

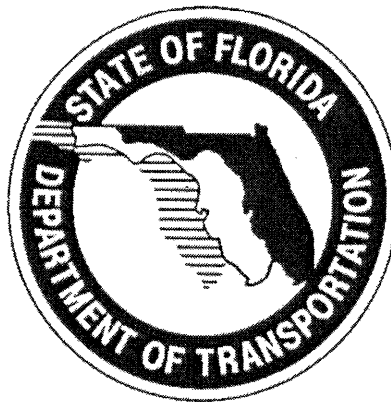
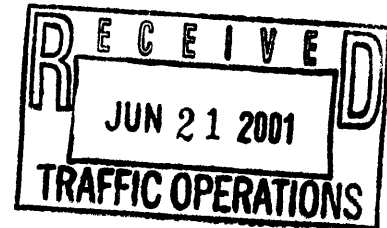
COMPOSITE STUDY

FOR

SR 46 and Town Center Boulevard
Seminole County, Florida

Study #1-3
Work Order No. 36
Section Number 77030

Prepared for:



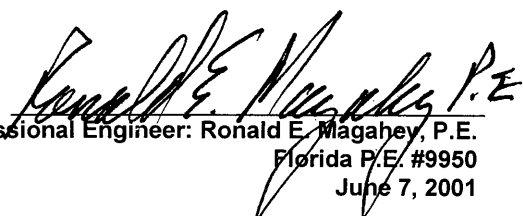
Traffic Operations Studies Contract No. 11
Financial Project ID: 404191-1-32-01
Contract No. C-8122

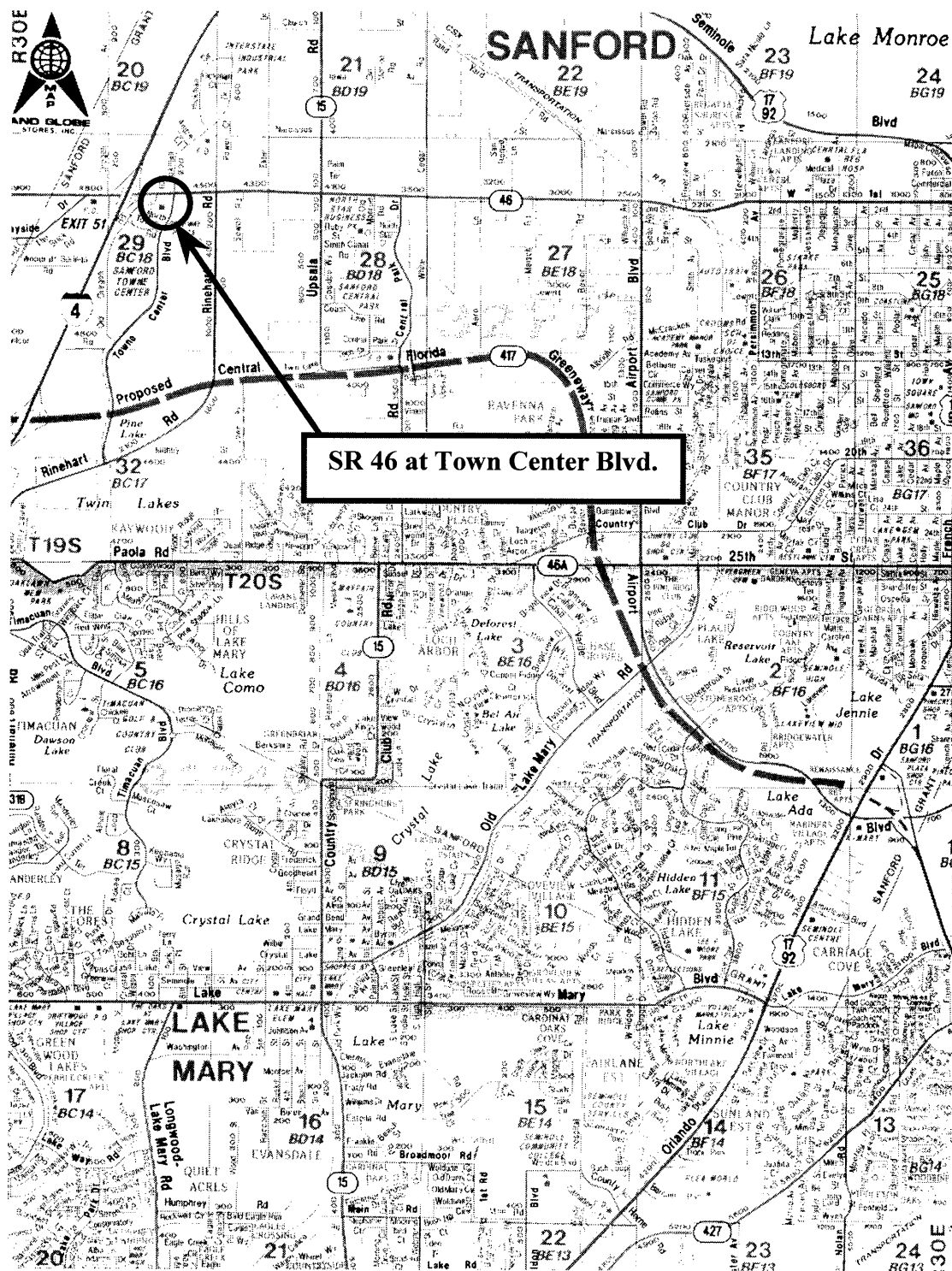
Prepared by:



201 S Orange Ave, Suite 1300 Orlando, FL 32801-3417
Engineering Business Number : 7862

June 2001


Professional Engineer: Ronald E. Magahey, P.E.
Florida P.E. #9950
June 7, 2001



**PROJECT LOCATION
MAP**












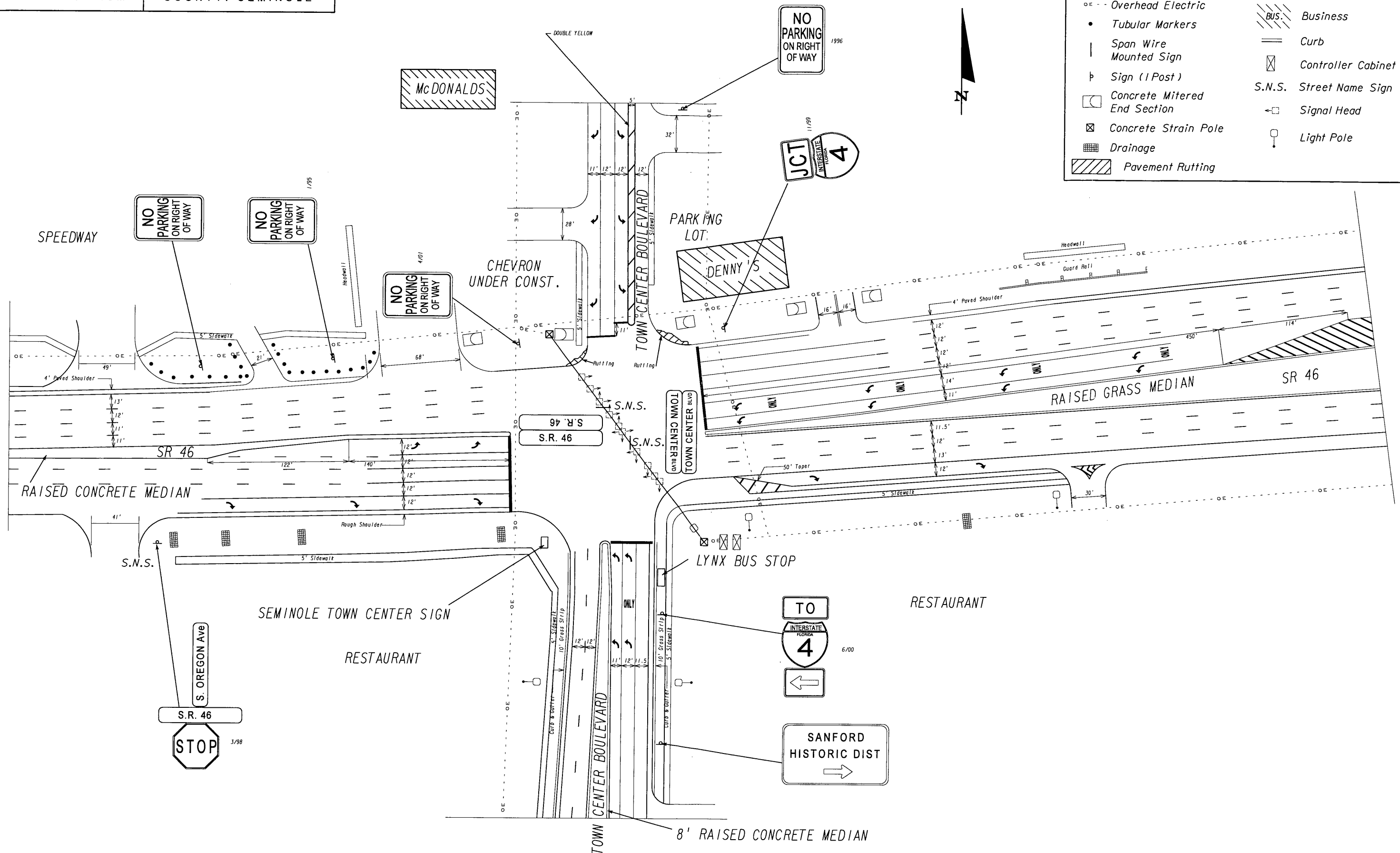
CES Comprehensive
Engineering
Services, Inc.

FIGURE

1

LEGEND

- | | | | |
|---|-----------------------------|---|--------------------|
| OE - - - | Overhead Electric |  | Business |
| • | Tubular Markers |  | Curb |
| | Span Wire |  | Controller Cabinet |
| ⌋ | Sign (I Post) | S.N.S. | Street Name Sign |
|  | Concrete Mitred End Section |  | Signal Head |
|  | Concrete Strain Pole |  | Light Pole |
|  | Drainage | | |
|  | Pavement Rutting | | |



FLORIDA DEPARTMENT OF TRANSPORTATION

VOLUME SUMMARY TMC

Section 77030 City _____ County Seminole Major Street SR 46 No. Lanes 6 Posted Speed 45 MPH
 Cross Street Town Center Boulevard No. of Lanes 2 Posted Speed N/A MPH Form By / Date STP 05/21/01 Study Date 4/19/2001

1

DIRECTION OF VEHICLE MOVEMENT

Time Begin	NORTHBOUND					SOUTHBOUND						WESTBOUND					EASTBOUND					TOTAL	
HOURLY/DIR	LEFT	U-T	THRU	RIGHT	TOTAL	LEFT	U-T	THRU	RIGHT	TOTAL	TOTAL N/S	LEFT	U-T	THRU	RIGHT	TOTAL	LEFT	U-T	THRU	RIGHT	TOTAL	TOTAL EW	ALL
11:00-12:00	240	5	39	114	398	113	0	55	99	267	665	228	5	597	126	956	127	39	664	447	1277	2233	2898
12:00-1:00	368	7	46	218	639	142	0	63	143	348	987	223	7	671	171	1072	153	58	689	484	1384	2456	3443
4:00-5:00	390	2	37	162	591	96	0	21	138	255	846	158	7	1042	88	1295	66	63	726	298	1153	2448	3294
5:00-6:00	487	4	49	188	728	92	0	32	157	281	1009	226	3	1317	91	1637	77	56	697	315	1145	2782	3791
TOTALS	1485	18	171	682	2356	443	0	171	537	1151	3507	835	22	3627	476	4960	423	216	2776	1544	4959	9919	13426

Accurate Traffic Counts, Inc.
920 Kerwood Circle, Oviedo, FL 32765
Ph/Fax: (407) 359-0962

Weather: Clear
 Counted By: Santiago/Mireya
 Counter: 2126/1668
 Location: SR 46@Towne Center/Hickman Dr

File Name : ces2126.1668
 Site Code : 00002126
 Start Date : 04/19/2001
 Page No : 1

Groups Printed- General Traffic

Start Time	Hickman Dr Southbound				SR 46 Westbound				Towne Center Blvd Northbound				SR 46 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
11:00	27	14	24	65	39	132	27	198	49	8	25	82	30	138	106	274	619
11:15	27	18	20	65	48	135	30	213	55	10	31	96	23	140	108	271	645
11:30	28	9	22	59	69	144	36	249	52	9	17	78	34	153	96	283	669
11:45	23	12	29	64	60	142	28	230	78	10	39	127	33	187	133	353	774
Total	105	53	95	253	216	553	121	890	234	37	112	383	120	618	443	1181	2707
12:00	33	20	33	86	63	177	41	281	81	8	34	123	34	129	114	277	767
12:15	38	13	31	82	49	155	33	237	67	12	49	128	39	172	123	334	781
12:30	28	16	41	85	53	128	62	243	98	15	68	181	33	154	115	302	811
12:45	32	14	30	76	54	141	21	216	115	11	65	191	39	170	125	334	817
Total	131	63	135	329	219	601	157	977	361	46	216	623	145	625	477	1247	3176
*** BREAK ***																	
16:00	21	4	26	51	31	237	19	287	85	7	35	127	15	168	74	257	722
16:15	27	10	39	76	43	212	19	274	119	16	32	167	13	156	70	239	756
16:30	16	4	33	53	45	293	25	363	89	9	51	149	17	185	79	281	846
16:45	27	3	35	65	36	251	19	306	94	5	41	140	17	174	74	265	776
Total	91	21	133	245	155	993	82	1230	387	37	159	583	62	683	297	1042	3100
17:00	26	9	54	89	59	336	17	412	124	8	49	181	17	168	86	271	953
17:15	24	5	27	56	41	323	24	388	116	12	37	165	13	175	62	250	859
17:30	21	9	30	60	67	314	19	400	124	13	47	184	23	148	81	252	896
17:45	18	9	43	70	57	310	29	396	120	16	54	190	22	168	83	273	929
Total	89	32	154	275	224	1283	89	1596	484	49	187	720	75	659	312	1046	3637
Grand Total	416	169	517	1102	814	3430	449	4693	1466	169	674	2309	402	2585	1529	4516	12620
Apprch %	37.7	15.3	46.9		17.3	73.1	9.6		63.5	7.3	29.2		8.9	57.2	33.9		
Total %	3.3	1.3	4.1	8.7	6.5	27.2	3.6	37.2	11.6	1.3	5.3	18.3	3.2	20.5	12.1	35.8	

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 Counted By: Santiago/Mireya
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 Location: SR 46@Towne Center/Hickman Dr

File Name : ces2126.1668
 Site Code : 00002126
 Start Date : 04/19/2001
 Page No : 1

Groups Printed- Trucks

Start Time	Hickman Dr Southbound				SR 46 Westbound				Towne Center Blvd Northbound				SR 46 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
*** BREAK ***																	
11:15	3	0	1	4	5	12	2	19	1	1	0	2	2	10	2	14	39
11:30	2	2	2	6	5	15	2	22	1	1	1	3	2	19	1	22	53
11:45	3	0	1	4	2	17	1	20	4	0	1	5	3	17	1	21	50
Total	8	2	4	14	12	44	5	61	6	2	2	10	7	46	4	57	142
12:00	2	0	1	3	0	24	3	27	2	0	0	2	2	13	4	19	51
12:15	3	0	4	7	2	15	4	21	0	0	0	0	1	20	2	23	51
12:30	2	0	1	3	0	14	6	20	4	0	2	6	4	14	1	19	48
12:45	4	0	2	6	2	17	1	20	1	0	0	1	1	17	0	18	45
Total	11	0	8	19	4	70	14	88	7	0	2	9	8	64	7	79	195
*** BREAK ***																	
16:00	1	0	2	3	2	12	2	16	1	0	0	1	1	11	1	13	33
16:15	2	0	2	4	1	11	1	13	1	0	1	2	1	12	0	13	32
16:30	0	0	0	0	0	12	1	13	1	0	1	2	2	10	0	12	27
16:45	2	0	1	3	0	14	2	16	0	0	1	1	0	10	0	10	30
Total	5	0	5	10	3	49	6	58	3	0	3	6	4	43	1	48	122
17:00	1	0	1	2	1	11	1	13	1	0	0	1	1	10	1	12	28
17:15	0	0	1	1	0	13	0	13	1	0	0	1	0	10	0	10	25
17:30	0	0	1	1	1	8	0	9	0	0	1	1	0	10	0	10	21
17:45	2	0	0	2	0	2	1	3	1	0	0	1	1	8	2	11	17
Total	3	0	3	6	2	34	2	38	3	0	1	4	2	38	3	43	91
Grand Total	27	2	20	49	21	197	27	245	19	2	8	29	21	191	15	227	550
Apprch %	55.1	4.1	40.8		8.6	80.4	11.0		65.5	6.9	27.6		9.3	84.1	6.6		
Total %	4.9	0.4	3.6	8.9	3.8	35.8	4.9	44.5	3.5	0.4	1.5	5.3	3.8	34.7	2.7	41.3	

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Location: SR 46@Towne Center/Hickman Dr

File Name : ces2126.1668
Site Code : 00002126
Start Date : 04/19/2001
Page No : 1

Groups Printed- U-Turns

	Hickman Dr Southbound				SR 46 Westbound				Towne Center Blvd Northbound				SR 46 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
*** BREAK ***																	
11:15	0	0	0	0	2	0	0	2	0	0	0	0	11	0	0	11	13
11:30	0	0	0	0	2	0	0	2	3	0	0	3	13	0	0	13	18
11:45	0	0	0	0	1	0	0	1	2	0	0	2	15	0	0	15	18
Total	0	0	0	0	5	0	0	5	5	0	0	5	39	0	0	39	49
12:00	0	0	0	0	1	0	0	1	3	0	0	3	18	0	0	18	22
12:15	0	0	0	0	2	0	0	2	0	0	0	0	13	0	0	13	15
12:30	0	0	0	0	4	0	0	4	3	0	0	3	17	0	0	17	24
12:45	0	0	0	0	0	0	0	0	1	0	0	1	10	0	0	10	11
Total	0	0	0	0	7	0	0	7	7	0	0	7	58	0	0	58	72
*** BREAK ***																	
16:00	0	0	0	0	1	0	0	1	1	0	0	1	11	0	0	11	13
16:15	0	0	0	0	4	0	0	4	0	0	0	0	19	0	0	19	23
16:30	0	0	0	0	2	0	0	2	0	0	0	0	21	0	0	21	23
16:45	0	0	0	0	0	0	0	0	1	0	0	1	12	0	0	12	13
Total	0	0	0	0	7	0	0	7	2	0	0	2	63	0	0	63	72
17:00	0	0	0	0	0	0	0	0	2	0	0	2	10	0	0	10	12
17:15	0	0	0	0	1	0	0	1	1	0	0	1	14	0	0	14	16
17:30	0	0	0	0	1	0	0	1	0	0	0	0	14	0	0	14	15
17:45	0	0	0	0	1	0	0	1	1	0	0	1	18	0	0	18	20
Total	0	0	0	0	3	0	0	3	4	0	0	4	56	0	0	56	63
Grand Total	0	0	0	0	22	0	0	22	18	0	0	18	216	0	0	216	256
Apprch %	0.0	0.0	0.0		100.0	0.0	0.0		100.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	8.6	0.0	0.0	8.6	7.0	0.0	0.0	7.0	84.4	0.0	0.0	84.4	

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 Location: SR 46@Towne Center/Hickman Dr

File Name : ces2126.1668
 Site Code : 00002126
 Start Date : 04/19/2001
 Page No : 1

Groups Printed- General Traffic - Trucks - U-Turns

Start Time	Hickman Dr Southbound				SR 46 Westbound				Towne Center Blvd Northbound				SR 46 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
11:00	27	14	24	65	39	132	27	198	49	8	25	82	30	138	106	274	619
11:15	30	18	21	69	55	147	32	234	56	11	31	98	36	150	110	296	697
11:30	30	11	24	65	76	159	38	273	56	10	18	84	49	172	97	318	740
11:45	26	12	30	68	63	159	29	251	84	10	40	134	51	204	134	389	842
Total	113	55	99	267	233	597	126	956	245	39	114	398	166	664	447	1277	2898
12:00	35	20	34	89	64	201	44	309	86	8	34	128	54	142	118	314	840
12:15	41	13	35	89	53	170	37	260	67	12	49	128	53	192	125	370	847
12:30	30	16	42	88	57	142	68	267	105	15	70	190	54	168	116	338	883
12:45	36	14	32	82	56	158	22	236	117	11	65	193	50	187	125	362	873
Total	142	63	143	348	230	671	171	1072	375	46	218	639	211	689	484	1384	3443

*** BREAK ***

16:00	22	4	28	54	34	249	21	304	87	7	35	129	27	179	75	281	768
16:15	29	10	41	80	48	223	20	291	120	16	33	169	33	168	70	271	811
16:30	16	4	33	53	47	305	26	378	90	9	52	151	40	195	79	314	896
16:45	29	3	36	68	36	265	21	322	95	5	42	142	29	184	74	287	819
Total	96	21	138	255	165	1042	88	1295	392	37	162	591	129	726	298	1153	3294
17:00	27	9	55	91	60	347	18	425	127	8	49	184	28	178	87	293	993
17:15	24	5	28	57	42	336	24	402	118	12	37	167	27	185	62	274	900
17:30	21	9	31	61	69	322	19	410	124	13	48	185	37	158	81	276	932
17:45	20	9	43	72	58	312	30	400	122	16	54	192	41	176	85	302	966
Total	92	32	157	281	229	1317	91	1637	491	49	188	728	133	697	315	1145	3791
Grand Total	443	171	537	1151	857	3627	476	4960	1503	171	682	2356	639	2776	1544	4959	13426
Apprch %	38.5	14.9	46.7		17.3	73.1	9.6		63.8	7.3	28.9		12.9	56.0	31.1		
Total %	3.3	1.3	4.0	8.6	6.4	27.0	3.5	36.9	11.2	1.3	5.1	17.5	4.8	20.7	11.5	36.9	

	Hickman Dr Southbound				SR 46 Westbound				Towne Center Blvd Northbound				SR 46 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 11:00 to 12:45 - Peak 1 of 1																	
Intersection	12:00																
Volume	142	63	143	348	230	671	171	1072	375	46	218	639	211	689	484	1384	3443
Percent	40.8	18.1	41.1		21.5	62.6	16.0		58.7	7.2	34.1		15.2	49.8	35.0		
Volume	142	63	143	348	230	671	171	1072	375	46	218	639	211	689	484	1384	3443
Volume	30	16	42	88	57	142	68	267	105	15	70	190	54	168	116	338	883
Peak Factor																	0.975
High Int.	12:00				12:00				12:45				12:15				
Volume	35	20	34	89	64	201	44	309	117	11	65	193	53	192	125	370	
Peak Factor				0.978				0.867				0.828				0.935	
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																	
Intersection	17:00																
Volume	92	32	157	281	229	1317	91	1637	491	49	188	728	133	697	315	1145	3791
Percent	32.7	11.4	55.9		14.0	80.5	5.6		67.4	6.7	25.8		11.6	60.9	27.5		
Volume	92	32	157	281	229	1317	91	1637	491	49	188	728	133	697	315	1145	3791
Volume	27	9	55	91	60	347	18	425	127	8	49	184	28	178	87	293	993
Peak Factor																	0.954
High Int.	17:00				17:00				17:45				17:45				
Volume	27	9	55	91	60	347	18	425	122	16	54	192	41	176	85	302	
Peak Factor				0.772				0.963				0.948				0.948	