

8 HOUR TMC

For

SR 535 @ I-4 WB Ramps

Section 75035

M.P. 0.126

Orange County

Prepared For:



District 5 Traffic Operations
Florida Department of Transportation

Continuing Services Contract for Traffic Operations

427046-2-32-01

Work Order No. 4

Metric Project No. 4.1930

Prepared By:

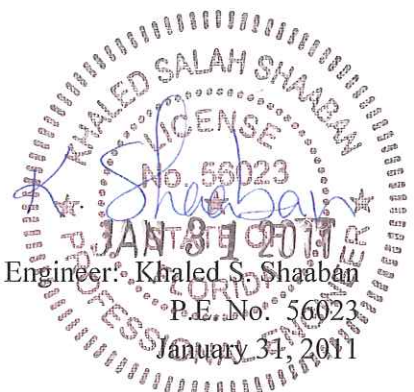


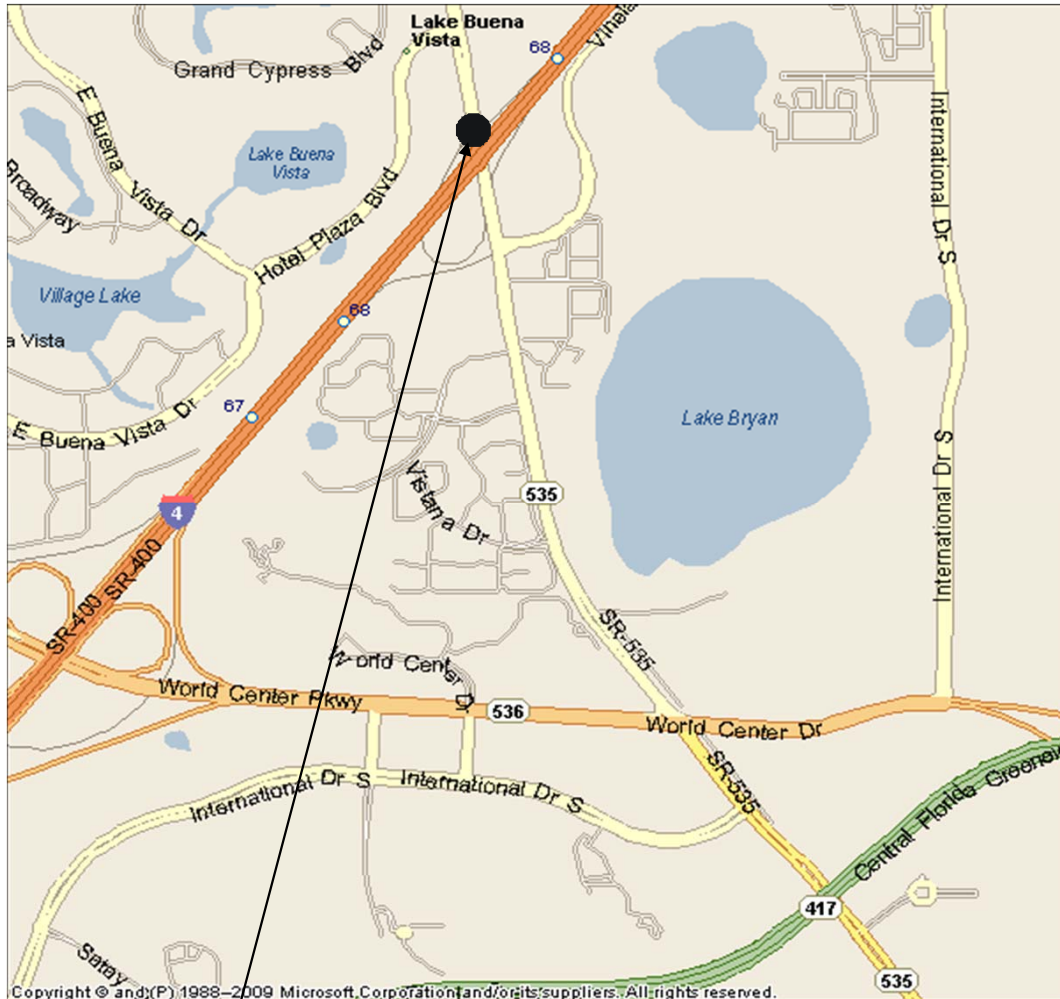
Metric Engineering, Inc.
615 Crescent Executive Court - Suite 524
Lake Mary, FL 32746
Florida Cert. No EB-0002294

Professional Engineer: Khaled S. Shaaban

P.E. No. 56023

January 31, 2011





Project Location



Project Location Map

SR 535 @ I-4 WB Ramps

SR 535



Looking north into the intersection



Looking north at the intersection



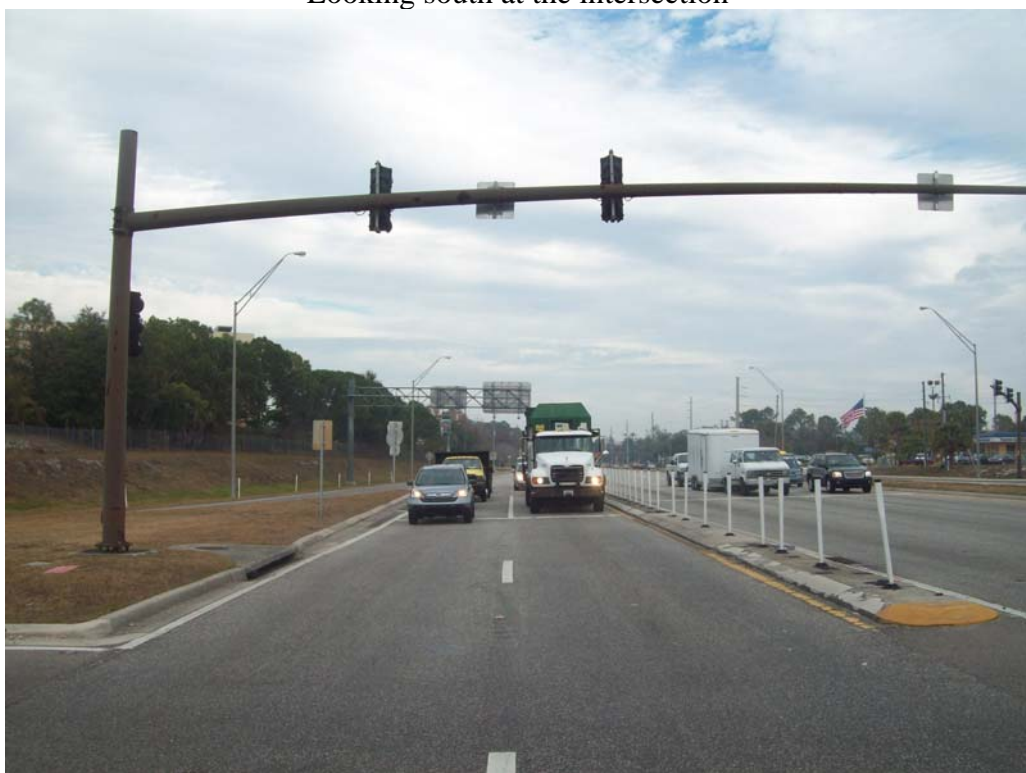
Looking south into the intersection



Looking south at the intersection



Looking south at the intersection



Looking north from the intersection



Looking north from the intersection



Looking south from the intersection

I-4 WB Off Ramp



Looking east into the intersection



Looking east at the intersection



Looking east from the intersection



Looking east from the intersection

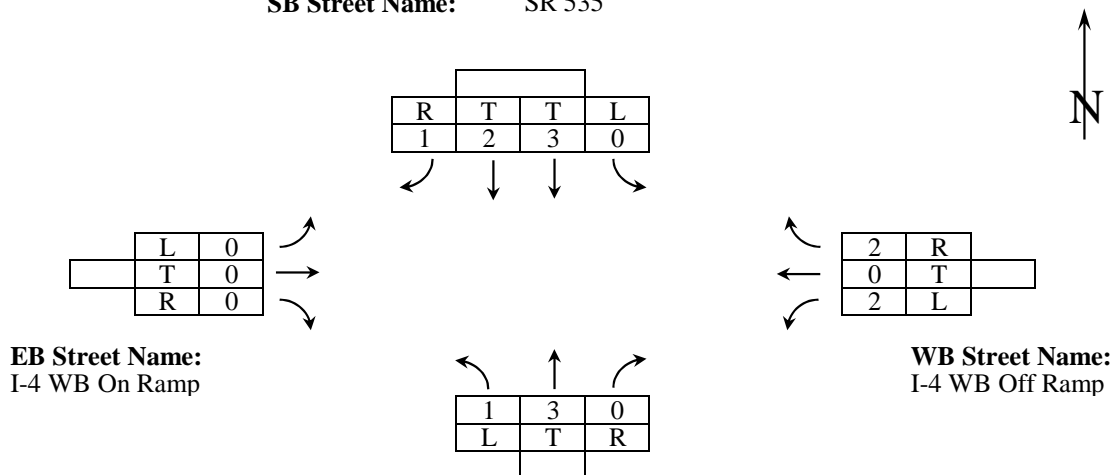
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

SUMMARY OF VEHICLE MOVEMENTS

Location: SR 535 @ I-4 WB Ramps
North/ South Street: SR 535
East/ West Street: I-4 WB Ramps
Observer(s): Jose Perez/Olsen Deronvil
Weather: Good
Road Condition: Good
Remarks: _____

Section: 75035
M.P. 0.126
City: Orlando
County: Orange
Date: January 13, 2011

SB Street Name: SR 535



Time	Northbound					Southbound					Total	Southbound to I-4 EB On Ramp					Westbound					Total
Begin/End	L	T	R	U	Total	T	T	R	U	Total	N/S	L	T	R	U	Total	L	T	R	U	Total	E/W
6:30-7:00	39	405	0	1	445	0	167	137	0	304	749	0	172	0	0	172	312	0	400	0	712	884
7-8	124	1121	0	2	1247	0	597	555	0	1152	2399	0	490	0	0	490	675	0	869	0	1544	2034
8-9	163	1179	0	7	1349	0	848	650	0	1498	2847	0	548	0	0	548	712	0	849	0	1561	2109
10:45-11:45	182	1254	0	9	1445	0	1200	409	0	1609	3054	0	542	0	0	542	1012	0	753	0	1765	2307
11:45-12:45	196	1439	0	15	1650	0	1149	343	2	1494	3144	0	378	0	0	378	857	0	676	0	1533	1911
2:30-3:00	127	683	0	8	818	0	624	203	0	827	1645	0	266	0	0	266	533	0	541	0	1074	1340
3-4	233	1297	0	15	1545	0	1409	459	0	1868	3413	0	680	0	0	680	1347	0	1119	0	2466	3146
4-5	233	1439	0	9	1681	0	1487	465	0	1952	3633	0	917	0	0	917	1726	0	930	0	2656	3573
5-6	312	1847	0	12	2171	0	1539	537	0	2076	4247	0	915	0	0	915	1809	0	1100	0	2909	3824
Total	1609	10664	0	78	12351	0	9020	3758	2	12780	25131	0	4908	0	0	4908	8983	0	7237	0	16220	21128

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

PEDESTRIAN VOLUME SHEET

Location: SR 535 @ I-4 WB Ramps
North/ South Street: SR 535
East/ West Street: I-4 WB Ramps
Observer(s): Jose Perez/Olsen Deronvil
Weather: Good

Section: 75035
M.P. 0.126
City: Orlando
County: Orange
Date: January 13, 2011

Remarks: _____

SB Street Name: SR 535



6:30-7	7-8	8-9	10:45-11:45	11:45-12:45	2:30-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

6:30-7	7-8	8-9	10:45-11:45	11:45-12:45	2:30-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

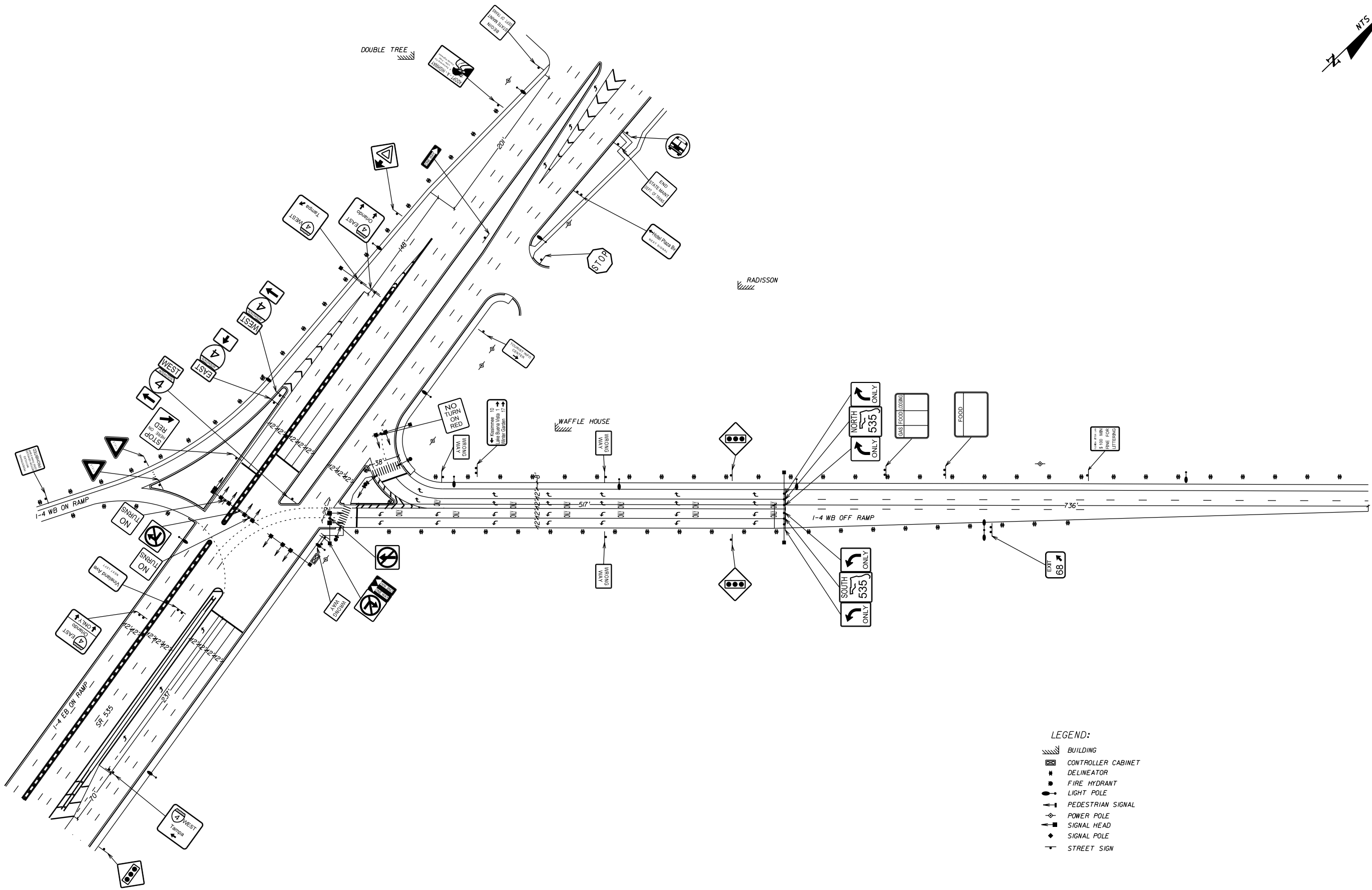
EB Street Name:
I-4 WB On Ramp

WB Street Name:
I-4 WB Off Ramp


6:30-7	7-8	8-9	10:45-11:45	11:45-12:45	2:30-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

6:30-7	7-8	8-9	10:45-11:45	11:45-12:45	2:30-3	3-4	4-5	5-6	Total
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

NB Street Name: SR 535



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



METRIC ENGINEERING, INC.
615 CRESCENT EXECUTIVE CT
SUITE 524
LAKE MARY, FLORIDA 32746
TEL. (407) 644-1898
FAX. (407) 644-2376
CERTIFICATE OF AUTHORIZATION 2294

- ENGINEERS
- PLANNERS
- SURVEYORS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 535	ORANGE	427046-2-32-01

INTERSECTION SKETCH
SR 535 & I-4 WB RAMPS

Metric Engineering, Inc.
615 Crescent Executive Court
Suite 524
Lake Mary, FL 32703

Location:
SR 535 @ I-4 WB Ramps

File Name : cleaned
Site Code : 00000000
Start Date : 1/13/2011
Page No : 1

Groups Printed- Autos - Trucks - U-Turns

	SR 535 Southbound				I-4 WB Off Ramp Westbound				SR 535 Northbound				SR 535 to I-4 EB On Ramp Southbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	65	69	0	129	0	172	0	24	132	0	0	0	83	0	0	674
06:45 AM	0	102	68	0	183	0	228	0	16	273	0	0	0	89	0	0	959
Total	0	167	137	0	312	0	400	0	40	405	0	0	0	172	0	0	1633
07:00 AM	0	80	107	0	110	0	170	0	24	186	0	0	0	121	0	0	798
07:15 AM	0	126	142	0	163	0	255	0	32	248	0	0	0	121	0	0	1087
07:30 AM	0	166	141	0	171	0	268	0	28	311	0	0	0	150	0	0	1235
07:45 AM	0	225	165	0	231	0	176	0	42	376	0	0	0	98	0	0	1313
Total	0	597	555	0	675	0	869	0	126	1121	0	0	0	490	0	0	4433
08:00 AM	0	178	127	0	139	0	217	0	35	311	0	0	0	190	0	0	1197
08:15 AM	0	204	181	0	158	0	212	0	40	296	0	0	0	145	0	0	1236
08:30 AM	0	247	172	0	202	0	205	0	39	308	0	0	0	120	0	0	1293
08:45 AM	0	219	170	0	213	0	215	0	56	264	0	0	0	93	0	0	1230
Total	0	848	650	0	712	0	849	0	170	1179	0	0	0	548	0	0	4956
10:45 AM	0	288	114	0	246	0	222	0	52	298	0	0	0	98	0	0	1318
Total	0	288	114	0	246	0	222	0	52	298	0	0	0	98	0	0	1318
11:00 AM	0	277	115	0	311	0	207	0	47	328	0	0	0	137	0	0	1422
11:15 AM	0	309	89	0	190	0	144	0	54	309	0	0	0	140	0	0	1235
11:30 AM	0	326	91	0	265	0	180	0	38	319	0	0	0	167	0	0	1386
11:45 AM	0	306	110	0	214	0	102	0	55	414	0	0	0	143	0	0	1344
Total	0	1218	405	0	980	0	633	0	194	1370	0	0	0	587	0	0	5387
12:00 PM	2	305	81	0	234	0	236	0	33	409	0	0	0	64	0	0	1364
12:15 PM	0	270	68	0	193	0	134	0	63	277	0	0	0	82	0	0	1087
12:30 PM	0	268	84	0	216	0	204	0	60	339	0	0	0	89	0	0	1260
Total	2	843	233	0	643	0	574	0	156	1025	0	0	0	235	0	0	3711
02:30 PM	0	335	119	0	244	0	274	0	82	331	0	0	0	144	0	0	1529
02:45 PM	0	289	84	0	289	0	267	0	53	352	0	0	0	122	0	0	1456
Total	0	624	203	0	533	0	541	0	135	683	0	0	0	266	0	0	2985
03:00 PM	0	306	86	0	290	0	290	0	57	262	0	0	0	97	0	0	1388
03:15 PM	0	358	95	0	273	0	340	0	59	337	0	0	0	156	0	0	1618
03:30 PM	0	385	121	0	321	0	221	0	67	378	0	0	0	184	0	0	1677
03:45 PM	0	360	157	0	463	0	268	0	65	320	0	0	0	243	0	0	1876
Total	0	1409	459	0	1347	0	1119	0	248	1297	0	0	0	680	0	0	6559
04:00 PM	0	408	125	0	390	0	318	0	59	319	0	0	0	155	0	0	1774
04:15 PM	0	358	80	0	392	0	91	0	51	409	0	0	0	210	0	0	1591
04:30 PM	0	396	141	0	426	0	262	0	60	320	0	0	0	299	0	0	1904
04:45 PM	0	325	119	0	518	0	259	0	72	391	0	0	0	253	0	0	1937
Total	0	1487	465	0	1726	0	930	0	242	1439	0	0	0	917	0	0	7206
05:00 PM	0	460	162	0	519	0	312	0	123	414	0	0	0	186	0	0	2176
05:15 PM	0	436	149	0	462	0	226	0	63	537	0	0	0	204	0	0	2077
05:30 PM	0	330	128	0	409	0	262	0	64	423	0	0	0	295	0	0	1911
05:45 PM	0	313	98	0	419	0	300	0	74	473	0	0	0	230	0	0	1907
Total	0	1539	537	0	1809	0	1100	0	324	1847	0	0	0	915	0	0	8071
Grand Total	2	9020	3758	0	8983	0	7237	0	1687	10664	0	0	0	4908	0	0	46259
Apprch %	0.0	70.6	29.4	0.0	55.4	0.0	44.6	0.0	13.7	86.3	0.0	0.0	0.0	100.0	0.0	0.0	
Total %	0.0	19.5	8.1	0.0	19.4	0.0	15.6	0.0	3.6	23.1	0.0	0.0	0.0	10.6	0.0	0.0	

Metric Engineering, Inc.
615 Crescent Executive Court
Suite 524
Lake Mary, FL 32703

File Name : cleaned
Site Code : 00000000
Start Date : 1/13/2011
Page No : 2

	SR 535 Southbound					I-4 WB Off Ramp Westbound					SR 535 Northbound					SR 535 to I-4 EB On Ramp Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	0	854	645	0	1499	730	0	810	0	1540	156	1291	0	0	1447	0	553	0	0	553	5039
Percent	0.0	57.0	43.0	0.0		47.4	0.0	52.6	0.0		10.8	89.2	0.0	0.0		0.0	100.0	0.0	0.0		
07:45 Volume	0	225	165	0	390	231	0	176	0	407	42	376	0	0	418	0	98	0	0	98	1313
Peak Factor																					0.959
High Int. Volume	08:30 AM					07:45 AM					07:45 AM					08:00 AM					
Peak Factor	0	247	172	0	419	231	0	176	0	407	42	376	0	0	418	0	190	0	0	190	
	0.894					0.946					0.865					0.728					
Peak Hour From 10:45 AM to 12:30 PM - Peak 1 of 1																					
Intersection	11:00 AM																				
Volume	0	1218	405	0	1623	980	0	633	0	1613	194	1370	0	0	1564	0	587	0	0	587	5387
Percent	0.0	75.0	25.0	0.0		60.8	0.0	39.2	0.0		12.4	87.6	0.0	0.0		0.0	100.0	0.0	0.0		
11:00 Volume	0	277	115	0	392	311	0	207	0	518	47	328	0	0	375	0	137	0	0	137	1422
Peak Factor																					0.947
High Int. Volume	11:30 AM					11:00 AM					11:45 AM					11:30 AM					
Peak Factor	0	326	91	0	417	311	0	207	0	518	55	414	0	0	469	0	167	0	0	167	
	0.973					0.778					0.834					0.879					
Peak Hour From 02:30 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	0	1551	558	0	2109	1908	0	1059	0	2967	322	1765	0	0	2087	0	938	0	0	938	8101
Percent	0.0	73.5	26.5	0.0		64.3	0.0	35.7	0.0		15.4	84.6	0.0	0.0		0.0	100.0	0.0	0.0		
05:00 Volume	0	460	162	0	622	519	0	312	0	831	123	414	0	0	537	0	186	0	0	186	2176
Peak Factor																					0.931
High Int. Volume	05:00 PM					05:00 PM					05:15 PM					05:30 PM					
Peak Factor	0	460	162	0	622	519	0	312	0	831	63	537	0	0	600	0	295	0	0	295	
	0.848					0.893					0.870					0.795					

Metric Engineering, Inc.
615 Crescent Executive Court
Suite 524
Lake Mary, FL 32703

Location:
SR 535 @ I-4 WB Ramps

File Name : cleaned
Site Code : 00000000
Start Date : 1/13/2011
Page No : 1

Groups Printed- Trucks

	SR 535 Southbound				I-4 WB Off Ramp Westbound				SR 535 Northbound				SR 535 to I-4 EB On Ramp Southbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	3	1	0	9	0	4	0	0	2	0	0	0	3	0	0	22
06:45 AM	0	2	4	0	4	0	6	0	0	7	0	0	0	2	0	0	25
Total	0	5	5	0	13	0	10	0	0	9	0	0	0	5	0	0	47
07:00 AM	0	6	0	0	12	0	3	0	0	8	0	0	0	5	0	0	34
07:15 AM	0	3	3	0	8	0	5	0	2	6	0	0	0	7	0	0	34
07:30 AM	0	3	3	0	6	0	2	0	0	7	0	0	0	3	0	0	24
07:45 AM	0	2	5	0	6	0	4	0	0	7	0	0	0	3	0	0	27
Total	0	14	11	0	32	0	14	0	2	28	0	0	0	18	0	0	119
08:00 AM	0	3	0	0	7	0	4	0	0	7	0	0	0	1	0	0	22
08:15 AM	0	7	5	0	9	0	6	0	2	5	0	0	0	5	0	0	39
08:30 AM	0	4	1	0	11	0	11	0	0	9	0	0	0	2	0	0	38
08:45 AM	0	7	1	0	5	0	1	0	1	7	0	0	0	2	0	0	24
Total	0	21	7	0	32	0	22	0	3	28	0	0	0	10	0	0	123
10:45 AM	0	4	2	0	4	0	8	0	2	7	0	0	0	4	0	0	31
Total	0	4	2	0	4	0	8	0	2	7	0	0	0	4	0	0	31
11:00 AM	0	9	2	0	11	0	5	0	1	10	0	0	0	1	0	0	39
11:15 AM	0	7	3	0	5	0	5	0	2	13	0	0	0	1	0	0	36
11:30 AM	0	5	5	0	6	0	3	0	2	5	0	0	0	2	0	0	28
11:45 AM	0	4	1	0	5	0	4	0	0	10	0	0	0	2	0	0	26
Total	0	25	11	0	27	0	17	0	5	38	0	0	0	6	0	0	129
12:00 PM	0	9	1	0	5	0	7	0	0	6	0	0	0	4	0	0	32
12:15 PM	0	3	0	0	7	0	7	0	0	1	0	0	0	0	0	0	18
12:30 PM	0	5	2	0	5	0	3	0	1	8	0	0	0	4	0	0	28
Total	0	17	3	0	17	0	17	0	1	15	0	0	0	8	0	0	78
02:30 PM	0	7	2	0	4	0	3	0	2	1	0	0	0	3	0	0	22
02:45 PM	0	2	1	0	5	0	7	0	1	9	0	0	0	9	0	0	34
Total	0	9	3	0	9	0	10	0	3	10	0	0	0	12	0	0	56
03:00 PM	0	6	0	0	1	0	6	0	1	4	0	0	0	2	0	0	20
03:15 PM	0	1	3	0	7	0	4	0	1	3	0	0	0	5	0	0	24
03:30 PM	0	3	0	0	6	0	6	0	1	2	0	0	0	6	0	0	24
03:45 PM	0	7	0	0	0	0	2	0	1	4	0	0	0	8	0	0	22
Total	0	17	3	0	14	0	18	0	4	13	0	0	0	21	0	0	90
04:00 PM	0	5	2	0	6	0	6	0	0	7	0	0	0	5	0	0	31
04:15 PM	0	4	1	0	7	0	3	0	0	2	0	0	0	1	0	0	18
04:30 PM	0	2	1	0	3	0	3	0	0	5	0	0	0	4	0	0	18
04:45 PM	0	6	1	0	7	0	3	0	0	2	0	0	0	4	0	0	23
Total	0	17	5	0	23	0	15	0	0	16	0	0	0	14	0	0	90
05:00 PM	0	0	0	0	1	0	0	0	0	3	0	0	0	5	0	0	9
05:15 PM	0	1	1	0	3	0	1	0	0	4	0	0	0	6	0	0	16
05:30 PM	0	4	0	0	3	0	1	0	2	6	0	0	0	2	0	0	18
05:45 PM	0	1	1	0	4	0	2	0	0	3	0	0	0	3	0	0	14
Total	0	6	2	0	11	0	4	0	2	16	0	0	0	16	0	0	57
Grand Total	0	135	52	0	182	0	135	0	22	180	0	0	0	114	0	0	820
Apprch %	0.0	72.2	27.8	0.0	57.4	0.0	42.6	0.0	10.9	89.1	0.0	0.0	0.0	100.0	0.0	0.0	
Total %	0.0	16.5	6.3	0.0	22.2	0.0	16.5	0.0	2.7	22.0	0.0	0.0	0.0	13.9	0.0	0.0	