

TRAFFIC ENGINEERING REPORT

**DANIELS BRIDGE ROAD EXTENSION
From Chestnut Hill Road to Jennings Mill Parkway
Project No. R-41**

OCONEE COUNTY



*Prepared for:
Oconee County Department of Public Works*

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March 2007

Introduction

The Oconee County Department of Public Works proposed an extension of Daniels Bridge Road near the SR 316/SR 10 interchange. The proposed improvements include the construction of a 4-lane extension of Daniels Bridge Road from Chestnut Hill Road across the Athens Perimeter (SR 10) to the Jennings Mill Parkway extension just south of Epps Bridge Road. The improvements generally consist of the construction of a 4-lane divided roadway on new location. The proposed typical section consists of four 12-foot lanes with a 20-foot raised median with curb and gutter and sidewalks on each side of the roadway. This report provides a traffic analysis of the existing and future conditions in the area of the SR 316 and SR 10 interchange with and without the proposed Daniels Bridge Road Extension. The analysis includes existing and future conditions at all intersections as well as a comparison of conditions at the SR 10 interchange ramps with SR 316 with and without the Daniels Bridge Road Extension.

Criteria for Traffic Analysis

Roadways and intersections are designed to carry a specific number of vehicles within a specific time period. This is referred to as design capacity for that roadway segment or intersection. Once the capacity of and the actual vehicles on a segment or intersection are determined, it is possible to develop a measure of efficiency to quantify the quality of service of that segment or intersection. This measure of efficiency is expressed as the Level of Service (LOS). LOS is a qualitative measure describing operational conditions within a traffic stream. Six LOS are defined for each type of facility. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. The following definitions are excerpts taken directly from the 2000 Highway Capacity Manual (HCM2000).

Capacity - The capacity of a facility is defined as the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions.

Level of Service - Level of Service (LOS) is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Level of Service A represents free flow conditions. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speed and to maneuver within the traffic stream is extremely high.

Level of Service B is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A.

Level of Service C is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users become significantly affected by interactions with others in the traffic stream.

Level of Service D represents high density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.

Level of Service E represents operating conditions at or near the capacity level. Freedom to maneuver within the traffic stream is extremely difficult. Comfort and convenience levels are extremely poor, and drive frustration is generally high.

Level of Service F is used to define forced or breakdown flow. This condition exists when the amount of traffic approaching a point exceeds the amount that can traverse the point.

Tables 1 and 2 below indicate the relationship between intersection delay and level of service for unsignalized and signalized intersections, respectively.

Table 1. Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Control Delay (seconds/vehicle)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Table 2. Level-of-Service Criteria for Signalized Intersections

Level of Service	Control Delay (seconds/vehicle)
A	0-10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

Existing Traffic Conditions and Analysis

Existing traffic counts and turning movement counts for area intersections and roadway segments were collected as part of this study and have been included in Appendix A of

this report. Turning movement data collected for the following intersections in the study area on August 30, 2006:

- Daniels Bridge Road and Chestnut Hill Road
- Oconee Connector and Mars Hill Rd/Daniels Bridge Rd
- SR 316 and Oconee Connector
- SR 316 and SR 10 Southbound Ramp
- SR 316 and SR 10 Northbound Ramp
- SR 316 and Jennings Mill Parkway

To evaluate the impact of the proposed changes to Daniels Bridge Road, SYNCHRO software was used. SYNCHRO has the ability to analyze signalized and unsignalized intersections as well as produce an animated simulation which makes comparing multiple alternatives very efficient. The analytical methodologies used by the software reflect those in the Highway Capacity Manual, 2000 Update.

Intersection capacity analysis was performed on each of the above intersections within the study area for the AM and PM Peak Hours to determine their existing operational LOS. The analysis results are provided below in Table 3.

Table 3: Existing Conditions (Year 2006) - Intersection Capacity Analysis

Intersection	Type	2006 Existing Control Delay /LOS	
		AM Peak	PM Peak
Daniels Bridge Road and Chestnut Hill Road	Unsignalized*	10.3/B	10.5/B
Oconee Connector @ Mars Hill Rd/Daniels Bridge Road	Signalized	8.1/A	7.3/A
Oconee Connector @ SR 316	Signalized	39.6/D	29.0/C
SR 316 and SR 10 Southbound Ramp	Signalized	3.9/A	37.8/D
SR 316 and SR 10 Northbound Ramp	Signalized	7.7/A	21.6/C
SR 316 and Jennings Mill Parkway	Signalized	11.1/B	22.9/C

*Note: Results for unsignalized intersections are reported in terms of minor street LOS.

It can be seen that all intersections throughout the project corridor currently operate at acceptable levels of service.

Future Traffic and Analysis

Future Traffic Volumes

2000 base year and 2030 future no-build and build volumes within the project area were provided by the Georgia Department of Transportation (GDOT) from the MACORTS 2000, and 2030 travel demand model. These models were utilized to develop traffic growth rates by approach for the study area. These growth rates were applied to the

existing traffic volumes to develop 2010, 2015 and 2030 no-build and build traffic volumes. These traffic volumes are included in the Appendix B of this report.

Roadway Segment Analysis Results

Table 4 below provides the results of the traffic analysis conducted on the Proposed Daniels Bridge connection to Jennings Mill Parkway for the 2030 build conditions. In addition to the LOS results, the additional performance measures of volume-to-capacity (v/c) ratios and average travel speeds are also shown. The v/c ratio typically ranges between 0.0 and 1.0, and is the hourly volume of traffic occurring on a section of roadway divided by the capacity for that section of roadway. Low v/c ratios (i.e. below 0.5) are an indication that the given volume is well within the capacity of the roadway section. As the v/c ratio approaches 1.0, the given volume approaches the capacity of the roadway, and v/c ratios greater than 1.0 indicate volumes that exceed the capacity of the roadway section. The average travel speed is the speed at which motorists can be expected to obtain for a given roadway section.

Table 4: LOS Analysis for the Proposed Daniels Bridge Road Extension

Roadway Section	2030 AADT	Performance Measures	
		Daniels Bridge Road Extension	18,000
		Volume-to-Capacity	0.32
		Average Travel Speed	50.0 mph

With two lanes proposed in each direction, this segment of Daniels Bridge Road will operate at LOS B for the future build year 2030.

Capacity Analysis

An analysis of the future 2030 peak hour traffic conditions for the No-Build and Build condition is shown in Table 5. The build condition assumes that the Daniels Bridge Road Extension and Jennings Mill Parkway Extension are complete. The capacity analysis reports have also been included in Appendix C of this report. Following tables summarize the capacity analysis results.

Table 5: 2030 No-Build and Build Intersection Capacity Analysis

Intersection Location	2030 No-build Control Delay/LOS			2030 Build Control Delay/LOS		
	Type	AM	PM	Type	AM	PM
Daniels Bridge Road and Chestnut Hill Road	Unsignalized	24.9/C	25.2/D	Signalized	10.7/B	8.2/A
Daniels Bridge Road and Proposed connector to Jennings Mill Parkway	Unsignalized	N/A	N/A	Signalized	23.6/C	27.0/C
Oconee Connector @ Mars Hill Rd/Daniels Bridge Road	Signalized	94.2/F	36.1/D	Signalized	10.6/B	14.5/B
Oconee Connector @ SR 316	Signalized	106.5/F	100.5/F	Signalized	95.9/F	127.7/F
SR 316 and SR 10 Southbound Ramp	Signalized	14.2/F	108.0/F	Signalized	5.8/A	74.1/E
SR 316 and SR 10 Northbound Ramp	Signalized	20.0/B	144.6/F	Signalized	19.5/B	103.3/F
SR 316 and Jennings Mill Parkway	Signalized	60.0/E	51.2/D	Signalized	14.5/B	80.1/F

Note: Results for unsignalized intersections are reported in terms of side street LOS.

The results of the intersection level of service analysis demonstrate that the intersection at Oconee Connector and SR 316 is operating at a LOS F for both AM and PM peak hour traffic conditions. The intersections at SR 10 northbound and southbound ramps and Jennings Mill Parkway are operating at LOS F for PM peak hour traffic conditions. The remaining three intersections at Chestnut Hill Road, Mars Hill Road and proposed connector to Jennings Mill Parkway are operating at acceptable levels of service.

The SR 316 and SR 10 interchange northbound and southbound ramps were further investigated to predict when these ramp intersections will fail with and without the implementation of the Daniels Bridge Road Extension. Years 2010, 2015 and 2020 were analyzed in order to predict when these interchange intersections failed under both the Build and No-Build conditions. Tables 6 and 7 shows the capacity analysis results for no-build and build conditions.

Table 6: No-Build Scenario: Intersection Capacity Analysis

Intersection	Year 2010 Control Delay/LOS	
	AM Peak	PM Peak
SR 316 and SR 10 Southbound Ramp	4.4/A	64.0/E
SR 316 and SR 10 Northbound Ramp	11.1/B	41.6/D

Table 6 presents the LOS results at the interchange intersections without the implementation of the Daniels Bridge Road Extension. It can be seen from the table that the intersection at SR 316 and SR 10 southbound ramp will have unacceptable levels of service in the PM peak hour in 2010 under this condition. Incremental yearly analysis shows that in 2009 the interchange will operate at an unacceptable LOS E. These results are shown in Appendix C of this report. This is primarily due to heavy westbound through movement (Volume to capacity ratio of 1.22) in the PM peak through the interchange. This interchange will need improvements by year 2009 without the implementation of the Daniels Bridge Road Extension and Jennings Mill Parkway Extension.

Table 7: Build Scenario: Intersection Capacity Analysis

Intersection	Year 2010 Control Delay/LOS		Year 2015 Control Delay/LOS		Year 2020 Control Delay/LOS	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
SR 316 and SR 10 Southbound Ramp	4.2/A	36.1/D	4.9/A	42.3/D	4.8/A	59.8/E
SR 316 and SR 10 Northbound Ramp	7.8/A	24.1/C	7.7/A	35.8/D	16.2/B	55.6/E

Table 7 presents the LOS results at the interchange ramp intersections with implementation of the proposed project. With the implementation of the proposed Daniels Bridge Road extension and Jennings Mill Parkway extension projects, these

interchange ramps will operate at a satisfactory levels of service up to year 2015. Incremental yearly analysis shows that in 2019 the interchange will operate at an unacceptable LOS E. These results are shown in Appendix C of this report. This is an improvement over no-build conditions, which shows that the interchange will experience an unacceptable LOS E for in year 2009 as described above.

The Daniels Bridge Road and Jennings Mill Parkway Extension projects will reduce demand on the SR 316 at SR 10 interchange ramps. They will also significantly reduce through traffic on SR 316 and SR 10 through the interchange. This allows these ramps to operate at LOS D or better until 2018. However, these interchange ramps will have LOS E condition in year 2019. In order to accommodate traffic growth in the area, the SR 316 at SR 10 interchange will require improvements prior to 2019 even with the implementation of the Daniels Bridge Road Extension project.

Conclusions and Recommendations

Traffic Analysis Conclusions

The capacity analysis results indicate that the traffic operation conditions are on the verge of failure at the interchange. With unsatisfactory Levels of Service E conditions in imminent in the year 2009 for the existing interchange, improvements will need to be implemented to provide satisfactory traffic flow movements through the interchange. The improvements necessary to provide satisfactory Level of Service through the interchange are whole scale interchange reconstruction, alternative routes of travel to bypass the interchange, or a combination thereof.

This project would provide needed alternative travel routes for local traffic to bypass the interchange. Implementation of this project would provide much need congestion relief along SR 316 at the SR 10 northbound and southbound ramp terminals improving the Level of Service experienced in this location.

Implementation of the proposed project will help provide congestion relief for the interchange by providing alternative travel routes for local traffic, alleviating some traffic from the interchange. The proposed project will help mitigate the Level of Service of the interchange and extend the period before the interchange fails. It is projected that with implementation of the project that the interchange will continue to operate at satisfactory Levels of Service until failing in 2019.

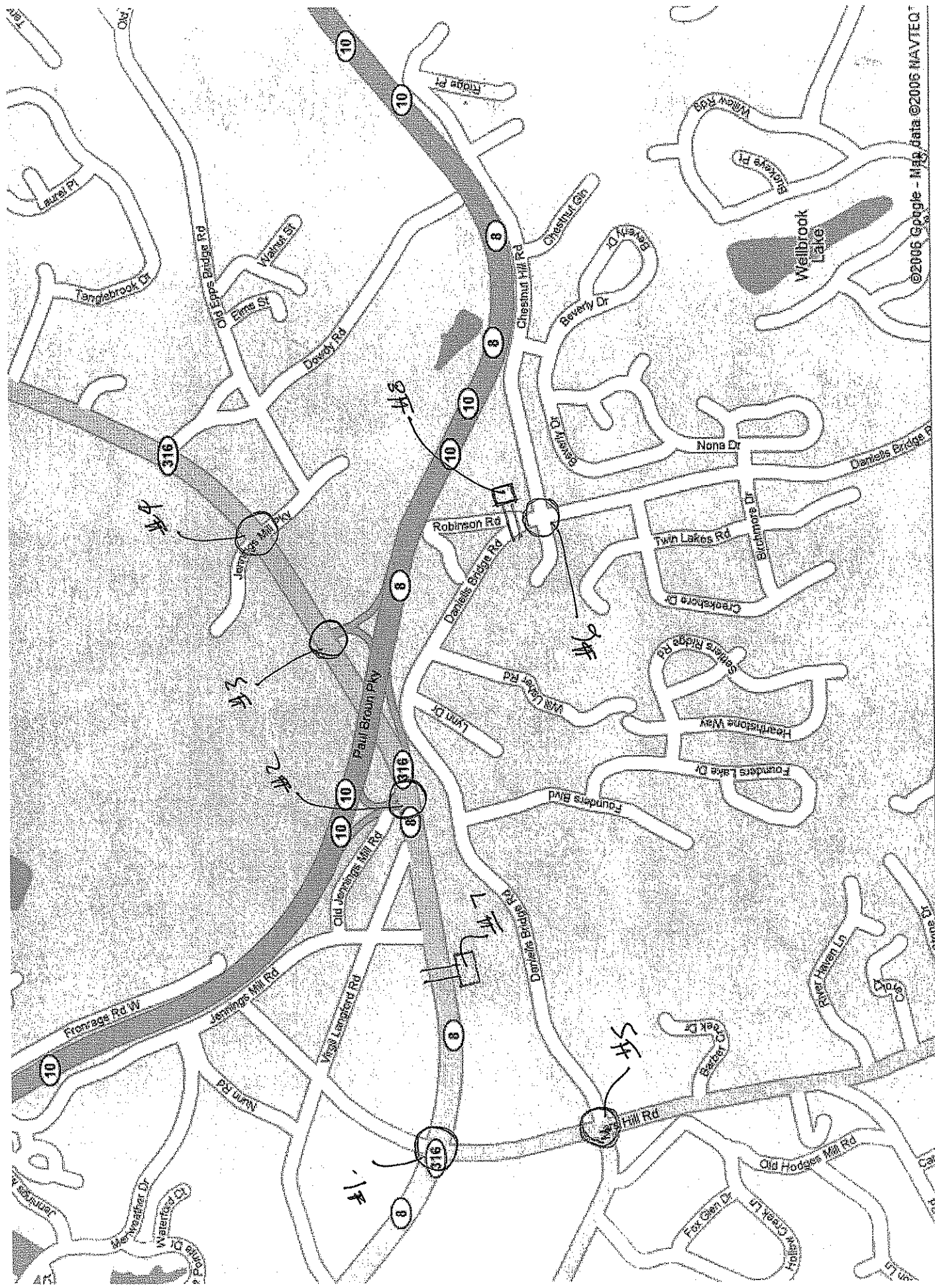
Based on this analysis, it is concluded that the proposed project is a vital project to help relieve the congestion at the SR 316 and SR 10 interchange. The proposed project will provide an additional 10 year period before the interchange fails. During this period, GDOT, Oconee County and MACORTS can plan, design, fund and construct large scale improvements to the interchange as a whole to handle the future traffic volumes at the interchange before failure occurs in 2019.

Design Recommendations

Based on the traffic analysis and the conceptual layouts for the project, the following improvements and geometric configurations are recommended for the new Daniels Bridge Road Extension and the new intersections along Daniels Bridge:

- The proposed Daniels Bridge Road Extension should be four lanes wide as proposed. This will provide a LOS B or better through 2030.
- Recommend that the new intersection be signalized to handle forecasted future traffic volumes. Also, a signal should be installed at the Daniels Bridge Road at Chestnut Hill Road intersection. These two intersections should operate in conjunction with each other to satisfactorily control traffic movements through these two intersections.
- Recommend that a right turn lane with 200-feet of storage and a 100-foot taper from Daniels Bridge Road to the Daniels Bridge Road Extension.

Appendix A – Existing Traffic Data



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○ TMC counts — 6@ 4 hours peak hour counts (2h-AM, 2h-PM (4:00-6:00))
 □ ADT — 2@ 24-hr Bi-directional counts

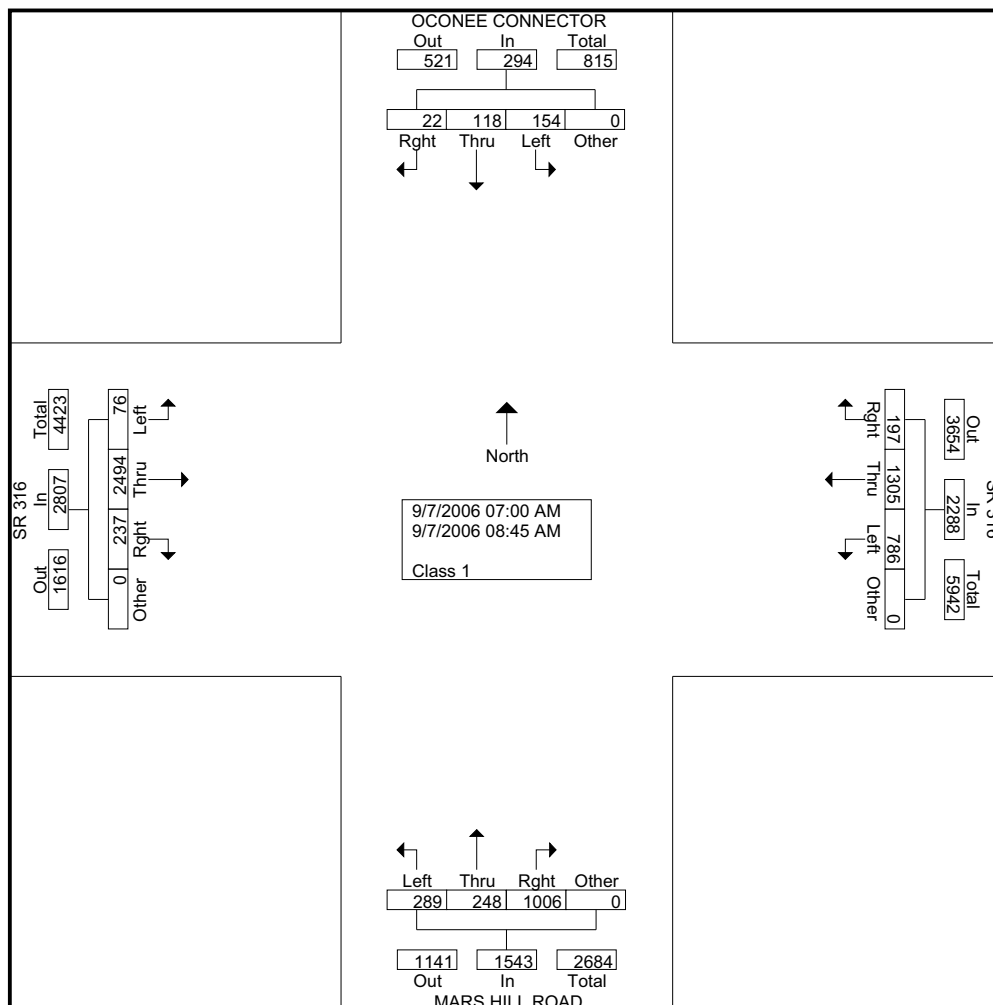
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1336 Farmer Road
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File Name : OconeeConn&SR316AM
 Site Code : 00000001
 Start Date : 9/7/2006
 Page No : 1

Groups Printed- Class 1

Start Time	OCONEE CONNECTOR Southbound					SR 316 Westbound					MARS HILL ROAD Northbound					SR 316 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
07:00 AM	9	9	5	0	23	61	139	16	0	216	35	13	64	0	112	1	218	24	0	243	594
07:15 AM	15	13	3	0	31	72	172	22	0	266	30	23	103	0	156	10	266	27	0	303	756
07:30 AM	34	19	2	0	55	110	181	19	0	310	41	37	146	0	224	13	336	37	0	386	975
07:45 AM	18	24	5	0	47	104	181	33	0	318	47	36	174	0	257	18	423	38	0	479	1101
Total	76	65	15	0	156	347	673	90	0	1110	153	109	487	0	749	42	1243	126	0	1411	3426
08:00 AM	18	16	2	0	36	129	152	22	0	303	37	43	135	0	215	10	358	26	0	394	948
08:15 AM	29	15	2	0	46	103	168	33	0	304	40	34	101	0	175	12	304	23	0	339	864
08:30 AM	19	10	1	0	30	94	147	24	0	265	33	30	157	0	220	5	266	33	0	304	819
08:45 AM	12	12	2	0	26	113	165	28	0	306	26	32	126	0	184	7	323	29	0	359	875
Total	78	53	7	0	138	439	632	107	0	1178	136	139	519	0	794	34	1251	111	0	1396	3506
Grand Total	154	118	22	0	294	786	1305	197	0	2288	289	248	1006	0	1543	76	2494	237	0	2807	6932
Apprch %	52.4	40.1	7.5	0		34.4	57	8.6	0		18.7	16.1	65.2	0		2.7	88.8	8.4	0		
Total %	2.2	1.7	0.3	0	4.2	11.3	18.8	2.8	0	33	4.2	3.6	14.5	0	22.3	1.1	36	3.4	0	40.5	

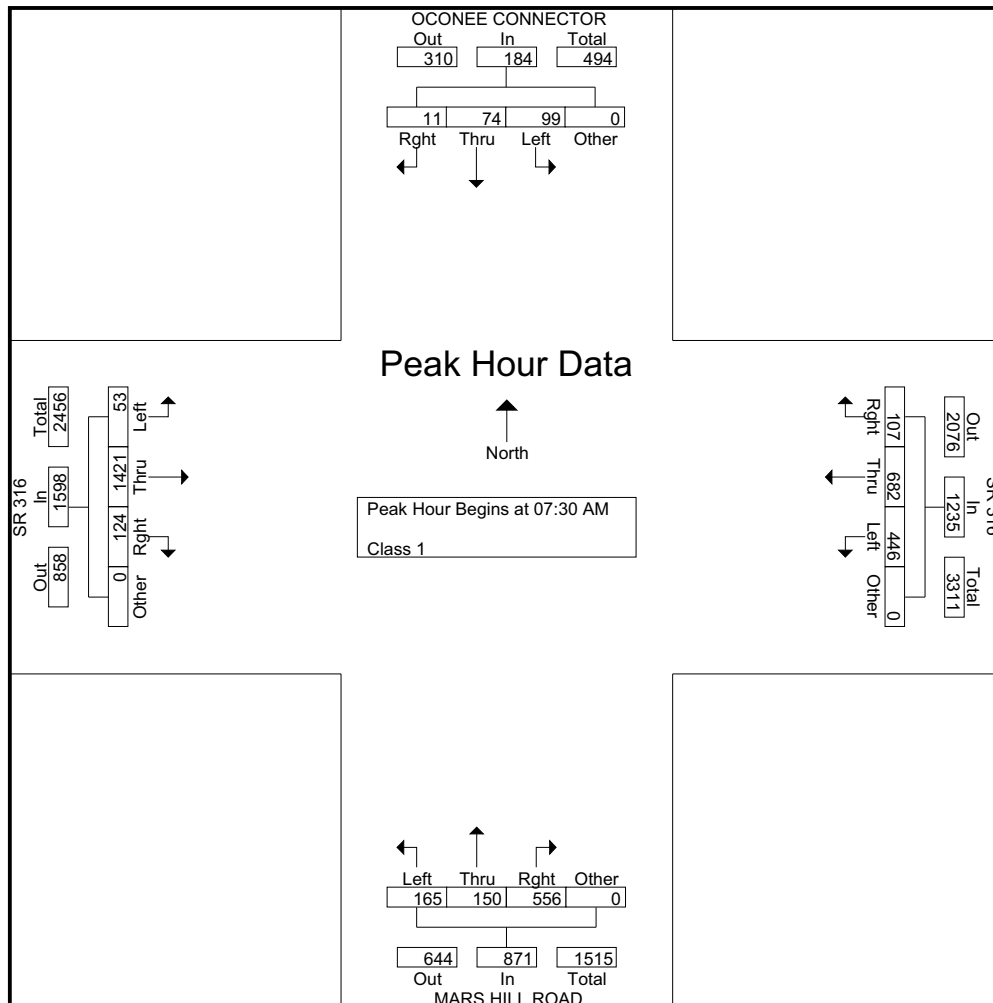


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 Page No : 2

Start Time	OCONEE CONNECTOR Southbound					SR 316 Westbound					MARS HILL ROAD Northbound					SR 316 Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	34	19	2	0	55	110	181	19	0	310	41	37	146	0	224	13	336	37	0	386	975
07:45 AM	18	24	5	0	47	104	181	33	0	318	47	36	174	0	257	18	423	38	0	479	1101
08:00 AM	18	16	2	0	36	129	152	22	0	303	37	43	135	0	215	10	358	26	0	394	948
08:15 AM	29	15	2	0	46	103	168	33	0	304	40	34	101	0	175	12	304	23	0	339	864
Total Volume	99	74	11	0	184	446	682	107	0	1235	165	150	556	0	871	53	1421	124	0	1598	3888
% App. Total	53.8	40.2	6	0		36.1	55.2	8.7	0		18.9	17.2	63.8	0		3.3	88.9	7.8	0		
PHF	.728	.771	.550	.000	.836	.864	.942	.811	.000	.971	.878	.872	.799	.000	.847	.736	.840	.816	.000	.834	.883



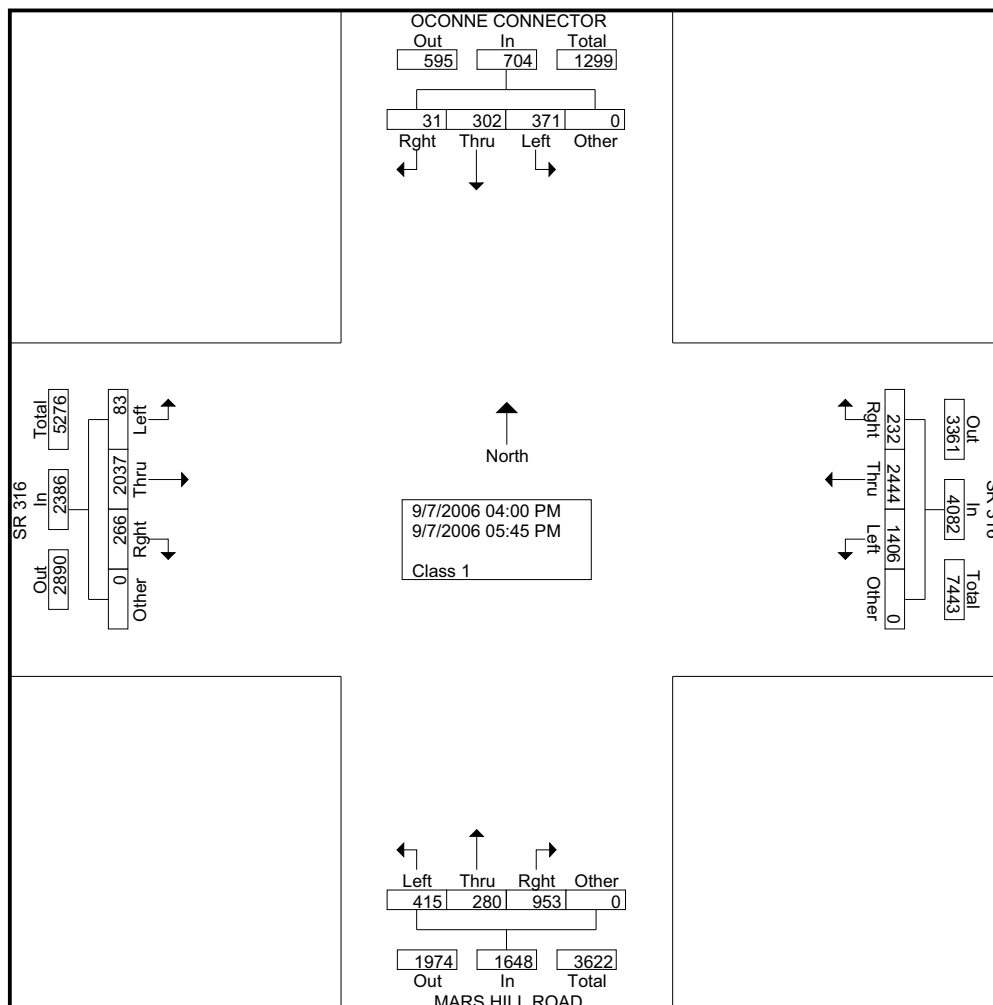
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Start Time	OCONNE CONNECTOR Southbound					SR 316 Westbound					MARS HILL ROAD Northbound					SR 316 Eastbound					Int. Total
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04:00 PM	29	29	4	0	62	138	307	24	0	469	40	40	106	0	186	11	236	28	0	275	992
04:15 PM	32	10	2	0	44	109	243	24	0	376	31	21	111	0	163	8	245	20	0	273	856
04:30 PM	32	28	2	0	62	157	289	30	0	476	69	30	100	0	199	8	264	32	0	304	1041
04:45 PM	71	55	6	0	132	177	293	33	0	503	52	55	105	0	212	10	234	26	0	270	1117
Total	164	122	14	0	300	581	1132	111	0	1824	192	146	422	0	760	37	979	106	0	1122	4006
05:00 PM	64	45	5	0	114	195	341	32	0	568	62	38	147	0	247	12	237	37	0	286	1215
05:15 PM	54	35	2	0	91	208	346	33	0	587	56	21	138	0	215	7	291	47	0	345	1238
05:30 PM	45	52	6	0	103	206	309	26	0	541	51	34	116	0	201	15	239	32	0	286	1131
05:45 PM	44	48	4	0	96	216	316	30	0	562	54	41	130	0	225	12	291	44	0	347	1230
Total	207	180	17	0	404	825	1312	121	0	2258	223	134	531	0	888	46	1058	160	0	1264	4814
Grand Total	371	302	31	0	704	1406	2444	232	0	4082	415	280	953	0	1648	83	2037	266	0	2386	8820
Apprch %	52.7	42.9	4.4	0		34.4	59.9	5.7	0		25.2	17	57.8	0		3.5	85.4	11.1	0		
Total %	4.2	3.4	0.4	0	8	15.9	27.7	2.6	0	46.3	4.7	3.2	10.8	0	18.7	0.9	23.1	3	0	27.1	

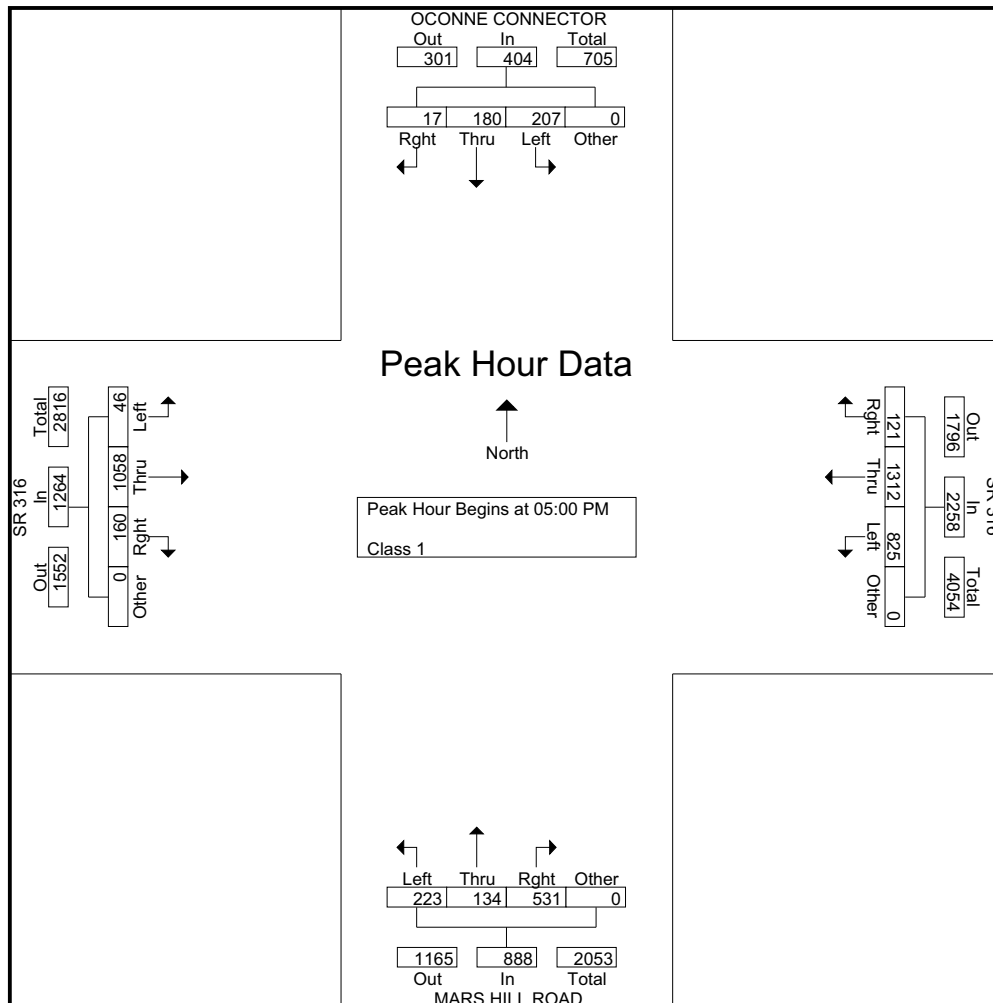


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 Site Code : 00000001
 Start Date : 9/7/2006
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Start Time	OCONNE CONNECTOR Southbound					SR 316 Westbound					MARS HILL ROAD Northbound					SR 316 Eastbound					Int. Total
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	64	45	5	0	114	195	341	32	0	568	62	38	147	0	247	12	237	37	0	286	1215
05:15 PM	54	35	2	0	91	208	346	33	0	587	56	21	138	0	215	7	291	47	0	345	1238
05:30 PM	45	52	6	0	103	206	309	26	0	541	51	34	116	0	201	15	239	32	0	286	1131
05:45 PM	44	48	4	0	96	216	316	30	0	562	54	41	130	0	225	12	291	44	0	347	1230
Total Volume	207	180	17	0	404	825	1312	121	0	2258	223	134	531	0	888	46	1058	160	0	1264	4814
% App. Total	51.2	44.6	4.2	0		36.5	58.1	5.4	0		25.1	15.1	59.8	0		3.6	83.7	12.7	0		
PHF	.809	.865	.708	.000	.886	.955	.948	.917	.000	.962	.899	.817	.903	.000	.899	.767	.909	.851	.000	.911	.972



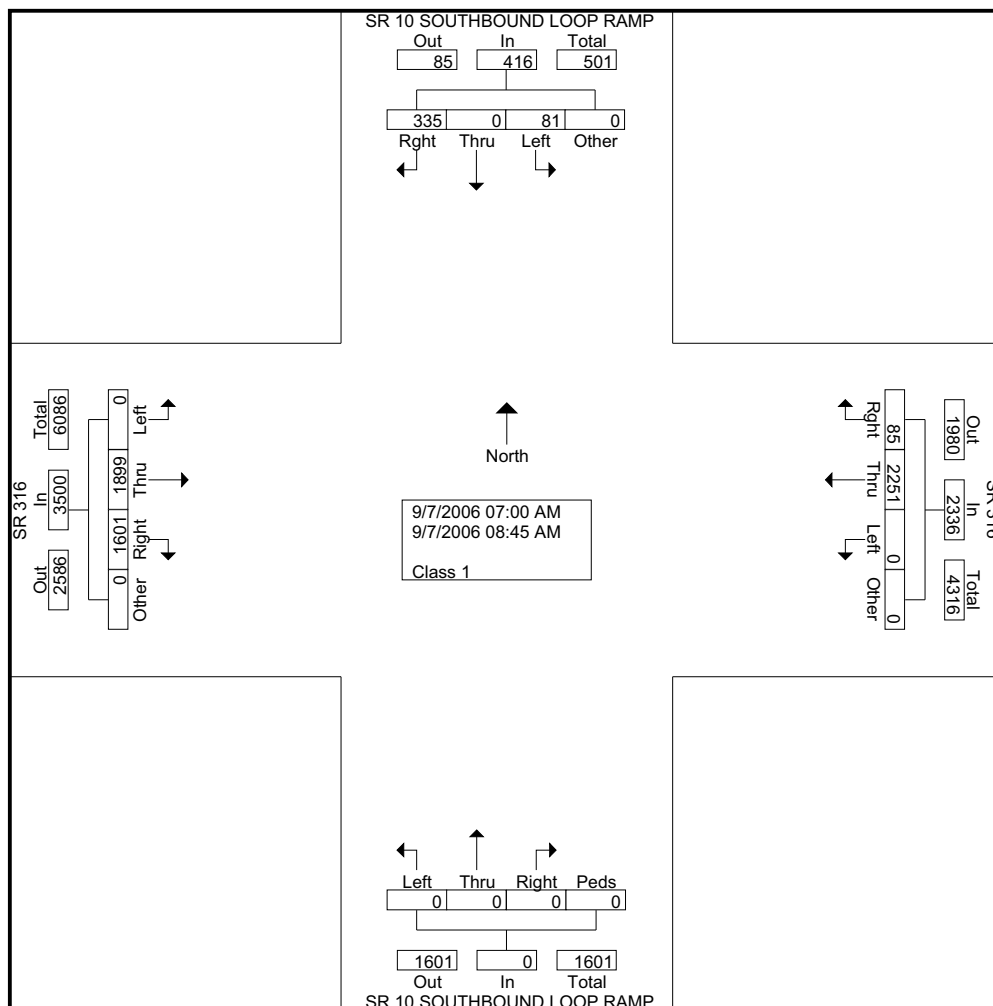
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File Name : SR10SBRamp&SR316AM
 Site Code : 00000002
 Start Date : 9/7/2006
 Page No : 1

Groups Printed- Class 1

Start Time	SR 10 SOUTHBOUND LOOP RAMP Southbound					SR 316 Westbound					SR 10 SOUTHBOUND LOOP RAMP Northbound					SR 316 Eastbound					Int. Total
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07:15 AM	5	0	36	0	41	0	276	9	0	285	0	0	0	0	0	0	269	276	0	545	871
07:30 AM	3	0	62	0	65	0	321	2	0	323	0	0	0	0	0	0	270	241	0	511	899
07:45 AM	11	0	43	0	54	0	366	15	0	381	0	0	0	0	0	0	285	215	0	500	935
Total	21	0	182	0	203	0	1174	32	0	1206	0	0	0	0	0	0	981	922	0	1903	3312
08:00 AM	10	0	54	0	64	0	319	9	0	328	0	0	0	0	0	0	222	154	0	376	768
08:15 AM	13	0	31	0	44	0	270	24	0	294	0	0	0	0	0	0	299	168	0	467	805
08:30 AM	18	0	35	0	53	0	288	12	0	300	0	0	0	0	0	0	218	180	0	398	751
08:45 AM	19	0	33	0	52	0	200	8	0	208	0	0	0	0	0	0	179	177	0	356	616
Total	60	0	153	0	213	0	1077	53	0	1130	0	0	0	0	0	0	918	679	0	1597	2940
Grand Total	81	0	335	0	416	0	2251	85	0	2336	0	0	0	0	0	0	1899	1601	0	3500	6252
Apprch %	19.5	0	80.5	0		0	96.4	3.6	0		0	0	0	0	0	0	54.3	45.7	0		
Total %	1.3	0	5.4	0	6.7	0	36	1.4	0	37.4	0	0	0	0	0	0	30.4	25.6	0	56	

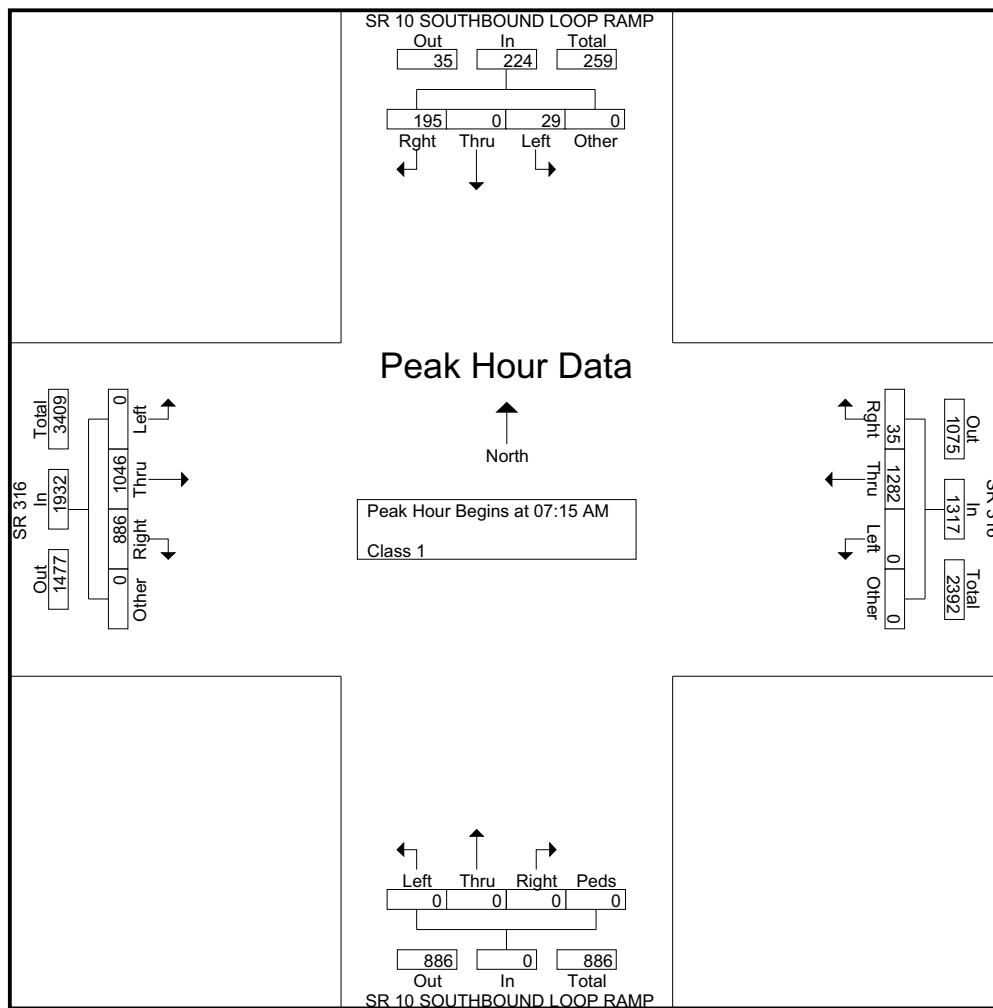


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File Name : SR10SBRamp&SR316AM
 Site Code : 00000002
 Start Date : 9/7/2006
 Page No : 2

Start Time	SR 10 SOUTHBOUND LOOP RAMP Southbound					SR 316 Westbound					SR 10 SOUTHBOUND LOOP RAMP Northbound					SR 316 Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	5	0	36	0	41	0	276	9	0	285	0	0	0	0	0	0	269	276	0	545	871
07:30 AM	3	0	62	0	65	0	321	2	0	323	0	0	0	0	0	0	270	241	0	511	899
07:45 AM	11	0	43	0	54	0	366	15	0	381	0	0	0	0	0	0	285	215	0	500	935
08:00 AM	10	0	54	0	64	0	319	9	0	328	0	0	0	0	0	0	222	154	0	376	768
Total Volume	29	0	195	0	224	0	1282	35	0	1317	0	0	0	0	0	0	1046	886	0	1932	3473
% App. Total	12.9	0	87.1	0		0	97.3	2.7	0		0	0	0	0	0	0	54.1	45.9	0		
PHF	.659	.000	.786	.000	.862	.000	.876	.583	.000	.864	.000	.000	.000	.000	.000	.000	.918	.803	.000	.886	.929



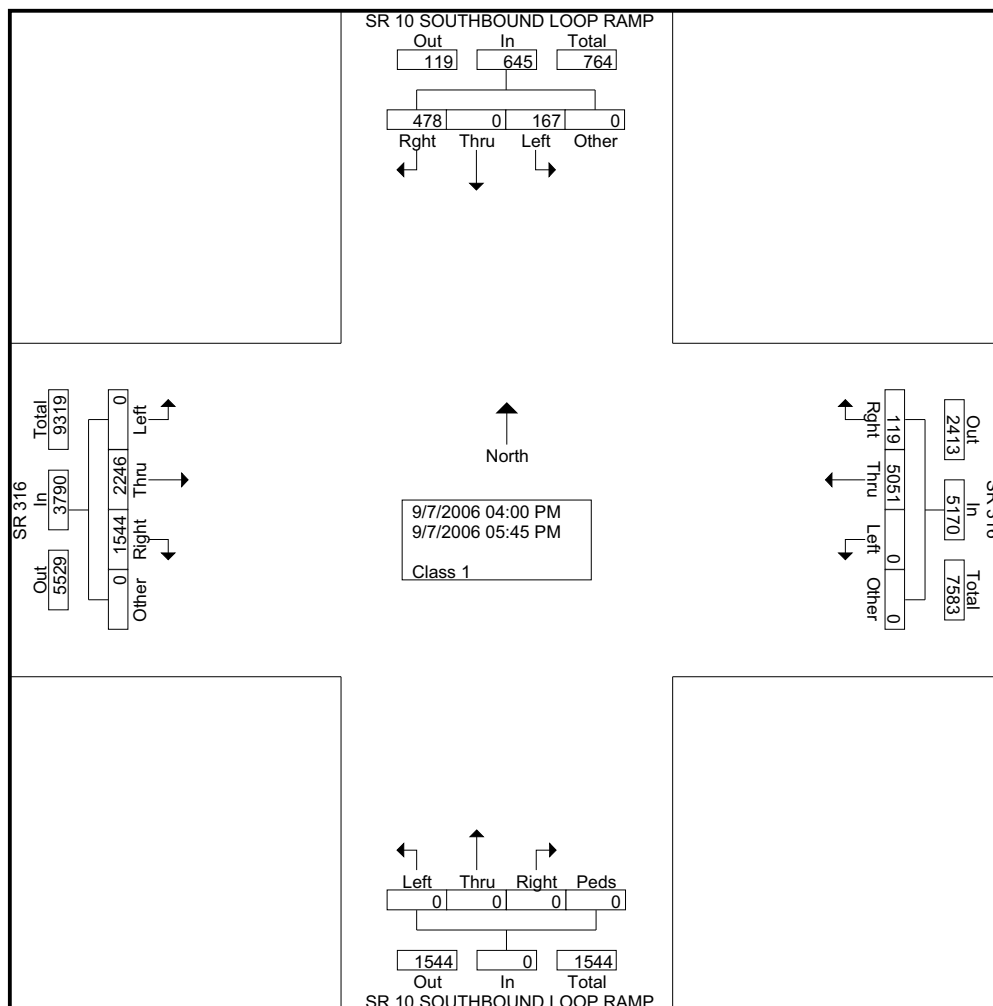
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : SR10SBRamp&SR316PM
 Site Code : 00000002
 Start Date : 9/7/2006
 Page No : 1

Groups Printed- Class 1

Start Time	SR 10 SOUTHBOUND LOOP RAMP Southbound					SR 316 Westbound					SR 10 SOUTHBOUND LOOP RAMP Northbound					SR 316 Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Other	App. Total	
04:00 PM	16	0	54	0	70	0	512	11	0	523	0	0	0	0	0	0	265	156	0	421	1014
04:15 PM	16	0	67	0	83	0	567	12	0	579	0	0	0	0	0	0	228	167	0	395	1057
04:30 PM	21	0	56	0	77	0	587	17	0	604	0	0	0	0	0	0	243	154	0	397	1078
04:45 PM	18	0	47	0	65	0	645	14	0	659	0	0	0	0	0	0	265	189	0	454	1178
Total	71	0	224	0	295	0	2311	54	0	2365	0	0	0	0	0	0	1001	666	0	1667	4327
05:00 PM	26	0	54	0	80	0	678	19	0	697	0	0	0	0	0	0	289	207	0	496	1273
05:15 PM	23	0	58	0	81	0	722	11	0	733	0	0	0	0	0	0	321	217	0	538	1352
05:30 PM	26	0	68	0	94	0	665	23	0	688	0	0	0	0	0	0	311	232	0	543	1325
05:45 PM	21	0	74	0	95	0	675	12	0	687	0	0	0	0	0	0	324	222	0	546	1328
Total	96	0	254	0	350	0	2740	65	0	2805	0	0	0	0	0	0	1245	878	0	2123	5278
Grand Total	167	0	478	0	645	0	5051	119	0	5170	0	0	0	0	0	0	2246	1544	0	3790	9605
Apprch %	25.9	0	74.1	0		0	97.7	2.3	0		0	0	0	0	0	0	59.3	40.7	0		
Total %	1.7	0	5	0	6.7	0	52.6	1.2	0	53.8	0	0	0	0	0	0	23.4	16.1	0	39.5	

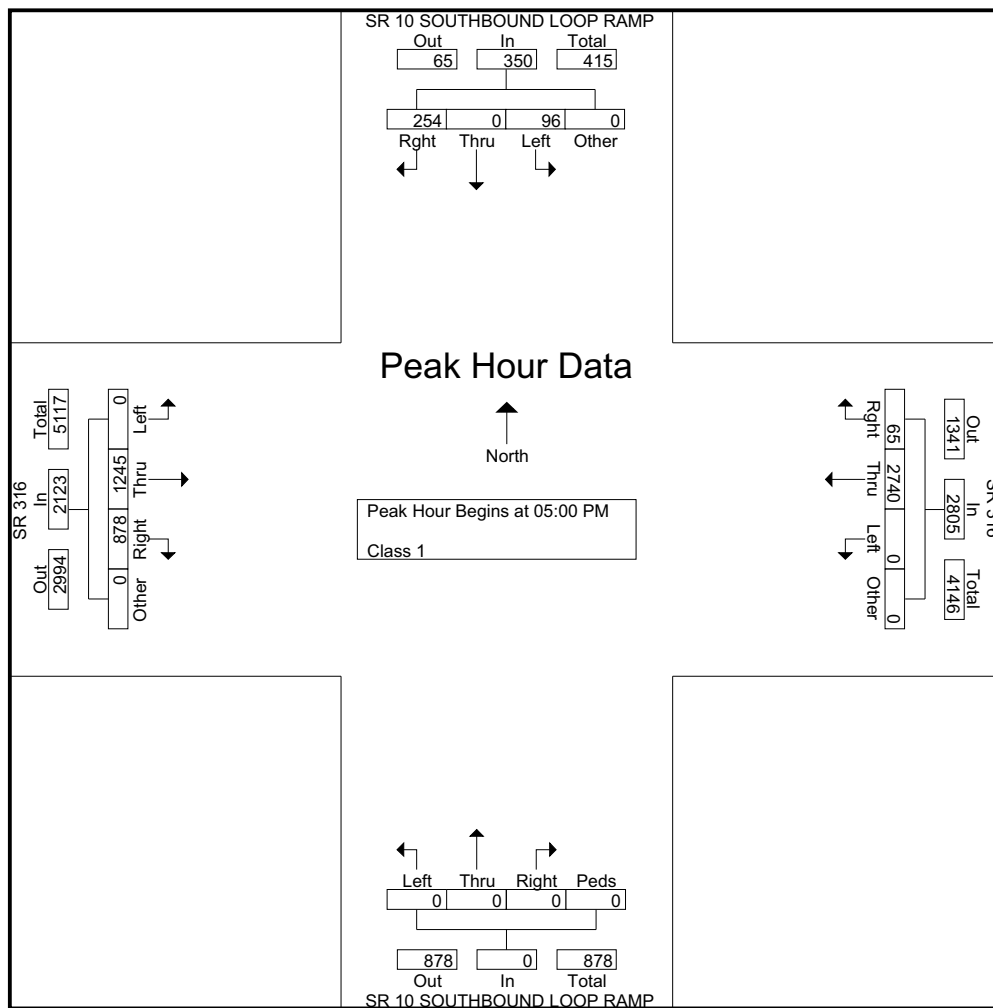


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : SR10SBRamp&SR316PM
 Site Code : 00000002
 Start Date : 9/7/2006
 Page No : 2

Start Time	SR 10 SOUTHBOUND LOOP RAMP Southbound					SR 316 Westbound					SR 10 SOUTHBOUND LOOP RAMP Northbound					SR 316 Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	26	0	54	0	80	0	678	19	0	697	0	0	0	0	0	0	289	207	0	496	1273
05:15 PM	23	0	58	0	81	0	722	11	0	733	0	0	0	0	0	0	321	217	0	538	1352
05:30 PM	26	0	68	0	94	0	665	23	0	688	0	0	0	0	0	0	311	232	0	543	1325
05:45 PM	21	0	74	0	95	0	675	12	0	687	0	0	0	0	0	0	324	222	0	546	1328
Total Volume	96	0	254	0	350	0	2740	65	0	2805	0	0	0	0	0	0	1245	878	0	2123	5278
% App. Total	27.4	0	72.6	0		0	97.7	2.3	0		0	0	0	0	0	0	58.6	41.4	0		
PHF	.923	.000	.858	.000	.921	.000	.949	.707	.000	.957	.000	.000	.000	.000	.000	.000	.961	.946	.000	.972	.976



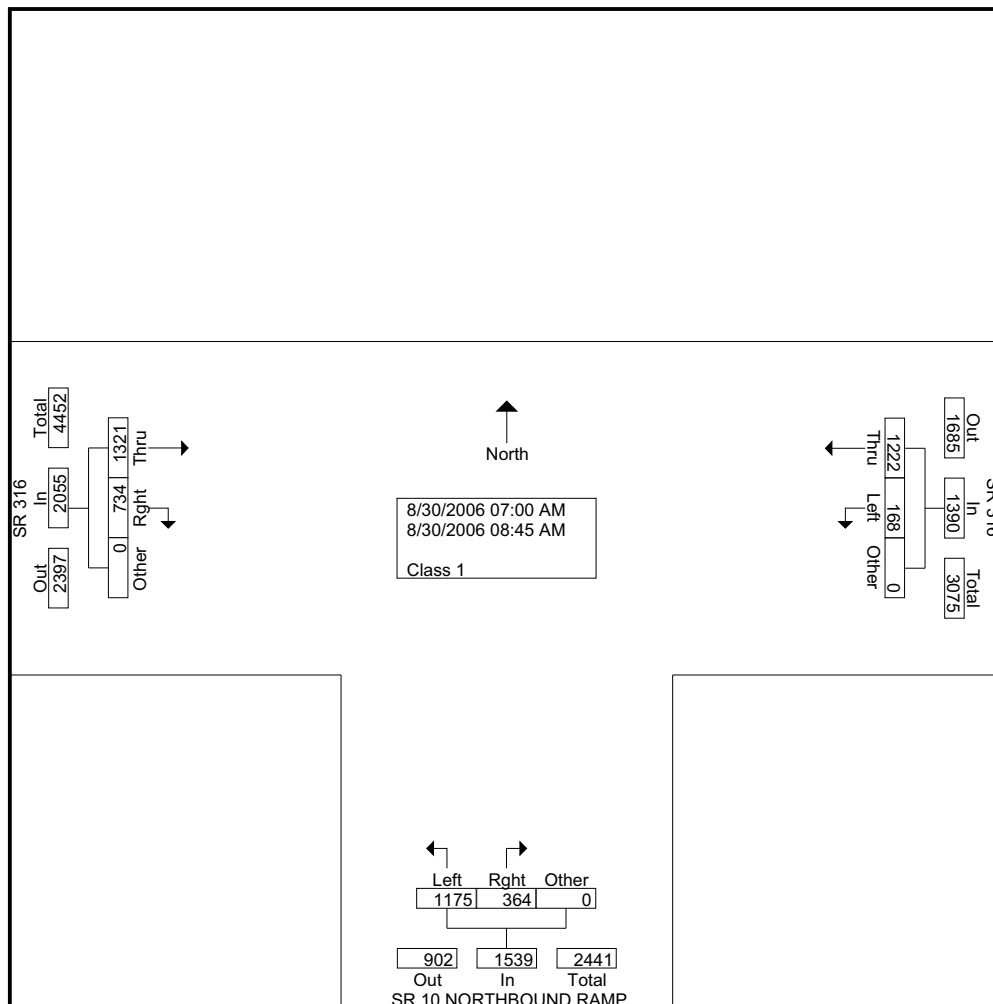
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : SR10NBRamp&SR316AM
 Site Code : 00000003
 Start Date : 8/30/2006
 Page No : 1

Groups Printed- Class 1

Start Time	SR 316 Westbound				SR 10 NORTHBOUND RAMP Northbound				SR 316 Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
07:00 AM	12	99	0	111	117	29	0	146	101	59	0	160	417
07:15 AM	19	134	0	153	148	34	0	182	112	67	0	179	514
07:30 AM	20	162	0	182	172	39	0	211	179	96	0	275	668
07:45 AM	23	165	0	188	209	66	0	275	190	125	0	315	778
Total	74	560	0	634	646	168	0	814	582	347	0	929	2377
08:00 AM	29	166	0	195	170	49	0	219	168	103	0	271	685
08:15 AM	27	150	0	177	119	38	0	157	166	106	0	272	606
08:30 AM	15	159	0	174	127	47	0	174	227	122	0	349	697
08:45 AM	23	187	0	210	113	62	0	175	178	56	0	234	619
Total	94	662	0	756	529	196	0	725	739	387	0	1126	2607
Grand Total	168	1222	0	1390	1175	364	0	1539	1321	734	0	2055	4984
Apprch %	12.1	87.9	0		76.3	23.7	0		64.3	35.7	0		
Total %	3.4	24.5	0	27.9	23.6	7.3	0	30.9	26.5	14.7	0	41.2	

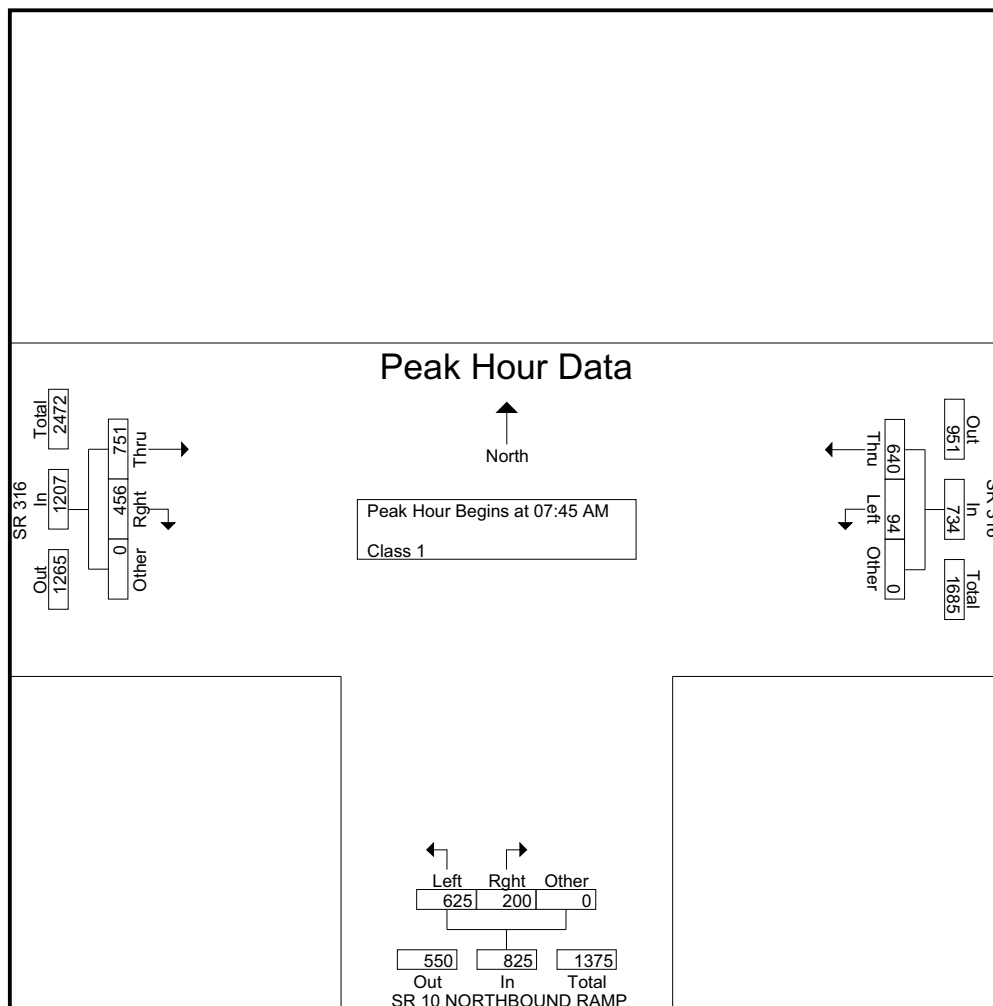


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : SR10NBRamp&SR316AM
 Site Code : 00000003
 Start Date : 8/30/2006
 Page No : 2

Start Time	SR 316 Westbound				SR 10 NORTHBOUND RAMP Northbound				SR 316 Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Rght	Other	App. Total	Thru	Rght	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	23	165	0	188	209	66	0	275	190	125	0	315	778
08:00 AM	29	166	0	195	170	49	0	219	168	103	0	271	685
08:15 AM	27	150	0	177	119	38	0	157	166	106	0	272	606
08:30 AM	15	159	0	174	127	47	0	174	227	122	0	349	697
Total Volume	94	640	0	734	625	200	0	825	751	456	0	1207	2766
% App. Total	12.8	87.2	0		75.8	24.2	0		62.2	37.8	0		
PHF	.810	.964	.000	.941	.748	.758	.000	.750	.827	.912	.000	.865	.889



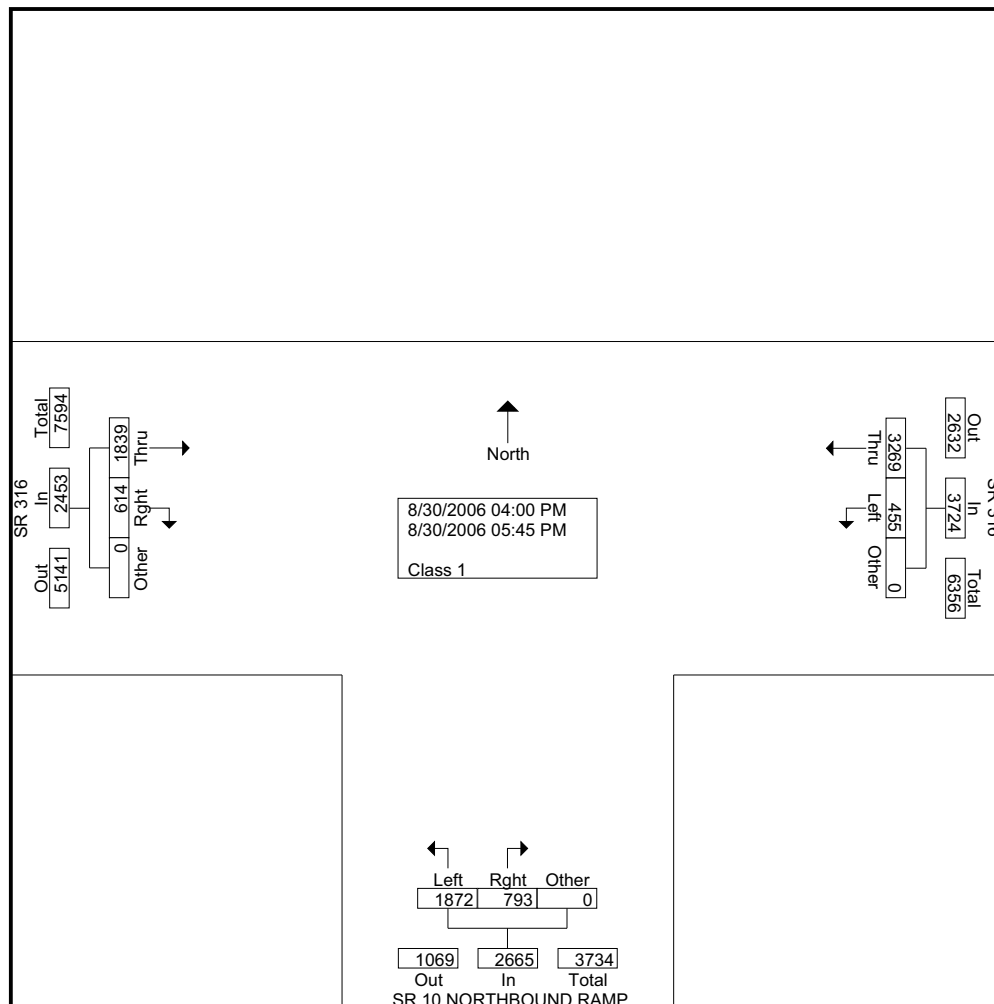
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : SR10NBRamp&SR316PM
 Site Code : 00000003
 Start Date : 8/30/2006
 Page No : 1

Groups Printed- Class 1

Start Time	SR 316 Westbound				SR 10 NORTHBOUND RAMP Northbound				SR 316 Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
04:00 PM	41	329	0	370	219	95	0	314	214	75	0	289	973
04:15 PM	47	386	0	433	201	72	0	273	172	76	0	248	954
04:30 PM	41	384	0	425	197	88	0	285	192	69	0	261	971
04:45 PM	44	443	0	487	213	92	0	305	239	50	0	289	1081
Total	173	1542	0	1715	830	347	0	1177	817	270	0	1087	3979
05:00 PM	69	409	0	478	283	122	0	405	221	111	0	332	1215
05:15 PM	90	443	0	533	272	113	0	385	264	86	0	350	1268
05:30 PM	65	424	0	489	249	106	0	355	265	77	0	342	1186
05:45 PM	58	451	0	509	238	105	0	343	272	70	0	342	1194
Total	282	1727	0	2009	1042	446	0	1488	1022	344	0	1366	4863
Grand Total	455	3269	0	3724	1872	793	0	2665	1839	614	0	2453	8842
Apprch %	12.2	87.8	0		70.2	29.8	0		75	25	0		
Total %	5.1	37	0	42.1	21.2	9	0	30.1	20.8	6.9	0	27.7	

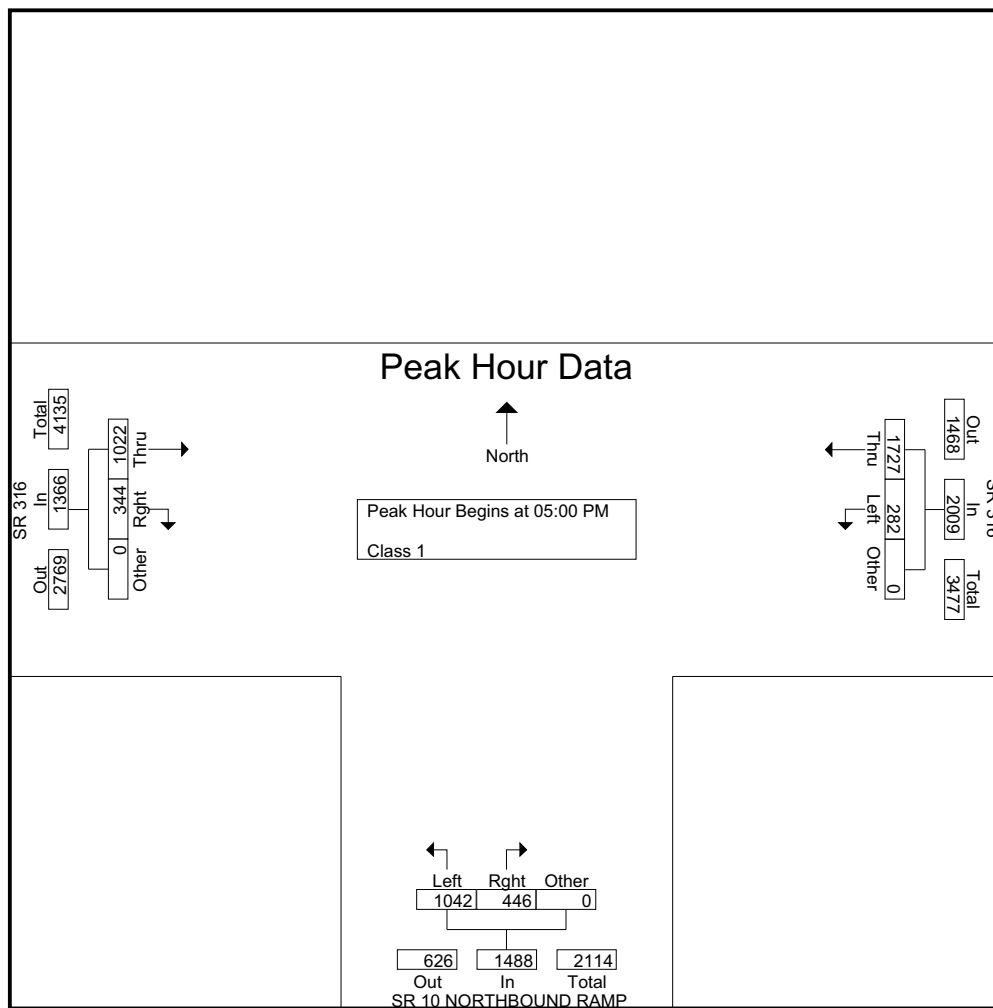


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1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : SR10NBRamp&SR316PM
 Site Code : 00000003
 Start Date : 8/30/2006
 Page No : 2

Start Time	SR 316 Westbound				SR 10 NORTHBOUND RAMP Northbound				SR 316 Eastbound				Int. Total
	Left	Thru	Other	App. Total	Left	Right	Other	App. Total	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	69	409	0	478	283	122	0	405	221	111	0	332	1215
05:15 PM	90	443	0	533	272	113	0	385	264	86	0	350	1268
05:30 PM	65	424	0	489	249	106	0	355	265	77	0	342	1186
05:45 PM	58	451	0	509	238	105	0	343	272	70	0	342	1194
Total Volume	282	1727	0	2009	1042	446	0	1488	1022	344	0	1366	4863
% App. Total	14	86	0		70	30	0		74.8	25.2	0		
PHF	.783	.957	.000	.942	.920	.914	.000	.919	.939	.775	.000	.976	.959



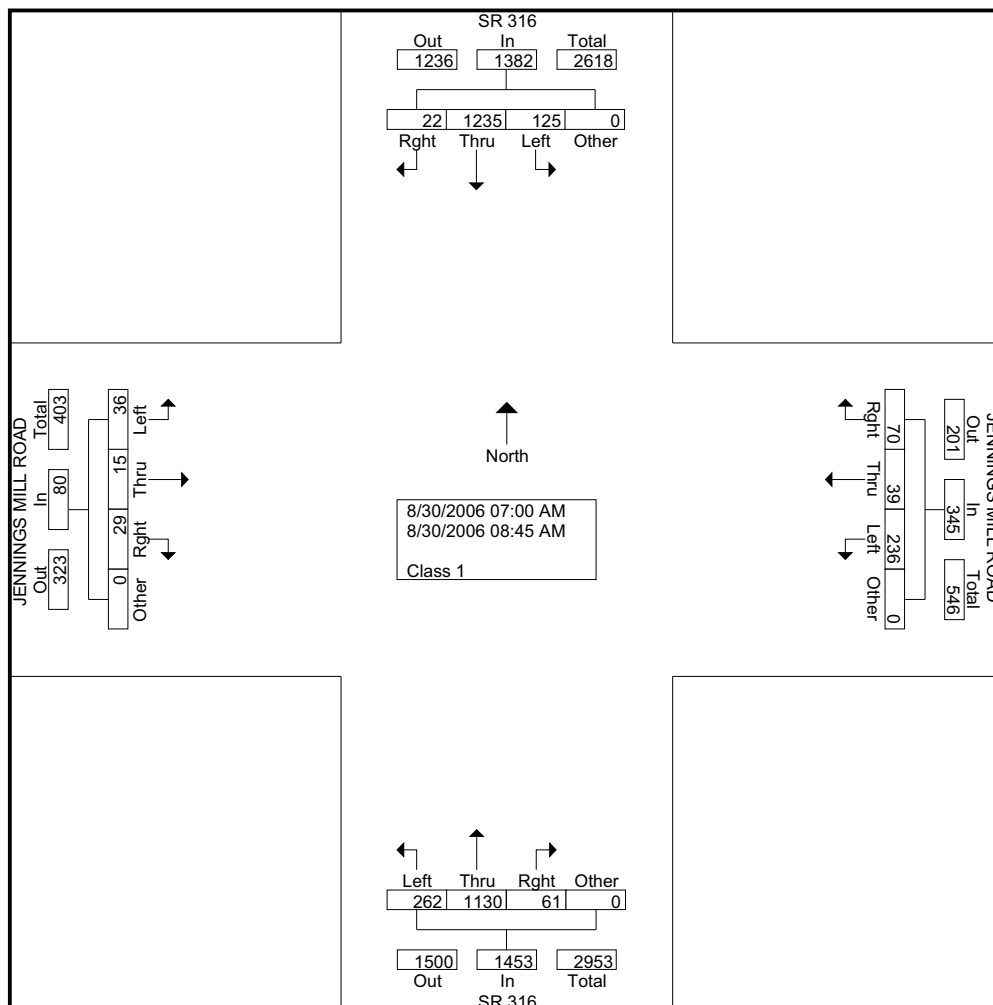
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : JenningsMill&SR316AM
 Site Code : 00000004
 Start Date : 8/30/2006
 Page No : 1

Groups Printed- Class 1

Start Time	SR 316 Southbound					JENNINGS MILL ROAD Westbound					SR 316 Northbound					JENNINGS MILL ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
07:00 AM	12	78	2	0	92	23	7	3	0	33	11	90	16	0	117	2	0	0	0	2	244
07:15 AM	15	134	3	0	152	31	5	6	0	42	29	106	9	0	144	2	1	3	0	6	344
07:30 AM	13	176	2	0	191	36	5	8	0	49	33	132	8	0	173	2	1	4	0	7	420
07:45 AM	15	156	4	0	175	26	8	5	0	39	38	148	7	0	193	1	3	3	0	7	414
Total	55	544	11	0	610	116	25	22	0	163	111	476	40	0	627	7	5	10	0	22	1422
08:00 AM	24	179	5	0	208	27	6	8	0	41	36	166	5	0	207	5	0	4	0	9	465
08:15 AM	11	168	0	0	179	28	1	12	0	41	41	167	5	0	213	7	2	11	0	20	453
08:30 AM	16	156	2	0	174	28	6	13	0	47	41	165	8	0	214	8	3	3	0	14	449
08:45 AM	19	188	4	0	211	37	1	15	0	53	33	156	3	0	192	9	5	1	0	15	471
Total	70	691	11	0	772	120	14	48	0	182	151	654	21	0	826	29	10	19	0	58	1838
Grand Total	125	1235	22	0	1382	236	39	70	0	345	262	1130	61	0	1453	36	15	29	0	80	3260
Apprch %	9	89.4	1.6	0		68.4	11.3	20.3	0		18	77.8	4.2	0		45	18.8	36.2	0		
Total %	3.8	37.9	0.7	0	42.4	7.2	1.2	2.1	0	10.6	8	34.7	1.9	0	44.6	1.1	0.5	0.9	0	2.5	

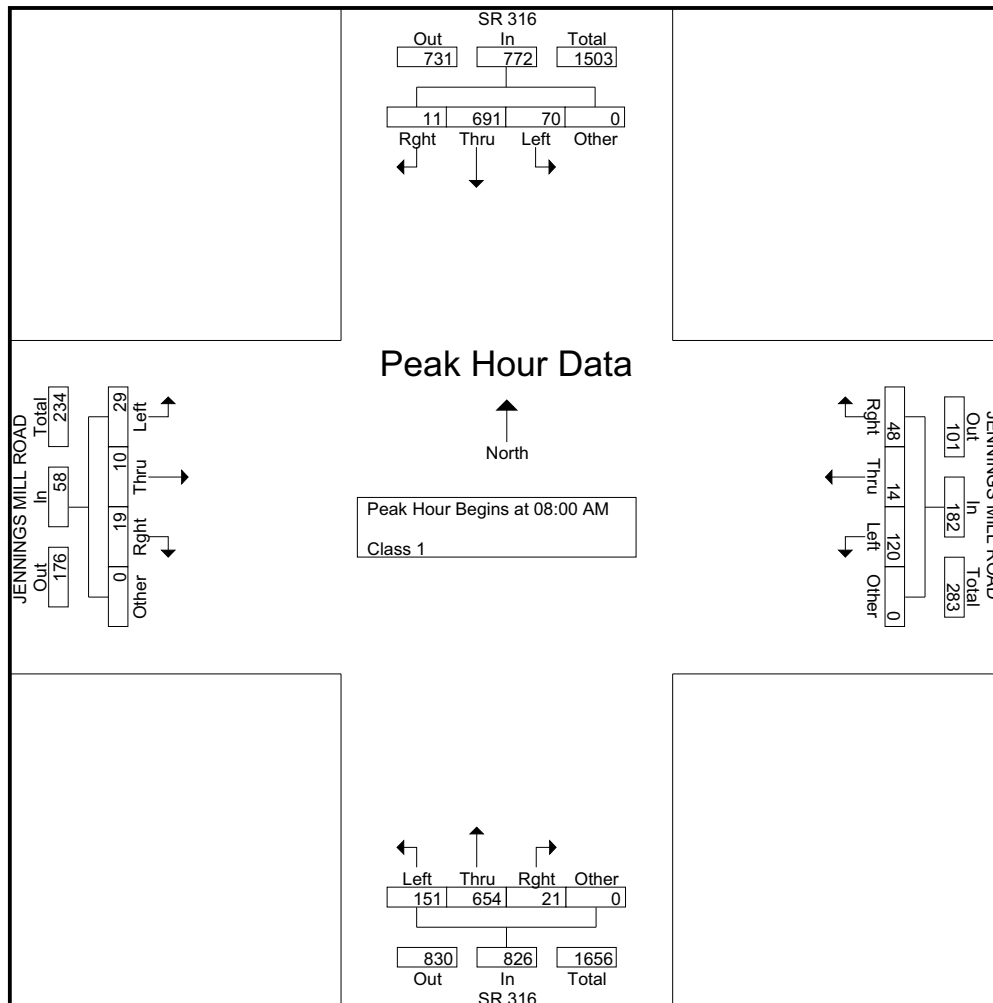


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : JenningsMill&SR316AM
 Site Code : 00000004
 Start Date : 8/30/2006
 Page No : 2

Start Time	SR 316 Southbound					JENNINGS MILL ROAD Westbound					SR 316 Northbound					JENNINGS MILL ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	24	179	5	0	208	27	6	8	0	41	36	166	5	0	207	5	0	4	0	9	465
08:15 AM	11	168	0	0	179	28	1	12	0	41	41	167	5	0	213	7	2	11	0	20	453
08:30 AM	16	156	2	0	174	28	6	13	0	47	41	165	8	0	214	8	3	3	0	14	449
08:45 AM	19	188	4	0	211	37	1	15	0	53	33	156	3	0	192	9	5	1	0	15	471
Total Volume	70	691	11	0	772	120	14	48	0	182	151	654	21	0	826	29	10	19	0	58	1838
% App. Total	9.1	89.5	1.4	0		65.9	7.7	26.4	0		18.3	79.2	2.5	0		50	17.2	32.8	0		
PHF	.729	.919	.550	.000	.915	.811	.583	.800	.000	.858	.921	.979	.656	.000	.965	.806	.500	.432	.000	.725	.976



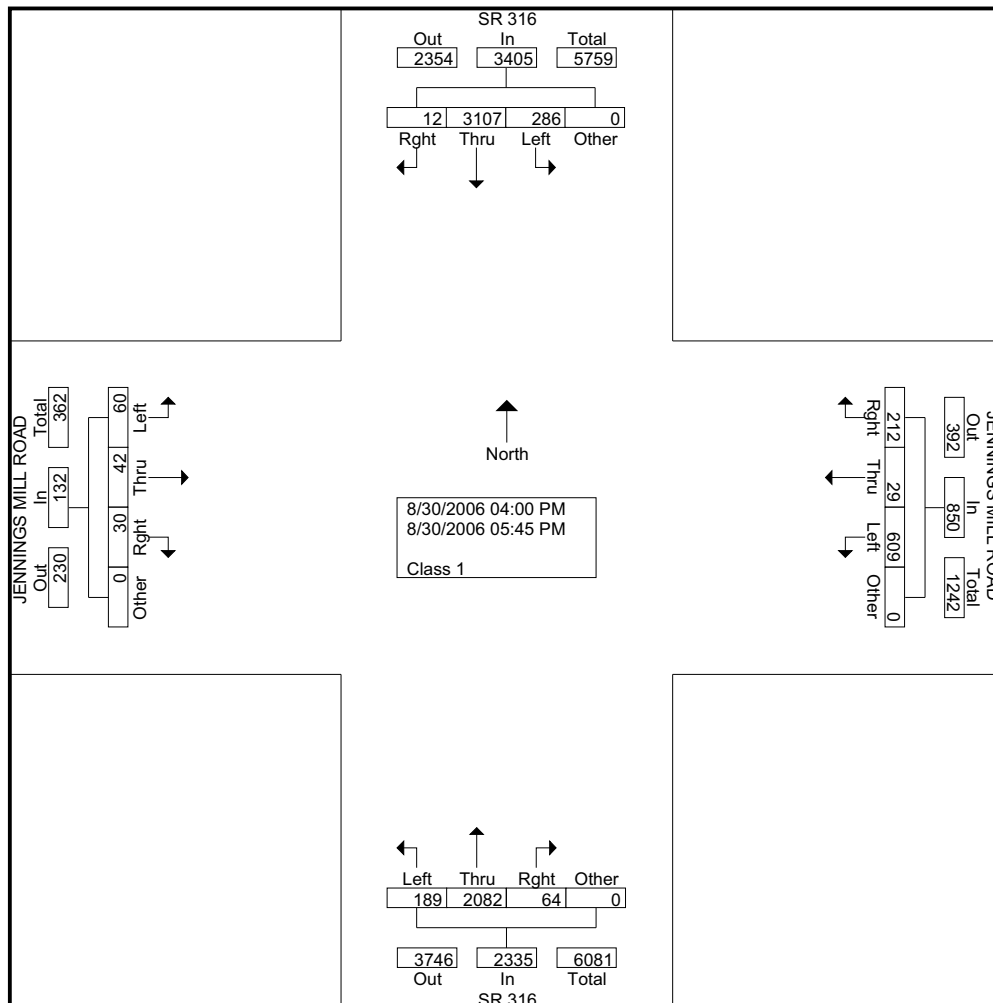
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : JenningsMill&SR316PM
 Site Code : 00000004
 Start Date : 8/30/2006
 Page No : 1

Groups Printed- Class 1

Start Time	SR 316 Southbound					JENNINGS MILL ROAD Westbound					SR 316 Northbound					JENNINGS MILL ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
04:00 PM	26	298	0	0	324	68	6	30	0	104	28	265	6	0	299	6	5	3	0	14	741
04:15 PM	32	355	1	0	388	84	5	28	0	117	24	231	1	0	256	7	5	3	0	15	776
04:30 PM	38	376	2	0	416	61	4	27	0	92	24	256	9	0	289	7	4	7	0	18	815
04:45 PM	35	400	3	0	438	76	3	27	0	106	16	288	8	0	312	10	5	4	0	19	875
Total	131	1429	6	0	1566	289	18	112	0	419	92	1040	24	0	1156	30	19	17	0	66	3207
05:00 PM	34	389	1	0	424	72	1	36	0	109	19	231	7	0	257	8	3	4	0	15	805
05:15 PM	38	432	2	0	472	86	2	23	0	111	29	278	11	0	318	7	9	2	0	18	919
05:30 PM	43	434	1	0	478	85	3	21	0	109	28	267	10	0	305	8	6	3	0	17	909
05:45 PM	40	423	2	0	465	77	5	20	0	102	21	266	12	0	299	7	5	4	0	16	882
Total	155	1678	6	0	1839	320	11	100	0	431	97	1042	40	0	1179	30	23	13	0	66	3515
Grand Total	286	3107	12	0	3405	609	29	212	0	850	189	2082	64	0	2335	60	42	30	0	132	6722
Apprch %	8.4	91.2	0.4	0		71.6	3.4	24.9	0		8.1	89.2	2.7	0		45.5	31.8	22.7	0		
Total %	4.3	46.2	0.2	0	50.7	9.1	0.4	3.2	0	12.6	2.8	31	1	0	34.7	0.9	0.6	0.4	0	2	

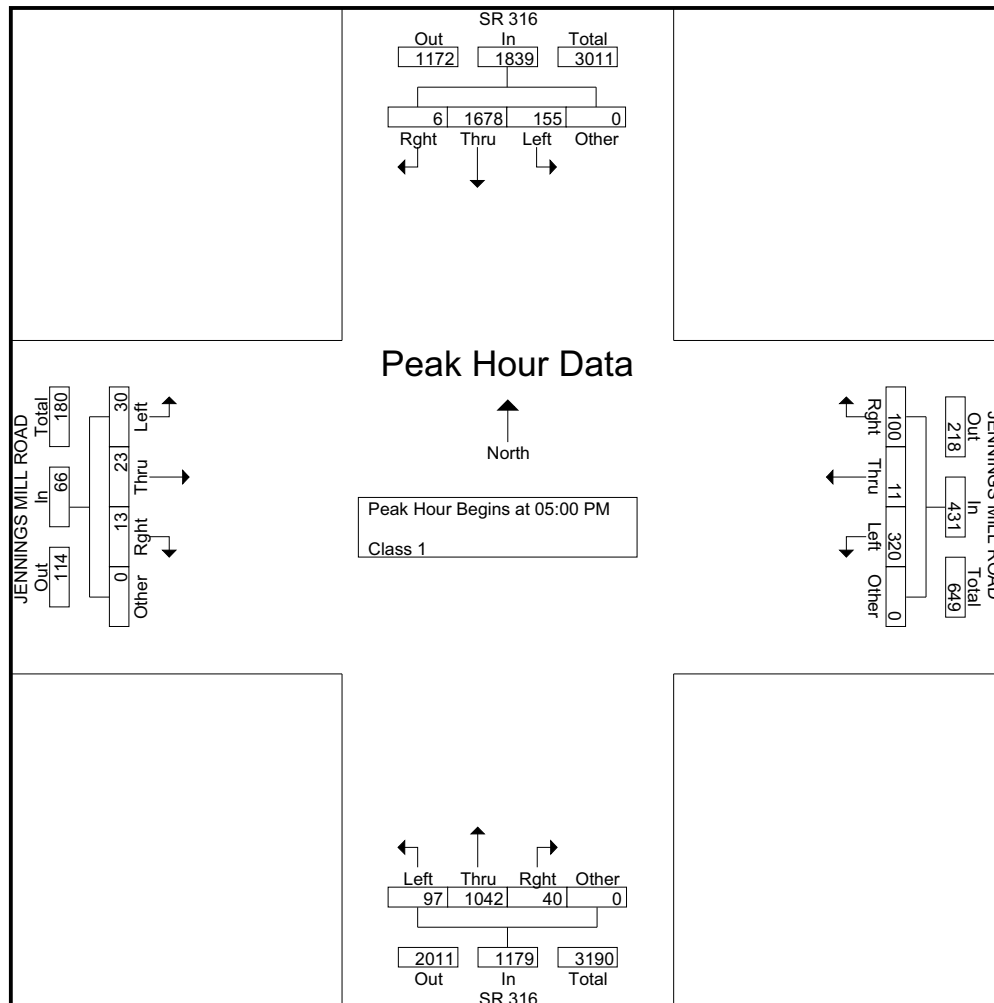


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : JenningsMill&SR316PM
 Site Code : 00000004
 Start Date : 8/30/2006
 Page No : 2

Start Time	SR 316 Southbound					JENNINGS MILL ROAD Westbound					SR 316 Northbound					JENNINGS MILL ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	34	389	1	0	424	72	1	36	0	109	19	231	7	0	257	8	3	4	0	15	805
05:15 PM	38	432	2	0	472	86	2	23	0	111	29	278	11	0	318	7	9	2	0	18	919
05:30 PM	43	434	1	0	478	85	3	21	0	109	28	267	10	0	305	8	6	3	0	17	909
05:45 PM	40	423	2	0	465	77	5	20	0	102	21	266	12	0	299	7	5	4	0	16	882
Total Volume	155	1678	6	0	1839	320	11	100	0	431	97	1042	40	0	1179	30	23	13	0	66	3515
% App. Total	8.4	91.2	0.3	0		74.2	2.6	23.2	0		8.2	88.4	3.4	0		45.5	34.8	19.7	0		
PHF	.901	.967	.750	.000	.962	.930	.550	.694	.000	.971	.836	.937	.833	.000	.927	.938	.639	.813	.000	.917	.956



All Traffic Data Services, Inc.

1336 Farmer Road

Conyers, Ga. 30012

Ph. 404-374-1283

File Name : OconeeConn&DanielsBridgeAM

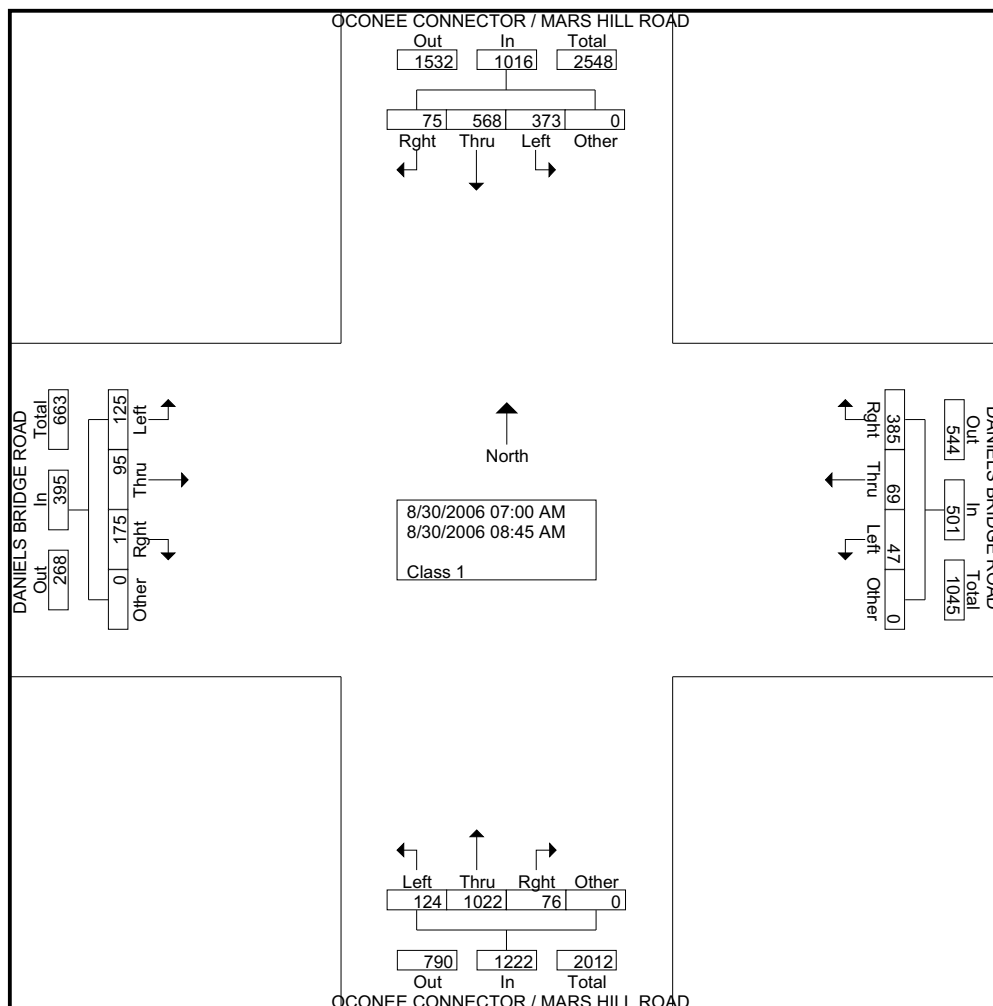
Site Code : 00000005

Start Date : 8/30/2006

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Groups Printed- Class 1

Start Time	OCONEE CONNECTOR / MARS HILL ROAD Southbound					DANIELS BRIDGE ROAD Westbound					OCONEE CONNECTOR / MARS HILL ROAD Northbound					DANIELS BRIDGE ROAD Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	
07:00 AM	65	69	8	0	142	8	9	56	0	73	12	111	9	0	132	11	9	16	0	36	383
07:15 AM	60	77	9	0	146	5	12	60	0	77	9	127	12	0	148	18	21	19	0	58	429
07:30 AM	50	64	10	0	124	12	10	68	0	90	10	131	18	0	159	17	18	20	0	55	428
07:45 AM	55	83	17	0	155	5	4	51	0	60	15	156	13	0	184	29	16	31	0	76	475
Total	230	293	44	0	567	30	35	235	0	300	46	525	52	0	623	75	64	86	0	225	1715
08:00 AM	37	76	8	0	121	3	7	49	0	59	21	148	6	0	175	19	9	19	0	47	402
08:15 AM	38	67	10	0	115	5	13	42	0	60	20	104	7	0	131	13	11	26	0	50	356
08:30 AM	36	71	5	0	112	4	5	32	0	41	16	123	5	0	144	9	4	23	0	36	333
08:45 AM	32	61	8	0	101	5	9	27	0	41	21	122	6	0	149	9	7	21	0	37	328
Total	143	275	31	0	449	17	34	150	0	201	78	497	24	0	599	50	31	89	0	170	1419
Grand Total	373	568	75	0	1016	47	69	385	0	501	124	1022	76	0	1222	125	95	175	0	395	3134
Apprch %	36.7	55.9	7.4	0		9.4	13.8	76.8	0		10.1	83.6	6.2	0		31.6	24.1	44.3	0		
Total %	11.9	18.1	2.4	0	32.4	1.5	2.2	12.3	0	16	4	32.6	2.4	0	39	4	3	5.6	0	12.6	



All Traffic Data Services, Inc.

1336 Farmer Road

Conyers, Ga. 30012

Ph. 404-374-1283

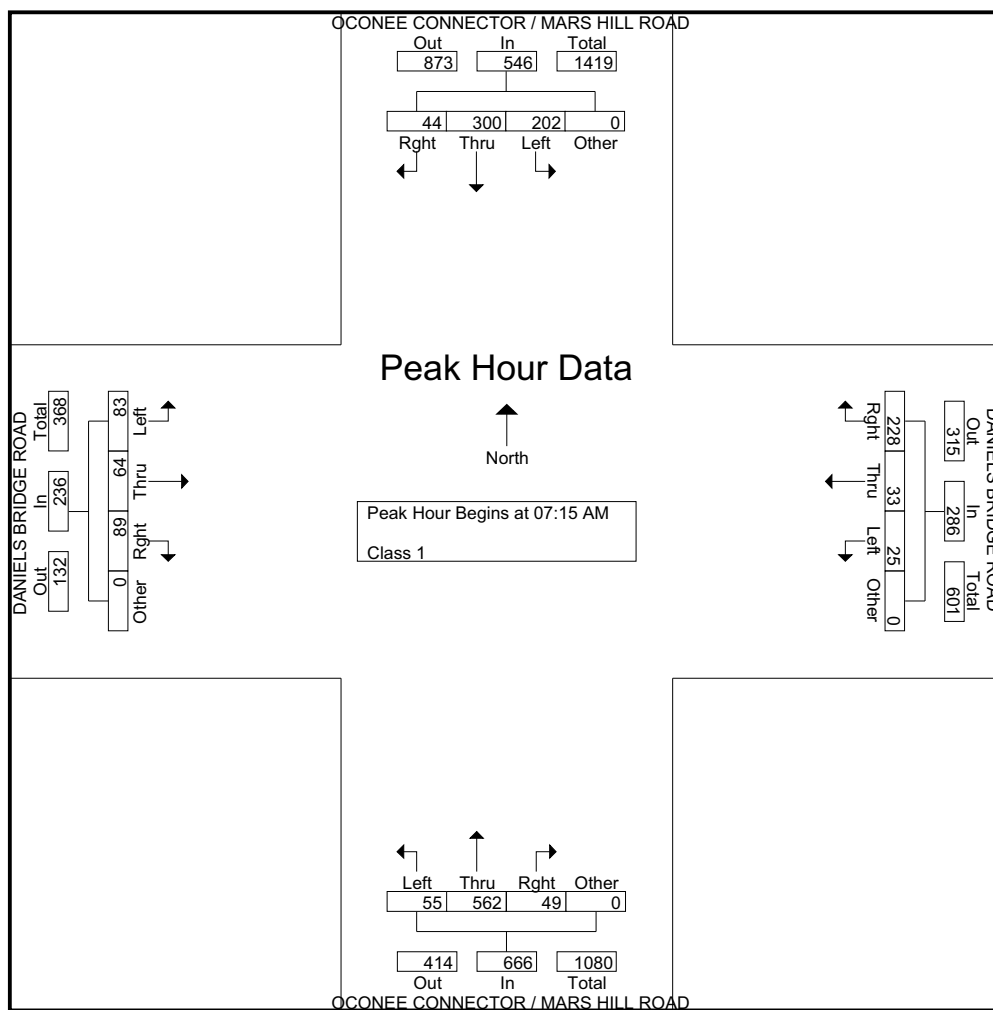
File Name : OconeeConn&DanielsBridgeAM

Site Code : 00000005

Start Date : 8/30/2006

Page No : 2

Start Time	OCONEE CONNECTOR / MARS HILL ROAD Southbound					DANIELS BRIDGE ROAD Westbound					OCONEE CONNECTOR / MARS HILL ROAD Northbound					DANIELS BRIDGE ROAD Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	60	77	9	0	146	5	12	60	0	77	9	127	12	0	148	18	21	19	0	58	429
07:30 AM	50	64	10	0	124	12	10	68	0	90	10	131	18	0	159	17	18	20	0	55	428
07:45 AM	55	83	17	0	155	5	4	51	0	60	15	156	13	0	184	29	16	31	0	76	475
08:00 AM	37	76	8	0	121	3	7	49	0	59	21	148	6	0	175	19	9	19	0	47	402
Total Volume	202	300	44	0	546	25	33	228	0	286	55	562	49	0	666	83	64	89	0	236	1734
% App. Total	37	54.9	8.1	0		8.7	11.5	79.7	0		8.3	84.4	7.4	0		35.2	27.1	37.7	0		
PHF	.842	.904	.647	.000	.881	.521	.688	.838	.000	.794	.655	.901	.681	.000	.905	.716	.762	.718	.000	.776	.913



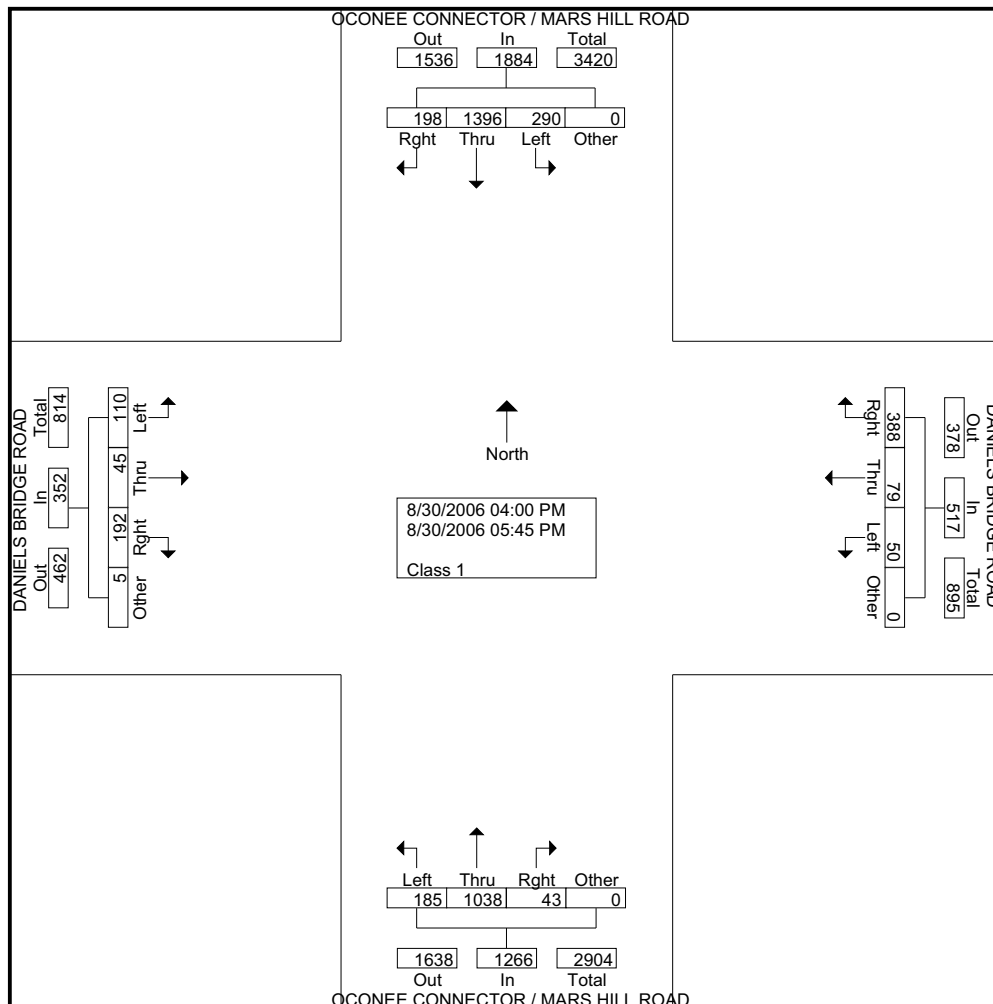
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : OconeeConn&DanielsBridgePM
 Site Code : 00000005
 Start Date : 8/30/2006
 Page No : 1

Groups Printed- Class 1

Start Time	OCONEE CONNECTOR / MARS HILL ROAD Southbound					DANIELS BRIDGE ROAD Westbound					OCONEE CONNECTOR / MARS HILL ROAD Northbound					DANIELS BRIDGE ROAD Eastbound					Int. Total
	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	
04:00 PM	39	129	19	0	187	8	9	38	0	55	29	141	7	0	177	11	6	24	0	41	460
04:15 PM	32	91	23	0	146	6	7	43	0	56	18	105	5	0	128	17	10	27	2	56	386
04:30 PM	35	134	21	0	190	4	6	30	0	40	13	96	8	0	117	12	4	20	0	36	383
04:45 PM	41	188	21	0	250	4	7	33	0	44	6	92	3	0	101	11	5	14	0	30	425
Total	147	542	84	0	773	22	29	144	0	195	66	434	23	0	523	51	25	85	2	163	1654
05:00 PM	23	197	32	0	252	15	19	93	0	127	18	134	8	0	160	26	1	23	1	51	590
05:15 PM	48	211	32	0	291	3	3	56	0	62	18	160	3	0	181	11	4	22	0	37	571
05:30 PM	38	232	25	0	295	7	8	45	0	60	45	155	0	0	200	13	9	32	2	56	611
05:45 PM	34	214	25	0	273	3	20	50	0	73	38	155	9	0	202	9	6	30	0	45	593
Total	143	854	114	0	1111	28	50	244	0	322	119	604	20	0	743	59	20	107	3	189	2365
Grand Total	290	1396	198	0	1884	50	79	388	0	517	185	1038	43	0	1266	110	45	192	5	352	4019
Apprch %	15.4	74.1	10.5	0		9.7	15.3	75	0		14.6	82	3.4	0		31.2	12.8	54.5	1.4		
Total %	7.2	34.7	4.9	0	46.9	1.2	2	9.7	0	12.9	4.6	25.8	1.1	0	31.5	2.7	1.1	4.8	0.1	8.8	

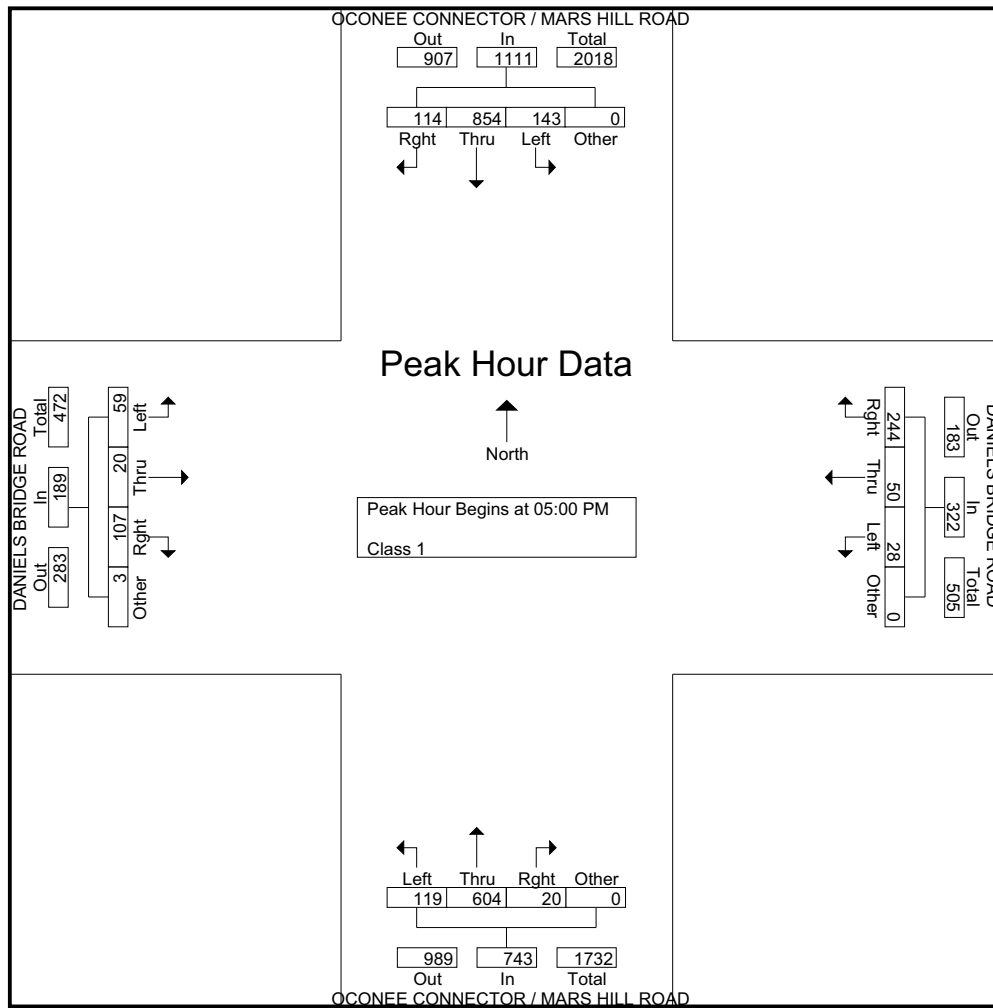


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : OconeeConn&DanielsBridgePM
 Site Code : 00000005
 Start Date : 8/30/2006
 Page No : 2

Start Time	OCONEE CONNECTOR / MARS HILL ROAD Southbound					DANIELS BRIDGE ROAD Westbound					OCONEE CONNECTOR / MARS HILL ROAD Northbound					DANIELS BRIDGE ROAD Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	23	197	32	0	252	15	19	93	0	127	18	134	8	0	160	26	1	23	1	51	590
05:15 PM	48	211	32	0	291	3	3	56	0	62	18	160	3	0	181	11	4	22	0	37	571
05:30 PM	38	232	25	0	295	7	8	45	0	60	45	155	0	0	200	13	9	32	2	56	611
05:45 PM	34	214	25	0	273	3	20	50	0	73	38	155	9	0	202	9	6	30	0	45	593
Total Volume	143	854	114	0	1111	28	50	244	0	322	119	604	20	0	743	59	20	107	3	189	2365
% App. Total	12.9	76.9	10.3	0		8.7	15.5	75.8	0		16	81.3	2.7	0		31.2	10.6	56.6	1.6		
PHF	.745	.920	.891	.000	.942	.467	.625	.656	.000	.634	.661	.944	.556	.000	.920	.567	.556	.836	.375	.844	.968



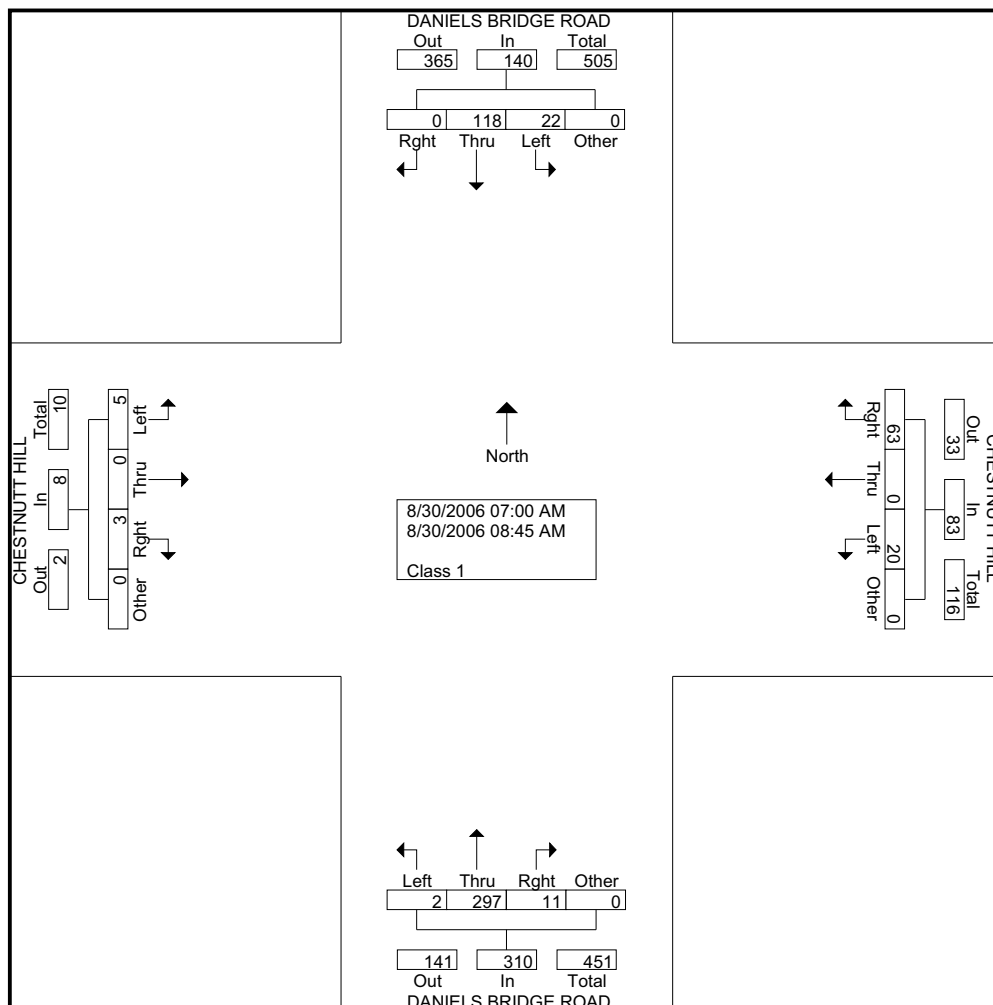
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : DanielsBridge&ChestnuttAM
 Site Code : 00000006
 Start Date : 8/30/2006
 Page No : 1

Groups Printed- Class 1

Start Time	DANIELS BRIDGE ROAD Southbound					CHESTNUTT HILL Westbound					DANIELS BRIDGE ROAD Northbound					CHESTNUTT HILL Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
07:00 AM	2	4	0	0	6	0	0	4	0	4	0	13	0	0	13	1	0	0	0	1	24
07:15 AM	2	12	0	0	14	3	0	9	0	12	0	32	0	0	32	1	0	0	0	1	59
07:30 AM	0	15	0	0	15	6	0	12	0	18	0	55	1	0	56	1	0	3	0	4	93
07:45 AM	2	21	0	0	23	2	0	12	0	14	0	85	5	0	90	1	0	0	0	1	128
Total	6	52	0	0	58	11	0	37	0	48	0	185	6	0	191	4	0	3	0	7	304
08:00 AM	3	19	0	0	22	7	0	6	0	13	1	35	2	0	38	1	0	0	0	1	74
08:15 AM	1	9	0	0	10	0	0	3	0	3	1	31	1	0	33	0	0	0	0	0	46
08:30 AM	9	16	0	0	25	2	0	11	0	13	0	27	1	0	28	0	0	0	0	0	66
08:45 AM	3	22	0	0	25	0	0	6	0	6	0	19	1	0	20	0	0	0	0	0	51
Total	16	66	0	0	82	9	0	26	0	35	2	112	5	0	119	1	0	0	0	1	237
Grand Total	22	118	0	0	140	20	0	63	0	83	2	297	11	0	310	5	0	3	0	8	541
Apprch %	15.7	84.3	0	0		24.1	0	75.9	0		0.6	95.8	3.5	0		62.5	0	37.5	0		
Total %	4.1	21.8	0	0	25.9	3.7	0	11.6	0	15.3	0.4	54.9	2	0	57.3	0.9	0	0.6	0	1.5	

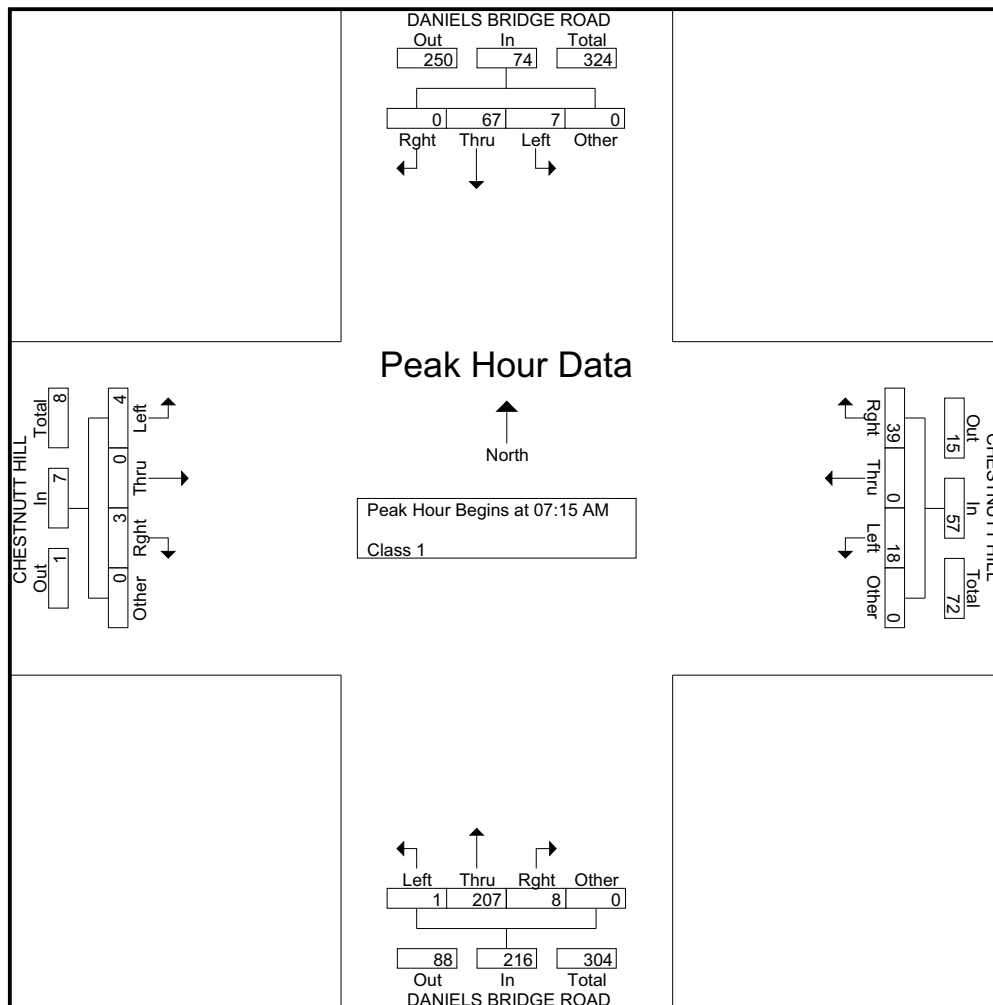


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : DanielsBridge&ChestnuttAM
 Site Code : 00000006
 Start Date : 8/30/2006
 Page No : 2

Start Time	DANIELS BRIDGE ROAD Southbound					CHESTNUTT HILL Westbound					DANIELS BRIDGE ROAD Northbound					CHESTNUTT HILL Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	2	12	0	0	14	3	0	9	0	12	0	32	0	0	32	1	0	0	0	1	59
07:30 AM	0	15	0	0	15	6	0	12	0	18	0	55	1	0	56	1	0	3	0	4	93
07:45 AM	2	21	0	0	23	2	0	12	0	14	0	85	5	0	90	1	0	0	0	1	128
08:00 AM	3	19	0	0	22	7	0	6	0	13	1	35	2	0	38	1	0	0	0	1	74
Total Volume	7	67	0	0	74	18	0	39	0	57	1	207	8	0	216	4	0	3	0	7	354
% App. Total	9.5	90.5	0	0		31.6	0	68.4	0		0.5	95.8	3.7	0		57.1	0	42.9	0		
PHF	.583	.798	.000	.000	.804	.643	.000	.813	.000	.792	.250	.609	.400	.000	.600	1.000					



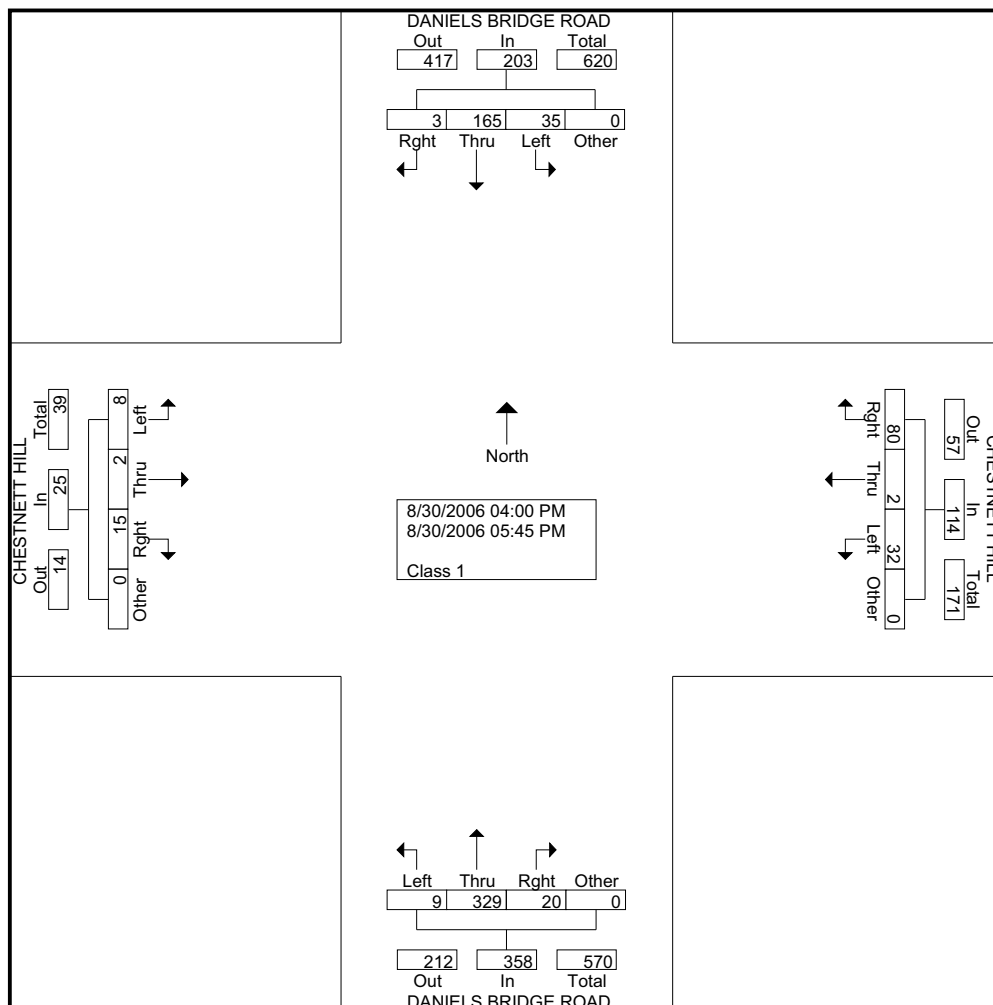
All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : DanielsBridge&ChestnuttPM
 Site Code : 00000000
 Start Date : 8/30/2006
 Page No : 1

Groups Printed- Class 1

Start Time	DANIELS BRIDGE ROAD Southbound					CHESTNETT HILL Westbound					DANIELS BRIDGE ROAD Northbound					CHESTNETT HILL Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
04:00 PM	4	11	0	0	15	3	0	8	0	11	2	24	4	0	30	1	0	0	0	1	57
04:15 PM	5	14	1	0	20	2	1	9	0	12	1	32	2	0	35	0	0	2	0	2	69
04:30 PM	3	23	0	0	26	5	0	11	0	16	2	44	0	0	46	1	0	3	0	4	92
04:45 PM	4	21	0	0	25	3	0	12	0	15	0	34	3	0	37	1	1	4	0	6	83
Total	16	69	1	0	86	13	1	40	0	54	5	134	9	0	148	3	1	9	0	13	301
05:00 PM	6	26	1	0	33	6	1	13	0	20	1	54	4	0	59	2	1	2	0	5	117
05:15 PM	5	21	0	0	26	3	0	12	0	15	2	65	0	0	67	1	0	0	0	1	109
05:30 PM	3	22	1	0	26	4	0	7	0	11	1	34	2	0	37	1	0	1	0	2	76
05:45 PM	5	27	0	0	32	6	0	8	0	14	0	42	5	0	47	1	0	3	0	4	97
Total	19	96	2	0	117	19	1	40	0	60	4	195	11	0	210	5	1	6	0	12	399
Grand Total	35	165	3	0	203	32	2	80	0	114	9	329	20	0	358	8	2	15	0	25	700
Apprch %	17.2	81.3	1.5	0		28.1	1.8	70.2	0		2.5	91.9	5.6	0		32	8	60	0		
Total %	5	23.6	0.4	0	29	4.6	0.3	11.4	0	16.3	1.3	47	2.9	0	51.1	1.1	0.3	2.1	0	3.6	

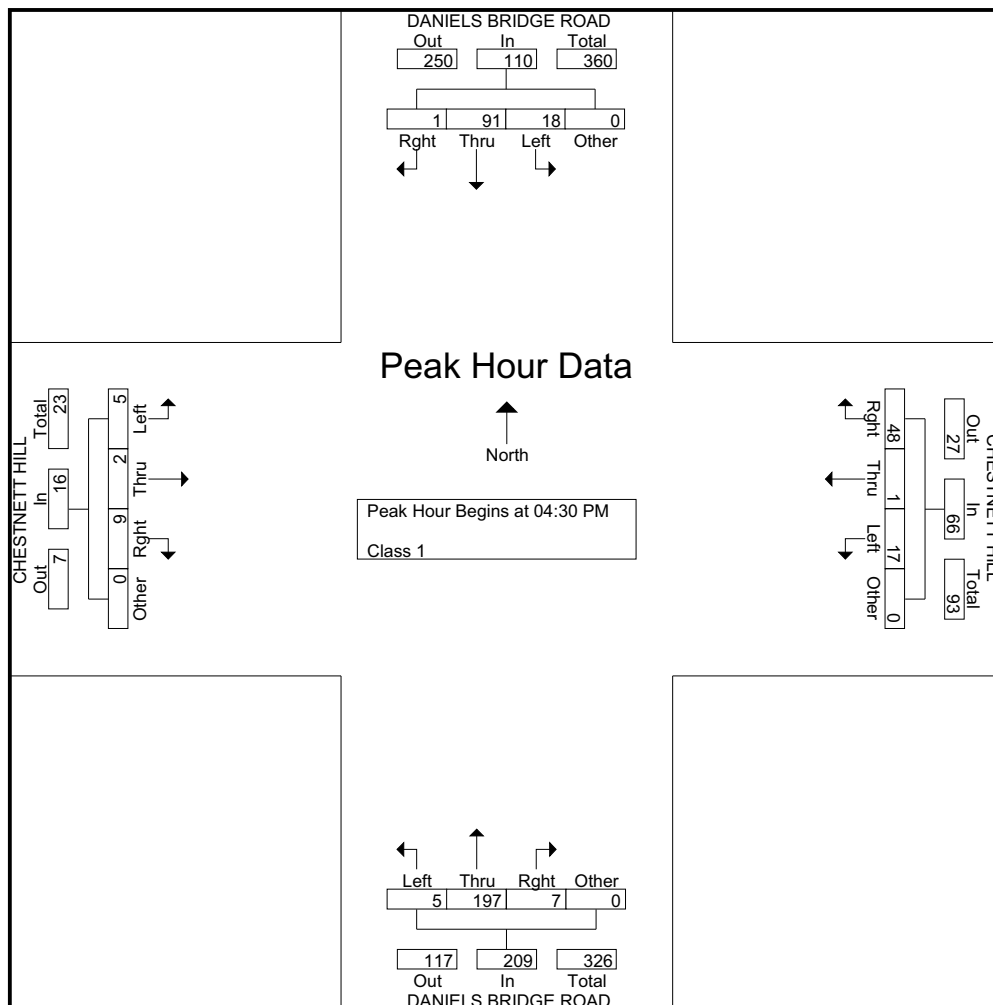


All Traffic Data Services, Inc.

1336 Farmer Road
 Conyers, Ga. 30012
 Ph. 404-374-1283

File Name : DanielsBridge&ChestnuttPM
 Site Code : 00000000
 Start Date : 8/30/2006
 Page No : 2

Start Time	DANIELS BRIDGE ROAD Southbound					CHESTNETT HILL Westbound					DANIELS BRIDGE ROAD Northbound					CHESTNETT HILL Eastbound					Int. Total
	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	Left	Thru	Right	Other	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	23	0	0	26	5	0	11	0	16	2	44	0	0	46	1	0	3	0	4	92
04:45 PM	4	21	0	0	25	3	0	12	0	15	0	34	3	0	37	1	1	4	0	6	83
05:00 PM	6	26	1	0	33	6	1	13	0	20	1	54	4	0	59	2	1	2	0	5	117
05:15 PM	5	21	0	0	26	3	0	12	0	15	2	65	0	0	67	1	0	0	0	1	109
Total Volume	18	91	1	0	110	17	1	48	0	66	5	197	7	0	209	5	2	9	0	16	401
% App. Total	16.4	82.7	0.9	0		25.8	1.5	72.7	0		2.4	94.3	3.3	0		31.2	12.5	56.2	0		
PHF	.750	.875	.250	.000	.833	.708	.250	.923	.000	.825	.625	.758	.438	.000	.780	.625	.500	.563	.000	.667	.857



Start Time	31-Aug-0 Thu	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		50	337			35	310				
12:15		29	287			32	316				
12:30		24	304			34	375				
12:45		26	298	129	1226	20	426	121	1427	250	2653
01:00		32	326			13	388				
01:15		32	260			22	406				
01:30		28	310			26	350				
01:45		35	312	127	1208	18	372	79	1516	206	2724
02:00		20	335			15	439				
02:15		18	306			37	407				
02:30		16	265			24	378				
02:45		20	298	74	1204	28	354	104	1578	178	2782
03:00		24	324			18	417				
03:15		18	329			18	395				
03:30		22	338			26	480				
03:45		24	402	88	1393	16	508	78	1800	166	3193
04:00		17	378			24	492				
04:15		20	367			18	510				
04:30		34	386			40	452				
04:45		35	376	106	1507	46	506	128	1960	234	3467
05:00		25	439			56	533				
05:15		46	457			78	569				
05:30		59	413			66	573				
05:45		95	426	225	1735	104	522	304	2197	529	3932
06:00		96	360			106	454				
06:15		166	342			158	436				
06:30		204	360			170	382				
06:45		262	302	728	1364	176	376	610	1648	1338	3012
07:00		320	282			230	333				
07:15		390	246			290	315				
07:30		557	251			318	328				
07:45		611	228	1878	1007	344	320	1182	1296	3060	2303
08:00		501	202			320	308				
08:15		454	231			316	246				
08:30		433	182			262	212				
08:45		445	160	1833	775	302	222	1200	988	3033	1763
09:00		414	174			243	178				
09:15		335	150			246	188				
09:30		346	146			255	184				
09:45		366	148	1461	618	254	123	998	673	2459	1291
10:00		372	121			246	130				
10:15		342	120			274	102				
10:30		342	104			282	119				
10:45		300	96	1356	441	274	110	1076	461	2432	902
11:00		266	81			296	103				
11:15		303	74			277	74				
11:30		322	92			326	62				
11:45		344	78	1235	325	274	55	1173	294	2408	619
Total		9240	12803			7053	15838			16293	28641
Percent		41.9%	58.1%			30.8%	69.2%			36.3%	63.7%
Grand Total		9240	12803			7053	15838			16293	28641
Percent		41.9%	58.1%			30.8%	69.2%			36.3%	63.7%

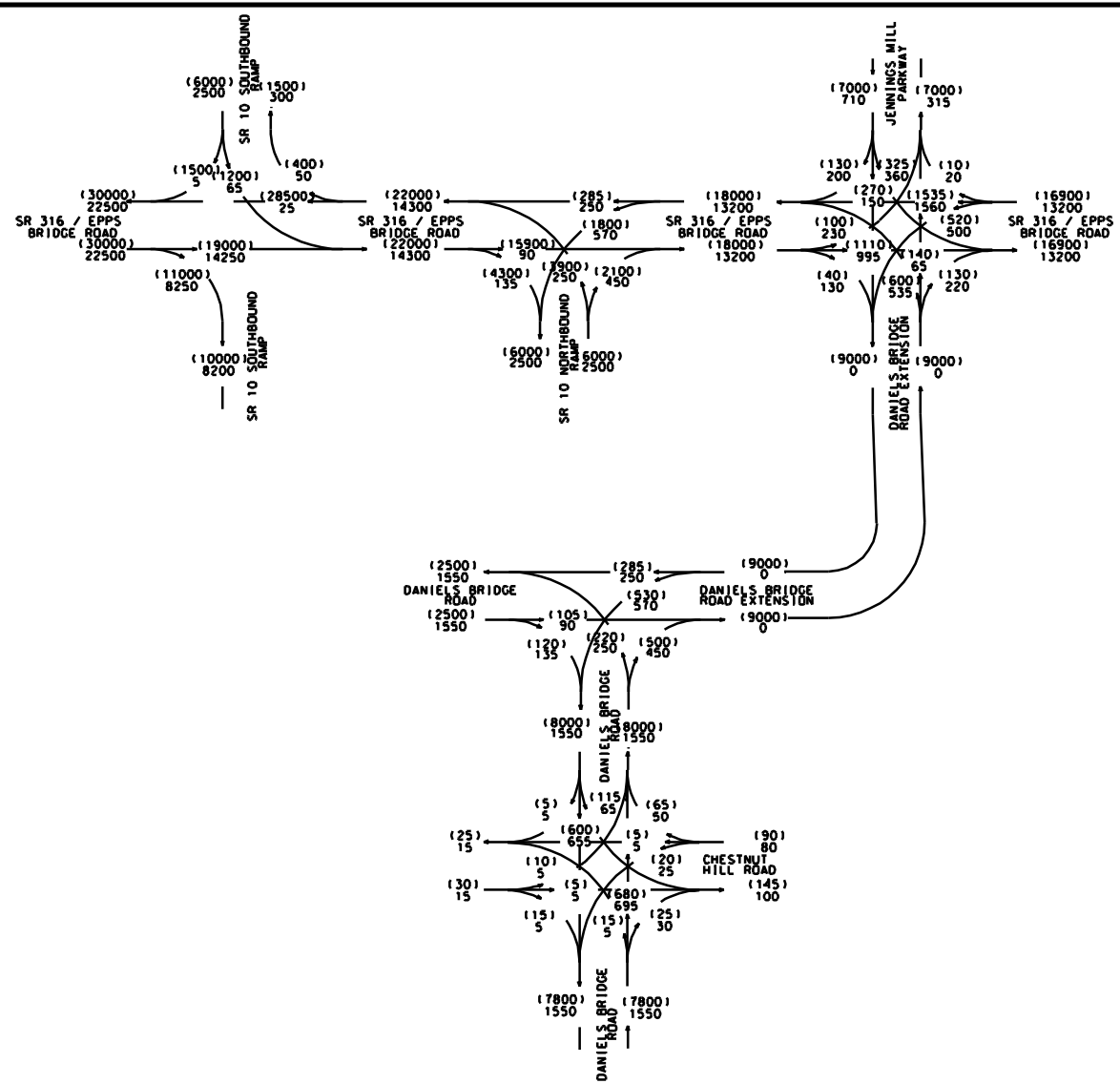
ADT Not Calculated

Start Time	31-Aug-0 Thu	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	23			1	23				
12:15		1	21			0	15				
12:30		1	21			1	21				
12:45		0	21	5	86	1	12	3	71	8	157
01:00		0	22			0	28				
01:15		0	19			0	66				
01:30		0	35			0	65				
01:45		0	33	0	109	0	61	0	220	0	329
02:00		0	43			1	30				
02:15		1	17			0	17				
02:30		0	22			0	25				
02:45		0	25	1	107	0	27	1	99	2	206
03:00		0	20			1	31				
03:15		1	32			1	23				
03:30		2	31			0	29				
03:45		2	19	5	102	1	35	3	118	8	220
04:00		1	26			3	27				
04:15		1	27			0	40				
04:30		1	29			0	32				
04:45		1	46	4	128	1	29	4	128	8	256
05:00		4	36			1	37				
05:15		3	24			0	44				
05:30		4	31			0	33				
05:45		4	28	15	119	1	31	2	145	17	264
06:00		10	25			2	34				
06:15		11	38			4	24				
06:30		21	24			1	32				
06:45		19	20	61	107	4	27	11	117	72	224
07:00		18	15			6	41				
07:15		38	15			12	23				
07:30		62	8			18	23				
07:45		98	15	216	53	25	22	61	109	277	162
08:00		50	6			22	20				
08:15		33	13			12	17				
08:30		37	6			24	16				
08:45		25	4	145	29	24	25	82	78	227	107
09:00		24	3			18	24				
09:15		24	6			13	18				
09:30		19	0			12	19				
09:45		22	1	89	10	18	10	61	71	150	81
10:00		19	0			14	5				
10:15		17	2			14	4				
10:30		26	3			21	2				
10:45		24	6	86	11	23	3	72	14	158	25
11:00		30	4			16	1				
11:15		10	3			15	9				
11:30		19	0			22	0				
11:45		21	0	80	7	26	2	79	12	159	19
Total		707	868			379	1182			1086	2050
Percent		44.9%	55.1%			24.3%	75.7%			34.6%	65.4%
Grand Total		707	868			379	1182			1086	2050
Percent		44.9%	55.1%			24.3%	75.7%			34.6%	65.4%

ADT Not Calculated

Appendix B – Future Traffic Projections

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



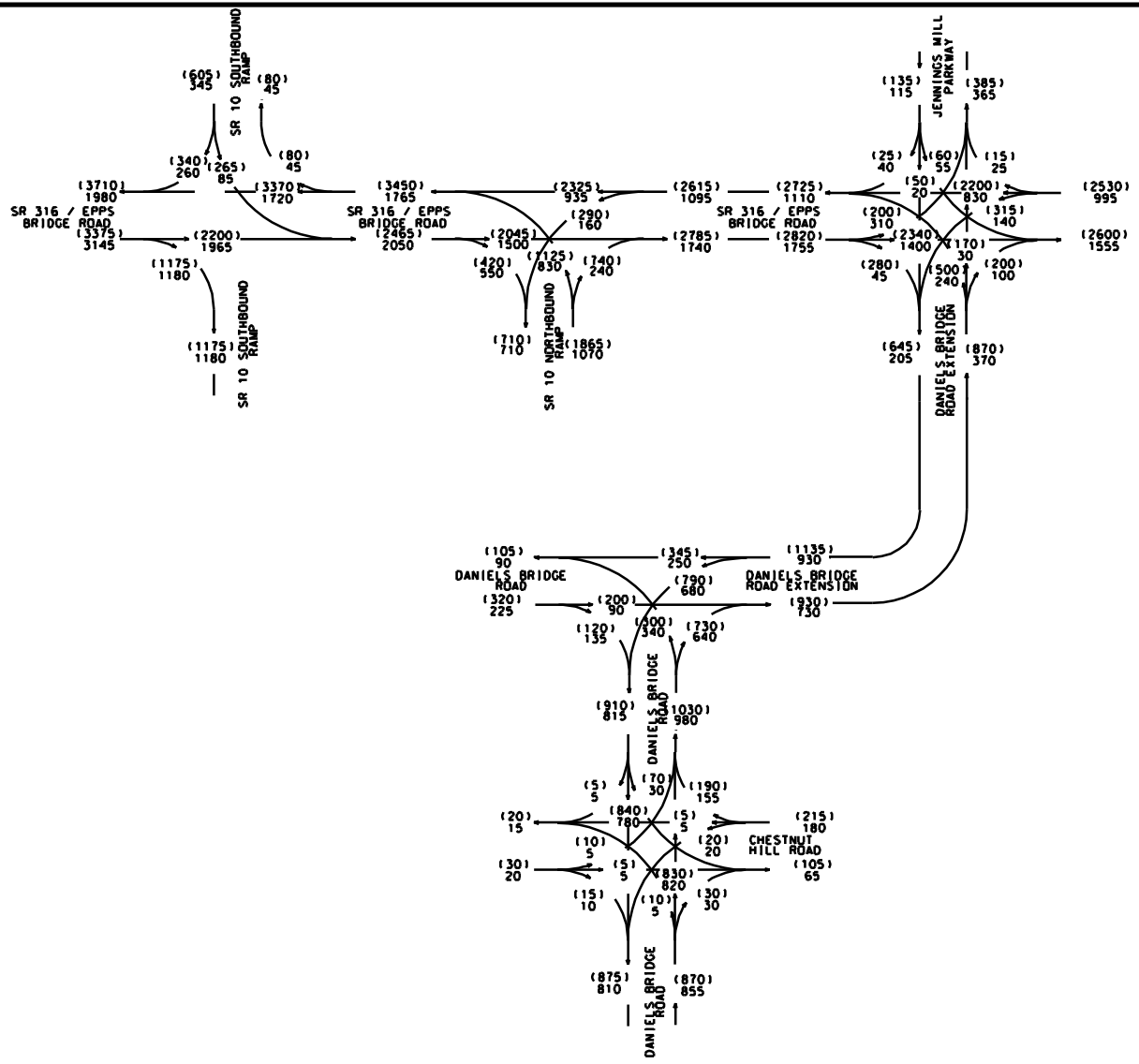
OCONEE COUNTY
 DANIELS BRIDGE
 ROAD EXTENSION
 2030 ADT : 1000
 2006 ADT : 000
 24 HR. T : %
 S.U. : %
 COMB. : %
 10/26/06 RV

PROPERTY AND EXISTING R/W LINE	—+—	BEGIN LIMIT OF ACCESS.....BLA
REQUIRED R/W LINE	—+—	END LIMIT OF ACCESS.....ELA
CONSTRUCTION LIMITS	—C—F—	LIMIT OF ACCESS
EASEMENT FOR CONSTR	▨	R/W AND LIMIT OF ACCESS
& MAINTENANCE OF SLOPES	▨	
EASEMENT FOR CONSTR OF SLOPES	▨	
EASEMENT FOR CONSTR OF DRIVES	▨	

DATE	REVISIONS	DATE	REVISIONS

OCONEE COUNTY
 DEPARTMENT OF TRANSPORTATION
 TRAFFIC DIAGRAM
 PROJECT NO. R-41
 OCONEE COUNTY
 DATE 03-15-07 DWG NO. 10-01

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



OCONEE COUNTY
 DANIELS BRIDGE
 ROAD EXTENSION
 2030 PM DHV : 1000
 2030 AM DHV : 000
 T · X
 10/26/06 RV

PROPERTY AND EXISTING R/W LINE	—+—	BEGIN LIMIT OF ACCESS.....BLA
REQUIRED R/W LINE	—+—	END LIMIT OF ACCESS.....ELA
CONSTRUCTION LIMITS	—C—F—	LIMIT OF ACCESS
EASEMENT FOR CONSTR	[Hatched Box]	R/W AND LIMIT OF ACCESS
& MAINTENANCE OF SLOPES	[Hatched Box]	
EASEMENT FOR CONSTR OF SLOPES	[Hatched Box]	
EASEMENT FOR CONSTR OF DRIVES	[Hatched Box]	

DATE	REVISIONS	DATE	REVISIONS

OCONEE COUNTY
 DEPARTMENT OF TRANSPORTATION
TRAFFIC DIAGRAM
 PROJECT NO. R-41
 OCONEE COUNTY
 DATE 03-15-07 DWG NO. 10-02

Appendix C – Capacity Analysis Reports

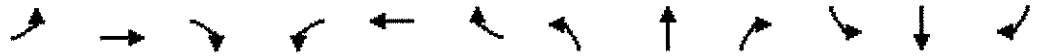
**Daniels Bridge Road Extension
SR 10 Northbound and Southbound Ramps Analysis
No Build Scenario**

Year	No Bulid							
	NB Ramp				SB Ramp			
	Delay Control		LOS		Delay Control		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM
2006	7.7	21.6	A	C	3.9	37.8	A	D
2007	8.55	26.6	A	C	4.025	44.35	A	D
2008	9.4	31.6	A	C	4.15	50.9	A	D
2009	10.25	36.6	B	D	4.275	57.45	A	E
2010	11.1	41.6	B	D	4.4	64	A	E
2011	11.545	46.75	B	D	4.89	66.2	A	E
2012	11.99	51.9	B	D	5.38	68.4	A	E
2013	12.435	57.05	B	E	5.87	70.6	A	E
2014	12.88	62.2	B	E	6.36	72.8	A	E
2015	13.325	67.35	B	E	6.85	75	A	E
2016	13.77	72.5	B	E	7.34	77.2	A	E
2017	14.215	77.65	B	E	7.83	79.4	A	E
2018	14.66	82.8	B	F	8.32	81.6	A	F
2019	15.105	87.95	B	F	8.81	83.8	A	F
2020	15.55	93.1	B	F	9.3	86	A	F
2021	15.995	98.25	B	F	9.79	88.2	A	F
2022	16.44	103.4	B	F	10.28	90.4	B	F
2023	16.885	108.55	B	F	10.77	92.6	B	F
2024	17.33	113.7	B	F	11.26	94.8	B	F
2025	17.775	118.85	B	F	11.75	97	B	F
2026	18.22	124	B	F	12.24	99.2	B	F
2027	18.665	129.15	B	F	12.73	101.4	B	F
2028	19.11	134.3	B	F	13.22	103.6	B	F
2029	19.555	139.45	B	F	13.71	105.8	B	F
2030	20	144.6	B	F	14.2	108	B	F

**Daniels Bridge Road Extension
SR 10 Northbound and Southbound Ramps Analysis
Build Scenario**

Year	Build							
	NB Ramp				SB Ramp			
	Delay Control		LOS		Delay Control		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM
2010	7.8	24.1	A	C	4.2	36.1	A	D
2011	7.78	26.44	A	C	4.34	37.34	A	D
2012	7.76	28.78	A	C	4.48	38.58	A	D
2013	7.74	31.12	A	C	4.62	39.82	A	D
2014	7.72	33.46	A	C	4.76	41.06	A	D
2015	7.7	35.8	A	D	4.9	42.3	A	D
2016	9.4	39.76	A	D	4.88	45.8	A	D
2017	11.1	43.72	B	D	4.86	49.3	A	D
2018	12.8	47.68	B	D	4.84	52.8	A	D
2019	14.5	51.64	B	D	4.82	56.3	A	E
2020	16.2	55.6	B	E	4.8	59.8	A	E
2021	16.53	60.37	B	E	4.9	61.23	A	E
2022	16.86	65.14	B	E	5	62.66	A	E
2023	17.19	69.91	B	E	5.1	64.09	A	E
2024	17.52	74.68	B	E	5.2	65.52	A	E
2025	17.85	79.45	B	E	5.3	66.95	A	E
2026	18.18	84.22	B	F	5.4	68.38	A	E
2027	18.51	88.99	B	F	5.5	69.81	A	E
2028	18.84	93.76	B	F	5.6	71.24	A	E
2029	19.17	98.53	B	F	5.7	72.67	A	E
2030	19.5	103.3	B	F	5.8	74.1	A	E

Existing AM & PM Network



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.942			0.909			0.995				
Fl _t Protected		0.972			0.984						0.995	
Satd. Flow (prot)	0	1706	0	0	1666	0	0	1853	0	0	1853	0
Fl _t Permitted		0.972			0.984						0.995	
Satd. Flow (perm)	0	1706	0	0	1666	0	0	1853	0	0	1853	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		332			534			959			274	
Travel Time (s)		7.5			12.1			21.8			6.2	
Volume (vph)	4	0	3	18	0	39	1	207	8	7	67	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
Adj. Flow (vph)	4	0	3	20	0	42	1	225	9	8	73	0
Lane Group Flow (vph)	0	7	0	0	62	0	0	235	0	0	81	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 23.2% ICU Level of Service A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↖		↖	↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	250		0	450		300
Storage Lanes	0		1	0		1	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.988				0.850
Flt Protected		0.973			0.979		0.950			0.950		
Satd. Flow (prot)	0	1812	1583	0	1824	1583	1770	1840	0	1770	1863	1583
Flt Permitted		0.807			0.861		0.543			0.298		
Satd. Flow (perm)	0	1503	1583	0	1604	1583	1011	1840	0	555	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			248		13				48
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		370			4512			987			1622	
Travel Time (s)		8.4			102.5			22.4			36.9	
Volume (vph)	83	64	89	25	33	228	55	562	49	202	300	44
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
Adj. Flow (vph)	90	70	97	27	36	248	60	611	53	220	326	48
Lane Group Flow (vph)	0	160	97	0	63	248	60	664	0	220	326	48
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	40.0	40.0	0.0	40.0	40.0	40.0
Total Split (%)	33%	33%	33%	33%	33%	33%	67%	67%	0%	67%	67%	67%
Maximum Green (s)	16.0	16.0	16.0	16.0	16.0	16.0	36.0	36.0		36.0	36.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)		16.0	16.0		16.0	16.0	36.0	36.0		36.0	36.0	36.0
Actuated g/C Ratio		0.27	0.27		0.27	0.27	0.60	0.60		0.60	0.60	0.60
v/c Ratio		0.40	0.20		0.15	0.41	0.10	0.60		0.66	0.29	0.05
Uniform Delay, d1		18.0	0.0		16.8	0.0	5.1	7.3		7.9	5.8	0.0
Delay		18.7	4.8		17.2	3.2	5.3	7.8		17.8	1.7	0.0
LOS		B	A		B	A	A	A		B	A	A
Approach Delay		13.5			6.0			7.6			7.5	
Approach LOS		B			A			A			A	

Intersection Summary	
Area Type	Other
Cycle Length	60
Actuated Cycle Length	60

Offset: 5 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.66





Intersection Signal Delay: 8.1

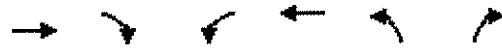
Intersection LOS: A

Intersection Capacity Utilization 72.9%

ICU Level of Service C

Splits and Phases: 12: Daniels Bridge Rd & Mars Hill Road

 02	 04
40 s	20 s
 06	 08
40 s	20 s



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.231		0.950	
Satd. Flow (perm)	3539	1583	430	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		496				217
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	751	456	94	666	651	200
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	816	496	102	724	708	217
Lane Group Flow (vph)	816	496	102	724	708	217
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	25.0	0.0	11.0	36.0	24.0	24.0
Total Split (%)	42%	0%	18%	60%	40%	40%
Maximum Green (s)	21.0		7.0	32.0	20.0	20.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	25.8	60.0	34.6	34.6	17.4	17.4
Actuated g/C Ratio	0.43	1.00	0.58	0.58	0.29	0.29
v/c Ratio	0.54	0.31	0.25	0.35	0.71	0.35
Uniform Delay, d1	13.2	0.0	7.0	6.8	19.0	0.0
Delay	10.0	0.0	2.5	1.7	18.8	2.8
LOS	B	A	A	A	B	A
Approach Delay	6.2			1.8	15.0	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A		A		B	

Intersection Summary	
Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	41 (68%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	7.7
Intersection LOS:	A
Intersection Capacity Utilization:	58.4%
ICU Level of Service:	A

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2	↙ ø1	
25 s	11 s	
← ø6		↘ ø8
36 s		24 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	450		450	300		350	250		200
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.690			0.503		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1285	1863	1583	937	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			116			304			12
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		646			1607			1622			1312	
Travel Time (s)		14.7			36.5			36.9			29.8	
Volume (vph)	53	1421	124	446	682	107	165	150	556	99	74	11
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
Adj. Flow (vph)	58	1545	135	485	741	116	179	163	604	108	80	12
Lane Group Flow (vph)	58	1545	135	485	741	116	179	163	604	108	80	12
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	13.0	57.0	57.0	22.0	66.0	66.0	15.0	33.0	33.0	8.0	26.0	26.0
Total Split (%)	11%	48%	48%	18%	55%	55%	13%	28%	28%	7%	22%	22%
Maximum Green (s)	9.0	53.0	53.0	18.0	62.0	62.0	11.0	29.0	29.0	4.0	22.0	22.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	9.0	53.0	53.0	18.0	62.0	62.0	37.0	29.0	29.0	26.0	22.0	22.0
Actuated g/C Ratio	0.08	0.44	0.44	0.15	0.52	0.52	0.31	0.24	0.24	0.22	0.18	0.18
v/c Ratio	0.44	0.99	0.18	0.94	0.41	0.13	0.41	0.36	0.99	0.47	0.23	0.04
Uniform Delay, d1	53.1	33.2	2.7	50.4	17.7	0.0	33.3	37.8	22.4	33.0	41.8	0.0
Delay	53.8	47.7	5.0	63.6	15.4	3.0	33.2	36.8	46.5	34.0	42.4	19.2
LOS	D	D	A	E	B	A	C	D	D	C	D	B
Approach Delay		44.6			31.8			42.3			36.5	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 44 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 39.6

Intersection LOS: D

Intersection Capacity Utilization 96.1%

ICU Level of Service E

Splits and Phases: 21: SR 316 & Oconee Connector

ø2	ø1	ø4	ø3
57 s	22 s	26 s	15 s
ø7	ø6	ø8	
13 s	66 s	33 s	8 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			940			38						36
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1174	880	0	1282	35	0	0	0	33	0	195
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
Adj. Flow (vph)	0	1276	957	0	1393	38	0	0	0	36	0	212
Lane Group Flow (vph)	0	1276	957	0	1393	38	0	0	0	36	0	212
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	0.0	0.0	23.0	0.0	23.0
Total Split (%)	0%	62%	0%	0%	62%	0%	0%	0%	0%	38%	0%	38%
Maximum Green (s)		33.0			33.0					19.0		19.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		40.4	60.0		40.4	60.0				11.6		11.6
Actuated g/C Ratio		0.67	1.00		0.67	1.00				0.19		0.19
v/c Ratio		0.54	0.60		0.58	0.02				0.11		0.63
Uniform Delay, d1		5.0	0.0		5.3	0.0				19.9		18.3
Delay		3.8	1.9		3.0	0.0				17.9		17.5
LOS		A	A		A	A				B		B
Approach Delay		3.0			2.9							



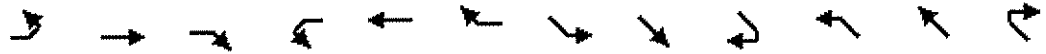
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		A			A							

Intersection Summary

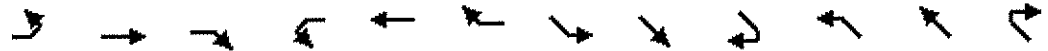
Area Type	Other
Cycle Length	60
Actuated Cycle Length	60
Offset	1 (2%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle	50
Control Type	Actuated-Coordinated
Maximum v/c Ratio	0.63
Intersection Signal Delay	3.9
Intersection LOS	A
Intersection Capacity Utilization	58.3%
ICU Level of Service	A

Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2 37 s	↘ ø4 23 s
← ø6 37 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		400	200		200	200		200	250		250
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950	0.961	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1681	1701	1583
Flt Permitted	0.267			0.381			0.950			0.950	0.712	
Satd. Flow (perm)	497	3539	1583	710	3539	1583	1770	1863	1583	1681	1260	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			23			12			21			52
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1112			473			289			561	
Travel Time (s)		25.3			10.8			6.6			12.8	
Volume (vph)	151	654	21	70	691	11	29	10	19	120	14	48
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
Adj. Flow (vph)	164	711	23	76	751	12	32	11	21	130	15	52
Lane Group Flow (vph)	164	711	23	76	751	12	32	11	21	65	80	52
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	9.0	24.0	24.0	8.0	23.0	23.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (%)	15%	40%	40%	13%	38%	38%	13%	33%	33%	13%	33%	33%
Maximum Green (s)	5.0	20.0	20.0	4.0	19.0	19.0	4.0	16.0	16.0	4.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	Coord	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	32.0	32.8	32.8	30.4	30.4	30.4	4.0	11.8	11.8	6.4	6.4	16.0
Actuated g/C Ratio	0.53	0.55	0.55	0.51	0.51	0.51	0.07	0.20	0.20	0.11	0.11	0.27
v/c Ratio	0.44	0.37	0.03	0.18	0.42	0.01	0.27	0.03	0.06	0.36	0.44	0.11
Uniform Delay, d1	9.9	11.2	0.0	11.0	12.5	0.0	28.9	21.3	0.0	26.4	26.6	0.0
Delay	6.4	2.7	0.2	15.3	13.8	8.2	27.1	17.6	8.3	37.6	45.0	6.0
LOS	A	A	A	B	B	A	C	B	A	D	D	A
Approach Delay		3.3			13.8			19.3			32.3	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Approach LOS	A			B			B			C		

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	16 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.44
Intersection Signal Delay:	11.1
Intersection LOS:	B
Intersection Capacity Utilization:	50.5%
ICU Level of Service:	A

Splits and Phases: 26: SR 316 & Jennings Mill Pkwy

ø2	ø1	ø3	ø4
24 s	8 s	8 s	20 s
ø5	ø6	ø8	ø7
8 s	23 s	20 s	8 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.921			0.901			0.995			0.999	
Flt Protected		0.986			0.987			0.999			0.992	
Satd. Flow (prot)	0	1692	0	0	1657	0	0	1852	0	0	1846	0
Flt Permitted		0.800			0.800			0.800			0.800	
Satd. Flow (perm)	0	1372	0	0	1343	0	0	1483	0	0	1489	0
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		332			534			959			274	
Travel Time (s)		7.5			12.1			21.8			6.2	
Volume (vph)	5	2	9	17	1	48	5	197	7	18	91	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
Adj. Flow (vph)	5	2	10	18	1	52	5	214	8	20	99	1
Lane Group Flow (vph)	0	17	0	0	71	0	0	227	0	0	120	0
Sign Control		Stop			Stop			Free			Free	

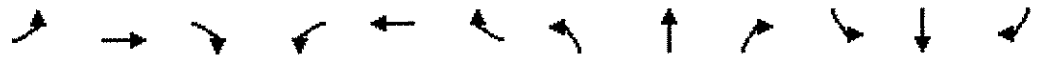
Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 24.3%

ICU Level of Service A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↖		↖	↖	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	250		0	450		300
Storage Lanes	0		1	0		1	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.995				0.850
Flt Protected		0.964			0.982		0.950			0.950		
Satd. Flow (prot)	0	1796	1583	0	1829	1583	1770	1853	0	1770	1863	1583
Flt Permitted		0.752			0.887		0.207			0.334		
Satd. Flow (perm)	0	1401	1583	0	1652	1583	386	1853	0	622	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			265		4				124
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		370			4512			987			1622	
Travel Time (s)		8.4			102.5			22.4			36.9	
Volume (vph)	59	20	107	28	50	244	119	604	20	143	854	114
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
Adj. Flow (vph)	64	22	116	30	54	265	129	657	22	155	928	124
Lane Group Flow (vph)	0	86	116	0	84	265	129	679	0	155	928	124
Turn Type	Perm		Perm	Perm		Perm	Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	76.0	76.0	0.0	76.0	76.0	76.0
Total Split (%)	24%	24%	24%	24%	24%	24%	76%	76%	0%	76%	76%	76%
Maximum Green (s)	20.0	20.0	20.0	20.0	20.0	20.0	72.0	72.0		72.0	72.0	72.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)		20.0	20.0		20.0	20.0	72.0	72.0		72.0	72.0	72.0
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.72	0.72		0.72	0.72	0.72
v/c Ratio		0.31	0.28		0.25	0.50	0.46	0.51		0.35	0.69	0.11
Uniform Delay, d1		34.1	0.0		33.7	0.0	5.9	6.1		5.2	7.8	0.0
Delay		34.8	6.8		34.3	4.6	6.9	6.4		1.0	6.0	0.0
LOS		C	A		C	A	A	A		A	A	A
Approach Delay		18.7			11.8			6.5			4.7	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type	Other
Cycle Length	100
Actuated Cycle Length	100

Offset: 23 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.69





Intersection Signal Delay: 7.3

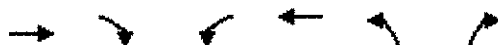
Intersection LOS: A

Intersection Capacity Utilization 77.4%

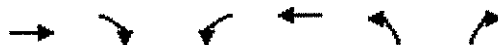
ICU Level of Service: C

Splits and Phases: 12: Mars Hill Road & Oconee Connector

 02	 04
76 s	24 s
 06	 08
76 s	24 s



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.100		0.950	
Satd. Flow (perm)	3539	1583	186	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		253				361
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	1022	344	282	1749	1056	446
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1111	374	307	1901	1148	485
Lane Group Flow (vph)	1111	374	307	1901	1148	485
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	40.0	0.0	21.0	61.0	39.0	39.0
Total Split (%)	40%	0%	21%	61%	39%	39%
Maximum Green (s)	36.0		17.0	57.0	35.0	35.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	36.0	100.0	57.0	57.0	35.0	35.0
Actuated g/C Ratio	0.36	1.00	0.57	0.57	0.35	0.35
v/c Ratio	0.87	0.24	0.82	0.94	0.96	0.61
Uniform Delay, d1	29.8	0.0	33.2	20.0	31.7	6.0
Delay	22.8	0.0	25.9	15.2	43.0	7.1
LOS	C	A	C	B	D	A
Approach Delay	17.0			16.7	32.3	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B		B		C	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 49 (49%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

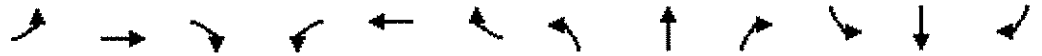
Maximum v/c Ratio: 0.96

Intersection Signal Delay: 21.6 Intersection LOS: C

Intersection Capacity Utilization: 92.0% ICU Level of Service: E

Splits and Phases: 16: SR 316 & SR 10 NB Ramp

Ø2	Ø1	
40 s	21 s	
Ø6	Ø8	
61 s	39 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑	↗	↘	↑	↗	↘	↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	450		450	300		350	250		200
Storage Lanes	1		1	2		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.309			0.664		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	576	1863	1583	1237	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			174			132			506			18
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		646			1607			1622			1312	
Travel Time (s)		14.7			36.5			36.9			29.8	
Volume (vph)	46	1058	160	825	1312	121	223	134	531	207	180	17
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
Adj. Flow (vph)	50	1150	174	897	1426	132	242	146	577	225	196	18
Lane Group Flow (vph)	50	1150	174	897	1426	132	242	146	577	225	196	18
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	11.0	37.0	37.0	31.0	57.0	57.0	12.0	24.0	24.0	8.0	20.0	20.0
Total Split (%)	11%	37%	37%	31%	57%	57%	12%	24%	24%	8%	20%	20%
Maximum Green (s)	7.0	33.0	33.0	27.0	53.0	53.0	8.0	20.0	20.0	4.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	7.0	33.0	33.0	27.0	53.0	53.0	28.0	20.0	20.0	20.0	16.0	16.0
Actuated g/C Ratio	0.07	0.33	0.33	0.27	0.53	0.53	0.28	0.20	0.20	0.20	0.16	0.16
v/c Ratio	0.40	0.98	0.27	0.97	0.76	0.15	0.94	0.39	0.80	0.84	0.66	0.07
Uniform Delay, d1	44.5	33.2	0.0	36.1	18.5	0.0	31.3	34.7	4.2	35.2	39.4	0.0
Delay	45.2	50.4	3.9	34.6	11.8	1.0	61.1	31.7	7.3	49.1	40.9	15.7
LOS	D	D	A	C	B	A	E	C	A	D	D	B
Approach Delay		44.3			19.5			24.5			44.1	
Approach LOS		D			B			C			D	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 34 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.98









Intersection Signal Delay: 29.0

Intersection LOS: C

Intersection Capacity Utilization 94.4%

ICU Level of Service E

Splits and Phases: 21: SR 316 & Oconee Conn

 ø1	 ø2	 ø3	 ø4
31 s	37 s	12 s	20 s
 ø6	 ø5	 ø7	 ø8
57 s	11 s	8 s	24 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↖		↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			521			28						5
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1268	878	0	2740	65	0	0	0	98	0	254
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
Adj. Flow (vph)	0	1378	954	0	2978	71	0	0	0	107	0	276
Lane Group Flow (vph)	0	1378	954	0	2978	71	0	0	0	107	0	276
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	80.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0
Total Split (%)	0%	80%	0%	0%	80%	0%	0%	0%	0%	20%	0%	20%
Maximum Green (s)		76.0			76.0					16.0		16.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		76.0	100.0		76.0	100.0				16.0		16.0
Actuated g/C Ratio		0.76	1.00		0.76	1.00				0.16		0.16
v/c Ratio		0.51	0.60		1.11	0.04				0.38		1.07
Uniform Delay, d1		4.7	0.0		12.0	0.0				37.6		41.1
Delay		1.2	2.2		61.2	0.0				38.2		99.6
LOS		A	A		E	A				D		F
Approach Delay		1.6			59.8							



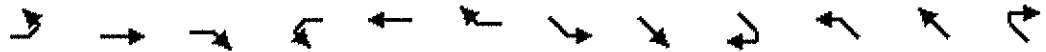
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			E								

Intersection Summary

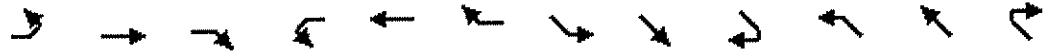
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	2 (2%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	130
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.11
Intersection Signal Delay:	37.8
Intersection LOS:	D
Intersection Capacity Utilization:	106.1%
ICU Level of Service:	F

Splits and Phases: 25: SR 316 & SR 10 SB Ramp

→ ø2	↖ ø4
20 s	20 s
← ø6	
20 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		400	200		200	200		200	250		250
Storage Lanes	1		1	1		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950	0.955	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1681	1690	1583
Flt Permitted	0.103			0.103			0.950			0.950	0.722	
Satd. Flow (perm)	192	3539	1583	192	3539	1583	1770	1863	1583	1681	1278	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			43			5			14			109
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1112			473			289			561	
Travel Time (s)		25.3			10.8			6.6			12.8	
Volume (vph)	97	1042	40	155	1678	6	30	23	13	320	11	100
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
Adj. Flow (vph)	105	1133	43	168	1824	7	33	25	14	348	12	109
Lane Group Flow (vph)	105	1133	43	168	1824	7	33	25	14	174	186	109
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	8.0	47.0	47.0	18.0	57.0	57.0	10.0	20.0	20.0	15.0	25.0	25.0
Total Split (%)	8%	47%	47%	18%	57%	57%	10%	20%	20%	15%	25%	25%
Maximum Green (s)	4.0	43.0	43.0	14.0	53.0	53.0	6.0	16.0	16.0	11.0	21.0	21.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	Coord	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	50.6	50.6	50.6	57.0	57.0	57.0	5.9	6.8	6.8	20.0	20.0	21.0
Actuated g/C Ratio	0.51	0.51	0.51	0.57	0.57	0.57	0.06	0.07	0.07	0.20	0.20	0.21
v/c Ratio	0.65	0.63	0.05	0.62	0.90	0.01	0.32	0.20	0.12	0.52	0.55	0.26
Uniform Delay, d1	27.6	19.1	0.0	11.0	20.5	2.9	47.3	46.1	0.0	35.7	35.9	0.0
Delay	21.6	11.4	3.2	14.7	29.0	7.7	45.6	43.6	20.6	36.8	37.0	6.8
LOS	C	B	A	B	C	A	D	D	C	D	D	A
Approach Delay		11.9			27.7			40.1			29.9	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Approach LOS	B			C			D			C		

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	58 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	22.9
Intersection Capacity Utilization	82.9%
Intersection LOS:	C
ICU Level of Service	D

Splits and Phases: 26: SR 316 & Jennings Mill Pkwy

ø1	ø2	ø4	ø3
19 s	47 s	20 s	15 s
ø6	ø5	ø8	ø7
57 s	8 s	25 s	10 s

2030 Build AM & PM Network



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.929			0.884			0.995			0.999	
Flt Protected		0.988			0.994						0.998	
Satd. Flow (prot)	0	1710	0	0	1637	0	0	3522	0	0	3529	0
Flt Permitted		0.952			0.976			0.951			0.900	
Satd. Flow (perm)	0	1647	0	0	1607	0	0	3349	0	0	3182	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			107			8			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		332			534			959			1191	
Travel Time (s)		7.5			12.1			21.8			27.1	
Volume (vph)	5	5	10	20	5	155	5	820	30	30	780	5
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
Adj. Flow (vph)	5	5	11	22	5	168	5	891	33	33	848	5
Lane Group Flow (vph)	0	21	0	0	195	0	0	929	0	0	886	0
Turn Type	Perm			Perm			Perm			custom		
Protected Phases		4			8			2				
Permitted Phases	4			8			2			6	6	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	37.0	37.0	0.0	37.0	37.0	0.0
Total Split (%)	43%	43%	0%	43%	43%	0%	57%	57%	0%	57%	57%	0%
Maximum Green (s)	24.0	24.0		24.0	24.0		33.0	33.0		33.0	33.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		24.0			24.0			33.0			33.0	
Actuated g/C Ratio		0.37			0.37			0.51			0.51	
v/c Ratio		0.03			0.30			0.55			0.55	
Uniform Delay, d1		6.2			6.2			10.8			10.9	
Delay		9.5			7.2			11.0			11.2	
LOS		A			A			B			B	
Approach Delay		9.5			7.2			11.0			11.2	
Approach LOS		A			A			B			B	
Intersection Summary												
Area Type	Other											
Cycle Length: 65												
Actuated Cycle Length: 65												
Offset: 53 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 40												

Control Type: Pretimed

Maximum v/c Ratio: 0.55





Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization: 55.9%

ICU Level of Service: A

Splits and Phases: 1: Chestnut Hill Road & Daniels Bridge Rd

 Ø2	 Ø4
37 s	28 s
 Ø6	 Ø8
37 s	28 s



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1863	1583	1770	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		147				573
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1445			351	1191	
Travel Time (s)	32.8			8.0	27.1	
Volume (vph)	90	135	680	250	340	640
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	147	739	272	370	696
Lane Group Flow (vph)	98	147	739	272	370	696
Turn Type		Perm	Prot			Free
Protected Phases	4		3			
Permitted Phases		4		6	2	Free
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	70.0	40.0	40.0	0.0
Total Split (%)	15%	15%	54%	31%	31%	0%
Maximum Green (s)	16.0	16.0	66.0	36.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag	Lead	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes			
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	16.0	16.0	66.0	36.0	36.0	130.0
Actuated g/C Ratio	0.12	0.12	0.51	0.28	0.28	1.00
v/c Ratio	0.43	0.45	0.82	0.53	0.76	0.44
Uniform Delay, d1	52.7	0.0	27.0	39.8	43.0	0.0
Delay	47.3	13.0	28.4	44.9	37.8	1.6
LOS	D	B	C	D	D	A
Approach Delay	26.7			32.9	14.2	
Approach LOS	C			C	B	

Intersection Summary

Area Type Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 78 (60%), Referenced to phase 2:NBL and 6:WBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.82





Intersection Signal Delay: 23.6

Intersection LOS: C

Intersection Capacity Utilization 74.8%

ICU Level of Service C

Splits and Phases: 7: Daniels Bridge Rd & Daniels Bridge Extension

 Ø2	 Ø4	 Ø3
40 s	20 s	70 s
 Ø6		
40 s		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↕	↖	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	250		0	450		300
Storage Lanes	0		1	0		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.963			0.979		0.950			0.950		
Satd. Flow (prot)	0	1794	1583	0	1824	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.759			0.886		0.459			0.211		
Satd. Flow (perm)	0	1414	1583	0	1650	1583	855	3539	1583	393	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152			141			33			60
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		370			4512			987			1622	
Travel Time (s)		8.4			102.5			22.4			36.9	
Volume (vph)	110	35	140	15	20	130	90	905	30	115	480	55
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
Adj. Flow (vph)	120	38	152	16	22	141	98	984	33	125	522	60
Lane Group Flow (vph)	0	158	152	0	38	141	98	984	33	125	522	60
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	12.0	31.0	31.0	12.0	31.0	31.0
Total Split (%)	34%	34%	34%	34%	34%	34%	18%	48%	48%	18%	48%	48%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0	18.0	8.0	27.0	27.0	8.0	27.0	27.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag							Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effct Green (s)		18.0	18.0		18.0	18.0	27.0	27.0	27.0	27.0	27.0	27.0
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.42	0.42	0.42	0.42	0.42	0.42
v/c Ratio		0.40	0.28		0.08	0.26	0.21	0.67	0.05	0.38	0.36	0.09
Uniform Delay, d1		19.1	0.0		17.4	0.0	12.5	15.4	0.0	11.9	13.0	0.0
Delay		19.9	4.0		6.7	7.0	13.3	15.7	4.7	7.3	3.0	0.1
LOS		B	A		A	A	B	B	A	A	A	A
Approach Delay		12.1			6.9			15.2			3.5	
Approach LOS		B			A			B			A	

Intersection Summary	
Area Type	Other
Cycle Length: 65	
Actuated Cycle Length: 65	

Offset: 3 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.67







Intersection Signal Delay: 10.6

Intersection LOS: B

Intersection Capacity Utilization: 59.4%

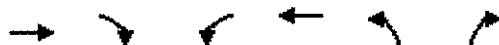
ICU Level of Service: A

Splits and Phases: 12: Daniels Bridge Rd & Oconee Connector

 ø1	 ø2	 ø4
12 s	31 s	22 s
 ø6	 ø5	 ø8
31 s	12 s	22 s



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.056		0.950	
Satd. Flow (perm)	3539	1583	104	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		212				189
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	1500	550	160	935	830	240
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1630	598	174	1016	902	261
Lane Group Flow (vph)	1630	598	174	1016	902	261
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	71.0	0.0	17.0	88.0	42.0	42.0
Total Split (%)	55%	0%	13%	68%	32%	32%
Maximum Green (s)	67.0		13.0	84.0	38.0	38.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	68.7	130.0	84.9	84.9	37.1	37.1
Actuated g/C Ratio	0.53	1.00	0.65	0.65	0.29	0.29
v/c Ratio	0.87	0.38	0.78	0.44	0.92	0.44
Uniform Delay, d1	26.7	0.0	28.5	11.0	45.0	9.7
Delay	15.5	0.0	53.6	6.7	49.8	11.0
LOS	B	A	D	A	D	B
Approach Delay	11.4			13.6	41.1	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			B	D	

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	68 (52%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	19.5
Intersection LOS:	B
Intersection Capacity Utilization:	90.4%
ICU Level of Service:	E

Splits and Phases: 16: SR 316 & SR10 NB Ramp

ø1 17 s	ø2 71 s	
ø6 68 s		ø8 42 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	450		450	300		350	250		200
Storage Lanes	1		1	2		1	2		2	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	3539	2787	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	3433	3539	2787	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			103			201			395			27
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		646			1607			1622			1312	
Travel Time (s)		14.7			36.5			36.9			29.8	
Volume (vph)	90	2270	160	575	1220	185	355	260	745	130	95	25
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
Adj. Flow (vph)	98	2467	174	625	1326	201	386	283	810	141	103	27
Lane Group Flow (vph)	98	2467	174	625	1326	201	386	283	810	141	103	27
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	18.0	73.0	73.0	22.0	77.0	77.0	15.0	26.0	26.0	9.0	20.0	20.0
Total Split (%)	14%	56%	56%	17%	59%	59%	12%	20%	20%	7%	15%	15%
Maximum Green (s)	14.0	69.0	69.0	18.0	73.0	73.0	11.0	22.0	22.0	5.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	14.0	69.0	69.0	17.9	73.1	73.1	11.1	22.0	22.0	4.9	16.0	16.0
Actuated g/C Ratio	0.11	0.53	0.53	0.14	0.56	0.56	0.09	0.17	0.17	0.04	0.12	0.12
v/c Ratio	0.51	1.31	0.20	1.32	0.67	0.21	1.33	0.47	1.01	1.07	0.24	0.12
Uniform Delay, d1	54.7	30.5	6.1	56.0	20.0	0.0	59.5	48.7	27.3	62.5	51.5	0.0
Delay	55.5	149.6	6.7	160.2	15.0	0.5	169.4	38.9	50.3	131.1	51.8	17.4
LOS	E	F	A	F	B	A	F	D	D	F	D	B
Approach Delay		137.1			55.8			79.2			89.7	
Approach LOS		F			E			E			F	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 93 (72%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.33

Intersection Signal Delay: 95.9

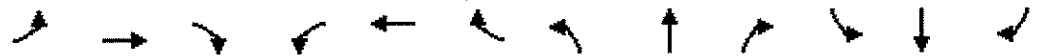
Intersection LOS: F

Intersection Capacity Utilization: 113.7%

ICU Level of Service: G

Splits and Phases: 21: SR 316 & Oconee Conn

ø2	ø1	ø4	ø3
73 s	22 s	20 s	15 s
ø7 ø5	ø6	ø8	
18 s	77 s	26 s	9 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↖		↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			348			23						29
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1965	1180	0	1720	45	0	0	0	85	0	260
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
Adj. Flow (vph)	0	2136	1283	0	1870	49	0	0	0	92	0	283
Lane Group Flow (vph)	0	2136	1283	0	1870	49	0	0	0	92	0	283
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	95.0	0.0	0.0	95.0	0.0	0.0	0.0	0.0	35.0	0.0	35.0
Total Split (%)	0%	73%	0%	0%	73%	0%	0%	0%	0%	27%	0%	27%
Maximum Green (s)		91.0			91.0					31.0		31.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		97.1	130.0		97.1	130.0				24.9		24.9
Actuated g/C Ratio		0.75	1.00		0.75	1.00				0.19		0.19
v/c Ratio		0.81	0.81		0.71	0.03				0.27		0.87
Uniform Delay, d1		10.5	0.0		8.8	0.0				44.8		45.6
Delay		2.3	6.2		1.9	0.0				43.2		45.0
LOS		A	A		A	A				D		D
Approach Delay		3.8			1.8							



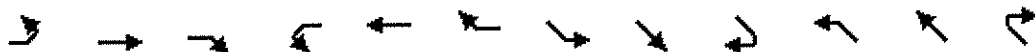
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A								

Intersection Summary

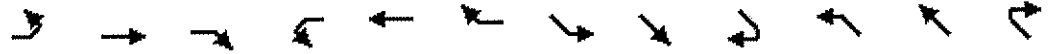
Area Type	Other
Cycle Length	130
Actuated Cycle Length	130
Offset	6 (5%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle	70
Control Type	Actuated-Coordinated
Maximum v/c Ratio	0.87
Intersection Signal Delay	5.8
Intersection LOS	A
Intersection Capacity Utilization	75.8%
ICU Level of Service	C

Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↘ ø4
35 s	35 s
← ø6	
35 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		400	200		200	200		200	250		250
Storage Lanes	1		1	1		1	1		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	3433	1863	1583
Flt Permitted	0.295			0.093			0.950			0.950		
Satd. Flow (perm)	550	3539	1583	173	3539	1583	1770	1863	1583	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49			26			43			109
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1112			473			289			561	
Travel Time (s)		25.3			10.8			6.6			12.8	
Volume (vph)	310	1400	45	140	830	25	55	20	40	240	30	100
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
Adj. Flow (vph)	337	1522	49	152	902	27	60	22	43	261	33	109
Lane Group Flow (vph)	337	1522	49	152	902	27	60	22	43	261	33	109
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	30.0	73.0	73.0	19.0	62.0	62.0	14.0	20.0	20.0	18.0	24.0	24.0
Total Split (%)	23%	56%	56%	15%	48%	48%	11%	15%	15%	14%	18%	18%
Maximum Green (s)	26.0	69.0	69.0	15.0	58.0	58.0	10.0	16.0	16.0	14.0	20.0	20.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	Coord	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	84.2	84.2	84.2	69.6	69.6	69.6	8.8	7.0	7.0	13.3	11.6	11.6
Actuated g/C Ratio	0.65	0.65	0.65	0.54	0.54	0.54	0.07	0.05	0.05	0.10	0.09	0.09
v/c Ratio	0.56	0.66	0.05	0.65	0.48	0.03	0.50	0.22	0.34	0.75	0.20	0.45
Uniform Delay, d1	21.0	14.6	0.0	15.8	19.3	0.5	59.6	59.9	0.0	56.7	54.9	0.0
Delay	9.7	2.8	0.1	20.5	19.8	6.0	58.4	58.4	16.6	53.2	50.2	11.2
LOS	A	A	A	C	B	A	E	E	B	D	D	B
Approach Delay		3.9			19.5			44.0			41.6	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Approach LOS	A			B			D			D		

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 106 (82%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 14.5

Intersection LOS: B

Intersection Capacity Utilization 74.6%

ICU Level of Service C

Splits and Phases: 26: SR 316 & Jennings Mill Pkwy

ø1 19 s	ø2 73 s	ø4 20 s	ø3 18 s
ø6 62 s	ø5 30 s	ø7 14 s	ø8 24 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.932			0.881			0.995			0.999	
Flt Protected		0.983			0.995			0.999			0.996	
Satd. Flow (prot)	0	1707	0	0	1633	0	0	3518	0	0	3522	0
Flt Permitted		0.902			0.976			0.940			0.740	
Satd. Flow (perm)	0	1566	0	0	1602	0	0	3310	0	0	2616	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			155			5			1	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		332			534			959			1191	
Travel Time (s)		7.5			12.1			21.8			27.1	
Volume (vph)	10	5	15	20	5	190	10	830	30	70	840	5
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
Adj. Flow (vph)	11	5	16	22	5	207	11	902	33	76	913	5
Lane Group Flow (vph)	0	32	0	0	234	0	0	946	0	0	994	0
Turn Type	Perm			Perm			Perm			custom		
Protected Phases		4			8			2				
Permitted Phases	4			8			2			6	6	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	83.0	83.0	0.0	83.0	83.0	0.0
Total Split (%)	36%	36%	0%	36%	36%	0%	64%	64%	0%	64%	64%	0%
Maximum Green (s)	43.0	43.0		43.0	43.0		79.0	79.0		79.0	79.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		43.0			43.0			79.0			79.0	
Actuated g/C Ratio		0.33			0.33			0.61			0.61	
v/c Ratio		0.06			0.37			0.47			0.63	
Uniform Delay, d1		14.7			10.4			13.9			16.1	
Delay		18.4			11.5			14.1			1.5	
LOS		B			B			B			A	
Approach Delay		18.4			11.5			14.1			1.5	
Approach LOS		B			B			B			A	
Intersection Summary												
Area Type	Other											
Cycle Length	130											
Actuated Cycle Length	130											
Offset	76 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green											
Natural Cycle	45											

1: Chestnut Hill Road & Daniels Bridge Rd

Control Type: Pretimed

Maximum v/c Ratio: 0.63





Intersection Signal Delay: 8.2

Intersection LOS: A

Intersection Capacity Utilization 84.4%

ICU Level of Service D

Splits and Phases: 1: Chestnut Hill Road & Daniels Bridge Rd

 02	 04
83 s	47 s
 06	 08
83 s	47 s



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1863	1583	1770	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		130				741
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1445			351	1191	
Travel Time (s)	32.8			8.0	27.1	
Volume (vph)	200	120	790	345	300	730
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	130	859	375	326	793
Lane Group Flow (vph)	217	130	859	375	326	793
Turn Type		Perm	Prot			Free
Protected Phases	4		3			
Permitted Phases		4		6	2	Free
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	22.0	22.0	73.0	35.0	35.0	0.0
Total Split (%)	17%	17%	56%	27%	27%	0%
Maximum Green (s)	18.0	18.0	69.0	31.0	31.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	
Act Effct Green (s)	17.9	17.9	69.0	30.9	30.9	130.0
Actuated g/C Ratio	0.14	0.14	0.53	0.24	0.24	1.00
v/c Ratio	0.84	0.39	0.91	0.84	0.77	0.50
Uniform Delay, d1	54.6	0.0	27.8	47.2	46.2	0.0
Delay	70.7	12.5	26.4	46.1	41.5	3.2
LOS	E	B	C	D	D	A
Approach Delay	48.9			32.4	14.3	
Approach LOS	D			C	B	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 17 (13%), Referenced to phase 2:NBL and 6:WBT, Start of Green
 Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.91





Intersection Signal Delay: 27.0

Intersection LOS: C

Intersection Capacity Utilization 87.1%

ICU Level of Service D

Splits and Phases: 7: Daniels Bridge Rd & Daniels Bridge Extension

 02	 03	 04
25 s	73 s	22 s
 05		
25 s		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	250		0	450		300
Storage Lanes	0		1	0		1	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.957			0.984		0.950			0.950		
Satd. Flow (prot)	0	1783	1583	0	1833	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.720			0.911		0.146			0.148		
Satd. Flow (perm)	0	1341	1583	0	1697	1583	272	3539	1583	276	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			185			147			11			163
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		370			4512			987			1622	
Travel Time (s)		8.4			102.5			22.4			36.9	
Volume (vph)	80	10	170	15	30	135	190	970	10	80	1175	150
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
Adj. Flow (vph)	87	11	185	16	33	147	207	1054	11	87	1277	163
Lane Group Flow (vph)	0	98	185	0	49	147	207	1054	11	87	1277	163
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	31.0	82.0	82.0	18.0	69.0	69.0
Total Split (%)	23%	23%	23%	23%	23%	23%	24%	63%	63%	14%	53%	53%
Maximum Green (s)	26.0	26.0	26.0	26.0	26.0	26.0	27.0	78.0	78.0	14.0	65.0	65.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag							Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effct Green (s)		26.0	26.0		26.0	26.0	78.0	78.0	78.0	65.0	65.0	65.0
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.60	0.60	0.60	0.50	0.50	0.50
v/c Ratio		0.37	0.40		0.14	0.34	0.44	0.50	0.01	0.29	0.72	0.19
Uniform Delay, d1		44.8	0.0		42.8	0.0	28.3	14.8	0.0	17.1	25.4	0.0
Delay		45.7	6.2		19.3	2.7	29.1	15.0	4.9	4.9	14.2	0.7
LOS		D	A		B	A	C	B	A	A	B	A
Approach Delay		19.9			6.8			17.2			12.3	
Approach LOS		B			A			B			B	

Intersection Summary
 Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130

Offset: 67 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.72






Intersection Signal Delay: 14.5

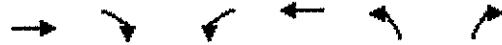
Intersection LOS: B

Intersection Capacity Utilization 68.8%

ICU Level of Service B

Splits and Phases: 12: Mars Hill Road & Oconee Connector

 ø1	 ø2	 ø4
16 s	62 s	30 s
 ø6	 ø5	 ø8
69 s	31 s	30 s



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Flt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.059		0.950	
Satd. Flow (perm)	3539	1583	110	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		119				186
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	2045	420	290	2325	1125	740
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2223	457	315	2527	1223	804
Lane Group Flow (vph)	2223	457	315	2527	1223	804
Turn Type		Free pm+pt			Perm	
Protected Phases	2		1	6	8	
Permitted Phases		Free		6		8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	68.0	0.0	17.0	85.0	45.0	45.0
Total Split (%)	52%	0%	13%	65%	35%	35%
Maximum Green (s)	64.0		13.0	81.0	41.0	41.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	64.0	130.0	81.0	81.0	41.0	41.0
Actuated g/C Ratio	0.49	1.00	0.62	0.62	0.32	0.32
v/c Ratio	1.28	0.29	1.34	1.15	1.13	1.28
Uniform Delay, d1	33.0	0.0	48.6	24.5	44.5	31.3
Delay	133.6	0.0	165.4	77.1	101.1	139.6
LOS	F	A	F	E	F	F
Approach Delay	110.8			86.9	116.4	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	F			F	F	

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	60 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.34
Intersection Signal Delay:	103.3
Intersection LOS:	F
Intersection Capacity Utilization:	123.8%
ICU Level of Service:	H

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2 68 s	↶ ø1 17 s	
↵ ø6 25 s		↷ ø8 45 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙↗	↑↑	↗	↙↗	↑↑	↗	↙↗	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		300	450		450	300		350	250		200
Storage Lanes	1		1	2		1	2		2	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	3433	3539	2787	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	3433	3539	2787	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			206			461			43
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		646			1607			1622			1312	
Travel Time (s)		14.7			36.5			36.9			29.8	
Volume (vph)	80	2385	210	860	2640	210	480	230	710	280	230	40
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
Adj. Flow (vph)	87	2592	228	935	2870	228	522	250	772	304	250	43
Lane Group Flow (vph)	87	2592	228	935	2870	228	522	250	772	304	250	43
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	9.0	67.0	67.0	26.0	84.0	84.0	17.0	22.0	22.0	15.0	20.0	20.0
Total Split (%)	7%	52%	52%	20%	65%	65%	13%	17%	17%	12%	15%	15%
Maximum Green (s)	5.0	63.0	63.0	22.0	80.0	80.0	13.0	18.0	18.0	11.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	4.9	63.1	63.1	22.0	80.0	80.0	13.0	17.9	17.9	11.1	16.0	16.0
Actuated g/C Ratio	0.04	0.49	0.49	0.17	0.62	0.62	0.10	0.14	0.14	0.09	0.12	0.12
v/c Ratio	1.28	1.51	0.28	1.61	1.32	0.22	1.52	0.51	0.99	1.05	0.57	0.18
Uniform Delay, d1	62.5	33.5	9.1	54.0	25.0	0.9	58.5	51.9	22.4	59.5	53.8	0.0
Delay	187.0	200.8	9.4	170.1	90.8	0.3	208.7	48.7	43.5	107.2	54.1	14.7
LOS	F	F	A	F	F	A	F	D	D	F	D	B
Approach Delay		185.4			104.1			100.2			78.3	
Approach LOS		F			F			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

21: SR 316 & Oconee Conn

Offset: 78 (60%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.61

Intersection Signal Delay: 127.7

Intersection LOS: F

Intersection Capacity Utilization 133.5%

ICU Level of Service H

Splits and Phases: 21: SR 316 & Oconee Conn

→ ø2 67 s	↖ ø1 26 s	↖ ø3 17 s	↓ ø4 20 s
↖ ø5 9 s	← ø6 34 s	↑ ø8 22 s	↘ ø7 15 s

25: SR 316 & SR10 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↓		↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			309			21						1
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	2200	1175	0	3370	80	0	0	0	265	0	340
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
Adj. Flow (vph)	0	2391	1277	0	3663	87	0	0	0	288	0	370
Lane Group Flow (vph)	0	2391	1277	0	3663	87	0	0	0	288	0	370
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	101.0	0.0	0.0	101.0	0.0	0.0	0.0	0.0	29.0	0.0	29.0
Total Split (%)	0%	78%	0%	0%	78%	0%	0%	0%	0%	22%	0%	22%
Maximum Green (s)		97.0			97.0					25.0		25.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		97.0	130.0		97.0	130.0				25.0		25.0
Actuated g/C Ratio		0.75	1.00		0.75	1.00				0.19		0.19
v/c Ratio		0.91	0.81		1.39	0.05				0.85		1.21
Uniform Delay, d1		12.9	0.0		16.5	0.0				50.6		52.3
Delay		4.8	7.5		138.8	0.0				60.7		139.5
LOS		A	A		F	A				E		F
Approach Delay		5.8			135.6							

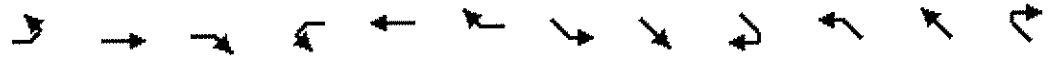


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A						F					

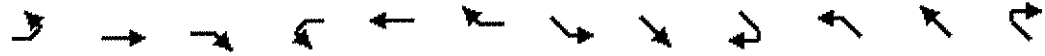
Intersection Summary	
Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	118 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.39
Intersection Signal Delay:	74.1
Intersection LOS:	E
Intersection Capacity Utilization:	130.8%
ICU Level of Service:	H

Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↘ ø4
101 s	29 s
← ø6	
101 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑	↗	↗↗	↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		400	200		200	200		200	250		250
Storage Lanes	1		1	1		1	1		1	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	3433	1863	1583
Flt Permitted	0.066			0.066			0.950			0.950		
Satd. Flow (perm)	123	3539	1583	123	3539	1583	1770	1863	1583	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			228			7			27			214
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1112			473			289			561	
Travel Time (s)		25.3			10.8			6.6			12.8	
Volume (vph)	200	2340	280	315	2200	15	60	50	25	500	170	200
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
Adj. Flow (vph)	217	2543	304	342	2391	16	65	54	27	543	185	217
Lane Group Flow (vph)	217	2543	304	342	2391	16	65	54	27	543	185	217
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phases	5	2	2	1	6	6	7	4	4	3	8	8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	12.0	73.0	73.0	18.0	79.0	79.0	14.0	20.0	20.0	19.0	25.0	25.0
Total Split (%)	9%	56%	56%	14%	61%	61%	11%	15%	15%	15%	19%	19%
Maximum Green (s)	8.0	69.0	69.0	14.0	75.0	75.0	10.0	16.0	16.0	15.0	21.0	21.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Coord	Coord	None	Coord	Coord	None	None	None	None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	74.5	74.5	74.5	80.5	80.5	80.5	8.9	9.0	9.0	18.4	18.6	18.6
Actuated g/C Ratio	0.57	0.57	0.57	0.62	0.62	0.62	0.07	0.07	0.07	0.14	0.14	0.14
v/c Ratio	1.26	1.25	0.30	1.35	1.09	0.02	0.54	0.42	0.20	1.12	0.70	0.53
Uniform Delay, d1	47.6	28.1	3.2	35.9	25.2	5.5	59.7	59.0	0.0	55.8	53.0	0.7
Delay	115.7	85.2	0.3	166.0	78.9	8.4	58.5	57.3	18.8	92.3	39.3	2.9
LOS	F	F	A	F	E	A	E	E	B	F	D	A
Approach Delay		78.9			89.3			50.7			61.4	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Approach LOS	E			F			D			E		

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 78 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.35

Intersection Signal Delay: 80.1

Intersection LOS: F

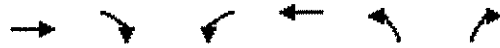
Intersection Capacity Utilization 121.4%

ICU Level of Service H

Splits and Phases: 26: SR 316 & Jennings Mill Pkwy

ø1	ø2	ø4	ø3
18 s	73 s	20 s	19 s
ø6	ø5	ø7	ø8
79 s	12 s	14 s	25 s

2010 No-Build AM & PM SR 316@SR 10 Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3539	1583	294	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		464				245
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	810	500	105	770	720	225
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	880	543	114	837	783	245
Lane Group Flow (vph)	880	543	114	837	783	245
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	42.0	0.0	18.0	60.0	40.0	40.0
Total Split (%)	42%	0%	18%	60%	40%	40%
Maximum Green (s)	38.0		14.0	56.0	36.0	36.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	51.3	100.0	63.1	63.1	28.9	28.9
Actuated g/C Ratio	0.51	1.00	0.63	0.63	0.29	0.29
v/c Ratio	0.49	0.34	0.38	0.37	0.79	0.39
Uniform Delay, d1	15.8	0.0	7.3	8.9	32.7	0.0
Delay	8.8	0.0	2.8	4.3	32.2	3.2
LOS	A	A	A	A	C	A
Approach Delay	5.4			4.1	25.3	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A		A		C	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 32 (32%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 11.1 Intersection LOS: B

Intersection Capacity Utilization: 63.0% ICU Level of Service: B

Splits and Phases: 16: SR 316 & SR10 NB Ramp

ø1	ø2	
18 s	42 s	
ø6		ø8
60 s		40 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			545			32						35
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1270	920	0	1450	40	0	0	0	40	0	210
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
Adj. Flow (vph)	0	1380	1000	0	1576	43	0	0	0	43	0	228
Lane Group Flow (vph)	0	1380	1000	0	1576	43	0	0	0	43	0	228
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	66.0	0.0	0.0	66.0	0.0	0.0	0.0	0.0	34.0	0.0	34.0
Total Split (%)	0%	66%	0%	0%	66%	0%	0%	0%	0%	34%	0%	34%
Maximum Green (s)		62.0			62.0					30.0		30.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		75.1	100.0		75.1	100.0				16.9		16.9
Actuated g/C Ratio		0.75	1.00		0.75	1.00				0.17		0.17
v/c Ratio		0.52	0.63		0.59	0.03				0.14		0.77
Uniform Delay, d1		5.1	0.0		5.6	0.0				35.3		33.4
Delay		1.8	1.9		3.6	0.0				32.8		32.5
LOS		A	A		A	A				C		C
Approach Delay		1.9			3.5							



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A								

Intersection Summary

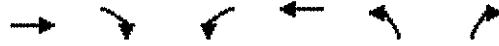
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	4.4
Intersection LOS:	A
Intersection Capacity Utilization:	64.4%
ICU Level of Service:	B

Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↖ ø4
65 s	34 s
← ø6	
65 s	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.076		0.950	
Satd. Flow (perm)	3539	1583	142	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		200				327
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	1100	380	310	2005	1160	500
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1196	413	337	2179	1261	543
Lane Group Flow (vph)	1196	413	337	2179	1261	543
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	56.0	0.0	25.0	81.0	49.0	49.0
Total Split (%)	43%	0%	19%	62%	38%	38%
Maximum Green (s)	52.0		21.0	77.0	45.0	45.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	52.0	130.0	77.0	77.0	45.0	45.0
Actuated g/C Ratio	0.40	1.00	0.59	0.59	0.35	0.35
v/c Ratio	0.84	0.26	0.97	1.04	1.06	0.71
Uniform Delay, d1	35.3	0.0	47.2	26.5	42.5	13.3
Delay	20.0	0.0	61.8	44.2	77.6	14.2
LOS	B	A	E	D	E	B
Approach Delay	14.8			46.5	58.5	



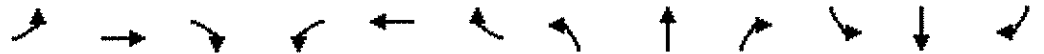
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B		D		E	

Intersection Summary

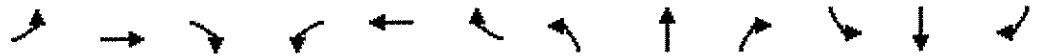
Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	8 (6%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.06
Intersection Signal Delay:	41.6
Intersection LOS:	D
Intersection Capacity Utilization:	102.9%
ICU Level of Service:	F

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2	↘ ø1	
55 s	25 s	
← ø6	↙ ø8	
21 s	43 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			387			22						3
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1370	915	0	3090	75	0	0	0	110	0	270
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
Adj. Flow (vph)	0	1489	995	0	3359	82	0	0	0	120	0	293
Lane Group Flow (vph)	0	1489	995	0	3359	82	0	0	0	120	0	293
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	105.0	0.0	0.0	105.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
Total Split (%)	0%	81%	0%	0%	81%	0%	0%	0%	0%	19%	0%	19%
Maximum Green (s)		101.0			101.0					21.0		21.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		101.0	130.0		101.0	130.0				21.1		21.1
Actuated g/C Ratio		0.78	1.00		0.78	1.00				0.16		0.16
v/c Ratio		0.54	0.63		1.22	0.05				0.42		1.14
Uniform Delay, d1		5.6	0.0		14.5	0.0				49.0		53.8
Delay		0.4	2.4		107.4	0.0				49.7		123.6
LOS		A	A		F	A				D		F
Approach Delay		1.2			104.9							



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			F								

Intersection Summary

Area Type	Other	
Cycle Length	130	
Actuated Cycle Length	130	
Offset	58 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle	120	
Control Type	Actuated-Coordinated	
Maximum v/c Ratio	1.22	
Intersection Signal Delay	64.0	Intersection LOS: E
Intersection Capacity Utilization	117.7%	ICU Level of Service G

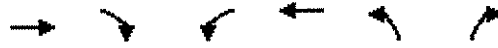
Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↖ ø4
105 s	25 s
← ø6	
105 s	

2010 Build AM & PM SR 316@SR 10 Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.206		0.950	
Satd. Flow (perm)	3539	1583	384	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		543				223
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	840	500	100	710	680	205
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	913	543	109	772	739	223
Lane Group Flow (vph)	913	543	109	772	739	223
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	30.0	0.0	10.0	40.0	25.0	25.0
Total Split (%)	46%	0%	15%	62%	38%	38%
Maximum Green (s)	26.0		6.0	36.0	21.0	21.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	30.4	65.0	38.4	38.4	18.6	18.6
Actuated g/C Ratio	0.47	1.00	0.59	0.59	0.29	0.29
v/c Ratio	0.55	0.34	0.31	0.37	0.75	0.36
Uniform Delay, d1	13.0	0.0	7.6	7.0	21.1	0.0
Delay	7.5	0.0	4.5	3.2	20.9	2.9
LOS	A	A	A	A	C	A
Approach Delay	4.7			3.3	16.7	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A		A		B	

Intersection Summary

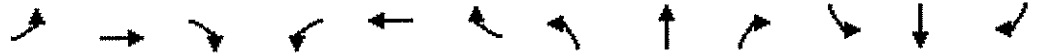
Area Type:	Other
Cycle Length:	65
Actuated Cycle Length:	65
Offset:	48 (74%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	7.8
Intersection Capacity Utilization:	62.3%
Intersection LOS:	A
ICU Level of Service:	B

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2 30 s	↙ ø1 10 s	
← ø6 40 s		↘ ø8 25 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			819			43						37
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1300	920	0	1350	40	0	0	0	40	0	200
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
Adj. Flow (vph)	0	1413	1000	0	1467	43	0	0	0	43	0	217
Lane Group Flow (vph)	0	1413	1000	0	1467	43	0	0	0	43	0	217
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	42.0	0.0	0.0	42.0	0.0	0.0	0.0	0.0	23.0	0.0	23.0
Total Split (%)	0%	65%	0%	0%	65%	0%	0%	0%	0%	35%	0%	35%
Maximum Green (s)		38.0			38.0					19.0		19.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		44.6	65.0		44.6	65.0				12.4		12.4
Actuated g/C Ratio		0.69	1.00		0.69	1.00				0.19		0.19
v/c Ratio		0.58	0.63		0.60	0.03				0.13		0.65
Uniform Delay, d1		5.3	0.0		5.5	0.0				21.8		20.0
Delay		4.7	1.5		3.1	0.0				19.7		19.1
LOS		A	A		A	A				B		B
Approach Delay		3.4			3.0							



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A								

Intersection Summary	
Area Type:	Other
Cycle Length:	65
Actuated Cycle Length:	65
Offset:	1 (2%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	4.2
Intersection LOS:	A
Intersection Capacity Utilization:	60.7%
ICU Level of Service:	B

Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↙ ø4
42 s	23 s
← ø6	
42 s	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.071		0.950	
Satd. Flow (perm)	3539	1583	132	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		189				335
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	1150	375	280	1810	990	565
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1250	408	304	1967	1076	614
Lane Group Flow (vph)	1250	408	304	1967	1076	614
Turn Type		Free pm+pt			Perm	
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	56.0	0.0	26.0	82.0	48.0	48.0
Total Split (%)	43%	0%	20%	63%	37%	37%
Maximum Green (s)	52.0		22.0	78.0	44.0	44.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	52.6	130.0	78.6	78.6	43.4	43.4
Actuated g/C Ratio	0.40	1.00	0.60	0.60	0.33	0.33
v/c Ratio	0.87	0.26	0.85	0.92	0.94	0.82
Uniform Delay, d1	35.6	0.0	45.0	22.9	42.0	16.9
Delay	22.2	0.0	38.8	16.3	48.3	19.0
LOS	C	A	D	B	D	B
Approach Delay	16.7			19.3	37.7	



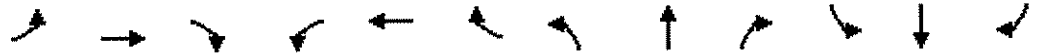
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B		B		D	

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	7 (5%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	24.1
Intersection LOS:	C
Intersection Capacity Utilization:	92.1%
ICU Level of Service:	E

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2 56 s	↶ ø1 26 s	
↶ ø6 62 s		↷ ø8 48 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↖		↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			377			23						5
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1410	920	0	2730	70	0	0	0	115	0	270
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
Adj. Flow (vph)	0	1533	1000	0	2967	76	0	0	0	125	0	293
Lane Group Flow (vph)	0	1533	1000	0	2967	76	0	0	0	125	0	293
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	104.0	0.0	0.0	104.0	0.0	0.0	0.0	0.0	26.0	0.0	26.0
Total Split (%)	0%	80%	0%	0%	80%	0%	0%	0%	0%	20%	0%	20%
Maximum Green (s)		100.0			100.0					22.0		22.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		100.0	130.0		100.0	130.0				22.0		22.0
Actuated g/C Ratio		0.77	1.00		0.77	1.00				0.17		0.17
v/c Ratio		0.56	0.63		1.09	0.05				0.42		1.08
Uniform Delay, d1		6.1	0.0		15.0	0.0				48.3		53.0
Delay		0.4	2.5		59.2	0.0				48.9		108.6
LOS		A	A		E	A				D		F
Approach Delay		1.2			57.7							



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			E								

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 58 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 36.1

Intersection LOS: D

Intersection Capacity Utilization 106.9%

ICU Level of Service F

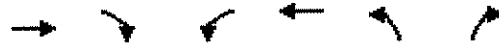
Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↖ ø4
104 s	26 s
← ø6	
104 s	

2015 Build AM & PM SR 316@SR 10 Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.162		0.950	
Satd. Flow (perm)	3539	1583	302	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		598				198
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	980	550	115	750	710	215
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1065	598	125	815	772	234
Lane Group Flow (vph)	1065	598	125	815	772	234
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	32.0	0.0	9.0	41.0	24.0	24.0
Total Split (%)	49%	0%	14%	63%	37%	37%
Maximum Green (s)	28.0		5.0	37.0	20.0	20.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	31.2	65.0	38.4	38.4	18.6	18.6
Actuated g/C Ratio	0.48	1.00	0.59	0.59	0.29	0.29
v/c Ratio	0.63	0.38	0.43	0.39	0.79	0.39
Uniform Delay, d1	13.1	0.0	9.3	7.1	21.3	2.6
Delay	6.6	0.0	6.9	3.0	21.3	4.7
LOS	A	A	A	A	C	A
Approach Delay	4.3			3.5	17.5	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A		A		B	

Intersection Summary

Area Type:	Other
Cycle Length:	65
Actuated Cycle Length:	65
Offset:	46 (71%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	7.7
Intersection LOS:	A
Intersection Capacity Utilization:	68.4%
ICU Level of Service:	B

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2	↘ ø1	
32 s	9 s	
↙ ø6		↘ ø8
41 s		24 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			764			43						37
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1485	980	0	1420	40	0	0	0	45	0	215
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
Adj. Flow (vph)	0	1614	1065	0	1543	43	0	0	0	49	0	234
Lane Group Flow (vph)	0	1614	1065	0	1543	43	0	0	0	49	0	234
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	44.0	0.0	0.0	44.0	0.0	0.0	0.0	0.0	21.0	0.0	21.0
Total Split (%)	0%	68%	0%	0%	68%	0%	0%	0%	0%	32%	0%	32%
Maximum Green (s)		40.0			40.0					17.0		17.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		44.3	65.0		44.3	65.0				12.7		12.7
Actuated g/C Ratio		0.68	1.00		0.68	1.00				0.20		0.20
v/c Ratio		0.67	0.67		0.64	0.03				0.14		0.69
Uniform Delay, d1		6.1	0.0		5.8	0.0				21.6		20.3
Delay		6.5	1.8		2.7	0.0				19.9		19.7
LOS		A	A		A	A				B		B
Approach Delay		4.6			2.7							

25: SR 316 & SR10 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		A			A							

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 61 (94%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 4.9

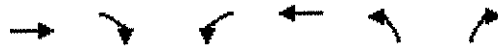
Intersection LOS: A

Intersection Capacity Utilization 63.8%

ICU Level of Service B

Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2 44 s	↘ ø4 21 s
← ø6 44 s	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.068		0.950	
Satd. Flow (perm)	3539	1583	127	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		183				276
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	1330	420	290	1915	995	680
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1446	457	315	2082	1082	739
Lane Group Flow (vph)	1446	457	315	2082	1082	739
Turn Type		Free pm+pt			Perm	
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	59.0	0.0	22.0	81.0	49.0	49.0
Total Split (%)	45%	0%	17%	62%	38%	38%
Maximum Green (s)	55.0		18.0	77.0	45.0	45.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	55.0	130.0	77.0	77.0	45.0	45.0
Actuated g/C Ratio	0.42	1.00	0.59	0.59	0.35	0.35
v/c Ratio	0.97	0.29	1.04	0.99	0.91	1.02
Uniform Delay, d1	36.6	0.0	48.7	26.2	40.6	26.4
Delay	32.3	0.0	72.9	28.7	45.5	54.8
LOS	C	A	E	C	D	D
Approach Delay	24.5			34.5	49.3	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	C		C		D	

Intersection Summary	
Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	4 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.04
Intersection Signal Delay:	35.8
Intersection LOS:	D
Intersection Capacity Utilization:	98.3%
ICU Level of Service:	E

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2	↙ ø1	
59 s	22 s	
↖ ø6	↘ ø8	
61 s	43 s	

25: SR 316 & SR10 SB Ramp



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			352			22						4
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1605	975	0	2840	70	0	0	0	145	0	280
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
Adj. Flow (vph)	0	1745	1060	0	3087	76	0	0	0	158	0	304
Lane Group Flow (vph)	0	1745	1060	0	3087	76	0	0	0	158	0	304
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	105.0	0.0	0.0	105.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0
Total Split (%)	0%	81%	0%	0%	81%	0%	0%	0%	0%	19%	0%	19%
Maximum Green (s)		101.0			101.0					21.0		21.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		101.0	130.0		101.0	130.0				21.1		21.1
Actuated g/C Ratio		0.78	1.00		0.78	1.00				0.16		0.16
v/c Ratio		0.63	0.67		1.12	0.05				0.55		1.17
Uniform Delay, d1		6.4	0.0		14.5	0.0				50.1		53.6
Delay		0.5	3.2		71.0	0.0				50.9		132.6
LOS		A	A		E	A				D		F
Approach Delay		1.5			69.3							



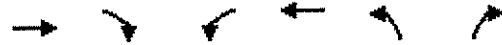
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			E								

Intersection Summary	
Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	53 (41%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	130
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.17
Intersection Signal Delay:	42.3
Intersection LOS:	D
Intersection Capacity Utilization:	110.8%
ICU Level of Service:	G

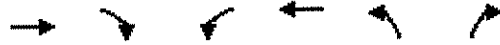
Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↘ ø4
105 s	25 s
← ø6	
105 s	

2020 Build AM & PM SR 316@SR 10 Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.075		0.950	
Satd. Flow (perm)	3539	1583	140	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		315				245
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	1130	615	130	815	750	225
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1228	668	141	886	815	245
Lane Group Flow (vph)	1228	668	141	886	815	245
Turn Type		Free pm+pt			Perm	
Protected Phases	2		1	6	8	
Permitted Phases		Free		6		8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	61.0	0.0	22.0	83.0	47.0	47.0
Total Split (%)	47%	0%	17%	64%	36%	36%
Maximum Green (s)	57.0		18.0	79.0	43.0	43.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag		Lag		Lead		
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	69.8	130.0	85.4	85.4	36.6	36.6
Actuated g/C Ratio	0.54	1.00	0.66	0.66	0.28	0.28
v/c Ratio	0.65	0.42	0.59	0.38	0.84	0.39
Uniform Delay, d1	21.3	0.0	8.7	10.2	44.0	0.0
Delay	13.3	0.0	26.8	9.1	43.6	3.8
LOS	B	A	C	A	D	A
Approach Delay	8.6			11.5	34.4	

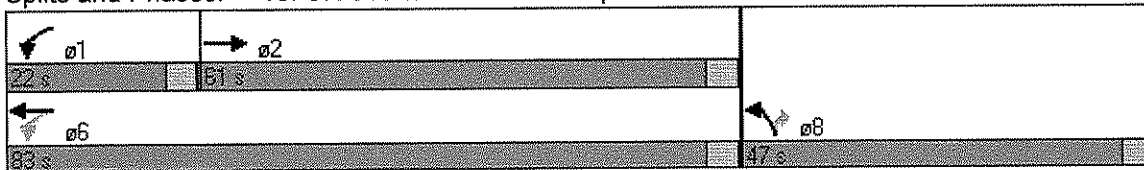


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A		B		C	

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	51 (39%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	16.2
Intersection LOS:	B
Intersection Capacity Utilization:	75.0%
ICU Level of Service:	C

Splits and Phases: 16: SR 316 & SR10 NB Ramp





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			359			23						37
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1690	1050	0	1525	40	0	0	0	55	0	230
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
Adj. Flow (vph)	0	1837	1141	0	1658	43	0	0	0	60	0	250
Lane Group Flow (vph)	0	1837	1141	0	1658	43	0	0	0	60	0	250
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	90.0	0.0	0.0	90.0	0.0	0.0	0.0	0.0	40.0	0.0	40.0
Total Split (%)	0%	69%	0%	0%	69%	0%	0%	0%	0%	31%	0%	31%
Maximum Green (s)		86.0			86.0					36.0		36.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		99.8	130.0		99.8	130.0				22.2		22.2
Actuated g/C Ratio		0.77	1.00		0.77	1.00				0.17		0.17
v/c Ratio		0.68	0.72		0.61	0.03				0.20		0.83
Uniform Delay, d1		7.3	0.0		6.6	0.0				46.2		44.2
Delay		2.6	2.3		1.7	0.0				43.8		43.3
LOS		A	A		A	A				D		D
Approach Delay		2.5			1.7							



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A								

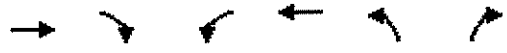
Intersection Summary	
Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	5 (4%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	4.8
Intersection LOS:	A
Intersection Capacity Utilization:	68.0%
ICU Level of Service:	B

Splits and Phases: 25: SR 316 & SR10 SB Ramp

→ ø2	↘ ø4
60 s	40 s
← ø6	
60 s	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	400
Storage Lanes		1	1		2	1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Flt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.066		0.950	
Satd. Flow (perm)	3539	1583	123	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		176				288
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	1723			1112	334	
Travel Time (s)	39.2			25.3	7.6	
Volume (vph)	1530	465	330	2135	1000	700
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1663	505	359	2321	1087	761
Lane Group Flow (vph)	1663	505	359	2321	1087	761
Turn Type		Free	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		Free	6			8
Detector Phases	2		1	6	8	8
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		8.0	20.0	20.0	20.0
Total Split (s)	61.0	0.0	24.0	85.0	45.0	45.0
Total Split (%)	47%	0%	18%	65%	35%	35%
Maximum Green (s)	57.0		20.0	81.0	41.0	41.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Coord		None	Coord	None	None
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	56.9	130.0	81.0	81.0	41.0	41.0
Actuated g/C Ratio	0.44	1.00	0.62	0.62	0.32	0.32
v/c Ratio	1.07	0.32	1.09	1.05	1.00	1.09
Uniform Delay, d1	36.5	0.0	47.9	24.5	44.5	26.1
Delay	62.2	0.0	88.7	46.3	65.1	77.8
LOS	E	A	F	D	E	E
Approach Delay	47.7			51.9	70.3	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	D		D		E	

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Offset:	2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.09
Intersection Signal Delay:	55.6
Intersection LOS:	E
Intersection Capacity Utilization:	106.9%
ICU Level of Service:	F

Splits and Phases: 16: SR 316 & SR10 NB Ramp

→ ø2 61 s	↙ ø1 24 s	
← ø6 65 s		↘ ø8 45 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑				↑		↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		400	0		0	0		0
Storage Lanes	0		1	0		1	0		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50	50		50	50				50		50
Trailing Detector (ft)		0	0		0	0				0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.850			0.850						0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	1583	0	3539	1583	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			333			22						3
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1837			1723			109			337	
Travel Time (s)		41.8			39.2			2.5			7.7	
Volume (vph)	0	1815	1045	0	3060	75	0	0	0	180	0	300
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
Adj. Flow (vph)	0	1973	1136	0	3326	82	0	0	0	196	0	326
Lane Group Flow (vph)	0	1973	1136	0	3326	82	0	0	0	196	0	326
Turn Type			Free			Free				custom		custom
Protected Phases		2			6					4		4
Permitted Phases			Free			Free				4		4
Detector Phases		2			6					4		4
Minimum Initial (s)		4.0			4.0					4.0		4.0
Minimum Split (s)		20.0			20.0					20.0		20.0
Total Split (s)	0.0	104.0	0.0	0.0	104.0	0.0	0.0	0.0	0.0	26.0	0.0	26.0
Total Split (%)	0%	80%	0%	0%	80%	0%	0%	0%	0%	20%	0%	20%
Maximum Green (s)		100.0			100.0					22.0		22.0
Yellow Time (s)		3.5			3.5					3.5		3.5
All-Red Time (s)		0.5			0.5					0.5		0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Recall Mode		Coord			Coord					None		None
Walk Time (s)		5.0			5.0					5.0		5.0
Flash Dont Walk (s)		11.0			11.0					11.0		11.0
Pedestrian Calls (#/hr)		0			0					0		0
Act Effct Green (s)		100.0	130.0		100.0	130.0				22.0		22.0
Actuated g/C Ratio		0.77	1.00		0.77	1.00				0.17		0.17
v/c Ratio		0.72	0.72		1.22	0.05				0.65		1.21
Uniform Delay, d1		7.8	0.0		15.0	0.0				50.4		53.4
Delay		1.0	3.8		107.9	0.0				51.2		140.1
LOS		A	A		F	A				D		F
Approach Delay		2.0			105.3							



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			F								

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 54 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.22

Intersection Signal Delay: 59.8

Intersection LOS: E

Intersection Capacity Utilization 118.8%

ICU Level of Service G

Splits and Phases: 25: SR 316 & SR10 SB Ramp

ø2	ø4
104 s	25 s
ø6	
104 s	

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN**

PROJECT CONCEPT REPORT

Daniels Bridge Road Extension

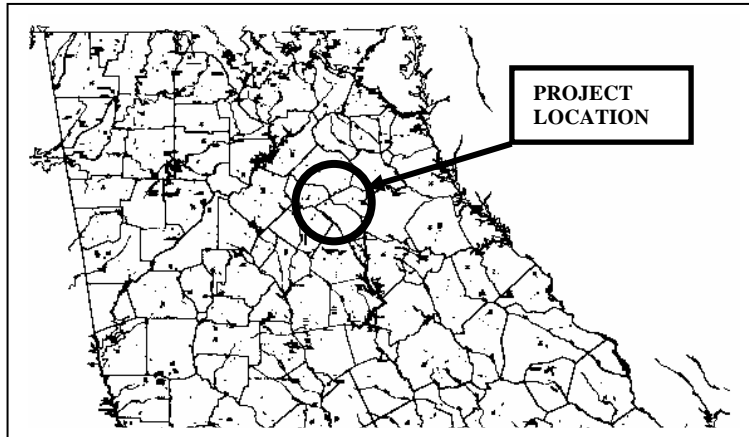
Project Number: R-41

County: Oconee

P. I. Number: Not Assigned

Federal Route Number: NA

State Route Number: NA



Recommendation for approval:

DATE _____

Project Manager

DATE _____

Office Head/District Engineer

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP).

DATE _____

State Transportation Planning Administrator

DATE _____

State Transportation Programming Engineer

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety and Design Engineer

DATE _____

District Engineer

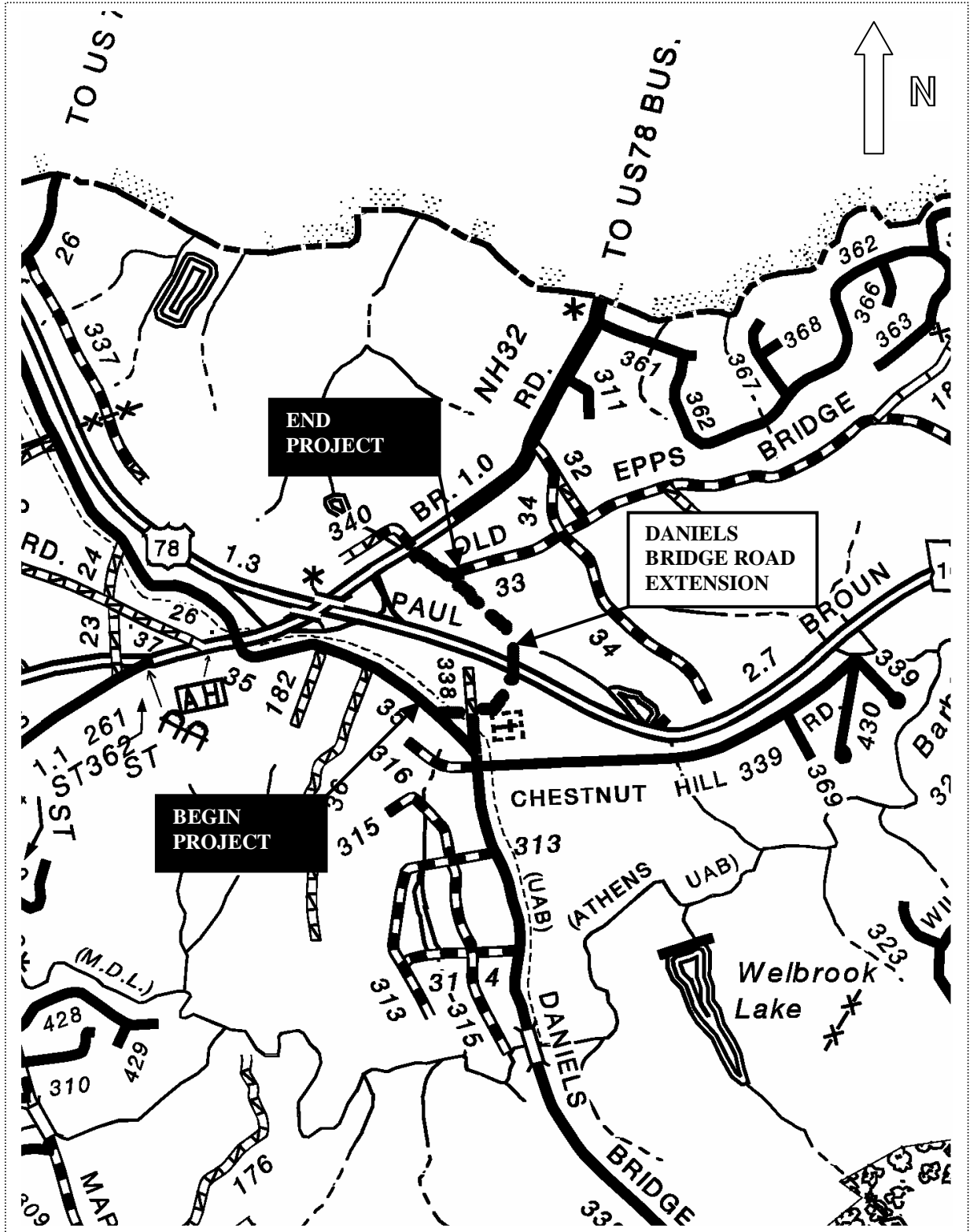
DATE _____

Project Review Engineer

DATE _____

Office of Bridge and Structural Design

PROJECT MAP – Project No. : R-41 - Oconee County



Need and Purpose:

Traffic volumes in the project corridor have increase significantly not only along Daniels Bridge Road, but also along Epps Bridge Road, which has significantly impacted the traffic capacity and operational characteristics of the SR 316/SR 10 interchange. With the increasing development in the area, it is anticipated that traffic volumes will continue to increase further taxing the operational ability of the roadway and interchange in the corridor. Therefore, in order to alleviate some of the congestion in the area for local traffic, the project proposes to extend Daniels Bridge Road across the Athens Perimeter (SR 10) and tie in to the existing Jennings Mill Road extension, providing an alternative link for local traffic to the commercial developments without traversing through the SR 316/SR 10 interchange. This extension will allow traffic to bypass the SR 316/SR 10 interchange and alleviate some of the congestion at the interchange and along Epps Bridge Road.

Description of the proposed project:

The Oconee County Department of Public Works proposes an extension of the existing Daniels Bridge Road. The proposed roadway will consist of an extension of Daniels Bridge Road just north of Chestnut Hill Road intersection extending north across the Athens Perimeter (SR 10), and tie in to the existing Jennings Mill Road extension just south of Old Epps Bridge Road. The total length of project is 0.7 miles. This project is located in Oconee County. The proposed roadway will consist of four 12-foot lanes, a 20-foot raised median and urban shoulder with 5-foot sidewalks on each side. The project will also include a bridge over the Athens Perimeter (SR 10).

Is the project located in a Non-attainment area? _____ Yes No

PDP Classification: *Minor, New Location*

Federal Oversight: Full Oversight (), Exempt(), State Funded(X), or Other ()

Functional Classification: *Urban Principal Collector Road*

U. S. Route Number(s): *NA*

State Route Number(s): *NA*

Traffic (AADT):

Current Year (2010): *0* Design Year (2030): *18,000*

Existing design features: *NA*

Proposed Design Features:

- Proposed typical section(s):
 - Four 12' lanes
 - 20' raised median
 - 16' outside shoulder with curb and gutter
 - 5' sidewalk on each side
- Proposed Design Speed Mainline: 45 mph
- Proposed Maximum grade Mainline: 4.0% Maximum grade allowable: 8.0%
- Proposed Maximum grade Side Street: N/A Maximum grade allowable: 8.0%
- Proposed Maximum grade driveway: 11% commercial; 15% residential
- Proposed Maximum degree of curve: 6° 45' Maximum degree allowable: 8° 00'
- Right of way
 - Width: 100' Minimum
 - Easements: Temporary (), Permanent (X), Utility (), Other ().
 - Type of access control: Full (), Partial (), By Permit (X), Other ().
 - Number of parcels: 18 Number of displacements:
 - Business: 0
 - Residences: 0
 - Mobile homes: 0
 - Other: 0
- Structures:
 - *294'x86'-5" Bridge over SR 10 – Construct a single four span bridge over SR 10 to provide four lanes (2 in each direction), a 20-foot median, and 6-foot sidewalks on each side of the bridge.*
- Major intersections and interchanges: *New intersection at Daniels Bridge Road and Daniels Bridge Road Extension, improvements to the Daniels Bridge Road and Chestnut Hill Road intersection*
- Traffic control during construction:

Traffic to be maintained on existing roadways during construction
- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	()	()	(X)
ROADWAY WIDTH:	()	()	(X)
SHOULDER WIDTH:	()	()	(X)
VERTICAL GRADES:	()	()	(X)
CROSS SLOPES:	()	()	(X)
STOPPING SIGHT DISTANCE:	()	()	(X)
SUPERELEVATION RATES:	()	()	(X)
HORIZONTAL CLEARANCE:	()	()	(X)
SPEED DESIGN:	()	()	(X)
VERTICAL CLEARANCE:	()	()	(X)
BRIDGE WIDTH:	()	()	(X)
BRIDGE STRUCTURAL CAPACITY:	()	()	(X)
- Design Variances: None anticipated
- Environmental concerns: None anticipated
- Level of environmental analysis:
 - Are Time Savings Procedures appropriate? Yes (X), No (),
 - Categorical exclusion (),
 - Environmental Assessment/Finding of No Significant Impact (FONSI) (X), or

- Environmental Impact Statement (EIS) ().
- Utility involvements: *None*

Project responsibilities:

- Design: Local (Oconee County)
- Right of Way Acquisition: Local (Oconee County)
- Relocation of Utilities: Georgia DOT
- Letting to contract: Georgia DOT
- Supervision of construction: Georgia DOT
- Providing material pits: not determined
- Providing detours: N/A

Coordination

- Concept meeting date: None to date
- P. A. R. meetings, dates and results: None required
- FEMA, USCG, and/or TVA: None to date
- Public involvement: A public information meeting was held on June 12, 2007.
- Local government comments: None
- Other projects in the area:
 - CSSTP-0007-00(941); PI No. 0007941; Oconee County – Addition of turn lanes on Daniels Bridge Road from Mars Hill Road to Hog Mountain Road.
 - CSSTP-0007-00(939); PI No. 0007939; Oconee County – Widening and rehabilitation of CR 12/CR 55/ Jimmie Daniel Road from CR 263 Mars Hill Road to SR 1.
 - STP-1267(8); PI No. 142060; Oconee County – Widening of SR 53 & CR 264/Mars Hill Road from SR 15 to SR 316 & Oconee Connector.
 - STP-0002-00(962); PI No. 0002962; Clarke County – Traffic sign upgrades for SR 10 Loop/Athens Bypass.
 - SF000-M003-00(485); PI No. M003485; Banks, Jackson, Walton and Clarke Counties – Deep patching and resurfacing along SR 326, SR 10 and SR 11.
- Other coordination to date
 - Future Passenger Rail Corridor Yes _____ No X

Scheduling – Responsible Parties’ Estimate

- Time to complete the environmental process: 18 Months
- Time to complete preliminary construction plans: 12 Months
- Time to complete right of way plans: 6 Months
- Time to complete the Section 404 Permit: 6 Months
- Time to complete final construction plans: 12 Months
- Time to complete to purchase right of way: 6 Months

Other alternates considered:

- **No Build:** *This alternative does not meet the capacity and operational needs of the*

Project Concept Report - Page 6

Project Number: R-41

P. I. Number: Not Assigned

County: Oconee

project.

Comments:

- *An environmental screening of the area has been completed, and the results are attached. Potential issues include stream impacts, wetland impacts and avoidance of a cemetery in the vicinity of the project. It is anticipated that an EA/FONSI will be required for this project.*

Attachments:

1. Cost Estimates,
2. Typical sections,
3. Environmental screening memo

Estimate Report for file "Daniels Bridge Road_2007-05-29"

Section MAJOR STRUCTURES					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
207-0203	100	CY	60.38	FOUND BK FILL MATL, TP II	6038.00
500-3101	160	CY	598.54	CLASS A CONCRETE	95766.40
511-1000	15500	LB	0.95	BAR REINF STEEL	14725.00
999-9999	25407	SF	95.00	BRIDGE REPLACEMENT - DANIELS BRIDGE ROAD OVER SR 10 (86.41 x 294)	2413665.00
Section Sub Total:					\$2,530,194.40

Section BASE AND PAVING					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
310-1101	18400	TN	18.23	GR AGGR BASE CRS, INCL MATL	335432.00
402-3121	4100	TN	64.41	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	264081.00
402-3130	2100	TN	68.66	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	144186.00
402-3190	2800	TN	64.57	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	180796.00
413-1000	2600	GL	2.08	BITUM TACK COAT	5408.00
433-1000	560	SY	122.41	REINF CONC APPROACH SLAB	68549.60
Section Sub Total:					\$998,452.60

Section GRADING AND DRAINAGE					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
206-0002	170000	CY	6.23	BORROW EXCAV, INCL MATL	1059100.00
208-0100	195000	CY	10.19	IN PLACE EMBANKMENT	1987050.00
550-1180	3200	LF	43.43	STORM DRAIN PIPE, 18 IN, H 1-10	138976.00
550-1240	1000	LF	54.80	STORM DRAIN PIPE, 24 IN, H 1-10	54800.00
550-1300	300	LF	73.92	STORM DRAIN PIPE, 30 IN, H 1-10	22176.00
550-4218	10	EA	680.43	FLARED END SECTION 18 IN, STORM DRAIN	6804.30
550-4224	4	EA	835.42	FLARED END SECTION 24 IN, STORM DRAIN	3341.68
550-4230	2	EA	884.43	FLARED END SECTION 30 IN, STORM DRAIN	1768.86
576-1018	200	LF	32.34	SLOPE DRAIN PIPE, 18 IN	6468.00
668-1100	35	EA	2668.28	CATCH BASIN, GP 1	93389.80
668-1110	10	LF	251.11	CATCH BASIN, GP 1, ADDL DEPTH	2511.10
668-2100	5	EA	4358.32	DROP INLET, GP 1	21791.60
668-2110	5	LF	327.37	DROP INLET, GP 1, ADDL DEPTH	1636.85
Section Sub Total:					\$3,399,814.19

Section GRASSING AND EROSION CONTROL					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	4	AC	604.06	TEMPORARY GRASSING	2416.24
163-0240	64	TN	180.48	MULCH	11550.72
163-0300	4	EA	2465.64	CONSTRUCTION EXIT	9862.56
163-0503	10	EA	556.18	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	5561.80
163-0520	1000	LF	17.18	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	17180.00
163-0521	60	EA	214.41	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS	12864.60
163-0530	2000	LF	3.83	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	7660.00
163-0550	40	EA	315.68	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	12627.20
165-0010	600	LF	1.05	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	630.00
165-0030	2400	LF	1.91	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	4584.00
165-0040	60	EA	83.42	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	5005.20
165-0070	1000	LF	2.25	MAINTENANCE OF BALED STRAW EROSION CHECK	2250.00
165-0087	10	EA	191.35	MAINTENANCE OF SILT CONTROL GATE, TP 3	1913.50
165-0101	12	EA	659.48	MAINTENANCE OF CONSTRUCTION EXIT	7913.76
165-0105	40	EA	113.33	MAINTENANCE OF INLET SEDIMENT TRAP	4533.20
167-1000	2	EA	1352.63	WATER QUALITY MONITORING AND SAMPLING	2705.26
167-1500	24	MO	1051.37	WATER QUALITY INSPECTIONS	25232.88
171-0010	1200	LF	2.10	TEMPORARY SILT FENCE, TYPE A	2520.00
171-0030	4800	LF	4.11	TEMPORARY SILT FENCE, TYPE C	19728.00

201-1500	1	LS	150000.00	CLEARING & GRUBBING -	150000.00
441-0204	500	SY	32.53	PLAIN CONC DITCH PAVING, 4 IN	16265.00
603-2024	50	SY	51.31	STN DUMPED RIP RAP, TP 1, 24 IN	2565.50
603-7000	550	SY	4.98	PLASTIC FILTER FABRIC	2739.00
700-6910	8	AC	987.28	PERMANENT GRASSING	7898.24
700-7000	8	TN	61.37	AGRICULTURAL LIME	490.96
700-7010	20	GL	20.24	LIQUID LIME	404.80
700-8000	11	TN	350.95	FERTILIZER MIXED GRADE	3860.45
700-8100	400	LB	2.25	FERTILIZER NITROGEN CONTENT	900.00
716-2000	6000	SY	1.27	EROSION CONTROL MATS, SLOPES	7620.00
Section Sub Total:					\$349,482.87

Section SIGNING AND MARKING

Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1031	20	SF	19.56	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 6	391.20
636-1032	100	SF	38.38	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING TP 6	3838.00
636-2070	160	LF	8.25	GALV STEEL POSTS, TP 7	1320.00
639-4004	8	EA	6131.01	STRAIN POLE, TP IV	49048.08
647-1000	1	LS	48653.95	TRAFFIC SIGNAL INSTALLATION NO. 1 - DANIELS BRIDGE ROAD AT DANIELS BRIDGE ROAD EXTENSION	48653.95
647-1000	1	LS	48653.95	TRAFFIC SIGNAL INSTALLATION NO. 2 - DANIELS BRIDGE ROAD AT CHESTNUT HILL ROAD	48653.95
653-0120	10	EA	70.45	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	704.50
653-1501	9000	LF	0.63	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	5670.00
653-1502	9000	LF	0.63	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	5670.00
653-1704	160	LF	5.33	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	852.80
653-1804	2000	LF	1.86	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	3720.00
653-3501	6200	GLF	0.54	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	3348.00
653-3502	2000	GLF	0.31	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, YELLOW	620.00
653-6004	60	SY	2.70	THERMOPLASTIC TRAF STRIPING, WHITE	162.00
653-6006	300	SY	3.32	THERMOPLASTIC TRAF STRIPING, YELLOW	996.00
654-1002	150	EA	3.43	RAISED PVMT MARKERS TP 2	514.50
654-1003	150	EA	3.69	RAISED PVMT MARKERS TP 3	553.50
657-1054	710	LF	4.66	PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, WHITE, TP PB	3308.60
657-3054	710	GLF	3.30	PREFORMED PLASTIC SKIP PVMT MKG, 5 IN, WHITE, TP PB	2343.00
657-6054	710	LF	4.41	PREFORMED PLASTIC SOLID PVMT MKG, 5 IN, YELLOW, TP PB	3131.10
Section Sub Total:					\$183,499.18

Section MISCELLANEOUS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	300000.00	TRAFFIC CONTROL -	300000.00
441-0104	3500	SY	37.42	CONC SIDEWALK, 4 IN	130970.00
622-1070	500	LF	50.00	PRECAST CONCRETE MEDIAN BARRIER, METHOD 5	25000.00
641-1100	200	LF	53.27	GUARDRAIL, TP T	10654.00
641-1200	1800	LF	18.24	GUARDRAIL, TP W	32832.00
641-5001	2	EA	647.31	GUARDRAIL ANCHORAGE, TP 1	1294.62
641-5012	2	EA	1815.35	GUARDRAIL ANCHORAGE, TP 12	3630.70
Section Sub Total:					\$504,381.32

Total Estimated Cost: \$7,965,824.56**Subtotal Construction Cost \$7,965,824.56**

E&C Rate 10.0 % \$796,582.46

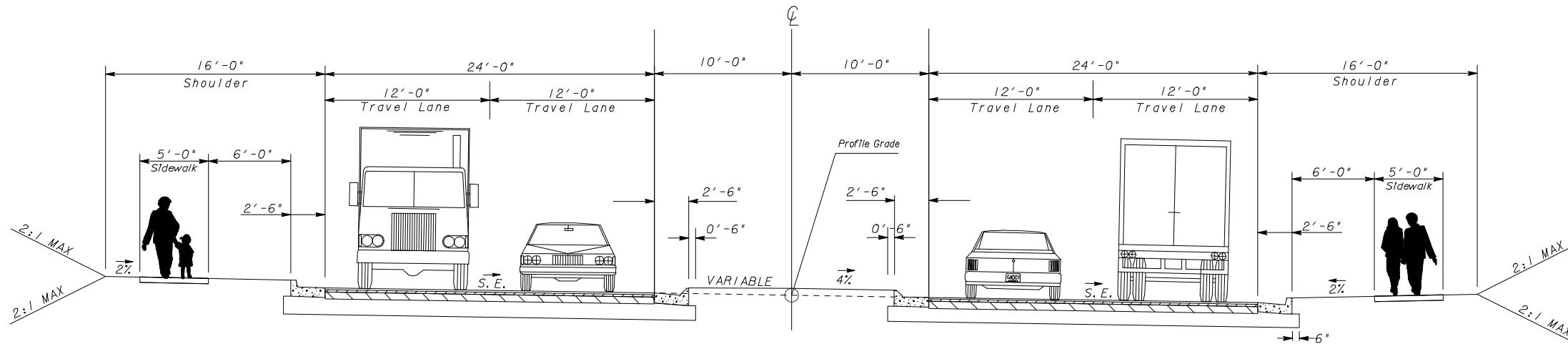
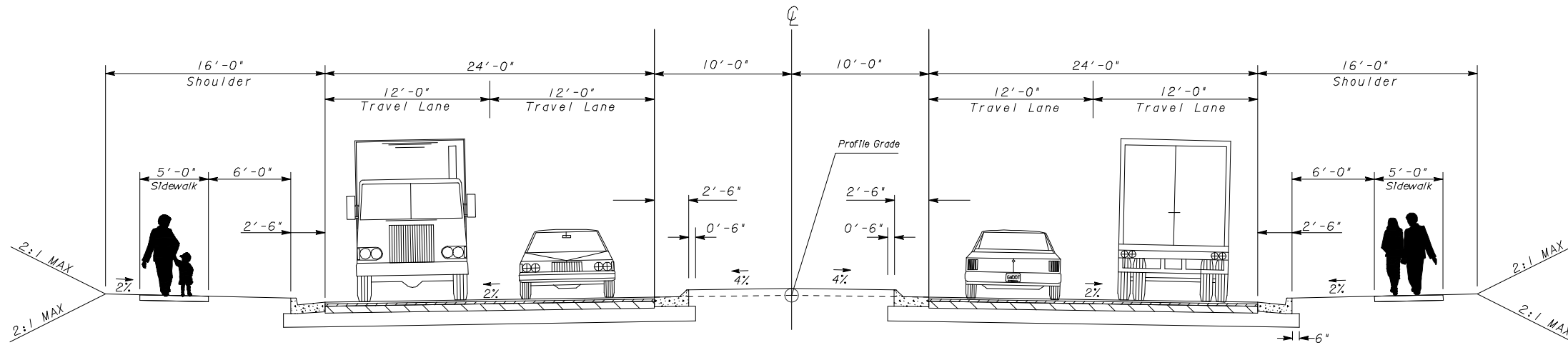
Inflation Rate 5.0 % @ 4.0 Years \$1,888,353.48

Total Construction Cost \$10,650,760.49

Right Of Way \$3,667,000.00

ReImb. Utilities \$0.00

Grand Total Project Cost \$14,317,760.49



DATE: 3/1/2007
 TIME: 10:00 AM
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REVISION DATES

NO.	DATE	DESCRIPTION

OCONEE COUNTY
 PUBLIC WORKS DEPARTMENT
 OFFICE:
TYPICAL SECTIONS
 DANIELS BRIDGE ROAD
 DRAWING No.
5-01



MEMORANDUM

DATE: December 20, 2006

TO: Ed Culican, P.E.

FROM: Heather Harris

SUBJECT: Environmental Inventory
Daniels Bridge Road Extension
Oconee County, Georgia

The Oconee County Department of Public Works proposes an extension of the existing Daniels Bridge Road from the south side of State Route 10 (SR 10) to the north side of SR 10. The purpose of the proposed project would be to eliminate congestion along Daniels Bridge Road and the SR 316/SR 10 intersection. The new location roadway would begin on Daniels Bridge Road north of the Chestnut Hill Road intersection. The road would travel north, bridge over SR 10, and connect to the existing terminus of the Jennings Mill Road extension. The road would consist of four 12-foot wide travel lanes (two in each direction), a 20-foot raised median and urban shoulders with 5-foot wide sidewalks on both sides of the road. The total length of the proposed project is approximately 0.7 mile.

As part of the project development process, Jordan, Jones & Goulding (JJG) conducted a preliminary survey of the proposed project area in order to identify potential ecological, historical, and socioeconomic resources within the project corridor. Any or all of these factors could affect project implementation and the level of documentation that the Georgia Department of Transportation (GDOT) would determine necessary to fulfill pre-construction and permitting requirements. Upon approval of the Project Concept by GDOT, intensive environmental field studies would be completed in order to assess detailed impacts on the affected areas of environmental concern. The preliminary survey identified the following areas of concern in the project corridor.

The Robinson Cemetery is located on the north side of Daniels Bridge Road directly south of SR 10. The cemetery is located approximately 300 feet from the preliminary plan for the new location road. In order to ensure that it is avoided, the cemetery needs to be clearly delineated by an archaeologist to ensure there will be no impacts from the proposed project.

A jurisdictional stream and a jurisdictional wetland are located on the north side of SR 10 to the southeast of Home Depot. The preliminary plan shows the new location road traversing through this area. A field delineation of Section 404 jurisdictional boundaries following the accepted methodology of the United States Army Corps of Engineers (USACE) needs to be conducted in order to assess impacts to these areas and evaluate permit requirements.

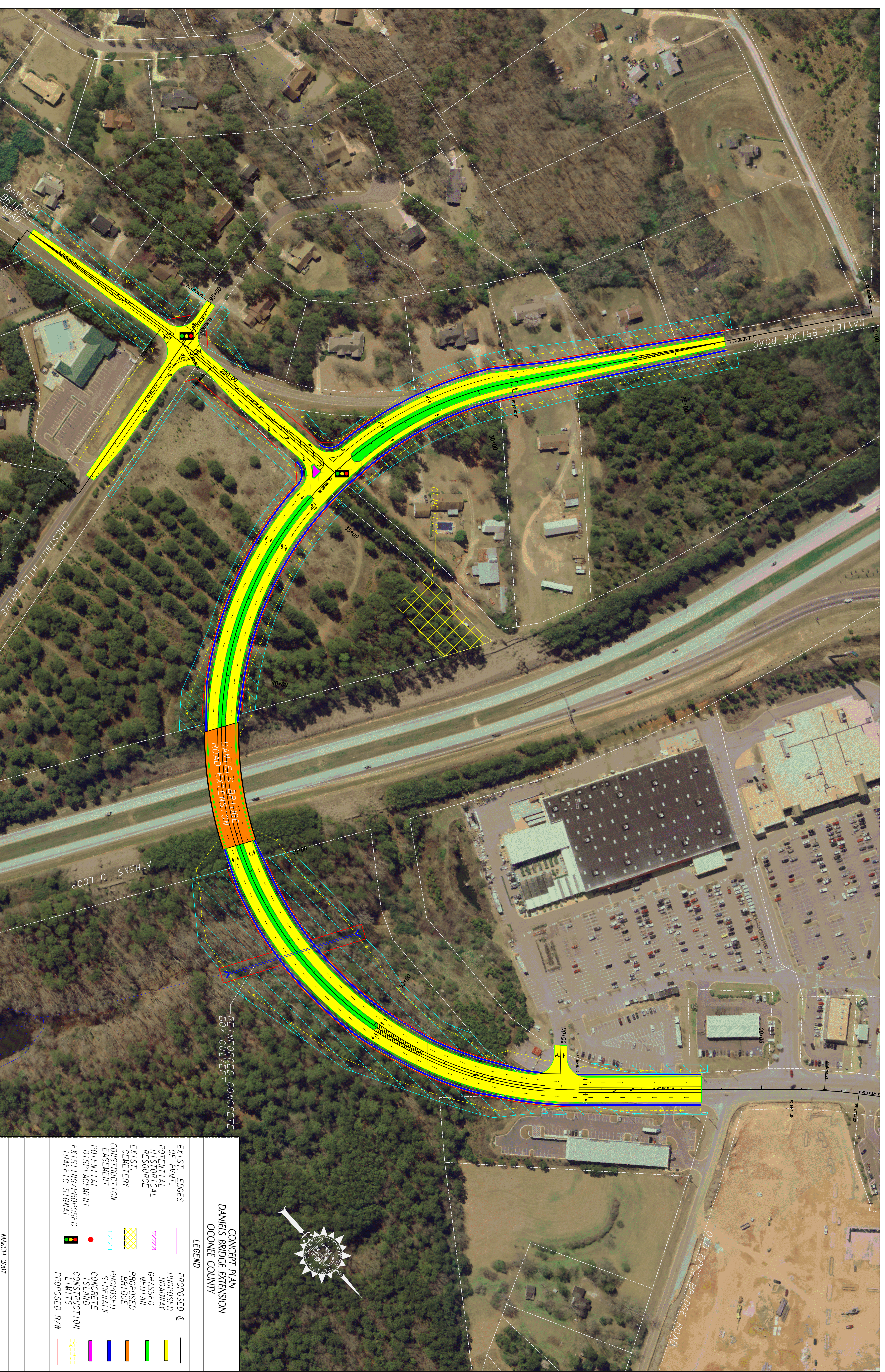
If federal funding is contemplated, compliance with the National Environmental Policy Act (NEPA) would be required. The level of NEPA documentation to be completed on a new

location roadway would most likely be an Environmental Assessment (EA). The following effects would need to be evaluated in the required federal environmental document:

- Social Environment (land use changes, community cohesion, environmental justice, controversy potential, and economic effects, and Section 4(f))
- Cultural Environment (historic sites, archaeological sites, and Section 4(f))
- Natural Environment (wetland, water quality, wild/scenic rivers, farmlands, endangered/threatened species, floodplains, stream, and invasive species)
- Physical Environment (noise, air, construction/utilities, USTs, and hazardous waste sites)

The previously mentioned intensive environmental field studies, along with the required public involvement would form the basis of the EA, which would be submitted through GDOT to the FHWA for review and approval. Other project-specific permits, including the USACE 404 permit would not be processed until more detailed engineering construction plans are substantially complete.

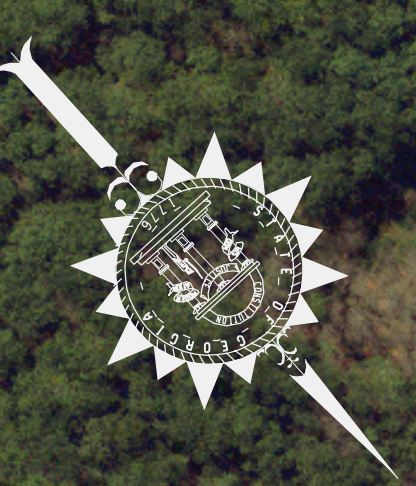
If state funds were contemplated for the project the Georgia Environmental Policy Act (GEPA) would apply and the likely level of documentation would be an Environmental Effects Report (EER). The EER would require most of the same analyses to be conducted as the EA, notably excepting Section 4(f).

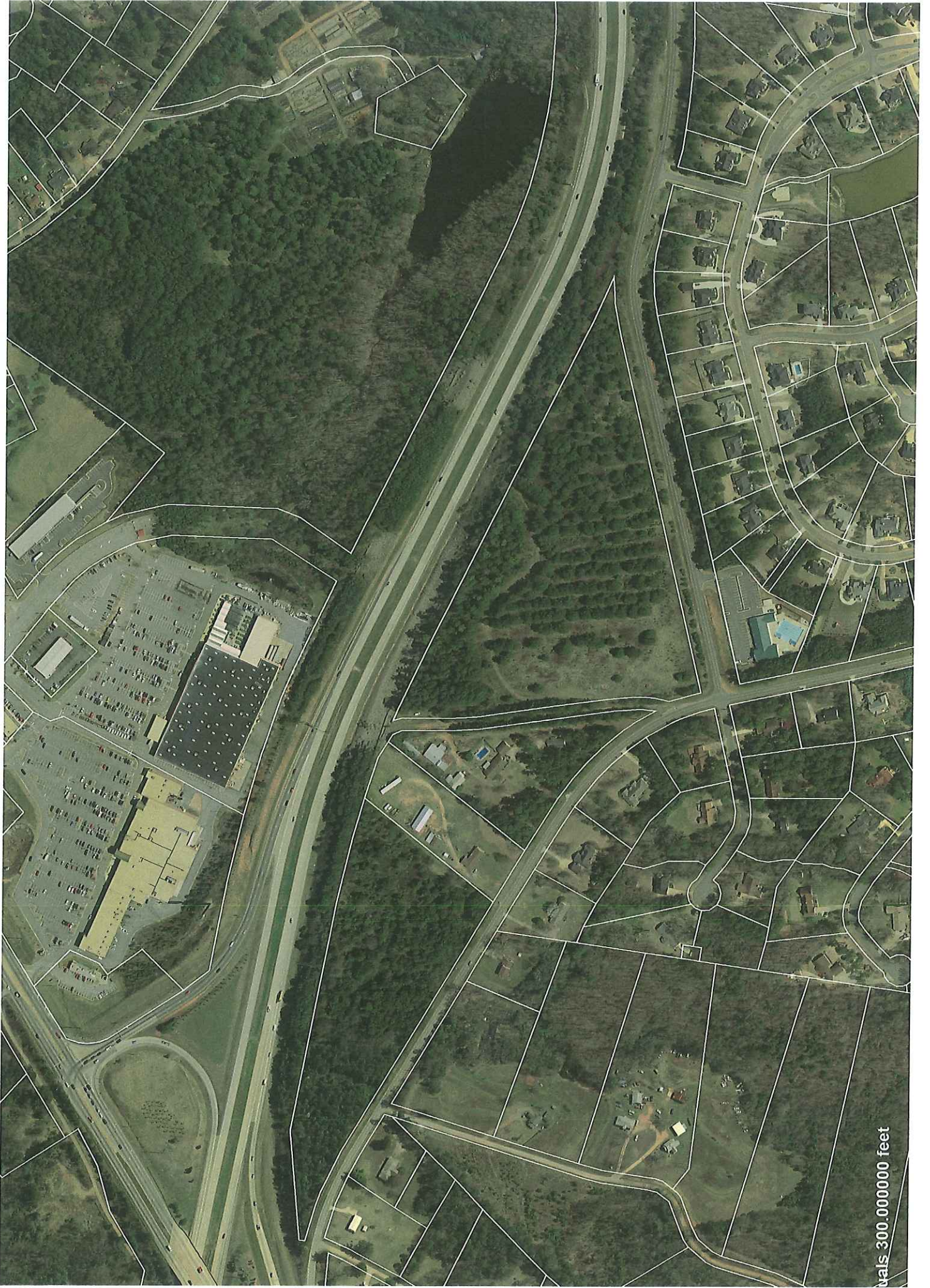


CONCEPT PLAN
DANIELS BRIDGE EXTENSION
OCONEE COUNTY

LEGEND

EXIST. EDGES OF P.W.M.T.	PROPOSED
POTENTIAL HISTORICAL RESOURCE	PROPOSED ROADWAY
EXIST. CONSTRUCTION EASEMENT	PROPOSED MEDIAN
POTENTIAL DISPLACEMENT	PROPOSED BRIDGE
EXISTING/PROPOSED TRAFFIC SIGNAL	PROPOSED SIDEWALK
	PROPOSED CONCRETE ISLAND
	EXISTING/PROPOSED CONSTRUCTION LIMITS
	PROPOSED R/W





Scale: 1 inch equals 300,000 feet