

**Date**  
August 8, 2014

**To**  
Beata Styś-Pałasz, PE, FDOT  
Kacia Monts, FDOT



**PROJECT  
CORRESPONDENCE**

**From**  
Luis E. Diaz, PE, HNTB

**Subject**  
EE Williamson Road Direct Connect Ramps to  
I-4 Express Lanes

**Purpose**

As part of the Interstate 4 (I-4) “Beyond the Ultimate” PD&E Reevaluation Study in Seminole County, the Florida Department of Transportation (FDOT) has been asked by Seminole County to review the impacts of providing a direct connection from the proposed Express Lanes to EE Williamson Road. This connection would be provided only to and from the south (west) and would only be available to patrons using the proposed Express lanes on I-4. A graphic showing this connection is provided in the attachments to this document.

**Analysis**

This traffic analysis was based on traffic data developed as part of the I-4 Systems Access Modification Report (SAMR) update that is being prepared to support the (I-4) “Beyond the Ultimate” PD&E Reevaluation Study. The 2012 FDOT Project Traffic Forecasting Handbook and the Project Forecasting Procedure Topic No.525-030-120 were used to develop the Design Traffic for this project.

For the purposes of this EE Williamson Road evaluation, the traffic volumes provided for the facilities located within the study area (SR 434, Markham Woods Road, Lake Emma Road, EE Williamson Road and Lake Mary Boulevard) were adjusted to reflect growth patterns and travel behaviors in the area. Using the methodologies provided in the Project Traffic Forecasting Handbook, daily traffic volumes (from the Design Traffic Report) were converted to hourly traffic volumes (for both travel directions) for the morning and afternoon peak hours. Projected intersection turning movement traffic volumes were developed from the hourly volumes and were analyzed using the latest version of the Highway Capacity Software (HCS) to determine the projected intersection delay and level of service for the intersections. Attached are three figures showing the projected 2040 traffic for the different roadway intersections within the study area. The first shows the traffic without the connection between the Express Lanes and EE Williamson Road, the second shows the traffic with the connection and the third shows the difference between the two scenarios.

The information provided in these figures shows that the direct connection from the proposed Express Lanes to EE Williamson Road does not provide significant relief at either SR 434 or Lake Mary Blvd while adding approximately 25% more traffic to the east side of EE Williamson Road (where Woodland Elementary School is located) in the AM peak period. The largest reduction in traffic can be expected at the EB off ramp at SR 434, at approximately 6% reduction in the same AM peak period. Also found in the attachments to this document is a table providing results of HCS analysis that was performed at the different intersections impacted by the proposed connection. This table shows that there are no significant reductions in intersection delay or improvement in overall intersection level of service.

# **ATTACHMENTS**



AERIAL FLOWN 2013

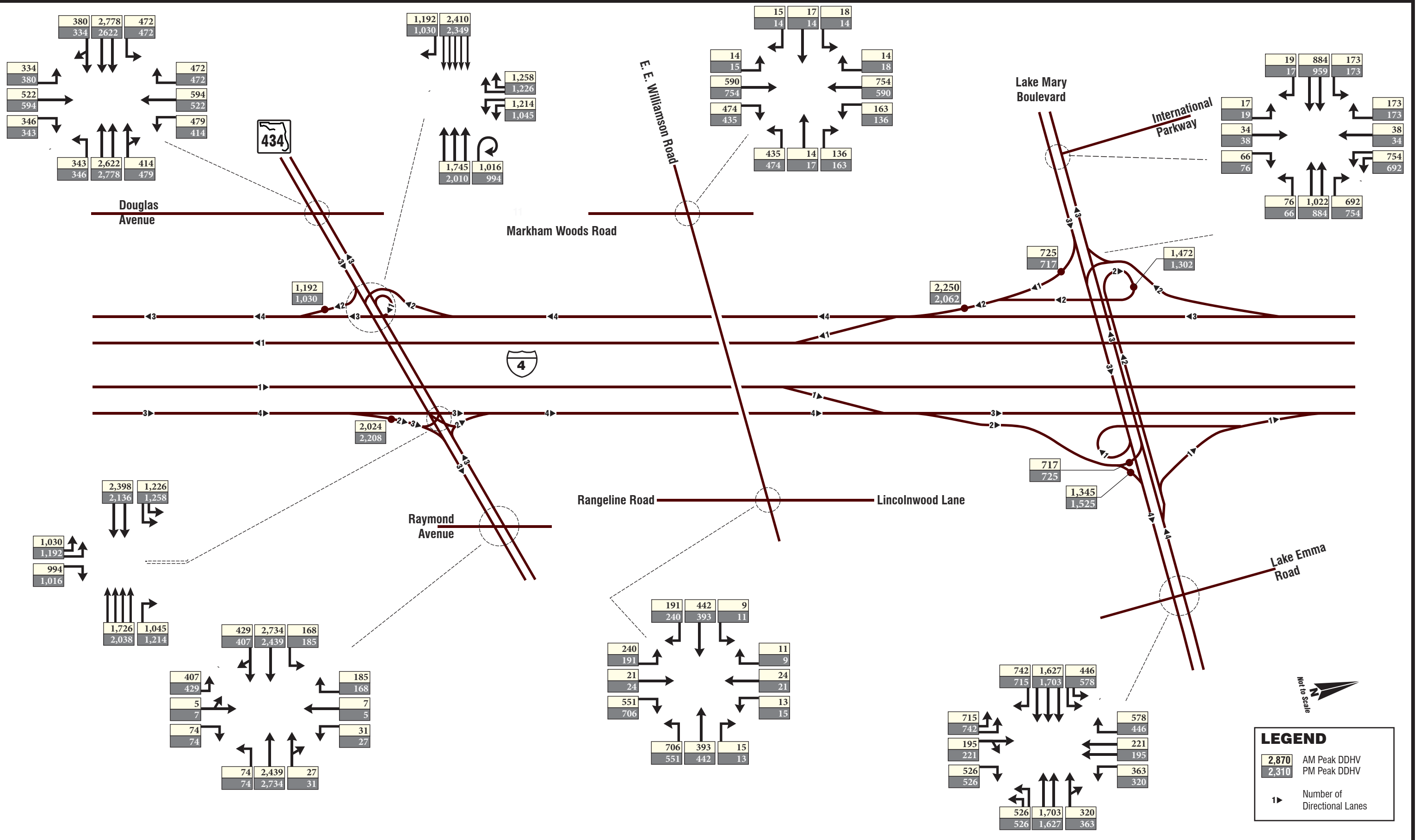


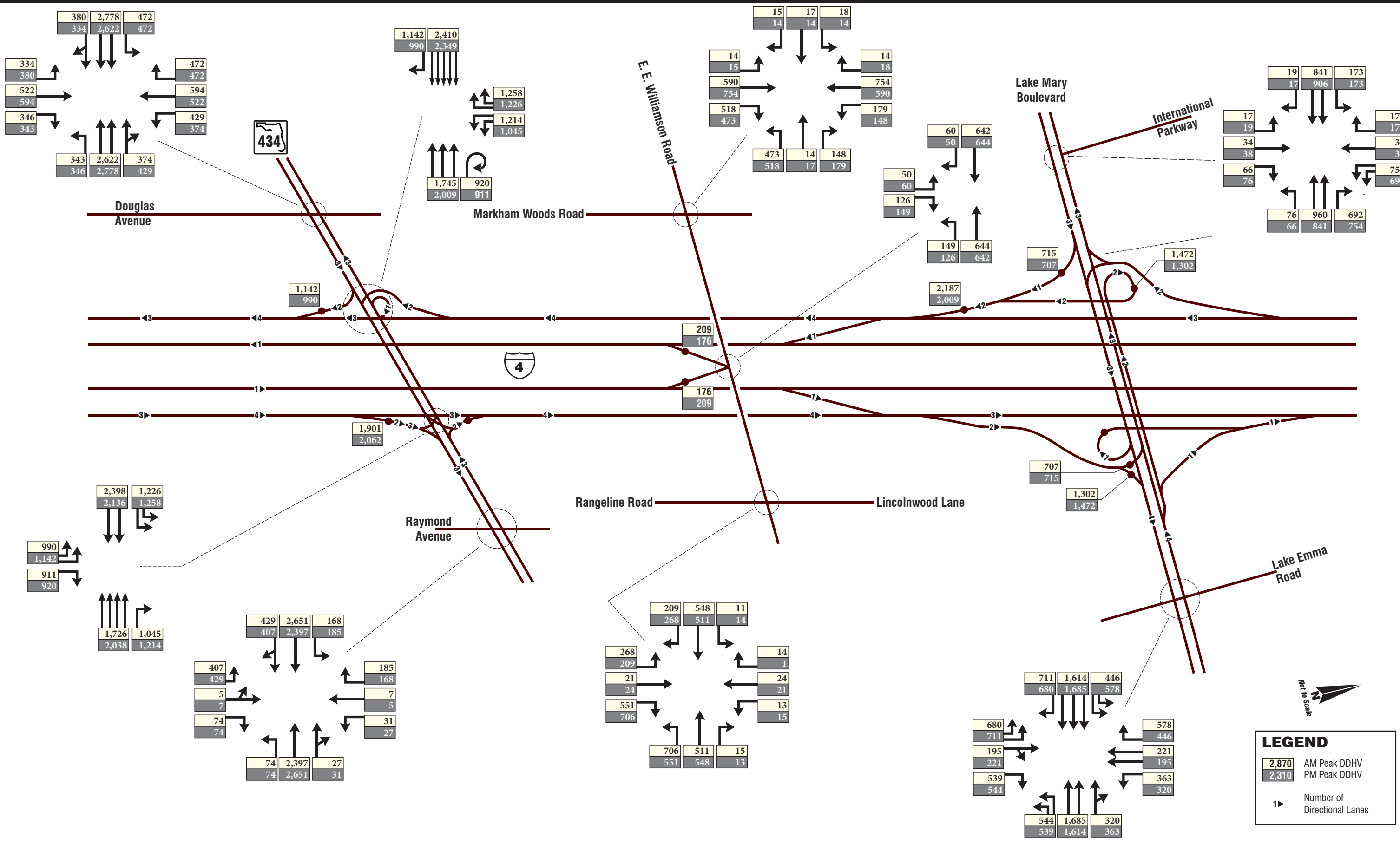
LEGEND	
GENERAL USE LANES	
EXPRESS LANES	
BRIDGE	

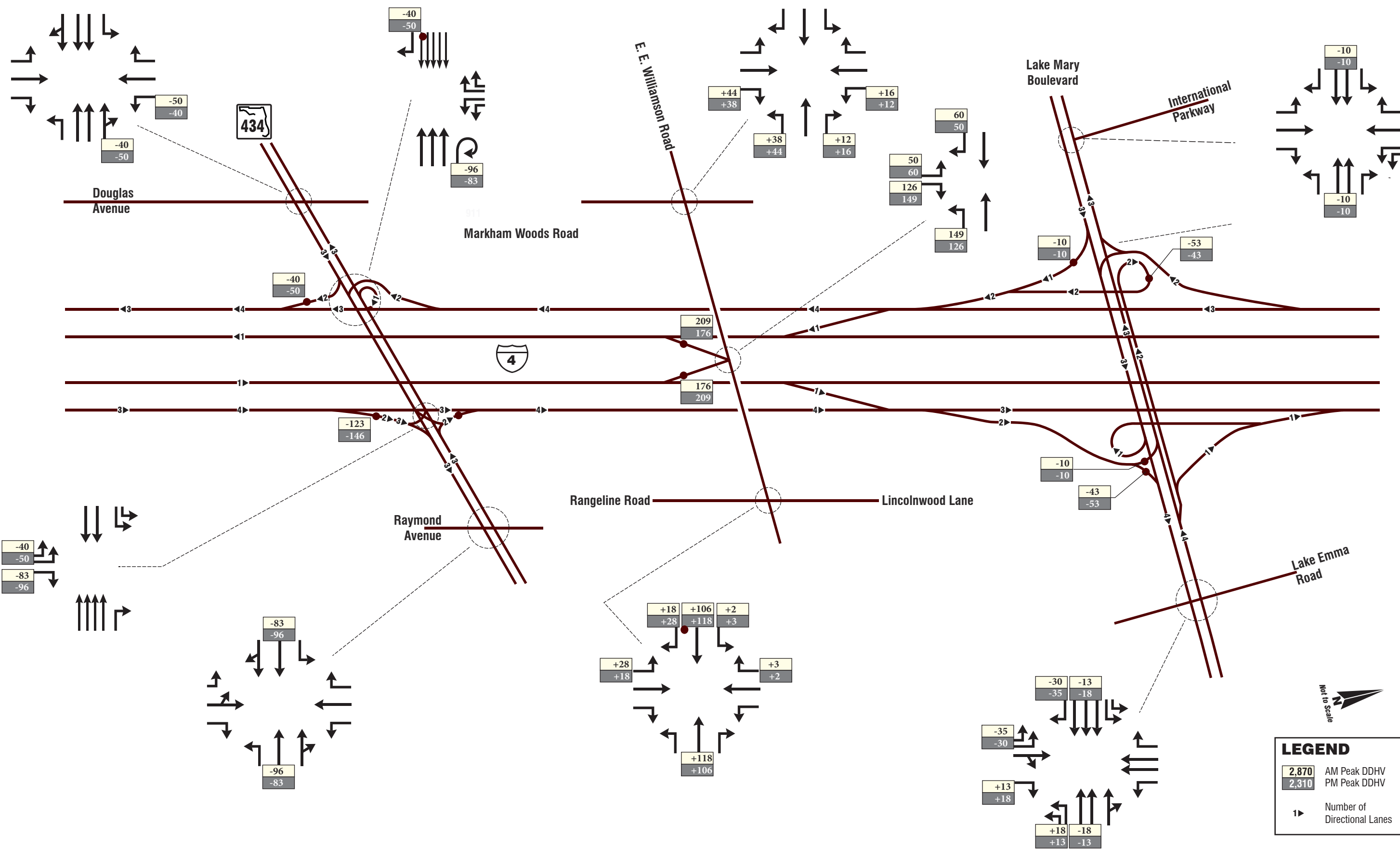


# SR-400 (I-4) Segment 3 EE WILLIAMSON ROAD / I-4 ALTERNATIVE 2









**EE Williamson Road Express Lane Connection Traffic Analysis  
2040 LOS and Overall Intersection Delay**

SR 434 at Douglas Ave	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	228.3	233.2	234.2	241.2
Intersection LOS	F	F	F	F

SR 434 at I-4 WB	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	31	30.9	31.6	31.5
Intersection LOS	C	C	C	C

SR 434 at I-4 EB	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	98.4	113.4	108.1	124.7
Intersection LOS	F	F	F	F

E.E. Williamson Rd at Markham Woods Rd	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	46.6	54.2	41.6	46.3
Intersection LOS	D	D	D	D

E.E. Williamson Rd at I-4	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	12.4	12.9	-	-
Intersection LOS	B	B	-	-

E.E. Williamson Rd at Lincolnwood Ln	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	85.7	80.6	67	55.7
Intersection LOS	F	F	E	E

Lake Mary Blvd at Intl Pkwy	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	32.7	31	33.4	31.4
Intersection LOS	C	C	C	C

Lake Mary Blvd at Lake Emma Rd	With E.E. Williamson Road Connection		Without E.E. Williamson Road Connection	
	AM	PM	AM	PM
Intersection Delay (s)	131.8	125.1	137.4	134.1
Intersection LOS	F	F	F	F