LA MEDIA RETAIL

TRANSPORTATION IMPACT STUDY

TECHNICAL APPENDICES

FINAL: JANUARY 28, 2021

JOB NUMBER: 18548

RICK ENGINEERING COMPANY

RICK
ENGINEERING COMPANY

rickengineering.com

Appendix A

MTS Transit Information

CASH FARES / *Tarifas en efectivo*

Exact fare, please / *Favor de pagar la cantidad exacta*

	905/909	950
Day Pass (Regional) / *Pase diario (Regional)* Compass Card required ($2) / *Se requiere un Compass Card ($2)*	$5.00	
One-Way Fare / *Tarifa de una direccíon*	$2.25	$2.50
Senior (60+)/Disabled/Medicare *Mayores de 60 años/Discapacitados/Medicare*	$1.10*	$1.25*
Children 5 & under / *Niños de 5 años o menos* Up to two children ride free per paying adult / *Máximo dos niños viajan gratis por cada adulto*	FREE / *GRATIS*	

MONTHLY PASSES / *Pases mensual*

Adult / *Adulto*	$72.00
Senior (60+)/Disabled/Medicare *Mayores de 60 años/Discapacitados/Medicare*	$18.00*
Youths (18 and under) *Jóvenes (18 años o menos)*	$36.00*

*I.D. required for discount fare or pass.
**Se requiere identificación para tarifas o pases de descuento.*

DAY PASS (REGIONAL) / *Pase diario (Regional)*

All passes are sold on Compass Card, which can be reloaded and reused for up to five years. Compass Cards are available for $2 at select outlets. A $5 Day Pass requires a Compass Card. A paper Day Pass can be purchased on board buses for an additional $2 fee.

Todos los pases se venden en el Compass Card, el cual puede ser recargado y reutilizado por hasta cinco años. Compass Cards están disponibles por $2 en selectas sucursales. Un pase de un día por $5 requiere un Compass Card. Un pase de un día de papel se puede obtener a bordo los autobuses por un costo adicional de $2.

DIRECTORY / *Directorio*

Regional Transit Information *Información de transporte público regional*	**511** or/ó **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
SafeWatch	**(619) 557-4500**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.

*Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a **sdmts.com**.*

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JUNE 9, 2019

905 | 909 | 950

Otay Mesa – Iris Transit Center via SR-905 / Otay Mesa Rd.

Otay Mesa – Southwestern College Otay Mesa

Otay Mesa - Iris Transit Center Express via SR-905

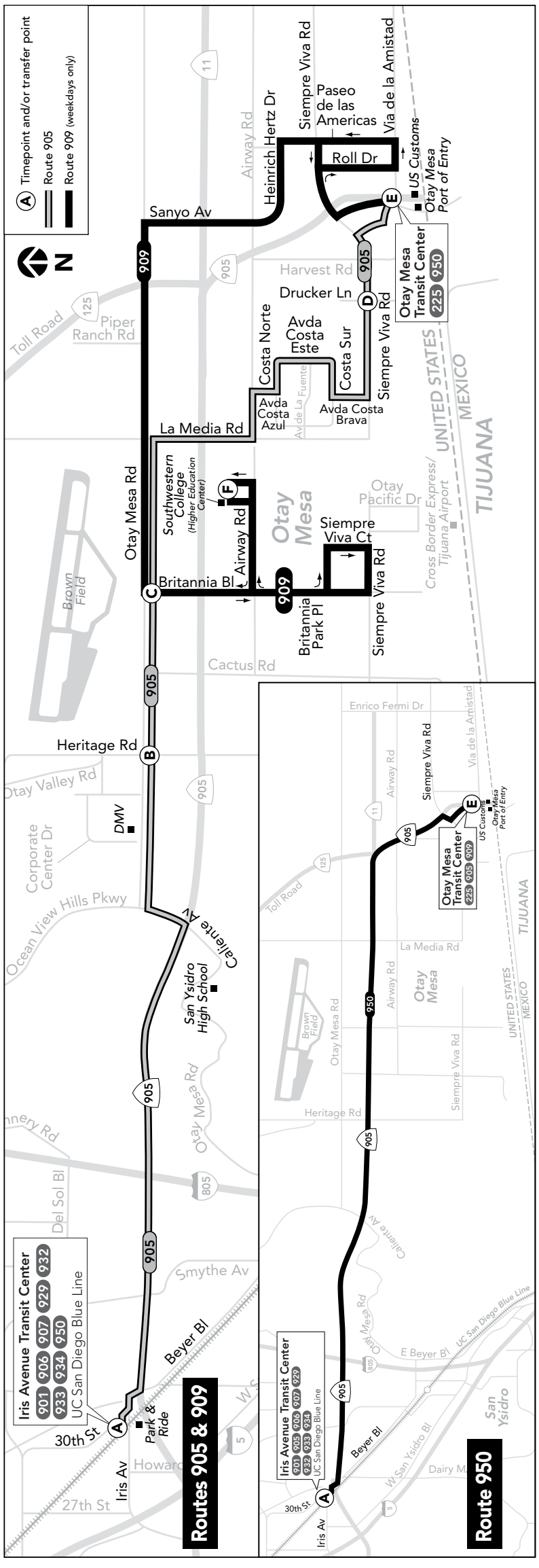
DESTINATIONS

- Brown Field
- Otay Mesa Industrial Parks
- Otay Mesa Port of Entry
- San Ysidro High School (905)
- Southwestern College Otay Mesa (909)

MTS Metropolitan Transit System

TROLLEY CONNECTIONS
Iris Av.

06/19



Alternative formats available upon request. Please call: (619) 557-4555
Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.

Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

Route 950 – Monday through Friday / *lunes a viernes*

Otay Mesa ➡ Iris Avenue

(E) Otay Mesa Transit Center DEPART	(A) Iris Avenue Transit Center ARRIVE
4:30a	4:44a
4:45	4:59
5:00	5:14
5:12	5:26
5:24	5:38
5:36	5:50
5:48	6:02
6:00	6:14
6:12	6:26
6:24	6:38
6:36	6:50
6:48	7:02
7:00	7:14
7:12	7:26
7:24	7:38
7:36	7:50
7:48	8:02
8:04	8:18
8:24	8:38
8:44	8:58
9:04	9:18
9:24	9:38
9:44	9:58
10:15	10:29
10:45	10:59
11:15	11:29
11:45	11:59
12:15p	**12:29p**

Iris Avenue ➡ Otay Mesa

(A) Iris Avenue Transit Center DEPART	(E) Otay Mesa Transit Center ARRIVE
12:17p	**12:31p**
12:47	**1:01**
1:17	**1:31**
1:42	**1:56**
2:02	**2:16**
2:22	**2:36**
2:42	**2:56**
3:02	**3:16**
3:22	**3:36**
3:42	**3:56**
4:02	**4:16**
4:22	**4:36**
4:42	**4:56**
5:02	**5:16**
5:22	**5:36**
5:42	**5:56**
6:02	**6:16**
6:22	**6:36**
6:42	**6:56**
7:02	**7:16**
7:22	**7:36**
7:47	**8:01**
8:17	**8:31**

Route 950 – Saturday / *sábado*

Otay Mesa ➡ Iris Avenue

(E) Otay Mesa Transit Center DEPART	(A) Iris Avenue Transit Center ARRIVE
4:54a	5:08a
5:14	5:28
5:34	5:48
5:54	6:08
6:14	6:28
6:34	6:48
6:54	7:08
7:14	7:28
7:34	7:48
7:54	8:08
8:14	8:28
8:46	9:00
9:16	9:30
9:46	10:00
10:16	10:30
10:53	11:07
11:53	**12:07p**

Iris Avenue ➡ Otay Mesa

(A) Iris Avenue Transit Center DEPART	(E) Otay Mesa Transit Center ARRIVE
12:23p	**12:37p**
1:02	**1:16**
1:32	**1:46**
2:02	**2:16**
2:23	**2:37**
2:43	**2:57**
3:03	**3:17**
3:23	**3:37**
3:43	**3:57**
4:03	**4:17**
4:23	**4:37**
4:43	**4:57**
5:03	**5:17**
5:23	**5:37**
5:45	**5:59**
6:15	**6:29**
6:45	**6:59**
7:23	**7:37**

Route 950 – Sunday / *domingo*

Otay Mesa ➡ Iris Avenue

(E) Otay Mesa Transit Center DEPART	(A) Iris Avenue Transit Center ARRIVE
5:14a	5:28a
5:44	5:58
6:14	6:28
6:44	6:58
7:14	7:28
7:44	7:58
8:14	8:28
8:44	8:58
9:14	9:28
10:01	10:15
11:02	11:16
12:02p	**12:16p**

Iris Avenue ➡ Otay Mesa

(A) Iris Avenue Transit Center DEPART	(E) Otay Mesa Transit Center ARRIVE
12:23p	**12:37p**
1:23	**1:37**
2:08	**2:22**
2:38	**2:52**
3:08	**3:22**
3:38	**3:52**
4:08	**4:22**
4:38	**4:52**
5:08	**5:22**
5:38	**5:52**
6:23	**6:37**
7:23	**7:37**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Route 905 – Monday through Friday / *lunes a viernes*

Otay Mesa Transit Center ➡ Iris Avenue Transit Center

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓑ Otay Mesa Rd. & Heritage Rd.	Ⓐ Iris Avenue Transit Center **ARRIVE**
4:14a	4:17a	4:27a	4:36a
4:49	4:52	5:02	5:11
5:23	5:26	5:36	5:45
5:55	5:58	6:09	6:19
6:28	6:31	6:42	6:52
6:51	6:55	7:07	7:17
7:27	7:31	7:43	7:53
7:57	8:01	8:13	8:23
8:27	8:31	8:43	8:53
8:57	9:01	9:13	9:23
9:28	9:32	9:44	9:54
10:00	10:04	10:16	10:26
10:30	10:34	10:46	10:57
11:00	11:04	11:16	11:27
11:30	11:34	11:46	11:57
12:00p	**12:04p**	**12:16p**	**12:27p**
12:26	**12:30**	**12:42**	**12:53**
12:49	**12:53**	**1:05**	**1:16**
1:19	**1:23**	**1:35**	**1:46**
1:49	**1:53**	**2:05**	**2:16**
2:19	**2:23**	**2:35**	**2:46**
2:37	**2:41**	**2:53**	**3:04**
2:52	**2:56**	**3:08**	**3:19**
3:07	**3:11**	**3:23**	**3:34**
3:22	**3:26**	**3:38**	**3:49**
3:37	**3:41**	**3:53**	**4:04**
3:52	**3:56**	**4:08**	**4:19**
—	**—**	**T 4:18**	**4:27**
4:07	**4:11**	**4:23**	**4:34**
4:22	**4:26**	**4:38**	**4:49**
4:37	**4:41**	**4:53**	**5:04**
4:52	**4:56**	**5:08**	**5:19**
5:07	**5:11**	**5:23**	**5:34**
5:21	**5:25**	**5:37**	**5:48**
5:48	**5:52**	**6:04**	**6:15**
6:18	**6:22**	**6:34**	**6:45**
6:54	**6:58**	**7:09**	**7:19**
7:30	**7:34**	**7:45**	**7:55**
8:08	**8:12**	**8:22**	**8:31**

Iris Avenue Transit Center ➡ Otay Mesa Transit Center

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ Otay Mesa Rd. & Heritage Rd.	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓔ Otay Mesa Transit Center **ARRIVE**
4:53a	5:01a	5:12a	5:16a
5:24	5:32	5:43	5:47
5:54	6:03	6:15	6:19
6:17	6:26	6:38	6:42
6:32	6:41	6:53	6:57
6:47	6:56	7:08	7:12
7:02	7:11	7:23	7:27
7:17	7:27	7:39	7:44
7:32	7:42	7:54	7:59
7:48	7:58	8:10	8:15
8:03	8:13	8:25	8:30
8:18	8:28	8:40	8:45
8:33	8:43	8:55	9:00
8:52	9:02	9:14	9:19
9:07	9:17	9:29	9:34
9:32	9:42	9:54	9:59
10:02	10:12	10:24	10:29
10:37	10:47	10:59	11:04
11:07	11:17	11:29	11:34
11:37	11:47	11:59	**12:04p**
12:03p	**12:13p**	**12:25p**	**12:30**
12:33	**12:43**	**12:55**	**1:00**
1:02	**1:12**	**1:24**	**1:29**
1:32	**1:42**	**1:54**	**1:59**
2:07	**2:17**	**2:29**	**2:34**
2:37	**2:47**	**2:59**	**3:04**
3:07	**3:17**	**3:29**	**3:34**
3:36	**3:46**	**3:58**	**4:03**
4:06	**4:16**	**4:28**	**4:33**
4:36	**4:46**	**4:58**	**5:03**
5:06	**5:16**	**5:27**	**5:31**
5:36	**5:46**	**5:57**	**6:01**
6:06	**6:16**	**6:27**	**6:31**
6:33	**6:43**	**6:54**	**6:58**
7:00	**7:09**	**7:19**	**7:23**
7:32	**7:41**	**7:51**	**7:55**
8:02	**8:11**	**8:21**	**8:25**
8:38	**8:47**	**8:57**	**9:01**
9:08	**9:16**	**9:26**	**9:30**
9:38	**9:46**	**9:56**	**10:00**

T = Trip begins on SR-905 ramp & Caliente Av. at 4:18pm and only operates when San Ysidro High School is in full day session / *Este viaje comienza en la rampa de SR-905 & Caliente Av. a las 4:18pm y unicamente opera durante los días escolares de San Ysidro High School.*

Route 905 – Saturday / *sábado*

Otay Mesa Transit Center ➡ Iris Avenue Transit Center

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓑ Otay Mesa Rd. & Heritage Rd.	Ⓐ Iris Avenue Transit Center **ARRIVE**
5:23a	5:26a	5:36a	5:44a
6:23	6:26	6:37	6:45
7:23	7:27	7:38	7:47
8:23	8:27	8:38	8:47
9:23	9:27	9:38	9:47
10:23	10:27	10:38	10:47
11:23	11:27	11:38	11:47
12:23p	**12:27p**	**12:38p**	**12:47p**
1:23	**1:27**	**1:38**	**1:47**
2:23	**2:27**	**2:38**	**2:47**
3:23	**3:27**	**3:38**	**3:47**
4:23	**4:27**	**4:38**	**4:47**
5:24	**5:27**	**5:37**	**5:46**
6:24	**6:27**	**6:37**	**6:46**
7:24	**7:27**	**7:37**	**7:46**
8:25	**8:28**	**8:38**	**8:46**

Iris Avenue Transit Center ➡ Otay Mesa Transit Center

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ Otay Mesa Rd. & Heritage Rd.	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓔ Otay Mesa Transit Center **ARRIVE**
5:53a	6:01a	6:10a	6:14a
6:53	7:01	7:11	7:15
7:53	8:02	8:12	8:16
8:53	9:02	9:12	9:16
9:53	10:02	10:12	10:16
10:53	11:02	11:12	11:16
11:53	**12:02p**	**12:12p**	**12:16p**
12:53p	**1:02**	**1:12**	**1:16**
1:53	**2:02**	**2:12**	**2:16**
2:53	**3:02**	**3:12**	**3:16**
3:53	**4:02**	**4:12**	**4:16**
4:53	**5:02**	**5:12**	**5:16**
5:53	**6:02**	**6:12**	**6:16**
6:53	**7:02**	**7:12**	**7:16**
7:53	**8:01**	**8:10**	**8:14**
8:53	**9:01**	**9:10**	**9:14**

Route 905 – Sunday / *domingo*

Otay Mesa Transit Center ➡ Iris Avenue Transit Center

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓑ Otay Mesa Rd. & Heritage Rd.	Ⓐ Iris Avenue Transit Center **ARRIVE**
5:30a	5:33a	5:43a	5:51a
6:30	6:33	6:44	6:52
7:29	7:33	7:44	7:53
8:29	8:33	8:44	8:53
9:29	9:33	9:44	9:53
10:29	10:33	10:44	10:53
11:29	11:33	11:44	11:53
12:29p	**12:33p**	**12:44p**	**12:53p**
1:29	**1:33**	**1:44**	**1:53**
2:29	**2:33**	**2:44**	**2:53**
3:29	**3:33**	**3:44**	**3:53**
4:29	**4:33**	**4:44**	**4:53**
5:31	**5:34**	**5:44**	**5:53**
6:31	**6:34**	**6:44**	**6:53**
7:31	**7:34**	**7:44**	**7:53**
8:32	**8:35**	**8:45**	**8:53**

Iris Avenue Transit Center ➡ Otay Mesa Transit Center

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ Otay Mesa Rd. & Heritage Rd.	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓔ Otay Mesa Transit Center **ARRIVE**
6:00a	6:08a	6:18a	6:22a
7:00	7:08	7:18	7:22
7:59	8:08	8:18	8:22
8:59	9:08	9:18	9:22
9:59	10:08	10:18	10:22
10:59	11:08	11:18	11:22
11:59	**12:08p**	**12:18p**	**12:22p**
12:59p	**1:08**	**1:18**	**1:22**
1:59	**2:08**	**2:18**	**2:22**
2:59	**3:08**	**3:18**	**3:22**
3:59	**4:08**	**4:18**	**4:22**
5:00	**5:09**	**5:19**	**5:23**
6:00	**6:09**	**6:19**	**6:23**
7:01	**7:09**	**7:18**	**7:22**
8:01	**8:09**	**8:18**	**8:22**

Route 909 – Monday through Friday / *lunes a viernes*

Otay Mesa Transit Center ➡ Southwestern College Otay Mesa

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓕ Southwestern College Otay Mesa **ARRIVE**
5:01a	5:13a	5:23a
6:01	6:13	6:23
7:07	7:20	7:31
8:07	8:20	8:31
9:09	9:22	9:33
10:08	10:21	10:32
11:10	11:23	11:34
12:06p	**12:19p**	**12:30p**
1:13	**1:26**	**1:37**
2:13	**2:26**	**2:37**
3:12	**3:25**	**3:36**
4:12	**4:25**	**4:36**
4:56	**5:09**	**5:20**
5:55	**6:07**	**6:17**
7:07	**7:19**	**7:29**

Southwestern College Otay Mesa ➡ Otay Mesa Transit Center

Ⓕ Southwestern College Otay Mesa **DEPART**	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓔ Otay Mesa Transit Center **ARRIVE**
5:24a	5:28a	5:39a
6:25	6:29	6:40
7:31	7:36	7:48
8:31	8:36	8:48
9:33	9:38	9:50
10:32	10:37	10:49
11:34	11:39	11:51
12:30p	**12:35p**	**12:47p**
1:39	**1:44**	**1:56**
2:39	**2:44**	**2:56**
3:37	**3:42**	**3:54**
4:37	**4:42**	**4:54**
5:21	**5:26**	**5:38**
6:19	**6:24**	**6:36**
7:31	**7:35**	**7:46**

Route 909 does not operate on weekends or on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

La ruta 909 no ofrece servicio durante el fin de semana ó durante los siguientes días festivos y feriados observados

Appendix B

Traffic Volume Data

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-004 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

AM

NS/EW Streets:	La Media Rd			La Media Rd			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	2	0.5	0.5	1	3	1	1	2.5	0.5	
7:00 AM	7	26	67	6	21	3	7	42	20	46	42	6	293
7:15 AM	5	25	96	5	26	1	8	36	19	73	35	7	336
7:30 AM	5	27	92	6	27	6	5	45	25	72	62	6	378
7:45 AM	9	29	96	8	25	3	10	49	24	97	59	10	419
8:00 AM	5	38	91	8	15	7	17	41	15	69	48	13	367
8:15 AM	11	23	72	6	14	8	11	45	23	66	46	10	335
8:30 AM	14	26	54	5	34	10	9	32	20	52	36	12	304
8:45 AM	15	27	67	6	27	11	20	19	29	62	52	11	346
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	71	221	635	50	189	49	87	309	175	537	380	75	2778
APPROACH %'s :	7.66%	23.84%	68.50%	17.36%	65.63%	17.01%	15.24%	54.12%	30.65%	54.13%	38.31%	7.56%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	24	119	375	27	93	17	40	171	83	311	204	36	1500
PEAK HR FACTOR :		0.966			0.878			0.886			0.830		0.895

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-004 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

PM

NS/EW Streets:	La Media Rd			La Media Rd			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	2	0.5	0.5	1	3	1	1	2.5	0.5	
4:00 PM	16	22	55	9	45	16	16	40	28	98	56	12	413
4:15 PM	15	37	47	5	56	12	22	29	29	95	50	8	405
4:30 PM	13	23	62	11	42	12	12	40	36	89	44	8	392
4:45 PM	8	32	79	9	49	11	11	38	23	101	43	11	415
5:00 PM	15	25	60	9	40	12	12	48	46	112	61	8	448
5:15 PM	15	13	72	11	41	5	14	51	34	78	31	4	369
5:30 PM	7	23	52	7	34	10	12	42	27	78	36	5	333
5:45 PM	9	20	60	8	26	2	6	42	29	60	24	5	291
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	98	195	487	69	333	80	105	330	252	711	345	61	3066
APPROACH %'s :	12.56%	25.00%	62.44%	14.32%	69.09%	16.60%	15.28%	48.03%	36.68%	63.65%	30.89%	5.46%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	51	117	248	34	187	47	57	155	134	397	198	35	1660
PEAK HR FACTOR :		0.874			0.918			0.816			0.870		0.926

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

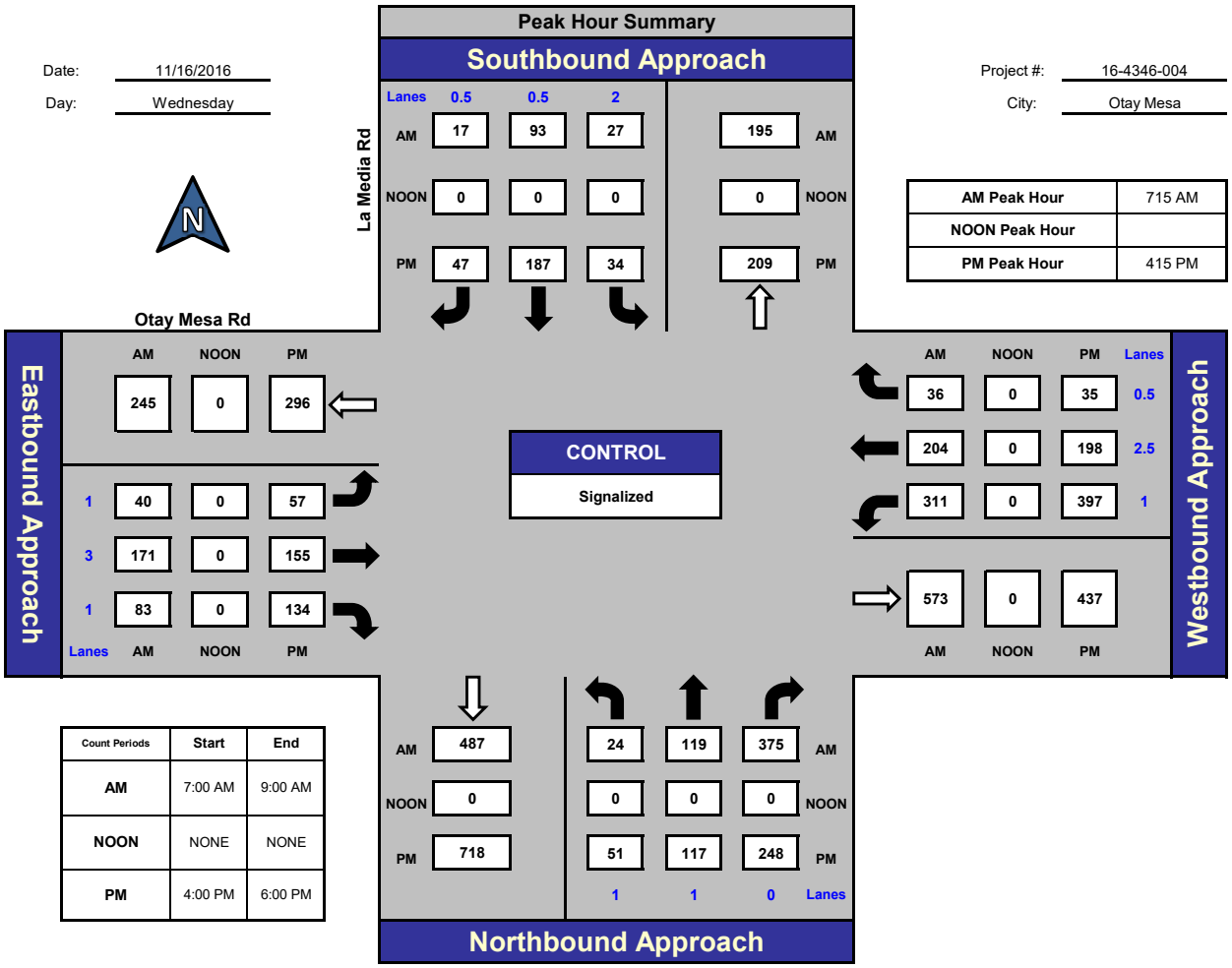
National Data & Surveying Services

La Media Rd and Otay Mesa Rd , Otay Mesa

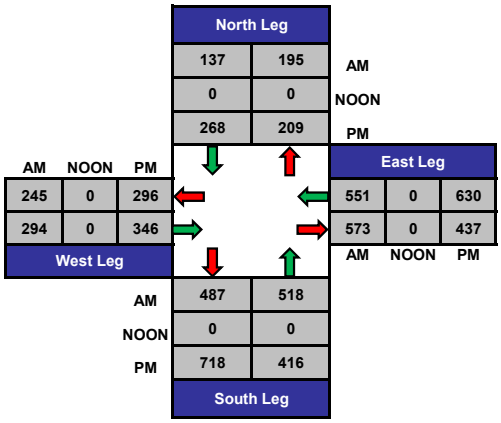
Date: 11/16/2016
Day: Wednesday

Project #: 16-4346-004
City: Otay Mesa

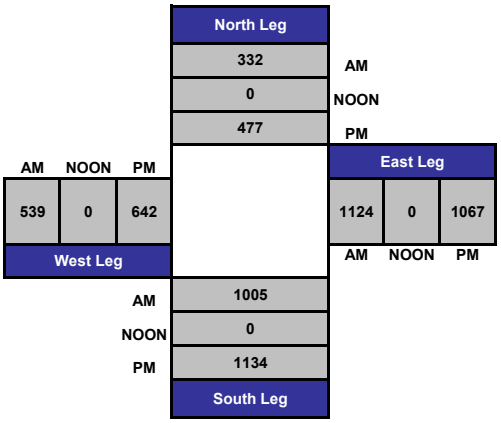
AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	415 PM



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-005 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

AM

NS/EW Streets:	La Media Rd			La Media Rd			SR 905 WB Ramps			SR 905 WB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	0	3.5	0.5	1	0.5	0.5	1.5	0.5	1	
7:00 AM	13	73	29	0	93	4	0	0	12	3	9	38	274
7:15 AM	10	99	15	0	121	6	1	0	12	10	31	34	339
7:30 AM	36	110	16	0	120	8	0	0	17	7	9	22	345
7:45 AM	20	111	18	0	161	6	1	0	15	14	12	37	395
8:00 AM	28	105	15	0	110	3	1	0	11	11	13	32	329
8:15 AM	24	77	22	0	111	8	0	1	11	7	16	46	323
8:30 AM	22	58	28	0	117	8	1	0	11	8	8	36	297
8:45 AM	23	83	26	0	123	9	1	1	11	5	10	35	327
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	176	716	169	0	956	52	5	2	100	65	108	280	2629
APPROACH %'s :	16.59%	67.48%	15.93%	0.00%	94.84%	5.16%	4.67%	1.87%	93.46%	14.35%	23.84%	61.81%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	94	425	64	0	512	23	3	0	55	42	65	125	1408
PEAK HR FACTOR :		0.900			0.801			0.853			0.773		0.891

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-005 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

PM

NS/EW Streets:	La Media Rd			La Media Rd			SR 905 WB Ramps			SR 905 WB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	0	3.5	0.5	1	0.5	0.5	1.5	0.5	1	
4:00 PM	24	81	62	0	173	8	1	0	19	24	9	26	427
4:15 PM	27	64	51	1	178	8	0	0	30	22	9	27	417
4:30 PM	19	74	58	1	176	5	2	0	30	9	6	37	417
4:45 PM	28	84	43	0	182	4	2	0	16	18	7	36	420
5:00 PM	19	78	52	0	206	5	0	0	25	16	9	36	446
5:15 PM	22	80	58	0	166	8	2	0	28	17	5	36	422
5:30 PM	15	46	49	0	147	7	2	2	21	13	12	33	347
5:45 PM	14	60	41	0	129	3	1	0	13	9	2	31	303
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	168	567	414	2	1357	48	10	2	182	128	59	262	3199
APPROACH %'s :	14.62%	49.35%	36.03%	0.14%	96.45%	3.41%	5.15%	1.03%	93.81%	28.51%	13.14%	58.35%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	88	316	211	1	730	22	6	0	99	60	27	145	1705
PEAK HR FACTOR :		0.961			0.892			0.820			0.951		0.956

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

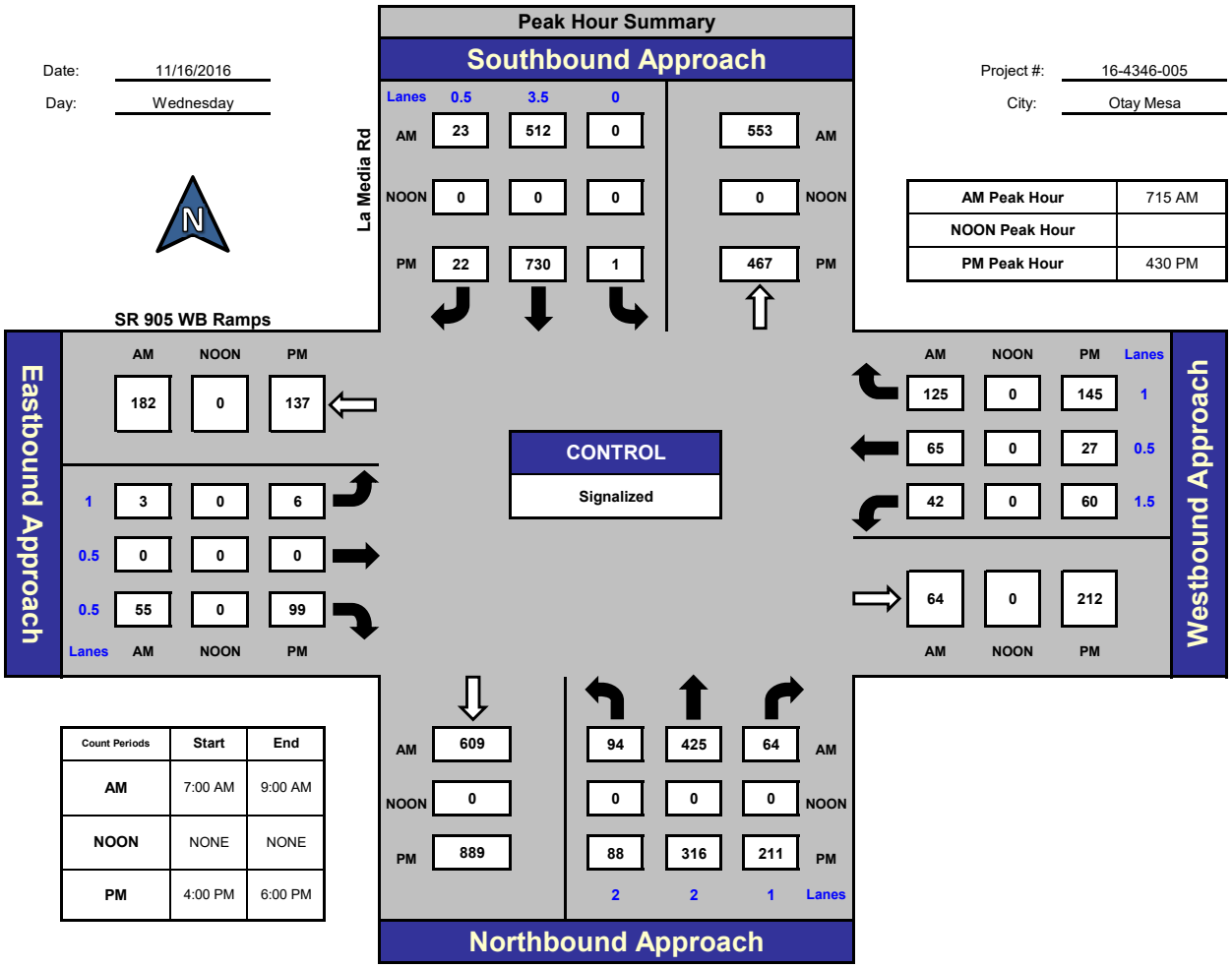
National Data & Surveying Services

La Media Rd and SR 905 WB Ramps , Otay Mesa

Date: 11/16/2016
Day: Wednesday

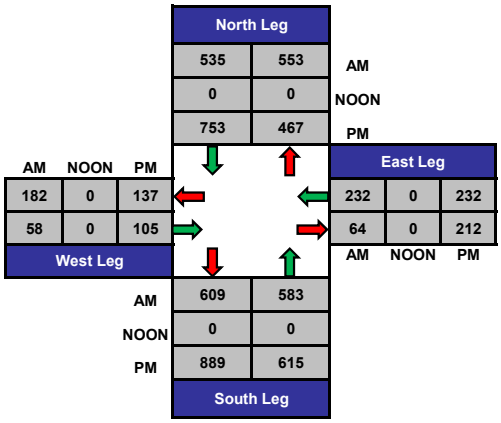
Project #: 16-4346-005
City: Otay Mesa

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

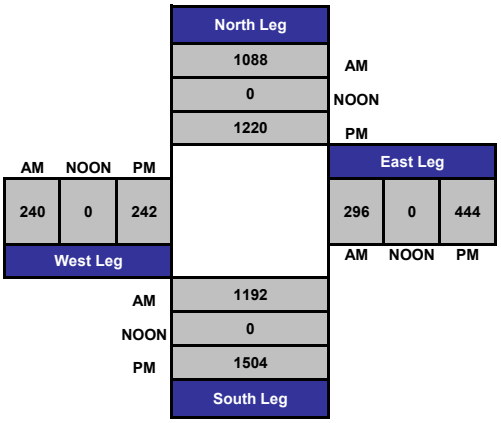


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-006 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

AM

NS/EW Streets:	La Media Rd			La Media Rd			SR 905 WB On-Ramps			SR 905 WB On-Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	0	3	1	0	0	0	0	0	0	
7:00 AM	0	113	0	0	45	62	0	0	0	0	0	0	220
7:15 AM	0	124	0	0	69	83	0	0	0	0	0	0	276
7:30 AM	0	156	0	0	69	82	0	0	0	0	0	0	307
7:45 AM	0	153	0	0	104	81	0	0	0	0	0	0	338
8:00 AM	0	145	0	0	82	52	0	0	0	0	0	0	279
8:15 AM	0	123	0	0	71	59	0	0	0	0	0	0	253
8:30 AM	0	116	0	0	78	64	0	0	0	0	0	0	258
8:45 AM	0	126	0	0	79	56	0	0	0	0	0	0	261
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1056	0	0	597	539	0	0	0	0	0	0	2192
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	52.55%	47.45%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	578	0	0	324	298	0	0	0	0	0	0	1200
PEAK HR FACTOR :		0.926			0.841			0.000			0.000		0.888

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-006 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

PM

NS/EW Streets:	La Media Rd			La Media Rd			SR 905 WB On-Ramps			SR 905 WB On-Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	0	3	1	0	0	0	0	0	0	
4:00 PM	0	168	0	0	103	115	0	0	0	0	0	0	386
4:15 PM	0	141	0	0	104	127	0	0	0	0	0	0	372
4:30 PM	0	149	0	0	113	100	0	0	0	0	0	0	362
4:45 PM	0	151	0	0	116	107	0	0	0	0	0	0	374
5:00 PM	0	154	0	0	144	106	0	0	0	0	0	0	404
5:15 PM	0	157	0	0	114	103	0	0	0	0	0	0	374
5:30 PM	0	114	0	0	100	90	0	0	0	0	0	0	304
5:45 PM	0	120	0	0	86	60	0	0	0	0	0	0	266
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1154	0	0	880	808	0	0	0	0	0	0	2842
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	52.13%	47.87%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	611	0	0	487	416	0	0	0	0	0	0	1514
PEAK HR FACTOR :		0.973			0.903			0.000			0.000		0.937

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

La Media Rd and SR 905 WB On-Ramps , Otay Mesa

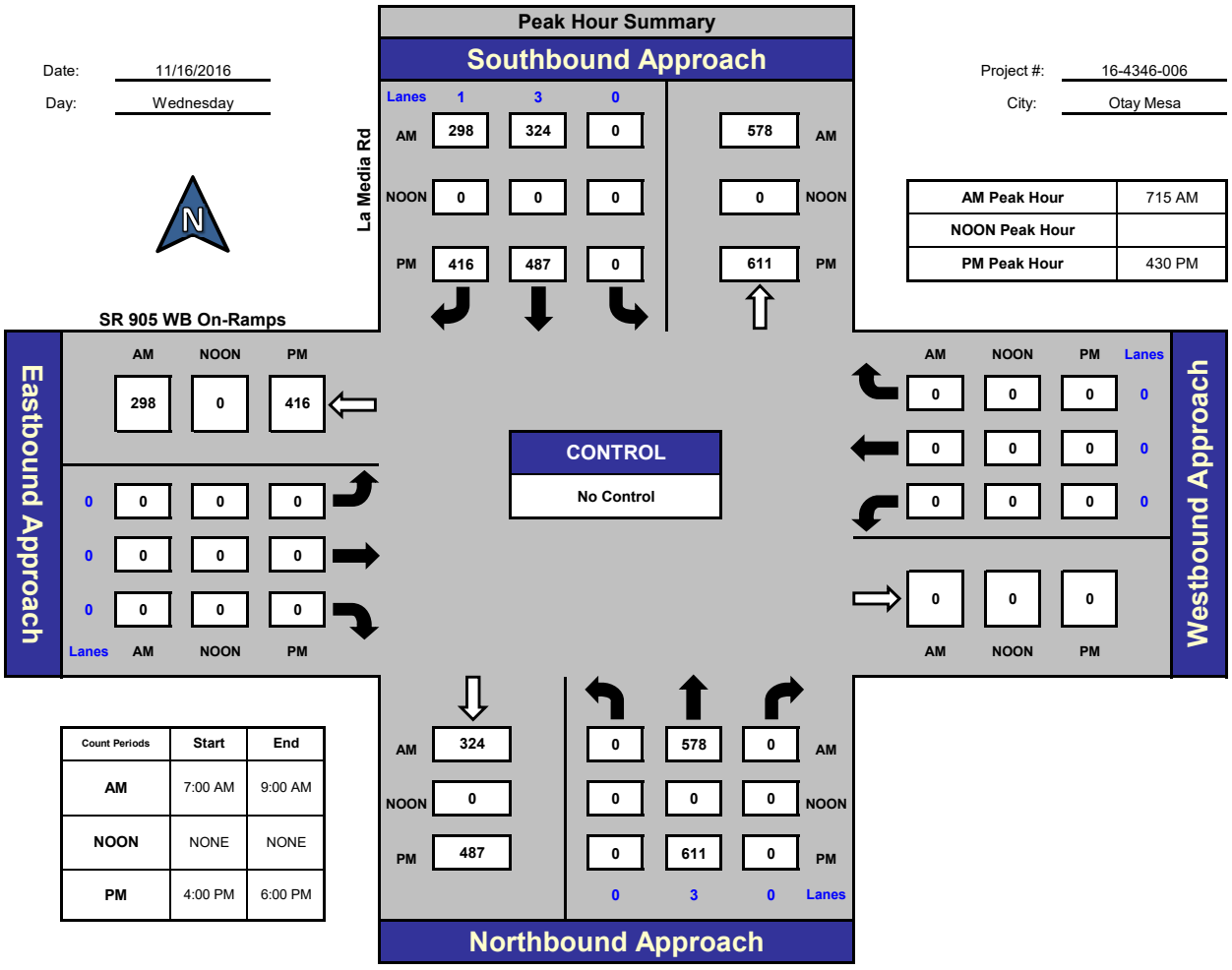
Date: 11/16/2016

Day: Wednesday

Project #: 16-4346-006

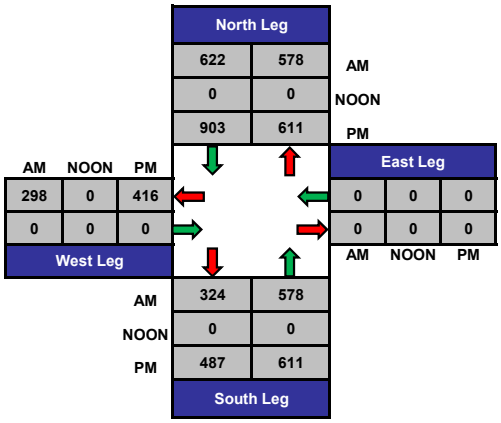
City: Otay Mesa

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

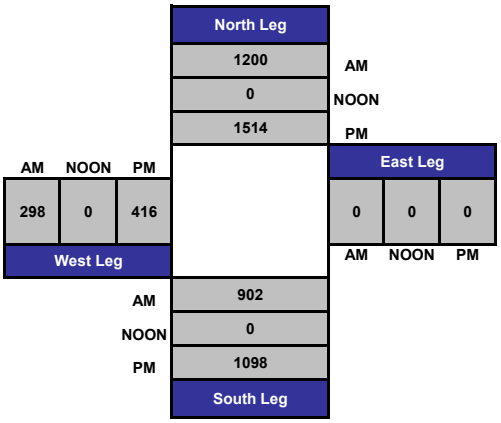


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-007 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

AM

NS/EW Streets:	La Media Rd			La Media Rd			SR 905 EB Ramps			SR 905 EB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	0	2	1	2	0	2	0	0	0	
7:00 AM	0	44	0	0	26	19	70	0	64	0	0	0	223
7:15 AM	3	31	0	0	34	32	92	0	62	0	0	0	254
7:30 AM	1	33	0	0	34	34	130	0	61	0	0	0	293
7:45 AM	0	36	0	0	68	37	112	0	85	0	0	0	338
8:00 AM	2	33	0	0	51	34	117	0	85	0	0	0	322
8:15 AM	1	40	0	0	35	36	80	0	79	0	0	0	271
8:30 AM	0	51	0	0	45	34	55	0	59	0	0	0	244
8:45 AM	2	50	0	0	43	33	87	0	60	0	0	0	275
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	9	318	0	0	336	259	743	0	555	0	0	0	2220
APPROACH %'s :	2.75%	97.25%	0.00%	0.00%	56.47%	43.53%	57.24%	0.00%	42.76%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	4	142	0	0	188	141	439	0	310	0	0	0	1224
PEAK HR FACTOR :		0.890			0.783			0.927			0.000		0.905

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-007 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

PM

NS/EW Streets:	La Media Rd			La Media Rd			SR 905 EB Ramps			SR 905 EB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	0	2	1	2	0	2	0	0	0	
4:00 PM	3	108	0	0	47	53	59	0	44	0	0	0	314
4:15 PM	2	82	0	0	66	45	57	0	57	0	0	0	309
4:30 PM	5	95	0	0	61	56	63	0	62	0	0	0	342
4:45 PM	5	80	0	0	56	59	73	0	46	0	0	0	319
5:00 PM	6	108	0	0	67	83	55	0	33	0	0	0	352
5:15 PM	6	84	0	0	52	63	70	0	42	0	0	0	317
5:30 PM	2	67	0	0	48	47	43	0	29	0	0	0	236
5:45 PM	2	66	0	0	40	46	52	0	31	0	0	0	237
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	31	690	0	0	437	452	472	0	344	0	0	0	2426
APPROACH %'s :	4.30%	95.70%	0.00%	0.00%	49.16%	50.84%	57.84%	0.00%	42.16%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	22	367	0	0	236	261	261	0	183	0	0	0	1330
PEAK HR FACTOR :		0.853			0.828			0.888			0.000		0.945

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

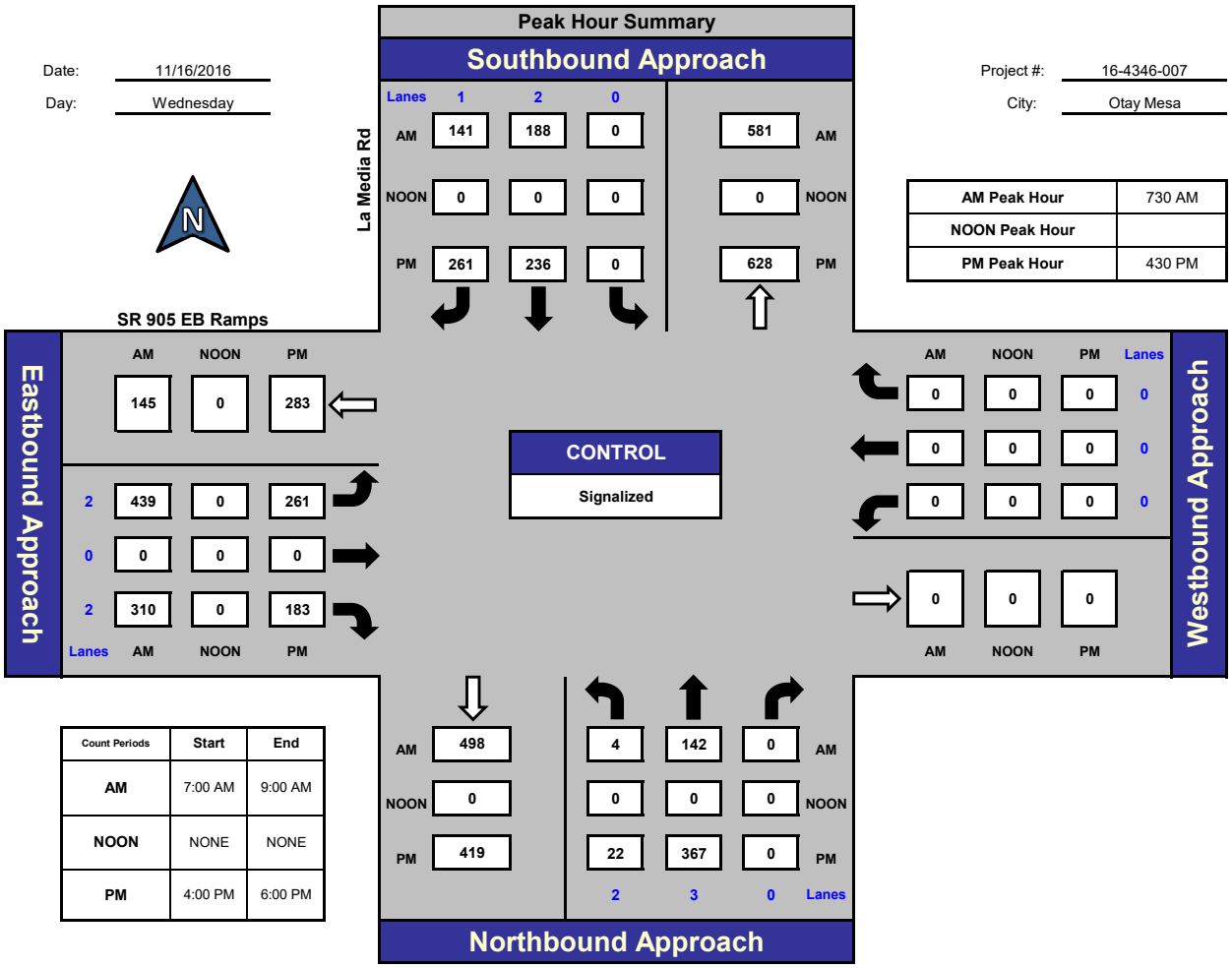
National Data & Surveying Services

La Media Rd and SR 905 EB Ramps , Otay Mesa

Date: 11/16/2016
Day: Wednesday

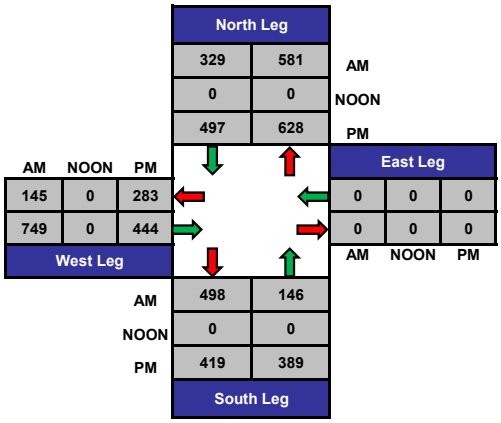
Project #: 16-4346-007
City: Otay Mesa

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

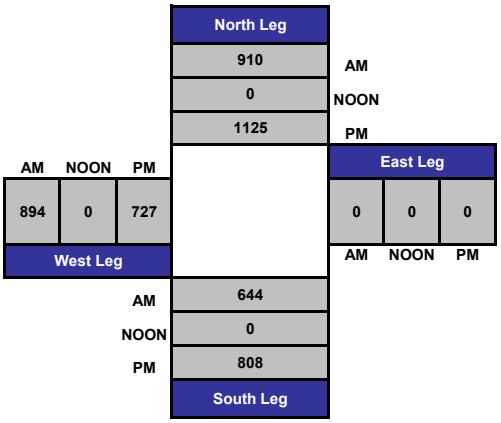


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-004 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	La Media Rd			La Media Rd			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	1	0	0	1	0	
7:00 AM	2	26	1	44	50	7	2	3	5	3	8	10	161
7:15 AM	7	29	0	64	37	6	4	5	7	3	3	17	182
7:30 AM	4	26	1	69	66	14	1	13	3	1	9	11	218
7:45 AM	5	25	2	80	64	13	2	7	8	2	12	18	238
8:00 AM	8	26	2	77	60	11	2	10	6	4	14	21	241
8:15 AM	7	34	2	58	54	10	4	11	6	4	11	20	221
8:30 AM	10	31	2	46	55	6	2	12	4	5	10	30	213
8:45 AM	8	32	1	51	46	9	9	16	6	4	15	29	226
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	51	229	11	489	432	76	26	77	45	26	82	156	1700
APPROACH %'s :	17.53%	78.69%	3.78%	49.05%	43.33%	7.62%	17.57%	52.03%	30.41%	9.85%	31.06%	59.09%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	24	111	7	284	244	48	9	41	23	11	46	70	918
PEAK HR FACTOR :		0.826			0.917			0.869			0.814		0.952

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-004 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	La Media Rd			La Media Rd			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	1	0	0	1	0	
4:00 PM	8	65	0	43	37	7	9	20	10	8	16	53	276
4:15 PM	10	59	3	43	47	6	5	19	8	5	20	60	285
4:30 PM	5	56	0	45	39	10	13	19	7	2	9	60	265
4:45 PM	4	61	0	42	24	14	11	13	10	6	14	49	248
5:00 PM	3	65	0	39	28	3	10	16	0	3	14	76	257
5:15 PM	6	48	2	33	17	5	6	11	1	6	19	45	199
5:30 PM	8	42	2	46	7	6	2	21	1	6	13	32	186
5:45 PM	4	46	4	42	17	5	7	10	1	4	8	39	187
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	48	442	11	333	216	56	63	129	38	40	113	414	1903
APPROACH %'s :	9.58%	88.22%	2.20%	55.04%	35.70%	9.26%	27.39%	56.09%	16.52%	7.05%	19.93%	73.02%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	27	241	3	173	147	37	38	71	35	21	59	222	1074
PEAK HR FACTOR :		0.928			0.930			0.923			0.888		0.942

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

La Media Rd and Airway Rd , Otay Mesa

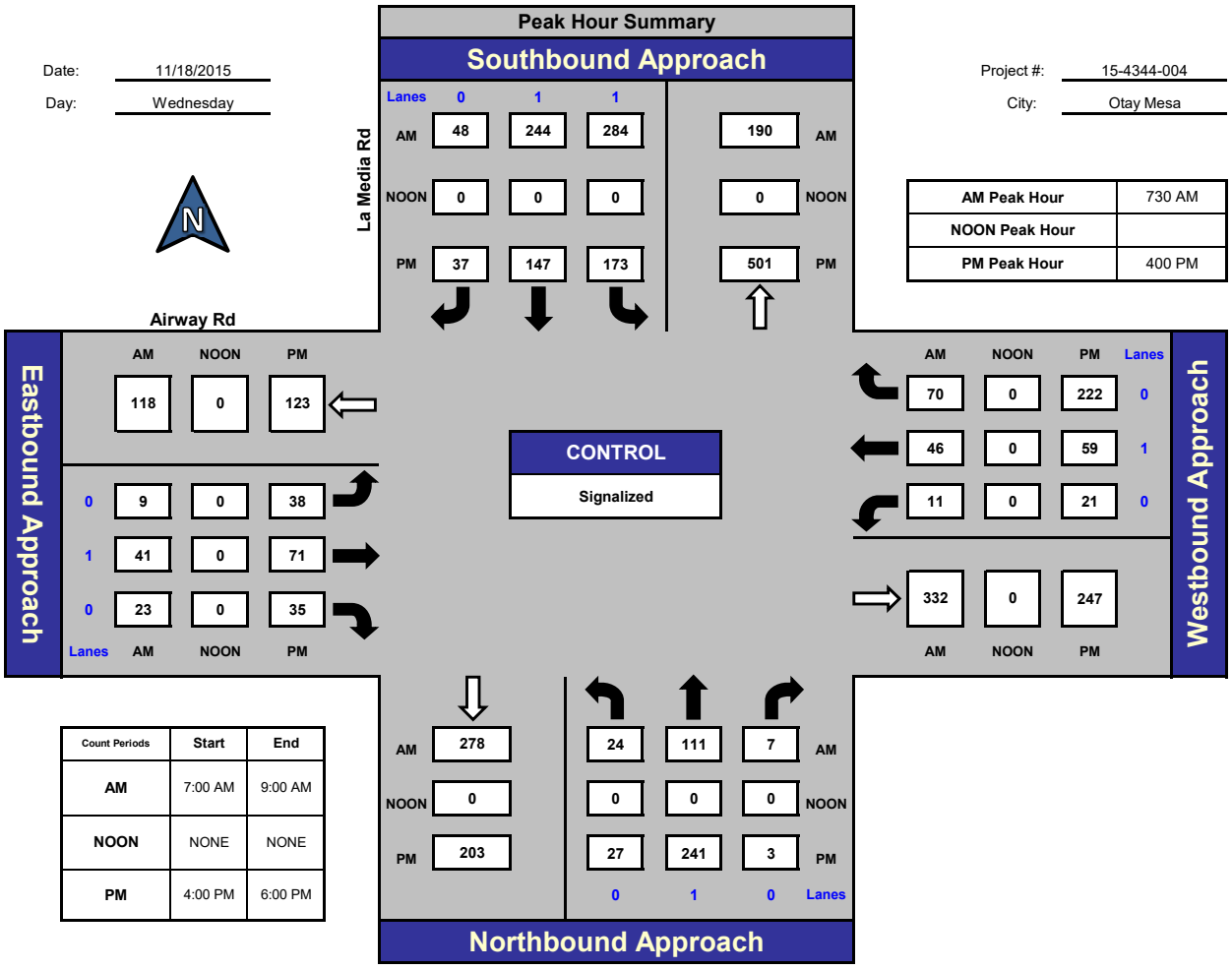
Date: 11/18/2015

Day: Wednesday

Project #: 15-4344-004

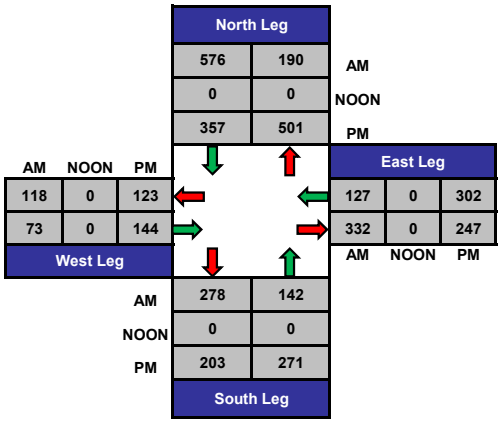
City: Otay Mesa

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	400 PM

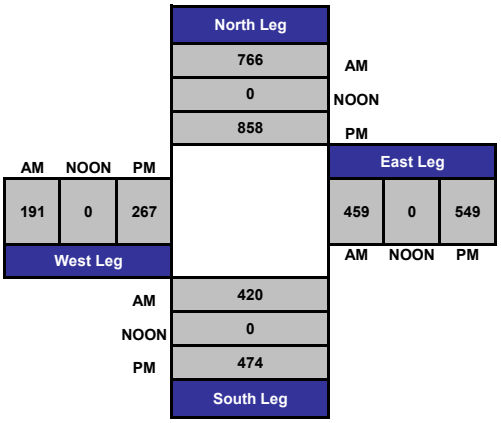


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-005 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	La Media Rd			La Media Rd			Avenida De La Fuente			Avenida De La Fuente			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	1	1	0	
7:00 AM	0	17	0	11	36	0	0	0	0	3	0	8	75
7:15 AM	0	19	0	17	39	0	0	0	0	4	0	10	89
7:30 AM	0	16	0	16	25	0	0	0	0	5	0	5	67
7:45 AM	0	19	1	28	53	0	0	0	0	8	0	10	119
8:00 AM	0	16	2	22	22	0	0	0	0	14	0	12	88
8:15 AM	0	13	0	28	41	0	0	0	0	20	0	11	113
8:30 AM	0	19	4	26	31	0	0	0	0	17	0	24	121
8:45 AM	0	23	3	18	37	0	0	0	0	22	0	12	115
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	142	10	166	284	0	0	0	0	93	0	92	787
APPROACH %'s :	0.00%	93.42%	6.58%	36.89%	63.11%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	50.27%	0.00%	49.73%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	67	7	104	147	0	0	0	0	59	0	57	441
PEAK HR FACTOR :		0.804			0.775			0.000			0.707		0.911

CONTROL : 3-Way Stop (NB/SB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-005 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	La Media Rd			La Media Rd			Avenida De La Fuente			Avenida De La Fuente			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	1	1	0	
4:00 PM	0	40	1	18	37	0	0	0	0	14	0	17	127
4:15 PM	0	45	3	21	29	0	0	0	0	19	0	22	139
4:30 PM	0	41	3	16	34	0	0	0	0	21	0	25	140
4:45 PM	0	27	2	9	36	0	0	0	0	27	0	21	122
5:00 PM	0	41	5	18	19	0	0	0	0	12	0	39	134
5:15 PM	0	21	1	15	5	0	0	0	0	6	0	16	64
5:30 PM	0	11	4	5	5	0	0	0	0	5	0	17	47
5:45 PM	0	17	0	2	5	0	0	0	0	6	0	21	51
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	243	19	104	170	0	0	0	0	110	0	178	824
APPROACH %'s :	0.00%	92.75%	7.25%	37.96%	62.04%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	38.19%	0.00%	61.81%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	154	13	64	118	0	0	0	0	79	0	107	535
PEAK HR FACTOR :		0.870			0.910			0.000			0.912		0.955

CONTROL : 3-Way Stop (NB/SB/WB)

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

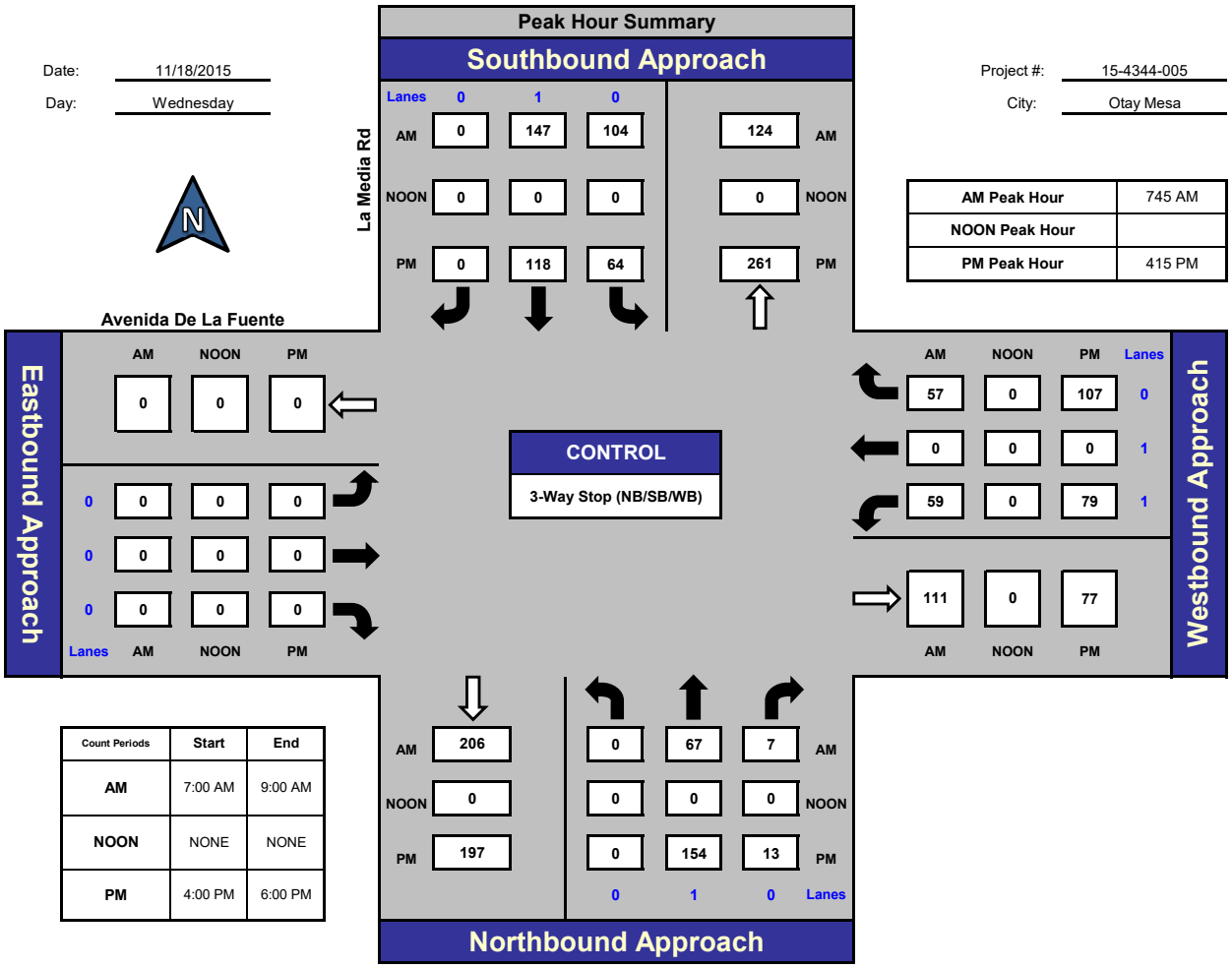
La Media Rd and Avenida De La Fuente , Otay Mesa

Date: 11/18/2015

Day: Wednesday

Project #: 15-4344-005

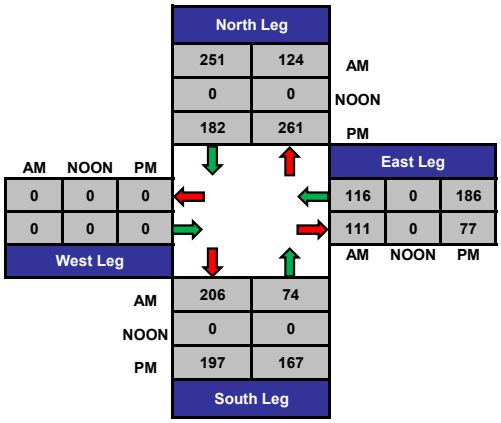
City: Otay Mesa



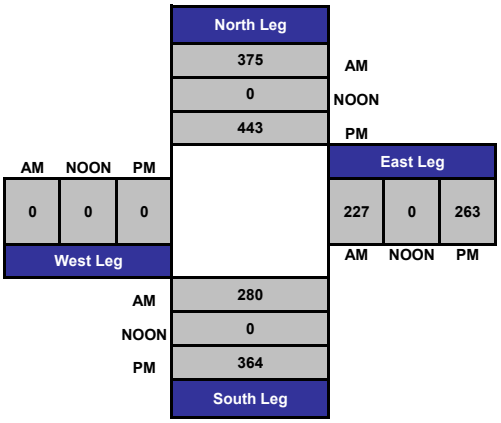
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-006 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	La Media Rd			La Media Rd			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0.5	0.5	
7:00 AM	1	2	0	30	6	1	0	3	1	6	8	13	71
7:15 AM	0	3	0	28	6	1	0	4	0	0	5	17	64
7:30 AM	1	5	0	28	7	1	0	8	0	6	5	10	71
7:45 AM	0	7	0	42	4	0	0	6	2	4	13	14	92
8:00 AM	1	5	0	33	11	3	0	10	1	0	11	16	91
8:15 AM	0	3	0	28	21	1	0	7	2	11	15	7	95
8:30 AM	0	0	0	27	22	0	1	10	2	0	8	20	90
8:45 AM	1	2	0	26	27	0	4	7	0	6	14	20	107
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	4	27	0	242	104	7	5	55	8	33	79	117	681
APPROACH %'s :	12.90%	87.10%	0.00%	68.56%	29.46%	1.98%	7.35%	80.88%	11.76%	14.41%	34.50%	51.09%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	2	10	0	114	81	4	5	34	5	17	48	63	383
PEAK HR FACTOR :		0.500			0.939			0.846			0.800		0.895

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-006 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	La Media Rd			La Media Rd			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	0.5	0.5	
4:00 PM	0	18	1	19	30	0	0	7	10	5	6	16	112
4:15 PM	0	22	0	17	34	0	1	5	6	11	5	28	129
4:30 PM	1	12	2	22	27	2	2	6	6	10	11	28	129
4:45 PM	0	11	0	17	39	0	2	14	8	13	7	17	128
5:00 PM	1	23	0	4	17	0	1	10	4	11	5	22	98
5:15 PM	1	14	1	1	12	0	0	9	6	3	1	7	55
5:30 PM	1	13	1	1	11	0	1	9	4	5	2	3	51
5:45 PM	0	14	1	1	11	0	0	6	9	6	0	0	48
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	4	127	6	82	181	2	7	66	53	64	37	121	750
APPROACH %'s :	2.92%	92.70%	4.38%	30.94%	68.30%	0.75%	5.56%	52.38%	42.06%	28.83%	16.67%	54.50%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	1	63	3	75	130	2	5	32	30	39	29	89	498
PEAK HR FACTOR :		0.761			0.924			0.698			0.801		0.965

CONTROL : 4-Way Stop

ITM Peak Hour Summary

Prepared by:

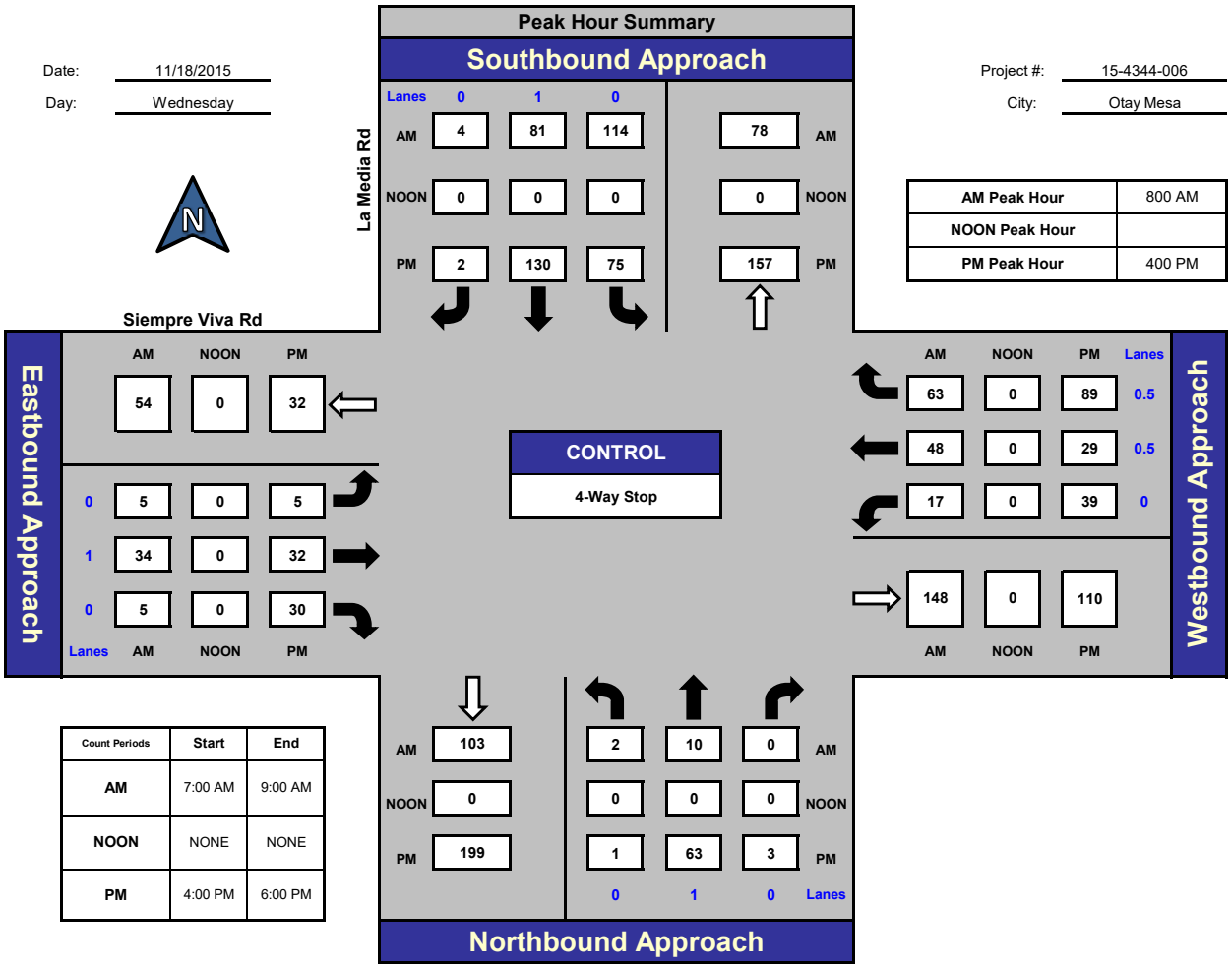
National Data & Surveying Services

La Media Rd and Siempre Viva Rd , Otay Mesa

Date: 11/18/2015
Day: Wednesday

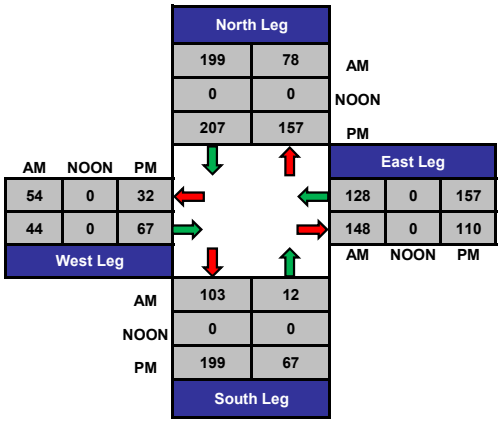
Project #: 15-4344-006
City: Otay Mesa

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

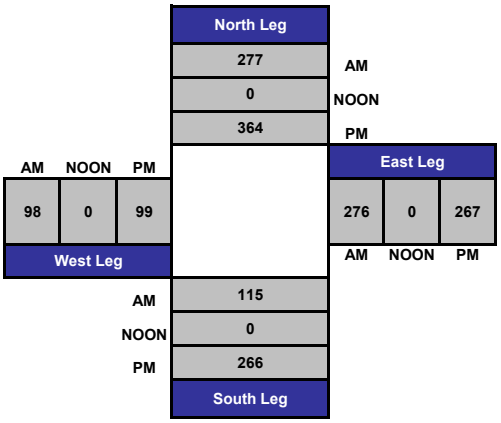


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-002 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

AM

NS/EW Streets:	SR 125 SB Ramps			SR 125 SB Ramps			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	2	0	1	0	3	0	0	3	0	
7:00 AM	0	0	0	88	0	75	0	100	0	0	23	0	286
7:15 AM	0	0	0	114	0	106	0	102	0	0	17	0	339
7:30 AM	0	0	0	103	0	113	0	120	0	0	22	0	358
7:45 AM	0	0	0	142	0	108	0	108	0	0	26	0	384
8:00 AM	0	0	0	81	0	97	0	102	0	0	24	0	304
8:15 AM	0	0	0	78	0	85	0	85	0	0	22	0	270
8:30 AM	0	0	0	57	0	71	0	58	0	0	28	0	214
8:45 AM	0	0	0	56	0	88	0	71	0	0	43	0	258
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	719	0	743	0	746	0	0	205	0	2413
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	49.18%	0.00%	50.82%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	440	0	424	0	432	0	0	89	0	1385
PEAK HR FACTOR :		0.000			0.864			0.900			0.856		0.902

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-002 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

PM

NS/EW Streets:	SR 125 SB Ramps			SR 125 SB Ramps			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	2	0	1	0	3	0	0	3	0	
4:00 PM	0	0	0	32	0	42	0	103	0	0	89	0	266
4:15 PM	0	0	0	34	0	64	0	93	0	0	83	0	274
4:30 PM	0	0	0	27	0	60	0	115	0	0	67	0	269
4:45 PM	0	0	0	27	0	56	0	114	0	0	35	0	232
5:00 PM	0	0	0	19	0	54	0	124	0	0	40	0	237
5:15 PM	0	0	0	24	0	62	0	124	0	0	46	0	256
5:30 PM	0	0	0	24	0	50	0	102	0	0	38	0	214
5:45 PM	0	0	0	21	0	37	0	99	0	0	32	0	189
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	208	0	425	0	874	0	0	430	0	1937
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	32.86%	0.00%	67.14%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	120	0	222	0	425	0	0	274	0	1041
PEAK HR FACTOR :		0.000			0.872			0.924			0.770		0.950

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

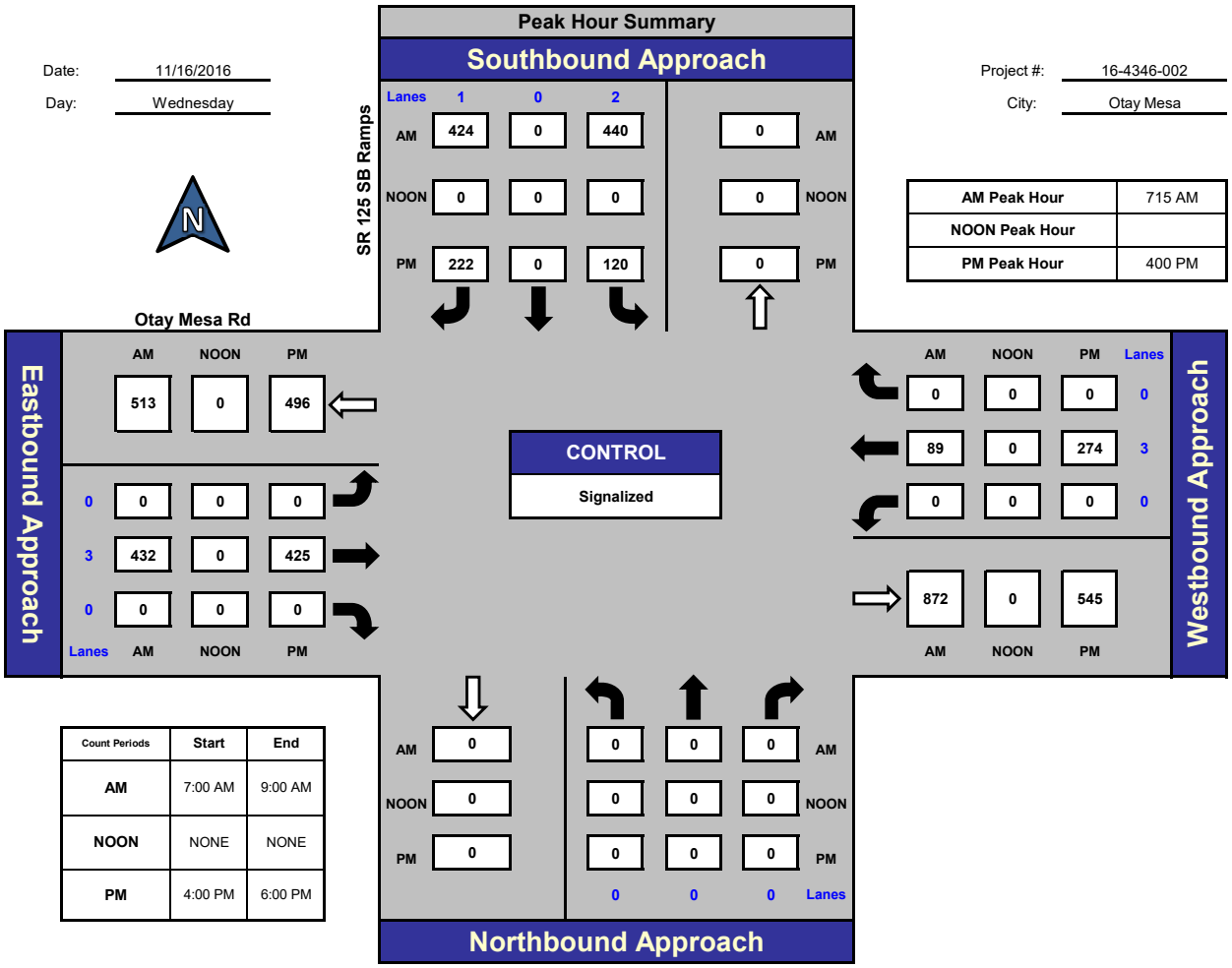
National Data & Surveying Services

SR 125 SB Ramps and Otay Mesa Rd , Otay Mesa

Date: 11/16/2016
Day: Wednesday

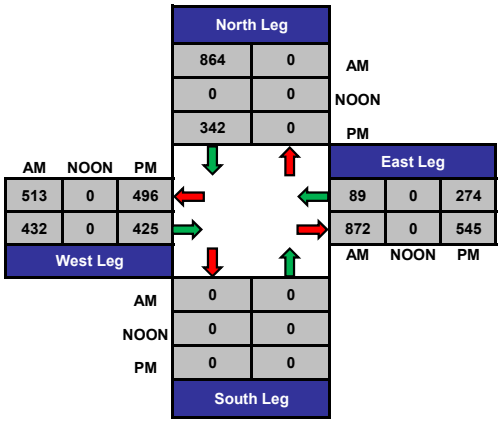
Project #: 16-4346-002
City: Otay Mesa

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	400 PM

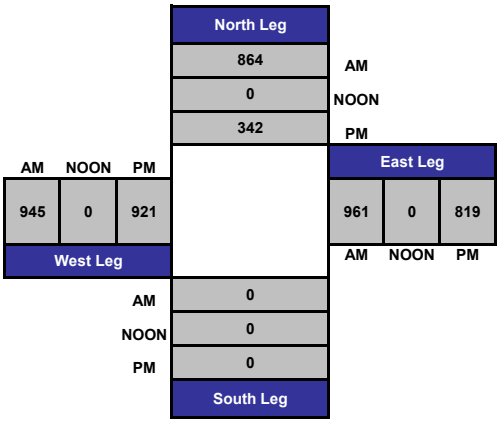


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-001 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

AM

NS/EW Streets:	SR 125 NB Ramps			SR 125 NB Ramps			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	0	0	1	2	0	0	1.5	1.5	
7:00 AM	0	0	0	0	0	0	53	138	0	0	22	12	225
7:15 AM	0	0	0	0	0	0	35	178	0	0	17	20	250
7:30 AM	0	0	0	0	0	0	45	177	0	0	24	13	259
7:45 AM	0	0	0	0	0	0	50	204	0	0	26	12	292
8:00 AM	0	0	0	0	0	0	55	129	0	0	23	19	226
8:15 AM	0	0	0	0	0	0	47	118	0	0	21	16	202
8:30 AM	0	0	0	0	0	0	24	89	0	0	34	25	172
8:45 AM	0	0	0	0	0	0	33	93	0	0	40	21	187
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	342	1126	0	0	207	138	1813
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	23.30%	76.70%	0.00%	0.00%	60.00%	40.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	185	688	0	0	90	64	1027
PEAK HR FACTOR :		0.000			0.000			0.859			0.917		0.879

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-4346-001 **Day:** Wednesday

City: Otay Mesa **Date:** 11/16/2016

PM

NS/EW Streets:	SR 125 NB Ramps			SR 125 NB Ramps			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	0	0	1	2	0	0	1.5	1.5	
4:00 PM	0	0	0	0	0	0	73	63	0	0	92	122	350
4:15 PM	0	0	0	0	0	0	66	58	0	0	76	77	277
4:30 PM	0	0	0	0	0	0	82	58	0	0	73	93	306
4:45 PM	0	0	0	0	0	0	94	50	0	0	35	70	249
5:00 PM	0	0	0	0	0	0	95	48	0	0	36	106	285
5:15 PM	0	0	0	0	0	0	100	52	0	0	47	55	254
5:30 PM	0	0	0	0	0	0	79	46	0	0	38	54	217
5:45 PM	0	0	0	0	0	0	78	40	0	0	33	72	223
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	667	415	0	0	430	649	2161
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	61.65%	38.35%	0.00%	0.00%	39.85%	60.15%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	315	229	0	0	276	362	1182
PEAK HR FACTOR :		0.000			0.000			0.944			0.745		0.844

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

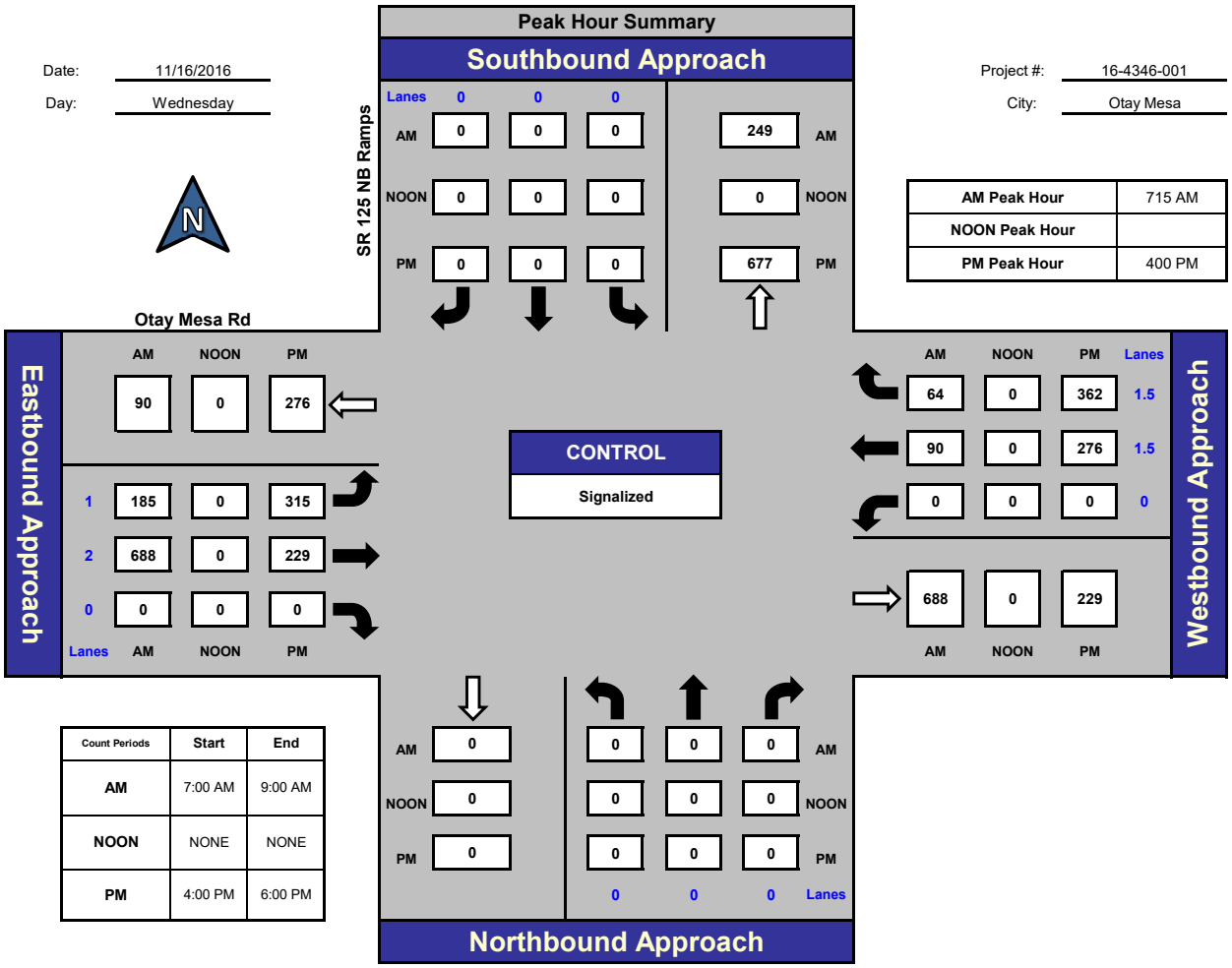
National Data & Surveying Services

SR 125 NB Ramps and Otay Mesa Rd , Otay Mesa

Date: 11/16/2016
Day: Wednesday

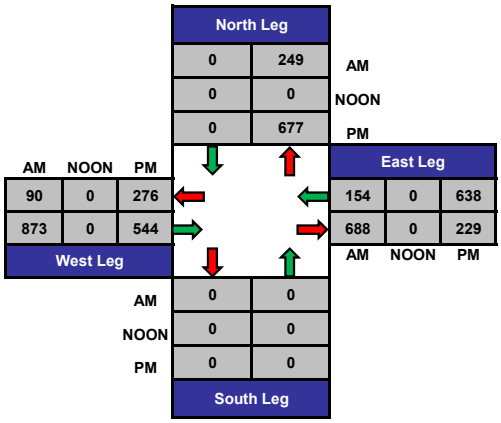
Project #: 16-4346-001
City: Otay Mesa

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	400 PM

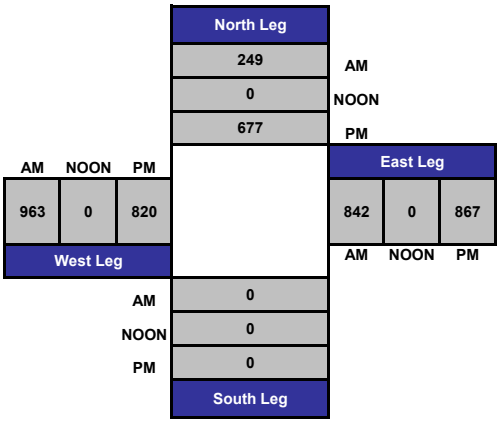


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-009 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	I-905 SB Ramps			I-905 SB Ramps			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	2	0	0	0	0	3	0	2	3	0	
7:00 AM	0	0	107	0	0	0	0	59	17	25	128	0	336
7:15 AM	0	0	130	0	0	0	4	60	11	22	139	0	366
7:30 AM	0	0	139	0	0	0	0	60	13	27	184	0	423
7:45 AM	0	0	175	0	0	0	0	68	58	33	199	0	533
8:00 AM	0	0	130	0	0	0	0	59	26	17	185	0	417
8:15 AM	0	0	118	0	0	0	0	74	30	21	168	0	411
8:30 AM	0	0	90	0	0	0	0	80	31	29	182	0	412
8:45 AM	0	0	99	0	0	0	0	95	38	29	156	0	417
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	988	0	0	0	4	555	224	203	1341	0	3315
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.51%	70.88%	28.61%	13.15%	86.85%	0.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	562	0	0	0	0	261	127	98	736	0	1784
PEAK HR FACTOR :		0.803			0.000			0.770			0.899		0.837

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-009 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	I-905 SB Ramps			I-905 SB Ramps			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	2	0	0	0	0	3	0	2	3	0	
4:00 PM	0	0	88	0	0	0	0	126	50	50	166	0	480
4:15 PM	0	0	67	0	0	0	0	148	57	59	161	0	492
4:30 PM	0	0	75	0	0	0	0	149	67	41	201	0	533
4:45 PM	0	0	60	0	0	0	0	121	70	55	168	0	474
5:00 PM	0	0	69	0	0	0	0	151	84	64	149	0	517
5:15 PM	0	0	68	0	0	0	0	127	65	52	147	0	459
5:30 PM	0	0	62	0	0	0	0	123	56	45	151	0	437
5:45 PM	0	0	68	0	0	0	0	98	59	41	116	0	382
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	557	0	0	0	0	1043	508	407	1259	0	3774
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	67.25%	32.75%	24.43%	75.57%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	0	271	0	0	0	0	569	278	219	679	0	2016
PEAK HR FACTOR :		0.903			0.000			0.901			0.928		0.946

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

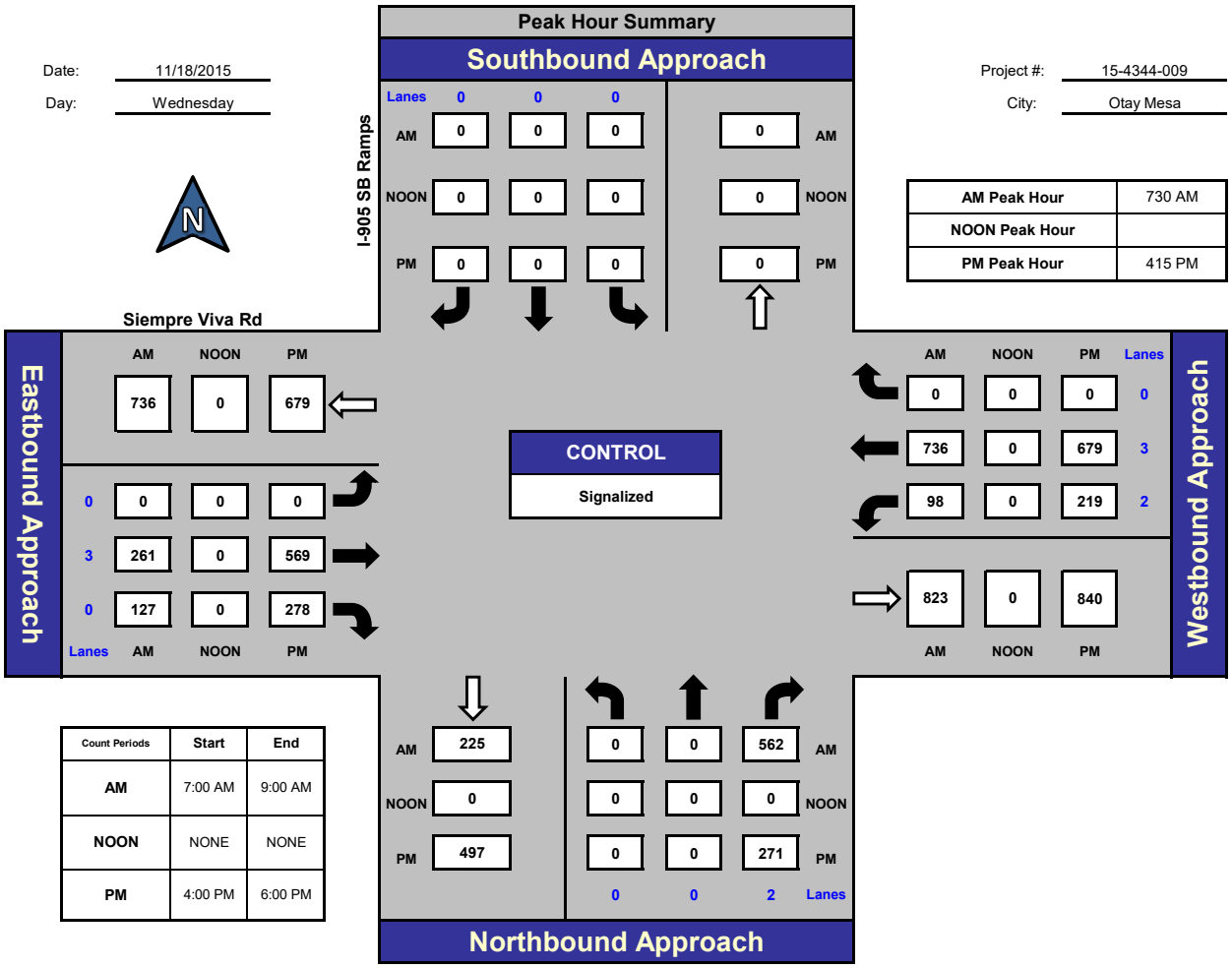
National Data & Surveying Services

I-905 SB Ramps and Siempre Viva Rd , Otay Mesa

Date: 11/18/2015
Day: Wednesday

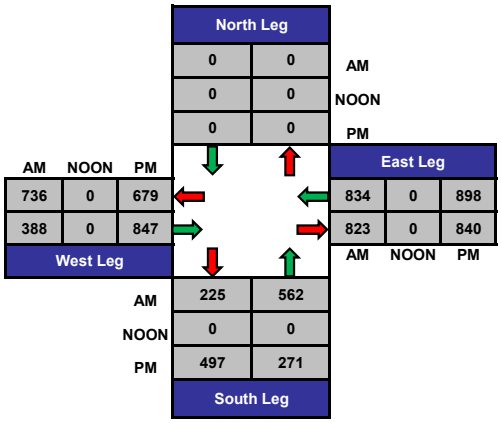
Project #: 15-4344-009
City: Otay Mesa

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	415 PM

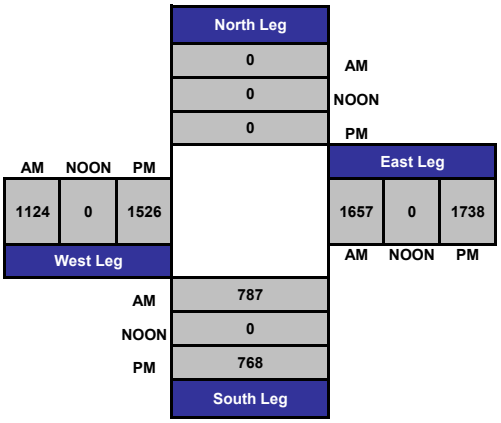


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-109 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	I-905 SB Off-Ramp			I-905 SB Off-Ramp			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	0	1	0	3	0	0	3	0	
7:00 AM	0	0	0	0	0	56	0	0	0	0	0	0	56
7:15 AM	0	0	0	0	0	69	0	0	0	0	0	0	69
7:30 AM	0	0	0	0	0	99	0	0	0	0	0	0	99
7:45 AM	0	0	0	0	0	109	0	0	0	0	0	0	109
8:00 AM	0	0	0	0	0	65	0	0	0	0	0	0	65
8:15 AM	0	0	0	0	0	76	0	0	0	0	0	0	76
8:30 AM	0	0	0	0	0	78	0	0	0	0	0	0	78
8:45 AM	0	0	0	0	0	46	0	0	0	0	0	0	46
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	598	0	0	0	0	0	0	598
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	349	0	0	0	0	0	0	349
PEAK HR FACTOR :		0.000			0.800			0.000			0.000		0.800

CONTROL : 1-Way Stop (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-109 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	I-905 SB Off-Ramp			I-905 SB Off-Ramp			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	0	1	0	3	0	0	3	0	
4:00 PM	0	0	0	0	0	78	0	0	0	0	0	0	78
4:15 PM	0	0	0	0	0	68	0	0	0	0	0	0	68
4:30 PM	0	0	0	0	0	88	0	0	0	0	0	0	88
4:45 PM	0	0	0	0	0	88	0	0	0	0	0	0	88
5:00 PM	0	0	0	0	0	68	0	0	0	0	0	0	68
5:15 PM	0	0	0	0	0	85	0	0	0	0	0	0	85
5:30 PM	0	0	0	0	0	70	0	0	0	0	0	0	70
5:45 PM	0	0	0	0	0	55	0	0	0	0	0	0	55
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	600	0	0	0	0	0	0	600
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	329	0	0	0	0	0	0	329
PEAK HR FACTOR :		0.000			0.935			0.000			0.000		0.935

CONTROL : 1-Way Stop (SB)

ITM Peak Hour Summary

Prepared by:

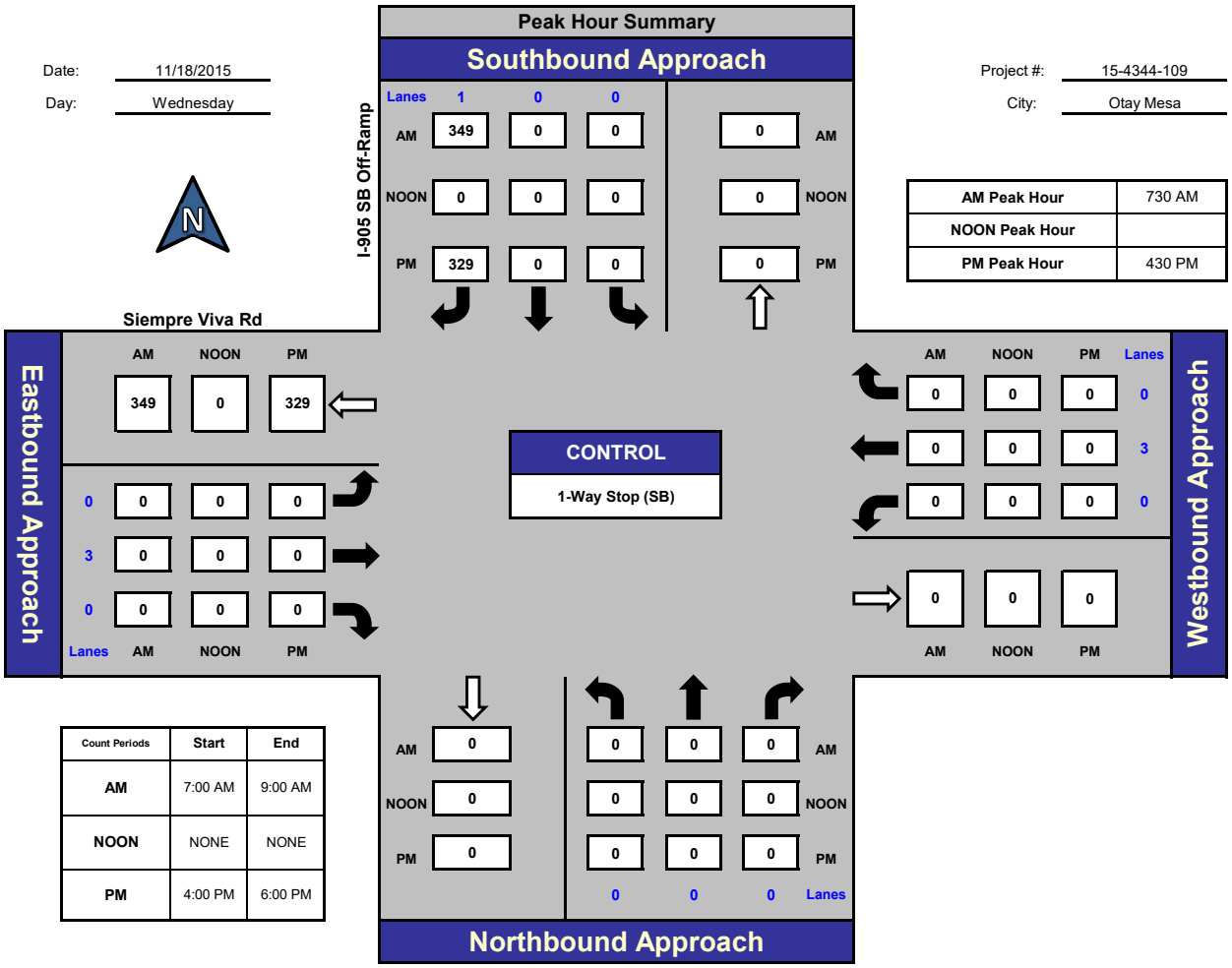
National Data & Surveying Services

I-905 SB Off-Ramp and Siempre Viva Rd , Otay Mesa

Date: 11/18/2015
Day: Wednesday

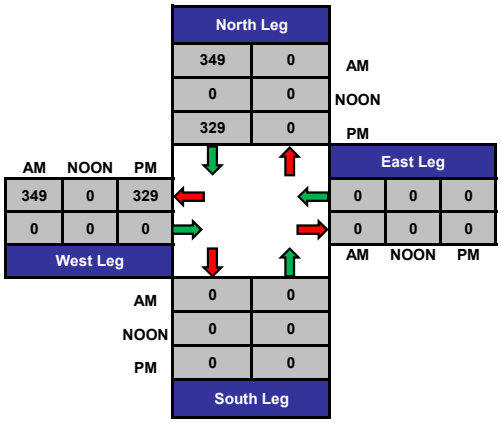
Project #: 15-4344-109
City: Otay Mesa

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

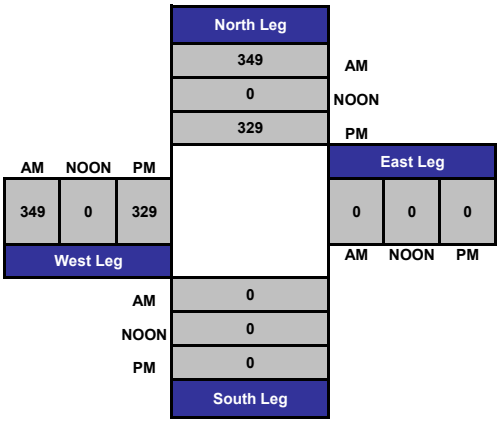


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-010 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	I-905 NB Ramps			I-905 NB Ramps			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	2	0	0	0	2	3	0	0	2.5	1.5	
7:00 AM	35	0	55	0	0	0	23	139	0	0	53	92	397
7:15 AM	38	0	87	0	0	0	26	153	0	0	58	101	463
7:30 AM	42	0	71	0	0	0	27	193	0	0	65	101	499
7:45 AM	51	0	91	0	0	0	24	198	0	0	77	95	536
8:00 AM	60	0	96	0	0	0	33	180	0	0	76	82	527
8:15 AM	47	0	73	0	0	0	25	151	0	0	62	106	464
8:30 AM	56	0	88	0	0	0	33	155	0	0	71	119	522
8:45 AM	45	0	94	0	0	0	25	151	0	0	97	115	527
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	374	0	655	0	0	0	216	1320	0	0	559	811	3935
APPROACH %'s :	36.35%	0.00%	63.65%	#DIV/0!	#DIV/0!	#DIV/0!	14.06%	85.94%	0.00%	0.00%	40.80%	59.20%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	214	0	348	0	0	0	115	684	0	0	286	402	2049
PEAK HR FACTOR :		0.901			0.000			0.900			0.905		0.956

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-010 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	I-905 NB Ramps			I-905 NB Ramps			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	2	0	0	0	2	3	0	0	2.5	1.5	
4:00 PM	14	0	52	0	0	0	65	149	0	0	126	186	592
4:15 PM	12	0	61	0	0	0	79	142	0	0	136	178	608
4:30 PM	16	1	66	0	0	0	114	107	0	1	135	175	615
4:45 PM	22	0	68	0	0	0	79	110	0	0	121	169	569
5:00 PM	12	0	42	0	0	0	111	94	0	0	129	212	600
5:15 PM	20	0	61	0	0	0	78	130	0	0	103	204	596
5:30 PM	16	0	40	0	0	0	80	110	0	0	95	181	522
5:45 PM	12	1	50	0	0	0	78	87	0	0	97	155	480
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	124	2	440	0	0	0	684	929	0	1	942	1460	4582
APPROACH %'s :	21.91%	0.35%	77.74%	#DIV/0!	#DIV/0!	#DIV/0!	42.41%	57.59%	0.00%	0.04%	39.20%	60.76%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	62	1	237	0	0	0	383	453	0	1	521	734	2392
PEAK HR FACTOR :		0.833			0.000			0.946			0.921		0.972

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

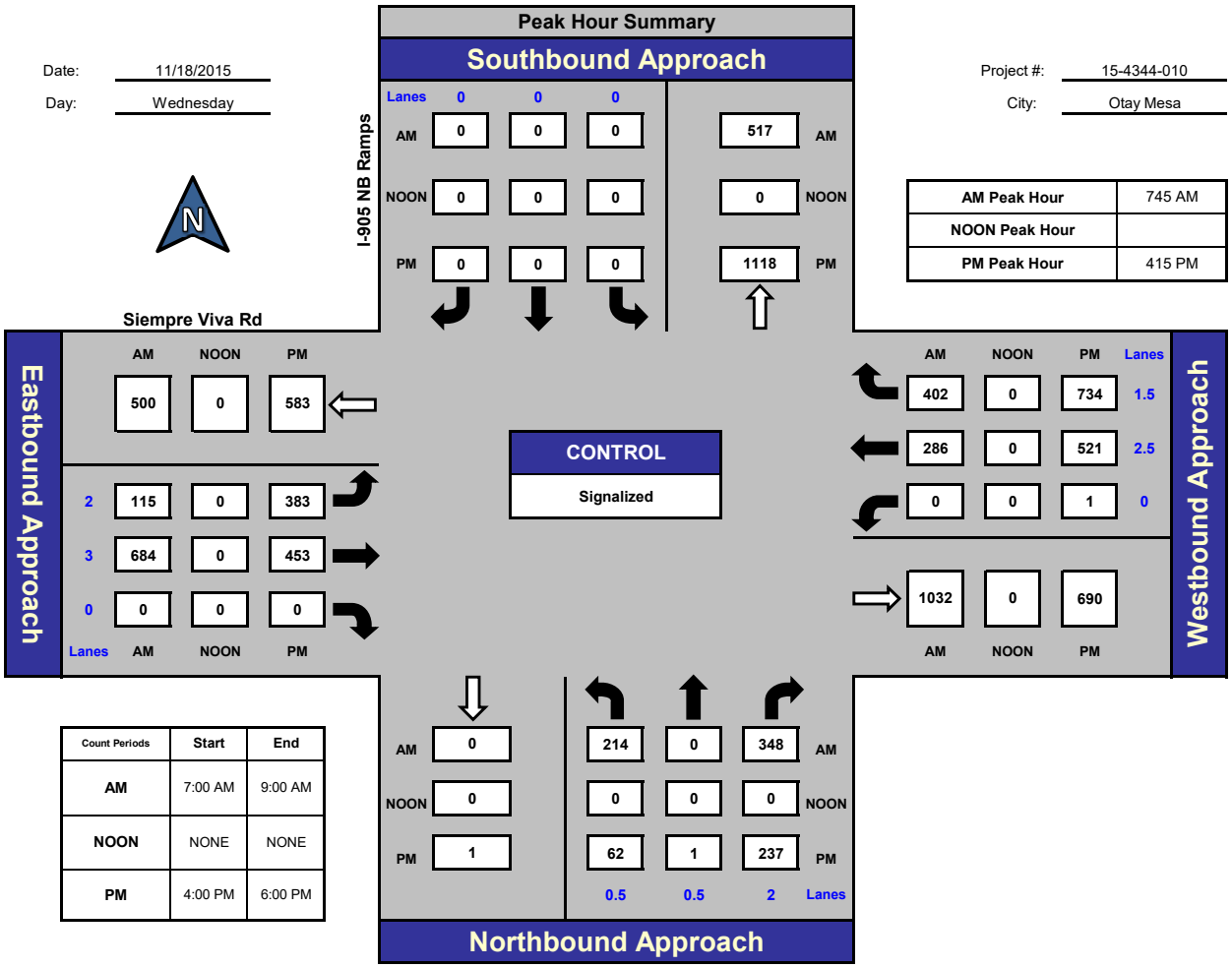
National Data & Surveying Services

I-905 NB Ramps and Siempre Viva Rd , Otay Mesa

Date: 11/18/2015
Day: Wednesday

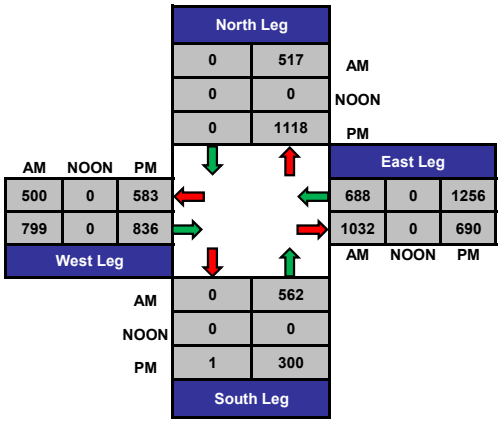
Project #: 15-4344-010
City: Otay Mesa

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	415 PM

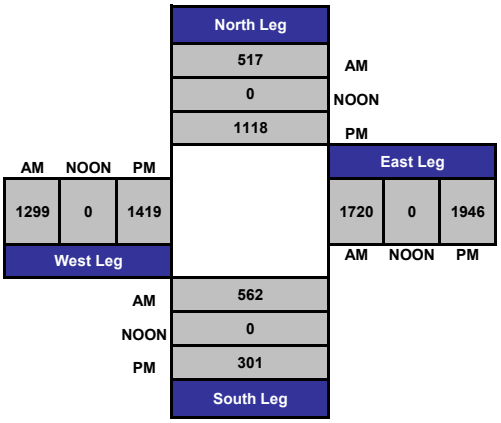


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-011 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Otay Center Dr			Otay Center Dr			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	0.5	1	0.5	1	3	0	1	3	0	
7:00 AM	14	9	33	23	8	8	4	22	7	36	57	25	246
7:15 AM	12	14	25	20	21	11	4	17	9	58	50	31	272
7:30 AM	10	8	25	24	24	13	4	24	1	63	97	34	327
7:45 AM	11	5	50	36	12	17	7	28	5	64	100	38	373
8:00 AM	14	6	23	27	16	24	8	32	8	68	74	33	333
8:15 AM	8	8	25	36	6	24	3	34	8	49	95	34	330
8:30 AM	14	4	36	28	16	16	2	43	5	49	92	36	341
8:45 AM	10	7	43	43	11	23	6	48	5	46	72	32	346
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	93	61	260	237	114	136	38	248	48	433	637	263	2568
APPROACH %'s :	22.46%	14.73%	62.80%	48.67%	23.41%	27.93%	11.38%	74.25%	14.37%	32.48%	47.79%	19.73%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	47	23	134	127	50	81	20	137	26	230	361	141	1377
PEAK HR FACTOR :		0.773			0.963			0.915			0.906		0.923

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-011 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Otay Center Dr			Otay Center Dr			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	0.5	1	0.5	1	3	0	1	3	0	
4:00 PM	4	8	55	49	18	15	14	71	5	42	77	36	394
4:15 PM	10	9	80	44	22	18	6	83	13	49	87	37	458
4:30 PM	2	13	73	51	15	24	11	70	11	69	70	55	464
4:45 PM	15	13	54	47	20	14	17	98	10	60	64	39	451
5:00 PM	13	13	65	43	28	21	15	105	15	60	56	45	479
5:15 PM	12	9	67	55	17	20	11	66	13	53	53	35	411
5:30 PM	9	12	58	49	16	9	9	62	7	56	53	31	371
5:45 PM	8	13	48	40	15	14	11	70	10	51	43	30	353
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	73	90	500	378	151	135	94	625	84	440	503	308	3381
APPROACH %'s :	11.01%	13.57%	75.41%	56.93%	22.74%	20.33%	11.71%	77.83%	10.46%	35.17%	40.21%	24.62%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	40	48	272	185	85	77	49	356	49	238	277	176	1852
PEAK HR FACTOR :		0.909			0.943			0.841			0.890		0.967

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

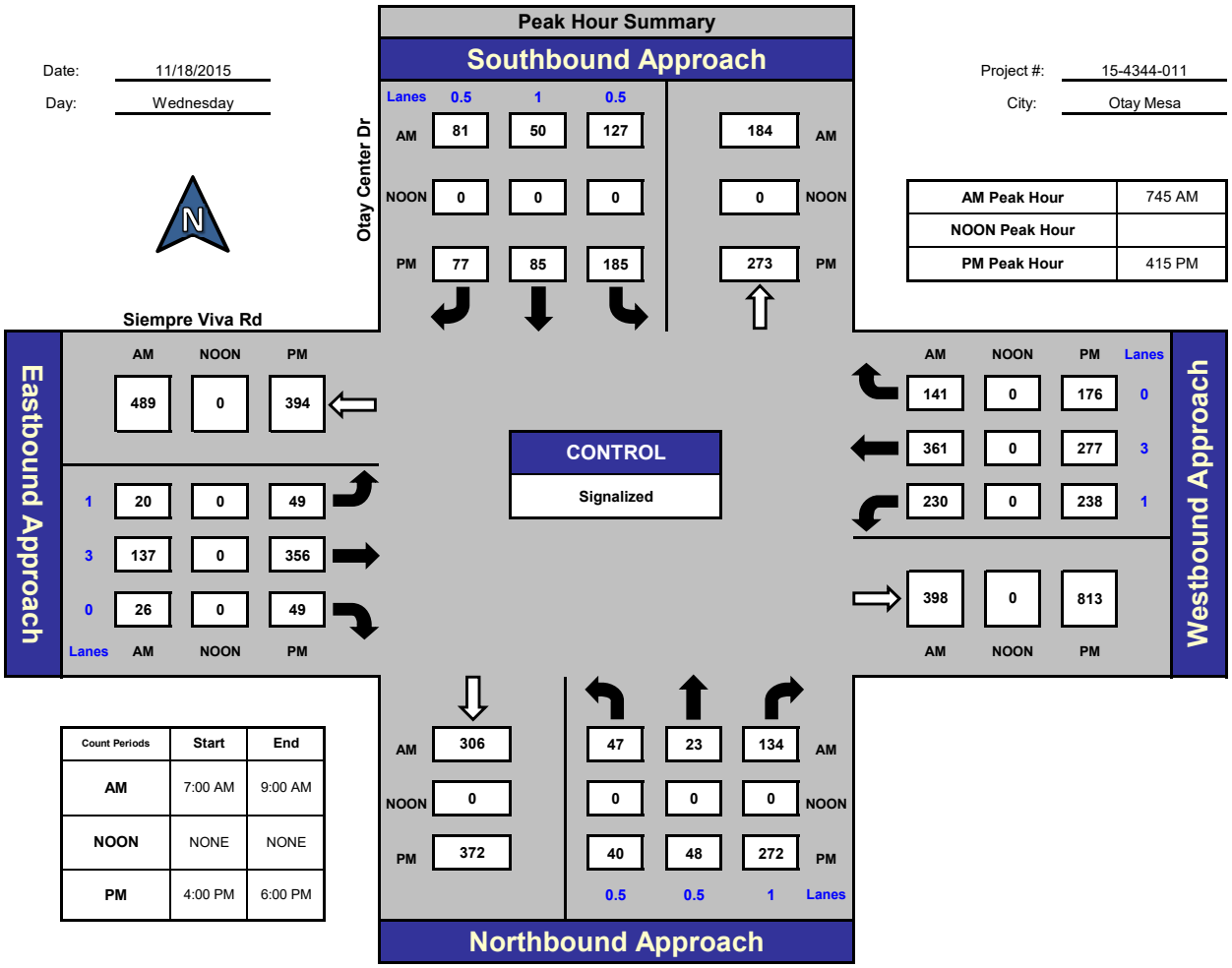
National Data & Surveying Services

Otay Center Dr and Siempre Viva Rd , Otay Mesa

Date: 11/18/2015
Day: Wednesday

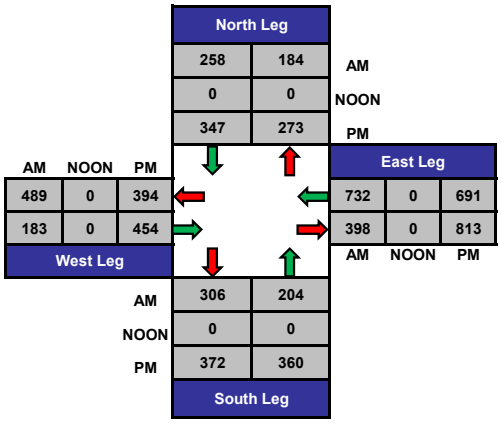
Project #: 15-4344-011
City: Otay Mesa

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	415 PM

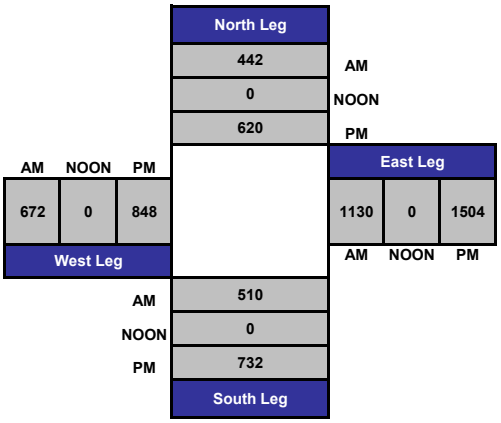


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-012 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Harvest Rd			Harvest Rd			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	1	2	0	
7:00 AM	8	0	9	2	0	0	1	24	11	17	12	1	85
7:15 AM	14	0	4	4	0	0	1	36	6	10	15	2	92
7:30 AM	17	0	8	1	0	0	0	23	12	13	16	2	92
7:45 AM	11	0	8	0	2	0	0	21	14	21	24	0	101
8:00 AM	26	0	18	0	0	0	1	33	12	22	19	0	131
8:15 AM	19	0	7	0	0	0	0	16	17	18	18	0	95
8:30 AM	14	0	7	2	0	0	0	21	9	10	25	3	91
8:45 AM	34	0	6	2	0	0	1	25	37	11	18	0	134
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	143	0	67	11	2	0	4	199	118	122	147	8	821
APPROACH %'s :	68.10%	0.00%	31.90%	84.62%	15.38%	0.00%	1.25%	61.99%	36.76%	44.04%	53.07%	2.89%	

PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	93	0	38	4	0	0	2	95	75	61	80	3	451
PEAK HR FACTOR :		0.744			0.500			0.683			0.878		0.841

CONTROL : 3-Way Stop (NB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-012 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Harvest Rd			Harvest Rd			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	1	2	0	
4:00 PM	22	0	15	0	0	0	0	24	38	33	41	0	173
4:15 PM	15	0	9	0	1	0	0	31	27	13	34	0	130
4:30 PM	14	0	7	0	0	0	0	22	36	25	37	0	141
4:45 PM	15	0	19	0	0	0	0	26	39	26	36	0	161
5:00 PM	7	0	16	0	0	0	0	26	27	21	35	1	133
5:15 PM	7	0	10	0	0	0	1	20	26	11	23	0	98
5:30 PM	15	0	8	0	0	0	2	12	22	8	17	1	85
5:45 PM	9	2	9	0	2	0	0	12	12	7	10	0	63
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	104	2	93	0	3	0	3	173	227	144	233	2	984
APPROACH %'s :	52.26%	1.01%	46.73%	0.00%	100.00%	0.00%	0.74%	42.93%	56.33%	37.99%	61.48%	0.53%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	66	0	50	0	1	0	0	103	140	97	148	0	605
PEAK HR FACTOR :		0.784			0.250			0.935			0.828		0.874

CONTROL : 3-Way Stop (NB/EB/WB)

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Harvest Rd and Airway Rd , Otay Mesa

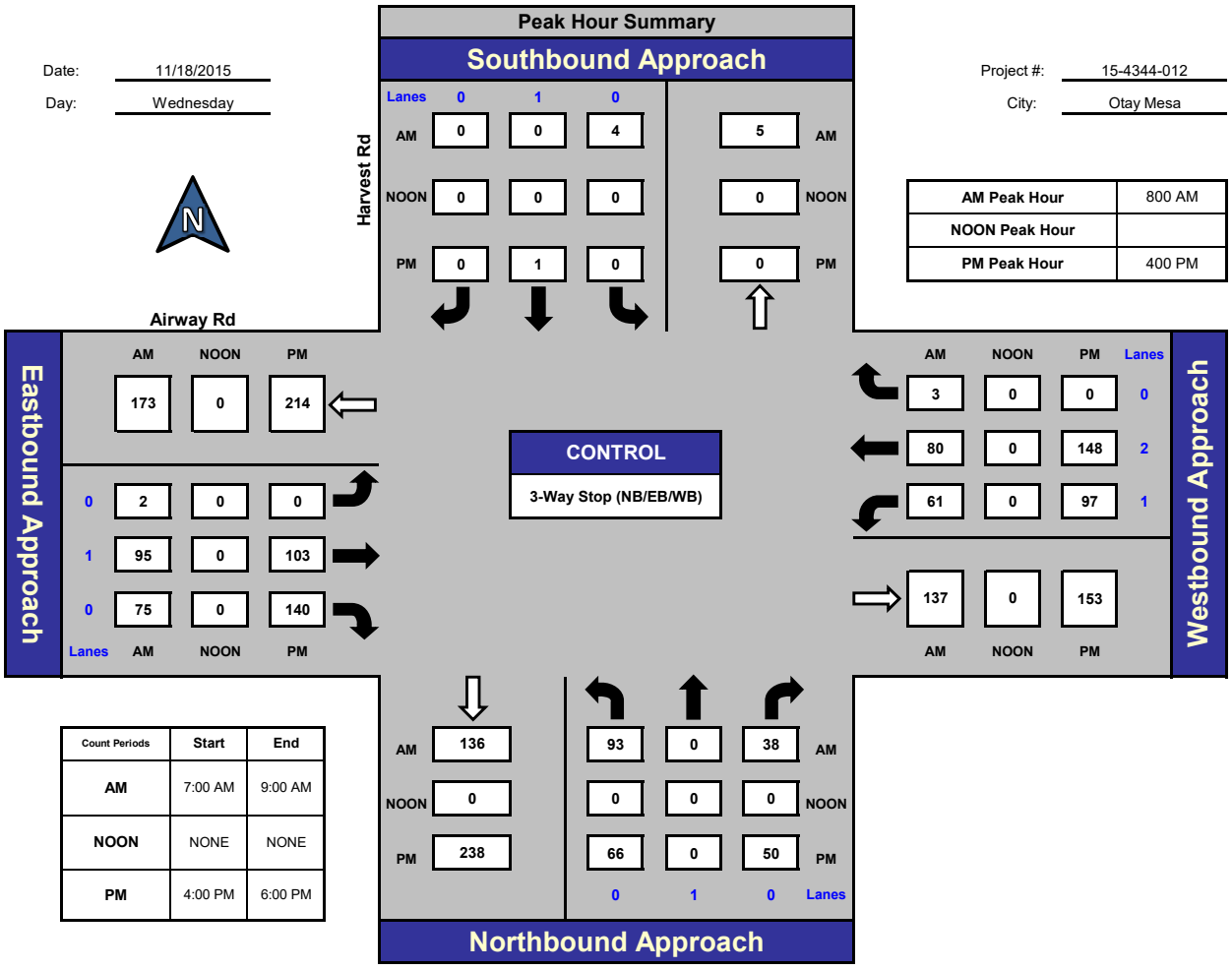
Date: 11/18/2015

Day: Wednesday

Project #: 15-4344-012

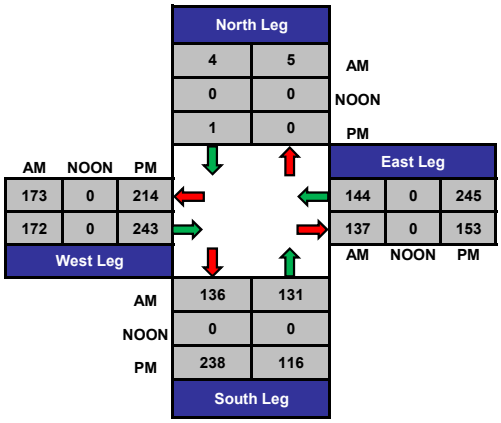
City: Otay Mesa

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

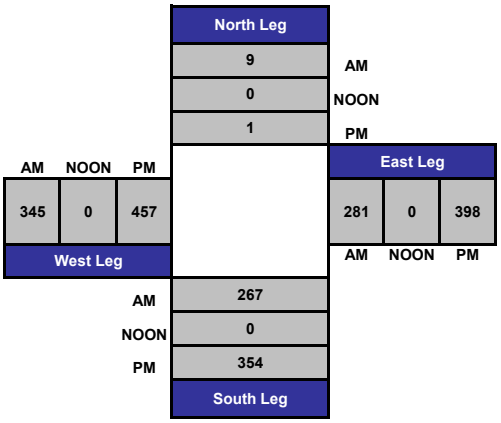


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-013 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Customhouse Plaza/Harvest Rd			Customhouse Plaza/Harvest Rd			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	1	0	1	3	0	1	3	0	
7:00 AM	1	0	0	0	0	1	8	30	2	6	86	0	134
7:15 AM	5	0	1	1	0	4	4	31	6	7	56	0	115
7:30 AM	3	0	3	0	1	3	5	31	4	10	119	0	179
7:45 AM	2	0	7	0	0	4	7	32	7	21	102	0	182
8:00 AM	6	0	3	0	0	4	6	37	4	16	101	1	178
8:15 AM	7	0	3	0	0	3	5	47	2	24	95	1	187
8:30 AM	8	0	3	0	0	5	5	43	7	29	100	0	200
8:45 AM	8	0	13	0	0	3	12	53	10	13	86	2	200
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	40	0	33	1	1	27	52	304	42	126	745	4	1375
APPROACH %'s :	54.79%	0.00%	45.21%	3.45%	3.45%	93.10%	13.07%	76.38%	10.55%	14.40%	85.14%	0.46%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	29	0	22	0	0	15	28	180	23	82	382	4	765
PEAK HR FACTOR :		0.607			0.750			0.770			0.907		0.956

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-013 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Customhouse Plaza/Harvest Rd			Customhouse Plaza/Harvest Rd			Siempre Viva Rd			Siempre Viva Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	1	0	1	3	0	1	3	0	
4:00 PM	10	0	6	2	0	3	6	83	6	8	75	2	201
4:15 PM	8	0	3	0	0	1	7	105	1	13	111	0	249
4:30 PM	7	0	4	0	0	1	9	79	9	16	77	0	202
4:45 PM	11	0	6	0	1	6	1	132	6	15	82	0	260
5:00 PM	4	0	9	0	0	5	10	117	10	18	71	0	244
5:15 PM	7	0	5	0	0	2	2	89	15	7	76	0	203
5:30 PM	9	0	1	1	0	4	14	68	6	5	72	0	180
5:45 PM	7	0	3	0	0	1	4	99	6	9	51	0	180
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	63	0	37	3	1	23	53	772	59	91	615	2	1719
APPROACH %'s :	63.00%	0.00%	37.00%	11.11%	3.70%	85.19%	6.00%	87.33%	6.67%	12.85%	86.86%	0.28%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	30	0	22	0	1	13	27	433	26	62	341	0	955
PEAK HR FACTOR :		0.765			0.500			0.874			0.813		0.918

CONTROL : Signalized

ITM Peak Hour Summary

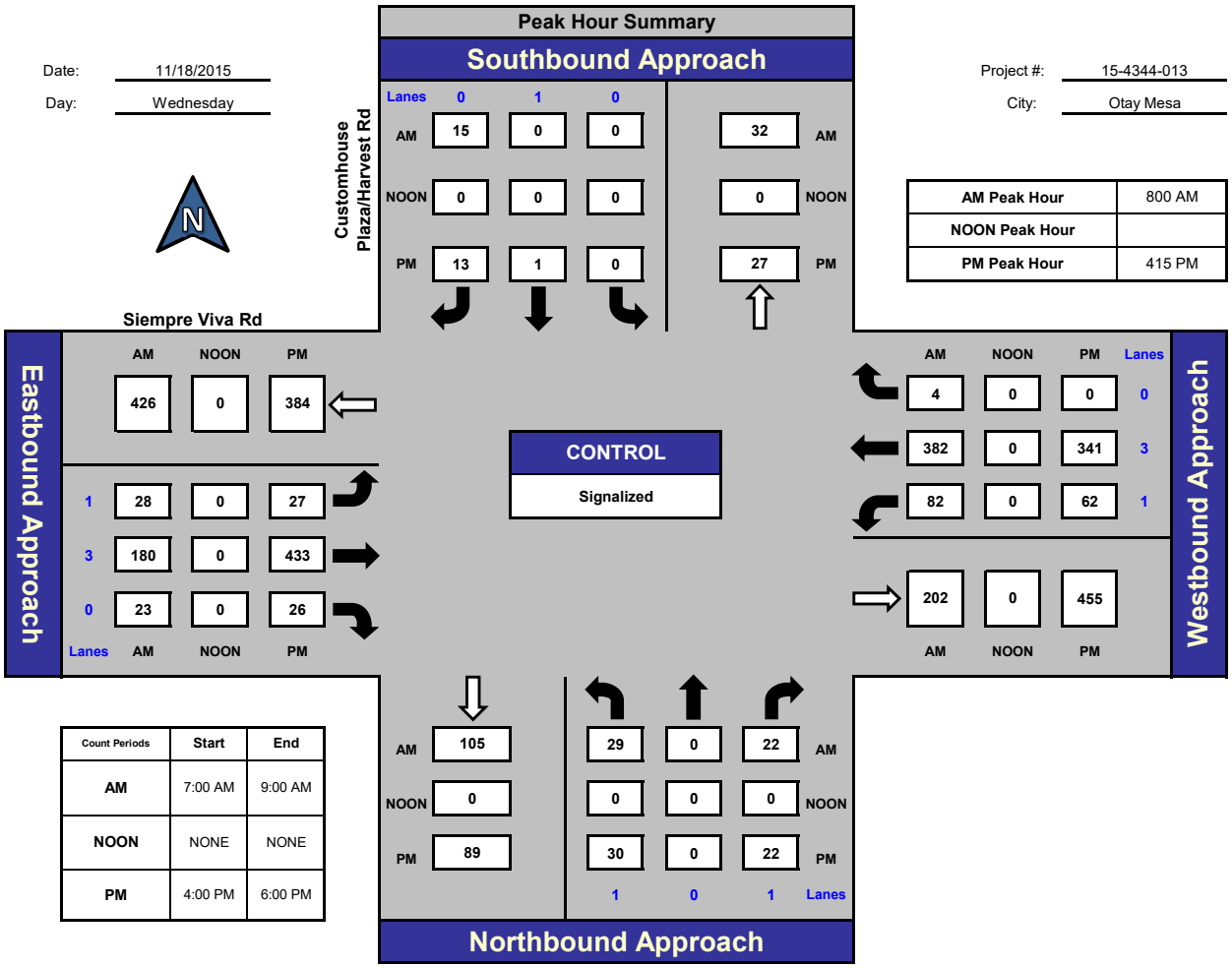
Prepared by:

National Data & Surveying Services

Customhouse Plaza/Harvest Rd and Siempre Viva Rd , Otay Mesa

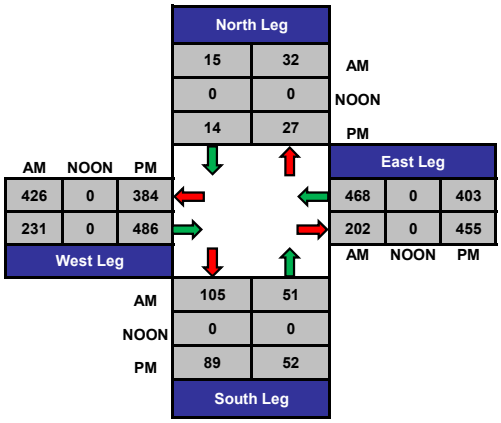
Date: 11/18/2015
Day: Wednesday
Project #: 15-4344-013
City: Otay Mesa

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

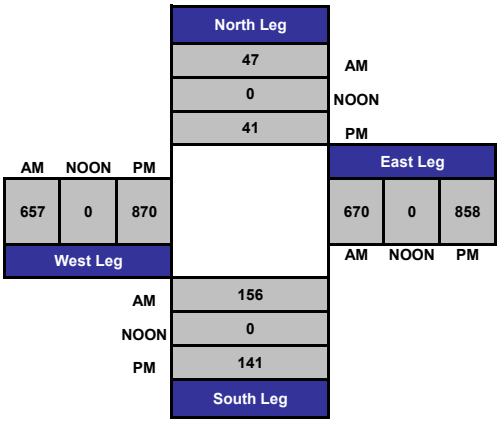


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-4014-003 **Day:** Wednesday

City: Otay Mesa **Date:** 1/18/2017

AM

NS/EW Streets:	Britannia Blvd			Britannia Blvd			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	0	1	0	0	0	0	3	1	1	3	0	
7:00 AM	32	0	45	0	0	0	0	25	30	28	28	0	188
7:15 AM	26	0	67	0	0	0	0	23	18	36	40	0	210
7:30 AM	35	0	50	0	0	0	0	30	19	39	29	0	202
7:45 AM	39	0	87	0	0	0	0	36	30	43	52	0	287
8:00 AM	55	0	52	0	0	0	0	29	25	42	45	0	248
8:15 AM	53	0	48	0	0	0	0	39	32	38	46	0	256
8:30 AM	63	0	40	0	0	0	0	22	26	40	41	0	232
8:45 AM	65	0	40	0	0	0	0	38	33	28	45	0	249
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	368	0	429	0	0	0	0	242	213	294	326	0	1872
APPROACH %'s :	46.17%	0.00%	53.83%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	53.19%	46.81%	47.42%	52.58%	0.00%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	210	0	227	0	0	0	0	126	113	163	184	0	1023
PEAK HR FACTOR :		0.867			0.000			0.842			0.913		0.891

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-4014-003 **Day:** Wednesday

City: Otay Mesa **Date:** 1/18/2017

PM

NS/EW Streets:	Britannia Blvd			Britannia Blvd			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	0	1	0	0	0	0	3	1	1	3	0	
4:00 PM	69	0	47	0	0	0	0	71	75	48	64	0	374
4:15 PM	70	0	44	0	0	0	0	57	71	36	70	0	348
4:30 PM	64	0	47	0	0	0	0	50	71	93	67	0	392
4:45 PM	65	0	46	0	0	0	0	40	75	56	56	0	338
5:00 PM	52	0	41	0	0	0	0	86	99	62	53	0	393
5:15 PM	68	0	35	0	0	0	0	41	67	50	60	0	321
5:30 PM	36	0	37	0	0	0	1	48	62	47	37	0	268
5:45 PM	47	0	27	0	0	0	0	34	51	25	42	0	226
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	471	0	324	0	0	0	1	427	571	417	449	0	2660
APPROACH %'s :	59.25%	0.00%	40.75%	#DIV/0!	#DIV/0!	#DIV/0!	0.10%	42.74%	57.16%	48.15%	51.85%	0.00%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	251	0	178	0	0	0	0	233	316	247	246	0	1471
PEAK HR FACTOR :		0.941			0.000			0.742			0.770		0.936

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

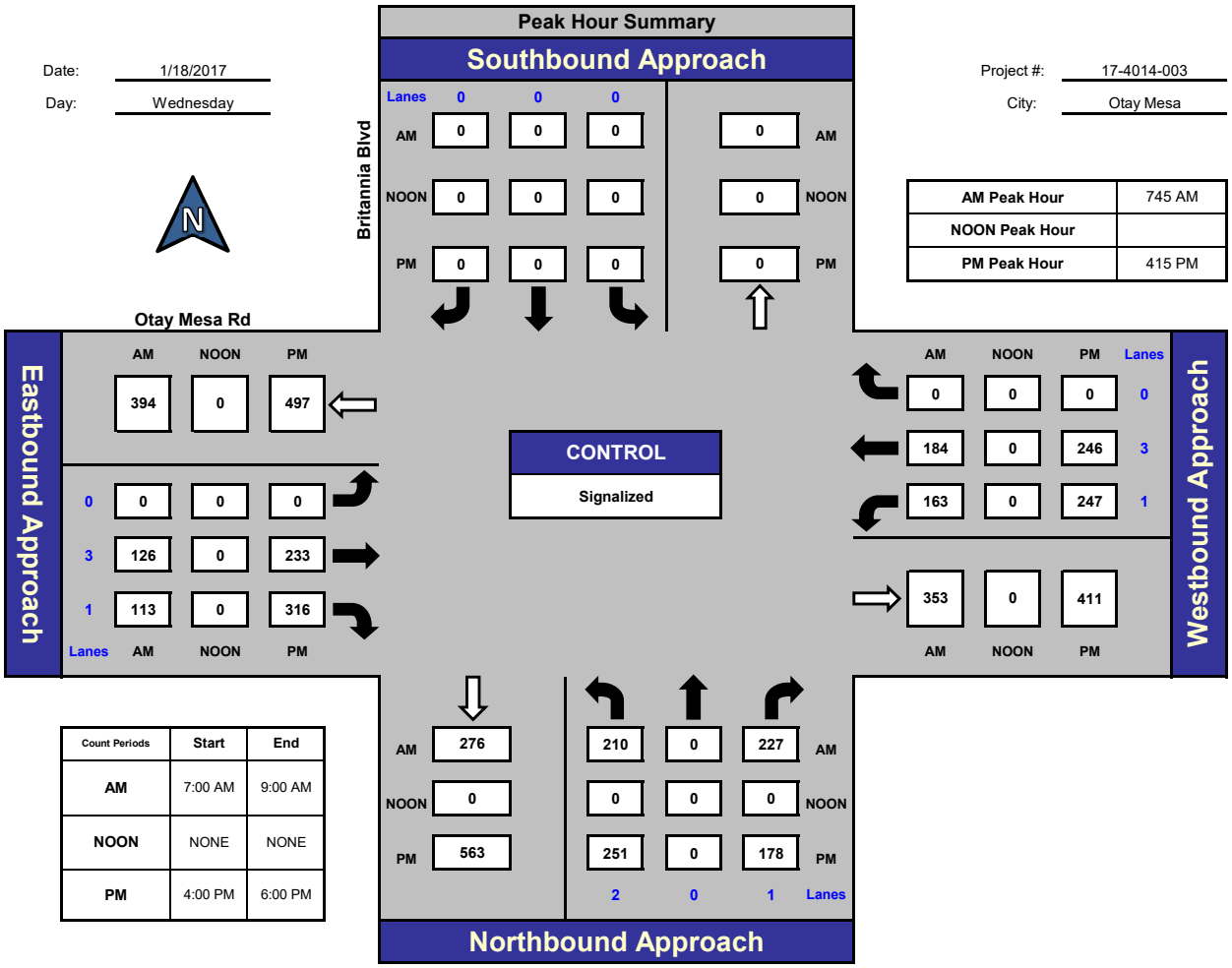
National Data & Surveying Services

Britannia Blvd and Otay Mesa Rd , Otay Mesa

Date: 1/18/2017
Day: Wednesday

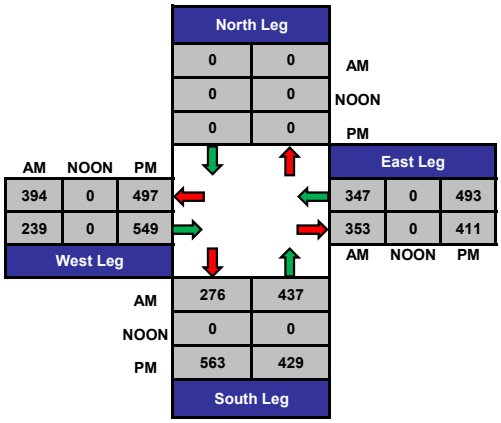
Project #: 17-4014-003
City: Otay Mesa

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	415 PM

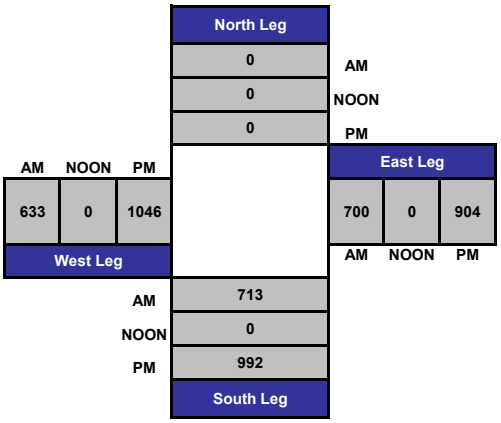


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-015 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Britannia Blvd			Britannia Blvd			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	0.5	0.5	0.5	0.5	1	
7:00 AM	0	14	3	79	68	17	5	1	0	2	1	15	205
7:15 AM	0	28	2	67	72	13	8	2	0	3	3	13	211
7:30 AM	0	21	3	59	57	22	6	1	0	5	2	34	210
7:45 AM	0	33	4	88	86	21	6	1	0	4	5	35	283
8:00 AM	1	38	7	74	79	18	4	2	0	13	4	23	263
8:15 AM	1	29	8	79	69	19	2	3	0	11	5	22	248
8:30 AM	0	28	12	69	54	13	10	4	0	6	3	27	226
8:45 AM	0	32	7	50	60	30	14	3	0	16	4	29	245
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	223	46	565	545	153	55	17	0	60	27	198	1891
APPROACH %'s :	0.74%	82.29%	16.97%	44.73%	43.15%	12.11%	76.39%	23.61%	0.00%	21.05%	9.47%	69.47%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	2	128	31	310	288	71	22	10	0	34	17	107	1020
PEAK HR FACTOR :		0.875			0.858			0.571			0.898		0.901

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-015 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Britannia Blvd			Britannia Blvd			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1	0.5	0.5	0.5	0.5	1	
4:00 PM	0	117	11	47	47	15	33	3	1	8	3	107	392
4:15 PM	1	73	6	58	28	14	32	4	1	6	3	95	321
4:30 PM	3	96	8	42	26	15	26	1	0	11	3	92	323
4:45 PM	0	68	12	66	28	24	20	3	0	7	0	89	317
5:00 PM	0	112	3	33	20	13	42	6	0	3	1	85	318
5:15 PM	1	54	7	32	24	17	28	5	1	6	1	60	236
5:30 PM	0	50	6	23	16	9	12	1	0	4	2	52	175
5:45 PM	0	44	7	18	16	4	7	1	1	2	3	41	144
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	5	614	60	319	205	111	200	24	4	47	16	621	2226
APPROACH %'s :	0.74%	90.43%	8.84%	50.24%	32.28%	17.48%	87.72%	10.53%	1.75%	6.87%	2.34%	90.79%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	4	354	37	213	129	68	111	11	2	32	9	383	1353
PEAK HR FACTOR :		0.771			0.869			0.838			0.898		0.863

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

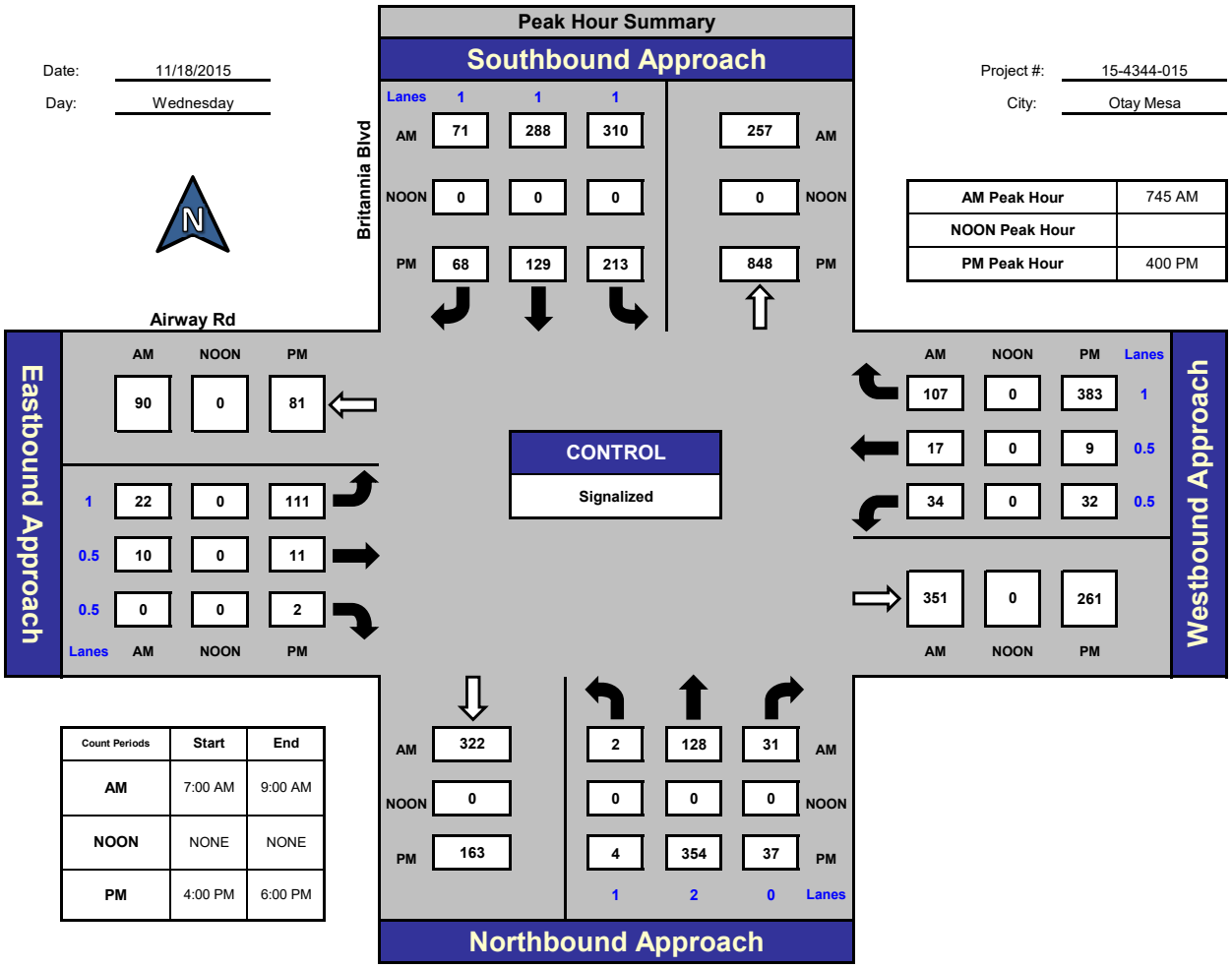
Britannia Blvd and Airway Rd , Otay Mesa

Date: 11/18/2015

Day: Wednesday

Project #: 15-4344-015

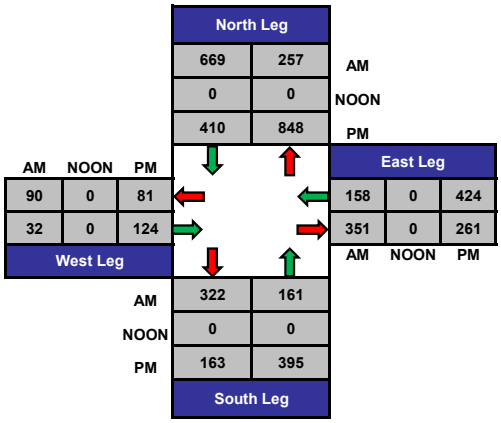
City: Otay Mesa



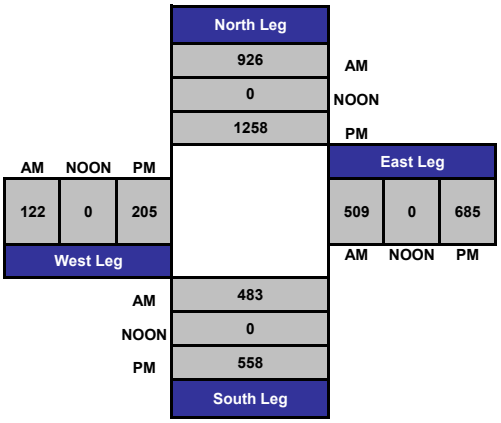
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-4014-005 **Day:** Wednesday

City: Otay Mesa **Date:** 1/18/2017

AM

NS/EW Streets:	Heritage Rd			Heritage Rd			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	2	2	3	1	2	3	1	
7:00 AM	9	4	4	19	8	15	10	18	17	3	30	17	154
7:15 AM	13	5	3	16	6	13	10	18	26	10	33	19	172
7:30 AM	10	9	8	21	8	18	22	26	34	9	21	25	211
7:45 AM	10	20	5	31	15	21	35	26	41	15	36	27	282
8:00 AM	11	8	5	25	12	11	30	35	26	13	32	22	230
8:15 AM	9	13	7	29	3	19	19	26	27	13	36	36	237
8:30 AM	18	7	3	16	9	13	30	15	20	9	41	30	211
8:45 AM	21	7	4	28	2	22	42	40	33	8	57	29	293
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	101	73	39	185	63	132	198	204	224	80	286	205	1790
APPROACH %'s :	47.42%	34.27%	18.31%	48.68%	16.58%	34.74%	31.63%	32.59%	35.78%	14.01%	50.09%	35.90%	

PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	59	35	19	98	26	65	121	116	106	43	166	117	971
PEAK HR FACTOR :		0.883			0.909			0.746			0.867		0.828

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-4014-005 **Day:** Wednesday

City: Otay Mesa **Date:** 1/18/2017

PM

NS/EW Streets:	Heritage Rd			Heritage Rd			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	2	2	3	1	2	3	1	
4:00 PM	28	10	13	53	13	53	25	52	21	12	54	41	375
4:15 PM	22	15	14	49	18	73	39	40	20	11	41	54	396
4:30 PM	40	15	16	45	14	56	29	39	21	9	60	48	392
4:45 PM	33	7	16	51	20	52	32	40	21	9	49	47	377
5:00 PM	46	6	26	50	27	83	32	50	23	13	56	34	446
5:15 PM	52	17	15	45	21	66	26	28	13	8	55	38	384
5:30 PM	27	6	10	33	16	47	13	44	9	4	36	30	275
5:45 PM	36	6	13	25	15	37	22	27	12	5	38	17	253
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	284	82	123	351	144	467	218	320	140	71	389	309	2898
APPROACH %'s :	58.08%	16.77%	25.15%	36.49%	14.97%	48.54%	32.15%	47.20%	20.65%	9.23%	50.59%	40.18%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	141	43	72	195	79	264	132	169	85	42	206	183	1611
PEAK HR FACTOR :		0.821			0.841			0.919			0.921		0.903

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Heritage Rd and Otay Mesa Rd , Otay Mesa

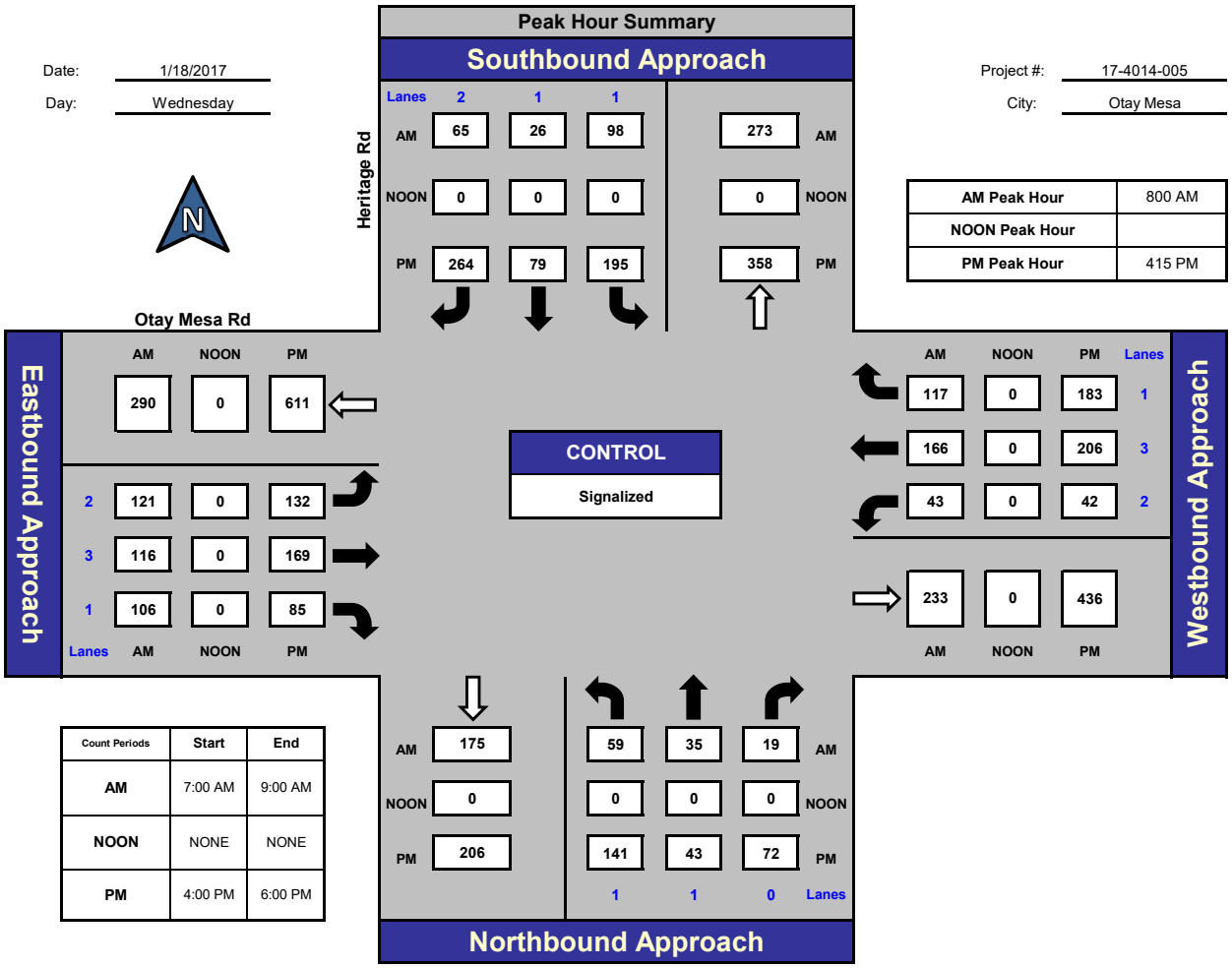
Date: 1/18/2017

Day: Wednesday

Project #: 17-4014-005

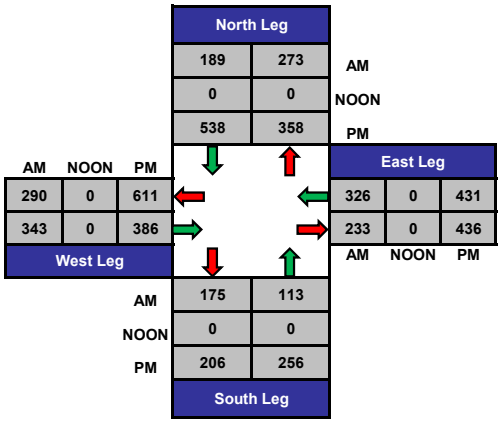
City: Otay Mesa

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

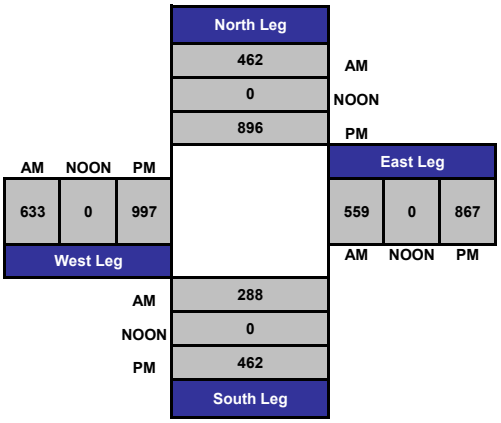


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-4014-007 **Day:** Wednesday

City: Otay Mesa **Date:** 1/18/2017

AM

NS/EW Streets:	Ocean View Hills Pkwy			Ocean View Hills Pkwy			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	2	2	0	1	2	1	2	1	1	
7:00 AM	1	28	68	13	49	0	0	0	0	59	0	15	233
7:15 AM	0	66	74	14	69	1	1	0	0	65	0	19	309
7:30 AM	1	84	131	38	93	0	0	0	0	57	0	14	418
7:45 AM	0	128	175	65	143	0	0	0	2	61	1	21	596
8:00 AM	0	51	150	47	135	0	0	0	1	64	1	11	460
8:15 AM	0	45	108	36	69	0	0	0	2	51	2	14	327
8:30 AM	0	44	103	36	81	0	0	0	1	79	0	20	364
8:45 AM	2	68	148	42	93	0	0	0	3	83	3	16	458
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	4	514	957	291	732	1	1	0	9	519	7	130	3165
APPROACH %'s :	0.27%	34.85%	64.88%	28.42%	71.48%	0.10%	10.00%	0.00%	90.00%	79.12%	1.07%	19.82%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	1	308	564	186	440	0	0	0	5	233	4	60	1801
PEAK HR FACTOR :		0.720			0.752			0.625			0.895		0.755

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-4014-007 **Day:** Wednesday

City: Otay Mesa **Date:** 1/18/2017

PM

NS/EW Streets:	Ocean View Hills Pkwy			Ocean View Hills Pkwy			Otay Mesa Rd			Otay Mesa Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	2	2	0	1	2	1	2	1	1	
4:00 PM	1	99	98	33	63	0	0	0	2	171	1	38	506
4:15 PM	5	162	97	42	65	0	0	0	1	133	0	49	554
4:30 PM	3	97	104	28	55	0	1	0	3	210	3	50	554
4:45 PM	0	77	85	40	43	0	0	0	2	162	2	37	448
5:00 PM	2	109	85	32	52	0	0	1	5	268	4	84	642
5:15 PM	0	91	63	33	57	0	0	0	1	217	1	60	523
5:30 PM	0	92	47	21	49	0	0	0	0	179	0	45	433
5:45 PM	0	86	51	30	42	1	1	0	1	146	1	36	395
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	11	813	630	259	426	1	2	1	15	1354	12	399	3923
APPROACH %'s :	0.76%	55.91%	43.33%	37.76%	62.10%	0.15%	11.11%	5.56%	83.33%	76.71%	0.68%	22.61%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	10	445	371	142	215	0	1	1	11	773	9	220	2198
PEAK HR FACTOR :		0.782			0.834			0.542			0.704		0.856

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

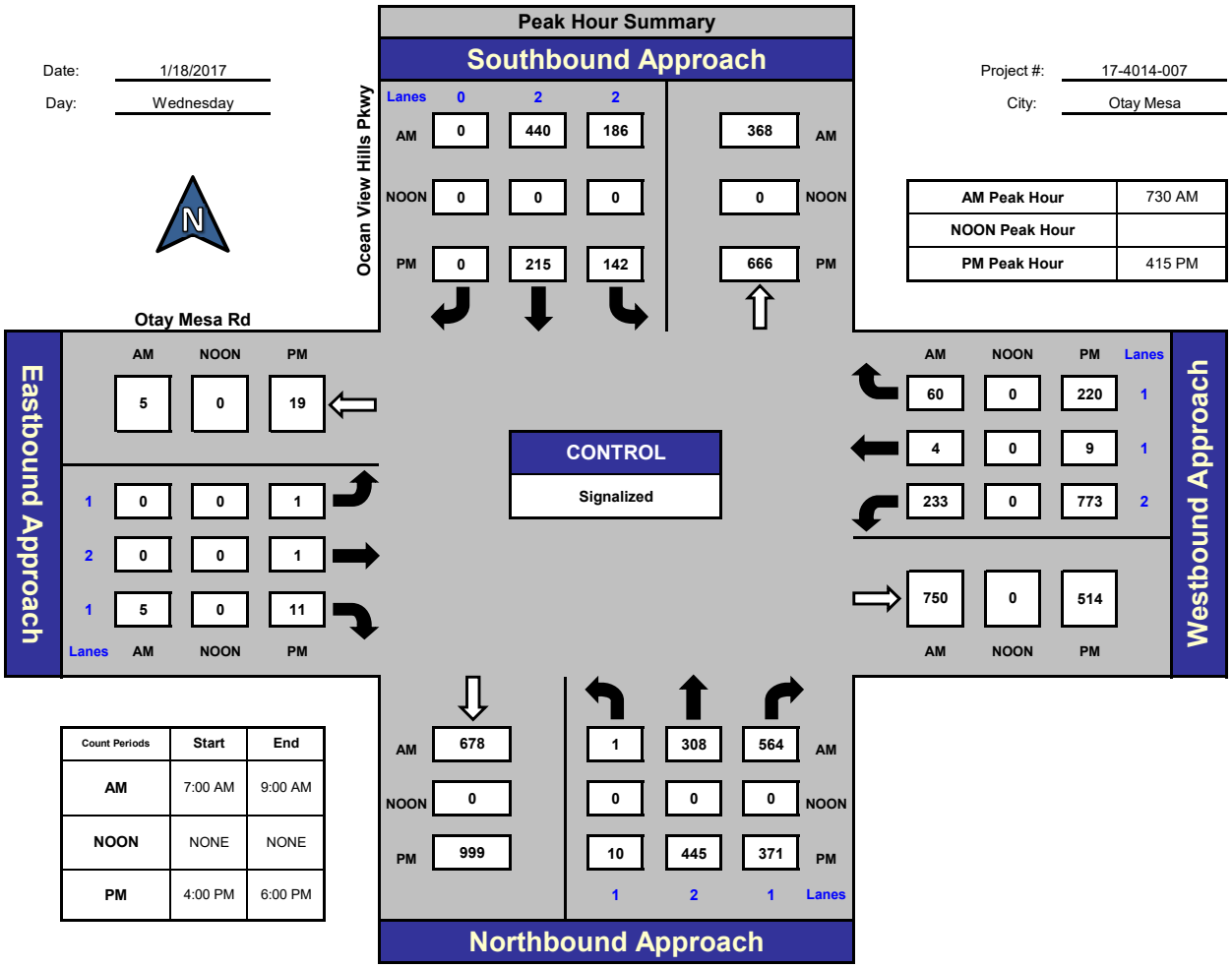
National Data & Surveying Services

Ocean View Hills Pkwy and Otay Mesa Rd , Otay Mesa

Date: 1/18/2017
Day: Wednesday

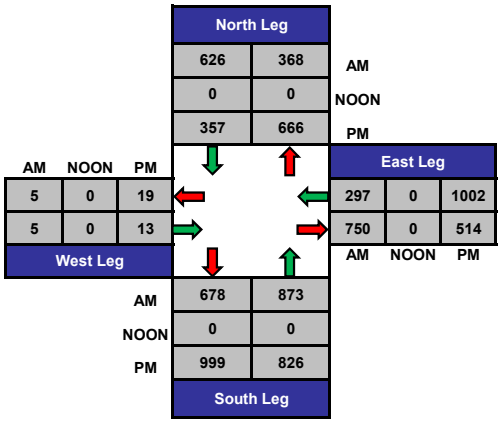
Project #: 17-4014-007
City: Otay Mesa

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	415 PM

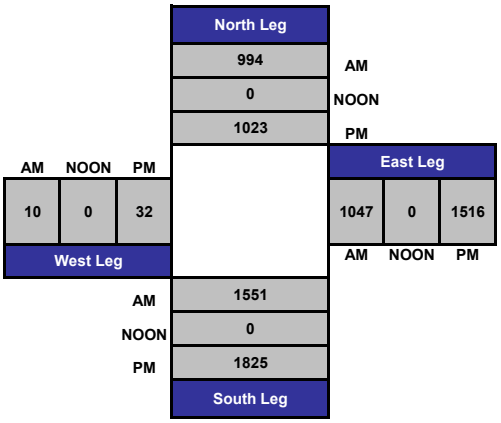


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-018 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Caliente Ave			Caliente Ave			I-905 WB Ramps			I-905 WB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	0	0	0.5	0.5	1	
7:00 AM	40	92	0	0	23	71	0	0	0	8	1	5	240
7:15 AM	36	137	0	0	30	93	0	0	0	10	1	10	317
7:30 AM	48	175	0	0	55	109	0	0	0	15	1	17	420
7:45 AM	54	282	0	0	87	113	0	0	0	12	0	15	563
8:00 AM	71	175	0	0	79	97	0	0	0	7	2	9	440
8:15 AM	41	151	0	0	45	91	0	0	0	7	0	7	342
8:30 AM	66	149	0	0	51	100	0	0	0	11	0	12	389
8:45 AM	102	221	0	0	97	88	0	0	0	7	0	8	523
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	458	1382	0	0	467	762	0	0	0	77	5	83	3234
APPROACH %'s :	24.89%	75.11%	0.00%	0.00%	38.00%	62.00%	#DIV/0!	#DIV/0!	#DIV/0!	46.67%	3.03%	50.30%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	214	783	0	0	266	410	0	0	0	41	3	48	1765
PEAK HR FACTOR :		0.742			0.845			0.000			0.697		0.784

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-018 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Caliente Ave			Caliente Ave			I-905 WB Ramps			I-905 WB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	0	0	0	0.5	0.5	1	
4:00 PM	105	179	0	0	78	179	0	0	0	13	0	30	584
4:15 PM	115	183	0	0	66	155	0	0	0	13	1	19	552
4:30 PM	54	155	0	0	57	176	0	0	0	12	0	21	475
4:45 PM	42	143	0	0	46	177	0	0	0	10	0	17	435
5:00 PM	42	154	0	0	54	233	0	0	0	23	0	21	527
5:15 PM	58	129	0	0	57	183	0	0	0	13	0	20	460
5:30 PM	45	125	0	0	63	179	0	0	0	16	0	19	447
5:45 PM	36	123	0	0	53	108	0	0	0	16	1	18	355
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	497	1191	0	0	474	1390	0	0	0	116	2	165	3835
APPROACH %'s :	29.44%	70.56%	0.00%	0.00%	25.43%	74.57%	#DIV/0!	#DIV/0!	#DIV/0!	40.99%	0.71%	58.30%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	316	660	0	0	247	687	0	0	0	48	1	87	2046
PEAK HR FACTOR :		0.819			0.909			0.000			0.791		0.876

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

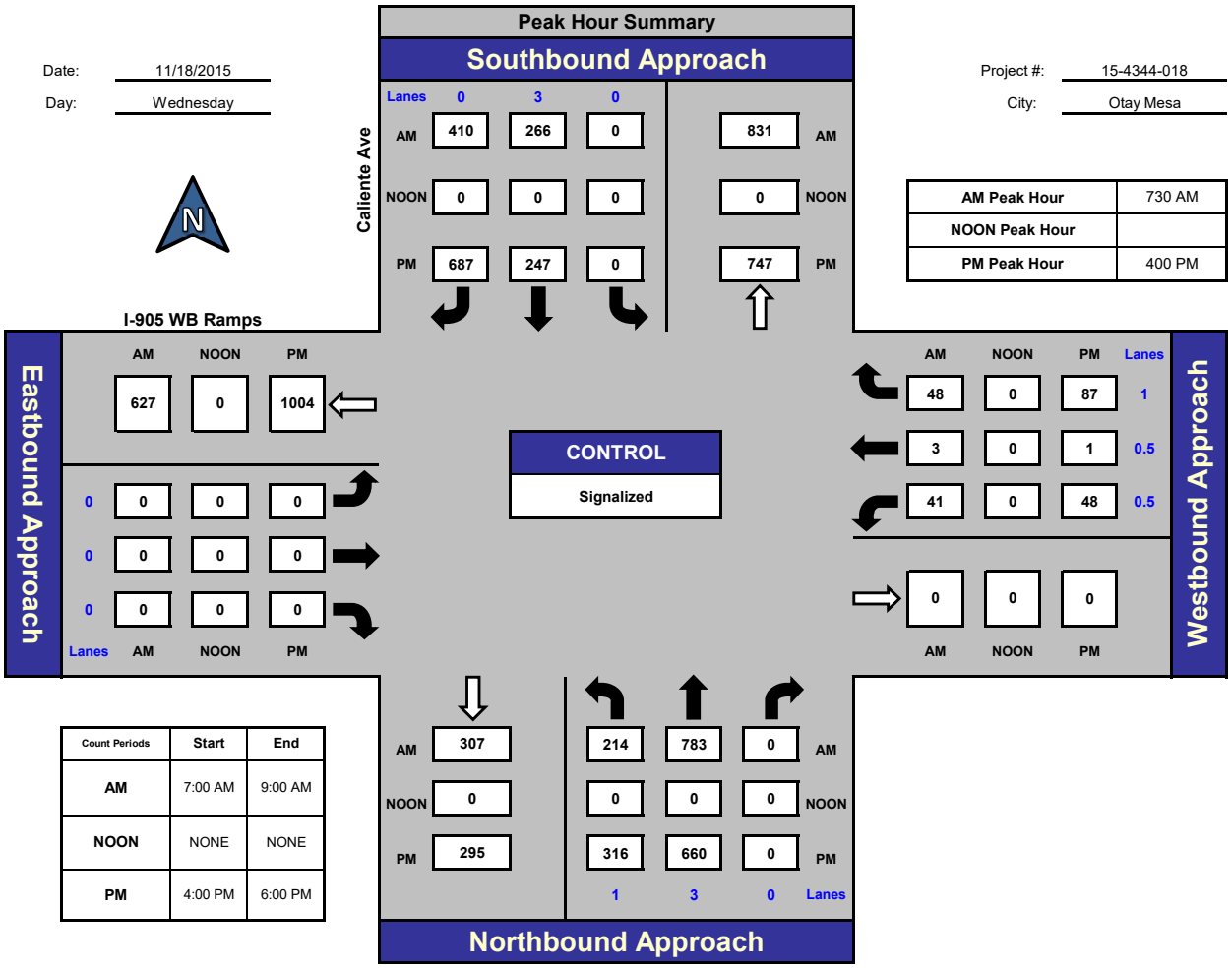
National Data & Surveying Services

Caliente Ave and I-905 WB Ramps , Otay Mesa

Date: 11/18/2015
Day: Wednesday

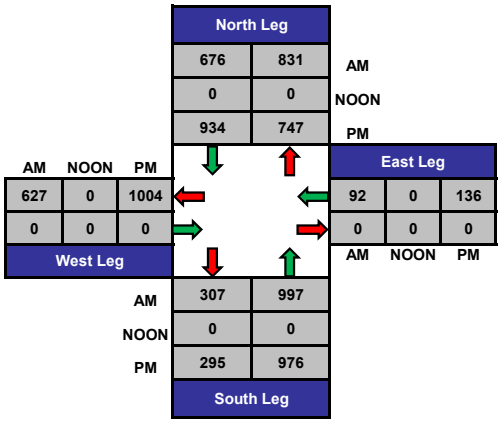
Project #: 15-4344-018
City: Otay Mesa

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	400 PM

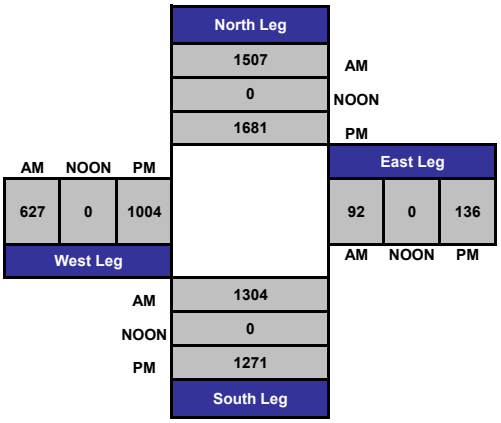


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-019 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Caliente Ave			Caliente Ave			I-905 EB Ramps			I-905 EB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.3	0.3	0.3	0	0	0	
7:00 AM	0	48	8	13	18	0	88	1	34	0	0	0	210
7:15 AM	0	54	9	14	27	0	122	1	38	0	0	0	265
7:30 AM	0	71	14	16	52	0	145	0	33	0	0	0	331
7:45 AM	0	123	21	31	65	0	219	0	83	0	0	0	542
8:00 AM	0	101	15	31	59	0	149	0	65	0	0	0	420
8:15 AM	0	59	14	10	41	0	125	1	64	0	0	0	314
8:30 AM	0	109	11	13	50	0	122	0	99	0	0	0	404
8:45 AM	0	153	20	13	83	0	161	0	147	0	0	0	577
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	718	112	141	395	0	1131	3	563	0	0	0	3063
APPROACH %'s :	0.00%	86.51%	13.49%	26.31%	73.69%	0.00%	66.65%	0.18%	33.18%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	422	60	67	233	0	557	1	375	0	0	0	1715
PEAK HR FACTOR :		0.697			0.781			0.757			0.000		0.743

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-019 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Caliente Ave			Caliente Ave			I-905 EB Ramps			I-905 EB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	1	2	0	1.3	0.3	0.3	0	0	0	
4:00 PM	0	176	35	17	71	0	122	0	78	0	0	0	499
4:15 PM	0	162	23	18	60	0	123	3	71	0	0	0	460
4:30 PM	0	82	7	25	48	0	133	2	53	0	0	0	350
4:45 PM	0	60	8	14	42	0	128	0	58	0	0	0	310
5:00 PM	0	50	5	27	47	0	141	0	92	0	0	0	362
5:15 PM	0	76	10	17	54	0	106	1	111	0	0	0	375
5:30 PM	0	72	5	16	55	0	100	0	130	0	0	0	378
5:45 PM	0	65	2	9	66	0	103	1	151	0	0	0	397
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	743	95	143	443	0	956	7	744	0	0	0	3131
APPROACH %'s :	0.00%	88.66%	11.34%	24.40%	75.60%	0.00%	56.00%	0.41%	43.59%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	480	73	74	221	0	506	5	260	0	0	0	1619
PEAK HR FACTOR :		0.655			0.838			0.964			0.000		0.811

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

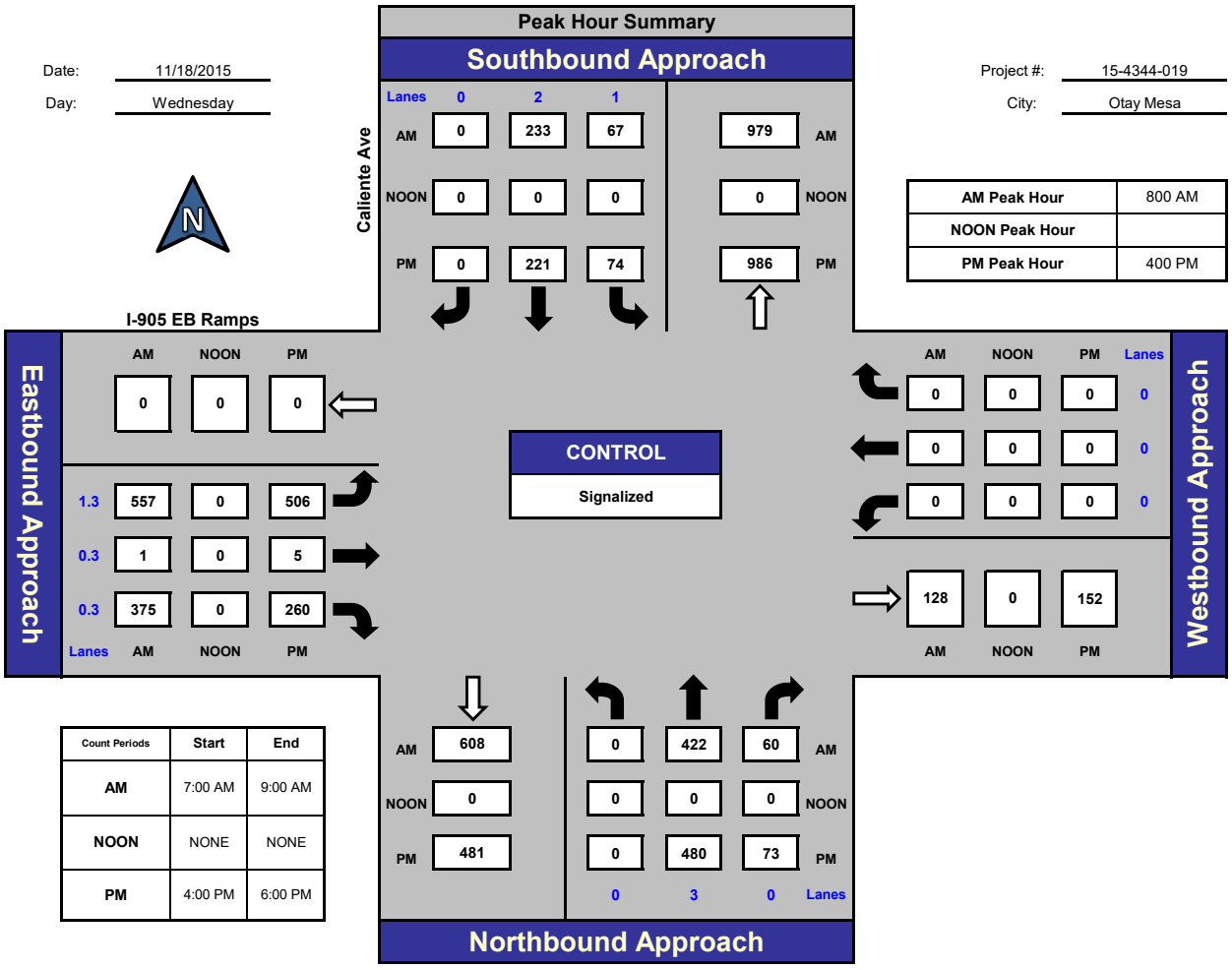
National Data & Surveying Services

Caliente Ave and I-905 EB Ramps , Otay Mesa

Date: 11/18/2015
Day: Wednesday

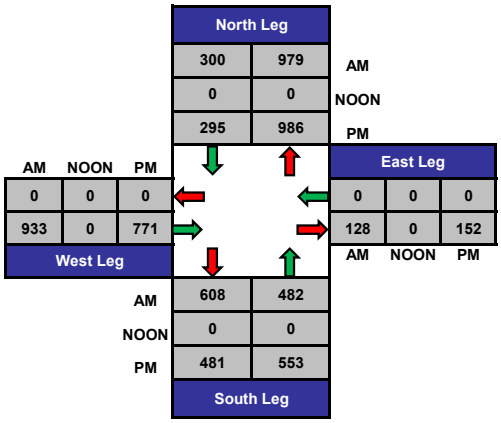
Project #: 15-4344-019
City: Otay Mesa

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

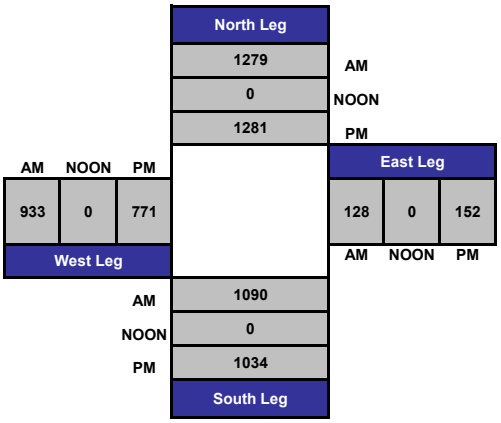


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-020 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Caliente Ave			Caliente Ave			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	2	0	1.5	0	0.5	2	2	1	
7:00 AM	1	2	1	8	11	30	41	4	1	1	0	1	101
7:15 AM	0	2	0	0	5	61	63	0	0	0	0	0	131
7:30 AM	0	3	0	3	8	75	86	0	0	0	0	2	177
7:45 AM	3	18	0	9	33	105	118	0	0	0	0	4	290
8:00 AM	7	18	0	3	30	93	93	0	2	0	1	1	248
8:15 AM	4	12	0	5	22	65	67	0	1	0	0	0	176
8:30 AM	3	20	0	3	28	128	94	0	1	0	0	0	277
8:45 AM	3	35	0	1	36	182	140	0	0	0	0	0	397
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	21	110	1	32	173	739	702	4	5	1	1	8	1797
APPROACH %'s :	15.91%	83.33%	0.76%	3.39%	18.33%	78.28%	98.73%	0.56%	0.70%	10.00%	10.00%	80.00%	

PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	17	85	0	12	116	468	394	0	4	0	1	1	1098
PEAK HR FACTOR :		0.671			0.680			0.711			0.250		0.691

CONTROL : 3-Way Stop (NB/SB/EB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-020 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Caliente Ave			Caliente Ave			Airway Rd			Airway Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	2	0	1.5	0	0.5	2	2	1	
4:00 PM	2	56	0	6	34	101	138	1	0	0	0	3	341
4:15 PM	1	46	0	5	12	108	149	1	0	0	1	6	329
4:30 PM	0	10	0	3	7	97	70	0	0	0	0	1	188
4:45 PM	3	4	0	4	6	99	52	0	4	0	1	4	177
5:00 PM	0	3	0	3	8	114	53	0	3	0	1	4	189
5:15 PM	2	6	0	2	7	166	70	0	3	0	0	4	260
5:30 PM	0	1	0	0	4	174	76	0	0	0	0	6	261
5:45 PM	0	1	0	7	2	201	62	0	0	0	0	1	274
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	8	127	0	30	80	1060	670	2	10	0	3	29	2019
APPROACH %'s :	5.93%	94.07%	0.00%	2.56%	6.84%	90.60%	98.24%	0.29%	1.47%	0.00%	9.38%	90.63%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	6	116	0	18	59	405	409	2	4	0	2	14	1035
PEAK HR FACTOR :		0.526			0.855			0.692			0.571		0.759

CONTROL : 3-Way Stop (NB/SB/EB)

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Caliente Ave and Airway Rd , Otay Mesa

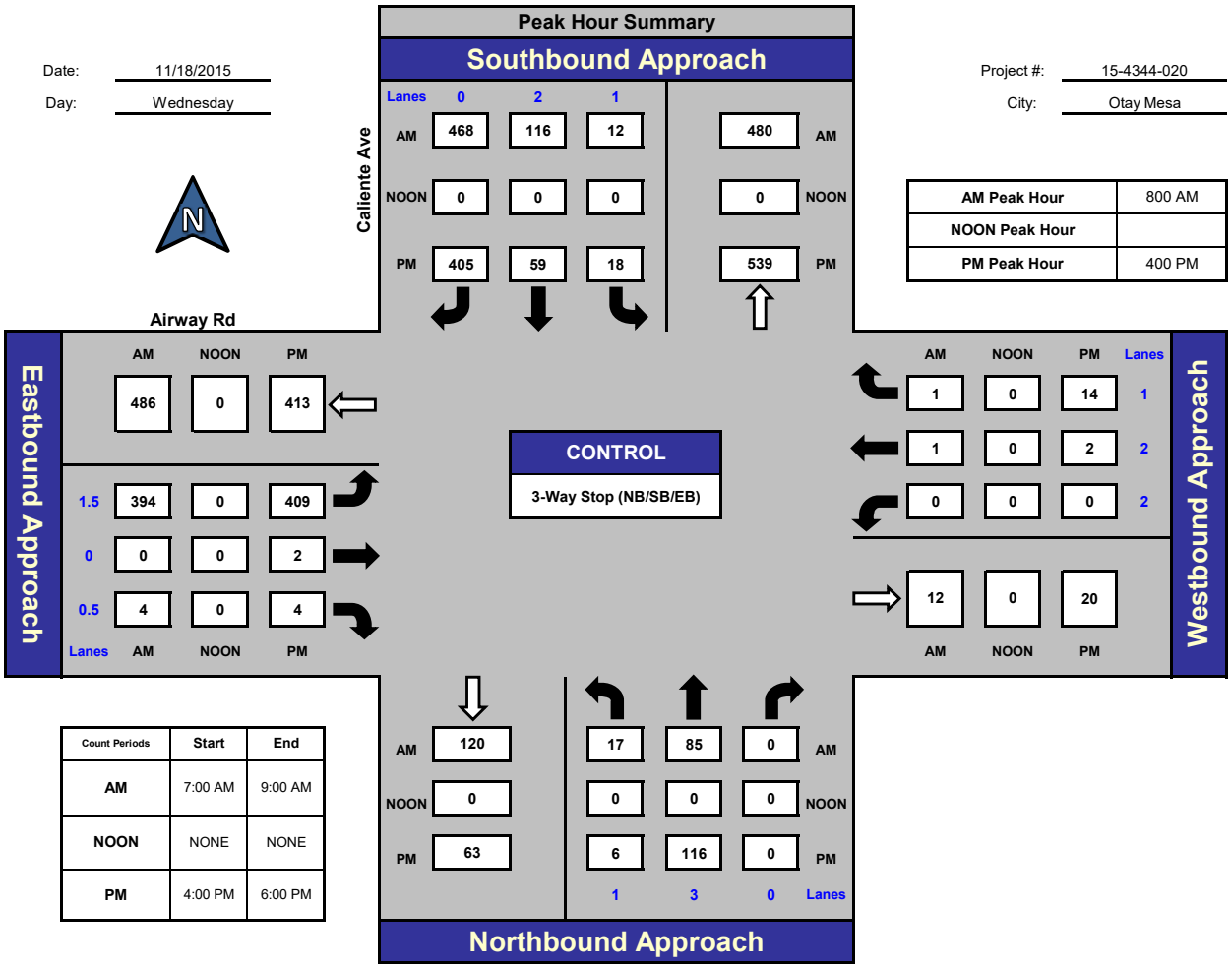
Date: 11/18/2015

Day: Wednesday

Project #: 15-4344-020

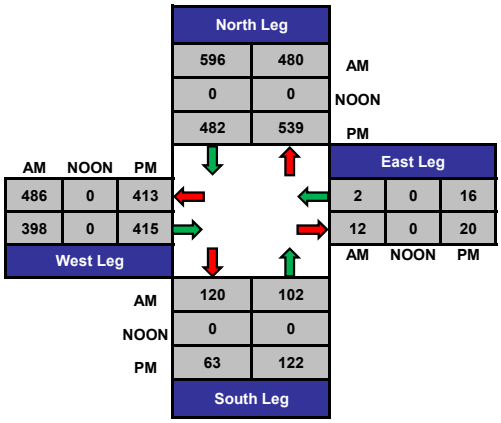
City: Otay Mesa

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

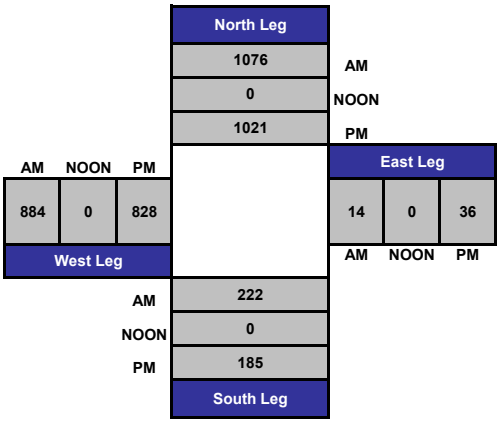


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-021 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

AM

NS/EW Streets:	Main St			Main St			Heritage			Heritage			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	1	1	0	0	0	0	0	1	0	
7:00 AM	0	64	2	11	54	0	0	0	0	2	0	5	138
7:15 AM	0	89	0	8	65	0	0	0	0	1	0	6	169
7:30 AM	0	95	0	3	85	0	0	0	0	1	0	7	191
7:45 AM	0	63	4	9	85	0	0	0	0	0	0	6	167
8:00 AM	0	44	0	9	55	0	0	0	0	3	0	8	119
8:15 AM	0	59	1	4	64	0	0	0	0	0	0	8	136
8:30 AM	0	51	2	6	70	0	0	0	0	1	0	6	136
8:45 AM	0	41	2	7	70	0	0	0	0	2	0	5	127
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	506	11	57	548	0	0	0	0	10	0	51	1183
APPROACH %'s :	0.00%	97.87%	2.13%	9.42%	90.58%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	16.39%	0.00%	83.61%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	311	6	31	289	0	0	0	0	4	0	24	665
PEAK HR FACTOR :		0.834			0.851			0.000			0.875		0.870

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-4344-021 **Day:** Wednesday

City: Otay Mesa **Date:** 11/18/2015

PM

NS/EW Streets:	Main St			Main St			Heritage			Heritage			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	1	1	0	0	0	0	0	1	0	
4:00 PM	0	80	1	0	96	0	0	0	0	0	0	8	185
4:15 PM	0	94	1	1	72	0	0	0	0	0	0	2	170
4:30 PM	0	82	0	0	77	0	0	0	0	0	0	0	159
4:45 PM	0	74	0	0	87	0	0	0	0	0	0	2	163
5:00 PM	0	135	0	1	80	0	0	0	0	0	0	0	216
5:15 PM	0	94	0	0	79	0	0	0	0	0	0	1	174
5:30 PM	0	72	0	1	67	0	0	0	0	0	0	5	145
5:45 PM	0	51	0	0	68	0	0	0	0	0	0	0	119
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	682	2	3	626	0	0	0	0	0	0	18	1331
APPROACH %'s :	0.00%	99.71%	0.29%	0.48%	99.52%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	385	0	1	323	0	0	0	0	0	0	3	712
PEAK HR FACTOR :		0.713			0.931			0.000			0.375		0.824

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

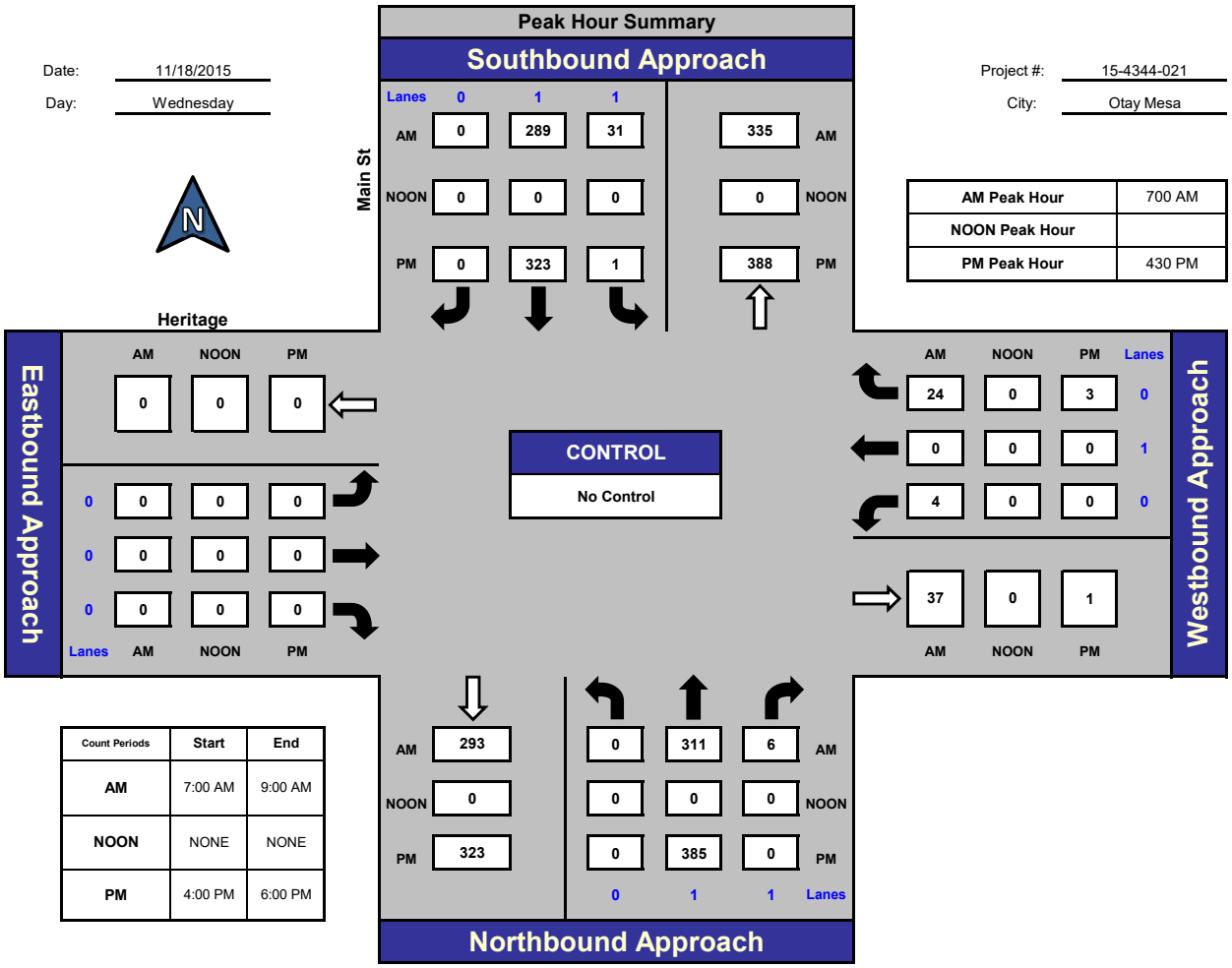
National Data & Surveying Services

Main St and Heritage , Otay Mesa

Date: 11/18/2015
Day: Wednesday

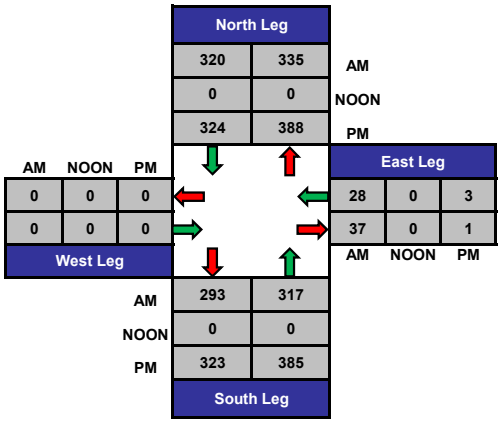
Project #: 15-4344-021
City: Otay Mesa

AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	430 PM

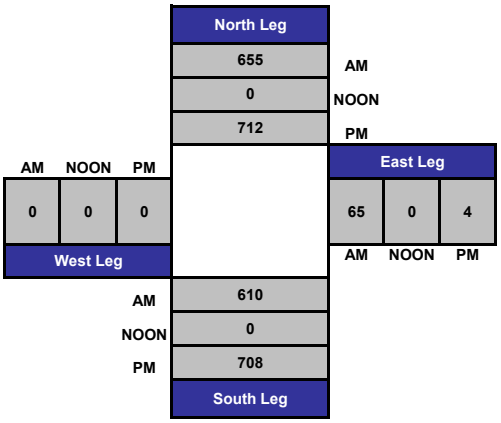


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Prepared by NDS/ATD

VOLUME

Otay Mesa Rd Bet. Corporate Center Dr & Ocean View Hills Pkwy (32.568283, -117.010342)

Day: Wednesday
Date: 1/18/2017

City: Otay Mesa
Project #: CA17_4015_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,565	9,150	16,715

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
0:00			8		15		23		12:00			143		178		321	
0:15			3		11		14		12:15			152		172		324	
0:30			4		24		28		12:30			138		170		308	
0:45			7	22	6	56	13	78	12:45			170	603	159	679	329	1282
1:00			5		15		20		13:00			142		199		341	
1:15			3		6		9		13:15			159		140		299	
1:30			9		6		15		13:30			149		180		329	
1:45			6	23	8	35	14	58	13:45			157	607	163	682	320	1289
2:00			9		9		18		14:00			178		160		338	
2:15			12		5		17		14:15			137		217		354	
2:30			9		9		18		14:30			164		206		370	
2:45			10	40	14	37	24	77	14:45			143	622	189	772	332	1394
3:00			4		11		15		15:00			135		199		334	
3:15			6		5		11		15:15			140		182		322	
3:30			17		7		24		15:30			126		304		430	
3:45			18	45	16	39	34	84	15:45			155	556	185	870	340	1426
4:00			17		21		38		16:00			118		197		315	
4:15			12		34		46		16:15			126		203		329	
4:30			27		25		52		16:30			124		257		381	
4:45			29	85	27	107	56	192	16:45			115	483	196	853	311	1336
5:00			22		33		55		17:00			103		364		467	
5:15			40		40		80		17:15			86		264		350	
5:30			29		34		63		17:30			62		218		280	
5:45			66	157	51	158	117	315	17:45			74	325	184	1030	258	1355
6:00			46		58		104		18:00			92		145		237	
6:15			55		56		111		18:15			50		145		195	
6:30			95		51		146		18:30			62		91		153	
6:45			146	342	78	243	224	585	18:45			68	272	75	456	143	728
7:00			86		82		168		19:00			52		78		130	
7:15			90		83		173		19:15			39		75		114	
7:30			161		70		231		19:30			43		54		97	
7:45			209	546	87	322	296	868	19:45			36	170	62	269	98	439
8:00			176		69		245		20:00			54		63		117	
8:15			134		79		213		20:15			35		59		94	
8:30			132		89		221		20:30			28		38		66	
8:45			196	638	102	339	298	977	20:45			33	150	40	200	73	350
9:00			151		101		252		21:00			35		37		72	
9:15			127		115		242		21:15			32		54		86	
9:30			152		122		274		21:30			21		50		71	
9:45			125	555	120	458	245	1013	21:45			17	105	40	181	57	286
10:00			151		112		263		22:00			19		33		52	
10:15			131		123		254		22:15			24		24		48	
10:30			137		137		274		22:30			16		30		46	
10:45			146	565	153	525	299	1090	22:45			21	80	14	101	35	181
11:00			134		164		298		23:00			12		21		33	
11:15			140		170		310		23:15			6		12		18	
11:30			127		175		302		23:30			12		21		33	
11:45			131	532	163	672	294	1204	23:45			12	42	12	66	24	108
TOTALS				3550		2991		**6541**	**TOTALS**				4015		6159		**10174**
SPLIT %				54.3%		45.7%		**39.1%**	**SPLIT %**				39.5%		60.5%		**60.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,565	9,150	16,715

AM Peak Hour			7:30	11:30	**11:45**	**PM Peak Hour**			13:15	16:30	**16:30**
AM Pk Volume			680	688	**1247**	**PM Pk Volume**			643	1081	**1509**
Pk Hr Factor			0.813	0.966	**0.962**	**Pk Hr Factor**			0.903	0.742	**0.808**
7 - 9 Volume	0	0	1184	661	**1845**	**4 - 6 Volume**	0	0	808	1883	**2691**
7 - 9 Peak Hour			7:30	8:00	**7:30**	**4 - 6 Peak Hour**			16:00	16:30	**16:30**
7 - 9 Pk Volume	0	0	680	339	**985**	**4 - 6 Pk Volume**	0	0	483	1081	**1509**
Pk Hr Factor	0.000	0.000	0.813	0.831	**0.832**	**Pk Hr Factor**	0.000	0.000	0.958	0.742	**0.808**

Prepared by NDS/ATD

VOLUME

Otay Mesa Rd Bet. Britannia Blvd & Cactus Rd (32.568044, -116.985083)

Day: Wednesday
Date: 1/18/2017

City: Otay Mesa
Project #: CA17_4015_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,579	6,073	11,652

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
0:00			8		8		16		12:00			107		109		216	
0:15			4		9		13		12:15			112		110		222	
0:30			4		2		6		12:30			94		110		204	
0:45			9	25	7	26	16	51	12:45			123	436	122	451	245	887
1:00			3		7		10		13:00			109		92		201	
1:15			4		3		7		13:15			116		115		231	
1:30			6		11		17		13:30			107		114		221	
1:45			6	19	11	32	17	51	13:45			119	451	110	431	229	882
2:00			5		11		16		14:00			103		107		210	
2:15			9		14		23		14:15			110		122		232	
2:30			6		13		19		14:30			128		115		243	
2:45			8	28	12	50	20	78	14:45			134	475	113	457	247	932
3:00			8		4		12		15:00			87		103		190	
3:15			7		5		12		15:15			114		117		231	
3:30			6		14		20		15:30			112		131		243	
3:45			5	26	17	40	22	66	15:45			125	438	90	441	215	879
4:00			11		20		31		16:00			140		128		268	
4:15			17		33		50		16:15			126		132		258	
4:30			20		24		44		16:30			120		133		253	
4:45			26	74	22	99	48	173	16:45			116	502	123	516	239	1018
5:00			16		24		40		17:00			168		104		272	
5:15			23		28		51		17:15			110		117		227	
5:30			31		34		65		17:30			112		71		183	
5:45			25	95	51	137	76	232	17:45			79	469	90	382	169	851
6:00			38		41		79		18:00			96		78		174	
6:15			30		59		89		18:15			74		70		144	
6:30			48		60		108		18:30			58		61		119	
6:45			58	174	55	215	113	389	18:45			51	279	46	255	97	534
7:00			50		54		104		19:00			49		53		102	
7:15			44		73		117		19:15			42		43		85	
7:30			54		58		112		19:30			25		54		79	
7:45			64	212	97	282	161	494	19:45			28	144	47	197	75	341
8:00			55		89		144		20:00			30		41		71	
8:15			75		95		170		20:15			34		41		75	
8:30			56		102		158		20:30			35		44		79	
8:45			79	265	118	404	197	669	20:45			31	130	27	153	58	283
9:00			79		101		180		21:00			33		33		66	
9:15			81		92		173		21:15			25		40		65	
9:30			103		100		203		21:30			30		31		61	
9:45			83	346	105	398	188	744	21:45			23	111	23	127	46	238
10:00			86		99		185		22:00			31		29		60	
10:15			95		106		201		22:15			16		21		37	
10:30			86		117		203		22:30			21		14		35	
10:45			99	366	96	418	195	784	22:45			11	79	4	68	15	147
11:00			97		113		210		23:00			11		14		25	
11:15			107		100		207		23:15			10		12		22	
11:30			104		128		232		23:30			8		11		19	
11:45			93	401	105	446	198	847	23:45			5	34	11	48	16	82
TOTALS				2031		2547		**4578**	**TOTALS**				3548		3526		**7074**
SPLIT %				44.4%		55.6%		**39.3%**	**SPLIT %**				50.2%		49.8%		**60.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,579	6,073	11,652

AM Peak Hour			11:30		11:30		**11:30**		**PM Peak Hour**			16:15		16:00		**16:15**	
AM Pk Volume			416		452		**868**		**PM Pk Volume**			530		516		**1022**	
Pk Hr Factor			0.929		0.883		**0.935**		**Pk Hr Factor**			0.789		0.970		**0.939**	
7 - 9 Volume	0	0	477		686		**1163**		**4 - 6 Volume**	0	0	971		898		**1869**	
7 - 9 Peak Hour			8:00		8:00		**8:00**		**4 - 6 Peak Hour**			16:15		16:00		**16:15**	
7 - 9 Pk Volume	0	0	265		404		**669**		**4 - 6 Pk Volume**	0	0	530		516		**1022**	
Pk Hr Factor	0.000	0.000	0.839		0.856		**0.849**		**Pk Hr Factor**	0.000	0.000	0.789		0.970		**0.939**	

Prepared by NDS/ATD

VOLUME

Otay Mesa Rd Bet. St Andrews Ave & Gailes Blvd (32.567869, -116.972675)

Day: Wednesday
Date: 1/18/2017

City: Otay Mesa
Project #: CA17_4015_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,323	5,076	10,399

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
0:00			5		3		8		12:00			100		99		199	
0:15			4		6		10		12:15			122		117		239	
0:30			4		4		8		12:30			105		106		211	
0:45			4	17	6	19	10	36	12:45			129	456	88	410	217	866
1:00			5		6		11		13:00			110		101		211	
1:15			2		4		6		13:15			129		115		244	
1:30			8		4		12		13:30			119		111		230	
1:45			8	23	6	20	14	43	13:45			113	471	109	436	222	907
2:00			6		7		13		14:00			107		114		221	
2:15			4		4		8		14:15			133		76		209	
2:30			10		2		12		14:30			110		114		224	
2:45			5	25	8	21	13	46	14:45			143	493	114	418	257	911
3:00			3		0		3		15:00			98		123		221	
3:15			6		3		9		15:15			119		110		229	
3:30			2		9		11		15:30			111		134		245	
3:45			2	13	9	21	11	34	15:45			103	431	93	460	196	891
4:00			3		14		17		16:00			101		95		196	
4:15			12		12		24		16:15			105		105		210	
4:30			7		11		18		16:30			97		88		185	
4:45			12	34	9	46	21	80	16:45			83	386	80	368	163	754
5:00			16		8		24		17:00			128		86		214	
5:15			25		10		35		17:15			77		88		165	
5:30			37		21		58		17:30			89		60		149	
5:45			27	105	33	72	60	177	17:45			64	358	53	287	117	645
6:00			38		25		63		18:00			86		58		144	
6:15			28		57		85		18:15			90		59		149	
6:30			41		57		98		18:30			66		43		109	
6:45			38	145	58	197	96	342	18:45			68	310	41	201	109	511
7:00			56		61		117		19:00			35		36		71	
7:15			65		74		139		19:15			42		26		68	
7:30			55		77		132		19:30			30		26		56	
7:45			76	252	97	309	173	561	19:45			24	131	26	114	50	245
8:00			47		79		126		20:00			27		20		47	
8:15			66		88		154		20:15			22		20		42	
8:30			59		75		134		20:30			17		25		42	
8:45			63	235	75	317	138	552	20:45			23	89	24	89	47	178
9:00			68		81		149		21:00			15		23		38	
9:15			80		70		150		21:15			15		15		30	
9:30			112		83		195		21:30			24		25		49	
9:45			80	340	87	321	167	661	21:45			15	69	10	73	25	142
10:00			99		72		171		22:00			13		28		41	
10:15			95		102		197		22:15			12		17		29	
10:30			98		102		200		22:30			13		11		24	
10:45			90	382	97	373	187	755	22:45			16	54	2	58	18	112
11:00			126		111		237		23:00			8		13		21	
11:15			124		91		215		23:15			14		7		21	
11:30			109		99		208		23:30			7		8		15	
11:45			111	470	110	411	221	881	23:45			5	34	7	35	12	69
TOTALS				2041		2127		**4168**	**TOTALS**				3282		2949		**6231**
SPLIT %				49.0%		51.0%		**40.1%**	**SPLIT %**				52.7%		47.3%		**59.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,323	5,076	10,399

AM Peak Hour			11:00	11:45	**11:00**	**PM Peak Hour**			14:00	14:45	**14:45**
AM Pk Volume			470	432	**881**	**PM Pk Volume**			493	481	**952**
Pk Hr Factor			0.933	0.923	**0.929**	**Pk Hr Factor**			0.862	0.897	**0.926**
7 - 9 Volume	0	0	487	626	**1113**	**4 - 6 Volume**	0	0	744	655	**1399**
7 - 9 Peak Hour			7:00	7:30	**7:45**	**4 - 6 Peak Hour**			16:15	16:00	**16:15**
7 - 9 Pk Volume	0	0	252	341	**587**	**4 - 6 Pk Volume**	0	0	413	368	**772**
Pk Hr Factor	0.000	0.000	0.829	0.879	**0.848**	**Pk Hr Factor**	0.000	0.000	0.807	0.876	**0.902**

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Otay Mesa Rd Bet. La Media Rd & Piper Ranch Rd

Day: Wednesday
Date: 11/16/2016

City: Otay Mesa
Project #: CA16_4347_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,464	6,956	13,420

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00	0	0	9		9		18		12:00	0	0	92		128		220	
00:15	0	0	12		13		25		12:15	0	0	105		123		228	
00:30	0	0	11		6		17		12:30	0	0	109		124		233	
00:45	0	0	1	33	0	28	1	61	12:45	0	0	121	427	145	520	266	947
01:00	0	0	5		10		15		13:00	0	0	142		144		286	
01:15	0	0	3		1		4		13:15	0	0	121		105		226	
01:30	0	0	2		7		9		13:30	0	0	114		127		241	
01:45	0	0	6	16	6	24	12	40	13:45	0	0	92	469	116	492	208	961
02:00	0	0	7		4		11		14:00	0	0	111		147		258	
02:15	0	0	8		3		11		14:15	0	0	139		127		266	
02:30	0	0	4		6		10		14:30	0	0	126		124		250	
02:45	0	0	5	24	7	20	12	44	14:45	0	0	132	508	160	558	292	1066
03:00	0	0	3		3		6		15:00	0	0	104		182		286	
03:15	0	0	9		3		12		15:15	0	0	156		132		288	
03:30	0	0	7		15		22		15:30	0	0	117		165		282	
03:45	0	0	16	35	4	25	20	60	15:45	0	0	141	518	119	598	260	1116
04:00	0	0	9		13		22		16:00	0	0	121		140		261	
04:15	0	0	12		18		30		16:15	0	0	106		164		270	
04:30	0	0	15		12		27		16:30	0	0	132		138		270	
04:45	0	0	29	65	25	68	54	133	16:45	0	0	122	481	110	552	232	1033
05:00	0	0	32		19		51		17:00	0	0	133		112		245	
05:15	0	0	50		37		87		17:15	0	0	132		129		261	
05:30	0	0	88		41		129		17:30	0	0	110		103		213	
05:45	0	0	89	259	44	141	133	400	17:45	0	0	106	481	85	429	191	910
06:00	0	0	56		51		107		18:00	0	0	91		85		176	
06:15	0	0	93		75		168		18:15	0	0	68		75		143	
06:30	0	0	111		94		205		18:30	0	0	66		66		132	
06:45	0	0	131	391	108	328	239	719	18:45	0	0	50	275	73	299	123	574
07:00	0	0	105		103		208		19:00	0	0	43		61		104	
07:15	0	0	112		121		233		19:15	0	0	51		58		109	
07:30	0	0	118		139		257		19:30	0	0	44		48		92	
07:45	0	0	115	450	130	493	245	943	19:45	0	0	48	186	36	203	84	389
08:00	0	0	111		132		243		20:00	0	0	42		41		83	
08:15	0	0	84		119		203		20:15	0	0	29		30		59	
08:30	0	0	65		113		178		20:30	0	0	36		23		59	
08:45	0	0	76	336	145	509	221	845	20:45	0	0	25	132	34	128	59	260
09:00	0	0	72		101		173		21:00	0	0	41		20		61	
09:15	0	0	70		128		198		21:15	0	0	43		23		66	
09:30	0	0	90		130		220		21:30	0	0	43		30		73	
09:45	0	0	89	321	114	473	203	794	21:45	0	0	23	150	24	97	47	247
10:00	0	0	87		93		180		22:00	0	0	21		35		56	
10:15	0	0	88		89		177		22:15	0	0	26		28		54	
10:30	0	0	97		101		198		22:30	0	0	26		17		43	
10:45	0	0	102	374	87	370	189	744	22:45	0	0	12	85	12	92	24	177
11:00	0	0	104		100		204		23:00	0	0	7		17		24	
11:15	0	0	90		115		205		23:15	0	0	9		6		15	
11:30	0	0	98		115		213		23:30	0	0	16		12		28	
11:45	0	0	104	396	113	443	217	839	23:45	0	0	20	52	31	66	51	118
TOTALS				2700		2922		5622	TOTALS				3764		4034		7798
SPLIT %				48.0%		52.0%		41.9%	SPLIT %				48.3%		51.7%		58.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,464	6,956	13,420

AM Peak Hour				06:45		07:15		07:15	PM Peak Hour				15:45		15:15			15:15
AM Pk Volume				466		522		978	PM Pk Volume				535		639			1148
Pk Hr Factor				0.889		0.939		0.951	Pk Hr Factor				0.857		0.878			0.947
7 - 9 Volume	0	0		786		1002		1788	4 - 6 Volume	0	0		962		981			1943
7 - 9 Peak Hour				07:15		07:15		07:15	4 - 6 Peak Hour				16:30		16:00			16:00
7 - 9 Pk Volume	0	0		456		522		978	4 - 6 Pk Volume	0	0		519		552			1033
Pk Hr Factor	0.000	0.000		0.966		0.939		0.951	Pk Hr Factor	0.000	0.000		0.976		0.841			0.956

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Otay Mesa Rd Bet. Piper Ranch Rd & SR 125 Ramps

Day: Wednesday
Date: 11/16/2016

City: Otay Mesa
Project #: CA16_4347_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,814	8,356	16,170

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00	0	0	15		12		27		12:00	0	0	108		157		265	
00:15	0	0	13		17		30		12:15	0	0	129		130		259	
00:30	0	0	26		15		41		12:30	0	0	123		131		254	
00:45	0	0	8	62	6	50	14	112	12:45	0	0	126	486	166	584	292	1070
01:00	0	0	10		11		21		13:00	0	0	139		166		305	
01:15	0	0	10		8		18		13:15	0	0	137		128		265	
01:30	0	0	8		18		26		13:30	0	0	137		143		280	
01:45	0	0	20	48	14	51	34	99	13:45	0	0	116	529	151	588	267	1117
02:00	0	0	10		5		15		14:00	0	0	138		155		293	
02:15	0	0	6		18		24		14:15	0	0	151		168		319	
02:30	0	0	13		4		17		14:30	0	0	159		143		302	
02:45	0	0	12	41	15	42	27	83	14:45	0	0	177	625	197	663	374	1288
03:00	0	0	11		4		15		15:00	0	0	120		199		319	
03:15	0	0	16		17		33		15:15	0	0	139		180		319	
03:30	0	0	17		22		39		15:30	0	0	141		210		351	
03:45	0	0	23	67	24	67	47	134	15:45	0	0	139	539	137	726	276	1265
04:00	0	0	16		15		31		16:00	0	0	119		205		324	
04:15	0	0	27		16		43		16:15	0	0	90		170		260	
04:30	0	0	16		30		46		16:30	0	0	127		180		307	
04:45	0	0	39	98	37	98	76	196	16:45	0	0	146	482	149	704	295	1186
05:00	0	0	36		27		63		17:00	0	0	136		179		315	
05:15	0	0	64		40		104		17:15	0	0	156		142		298	
05:30	0	0	108		43		151		17:30	0	0	103		120		223	
05:45	0	0	105	313	35	145	140	458	17:45	0	0	119	514	95	536	214	1050
06:00	0	0	78		57		135		18:00	0	0	81		123		204	
06:15	0	0	115		65		180		18:15	0	0	85		104		189	
06:30	0	0	140		102		242		18:30	0	0	68		79		147	
06:45	0	0	137	470	107	331	244	801	18:45	0	0	69	303	90	396	159	699
07:00	0	0	123		90		213		19:00	0	0	75		68		143	
07:15	0	0	153		116		269		19:15	0	0	63		81		144	
07:30	0	0	155		130		285		19:30	0	0	53		59		112	
07:45	0	0	155	586	145	481	300	1067	19:45	0	0	52	243	48	256	100	499
08:00	0	0	145		129		274		20:00	0	0	74		46		120	
08:15	0	0	135		148		283		20:15	0	0	46		40		86	
08:30	0	0	94		124		218		20:30	0	0	38		41		79	
08:45	0	0	104	478	160	561	264	1039	20:45	0	0	42	200	36	163	78	363
09:00	0	0	107		130		237		21:00	0	0	48		34		82	
09:15	0	0	120		137		257		21:15	0	0	43		41		84	
09:30	0	0	98		146		244		21:30	0	0	44		44		88	
09:45	0	0	104	429	140	553	244	982	21:45	0	0	46	181	35	154	81	335
10:00	0	0	103		117		220		22:00	0	0	29		46		75	
10:15	0	0	117		96		213		22:15	0	0	36		40		76	
10:30	0	0	104		134		238		22:30	0	0	26		22		48	
10:45	0	0	132	456	105	452	237	908	22:45	0	0	25	116	15	123	40	239
11:00	0	0	132		126		258		23:00	0	0	21		26		47	
11:15	0	0	97		129		226		23:15	0	0	16		14		30	
11:30	0	0	117		155		272		23:30	0	0	18		20		38	
11:45	0	0	125	471	130	540	255	1011	23:45	0	0	22	77	32	92	54	169
TOTALS				3519		3371		**6890**	**TOTALS**				4295		4985		**9280**
SPLIT %				51.1%		48.9%		**42.6%**	**SPLIT %**				46.3%		53.7%		**57.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,814	8,356	16,170

AM Peak Hour				07:15		08:45		**07:30**	**PM Peak Hour**				14:30		15:15		**15:15**
AM Pk Volume				608		573		**1142**	**PM Pk Volume**				625		786		**1363**
Pk Hr Factor				0.981		0.895		**0.952**	**Pk Hr Factor**				0.883		0.936		**0.905**
7 - 9 Volume	0	0		1064		1042		**2106**	**4 - 6 Volume**	0	0		996		1240		**2236**
7 - 9 Peak Hour				07:15		08:00		**07:30**	**4 - 6 Peak Hour**				16:30		16:00		**16:30**
7 - 9 Pk Volume	0	0		608		561		**1142**	**4 - 6 Pk Volume**	0	0		565		704		**1215**
Pk Hr Factor	0.000	0.000		0.981		0.877		**0.952**	**Pk Hr Factor**	0.000	0.000		0.905		0.859		**0.964**

Prepared by NDS/ATD

VOLUME

Otay Mesa Rd Bet. SR 125 NB Ramp & Harvest Rd (32.567575, -116.945569)

Day: Wednesday
Date: 1/18/2017

City: Otay Mesa
Project #: CA17_4015_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,190	4,605	9,795

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
0:00			2		2		4		12:00			70		77		147	
0:15			4		5		9		12:15			86		88		174	
0:30			6		7		13		12:30			98		60		158	
0:45			0	12	4	18	4	30	12:45			89	343	72	297	161	640
1:00			7		8		15		13:00			91		78		169	
1:15			4		2		6		13:15			86		58		144	
1:30			0		11		11		13:30			113		86		199	
1:45			1	12	1	22	2	34	13:45			87	377	88	310	175	687
2:00			4		1		5		14:00			58		118		176	
2:15			2		1		3		14:15			71		122		193	
2:30			6		5		11		14:30			101		120		221	
2:45			4	16	4	11	8	27	14:45			85	315	108	468	193	783
3:00			4		2		6		15:00			66		140		206	
3:15			9		9		18		15:15			59		135		194	
3:30			18		7		25		15:30			70		128		198	
3:45			8	39	8	26	16	65	15:45			57	252	101	504	158	756
4:00			8		5		13		16:00			72		175		247	
4:15			13		7		20		16:15			72		134		206	
4:30			21		5		26		16:30			69		136		205	
4:45			38	80	11	28	49	108	16:45			73	286	105	550	178	836
5:00			33		11		44		17:00			61		125		186	
5:15			87		16		103		17:15			60		109		169	
5:30			130		20		150		17:30			64		83		147	
5:45			137	387	29	76	166	463	17:45			49	234	68	385	117	619
6:00			66		43		109		18:00			31		67		98	
6:15			87		54		141		18:15			35		77		112	
6:30			109		39		148		18:30			21		54		75	
6:45			153	415	13	149	166	564	18:45			31	118	55	253	86	371
7:00			126		24		150		19:00			22		36		58	
7:15			166		27		193		19:15			20		38		58	
7:30			190		37		227		19:30			21		28		49	
7:45			202	684	43	131	245	815	19:45			20	83	36	138	56	221
8:00			127		34		161		20:00			21		36		57	
8:15			114		46		160		20:15			23		38		61	
8:30			115		41		156		20:30			17		20		37	
8:45			97	453	37	158	134	611	20:45			17	78	13	107	30	185
9:00			92		35		127		21:00			18		20		38	
9:15			87		78		165		21:15			18		21		39	
9:30			95		73		168		21:30			31		13		44	
9:45			71	345	66	252	137	597	21:45			8	75	16	70	24	145
10:00			61		53		114		22:00			9		43		52	
10:15			69		77		146		22:15			12		28		40	
10:30			61		56		117		22:30			8		11		19	
10:45			67	258	63	249	130	507	22:45			12	41	14	96	26	137
11:00			67		54		121		23:00			4		13		17	
11:15			68		64		132		23:15			4		8		12	
11:30			70		63		133		23:30			8		10		18	
11:45			63	268	63	244	126	512	23:45			3	19	32	63	35	82
TOTALS				2969		1364		**4333**	**TOTALS**				2221		3241		**5462**
SPLIT %				68.5%		31.5%		**44.2%**	**SPLIT %**				40.7%		59.3%		**55.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,190	4,605	9,795

AM Peak Hour			7:15	11:30	**7:15**	**PM Peak Hour**			12:45	16:00	**16:00**
AM Pk Volume			685	291	**826**	**PM Pk Volume**			379	550	**836**
Pk Hr Factor			0.848	0.827	**0.843**	**Pk Hr Factor**			0.838	0.786	**0.846**
7 - 9 Volume	0	0	1137	289	**1426**	**4 - 6 Volume**	0	0	520	935	**1455**
7 - 9 Peak Hour			7:15	7:45	**7:15**	**4 - 6 Peak Hour**			16:00	16:00	**16:00**
7 - 9 Pk Volume	0	0	685	164	**826**	**4 - 6 Pk Volume**	0	0	286	550	**836**
Pk Hr Factor	0.000	0.000	0.848	0.891	**0.843**	**Pk Hr Factor**	0.000	0.000	0.979	0.786	**0.846**

Prepared by NDS/ATD

VOLUME

Britannia Blvd Bet. Otay Mesa Rd & I-905 WB On Ramp

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_006

DAILY TOTALS	NB	SB	EB	WB	Total
	5,257	4,198	0	0	9,455

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	5		0				5		12:00	138		71				209	
00:15	10		1				11		12:15	118		78				196	
00:30	2		6				8		12:30	139		91				230	
00:45	8	25	1	8			9	33	12:45	99	494	87	327			186	821
01:00	0		5				5		13:00	91		82				173	
01:15	3		0				3		13:15	94		73				167	
01:30	3		1				4		13:30	88		72				160	
01:45	6	12	0	6			6	18	13:45	98	371	93	320			191	691
02:00	8		4				12		14:00	91		64				155	
02:15	3		8				11		14:15	82		82				164	
02:30	14		15				29		14:30	98		76				174	
02:45	0	25	0	27			0	52	14:45	121	392	110	332			231	724
03:00	0		0				0		15:00	125		99				224	
03:15	0		0				0		15:15	106		89				195	
03:30	7		9				16		15:30	118		106				224	
03:45	10	17	3	12			13	29	15:45	121	470	101	395			222	865
04:00	7		3				10		16:00	105		132				237	
04:15	16		4				20		16:15	99		130				229	
04:30	27		11				38		16:30	69		137				206	
04:45	28	78	12	30			40	108	16:45	81	354	127	526			208	880
05:00	33		13				46		17:00	71		132				203	
05:15	35		13				48		17:15	71		103				174	
05:30	37		6				43		17:30	49		83				132	
05:45	42	147	18	50			60	197	17:45	63	254	76	394			139	648
06:00	48		19				67		18:00	52		79				131	
06:15	54		17				71		18:15	51		44				95	
06:30	65		29				94		18:30	44		49				93	
06:45	94	261	42	107			136	368	18:45	32	179	31	203			63	382
07:00	61		51				112		19:00	27		25				52	
07:15	80		36				116		19:15	21		29				50	
07:30	85		50				135		19:30	23		25				48	
07:45	88	314	53	190			141	504	19:45	20	91	26	105			46	196
08:00	90		33				123		20:00	23		14				37	
08:15	78		60				138		20:15	15		18				33	
08:30	63		25				88		20:30	22		19				41	
08:45	35	266	48	166			83	432	20:45	9	69	10	61			19	130
09:00	106		66				172		21:00	12		14				26	
09:15	94		71				165		21:15	14		13				27	
09:30	115		63				178		21:30	7		9				16	
09:45	109	424	59	259			168	683	21:45	7	40	15	51			22	91
10:00	108		65				173		22:00	9		10				19	
10:15	114		60				174		22:15	16		12				28	
10:30	112		51				163		22:30	11		9				20	
10:45	116	450	67	243			183	693	22:45	9	45	22	53			31	98
11:00	97		54				151		23:00	3		15				18	
11:15	104		83				187		23:15	9		13				22	
11:30	127		84				211		23:30	12		12				24	
11:45	121	449	68	289			189	738	23:45	6	30	4	44			10	74
TOTALS		2468		1387				**3855**	**TOTALS**		2789		2811				**5600**
SPLIT %		64.0%		36.0%				**40.8%**	**SPLIT %**		49.8%		50.2%				**59.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	5,257	4,198	0	0	9,455

AM Peak Hour	11:45	11:45					**11:45**		**PM Peak Hour**	12:00	16:00					**15:30**		
AM Pk Volume	516	308					**824**		**PM Pk Volume**	494	526					**912**		
Pk Hr Factor	0.928	0.846					**0.896**		**Pk Hr Factor**	0.888	0.960					**0.962**		
7 - 9 Volume	580	356	0	0			**936**		**4 - 6 Volume**	608	920	0	0			**1528**		
7 - 9 Peak Hour	07:15	07:30					**07:30**		**4 - 6 Peak Hour**	16:00	16:00					**16:00**		
7 - 9 Pk Volume	343	196	0	0			**537**		**4 - 6 Pk Volume**	354	526	0	0			**880**		
Pk Hr Factor	0.953	0.817	0.000	0.000			**0.952**		**Pk Hr Factor**	0.843	0.960	0.000	0.000			**0.928**		

Prepared by NDS/ATD

VOLUME

Britannia Blvd Bet. I-905 EB Off Ramp & Airway Rd

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_007

DAILY TOTALS	NB	SB	EB	WB	Total
	8,831	3,570	0	0	12,401

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	50		0						50		12:00	212		38						250	
00:15	28		0						28		12:15	168		72						240	
00:30	32		0						32		12:30	166		51						217	
00:45	43	153	0						43	153	12:45	166	712	88	249					254	961
01:00	21		0						21		13:00	145		72						217	
01:15	51		0						51		13:15	188		65						253	
01:30	29		0						29		13:30	205		112						317	
01:45	19	120	0						19	120	13:45	135	673	118	367					253	1040
02:00	21		0						21		14:00	173		79						252	
02:15	22		0						22		14:15	153		107						260	
02:30	25		0						25		14:30	220		129						349	
02:45	18	86	0						18	86	14:45	209	755	116	431					325	1186
03:00	26		0						26		15:00	190		136						326	
03:15	18		2						20		15:15	188		172						360	
03:30	24		1						25		15:30	249		160						409	
03:45	22	90	5	8					27	98	15:45	193	820	138	606					331	1426
04:00	24		1						25		16:00	264		102						366	
04:15	22		0						22		16:15	197		105						302	
04:30	25		4						29		16:30	218		75						293	
04:45	18	89	10	15					28	104	16:45	172	851	118	400					290	1251
05:00	28		14						42		17:00	244		82						326	
05:15	59		6						65		17:15	140		57						197	
05:30	39		11						50		17:30	119		51						170	
05:45	37	163	2	33					39	196	17:45	85	588	34	224					119	812
06:00	69		4						73		18:00	127		35						162	
06:15	54		2						56		18:15	109		36						145	
06:30	64		3						67		18:30	78		45						123	
06:45	57	244	7	16					64	260	18:45	57	371	31	147					88	518
07:00	42		12						54		19:00	58		36						94	
07:15	44		16						60		19:15	45		48						93	
07:30	66		6						72		19:30	30		36						66	
07:45	69	221	11	45					80	266	19:45	35	168	31	151					66	319
08:00	74		50						124		20:00	50		27						77	
08:15	47		6						53		20:15	37		37						74	
08:30	76		9						85		20:30	45		46						91	
08:45	67	264	12	77					79	341	20:45	23	155	28	138					51	293
09:00	105		16						121		21:00	35		22						57	
09:15	108		41						149		21:15	36		22						58	
09:30	120		32						152		21:30	33		21						54	
09:45	118	451	15	104					133	555	21:45	31	135	36	101					67	236
10:00	118		32						150		22:00	40		13						53	
10:15	144		26						170		22:15	45		23						68	
10:30	178		36						214		22:30	33		43						76	
10:45	153	593	31	125					184	718	22:45	30	148	51	130					81	278
11:00	189		55						244		23:00	40		11						51	
11:15	182		42						224		23:15	22		12						34	
11:30	230		37						267		23:30	61		3						64	
11:45	214	815	38	172					252	987	23:45	43	166	5	31					48	197
TOTALS		3289		595						3884	TOTALS		5542		2975						8517
SPLIT %		84.7%		15.3%						31.3%	SPLIT %		65.1%		34.9%						68.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	8,831	3,570	0	0	12,401

AM Peak Hour	11:15	11:45			11:30	PM Peak Hour	15:30	15:00			15:15
AM Pk Volume	838	199			1009	PM Pk Volume	903	606			1466
Pk Hr Factor	0.911	0.691			0.945	Pk Hr Factor	0.855	0.881			0.896
7 - 9 Volume	485	122	0	0	607	4 - 6 Volume	1439	624	0	0	2063
7 - 9 Peak Hour	07:45	07:15			07:45	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	266	83	0	0	342	4 - 6 Pk Volume	851	400	0	0	1251
Pk Hr Factor	0.875	0.415	0.000	0.000	0.690	Pk Hr Factor	0.806	0.847	0.000	0.000	0.855

Prepared by NDS/ATD

VOLUME

Britannia Blvd Bet. Airway Rd & Siempre Viva Rd

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_008

DAILY TOTALS	NB	SB	EB	WB	Total
	4,562	4,224	0	0	8,786

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	27		4				31		12:00	96		81				177	
00:15	21		13				34		12:15	98		85				183	
00:30	15		8				23		12:30	88		85				173	
00:45	17	80	5	30			22	110	12:45	89	371	100	351			189	722
01:00	10		7				17		13:00	76		103				179	
01:15	14		7				21		13:15	99		92				191	
01:30	7		5				12		13:30	119		88				207	
01:45	8	39	6	25			14	64	13:45	76	370	96	379			172	749
02:00	5		3				8		14:00	101		77				178	
02:15	4		6				10		14:15	67		66				133	
02:30	5		7				12		14:30	101		83				184	
02:45	3	17	5	21			8	38	14:45	97	366	78	304			175	670
03:00	3		10				13		15:00	111		67				178	
03:15	17		19				36		15:15	104		95				199	
03:30	14		15				29		15:30	114		80				194	
03:45	14	48	13	57			27	105	15:45	114	443	74	316			188	759
04:00	13		19				32		16:00	131		56				187	
04:15	16		29				45		16:15	109		32				141	
04:30	14		27				41		16:30	87		42				129	
04:45	15	58	33	108			48	166	16:45	63	390	28	158			91	548
05:00	26		21				47		17:00	123		29				152	
05:15	36		30				66		17:15	73		26				99	
05:30	14		59				73		17:30	44		22				66	
05:45	21	97	80	190			101	287	17:45	61	301	12	89			73	390
06:00	43		53				96		18:00	82		28				110	
06:15	35		21				56		18:15	57		28				85	
06:30	25		76				101		18:30	46		29				75	
06:45	22	125	67	217			89	342	18:45	33	218	21	106			54	324
07:00	25		75				100		19:00	36		16				52	
07:15	22		69				91		19:15	19		19				38	
07:30	35		66				101		19:30	15		14				29	
07:45	48	130	83	293			131	423	19:45	20	90	14	63			34	153
08:00	53		98				151		20:00	16		12				28	
08:15	46		71				117		20:15	23		19				42	
08:30	47		66				113		20:30	13		24				37	
08:45	46	192	62	297			108	489	20:45	19	71	15	70			34	141
09:00	66		76				142		21:00	15		16				31	
09:15	83		91				174		21:15	21		11				32	
09:30	85		81				166		21:30	18		18				36	
09:45	59	293	86	334			145	627	21:45	23	77	25	70			48	147
10:00	73		96				169		22:00	20		6				26	
10:15	84		72				156		22:15	16		12				28	
10:30	86		78				164		22:30	20		11				31	
10:45	74	317	75	321			149	638	22:45	18	74	23	52			41	126
11:00	84		69				153		23:00	9		18				27	
11:15	70		69				139		23:15	12		21				33	
11:30	79		90				169		23:30	17		17				34	
11:45	96	329	78	306			174	635	23:45	28	66	11	67			39	133
TOTALS		1725		2199				3924	TOTALS		2837		2025				4862
SPLIT %		44.0%		56.0%				44.7%	SPLIT %		58.4%		41.6%				55.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,562	4,224	0	0	8,786

AM Peak Hour	11:45	09:15			11:45	PM Peak Hour	15:30	12:45			15:15
AM Pk Volume	378	354			707	PM Pk Volume	468	383			768
Pk Hr Factor	0.964	0.922			0.966	Pk Hr Factor	0.893	0.930			0.965
7 - 9 Volume	322	590	0	0	912	4 - 6 Volume	691	247	0	0	938
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	194	318	0	0	512	4 - 6 Pk Volume	390	158	0	0	548
Pk Hr Factor	0.915	0.811	0.000	0.000	0.848	Pk Hr Factor	0.744	0.705	0.000	0.000	0.733

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

La Media Rd Bet. Otay Mesa Rd & SR 905

Day: Wednesday
Date: 11/16/2016

City: Otay Mesa
Project #: CA16_4347_003

DAILY TOTALS	NB	SB	EB	WB	Total
	7,716	10,454	0	0	18,170

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	20		29		0	0	49		12:00	112		200		0	0	312	
00:15	16		33		0	0	49		12:15	138		170		0	0	308	
00:30	21		21		0	0	42		12:30	112		162		0	0	274	
00:45	8	65	24	107	0	0	32	172	12:45	97	459	197	729	0	0	294	1188
01:00	6		14		0	0	20		13:00	124		167		0	0	291	
01:15	12		21		0	0	33		13:15	122		182		0	0	304	
01:30	13		27		0	0	40		13:30	158		172		0	0	330	
01:45	18	49	28	90	0	0	46	139	13:45	105	509	166	687	0	0	271	1196
02:00	7		12		0	0	19		14:00	106		210		0	0	316	
02:15	11		27		0	0	38		14:15	114		191		0	0	305	
02:30	17		20		0	0	37		14:30	135		196		0	0	331	
02:45	21	56	30	89	0	0	51	145	14:45	158	513	210	807	0	0	368	1320
03:00	16		33		0	0	49		15:00	115		210		0	0	325	
03:15	13		48		0	0	61		15:15	136		189		0	0	325	
03:30	25		41		0	0	66		15:30	138		178		0	0	316	
03:45	24	78	37	159	0	0	61	237	15:45	104	493	187	764	0	0	291	1257
04:00	27		41		0	0	68		16:00	106		191		0	0	297	
04:15	43		43		0	0	86		16:15	116		202		0	0	318	
04:30	30		63		0	0	93		16:30	109		185		0	0	294	
04:45	50	150	59	206	0	0	109	356	16:45	126	457	178	756	0	0	304	1213
05:00	59		55		0	0	114		17:00	108		210		0	0	318	
05:15	63		64		0	0	127		17:15	117		184		0	0	301	
05:30	90		64		0	0	154		17:30	80		171		0	0	251	
05:45	92	304	77	260	0	0	169	564	17:45	103	408	145	710	0	0	248	1118
06:00	89		76		0	0	165		18:00	104		164		0	0	268	
06:15	97		92		0	0	189		18:15	104		147		0	0	251	
06:30	122		83		0	0	205		18:30	79		133		0	0	212	
06:45	118	426	101	352	0	0	219	778	18:45	82	369	144	588	0	0	226	957
07:00	95		94		0	0	189		19:00	79		112		0	0	191	
07:15	139		118		0	0	257		19:15	74		124		0	0	198	
07:30	124		119		0	0	243		19:30	61		127		0	0	188	
07:45	145	503	144	475	0	0	289	978	19:45	77	291	79	442	0	0	156	733
08:00	149		114		0	0	263		20:00	83		109		0	0	192	
08:15	130		122		0	0	252		20:15	60		64		0	0	124	
08:30	101		128		0	0	229		20:30	53		80		0	0	133	
08:45	129	509	136	500	0	0	265	1009	20:45	52	248	68	321	0	0	120	569
09:00	132		139		0	0	271		21:00	57		83		0	0	140	
09:15	147		123		0	0	270		21:15	48		69		0	0	117	
09:30	109		145		0	0	254		21:30	37		64		0	0	101	
09:45	105	493	151	558	0	0	256	1051	21:45	53	195	50	266	0	0	103	461
10:00	115		136		0	0	251		22:00	30		45		0	0	75	
10:15	131		132		0	0	263		22:15	33		45		0	0	78	
10:30	113		177		0	0	290		22:30	33		54		0	0	87	
10:45	110	469	171	616	0	0	281	1085	22:45	24	120	30	174	0	0	54	294
11:00	115		158		0	0	273		23:00	31		29		0	0	60	
11:15	123		177		0	0	300		23:15	20		30		0	0	50	
11:30	114		184		0	0	298		23:30	15		35		0	0	50	
11:45	104	456	155	674	0	0	259	1130	23:45	30	96	30	124	0	0	60	220
TOTALS		3558		4086				7644	TOTALS		4158		6368				10526
SPLIT %		46.5%		53.5%				42.1%	SPLIT %		39.5%		60.5%				57.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,716	10,454	0	0	18,170

AM Peak Hour	07:15	11:15						11:15	PM Peak Hour	15:15	14:30						15:00
AM Pk Volume	557	716						1169	PM Pk Volume	547	807						1349
Pk Hr Factor	0.935	0.895						0.937	Pk Hr Factor	0.866	0.961						0.967
7 - 9 Volume	1012	975	0	0				1987	4 - 6 Volume	865	1466	0	0				2331
7 - 9 Peak Hour	07:15	07:45						07:15	4 - 6 Peak Hour	16:30	16:15						16:15
7 - 9 Pk Volume	557	508	0	0				1052	4 - 6 Pk Volume	460	775	0	0				1234
Pk Hr Factor	0.935	0.882	0.000	0.000				0.910	Pk Hr Factor	0.913	0.923	0.000	0.000				0.970

Prepared by NDS/ATD

VOLUME

La Media Rd Bet. I-905 EB Off Ramp & Airway Rd

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_010

DAILY TOTALS	NB	SB	EB	WB	Total
	7,168	7,097	0	0	14,265

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	29		22				51		12:00	137		137				274	
00:15	8		19				27		12:15	141		143				284	
00:30	13		29				42		12:30	145		154				299	
00:45	17	67	15	85			32	152	12:45	128	551	136	570			264	1121
01:00	32		19				51		13:00	118		114				232	
01:15	32		12				44		13:15	136		115				251	
01:30	30		10				40		13:30	171		127				298	
01:45	28	122	14	55			42	177	13:45	135	560	138	494			273	1054
02:00	30		12				42		14:00	162		156				318	
02:15	25		20				45		14:15	127		140				267	
02:30	19		25				44		14:30	148		116				264	
02:45	25	99	29	86			54	185	14:45	131	568	128	540			259	1108
03:00	46		38				84		15:00	110		105				215	
03:15	32		38				70		15:15	129		133				262	
03:30	40		28				68		15:30	142		108				250	
03:45	24	142	48	152			72	294	15:45	136	517	111	457			247	974
04:00	18		15				33		16:00	117		79				196	
04:15	35		20				55		16:15	126		101				227	
04:30	45		50				95		16:30	140		88				228	
04:45	45	143	33	118			78	261	16:45	110	493	89	357			199	850
05:00	58		30				88		17:00	148		72				220	
05:15	34		48				82		17:15	107		54				161	
05:30	50		46				96		17:30	75		53				128	
05:45	47	189	84	208			131	397	17:45	89	419	68	247			157	666
06:00	34		64				98		18:00	127		50				177	
06:15	56		85				141		18:15	75		72				147	
06:30	57		91				148		18:30	122		56				178	
06:45	79	226	95	335			174	561	18:45	95	419	66	244			161	663
07:00	39		98				137		19:00	103		66				169	
07:15	50		113				163		19:15	67		46				113	
07:30	40		143				183		19:30	86		80				166	
07:45	40	169	167	521			207	690	19:45	98	354	73	265			171	619
08:00	53		145				198		20:00	78		49				127	
08:15	52		113				165		20:15	58		40				98	
08:30	67		124				191		20:30	54		39				93	
08:45	59	231	95	477			154	708	20:45	30	220	31	159			61	379
09:00	125		106				231		21:00	27		28				55	
09:15	101		110				211		21:15	27		32				59	
09:30	109		98				207		21:30	37		38				75	
09:45	93	428	119	433			212	861	21:45	28	119	28	126			56	245
10:00	83		104				187		22:00	44		24				68	
10:15	101		131				232		22:15	28		35				63	
10:30	125		127				252		22:30	16		31				47	
10:45	142	451	105	467			247	918	22:45	20	108	21	111			41	219
11:00	131		129				260		23:00	40		23				63	
11:15	103		116				219		23:15	28		32				60	
11:30	132		103				235		23:30	22		32				54	
11:45	98	464	133	481			231	945	23:45	19	109	22	109			41	218
TOTALS		2731		3418				**6149**	**TOTALS**		4437		3679				**8116**
SPLIT %		44.4%		55.6%				**43.1%**	**SPLIT %**		54.7%		45.3%				**56.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	7,168	7,097	0	0	14,265

AM Peak Hour	11:45	07:15				**11:45**	**PM Peak Hour**	13:15	12:00				**13:30**
AM Pk Volume	521	568				**1088**	**PM Pk Volume**	604	570				**1156**
Pk Hr Factor	0.898	0.850				**0.910**	**Pk Hr Factor**	0.883	0.925				**0.909**
7 - 9 Volume	400	998	0	0		**1398**	**4 - 6 Volume**	912	604	0	0		**1516**
7 - 9 Peak Hour	08:00	07:15				**07:45**	**4 - 6 Peak Hour**	16:15	16:00				**16:15**
7 - 9 Pk Volume	231	568	0	0		**761**	**4 - 6 Pk Volume**	524	357	0	0		**874**
Pk Hr Factor	0.862	0.850	0.000	0.000		**0.919**	**Pk Hr Factor**	0.885	0.884	0.000	0.000		**0.958**

Prepared by NDS/ATD

VOLUME

La Media Rd Bet. Airway Rd & Avenida De La Fuente

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_011

DAILY TOTALS	NB	SB	EB	WB	Total
	5,912	4,506	0	0	10,418

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	24		12				36		12:00	109		94				203	
00:15	3		9				12		12:15	100		91				191	
00:30	8		7				15		12:30	105		109				214	
00:45	19	54	7	35			26	89	12:45	129	443	102	396			231	839
01:00	43		9				52		13:00	148		90				238	
01:15	33		4				37		13:15	173		76				249	
01:30	17		4				21		13:30	119		90				209	
01:45	12	105	2	19			14	124	13:45	127	567	98	354			225	921
02:00	9		3				12		14:00	136		100				236	
02:15	17		6				23		14:15	128		125				253	
02:30	3		6				9		14:30	146		109				255	
02:45	4	33	2	17			6	50	14:45	124	534	100	434			224	968
03:00	24		8				32		15:00	94		105				199	
03:15	14		8				22		15:15	145		88				233	
03:30	22		12				34		15:30	124		87				211	
03:45	7	67	18	46			25	113	15:45	179	542	87	367			266	909
04:00	14		6				20		16:00	66		60				126	
04:15	20		7				27		16:15	78		53				131	
04:30	27		16				43		16:30	52		52				104	
04:45	25	86	15	44			40	130	16:45	72	268	36	201			108	469
05:00	29		13				42		17:00	63		34				97	
05:15	20		21				41		17:15	59		23				82	
05:30	25		21				46		17:30	44		19				63	
05:45	28	102	53	108			81	210	17:45	57	223	12	88			69	311
06:00	20		42				62		18:00	127		53				180	
06:15	34		57				91		18:15	86		63				149	
06:30	38		52				90		18:30	115		44				159	
06:45	41	133	62	213			103	346	18:45	122	450	45	205			167	655
07:00	26		65				91		19:00	120		50				170	
07:15	44		43				87		19:15	61		30				91	
07:30	23		76				99		19:30	88		48				136	
07:45	38	131	69	253			107	384	19:45	64	333	35	163			99	496
08:00	27		75				102		20:00	97		24				121	
08:15	49		56				105		20:15	69		14				83	
08:30	41		68				109		20:30	54		16				70	
08:45	49	166	52	251			101	417	20:45	17	237	17	71			34	308
09:00	79		81				160		21:00	30		11				41	
09:15	107		70				177		21:15	46		14				60	
09:30	90		86				176		21:30	39		16				55	
09:45	79	355	88	325			167	680	21:45	19	134	18	59			37	193
10:00	76		108				184		22:00	44		7				51	
10:15	139		97				236		22:15	20		20				40	
10:30	115		97				212		22:30	18		19				37	
10:45	90	420	76	378			166	798	22:45	22	104	9	55			31	159
11:00	79		92				171		23:00	39		17				56	
11:15	68		106				174		23:15	24		11				35	
11:30	103		73				176		23:30	23		11				34	
11:45	72	322	110	381			182	703	23:45	17	103	4	43			21	146
TOTALS		1974		2070				**4044**	**TOTALS**		3938		2436				**6374**
SPLIT %		48.8%		51.2%				**38.8%**	**SPLIT %**		61.8%		38.2%				**61.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	5,912	4,506	0	0	10,418

AM Peak Hour	10:15	11:45			**09:45**	**PM Peak Hour**	12:45	14:15			**13:45**
AM Pk Volume	423	404			**799**	**PM Pk Volume**	569	439			**969**
Pk Hr Factor	0.761	0.918			**0.846**	**Pk Hr Factor**	0.822	0.878			**0.950**
7 - 9 Volume	297	504	0	0	**801**	**4 - 6 Volume**	491	289	0	0	**780**
7 - 9 Peak Hour	08:00	07:30			**07:45**	**4 - 6 Peak Hour**	16:00	16:00			**16:00**
7 - 9 Pk Volume	166	276	0	0	**423**	**4 - 6 Pk Volume**	268	201	0	0	**469**
Pk Hr Factor	0.847	0.908	0.000	0.000	**0.970**	**Pk Hr Factor**	0.859	0.838	0.000	0.000	**0.895**

Prepared by NDS/ATD

VOLUME

La Media Rd Bet. Avenida De La Fuente & Siempre Viva Rd

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_012

DAILY TOTALS	NB	SB	EB	WB	Total
	2,401	981	0	0	3,382

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	13		0				13		12:00	63		0				63	
00:15	3		0				3		12:15	51		0				51	
00:30	3		0				3		12:30	47		1				48	
00:45	14	33	0				14	33	12:45	44	205	0	1			44	206
01:00	20		0				20		13:00	45		1				46	
01:15	21		0				21		13:15	45		0				45	
01:30	12		0				12		13:30	45		0				45	
01:45	9	62	0				9	62	13:45	46	181	0	1			46	182
02:00	10		0				10		14:00	54		0				54	
02:15	12		5				17		14:15	58		0				58	
02:30	1		4				5		14:30	49		0				49	
02:45	4	27	1	10			5	37	14:45	57	218	0				57	218
03:00	5		6				11		15:00	61		0				61	
03:15	2		3				5		15:15	48		0				48	
03:30	4		7				11		15:30	59		0				59	
03:45	2	13	15	31			17	44	15:45	63	231	0				63	231
04:00	1		2				3		16:00	38		1				39	
04:15	9		3				12		16:15	49		0				49	
04:30	3		12				15		16:30	43		0				43	
04:45	12	25	11	28			23	53	16:45	30	160	1	2			31	162
05:00	8		7				15		17:00	46		0				46	
05:15	4		17				21		17:15	22		0				22	
05:30	8		16				24		17:30	16		0				16	
05:45	16	36	46	86			62	122	17:45	15	99	0				15	99
06:00	12		33				45		18:00	25		0				25	
06:15	20		54				74		18:15	28		0				28	
06:30	24		51				75		18:30	31		0				31	
06:45	12	68	51	189			63	257	18:45	32	116	0				32	116
07:00	22		31				53		19:00	22		0				22	
07:15	19		46				65		19:15	18		1				19	
07:30	16		31				47		19:30	19		0				19	
07:45	21	78	53	161			74	239	19:45	13	72	0	1			13	73
08:00	17		43				60		20:00	17		0				17	
08:15	12		57				69		20:15	14		0				14	
08:30	22		47				69		20:30	11		0				11	
08:45	27	78	57	204			84	282	20:45	6	48	0				6	48
09:00	43		88				131		21:00	3		0				3	
09:15	55		81				136		21:15	13		0				13	
09:30	32		90				122		21:30	5		0				5	
09:45	28	158	8	267			36	425	21:45	2	23	0				2	23
10:00	37		0				37		22:00	19		0				19	
10:15	53		0				53		22:15	9		0				9	
10:30	41		0				41		22:30	6		0				6	
10:45	56	187	0				56	187	22:45	4	38	0				4	38
11:00	49		0				49		23:00	29		0				29	
11:15	33		0				33		23:15	15		0				15	
11:30	36		0				36		23:30	16		0				16	
11:45	58	176	0				58	176	23:45	9	69	0				9	69
TOTALS		941		976				**1917**	**TOTALS**		1460		5				**1465**
SPLIT %		49.1%		50.9%				**56.7%**	**SPLIT %**		99.7%		0.3%				**43.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	2,401	981	0	0	3,382

AM Peak Hour	11:45	08:45						**08:45**	**PM Peak Hour**	15:00	12:15							**15:00**
AM Pk Volume	219	316						**473**	**PM Pk Volume**	231	2							**231**
Pk Hr Factor	0.869	0.878						**0.869**	**Pk Hr Factor**	0.917	0.500							**0.917**
7 - 9 Volume	156	365	0	0				**521**	**4 - 6 Volume**	259	2	0	0					**261**
7 - 9 Peak Hour	07:00	08:00						**08:00**	**4 - 6 Peak Hour**	16:15	16:00							**16:15**
7 - 9 Pk Volume	78	204	0	0				**282**	**4 - 6 Pk Volume**	168	2	0	0					**169**
Pk Hr Factor	0.886	0.895	0.000	0.000				**0.839**	**Pk Hr Factor**	0.857	0.500	0.000	0.000					**0.862**

Prepared by NDS/ATD

VOLUME

Airway Rd Bet. Britannia Blvd & La Media Rd

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,620	1,563	3,183

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			3		3		6		12:00			31		30		61	
00:15			2		3		5		12:15			31		34		65	
00:30			2		1		3		12:30			32		28		60	
00:45			1	8	1	8	2	16	12:45			25	119	27	119	52	238
01:00			5		0		5		13:00			26		37		63	
01:15			3		2		5		13:15			41		40		81	
01:30			2		1		3		13:30			32		30		62	
01:45			2	12	0	3	2	15	13:45			44	143	24	131	68	274
02:00			2		2		4		14:00			37		35		72	
02:15			3		1		4		14:15			42		32		74	
02:30			2		1		3		14:30			30		41		71	
02:45			0	7	1	5	1	12	14:45			31	140	26	134	57	274
03:00			2		2		4		15:00			42		36		78	
03:15			6		4		10		15:15			34		30		64	
03:30			2		4		6		15:30			32		29		61	
03:45			3	13	5	15	8	28	15:45			53	161	39	134	92	295
04:00			0		2		2		16:00			41		38		79	
04:15			1		2		3		16:15			40		32		72	
04:30			2		2		4		16:30			42		17		59	
04:45			0	3	7	13	7	16	16:45			27	150	20	107	47	257
05:00			1		4		5		17:00			38		24		62	
05:15			4		5		9		17:15			24		29		53	
05:30			2		5		7		17:30			18		20		38	
05:45			2	9	10	24	12	33	17:45			18	98	19	92	37	190
06:00			10		12		22		18:00			18		10		28	
06:15			10		8		18		18:15			17		13		30	
06:30			10		17		27		18:30			9		12		21	
06:45			7	37	8	45	15	82	18:45			13	57	14	49	27	106
07:00			12		11		23		19:00			22		6		28	
07:15			13		19		32		19:15			9		12		21	
07:30			14		20		34		19:30			19		16		35	
07:45			16	55	47	97	63	152	19:45			10	60	5	39	15	99
08:00			16		29		45		20:00			9		1		10	
08:15			18		29		47		20:15			5		3		8	
08:30			32		28		60		20:30			7		4		11	
08:45			30	96	33	119	63	215	20:45			5	26	2	10	7	36
09:00			25		21		46		21:00			6		3		9	
09:15			32		33		65		21:15			3		4		7	
09:30			35		34		69		21:30			1		8		9	
09:45			25	117	40	128	65	245	21:45			4	14	6	21	10	35
10:00			40		27		67		22:00			4		11		15	
10:15			25		20		45		22:15			4		5		9	
10:30			32		35		67		22:30			1		5		6	
10:45			34	131	18	100	52	231	22:45			0	9	9	30	9	39
11:00			32		41		73		23:00			5		2		7	
11:15			38		30		68		23:15			2		2		4	
11:30			32		27		59		23:30			4		4		8	
11:45			40	142	33	131	73	273	23:45			2	13	1	9	3	22
TOTALS				630		688		**1318**	**TOTALS**				990		875		**1865**
SPLIT %				47.8%		52.2%		**41.4%**	**SPLIT %**				53.1%		46.9%		**58.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,620	1,563	3,183

AM Peak Hour			11:00	09:15	**11:00**	**PM Peak Hour**			15:45	15:30	**15:30**
AM Pk Volume			142	134	**273**	**PM Pk Volume**			176	138	**304**
Pk Hr Factor			0.888	0.838	**0.935**	**Pk Hr Factor**			0.830	0.885	**0.826**
7 - 9 Volume	0	0	151	216	**367**	**4 - 6 Volume**	0	0	248	199	**447**
7 - 9 Peak Hour			08:00	07:45	**07:45**	**4 - 6 Peak Hour**			16:00	16:00	**16:00**
7 - 9 Pk Volume	0	0	96	133	**215**	**4 - 6 Pk Volume**	0	0	150	107	**257**
Pk Hr Factor	0.000	0.000	0.750	0.707	**0.853**	**Pk Hr Factor**	0.000	0.000	0.893	0.704	**0.813**

Prepared by NDS/ATD

VOLUME

Airway Rd Bet. La Media Rd & Harvest Rd

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_014

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,288	3,737	7,025

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			7		11		18		12:00			50		88		138	
00:15			3		7		10		12:15			52		79		131	
00:30			4		2		6		12:30			37		59		96	
00:45			7	21	1	21	8	42	12:45			45	184	64	290	109	474
01:00			8		1		9		13:00			51		70		121	
01:15			10		2		12		13:15			70		74		144	
01:30			13		4		17		13:30			52		110		162	
01:45			8	39	7	14	15	53	13:45			57	230	52	306	109	536
02:00			10		7		17		14:00			64		116		180	
02:15			9		9		18		14:15			49		73		122	
02:30			13		14		27		14:30			48		82		130	
02:45			21	53	10	40	31	93	14:45			58	219	77	348	135	567
03:00			35		10		45		15:00			61		69		130	
03:15			43		16		59		15:15			62		59		121	
03:30			19		14		33		15:30			58		87		145	
03:45			41	138	12	52	53	190	15:45			53	234	90	305	143	539
04:00			7		10		17		16:00			56		91		147	
04:15			12		11		23		16:15			69		74		143	
04:30			18		13		31		16:30			54		84		138	
04:45			10	47	17	51	27	98	16:45			63	242	58	307	121	549
05:00			15		16		31		17:00			51		105		156	
05:15			16		22		38		17:15			48		63		111	
05:30			30		13		43		17:30			51		59		110	
05:45			25	86	23	74	48	160	17:45			68	218	45	272	113	490
06:00			13		11		24		18:00			31		64		95	
06:15			21		25		46		18:15			26		50		76	
06:30			22		23		45		18:30			30		66		96	
06:45			39	95	25	84	64	179	18:45			24	111	38	218	62	329
07:00			49		15		64		19:00			24		40		64	
07:15			64		30		94		19:15			14		47		61	
07:30			89		17		106		19:30			17		22		39	
07:45			81	283	43	105	124	388	19:45			26	81	45	154	71	235
08:00			94		37		131		20:00			12		26		38	
08:15			67		41		108		20:15			13		13		26	
08:30			62		41		103		20:30			12		16		28	
08:45			59	282	51	170	110	452	20:45			16	53	16	71	32	124
09:00			44		58		102		21:00			11		18		29	
09:15			63		64		127		21:15			11		9		20	
09:30			45		63		108		21:30			8		7		15	
09:45			59	211	57	242	116	453	21:45			6	36	12	46	18	82
10:00			50		68		118		22:00			8		11		19	
10:15			43		45		88		22:15			6		12		18	
10:30			51		50		101		22:30			5		9		14	
10:45			46	190	73	236	119	426	22:45			7	26	9	41	16	67
11:00			41		74		115		23:00			4		8		12	
11:15			50		61		111		23:15			3		7		10	
11:30			58		76		134		23:30			9		3		12	
11:45			38	187	58	269	96	456	23:45			6	22	3	21	9	43
TOTALS				1632		1358		**2990**	**TOTALS**				1656		2379		**4035**
SPLIT %				54.6%		45.4%		**42.6%**	**SPLIT %**				41.0%		59.0%		**57.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,288	3,737	7,025

AM Peak Hour			07:30	11:30	**11:30**	**PM Peak Hour**			13:15	13:15	**13:15**
AM Pk Volume			331	301	**499**	**PM Pk Volume**			243	352	**595**
Pk Hr Factor			0.880	0.855	**0.904**	**Pk Hr Factor**			0.868	0.759	**0.826**
7 - 9 Volume	0	0	565	275	**840**	**4 - 6 Volume**	0	0	460	579	**1039**
7 - 9 Peak Hour			07:30	08:00	**07:30**	**4 - 6 Peak Hour**			16:00	16:15	**16:15**
7 - 9 Pk Volume	0	0	331	170	**469**	**4 - 6 Pk Volume**	0	0	242	321	**558**
Pk Hr Factor	0.000	0.000	0.880	0.833	**0.895**	**Pk Hr Factor**	0.000	0.000	0.877	0.764	**0.894**

Prepared by NDS/ATD

VOLUME

Siempre Viva Rd Bet. Customhouse Plaza/Harvest Rd & Otay Center Dr

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_016

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,732	7,524	11,256

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			7		16		23		12:00			80		161		241	
00:15			5		7		12		12:15			82		174		256	
00:30			11		13		24		12:30			83		161		244	
00:45			4	27	4	40	8	67	12:45			62	307	150	646	212	953
01:00			7		6		13		13:00			68		174		242	
01:15			2		9		11		13:15			83		107		190	
01:30			8		3		11		13:30			75		190		265	
01:45			6	23	15	33	21	56	13:45			80	306	190	661	270	967
02:00			2		4		6		14:00			71		181		252	
02:15			2		5		7		14:15			57		169		226	
02:30			4		9		13		14:30			78		179		257	
02:45			4	12	8	26	12	38	14:45			92	298	144	673	236	971
03:00			3		4		7		15:00			116		165		281	
03:15			2		7		9		15:15			68		145		213	
03:30			2		8		10		15:30			78		133		211	
03:45			7	14	5	24	12	38	15:45			69	331	158	601	227	932
04:00			5		16		21		16:00			94		90		184	
04:15			2		14		16		16:15			105		120		225	
04:30			14		20		34		16:30			93		96		189	
04:45			7	28	30	80	37	108	16:45			130	422	95	401	225	823
05:00			4		18		22		17:00			123		90		213	
05:15			13		36		49		17:15			98		83		181	
05:30			10		41		51		17:30			67		73		140	
05:45			14	41	46	141	60	182	17:45			107	395	62	308	169	703
06:00			12		59		71		18:00			76		110		186	
06:15			11		48		59		18:15			50		122		172	
06:30			28		50		78		18:30			41		90		131	
06:45			14	65	66	223	80	288	18:45			39	206	56	378	95	584
07:00			32		86		118		19:00			21		84		105	
07:15			30		66		96		19:15			27		72		99	
07:30			40		124		164		19:30			22		63		85	
07:45			33	135	125	401	158	536	19:45			17	87	64	283	81	370
08:00			48		115		163		20:00			29		32		61	
08:15			42		123		165		20:15			28		29		57	
08:30			56		126		182		20:30			16		34		50	
08:45			56	202	105	469	161	671	20:45			10	83	15	110	25	193
09:00			45		146		191		21:00			5		31		36	
09:15			38		138		176		21:15			14		24		38	
09:30			62		134		196		21:30			6		37		43	
09:45			65	210	146	564	211	774	21:45			4	29	30	122	34	151
10:00			53		151		204		22:00			14		16		30	
10:15			61		157		218		22:15			6		18		24	
10:30			53		126		179		22:30			10		23		33	
10:45			50	217	163	597	213	814	22:45			5	35	12	69	17	104
11:00			46		136		182		23:00			7		10		17	
11:15			50		175		225		23:15			12		13		25	
11:30			59		168		227		23:30			5		3		8	
11:45			70	225	160	639	230	864	23:45			10	34	9	35	19	69
TOTALS				1199		3237		**4436**	**TOTALS**				2533		4287		**6820**
SPLIT %				27.0%		73.0%		**39.4%**	**SPLIT %**				37.1%		62.9%		**60.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,732	7,524	11,256

AM Peak Hour			11:45	11:15	**11:45**	**PM Peak Hour**			16:15	13:30	**13:30**
AM Pk Volume			315	664	**971**	**PM Pk Volume**			451	730	**1013**
Pk Hr Factor			0.949	0.949	**0.948**	**Pk Hr Factor**			0.867	0.961	**0.938**
7 - 9 Volume	0	0	337	870	**1207**	**4 - 6 Volume**	0	0	817	709	**1526**
7 - 9 Peak Hour			08:00	07:45	**08:00**	**4 - 6 Peak Hour**			16:15	16:00	**16:15**
7 - 9 Pk Volume	0	0	202	489	**671**	**4 - 6 Pk Volume**	0	0	451	401	**852**
Pk Hr Factor	0.000	0.000	0.902	0.970	**0.922**	**Pk Hr Factor**	0.000	0.000	0.867	0.835	**0.947**

Prepared by NDS/ATD

VOLUME

Siempre Viva Rd Bet. I-905 SB Ramp & Paseo De La Americas

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_017

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,606	7,664	19,270

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			31	5	36	12:00			186	209	395
00:15			23	0	23	12:15			183	207	390
00:30			39	3	42	12:30			193	164	357
00:45			19	112 1	9 20	121 12:45			209	771 234	814 443 1585
01:00			18	3	21	13:00			161	185	346
01:15			29	1	30	13:15			176	178	354
01:30			23	0	23	13:30			183	224	407
01:45			13	83 5	9 18	92 13:45			174	694 206	793 380 1487
02:00			10	0	10	14:00			197	211	408
02:15			15	0	15	14:15			174	209	383
02:30			16	0	16	14:30			196	224	420
02:45			19	60 1	1 20	61 14:45			188	755 230	874 418 1629
03:00			37	0	37	15:00			180	216	396
03:15			32	0	32	15:15			197	212	409
03:30			29	0	29	15:30			150	227	377
03:45			27	125 0	27	125 15:45			153	680 236	891 389 1571
04:00			29	0	29	16:00			185	226	411
04:15			80	0	80	16:15			185	217	402
04:30			83	0	83	16:30			189	195	384
04:45			109	301 0	109	301 16:45			158	717 119	757 277 1474
05:00			75	0	75	17:00			124	122	246
05:15			121	0	121	17:15			177	54	231
05:30			156	0	156	17:30			130	70	200
05:45			134	486 1	1 135	487 17:45			154	585 77	323 231 908
06:00			124	1	125	18:00			144	70	214
06:15			144	1	145	18:15			132	75	207
06:30			132	1	133	18:30			124	60	184
06:45			152	552 3	6 155	558 18:45			107	507 43	248 150 755
07:00			202	3	205	19:00			105	42	147
07:15			220	4	224	19:15			110	17	127
07:30			243	21	264	19:30			93	23	116
07:45			273	938 65	93 338	1031 19:45			70	378 19	101 89 479
08:00			268	61	329	20:00			81	20	101
08:15			209	77	286	20:15			66	23	89
08:30			230	129	359	20:30			81	26	107
08:45			227	934 151	418 378	1352 20:45			59	287 10	79 69 366
09:00			176	164	340	21:00			65	7	72
09:15			193	176	369	21:15			62	7	69
09:30			175	177	352	21:30			45	10	55
09:45			208	752 183	700 391	1452 21:45			52	224 10	34 62 258
10:00			190	166	356	22:00			60	21	81
10:15			164	183	347	22:15			37	5	42
10:30			167	161	328	22:30			41	12	53
10:45			187	708 172	682 359	1390 22:45			42	180 10	48 52 228
11:00			142	196	338	23:00			25	9	34
11:15			171	183	354	23:15			21	4	25
11:30			162	195	357	23:30			38	3	41
11:45			182	657 187	761 369	1418 23:45			36	120 6	22 42 142
TOTALS				5708	2680	8388	TOTALS			5898	4984	10882
SPLIT %				68.0%	32.0%	43.5%	SPLIT %			54.2%	45.8%	56.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,606	7,664	19,270

AM Peak Hour			07:15	11:30	11:30	PM Peak Hour			12:00	15:30	14:30
AM Pk Volume			1004	798	1511	PM Pk Volume			771	906	1643
Pk Hr Factor			0.919	0.955	0.956	Pk Hr Factor			0.922	0.960	0.978
7 - 9 Volume	0	0	1872	511	2383	4 - 6 Volume	0	0	1302	1080	2382
7 - 9 Peak Hour			07:15	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	1004	418	1352	4 - 6 Pk Volume	0	0	717	757	1474
Pk Hr Factor	0.000	0.000	0.919	0.692	0.894	Pk Hr Factor	0.000	0.000	0.948	0.837	0.897

Prepared by NDS/ATD

VOLUME

Otay Valley Rd/Heritage Rd Bet. Otay Mesa Rd & Datsun St

Day: Wednesday
Date: 11/18/2015

City: Otay Mesa
Project #: CA15_4345_018

DAILY TOTALS	NB	SB	EB	WB	Total
	3,952	3,989	0	0	7,941

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	3		4				7		12:00	77		81				158	
00:15	3		2				5		12:15	75		77				152	
00:30	1		1				2		12:30	78		113				191	
00:45	1	8	1	8			2	16	12:45	95	325	97	368			192	693
01:00	0		0				0		13:00	84		98				182	
01:15	1		1				2		13:15	98		98				196	
01:30	0		0				0		13:30	79		103				182	
01:45	0	1	2	3			2	4	13:45	93	354	82	381			175	735
02:00	0		0				0		14:00	88		105				193	
02:15	1		1				2		14:15	98		80				178	
02:30	2		1				3		14:30	115		63				178	
02:45	0	3	3	5			3	8	14:45	105	406	111	359			216	765
03:00	1		3				4		15:00	101		87				188	
03:15	2		1				3		15:15	69		62				131	
03:30	4		2				6		15:30	96		65				161	
03:45	1	8	1	7			2	15	15:45	90	356	94	308			184	664
04:00	2		1				3		16:00	90		106				196	
04:15	1		2				3		16:15	95		96				191	
04:30	5		2				7		16:30	78		89				167	
04:45	8	16	4	9			12	25	16:45	77	340	105	396			182	736
05:00	9		8				17		17:00	80		157				237	
05:15	14		13				27		17:15	63		94				157	
05:30	15		15				30		17:30	40		87				127	
05:45	28	66	14	50			42	116	17:45	36	219	41	379			77	598
06:00	20		19				39		18:00	46		35				81	
06:15	29		19				48		18:15	30		33				63	
06:30	25		24				49		18:30	28		32				60	
06:45	26	100	30	92			56	192	18:45	25	129	21	121			46	250
07:00	43		25				68		19:00	17		20				37	
07:15	34		53				87		19:15	18		16				34	
07:30	41		47				88		19:30	16		11				27	
07:45	55	173	58	183			113	356	19:45	15	66	18	65			33	131
08:00	68		54				122		20:00	11		10				21	
08:15	54		55				109		20:15	10		6				16	
08:30	64		54				118		20:30	14		8				22	
08:45	61	247	59	222			120	469	20:45	13	48	14	38			27	86
09:00	55		57				112		21:00	11		8				19	
09:15	81		65				146		21:15	11		7				18	
09:30	74		54				128		21:30	9		11				20	
09:45	88	298	91	267			179	565	21:45	11	42	9	35			20	77
10:00	81		85				166		22:00	11		2				13	
10:15	104		71				175		22:15	6		5				11	
10:30	81		93				174		22:30	5		6				11	
10:45	71	337	80	329			151	666	22:45	5	27	3	16			8	43
11:00	82		79				161		23:00	2		1				3	
11:15	84		81				165		23:15	2		1				3	
11:30	100		92				192		23:30	2		2				4	
11:45	110	376	91	343			201	719	23:45	1	7	1	5			2	12
TOTALS		1633		1518				**3151**	**TOTALS**		2319		2471				**4790**
SPLIT %		51.8%		48.2%				**39.7%**	**SPLIT %**		48.4%		51.6%				**60.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	3,952	3,989	0	0	7,941

AM Peak Hour	11:00	11:45				**11:00**	**PM Peak Hour**	14:15	16:15				**16:15**
AM Pk Volume	376	362				**719**	**PM Pk Volume**	419	447				**777**
Pk Hr Factor	0.855	0.801				**0.894**	**Pk Hr Factor**	0.911	0.712				**0.820**
7 - 9 Volume	420	405	0	0		**825**	**4 - 6 Volume**	559	775	0	0		**1334**
7 - 9 Peak Hour	08:00	08:00				**08:00**	**4 - 6 Peak Hour**	16:00	16:15				**16:15**
7 - 9 Pk Volume	247	222	0	0		**469**	**4 - 6 Pk Volume**	340	447	0	0		**777**
Pk Hr Factor	0.908	0.941	0.000	0.000		**0.961**	**Pk Hr Factor**	0.895	0.712	0.000	0.000		**0.820**

Prepared by National Data & Surveying Services

CLASSIFICATION

Otay Mesa Rd W/O La Media Rd

Day: Thursday
Date: 2/1/2018

City: San Diego
Project #: CA18_4030_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	29	1	1	0	1	0	0	0	0	0	0	0	32
01:00	0	18	0	0	1	2	0	0	0	0	0	0	0	21
02:00	0	38	3	0	2	0	0	0	5	0	0	0	0	48
03:00	0	42	1	0	0	0	0	2	5	0	0	0	0	50
04:00	0	82	2	0	8	1	0	4	6	0	2	0	0	105
05:00	2	141	11	1	5	1	1	1	7	0	1	0	0	171
06:00	5	248	22	0	19	7	1	0	12	0	1	0	0	315
07:00	7	429	29	2	25	8	0	4	31	0	3	0	0	538
08:00	3	423	31	8	33	15	1	5	47	0	2	0	0	568
09:00	7	449	30	6	44	13	0	6	46	0	1	0	0	602
10:00	1	503	39	5	44	15	0	18	52	0	2	0	0	679
11:00	4	615	48	4	44	18	0	21	55	0	2	0	0	811
12:00 PM	7	668	38	5	46	19	1	14	61	0	1	0	0	860
13:00	2	738	53	4	46	23	0	17	67	2	2	0	0	954
14:00	9	692	43	6	36	21	1	13	63	1	1	0	0	886
15:00	5	662	32	7	44	16	1	11	60	0	0	0	0	838
16:00	10	641	34	7	43	11	1	12	45	0	0	0	0	804
17:00	7	517	20	7	36	9	2	10	48	0	0	0	0	656
18:00	6	290	19	4	23	5	0	5	20	0	0	0	0	372
19:00	2	168	5	3	6	5	0	3	15	0	0	0	0	207
20:00	0	118	2	0	5	0	0	0	9	0	0	0	0	134
21:00	2	112	5	1	1	1	0	2	5	0	0	0	0	129
22:00	0	64	5	0	1	1	0	2	2	0	0	0	0	75
23:00	0	56	3	0	4	0	0	0	1	0	2	0	0	66
Totals	79	7743	476	71	516	192	9	150	662	3	20			9921
% of Totals	1%	78%	5%	1%	5%	2%	0%	2%	7%	0%	0%			100%

AM Volumes	29	3017	217	27	225	81	3	61	266	0	14	0	0	3940
% AM	0%	30%	2%	0%	2%	1%	0%	1%	3%		0%			40%
AM Peak Hour	07:00	11:00	11:00	08:00	09:00	11:00	05:00	11:00	11:00		07:00			11:00
Volume	7	615	48	8	44	18	1	21	55		3			811
PM Volumes	50	4726	259	44	291	111	6	89	396	3	6	0	0	5981
% PM	1%	48%	3%	0%	3%	1%	0%	1%	4%	0%	0%			60%
PM Peak Hour	16:00	13:00	13:00	15:00	12:00	13:00	17:00	13:00	13:00	13:00	13:00			13:00
Volume	10	738	53	7	46	23	2	17	67	2	2			954

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1106		11%	1814		18%	1460		15%	5541		56%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Otay Mesa Rd E/O La Media Rd

Day: Thursday
Date: 2/1/2018

City: San Diego
Project #: CA18_4030_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	60	2	0	4	0	0	0	9	0	2	0	0	78
01:00	0	60	8	0	2	0	0	0	16	0	2	0	0	88
02:00	0	56	4	1	2	0	0	1	12	0	0	0	0	76
03:00	0	91	10	0	5	0	0	1	10	0	0	0	0	117
04:00	1	115	9	0	9	1	0	1	15	0	1	0	0	152
05:00	1	254	15	0	18	6	0	8	35	0	2	0	0	339
06:00	2	425	33	3	26	7	0	7	49	0	3	0	0	555
07:00	7	752	66	4	37	12	0	12	48	0	9	0	0	947
08:00	5	684	76	7	41	19	0	11	75	0	12	0	0	930
09:00	4	593	68	2	65	8	1	16	68	0	3	0	0	828
10:00	12	623	83	7	36	22	0	20	103	0	6	0	0	912
11:00	9	652	81	9	43	14	1	13	100	0	12	0	0	934
12:00 PM	3	794	79	8	52	15	0	18	104	0	12	0	0	1085
13:00	11	756	86	8	55	21	1	34	84	0	8	0	0	1064
14:00	6	756	75	7	33	18	0	10	70	0	11	0	0	986
15:00	8	849	64	4	44	23	1	21	74	0	7	0	0	1095
16:00	4	919	86	4	49	7	1	13	58	0	11	0	0	1152
17:00	6	747	64	3	35	11	1	12	71	0	1	0	0	951
18:00	8	464	43	6	14	6	1	3	59	0	0	0	0	604
19:00	3	302	21	4	7	8	0	4	53	0	0	0	0	402
20:00	2	192	18	3	10	3	0	5	18	0	0	0	0	251
21:00	0	214	13	0	8	2	0	3	15	0	0	0	0	255
22:00	1	143	9	0	8	1	0	2	11	0	0	0	0	175
23:00	1	100	5	0	3	0	0	1	6	0	1	0	0	117
Totals	95	10601	1018	80	606	204	7	216	1163		103			14093
% of Totals	1%	75%	7%	1%	4%	1%	0%	2%	8%		1%			100%

AM Volumes	42	4365	455	33	288	89	2	90	540	0	52	0	0	5956
% AM	0%	31%	3%	0%	2%	1%	0%	1%	4%		0%			42%
AM Peak Hour	10:00	07:00	10:00	11:00	09:00	10:00	09:00	10:00	10:00		08:00			07:00
Volume	12	752	83	9	65	22	1	20	103		12			947
PM Volumes	53	6236	563	47	318	115	5	126	623	0	51	0	0	8137
% PM	0%	44%	4%	0%	2%	1%	0%	1%	4%		0%			58%
PM Peak Hour	13:00	16:00	13:00	12:00	13:00	15:00	13:00	13:00	12:00		12:00			16:00
Volume	11	919	86	8	55	23	1	34	104		12			1152

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1877		13%	2149		15%	2103		15%	7964		57%

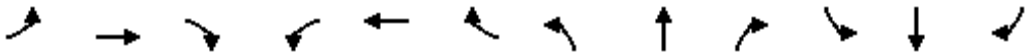
Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Appendix C

Intersection LOS Worksheets

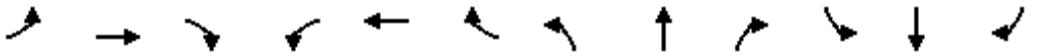
EXISTING CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	171	83	311	204	36	24	119	375	27	93	17
Future Volume (vph)	40	171	83	311	204	36	24	119	375	27	93	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.89		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1556	4472	1392	1556	4371		1556	1451		3019	1600	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1556	4472	1392	1556	4371		1556	1451		3019	1600	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	190	92	346	227	40	27	132	417	30	103	19
RTOR Reduction (vph)	0	0	83	0	20	0	0	121	0	0	7	0
Lane Group Flow (vph)	44	190	9	346	247	0	27	428	0	30	115	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	6.3	10.3	10.3	28.3	32.3		11.0	29.5		7.2	25.7	
Effective Green, g (s)	6.3	10.3	10.3	28.3	32.3		11.0	29.5		7.2	25.7	
Actuated g/C Ratio	0.06	0.10	0.10	0.28	0.32		0.11	0.29		0.07	0.26	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	460	143	440	1411		171	428		217	411	
v/s Ratio Prot	0.03	c0.04		c0.22	c0.06		c0.02	c0.29		0.01	0.07	
v/s Ratio Perm			0.01									
v/c Ratio	0.45	0.41	0.07	0.79	0.17		0.16	1.00		0.14	0.28	
Uniform Delay, d1	45.2	42.0	40.5	33.1	24.3		40.3	35.2		43.5	29.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.64	0.33		1.00	1.00	
Incremental Delay, d2	3.2	0.6	0.2	9.0	0.1		0.4	42.9		0.3	1.7	
Delay (s)	48.4	42.6	40.7	42.0	24.3		26.4	54.5		43.8	31.4	
Level of Service	D	D	D	D	C		C	D		D	C	
Approach Delay (s)		42.9			34.3			53.2			33.9	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

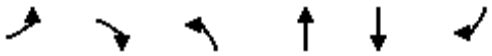
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	55	42	65	125	94	425	64	0	512	23
Future Volume (vph)	3	0	55	42	65	125	94	425	64	0	512	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1556	1392		1478	1551	1392	3019	3112	1392		4472	1392
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1556	1392		1478	1551	1392	3019	3112	1392		4472	1392
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	3	0	62	47	73	140	106	478	72	0	575	26
RTOR Reduction (vph)	0	59	0	0	0	125	0	0	22	0	0	11
Lane Group Flow (vph)	3	3	0	42	78	15	106	478	50	0	575	15
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	4.7	4.7		10.5	10.5	10.5	8.9	69.5	69.5		55.9	55.9
Effective Green, g (s)	4.7	4.7		10.5	10.5	10.5	8.9	69.5	69.5		55.9	55.9
Actuated g/C Ratio	0.05	0.05		0.10	0.10	0.10	0.09	0.70	0.70		0.56	0.56
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	73	65		155	162	146	268	2162	967		2499	778
v/s Ratio Prot	0.00	c0.00		0.03	c0.05		c0.04	c0.15			0.13	
v/s Ratio Perm						0.01			0.04			0.01
v/c Ratio	0.04	0.04		0.27	0.48	0.10	0.40	0.22	0.05		0.23	0.02
Uniform Delay, d1	45.5	45.5		41.2	42.2	40.5	43.0	5.5	4.8		11.2	9.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.80	0.23	0.00		0.31	1.00
Incremental Delay, d2	0.2	0.3		0.9	2.2	0.3	0.9	0.2	0.1		0.2	0.0
Delay (s)	45.7	45.8		42.2	44.4	40.8	35.3	1.5	0.1		3.7	9.9
Level of Service	D	D		D	D	D	D	A	A		A	A
Approach Delay (s)		45.8			42.1			6.8			3.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

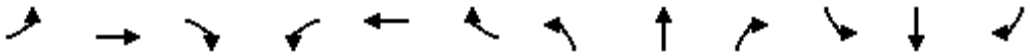
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	439	310	4	142	188	141
Future Volume (vph)	439	310	4	142	188	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3019	2450	3019	4472	3112	1392
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3019	2450	3019	4472	3112	1392
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	482	341	4	156	207	155
RTOR Reduction (vph)	0	265	0	0	0	25
Lane Group Flow (vph)	482	76	4	156	207	130
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	22.3	22.3	1.2	67.5	61.6	83.9
Effective Green, g (s)	22.3	22.3	1.2	67.5	61.6	83.9
Actuated g/C Ratio	0.22	0.22	0.01	0.68	0.62	0.84
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	673	546	36	3018	1916	1238
v/s Ratio Prot	c0.16		0.00	c0.03	0.07	c0.02
v/s Ratio Perm		0.03				0.07
v/c Ratio	0.72	0.14	0.11	0.05	0.11	0.11
Uniform Delay, d1	35.9	31.2	48.9	5.5	7.9	1.4
Progression Factor	1.00	1.00	1.00	1.00	0.55	6.41
Incremental Delay, d2	3.6	0.1	1.4	0.0	0.1	0.0
Delay (s)	39.6	31.3	50.2	5.5	4.5	9.2
Level of Service	D	C	D	A	A	A
Approach Delay (s)	36.1			6.6	6.5	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	41	23	11	58	126	0	0	0	284	244	48
Future Volume (vph)	9	41	23	11	58	126	0	0	0	284	244	48
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
Hourly flow rate (vph)	9	43	24	12	61	133	0	0	0	299	257	51

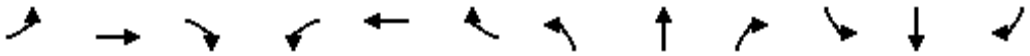
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	76	206	428	180
Volume Left (vph)	9	12	299	0
Volume Right (vph)	24	133	0	51
Hadj (s)	0.11	-0.10	0.62	0.07
Departure Headway (s)	5.9	5.4	5.9	5.4
Degree Utilization, x	0.12	0.31	0.70	0.27
Capacity (veh/h)	568	624	592	655
Control Delay (s)	9.7	10.8	20.6	9.1
Approach Delay (s)	9.7	10.8	17.2	
Approach LOS	A	B	C	

Intersection Summary				
Delay	15.1			
Level of Service	C			
Intersection Capacity Utilization	36.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	59	0	0	0	104	147
Future Volume (Veh/h)	59	0	0	0	104	147
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	65	0	0	0	114	162
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	309	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	309	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	89	100			93	
cM capacity (veh/h)	576	1040			1525	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	65	168	108
Volume Left	65	114	0
Volume Right	0	0	0
cSH	576	1525	1700
Volume to Capacity	0.11	0.07	0.06
Queue Length 95th (ft)	9	6	0
Control Delay (s)	12.0	5.3	0.0
Lane LOS	B	A	
Approach Delay (s)	12.0	3.2	
Approach LOS	B		

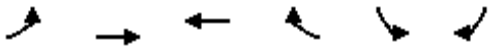
Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	39	5	17	50	0	0	0	0	114	81	4
Future Volume (vph)	0	39	5	17	50	0	0	0	0	114	81	4
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
Hourly flow rate (vph)	0	43	6	19	56	0	0	0	0	127	90	4

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	49	75	172	49
Volume Left (vph)	0	19	127	0
Volume Right (vph)	6	0	0	4
Hadj (s)	0.20	0.32	0.64	0.21
Departure Headway (s)	4.8	4.9	5.5	5.0
Degree Utilization, x	0.07	0.10	0.26	0.07
Capacity (veh/h)	708	699	643	694
Control Delay (s)	8.1	8.4	9.2	7.2
Approach Delay (s)	8.1	8.4	8.7	
Approach LOS	A	A	A	

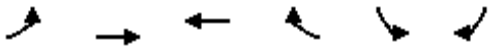
Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	23.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	432	89	0	440	424
Future Volume (vph)	0	432	89	0	440	424
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4472	4472		3019	1392
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4472	4472		3019	1392
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	480	99	0	489	471
RTOR Reduction (vph)	0	0	0	0	0	358
Lane Group Flow (vph)	0	480	99	0	489	113
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		55.1	55.1		21.6	21.6
Effective Green, g (s)		55.1	55.1		21.6	21.6
Actuated g/C Ratio		0.61	0.61		0.24	0.24
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2737	2737		724	334
v/s Ratio Prot		c0.11	0.02		c0.16	
v/s Ratio Perm						0.08
v/c Ratio		0.18	0.04		0.68	0.34
Uniform Delay, d1		7.6	6.9		31.0	28.3
Progression Factor		1.00	1.02		1.00	1.00
Incremental Delay, d2		0.1	0.0		2.5	0.6
Delay (s)		7.7	7.1		33.5	28.9
Level of Service		A	A		C	C
Approach Delay (s)		7.7	7.1		31.3	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

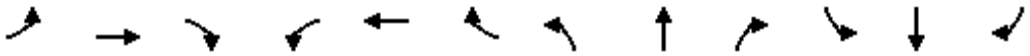
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	185	688	90	64	0	0
Future Volume (vph)	185	688	90	64	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	1.00	0.95	0.91	0.91		
Frt	1.00	1.00	0.98	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1556	3112	2908	1267		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1556	3112	2908	1267		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	210	782	102	73	0	0
RTOR Reduction (vph)	0	0	7	18	0	0
Lane Group Flow (vph)	210	782	115	35	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	17.7	90.0	59.4	59.4		
Effective Green, g (s)	17.7	90.0	59.4	59.4		
Actuated g/C Ratio	0.20	1.00	0.66	0.66		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	306	3112	1919	836		
v/s Ratio Prot	c0.13	c0.25	0.04			
v/s Ratio Perm				0.03		
v/c Ratio	0.69	0.25	0.06	0.04		
Uniform Delay, d1	33.6	0.0	5.4	5.3		
Progression Factor	0.76	1.00	1.00	1.00		
Incremental Delay, d2	6.2	0.2	0.1	0.1		
Delay (s)	31.8	0.2	5.5	5.4		
Level of Service	C	A	A	A		
Approach Delay (s)		6.9	5.5		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	684	0	0	286	402	214	0	348	0	0	0
Future Volume (vph)	115	684	0	0	286	402	214	0	348	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3964	1197		1556	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3964	1197		1556	2450			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	120	712	0	0	298	419	223	0	362	0	0	0
RTOR Reduction (vph)	0	0	0	0	94	97	0	0	287	0	0	0
Lane Group Flow (vph)	120	713	0	0	414	112	0	223	76	0	0	0
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	10.5	69.0			53.8	53.8		20.8	20.8			
Effective Green, g (s)	10.5	69.0			53.8	53.8		20.8	20.8			
Actuated g/C Ratio	0.10	0.69			0.54	0.54		0.21	0.21			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	316	3085			2132	643		323	509			
v/s Ratio Prot	c0.04	c0.16			0.10							
v/s Ratio Perm						0.09		0.14	0.03			
v/c Ratio	0.38	0.23			0.19	0.17		0.69	0.15			
Uniform Delay, d1	41.7	5.7			11.9	11.8		36.6	32.4			
Progression Factor	0.97	0.88			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.2			0.2	0.6		6.2	0.1			
Delay (s)	41.3	5.2			12.1	12.4		42.9	32.5			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		10.4			12.2			36.4			0.0	
Approach LOS		B			B			D			A	

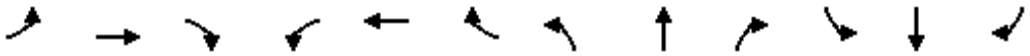
Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	261	127	98	736	0	562
Future Volume (vph)	261	127	98	736	0	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4252		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4252		3019	4472		2450
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	311	151	117	876	0	669
RTOR Reduction (vph)	31	0	0	0	0	602
Lane Group Flow (vph)	431	0	117	876	0	67
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	79.8		10.0	100.0		10.0
Effective Green, g (s)	79.8		10.0	100.0		10.0
Actuated g/C Ratio	0.80		0.10	1.00		0.10
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3393		301	4472		245
v/s Ratio Prot	0.10		c0.04	c0.20		0.03
v/s Ratio Perm						
v/c Ratio	0.13		0.39	0.20		0.27
Uniform Delay, d1	2.3		42.1	0.0		41.6
Progression Factor	0.32		0.89	1.00		1.00
Incremental Delay, d2	0.1		0.8	0.1		0.6
Delay (s)	0.8		38.5	0.1		42.2
Level of Service	A		D	A		D
Approach Delay (s)	0.8			4.6	42.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	137	26	230	361	141	47	23	134	127	50	81
Future Volume (vph)	20	137	26	230	361	141	47	23	134	127	50	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1556	4365		1556	4283			1585	1392		2894	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.79	
Satd. Flow (perm)	1556	4365		1556	4283			911	1392		2338	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	149	28	250	392	153	51	25	146	138	54	88
RTOR Reduction (vph)	0	14	0	0	41	0	0	0	123	0	74	0
Lane Group Flow (vph)	22	163	0	250	504	0	0	76	23	0	206	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.6	49.1		21.0	64.9			15.7	15.7		15.7	
Effective Green, g (s)	4.6	49.1		21.0	64.9			15.7	15.7		15.7	
Actuated g/C Ratio	0.05	0.49		0.21	0.65			0.16	0.16		0.16	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	71	2143		326	2779			143	218		367	
v/s Ratio Prot	c0.01	0.04		c0.16	c0.12							
v/s Ratio Perm								0.08	0.02		c0.09	
v/c Ratio	0.31	0.08		0.77	0.18			0.53	0.11		0.56	
Uniform Delay, d1	46.2	13.5		37.2	7.0			38.8	36.1		39.0	
Progression Factor	1.00	1.00		0.81	0.84			1.00	1.00		1.00	
Incremental Delay, d2	0.9	0.1		9.3	0.1			5.6	0.4		2.7	
Delay (s)	47.1	13.5		39.5	6.0			44.3	36.5		41.7	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		17.2			16.5			39.2			41.7	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

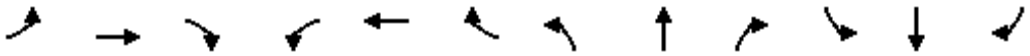
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	75	61	80	93	38
Future Vol, veh/h	95	75	61	80	93	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	113	89	73	95	111	45
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	9.9	8.4	10.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	71%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	100%
Vol Right, %	29%	44%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	170	61	40	40
LT Vol	93	0	61	0	0
Through Vol	0	95	0	40	40
RT Vol	38	75	0	0	0
Lane Flow Rate	156	202	73	48	48
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.252	0.287	0.12	0.072	0.046
Departure Headway (Hd)	5.807	5.105	5.945	5.442	3.455
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	618	702	603	658	1031
Service Time	3.556	2.844	3.685	3.181	1.194
HCM Lane V/C Ratio	0.252	0.288	0.121	0.073	0.047
HCM Control Delay	10.5	9.9	9.5	8.6	6.4
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	1	1.2	0.4	0.2	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	180	23	82	382	4	29	0	22	0	0	15
Future Volume (vph)	28	180	23	82	382	4	29	0	22	0	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4396		1556	4465			1556	1392		1417	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4396		1556	4465			1638	1392		1417	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	188	24	85	398	4	30	0	23	0	0	16
RTOR Reduction (vph)	0	17	0	0	1	0	0	0	22	0	15	0
Lane Group Flow (vph)	29	195	0	85	401	0	0	30	1	0	1	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.7	9.5		5.2	14.0			1.9	1.9		1.9	
Effective Green, g (s)	0.7	9.5		5.2	14.0			1.9	1.9		1.9	
Actuated g/C Ratio	0.02	0.31		0.17	0.45			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	35	1355		262	2029			101	85		87	
v/s Ratio Prot	0.02	0.04		c0.05	c0.09						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.83	0.14		0.32	0.20			0.30	0.02		0.01	
Uniform Delay, d1	15.0	7.7		11.3	5.0			13.8	13.6		13.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	81.6	0.1		0.3	0.1			0.6	0.0		0.0	
Delay (s)	96.6	7.9		11.5	5.1			14.4	13.6		13.6	
Level of Service	F	A		B	A			B	B		B	
Approach Delay (s)		18.5			6.3			14.1			13.6	
Approach LOS		B			A			B			B	

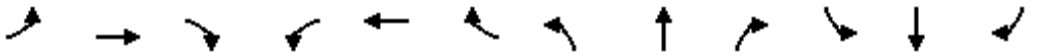
Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	30.8	Sum of lost time (s)	14.2
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	126	113	163	184	210	227
Future Volume (vph)	126	113	163	184	210	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4472	1392	1556	4472	3019	1392
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4472	1392	1556	4472	3019	1392
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	142	127	183	207	236	255
RTOR Reduction (vph)	0	82	0	0	0	203
Lane Group Flow (vph)	142	45	183	207	236	52
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	7.4	17.0	10.8	23.9	9.6	9.6
Effective Green, g (s)	7.4	17.0	10.8	23.9	9.6	9.6
Actuated g/C Ratio	0.16	0.36	0.23	0.50	0.20	0.20
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	696	498	353	2250	610	281
v/s Ratio Prot	c0.03	0.02	c0.12	0.05	c0.08	
v/s Ratio Perm		0.01				0.04
v/c Ratio	0.20	0.09	0.52	0.09	0.39	0.18
Uniform Delay, d1	17.5	10.1	16.1	6.1	16.4	15.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	1.3	0.0	0.4	0.3
Delay (s)	17.6	10.2	17.4	6.2	16.8	16.0
Level of Service	B	B	B	A	B	B
Approach Delay (s)	14.1			11.4	16.4	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	47.5	Sum of lost time (s)	19.7
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

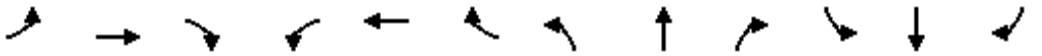
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	10	0	34	17	107	2	128	31	310	288	71
Future Volume (vph)	22	10	0	34	17	107	2	128	31	310	288	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1556	1638			1585	1392	1556	3022		1556	1638	1392
Flt Permitted	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1556	1638			1585	1392	1556	3022		1556	1638	1392
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	11	0	38	19	119	2	142	34	344	320	79
RTOR Reduction (vph)	0	0	0	0	0	105	0	23	0	0	0	41
Lane Group Flow (vph)	24	11	0	0	57	14	2	153	0	344	320	38
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	1.9	1.9			6.4	6.4	0.6	7.7		19.3	26.2	26.2
Effective Green, g (s)	1.9	1.9			6.4	6.4	0.6	7.7		19.3	26.2	26.2
Actuated g/C Ratio	0.03	0.03			0.12	0.12	0.01	0.14		0.35	0.48	0.48
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	53	56			184	161	16	422		545	778	661
v/s Ratio Prot	c0.02	0.01			c0.04		0.00	0.05		c0.22	c0.20	
v/s Ratio Perm						0.01						0.03
v/c Ratio	0.45	0.20			0.31	0.09	0.12	0.36		0.63	0.41	0.06
Uniform Delay, d1	26.1	25.9			22.3	21.7	27.0	21.5		14.9	9.4	7.8
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	0.6			1.2	0.3	1.3	0.7		1.8	0.5	0.0
Delay (s)	28.3	26.5			23.5	22.0	28.3	22.2		16.7	9.9	7.8
Level of Service	C	C			C	C	C	C		B	A	A
Approach Delay (s)		27.7			22.5			22.2			12.8	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

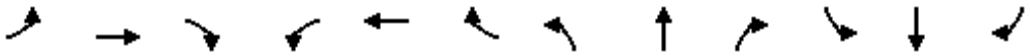
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	116	106	43	166	117	59	35	19	98	26	65
Future Volume (vph)	121	116	106	43	166	117	59	35	19	98	26	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3019	4472	1392	3019	4472	1392	1556	1551		1556	1638	2450
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3019	4472	1392	3019	4472	1392	1556	1551		1556	1638	2450
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	146	140	128	52	200	141	71	42	23	118	31	78
RTOR Reduction (vph)	0	0	92	0	0	115	0	21	0	0	0	57
Lane Group Flow (vph)	146	140	36	52	200	26	71	44	0	118	31	21
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.8	16.5	16.5	5.1	10.8	10.8	8.0	5.1		8.0	5.1	15.9
Effective Green, g (s)	10.8	16.5	16.5	5.1	10.8	10.8	8.0	5.1		8.0	5.1	15.9
Actuated g/C Ratio	0.18	0.28	0.28	0.09	0.18	0.18	0.13	0.09		0.13	0.09	0.27
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	548	1242	386	259	813	253	209	133		209	140	655
v/s Ratio Prot	c0.05	c0.03		0.02	c0.04		0.05	c0.03		c0.08	0.02	0.01
v/s Ratio Perm			0.03			0.02						0.00
v/c Ratio	0.27	0.11	0.09	0.20	0.25	0.10	0.34	0.33		0.56	0.22	0.03
Uniform Delay, d1	20.9	16.0	15.9	25.3	20.8	20.3	23.3	25.5		24.1	25.3	16.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.1	0.4	0.2	0.2	1.0	1.5		3.5	0.8	0.0
Delay (s)	21.2	16.0	16.0	25.6	21.0	20.4	24.3	27.0		27.5	26.1	16.1
Level of Service	C	B	B	C	C	C	C	C		C	C	B
Approach Delay (s)		17.8			21.4			25.6			23.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	24.7
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

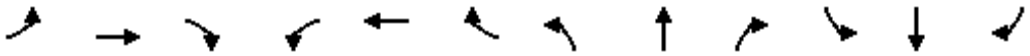
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	233	4	60	1	308	564	186	440	0
Future Volume (vph)	0	0	5	233	4	60	1	308	564	186	440	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor			1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt			0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)			1392	3019	1638	1392	1556	3112	1392	3019	3112	
Flt Permitted			1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)			1392	3019	1638	1392	1556	3112	1392	3019	3112	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	0	0	7	307	5	79	1	405	742	245	579	0
RTOR Reduction (vph)	0	0	7	0	0	63	0	0	378	0	0	0
Lane Group Flow (vph)	0	0	0	307	5	16	1	405	364	245	579	0
Turn Type	Prot		pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)			1.8	14.4	12.9	12.9	1.8	14.5	28.9	16.7	29.4	
Effective Green, g (s)			1.8	14.4	12.9	12.9	1.8	14.5	28.9	16.7	29.4	
Actuated g/C Ratio			0.03	0.23	0.21	0.21	0.03	0.23	0.46	0.27	0.47	
Clearance Time (s)			5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)			40	697	339	288	44	724	761	809	1468	
v/s Ratio Prot			0.00	0.10	0.00		0.00	0.13	c0.11	c0.08	c0.19	
v/s Ratio Perm						0.01			0.15			
v/c Ratio			0.01	0.44	0.01	0.06	0.02	0.56	0.48	0.30	0.39	
Uniform Delay, d1			29.4	20.5	19.6	19.8	29.4	21.1	11.5	18.2	10.7	
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2			0.1	0.4	0.0	0.1	0.2	0.9	0.5	0.2	0.2	
Delay (s)			29.4	20.9	19.7	19.9	29.6	22.0	12.0	18.4	10.8	
Level of Service			C	C	B	B	C	C	B	B	B	
Approach Delay (s)		29.4			20.7			15.5			13.1	
Approach LOS		C			C			B			B	

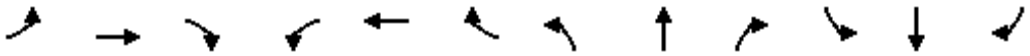
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	23.4
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	41	3	48	214	783	0	0	266	410
Future Volume (vph)	0	0	0	41	3	48	214	783	0	0	266	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.91	
Flt Protected					0.96	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1729	1392	1719	4472			4222	
Flt Permitted					0.96	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1729	1392	1719	4472			4222	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	0	0	53	4	62	274	1004	0	0	341	526
RTOR Reduction (vph)	0	0	0	0	0	57	0	0	0	0	235	0
Lane Group Flow (vph)	0	0	0	0	57	5	274	1004	0	0	632	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	16%	5%	16%	5%	5%	5%	16%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.3	7.3	19.7	72.5			48.1	
Effective Green, g (s)					7.3	7.3	19.7	72.5			48.1	
Actuated g/C Ratio					0.08	0.08	0.22	0.81			0.53	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					140	112	376	3602			2256	
v/s Ratio Prot							c0.16	c0.22			0.15	
v/s Ratio Perm					0.03	0.00						
v/c Ratio					0.41	0.04	0.73	0.28			0.28	
Uniform Delay, d1					39.3	38.1	32.7	2.2			11.5	
Progression Factor					1.00	1.00	0.90	0.28			1.00	
Incremental Delay, d2					1.9	0.2	5.1	0.1			0.3	
Delay (s)					41.2	38.3	34.4	0.8			11.8	
Level of Service					D	D	C	A			B	
Approach Delay (s)		0.0			39.7			8.0			11.8	
Approach LOS		A			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	557	1	375	0	0	0	0	422	60	67	233	0
Future Volume (vph)	557	1	375	0	0	0	0	422	60	67	233	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.87						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1478	1466						4848		1556	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1478	1466						4848		1556	3438	
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	753	1	507	0	0	0	0	570	81	91	315	0
RTOR Reduction (vph)	0	162	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	663	436	0	0	0	0	0	631	0	91	315	0
Heavy Vehicles (%)	16%	5%	5%	5%	5%	5%	5%	5%	5%	16%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	46.2	46.2						22.1		6.8	33.6	
Effective Green, g (s)	46.2	46.2						22.1		6.8	33.6	
Actuated g/C Ratio	0.51	0.51						0.25		0.08	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	758	752						1190		117	1283	
v/s Ratio Prot	c0.45	0.30						c0.13		c0.06	0.09	
v/s Ratio Perm												
v/c Ratio	0.87	0.58						0.53		0.78	0.25	
Uniform Delay, d1	19.3	15.2						29.5		40.9	19.5	
Progression Factor	1.00	1.00						1.00		0.98	0.92	
Incremental Delay, d2	11.0	1.1						1.7		26.2	0.4	
Delay (s)	30.3	16.3						31.1		66.2	18.3	
Level of Service	C	B						C		E	B	
Approach Delay (s)		23.7			0.0			31.1			29.0	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	93.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	394	0	4	0	1	1	17	85	0	12	116	468
Future Vol, veh/h	394	0	4	0	1	1	17	85	0	12	116	468
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	571	0	6	0	1	1	25	123	0	17	168	678
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

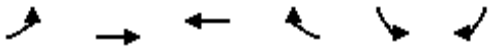
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	23.4	11.9	12	153.9
HCM LOS	C	B	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	98%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	50%	0%	100%	8%
Vol Right, %	0%	0%	0%	0%	2%	0%	0%	50%	0%	0%	92%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	43	43	201	197	0	0	2	12	77	507
LT Vol	17	0	0	201	193	0	0	0	12	0	0
Through Vol	0	43	43	0	0	0	0	1	0	77	39
RT Vol	0	0	0	0	4	0	0	1	0	0	468
Lane Flow Rate	25	62	62	291	286	0	0	3	17	112	734
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.06	0.142	0.111	0.624	0.611	0	0	0.007	0.037	0.223	1.326
Departure Headway (Hd)	9.427	8.908	7.054	8.245	8.221	9.459	9.459	9.102	7.676	7.164	6.503
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	382	405	511	440	443	0	0	396	467	502	565
Service Time	7.127	6.608	4.754	5.945	5.921	7.159	7.159	6.802	5.409	4.897	4.236
HCM Lane V/C Ratio	0.065	0.153	0.121	0.661	0.646	0	0	0.008	0.036	0.223	1.299
HCM Control Delay	12.7	13.1	10.6	23.7	23	12.2	12.2	11.9	10.7	12	178.9
HCM Lane LOS	B	B	B	C	C	N	N	B	B	B	F
HCM 95th-tile Q	0.2	0.5	0.4	4.1	4	0	0	0	0.1	0.8	31.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	24	311	6	31	289
Future Volume (Veh/h)	4	24	311	6	31	289
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	4	26	357	7	36	332
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	761	357			357	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	761	357			357	
tC, single (s)	6.6	6.4			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	96			97	
cM capacity (veh/h)	343	657			1128	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	30	357	7	36	332
Volume Left	4	0	0	36	0
Volume Right	26	0	7	0	0
cSH	585	1700	1700	1128	1700
Volume to Capacity	0.05	0.21	0.00	0.03	0.20
Queue Length 95th (ft)	4	0	0	2	0
Control Delay (s)	11.5	0.0	0.0	8.3	0.0
Lane LOS	B			A	
Approach Delay (s)	11.5	0.0		0.8	
Approach LOS	B				

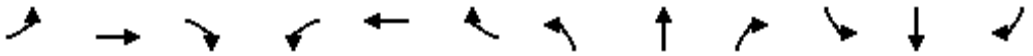
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	203	378	420	86	62	125
Future Volume (vph)	203	378	420	86	62	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Lane Util. Factor	0.97	0.95	0.91	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.93	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (prot)	3019	3112	4472	1392	2868	1267
Flt Permitted	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (perm)	3019	3112	4472	1392	2868	1267
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	218	406	452	92	67	134
RTOR Reduction (vph)	0	0	0	67	59	59
Lane Group Flow (vph)	218	406	452	25	75	8
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	8.9	25.7	11.6	11.6	5.3	5.3
Effective Green, g (s)	8.9	25.7	11.6	11.6	5.3	5.3
Actuated g/C Ratio	0.21	0.59	0.27	0.27	0.12	0.12
Clearance Time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	620	1847	1198	372	351	155
v/s Ratio Prot	c0.07	0.13	c0.10		c0.03	
v/s Ratio Perm				0.02		0.01
v/c Ratio	0.35	0.22	0.38	0.07	0.21	0.05
Uniform Delay, d1	14.7	4.1	12.9	11.8	17.1	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.2	0.1	0.3	0.1
Delay (s)	15.1	4.2	13.1	11.9	17.4	16.9
Level of Service	B	A	B	B	B	B
Approach Delay (s)		8.0	12.9		17.3	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	43.3	Sum of lost time (s)	17.5
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

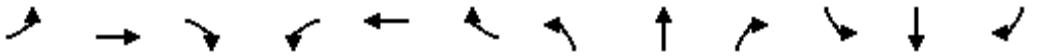
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	155	134	397	198	35	51	117	248	34	187	47
Future Volume (vph)	57	155	134	397	198	35	51	117	248	34	187	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.90		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1556	4472	1392	1556	4370		1556	1471		3019	1588	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1556	4472	1392	1556	4370		1556	1471		3019	1588	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	61	167	144	427	213	38	55	126	267	37	201	51
RTOR Reduction (vph)	0	0	126	0	24	0	0	79	0	0	10	0
Lane Group Flow (vph)	61	167	18	427	227	0	55	314	0	37	242	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	5.3	11.3	11.3	27.0	33.0		5.7	24.4		2.6	21.3	
Effective Green, g (s)	5.3	11.3	11.3	27.0	33.0		5.7	24.4		2.6	21.3	
Actuated g/C Ratio	0.06	0.13	0.13	0.30	0.37		0.06	0.27		0.03	0.24	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	561	174	466	1602		98	398		87	375	
v/s Ratio Prot	0.04	c0.04		c0.27	0.05		0.04	c0.21		0.01	c0.15	
v/s Ratio Perm			0.01									
v/c Ratio	0.67	0.30	0.10	0.92	0.14		0.56	0.79		0.43	0.65	
Uniform Delay, d1	41.5	35.7	34.9	30.4	19.0		40.9	30.4		43.0	30.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.91	0.91		1.00	1.00	
Incremental Delay, d2	17.7	0.3	0.3	22.6	0.0		7.1	14.5		3.3	8.3	
Delay (s)	59.2	36.0	35.1	53.0	19.1		44.5	42.1		46.3	39.3	
Level of Service	E	D	D	D	B		D	D		D	D	
Approach Delay (s)		39.5			40.5			42.4			40.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

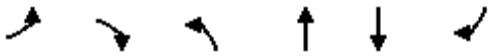
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	0	99	60	27	145	88	316	211	0	730	22
Future Volume (vph)	6	0	99	60	27	145	88	316	211	0	730	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1556	1392		1478	1526	1392	3019	3112	1392		4472	1392
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1556	1392		1478	1526	1392	3019	3112	1392		4472	1392
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	0	103	62	28	151	92	329	220	0	760	23
RTOR Reduction (vph)	0	97	0	0	0	137	0	0	70	0	0	10
Lane Group Flow (vph)	6	6	0	45	46	14	92	329	150	0	760	13
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	4.9	4.9		8.5	8.5	8.5	6.9	61.3	61.3		49.7	49.7
Effective Green, g (s)	4.9	4.9		8.5	8.5	8.5	6.9	61.3	61.3		49.7	49.7
Actuated g/C Ratio	0.05	0.05		0.09	0.09	0.09	0.08	0.68	0.68		0.55	0.55
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	84	75		139	144	131	231	2119	948		2469	768
v/s Ratio Prot	0.00	c0.00		c0.03	0.03		c0.03	0.11			c0.17	
v/s Ratio Perm						0.01			0.11			0.01
v/c Ratio	0.07	0.07		0.32	0.32	0.11	0.40	0.16	0.16		0.31	0.02
Uniform Delay, d1	40.4	40.4		38.1	38.0	37.3	39.6	5.1	5.1		10.9	9.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.73	0.55	0.03		0.34	1.00
Incremental Delay, d2	0.4	0.4		1.4	1.3	0.4	1.1	0.2	0.3		0.2	0.0
Delay (s)	40.8	40.8		39.4	39.3	37.7	30.0	3.0	0.5		3.9	9.1
Level of Service	D	D		D	D	D	C	A	A		A	A
Approach Delay (s)		40.8			38.3			6.0			4.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

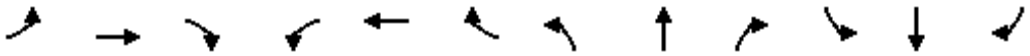
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	261	183	22	367	236	261
Future Volume (vph)	261	183	22	367	236	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3019	2450	3019	4472	3112	1392
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3019	2450	3019	4472	3112	1392
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	275	193	23	386	248	275
RTOR Reduction (vph)	0	163	0	0	0	54
Lane Group Flow (vph)	275	30	23	386	248	221
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	14.1	14.1	2.8	65.7	58.2	72.3
Effective Green, g (s)	14.1	14.1	2.8	65.7	58.2	72.3
Actuated g/C Ratio	0.16	0.16	0.03	0.73	0.65	0.80
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	472	383	93	3264	2012	1197
v/s Ratio Prot	c0.09		c0.01	0.09	0.08	c0.03
v/s Ratio Perm		0.01				0.13
v/c Ratio	0.58	0.08	0.25	0.12	0.12	0.18
Uniform Delay, d1	35.2	32.4	42.6	3.6	6.1	2.0
Progression Factor	1.00	1.00	1.00	1.00	0.62	0.56
Incremental Delay, d2	1.8	0.1	1.4	0.1	0.1	0.1
Delay (s)	37.1	32.5	44.0	3.7	3.9	1.2
Level of Service	D	C	D	A	A	A
Approach Delay (s)	35.2			5.9	2.5	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	38	71	35	21	73	343	0	0	0	173	147	37
Future Volume (vph)	38	71	35	21	73	343	0	0	0	173	147	37
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
Hourly flow rate (vph)	40	76	37	22	78	365	0	0	0	184	156	39

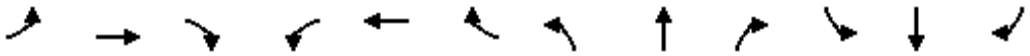
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	153	465	262	117
Volume Left (vph)	40	22	184	0
Volume Right (vph)	37	365	0	39
Hadj (s)	0.18	-0.19	0.62	0.04
Departure Headway (s)	5.9	5.1	6.8	6.2
Degree Utilization, x	0.25	0.66	0.49	0.20
Capacity (veh/h)	565	683	503	553
Control Delay (s)	10.9	17.5	15.0	9.5
Approach Delay (s)	10.9	17.5	13.3	
Approach LOS	B	C	B	

Intersection Summary				
Delay	14.9			
Level of Service	B			
Intersection Capacity Utilization	44.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	0	0	0	64	118
Future Volume (Veh/h)	79	0	0	0	64	118
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	82	0	0	0	67	123
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	196	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	88	100			96	
cM capacity (veh/h)	704	1040			1525	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	82	108	82
Volume Left	82	67	0
Volume Right	0	0	0
cSH	704	1525	1700
Volume to Capacity	0.12	0.04	0.05
Queue Length 95th (ft)	10	3	0
Control Delay (s)	10.8	4.8	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	2.7	
Approach LOS	B		

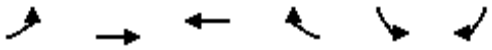
Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	16.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	37	30	39	30	0	0	0	0	75	130	2
Future Volume (vph)	0	37	30	39	30	0	0	0	0	75	130	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	38	31	40	31	0	0	0	0	77	134	2

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	69	71	144	69
Volume Left (vph)	0	40	77	0
Volume Right (vph)	31	0	0	2
Hadj (s)	0.00	0.38	0.54	0.25
Departure Headway (s)	4.6	4.9	5.4	5.1
Degree Utilization, x	0.09	0.10	0.22	0.10
Capacity (veh/h)	756	693	650	684
Control Delay (s)	8.0	8.5	8.7	7.5
Approach Delay (s)	8.0	8.5	8.3	
Approach LOS	A	A	A	

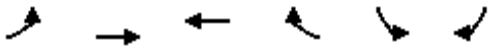
Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	425	274	0	120	222
Future Volume (vph)	0	425	274	0	120	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4472	4472		3019	1392
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4472	4472		3019	1392
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	447	288	0	126	234
RTOR Reduction (vph)	0	0	0	0	0	209
Lane Group Flow (vph)	0	447	288	0	126	25
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		66.9	66.9		9.8	9.8
Effective Green, g (s)		66.9	66.9		9.8	9.8
Actuated g/C Ratio		0.74	0.74		0.11	0.11
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3324	3324		328	151
v/s Ratio Prot		c0.10	0.06		c0.04	
v/s Ratio Perm						0.02
v/c Ratio		0.13	0.09		0.38	0.17
Uniform Delay, d1		3.3	3.2		37.3	36.4
Progression Factor		1.00	2.06		1.00	1.00
Incremental Delay, d2		0.1	0.0		0.8	0.5
Delay (s)		3.4	6.6		38.0	36.9
Level of Service		A	A		D	D
Approach Delay (s)		3.4	6.6		37.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	315	229	276	362	0	0
Future Volume (vph)	315	229	276	362	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	1.00	0.95	0.91	0.91		
Frt	1.00	1.00	0.94	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1556	3112	2815	1267		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1556	3112	2815	1267		
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	375	273	329	431	0	0
RTOR Reduction (vph)	0	0	67	106	0	0
Lane Group Flow (vph)	375	273	456	131	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	27.3	90.0	49.8	49.8		
Effective Green, g (s)	27.3	90.0	49.8	49.8		
Actuated g/C Ratio	0.30	1.00	0.55	0.55		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	471	3112	1557	701		
v/s Ratio Prot	c0.24	0.09	c0.16			
v/s Ratio Perm				0.10		
v/c Ratio	0.80	0.09	0.29	0.19		
Uniform Delay, d1	28.8	0.0	10.7	10.0		
Progression Factor	0.95	1.00	1.00	1.00		
Incremental Delay, d2	9.0	0.1	0.5	0.6		
Delay (s)	36.3	0.1	11.2	10.6		
Level of Service	D	A	B	B		
Approach Delay (s)		21.0	11.0		0.0	
Approach LOS		C	B		A	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	383	453	0	0	521	734	62	1	237	0	0	0
Future Volume (vph)	383	453	0	0	521	734	62	1	237	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3964	1197		1561	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3964	1197		1561	2450			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	395	467	0	0	537	757	64	1	244	0	0	0
RTOR Reduction (vph)	0	0	0	0	101	180	0	0	222	0	0	0
Lane Group Flow (vph)	395	467	0	0	815	198	0	65	22	0	0	0
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	27.3	89.7			57.7	57.7		10.1	10.1			
Effective Green, g (s)	27.3	89.7			57.7	57.7		10.1	10.1			
Actuated g/C Ratio	0.25	0.82			0.52	0.52		0.09	0.09			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	749	3646			2079	627		143	224			
v/s Ratio Prot	c0.13	0.10			c0.21							
v/s Ratio Perm						0.17		0.04	0.01			
v/c Ratio	0.53	0.13			0.39	0.32		0.45	0.10			
Uniform Delay, d1	35.8	2.1			15.7	14.9		47.3	45.8			
Progression Factor	0.87	0.87			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.1			0.6	1.3		2.3	0.2			
Delay (s)	31.9	1.9			16.2	16.2		49.6	46.0			
Level of Service	C	A			B	B		D	D			
Approach Delay (s)		15.7			16.2			46.7			0.0	
Approach LOS		B			B			D			A	

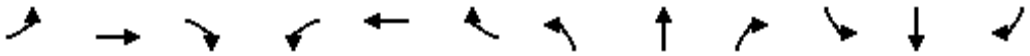
Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	569	278	219	679	0	271
Future Volume (vph)	569	278	219	679	0	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4251		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4251		3019	4472		2450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	599	293	231	715	0	285
RTOR Reduction (vph)	81	0	0	0	0	202
Lane Group Flow (vph)	811	0	231	715	0	83
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	67.9		31.9	110.0		31.9
Effective Green, g (s)	67.9		31.9	110.0		31.9
Actuated g/C Ratio	0.62		0.29	1.00		0.29
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2624		875	4472		710
v/s Ratio Prot	c0.19		c0.08	0.16		0.03
v/s Ratio Perm						
v/c Ratio	0.31		0.26	0.16		0.12
Uniform Delay, d1	10.0		30.0	0.0		28.7
Progression Factor	0.50		0.75	1.00		1.00
Incremental Delay, d2	0.3		0.2	0.1		0.1
Delay (s)	5.3		22.7	0.1		28.8
Level of Service	A		C	A		C
Approach Delay (s)	5.3			5.6	28.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	356	49	238	277	176	40	48	272	185	85	77
Future Volume (vph)	49	356	49	238	277	176	40	48	272	185	85	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.94			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1556	4390		1556	4212			1601	1392		2931	
Flt Permitted	0.95	1.00		0.95	1.00			0.68	1.00		0.77	
Satd. Flow (perm)	1556	4390		1556	4212			1111	1392		2311	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	367	51	245	286	181	41	49	280	191	88	79
RTOR Reduction (vph)	0	12	0	0	72	0	0	0	222	0	30	0
Lane Group Flow (vph)	51	406	0	245	395	0	0	90	58	0	328	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.0	51.5		21.5	65.4			22.8	22.8		22.8	
Effective Green, g (s)	7.0	51.5		21.5	65.4			22.8	22.8		22.8	
Actuated g/C Ratio	0.06	0.47		0.20	0.59			0.21	0.21		0.21	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	99	2055		304	2504			230	288		479	
v/s Ratio Prot	c0.03	c0.09		c0.16	0.09							
v/s Ratio Perm								0.08	0.04		c0.14	
v/c Ratio	0.52	0.20		0.81	0.16			0.39	0.20		0.68	
Uniform Delay, d1	49.9	17.1		42.3	10.0			37.6	36.1		40.3	
Progression Factor	1.00	1.00		0.81	0.29			1.00	1.00		1.00	
Incremental Delay, d2	1.9	0.2		13.5	0.1			1.8	0.6		4.6	
Delay (s)	51.7	17.4		47.7	3.1			39.4	36.6		44.9	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		21.1			18.4			37.3			44.9	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

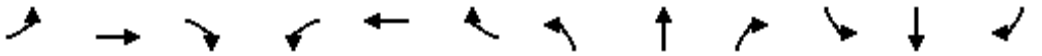
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	140	97	148	66	50
Future Vol, veh/h	103	140	97	148	66	50
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	118	161	111	170	76	57
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	11	8.6	10.5
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	57%	0%	100%	0%	0%
Vol Thru, %	0%	42%	0%	100%	100%
Vol Right, %	43%	58%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	243	97	74	74
LT Vol	66	0	97	0	0
Through Vol	0	103	0	74	74
RT Vol	50	140	0	0	0
Lane Flow Rate	133	279	111	85	85
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.223	0.392	0.184	0.129	0.082
Departure Headway (Hd)	6.032	5.051	5.948	5.444	3.457
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	592	709	602	657	1029
Service Time	3.801	2.798	3.695	3.191	1.203
HCM Lane V/C Ratio	0.225	0.394	0.184	0.129	0.083
HCM Control Delay	10.5	11	10	9	6.5
HCM Lane LOS	B	B	A	A	A
HCM 95th-tile Q	0.8	1.9	0.7	0.4	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	433	26	62	341	0	30	0	22	0	1	13
Future Volume (vph)	27	433	26	62	341	0	30	0	22	0	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4434		1556	4472			1556	1392		1432	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4434		1556	4472			1638	1392		1432	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	471	28	67	371	0	33	0	24	0	1	14
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	23	0	13	0
Lane Group Flow (vph)	29	491	0	67	371	0	0	33	1	0	2	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.7	11.5		2.1	12.9			1.8	1.8		1.8	
Effective Green, g (s)	0.7	11.5		2.1	12.9			1.8	1.8		1.8	
Actuated g/C Ratio	0.02	0.39		0.07	0.44			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	36	1722		110	1948			99	84		87	
v/s Ratio Prot	0.02	c0.11		c0.04	0.08						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.81	0.29		0.61	0.19			0.33	0.02		0.02	
Uniform Delay, d1	14.4	6.2		13.4	5.1			13.3	13.1		13.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	72.5	0.3		6.4	0.1			0.7	0.0		0.0	
Delay (s)	86.9	6.5		19.7	5.2			14.1	13.1		13.1	
Level of Service	F	A		B	A			B	B		B	
Approach Delay (s)		10.9			7.5			13.6			13.1	
Approach LOS		B			A			B			B	

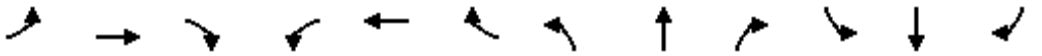
Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	29.6	Sum of lost time (s)	14.2
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	233	316	247	246	251	178
Future Volume (vph)	233	316	247	246	251	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4472	1392	1556	4472	3019	1392
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4472	1392	1556	4472	3019	1392
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	253	343	268	267	273	193
RTOR Reduction (vph)	0	211	0	0	0	155
Lane Group Flow (vph)	253	132	268	267	273	38
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	10.7	22.1	15.5	31.9	11.4	11.4
Effective Green, g (s)	10.7	22.1	15.5	31.9	11.4	11.4
Actuated g/C Ratio	0.19	0.39	0.27	0.56	0.20	0.20
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	835	536	420	2489	600	276
v/s Ratio Prot	c0.06	0.05	c0.17	0.06	c0.09	
v/s Ratio Perm		0.05				0.03
v/c Ratio	0.30	0.25	0.64	0.11	0.46	0.14
Uniform Delay, d1	20.1	11.9	18.4	6.0	20.2	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	3.2	0.0	0.5	0.2
Delay (s)	20.3	12.2	21.6	6.0	20.8	19.1
Level of Service	C	B	C	A	C	B
Approach Delay (s)	15.6			13.8	20.1	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	19.7
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

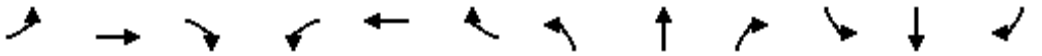
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	11	2	32	9	383	4	354	37	213	129	68
Future Volume (vph)	111	11	2	32	9	383	4	354	37	213	129	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.98			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1556	1605			1576	1392	1556	3068		1556	1638	1392
Flt Permitted	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1556	1605			1576	1392	1556	3068		1556	1638	1392
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	129	13	2	37	10	445	5	412	43	248	150	79
RTOR Reduction (vph)	0	2	0	0	0	376	0	8	0	0	0	44
Lane Group Flow (vph)	129	13	0	0	47	69	5	447	0	248	150	35
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.8	7.8			10.9	10.9	0.6	16.1		15.6	30.9	30.9
Effective Green, g (s)	7.8	7.8			10.9	10.9	0.6	16.1		15.6	30.9	30.9
Actuated g/C Ratio	0.11	0.11			0.16	0.16	0.01	0.23		0.22	0.44	0.44
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	172	178			244	216	13	703		345	721	612
v/s Ratio Prot	c0.08	0.01			0.03		0.00	c0.15		c0.16	0.09	
v/s Ratio Perm						c0.05						0.02
v/c Ratio	0.75	0.07			0.19	0.32	0.38	0.64		0.72	0.21	0.06
Uniform Delay, d1	30.3	28.0			25.8	26.4	34.6	24.4		25.3	12.1	11.3
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.0	0.1			0.5	1.1	6.8	2.1		5.9	0.2	0.1
Delay (s)	45.2	28.0			26.3	27.4	41.4	26.5		31.1	12.3	11.3
Level of Service	D	C			C	C	D	C		C	B	B
Approach Delay (s)		43.4			27.3			26.6			21.9	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

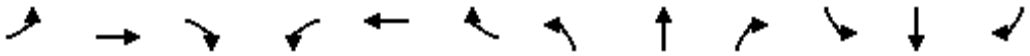
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	169	85	42	206	183	141	43	72	195	79	264
Future Volume (vph)	132	169	85	42	206	183	141	43	72	195	79	264
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3019	4472	1392	3019	4472	1392	1556	1484		1556	1638	2450
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3019	4472	1392	3019	4472	1392	1556	1484		1556	1638	2450
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	145	186	93	46	226	201	155	47	79	214	87	290
RTOR Reduction (vph)	0	0	71	0	0	166	0	65	0	0	0	213
Lane Group Flow (vph)	145	186	22	46	226	35	155	61	0	214	87	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.1	17.1	17.1	5.9	12.9	12.9	16.6	12.8		13.3	9.5	19.6
Effective Green, g (s)	10.1	17.1	17.1	5.9	12.9	12.9	16.6	12.8		13.3	9.5	19.6
Actuated g/C Ratio	0.14	0.23	0.23	0.08	0.17	0.17	0.22	0.17		0.18	0.13	0.27
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	413	1036	322	241	781	243	349	257		280	210	650
v/s Ratio Prot	c0.05	c0.04		0.02	c0.05		0.10	c0.04		c0.14	c0.05	0.02
v/s Ratio Perm			0.02			0.03						0.02
v/c Ratio	0.35	0.18	0.07	0.19	0.29	0.14	0.44	0.24		0.76	0.41	0.12
Uniform Delay, d1	28.9	22.7	22.1	31.7	26.5	25.8	24.6	26.3		28.8	29.6	20.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.1	0.4	0.2	0.3	0.9	0.5		11.7	1.3	0.1
Delay (s)	29.4	22.8	22.2	32.1	26.7	26.1	25.5	26.8		40.5	30.9	20.6
Level of Service	C	C	C	C	C	C	C	C		D	C	C
Approach Delay (s)		24.9			26.9			26.1			29.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	73.8	Sum of lost time (s)	24.7
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

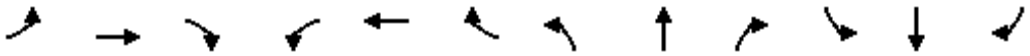
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	14	749	14	213	3	387	334	119	205	2
Future Volume (vph)	2	1	14	749	14	213	3	387	334	119	205	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1556	3112	1392	3019	1638	1392	1556	3112	1392	3019	3108	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1556	3112	1392	3019	1638	1392	1556	3112	1392	3019	3108	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	2	1	16	842	16	239	3	435	375	134	230	2
RTOR Reduction (vph)	0	0	15	0	0	159	0	0	151	0	1	0
Lane Group Flow (vph)	2	1	1	842	16	80	3	435	224	134	231	0
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.5	1.5	5.2	30.4	29.3	29.3	3.7	22.2	52.6	11.6	30.1	
Effective Green, g (s)	1.5	1.5	5.2	30.4	29.3	29.3	3.7	22.2	52.6	11.6	30.1	
Actuated g/C Ratio	0.02	0.02	0.06	0.35	0.33	0.33	0.04	0.25	0.60	0.13	0.34	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	26	53	82	1042	545	463	65	785	832	397	1063	
v/s Ratio Prot	0.00	0.00	0.00	c0.28	0.01		0.00	c0.14	0.09	c0.04	0.07	
v/s Ratio Perm			0.00			c0.06			0.07			
v/c Ratio	0.08	0.02	0.01	0.81	0.03	0.17	0.05	0.55	0.27	0.34	0.22	
Uniform Delay, d1	42.6	42.5	39.0	26.2	19.8	20.8	40.5	28.6	8.5	34.7	20.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.1	0.1	4.7	0.0	0.2	0.3	0.9	0.2	0.5	0.1	
Delay (s)	43.8	42.7	39.0	30.8	19.8	20.9	40.8	29.4	8.7	35.2	20.7	
Level of Service	D	D	D	C	B	C	D	C	A	D	C	
Approach Delay (s)		39.7			28.5			19.9			26.0	
Approach LOS		D			C			B			C	

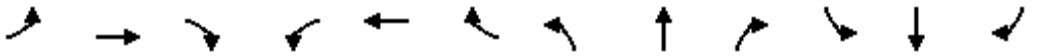
Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	48	1	87	316	660	0	0	247	687
Future Volume (vph)	0	0	0	48	1	87	316	660	0	0	247	687
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.89	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1725	1392	1719	4472			4081	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1725	1392	1719	4472			4081	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	55	1	99	359	750	0	0	281	781
RTOR Reduction (vph)	0	0	0	0	0	91	0	0	0	0	225	0
Lane Group Flow (vph)	0	0	0	0	56	8	359	750	0	0	837	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	16%	5%	16%	5%	5%	5%	16%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.2	7.2	23.9	72.6			44.0	
Effective Green, g (s)					7.2	7.2	23.9	72.6			44.0	
Actuated g/C Ratio					0.08	0.08	0.27	0.81			0.49	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					138	111	456	3607			1995	
v/s Ratio Prot							c0.21	0.17			c0.21	
v/s Ratio Perm					0.03	0.01						
v/c Ratio					0.41	0.07	0.79	0.21			0.42	
Uniform Delay, d1					39.4	38.3	30.7	2.0			14.8	
Progression Factor					1.00	1.00	0.83	0.70			1.00	
Incremental Delay, d2					1.9	0.3	7.4	0.1			0.7	
Delay (s)					41.3	38.6	33.0	1.5			15.4	
Level of Service					D	D	C	A			B	
Approach Delay (s)		0.0			39.6			11.7			15.4	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	506	5	260	0	0	0	0	480	73	74	221	0
Future Volume (vph)	506	5	260	0	0	0	0	480	73	74	221	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1478	1473						4842		1556	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1478	1473						4842		1556	3438	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	625	6	321	0	0	0	0	593	90	91	273	0
RTOR Reduction (vph)	0	96	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	494	362	0	0	0	0	0	661	0	91	273	0
Heavy Vehicles (%)	16%	5%	5%	5%	5%	5%	5%	5%	5%	16%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	36.5	36.5						30.3		8.3	43.3	
Effective Green, g (s)	36.5	36.5						30.3		8.3	43.3	
Actuated g/C Ratio	0.41	0.41						0.34		0.09	0.48	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	599	597						1630		143	1654	
v/s Ratio Prot	c0.33	0.25						c0.14		c0.06	0.08	
v/s Ratio Perm												
v/c Ratio	0.82	0.61						0.41		0.64	0.17	
Uniform Delay, d1	23.9	21.1						22.9		39.4	13.2	
Progression Factor	1.00	1.00						1.00		1.26	0.76	
Incremental Delay, d2	9.0	1.7						0.8		8.3	0.2	
Delay (s)	32.9	22.8						23.7		58.2	10.2	
Level of Service	C	C						C		E	B	
Approach Delay (s)		28.1			0.0			23.7			22.2	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	37.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	409	2	4	0	2	14	6	116	0	18	59	405
Future Vol, veh/h	409	2	4	0	2	14	6	116	0	18	59	405
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	538	3	5	0	3	18	8	153	0	24	78	533
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

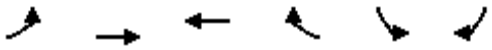
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	20.9	11.3	11.6	59.4
HCM LOS	C	B	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	97%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	100%	0%	1%	100%	100%	12%	0%	100%	5%
Vol Right, %	0%	0%	0%	0%	2%	0%	0%	88%	0%	0%	95%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	58	58	209	206	0	0	16	18	39	425
LT Vol	6	0	0	209	200	0	0	0	18	0	0
Through Vol	0	58	58	0	2	0	0	2	0	39	20
RT Vol	0	0	0	0	4	0	0	14	0	0	405
Lane Flow Rate	8	76	76	274	272	0	0	21	24	52	559
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.019	0.175	0.138	0.59	0.582	0	0	0.048	0.051	0.103	1.01
Departure Headway (Hd)	8.934	8.417	6.519	7.741	7.713	8.766	8.766	8.144	7.703	7.192	6.509
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	403	429	549	467	467	0	0	439	466	499	559
Service Time	6.634	6.117	4.269	5.481	5.453	6.525	6.525	5.903	5.432	4.92	4.237
HCM Lane V/C Ratio	0.02	0.177	0.138	0.587	0.582	0	0	0.048	0.052	0.104	1
HCM Control Delay	11.8	12.9	10.3	21.1	20.7	11.5	11.5	11.3	10.8	10.7	66
HCM Lane LOS	B	B	B	C	C	N	N	B	B	B	F
HCM 95th-tile Q	0.1	0.6	0.5	3.7	3.6	0	0	0.2	0.2	0.3	14.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	3	385	1	1	323
Future Volume (Veh/h)	0	3	385	1	1	323
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	4	470	1	1	394
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	866	470			470	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	866	470			470	
tC, single (s)	6.6	6.4			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	306	566			1022	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	470	1	1	394
Volume Left	0	0	0	1	0
Volume Right	4	0	1	0	0
cSH	566	1700	1700	1022	1700
Volume to Capacity	0.01	0.28	0.00	0.00	0.23
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.4	0.0	0.0	8.5	0.0
Lane LOS	B			A	
Approach Delay (s)	11.4	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

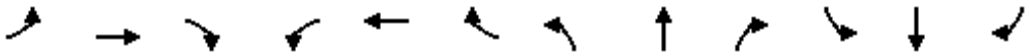


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	110	389	342	80	89	238
Future Volume (vph)	110	389	342	80	89	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Lane Util. Factor	0.97	0.95	0.91	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.91	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (prot)	3019	3112	4472	1392	2844	1267
Flt Permitted	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (perm)	3019	3112	4472	1392	2844	1267
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	118	418	368	86	96	256
RTOR Reduction (vph)	0	0	0	64	106	106
Lane Group Flow (vph)	118	418	368	22	118	22
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	5.6	21.5	10.7	10.7	7.2	7.2
Effective Green, g (s)	5.6	21.5	10.7	10.7	7.2	7.2
Actuated g/C Ratio	0.14	0.52	0.26	0.26	0.18	0.18
Clearance Time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	412	1631	1167	363	499	222
v/s Ratio Prot	0.04	c0.13	0.08		c0.04	
v/s Ratio Perm				0.02		0.02
v/c Ratio	0.29	0.26	0.32	0.06	0.24	0.10
Uniform Delay, d1	15.9	5.4	12.2	11.4	14.5	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2	0.1	0.2	0.2
Delay (s)	16.3	5.4	12.4	11.5	14.8	14.4
Level of Service	B	A	B	B	B	B
Approach Delay (s)		7.8	12.2		14.6	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	41.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

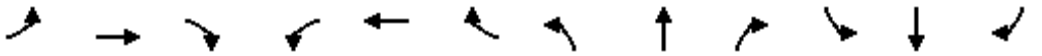
c Critical Lane Group

EXISTING PLUS PROJECT CONDITIONS



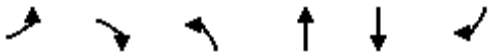
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	249	83	467	262	36	24	119	375	27	93	17
Future Volume (vph)	40	249	83	467	262	36	24	119	375	27	93	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1556	4673	1392	1626	4528		3019	3112	1392	3019	1600	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1556	4673	1392	1626	4528		3019	3112	1392	3019	1600	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	277	92	519	291	40	27	132	417	30	103	19
RTOR Reduction (vph)	0	0	82	0	15	0	0	0	337	0	6	0
Lane Group Flow (vph)	44	277	10	519	316	0	27	132	80	30	116	0
Heavy Vehicles (%)	16%	11%	16%	11%	12%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	6.3	10.9	10.9	37.5	42.1		4.1	19.3	19.3	7.6	22.8	
Effective Green, g (s)	6.3	10.9	10.9	37.5	42.1		4.1	19.3	19.3	7.6	22.8	
Actuated g/C Ratio	0.06	0.11	0.11	0.38	0.42		0.04	0.19	0.19	0.08	0.23	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	98	509	151	609	1906		123	600	268	229	364	
v/s Ratio Prot	0.03	c0.06		c0.32	c0.07		c0.01	0.04		c0.01	c0.07	
v/s Ratio Perm			0.01						0.06			
v/c Ratio	0.45	0.54	0.07	0.85	0.17		0.22	0.22	0.30	0.13	0.32	
Uniform Delay, d1	45.2	42.2	40.0	28.7	18.0		46.4	34.0	34.6	43.1	32.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.80	0.65	1.11	1.00	1.00	
Incremental Delay, d2	3.2	1.2	0.2	11.1	0.0		0.9	0.8	2.8	0.3	2.3	
Delay (s)	48.4	43.4	40.2	39.8	18.1		37.8	22.9	41.1	43.4	34.4	
Level of Service	D	D	D	D	B		D	C	D	D	C	
Approach Delay (s)		43.2			31.3			36.8			36.2	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



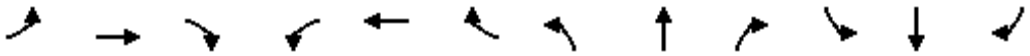
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	55	42	65	152	94	504	64	0	586	28
Future Volume (vph)	10	0	55	42	65	152	94	504	64	0	586	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1556	1392		1478	1551	1429	3019	3195	1392		4550	1429
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1556	1392		1478	1551	1429	3019	3195	1392		4550	1429
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	11	0	62	47	73	171	106	566	72	0	658	31
RTOR Reduction (vph)	0	59	0	0	0	153	0	0	22	0	0	14
Lane Group Flow (vph)	11	3	0	42	78	18	106	566	50	0	658	17
Heavy Vehicles (%)	16%	16%	16%	16%	16%	13%	16%	13%	16%	16%	14%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	5.2	5.2		10.5	10.5	10.5	8.9	69.0	69.0		55.4	55.4
Effective Green, g (s)	5.2	5.2		10.5	10.5	10.5	8.9	69.0	69.0		55.4	55.4
Actuated g/C Ratio	0.05	0.05		0.10	0.10	0.10	0.09	0.69	0.69		0.55	0.55
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	80	72		155	162	150	268	2204	960		2520	791
v/s Ratio Prot	c0.01	0.00		0.03	c0.05		c0.04	c0.18			0.14	
v/s Ratio Perm						0.01			0.04			0.01
v/c Ratio	0.14	0.04		0.27	0.48	0.12	0.40	0.26	0.05		0.26	0.02
Uniform Delay, d1	45.3	45.0		41.2	42.2	40.6	43.0	5.8	5.0		11.6	10.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.81	0.25	0.00		0.46	1.00
Incremental Delay, d2	0.8	0.3		0.9	2.2	0.4	0.9	0.3	0.1		0.2	0.0
Delay (s)	46.0	45.3		42.2	44.4	40.9	35.5	1.7	0.1		5.5	10.1
Level of Service	D	D		D	D	D	D	A	A		A	B
Approach Delay (s)		45.4			42.0			6.4			5.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	477	310	4	182	216	160
Future Volume (vph)	477	310	4	182	216	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3045	2450	3019	4631	3167	1417
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3045	2450	3019	4631	3167	1417
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	524	341	4	200	237	176
RTOR Reduction (vph)	0	260	0	0	0	28
Lane Group Flow (vph)	524	81	4	200	237	148
Heavy Vehicles (%)	15%	16%	16%	12%	14%	14%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	23.8	23.8	1.2	66.0	60.1	83.9
Effective Green, g (s)	23.8	23.8	1.2	66.0	60.1	83.9
Actuated g/C Ratio	0.24	0.24	0.01	0.66	0.60	0.84
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	724	583	36	3056	1903	1261
v/s Ratio Prot	c0.17		0.00	c0.04	c0.07	0.03
v/s Ratio Perm		0.03				0.08
v/c Ratio	0.72	0.14	0.11	0.07	0.12	0.12
Uniform Delay, d1	35.1	30.0	48.9	6.0	8.6	1.4
Progression Factor	1.00	1.00	1.00	1.00	0.47	7.99
Incremental Delay, d2	3.6	0.1	1.4	0.0	0.1	0.0
Delay (s)	38.7	30.1	50.2	6.1	4.2	11.5
Level of Service	D	C	D	A	A	B
Approach Delay (s)	35.3			6.9	7.3	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	27	41	23	11	58	148	0	0	0	290	253	61
Future Volume (vph)	27	41	23	11	58	148	0	0	0	290	253	61
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
Hourly flow rate (vph)	28	43	24	12	61	156	0	0	0	305	266	64

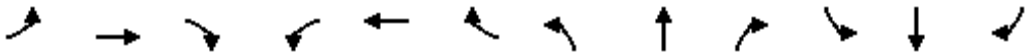
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	95	229	438	197
Volume Left (vph)	28	12	305	0
Volume Right (vph)	24	156	0	64
Hadj (s)	0.12	-0.15	0.62	0.02
Departure Headway (s)	6.0	5.5	6.1	5.5
Degree Utilization, x	0.16	0.35	0.74	0.30
Capacity (veh/h)	558	620	581	647
Control Delay (s)	10.1	11.4	22.9	9.6
Approach Delay (s)	10.1	11.4	18.8	
Approach LOS	B	B	C	

Intersection Summary				
Delay	16.2			
Level of Service	C			
Intersection Capacity Utilization	38.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	59	0	0	0	107	153
Future Volume (Veh/h)	59	0	0	0	107	153
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	65	0	0	0	118	168
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	320	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	88	100			92	
cM capacity (veh/h)	565	1040			1525	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	65	174	112
Volume Left	65	118	0
Volume Right	0	0	0
cSH	565	1525	1700
Volume to Capacity	0.12	0.08	0.07
Queue Length 95th (ft)	10	6	0
Control Delay (s)	12.2	5.3	0.0
Lane LOS	B	A	
Approach Delay (s)	12.2	3.2	
Approach LOS	B		

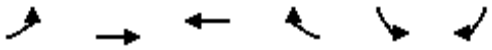
Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	17.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	39	5	17	50	0	0	0	0	118	84	4
Future Volume (vph)	0	39	5	17	50	0	0	0	0	118	84	4
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
Hourly flow rate (vph)	0	43	6	19	56	0	0	0	0	131	93	4

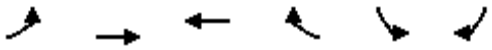
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	49	75	178	51
Volume Left (vph)	0	19	131	0
Volume Right (vph)	6	0	0	4
Hadj (s)	0.20	0.32	0.64	0.22
Departure Headway (s)	4.8	4.9	5.5	5.0
Degree Utilization, x	0.07	0.10	0.27	0.07
Capacity (veh/h)	705	696	643	694
Control Delay (s)	8.1	8.5	9.3	7.2
Approach Delay (s)	8.1	8.5	8.8	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	449	104	0	440	433
Future Volume (vph)	0	449	104	0	440	433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4510	4550		3019	1392
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4510	4550		3019	1392
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	499	116	0	489	481
RTOR Reduction (vph)	0	0	0	0	0	366
Lane Group Flow (vph)	0	499	116	0	489	115
Heavy Vehicles (%)	16%	15%	14%	16%	16%	16%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		55.1	55.1		21.6	21.6
Effective Green, g (s)		55.1	55.1		21.6	21.6
Actuated g/C Ratio		0.61	0.61		0.24	0.24
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2761	2785		724	334
v/s Ratio Prot		c0.11	0.03		c0.16	
v/s Ratio Perm						0.08
v/c Ratio		0.18	0.04		0.68	0.35
Uniform Delay, d1		7.6	6.9		31.0	28.3
Progression Factor		1.00	1.02		1.00	1.00
Incremental Delay, d2		0.1	0.0		2.5	0.6
Delay (s)		7.8	7.1		33.5	29.0
Level of Service		A	A		C	C
Approach Delay (s)		7.8	7.1		31.3	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	191	698	105	64	0	0
Future Volume (vph)	191	698	105	64	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	1.00	0.95	0.91	0.91		
Frt	1.00	1.00	0.98	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1570	3112	2977	1267		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1570	3112	2977	1267		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	217	793	119	73	0	0
RTOR Reduction (vph)	0	0	5	20	0	0
Lane Group Flow (vph)	217	793	129	38	0	0
Heavy Vehicles (%)	15%	16%	14%	16%	16%	16%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	18.0	90.0	59.1	59.1		
Effective Green, g (s)	18.0	90.0	59.1	59.1		
Actuated g/C Ratio	0.20	1.00	0.66	0.66		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	314	3112	1954	831		
v/s Ratio Prot	c0.14	c0.25	0.04			
v/s Ratio Perm				0.03		
v/c Ratio	0.69	0.25	0.07	0.05		
Uniform Delay, d1	33.4	0.0	5.5	5.5		
Progression Factor	0.76	1.00	1.00	1.00		
Incremental Delay, d2	6.3	0.2	0.1	0.1		
Delay (s)	31.8	0.2	5.6	5.6		
Level of Service	C	A	A	A		
Approach Delay (s)		7.0	5.6		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	687	0	0	290	402	214	0	348	0	0	0
Future Volume (vph)	115	687	0	0	290	402	214	0	348	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3966	1197		1556	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3966	1197		1556	2450			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	120	716	0	0	302	419	223	0	362	0	0	0
RTOR Reduction (vph)	0	0	0	0	92	97	0	0	284	0	0	0
Lane Group Flow (vph)	120	716	0	0	420	112	0	223	79	0	0	0
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	10.5	69.0			53.8	53.8		20.8	20.8			
Effective Green, g (s)	10.5	69.0			53.8	53.8		20.8	20.8			
Actuated g/C Ratio	0.10	0.69			0.54	0.54		0.21	0.21			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	316	3085			2133	643		323	509			
v/s Ratio Prot	c0.04	c0.16			0.11							
v/s Ratio Perm						0.09		0.14	0.03			
v/c Ratio	0.38	0.23			0.20	0.17		0.69	0.15			
Uniform Delay, d1	41.7	5.7			11.9	11.8		36.6	32.4			
Progression Factor	0.97	0.88			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.2			0.2	0.6		6.2	0.1			
Delay (s)	41.3	5.2			12.1	12.4		42.9	32.5			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		10.4			12.2			36.5			0.0	
Approach LOS		B			B			D			A	

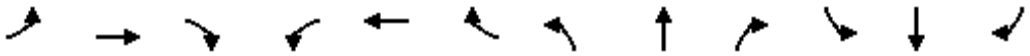
Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	264	127	98	740	0	562
Future Volume (vph)	264	127	98	740	0	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4254		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4254		3019	4472		2450
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	314	151	117	881	0	669
RTOR Reduction (vph)	31	0	0	0	0	601
Lane Group Flow (vph)	434	0	117	881	0	68
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	79.7		10.1	100.0		10.1
Effective Green, g (s)	79.7		10.1	100.0		10.1
Actuated g/C Ratio	0.80		0.10	1.00		0.10
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3390		304	4472		247
v/s Ratio Prot	0.10		c0.04	c0.20		0.03
v/s Ratio Perm						
v/c Ratio	0.13		0.38	0.20		0.27
Uniform Delay, d1	2.3		42.0	0.0		41.6
Progression Factor	0.32		0.89	1.00		1.00
Incremental Delay, d2	0.1		0.8	0.1		0.6
Delay (s)	0.8		38.3	0.1		42.2
Level of Service	A		D	A		D
Approach Delay (s)	0.8			4.6	42.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	140	26	230	365	141	47	23	134	127	50	81
Future Volume (vph)	20	140	26	230	365	141	47	23	134	127	50	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1556	4367		1556	4285			1585	1392		2894	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.79	
Satd. Flow (perm)	1556	4367		1556	4285			911	1392		2338	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	152	28	250	397	153	51	25	146	138	54	88
RTOR Reduction (vph)	0	14	0	0	41	0	0	0	123	0	74	0
Lane Group Flow (vph)	22	166	0	250	509	0	0	76	23	0	206	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.6	49.1		21.0	64.9			15.7	15.7		15.7	
Effective Green, g (s)	4.6	49.1		21.0	64.9			15.7	15.7		15.7	
Actuated g/C Ratio	0.05	0.49		0.21	0.65			0.16	0.16		0.16	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	71	2144		326	2780			143	218		367	
v/s Ratio Prot	c0.01	0.04		c0.16	c0.12							
v/s Ratio Perm								0.08	0.02		c0.09	
v/c Ratio	0.31	0.08		0.77	0.18			0.53	0.11		0.56	
Uniform Delay, d1	46.2	13.5		37.2	7.0			38.8	36.1		39.0	
Progression Factor	1.00	1.00		0.82	0.83			1.00	1.00		1.00	
Incremental Delay, d2	0.9	0.1		9.3	0.1			5.6	0.4		2.7	
Delay (s)	47.1	13.5		39.6	6.0			44.3	36.5		41.7	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		17.2			16.5			39.2			41.7	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

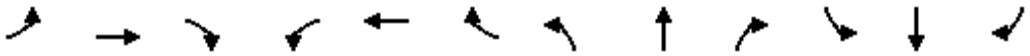
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	99	75	61	85	93	38
Future Vol, veh/h	99	75	61	85	93	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	118	89	73	101	111	45
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	10	8.3	10.6
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	71%	0%	100%	0%	0%
Vol Thru, %	0%	57%	0%	100%	100%
Vol Right, %	29%	43%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	174	61	43	43
LT Vol	93	0	61	0	0
Through Vol	0	99	0	43	43
RT Vol	38	75	0	0	0
Lane Flow Rate	156	207	73	51	51
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.253	0.295	0.12	0.077	0.049
Departure Headway (Hd)	5.832	5.121	5.953	5.449	3.462
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	614	700	602	657	1029
Service Time	3.582	2.859	3.693	3.189	1.202
HCM Lane V/C Ratio	0.254	0.296	0.121	0.078	0.05
HCM Control Delay	10.6	10	9.5	8.6	6.4
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	1	1.2	0.4	0.2	0.2



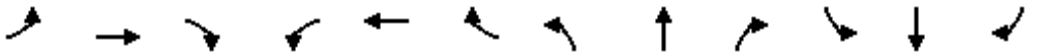
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	183	23	82	386	4	29	0	22	0	0	15
Future Volume (vph)	28	183	23	82	386	4	29	0	22	0	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4397		1556	4465			1556	1392		1417	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4397		1556	4465			1638	1392		1417	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	191	24	85	402	4	30	0	23	0	0	16
RTOR Reduction (vph)	0	17	0	0	1	0	0	0	22	0	15	0
Lane Group Flow (vph)	29	198	0	85	405	0	0	30	1	0	1	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.7	9.4		5.2	13.9			1.9	1.9		1.9	
Effective Green, g (s)	0.7	9.4		5.2	13.9			1.9	1.9		1.9	
Actuated g/C Ratio	0.02	0.31		0.17	0.45			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	35	1346		263	2021			101	86		87	
v/s Ratio Prot	0.02	0.05		c0.05	c0.09						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.83	0.15		0.32	0.20			0.30	0.02		0.01	
Uniform Delay, d1	14.9	7.7		11.2	5.1			13.8	13.5		13.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	81.6	0.1		0.3	0.1			0.6	0.0		0.0	
Delay (s)	96.6	7.9		11.5	5.2			14.4	13.6		13.5	
Level of Service	F	A		B	A			B	B		B	
Approach Delay (s)		18.4			6.3			14.0			13.5	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	30.7	Sum of lost time (s)	14.2
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	168	113	163	213	210	227
Future Volume (vph)	168	113	163	213	210	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4631	1392	1556	4550	3019	1392
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4631	1392	1556	4550	3019	1392
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	189	127	183	239	236	255
RTOR Reduction (vph)	0	77	0	0	0	206
Lane Group Flow (vph)	189	50	183	239	236	49
Heavy Vehicles (%)	12%	16%	16%	14%	16%	16%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	10.0	19.5	10.3	26.0	9.5	9.5
Effective Green, g (s)	10.0	19.5	10.3	26.0	9.5	9.5
Actuated g/C Ratio	0.20	0.39	0.21	0.53	0.19	0.19
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	935	548	323	2389	579	267
v/s Ratio Prot	c0.04	0.02	c0.12	0.05	c0.08	
v/s Ratio Perm		0.02				0.04
v/c Ratio	0.20	0.09	0.57	0.10	0.41	0.18
Uniform Delay, d1	16.4	9.4	17.6	5.9	17.5	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	2.3	0.0	0.5	0.3
Delay (s)	16.5	9.5	19.9	5.9	18.0	17.1
Level of Service	B	A	B	A	B	B
Approach Delay (s)	13.7			12.0	17.5	
Approach LOS	B			B	B	

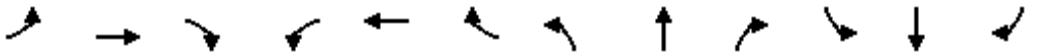
Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	49.5	Sum of lost time (s)	19.7
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	14	0	39	20	107	2	128	38	310	288	71
Future Volume (vph)	22	14	0	39	20	107	2	128	38	310	288	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1556	1638			1585	1392	1556	3006		1556	1638	1392
Flt Permitted	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1556	1638			1585	1392	1556	3006		1556	1638	1392
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	16	0	43	22	119	2	142	42	344	320	79
RTOR Reduction (vph)	0	0	0	0	0	105	0	31	0	0	0	42
Lane Group Flow (vph)	24	16	0	0	65	14	2	153	0	344	320	37
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	3.0	3.0			6.5	6.5	0.6	7.7		19.6	26.5	26.5
Effective Green, g (s)	3.0	3.0			6.5	6.5	0.6	7.7		19.6	26.5	26.5
Actuated g/C Ratio	0.05	0.05			0.11	0.11	0.01	0.14		0.35	0.47	0.47
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	82	86			182	159	16	408		538	766	651
v/s Ratio Prot	c0.02	0.01			c0.04		0.00	0.05		c0.22	c0.20	
v/s Ratio Perm						0.01						0.03
v/c Ratio	0.29	0.19			0.36	0.09	0.12	0.37		0.64	0.42	0.06
Uniform Delay, d1	25.8	25.6			23.1	22.4	27.7	22.3		15.5	9.9	8.2
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.4			1.5	0.3	1.3	0.7		1.8	0.5	0.0
Delay (s)	26.5	26.0			24.6	22.7	29.0	23.0		17.4	10.4	8.3
Level of Service	C	C			C	C	C	C		B	B	A
Approach Delay (s)		26.3			23.4			23.1			13.4	
Approach LOS		C			C			C			B	

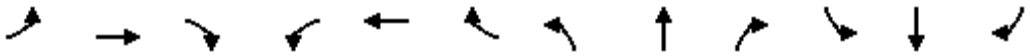
Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



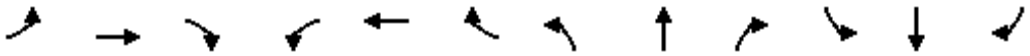
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	140	106	43	183	130	59	35	19	116	26	65
Future Volume (vph)	121	140	106	43	183	130	59	35	19	116	26	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3019	4590	1392	3019	4510	1417	1556	1551		1583	1638	2450
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3019	4590	1392	3019	4510	1417	1556	1551		1583	1638	2450
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	146	169	128	52	220	157	71	42	23	140	31	78
RTOR Reduction (vph)	0	0	92	0	0	125	0	21	0	0	0	56
Lane Group Flow (vph)	146	169	36	52	220	32	71	44	0	140	31	22
Heavy Vehicles (%)	16%	13%	16%	16%	15%	14%	16%	16%	16%	14%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.3	18.1	18.1	5.4	13.2	13.2	8.5	5.4		10.9	7.8	18.1
Effective Green, g (s)	10.3	18.1	18.1	5.4	13.2	13.2	8.5	5.4		10.9	7.8	18.1
Actuated g/C Ratio	0.16	0.28	0.28	0.08	0.20	0.20	0.13	0.08		0.17	0.12	0.28
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	482	1288	390	252	922	289	205	129		267	198	687
v/s Ratio Prot	c0.05	c0.04		0.02	c0.05		0.05	c0.03		c0.09	0.02	0.01
v/s Ratio Perm			0.03			0.02						0.00
v/c Ratio	0.30	0.13	0.09	0.21	0.24	0.11	0.35	0.34		0.52	0.16	0.03
Uniform Delay, d1	23.9	17.3	17.1	27.6	21.4	20.9	25.5	27.9		24.4	25.4	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.1	0.4	0.1	0.2	1.0	1.6		1.9	0.4	0.0
Delay (s)	24.3	17.4	17.2	28.0	21.6	21.0	26.5	29.4		26.3	25.8	16.9
Level of Service	C	B	B	C	C	C	C	C		C	C	B
Approach Delay (s)		19.6			22.2			27.9			23.3	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	24.7
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



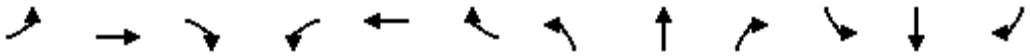
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	233	4	77	1	308	564	210	440	0
Future Volume (vph)	0	0	5	233	4	77	1	308	564	210	440	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor			1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt			0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)			1392	3019	1638	1442	1556	3112	1392	3072	3112	
Flt Permitted			1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)			1392	3019	1638	1442	1556	3112	1392	3072	3112	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	0	0	7	307	5	101	1	405	742	276	579	0
RTOR Reduction (vph)	0	0	7	0	0	80	0	0	377	0	0	0
Lane Group Flow (vph)	0	0	0	307	5	21	1	405	365	276	579	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	12%	16%	16%	16%	14%	16%	16%
Turn Type	Prot		pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)			1.8	14.5	13.0	13.0	1.8	14.5	29.0	17.2	29.9	
Effective Green, g (s)			1.8	14.5	13.0	13.0	1.8	14.5	29.0	17.2	29.9	
Actuated g/C Ratio			0.03	0.23	0.21	0.21	0.03	0.23	0.46	0.27	0.48	
Clearance Time (s)			5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)			39	695	338	298	44	717	756	840	1479	
v/s Ratio Prot			0.00	0.10	0.00		0.00	0.13	c0.11	c0.09	c0.19	
v/s Ratio Perm						0.01			0.15			
v/c Ratio			0.01	0.44	0.01	0.07	0.02	0.56	0.48	0.33	0.39	
Uniform Delay, d1			29.7	20.7	19.9	20.1	29.7	21.4	11.7	18.2	10.6	
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2			0.1	0.5	0.0	0.1	0.2	1.0	0.5	0.2	0.2	
Delay (s)			29.7	21.2	19.9	20.2	29.9	22.4	12.2	18.5	10.8	
Level of Service			C	C	B	C	C	C	B	B	B	
Approach Delay (s)		29.7			20.9			15.8			13.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	62.9	Sum of lost time (s)	23.4
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	45	3	48	214	783	0	0	266	410
Future Volume (vph)	0	0	0	45	3	48	214	783	0	0	266	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.91	
Flt Protected					0.96	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1729	1392	1719	4472			4222	
Flt Permitted					0.96	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1729	1392	1719	4472			4222	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	0	0	58	4	62	274	1004	0	0	341	526
RTOR Reduction (vph)	0	0	0	0	0	57	0	0	0	0	236	0
Lane Group Flow (vph)	0	0	0	0	62	5	274	1004	0	0	631	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	16%	5%	16%	5%	5%	5%	16%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.5	7.5	19.7	72.3			47.9	
Effective Green, g (s)					7.5	7.5	19.7	72.3			47.9	
Actuated g/C Ratio					0.08	0.08	0.22	0.80			0.53	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					144	116	376	3592			2247	
v/s Ratio Prot							c0.16	c0.22			0.15	
v/s Ratio Perm					0.04	0.00						
v/c Ratio					0.43	0.04	0.73	0.28			0.28	
Uniform Delay, d1					39.2	38.0	32.7	2.2			11.6	
Progression Factor					1.00	1.00	0.90	0.29			1.00	
Incremental Delay, d2					2.1	0.2	5.1	0.1			0.3	
Delay (s)					41.3	38.1	34.5	0.8			11.9	
Level of Service					D	D	C	A			B	
Approach Delay (s)		0.0			39.7			8.0			11.9	
Approach LOS		A			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	557	1	375	0	0	0	0	427	60	67	237	0
Future Volume (vph)	557	1	375	0	0	0	0	427	60	67	237	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.87						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1478	1466						4849		1556	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1478	1466						4849		1556	3438	
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	753	1	507	0	0	0	0	577	81	91	320	0
RTOR Reduction (vph)	0	159	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	663	439	0	0	0	0	0	639	0	91	320	0
Heavy Vehicles (%)	16%	5%	5%	5%	5%	5%	5%	5%	5%	16%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	46.2	46.2						22.1		6.8	33.6	
Effective Green, g (s)	46.2	46.2						22.1		6.8	33.6	
Actuated g/C Ratio	0.51	0.51						0.25		0.08	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	758	752						1190		117	1283	
v/s Ratio Prot	c0.45	0.30						c0.13		c0.06	0.09	
v/s Ratio Perm												
v/c Ratio	0.87	0.58						0.54		0.78	0.25	
Uniform Delay, d1	19.3	15.2						29.5		40.9	19.5	
Progression Factor	1.00	1.00						1.00		0.99	0.90	
Incremental Delay, d2	11.0	1.2						1.7		26.1	0.4	
Delay (s)	30.3	16.4						31.2		66.5	18.0	
Level of Service	C	B						C		E	B	
Approach Delay (s)		23.7			0.0			31.2			28.8	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	96.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	399	0	4	0	1	1	17	85	0	12	116	472
Future Vol, veh/h	399	0	4	0	1	1	17	85	0	12	116	472
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	578	0	6	0	1	1	25	123	0	17	168	684
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	23.8	11.9	12.1	159.4
HCM LOS	C	B	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	98%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	50%	0%	100%	8%
Vol Right, %	0%	0%	0%	0%	2%	0%	0%	50%	0%	0%	92%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	43	43	203	200	0	0	2	12	77	511
LT Vol	17	0	0	203	196	0	0	0	12	0	0
Through Vol	0	43	43	0	0	0	0	1	0	77	39
RT Vol	0	0	0	0	4	0	0	1	0	0	472
Lane Flow Rate	25	62	62	295	289	0	0	3	17	112	740
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.06	0.142	0.112	0.633	0.618	0	0	0.007	0.037	0.224	1.341
Departure Headway (Hd)	9.469	8.949	7.095	8.27	8.246	9.504	9.504	9.147	7.697	7.186	6.524
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	381	403	508	439	440	0	0	394	466	500	562
Service Time	7.169	6.649	4.795	5.97	5.946	7.204	7.204	6.847	5.43	4.919	4.257
HCM Lane V/C Ratio	0.066	0.154	0.122	0.672	0.657	0	0	0.008	0.036	0.224	1.317
HCM Control Delay	12.8	13.1	10.7	24.2	23.4	12.2	12.2	11.9	10.7	12	185.2
HCM Lane LOS	B	B	B	C	C	N	N	B	B	B	F
HCM 95th-tile Q	0.2	0.5	0.4	4.3	4.1	0	0	0	0.1	0.9	32

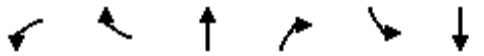
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	24	324	6	31	307
Future Volume (Veh/h)	4	24	324	6	31	307
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	4	26	372	7	36	353
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	797	372			372	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	797	372			372	
tC, single (s)	6.6	6.4			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	96			97	
cM capacity (veh/h)	326	644			1114	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	30	372	7	36	353
Volume Left	4	0	0	36	0
Volume Right	26	0	7	0	0
cSH	570	1700	1700	1114	1700
Volume to Capacity	0.05	0.22	0.00	0.03	0.21
Queue Length 95th (ft)	4	0	0	3	0
Control Delay (s)	11.7	0.0	0.0	8.3	0.0
Lane LOS	B			A	
Approach Delay (s)	11.7	0.0		0.8	
Approach LOS	B				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	573	78	51	551	213	38
Future Volume (vph)	573	78	51	551	213	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	4472	1538	1719	4472	3292	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	4472	1538	1719	4472	3292	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	623	85	55	599	232	41
RTOR Reduction (vph)	0	56	0	0	18	0
Lane Group Flow (vph)	623	29	55	599	255	0
Heavy Vehicles (%)	16%	5%	5%	16%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases		4				
Actuated Green, G (s)	12.1	12.1	2.4	18.5	9.0	
Effective Green, g (s)	12.1	12.1	2.4	18.5	9.0	
Actuated g/C Ratio	0.34	0.34	0.07	0.52	0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1524	524	116	2330	834	
v/s Ratio Prot	c0.14		c0.03	0.13	c0.08	
v/s Ratio Perm		0.02				
v/c Ratio	0.41	0.06	0.47	0.26	0.31	
Uniform Delay, d1	9.0	7.9	15.9	4.7	10.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.0	3.0	0.1	0.2	
Delay (s)	9.1	7.9	19.0	4.8	10.9	
Level of Service	A	A	B	A	B	
Approach Delay (s)	9.0			6.0	10.9	
Approach LOS	A			A	B	

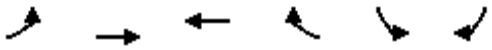
Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	35.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	518	210	0	643
Future Volume (Veh/h)	0	0	518	210	0	643
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	563	228	0	699
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			292			366
pX, platoon unblocked						
vC, conflicting volume	738	188			791	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	738	188			791	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	100	100			100	
cM capacity (veh/h)	325	780			740	

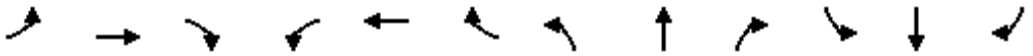
Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	188	188	188	228	175	175	175	175
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	228	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.11	0.11	0.13	0.10	0.10	0.10	0.10
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								
Approach Delay (s)	0.0				0.0			
Approach LOS								

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	16.3%	ICU Level of Service	A
Analysis Period (min)	15		



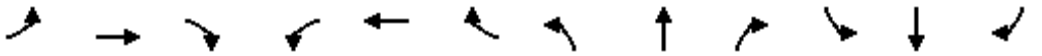
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	206	395	444	86	62	129
Future Volume (vph)	206	395	444	86	62	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Lane Util. Factor	0.97	0.95	0.91	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.92	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (prot)	3019	3139	4510	1392	2864	1267
Flt Permitted	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (perm)	3019	3139	4510	1392	2864	1267
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	222	425	477	92	67	139
RTOR Reduction (vph)	0	0	0	67	62	61
Lane Group Flow (vph)	222	425	477	25	75	8
Heavy Vehicles (%)	16%	15%	15%	16%	16%	16%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	9.1	26.4	12.1	12.1	5.3	5.3
Effective Green, g (s)	9.1	26.4	12.1	12.1	5.3	5.3
Actuated g/C Ratio	0.21	0.60	0.27	0.27	0.12	0.12
Clearance Time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	624	1883	1240	382	344	152
v/s Ratio Prot	c0.07	0.14	c0.11		c0.03	
v/s Ratio Perm				0.02		0.01
v/c Ratio	0.36	0.23	0.38	0.07	0.22	0.05
Uniform Delay, d1	14.9	4.1	12.9	11.8	17.5	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2	0.1	0.3	0.2
Delay (s)	15.3	4.1	13.1	11.9	17.8	17.3
Level of Service	B	A	B	B	B	B
Approach Delay (s)		8.0	12.9		17.6	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	44.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



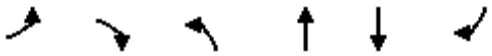
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	313	134	822	356	35	51	117	248	34	187	47
Future Volume (vph)	57	313	134	822	356	35	51	117	248	34	187	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1556	4803	1392	1671	4667		3019	3112	1392	3019	1588	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1556	4803	1392	1671	4667		3019	3112	1392	3019	1588	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	61	337	144	884	383	38	55	126	267	37	201	51
RTOR Reduction (vph)	0	0	124	0	13	0	0	0	225	0	10	0
Lane Group Flow (vph)	61	337	20	884	408	0	55	126	42	37	242	0
Heavy Vehicles (%)	16%	8%	16%	8%	9%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	7.0	12.7	12.7	34.3	40.0		4.1	14.2	14.2	4.1	14.2	
Effective Green, g (s)	7.0	12.7	12.7	34.3	40.0		4.1	14.2	14.2	4.1	14.2	
Actuated g/C Ratio	0.08	0.14	0.14	0.38	0.44		0.05	0.16	0.16	0.05	0.16	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	121	677	196	636	2074		137	491	219	137	250	
v/s Ratio Prot	0.04	c0.07		c0.53	0.09		0.02	c0.04		0.01	c0.15	
v/s Ratio Perm			0.01						0.03			
v/c Ratio	0.50	0.50	0.10	1.39	0.20		0.40	0.26	0.19	0.27	0.97	
Uniform Delay, d1	39.8	35.7	33.7	27.9	15.2		41.8	33.3	32.9	41.5	37.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.88	0.96	1.35	1.00	1.00	
Incremental Delay, d2	3.3	0.6	0.2	185.0	0.0		1.9	1.2	1.9	1.1	49.2	
Delay (s)	43.1	36.3	33.9	212.9	15.3		38.6	33.1	46.3	42.6	86.8	
Level of Service	D	D	C	F	B		D	C	D	D	F	
Approach Delay (s)		36.4			149.1			41.6			81.2	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	99.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



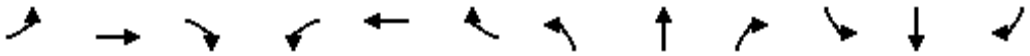
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	0	99	60	27	206	88	491	211	0	965	38
Future Volume (vph)	22	0	99	60	27	206	88	491	211	0	965	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1556	1392		1478	1526	1455	3019	3282	1392		4631	1482
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1556	1392		1478	1526	1455	3019	3282	1392		4631	1482
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	23	0	103	62	28	215	92	511	220	0	1005	40
RTOR Reduction (vph)	0	96	0	0	0	194	0	0	73	0	0	18
Lane Group Flow (vph)	23	7	0	45	46	21	92	511	147	0	1005	22
Heavy Vehicles (%)	16%	16%	16%	16%	16%	11%	16%	10%	16%	16%	12%	9%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	5.8	5.8		8.9	8.9	8.9	6.9	60.0	60.0		48.4	48.4
Effective Green, g (s)	5.8	5.8		8.9	8.9	8.9	6.9	60.0	60.0		48.4	48.4
Actuated g/C Ratio	0.06	0.06		0.10	0.10	0.10	0.08	0.67	0.67		0.54	0.54
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	100	89		146	150	143	231	2188	928		2490	796
v/s Ratio Prot	c0.01	0.00		c0.03	0.03		c0.03	0.16			c0.22	
v/s Ratio Perm						0.01			0.11			0.01
v/c Ratio	0.23	0.07		0.31	0.31	0.15	0.40	0.23	0.16		0.40	0.03
Uniform Delay, d1	40.0	39.6		37.7	37.7	37.1	39.6	5.9	5.6		12.3	9.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.75	0.52	0.00		0.40	1.00
Incremental Delay, d2	1.2	0.4		1.2	1.2	0.5	1.1	0.2	0.4		0.0	0.0
Delay (s)	41.2	39.9		38.9	38.8	37.6	30.9	3.3	0.4		5.0	9.8
Level of Service	D	D		D	D	D	C	A	A		A	A
Approach Delay (s)		40.2			38.0			5.6			5.1	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	346	183	22	457	325	322
Future Volume (vph)	346	183	22	457	325	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3127	2450	3019	4590	3223	1429
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3127	2450	3019	4590	3223	1429
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	364	193	23	481	342	339
RTOR Reduction (vph)	0	157	0	0	0	67
Lane Group Flow (vph)	364	36	23	481	342	272
Heavy Vehicles (%)	12%	16%	16%	13%	12%	13%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	16.8	16.8	2.8	63.0	55.5	72.3
Effective Green, g (s)	16.8	16.8	2.8	63.0	55.5	72.3
Actuated g/C Ratio	0.19	0.19	0.03	0.70	0.62	0.80
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	583	457	93	3213	1987	1228
v/s Ratio Prot	c0.12		0.01	c0.10	0.11	c0.04
v/s Ratio Perm		0.01				0.15
v/c Ratio	0.62	0.08	0.25	0.15	0.17	0.22
Uniform Delay, d1	33.7	30.2	42.6	4.5	7.4	2.1
Progression Factor	1.00	1.00	1.00	1.00	0.29	1.48
Incremental Delay, d2	2.1	0.1	1.4	0.1	0.2	0.1
Delay (s)	35.8	30.3	44.0	4.6	2.3	3.2
Level of Service	D	C	D	A	A	A
Approach Delay (s)	33.9			6.4	2.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	79	71	35	21	73	392	0	0	0	193	175	78
Future Volume (vph)	79	71	35	21	73	392	0	0	0	193	175	78
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
Hourly flow rate (vph)	84	76	37	22	78	417	0	0	0	205	186	83

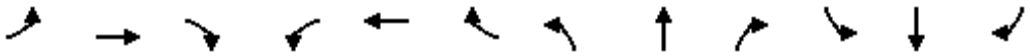
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	197	517	298	176
Volume Left (vph)	84	22	205	0
Volume Right (vph)	37	417	0	83
Hadj (s)	0.19	-0.22	0.58	-0.15
Departure Headway (s)	6.4	5.4	7.1	6.3
Degree Utilization, x	0.35	0.78	0.59	0.31
Capacity (veh/h)	532	648	486	545
Control Delay (s)	12.7	25.1	18.4	11.0
Approach Delay (s)	12.7	25.1	15.6	
Approach LOS	B	D	C	

Intersection Summary				
Delay	19.2			
Level of Service	C			
Intersection Capacity Utilization	62.3%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	0	0	0	72	138
Future Volume (Veh/h)	79	0	0	0	72	138
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	82	0	0	0	75	144
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	222	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	222	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	88	100			95	
cM capacity (veh/h)	673	1040			1525	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	82	123	96
Volume Left	82	75	0
Volume Right	0	0	0
cSH	673	1525	1700
Volume to Capacity	0.12	0.05	0.06
Queue Length 95th (ft)	10	4	0
Control Delay (s)	11.1	4.7	0.0
Lane LOS	B	A	
Approach Delay (s)	11.1	2.6	
Approach LOS	B		

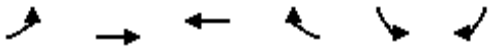
Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	16.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	37	30	39	30	0	0	0	0	87	138	2
Future Volume (vph)	0	37	30	39	30	0	0	0	0	87	138	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	38	31	40	31	0	0	0	0	90	142	2

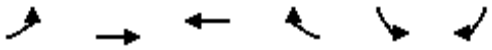
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	69	71	161	73
Volume Left (vph)	0	40	90	0
Volume Right (vph)	31	0	0	2
Hadj (s)	0.00	0.38	0.55	0.25
Departure Headway (s)	4.6	5.0	5.4	5.1
Degree Utilization, x	0.09	0.10	0.24	0.10
Capacity (veh/h)	736	684	648	684
Control Delay (s)	8.1	8.5	8.9	7.5
Approach Delay (s)	8.1	8.5	8.5	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	23.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	478	307	0	120	242
Future Volume (vph)	0	478	307	0	120	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4472	4550		3019	1404
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4472	4550		3019	1404
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	503	323	0	126	255
RTOR Reduction (vph)	0	0	0	0	0	227
Lane Group Flow (vph)	0	503	323	0	126	28
Heavy Vehicles (%)	14%	16%	14%	16%	16%	15%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		66.8	66.8		9.9	9.9
Effective Green, g (s)		66.8	66.8		9.9	9.9
Actuated g/C Ratio		0.74	0.74		0.11	0.11
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3319	3377		332	154
v/s Ratio Prot		c0.11	0.07		c0.04	
v/s Ratio Perm						0.02
v/c Ratio		0.15	0.10		0.38	0.18
Uniform Delay, d1		3.4	3.2		37.2	36.4
Progression Factor		1.00	2.11		1.00	1.00
Incremental Delay, d2		0.1	0.1		0.7	0.6
Delay (s)		3.5	6.9		37.9	36.9
Level of Service		A	A		D	D
Approach Delay (s)		3.5	6.9		37.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	335	261	309	362	0	0
Future Volume (vph)	335	261	309	362	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	1.00	0.95	0.91	0.91		
Frt	1.00	1.00	0.95	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1570	3167	2867	1267		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1570	3167	2867	1267		
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	399	311	368	431	0	0
RTOR Reduction (vph)	0	0	49	115	0	0
Lane Group Flow (vph)	399	311	500	135	0	0
Heavy Vehicles (%)	15%	14%	14%	16%	16%	16%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	28.4	90.0	48.7	48.7		
Effective Green, g (s)	28.4	90.0	48.7	48.7		
Actuated g/C Ratio	0.32	1.00	0.54	0.54		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	495	3167	1551	685		
v/s Ratio Prot	c0.25	0.10	c0.17			
v/s Ratio Perm				0.11		
v/c Ratio	0.81	0.10	0.32	0.20		
Uniform Delay, d1	28.3	0.0	11.5	10.6		
Progression Factor	0.95	1.00	1.00	1.00		
Incremental Delay, d2	9.3	0.1	0.6	0.6		
Delay (s)	36.2	0.1	12.0	11.3		
Level of Service	D	A	B	B		
Approach Delay (s)		20.4	11.8		0.0	
Approach LOS		C	B		A	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	383	461	0	0	529	734	62	1	237	0	0	0
Future Volume (vph)	383	461	0	0	529	734	62	1	237	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3966	1197		1561	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3966	1197		1561	2450			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	395	475	0	0	545	757	64	1	244	0	0	0
RTOR Reduction (vph)	0	0	0	0	99	180	0	0	222	0	0	0
Lane Group Flow (vph)	395	475	0	0	825	198	0	65	22	0	0	0
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	27.3	89.7			57.7	57.7		10.1	10.1			
Effective Green, g (s)	27.3	89.7			57.7	57.7		10.1	10.1			
Actuated g/C Ratio	0.25	0.82			0.52	0.52		0.09	0.09			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	749	3646			2080	627		143	224			
v/s Ratio Prot	c0.13	0.11			c0.21							
v/s Ratio Perm						0.17		0.04	0.01			
v/c Ratio	0.53	0.13			0.40	0.32		0.45	0.10			
Uniform Delay, d1	35.8	2.1			15.7	14.9		47.3	45.8			
Progression Factor	0.87	0.88			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.1			0.6	1.3		2.3	0.2			
Delay (s)	31.9	1.9			16.3	16.2		49.6	46.0			
Level of Service	C	A			B	B		D	D			
Approach Delay (s)		15.5			16.3			46.7			0.0	
Approach LOS		B			B			D			A	

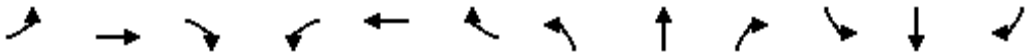
Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	577	278	219	687	0	271
Future Volume (vph)	577	278	219	687	0	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4253		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4253		3019	4472		2450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	607	293	231	723	0	285
RTOR Reduction (vph)	79	0	0	0	0	202
Lane Group Flow (vph)	821	0	231	723	0	83
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	67.9		31.9	110.0		31.9
Effective Green, g (s)	67.9		31.9	110.0		31.9
Actuated g/C Ratio	0.62		0.29	1.00		0.29
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2625		875	4472		710
v/s Ratio Prot	c0.19		c0.08	0.16		0.03
v/s Ratio Perm						
v/c Ratio	0.31		0.26	0.16		0.12
Uniform Delay, d1	10.0		30.0	0.0		28.7
Progression Factor	0.50		0.75	1.00		1.00
Incremental Delay, d2	0.3		0.2	0.1		0.1
Delay (s)	5.3		22.6	0.1		28.8
Level of Service	A		C	A		C
Approach Delay (s)	5.3			5.5	28.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	364	49	238	285	176	40	48	272	185	85	77
Future Volume (vph)	49	364	49	238	285	176	40	48	272	185	85	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.94			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1556	4391		1556	4216			1601	1392		2931	
Flt Permitted	0.95	1.00		0.95	1.00			0.68	1.00		0.77	
Satd. Flow (perm)	1556	4391		1556	4216			1111	1392		2311	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	375	51	245	294	181	41	49	280	191	88	79
RTOR Reduction (vph)	0	11	0	0	71	0	0	0	222	0	30	0
Lane Group Flow (vph)	51	415	0	245	404	0	0	90	58	0	328	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.0	51.5		21.5	65.4			22.8	22.8		22.8	
Effective Green, g (s)	7.0	51.5		21.5	65.4			22.8	22.8		22.8	
Actuated g/C Ratio	0.06	0.47		0.20	0.59			0.21	0.21		0.21	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	99	2055		304	2506			230	288		479	
v/s Ratio Prot	c0.03	c0.09		c0.16	0.10							
v/s Ratio Perm								0.08	0.04		c0.14	
v/c Ratio	0.52	0.20		0.81	0.16			0.39	0.20		0.68	
Uniform Delay, d1	49.9	17.2		42.3	10.0			37.6	36.1		40.3	
Progression Factor	1.00	1.00		0.81	0.30			1.00	1.00		1.00	
Incremental Delay, d2	1.9	0.2		13.5	0.1			1.8	0.6		4.6	
Delay (s)	51.7	17.4		47.6	3.1			39.4	36.6		44.9	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		21.1			18.3			37.3			44.9	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

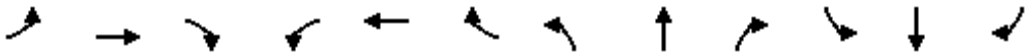
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	115	140	97	160	66	50
Future Vol, veh/h	115	140	97	160	66	50
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	132	161	111	184	76	57
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	11.4	8.7	10.7
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	57%	0%	100%	0%	0%
Vol Thru, %	0%	45%	0%	100%	100%
Vol Right, %	43%	55%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	255	97	80	80
LT Vol	66	0	97	0	0
Through Vol	0	115	0	80	80
RT Vol	50	140	0	0	0
Lane Flow Rate	133	293	111	92	92
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.226	0.414	0.185	0.139	0.089
Departure Headway (Hd)	6.09	5.085	5.964	5.46	3.473
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	587	706	600	655	1023
Service Time	3.862	2.838	3.718	3.213	1.225
HCM Lane V/C Ratio	0.227	0.415	0.185	0.14	0.09
HCM Control Delay	10.7	11.4	10.1	9.1	6.6
HCM Lane LOS	B	B	B	A	A
HCM 95th-tile Q	0.9	2	0.7	0.5	0.3



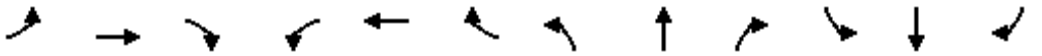
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	441	26	62	349	0	30	0	22	0	1	13
Future Volume (vph)	27	441	26	62	349	0	30	0	22	0	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4435		1556	4472			1556	1392		1432	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4435		1556	4472			1638	1392		1432	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	479	28	67	379	0	33	0	24	0	1	14
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	23	0	13	0
Lane Group Flow (vph)	29	500	0	67	379	0	0	33	1	0	2	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.7	11.9		2.1	13.3			1.8	1.8		1.8	
Effective Green, g (s)	0.7	11.9		2.1	13.3			1.8	1.8		1.8	
Actuated g/C Ratio	0.02	0.40		0.07	0.44			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	36	1759		108	1982			98	83		85	
v/s Ratio Prot	0.02	c0.11		c0.04	0.08						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.81	0.28		0.62	0.19			0.34	0.02		0.02	
Uniform Delay, d1	14.6	6.2		13.6	5.1			13.5	13.3		13.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	72.5	0.3		7.7	0.1			0.7	0.0		0.0	
Delay (s)	87.1	6.4		21.3	5.2			14.3	13.3		13.3	
Level of Service	F	A		C	A			B	B		B	
Approach Delay (s)		10.8			7.6			13.9			13.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	30.0	Sum of lost time (s)	14.2
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	327	316	247	339	251	178
Future Volume (vph)	327	316	247	339	251	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4673	1392	1612	4472	3019	1392
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4673	1392	1612	4472	3019	1392
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	355	343	268	368	273	193
RTOR Reduction (vph)	0	208	0	0	0	155
Lane Group Flow (vph)	355	135	268	368	273	38
Heavy Vehicles (%)	11%	16%	12%	16%	16%	16%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	11.2	22.7	15.4	32.3	11.5	11.5
Effective Green, g (s)	11.2	22.7	15.4	32.3	11.5	11.5
Actuated g/C Ratio	0.19	0.39	0.27	0.56	0.20	0.20
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	905	546	429	2499	600	276
v/s Ratio Prot	c0.08	0.05	c0.17	0.08	c0.09	
v/s Ratio Perm		0.05				0.03
v/c Ratio	0.39	0.25	0.62	0.15	0.46	0.14
Uniform Delay, d1	20.3	11.8	18.7	6.1	20.4	19.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	2.8	0.0	0.5	0.2
Delay (s)	20.6	12.0	21.5	6.2	20.9	19.3
Level of Service	C	B	C	A	C	B
Approach Delay (s)	16.4			12.6	20.3	
Approach LOS	B			B	C	

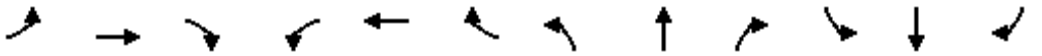
Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	19.7
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	19	2	48	17	383	4	354	53	213	129	68
Future Volume (vph)	111	19	2	48	17	383	4	354	53	213	129	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1556	1617			1580	1392	1556	3051		1556	1638	1392
Flt Permitted	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1556	1617			1580	1392	1556	3051		1556	1638	1392
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	129	22	2	56	20	445	5	412	62	248	150	79
RTOR Reduction (vph)	0	2	0	0	0	373	0	13	0	0	0	44
Lane Group Flow (vph)	129	22	0	0	76	72	5	461	0	248	150	35
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.8	7.8			11.6	11.6	0.6	16.4		15.7	31.3	31.3
Effective Green, g (s)	7.8	7.8			11.6	11.6	0.6	16.4		15.7	31.3	31.3
Actuated g/C Ratio	0.11	0.11			0.16	0.16	0.01	0.23		0.22	0.44	0.44
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	170	176			257	226	13	701		342	719	611
v/s Ratio Prot	c0.08	0.01			0.05		0.00	c0.15		c0.16	0.09	
v/s Ratio Perm						c0.05						0.02
v/c Ratio	0.76	0.13			0.30	0.32	0.38	0.66		0.73	0.21	0.06
Uniform Delay, d1	30.8	28.7			26.3	26.4	35.2	24.9		25.8	12.4	11.5
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.7	0.1			0.8	1.0	6.8	2.4		6.3	0.2	0.1
Delay (s)	46.6	28.8			27.1	27.4	41.9	27.3		32.1	12.5	11.6
Level of Service	D	C			C	C	D	C		C	B	B
Approach Delay (s)		43.8			27.4			27.5			22.6	
Approach LOS		D			C			C			C	

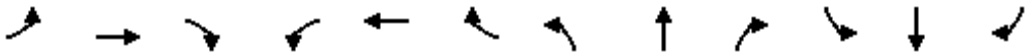
Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	71.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



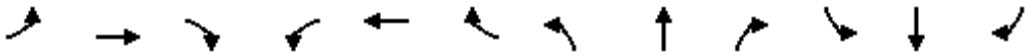
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	222	85	42	259	224	141	43	72	236	79	264
Future Volume (vph)	132	222	85	42	259	224	141	43	72	236	79	264
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3019	4631	1392	3019	4590	1404	1556	1484		1597	1638	2450
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3019	4631	1392	3019	4590	1404	1556	1484		1597	1638	2450
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	145	244	93	46	285	246	155	47	79	259	87	290
RTOR Reduction (vph)	0	0	71	0	0	202	0	65	0	0	0	214
Lane Group Flow (vph)	145	244	22	46	285	44	155	61	0	259	87	76
Heavy Vehicles (%)	16%	12%	16%	16%	13%	15%	16%	16%	16%	13%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.1	17.6	17.6	5.9	13.4	13.4	16.7	12.8		13.3	9.4	19.5
Effective Green, g (s)	10.1	17.6	17.6	5.9	13.4	13.4	16.7	12.8		13.3	9.4	19.5
Actuated g/C Ratio	0.14	0.24	0.24	0.08	0.18	0.18	0.22	0.17		0.18	0.13	0.26
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	410	1096	329	239	827	253	349	255		285	207	643
v/s Ratio Prot	c0.05	c0.05		0.02	c0.06		0.10	c0.04		c0.16	c0.05	0.02
v/s Ratio Perm			0.02			0.03						0.01
v/c Ratio	0.35	0.22	0.07	0.19	0.34	0.18	0.44	0.24		0.91	0.42	0.12
Uniform Delay, d1	29.1	22.8	22.0	32.0	26.6	25.8	24.8	26.5		29.9	29.9	20.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.1	0.4	0.3	0.3	0.9	0.5		30.4	1.4	0.1
Delay (s)	29.7	22.9	22.1	32.4	26.9	26.1	25.7	27.0		60.3	31.3	20.9
Level of Service	C	C	C	C	C	C	C	C		E	C	C
Approach Delay (s)		24.8			27.0			26.3			38.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	74.3	Sum of lost time (s)	24.7
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



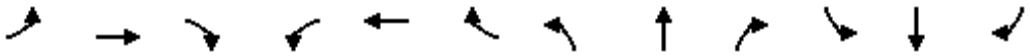
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	14	749	14	266	3	387	334	172	205	2
Future Volume (vph)	2	1	14	749	14	266	3	387	334	172	205	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1556	3112	1392	3019	1638	1429	1556	3112	1392	3155	3108	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1556	3112	1392	3019	1638	1429	1556	3112	1392	3155	3108	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	2	1	16	842	16	299	3	435	375	193	230	2
RTOR Reduction (vph)	0	0	15	0	0	199	0	0	151	0	1	0
Lane Group Flow (vph)	2	1	1	842	16	100	3	435	224	193	231	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	13%	16%	16%	16%	11%	16%	16%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.5	1.5	5.2	30.4	29.3	29.3	3.7	22.2	52.6	11.6	30.1	
Effective Green, g (s)	1.5	1.5	5.2	30.4	29.3	29.3	3.7	22.2	52.6	11.6	30.1	
Actuated g/C Ratio	0.02	0.02	0.06	0.35	0.33	0.33	0.04	0.25	0.60	0.13	0.34	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	26	53	82	1042	545	475	65	785	832	415	1063	
v/s Ratio Prot	0.00	0.00	0.00	c0.28	0.01		0.00	c0.14	0.09	c0.06	0.07	
v/s Ratio Perm			0.00			c0.07			0.07			
v/c Ratio	0.08	0.02	0.01	0.81	0.03	0.21	0.05	0.55	0.27	0.47	0.22	
Uniform Delay, d1	42.6	42.5	39.0	26.2	19.8	21.0	40.5	28.6	8.5	35.3	20.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.1	0.1	4.7	0.0	0.2	0.3	0.9	0.2	0.8	0.1	
Delay (s)	43.8	42.7	39.0	30.8	19.8	21.3	40.8	29.4	8.7	36.2	20.7	
Level of Service	D	D	D	C	B	C	D	C	A	D	C	
Approach Delay (s)		39.7			28.2			19.9			27.7	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	1	87	316	660	0	0	247	687
Future Volume (vph)	0	0	0	60	1	87	316	660	0	0	247	687
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.89	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1725	1392	1719	4472			4081	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1725	1392	1719	4472			4081	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	68	1	99	359	750	0	0	281	781
RTOR Reduction (vph)	0	0	0	0	0	91	0	0	0	0	227	0
Lane Group Flow (vph)	0	0	0	0	69	8	359	750	0	0	835	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	16%	5%	16%	5%	5%	5%	16%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.6	7.6	23.9	72.2			43.6	
Effective Green, g (s)					7.6	7.6	23.9	72.2			43.6	
Actuated g/C Ratio					0.08	0.08	0.27	0.80			0.48	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					145	117	456	3587			1977	
v/s Ratio Prot							c0.21	0.17			c0.20	
v/s Ratio Perm					0.04	0.01						
v/c Ratio					0.48	0.07	0.79	0.21			0.42	
Uniform Delay, d1					39.3	37.9	30.7	2.1			15.0	
Progression Factor					1.00	1.00	0.83	0.71			1.00	
Incremental Delay, d2					2.5	0.3	7.4	0.1			0.7	
Delay (s)					41.8	38.2	33.0	1.6			15.7	
Level of Service					D	D	C	A			B	
Approach Delay (s)		0.0			39.7			11.8			15.7	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	506	5	260	0	0	0	0	492	73	74	233	0
Future Volume (vph)	506	5	260	0	0	0	0	492	73	74	233	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1478	1473						4844		1556	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1478	1473						4844		1556	3438	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	625	6	321	0	0	0	0	607	90	91	288	0
RTOR Reduction (vph)	0	96	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	494	362	0	0	0	0	0	676	0	91	288	0
Heavy Vehicles (%)	16%	5%	5%	5%	5%	5%	5%	5%	5%	16%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	36.5	36.5						30.4		8.2	43.3	
Effective Green, g (s)	36.5	36.5						30.4		8.2	43.3	
Actuated g/C Ratio	0.41	0.41						0.34		0.09	0.48	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	599	597						1636		141	1654	
v/s Ratio Prot	c0.33	0.25						c0.14		c0.06	0.08	
v/s Ratio Perm												
v/c Ratio	0.82	0.61						0.41		0.65	0.17	
Uniform Delay, d1	23.9	21.1						22.9		39.5	13.2	
Progression Factor	1.00	1.00						1.00		1.23	0.75	
Incremental Delay, d2	9.0	1.7						0.8		9.0	0.2	
Delay (s)	32.9	22.8						23.7		57.8	10.1	
Level of Service	C	C						C		E	B	
Approach Delay (s)		28.1			0.0			23.7			21.5	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	42.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	421	2	4	0	2	14	6	116	0	18	59	417
Future Vol, veh/h	421	2	4	0	2	14	6	116	0	18	59	417
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	554	3	5	0	3	18	8	153	0	24	78	549
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	21.6	11.4	11.7	69.1
HCM LOS	C	B	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	97%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	100%	0%	1%	100%	100%	12%	0%	100%	5%
Vol Right, %	0%	0%	0%	0%	2%	0%	0%	88%	0%	0%	95%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	58	58	215	212	0	0	16	18	39	437
LT Vol	6	0	0	215	206	0	0	0	18	0	0
Through Vol	0	58	58	0	2	0	0	2	0	39	20
RT Vol	0	0	0	0	4	0	0	14	0	0	417
Lane Flow Rate	8	76	76	283	279	0	0	21	24	52	575
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.019	0.176	0.137	0.604	0.595	0	0	0.047	0.051	0.104	1.048
Departure Headway (Hd)	9.024	8.506	6.656	7.844	7.817	8.924	8.924	8.301	7.765	7.254	6.569
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	399	424	542	463	464	0	0	434	464	497	557
Service Time	6.724	6.206	4.356	5.544	5.517	6.624	6.624	6.001	5.465	4.954	4.269
HCM Lane V/C Ratio	0.02	0.179	0.14	0.611	0.601	0	0	0.048	0.052	0.105	1.032
HCM Control Delay	11.9	13	10.4	21.8	21.4	11.6	11.6	11.4	10.9	10.8	76.8
HCM Lane LOS	B	B	B	C	C	N	N	B	B	B	F
HCM 95th-tile Q	0.1	0.6	0.5	3.9	3.8	0	0	0.1	0.2	0.3	16.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	3	426	1	1	364
Future Volume (Veh/h)	0	3	426	1	1	364
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	4	520	1	1	444
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	966	520			520	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	966	520			520	
tC, single (s)	6.6	6.4			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	266	529			978	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	520	1	1	444
Volume Left	0	0	0	1	0
Volume Right	4	0	1	0	0
cSH	529	1700	1700	978	1700
Volume to Capacity	0.01	0.31	0.00	0.00	0.26
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.9	0.0	0.0	8.7	0.0
Lane LOS	B			A	
Approach Delay (s)	11.9	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

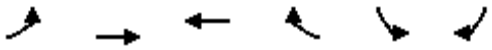
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	437	158	103	630	582	103
Future Volume (vph)	437	158	103	630	582	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	4472	1538	1719	4472	3291	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	4472	1538	1719	4472	3291	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	475	172	112	685	633	112
RTOR Reduction (vph)	0	128	0	0	19	0
Lane Group Flow (vph)	475	44	112	685	726	0
Heavy Vehicles (%)	16%	5%	5%	16%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases		4				
Actuated Green, G (s)	12.5	12.5	7.2	23.7	17.5	
Effective Green, g (s)	12.5	12.5	7.2	23.7	17.5	
Actuated g/C Ratio	0.25	0.25	0.15	0.48	0.36	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1136	390	251	2154	1170	
v/s Ratio Prot	c0.11		c0.07	0.15	c0.22	
v/s Ratio Perm		0.03				
v/c Ratio	0.42	0.11	0.45	0.32	0.62	
Uniform Delay, d1	15.3	14.1	19.2	7.8	13.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.1	1.3	0.1	1.0	
Delay (s)	15.6	14.2	20.4	7.9	14.1	
Level of Service	B	B	C	A	B	
Approach Delay (s)	15.2			9.7	14.1	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	416	426	0	1143
Future Volume (Veh/h)	0	0	416	426	0	1143
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	452	463	0	1242
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			292			366
pX, platoon unblocked						
vC, conflicting volume	762	151			915	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762	151			915	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	100	100			100	
cM capacity (veh/h)	313	826			660	

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	151	151	151	463	310	310	310	310
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	463	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.09	0.09	0.09	0.27	0.18	0.18	0.18	0.18
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								
Approach Delay (s)	0.0				0.0			
Approach LOS								

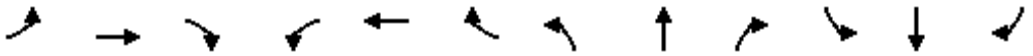
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	118	442	395	80	89	246
Future Volume (vph)	118	442	395	80	89	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Lane Util. Factor	0.97	0.95	0.91	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.91	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (prot)	3045	3167	4550	1392	2856	1278
Flt Permitted	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (perm)	3045	3167	4550	1392	2856	1278
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	127	475	425	86	96	265
RTOR Reduction (vph)	0	0	0	63	110	109
Lane Group Flow (vph)	127	475	425	23	119	23
Heavy Vehicles (%)	15%	14%	14%	16%	16%	15%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	5.7	22.0	11.1	11.1	7.3	7.3
Effective Green, g (s)	5.7	22.0	11.1	11.1	7.3	7.3
Actuated g/C Ratio	0.14	0.53	0.27	0.27	0.18	0.18
Clearance Time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	417	1674	1214	371	501	224
v/s Ratio Prot	0.04	c0.15	c0.09		c0.04	
v/s Ratio Perm				0.02		0.02
v/c Ratio	0.30	0.28	0.35	0.06	0.24	0.10
Uniform Delay, d1	16.2	5.4	12.3	11.4	14.8	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2	0.1	0.2	0.2
Delay (s)	16.6	5.5	12.5	11.4	15.0	14.6
Level of Service	B	A	B	B	B	B
Approach Delay (s)		7.9	12.3		14.9	
Approach LOS		A	B		B	

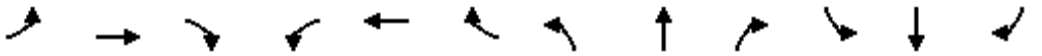
Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	41.6	Sum of lost time (s)	17.5
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

OPENING YEAR 2020 BASELINE CONDITIONS



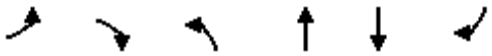
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	349	196	466	318	61	135	186	724	61	164	54
Future Volume (vph)	48	349	196	466	318	61	135	186	724	61	164	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.88		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1468	1641	4601		1641	1521		3183	1663	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1468	1641	4601		1641	1521		3183	1663	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	388	218	518	353	68	150	207	804	68	182	60
RTOR Reduction (vph)	0	0	194	0	25	0	0	144	0	0	14	0
Lane Group Flow (vph)	53	388	24	518	396	0	150	867	0	68	228	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	8.4	10.9	10.9	25.7	28.2		21.4	30.6		8.1	17.3	
Effective Green, g (s)	8.4	10.9	10.9	25.7	28.2		21.4	30.6		8.1	17.3	
Actuated g/C Ratio	0.08	0.11	0.11	0.26	0.28		0.21	0.31		0.08	0.17	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	137	513	160	421	1297		351	465		257	287	
v/s Ratio Prot	0.03	c0.08		c0.32	c0.09		c0.09	c0.57		0.02	0.14	
v/s Ratio Perm			0.02									
v/c Ratio	0.39	0.76	0.15	1.23	0.31		0.43	1.86		0.26	0.79	
Uniform Delay, d1	43.4	43.3	40.3	37.1	28.2		34.0	34.7		43.2	39.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.68	0.49		1.00	1.00	
Incremental Delay, d2	1.8	6.3	0.4	122.9	0.1		0.8	396.2		0.6	19.9	
Delay (s)	45.2	49.5	40.8	160.1	28.3		24.0	413.3		43.7	59.6	
Level of Service	D	D	D	F	C		C	F		D	E	
Approach Delay (s)		46.3			101.0			363.0			56.1	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	183.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	117.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



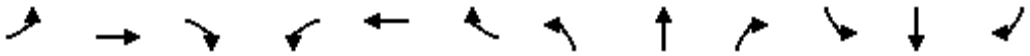
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	61	88	64	150	95	907	108	0	817	34
Future Volume (vph)	7	0	61	88	64	150	95	907	108	0	817	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1627	1468	3183	3282	1468		4715	1468
Flt Permitted	0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1627	1468	3183	3282	1468		4715	1468
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	8	0	69	99	72	169	107	1019	121	0	918	38
RTOR Reduction (vph)	0	66	0	0	0	151	0	0	38	0	0	17
Lane Group Flow (vph)	8	3	0	84	87	18	107	1019	83	0	918	21
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	5.0	5.0		10.9	10.9	10.9	8.7	68.8	68.8		55.4	55.4
Effective Green, g (s)	5.0	5.0		10.9	10.9	10.9	8.7	68.8	68.8		55.4	55.4
Actuated g/C Ratio	0.05	0.05		0.11	0.11	0.11	0.09	0.69	0.69		0.55	0.55
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	82	73		169	177	160	276	2258	1009		2612	813
v/s Ratio Prot	c0.00	0.00		c0.05	0.05		0.03	c0.31			0.19	
v/s Ratio Perm						0.01			0.06			0.01
v/c Ratio	0.10	0.05		0.50	0.49	0.12	0.39	0.45	0.08		0.35	0.03
Uniform Delay, d1	45.3	45.2		42.0	41.9	40.2	43.1	7.1	5.2		12.4	10.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.69	0.21	0.00		0.40	1.00
Incremental Delay, d2	0.5	0.3		2.3	2.1	0.3	0.7	0.5	0.1		0.2	0.0
Delay (s)	45.9	45.5		44.3	44.1	40.5	30.4	2.0	0.1		5.2	10.1
Level of Service	D	D		D	D	D	C	A	A		A	B
Approach Delay (s)		45.5			42.4			4.3			5.4	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	818	381	28	287	301	177
Future Volume (vph)	818	381	28	287	301	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3155	2561	3155	4673	3252	1455
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3155	2561	3155	4673	3252	1455
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	899	419	31	315	331	195
RTOR Reduction (vph)	0	269	0	0	0	37
Lane Group Flow (vph)	899	150	31	315	331	158
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	35.9	35.9	4.2	53.9	45.0	80.9
Effective Green, g (s)	35.9	35.9	4.2	53.9	45.0	80.9
Actuated g/C Ratio	0.36	0.36	0.04	0.54	0.45	0.81
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1132	919	132	2518	1463	1251
v/s Ratio Prot	c0.28		c0.01	0.07	c0.10	0.05
v/s Ratio Perm		0.06				0.06
v/c Ratio	0.79	0.16	0.23	0.13	0.23	0.13
Uniform Delay, d1	28.7	21.8	46.3	11.4	16.8	2.0
Progression Factor	1.00	1.00	1.00	1.00	0.85	11.23
Incremental Delay, d2	3.9	0.1	0.9	0.1	0.3	0.0
Delay (s)	32.7	21.9	47.3	11.5	14.6	22.9
Level of Service	C	C	D	B	B	C
Approach Delay (s)	29.2			14.7	17.7	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	14	41	25	11	65	155	0	0	0	291	283	51
Future Volume (vph)	14	41	25	11	65	155	0	0	0	291	283	51
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
Hourly flow rate (vph)	15	43	26	12	68	163	0	0	0	306	298	54

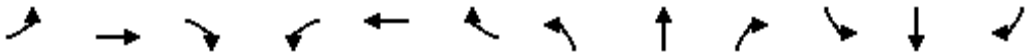
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	84	243	455	203
Volume Left (vph)	15	12	306	0
Volume Right (vph)	26	163	0	54
Hadj (s)	0.09	-0.15	0.57	0.05
Departure Headway (s)	6.0	5.5	6.0	5.5
Degree Utilization, x	0.14	0.37	0.76	0.31
Capacity (veh/h)	553	620	585	642
Control Delay (s)	10.0	11.7	24.5	9.8
Approach Delay (s)	10.0	11.7	20.0	
Approach LOS	B	B	C	

Intersection Summary				
Delay	17.1			
Level of Service	C			
Intersection Capacity Utilization	39.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	59	0	0	0	109	183
Future Volume (Veh/h)	59	0	0	0	109	183
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	65	0	0	0	120	201
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	340	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	340	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	88	100			92	
cM capacity (veh/h)	554	1050			1545	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	65	187	134
Volume Left	65	120	0
Volume Right	0	0	0
cSH	554	1545	1700
Volume to Capacity	0.12	0.08	0.08
Queue Length 95th (ft)	10	6	0
Control Delay (s)	12.4	5.0	0.0
Lane LOS	B	A	
Approach Delay (s)	12.4	2.9	
Approach LOS	B		

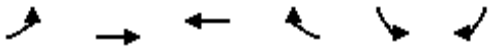
Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	45	5	17	50	0	0	0	0	141	89	7
Future Volume (vph)	0	45	5	17	50	0	0	0	0	141	89	7
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
Hourly flow rate (vph)	0	50	6	19	56	0	0	0	0	157	99	8

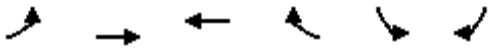
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	56	75	207	58
Volume Left (vph)	0	19	157	0
Volume Right (vph)	6	0	0	8
Hadj (s)	0.16	0.27	0.60	0.12
Departure Headway (s)	4.9	4.9	5.4	5.0
Degree Utilization, x	0.08	0.10	0.31	0.08
Capacity (veh/h)	695	686	646	704
Control Delay (s)	8.3	8.5	9.7	7.2
Approach Delay (s)	8.3	8.5	9.1	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.9			
Level of Service	A			
Intersection Capacity Utilization	24.7%	ICU Level of Service	A	
Analysis Period (min)	15			



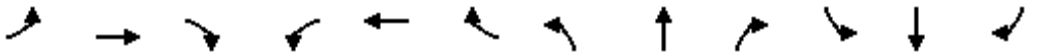
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	616	192	0	572	497
Future Volume (vph)	0	616	192	0	572	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4631	4631		3127	1442
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4631	4631		3127	1442
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	684	213	0	636	552
RTOR Reduction (vph)	0	0	0	0	0	355
Lane Group Flow (vph)	0	684	213	0	636	197
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		50.3	50.3		26.4	26.4
Effective Green, g (s)		50.3	50.3		26.4	26.4
Actuated g/C Ratio		0.56	0.56		0.29	0.29
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2588	2588		917	422
v/s Ratio Prot		c0.15	0.05		c0.20	
v/s Ratio Perm						0.14
v/c Ratio		0.26	0.08		0.69	0.47
Uniform Delay, d1		10.3	9.2		28.2	26.0
Progression Factor		1.00	0.99		1.00	1.00
Incremental Delay, d2		0.2	0.1		2.3	0.8
Delay (s)		10.5	9.1		30.5	26.8
Level of Service		B	A		C	C
Approach Delay (s)		10.5	9.1		28.8	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	260	900	193	111	0	0
Future Volume (vph)	260	900	193	111	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.99	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3127	3223	3047	1312		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3127	3223	3047	1312		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	295	1023	219	126	0	0
RTOR Reduction (vph)	0	0	4	31	0	0
Lane Group Flow (vph)	295	1023	236	74	0	0
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	13.9	90.0	63.2	63.2		
Effective Green, g (s)	13.9	90.0	63.2	63.2		
Actuated g/C Ratio	0.15	1.00	0.70	0.70		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	482	3223	2139	921		
v/s Ratio Prot	c0.09	c0.32	0.08			
v/s Ratio Perm				0.06		
v/c Ratio	0.61	0.32	0.11	0.08		
Uniform Delay, d1	35.5	0.0	4.3	4.2		
Progression Factor	0.90	1.00	1.00	1.00		
Incremental Delay, d2	2.2	0.2	0.1	0.2		
Delay (s)	34.2	0.2	4.4	4.4		
Level of Service	C	A	A	A		
Approach Delay (s)		7.9	4.4		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

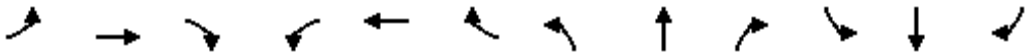


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	712	0	0	286	423	214	0	348	0	0	0
Future Volume (vph)	119	712	0	0	286	423	214	0	348	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3956	1197		1556	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3956	1197		1556	2450			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	124	742	0	0	298	441	223	0	362	0	0	0
RTOR Reduction (vph)	0	0	0	0	99	102	0	0	267	0	0	0
Lane Group Flow (vph)	124	742	0	0	420	118	0	223	96	0	0	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	10.6	69.0			53.7	53.7		20.8	20.8			
Effective Green, g (s)	10.6	69.0			53.7	53.7		20.8	20.8			
Actuated g/C Ratio	0.11	0.69			0.54	0.54		0.21	0.21			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	320	3085			2124	642		323	509			
v/s Ratio Prot	c0.04	c0.17			0.11							
v/s Ratio Perm						0.10		0.14	0.04			
v/c Ratio	0.39	0.24			0.20	0.18		0.69	0.19			
Uniform Delay, d1	41.7	5.8			12.0	11.9		36.6	32.6			
Progression Factor	0.96	0.85			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.2			0.2	0.6		6.2	0.2			
Delay (s)	40.8	5.1			12.2	12.5		42.9	32.8			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		10.2			12.3			36.6			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	265	127	98	747	0	590
Future Volume (vph)	265	127	98	747	0	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4254		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4254		3019	4472		2450
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	315	151	117	889	0	702
RTOR Reduction (vph)	31	0	0	0	0	626
Lane Group Flow (vph)	435	0	117	889	0	76
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	79.0		10.8	100.0		10.8
Effective Green, g (s)	79.0		10.8	100.0		10.8
Actuated g/C Ratio	0.79		0.11	1.00		0.11
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3360		326	4472		264
v/s Ratio Prot	0.10		c0.04	c0.20		0.03
v/s Ratio Perm						
v/c Ratio	0.13		0.36	0.20		0.29
Uniform Delay, d1	2.5		41.4	0.0		41.1
Progression Factor	0.31		0.86	1.00		1.00
Incremental Delay, d2	0.1		0.7	0.1		0.6
Delay (s)	0.8		36.1	0.1		41.7
Level of Service	A		D	A		D
Approach Delay (s)	0.8			4.3	41.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	141	26	230	372	141	47	23	134	127	50	81
Future Volume (vph)	20	141	26	230	372	141	47	23	134	127	50	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1556	4368		1556	4287			1585	1392		2894	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.79	
Satd. Flow (perm)	1556	4368		1556	4287			911	1392		2338	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	153	28	250	404	153	51	25	146	138	54	88
RTOR Reduction (vph)	0	14	0	0	40	0	0	0	123	0	74	0
Lane Group Flow (vph)	22	167	0	250	517	0	0	76	23	0	206	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.5	49.1		21.0	65.0			15.7	15.7		15.7	
Effective Green, g (s)	4.5	49.1		21.0	65.0			15.7	15.7		15.7	
Actuated g/C Ratio	0.04	0.49		0.21	0.65			0.16	0.16		0.16	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	70	2144		326	2786			143	218		367	
v/s Ratio Prot	c0.01	0.04		c0.16	c0.12							
v/s Ratio Perm								0.08	0.02		c0.09	
v/c Ratio	0.31	0.08		0.77	0.19			0.53	0.11		0.56	
Uniform Delay, d1	46.3	13.5		37.2	7.0			38.8	36.1		39.0	
Progression Factor	1.00	1.00		0.82	0.84			1.00	1.00		1.00	
Incremental Delay, d2	0.9	0.1		9.3	0.1			5.6	0.4		2.7	
Delay (s)	47.2	13.5		39.7	6.0			44.3	36.5		41.7	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		17.2			16.4			39.2			41.7	
Approach LOS		B			B			D			D	

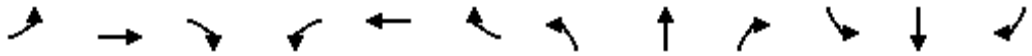
Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	97	75	61	84	93	38
Future Vol, veh/h	97	75	61	84	93	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	15	15	15	15	15	15
Mvmt Flow	115	89	73	100	111	45
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	9.9	8.3	10.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	71%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	100%
Vol Right, %	29%	44%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	172	61	42	42
LT Vol	93	0	61	0	0
Through Vol	0	97	0	42	42
RT Vol	38	75	0	0	0
Lane Flow Rate	156	205	73	50	50
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.251	0.29	0.12	0.075	0.048
Departure Headway (Hd)	5.805	5.096	5.93	5.427	3.457
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	618	704	604	660	1031
Service Time	3.552	2.832	3.668	3.164	1.194
HCM Lane V/C Ratio	0.252	0.291	0.121	0.076	0.048
HCM Control Delay	10.5	9.9	9.5	8.6	6.4
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	1	1.2	0.4	0.2	0.2

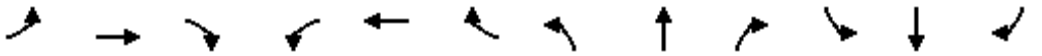


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	184	23	82	393	4	29	0	22	0	0	15
Future Volume (vph)	28	184	23	82	393	4	29	0	22	0	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1570	4435		1570	4504			1570	1404		1429	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1570	4435		1570	4504			1652	1404		1429	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	192	24	85	409	4	30	0	23	0	0	16
RTOR Reduction (vph)	0	17	0	0	1	0	0	0	22	0	15	0
Lane Group Flow (vph)	29	199	0	85	412	0	0	30	1	0	1	0
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	9.4		5.4	14.0			1.9	1.9		1.9	
Effective Green, g (s)	0.8	9.4		5.4	14.0			1.9	1.9		1.9	
Actuated g/C Ratio	0.03	0.30		0.17	0.45			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	40	1349		274	2040			101	86		87	
v/s Ratio Prot	0.02	0.04		c0.05	c0.09						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.72	0.15		0.31	0.20			0.30	0.02		0.01	
Uniform Delay, d1	14.9	7.8		11.1	5.1			13.9	13.6		13.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	42.4	0.1		0.2	0.1			0.6	0.0		0.0	
Delay (s)	57.4	8.0		11.4	5.2			14.5	13.7		13.6	
Level of Service	E	A		B	A			B	B		B	
Approach Delay (s)		13.8			6.2			14.1			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	30.9	Sum of lost time (s)	14.2
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

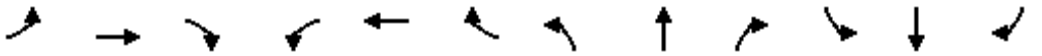
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	365	182	212	350	294	319
Future Volume (vph)	365	182	212	350	294	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4673	1455	1626	4673	3155	1455
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4673	1455	1626	4673	3155	1455
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	410	204	238	393	330	358
RTOR Reduction (vph)	0	39	0	0	0	278
Lane Group Flow (vph)	410	165	238	393	330	80
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	10.4	22.0	10.3	26.4	11.6	11.6
Effective Green, g (s)	10.4	22.0	10.3	26.4	11.6	11.6
Actuated g/C Ratio	0.20	0.42	0.20	0.51	0.22	0.22
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	934	615	322	2372	703	324
v/s Ratio Prot	c0.09	0.06	c0.15	0.08	c0.10	
v/s Ratio Perm		0.05				0.05
v/c Ratio	0.44	0.27	0.74	0.17	0.47	0.25
Uniform Delay, d1	18.2	9.8	19.6	6.9	17.5	16.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	8.6	0.0	0.5	0.4
Delay (s)	18.6	10.0	28.2	6.9	18.0	17.0
Level of Service	B	A	C	A	B	B
Approach Delay (s)	15.7			14.9	17.5	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



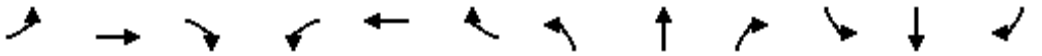
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	10	0	36	17	126	2	164	35	329	327	71
Future Volume (vph)	22	10	0	36	17	126	2	164	35	329	327	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	1667			1612	1417	1583	3083		1583	1667	1417
Flt Permitted	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1583	1667			1612	1417	1583	3083		1583	1667	1417
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	11	0	40	19	140	2	182	39	366	363	79
RTOR Reduction (vph)	0	0	0	0	0	125	0	18	0	0	0	36
Lane Group Flow (vph)	24	11	0	0	59	15	2	203	0	366	363	43
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	1.9	1.9			6.9	6.9	0.6	17.1		19.2	35.5	35.5
Effective Green, g (s)	1.9	1.9			6.9	6.9	0.6	17.1		19.2	35.5	35.5
Actuated g/C Ratio	0.03	0.03			0.11	0.11	0.01	0.26		0.30	0.55	0.55
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	46	48			171	150	14	812		468	911	775
v/s Ratio Prot	c0.02	0.01			c0.04		0.00	0.07		c0.23	c0.22	
v/s Ratio Perm						0.01						0.03
v/c Ratio	0.52	0.23			0.35	0.10	0.14	0.25		0.78	0.40	0.06
Uniform Delay, d1	31.1	30.8			26.9	26.2	31.9	18.8		20.9	8.5	6.9
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.8	0.9			1.5	0.4	1.7	0.2		7.7	0.4	0.0
Delay (s)	35.9	31.7			28.4	26.6	33.6	19.1		28.6	8.9	6.9
Level of Service	D	C			C	C	C	B		C	A	A
Approach Delay (s)		34.6			27.1			19.2			17.6	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	64.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



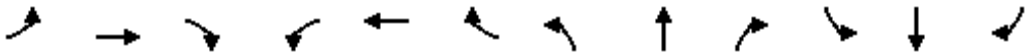
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	387	126	57	259	172	74	62	46	201	45	100
Future Volume (vph)	164	387	126	57	259	172	74	62	46	201	45	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3155	4673	1455	3155	4673	1455	1626	1603		1626	1712	2561
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3155	4673	1455	3155	4673	1455	1626	1603		1626	1712	2561
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	198	466	152	69	312	207	89	75	55	242	54	120
RTOR Reduction (vph)	0	0	115	0	0	169	0	39	0	0	0	75
Lane Group Flow (vph)	198	466	37	69	312	38	89	91	0	242	54	45
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.1	16.9	16.9	5.9	12.7	12.7	6.0	10.6		11.3	15.9	26.0
Effective Green, g (s)	10.1	16.9	16.9	5.9	12.7	12.7	6.0	10.6		11.3	15.9	26.0
Actuated g/C Ratio	0.15	0.24	0.24	0.09	0.18	0.18	0.09	0.15		0.16	0.23	0.37
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	459	1137	354	268	855	266	140	244		264	392	959
v/s Ratio Prot	c0.06	c0.10		0.02	0.07		0.05	c0.06		c0.15	c0.03	0.01
v/s Ratio Perm			0.03			0.03						0.01
v/c Ratio	0.43	0.41	0.10	0.26	0.36	0.14	0.64	0.37		0.92	0.14	0.05
Uniform Delay, d1	27.0	22.1	20.4	29.7	24.8	23.8	30.6	26.4		28.6	21.3	13.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.1	0.5	0.3	0.2	9.1	1.0		33.8	0.2	0.0
Delay (s)	27.7	22.3	20.5	30.2	25.1	24.0	39.7	27.4		62.4	21.5	13.8
Level of Service	C	C	C	C	C	C	D	C		E	C	B
Approach Delay (s)		23.3			25.3			32.4			43.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	24.7
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	53	26	352	37	161	10	328	855	304	451	4
Future Volume (vph)	7	53	26	352	37	161	10	328	855	304	451	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1468	1641	3282	1468	3183	3278	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1468	1641	3282	1468	3183	3278	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	9	70	34	463	49	212	13	432	1125	400	593	5
RTOR Reduction (vph)	0	0	28	0	0	139	0	0	254	0	1	0
Lane Group Flow (vph)	9	70	6	463	49	73	13	432	871	400	597	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.9	8.2	15.6	27.8	33.0	33.0	7.4	17.9	45.7	19.7	30.2	
Effective Green, g (s)	1.9	8.2	15.6	27.8	33.0	33.0	7.4	17.9	45.7	19.7	30.2	
Actuated g/C Ratio	0.02	0.09	0.16	0.29	0.34	0.34	0.08	0.19	0.48	0.21	0.31	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	32	280	318	922	594	505	126	612	779	653	1032	
v/s Ratio Prot	0.01	c0.02	0.00	0.15	0.03		0.01	0.13	c0.32	c0.13	0.18	
v/s Ratio Perm			0.00			0.05			0.27			
v/c Ratio	0.28	0.25	0.02	0.50	0.08	0.14	0.10	0.71	1.12	0.61	0.58	
Uniform Delay, d1	46.3	41.0	33.7	28.3	21.2	21.7	41.2	36.5	25.1	34.6	27.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.8	0.5	0.0	0.4	0.1	0.1	0.4	3.7	69.6	1.7	0.8	
Delay (s)	51.1	41.4	33.7	28.7	21.3	21.8	41.5	40.2	94.7	36.3	28.3	
Level of Service	D	D	C	C	C	C	D	D	F	D	C	
Approach Delay (s)		39.9			26.2			79.3			31.5	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	52.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	95.9	Sum of lost time (s)	23.4
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

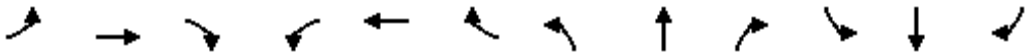


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	54	3	75	379	1209	0	0	424	808
Future Volume (vph)	0	0	0	54	3	75	379	1209	0	0	424	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1728	1468	1719	4715			4319	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1728	1468	1719	4715			4319	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	0	0	69	4	96	486	1550	0	0	544	1036
RTOR Reduction (vph)	0	0	0	0	0	81	0	0	0	0	190	0
Lane Group Flow (vph)	0	0	0	0	73	15	486	1550	0	0	1390	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	10%	5%	10%	5%	5%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					5.6	5.6	29.6	74.2			39.9	
Effective Green, g (s)					5.6	5.6	29.6	74.2			39.9	
Actuated g/C Ratio					0.06	0.06	0.33	0.82			0.44	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					107	91	565	3887			1914	
v/s Ratio Prot							c0.28	0.33			c0.32	
v/s Ratio Perm					0.04	0.01						
v/c Ratio					0.68	0.17	0.86	0.40			1.20dr	
Uniform Delay, d1					41.3	40.0	28.3	2.1			20.6	
Progression Factor					1.00	1.00	0.99	0.10			1.00	
Incremental Delay, d2					16.5	0.9	1.3	0.0			2.4	
Delay (s)					57.8	40.9	29.4	0.2			23.0	
Level of Service					E	D	C	A			C	
Approach Delay (s)		0.0			48.2			7.2			23.0	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	797	1	417	0	0	0	0	773	111	118	355	0
Future Volume (vph)	797	1	417	0	0	0	0	773	111	118	355	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1545	1489						4847		1626	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1545	1489						4847		1626	3438	
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	1077	1	564	0	0	0	0	1045	150	159	480	0
RTOR Reduction (vph)	0	99	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	851	692	0	0	0	0	0	1174	0	159	480	0
Heavy Vehicles (%)	11%	5%	5%	5%	5%	5%	5%	5%	5%	11%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	44.9	44.9						22.9		7.3	34.9	
Effective Green, g (s)	44.9	44.9						22.9		7.3	34.9	
Actuated g/C Ratio	0.50	0.50						0.25		0.08	0.39	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	770	742						1233		131	1333	
v/s Ratio Prot	c0.55	0.46						c0.24		c0.10	0.14	
v/s Ratio Perm												
v/c Ratio	1.11	0.93						0.95		1.21	0.36	
Uniform Delay, d1	22.6	21.1						33.0		41.4	19.6	
Progression Factor	1.00	1.00						1.00		0.79	0.71	
Incremental Delay, d2	65.2	18.5						16.5		135.9	0.5	
Delay (s)	87.7	39.6						49.5		168.6	14.5	
Level of Service	F	D						D		F	B	
Approach Delay (s)		64.5			0.0			49.5			52.8	
Approach LOS		E			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	57.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	260.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	453	3	14	1	14	94	56	337	1	39	179	541
Future Vol, veh/h	453	3	14	1	14	94	56	337	1	39	179	541
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	657	4	20	1	20	136	81	488	1	57	259	784
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	81.2	28.1	52	512.5
HCM LOS	F	D	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	93%	100%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	99%	0%	1%	0%	0%	13%	0%	100%	10%
Vol Right, %	0%	0%	1%	0%	6%	0%	0%	87%	0%	0%	90%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	225	113	236	234	1	1	108	39	119	601
LT Vol	56	0	0	236	217	1	1	0	39	0	0
Through Vol	0	225	112	0	3	0	0	14	0	119	60
RT Vol	0	0	1	0	14	0	0	94	0	0	541
Lane Flow Rate	81	326	164	341	340	1	1	157	57	173	871
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.244	0.935	0.472	0.979	0.967	0.002	0.002	0.489	0.172	0.501	2.362
Departure Headway (Hd)	12.753	12.231	12.224	11.997	11.919	14.527	14.527	13.363	10.936	10.42	9.769
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	283	300	297	304	306	248	248	272	328	346	383
Service Time	10.453	9.931	9.924	9.697	9.619	12.227	12.227	11.063	8.685	8.168	7.517
HCM Lane V/C Ratio	0.286	1.087	0.552	1.122	1.111	0.004	0.004	0.577	0.174	0.5	2.274
HCM Control Delay	19.5	73.5	25.4	82.8	79.6	17.3	17.3	28.2	16	23.2	642
HCM Lane LOS	C	F	D	F	F	C	C	D	C	C	F
HCM 95th-tile Q	0.9	9	2.4	10.1	9.9	0	0	2.5	0.6	2.7	67.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	24	340	6	31	326
Future Volume (Veh/h)	4	24	340	6	31	326
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	4	26	391	7	36	375
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	838	391			391	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	838	391			391	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	96			97	
cM capacity (veh/h)	310	632			1105	

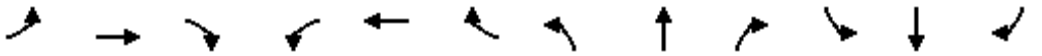
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	30	391	7	36	375
Volume Left	4	0	0	36	0
Volume Right	26	0	7	0	0
cSH	555	1700	1700	1105	1700
Volume to Capacity	0.05	0.23	0.00	0.03	0.22
Queue Length 95th (ft)	4	0	0	3	0
Control Delay (s)	11.9	0.0	0.0	8.4	0.0
Lane LOS	B			A	
Approach Delay (s)	11.9	0.0		0.7	
Approach LOS	B				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	992	89	0	783	0	38
Future Volume (Veh/h)	992	89	0	783	0	38
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1078	97	0	851	0	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1236					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			1175		1362	539
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1030		1231	343
tC, single (s)			4.3		7.0	7.1
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	93
cM capacity (veh/h)			578		147	584

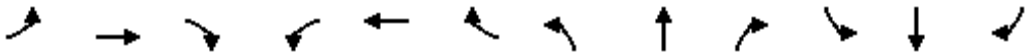
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	539	539	97	284	284	284	41
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	97	0	0	0	41
cSH	1700	1700	1700	1700	1700	1700	584
Volume to Capacity	0.32	0.32	0.06	0.17	0.17	0.17	0.07
Queue Length 95th (ft)	0	0	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.6
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.6
Approach LOS							B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	276	530	266	80	546	96	117	4	30	78	9	175
Future Volume (vph)	276	530	266	80	546	96	117	4	30	78	9	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.88	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1497		1559	1372	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1497		1559	1372	1395
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	297	570	286	86	587	103	126	4	32	84	10	188
RTOR Reduction (vph)	0	0	200	0	0	79	0	27	0	0	74	88
Lane Group Flow (vph)	297	570	86	86	587	24	126	9	0	76	30	14
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.0	20.0	20.0	5.6	15.9	15.9	11.0	11.0		9.0	9.0	9.0
Effective Green, g (s)	9.0	20.0	20.0	5.6	15.9	15.9	11.0	11.0		9.0	9.0	9.0
Actuated g/C Ratio	0.13	0.30	0.30	0.08	0.24	0.24	0.16	0.16		0.13	0.13	0.13
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	428	1409	438	266	1120	348	269	246		209	184	187
v/s Ratio Prot	c0.09	c0.12		0.03	c0.12		c0.08	0.01		c0.05	0.02	
v/s Ratio Perm			0.06			0.02						0.01
v/c Ratio	0.69	0.40	0.20	0.32	0.52	0.07	0.47	0.04		0.36	0.16	0.07
Uniform Delay, d1	27.6	18.7	17.5	28.9	22.2	19.8	25.3	23.5		26.3	25.6	25.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.8	0.2	0.2	0.7	0.4	0.1	1.3	0.1		1.1	0.4	0.2
Delay (s)	32.5	18.9	17.7	29.6	22.7	19.9	26.6	23.6		27.4	26.0	25.5
Level of Service	C	B	B	C	C	B	C	C		C	C	C
Approach Delay (s)		22.1			23.0			25.9			26.2	
Approach LOS		C			C			C			C	

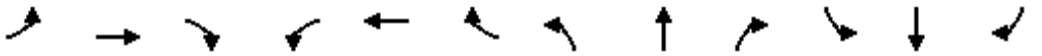
Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	22.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	312	257	729	320	76	195	164	453	52	239	55
Future Volume (vph)	84	312	257	729	320	76	195	164	453	52	239	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.89		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1468	1641	4579		1641	1537		3183	1679	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1468	1641	4579		1641	1537		3183	1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	90	335	276	784	344	82	210	176	487	56	257	59
RTOR Reduction (vph)	0	0	252	0	25	0	0	66	0	0	6	0
Lane Group Flow (vph)	90	335	24	784	401	0	210	597	0	56	310	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.0	12.8	12.8	59.3	59.1		23.3	49.8		3.4	29.9	
Effective Green, g (s)	13.0	12.8	12.8	59.3	59.1		23.3	49.8		3.4	29.9	
Actuated g/C Ratio	0.09	0.09	0.09	0.40	0.39		0.16	0.33		0.02	0.20	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	142	402	125	648	1804		254	510		72	334	
v/s Ratio Prot	0.05	c0.07		c0.48	0.09		0.13	c0.39		0.02	c0.18	
v/s Ratio Perm			0.02									
v/c Ratio	0.63	0.83	0.19	1.21	0.22		0.83	1.17		0.78	0.93	
Uniform Delay, d1	66.2	67.5	63.8	45.4	30.2		61.4	50.1		72.9	59.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.9	13.8	0.7	108.4	0.1		19.3	96.0		39.9	34.2	
Delay (s)	75.1	81.3	64.5	153.7	30.2		80.7	146.1		112.8	93.2	
Level of Service	E	F	E	F	C		F	F		F	F	
Approach Delay (s)		73.9			110.3			130.4			96.1	
Approach LOS		E			F			F			F	

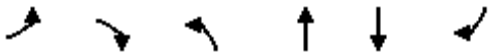
Intersection Summary			
HCM 2000 Control Delay	106.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	109.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



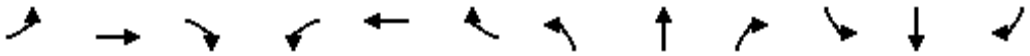
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	114	77	31	164	93	688	261	0	1309	48
Future Volume (vph)	14	0	114	77	31	164	93	688	261	0	1309	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1626	1455		1545	1591	1455	3155	3252	1455		4673	1455
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1626	1455		1545	1591	1455	3155	3252	1455		4673	1455
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	15	0	119	80	32	171	97	717	272	0	1364	50
RTOR Reduction (vph)	0	112	0	0	0	157	0	0	72	0	0	19
Lane Group Flow (vph)	15	7	0	55	57	14	97	717	200	0	1364	31
Heavy Vehicles (%)	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	6.7	6.7		9.9	9.9	9.9	9.1	88.1	88.1		74.3	74.3
Effective Green, g (s)	6.7	6.7		9.9	9.9	9.9	9.1	88.1	88.1		74.3	74.3
Actuated g/C Ratio	0.06	0.06		0.08	0.08	0.08	0.08	0.73	0.73		0.62	0.62
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	90	81		127	131	120	239	2387	1068		2893	900
v/s Ratio Prot	c0.01	0.00		0.04	c0.04		c0.03	0.22			c0.29	
v/s Ratio Perm						0.01			0.14			0.02
v/c Ratio	0.17	0.08		0.43	0.44	0.12	0.41	0.30	0.19		0.47	0.03
Uniform Delay, d1	54.0	53.7		52.4	52.4	51.0	52.9	5.4	4.9		12.3	8.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.97	0.45	0.00		1.00	1.00
Incremental Delay, d2	0.9	0.4		2.4	2.3	0.4	1.1	0.3	0.4		0.6	0.1
Delay (s)	54.9	54.2		54.7	54.7	51.4	52.1	2.8	0.4		12.8	9.0
Level of Service	D	D		D	D	D	D	A	A		B	A
Approach Delay (s)		54.2			52.7			6.6			12.7	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	526	230	69	528	382	336
Future Volume (vph)	526	230	69	528	382	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3127	2538	3127	4631	3223	1442
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3127	2538	3127	4631	3223	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	554	242	73	556	402	354
RTOR Reduction (vph)	0	184	0	0	0	41
Lane Group Flow (vph)	554	58	73	556	402	313
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	28.6	28.6	7.0	81.2	69.5	98.1
Effective Green, g (s)	28.6	28.6	7.0	81.2	69.5	98.1
Actuated g/C Ratio	0.24	0.24	0.06	0.68	0.58	0.82
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	745	604	182	3133	1866	1240
v/s Ratio Prot	c0.18		c0.02	0.12	0.12	c0.06
v/s Ratio Perm		0.02				0.16
v/c Ratio	0.74	0.10	0.40	0.18	0.22	0.25
Uniform Delay, d1	42.3	35.6	54.5	7.1	12.1	2.5
Progression Factor	1.00	1.00	1.00	1.00	0.31	0.11
Incremental Delay, d2	4.0	0.1	1.4	0.1	0.2	0.1
Delay (s)	46.3	35.7	55.9	7.3	4.0	0.4
Level of Service	D	D	E	A	A	A
Approach Delay (s)	43.1			12.9	2.3	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	42	71	41	21	77	368	0	0	0	179	208	43
Future Volume (vph)	42	71	41	21	77	368	0	0	0	179	208	43
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
Hourly flow rate (vph)	45	76	44	22	82	391	0	0	0	190	221	46

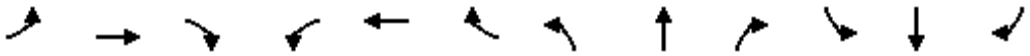
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	165	495	301	157
Volume Left (vph)	45	22	190	0
Volume Right (vph)	44	391	0	46
Hadj (s)	0.13	-0.23	0.55	0.03
Departure Headway (s)	6.2	5.3	6.9	6.3
Degree Utilization, x	0.28	0.73	0.57	0.28
Capacity (veh/h)	543	661	501	544
Control Delay (s)	11.6	21.3	17.5	10.5
Approach Delay (s)	11.6	21.3	15.1	
Approach LOS	B	C	C	

Intersection Summary				
Delay		17.3		
Level of Service		C		
Intersection Capacity Utilization		47.8%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	0	0	0	73	174
Future Volume (Veh/h)	79	0	0	0	73	174
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	82	0	0	0	76	181
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	242	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	242	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	88	100			95	
cM capacity (veh/h)	661	1050			1545	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	82	136	121
Volume Left	82	76	0
Volume Right	0	0	0
cSH	661	1545	1700
Volume to Capacity	0.12	0.05	0.07
Queue Length 95th (ft)	11	4	0
Control Delay (s)	11.2	4.3	0.0
Lane LOS	B	A	
Approach Delay (s)	11.2	2.3	
Approach LOS	B		

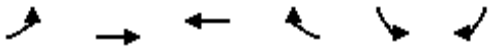
Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	40	30	39	30	0	0	0	0	108	146	8
Future Volume (vph)	0	40	30	39	30	0	0	0	0	108	146	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	41	31	40	31	0	0	0	0	111	151	8

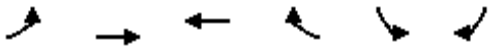
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	72	71	187	84
Volume Left (vph)	0	40	111	0
Volume Right (vph)	31	0	0	8
Hadj (s)	-0.02	0.35	0.54	0.17
Departure Headway (s)	4.7	5.0	5.4	5.0
Degree Utilization, x	0.09	0.10	0.28	0.12
Capacity (veh/h)	724	674	650	694
Control Delay (s)	8.2	8.6	9.3	7.5
Approach Delay (s)	8.2	8.6	8.7	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	24.5%	ICU Level of Service	A	
Analysis Period (min)	15			



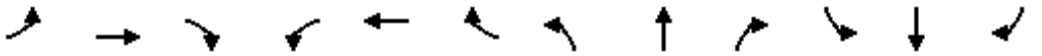
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	611	394	0	175	276
Future Volume (vph)	0	611	394	0	175	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4590	4590		3099	1429
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4590	4590		3099	1429
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	643	415	0	184	291
RTOR Reduction (vph)	0	0	0	0	0	245
Lane Group Flow (vph)	0	643	415	0	184	46
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		65.1	65.1		11.6	11.6
Effective Green, g (s)		65.1	65.1		11.6	11.6
Actuated g/C Ratio		0.72	0.72		0.13	0.13
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3320	3320		399	184
v/s Ratio Prot		c0.14	0.09		c0.06	
v/s Ratio Perm						0.03
v/c Ratio		0.19	0.12		0.46	0.25
Uniform Delay, d1		4.0	3.8		36.3	35.3
Progression Factor		1.00	0.82		1.00	1.00
Incremental Delay, d2		0.1	0.1		0.8	0.7
Delay (s)		4.1	3.2		37.2	36.0
Level of Service		A	A		D	D
Approach Delay (s)		4.1	3.2		36.5	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	423	348	399	465	0	0
Future Volume (vph)	423	348	399	465	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	1.00	0.95	0.91	0.91		
Frt	1.00	1.00	0.95	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1597	3195	2909	1301		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1597	3195	2909	1301		
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	504	414	475	554	0	0
RTOR Reduction (vph)	0	0	49	164	0	0
Lane Group Flow (vph)	504	414	659	157	0	0
Heavy Vehicles (%)	13%	13%	13%	13%	13%	13%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	35.2	90.0	41.9	41.9		
Effective Green, g (s)	35.2	90.0	41.9	41.9		
Actuated g/C Ratio	0.39	1.00	0.47	0.47		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	624	3195	1354	605		
v/s Ratio Prot	c0.32	0.13	c0.23			
v/s Ratio Perm				0.12		
v/c Ratio	0.81	0.13	0.49	0.26		
Uniform Delay, d1	24.4	0.0	16.6	14.6		
Progression Factor	1.12	1.00	1.00	1.00		
Incremental Delay, d2	7.5	0.1	1.3	1.0		
Delay (s)	35.0	0.1	17.9	15.7		
Level of Service	C	A	B	B		
Approach Delay (s)		19.2	17.2		0.0	
Approach LOS		B	B		A	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

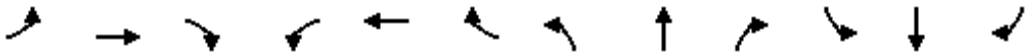


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	474	0	0	521	764	62	1	237	0	0	0
Future Volume (vph)	395	474	0	0	521	764	62	1	237	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3958	1197		1561	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3958	1197		1561	2450			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	407	489	0	0	537	788	64	1	244	0	0	0
RTOR Reduction (vph)	0	0	0	0	106	184	0	0	222	0	0	0
Lane Group Flow (vph)	407	489	0	0	825	210	0	65	22	0	0	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	26.3	89.7			58.7	58.7		10.1	10.1			
Effective Green, g (s)	26.3	89.7			58.7	58.7		10.1	10.1			
Actuated g/C Ratio	0.24	0.82			0.53	0.53		0.09	0.09			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	721	3646			2112	638		143	224			
v/s Ratio Prot	c0.13	0.11			c0.21							
v/s Ratio Perm						0.18		0.04	0.01			
v/c Ratio	0.56	0.13			0.39	0.33		0.45	0.10			
Uniform Delay, d1	36.8	2.1			15.1	14.5		47.3	45.8			
Progression Factor	0.89	1.01			1.00	1.00		1.00	1.00			
Incremental Delay, d2	1.0	0.1			0.5	1.4		2.3	0.2			
Delay (s)	33.9	2.2			15.7	15.9		49.6	46.0			
Level of Service	C	A			B	B		D	D			
Approach Delay (s)		16.6			15.7			46.7			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	581	278	219	685	0	292
Future Volume (vph)	581	278	219	685	0	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4254		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4254		3019	4472		2450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	612	293	231	721	0	307
RTOR Reduction (vph)	79	0	0	0	0	210
Lane Group Flow (vph)	826	0	231	721	0	97
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	64.9		34.9	110.0		34.9
Effective Green, g (s)	64.9		34.9	110.0		34.9
Actuated g/C Ratio	0.59		0.32	1.00		0.32
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2509		957	4472		777
v/s Ratio Prot	c0.19		c0.08	0.16		0.04
v/s Ratio Perm						
v/c Ratio	0.33		0.24	0.16		0.13
Uniform Delay, d1	11.5		27.8	0.0		26.7
Progression Factor	0.54		0.75	1.00		1.00
Incremental Delay, d2	0.3		0.1	0.1		0.1
Delay (s)	6.6		21.0	0.1		26.8
Level of Service	A		C	A		C
Approach Delay (s)	6.6			5.2	26.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	368	49	238	283	176	40	48	272	185	85	77
Future Volume (vph)	49	368	49	238	283	176	40	48	272	185	85	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.94			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1556	4392		1556	4215			1601	1392		2931	
Flt Permitted	0.95	1.00		0.95	1.00			0.68	1.00		0.77	
Satd. Flow (perm)	1556	4392		1556	4215			1114	1392		2311	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	379	51	245	292	181	41	49	280	191	88	79
RTOR Reduction (vph)	0	11	0	0	72	0	0	0	222	0	29	0
Lane Group Flow (vph)	51	419	0	245	401	0	0	90	58	0	329	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.9	51.2		21.7	64.4			22.9	22.9		22.9	
Effective Green, g (s)	7.9	51.2		21.7	64.4			22.9	22.9		22.9	
Actuated g/C Ratio	0.07	0.47		0.20	0.59			0.21	0.21		0.21	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	111	2044		306	2467			231	289		481	
v/s Ratio Prot	c0.03	c0.10		c0.16	0.10							
v/s Ratio Perm								0.08	0.04		c0.14	
v/c Ratio	0.46	0.21		0.80	0.16			0.39	0.20		0.68	
Uniform Delay, d1	49.0	17.4		42.1	10.4			37.5	36.0		40.2	
Progression Factor	1.00	1.00		0.81	0.33			1.00	1.00		1.00	
Incremental Delay, d2	1.1	0.2		13.1	0.1			1.8	0.6		4.6	
Delay (s)	50.1	17.6		47.0	3.6			39.3	36.6		44.8	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		21.0			18.4			37.2			44.8	
Approach LOS		C			B			D			D	

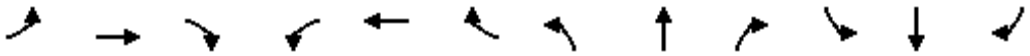
Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	106	140	97	150	66	50
Future Vol, veh/h	106	140	97	150	66	50
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	122	161	111	172	76	57
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	11.1	8.6	10.6
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	57%	0%	100%	0%	0%
Vol Thru, %	0%	43%	0%	100%	100%
Vol Right, %	43%	57%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	246	97	75	75
LT Vol	66	0	97	0	0
Through Vol	0	106	0	75	75
RT Vol	50	140	0	0	0
Lane Flow Rate	133	283	111	86	86
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.224	0.397	0.184	0.13	0.083
Departure Headway (Hd)	6.047	5.059	5.951	5.447	3.46
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	591	710	602	656	1028
Service Time	3.812	2.807	3.701	3.197	1.209
HCM Lane V/C Ratio	0.225	0.399	0.184	0.131	0.084
HCM Control Delay	10.6	11.1	10	9	6.5
HCM Lane LOS	B	B	A	A	A
HCM 95th-tile Q	0.9	1.9	0.7	0.4	0.3

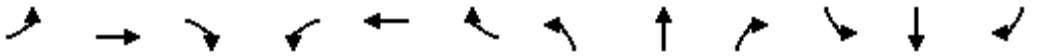


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	445	26	62	347	0	30	0	22	0	1	13
Future Volume (vph)	27	445	26	62	347	0	30	0	22	0	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4435		1556	4472			1556	1392		1432	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4435		1556	4472			1638	1392		1432	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	484	28	67	377	0	33	0	24	0	1	14
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	23	0	13	0
Lane Group Flow (vph)	29	505	0	67	377	0	0	33	1	0	2	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	11.9		2.1	13.2			1.8	1.8		1.8	
Effective Green, g (s)	0.8	11.9		2.1	13.2			1.8	1.8		1.8	
Actuated g/C Ratio	0.03	0.40		0.07	0.44			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	41	1759		108	1967			98	83		85	
v/s Ratio Prot	0.02	c0.11		c0.04	0.08						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.71	0.29		0.62	0.19			0.34	0.02		0.02	
Uniform Delay, d1	14.5	6.2		13.6	5.1			13.5	13.3		13.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	36.5	0.3		7.7	0.1			0.7	0.0		0.0	
Delay (s)	51.0	6.4		21.3	5.2			14.3	13.3		13.3	
Level of Service	D	A		C	A			B	B		B	
Approach Delay (s)		8.8			7.7			13.9			13.3	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	30.0	Sum of lost time (s)	14.2
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

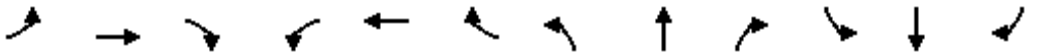
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	422	379	351	401	334	230
Future Volume (vph)	422	379	351	401	334	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4631	1442	1612	4631	3127	1442
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4631	1442	1612	4631	3127	1442
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	459	412	382	436	363	250
RTOR Reduction (vph)	0	179	0	0	0	197
Lane Group Flow (vph)	459	233	382	436	363	53
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	12.9	27.5	22.0	40.6	14.6	14.6
Effective Green, g (s)	12.9	27.5	22.0	40.6	14.6	14.6
Actuated g/C Ratio	0.19	0.40	0.32	0.59	0.21	0.21
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	863	573	512	2717	659	304
v/s Ratio Prot	c0.10	0.09	c0.24	0.09	c0.12	
v/s Ratio Perm		0.08				0.04
v/c Ratio	0.53	0.41	0.75	0.16	0.55	0.17
Uniform Delay, d1	25.4	15.0	21.1	6.5	24.4	22.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.5	5.9	0.0	1.0	0.3
Delay (s)	26.1	15.5	27.0	6.6	25.4	22.6
Level of Service	C	B	C	A	C	C
Approach Delay (s)	21.0			16.1	24.3	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	69.2	Sum of lost time (s)	19.7
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



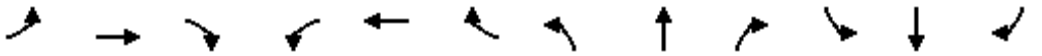
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	11	2	36	9	409	4	405	39	237	175	68
Future Volume (vph)	111	11	2	36	9	409	4	405	39	237	175	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.98			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1570	1619			1588	1404	1570	3098		1570	1652	1404
Flt Permitted	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1570	1619			1588	1404	1570	3098		1570	1652	1404
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	129	13	2	42	10	476	5	471	45	276	203	79
RTOR Reduction (vph)	0	2	0	0	0	407	0	7	0	0	0	40
Lane Group Flow (vph)	129	13	0	0	52	69	5	509	0	276	203	39
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.9	7.9			11.0	11.0	0.6	21.6		17.0	37.8	37.8
Effective Green, g (s)	7.9	7.9			11.0	11.0	0.6	21.6		17.0	37.8	37.8
Actuated g/C Ratio	0.10	0.10			0.14	0.14	0.01	0.28		0.22	0.49	0.49
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	160	165			225	199	12	865		345	807	686
v/s Ratio Prot	c0.08	0.01			0.03		0.00	c0.16		c0.18	0.12	
v/s Ratio Perm						c0.05						0.03
v/c Ratio	0.81	0.08			0.23	0.34	0.42	0.59		0.80	0.25	0.06
Uniform Delay, d1	34.0	31.4			29.4	29.9	38.2	24.0		28.5	11.5	10.4
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.6	0.1			0.7	1.3	8.3	1.2		11.8	0.2	0.0
Delay (s)	57.5	31.5			30.1	31.2	46.5	25.2		40.3	11.7	10.4
Level of Service	E	C			C	C	D	C		D	B	B
Approach Delay (s)		54.8			31.1			25.4			25.7	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



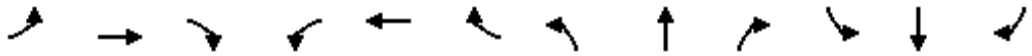
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	317	103	70	455	280	163	61	82	243	105	311
Future Volume (vph)	174	317	103	70	455	280	163	61	82	243	105	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	4631	1442	3127	4631	1442	1612	1551		1612	1696	2538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	4631	1442	3127	4631	1442	1612	1551		1612	1696	2538
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	191	348	113	77	500	308	179	67	90	267	115	342
RTOR Reduction (vph)	0	0	89	0	0	251	0	64	0	0	0	210
Lane Group Flow (vph)	191	348	24	77	500	57	179	93	0	267	115	132
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.2	16.6	16.6	7.9	14.3	14.3	17.8	14.1		13.4	9.7	19.9
Effective Green, g (s)	10.2	16.6	16.6	7.9	14.3	14.3	17.8	14.1		13.4	9.7	19.9
Actuated g/C Ratio	0.13	0.22	0.22	0.10	0.19	0.19	0.23	0.18		0.17	0.13	0.26
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	415	1002	312	322	863	268	374	285		281	214	658
v/s Ratio Prot	c0.06	0.08		0.02	c0.11		0.11	c0.06		c0.17	c0.07	0.03
v/s Ratio Perm			0.02			0.04						0.03
v/c Ratio	0.46	0.35	0.08	0.24	0.58	0.21	0.48	0.33		0.95	0.54	0.20
Uniform Delay, d1	30.7	25.5	24.0	31.6	28.5	26.4	25.4	27.2		31.3	31.4	22.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.2	0.1	0.4	0.9	0.4	1.0	0.7		40.2	2.6	0.2
Delay (s)	31.5	25.7	24.1	32.0	29.4	26.8	26.4	27.9		71.5	34.0	22.3
Level of Service	C	C	C	C	C	C	C	C		E	C	C
Approach Delay (s)		27.1			28.7			27.1			42.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	76.7	Sum of lost time (s)	24.7
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	56	19	1067	78	405	31	460	580	323	239	4
Future Volume (vph)	7	56	19	1067	78	405	31	460	580	323	239	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	3213	1743	1482	1656	3312	1482	3213	3305	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1656	3312	1482	3213	1743	1482	1656	3312	1482	3213	3305	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	8	63	21	1199	88	455	35	517	652	363	269	4
RTOR Reduction (vph)	0	0	18	0	0	248	0	0	70	0	1	0
Lane Group Flow (vph)	8	63	3	1199	88	207	35	517	582	363	272	0
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.9	11.2	19.5	51.8	60.0	60.0	8.3	26.6	78.4	19.7	38.0	
Effective Green, g (s)	1.9	11.2	19.5	51.8	60.0	60.0	8.3	26.6	78.4	19.7	38.0	
Actuated g/C Ratio	0.01	0.09	0.15	0.39	0.46	0.46	0.06	0.20	0.60	0.15	0.29	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	23	281	219	1264	794	675	104	669	882	480	954	
v/s Ratio Prot	0.00	0.02	0.00	c0.37	0.05		0.02	c0.16	0.26	c0.11	0.08	
v/s Ratio Perm			0.00			c0.14			0.13			
v/c Ratio	0.35	0.22	0.01	0.95	0.11	0.31	0.34	0.77	0.66	0.76	0.29	
Uniform Delay, d1	64.2	56.1	47.8	38.6	20.5	22.7	59.0	49.6	17.7	53.6	36.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.9	0.4	0.0	14.6	0.1	0.3	1.9	5.5	1.9	6.7	0.2	
Delay (s)	73.1	56.6	47.9	53.2	20.6	22.9	60.9	55.2	19.6	60.3	36.4	
Level of Service	E	E	D	D	C	C	E	E	B	E	D	
Approach Delay (s)		56.0			43.6			36.1			50.1	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	131.6	Sum of lost time (s)	23.4
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

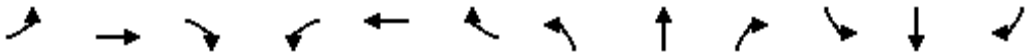


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	99	1	156	386	1307	0	0	502	1009
Future Volume (vph)	0	0	0	99	1	156	386	1307	0	0	502	1009
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1724	1468	1719	4715			4308	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1724	1468	1719	4715			4308	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	112	1	177	439	1485	0	0	570	1147
RTOR Reduction (vph)	0	0	0	0	0	78	0	0	0	0	237	0
Lane Group Flow (vph)	0	0	0	0	114	99	439	1485	0	0	1480	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	10%	5%	10%	5%	5%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					10.6	10.6	29.7	79.2			44.8	
Effective Green, g (s)					10.6	10.6	29.7	79.2			44.8	
Actuated g/C Ratio					0.11	0.11	0.30	0.79			0.45	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					182	155	510	3734			1929	
v/s Ratio Prot							c0.26	0.31			c0.34	
v/s Ratio Perm					0.07	c0.07						
v/c Ratio					0.63	0.64	0.86	0.40			1.27dr	
Uniform Delay, d1					42.8	42.9	33.2	3.2			23.2	
Progression Factor					1.00	1.00	1.10	0.49			1.00	
Incremental Delay, d2					6.6	8.7	3.7	0.1			3.0	
Delay (s)					49.4	51.6	40.4	1.6			26.2	
Level of Service					D	D	D	A			C	
Approach Delay (s)		0.0			50.7			10.5			26.2	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1001	5	423	0	0	0	0	704	95	121	479	0
Future Volume (vph)	1001	5	423	0	0	0	0	704	95	121	479	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.91						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1504						4852		1641	3438	
Flt Permitted	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1504						4852		1641	3438	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1236	6	522	0	0	0	0	869	117	149	591	0
RTOR Reduction (vph)	0	57	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	915	792	0	0	0	0	0	969	0	149	591	0
Heavy Vehicles (%)	10%	5%	5%	5%	5%	5%	5%	5%	5%	10%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	52.9	52.9						22.8		9.4	36.9	
Effective Green, g (s)	52.9	52.9						22.8		9.4	36.9	
Actuated g/C Ratio	0.53	0.53						0.23		0.09	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	824	795						1106		154	1268	
v/s Ratio Prot	c0.59	0.53						c0.20		c0.09	0.17	
v/s Ratio Perm												
v/c Ratio	1.11	1.00						0.88		0.97	0.47	
Uniform Delay, d1	23.6	23.4						37.2		45.1	24.0	
Progression Factor	1.00	1.00						1.00		0.82	0.68	
Incremental Delay, d2	66.2	30.6						9.8		51.2	0.9	
Delay (s)	89.7	54.1						47.0		88.4	17.3	
Level of Service	F	D						D		F	B	
Approach Delay (s)		72.6			0.0			47.0			31.6	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	159.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	503	15	42	1	7	59	22	223	1	112	308	485
Future Vol, veh/h	503	15	42	1	7	59	22	223	1	112	308	485
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	662	20	55	1	9	78	29	293	1	147	405	638
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	69.5	18.7	24.3	261.5
HCM LOS	F	C	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	80%	100%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	99%	0%	5%	0%	0%	11%	0%	100%	17%
Vol Right, %	0%	0%	1%	0%	15%	0%	0%	89%	0%	0%	83%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	149	75	282	278	1	1	66	112	205	588
LT Vol	22	0	0	282	221	1	1	0	112	0	0
Through Vol	0	149	74	0	15	0	0	7	0	205	103
RT Vol	0	0	1	0	42	0	0	59	0	0	485
Lane Flow Rate	29	196	99	371	366	1	1	87	147	270	773
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.087	0.563	0.285	0.97	0.937	0.002	0.002	0.259	0.388	0.673	1.8
Departure Headway (Hd)	12.126	11.611	11.602	10.279	10.071	13.051	13.051	11.889	9.484	8.973	8.382
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	297	313	312	356	363	276	276	304	379	403	441
Service Time	9.826	9.311	9.302	7.979	7.771	10.751	10.751	9.589	7.263	6.752	6.161
HCM Lane V/C Ratio	0.098	0.626	0.317	1.042	1.008	0.004	0.004	0.286	0.388	0.67	1.753
HCM Control Delay	16	28.3	18.9	73.6	65.3	15.8	15.8	18.7	18.2	28.5	389.3
HCM Lane LOS	C	D	C	F	F	C	C	C	C	D	F
HCM 95th-tile Q	0.3	3.2	1.1	10.6	9.9	0	0	1	1.8	4.8	48.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	3	425	1	1	358
Future Volume (Veh/h)	0	3	425	1	1	358
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	4	518	1	1	437
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	957	518			518	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	957	518			518	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	272	535			989	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	518	1	1	437
Volume Left	0	0	0	1	0
Volume Right	4	0	1	0	0
cSH	535	1700	1700	989	1700
Volume to Capacity	0.01	0.30	0.00	0.00	0.26
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.8	0.0	0.0	8.6	0.0
Lane LOS	B			A	
Approach Delay (s)	11.8	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

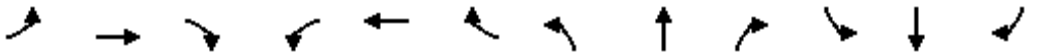
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	743	212	103	1023	582	184
Future Volume (vph)	743	212	103	1023	582	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	4759	1538	1719	4759	3260	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	4759	1538	1719	4759	3260	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	808	230	112	1112	633	200
RTOR Reduction (vph)	0	156	0	0	40	0
Lane Group Flow (vph)	808	74	112	1112	793	0
Heavy Vehicles (%)	9%	5%	5%	9%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases		4				
Actuated Green, G (s)	19.4	19.4	7.7	31.1	21.5	
Effective Green, g (s)	19.4	19.4	7.7	31.1	21.5	
Actuated g/C Ratio	0.32	0.32	0.13	0.51	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1523	492	218	2442	1156	
v/s Ratio Prot	c0.17		0.07	c0.23	c0.24	
v/s Ratio Perm		0.05				
v/c Ratio	0.53	0.15	0.51	0.46	0.69	
Uniform Delay, d1	16.9	14.7	24.7	9.4	16.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.1	2.0	0.1	1.7	
Delay (s)	17.2	14.9	26.7	9.5	18.4	
Level of Service	B	B	C	A	B	
Approach Delay (s)	16.7			11.1	18.4	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	758	426	0	1590
Future Volume (Veh/h)	0	0	758	426	0	1590
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	824	463	0	1728
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			292			366
pX, platoon unblocked						
vC, conflicting volume	1256	275			1287	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1256	275			1287	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	100			100	
cM capacity (veh/h)	154	702			498	

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	275	275	275	463	432	432	432	432
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	463	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.16	0.16	0.27	0.25	0.25	0.25	0.25
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								
Approach Delay (s)	0.0				0.0			
Approach LOS								

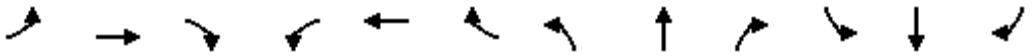
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	253	560	162	49	549	86	252	8	65	113	5	304
Future Volume (vph)	253	560	162	49	549	86	252	8	65	113	5	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.86	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	1498		1559	1354	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	1498		1559	1354	1395
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	272	602	174	53	590	92	271	9	70	122	5	327
RTOR Reduction (vph)	0	0	123	0	0	71	0	53	0	0	133	145
Lane Group Flow (vph)	272	602	51	53	590	21	271	26	0	110	41	25
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.1	23.6	23.6	4.4	18.2	18.2	19.3	19.3		12.1	12.1	12.1
Effective Green, g (s)	9.1	23.6	23.6	4.4	18.2	18.2	19.3	19.3		12.1	12.1	12.1
Actuated g/C Ratio	0.11	0.29	0.29	0.05	0.23	0.23	0.24	0.24		0.15	0.15	0.15
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	358	1391	429	173	1073	331	392	358		233	203	209
v/s Ratio Prot	c0.09	0.13		0.02	c0.12		c0.17	0.02		c0.07	0.03	
v/s Ratio Perm			0.03			0.01						0.02
v/c Ratio	0.76	0.43	0.12	0.31	0.55	0.06	0.69	0.07		0.47	0.20	0.12
Uniform Delay, d1	34.7	23.1	20.9	36.7	27.6	24.5	28.0	23.8		31.4	30.1	29.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	0.2	0.1	1.0	0.6	0.1	5.2	0.1		1.5	0.5	0.3
Delay (s)	43.7	23.3	21.1	37.7	28.2	24.6	33.2	23.9		32.9	30.5	30.0
Level of Service	D	C	C	D	C	C	C	C		C	C	C
Approach Delay (s)		28.2			28.4			31.1			30.9	
Approach LOS		C			C			C			C	

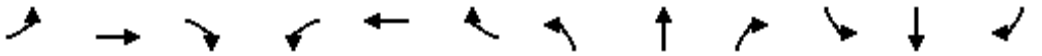
Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

OPENING YEAR 2020 BASELINE PLUS PROJECT CONDITIONS



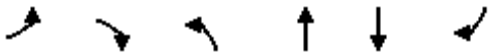
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	427	196	622	376	61	135	186	724	61	164	54
Future Volume (vph)	48	427	196	622	376	61	135	186	724	61	164	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4803	1468	1687	4690		3183	3282	1468	3183	1663	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4803	1468	1687	4690		3183	3282	1468	3183	1663	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	474	218	691	418	68	150	207	804	68	182	60
RTOR Reduction (vph)	0	0	193	0	20	0	0	0	629	0	12	0
Lane Group Flow (vph)	53	474	25	691	466	0	150	207	175	68	230	0
Heavy Vehicles (%)	10%	8%	10%	7%	8%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	8.4	11.3	11.3	38.5	41.4		11.3	17.1	17.1	8.4	14.2	
Effective Green, g (s)	8.4	11.3	11.3	38.5	41.4		11.3	17.1	17.1	8.4	14.2	
Actuated g/C Ratio	0.08	0.11	0.11	0.38	0.41		0.11	0.17	0.17	0.08	0.14	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	137	542	165	649	1941		359	561	251	267	236	
v/s Ratio Prot	0.03	c0.10		c0.41	c0.10		c0.05	0.06		0.02	c0.14	
v/s Ratio Perm			0.02						0.12			
v/c Ratio	0.39	0.87	0.15	1.06	0.24		0.42	0.37	0.70	0.25	0.97	
Uniform Delay, d1	43.4	43.7	40.0	30.8	19.1		41.3	36.7	39.0	42.9	42.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.80	0.81	2.77	1.00	1.00	
Incremental Delay, d2	1.8	14.6	0.4	53.8	0.1		0.7	1.7	13.7	0.5	52.4	
Delay (s)	45.2	58.2	40.4	84.6	19.1		33.7	31.4	121.8	43.4	95.1	
Level of Service	D	E	D	F	B		C	C	F	D	F	
Approach Delay (s)		52.1			57.5			94.3			83.8	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	71.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



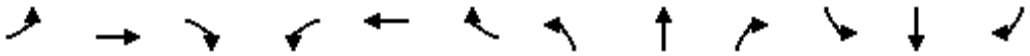
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	61	88	64	177	95	986	108	0	891	39
Future Volume (vph)	14	0	61	88	64	177	95	986	108	0	891	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1627	1495	3183	3312	1468		4759	1495
Flt Permitted	0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1627	1495	3183	3312	1468		4759	1495
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	16	0	69	99	72	199	107	1108	121	0	1001	44
RTOR Reduction (vph)	0	65	0	0	0	151	0	0	39	0	0	20
Lane Group Flow (vph)	16	4	0	84	87	48	107	1108	82	0	1001	24
Heavy Vehicles (%)	10%	10%	10%	10%	10%	8%	10%	9%	10%	10%	9%	8%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	5.5	5.5		11.2	11.2	11.2	8.7	68.0	68.0		54.6	54.6
Effective Green, g (s)	5.5	5.5		11.2	11.2	11.2	8.7	68.0	68.0		54.6	54.6
Actuated g/C Ratio	0.06	0.06		0.11	0.11	0.11	0.09	0.68	0.68		0.55	0.55
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	90	80		174	182	167	276	2252	998		2598	816
v/s Ratio Prot	c0.01	0.00		c0.05	0.05		0.03	c0.33			0.21	
v/s Ratio Perm						0.03			0.06			0.02
v/c Ratio	0.18	0.05		0.48	0.48	0.29	0.39	0.49	0.08		0.39	0.03
Uniform Delay, d1	45.1	44.8		41.7	41.7	40.7	43.1	7.7	5.4		13.1	10.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.68	0.22	0.00		0.60	1.00
Incremental Delay, d2	0.9	0.2		2.1	2.0	1.0	0.7	0.6	0.1		0.2	0.0
Delay (s)	46.0	45.0		43.8	43.6	41.7	30.3	2.3	0.1		8.0	10.5
Level of Service	D	D		D	D	D	C	A	A		A	B
Approach Delay (s)		45.2			42.6			4.3			8.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	856	381	28	327	329	196
Future Volume (vph)	856	381	28	327	329	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3155	2561	3155	4759	3282	1468
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3155	2561	3155	4759	3282	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	941	419	31	359	362	215
RTOR Reduction (vph)	0	260	0	0	0	41
Lane Group Flow (vph)	941	159	31	359	362	174
Heavy Vehicles (%)	11%	11%	11%	9%	10%	10%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	37.9	37.9	4.2	51.9	43.0	80.9
Effective Green, g (s)	37.9	37.9	4.2	51.9	43.0	80.9
Actuated g/C Ratio	0.38	0.38	0.04	0.52	0.43	0.81
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1195	970	132	2469	1411	1262
v/s Ratio Prot	c0.30		c0.01	0.08	c0.11	0.05
v/s Ratio Perm		0.06				0.07
v/c Ratio	0.79	0.16	0.23	0.15	0.26	0.14
Uniform Delay, d1	27.5	20.6	46.3	12.5	18.3	2.1
Progression Factor	1.00	1.00	1.00	1.00	0.83	10.56
Incremental Delay, d2	3.5	0.1	0.9	0.1	0.4	0.0
Delay (s)	31.0	20.6	47.3	12.6	15.6	21.7
Level of Service	C	C	D	B	B	C
Approach Delay (s)	27.8			15.4	17.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	32	41	25	11	65	177	0	0	0	297	292	64
Future Volume (vph)	32	41	25	11	65	177	0	0	0	297	292	64
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
Hourly flow rate (vph)	34	43	26	12	68	186	0	0	0	313	307	67

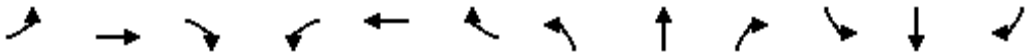
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	103	266	467	221
Volume Left (vph)	34	12	313	0
Volume Right (vph)	26	186	0	67
Hadj (s)	0.11	-0.20	0.57	0.01
Departure Headway (s)	6.2	5.6	6.2	5.6
Degree Utilization, x	0.18	0.41	0.80	0.34
Capacity (veh/h)	544	615	574	631
Control Delay (s)	10.5	12.4	27.9	10.3
Approach Delay (s)	10.5	12.4	22.3	
Approach LOS	B	B	C	

Intersection Summary				
Delay	18.6			
Level of Service	C			
Intersection Capacity Utilization	43.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	59	0	0	0	112	189
Future Volume (Veh/h)	59	0	0	0	112	189
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	65	0	0	0	123	208
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	350	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	350	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	88	100			92	
cM capacity (veh/h)	545	1050			1545	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	65	192	139
Volume Left	65	123	0
Volume Right	0	0	0
cSH	545	1545	1700
Volume to Capacity	0.12	0.08	0.08
Queue Length 95th (ft)	10	6	0
Control Delay (s)	12.5	5.0	0.0
Lane LOS	B	A	
Approach Delay (s)	12.5	2.9	
Approach LOS	B		

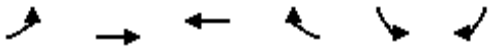
Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	45	5	17	50	0	0	0	0	145	92	7
Future Volume (vph)	0	45	5	17	50	0	0	0	0	145	92	7
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
Hourly flow rate (vph)	0	50	6	19	56	0	0	0	0	161	102	8

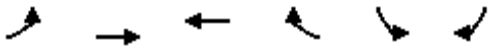
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	56	75	212	59
Volume Left (vph)	0	19	161	0
Volume Right (vph)	6	0	0	8
Hadj (s)	0.16	0.27	0.60	0.13
Departure Headway (s)	4.9	5.0	5.4	5.0
Degree Utilization, x	0.08	0.10	0.32	0.08
Capacity (veh/h)	692	683	646	704
Control Delay (s)	8.3	8.5	9.8	7.2
Approach Delay (s)	8.3	8.5	9.2	
Approach LOS	A	A	A	

Intersection Summary				
Delay	9.0			
Level of Service	A			
Intersection Capacity Utilization	24.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	633	207	0	572	506
Future Volume (vph)	0	633	207	0	572	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4631	4673		3127	1442
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4631	4673		3127	1442
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	703	230	0	636	562
RTOR Reduction (vph)	0	0	0	0	0	331
Lane Group Flow (vph)	0	703	230	0	636	231
Heavy Vehicles (%)	12%	12%	11%	12%	12%	12%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		49.9	49.9		26.8	26.8
Effective Green, g (s)		49.9	49.9		26.8	26.8
Actuated g/C Ratio		0.55	0.55		0.30	0.30
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2567	2590		931	429
v/s Ratio Prot		c0.15	0.05		c0.20	
v/s Ratio Perm						0.16
v/c Ratio		0.27	0.09		0.68	0.54
Uniform Delay, d1		10.5	9.4		27.9	26.4
Progression Factor		1.00	0.98		1.00	1.00
Incremental Delay, d2		0.3	0.1		2.1	1.3
Delay (s)		10.8	9.3		29.9	27.7
Level of Service		B	A		C	C
Approach Delay (s)		10.8	9.3		28.9	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	266	910	208	111	0	0
Future Volume (vph)	266	910	208	111	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.99	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3127	3223	3080	1312		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3127	3223	3080	1312		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	302	1034	236	126	0	0
RTOR Reduction (vph)	0	0	3	32	0	0
Lane Group Flow (vph)	302	1034	251	76	0	0
Heavy Vehicles (%)	12%	12%	11%	12%	12%	12%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	14.1	90.0	63.0	63.0		
Effective Green, g (s)	14.1	90.0	63.0	63.0		
Actuated g/C Ratio	0.16	1.00	0.70	0.70		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	489	3223	2156	918		
v/s Ratio Prot	c0.10	c0.32	0.08			
v/s Ratio Perm				0.06		
v/c Ratio	0.62	0.32	0.12	0.08		
Uniform Delay, d1	35.4	0.0	4.4	4.3		
Progression Factor	0.90	1.00	1.00	1.00		
Incremental Delay, d2	2.2	0.3	0.1	0.2		
Delay (s)	34.2	0.3	4.5	4.5		
Level of Service	C	A	A	A		
Approach Delay (s)		7.9	4.5		0.0	
Approach LOS		A	A		A	

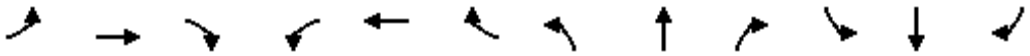
Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	715	0	0	290	423	214	0	348	0	0	0
Future Volume (vph)	119	715	0	0	290	423	214	0	348	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3958	1197		1556	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3958	1197		1556	2450			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	124	745	0	0	302	441	223	0	362	0	0	0
RTOR Reduction (vph)	0	0	0	0	97	102	0	0	265	0	0	0
Lane Group Flow (vph)	124	745	0	0	426	118	0	223	98	0	0	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	10.6	69.0			53.7	53.7		20.8	20.8			
Effective Green, g (s)	10.6	69.0			53.7	53.7		20.8	20.8			
Actuated g/C Ratio	0.11	0.69			0.54	0.54		0.21	0.21			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	320	3085			2125	642		323	509			
v/s Ratio Prot	c0.04	c0.17			0.11							
v/s Ratio Perm						0.10		0.14	0.04			
v/c Ratio	0.39	0.24			0.20	0.18		0.69	0.19			
Uniform Delay, d1	41.7	5.8			12.0	11.9		36.6	32.7			
Progression Factor	0.96	0.84			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.2			0.2	0.6		6.2	0.2			
Delay (s)	40.8	5.0			12.2	12.5		42.9	32.9			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		10.1			12.3			36.7			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	268	127	98	751	0	590
Future Volume (vph)	268	127	98	751	0	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4256		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4256		3019	4472		2450
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	319	151	117	894	0	702
RTOR Reduction (vph)	31	0	0	0	0	625
Lane Group Flow (vph)	439	0	117	894	0	77
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	78.9		10.9	100.0		10.9
Effective Green, g (s)	78.9		10.9	100.0		10.9
Actuated g/C Ratio	0.79		0.11	1.00		0.11
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3357		329	4472		267
v/s Ratio Prot	0.10		c0.04	c0.20		0.03
v/s Ratio Perm						
v/c Ratio	0.13		0.36	0.20		0.29
Uniform Delay, d1	2.5		41.3	0.0		41.0
Progression Factor	0.31		0.85	1.00		1.00
Incremental Delay, d2	0.1		0.7	0.1		0.6
Delay (s)	0.8		35.8	0.1		41.6
Level of Service	A		D	A		D
Approach Delay (s)	0.8			4.2	41.6	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	144	26	230	376	141	47	23	134	127	50	81
Future Volume (vph)	20	144	26	230	376	141	47	23	134	127	50	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1556	4370		1556	4289			1585	1392		2894	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.79	
Satd. Flow (perm)	1556	4370		1556	4289			911	1392		2338	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	157	28	250	409	153	51	25	146	138	54	88
RTOR Reduction (vph)	0	14	0	0	39	0	0	0	123	0	74	0
Lane Group Flow (vph)	22	171	0	250	523	0	0	76	23	0	206	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.4	49.1		21.0	65.1			15.7	15.7		15.7	
Effective Green, g (s)	4.4	49.1		21.0	65.1			15.7	15.7		15.7	
Actuated g/C Ratio	0.04	0.49		0.21	0.65			0.16	0.16		0.16	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	68	2145		326	2792			143	218		367	
v/s Ratio Prot	c0.01	0.04		c0.16	c0.12							
v/s Ratio Perm								0.08	0.02		c0.09	
v/c Ratio	0.32	0.08		0.77	0.19			0.53	0.11		0.56	
Uniform Delay, d1	46.4	13.5		37.2	6.9			38.8	36.1		39.0	
Progression Factor	1.00	1.00		0.82	0.84			1.00	1.00		1.00	
Incremental Delay, d2	1.0	0.1		9.2	0.1			5.6	0.4		2.7	
Delay (s)	47.4	13.6		39.7	5.9			44.3	36.5		41.7	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		17.1			16.3			39.2			41.7	
Approach LOS		B			B			D			D	

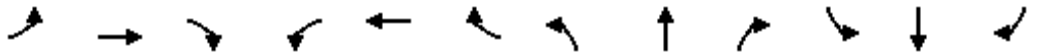
Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	101	75	61	89	93	38
Future Vol, veh/h	101	75	61	89	93	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	15	15	15	15	15	15
Mvmt Flow	120	89	73	106	111	45
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	10	8.3	10.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	71%	0%	100%	0%	0%
Vol Thru, %	0%	57%	0%	100%	100%
Vol Right, %	29%	43%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	176	61	45	45
LT Vol	93	0	61	0	0
Through Vol	0	101	0	45	45
RT Vol	38	75	0	0	0
Lane Flow Rate	156	210	73	53	53
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.252	0.297	0.12	0.08	0.051
Departure Headway (Hd)	5.828	5.111	5.938	5.434	3.464
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	614	702	603	659	1029
Service Time	3.577	2.847	3.675	3.171	1.201
HCM Lane V/C Ratio	0.254	0.299	0.121	0.08	0.052
HCM Control Delay	10.5	10	9.5	8.6	6.4
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	1	1.2	0.4	0.3	0.2

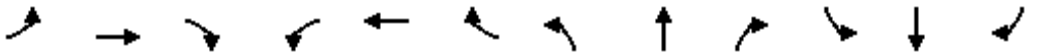


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	187	23	82	397	4	29	0	22	0	0	15
Future Volume (vph)	28	187	23	82	397	4	29	0	22	0	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1570	4436		1570	4504			1570	1404		1429	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1570	4436		1570	4504			1652	1404		1429	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	195	24	85	414	4	30	0	23	0	0	16
RTOR Reduction (vph)	0	17	0	0	1	0	0	0	22	0	15	0
Lane Group Flow (vph)	29	202	0	85	417	0	0	30	1	0	1	0
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	9.4		5.4	14.0			1.9	1.9		1.9	
Effective Green, g (s)	0.8	9.4		5.4	14.0			1.9	1.9		1.9	
Actuated g/C Ratio	0.03	0.30		0.17	0.45			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	40	1349		274	2040			101	86		87	
v/s Ratio Prot	0.02	0.05		c0.05	c0.09						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.72	0.15		0.31	0.20			0.30	0.02		0.01	
Uniform Delay, d1	14.9	7.8		11.1	5.1			13.9	13.6		13.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	42.4	0.1		0.2	0.1			0.6	0.0		0.0	
Delay (s)	57.4	8.0		11.4	5.2			14.5	13.7		13.6	
Level of Service	E	A		B	A			B	B		B	
Approach Delay (s)		13.8			6.2			14.1			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	30.9	Sum of lost time (s)	14.2
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

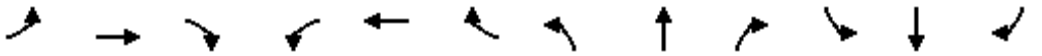
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	407	182	212	379	294	319
Future Volume (vph)	407	182	212	379	294	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1455	1626	4715	3155	1455
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1455	1626	4715	3155	1455
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	457	204	238	426	330	358
RTOR Reduction (vph)	0	39	0	0	0	278
Lane Group Flow (vph)	457	165	238	426	330	80
Heavy Vehicles (%)	10%	11%	11%	10%	11%	11%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	10.5	22.1	10.3	26.5	11.6	11.6
Effective Green, g (s)	10.5	22.1	10.3	26.5	11.6	11.6
Actuated g/C Ratio	0.20	0.42	0.20	0.51	0.22	0.22
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	950	617	321	2398	702	323
v/s Ratio Prot	c0.10	0.06	c0.15	0.09	c0.10	
v/s Ratio Perm		0.05				0.05
v/c Ratio	0.48	0.27	0.74	0.18	0.47	0.25
Uniform Delay, d1	18.4	9.7	19.6	6.9	17.6	16.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	8.9	0.0	0.5	0.4
Delay (s)	18.8	10.0	28.6	6.9	18.1	17.1
Level of Service	B	A	C	A	B	B
Approach Delay (s)	16.1			14.7	17.5	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	19.7
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



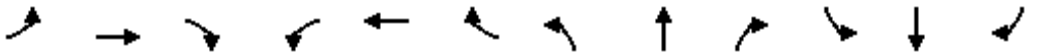
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	14	0	41	20	126	2	164	42	329	327	71
Future Volume (vph)	22	14	0	41	20	126	2	164	42	329	327	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	1667			1612	1417	1583	3069		1583	1667	1417
Flt Permitted	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1583	1667			1612	1417	1583	3069		1583	1667	1417
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	16	0	46	22	140	2	182	47	366	363	79
RTOR Reduction (vph)	0	0	0	0	0	125	0	23	0	0	0	36
Lane Group Flow (vph)	24	16	0	0	68	15	2	206	0	366	363	43
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	3.0	3.0			7.0	7.0	0.6	17.2		19.3	35.7	35.7
Effective Green, g (s)	3.0	3.0			7.0	7.0	0.6	17.2		19.3	35.7	35.7
Actuated g/C Ratio	0.05	0.05			0.11	0.11	0.01	0.26		0.29	0.54	0.54
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	71	75			170	149	14	796		460	897	763
v/s Ratio Prot	c0.02	0.01			c0.04		0.00	0.07		c0.23	c0.22	
v/s Ratio Perm						0.01						0.03
v/c Ratio	0.34	0.21			0.40	0.10	0.14	0.26		0.80	0.40	0.06
Uniform Delay, d1	30.7	30.5			27.7	26.8	32.6	19.5		21.7	9.0	7.3
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.5			1.9	0.4	1.7	0.2		8.6	0.4	0.0
Delay (s)	31.7	31.0			29.6	27.2	34.3	19.7		30.3	9.4	7.3
Level of Service	C	C			C	C	C	B		C	A	A
Approach Delay (s)		31.4			28.0			19.8			18.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



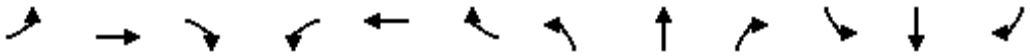
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	411	126	57	276	185	74	62	46	219	45	100
Future Volume (vph)	164	411	126	57	276	185	74	62	46	219	45	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3155	4715	1455	3155	4715	1468	1626	1603		1641	1712	2561
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3155	4715	1455	3155	4715	1468	1626	1603		1641	1712	2561
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	198	495	152	69	333	223	89	75	55	264	54	120
RTOR Reduction (vph)	0	0	115	0	0	182	0	39	0	0	0	76
Lane Group Flow (vph)	198	495	37	69	333	41	89	91	0	264	54	44
Heavy Vehicles (%)	11%	10%	11%	11%	10%	10%	11%	11%	11%	10%	11%	11%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.1	16.9	16.9	5.9	12.7	12.7	6.3	10.6		11.3	15.6	25.7
Effective Green, g (s)	10.1	16.9	16.9	5.9	12.7	12.7	6.3	10.6		11.3	15.6	25.7
Actuated g/C Ratio	0.15	0.24	0.24	0.09	0.18	0.18	0.09	0.15		0.16	0.22	0.37
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	459	1148	354	268	862	268	147	244		267	384	948
v/s Ratio Prot	c0.06	c0.10		0.02	0.07		0.05	c0.06		c0.16	c0.03	0.01
v/s Ratio Perm			0.03			0.03						0.01
v/c Ratio	0.43	0.43	0.10	0.26	0.39	0.15	0.61	0.37		0.99	0.14	0.05
Uniform Delay, d1	27.0	22.2	20.4	29.7	24.9	23.8	30.4	26.4		29.0	21.5	14.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.3	0.1	0.5	0.3	0.3	6.9	1.0		51.4	0.2	0.0
Delay (s)	27.7	22.4	20.5	30.2	25.2	24.1	37.2	27.4		80.4	21.7	14.0
Level of Service	C	C	C	C	C	C	D	C		F	C	B
Approach Delay (s)		23.3			25.4			31.4			55.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	24.7
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	53	26	352	37	178	10	328	855	328	451	4
Future Volume (vph)	7	53	26	352	37	178	10	328	855	328	451	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3213	3278	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3213	3278	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	9	70	34	463	49	234	13	432	1125	432	593	5
RTOR Reduction (vph)	0	0	28	0	0	154	0	0	253	0	1	0
Lane Group Flow (vph)	9	70	6	463	49	80	13	432	872	432	597	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	10%	10%	9%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.9	8.2	16.2	27.8	33.0	33.0	8.0	18.1	45.9	20.6	30.7	
Effective Green, g (s)	1.9	8.2	16.2	27.8	33.0	33.0	8.0	18.1	45.9	20.6	30.7	
Actuated g/C Ratio	0.02	0.08	0.17	0.29	0.34	0.34	0.08	0.19	0.47	0.21	0.32	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	32	277	323	912	587	504	135	612	773	682	1037	
v/s Ratio Prot	0.01	c0.02	0.00	0.15	0.03		0.01	0.13	c0.32	c0.13	0.18	
v/s Ratio Perm			0.00			0.05			0.27			
v/c Ratio	0.28	0.25	0.02	0.51	0.08	0.16	0.10	0.71	1.13	0.63	0.58	
Uniform Delay, d1	46.9	41.5	33.8	28.9	21.7	22.3	41.2	37.0	25.6	34.8	27.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.8	0.5	0.0	0.4	0.1	0.1	0.3	3.7	73.5	1.9	0.8	
Delay (s)	51.6	42.0	33.8	29.3	21.8	22.5	41.5	40.7	99.0	36.7	28.5	
Level of Service	D	D	C	C	C	C	D	D	F	D	C	
Approach Delay (s)		40.3			26.7			82.5			31.9	
Approach LOS		D			C			F			C	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

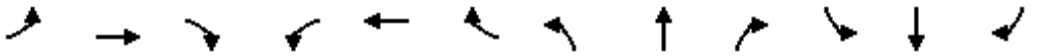


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	58	3	75	379	1209	0	0	424	808
Future Volume (vph)	0	0	0	58	3	75	379	1209	0	0	424	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1728	1468	1719	4715			4319	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1728	1468	1719	4715			4319	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	0	0	74	4	96	486	1550	0	0	544	1036
RTOR Reduction (vph)	0	0	0	0	0	81	0	0	0	0	190	0
Lane Group Flow (vph)	0	0	0	0	78	15	486	1550	0	0	1390	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	10%	5%	10%	5%	5%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					5.6	5.6	29.6	74.2			39.9	
Effective Green, g (s)					5.6	5.6	29.6	74.2			39.9	
Actuated g/C Ratio					0.06	0.06	0.33	0.82			0.44	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					107	91	565	3887			1914	
v/s Ratio Prot							c0.28	0.33			c0.32	
v/s Ratio Perm					0.05	0.01						
v/c Ratio					0.73	0.17	0.86	0.40			1.20dr	
Uniform Delay, d1					41.5	40.0	28.3	2.1			20.6	
Progression Factor					1.00	1.00	0.99	0.10			1.00	
Incremental Delay, d2					21.8	0.9	1.3	0.0			2.4	
Delay (s)					63.3	40.9	29.3	0.2			23.0	
Level of Service					E	D	C	A			C	
Approach Delay (s)		0.0			50.9			7.2			23.0	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	797	1	417	0	0	0	0	778	111	118	359	0
Future Volume (vph)	797	1	417	0	0	0	0	778	111	118	359	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1545	1489						4847		1626	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1545	1489						4847		1626	3438	
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	1077	1	564	0	0	0	0	1051	150	159	485	0
RTOR Reduction (vph)	0	99	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	851	692	0	0	0	0	0	1180	0	159	485	0
Heavy Vehicles (%)	11%	5%	5%	5%	5%	5%	5%	5%	5%	11%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	44.9	44.9						22.9		7.3	34.9	
Effective Green, g (s)	44.9	44.9						22.9		7.3	34.9	
Actuated g/C Ratio	0.50	0.50						0.25		0.08	0.39	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	770	742						1233		131	1333	
v/s Ratio Prot	c0.55	0.46						c0.24		c0.10	0.14	
v/s Ratio Perm												
v/c Ratio	1.11	0.93						0.96		1.21	0.36	
Uniform Delay, d1	22.6	21.1						33.1		41.4	19.6	
Progression Factor	1.00	1.00						1.00		0.80	0.71	
Incremental Delay, d2	65.2	18.5						17.2		135.7	0.6	
Delay (s)	87.7	39.6						50.3		168.7	14.4	
Level of Service	F	D						D		F	B	
Approach Delay (s)		64.5			0.0			50.3			52.5	
Approach LOS		E			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	57.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	265.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	458	3	14	1	14	94	56	337	1	39	179	545
Future Vol, veh/h	458	3	14	1	14	94	56	337	1	39	179	545
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	664	4	20	1	20	136	81	488	1	57	259	790
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	84.1	28.3	52.4	521.4
HCM LOS	F	D	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	93%	100%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	99%	0%	1%	0%	0%	13%	0%	100%	10%
Vol Right, %	0%	0%	1%	0%	6%	0%	0%	87%	0%	0%	90%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	225	113	238	237	1	1	108	39	119	605
LT Vol	56	0	0	238	220	1	1	0	39	0	0
Through Vol	0	225	112	0	3	0	0	14	0	119	60
RT Vol	0	0	1	0	14	0	0	94	0	0	545
Lane Flow Rate	81	326	164	345	343	1	1	157	57	173	876
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.245	0.937	0.473	0.99	0.978	0.002	0.002	0.49	0.172	0.502	2.385
Departure Headway (Hd)	12.807	12.285	12.278	12.032	11.955	14.585	14.585	13.421	10.964	10.447	9.796
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	282	296	296	304	305	247	247	271	328	346	377
Service Time	10.507	9.985	9.978	9.732	9.655	12.285	12.285	11.121	8.712	8.195	7.544
HCM Lane V/C Ratio	0.287	1.101	0.554	1.135	1.125	0.004	0.004	0.579	0.174	0.5	2.324
HCM Control Delay	19.6	74.2	25.5	85.7	82.4	17.3	17.3	28.4	16	23.3	652.3
HCM Lane LOS	C	F	D	F	F	C	C	D	C	C	F
HCM 95th-tile Q	0.9	9.1	2.4	10.4	10.1	0	0	2.5	0.6	2.7	68.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	24	353	6	31	344
Future Volume (Veh/h)	4	24	353	6	31	344
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	4	26	406	7	36	395
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	873	406			406	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	873	406			406	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	96			97	
cM capacity (veh/h)	296	620			1091	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	30	406	7	36	395
Volume Left	4	0	0	36	0
Volume Right	26	0	7	0	0
cSH	541	1700	1700	1091	1700
Volume to Capacity	0.06	0.24	0.00	0.03	0.23
Queue Length 95th (ft)	4	0	0	3	0
Control Delay (s)	12.0	0.0	0.0	8.4	0.0
Lane LOS	B			A	
Approach Delay (s)	12.0	0.0		0.7	
Approach LOS	B				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

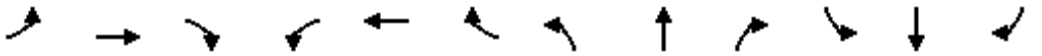
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	992	167	51	783	213	76
Future Volume (vph)	992	167	51	783	213	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	4715	1538	1719	4715	3252	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	4715	1538	1719	4715	3252	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1078	182	55	851	232	83
RTOR Reduction (vph)	0	103	0	0	46	0
Lane Group Flow (vph)	1078	79	55	851	269	0
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases		4				
Actuated Green, G (s)	20.3	20.3	4.1	28.4	10.1	
Effective Green, g (s)	20.3	20.3	4.1	28.4	10.1	
Actuated g/C Ratio	0.44	0.44	0.09	0.61	0.22	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2058	671	151	2879	706	
v/s Ratio Prot	c0.23		0.03	c0.18	c0.08	
v/s Ratio Perm		0.05				
v/c Ratio	0.52	0.12	0.36	0.30	0.38	
Uniform Delay, d1	9.6	7.8	20.0	4.3	15.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.1	1.5	0.1	0.3	
Delay (s)	9.8	7.9	21.5	4.4	15.9	
Level of Service	A	A	C	A	B	
Approach Delay (s)	9.5			5.4	15.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	46.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑↑	↱		↑↑↑↑
Traffic Volume (veh/h)	0	0	967	210	0	932
Future Volume (Veh/h)	0	0	967	210	0	932
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	1051	228	0	1013
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			292			366
pX, platoon unblocked						
vC, conflicting volume	1304	350			1279	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1304	350			1279	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	100			100	
cM capacity (veh/h)	143	626			502	

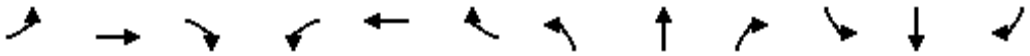
Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	350	350	350	228	253	253	253	253
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	228	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.21	0.21	0.21	0.13	0.15	0.15	0.15	0.15
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								
Approach Delay (s)	0.0				0.0			
Approach LOS								

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		



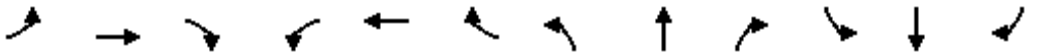
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	279	547	266	80	570	96	117	4	30	78	9	179
Future Volume (vph)	279	547	266	80	570	96	117	4	30	78	9	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.88	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1497		1559	1371	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1497		1559	1371	1395
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	300	588	286	86	613	103	126	4	32	84	10	192
RTOR Reduction (vph)	0	0	199	0	0	78	0	27	0	0	76	90
Lane Group Flow (vph)	300	588	87	86	613	25	126	9	0	76	30	14
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.0	20.6	20.6	5.6	16.5	16.5	11.1	11.1		9.1	9.1	9.1
Effective Green, g (s)	9.0	20.6	20.6	5.6	16.5	16.5	11.1	11.1		9.1	9.1	9.1
Actuated g/C Ratio	0.13	0.30	0.30	0.08	0.24	0.24	0.16	0.16		0.13	0.13	0.13
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	423	1434	446	263	1149	357	269	245		209	184	187
v/s Ratio Prot	c0.09	c0.12		0.03	c0.13		c0.08	0.01		c0.05	0.02	
v/s Ratio Perm			0.06			0.02						0.01
v/c Ratio	0.71	0.41	0.20	0.33	0.53	0.07	0.47	0.04		0.36	0.16	0.07
Uniform Delay, d1	28.1	18.7	17.4	29.3	22.3	19.7	25.6	23.8		26.7	25.9	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.4	0.2	0.2	0.7	0.5	0.1	1.3	0.1		1.1	0.4	0.2
Delay (s)	33.5	18.9	17.6	30.0	22.7	19.8	26.9	23.9		27.7	26.3	25.8
Level of Service	C	B	B	C	C	B	C	C		C	C	C
Approach Delay (s)		22.3			23.1			26.2			26.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



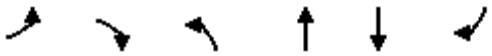
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	470	257	1154	478	76	195	164	453	52	239	55
Future Volume (vph)	84	470	257	1154	478	76	195	164	453	52	239	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4848	1468	1703	4729		3183	3282	1468	3183	1679	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4848	1468	1703	4729		3183	3282	1468	3183	1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	90	505	276	1241	514	82	210	176	487	56	257	59
RTOR Reduction (vph)	0	0	147	0	14	0	0	0	390	0	6	0
Lane Group Flow (vph)	90	505	129	1241	582	0	210	176	97	56	310	0
Heavy Vehicles (%)	10%	7%	10%	6%	7%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	13.0	12.8	12.8	79.3	79.1		8.4	29.8	29.8	3.4	24.8	
Effective Green, g (s)	13.0	12.8	12.8	79.3	79.1		8.4	29.8	29.8	3.4	24.8	
Actuated g/C Ratio	0.09	0.09	0.09	0.53	0.53		0.06	0.20	0.20	0.02	0.17	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	142	413	125	900	2493		178	652	291	72	277	
v/s Ratio Prot	0.05	c0.10		c0.73	0.12		c0.07	0.05		0.02	c0.18	
v/s Ratio Perm			0.09						0.07			
v/c Ratio	0.63	1.22	1.03	1.38	0.23		1.18	0.27	0.33	0.78	1.12	
Uniform Delay, d1	66.2	68.6	68.6	35.4	19.1		70.8	50.9	51.6	72.9	62.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.9	120.2	88.7	177.5	0.0		124.1	1.0	3.0	39.9	90.2	
Delay (s)	75.1	188.8	157.3	212.8	19.2		194.9	51.9	54.6	112.8	152.8	
Level of Service	E	F	F	F	B		F	D	D	F	F	
Approach Delay (s)		167.1			150.0			87.8			146.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	139.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



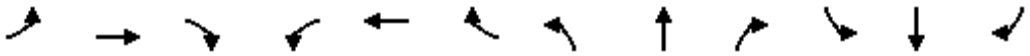
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	0	114	77	31	225	93	863	261	0	1544	64
Future Volume (vph)	30	0	114	77	31	225	93	863	261	0	1544	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1626	1455		1545	1591	1495	3155	3312	1455		4759	1509
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1626	1455		1545	1591	1495	3155	3312	1455		4759	1509
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	31	0	119	80	32	234	97	899	272	0	1608	67
RTOR Reduction (vph)	0	111	0	0	0	207	0	0	76	0	0	26
Lane Group Flow (vph)	31	8	0	55	57	27	97	899	196	0	1608	41
Heavy Vehicles (%)	11%	11%	11%	11%	11%	8%	11%	9%	11%	11%	9%	7%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	7.8	7.8		10.3	10.3	10.3	8.6	86.6	86.6		73.3	73.3
Effective Green, g (s)	7.8	7.8		10.3	10.3	10.3	8.6	86.6	86.6		73.3	73.3
Actuated g/C Ratio	0.06	0.06		0.09	0.09	0.09	0.07	0.72	0.72		0.61	0.61
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	105	94		132	136	128	226	2390	1050		2906	921
v/s Ratio Prot	c0.02	0.01		0.04	c0.04		0.03	c0.27			c0.34	
v/s Ratio Perm						0.02			0.13			0.03
v/c Ratio	0.30	0.08		0.42	0.42	0.21	0.43	0.38	0.19		0.55	0.04
Uniform Delay, d1	53.5	52.7		52.0	52.0	51.1	53.3	6.4	5.4		13.7	9.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.98	0.50	0.10		1.00	1.00
Incremental Delay, d2	1.6	0.4		2.1	2.1	0.8	1.2	0.4	0.4		0.8	0.1
Delay (s)	55.1	53.1		54.1	54.1	51.9	53.5	3.6	0.9		14.5	9.4
Level of Service	E	D		D	D	D	D	A	A		B	A
Approach Delay (s)		53.5			52.6			6.8			14.3	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	611	230	69	618	471	397
Future Volume (vph)	611	230	69	618	471	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3183	2538	3127	4715	3312	1468
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3183	2538	3127	4715	3312	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	643	242	73	651	496	418
RTOR Reduction (vph)	0	177	0	0	0	41
Lane Group Flow (vph)	643	65	73	651	496	377
Heavy Vehicles (%)	10%	12%	12%	10%	9%	10%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	32.2	32.2	7.0	77.6	65.9	98.1
Effective Green, g (s)	32.2	32.2	7.0	77.6	65.9	98.1
Actuated g/C Ratio	0.27	0.27	0.06	0.65	0.55	0.82
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	854	681	182	3049	1818	1262
v/s Ratio Prot	c0.20		c0.02	0.14	0.15	c0.08
v/s Ratio Perm		0.03				0.18
v/c Ratio	0.75	0.10	0.40	0.21	0.27	0.30
Uniform Delay, d1	40.3	33.0	54.5	8.7	14.3	2.6
Progression Factor	1.00	1.00	1.00	1.00	0.30	0.31
Incremental Delay, d2	3.8	0.1	1.4	0.2	0.3	0.1
Delay (s)	44.0	33.0	55.9	8.9	4.6	0.9
Level of Service	D	C	E	A	A	A
Approach Delay (s)	41.0			13.6	2.9	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	83	71	41	21	77	417	0	0	0	199	236	84
Future Volume (vph)	83	71	41	21	77	417	0	0	0	199	236	84
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
Hourly flow rate (vph)	88	76	44	22	82	444	0	0	0	212	251	89

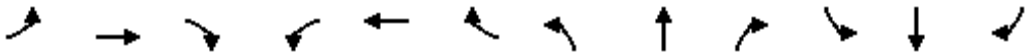
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	208	548	338	215
Volume Left (vph)	88	22	212	0
Volume Right (vph)	44	444	0	89
Hadj (s)	0.15	-0.25	0.53	-0.12
Departure Headway (s)	6.6	5.6	7.2	6.5
Degree Utilization, x	0.38	0.86	0.67	0.39
Capacity (veh/h)	514	548	482	533
Control Delay (s)	13.6	32.9	22.7	12.4
Approach Delay (s)	13.6	32.9	18.7	
Approach LOS	B	D	C	

Intersection Summary				
Delay		23.8		
Level of Service		C		
Intersection Capacity Utilization		66.7%	ICU Level of Service	C
Analysis Period (min)		15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	0	0	0	81	194
Future Volume (Veh/h)	79	0	0	0	81	194
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	82	0	0	0	84	202
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	269	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	269	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	87	100			95	
cM capacity (veh/h)	632	1050			1545	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	82	151	135
Volume Left	82	84	0
Volume Right	0	0	0
cSH	632	1545	1700
Volume to Capacity	0.13	0.05	0.08
Queue Length 95th (ft)	11	4	0
Control Delay (s)	11.5	4.3	0.0
Lane LOS	B	A	
Approach Delay (s)	11.5	2.3	
Approach LOS	B		

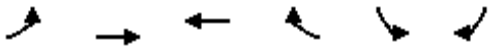
Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	40	30	39	30	0	0	0	0	120	154	8
Future Volume (vph)	0	40	30	39	30	0	0	0	0	120	154	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	41	31	40	31	0	0	0	0	124	159	8

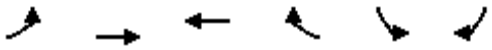
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	72	71	204	88
Volume Left (vph)	0	40	124	0
Volume Right (vph)	31	0	0	8
Hadj (s)	-0.02	0.35	0.54	0.17
Departure Headway (s)	4.7	5.1	5.4	5.0
Degree Utilization, x	0.09	0.10	0.31	0.12
Capacity (veh/h)	714	665	649	693
Control Delay (s)	8.2	8.7	9.6	7.5
Approach Delay (s)	8.2	8.7	9.0	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.8			
Level of Service	A			
Intersection Capacity Utilization	25.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	675	441	0	175	296
Future Volume (vph)	0	675	441	0	175	296
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4631	4631		3099	1442
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4631	4631		3099	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	711	464	0	184	312
RTOR Reduction (vph)	0	0	0	0	0	203
Lane Group Flow (vph)	0	711	464	0	184	109
Heavy Vehicles (%)	13%	12%	12%	13%	13%	12%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		63.5	63.5		13.2	13.2
Effective Green, g (s)		63.5	63.5		13.2	13.2
Actuated g/C Ratio		0.71	0.71		0.15	0.15
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3267	3267		454	211
v/s Ratio Prot		c0.15	0.10		0.06	
v/s Ratio Perm						c0.08
v/c Ratio		0.22	0.14		0.41	0.52
Uniform Delay, d1		4.6	4.3		34.8	35.5
Progression Factor		1.00	1.43		1.00	1.00
Incremental Delay, d2		0.2	0.1		0.6	2.1
Delay (s)		4.8	6.3		35.4	37.6
Level of Service		A	A		D	D
Approach Delay (s)		4.8	6.3		36.8	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	443	391	446	465	0	0
Future Volume (vph)	443	391	446	465	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.96	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3127	3223	2943	1301		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3127	3223	2943	1301		
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	527	465	531	554	0	0
RTOR Reduction (vph)	0	0	35	55	0	0
Lane Group Flow (vph)	527	465	718	277	0	0
Heavy Vehicles (%)	12%	12%	12%	13%	13%	13%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	20.5	90.0	56.6	56.6		
Effective Green, g (s)	20.5	90.0	56.6	56.6		
Actuated g/C Ratio	0.23	1.00	0.63	0.63		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	712	3223	1850	818		
v/s Ratio Prot	c0.17	0.14	c0.24			
v/s Ratio Perm				0.21		
v/c Ratio	0.74	0.14	0.39	0.34		
Uniform Delay, d1	32.3	0.0	8.2	7.9		
Progression Factor	0.84	1.00	1.00	1.00		
Incremental Delay, d2	4.1	0.1	0.6	1.1		
Delay (s)	31.2	0.1	8.8	9.0		
Level of Service	C	A	A	A		
Approach Delay (s)		16.6	8.9		0.0	
Approach LOS		B	A		A	

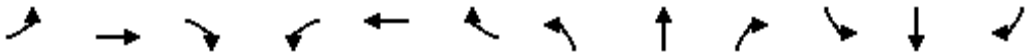
Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	482	0	0	529	764	62	1	237	0	0	0
Future Volume (vph)	395	482	0	0	529	764	62	1	237	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3960	1197		1561	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3960	1197		1561	2450			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	407	497	0	0	545	788	64	1	244	0	0	0
RTOR Reduction (vph)	0	0	0	0	104	184	0	0	222	0	0	0
Lane Group Flow (vph)	407	497	0	0	835	210	0	65	22	0	0	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	26.3	89.7			58.7	58.7		10.1	10.1			
Effective Green, g (s)	26.3	89.7			58.7	58.7		10.1	10.1			
Actuated g/C Ratio	0.24	0.82			0.53	0.53		0.09	0.09			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	721	3646			2113	638		143	224			
v/s Ratio Prot	c0.13	0.11			c0.21							
v/s Ratio Perm						0.18		0.04	0.01			
v/c Ratio	0.56	0.14			0.39	0.33		0.45	0.10			
Uniform Delay, d1	36.8	2.1			15.2	14.5		47.3	45.8			
Progression Factor	0.89	1.03			1.00	1.00		1.00	1.00			
Incremental Delay, d2	1.0	0.1			0.6	1.4		2.3	0.2			
Delay (s)	33.8	2.2			15.7	15.9		49.6	46.0			
Level of Service	C	A			B	B		D	D			
Approach Delay (s)		16.5			15.8			46.7			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	589	278	219	693	0	292
Future Volume (vph)	589	278	219	693	0	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4256		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4256		3019	4472		2450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	620	293	231	729	0	307
RTOR Reduction (vph)	77	0	0	0	0	210
Lane Group Flow (vph)	836	0	231	729	0	97
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	64.9		34.9	110.0		34.9
Effective Green, g (s)	64.9		34.9	110.0		34.9
Actuated g/C Ratio	0.59		0.32	1.00		0.32
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2511		957	4472		777
v/s Ratio Prot	c0.20		c0.08	0.16		0.04
v/s Ratio Perm						
v/c Ratio	0.33		0.24	0.16		0.13
Uniform Delay, d1	11.5		27.8	0.0		26.7
Progression Factor	0.54		0.75	1.00		1.00
Incremental Delay, d2	0.3		0.1	0.1		0.1
Delay (s)	6.6		20.9	0.1		26.8
Level of Service	A		C	A		C
Approach Delay (s)	6.6			5.1	26.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	376	49	238	291	176	40	48	272	185	85	77
Future Volume (vph)	49	376	49	238	291	176	40	48	272	185	85	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.94			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1556	4394		1556	4219			1601	1392		2931	
Flt Permitted	0.95	1.00		0.95	1.00			0.68	1.00		0.77	
Satd. Flow (perm)	1556	4394		1556	4219			1114	1392		2311	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	388	51	245	300	181	41	49	280	191	88	79
RTOR Reduction (vph)	0	11	0	0	70	0	0	0	222	0	29	0
Lane Group Flow (vph)	51	428	0	245	411	0	0	90	58	0	329	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.9	51.2		21.7	64.4			22.9	22.9		22.9	
Effective Green, g (s)	7.9	51.2		21.7	64.4			22.9	22.9		22.9	
Actuated g/C Ratio	0.07	0.47		0.20	0.59			0.21	0.21		0.21	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	111	2045		306	2470			231	289		481	
v/s Ratio Prot	c0.03	c0.10		c0.16	0.10							
v/s Ratio Perm								0.08	0.04		c0.14	
v/c Ratio	0.46	0.21		0.80	0.17			0.39	0.20		0.68	
Uniform Delay, d1	49.0	17.4		42.1	10.5			37.5	36.0		40.2	
Progression Factor	1.00	1.00		0.80	0.34			1.00	1.00		1.00	
Incremental Delay, d2	1.1	0.2		13.1	0.1			1.8	0.6		4.6	
Delay (s)	50.1	17.6		46.9	3.7			39.3	36.6		44.8	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		21.0			18.3			37.2			44.8	
Approach LOS		C			B			D			D	

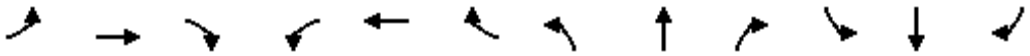
Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	118	140	97	162	66	50
Future Vol, veh/h	118	140	97	162	66	50
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	136	161	111	186	76	57
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	11.5	8.7	10.7
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	57%	0%	100%	0%	0%
Vol Thru, %	0%	46%	0%	100%	100%
Vol Right, %	43%	54%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	258	97	81	81
LT Vol	66	0	97	0	0
Through Vol	0	118	0	81	81
RT Vol	50	140	0	0	0
Lane Flow Rate	133	297	111	93	93
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.226	0.42	0.185	0.141	0.09
Departure Headway (Hd)	6.103	5.094	5.97	5.466	3.478
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	585	703	600	654	1021
Service Time	3.877	2.844	3.722	3.218	1.229
HCM Lane V/C Ratio	0.227	0.422	0.185	0.142	0.091
HCM Control Delay	10.7	11.5	10.1	9.1	6.6
HCM Lane LOS	B	B	B	A	A
HCM 95th-tile Q	0.9	2.1	0.7	0.5	0.3

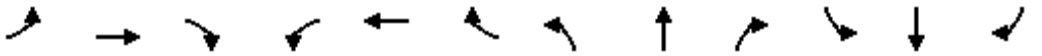


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	453	26	62	355	0	30	0	22	0	1	13
Future Volume (vph)	27	453	26	62	355	0	30	0	22	0	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4435		1556	4472			1556	1392		1432	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4435		1556	4472			1638	1392		1432	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	492	28	67	386	0	33	0	24	0	1	14
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	23	0	13	0
Lane Group Flow (vph)	29	513	0	67	386	0	0	33	1	0	2	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	12.0		2.1	13.3			1.8	1.8		1.8	
Effective Green, g (s)	0.8	12.0		2.1	13.3			1.8	1.8		1.8	
Actuated g/C Ratio	0.03	0.40		0.07	0.44			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	41	1768		108	1976			97	83		85	
v/s Ratio Prot	0.02	c0.12		c0.04	0.09						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.71	0.29		0.62	0.20			0.34	0.02		0.02	
Uniform Delay, d1	14.5	6.2		13.6	5.1			13.6	13.3		13.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	36.5	0.3		7.7	0.1			0.8	0.0		0.0	
Delay (s)	51.1	6.4		21.3	5.2			14.3	13.3		13.4	
Level of Service	D	A		C	A			B	B		B	
Approach Delay (s)		8.8			7.6			13.9			13.4	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	30.1	Sum of lost time (s)	14.2
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

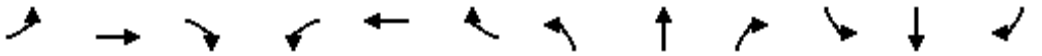
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	516	379	351	494	334	230
Future Volume (vph)	516	379	351	494	334	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1442	1612	4759	3127	1442
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1442	1612	4759	3127	1442
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	561	412	382	537	363	250
RTOR Reduction (vph)	0	177	0	0	0	198
Lane Group Flow (vph)	561	235	382	537	363	52
Heavy Vehicles (%)	10%	12%	12%	9%	12%	12%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	13.8	28.5	22.3	41.8	14.7	14.7
Effective Green, g (s)	13.8	28.5	22.3	41.8	14.7	14.7
Actuated g/C Ratio	0.20	0.40	0.32	0.59	0.21	0.21
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	922	582	509	2821	652	300
v/s Ratio Prot	c0.12	0.08	c0.24	0.11	c0.12	
v/s Ratio Perm		0.08				0.04
v/c Ratio	0.61	0.40	0.75	0.19	0.56	0.17
Uniform Delay, d1	25.9	15.0	21.6	6.6	25.0	22.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.5	6.2	0.0	1.0	0.3
Delay (s)	27.0	15.4	27.8	6.6	26.0	23.2
Level of Service	C	B	C	A	C	C
Approach Delay (s)	22.1			15.4	24.9	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	70.5	Sum of lost time (s)	19.7
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



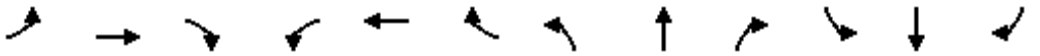
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	19	2	52	17	409	4	405	55	237	175	68
Future Volume (vph)	111	19	2	52	17	409	4	405	55	237	175	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.99			1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1570	1632			1592	1404	1570	3083		1570	1652	1404
Flt Permitted	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1570	1632			1592	1404	1570	3083		1570	1652	1404
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	129	22	2	60	20	476	5	471	64	276	203	79
RTOR Reduction (vph)	0	2	0	0	0	404	0	11	0	0	0	41
Lane Group Flow (vph)	129	22	0	0	80	72	5	524	0	276	203	38
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.9	7.9			11.8	11.8	0.7	21.9		17.1	38.1	38.1
Effective Green, g (s)	7.9	7.9			11.8	11.8	0.7	21.9		17.1	38.1	38.1
Actuated g/C Ratio	0.10	0.10			0.15	0.15	0.01	0.28		0.22	0.49	0.49
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	158	164			239	211	14	860		342	801	681
v/s Ratio Prot	c0.08	0.01			0.05		0.00	c0.17		c0.18	0.12	
v/s Ratio Perm						c0.05						0.03
v/c Ratio	0.82	0.14			0.33	0.34	0.36	0.61		0.81	0.25	0.06
Uniform Delay, d1	34.6	32.2			29.8	29.9	38.7	24.6		29.1	11.9	10.7
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.5	0.1			1.0	1.2	5.6	1.4		12.3	0.2	0.0
Delay (s)	60.1	32.3			30.9	31.1	44.3	26.0		41.5	12.1	10.7
Level of Service	E	C			C	C	D	C		D	B	B
Approach Delay (s)		55.7			31.1			26.1			26.4	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



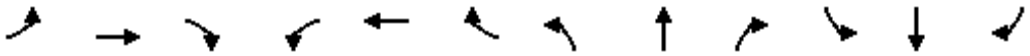
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	370	103	70	508	321	163	61	82	284	105	311
Future Volume (vph)	174	370	103	70	508	321	163	61	82	284	105	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	4715	1442	3127	4673	1455	1612	1551		1641	1696	2538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	4715	1442	3127	4673	1455	1612	1551		1641	1696	2538
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	191	407	113	77	558	353	179	67	90	312	115	342
RTOR Reduction (vph)	0	0	88	0	0	285	0	64	0	0	0	210
Lane Group Flow (vph)	191	407	25	77	558	68	179	93	0	312	115	132
Heavy Vehicles (%)	12%	10%	12%	12%	11%	11%	12%	12%	12%	10%	12%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.1	17.1	17.1	7.9	14.9	14.9	17.7	14.1		13.3	9.7	19.8
Effective Green, g (s)	10.1	17.1	17.1	7.9	14.9	14.9	17.7	14.1		13.3	9.7	19.8
Actuated g/C Ratio	0.13	0.22	0.22	0.10	0.19	0.19	0.23	0.18		0.17	0.13	0.26
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	409	1045	319	320	903	281	370	283		283	213	651
v/s Ratio Prot	c0.06	0.09		0.02	c0.12		0.11	c0.06		c0.19	c0.07	0.03
v/s Ratio Perm			0.02			0.05						0.03
v/c Ratio	0.47	0.39	0.08	0.24	0.62	0.24	0.48	0.33		1.10	0.54	0.20
Uniform Delay, d1	31.0	25.6	23.8	31.8	28.5	26.3	25.7	27.4		31.9	31.6	22.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.2	0.1	0.4	1.3	0.5	1.0	0.7		83.8	2.6	0.2
Delay (s)	31.9	25.8	23.9	32.2	29.8	26.8	26.7	28.1		115.7	34.2	22.6
Level of Service	C	C	C	C	C	C	C	C		F	C	C
Approach Delay (s)		27.1			28.9			27.4			62.1	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	77.1	Sum of lost time (s)	24.7
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	56	19	1067	78	458	31	460	580	376	239	4
Future Volume (vph)	7	56	19	1067	78	458	31	460	580	376	239	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	3213	1743	1495	1656	3312	1482	3273	3305	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1656	3312	1482	3213	1743	1495	1656	3312	1482	3273	3305	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	8	63	21	1199	88	515	35	517	652	422	269	4
RTOR Reduction (vph)	0	0	18	0	0	284	0	0	62	0	1	0
Lane Group Flow (vph)	8	63	3	1199	88	231	35	517	590	422	272	0
Heavy Vehicles (%)	9%	9%	9%	9%	9%	8%	9%	9%	9%	7%	9%	9%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.9	11.2	19.5	51.8	60.0	60.0	8.3	27.0	78.8	21.4	40.1	
Effective Green, g (s)	1.9	11.2	19.5	51.8	60.0	60.0	8.3	27.0	78.8	21.4	40.1	
Actuated g/C Ratio	0.01	0.08	0.15	0.39	0.45	0.45	0.06	0.20	0.59	0.16	0.30	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	23	277	216	1244	782	670	102	668	873	523	991	
v/s Ratio Prot	0.00	0.02	0.00	c0.37	0.05		0.02	c0.16	0.26	c0.13	0.08	
v/s Ratio Perm			0.00			c0.15			0.14			
v/c Ratio	0.35	0.23	0.01	0.96	0.11	0.34	0.34	0.77	0.68	0.81	0.27	
Uniform Delay, d1	65.3	57.2	48.9	40.0	21.4	24.0	60.1	50.5	18.7	54.2	35.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.9	0.4	0.0	17.4	0.1	0.3	2.0	5.6	2.1	8.9	0.2	
Delay (s)	74.2	57.6	48.9	57.5	21.5	24.3	62.1	56.0	20.8	63.0	35.9	
Level of Service	E	E	D	E	C	C	E	E	C	E	D	
Approach Delay (s)		57.1			46.2			37.1			52.4	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	133.7	Sum of lost time (s)	23.4
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

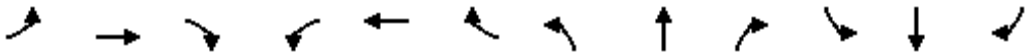


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	111	1	156	386	1307	0	0	502	1009
Future Volume (vph)	0	0	0	111	1	156	386	1307	0	0	502	1009
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1724	1468	1719	4715			4308	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1724	1468	1719	4715			4308	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	126	1	177	439	1485	0	0	570	1147
RTOR Reduction (vph)	0	0	0	0	0	78	0	0	0	0	239	0
Lane Group Flow (vph)	0	0	0	0	127	99	439	1485	0	0	1478	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	10%	5%	10%	5%	5%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					10.9	10.9	29.7	78.9			44.5	
Effective Green, g (s)					10.9	10.9	29.7	78.9			44.5	
Actuated g/C Ratio					0.11	0.11	0.30	0.79			0.44	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					187	160	510	3720			1917	
v/s Ratio Prot							c0.26	0.31			c0.34	
v/s Ratio Perm					0.07	0.07						
v/c Ratio					0.68	0.62	0.86	0.40			1.27dr	
Uniform Delay, d1					42.9	42.6	33.2	3.2			23.4	
Progression Factor					1.00	1.00	1.10	0.51			1.00	
Incremental Delay, d2					9.4	7.3	3.6	0.1			3.1	
Delay (s)					52.3	49.9	40.2	1.7			26.5	
Level of Service					D	D	D	A			C	
Approach Delay (s)		0.0			50.9			10.5			26.5	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1001	5	423	0	0	0	0	716	95	121	491	0
Future Volume (vph)	1001	5	423	0	0	0	0	716	95	121	491	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.91						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1504						4853		1641	3438	
Flt Permitted	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1504						4853		1641	3438	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1236	6	522	0	0	0	0	884	117	149	606	0
RTOR Reduction (vph)	0	57	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	915	792	0	0	0	0	0	984	0	149	606	0
Heavy Vehicles (%)	10%	5%	5%	5%	5%	5%	5%	5%	5%	10%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	52.9	52.9						22.8		9.4	36.9	
Effective Green, g (s)	52.9	52.9						22.8		9.4	36.9	
Actuated g/C Ratio	0.53	0.53						0.23		0.09	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	824	795						1106		154	1268	
v/s Ratio Prot	c0.59	0.53						c0.20		c0.09	0.18	
v/s Ratio Perm												
v/c Ratio	1.11	1.00						0.89		0.97	0.48	
Uniform Delay, d1	23.6	23.4						37.4		45.1	24.2	
Progression Factor	1.00	1.00						1.00		0.84	0.70	
Incremental Delay, d2	66.2	30.6						10.8		50.8	0.9	
Delay (s)	89.7	54.1						48.2		88.5	17.9	
Level of Service	F	D						D		F	B	
Approach Delay (s)		72.6			0.0			48.2			31.9	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	56.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	168.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	515	15	42	1	7	59	22	223	1	112	308	497
Future Vol, veh/h	515	15	42	1	7	59	22	223	1	112	308	497
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	678	20	55	1	9	78	29	293	1	147	405	654
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	74.8	18.8	24.6	276.9
HCM LOS	F	C	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	80%	100%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	99%	0%	5%	0%	0%	11%	0%	100%	17%
Vol Right, %	0%	0%	1%	0%	15%	0%	0%	89%	0%	0%	83%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	149	75	288	284	1	1	66	112	205	600
LT Vol	22	0	0	288	227	1	1	0	112	0	0
Through Vol	0	149	74	0	15	0	0	7	0	205	103
RT Vol	0	0	1	0	42	0	0	59	0	0	497
Lane Flow Rate	29	196	99	379	373	1	1	87	147	270	789
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.088	0.566	0.287	0.994	0.957	0.002	0.002	0.258	0.39	0.677	1.847
Departure Headway (Hd)	12.27	11.755	11.745	10.337	10.133	13.18	13.18	12.018	9.53	9.019	8.426
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	294	309	308	353	362	273	273	300	377	400	434
Service Time	9.97	9.455	9.445	8.037	7.833	10.88	10.88	9.718	7.304	6.793	6.199
HCM Lane V/C Ratio	0.099	0.634	0.321	1.074	1.03	0.004	0.004	0.29	0.39	0.675	1.818
HCM Control Delay	16.2	28.7	19.1	79.7	69.9	15.9	15.9	18.8	18.3	28.9	410.1
HCM Lane LOS	C	D	C	F	F	C	C	C	C	D	F
HCM 95th-tile Q	0.3	3.3	1.2	11.3	10.4	0	0	1	1.8	4.8	50.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	3	466	1	1	399
Future Volume (Veh/h)	0	3	466	1	1	399
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	4	568	1	1	487
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1057	568			568	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1057	568			568	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	236	500			947	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	568	1	1	487
Volume Left	0	0	0	1	0
Volume Right	4	0	1	0	0
cSH	500	1700	1700	947	1700
Volume to Capacity	0.01	0.33	0.00	0.00	0.29
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	12.3	0.0	0.0	8.8	0.0
Lane LOS	B			A	
Approach Delay (s)	12.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

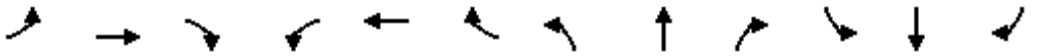
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	743	212	103	1023	582	184
Future Volume (vph)	743	212	103	1023	582	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	4759	1538	1719	4759	3260	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	4759	1538	1719	4759	3260	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	808	230	112	1112	633	200
RTOR Reduction (vph)	0	156	0	0	40	0
Lane Group Flow (vph)	808	74	112	1112	793	0
Heavy Vehicles (%)	9%	5%	5%	9%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases		4				
Actuated Green, G (s)	19.4	19.4	7.7	31.1	21.5	
Effective Green, g (s)	19.4	19.4	7.7	31.1	21.5	
Actuated g/C Ratio	0.32	0.32	0.13	0.51	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1523	492	218	2442	1156	
v/s Ratio Prot	c0.17		0.07	c0.23	c0.24	
v/s Ratio Perm		0.05				
v/c Ratio	0.53	0.15	0.51	0.46	0.69	
Uniform Delay, d1	16.9	14.7	24.7	9.4	16.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.1	2.0	0.1	1.7	
Delay (s)	17.2	14.9	26.7	9.5	18.4	
Level of Service	B	B	C	A	B	
Approach Delay (s)	16.7			11.1	18.4	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	758	426	0	1590
Future Volume (Veh/h)	0	0	758	426	0	1590
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	824	463	0	1728
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			292			366
pX, platoon unblocked						
vC, conflicting volume	1256	275			1287	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1256	275			1287	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	100			100	
cM capacity (veh/h)	154	702			498	

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	275	275	275	463	432	432	432	432
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	463	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.16	0.16	0.27	0.25	0.25	0.25	0.25
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								
Approach Delay (s)	0.0				0.0			
Approach LOS								

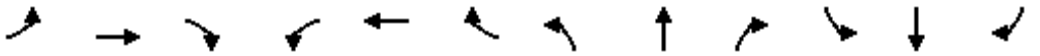
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	253	560	162	49	549	86	252	8	65	113	5	304
Future Volume (vph)	253	560	162	49	549	86	252	8	65	113	5	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.86	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	1498		1559	1354	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	1498		1559	1354	1395
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	272	602	174	53	590	92	271	9	70	122	5	327
RTOR Reduction (vph)	0	0	123	0	0	71	0	53	0	0	133	145
Lane Group Flow (vph)	272	602	51	53	590	21	271	26	0	110	41	25
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.1	23.6	23.6	4.4	18.2	18.2	19.3	19.3		12.1	12.1	12.1
Effective Green, g (s)	9.1	23.6	23.6	4.4	18.2	18.2	19.3	19.3		12.1	12.1	12.1
Actuated g/C Ratio	0.11	0.29	0.29	0.05	0.23	0.23	0.24	0.24		0.15	0.15	0.15
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	358	1391	429	173	1073	331	392	358		233	203	209
v/s Ratio Prot	c0.09	0.13		0.02	c0.12		c0.17	0.02		c0.07	0.03	
v/s Ratio Perm			0.03			0.01						0.02
v/c Ratio	0.76	0.43	0.12	0.31	0.55	0.06	0.69	0.07		0.47	0.20	0.12
Uniform Delay, d1	34.7	23.1	20.9	36.7	27.6	24.5	28.0	23.8		31.4	30.1	29.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	0.2	0.1	1.0	0.6	0.1	5.2	0.1		1.5	0.5	0.3
Delay (s)	43.7	23.3	21.1	37.7	28.2	24.6	33.2	23.9		32.9	30.5	30.0
Level of Service	D	C	C	D	C	C	C	C		C	C	C
Approach Delay (s)		28.2			28.4			31.1			30.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

OPENING YEAR 2020 BASELINE PLUS PROJECT CONDITIONS WITH MITIGATION



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	427	196	622	376	61	135	186	724	61	164	54
Future Volume (vph)	48	427	196	622	376	61	135	186	724	61	164	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4803	1468	3273	4690		3183	3282	1468	3183	1663	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4803	1468	3273	4690		3183	3282	1468	3183	1663	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	474	218	691	418	68	150	207	804	68	182	60
RTOR Reduction (vph)	0	0	191	0	21	0	0	0	108	0	11	0
Lane Group Flow (vph)	53	474	27	691	465	0	150	207	696	68	231	0
Heavy Vehicles (%)	10%	8%	10%	7%	8%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	8.4	12.2	12.2	33.6	37.4		11.3	17.2	50.8	12.3	18.2	
Effective Green, g (s)	8.4	12.2	12.2	33.6	37.4		11.3	17.2	50.8	12.3	18.2	
Actuated g/C Ratio	0.08	0.12	0.12	0.34	0.37		0.11	0.17	0.51	0.12	0.18	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	137	585	179	1099	1754		359	564	829	391	302	
v/s Ratio Prot	0.03	c0.10		0.21	c0.10		c0.05	0.06	c0.28	0.02	0.14	
v/s Ratio Perm			0.02						0.19			
v/c Ratio	0.39	0.81	0.15	0.63	0.27		0.42	0.37	0.84	0.17	0.76	
Uniform Delay, d1	43.4	42.8	39.3	27.9	21.8		41.3	36.6	21.1	39.3	38.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.80	0.88	0.98	1.00	1.00	
Incremental Delay, d2	1.8	8.3	0.4	1.1	0.1		0.7	1.7	6.9	0.2	16.6	
Delay (s)	45.2	51.1	39.6	29.1	21.8		33.6	34.0	27.6	39.5	55.5	
Level of Service	D	D	D	C	C		C	C	C	D	E	
Approach Delay (s)		47.3			26.1			29.5			52.0	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

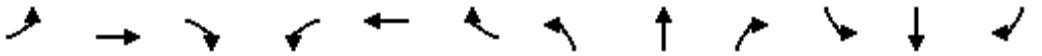
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	458	3	14	1	14	94	56	337	1	39	179	545
Future Volume (vph)	458	3	14	1	14	94	56	337	1	39	179	545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.88		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1583		3335	1810	1538	1719	4938		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1583		3335	1810	1538	1719	4938		1719	3438	1538
Peak-hour factor, PHF	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Adj. Flow (vph)	664	4	20	1	20	136	81	488	1	57	259	790
RTOR Reduction (vph)	0	13	0	0	0	116	0	0	0	0	0	596
Lane Group Flow (vph)	664	11	0	1	20	20	81	489	0	57	259	194
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	16.3	25.8		0.8	10.3	10.3	6.8	19.6		4.3	17.1	17.1
Effective Green, g (s)	16.3	25.8		0.8	10.3	10.3	6.8	19.6		4.3	17.1	17.1
Actuated g/C Ratio	0.23	0.37		0.01	0.15	0.15	0.10	0.28		0.06	0.25	0.25
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	782	587		38	268	227	168	1392		106	845	378
v/s Ratio Prot	c0.20	0.01		0.00	0.01		c0.05	0.10		0.03	0.08	
v/s Ratio Perm						c0.01						c0.13
v/c Ratio	0.85	0.02		0.03	0.07	0.09	0.48	0.35		0.54	0.31	0.51
Uniform Delay, d1	25.4	13.8		34.0	25.5	25.5	29.7	19.9		31.6	21.4	22.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.6	0.0		0.3	0.1	0.2	2.2	0.2		5.2	0.2	1.2
Delay (s)	34.0	13.9		34.2	25.6	25.7	31.9	20.0		36.8	21.6	23.8
Level of Service	C	B		C	C	C	C	C		D	C	C
Approach Delay (s)		33.3			25.8			21.7			23.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	19.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	470	257	1154	478	76	195	164	453	52	239	55
Future Volume (vph)	84	470	257	1154	478	76	195	164	453	52	239	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4848	1468	3303	4729		3183	3282	1468	3183	1679	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4848	1468	3303	4729		3183	3282	1468	3183	1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	90	505	276	1241	514	82	210	176	487	56	257	59
RTOR Reduction (vph)	0	0	210	0	20	0	0	0	38	0	8	0
Lane Group Flow (vph)	90	505	66	1241	576	0	210	176	449	56	308	0
Heavy Vehicles (%)	10%	7%	10%	6%	7%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	8.9	12.7	12.7	38.6	42.4		8.4	19.8	58.4	4.2	15.6	
Effective Green, g (s)	8.9	12.7	12.7	38.6	42.4		8.4	19.8	58.4	4.2	15.6	
Actuated g/C Ratio	0.09	0.13	0.13	0.39	0.42		0.08	0.20	0.58	0.04	0.16	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	146	615	186	1274	2005		267	649	857	133	261	
v/s Ratio Prot	0.05	c0.10		c0.38	c0.12		c0.07	0.05	0.20	0.02	c0.18	
v/s Ratio Perm			0.04						0.10			
v/c Ratio	0.62	0.82	0.35	0.97	0.29		0.79	0.27	0.52	0.42	1.18	
Uniform Delay, d1	43.9	42.5	39.9	30.2	18.9		44.9	34.0	12.5	46.7	42.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.5	8.6	1.2	19.1	0.1		14.1	1.0	0.6	2.1	112.7	
Delay (s)	51.4	51.2	41.0	49.4	19.0		59.0	35.0	13.0	48.9	154.9	
Level of Service	D	D	D	D	B		E	D	B	D	F	
Approach Delay (s)		48.0			39.5			28.5			139.0	
Approach LOS		D			D			C			F	

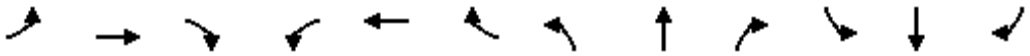
Intersection Summary			
HCM 2000 Control Delay	48.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	515	15	42	1	7	59	22	223	1	112	308	497
Future Volume (vph)	515	15	42	1	7	59	22	223	1	112	308	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.89		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1610		3335	1810	1538	1719	4937		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1610		3335	1810	1538	1719	4937		1719	3438	1538
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	678	20	55	1	9	78	29	293	1	147	405	654
RTOR Reduction (vph)	0	37	0	0	0	70	0	0	0	0	0	441
Lane Group Flow (vph)	678	38	0	1	9	8	29	294	0	147	405	213
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	14.5	20.3		0.9	6.7	6.7	1.9	15.1		7.2	20.4	20.4
Effective Green, g (s)	14.5	20.3		0.9	6.7	6.7	1.9	15.1		7.2	20.4	20.4
Actuated g/C Ratio	0.23	0.32		0.01	0.11	0.11	0.03	0.24		0.12	0.33	0.33
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	773	522		48	194	164	52	1192		198	1122	502
v/s Ratio Prot	c0.20	c0.02		0.00	0.00		0.02	0.06		c0.09	0.12	
v/s Ratio Perm						0.01						c0.14
v/c Ratio	0.88	0.07		0.02	0.05	0.05	0.56	0.25		0.74	0.36	0.43
Uniform Delay, d1	23.1	14.6		30.4	25.0	25.0	29.9	19.1		26.8	16.1	16.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	11.0	0.1		0.2	0.1	0.1	12.3	0.1		13.9	0.2	0.6
Delay (s)	34.1	14.6		30.5	25.1	25.2	42.2	19.2		40.7	16.3	17.0
Level of Service	C	B		C	C	C	D	B		D	B	B
Approach Delay (s)		32.2			25.2			21.3			19.7	
Approach LOS		C			C			C			B	

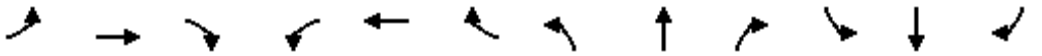
Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HORIZON YEAR 2035 BASELINE CONDITIONS



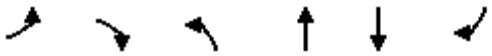
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	635	323	474	569	265	417	526	474	336	269	351
Future Volume (vph)	79	635	323	474	569	265	417	526	474	336	269	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1468	1641	4491		1641	1604		3183	1581	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1468	1641	4491		1641	1604		3183	1581	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	668	340	499	599	279	439	554	499	354	283	369
RTOR Reduction (vph)	0	0	304	0	55	0	0	22	0	0	31	0
Lane Group Flow (vph)	83	668	36	499	823	0	439	1031	0	354	621	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	12.5	15.8	15.8	31.3	34.6		26.3	64.9		13.3	51.9	
Effective Green, g (s)	12.5	15.8	15.8	31.3	34.6		26.3	64.9		13.3	51.9	
Actuated g/C Ratio	0.08	0.11	0.11	0.21	0.23		0.18	0.43		0.09	0.35	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	496	154	342	1035		287	693		282	547	
v/s Ratio Prot	0.05	c0.14		c0.30	c0.18		0.27	c0.64		0.11	c0.39	
v/s Ratio Perm			0.02									
v/c Ratio	0.61	1.35	0.23	1.46	0.79		1.53	1.49		1.26	1.13	
Uniform Delay, d1	66.4	67.1	61.5	59.4	54.4		61.9	42.5		68.3	49.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.9	169.1	0.8	222.1	4.3		255.2	227.4		140.5	81.2	
Delay (s)	74.3	236.2	62.3	281.5	58.6		317.1	270.0		208.9	130.3	
Level of Service	E	F	E	F	E		F	F		F	F	
Approach Delay (s)		169.7			139.4			283.8			157.9	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	193.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	125.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	0	127	572	59	483	101	927	575	0	1044	51
Future Volume (vph)	28	0	127	572	59	483	101	927	575	0	1044	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1577	1468	3183	3282	1468		4715	1468
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1577	1468	3183	3282	1468		4715	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	29	0	134	602	62	508	106	976	605	0	1099	54
RTOR Reduction (vph)	0	126	0	0	0	89	0	0	315	0	0	34
Lane Group Flow (vph)	29	8	0	331	333	419	106	976	290	0	1099	20
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	7.0	7.0		40.2	40.2	40.2	7.5	57.5	57.5		45.3	45.3
Effective Green, g (s)	7.0	7.0		40.2	40.2	40.2	7.5	57.5	57.5		45.3	45.3
Actuated g/C Ratio	0.06	0.06		0.34	0.34	0.34	0.06	0.48	0.48		0.38	0.38
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	95	85		522	528	491	198	1572	703		1779	554
v/s Ratio Prot	c0.02	0.01		0.21	0.21		0.03	c0.30			0.23	
v/s Ratio Perm						c0.29			0.20			0.01
v/c Ratio	0.31	0.09		0.63	0.63	0.85	0.54	0.62	0.41		0.62	0.04
Uniform Delay, d1	54.2	53.5		33.7	33.6	37.2	54.6	23.2	20.3		30.3	23.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.80	0.66	1.25		1.00	1.00
Incremental Delay, d2	1.8	0.5		2.5	2.5	13.4	2.5	1.7	1.6		1.6	0.1
Delay (s)	56.0	54.0		36.2	36.1	50.6	46.2	17.0	26.9		31.9	23.7
Level of Service	E	D		D	D	D	D	B	C		C	C
Approach Delay (s)		54.3			42.4			22.4			31.6	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

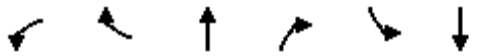


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	661	1132	250	939	1073	240
Future Volume (vph)	661	1132	250	939	1073	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3183	2584	3183	4715	3282	1468
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3183	2584	3183	4715	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	696	1192	263	988	1129	253
RTOR Reduction (vph)	0	221	0	0	0	4
Lane Group Flow (vph)	696	971	263	988	1129	249
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	46.5	46.5	11.5	63.3	47.1	93.6
Effective Green, g (s)	46.5	46.5	11.5	63.3	47.1	93.6
Actuated g/C Ratio	0.39	0.39	0.10	0.53	0.39	0.78
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1233	1001	305	2487	1288	1207
v/s Ratio Prot	0.22		c0.08	0.21	c0.34	0.08
v/s Ratio Perm		c0.38				0.09
v/c Ratio	0.56	0.97	0.86	0.40	0.88	0.21
Uniform Delay, d1	28.8	36.1	53.5	16.9	33.8	3.5
Progression Factor	1.00	1.00	1.00	1.00	0.61	0.11
Incremental Delay, d2	0.6	21.2	21.3	0.5	7.1	0.1
Delay (s)	29.4	57.2	74.8	17.4	27.7	0.5
Level of Service	C	E	E	B	C	A
Approach Delay (s)	47.0			29.5	22.7	
Approach LOS	D			C	C	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	146	62	27	151	169	65	260	18	638	495	167
Future Volume (vph)	32	146	62	27	151	169	65	260	18	638	495	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	3282	1468	3183	3282	2584	3183	3282	1468	3183	4715	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	3282	1468	3183	3282	2584	3183	3282	1468	3183	4715	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	154	65	28	159	178	68	274	19	672	521	176
RTOR Reduction (vph)	0	0	56	0	0	154	0	0	16	0	0	92
Lane Group Flow (vph)	34	154	9	28	159	24	68	274	3	672	521	84
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	1.7	9.1	9.1	1.7	9.1	9.1	5.0	12.1	12.1	25.0	32.1	32.1
Effective Green, g (s)	1.7	9.1	9.1	1.7	9.1	9.1	5.0	12.1	12.1	25.0	32.1	32.1
Actuated g/C Ratio	0.03	0.14	0.14	0.03	0.14	0.14	0.07	0.18	0.18	0.37	0.48	0.48
Clearance Time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	80	443	198	80	443	348	236	589	263	1180	2245	1230
v/s Ratio Prot	c0.01	0.05		0.01	c0.05		0.02	c0.08		c0.21	0.11	
v/s Ratio Perm			0.01			0.01			0.00			0.03
v/c Ratio	0.42	0.35	0.04	0.35	0.36	0.07	0.29	0.47	0.01	0.57	0.23	0.07
Uniform Delay, d1	32.4	26.5	25.4	32.3	26.5	25.5	29.5	24.8	22.7	16.9	10.4	9.6
Progression 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
Incremental Delay, d2	3.6	0.5	0.1	2.6	0.5	0.1	0.7	0.6	0.0	0.6	0.1	0.0
Delay (s)	36.0	26.9	25.5	34.9	27.0	25.5	30.2	25.3	22.8	17.5	10.4	9.6
Level of Service	D	C	C	C	C	C	C	C	C	B	B	A
Approach Delay (s)		27.8			26.9			26.1			13.8	
Approach LOS		C			C			C			B	

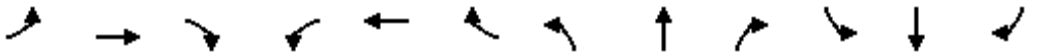
Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	19.5
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	111	107	125	13	197	279
Future Volume (Veh/h)	111	107	125	13	197	279
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	117	113	132	14	207	294
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1296
pX, platoon unblocked						
vC, conflicting volume	651	73			146	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	651	73			146	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	64	88			85	
cM capacity (veh/h)	326	949			1377	

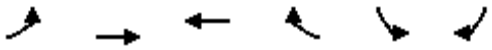
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	117	113	88	58	207	98	98	98
Volume Left	117	0	0	0	207	0	0	0
Volume Right	0	113	0	14	0	0	0	0
cSH	326	949	1700	1700	1377	1700	1700	1700
Volume to Capacity	0.36	0.12	0.05	0.03	0.15	0.06	0.06	0.06
Queue Length 95th (ft)	40	10	0	0	13	0	0	0
Control Delay (s)	22.1	9.3	0.0	0.0	8.1	0.0	0.0	0.0
Lane LOS	C	A			A			
Approach Delay (s)	15.8		0.0		3.3			
Approach LOS	C							

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		



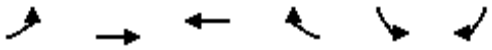
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	37	6	21	54	124	3	21	5	212	91	8
Future Volume (vph)	14	37	6	21	54	124	3	21	5	212	91	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lane Util. Factor		1.00		1.00	0.95	0.88		1.00		1.00	0.95	1.00
Frt		0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected		0.99		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1683		1641	3282	2584		1680		1641	3282	1468
Flt Permitted		0.90		0.78	1.00	1.00		0.97		0.74	1.00	1.00
Satd. Flow (perm)		1526		1355	3282	2584		1630		1274	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	39	6	22	57	131	3	22	5	223	96	8
RTOR Reduction (vph)	0	5	0	0	0	102	0	3	0	0	0	5
Lane Group Flow (vph)	0	55	0	22	57	29	0	27	0	223	96	3
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)		5.1		5.1	5.1	5.1		8.1		8.1	8.1	8.1
Effective Green, g (s)		5.1		5.1	5.1	5.1		8.1		8.1	8.1	8.1
Actuated g/C Ratio		0.22		0.22	0.22	0.22		0.35		0.35	0.35	0.35
Clearance Time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		335		297	721	568		569		444	1145	512
v/s Ratio Prot					0.02						0.03	
v/s Ratio Perm		c0.04		0.02		0.01		0.02		c0.18		0.00
v/c Ratio		0.17		0.07	0.08	0.05		0.05		0.50	0.08	0.01
Uniform Delay, d1		7.3		7.2	7.2	7.1		5.0		6.0	5.1	4.9
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2		0.1	0.0	0.0		0.0		0.9	0.0	0.0
Delay (s)		7.6		7.3	7.2	7.2		5.0		6.9	5.1	4.9
Level of Service		A		A	A	A		A		A	A	A
Approach Delay (s)		7.6			7.2			5.0			6.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	23.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	1110	345	0	853	479
Future Volume (vph)	0	1110	345	0	853	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4715	4715		3183	1468
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4715	4715		3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1168	363	0	898	504
RTOR Reduction (vph)	0	0	0	0	0	178
Lane Group Flow (vph)	0	1168	363	0	898	326
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		42.6	42.6		34.1	34.1
Effective Green, g (s)		42.6	42.6		34.1	34.1
Actuated g/C Ratio		0.47	0.47		0.38	0.38
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2231	2231		1206	556
v/s Ratio Prot		c0.25	0.08		c0.28	
v/s Ratio Perm						0.22
v/c Ratio		0.52	0.16		0.74	0.59
Uniform Delay, d1		16.6	13.5		24.2	22.3
Progression Factor		1.00	0.15		1.00	1.00
Incremental Delay, d2		0.9	0.2		2.5	1.6
Delay (s)		17.5	2.2		26.7	23.9
Level of Service		B	A		C	C
Approach Delay (s)		17.5	2.2		25.7	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	466	1498	346	306	0	0
Future Volume (vph)	466	1498	346	306	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.96	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3183	3282	3032	1336		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3183	3282	3032	1336		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	491	1577	364	322	0	0
RTOR Reduction (vph)	0	0	22	61	0	0
Lane Group Flow (vph)	491	1577	455	148	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	19.3	90.0	57.8	57.8		
Effective Green, g (s)	19.3	90.0	57.8	57.8		
Actuated g/C Ratio	0.21	1.00	0.64	0.64		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	682	3282	1947	858		
v/s Ratio Prot	c0.15	c0.48	0.15			
v/s Ratio Perm				0.11		
v/c Ratio	0.72	0.48	0.23	0.17		
Uniform Delay, d1	32.8	0.0	6.8	6.5		
Progression Factor	1.10	1.00	1.00	1.00		
Incremental Delay, d2	3.1	0.4	0.3	0.4		
Delay (s)	39.2	0.4	7.1	6.9		
Level of Service	D	A	A	A		
Approach Delay (s)		9.6	7.0		0.0	
Approach LOS		A	A		A	

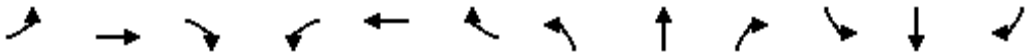
Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	1045	0	0	437	614	327	0	532	0	0	0
Future Volume (vph)	176	1045	0	0	437	614	327	0	532	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3183	4715			4181	1263		1641	2584			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3183	4715			4181	1263		1641	2584			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	1100	0	0	460	646	344	0	560	0	0	0
RTOR Reduction (vph)	0	0	0	0	107	179	0	0	80	0	0	0
Lane Group Flow (vph)	185	1100	0	0	676	144	0	344	480	0	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	11.6	60.9			44.6	44.6		28.9	28.9			
Effective Green, g (s)	11.6	60.9			44.6	44.6		28.9	28.9			
Actuated g/C Ratio	0.12	0.61			0.45	0.45		0.29	0.29			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	369	2871			1864	563		474	746			
v/s Ratio Prot	c0.06	c0.23			0.16							
v/s Ratio Perm						0.11		0.21	0.19			
v/c Ratio	0.50	0.38			0.36	0.26		0.73	0.64			
Uniform Delay, d1	41.5	10.0			18.3	17.3		32.0	31.0			
Progression Factor	0.93	0.69			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.9	0.3			0.5	1.1		5.5	1.9			
Delay (s)	39.7	7.2			18.9	18.4		37.5	33.0			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		11.9			18.7			34.7			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	451	220	169	1273	0	972
Future Volume (vph)	451	220	169	1273	0	972
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4483		3183	4715		2584
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4483		3183	4715		2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	475	232	178	1340	0	1023
RTOR Reduction (vph)	68	0	0	0	0	231
Lane Group Flow (vph)	639	0	178	1340	0	792
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	51.8		38.0	100.0		38.0
Effective Green, g (s)	51.8		38.0	100.0		38.0
Actuated g/C Ratio	0.52		0.38	1.00		0.38
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2322		1209	4715		981
v/s Ratio Prot	0.14		0.06	c0.28		c0.31
v/s Ratio Perm						
v/c Ratio	0.28		0.15	0.28		0.81
Uniform Delay, d1	13.5		20.4	0.0		27.7
Progression Factor	0.49		0.95	1.00		1.00
Incremental Delay, d2	0.3		0.1	0.1		4.9
Delay (s)	7.0		19.3	0.1		32.7
Level of Service	A		B	A		C
Approach Delay (s)	7.0			2.4	32.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	286	43	355	660	208	64	31	193	183	63	111
Future Volume (vph)	37	286	43	355	660	208	64	31	193	183	63	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	
Satd. Flow (prot)	1641	4623		1641	4546			1671	1468		3050	
Flt Permitted	0.95	1.00		0.95	1.00			0.47	1.00		0.77	
Satd. Flow (perm)	1641	4623		1641	4546			816	1468		2410	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	39	301	45	374	695	219	67	33	203	193	66	117
RTOR Reduction (vph)	0	18	0	0	37	0	0	0	162	0	70	0
Lane Group Flow (vph)	39	328	0	374	877	0	0	100	41	0	306	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.9	32.0		33.8	60.3			20.0	20.0		20.0	
Effective Green, g (s)	4.9	32.0		33.8	60.3			20.0	20.0		20.0	
Actuated g/C Ratio	0.05	0.32		0.34	0.60			0.20	0.20		0.20	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	80	1479		554	2741			163	293		482	
v/s Ratio Prot	0.02	0.07		c0.23	c0.19							
v/s Ratio Perm								0.12	0.03		c0.13	
v/c Ratio	0.49	0.22		0.68	0.32			0.61	0.14		0.64	
Uniform Delay, d1	46.3	24.9		28.4	9.8			36.5	32.9		36.7	
Progression Factor	1.00	1.00		0.97	0.74			1.00	1.00		1.00	
Incremental Delay, d2	1.7	0.3		2.5	0.3			8.4	0.4		3.4	
Delay (s)	48.0	25.2		30.0	7.5			44.8	33.3		40.0	
Level of Service	D	C		C	A			D	C		D	
Approach Delay (s)		27.5			14.0			37.1			40.0	
Approach LOS		C			B			D			D	

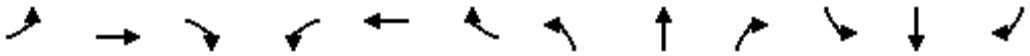
Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	170	134	145	182	162	69
Future Vol, veh/h	170	134	145	182	162	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	179	141	153	192	171	73
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	14.1	9.9	14.3
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	70%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	100%
Vol Right, %	30%	44%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	304	145	91	91
LT Vol	162	0	145	0	0
Through Vol	0	170	0	91	91
RT Vol	69	134	0	0	0
Lane Flow Rate	243	320	153	96	96
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.44	0.504	0.274	0.158	0.108
Departure Headway (Hd)	6.507	5.669	6.452	5.945	4.049
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	554	637	557	603	883
Service Time	4.24	3.401	4.185	3.678	1.782
HCM Lane V/C Ratio	0.439	0.502	0.275	0.159	0.109
HCM Control Delay	14.3	14.1	11.6	9.8	7.3
HCM Lane LOS	B	B	B	A	A
HCM 95th-tile Q	2.2	2.8	1.1	0.6	0.4

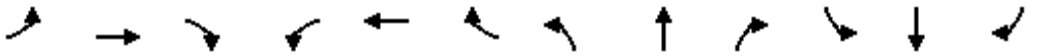


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	353	25	90	701	92	32	10	24	10	10	124
Future Volume (vph)	140	353	25	90	701	92	32	10	24	10	10	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		1.00	
Satd. Flow (prot)	1641	4669		1641	4633			1664	1468		1522	
Flt Permitted	0.95	1.00		0.95	1.00			0.79	1.00		0.97	
Satd. Flow (perm)	1641	4669		1641	4633			1358	1468		1480	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	372	26	95	738	97	34	11	25	11	11	131
RTOR Reduction (vph)	0	8	0	0	18	0	0	0	22	0	116	0
Lane Group Flow (vph)	147	390	0	95	817	0	0	45	3	0	37	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.6	21.1		4.8	18.3			5.0	5.0		5.0	
Effective Green, g (s)	7.6	21.1		4.8	18.3			5.0	5.0		5.0	
Actuated g/C Ratio	0.17	0.47		0.11	0.41			0.11	0.11		0.11	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	276	2184		174	1879			150	162		164	
v/s Ratio Prot	c0.09	c0.08		0.06	c0.18							
v/s Ratio Perm								c0.03	0.00		0.02	
v/c Ratio	0.53	0.18		0.55	0.43			0.30	0.02		0.22	
Uniform Delay, d1	17.1	7.0		19.1	9.7			18.4	17.9		18.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	1.0	0.1		1.9	0.3			0.4	0.0		0.3	
Delay (s)	18.1	7.1		21.0	10.0			18.9	17.9		18.5	
Level of Service	B	A		C	B			B	B		B	
Approach Delay (s)		10.1			11.1			18.5			18.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	14.2
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

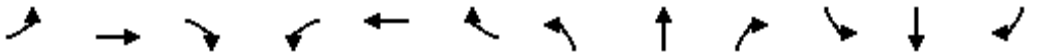
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	891	762	292	921	693	414
Future Volume (vph)	891	762	292	921	693	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1468	1641	4715	3183	1468
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1468	1641	4715	3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	938	802	307	969	729	436
RTOR Reduction (vph)	0	38	0	0	0	279
Lane Group Flow (vph)	938	764	307	969	729	157
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	22.6	56.7	18.6	46.9	34.1	34.1
Effective Green, g (s)	22.6	56.7	18.6	46.9	34.1	34.1
Actuated g/C Ratio	0.24	0.60	0.20	0.49	0.36	0.36
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1121	876	321	2327	1142	526
v/s Ratio Prot	0.20	c0.31	c0.19	0.21	0.23	
v/s Ratio Perm		0.21				0.11
v/c Ratio	0.84	0.87	0.96	0.42	0.64	0.30
Uniform Delay, d1	34.4	16.1	37.8	15.3	25.3	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.6	9.5	38.3	0.1	1.2	0.3
Delay (s)	40.0	25.6	76.1	15.4	26.5	22.2
Level of Service	D	C	E	B	C	C
Approach Delay (s)	33.4			30.0	24.9	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



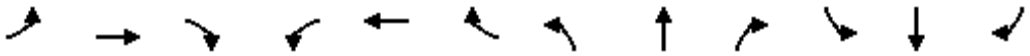
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	90	10	136	116	204	30	328	103	476	642	428
Future Volume (vph)	104	90	10	136	116	204	30	328	103	476	642	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1641	1700		1641	1727	1468	1641	3164		1641	1727	1468
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1641	1700		1641	1727	1468	1641	3164		1641	1727	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	95	11	143	122	215	32	345	108	501	676	451
RTOR Reduction (vph)	0	5	0	0	0	187	0	32	0	0	0	222
Lane Group Flow (vph)	109	101	0	143	122	28	32	421	0	501	676	229
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	8.4	8.4		10.9	10.9	10.9	2.3	17.0		28.3	42.8	42.8
Effective Green, g (s)	8.4	8.4		10.9	10.9	10.9	2.3	17.0		28.3	42.8	42.8
Actuated g/C Ratio	0.10	0.10		0.13	0.13	0.13	0.03	0.20		0.34	0.51	0.51
Clearance Time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0		3.7	3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	163	169		211	223	189	44	637		550	875	744
v/s Ratio Prot	c0.07	0.06		c0.09	0.07		0.02	0.13		c0.31	c0.39	
v/s Ratio Perm						0.02						0.16
v/c Ratio	0.67	0.60		0.68	0.55	0.15	0.73	0.66		0.91	0.77	0.31
Uniform Delay, d1	36.7	36.4		35.1	34.4	32.6	40.7	31.0		26.8	16.9	12.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.8	4.1		8.8	3.2	0.5	39.6	2.8		19.0	4.5	0.3
Delay (s)	44.5	40.5		43.9	37.6	33.1	80.3	33.8		45.9	21.3	12.5
Level of Service	D	D		D	D	C	F	C		D	C	B
Approach Delay (s)		42.5			37.5			36.9			26.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	84.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



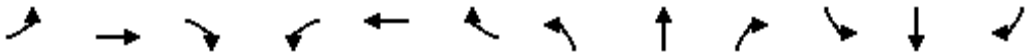
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	809	201	168	438	499	177	351	251	808	240	352
Future Volume (vph)	395	809	201	168	438	499	177	351	251	808	240	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1619		1641	1727	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1619		1641	1727	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	852	212	177	461	525	186	369	264	851	253	371
RTOR Reduction (vph)	0	0	182	0	0	461	0	18	0	0	0	134
Lane Group Flow (vph)	416	852	30	177	461	64	186	615	0	851	253	237
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	13.3	20.7	20.7	10.2	17.6	17.6	21.0	48.0		41.3	68.3	81.6
Effective Green, g (s)	13.3	20.7	20.7	10.2	17.6	17.6	21.0	48.0		41.3	68.3	81.6
Actuated g/C Ratio	0.09	0.14	0.14	0.07	0.12	0.12	0.14	0.33		0.29	0.47	0.56
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	292	673	209	224	572	178	237	536		467	814	1455
v/s Ratio Prot	c0.13	c0.18		0.06	0.10		0.11	c0.38		c0.52	0.15	0.01
v/s Ratio Perm			0.02			0.04						0.08
v/c Ratio	1.42	1.27	0.14	0.79	0.81	0.36	0.78	1.15		1.82	0.31	0.16
Uniform Delay, d1	65.8	62.1	54.4	66.3	62.0	58.5	59.8	48.5		51.8	23.7	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	209.9	131.3	0.3	17.1	8.1	1.2	15.6	86.4		378.4	0.2	0.1
Delay (s)	275.7	193.4	54.7	83.4	70.1	59.7	75.3	134.8		430.2	23.9	15.3
Level of Service	F	F	D	F	E	E	E	F		F	C	B
Approach Delay (s)		196.7			67.4			121.3			256.1	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	171.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	144.9	Sum of lost time (s)	24.7
Intersection Capacity Utilization	123.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	413	251	453	221	219	100	268	1016	442	473	41
Future Volume (vph)	41	413	251	453	221	219	100	268	1016	442	473	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1468	1641	3282	1468	3183	3243	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1468	1641	3282	1468	3183	3243	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	435	264	477	233	231	105	282	1069	465	498	43
RTOR Reduction (vph)	0	0	98	0	0	136	0	0	77	0	5	0
Lane Group Flow (vph)	43	435	166	477	233	95	105	282	992	465	536	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.6	20.9	34.1	38.4	49.6	49.6	13.2	15.9	54.3	23.5	26.2	
Effective Green, g (s)	8.6	20.9	34.1	38.4	49.6	49.6	13.2	15.9	54.3	23.5	26.2	
Actuated g/C Ratio	0.07	0.17	0.28	0.32	0.41	0.41	0.11	0.13	0.45	0.19	0.22	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	116	566	476	1010	707	601	179	431	721	618	702	
v/s Ratio Prot	0.03	c0.13	0.04	0.15	0.13		0.06	0.09	c0.44	c0.15	0.17	
v/s Ratio Perm			0.08			0.06			0.24			
v/c Ratio	0.37	0.77	0.35	0.47	0.33	0.16	0.59	0.65	1.38	0.75	0.76	
Uniform Delay, d1	53.6	47.7	34.6	33.2	24.4	22.5	51.3	49.9	33.4	46.0	44.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	6.2	0.4	0.4	0.3	0.1	4.8	3.6	177.7	5.2	4.9	
Delay (s)	55.6	54.0	35.1	33.5	24.6	22.6	56.1	53.5	211.1	51.2	49.4	
Level of Service	E	D	D	C	C	C	E	D	F	D	D	
Approach Delay (s)		47.3			28.6			169.4			50.2	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	86.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	121.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

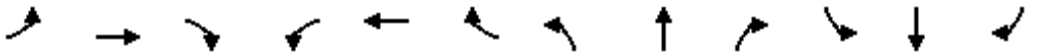


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	62	3	74	432	1333	0	0	449	869
Future Volume (vph)	0	0	0	62	3	74	432	1333	0	0	449	869
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1727	1468	1719	4715			4316	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1727	1468	1719	4715			4316	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	65	3	78	455	1403	0	0	473	915
RTOR Reduction (vph)	0	0	0	0	0	73	0	0	0	0	209	0
Lane Group Flow (vph)	0	0	0	0	68	5	455	1403	0	0	1179	0
Heavy Vehicles (%)	10%	10%	10%	5%	5%	10%	5%	10%	10%	10%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.0	7.0	31.7	82.8			46.4	
Effective Green, g (s)					7.0	7.0	31.7	82.8			46.4	
Actuated g/C Ratio					0.07	0.07	0.32	0.83			0.46	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					120	102	544	3904			2002	
v/s Ratio Prot							c0.26	0.30			c0.27	
v/s Ratio Perm					0.04	0.00						
v/c Ratio					0.57	0.05	0.84	0.36			1.00dr	
Uniform Delay, d1					45.0	43.4	31.7	2.1			19.8	
Progression Factor					1.00	1.00	1.09	0.23			1.00	
Incremental Delay, d2					6.0	0.2	3.4	0.1			1.3	
Delay (s)					51.0	43.6	38.0	0.6			21.0	
Level of Service					D	D	D	A			C	
Approach Delay (s)		0.0			47.1			9.7			21.0	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

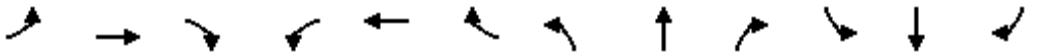
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



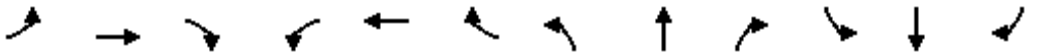
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	964	1	557	0	0	0	0	959	148	116	385	0
Future Volume (vph)	964	1	557	0	0	0	0	959	148	116	385	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1488						4841		1641	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1488						4841		1641	3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1015	1	586	0	0	0	0	1009	156	122	405	0
RTOR Reduction (vph)	0	114	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	832	656	0	0	0	0	0	1144	0	122	405	0
Heavy Vehicles (%)	10%	5%	5%	10%	10%	10%	10%	5%	5%	10%	5%	10%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	52.9	52.9						24.9		7.3	36.9	
Effective Green, g (s)	52.9	52.9						24.9		7.3	36.9	
Actuated g/C Ratio	0.53	0.53						0.25		0.07	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	824	787						1205		119	1268	
v/s Ratio Prot	c0.53	0.44						c0.24		c0.07	0.12	
v/s Ratio Perm												
v/c Ratio	1.01	0.83						0.95		1.03	0.32	
Uniform Delay, d1	23.6	19.8						36.9		46.4	22.6	
Progression Factor	1.00	1.00						1.00		0.80	0.71	
Incremental Delay, d2	33.8	7.5						16.3		80.9	0.5	
Delay (s)	57.3	27.4						53.2		118.1	16.5	
Level of Service	E	C						D		F	B	
Approach Delay (s)		42.9			0.0			53.2			40.0	
Approach LOS		D			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	463	52	57	56	86	336	106	380	84	120	245	552
Future Volume (vph)	463	52	57	56	86	336	106	380	84	120	245	552
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1668		3335	1810	1538	1719	4806		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1668		3335	1810	1538	1719	4806		1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	487	55	60	59	91	354	112	400	88	126	258	581
RTOR Reduction (vph)	0	37	0	0	0	257	0	33	0	0	0	465
Lane Group Flow (vph)	487	78	0	59	91	97	112	455	0	126	258	116
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	13.3	22.7		3.1	12.5	12.5	10.0	15.4		8.2	13.6	13.6
Effective Green, g (s)	13.3	22.7		3.1	12.5	12.5	10.0	15.4		8.2	13.6	13.6
Actuated g/C Ratio	0.19	0.33		0.05	0.18	0.18	0.15	0.23		0.12	0.20	0.20
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	648	553		151	330	281	251	1082		206	683	305
v/s Ratio Prot	c0.15	0.05		0.02	0.05		c0.07	c0.09		c0.07	0.08	
v/s Ratio Perm						c0.06						0.08
v/c Ratio	0.75	0.14		0.39	0.28	0.34	0.45	0.42		0.61	0.38	0.38
Uniform Delay, d1	26.0	16.0		31.7	24.1	24.4	26.7	22.7		28.6	23.7	23.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	0.1		1.7	0.5	0.7	1.3	0.3		5.3	0.4	0.8
Delay (s)	30.9	16.1		33.4	24.5	25.1	27.9	22.9		33.9	24.1	24.5
Level of Service	C	B		C	C	C	C	C		C	C	C
Approach Delay (s)		28.1			26.0			23.9			25.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	68.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	521	301	520	642	219	105	730	178	219	677	128
Future Volume (vph)	184	521	301	520	642	219	105	730	178	219	677	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	548	317	547	676	231	111	768	187	231	713	135
RTOR Reduction (vph)	0	0	140	0	0	136	0	0	122	0	0	95
Lane Group Flow (vph)	194	548	177	547	676	95	111	768	65	231	713	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.0	23.9	23.9	20.8	33.7	33.7	8.0	29.8	29.8	9.3	31.1	31.1
Effective Green, g (s)	11.0	23.9	23.9	20.8	33.7	33.7	8.0	29.8	29.8	9.3	31.1	31.1
Actuated g/C Ratio	0.10	0.23	0.23	0.20	0.32	0.32	0.08	0.28	0.28	0.09	0.30	0.30
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	350	784	350	661	1105	494	254	977	437	295	1020	456
v/s Ratio Prot	0.06	c0.16		c0.16	0.20		0.03	c0.22		c0.07	0.21	
v/s Ratio Perm			0.11			0.06			0.04			0.03
v/c Ratio	0.55	0.70	0.50	0.83	0.61	0.19	0.44	0.79	0.15	0.78	0.70	0.09
Uniform Delay, d1	44.6	37.1	35.3	40.3	30.0	25.7	46.2	34.6	28.0	46.8	32.7	26.6
Progression 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
Incremental Delay, d2	1.9	2.7	1.1	8.4	1.0	0.2	1.2	4.2	0.2	12.7	2.1	0.1
Delay (s)	46.5	39.9	36.4	48.7	31.0	25.9	47.5	38.8	28.2	59.5	34.8	26.7
Level of Service	D	D	D	D	C	C	D	D	C	E	C	C
Approach Delay (s)		40.1			36.9			37.8			39.1	
Approach LOS		D			D			D			D	

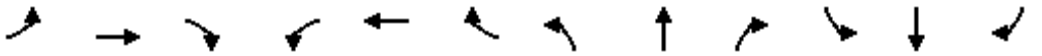
Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	104.8	Sum of lost time (s)	21.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1334	111	0	1280	0	76
Future Volume (Veh/h)	1334	111	0	1280	0	76
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1404	117	0	1347	0	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1236					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			1521		1853	702
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1331		1705	406
tC, single (s)			4.3		7.0	7.1
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	84
cM capacity (veh/h)			420		67	507

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	702	702	117	449	449	449	80
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	117	0	0	0	80
cSH	1700	1700	1700	1700	1700	1700	507
Volume to Capacity	0.41	0.41	0.07	0.26	0.26	0.26	0.16
Queue Length 95th (ft)	0	0	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	13.4
Lane LOS							B
Approach Delay (s)	0.0			0.0			13.4
Approach LOS							B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

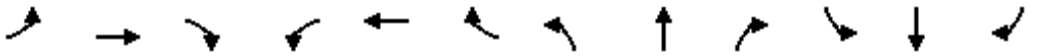


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	372	1021	115	186	728	203	49	13	51	245	31	455
Future Volume (vph)	372	1021	115	186	728	203	49	13	51	245	31	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88		1.00	0.88	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1522		1559	1380	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1522		1559	1380	1395
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	392	1075	121	196	766	214	52	14	54	258	33	479
RTOR Reduction (vph)	0	0	82	0	0	146	0	50	0	0	104	201
Lane Group Flow (vph)	392	1075	39	196	766	68	52	18	0	232	171	62
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.3	27.9	27.9	9.5	27.4	27.4	6.8	6.8		20.4	20.4	20.4
Effective Green, g (s)	9.3	27.9	27.9	9.5	27.4	27.4	6.8	6.8		20.4	20.4	20.4
Actuated g/C Ratio	0.11	0.32	0.32	0.11	0.32	0.32	0.08	0.08		0.24	0.24	0.24
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	344	1531	476	352	1503	468	129	120		370	327	331
v/s Ratio Prot	c0.12	c0.23		0.06	0.16		c0.03	0.01		c0.15	0.12	
v/s Ratio Perm			0.03			0.05						0.04
v/c Ratio	1.14	0.70	0.08	0.56	0.51	0.15	0.40	0.15		0.63	0.52	0.19
Uniform Delay, d1	38.3	25.4	20.1	36.2	23.8	20.9	37.6	36.9		29.3	28.5	26.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	92.0	1.5	0.1	1.9	0.3	0.1	2.1	0.6		3.3	1.5	0.3
Delay (s)	130.3	26.8	20.2	38.1	24.1	21.0	39.7	37.5		32.6	30.0	26.4
Level of Service	F	C	C	D	C	C	D	D		C	C	C
Approach Delay (s)		51.9			25.9			38.4			29.6	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	22.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

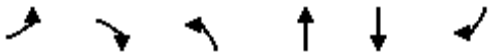
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	458	533	504	667	343	307	325	405	185	370	77
Future Volume (vph)	308	458	533	504	667	343	307	325	405	185	370	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00		0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.92		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	4715	1468	1641	4475		1641	1584		3183	1683	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1641	4715	1468	1641	4475		1641	1584		3183	1683	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	482	561	531	702	361	323	342	426	195	389	81
RTOR Reduction (vph)	0	0	338	0	62	0	0	30	0	0	5	0
Lane Group Flow (vph)	324	482	223	531	1001	0	323	738	0	195	465	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	28.3	18.8	18.8	40.3	30.8		25.3	58.9		7.3	40.9	
Effective Green, g (s)	28.3	18.8	18.8	40.3	30.8		25.3	58.9		7.3	40.9	
Actuated g/C Ratio	0.19	0.13	0.13	0.27	0.21		0.17	0.39		0.05	0.27	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1		5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	309	590	183	440	918		276	621		154	458	
v/s Ratio Prot	c0.20	0.10		c0.32	0.22		0.20	c0.47		0.06	c0.28	
v/s Ratio Perm			0.15									
v/c Ratio	1.05	0.82	1.22	1.21	1.09		1.17	1.19		1.27	1.02	
Uniform Delay, d1	60.9	63.9	65.6	54.9	59.6		62.4	45.5		71.3	54.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	64.5	8.6	138.3	112.8	57.4		108.3	100.4		161.1	45.9	
Delay (s)	125.3	72.5	203.9	167.6	117.0		170.7	146.0		232.5	100.4	
Level of Service	F	E	F	F	F		F	F		F	F	
Approach Delay (s)		139.0			133.9			153.3			139.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	140.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



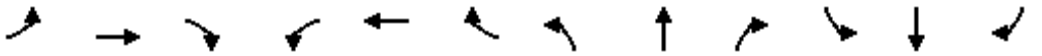
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	0	267	252	67	219	145	737	787	0	1319	108
Future Volume (vph)	110	0	267	252	67	219	145	737	787	0	1319	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1595	1468	3183	3282	1468		4715	1468
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1595	1468	3183	3282	1468		4715	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	0	281	265	71	231	153	776	828	0	1388	114
RTOR Reduction (vph)	0	128	0	0	0	199	0	0	370	0	0	66
Lane Group Flow (vph)	116	153	0	167	169	32	153	776	458	0	1388	48
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	12.6	12.6		12.3	12.3	12.3	6.9	49.8	49.8		38.2	38.2
Effective Green, g (s)	12.6	12.6		12.3	12.3	12.3	6.9	49.8	49.8		38.2	38.2
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.14	0.08	0.55	0.55		0.42	0.42
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	229	205		213	217	200	244	1816	812		2001	623
v/s Ratio Prot	0.07	c0.10		c0.11	0.11		0.05	0.24			c0.29	
v/s Ratio Perm						0.02			c0.31			0.03
v/c Ratio	0.51	0.75		0.78	0.78	0.16	0.63	0.43	0.56		0.69	0.08
Uniform Delay, d1	35.8	37.2		37.6	37.5	34.3	40.3	11.8	13.1		21.1	15.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.87	0.89	3.72		1.00	1.00
Incremental Delay, d2	1.8	13.7		17.0	16.0	0.4	4.5	0.7	2.6		2.0	0.2
Delay (s)	37.6	50.9		54.6	53.6	34.7	39.6	11.2	51.1		23.1	15.7
Level of Service	D	D		D	D	C	D	B	D		C	B
Approach Delay (s)		47.0			46.2			32.4			22.6	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



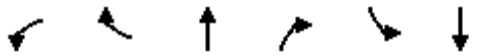
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	429	727	550	1247	713	406
Future Volume (vph)	429	727	550	1247	713	406
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3183	2584	3183	4715	3282	1468
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3183	2584	3183	4715	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	452	765	579	1313	751	427
RTOR Reduction (vph)	0	514	0	0	0	2
Lane Group Flow (vph)	452	251	579	1313	751	425
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	18.2	18.2	27.1	61.6	29.8	48.0
Effective Green, g (s)	18.2	18.2	27.1	61.6	29.8	48.0
Actuated g/C Ratio	0.20	0.20	0.30	0.68	0.33	0.53
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	643	522	958	3227	1086	866
v/s Ratio Prot	c0.14		c0.18	0.28	c0.23	0.10
v/s Ratio Perm		0.10				0.19
v/c Ratio	0.70	0.48	0.60	0.41	0.69	0.49
Uniform Delay, d1	33.4	31.7	26.9	6.2	26.1	13.3
Progression Factor	1.00	1.00	1.00	1.00	0.43	0.32
Incremental Delay, d2	3.5	0.7	1.1	0.4	2.5	0.3
Delay (s)	36.9	32.4	28.0	6.6	13.8	4.5
Level of Service	D	C	C	A	B	A
Approach Delay (s)	34.1			13.1	10.5	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	254	95	51	192	535	71	552	11	332	279	140
Future Volume (vph)	136	254	95	51	192	535	71	552	11	332	279	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	3282	1468	3183	3282	2584	3183	3282	1468	3183	4715	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	3282	1468	3183	3282	2584	3183	3282	1468	3183	4715	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	143	267	100	54	202	563	75	581	12	349	294	147
RTOR Reduction (vph)	0	0	75	0	0	365	0	0	9	0	0	92
Lane Group Flow (vph)	143	267	25	54	202	198	75	581	3	349	294	55
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.3	18.8	18.8	3.1	14.6	14.6	5.3	19.5	19.5	13.7	27.9	27.9
Effective Green, g (s)	7.3	18.8	18.8	3.1	14.6	14.6	5.3	19.5	19.5	13.7	27.9	27.9
Actuated g/C Ratio	0.10	0.25	0.25	0.04	0.20	0.20	0.07	0.26	0.26	0.18	0.37	0.37
Clearance Time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	311	827	369	132	642	505	226	857	383	584	1763	966
v/s Ratio Prot	c0.04	c0.08		0.02	0.06		0.02	c0.18		c0.11	0.06	
v/s Ratio Perm			0.02			c0.08			0.00			0.02
v/c Ratio	0.46	0.32	0.07	0.41	0.31	0.39	0.33	0.68	0.01	0.60	0.17	0.06
Uniform Delay, d1	31.8	22.7	21.2	34.9	25.7	26.1	33.0	24.7	20.4	27.9	15.6	14.9
Progression 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
Incremental Delay, d2	1.1	0.2	0.1	2.1	0.3	0.5	0.9	2.1	0.0	1.7	0.0	0.0
Delay (s)	32.9	22.9	21.3	36.9	26.0	26.6	33.8	26.9	20.4	29.6	15.6	15.0
Level of Service	C	C	C	D	C	C	C	C	C	C	B	B
Approach Delay (s)		25.4			27.2			27.5			21.7	
Approach LOS		C			C			C			C	

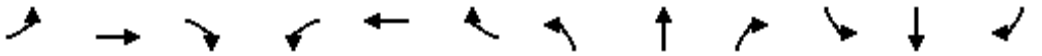
Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	74.6	Sum of lost time (s)	19.5
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	201	286	24	121	224
Future Volume (Veh/h)	148	201	286	24	121	224
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	156	212	301	25	127	236
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1296
pX, platoon unblocked						
vC, conflicting volume	646	163			326	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	646	163			326	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	55	74			89	
cM capacity (veh/h)	345	828			1175	

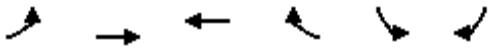
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	156	212	201	125	127	79	79	79
Volume Left	156	0	0	0	127	0	0	0
Volume Right	0	212	0	25	0	0	0	0
cSH	345	828	1700	1700	1175	1700	1700	1700
Volume to Capacity	0.45	0.26	0.12	0.07	0.11	0.05	0.05	0.05
Queue Length 95th (ft)	57	25	0	0	9	0	0	0
Control Delay (s)	23.8	10.8	0.0	0.0	8.4	0.0	0.0	0.0
Lane LOS	C	B			A			
Approach Delay (s)	16.3		0.0		3.0			
Approach LOS	C							

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		



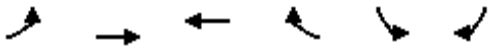
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	35	33	47	32	243	3	69	8	139	147	10
Future Volume (vph)	10	35	33	47	32	243	3	69	8	139	147	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lane Util. Factor		1.00		1.00	0.95	0.88		1.00		1.00	0.95	1.00
Frt		0.94		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected		0.99		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1618		1641	3282	2584		1702		1641	3282	1468
Flt Permitted		0.95		0.78	1.00	1.00		0.98		0.70	1.00	1.00
Satd. Flow (perm)		1541		1355	3282	2584		1674		1213	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	37	35	49	34	256	3	73	8	146	155	11
RTOR Reduction (vph)	0	27	0	0	0	196	0	6	0	0	0	8
Lane Group Flow (vph)	0	56	0	49	34	60	0	78	0	146	155	3
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)		5.1		5.1	5.1	5.1		6.6		6.6	6.6	6.6
Effective Green, g (s)		5.1		5.1	5.1	5.1		6.6		6.6	6.6	6.6
Actuated g/C Ratio		0.24		0.24	0.24	0.24		0.30		0.30	0.30	0.30
Clearance Time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		362		318	771	607		509		368	998	446
v/s Ratio Prot					0.01						0.05	
v/s Ratio Perm		c0.04		0.04		0.02		0.05		c0.12		0.00
v/c Ratio		0.16		0.15	0.04	0.10		0.15		0.40	0.16	0.01
Uniform Delay, d1		6.6		6.6	6.4	6.5		5.5		6.0	5.5	5.3
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2		0.2	0.0	0.1		0.1		0.7	0.1	0.0
Delay (s)		6.8		6.8	6.4	6.6		5.7		6.7	5.6	5.3
Level of Service		A		A	A	A		A		A	A	A
Approach Delay (s)		6.8			6.6			5.7			6.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	21.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	824	729	0	339	281
Future Volume (vph)	0	824	729	0	339	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4715	4715		3183	1468
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4715	4715		3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	867	767	0	357	296
RTOR Reduction (vph)	0	0	0	0	0	66
Lane Group Flow (vph)	0	867	767	0	357	230
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		65.0	65.0		21.7	21.7
Effective Green, g (s)		65.0	65.0		21.7	21.7
Actuated g/C Ratio		0.65	0.65		0.22	0.22
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3064	3064		690	318
v/s Ratio Prot		c0.18	0.16		0.11	
v/s Ratio Perm						c0.16
v/c Ratio		0.28	0.25		0.52	0.72
Uniform Delay, d1		7.5	7.3		34.5	36.4
Progression Factor		1.00	0.10		1.00	1.00
Incremental Delay, d2		0.2	0.1		0.7	7.9
Delay (s)		7.7	0.9		35.2	44.3
Level of Service		A	A		D	D
Approach Delay (s)		7.7	0.9		39.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	487	676	730	778	0	0
Future Volume (vph)	487	676	730	778	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.96	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3183	3282	3003	1336		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3183	3282	3003	1336		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	513	712	768	819	0	0
RTOR Reduction (vph)	0	0	31	31	0	0
Lane Group Flow (vph)	513	712	1065	460	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	21.3	100.0	65.8	65.8		
Effective Green, g (s)	21.3	100.0	65.8	65.8		
Actuated g/C Ratio	0.21	1.00	0.66	0.66		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	677	3282	1975	879		
v/s Ratio Prot	c0.16	0.22	c0.35			
v/s Ratio Perm				0.34		
v/c Ratio	0.76	0.22	0.54	0.52		
Uniform Delay, d1	36.9	0.0	9.1	8.9		
Progression Factor	1.07	1.00	1.00	1.00		
Incremental Delay, d2	4.7	0.1	1.1	2.2		
Delay (s)	44.3	0.1	10.1	11.1		
Level of Service	D	A	B	B		
Approach Delay (s)		18.6	10.4		0.0	
Approach LOS		B	B		A	

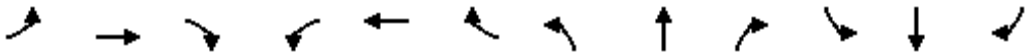
Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	585	692	0	0	796	1121	95	2	362	0	0	0
Future Volume (vph)	585	692	0	0	796	1121	95	2	362	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3183	4715			4180	1263		1647	2584			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3183	4715			4180	1263		1647	2584			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	616	728	0	0	838	1180	100	2	381	0	0	0
RTOR Reduction (vph)	0	0	0	0	113	171	0	0	344	0	0	0
Lane Group Flow (vph)	616	728	0	0	1315	419	0	102	37	0	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	28.3	89.2			56.2	56.2		10.6	10.6			
Effective Green, g (s)	28.3	89.2			56.2	56.2		10.6	10.6			
Actuated g/C Ratio	0.26	0.81			0.51	0.51		0.10	0.10			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	818	3823			2135	645		158	249			
v/s Ratio Prot	c0.19	0.15			0.31							
v/s Ratio Perm						c0.33		0.06	0.01			
v/c Ratio	0.75	0.19			0.62	0.65		0.65	0.15			
Uniform Delay, d1	37.6	2.3			19.2	19.7		47.9	45.6			
Progression Factor	0.84	0.72			1.00	1.00		1.00	1.00			
Incremental Delay, d2	3.5	0.1			1.3	5.0		8.7	0.3			
Delay (s)	35.3	1.8			20.5	24.7		56.6	45.8			
Level of Service	D	A			C	C		E	D			
Approach Delay (s)		17.1			21.8			48.1			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	984	481	379	1174	0	469
Future Volume (vph)	984	481	379	1174	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4483		3183	4715		2584
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4483		3183	4715		2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1036	506	399	1236	0	494
RTOR Reduction (vph)	54	0	0	0	0	140
Lane Group Flow (vph)	1488	0	399	1236	0	354
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	78.4		21.4	110.0		21.4
Effective Green, g (s)	78.4		21.4	110.0		21.4
Actuated g/C Ratio	0.71		0.19	1.00		0.19
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3195		619	4715		502
v/s Ratio Prot	c0.33		0.13	0.26		c0.14
v/s Ratio Perm						
v/c Ratio	0.47		0.64	0.26		0.70
Uniform Delay, d1	6.8		40.8	0.0		41.4
Progression Factor	0.25		0.91	1.00		1.00
Incremental Delay, d2	0.4		2.2	0.1		4.5
Delay (s)	2.1		39.1	0.1		45.8
Level of Service	A		D	A		D
Approach Delay (s)	2.1			9.6	45.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	693	80	375	506	272	55	65	391	267	106	105
Future Volume (vph)	75	693	80	375	506	272	55	65	391	267	106	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.95			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1641	4642		1641	4468			1688	1468		3087	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.73	
Satd. Flow (perm)	1641	4642		1641	4468			966	1468		2320	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	729	84	395	533	286	58	68	412	281	112	111
RTOR Reduction (vph)	0	12	0	0	69	0	0	0	300	0	27	0
Lane Group Flow (vph)	79	801	0	395	750	0	0	126	112	0	477	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	8.6	35.5		30.3	56.6			30.0	30.0		30.0	
Effective Green, g (s)	8.6	35.5		30.3	56.6			30.0	30.0		30.0	
Actuated g/C Ratio	0.08	0.32		0.28	0.51			0.27	0.27		0.27	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	128	1498		452	2298			263	400		632	
v/s Ratio Prot	0.05	c0.17		c0.24	0.17							
v/s Ratio Perm								0.13	0.08		c0.21	
v/c Ratio	0.62	0.54		0.87	0.33			0.48	0.28		0.75	
Uniform Delay, d1	49.1	30.5		38.0	15.6			33.5	31.5		36.6	
Progression Factor	1.00	1.00		1.08	0.56			1.00	1.00		1.00	
Incremental Delay, d2	6.1	1.4		16.1	0.4			2.3	0.6		5.7	
Delay (s)	55.2	31.9		57.2	9.0			35.7	32.1		42.3	
Level of Service	E	C		E	A			D	C		D	
Approach Delay (s)		33.9			24.7			33.0			42.3	
Approach LOS		C			C			C			D	

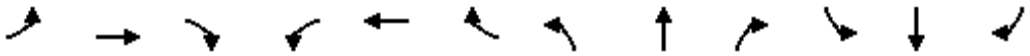
Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	246	229	318	109	105
Future Vol, veh/h	230	246	229	318	109	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	242	259	241	335	115	111
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	30.7	12	15.7
HCM LOS	D	B	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	51%	0%	100%	0%	0%
Vol Thru, %	0%	48%	0%	100%	100%
Vol Right, %	49%	52%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	476	229	159	159
LT Vol	109	0	229	0	0
Through Vol	0	230	0	159	159
RT Vol	105	246	0	0	0
Lane Flow Rate	225	501	241	167	167
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.448	0.825	0.45	0.289	0.2
Departure Headway (Hd)	7.162	5.924	6.721	6.213	4.311
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	502	611	535	576	825
Service Time	4.929	3.684	4.484	3.975	2.072
HCM Lane V/C Ratio	0.448	0.82	0.45	0.29	0.202
HCM Control Delay	15.7	30.7	14.9	11.5	8.2
HCM Lane LOS	C	D	B	B	A
HCM 95th-tile Q	2.3	8.6	2.3	1.2	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	850	29	68	626	70	33	10	24	10	10	107
Future Volume (vph)	123	850	29	68	626	70	33	10	24	10	10	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		1.00	
Satd. Flow (prot)	1641	4692		1641	4644			1664	1468		1526	
Flt Permitted	0.95	1.00		0.95	1.00			0.85	1.00		0.97	
Satd. Flow (perm)	1641	4692		1641	4644			1474	1468		1479	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	129	895	31	72	659	74	35	11	25	11	11	113
RTOR Reduction (vph)	0	3	0	0	14	0	0	0	22	0	101	0
Lane Group Flow (vph)	129	923	0	72	719	0	0	46	3	0	34	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	5.4	22.7		3.2	20.5			4.7	4.7		4.7	
Effective Green, g (s)	5.4	22.7		3.2	20.5			4.7	4.7		4.7	
Actuated g/C Ratio	0.12	0.51		0.07	0.46			0.10	0.10		0.10	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	197	2377		117	2125			154	154		155	
v/s Ratio Prot	c0.08	c0.20		0.04	0.15							
v/s Ratio Perm								c0.03	0.00		0.02	
v/c Ratio	0.65	0.39		0.62	0.34			0.30	0.02		0.22	
Uniform Delay, d1	18.8	6.8		20.2	7.8			18.5	18.0		18.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	5.8	0.3		6.6	0.2			0.4	0.0		0.3	
Delay (s)	24.7	7.1		26.8	8.0			18.9	18.0		18.6	
Level of Service	C	A		C	A			B	B		B	
Approach Delay (s)		9.2			9.7			18.6			18.6	
Approach LOS		A			A			B			B	

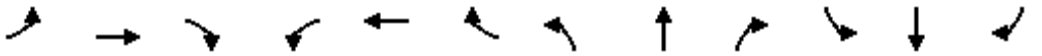
Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	14.2
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	884	741	467	951	835	301
Future Volume (vph)	884	741	467	951	835	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1468	1641	4715	3183	1468
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1468	1641	4715	3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	931	780	492	1001	879	317
RTOR Reduction (vph)	0	60	0	0	0	232
Lane Group Flow (vph)	931	720	492	1001	879	85
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	19.8	44.0	26.3	51.8	24.2	24.2
Effective Green, g (s)	19.8	44.0	26.3	51.8	24.2	24.2
Actuated g/C Ratio	0.22	0.49	0.29	0.58	0.27	0.27
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1037	717	479	2713	855	394
v/s Ratio Prot	0.20	c0.27	c0.30	0.21	c0.28	
v/s Ratio Perm		0.22				0.06
v/c Ratio	0.90	1.00	1.03	0.37	1.03	0.22
Uniform Delay, d1	34.1	23.0	31.8	10.3	32.9	25.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.3	34.7	48.2	0.1	38.2	0.3
Delay (s)	44.4	57.7	80.1	10.4	71.1	25.8
Level of Service	D	E	F	B	E	C
Approach Delay (s)	50.5			33.3	59.1	
Approach LOS	D			C	E	

Intersection Summary			
HCM 2000 Control Delay	47.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

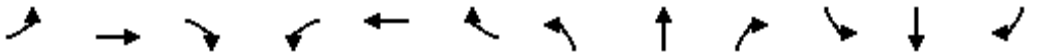
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	476	147	39	72	119	502	46	913	124	335	288	352
Future Volume (vph)	476	147	39	72	119	502	46	913	124	335	288	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1641	1673		1641	1727	1468	1641	3223		1641	1727	1468
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1641	1673		1641	1727	1468	1641	3223		1641	1727	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	501	155	41	76	125	528	48	961	131	353	303	371
RTOR Reduction (vph)	0	7	0	0	0	223	0	8	0	0	0	215
Lane Group Flow (vph)	501	189	0	76	125	305	48	1084	0	353	303	156
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	33.7	33.7		20.8	20.8	20.8	7.2	42.0		24.6	59.2	59.2
Effective Green, g (s)	33.7	33.7		20.8	20.8	20.8	7.2	42.0		24.6	59.2	59.2
Actuated g/C Ratio	0.24	0.24		0.15	0.15	0.15	0.05	0.30		0.17	0.42	0.42
Clearance Time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0		3.7	3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	392	400		242	254	216	83	960		286	725	616
v/s Ratio Prot	c0.31	0.11		0.05	0.07		0.03	c0.34		c0.22	0.18	
v/s Ratio Perm						c0.21						0.11
v/c Ratio	1.28	0.47		0.31	0.49	1.41	0.58	1.13		1.23	0.42	0.25
Uniform Delay, d1	53.6	46.0		53.7	55.2	60.1	65.4	49.5		58.2	28.7	26.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	143.5	0.3		0.9	1.9	209.9	5.9	71.6		131.9	0.5	0.3
Delay (s)	197.1	46.3		54.6	57.1	270.0	71.3	121.0		190.1	29.2	26.8
Level of Service	F	D		D	E	F	E	F		F	C	C
Approach Delay (s)		154.7			211.0			118.9			83.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	134.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	140.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



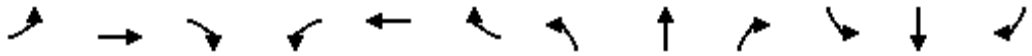
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	482	192	299	811	734	221	250	158	465	377	479
Future Volume (vph)	391	482	192	299	811	734	221	250	158	465	377	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1627		1641	1727	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1627		1641	1727	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	412	507	202	315	854	773	233	263	166	489	397	504
RTOR Reduction (vph)	0	0	167	0	0	453	0	16	0	0	0	145
Lane Group Flow (vph)	412	507	35	315	854	320	233	413	0	489	397	359
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	15.3	24.9	24.9	17.2	26.8	26.8	24.8	40.0		35.4	50.6	65.9
Effective Green, g (s)	15.3	24.9	24.9	17.2	26.8	26.8	24.8	40.0		35.4	50.6	65.9
Actuated g/C Ratio	0.11	0.18	0.18	0.12	0.19	0.19	0.17	0.28		0.25	0.36	0.46
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	342	825	257	385	888	276	286	457		408	614	1197
v/s Ratio Prot	c0.13	0.11		0.10	0.18		0.14	c0.25		c0.30	0.23	0.03
v/s Ratio Perm			0.02			c0.22						0.11
v/c Ratio	1.20	0.61	0.14	0.82	0.96	1.16	0.81	0.90		1.20	0.65	0.30
Uniform Delay, d1	63.4	54.2	49.6	61.0	57.2	57.7	56.5	49.3		53.4	38.3	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	116.6	1.4	0.2	12.7	21.3	104.6	16.1	21.0		110.8	2.3	0.1
Delay (s)	180.0	55.6	49.8	73.7	78.5	162.3	72.6	70.2		164.2	40.7	23.9
Level of Service	F	E	D	E	E	F	E	E		F	D	C
Approach Delay (s)		100.3			111.1			71.1			78.1	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	94.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	142.2	Sum of lost time (s)	24.7
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	220	106	1041	418	464	254	476	532	264	213	41
Future Volume (vph)	42	220	106	1041	418	464	254	476	532	264	213	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1468	1641	3282	1468	3183	3203	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1468	1641	3282	1468	3183	3203	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	232	112	1096	440	488	267	501	560	278	224	43
RTOR Reduction (vph)	0	0	89	0	0	228	0	0	44	0	13	0
Lane Group Flow (vph)	44	232	23	1096	440	260	267	501	516	278	254	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.6	13.4	25.3	48.8	52.5	52.5	11.9	24.5	73.3	15.8	28.4	
Effective Green, g (s)	8.6	13.4	25.3	48.8	52.5	52.5	11.9	24.5	73.3	15.8	28.4	
Actuated g/C Ratio	0.07	0.11	0.20	0.39	0.42	0.42	0.10	0.20	0.59	0.13	0.23	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	113	352	297	1244	726	617	156	644	862	402	728	
v/s Ratio Prot	0.03	0.07	0.01	c0.34	c0.25		c0.16	c0.15	0.23	0.09	c0.08	
v/s Ratio Perm			0.01			0.18			0.12			
v/c Ratio	0.39	0.66	0.08	0.88	0.61	0.42	1.71	0.78	0.60	0.69	0.35	
Uniform Delay, d1	55.6	53.5	40.3	35.3	28.1	25.4	56.4	47.6	16.4	52.2	40.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.2	4.4	0.1	7.6	1.4	0.5	345.9	5.9	1.1	5.1	0.3	
Delay (s)	57.8	57.9	40.4	42.9	29.5	25.9	402.3	53.5	17.5	57.2	40.7	
Level of Service	E	E	D	D	C	C	F	D	B	E	D	
Approach Delay (s)		52.9			35.9			108.5			49.2	
Approach LOS		D			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	61.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	124.8	Sum of lost time (s)	23.4
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

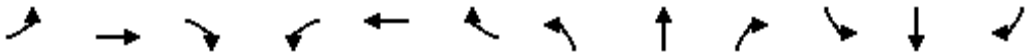


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	113	1	146	440	1367	0	0	522	1077
Future Volume (vph)	0	0	0	113	1	146	440	1367	0	0	522	1077
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1724	1468	1719	4715			4303	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1724	1468	1719	4715			4303	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	119	1	154	463	1439	0	0	549	1134
RTOR Reduction (vph)	0	0	0	0	0	90	0	0	0	0	221	0
Lane Group Flow (vph)	0	0	0	0	120	64	463	1439	0	0	1462	0
Heavy Vehicles (%)	10%	10%	10%	5%	5%	10%	5%	10%	10%	10%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					12.4	12.4	36.6	97.4			56.1	
Effective Green, g (s)					12.4	12.4	36.6	97.4			56.1	
Actuated g/C Ratio					0.10	0.10	0.31	0.81			0.47	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					178	151	524	3827			2011	
v/s Ratio Prot							c0.27	0.31			c0.34	
v/s Ratio Perm					0.07	0.04						
v/c Ratio					0.67	0.43	0.88	0.38			1.23dr	
Uniform Delay, d1					51.9	50.5	39.7	3.1			25.8	
Progression Factor					1.00	1.00	1.07	0.97			1.00	
Incremental Delay, d2					9.7	1.9	5.2	0.1			2.3	
Delay (s)					61.5	52.4	47.7	3.0			28.1	
Level of Service					E	D	D	A			C	
Approach Delay (s)		0.0			56.4			13.9			28.1	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		

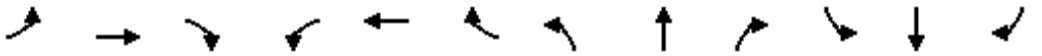
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



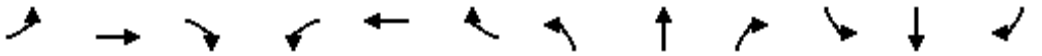
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1167	7	565	0	0	0	0	843	127	112	519	0
Future Volume (vph)	1167	7	565	0	0	0	0	843	127	112	519	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.90						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1498						4843		1641	3438	
Flt Permitted	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1498						4843		1641	3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1228	7	595	0	0	0	0	887	134	118	546	0
RTOR Reduction (vph)	0	56	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	946	828	0	0	0	0	0	1004	0	118	546	0
Heavy Vehicles (%)	10%	5%	5%	10%	10%	10%	10%	5%	5%	10%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	68.9	68.9						27.7		8.5	40.9	
Effective Green, g (s)	68.9	68.9						27.7		8.5	40.9	
Actuated g/C Ratio	0.57	0.57						0.23		0.07	0.34	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	895	860						1117		116	1171	
v/s Ratio Prot	c0.61	0.55						c0.21		c0.07	0.16	
v/s Ratio Perm												
v/c Ratio	1.06	0.96						0.90		1.02	0.47	
Uniform Delay, d1	25.5	24.3						44.8		55.8	31.0	
Progression Factor	1.00	1.00						1.00		0.75	0.58	
Incremental Delay, d2	46.3	21.9						11.4		73.0	0.9	
Delay (s)	71.9	46.2						56.2		114.6	18.7	
Level of Service	E	D						E		F	B	
Approach Delay (s)		59.5			0.0			56.2			35.8	
Approach LOS		E			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	488	103	82	66	71	222	55	295	59	230	349	506
Future Volume (vph)	488	103	82	66	71	222	55	295	59	230	349	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1689		3335	1810	1538	1719	4817		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1689		3335	1810	1538	1719	4817		1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	514	108	86	69	75	234	58	311	62	242	367	533
RTOR Reduction (vph)	0	29	0	0	0	200	0	30	0	0	0	368
Lane Group Flow (vph)	514	165	0	69	75	34	58	343	0	242	367	165
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	11.2	15.9		4.6	9.3	9.3	4.8	10.1		14.6	19.9	19.9
Effective Green, g (s)	11.2	15.9		4.6	9.3	9.3	4.8	10.1		14.6	19.9	19.9
Actuated g/C Ratio	0.17	0.25		0.07	0.14	0.14	0.07	0.16		0.23	0.31	0.31
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	581	418		238	262	222	128	757		390	1065	476
v/s Ratio Prot	c0.15	c0.10		0.02	0.04		0.03	0.07		c0.14	0.11	
v/s Ratio Perm						0.02						c0.11
v/c Ratio	0.88	0.39		0.29	0.29	0.15	0.45	0.45		0.62	0.34	0.35
Uniform Delay, d1	25.9	20.1		28.3	24.5	24.0	28.4	24.5		22.3	17.1	17.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.9	0.6		0.7	0.6	0.3	2.5	0.4		3.1	0.2	0.4
Delay (s)	40.8	20.7		28.9	25.1	24.3	31.0	25.0		25.4	17.3	17.6
Level of Service	D	C		C	C	C	C	C		C	B	B
Approach Delay (s)		35.3			25.3			25.8			19.1	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	621	271	307	517	152	205	870	305	128	780	153
Future Volume (vph)	286	621	271	307	517	152	205	870	305	128	780	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	301	654	285	323	544	160	216	916	321	135	821	161
RTOR Reduction (vph)	0	0	120	0	0	116	0	0	187	0	0	105
Lane Group Flow (vph)	301	654	165	323	544	44	216	916	134	135	821	56
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.6	26.4	26.4	11.8	26.6	26.6	8.2	32.8	32.8	7.1	31.7	31.7
Effective Green, g (s)	11.6	26.4	26.4	11.8	26.6	26.6	8.2	32.8	32.8	7.1	31.7	31.7
Actuated g/C Ratio	0.12	0.27	0.27	0.12	0.27	0.27	0.08	0.33	0.33	0.07	0.32	0.32
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	390	915	409	397	922	412	275	1137	509	238	1099	491
v/s Ratio Prot	0.09	c0.19		c0.10	0.16		c0.06	c0.27		0.04	0.24	
v/s Ratio Perm			0.11			0.03			0.09			0.04
v/c Ratio	0.77	0.71	0.40	0.81	0.59	0.11	0.79	0.81	0.26	0.57	0.75	0.11
Uniform Delay, d1	42.5	32.9	29.9	42.6	31.5	27.3	44.6	30.2	24.3	44.5	30.1	23.8
Progression 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
Incremental Delay, d2	9.1	2.7	0.7	12.0	1.0	0.1	13.7	4.3	0.3	3.1	2.8	0.1
Delay (s)	51.6	35.6	30.5	54.6	32.5	27.4	58.3	34.5	24.6	47.6	32.9	23.9
Level of Service	D	D	C	D	C	C	E	C	C	D	C	C
Approach Delay (s)		38.3			38.7			35.8			33.4	
Approach LOS		D			D			D			C	

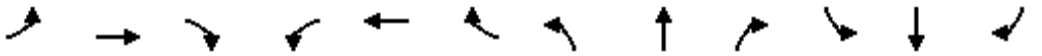
Intersection Summary			
HCM 2000 Control Delay	36.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	21.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	980	68	0	1453	0	162
Future Volume (Veh/h)	980	68	0	1453	0	162
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1032	72	0	1529	0	171
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1236					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			1104		1542	516
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			874		1365	215
tC, single (s)			4.3		7.0	7.1
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	75
cM capacity (veh/h)			641		115	683

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	516	516	72	510	510	510	171
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	72	0	0	0	171
cSH	1700	1700	1700	1700	1700	1700	683
Volume to Capacity	0.30	0.30	0.04	0.30	0.30	0.30	0.25
Queue Length 95th (ft)	0	0	0	0	0	0	25
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	12.0
Lane LOS							B
Approach Delay (s)	0.0			0.0			12.0
Approach LOS							B

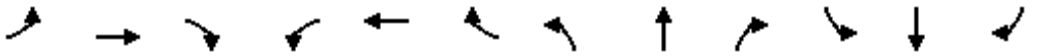
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	676	70	113	816	148	106	28	110	370	19	421
Future Volume (vph)	192	676	70	113	816	148	106	28	110	370	19	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88		1.00	0.91	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1520		1559	1406	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1520		1559	1406	1395
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	202	712	74	119	859	156	112	29	116	389	20	443
RTOR Reduction (vph)	0	0	53	0	0	114	0	101	0	0	42	197
Lane Group Flow (vph)	202	712	21	119	859	42	112	44	0	296	244	73
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.1	26.2	26.2	8.6	25.0	25.0	12.3	12.3		25.4	25.4	25.4
Effective Green, g (s)	9.1	26.2	26.2	8.6	25.0	25.0	12.3	12.3		25.4	25.4	25.4
Actuated g/C Ratio	0.10	0.28	0.28	0.09	0.27	0.27	0.13	0.13		0.27	0.27	0.27
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	308	1316	410	291	1256	391	215	199		422	380	377
v/s Ratio Prot	c0.06	0.15		0.04	c0.18		c0.07	0.03		c0.19	0.17	
v/s Ratio Perm			0.01			0.03						0.05
v/c Ratio	0.66	0.54	0.05	0.41	0.68	0.11	0.52	0.22		0.70	0.64	0.19
Uniform Delay, d1	40.8	28.7	24.7	40.2	30.9	26.0	38.0	36.5		30.8	30.2	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.0	0.5	0.1	0.9	1.6	0.1	2.3	0.6		5.2	3.7	0.3
Delay (s)	45.8	29.2	24.8	41.1	32.4	26.1	40.3	37.0		36.0	33.9	26.6
Level of Service	D	C	C	D	C	C	D	D		D	C	C
Approach Delay (s)		32.2			32.5			38.4			32.3	
Approach LOS		C			C			D			C	

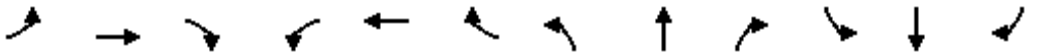
Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	22.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HORIZON YEAR 2035 BASELINE PLUS PROJECT CONDITIONS



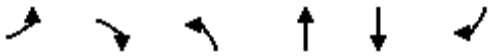
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	713	323	630	627	265	417	526	474	336	269	351
Future Volume (vph)	79	713	323	630	627	265	417	526	474	336	269	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4759	1468	3242	4534		3183	3282	1468	3183	1581	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4759	1468	3242	4534		3183	3282	1468	3183	1581	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	751	340	663	660	279	439	554	499	354	283	369
RTOR Reduction (vph)	0	0	291	0	50	0	0	0	70	0	31	0
Lane Group Flow (vph)	83	751	49	663	889	0	439	554	429	354	621	0
Heavy Vehicles (%)	10%	9%	10%	8%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	12.5	21.8	21.8	28.3	37.6		19.3	31.7	60.0	43.5	55.9	
Effective Green, g (s)	12.5	21.8	21.8	28.3	37.6		19.3	31.7	60.0	43.5	55.9	
Actuated g/C Ratio	0.08	0.15	0.15	0.19	0.25		0.13	0.21	0.40	0.29	0.37	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	136	691	213	611	1136		409	693	642	923	589	
v/s Ratio Prot	0.05	c0.16		c0.20	0.20		c0.14	0.17	0.13	0.11	c0.39	
v/s Ratio Perm			0.03						0.17			
v/c Ratio	0.61	1.09	0.23	1.09	0.78		1.07	0.80	0.67	0.38	1.05	
Uniform Delay, d1	66.4	64.1	56.7	60.9	52.4		65.3	56.1	36.9	42.5	47.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.9	60.2	0.6	61.6	3.6		65.5	9.4	2.6	0.3	52.0	
Delay (s)	74.3	124.3	57.3	122.5	56.0		130.8	65.5	39.5	42.8	99.1	
Level of Service	E	F	E	F	E		F	E	D	D	F	
Approach Delay (s)		101.4			83.5			76.0			79.3	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	84.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



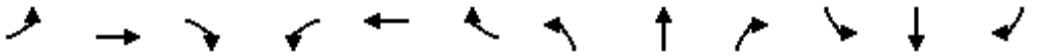
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	0	127	572	59	510	101	1006	575	0	1118	56
Future Volume (vph)	35	0	127	572	59	510	101	1006	575	0	1118	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1577	1482	3183	3312	1468		4759	1482
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1577	1482	3183	3312	1468		4759	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	0	134	602	62	537	106	1059	605	0	1177	59
RTOR Reduction (vph)	0	126	0	0	0	72	0	0	327	0	0	38
Lane Group Flow (vph)	37	8	0	331	333	465	106	1059	278	0	1177	21
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	9%	10%	10%	9%	9%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	7.2	7.2		42.4	42.4	42.4	7.0	55.1	55.1		43.4	43.4
Effective Green, g (s)	7.2	7.2		42.4	42.4	42.4	7.0	55.1	55.1		43.4	43.4
Actuated g/C Ratio	0.06	0.06		0.35	0.35	0.35	0.06	0.46	0.46		0.36	0.36
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	98	88		550	557	523	185	1520	674		1721	535
v/s Ratio Prot	c0.02	0.01		0.21	0.21		0.03	c0.32			0.25	
v/s Ratio Perm						c0.31			0.19			0.01
v/c Ratio	0.38	0.09		0.60	0.60	0.89	0.57	0.70	0.41		0.68	0.04
Uniform Delay, d1	54.2	53.3		31.9	31.8	36.6	55.0	25.8	21.6		32.5	24.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.81	0.67	1.24		1.00	1.00
Incremental Delay, d2	2.4	0.5		1.9	1.7	16.6	3.8	2.4	1.7		2.2	0.1
Delay (s)	56.7	53.8		33.7	33.5	53.2	48.3	19.7	28.5		34.7	24.9
Level of Service	E	D		C	C	D	D	B	C		C	C
Approach Delay (s)		54.4			42.4			24.4			34.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	699	1132	250	979	1101	259
Future Volume (vph)	699	1132	250	979	1101	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3183	2584	3183	4715	3282	1482
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3183	2584	3183	4715	3282	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	736	1192	263	1031	1159	273
RTOR Reduction (vph)	0	218	0	0	0	4
Lane Group Flow (vph)	736	974	263	1031	1159	269
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	46.6	46.6	11.3	63.2	47.2	93.8
Effective Green, g (s)	46.6	46.6	11.3	63.2	47.2	93.8
Actuated g/C Ratio	0.39	0.39	0.09	0.53	0.39	0.78
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1236	1003	299	2483	1290	1221
v/s Ratio Prot	0.23		c0.08	0.22	c0.35	0.09
v/s Ratio Perm		c0.38				0.10
v/c Ratio	0.60	0.97	0.88	0.42	0.90	0.22
Uniform Delay, d1	29.2	36.0	53.7	17.2	34.2	3.5
Progression Factor	1.00	1.00	1.00	1.00	0.54	0.15
Incremental Delay, d2	0.8	21.5	24.1	0.5	8.1	0.1
Delay (s)	30.0	57.5	77.8	17.7	26.5	0.6
Level of Service	C	E	E	B	C	A
Approach Delay (s)	47.0			29.9	21.5	
Approach LOS	D			C	C	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



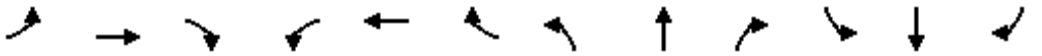
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	146	62	27	151	178	65	273	18	644	504	180
Future Volume (vph)	50	146	62	27	151	178	65	273	18	644	504	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3303	3282	1468	3183	3282	2608	3183	3282	1468	3183	4715	2608
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3303	3282	1468	3183	3282	2608	3183	3282	1468	3183	4715	2608
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	154	65	28	159	187	68	287	19	678	531	189
RTOR Reduction (vph)	0	0	55	0	0	161	0	0	16	0	0	99
Lane Group Flow (vph)	53	154	10	28	159	26	68	287	3	678	531	90
Heavy Vehicles (%)	6%	10%	10%	10%	10%	9%	10%	10%	10%	10%	10%	9%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	2.8	11.0	11.0	1.8	10.0	10.0	4.9	12.5	12.5	26.1	33.7	33.7
Effective Green, g (s)	2.8	11.0	11.0	1.8	10.0	10.0	4.9	12.5	12.5	26.1	33.7	33.7
Actuated g/C Ratio	0.04	0.16	0.16	0.03	0.14	0.14	0.07	0.18	0.18	0.37	0.48	0.48
Clearance Time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	130	509	227	80	462	367	219	578	258	1171	2241	1239
v/s Ratio Prot	c0.02	0.05		0.01	c0.05		0.02	c0.09		c0.21	0.11	
v/s Ratio Perm			0.01			0.01			0.00			0.03
v/c Ratio	0.41	0.30	0.04	0.35	0.34	0.07	0.31	0.50	0.01	0.58	0.24	0.07
Uniform Delay, d1	33.2	26.5	25.5	34.0	27.5	26.4	31.4	26.4	24.1	18.0	11.0	10.1
Progression 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
Incremental Delay, d2	2.1	0.3	0.1	2.6	0.4	0.1	0.8	0.7	0.0	0.7	0.1	0.0
Delay (s)	35.3	26.9	25.6	36.6	27.9	26.5	32.2	27.0	24.1	18.7	11.1	10.1
Level of Service	D	C	C	D	C	C	C	C	C	B	B	B
Approach Delay (s)		28.2			27.9			27.8			14.6	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	19.5
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	111	111	134	13	200	285
Future Volume (Veh/h)	111	111	134	13	200	285
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	117	117	141	14	211	300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1296
pX, platoon unblocked						
vC, conflicting volume	670	78			155	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	670	78			155	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	63	88			85	
cM capacity (veh/h)	315	942			1366	

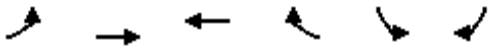
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	117	117	94	61	211	100	100	100
Volume Left	117	0	0	0	211	0	0	0
Volume Right	0	117	0	14	0	0	0	0
cSH	315	942	1700	1700	1366	1700	1700	1700
Volume to Capacity	0.37	0.12	0.06	0.04	0.15	0.06	0.06	0.06
Queue Length 95th (ft)	41	11	0	0	14	0	0	0
Control Delay (s)	23.0	9.4	0.0	0.0	8.1	0.0	0.0	0.0
Lane LOS	C	A			A			
Approach Delay (s)	16.2		0.0		3.4			
Approach LOS	C							

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		



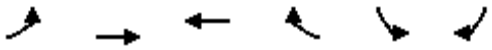
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	37	6	21	54	129	3	25	5	216	94	8
Future Volume (vph)	14	37	6	21	54	129	3	25	5	216	94	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lane Util. Factor		1.00		1.00	0.95	0.88		1.00		1.00	0.95	1.00
Frt		0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected		0.99		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1683		1641	3282	2584		1686		1641	3282	1468
Flt Permitted		0.90		0.78	1.00	1.00		0.97		0.73	1.00	1.00
Satd. Flow (perm)		1526		1355	3282	2584		1641		1269	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	39	6	22	57	136	3	26	5	227	99	8
RTOR Reduction (vph)	0	5	0	0	0	106	0	3	0	0	0	5
Lane Group Flow (vph)	0	55	0	22	57	30	0	31	0	227	99	3
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)		5.1		5.1	5.1	5.1		8.2		8.2	8.2	8.2
Effective Green, g (s)		5.1		5.1	5.1	5.1		8.2		8.2	8.2	8.2
Actuated g/C Ratio		0.22		0.22	0.22	0.22		0.35		0.35	0.35	0.35
Clearance Time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		334		296	718	565		577		446	1155	516
v/s Ratio Prot					0.02						0.03	
v/s Ratio Perm		c0.04		0.02		0.01		0.02		c0.18		0.00
v/c Ratio		0.17		0.07	0.08	0.05		0.05		0.51	0.09	0.01
Uniform Delay, d1		7.4		7.2	7.2	7.2		5.0		6.0	5.0	4.9
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2		0.1	0.0	0.0		0.0		0.9	0.0	0.0
Delay (s)		7.6		7.3	7.3	7.2		5.0		6.9	5.1	4.9
Level of Service		A		A	A	A		A		A	A	A
Approach Delay (s)		7.6			7.3			5.0			6.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	23.3	Sum of lost time (s)	10.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



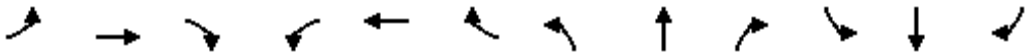
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	1127	360	0	853	488
Future Volume (vph)	0	1127	360	0	853	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4715	4715		3183	1468
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4715	4715		3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1186	379	0	898	514
RTOR Reduction (vph)	0	0	0	0	0	167
Lane Group Flow (vph)	0	1186	379	0	898	347
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		42.3	42.3		34.4	34.4
Effective Green, g (s)		42.3	42.3		34.4	34.4
Actuated g/C Ratio		0.47	0.47		0.38	0.38
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2216	2216		1216	561
v/s Ratio Prot		c0.25	0.08		c0.28	
v/s Ratio Perm						0.24
v/c Ratio		0.54	0.17		0.74	0.62
Uniform Delay, d1		16.9	13.7		23.9	22.5
Progression Factor		1.00	0.22		1.00	1.00
Incremental Delay, d2		0.9	0.2		2.4	2.0
Delay (s)		17.8	3.1		26.3	24.5
Level of Service		B	A		C	C
Approach Delay (s)		17.8	3.1		25.7	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	472	1508	361	306	0	0
Future Volume (vph)	472	1508	361	306	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.97	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3183	3282	3041	1336		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3183	3282	3041	1336		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	497	1587	380	322	0	0
RTOR Reduction (vph)	0	0	19	60	0	0
Lane Group Flow (vph)	497	1587	467	156	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	19.5	90.0	57.6	57.6		
Effective Green, g (s)	19.5	90.0	57.6	57.6		
Actuated g/C Ratio	0.22	1.00	0.64	0.64		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	689	3282	1946	855		
v/s Ratio Prot	c0.16	c0.48	0.15			
v/s Ratio Perm				0.12		
v/c Ratio	0.72	0.48	0.24	0.18		
Uniform Delay, d1	32.7	0.0	6.9	6.6		
Progression Factor	1.15	1.00	1.00	1.00		
Incremental Delay, d2	3.2	0.4	0.3	0.5		
Delay (s)	40.6	0.4	7.2	7.1		
Level of Service	D	A	A	A		
Approach Delay (s)		10.0	7.1		0.0	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

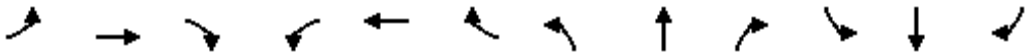


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	1048	0	0	441	614	327	0	532	0	0	0
Future Volume (vph)	176	1048	0	0	441	614	327	0	532	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3183	4715			4182	1263		1641	2584			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3183	4715			4182	1263		1641	2584			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	1103	0	0	464	646	344	0	560	0	0	0
RTOR Reduction (vph)	0	0	0	0	107	179	0	0	80	0	0	0
Lane Group Flow (vph)	185	1103	0	0	680	144	0	344	480	0	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	11.6	60.9			44.6	44.6		28.9	28.9			
Effective Green, g (s)	11.6	60.9			44.6	44.6		28.9	28.9			
Actuated g/C Ratio	0.12	0.61			0.45	0.45		0.29	0.29			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	369	2871			1865	563		474	746			
v/s Ratio Prot	c0.06	c0.23			0.16							
v/s Ratio Perm						0.11		0.21	0.19			
v/c Ratio	0.50	0.38			0.36	0.26		0.73	0.64			
Uniform Delay, d1	41.5	10.0			18.3	17.3		32.0	31.1			
Progression Factor	0.93	0.68			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.9	0.3			0.6	1.1		5.5	1.9			
Delay (s)	39.5	7.1			18.9	18.4		37.5	33.0			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		11.8			18.7			34.7			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	454	220	169	1277	0	972
Future Volume (vph)	454	220	169	1277	0	972
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4484		3183	4715		2584
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4484		3183	4715		2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	478	232	178	1344	0	1023
RTOR Reduction (vph)	69	0	0	0	0	228
Lane Group Flow (vph)	641	0	178	1344	0	795
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	51.7		38.1	100.0		38.1
Effective Green, g (s)	51.7		38.1	100.0		38.1
Actuated g/C Ratio	0.52		0.38	1.00		0.38
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2318		1212	4715		984
v/s Ratio Prot	0.14		0.06	c0.29		c0.31
v/s Ratio Perm						
v/c Ratio	0.28		0.15	0.29		0.81
Uniform Delay, d1	13.6		20.3	0.0		27.7
Progression Factor	0.50		0.95	1.00		1.00
Incremental Delay, d2	0.3		0.1	0.1		4.9
Delay (s)	7.0		19.3	0.1		32.6
Level of Service	A		B	A		C
Approach Delay (s)	7.0			2.4	32.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	289	43	355	664	208	64	31	193	183	63	111
Future Volume (vph)	37	289	43	355	664	208	64	31	193	183	63	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	
Satd. Flow (prot)	1641	4624		1641	4547			1671	1468		3050	
Flt Permitted	0.95	1.00		0.95	1.00			0.47	1.00		0.77	
Satd. Flow (perm)	1641	4624		1641	4547			816	1468		2410	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	39	304	45	374	699	219	67	33	203	193	66	117
RTOR Reduction (vph)	0	18	0	0	37	0	0	0	162	0	70	0
Lane Group Flow (vph)	39	331	0	374	881	0	0	100	41	0	306	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.9	32.0		33.8	60.3			20.0	20.0		20.0	
Effective Green, g (s)	4.9	32.0		33.8	60.3			20.0	20.0		20.0	
Actuated g/C Ratio	0.05	0.32		0.34	0.60			0.20	0.20		0.20	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	80	1479		554	2741			163	293		482	
v/s Ratio Prot	0.02	0.07		c0.23	c0.19							
v/s Ratio Perm								0.12	0.03		c0.13	
v/c Ratio	0.49	0.22		0.68	0.32			0.61	0.14		0.64	
Uniform Delay, d1	46.3	24.9		28.4	9.8			36.5	32.9		36.7	
Progression Factor	1.00	1.00		0.97	0.74			1.00	1.00		1.00	
Incremental Delay, d2	1.7	0.4		2.5	0.3			8.4	0.4		3.4	
Delay (s)	48.0	25.3		30.1	7.5			44.8	33.3		40.0	
Level of Service	D	C		C	A			D	C		D	
Approach Delay (s)		27.5			14.1			37.1			40.0	
Approach LOS		C			B			D			D	

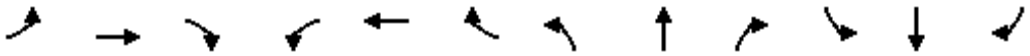
Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	174	134	145	187	162	69
Future Vol, veh/h	174	134	145	187	162	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	183	141	153	197	171	73
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	14.3	9.9	14.3
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	70%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	100%
Vol Right, %	30%	44%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	308	145	94	94
LT Vol	162	0	145	0	0
Through Vol	0	174	0	94	94
RT Vol	69	134	0	0	0
Lane Flow Rate	243	324	153	98	98
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.441	0.512	0.274	0.163	0.111
Departure Headway (Hd)	6.528	5.681	6.46	5.953	4.058
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	552	635	557	602	882
Service Time	4.262	3.414	4.194	3.687	1.791
HCM Lane V/C Ratio	0.44	0.51	0.275	0.163	0.111
HCM Control Delay	14.3	14.3	11.6	9.8	7.3
HCM Lane LOS	B	B	B	A	A
HCM 95th-tile Q	2.2	2.9	1.1	0.6	0.4

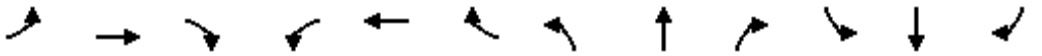


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	356	25	90	705	92	32	10	24	10	10	124
Future Volume (vph)	140	356	25	90	705	92	32	10	24	10	10	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		1.00	
Satd. Flow (prot)	1641	4670		1641	4634			1664	1468		1522	
Flt Permitted	0.95	1.00		0.95	1.00			0.79	1.00		0.97	
Satd. Flow (perm)	1641	4670		1641	4634			1358	1468		1480	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	375	26	95	742	97	34	11	25	11	11	131
RTOR Reduction (vph)	0	8	0	0	18	0	0	0	22	0	116	0
Lane Group Flow (vph)	147	393	0	95	821	0	0	45	3	0	37	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.6	21.1		4.8	18.3			5.0	5.0		5.0	
Effective Green, g (s)	7.6	21.1		4.8	18.3			5.0	5.0		5.0	
Actuated g/C Ratio	0.17	0.47		0.11	0.41			0.11	0.11		0.11	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	276	2184		174	1880			150	162		164	
v/s Ratio Prot	c0.09	c0.08		0.06	c0.18							
v/s Ratio Perm								c0.03	0.00		0.02	
v/c Ratio	0.53	0.18		0.55	0.44			0.30	0.02		0.22	
Uniform Delay, d1	17.1	7.0		19.1	9.7			18.4	17.9		18.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	1.0	0.1		1.9	0.4			0.4	0.0		0.3	
Delay (s)	18.1	7.1		21.0	10.0			18.9	17.9		18.5	
Level of Service	B	A		C	B			B	B		B	
Approach Delay (s)		10.0			11.1			18.5			18.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	14.2
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

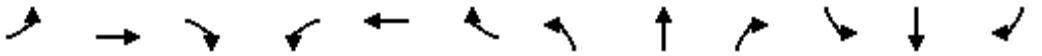
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	933	762	292	950	693	414
Future Volume (vph)	933	762	292	950	693	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1468	1641	4715	3183	1468
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1468	1641	4715	3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	982	802	307	1000	729	436
RTOR Reduction (vph)	0	38	0	0	0	280
Lane Group Flow (vph)	982	764	307	1000	729	156
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	23.2	57.4	18.5	47.4	34.2	34.2
Effective Green, g (s)	23.2	57.4	18.5	47.4	34.2	34.2
Actuated g/C Ratio	0.24	0.60	0.19	0.50	0.36	0.36
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1144	881	317	2337	1138	525
v/s Ratio Prot	0.21	c0.31	c0.19	0.21	0.23	
v/s Ratio Perm		0.21				0.11
v/c Ratio	0.86	0.87	0.97	0.43	0.64	0.30
Uniform Delay, d1	34.6	15.9	38.3	15.4	25.6	22.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.6	9.0	41.5	0.1	1.2	0.3
Delay (s)	41.2	25.0	79.8	15.5	26.8	22.4
Level of Service	D	C	E	B	C	C
Approach Delay (s)	33.9			30.6	25.2	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	95.6	Sum of lost time (s)	19.7
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



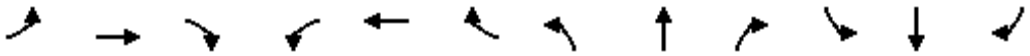
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	94	10	141	119	204	30	328	110	476	642	428
Future Volume (vph)	104	94	10	141	119	204	30	328	110	476	642	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1641	1701		1641	1727	1468	1641	3158		1641	1727	1468
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1641	1701		1641	1727	1468	1641	3158		1641	1727	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	99	11	148	125	215	32	345	116	501	676	451
RTOR Reduction (vph)	0	5	0	0	0	187	0	35	0	0	0	222
Lane Group Flow (vph)	109	105	0	148	125	28	32	426	0	501	676	229
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	8.4	8.4		11.0	11.0	11.0	2.3	17.1		28.3	42.9	42.9
Effective Green, g (s)	8.4	8.4		11.0	11.0	11.0	2.3	17.1		28.3	42.9	42.9
Actuated g/C Ratio	0.10	0.10		0.13	0.13	0.13	0.03	0.20		0.33	0.51	0.51
Clearance Time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0		3.7	3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	162	168		213	224	190	44	638		548	875	744
v/s Ratio Prot	c0.07	0.06		c0.09	0.07		0.02	0.13		c0.31	c0.39	
v/s Ratio Perm						0.02						0.16
v/c Ratio	0.67	0.63		0.69	0.56	0.15	0.73	0.67		0.91	0.77	0.31
Uniform Delay, d1	36.8	36.6		35.2	34.5	32.6	40.8	31.1		27.0	16.9	12.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.3	5.2		9.9	3.5	0.5	39.6	2.9		19.5	4.5	0.3
Delay (s)	45.1	41.8		45.1	38.0	33.1	80.4	34.0		46.5	21.4	12.5
Level of Service	D	D		D	D	C	F	C		D	C	B
Approach Delay (s)		43.4			38.0			37.0			26.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	84.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



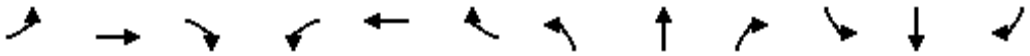
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	833	201	168	455	512	177	351	251	826	240	352
Future Volume (vph)	395	833	201	168	455	512	177	351	251	826	240	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1619		1641	1727	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1619		1641	1727	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	877	212	177	479	539	186	369	264	869	253	371
RTOR Reduction (vph)	0	0	182	0	0	474	0	18	0	0	0	133
Lane Group Flow (vph)	416	877	30	177	479	65	186	615	0	869	253	238
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	13.3	20.7	20.7	10.2	17.6	17.6	21.0	48.0		41.3	68.3	81.6
Effective Green, g (s)	13.3	20.7	20.7	10.2	17.6	17.6	21.0	48.0		41.3	68.3	81.6
Actuated g/C Ratio	0.09	0.14	0.14	0.07	0.12	0.12	0.14	0.33		0.29	0.47	0.56
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	292	673	209	224	572	178	237	536		467	814	1455
v/s Ratio Prot	c0.13	c0.19		0.06	0.10		0.11	c0.38		c0.53	0.15	0.01
v/s Ratio Perm			0.02			0.04						0.08
v/c Ratio	1.42	1.30	0.14	0.79	0.84	0.37	0.78	1.15		1.86	0.31	0.16
Uniform Delay, d1	65.8	62.1	54.4	66.3	62.3	58.5	59.8	48.5		51.8	23.7	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	209.9	147.1	0.3	17.1	10.3	1.3	15.6	86.4		395.5	0.2	0.1
Delay (s)	275.7	209.2	54.7	83.4	72.6	59.8	75.3	134.8		447.3	23.9	15.3
Level of Service	F	F	D	F	E	E	E	F		F	C	B
Approach Delay (s)		205.8			68.4			121.3			268.2	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	177.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	144.9	Sum of lost time (s)	24.7
Intersection Capacity Utilization	124.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	420	251	453	226	230	100	268	1016	458	473	41
Future Volume (vph)	41	420	251	453	226	230	100	268	1016	458	473	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3183	3243	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3183	3243	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	442	264	477	238	242	105	282	1069	482	498	43
RTOR Reduction (vph)	0	0	97	0	0	143	0	0	78	0	5	0
Lane Group Flow (vph)	43	442	167	477	238	99	105	282	991	482	536	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.5	21.2	34.8	38.3	49.9	49.9	13.6	16.0	54.3	23.9	26.3	
Effective Green, g (s)	8.5	21.2	34.8	38.3	49.9	49.9	13.6	16.0	54.3	23.9	26.3	
Actuated g/C Ratio	0.07	0.17	0.29	0.31	0.41	0.41	0.11	0.13	0.45	0.20	0.22	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	114	571	482	1001	708	607	183	431	717	625	700	
v/s Ratio Prot	0.03	c0.13	0.04	0.15	0.14		0.06	0.09	c0.43	c0.15	0.17	
v/s Ratio Perm			0.08			0.07			0.24			
v/c Ratio	0.38	0.77	0.35	0.48	0.34	0.16	0.57	0.65	1.38	0.77	0.77	
Uniform Delay, d1	54.1	48.0	34.4	33.6	24.6	22.7	51.3	50.2	33.7	46.3	44.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.1	6.5	0.4	0.4	0.3	0.1	4.3	3.6	180.9	5.9	5.0	
Delay (s)	56.2	54.4	34.9	34.0	24.8	22.8	55.6	53.8	214.6	52.2	49.8	
Level of Service	E	D	C	C	C	C	E	D	F	D	D	
Approach Delay (s)		47.6			28.9			172.0			50.9	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	87.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	121.7	Sum of lost time (s)	23.4
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

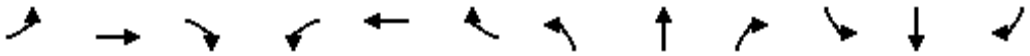


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	66	3	74	432	1333	0	0	449	869
Future Volume (vph)	0	0	0	66	3	74	432	1333	0	0	449	869
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1727	1468	1719	4715			4316	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1727	1468	1719	4715			4316	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	69	3	78	455	1403	0	0	473	915
RTOR Reduction (vph)	0	0	0	0	0	72	0	0	0	0	209	0
Lane Group Flow (vph)	0	0	0	0	72	6	455	1403	0	0	1179	0
Heavy Vehicles (%)	10%	10%	10%	5%	5%	10%	5%	10%	10%	10%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.1	7.1	31.7	82.7			46.3	
Effective Green, g (s)					7.1	7.1	31.7	82.7			46.3	
Actuated g/C Ratio					0.07	0.07	0.32	0.83			0.46	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					122	104	544	3899			1998	
v/s Ratio Prot							c0.26	0.30			c0.27	
v/s Ratio Perm					0.04	0.00						
v/c Ratio					0.59	0.05	0.84	0.36			1.00dr	
Uniform Delay, d1					45.0	43.3	31.7	2.1			19.8	
Progression Factor					1.00	1.00	1.09	0.23			1.00	
Incremental Delay, d2					7.4	0.2	3.4	0.1			1.3	
Delay (s)					52.5	43.5	37.9	0.6			21.1	
Level of Service					D	D	D	A			C	
Approach Delay (s)		0.0			47.8			9.7			21.1	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

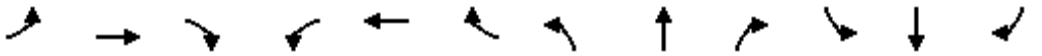
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



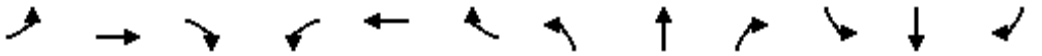
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	964	1	557	0	0	0	0	959	153	116	389	0
Future Volume (vph)	964	1	557	0	0	0	0	959	153	116	389	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1488						4838		1641	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1488						4838		1641	3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1015	1	586	0	0	0	0	1009	161	122	409	0
RTOR Reduction (vph)	0	114	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	832	656	0	0	0	0	0	1148	0	122	409	0
Heavy Vehicles (%)	10%	5%	5%	10%	10%	10%	10%	5%	5%	10%	5%	10%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	52.9	52.9						24.9		7.3	36.9	
Effective Green, g (s)	52.9	52.9						24.9		7.3	36.9	
Actuated g/C Ratio	0.53	0.53						0.25		0.07	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	824	787						1204		119	1268	
v/s Ratio Prot	c0.53	0.44						c0.24		c0.07	0.12	
v/s Ratio Perm												
v/c Ratio	1.01	0.83						0.95		1.03	0.32	
Uniform Delay, d1	23.6	19.8						37.0		46.4	22.6	
Progression Factor	1.00	1.00						1.00		0.81	0.71	
Incremental Delay, d2	33.8	7.5						17.0		80.8	0.5	
Delay (s)	57.3	27.4						53.9		118.3	16.7	
Level of Service	E	C						D		F	B	
Approach Delay (s)		42.9			0.0			53.9			40.0	
Approach LOS		D			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	468	52	57	56	86	336	106	380	84	120	245	556
Future Volume (vph)	468	52	57	56	86	336	106	380	84	120	245	556
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1668		3335	1810	1538	1719	4806		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1668		3335	1810	1538	1719	4806		1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	493	55	60	59	91	354	112	400	88	126	258	585
RTOR Reduction (vph)	0	37	0	0	0	258	0	32	0	0	0	467
Lane Group Flow (vph)	493	78	0	59	91	96	112	456	0	126	258	118
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	13.3	22.7		3.0	12.4	12.4	10.0	15.6		8.2	13.8	13.8
Effective Green, g (s)	13.3	22.7		3.0	12.4	12.4	10.0	15.6		8.2	13.8	13.8
Actuated g/C Ratio	0.19	0.33		0.04	0.18	0.18	0.15	0.23		0.12	0.20	0.20
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	647	552		146	327	278	250	1094		205	692	309
v/s Ratio Prot	c0.15	0.05		0.02	0.05		c0.07	c0.09		c0.07	0.08	
v/s Ratio Perm						c0.06						0.08
v/c Ratio	0.76	0.14		0.40	0.28	0.35	0.45	0.42		0.61	0.37	0.38
Uniform Delay, d1	26.1	16.1		31.9	24.2	24.5	26.7	22.6		28.6	23.6	23.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.3	0.1		1.8	0.5	0.7	1.3	0.3		5.4	0.3	0.8
Delay (s)	31.4	16.2		33.7	24.7	25.3	28.0	22.8		34.0	24.0	24.4
Level of Service	C	B		C	C	C	C	C		C	C	C
Approach Delay (s)		28.5			26.1			23.8			25.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	19.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



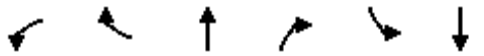
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	521	301	520	642	219	105	743	178	219	695	128
Future Volume (vph)	184	521	301	520	642	219	105	743	178	219	695	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	548	317	547	676	231	111	782	187	231	732	135
RTOR Reduction (vph)	0	0	139	0	0	135	0	0	119	0	0	95
Lane Group Flow (vph)	194	548	178	547	676	96	111	782	68	231	732	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.0	24.0	24.0	20.8	33.8	33.8	8.1	30.3	30.3	9.3	31.5	31.5
Effective Green, g (s)	11.0	24.0	24.0	20.8	33.8	33.8	8.1	30.3	30.3	9.3	31.5	31.5
Actuated g/C Ratio	0.10	0.23	0.23	0.20	0.32	0.32	0.08	0.29	0.29	0.09	0.30	0.30
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	348	782	350	658	1102	493	256	988	442	294	1027	459
v/s Ratio Prot	0.06	c0.16		c0.16	0.20		0.03	c0.23		c0.07	0.21	
v/s Ratio Perm			0.12			0.06			0.04			0.03
v/c Ratio	0.56	0.70	0.51	0.83	0.61	0.19	0.43	0.79	0.15	0.79	0.71	0.09
Uniform Delay, d1	44.9	37.4	35.5	40.6	30.3	25.9	46.5	34.6	28.0	47.1	32.9	26.6
Progression 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
Incremental Delay, d2	1.9	2.9	1.2	8.8	1.0	0.2	1.2	4.4	0.2	12.9	2.4	0.1
Delay (s)	46.8	40.3	36.7	49.4	31.3	26.1	47.6	39.0	28.2	60.0	35.3	26.7
Level of Service	D	D	D	D	C	C	D	D	C	E	D	C
Approach Delay (s)		40.4			37.3			38.0			39.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1334	189	51	1280	241	86
Future Volume (vph)	1334	189	51	1280	241	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	4715	1538	1719	4715	3252	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	4715	1538	1719	4715	3252	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1404	199	54	1347	254	91
RTOR Reduction (vph)	0	97	0	0	44	0
Lane Group Flow (vph)	1404	102	54	1347	301	0
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases		4				
Actuated Green, G (s)	28.8	28.8	4.0	36.8	11.5	
Effective Green, g (s)	28.8	28.8	4.0	36.8	11.5	
Actuated g/C Ratio	0.51	0.51	0.07	0.65	0.20	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	2411	786	122	3081	664	
v/s Ratio Prot	c0.30		0.03	c0.29	c0.09	
v/s Ratio Perm		0.07				
v/c Ratio	0.58	0.13	0.44	0.44	0.45	
Uniform Delay, d1	9.6	7.2	25.1	4.7	19.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.1	2.6	0.1	0.5	
Delay (s)	9.9	7.3	27.6	4.8	20.1	
Level of Service	A	A	C	A	C	
Approach Delay (s)	9.6			5.7	20.1	
Approach LOS	A			A	C	

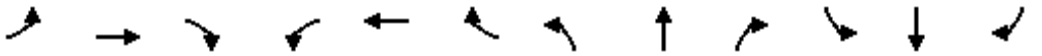
Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑↑	↱		↑↑↑↑
Traffic Volume (veh/h)	0	0	1417	210	0	1222
Future Volume (Veh/h)	0	0	1417	210	0	1222
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1492	221	0	1286
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			292			366
pX, platoon unblocked						
vC, conflicting volume	1814	497			1713	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1814	497			1713	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	100			100	
cM capacity (veh/h)	64	498			333	

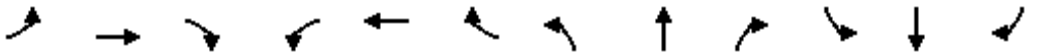
Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	497	497	497	221	322	322	322	322
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	221	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.29	0.29	0.29	0.13	0.19	0.19	0.19	0.19
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								
Approach Delay (s)	0.0				0.0			
Approach LOS								

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		



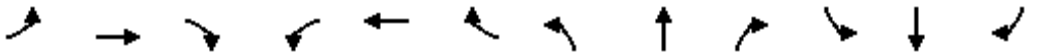
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	1038	115	186	752	203	49	13	51	245	31	459
Future Volume (vph)	375	1038	115	186	752	203	49	13	51	245	31	459
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88		1.00	0.88	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1522		1559	1380	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1522		1559	1380	1395
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	395	1093	121	196	792	214	52	14	54	258	33	483
RTOR Reduction (vph)	0	0	81	0	0	145	0	50	0	0	105	203
Lane Group Flow (vph)	395	1093	40	196	792	69	52	18	0	232	171	63
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.3	28.3	28.3	9.5	27.8	27.8	6.8	6.8		20.4	20.4	20.4
Effective Green, g (s)	9.3	28.3	28.3	9.5	27.8	27.8	6.8	6.8		20.4	20.4	20.4
Actuated g/C Ratio	0.11	0.33	0.33	0.11	0.32	0.32	0.08	0.08		0.24	0.24	0.24
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	343	1546	481	350	1518	472	129	119		368	326	329
v/s Ratio Prot	c0.12	c0.23		0.06	0.17		c0.03	0.01		c0.15	0.12	
v/s Ratio Perm			0.03			0.05						0.05
v/c Ratio	1.15	0.71	0.08	0.56	0.52	0.15	0.40	0.15		0.63	0.53	0.19
Uniform Delay, d1	38.5	25.4	20.0	36.4	23.8	20.8	37.8	37.1		29.6	28.7	26.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	96.4	1.5	0.1	2.0	0.3	0.1	2.1	0.6		3.5	1.5	0.3
Delay (s)	134.9	26.9	20.1	38.5	24.2	20.9	39.9	37.7		33.1	30.3	26.6
Level of Service	F	C	C	D	C	C	D	D		C	C	C
Approach Delay (s)		52.9			25.9			38.6			29.9	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	22.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



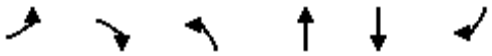
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	616	533	929	825	343	307	325	405	185	370	77
Future Volume (vph)	308	616	533	929	825	343	307	325	405	185	370	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4803	1468	3303	4566		3183	3282	1468	3183	1683	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4803	1468	3303	4566		3183	3282	1468	3183	1683	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	648	561	978	868	361	323	342	426	195	389	81
RTOR Reduction (vph)	0	0	188	0	50	0	0	0	44	0	5	0
Lane Group Flow (vph)	324	648	373	978	1179	0	323	342	382	195	465	0
Heavy Vehicles (%)	10%	8%	10%	6%	8%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	30.6	31.8	31.8	40.3	41.5		14.3	21.0	61.3	32.2	38.9	
Effective Green, g (s)	30.6	31.8	31.8	40.3	41.5		14.3	21.0	61.3	32.2	38.9	
Actuated g/C Ratio	0.20	0.21	0.21	0.27	0.28		0.10	0.14	0.41	0.21	0.26	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	334	1018	311	887	1263		303	459	599	683	436	
v/s Ratio Prot	0.20	0.13		c0.30	0.26		c0.10	0.10	0.17	0.06	c0.28	
v/s Ratio Perm			c0.25						0.09			
v/c Ratio	0.97	0.64	1.20	1.10	0.93		1.07	0.75	0.64	0.29	1.07	
Uniform Delay, d1	59.2	53.8	59.1	54.9	52.9		67.8	61.9	35.5	49.3	55.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	41.1	1.3	116.1	62.3	12.5		70.3	10.5	2.2	0.2	61.8	
Delay (s)	100.3	55.2	175.2	117.2	65.4		138.1	72.4	37.7	49.5	117.3	
Level of Service	F	E	F	F	E		F	E	D	D	F	
Approach Delay (s)		108.6			88.4			78.3			97.5	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	93.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



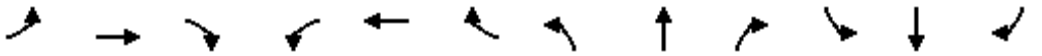
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	0	267	252	67	280	145	912	787	0	1554	124
Future Volume (vph)	126	0	267	252	67	280	145	912	787	0	1554	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1595	1495	3183	3343	1468		4759	1482
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1595	1495	3183	3343	1468		4759	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	133	0	281	265	71	295	153	960	828	0	1636	131
RTOR Reduction (vph)	0	128	0	0	0	147	0	0	373	0	0	75
Lane Group Flow (vph)	133	153	0	167	169	148	153	960	455	0	1636	56
Heavy Vehicles (%)	10%	10%	10%	10%	10%	8%	10%	8%	10%	10%	9%	9%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	12.7	12.7		12.5	12.5	12.5	6.5	49.5	49.5		38.3	38.3
Effective Green, g (s)	12.7	12.7		12.5	12.5	12.5	6.5	49.5	49.5		38.3	38.3
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.14	0.07	0.55	0.55		0.43	0.43
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	231	207		216	221	207	229	1838	807		2025	630
v/s Ratio Prot	0.08	c0.10		c0.11	0.11		0.05	0.29			c0.34	
v/s Ratio Perm						0.10			c0.31			0.04
v/c Ratio	0.58	0.74		0.77	0.76	0.71	0.67	0.52	0.56		0.81	0.09
Uniform Delay, d1	36.1	37.1		37.4	37.3	37.0	40.7	12.8	13.2		22.6	15.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.86	0.85	2.78		1.00	1.00
Incremental Delay, d2	3.4	12.9		15.7	14.5	11.1	6.2	0.9	2.4		3.6	0.3
Delay (s)	39.6	50.0		53.1	51.9	48.1	41.2	11.8	39.1		26.2	15.7
Level of Service	D	D		D	D	D	D	B	D		C	B
Approach Delay (s)		46.6			50.4			25.8			25.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



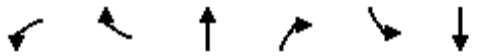
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	514	727	550	1337	802	467
Future Volume (vph)	514	727	550	1337	802	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3213	2584	3183	4759	3312	1482
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3213	2584	3183	4759	3312	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	541	765	579	1407	844	492
RTOR Reduction (vph)	0	482	0	0	0	2
Lane Group Flow (vph)	541	283	579	1407	844	490
Heavy Vehicles (%)	9%	10%	10%	9%	9%	9%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	17.0	17.0	26.5	62.8	31.6	48.6
Effective Green, g (s)	17.0	17.0	26.5	62.8	31.6	48.6
Actuated g/C Ratio	0.19	0.19	0.29	0.70	0.35	0.54
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	606	488	937	3320	1162	884
v/s Ratio Prot	c0.17		c0.18	0.30	c0.25	0.10
v/s Ratio Perm		0.11				0.23
v/c Ratio	0.89	0.58	0.62	0.42	0.73	0.55
Uniform Delay, d1	35.6	33.3	27.4	5.8	25.4	13.6
Progression Factor	1.00	1.00	1.00	1.00	0.39	0.28
Incremental Delay, d2	15.4	1.8	1.2	0.4	2.4	0.4
Delay (s)	51.0	35.0	28.6	6.2	12.4	4.3
Level of Service	D	D	C	A	B	A
Approach Delay (s)	41.7			12.8	9.4	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	254	95	51	192	555	71	580	11	352	307	181
Future Volume (vph)	177	254	95	51	192	555	71	580	11	352	307	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3242	3282	1468	3183	3282	2584	3183	3282	1468	3213	4759	2632
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3242	3282	1468	3183	3282	2584	3183	3282	1468	3213	4759	2632
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	186	267	100	54	202	584	75	611	12	371	323	191
RTOR Reduction (vph)	0	0	74	0	0	346	0	0	9	0	0	119
Lane Group Flow (vph)	186	267	26	54	202	238	75	611	3	371	323	72
Heavy Vehicles (%)	8%	10%	10%	10%	10%	10%	10%	10%	10%	9%	9%	8%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.3	19.9	19.9	3.1	15.7	15.7	5.3	20.8	20.8	13.7	29.2	29.2
Effective Green, g (s)	7.3	19.9	19.9	3.1	15.7	15.7	5.3	20.8	20.8	13.7	29.2	29.2
Actuated g/C Ratio	0.09	0.26	0.26	0.04	0.20	0.20	0.07	0.27	0.27	0.18	0.38	0.38
Clearance Time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	307	848	379	128	669	526	219	886	396	571	1804	998
v/s Ratio Prot	c0.06	c0.08		0.02	0.06		0.02	c0.19		c0.12	0.07	
v/s Ratio Perm			0.02			c0.09			0.00			0.03
v/c Ratio	0.61	0.31	0.07	0.42	0.30	0.45	0.34	0.69	0.01	0.65	0.18	0.07
Uniform Delay, d1	33.5	23.0	21.6	36.1	26.0	26.9	34.2	25.2	20.6	29.4	15.9	15.3
Progression 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
Incremental Delay, d2	3.4	0.2	0.1	2.2	0.3	0.6	0.9	2.3	0.0	2.6	0.0	0.0
Delay (s)	36.8	23.3	21.6	38.3	26.3	27.5	35.1	27.5	20.6	32.0	16.0	15.3
Level of Service	D	C	C	D	C	C	D	C	C	C	B	B
Approach Delay (s)		27.5			27.9			28.2			22.5	
Approach LOS		C			C			C			C	

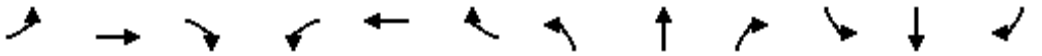
Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	209	306	24	129	244
Future Volume (Veh/h)	148	209	306	24	129	244
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	156	220	322	25	136	257
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1296
pX, platoon unblocked						
vC, conflicting volume	692	174			347	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	692	174			347	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	51	73			88	
cM capacity (veh/h)	318	815			1153	

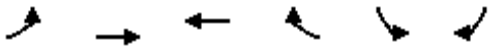
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	156	220	215	132	136	86	86	86
Volume Left	156	0	0	0	136	0	0	0
Volume Right	0	220	0	25	0	0	0	0
cSH	318	815	1700	1700	1153	1700	1700	1700
Volume to Capacity	0.49	0.27	0.13	0.08	0.12	0.05	0.05	0.05
Queue Length 95th (ft)	64	27	0	0	10	0	0	0
Control Delay (s)	26.7	11.0	0.0	0.0	8.5	0.0	0.0	0.0
Lane LOS	D	B			A			
Approach Delay (s)	17.5		0.0		3.0			
Approach LOS	C							

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		



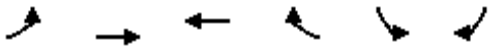
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	35	33	47	32	255	3	77	8	151	155	10
Future Volume (vph)	10	35	33	47	32	255	3	77	8	151	155	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lane Util. Factor		1.00		1.00	0.95	0.88		1.00		1.00	0.95	1.00
Frt		0.94		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected		0.99		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1618		1641	3282	2584		1704		1641	3282	1468
Flt Permitted		0.95		0.70	1.00	1.00		0.98		0.70	1.00	1.00
Satd. Flow (perm)		1552		1214	3282	2584		1680		1205	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	37	35	49	34	268	3	81	8	159	163	11
RTOR Reduction (vph)	0	25	0	0	0	191	0	6	0	0	0	8
Lane Group Flow (vph)	0	58	0	49	34	77	0	86	0	159	163	3
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)		6.9		6.9	6.9	6.9		7.1		7.1	7.1	7.1
Effective Green, g (s)		6.9		6.9	6.9	6.9		7.1		7.1	7.1	7.1
Actuated g/C Ratio		0.29		0.29	0.29	0.29		0.30		0.30	0.30	0.30
Clearance Time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		446		349	943	742		497		356	970	434
v/s Ratio Prot					0.01						0.05	
v/s Ratio Perm		0.04		c0.04		0.03		0.05		c0.13		0.00
v/c Ratio		0.13		0.14	0.04	0.10		0.17		0.45	0.17	0.01
Uniform Delay, d1		6.3		6.3	6.2	6.3		6.3		6.9	6.3	6.0
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.1		0.2	0.0	0.1		0.2		0.9	0.1	0.0
Delay (s)		6.5		6.5	6.2	6.3		6.4		7.8	6.3	6.0
Level of Service		A		A	A	A		A		A	A	A
Approach Delay (s)		6.5			6.4			6.4			7.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	24.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



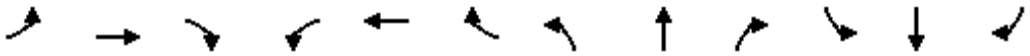
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	877	762	0	339	301
Future Volume (vph)	0	877	762	0	339	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4759	4715		3183	1482
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4759	4715		3183	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	923	802	0	357	317
RTOR Reduction (vph)	0	0	0	0	0	57
Lane Group Flow (vph)	0	923	802	0	357	260
Heavy Vehicles (%)	10%	9%	10%	10%	10%	9%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		63.1	63.1		23.6	23.6
Effective Green, g (s)		63.1	63.1		23.6	23.6
Actuated g/C Ratio		0.63	0.63		0.24	0.24
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3002	2975		751	349
v/s Ratio Prot		c0.19	0.17		0.11	
v/s Ratio Perm						c0.18
v/c Ratio		0.31	0.27		0.48	0.75
Uniform Delay, d1		8.4	8.2		32.9	35.4
Progression Factor		1.00	0.09		1.00	1.00
Incremental Delay, d2		0.3	0.1		0.5	8.4
Delay (s)		8.7	0.9		33.3	43.8
Level of Service		A	A		C	D
Approach Delay (s)		8.7	0.9		38.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	507	708	763	778	0	0
Future Volume (vph)	507	708	763	778	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.96	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3183	3282	3010	1336		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3183	3282	3010	1336		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	534	745	803	819	0	0
RTOR Reduction (vph)	0	0	28	28	0	0
Lane Group Flow (vph)	534	745	1094	472	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	21.9	100.0	65.2	65.2		
Effective Green, g (s)	21.9	100.0	65.2	65.2		
Actuated g/C Ratio	0.22	1.00	0.65	0.65		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	697	3282	1962	871		
v/s Ratio Prot	c0.17	0.23	c0.36			
v/s Ratio Perm				0.35		
v/c Ratio	0.77	0.23	0.56	0.54		
Uniform Delay, d1	36.6	0.0	9.5	9.4		
Progression Factor	1.03	1.00	1.00	1.00		
Incremental Delay, d2	4.9	0.2	1.1	2.4		
Delay (s)	42.8	0.2	10.7	11.8		
Level of Service	D	A	B	B		
Approach Delay (s)		18.0	11.0		0.0	
Approach LOS		B	B		A	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

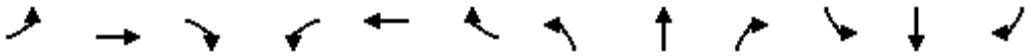


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	585	700	0	0	804	1121	95	2	362	0	0	0
Future Volume (vph)	585	700	0	0	804	1121	95	2	362	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3183	4715			4182	1263		1647	2584			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3183	4715			4182	1263		1647	2584			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	616	737	0	0	846	1180	100	2	381	0	0	0
RTOR Reduction (vph)	0	0	0	0	112	171	0	0	344	0	0	0
Lane Group Flow (vph)	616	737	0	0	1324	419	0	102	37	0	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	28.3	89.2			56.2	56.2		10.6	10.6			
Effective Green, g (s)	28.3	89.2			56.2	56.2		10.6	10.6			
Actuated g/C Ratio	0.26	0.81			0.51	0.51		0.10	0.10			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	818	3823			2136	645		158	249			
v/s Ratio Prot	c0.19	0.16			0.32							
v/s Ratio Perm						c0.33		0.06	0.01			
v/c Ratio	0.75	0.19			0.62	0.65		0.65	0.15			
Uniform Delay, d1	37.6	2.3			19.3	19.7		47.9	45.6			
Progression Factor	0.84	0.72			1.00	1.00		1.00	1.00			
Incremental Delay, d2	3.5	0.1			1.4	5.0		8.7	0.3			
Delay (s)	35.2	1.8			20.6	24.7		56.6	45.8			
Level of Service	D	A			C	C		E	D			
Approach Delay (s)		17.0			21.8			48.1			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	992	481	379	1182	0	469
Future Volume (vph)	992	481	379	1182	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4485		3183	4715		2584
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4485		3183	4715		2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1044	506	399	1244	0	494
RTOR Reduction (vph)	54	0	0	0	0	137
Lane Group Flow (vph)	1496	0	399	1244	0	357
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	78.3		21.5	110.0		21.5
Effective Green, g (s)	78.3		21.5	110.0		21.5
Actuated g/C Ratio	0.71		0.20	1.00		0.20
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3192		622	4715		505
v/s Ratio Prot	c0.33		0.13	0.26		c0.14
v/s Ratio Perm						
v/c Ratio	0.47		0.64	0.26		0.71
Uniform Delay, d1	6.9		40.7	0.0		41.3
Progression Factor	0.25		0.91	1.00		1.00
Incremental Delay, d2	0.4		2.2	0.1		4.5
Delay (s)	2.1		39.1	0.1		45.8
Level of Service	A		D	A		D
Approach Delay (s)	2.1			9.6	45.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	701	80	375	514	272	55	65	391	267	106	105
Future Volume (vph)	75	701	80	375	514	272	55	65	391	267	106	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.95			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1641	4643		1641	4471			1688	1468		3087	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.73	
Satd. Flow (perm)	1641	4643		1641	4471			966	1468		2320	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	738	84	395	541	286	58	68	412	281	112	111
RTOR Reduction (vph)	0	12	0	0	68	0	0	0	300	0	27	0
Lane Group Flow (vph)	79	810	0	395	759	0	0	126	112	0	477	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	8.6	35.5		30.3	56.6			30.0	30.0		30.0	
Effective Green, g (s)	8.6	35.5		30.3	56.6			30.0	30.0		30.0	
Actuated g/C Ratio	0.08	0.32		0.28	0.51			0.27	0.27		0.27	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	128	1498		452	2300			263	400		632	
v/s Ratio Prot	0.05	c0.17		c0.24	0.17							
v/s Ratio Perm								0.13	0.08		c0.21	
v/c Ratio	0.62	0.54		0.87	0.33			0.48	0.28		0.75	
Uniform Delay, d1	49.1	30.6		38.0	15.6			33.5	31.5		36.6	
Progression Factor	1.00	1.00		1.08	0.55			1.00	1.00		1.00	
Incremental Delay, d2	6.1	1.4		16.1	0.4			2.3	0.6		5.7	
Delay (s)	55.2	32.0		57.3	9.0			35.7	32.1		42.3	
Level of Service	E	C		E	A			D	C		D	
Approach Delay (s)		34.0			24.6			33.0			42.3	
Approach LOS		C			C			C			D	

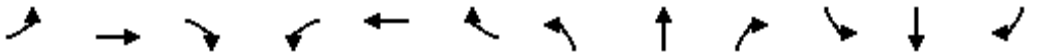
Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	21
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	242	246	229	330	109	105
Future Vol, veh/h	242	246	229	330	109	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	255	259	241	347	115	111
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	33.6	12	15.8
HCM LOS	D	B	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	51%	0%	100%	0%	0%
Vol Thru, %	0%	50%	0%	100%	100%
Vol Right, %	49%	50%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	488	229	165	165
LT Vol	109	0	229	0	0
Through Vol	0	242	0	165	165
RT Vol	105	246	0	0	0
Lane Flow Rate	225	514	241	174	174
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.451	0.85	0.452	0.301	0.209
Departure Headway (Hd)	7.215	5.956	6.75	6.241	4.339
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	498	606	533	573	820
Service Time	4.985	3.718	4.513	4.004	2.101
HCM Lane V/C Ratio	0.452	0.848	0.452	0.304	0.212
HCM Control Delay	15.8	33.6	15	11.7	8.3
HCM Lane LOS	C	D	B	B	A
HCM 95th-tile Q	2.3	9.3	2.3	1.3	0.8

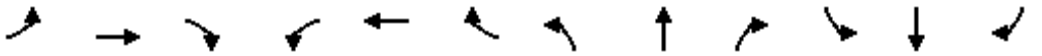


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	858	29	68	634	70	33	10	24	10	10	107
Future Volume (vph)	123	858	29	68	634	70	33	10	24	10	10	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		1.00	
Satd. Flow (prot)	1641	4692		1641	4645			1664	1468		1526	
Flt Permitted	0.95	1.00		0.95	1.00			0.85	1.00		0.97	
Satd. Flow (perm)	1641	4692		1641	4645			1474	1468		1479	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	129	903	31	72	667	74	35	11	25	11	11	113
RTOR Reduction (vph)	0	3	0	0	14	0	0	0	22	0	101	0
Lane Group Flow (vph)	129	931	0	72	727	0	0	46	3	0	34	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	5.4	22.7		3.2	20.5			4.7	4.7		4.7	
Effective Green, g (s)	5.4	22.7		3.2	20.5			4.7	4.7		4.7	
Actuated g/C Ratio	0.12	0.51		0.07	0.46			0.10	0.10		0.10	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	197	2377		117	2125			154	154		155	
v/s Ratio Prot	c0.08	c0.20		0.04	0.16							
v/s Ratio Perm								c0.03	0.00		0.02	
v/c Ratio	0.65	0.39		0.62	0.34			0.30	0.02		0.22	
Uniform Delay, d1	18.8	6.8		20.2	7.8			18.5	18.0		18.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	5.8	0.3		6.6	0.2			0.4	0.0		0.3	
Delay (s)	24.7	7.1		26.8	8.0			18.9	18.0		18.6	
Level of Service	C	A		C	A			B	B		B	
Approach Delay (s)		9.2			9.7			18.6			18.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	14.2
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

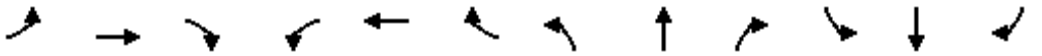
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	978	741	467	1044	835	301
Future Volume (vph)	978	741	467	1044	835	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4759	1468	1641	4759	3183	1468
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4759	1468	1641	4759	3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1029	780	492	1099	879	317
RTOR Reduction (vph)	0	60	0	0	0	232
Lane Group Flow (vph)	1029	720	492	1099	879	85
Heavy Vehicles (%)	9%	10%	10%	9%	10%	10%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	19.8	44.0	26.3	51.8	24.2	24.2
Effective Green, g (s)	19.8	44.0	26.3	51.8	24.2	24.2
Actuated g/C Ratio	0.22	0.49	0.29	0.58	0.27	0.27
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1046	717	479	2739	855	394
v/s Ratio Prot	0.22	c0.27	c0.30	0.23	c0.28	
v/s Ratio Perm		0.22				0.06
v/c Ratio	0.98	1.00	1.03	0.40	1.03	0.22
Uniform Delay, d1	34.9	23.0	31.8	10.5	32.9	25.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.7	34.7	48.2	0.1	38.2	0.3
Delay (s)	58.7	57.7	80.1	10.6	71.1	25.8
Level of Service	E	E	F	B	E	C
Approach Delay (s)	58.3			32.1	59.1	
Approach LOS	E			C	E	

Intersection Summary			
HCM 2000 Control Delay	49.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



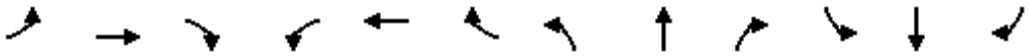
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	476	155	39	88	127	502	46	913	140	335	288	352
Future Volume (vph)	476	155	39	88	127	502	46	913	140	335	288	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1641	1675		1641	1727	1468	1641	3217		1641	1727	1468
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1641	1675		1641	1727	1468	1641	3217		1641	1727	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	501	163	41	93	134	528	48	961	147	353	303	371
RTOR Reduction (vph)	0	7	0	0	0	223	0	8	0	0	0	215
Lane Group Flow (vph)	501	197	0	93	134	305	48	1100	0	353	303	156
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	33.7	33.7		20.8	20.8	20.8	7.2	42.0		24.6	59.2	59.2
Effective Green, g (s)	33.7	33.7		20.8	20.8	20.8	7.2	42.0		24.6	59.2	59.2
Actuated g/C Ratio	0.24	0.24		0.15	0.15	0.15	0.05	0.30		0.17	0.42	0.42
Clearance Time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0		3.7	3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	392	400		242	254	216	83	958		286	725	616
v/s Ratio Prot	c0.31	0.12		0.06	0.08		0.03	c0.34		c0.22	0.18	
v/s Ratio Perm						c0.21						0.11
v/c Ratio	1.28	0.49		0.38	0.53	1.41	0.58	1.15		1.23	0.42	0.25
Uniform Delay, d1	53.6	46.2		54.3	55.5	60.1	65.4	49.5		58.2	28.7	26.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	143.5	0.3		1.3	2.4	209.9	5.9	78.8		131.9	0.5	0.3
Delay (s)	197.1	46.6		55.5	57.9	270.0	71.3	128.3		190.1	29.2	26.8
Level of Service	F	D		E	E	F	E	F		F	C	C
Approach Delay (s)		153.6			205.9			125.9			83.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	135.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	140.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



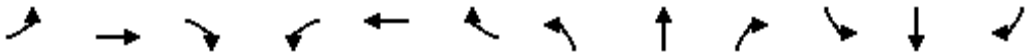
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	535	192	299	864	775	221	250	158	506	377	479
Future Volume (vph)	391	535	192	299	864	775	221	250	158	506	377	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	1627		1656	1727	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	1627		1656	1727	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	412	563	202	315	909	816	233	263	166	533	397	504
RTOR Reduction (vph)	0	0	167	0	0	453	0	16	0	0	0	145
Lane Group Flow (vph)	412	563	35	315	909	363	233	413	0	533	397	359
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	9%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	15.3	24.9	24.9	17.2	26.8	26.8	24.8	40.0		35.4	50.6	65.9
Effective Green, g (s)	15.3	24.9	24.9	17.2	26.8	26.8	24.8	40.0		35.4	50.6	65.9
Actuated g/C Ratio	0.11	0.18	0.18	0.12	0.19	0.19	0.17	0.28		0.25	0.36	0.46
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	342	833	257	385	896	276	286	457		412	614	1197
v/s Ratio Prot	c0.13	0.12		0.10	0.19		0.14	c0.25		c0.32	0.23	0.03
v/s Ratio Perm			0.02			c0.25						0.11
v/c Ratio	1.20	0.68	0.14	0.82	1.01	1.32	0.81	0.90		1.29	0.65	0.30
Uniform Delay, d1	63.4	54.9	49.6	61.0	57.7	57.7	56.5	49.3		53.4	38.3	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	116.6	2.2	0.2	12.7	33.7	165.5	16.1	21.0		149.2	2.3	0.1
Delay (s)	180.0	57.1	49.8	73.7	91.4	223.2	72.6	70.2		202.6	40.7	23.9
Level of Service	F	E	D	E	F	F	E	E		F	D	C
Approach Delay (s)		98.9			141.4			71.1			95.0	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	110.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	142.2	Sum of lost time (s)	24.7
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	236	106	1041	434	500	254	476	532	301	213	41
Future Volume (vph)	42	236	106	1041	434	500	254	476	532	301	213	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3242	3203	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3242	3203	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	248	112	1096	457	526	267	501	560	317	224	43
RTOR Reduction (vph)	0	0	89	0	0	230	0	0	44	0	13	0
Lane Group Flow (vph)	44	248	23	1096	457	296	267	501	516	317	254	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	10%	10%	8%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.6	13.6	25.5	48.7	52.6	52.6	11.9	24.7	73.4	16.9	29.7	
Effective Green, g (s)	8.6	13.6	25.5	48.7	52.6	52.6	11.9	24.7	73.4	16.9	29.7	
Actuated g/C Ratio	0.07	0.11	0.20	0.39	0.42	0.42	0.09	0.20	0.58	0.13	0.24	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	353	296	1228	719	617	154	642	853	434	753	
v/s Ratio Prot	0.03	c0.08	0.01	c0.34	0.26		c0.16	c0.15	0.23	0.10	c0.08	
v/s Ratio Perm			0.01			0.20			0.12			
v/c Ratio	0.40	0.70	0.08	0.89	0.64	0.48	1.73	0.78	0.60	0.73	0.34	
Uniform Delay, d1	56.3	54.3	40.8	36.3	29.2	26.8	57.1	48.2	17.0	52.5	40.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	6.2	0.1	8.5	1.8	0.6	355.8	6.1	1.2	6.2	0.3	
Delay (s)	58.6	60.6	40.9	44.8	31.0	27.4	413.0	54.3	18.3	58.7	40.3	
Level of Service	E	E	D	D	C	C	F	D	B	E	D	
Approach Delay (s)		54.9			37.4			111.2			50.3	
Approach LOS		D			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	63.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	126.2	Sum of lost time (s)	23.4
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

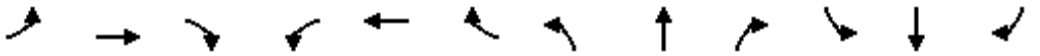


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	125	1	146	440	1367	0	0	522	1077
Future Volume (vph)	0	0	0	125	1	146	440	1367	0	0	522	1077
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1724	1468	1719	4715			4303	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1724	1468	1719	4715			4303	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	132	1	154	463	1439	0	0	549	1134
RTOR Reduction (vph)	0	0	0	0	0	89	0	0	0	0	223	0
Lane Group Flow (vph)	0	0	0	0	133	65	463	1439	0	0	1460	0
Heavy Vehicles (%)	10%	10%	10%	5%	5%	10%	5%	10%	10%	10%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					13.0	13.0	36.6	96.8			55.5	
Effective Green, g (s)					13.0	13.0	36.6	96.8			55.5	
Actuated g/C Ratio					0.11	0.11	0.31	0.81			0.46	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					186	159	524	3803			1990	
v/s Ratio Prot							c0.27	0.31			c0.34	
v/s Ratio Perm					0.08	0.04						
v/c Ratio					0.72	0.41	0.88	0.38			1.24dr	
Uniform Delay, d1					51.7	49.9	39.7	3.2			26.2	
Progression Factor					1.00	1.00	1.07	0.97			1.00	
Incremental Delay, d2					12.3	1.7	5.1	0.1			2.4	
Delay (s)					64.0	51.6	47.6	3.2			28.7	
Level of Service					E	D	D	A			C	
Approach Delay (s)		0.0			57.3			14.0			28.7	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		

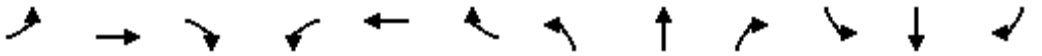
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



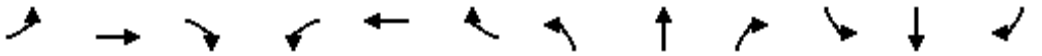
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1167	7	565	0	0	0	0	843	139	112	531	0
Future Volume (vph)	1167	7	565	0	0	0	0	843	139	112	531	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.90						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1498						4835		1641	3438	
Flt Permitted	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1498						4835		1641	3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1228	7	595	0	0	0	0	887	146	118	559	0
RTOR Reduction (vph)	0	53	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	946	831	0	0	0	0	0	1014	0	118	559	0
Heavy Vehicles (%)	10%	5%	5%	10%	10%	10%	10%	5%	5%	10%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	68.9	68.9						27.7		8.5	40.9	
Effective Green, g (s)	68.9	68.9						27.7		8.5	40.9	
Actuated g/C Ratio	0.57	0.57						0.23		0.07	0.34	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	895	860						1116		116	1171	
v/s Ratio Prot	c0.61	0.55						c0.21		c0.07	0.16	
v/s Ratio Perm												
v/c Ratio	1.06	0.97						0.91		1.02	0.48	
Uniform Delay, d1	25.5	24.4						44.9		55.8	31.1	
Progression Factor	1.00	1.00						1.00		0.75	0.58	
Incremental Delay, d2	46.3	22.5						12.3		72.2	0.9	
Delay (s)	71.9	47.0						57.2		113.8	19.0	
Level of Service	E	D						E		F	B	
Approach Delay (s)		59.8			0.0			57.2			35.5	
Approach LOS		E			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	500	103	82	66	71	222	55	295	59	230	349	518
Future Volume (vph)	500	103	82	66	71	222	55	295	59	230	349	518
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1689		3335	1810	1538	1719	4817		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1689		3335	1810	1538	1719	4817		1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	526	108	86	69	75	234	58	311	62	242	367	545
RTOR Reduction (vph)	0	29	0	0	0	200	0	30	0	0	0	375
Lane Group Flow (vph)	526	165	0	69	75	34	58	343	0	242	367	170
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	11.2	15.9		4.6	9.3	9.3	4.8	10.1		14.7	20.0	20.0
Effective Green, g (s)	11.2	15.9		4.6	9.3	9.3	4.8	10.1		14.7	20.0	20.0
Actuated g/C Ratio	0.17	0.25		0.07	0.14	0.14	0.07	0.16		0.23	0.31	0.31
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	580	417		238	261	222	128	756		392	1069	478
v/s Ratio Prot	c0.16	c0.10		0.02	0.04		0.03	0.07		c0.14	0.11	
v/s Ratio Perm						0.02						c0.11
v/c Ratio	0.91	0.39		0.29	0.29	0.15	0.45	0.45		0.62	0.34	0.35
Uniform Delay, d1	26.0	20.2		28.3	24.5	24.1	28.5	24.6		22.3	17.1	17.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	17.8	0.6		0.7	0.6	0.3	2.5	0.4		2.9	0.2	0.5
Delay (s)	43.9	20.8		29.0	25.2	24.4	31.0	25.0		25.2	17.3	17.6
Level of Service	D	C		C	C	C	C	C		C	B	B
Approach Delay (s)		37.6			25.4			25.8			19.1	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



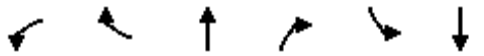
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	621	271	307	517	152	205	911	305	128	821	153
Future Volume (vph)	286	621	271	307	517	152	205	911	305	128	821	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	301	654	285	323	544	160	216	959	321	135	864	161
RTOR Reduction (vph)	0	0	118	0	0	114	0	0	177	0	0	99
Lane Group Flow (vph)	301	654	167	323	544	46	216	959	144	135	864	62
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.5	26.7	26.7	11.7	26.9	26.9	8.2	34.2	34.2	7.1	33.1	33.1
Effective Green, g (s)	11.5	26.7	26.7	11.7	26.9	26.9	8.2	34.2	34.2	7.1	33.1	33.1
Actuated g/C Ratio	0.11	0.27	0.27	0.12	0.27	0.27	0.08	0.34	0.34	0.07	0.33	0.33
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	380	911	407	387	918	410	271	1167	522	235	1130	505
v/s Ratio Prot	0.09	c0.19		c0.10	0.16		c0.06	c0.28		0.04	0.25	
v/s Ratio Perm			0.11			0.03			0.09			0.04
v/c Ratio	0.79	0.72	0.41	0.83	0.59	0.11	0.80	0.82	0.28	0.57	0.76	0.12
Uniform Delay, d1	43.4	33.6	30.5	43.6	32.1	27.9	45.4	30.5	24.2	45.3	30.3	23.6
Progression 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
Incremental Delay, d2	10.8	2.7	0.7	14.3	1.0	0.1	14.9	4.8	0.3	3.4	3.1	0.1
Delay (s)	54.2	36.3	31.2	57.9	33.2	28.0	60.4	35.2	24.5	48.7	33.4	23.8
Level of Service	D	D	C	E	C	C	E	D	C	D	C	C
Approach Delay (s)		39.5			40.1			36.6			33.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.7	Sum of lost time (s)	21.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	980	226	103	1453	643	204
Future Volume (vph)	980	226	103	1453	643	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (prot)	4715	1538	1719	4715	3260	
Flt Permitted	1.00	1.00	0.95	1.00	0.96	
Satd. Flow (perm)	4715	1538	1719	4715	3260	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1032	238	108	1529	677	215
RTOR Reduction (vph)	0	152	0	0	39	0
Lane Group Flow (vph)	1032	86	108	1529	853	0
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases		4				
Actuated Green, G (s)	25.3	25.3	7.7	37.0	24.8	
Effective Green, g (s)	25.3	25.3	7.7	37.0	24.8	
Actuated g/C Ratio	0.36	0.36	0.11	0.53	0.36	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1709	557	189	2499	1158	
v/s Ratio Prot	0.22		0.06	c0.32	c0.26	
v/s Ratio Perm		0.06				
v/c Ratio	0.60	0.15	0.57	0.61	0.74	
Uniform Delay, d1	18.2	15.0	29.5	11.4	19.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.1	4.1	0.4	2.5	
Delay (s)	18.8	15.2	33.6	11.9	22.1	
Level of Service	B	B	C	B	C	
Approach Delay (s)	18.1			13.3	22.1	
Approach LOS	B			B	C	

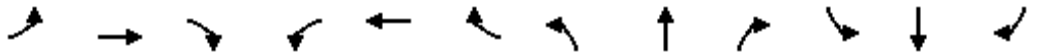
Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	69.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑↑	↱		↑↑↑↑
Traffic Volume (veh/h)	0	0	1037	426	0	1407
Future Volume (Veh/h)	0	0	1037	426	0	1407
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1092	448	0	1481
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			292			366
pX, platoon unblocked						
vC, conflicting volume	1462	364			1540	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1462	364			1540	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	100			100	
cM capacity (veh/h)	111	610			391	

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	364	364	364	448	370	370	370	370
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	448	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.21	0.21	0.21	0.26	0.22	0.22	0.22	0.22
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								
Approach Delay (s)	0.0				0.0			
Approach LOS								

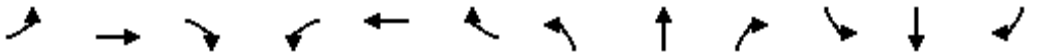
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	729	70	113	869	148	106	28	110	370	19	429
Future Volume (vph)	200	729	70	113	869	148	106	28	110	370	19	429
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88		1.00	0.91	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	1520		1559	1406	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	1520		1559	1406	1395
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	767	74	119	915	156	112	29	116	389	20	452
RTOR Reduction (vph)	0	0	53	0	0	113	0	101	0	0	42	202
Lane Group Flow (vph)	211	767	21	119	915	43	112	44	0	296	247	74
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.1	27.5	27.5	8.7	26.4	26.4	12.3	12.3		25.6	25.6	25.6
Effective Green, g (s)	9.1	27.5	27.5	8.7	26.4	26.4	12.3	12.3		25.6	25.6	25.6
Actuated g/C Ratio	0.10	0.29	0.29	0.09	0.28	0.28	0.13	0.13		0.27	0.27	0.27
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	303	1371	423	290	1316	406	211	195		418	377	374
v/s Ratio Prot	c0.07	0.16		0.04	c0.19		c0.07	0.03		c0.19	0.18	
v/s Ratio Perm			0.01			0.03						0.05
v/c Ratio	0.70	0.56	0.05	0.41	0.70	0.11	0.53	0.23		0.71	0.65	0.20
Uniform Delay, d1	41.8	28.8	24.5	40.9	30.9	25.7	38.9	37.3		31.5	31.0	27.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.8	0.5	0.0	0.9	1.6	0.1	2.6	0.6		5.4	4.0	0.3
Delay (s)	48.6	29.3	24.6	41.9	32.5	25.8	41.4	37.9		36.9	35.0	27.2
Level of Service	D	C	C	D	C	C	D	D		D	D	C
Approach Delay (s)		32.8			32.6			39.4			33.2	
Approach LOS		C			C			D			C	

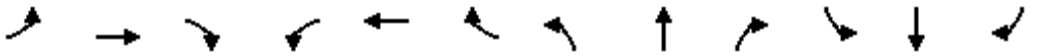
Intersection Summary					
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.67				
Actuated Cycle Length (s)	95.4	Sum of lost time (s)		22.0	
Intersection Capacity Utilization	64.2%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

HORIZON YEAR 2035 BASELINE PLUS PROJECT CONDITIONS WITH MITIGATION



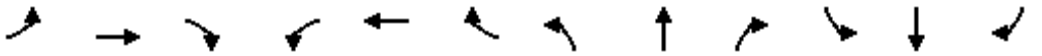
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	713	323	630	627	265	417	526	474	336	269	351
Future Volume (vph)	79	713	323	630	627	265	417	526	474	336	269	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3183	4759	1468	3242	4534		3183	3282	1468	3183	3003	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3183	4759	1468	3242	4534		3183	3282	1468	3183	3003	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	751	340	663	660	279	439	554	499	354	283	369
RTOR Reduction (vph)	0	0	282	0	75	0	0	0	62	0	270	0
Lane Group Flow (vph)	83	751	58	663	864	0	439	554	437	354	382	0
Heavy Vehicles (%)	10%	9%	10%	8%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	8.0	15.4	15.4	20.4	27.8		13.3	17.5	37.9	12.0	16.2	
Effective Green, g (s)	8.0	15.4	15.4	20.4	27.8		13.3	17.5	37.9	12.0	16.2	
Actuated g/C Ratio	0.09	0.17	0.17	0.23	0.31		0.15	0.19	0.42	0.13	0.18	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	282	814	251	734	1400		470	638	711	424	540	
v/s Ratio Prot	0.03	c0.16		c0.20	c0.19		0.14	c0.17	0.14	c0.11	c0.13	
v/s Ratio Perm			0.04						0.16			
v/c Ratio	0.29	0.92	0.23	0.90	0.62		0.93	0.87	0.61	0.83	0.71	
Uniform Delay, d1	38.4	36.7	32.2	33.8	26.6		37.9	35.1	20.3	38.0	34.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	15.8	0.5	14.4	0.8		25.8	14.9	1.6	13.3	7.6	
Delay (s)	38.9	52.5	32.7	48.3	27.4		63.7	50.0	21.9	51.3	42.3	
Level of Service	D	D	C	D	C		E	D	C	D	D	
Approach Delay (s)		45.8			36.0			44.6			45.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



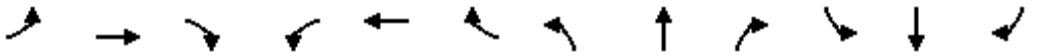
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	94	10	141	119	204	30	328	110	476	642	428
Future Volume (vph)	104	94	10	141	119	204	30	328	110	476	642	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3	5.3	5.2	5.2	4.4	4.4	4.9	4.9	4.4	5.1	5.1
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	1727	1468	1641	1727	1468	1641	3282	1468	3183	3282	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	1727	1468	1641	1727	1468	1641	3282	1468	3183	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	99	11	148	125	215	32	345	116	501	676	451
RTOR Reduction (vph)	0	0	10	0	0	93	0	0	84	0	0	238
Lane Group Flow (vph)	109	99	1	148	125	122	32	345	32	501	676	213
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	5.0	6.7	6.7	9.6	11.3	27.8	2.0	20.0	20.0	16.5	34.3	34.3
Effective Green, g (s)	5.0	6.7	6.7	9.6	11.3	27.8	2.0	20.0	20.0	16.5	34.3	34.3
Actuated g/C Ratio	0.07	0.09	0.09	0.13	0.16	0.38	0.03	0.28	0.28	0.23	0.47	0.47
Clearance Time (s)	5.3	5.3	5.3	5.2	5.2	4.4	4.4	4.9	4.9	4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0	2.0	3.7	3.7	2.0	2.0	3.8	3.8	2.0	3.8	3.8
Lane Grp Cap (vph)	219	159	135	216	268	562	45	904	404	723	1550	693
v/s Ratio Prot	0.03	0.06		c0.09	c0.07	0.05	0.02	0.11		c0.16	c0.21	
v/s Ratio Perm			0.00			0.03			0.02			0.15
v/c Ratio	0.50	0.62	0.01	0.69	0.47	0.22	0.71	0.38	0.08	0.69	0.44	0.31
Uniform Delay, d1	32.6	31.7	29.9	30.1	27.9	15.1	35.0	21.3	19.5	25.7	12.7	11.8
Progression 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
Incremental Delay, d2	0.6	5.4	0.0	9.2	1.6	0.1	35.6	0.3	0.1	2.3	0.3	0.3
Delay (s)	33.2	37.1	29.9	39.2	29.5	15.2	70.6	21.6	19.6	28.1	13.0	12.1
Level of Service	C	D	C	D	C	B	E	C	B	C	B	B
Approach Delay (s)		34.8			26.1			24.3			17.4	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



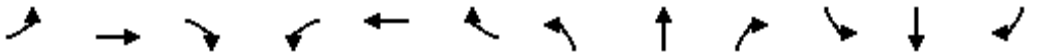
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	833	201	168	455	512	177	351	251	826	240	352
Future Volume (vph)	395	833	201	168	455	512	177	351	251	826	240	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	3282	1468	3183	3282	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	3282	1468	3183	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	877	212	177	479	539	186	369	264	869	253	371
RTOR Reduction (vph)	0	0	165	0	0	110	0	0	169	0	0	90
Lane Group Flow (vph)	416	877	47	177	479	429	186	369	95	869	253	281
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6	7	3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	19.3	25.7	25.7	10.3	16.7	53.1	18.0	19.4	19.4	36.4	37.8	57.1
Effective Green, g (s)	19.3	25.7	25.7	10.3	16.7	53.1	18.0	19.4	19.4	36.4	37.8	57.1
Actuated g/C Ratio	0.17	0.22	0.22	0.09	0.14	0.46	0.15	0.17	0.17	0.31	0.32	0.49
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	527	1040	323	281	675	669	253	546	244	994	1064	719
v/s Ratio Prot	c0.13	c0.19		0.06	0.10	0.20	0.11	c0.11		c0.27	0.08	0.06
v/s Ratio Perm			0.03			0.09			0.06			0.13
v/c Ratio	0.79	0.84	0.14	0.63	0.71	0.64	0.74	0.68	0.39	0.87	0.24	0.39
Uniform Delay, d1	46.6	43.5	36.6	51.3	47.6	24.4	47.0	45.6	43.3	37.9	28.8	18.7
Progression 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
Incremental Delay, d2	7.7	6.4	0.2	4.4	3.4	2.1	10.6	3.3	1.0	8.6	0.1	0.4
Delay (s)	54.4	49.8	36.8	55.6	51.0	26.5	57.5	48.9	44.3	46.5	28.9	19.1
Level of Service	D	D	D	E	D	C	E	D	D	D	C	B
Approach Delay (s)		49.2			40.6			49.4			36.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	116.5	Sum of lost time (s)	24.7
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



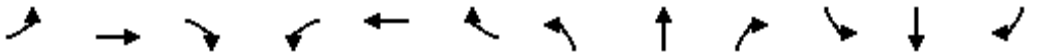
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	616	533	929	825	343	307	325	405	185	370	77
Future Volume (vph)	308	616	533	929	825	343	307	325	405	185	370	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3183	4803	1468	3303	4566		3183	3282	1468	3183	3197	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3183	4803	1468	3303	4566		3183	3282	1468	3183	3197	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	648	561	978	868	361	323	342	426	195	389	81
RTOR Reduction (vph)	0	0	237	0	77	0	0	0	64	0	18	0
Lane Group Flow (vph)	324	648	324	978	1152	0	323	342	362	195	452	0
Heavy Vehicles (%)	10%	8%	10%	6%	8%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	18.4	21.8	21.8	28.3	31.7		10.3	14.9	43.2	10.3	14.9	
Effective Green, g (s)	18.4	21.8	21.8	28.3	31.7		10.3	14.9	43.2	10.3	14.9	
Actuated g/C Ratio	0.18	0.22	0.22	0.28	0.32		0.10	0.15	0.43	0.10	0.15	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	5.7	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	585	1047	320	934	1447		327	489	717	327	476	
v/s Ratio Prot	0.10	0.13		c0.30	0.25		c0.10	0.10	0.14	0.06	c0.14	
v/s Ratio Perm			c0.22						0.10			
v/c Ratio	0.55	0.62	1.01	1.05	0.80		0.99	0.70	0.51	0.60	0.95	
Uniform Delay, d1	37.1	35.3	39.1	35.9	31.2		44.8	40.4	20.6	42.9	42.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.78	0.80	0.46	1.00	1.00	
Incremental Delay, d2	1.1	1.1	53.6	42.5	3.1		42.7	7.1	0.5	2.9	30.5	
Delay (s)	38.2	36.4	92.7	78.4	34.3		77.7	39.2	10.0	45.8	72.7	
Level of Service	D	D	F	E	C		E	D	A	D	E	
Approach Delay (s)		57.4			53.9			39.2			64.8	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	53.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	476	155	39	88	127	502	46	913	140	335	288	352
Future Volume (vph)	476	155	39	88	127	502	46	913	140	335	288	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3	5.3	5.2	5.2	4.4	4.4	4.9	4.9	4.4	5.1	5.1
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	1727	1468	1641	1727	1468	1641	3282	1468	3183	3282	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	1727	1468	1641	1727	1468	1641	3282	1468	3183	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	501	163	41	93	134	528	48	961	147	353	303	371
RTOR Reduction (vph)	0	0	32	0	0	62	0	0	100	0	0	215
Lane Group Flow (vph)	501	163	9	93	134	466	48	961	47	353	303	156
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.0	18.8	18.8	9.3	13.1	26.6	4.1	28.5	28.5	13.5	37.7	37.7
Effective Green, g (s)	15.0	18.8	18.8	9.3	13.1	26.6	4.1	28.5	28.5	13.5	37.7	37.7
Actuated g/C Ratio	0.17	0.21	0.21	0.10	0.15	0.30	0.05	0.32	0.32	0.15	0.42	0.42
Clearance Time (s)	5.3	5.3	5.3	5.2	5.2	4.4	4.4	4.9	4.9	4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0	2.0	3.7	3.7	2.0	2.0	3.8	3.8	2.0	3.8	3.8
Lane Grp Cap (vph)	531	361	306	169	251	434	74	1040	465	477	1376	615
v/s Ratio Prot	c0.16	0.09		0.06	0.08	c0.16	0.03	c0.29		0.11	0.09	
v/s Ratio Perm			0.01			0.16			0.03			0.11
v/c Ratio	0.94	0.45	0.03	0.55	0.53	1.07	0.65	0.92	0.10	0.74	0.22	0.25
Uniform Delay, d1	37.0	31.0	28.3	38.3	35.6	31.7	42.2	29.7	21.7	36.5	16.7	17.0
Progression 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
Incremental Delay, d2	25.3	0.3	0.0	4.4	2.6	64.4	13.7	13.4	0.1	5.3	0.1	0.3
Delay (s)	62.3	31.4	28.3	42.7	38.2	96.0	55.9	43.1	21.8	41.9	16.8	17.2
Level of Service	E	C	C	D	D	F	E	D	C	D	B	B
Approach Delay (s)		53.2			79.2			40.9			25.6	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



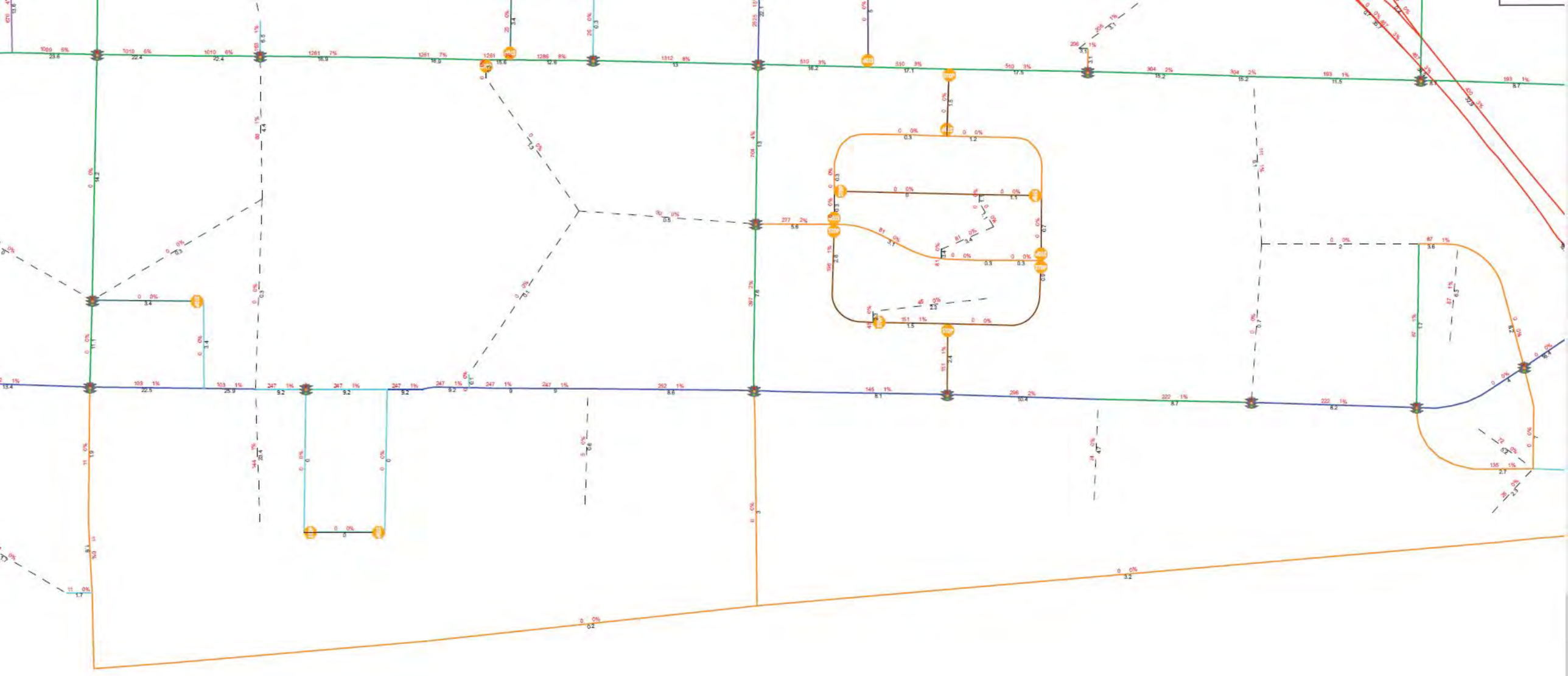
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	535	192	299	864	775	221	250	158	506	377	479
Future Volume (vph)	391	535	192	299	864	775	221	250	158	506	377	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	3282	1468	3213	3282	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	3282	1468	3213	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	412	563	202	315	909	816	233	263	166	533	397	504
RTOR Reduction (vph)	0	0	150	0	0	137	0	0	142	0	0	92
Lane Group Flow (vph)	412	563	52	315	909	679	233	263	24	533	397	412
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	9%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6	7	3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	18.4	30.5	30.5	16.5	28.6	58.0	21.8	16.7	16.7	29.4	24.3	42.7
Effective Green, g (s)	18.4	30.5	30.5	16.5	28.6	58.0	21.8	16.7	16.7	29.4	24.3	42.7
Actuated g/C Ratio	0.16	0.26	0.26	0.14	0.24	0.49	0.19	0.14	0.14	0.25	0.21	0.36
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	497	1232	380	445	1155	722	303	465	208	801	677	532
v/s Ratio Prot	c0.13	0.12		0.10	0.19	c0.23	0.14	0.08		0.17	0.12	c0.12
v/s Ratio Perm			0.04			0.23			0.02			0.16
v/c Ratio	0.83	0.46	0.14	0.71	0.79	0.94	0.77	0.57	0.11	0.67	0.59	0.77
Uniform Delay, d1	48.2	36.7	33.5	48.3	41.7	28.3	45.6	47.2	44.1	39.8	42.2	33.3
Progression 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
Incremental Delay, d2	10.9	0.3	0.2	5.1	3.6	20.4	11.1	1.6	0.2	2.1	1.3	7.0
Delay (s)	59.1	37.0	33.7	53.4	45.4	48.6	56.8	48.7	44.3	41.9	43.5	40.2
Level of Service	E	D	C	D	D	D	E	D	D	D	D	D
Approach Delay (s)		44.2			47.9			50.5			41.8	
Approach LOS		D			D			D			D	

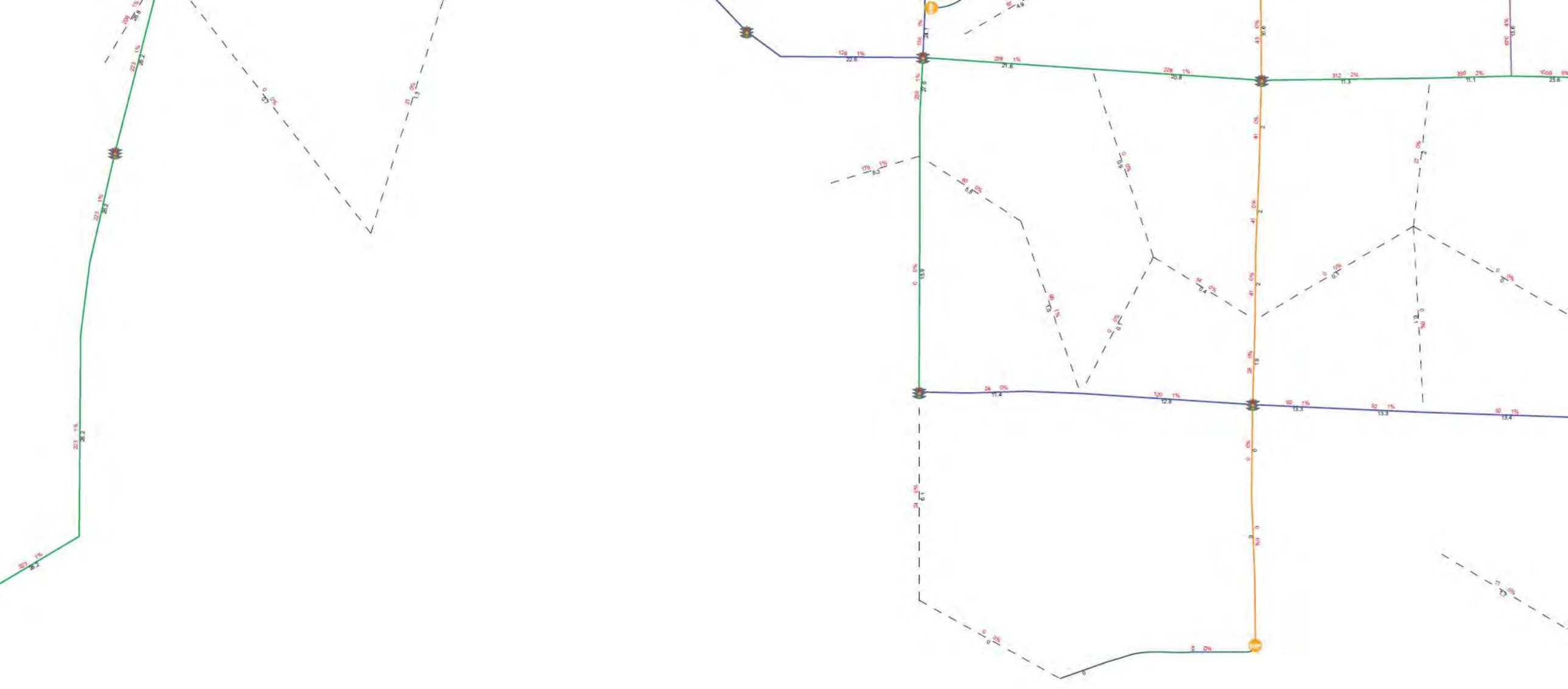
Intersection Summary			
HCM 2000 Control Delay	45.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	117.8	Sum of lost time (s)	24.7
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

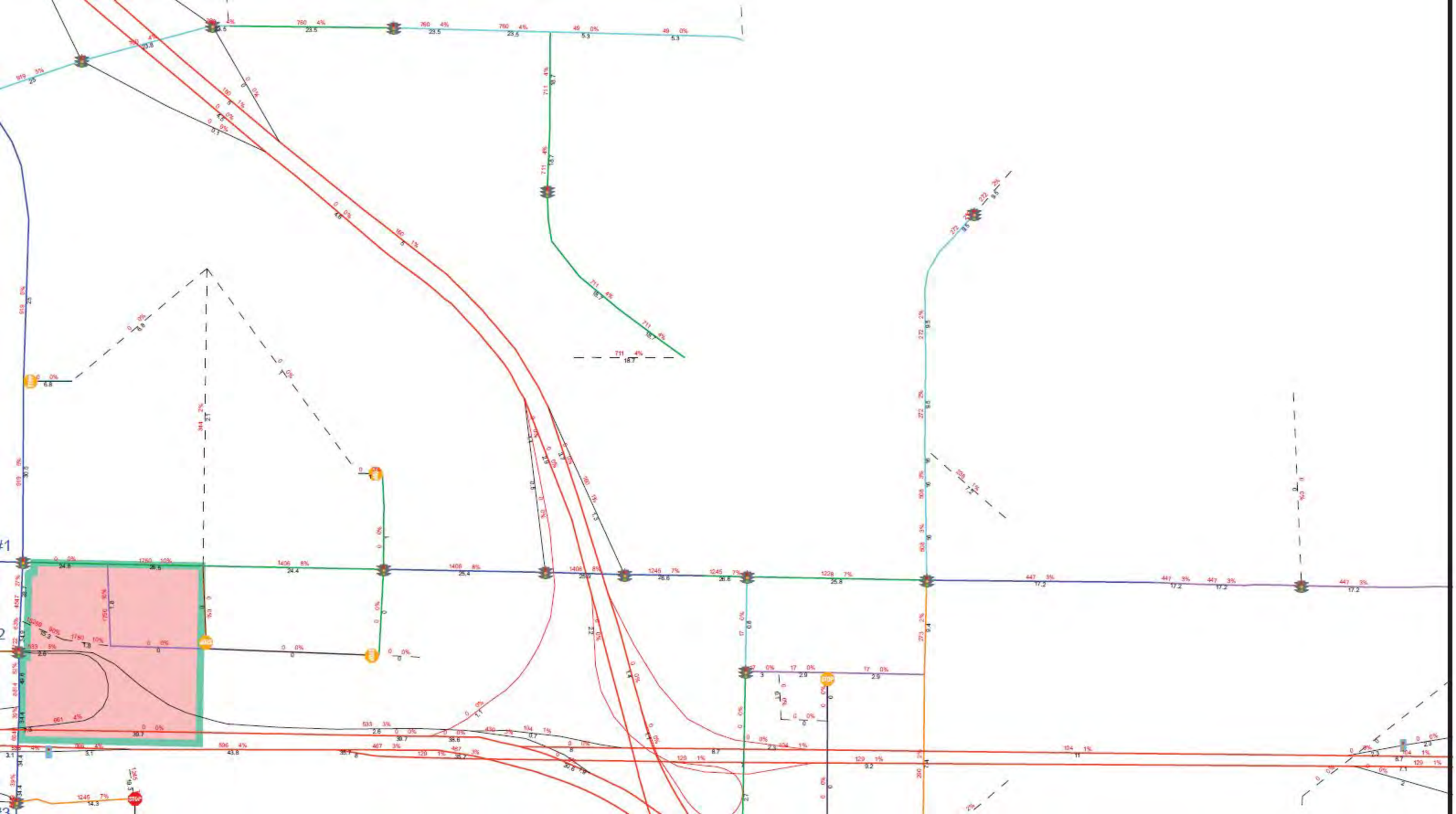
Appendix D

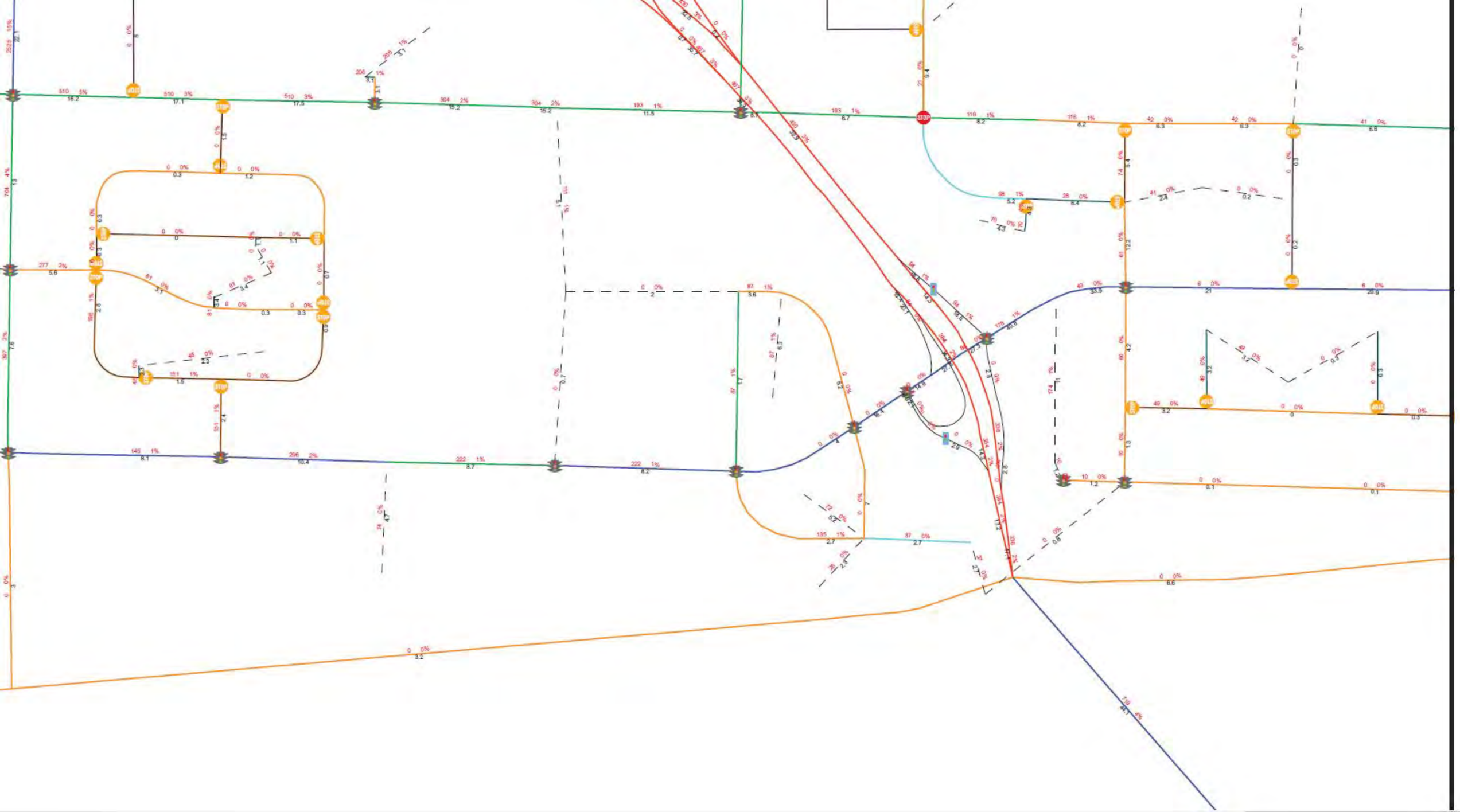
SANDAG Series 12 Select Zone Model Plot

#1
#2
#3









Appendix E

Cumulative Projects Information

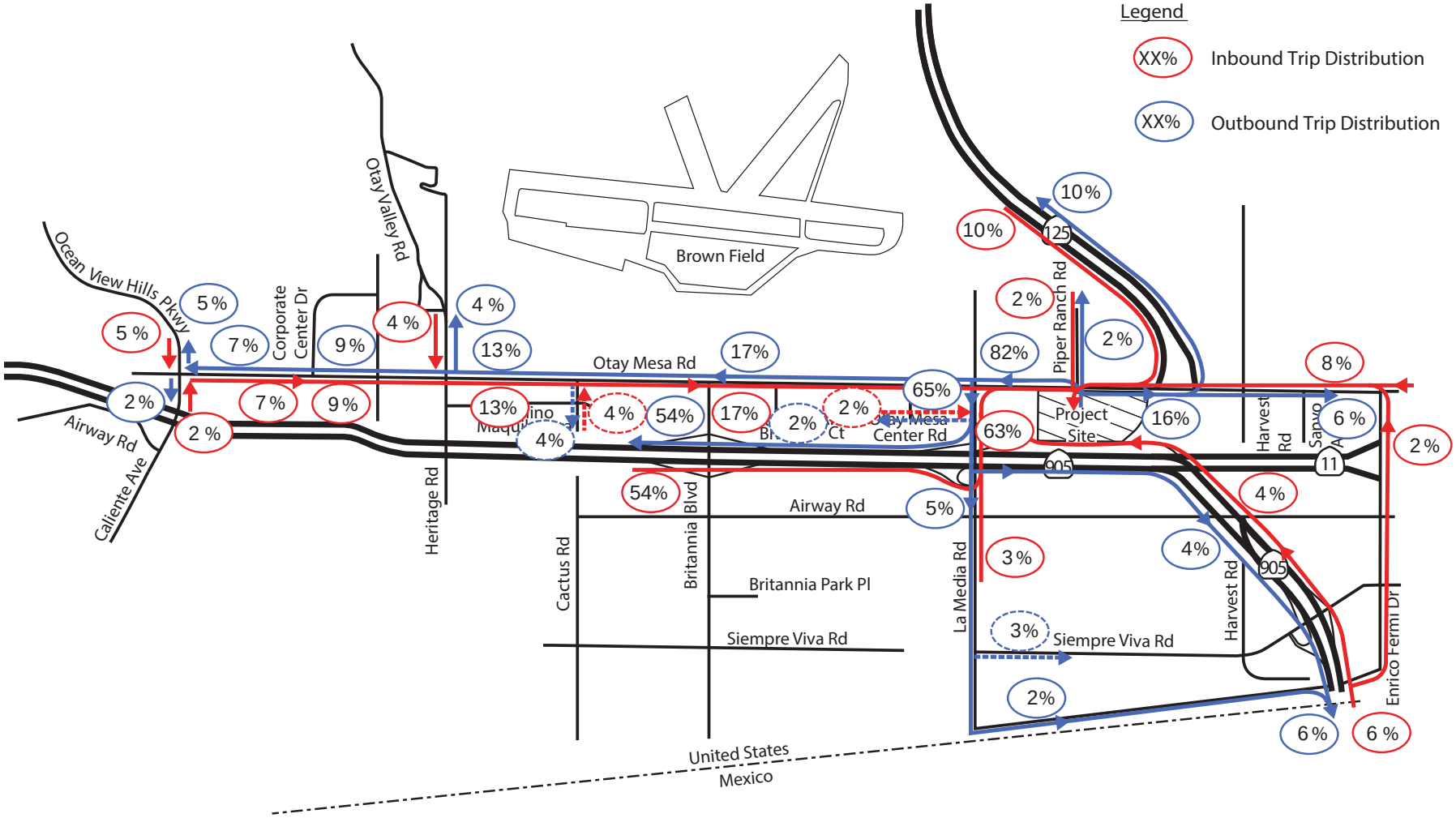
Table 4-1 Trip Generation Summary

Description	Land Use	Units[1]	Trip Rate[2]	Daily Trips	AM Peak-Hour					PM Peak-Hour				
					% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
Driveway Trips[3]														
Phase 1														
Building 3	Warehousing	216.3 ksf	5 / ksf	1,082	15%	7.00 : 3.00	114	48	162	16%	4.00 : 6.00	69	104	173
Building 4	Warehousing	153.5 ksf	5 / ksf	768	15%	7.00 : 3.00	81	34	115	16%	4.00 : 6.00	49	74	123
Phase Total		***369.8***		***1,849***			***195***	***82***	***277***			***118***	***178***	***296***
Phase 2														
Building 1	Warehousing	234.7 ksf	5 / ksf	1,173	15%	7.00 : 3.00	123	53	176	16%	4.00 : 6.00	75	113	188
Building 2	Warehousing	240.6 ksf	5 / ksf	1,203	15%	7.00 : 3.00	126	54	180	16%	4.00 : 6.00	77	115	192
Phase Total		***475.2***		***2,376***			***249***	***107***	***356***			***152***	***228***	***380***
Proposed Total		**845**		**4,225**			**444**	**189**	**633**			**270**	**406**	**676**

Note:

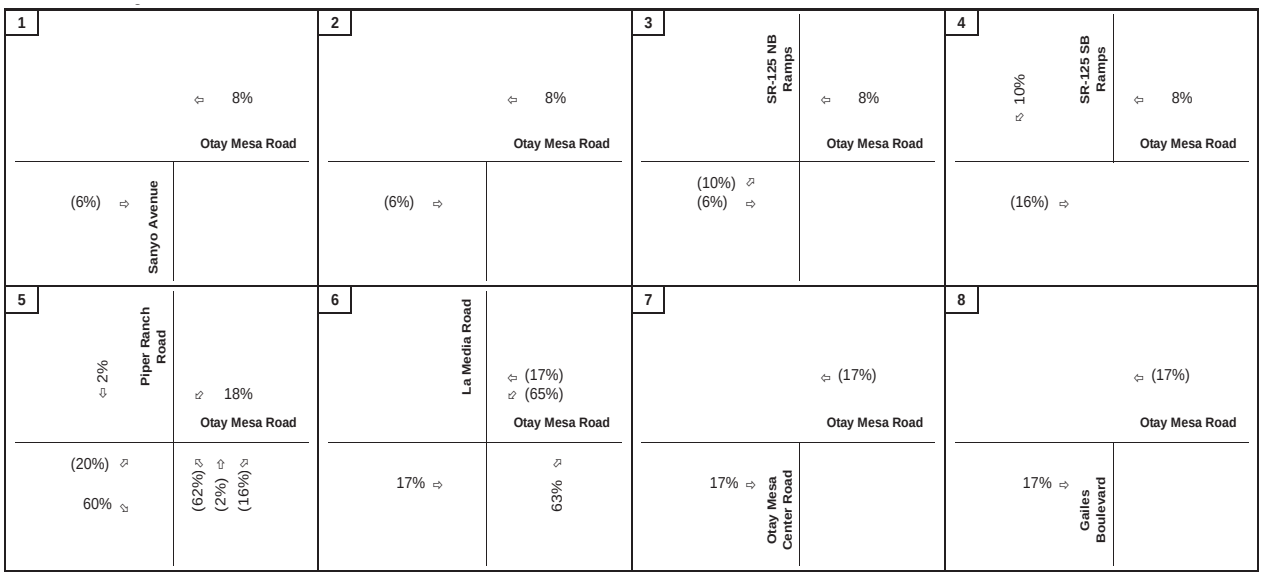
1. ksf = Thousand Square Feet
2. Daily and peak-hour trip generation rates referenced from the City of San Diego Land Development Code - Trip Generation Manual, May 2003.

K:\SND_LDEV\095128024 - Sunroad Otay\Traffic\ANALYSIS\EXCEL\[095128024_TG01.xlsm]Summary



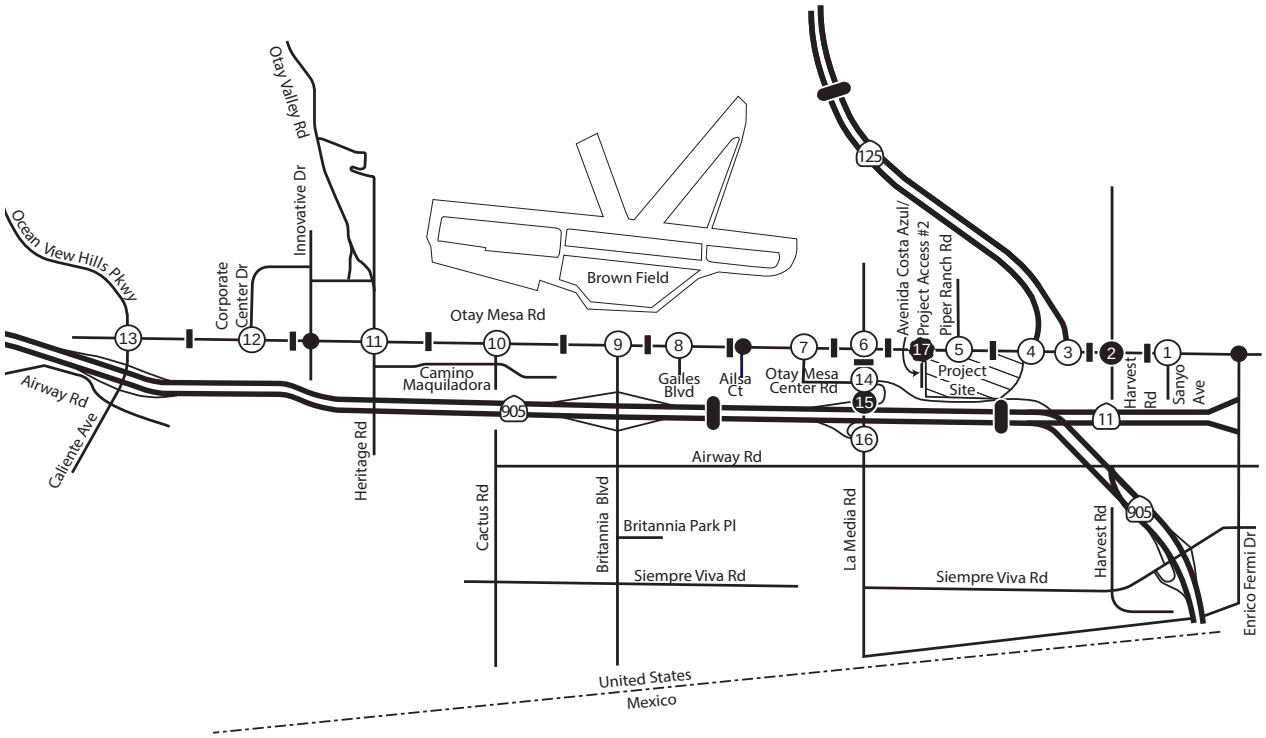
General Trip Distribution

Existing & Near Term plus Project Conditions

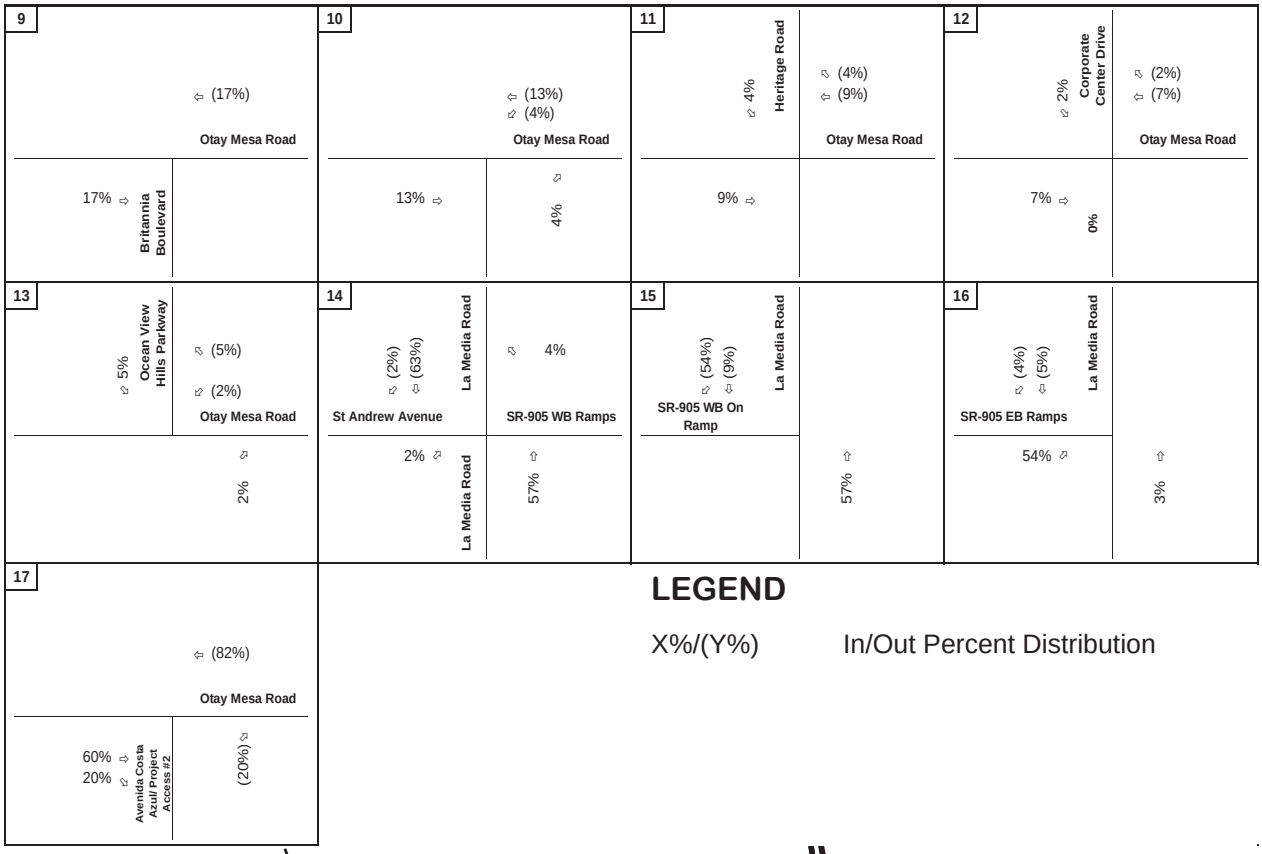


LEGEND

X%/(Y%) In/Out Percent Distribution

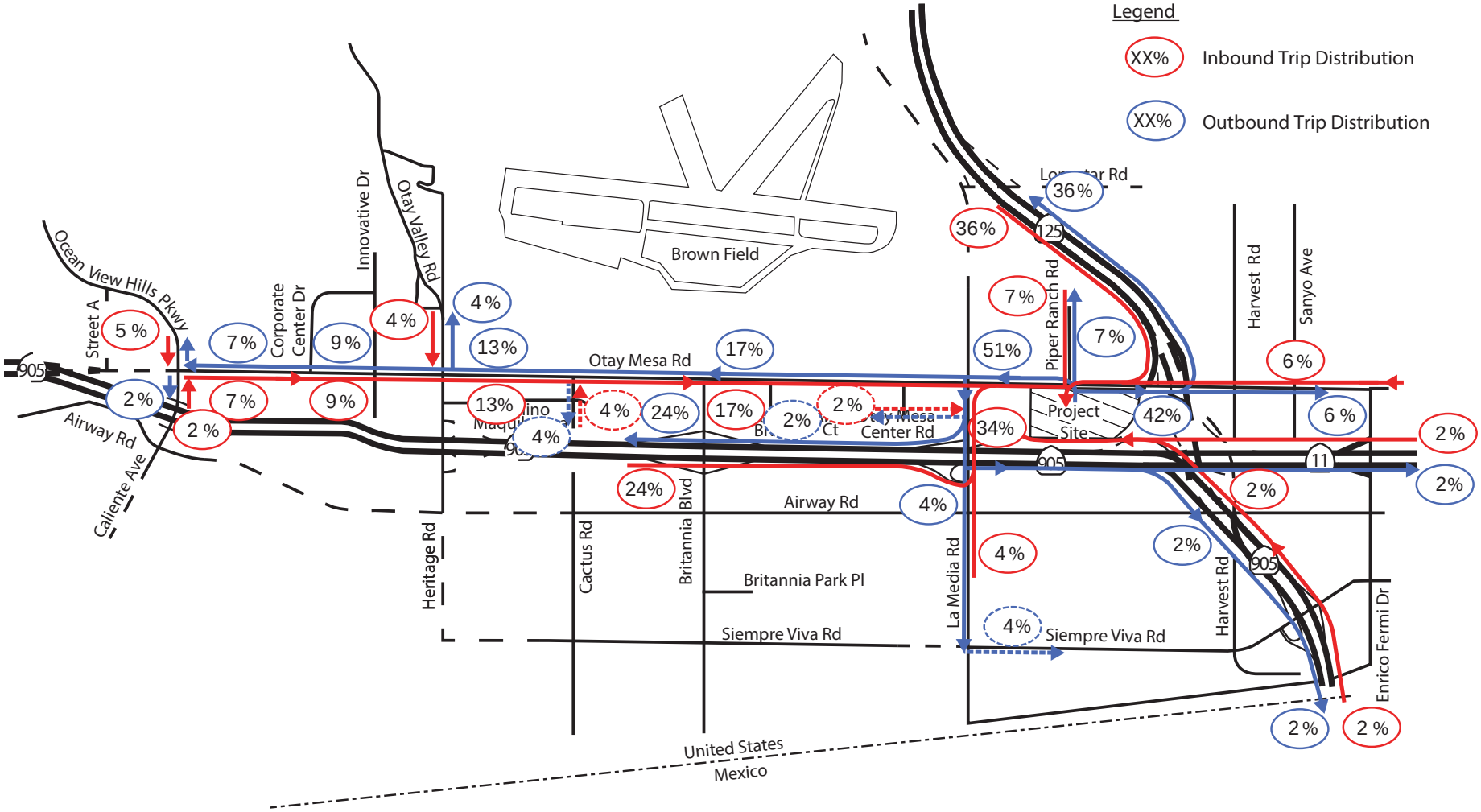


Trip Distribution For Phase 1 & 2
Existing Conditions

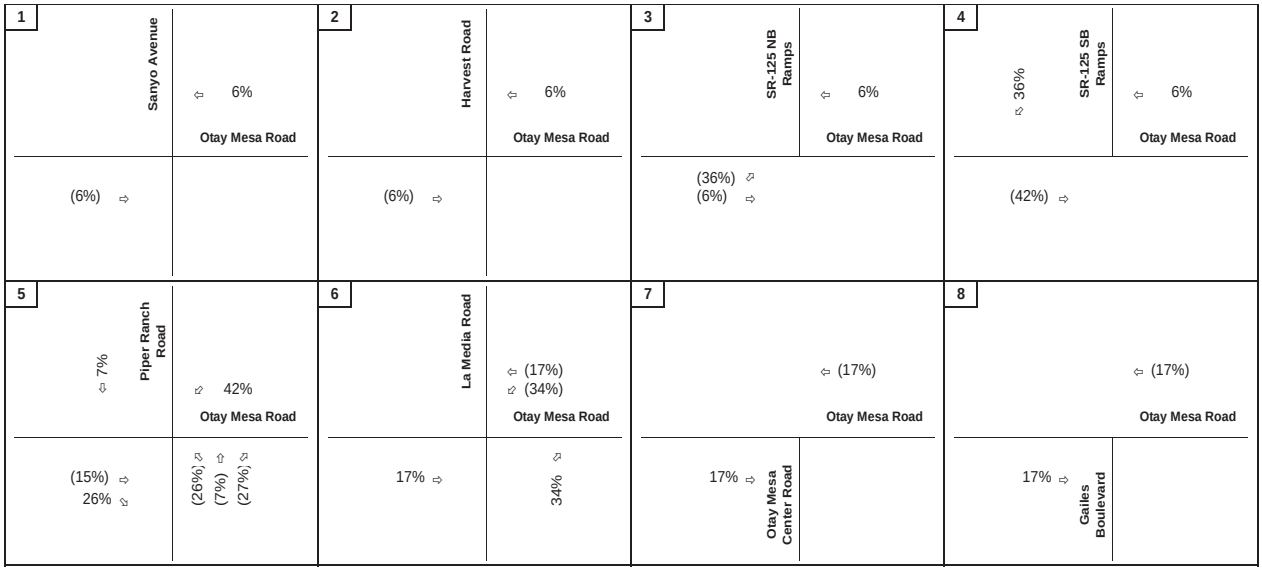


Trip Distribution For Phase 1 & 2 Existing Conditions (cont.)

FIGURE 4-6

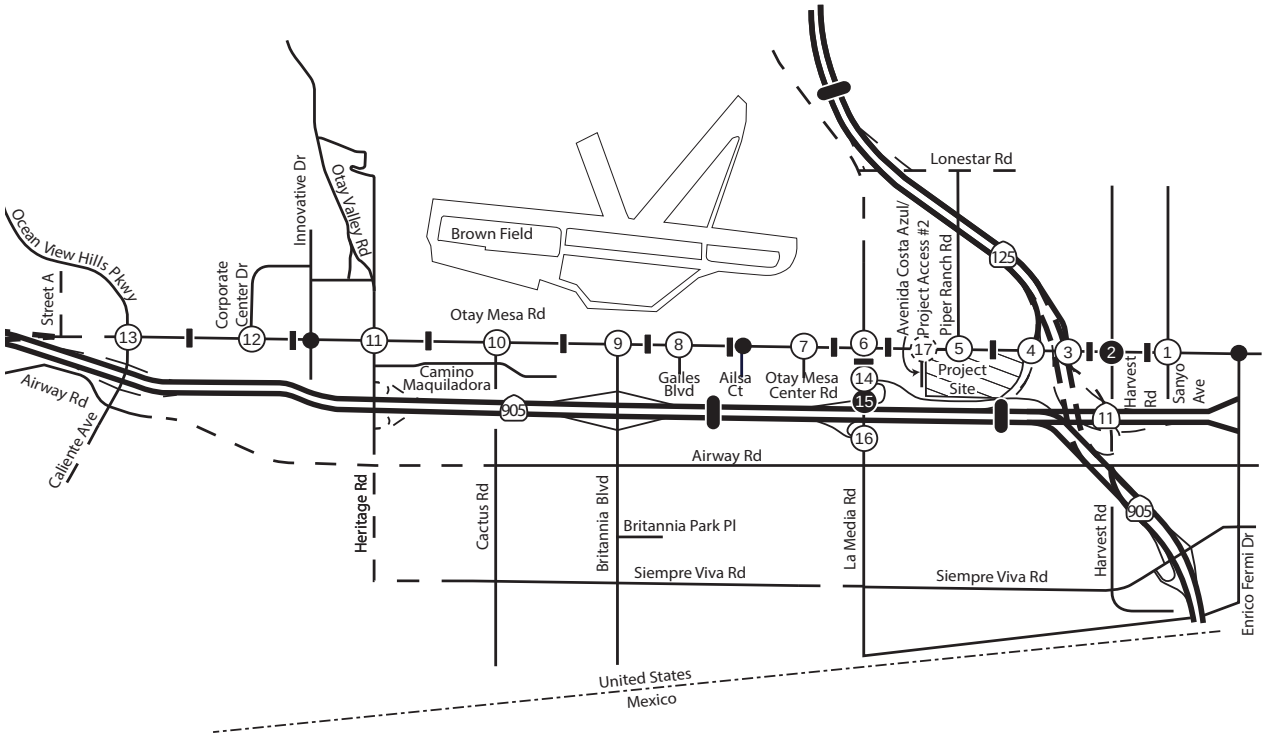


General Trip Distribution
Horizon Year Conditions



LEGEND

X%/(Y%) In/Out Percent Distribution



Trip Distribution For Phase 1 & 2 Horizon Year Conditions

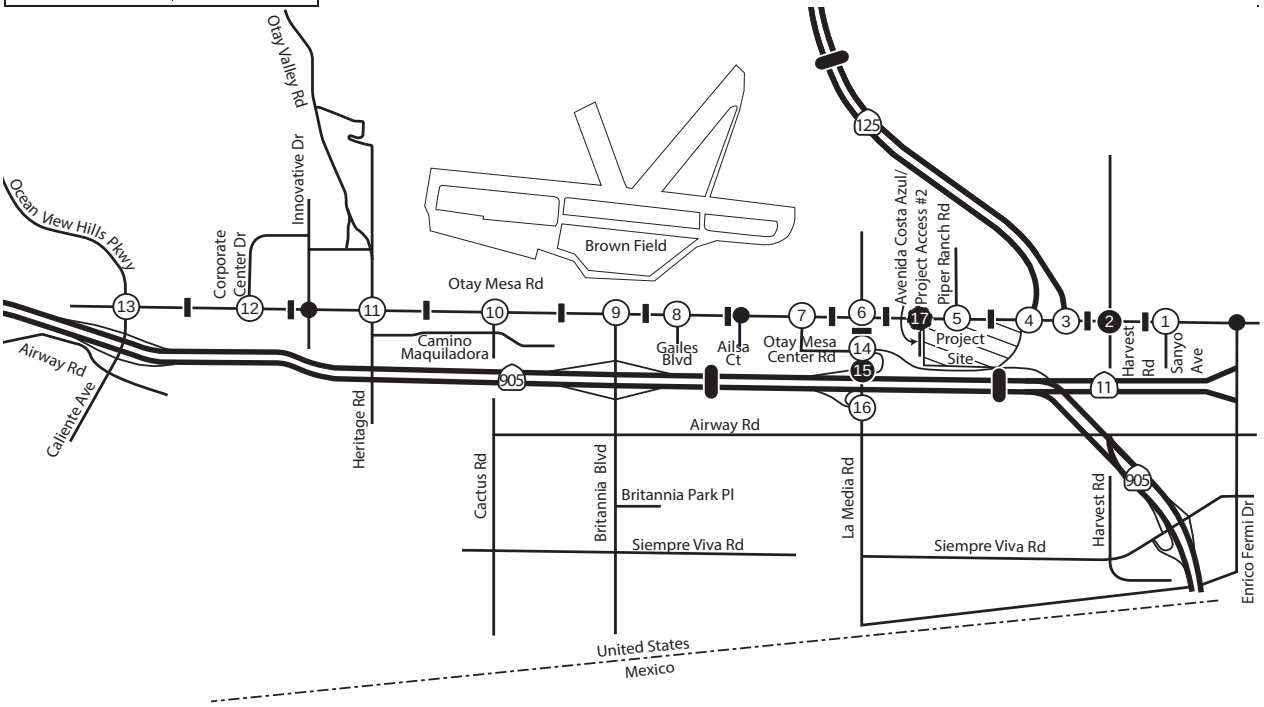
9		10		11		12	
Britannia Boulevard	⇦ (17%) Otay Mesa Road	Cactus Road	⇦ (13%) ⇦ (4%) Otay Mesa Road	4% ⇗ Heritage Road	⇦ (4%) ⇦ (9%) Otay Mesa Road	2% ⇗ Corporate Center Drive	⇦ (2%) ⇦ (7%) Otay Mesa Road
17% ⇨		13% ⇨	4% ⇗	9% ⇨		7% ⇨	

13		14		15		16	
4% ⇗ Ocean View Hills Parkway	⇦ (4%) ⇦ (3%) Otay Mesa Road	(2%) ⇗ (32%) ⇩ La Media Road	⇦ 4% St Andrew Avenue	(24%) ⇗ (8%) ⇩ La Media Road	SR-905 WB On Ramp	(4%) ⇗ (4%) ⇩ La Media Road	SR-905 EB Ramps
Caliente Avenue	3% ⇗	La Media Road	28% ⇧ SR-905 WB Ramps		28% ⇧		4% ⇧
		2% ⇗				24% ⇗	

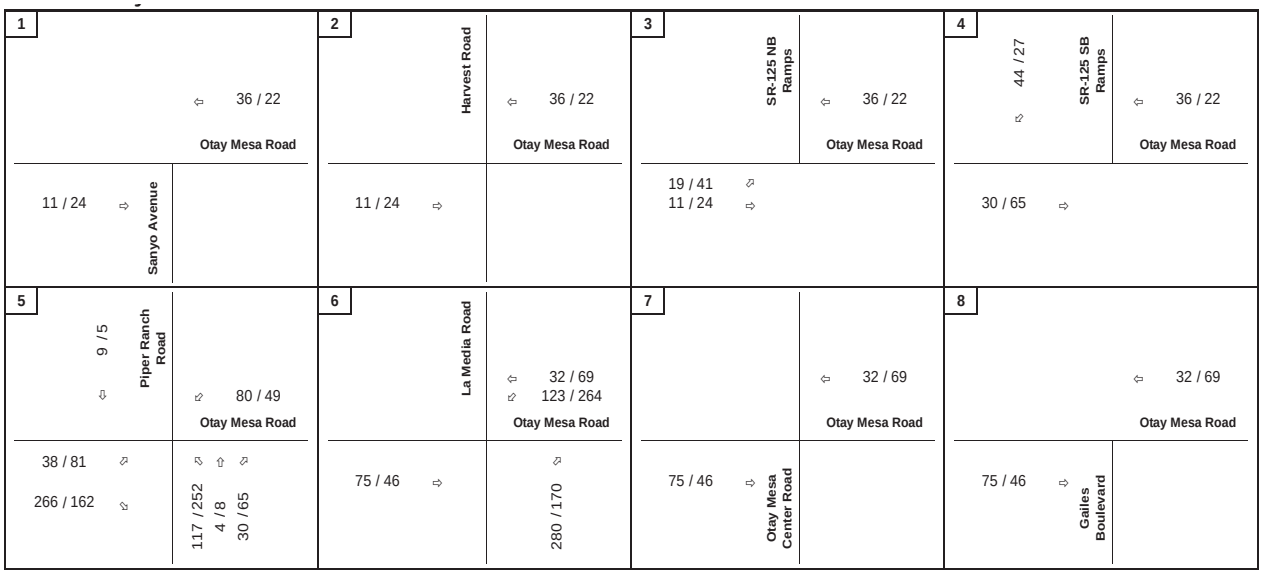
17	
	⇦ (51%) Otay Mesa Road
26% ⇨ 25% ⇗ Avenida Costa Azul/ Project Access #2	(40%) ⇘

LEGEND

X%/(Y%) In/Out Percent Distribution

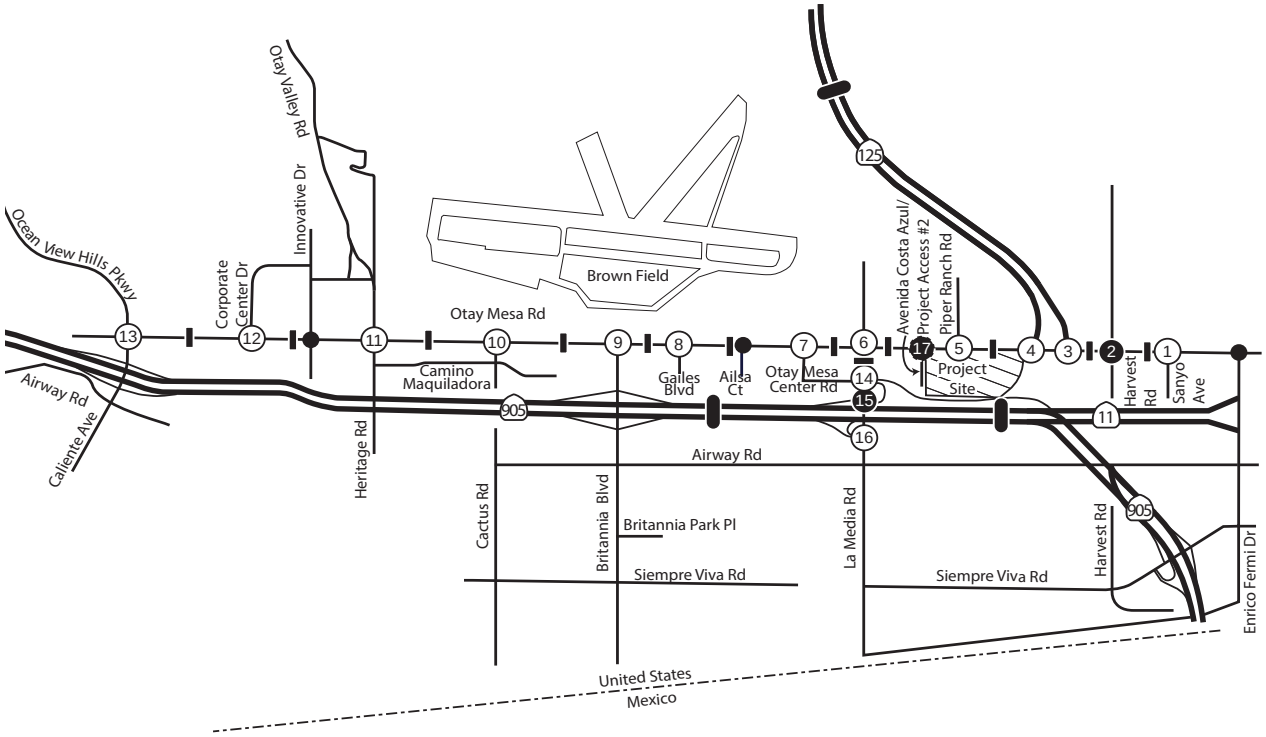


Trip Distribution For Phase 1 & 2 Horizon Year Conditions (cont.)



LEGEND

X/Y	AM/PM Peak Hour Traffic Volumes



Trip Assignment For Phase 1 & 2
Existing Condition

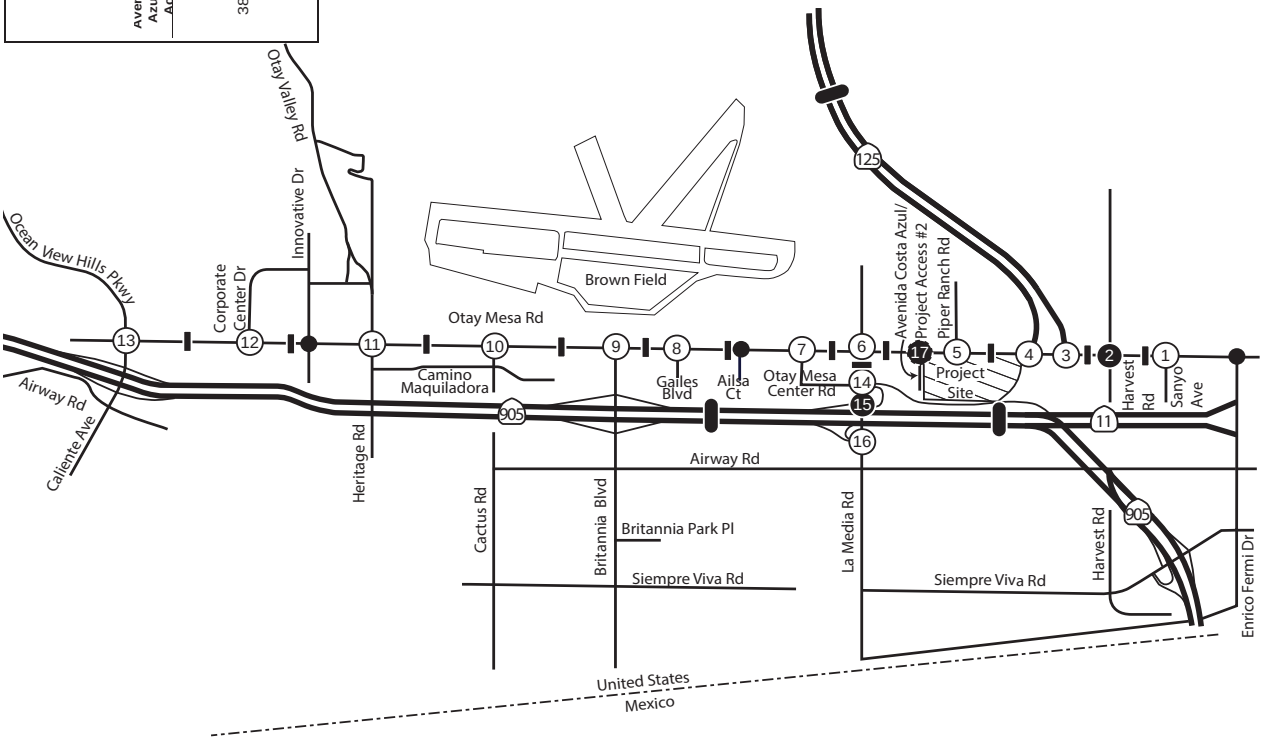
9		10		11		12	
	32 / 69 Otay Mesa Road	Cactus Road	25 / 53 8 / 16 Otay Mesa Road	18 / 11 Heritage Road	8 / 16 17 / 37 Otay Mesa Road	9 / 5 Corporate Center Drive	4 / 8 13 / 28 Otay Mesa Road
75 / 46 Britannia Boulevard		58 / 35	18 / 11	40 / 24		31 / 19	

13		14		15		16	
22 / 14 Ocean View Hills Parkway	9 / 20 4 / 8 Otay Mesa Road	4 / 8 119 / 256 La Media Road	18 / 11 SR-905 WB Ramps	102 / 219 17 / 37 SR-905 WB On Ramp	253 /154 La Media Road	8 / 16 9 / 20 SR-905 EB Ramps	13 /8 La Media Road
Caliente Avenue	9 /5	St Andrew Avenue 9 / 5	253 /154 La Media Road			240 / 146	

17	
	155 / 333 Otay Mesa Road
266 / 162 89 / 54 Avenida Costa Azul/ Project Access #2	38 / 81

LEGEND

X/Y — AM/PM Peak Hour Traffic Volumes

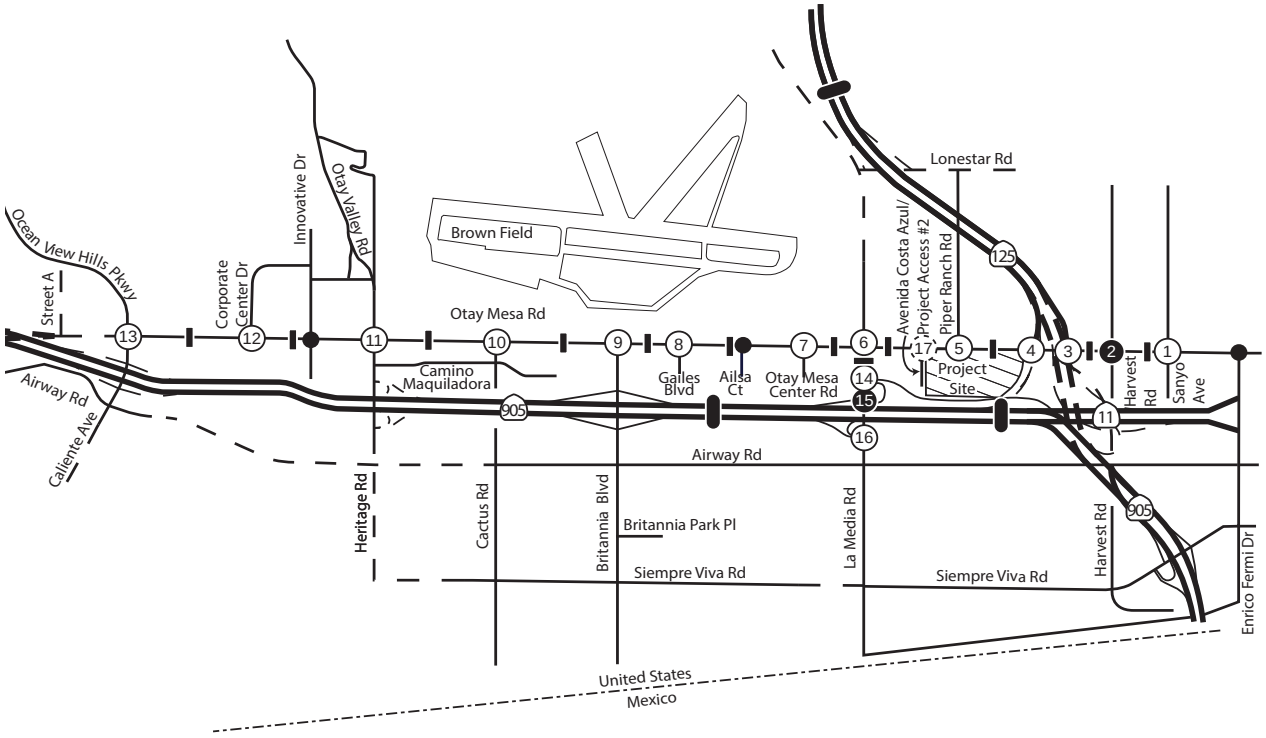


Trip Assignment For Phase 1 & 2 Existing Condition (cont.)

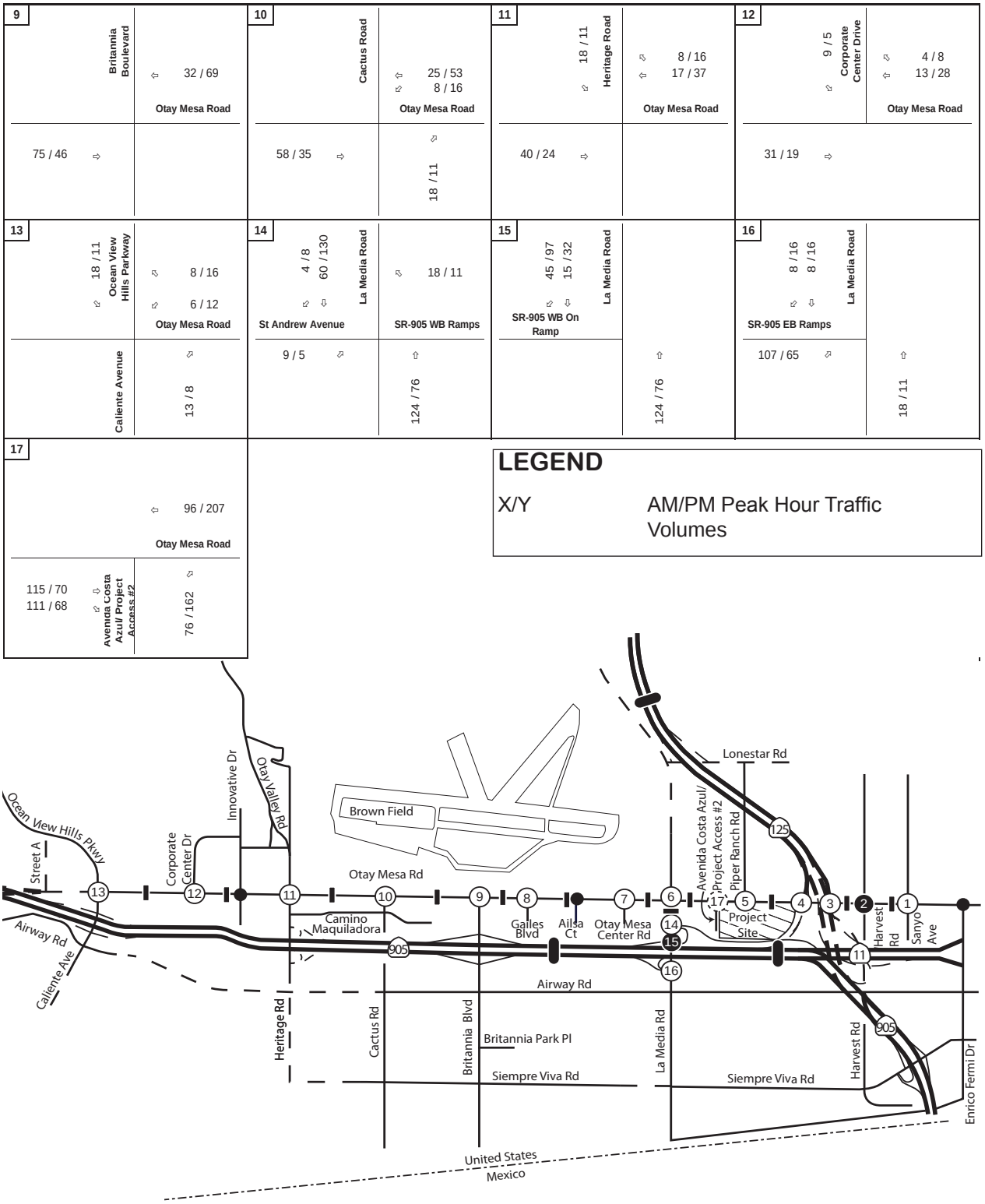
1 Sanyo Avenue 27 / 16 ⇦ Otay Mesa Road 11 / 24 ⇨	**2** Harvest Road 27 / 16 ⇦ Otay Mesa Road 11 / 24 ⇨	**3** SR-125 NB Ramps 27 / 16 ⇦ Otay Mesa Road 68 / 146 ⇦ 11 / 24 ⇨	**4** 160 / 97 ⇨ SR-125 SB Ramps 27 / 16 ⇦ Otay Mesa Road 79 / 171 ⇨
5 31 / 19 ⇩ Piper Ranch Road 186 / 113 ⇗ Otay Mesa Road 28 / 61 ⇨ 115 / 70 ⇙ ⇖ 49 / 106 ⇧ 13 / 28 ⇗ 51 / 110	**6** La Media Road 32 / 69 ⇦ 64 / 138 ⇗ Otay Mesa Road 75 / 46 ⇨ ⇗ 151 / 92	**7** 32 / 69 ⇦ Otay Mesa Road 75 / 46 ⇨ Otay Mesa Center Road	**8** 32 / 69 ⇦ Otay Mesa Road 75 / 46 ⇨ Gailes Boulevard

LEGEND

X/Y — AM/PM Peak Hour Traffic Volumes



Trip Assignment For Phase 1 & 2 Horizon Year Conditions



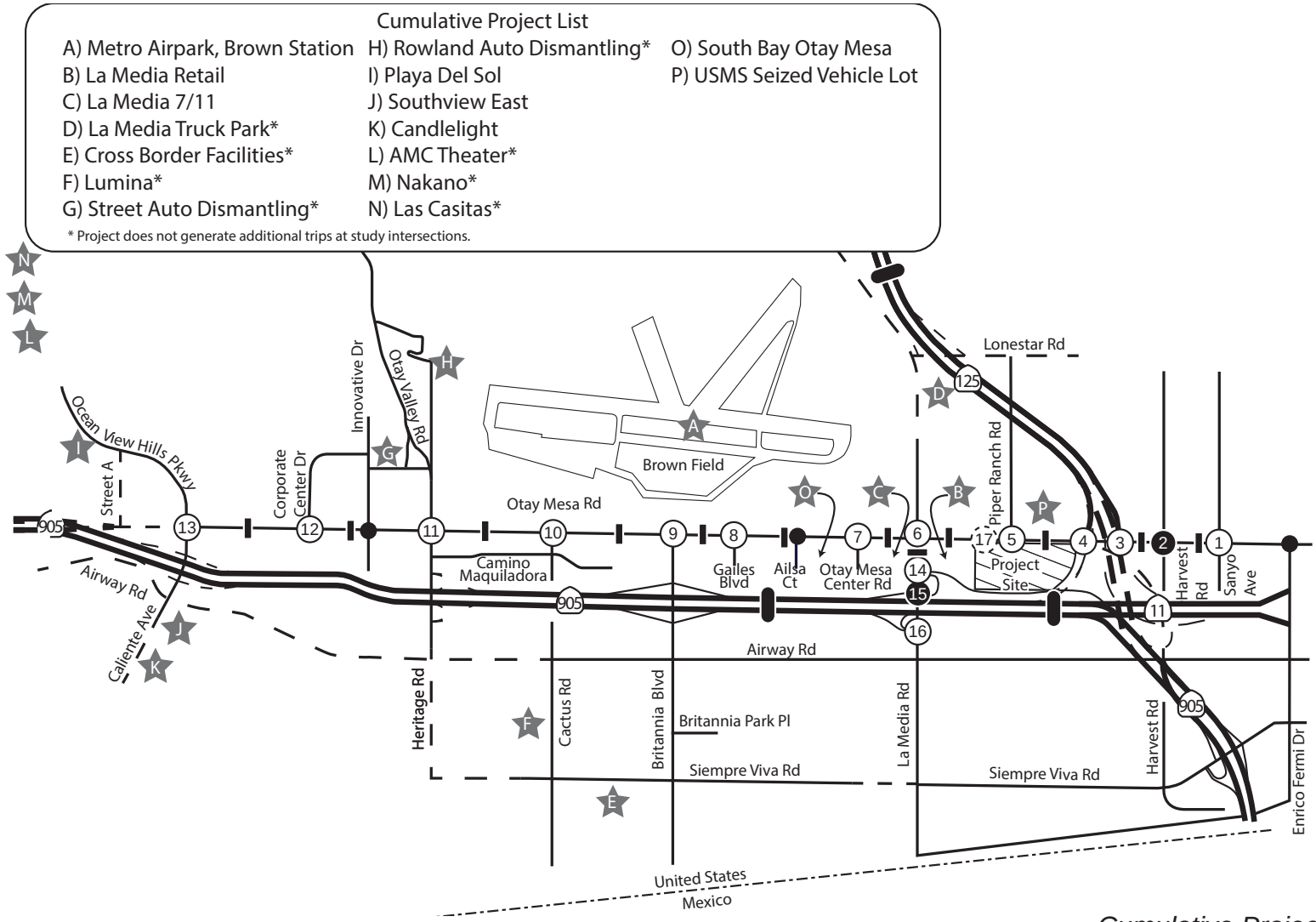
Trip Assignment For Phase 1 & 2 Horizon Year Conditions (cont.)

Table 7–1 Cumulative Project List

	PROJECT	LAND USE	ADT
A	Metro Airpark (Phase I) [a]	Airfield Expansion	4,288 ADT
B	La Media Retail	Mixed-Use	8,660 ADT
C	La Media 7-11[c]	Gas Station	1,500 ADT
D	La Media Truck Park*	Truck Terminal	---
E	Cross Border Facilities*	---	---
F	Lumina*	Mixed-Use	---
G	Street Auto Dismantling*	Truck Terminal	---
H	Rowland Auto Dismantling*	Truck Terminal	---
I	Playa Del Sol[a]	Residential	9,432 ADT
J	Southview East [b]	Residential	3,318 ADT
K	Candlelight	Residential	2,850 ADT
L	AMC Theater*	Movie Theater	---
M	Nakano*	---	---
N	Las Casitas*	---	---
O	South Bay Otay Mesa	Warehouse	1,678 ADT
P	USMS Seized Vehicle Lot[a]	N/A	125 ADT
		TOTAL	34,691 ADT

* Project does not generate additional trips at study intersections.

Source:
(a) Metro Airpark Traffic Study dated April 12, 2012
(b) Approved Traffic Study for the Southview project, dated November 15, 2011.
(c) Based on email from City Staff – October 2017.



Cumulative Projects Map

#N/A

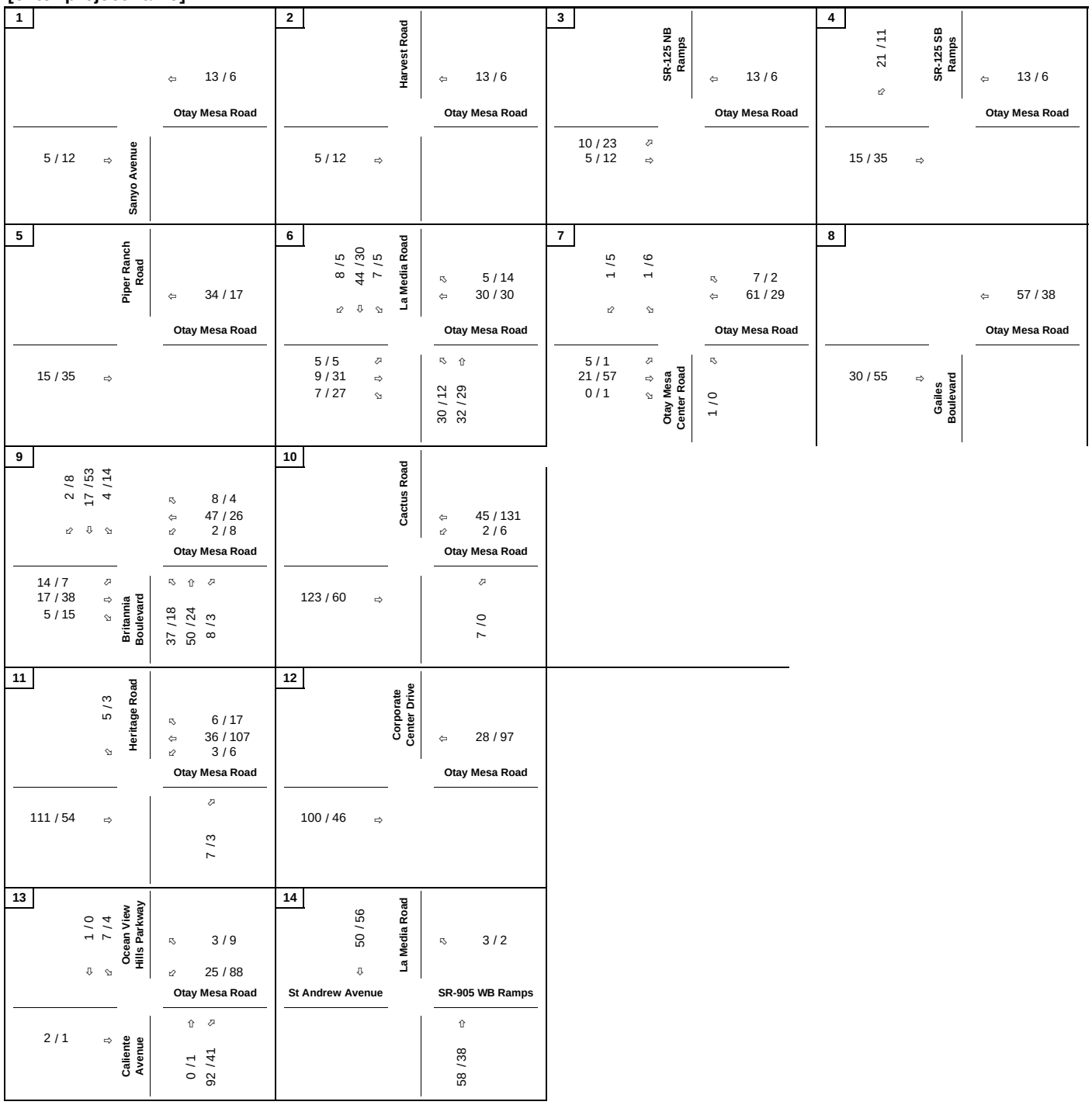
TRIP GENERATION SUMMARY FOR CUMULATIVE PROJECTS

Project Name	Location	Land Use	Units[1]		Trip Rate[2]	Daily Trip	AM Peak-Hour					PM Peak-Hour				
							% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
Cumulative Trips[3]																
Proposed																
Lumina Phase 1	Not included in cumulative projects, OY after project open.	Multiple Dwelling Unit - Over 20 dwelling units/acre	1,129			6,774			108	434	542			427	183	610
		Shopping Center - Community (100,000 sq. ft. or mo	63			4,377			79	52	131			219	219	438
		Subtotal				**11,151**			**187**	**486**	**673**			**646**	**402**	**1,048**
Lumina Phase 2	Not included in cumulative projects, OY after project open.	Multiple Dwelling Unit - Over 20 dwelling units/acre	526	DU		3,156			51	201	252			199	85	284
		Multiple Dwelling Unit - Under 20 dwelling units/acre	213	DU		1,704			27	109	136			119	51	170
		Park - Developed	7			330			7	6	13			13	13	26
		Elementary School	6			857			159	107	266			65	98	163
		Internal Capture (9.4%)			9%	-1,617			-41	-85	-126			-98	-61	-159
		Subtotal				**4,430**			**203**	**338**	**541**			**298**	**186**	**484**
Palm Promenade	Not in Study Area	Movie Theater	73			5,874			14	4	18			329	141	470
		Shopping Center - Community (100,000 sq. ft. or mo	73			3,573			64	43	107			179	178	357
		Movie Theater - Existing	107			-8,558			-21	-5	-26			-480	-205	-685
		Subtotal				**889**			**57**	**42**	**99**			**28**	**114**	**142**
Candlelight	Included in 2018 under Near Term assumptions from study.	Multiple Dwelling Unit - Over 20 dwelling units/acre	475	du		2,850	8%	0.20 0.80	46	182	228	9%	0.70 0.30	180	77	257
		Subtotal				**2,850**			**46**	**182**	**228**			**180**	**77**	**257**
Metro Airpark	Phase 1 included in 2018 OY	Airport	64	flights		326	6%		12	8	20	7%		11	12	23
		Commercial Office	118	ksf		1,916	13%		224	25	249	14%		54	214	268
		Restaurant - High Turnover (sit-down)	11	ksf		1,144	8%		46	46	92	8%		55	37	92
		Truck Terminal	30	acre		900	9%		32	49	81	9%		36	45	81
		Solar Field	67	acre		2			1	0	1			0	1	1
		Subtotal				**4,288**			**315**	**127**	**442**			**156**	**309**	**465**
La Media Retail	Included in 2018 based on coordination with project engineers	Commercial-Retail	107	ksf		7,469	3%		134	90	224	10%		374	373	747
		Restaurant - Fast Food (with or without drive-through	14	ksf		1,215	4%		29	20	49	10%		61	61	122
		Drugstore	6	ksf		4,200	4%		101	67	168	8%		168	168	336
		Gasoline Station - With food mart & fully automated car	12	vfs		1,860	8%		75	74	149	9%		84	83	167
		Passy by and Diverted				-6,084			-156	-123	-279			-280	-280	-560
		Subtotal				**8,660**			**183**	**127**	**310**			**407**	**405**	**812**
La Media 7-11	Included in 2018, based on email communication with City staff	Gasoline Station - With food mart	10	vfs	150 / vfs	1,500	8%	0.50 0.50	60	60	120	8%	0.50 0.50	60	60	120
		Subtotal				**1,500**			**60**	**60**	**120**			**60**	**60**	**120**
Otay Mesa Travel Plaza	Based on cumulative project information from Metro Airpark Project					440			16	17	33	9%		18	17	35
		Subtotal				**440**			**16**	**17**	**33**			**18**	**17**	**35**
USMS Siezed Vehicle Lot	Based on cumulative project information from Metro Airpark Project				/	125		:					:			
		Subtotal				**125**			**0**	**0**	**0**			**0**	**0**	**0**
Otay Business Park	Nominal traffic assumed in study area; Based on traffic study from 2006				/	17,184		:					:			
		Subtotal				**17,184**			**0**	**0**	**0**			**0**	**0**	**0**
Playa del Sol	Based on cumulative project information from Metro Airpark Project	Residential			/	9,432	8%	0.20 0.80	151	604	755	10%	0.70 0.30	660	283	943
		Subtotal				**9,432**			**151**	**604**	**755**			**660**	**283**	**943**
National Enterprises Storage and Recycling Facility	Based on cumulative project information from Metro Airpark Project	Truck Terminal			#N/A / 0	2,400	9%	0.40 : 0.60	86	130	216	8%	0.50 : 0.50	96	96	192
		Subtotal				**2,400**			**86**	**130**	**216**			**96**	**96**	**192**
Southbay	Based on cumulative project information from Metro Airpark Project	Warehousing				1,678	15%	0.70 0.30	176	76	252	16%	0.40 0.60	107	161	268
		Subtotal				**1,678**			**176**	**76**	**252**			**107**	**161**	**268**
Southview	Based on traffic study from 2006	Multi-Family Housing				3,318	8%	0.20 0.80	53	212	265	9%	0.70 0.30	209	90	299
		Subtotal				**3,318**			**53**	**212**	**265**			**209**	**90**	**299**
NET CUMULATIVE PROJECTS TRIP GENERATION =						**34,691**			**1,533**	**2,401**	**3,934**			**2,865**	**2,200**	**5,065**

Note:

1. DU = dwelling unit; ksf = one thousand square feet
2. Trip rates referenced from the City of San Diego Land Development Code - Trip Generation Manual, May 2003.
3. Cumulative trips are the total trips generated by the site exclusive of pass-by trips already on the roadway.

[enter project name]



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

Kimley-Horn and Associates, Inc.

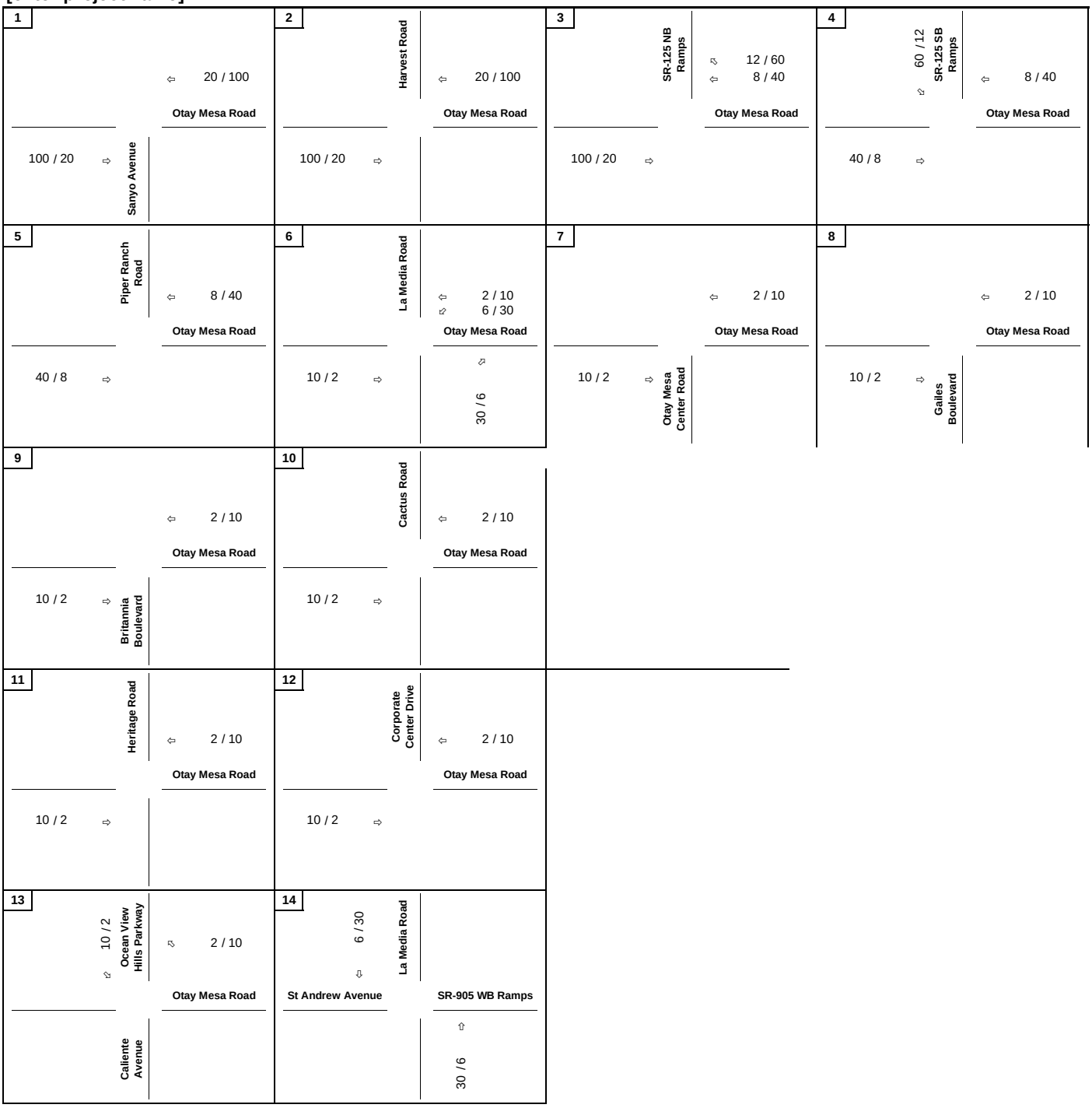
#N/A

#N/A

Metro Airpark Peak-Hour Traffic Volumes

K:\SND_LDEV\095128024 - Sunroad Otay\Traffic\ANALYSIS\EXCEL\[095128024_CP01.xls]5 PA Figure 1-14

[enter project name]

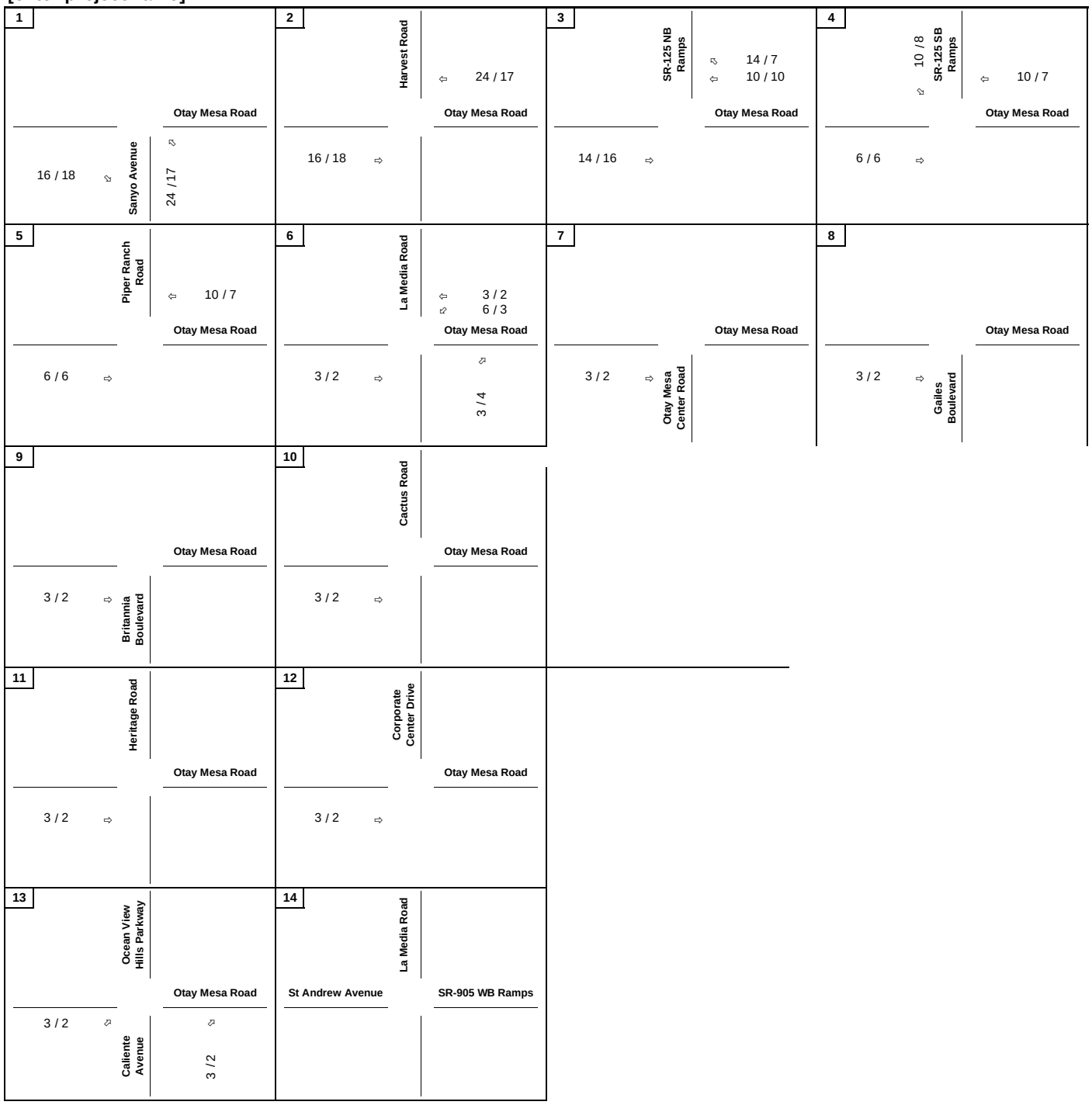


Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

[enter project name]



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

Kimley-Horn and Associates, Inc.

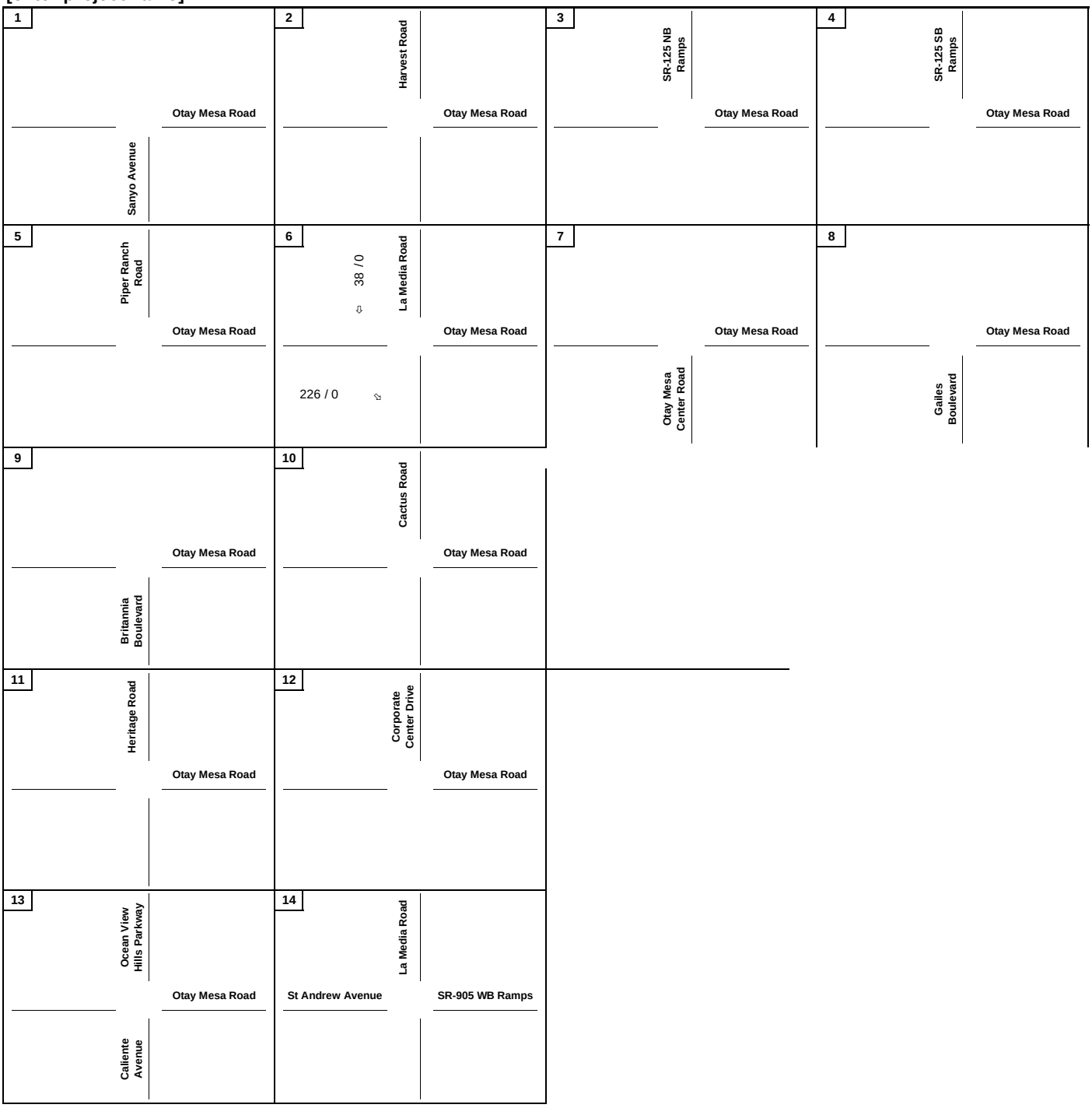
#N/A

#N/A

Otay Mesa Travel Plaza Peak-Hour Traffic Volumes

K:\SND_LDEV\095128024 - Sunroad Otay\Traffic\ANALYSIS\EXCEL\[095128024_CP01.xls]8 PA Figure 1-14

[enter project name]



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

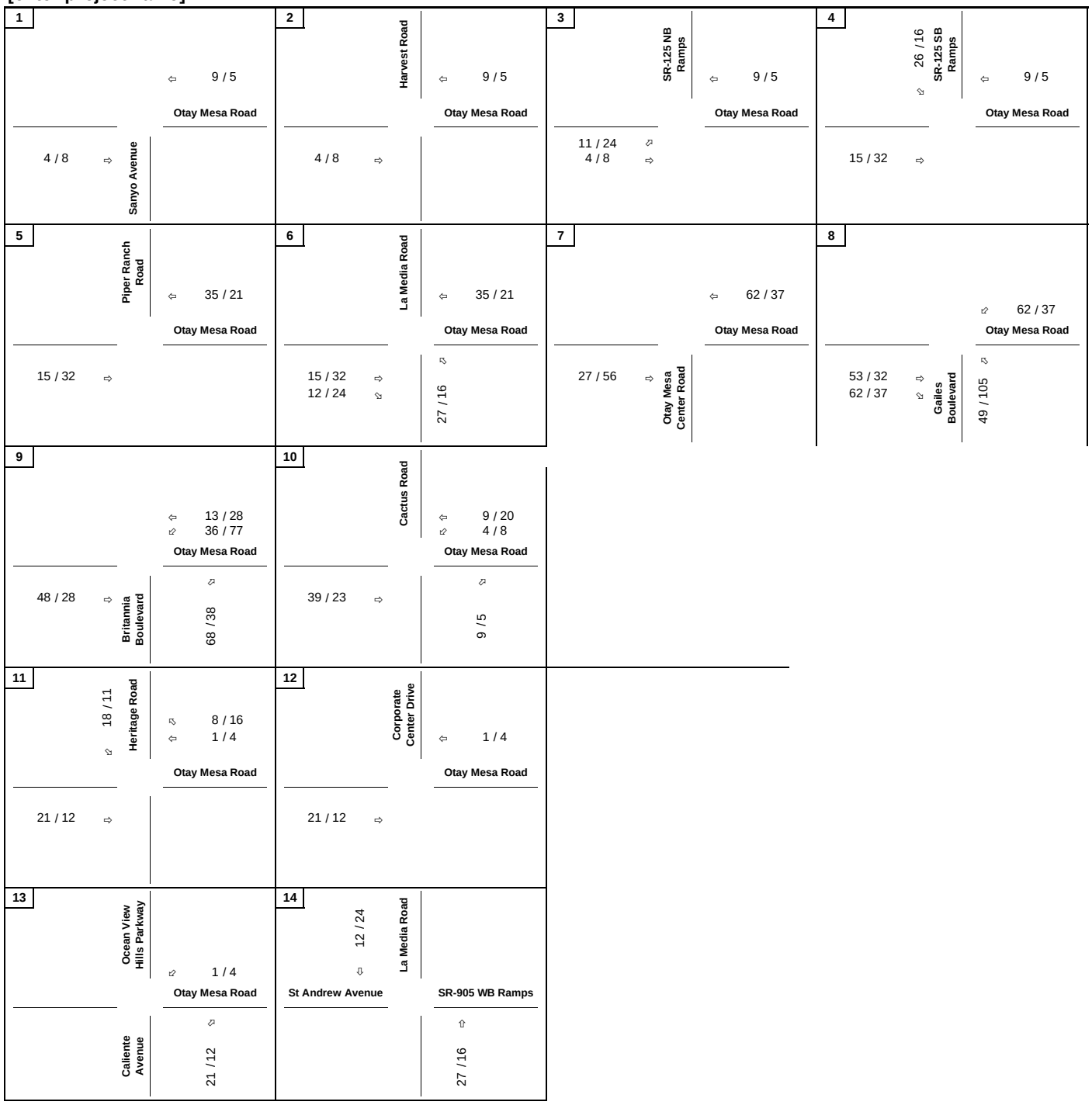
Kimley-Horn and Associates, Inc.

#N/A

#N/A

Playa del Sol Peak-Hour Traffic Volumes

[enter project name]



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

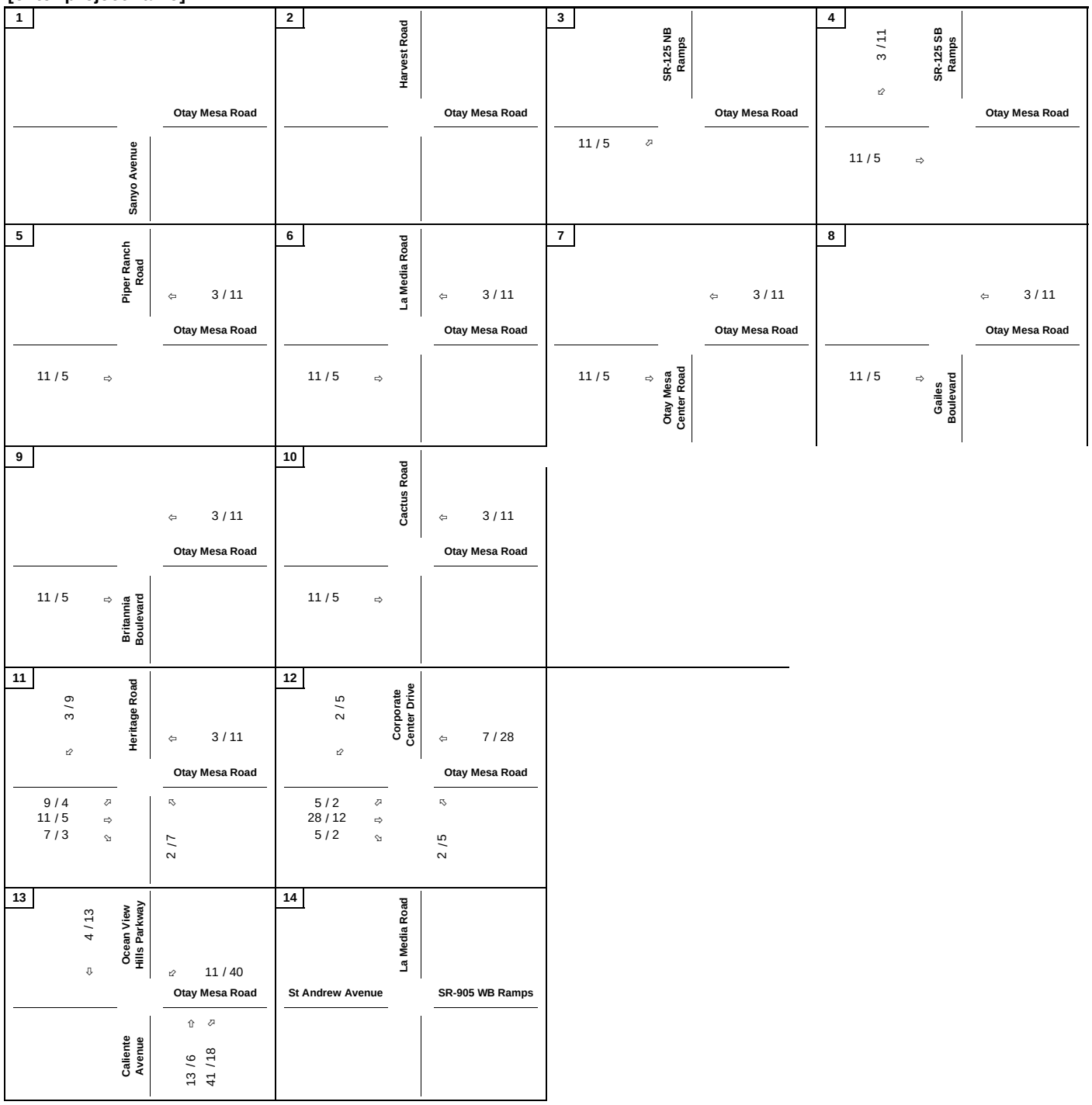
Kimley-Horn and Associates, Inc.

#N/A

#N/A

Southbay Peak-Hour Traffic Volumes

[enter project name]



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

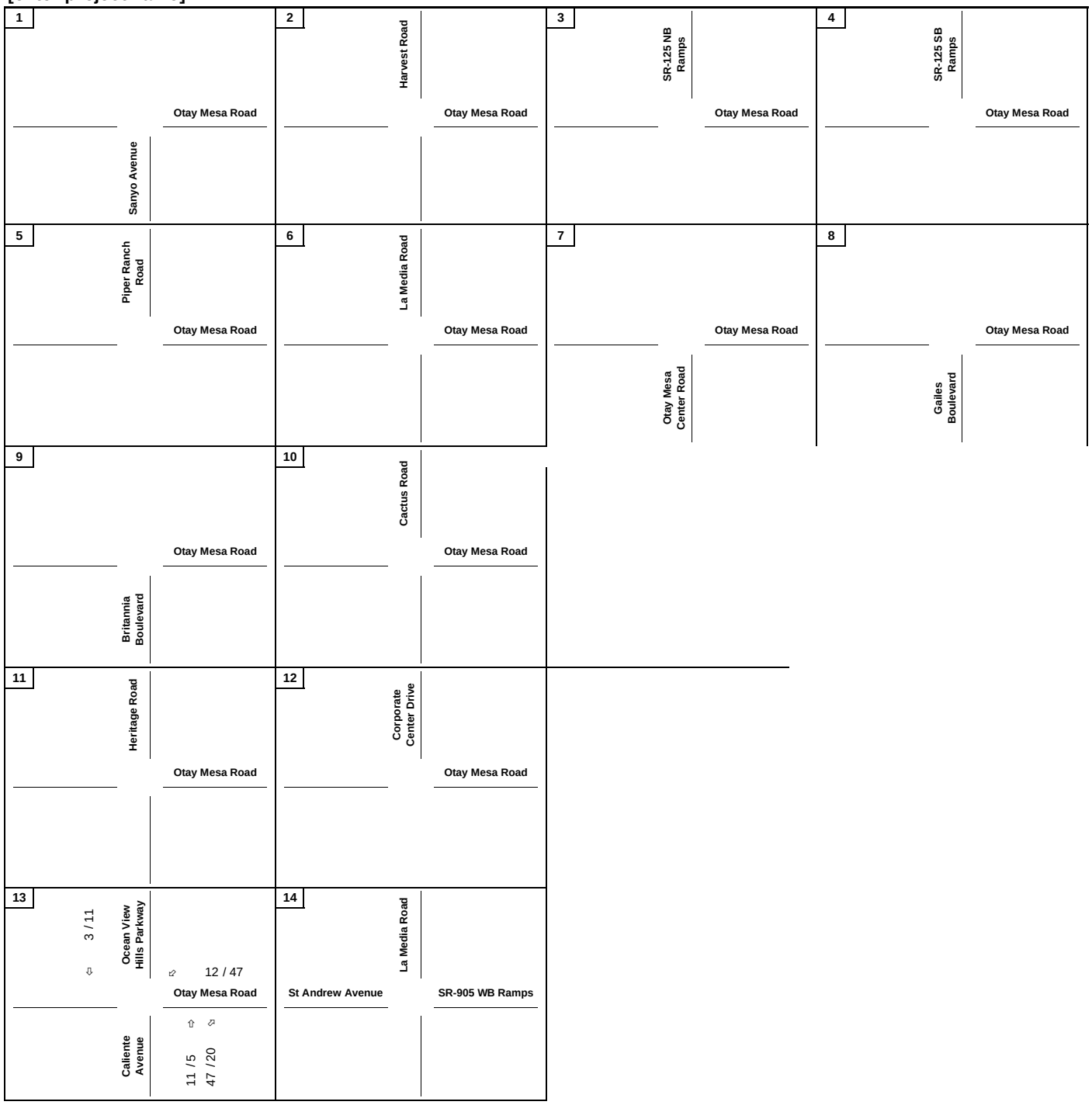
Kimley-Horn and Associates, Inc.

#N/A

#N/A

Southview Peak-Hour Traffic Volumes

[enter project name]



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

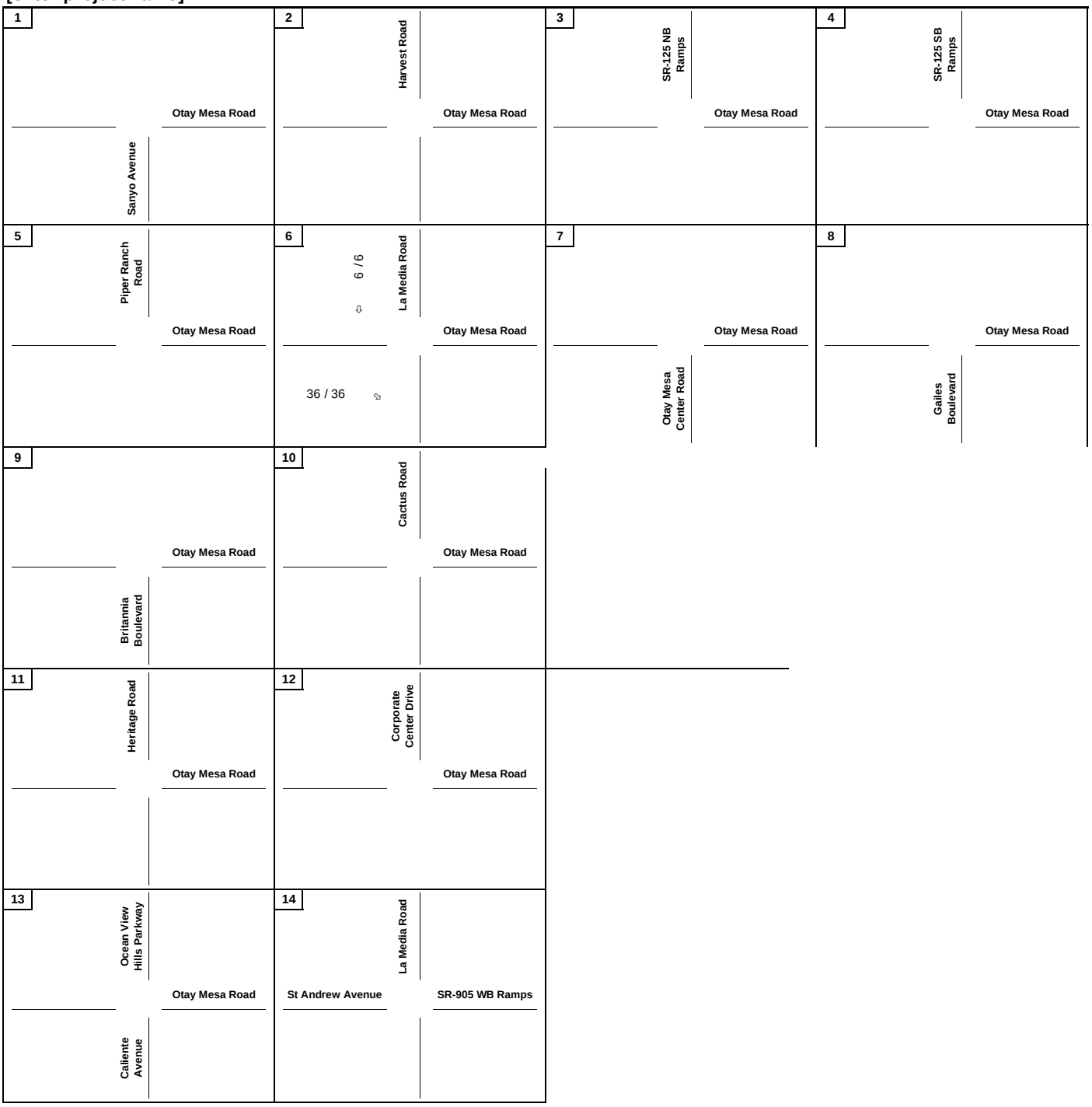
Kimley-Horn and Associates, Inc.

#N/A

#N/A

Candlelight Peak-Hour Traffic Volumes

[enter project name]



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

NOT TO SCALE

Kimley-Horn and Associates, Inc.

#N/A

#N/A

La Media 7-11 Peak-Hour Traffic Volumes

K:\SND_LDEV\095128024 - Sunroad Otay\Traffic\ANALYSIS\EXCEL\[095128024_CP01.xls]7 PA Figure 1-14

Otay Mesa Cumulative Projects in the City of SD (as of December 2010)

Project Name	Location	Project Description	ADT	Traffic Consultant	Project Status
Britannia 40	west side of Brianna Blvd between Airway Rd & Siempre Viva Rd			Kimley-Horn	Approved
Brown Field Tech Park	south of Otay Mesa Rd, north of Airway Rd, east of Pacific Rim Ct, and west of Britannia Blvd			Kimley-Horn	Approved (ministerial project)
Cross Border Facility	south of Siempre Viva Road between Britannia Blvd and La Media Road			LSA	Pending
Las Casitas	Near Palm Ave and I-805			Urban Systems	Pending
Metro Airpark	Brown Airfield			Rick Engineering	Pending
Nakano	Near Palm Ave and I-805			Urban Systems	Pending
Otay Mesa Batch Plant	7931 Airway Road			LOS Engineering	Approved
Playa del Sol	Ocean View Hills Parkway south of Del Sol Boulevard	1572 multi-family dwelling units		Urban Systems	Approved
Rowland Dismantling	901 through 1057 Heritage Road (north of Otay Mesa Road on the east side of Heritage Road)		0	None at present	Pending
Siempre Viva Industrial Park	North of Siempre Viva Road between Britannia Blvd and La Media Road			Kimley-Horn	Approved
South Bay Otay Mesa	6075 Otay Mesa Road			Kimley-Horn	Approved
Southview	east side of Caliente Avenue near Airway Road	543 condominiums		Kimley-Horn	Pending
Street Auto Dismantling	north of Otay Mesa Road on the west side of Heritage Road		0	None at present	Pending
Sunroad 20	8125 Otay Mesa Road (near Otay Mesa Center Road)	Outdoor auto sales, service, and storage (temporary use)	2000	None at present	Pending
Sunroad 80	1625 Avenida Costa Azul (south of Otay Mesa Road with access points on Avenida Costa Azul (future road) and Piper Ranch Road (future road))	Outdoor construction sales, service, and storage facilities (temporary use)	1500	None at present	Pending
USMS Seized Vehicle Lot	9020 Airway Road	vehicle storage and auction facility		KOA Corporation	Pending
Vista del Mar Elementary	south of Del Sol Blvd west of Ocean View Hills Parkway			Garland Associates	Approved

Reproduced with permission granted by THOMAS BROS. MAPS®. This map is copyrighted by THOMAS BROS. MAPS®. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

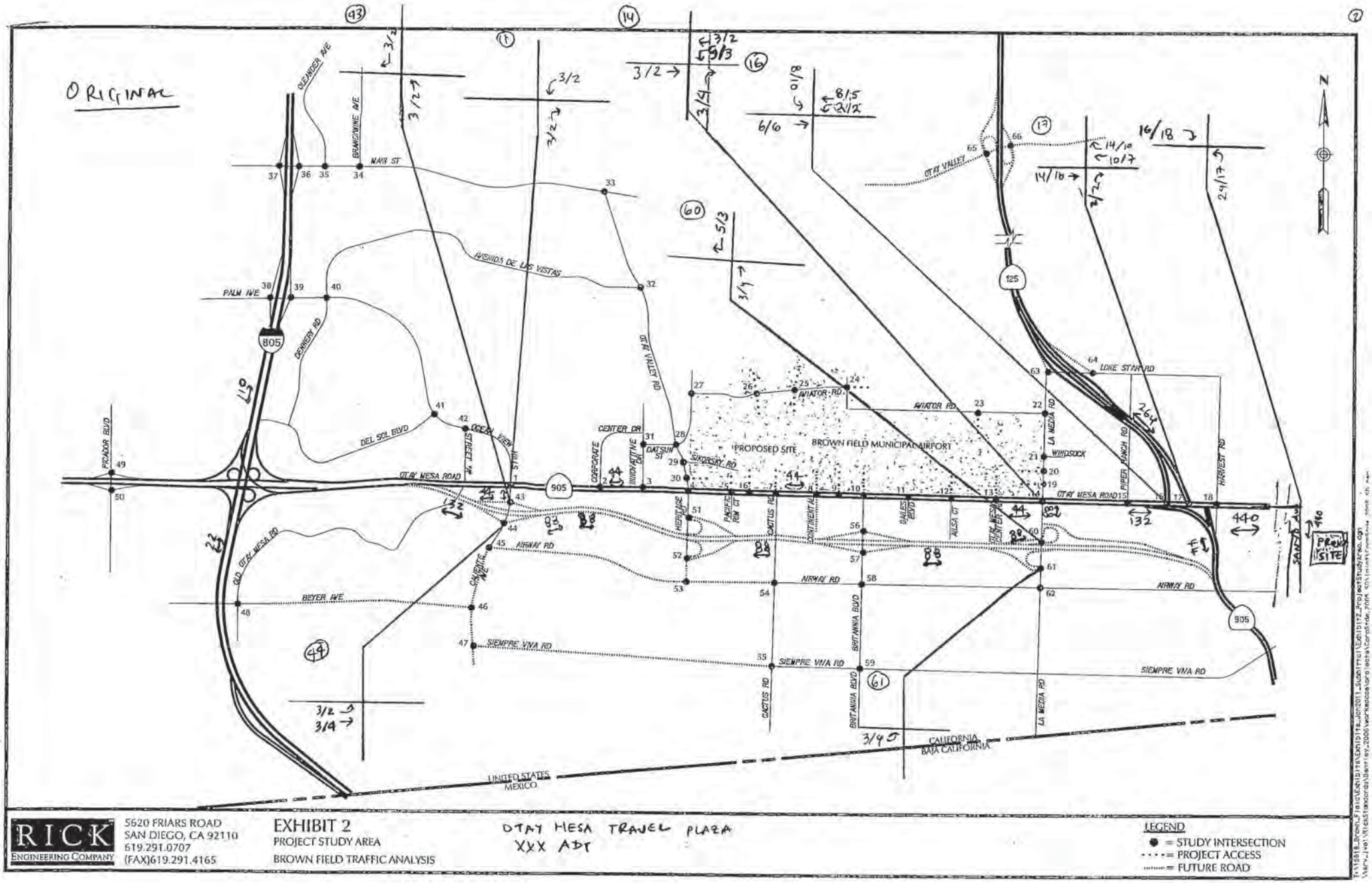
I:\ArcGIS\MAD-01 EastOtay\Mxd\ENVEIR\Fig1-12_CumulativeProjects.mxd - jp

Cumulative Projects

OTAY CROSSINGS COMMERCE PARK

Figure 1-12

HELIX



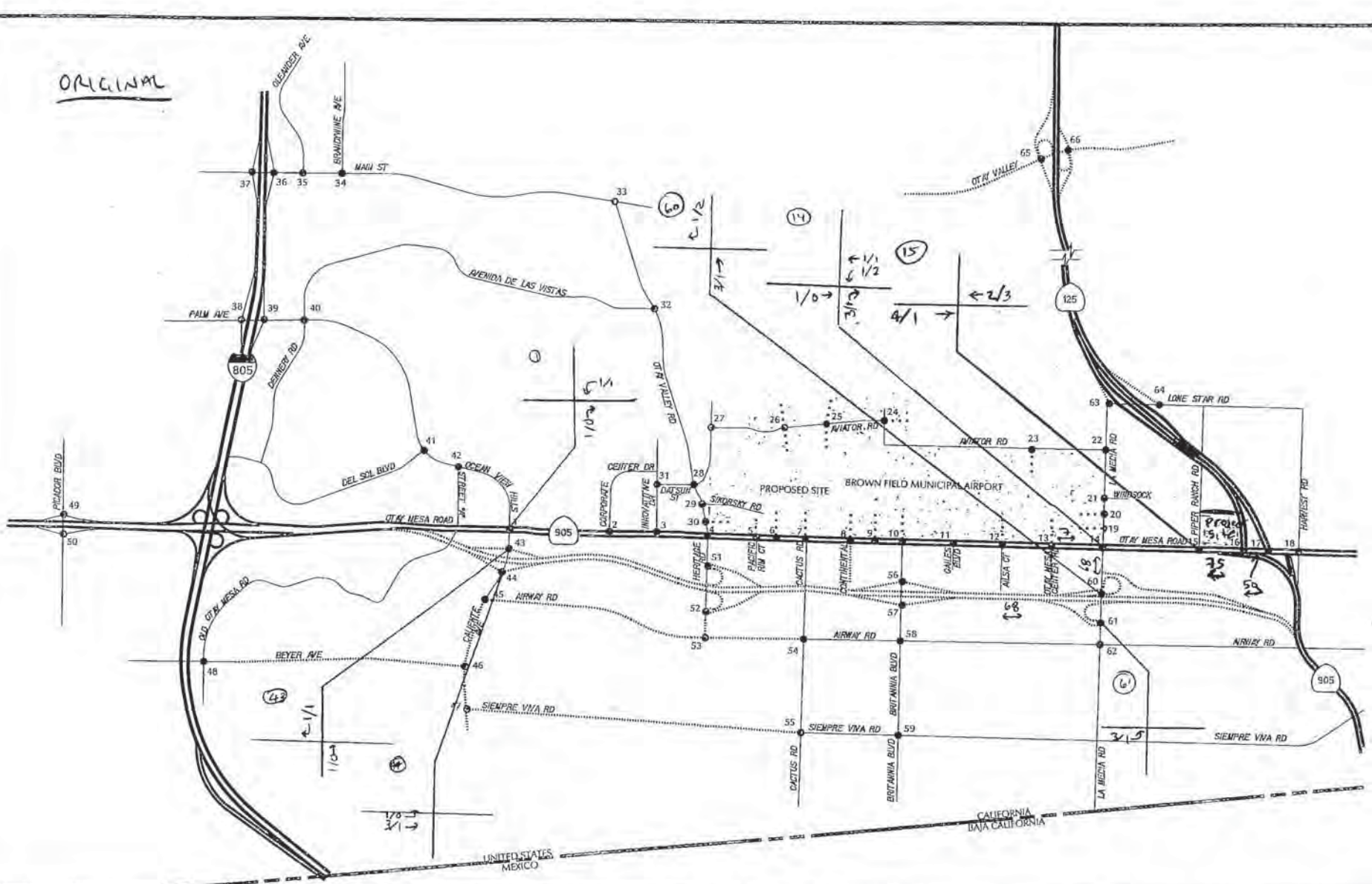
RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

OTAY MESA TRAVEL PLAZA
XXX ADT

LEGEND
● = STUDY INTERSECTION
- - - - = PROJECT ACCESS
..... = FUTURE ROAD

ORIGINAL

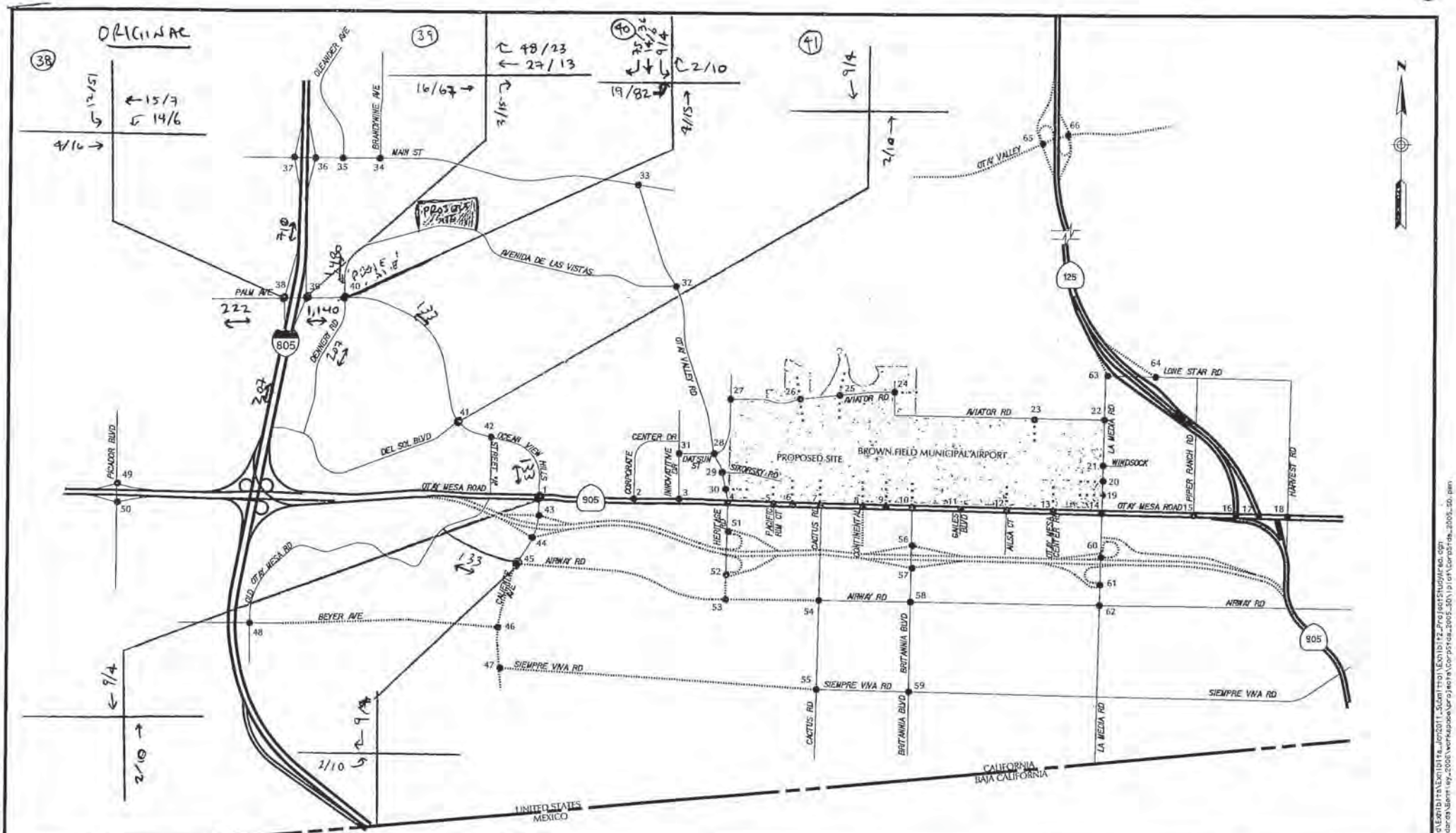


RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

USMS Seized Vehicle Lot
XXX ADT

LEGEND
● = STUDY INTERSECTION
- - - - = PROJECT ACCESS
..... = FUTURE ROAD



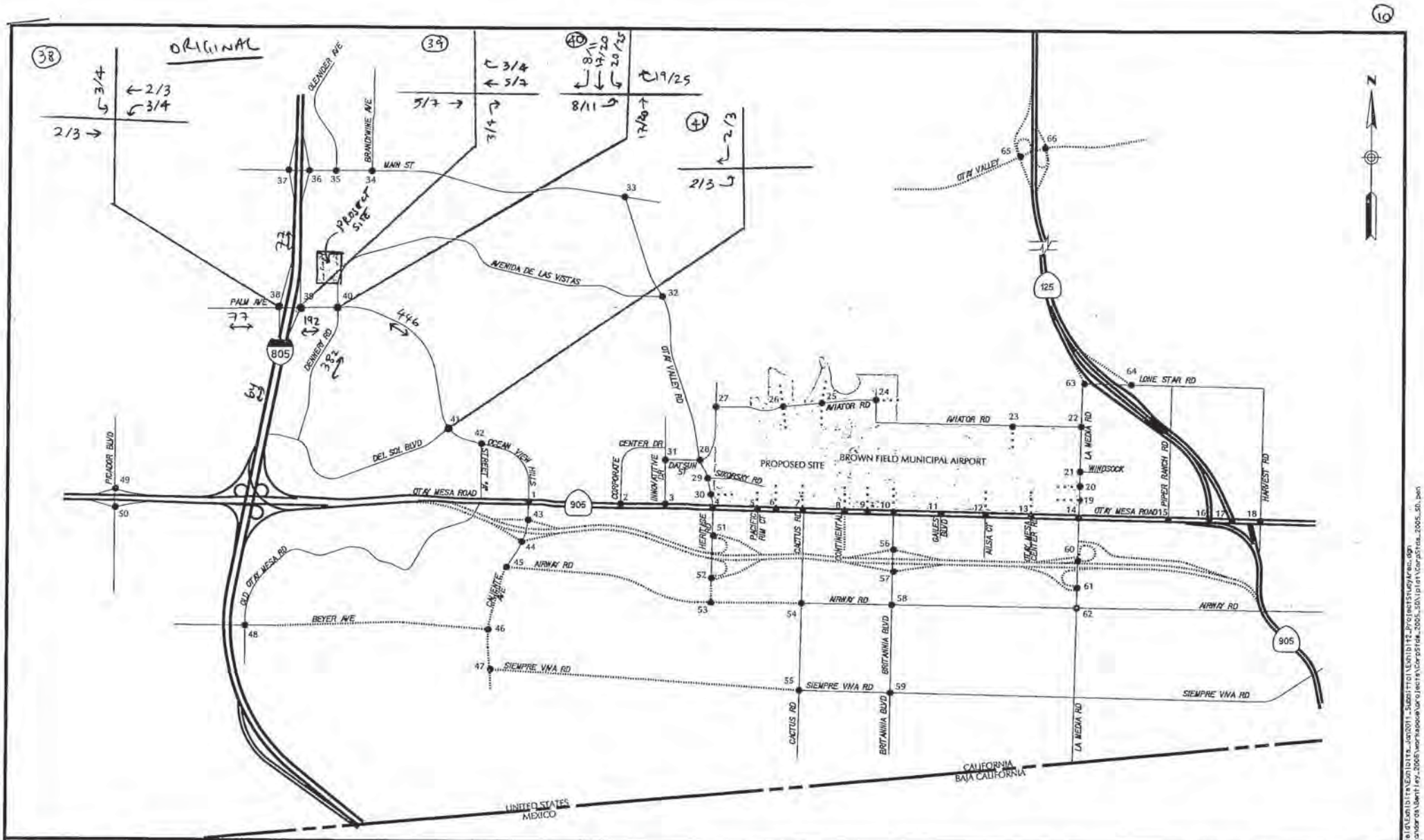
RICK ENGINEERING COMPANY

5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

LAS CASITAS
XXX ADT (1987)

LEGEND
● = STUDY INTERSECTION
• • • • = PROJECT ACCESS
..... = FUTURE ROAD

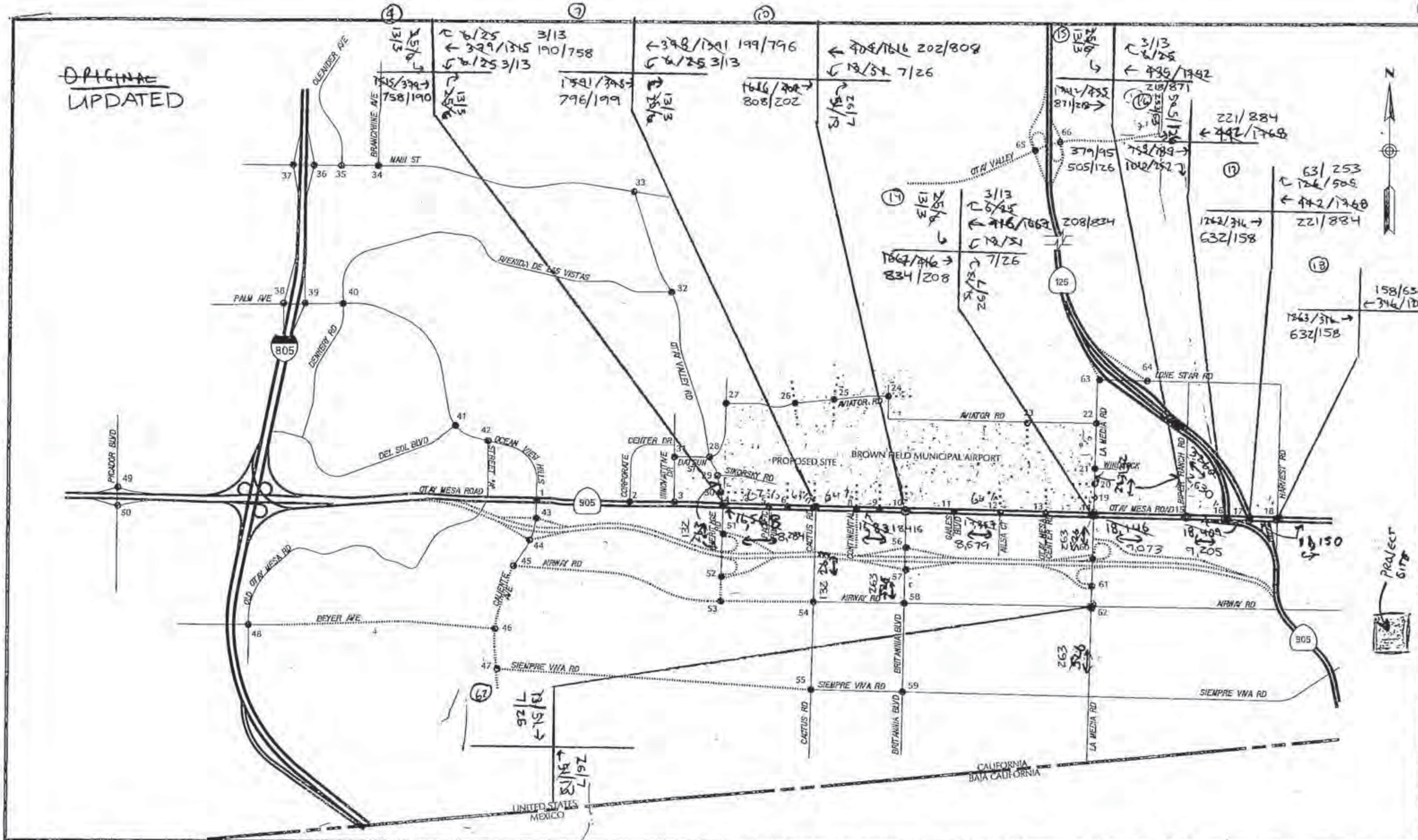


RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

NAKANO
XXX ADT (

LEGEND
● = STUDY INTERSECTION
= PROJECT ACCESS
= FUTURE ROAD



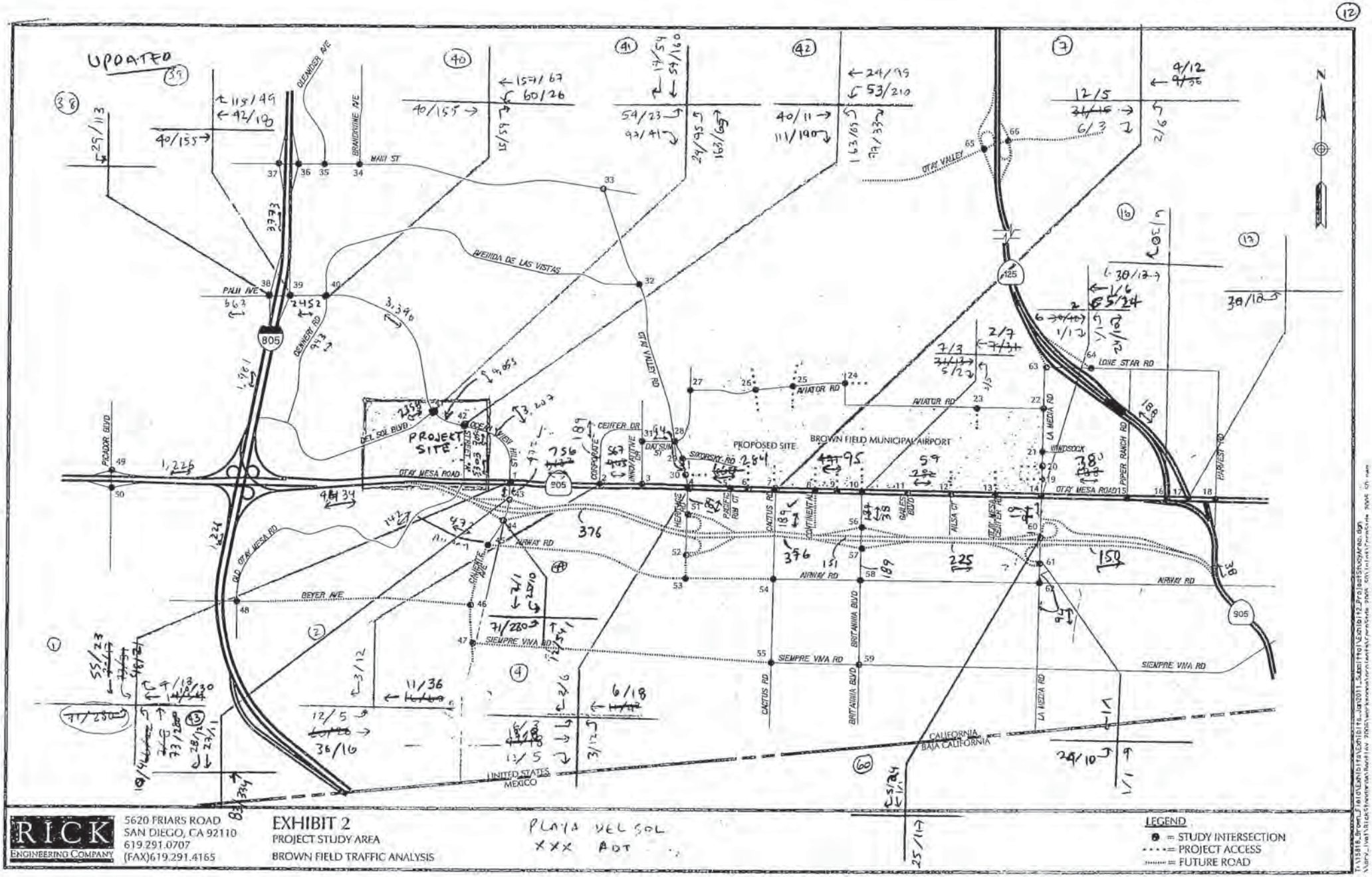
RICK ENGINEERING COMPANY

5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

OTAY BUSINESS PARK (Phases 1 and 2)
XXX ADT

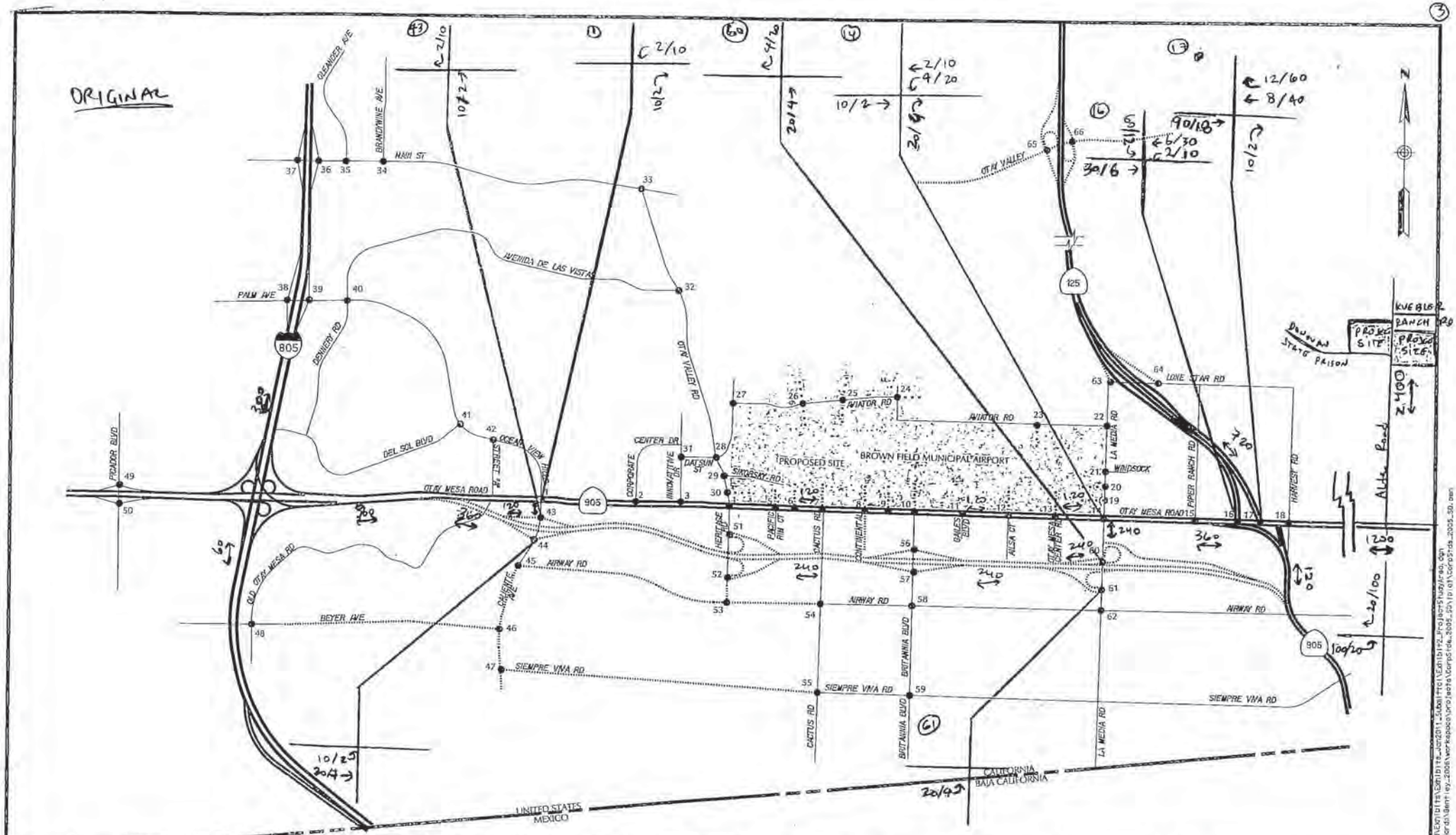
LEGEND
● = STUDY INTERSECTION
• • • • = PROJECT ACCESS
······· = FUTURE ROAD



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

LEGEND
● = STUDY INTERSECTION
- - - - = PROJECT ACCESS
..... = FUTURE ROAD



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

NATIONAL ENTERPRISES STORAGE AND RECYCLING FACILITY
XXX ADT

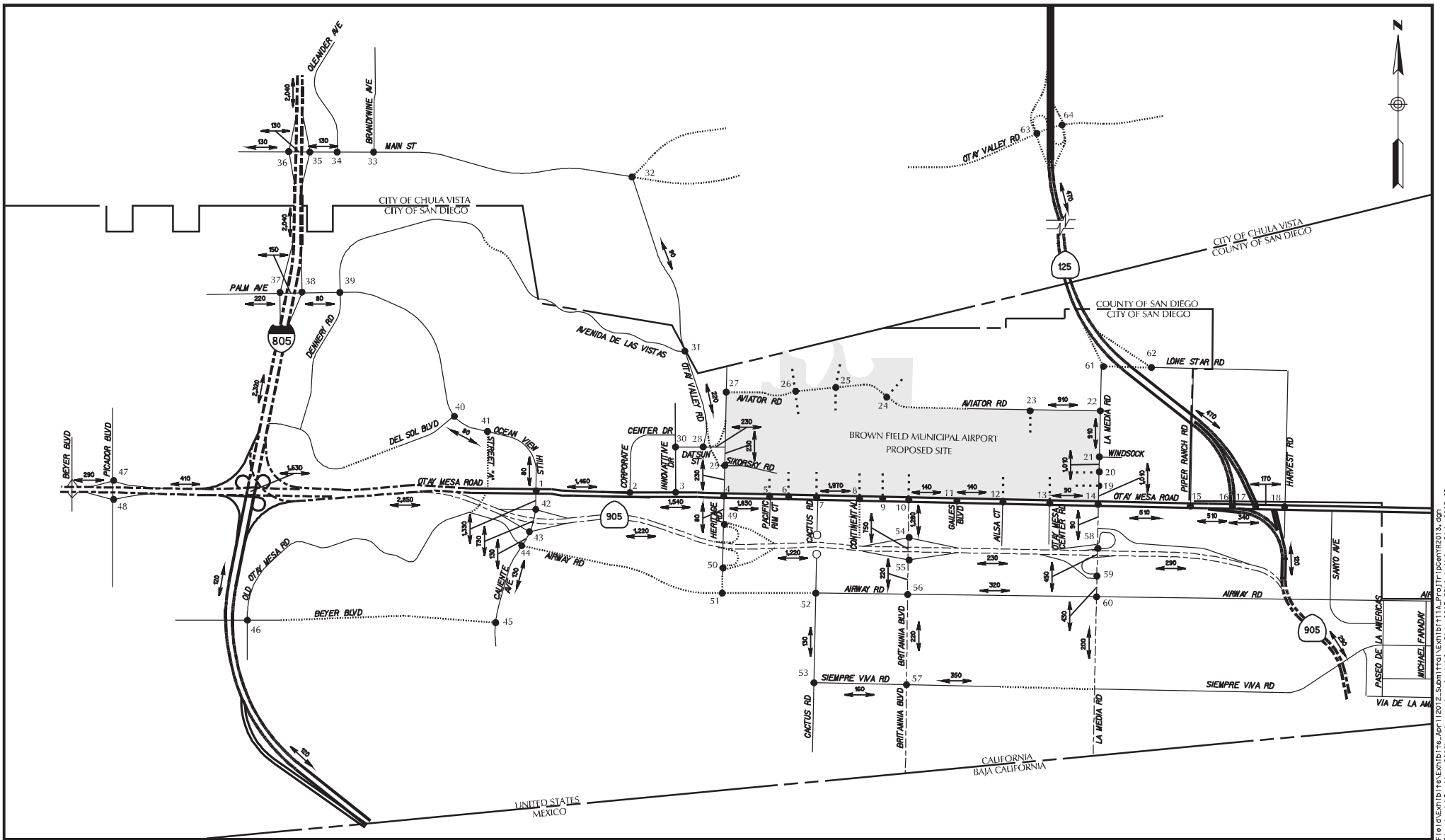
LEGEND
● = STUDY INTERSECTION
···· = PROJECT ACCESS
-·-·- = FUTURE ROAD

RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 2
PROJECT STUDY AREA
BROWN FIELD TRAFFIC ANALYSIS

SOUNDBAY PROJECT
XXX ADT

LEGEND
● = STUDY INTERSECTION
- - - - = PROJECT ACCESS
..... = FUTURE ROAD



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX)619.291.4165

EXHIBIT 11A

PHASE 1 TRIP ASSIGNMENT FOR YEAR 2013 (PHASE 1 OPENING YEAR) SCENARIO

METROPOLITAN AIRPARK TRAFFIC IMPACT ANALYSIS

LEGEND

● = STUDY INTERSECTION
= PROJECT ACCESS
= FUTURE ROAD
= TRUCK ROUTE
XX,XXX = ADT

© 2012 Rick Engineering Company

T:\15818_Brown_Field\Exhibits\Exhibit11A_Apr12012_Submittal\Exhibit11A_ProjTrip_Year2013.dgn
\\Rickfiles\projects\standards_Berrley2006\workspace\projects\Corp5tds_2005_SD\plot\Corp5tds_2005_SD.pen
10-APR-2012 11:50

TABLE 4-1
TRIP GENERATION SUMMARY

Land Use		Units[1]	Daily Trip Rate[2]	Daily Trips	AM Peak-Hour					PM Peak-Hour				
					% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
Driveway Trips[3]														
Proposed														
Candlelight	Multiple Dwelling Unit - Over 20 dwelling units/acre	475 du	6 / du	2,850	8%	2.00 : 8.00	46	182	228	9%	7.00 : 3.00	180	77	257
Proposed Total				**2,850**			**46**	**182**	**228**			**180**	**77**	**257**
NET TRIP GENERATION =				**2,850**			**46**	**182**	**228**			**180**	**77**	**257**

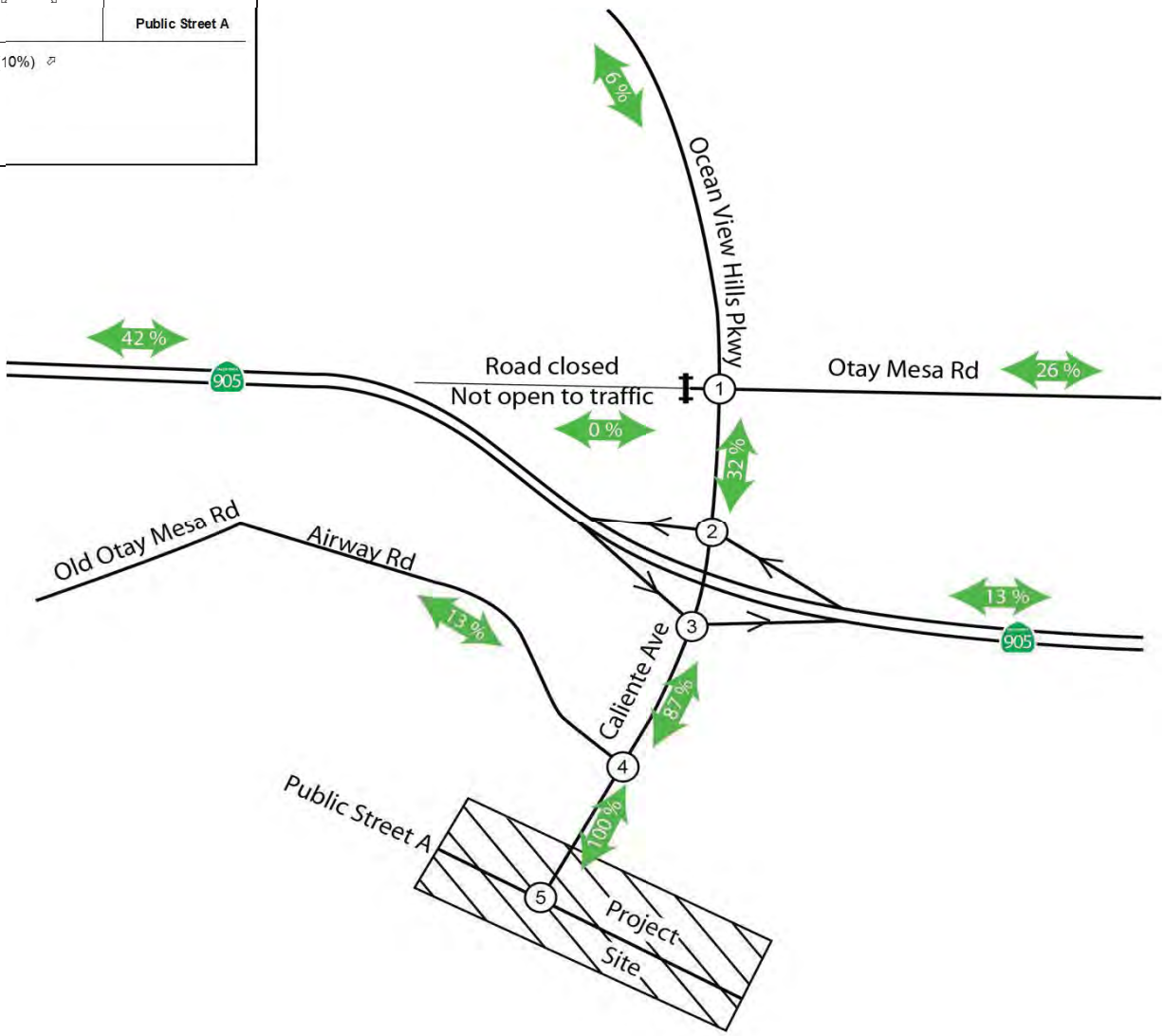
Note:
1. DU = Dwelling Unit
2. Trip rates referenced from the City of San Diego Land Development Code - Trip Generation Manual, May 2003.
3. Driveway trips are the total number of trips generated by a site.

K:\SND_TPTO\095809001-Candlelight\Excel\[809001TG01.xlsm]Summary

Candlelight

1			2			3			4		
	Ocean View Hills Pkwy	Otay Mesa Rd		Caliente Ave	SR-905 WB Ramps		Caliente Ave	SR-905 EB Ramps		Caliente Ave	Airway Rd
Caliente Ave	6%	26%	Caliente Ave	32%	13%	Caliente Ave	45%		Caliente Ave	87%	
	(6%)	(26%)			(42%) (32%)		42%	(74%) (13%)		13%	(13%) (87%)

5		
	Caliente Ave	Public Street A
Caliente Ave	10%	(90%)
Public Street A	90%	
	(10%)	



Legend

X% / (Y%) = IN / OUT PERCENT DISTRIBUTION

NOT TO SCALE

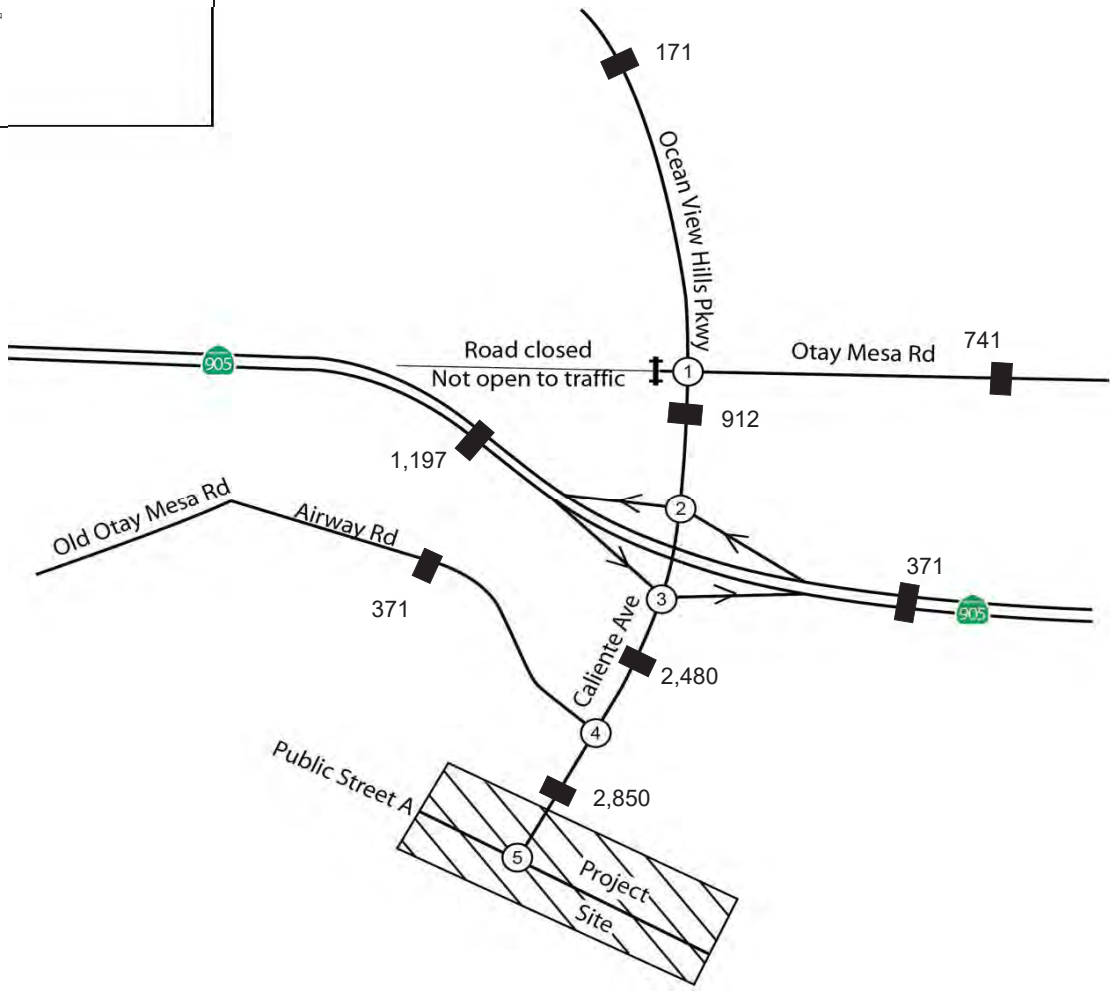
Kimley-Horn and Associates, Inc.

FIGURE 4-1
Existing and Near Term Conditions Project Trip Distribution

Candlelight

1			2			3			4		
	3 / 11 ⇩ Ocean View Hills Pkwy	⇘ 12 / 47 Otay Mesa Rd		15 / 58 ⇩ Caliente Ave	⇘ 6 / 23 SR-905 WB Ramps		21 / 81 ⇩ Caliente Ave	SR-905 EB Ramps		40 / 157 ⇩ Caliente Ave	Airway Rd
Caliente Ave	⇧ 11 / 5 ⇗ 47 / 20				⇖ 76 / 32 ⇑ 58 / 25		19 / 76 ⇖	⇑ 135 / 57 ⇗ 24 / 10		6 / 23 ⇖	⇖ 24 / 10 ⇑ 158 / 67

5		
	5 / 18 ⇖ 41 / 162 ⇙ Caliente Ave	⇘ 164 / 69 Public Street A
18 / 8 ⇗		



Legend

X / Y = AM / PM PEAK HOUR TURNING VOLUMES

■ X,XXX = Average Daily Traffic

NOT TO SCALE

Kimley-Horn and Associates, Inc.

FIGURE 4-3

Existing and Near Term Conditions Project Trip Assignment

TABLE 1
OTAY MESA LUMINA PROJECT
PROPOSED PROJECT TRIP GENERATION – SELECT ZONE ASSIGNMENT REDUCTION

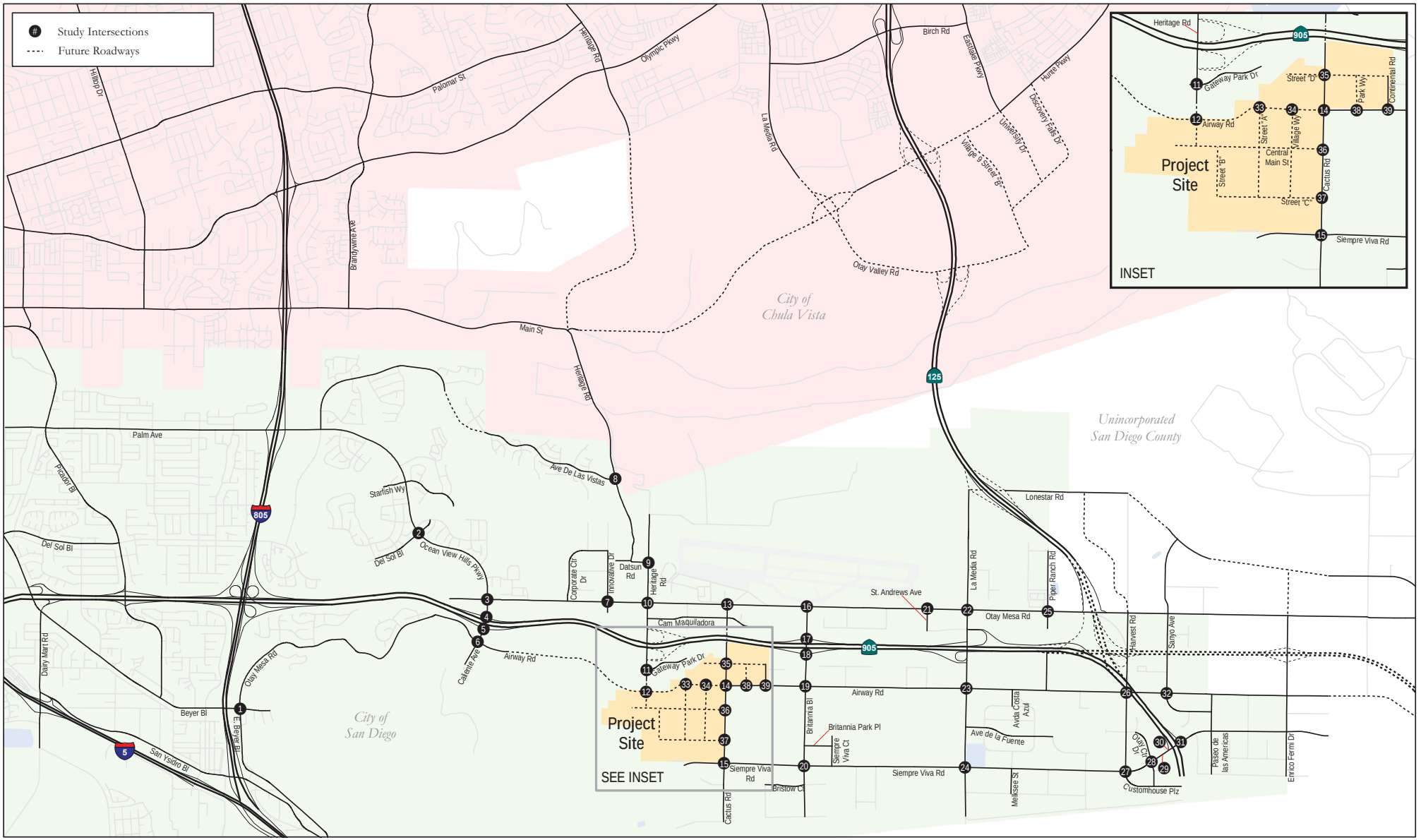
Land Use	Units	Trip Rate	ADT	AM Peak Hour					PM Peak Hour				
				%	Trips	Split	In	Out	%	Trips	Split	In	Out
Phase 1 (Year 2023)													
Multi-Family (Over 20 DU/acre)	1,129 DU	6	6,774	8%	542	2:8	108	434	9%	610	7:3	427	183
Community Commercial [a]	62.53 KSF	70[a]	4,377	3%	131	6:4	79	52	10%	438	5:5	219	219
Phase 2 (Year 2027)													
Multi-Family (Over 20 DU/acre)	526 DU	6	3,156	8%	252	2:8	51	201	9%	284	7:3	199	85
Multi-Family (Under 20 DU/acre)	213 DU	8	1,704	8%	136	2:8	27	109	10%	170	7:3	119	51
Park (Developed)	6.6 Acres	50	330	4%	13	5:5	7	6	8%	26	5:5	13	13
Elementary School	6.3 Acres	136	857	31%	266	6:4	159	107	19%	163	4:6	65	98
Total			17,198		1,340		431	909		1,691		1,042	649
Internal Trips Capture (9.4%)[b]			1,617		126		41	85		159		98	61
External Trips			15,581		1,214		390	824		1,532		944	588

Source: City of San Diego Land Use Code – Trip Generation Manual, May 2003

Notes:

[a] – Trip generation rate used is consistent with the Otay Mesa CPU & OMCVSP.

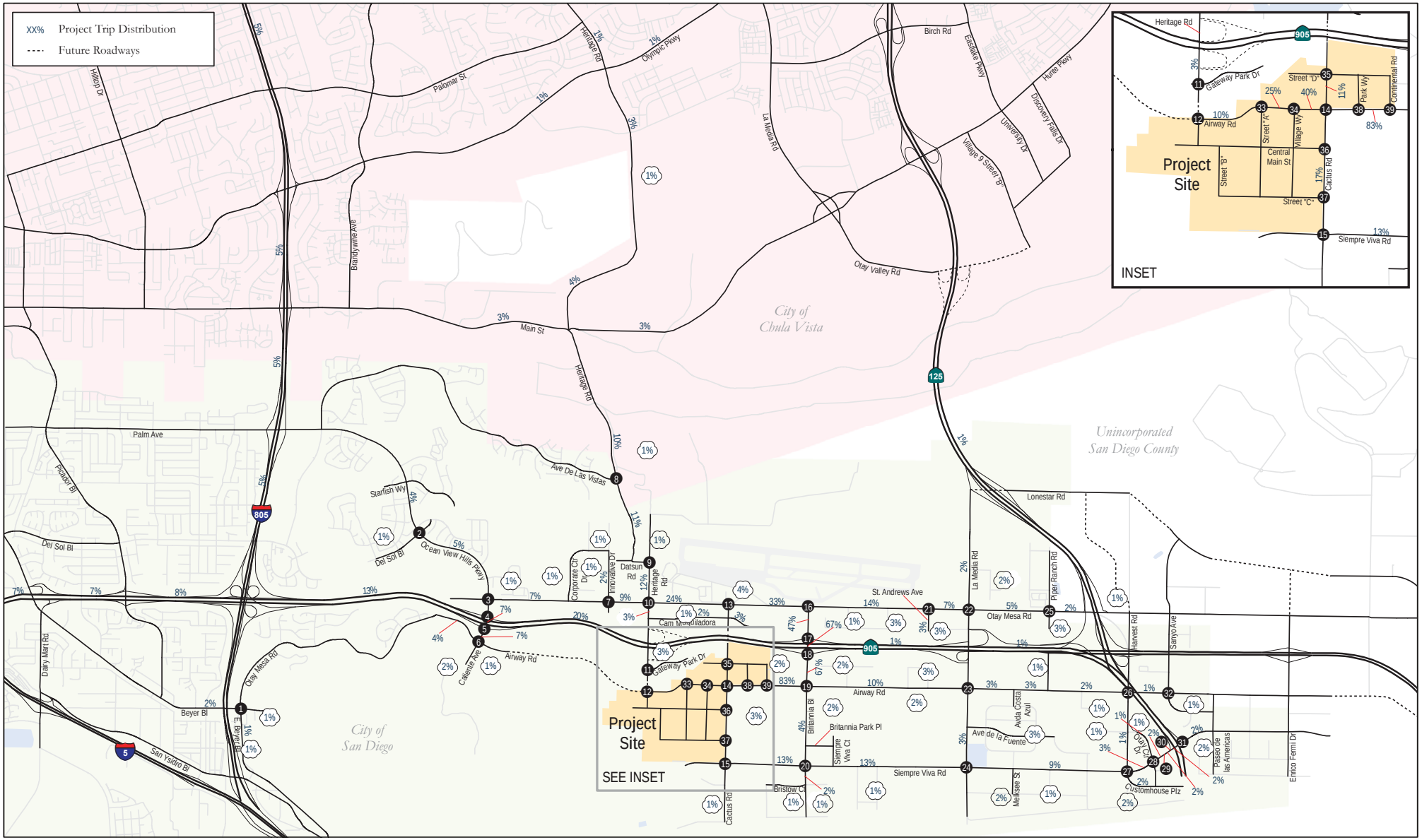
[b] – Internal capture consistent with Otay Mesa Central Village Specific Plan.



Otay Mesa Central Village Specific Plan

CHEN RYAN

Figure 1-2
Project Study Area



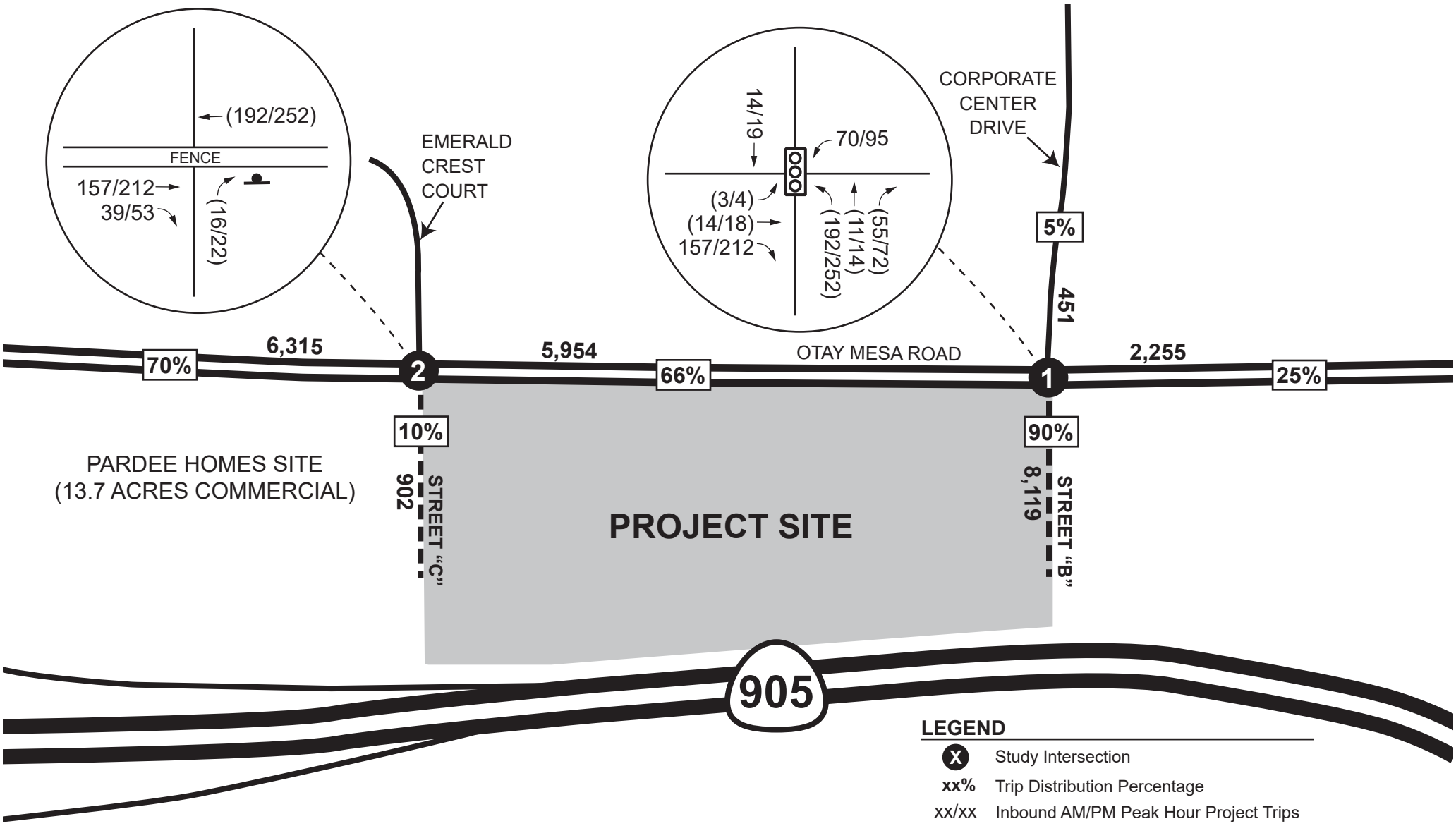
Otay Mesa Central Village Specific Plan

CHEN RYAN

Figure 3-2
Project Trip Distribution

Handler Trip Generation

Land Use		Unit	Daily (per unit)	AM Peak Hour			PM Peak Hour		
				Total (of daily)	Inbound (% AM)	Outbound (% AM)	Total (of daily)	Inbound (% PM)	Outbound (% PM)
Trip Generation Rates (City of San Diego Cumulative Trip Rates)									
Fast-Food Restaurant w/Drive-Through		TSF	420	4%	60%	40%	8%	50%	50%
Restaurant High Turnover		TSF	104	8%	50%	50%	8%	60%	40%
Motel		rooms	9	8%	40%	60%	9%	40%	60%
Forecast Project Generated Trips									
Land Use	**Size**	**Unit**	**Daily Trips**	**AM Peak Hour**			**PM Peak Hour**		
				Total	**Inbound**	**Outbound**	**Total**	**Inbound**	**Outbound**
Fast-Food Restaurant w/Drive-Through	6	TSF	2,520	101	60	40	202	101	101
Restaurant High Turnover	24	TSF	2,496	200	100	100	200	120	80
Motel	189	rooms	1,701	136	54	82	153	61	92
Total Project Trips			**6,717**	**437**	**215**	**222**	**554**	**282**	**273**



LEGEND

X	Study Intersection
xx%	Trip Distribution Percentage
xx/xx	Inbound AM/PM Peak Hour Project Trips
(xx/xx)	Outbound AM/PM Peak Hour Project Trips
X,XXX	Daily Project Trips
	Signalized Intersection
	Stop Sign

HANDLER PROPERTY TRIP DISTRIBUTION

Not to Scale

Michael Baker INTERNATIONAL

JN 144138 DECEMBER 2015

PROJECT TRIP DISTRIBUTION AND TRIP ASSIGNMENT WITHOUT TRAFFIC SIGNAL AT OTAY MESA RD/STREET "C"

EXHIBIT 4

A Series 13, year 2050 SANDAG Select Zone Assignment for the project land uses documented an internal capture rate of 2.8% that was applied to the trip generation. The SANDAG internal capture rate is included in **Appendix L**. The residential density is greater than 20 units per acres (267 du/9.2 acres = 29.0 du/acre).

The project driveway volumes were calculated at 6,816 ADT with 336 AM peak hour trips (152 inbound and 184 outbound) and 717 PM peak hour trips (387 inbound and 330 outbound). The cumulative traffic volumes were calculated at 4,716 ADT with 252 AM peak hour trips (101 inbound and 151 outbound) and 486 PM peak hour trips (271 inbound and 215 outbound) as shown in **Table 9**.

TABLE 9: PROJECT TRIP GENERATION AS ANALYZED IN THIS TIA (HIGHEST DENSITY RESIDENTIAL WITH 267 UNITS)

Land Use	Daily Rate	Size & Units	ADT	%	Split	AM IN	AM OUT	%	Split	PM IN	PM OUT
Driveway Trips											
Neighborhood Shopping Center	120 /KSF	45,000 SF	**5,400**	4%	0.6 0.4	**130**	**86**	11%	0.5 0.5	**297**	**297**
Multi Family (over 20 du/ac)	6 /DU	267 DU	**1,602**	8%	0.2 0.8	**26**	**103**	9%	0.7 0.3	**101**	**43**
Developed Park	50 /Acre	0.19 Acres	**10**	4%	0.5 0.5	**0**	**0**	8%	0.5 0.5	**0**	**0**
SANDAG Traffic Model Internal Capture 2.8%			**-196**			**-4**	**-5**			**-11**	**-10**
External Driveway Trips:			**6,816**			**152**	**184**			**387**	**330**
Cumulative Trips											
Neighborhood Shopping Center	72 /KSF	45,000 SF	**3,240**	4%	0.6 0.4	**78**	**52**	11%	0.5 0.5	**178**	**178**
Multi Family (over 20 du/ac)	6 /DU	267 DU	**1,602**	8%	0.2 0.8	**26**	**103**	9%	0.7 0.3	**101**	**43**
Developed Park	50 /Acre	0.19 Acres	**10**	4%	0.5 0.5	**0**	**0**	8%	0.5 0.5	**0**	**0**
SANDAG Traffic Model Internal Capture 2.8%			**-136**			**-3**	**-4**			**-8**	**-6**
External Cumulative Trips:			**4,716**			**101**	**151**			**271**	**215**

Source: City of San Diego *Trip Generation Manual*, May 2003. SF - Square Feet; ADT-Average Daily Traffic. Totals above ±1 due to Excel rounding.

SF - Square Feet; ADT-Average Daily Traffic; Split-percent inbound and outbound.

If the final project has fewer units, the trip generation will decrease until reaching 183 units at which time the density decreases to less than 20 du/acre (183 du/9.2ac = 19.9 du/acre). At 183 units, the applicable trip generation rate of 8 ADT/du results in 1,464 ADT with 117 AM peak hour trips (23 inbound and 94 outbound) and 146 PM peak hour trips (102 inbound and 44 outbound). When compared to the 183 units at the higher trip rate, 267 units at 6 ADT/du is calculated to generate 1,602 ADT (138 more ADT), 128 AM peak hour trips (11 more peak hour trips), and 144 PM peak hour trips.

If the project is completed at a lower density as shown on the site plan with only 171 dwelling units, then the project driveway volumes were calculated at 6,656 ADT with 320 AM peak hour trips (149 inbound and 171 outbound) and 718 PM peak hour trips (386 inbound and 332 outbound). The cumulative traffic volumes were calculated at 4,535 ADT with 235 AM peak hour trips (98 inbound and 137 outbound) and 484 PM peak hour trips (269 inbound and 215 outbound) as shown in **Table 10**.

Figure 6: Project Distribution

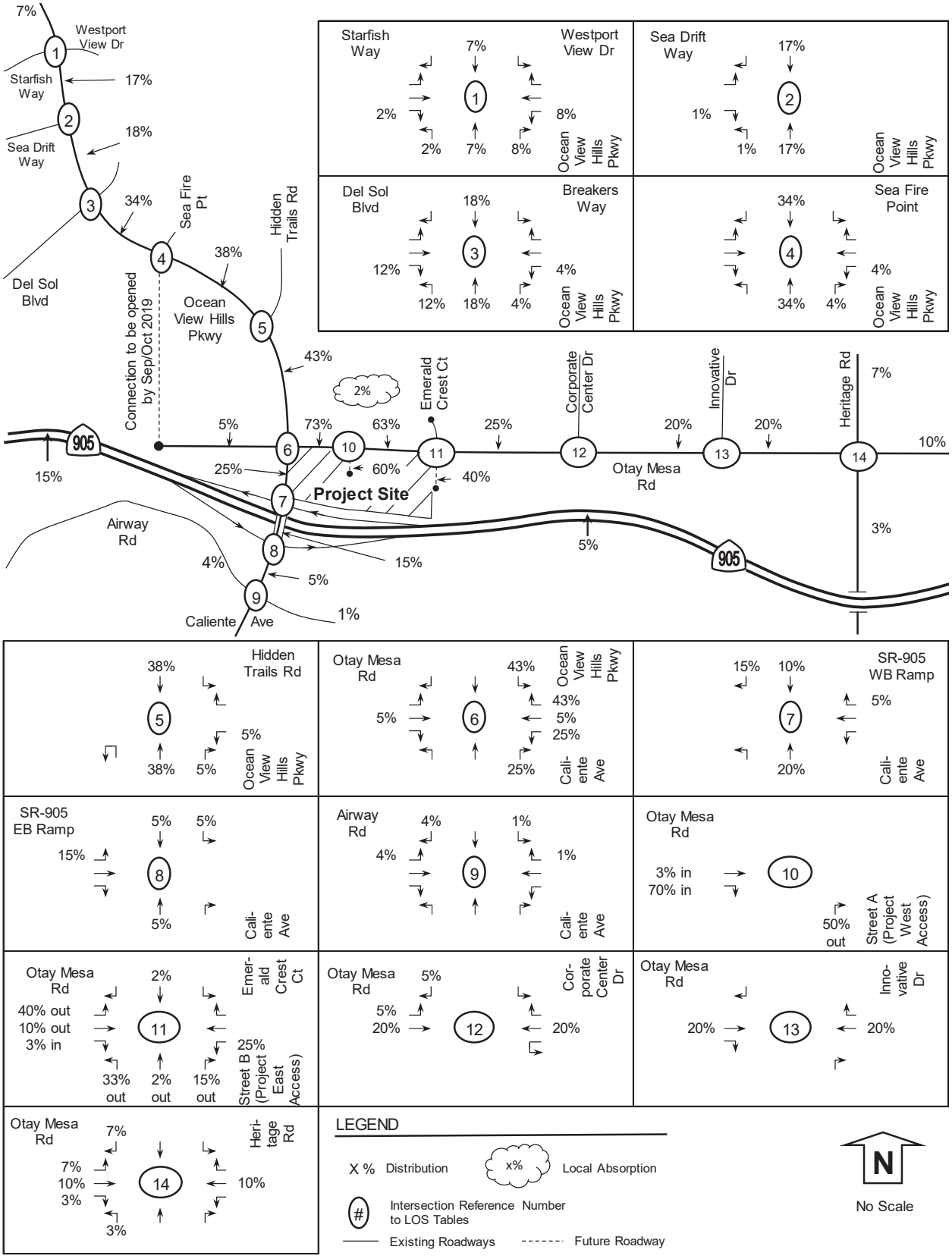
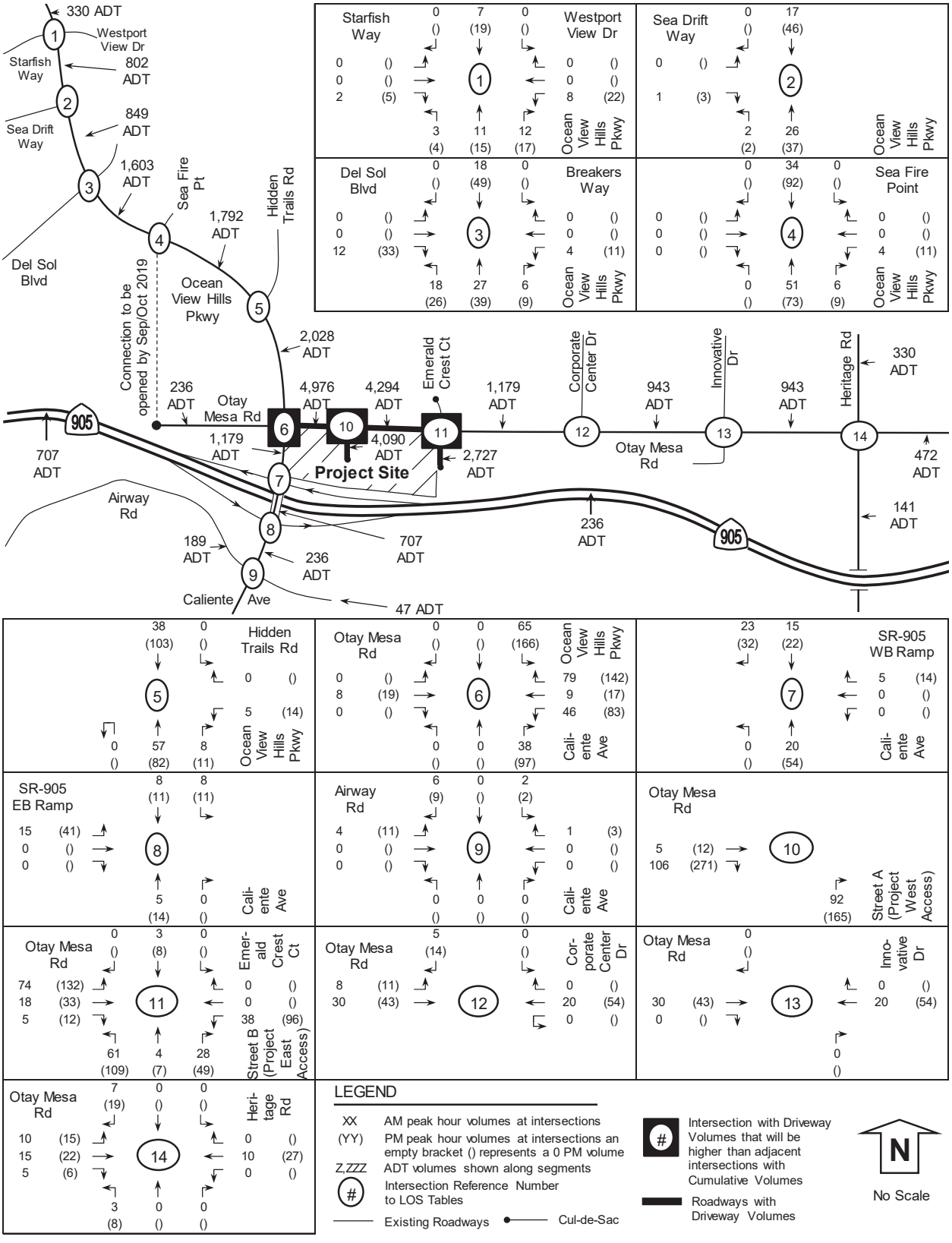


Figure 7: Project Assignment



Appendix F

Conceptual Design Exhibits for Intersection Mitigation Measures

RICK ENGINEERING COMPANY TRAFFIC

FIGURE F1

AIRWAY ROAD AND CALIENTE AVENUE IMPROVEMENTS

LA MEDIA RETAIL

LEGEND
XX'=PROPOSED WIDTH
(XX')=EXISTING WIDTH

\\cp.rickeng.com\projects\C_SD_T\18548_La Media Retail TIA\Traffic\Graphics\18548_Figure_F1.dgn
\\cp.rickeng.com\projects\C_SD_T\18548_La Media Retail TIA\Traffic\Graphics\SD CorpStds 2005.dscript

© 2019 Rick Engineering Company
25-SEP-2019 13:48

RICK ENGINEERING COMPANY
TRAFFIC

FIGURE F2

AIRWAY ROAD AND BRITANNIA BOULEVARD IMPROVEMENTS

LA MEDIA RETAIL

LEGEND
XX'=PROPOSED WIDTH
(XX')=EXISTING WIDTH

\\cp.rickeng.com\projects\C_SD_T\18548_La Media Retail TIA\Traffic\Graphics\18548_Figure_F2.dgn
\\cp.rickeng.com\projects\C_SD_T\18548_La Media Retail TIA\Traffic\Graphics\SD CorpStds 2005.dscript

© 2019 Rick Engineering Company
25-SEP-2019 13:48

RICK ENGINEERING COMPANY
TRAFFIC

FIGURE F3

HERITAGE ROAD AND OTAY MESA ROAD IMPROVEMENTS

LA MEDIA RETAIL

LEGEND
XX'=PROPOSED WIDTH
(XX')=EXISTING WIDTH

\\cp.rickeng.com\projects\C_SD_T\18548_La Media Retail TIA\Traffic\Graphics\18548_Figure_F3.dgn
\\cp.rickeng.com\projects\C_SD_T\18548_La Media Retail TIA\Traffic\Graphics\SD CorpStds 2005.dscrlpt

© 2019 Rick Engineering Company
25-SEP-2019 13:47

Appendix G

Horizon Year 2035 Planned Improvements Information

CITY OF SAN DIEGO
FACILITIES FINANCING PROGRAM

TITLE: **LA MEDIA ROAD (SR 905 Interchange to Airway Road)**

PROJECT: OM T-25.3

DEPARTMENT: PUBLIC WORKS
WBS, CIP, or JO #: N/A

COUNCIL DISTRICT: 8
COMMUNITY PLAN: OM

SOURCE	**FUNDING:**	EXPENDED	CONT APPROP	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
FBA-OM	**$13,728,000**				$2,500,000	$3,050,000	$8,178,000	
DIF-OM								
FBA-OM(w)								
FBA-OM(e)								
PDIF (w)								
PDIF (e)								
DEV/SUBD								
OTHER	**$3,872,000**						$3,872,000	
TOTAL	**$17,600,000**	$0	$0	$0	$2,500,000	$3,050,000	$12,050,000	$0

SOURCE	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
FBA-OM								
DIF-OM								
FBA-OM(w)								
FBA-OM(e)								
PDIF (w)								
PDIF (e)								
DEV/SUBD								
OTHER								
TOTAL	$0	$0	$0	$0	$0	$0	$0	$0

CONTACT: TRANSPORTATION & STORM WATER TELEPHONE: (619) 533-3126 EMAIL: N/A

CITY OF SAN DIEGO
FACILITIES FINANCING PROGRAM

TITLE: **LA MEDIA ROAD (SR 905 Interchange to Airway Road)**

PROJECT: OM T-25.3

DEPARTMENT: PUBLIC WORKS
CIP or JO #: N/A

COUNCIL DISTRICT: 8
COMMUNITY PLAN: OM

DESCRIPTION:

THIS PROJECT WOULD PROVIDE FOR THE DESIGN AND CONSTRUCTION OF WIDENING ROAD SEGMENTS, NOT YET FULLY IMPROVED, TO THE SIX-LANE PRIMARY ARTERIAL STANDARD WITH INTERSECTION TURN LANES. IMPROVEMENTS INCLUDE PAVEMENT, CONCRETE MEDIANS, SIDEWALK, CURB AND GUTTER, LANDSCAPING, STORM DRAIN FACILITIES AND STREET LIGHTING. THIS ROAD SEGMENT IS APPROXIMATELY 800 LINEAL FEET. ESTIMATE INCLUDES THE INTERSECTION IMPROVEMENTS OF LA MEDIA ROAD AT AIRWAY ROAD; APPROXIMATELY 1,200 LINEAL FEET OF IMPROVEMENTS ON THE NORTH SIDE OF AIRWAY ROAD EAST OF LA MEDIA ROAD; AND APPROXIMATELY 800LF OF IMPROVEMENTS ON AIRWAY ROAD WEST OF LA MEDIA ROAD INCLUDING THE COST TO ADDRESS THE DRAINAGE ISSUE ON AIRWAY ROAD WEST OF LA MEDIA ROAD.

JUSTIFICATION:

THE OTAY MESA COMMUNITY PLAN TRANSPORTATION ELEMENT SUGGESTS THAT AN INTEGRATED TRANSPORTATION NETWORK WILL PROVIDE MOBILITY AND ACCESSIBILITY TO THE RESIDENTS AND BUSINESSES OF THE COMMUNITY. THIS PROJECT IS CONSISTENT WITH THE GOALS OF THE OTAY MESA COMMUNITY PLAN AND THE CITY'S GENERAL PLAN, AND IS NEEDED TO SERVE THE COMMUNITY AT BUILDOUT.

FUNDING ISSUES:

OTHER FUNDING SOURCES:
UNIDENTIFIED: $3,872,000

NOTES:

SHOULD TRAFFIC CONDITIONS AT THE INTERCHANGE OF LA MEDIA ROAD AND SR-905 HINDER GOODS MOVEMENT TO THE DETRIMENT OF REGIONAL ECONOMIC GOALS, ADDITIONAL IMPROVEMENTS MAY BE NECESSARY ON THE SR 905 FREEWAY AND/OR AT THE FREEWAY INTERCHANGE. THESE IMPROVEMENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, ADDITIONAL FREEWAY LANES, AUXILIARY LANES, ADDITIONAL EASTBOUND ON-RAMP, ADDITIONAL ON-RAMP LANES, AND ADDITIONAL INTERSECTION TURN LANES. SUCH IMPROVEMENTS WOULD HAVE TO BE DETERMINED WITH CLOSE COORDINATION WITH CALTRANS AND VETTED THROUGH THEIR PSR PROCESS.

SCHEDULE:

FUNDING FOR DESIGN AND CONSTRUCTION IS ANTICIPATED IN FY 2015-17

CONTACT: TRANSPORTATION & STORM WATER TELEPHONE: (619) 533-3126 EMAIL: N/A

CITY OF SAN DIEGO
FACILITIES FINANCING PROGRAM

TITLE: **LA MEDIA ROAD (Airway Road to Siempre Viva Road)**

PROJECT: OM T-25.4

DEPARTMENT: PUBLIC WORKS
WBS, CIP, or JO #: N/A

COUNCIL DISTRICT: 8
COMMUNITY PLAN: OM

SOURCE	**FUNDING:**	EXPENDED	CONT APPROP	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
FBA-OM	**$3,459,310**					$540,000	$2,919,310	
DIF-OM	**$3,310,000**				$3,310,000			
FBA-OM(w)								
FBA-OM(e)	**$5,193,690**			$5,193,690				
PDIF (w)								
PDIF (e)	**$1,063,000**			$1,063,000				
DEV/SUBD								
OTHER	**$2,574,000**			$2,574,000				
TOTAL	**$15,600,000**	$0	$0	$8,830,690	$3,310,000	$540,000	$2,919,310	$0

SOURCE	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
FBA-OM								
DIF-OM								
FBA-OM(w)								
FBA-OM(e)								
PDIF (w)								
PDIF (e)								
DEV/SUBD								
OTHER								
TOTAL	$0	$0	$0	$0	$0	$0	$0	$0

CONTACT: TRANSPORTATION & STORM WATER TELEPHONE: (619) 533-3126 EMAIL: N/A

CITY OF SAN DIEGO
FACILITIES FINANCING PROGRAM

TITLE: **LA MEDIA ROAD (Airway Road to Siempre Viva Road)**

PROJECT: OM T-25.4

DEPARTMENT: PUBLIC WORKS
CIP or JO #: N/A

COUNCIL DISTRICT: 8
COMMUNITY PLAN: OM

DESCRIPTION:

THIS PROJECT WOULD PROVIDE FOR THE DESIGN AND CONSTRUCTION OF WIDENING THE EXISTING ROAD TO A FIVE-LANE MAJOR ROAD WITH INTERSECTION TURN LANES. IMPROVEMENTS INCLUDE PAVEMENT, CONCRETE MEDIANS, SIDEWALK, CURB AND GUTTER, LANDSCAPING, STORM DRAIN FACILITIES, AND STREET LIGHTING. THIS ROAD SEGMENT IS APPROXIMATELY 2,700 FEET. ESTIMATE INCLUDES THE INTERSECTION IMPROVEMENTS OF LA MEDIA ROAD AT SIEMPRE VIVA ROAD.

JUSTIFICATION:

THE OTAY MESA COMMUNITY PLAN TRANSPORTATION ELEMENT SUGGESTS THAT AN INTEGRATED TRANSPORTATION NETWORK WILL PROVIDE MOBILITY AND ACCESSIBILITY TO THE RESIDENTS AND BUSINESSES OF THE COMMUNITY. THIS PROJECT IS CONSISTENT WITH THE GOALS OF THE OTAY MESA COMMUNITY PLAN AND THE CITY'S GENERAL PLAN, AND IS NEEDED TO SERVE THE COMMUNITY AT BUILDOUT.

FUNDING ISSUES:

OTHER FUNDING SOURCES:
UNIDENTIFIED: $2,574,000

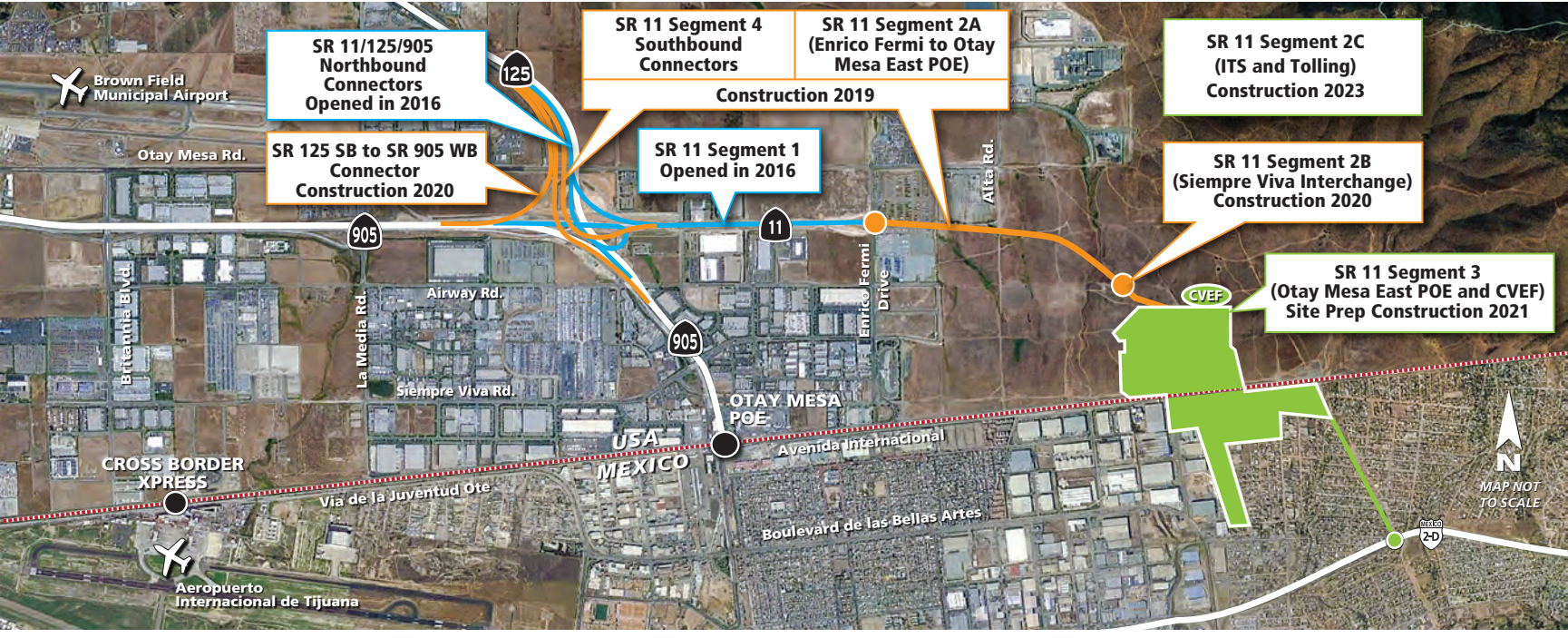
NOTES:

SCHEDULE:

FUNDING FOR DESIGN AND CONSTRUCTION IS ANTICIPATED IN FY 2014-17

CONTACT: TRANSPORTATION & STORM WATER TELEPHONE: (619) 533-3126 EMAIL: N/A

SR 11 OTAY MESA EAST PORT OF ENTRY OVERVIEW



Completed **Upcoming Construction** **Planned**

4825 5/14/2019

April 2018

SR 11/OTAY MESA EAST PORT OF ENTRY

San Diego-Tijuana Region

State Route 11 (SR 11)/Otay Mesa East Port of Entry (POE) aims to provide a safe, secure, and efficient border crossing.

Located in the southwest corner of the U.S.-Mexico border, San Diego County is part of the California-Baja region, one of the most dynamic and innovative mega regions in the world. The total population of this rapidly growing border region exceeds 6 million, and the combined gross regional product exceeds $300 billion.

Much of the region's prosperity and security, along with the nation's, hinges on border crossings that facilitate the legal movement of people and goods that support fair trade, tourism, advanced manufacturing, culture, and education.

The existing border crossings – San Ysidro, Otay Mesa, and Tecate – suffer from chronic congestion and hours-long border wait times that harm economic growth and air quality.

The San Diego Association of Governments (SANDAG) – representing all 18 cities in the region and the county government – and the state of California (Caltrans District 11) are leading a groundbreaking effort to build a new port of entry and connecting highway.

New Border Crossing Project

Vision for economic growth and innovation

The SR 11/Otay Mesa East Port of Entry Project (OME POE) will feature a four-lane tolled road connecting directly to a state-of-the-art Customs & Border Protection Land Port of Entry and a California Highway Patrol Commercial Vehicle Enforcement Facility (CVEF).

By working together, local, state, and federal agencies have a historic opportunity to design, build, and finance border infrastructure that will serve as a system planning approach model for both countries.

Potential innovations include:

- Integrating security, traffic management, and tolling to enhance border operations
- Generating user fees/tolls to help fund construction, reducing the need to use public funds
- Developing a system-wide approach to manage congestion along the California-Baja border
- Engaging the private sector to explore partnership opportunities

Project Objectives

Economy and Expertise

- 2nd most populous county in California, 5th in the United States
- $215 billion economy, ranked 27th as a state and 48th as a country (out of 189)
- Home to $14.4 billion advanced industry research & development cluster

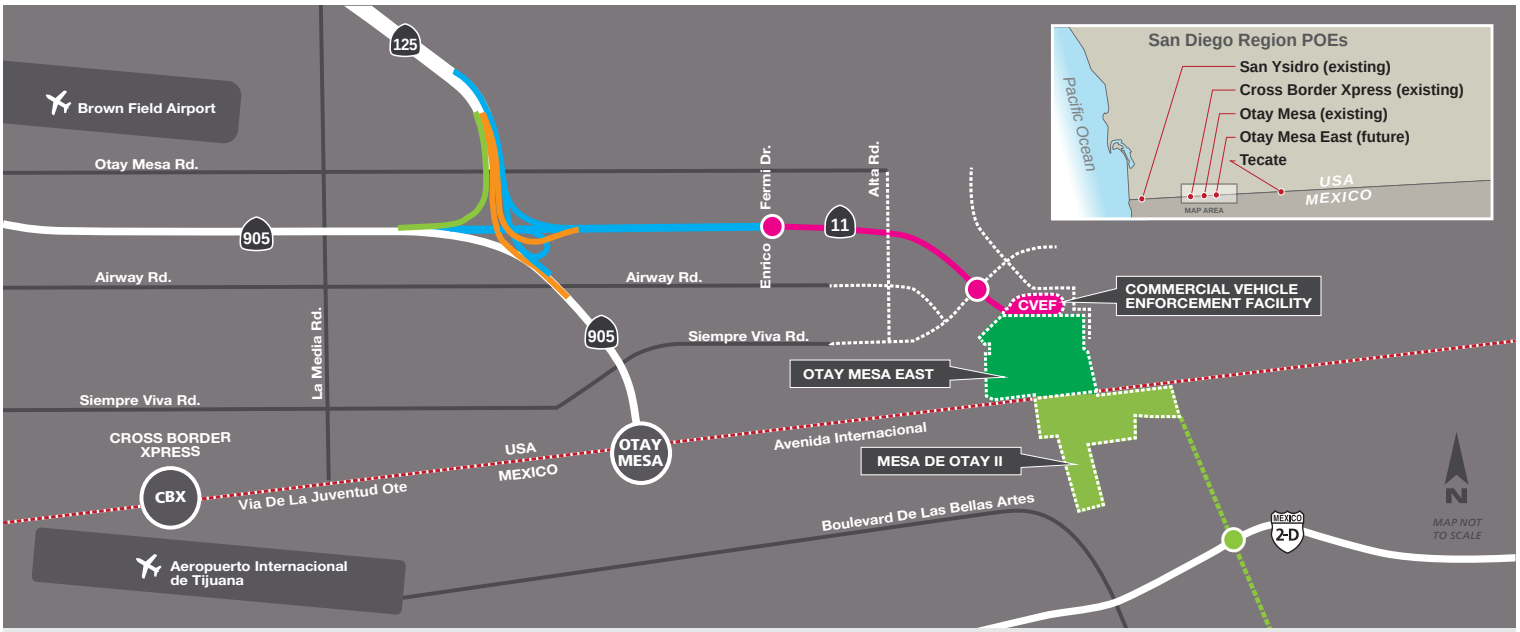
San Diego has a reputation as an innovative region with a wealth of experience in border infrastructure development.

The region is the first in the nation to develop a border master plan, and the first in the nation to conduct a study on the economic impacts of border wait time. The region also is home to a unique, privately-developed pedestrian bridge, Cross Border Xpress (CBX), that connects San Diego to Tijuana's airport.

Approximately $1.3 billion worth of infrastructure projects have been completed, are under construction, or are being planned along the San Diego-Tijuana border.

SR 11/OTAY MESA EAST PORT OF ENTRY

Project Map



- Segment 1: SR 11 and SR 11/SR 905 Connectors (Opened 2016)
- Segment 2A: SR 11 (Construction 2019)
- Segment 2B: Siempre Viva Interchange/CVEF (Construction 2020)
- Segment 2C: ITS and Tolling (Construction 2020)
- Segment 3: Otay Mesa East POE (Construction 2020)
- Northbound Connectors (Opened 2016)
- Southbound Connectors (Construction 2019)
- Future Mesa de Otay II POE and Access Roadway
- Future Southbound Connector (Design 2019)
- Planned Interchanges

Current Status and Next Steps

Significant progress has been made on the SR 11/Otay Mesa East POE Project. The first segment of SR 11 and the three northbound connectors linking SR 11/125/905 opened in 2016. Right of way and construction funding has been secured to complete the SR 11 main lanes, along with some key interchanges and connectors.

Currently, the project team is conducting a binational analysis on which innovations should be incorporated into the new POE. The analysis will help define the configuration of the port facilities and local access roads on both sides of the border.

The project team will continue to advance discussions with federal partners on how to fund the operations and maintenance of the new crossing on the U.S. side.

For more information, visit: **sandag.org/sr11**

SANDAG Caltrans

March 2019

SR 11/OTAY MESA EAST PORT OF ENTRY

New Border Crossing Project

Vision for economic growth and innovation

The State Route 11 (SR 11)/Otay Mesa East Port of Entry Project is a joint venture between the San Diego Association of Governments (SANDAG) and Caltrans, in collaboration with state and federal partners in the U.S. and Mexican governments, to create a 21st century border crossing for the San Diego-Baja California region that will enhance regional mobility and fuel economic growth and binational trade.

The proposed border improvements will provide fast, predictable, and secure border crossings by constructing a four-lane tolled road connecting directly to a state-of-the-art Customs & Border Protection Land Port of Entry (POE) and a California Highway Patrol Commercial Vehicle Enforcement Facility (CVEF).

Additional improvements include:

- New border wait time detection system
- Advanced traveler information to improve route planning
- Optimized POE capacity to decrease congestion and wait times

Project Objectives

Advanced technology and tolling will decrease border wait times, increase efficiency, and drive sustainable mobility solutions.

San Diego-Tijuana Region

Located in the southwest corner of the U.S.-Mexico border, San Diego County is part of the California-Baja region, one of the most dynamic and innovative “mega-regions” in the world. The total population of this rapidly growing border region exceeds 7 million and the combined gross regional product exceeds $300 billion.

Much of the region and our nation’s prosperity and security hinges on border crossings that facilitate the legal movement of people and goods that support binational trade, tourism, manufacturing, and the free exchange of cultures, ideas, and education.The existing border crossings – San Ysidro, Otay Mesa, and Tecate – suffer from chronic congestion and hours-long border wait times that harm economic growth and air quality.

SR 11/OTAY MESA EAST PORT OF ENTRY

San Diego Economy and Expertise

San Diego is known as an innovative region with a wealth of experience in border infrastructure development. The region is the first in the nation to develop a border master plan and conduct a study on the economic impacts of border wait times. Approximately $1.3 billion worth of infrastructure projects have been completed, are under construction, or are being planned along the San Diego-Tijuana border.

The economies of the San Diego-Tijuana mega-region are blended and interdependent, making trade a key driver of the economy and employment. On average, over 70 million people cross the San Diego/Baja California border annually.

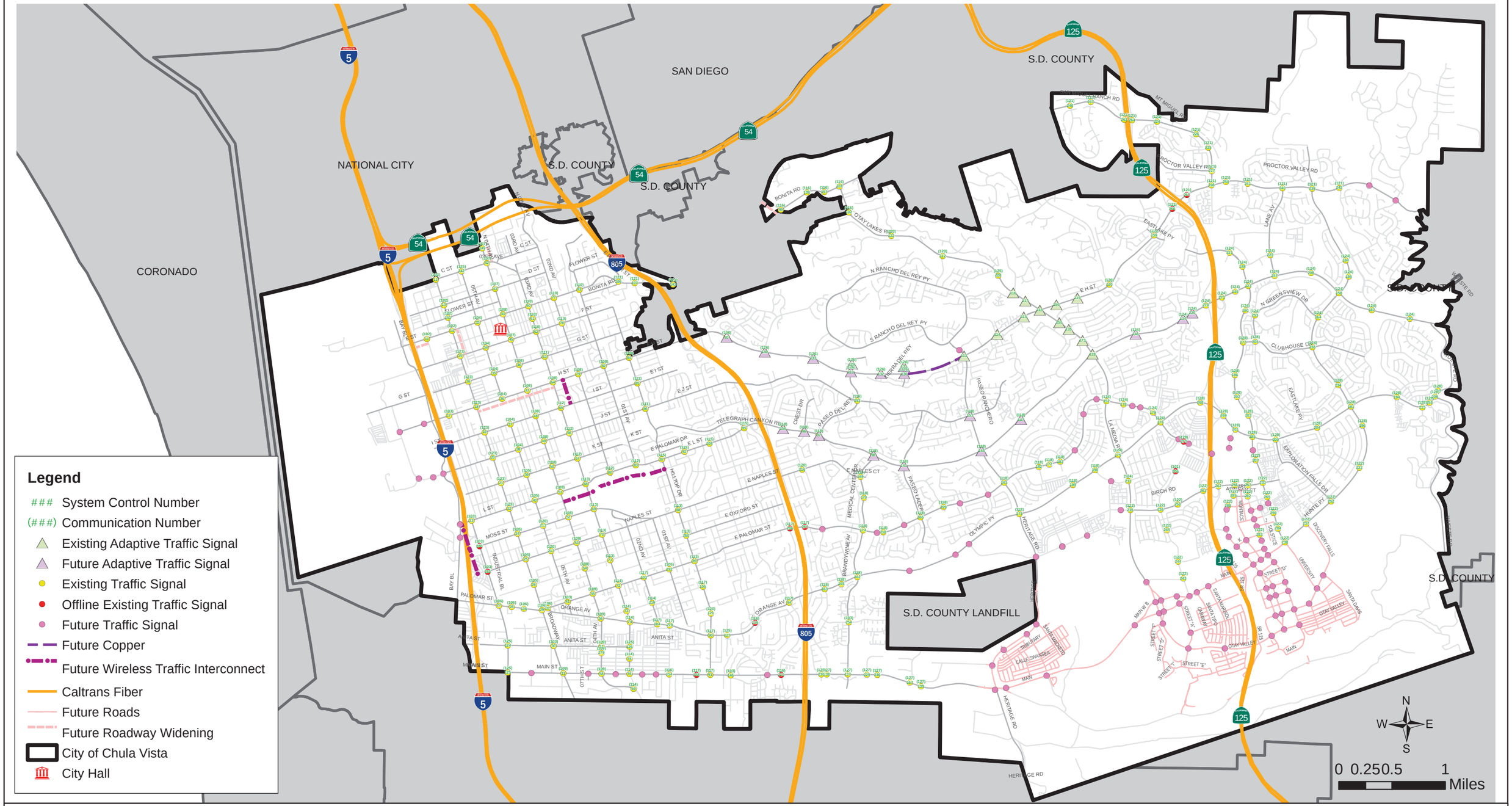
2nd most populous county in California, **5th** in the United States

San Diego's exports to Mexico are valued at almost **$6 billion** per year

Home to **$14.4 billion** advanced industry research & development cluster

Project Map

Document Path: S:\Projects\Chula Vista\0347_Chula Vista Traffic Signal Communications Master Plan\04 Design\GIS\MXD Files\Chula Vista Comm MP Phase Implementation.mxd



CITY OF CHULA VISTA

Figure 3-3 Future Roadway Network

TRAFFIC

Future Traffic Signals

TRAFFIC SIGNAL LOCATION	SOURCE
MAIN ST/HERITAGE RD	VILLAGE 3 SPA
HERITAGE RD/SANTA MACHETO	VILLAGE 3 SPA
HERITAGE RD/SANTA PICACHO	VILLAGE 3 SPA
HERITAGE RD/SANTA MAYA	VILLAGE 3 SPA
HERITAGE RD/ENERGY WAY	VILLAGE 3 SPA
MAIN ST/QUARRY ACCESS RD	VILLAGE 3 SPA
MAIN ST/PRIVATE RD	VILLAGE 3 SPA
MAIN ST/SANTA MARISOL	VILLAGE 8E SPA
OTAY VALLEY RD/SANTA MARISOL	VILLAGE 8E SPA
DISCOVERY FALLS DR/SANTA DAVIS	VILLAGE 10 SPA
DISCOVERY FALLS/UNIVERSITY DR	VILLAGE 10 SPA
DISCOVERY FALLS DR/SANTA JULIARD	VILLAGE 10 SPA
DISCOVERY FALLS DR/STREET 'B'	VILLAGE 10 SPA
OTAY VALLEY RD/MAIN ST	CITY OF CHULA VISTA STAFF
LA MEDIA RD SB/MAIN ST WB	VILLAGE 8W SPA
LA MEDIA RD SB/MAIN ST EB	VILLAGE 8W SPA
LA MEDIA RD NB/MAIN ST EB	VILLAGE 8W SPA
STREET 'A'/MAIN ST WB	VILLAGE 8W SPA
OTAY VALLEY RD/STREET 'C'	VILLAGE 8W SPA
STREET 'A'/MAIN ST EB	VILLAGE 8W SPA
OTAY VALLEY RD/STREET 'A'	VILLAGE 9 SPA, VILLAGE 8W SPA
STREET 'A'/STREET 'B'	VILLAGE 8W SPA
LA MEDIA RD NB/MAIN ST WB	VILLAGE 8W SPA
MILLENIA AVE/HUNTE PKWY	VILLAGE 9 SPA
HUNTE PKWY/ORION AVE	VILLAGE 9 SPA
STREET "C"& STREET "F"/STREET "A"	VILLAGE 9 SPA
STREET "C"/STREET "B"	VILLAGE 9 SPA
STREET "E"/STREET "B"	CITY OF CHULA VISTA STAFF
STREET "E"/STREET "A" NB	VILLAGE 9 SPA
STREET "E"/STREET "A" SB	VILLAGE 9 SPA
CAMPUS BLVD/STREET "B"	VILLAGE 9 SPA
CAMPUS BLVD/STREET "A" NB	VILLAGE 9 SPA
CAMPUS BLVD/STREET "A" SB	VILLAGE 9 SPA
STREET "I"/STREET "A" NB	VILLAGE 9 SPA
STREET "I"/STREET "A" SB	VILLAGE 9 SPA
OTAY VALLEY RD/STREET "A"	VILLAGE 9 SPA
OTAY VALLEY RD/STREET "I"	VILLAGE 9 SPA
E PALOMAR/MEDICAL CENTER CT	CITY OF CHULA VISTA STAFF
E PALOMAR/SANTA OLIVA/SANTA CARINA	CITY OF CHULA VISTA STAFF
E PALOMAR/SANTA MARIA/SANTA SIERRA	CITY OF CHULA VISTA STAFF
E PALOMAR/SANTA ALICIA	CITY OF CHULA VISTA STAFF
E PALOMAR/SANTA FLORA	CITY OF CHULA VISTA STAFF
E PALOMAR/SANTA DELPHINA	CITY OF CHULA VISTA STAFF
E PALOMAR/VISTA SONRISA	CITY OF CHULA VISTA STAFF

Option A was the configuration utilized in the TIA analysis is based on the fact that the other SR-125 interchanges in the vicinity, such as Birch Road, Olympic Parkway, and Otay Lakes Road, all have the identical layout.

The TIA determined that ramp intersections at the SR-125 SB Ramps / Main Street and SR-125 NB Ramps / Main Street would operate at acceptable LOS D or better under Year 2030 conditions under all three options, with the "full Interchange with partial cloverleaf" (Option A) providing the best traffic operations in terms of queue length, average delay and levels of service.

D. Equivalent Dwelling Units Thresholds

The off-site roadway and intersection improvements as discussed in CHEN+RYAN TIA are needed primarily based on traffic generation and are associated with each of the mitigation measures identified from the Year 2015, 2020, 2025, and 2030 analyses.

The C+R TIA provides details on how the EDU triggers were derived.

Appendix B of the Chen+Ryan TIA documents how EDU triggers are determined for each of the recommended mitigation measures.

Table C.9 summarizes the required mitigation measures and their associated EDU triggers.

Table C.9
Village 3 North
EDU Triggers To Recommended Mitigation Measures

Location	Mitigation Measure	Analysis Year	EDU Trigger
Intersection			
11. I-805 SB Ramps / Olympic Pkway	Construction of Heritage Road	2020	956th EDU of V3N
12. I-805 NB Ramps / Olympic Pkway	Construction of Heritage Road	2020	956th EDU of V3N
14. Brandywine Ave. / Olympic Pkwy	Construction of Heritage Road	2020	956th EDU of V3N
15. Heritage Road / Olympic Parkway	Payment towards TDIF (for the construction of Main St from Heritage Rd to La Media Rd, including construction of Main St Bridge) [1]	2025	4,737th EDU of V3N + V8W + V10
17. La Media Road / Olympic Parkway	Payment towards TDIF (for the construction of Main St from Heritage Rd to La Media Rd, including construction of Main St Bridge) [1]	2025	4,737th EDU of V3N + V8W + V10
39. Heritage Road / Main Street	Signalization	2020	751st EDU of V3N
Roadway Segment			
Orange Avenue between Melrose Avenue and I-805 SB Ramps	Construction of Heritage Road	2020	956th EDU of V3N
Olympic Parkway between I-805 SB Ramps and I-805 NB Ramps	Construction of Heritage Road	2020	956th EDU of V3N

Heritage Road, between Olympic Parkway and Main Street, as a Six-Lane Prime Arterial.

TCA-5 Heritage Road / Main Street (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 751st EDU in Village 3 North, the project applicant shall signalize Heritage Road / Main Street intersection.

TCA-6 La Media Road (SB) / Main Street (WB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (SB) /Main Street (WB) intersection.

TCA-7 La Media Road (NB) / Main Street (WB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (NB) /Main Street (WB) intersection.

TCA-8 La Media Road (SB) / Main Street (EB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (SB) /Main Street (EB) intersection.

TCA-9 La Media Road (NB) / Main Street (EB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (NB) / Main Street (EB) intersection.

TCA-10 Magdalena Avenue / Main Street (one-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 1,693rd EDU in Village Eight East, the project applicant shall signalize the Magdalena Avenue / Main Street intersection.

TCA-11 The year 2020 scenario assumes the following intersection and roadway *improvements* are in place:

- Heritage Road, south of Main Street to the Chula Vista city limit as a 6-lane Prime Arterial.
- Otay Lakes Road between H Street and Telegraph Canyon Road as a 6-lane Prime Arterial.
- Quarry Driveway (Int #65) @ Main Street as an all-way stop controlled intersection.

If the project equivalent dwelling unit of 4,070th EDU is exceeded prior to these improvements being constructed and open to traffic, then one of the following steps shall be taken each to the satisfaction of the City Engineer:

i. Development in Village 3 and the Portion of Village 4 and Village Eight 8 shall stop until those assumed future roadways are constructed by others as presently planned; or

ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. Because a number of factors, including changes to the tolling structure at SR-125, may affect future traffic patterns in Otay Ranch, the applicant shall submit to the City additional traffic analysis of the roadway network and levels of service at that time to determine: (i) if such improvements in fact are necessary; and (ii) the scope and timing of additional circulation improvements, if any; The City's determination of

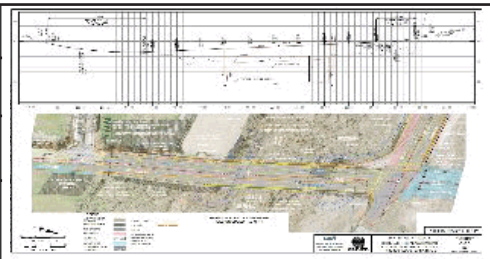
City of Chula Vista

2018/19-2022/23 Capital Improvement Program

Project Description Report

Project Name: Heritage Road Bridge Improvements
Project No: STM0386

Project Location:	Heritage Road from Entertainment Circle North(Amphitheater) to Main Street intersection crossing the Otay River		
Department Responsible:	Engineering		
Project Intents:	Capacity		
Project Description:	This project is for completing Heritage Road bridge improvements. Phase II will complete environmental clearance, compile construction plans, and replace existing bridge.		
Project Information:	Project is funded through the Highway Bridge Program and TDIF. This project is linked to STM-364.; MPOID CHV69		
Justification:	The existing bridge was constructed as an interim timber deck bridge in 1993 and does not accommodate existing peak traffic, pedestrians, or a 100 year storm event. The General Plan indicates that Heritage Road is planned as a six-lane major arterial between Olympic Parkway to the boundary with the City of San Diego. As the Eastern Territories and San Diego's Otay Mesa area develop, there will be a need for a wide and realigned bridge to accommodate projected traffic and a 100-year storm event. This project supports Strong and Secure Neighborhoods by ensuring sustainable and well maintained infrastructure.		
Total Estimated Cost:	$3,895,134		
Estimated Operation and Maintenance Cost:	$0	Project Type:	Major Streets



Source Of Funding

Fund No	Fund Name	Previous	2018/19	2019/20	2020/21	2021/22	2022/23	Future
73612	Highway Bridge Program	$2,992,314	$185,913	$0	$0	$0	$0	$0
59110	Transportation Development	$342,820	$374,087	$0	$0	$0	$0	$0

City of Chula vista
Capital Improvement Program
Active Projects

Note: Active projects are those that have construction schedule posted in CIP Ace.

CIP No	Project Name	ProjectDescription	Estimated Completion
STL0418	Bonita Road and Allen School Lane Intersection Improvements	Installation of missing ADA (Americans with Disability Act) ramps, upgrade of existing ADA ramps, and modification of existing traffic signal equipment, roadway striping and pavement legends.	Fall 2018
STL0420	Palomar Street and Orange Avenue Sidewalk Improvements	Installation of missing curb, gutter and sidewalk improvements along the south side of Palomar Street between Fifth Avenue and Orange Avenue. Installation of missing curb, gutter, and sidewalk improvements along the north side of Orange Avenue between Fifth Avenue and Palomar Street. Traffic signal upgrades at intersection of Palomar Street/Orange Avenue.	Summer 2018
STL0423	Pavement Minor Rehabilitation FY2017/2018	Pavement maintenance and rehabilitation includes slurry, chip and other types of seals based on recommendations of the City's Pavement Management System.	Spring 2019
STL0427	Street Pavement Rehabilitation (Measure P)	Pavement rehabilitation on various streets based on recommendations from the City's Pavement Management System for streets with pavement condition index (PCI) ranging from 0 to 25.	Summer 2018
STL0428	Sidewalk Replacement Citywide (Measure P)	Replace sidewalk damaged at various locations based on recommendations from the Pedestrian Connectivity Plan.	Fall 2018
STL0429	Rancho Del Rey Pavement Rehabilitation	Routine maintenance and rehabilitation of street asphalt.	Winter 2018
STL0386	Heritage Road Bridge Improvements	This project is for completing Heritage Road bridge improvements. Phase II will complete environmental clearance, compile construction plans, and replace existing bridge.	Spring 2021
STL0392	Class 2 Bike Lanes on Broadway	Construction of a Class 2 Bike Lanes includes removal and replacement of existing traffic signs and striping; installation of bike racks; construction of bus pads; updating traffic signal indications and detection for vehicles and bicycles; and applying a pavement slurry seal. Other work includes traffic control during construction.	Winter 2019
STL0396	RMRA Major Pavement Rehabilitation Phase II FY2018-19	Project includes street overlays and street reconstruction in various streets in the City. The major rehabilitation treatments are based on the recommendations of the City's Pavement Management System. Project is funded by the Road Maintena nce and Rehabilitation Account (RMRA).	Summer 2019
STM0384	Bike Lane Improvements on Broadway -Phase I	Construct a Class 2 (bike lane) along Broadway from C Street to Main Street. Approximate total length 20,460 ft (3.875 MI). Implementation of Phase I on Broadway from C Street to G Street.	Winter 2019
STM0388	Main Street Widening FY2015/16	Main Street from Nirvana Aven ue to Heritage Road/Main Street; widen south side to a six lane major.	Spring 2020
STM0389	Heritage Road Widening FY2015/16	Heritage Road from Entertainm ent Circle North to the southerly City Boundary; widen to 6-lane prime arterial.	Spring 2020
STM0390	Major Pavement Rehabilitation FY 2016/17	This project involves work on existing City streets that require major rehabilitation treatments based on the recommendations of the City's Pavement Management System.	Fall 2017
STM0393	Major Pavement Rehabilitation FY2017/18	Project includes pavement treatmen ts such as overlays and reconstructions.	Fall 2018
STM0395	RMRA Major Pavement Rehabilitation FY2017-18	Project includes street overlays and street reconstruction on various streets in the City. The major rehabilitation treatments are based on the recommendations of the City's Pavement Management System.	Fall 2018

Appendix H

Horizon Year 2035 Post-Processing Worksheets

AM **#4** N/S Street: La Media Rd E/W Street: Airway Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**0**	NB	135	19%	NB	256	**0**	Left	**296**	NB	296	0		**0**	**284**	28	28
13,331	Thru	**0**	SB	576	81%	SB	1092	**0**	Thru	**1092**	SB	1092	0		**0**	**1154**	62	115
13331	Right	**0**	Sum	**711**		**Enter**	**25267**	**0**	Right		Sum	**1387**	0		**0**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**284**	NB	0	0%	NB	0	**538**	Left	**0**	NB	0	312		**538**	**0**	0	0
5,209	Thru	**244**	SB	278	100%	SB	527	**462**	Thru	**568**	SB	568	268		**462**	**568**	41	57
5213	Right	**48**	Sum	**278**		**Enter**	**9873**	**91**	Right		Sum	**568**	53	**+62**	**153**			
	Eastbound	**E. of**	**La Media Rd**						**Eastbound**		**E of**	**La Media Rd**						
	Left	**9**	EB	325	63%	EB	680	**32**	Left	**685**	EB	685	10		**32**	**685**	5	68
8,513	Thru	**41**	WB	195	38%	WB	408	**146**	Thru	**408**	WB	408	45		**146**	**466**	58	47
8513	Right	**23**	Sum	**520**		**Enter**	**17801**	**82**	Right		Sum	**1092**	25		**82**			
	Westbound	**W.of**	**La Media Rd**						**Westbound**		**W of**	**La Media Rd**						
	Left	**11**	EB	73	41%	EB	261	**23**	Left	**261**	EB	261	12		**23**	**261**	0	26
3,183	Thru	**58**	WB	106	59%	WB	379	**121**	Thru	**212**	WB	212	64	**+70**	**191**	**344**	-34	34
3175	Right	**126**	Sum	**179**		**Enter**	**11368**	**263**	Right		Sum	**473**	139	**-12**	**251**			

159.2134

PM N/S Street: La Media Rd E/W Street: Airway Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**0**	NB	381	52%	NB	722	**0**	Left	**853**	NB	853	0		**0**	**802**	80	80
13,331	Thru	**0**	SB	357	48%	SB	677	**0**	Thru	**677**	SB	677	0		**0**	**692**	15	69
	Right	**0**	Sum	**738**		**Enter**	**25267**	**0**	Right		Sum	**1530**	0		**0**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**173**	NB	0	0%	NB	0	**328**	Left	**0**	NB	0	190	**-15**	**313**	**0**	0	0
5,209	Thru	**147**	SB	203	100%	SB	385	**279**	Thru	**448**	SB	448	162	**-20**	**259**	**428**	43	43
	Right	**37**	Sum	**203**		**Enter**	**9873**	**70**	Right		Sum	**448**	41	**+50**	**120**			
	Eastbound	**E. of**	**La Media Rd**						**Eastbound**		**E of**	**La Media Rd**						
	Left	**38**	EB	244	36%	EB	510	**136**	Left	**581**	EB	581	42	**-10**	**126**	**566**	56	57
8,513	Thru	**71**	WB	437	64%	WB	914	**254**	Thru	**914**	WB	914	78		**254**	**958**	44	96
	Right	**35**	Sum	**681**		**Enter**	**17801**	**125**	Right		Sum	**1495**	39		**125**			
	Westbound	**W.of**	**La Media Rd**						**Westbound**		**W of**	**La Media Rd**						
	Left	**21**	EB	144	57%	EB	514	**44**	Left	**514**	EB	514	23		**44**	**504**	-10	50
3,183	Thru	**73**	WB	110	43%	WB	393	**153**	Thru	**223**	WB	223	80	**+85**	**238**	**358**	-35	36
	Right	**343**	Sum	**254**		**Enter**	**11368**	**717**	Right		Sum	**737**	377	**-41**	**676**			

192.7755

AM **#5** N/S Street: La Media Rd E/W Street: Avenida de la Fuente AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Avenida de la Fuente**		**%**				**Northbound**		**N of**	Avenida de la Fuente						
	Left	**0**	NB	0	0%	NB	0	**0**	Left	**0**	NB	0	0		**0**	**0**	0	0
5,209	Thru	**0**	SB	251	100%	SB	476	**0**	Thru	**476**	SB	476	0		**0**	**476**	0	48
5196	Right	**0**	Sum	**251**		**Enter**	**9873**	**0**	Right		Sum	**476**	0		**0**			
	Southbound	**S. of**	**Avenida de la Fuente**						**Southbound**		**S of**	Avenida de la Fuente						
	Left	**104**	NB	0	0%	NB	0	**197**	Left	**0**	NB	0	114		**197**	**0**	0	0
4,264	Thru	**147**	SB	206	100%	SB	390	**279**	Thru	**390**	SB	390	162		**279**	**390**	0	39
4264	Right	**0**	Sum	**206**		**Enter**	**8082**	**0**	Right		Sum	**390**	0		**0**			
	Eastbound	**E. of**	**La Media Rd**						**Eastbound**		**E of**	La Media Rd						
	Left	**0**	EB	104	64%	EB	197	**0**	Left	**197**	EB	197	0		**0**	**197**	0	20
2,038	Thru	**0**	WB	59	36%	WB	112	**0**	Thru	**112**	WB	112	0		**0**	**112**	0	11
2038	Right	**0**	Sum	**163**		**Enter**	**3863**	**0**	Right		Sum	**309**	0		**0**			
	Westbound	**W.of**	**La Media Rd**						**Westbound**		**W of**	La Media Rd						
	Left	**59**	EB	0	0%	EB	0	**112**	Left	**0**	EB	0	65		**112**	**0**	0	0
0	Thru	**0**	WB	0	0%	WB	0	**0**	Thru	**0**	WB	0	0		**0**	**0**	0	0
0	Right	**0**	Sum	**0**		**Enter**	**0**	**0**	Right		Sum	**0**	0		**0**			

-0.01385

PM N/S Street: La Media Rd E/W Street: Avenida de la Fuente PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Avenida de la Fuente**		**%**				**Northbound**		**N of**	Avenida de la Fuente						
	Left	**0**	NB	0	0%	NB	0	**0**	Left	**0**	NB	0	0		**0**	**0**	0	0
5,209	Thru	**0**	SB	182	100%	SB	345	**0**	Thru	**345**	SB	345	0		**0**	**345**	0	34
	Right	**0**	Sum	**182**		**Enter**	**9873**	**0**	Right		Sum	**345**	0		**0**			
	Southbound	**S. of**	**Avenida de la Fuente**						**Southbound**		**S of**	Avenida de la Fuente						
	Left	**64**	NB	0	0%	NB	0	**121**	Left	**0**	NB	0	70		**121**	**0**	0	0
4,264	Thru	**118**	SB	197	100%	SB	373	**224**	Thru	**373**	SB	373	130		**224**	**373**	0	37
	Right	**0**	Sum	**197**		**Enter**	**8082**	**0**	Right		Sum	**373**	0		**0**			
	Eastbound	**E. of**	**La Media Rd**						**Eastbound**		**E of**	La Media Rd						
	Left	**0**	EB	64	45%	EB	121	**0**	Left	**121**	EB	121	0		**0**	**121**	0	12
2,038	Thru	**0**	WB	79	55%	WB	150	**0**	Thru	**150**	WB	150	0		**0**	**150**	0	15
	Right	**0**	Sum	**143**		**Enter**	**3863**	**0**	Right		Sum	**271**	0		**0**			
	Westbound	**W.of**	**La Media Rd**						**Westbound**		**W of**	La Media Rd						
	Left	**79**	EB	0	0%	EB	0	**150**	Left	**0**	EB	0	87		**150**	**0**	0	0
0	Thru	**0**	WB	0	0%	WB	0	**0**	Thru	**0**	WB	0	0		**0**	**0**	0	0
	Right	**0**	Sum	**0**		**Enter**	**0**	**0**	Right		Sum	**0**	0		**0**			

0.020269

AM **#6** N/S Street: La Media Rd E/W Street: Siempre Viva Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**0**	NB	0	0%	NB	0	**0** Left	**0**	NB	0	0		**0**	**0**	0	0
4,264	Thru	**0**	SB	199	100%	SB	377	**0** Thru	**377**	SB	377	0		**0**	**379**	2	38
4244	Right	**0**	Sum	**199**		**Enter**	**8082**	**0** Right		Sum	**377**	0		**0**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**114**	NB	0	0%	NB	0	**216** Left	**0**	NB	0	125	**+5**	**221**	**0**	0	0
2,112	Thru	**81**	SB	103	100%	SB	188	**154** Thru	**191**	SB	191	89		**154**	**191**	3	19
2112	Right	**4**	Sum	**103**		**Enter**	**3863**	**8** Right		Sum	**191**	4	**-3**	**5**			
	Eastbound	**E. of**	**La Media Rd**					**Eastbound**		**E of**	La Media Rd						
	Left	**0**	EB	153	70%	EB	290	**0** Left	**259**	EB	259	0		**0**	**264**	-26	26
3,711	Thru	**39**	WB	67	30%	WB	127	**43** Thru	**127**	WB	127	43		**43**	**94**	-33	9
3711	Right	**5**	Sum	**220**		**Enter**	**7034**	**6** Right		Sum	**386**	6		**6**			
	Westbound	**W.of**	**La Media Rd**					**Westbound**		**W of**	La Media Rd						
	Left	**17**	EB	44	45%	EB	48	**32** Left	**48**	EB	48	19		**32**	**48**	0	5
2,030	Thru	**50**	WB	54	55%	WB	59	**95** Thru	**102**	WB	102	55	**-33**	**62**	**66**	7	7
2030	Right	**0**	Sum	**98**		**Enter**	**2232**	**0** Right		Sum	**151**	0		**0**			

-47.2841

PM N/S Street: La Media Rd E/W Street: Siempre Viva Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**0**	NB	0	0%	NB	0	**0** Left	**0**	NB	0	0		**0**	**0**	0	0
4,264	Thru	**0**	SB	207	100%	SB	392	**0** Thru	**392**	SB	392	0		**0**	**401**	9	40
	Right	**0**	Sum	**207**		**Enter**	**8082**	**0** Right		Sum	**392**	0		**0**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**75**	NB	0	0%	NB	0	**142** Left	**0**	NB	0	83	**+10**	**152**	**0**	0	0
2,112	Thru	**130**	SB	199	100%	SB	364	**246** Thru	**353**	SB	353	143		**246**	**353**	-11	35
	Right	**2**	Sum	**199**		**Enter**	**3863**	**4** Right		Sum	**353**	2	**-1**	**3**			
	Eastbound	**E. of**	**La Media Rd**					**Eastbound**		**E of**	La Media Rd						
	Left	**0**	EB	112	62%	EB	212	**0** Left	**183**	EB	183	0		**0**	**193**	-19	19
3,711	Thru	**37**	WB	69	38%	WB	131	**41** Thru	**131**	WB	131	41		**41**	**111**	-20	11
	Right	**30**	Sum	**181**		**Enter**	**7034**	**33** Right		Sum	**314**	33		**33**			
	Westbound	**W.of**	**La Media Rd**					**Westbound**		**W of**	La Media Rd						
	Left	**39**	EB	67	68%	EB	74	**74** Left	**74**	EB	74	43		**74**	**74**	0	7
2,030	Thru	**30**	WB	32	32%	WB	35	**57** Thru	**61**	WB	61	33	**-20**	**37**	**40**	4	4
	Right	**0**	Sum	**99**		**Enter**	**2232**	**0** Right		Sum	**134**	0		**0**			

-36.7382

AM **#9** N/S Street: SR-905 NB Ramps E/W Street: Siempre Viva Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**214**	NB	517	100%	NB	790	**327** Left	**790**	NB	790	235		**327**	**790**	0	79
15,898	Thru	**0**	SB	0	0%	SB	0	**0** Thru	**0**	SB	0	0		**0**	**0**	0	0
15898	Right	**348**	Sum	**517**		**Enter**	**24285**	**532** Right		Sum	**790**	383		**532**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**0**	NB	562	100%	NB	858	**0** Left	**858**	NB	858	0		**0**	**858**	0	86
4,266	Thru	**0**	SB	0	0%	SB	0	**0** Thru	**0**	SB	0	0		**0**	**0**	0	0
4266	Right	**0**	Sum	**562**		**Enter**	**6516**	**0** Right		Sum	**858**	0		**0**			
	Eastbound	**E. of**	**SR-905 NB Ramps**					**Eastbound**		**E of**	SR-905 NB Ramps						
	Left	**115**	EB	1032	60%	EB	1576	**176** Left	**1576**	EB	1576	127		**176**	**1576**	0	158
27,666	Thru	**684**	WB	688	40%	WB	1051	**1045** Thru	**1051**	WB	1051	752		**1045**	**1051**	0	105
27658	Right	**0**	Sum	**1720**		**Enter**	**42260**	**0** Right		Sum	**2627**	0		**0**			
	Westbound	**W.of**	**SR-905 NB Ramps**					**Westbound**		**W of**	SR-905 NB Ramps						
	Left	**0**	EB	799	62%	EB	1220	**0** Left	**1220**	EB	1220	0		**0**	**1220**	0	122
20,178	Thru	**286**	WB	500	38%	WB	764	**437** Thru	**764**	WB	764	315		**437**	**764**	0	76
20178	Right	**402**	Sum	**1299**		**Enter**	**30822**	**614** Right		Sum	**1984**	442		**614**			

-0.07448

PM N/S Street: SR-905 NB Ramps E/W Street: Siempre Viva Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**62**	NB	1118	100%	NB	1708	**95** Left	**1708**	NB	1708	68		**95**	**1708**	0	171
15,898	Thru	**1**	SB	0	0%	SB	0	**2** Thru	**0**	SB	0	1		**2**	**0**	0	0
	Right	**237**	Sum	**1118**		**Enter**	**24285**	**362** Right		Sum	**1708**	261		**362**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**0**	NB	300	100%	NB	458	**0** Left	**458**	NB	458	0		**0**	**458**	0	46
4,266	Thru	**0**	SB	0	0%	SB	0	**0** Thru	**0**	SB	0	0		**0**	**0**	0	0
	Right	**0**	Sum	**300**		**Enter**	**6516**	**0** Right		Sum	**458**	0		**0**			
	Eastbound	**E. of**	**SR-905 NB Ramps**					**Eastbound**		**E of**	SR-905 NB Ramps						
	Left	**383**	EB	690	35%	EB	1054	**585** Left	**1054**	EB	1054	421		**585**	**1054**	0	105
27,666	Thru	**453**	WB	1255	65%	WB	1917	**692** Thru	**1917**	WB	1917	498		**692**	**1917**	0	192
	Right	**0**	Sum	**1945**		**Enter**	**42260**	**0** Right		Sum	**2971**	0		**0**			
	Westbound	**W.of**	**SR-905 NB Ramps**					**Westbound**		**W of**	SR-905 NB Ramps						
	Left	**0**	EB	836	59%	EB	1277	**0** Left	**1277**	EB	1277	0		**0**	**1277**	0	128
20,178	Thru	**521**	WB	583	41%	WB	891	**796** Thru	**891**	WB	891	573		**796**	**891**	0	89
	Right	**734**	Sum	**1419**		**Enter**	**30822**	**1121** Right		Sum	**2168**	807		**1121**			

-0.08141

AM **#10** N/S Street: SR-905 SB Ramps E/W Street: Siempre Viva Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**0**	NB	0	0%	NB	0	**0** Left	**0**	NB	0	0		**0**	**0**	0	0
0	Thru	**0**	SB	0	0%	SB	0	**0** Thru	**0**	SB	0	0		**0**	**0**	0	0
0	Right	**562**	Sum	**0**		**Enter**	**0**	**972** Right		Sum	**0**	618		**972**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**0**	NB	562	71%	NB	972	**0** Left	**972**	NB	972	0		**0**	**972**	0	97
10,921	Thru	**0**	SB	225	29%	SB	389	**0** Thru	**389**	SB	389	0		**0**	**389**	0	39
10921	Right	**0**	Sum	**787**		**Enter**	**18883**	**0** Right		Sum	**1361**	0		**0**			
	Eastbound	**E. of**	**SR-905 SB Ramps**					**Eastbound**		**E of**	SR-905 SB Ramps						
	Left	**0**	EB	823	50%	EB	1423	**0** Left	**1423**	EB	1423	0		**0**	**1423**	0	142
24,714	Thru	**261**	WB	834	50%	WB	1442	**451** Thru	**1442**	WB	1442	287		**451**	**1442**	0	144
24714	Right	**127**	Sum	**1657**		**Enter**	**42731**	**220** Right		Sum	**2865**	140		**220**			
	Westbound	**W.of**	**SR-905 SB Ramps**					**Westbound**		**W of**	SR-905 SB Ramps						
	Left	**98**	EB	388	35%	EB	671	**169** Left	**671**	EB	671	108		**169**	**671**	0	67
21,700	Thru	**736**	WB	736	65%	WB	1273	**1273** Thru	**1273**	WB	1273	810		**1273**	**1273**	0	127
21700	Right	**0**	Sum	**1124**		**Enter**	**37520**	**0** Right		Sum	**1943**	0		**0**			

0.001324

PM N/S Street: SR-905 SB Ramps E/W Street: Siempre Viva Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**0**	NB	0	0%	NB	0	**0** Left	**0**	NB	0	0		**0**	**0**	0	0
0	Thru	**0**	SB	0	0%	SB	0	**0** Thru	**0**	SB	0	0		**0**	**0**	0	0
	Right	**271**	Sum	**0**		**Enter**	**0**	**469** Right		Sum	**0**	298		**469**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**0**	NB	271	35%	NB	469	**0** Left	**469**	NB	469	0		**0**	**469**	0	47
10,921	Thru	**0**	SB	497	65%	SB	859	**0** Thru	**859**	SB	859	0		**0**	**859**	0	86
	Right	**0**	Sum	**768**		**Enter**	**18883**	**0** Right		Sum	**1328**	0		**0**			
	Eastbound	**E. of**	**SR-905 SB Ramps**					**Eastbound**		**E of**	SR-905 SB Ramps						
	Left	**0**	EB	840	48%	EB	1452	**0** Left	**1452**	EB	1452	0		**0**	**1452**	0	145
24,714	Thru	**569**	WB	898	52%	WB	1553	**984** Thru	**1553**	WB	1553	626		**984**	**1553**	0	155
	Right	**278**	Sum	**1738**		**Enter**	**42731**	**481** Right		Sum	**3005**	306		**481**			
	Westbound	**W.of**	**SR-905 SB Ramps**					**Westbound**		**W of**	SR-905 SB Ramps						
	Left	**219**	EB	847	56%	EB	1465	**379** Left	**1465**	EB	1465	241		**379**	**1465**	0	146
21,700	Thru	**679**	WB	679	44%	WB	1174	**1174** Thru	**1174**	WB	1174	747		**1174**	**1174**	0	117
	Right	**0**	Sum	**1526**		**Enter**	**37520**	**0** Right		Sum	**2638**	0		**0**			

-0.0048

AM **#11** N/S Street: Otay Center Dr E/W Street: Siempre Viva Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**47**	NB	184	42%	NB	251	**64** Left	**326**	NB	326	52		**64**	**276**	25	28
8,234	Thru	**23**	SB	258	58%	SB	352	**31** Thru	**352**	SB	352	25		**31**	**357**	5	36
8234	Right	**134**	Sum	**442**		**Enter**	**11235**	**183** Right		Sum	**678**	147	**+10**	**193**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**127**	NB	204	40%	NB	278	**173** Left	**278**	NB	278	140	**+10**	**183**	**288**	10	29
9,721	Thru	**50**	SB	306	60%	SB	418	**68** Thru	**536**	SB	536	55	**-5**	**63**	**461**	44	46
9721	Right	**81**	Sum	**510**		**Enter**	**13264**	**111** Right		Sum	**815**	89		**111**			
	Eastbound	**E. of**	**Otay Center Dr**					**Eastbound**		**E of**	Otay Center Dr						
	Left	**20**	EB	398	35%	EB	727	**37** Left	**607**	EB	607	22		**37**	**662**	-65	66
19,973	Thru	**137**	WB	732	65%	WB	1338	**251** Thru	**1338**	WB	1338	151	**+35**	**286**	**1223**	-115	122
19973	Right	**26**	Sum	**1130**		**Enter**	**36506**	**48** Right		Sum	**1945**	29	**-5**	**43**			
	Westbound	**W.of**	**Otay Center Dr**					**Westbound**		**W of**	Otay Center Dr						
	Left	**230**	EB	183	27%	EB	336	**420** Left	**336**	EB	336	253	**-65**	**355**	**366**	30	37
11,256	Thru	**361**	WB	489	73%	WB	897	**660** Thru	**834**	WB	834	397		**660**	**834**	-63	83
11261	Right	**141**	Sum	**672**		**Enter**	**20650**	**258** Right		Sum	**1170**	155	**-50**	**208**			

-129.111

PM N/S Street: Otay Center Dr E/W Street: Siempre Viva Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	Siempre Viva Rd						
	Left	**40**	NB	273	44%	NB	373	**55** Left	**477**	NB	477	44		**55**	**412**	40	41
8,234	Thru	**48**	SB	347	56%	SB	473	**65** Thru	**473**	SB	473	53		**65**	**478**	5	48
	Right	**272**	Sum	**620**		**Enter**	**11235**	**371** Right		Sum	**951**	299	**+20**	**391**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	Siempre Viva Rd						
	Left	**185**	NB	360	49%	NB	491	**252** Left	**491**	NB	491	204	**+15**	**267**	**511**	20	51
9,721	Thru	**85**	SB	372	51%	SB	508	**116** Thru	**641**	SB	641	94	**-10**	**106**	**561**	53	56
	Right	**77**	Sum	**732**		**Enter**	**13264**	**105** Right		Sum	**1132**	85		**105**			
	Eastbound	**E. of**	**Otay Center Dr**					**Eastbound**		**E of**	Otay Center Dr						
	Left	**49**	EB	813	54%	EB	1486	**90** Left	**1277**	EB	1277	54	**-15**	**75**	**1352**	-134	135
19,973	Thru	**356**	WB	691	46%	WB	1263	**653** Thru	**1263**	WB	1263	392	**+40**	**693**	**1153**	-110	115
	Right	**49**	Sum	**1504**		**Enter**	**36506**	**90** Right		Sum	**2540**	54	**-10**	**80**			
	Westbound	**W.of**	**Otay Center Dr**					**Westbound**		**W of**	Otay Center Dr						
	Left	**238**	EB	454	54%	EB	833	**435** Left	**833**	EB	833	262	**-60**	**375**	**848**	15	85
11,256	Thru	**277**	WB	394	46%	WB	723	**506** Thru	**666**	WB	666	305		**506**	**666**	-57	67
	Right	**176**	Sum	**848**		**Enter**	**20650**	**322** Right		Sum	**1499**	194	**-50**	**272**			

-168.31

AM **#12** N/S Street: Harvest Rd E/W Street: Airway Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**93**	NB	0	0%	NB	0	**168**	Left	**0**	NB	0	102	**-6**	**162**	**0**	0	0
0	Thru	**0**	SB	0	0%	SB	0	**0**	Thru	**0**	SB	0	0		**0**	**0**	0	0
0	Right	**38**	Sum	**0**		**Enter**	**0**	**69**	Right		Sum	**0**	42		**69**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**0**	NB	131	49%	NB	236	**0**	Left	**236**	NB	236	0		**0**	**230**	-6	23
5,429	Thru	**0**	SB	136	51%	SB	245	**0**	Thru	**279**	SB	279	0		**0**	**279**	34	28
5429	Right	**0**	Sum	**267**		**Enter**	**9795**	**0**	Right		Sum	**516**	0		**0**			
	Eastbound	**E. of**	**Harvest Rd**						**Eastbound**		**E of**	**Harvest Rd**						
	Left	**0**	EB	133	49%	EB	316	**0**	Left	**239**	EB	239	0		**0**	**239**	-77	24
6,121	Thru	**95**	WB	141	51%	WB	335	**170**	Thru	**335**	WB	335	105		**170**	**327**	-8	33
6121	Right	**75**	Sum	**274**		**Enter**	**14538**	**134**	Right		Sum	**574**	83		**134**			
	Westbound	**W.of**	**Harvest Rd**						**Westbound**		**W of**	**Harvest Rd**						
	Left	**61**	EB	170	50%	EB	305	**145**	Left	**305**	EB	305	67		**145**	**305**	0	30
7,025	Thru	**80**	WB	173	50%	WB	310	**190**	Thru	**358**	WB	358	88	**-8**	**182**	**344**	34	34
7029	Right	**0**	Sum	**343**		**Enter**	**12591**	**0**	Right		Sum	**662**	0		**0**			

-23.3976

PM N/S Street: Harvest Rd E/W Street: Airway Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**66**	NB	0	0%	NB	0	**119**	Left	**0**	NB	0	73	**-10**	**109**	**0**	0	0
0	Thru	**0**	SB	0	0%	SB	0	**0**	Thru	**0**	SB	0	0		**0**	**0**	0	0
	Right	**50**	Sum	**0**		**Enter**	**0**	**90**	Right		Sum	**0**	55	**+15**	**105**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**0**	NB	116	33%	NB	209	**0**	Left	**209**	NB	209	0		**0**	**214**	5	21
5,429	Thru	**0**	SB	237	67%	SB	428	**0**	Thru	**481**	SB	481	0		**0**	**475**	48	48
	Right	**0**	Sum	**353**		**Enter**	**9795**	**0**	Right		Sum	**691**	0		**0**			
	Eastbound	**E. of**	**Harvest Rd**						**Eastbound**		**E of**	**Harvest Rd**						
	Left	**0**	EB	153	38%	EB	363	**0**	Left	**275**	EB	275	0		**0**	**335**	-29	33
6,121	Thru	**103**	WB	245	62%	WB	582	**185**	Thru	**582**	WB	582	113	**+45**	**230**	**547**	-35	55
	Right	**140**	Sum	**398**		**Enter**	**14538**	**251**	Right		Sum	**857**	154	**-5**	**246**			
	Westbound	**W.of**	**Harvest Rd**						**Westbound**		**W of**	**Harvest Rd**						
	Left	**97**	EB	243	53%	EB	436	**230**	Left	**436**	EB	436	107	**-1**	**229**	**476**	40	48
7,025	Thru	**148**	WB	214	47%	WB	384	**352**	Thru	**471**	WB	471	163	**-34**	**318**	**427**	43	43
	Right	**0**	Sum	**457**		**Enter**	**12591**	**0**	Right		Sum	**906**	0		**0**			

72.17538

AM **#13** N/S Street: Harvest Rd E/W Street: Siempre Viva Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	**Siempre Viva Rd**						
	Left	**29**	NB	32	68%	NB	264	**55**	Left	**62**	NB	62	32		**55**	**242**	-22	24
538	Thru	**0**	SB	15	32%	SB	124	**0**	Thru	**124**	SB	124	0	**+10**	**10**	**144**	20	14
538	Right	**22**	Sum	**47**		**Enter**	**4446**	**42**	Right		Sum	**186**	24		**42**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	**Siempre Viva Rd**						
	Left	**0**	NB	51	33%	NB	97	**0**	Left	**97**	NB	97	0	**+10**	**10**	**107**	10	11
1,850	Thru	**0**	SB	105	67%	SB	199	**0**	Thru	**196**	SB	196	0	**+10**	**10**	**206**	6	21
1850	Right	**15**	Sum	**156**		**Enter**	**3512**	**124**	Right		Sum	**292**	17		**124**			
	Eastbound	**E. of**	**Harvest Rd**					**Eastbound**		**E of**	**Harvest Rd**						
	Left	**28**	EB	202	30%	EB	371	**55**	Left	**395**	EB	395	31	**+85**	**140**	**405**	34	40
11,256	Thru	**180**	WB	468	70%	WB	859	**353**	Thru	**859**	WB	859	198		**353**	**944**	85	94
11257	Right	**23**	Sum	**670**		**Enter**	**20650**	**45**	Right		Sum	**1254**	25		**45**			
	Westbound	**W.of**	**Harvest Rd**					**Westbound**		**W of**	**Harvest Rd**						
	Left	**82**	EB	231	35%	EB	453	**150**	Left	**453**	EB	453	90		**150**	**538**	85	54
11,414	Thru	**382**	WB	426	65%	WB	836	**701**	Thru	**880**	WB	880	420		**701**	**880**	44	88
11414	Right	**4**	Sum	**657**		**Enter**	**22395**	**7**	Right		Sum	**1333**	4	**+85**	**92**			

262.3837

PM N/S Street: Harvest Rd E/W Street: Siempre Viva Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Siempre Viva Rd**		**%**			**Northbound**		**N of**	**Siempre Viva Rd**						
	Left	**30**	NB	27	66%	NB	223	**57**	Left	**53**	NB	53	33		**57**	**203**	-20	20
538	Thru	**0**	SB	14	34%	SB	116	**0**	Thru	**116**	SB	116	0	**+10**	**10**	**128**	12	13
	Right	**22**	Sum	**41**		**Enter**	**4446**	**42**	Right		Sum	**169**	24		**42**			
	Southbound	**S. of**	**Siempre Viva Rd**					**Southbound**		**S of**	**Siempre Viva Rd**						
	Left	**0**	NB	52	37%	NB	99	**0**	Left	**99**	NB	99	0	**+10**	**10**	**109**	10	11
1,850	Thru	**1**	SB	89	63%	SB	169	**8**	Thru	**173**	SB	173	1	**+2**	**10**	**175**	6	18
	Right	**13**	Sum	**141**		**Enter**	**3512**	**107**	Right		Sum	**272**	14		**107**			
	Eastbound	**E. of**	**Harvest Rd**					**Eastbound**		**E of**	**Harvest Rd**						
	Left	**27**	EB	455	53%	EB	835	**53**	Left	**891**	EB	891	30	**+70**	**123**	**901**	67	90
11,256	Thru	**433**	WB	403	47%	WB	739	**850**	Thru	**739**	WB	739	476		**850**	**809**	70	81
	Right	**26**	Sum	**858**		**Enter**	**20650**	**51**	Right		Sum	**1631**	29		**51**			
	Westbound	**W.of**	**Harvest Rd**					**Westbound**		**W of**	**Harvest Rd**						
	Left	**62**	EB	486	56%	EB	954	**114**	Left	**954**	EB	954	68		**114**	**1024**	70	102
11,414	Thru	**341**	WB	384	44%	WB	753	**626**	Thru	**790**	WB	790	375		**626**	**790**	37	79
	Right	**0**	Sum	**870**		**Enter**	**22395**	**0**	Right		Sum	**1744**	0	**+70**	**70**			

251.0353

AM **#15** N/S Street: Britannia Blvd E/W Street: Airway Rd AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**2**	NB	257	28%	NB	573	**5**	Left	**721**	NB	721	2	**+25**	**30**	**636**	63	64
15,841	Thru	**128**	SB	669	72%	SB	1492	**343**	Thru	**1492**	SB	1492	141	**-15**	**328**	**1547**	55	155
15838	Right	**31**	Sum	**926**		**Enter**	**35320**	**83**	Right		Sum	**2212**	34	**+20**	**103**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**310**	NB	161	33%	NB	431	**691**	Left	**431**	NB	431	341	**-215**	**476**	**461**	30	46
8,786	Thru	**288**	SB	323	67%	SB	865	**642**	Thru	**720**	SB	720	317		**642**	**788**	-77	79
8789	Right	**71**	Sum	**484**		**Enter**	**23537**	**158**	Right		Sum	**1152**	78	**+270**	**428**			
	Eastbound	**E. of**	**Britannia Blvd**						**Eastbound**		**E of**	**Britannia Blvd**						
	Left	**22**	EB	351	69%	EB	735	**154**	Left	**844**	EB	844	24	**-50**	**104**	**669**	-66	67
9,590	Thru	**10**	WB	158	31%	WB	331	**70**	Thru	**331**	WB	331	11	**+20**	**90**	**456**	125	46
9590	Right	**1**	Sum	**509**		**Enter**	**20085**	**7**	Right		Sum	**1175**	1	**+3**	**10**			
	Westbound	**W.of**	**Britannia Blvd**						**Westbound**		**W of**	**Britannia Blvd**						
	Left	**34**	EB	33	27%	EB	231	**71**	Left	**231**	EB	231	37	**+65**	**136**	**204**	-27	20
2,870	Thru	**17**	WB	90	73%	WB	629	**36**	Thru	**199**	WB	199	19	**+80**	**116**	**574**	-55	57
2870	Right	**107**	Sum	**123**		**Enter**	**20065**	**224**	Right		Sum	**430**	118	**-20**	**204**			

47.91684

PM N/S Street: Britannia Blvd E/W Street: Airway Rd PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**4**	NB	848	67%	NB	1891	**11**	Left	**2527**	NB	2527	4	**+35**	**46**	**1892**	1	189
15,841	Thru	**354**	SB	410	33%	SB	914	**948**	Thru	**914**	SB	914	389	**-35**	**913**	**974**	60	97
	Right	**37**	Sum	**1258**		**Enter**	**35320**	**99**	Right		Sum	**3441**	41	**+25**	**124**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**213**	NB	395	71%	NB	1058	**475**	Left	**1058**	NB	1058	234	**-140**	**335**	**1083**	25	108
8,786	Thru	**129**	SB	163	29%	SB	437	**288**	Thru	**369**	SB	369	142		**288**	**399**	-38	40
	Right	**68**	Sum	**558**		**Enter**	**23537**	**152**	Right		Sum	**1427**	75	**+200**	**352**			
	Eastbound	**E. of**	**Britannia Blvd**						**Eastbound**		**E of**	**Britannia Blvd**						
	Left	**111**	EB	261	38%	EB	547	**776**	Left	**651**	EB	651	122	**-300**	**476**	**606**	59	61
9,590	Thru	**11**	WB	424	62%	WB	888	**77**	Thru	**888**	WB	888	12	**+70**	**147**	**693**	-195	69
	Right	**2**	Sum	**685**		**Enter**	**20085**	**14**	Right		Sum	**1539**	2	**+25**	**39**			
	Westbound	**W.of**	**Britannia Blvd**						**Westbound**		**W of**	**Britannia Blvd**						
	Left	**32**	EB	124	60%	EB	867	**67**	Left	**867**	EB	867	35	**+5**	**72**	**662**	-205	66
2,870	Thru	**9**	WB	81	40%	WB	566	**19**	Thru	**181**	WB	181	10	**+100**	**119**	**516**	-50	52
	Right	**383**	Sum	**205**		**Enter**	**20065**	**802**	Right		Sum	**1048**	421	**-300**	**502**			

-343.073

AM **#18** N/S Street: Caliente Ave E/W Street: SR-905 WB Ramps AM

Opening Year ADT	Opening Year	AM	Opening Year Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**SR-905 WB Ramps**		**%**				**Northbound**		**N of**	**SR-905 WB Ramps**						
	Left	**379**	NB	1234	52%	NB	1407	**432**	Left	**1407**	NB	1407	417		**432**	**1407**	0	141
27,300	Thru	**1169**	SB	1156	48%	SB	1318	**1333**	Thru	**1318**	SB	1318	1286		**1333**	**1318**	0	132
27300	Right	**0**	Sum	**2390**		**Enter**	**31121**	**0**	Right		Sum	**2724**	0		**0**			
	Southbound	**S. of**	**SR-905 WB Ramps**						**Southbound**		**S of**	**SR-905 WB Ramps**						
	Left	**0**	NB	1548	78%	NB	1765	**0**	Left	**1765**	NB	1765	0		**0**	**1765**	0	176
21,420	Thru	**394**	SB	448	22%	SB	511	**449**	Thru	**511**	SB	511	433		**449**	**511**	0	51
21420	Right	**762**	Sum	**1996**		**Enter**	**24418**	**869**	Right		Sum	**2275**	838		**869**			
	Eastbound	**E. of**	**Caliente Ave**						**Eastbound**		**E of**	**Caliente Ave**						
	Left	**0**	EB	0	0%	EB	0	**0**	Left	**0**	EB	0	0		**0**	**0**	0	0
2,681	Thru	**0**	WB	122	100%	WB	139	**0**	Thru	**139**	WB	139	0		**0**	**139**	0	14
2681	Right	**0**	Sum	**122**		**Enter**	**3056**	**0**	Right		Sum	**139**	0		**0**			
	Westbound	**W.of**	**Caliente Ave**						**Westbound**		**W of**	**Caliente Ave**						
	Left	**54**	EB	0	0%	EB	0	**62**	Left	**0**	EB	0	59		**62**	**0**	0	0
15,664	Thru	**3**	WB	1144	100%	WB	1304	**3**	Thru	**1304**	WB	1304	3		**3**	**1304**	0	130
15664	Right	**65**	Sum	**1144**		**Enter**	**17857**	**74**	Right		Sum	**1304**	72		**74**			

-0.0445

PM N/S Street: Caliente Ave E/W Street: SR-905 WB Ramps PM

Opening Year ADT	Opening Year	AM	Opening Year Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**SR-905 WB Ramps**		**%**				**Northbound**		**N of**	**SR-905 WB Ramps**						
	Left	**386**	NB	1327	49%	NB	1513	**440**	Left	**1513**	NB	1513	425		**440**	**1513**	0	151
27,300	Thru	**1199**	SB	1403	51%	SB	1599	**1367**	Thru	**1599**	SB	1599	1319		**1367**	**1599**	0	160
	Right	**0**	Sum	**2730**		**Enter**	**31121**	**0**	Right		Sum	**3112**	0		**0**			
	Southbound	**S. of**	**SR-905 WB Ramps**						**Southbound**		**S of**	**SR-905 WB Ramps**						
	Left	**0**	NB	1585	74%	NB	1807	**0**	Left	**1807**	NB	1807	0		**0**	**1807**	0	181
21,420	Thru	**458**	SB	557	26%	SB	635	**522**	Thru	**635**	SB	635	504		**522**	**635**	0	63
	Right	**945**	Sum	**2142**		**Enter**	**24418**	**1077**	Right		Sum	**2442**	1040		**1077**			
	Eastbound	**E. of**	**Caliente Ave**						**Eastbound**		**E of**	**Caliente Ave**						
	Left	**0**	EB	0	0%	EB	0	**0**	Left	**0**	EB	0	0		**0**	**0**	0	0
2,681	Thru	**0**	WB	228	100%	WB	260	**0**	Thru	**260**	WB	260	0		**0**	**260**	0	26
	Right	**0**	Sum	**228**		**Enter**	**3056**	**0**	Right		Sum	**260**	0		**0**			
	Westbound	**W.of**	**Caliente Ave**						**Westbound**		**W of**	**Caliente Ave**						
	Left	**99**	EB	0	0%	EB	0	**113**	Left	**0**	EB	0	109		**113**	**0**	0	0
15,664	Thru	**1**	WB	1332	100%	WB	1518	**1**	Thru	**1518**	WB	1518	1		**1**	**1518**	0	152
	Right	**128**	Sum	**1332**		**Enter**	**17857**	**146**	Right		Sum	**1518**	141		**146**			

-0.06961

AM **#19** N/S Street: Caliente Ave E/W Street: SR-905 EB Ramps AM

Opening Year ADT	Opening Year	AM	Opening Year Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**SR-905 EB Ramps**		**%**			**Northbound**		**N of**	**SR-905 EB Ramps**						
	Left	**0**	NB	1530	78%	NB	1737	**0** Left	**2043**	NB	2043	0		**0**	**1923**	186	192
21,510	Thru	**763**	SB	441	22%	SB	501	**1019** Thru	**501**	SB	501	839	**-60**	**959**	**501**	0	50
21510	Right	**111**	Sum	**1971**		**Enter**	**24418**	**148** Right		Sum	**2543**	122		**148**			
	Southbound	**S. of**	**SR-905 EB Ramps**					**Southbound**		**S of**	**SR-905 EB Ramps**						
	Left	**102**	NB	874	54%	NB	1167	**116** Left	**1167**	NB	1167	112		**116**	**1107**	-60	111
16,510	Thru	**339**	SB	756	46%	SB	1009	**385** Thru	**942**	SB	942	373		**385**	**942**	-68	94
16510	Right	**0**	Sum	**1630**		**Enter**	**22042**	**0** Right		Sum	**2108**	0		**0**			
	Eastbound	**E. of**	**Caliente Ave**					**Eastbound**		**E of**	**Caliente Ave**						
	Left	**767**	EB	214	100%	EB	286	**1024** Left	**265**	EB	265	844	**-60**	**964**	**265**	-20	27
1,990	Thru	**1**	WB	0	0%	WB	0	**1** Thru	**0**	WB	0	1		**1**	**0**	0	0
1990	Right	**417**	Sum	**214**		**Enter**	**2657**	**557** Right		Sum	**265**	459		**557**			
	Westbound	**W.of**	**Caliente Ave**					**Westbound**		**W of**	**Caliente Ave**						
	Left	**0**	EB	1185	100%	EB	1582	**0** Left	**1582**	EB	1582	0		**0**	**1522**	-60	152
13,470	Thru	**0**	WB	0	0%	WB	0	**0** Thru	**0**	WB	0	0		**0**	**0**	0	0
13470	Right	**0**	Sum	**1185**		**Enter**	**17984**	**0** Right		Sum	**1582**	0		**0**			

-22.3032

PM N/S Street: Caliente Ave E/W Street: SR-905 EB Ramps PM

Opening Year ADT	Opening Year	AM	Opening Year Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**SR-905 EB Ramps**		**%**			**Northbound**		**N of**	**SR-905 EB Ramps**						
	Left	**0**	NB	1595	74%	NB	1811	**0** Left	**2129**	NB	2129	0		**0**	**2009**	199	201
21,510	Thru	**676**	SB	556	26%	SB	631	**903** Thru	**631**	SB	631	744	**-60**	**843**	**631**	0	63
	Right	**95**	Sum	**2151**		**Enter**	**24418**	**127** Right		Sum	**2761**	105		**127**			
	Southbound	**S. of**	**SR-905 EB Ramps**					**Southbound**		**S of**	**SR-905 EB Ramps**						
	Left	**99**	NB	771	47%	NB	1029	**112** Left	**1029**	NB	1029	109		**112**	**969**	-60	97
16,510	Thru	**457**	SB	880	53%	SB	1175	**519** Thru	**1084**	SB	1084	503		**519**	**1084**	-91	108
	Right	**0**	Sum	**1651**		**Enter**	**22042**	**0** Right		Sum	**2113**	0		**0**			
	Eastbound	**E. of**	**Caliente Ave**					**Eastbound**		**E of**	**Caliente Ave**						
	Left	**919**	EB	199	100%	EB	266	**1227** Left	**246**	EB	246	1011	**-60**	**1167**	**246**	-20	25
1,990	Thru	**5**	WB	0	0%	WB	0	**7** Thru	**0**	WB	0	6		**7**	**0**	0	0
	Right	**423**	Sum	**199**		**Enter**	**2657**	**565** Right		Sum	**246**	465		**565**			
	Westbound	**W.of**	**Caliente Ave**					**Westbound**		**W of**	**Caliente Ave**						
	Left	**0**	EB	1347	100%	EB	1798	**0** Left	**1798**	EB	1798	0		**0**	**1738**	-60	174
13,470	Thru	**0**	WB	0	0%	WB	0	**0** Thru	**0**	WB	0	0		**0**	**0**	0	0
	Right	**0**	Sum	**1347**		**Enter**	**17984**	**0** Right		Sum	**1798**	0		**0**			

-32.2881

AM **#20** N/S Street: Caliente Ave E/W Street: Airway Rd AM

Opening Year ADT	Opening Year	AM	Opening Year Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**17**	NB	480	45%	NB	807	**156**	Left	**1478**	NB	1478	19	**-50**	**106**	**1178**	371	118
12,068	Thru	**85**	SB	596	55%	SB	1003	**780**	Thru	**1003**	SB	1003	94	**-400**	**380**	**918**	-85	92
12068	Right	**1**	Sum	**1076**		**Enter**	**20300**	**9**	Right		Sum	**2481**	1	**+75**	**84**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**12**	NB	103	46%	NB	945	**20**	Left	**945**	NB	945	13	**+100**	**120**	**570**	-375	57
2,210	Thru	**116**	SB	121	54%	SB	1110	**195**	Thru	**237**	SB	237	128	**+50**	**245**	**357**	-753	36
2210	Right	**468**	Sum	**224**		**Enter**	**20284**	**787**	Right		Sum	**1183**	515	**-235**	**552**			
	Eastbound	**E. of**	**Caliente Ave**						**Eastbound**		**E of**	**Caliente Ave**						
	Left	**394**	EB	14	82%	EB	497	**663**	Left	**31**	EB	31	433	**-200**	**463**	**256**	-241	26
449	Thru	**1**	WB	3	18%	WB	107	**2**	Thru	**107**	WB	107	1	**+50**	**52**	**477**	370	48
449	Right	**4**	Sum	**17**		**Enter**	**15946**	**7**	Right		Sum	**138**	4	**+50**	**57**			
	Westbound	**W.of**	**Caliente Ave**						**Westbound**		**W of**	**Caliente Ave**						
	Left	**1**	EB	399	45%	EB	671	**36**	Left	**671**	EB	671	1	**+20**	**56**	**571**	-100	57
9,787	Thru	**1**	WB	486	55%	WB	818	**36**	Thru	**979**	WB	979	1	**+50**	**86**	**744**	-74	74
9787	Right	**1**	Sum	**885**		**Enter**	**16465**	**36**	Right		Sum	**1650**	1	**+300**	**336**			
																	-886.943	

PM N/S Street: Caliente Ave E/W Street: Airway Rd PM

Opening Year ADT	Opening Year	AM	Opening Year Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes		FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Airway Rd**		**%**				**Northbound**		**N of**	**Airway Rd**						
	Left	**6**	NB	539	53%	NB	907	**55**	Left	**2250**	NB	2250	7		**55**	**1005**	98	100
12,068	Thru	**116**	SB	482	47%	SB	811	**1065**	Thru	**811**	SB	811	128	**-770**	**295**	**1086**	275	109
	Right	**1**	Sum	**1021**		**Enter**	**20300**	**9**	Right		Sum	**3060**	1	**+50**	**59**			
	Southbound	**S. of**	**Airway Rd**						**Southbound**		**S of**	**Airway Rd**						
	Left	**18**	NB	123	66%	NB	1129	**30**	Left	**1129**	NB	1129	20	**+200**	**230**	**409**	-720	41
2,210	Thru	**59**	SB	64	34%	SB	587	**99**	Thru	**141**	SB	141	65	**+250**	**349**	**496**	-91	50
	Right	**405**	Sum	**187**		**Enter**	**20284**	**681**	Right		Sum	**1270**	446	**-175**	**506**			
	Eastbound	**E. of**	**Caliente Ave**						**Eastbound**		**E of**	**Caliente Ave**						
	Left	**409**	EB	21	55%	EB	746	**688**	Left	**43**	EB	43	450	**-200**	**488**	**393**	-353	39
449	Thru	**2**	WB	17	45%	WB	604	**3**	Thru	**604**	WB	604	2	**+100**	**103**	**359**	-245	36
	Right	**4**	Sum	**38**		**Enter**	**15946**	**7**	Right		Sum	**646**	4	**+75**	**82**			
	Westbound	**W.of**	**Caliente Ave**						**Westbound**		**W of**	**Caliente Ave**						
	Left	**1**	EB	415	50%	EB	698	**36**	Left	**698**	EB	698	1	**+30**	**66**	**673**	-25	67
9,787	Thru	**2**	WB	413	50%	WB	695	**71**	Thru	**807**	WB	807	2		**71**	**632**	-62	63
	Right	**14**	Sum	**828**		**Enter**	**16465**	**497**	Right		Sum	**1505**	15	**-275**	**222**			
																	-1123.09	

AM **#21** N/S Street: Heritage Rd E/W Street: Main St AM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Main St**		**%**			**Northbound**		**N of**	**Main St**						
	Left	**1**	NB	336	51%	NB	1020	**5**	Left	**9370**	NB	9370	1	**+100**	**105**	**1133**	113	113
8,568	Thru	**311**	SB	321	49%	SB	974	**1430**	Thru	**974**	SB	974	342	**-700**	**730**	**1024**	50	102
8568	Right	**6**	Sum	**657**		**Enter**	**25998**	**28**	Right		Sum	**10344**	7	**+150**	**178**			
	Southbound	**S. of**	**Main St**						**Southbound**		**S of**	**Main St**						
	Left	**31**	NB	318	52%	NB	1462	**94**	Left	**1462**	NB	1462	34	**+125**	**219**	**1012**	-450	101
8,544	Thru	**289**	SB	294	48%	SB	1351	**877**	Thru	**2468**	SB	2468	318	**-200**	**677**	**1498**	146	150
8544	Right	**1**	Sum	**612**		**Enter**	**39276**	**3**	Right		Sum	**3929**	1	**+125**	**128**			
	Eastbound	**E. of**	**Heritage Rd**						**Eastbound**		**E of**	**Heritage Rd**						
	Left	**1**	EB	38	57%	EB	12064	**321**	Left	**442**	EB	442	1	**-137**	**184**	**917**	-11146	92
96	Thru	**1**	WB	29	43%	WB	9207	**321**	Thru	**9207**	WB	9207	1	**+200**	**521**	**1382**	-7825	138
96	Right	**1**	Sum	**67**		**Enter**	**30477**	**321**	Right		Sum	**9649**	1	**-20**	**301**			
	Westbound	**W.of**	**Heritage Rd**						**Westbound**		**W of**	**Heritage Rd**						
	Left	**4**	EB	3	50%	EB	962	**1270**	Left	**962**	EB	962	4	**-750**	**520**	**1005**	43	101
68	Thru	**1**	WB	3	50%	WB	962	**317**	Thru	**325**	WB	325	1	**+325**	**642**	**875**	-87	88
68	Right	**24**	Sum	**6**		**Enter**	**21751**	**7619**	Right		Sum	**1288**	26	**-7,400**	**219**			
																	-19156.4	

PM N/S Street: Heritage Rd E/W Street: Main St PM

Existing ADT	Existing	AM	Existing Link Volumes			Future ADT (2035)		FUTURE Raw Turning Movement Volumes	FUTURE Link Volumes	Verify		Minimum 10% Growth	Volume Adj.	Refined Turning Movement Volumes	Refined Link Volumes	Gap Closure	10% Gap
	Northbound	**N.of**	**Main St**		**%**			**Northbound**		**N of**	**Main St**						
	Left	**1**	NB	389	54%	NB	1180	**5**	Left	**3043**	NB	3043	1	**+200**	**205**	**1308**	128	131
8,568	Thru	**385**	SB	325	46%	SB	986	**1770**	Thru	**986**	SB	986	424	**-900**	**870**	**1061**	75	106
	Right	**1**	Sum	**714**		**Enter**	**25998**	**5**	Right		Sum	**4029**	1	**+300**	**305**			
	Southbound	**S. of**	**Main St**						**Southbound**		**S of**	**Main St**						
	Left	**1**	NB	387	54%	NB	1779	**3**	Left	**1779**	NB	1779	1	**+125**	**128**	**1379**	-400	138
8,544	Thru	**323**	SB	325	46%	SB	1494	**980**	Thru	**1618**	SB	1618	355	**-200**	**780**	**1358**	-136	136
	Right	**1**	Sum	**712**		**Enter**	**39276**	**3**	Right		Sum	**3397**	1	**+150**	**153**			
	Eastbound	**E. of**	**Heritage Rd**						**Eastbound**		**E of**	**Heritage Rd**						
	Left	**1**	EB	3	38%	EB	952	**321**	Left	**328**	EB	328	1	**-35**	**286**	**1053**	101	105
96	Thru	**1**	WB	5	63%	WB	1587	**321**	Thru	**1587**	WB	1587	1	**+300**	**621**	**977**	-610	98
	Right	**1**	Sum	**8**		**Enter**	**30477**	**321**	Right		Sum	**1916**	1	**-50**	**271**			
	Westbound	**W.of**	**Heritage Rd**						**Westbound**		**W of**	**Heritage Rd**						
	Left	**1**	EB	3	50%	EB	962	**317**	Left	**962**	EB	962	1	**-10**	**307**	**1177**	215	118
68	Thru	**1**	WB	3	50%	WB	962	**317**	Thru	**325**	WB	325	1	**+200**	**517**	**875**	-87	88
	Right	**3**	Sum	**6**		**Enter**	**21751**	**952**	Right		Sum	**1288**	3	**-800**	**152**			
																	-714.25	

Appendix I

Excerpts from *Otay Mesa Community Plan Update EIR Transportation Analysis*

TABLE 7-3

Buildout Scenario 3B Without La Media Road Intersection Levels of Service

		Without Mitigation				With Mitigation			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Intersection	CD	LOS	CD	LOS	CD	LOS	CD	LOS
1	Palm Ave. / I-805 SB Ramps	48.9	D	51.3	D	24.8	C	35.7	D
2	Palm Ave. / I-805 NB Ramps	116.1	F	122.6	F	4.6	A	5.5	A
3	Palm Ave. / Dennery Rd.	33.5	C	67.2	E	-	-	-	-
4	Otay Mesa Rd. / Caliente Ave.	263.5	F	146.0	F	205.9	F	87.2	F
5	Caliente Ave. / SR-905 WB Ramps	83.1	F	43.2	(1) D	34.0	(1) C	34.0	(1) C
6	Caliente Ave. / SR-905 EB Ramps	165.7	F	150.5	F	55.0	E	70.2	E
7	Caliente Ave. / Airway Rd.	228.5	F	223.0	F	143.0	F	200.5	F
8	Caliente Ave. / Beyer Blvd.	252.0	F	429.8	F	212.7	F	122.4	F
9	Otay Mesa Rd. / Heritage Rd.	367.5	F	257.4	F	272.0	F	161.2	F
10	Heritage Rd. / SR-905 WB Ramps	69.9	E	81.1	F	15.9	(1) B	28.4	(1) C
11	Heritage Rd. / SR-905 EB Ramps	113.0	F	86.4	F	39.5	(1) D	25.5	(1) C
12	Heritage Rd. / Airway Rd.	162.7	F	402.8	F	144.5	F	88.3	F
13	Heritage Rd. / Siempre Viva Rd.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	Otay Mesa Rd. / Cactus Rd.	437.9	F	290.5	F	139.6	F	199.7	F
15	Airway Rd. / Cactus Rd.	361.5	F	437.7	F	188.6	F	306.2	F
16	Siempre Viva Rd. / Cactus Rd.	48.7	D	127.7	F	47.6	D	117.3	F
17	Otay Mesa Rd. / Britannia Blvd.	108.5	F	117.2	F	63.1	E	47.5	D
18	Britannia Blvd. / SR-905 WB Ramps	240.5	F	577.4	F	65.0	E	547.1	F
19	Britannia Blvd. / SR-905 EB Ramps	353.3	F	235.1	F	305.9	F	67.1	E
20	Britannia Blvd. / Airway Rd.	618.2	F	615.8	F	184.9	F	241.1	F
21	Siempre Viva Rd. / Britannia Blvd.	363.3	F	362.8	F	177.5	F	143.2	F
22	Otay Mesa Rd. / La Media Rd.	457.1	F	443.8	F	131.9	F	126.2	F

Legend

CD = Control Delay

LOS = Level of Service

(1) = Vehicle queues may extend through this intersection from an upstream intersection so that the peak hour level of service would be degraded due to vehicles blocking this intersection.

F = Shading indicates a significant impact.

TABLE 7-3 (Continued)

Buildout Scenario 3B Without La Media Road Intersection Levels of Service

		Without Mitigation				With Mitigation			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Intersection	CD	LOS	CD	LOS	CD	LOS	CD	LOS
23	La Media Rd. / SR-905 WB Ramps	266.1	F	227.2	F	129.8	F	112.7	F
24	La Media Rd. / SR-905 EB Ramps	234.7	F	84.7	F	162.2	F	48.5	(1) D
25	La Media Rd. / Airway Rd.	496.6	F	507.9	F	182.5	F	212.5	F
26	La Media Rd. / Siempre Viva Rd.	244.0	F	112.1	F	81.6	F	37.1	D
27	La Media Rd. / Lone Star Rd.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28	Lone Star Rd. / SR-125 SB Off Ramp	63.6	E	96.8	F	-	-	-	-
29	Lone Star Rd. / SR-125 NB On Ramp	2.1	(1) A	147.8	F	-	-	-	-
30	Lone Star Rd. / Piper Ranch Rd.	8.1	A	9.3	(1) A	-	-	-	-
31	Otay Mesa Rd. / Piper Ranch Rd.	129.2	F	166.2	F	44.6	D	47.5	D
32	Otay Mesa Rd. / SR-125 SB Off Ramp	82.9	F	13.0	(1) B	30.4	C	11.0	(1) B
33	Otay Mesa Rd. / SR-125 NB On Ramp	4.8	A	22.0	C	-	-	-	-
34	Otay Mesa Rd. / Harvest Rd.	37.9	D	133.7	F	11.8	B	38.9	(1) D
35	Siempre Viva Rd. / Otay Center Dr.	276.0	F	213.0	F	83.0	F	85.4	F
36	Siempre Viva Rd. / SR-905 SB to EB Ramp	29.0	(1) C	146.2	F	-	-	-	-
36A	Siempre Viva Rd. / SR-905 SB to WB Ramp	(2) 2,641	F	(2) 205.7	F	382.0	F	16.3	(1) B
37	Siempre Viva Rd. / SR-905 NB Ramps	47.2	(1) D	262.7	F	39.3	(1) D	250.4	F
38	Siempre Viva Rd. / Paseo de las Americas	188.8	F	367.1	F	78.8	E	159.5	F
39	Dennery Rd. / Del Sol Blvd.	49.3	D	49.4	D	-	-	-	-
40	Ocean View Hills Pkwy. / Del Sol Blvd.	67.8	E	67.3	E	50.5	D	53.3	D
41	Ocean View Hills Pkwy. / Street A	48.2	D	57.9	E	35.5	D	34.6	C
42	Old Otay Mesa Rd. / Beyer Blvd.	381.2	F	396.5	F	194.3	F	181.8	F
43	Otay Mesa Rd. / Corporate Center Dr.	119.3	F	184.3	F	78.6	E	140.6	F
44	Otay Mesa Rd. / Innovative Dr.	114.4	F	108.9	F	113.7	F	89.8	F

Legend

CD = Control Delay

LOS = Level of Service

(1) = Vehicle queues may extend through this intersection from an upstream intersection so that the peak hour level of service would be degraded due to vehicles blocking this intersection.

(2) = Unsignalized: SB to WB right turn at LOS F (AM and PM Peak Hours)

F = Shading indicates a significant impact.

TABLE 7-3 (Continued)

Buildout Scenario 3B Without La Media Road Intersection Levels of Service

		Without Mitigation				With Mitigation			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Intersection	CD	LOS	CD	LOS	CD	LOS	CD	LOS
45	Harvest Rd. / Airway Rd.	116.7	F	13.8	B	42.5	D	13.5	B
46	Harvest Rd. / Siempre Viva Rd.	76.6	E	69.2	E	28.7	C	51.5	D
47	Otay Mesa Rd. / Sanyo Ave.	263.3	F	276.6	F	106.7	F	89.0	F
48	Airway Rd. / Sanyo Ave.	225.6	F	229.8	F	49.7	D	38.6	D
49	Paseo de las Americas / Heinrich Hertz Dr.	(3) 988.3	F	(3) 244.6	F	8.9	A	13.0	B
50	Paseo de las Americas / Marconi Dr.	(4) 869.6	F	(4) 108.0	F	11.5	B	13.4	B
51	Heritage Rd. / Otay Valley Rd.	516.4	F	837.9	F	178.7	F	382.7	F
52	Aviator Rd. / La Media Rd.	105.1	F	38.0	D	27.7	C	18.3	B
53	Otay Valley Rd. / Avenida De Las Vistas	764.4	F	298.6	F	-	-	-	-

Note: Control delay results should be considered unreliable at delay volumes higher than two times the LOS E delay of 80.0 seconds.

Legend

CD = Control Delay

LOS = Level of Service

(3) Unsignalized: eastbound left turn at LOS F(AM Peak Hour); eastbound left and right turns at LOS F (PM Peak Hour).

(4) Unsignalized: westbound left turn at LOS F (AM and PM Peak Hours); westbound right turn at LOS F (PM Peak Hour).

F = Shading indicates a significant impact.

Control Delay	LOS
0.0 - 10.0	A
10.1 - 20.0	B
20.1 - 35.0	C
35.1 - 55.0	D
55.1 - 80.0	E
Over 80.0	F

Source: 2000 Highway Capacity Manual

TABLE 7-1

Buildout Scenario 3B Without La Media Rd.

Average Daily Traffic & Level of Service

Street	Segment	#	(1) Class	LOS E ADT (2)	Segment ADT	V/C	LOS	New Class	New V/C	NEW LOS	S?
Otay Mesa Road	Street A to Caliente Ave.	1	6-PA	60,000	26,000	0.43	B	6-M	0.52	B	N
	Caliente Ave. to Corporate Center Dr.	2	6-PA	60,000	72,500	1.21	F	N	-	-	Y
	Corporate Center Dr. to Innovative Dr.	3	6-PA	60,000	51,500	0.86	D	N	-	-	N
	Innovative Dr. to Heritage Rd.	4	6-PA	60,000	46,500	0.78	C	N	-	-	N
	Heritage Rd. to Cactus Rd.	5	6-PA	60,000	76,500	1.28	F	N	-	-	Y
	Cactus Rd. to Britannia Blvd.	6	6-PA	60,000	44,000	0.73	C	N	-	-	N
	Britannia Blvd. to Ailsa Ct.	7	6-PA	60,000	50,500	0.84	D	N	-	-	N
	Ailsa Ct. to La Media Rd.	8	7-M	55,000	42,500	0.77	C	6-PA	0.71	C	N
	La Media Rd. to Piper Ranch Rd.	9	8-M	70,000	54,000	0.77	C	6-PA	0.90	D	N
	Piper Ranch Rd. to SR-125	10	4-P	45,000	28,500	0.63	C	6-PA	0.48	B	N
	SR-125 to Harvest Rd.	11	4-M	40,000	36,000	0.90	E	6-PA	0.60	C	N
	Harvest Rd. to Sanyo Ave.	12	4-M	40,000	32,000	0.80	D	6-PA	0.53	B	N
	Sanyo Ave. to Enrico Fermi Dr.	13	4-M	40,000	7,500	0.19	A	6-PA	0.13	A	N
Airway Road	Old Otay Mesa Rd. to Caliente Ave.	14	4-CL	30,000	10,500	0.35	A	N	-	-	N
	Caliente Ave. to Heritage Rd.	15	4-M	40,000	38,000	0.95	E	N	-	-	Y
	Heritage Rd. to Cactus Rd.	16	4-M	40,000	60,500	1.52	F	6-PA	1.01	F	Y
	Cactus Rd. to Britannia Blvd.	17	4-M	40,000	44,500	1.11	F	6-M	0.89	D	N
	Britannia Blvd. to La Media Rd.	18	4-M	40,000	35,000	0.88	D	N	-	-	N
	La Media Rd. to Harvest Rd.	19	4-M	40,000	34,000	0.85	D	N	-	-	N
	Harvest Rd. to Sanyo Ave.	20	4-M	40,000	26,500	0.66	C	N	-	-	N
	Sanyo Ave. to Paseo de las Americas	21	4-M	40,000	10,000	0.25	A	N	-	-	N
	Paseo de las Americas to Michael Faraday Dr.	22	4-M	40,000	9,500	0.24	A	N	-	-	N
	Michael Faraday Dr. to Enrico Fermi Dr.	23	4-M	40,000	12,000	0.30	A	N	-	-	N
	Enrico Fermi Dr. to Siempre Viva Rd.*	24	4-M	40,000	12,500	0.31	A	N	-	-	N
Siempre Viva Road	Caliente Ave. to West Terminus	25	4-M	40,000	10,000	0.25	A	2-CL	0.67	C	N
	Cactus Rd. to Britannia Blvd.	27	6-PA	60,000	37,000	0.62	C	N	-	-	N
	Britannia Blvd. to La Media Rd.	28	6-PA	60,000	42,500	0.71	C	N	-	-	N
	La Media Rd. to Harvest Rd.	29	6-PA	60,000	40,500	0.68	C	N	-	-	N
	Harvest Rd. to Otay Center Dr.	30	6-PA	60,000	34,000	0.57	B	N	-	-	N
	Otay Center Dr. to SR-905	31	6-PA	60,000	60,000	1.00	E	N	-	-	Y
	SR-905 to Paseo de las Americas	32	6-PA	60,000	63,000	1.05	F	N	-	-	Y
	Paseo de las Americas to Michael Faraday Dr.	33	4-M	40,000	23,000	0.58	C	N	-	-	N
	Michael Faraday Dr. to Enrico Fermi Dr.	34	4-M	40,000	21,000	0.53	B	N	-	-	N
	Enrico Fermi Dr. to SR-11*	35	4-M	40,000	17,500	0.44	B	N	-	-	N

*Segment in County of San Diego

Note: There is no segment #26 with this alternative.

= Segment Number

(1) = Current Community Plan Classification, unless footnotes (3) or (4) apply.

(2) = Source: City of San Diego Traffic Impact Study Manual, Table 2.

(3) = Add to Circulation Plan.

(4) = Functional classification shown, not currently classified.

S? = Significant impact, Yes (Y) or No (N).

New LOS = LOS after change in classification.

F = Shading indicates a significant impact.

Legend

8-M = 8-lane Major Arterial

7-PA = 7-lane Primary Arterial

7-M = 7-lane Major Arterial

6-PA = 6-lane Primary Arterial

6-M = 6-lane Major Arterial

5-M = 5-lane Major Arterial (3SB /2NB)

4-P = 4-lane Primary Arterial

4-M = 4-lane Major Arterial

4-CL = 4-lane Collector (with continuous left turn lane)

4-C = 4-lane Collector (without continuous left turn lane)

2-CL = 2-lane Collector (with continuous left turn lane)

2-CN = 2-lane Collector (no fronting property)

2-C = 2-lane Collector (without continuous left turn lane)

TABLE 7-1 (Continued)

Buildout Scenario 3B Without La Media Rd.

Average Daily Traffic & Level of Service

Street	Segment	#	(1) Class	LOS E ADT (2)	Segment ADT	V/C	LOS		New Class	New V/C	New LOS	S?
Palm Ave.	I-805 to Dennery Rd.	37	7-PA	65,000	59,500	0.92	D		N	-	-	N
Ocean View Hills Parkway	Dennery Rd. to Del Sol Blvd.	38	4-M	40,000	22,000	0.55	C		N	-	-	N
	Del Sol Blvd. to Street "A"	39	6-M	50,000	35,000	0.70	C		N	-	-	N
	Street "A" to Otay Mesa Rd.	40	6-M	50,000	23,500	0.42	B		N	-	-	N
Caliente Avenue	Otay Mesa Rd. to SR-905	41	6-M	50,000	38,000	0.76	C		6-PA	0.63	C	N
	SR-905 to Airway Rd.	42	6-M	50,000	32,000	0.64	C		6-PA	0.53	B	N
	Airway Rd. to Beyer Blvd.	43	4-M	40,000	46,000	1.15	F		6-M	0.92	E	Y
	Beyer Blvd. to Siempre Viva Rd.	43A	4-M	40,000	41,000	1.03	F		N	-	-	Y
Beyer Boulevard	Alaquinas Dr. to Old Otay Mesa Rd.	44	4-M	40,000	32,500	0.81	D		N	-	-	N
	Old Otay Mesa Rd. to Caliente Ave. (3)	45	4-M	40,000	31,000	0.78	D		N	-	-	N
Heritage Road/ Otay Valley Road	Main St. to Avenida De Las Vistas**	46	6-PA	60,000	83,000	1.38	F		N	-	-	Y
	Avenida De Las Vistas to Datsun St.	47	6-M	50,000	75,500	1.51	F		6-PA	1.26	F	Y
	Datsun St. to Otay Mesa Rd.	48	6-M	50,000	48,000	0.96	E		6-PA	0.80	C	N
	Otay Mesa Rd. to SR-905	49	6-M	50,000	23,500	0.47	B		6-PA	0.39	A	N
	SR-905 to Airway Rd.	50	6-M	50,000	35,000	0.70	C		6-PA	0.58	B	N
Cactus Road	Otay Mesa Rd. to Airway Rd.	52	4-CL	30,000	40,500	1.35	F		4-M	1.01	F	Y
	Airway Rd. to Siempre Viva Rd.	53	4-CL	30,000	40,500	1.35	F		4-M	1.01	F	Y
	Siempre Viva Rd. to South End	54	2-CL	15,000	11,000	0.73	D		N	-	-	N
Britannia Boulevard	Otay Mesa Rd. to SR-905	55	4-M	40,000	17,500	0.44	B		6-PA	0.29	A	N
	SR-905 to Airway Rd.	56	4-M	40,000	63,000	1.58	F		6-PA	1.05	F	Y
	Airway Rd. to Siempre Viva Rd.	57	4-M	40,000	44,500	1.11	F		6-M	0.89	D	N
	Siempre Viva Rd. to South End	58	2-C	8,000	22,000	2.75	F		4-CL	0.73	D	N
La Media Road	Birch Rd. to Lone Star Rd.**	59	6-PA	60,000	N/A	N/A	N/A		N/A	N/A	N/A	N/A
	Lone Star Rd. to Aviator Rd.	60	6-PA	60,000	19,500	0.33	A		4-M	0.49	B	N
	Aviator Rd. to Otay Mesa Rd.	61	6-PA	60,000	22,500	0.38	A		4-M	0.56	C	N
	Otay Mesa Rd. to SR-905	62	6-PA	60,000	37,500	0.63	C		N	-	-	N
	SR-905 to Airway Rd.	63	6-PA	60,000	64,000	1.06	F		N	-	-	Y
	Airway Rd. to Siempre Viva Rd.	64	4-M	40,000	33,000	0.83	D		5-M	0.73	C	N
Harvest Road	South of Otay Mesa Rd.	65	4-M	40,000	8,500	0.21	A		2-CL	0.57	C	N
	Airway Rd. to Otay Center Dr.	66	4-M	40,000	16,000	0.40	B		4-CL	0.53	C	N
	Otay Center Dr. to Siempre Viva Rd.	67	4-M	40,000	10,000	0.25	A		4-CL	0.33	A	N

*Segment in County of San Diego

**Segment in Chula Vista

= Segment Number

(1) = Current Community Plan Classification, unless footnotes (3) or (4) apply.

(2) = Source: City of San Diego Traffic Impact Study Manual, Table 2.

(3) = Add to Circulation Plan.

(4) = Functional classification shown, not currently classified.

S? = Significant impact, Yes (Y) or No (N).

New LOS = LOS after change in classification.

F = Shading indicates a significant impact.

Note: There is no segment #51 with this alternative.
Segment #36 was deleted.

Legend

8-M = 8-lane Major Arterial

7-PA = 7-lane Primary Arterial

7-M = 7-lane Major Arterial

6-PA = 6-lane Primary Arterial

6-M = 6-lane Major Arterial

5-M = 5-lane Major Arterial (3SB /2NB)

4-P = 4-lane Primary Arterial

4-M = 4-lane Major Arterial

4-CL = 4-lane Collector (with continuous left turn lane)

4-C = 4-lane Collector (without continuous left turn lane)

2-CL = 2-lane Collector (with continuous left turn lane)

2-CN = 2-lane Collector (no fronting property)

2-C = 2-lane Collector (without continuous left turn lane)

TABLE 7-1 (Continued)

Buildout Scenario 3B Without La Media Rd.

Average Daily Traffic & Level of Service

Street	Segment	#	(1)Class	LOS E ADT (2)	Segment ADT	V/C	LOS		New Class	New V/C	New LOS	S?
Enrico Fermi Drive	SR-11 to Airway Rd.*	68	4-M	40,000	15,500	0.62	B		N	-	-	N
	Airway Rd. to SiempreViva Rd.	69	4-M	40,000	8,000	0.20	A		4-CL	0.27	A	N
	Siempre Viva Rd. to Via de la Amistad	70	4-M	40,000	10,500	0.26	A		4-CL	0.35	B	N
Lone Star Road	SR-125 to Piper Ranch Rd.	72	4-M	40,000	35,000	0.88	D		6-PA	0.58	B	N
	Piper Ranch Rd. to City / County Boundary	73	4-M	40,000	36,000	0.90	E		6-PA	0.60	C	N
Aviator Road	Heritage Rd. to La Media Rd. (3)	74	2-C	8,000	23,000	2.88	F		4-CL	0.77	D	N
Dennery Road	Palm Ave. to Del Sol Blvd.	75	4-M	40,000	28,000	0.70	C		N	-	-	N
	Palm Ave. to Regatta Ln.	76	4-M	40,000	19,500	0.49	B		N	-	-	N
	Regatta Ln. to Red Coral Ln.	77	4-CL	30,000	12,500	0.42	B		N	-	-	N
	Red Coral Ln. to Black Coral Ln.	78	2-CL	15,000	12,500	0.83	D		N	-	-	N
	Black Coral Ln. to East End	79	2-CN	10,000	16,500	1.65	F		N	-	-	Y
Avendia De Las Vistas	Otay Valley Rd. to Vista Santo Domingo	80	2-CN	10,000	7,000	0.70	C		N	-	-	N
	Vista Santo Domingo to Dennery Rd.	81	2-CN	10,000	19,500	1.95	F		N	-	-	Y
Del Sol Boulevard	Ocean View Hills Pkwy. to Surf Crest Dr.	82	4-CL	30,000	19,500	0.65	C		N	-	-	N
	Surf Crest Dr. to Riviera Pointe	83	2-CN	10,000	23,000	2.30	F		N	-	-	Y
	Riviera Pointe to Dennery Rd.	84	2-CL	15,000	23,000	1.53	F		N	-	-	Y
	Dennery Rd. to I-805	85	4-CL	30,000	16,000	0.53	C		N	-	-	N
Street A	Ocean View Hills Pkwy. to Otay Mesa Rd.	86	4-M	40,000	13,500	0.34	A		N	-	-	N
Old Otay Mesa Road	Otay Mesa Rd. to Airway Rd.	87	4-CL	30,000	22,000	0.73	D		N	-	-	N
	Airway Rd. to Crescent Bay Dr.	88	4-CL	30,000	14,500	0.48	C		N	-	-	N
	Crescent Bay Dr. to Beyer Blvd.	89	2-C	8,000	16,000	2.00	F		N	-	-	Y
Emerald Crest Dr.	Otay Mesa Rd. to South End (3)	90	4-CL	30,000	25,000	0.83	D		N	-	-	N
Corporate Center Drive	South End to Otay Mesa Rd. (3)	91	4-CL	30,000	17,500	0.58	C		N	-	-	N
	Otay Mesa Rd. to Progressive Ave.	92	4-CL	30,000	19,500	0.65	C		N	-	-	N
	Progressive Ave. to Innovative Dr.	93	2-C	8,000	8,000	1.00	E		2-CL	0.53	C	N
Innovative Drive	Otay Mesa Rd. to Corporate Center Dr.	94	4-CL	30,000	15,000	0.50	C		N	-	-	N
Piper Ranch Road	Lone Star Rd. to Otay Mesa Rd.	96	4-CL	30,000	20,500	0.68	D		N	-	-	N

*Segment in County of San Diego

Note: There is no segment #71 with this alternative.

= Segment Number

(1) = Current Community Plan Classification, unless footnotes (3) or (4) apply.

(2) = Source: City of San Diego Traffic Impact Study Manual, Table 2.

(3) = Add to Circulation Plan.

(4) = Functional classification shown, not currently classified.

S? = Significant impact, Yes (Y) or No (N).

New LOS = LOS after change in classification.

F = Shading indicates a significant impact.

Legend

8-M = 8-lane Major Arterial

7-PA = 7-lane Primary Arterial

7-M = 7-lane Major Arterial

6-PA = 6-lane Primary Arterial

6-M = 6-lane Major Arterial

5-M = 5-lane Major Arterial (3SB /2NB)

4-P = 4-lane Primary Arterial

4-M = 4-lane Major Arterial

4-CL = 4-lane Collector (with continuous left turn lane)

4-C = 4-lane Collector (without continuous left turn lane)

2-CL = 2-lane Collector (with continuous left turn lane)

2-CN = 2-lane Collector (no fronting property)

2-C = 2-lane Collector (without continuous left turn lane)

TABLE 7-1 (Continued)

Buildout Scenario 3B Without La Media Rd.

Average Daily Traffic & Level of Service

Street	Segment	#	Class	LOS E ADT (2)	Segment ADT	V/C	LOS		New Class	New V/C	NEW LOS	S?
Sanyo Avenue	Otay Mesa Rd. to Airway Rd. (4)	97	4-C	15,000	24,500	1.63	F		4-CL	0.82	D	N
Heinrich Hertz Drive	Airway Rd. to Paseo de las Americas (4)	98	2-CL	15,000	12,000	0.80	D		N	-	-	N
Paseo de las	Airway Rd. to Siempre Viva Rd.	99	2-C	8,000	16,500	2.06	F		4-CL	0.55	C	N
Americas	Siempre Viva Rd. to Marconi Dr.	100	2-C	8,000	15,000	1.88	F		4-CL	0.50	C	N
Marconi Drive	Paseo de las Americas to Enrico Fermi Dr.	101	2-C	8,000	8,000	1.00	E		2-CL	0.53	C	N
Otay Center Drive	Harvest Rd. to Siempre Viva Rd. (4)	102	4-C	15,000	15,500	1.03	F		4-CL	0.52	C	N
Michael Faraday	Airway Rd. to Siempre Viva Rd. (4)	103	2-CL	15,000	6,500	0.43	B		N	-	-	N
Drive	Siempre Viva Rd. to Marconi Dr. (4)	104	2-CL	15,000	8,000	0.53	C		N	-	-	N
St. Andrews Avenue	Otay Mesa Center Rd. to La Media Rd.	105	2-C	8,000	13,500	1.69	F		4-CL	0.45	C	N
Gailes Boulevard	Otay Mesa Rd. to St. Andrews Ave.	107	2-C	8,000	12,500	1.56	F		4-C	0.83	D	N
Camino	Heritage Rd. to Pacific Rim Ct.	108	2-C	8,000	9,500	1.19	F		N	-	-	Y
Maquiladora	Pacific Rim Ct. to Cactus Rd.	109	2-C	8,000	7,500	0.94	E		N	-	-	Y
	Cactus Rd. to Continental St.	110	2-C	8,000	6,000	0.75	D		N	-	-	N
Pacific Rim Court	Otay Mesa Rd. to Camino Maquiladora	111	2-C	8,000	4,500	0.56	C		N	-	-	N
Progressive Avenue	Corporate Center Dr. to Innovative Dr.	112	2-C	8,000	11,500	1.44	F		N	-	-	Y
Otay Mesa Center Road	Otay Mesa Rd. to St. Andrews Ave.	113	2-C	8,000	24,000	1.60	F		4-CL	0.80	D	N
Datsun Street	Innovative Dr. to Heritage Rd. (3)	114	2-C	8,000	30,000	3.75	F		4-CL	1.00	E	Y
Avenida Costa Azul	Otay Mesa Rd. to St. Andrews Ave. (3)	115	2-CL	15,000	19,000	1.27	F		4-CL	0.63	B	N
Excellante Street	Airway Rd. to Gigantic St.	116	4-C	15,000	6,000	0.40	B		2-C	0.75	D	N
Gigantic Street	Excellante St. to Centurion St.	117	4-C	15,000	6,000	0.40	B		2-C	0.75	D	N
Centurion Street	Airway Rd. to Gigantic St.	118	4-C	15,000	6,000	0.40	B		2-C	0.75	D	N
Exposition Way / Vista Santo Domingo	Avenida De Las Vistas to Corporate Dr. (4)	119	2-CN	10,000	12,500	1.25	F		N	-	-	Y
Continental Street	South of Otay Mesa Rd.	120	2-C	8,000	4,500	0.56	C		N	-	-	N
	North of Airway Rd.	121	2-CL	15,000	12,000	0.80	D		N	-	-	N

*Segment in County of San Diego

= Segment Number

(1) = Current Community Plan Classification, unless footnotes (3) or (4) apply.

(2) = Source: City of San Diego Traffic Impact Study Manual, Table 2.

(3) = Add to Circulation Plan.

(4) = Functional classification shown, not currently classified.

S? = Significant impact, Yes (Y) or No (N).

New LOS = LOS after change in classification.

F = Shading indicates a significant impact.

Legend

8-M = 8-lane Major Arterial

7-PA = 7-lane Primary Arterial

7-M = 7-lane Major Arterial

6-PA = 6-lane Primary Arterial

6-M = 6-lane Major Arterial

5-M = 5-lane Major Arterial (3SB /2NB)

4-P = 4-lane Primary Arterial

4-M = 4-lane Major Arterial

4-CL = 4-lane Collector (with continuous left turn lane)

4-C = 4-lane Collector (without continuous left turn lane)

2-CL = 2-lane Collector (with continuous left turn lane)

2-CN = 2-lane Collector (no fronting property)

2-C = 2-lane Collector (without continuous left turn lane)

Appendix J

Fair Share Calculation Worksheets and Otay Mesa PFFP Summary Table

La Media Road @ Otay Mesa Road
Horizon Year 2035 With Project AM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total	**1,500**	**4,718**	**5,010**

Overall Increase in Traffic (2035 With Project - Existing) >>	3,510
Project Trips >>	292
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**8.3%**

La Media Road @ Otay Mesa Road
Horizon Year 2035 With Project PM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total	**1,660**	**4,482**	**5,223**

Overall Increase in Traffic (2035 With Project - Existing) >>	3,563
Project Trips >>	741
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**20.8%**

Britannia Boulevard @ Airway Road
Horizon Year 2035 With Project AM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total Entering	**1,020**	**2,667**	**2,686**

Overall Increase in Traffic (2035 With Project - Existing) >>	1,666
Project Trips >>	19
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**1.1%**

Britannia Boulevard @ Airway Road
Horizon Year 2035 With Project PM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total Entering	**1,353**	**3,413**	**3,461**

Overall Increase in Traffic (2035 With Project - Existing) >>	2,108
Project Trips >>	48
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**2.3%**

Heritage Road @ Otay Mesa Road
Horizon Year 2035 With Project AM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total Entering	**971**	**4,689**	**4,761**

Overall Increase in Traffic (2035 With Project - Existing) >>	3,790
Project Trips >>	72
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**1.9%**

Heritage Road @ Otay Mesa Road
Horizon Year 2035 With Project PM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total Entering	**1,611**	**4,859**	**5,047**

Overall Increase in Traffic (2035 With Project - Existing) >>	3,436
Project Trips >>	188
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**5.5%**

La Media Road from SR-905 Eastbound Ramps to Airway Road
Horizon Year 2035 Conditions

Volume	Existing	Year 2035 Without Project	Year 2035 With Project
Total	**13,331**	**25,267**	**27,172**

Project Trips [2035 With Project - 2035 No Project)] >>	1,905
Segment Volume Increase (2035 With Project - Existing) >>	13,841
Fair Share % (Project Trips / Segment Volume Increase) >>	**13.8%**

Airway Road from Brittania Blvd to La Media Road
Horizon Year 2035 Conditions

Volume	Existing	Year 2035 Without Project	Year 2035 With Project
Total	**3,183**	**16,409**	**17,102**

Project Trips [2035 With Project - 2035 No Project)] >>	693
Segment Volume Increase (2035 With Project - Existing) >>	13,919
Fair Share % (Project Trips / Segment Volume Increase) >>	**5.0%**

Airway Road from La Media Road to Avenida Costa Azul
Horizon Year 2035 Conditions

Volume	Existing	Year 2035 Without Project	Year 2035 With Project
Total	**8,513**	**17,012**	**17,445**

Project Trips [2035 With Project - 2035 No Project)] >>	433
Segment Volume Increase (2035 With Project - Existing) >>	8,932
Fair Share % (Project Trips / Segment Volume Increase) >>	**4.8%**

Airway Road from Piper Ranch Road to Harvest Road
Horizon Year 2035 Conditions

Volume	Existing	Year 2035 Without Project	Year 2035 With Project
Total	**8,513**	**18,167**	**18,427**

Project Trips [2035 With Project - 2035 No Project)] >>	260
Segment Volume Increase (2035 With Project - Existing) >>	9,914
Fair Share % (Project Trips / Segment Volume Increase) >>	**2.6%**

Heritage Road from Otay Mesa Road to Datsun Street
Horizon Year 2035 Conditions

Volume	Existing	Year 2035 Without Project	Year 2035 With Project
Total	**7,941**	**24,656**	**25,522**

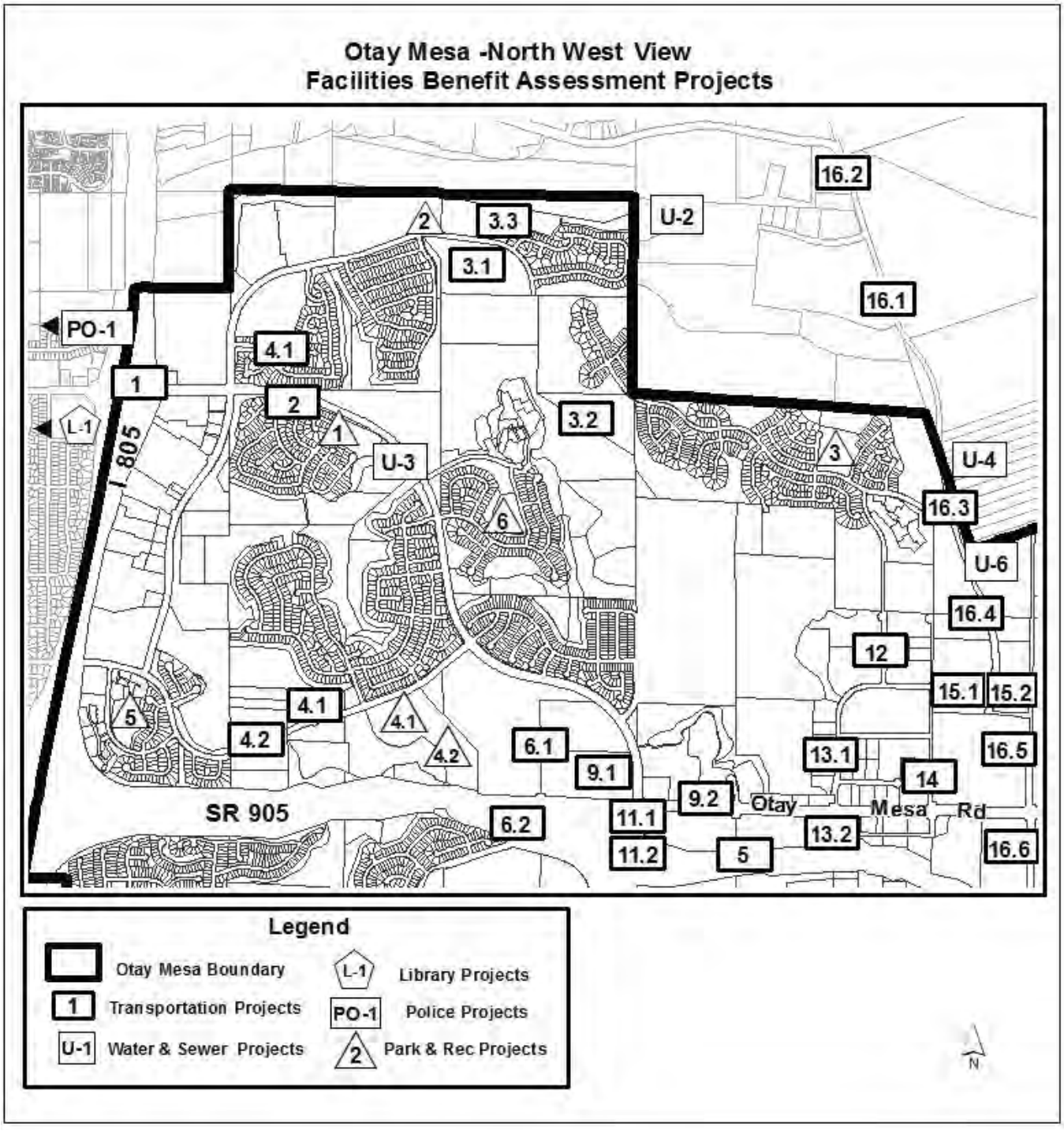
Project Trips [2035 With Project - 2035 No Project)] >>	866
Segment Volume Increase (2035 With Project - Existing) >>	17,581
Fair Share % (Project Trips / Segment Volume Increase) >>	**4.9%**

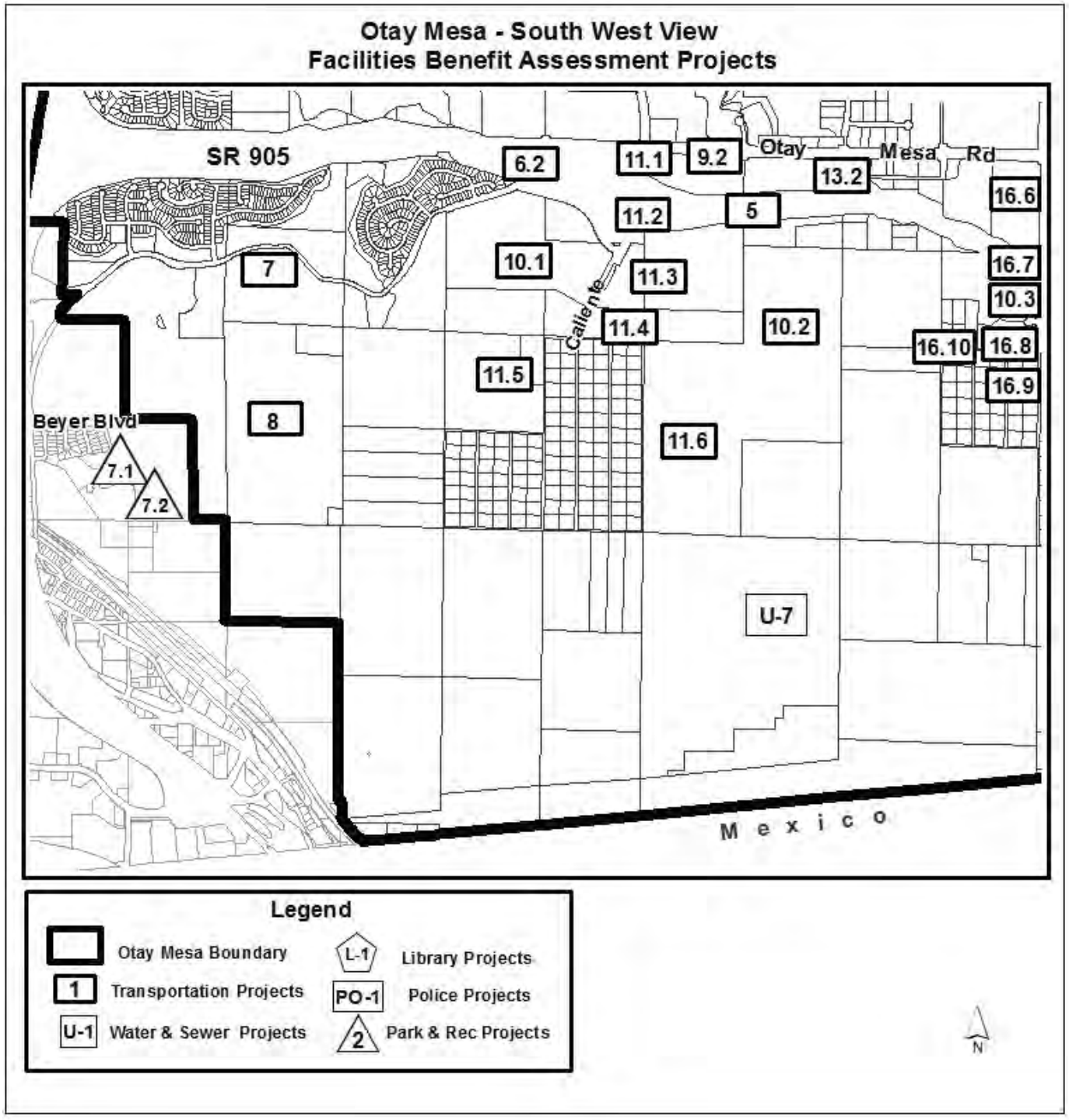
Table 6 Otay Mesa Project Summary

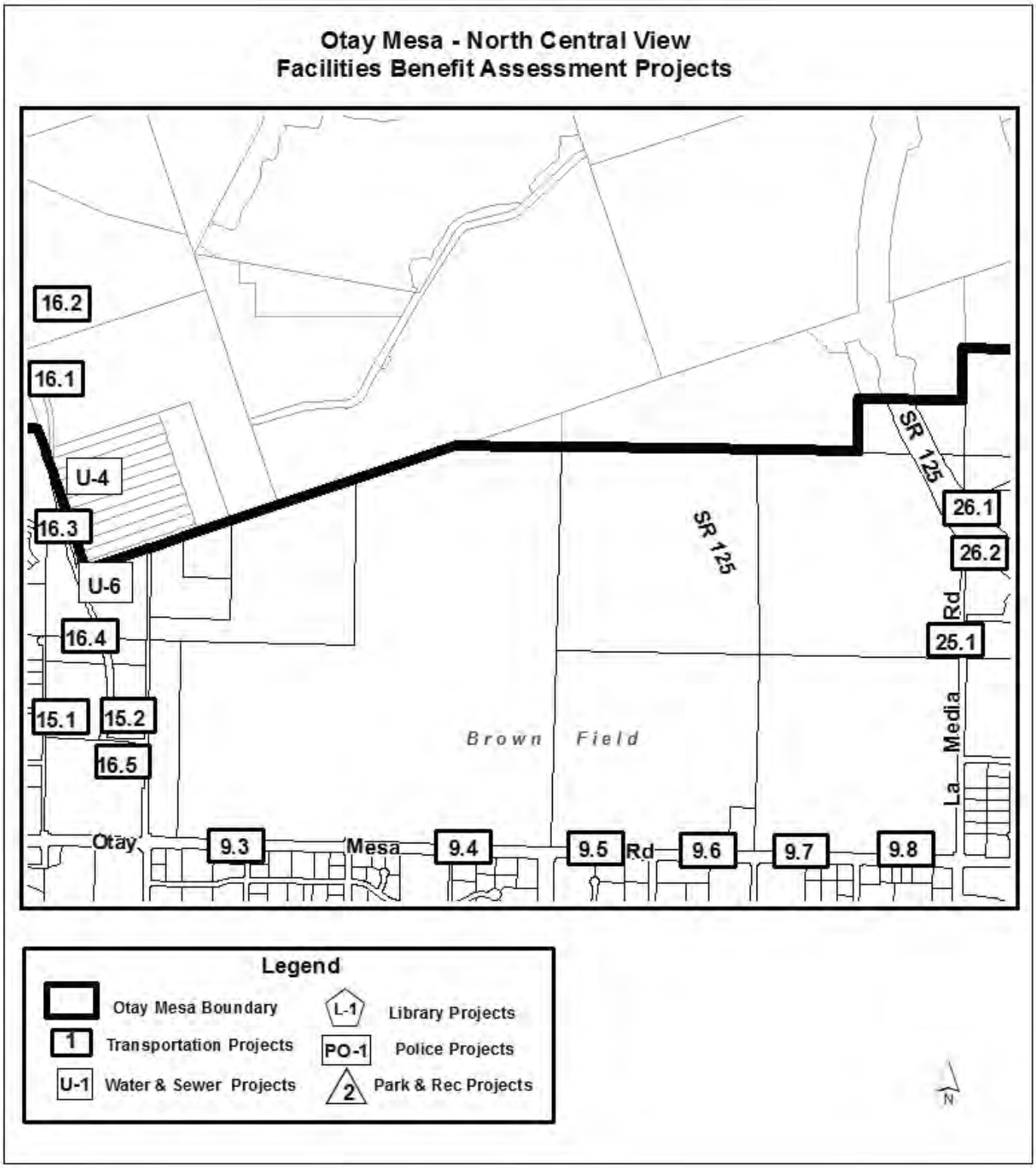
PAGE	PROJECT NO.	DESCRIPTION	FUNDING YEAR(S)	ESTIMATED COST (2014)	FUNDING SOURCE						
					FBA-OM	DIF-0M	FBA-(W)	FBA-(E)	PDIF-(W)	PDIF-(E)	OTHER
		TRANSPORTATION PROJECTS:									
32	OM T-1	PALM AVENUE/I-805 INTERCHANGE	2014, 2028, 2029	$41,374,000	$33,005,337	$0	$2,800,092	$4,568,571	$0	$0	$1,000,000
34	OM T-2	OCEAN VIEW HILLS PARKWAY	2014	$17,948,173	$0	$0	$4,916,974	$7,067,664	$1,604,993	$3,818,542	$540,000
36	OM T-3.1	DENNERY ROAD - (Black Coral Way to Topsail Drive)	2017	$825,000	$825,000	$0	$0	$0	$0	$0	$0
38	OM T-3.2	DENNERY ROAD - (Topsail Drive to Avenida De Las Vistas)	2034, 2035	$5,700,000	$5,700,000	$0	$0	$0	$0	$0	$0
40	OM T-3.3	DENNERY ROAD - (Triple Pipe Crossing)	2018	$750,000	$750,000	$0	$0	$0	$0	$0	$0
42	OM T-4.1	DEL SOL BOULEVARD (west boundary of elementary school to Surfpoint Way)	2014, 2018	$5,357,000	$483,598	$0	$4,873,402	$0	$0	$0	$0
44	OM T-4.2	DEL SOL BOULEVARD (Riviera Point Street to west boundary of elementary school)	2020	$3,700,000	$3,700,000	$0	$0	$0	$0	$0	$0
46	OM T-6.1	STREET 'A' (Ocean View Hills Parkway to Otay Mesa Road)	2023, 2024	$4,000,000	$3,120,000	$0	$0	$0	$0	$0	$880,000
48	OM T-6.2	STREET 'A' (Overpass from Otay Mesa Road to Airway Road)	2023, 2024, 2025	$22,300,000	$17,394,000	$0	$0	$0	$0	$0	$4,906,000
50	OM T-7	OLD OTAY MESA ROAD (Hawken Drive to California Terrace Subdivision)	2014	$8,500,000	$0	$0	$4,954,000	$0	$546,000	$0	$3,000,000
52	OM T-8	BEYER BOULEVARD (Enright Drive to Caliente Avenue)	2022, 2023	$20,500,000	$15,990,000	$0	$0	$0	$0	$0	$4,510,000
54	OM T-9.1	OTAY MESA ROAD (Street "A" to Caliente Avenue)	2035	$2,200,000	$1,716,000	$0	$0	$0	$0	$0	$484,000
56	OM T-9.2	OTAY MESA ROAD (Caliente Avenue to Heritage Road)	2036	$4,400,000	$3,432,000	$0	$0	$0	$0	$0	$968,000
58	OM T-9.3	OTAY MESA ROAD (Heritage Road to Cactus Road)	2036, 2038	$2,400,000	$1,872,000	$0	$0	$0	$0	$0	$528,000
60	OM T-9.4	OTAY MESA ROAD (Cactus Road to Britannia Boulevard)	2036, 2038	$2,400,000	$1,872,000	$0	$0	$0	$0	$0	$528,000
62	OM T-9.5	OTAY MESA ROAD (Britannia Boulevard to Gailes Boulevard)	2038	$920,000	$717,600	$0	$0	$0	$0	$0	$202,400
64	OM T-9.6	OTAY MESA ROAD (Gailes Boulevard to St. Andrews)	2038	$960,000	$748,800	$0	$0	$0	$0	$0	$211,200
66	OM T-9.7	OTAY MESA ROAD (St. Andrews to Otay Center Road)	2038	$1,400,000	$1,092,000	$0	$0	$0	$0	$0	$308,000
68	OM T-9.8	OTAY MESA ROAD (Otay Center Road to La Media Road)	2038	$1,100,000	$858,000	$0	$0	$0	$0	$0	$242,000
70	OM T-9.9	OTAY MESA ROAD (La Media Road to Piper Ranch Road)	2039	$3,100,000	$2,418,000	$0	$0	$0	$0	$0	$682,000
72	OM T-9.10	OTAY MESA ROAD (Piper Ranch Road to Harvest Road)	2039	$3,900,000	$1,521,000	$0	$0	$0	$0	$0	$2,379,000
74	OM T-9.11	OTAY MESA ROAD (Harvest Road to Sanyo Road)	2039	$3,500,000	$0	$0	$0	$0	$0	$0	$3,500,000
76	OM T-9.12	OTAY MESA ROAD (Sanyo Road to city limits)	2039	$3,700,000	$0	$0	$0	$0	$0	$0	$3,700,000
78	OM T-10.1	AIRWAY ROAD (Old Otay Mesa Road to Caliente Avenue)	2047	$300,000	$0	$0	$0	$0	$0	$0	$300,000
80	OM T-10.2	AIRWAY ROAD (Caliente Avenue to Heritage Road)	2043-2054	$76,200,000	$76,200,000	$0	$0	$0	$0	$0	$0
82	OM T-10.3	AIRWAY ROAD (Heritage Road to Cactus Road)	2035, 2036	$20,800,000	$16,224,000	$0	$0	$0	$0	$0	$4,576,000
84	OM T-10.4	AIRWAY ROAD (Cactus Road to Britannia Boulevard)	2023, 2024	$17,400,000	$13,572,000	$0	$0	$0	$0	$0	$3,828,000
86	OM T-10.5	AIRWAY ROAD (Britannia Boulevard to west of La Media Road)	2018, 2020	$6,900,000	$5,382,000	$0	$0	$0	$0	$0	$1,518,000
88	OM T-10.6	AIRWAY ROAD (La Media Road to Avenida Costa Azul)	2019	$6,900,000	$5,382,000	$0	$0	$0	$0	$0	$1,518,000
90	OM T-10.7	AIRWAY ROAD (Avenida Costa Azul to Avenida De la Fuente N.)	2021	$4,200,000	$3,276,000	$0	$0	$0	$0	$0	$924,000
92	OM T-10.8	AIRWAY ROAD (Avenida De la Fuente N. to Harvest Road)	2021, 2022	$5,400,000	$4,212,000	$0	$0	$0	$0	$0	$1,188,000
94	OM T-10.9	AIRWAY ROAD (Harvest Road to Sanyo Road)	2035	$3,500,000	$2,730,000	$0	$0	$0	$0	$0	$770,000
96	OM T-10.10	AIRWAY ROAD (Sanyo Road to Paseo de las Americas)	2035	$870,000	$0	$0	$0	$0	$0	$0	$870,000
98	OM T-10.11	AIRWAY ROAD (Paseo de las Americas to Enrico Fermi)	2035	$3,800,000	$0	$0	$0	$0	$0	$0	$3,800,000
100	OM T-11.1	CALIENTE AVENUE (Otay Mesa Road to Proposed SR 905 Overpass)	2026	$500,000	$390,000	$0	$0	$0	$0	$0	$110,000
102	OM T-11.2	CALIENTE AVENUE (SR 905 Overpass)	2026	$50,000	$39,000	$0	$0	$0	$0	$0	$11,000
104	OM T-11.3	CALIENTE AVENUE (SR 905 Overpass to Airway Road)	2026	$500,000	$390,000	$0	$0	$0	$0	$0	$110,000
106	OM T-11.4	CALIENTE AVENUE (Airway Road to current dead end)	2025, 2026	$1,700,000	$1,326,000	$0	$0	$0	$0	$0	$374,000
108	OM T-11.5	CALIENTE AVENUE (current dead end to Beyer Boulevard)	2026, 2027	$4,800,000	$3,744,000	$0	$0	$0	$0	$0	$1,056,000
110	OM T-11.6	CALIENTE AVENUE (Beyer Boulevard to Siempre Viva Road)	2026	$2,100,000	$0	$0	$0	$0	$0	$0	$2,100,000
112	OM T-12	EXPOSITION WAY/VISTA SANTO DOMINGO	2026	$1,350,000	$0	$0	$0	$0	$0	$0	$1,350,000
114	OM T-13.1	CORPORATE CENTER DRIVE (Progressive Avenue to Otay Mesa Road)	2027	$3,925,000	$0	$0	$0	$0	$0	$0	$3,925,000
116	OM T-13.2	CORPORATE CENTER DRIVE (Otay Mesa Road to SR 905)	2027	$2,050,000	$0	$0	$0	$0	$0	$0	$2,050,000
118	OM T-14	INNOVATIVE DRIVE (Corporate Center Drive to Otay Mesa Road)	2027	$2,650,000	$0	$0	$0	$0	$0	$0	$2,650,000
120	OM T-15.1	DATSUN STREET (Innovative Drive to existing Otay Valley Road)	2033	$3,600,000	$0	$0	$0	$0	$0	$0	$3,600,000
122	OM T-15.2	DATSUN STREET (existing Otay Valley Road to existing Heritage Road)	2033	$2,800,000	$0	$0	$0	$0	$0	$0	$2,800,000
124	OM T-16.2	HERITAGE ROAD/OTAY VALLEY ROAD (Main Street to city limits)	2017, 2027	$53,700,000	$1,000,000	$0	$0	$0	$0	$0	$52,700,000
126	OM T-16.3	HERITAGE ROAD/OTAY VALLEY ROAD (city limits to Avenida de las Vistas)	2025	$6,900,000	$0	$6,900,000	$0	$0	$0	$0	$0
128	OM T-16.4	HERITAGE ROAD/OTAY VALLEY ROAD (Avenida de las Vistas to Datsun Street)	2025, 2027	$10,300,000	$5,854,000	$2,180,000	$0	$0	$0	$0	$2,266,000
130	OM T-16.5	HERITAGE ROAD/OTAY VALLEY ROAD (Datsun Street to Otay Mesa Road)	2030	$6,200,000	$4,836,000	$0	$0	$0	$0	$0	$1,364,000
132	OM T-16.6	HERITAGE ROAD/OTAY VALLEY ROAD (Otay Mesa Road to SR 905 Interchange)	2029, 2030, 2031	$5,800,000	$4,524,000	$0	$0	$0	$0	$0	$1,276,000
134	OM T-16.7	HERITAGE ROAD/OTAY VALLEY ROAD (SR 905 Interchange ramps)	2030, 2031	$21,700,000	$13,539,000	$8,161,000	$0	$0	$0	$0	$0
136	OM T-16.8	HERITAGE ROAD/OTAY VALLEY ROAD (SR 905 Interchange to current dead end)	2032	$540,000	$421,200	$0	$0	$0	$0	$0	$118,800
138	OM T-16.9	HERITAGE ROAD/OTAY VALLEY ROAD (current dead end to Airway Road)	2032, 2033, 2034	$19,800,000	$19,800,000	$0	$0	$0	$0	$0	$0
140	OM T-16.10	HERITAGE ROAD/OTAY VALLEY ROAD (bridge to Airway Road)	2032, 2033, 2034	$24,200,000	$24,200,000	$0	$0	$0	$0	$0	$0
142	OM T-17.1	AVIATOR ROAD (Heritage Road to La MediaRoad - widening portion only)	2022	$15,600,000	$0	$0	$0	$0	$0	$0	$15,600,000
144	OM T-17.2	AVIATOR ROAD (Heritage Road to La Media Road - new extension portion only)	2022	$19,300,000	$0	$0	$0	$0	$0	$0	$19,300,000

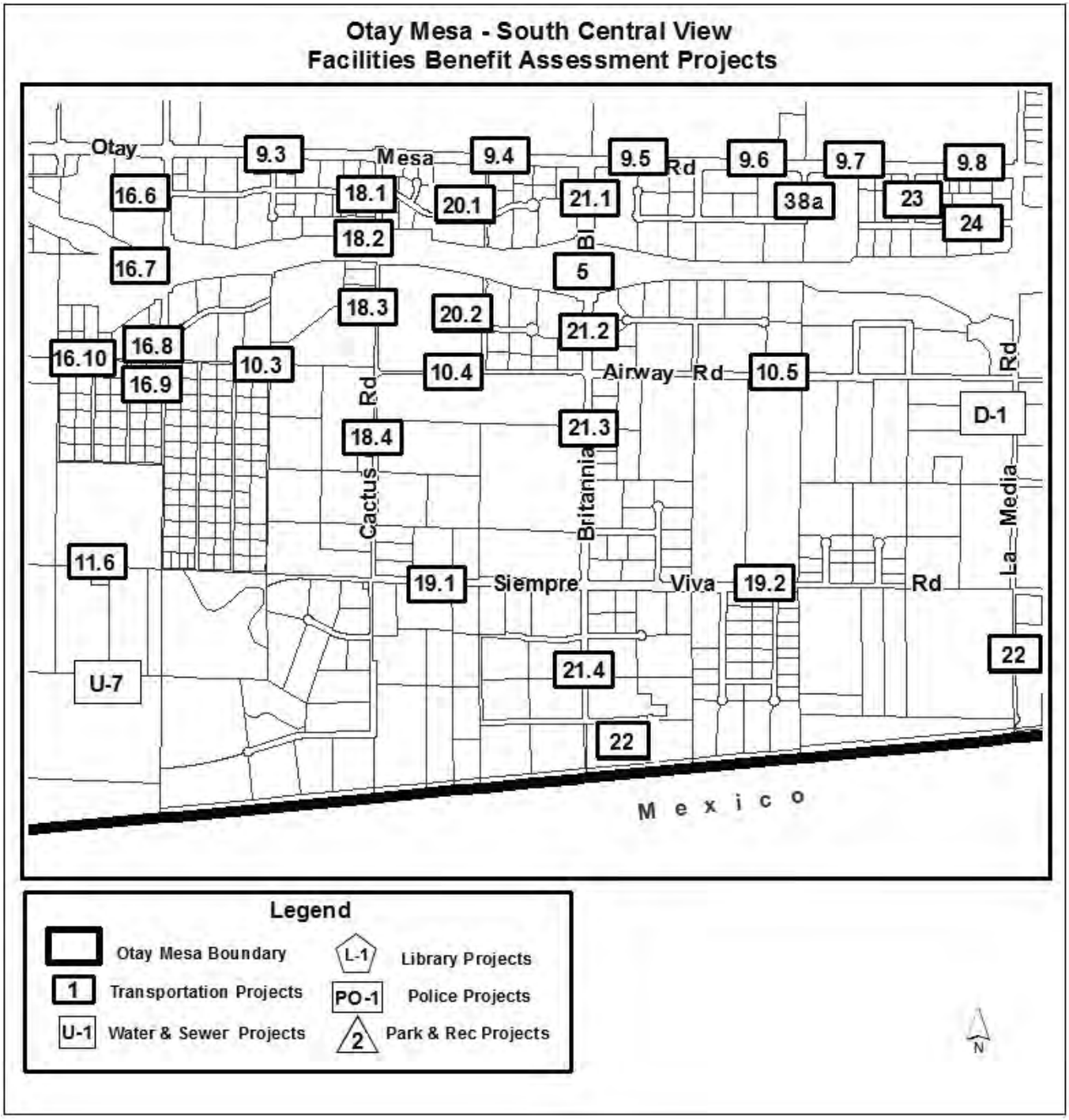
146	OM T-18.1	CACTUS ROAD (Otay Mesa Road to SR 905)	2040	$700,000	$0	$0	$0	$0	$0	$0	$700,000
148	OM T-18.2	CACTUS ROAD (SR 905 Overpass)	2039-2042	$35,200,000	$27,456,000	$0	$0	$0	$0	$0	$7,744,000
150	OM T-18.3	CACTUS ROAD (SR 905 to Airway Road)	2046	$4,200,000	$0	$0	$0	$0	$0	$0	$4,200,000
152	OM T-18.4	CACTUS ROAD (Airway Road to Siempre Viva)	2046	$10,500,000	$0	$0	$0	$0	$0	$0	$10,500,000
154	OM T-19.1	SIEMPRE VIVA ROAD (Cactus Road to Britannia Boulevard)	2037	$8,300,000	$6,474,000	$0	$0	$0	$0	$0	$1,826,000
156	OM T-19.2	SIEMPRE VIVA ROAD (Britannia Boulevard to La Media Road)	2018, 2019	$12,900,000	$10,062,000	$0	$0	$0	$0	$0	$2,838,000
158	OM T-19.3	SIEMPRE VIVA ROAD (La Media Road to Harvest Road)	2018	$4,100,000	$3,198,000	$0	$0	$0	$0	$0	$902,000
160	OM T-19.4	SIEMPRE VIVA ROAD (Harvest Road to Otay Center Road)	2037	$1,500,000	$1,170,000	$0	$0	$0	$0	$0	$330,000
162	OM T-19.5	SIEMPRE VIVA ROAD (Otay Center Road to Paseo de las Americas)	2038	$1,400,000	$1,092,000	$0	$0	$0	$0	$0	$308,000
164	OM T-19.6	SIEMPRE VIVA ROAD (Paseo de las Americas to Michael Faraday Drive)	2038	$110,000	$0	$0	$0	$0	$0	$0	$110,000
166	OM T-20.1	CONTINENTAL STREET (Otay Mesa Road to Camino Maquiladora)	2024	$1,425,000	$0	$0	$0	$0	$0	$0	$1,425,000
168	OM T-20.2	CONTINENTAL STREET (Airway Road to SR-905)	2024	$3,050,000	$0	$0	$0	$0	$0	$0	$3,050,000
170	OM T-21.1	BRITANNIA BOULEVARD (Otay Mesa Road to SR 905)	2022	$400,000	$0	$312,000	$0	$0	$0	$0	$88,000
172	OM T-21.2	BRITANNIA BOULEVARD (SR 905 to Airway Road)	2022	$600,000	$0	$468,000	$0	$0	$0	$0	$132,000
174	OM T-21.3	BRITANNIA BOULEVARD (Airway Road to Siempre Viva Road)	2020	$8,600,000	$0	$6,708,000	$0	$0	$0	$0	$1,892,000
176	OM T-21.4	BRITANNIA BOULEVARD (Siempre Viva Road to Britannia Court)	2021	$6,400,000	$0	$0	$0	$0	$0	$0	$6,400,000
178	OM T-22	SOUTHBOUND TRUCK ROUTE	2014, 2015	$21,842,856	$0	$0	$0	$1,205,000	$0	$200,000	$20,437,856
180	OM T-23	OTAY MESA CENTER ROAD (Otay Mesa Road to St. Andrews Avenue)	2022	$1,125,000	$0	$0	$0	$0	$0	$0	$1,125,000
182	OM T-24	SAINT ANDREWS AVENUE (Otay Mesa Center Road to La Media Road)	2022	$500,000	$0	$0	$0	$0	$0	$0	$500,000
184	OM T-25.1	LA MEDIA ROAD (Lonestar Road to Otay Mesa Road)	2034	$10,300,000	$0	$0	$0	$0	$0	$0	$10,300,000
186	OM T-25.2	LA MEDIA ROAD (Otay Mesa Road to SR 905 Interchange)	2022	$2,400,000	$0	$1,872,000	$0	$0	$0	$0	$528,000
188	OM T-25.3	LA MEDIA ROAD (SR 905 Interchange to Airway Road)	2015, 2016, 2017	$17,600,000	$13,728,000	$0	$0	$0	$0	$0	$3,872,000
190	OM T-25.4	LA MEDIA ROAD (Airway Road to Siempre Viva Road)	2014-2017	$15,600,000	$3,459,310	$3,310,000	$0	$5,193,690	$0	$1,063,000	$2,574,000
192	OM T-26.1	LONE STAR ROAD (Ramps for Southbound SR 125 and Northbound SR 125 at La Media)	2037	$12,600,000	$3,538,080	$0	$0	$0	$0	$0	$9,061,920
194	OM T-26.2	LONE STAR ROAD (Overpass)	2037, 2038	$42,400,000	$11,905,920	$0	$0	$0	$0	$0	$30,494,080
196	OM T-26.3	LONE STAR ROAD (Overpass to Harvest Road)	2038	$14,200,000	$0	$0	$0	$0	$0	$0	$14,200,000
198	OM T-27.1	PIPER RANCH ROAD (Lone Star to SR 125 Overpass)	2040	$9,800,000	$0	$0	$0	$0	$0	$0	$9,800,000
200	OM T-27.2	PIPER RANCH ROAD (SR 125 Overpass)	2040	$29,500,000	$0	$0	$0	$0	$0	$0	$29,500,000
202	OM T-27.3	PIPER RANCH ROAD (SR 125 Overpass to Otay Mesa Road)	2040	$10,600,000	$0	$0	$0	$0	$0	$0	$10,600,000
204	OM T-28	AVENIDA COSTA AZUL (Otay Mesa Road to SR 905)	2039	$5,350,000	$0	$0	$0	$0	$0	$0	$5,350,000
206	OM T-29.1	HARVEST ROAD (Airway Road to Otay Center Drive)	2025	$1,300,000	$0	$0	$0	$0	$0	$0	$1,300,000
208	OM T-29.2	HARVEST ROAD (Otay Center Drive to Siempre Viva)	2025	$4,800,000	$0	$0	$0	$0	$0	$0	$4,800,000
210	OM T-30	OTAY CENTER DRIVE (Harvest Road to Siempre Viva Road)	2025	$650,000	$0	$0	$0	$0	$0	$0	$650,000
212	OM T-31.1	SANYO/HEINRICH HERTZ DRIVE (Otay Mesa Road to Airway Road)	2030	$8,500,000	$0	$0	$0	$0	$0	$0	$8,500,000
214	OM T-31.2	SANYO/HEINRICH HERTZ DRIVE (Airway Road to Paseo de las Americas)	2030	$83,000	$0	$0	$0	$0	$0	$0	$83,000
216	OM T-32	PASEO DE LAS AMERICAS (Airway Road to Heinrich Hertz Drive)	2030	$1,775,000	$0	$0	$0	$0	$0	$0	$1,775,000
218	OM T-33	MICHAEL FARADAY (Siempre Viva Road to Marconi Drive)	2030	$350,000	$0	$0	$0	$0	$0	$0	$350,000
220	OM T-34	MARCONI DRIVE (Peseo de las Americas to Enrico Fermi Drive)	2030	$975,000	$0	$0	$0	$0	$0	$0	$975,000
222	OM T-35	TRAFFIC SIGNALS (53 locations)	2016-2048	$18,004,773	$9,427,080	$0	$0	$0	$0	$88,773	$8,488,920
226	OM T-36	SR-125/SR-905 CONNECTORS	2025	$83,300,000	$0	$0	$0	$0	$0	$0	$83,300,000
228	OM T-37	EMERALD CREST COURT; and INNOVATIVE DRIVE	2028, 2030	$3,925,000	$0	$0	$0	$0	$0	$0	$3,925,000
230	OM T-38	ALISA COURT; and HARVEST ROAD (South of Otay Mesa Road)	2028, 2030	$2,750,000	$0	$0	$0	$0	$0	$0	$2,750,000
		TOTAL TRANSPORTATION PROJECTS		**$936,884,802**	**$395,766,925**	**$29,911,000**	**$17,544,468**	**$18,034,925**	**$2,150,993**	**$5,170,315**	**$468,306,176**
		PARK PROJECTS:									
234	OM P-2	DENNERY RANCH NEIGHBORHOOD PARK	2018-2023	$15,100,000	$15,098,097	$0	$1,904	$0	$0	$0	$0
236	OM P-4.1	CESAR SOLIS COMMUNITY PARK	2014-2016	$17,400,000	$3,421,614	$0	$13,978,386	$0	$0	$0	$0
238	OM P-4.2	CESAR SOLIS COMMUNITY PARK - RECREATION CENTER & SWIMMING POOL	2019, 2021	$11,900,000	$8,850,000	$0	$0	$0	$0	$0	$3,050,000
240	OM P-5	RIVIERA DEL SOL NEIGHBORHOOD PARK	2014-2018	$7,400,000	$5,479,162	$0	$1,920,838	$0	$0	$0	$0
242	OM P-6	HIDDEN TRAILS NEIGHBORHOOD PARK	2014-2018	$5,450,000	$4,316,804	$0	$1,133,196	$0	$0	$0	$0
244	OM P-7.1	BEYER COMMUNITY PARK	2020, 2021	$11,888,000	$8,704,000	$0	$212,000	$0	$0	$0	$2,972,000
246	OM P-7.2	BEYER COMMUNITY PARK RECREATION CENTER	2023, 2024	$6,900,000	$5,175,000	$0	$0	$0	$0	$0	$1,725,000
248	OM P-8	SOUTHWEST VILLAGE NEIGHBORHOOD PARK (A)	2022, 2023	$6,200,000	$6,200,000	$0	$0	$0	$0	$0	$0
250	OM P-9	SOUTHWEST VILLAGE NEIGHBORHOOD PARK (B)	2024, 2025	$6,200,000	$6,200,000	$0	$0	$0	$0	$0	$0
252	OM P-10	SOUTHWEST VILLAGE NEIGHBORHOOD PARK C	2026, 2027	$6,200,000	$6,200,000	$0	$0	$0	$0	$0	$0
254	OM P-11.1	GRAND PARK	2040-2043	$49,800,000	$49,800,000	$0	$0	$0	$0	$0	$0
256	OM P-11.2	GRAND PARK RECREATION CENTER	2044	$6,900,000	$6,900,000	$0	$0	$0	$0	$0	$0
258	OM P-11.3	GRAND PARK SWIMMING POOL	2044, 2045	$5,000,000	$5,000,000	$0	$0	$0	$0	$0	$0
260	OM P-12	SOUTHWEST VILLAGE NEIGHBORHOOD PARK (D)	2028, 2029	$6,200,000	$6,200,000	$0	$0	$0	$0	$0	$0
262	OM P-13	SOUTHWEST VILLAGE NEIGHBORHOOD PARK (E)	2030, 2031	$6,200,000	$6,200,000	$0	$0	$0	$0	$0	$0
264	OM P-14	SOUTHWEST VILLAGE NEIGHBORHOOD PARK (F)	2032, 2033	$6,200,000	$6,200,000	$0	$0	$0	$0	$0	$0

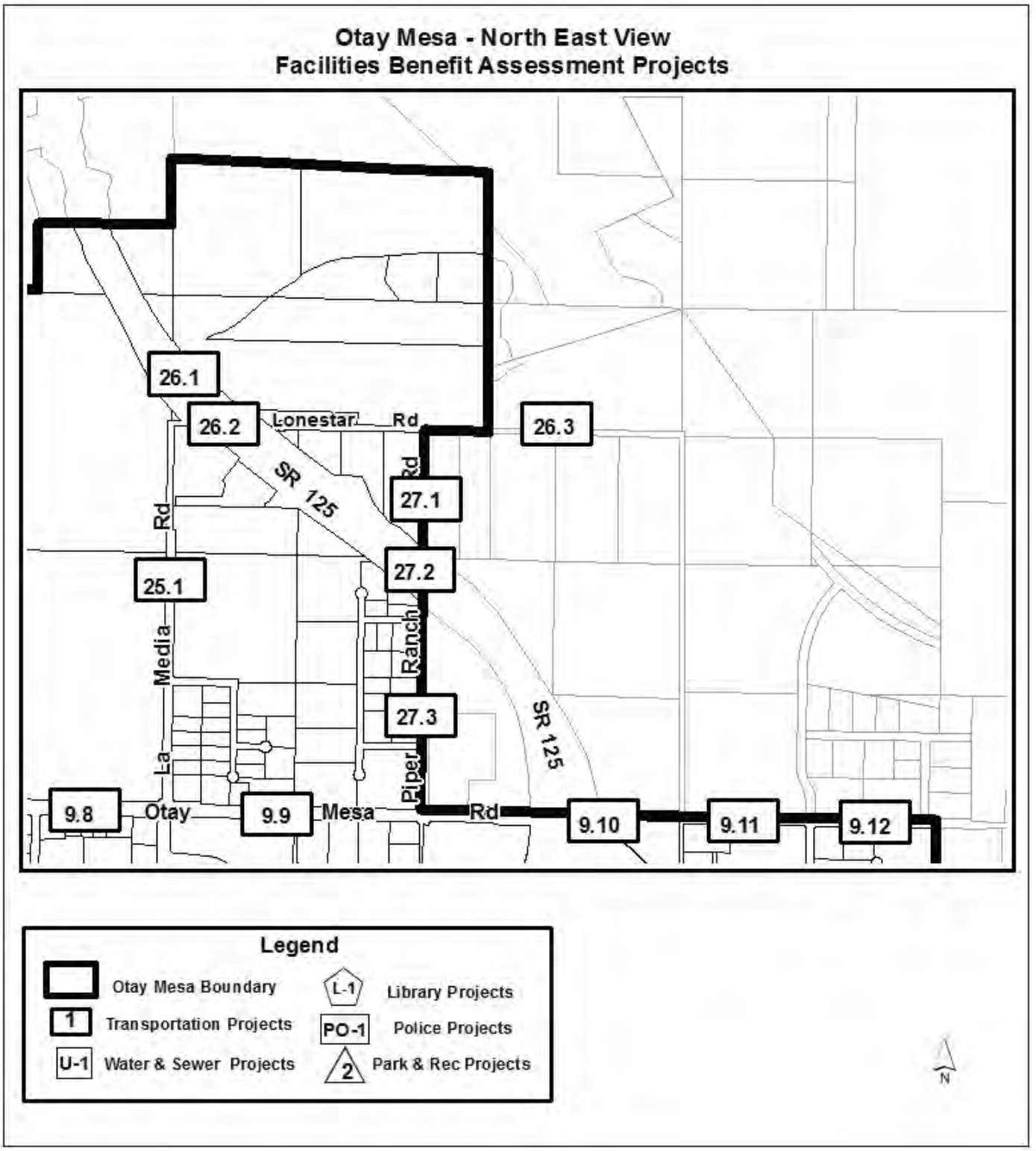
Figure 2 Otay Mesa Project Summary Map

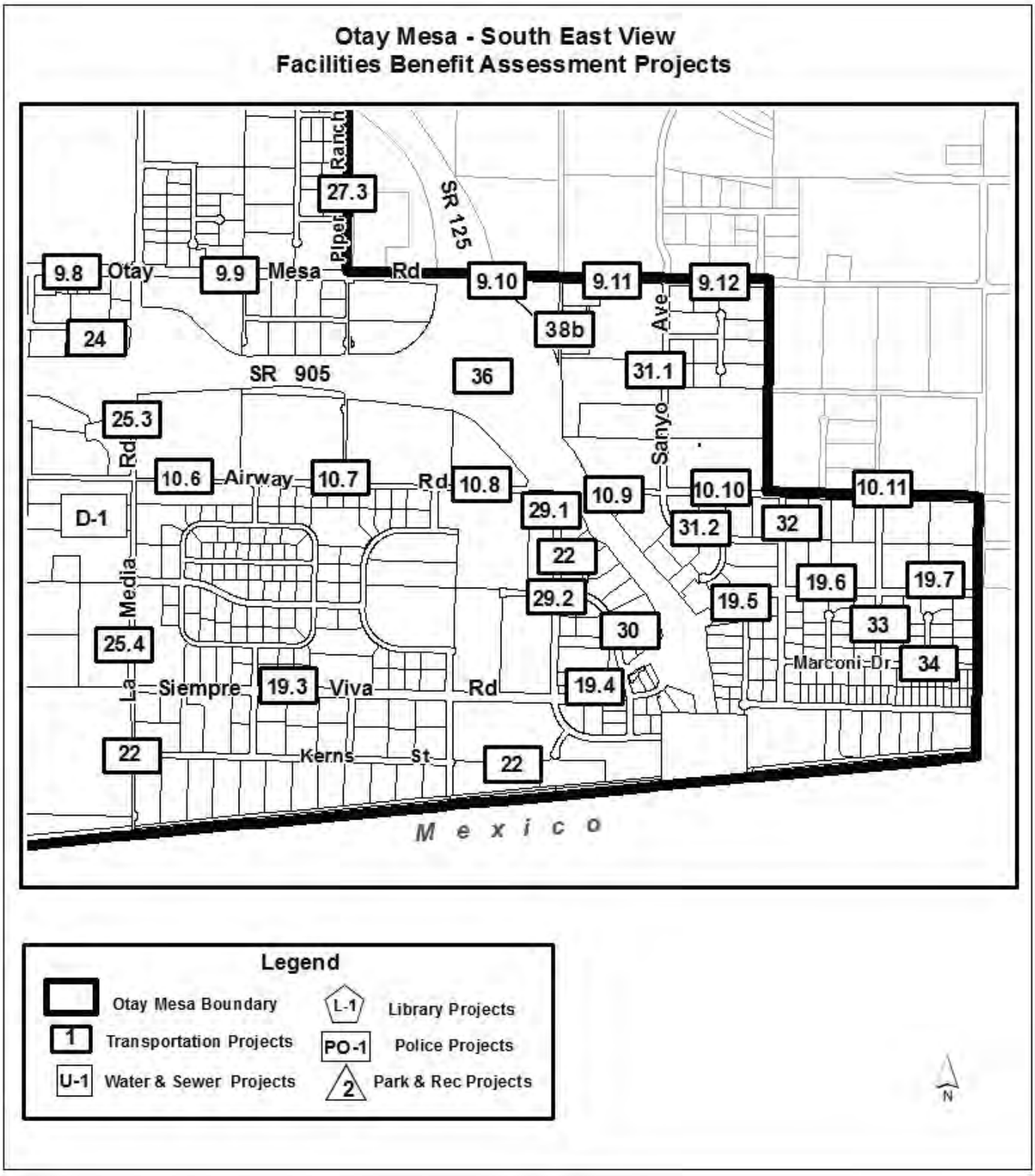



Otay Mesa - South West View
Facilities Benefit Assessment Projects
SR 905
Otay Mesa Rd
Caliente
Beyer Blvd
Mexico
6.2
11.1
9.2
13.2
16.6
11.2
5
7
10.1
11.3
16.7
10.3
11.4
10.2
16.10
16.8
11.5
16.9
8
11.6
7.1
7.2
U-7
Legend
Otay Mesa Boundary
Transportation Projects
Water & Sewer Projects
Library Projects
Police Projects
Park & Rec Projects
N


Otay Mesa - North Central View
Facilities Benefit Assessment Projects
16.2
16.1
U-4
16.3
U-6
16.4
15.1
15.2
16.5
SR 125
SR 125
26.1
26.2
Rd
25.1
La Media
Brown Field
Otay
9.3
Mesa
9.4
9.5
Rd
9.6
9.7
9.8
Legend
Otay Mesa Boundary
1
Transportation Projects
U-1
Water & Sewer Projects
L-1
Library Projects
PO-1
Police Projects
2
Park & Rec Projects
N


Otay Mesa - South Central View
Facilities Benefit Assessment Projects
Otay
Mesa
Rd
9.3
9.4
9.5
9.6
9.7
9.8
16.6
18.1
20.1
21.1
38a
23
24
18.2
Bl
16.7
5
18.3
20.2
21.2
16.10
16.8
10.3
10.4
Airway Rd
10.5
16.9
Rd
D-1
18.4
21.3
Cactus
Britannia
La Media
11.6
19.1
Siempre
Viva
19.2
Rd
22
U-7
21.4
22
Mexico
Legend
Otay Mesa Boundary
Transportation Projects
Water & Sewer Projects
Library Projects
Police Projects
Park & Rec Projects
N


Otay Mesa - North East View
Facilities Benefit Assessment Projects
26.1
26.2
Lonestar
Rd
26.3
SR 125
Rd
27.1
Rd
25.1
27.2
Ranch
Media
27.3
SR 125
La
Piper
9.8
Otay
9.9
Mesa
Rd
9.10
9.11
9.12
Legend
Otay Mesa Boundary
L-1
Library Projects
1
Transportation Projects
PO-1
Police Projects
U-1
Water & Sewer Projects
2
Park & Rec Projects
N


Otay Mesa - South East View
Facilities Benefit Assessment Projects
Ranch
27.3
Piper
SR 125
9.8
Otay
9.9
Mesa
Rd
9.10
9.11
9.12
Ave
24
38b
SR 905
36
31.1
25.3
Rd
Sanyo
10.6
Airway
10.7
Rd
10.8
10.9
10.10
10.11
D-1
29.1
31.2
32
22
Media
29.2
19.5
19.6
19.7
30
33
25.4
Marconi Dr
34
La
Siempre
19.3
Viva
Rd
19.4
22
Kerns
St
22
M e x i c o
Legend
Otay Mesa Boundary
L-1
Library Projects
1
Transportation Projects
PO-1
Police Projects
U-1
Water & Sewer Projects
2
Park & Rec Projects
N

Appendix K

Signal Warrant Worksheets

Existing + Project

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE _____

CALC _____ DATE _____

CHK _____ DATE _____

DIST ____ CO ____ RTE ____ PM ____

Major St: Otay Mesa Rd.

Minor St: Avenida Costa Azul

Critical Approach Speed 40 mph

Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph ☐ or In built up area of isolated community of < 10,000 population ☐ } **RURAL (R)**

☑ **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN ✓ RURAL _____

CONDITION A - Minimum Vehicular Volume

Satisfied ✓ Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Minimum Requirements EADT 16,408 5,087

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	6,720	3,200	2,240
8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied ✓ Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more ____ A ____ B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Opening Year 2020 With Project

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE _____

CALC _____ DATE _____

CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: Otay Mesa Rd.

Minor St: Avenida Costa Azul

Critical Approach Speed 40 mph

Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☐ or ☐ In built up area of isolated community of < 10,000 population..... } **RURAL (R)**

☑ **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN ✓ RURAL.....

CONDITION A - Minimum Vehicular Volume

Satisfied ✓ Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Minimum Requirements EADT 23,680 / 5,509

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	6,720	3,200	2,240
8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied ✓ Not Satisfied _____

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1	1
2 or More	1
2 or More	2 or More
1	2 or More

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied _____

No one condition satisfied, but following conditions fulfilled 80% or more..... A _____ B _____

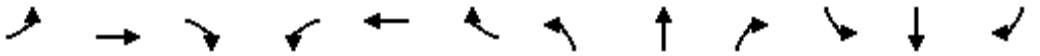
2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Appendix L

Queuing Analysis Worksheets



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	419	196	622	371	61	135	186	724	61	164	54
Future Volume (vph)	48	419	196	622	371	61	135	186	724	61	164	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	525		0	525		0	200		0	150		0
Storage Lanes	1		1	2		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		5389			1236			366			661	
Travel Time (s)		73.5			16.9			7.1			12.9	
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
Heavy Vehicles (%)	10%	8%	10%	7%	8%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	466	218	691	480	0	150	207	804	68	242	0
v/c Ratio	0.31	0.80	0.59	0.65	0.27		0.47	0.32	0.85	0.15	0.69	
Control Delay	46.5	54.2	13.0	31.7	20.9		38.4	35.3	23.5	38.1	47.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.1	0.0	0.0	
Total Delay	46.5	54.2	13.0	31.7	20.9		38.4	35.3	23.6	38.1	47.6	
Queue Length 50th (ft)	32	107	0	184	71		50	55	240	19	140	
Queue Length 95th (ft)	69	#160	69	243	101		74	90	#353	40	#262	
Internal Link Dist (ft)		5309			1156			286			581	
Turn Bay Length (ft)	525			525			200			150		
Base Capacity (vph)	234	583	370	1155	1774		327	785	944	456	356	
Starvation Cap Reductn	0	0	0	0	0		0	0	4	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.23	0.80	0.59	0.60	0.27		0.46	0.26	0.86	0.15	0.68	

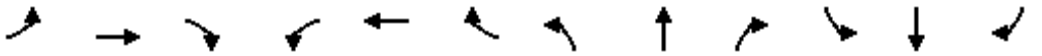
Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	977	167	51	773	251	38
Future Volume (vph)	977	167	51	773	251	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		230	100		0	0
Storage Lanes		1	1		2	0
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	25	
Link Distance (ft)	1236			339	501	
Travel Time (s)	16.9			4.6	13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1062	182	55	840	314	0
v/c Ratio	0.51	0.23	0.19	0.31	0.40	
Control Delay	11.3	3.0	23.6	4.9	18.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.3	3.0	23.6	4.9	18.7	
Queue Length 50th (ft)	81	0	15	31	39	
Queue Length 95th (ft)	142	30	50	58	88	
Internal Link Dist (ft)	1156			259	421	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	3978	1326	471	4569	2061	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.27	0.14	0.12	0.18	0.15	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	459	257	1154	464	76	195	164	453	52	239	55
Future Volume (vph)	84	459	257	1154	464	76	195	164	453	52	239	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	525		0	525		0	200		0	150		0
Storage Lanes	1		1	2		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		5389			1236			366			661	
Travel Time (s)		73.5			16.9			7.1			12.9	
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
Heavy Vehicles (%)	10%	7%	10%	6%	7%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	494	276	1241	581	0	210	176	487	56	316	0
v/c Ratio	0.54	0.80	0.70	1.00	0.29		0.91	0.24	0.52	0.33	1.03	
Control Delay	54.4	53.6	18.5	58.8	19.2		86.2	34.3	7.5	51.3	98.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	54.4	53.6	18.5	58.8	19.2		86.2	34.3	7.5	51.3	98.8	
Queue Length 50th (ft)	55	113	20	~408	85		69	50	75	18	~210	
Queue Length 95th (ft)	105	#162	106	#559	118		#138	81	125	38	#382	
Internal Link Dist (ft)		5309			1156			286			581	
Turn Bay Length (ft)	525			525			200			150		
Base Capacity (vph)	201	620	398	1236	2023		232	725	932	168	308	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.45	0.80	0.69	1.00	0.29		0.91	0.24	0.52	0.33	1.03	

Intersection Summary

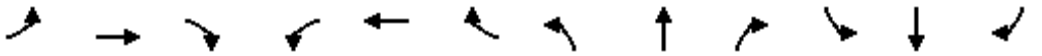
Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	721	212	103	996	663	103
Future Volume (vph)	721	212	103	996	663	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		230	100		0	0
Storage Lanes		1	1		2	0
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	25	
Link Distance (ft)	1236			339	501	
Travel Time (s)	16.9			4.6	13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	9%	5%	5%	9%	5%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	784	230	112	1083	833	0
v/c Ratio	0.52	0.36	0.40	0.46	0.69	
Control Delay	20.6	5.2	31.8	10.9	20.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	20.6	5.2	31.8	10.9	20.5	
Queue Length 50th (ft)	89	0	38	85	130	
Queue Length 95th (ft)	164	50	101	156	235	
Internal Link Dist (ft)	1156			259	421	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	2180	829	441	3443	2234	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.28	0.25	0.31	0.37	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	713	323	630	627	265	417	526	474	336	269	351
Future Volume (vph)	79	713	323	630	627	265	417	526	474	336	269	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	525		1000	525		0	200		0	150		0
Storage Lanes	2		1	2		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		5389			1236			366			661	
Travel Time (s)		73.5			16.9			7.1			12.9	
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
Heavy Vehicles (%)	10%	9%	10%	8%	9%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	83	751	340	663	939	0	439	554	499	354	652	0
v/c Ratio	0.24	0.92	0.64	0.95	0.64		0.93	0.81	0.65	0.84	0.77	
Control Delay	38.4	55.9	10.2	60.8	27.0		67.4	44.5	17.5	57.4	23.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	38.4	55.9	10.2	60.8	27.0		67.4	44.5	17.5	57.4	23.7	
Queue Length 50th (ft)	22	156	0	193	157		128	156	153	103	90	
Queue Length 95th (ft)	44	#236	78	#302	205		#219	215	261	#181	155	
Internal Link Dist (ft)		5309			1156			286			581	
Turn Bay Length (ft)	525		1000	525			200			150		
Base Capacity (vph)	505	813	532	695	1475		470	725	773	422	860	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.16	0.92	0.64	0.95	0.64		0.93	0.76	0.65	0.84	0.76	

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1334	189	51	1280	241	86
Future Volume (vph)	1334	189	51	1280	241	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		230	100		0	0
Storage Lanes		1	1		2	0
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	25	
Link Distance (ft)	1236			339	501	
Travel Time (s)	16.9			4.6	13.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1404	199	54	1347	345	0
v/c Ratio	0.57	0.22	0.22	0.46	0.48	
Control Delay	11.0	2.3	31.0	5.4	21.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.0	2.3	31.0	5.4	21.8	
Queue Length 50th (ft)	124	0	18	62	48	
Queue Length 95th (ft)	201	28	61	112	108	
Internal Link Dist (ft)	1156			259	421	
Turn Bay Length (ft)		230	100			
Base Capacity (vph)	3858	1294	320	4373	1445	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.15	0.17	0.31	0.24	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	616	533	929	825	343	307	325	405	185	370	77
Future Volume (vph)	308	616	533	929	825	343	307	325	405	185	370	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	525		1000	525		0	200		0	150		0
Storage Lanes	2		1	2		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			35			35	
Link Distance (ft)		5389			1236			366			661	
Travel Time (s)		73.5			16.9			7.1			12.9	
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
Heavy Vehicles (%)	10%	8%	10%	6%	8%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	324	648	561	978	1229	0	323	342	426	195	470	0
v/c Ratio	0.55	0.62	1.01	1.05	0.81		0.99	0.70	0.55	0.60	0.95	
Control Delay	42.0	38.3	59.9	78.4	32.8		81.0	39.0	8.1	52.3	71.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	42.0	38.3	59.9	78.4	32.8		81.0	39.0	8.1	52.3	71.4	
Queue Length 50th (ft)	100	137	~194	~351	232		105	109	62	62	151	
Queue Length 95th (ft)	146	178	#424	#474	287		m#192	m157	m90	#115	#254	
Internal Link Dist (ft)		5309			1156			286			581	
Turn Bay Length (ft)	525		1000	525			200			150		
Base Capacity (vph)	584	1047	556	934	1618		327	554	781	326	494	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.55	0.62	1.01	1.05	0.76		0.99	0.62	0.55	0.60	0.95	

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

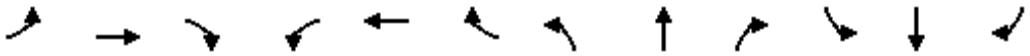
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	980	226	103	1453	643	204
Future Volume (vph)	980	226	103	1453	643	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		230	150		0	0
Storage Lanes		1	1		2	0
Taper Length (ft)			90		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	50			50	25	
Link Distance (ft)	1236			1453	501	
Travel Time (s)	16.9			19.8	13.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1032	238	108	1529	892	0
v/c Ratio	0.59	0.33	0.44	0.62	0.75	
Control Delay	23.1	4.8	39.4	14.0	24.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.1	4.8	39.4	14.0	24.7	
Queue Length 50th (ft)	143	0	46	163	172	
Queue Length 95th (ft)	252	52	114	282	290	
Internal Link Dist (ft)	1156			1373	421	
Turn Bay Length (ft)		230	150			
Base Capacity (vph)	2220	850	404	3428	1939	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.46	0.28	0.27	0.45	0.46	

Intersection Summary	
Area Type:	Other

Appendix M

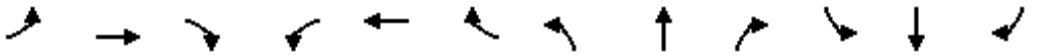
Intersection LOS Worksheets With Alternative Industrial Project

Existing Plus Project



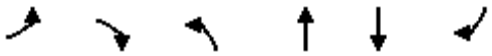
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	206	83	326	208	36	24	119	503	27	93	17
Future Volume (vph)	40	206	83	326	208	36	24	119	503	27	93	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1556	4673	1392	1626	4505		3019	3112	1392	3019	1600	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1556	4673	1392	1626	4505		3019	3112	1392	3019	1600	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	229	92	362	231	40	27	132	559	30	103	19
RTOR Reduction (vph)	0	0	82	0	24	0	0	0	404	0	6	0
Lane Group Flow (vph)	44	229	10	362	247	0	27	132	155	30	116	0
Heavy Vehicles (%)	16%	11%	16%	11%	12%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	6.3	10.5	10.5	29.9	34.1		4.3	27.8	27.8	7.1	30.6	
Effective Green, g (s)	6.3	10.5	10.5	29.9	34.1		4.3	27.8	27.8	7.1	30.6	
Actuated g/C Ratio	0.06	0.10	0.10	0.30	0.34		0.04	0.28	0.28	0.07	0.31	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	98	490	146	486	1536		129	865	386	214	489	
v/s Ratio Prot	0.03	c0.05		c0.22	c0.05		0.01	0.04		c0.01	0.07	
v/s Ratio Perm			0.01						c0.11			
v/c Ratio	0.45	0.47	0.07	0.74	0.16		0.21	0.15	0.40	0.14	0.24	
Uniform Delay, d1	45.2	42.1	40.3	31.6	23.0		46.2	27.2	29.3	43.6	26.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.74	0.53	1.97	1.00	1.00	
Incremental Delay, d2	3.2	0.7	0.2	6.1	0.0		0.8	0.4	3.0	0.3	1.1	
Delay (s)	48.4	42.8	40.5	37.7	23.0		35.2	14.7	60.8	43.9	27.1	
Level of Service	D	D	D	D	C		D	B	E	D	C	
Approach Delay (s)		42.9			31.4			51.3			30.4	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



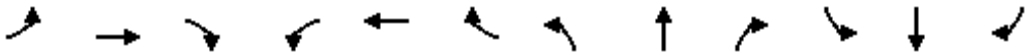
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	55	42	65	133	94	541	64	0	526	23
Future Volume (vph)	7	0	55	42	65	133	94	541	64	0	526	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1556	1392		1478	1551	1429	3019	3195	1392		4550	1429
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1556	1392		1478	1551	1429	3019	3195	1392		4550	1429
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	8	0	62	47	73	149	106	608	72	0	591	26
RTOR Reduction (vph)	0	59	0	0	0	133	0	0	22	0	0	12
Lane Group Flow (vph)	8	3	0	42	78	16	106	608	50	0	591	14
Heavy Vehicles (%)	16%	16%	16%	16%	16%	13%	16%	13%	16%	16%	14%	13%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	5.0	5.0		10.5	10.5	10.5	8.9	69.2	69.2		55.6	55.6
Effective Green, g (s)	5.0	5.0		10.5	10.5	10.5	8.9	69.2	69.2		55.6	55.6
Actuated g/C Ratio	0.05	0.05		0.10	0.10	0.10	0.09	0.69	0.69		0.56	0.56
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	77	69		155	162	150	268	2210	963		2529	794
v/s Ratio Prot	c0.01	0.00		0.03	c0.05		c0.04	c0.19			0.13	
v/s Ratio Perm						0.01			0.04			0.01
v/c Ratio	0.10	0.04		0.27	0.48	0.10	0.40	0.28	0.05		0.23	0.02
Uniform Delay, d1	45.4	45.2		41.2	42.2	40.5	43.0	5.9	4.9		11.3	10.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.75	0.20	0.00		0.56	1.00
Incremental Delay, d2	0.6	0.3		0.9	2.2	0.3	0.8	0.3	0.1		0.2	0.0
Delay (s)	46.0	45.5		42.2	44.4	40.8	33.3	1.4	0.1		6.5	10.0
Level of Service	D	D		D	D	D	C	A	A		A	A
Approach Delay (s)		45.5			42.1			5.6			6.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	549	310	4	148	189	142
Future Volume (vph)	549	310	4	148	189	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3045	2450	3019	4631	3167	1417
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3045	2450	3019	4631	3167	1417
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	603	341	4	163	208	156
RTOR Reduction (vph)	0	251	0	0	0	25
Lane Group Flow (vph)	603	90	4	163	208	131
Heavy Vehicles (%)	15%	16%	16%	12%	14%	14%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	26.4	26.4	1.2	63.4	57.5	83.9
Effective Green, g (s)	26.4	26.4	1.2	63.4	57.5	83.9
Actuated g/C Ratio	0.26	0.26	0.01	0.63	0.58	0.84
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	803	646	36	2936	1821	1261
v/s Ratio Prot	c0.20		0.00	c0.04	c0.07	0.03
v/s Ratio Perm		0.04				0.06
v/c Ratio	0.75	0.14	0.11	0.06	0.11	0.10
Uniform Delay, d1	33.8	28.1	48.9	6.9	9.7	1.4
Progression Factor	1.00	1.00	1.00	1.00	0.65	9.54
Incremental Delay, d2	4.0	0.1	1.4	0.0	0.1	0.0
Delay (s)	37.8	28.2	50.2	7.0	6.4	13.6
Level of Service	D	C	D	A	A	B
Approach Delay (s)	34.3			8.0	9.5	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	41	23	11	58	131	0	0	0	284	245	48
Future Volume (vph)	9	41	23	11	58	131	0	0	0	284	245	48
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
Hourly flow rate (vph)	9	43	24	12	61	138	0	0	0	299	258	51

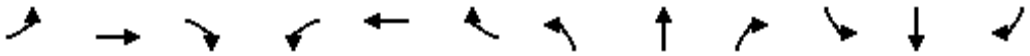
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	76	211	428	180
Volume Left (vph)	9	12	299	0
Volume Right (vph)	24	138	0	51
Hadj (s)	0.08	-0.13	0.62	0.05
Departure Headway (s)	5.8	5.4	5.9	5.4
Degree Utilization, x	0.12	0.32	0.71	0.27
Capacity (veh/h)	569	627	591	657
Control Delay (s)	9.7	10.9	20.7	9.1
Approach Delay (s)	9.7	10.9	17.2	
Approach LOS	A	B	C	

Intersection Summary				
Delay	15.1			
Level of Service	C			
Intersection Capacity Utilization	36.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	59	0	0	0	104	148
Future Volume (Veh/h)	59	0	0	0	104	148
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	65	0	0	0	114	163
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	310	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	89	100			93	
cM capacity (veh/h)	575	1040			1525	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	65	168	109
Volume Left	65	114	0
Volume Right	0	0	0
cSH	575	1525	1700
Volume to Capacity	0.11	0.07	0.06
Queue Length 95th (ft)	9	6	0
Control Delay (s)	12.1	5.3	0.0
Lane LOS	B	A	
Approach Delay (s)	12.1	3.2	
Approach LOS	B		

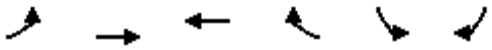
Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	39	5	17	50	0	0	0	0	115	81	4
Future Volume (vph)	0	39	5	17	50	0	0	0	0	115	81	4
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
Hourly flow rate (vph)	0	43	6	19	56	0	0	0	0	128	90	4

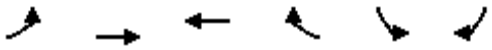
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	49	75	173	49
Volume Left (vph)	0	19	128	0
Volume Right (vph)	6	0	0	4
Hadj (s)	0.20	0.32	0.64	0.21
Departure Headway (s)	4.8	4.9	5.5	5.0
Degree Utilization, x	0.07	0.10	0.26	0.07
Capacity (veh/h)	707	698	643	694
Control Delay (s)	8.1	8.4	9.2	7.2
Approach Delay (s)	8.1	8.4	8.8	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	23.3%	ICU Level of Service	A	
Analysis Period (min)	15			



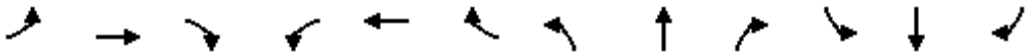
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	436	105	0	440	444
Future Volume (vph)	0	436	105	0	440	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4510	4550		3019	1392
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4510	4550		3019	1392
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	484	117	0	489	493
RTOR Reduction (vph)	0	0	0	0	0	375
Lane Group Flow (vph)	0	484	117	0	489	118
Heavy Vehicles (%)	16%	15%	14%	16%	16%	16%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		55.1	55.1		21.6	21.6
Effective Green, g (s)		55.1	55.1		21.6	21.6
Actuated g/C Ratio		0.61	0.61		0.24	0.24
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2761	2785		724	334
v/s Ratio Prot		c0.11	0.03		c0.16	
v/s Ratio Perm						0.08
v/c Ratio		0.18	0.04		0.68	0.35
Uniform Delay, d1		7.6	6.9		31.0	28.4
Progression Factor		1.00	1.02		1.00	1.00
Incremental Delay, d2		0.1	0.0		2.5	0.6
Delay (s)		7.7	7.1		33.5	29.1
Level of Service		A	A		C	C
Approach Delay (s)		7.7	7.1		31.3	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	187	689	106	64	0	0
Future Volume (vph)	187	689	106	64	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	1.00	0.95	0.91	0.91		
Frt	1.00	1.00	0.98	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1570	3112	2977	1267		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1570	3112	2977	1267		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	212	783	120	73	0	0
RTOR Reduction (vph)	0	0	5	20	0	0
Lane Group Flow (vph)	213	783	130	38	0	0
Heavy Vehicles (%)	15%	16%	14%	16%	16%	16%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	17.8	90.0	59.3	59.3		
Effective Green, g (s)	17.8	90.0	59.3	59.3		
Actuated g/C Ratio	0.20	1.00	0.66	0.66		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	310	3112	1961	834		
v/s Ratio Prot	c0.14	c0.25	0.04			
v/s Ratio Perm				0.03		
v/c Ratio	0.69	0.25	0.07	0.05		
Uniform Delay, d1	33.5	0.0	5.5	5.4		
Progression Factor	0.77	1.00	1.00	1.00		
Incremental Delay, d2	6.1	0.2	0.1	0.1		
Delay (s)	31.8	0.2	5.5	5.5		
Level of Service	C	A	A	A		
Approach Delay (s)		7.0	5.5		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	684	0	0	286	402	214	0	348	0	0	0
Future Volume (vph)	115	684	0	0	286	402	214	0	348	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3964	1197		1556	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3964	1197		1556	2450			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	120	712	0	0	298	419	223	0	362	0	0	0
RTOR Reduction (vph)	0	0	0	0	94	97	0	0	287	0	0	0
Lane Group Flow (vph)	120	713	0	0	414	112	0	223	76	0	0	0
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	10.5	69.0			53.8	53.8		20.8	20.8			
Effective Green, g (s)	10.5	69.0			53.8	53.8		20.8	20.8			
Actuated g/C Ratio	0.10	0.69			0.54	0.54		0.21	0.21			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	316	3085			2132	643		323	509			
v/s Ratio Prot	c0.04	c0.16			0.10							
v/s Ratio Perm						0.09		0.14	0.03			
v/c Ratio	0.38	0.23			0.19	0.17		0.69	0.15			
Uniform Delay, d1	41.7	5.7			11.9	11.8		36.6	32.4			
Progression Factor	0.97	0.88			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.2			0.2	0.6		6.2	0.1			
Delay (s)	41.3	5.2			12.1	12.4		42.9	32.5			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		10.4			12.2			36.4			0.0	
Approach LOS		B			B			D			A	

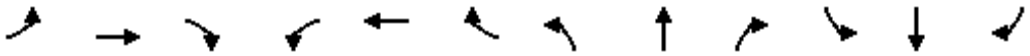
Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	261	127	98	736	0	562
Future Volume (vph)	261	127	98	736	0	562
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4252		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4252		3019	4472		2450
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	311	151	117	876	0	669
RTOR Reduction (vph)	31	0	0	0	0	602
Lane Group Flow (vph)	431	0	117	876	0	67
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	79.8		10.0	100.0		10.0
Effective Green, g (s)	79.8		10.0	100.0		10.0
Actuated g/C Ratio	0.80		0.10	1.00		0.10
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3393		301	4472		245
v/s Ratio Prot	0.10		c0.04	c0.20		0.03
v/s Ratio Perm						
v/c Ratio	0.13		0.39	0.20		0.27
Uniform Delay, d1	2.3		42.1	0.0		41.6
Progression Factor	0.32		0.89	1.00		1.00
Incremental Delay, d2	0.1		0.8	0.1		0.6
Delay (s)	0.8		38.5	0.1		42.2
Level of Service	A		D	A		D
Approach Delay (s)	0.8			4.6	42.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	137	26	230	361	141	47	23	134	127	50	81
Future Volume (vph)	20	137	26	230	361	141	47	23	134	127	50	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1556	4365		1556	4283			1585	1392		2894	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.79	
Satd. Flow (perm)	1556	4365		1556	4283			911	1392		2338	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	149	28	250	392	153	51	25	146	138	54	88
RTOR Reduction (vph)	0	14	0	0	41	0	0	0	123	0	74	0
Lane Group Flow (vph)	22	163	0	250	504	0	0	76	23	0	206	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.6	49.1		21.0	64.9			15.7	15.7		15.7	
Effective Green, g (s)	4.6	49.1		21.0	64.9			15.7	15.7		15.7	
Actuated g/C Ratio	0.05	0.49		0.21	0.65			0.16	0.16		0.16	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	71	2143		326	2779			143	218		367	
v/s Ratio Prot	c0.01	0.04		c0.16	c0.12							
v/s Ratio Perm								0.08	0.02		c0.09	
v/c Ratio	0.31	0.08		0.77	0.18			0.53	0.11		0.56	
Uniform Delay, d1	46.2	13.5		37.2	7.0			38.8	36.1		39.0	
Progression Factor	1.00	1.00		0.81	0.84			1.00	1.00		1.00	
Incremental Delay, d2	0.9	0.1		9.3	0.1			5.6	0.4		2.7	
Delay (s)	47.1	13.5		39.5	6.0			44.3	36.5		41.7	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		17.2			16.5			39.2			41.7	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

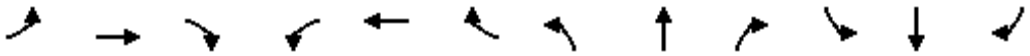
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	75	61	80	93	38
Future Vol, veh/h	95	75	61	80	93	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	113	89	73	95	111	45
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	9.9	8.4	10.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	71%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	100%
Vol Right, %	29%	44%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	170	61	40	40
LT Vol	93	0	61	0	0
Through Vol	0	95	0	40	40
RT Vol	38	75	0	0	0
Lane Flow Rate	156	202	73	48	48
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.252	0.287	0.12	0.072	0.046
Departure Headway (Hd)	5.807	5.105	5.945	5.442	3.455
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	618	702	603	658	1031
Service Time	3.556	2.844	3.685	3.181	1.194
HCM Lane V/C Ratio	0.252	0.288	0.121	0.073	0.047
HCM Control Delay	10.5	9.9	9.5	8.6	6.4
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	1	1.2	0.4	0.2	0.1



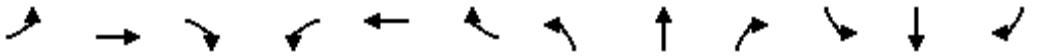
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	180	23	82	382	4	29	0	22	0	0	15
Future Volume (vph)	28	180	23	82	382	4	29	0	22	0	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4396		1556	4465			1556	1392		1417	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4396		1556	4465			1638	1392		1417	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	188	24	85	398	4	30	0	23	0	0	16
RTOR Reduction (vph)	0	17	0	0	1	0	0	0	22	0	15	0
Lane Group Flow (vph)	29	195	0	85	401	0	0	30	1	0	1	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.7	9.5		5.2	14.0			1.9	1.9		1.9	
Effective Green, g (s)	0.7	9.5		5.2	14.0			1.9	1.9		1.9	
Actuated g/C Ratio	0.02	0.31		0.17	0.45			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	35	1355		262	2029			101	85		87	
v/s Ratio Prot	0.02	0.04		c0.05	c0.09						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.83	0.14		0.32	0.20			0.30	0.02		0.01	
Uniform Delay, d1	15.0	7.7		11.3	5.0			13.8	13.6		13.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	81.6	0.1		0.3	0.1			0.6	0.0		0.0	
Delay (s)	96.6	7.9		11.5	5.1			14.4	13.6		13.6	
Level of Service	F	A		B	A			B	B		B	
Approach Delay (s)		18.5			6.3			14.1			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	30.8	Sum of lost time (s)	14.2
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	161	113	163	188	210	227
Future Volume (vph)	161	113	163	188	210	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4631	1392	1556	4550	3019	1392
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4631	1392	1556	4550	3019	1392
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	181	127	183	211	236	255
RTOR Reduction (vph)	0	77	0	0	0	206
Lane Group Flow (vph)	181	50	183	211	236	49
Heavy Vehicles (%)	12%	16%	16%	14%	16%	16%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	10.0	19.5	10.3	26.0	9.5	9.5
Effective Green, g (s)	10.0	19.5	10.3	26.0	9.5	9.5
Actuated g/C Ratio	0.20	0.39	0.21	0.53	0.19	0.19
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	935	548	323	2389	579	267
v/s Ratio Prot	c0.04	0.02	c0.12	0.05	c0.08	
v/s Ratio Perm		0.02				0.04
v/c Ratio	0.19	0.09	0.57	0.09	0.41	0.18
Uniform Delay, d1	16.4	9.4	17.6	5.8	17.5	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	2.3	0.0	0.5	0.3
Delay (s)	16.5	9.5	19.9	5.9	18.0	17.1
Level of Service	B	A	B	A	B	B
Approach Delay (s)	13.6			12.4	17.5	
Approach LOS	B			B	B	

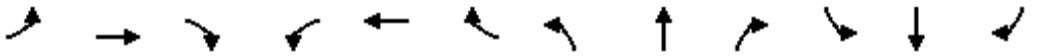
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	49.5	Sum of lost time (s)	19.7
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	10	0	34	17	107	2	128	31	310	288	71
Future Volume (vph)	22	10	0	34	17	107	2	128	31	310	288	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1556	1638			1585	1392	1556	3022		1556	1638	1392
Flt Permitted	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1556	1638			1585	1392	1556	3022		1556	1638	1392
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	11	0	38	19	119	2	142	34	344	320	79
RTOR Reduction (vph)	0	0	0	0	0	105	0	23	0	0	0	41
Lane Group Flow (vph)	24	11	0	0	57	14	2	153	0	344	320	38
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	1.9	1.9			6.4	6.4	0.6	7.7		19.3	26.2	26.2
Effective Green, g (s)	1.9	1.9			6.4	6.4	0.6	7.7		19.3	26.2	26.2
Actuated g/C Ratio	0.03	0.03			0.12	0.12	0.01	0.14		0.35	0.48	0.48
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	53	56			184	161	16	422		545	778	661
v/s Ratio Prot	c0.02	0.01			c0.04		0.00	0.05		c0.22	c0.20	
v/s Ratio Perm						0.01						0.03
v/c Ratio	0.45	0.20			0.31	0.09	0.12	0.36		0.63	0.41	0.06
Uniform Delay, d1	26.1	25.9			22.3	21.7	27.0	21.5		14.9	9.4	7.8
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	0.6			1.2	0.3	1.3	0.7		1.8	0.5	0.0
Delay (s)	28.3	26.5			23.5	22.0	28.3	22.2		16.7	9.9	7.8
Level of Service	C	C			C	C	C	C		B	A	A
Approach Delay (s)		27.7			22.5			22.2			12.8	
Approach LOS		C			C			C			B	

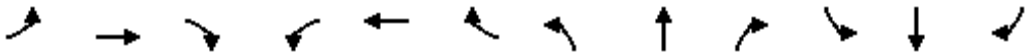
Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



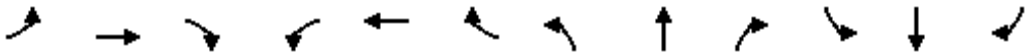
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	134	106	43	168	118	59	35	19	106	26	65
Future Volume (vph)	121	134	106	43	168	118	59	35	19	106	26	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3019	4590	1392	3019	4510	1417	1556	1551		1583	1638	2450
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3019	4590	1392	3019	4510	1417	1556	1551		1583	1638	2450
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	146	161	128	52	202	142	71	42	23	128	31	78
RTOR Reduction (vph)	0	0	92	0	0	113	0	21	0	0	0	56
Lane Group Flow (vph)	146	161	36	52	202	29	71	44	0	128	31	22
Heavy Vehicles (%)	16%	13%	16%	16%	15%	14%	16%	16%	16%	14%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.3	17.9	17.9	5.4	13.0	13.0	8.5	5.4		10.9	7.8	18.1
Effective Green, g (s)	10.3	17.9	17.9	5.4	13.0	13.0	8.5	5.4		10.9	7.8	18.1
Actuated g/C Ratio	0.16	0.28	0.28	0.08	0.20	0.20	0.13	0.08		0.17	0.12	0.28
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	483	1277	387	253	911	286	205	130		268	198	689
v/s Ratio Prot	c0.05	c0.04		0.02	c0.04		0.05	c0.03		c0.08	0.02	0.01
v/s Ratio Perm			0.03			0.02						0.00
v/c Ratio	0.30	0.13	0.09	0.21	0.22	0.10	0.35	0.34		0.48	0.16	0.03
Uniform Delay, d1	23.8	17.4	17.2	27.5	21.4	20.9	25.4	27.8		24.1	25.3	16.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.1	0.4	0.1	0.2	1.0	1.5		1.3	0.4	0.0
Delay (s)	24.2	17.4	17.3	27.9	21.5	21.0	26.4	29.3		25.5	25.7	16.8
Level of Service	C	B	B	C	C	C	C	C		C	C	B
Approach Delay (s)		19.6			22.2			27.8			22.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	24.7
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



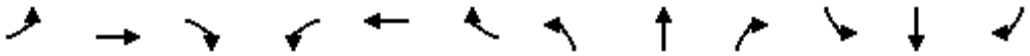
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	233	4	61	1	308	568	196	440	0
Future Volume (vph)	0	0	5	233	4	61	1	308	568	196	440	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor			1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt			0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected			1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)			1392	3019	1638	1442	1556	3112	1392	3072	3112	
Flt Permitted			1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)			1392	3019	1638	1442	1556	3112	1392	3072	3112	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	0	0	7	307	5	80	1	405	747	258	579	0
RTOR Reduction (vph)	0	0	7	0	0	63	0	0	377	0	0	0
Lane Group Flow (vph)	0	0	0	307	5	17	1	405	370	258	579	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	12%	16%	16%	16%	14%	16%	16%
Turn Type	Prot		pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)			1.8	14.5	13.0	13.0	1.8	14.5	29.0	16.9	29.6	
Effective Green, g (s)			1.8	14.5	13.0	13.0	1.8	14.5	29.0	16.9	29.6	
Actuated g/C Ratio			0.03	0.23	0.21	0.21	0.03	0.23	0.46	0.27	0.47	
Clearance Time (s)			5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)			40	699	340	299	44	720	760	829	1471	
v/s Ratio Prot			0.00	0.10	0.00		0.00	0.13	c0.11	c0.08	c0.19	
v/s Ratio Perm						0.01			0.15			
v/c Ratio			0.01	0.44	0.01	0.06	0.02	0.56	0.49	0.31	0.39	
Uniform Delay, d1			29.5	20.6	19.7	19.9	29.5	21.2	11.6	18.2	10.7	
Progression Factor			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2			0.1	0.4	0.0	0.1	0.2	1.0	0.5	0.2	0.2	
Delay (s)			29.6	21.0	19.7	20.0	29.8	22.3	12.1	18.4	10.9	
Level of Service			C	C	B	B	C	C	B	B	B	
Approach Delay (s)		29.6			20.8			15.7			13.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	62.6	Sum of lost time (s)	23.4
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	41	3	48	214	787	0	0	266	410
Future Volume (vph)	0	0	0	41	3	48	214	787	0	0	266	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.91	
Flt Protected					0.96	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1729	1392	1719	4472			4222	
Flt Permitted					0.96	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1729	1392	1719	4472			4222	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	0	0	53	4	62	274	1009	0	0	341	526
RTOR Reduction (vph)	0	0	0	0	0	57	0	0	0	0	235	0
Lane Group Flow (vph)	0	0	0	0	57	5	274	1009	0	0	632	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	16%	5%	16%	5%	5%	5%	16%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.3	7.3	19.7	72.5			48.1	
Effective Green, g (s)					7.3	7.3	19.7	72.5			48.1	
Actuated g/C Ratio					0.08	0.08	0.22	0.81			0.53	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					140	112	376	3602			2256	
v/s Ratio Prot							c0.16	c0.23			0.15	
v/s Ratio Perm					0.03	0.00						
v/c Ratio					0.41	0.04	0.73	0.28			0.28	
Uniform Delay, d1					39.3	38.1	32.7	2.2			11.5	
Progression Factor					1.00	1.00	0.89	0.29			1.00	
Incremental Delay, d2					1.9	0.2	5.1	0.1			0.3	
Delay (s)					41.2	38.3	34.2	0.8			11.8	
Level of Service					D	D	C	A			B	
Approach Delay (s)		0.0			39.7			7.9			11.8	
Approach LOS		A			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	557	1	375	0	0	0	0	426	60	67	233	0
Future Volume (vph)	557	1	375	0	0	0	0	426	60	67	233	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.87						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1478	1466						4849		1556	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1478	1466						4849		1556	3438	
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	753	1	507	0	0	0	0	576	81	91	315	0
RTOR Reduction (vph)	0	162	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	663	436	0	0	0	0	0	638	0	91	315	0
Heavy Vehicles (%)	16%	5%	5%	5%	5%	5%	5%	5%	5%	16%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	46.2	46.2						22.1		6.8	33.6	
Effective Green, g (s)	46.2	46.2						22.1		6.8	33.6	
Actuated g/C Ratio	0.51	0.51						0.25		0.08	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	758	752						1190		117	1283	
v/s Ratio Prot	c0.45	0.30						c0.13		c0.06	0.09	
v/s Ratio Perm												
v/c Ratio	0.87	0.58						0.54		0.78	0.25	
Uniform Delay, d1	19.3	15.2						29.5		40.9	19.5	
Progression Factor	1.00	1.00						1.00		0.98	0.92	
Incremental Delay, d2	11.0	1.1						1.7		26.2	0.4	
Delay (s)	30.3	16.3						31.2		66.2	18.3	
Level of Service	C	B						C		E	B	
Approach Delay (s)		23.7			0.0			31.2			29.0	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	93.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	398	0	4	0	1	1	17	85	0	12	116	468
Future Vol, veh/h	398	0	4	0	1	1	17	85	0	12	116	468
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	577	0	6	0	1	1	25	123	0	17	168	678
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	23.7	11.9	12	155.3
HCM LOS	C	B	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	98%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	50%	0%	100%	8%
Vol Right, %	0%	0%	0%	0%	2%	0%	0%	50%	0%	0%	92%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	43	43	203	199	0	0	2	12	77	507
LT Vol	17	0	0	203	195	0	0	0	12	0	0
Through Vol	0	43	43	0	0	0	0	1	0	77	39
RT Vol	0	0	0	0	4	0	0	1	0	0	468
Lane Flow Rate	25	62	62	294	288	0	0	3	17	112	734
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.06	0.142	0.112	0.631	0.617	0	0	0.007	0.037	0.224	1.33
Departure Headway (Hd)	9.45	8.93	7.076	8.253	8.229	9.482	9.482	9.126	7.692	7.181	6.52
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	381	404	509	441	441	0	0	395	466	501	558
Service Time	7.15	6.63	4.776	5.953	5.929	7.182	7.182	6.826	5.426	4.915	4.253
HCM Lane V/C Ratio	0.066	0.153	0.122	0.667	0.653	0	0	0.008	0.036	0.224	1.315
HCM Control Delay	12.8	13.1	10.7	24	23.3	12.2	12.2	11.9	10.7	12	180.6
HCM Lane LOS	B	B	B	C	C	N	N	B	B	B	F
HCM 95th-tile Q	0.2	0.5	0.4	4.2	4	0	0	0	0.1	0.9	31.4

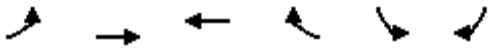
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	24	312	6	31	297
Future Volume (Veh/h)	4	24	312	6	31	297
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	4	26	359	7	36	341
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	772	359			359	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	772	359			359	
tC, single (s)	6.6	6.4			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	96			97	
cM capacity (veh/h)	338	655			1126	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	30	359	7	36	341
Volume Left	4	0	0	36	0
Volume Right	26	0	7	0	0
cSH	582	1700	1700	1126	1700
Volume to Capacity	0.05	0.21	0.00	0.03	0.20
Queue Length 95th (ft)	4	0	0	2	0
Control Delay (s)	11.5	0.0	0.0	8.3	0.0
Lane LOS	B			A	
Approach Delay (s)	11.5	0.0		0.8	
Approach LOS	B				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		

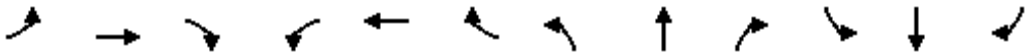
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	573	162	41	551	19	4
Future Volume (vph)	573	162	41	551	19	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4472	1538	1719	4472	3335	1538
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4472	1538	1719	4472	3335	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	623	176	45	599	21	4
RTOR Reduction (vph)	0	93	0	0	0	4
Lane Group Flow (vph)	623	83	45	599	21	0
Heavy Vehicles (%)	16%	5%	5%	16%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	12.0	12.0	0.7	16.7	0.6	0.6
Effective Green, g (s)	12.0	12.0	0.7	16.7	0.6	0.6
Actuated g/C Ratio	0.47	0.47	0.03	0.66	0.02	0.02
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2121	729	47	2951	79	36
v/s Ratio Prot	c0.14		c0.03	0.13	c0.01	
v/s Ratio Perm		0.05				0.00
v/c Ratio	0.29	0.11	0.96	0.20	0.27	0.00
Uniform Delay, d1	4.1	3.7	12.3	1.7	12.1	12.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	114.0	0.0	1.8	0.0
Delay (s)	4.1	3.8	126.3	1.7	13.9	12.1
Level of Service	A	A	F	A	B	B
Approach Delay (s)	4.1			10.4	13.6	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	25.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



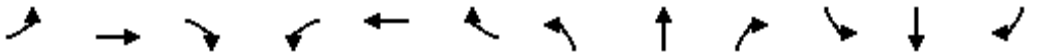
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	203	382	457	86	62	129
Future Volume (vph)	203	382	457	86	62	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Lane Util. Factor	0.97	0.95	0.91	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.92	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (prot)	3019	3139	4510	1392	2864	1267
Flt Permitted	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (perm)	3019	3139	4510	1392	2864	1267
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	218	411	491	92	67	139
RTOR Reduction (vph)	0	0	0	66	62	61
Lane Group Flow (vph)	218	411	491	26	75	8
Heavy Vehicles (%)	16%	15%	15%	16%	16%	16%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	9.0	26.5	12.3	12.3	5.3	5.3
Effective Green, g (s)	9.0	26.5	12.3	12.3	5.3	5.3
Actuated g/C Ratio	0.20	0.60	0.28	0.28	0.12	0.12
Clearance Time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	616	1886	1257	388	344	152
v/s Ratio Prot	c0.07	0.13	c0.11		c0.03	
v/s Ratio Perm				0.02		0.01
v/c Ratio	0.35	0.22	0.39	0.07	0.22	0.05
Uniform Delay, d1	15.1	4.0	12.9	11.7	17.5	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2	0.1	0.3	0.2
Delay (s)	15.4	4.1	13.1	11.8	17.9	17.3
Level of Service	B	A	B	B	B	B
Approach Delay (s)		8.0	12.9		17.7	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	17.5
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



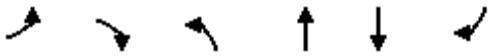
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	163	134	526	232	35	51	117	279	34	187	47
Future Volume (vph)	57	163	134	526	232	35	51	117	279	34	187	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1556	4803	1392	1671	4625		3019	3112	1392	3019	1588	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1556	4803	1392	1671	4625		3019	3112	1392	3019	1588	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	61	175	144	566	249	38	55	126	300	37	201	51
RTOR Reduction (vph)	0	0	126	0	22	0	0	0	243	0	10	0
Lane Group Flow (vph)	61	175	18	566	265	0	55	126	57	37	242	0
Heavy Vehicles (%)	16%	8%	16%	8%	9%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	7.0	11.3	11.3	32.8	37.1		5.4	17.2	17.2	4.0	15.8	
Effective Green, g (s)	7.0	11.3	11.3	32.8	37.1		5.4	17.2	17.2	4.0	15.8	
Actuated g/C Ratio	0.08	0.13	0.13	0.36	0.41		0.06	0.19	0.19	0.04	0.18	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	121	603	174	608	1906		181	594	266	134	278	
v/s Ratio Prot	0.04	c0.04		c0.34	0.06		0.02	0.04		0.01	c0.15	
v/s Ratio Perm			0.01						c0.04			
v/c Ratio	0.50	0.29	0.10	0.93	0.14		0.30	0.21	0.22	0.28	0.87	
Uniform Delay, d1	39.8	35.7	34.9	27.5	16.5		40.5	30.7	30.7	41.6	36.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.88	0.84	1.44	1.00	1.00	
Incremental Delay, d2	3.3	0.3	0.3	21.1	0.0		0.9	0.8	1.8	1.1	29.1	
Delay (s)	43.1	36.0	35.1	48.6	16.5		36.6	26.7	46.2	42.7	65.2	
Level of Service	D	D	D	D	B		D	C	D	D	E	
Approach Delay (s)		36.8			37.8			40.0			62.3	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



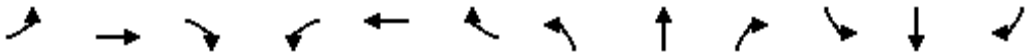
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	99	60	27	147	88	344	211	0	855	26
Future Volume (vph)	7	0	99	60	27	147	88	344	211	0	855	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1556	1392		1478	1526	1455	3019	3282	1392		4631	1482
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1556	1392		1478	1526	1455	3019	3282	1392		4631	1482
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	7	0	103	62	28	153	92	358	220	0	891	27
RTOR Reduction (vph)	0	97	0	0	0	139	0	0	70	0	0	12
Lane Group Flow (vph)	7	6	0	45	46	14	92	358	150	0	891	15
Heavy Vehicles (%)	16%	16%	16%	16%	16%	11%	16%	10%	16%	16%	12%	9%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	4.9	4.9		8.4	8.4	8.4	6.9	61.4	61.4		49.8	49.8
Effective Green, g (s)	4.9	4.9		8.4	8.4	8.4	6.9	61.4	61.4		49.8	49.8
Actuated g/C Ratio	0.05	0.05		0.09	0.09	0.09	0.08	0.68	0.68		0.55	0.55
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	84	75		137	142	135	231	2239	949		2562	820
v/s Ratio Prot	c0.00	0.00		c0.03	0.03		c0.03	0.11			c0.19	
v/s Ratio Perm						0.01			0.11			0.01
v/c Ratio	0.08	0.07		0.33	0.32	0.11	0.40	0.16	0.16		0.35	0.02
Uniform Delay, d1	40.4	40.4		38.2	38.1	37.4	39.6	5.1	5.1		11.1	9.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.75	0.53	0.03		0.30	1.00
Incremental Delay, d2	0.4	0.4		1.4	1.3	0.3	1.1	0.1	0.3		0.2	0.0
Delay (s)	40.8	40.8		39.6	39.5	37.7	30.7	2.9	0.5		3.6	9.1
Level of Service	D	D		D	D	D	C	A	A		A	A
Approach Delay (s)		40.8			38.4			5.9			3.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	287	183	22	368	246	269
Future Volume (vph)	287	183	22	368	246	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3127	2450	3019	4590	3223	1429
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3127	2450	3019	4590	3223	1429
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	302	193	23	387	259	283
RTOR Reduction (vph)	0	162	0	0	0	56
Lane Group Flow (vph)	302	31	23	387	259	227
Heavy Vehicles (%)	12%	16%	16%	13%	12%	13%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	14.6	14.6	2.8	65.2	57.7	72.3
Effective Green, g (s)	14.6	14.6	2.8	65.2	57.7	72.3
Actuated g/C Ratio	0.16	0.16	0.03	0.72	0.64	0.80
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	507	397	93	3325	2066	1228
v/s Ratio Prot	c0.10		c0.01	0.08	0.08	c0.03
v/s Ratio Perm		0.01				0.13
v/c Ratio	0.60	0.08	0.25	0.12	0.13	0.19
Uniform Delay, d1	35.0	32.0	42.6	3.7	6.3	2.0
Progression Factor	1.00	1.00	1.00	1.00	0.42	0.18
Incremental Delay, d2	1.9	0.1	1.4	0.1	0.1	0.1
Delay (s)	36.8	32.1	44.0	3.8	2.8	0.4
Level of Service	D	C	D	A	A	A
Approach Delay (s)	35.0			6.1	1.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	38	71	35	21	72	343	0	0	0	173	157	37
Future Volume (vph)	38	71	35	21	72	343	0	0	0	173	157	37
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
Hourly flow rate (vph)	40	76	37	22	77	365	0	0	0	184	167	39

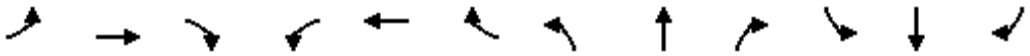
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	153	464	268	123
Volume Left (vph)	40	22	184	0
Volume Right (vph)	37	365	0	39
Hadj (s)	0.14	-0.20	0.58	-0.03
Departure Headway (s)	5.9	5.1	6.7	6.1
Degree Utilization, x	0.25	0.66	0.50	0.21
Capacity (veh/h)	566	682	507	560
Control Delay (s)	10.9	17.5	15.1	9.5
Approach Delay (s)	10.9	17.5	13.3	
Approach LOS	B	C	B	

Intersection Summary				
Delay		14.9		
Level of Service		B		
Intersection Capacity Utilization		44.3%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	0	0	0	64	128
Future Volume (Veh/h)	79	0	0	0	64	128
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	82	0	0	0	67	133
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	200	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	200	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.7	3.5			2.4	
p0 queue free %	88	100			96	
cM capacity (veh/h)	699	1040			1525	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	82	111	89
Volume Left	82	67	0
Volume Right	0	0	0
cSH	699	1525	1700
Volume to Capacity	0.12	0.04	0.05
Queue Length 95th (ft)	10	3	0
Control Delay (s)	10.8	4.6	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	2.6	
Approach LOS	B		

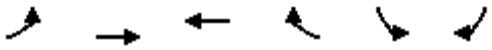
Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	16.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	37	30	39	30	0	0	0	0	81	134	2
Future Volume (vph)	0	37	30	39	30	0	0	0	0	81	134	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	38	31	40	31	0	0	0	0	84	138	2

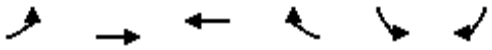
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	69	71	153	71
Volume Left (vph)	0	40	84	0
Volume Right (vph)	31	0	0	2
Hadj (s)	0.00	0.38	0.55	0.25
Departure Headway (s)	4.6	5.0	5.4	5.1
Degree Utilization, x	0.09	0.10	0.23	0.10
Capacity (veh/h)	751	688	649	684
Control Delay (s)	8.0	8.5	8.8	7.5
Approach Delay (s)	8.0	8.5	8.4	
Approach LOS	A	A	A	

Intersection Summary			
Delay	8.3		
Level of Service	A		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		



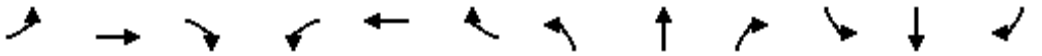
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	457	278	0	120	227
Future Volume (vph)	0	457	278	0	120	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4472	4550		3019	1404
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4472	4550		3019	1404
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	481	293	0	126	239
RTOR Reduction (vph)	0	0	0	0	0	213
Lane Group Flow (vph)	0	481	293	0	126	26
Heavy Vehicles (%)	14%	16%	14%	16%	16%	15%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		66.9	66.9		9.8	9.8
Effective Green, g (s)		66.9	66.9		9.8	9.8
Actuated g/C Ratio		0.74	0.74		0.11	0.11
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3324	3382		328	152
v/s Ratio Prot		c0.11	0.06		c0.04	
v/s Ratio Perm						0.02
v/c Ratio		0.14	0.09		0.38	0.17
Uniform Delay, d1		3.3	3.2		37.3	36.4
Progression Factor		1.00	2.10		1.00	1.00
Incremental Delay, d2		0.1	0.0		0.8	0.5
Delay (s)		3.4	6.7		38.0	36.9
Level of Service		A	A		D	D
Approach Delay (s)		3.4	6.7		37.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	335	241	280	362	0	0
Future Volume (vph)	335	241	280	362	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	1.00	0.95	0.91	0.91		
Frt	1.00	1.00	0.94	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1570	3167	2847	1267		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1570	3167	2847	1267		
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	399	287	333	431	0	0
RTOR Reduction (vph)	0	0	67	109	0	0
Lane Group Flow (vph)	399	287	460	128	0	0
Heavy Vehicles (%)	15%	14%	14%	16%	16%	16%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	28.4	90.0	48.7	48.7		
Effective Green, g (s)	28.4	90.0	48.7	48.7		
Actuated g/C Ratio	0.32	1.00	0.54	0.54		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	495	3167	1540	685		
v/s Ratio Prot	c0.25	0.09	c0.16			
v/s Ratio Perm				0.10		
v/c Ratio	0.81	0.09	0.30	0.19		
Uniform Delay, d1	28.3	0.0	11.3	10.5		
Progression Factor	0.95	1.00	1.00	1.00		
Incremental Delay, d2	9.3	0.1	0.5	0.6		
Delay (s)	36.1	0.1	11.8	11.1		
Level of Service	D	A	B	B		
Approach Delay (s)		21.0	11.6		0.0	
Approach LOS		C	B		A	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	383	453	0	0	521	734	62	1	237	0	0	0
Future Volume (vph)	383	453	0	0	521	734	62	1	237	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3964	1197		1561	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3964	1197		1561	2450			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	395	467	0	0	537	757	64	1	244	0	0	0
RTOR Reduction (vph)	0	0	0	0	101	180	0	0	222	0	0	0
Lane Group Flow (vph)	395	467	0	0	815	198	0	65	22	0	0	0
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	27.3	89.7			57.7	57.7		10.1	10.1			
Effective Green, g (s)	27.3	89.7			57.7	57.7		10.1	10.1			
Actuated g/C Ratio	0.25	0.82			0.52	0.52		0.09	0.09			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	749	3646			2079	627		143	224			
v/s Ratio Prot	c0.13	0.10			c0.21							
v/s Ratio Perm						0.17		0.04	0.01			
v/c Ratio	0.53	0.13			0.39	0.32		0.45	0.10			
Uniform Delay, d1	35.8	2.1			15.7	14.9		47.3	45.8			
Progression Factor	0.87	0.87			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.1			0.6	1.3		2.3	0.2			
Delay (s)	31.9	1.9			16.2	16.2		49.6	46.0			
Level of Service	C	A			B	B		D	D			
Approach Delay (s)		15.7			16.2			46.7			0.0	
Approach LOS		B			B			D			A	

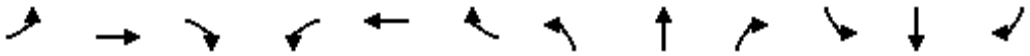
Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	569	278	219	679	0	271
Future Volume (vph)	569	278	219	679	0	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4251		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4251		3019	4472		2450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	599	293	231	715	0	285
RTOR Reduction (vph)	81	0	0	0	0	202
Lane Group Flow (vph)	811	0	231	715	0	83
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	67.9		31.9	110.0		31.9
Effective Green, g (s)	67.9		31.9	110.0		31.9
Actuated g/C Ratio	0.62		0.29	1.00		0.29
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2624		875	4472		710
v/s Ratio Prot	c0.19		c0.08	0.16		0.03
v/s Ratio Perm						
v/c Ratio	0.31		0.26	0.16		0.12
Uniform Delay, d1	10.0		30.0	0.0		28.7
Progression Factor	0.50		0.75	1.00		1.00
Incremental Delay, d2	0.3		0.2	0.1		0.1
Delay (s)	5.3		22.7	0.1		28.8
Level of Service	A		C	A		C
Approach Delay (s)	5.3			5.6	28.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	356	49	238	277	176	40	48	272	185	85	77
Future Volume (vph)	49	356	49	238	277	176	40	48	272	185	85	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.94			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1556	4390		1556	4212			1601	1392		2931	
Flt Permitted	0.95	1.00		0.95	1.00			0.68	1.00		0.77	
Satd. Flow (perm)	1556	4390		1556	4212			1111	1392		2311	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	367	51	245	286	181	41	49	280	191	88	79
RTOR Reduction (vph)	0	12	0	0	72	0	0	0	222	0	30	0
Lane Group Flow (vph)	51	406	0	245	395	0	0	90	58	0	328	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.0	51.5		21.5	65.4			22.8	22.8		22.8	
Effective Green, g (s)	7.0	51.5		21.5	65.4			22.8	22.8		22.8	
Actuated g/C Ratio	0.06	0.47		0.20	0.59			0.21	0.21		0.21	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	99	2055		304	2504			230	288		479	
v/s Ratio Prot	c0.03	c0.09		c0.16	0.09							
v/s Ratio Perm								0.08	0.04		c0.14	
v/c Ratio	0.52	0.20		0.81	0.16			0.39	0.20		0.68	
Uniform Delay, d1	49.9	17.1		42.3	10.0			37.6	36.1		40.3	
Progression Factor	1.00	1.00		0.81	0.29			1.00	1.00		1.00	
Incremental Delay, d2	1.9	0.2		13.5	0.1			1.8	0.6		4.6	
Delay (s)	51.7	17.4		47.7	3.1			39.4	36.6		44.9	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		21.1			18.4			37.3			44.9	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

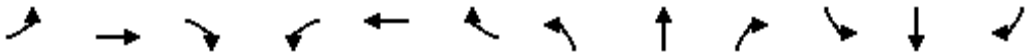
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	140	97	148	66	50
Future Vol, veh/h	103	140	97	148	66	50
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	118	161	111	170	76	57
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	11	8.6	10.5
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	57%	0%	100%	0%	0%
Vol Thru, %	0%	42%	0%	100%	100%
Vol Right, %	43%	58%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	243	97	74	74
LT Vol	66	0	97	0	0
Through Vol	0	103	0	74	74
RT Vol	50	140	0	0	0
Lane Flow Rate	133	279	111	85	85
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.223	0.392	0.184	0.129	0.082
Departure Headway (Hd)	6.032	5.051	5.948	5.444	3.457
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	592	709	602	657	1029
Service Time	3.801	2.798	3.695	3.191	1.203
HCM Lane V/C Ratio	0.225	0.394	0.184	0.129	0.083
HCM Control Delay	10.5	11	10	9	6.5
HCM Lane LOS	B	B	A	A	A
HCM 95th-tile Q	0.8	1.9	0.7	0.4	0.3



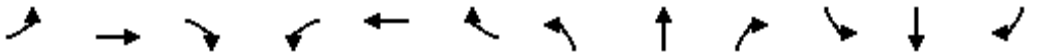
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	433	26	62	341	0	30	0	22	0	1	13
Future Volume (vph)	27	433	26	62	341	0	30	0	22	0	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4434		1556	4472			1556	1392		1432	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4434		1556	4472			1638	1392		1432	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	471	28	67	371	0	33	0	24	0	1	14
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	23	0	13	0
Lane Group Flow (vph)	29	491	0	67	371	0	0	33	1	0	2	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.7	11.5		2.1	12.9			1.8	1.8		1.8	
Effective Green, g (s)	0.7	11.5		2.1	12.9			1.8	1.8		1.8	
Actuated g/C Ratio	0.02	0.39		0.07	0.44			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	36	1722		110	1948			99	84		87	
v/s Ratio Prot	0.02	c0.11		c0.04	0.08						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.81	0.29		0.61	0.19			0.33	0.02		0.02	
Uniform Delay, d1	14.4	6.2		13.4	5.1			13.3	13.1		13.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	72.5	0.3		6.4	0.1			0.7	0.0		0.0	
Delay (s)	86.9	6.5		19.7	5.2			14.1	13.1		13.1	
Level of Service	F	A		B	A			B	B		B	
Approach Delay (s)		10.9			7.5			13.6			13.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	29.6	Sum of lost time (s)	14.2
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	241	316	247	280	251	178
Future Volume (vph)	241	316	247	280	251	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4673	1392	1612	4472	3019	1392
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4673	1392	1612	4472	3019	1392
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	262	343	268	304	273	193
RTOR Reduction (vph)	0	211	0	0	0	155
Lane Group Flow (vph)	262	132	268	304	273	38
Heavy Vehicles (%)	11%	16%	12%	16%	16%	16%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	10.5	21.8	15.2	31.4	11.3	11.3
Effective Green, g (s)	10.5	21.8	15.2	31.4	11.3	11.3
Actuated g/C Ratio	0.19	0.38	0.27	0.55	0.20	0.20
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	865	535	432	2476	601	277
v/s Ratio Prot	c0.06	0.05	c0.17	0.07	c0.09	
v/s Ratio Perm		0.05				0.03
v/c Ratio	0.30	0.25	0.62	0.12	0.45	0.14
Uniform Delay, d1	19.9	11.9	18.2	6.1	20.0	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	2.8	0.0	0.5	0.2
Delay (s)	20.1	12.1	21.0	6.1	20.5	18.9
Level of Service	C	B	C	A	C	B
Approach Delay (s)	15.6			13.1	19.9	
Approach LOS	B			B	B	

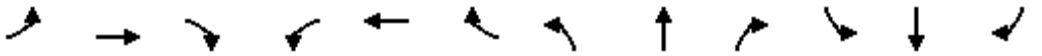
Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	56.7	Sum of lost time (s)	19.7
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	11	2	32	9	383	4	354	37	213	129	68
Future Volume (vph)	111	11	2	32	9	383	4	354	37	213	129	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.98			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1556	1605			1576	1392	1556	3068		1556	1638	1392
Flt Permitted	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1556	1605			1576	1392	1556	3068		1556	1638	1392
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	129	13	2	37	10	445	5	412	43	248	150	79
RTOR Reduction (vph)	0	2	0	0	0	376	0	8	0	0	0	44
Lane Group Flow (vph)	129	13	0	0	47	69	5	447	0	248	150	35
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.8	7.8			10.9	10.9	0.6	16.1		15.6	30.9	30.9
Effective Green, g (s)	7.8	7.8			10.9	10.9	0.6	16.1		15.6	30.9	30.9
Actuated g/C Ratio	0.11	0.11			0.16	0.16	0.01	0.23		0.22	0.44	0.44
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	172	178			244	216	13	703		345	721	612
v/s Ratio Prot	c0.08	0.01			0.03		0.00	c0.15		c0.16	0.09	
v/s Ratio Perm						c0.05						0.02
v/c Ratio	0.75	0.07			0.19	0.32	0.38	0.64		0.72	0.21	0.06
Uniform Delay, d1	30.3	28.0			25.8	26.4	34.6	24.4		25.3	12.1	11.3
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.0	0.1			0.5	1.1	6.8	2.1		5.9	0.2	0.1
Delay (s)	45.2	28.0			26.3	27.4	41.4	26.5		31.1	12.3	11.3
Level of Service	D	C			C	C	D	C		C	B	B
Approach Delay (s)		43.4			27.3			26.6			21.9	
Approach LOS		D			C			C			C	

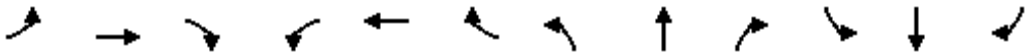
Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



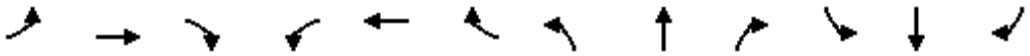
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	173	85	42	224	191	141	43	72	197	79	264
Future Volume (vph)	132	173	85	42	224	191	141	43	72	197	79	264
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3019	4631	1392	3019	4590	1404	1556	1484		1597	1638	2450
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3019	4631	1392	3019	4590	1404	1556	1484		1597	1638	2450
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	145	190	93	46	246	210	155	47	79	216	87	290
RTOR Reduction (vph)	0	0	71	0	0	173	0	65	0	0	0	213
Lane Group Flow (vph)	145	190	22	46	246	37	155	61	0	216	87	77
Heavy Vehicles (%)	16%	12%	16%	16%	13%	15%	16%	16%	16%	13%	16%	16%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.1	17.1	17.1	5.9	12.9	12.9	16.6	12.7		13.3	9.4	19.5
Effective Green, g (s)	10.1	17.1	17.1	5.9	12.9	12.9	16.6	12.7		13.3	9.4	19.5
Actuated g/C Ratio	0.14	0.23	0.23	0.08	0.18	0.18	0.23	0.17		0.18	0.13	0.26
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	413	1074	322	241	803	245	350	255		288	208	648
v/s Ratio Prot	c0.05	c0.04		0.02	c0.05		0.10	c0.04		c0.14	c0.05	0.02
v/s Ratio Perm			0.02			0.03						0.02
v/c Ratio	0.35	0.18	0.07	0.19	0.31	0.15	0.44	0.24		0.75	0.42	0.12
Uniform Delay, d1	28.8	22.7	22.1	31.7	26.5	25.8	24.6	26.3		28.6	29.6	20.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.1	0.4	0.2	0.3	0.9	0.5		10.5	1.4	0.1
Delay (s)	29.3	22.7	22.2	32.1	26.7	26.0	25.5	26.8		39.1	31.0	20.7
Level of Service	C	C	C	C	C	C	C	C		D	C	C
Approach Delay (s)		24.9			26.9			26.1			28.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	24.7
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



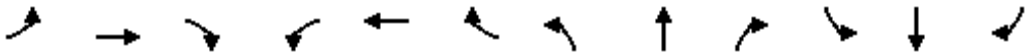
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	14	753	14	223	3	387	335	121	205	2
Future Volume (vph)	2	1	14	753	14	223	3	387	335	121	205	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1556	3112	1392	3019	1638	1429	1556	3112	1392	3155	3108	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1556	3112	1392	3019	1638	1429	1556	3112	1392	3155	3108	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	2	1	16	846	16	251	3	435	376	136	230	2
RTOR Reduction (vph)	0	0	15	0	0	167	0	0	151	0	1	0
Lane Group Flow (vph)	2	1	1	846	16	84	3	435	225	136	231	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	13%	16%	16%	16%	11%	16%	16%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.5	1.5	5.2	30.5	29.4	29.4	3.7	22.2	52.7	11.6	30.1	
Effective Green, g (s)	1.5	1.5	5.2	30.5	29.4	29.4	3.7	22.2	52.7	11.6	30.1	
Actuated g/C Ratio	0.02	0.02	0.06	0.35	0.33	0.33	0.04	0.25	0.60	0.13	0.34	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	26	52	82	1045	546	476	65	784	832	415	1061	
v/s Ratio Prot	0.00	0.00	0.00	c0.28	0.01		0.00	c0.14	0.09	c0.04	0.07	
v/s Ratio Perm			0.00			c0.06			0.07			
v/c Ratio	0.08	0.02	0.01	0.81	0.03	0.18	0.05	0.55	0.27	0.33	0.22	
Uniform Delay, d1	42.6	42.6	39.0	26.2	19.7	20.8	40.5	28.7	8.5	34.7	20.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.1	0.1	4.7	0.0	0.2	0.3	0.9	0.2	0.5	0.1	
Delay (s)	43.9	42.7	39.1	30.9	19.8	21.0	40.8	29.5	8.7	35.2	20.7	
Level of Service	D	D	D	C	B	C	D	C	A	D	C	
Approach Delay (s)		39.8			28.5			19.9			26.1	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	23.4
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	48	1	87	316	661	0	0	251	687
Future Volume (vph)	0	0	0	48	1	87	316	661	0	0	251	687
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.89	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1725	1392	1719	4472			4084	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1725	1392	1719	4472			4084	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	55	1	99	359	751	0	0	285	781
RTOR Reduction (vph)	0	0	0	0	0	91	0	0	0	0	225	0
Lane Group Flow (vph)	0	0	0	0	56	8	359	751	0	0	841	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	16%	5%	16%	5%	5%	5%	16%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.2	7.2	23.9	72.6			44.0	
Effective Green, g (s)					7.2	7.2	23.9	72.6			44.0	
Actuated g/C Ratio					0.08	0.08	0.27	0.81			0.49	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					138	111	456	3607			1996	
v/s Ratio Prot							c0.21	0.17			c0.21	
v/s Ratio Perm					0.03	0.01						
v/c Ratio					0.41	0.07	0.79	0.21			0.42	
Uniform Delay, d1					39.4	38.3	30.7	2.0			14.8	
Progression Factor					1.00	1.00	0.83	0.70			1.00	
Incremental Delay, d2					1.9	0.3	7.4	0.1			0.7	
Delay (s)					41.3	38.6	33.0	1.5			15.5	
Level of Service					D	D	C	A			B	
Approach Delay (s)		0.0			39.6			11.7			15.5	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	506	5	260	0	0	0	0	481	73	74	225	0
Future Volume (vph)	506	5	260	0	0	0	0	481	73	74	225	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1478	1473						4842		1556	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1478	1473						4842		1556	3438	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	625	6	321	0	0	0	0	594	90	91	278	0
RTOR Reduction (vph)	0	96	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	494	362	0	0	0	0	0	662	0	91	278	0
Heavy Vehicles (%)	16%	5%	5%	5%	5%	5%	5%	5%	5%	16%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	36.5	36.5						30.3		8.3	43.3	
Effective Green, g (s)	36.5	36.5						30.3		8.3	43.3	
Actuated g/C Ratio	0.41	0.41						0.34		0.09	0.48	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	599	597						1630		143	1654	
v/s Ratio Prot	c0.33	0.25						c0.14		c0.06	0.08	
v/s Ratio Perm												
v/c Ratio	0.82	0.61						0.41		0.64	0.17	
Uniform Delay, d1	23.9	21.1						22.9		39.4	13.2	
Progression Factor	1.00	1.00						1.00		1.26	0.77	
Incremental Delay, d2	9.0	1.7						0.8		8.3	0.2	
Delay (s)	32.9	22.8						23.7		58.1	10.3	
Level of Service	C	C						C		E	B	
Approach Delay (s)		28.1			0.0			23.7			22.1	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	39
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	410	2	4	0	2	14	6	116	0	18	59	409
Future Vol, veh/h	410	2	4	0	2	14	6	116	0	18	59	409
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	539	3	5	0	3	18	8	153	0	24	78	538
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	21	11.3	11.6	62.1
HCM LOS	C	B	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	97%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	100%	0%	1%	100%	100%	12%	0%	100%	5%
Vol Right, %	0%	0%	0%	0%	2%	0%	0%	88%	0%	0%	95%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	58	58	209	207	0	0	16	18	39	429
LT Vol	6	0	0	209	201	0	0	0	18	0	0
Through Vol	0	58	58	0	2	0	0	2	0	39	20
RT Vol	0	0	0	0	4	0	0	14	0	0	409
Lane Flow Rate	8	76	76	275	272	0	0	21	24	52	564
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.019	0.175	0.135	0.592	0.584	0	0	0.047	0.051	0.104	1.021
Departure Headway (Hd)	8.954	8.436	6.589	7.752	7.725	8.844	8.844	8.222	7.711	7.2	6.516
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	402	428	547	465	468	0	0	438	466	499	558
Service Time	6.654	6.136	4.289	5.494	5.466	6.544	6.544	5.922	5.431	4.919	4.236
HCM Lane V/C Ratio	0.02	0.178	0.139	0.591	0.581	0	0	0.048	0.052	0.104	1.011
HCM Control Delay	11.8	12.9	10.3	21.2	20.8	11.5	11.5	11.3	10.8	10.8	69
HCM Lane LOS	B	B	B	C	C	N	N	B	B	B	F
HCM 95th-tile Q	0.1	0.6	0.5	3.8	3.7	0	0	0.1	0.2	0.3	15.3

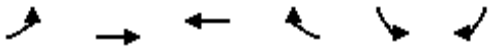
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	3	393	1	1	325
Future Volume (Veh/h)	0	3	393	1	1	325
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	4	479	1	1	396
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	877	479			479	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	877	479			479	
tC, single (s)	6.6	6.4			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	301	559			1014	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	479	1	1	396
Volume Left	0	0	0	1	0
Volume Right	4	0	1	0	0
cSH	559	1700	1700	1014	1700
Volume to Capacity	0.01	0.28	0.00	0.00	0.23
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.5	0.0	0.0	8.6	0.0
Lane LOS	B			A	
Approach Delay (s)	11.5	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	437	39	10	630	162	36
Future Volume (vph)	437	39	10	630	162	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4472	1538	1719	4472	3335	1538
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4472	1538	1719	4472	3335	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	475	42	11	685	176	39
RTOR Reduction (vph)	0	26	0	0	0	32
Lane Group Flow (vph)	475	16	11	685	176	7
Heavy Vehicles (%)	16%	5%	5%	16%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	11.0	11.0	0.8	15.8	5.4	5.4
Effective Green, g (s)	11.0	11.0	0.8	15.8	5.4	5.4
Actuated g/C Ratio	0.38	0.38	0.03	0.54	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1684	579	47	2419	616	284
v/s Ratio Prot	0.11		0.01	c0.15	c0.05	
v/s Ratio Perm		0.01				0.00
v/c Ratio	0.28	0.03	0.23	0.28	0.29	0.03
Uniform Delay, d1	6.3	5.7	13.9	3.6	10.2	9.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	2.6	0.1	0.3	0.0
Delay (s)	6.4	5.8	16.5	3.7	10.5	9.8
Level of Service	A	A	B	A	B	A
Approach Delay (s)	6.4			3.9	10.4	
Approach LOS	A			A	B	

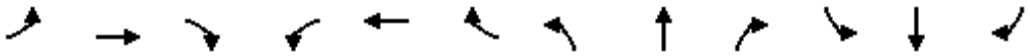
Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	29.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	23.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	114	421	351	80	89	239
Future Volume (vph)	114	421	351	80	89	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Lane Util. Factor	0.97	0.95	0.91	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.91	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (prot)	3045	3167	4550	1392	2858	1278
Flt Permitted	0.95	1.00	1.00	1.00	0.98	1.00
Satd. Flow (perm)	3045	3167	4550	1392	2858	1278
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	123	453	377	86	96	257
RTOR Reduction (vph)	0	0	0	64	106	106
Lane Group Flow (vph)	123	453	377	22	119	22
Heavy Vehicles (%)	15%	14%	14%	16%	16%	15%
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	5.6	21.5	10.7	10.7	7.2	7.2
Effective Green, g (s)	5.6	21.5	10.7	10.7	7.2	7.2
Actuated g/C Ratio	0.14	0.52	0.26	0.26	0.18	0.18
Clearance Time (s)	5.2	6.7	6.7	6.7	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	415	1660	1187	363	501	224
v/s Ratio Prot	0.04	c0.14	0.08		c0.04	
v/s Ratio Perm				0.02		0.02
v/c Ratio	0.30	0.27	0.32	0.06	0.24	0.10
Uniform Delay, d1	15.9	5.4	12.2	11.4	14.5	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.2	0.1	0.2	0.2
Delay (s)	16.3	5.5	12.4	11.5	14.8	14.4
Level of Service	B	A	B	B	B	B
Approach Delay (s)		7.8	12.2		14.6	
Approach LOS		A	B		B	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	41.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

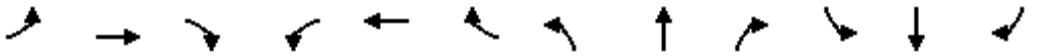
Opening Year 2020 Baseline Plus Project



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	384	196	481	322	61	135	186	852	61	164	54
Future Volume (vph)	48	384	196	481	322	61	135	186	852	61	164	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4803	1468	1687	4674		3183	3282	1468	3183	1663	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4803	1468	1687	4674		3183	3282	1468	3183	1663	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	427	218	534	358	68	150	207	947	68	182	60
RTOR Reduction (vph)	0	0	194	0	26	0	0	0	606	0	12	0
Lane Group Flow (vph)	53	427	24	534	400	0	150	207	341	68	230	0
Heavy Vehicles (%)	10%	8%	10%	7%	8%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	8.4	11.0	11.0	35.9	38.5		11.3	20.3	20.3	8.1	17.1	
Effective Green, g (s)	8.4	11.0	11.0	35.9	38.5		11.3	20.3	20.3	8.1	17.1	
Actuated g/C Ratio	0.08	0.11	0.11	0.36	0.38		0.11	0.20	0.20	0.08	0.17	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	137	528	161	605	1799		359	666	298	257	284	
v/s Ratio Prot	0.03	c0.09		c0.32	c0.09		c0.05	0.06		0.02	0.14	
v/s Ratio Perm			0.02						c0.23			
v/c Ratio	0.39	0.81	0.15	0.88	0.22		0.42	0.31	1.15	0.26	0.81	
Uniform Delay, d1	43.4	43.5	40.3	30.1	20.7		41.3	33.9	39.9	43.2	39.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.74	0.78	2.71	1.00	1.00	
Incremental Delay, d2	1.8	8.9	0.4	14.2	0.1		0.7	1.1	94.6	0.6	21.7	
Delay (s)	45.2	52.4	40.7	44.3	20.7		31.2	27.4	202.7	43.7	61.6	
Level of Service	D	D	D	D	C		C	C	F	D	E	
Approach Delay (s)		48.2			33.9			155.1			57.7	
Approach LOS		D			C			F			E	

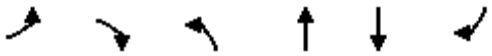
Intersection Summary			
HCM 2000 Control Delay	87.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



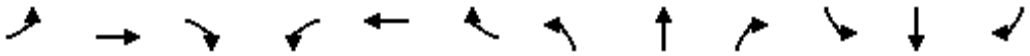
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	61	88	65	158	95	1023	108	0	831	34
Future Volume (vph)	11	0	61	88	65	158	95	1023	108	0	831	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1627	1495	3183	3312	1468		4759	1495
Flt Permitted	0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1627	1495	3183	3312	1468		4759	1495
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	12	0	69	99	73	178	107	1149	121	0	934	38
RTOR Reduction (vph)	0	65	0	0	0	151	0	0	38	0	0	17
Lane Group Flow (vph)	12	4	0	84	88	27	107	1149	83	0	934	21
Heavy Vehicles (%)	10%	10%	10%	10%	10%	8%	10%	9%	10%	10%	9%	8%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	5.3	5.3		10.9	10.9	10.9	8.9	68.5	68.5		54.9	54.9
Effective Green, g (s)	5.3	5.3		10.9	10.9	10.9	8.9	68.5	68.5		54.9	54.9
Actuated g/C Ratio	0.05	0.05		0.11	0.11	0.11	0.09	0.68	0.68		0.55	0.55
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	86	77		169	177	162	283	2268	1005		2612	820
v/s Ratio Prot	c0.01	0.00		0.05	c0.05		0.03	c0.35			0.20	
v/s Ratio Perm						0.02			0.06			0.01
v/c Ratio	0.14	0.05		0.50	0.50	0.16	0.38	0.51	0.08		0.36	0.03
Uniform Delay, d1	45.2	45.0		42.0	42.0	40.4	42.9	7.6	5.3		12.7	10.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.72	0.39	0.09		0.73	1.00
Incremental Delay, d2	0.7	0.3		2.3	2.2	0.5	0.7	0.7	0.1		0.3	0.0
Delay (s)	45.9	45.2		44.3	44.2	40.9	31.5	3.6	0.6		9.5	10.4
Level of Service	D	D		D	D	D	C	A	A		A	B
Approach Delay (s)		45.3			42.5			5.5			9.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	928	381	28	293	302	178
Future Volume (vph)	928	381	28	293	302	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3155	2561	3155	4759	3282	1468
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3155	2561	3155	4759	3282	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1020	419	31	322	332	196
RTOR Reduction (vph)	0	243	0	0	0	37
Lane Group Flow (vph)	1020	176	31	322	332	159
Heavy Vehicles (%)	11%	11%	11%	9%	10%	10%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	42.0	42.0	4.2	47.8	38.9	80.9
Effective Green, g (s)	42.0	42.0	4.2	47.8	38.9	80.9
Actuated g/C Ratio	0.42	0.42	0.04	0.48	0.39	0.81
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1325	1075	132	2274	1276	1262
v/s Ratio Prot	c0.32		c0.01	0.07	c0.10	0.05
v/s Ratio Perm		0.07				0.06
v/c Ratio	0.77	0.16	0.23	0.14	0.26	0.13
Uniform Delay, d1	24.9	18.1	46.3	14.6	20.8	2.0
Progression Factor	1.00	1.00	1.00	1.00	0.94	9.53
Incremental Delay, d2	2.8	0.1	0.9	0.1	0.5	0.0
Delay (s)	27.6	18.1	47.3	14.7	20.1	19.4
Level of Service	C	B	D	B	C	B
Approach Delay (s)	24.9			17.6	19.8	
Approach LOS	C			B	B	

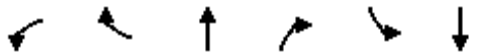
Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	14	41	25	11	65	161	0	0	0	291	284	51
Future Volume (vph)	14	41	25	11	65	161	0	0	0	291	284	51
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
Hourly flow rate (vph)	15	43	26	12	68	169	0	0	0	306	299	54

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	84	249	456	204
Volume Left (vph)	15	12	306	0
Volume Right (vph)	26	169	0	54
Hadj (s)	0.06	-0.18	0.57	0.04
Departure Headway (s)	6.0	5.5	6.0	5.5
Degree Utilization, x	0.14	0.38	0.76	0.31
Capacity (veh/h)	554	623	584	642
Control Delay (s)	10.0	11.8	24.8	9.8
Approach Delay (s)	10.0	11.8	20.1	
Approach LOS	B	B	C	

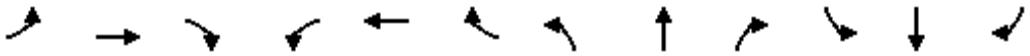
Intersection Summary				
Delay	17.2			
Level of Service	C			
Intersection Capacity Utilization	39.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	59	0	0	0	109	184
Future Volume (Veh/h)	59	0	0	0	109	184
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	65	0	0	0	120	202
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	341	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	341	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	88	100			92	
cM capacity (veh/h)	554	1050			1545	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	65	187	135
Volume Left	65	120	0
Volume Right	0	0	0
cSH	554	1545	1700
Volume to Capacity	0.12	0.08	0.08
Queue Length 95th (ft)	10	6	0
Control Delay (s)	12.4	5.0	0.0
Lane LOS	B	A	
Approach Delay (s)	12.4	2.9	
Approach LOS	B		

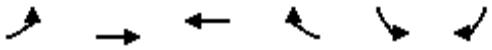
Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	45	5	17	50	0	0	0	0	142	89	7
Future Volume (vph)	0	45	5	17	50	0	0	0	0	142	89	7
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
Hourly flow rate (vph)	0	50	6	19	56	0	0	0	0	158	99	8

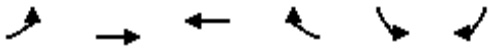
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	56	75	208	58
Volume Left (vph)	0	19	158	0
Volume Right (vph)	6	0	0	8
Hadj (s)	0.16	0.27	0.60	0.12
Departure Headway (s)	4.9	4.9	5.4	5.0
Degree Utilization, x	0.08	0.10	0.31	0.08
Capacity (veh/h)	695	685	646	704
Control Delay (s)	8.3	8.5	9.7	7.2
Approach Delay (s)	8.3	8.5	9.2	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.9			
Level of Service	A			
Intersection Capacity Utilization	24.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	620	208	0	572	517
Future Volume (vph)	0	620	208	0	572	517
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4631	4673		3127	1442
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4631	4673		3127	1442
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	689	231	0	636	574
RTOR Reduction (vph)	0	0	0	0	0	328
Lane Group Flow (vph)	0	689	231	0	636	246
Heavy Vehicles (%)	12%	12%	11%	12%	12%	12%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		49.6	49.6		27.1	27.1
Effective Green, g (s)		49.6	49.6		27.1	27.1
Actuated g/C Ratio		0.55	0.55		0.30	0.30
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2552	2575		941	434
v/s Ratio Prot		c0.15	0.05		c0.20	
v/s Ratio Perm						0.17
v/c Ratio		0.27	0.09		0.68	0.57
Uniform Delay, d1		10.7	9.5		27.6	26.5
Progression Factor		1.00	0.98		1.00	1.00
Incremental Delay, d2		0.3	0.1		1.9	1.7
Delay (s)		10.9	9.4		29.5	28.2
Level of Service		B	A		C	C
Approach Delay (s)		10.9	9.4		28.9	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	262	901	209	111	0	0
Future Volume (vph)	262	901	209	111	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.99	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3127	3223	3084	1312		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3127	3223	3084	1312		
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	298	1024	238	126	0	0
RTOR Reduction (vph)	0	0	3	33	0	0
Lane Group Flow (vph)	298	1024	251	77	0	0
Heavy Vehicles (%)	12%	12%	11%	12%	12%	12%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	14.0	90.0	63.1	63.1		
Effective Green, g (s)	14.0	90.0	63.1	63.1		
Actuated g/C Ratio	0.16	1.00	0.70	0.70		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	486	3223	2162	919		
v/s Ratio Prot	c0.10	c0.32	0.08			
v/s Ratio Perm				0.06		
v/c Ratio	0.61	0.32	0.12	0.08		
Uniform Delay, d1	35.5	0.0	4.4	4.3		
Progression Factor	0.89	1.00	1.00	1.00		
Incremental Delay, d2	2.2	0.2	0.1	0.2		
Delay (s)	33.8	0.2	4.5	4.5		
Level of Service	C	A	A	A		
Approach Delay (s)		7.8	4.5		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	712	0	0	286	423	214	0	348	0	0	0
Future Volume (vph)	119	712	0	0	286	423	214	0	348	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3956	1197		1556	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3956	1197		1556	2450			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	124	742	0	0	298	441	223	0	362	0	0	0
RTOR Reduction (vph)	0	0	0	0	99	102	0	0	267	0	0	0
Lane Group Flow (vph)	124	742	0	0	420	118	0	223	96	0	0	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	10.6	69.0			53.7	53.7		20.8	20.8			
Effective Green, g (s)	10.6	69.0			53.7	53.7		20.8	20.8			
Actuated g/C Ratio	0.11	0.69			0.54	0.54		0.21	0.21			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	320	3085			2124	642		323	509			
v/s Ratio Prot	c0.04	c0.17			0.11							
v/s Ratio Perm						0.10		0.14	0.04			
v/c Ratio	0.39	0.24			0.20	0.18		0.69	0.19			
Uniform Delay, d1	41.7	5.8			12.0	11.9		36.6	32.6			
Progression Factor	0.96	0.85			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.7	0.2			0.2	0.6		6.2	0.2			
Delay (s)	40.8	5.1			12.2	12.5		42.9	32.8			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		10.2			12.3			36.6			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	265	127	98	747	0	590
Future Volume (vph)	265	127	98	747	0	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4254		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4254		3019	4472		2450
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	315	151	117	889	0	702
RTOR Reduction (vph)	31	0	0	0	0	626
Lane Group Flow (vph)	435	0	117	889	0	76
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	79.0		10.8	100.0		10.8
Effective Green, g (s)	79.0		10.8	100.0		10.8
Actuated g/C Ratio	0.79		0.11	1.00		0.11
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3360		326	4472		264
v/s Ratio Prot	0.10		c0.04	c0.20		0.03
v/s Ratio Perm						
v/c Ratio	0.13		0.36	0.20		0.29
Uniform Delay, d1	2.5		41.4	0.0		41.1
Progression Factor	0.31		0.86	1.00		1.00
Incremental Delay, d2	0.1		0.7	0.1		0.6
Delay (s)	0.8		36.1	0.1		41.7
Level of Service	A		D	A		D
Approach Delay (s)	0.8			4.3	41.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	141	26	230	372	141	47	23	134	127	50	81
Future Volume (vph)	20	141	26	230	372	141	47	23	134	127	50	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1556	4368		1556	4287			1585	1392		2894	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.79	
Satd. Flow (perm)	1556	4368		1556	4287			911	1392		2338	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	153	28	250	404	153	51	25	146	138	54	88
RTOR Reduction (vph)	0	14	0	0	40	0	0	0	123	0	74	0
Lane Group Flow (vph)	22	167	0	250	517	0	0	76	23	0	206	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.5	49.1		21.0	65.0			15.7	15.7		15.7	
Effective Green, g (s)	4.5	49.1		21.0	65.0			15.7	15.7		15.7	
Actuated g/C Ratio	0.04	0.49		0.21	0.65			0.16	0.16		0.16	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	70	2144		326	2786			143	218		367	
v/s Ratio Prot	c0.01	0.04		c0.16	c0.12							
v/s Ratio Perm								0.08	0.02		c0.09	
v/c Ratio	0.31	0.08		0.77	0.19			0.53	0.11		0.56	
Uniform Delay, d1	46.3	13.5		37.2	7.0			38.8	36.1		39.0	
Progression Factor	1.00	1.00		0.82	0.84			1.00	1.00		1.00	
Incremental Delay, d2	0.9	0.1		9.3	0.1			5.6	0.4		2.7	
Delay (s)	47.2	13.5		39.7	6.0			44.3	36.5		41.7	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		17.2			16.4			39.2			41.7	
Approach LOS		B			B			D			D	

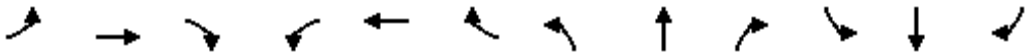
Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	97	75	61	84	93	38
Future Vol, veh/h	97	75	61	84	93	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	15	15	15	15	15	15
Mvmt Flow	115	89	73	100	111	45
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	9.9	8.3	10.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	71%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	100%
Vol Right, %	29%	44%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	172	61	42	42
LT Vol	93	0	61	0	0
Through Vol	0	97	0	42	42
RT Vol	38	75	0	0	0
Lane Flow Rate	156	205	73	50	50
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.251	0.29	0.12	0.075	0.048
Departure Headway (Hd)	5.805	5.096	5.93	5.427	3.457
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	618	704	604	660	1031
Service Time	3.552	2.832	3.668	3.164	1.194
HCM Lane V/C Ratio	0.252	0.291	0.121	0.076	0.048
HCM Control Delay	10.5	9.9	9.5	8.6	6.4
HCM Lane LOS	B	A	A	A	A
HCM 95th-tile Q	1	1.2	0.4	0.2	0.2

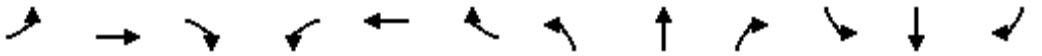


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	184	23	82	393	4	29	0	22	0	0	15
Future Volume (vph)	28	184	23	82	393	4	29	0	22	0	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1570	4435		1570	4504			1570	1404		1429	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1570	4435		1570	4504			1652	1404		1429	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	192	24	85	409	4	30	0	23	0	0	16
RTOR Reduction (vph)	0	17	0	0	1	0	0	0	22	0	15	0
Lane Group Flow (vph)	29	199	0	85	412	0	0	30	1	0	1	0
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	9.4		5.4	14.0			1.9	1.9		1.9	
Effective Green, g (s)	0.8	9.4		5.4	14.0			1.9	1.9		1.9	
Actuated g/C Ratio	0.03	0.30		0.17	0.45			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	40	1349		274	2040			101	86		87	
v/s Ratio Prot	0.02	0.04		c0.05	c0.09						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.72	0.15		0.31	0.20			0.30	0.02		0.01	
Uniform Delay, d1	14.9	7.8		11.1	5.1			13.9	13.6		13.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	42.4	0.1		0.2	0.1			0.6	0.0		0.0	
Delay (s)	57.4	8.0		11.4	5.2			14.5	13.7		13.6	
Level of Service	E	A		B	A			B	B		B	
Approach Delay (s)		13.8			6.2			14.1			13.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	30.9	Sum of lost time (s)	14.2
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

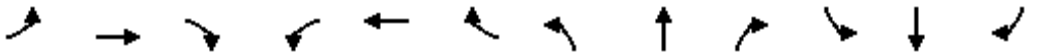
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	400	182	212	354	294	319
Future Volume (vph)	400	182	212	354	294	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1455	1626	4715	3155	1455
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1455	1626	4715	3155	1455
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	449	204	238	398	330	358
RTOR Reduction (vph)	0	39	0	0	0	278
Lane Group Flow (vph)	449	165	238	398	330	80
Heavy Vehicles (%)	10%	11%	11%	10%	11%	11%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	10.5	22.1	10.3	26.5	11.6	11.6
Effective Green, g (s)	10.5	22.1	10.3	26.5	11.6	11.6
Actuated g/C Ratio	0.20	0.42	0.20	0.51	0.22	0.22
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	950	617	321	2398	702	323
v/s Ratio Prot	c0.10	0.06	c0.15	0.08	c0.10	
v/s Ratio Perm		0.05				0.05
v/c Ratio	0.47	0.27	0.74	0.17	0.47	0.25
Uniform Delay, d1	18.4	9.7	19.6	6.9	17.6	16.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	8.9	0.0	0.5	0.4
Delay (s)	18.7	10.0	28.6	6.9	18.1	17.1
Level of Service	B	A	C	A	B	B
Approach Delay (s)	16.0			15.0	17.5	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	19.7
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



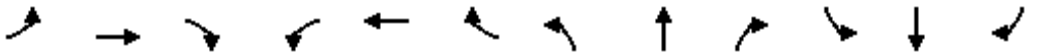
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	10	0	36	17	126	2	164	35	329	327	71
Future Volume (vph)	22	10	0	36	17	126	2	164	35	329	327	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1583	1667			1612	1417	1583	3083		1583	1667	1417
Flt Permitted	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1583	1667			1612	1417	1583	3083		1583	1667	1417
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	11	0	40	19	140	2	182	39	366	363	79
RTOR Reduction (vph)	0	0	0	0	0	125	0	18	0	0	0	36
Lane Group Flow (vph)	24	11	0	0	59	15	2	203	0	366	363	43
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	1.9	1.9			6.9	6.9	0.6	17.1		19.2	35.5	35.5
Effective Green, g (s)	1.9	1.9			6.9	6.9	0.6	17.1		19.2	35.5	35.5
Actuated g/C Ratio	0.03	0.03			0.11	0.11	0.01	0.26		0.30	0.55	0.55
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	46	48			171	150	14	812		468	911	775
v/s Ratio Prot	c0.02	0.01			c0.04		0.00	0.07		c0.23	c0.22	
v/s Ratio Perm						0.01						0.03
v/c Ratio	0.52	0.23			0.35	0.10	0.14	0.25		0.78	0.40	0.06
Uniform Delay, d1	31.1	30.8			26.9	26.2	31.9	18.8		20.9	8.5	6.9
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.8	0.9			1.5	0.4	1.7	0.2		7.7	0.4	0.0
Delay (s)	35.9	31.7			28.4	26.6	33.6	19.1		28.6	8.9	6.9
Level of Service	D	C			C	C	C	B		C	A	A
Approach Delay (s)		34.6			27.1			19.2			17.6	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	64.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



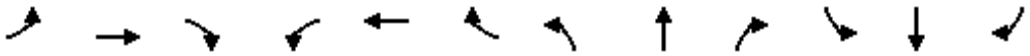
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	405	126	57	261	173	74	62	46	209	45	100
Future Volume (vph)	164	405	126	57	261	173	74	62	46	209	45	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3155	4715	1455	3155	4715	1468	1626	1603		1641	1712	2561
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3155	4715	1455	3155	4715	1468	1626	1603		1641	1712	2561
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	198	488	152	69	314	208	89	75	55	252	54	120
RTOR Reduction (vph)	0	0	115	0	0	170	0	39	0	0	0	76
Lane Group Flow (vph)	198	488	37	69	314	38	89	91	0	252	54	44
Heavy Vehicles (%)	11%	10%	11%	11%	10%	10%	11%	11%	11%	10%	11%	11%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.1	16.9	16.9	5.9	12.7	12.7	6.3	10.6		11.3	15.6	25.7
Effective Green, g (s)	10.1	16.9	16.9	5.9	12.7	12.7	6.3	10.6		11.3	15.6	25.7
Actuated g/C Ratio	0.15	0.24	0.24	0.09	0.18	0.18	0.09	0.15		0.16	0.22	0.37
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	459	1148	354	268	862	268	147	244		267	384	948
v/s Ratio Prot	c0.06	c0.10		0.02	0.07		0.05	c0.06		c0.15	c0.03	0.01
v/s Ratio Perm			0.03			0.03						0.01
v/c Ratio	0.43	0.43	0.10	0.26	0.36	0.14	0.61	0.37		0.94	0.14	0.05
Uniform Delay, d1	27.0	22.2	20.4	29.7	24.8	23.8	30.4	26.4		28.7	21.5	14.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.3	0.1	0.5	0.3	0.2	6.9	1.0		39.8	0.2	0.0
Delay (s)	27.7	22.4	20.5	30.2	25.1	24.0	37.2	27.4		68.5	21.7	14.0
Level of Service	C	C	C	C	C	C	D	C		E	C	B
Approach Delay (s)		23.3			25.3			31.4			47.2	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	24.7
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	53	26	352	37	162	10	328	859	314	451	4
Future Volume (vph)	7	53	26	352	37	162	10	328	859	314	451	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3213	3278	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3213	3278	
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	9	70	34	463	49	213	13	432	1130	413	593	5
RTOR Reduction (vph)	0	0	28	0	0	140	0	0	254	0	1	0
Lane Group Flow (vph)	9	70	6	463	49	73	13	432	876	413	597	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	10%	10%	9%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.9	8.2	15.8	27.8	33.0	33.0	7.6	18.0	45.8	19.9	30.3	
Effective Green, g (s)	1.9	8.2	15.8	27.8	33.0	33.0	7.6	18.0	45.8	19.9	30.3	
Actuated g/C Ratio	0.02	0.09	0.16	0.29	0.34	0.34	0.08	0.19	0.48	0.21	0.31	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	32	279	320	919	592	508	129	614	778	664	1032	
v/s Ratio Prot	0.01	c0.02	0.00	0.15	0.03		0.01	0.13	c0.33	c0.13	0.18	
v/s Ratio Perm			0.00			0.05			0.27			
v/c Ratio	0.28	0.25	0.02	0.50	0.08	0.14	0.10	0.70	1.13	0.62	0.58	
Uniform Delay, d1	46.5	41.1	33.7	28.5	21.4	21.8	41.1	36.6	25.2	34.7	27.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.8	0.5	0.0	0.4	0.1	0.1	0.3	3.7	73.0	1.8	0.8	
Delay (s)	51.2	41.6	33.7	28.9	21.4	22.0	41.5	40.3	98.2	36.5	28.4	
Level of Service	D	D	C	C	C	C	D	D	F	D	C	
Approach Delay (s)		40.0			26.4			81.8			31.7	
Approach LOS		D			C			F			C	

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	96.2	Sum of lost time (s)	23.4
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	54	3	75	379	1213	0	0	424	808
Future Volume (vph)	0	0	0	54	3	75	379	1213	0	0	424	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1728	1468	1719	4715			4319	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1728	1468	1719	4715			4319	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	0	0	69	4	96	486	1555	0	0	544	1036
RTOR Reduction (vph)	0	0	0	0	0	80	0	0	0	0	190	0
Lane Group Flow (vph)	0	0	0	0	73	16	486	1555	0	0	1390	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	10%	5%	10%	5%	5%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					5.6	5.6	29.6	74.2			39.9	
Effective Green, g (s)					5.6	5.6	29.6	74.2			39.9	
Actuated g/C Ratio					0.06	0.06	0.33	0.82			0.44	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					107	91	565	3887			1914	
v/s Ratio Prot							c0.28	0.33			c0.32	
v/s Ratio Perm					0.04	0.01						
v/c Ratio					0.68	0.18	0.86	0.40			1.20dr	
Uniform Delay, d1					41.3	40.0	28.3	2.1			20.6	
Progression Factor					1.00	1.00	0.99	0.10			1.00	
Incremental Delay, d2					16.5	0.9	1.3	0.0			2.4	
Delay (s)					57.8	41.0	29.3	0.2			23.0	
Level of Service					E	D	C	A			C	
Approach Delay (s)		0.0			48.2			7.2			23.0	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	797	1	417	0	0	0	0	777	111	118	355	0
Future Volume (vph)	797	1	417	0	0	0	0	777	111	118	355	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1545	1489						4847		1626	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1545	1489						4847		1626	3438	
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	1077	1	564	0	0	0	0	1050	150	159	480	0
RTOR Reduction (vph)	0	99	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	851	692	0	0	0	0	0	1179	0	159	480	0
Heavy Vehicles (%)	11%	5%	5%	5%	5%	5%	5%	5%	5%	11%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	44.9	44.9						22.9		7.3	34.9	
Effective Green, g (s)	44.9	44.9						22.9		7.3	34.9	
Actuated g/C Ratio	0.50	0.50						0.25		0.08	0.39	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	770	742						1233		131	1333	
v/s Ratio Prot	c0.55	0.46						c0.24		c0.10	0.14	
v/s Ratio Perm												
v/c Ratio	1.11	0.93						0.96		1.21	0.36	
Uniform Delay, d1	22.6	21.1						33.1		41.4	19.6	
Progression Factor	1.00	1.00						1.00		0.79	0.71	
Incremental Delay, d2	65.2	18.5						17.1		135.9	0.5	
Delay (s)	87.7	39.6						50.1		168.6	14.5	
Level of Service	F	D						D		F	B	
Approach Delay (s)		64.5			0.0			50.1			52.8	
Approach LOS		E			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	57.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	261.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	457	3	14	1	14	94	56	337	1	39	179	541
Future Vol, veh/h	457	3	14	1	14	94	56	337	1	39	179	541
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	662	4	20	1	20	136	81	488	1	57	259	784
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	83.5	28.2	52.3	514.7
HCM LOS	F	D	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	93%	100%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	99%	0%	1%	0%	0%	13%	0%	100%	10%
Vol Right, %	0%	0%	1%	0%	6%	0%	0%	87%	0%	0%	90%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	225	113	238	236	1	1	108	39	119	601
LT Vol	56	0	0	238	219	1	1	0	39	0	0
Through Vol	0	225	112	0	3	0	0	14	0	119	60
RT Vol	0	0	1	0	14	0	0	94	0	0	541
Lane Flow Rate	81	326	164	344	343	1	1	157	57	173	871
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.245	0.937	0.472	0.988	0.976	0.002	0.002	0.49	0.172	0.502	2.368
Departure Headway (Hd)	12.781	12.259	12.252	12.011	11.933	14.556	14.556	13.392	10.959	10.442	9.791
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	283	300	296	307	308	247	247	271	328	346	383
Service Time	10.481	9.959	9.952	9.711	9.633	12.256	12.256	11.092	8.707	8.191	7.539
HCM Lane V/C Ratio	0.286	1.087	0.554	1.121	1.114	0.004	0.004	0.579	0.174	0.5	2.274
HCM Control Delay	19.6	74.1	25.4	85.1	81.8	17.3	17.3	28.3	16	23.3	644.7
HCM Lane LOS	C	F	D	F	F	C	C	D	C	C	F
HCM 95th-tile Q	0.9	9.1	2.4	10.3	10.1	0	0	2.5	0.6	2.7	67.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	24	341	6	31	334
Future Volume (Veh/h)	4	24	341	6	31	334
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	4	26	392	7	36	384
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	848	392			392	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	848	392			392	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	96			97	
cM capacity (veh/h)	306	631			1104	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	30	392	7	36	384
Volume Left	4	0	0	36	0
Volume Right	26	0	7	0	0
cSH	553	1700	1700	1104	1700
Volume to Capacity	0.05	0.23	0.00	0.03	0.23
Queue Length 95th (ft)	4	0	0	3	0
Control Delay (s)	11.9	0.0	0.0	8.4	0.0
Lane LOS	B			A	
Approach Delay (s)	11.9	0.0		0.7	
Approach LOS	B				

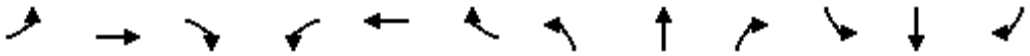
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	992	251	41	783	19	42
Future Volume (vph)	992	251	41	783	19	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1538	1719	4715	3335	1538
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1538	1719	4715	3335	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1078	273	45	851	21	46
RTOR Reduction (vph)	0	124	0	0	0	42
Lane Group Flow (vph)	1078	149	45	851	21	4
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.5	20.5	2.1	26.6	3.0	3.0
Effective Green, g (s)	20.5	20.5	2.1	26.6	3.0	3.0
Actuated g/C Ratio	0.55	0.55	0.06	0.71	0.08	0.08
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2570	838	96	3335	266	122
v/s Ratio Prot	c0.23		c0.03	0.18	c0.01	
v/s Ratio Perm		0.10				0.00
v/c Ratio	0.42	0.18	0.47	0.26	0.08	0.03
Uniform Delay, d1	5.0	4.3	17.2	2.0	16.0	16.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	3.6	0.0	0.1	0.1
Delay (s)	5.2	4.4	20.8	2.0	16.1	16.1
Level of Service	A	A	C	A	B	B
Approach Delay (s)	5.0			2.9	16.1	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	37.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	35.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

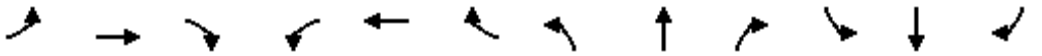
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	276	534	266	80	583	96	117	4	30	78	9	179
Future Volume (vph)	276	534	266	80	583	96	117	4	30	78	9	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.88	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1497		1559	1371	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1497		1559	1371	1395
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	297	574	286	86	627	103	126	4	32	84	10	192
RTOR Reduction (vph)	0	0	198	0	0	78	0	27	0	0	76	90
Lane Group Flow (vph)	297	574	88	86	627	25	126	9	0	76	30	14
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.0	20.9	20.9	5.6	16.8	16.8	11.1	11.1		9.1	9.1	9.1
Effective Green, g (s)	9.0	20.9	20.9	5.6	16.8	16.8	11.1	11.1		9.1	9.1	9.1
Actuated g/C Ratio	0.13	0.31	0.31	0.08	0.25	0.25	0.16	0.16		0.13	0.13	0.13
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	421	1449	451	262	1164	362	267	244		208	183	186
v/s Ratio Prot	c0.09	c0.12		0.03	c0.13		c0.08	0.01		c0.05	0.02	
v/s Ratio Perm			0.06			0.02						0.01
v/c Ratio	0.71	0.40	0.19	0.33	0.54	0.07	0.47	0.04		0.37	0.16	0.07
Uniform Delay, d1	28.2	18.6	17.4	29.4	22.2	19.6	25.8	24.0		26.8	26.1	25.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.3	0.2	0.2	0.7	0.5	0.1	1.3	0.1		1.1	0.4	0.2
Delay (s)	33.5	18.8	17.6	30.2	22.7	19.7	27.1	24.0		27.9	26.5	25.9
Level of Service	C	B	B	C	C	B	C	C		C	C	C
Approach Delay (s)		22.3			23.1			26.4			26.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



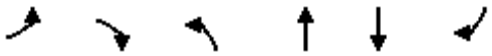
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	320	257	858	354	76	195	164	484	52	239	55
Future Volume (vph)	84	320	257	858	354	76	195	164	484	52	239	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4848	1468	1703	4696		3183	3282	1468	3183	1679	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4848	1468	1703	4696		3183	3282	1468	3183	1679	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	90	344	276	923	381	82	210	176	520	56	257	59
RTOR Reduction (vph)	0	0	167	0	21	0	0	0	417	0	6	0
Lane Group Flow (vph)	90	344	109	923	442	0	210	176	103	56	310	0
Heavy Vehicles (%)	10%	7%	10%	6%	7%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	13.0	12.8	12.8	79.3	79.1		8.4	29.8	29.8	3.4	24.8	
Effective Green, g (s)	13.0	12.8	12.8	79.3	79.1		8.4	29.8	29.8	3.4	24.8	
Actuated g/C Ratio	0.09	0.09	0.09	0.53	0.53		0.06	0.20	0.20	0.02	0.17	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	142	413	125	900	2476		178	652	291	72	277	
v/s Ratio Prot	0.05	0.07		c0.54	0.09		c0.07	0.05		0.02	c0.18	
v/s Ratio Perm			c0.07						0.07			
v/c Ratio	0.63	0.83	0.87	1.03	0.18		1.18	0.27	0.36	0.78	1.12	
Uniform Delay, d1	66.2	67.5	67.8	35.4	18.5		70.8	50.9	51.8	72.9	62.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.9	13.4	42.9	36.7	0.0		124.1	1.0	3.4	39.9	90.2	
Delay (s)	75.1	81.0	110.7	72.0	18.5		194.9	51.9	55.2	112.8	152.8	
Level of Service	E	F	F	E	B		F	D	E	F	F	
Approach Delay (s)		91.8			54.2			86.9			146.8	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	81.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



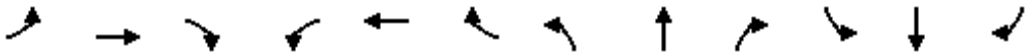
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	114	77	31	166	93	716	261	0	1434	52
Future Volume (vph)	15	0	114	77	31	166	93	716	261	0	1434	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1626	1455		1545	1591	1495	3155	3312	1455		4759	1509
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1626	1455		1545	1591	1495	3155	3312	1455		4759	1509
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	0	119	80	32	173	97	746	272	0	1494	54
RTOR Reduction (vph)	0	112	0	0	0	159	0	0	73	0	0	21
Lane Group Flow (vph)	16	7	0	55	57	14	97	746	199	0	1494	33
Heavy Vehicles (%)	11%	11%	11%	11%	11%	8%	11%	9%	11%	11%	9%	7%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	6.8	6.8		9.9	9.9	9.9	9.1	88.0	88.0		74.2	74.2
Effective Green, g (s)	6.8	6.8		9.9	9.9	9.9	9.1	88.0	88.0		74.2	74.2
Actuated g/C Ratio	0.06	0.06		0.08	0.08	0.08	0.08	0.73	0.73		0.62	0.62
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	92	82		127	131	123	239	2428	1067		2942	933
v/s Ratio Prot	c0.01	0.00		0.04	c0.04		c0.03	0.23			c0.31	
v/s Ratio Perm						0.01			0.14			0.02
v/c Ratio	0.17	0.08		0.43	0.44	0.12	0.41	0.31	0.19		0.51	0.04
Uniform Delay, d1	53.9	53.6		52.4	52.4	51.0	52.9	5.5	4.9		12.7	8.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.49	0.13		1.00	1.00
Incremental Delay, d2	0.9	0.4		2.4	2.3	0.4	1.1	0.3	0.4		0.6	0.1
Delay (s)	54.8	54.1		54.7	54.7	51.4	54.2	3.0	1.0		13.4	9.0
Level of Service	D	D		D	D	D	D	A	A		B	A
Approach Delay (s)		54.2			52.7			7.0			13.2	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	552	230	69	529	392	344
Future Volume (vph)	552	230	69	529	392	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3183	2538	3127	4715	3312	1468
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3183	2538	3127	4715	3312	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	581	242	73	557	413	362
RTOR Reduction (vph)	0	182	0	0	0	41
Lane Group Flow (vph)	581	60	73	557	413	321
Heavy Vehicles (%)	10%	12%	12%	10%	9%	10%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	29.6	29.6	7.0	80.2	68.5	98.1
Effective Green, g (s)	29.6	29.6	7.0	80.2	68.5	98.1
Actuated g/C Ratio	0.25	0.25	0.06	0.67	0.57	0.82
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	785	626	182	3151	1890	1262
v/s Ratio Prot	c0.18		c0.02	0.12	0.12	c0.06
v/s Ratio Perm		0.02				0.16
v/c Ratio	0.74	0.10	0.40	0.18	0.22	0.25
Uniform Delay, d1	41.7	34.9	54.5	7.5	12.6	2.5
Progression Factor	1.00	1.00	1.00	1.00	0.31	0.29
Incremental Delay, d2	3.8	0.1	1.4	0.1	0.2	0.1
Delay (s)	45.4	34.9	55.9	7.6	4.2	0.8
Level of Service	D	C	E	A	A	A
Approach Delay (s)	42.3			13.2	2.6	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	42	71	41	21	77	369	0	0	0	179	218	43
Future Volume (vph)	42	71	41	21	77	369	0	0	0	179	218	43
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
Hourly flow rate (vph)	45	76	44	22	82	393	0	0	0	190	232	46

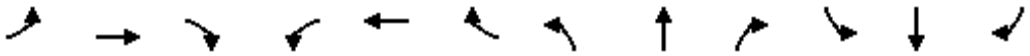
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	165	497	306	162
Volume Left (vph)	45	22	190	0
Volume Right (vph)	44	393	0	46
Hadj (s)	0.10	-0.24	0.53	-0.02
Departure Headway (s)	6.2	5.3	6.8	6.3
Degree Utilization, x	0.28	0.73	0.58	0.28
Capacity (veh/h)	543	661	503	549
Control Delay (s)	11.6	21.5	17.7	10.6
Approach Delay (s)	11.6	21.5	15.3	
Approach LOS	B	C	C	

Intersection Summary				
Delay	17.5			
Level of Service	C			
Intersection Capacity Utilization	48.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	0	0	0	73	184
Future Volume (Veh/h)	79	0	0	0	73	184
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	82	0	0	0	76	192
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	248	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	248	0			0	
tC, single (s)	7.1	7.2			4.4	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	87	100			95	
cM capacity (veh/h)	655	1050			1545	

Direction, Lane #	WB 1	SB 1	SB 2
Volume Total	82	140	128
Volume Left	82	76	0
Volume Right	0	0	0
cSH	655	1545	1700
Volume to Capacity	0.13	0.05	0.08
Queue Length 95th (ft)	11	4	0
Control Delay (s)	11.3	4.2	0.0
Lane LOS	B	A	
Approach Delay (s)	11.3	2.2	
Approach LOS	B		

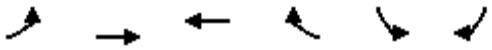
Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	40	30	39	30	0	0	0	0	114	150	8
Future Volume (vph)	0	40	30	39	30	0	0	0	0	114	150	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	41	31	40	31	0	0	0	0	118	155	8

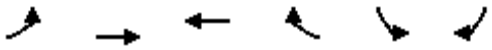
Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	72	71	196	86
Volume Left (vph)	0	40	118	0
Volume Right (vph)	31	0	0	8
Hadj (s)	-0.02	0.35	0.54	0.17
Departure Headway (s)	4.7	5.1	5.4	5.0
Degree Utilization, x	0.09	0.10	0.29	0.12
Capacity (veh/h)	719	669	649	694
Control Delay (s)	8.2	8.6	9.4	7.5
Approach Delay (s)	8.2	8.6	8.9	
Approach LOS	A	A	A	

Intersection Summary				
Delay	8.7			
Level of Service	A			
Intersection Capacity Utilization	24.8%	ICU Level of Service	A	
Analysis Period (min)	15			



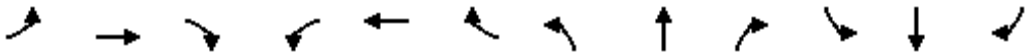
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	654	412	0	175	281
Future Volume (vph)	0	654	412	0	175	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4631	4631		3099	1442
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4631	4631		3099	1442
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	688	434	0	184	296
RTOR Reduction (vph)	0	0	0	0	0	229
Lane Group Flow (vph)	0	688	434	0	184	67
Heavy Vehicles (%)	13%	12%	12%	13%	13%	12%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		64.8	64.8		11.9	11.9
Effective Green, g (s)		64.8	64.8		11.9	11.9
Actuated g/C Ratio		0.72	0.72		0.13	0.13
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3334	3334		409	190
v/s Ratio Prot		c0.15	0.09		c0.06	
v/s Ratio Perm						0.05
v/c Ratio		0.21	0.13		0.45	0.35
Uniform Delay, d1		4.1	3.9		36.0	35.5
Progression Factor		1.00	1.35		1.00	1.00
Incremental Delay, d2		0.1	0.1		0.8	1.1
Delay (s)		4.3	5.3		36.8	36.7
Level of Service		A	A		D	D
Approach Delay (s)		4.3	5.3		36.7	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	443	371	417	465	0	0
Future Volume (vph)	443	371	417	465	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.95	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3127	3223	2934	1301		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3127	3223	2934	1301		
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	527	442	496	554	0	0
RTOR Reduction (vph)	0	0	40	55	0	0
Lane Group Flow (vph)	527	442	683	272	0	0
Heavy Vehicles (%)	12%	12%	12%	13%	13%	13%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	20.5	90.0	56.6	56.6		
Effective Green, g (s)	20.5	90.0	56.6	56.6		
Actuated g/C Ratio	0.23	1.00	0.63	0.63		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	712	3223	1845	818		
v/s Ratio Prot	c0.17	0.14	c0.23			
v/s Ratio Perm				0.21		
v/c Ratio	0.74	0.14	0.37	0.33		
Uniform Delay, d1	32.3	0.0	8.1	7.8		
Progression Factor	0.85	1.00	1.00	1.00		
Incremental Delay, d2	4.1	0.1	0.6	1.1		
Delay (s)	31.6	0.1	8.6	8.9		
Level of Service	C	A	A	A		
Approach Delay (s)		17.2	8.7		0.0	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

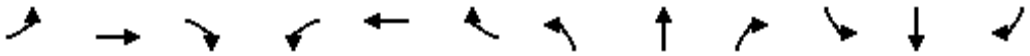


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	474	0	0	521	764	62	1	237	0	0	0
Future Volume (vph)	395	474	0	0	521	764	62	1	237	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3019	4472			3958	1197		1561	2450			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3019	4472			3958	1197		1561	2450			
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	407	489	0	0	537	788	64	1	244	0	0	0
RTOR Reduction (vph)	0	0	0	0	106	184	0	0	222	0	0	0
Lane Group Flow (vph)	407	489	0	0	825	210	0	65	22	0	0	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	26.3	89.7			58.7	58.7		10.1	10.1			
Effective Green, g (s)	26.3	89.7			58.7	58.7		10.1	10.1			
Actuated g/C Ratio	0.24	0.82			0.53	0.53		0.09	0.09			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	721	3646			2112	638		143	224			
v/s Ratio Prot	c0.13	0.11			c0.21							
v/s Ratio Perm						0.18		0.04	0.01			
v/c Ratio	0.56	0.13			0.39	0.33		0.45	0.10			
Uniform Delay, d1	36.8	2.1			15.1	14.5		47.3	45.8			
Progression Factor	0.89	1.01			1.00	1.00		1.00	1.00			
Incremental Delay, d2	1.0	0.1			0.5	1.4		2.3	0.2			
Delay (s)	33.9	2.2			15.7	15.9		49.6	46.0			
Level of Service	C	A			B	B		D	D			
Approach Delay (s)		16.6			15.7			46.7			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	581	278	219	685	0	292
Future Volume (vph)	581	278	219	685	0	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4254		3019	4472		2450
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4254		3019	4472		2450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	612	293	231	721	0	307
RTOR Reduction (vph)	79	0	0	0	0	210
Lane Group Flow (vph)	826	0	231	721	0	97
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	64.9		34.9	110.0		34.9
Effective Green, g (s)	64.9		34.9	110.0		34.9
Actuated g/C Ratio	0.59		0.32	1.00		0.32
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2509		957	4472		777
v/s Ratio Prot	c0.19		c0.08	0.16		0.04
v/s Ratio Perm						
v/c Ratio	0.33		0.24	0.16		0.13
Uniform Delay, d1	11.5		27.8	0.0		26.7
Progression Factor	0.54		0.75	1.00		1.00
Incremental Delay, d2	0.3		0.1	0.1		0.1
Delay (s)	6.6		21.0	0.1		26.8
Level of Service	A		C	A		C
Approach Delay (s)	6.6			5.2	26.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	368	49	238	283	176	40	48	272	185	85	77
Future Volume (vph)	49	368	49	238	283	176	40	48	272	185	85	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.94			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1556	4392		1556	4215			1601	1392		2931	
Flt Permitted	0.95	1.00		0.95	1.00			0.68	1.00		0.77	
Satd. Flow (perm)	1556	4392		1556	4215			1114	1392		2311	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	51	379	51	245	292	181	41	49	280	191	88	79
RTOR Reduction (vph)	0	11	0	0	72	0	0	0	222	0	29	0
Lane Group Flow (vph)	51	419	0	245	401	0	0	90	58	0	329	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.9	51.2		21.7	64.4			22.9	22.9		22.9	
Effective Green, g (s)	7.9	51.2		21.7	64.4			22.9	22.9		22.9	
Actuated g/C Ratio	0.07	0.47		0.20	0.59			0.21	0.21		0.21	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	111	2044		306	2467			231	289		481	
v/s Ratio Prot	c0.03	c0.10		c0.16	0.10							
v/s Ratio Perm								0.08	0.04		c0.14	
v/c Ratio	0.46	0.21		0.80	0.16			0.39	0.20		0.68	
Uniform Delay, d1	49.0	17.4		42.1	10.4			37.5	36.0		40.2	
Progression Factor	1.00	1.00		0.81	0.33			1.00	1.00		1.00	
Incremental Delay, d2	1.1	0.2		13.1	0.1			1.8	0.6		4.6	
Delay (s)	50.1	17.6		47.0	3.6			39.3	36.6		44.8	
Level of Service	D	B		D	A			D	D		D	
Approach Delay (s)		21.0			18.4			37.2			44.8	
Approach LOS		C			B			D			D	

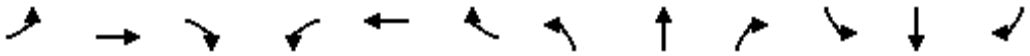
Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	106	140	97	150	66	50
Future Vol, veh/h	106	140	97	150	66	50
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	16	16	16	16	16	16
Mvmt Flow	122	161	111	172	76	57
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	11.1	8.6	10.6
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	57%	0%	100%	0%	0%
Vol Thru, %	0%	43%	0%	100%	100%
Vol Right, %	43%	57%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	246	97	75	75
LT Vol	66	0	97	0	0
Through Vol	0	106	0	75	75
RT Vol	50	140	0	0	0
Lane Flow Rate	133	283	111	86	86
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.224	0.397	0.184	0.13	0.083
Departure Headway (Hd)	6.047	5.059	5.951	5.447	3.46
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	591	710	602	656	1028
Service Time	3.812	2.807	3.701	3.197	1.209
HCM Lane V/C Ratio	0.225	0.399	0.184	0.131	0.084
HCM Control Delay	10.6	11.1	10	9	6.5
HCM Lane LOS	B	B	A	A	A
HCM 95th-tile Q	0.9	1.9	0.7	0.4	0.3

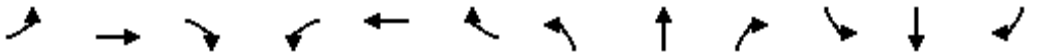


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	445	26	62	347	0	30	0	22	0	1	13
Future Volume (vph)	27	445	26	62	347	0	30	0	22	0	1	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1556	4435		1556	4472			1556	1392		1432	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00		1.00	
Satd. Flow (perm)	1556	4435		1556	4472			1638	1392		1432	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	484	28	67	377	0	33	0	24	0	1	14
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	23	0	13	0
Lane Group Flow (vph)	29	505	0	67	377	0	0	33	1	0	2	0
Heavy Vehicles (%)	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm		NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	0.8	11.9		2.1	13.2			1.8	1.8		1.8	
Effective Green, g (s)	0.8	11.9		2.1	13.2			1.8	1.8		1.8	
Actuated g/C Ratio	0.03	0.40		0.07	0.44			0.06	0.06		0.06	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	41	1759		108	1967			98	83		85	
v/s Ratio Prot	0.02	c0.11		c0.04	0.08						0.00	
v/s Ratio Perm								c0.02	0.00			
v/c Ratio	0.71	0.29		0.62	0.19			0.34	0.02		0.02	
Uniform Delay, d1	14.5	6.2		13.6	5.1			13.5	13.3		13.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	36.5	0.3		7.7	0.1			0.7	0.0		0.0	
Delay (s)	51.0	6.4		21.3	5.2			14.3	13.3		13.3	
Level of Service	D	A		C	A			B	B		B	
Approach Delay (s)		8.8			7.7			13.9			13.3	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	30.0	Sum of lost time (s)	14.2
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

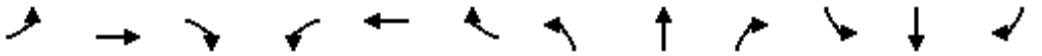
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	430	379	351	435	334	230
Future Volume (vph)	430	379	351	435	334	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1442	1612	4759	3127	1442
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1442	1612	4759	3127	1442
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	467	412	382	473	363	250
RTOR Reduction (vph)	0	179	0	0	0	197
Lane Group Flow (vph)	467	233	382	473	363	53
Heavy Vehicles (%)	10%	12%	12%	9%	12%	12%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	12.9	27.5	22.0	40.6	14.6	14.6
Effective Green, g (s)	12.9	27.5	22.0	40.6	14.6	14.6
Actuated g/C Ratio	0.19	0.40	0.32	0.59	0.21	0.21
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	878	573	512	2792	659	304
v/s Ratio Prot	c0.10	0.09	c0.24	0.10	c0.12	
v/s Ratio Perm		0.08				0.04
v/c Ratio	0.53	0.41	0.75	0.17	0.55	0.17
Uniform Delay, d1	25.4	15.0	21.1	6.6	24.4	22.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.5	5.9	0.0	1.0	0.3
Delay (s)	26.0	15.5	27.0	6.6	25.4	22.6
Level of Service	C	B	C	A	C	C
Approach Delay (s)	21.1			15.7	24.3	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	69.2	Sum of lost time (s)	19.7
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



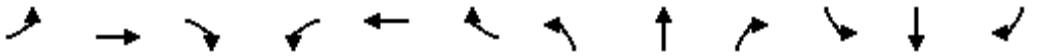
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	11	2	36	9	409	4	405	39	237	175	68
Future Volume (vph)	111	11	2	36	9	409	4	405	39	237	175	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.98			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1570	1619			1588	1404	1570	3098		1570	1652	1404
Flt Permitted	0.95	1.00			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1570	1619			1588	1404	1570	3098		1570	1652	1404
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	129	13	2	42	10	476	5	471	45	276	203	79
RTOR Reduction (vph)	0	2	0	0	0	407	0	7	0	0	0	40
Lane Group Flow (vph)	129	13	0	0	52	69	5	509	0	276	203	39
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.9	7.9			11.0	11.0	0.6	21.6		17.0	37.8	37.8
Effective Green, g (s)	7.9	7.9			11.0	11.0	0.6	21.6		17.0	37.8	37.8
Actuated g/C Ratio	0.10	0.10			0.14	0.14	0.01	0.28		0.22	0.49	0.49
Clearance Time (s)	5.3	5.3			5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0			3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	160	165			225	199	12	865		345	807	686
v/s Ratio Prot	c0.08	0.01			0.03		0.00	c0.16		c0.18	0.12	
v/s Ratio Perm						c0.05						0.03
v/c Ratio	0.81	0.08			0.23	0.34	0.42	0.59		0.80	0.25	0.06
Uniform Delay, d1	34.0	31.4			29.4	29.9	38.2	24.0		28.5	11.5	10.4
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.6	0.1			0.7	1.3	8.3	1.2		11.8	0.2	0.0
Delay (s)	57.5	31.5			30.1	31.2	46.5	25.2		40.3	11.7	10.4
Level of Service	E	C			C	C	D	C		D	B	B
Approach Delay (s)		54.8			31.1			25.4			25.7	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



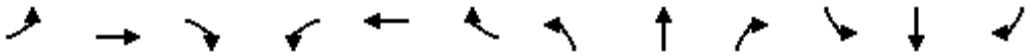
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	321	103	70	473	288	163	61	82	245	105	311
Future Volume (vph)	174	321	103	70	473	288	163	61	82	245	105	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3127	4715	1442	3127	4673	1455	1612	1551		1641	1696	2538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3127	4715	1442	3127	4673	1455	1612	1551		1641	1696	2538
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	191	353	113	77	520	316	179	67	90	269	115	342
RTOR Reduction (vph)	0	0	88	0	0	257	0	64	0	0	0	210
Lane Group Flow (vph)	191	353	25	77	520	59	179	93	0	269	115	132
Heavy Vehicles (%)	12%	10%	12%	12%	11%	11%	12%	12%	12%	10%	12%	12%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	10.2	16.7	16.7	7.9	14.4	14.4	17.8	14.1		13.4	9.7	19.9
Effective Green, g (s)	10.2	16.7	16.7	7.9	14.4	14.4	17.8	14.1		13.4	9.7	19.9
Actuated g/C Ratio	0.13	0.22	0.22	0.10	0.19	0.19	0.23	0.18		0.17	0.13	0.26
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	415	1025	313	321	876	272	373	284		286	214	657
v/s Ratio Prot	c0.06	0.07		0.02	c0.11		0.11	c0.06		c0.16	c0.07	0.03
v/s Ratio Perm			0.02			0.04						0.03
v/c Ratio	0.46	0.34	0.08	0.24	0.59	0.22	0.48	0.33		0.94	0.54	0.20
Uniform Delay, d1	30.8	25.4	23.9	31.7	28.5	26.4	25.5	27.2		31.3	31.4	22.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.2	0.1	0.4	1.1	0.4	1.0	0.7		37.5	2.6	0.2
Delay (s)	31.6	25.6	24.0	32.1	29.6	26.8	26.5	27.9		68.8	34.0	22.4
Level of Service	C	C	C	C	C	C	C	C		E	C	C
Approach Delay (s)		27.1			28.9			27.1			41.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	76.8	Sum of lost time (s)	24.7
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	56	19	1071	78	415	31	460	581	325	239	4
Future Volume (vph)	7	56	19	1071	78	415	31	460	581	325	239	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	3213	1743	1495	1656	3312	1482	3273	3305	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1656	3312	1482	3213	1743	1495	1656	3312	1482	3273	3305	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	8	63	21	1203	88	466	35	517	653	365	269	4
RTOR Reduction (vph)	0	0	18	0	0	253	0	0	69	0	1	0
Lane Group Flow (vph)	8	63	3	1203	88	213	35	517	584	365	272	0
Heavy Vehicles (%)	9%	9%	9%	9%	9%	8%	9%	9%	9%	7%	9%	9%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.9	11.2	19.5	51.8	60.0	60.0	8.3	26.6	78.4	19.5	37.8	
Effective Green, g (s)	1.9	11.2	19.5	51.8	60.0	60.0	8.3	26.6	78.4	19.5	37.8	
Actuated g/C Ratio	0.01	0.09	0.15	0.39	0.46	0.46	0.06	0.20	0.60	0.15	0.29	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	23	282	219	1266	795	682	104	670	884	485	950	
v/s Ratio Prot	0.00	0.02	0.00	c0.37	0.05		0.02	c0.16	0.26	c0.11	0.08	
v/s Ratio Perm			0.00			c0.14			0.13			
v/c Ratio	0.35	0.22	0.01	0.95	0.11	0.31	0.34	0.77	0.66	0.75	0.29	
Uniform Delay, d1	64.1	56.0	47.7	38.6	20.4	22.6	58.9	49.5	17.6	53.6	36.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.9	0.4	0.0	15.0	0.1	0.3	1.9	5.5	1.9	6.5	0.2	
Delay (s)	73.0	56.4	47.8	53.5	20.5	22.9	60.8	55.0	19.5	60.1	36.5	
Level of Service	E	E	D	D	C	C	E	E	B	E	D	
Approach Delay (s)		55.9			43.7			35.9			50.0	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	131.4	Sum of lost time (s)	23.4
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

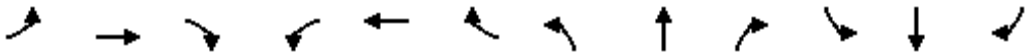


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	99	1	156	386	1308	0	0	506	1009
Future Volume (vph)	0	0	0	99	1	156	386	1308	0	0	506	1009
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1724	1468	1719	4715			4310	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1724	1468	1719	4715			4310	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	112	1	177	439	1486	0	0	575	1147
RTOR Reduction (vph)	0	0	0	0	0	77	0	0	0	0	237	0
Lane Group Flow (vph)	0	0	0	0	114	100	439	1486	0	0	1485	0
Heavy Vehicles (%)	5%	5%	5%	5%	5%	10%	5%	10%	5%	5%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					10.6	10.6	29.7	79.2			44.8	
Effective Green, g (s)					10.6	10.6	29.7	79.2			44.8	
Actuated g/C Ratio					0.11	0.11	0.30	0.79			0.45	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					182	155	510	3734			1930	
v/s Ratio Prot							c0.26	0.32			c0.34	
v/s Ratio Perm					0.07	c0.07						
v/c Ratio					0.63	0.65	0.86	0.40			1.27dr	
Uniform Delay, d1					42.8	42.9	33.2	3.2			23.2	
Progression Factor					1.00	1.00	1.10	0.49			1.00	
Incremental Delay, d2					6.6	8.9	3.7	0.1			3.0	
Delay (s)					49.4	51.8	40.4	1.6			26.3	
Level of Service					D	D	D	A			C	
Approach Delay (s)		0.0			50.9			10.5			26.3	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1001	5	423	0	0	0	0	705	95	121	483	0
Future Volume (vph)	1001	5	423	0	0	0	0	705	95	121	483	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.91						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1504						4852		1641	3438	
Flt Permitted	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1504						4852		1641	3438	
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	1236	6	522	0	0	0	0	870	117	149	596	0
RTOR Reduction (vph)	0	57	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	915	792	0	0	0	0	0	970	0	149	596	0
Heavy Vehicles (%)	10%	5%	5%	5%	5%	5%	5%	5%	5%	10%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	52.9	52.9						22.8		9.4	36.9	
Effective Green, g (s)	52.9	52.9						22.8		9.4	36.9	
Actuated g/C Ratio	0.53	0.53						0.23		0.09	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	824	795						1106		154	1268	
v/s Ratio Prot	c0.59	0.53						c0.20		c0.09	0.17	
v/s Ratio Perm												
v/c Ratio	1.11	1.00						0.88		0.97	0.47	
Uniform Delay, d1	23.6	23.4						37.2		45.1	24.1	
Progression Factor	1.00	1.00						1.00		0.82	0.68	
Incremental Delay, d2	66.2	30.6						9.9		51.1	0.9	
Delay (s)	89.7	54.1						47.1		88.2	17.2	
Level of Service	F	D						D		F	B	
Approach Delay (s)		72.6			0.0			47.1			31.4	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	56.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	161.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	504	15	42	1	7	59	22	223	1	112	308	489
Future Vol, veh/h	504	15	42	1	7	59	22	223	1	112	308	489
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	663	20	55	1	9	78	29	293	1	147	405	643
Number of Lanes	1	1	0	2	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	70	18.7	24.3	266
HCM LOS	F	C	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	80%	100%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	99%	0%	5%	0%	0%	11%	0%	100%	17%
Vol Right, %	0%	0%	1%	0%	15%	0%	0%	89%	0%	0%	83%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	149	75	282	279	1	1	66	112	205	592
LT Vol	22	0	0	282	222	1	1	0	112	0	0
Through Vol	0	149	74	0	15	0	0	7	0	205	103
RT Vol	0	0	1	0	42	0	0	59	0	0	489
Lane Flow Rate	29	196	99	371	367	1	1	87	147	270	779
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.087	0.563	0.285	0.972	0.939	0.002	0.002	0.257	0.388	0.674	1.814
Departure Headway (Hd)	12.149	11.635	11.625	10.291	10.083	13.075	13.075	11.913	9.489	8.978	8.387
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	297	313	311	357	363	275	275	303	379	403	436
Service Time	9.849	9.335	9.325	7.991	7.783	10.775	10.775	9.613	7.263	6.751	6.16
HCM Lane V/C Ratio	0.098	0.626	0.318	1.039	1.011	0.004	0.004	0.287	0.388	0.67	1.787
HCM Control Delay	16	28.3	18.9	74.1	65.8	15.8	15.8	18.7	18.2	28.5	395.4
HCM Lane LOS	C	D	C	F	F	C	C	C	C	D	F
HCM 95th-tile Q	0.3	3.2	1.1	10.7	9.9	0	0	1	1.8	4.8	49.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	3	433	1	1	360
Future Volume (Veh/h)	0	3	433	1	1	360
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	0	4	528	1	1	439
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	969	528			528	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	969	528			528	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	267	528			981	

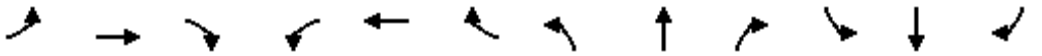
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	4	528	1	1	439
Volume Left	0	0	0	1	0
Volume Right	4	0	1	0	0
cSH	528	1700	1700	981	1700
Volume to Capacity	0.01	0.31	0.00	0.00	0.26
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	11.9	0.0	0.0	8.7	0.0
Lane LOS	B			A	
Approach Delay (s)	11.9	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	743	93	10	1023	162	117
Future Volume (vph)	743	93	10	1023	162	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4759	1538	1719	4759	3335	1538
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4759	1538	1719	4759	3335	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	808	101	11	1112	176	127
RTOR Reduction (vph)	0	58	0	0	0	100
Lane Group Flow (vph)	808	43	11	1112	176	27
Heavy Vehicles (%)	9%	5%	5%	9%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	15.2	15.2	0.9	20.1	7.7	7.7
Effective Green, g (s)	15.2	15.2	0.9	20.1	7.7	7.7
Actuated g/C Ratio	0.42	0.42	0.03	0.56	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2020	653	43	2671	717	330
v/s Ratio Prot	0.17		0.01	c0.23	c0.05	
v/s Ratio Perm		0.03				0.02
v/c Ratio	0.40	0.07	0.26	0.42	0.25	0.08
Uniform Delay, d1	7.1	6.1	17.1	4.5	11.6	11.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	3.1	0.1	0.2	0.1
Delay (s)	7.3	6.1	20.3	4.6	11.8	11.3
Level of Service	A	A	C	A	B	B
Approach Delay (s)	7.1			4.8	11.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	35.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

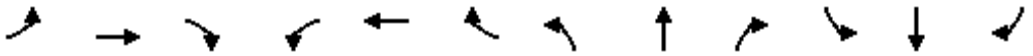
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	249	539	162	49	505	86	252	8	65	113	5	297
Future Volume (vph)	249	539	162	49	505	86	252	8	65	113	5	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.87		1.00	0.86	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	1498		1559	1355	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	1498		1559	1355	1395
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	268	580	174	53	543	92	271	9	70	122	5	319
RTOR Reduction (vph)	0	0	120	0	0	71	0	53	0	0	130	141
Lane Group Flow (vph)	268	580	54	53	543	21	271	26	0	110	40	25
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.1	24.6	24.6	3.1	17.9	17.9	19.0	19.0		12.0	12.0	12.0
Effective Green, g (s)	9.1	24.6	24.6	3.1	17.9	17.9	19.0	19.0		12.0	12.0	12.0
Actuated g/C Ratio	0.11	0.31	0.31	0.04	0.22	0.22	0.24	0.24		0.15	0.15	0.15
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	362	1463	451	123	1064	328	389	355		233	203	209
v/s Ratio Prot	c0.08	0.12		0.02	c0.11		c0.17	0.02		c0.07	0.03	
v/s Ratio Perm			0.04			0.01						0.02
v/c Ratio	0.74	0.40	0.12	0.43	0.51	0.06	0.70	0.07		0.47	0.20	0.12
Uniform Delay, d1	34.3	21.8	19.9	37.6	27.2	24.4	27.9	23.7		31.1	29.8	29.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.9	0.2	0.1	2.4	0.4	0.1	5.4	0.1		1.5	0.5	0.3
Delay (s)	42.2	22.0	20.0	40.0	27.6	24.5	33.2	23.7		32.6	30.3	29.7
Level of Service	D	C	C	D	C	C	C	C		C	C	C
Approach Delay (s)		27.0			28.2			31.1			30.6	
Approach LOS		C			C			C			C	

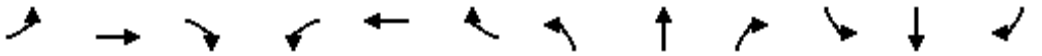
Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Horizon Year 2035 Baseline Plus Project



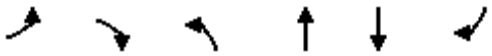
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	670	323	483	573	265	417	526	553	336	269	351
Future Volume (vph)	79	670	323	483	573	265	417	526	553	336	269	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4759	1468	1671	4520		3183	3282	1468	3183	1581	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4759	1468	1671	4520		3183	3282	1468	3183	1581	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	705	340	508	603	279	439	554	582	354	283	369
RTOR Reduction (vph)	0	0	297	0	55	0	0	0	428	0	31	0
Lane Group Flow (vph)	83	705	43	508	827	0	439	554	154	354	621	0
Heavy Vehicles (%)	10%	9%	10%	8%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	12.5	18.8	18.8	38.3	44.6		17.3	34.9	34.9	33.3	50.9	
Effective Green, g (s)	12.5	18.8	18.8	38.3	44.6		17.3	34.9	34.9	33.3	50.9	
Actuated g/C Ratio	0.08	0.13	0.13	0.26	0.30		0.12	0.23	0.23	0.22	0.34	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	136	596	183	426	1343		367	763	341	706	536	
v/s Ratio Prot	0.05	c0.15		c0.30	0.18		c0.14	0.17		0.11	c0.39	
v/s Ratio Perm			0.03						0.10			
v/c Ratio	0.61	1.18	0.23	1.19	0.62		1.20	0.73	0.45	0.50	1.16	
Uniform Delay, d1	66.4	65.6	59.1	55.9	45.3		66.3	53.1	49.3	51.1	49.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.9	98.6	0.7	107.7	0.8		111.9	6.0	4.3	0.6	90.6	
Delay (s)	74.3	164.2	59.8	163.5	46.2		178.2	59.1	53.6	51.6	140.2	
Level of Service	E	F	E	F	D		F	E	D	D	F	
Approach Delay (s)		126.1			89.1			90.3			109.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	101.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	0	127	572	59	491	101	994	575	0	1053	51
Future Volume (vph)	32	0	127	572	59	491	101	994	575	0	1053	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1577	1482	3183	3312	1468		4759	1482
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1577	1482	3183	3312	1468		4759	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	0	134	602	62	517	106	1046	605	0	1108	54
RTOR Reduction (vph)	0	126	0	0	0	76	0	0	322	0	0	34
Lane Group Flow (vph)	34	8	0	331	333	441	106	1046	283	0	1108	20
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	9%	10%	10%	9%	9%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	7.2	7.2		41.3	41.3	41.3	7.4	56.2	56.2		44.1	44.1
Effective Green, g (s)	7.2	7.2		41.3	41.3	41.3	7.4	56.2	56.2		44.1	44.1
Actuated g/C Ratio	0.06	0.06		0.34	0.34	0.34	0.06	0.47	0.47		0.37	0.37
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	98	88		536	542	510	196	1551	687		1748	544
v/s Ratio Prot	c0.02	0.01		0.21	0.21		0.03	c0.32			0.23	
v/s Ratio Perm						c0.30			0.19			0.01
v/c Ratio	0.35	0.09		0.62	0.61	0.86	0.54	0.67	0.41		0.63	0.04
Uniform Delay, d1	54.1	53.3		32.8	32.7	36.7	54.7	24.8	21.0		31.3	24.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.80	0.65	1.21		1.00	1.00
Incremental Delay, d2	2.1	0.5		2.1	2.1	14.2	2.7	2.1	1.6		1.8	0.1
Delay (s)	56.3	53.8		34.9	34.8	50.9	46.5	18.2	26.9		33.1	24.5
Level of Service	E	D		C	C	D	D	B	C		C	C
Approach Delay (s)		54.3			41.9			22.9			32.7	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

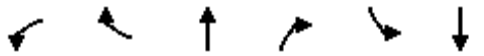


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	720	1132	250	947	1074	241
Future Volume (vph)	720	1132	250	947	1074	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3183	2584	3183	4715	3282	1482
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3183	2584	3183	4715	3282	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	758	1192	263	997	1131	254
RTOR Reduction (vph)	0	221	0	0	0	4
Lane Group Flow (vph)	758	971	263	997	1131	250
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	46.5	46.5	11.5	63.3	47.1	93.6
Effective Green, g (s)	46.5	46.5	11.5	63.3	47.1	93.6
Actuated g/C Ratio	0.39	0.39	0.10	0.53	0.39	0.78
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1233	1001	305	2487	1288	1218
v/s Ratio Prot	0.24		c0.08	0.21	c0.34	0.08
v/s Ratio Perm		c0.38				0.09
v/c Ratio	0.61	0.97	0.86	0.40	0.88	0.21
Uniform Delay, d1	29.5	36.1	53.5	17.0	33.8	3.5
Progression Factor	1.00	1.00	1.00	1.00	0.58	0.13
Incremental Delay, d2	0.9	21.2	21.3	0.5	7.2	0.1
Delay (s)	30.5	57.2	74.8	17.5	26.9	0.5
Level of Service	C	E	E	B	C	A
Approach Delay (s)	46.8			29.4	22.1	
Approach LOS	D			C	C	

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	146	62	27	151	169	65	268	18	638	496	167
Future Volume (vph)	32	146	62	27	151	169	65	268	18	638	496	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3303	3282	1468	3183	3282	2608	3183	3282	1468	3183	4715	2608
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3303	3282	1468	3183	3282	2608	3183	3282	1468	3183	4715	2608
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	154	65	28	159	178	68	282	19	672	522	176
RTOR Reduction (vph)	0	0	56	0	0	154	0	0	16	0	0	92
Lane Group Flow (vph)	34	154	9	28	159	24	68	282	3	672	522	84
Heavy Vehicles (%)	6%	10%	10%	10%	10%	9%	10%	10%	10%	10%	10%	9%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	1.7	9.1	9.1	1.7	9.1	9.1	5.0	12.2	12.2	25.1	32.3	32.3
Effective Green, g (s)	1.7	9.1	9.1	1.7	9.1	9.1	5.0	12.2	12.2	25.1	32.3	32.3
Actuated g/C Ratio	0.03	0.13	0.13	0.03	0.13	0.13	0.07	0.18	0.18	0.37	0.48	0.48
Clearance Time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	83	441	197	80	441	351	235	592	264	1181	2252	1246
v/s Ratio Prot	c0.01	0.05		0.01	c0.05		0.02	c0.09		c0.21	0.11	
v/s Ratio Perm			0.01			0.01			0.00			0.03
v/c Ratio	0.41	0.35	0.04	0.35	0.36	0.07	0.29	0.48	0.01	0.57	0.23	0.07
Uniform Delay, d1	32.5	26.6	25.5	32.4	26.6	25.5	29.6	24.8	22.8	16.9	10.4	9.5
Progression 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
Incremental Delay, d2	3.3	0.5	0.1	2.6	0.5	0.1	0.7	0.6	0.0	0.6	0.1	0.0
Delay (s)	35.7	27.0	25.6	35.0	27.1	25.6	30.3	25.4	22.8	17.6	10.4	9.5
Level of Service	D	C	C	D	C	C	C	C	C	B	B	A
Approach Delay (s)		27.8			27.0			26.2			13.8	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	67.6	Sum of lost time (s)	19.5
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



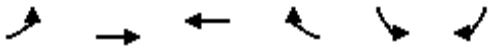
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	111	107	133	13	197	280
Future Volume (Veh/h)	111	107	133	13	197	280
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	117	113	140	14	207	295
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1296
pX, platoon unblocked						
vC, conflicting volume	659	77			154	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	659	77			154	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	64	88			85	
cM capacity (veh/h)	322	943			1367	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	117	113	93	61	207	98	98	98
Volume Left	117	0	0	0	207	0	0	0
Volume Right	0	113	0	14	0	0	0	0
cSH	322	943	1700	1700	1367	1700	1700	1700
Volume to Capacity	0.36	0.12	0.05	0.04	0.15	0.06	0.06	0.06
Queue Length 95th (ft)	40	10	0	0	13	0	0	0
Control Delay (s)	22.5	9.3	0.0	0.0	8.1	0.0	0.0	0.0
Lane LOS	C	A			A			
Approach Delay (s)	16.0		0.0		3.3			
Approach LOS	C							

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		

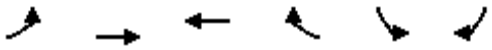
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	37	6	21	54	132	3	21	5	213	91	8
Future Volume (vph)	14	37	6	21	54	132	3	21	5	213	91	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lane Util. Factor		1.00		1.00	0.95	0.88		1.00		1.00	0.95	1.00
Frt		0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected		0.99		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1683		1641	3282	2584		1680		1641	3282	1468
Flt Permitted		0.90		0.78	1.00	1.00		0.97		0.74	1.00	1.00
Satd. Flow (perm)		1526		1355	3282	2584		1630		1274	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	39	6	22	57	139	3	22	5	224	96	8
RTOR Reduction (vph)	0	5	0	0	0	108	0	3	0	0	0	5
Lane Group Flow (vph)	0	55	0	22	57	31	0	27	0	224	96	3
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)		5.1		5.1	5.1	5.1		8.1		8.1	8.1	8.1
Effective Green, g (s)		5.1		5.1	5.1	5.1		8.1		8.1	8.1	8.1
Actuated g/C Ratio		0.22		0.22	0.22	0.22		0.35		0.35	0.35	0.35
Clearance Time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		335		297	721	568		569		444	1145	512
v/s Ratio Prot					0.02						0.03	
v/s Ratio Perm		c0.04		0.02		0.01		0.02		c0.18		0.00
v/c Ratio		0.17		0.07	0.08	0.05		0.05		0.50	0.08	0.01
Uniform Delay, d1		7.3		7.2	7.2	7.1		5.0		6.0	5.1	4.9
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2		0.1	0.0	0.0		0.0		0.9	0.0	0.0
Delay (s)		7.6		7.3	7.2	7.2		5.0		6.9	5.1	4.9
Level of Service		A		A	A	A		A		A	A	A
Approach Delay (s)		7.6			7.2			5.0			6.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	23.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



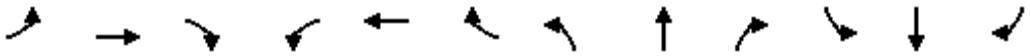
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	1120	357	0	853	552
Future Volume (vph)	0	1120	357	0	853	552
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4715	4715		3183	1468
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4715	4715		3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1179	376	0	898	581
RTOR Reduction (vph)	0	0	0	0	0	166
Lane Group Flow (vph)	0	1179	376	0	898	415
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		41.5	41.5		35.2	35.2
Effective Green, g (s)		41.5	41.5		35.2	35.2
Actuated g/C Ratio		0.46	0.46		0.39	0.39
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2174	2174		1244	574
v/s Ratio Prot		c0.25	0.08		0.28	
v/s Ratio Perm						c0.28
v/c Ratio		0.54	0.17		0.72	0.72
Uniform Delay, d1		17.4	14.2		23.2	23.3
Progression Factor		1.00	0.57		1.00	1.00
Incremental Delay, d2		1.0	0.2		2.1	4.5
Delay (s)		18.4	8.3		25.3	27.7
Level of Service		B	A		C	C
Approach Delay (s)		18.4	8.3		26.3	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	474	1499	362	306	0	0
Future Volume (vph)	474	1499	362	306	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.97	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3183	3282	3041	1336		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3183	3282	3041	1336		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	499	1578	381	322	0	0
RTOR Reduction (vph)	0	0	19	59	0	0
Lane Group Flow (vph)	499	1578	468	157	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	19.5	90.0	57.6	57.6		
Effective Green, g (s)	19.5	90.0	57.6	57.6		
Actuated g/C Ratio	0.22	1.00	0.64	0.64		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	689	3282	1946	855		
v/s Ratio Prot	c0.16	c0.48	0.15			
v/s Ratio Perm				0.12		
v/c Ratio	0.72	0.48	0.24	0.18		
Uniform Delay, d1	32.8	0.0	6.9	6.6		
Progression Factor	1.13	1.00	1.00	1.00		
Incremental Delay, d2	3.2	0.4	0.3	0.5		
Delay (s)	40.1	0.4	7.2	7.1		
Level of Service	D	A	A	A		
Approach Delay (s)		10.0	7.2		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

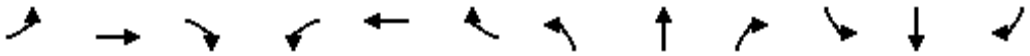


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	1045	0	0	437	614	327	0	532	0	0	0
Future Volume (vph)	176	1045	0	0	437	614	327	0	532	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3183	4715			4181	1263		1641	2584			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3183	4715			4181	1263		1641	2584			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	185	1100	0	0	460	646	344	0	560	0	0	0
RTOR Reduction (vph)	0	0	0	0	107	179	0	0	80	0	0	0
Lane Group Flow (vph)	185	1100	0	0	676	144	0	344	480	0	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	11.6	60.9			44.6	44.6		28.9	28.9			
Effective Green, g (s)	11.6	60.9			44.6	44.6		28.9	28.9			
Actuated g/C Ratio	0.12	0.61			0.45	0.45		0.29	0.29			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	369	2871			1864	563		474	746			
v/s Ratio Prot	c0.06	c0.23			0.16							
v/s Ratio Perm						0.11		0.21	0.19			
v/c Ratio	0.50	0.38			0.36	0.26		0.73	0.64			
Uniform Delay, d1	41.5	10.0			18.3	17.3		32.0	31.0			
Progression Factor	0.93	0.69			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.9	0.3			0.5	1.1		5.5	1.9			
Delay (s)	39.7	7.2			18.9	18.4		37.5	33.0			
Level of Service	D	A			B	B		D	C			
Approach Delay (s)		11.9			18.7			34.7			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	451	220	169	1273	0	972
Future Volume (vph)	451	220	169	1273	0	972
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4483		3183	4715		2584
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4483		3183	4715		2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	475	232	178	1340	0	1023
RTOR Reduction (vph)	68	0	0	0	0	231
Lane Group Flow (vph)	639	0	178	1340	0	792
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	51.8		38.0	100.0		38.0
Effective Green, g (s)	51.8		38.0	100.0		38.0
Actuated g/C Ratio	0.52		0.38	1.00		0.38
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	2322		1209	4715		981
v/s Ratio Prot	0.14		0.06	c0.28		c0.31
v/s Ratio Perm						
v/c Ratio	0.28		0.15	0.28		0.81
Uniform Delay, d1	13.5		20.4	0.0		27.7
Progression Factor	0.49		0.95	1.00		1.00
Incremental Delay, d2	0.3		0.1	0.1		4.9
Delay (s)	7.0		19.3	0.1		32.7
Level of Service	A		B	A		C
Approach Delay (s)	7.0			2.4	32.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	286	43	355	660	208	64	31	193	183	63	111
Future Volume (vph)	37	286	43	355	660	208	64	31	193	183	63	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.96			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	
Satd. Flow (prot)	1641	4623		1641	4546			1671	1468		3050	
Flt Permitted	0.95	1.00		0.95	1.00			0.47	1.00		0.77	
Satd. Flow (perm)	1641	4623		1641	4546			816	1468		2410	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	39	301	45	374	695	219	67	33	203	193	66	117
RTOR Reduction (vph)	0	18	0	0	37	0	0	0	162	0	70	0
Lane Group Flow (vph)	39	328	0	374	877	0	0	100	41	0	306	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.9	32.0		33.8	60.3			20.0	20.0		20.0	
Effective Green, g (s)	4.9	32.0		33.8	60.3			20.0	20.0		20.0	
Actuated g/C Ratio	0.05	0.32		0.34	0.60			0.20	0.20		0.20	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	80	1479		554	2741			163	293		482	
v/s Ratio Prot	0.02	0.07		c0.23	c0.19							
v/s Ratio Perm								0.12	0.03		c0.13	
v/c Ratio	0.49	0.22		0.68	0.32			0.61	0.14		0.64	
Uniform Delay, d1	46.3	24.9		28.4	9.8			36.5	32.9		36.7	
Progression Factor	1.00	1.00		0.97	0.74			1.00	1.00		1.00	
Incremental Delay, d2	1.7	0.3		2.5	0.3			8.4	0.4		3.4	
Delay (s)	48.0	25.2		30.0	7.5			44.8	33.3		40.0	
Level of Service	D	C		C	A			D	C		D	
Approach Delay (s)		27.5			14.0			37.1			40.0	
Approach LOS		C			B			D			D	

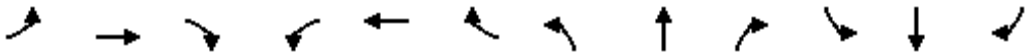
Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	170	134	145	182	162	69
Future Vol, veh/h	170	134	145	182	162	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	179	141	153	192	171	73
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	14.1	9.9	14.3
HCM LOS	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	70%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	100%
Vol Right, %	30%	44%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	304	145	91	91
LT Vol	162	0	145	0	0
Through Vol	0	170	0	91	91
RT Vol	69	134	0	0	0
Lane Flow Rate	243	320	153	96	96
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.44	0.504	0.274	0.158	0.108
Departure Headway (Hd)	6.507	5.669	6.452	5.945	4.049
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	554	637	557	603	883
Service Time	4.24	3.401	4.185	3.678	1.782
HCM Lane V/C Ratio	0.439	0.502	0.275	0.159	0.109
HCM Control Delay	14.3	14.1	11.6	9.8	7.3
HCM Lane LOS	B	B	B	A	A
HCM 95th-tile Q	2.2	2.8	1.1	0.6	0.4

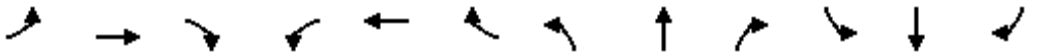


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	353	25	90	701	92	32	10	24	10	10	124
Future Volume (vph)	140	353	25	90	701	92	32	10	24	10	10	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		1.00	
Satd. Flow (prot)	1641	4669		1641	4633			1664	1468		1522	
Flt Permitted	0.95	1.00		0.95	1.00			0.79	1.00		0.97	
Satd. Flow (perm)	1641	4669		1641	4633			1358	1468		1480	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	372	26	95	738	97	34	11	25	11	11	131
RTOR Reduction (vph)	0	8	0	0	18	0	0	0	22	0	116	0
Lane Group Flow (vph)	147	390	0	95	817	0	0	45	3	0	37	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	7.6	21.1		4.8	18.3			5.0	5.0		5.0	
Effective Green, g (s)	7.6	21.1		4.8	18.3			5.0	5.0		5.0	
Actuated g/C Ratio	0.17	0.47		0.11	0.41			0.11	0.11		0.11	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	276	2184		174	1879			150	162		164	
v/s Ratio Prot	c0.09	c0.08		0.06	c0.18							
v/s Ratio Perm								c0.03	0.00		0.02	
v/c Ratio	0.53	0.18		0.55	0.43			0.30	0.02		0.22	
Uniform Delay, d1	17.1	7.0		19.1	9.7			18.4	17.9		18.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	1.0	0.1		1.9	0.3			0.4	0.0		0.3	
Delay (s)	18.1	7.1		21.0	10.0			18.9	17.9		18.5	
Level of Service	B	A		C	B			B	B		B	
Approach Delay (s)		10.1			11.1			18.5			18.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	14.2
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	926	762	292	925	693	414
Future Volume (vph)	926	762	292	925	693	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1468	1641	4715	3183	1468
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1468	1641	4715	3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	975	802	307	974	729	436
RTOR Reduction (vph)	0	38	0	0	0	280
Lane Group Flow (vph)	975	764	307	974	729	156
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	23.2	57.4	18.5	47.4	34.2	34.2
Effective Green, g (s)	23.2	57.4	18.5	47.4	34.2	34.2
Actuated g/C Ratio	0.24	0.60	0.19	0.50	0.36	0.36
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1144	881	317	2337	1138	525
v/s Ratio Prot	0.21	c0.31	c0.19	0.21	0.23	
v/s Ratio Perm		0.21				0.11
v/c Ratio	0.85	0.87	0.97	0.42	0.64	0.30
Uniform Delay, d1	34.6	15.9	38.3	15.3	25.6	22.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.3	9.0	41.5	0.1	1.2	0.3
Delay (s)	40.9	25.0	79.8	15.4	26.8	22.4
Level of Service	D	C	E	B	C	C
Approach Delay (s)	33.7			30.9	25.2	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	95.6	Sum of lost time (s)	19.7
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

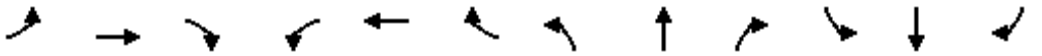


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	90	10	136	116	204	30	328	103	476	642	428
Future Volume (vph)	104	90	10	136	116	204	30	328	103	476	642	428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1641	1700		1641	1727	1468	1641	3164		1641	1727	1468
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1641	1700		1641	1727	1468	1641	3164		1641	1727	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	109	95	11	143	122	215	32	345	108	501	676	451
RTOR Reduction (vph)	0	5	0	0	0	187	0	32	0	0	0	222
Lane Group Flow (vph)	109	101	0	143	122	28	32	421	0	501	676	229
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	8.4	8.4		10.9	10.9	10.9	2.3	17.0		28.3	42.8	42.8
Effective Green, g (s)	8.4	8.4		10.9	10.9	10.9	2.3	17.0		28.3	42.8	42.8
Actuated g/C Ratio	0.10	0.10		0.13	0.13	0.13	0.03	0.20		0.34	0.51	0.51
Clearance Time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0		3.7	3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	163	169		211	223	189	44	637		550	875	744
v/s Ratio Prot	c0.07	0.06		c0.09	0.07		0.02	0.13		c0.31	c0.39	
v/s Ratio Perm						0.02						0.16
v/c Ratio	0.67	0.60		0.68	0.55	0.15	0.73	0.66		0.91	0.77	0.31
Uniform Delay, d1	36.7	36.4		35.1	34.4	32.6	40.7	31.0		26.8	16.9	12.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.8	4.1		8.8	3.2	0.5	39.6	2.8		19.0	4.5	0.3
Delay (s)	44.5	40.5		43.9	37.6	33.1	80.3	33.8		45.9	21.3	12.5
Level of Service	D	D		D	D	C	F	C		D	C	B
Approach Delay (s)		42.5			37.5			36.9			26.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	84.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

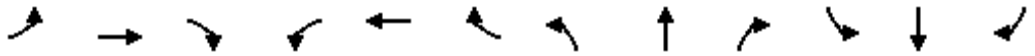
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	827	201	168	440	500	177	351	251	816	240	352
Future Volume (vph)	395	827	201	168	440	500	177	351	251	816	240	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1619		1641	1727	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1619		1641	1727	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	871	212	177	463	526	186	369	264	859	253	371
RTOR Reduction (vph)	0	0	182	0	0	462	0	18	0	0	0	134
Lane Group Flow (vph)	416	871	30	177	463	64	186	615	0	859	253	237
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	13.3	20.7	20.7	10.2	17.6	17.6	21.0	48.0		41.3	68.3	81.6
Effective Green, g (s)	13.3	20.7	20.7	10.2	17.6	17.6	21.0	48.0		41.3	68.3	81.6
Actuated g/C Ratio	0.09	0.14	0.14	0.07	0.12	0.12	0.14	0.33		0.29	0.47	0.56
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	292	673	209	224	572	178	237	536		467	814	1455
v/s Ratio Prot	c0.13	c0.18		0.06	0.10		0.11	c0.38		c0.52	0.15	0.01
v/s Ratio Perm			0.02			0.04						0.08
v/c Ratio	1.42	1.29	0.14	0.79	0.81	0.36	0.78	1.15		1.84	0.31	0.16
Uniform Delay, d1	65.8	62.1	54.4	66.3	62.0	58.5	59.8	48.5		51.8	23.7	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	209.9	143.3	0.3	17.1	8.3	1.2	15.6	86.4		386.0	0.2	0.1
Delay (s)	275.7	205.4	54.7	83.4	70.3	59.7	75.3	134.8		437.8	23.9	15.3
Level of Service	F	F	D	F	E	E	E	F		F	C	B
Approach Delay (s)		203.6			67.5			121.3			261.5	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	175.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	144.9	Sum of lost time (s)	24.7
Intersection Capacity Utilization	123.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	413	251	453	221	220	100	268	1020	452	473	41
Future Volume (vph)	41	413	251	453	221	220	100	268	1020	452	473	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3183	3243	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3183	3243	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	435	264	477	233	232	105	282	1074	476	498	43
RTOR Reduction (vph)	0	0	97	0	0	137	0	0	77	0	5	0
Lane Group Flow (vph)	43	435	167	477	233	95	105	282	997	476	536	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.6	20.9	34.4	38.6	49.8	49.8	13.5	16.0	54.6	23.7	26.2	
Effective Green, g (s)	8.6	20.9	34.4	38.6	49.8	49.8	13.5	16.0	54.6	23.7	26.2	
Actuated g/C Ratio	0.07	0.17	0.28	0.32	0.41	0.41	0.11	0.13	0.45	0.20	0.22	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	116	564	478	1011	707	607	182	432	722	620	699	
v/s Ratio Prot	0.03	c0.13	0.04	0.15	0.13		0.06	0.09	c0.44	c0.15	0.17	
v/s Ratio Perm			0.07			0.06			0.24			
v/c Ratio	0.37	0.77	0.35	0.47	0.33	0.16	0.58	0.65	1.38	0.77	0.77	
Uniform Delay, d1	53.9	48.0	34.6	33.3	24.5	22.6	51.3	50.1	33.5	46.3	44.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	6.5	0.4	0.3	0.3	0.1	4.4	3.5	180.0	5.7	5.0	
Delay (s)	55.9	54.5	35.1	33.6	24.7	22.7	55.7	53.6	213.4	52.0	49.8	
Level of Service	E	D	D	C	C	C	E	D	F	D	D	
Approach Delay (s)		47.7			28.7			171.2			50.8	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	87.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	121.5	Sum of lost time (s)	23.4
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

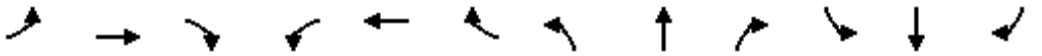


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	62	3	74	432	1337	0	0	449	869
Future Volume (vph)	0	0	0	62	3	74	432	1337	0	0	449	869
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1727	1468	1719	4715			4316	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1727	1468	1719	4715			4316	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	65	3	78	455	1407	0	0	473	915
RTOR Reduction (vph)	0	0	0	0	0	73	0	0	0	0	209	0
Lane Group Flow (vph)	0	0	0	0	68	5	455	1407	0	0	1179	0
Heavy Vehicles (%)	10%	10%	10%	5%	5%	10%	5%	10%	10%	10%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					7.0	7.0	31.7	82.8			46.4	
Effective Green, g (s)					7.0	7.0	31.7	82.8			46.4	
Actuated g/C Ratio					0.07	0.07	0.32	0.83			0.46	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					120	102	544	3904			2002	
v/s Ratio Prot							c0.26	0.30			c0.27	
v/s Ratio Perm					0.04	0.00						
v/c Ratio					0.57	0.05	0.84	0.36			1.00dr	
Uniform Delay, d1					45.0	43.4	31.7	2.1			19.8	
Progression Factor					1.00	1.00	1.09	0.23			1.00	
Incremental Delay, d2					6.0	0.2	3.4	0.1			1.3	
Delay (s)					51.0	43.6	37.9	0.6			21.0	
Level of Service					D	D	D	A			C	
Approach Delay (s)		0.0			47.1			9.7			21.0	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

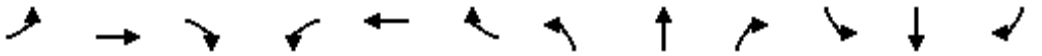
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	964	1	557	0	0	0	0	963	148	116	385	0
Future Volume (vph)	964	1	557	0	0	0	0	963	148	116	385	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1488						4841		1641	3438	
Flt Permitted	0.95	0.99						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1488						4841		1641	3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1015	1	586	0	0	0	0	1014	156	122	405	0
RTOR Reduction (vph)	0	114	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	832	656	0	0	0	0	0	1150	0	122	405	0
Heavy Vehicles (%)	10%	5%	5%	10%	10%	10%	10%	5%	5%	10%	5%	10%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	52.9	52.9						24.9		7.3	36.9	
Effective Green, g (s)	52.9	52.9						24.9		7.3	36.9	
Actuated g/C Ratio	0.53	0.53						0.25		0.07	0.37	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	824	787						1205		119	1268	
v/s Ratio Prot	c0.53	0.44						c0.24		c0.07	0.12	
v/s Ratio Perm												
v/c Ratio	1.01	0.83						0.95		1.03	0.32	
Uniform Delay, d1	23.6	19.8						37.0		46.4	22.6	
Progression Factor	1.00	1.00						1.00		0.80	0.71	
Incremental Delay, d2	33.8	7.5						17.0		80.9	0.5	
Delay (s)	57.3	27.4						54.0		118.1	16.5	
Level of Service	E	C						D		F	B	
Approach Delay (s)		42.9			0.0			54.0			40.0	
Approach LOS		D			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	467	52	57	56	86	336	106	380	84	120	245	552
Future Volume (vph)	467	52	57	56	86	336	106	380	84	120	245	552
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1668		3335	1810	1538	1719	4806		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1668		3335	1810	1538	1719	4806		1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	492	55	60	59	91	354	112	400	88	126	258	581
RTOR Reduction (vph)	0	37	0	0	0	257	0	33	0	0	0	465
Lane Group Flow (vph)	492	78	0	59	91	97	112	455	0	126	258	116
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	13.3	22.7		3.1	12.5	12.5	10.0	15.4		8.2	13.6	13.6
Effective Green, g (s)	13.3	22.7		3.1	12.5	12.5	10.0	15.4		8.2	13.6	13.6
Actuated g/C Ratio	0.19	0.33		0.05	0.18	0.18	0.15	0.23		0.12	0.20	0.20
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	648	553		151	330	281	251	1082		206	683	305
v/s Ratio Prot	c0.15	0.05		0.02	0.05		c0.07	c0.09		c0.07	0.08	
v/s Ratio Perm						c0.06						0.08
v/c Ratio	0.76	0.14		0.39	0.28	0.34	0.45	0.42		0.61	0.38	0.38
Uniform Delay, d1	26.0	16.0		31.7	24.1	24.4	26.7	22.7		28.6	23.7	23.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.1	0.1		1.7	0.5	0.7	1.3	0.3		5.3	0.4	0.8
Delay (s)	31.1	16.1		33.4	24.5	25.1	27.9	22.9		33.9	24.1	24.5
Level of Service	C	B		C	C	C	C	C		C	C	C
Approach Delay (s)		28.3			26.0			23.9			25.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	68.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	521	301	520	642	219	105	731	178	219	685	128
Future Volume (vph)	184	521	301	520	642	219	105	731	178	219	685	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	548	317	547	676	231	111	769	187	231	721	135
RTOR Reduction (vph)	0	0	140	0	0	136	0	0	122	0	0	95
Lane Group Flow (vph)	194	548	177	547	676	95	111	769	65	231	721	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.0	23.9	23.9	20.8	33.7	33.7	8.0	29.9	29.9	9.3	31.2	31.2
Effective Green, g (s)	11.0	23.9	23.9	20.8	33.7	33.7	8.0	29.9	29.9	9.3	31.2	31.2
Actuated g/C Ratio	0.10	0.23	0.23	0.20	0.32	0.32	0.08	0.29	0.29	0.09	0.30	0.30
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	349	783	350	661	1104	494	254	979	438	295	1022	457
v/s Ratio Prot	0.06	c0.16		c0.16	0.20		0.03	c0.22		c0.07	0.21	
v/s Ratio Perm			0.12			0.06			0.04			0.03
v/c Ratio	0.56	0.70	0.51	0.83	0.61	0.19	0.44	0.79	0.15	0.78	0.71	0.09
Uniform Delay, d1	44.6	37.2	35.4	40.3	30.1	25.8	46.3	34.5	28.0	46.8	32.8	26.6
Progression 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
Incremental Delay, d2	1.9	2.8	1.2	8.4	1.0	0.2	1.2	4.2	0.2	12.7	2.2	0.1
Delay (s)	46.5	40.0	36.5	48.7	31.1	26.0	47.5	38.8	28.2	59.5	35.0	26.7
Level of Service	D	D	D	D	C	C	D	D	C	E	D	C
Approach Delay (s)		40.1			36.9			37.8			39.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	21.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

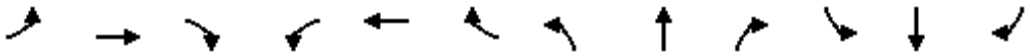
c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1334	225	89	1280	13	86
Future Volume (vph)	1334	225	89	1280	13	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1538	1719	4715	3335	1538
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1538	1719	4715	3335	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1404	237	94	1347	14	91
RTOR Reduction (vph)	0	105	0	0	0	83
Lane Group Flow (vph)	1404	132	94	1347	14	8
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	28.3	28.3	5.9	38.2	4.7	4.7
Effective Green, g (s)	28.3	28.3	5.9	38.2	4.7	4.7
Actuated g/C Ratio	0.56	0.56	0.12	0.75	0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2621	855	199	3538	307	142
v/s Ratio Prot	c0.30		0.05	c0.29	0.00	
v/s Ratio Perm		0.09				c0.01
v/c Ratio	0.54	0.15	0.47	0.38	0.05	0.06
Uniform Delay, d1	7.1	5.5	21.0	2.2	21.1	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	1.8	0.1	0.1	0.2
Delay (s)	7.4	5.6	22.8	2.3	21.1	21.3
Level of Service	A	A	C	A	C	C
Approach Delay (s)	7.1			3.6	21.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

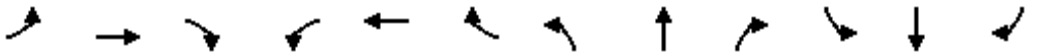
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	400	1031	115	186	813	203	49	13	51	245	31	459
Future Volume (vph)	400	1031	115	186	813	203	49	13	51	245	31	459
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88		1.00	0.88	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	1522		1559	1380	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	1522		1559	1380	1395
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	421	1085	121	196	856	214	52	14	54	258	33	483
RTOR Reduction (vph)	0	0	82	0	0	145	0	50	0	0	105	203
Lane Group Flow (vph)	421	1085	39	196	856	69	52	18	0	232	171	63
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.3	28.1	28.1	9.5	27.6	27.6	6.8	6.8		20.4	20.4	20.4
Effective Green, g (s)	9.3	28.1	28.1	9.5	27.6	27.6	6.8	6.8		20.4	20.4	20.4
Actuated g/C Ratio	0.11	0.33	0.33	0.11	0.32	0.32	0.08	0.08		0.24	0.24	0.24
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	343	1538	479	351	1511	470	129	120		369	326	330
v/s Ratio Prot	c0.13	c0.23		0.06	0.18		c0.03	0.01		c0.15	0.12	
v/s Ratio Perm			0.03			0.05						0.05
v/c Ratio	1.23	0.71	0.08	0.56	0.57	0.15	0.40	0.15		0.63	0.53	0.19
Uniform Delay, d1	38.4	25.4	20.1	36.3	24.3	20.8	37.7	37.0		29.5	28.6	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	125.4	1.5	0.1	1.9	0.5	0.1	2.1	0.6		3.3	1.5	0.3
Delay (s)	163.8	26.9	20.1	38.2	24.8	21.0	39.8	37.6		32.8	30.2	26.5
Level of Service	F	C	C	D	C	C	D	D		C	C	C
Approach Delay (s)		61.8			26.2			38.5			29.7	
Approach LOS		E			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	22.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



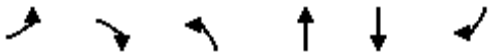
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	466	533	581	701	343	307	325	424	185	370	77
Future Volume (vph)	308	466	533	581	701	343	307	325	424	185	370	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	4803	1468	1703	4539		3183	3282	1468	3183	1683	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	4803	1468	1703	4539		3183	3282	1468	3183	1683	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	491	561	612	738	361	323	342	446	195	389	81
RTOR Reduction (vph)	0	0	207	0	60	0	0	0	378	0	5	0
Lane Group Flow (vph)	324	491	354	612	1039	0	323	342	68	195	465	0
Heavy Vehicles (%)	10%	8%	10%	6%	8%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	36.1	27.8	27.8	46.3	38.0		12.3	22.9	22.9	28.3	38.9	
Effective Green, g (s)	36.1	27.8	27.8	46.3	38.0		12.3	22.9	22.9	28.3	38.9	
Actuated g/C Ratio	0.24	0.19	0.19	0.31	0.25		0.08	0.15	0.15	0.19	0.26	
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2		5.7	6.1	6.1	5.7	6.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	394	890	272	525	1149		261	501	224	600	436	
v/s Ratio Prot	0.20	0.10		c0.36	0.23		c0.10	0.10		0.06	c0.28	
v/s Ratio Perm			c0.24						0.05			
v/c Ratio	0.82	0.55	1.30	1.17	0.90		1.24	0.68	0.30	0.33	1.07	
Uniform Delay, d1	53.9	55.4	61.1	51.9	54.2		68.8	60.1	56.5	52.6	55.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.0	0.7	160.0	93.8	10.1		135.3	7.3	3.5	0.3	61.8	
Delay (s)	66.9	56.2	221.1	145.6	64.3		204.1	67.5	59.9	52.9	117.3	
Level of Service	E	E	F	F	E		F	E	E	D	F	
Approach Delay (s)		125.9			93.4			104.2			98.4	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	105.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.7
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



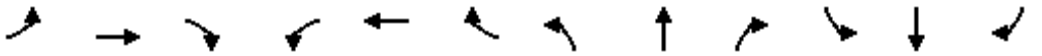
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	0	267	252	67	221	145	753	787	0	1392	112
Future Volume (vph)	111	0	267	252	67	221	145	753	787	0	1392	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	0.97	0.95	1.00		0.91	1.00
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1641	1468		1559	1595	1495	3183	3343	1468		4759	1482
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (perm)	1641	1468		1559	1595	1495	3183	3343	1468		4759	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	0	281	265	71	233	153	793	828	0	1465	118
RTOR Reduction (vph)	0	128	0	0	0	193	0	0	370	0	0	68
Lane Group Flow (vph)	117	153	0	167	169	40	153	793	458	0	1465	50
Heavy Vehicles (%)	10%	10%	10%	10%	10%	8%	10%	8%	10%	10%	9%	9%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm		NA	Perm
Protected Phases	4	4		3	3		5	2			6	
Permitted Phases						3			2			6
Actuated Green, G (s)	12.6	12.6		12.3	12.3	12.3	6.8	49.8	49.8		38.3	38.3
Effective Green, g (s)	12.6	12.6		12.3	12.3	12.3	6.8	49.8	49.8		38.3	38.3
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.14	0.08	0.55	0.55		0.43	0.43
Clearance Time (s)	5.1	5.1		5.1	5.1	5.1	4.7	5.1	5.1		5.1	5.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	229	205		213	217	204	240	1849	812		2025	630
v/s Ratio Prot	0.07	c0.10		c0.11	0.11		0.05	0.24			c0.31	
v/s Ratio Perm						0.03			c0.31			0.03
v/c Ratio	0.51	0.75		0.78	0.78	0.19	0.64	0.43	0.56		0.72	0.08
Uniform Delay, d1	35.8	37.2		37.6	37.5	34.5	40.4	11.8	13.1		21.5	15.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.86	0.88	3.61		1.00	1.00
Incremental Delay, d2	1.9	13.7		17.0	16.0	0.5	4.9	0.7	2.6		2.3	0.2
Delay (s)	37.8	50.9		54.6	53.6	34.9	39.8	11.0	49.7		23.7	15.6
Level of Service	D	D		D	D	C	D	B	D		C	B
Approach Delay (s)		47.0			46.2			31.5			23.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



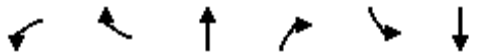
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	443	727	550	1249	721	414
Future Volume (vph)	443	727	550	1249	721	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Lane Util. Factor	0.97	0.88	0.97	0.91	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3213	2584	3183	4759	3312	1482
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3213	2584	3183	4759	3312	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	466	765	579	1315	759	436
RTOR Reduction (vph)	0	509	0	0	0	2
Lane Group Flow (vph)	466	256	579	1315	759	434
Heavy Vehicles (%)	9%	10%	10%	9%	9%	9%
Turn Type	Prot	Perm	Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	18.4	18.4	27.1	61.4	29.6	48.0
Effective Green, g (s)	18.4	18.4	27.1	61.4	29.6	48.0
Actuated g/C Ratio	0.20	0.20	0.30	0.68	0.33	0.53
Clearance Time (s)	5.1	5.1	4.7	5.1	5.1	5.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	656	528	958	3246	1089	874
v/s Ratio Prot	c0.15		c0.18	0.28	c0.23	0.10
v/s Ratio Perm		0.10				0.19
v/c Ratio	0.71	0.48	0.60	0.41	0.70	0.50
Uniform Delay, d1	33.3	31.6	26.9	6.3	26.3	13.3
Progression Factor	1.00	1.00	1.00	1.00	0.43	0.32
Incremental Delay, d2	3.6	0.7	1.1	0.4	2.5	0.3
Delay (s)	36.9	32.3	28.0	6.7	13.7	4.6
Level of Service	D	C	C	A	B	A
Approach Delay (s)	34.1			13.2	10.4	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	254	95	51	192	535	71	554	11	332	287	140
Future Volume (vph)	136	254	95	51	192	535	71	554	11	332	287	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00	0.97	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3242	3282	1468	3183	3282	2584	3183	3282	1468	3213	4759	2632
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3242	3282	1468	3183	3282	2584	3183	3282	1468	3213	4759	2632
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	143	267	100	54	202	563	75	583	12	349	302	147
RTOR Reduction (vph)	0	0	75	0	0	364	0	0	9	0	0	92
Lane Group Flow (vph)	143	267	25	54	202	199	75	583	3	349	302	55
Heavy Vehicles (%)	8%	10%	10%	10%	10%	10%	10%	10%	10%	9%	9%	8%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.3	18.8	18.8	3.1	14.6	14.6	5.3	19.6	19.6	13.6	27.9	27.9
Effective Green, g (s)	7.3	18.8	18.8	3.1	14.6	14.6	5.3	19.6	19.6	13.6	27.9	27.9
Actuated g/C Ratio	0.10	0.25	0.25	0.04	0.20	0.20	0.07	0.26	0.26	0.18	0.37	0.37
Clearance Time (s)	4.5	5.0	5.0	4.5	5.0	5.0	4.5	5.5	5.5	4.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	827	369	132	642	505	226	862	385	585	1779	984
v/s Ratio Prot	c0.04	c0.08		0.02	0.06		0.02	c0.18		c0.11	0.06	
v/s Ratio Perm			0.02			c0.08			0.00			0.02
v/c Ratio	0.45	0.32	0.07	0.41	0.31	0.39	0.33	0.68	0.01	0.60	0.17	0.06
Uniform Delay, d1	31.8	22.7	21.2	34.9	25.7	26.1	33.0	24.7	20.3	28.0	15.6	14.9
Progression 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
Incremental Delay, d2	1.0	0.2	0.1	2.1	0.3	0.5	0.9	2.1	0.0	1.6	0.0	0.0
Delay (s)	32.8	22.9	21.3	36.9	26.0	26.6	33.8	26.8	20.3	29.6	15.7	15.0
Level of Service	C	C	C	D	C	C	C	C	C	C	B	B
Approach Delay (s)		25.4			27.2			27.4			21.6	
Approach LOS		C			C			C			C	

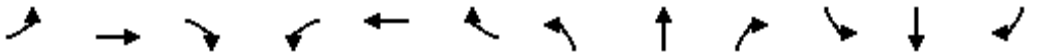
Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	74.6	Sum of lost time (s)	19.5
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	201	288	24	121	232
Future Volume (Veh/h)	148	201	288	24	121	232
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	156	212	303	25	127	244
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1296
pX, platoon unblocked						
vC, conflicting volume	651	164			328	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	651	164			328	
tC, single (s)	7.0	7.1			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	54	74			89	
cM capacity (veh/h)	342	827			1173	

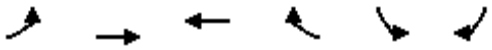
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	156	212	202	126	127	81	81	81
Volume Left	156	0	0	0	127	0	0	0
Volume Right	0	212	0	25	0	0	0	0
cSH	342	827	1700	1700	1173	1700	1700	1700
Volume to Capacity	0.46	0.26	0.12	0.07	0.11	0.05	0.05	0.05
Queue Length 95th (ft)	57	26	0	0	9	0	0	0
Control Delay (s)	24.0	10.8	0.0	0.0	8.4	0.0	0.0	0.0
Lane LOS	C	B			A			
Approach Delay (s)	16.4		0.0		2.9			
Approach LOS	C							

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		



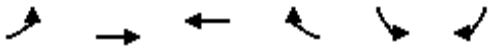
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	35	33	47	32	245	3	69	8	147	147	10
Future Volume (vph)	10	35	33	47	32	245	3	69	8	147	147	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Lane Util. Factor		1.00		1.00	0.95	0.88		1.00		1.00	0.95	1.00
Frt		0.94		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected		0.99		0.95	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1618		1641	3282	2584		1702		1641	3282	1468
Flt Permitted		0.95		0.70	1.00	1.00		0.98		0.70	1.00	1.00
Satd. Flow (perm)		1552		1214	3282	2584		1675		1213	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	37	35	49	34	258	3	73	8	155	155	11
RTOR Reduction (vph)	0	25	0	0	0	184	0	6	0	0	0	8
Lane Group Flow (vph)	0	58	0	49	34	74	0	78	0	155	155	3
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)		6.9		6.9	6.9	6.9		7.0		7.0	7.0	7.0
Effective Green, g (s)		6.9		6.9	6.9	6.9		7.0		7.0	7.0	7.0
Actuated g/C Ratio		0.29		0.29	0.29	0.29		0.29		0.29	0.29	0.29
Clearance Time (s)		5.0		5.0	5.0	5.0		5.0		5.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		448		350	947	746		490		355	961	429
v/s Ratio Prot					0.01						0.05	
v/s Ratio Perm		0.04		c0.04		0.03		0.05		c0.13		0.00
v/c Ratio		0.13		0.14	0.04	0.10		0.16		0.44	0.16	0.01
Uniform Delay, d1		6.3		6.3	6.1	6.2		6.3		6.9	6.3	6.0
Progression Factor		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.1		0.2	0.0	0.1		0.2		0.9	0.1	0.0
Delay (s)		6.4		6.5	6.1	6.3		6.4		7.7	6.4	6.0
Level of Service		A		A	A	A		A		A	A	A
Approach Delay (s)		6.4			6.3			6.4			7.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	23.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



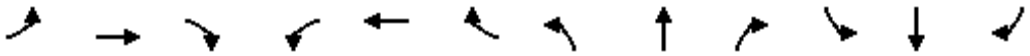
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Traffic Volume (vph)	0	907	732	0	339	299
Future Volume (vph)	0	907	732	0	339	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2	7.2		6.1	6.1
Lane Util. Factor		0.91	0.91		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		4759	4715		3183	1482
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		4759	4715		3183	1482
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	955	771	0	357	315
RTOR Reduction (vph)	0	0	0	0	0	64
Lane Group Flow (vph)	0	955	771	0	357	251
Heavy Vehicles (%)	10%	9%	10%	10%	10%	9%
Turn Type		NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		63.8	63.8		22.9	22.9
Effective Green, g (s)		63.8	63.8		22.9	22.9
Actuated g/C Ratio		0.64	0.64		0.23	0.23
Clearance Time (s)		7.2	7.2		6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		3036	3008		728	339
v/s Ratio Prot		c0.20	0.16		0.11	
v/s Ratio Perm						c0.17
v/c Ratio		0.31	0.26		0.49	0.74
Uniform Delay, d1		8.2	7.8		33.5	35.8
Progression Factor		1.00	0.88		1.00	1.00
Incremental Delay, d2		0.3	0.2		0.5	8.4
Delay (s)		8.5	7.1		34.0	44.2
Level of Service		A	A		C	D
Approach Delay (s)		8.5	7.1		38.8	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	558	688	734	778	0	0
Future Volume (vph)	558	688	734	778	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	7.2		
Lane Util. Factor	0.97	0.95	0.91	0.91		
Frt	1.00	1.00	0.96	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3183	3282	3003	1336		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3183	3282	3003	1336		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	587	724	773	819	0	0
RTOR Reduction (vph)	0	0	22	22	0	0
Lane Group Flow (vph)	587	724	1079	469	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Actuated Green, G (s)	23.2	100.0	63.9	63.9		
Effective Green, g (s)	23.2	100.0	63.9	63.9		
Actuated g/C Ratio	0.23	1.00	0.64	0.64		
Clearance Time (s)	5.7	7.2	7.2	7.2		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	738	3282	1918	853		
v/s Ratio Prot	c0.18	0.22	c0.36			
v/s Ratio Perm				0.35		
v/c Ratio	0.80	0.22	0.56	0.55		
Uniform Delay, d1	36.2	0.0	10.2	10.0		
Progression Factor	1.04	1.00	1.00	1.00		
Incremental Delay, d2	5.8	0.2	1.2	2.5		
Delay (s)	43.5	0.2	11.4	12.6		
Level of Service	D	A	B	B		
Approach Delay (s)		19.5	11.7		0.0	
Approach LOS		B	B		A	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

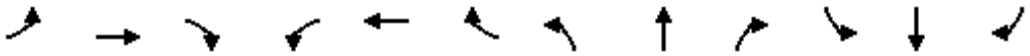


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	585	692	0	0	796	1121	95	2	362	0	0	0
Future Volume (vph)	585	692	0	0	796	1121	95	2	362	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Lane Util. Factor	0.97	0.91			0.86	0.86		1.00	0.88			
Frt	1.00	1.00			0.94	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	3183	4715			4180	1263		1647	2584			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	3183	4715			4180	1263		1647	2584			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	616	728	0	0	838	1180	100	2	381	0	0	0
RTOR Reduction (vph)	0	0	0	0	113	171	0	0	344	0	0	0
Lane Group Flow (vph)	616	728	0	0	1315	419	0	102	37	0	0	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	28.3	89.2			56.2	56.2		10.6	10.6			
Effective Green, g (s)	28.3	89.2			56.2	56.2		10.6	10.6			
Actuated g/C Ratio	0.26	0.81			0.51	0.51		0.10	0.10			
Clearance Time (s)	4.7	5.1			5.1	5.1		5.1	5.1			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	818	3823			2135	645		158	249			
v/s Ratio Prot	c0.19	0.15			0.31							
v/s Ratio Perm						c0.33		0.06	0.01			
v/c Ratio	0.75	0.19			0.62	0.65		0.65	0.15			
Uniform Delay, d1	37.6	2.3			19.2	19.7		47.9	45.6			
Progression Factor	0.84	0.72			1.00	1.00		1.00	1.00			
Incremental Delay, d2	3.5	0.1			1.3	5.0		8.7	0.3			
Delay (s)	35.3	1.8			20.5	24.7		56.6	45.8			
Level of Service	D	A			C	C		E	D			
Approach Delay (s)		17.1			21.8			48.1			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	984	481	379	1174	0	469
Future Volume (vph)	984	481	379	1174	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1		5.1	5.1		5.1
Lane Util. Factor	0.91		0.97	0.91		0.88
Frt	0.95		1.00	1.00		0.85
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	4483		3183	4715		2584
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	4483		3183	4715		2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1036	506	399	1236	0	494
RTOR Reduction (vph)	54	0	0	0	0	140
Lane Group Flow (vph)	1488	0	399	1236	0	354
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%
Turn Type	NA		Prot	NA		Over
Protected Phases	2		1	6		1
Permitted Phases						
Actuated Green, G (s)	78.4		21.4	110.0		21.4
Effective Green, g (s)	78.4		21.4	110.0		21.4
Actuated g/C Ratio	0.71		0.19	1.00		0.19
Clearance Time (s)	5.1		5.1	5.1		5.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	3195		619	4715		502
v/s Ratio Prot	c0.33		0.13	0.26		c0.14
v/s Ratio Perm						
v/c Ratio	0.47		0.64	0.26		0.70
Uniform Delay, d1	6.8		40.8	0.0		41.4
Progression Factor	0.25		0.91	1.00		1.00
Incremental Delay, d2	0.4		2.2	0.1		4.5
Delay (s)	2.1		39.1	0.1		45.8
Level of Service	A		D	A		D
Approach Delay (s)	2.1			9.6	45.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.2
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	693	80	375	506	272	55	65	391	267	106	105
Future Volume (vph)	75	693	80	375	506	272	55	65	391	267	106	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		0.95	
Frt	1.00	0.98		1.00	0.95			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	
Satd. Flow (prot)	1641	4642		1641	4468			1688	1468		3087	
Flt Permitted	0.95	1.00		0.95	1.00			0.56	1.00		0.73	
Satd. Flow (perm)	1641	4642		1641	4468			966	1468		2320	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	729	84	395	533	286	58	68	412	281	112	111
RTOR Reduction (vph)	0	12	0	0	69	0	0	0	300	0	27	0
Lane Group Flow (vph)	79	801	0	395	750	0	0	126	112	0	477	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	8.6	35.5		30.3	56.6			30.0	30.0		30.0	
Effective Green, g (s)	8.6	35.5		30.3	56.6			30.0	30.0		30.0	
Actuated g/C Ratio	0.08	0.32		0.28	0.51			0.27	0.27		0.27	
Clearance Time (s)	4.4	4.9		4.4	5.5			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	8.0		2.0	6.7			4.4	4.4		4.4	
Lane Grp Cap (vph)	128	1498		452	2298			263	400		632	
v/s Ratio Prot	0.05	c0.17		c0.24	0.17							
v/s Ratio Perm								0.13	0.08		c0.21	
v/c Ratio	0.62	0.54		0.87	0.33			0.48	0.28		0.75	
Uniform Delay, d1	49.1	30.5		38.0	15.6			33.5	31.5		36.6	
Progression Factor	1.00	1.00		1.08	0.56			1.00	1.00		1.00	
Incremental Delay, d2	6.1	1.4		16.1	0.4			2.3	0.6		5.7	
Delay (s)	55.2	31.9		57.2	9.0			35.7	32.1		42.3	
Level of Service	E	C		E	A			D	C		D	
Approach Delay (s)		33.9			24.7			33.0			42.3	
Approach LOS		C			C			C			D	

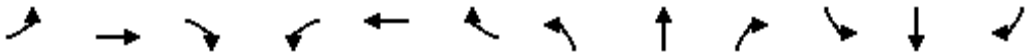
Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	246	229	318	109	105
Future Vol, veh/h	230	246	229	318	109	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	10	10	10	10	10	10
Mvmt Flow	242	259	241	335	115	111
Number of Lanes	1	0	1	2	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	30.7	12	15.7
HCM LOS	D	B	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3
Vol Left, %	51%	0%	100%	0%	0%
Vol Thru, %	0%	48%	0%	100%	100%
Vol Right, %	49%	52%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	476	229	159	159
LT Vol	109	0	229	0	0
Through Vol	0	230	0	159	159
RT Vol	105	246	0	0	0
Lane Flow Rate	225	501	241	167	167
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.448	0.825	0.45	0.289	0.2
Departure Headway (Hd)	7.162	5.924	6.721	6.213	4.311
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	502	611	535	576	825
Service Time	4.929	3.684	4.484	3.975	2.072
HCM Lane V/C Ratio	0.448	0.82	0.45	0.29	0.202
HCM Control Delay	15.7	30.7	14.9	11.5	8.2
HCM Lane LOS	C	D	B	B	A
HCM 95th-tile Q	2.3	8.6	2.3	1.2	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	850	29	68	626	70	33	10	24	10	10	107
Future Volume (vph)	123	850	29	68	626	70	33	10	24	10	10	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.98			1.00	0.85		0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		1.00	
Satd. Flow (prot)	1641	4692		1641	4644			1664	1468		1526	
Flt Permitted	0.95	1.00		0.95	1.00			0.85	1.00		0.97	
Satd. Flow (perm)	1641	4692		1641	4644			1474	1468		1479	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	129	895	31	72	659	74	35	11	25	11	11	113
RTOR Reduction (vph)	0	3	0	0	14	0	0	0	22	0	101	0
Lane Group Flow (vph)	129	923	0	72	719	0	0	46	3	0	34	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	5.4	22.7		3.2	20.5			4.7	4.7		4.7	
Effective Green, g (s)	5.4	22.7		3.2	20.5			4.7	4.7		4.7	
Actuated g/C Ratio	0.12	0.51		0.07	0.46			0.10	0.10		0.10	
Clearance Time (s)	4.4	4.9		4.4	4.9			4.9	4.9		4.9	
Vehicle Extension (s)	2.0	6.1		2.0	5.1			2.0	2.0		2.0	
Lane Grp Cap (vph)	197	2377		117	2125			154	154		155	
v/s Ratio Prot	c0.08	c0.20		0.04	0.15							
v/s Ratio Perm								c0.03	0.00		0.02	
v/c Ratio	0.65	0.39		0.62	0.34			0.30	0.02		0.22	
Uniform Delay, d1	18.8	6.8		20.2	7.8			18.5	18.0		18.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	5.8	0.3		6.6	0.2			0.4	0.0		0.3	
Delay (s)	24.7	7.1		26.8	8.0			18.9	18.0		18.6	
Level of Service	C	A		C	A			B	B		B	
Approach Delay (s)		9.2			9.7			18.6			18.6	
Approach LOS		A			A			B			B	

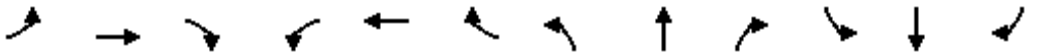
Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	44.8	Sum of lost time (s)	14.2
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	892	741	467	985	835	301
Future Volume (vph)	892	741	467	985	835	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4759	1468	1641	4759	3183	1468
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4759	1468	1641	4759	3183	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	939	780	492	1037	879	317
RTOR Reduction (vph)	0	60	0	0	0	232
Lane Group Flow (vph)	939	720	492	1037	879	85
Heavy Vehicles (%)	9%	10%	10%	9%	10%	10%
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Actuated Green, G (s)	19.8	44.0	26.3	51.8	24.2	24.2
Effective Green, g (s)	19.8	44.0	26.3	51.8	24.2	24.2
Actuated g/C Ratio	0.22	0.49	0.29	0.58	0.27	0.27
Clearance Time (s)	7.2	6.8	5.7	7.2	6.8	6.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1046	717	479	2739	855	394
v/s Ratio Prot	0.20	c0.27	c0.30	0.22	c0.28	
v/s Ratio Perm		0.22				0.06
v/c Ratio	0.90	1.00	1.03	0.38	1.03	0.22
Uniform Delay, d1	34.1	23.0	31.8	10.4	32.9	25.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.2	34.7	48.2	0.1	38.2	0.3
Delay (s)	44.3	57.7	80.1	10.5	71.1	25.8
Level of Service	D	E	F	B	E	C
Approach Delay (s)	50.4			32.9	59.1	
Approach LOS	D			C	E	

Intersection Summary			
HCM 2000 Control Delay	46.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

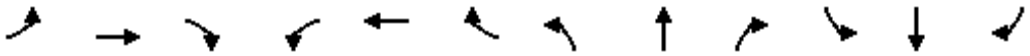
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	476	147	39	72	119	502	46	913	124	335	288	352
Future Volume (vph)	476	147	39	72	119	502	46	913	124	335	288	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1641	1673		1641	1727	1468	1641	3223		1641	1727	1468
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1641	1673		1641	1727	1468	1641	3223		1641	1727	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	501	155	41	76	125	528	48	961	131	353	303	371
RTOR Reduction (vph)	0	7	0	0	0	223	0	8	0	0	0	215
Lane Group Flow (vph)	501	189	0	76	125	305	48	1084	0	353	303	156
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	33.7	33.7		20.8	20.8	20.8	7.2	42.0		24.6	59.2	59.2
Effective Green, g (s)	33.7	33.7		20.8	20.8	20.8	7.2	42.0		24.6	59.2	59.2
Actuated g/C Ratio	0.24	0.24		0.15	0.15	0.15	0.05	0.30		0.17	0.42	0.42
Clearance Time (s)	5.3	5.3		5.2	5.2	5.2	4.4	4.9		4.4	5.1	5.1
Vehicle Extension (s)	2.0	2.0		3.7	3.7	3.7	2.0	3.8		2.0	3.8	3.8
Lane Grp Cap (vph)	392	400		242	254	216	83	960		286	725	616
v/s Ratio Prot	c0.31	0.11		0.05	0.07		0.03	c0.34		c0.22	0.18	
v/s Ratio Perm						c0.21						0.11
v/c Ratio	1.28	0.47		0.31	0.49	1.41	0.58	1.13		1.23	0.42	0.25
Uniform Delay, d1	53.6	46.0		53.7	55.2	60.1	65.4	49.5		58.2	28.7	26.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	143.5	0.3		0.9	1.9	209.9	5.9	71.6		131.9	0.5	0.3
Delay (s)	197.1	46.3		54.6	57.1	270.0	71.3	121.0		190.1	29.2	26.8
Level of Service	F	D		D	E	F	E	F		F	C	C
Approach Delay (s)		154.7			211.0			118.9			83.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	134.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	140.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



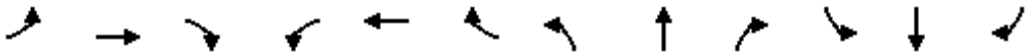
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	486	192	299	829	742	221	250	158	467	377	479
Future Volume (vph)	391	486	192	299	829	742	221	250	158	467	377	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	1627		1656	1727	2584
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	1627		1656	1727	2584
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	412	512	202	315	873	781	233	263	166	492	397	504
RTOR Reduction (vph)	0	0	167	0	0	453	0	16	0	0	0	145
Lane Group Flow (vph)	412	512	35	315	873	328	233	413	0	492	397	359
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	9%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	15.3	24.9	24.9	17.2	26.8	26.8	24.8	40.0		35.4	50.6	65.9
Effective Green, g (s)	15.3	24.9	24.9	17.2	26.8	26.8	24.8	40.0		35.4	50.6	65.9
Actuated g/C Ratio	0.11	0.18	0.18	0.12	0.19	0.19	0.17	0.28		0.25	0.36	0.46
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	7.2	5.7	6.1		5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	342	833	257	385	896	276	286	457		412	614	1197
v/s Ratio Prot	c0.13	0.11		0.10	0.18		0.14	c0.25		c0.30	0.23	0.03
v/s Ratio Perm			0.02			c0.22						0.11
v/c Ratio	1.20	0.61	0.14	0.82	0.97	1.19	0.81	0.90		1.19	0.65	0.30
Uniform Delay, d1	63.4	54.2	49.6	61.0	57.4	57.7	56.5	49.3		53.4	38.3	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	116.6	1.4	0.2	12.7	23.8	115.3	16.1	21.0		108.9	2.3	0.1
Delay (s)	180.0	55.6	49.8	73.7	81.1	173.0	72.6	70.2		162.3	40.7	23.9
Level of Service	F	E	D	E	F	F	E	E		F	D	C
Approach Delay (s)		100.1			116.4			71.1			77.6	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	96.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	142.2	Sum of lost time (s)	24.7
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	220	106	1045	418	474	254	476	533	266	213	41
Future Volume (vph)	42	220	106	1045	418	474	254	476	533	266	213	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3242	3203	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1641	3282	1468	3183	1727	1482	1641	3282	1468	3242	3203	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	232	112	1100	440	499	267	501	561	280	224	43
RTOR Reduction (vph)	0	0	89	0	0	228	0	0	44	0	13	0
Lane Group Flow (vph)	44	232	23	1100	440	271	267	501	517	280	254	0
Heavy Vehicles (%)	10%	10%	10%	10%	10%	9%	10%	10%	10%	8%	10%	10%
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.6	13.4	25.3	48.8	52.5	52.5	11.9	24.4	73.2	15.8	28.3	
Effective Green, g (s)	8.6	13.4	25.3	48.8	52.5	52.5	11.9	24.4	73.2	15.8	28.3	
Actuated g/C Ratio	0.07	0.11	0.20	0.39	0.42	0.42	0.10	0.20	0.59	0.13	0.23	
Clearance Time (s)	5.2	5.6	5.2	5.2	6.7	6.7	5.2	6.3	5.2	5.2	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	113	352	297	1245	727	623	156	642	861	410	726	
v/s Ratio Prot	0.03	0.07	0.01	c0.35	c0.25		c0.16	c0.15	0.23	0.09	c0.08	
v/s Ratio Perm			0.01			0.18			0.12			
v/c Ratio	0.39	0.66	0.08	0.88	0.61	0.43	1.71	0.78	0.60	0.68	0.35	
Uniform Delay, d1	55.5	53.5	40.2	35.3	28.0	25.6	56.4	47.6	16.4	52.1	40.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.2	4.4	0.1	7.7	1.4	0.5	345.9	6.1	1.2	4.7	0.3	
Delay (s)	57.8	57.9	40.4	43.0	29.5	26.1	402.3	53.7	17.6	56.7	40.8	
Level of Service	E	E	D	D	C	C	F	D	B	E	D	
Approach Delay (s)		52.8			36.0			108.5			48.9	
Approach LOS		D			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	61.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	124.7	Sum of lost time (s)	23.4
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

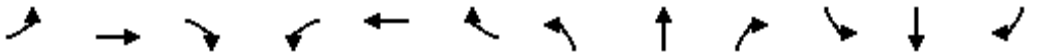


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	113	1	146	440	1368	0	0	526	1077
Future Volume (vph)	0	0	0	113	1	146	440	1368	0	0	526	1077
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.1	5.1	4.7	5.1			5.1	
Lane Util. Factor					1.00	1.00	1.00	0.91			0.91	
Frt					1.00	0.85	1.00	1.00			0.90	
Flt Protected					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					1724	1468	1719	4715			4304	
Flt Permitted					0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					1724	1468	1719	4715			4304	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	119	1	154	463	1440	0	0	554	1134
RTOR Reduction (vph)	0	0	0	0	0	90	0	0	0	0	221	0
Lane Group Flow (vph)	0	0	0	0	120	64	463	1440	0	0	1467	0
Heavy Vehicles (%)	10%	10%	10%	5%	5%	10%	5%	10%	10%	10%	5%	10%
Turn Type				Perm	NA	Perm	Prot	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)					12.4	12.4	36.6	97.4			56.1	
Effective Green, g (s)					12.4	12.4	36.6	97.4			56.1	
Actuated g/C Ratio					0.10	0.10	0.31	0.81			0.47	
Clearance Time (s)					5.1	5.1	4.7	5.1			5.1	
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)					178	151	524	3827			2012	
v/s Ratio Prot							c0.27	0.31			c0.34	
v/s Ratio Perm					0.07	0.04						
v/c Ratio					0.67	0.43	0.88	0.38			1.23dr	
Uniform Delay, d1					51.9	50.5	39.7	3.1			25.8	
Progression Factor					1.00	1.00	1.07	0.97			1.00	
Incremental Delay, d2					9.7	1.9	5.2	0.1			2.4	
Delay (s)					61.5	52.4	47.7	3.1			28.2	
Level of Service					E	D	D	A			C	
Approach Delay (s)		0.0			56.4			13.9			28.2	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		

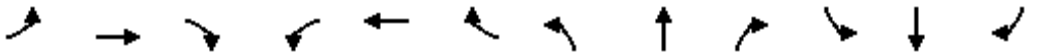
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1167	7	565	0	0	0	0	844	127	112	523	0
Future Volume (vph)	1167	7	565	0	0	0	0	844	127	112	523	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1						5.1		4.7	5.1	
Lane Util. Factor	0.95	0.95						0.91		1.00	0.95	
Frt	1.00	0.90						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1559	1498						4843		1641	3438	
Flt Permitted	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (perm)	1559	1498						4843		1641	3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1228	7	595	0	0	0	0	888	134	118	551	0
RTOR Reduction (vph)	0	55	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	946	829	0	0	0	0	0	1005	0	118	551	0
Heavy Vehicles (%)	10%	5%	5%	10%	10%	10%	10%	5%	5%	10%	5%	5%
Turn Type	Split	NA						NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases												
Actuated Green, G (s)	68.9	68.9						27.7		8.5	40.9	
Effective Green, g (s)	68.9	68.9						27.7		8.5	40.9	
Actuated g/C Ratio	0.57	0.57						0.23		0.07	0.34	
Clearance Time (s)	5.1	5.1						5.1		4.7	5.1	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	895	860						1117		116	1171	
v/s Ratio Prot	c0.61	0.55						c0.21		c0.07	0.16	
v/s Ratio Perm												
v/c Ratio	1.06	0.96						0.90		1.02	0.47	
Uniform Delay, d1	25.5	24.4						44.8		55.8	31.0	
Progression Factor	1.00	1.00						1.00		0.74	0.57	
Incremental Delay, d2	46.3	22.2						11.5		72.9	0.9	
Delay (s)	71.9	46.5						56.3		114.4	18.7	
Level of Service	E	D						E		F	B	
Approach Delay (s)		59.6			0.0			56.3			35.6	
Approach LOS		E			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.9
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	489	103	82	66	71	222	55	295	59	230	349	510
Future Volume (vph)	489	103	82	66	71	222	55	295	59	230	349	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1689		3335	1810	1538	1719	4817		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1689		3335	1810	1538	1719	4817		1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	515	108	86	69	75	234	58	311	62	242	367	537
RTOR Reduction (vph)	0	29	0	0	0	200	0	30	0	0	0	371
Lane Group Flow (vph)	515	165	0	69	75	34	58	343	0	242	367	166
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	11.2	15.9		4.6	9.3	9.3	4.8	10.1		14.6	19.9	19.9
Effective Green, g (s)	11.2	15.9		4.6	9.3	9.3	4.8	10.1		14.6	19.9	19.9
Actuated g/C Ratio	0.17	0.25		0.07	0.14	0.14	0.07	0.16		0.23	0.31	0.31
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	581	418		238	262	222	128	757		390	1065	476
v/s Ratio Prot	c0.15	c0.10		0.02	0.04		0.03	0.07		c0.14	0.11	
v/s Ratio Perm						0.02						c0.11
v/c Ratio	0.89	0.39		0.29	0.29	0.15	0.45	0.45		0.62	0.34	0.35
Uniform Delay, d1	25.9	20.1		28.3	24.5	24.0	28.4	24.5		22.3	17.1	17.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.1	0.6		0.7	0.6	0.3	2.5	0.4		3.1	0.2	0.4
Delay (s)	41.0	20.7		28.9	25.1	24.3	31.0	25.0		25.4	17.3	17.6
Level of Service	D	C		C	C	C	C	C		C	B	B
Approach Delay (s)		35.4			25.3			25.8			19.1	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

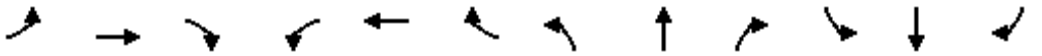
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	621	271	307	517	152	205	878	305	128	782	153
Future Volume (vph)	286	621	271	307	517	152	205	878	305	128	782	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	3335	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	301	654	285	323	544	160	216	924	321	135	823	161
RTOR Reduction (vph)	0	0	120	0	0	116	0	0	186	0	0	105
Lane Group Flow (vph)	301	654	165	323	544	44	216	924	135	135	823	56
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.6	26.5	26.5	11.8	26.7	26.7	8.2	33.0	33.0	7.1	31.9	31.9
Effective Green, g (s)	11.6	26.5	26.5	11.8	26.7	26.7	8.2	33.0	33.0	7.1	31.9	31.9
Actuated g/C Ratio	0.12	0.27	0.27	0.12	0.27	0.27	0.08	0.33	0.33	0.07	0.32	0.32
Clearance Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0	4.5	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	389	916	410	395	923	413	275	1141	510	238	1103	493
v/s Ratio Prot	0.09	c0.19		c0.10	0.16		c0.06	c0.27		0.04	0.24	
v/s Ratio Perm			0.11			0.03			0.09			0.04
v/c Ratio	0.77	0.71	0.40	0.82	0.59	0.11	0.79	0.81	0.27	0.57	0.75	0.11
Uniform Delay, d1	42.6	33.0	29.9	42.8	31.6	27.4	44.7	30.3	24.3	44.7	30.1	23.8
Progression 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
Incremental Delay, d2	9.3	2.7	0.6	12.4	1.0	0.1	13.7	4.3	0.3	3.1	2.8	0.1
Delay (s)	51.9	35.7	30.6	55.1	32.6	27.5	58.4	34.7	24.6	47.7	32.9	23.9
Level of Service	D	D	C	E	C	C	E	C	C	D	C	C
Approach Delay (s)		38.4			38.9			36.0			33.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	99.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	980	95	22	1453	111	249
Future Volume (vph)	980	95	22	1453	111	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4715	1538	1719	4715	3335	1538
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4715	1538	1719	4715	3335	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1032	100	23	1529	117	262
RTOR Reduction (vph)	0	49	0	0	0	214
Lane Group Flow (vph)	1032	51	23	1529	117	48
Heavy Vehicles (%)	10%	5%	5%	10%	5%	5%
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	21.5	21.5	1.1	26.6	7.8	7.8
Effective Green, g (s)	21.5	21.5	1.1	26.6	7.8	7.8
Actuated g/C Ratio	0.51	0.51	0.03	0.63	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2390	779	44	2957	613	282
v/s Ratio Prot	0.22		0.01	c0.32	c0.04	
v/s Ratio Perm		0.03				0.03
v/c Ratio	0.43	0.07	0.52	0.52	0.19	0.17
Uniform Delay, d1	6.6	5.3	20.4	4.4	14.6	14.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	10.8	0.2	0.2	0.3
Delay (s)	6.7	5.4	31.1	4.5	14.8	14.9
Level of Service	A	A	C	A	B	B
Approach Delay (s)	6.6			4.9	14.8	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	42.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

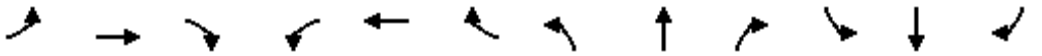


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	257	759	70	113	837	148	106	28	110	370	19	422
Future Volume (vph)	257	759	70	113	837	148	106	28	110	370	19	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.88		1.00	0.91	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	1520		1559	1406	1395
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	1520		1559	1406	1395
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	271	799	74	119	881	156	112	29	116	389	20	444
RTOR Reduction (vph)	0	0	53	0	0	114	0	101	0	0	42	198
Lane Group Flow (vph)	271	799	21	119	881	42	112	44	0	296	244	73
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	9.1	26.5	26.5	8.6	25.3	25.3	12.3	12.3		25.4	25.4	25.4
Effective Green, g (s)	9.1	26.5	26.5	8.6	25.3	25.3	12.3	12.3		25.4	25.4	25.4
Actuated g/C Ratio	0.10	0.28	0.28	0.09	0.27	0.27	0.13	0.13		0.27	0.27	0.27
Clearance Time (s)	5.2	6.7	6.7	4.5	6.7	6.7	4.5	4.5		5.6	5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	307	1340	413	290	1279	394	214	198		420	379	376
v/s Ratio Prot	c0.09	0.17		0.04	c0.19		c0.07	0.03		c0.19	0.17	
v/s Ratio Perm			0.01			0.03						0.05
v/c Ratio	0.88	0.60	0.05	0.41	0.69	0.11	0.52	0.22		0.70	0.64	0.19
Uniform Delay, d1	42.0	29.2	24.6	40.4	30.9	25.9	38.2	36.6		31.0	30.4	26.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	24.4	0.7	0.1	0.9	1.6	0.1	2.3	0.6		5.3	3.7	0.3
Delay (s)	66.4	29.9	24.7	41.3	32.4	26.0	40.5	37.2		36.3	34.1	26.7
Level of Service	E	C	C	D	C	C	D	D		D	C	C
Approach Delay (s)		38.2			32.5			38.6			32.5	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	22.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Opening Year 2020 Baseline Plus Project

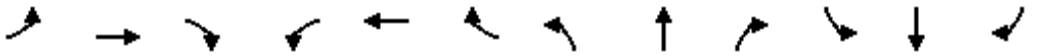
With Mitigation



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	457	3	14	1	14	94	56	337	1	39	179	541
Future Volume (vph)	457	3	14	1	14	94	56	337	1	39	179	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.88		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1583		3335	1810	1538	1719	4938		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1583		3335	1810	1538	1719	4938		1719	3438	1538
Peak-hour factor, PHF	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Adj. Flow (vph)	662	4	20	1	20	136	81	488	1	57	259	784
RTOR Reduction (vph)	0	13	0	0	0	116	0	0	0	0	0	591
Lane Group Flow (vph)	662	11	0	1	20	20	81	489	0	57	259	193
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	16.3	25.8		0.8	10.3	10.3	6.8	19.6		4.3	17.1	17.1
Effective Green, g (s)	16.3	25.8		0.8	10.3	10.3	6.8	19.6		4.3	17.1	17.1
Actuated g/C Ratio	0.23	0.37		0.01	0.15	0.15	0.10	0.28		0.06	0.25	0.25
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	782	587		38	268	227	168	1392		106	845	378
v/s Ratio Prot	c0.20	0.01		0.00	0.01		c0.05	0.10		0.03	0.08	
v/s Ratio Perm						c0.01						c0.13
v/c Ratio	0.85	0.02		0.03	0.07	0.09	0.48	0.35		0.54	0.31	0.51
Uniform Delay, d1	25.4	13.8		34.0	25.5	25.5	29.7	19.9		31.6	21.4	22.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.4	0.0		0.3	0.1	0.2	2.2	0.2		5.2	0.2	1.2
Delay (s)	33.8	13.9		34.2	25.6	25.7	31.9	20.0		36.8	21.6	23.8
Level of Service	C	B		C	C	C	C	C		D	C	C
Approach Delay (s)		33.1			25.8			21.7			23.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	19.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

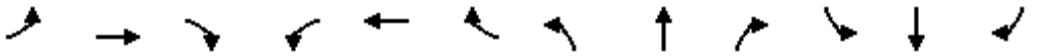


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	504	15	42	1	7	59	22	223	1	112	308	489
Future Volume (vph)	504	15	42	1	7	59	22	223	1	112	308	489
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		0.97	1.00	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.89		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	1610		3335	1810	1538	1719	4937		1719	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	1610		3335	1810	1538	1719	4937		1719	3438	1538
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	663	20	55	1	9	78	29	293	1	147	405	643
RTOR Reduction (vph)	0	37	0	0	0	70	0	0	0	0	0	434
Lane Group Flow (vph)	663	38	0	1	9	8	29	294	0	147	405	209
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	14.4	20.2		0.9	6.7	6.7	1.9	14.9		7.2	20.2	20.2
Effective Green, g (s)	14.4	20.2		0.9	6.7	6.7	1.9	14.9		7.2	20.2	20.2
Actuated g/C Ratio	0.23	0.32		0.01	0.11	0.11	0.03	0.24		0.12	0.32	0.32
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	772	522		48	194	165	52	1182		198	1116	499
v/s Ratio Prot	c0.20	c0.02		0.00	0.00		0.02	0.06		c0.09	0.12	
v/s Ratio Perm						0.01						c0.14
v/c Ratio	0.86	0.07		0.02	0.05	0.05	0.56	0.25		0.74	0.36	0.42
Uniform Delay, d1	22.9	14.5		30.2	24.9	24.9	29.7	19.1		26.6	16.1	16.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.4	0.1		0.2	0.1	0.1	12.3	0.1		13.9	0.2	0.6
Delay (s)	32.3	14.6		30.4	25.0	25.0	42.1	19.2		40.5	16.3	17.0
Level of Service	C	B		C	C	C	D	B		D	B	B
Approach Delay (s)		30.5			25.1			21.3			19.6	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	62.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

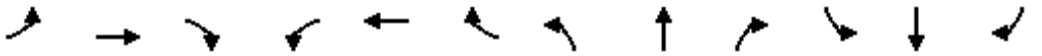
Horizon Year 2035 Baseline Plus Project

With Mitigation



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	827	201	168	440	500	177	351	251	816	240	352
Future Volume (vph)	395	827	201	168	440	500	177	351	251	816	240	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4715	1468	3183	4715	1468	1641	3282	1468	3183	3282	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	4715	1468	3183	4715	1468	1641	3282	1468	3183	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	871	212	177	463	526	186	369	264	859	253	371
RTOR Reduction (vph)	0	0	165	0	0	110	0	0	169	0	0	90
Lane Group Flow (vph)	416	871	47	177	463	416	186	369	95	859	253	281
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6	7	3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	19.3	25.7	25.7	10.3	16.7	53.1	18.0	19.4	19.4	36.4	37.8	57.1
Effective Green, g (s)	19.3	25.7	25.7	10.3	16.7	53.1	18.0	19.4	19.4	36.4	37.8	57.1
Actuated g/C Ratio	0.17	0.22	0.22	0.09	0.14	0.46	0.15	0.17	0.17	0.31	0.32	0.49
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	527	1040	323	281	675	669	253	546	244	994	1064	719
v/s Ratio Prot	c0.13	c0.18		0.06	0.10	0.19	0.11	c0.11		c0.27	0.08	0.06
v/s Ratio Perm			0.03			0.09			0.06			0.13
v/c Ratio	0.79	0.84	0.14	0.63	0.69	0.62	0.74	0.68	0.39	0.86	0.24	0.39
Uniform Delay, d1	46.6	43.4	36.6	51.3	47.4	24.1	47.0	45.6	43.3	37.7	28.8	18.7
Progression 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
Incremental Delay, d2	7.7	6.0	0.2	4.4	2.9	1.8	10.6	3.3	1.0	7.9	0.1	0.4
Delay (s)	54.4	49.4	36.8	55.6	50.3	25.9	57.5	48.9	44.3	45.6	28.9	19.1
Level of Service	D	D	D	E	D	C	E	D	D	D	C	B
Approach Delay (s)		49.0			40.1			49.4			36.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	116.5	Sum of lost time (s)	24.7
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	391	486	192	299	829	742	221	250	158	467	377	479
Future Volume (vph)	391	486	192	299	829	742	221	250	158	467	377	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3183	4759	1468	3183	4759	1468	1641	3282	1468	3213	3282	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3183	4759	1468	3183	4759	1468	1641	3282	1468	3213	3282	1468
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	412	512	202	315	873	781	233	263	166	492	397	504
RTOR Reduction (vph)	0	0	151	0	0	138	0	0	142	0	0	92
Lane Group Flow (vph)	412	512	51	315	873	643	233	263	24	492	397	412
Heavy Vehicles (%)	10%	9%	10%	10%	9%	10%	10%	10%	10%	9%	10%	10%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6	7	3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	18.4	29.5	29.5	16.5	27.6	56.6	21.7	16.6	16.6	29.0	23.9	42.3
Effective Green, g (s)	18.4	29.5	29.5	16.5	27.6	56.6	21.7	16.6	16.6	29.0	23.9	42.3
Actuated g/C Ratio	0.16	0.25	0.25	0.14	0.24	0.49	0.19	0.14	0.14	0.25	0.21	0.36
Clearance Time (s)	5.7	7.2	7.2	5.7	7.2	5.7	5.7	6.1	6.1	5.7	6.1	5.7
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	503	1207	372	451	1129	714	306	468	209	801	674	533
v/s Ratio Prot	c0.13	0.11		0.10	0.18	c0.22	0.14	0.08		0.15	0.12	c0.12
v/s Ratio Perm			0.03			0.21			0.02			0.16
v/c Ratio	0.82	0.42	0.14	0.70	0.77	0.90	0.76	0.56	0.11	0.61	0.59	0.77
Uniform Delay, d1	47.3	36.3	33.6	47.5	41.4	27.3	44.8	46.5	43.4	38.7	41.8	32.8
Progression 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
Incremental Delay, d2	10.0	0.2	0.2	4.7	3.4	14.5	10.7	1.5	0.2	1.4	1.3	6.9
Delay (s)	57.4	36.5	33.7	52.2	44.8	41.8	55.5	48.0	43.7	40.1	43.1	39.7
Level of Service	E	D	C	D	D	D	E	D	D	D	D	D
Approach Delay (s)		43.7			44.8			49.6			40.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	116.3	Sum of lost time (s)	24.7
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Appendix N

Fair Share Calculation Worksheets With Alternative Industrial Project

Heritage Road @ Otay Mesa Road
Horizon Year 2035 With Project AM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total	**971**	**4,689**	**4,718**

Overall Increase in Traffic (2035 With Project - Existing) >>	3,747
Project Trips >>	29
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**0.8%**

Heritage Road @ Otay Mesa Road
Horizon Year 2035 With Project PM Peak Hour

Volume	Existing	2035 No Project	2035 With Project
Total	**1,611**	**4,859**	**4,891**

Overall Increase in Traffic (2035 With Project - Existing) >>	3,280
Project Trips >>	32
Fair Share % (Project Trips / Overall Increase in Traffic) >>	**1.0%**