

May 5, 2010

Mr. Homi Namdari
Assistant City Engineer
City of Escondido
201 N. Broadway
Escondido, CA 92025

LLG Reference: 3-10-1944

Subject: **Talk-of-The-Town**
City of Escondido

Dear Mr. Namdari:

LLG Engineers prepared a traffic study for the Talk-of-The-Town project in January 2008. This project proposes to construct an automatic Car Wash facility, a two-stall oil change facility and a 4,156 square foot sit-down restaurant at the northwest corner of Centre City Parkway and Brotherton Road in the City of Escondido. This letter report updates an earlier one prepared on February 15, 2009 and addresses the following three issues:

- Potential conflict between project traffic and school vehicular traffic
- Potential conflict between project traffic and school pedestrian traffic
- Potential impact to nearby residential streets which the project traffic may utilize.

Figure 1 depicts the project location and study area.

1.0 TRAFFIC COUNTS

A traffic study was completed in December 2008 for this project. The analysis contained in that study was based on counts conducted in June 2008, when schools were closed for the summer. New traffic counts were conducted in the first week of February 2010, with nearby schools and day-cares in session. These counts also account for the traffic related to the Miller Elementary School, the Kindercare Learning Center on South Center City Parkway, the YMCA daycare on Miller Avenue and Leslie's daycare on Danica Place in the project vicinity. The count sheets are included in an attachment to this letter.

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When the counts were being conducted, southbound Centre City Parkway was closed at Citracado Parkway, thus access to southbound I-15 was not possible. Traffic was detoured to southbound I-15 via Citracado Parkway. No signs were provided on Centre City Parkway north of Felicita Avenue and hence traffic was not detoured onto Felicita Avenue. Therefore, traffic flow was not impacted due to the detour.

Therefore, fresh counts were conducted the week of March 15th 2010 on the 16th, 17th and the 18th. The Southbound 1-15 / Centre City Parkway On-Ramp was closed on Tuesday (16th) and open on Wednesday (17th) & Thursday (18th). The difference in the daily volumes on Brotherton Road between with the on-ramp “closed” versus “open” scenarios are within 5% and hence the ramp closure does not have a significant impact on the travel patterns on Brotherton Road. Some of the variations could be normal daily variations.

1.1 PEAK HOUR INTERSECTION TURNING MOVEMENT VOLUMES

Intersection turning movement counts were conducted during the following three peak periods in order to capture the traffic activity during those peak hours in this residential neighborhood. *Figure 2* depicts the Year 2010 traffic counts. *Table 1* depicts a comparison of the traffic volume counts conducted in June 2008 (summer) and the current year 2010 counts (with schools in session).

- AM peak hour - 7:00 AM and 9:00 AM
- School PM peak hour - 2:00 PM to 4:00 PM
- PM peak hour - 4:00 PM to 6:00 PM

Counts were conducted at the following intersections on Brotherton Road:

- Brotherton Road / Felicita Road
- Brotherton Road / Miller Avenue
- Brotherton Road / Centre City Parkway
- Brotherton Road / Escondido Boulevard

The total traffic volume entering the intersection during the AM and PM peak hours are compared in *Table 1*. The total entering peak hour volumes have increased at some intersections and increased at others.

TABLE 1
 COMPARISON OF TRAFFIC VOLUMES

Facility	Peak Hour	Jun-08	Jan-10	Increase (+) / Decrease (-)			
				Volume	Percent		
INTERSECTION - Total Entering Volume							
Brotherton Rd / Felicita Ave	AM	1,101	875	(-)	226	(-)	21%
	PM	996	1,087	(+)	91	(+)	9%
Brotherton Rd / Centre City Pkwy	AM	1,707	1,992	(+)	285	(+)	17%
	PM	2,104	2,420	(+)	316	(+)	15%
Brotherton Rd / Escondido Blvd	AM	403	394	(-)	9	(-)	-2%
	PM	511	508	(-)	3	(-)	-1%
SEGMENT - Daily Volume							
Brotherton Rd w/o Centre City Pkwy	-	1,100	790	(-)	310	(-)	-28%

Attachment A contains the traffic and pedestrian count sheets.

1.2 SEGMENT VOLUMES

72-hour machine traffic counts (ADT) were conducted at the following segments with schools in session.

- Brotherton Road from Felicita Road to Miller Avenue
- Brotherton Road from Miller Avenue to Centre City Parkway

As seen in *Table 1*, the segment volume on Brotherton Road west of Centre City Parkway has decreased since the summer of June 2008, even though the counts were currently conducted with area schools in session. The segment volumes were conducted for a period of three days and remain consistent over the three-day period. A decrease of 28% is recorded on the segment of Brotherton Road between the June 2006 and March 2010 counts.

2.0 TRAFFIC OPERATIONS

2.1 PEAK HOUR OPERATIONS

Figure 3 depicts the Existing + Project + Cumulative projects AM and PM peak hour intersection turning movement volumes and the 24-hour segment volumes. **Attachment B** contains the Existing peak hour intersection analysis worksheets.

2.1.1 EXISTING INTERSECTION OPERATIONS

Table 2 summarizes the peak hour intersection operations along Brotherton Road. As seen in **Table 2**, all intersections are calculated to operate at LOS C or better during all three peak periods. The analysis of the School PM peak (2:15 PM to 3:15 PM) is included for comparison purposes only.

2.1.2 EXISTING + PROJECT + CUMULATIVE PROJECTS INTERSECTION OPERATIONS

Table 2 summarizes the peak hour intersection operations along Brotherton Road. As seen in **Table 2**, with the addition of project and other cumulative projects, these intersections are calculated to continue to operate at LOS C or better.

TABLE 2
 INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project + Cumulative Projects	
			Delay ^a	LOS ^b	Delay	LOS
1. Brotherton Rd / Felicita Ave	TWSC ^c	AM	23.1	C	23.3	C
		School PM	21.2	C	-	-
		PM	19.3	C	19.6	C
2. Brotherton Rd / Miller Rd	TWSC ^c	AM	12.2	B	12.4	B
		School PM	11.2	B	-	-
		PM	9.9	A	10.0	A
3. Brotherton Rd / Centre City Pkwy	TWSC ^c	AM	13.6	B	15.2	C
		School PM	15.7	C	-	-
		PM	19.1	C	20.0	C
4. Brotherton Rd / Escondido Blvd	AWSC ^c	AM	8.5	A	8.8	A
		School PM	8.9	A	-	-
		PM	9.6	A	10.4	B

Footnotes:

- a. Average delay per vehicle in seconds
- b. Level of Service
- c. Two-Way-STOP-Controlled intersection. Minor street delay is reported.
- d. All-Way-STOP-Controlled intersection. Overall intersection delay is reported.

The intersection operations (delay and LOS) are comparable to the operations calculated in the June 2008 report. In some cases, the delay has increased by a couple of seconds. Hence, the conclusions in the June 2008 report remain valid.

2.2 SEGMENT OPERATIONS

Table 3 summarizes the segment operations along Brotherton Road. As seen in **Table 3**, with the addition of project and other cumulative projects, these segments are calculated to continue to operate at LOS C or better. Therefore, the project traffic has no impact on the subject segments.

TABLE 3
 STREET SEGMENT OPERATIONS

Street Segment	Existing Roadway Class ^a	Capacity ^b	ADT ^c	
			Existing	Existing + Project + Cumulative Projects
Brotherton Road				
Felicita Ave to Miller Ave	Resi Street	2,200	950	1,165
Miller Ave to Centre City Pkwy	Resi Street	2,200	790	1,005

Footnotes:

- a. Existing Roadway classification assumed as base condition.
- b. Capacity of Residential Street roadway facility based on City of Escondido standards.
- c. Average Daily Traffic

3.0 PROJECT TRAFFIC USING NEIGHBORHOOD STREETS TO ACCESS NORTHBOUND CENTRE CITY PARKWAY

Eastbound left-turns are not permitted at the Brotherton Road / Centre City Parkway intersection. Therefore, project traffic oriented to the north of the project site is not able to return directly to northbound Centre City Parkway. There are several alternative routes available. The neighborhood residents are concerned that traffic could potentially use neighborhood streets to travel north. The most obvious route to the north is to make an eastbound right-turn at the Brotherton Road / Centre City Parkway intersection, proceed south on Centre City Parkway to Citracado Boulevard and make a protected U-turn at the traffic signal at Citracado Parkway and then travel north towards Felicita Avenue.

4.1 PROJECT TRIP GENERATION

Table 4 summarizes the estimated project traffic generation. As seen in **Table 4**, the project is estimated to generate 1,579 daily trips with 95 trips during the AM peak hour and 139 trips during the PM peak hour. It may be noted that the number of trips identified above are primary trips, after accounting for passby traffic.

TABLE 4
 PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour				
		Rate	Volume	% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Proposed Project													
Car Wash	1 Site	900 / Site	900	4%	5:5	18	18	36	9%	5:5	41	40	81
Oil Change	2 Stall	40 /Stall	80	7%	6:4	3	3	6	11%	5:5	5	4	9
Restaurant	4,156 SF	160 /KSF	665	8%	5:5	27	26	53	8%	6:4	27	22	53
Total Trips			1,645			48	47	95			73	66	139
Pass By													
Restaurant (Daily and AM: 10% and PM Peak hour: 20%)			66			3	3	6			5	4	9
Subtotal Primary Trips			1,579			45	44	89			68	62	130
Fast Food Alternative													
Fast Food Restaurant	6,000 SF	700 /KSF	4,200	5%	6:4	105	105	210	7%	5:5	147	147	294
Pass By													
Restaurant (Daily and AM: 20% and PM Peak hour: 40%)			(-) 840			(-) 21	(-) 21	(-) 42			(-) 59	(-) 59	(-) 118
Subtotal Primary Trips			3,360			84	84	168			88	88	176
Difference			1,781			39	40	79			20	26	46

Based on the project trip distribution percentages assumed in the December 2008 report, 36% of the project traffic will potentially utilize Centre City Parkway to access the project site. Therefore, the total amount of traffic that would need to access northbound Centre City Parkway is estimated to be 296 vehicles over one 24-hour period, with 17 during the AM peak hour and 24 during the PM peak hour. It may be noted that only outbound traffic from the project would potentially utilize the neighborhood streets to travel north of the site.

An additional 137 daily trips with 11 AM and 16 PM peak hour trips are estimated to access northbound Escondido Boulevard. These trips that are destined to northbound Escondido Boulevard are however not considered, since it would be more convenient to use southbound Centre City Parkway to Citracado Parkway and then north on Escondido Boulevard.

4.2 TRIP GENERATION FOR THE MOST INTENSE PERMITTED LAND USE

Table 4 also summarizes the estimated traffic generation assuming the most intense permitted land use is constructed. The current permitted land uses at this site include a fast-food restaurant. If the project consisted of a fast-food restaurant, the project would generate 3,360 daily trips with 168 trips during the AM peak hour and 176 trips during the PM peak hour. It may be noted that the number of trips identified above are primary trips, after accounting for passby traffic. Thus, potentially, the project could have increased the neighborhood traffic by 605 daily trips with 30 AM and 32 PM peak hour trips. However, the currently proposed land uses are estimated to generate much fewer trips.

4.3 TRAVEL TIME ANALYSIS

A travel time analysis of two neighborhood routes and the route on Centre City Parkway was conducted during the peak hours. *Figure 4* depicts the three potential routes. As seen in *Figure 4*, the travel time was recorded starting from the project site and ending at the Felicita Avenue / Centre City Parkway intersection for all three routes. *Table 5* summarizes the results of this analysis. Three runs each were conducted along each route during each of the three peak hours. Following are the three routes:

- Route 1:** Charise Street / Darby Street / Montview Drive / U-turn on Centre City Parkway / Felicita Avenue
- Route 2:** C. City Parkway / U-Turn at Citracado Parkway / Felicita Avenue
- Route 3:** Charise Street / Darby Street / Montview Drive / Redwood Street / Felicita Avenue / Centre City Parkway

**TABLE 5
 TRAVEL TIME ANALYSIS**

Peak Hour	Route 1				Route 2				Route 3			
	Total Distance (miles)	Number of STOP Controlled Intersections	Average Travel Time	Speed (mph)	Total Distance (miles)	Number of STOP Controlled Intersections	Average Travel Time	Speed (mph)	Total Distance (miles)	Number of STOP Controlled Intersections	Average Travel Time	Speed (mph)
AM	0.96	3 Stop Controlled intersections, one park and 1 uncontrolled U-turn	2 min : 47 sec	20.7	1.19	1 Stop Controlled intersection, 1 signalized U-turn	2 min : 45 sec	26.0	0.98	4 Stop Controlled intersections	3 min : 17 sec	18.0
School PM			2 min : 54 sec	19.8			3 min : 17 sec	21.8			3 min : 13 sec	18.1
PM			3 min : 20 sec	17.3			2 min : 55 sec	24.5			3 min : 14 sec	18.3

Notes:

- Route 1: Charise Street / Darby Street / Montview / Centre City Parkway / Felicita Avenue
- Route 2: Centre City Parkway / U-Turn at Citracado Parkway / Felicita Avenue
- Route 3: Charise Street / Darby Street / Mont View / Felicita Avenue / Centre City Parkway

The travel time was recorded during the AM (7:15 AM to 8:15 AM), the school PM peak (2:00 PM to 3:00 PM) and the traditional PM peak hours (4:30 PM to 5:30 PM).

- Generally, few to no vehicular traffic were observed along the two neighborhood routes (Routes 1 & 3).
- Only one pedestrian was encountered on the sidewalk on Charise Street during the entire exercise.
- **Route 1** - There are two STOP controlled intersections (Charise Street / Darby Street and Darby Street / Montview Drive) and one uncontrolled U-turn (Centre City Parkway / Escondido Parkway).
- **Route 2** – There is one STOP controlled intersection (Brotherton Road / Centre City Parkway) and one signalized U-turn (Centre City Parkway / Citracado Parkway).
- **Route 3** – There are 4 STOP controlled intersections (Charise Street / Darby Street and Montview Drive / Darby Street, Montview Drive / Redwood Street and Felicita Avenue / Redwood Street).
- During the AM peak hour, the route with the shortest (average) travel time is Route 2.
- During the School PM peak hour, the route with the shortest travel time is Route 1.
- During the PM peak hour, the route with the shortest travel time is Route 2.
- The difference in travel time between the routes is very small. However, if the overall travel speed is compared, the highest overall travel speed is on Route 2, even though it is the longest route. This is because the posted speed limit on Centre City Parkway is 45 mph, whereas the posted speed limit on the neighborhood streets is 25 mph. It may be noted that the speed accounts for the stopped time at Stop signs or for yielding to traffic along the route. It is not the actual speed on any specific roadway segment, which is higher.

Based on the above, it is concluded that though some people would use the neighborhood streets, most people will use Route 2 to access northbound Centre City Parkway from the site. The people that use the neighborhood streets are likely to be people that live in the neighborhood or in adjacent neighborhoods. One has to be familiar with the neighborhood to use the neighborhood streets. Going through the neighborhood is not much shorter, nor is it faster or more convenient.

Assuming about 50% of the project traffic will use the neighborhood streets to travel north, the traffic in the neighborhood will increase by 148 vehicles over an entire day, or, 9 during the AM peak hour and 12 during the PM peak hour. Therefore, it is concluded, that even though traffic on the neighborhood streets may increase due to

the project, the increase is minimal and will substantially change the traffic operations in the neighborhood.

4.0 PEDESTRIAN TRAFFIC

AM peak period and PM peak period pedestrian volume counts were conducted at the following study area intersections and segments. The pedestrian counts were conducted from 7:00 AM to 9:00 AM and 2:00 PM to 6:00 PM to capture school and adjacent street pedestrian traffic.

- Brotherton Road / Felicita Road
- Brotherton Road / Miller Avenue
- Brotherton Road segment from Felicita Road to Miller Avenue
- Brotherton Road segment from Miller Avenue to Centre City Parkway

Figure 2 the pedestrian volumes. Attachment A contains the pedestrian count sheets.

The pedestrian traffic counts were conducted during the AM and PM peak hours. The highest pedestrian traffic was observed at the Brotherton Road / Miller Avenue intersection during the school peak hour between 2:15 PM and 3:15 PM, as expected. Table 6 summarizes the pedestrian counts along Brotherton Road during the three peak hours. As seen in Table 6, the highest amount of pedestrian traffic is 86 pedestrians or an average of a little more than one pedestrian every minute.

The project will possibly add a maximum of 17 and 24 trips during the AM and PM peak hours assuming all traffic destined north will use neighborhood streets. However, few to none of this traffic is expected to travel west on Brotherton Road.

TABLE 6
PEDESTRIAN COUNTS ON BROTHERTON ROAD

Segment	AM Peak Hour	School PM Peak Hour	PM Peak Hour
West of Miller Avenue	20	56	5
East of Miller Avenue	46	86	8

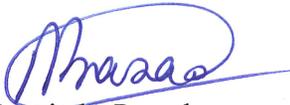
5.0 CONCLUSIONS

The above analysis indicates the following:

- The traffic counts conducted during the summer of June 2008 are comparable to the latest counts conducted in January and March 2010 with nearby schools in session (see *Table 1*).
- The intersection and segment operations using the 2010 counts are similar to that in the December 2008 traffic study.
- The trip generation for the project site could be higher by about 2,000 trips per day, if the permitted use of a fast-food restaurant was constructed.
- Field observations indicate 56 to 86 pedestrians along Brotherton Road west of Centre City Parkway during the School PM peak hour (2:15 PM to 3:15 PM). The project is forecasted to add 13 PM peak hour trips to Brotherton Road and therefore conflicts will be minimal.
- Travel time analysis on three possible routes revealed no significant difference in travel time. There are however, differences in the type of intersection traffic control and number of intersections along each route which could influence the route used by project traffic destined to the north.
- The increase in peak hour traffic due to the project in the neighborhood is 9 trips during the AM peak hour and 12 trips during the PM peak hour and is not expected to significantly impact traffic operations in neighborhood streets.

Sincerely,

Linscott, Law & Greenspan, Engineers



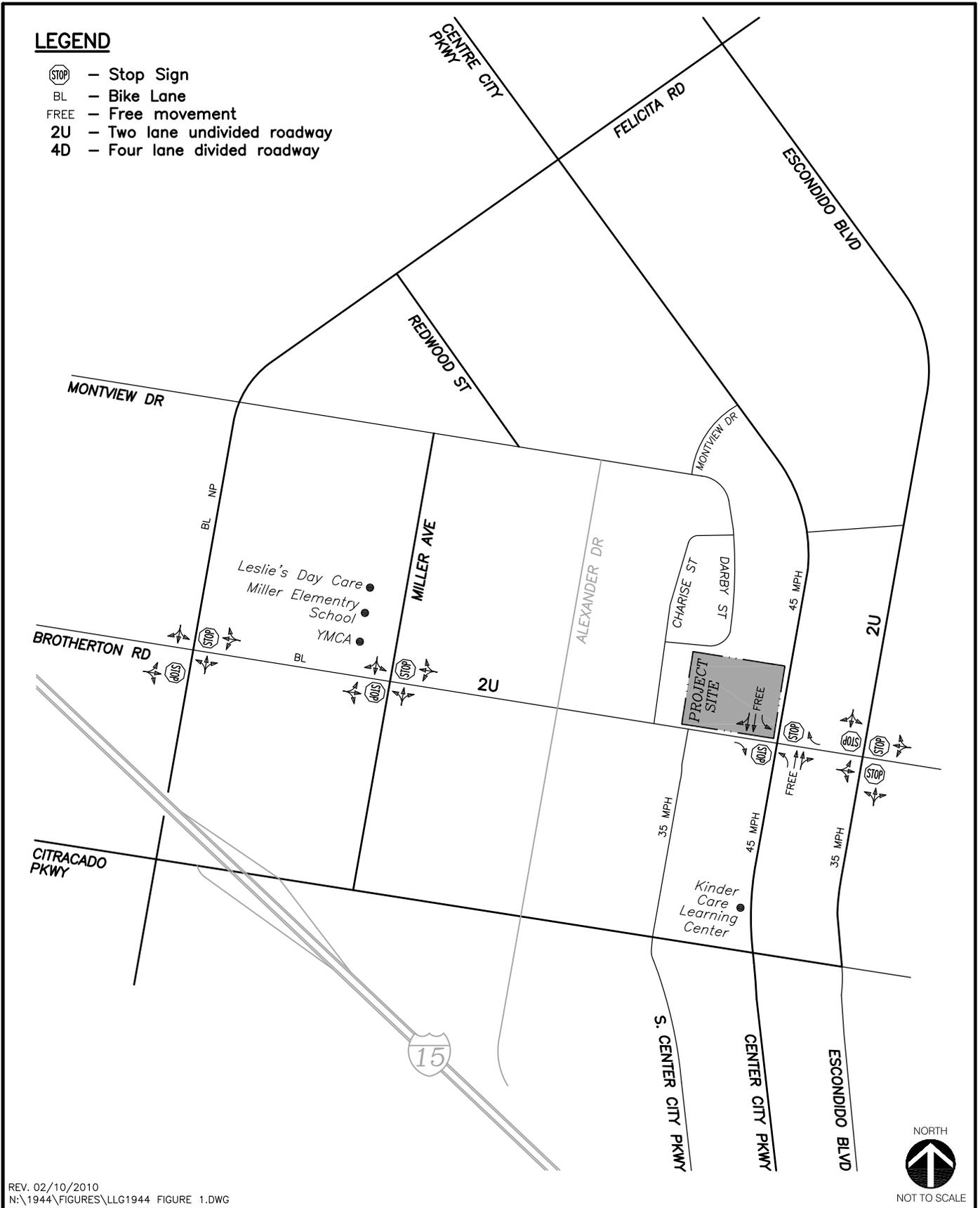
Narasimha Prasad
Senior Transportation Engineer

cc: File

FIGURES

LEGEND

- ⊘ - Stop Sign
- BL - Bike Lane
- FREE - Free movement
- 2U - Two lane undivided roadway
- 4D - Four lane divided roadway



REV. 02/10/2010
 N:\1944\FIGURES\LLG1944 FIGURE 1.DWG

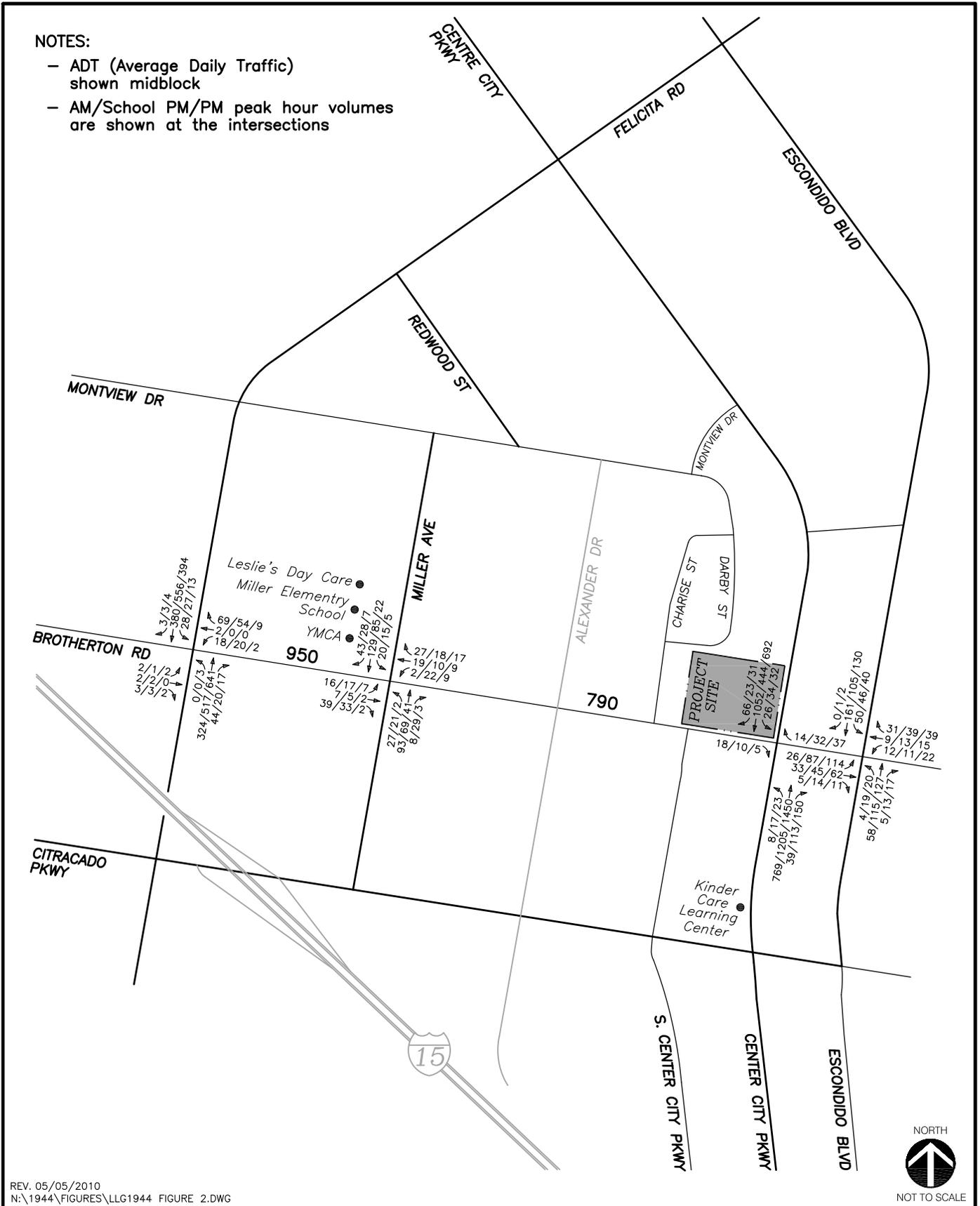
Figure 1

Existing Conditions Diagram



NOTES:

- ADT (Average Daily Traffic) shown midblock
- AM/School PM/PM peak hour volumes are shown at the intersections



REV. 05/05/2010
 N:\1944\FIGURES\LLG1944 FIGURE 2.DWG

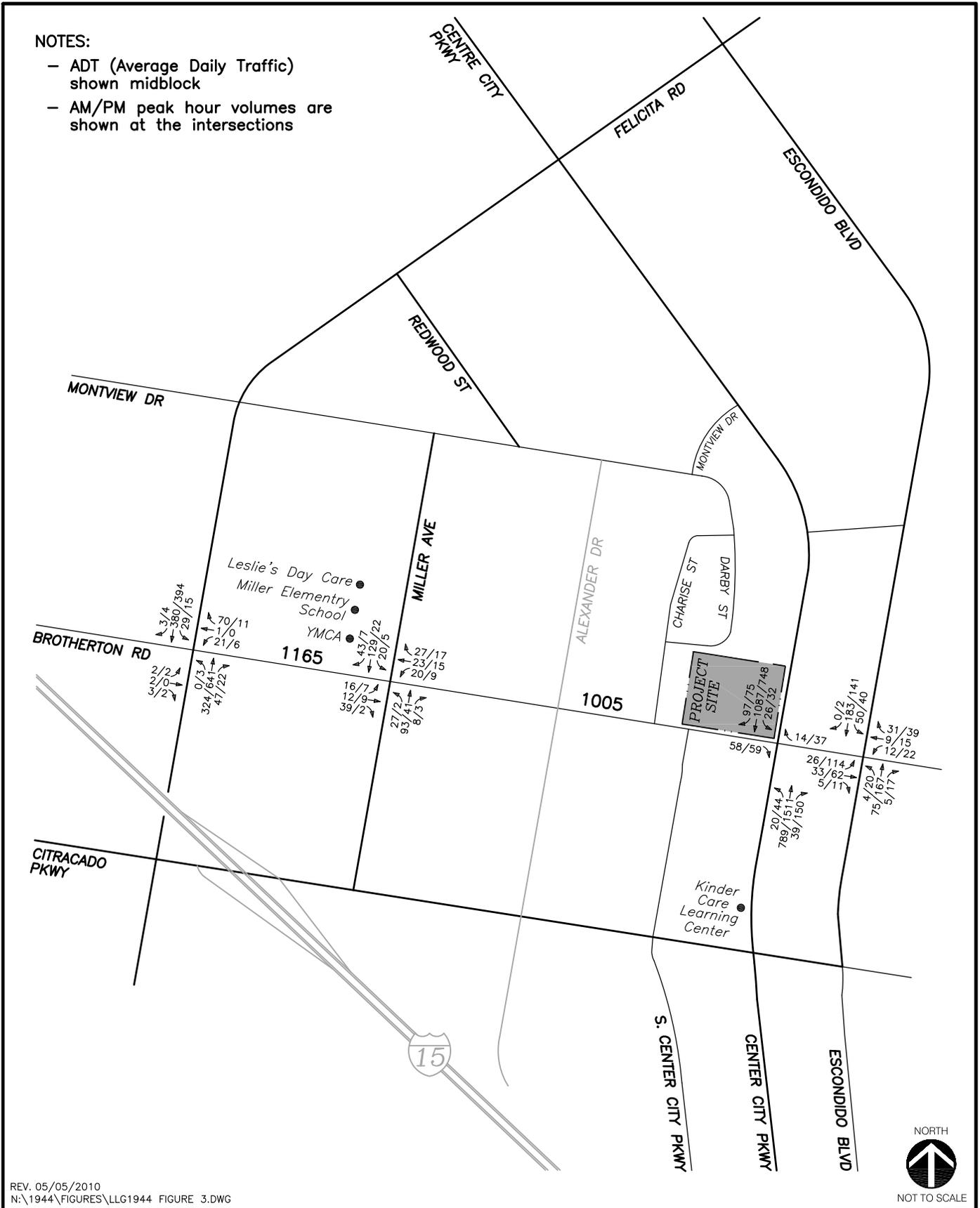


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Figure 2
Existing Traffic Volumes
AM/PM Peak Hours & ADT

NOTES:

- ADT (Average Daily Traffic) shown midblock
- AM/PM peak hour volumes are shown at the intersections



REV. 05/05/2010
 N:\1944\FIGURES\LLG1944 FIGURE 3.DWG



Figure 3
Existing + Project + Cumulative Project Traffic Volumes
AM/PM Peak Hours & ADT

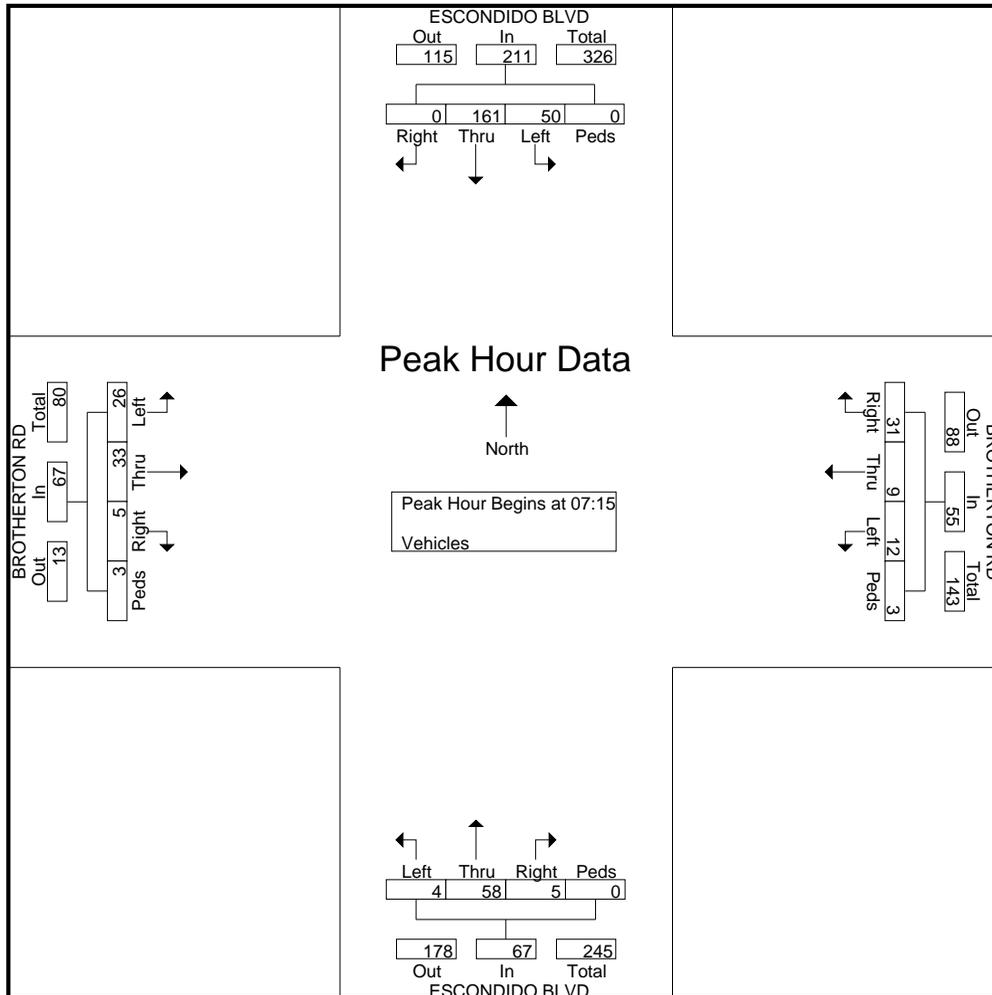
TRAFFIC COUNT SHEETS

True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.01.ESCONDIDO BLVD.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 2

Start Time	ESCONDIDO BLVD Southbound					BROTHERTON RD Westbound					ESCONDIDO BLVD Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	18	37	0	0	55	5	4	8	1	18	1	16	0	0	17	6	7	2	0	15	105
07:30	6	43	0	0	49	4	1	9	0	14	1	15	1	0	17	6	8	1	1	16	96
07:45	14	40	0	0	54	1	3	9	2	15	0	16	4	0	20	6	7	0	0	13	102
08:00	12	41	0	0	53	2	1	5	0	8	2	11	0	0	13	8	11	2	2	23	97
Total Volume	50	161	0	0	211	12	9	31	3	55	4	58	5	0	67	26	33	5	3	67	400
% App. Total	23.7	76.3	0	0		21.8	16.4	56.4	5.5		6	86.6	7.5	0		38.8	49.3	7.5	4.5		
PHF	.694	.936	.000	.000	.959	.600	.563	.861	.375	.764	.500	.906	.313	.000	.838	.813	.750	.625	.375	.728	.952

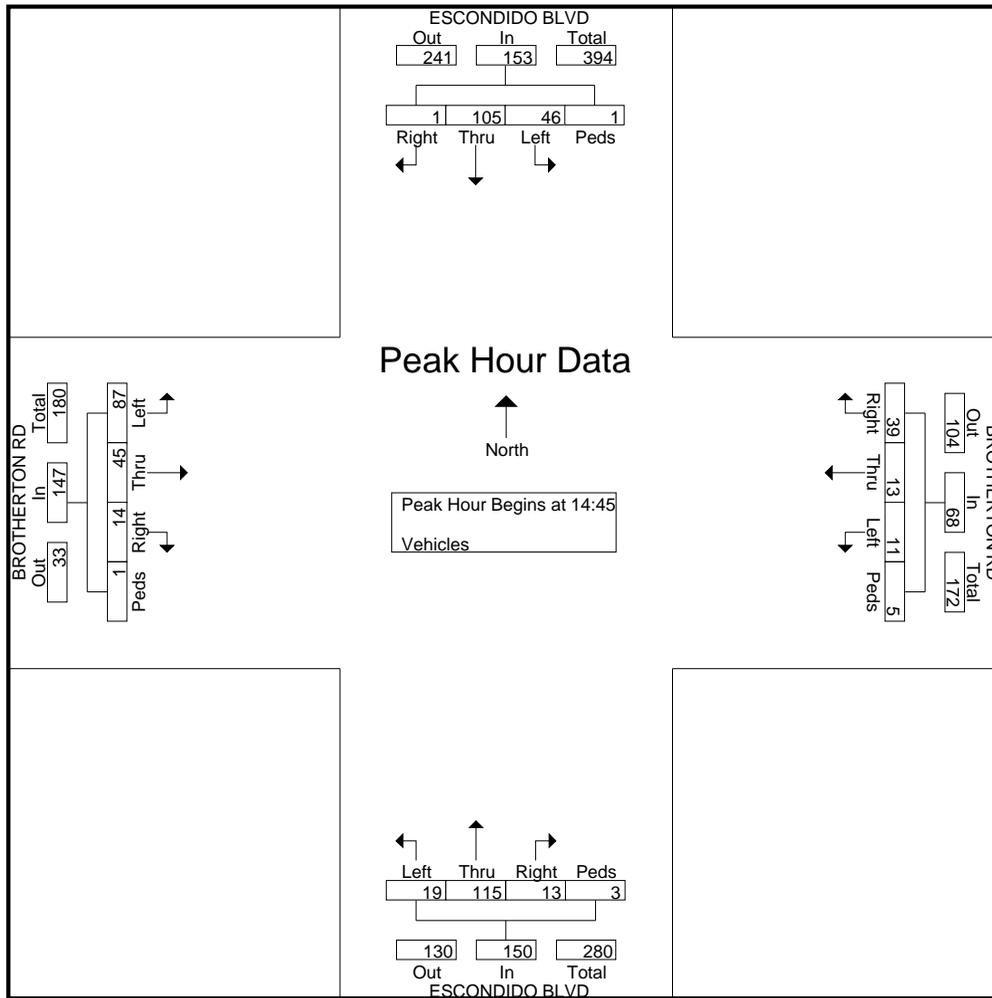


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.01.ESCONDIDO BLVD.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 3

Start Time	ESCONDIDO BLVD Southbound					BROTHERTON RD Westbound					ESCONDIDO BLVD Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 14:00 to 15:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 14:45																					
14:45	14	22	1	0	37	4	4	8	1	17	3	29	3	1	36	22	13	2	0	37	127
15:00	12	25	0	0	37	0	4	8	2	14	5	32	2	1	40	23	16	4	0	43	134
15:15	7	29	0	1	37	3	2	15	1	21	5	27	3	1	36	21	11	6	0	38	132
15:30	13	29	0	0	42	4	3	8	1	16	6	27	5	0	38	21	5	2	1	29	125
Total Volume	46	105	1	1	153	11	13	39	5	68	19	115	13	3	150	87	45	14	1	147	518
% App. Total	30.1	68.6	0.7	0.7		16.2	19.1	57.4	7.4		12.7	76.7	8.7	2		59.2	30.6	9.5	0.7		
PHF	.821	.905	.250	.250	.911	.688	.813	.650	.625	.810	.792	.898	.650	.750	.938	.946	.703	.583	.250	.855	.966

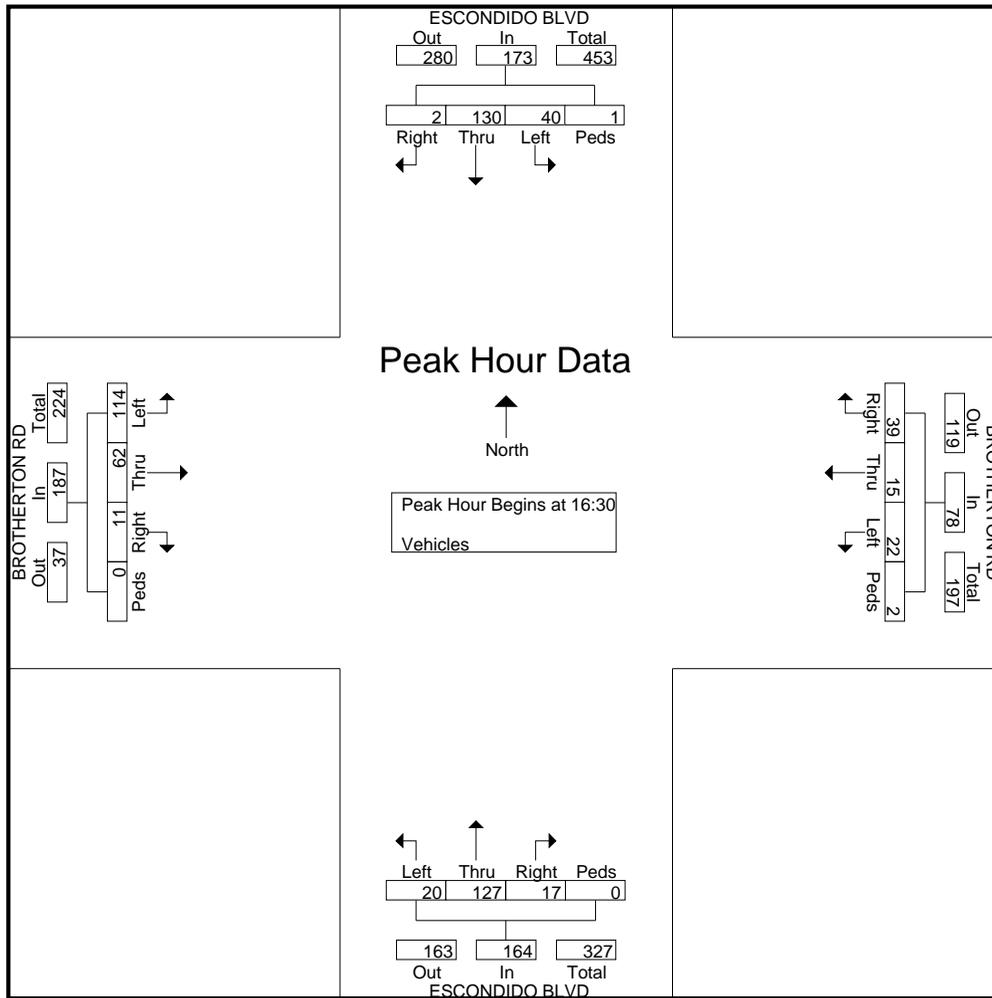


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.01.ESCONDIDO BLVD.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 4

Start Time	ESCONDIDO BLVD Southbound					BROTHERTON RD Westbound					ESCONDIDO BLVD Northbound					BROTHERTON RD Eastbound					Int. Total
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Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	7	35	1	0	43	7	2	7	0	16	5	30	4	0	39	23	11	7	0	41	139
16:45	11	28	0	0	39	0	5	7	2	14	4	38	3	0	45	33	17	1	0	51	149
17:00	11	26	0	0	37	9	5	9	0	23	5	27	5	0	37	33	17	3	0	53	150
17:15	11	41	1	1	54	6	3	16	0	25	6	32	5	0	43	25	17	0	0	42	164
Total Volume	40	130	2	1	173	22	15	39	2	78	20	127	17	0	164	114	62	11	0	187	602
% App. Total	23.1	75.1	1.2	0.6		28.2	19.2	50	2.6		12.2	77.4	10.4	0		61	33.2	5.9	0		
PHF	.909	.793	.500	.250	.801	.611	.750	.609	.250	.780	.833	.836	.850	.000	.911	.864	.912	.393	.000	.882	.918

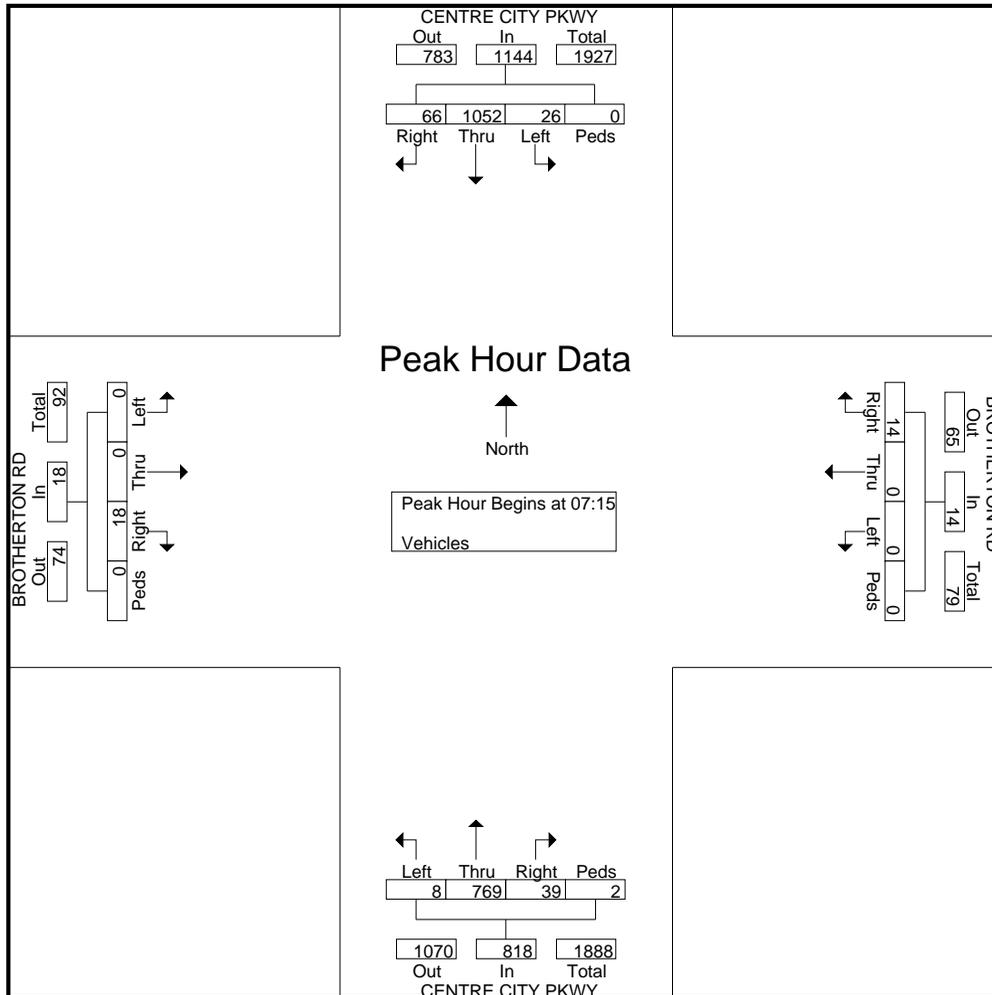


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.02.CENTRE CITY PKWY.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 2

Start Time	CENTRE CITY PKWY Southbound					BROTHERTON RD Westbound					CENTRE CITY PKWY Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	7	275	16	0	298	0	0	5	0	5	1	177	8	0	186	0	0	3	0	3	492
07:30	8	301	23	0	332	0	0	2	0	2	3	198	7	0	208	0	0	5	0	5	547
07:45	2	238	18	0	258	0	0	3	0	3	3	197	11	0	211	0	0	6	0	6	478
08:00	9	238	9	0	256	0	0	4	0	4	1	197	13	2	213	0	0	4	0	4	477
Total Volume	26	1052	66	0	1144	0	0	14	0	14	8	769	39	2	818	0	0	18	0	18	1994
% App. Total	2.3	92	5.8	0		0	0	100	0		1	94	4.8	0.2		0	0	100	0		
PHF	.722	.874	.717	.000	.861	.000	.000	.700	.000	.700	.667	.971	.750	.250	.960	.000	.000	.750	.000	.750	.911

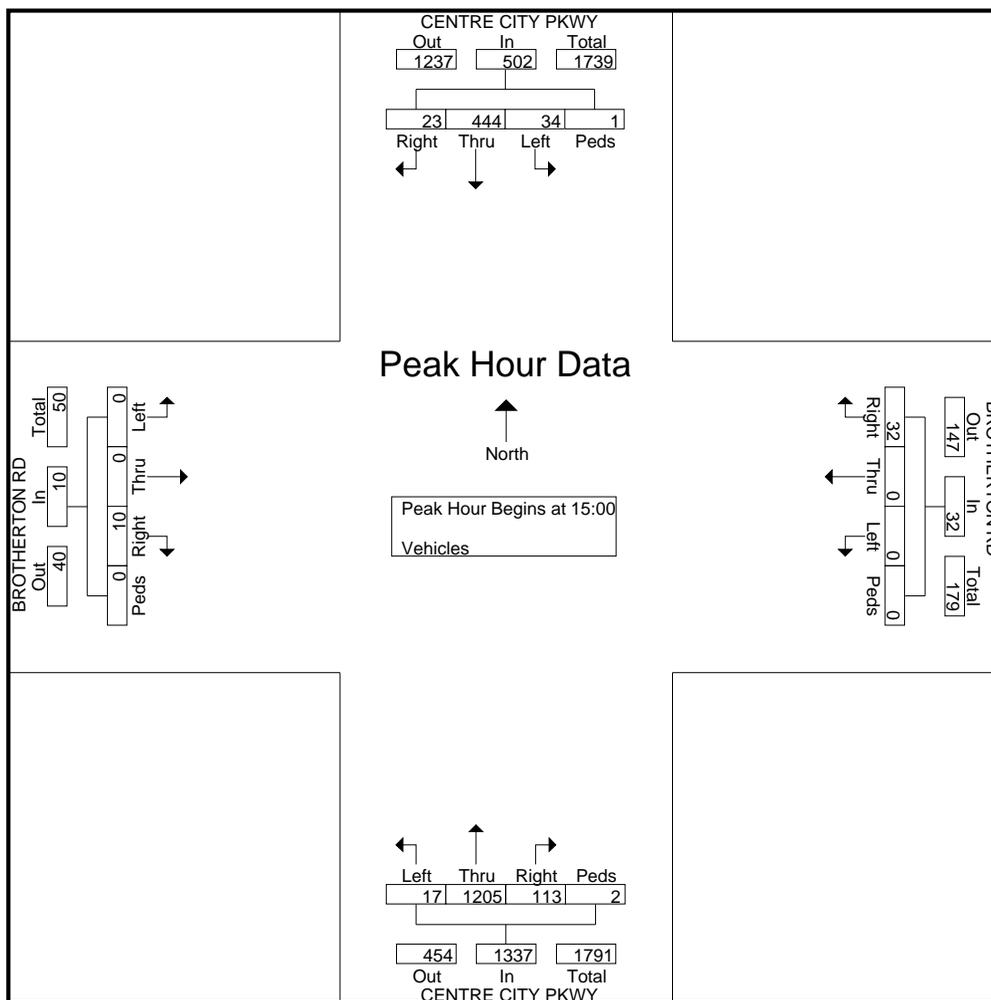


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.02.CENTRE CITY PKWY.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 3

Start Time	CENTRE CITY PKWY Southbound					BROTHERTON RD Westbound					CENTRE CITY PKWY Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 14:00 to 15:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:00																					
15:00	9	104	6	0	119	0	0	9	0	9	5	260	35	1	301	0	0	0	0	0	429
15:15	10	113	3	1	127	0	0	7	0	7	4	328	30	1	363	0	0	4	0	4	501
15:30	6	119	5	0	130	0	0	9	0	9	2	263	20	0	285	0	0	3	0	3	427
15:45	9	108	9	0	126	0	0	7	0	7	6	354	28	0	388	0	0	3	0	3	524
Total Volume	34	444	23	1	502	0	0	32	0	32	17	1205	113	2	1337	0	0	10	0	10	1881
% App. Total	6.8	88.4	4.6	0.2		0	0	100	0		1.3	90.1	8.5	0.1		0	0	100	0		
PHF	.850	.933	.639	.250	.965	.000	.000	.889	.000	.889	.708	.851	.807	.500	.861	.000	.000	.625	.000	.625	.897

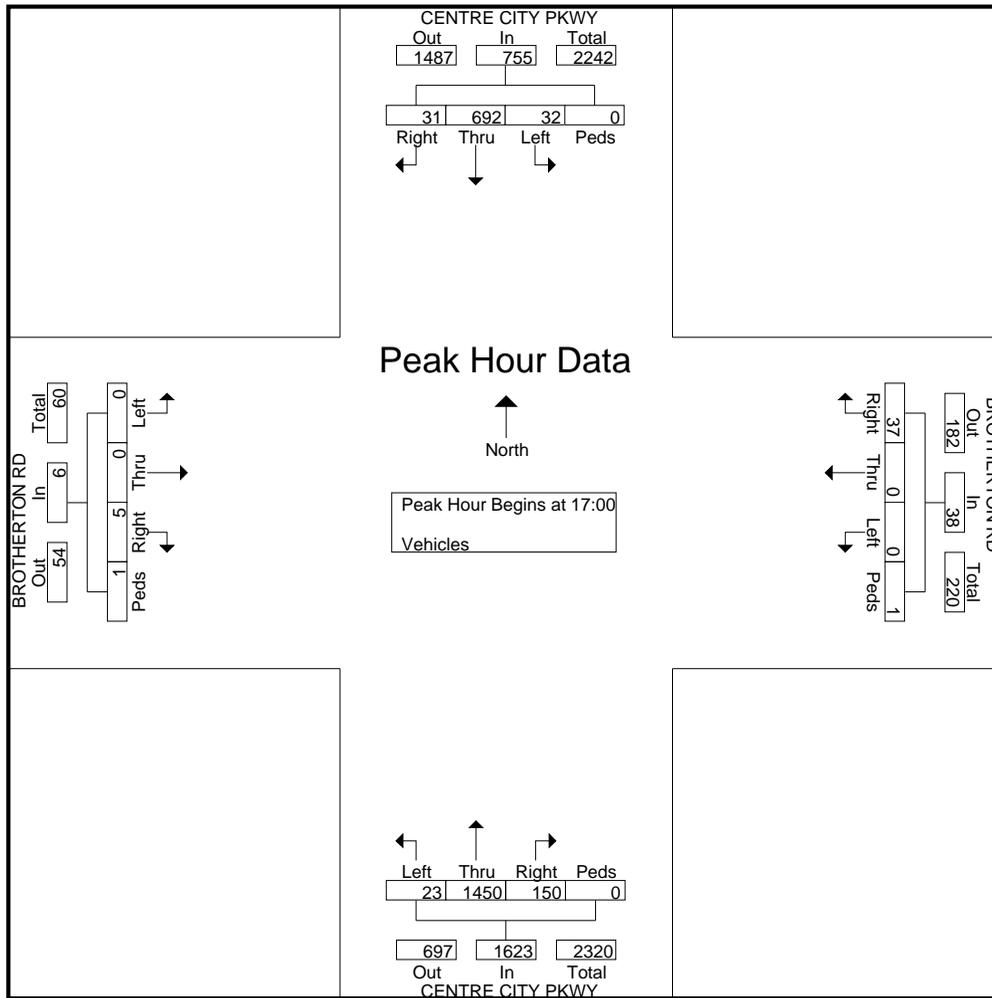


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.02.CENTRE CITY PKWY.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 4

Start Time	CENTRE CITY PKWY Southbound					BROTHERTON RD Westbound					CENTRE CITY PKWY Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	5	177	6	0	188	0	0	10	1	11	5	365	45	0	415	0	0	1	0	1	615
17:15	10	163	6	0	179	0	0	10	0	10	6	389	30	0	425	0	0	2	1	3	617
17:30	8	186	5	0	199	0	0	9	0	9	2	344	38	0	384	0	0	1	0	1	593
17:45	9	166	14	0	189	0	0	8	0	8	10	352	37	0	399	0	0	1	0	1	597
Total Volume	32	692	31	0	755	0	0	37	1	38	23	1450	150	0	1623	0	0	5	1	6	2422
% App. Total	4.2	91.7	4.1	0		0	0	97.4	2.6		1.4	89.3	9.2	0		0	0	83.3	16.7		
PHF	.800	.930	.554	.000	.948	.000	.000	.925	.250	.864	.575	.932	.833	.000	.955	.000	.000	.625	.250	.500	.981

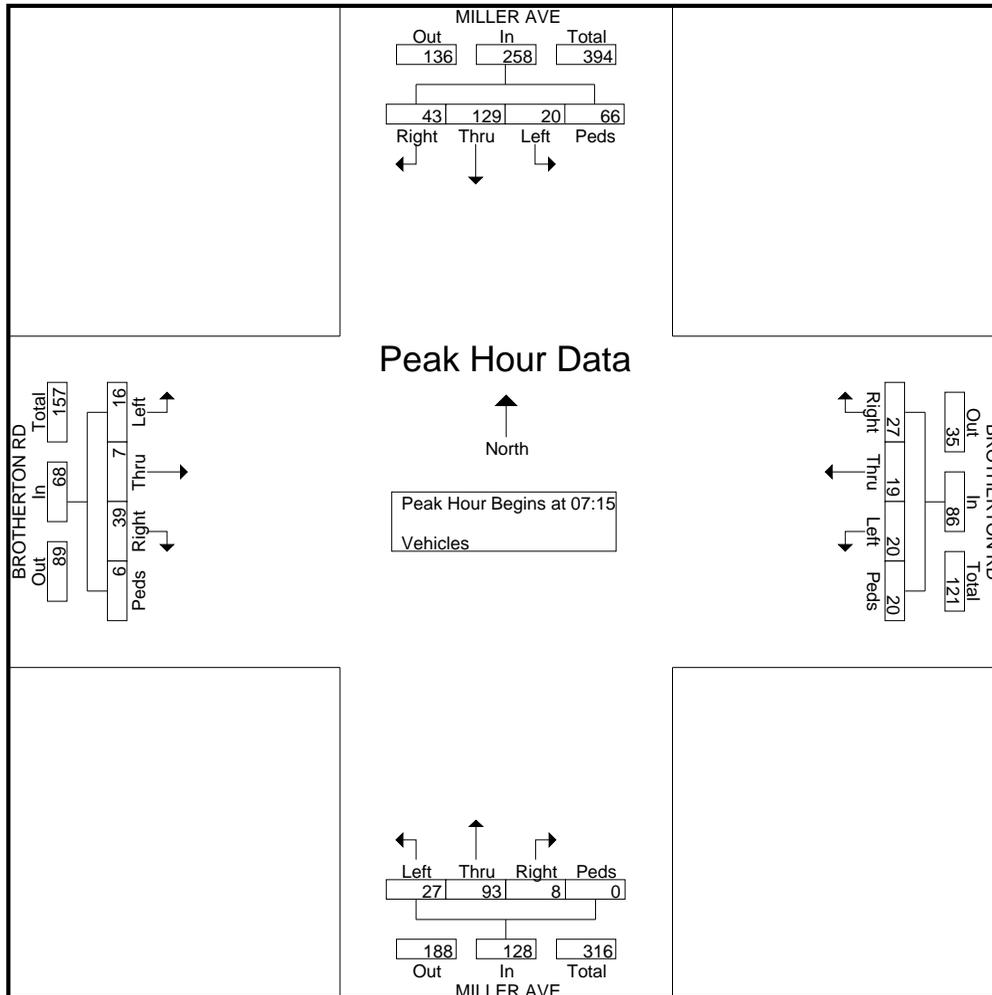


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.03.MILLER AVE.BROTHERTON RD
Site Code : 00000000
Start Date : 2/3/2010
Page No : 2

Start Time	MILLER AVE Southbound					BROTHERTON RD Westbound					MILLER AVE Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	3	21	8	1	33	6	0	4	0	10	3	18	0	0	21	5	0	5	0	10	74
07:30	5	28	18	12	63	4	9	3	2	18	7	26	4	0	37	5	2	14	2	23	141
07:45	3	41	13	43	100	5	6	12	12	35	15	42	4	0	61	4	4	14	4	26	222
08:00	9	39	4	10	62	5	4	8	6	23	2	7	0	0	9	2	1	6	0	9	103
Total Volume	20	129	43	66	258	20	19	27	20	86	27	93	8	0	128	16	7	39	6	68	540
% App. Total	7.8	50	16.7	25.6		23.3	22.1	31.4	23.3		21.1	72.7	6.2	0		23.5	10.3	57.4	8.8		
PHF	.556	.787	.597	.384	.645	.833	.528	.563	.417	.614	.450	.554	.500	.000	.525	.800	.438	.696	.375	.654	.608

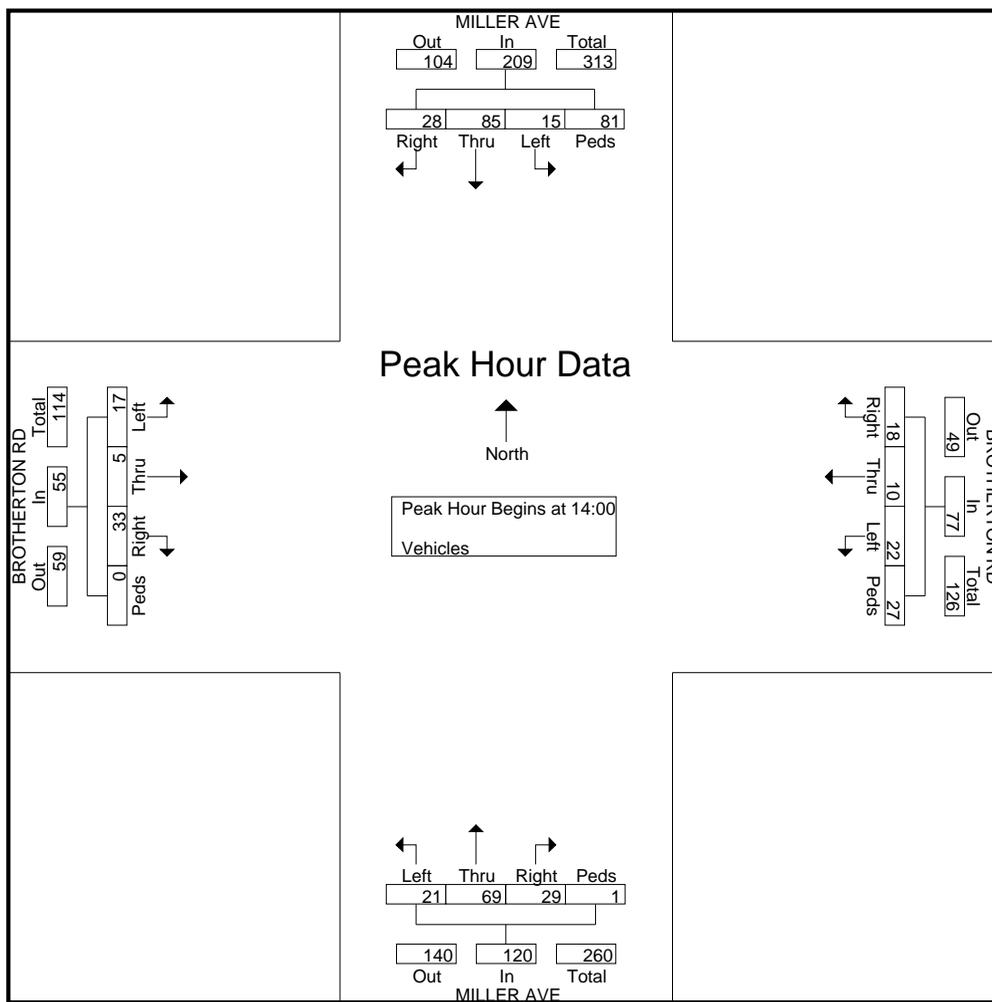


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.03.MILLER AVE.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 3

Start Time	MILLER AVE Southbound					BROTHERTON RD Westbound					MILLER AVE Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 14:00 to 15:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 14:00																					
14:00	4	2	4	7	17	2	3	1	0	6	3	11	5	1	20	6	0	0	0	6	49
14:15	3	8	5	45	61	5	2	8	16	31	10	15	13	0	38	3	1	6	0	10	140
14:30	8	44	15	23	90	11	4	6	11	32	6	21	5	0	32	7	3	26	0	36	190
14:45	0	31	4	6	41	4	1	3	0	8	2	22	6	0	30	1	1	1	0	3	82
Total Volume	15	85	28	81	209	22	10	18	27	77	21	69	29	1	120	17	5	33	0	55	461
% App. Total	7.2	40.7	13.4	38.8		28.6	13	23.4	35.1		17.5	57.5	24.2	0.8		30.9	9.1	60	0		
PHF	.469	.483	.467	.450	.581	.500	.625	.563	.422	.602	.525	.784	.558	.250	.789	.607	.417	.317	.000	.382	.607

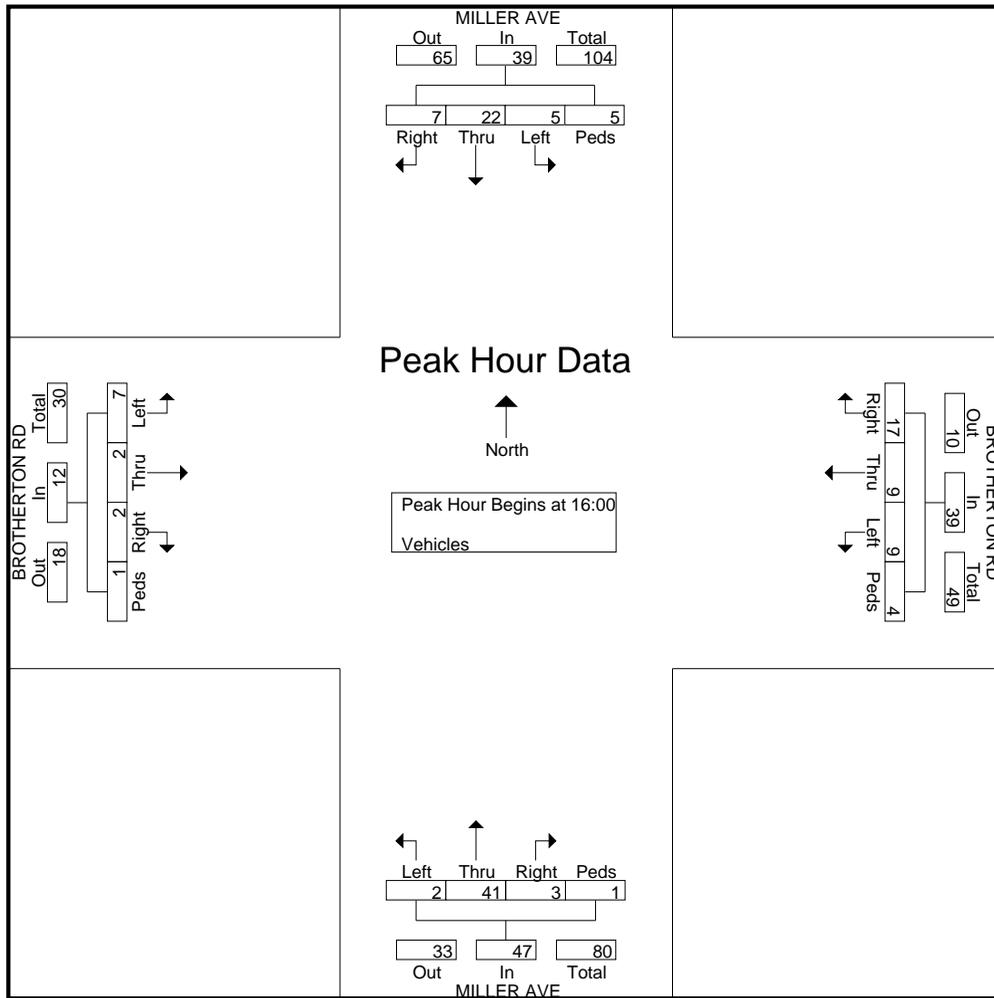


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.03.MILLER AVE.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 4

Start Time	MILLER AVE Southbound					BROTHERTON RD Westbound					MILLER AVE Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	3	8	2	1	14	2	5	2	0	9	1	10	0	0	11	2	1	0	0	3	37
16:15	1	2	3	1	7	1	2	3	2	8	0	8	0	1	9	0	0	0	0	0	24
16:30	1	7	0	1	9	3	2	7	0	12	1	12	1	0	14	3	1	0	0	4	39
16:45	0	5	2	2	9	3	0	5	2	10	0	11	2	0	13	2	0	2	1	5	37
Total Volume	5	22	7	5	39	9	9	17	4	39	2	41	3	1	47	7	2	2	1	12	137
% App. Total	12.8	56.4	17.9	12.8		23.1	23.1	43.6	10.3		4.3	87.2	6.4	2.1		58.3	16.7	16.7	8.3		
PHF	.417	.688	.583	.625	.696	.750	.450	.607	.500	.813	.500	.854	.375	.250	.839	.583	.500	.250	.250	.600	.878

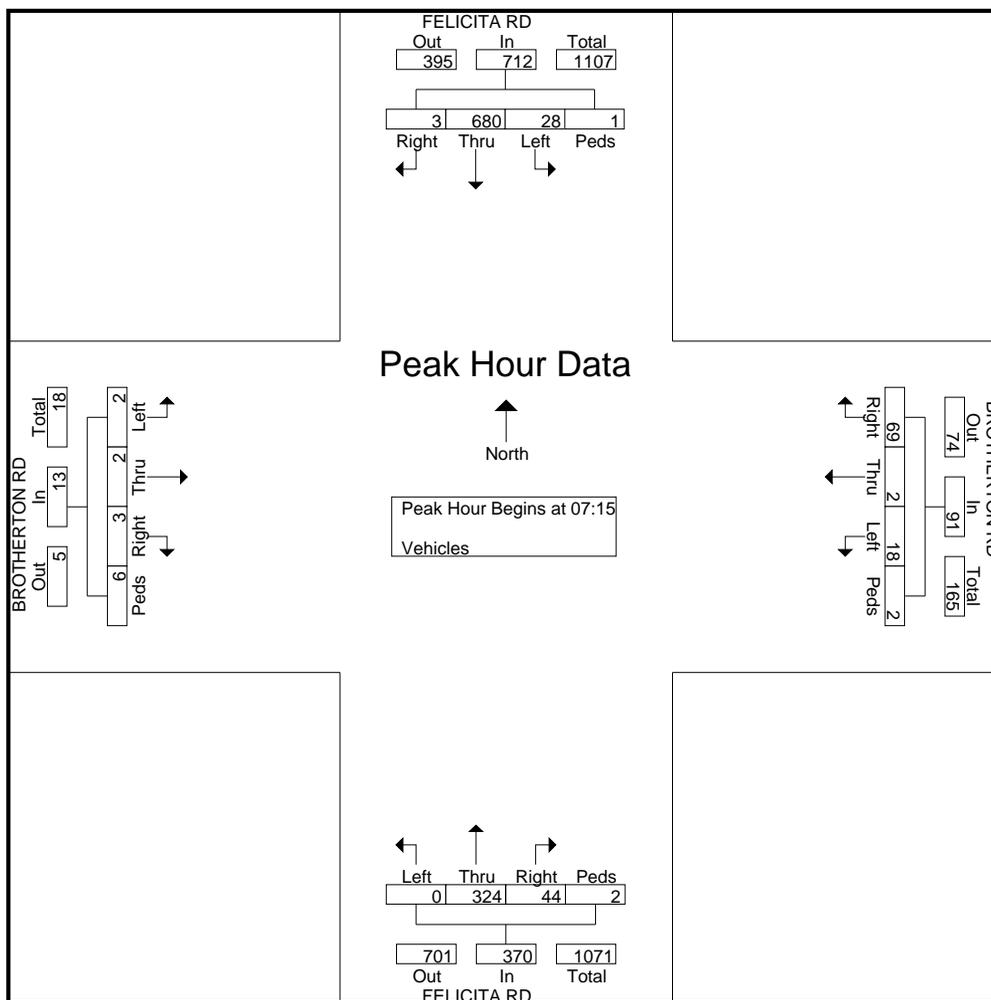


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.04.FELICITA RD.BROTHERTON RD
Site Code : 00000000
Start Date : 2/3/2010
Page No : 2

Start Time	FELICITA RD Southbound					BROTHERTON RD Westbound					FELICITA RD Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	3	170	0	1	174	1	0	8	1	10	0	55	4	0	59	0	2	1	2	5	248
07:30	11	181	0	0	192	2	1	18	0	21	0	71	19	2	92	0	0	0	2	2	307
07:45	10	178	1	0	189	12	1	35	0	48	0	98	18	0	116	2	0	1	1	4	357
08:00	4	151	2	0	157	3	0	8	1	12	0	100	3	0	103	0	0	1	1	2	274
Total Volume	28	680	3	1	712	18	2	69	2	91	0	324	44	2	370	2	2	3	6	13	1186
% App. Total	3.9	95.5	0.4	0.1		19.8	2.2	75.8	2.2		0	87.6	11.9	0.5		15.4	15.4	23.1	46.2		
PHF	.636	.939	.375	.250	.927	.375	.500	.493	.500	.474	.000	.810	.579	.250	.797	.250	.250	.750	.750	.650	.831

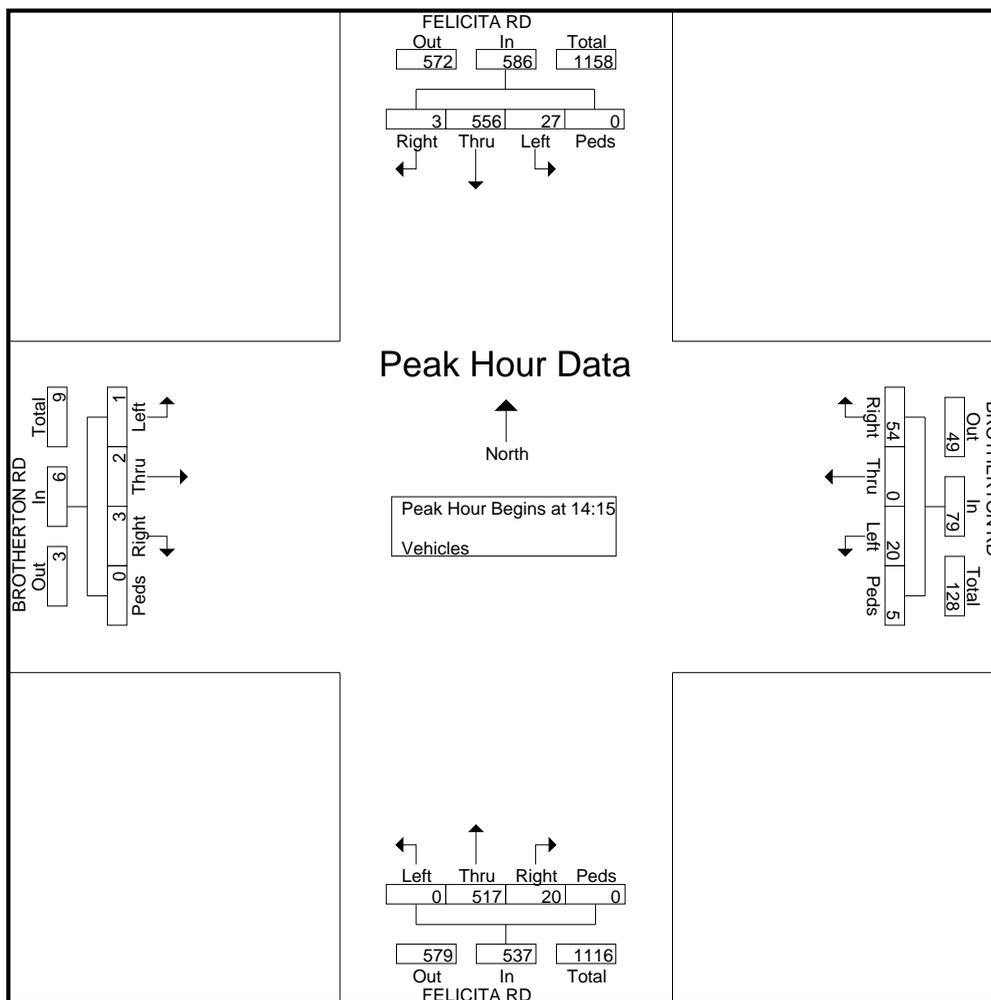


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.04.FELICITA RD.BROTHERTON RD
Site Code : 00000000
Start Date : 2/3/2010
Page No : 3

Start Time	FELICITA RD Southbound					BROTHERTON RD Westbound					FELICITA RD Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 14:00 to 15:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 14:15																					
14:15	13	147	2	0	162	1	0	8	0	9	0	122	10	0	132	0	1	1	0	2	305
14:30	10	134	0	0	144	12	0	37	2	51	0	120	8	0	128	0	1	1	0	2	325
14:45	2	149	1	0	152	4	0	4	0	8	0	118	2	0	120	0	0	1	0	1	281
15:00	2	126	0	0	128	3	0	5	3	11	0	157	0	0	157	1	0	0	0	1	297
Total Volume	27	556	3	0	586	20	0	54	5	79	0	517	20	0	537	1	2	3	0	6	1208
% App. Total	4.6	94.9	0.5	0		25.3	0	68.4	6.3		0	96.3	3.7	0		16.7	33.3	50	0		
PHF	.519	.933	.375	.000	.904	.417	.000	.365	.417	.387	.000	.823	.500	.000	.855	.250	.500	.750	.000	.750	.929

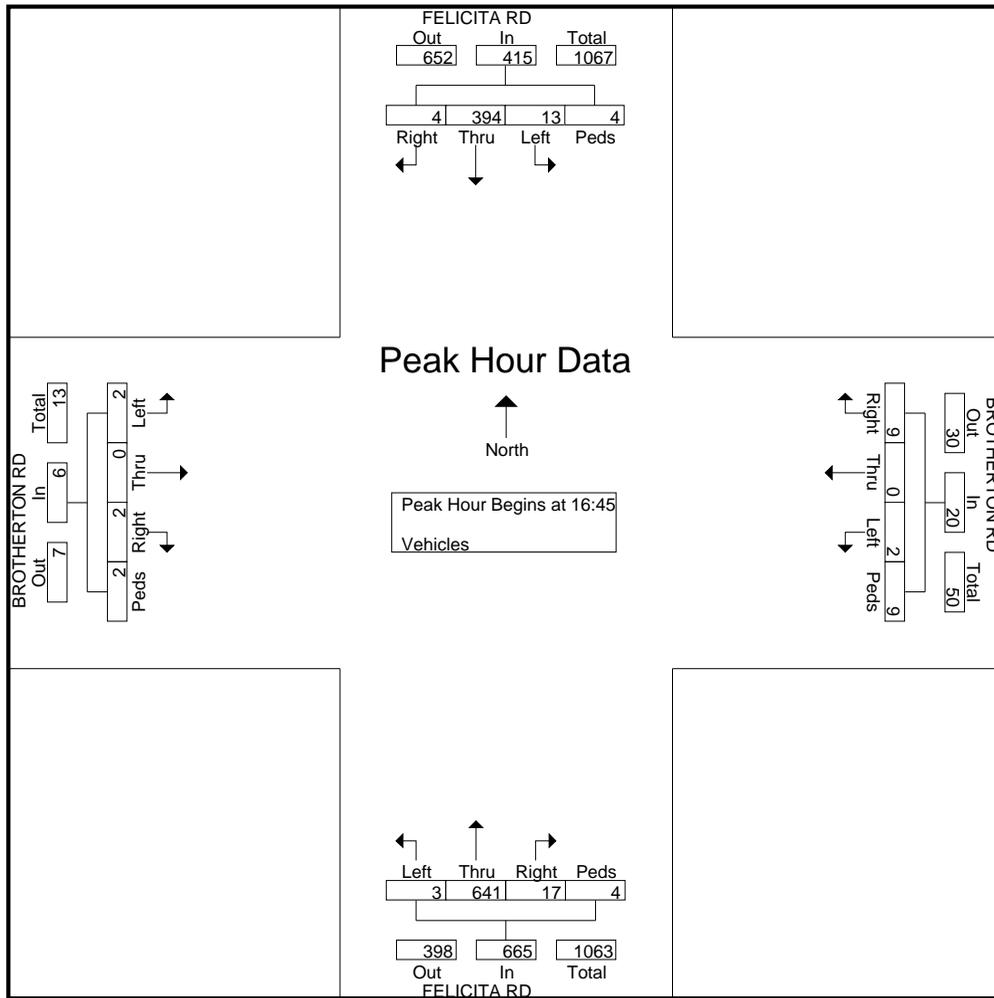


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.04.FELICITA RD.BROTHERTON RD
 Site Code : 00000000
 Start Date : 2/3/2010
 Page No : 4

Start Time	FELICITA RD Southbound					BROTHERTON RD Westbound					FELICITA RD Northbound					BROTHERTON RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	2	94	0	2	98	1	0	2	3	6	1	158	2	0	161	1	0	1	2	4	269
17:00	3	90	1	2	96	0	0	2	4	6	0	164	3	0	167	0	0	1	0	1	270
17:15	2	97	2	0	101	1	0	0	0	1	0	172	5	1	178	1	0	0	0	1	281
17:30	6	113	1	0	120	0	0	5	2	7	2	147	7	3	159	0	0	0	0	0	286
Total Volume	13	394	4	4	415	2	0	9	9	20	3	641	17	4	665	2	0	2	2	6	1106
% App. Total	3.1	94.9	1	1		10	0	45	45		0.5	96.4	2.6	0.6		33.3	0	33.3	33.3		
PHF	.542	.872	.500	.500	.865	.500	.000	.450	.563	.714	.375	.932	.607	.333	.934	.500	.000	.500	.250	.375	.967

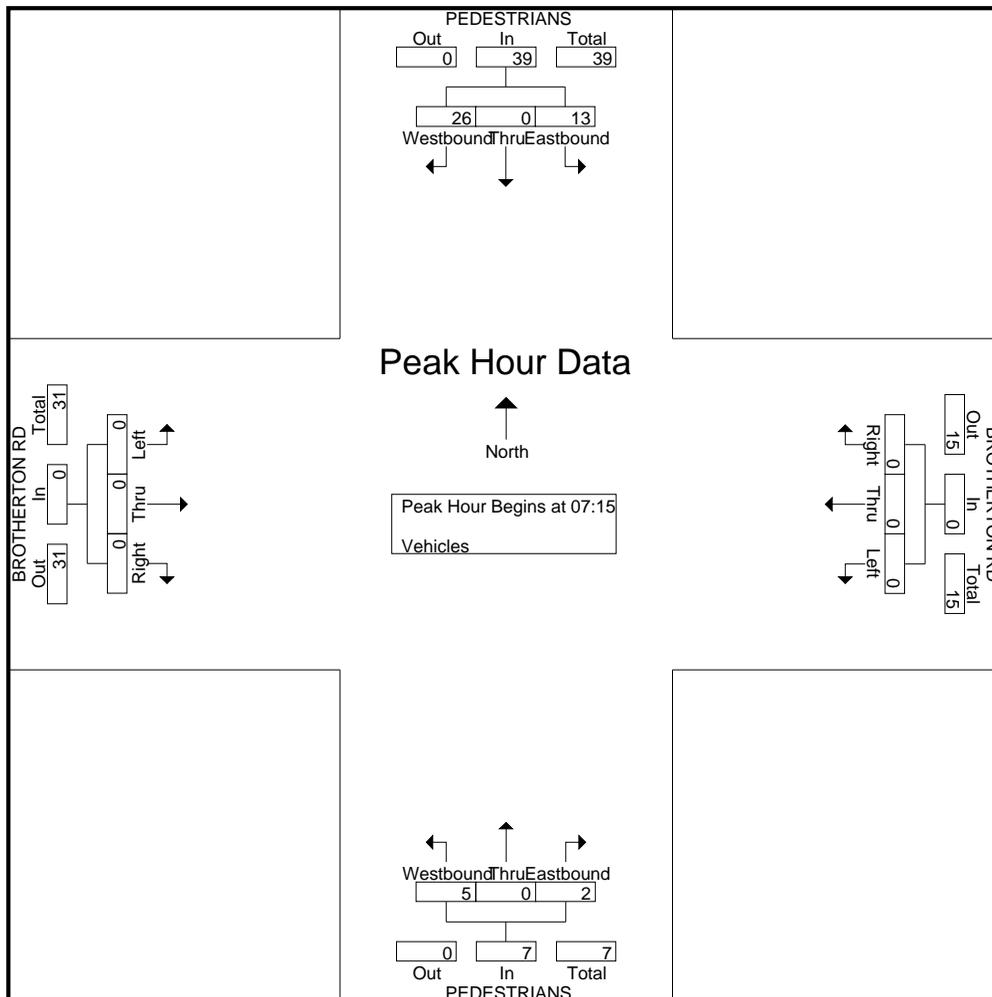


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.05.MID-BLOCK PEDESTRIAN TRAFFIC EAST OF MILLER AVE
Site Code : 00000000
Start Date : 2/3/2010
Page No : 2

Start Time	PEDESTRIANS North Sidewalk			BROTHERTON RD Westbound				PEDESTRIANS South Sidewalk			BROTHERTON RD Eastbound				Int. Total	
	Eastbound	Westbound	App. Total				App. Total	Westbound	Eastbound	App. Total				App. Total		
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 07:15																
07:15	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	3
07:30	3	0	4	7	0	0	0	0	0	0	0	0	0	0	0	7
07:45	4	0	19	23	0	0	0	0	5	0	0	5	0	0	0	28
08:00	5	0	1	6	0	0	0	0	0	0	2	2	0	0	0	8
Total Volume	13	0	26	39	0	0	0	0	5	0	2	7	0	0	0	46
% App. Total	33.3	0	66.7		0	0	0		71.4	0	28.6		0	0	0	
PHF	.650	.000	.342	.424	.000	.000	.000	.000	.250	.000	.250	.350	.000	.000	.000	.411

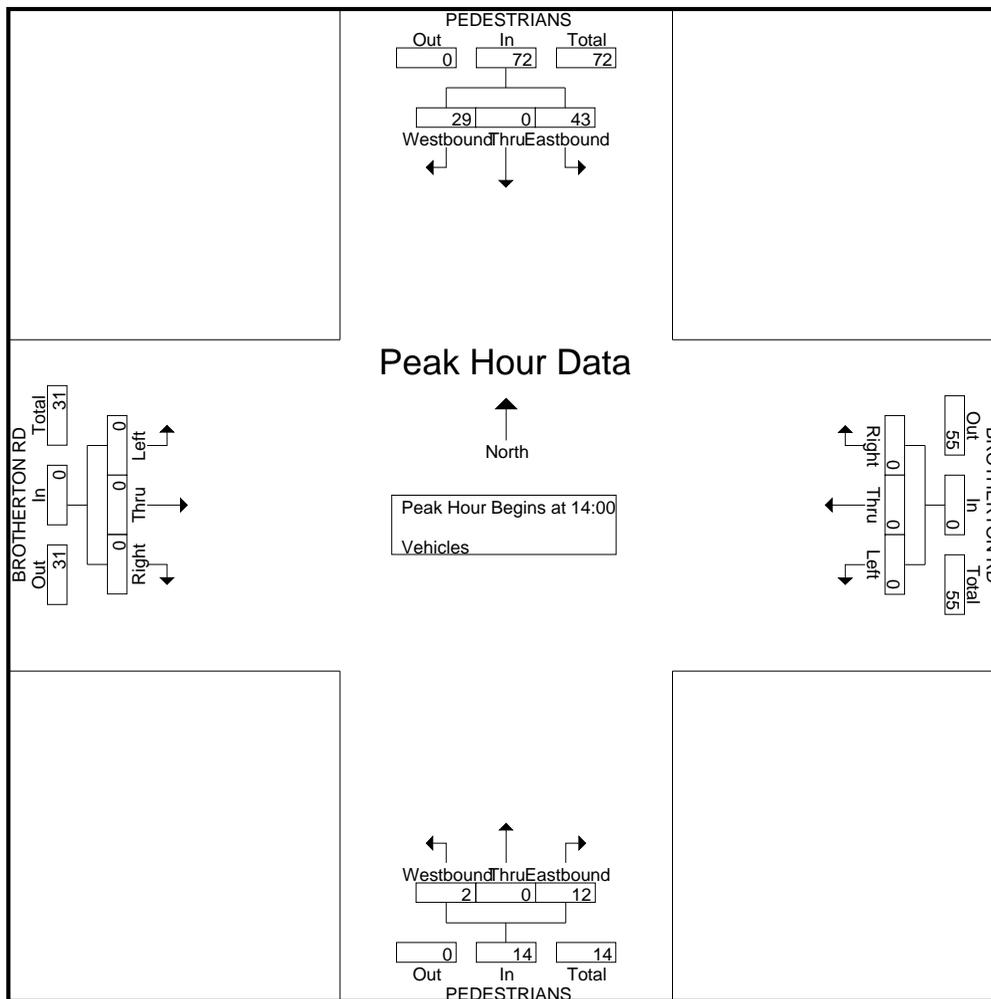


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.05.MID-BLOCK PEDESTRIAN TRAFFIC EAST OF MILLER AVE
Site Code : 00000000
Start Date : 2/3/2010
Page No : 3

Start Time	PEDESTRIANS North Sidewalk			BROTHERTON RD Westbound				PEDESTRIANS South Sidewalk				BROTHERTON RD Eastbound				Int. Total	
	Eastbound	Westbound	App. Total	Westbound	App. Total	Westbound	App. Total	Eastbound	App. Total	Westbound	App. Total	Eastbound	App. Total				
Peak Hour Analysis From 14:00 to 16:00 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 14:00																	
14:00	0	0	8	8	0	0	0	0	1	0	2	3	0	0	0	0	11
14:15	7	0	20	27	0	0	0	0	1	0	7	8	0	0	0	0	35
14:30	29	0	1	30	0	0	0	0	0	0	3	3	0	0	0	0	33
14:45	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Total Volume	43	0	29	72	0	0	0	0	2	0	12	14	0	0	0	0	86
% App. Total	59.7	0	40.3		0	0	0		14.3	0	85.7		0	0	0		
PHF	.371	.000	.363	.600	.000	.000	.000	.000	.500	.000	.429	.438	.000	.000	.000	.000	.614

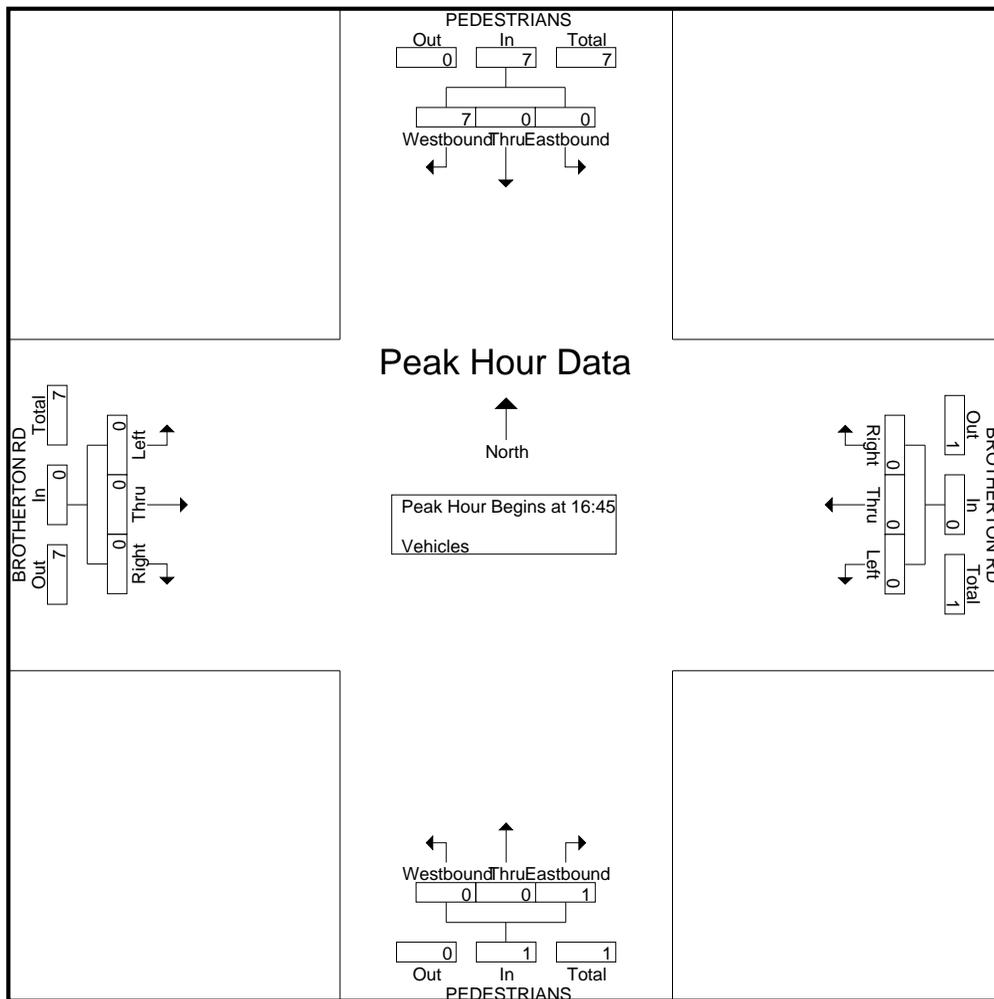


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.05.MID-BLOCK PEDESTRIAN TRAFFIC EAST OF MILLER AVE
Site Code : 00000000
Start Date : 2/3/2010
Page No : 4

Start Time	PEDESTRIANS North Sidewalk			BROTHERTON RD Westbound				PEDESTRIANS South Sidewalk				BROTHERTON RD Eastbound				Int. Total	
	Eastbound	Westbound	App. Total	Westbound	Thru	Eastbound	App. Total	Westbound	Thru	Eastbound	App. Total	Westbound	Thru	Eastbound	App. Total		
Peak Hour Analysis From 16:00 to 17:30 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total Volume	0	0	7	7	0	0	0	0	0	0	1	1	0	0	0	0	8
% App. Total	0	0	100		0	0	0		0	0	100		0	0	0		
PHF	.000	.000	.350	.350	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.400

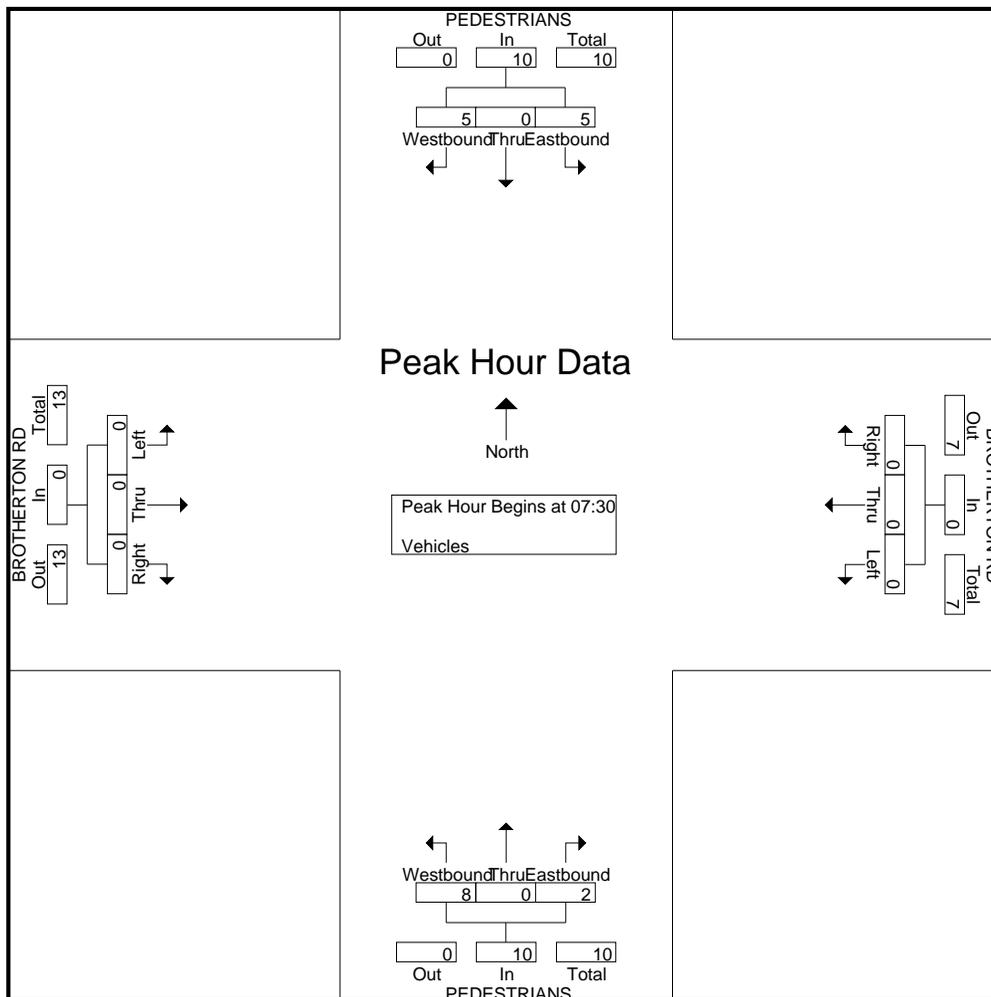


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.06.MID-BLOCK PEDESTRIAN TRAFFIC WEST OF MILLER AVE
Site Code : 00000000
Start Date : 2/3/2010
Page No : 2

Start Time	PEDESTRIANS North Sidewalk			BROTHERTON RD Westbound				PEDESTRIANS South Sidewalk			BROTHERTON RD Eastbound				Int. Total		
	Eastbound	Westbound	App. Total				App. Total	Westbound	Eastbound	App. Total				App. Total			
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	1	0	1	2	0	0	0	0	2	0	1	3	0	0	0	0	5
07:45	3	0	2	5	0	0	0	0	4	0	0	4	0	0	0	0	9
08:00	0	0	1	1	0	0	0	0	2	0	1	3	0	0	0	0	4
08:15	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	5	0	5	10	0	0	0	0	8	0	2	10	0	0	0	0	20
% App. Total	50	0	50		0	0	0		80	0	20		0	0	0		
PHF	.417	.000	.625	.500	.000	.000	.000	.000	.500	.000	.500	.625	.000	.000	.000	.000	.556

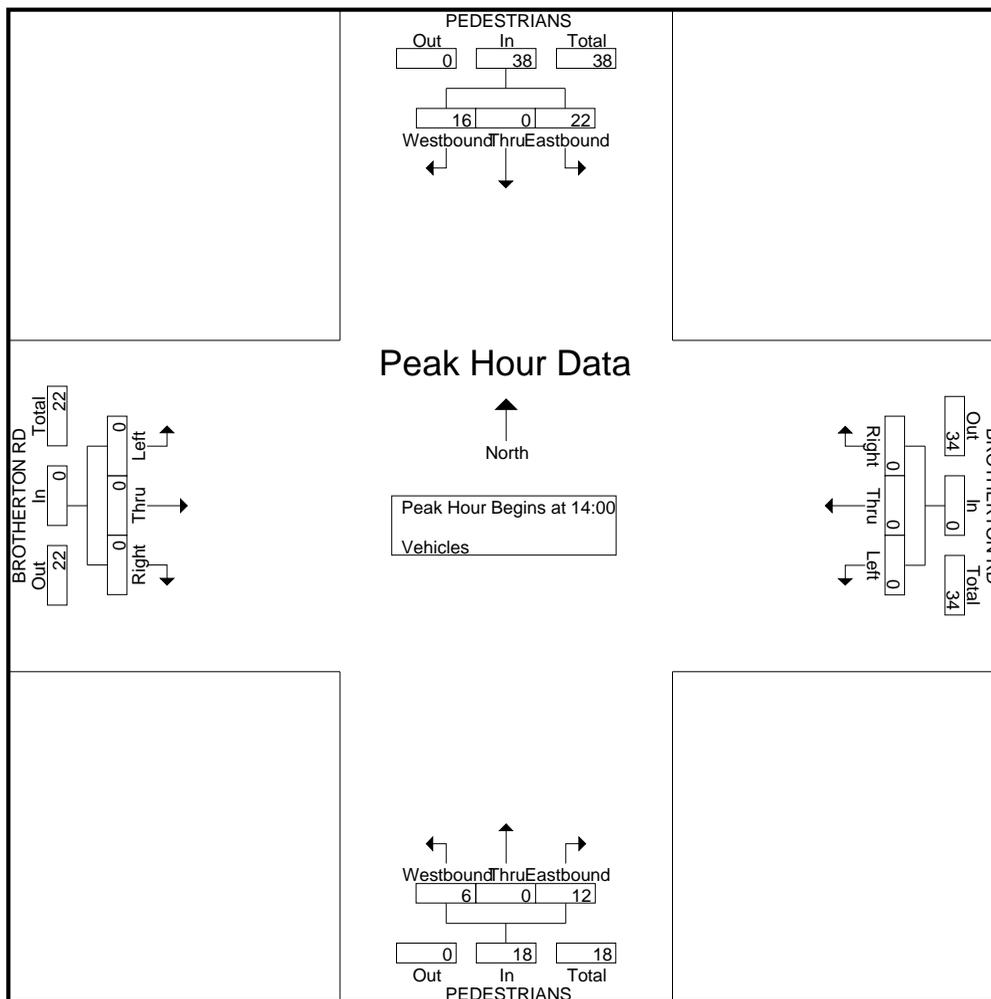


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.06.MID-BLOCK PEDESTRIAN TRAFFIC WEST OF MILLER AVE
Site Code : 00000000
Start Date : 2/3/2010
Page No : 3

Start Time	PEDESTRIANS North Sidewalk			BROTHERTON RD Westbound				PEDESTRIANS South Sidewalk				BROTHERTON RD Eastbound				Int. Total
	Eastbound	Westbound	App. Total				App. Total	Westbound		Eastbound	App. Total			App. Total		
Peak Hour Analysis From 14:00 to 15:45 - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 14:00																
14:00	3	0	1	4	0	0	0	0	0	0	0	0	0	0	4	
14:15	9	0	2	11	0	0	0	0	2	0	3	5	0	0	16	
14:30	10	0	13	23	0	0	0	0	4	0	9	13	0	0	36	
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	22	0	16	38	0	0	0	0	6	0	12	18	0	0	56	
% App. Total	57.9	0	42.1		0	0	0		33.3	0	66.7		0	0		
PHF	.550	.000	.308	.413	.000	.000	.000	.000	.375	.000	.333	.346	.000	.000	.000	

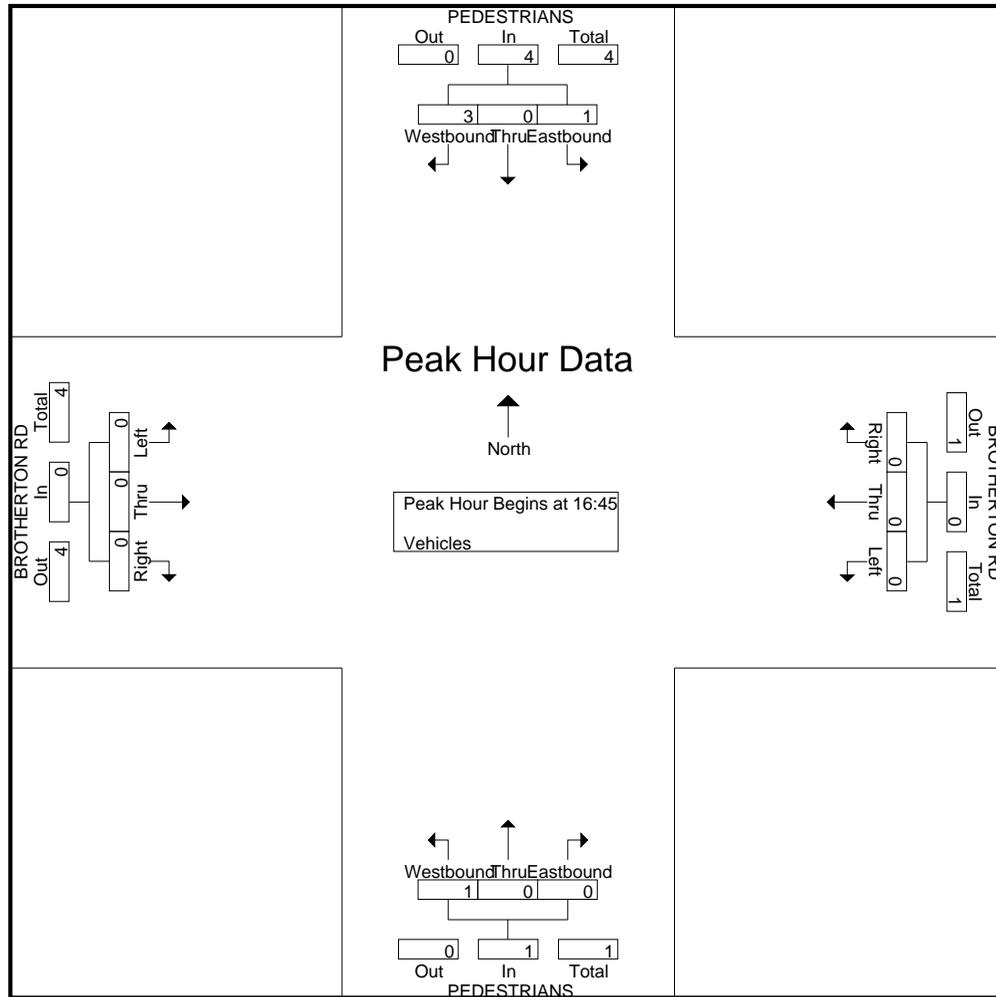


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1008.06.MID-BLOCK PEDESTRIAN TRAFFIC WEST OF MILLER AVE
Site Code : 00000000
Start Date : 2/3/2010
Page No : 4

Start Time	PEDESTRIANS North Sidewalk			BROTHERTON RD Westbound				PEDESTRIANS South Sidewalk				BROTHERTON RD Eastbound				Int. Total
	Eastbound	Westbound	App. Total	Westbound	Thru	Eastbound	App. Total	Westbound	Thru	Eastbound	App. Total	Westbound	Thru	Eastbound	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 16:45																
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0
17:30	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	1	0	3	4	0	0	0	0	1	0	0	1	0	0	0	5
% App. Total	25	0	75		0	0	0		100	0	0		0	0	0	
PHF	.250	.000	.250	.333	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.417



MetroCount Traffic Executive Vehicle Counts

401 -- English (ENU)

Datasets:

Site: [1008.01] BROTHERTON RD (FELICITA RD-MILLER AVE) EASTBOUND
Direction: 7 - West bound A>B, East bound B>A. Lane: 0
Survey Duration: 18:18 Monday, March 15, 2010 => 13:54 Friday, March 19, 2010
File: 1008-2.0119Mar2010.EC0 (Regular)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Tuesday, March 16, 2010 => 0:00 Friday, March 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: East (bound)
In profile: Vehicles = 1353 / 3334 (40.58%)

* Tuesday, March 16, 2010 - Total=480, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
14	8	2	3	2	1	5	59	44	13	41	55	15	9	57	14	4	11	6	13	15	47	25	17
4	4	2	1	1	0	0	5	23	5	6	40	11	4	8	1	1	6	2	6	3	16	10	8
4	2	0	0	0	0	0	4	15	1	1	6	0	2	11	5	2	3	0	4	0	10	9	2
4	2	0	1	0	1	2	16	3	2	1	1	2	2	27	4	0	1	1	0	2	11	3	2
2	0	0	1	1	0	3	34	3	5	33	8	2	1	11	4	1	1	3	3	10	10	3	5

AM Peak 0730 - 0830 (88), AM PHF=0.65 PM Peak 1400 - 1500 (57), PM PHF=0.53

* Wednesday, March 17, 2010 - Total=466, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
9	3	5	5	0	1	6	54	27	10	10	7	9	13	54	7	11	17	21	15	54	72	30	26
6	1	1	2	0	1	0	8	19	6	3	2	3	3	5	3	2	2	7	5	19	17	6	9
2	0	1	1	0	0	1	7	2	0	2	2	2	1	11	0	3	2	1	1	5	24	11	6
0	2	2	0	0	0	2	12	5	1	1	0	1	5	30	3	2	6	7	4	12	17	8	8
1	0	1	2	0	0	3	27	1	3	4	3	3	4	8	1	4	7	6	5	18	14	5	3

AM Peak 0715 - 0815 (65), AM PHF=0.60 PM Peak 2045 - 2145 (76), PM PHF=0.79

* Thursday, March 18, 2010 - Total=407, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
19	9	7	6	2	1	5	74	28	8	4	9	18	62	12	6	8	13	10	3	16	60	17	10
5	2	2	3	0	0	0	7	21	0	1	2	5	6	5	3	4	4	5	0	1	22	4	2
6	2	2	2	1	0	2	11	4	2	1	5	3	15	3	2	1	4	2	1	3	15	8	4
8	1	1	0	1	1	1	15	2	4	1	1	7	34	2	0	1	3	1	0	2	16	2	2
0	4	2	1	0	0	2	41	1	2	1	1	3	7	2	1	2	2	2	2	10	7	3	2

AM Peak 0715 - 0815 (88), AM PHF=0.54

MetroCount Traffic Executive Vehicle Counts

400 -- English (ENU)

Datasets:

Site: [1008.01] BROTHERTON RD (FELICITA RD-MILLER AVE) WESTBOUND
Direction: 7 - West bound A>B, East bound B>A. Lane: 0
Survey Duration: 18:18 Monday, March 15, 2010 => 13:54 Friday, March 19, 2010
File: 1008-2.0119Mar2010.EC0 (Regular)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Tuesday, March 16, 2010 => 0:00 Friday, March 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: West (bound)
In profile: Vehicles = 1415 / 3334 (42.44%)

* Tuesday, March 16, 2010 - Total=507, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
4	2	1	4	2	1	5	66	79	53	9	6	7	11	56	16	7	11	7	11	3	81	41	24	
0	0	1	0	1	0	1	7	30	34	2	2	3	5	6	10	1	4	1	3	1	23	11	14	1
3	0	0	3	0	0	1	8	9	9	1	2	0	3	12	3	2	4	1	5	0	21	13	1	3
0	0	0	1	1	0	1	14	11	5	2	0	1	2	25	2	2	2	4	1	1	17	9	6	1
1	2	0	0	0	1	2	37	29	5	4	2	3	1	13	1	2	1	1	2	1	20	8	3	1

AM Peak 0730 - 0830 (90), AM PHF=0.61 PM Peak 2100 - 2200 (81), PM PHF=0.88

* Wednesday, March 17, 2010 - Total=484, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
6	6	7	0	1	1	6	58	35	12	2	14	15	12	53	12	14	19	12	15	12	93	46	33	
1	2	1	0	0	0	0	6	20	2	0	4	2	1	4	4	5	5	4	3	3	24	15	10	4
3	2	1	0	1	1	2	6	5	1	1	4	3	4	11	2	4	2	2	1	2	31	15	6	3
1	2	4	0	0	0	2	13	5	4	0	2	4	4	28	4	2	6	5	3	2	24	9	8	1
1	0	1	0	0	0	2	33	5	5	1	4	6	3	10	2	3	6	1	8	5	14	7	9	3

AM Peak 0715 - 0815 (72), AM PHF=0.55 PM Peak 2100 - 2200 (93), PM PHF=0.75

* Thursday, March 18, 2010 - Total=424, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
11	9	8	3	2	0	5	65	33	10	10	7	6	62	11	7	3	7	9	4	7	85	39	21	
4	3	1	0	0	0	2	2	21	3	3	4	0	4	2	2	0	2	1	2	0	28	8	9	-
3	2	2	2	0	0	0	9	5	4	3	1	3	13	5	3	3	0	4	0	1	20	16	4	-
1	4	3	1	2	0	2	18	2	3	2	0	2	34	2	0	0	3	3	0	0	20	7	5	-
3	0	2	0	0	0	1	36	5	0	2	2	1	11	2	2	0	2	1	2	6	17	8	3	-

AM Peak 0715 - 0815 (84), AM PHF=0.58

MetroCount Traffic Executive Vehicle Counts

403 -- English (ENU)

Datasets:

Site: [1008.02] BROTHERTON RD (ALEXANDER DR-CENTRE CITY PKWY) EASTBOUND
Direction: 7 - West bound A>B, East bound B>A. Lane: 0
Survey Duration: 18:20 Monday, March 15, 2010 => 13:54 Friday, March 19, 2010
File: 1008-2.0219Mar2010.EC0 (Regular)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Tuesday, March 16, 2010 => 0:00 Friday, March 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: East (bound)
In profile: Vehicles = 589 / 2797 (21.06%)

* Tuesday, March 16, 2010 - Total=167, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
1	1	0	3	5	4	7	10	18	11	9	8	6	7	14	11	5	14	5	10	6	5	4	3	
1	0	0	0	2	1	0	3	5	3	4	0	0	5	5	2	0	3	0	4	1	2	0	0	1
0	1	0	1	0	0	2	1	6	1	2	2	3	0	1	3	3	2	0	0	1	1	0	1	0
0	0	0	2	2	2	2	2	3	4	2	4	2	0	5	5	2	3	4	1	0	1	1	1	0
0	0	0	0	1	1	3	4	4	3	1	2	1	2	3	1	0	6	1	5	4	1	3	1	0

AM Peak 0745 - 0845 (18), AM PHF=0.75 PM Peak 1400 - 1500 (14), PM PHF=0.70

* Wednesday, March 17, 2010 - Total=212, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
1	1	0	3	2	4	10	20	15	15	8	9	5	15	9	9	13	14	17	7	14	10	7	4	
1	1	0	0	0	1	0	6	8	2	6	4	1	3	2	4	2	4	4	4	4	3	2	2	2
0	0	0	0	0	1	2	4	3	3	0	3	3	5	1	0	2	3	3	1	1	1	1	0	0
0	0	0	2	1	1	2	2	2	5	2	1	1	2	5	5	2	1	4	0	6	4	2	0	3
0	0	0	1	1	1	6	8	2	5	0	1	0	5	1	0	7	6	6	2	3	2	2	2	1

AM Peak 0715 - 0815 (22), AM PHF=0.69 PM Peak 1745 - 1845 (17), PM PHF=0.71

* Thursday, March 18, 2010 - Total=210, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
6	0	3	1	4	7	7	18	19	9	9	11	4	14	12	12	14	9	15	5	17	9	4	1	
2	0	0	0	0	3	0	5	7	2	3	4	3	1	1	2	2	1	4	3	2	5	1	0	-
0	0	0	0	2	2	1	4	7	2	2	2	1	2	4	3	3	3	5	0	6	1	1	1	-
3	0	3	1	2	1	3	4	1	2	2	4	0	8	4	6	6	0	5	1	5	3	1	0	-
1	0	0	0	0	1	3	5	4	3	2	1	0	3	3	1	3	5	1	1	4	0	1	0	-

AM Peak 0730 - 0830 (23), AM PHF=0.82

MetroCount Traffic Executive Vehicle Counts

402 -- English (ENU)

Datasets:

Site: [1008.02] BROTHERTON RD (ALEXANDER DR-CENTRE CITY PKWY) WESTBOUND
Direction: 7 - West bound A>B, East bound B>A. Lane: 0
Survey Duration: 18:20 Monday, March 15, 2010 => 13:54 Friday, March 19, 2010
File: 1008-2.0219Mar2010.EC0 (Regular)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Tuesday, March 16, 2010 => 0:00 Friday, March 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: West (bound)
In profile: Vehicles = 1714 / 2797 (61.28%)

* Tuesday, March 16, 2010 - Total=575, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
6	1	2	0	1	1	9	42	34	37	37	29	27	29	45	29	53	42	40	39	25	24	17	6	
2	0	1	0	0	0	2	5	7	11	7	7	7	8	9	11	16	8	8	12	8	7	2	1	0
1	0	1	0	0	0	2	11	7	8	12	7	10	11	11	5	15	11	13	9	5	8	8	5	0
2	0	0	0	1	1	2	10	8	9	10	6	5	4	12	3	9	10	9	11	3	4	3	0	2
1	1	0	0	0	0	3	16	12	9	8	9	5	6	13	10	13	13	10	7	9	5	4	0	1

AM Peak 0715 - 0815 (44), AM PHF=0.69 PM Peak 1600 - 1700 (53), PM PHF=0.83

* Wednesday, March 17, 2010 - Total=578, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
3	1	0	2	1	2	16	50	29	27	29	23	34	30	45	48	43	52	51	37	22	13	11	9	
0	0	0	1	0	0	1	2	10	13	5	8	11	7	10	10	13	15	12	8	6	6	4	2	2
0	1	0	0	0	0	5	10	7	4	6	5	9	7	10	11	5	15	13	5	5	4	4	4	3
2	0	0	0	1	1	3	13	4	4	10	4	7	9	15	17	11	10	12	9	5	3	3	1	1
1	0	0	1	0	1	7	25	8	6	8	6	7	7	10	10	14	12	14	15	6	0	0	2	1

AM Peak 0715 - 0815 (58), AM PHF=0.58 PM Peak 1630 - 1730 (55), PM PHF=0.92

* Thursday, March 18, 2010 - Total=561, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
7	4	1	0	2	0	12	41	33	20	18	18	30	34	43	49	43	40	56	34	32	20	16	8	
2	1	0	0	1	0	2	4	10	6	1	7	6	2	11	12	10	8	17	8	6	4	3	3	-
3	1	0	0	0	0	2	12	10	7	6	1	8	10	15	10	9	7	13	8	11	6	4	3	-
1	1	1	0	1	0	2	13	8	3	5	8	10	14	11	15	10	12	12	5	7	6	6	2	-
1	1	0	0	0	0	6	12	5	4	6	2	6	8	6	12	14	13	14	13	8	4	3	0	-

AM Peak 0715 - 0815 (47), AM PHF=0.90

INTERSECTION ANALYSIS WORKSHEETS

- EXISTING

1: Brotherton Rd & Felicita Rd
2/9/2010

2/9/2010
Ex - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		+			+			+			+		
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	2	2	3	18	2	69	0	324	44	28	680	3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	2	2	3	20	2	75	0	352	48	30	739	3	
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	1254	1202	741	1182	1179	376	742						400
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1254	1202	741	1182	1179	376	742						400
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	98	99	99	88	99	89	100						97
cM capacity (veh/h)	128	180	416	160	185	670	865						1159

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	97	400	773
Volume Left	2	20	0	30
Volume Right	3	75	48	3
cSH	206	394	865	1159
Volume to Capacity	0.04	0.25	0.00	0.03
Queue Length 95th (ft)	3	24	0	2
Control Delay (s)	23.1	17.1	0.0	0.7
Lane LOS	C	C		A
Approach Delay (s)	23.1	17.1	0.0	0.7
Approach LOS	C	C		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

2: Brotherton Rd & Miller Avenue
2/9/2010

2/9/2010
Ex - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		+			+			+			+		
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	16	7	39	20	19	27	27	93	8	20	129	43	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	17	8	42	22	21	29	29	101	9	22	140	47	
Pedestrians	6			20			66			66			
Lane Width (ft)	12.0			12.0			12.0			12.0			
Walking Speed (ft/s)	4.0			4.0			4.0			4.0			
Percent Blockage	0			2			6			6			
Right turn flare (veh)													
Median type	None			None									
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	483	402	170	437	421	191	193						130
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	483	402	170	437	421	191	193						130
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	96	98	95	95	96	96	98						98
cM capacity (veh/h)	414	507	870	468	494	790	1373						1431

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	67	72	139	209
Volume Left	17	22	29	22
Volume Right	42	29	9	47
cSH	637	572	1373	1431
Volume to Capacity	0.11	0.13	0.02	0.02
Queue Length 95th (ft)	9	11	2	1
Control Delay (s)	11.3	12.2	1.8	0.9
Lane LOS	B	B	A	A
Approach Delay (s)	11.3	12.2	1.8	0.9
Approach LOS	B	B		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		

3: Brotherton Rd & Centre City Pkwy
2/9/2010

2/9/2010
Ex - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↔			↔	↔	↔		↔	↔		
Sign Control	Stop			Stop			Free			Free			
Grade	0%												
Volume (veh/h)	0	0	18	0	0	14	8	769	39	26	1052	66	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	20	0	0	15	9	836	42	28	1143	72	
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	1686	2132	608	1522	2146	439	1215						878
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1686	2132	608	1522	2146	439	1215						878
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	100	100	96	100	100	97	98						96
cM capacity (veh/h)	57	46	439	74	45	566	570						765

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	
Volume Total	20	15	9	557	321	28	762	453	
Volume Left	0	0	9	0	0	28	0	0	
Volume Right	20	15	0	0	42	0	0	72	
cSH	439	566	570	1700	1700	765	1700	1700	
Volume to Capacity	0.04	0.03	0.02	0.33	0.19	0.04	0.45	0.27	
Queue Length 95th (ft)	3	2	1	0	0	3	0	0	
Control Delay (s)	13.6	11.5	11.4	0.0	0.0	9.9	0.0	0.0	
Lane LOS	B	B	B	A					
Approach Delay (s)	13.6	11.5	0.1	0.2					
Approach LOS	B	B							

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	41.2%	ICU Level of Service A	
Analysis Period (min)	15		

4: Brotherton Rd & Escondido Blvd
2/9/2010

2/9/2010
Ex - AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	26	33	5	12	9	31	4	58	5	50	161	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	36	5	13	10	34	4	63	5	54	175	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	70	57	73	229								
Volume Left (vph)	28	13	4	54								
Volume Right (vph)	5	34	5	0								
Hadj (s)	0.07	-0.28	0.00	0.08								
Departure Headway (s)	4.7	4.4	4.5	4.4								
Degree Utilization, x	0.09	0.07	0.09	0.28								
Capacity (veh/h)	704	751	769	793								
Control Delay (s)	8.2	7.7	7.9	9.0								
Approach Delay (s)	8.2	7.7	7.9	9.0								
Approach LOS	A	A	A	A								

Intersection Summary			
Delay	8.5		
HCM Level of Service	A		
Intersection Capacity Utilization	30.6%	ICU Level of Service A	
Analysis Period (min)	15		

1: Brotherton Rd & Felicita Rd
2/9/2010

2/9/2010
Ex School - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↕			↕			↕			↕			
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	1	2	3	20	0	54	0	517	20	27	556	3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1	2	3	22	0	59	0	562	22	29	604	3	
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	1296	1248	606	1242	1239	573	608						584
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1296	1248	606	1242	1239	573	608						584
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	99	99	99	85	100	89	100						97
cM capacity (veh/h)	121	168	497	146	170	519	971						991

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	7	80	584	637
Volume Left	1	22	0	29
Volume Right	3	59	22	3
cSH	229	307	971	991
Volume to Capacity	0.03	0.26	0.00	0.03
Queue Length 95th (ft)	2	26	0	2
Control Delay (s)	21.2	20.9	0.0	0.8
Lane LOS	C	C		A
Approach Delay (s)	21.2	20.9	0.0	0.8
Approach LOS	C	C		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

2: Brotherton Rd & Miller Avenue
2/9/2010

2/9/2010
Ex School - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↕			↕			↕			↕			
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	17	5	33	22	10	18	21	69	29	15	85	28	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	18	5	36	24	11	20	23	75	32	16	92	30	
Pedestrians	6						20			66			
Lane Width (ft)	12.0			12.0			12.0						
Walking Speed (ft/s)	4.0			4.0			4.0						
Percent Blockage	0			2			6						
Right turn flare (veh)													
Median type	None			None									
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	374	318	114	335	318	177	129						127
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	374	318	114	335	318	177	129						127
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	96	99	96	96	98	98	98						99
cM capacity (veh/h)	508	569	934	559	570	805	1450						1435

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	60	54	129	139
Volume Left	18	24	23	16
Volume Right	36	20	32	30
cSH	709	631	1450	1435
Volume to Capacity	0.08	0.09	0.02	0.01
Queue Length 95th (ft)	7	7	1	1
Control Delay (s)	10.5	11.2	1.4	1.0
Lane LOS	B	B	A	A
Approach Delay (s)	10.5	11.2	1.4	1.0
Approach LOS	B	B		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

3: Brotherton Rd & Centre City Pkwy
2/9/2010

2/9/2010
Ex School - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↖			↖	↖	↖		↖	↖		
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	0	0	10	0	0	32	17	1205	113	34	444	23	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	11	0	0	35	18	1310	123	37	483	25	
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	1296	2039	254	1734	1990	716	508						1433
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1296	2039	254	1734	1990	716	508						1433
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	100	100	99	100	100	91	98						92
cM capacity (veh/h)	101	51	746	51	54	372	1053						470
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	11	35	18	873	559	37	322	186					
Volume Left	0	0	18	0	0	37	0	0					
Volume Right	11	35	0	0	123	0	0	25					
cSH	746	372	1053	1700	1700	470	1700	1700					
Volume to Capacity	0.01	0.09	0.02	0.51	0.33	0.08	0.19	0.11					
Queue Length 95th (ft)	1	8	1	0	0	6	0	0					
Control Delay (s)	9.9	15.7	8.5	0.0	0.0	13.3	0.0	0.0					
Lane LOS	A	C	A				B						
Approach Delay (s)	9.9	15.7	0.1				0.9						
Approach LOS	A	C											
Intersection Summary													
Average Delay	0.6												
Intersection Capacity Utilization	46.9%			ICU Level of Service			A						
Analysis Period (min)	15												

4: Brotherton Rd & Escondido Blvd
2/9/2010

2/9/2010
Ex School - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	87	45	14	11	13	39	19	115	13	46	105	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	95	49	15	12	14	42	21	125	14	50	114	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	159	68	160	165								
Volume Left (vph)	95	12	21	50								
Volume Right (vph)	15	42	14	1								
Hadj (s)	0.10	-0.30	0.01	0.09								
Departure Headway (s)	4.9	4.6	4.7	4.8								
Degree Utilization, x	0.22	0.09	0.21	0.22								
Capacity (veh/h)	686	711	725	711								
Control Delay (s)	9.2	8.1	8.9	9.1								
Approach Delay (s)	9.2	8.1	8.9	9.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay	8.9											
HCM Level of Service	A											
Intersection Capacity Utilization	37.2%			ICU Level of Service			A					
Analysis Period (min)	15											

1: Brotherton Rd & Felicita Rd
2/9/2010

2/9/2010
Existing - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	2	0	2	2	0	9	3	641	17	13	394	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	2	2	0	10	3	697	18	14	428	4
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	1181	1180	430	1173	1173	706	433			715		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1181	1180	430	1173	1173	706	433			715		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	99	100	98	100			98		
cM capacity (veh/h)	161	187	625	166	188	436	1127			885		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	12	718	447
Volume Left	2	2	3	14
Volume Right	2	10	18	4
cSH	256	336	1127	885
Volume to Capacity	0.02	0.04	0.00	0.02
Queue Length 95th (ft)	1	3	0	1
Control Delay (s)	19.3	16.1	0.1	0.5
Lane LOS	C	C	A	A
Approach Delay (s)	19.3	16.1	0.1	0.5
Approach LOS	C	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

2: Brotherton Rd & Miller Avenue
2/9/2010

2/9/2010
Existing - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	7	2	2	9	9	17	2	41	3	5	22	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	2	2	10	10	18	2	45	3	5	24	8
Pedestrians	6			20			66			66		
Lane Width (ft)	12.0			12.0			12.0			12.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	0			2			6			6		
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	184	117	34	112	119	132	38			68		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	184	117	34	112	119	132	38			68		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	99	99	98	100			100		
cM capacity (veh/h)	693	753	1034	830	751	852	1565			1508		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	12	38	50	37
Volume Left	8	10	2	5
Volume Right	2	18	3	8
cSH	749	818	1565	1508
Volume to Capacity	0.02	0.05	0.00	0.00
Queue Length 95th (ft)	1	4	0	0
Control Delay (s)	9.9	9.6	0.3	1.1
Lane LOS	A	A	A	A
Approach Delay (s)	9.9	9.6	0.3	1.1
Approach LOS	A	A		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

3: Brotherton Rd & Centre City Pkwy
2/9/2010

2/9/2010
Existing - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↖			↖	↖	↖		↖	↖		
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	0	0	5	0	0	37	23	1450	150	32	692	31	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	5	0	0	40	25	1576	163	35	752	34	
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	1717	2628	393	2159	2563	870	786						1739
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1717	2628	393	2159	2563	870	786						1739
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	100	100	99	100	100	86	97						90
cM capacity (veh/h)	45	21	606	24	23	295	829						358
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	5	40	25	1051	688	35	501	284					
Volume Left	0	0	25	0	0	35	0	0					
Volume Right	5	40	0	0	163	0	0	34					
cSH	606	295	829	1700	1700	358	1700	1700					
Volume to Capacity	0.01	0.14	0.03	0.62	0.40	0.10	0.29	0.17					
Queue Length 95th (ft)	1	12	2	0	0	8	0	0					
Control Delay (s)	11.0	19.1	9.5	0.0	0.0	16.1	0.0	0.0					
Lane LOS	B	C	A				C						
Approach Delay (s)	11.0	19.1	0.1				0.7						
Approach LOS	B	C											
Intersection Summary													
Average Delay				0.6									
Intersection Capacity Utilization	54.9%			ICU Level of Service			A						
Analysis Period (min)	15												

4: Brotherton Rd & Escondido Blvd
2/9/2010

2/9/2010
Existing - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	114	62	11	22	15	39	20	127	17	40	130	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	124	67	12	24	16	42	22	138	18	43	141	2
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	203	83	178	187								
Volume Left (vph)	124	24	22	43								
Volume Right (vph)	12	42	18	2								
Hadj (s)	0.12	-0.22	0.00	0.07								
Departure Headway (s)	5.1	4.9	4.9	5.0								
Degree Utilization, x	0.29	0.11	0.24	0.26								
Capacity (veh/h)	662	659	686	677								
Control Delay (s)	10.1	8.5	9.5	9.7								
Approach Delay (s)	10.1	8.5	9.5	9.7								
Approach LOS	B	A	A	A								
Intersection Summary												
Delay				9.6								
HCM Level of Service				A								
Intersection Capacity Utilization	39.4%			ICU Level of Service			A					
Analysis Period (min)	15											

INTERSECTION ANALYSIS WORKSHEETS

- EXISTING + PROJECT + CUMULATIVE PROJECTS

1: Brotherton Rd & Felicita Rd
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj- AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	2	2	3	21	2	70	0	324	47	29	680	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	2	3	23	2	76	0	352	51	32	739	3
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	1259	1207	741	1186	1183	378	742			403		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1259	1207	741	1186	1183	378	742			403		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	99	99	86	99	89	100			97		
cM capacity (veh/h)	127	178	416	159	184	669	865			1155		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	101	403	774
Volume Left	2	23	0	32
Volume Right	3	76	51	3
cSH	205	376	865	1155
Volume to Capacity	0.04	0.27	0.00	0.03
Queue Length 95th (ft)	3	27	0	2
Control Delay (s)	23.3	18.1	0.0	0.7
Lane LOS	C	C		A
Approach Delay (s)	23.3	18.1	0.0	0.7
Approach LOS	C	C		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

2: Brotherton Rd & Miller Avenue
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj- AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	16	12	39	20	23	27	27	93	8	20	129	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	13	42	22	25	29	29	101	9	22	140	47
Pedestrians	6			20			66			66		
Lane Width (ft)	12.0			12.0			12.0			12.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	0			2			6			6		
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	485	402	170	440	421	191	193			130		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	485	402	170	440	421	191	193			130		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	97	95	95	95	96	98			98		
cM capacity (veh/h)	410	507	870	463	494	790	1373			1431		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	76	139	209
Volume Left	17	22	29	22
Volume Right	42	29	9	47
cSH	623	565	1373	1431
Volume to Capacity	0.12	0.13	0.02	0.02
Queue Length 95th (ft)	10	12	2	1
Control Delay (s)	11.5	12.4	1.8	0.9
Lane LOS	B	B	A	A
Approach Delay (s)	11.5	12.4	1.8	0.9
Approach LOS	B	B		

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

3: Brotherton Rd & Centre City Pkwy
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj- AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↕			↕	↕	↕		↕	↕		
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	0	0	58	0	0	14	20	789	39	26	1087	97	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	63	0	0	15	22	858	42	28	1182	105	
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	1778	2234	643	1633	2266	450	1287						900
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1778	2234	643	1633	2266	450	1287						900
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	100	100	85	100	100	97	96						96
cM capacity (veh/h)	48	39	416	54	37	556	535						751

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	63	15	22	572	328	28	788	499
Volume Left	0	0	22	0	0	28	0	0
Volume Right	63	15	0	0	42	0	0	105
cSH	416	556	535	1700	1700	751	1700	1700
Volume to Capacity	0.15	0.03	0.04	0.34	0.19	0.04	0.46	0.29
Queue Length 95th (ft)	13	2	3	0	0	3	0	0
Control Delay (s)	15.2	11.7	12.0	0.0	0.0	10.0	0.0	0.0
Lane LOS	C	B	B				A	
Approach Delay (s)	15.2	11.7	0.3				0.2	
Approach LOS	C	B						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	43.4%	ICU Level of Service A	
Analysis Period (min)	15		

4: Brotherton Rd & Escondido Blvd
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj- AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	26	33	5	12	9	31	4	75	5	50	183	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	36	5	13	10	34	4	82	5	54	199	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	70	57	91	253								
Volume Left (vph)	28	13	4	54								
Volume Right (vph)	5	34	5	0								
Hadj (s)	0.07	-0.28	0.01	0.08								
Departure Headway (s)	4.8	4.5	4.5	4.4								
Degree Utilization, x	0.09	0.07	0.11	0.31								
Capacity (veh/h)	685	729	762	789								
Control Delay (s)	8.3	7.9	8.1	9.3								
Approach Delay (s)	8.3	7.9	8.1	9.3								
Approach LOS	A	A	A	A								

Intersection Summary			
Delay	8.8		
HCM Level of Service	A		
Intersection Capacity Utilization	31.7%	ICU Level of Service A	
Analysis Period (min)	15		

1: Brotherton Rd & Felicita Rd
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	2	0	2	6	0	11	3	641	22	15	394	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	2	7	0	12	3	697	24	16	428	4
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	1190	1190	430	1180	1180	709	433			721		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1190	1190	430	1180	1180	709	433			721		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	96	100	97	100			98		
cM capacity (veh/h)	157	184	625	164	186	434	1127			881		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	18	724	449
Volume Left	2	7	3	16
Volume Right	2	12	24	4
cSH	251	274	1127	881
Volume to Capacity	0.02	0.07	0.00	0.02
Queue Length 95th (ft)	1	5	0	1
Control Delay (s)	19.6	19.1	0.1	0.6
Lane LOS	C	C	A	A
Approach Delay (s)	19.6	19.1	0.1	0.6
Approach LOS	C	C		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

2: Brotherton Rd & Miller Avenue
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj - PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	7	9	2	9	15	17	2	41	3	5	22	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	10	2	10	16	18	2	45	3	5	24	8
Pedestrians	6			20			66			6		
Lane Width (ft)	12.0			12.0			12.0			12.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	0			2			6			6		
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	188	117	34	116	119	132	38			68		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	188	117	34	116	119	132	38			68		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	100	99	98	98	100			100		
cM capacity (veh/h)	685	753	1034	819	751	852	1565			1508		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	20	45	50	37
Volume Left	8	10	2	5
Volume Right	2	18	3	8
cSH	747	805	1565	1508
Volume to Capacity	0.03	0.06	0.00	0.00
Queue Length 95th (ft)	2	4	0	0
Control Delay (s)	10.0	9.7	0.3	1.1
Lane LOS	A	A	A	A
Approach Delay (s)	10.0	9.7	0.3	1.1
Approach LOS	A	A		

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

3: Brotherton Rd & Centre City Pkwy
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations			↔			↔	↔	↔		↔	↔		
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Volume (veh/h)	0	0	59	0	0	37	44	1511	150	32	748	75	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	64	0	0	40	48	1642	163	35	813	82	
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	1880	2824	447	2360	2784	903	895						1805
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1880	2824	447	2360	2784	903	895						1805
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1						4.1
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2						2.2
p0 queue free %	100	100	89	100	100	86	94						90
cM capacity (veh/h)	33	15	559	15	16	280	754						337
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	64	40	48	1095	711	35	542	353					
Volume Left	0	0	48	0	0	35	0	0					
Volume Right	64	40	0	0	163	0	0	82					
cSH	559	280	754	1700	1700	337	1700	1700					
Volume to Capacity	0.11	0.14	0.06	0.64	0.42	0.10	0.32	0.21					
Queue Length 95th (ft)	10	12	5	0	0	9	0	0					
Control Delay (s)	12.3	20.0	10.1	0.0	0.0	16.9	0.0	0.0					
Lane LOS	B	C	B				C						
Approach Delay (s)	12.3	20.0	0.3				0.6						
Approach LOS	B	C											
Intersection Summary													
Average Delay				0.9									
Intersection Capacity Utilization				56.5%			ICU Level of Service			B			
Analysis Period (min)	15												

4: Brotherton Rd & Escondido Blvd
2/10/2010

2/10/2010
Ex + Proj + Cumu Proj - PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔	↔	
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	114	62	11	22	15	39	20	167	17	40	141	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	124	67	12	24	16	42	22	182	18	43	153	2
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	203	83	222	199								
Volume Left (vph)	124	24	22	43								
Volume Right (vph)	12	42	18	2								
Hadj (s)	0.12	-0.22	0.00	0.07								
Departure Headway (s)	5.2	5.1	5.0	5.0								
Degree Utilization, x	0.29	0.12	0.30	0.28								
Capacity (veh/h)	637	630	682	664								
Control Delay (s)	10.4	8.7	10.1	10.0								
Approach Delay (s)	10.4	8.7	10.1	10.0								
Approach LOS	B	A	B	A								
Intersection Summary												
Delay				10.0								
HCM Level of Service				A								
Intersection Capacity Utilization				41.4%			ICU Level of Service			A		
Analysis Period (min)	15											