APPENDIX A

I-80 STATE STREET TO 1300 EAST TRAFFIC OPERATIONS ANALYSIS

SALT LAKE CITY, UTAH

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HORROCKS
ENGINEERS

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Introduction

This report presents the findings and recommendations of the traffic operations analysis for Interstate 80 (I-80) between Street State and 1300 East in Salt Lake City, Utah (see Figure 1 for project location).

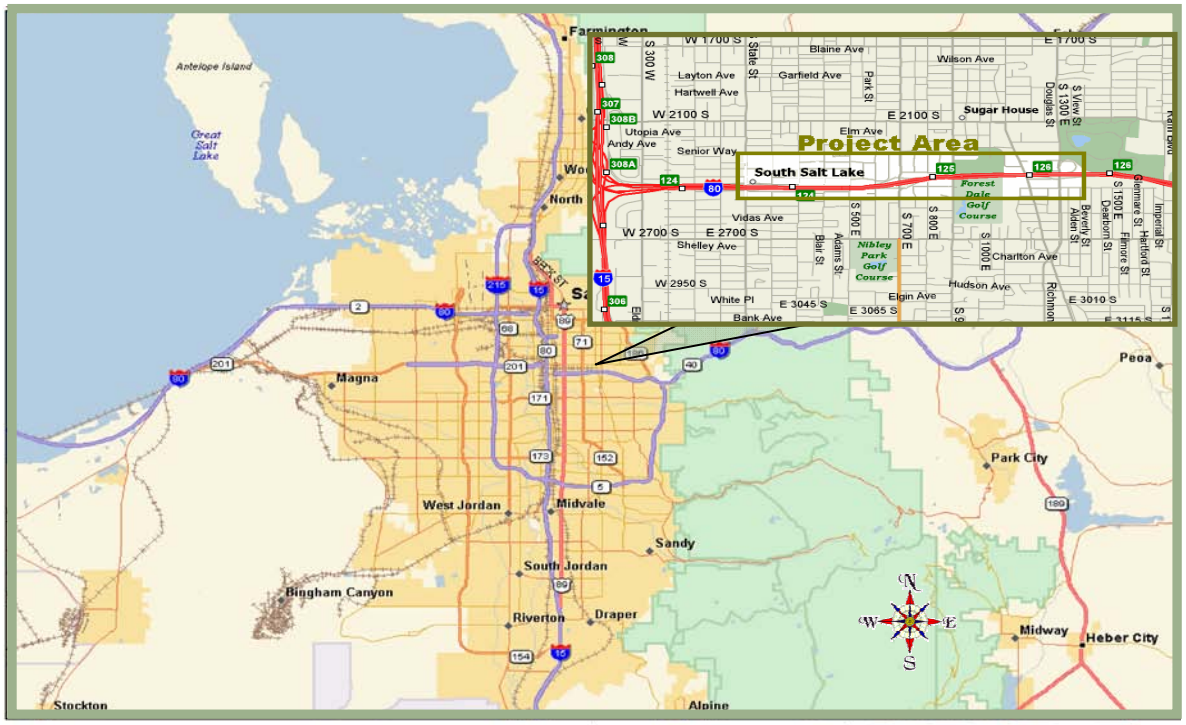


Figure 1: Project Location Map

I-80 is a major transcontinental roadway that runs from San Francisco, California east to New Jersey. The segment that runs through Utah has a predominately east-west alignment and acts as an important element of Utah's transportation system, linking both Summit and Tooele counties to the Salt Lake City metropolitan area. Also, it provides an important connection to the north-south corridors of I-15 and the I-215 beltway.

There are three interchanges on I-80 within the study area. These interchanges are located at State Street, 700 East and 1300 East. The study segment of I-80 is currently a six-lane roadway, with three-lanes each in the eastbound and westbound directions and a posted speed limit of 65 mph.

Data Collection

Existing Traffic Data

Existing traffic data was obtained from several sources. AM and PM peak hour intersection turn-movement counts at the ramp terminals were obtained from traffic counts performed October and November 2005. Traffic data for the I-80/I-15 interchange was obtained from counts performed by L2 Data Collection in March 2006. I-80 Mainline traffic data was obtained from the Utah Department of Transportation (UDOT) at their permanent count station No. 341. UDOT also provided an estimate of trucks on I-80 at 9 percent. Finally, 24-hour pneumatic hose counts were performed at 300 East, 500 East, and 600 East where they cross under I-80. Details of all the traffic data is found in the Appendix.

Future Traffic Data

Future traffic projections were obtained from multiple sources. The I-80 traffic projections were obtained using an extrapolation of historical traffic count data obtained from UDOT count station No. 341. Based on historical counts dating back to 1985, I-80 traffic has grown at an average 1740 vehicles per year (about 1.6 percent). This growth rate was used to obtain 2015, 2025, and 2030 traffic volumes for I-80. The cross-street traffic projections were obtained using the Wasatch Front Regional Council's (WFRC) travel demand model. The WFRC 2030 model was compared with the year 2005 data to obtain growth volumes for the cross streets. 2015 volumes were interpolated between the 2030 and existing traffic counts. Turn movement volumes during the AM and PM peak hours wear based on the future traffic volumes and existing turning movement percentages. Additional details are included in the Appendix.

Traffic Operations Analysis Description

Traffic operations are typically rated in terms of "Level of Service" (LOS). LOS is a term used by the *Highway Capacity Manual* (HCM) to describe the traffic operations of an intersection and/or roadway, based on congestion and/or delay. Level of Service is generally defined in ranges from LOS A (almost no congestion or delay) to LOS F (traffic demand is above capacity and the intersections experience long queues and delays). LOS C is generally considered acceptable for rural areas. LOS D is acceptable for urbanized areas. LOS E and F are the thresholds when the roadway or intersection reaches capacity and traffic movement is slow. Any disturbance or incident can cause long queues and increased travel delay under LOS E and F.

Intersection Level of Service

At intersections, Level of Service is based on average delay time per vehicle. At signalized intersections the delay per vehicle is based on the control delay of the traffic signal, and at unsignalized (two-way or all-way stop controlled) intersections the delay is based on vehicle time spent waiting at the intersection in order to make the desired movement. Tables 1 and 2 define the HCM LOS criteria for unsignalized and signalized intersection.

Table 1: LOS Criteria for Unsignalized Intersections

LOS	Stop Delay per Vehicle (s)
A	10
B	> 10 and 15
C	> 15 and 25
D	> 25 and 35
E	> 35 and 50
F	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Table 2: LOS Criteria for Signalized Intersections

LOS	Stop Delay per Vehicle (s)
A	10
B	> 10 and 20
C	> 20 and 35
D	> 35 and 55
E	> 55 and 80
F	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Freeway Level of Service

For freeway segments, LOS conditions are typically calculated using density in terms of passenger cars per mile per lane (pc/mi/ln). As stated in the *Highway Capacity Manual,* a density greater than 45 pc/mi/ln indicates severe congestion that extends through the segment. Table 3 summarizes the LOS criteria for basic freeway segments based on density, and Figure 3 show a graphical representation of the LOS's.

Table 3: LOS Criteria for Freeway Segments

LOS	Density Range (pc/mi/ln)
A	0-11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	>45

Source: Highway Capacity Manual, Transportation Research Board, 2000.

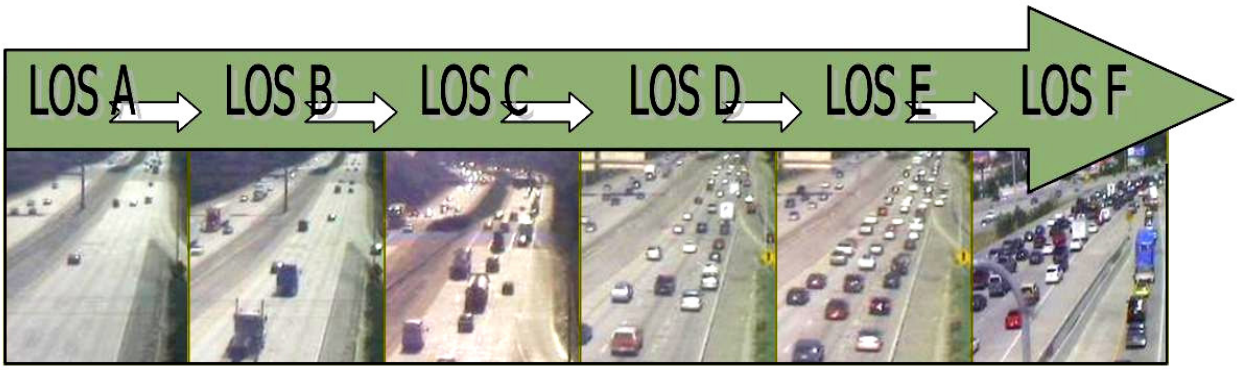


Figure 2: Freeway Level of Service

Level of Service Calculation Methods

LOS conditions for the signalized intersections were calculated based on *Highway Capacity Manual* methodology and criteria. The software package Synchro Version 7 was used to input data, estimate signal timings, and perform the HCM calculations.

The I-80 mainline LOS conditions were calculated using the *VISSIM* software package. *VISSIM* performs a microscopic simulation for the street network. Simulation can provide a more comprehensive analysis than HCM methodology because each individual vehicle is tracked through the entire network, and the affects of lane changes, acceleration, deceleration, and driver behavior are reflected in the results. In addition to the HCM analysis, the signalized intersections were included and analyzed in the VISSIM models.

I-80 Ramp and Mainline Scenarios

This section provides a brief description of the various scenarios analyzed for the I-80 mainline. Under all scenarios, the cross-streets had essentially the same improvement configurations including items such as dual left-turn lanes, exclusive right-turn lanes, and updated signal timings. The initial I-80 scenarios (with numbering) are described below.

1. *Existing Conditions*: Geometry and signal timings as they currently exist. Also referred to as the "No-Build" scenario.

2. *Auxiliary Lanes*: A full auxiliary lane was added in both directions to connect the on-ramps with the adjacent downstream off-ramps between State Street and 700 East, and between 700 East and 1300 East.

3A. Auxiliary Lanes and GP Lane: In addition to the auxiliary lanes, a general purpose lane was added to the inside lanes in both directions between State Street and 1300 East. The existing geometry already added and dropped an inside lane west of State Street, so the general purpose lane simply tied into the

existing lanes. The westbound general purpose lane was added by not dropping the 1300 East loop on-ramp. The eastbound general purpose lane needed to be dropped to match existing geometry. To perform the lane drop, the added lane was carried past the 1300 East off-ramp and the outside lane was dropped before the 1300 East structure.

3B. *Auxiliary Lanes and GP Lane 1300 East Dual Right*: This scenario is identical to Scenario 3A except for the 1300 East eastbound off-ramp intersection maintains a dual right turn lane like existing. This scenario is meant to determine whether Driggs Avenue should be closed.

3C. *Auxiliary Lanes and GP Lane 1300 East Ramp Meter*: Identical to Scenario 3A except that a ramp meter was added to the 1300 East eastbound on-ramp.

4. *Auxiliary Lanes and GP Lane with No Lane Drop.* Identical to Scenario 3 except that the bottleneck of dropping the eastbound lane is removed. Four eastbound general purpose lanes are assumed to extend eastward past 1300 East and beyond.

5. *Auxiliary Lanes and GP Lane with No Lane Drop Ramp Metering.* Identical to Scenario 4 except that ramp metering is applied to all on-ramps within the study area.

6. *Auxiliary Lanes and GP Lane with No Lane Drop and WB Improvements.* Identical to Scenario 4 with additional westbound improvements applied at the major diverge west of State Street. An additional lane is added to the right-side ramp diverge so both legs have three lanes. The State Street westbound off-ramp is converted to a single lane off-ramp to accommodate the extra lane.

Scenarios 4, 5 and 6 apply improvements that are outside the limits of the Environmental Study. For the traffic operations analysis, it was necessary to remove these “external” bottlenecks to more accurately analyze the recommended improvements within the study area. Otherwise, queuing caused by the bottlenecks impacted the ramp merge and diverge areas so that a true analysis of the improvements could not be performed.

Traffic Operation Analysis Results

The traffic operations analysis consisted of two main steps. First the ramp terminals at the cross-streets of State Street, 700 East, and 1300 East were analyzed for future improvement needs. Then I-80 mainline was analyzed under the improvement scenarios described above. The main design year for the study was 2030, but certain scenarios were also analyzed for 2005, 2015, 2020 and 2025 conditions during the AM and PM peak traffic periods.

Cross-Street Traffic Operations Results

The following tables summarize the HCM and VISSIM results for the cross-street intersections. The “Improved Geometry” will be described below.

Table 4: AM Peak Traffic Operations Analysis Results - HCM

Intersection	2005		2005		2030	
	Existing Geometry		Improved Geometry		Improved Geometry	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
State and EB Ramps	30.4	C	13.9	B	26.7	C
State and WB Ramps	18.0	B	14.1	B	30.8	C
700 East and EB Ramps	25.9	C	19.5	B	28.0	C
700 East and WB Ramps	23.2	C	8.5	A	9.9	A
1300 East and EB Ramps	29.2	C	13.4	B	23.2	C
1300 East and WB Ramps	17.2	B	12.9	B	19.0	B

Table 5: PM Peak Traffic Operations Analysis Results - HCM

Intersection	2005		2005		2030	
	Existing Geometry		Improved Geometry		Improved Geometry	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
State and EB Ramps	36.0	D	11.0	B	21.4	C
State and WB Ramps	22.0	C	15.3	B	28.3	C
700 East and EB Ramps	39.4	D	19.3	B	20.6	C
700 East and WB Ramps	21.6	C	14.7	B	16.0	B
1300 East and EB Ramps	84.4	F	20.7	C	31.2	C
1300 East and WB Ramps	32.3	C	23.3	C	50.8	D

Table 6: Existing Geometry Traffic Operations Results - VISSIM

Intersection	2005 - Existing Geometry				2015* - Existing Geometry	
	AM Peak		PM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
State and EB Ramps	26.1	C	31.1	C	33.0	C
State and WB Ramps	17.0	B	20.6	C	32.6	C
700 East and EB Ramps	69.4	E	46.8	D	63.5	E
700 East and WB Ramps	37.2	D	19.7	B	24.4	C
1300 East and EB Ramps	23.1	C	60.7	E	65.7	E
1300 East and WB Ramps	9.0	A	22.9	C	32.4	C
*The AM Peak was not run in VISSIM for 2015.						

Table 7: Improved Geometry Traffic Operations Results - VISSIM

Intersection	2015* - Improved Geometry				2030 - Improved Geometry			
	PM Peak		PM Peak - Scenario 3B		AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
State and EB Ramps	21.8	C	21.1	C	24.1	C	23.9	C
State and WB Ramps	21.4	C	21.0	C	16.9	B	24.1	C
700 East and EB Ramps	20.5	C	21.0	C	21.5	C	22.0	C
700 East and WB Ramps	18.4	B	18.2	B	11.6	B	32.1	C
1300 East and EB Ramps	40.0	D	68.0	E	32.2	C	40.9	D
1300 East and WB Ramps	24.1	C	21.6	C	10.0	A	23.4	C
*The AM Peak was not run in VISSIM for 2015.								

The tables above indicate that with existing geometry, the intersections of 700 East/EB Ramps and 1300 East/EB Ramps will operate at LOS E (at capacity) during the 2015 PM peak hour. With the improved geometry, all intersections are expected to operate at LOS D or better through 2030. The results of Scenario 6 (Table 7) indicate that Driggs Avenue, next to 1300 East/EB Ramps, should be closed to maintain acceptable traffic operations. The following section describes the recommended cross-street improvements.

Recommended Cross-Street Improvements

The following figures compare the existing lane geometry with the recommended improvements at State Street, 700 East and 1300 East. Also, a brief description of the improvements will be given with the figures.

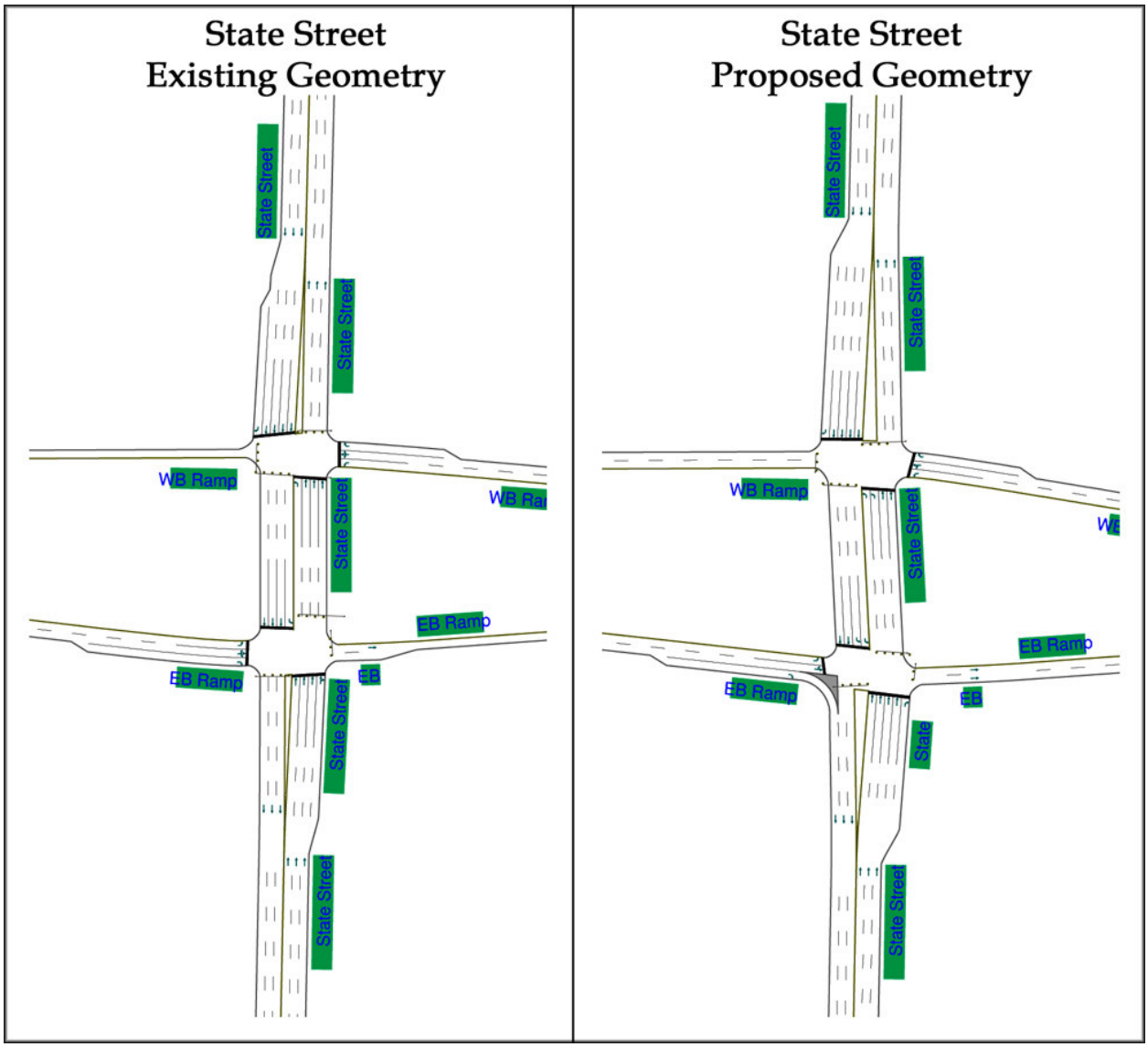


Figure 3: State Street Proposed Lane Configuration – Not to Scale

At the EB Ramp intersection, the proposed State Street intersection improvements include converting one southbound thru lane into a left turn lane to create dual left turn lanes. Also at the WB Ramp intersection, one northbound thru lane is converted into a left turn lane to create a dual left turn lanes. The dual lefts require the WB and EB on-ramps to be widened to two lanes. These improvements maintain the same pavement width under the I-80 structure. The reduced thru lanes allow free right turn movements for the WB and EB off-ramps. One additional improvement included adding a separate right turn lane for the northbound to eastbound movement at the EB on-ramp.

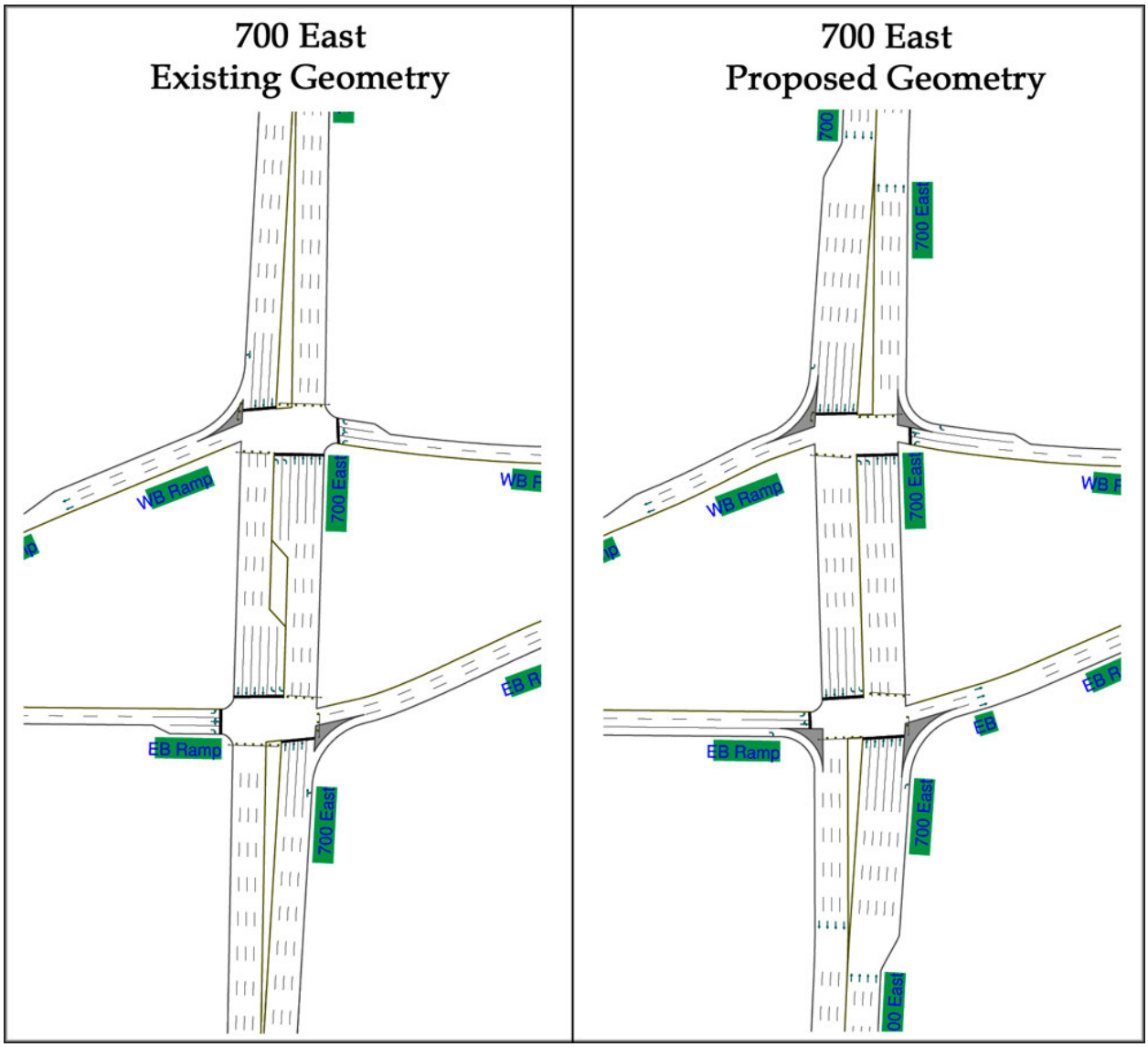


Figure 4: 700 East Proposed Lane Configuration – Not to Scale

At the EB Ramp intersection, the proposed 700 East intersection improvements include removing one southbound thru lane to create full length dual left turn lanes. At the WB Ramp intersection, one northbound thru lane was also removed to create full length dual left turn lanes. These improvements maintain the same pavement width under the I-80 structure. The right-turn movements for the WB and EB off-ramps were converted to free movements, and the pocket lengths were lengthened. The improvements also included adding a separate right turn lane for the northbound to eastbound movement at the EB on-ramp and for the southbound to westbound movement at the WB on-ramp.

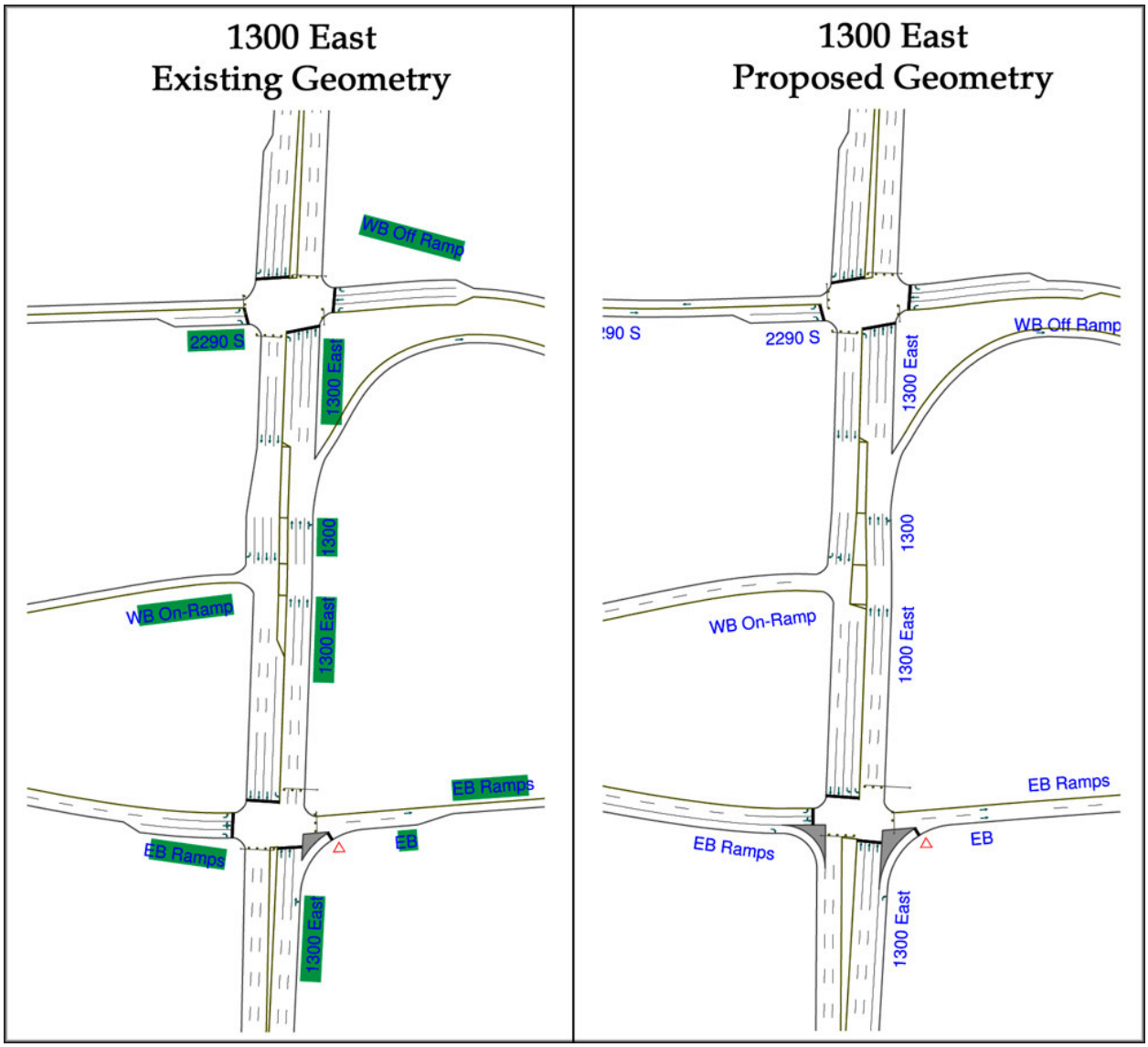


Figure 5: 1300 East Proposed Lane Configuration – Not to Scale

At the EB Ramp intersection, the proposed 1300 East intersection improvements include converting one southbound thru lane to a left turn lane creating dual left turn lanes. The WB off-ramp intersection required no additional improvements, but the WB on-ramp required re-configuration to an exclusive right turn lane, a shared thru-right lane, and an exclusive thru lane. These improvements maintain the same pavement width for the 1300 East structure over I-80. The right turn movement for the EB off-ramp was converted to a free movement, which required the closing of Driggs Avenue. The EB off-ramp right turn pocket length was lengthened. Finally, a separate right turn lane for the northbound to eastbound movement at the EB on-ramp was added.

I-80 Mainline and Ramp Junction Traffic Operations Results

The following tables summarize the VISSIM results for the I-80 mainline and ramp junctions. A brief explanation of the VISSIM results will be provided for each scenario.

Table 8: Existing Geometry Traffic Operations Results - VISSIM

	Scenario 1 - Existing Geometry					
	2005 AM Peak		2005 PM Peak		2015 PM Peak	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	15.6	B	22.3	C	95.1	F
State EB Merge	16.6	B	37.6	E	82.3	F
State WB Diverge 1 (Ramp)	24.6	C	19.8	B	23.4	C
State WB Diverge 2 (Mainline)	33.9	D	23.5	C	29.4	D
700 East EB Diverge	18.0	B	46.2	F	73.3	F
700 East EB Merge	13.1	B	81.0	F	30.0	D
700 East WB Diverge	35.4	E	16.8	B	19.6	B
700 East WB Merge	83.2	F	24.1	C	46.9	F
1300 East EB Diverge	15.3	B	72.4	F	40.7	E
1300 East EB Merge	10.8	B	17.8	B	22.6	C
1300 East WB Diverge	30.9	D	23.0	C	27.2	C
1300 East WB Merge 1 (Loop)	24.3	C	13.7	B	16.2	B
1300 East WB Merge 2 (Ramp)	25.4	C	16.3	B	19.9	B

Table 9: Existing Geometry Travel Times - VISSIM

	Scenario 1 - Existing Geometry			
	2005 AM Peak		2005 PM Peak	
I-80 Direction	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)
Eastbound	2.9	64.1	4.4	42.2
Westbound	3.3	54.0	2.9	62.0

Scenario 1 is simply the existing conditions and a “No-Build” condition for 2015 traffic volumes. The existing conditions are run to ensure that the model is calibrated to reflect observed traffic patterns. As shown in the table, the 2005 traffic operations are LOS E and F in several areas along the corridor during both the AM and PM peaks. The 2015 conditions show even worse traffic operations.

Table 10: Scenario 2 PM Peak Hour Traffic Operations Results - VISSIM

	Scenario 2 - Auxiliary Lanes			
	2015 PM Peak		2020 PM Peak	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	30.8	D	84.4	F
State EB Merge	36.0	E	61.8	F
State WB Diverge 1 (Ramp)	33.5	D	43.3	F
State WB Diverge 2 (Mainline)	35.9	E	44.0	F
700 East EB Diverge	36.6	E	54.8	F
700 East EB Merge	36.8	E	70.6	F
700 East WB Diverge	22.3	C	27.6	C
700 East WB Merge	27.3	C	43.9	F
1300 East EB Diverge	26.0	C	30.3	D
1300 East EB Merge	30.7	D	44.9	F
1300 East WB Diverge	20.2	C	24.8	C
1300 East WB Merge 1 (Loop)	21.3	C	26.7	C
1300 East WB Merge 2 (Ramp)	20.4	C	24.4	C

Table 11: Scenario 2 PM Peak Hour Travel Times - VISSIM

	Scenario 2 - Auxiliary Lanes			
	2015 PM Peak		2020 PM Peak	
I-80 Direction	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)
Eastbound	3.3	48.6	4.4	36.1
Westbound	4.2	42.2	4.5	39.3

Scenario 2 added auxiliary lanes between State Street and 700 East and between 700 East and 1300 East. The auxiliary lanes provided some benefit over the no-build in 2015; however, Scenario 2 operates at LOS F in 2020 through several sections of I-80.

Table 12: Scenarios 3A and 3B PM Peak Hour Comparison - VISSIM

	Scenario 3 - Auxiliary Lanes and GP Lane			
	Scenario 3A		Scenario 3B	
	2015 PM Peak		2015 PM Peak	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	25.9	C	25.0	C
State EB Merge	22.0	C	22.3	C
State WB Diverge 1 (Ramp)	15.7	B	15.7	B
State WB Diverge 2 (Mainline)	17.3	B	17.3	B
700 East EB Diverge	19.8	B	20.0	C
700 East EB Merge	19.1	B	19.2	B
700 East WB Diverge	12.4	B	12.3	B
700 East WB Merge	16.0	B	15.9	B
1300 East EB Diverge	18.3	B	45.4	F
1300 East EB Merge	27.5	C	27.9	C
1300 East WB Diverge	27.2	C	27.2	C
1300 East WB Merge 1 (Loop)	12.5	B	12.4	B
1300 East WB Merge 2 (Ramp)	13.1	B	13.0	B

When the general purpose lane is added in conjunction with the auxiliary lanes, the traffic operations improve significantly. Scenario 2 (Table 10) had several LOS E sections of I-80 in 2015, and Scenario 3A has LOS C or better. Scenario 3B shows the impacts that occur if Driggs Avenue is not closed. Not only does the intersection operate at LOS E (see Table 7), but vehicle queuing on the ramp impacts the I-80 mainline traffic operations at the 1300 East EB Diverge. Additional Scenario 3A results are shown below.

Table 13: Scenarios 3A and 5 AM Peak Hour Comparison - VISSIM

	Scenario 3A - Auxiliary Lanes and GP Lane						Scenario 5 - Metering	
	2020 AM Peak		2025 AM Peak		2030 AM Peak		2025 AM Peak	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	19.8	B	21.7	C	24.3	C	21.7	C
State EB Merge	17.1	B	18.9	B	20.7	C	18.9	B
State WB Diverge 1 (Ramp)	23.5	C	63.8	F	71.8	F	59.6	F
State WB Diverge 2 (Mainline)	29.4	D	38.9	E	40.4	E	33.9	D
700 East EB Diverge	14.5	B	15.9	B	17.3	B	16.0	B
700 East EB Merge	14.0	B	15.4	B	16.8	B	15.6	B
700 East WB Diverge	19.7	B	21.6	C	55.8	F	21.4	C
700 East WB Merge	24.4	C	55.3	F	84.6	F	50.3	F
1300 East EB Diverge	12.5	B	13.7	B	14.9	B	13.8	B
1300 East EB Merge	14.6	B	16.2	B	18.0	B	13.2	B
1300 East WB Diverge	31.0	D	36.6	E	41.4	E	36.6	E
1300 East WB Merge 1 (Loop)	23.5	C	26.1	C	39.4	E	26.0	C
1300 East WB Merge 2 (Ramp)	20.1	C	22.0	C	39.8	E	22.2	C

Table 14: Scenarios 3A and 5 AM Peak Hour Travel Times - VISSIM

	Scenario 3A - Auxiliary Lanes and GP Lane						Scenario 5 - Ramp Metering	
	2020 AM Peak		2025 AM Peak		2030 AM Peak		2025 AM Peak	
I-80 Direction	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)
Eastbound	2.9	64.5	2.9	63.9	3.0	62.9	2.9	63.9
Westbound	2.9	61.9	3.7	47.5	5.4	32.8	3.7	47.4

During the 2025 AM peak hour, Scenario 3A begins to operate at LOS E and F in the westbound direction. The 2025 AM peak hour for Scenario 5 is included with Scenario 3A for convenience in determining whether ramp metering will benefit the westbound movement. Table 13 shows a small improvement in density, but LOS and travel times are nearly identical between Scenario 3A and 5 in 2025. There seems to be very little benefit from adding ramp metering.

The main deficiency in the westbound AM Peak movements for Scenario 3A is actually a bottleneck located West of State Street. During the simulation, this bottleneck causes westbound queuing to occur through the study area which skews the traffic operations results. Scenario 6 below addresses this bottleneck.

Table 15: Scenarios 3A and 3C PM Peak Hour Comparison - VISSIM

	Scenario 3 - Auxiliary Lanes and GP Lane (Without and With 1300 East Ramp Meter)							
	2025 PM Peak				2030 PM Peak			
	Scenario 3A		Scenario 3C		Scenario 3A		Scenario 3C	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	37.5	E	36.4	E	73.8	F	58.2	F
State EB Merge	28.2	D	28.3	D	62.6	F	54.0	F
State WB Diverge 1 (Ramp)	31.5	D	31.4	D	38.3	E	40.7	E
State WB Diverge 2 (Mainline)	28.8	D	28.9	D	32.5	D	32.7	D
700 East EB Diverge	26.3	C	26.1	C	65.1	F	60.0	F
700 East EB Merge	26.0	C	24.3	C	72.3	F	62.6	F
700 East WB Diverge	15.9	B	15.8	B	18.4	B	18.3	B
700 East WB Merge	27.5	C	26.5	C	30.5	D	35.1	E
1300 East EB Diverge	25.4	C	23.4	C	71.6	F	64.5	F
1300 East EB Merge	35.4	E	37.3	E	74.4	F	67.6	F
1300 East WB Diverge	29.5	D	26.2	C	43.8	F	43.8	F
1300 East WB Merge 1 (Loop)	16.8	B	16.7	B	19.6	B	19.6	B
1300 East WB Merge 2 (Ramp)	16.7	B	16.5	B	18.7	B	18.8	B

Table 16: Scenario 3A PM Peak Hour Travel Times - VISSIM

	Scenario 3A - Auxiliary Lanes and GP Lane			
	2025 PM Peak		2030 PM Peak	
I-80 Direction	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)
Eastbound	3.4	55.4	7.8	23.9
Westbound	3.0	58.3	3.3	54.3

The results shown in Tables 15 and 16 indicate that during the 2030 PM peak, Scenario 3A begins to operate at LOS E and F. Scenario 3C adds a ramp meter to the 1300 East eastbound on-ramp, but very little benefit is gained. Like the westbound bottleneck described above for Scenario 3A during the AM peak, the eastbound direction also suffers from a bottleneck when the additional general purpose lane is dropped prior to the 1300 East structure. During the simulation, this bottleneck causes eastbound

queuing to occur through the study area which skews the traffic operations results. Scenario 4 below addresses this bottleneck.

Table 17: Scenarios 4, 5 and 6 AM Peak Hour Comparison - VISSIM

	2030 AM Peak					
	Scenario 4		Scenario 5		Scenario 6	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	24.3	C	24.0	C	24.3	C
State EB Merge	20.7	C	20.7	C	20.8	C
State WB Diverge 1 (Ramp)	75.2	F	66.4	F	26.4	C
State WB Diverge 2 (Mainline)	38.5	E	39.7	E	23.0	C
700 East EB Diverge	17.3	B	17.6	B	17.2	B
700 East EB Merge	16.9	B	17.1	B	16.8	B
700 East WB Diverge	56.6	F	44.8	F	23.2	C
700 East WB Merge	86.6	F	72.4	F	28.6	D
1300 East EB Diverge	15.0	B	15.0	B	14.8	B
1300 East EB Merge	13.9	B	14.0	B	13.8	B
1300 East WB Diverge	42.8	E	40.3	E	40.3	E
1300 East WB Merge 1 (Loop)	44.4	F	28.9	D	28.3	D
1300 East WB Merge 2 (Ramp)	45.8	F	30.5	D	23.6	C

Table 18: Scenarios 4, 5, and 6 AM Peak Hour Travel Times - VISSIM

	2030 AM Peak					
	Scenario 4		Scenario 5		Scenario 6	
I-80 Direction	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)
Eastbound	3.0	63.2	3.0	63.2	2.9	63.4
Westbound	5.5	31.9	4.7	37.6	2.9	60.9

Scenarios 4 and 5 remove the eastbound bottleneck which affects the PM peak hour traffic. However, during the AM peak hour, the westbound traffic is the critical movement. Tables 17 and 18 show the westbound movement operating poorly during the AM peak hour for Scenarios 4 and 5. Scenario 6 removes the westbound bottleneck and provides LOS D or better traffic operations. Only the 1300 East WB diverge operates at LOS E. This area would require improvements that are outside the limits of the environmental study to improve the traffic operations.

Table 19: Scenarios 4 and 5 PM Peak Hour Comparison - VISSIM

	2030 PM Peak			
	Scenario 4		Scenario 5	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	59.5	F	57.0	F
State EB Merge	32.3	D	33.1	D
State WB Diverge 1 (Ramp)	32.5	D	27.9	C
State WB Diverge 2 (Mainline)	26.5	C	25.3	C
700 East EB Diverge	29.7	D	31.3	D
700 East EB Merge	25.8	C	26.7	C
700 East WB Diverge	18.1	B	17.9	B
700 East WB Merge	26.2	C	23.7	C
1300 East EB Diverge	26.9	C	26.9	C
1300 East EB Merge	20.9	C	20.6	C
1300 East WB Diverge	42.4	E	42.4	E
1300 East WB Merge 1 (Loop)	19.1	B	19.1	B
1300 East WB Merge 2 (Ramp)	19.4	B	19.2	B

Table 20: Scenarios 4 and 5 PM Peak Hour Travel Times - VISSIM

	2030 PM Peak			
	Scenario 4		Scenario 5	
I-80 Direction	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)
Eastbound	3.7	50.3	3.7	50.5
Westbound	2.9	60.1	2.9	61.8

As shown in Table 19 and 20, when the eastbound bottleneck is removed, I-80 within the study area operates at LOS D or better in 2030 during the PM peak hour. The only problem areas are the State Street Weave Area and the 1300 east WB Diverge. Both of these sections would require improvements that are outside the limits of the environmental study to improve the traffic operations. Comparing Scenarios 4 and 5 indicates very little benefit occurs from adding ramp metering to the on-ramps.

Grade Analysis between 900 East and Highland Drive

One area of concern on the I-80 mainline occurs in the eastbound direction between 900 East and Highland Drive. This section currently has a long uphill grade which can cause heavy vehicles to slow down. An additional analysis was performed to compare this section with a 4 percent grade verses a 3 percent grade. This analysis was performed using Scenario 4 as the base model. The results are shown in Tables 21 and 22.

Table 21: Grade Analysis Traffic Operations Analysis Summary - VISSIM

2030 PM Peak	With 4% Grade EB Between 900 East and Highland		With 3% Grade EB Between 900 East and Highland	
I-80 Section	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
State Street Weave Area	65.1	F	60.0	F
State EB Merge	72.2	F	32.6	D
State WB Diverge 1 (Ramp)	31.4	D	29.3	D
State WB Diverge 2 (Mainline)	25.7	C	25.6	C
700 East EB Diverge	65.5	F	32.1	D
700 East EB Merge	66.8	F	34.0	D
700 East WB Diverge	17.3	B	17.4	B
700 East WB Merge	25.5	C	25.0	C
1300 East EB Diverge	29.4	D	28.3	D
1300 East EB Merge	25.2	C	27.9	C
1300 East WB Diverge	23.0	C	23.0	C
1300 East WB Merge 1 (Loop)	19.1	B	19.0	B
1300 East WB Merge 2 (Ramp)	18.9	B	19.1	B

Table 22: Grade Analysis Travel Time Summary - VISSIM

2030 PM Peak	With 4% Grade EB Between 900 East and Highland		With 3% Grade EB Between 900 East and Highland	
I-80 Direction	Average Travel Time (Minutes)	Average Speed (mph)	Average Travel Time (Minutes)	Average Speed (mph)
Eastbound*	5.1	30.9	3.1	51.3
Westbound	2.9	60.4	2.9	61.3

The results of the analysis indicate that grades of 4 percent between 900 East and Highland Drive will cause poor traffic operations. Also, the slowing of heavy vehicles may cause an unsafe condition and increase the rear-end accident rates through this section.

Accident Analysis

Accident data along the corridor was collected from the Utah Department of Transportation for the year 2002 thru 2004. Figure 6 details the accident locations along the corridor. The I-80 study limits were divided into 3 sections and each section was compared to an expedited value with existing geometry. An estimated value was generated if an auxiliary lane was installed. These values are shown in Figure 7. More than half of the accidents occurring were rear-end collisions with a high concentration of these occurring near the interchanges. Eastbound I-80 near 1300 East had the highest concentration of rear-end collision accidents. This can be attributed to traffic backing up from the 1300 East eastbound off-ramp to the mainline.

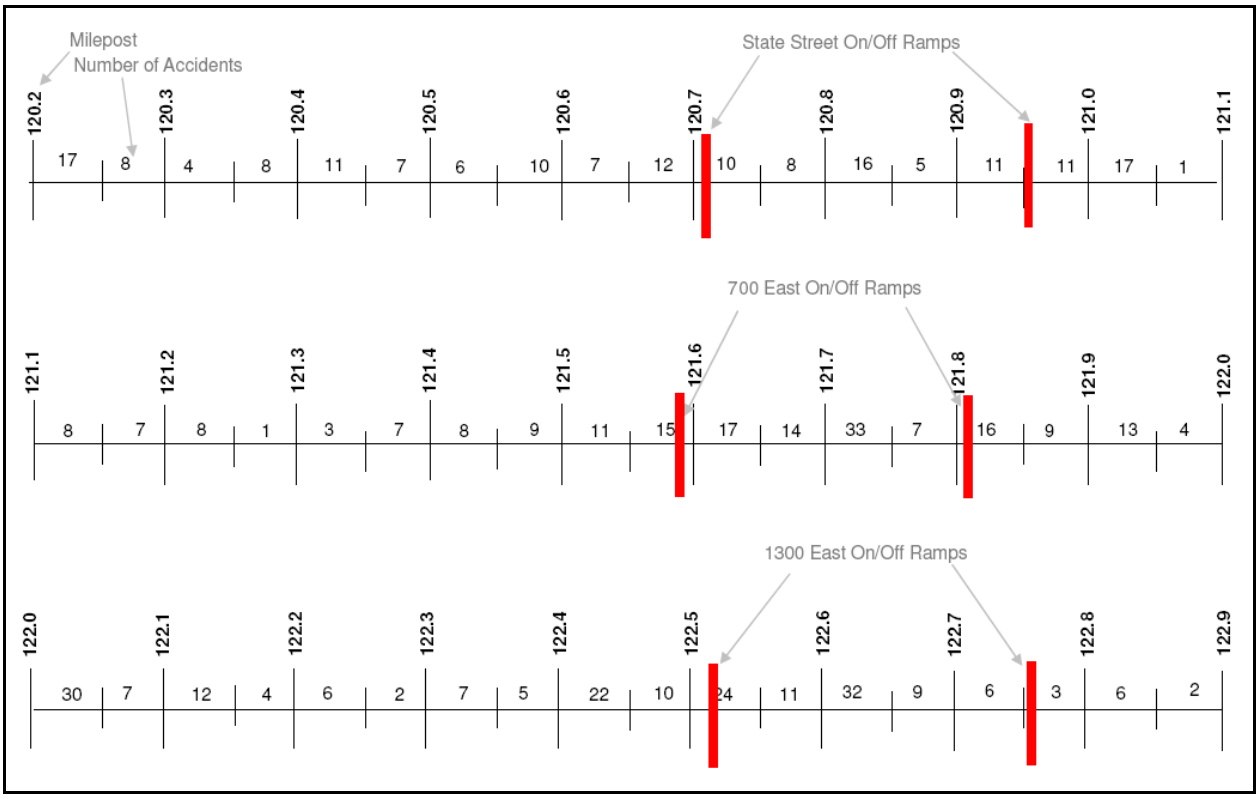


Figure 6: 2002-2004 I-80 Accident Summaries from State Street to 1300 East 06/07/06

I-80 State Street to 1300 east Environmental Study

Accident History 2002 to 2004 6/9/2006

Segment #1 From MP 120.2 to 121.1 = .9 miles
Segment #2 From MP 121.1 to 122.0 = .9 miles
Segment #3 From MP 122.0 to 122.9 = .9 miles

number of accidents per year and volume

	3year acc.	Acc/year	AADT
Segment #1	169	56.3	109,400
Segment #2	190	63.3	94,900
Segment #3	198	66.0	78,650
	557		

Accident rate expected value comparison

	Acc./year	multiplier	days/year	AADT	Length miles	Accident Rate	Expected Value
Segment #1	56.3	1,000,000	365	109,400	0.9	1.57	1.33
Segment #2	63.3	1,000,000	365	94,900	0.9	2.03	1.43
Segment #3	66.0	1,000,000	365	78,650	0.9	2.55	1.10
					average	2.05	1.29

Anticipated Accident rate with aux lanes only 80% reduction in ramp related crashes

	Acc./year	multiplier	days/year	AADT	Length miles	Accident Rate	Expected Value
Segment #1	46.0	1,000,000	365	109,400	0.9	1.28	1.33
Segment #2	45.6	1,000,000	365	94,900	0.9	1.46	1.43
Segment #3	51.3	1,000,000	365	78,650	0.9	1.99	1.10
					average	1.58	1.29

For segment 1,2,and 3 the there were 39 or 23%, 67 or 35%, 56 or 28% of the crashes that are associated with the ramp to be improved. The reduction is based only on the ramps that would benefit with the aux. lanes. This means there would be improvement for State St. on ramp, 700 east on and off ramp and 1300 east off ramp. The improvement is based on a 80% reduction in this type of crash. Resulting in a reduction of 31 crashes in segment 1, 53 crashes in segment 2, 44 crashes in segment 3
this results in a average number of crashes of 46 crashes for segment 1, 45.6 crashes for segment 2 and 51.3 crashes for segment 3
the accident rate goes from 1.57 to 1.28 for the first segment, expected value is 1.33
the accident rate goes from 2.03 to 1.46 for the second segment, expected value is 1.50
the accident rate goes from 2.55 to 1.99 for the third segment, expected value is 1.10

Figure 7: Accident Rate Analysis

Figure 7 shows that the accident rates within the I-80 study area are expected to decrease with the installation of auxiliary lanes. Although it has not been quantified, it is expected that the other recommended improvements (reducing steep grades, increasing sight distance, and improved traffic operations) will also reduce the anticipated accident rates.

600 East Underpass Closure Analysis

Currently, three local roadways cross under I-80 between State Street and 700 East. These include 300 East, 500 East, and 600 East. To save construction costs for these three structures, it was proposed that one of these crossings could be closed.

Pneumatic hose counts were performed at these three roadways to obtain existing average daily traffic (ADT) volumes. 300 East had an ADT of 5,900 vehicles per day (vpd), 500 East had an ADT of 4,900 vph, and 600 East had an ADT of 1,400 vpd. Based on these traffic volumes, the closure of 600 East would have the least impact to current travel patterns. To estimate the impact of closing the 600 East underpass, existing traffic volumes were redistributed based on existing traffic data and travel patterns. The following figure shows the estimated change in daily traffic.

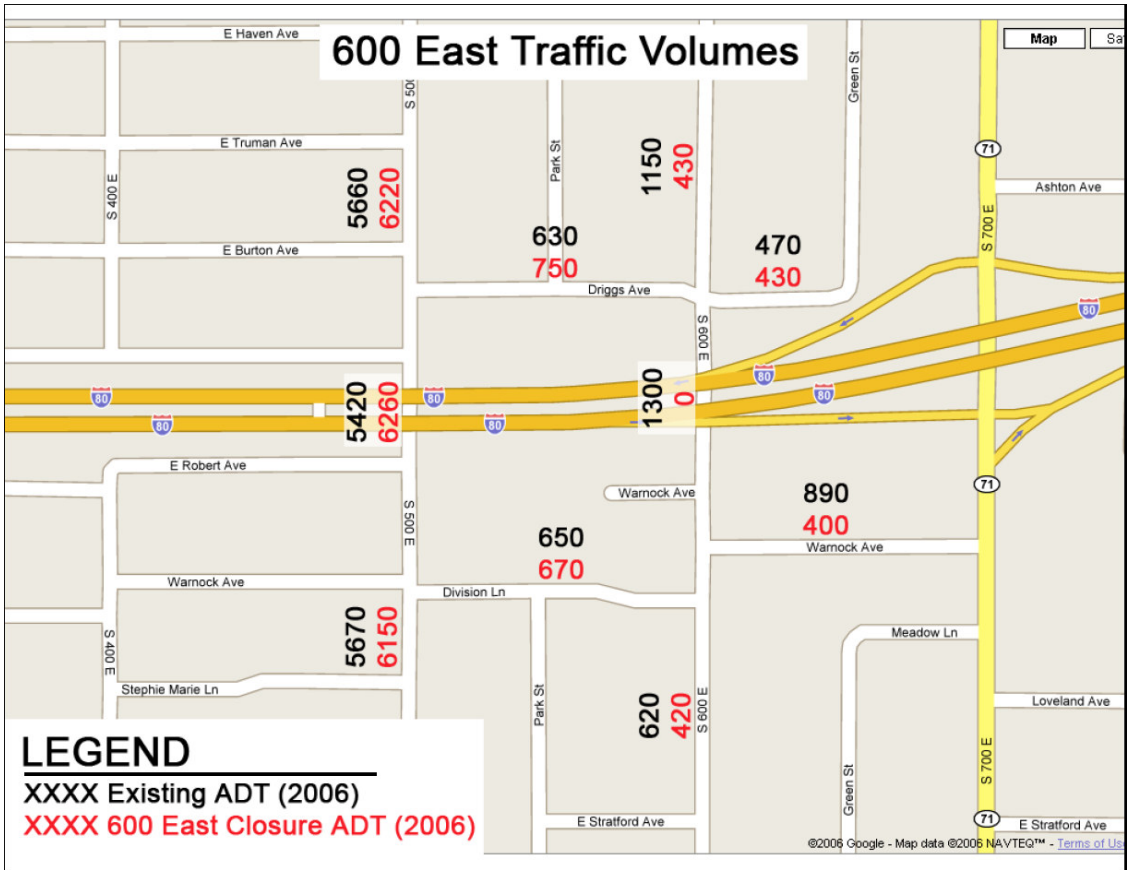


Figure 8: Estimated 2006 ADT's with and without 600 East Underpass Closure

From a capacity stand point, the closure of the 600 East underpass would not greatly impact the adjacent roadways. 500 East would have adequate capacity to carry the increase in traffic volume. Also, two local street crossings would remain to serve the local circulation. Based on the future traffic growth for the cross-streets described previously in the report, the 2030 traffic volumes would be about 20 percent higher than what is shown in Figure 8. With this growth, the local roadways would still have enough capacity to serve the daily traffic demand.

Conclusions and Recommendations

Based on the traffic operations analysis and the accident analysis, the following roadway improvements are recommended to provide acceptable Levels of Service, decrease overall travel time, and improve traffic safety through the year 2030:

I-80 Mainline between State Street and 1300 East

- Add an additional general purpose lane in each direction of travel.
- Add an auxiliary lane in each direction between the on and off ramps.
- Provide grades of 3 percent or less between 900 East and Highland Drive.
- Provide sight distance according to the most current edition of *A Policy on Geometric Design of Highway and Street.*

State Street and I-80 Ramp Intersections

- Provide a free right-turn movement for the eastbound and westbound off-ramp approaches.
- Provide dual left-turn lanes for the northbound and southbound approaches. This also requires the on-ramps be widened to two lanes.
- Add a separate right turn lane for the northbound to eastbound movement at the EB on-ramp.

700 East and I-80 Ramp Intersections

- Provide free right-turn movements for the eastbound and westbound off-ramp approaches.
- Provide side by side (full length between ramp intersections) dual left-turn lanes for the northbound and southbound approaches.
- Provide separate right turn lanes for the northbound to eastbound movement at the EB on-ramp and for the southbound to westbound movement at the WB on-ramp.

1300 East and I-80 Ramp Intersections

- Provide a free right-turn movement for the eastbound off-ramp approach.
- Provide dual left-turn lanes for the southbound approach.
- Cul-de-sac Driggs Avenue.
- Re-stripe the westbound on-ramp intersection with an exclusive right turn lane, a shared thru-right lane, and an exclusive thru lane. This also requires widening the on-ramp to two lanes.
- Provide a separate right turn lane for the northbound to eastbound on-ramp.

600 East Underpass Closure

- From a capacity and circulation stand point, the 600 East underpass could be closed.

Outside the scope of the environmental study, it is recommended that I-80 east of 1300 East be widened to accommodate future travel demands. Also it is recommended that the State Street weave section and major diverge section west of State Street be improved. These improvements will be required prior to the year 2030.

Appendix

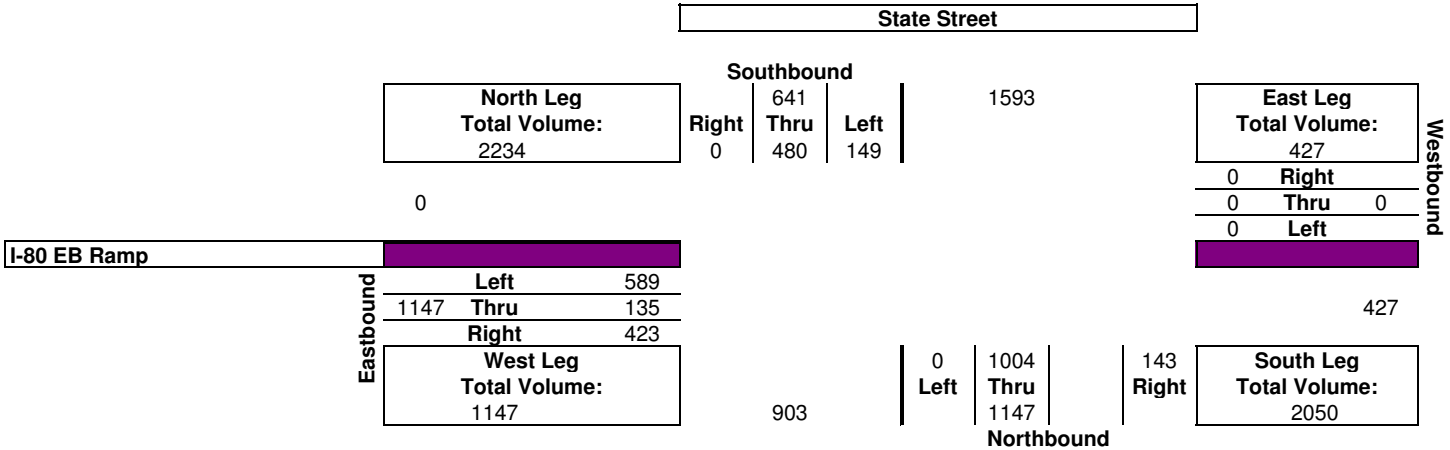
TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **State Street**
Date: **11-Oct-05**
Begin Time: **07:30 AM**
Interval Length: **15 min**

E-W Street: **I-80 EB Ramp**

HORROCKS ENGINEERS

Time Interval		SB Trucks 1	SB Right 2	SB Thru 3	SB Left 4	SB Left (fr)	WB Trucks 5	WB Right 6	WB Thru 7	WB Left 8	NB Trucks 9	NB Right 10	NB Rt (fr)	NB Thru 11	NB Left 12	EB Trucks 13	EB Right 14	EB Thru (fr) 15	EB Left 16	Total All Moves	Hourly Totals
07:30 AM	07:45 AM	3	0	105	36	3					11	40	0	274	0	5	114	20	138	730	
07:45 AM	08:00 AM	7	0	125	31	4					8	27	0	297	0	2	124	46	207	861	
08:00 AM	08:15 AM	3	0	135	40	3					7	50	4	233	0	4	112	35	139	751	
08:15 AM	08:30 AM	5	0	124	45	2					7	28	4	220	0	3	81	36	117	657	2999
08:30 AM	08:45 AM																			0	2269
08:45 AM	09:00 AM																			0	1408
09:00 AM	09:15 AM																			0	657
09:15 AM	09:30 AM																			0	0



OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

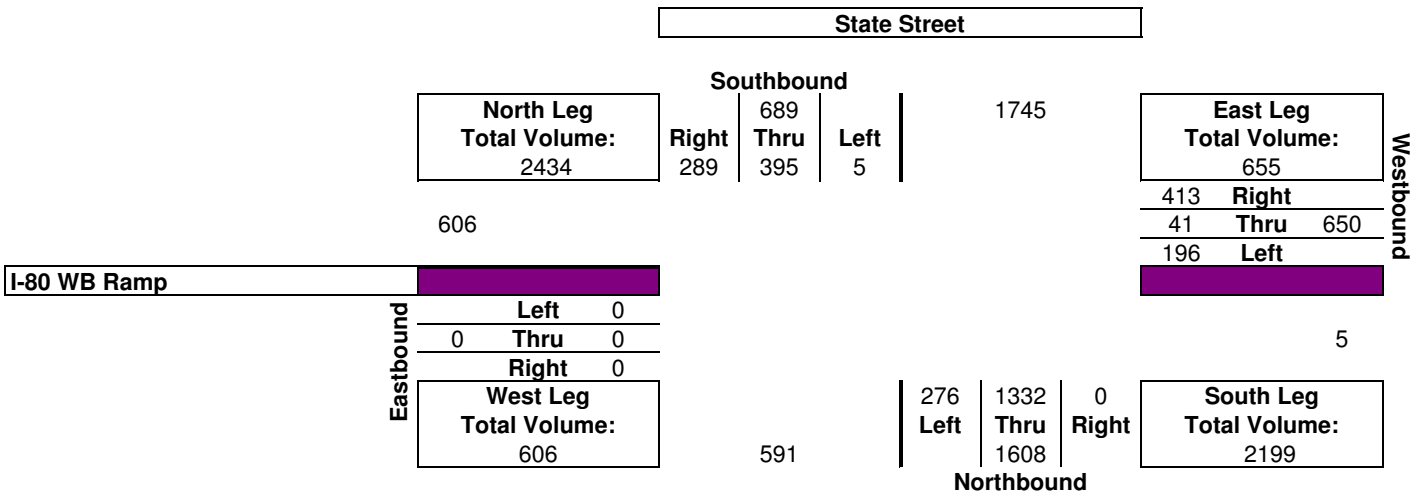
ADJUSTED PEAK HOUR TRAFFIC VOLUMES													
Southbound				Westbound			Northbound				Eastbound		
Left	Left (fr	Thru	Right	Left	Thru	Right	Left	Thru	Right	Rt (fr)	Left	Thru (fr	Right
149	12	480	0	0	0	0	0	1004	143	8	589	135	423
641				0			1147				1147		
Trucks:			3%	Trucks:		0%	Trucks:			3%	Trucks:		1%
Peak Hour:			07:30 AM to 08:30 AM				Peak Vol:			2935	PHF:		0.87

TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **State Street**
E-W Street: **I-80 WB Ramp**
Date: **13-Oct-05**
Begin Time: **07:30 AM**
Interval Length: **15 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
07:30 AM	07:45 AM	2	69	87	1	1	98	7	47	7	0	357	104					770	
07:45 AM	08:00 AM	6	81	99	2	1	134	13	59	5	0	409	81					878	
08:00 AM	08:15 AM	8	69	105	2	6	93	9	49	15	0	308	51					686	
08:15 AM	08:30 AM	9	75	112	0	0	96	12	45	4	0	285	45					670	3004
08:30 AM	08:45 AM																	0	2234
08:45 AM	09:00 AM																	0	1356
09:00 AM	09:15 AM																	0	670
09:15 AM	09:30 AM																	0	0



OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES											
Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
5	395	289	196	41	413	276	1332	0	0	0	0
	689			650			1608			0	
Trucks:		4%	Trucks:		1%	Trucks:		2%	Trucks:		0%
Peak Hour:		07:30 AM to 08:30 AM				Peak Vol:		2947	PHF:		0.86

TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **7th East**
Date: **11-Oct-05**
Begin Time: **07:00 AM**
Interval Length: **15 min**

E-W Street: **I-80 EB Ramp**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
07:00 AM	07:15 AM	2		91	30					7	37	352		3	62	2	73	647	
07:15 AM	07:30 AM	2		104	30					2	54	495		3	73	0	95	851	
07:30 AM	07:45 AM	3		133	45					5	31	576		2	100	0	130	1015	
07:45 AM	08:00 AM	4		169	35					3	39	707		1	98	0	131	1179	3692
08:00 AM	08:15 AM	3		167	58					2	36	519		5	93	0	101	974	4019
08:15 AM	08:30 AM	5		187	58					8	49	571		8	110	0	98	1073	4241
08:30 AM	08:45 AM	10		159	52					3	51	546		6	96	0	110	1014	4240
08:45 AM	09:00 AM	3		181	53					5	36	501		7	85	0	164	1020	4081

7th East

Southbound

North Leg Total Volume:	Right	Thru	Left		East Leg Total Volume:
3613	0	836 / 643	193	2777	345

Westbound

0	Right	
0	Thru	0
0	Left	

0

I-80 EB Ramp

Eastbound

	Left	451
844	Thru	0
	Right	393

345

West Leg Total Volume:					South Leg Total Volume:
844	1036	0 Left	2326 Thru 2478	152 Right	3514

Northbound

OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES

Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
193	643	0	0	0	0	0	2326	152	451	0	393
836			0			2478			844		
Trucks:		2%	Trucks:		0%	Trucks:		1%	Trucks:		2%
Peak Hour:		07:30 AM to 08:30 AM				Peak Vol:		4158	PHF:		0.90

TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **7th East**
Date: **11-Oct-05**
Begin Time: **07:00 AM**
Interval Length: **15 min**

E-W Street: **I-80 WB Ramp**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB					
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Total	Hourly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
07:00 AM	07:15 AM	3	99	119		1	60		10	6		288	129					705	
07:15 AM	07:30 AM	4	146	120		1	119		10	4		426	139					960	
07:30 AM	07:45 AM	2	190	155		0	150		21	3		508	165					1189	
07:45 AM	08:00 AM	3	217	200		1	135		26	0		629	197					1404	4258
08:00 AM	08:15 AM	3	181	225		2	162		31	1		557	163					1319	4872
08:15 AM	08:30 AM	4	145	251		4	190		37	3		485	129					1237	5149
08:30 AM	08:45 AM	7	130	170		1	166		37	4		519	148					1170	5130
08:45 AM	09:00 AM	5	151	202		0	170		37	3		475	148					1183	4909

7th East

Southbound

North Leg Total Volume: 4295

Right	Thru	Left
719	815	0

1534

2761

East Leg Total Volume: 738

Westbound

625	Right	
0	Thru	738
113	Left	

1360

I-80 WB Ramp

Eastbound

	Left	0
0	Thru	0
	Right	0

0

West Leg Total Volume: 1360

928

Left	Thru	Right
641	2136	0
	2777	

South Leg Total Volume: 3705

Northbound

OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES											
Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	815	719	113	0	625	641	2136	0	0	0	0
1534			738			2777			0		
Trucks:		1%	Trucks:		1%	Trucks:		0%	Trucks:		0%
Peak Hour:		07:30 AM to 08:30 AM				Peak Vol:		5049	PHF:		0.92

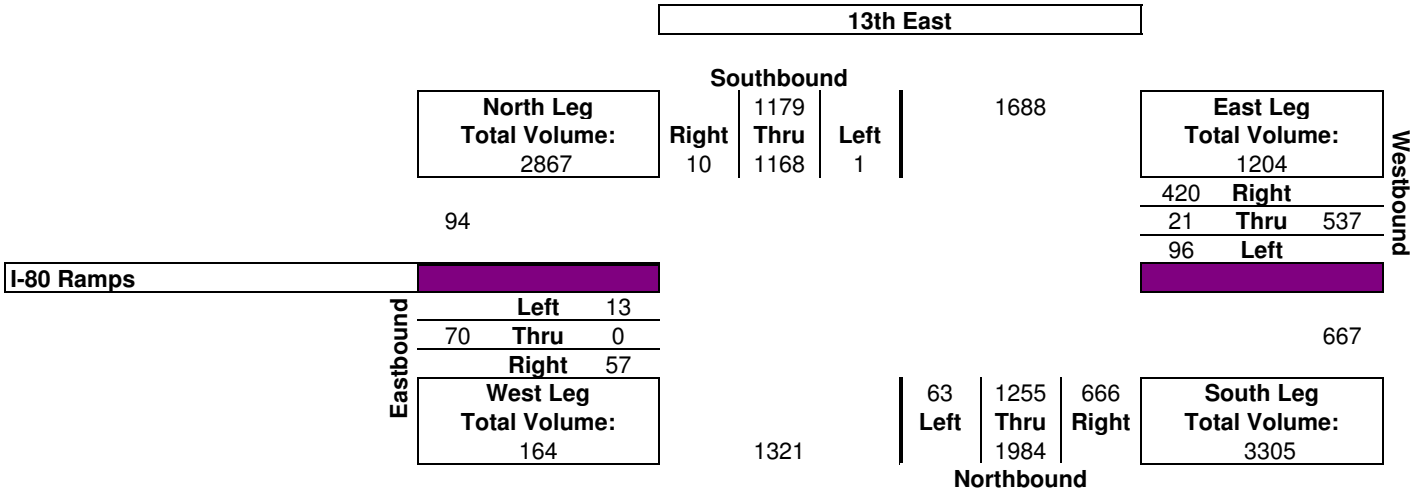
TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **13th East**
Date: **20-Oct-05**
Begin Time: **07:30 AM**
Interval Length: **15 min**

E-W Street: **I-80 Ramps**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
07:30 AM	07:45 AM	0	1	321	1	2	87	3	19	11	193	324	13	2	21	0	6	989	
07:45 AM	08:00 AM	4	4	278	0	1	155	6	30	9	156	345	16	0	16	0	2	1008	
08:00 AM	08:15 AM	4	1	315	0	0	82	6	25	14	149	311	15	1	13	0	3	920	
08:15 AM	08:30 AM	6	4	277	0	0	104	6	23	11	181	300	20	0	8	0	2	925	3842
08:30 AM	08:45 AM																	0	2853
08:45 AM	09:00 AM																	0	1845
09:00 AM	09:15 AM																	0	925
09:15 AM	09:30 AM																	0	0



OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES											
Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	1168	10	96	21	420	63	1255	666	13	0	57
1179			537			1984			70		
Trucks:		1%	Trucks:		1%	Trucks:		2%	Trucks:		4%
Peak Hour:		07:30 AM to 08:30 AM				Peak Vol:		3770	PHF:		0.95

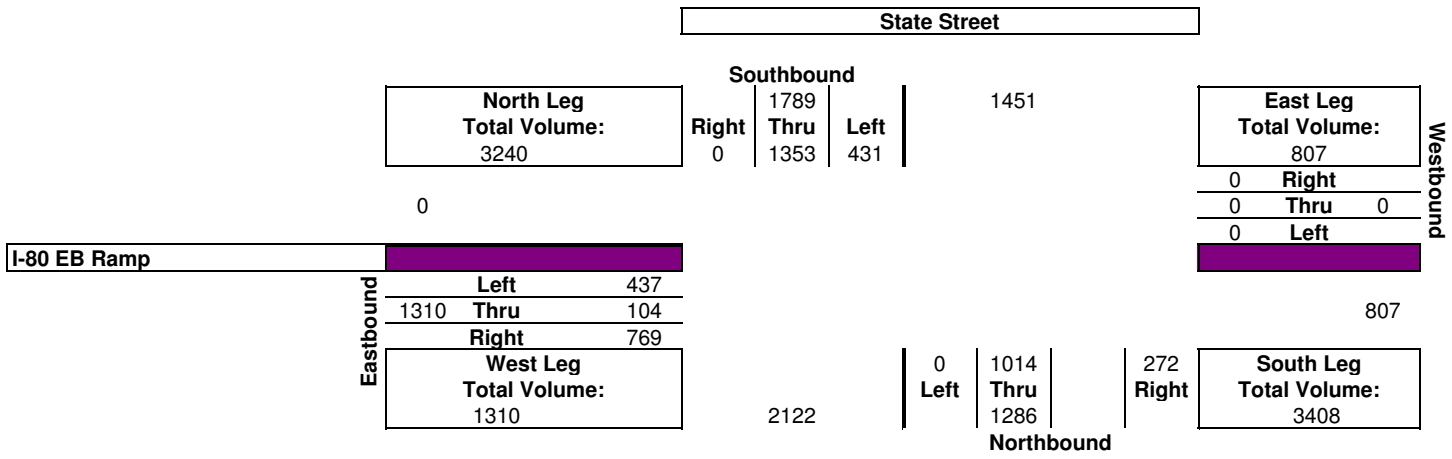
TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **State Street**
Date: **11-Oct-05**
Begin Time: **04:45 PM**
Interval Length: **15 min**

E-W Street: **I-80 EB Ramp**

HORROCKS ENGINEERS

Time Interval		SB Trucks 1	SB Right 2	SB Thru 3	SB Left 4	SB Left (fr)	WB Trucks 5	WB Right 6	WB Thru 7	WB Left 8	NB Trucks 9	NB Right 10	NB Rt (fr)	NB Thru 11	NB Left 12	EB Trucks 13	EB Right 14	EB Thru (fr) 15	EB Left 16	Total All Moves	Hourly Totals
04:45 PM	05:00 PM	9	0	332	87	0					2	39	9	257	0	6	238	26	105	1093	
05:00 PM	05:15 PM	7	0	383	122	2					5	82	11	263	0	6	225	28	99	1215	
05:15 PM	05:30 PM	6	0	305	107	0					5	91	3	280	0	3	181	25	116	1108	
05:30 PM	05:45 PM	6	0	360	123	3					0	65	4	234	0	1	140	27	125	1081	4497
05:45 PM	06:00 PM	3	0	290	97	2					3	58	6	266	0	5	213	19	100	1049	4453
06:00 PM	06:15 PM																			0	3238
06:15 PM	06:30 PM																			0	2130
06:30 PM	06:45 PM																			0	1049



OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES													
Southbound				Westbound			Northbound				Eastbound		
Left	Left (fr	Thru	Right	Left	Thru	Right	Left	Thru	Right	Rt (fr)	Left	Thru (fr	Right
431	5	1353	0	0	0	0	0	1014	272	27	437	104	769
1789				0			1286				1310		
Trucks:			2%	Trucks:		0%	Trucks:			1%	Trucks:		1%
Peak Hour:			04:45 PM to 05:45 PM				Peak Vol:			4385	PHF:		0.92

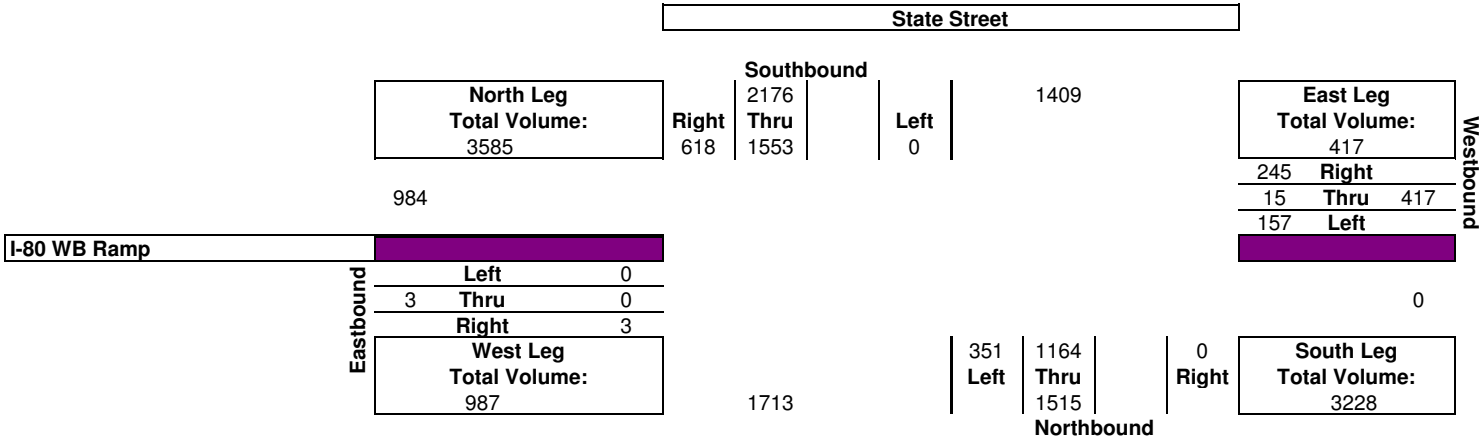
TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **State Street**
Date: **15-Nov-05**
Begin Time: **04:00 PM**
Interval Length: **15 min**

E-W Street: **I-80 WB Ramp**

HORROCKS ENGINEERS

Time Interval		SB Trucks 1	SB Right 2	SB Thru 3	SB Left 4	SB Rt (fr)	WB Trucks 5	WB Right 6	WB Thru 7	WB Thru (fr)	WB Left 8	NB Trucks 9	NB Right 10	NB Left (fr)	NB Thru 11	NB Left 12	WB Frontage Trucks 13	WB Frontage Right 14	WB Frontage Thru 15	WB Frontage Left 16	Total All Moves	Hourly Totals
04:00 PM	04:15 PM		140	292		0		49	9		42			2	212	79		4			729	
04:15 PM	04:30 PM		162	360		2		55	4		31			4	258	113		1			900	
04:30 PM	04:45 PM		139	323		1		42	0		50			0	239	82		1			785	
04:45 PM	05:00 PM		168	354		2		61	7		49			0	257	78		0			859	3273
05:00 PM	05:15 PM		197	378		0		54	5		37			0	298	116		0			1085	3629
05:15 PM	05:30 PM		127	401		2		81	1		30			1	309	71		0			1021	3750
05:30 PM	05:45 PM		119	404		1		46	1		39			0	288	82		2			981	3946
05:45 PM	06:00 PM		123	373		3		34	5		34			1	200	47		1			818	3905



OPTIONAL Adjustment Factors	
Monthly:	1.01
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	1.01

ADJUSTED PEAK HOUR TRAFFIC VOLUMES														
Southbound				Westbound				Northbound				Westbound Front.		
Left	Rt (fr)	Thru	Right	Left	Thru		Right	Left	Thru	Right	Rt (fr)	Left	Thru (fr)	Right
0	5	1553	618	157	15		245	351	1164	0	1	0	0	3
2176				417				1515				3		
Trucks:			0%	Trucks:			0%	Trucks:			0%	Trucks:		0%
Peak Hour:			04:45 PM to 05:45 PM					Peak Vol:			4111	PHF:		0.94

TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **7th East**
E-W Street: **I-80 EB Ramp**
Date: **11-Oct-05**
Begin Time: **04:00 PM**
Interval Length: **15 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
04:00 PM	04:15 PM	0	0	366	103						21	311			153	0	149	1103	
04:15 PM	04:30 PM	0	0	405	109						24	319			163	0	118	1138	
04:30 PM	04:45 PM	0	0	402	106						30	353			126	1	152	1170	
04:45 PM	05:00 PM	0	0	417	111						30	357			167	2	140	1224	4635
05:00 PM	05:15 PM	0	0	505	147						39	410			171	0	167	1439	4971
05:15 PM	05:30 PM	0	0	518	147						36	321			153	1	133	1309	5142
05:30 PM	05:45 PM	0	0	466	157						36	321			148	0	134	1262	5234
05:45 PM	06:00 PM	0	0	418	155						37	311			149	0	128	1198	5208

7th East

Southbound

North Leg Total Volume: 4363

Right	Thru	Left
0	1868	551

2419

1944

East Leg Total Volume: 693

Westbound

0 **Right**
0 **Thru** 0
0 **Left**

0

I-80 EB Ramp

Eastbound

Left 563
1193 **Thru** 3
Right 627

693

West Leg Total Volume: 1193

2495

Left	Thru	Right
0	1381	139
	1520	

Northbound

South Leg Total Volume: 4015

OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES

Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
551	1868	0	0	0	0	0	1381	139	563	3	627
2419			0			1520			1193		
Trucks:		0%	**Trucks:**		0%	**Trucks:**		0%	**Trucks:**		0%
Peak Hour:		04:45 PM to 05:45 PM				**Peak Vol:**		5132	**PHF:**		0.91

TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **7th East**
E-W Street: **I-80 WB Ramp**
Date: **11-Oct-05**
Begin Time: **04:00 PM**
Interval Length: **15 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
04:00 PM	04:15 PM		200				40		35		130							405	
04:15 PM	04:30 PM		129				48		45		122							344	
04:30 PM	04:45 PM		207				60		20		126							413	
04:45 PM	05:00 PM		213				42		38		95							388	1550
05:00 PM	05:15 PM		170				60		43		135							408	1553
05:15 PM	05:30 PM		175				101		35		126							437	1646
05:30 PM	05:45 PM		155				50		35		100							340	1573
05:45 PM	06:00 PM																	0	1185

7th East

Southbound

North Leg Total Volume:	Right	Thru	Left
1008	750	0	0

258

East Leg Total Volume: 865

Westbound

258	Right	
0	Thru	392
134	Left	

750

I-80 WB Ramp

Eastbound

	Left	0
0	Thru	0
	Right	0

473

West Leg Total Volume: 750

134

Left	Thru	Right
0	0	473

Northbound

South Leg Total Volume: 607

OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES											
Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	750	134	0	258	0	0	473	0	0	0
750			392			473			0		
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%
Peak Hour:		04:30 PM to 05:30 PM				Peak Vol:		1615	PHF:		0.94

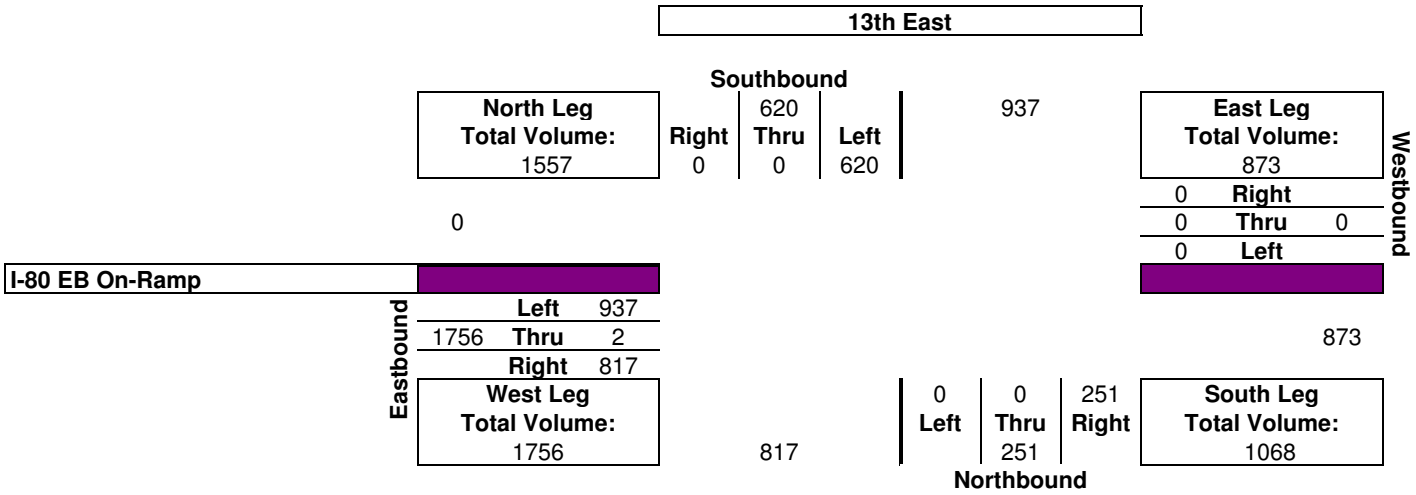
TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **13th East**
Date: **03-Nov-05**
Begin Time: **04:00 PM**
Interval Length: **15 min**

E-W Street: **I-80 EB On-Ramp**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
04:00 PM	04:15 PM	0	0	0	140						23			4	197	0	207	567	
04:15 PM	04:30 PM				131						35			2	205	0	212	583	
04:30 PM	04:45 PM				135						31			4	217	0	258	641	
04:45 PM	05:00 PM				137						39			4	205	0	206	587	2378
05:00 PM	05:15 PM				143						44			4	216	0	262	665	2476
05:15 PM	05:30 PM				146						70			0	201	0	219	636	2529
05:30 PM	05:45 PM				182						60			4	209	0	226	677	2565
05:45 PM	06:00 PM				142						74			0	182	1	220	619	2597



OPTIONAL Adjustment Factors	
Monthly:	1.01
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	1.01

ADJUSTED PEAK HOUR TRAFFIC VOLUMES											
Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
620	0	0	0	0	0	0	0	251	937	2	817
620			0			251			1756		
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%
Peak Hour:		05:00 PM to 06:00 PM				Peak Vol:		2627	PHF:		0.96

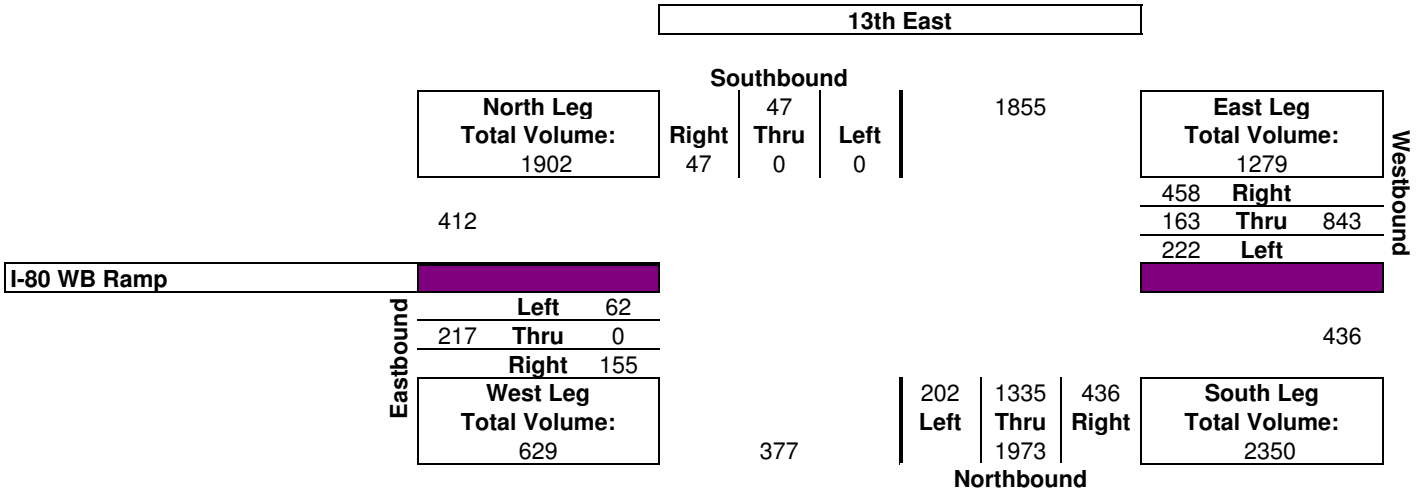
TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **13th East**
Date: **13-Oct-05**
Begin Time: **04:30 PM**
Interval Length: **15 min**

E-W Street: **I-80 WB Ramp**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
04:30 PM	04:45 PM		24				50	24	40		132	297	53		50		13	683	
04:45 PM	05:00 PM		15				96	19	35		111	297	62		37		11	683	
05:00 PM	05:15 PM		11				115	45	68		124	337	44		29		9	782	
05:15 PM	05:30 PM		8				125	35	55		116	312	59		37		15	762	2910
05:30 PM	05:45 PM		14				130	45	55		106	366	41		51		23	831	3058
05:45 PM	06:00 PM		14				97	41	48		98	347	62		41		16	764	3139
06:00 PM	06:15 PM																	0	2357
06:15 PM	06:30 PM																	0	1595



OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES											
Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	0	47	222	163	458	202	1335	436	62	0	155
47			843			1973			217		
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%
Peak Hour:		05:00 PM to 06:00 PM				Peak Vol:		3080	PHF:		0.94

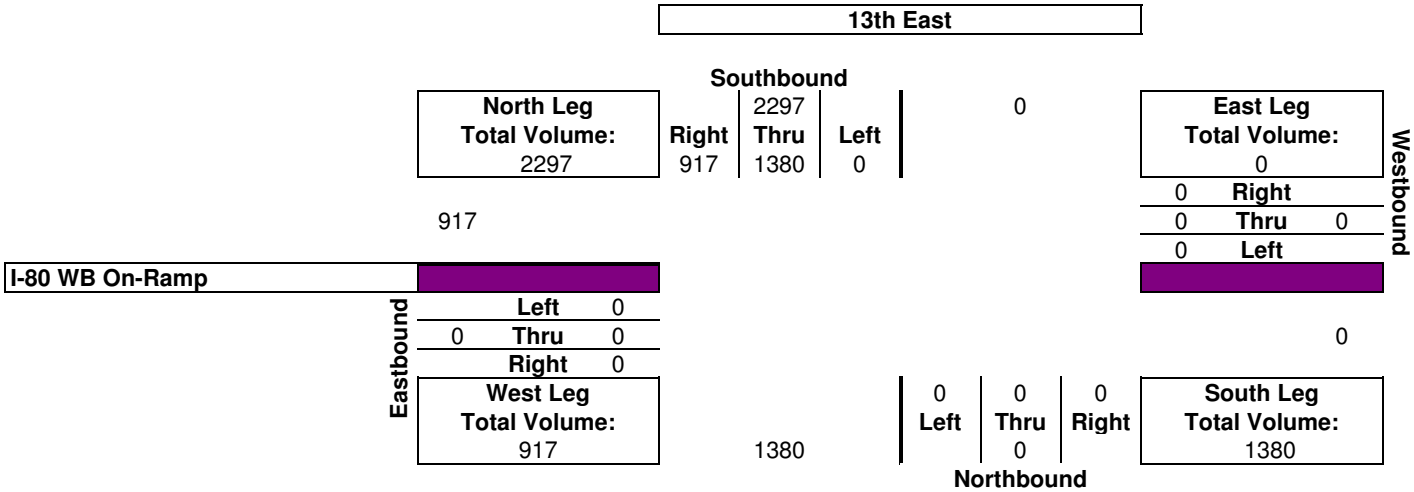
TRAFFIC COUNT SUMMARY

City: **Salt Lake City**
N-S Street: **13th East**
Date: **13-Oct-05**
Begin Time: **04:30 PM**
Interval Length: **15 min**

E-W Street: **I-80 WB On-Ramp**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
04:30 PM	04:45 PM	0	210	325	0													535	
04:45 PM	05:00 PM	0	215	332	0													547	
05:00 PM	05:15 PM	0	229	369	0													598	
05:15 PM	05:30 PM	0	244	356	0													600	2280
05:30 PM	05:45 PM	0	247	351	0													598	2343
05:45 PM	06:00 PM	0	232	308	0													540	2336
06:00 PM	06:15 PM																	0	1738
06:15 PM	06:30 PM																	0	1138



OPTIONAL Adjustment Factors	
Monthly:	0.98
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	0.98

ADJUSTED PEAK HOUR TRAFFIC VOLUMES											
Southbound			Westbound			Northbound			Eastbound		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	1380	917	0	0	0	0	0	0	0	0	0
2297			0			0			0		
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%
Peak Hour:		04:45 PM to 05:45 PM				Peak Vol:		2297	PHF:		0.98

UDOT *Utah Department of Transportation*

Fax Cover Sheet

SYSTEMS PLANNING & PROGRAMMING
4501 SOUTH 2700 WEST
BOX 143600
SALT LAKE CITY, UTAH 84114-3600
(801) 965-4129

Fax Number: (801) 965-4551

COMPANY NAME:	Horrocks
CONTACT NAME:	Jason Cluff
FAX NUMBER:	(801) 756-2362

SENDER:	Kaz
DESCRIPTION:	

Seasonal Variation is only 5%
Trucks = 9% (looks like a good #)
6 Months of Hourly Data
Peak Direction ≈ 5,800 still

NUMBER OF PAGES:	15
DATE SENT:	11/23/05

If there are any problems with this transmission, please call (801) 965-4129 immediately

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
MARCH, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: EAST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
441	223	188	157	228	635	1814	3398	3694	2844	2818	2981	3374	2803	3340	4060	4153	2398	4021	2716	2288	1940	1305	797	52616	T 1
472	316	206	178	232	636	1889	3182	3709	2818	2736	3186	3292	3250	3572	4328	5211	5966	4655	2800	2508	2683	1473	879	60177	W 2
559	313	221	193	231	640	1821	3390	3823	2858	2773	3207	3450	3295	3596	4362	5273	5054	4359	2881	2526	2241	1543	932	59541	TH 3
580	333	234	189	245	623	1643	3086	3686	3151	3107	3544	3666	3529	3855	4541	5129	5615	4560	2884	2483	2310	1936	1349	62278	F 4
941	590	341	225	219	367	837	1419	2312	2518	2922	3390	3512	3431	3422	3469	3515	3064	3095	2386	1993	1979	1808	1180	48935	SA 5
879	569	398	230	186	260	533	697	1148	1406	1712	2115	2164	2024	2015	2072	2368	2006	1727	1513	1477	1126	838	512	29975	SU 6
320	194	128	108	197	594	1764	3336	3626	2939	2707	3098	3199	3085	3389	4064	4822	5579	4012	2645	2121	1847	1218	721	55713	M 7
413	232	190	149	229	675	1824	3522	3704	2996	2750	3136	3323	3217	3457	4237	5052	5650	4196	2547	2332	2478	1365	808	58482	T 8
435	254	239	184	278	666	1939	3273	3789	2973	2899	3269	3281	3238	3589	4450	5290	5744	4306	2789	2547	2463	1431	864	60190	W 9
525	306	188	202	271	638	1935	3398	3871	3024	2969	3206	3366	3344	3749	4416	5257	5697	4492	2920	2468	2325	1574	967	61108	TH10
573	362	241	189	262	615	1689	3262	3584	3221	3258	3529	3627	3520	3864	4605	5529	5316	4361	2910	2414	2913	2004	1270	63118	F 11
904	578	396	229	220	423	898	1482	2255	2513	2809	3103	3256	3331	3374	3549	3560	3316	3148	2462	2059	2039	1813	1236	48953	SA12
794	584	375	222	217	290	520	704	1060	1371	1686	1862	2197	2218	2378	2353	2601	2252	2319	1981	1821	1500	1073	695	33073	SU13
375	247	134	145	236	616	1769	3250	3647	2863	2640	3040	3264	3119	3620	4273	5089	5838	4258	2659	1955	1718	1292	729	56776	M 14
425	273	198	165	230	621	1837	3295	3583	2925	2837	3116	3314	3243	3689	4435	5269	5678	4657	2766	2258	2058	1394	856	59122	T 15
436	271	249	209	253	620	1914	3266	3687	2890	2794	3241	3259	3320	3659	4345	5148	5752	4263	2670	2394	2240	1468	828	59176	W 16
491	374	228	240	268	662	1843	3344	3611	3026	2663	3265	3305	3130	3624	4232	5348	5773	4218	2656	2410	2347	1460	840	59358	TH17
621	416	269	221	245	577	1795	3183	3668	3101	2958	3400	3563	3505	3791	4625	5370	5589	4448	2906	2375	2306	2071	1306	62309	F 18
908	530	365	245	228	376	945	1448	2236	2610	2845	3173	3504	3488	3311	3244	3586	3349	3097	2433	2100	2164	1636	1153	48974	SA19
767	575	332	213	170	256	505	693	944	1119	1423	1702	1932	1990	2153	2315	2447	2306	2244	1903	1871	1436	1127	754	31177	SU20
388	219	134	166	231	644	1835	3221	3733	2814	2726	3087	3226	3111	3504	4197	5045	5738	4296	2699	2126	1924	1262	873	57199	M 21
491	264	184	169	234	637	1941	3449	3870	3005	2859	3300	3478	3188	3690	4420	5229	5261	4470	2447	2217	2544	1455	821	59623	T 22
488	279	190	164	260	677	1882	3242	3557	2873	2742	3194	3404	3249	3552	4293	5233	5667	4129	2699	2175	2008	1415	835	58207	W 23
474	282	267	180	238	650	1871	3188	3705	2929	2819	3144	3464	3344	3441	4232	5061	5559	4277	2800	2321	2530	1783	998	59557	TH24
576	360	256	195	267	561	1650	2815	3240	2936	2874	3355	3355	3236	3594	4082	4805	4849	3854	2653	2019	1832	1746	1182	56292	F 25
804	557	337	260	257	337	840	1392	2110	2399	2640	2999	3140	3220	3341	3268	3309	2916	2840	2293	2085	2314	1758	1126	46542	SA26
722	531	349	218	185	288	513	696	997	1149	1792	1708	2148	2106	2251	2320	2613	2456	2277	2262	2306	1728	1148	677	33440	SU27
406	229	129	144	269	647	1724	2993	3251	2857	2762	3132	3134	3078	3031	3754	4704	5176	3724	2459	1927	2110	1182	761	53583	M 28
471	267	190	171	237	625	1793	3162	3316	2941	2754	3174	3261	3274	3326	4084	5104	5644	4054	2545	2091	2035	1217	757	56493	T 29
425	260	174	164	231	569	1422	2428	2943	2542	2366	2809	2912	3007	3213	3990	4826	5589	4002	2586	2253	2473	1435	834	53453	W 30
523	309	220	176	266	659	1896	3167	3732	2919	2809	3216	3323	3310	3649	4325	5246	5710	3883	3003	2499	2386	1581	964	59771	TH31

DAILY HOURLY TOTALS
17627 7550 7320 47081 96091 82449 98693 104039 141192 118242 68419 45811 1665211
11097 5900 17084 82381 82530 93681 96203 120940 146507 79873 65997 28504

WEEKDAY HOURLY AVERAGES
474 202 245 1804 3610 2810 3341 3556 5095 4239 2292 1505
286 176 630 3211 2932 3201 3235 4276 5428 2723 2248 920

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	127665	223271	286336	291203	299335	243997	193404	1665211
NO. OF DAYS	4	4	5	5	5	4	4	31
AVERAGE	31916	55818	57267	58241	59867	60999	48351	53716

PEAK HR. TOTAL = 5966
TIME OF DAY = 6PM
DAY = 2
WEEKDAY = W

PEAK DAY TOTAL = 63118
MONTH = MARCH
DAY = 11
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 23 WEEKDAY TOTAL = 1344142 WEEKDAY AVERAGE = 58441

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
MARCH, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: WEST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
335	214	173	229	386	1106	3150	5725	5886	3733	3105	3231	3549	3674	3878	4264	4341	4144	3370	2461	1892	1779	1140	655	62420	T 1
400	184	199	231	415	1129	3101	5669	5892	3755	3006	3210	3719	3680	3889	4441	4513	4448	3944	2560	1908	1801	1324	621	64039	W 2
384	229	218	253	413	1070	3084	5702	5593	3730	3235	3387	3702	3863	3901	4488	4470	4586	3599	2579	2093	1845	1296	717	64437	TH 3
452	293	231	216	395	1038	2816	5367	5384	3836	3212	3580	3868	4242	4282	4758	4530	4519	3987	2911	2032	2162	1683	1040	66834	F 4
693	487	335	249	302	508	1060	1799	2489	2861	3172	3470	3561	3325	3493	4028	4120	4027	3517	2781	1934	1768	1505	1030	52514	SA 5
711	488	357	236	256	358	810	868	1410	1722	2115	2055	2338	2358	2642	2659	2873	2574	2027	1698	1386	1147	786	501	34375	SU 6
285	188	166	208	392	1109	3122	5681	5549	3582	2972	3196	3657	3563	3968	4250	4359	4260	3513	2433	1852	1697	1119	565	61686	M 7
366	185	174	215	380	1219	3106	5888	5780	3657	3225	3279	3593	3746	3919	4378	4410	4410	3841	2860	1680	1709	1264	665	63949	T 8
328	215	193	210	416	1162	3178	5700	5943	3825	3085	3350	3602	3859	4036	4374	4530	4442	3987	2743	1997	1874	1307	647	65003	W 9
411	247	205	254	439	1160	3172	5824	5786	3809	3245	3442	3773	3764	4082	4424	4616	4509	3914	2688	2204	1936	1336	774	66014	TH10
459	298	224	240	414	1055	2879	5423	5382	3749	3354	3634	3948	4160	4348	4663	4420	4447	4313	3026	2153	2240	1602	1027	67458	F 11
663	462	384	233	316	544	1144	1806	2583	3325	3332	3476	3537	3575	3711	3642	3889	3757	3335	2698	1904	1904	1575	1046	52841	SA12
777	456	313	226	269	352	756	905	1303	1599	1975	2154	2385	2580	2648	2948	3232	2852	2340	2090	1756	1408	955	559	36838	SU13
287	184	180	207	425	1158	3183	5811	5600	3638	2983	3272	3545	3720	3902	4306	4288	4316	3330	2426	1756	1632	1075	604	61828	M 14
358	217	174	213	387	1133	3234	5706	5760	3612	2975	3303	3559	3682	3897	4302	4445	4193	3478	2515	1896	1779	1157	660	62635	T 15
399	215	205	219	423	1205	3225	5732	5614	3854	3161	3567	3712	3917	3918	4408	4457	4315	3709	2638	1973	1843	1279	698	64686	W 16
432	261	232	249	464	1106	3072	5669	5624	3661	3070	3331	3736	3470	3695	4544	4402	4425	3611	2486	1963	1955	1309	752	63519	TH17
469	324	260	252	394	1040	2820	5400	5217	3626	3296	3467	3982	3989	4226	4810	4579	4621	3934	2981	2076	2256	1651	1018	66688	F 18
716	453	348	240	329	528	1048	1668	2329	2995	3434	3497	3648	3588	3661	3756	3933	3716	3158	2564	1883	1951	1493	1032	51968	SA19
658	487	334	211	270	356	679	732	1155	1391	1690	1868	2329	2352	2430	2644	2883	2702	2235	1907	1677	1306	908	637	33841	SU20
391	210	170	203	426	1043	3201	5570	5422	3577	2933	3240	3609	3530	3850	4329	4317	4285	3504	2665	1904	1739	1148	657	61923	M 21
389	222	209	199	424	1145	3344	5938	5771	3728	3163	3356	3765	3780	3974	4362	4526	4184	3711	2539	1966	1827	1217	625	64364	T 22
376	222	199	214	469	1103	2980	5481	5530	3702	3059	3207	3544	3691	3894	3900	3851	4283	3385	2318	1849	1779	1258	659	60953	W 23
352	232	212	228	427	1081	2903	5367	5482	3638	3157	3254	3602	3785	3875	4162	4324	4374	3835	2661	2058	1865	1384	797	63055	TH24
439	283	228	243	418	924	2587	4395	4764	3465	3242	3254	3629	3736	3959	4027	4146	4010	3538	2624	1781	1659	1632	1039	60022	F 25
660	401	323	225	331	494	1006	1501	2195	2700	3050	3352	3501	3446	3512	3808	3822	3540	3340	2616	1950	1725	1484	985	49967	SA26
665	506	296	215	262	369	728	894	1317	1536	1958	1955	2446	2494	2775	2910	3343	2616	2182	2217	1991	1455	1009	534	36673	SU27
345	209	158	190	461	1112	3012	5368	4970	3497	3174	3204	3607	3581	3469	3776	4015	3914	3341	2309	1597	1440	1045	545	58339	M 28
377	225	160	223	399	1100	3048	5398	5348	3471	3144	3253	3584	3733	3729	4051	4188	4168	3292	2596	1703	1639	1108	596	60533	T 29
315	220	170	199	331	976	2479	4294	4626	3167	2711	2808	3006	3211	3472	3808	4085	4327	3474	2595	1889	1766	1215	670	55814	W 30
389	248	211	256	391	1131	3201	5322	5401	3719	3262	3393	3701	3836	3983	4430	4611	4499	3601	2909	2178	2000	1278	763	64713	TH31

DAILY HOURLY TOTALS

14281	7241	11824	77128	141105	92495	107737	115018	128518	106345	59081	39542	1799929												
9065	6986	28814	136603	102160	98045	109930	125650	125463	78894	54886	23118													

WEEKDAY HOURLY AVERAGES

380	198	413	3039	5492	3120	3652	3919	4366	3661	1939	1297													
232	224	1100	5497	3654	3314	3748	4315	4334	2623	1836	730													

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	141727	243776	313901	310495	321738	261002	207290	1799929
NO. OF DAYS	4	4	5	5	5	4	4	31
AVERAGE	35432	60944	62780	62099	64348	65251	51823	58062

PEAK HR. TOTAL = 5943
TIME OF DAY = 9AM
DAY = 9
WEEKDAY = W

PEAK DAY TOTAL = 67458
MONTH = MARCH
DAY = 11
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 23 WEEKDAY TOTAL = 1450912 WEEKDAY AVERAGE = 63083

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
APRIL, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: EAST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
572	316	270	219	266	628	1790	3131	3561	2917	3022	3518	3598	3550	4072	4485	5192	5545	4794	3389	2495	2750	2100	1423	63603	F 1
951	628	413	254	230	396	965	1487	2044	2424	2633	2947	3392	3177	3060	3106	3474	3498	2576	1999	2153	2151	1626	1117	46701	SA 2
856	555	474	394	296	303	493	705	906	1207	1552	1628	2285	2338	2235	2247	2915	2368	2236	2079	1962	1579	1137	706	33456	SU 3
464	270	161	154	224	659	1704	3103	3327	2830	2507	2833	2983	2991	3356	4018	4835	5525	3957	2594	2014	1737	1249	739	54234	M 4
443	265	184	167	240	641	1790	3212	3779	3029	2841	3017	3439	3169	3562	4411	5184	5670	4172	2830	2554	2502	1526	877	59504	T 5
496	269	241	169	268	666	1901	3265	3883	2903	2739	3160	3248	3133	3626	4390	5275	5783	4254	2946	2474	2305	1561	908	59863	W 6
554	339	250	175	263	637	1891	3313	3841	2964	2877	3112	3327	3284	3614	4399	5209	5663	4365	2849	2617	2537	1577	1105	60762	TH 7
612	350	241	197	250	605	1694	3155	3493	2920	2775	3117	3464	3364	3638	4144	5034	5453	4108	2960	2461	2446	1953	1373	59807	F 8
877	610	376	249	226	329	738	1198	1751	2055	2417	2811	3099	3169	3231	3403	3400	3060	2740	2290	2127	2092	1842	1256	45346	SA 9
889	646	403	263	186	269	438	620	962	1158	1604	1759	2048	2233	2160	2309	2408	2153	2157	1810	1845	1557	1084	717	31678	SU10
408	244	123	153	226	656	1762	3317	3699	2824	2805	3025	3021	3040	3415	4185	5178	5713	4066	2663	2255	1894	1651	815	57138	M 11
459	258	199	172	217	611	1838	3246	3726	3054	2814	3157	3124	3143	3669	4365	5356	5674	4153	2812	2479	2165	1372	857	58920	T 12
464	282	210	195	240	602	1954	3481	3640	2968	2808	3092	3250	3214	3672	4432	5354	5503	4150	2704	2447	2486	1601	840	59589	W 13
483	298	236	170	259	663	1965	3371	3939	2998	2792	3264	3345	3316	3670	4476	4790	5637	4557	2972	2465	2317	1533	897	60413	TH14
542	309	265	196	260	645	1825	3203	3543	3150	3012	3422	3733	3426	3931	4537	5031	4332	4127	2896	2597	2673	2039	1442	61136	F 15
896	554	375	241	223	326	875	1374	2035	2317	2845	3230	3530	3233	3140	3398	3501	3279	2896	2401	2191	2111	1675	1189	47835	SA16
912	587	468	249	194	245	502	573	885	1157	1624	1711	2139	2222	2398	2250	2549	2168	2237	1953	1857	1624	1106	694	32304	SU17
444	227	143	154	254	631	1807	3119	2734	2814	2720	3167	3214	3049	3564	3993	5138	5435	3832	2348	1921	2136	1348	671	54863	M 18
424	262	176	158	215	625	1873	3298	3668	2793	2786	3140	3384	3323	3637	4239	4894	5284	4080	2540	2209	1952	1277	775	57012	T 19
446	269	207	207	250	591	1856	3257	3649	2812	2699	3312	3359	3306	3715	4285	5084	5589	4054	2676	2422	2125	1559	803	58532	W 20
516	346	262	197	259	653	1922	3195	3430	3013	2756	3208	3358	3187	3588	4309	5276	5687	4307	2860	2637	2320	1709	880	59875	TH21
509	327	261	206	255	604	1887	3317	3594	3038	2947	3484	3748	3623	3920	4634	4584	5038	4146	3065	2658	2482	1964	1291	61582	F 22
908	617	398	263	250	485	1264	1984	2755	3585	4304	4527	4091	3512	3420	3404	3437	3230	2986	2342	2033	2027	1835	1221	54878	SA23
903	599	336	239	196	253	471	568	821	1074	1486	1508	1930	2106	2159	2192	2518	2273	2159	1876	1826	1601	1100	728	30922	SU24
459	258	151	149	245	589	1845	3310	3499	2874	2709	3139	3167	3077	3471	4071	5039	5717	4192	2670	2151	1850	1331	949	56912	M 25
468	295	195	162	227	600	1927	3416	3749	2985	2782	3209	3143	3213	3665	4352	5407	5656	4137	2868	2341	2222	1480	781	59280	T 26
524	286	230	174	248	622	1952	3387	3784	3040	2828	3162	3333	3360	3688	4329	4940	5718	4281	2785	2366	2042	1405	824	59308	W 27
469	331	233	205	235	655	1790	3254	3620	2955	2717	3133	3348	3211	3626	4182	4852	4932	4171	2600	2283	1943	1396	811	56952	TH28
551	339	228	186	237	572	1778	3281	3500	2900	2888	3427	3714	3529	4031	4576	5350	5700	4152	2888	2602	2383	2135	1359	62306	F 29
883	614	404	283	201	341	820	1263	1868	2113	2439	2750	3189	3184	3378	3317	3406	3284	3180	2477	2209	2066	1861	1321	46851	SA30

DAILY HOURLY TOTALS

18382 8113 7140 45317 89685 79728 96003 102311 134610 111222 68651 47032 1611562
11550 6200 16102 78403 78871 89969 93682 116438 140567 78142 64075 29369

WEEKDAY HOURLY AVERAGES

491 213 245 1845 3603 2801 3348 3673 5095 4193 2402 1608
292 179 626 3268 2942 3195 3262 4324 5488 2805 2251 972

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	128360	223147	234716	237292	238002	308434	241611	1611562
NO. OF DAYS	4	4	4	4	4	5	5	30
AVERAGE	32090	55787	58679	59323	59501	61687	48322	53719

PEAK HR. TOTAL = 5783
TIME OF DAY = 6PM
DAY = 6
WEEKDAY = W

PEAK DAY TOTAL = 63603
MONTH = APRIL
DAY = 1
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 21 WEEKDAY TOTAL = 1241591 WEEKDAY AVERAGE = 59123

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
APRIL, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: WEST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY	
454	295	238	266	436	1090	3092	5409	5117	3739	3328	3679	3837	4165	4323	4641	4791	4645	4125	3011	2212	2349	2037	1282	68561	F	1
736	465	338	232	339	514	1128	1771	2651	2765	2962	3247	3563	3571	3480	3612	3921	3626	2665	2218	2019	2012	1642	1071	50548	SA	2
683	493	438	383	373	395	712	905	1356	1560	1749	2062	2738	2736	2623	2549	3079	2672	2383	2083	1867	1490	1048	647	37024	SU	3
412	250	179	225	412	1131	2989	5411	5407	3545	2843	3111	3440	3421	3618	3974	4047	3919	3143	2388	1704	1583	1156	621	58929	M	4
358	235	161	221	415	1115	2994	5375	5830	3602	3081	3188	3630	3737	3926	4346	4531	4383	3784	2904	2234	1917	1234	728	63929	T	5
400	277	183	222	427	1141	2957	5534	5743	3729	3150	3271	3566	3788	3965	4407	4507	4387	3740	2812	2182	2058	1314	772	64532	W	6
445	284	241	234	453	1101	2983	5197	5263	3833	3077	3207	3785	3750	4067	4341	4612	4514	3791	2769	2254	2060	1293	757	64311	TH	7
418	308	245	230	419	982	2760	5229	5269	3557	3178	3224	3616	3855	4036	4276	4213	4277	3821	2945	2227	2014	1602	1077	63778	F	8
727	437	313	262	316	523	1008	1532	2281	2552	2749	3162	3377	3379	3492	3528	3469	3285	3183	2469	1929	2065	1592	1119	48749	SA	9
699	503	373	250	241	361	677	805	1070	1459	1731	1940	2296	2464	2566	2555	2960	2492	2163	1956	1726	1468	937	607	34299	SU	10
332	197	165	202	381	1108	3163	5899	5523	3503	3077	3183	3426	3833	3690	4376	4324	4342	3642	2699	2025	1740	1045	681	62556	M	11
391	230	147	224	433	1128	3178	5765	5787	3626	3102	3328	3658	3631	3734	4352	4479	4368	3451	2634	2219	1847	1222	693	63627	T	12
406	210	211	238	399	1127	3072	5731	5810	3630	3087	3202	3689	3714	3923	4314	4445	4482	3851	2801	2156	2033	1261	662	64454	W	13
407	268	220	253	421	1134	3106	5517	5781	3855	3259	3342	3788	3698	4076	4426	4666	4424	3632	2834	2186	2139	1261	742	65435	TH	14
431	310	222	245	410	1031	2846	5399	5437	3732	3287	3538	3897	4231	4384	4624	4588	4333	4028	3112	2281	2013	1629	1086	67094	F	15
668	463	311	238	271	506	1023	1725	2403	2725	3015	3376	3344	3556	3437	3715	3800	3477	3204	2654	2195	1945	1556	1070	50677	SA	16
731	453	358	228	264	314	621	804	1140	1461	1842	1994	2194	2420	2481	2658	2961	2649	2164	2086	1832	1377	1020	562	34614	SU	17
349	185	176	208	403	1096	3124	5407	5200	3583	3011	3096	3559	3717	3708	4136	4290	4106	3356	2317	1653	1547	1128	587	59942	M	18
332	215	170	203	392	1092	3134	5838	5534	3515	2980	3137	3650	3626	3800	4191	3899	3760	3403	2407	1858	1765	1120	653	60674	T	19
334	230	181	196	404	1113	3020	5671	5695	3679	3116	3206	3504	3817	3931	4380	4236	4112	3418	2574	1961	1904	1225	711	62618	W	20
414	237	204	239	428	1107	3052	5640	5515	3665	3224	3242	3619	3816	3903	4439	4451	4473	3777	2718	2172	1962	1305	773	64375	TH	21
457	297	209	249	386	1012	2843	5306	5455	3654	3327	3502	3983	4155	4309	4496	4512	4219	3894	2987	2406	2140	1590	1092	66480	F	22
750	523	333	258	328	611	1480	2699	3616	3980	4926	4939	4129	3671	3665	3680	3541	3629	3299	2572	1912	1898	1472	1075	58986	SA	23
693	537	376	220	236	309	633	800	1005	1407	1759	1837	2249	2421	2440	2405	2565	2373	2093	1920	1816	1463	960	609	33126	SU	24
351	201	197	195	377	1134	3060	5765	5391	3600	2978	3164	3625	3683	3814	4165	4435	4094	3427	2553	1891	1689	1200	621	61610	M	25
360	214	203	221	377	1119	3200	5993	5609	3672	3201	3196	3615	3673	3806	4342	4353	4320	3493	2662	2236	1864	1247	697	63673	T	26
361	249	229	222	438	1102	3150	5781	5757	3612	3140	3273	3604	3892	3871	4331	3935	3797	3649	2809	1960	1792	1271	675	62900	W	27
360	242	219	212	399	1090	3081	5791	5628	3632	3044	3212	3608	3709	3925	4345	4263	3887	3052	2210	1764	1662	1140	643	61118	TH	28
430	314	223	200	364	1034	2819	5482	5408	3639	3208	3551	3851	4265	4356	4604	4499	4380	3939	3142	2347	2071	1635	1154	66915	F	29
649	454	298	226	296	460	1000	1626	2334	2784	3123	3433	3475	3509	3580	3528	3487	3307	3185	2679	1998	2067	1707	1149	50354	SA	30

DAILY HOURLY TOTALS

14538	7361	11238	71905	134015	89554	104315	110929	121859	100755	61222	39849	1735888
9576	7002	26980	129807	97295	94842	107903	119736	116732	77925	55934	24616	

WEEKDAY HOURLY AVERAGES

391	201	408	3030	5531	3128	3664	3960	4385	3639	2092	1329	
250	224	1095	5578	3648	3279	3818	4357	4249	2728	1912	796	

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	139063	243037	251903	254504	255239	332828	259314	1735888
NO. OF DAYS	4	4	4	4	4	5	5	30
AVERAGE	34766	60759	62976	63626	63810	66566	51863	57863

PEAK HR. TOTAL = 5993
TIME OF DAY = 8AM
DAY = 26
WEEKDAY = T

PEAK DAY TOTAL = 68561
MONTH = APRIL
DAY = 1
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 21 WEEKDAY TOTAL = 1337511 WEEKDAY AVERAGE = 63691

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
MAY, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: EAST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
934	619	390	265	207	250	488	623	865	1167	1633	1707	2196	2111	2121	2284	2646	2316	2095	1789	1756	1566	1066	756	31850	SU 1
426	238	153	137	229	636	1827	3189	3535	2856	2693	2974	3359	2976	3384	4157	5209	5841	4220	2644	2042	1822	1333	813	56693	M 2
480	261	197	172	230	620	1918	3312	3631	3127	2814	3141	3212	3195	3722	4385	5283	5621	4323	2839	2378	2246	1446	842	59395	T 3
507	249	208	200	270	640	2001	3467	3809	2967	2871	3207	3341	3295	3871	4541	5384	5666	4058	2801	2500	2273	1549	925	60600	W 4
526	319	239	180	255	665	1904	3425	3642	2926	2892	3292	3393	3375	3944	4659	5527	5351	4498	2837	2544	2427	1639	928	61387	TH 5
539	399	274	177	274	611	1861	3248	3635	3038	3221	3337	3803	3816	3942	4800	5219	5177	4199	2964	2493	2486	1984	1202	62699	F 6
829	567	399	269	213	342	787	1285	1815	2453	2916	3070	3359	3434	3570	3524	3579	3461	3027	2565	2207	2205	1869	1279	49024	SA 7
802	577	417	199	191	276	417	591	873	1372	1918	1994	2453	2482	2705	2691	2851	2670	2428	2424	2397	2100	1288	750	36866	SU 8
443	211	158	154	258	663	1848	3323	3661	2758	2696	3053	3186	3018	3431	4128	5070	5679	4014	2543	1981	1712	1201	774	55963	M 9
403	241	182	167	192	640	1793	3326	3621	2918	2637	3083	3164	3150	3482	4102	4990	4972	4251	2459	2157	1842	1322	749	55843	T 10
438	290	197	183	228	663	1686	2955	3487	2779	2583	2958	3091	3036	3607	4200	4958	5565	4051	2508	2166	2019	1395	888	55931	W 11
496	336	241	180	251	622	1833	3326	3653	2964	2558	3114	3308	3179	3643	4330	5047	5696	4192	2722	2369	2207	1583	930	58780	TH12
566	317	251	191	236	651	1816	3213	3655	3021	2868	3328	3690	3511	3981	4612	5078	5429	4045	2964	2444	2343	1858	1361	61429	F 13
854	590	408	295	249	408	974	1586	2269	2479	2627	2884	3132	3271	3182	3290	3358	3243	3014	2433	2120	2313	2028	1355	48362	SA14
889	601	379	228	186	291	521	713	898	1253	1627	1838	2201	2424	2451	2297	2531	2251	2144	1813	1842	1579	1079	690	32726	SU15
466	229	165	160	213	673	1851	3227	3532	2937	2629	3075	3225	3048	3571	4119	5132	5595	3968	2544	1838	1737	1270	720	55924	M 16
429	251	177	170	195	644	1859	3327	3746	2896	2742	3158	3246	3276	3655	4376	5334	5756	4159	2813	2543	2370	1512	856	59490	T 17
507	296	218	180	250	673	2098	3428	3879	2949	2545	3153	3322	3269	3610	4416	5402	5699	4425	2812	2601	2272	1680	945	60629	W 18
527	340	485	392	253	726	2041	3418	3894	3003	2889	3306	3541	3385	3805	4540	5378	5519	4424	2778	2528	2307	1747	1004	62230	TH19
653	430	255	225	254	713	2060	3291	3762	3207	3079	3507	3764	3549	3942	4721	5430	5301	4053	2922	2547	2526	2292	1329	63812	F 20
920	668	422	233	205	468	950	1512	2117	2600	2699	2964	3054	3332	3259	3478	3412	3146	2964	2447	2157	2208	1974	1320	48509	SA21
845	610	405	246	174	305	577	669	931	1271	1625	1788	2313	2333	2399	2404	2564	2355	2295	1934	1852	1822	1242	893	33852	SU22
476	243	176	154	243	650	1883	3415	3689	2901	2732	3137	3383	3235	3693	4297	5231	5633	4148	2652	2258	1961	1462	892	58544	M 23
497	268	205	203	219	698	2054	3441	3575	3322	2766	3158	3301	3172	3665	4520	5465	5560	4306	2766	2472	2320	1544	882	60379	T 24
551	349	231	187	256	777	2133	3577	3819	3206	3019	3333	3442	3365	3807	4521	5517	5648	4411	2874	2502	2356	1579	959	62419	W 25
557	365	292	204	269	714	2073	3326	3778	3200	3103	3349	3625	3552	3742	4380	5289	5418	4353	2926	2715	2501	1723	1082	62536	TH26
665	397	253	225	264	707	1897	3097	3477	3124	3168	3509	3815	3834	4222	4741	5408	4930	3980	2962	2487	2248	1912	1230	62552	F 27
885	609	363	221	239	438	924	1359	1955	2441	2807	2836	3121	3119	3178	3067	3166	2933	3014	2258	1979	1840	1650	1152	45554	SA28
734	515	315	209	183	288	519	603	907	1231	1744	1837	2129	2231	2349	2392	2491	2325	2139	1831	1683	1502	1263	794	32214	SU29
527	366	210	150	193	354	682	866	1126	1483	1768	2133	2438	2471	2721	2729	2785	2744	2561	2259	2035	1814	1438	920	36773	M 30
467	246	163	169	235	697	1975	3394	3882	3093	2937	3275	3383	3340	3730	4350	5366	5881	4141	2919	2323	2261	1470	893	60590	T 31

DAILY HOURLY TOTALS

18838	8428	7114	47250	91118	80806	97990	106384	140100	113900	69916	48398	1653555												
11997	6325	17503	79532	80942	90498	96784	121051	143381	80002	65185	30113													

WEEKDAY HOURLY AVERAGES

507	224	239	1868	3568	2782	3365	3690	5159	4126	2360	1588													
302	189	656	3209	2940	3163	3275	4347	5395	2750	2184	960													

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	167508	263897	295697	239579	244933	250492	191449	1653555
NO. OF DAYS	5	5	5	4	4	4	4	31
AVERAGE	33502	52779	59139	59895	61233	62623	47862	53340

PEAK HR. TOTAL = 5881
TIME OF DAY = 6PM
DAY = 31
WEEKDAY = T

PEAK DAY TOTAL = 63812
MONTH = MAY
DAY = 20
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 22 WEEKDAY TOTAL = 1294598 WEEKDAY AVERAGE = 58845

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
MAY, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: WEST ROUTE: A00080 REF. POST: f24 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
776	533	360	246	220	324	635	826	1182	1520	1840	2055	2372	2456	2603	2635	2813	2546	2144	1967	1689	1452	1037	612	34843	SU 1
326	207	175	206	356	1085	3096	5732	5399	3592	2954	3125	3615	3615	3715	4275	4326	4057	3229	2414	1867	1650	1114	681	60811	M 2
348	213	188	210	378	1150	3210	5789	5739	3692	3153	3265	3567	3755	3755	4455	4449	4417	3549	2688	2048	1839	1281	673	63811	T 3
398	264	207	213	402	1105	3189	5792	5694	3650	3138	3281	3594	3812	3949	4417	4576	4424	3629	2755	2053	1861	1379	716	64498	W 4
413	289	235	243	425	1161	3150	5744	5471	3830	3175	3601	3759	3953	4055	4571	4545	4344	3709	2676	2149	2008	1410	814	65730	TH 5
483	314	254	241	398	1008	2945	5383	5455	3745	3241	3556	3862	4266	4499	4605	4548	4323	3730	2975	2252	2188	1560	1110	66941	F 6
623	514	340	213	285	474	1025	2432	2559	2746	3148	3472	3627	3646	3699	3726	3475	3492	3290	2564	2036	2084	1606	1102	52178	SA 7
735	538	394	270	247	321	590	792	1263	1624	2068	2317	2769	2709	3084	3210	3489	2795	2402	2239	2269	1768	1059	571	39523	SU 8
368	204	181	207	381	1203	3189	5785	5519	3462	2949	3075	3457	3646	3807	4330	4303	4240	3260	2350	1927	1639	1052	606	61140	M 9
342	183	198	208	379	1106	3108	5771	5678	3567	3079	3304	3440	3574	3635	4215	4147	3862	3076	2222	1896	1621	1168	625	60404	T 10
353	267	174	204	361	1079	3016	5154	5438	3389	2980	3101	3374	3508	3603	4187	4065	4026	3456	2412	1794	1703	1276	718	59638	W 11
385	258	227	227	388	1053	3067	5518	5588	3538	3146	3199	3567	3698	3951	4461	4346	4176	3607	2446	1985	1834	1251	743	62659	TH12
429	324	236	241	374	1031	2994	5579	5255	3541	3269	3439	3863	4091	4227	4535	4520	4343	3812	2805	2309	1993	1666	1118	65994	F 13
714	474	372	241	296	572	1102	1712	2257	2696	3162	3380	3441	3494	3526	3619	3531	3571	3270	2581	2045	2014	1881	1051	51002	SA14
742	496	390	221	234	366	736	918	1143	1552	1738	2084	2380	2448	2628	2664	3116	2861	2402	1940	1690	1423	1053	560	35785	SU15
337	189	194	195	374	1105	3347	5699	5568	3479	3086	3275	3618	3675	3850	4282	4346	4219	3192	2357	1659	1440	1014	568	61068	M 16
335	200	188	197	395	1134	3189	5847	5739	3708	3061	3363	3633	3671	3903	4381	4443	4442	3625	2617	2111	1890	1254	695	64021	T 17
429	254	224	243	415	1160	3283	6006	5728	3685	3115	3506	3676	3755	3991	4515	4467	4453	3614	2797	2253	2211	1720	783	66283	W 18
499	267	254	286	452	1170	3302	5583	5705	3735	3147	3459	3613	3795	4184	4520	4587	4563	3628	2696	2245	2202	1388	803	66083	TH19
456	323	259	249	409	1092	2928	5462	5492	3584	3308	3521	3942	4132	4445	4789	4638	4508	4091	3065	2382	2306	1665	1114	68160	F 20
704	507	340	242	305	574	1274	1863	2319	2773	3071	3328	3437	3331	3438	3662	3613	3536	3235	2754	2145	2099	1704	1165	51419	SA21
733	537	373	253	238	388	660	836	1225	1562	1952	2012	2398	2471	2643	2781	2994	2821	2340	2187	1940	1813	1133	624	36914	SU22
408	270	198	228	418	1173	3266	5563	5685	3576	3007	3395	3659	3842	3865	4380	4423	4412	3369	2560	2158	1998	1310	681	63844	M 23
363	267	191	231	399	1170	3309	5545	5208	3689	3068	3395	3689	3668	3917	4383	4469	4551	3786	2620	2238	2064	1217	730	64167	T 24
427	271	214	224	437	1225	3197	5705	5827	3782	3205	3413	3807	3984	4084	4465	4575	4734	3693	2791	2181	2266	1434	756	66697	W 25
448	256	245	251	431	1203	3278	5479	5762	3765	3275	3586	3880	4134	4293	4605	4582	4397	3879	2894	2411	2210	1419	876	67559	TH26
550	364	288	276	376	1086	2892	4996	5052	3726	3432	3586	4002	4132	4296	4591	4174	3986	3548	2923	2191	2059	1607	1194	65327	F 27
715	449	284	206	279	476	955	1393	2096	2549	2774	2990	3041	3135	3195	3353	3267	3228	2773	2437	2176	2139	1706	1078	46694	SA28
705	431	328	213	207	297	538	761	1100	1378	1766	1939	2188	2346	2688	2691	2924	2563	2335	2149	1919	1683	1188	747	35084	SU29
425	270	202	167	220	407	779	1023	1314	1778	2291	2794	3068	3206	3348	3367	3215	2969	2578	2297	2153	1840	1282	751	41744	M 30
414	223	190	189	422	1164	3277	5657	5738	3819	3267	3417	3824	4020	4025	4521	4522	4465	3646	2724	2126	1951	1263	734	65598	T 31

DAILY HOURLY TOTALS

15383	7903	10901	74526	133198	89865	106162	114901	125488	101897	64297	42097	1775619												
10156	7041	27862	130345	96732	97233	109968	125191	121324	78902	59248	24999													

WEEKDAY HOURLY AVERAGES

406	215	390	3046	5366	3107	3660	3973	4376	3532	2109	1351													
258	224	1094	5401	3561	3348	3815	4402	4269	2640	1944	795													

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	182149	288607	318001	257116	262031	266422	201293	1775619
NO. OF DAYS	5	5	5	4	4	4	4	31
AVERAGE	36430	57721	63600	64279	65508	66606	50323	57278

PEAK HR. TOTAL = 6006
TIME OF DAY = 8AM
DAY = 18
WEEKDAY = W

PEAK DAY TOTAL = 68160
MONTH = MAY
DAY = 20
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 22 WEEKDAY TOTAL = 1392177 WEEKDAY AVERAGE = 63281

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
JUNE, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: EAST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11******* +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
556	326	194	198	251	725	2002	3239	3643	3098	2831	3408	3398	3518	3799	4387	5313	5711	4480	2920	2455	2271	1620	983	61326	W 1
611	358	249	276	257	726	2038	3523	3818	3216	3040	3481	3431	3698	4130	4472	5328	5597	4627	3068	2585	2486	1761	1036	63812	TH 2
607	348	289	211	253	695	1943	3322	3723	3197	3225	3527	3788	3601	3800	4552	5623	5591	4413	2893	2577	2422	1991	1395	63986	F 3
932	585	431	289	238	494	1003	1617	2127	2480	2825	3058	3496	3321	3445	3562	3975	3351	2871	2333	2189	2245	2097	1559	50523	SA 4
899	675	391	240	195	349	602	781	1030	1357	1878	1862	2358	2396	2374	2437	2715	2475	2218	1985	1941	1726	1178	785	34847	SU 5
429	295	174	163	249	700	1791	3005	3484	2919	2503	2893	3261	3052	3415	4018	5098	5891	3963	2622	2237	1975	1438	804	56379	M 6
446	305	213	182	233	683	2004	3113	3445	2792	2714	3059	3284	3314	3635	4088	5009	5782	4026	2672	2419	2220	1666	959	58263	T 7
563	347	236	207	244	735	2019	3399	3789	3052	2991	3359	3466	3451	3632	4222	5231	5569	4642	2848	2442	2229	1626	918	61217	W 8
605	380	284	229	271	753	2014	3399	3649	3080	2978	3323	3394	3328	3668	4323	5378	5685	4382	2840	2597	2414	1792	1121	61887	TH 9
693	395	319	220	257	726	2056	3084	3500	3059	2814	3511	3701	3695	4130	4733	5315	5356	4219	2802	2578	2447	1981	1380	62971	F 10
922	621	469	271	265	475	1109	1610	2057	2436	2693	2994	3264	3227	3349	3351	3415	3162	2933	2231	2092	1889	1620	1190	47645	SA11
796	629	381	233	195	293	520	689	928	1264	1524	1631	2037	2090	2243	2421	2722	2387	2296	1859	1818	1717	1251	786	32710	SU12
513	319	154	169	242	752	2006	3184	3505	3056	2903	3277	3202	3336	3379	4046	4975	5658	4053	2644	2225	1971	1391	826	57786	M 13
536	301	204	188	257	754	1685	2249	2395	2248	2160	2424	2386	2359	2564	2098	1661	1732	1511	1193	1066	985	755	496	34207	T 14
289	142	137	119	155	464	1043	1111	1322	1199	1175	1368	1410	1380	1395	1671	1808	1832	1595	1181	1085	1050	729	466	24126	W 15
277	150	121	101	180	470	1087	1375	1602	1348	1365	1749	2658	2644	2924	3513	4205	4507	3512	2644	2375	2326	1745	1108	43986	TH16
678	351	271	190	257	629	1720	2767	3262	2728	3046	3357	3423	3579	3749	4301	4975	4957	3905	2816	2477	2503	1998	1332	59271	F 17
921	619	424	279	240	479	946	1529	2189	2509	2749	2897	3142	3195	3252	3251	3306	2979	2875	2531	2188	2228	1987	1359	48074	SA18
945	665	448	229	211	313	610	778	1064	1441	1735	1920	2290	2357	2451	2549	2950	2737	2401	2172	2363	2094	1569	897	37189	SU19
490	239	160	181	268	746	1992	3097	3486	2931	2768	3143	3327	3244	3413	4057	5043	5632	3983	2639	2249	2061	1518	917	57584	M 20
611	288	213	198	268	758	2113	3138	3823	3044	2789	3269	3537	3197	3589	4306	5251	5511	4061	2680	2540	2284	1671	1220	60359	T 21
660	327	259	199	260	778	2203	3266	3668	3056	2973	3189	3526	3462	3540	4347	5104	5640	4223	2648	2326	2266	1773	1124	60817	W 22
613	419	261	214	294	814	2134	3259	3680	3126	2901	3119	3419	3405	3619	4288	4856	5426	3942	2854	2610	2282	1851	1139	60525	TH23
652	380	296	204	302	804	2099	2952	3464	3107	3081	3288	3649	3212	3756	4577	5117	4960	4109	2841	2576	2469	2154	1678	61727	F 24
901	674	385	240	259	478	1018	1640	2073	2548	2779	3023	3250	3351	3310	3390	3301	3157	2694	2337	2158	2101	1931	1651	48549	SA25
915	688	368	266	227	275	573	768	964	1391	1820	1983	2262	2386	2494	2497	2793	2458	2392	2005	1991	1805	1369	921	35611	SU26
492	293	190	172	263	767	2047	3119	3557	3052	2873	3218	3346	3251	3538	4019	5179	5657	4048	2749	2251	2059	1669	959	58768	M 27
583	331	232	204	265	821	2011	3163	3792	3209	3074	3297	3399	3340	3473	4215	5033	5697	4264	2760	2414	2305	1639	1020	60541	T 28
577	365	255	201	291	804	2144	3165	3777	3063	2924	3508	3495	3285	3613	4327	5415	5589	4381	3079	2686	2502	1709	1119	62274	W 29
737	402	280	208	307	810	2179	3159	3756	3174	3056	3422	3582	3658	3823	4450	5279	5458	4397	3037	2757	2519	1917	1232	63599	TH30

DAILY HOURLY TOTALS
19449 8288 7454 48711 86572 78187 94181 99502 131373 107416 68267 49396 1590559
12217 6281 19070 74400 78180 87557 93332 112468 136144 75883 63851 32380

WEEKDAY HOURLY AVERAGES
555 227 256 1924 3370 2736 3276 3481 4827 3943 2842 1654
321 192 723 2959 2852 3100 3228 4046 5156 2656 2184 1056

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	140357	230517	213370	269760	293809	247955	194791	1590559
NO. OF DAYS	4	4	4	5	5	4	4	30
AVERAGE	35089	57629	53343	53952	58762	61989	48698	53019

PEAK HR. TOTAL = 5891
TIME OF DAY = 6PM
DAY = 6
WEEKDAY = M

PEAK DAY TOTAL = 63986
MONTH = JUNE
DAY = 3
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 22 WEEKDAY TOTAL = 1255411 WEEKDAY AVERAGE = 57064

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
JUNE, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: WEST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
441	267	198	226	402	1202	3309	5302	5632	3743	3250	3545	3660	3774	4114	4339	4387	4350	3853	2807	2326	2152	1483	878	65640	W 1
458	287	251	260	407	1195	3250	5755	5716	3850	3370	3491	3945	4035	4099	4482	4553	4617	4046	2967	2384	2525	1533	871	68347	TH 2
553	310	258	248	389	1099	2954	5416	5454	3727	3456	3719	3993	4166	4402	4603	4662	4591	4140	3125	2431	2276	1631	1199	68802	F 3
719	480	349	245	278	610	1301	1947	2514	2815	3060	3384	3446	3563	3579	3628	3597	3433	3249	2606	2305	2382	2240	1355	53085	SA 4
873	565	413	246	250	407	755	899	1324	1541	2087	2200	2569	2701	2698	2877	3105	2773	2402	2163	1930	1735	1186	655	38354	SU 5
401	231	200	224	418	1210	3071	5048	5340	3558	3086	3253	3410	3671	3683	4145	4191	4263	3418	2480	1981	1888	1182	749	61101	M 6
382	232	199	233	399	1211	3242	5180	5084	3671	3169	3166	3558	3742	3860	4126	4346	4358	3703	2657	2140	1983	1397	786	62824	T 7
443	258	218	218	414	1215	3207	5801	5393	3646	3213	3476	3818	3891	3926	4392	4537	4429	3682	2637	2077	2181	1517	890	65479	W 8
488	296	264	275	447	1200	3185	5266	4793	3897	3225	3536	3958	4072	4073	4436	4576	4555	3896	2834	2381	2219	1544	936	66352	TH 9
524	345	287	280	393	1102	2974	5136	5130	3662	3417	3596	3984	4236	4318	4596	4650	4349	3815	3020	2459	2308	1792	1184	67557	F 10
761	474	381	264	297	595	1184	1729	2282	2781	3118	3524	3404	3553	3977	3677	3693	3467	3239	2436	1975	1804	1458	1039	51112	SA11
681	505	353	224	272	346	785	910	1205	1585	1871	2165	2559	2606	2581	2634	3027	2613	2259	2067	1832	1661	1234	730	36705	SU12
454	224	214	186	399	1214	3215	5572	5186	3594	3232	3317	3615	3835	3736	4284	4423	4417	3744	2701	2295	1950	1272	762	63841	M 13
461	251	217	210	425	1211	3113	5113	5067	3585	3131	3213	3554	3741	3770	4113	4337	3990	3378	2606	2066	1860	1367	775	61554	T 14
370	307	289	229	419	1182	3060	5283	4887	3492	3069	3175	3392	3494	3730	3890	4058	4054	3500	2645	2239	2069	1494	814	61141	W 15
506	306	254	251	440	1214	3086	5223	4739	3645	3085	3268	3510	3664	3723	4254	4342	4208	3702	2787	2337	2123	1560	893	63120	TH16
505	356	233	245	418	1132	2772	4865	4799	3602	3466	3448	3881	4184	4156	4472	4424	4035	3762	3001	2350	2321	1675	1135	65237	F 17
760	524	346	251	296	616	1143	1716	2360	2736	3218	3552	3445	3588	3743	3762	3569	3664	3292	2727	2247	2219	1730	1190	52694	SA18
732	539	385	258	263	372	644	752	1208	1647	2129	2275	2606	2714	2819	3164	3622	3124	2588	2607	2412	2142	1385	769	41156	SU19
399	246	200	199	436	1195	3197	5299	5214	3537	3140	3235	3714	3726	3945	4174	4328	4340	3399	2774	2262	2074	1334	798	63165	M 20
441	236	216	214	425	1230	3221	5359	5307	3753	3289	3382	3750	3870	3958	4197	4485	4485	3793	2780	2191	2074	1473	853	64982	T 21
469	300	233	238	483	1170	3178	5286	5310	3751	3291	3395	3748	3959	3961	4351	4279	4360	3749	2653	2301	2399	1743	852	65459	W 22
489	292	259	271	429	1286	3161	5375	5214	3758	3257	3541	3717	3992	4073	4334	4455	4551	3732	2873	2189	2066	1548	875	65737	TH23
516	327	279	225	435	1121	2876	5026	4881	3644	3464	3788	3980	4059	4279	4609	4642	4182	3807	2907	2503	2346	1777	1255	66928	F 24
764	546	351	268	349	678	1131	1686	2334	2769	3057	3531	3422	3553	3888	3780	3598	3385	3130	2699	2315	2018	1575	1141	51968	SA25
753	536	386	258	256	375	773	899	1253	1574	1982	2226	2698	2661	2764	2954	3130	3037	2565	2364	2026	1980	1298	765	39513	SU26
438	243	229	230	431	1235	3149	5332	5240	3778	3160	3437	3727	3819	3850	4223	4463	4307	3610	2616	2214	2031	1318	779	63859	M 27
456	258	214	191	436	1250	3137	5450	5404	3884	3289	3487	3870	3934	3936	4431	4531	4380	3649	2658	2212	1947	1599	810	65413	T 28
480	279	236	228	445	1243	3235	5453	5341	3832	3436	3497	3848	4033	4011	4397	4638	4458	3834	3006	2548	2385	1621	1016	67500	W 29
523	289	252	242	452	1301	3150	5427	5303	3873	3365	3676	3941	4121	4195	4708	4659	4627	3776	3093	2581	2441	1735	1067	68797	TH30

DAILY HOURLY TOTALS

16240	8164	11603	76458	128914	92382	106722	113847	125307	104712	67509	45701	1797422												
10309	7137	30417	127505	98930	98498	110957	122032	121402	81296	63559	27821													

WEEKDAY HOURLY AVERAGES

464	236	425	3125	5202	3266	3753	3991	4453	3727	2294	1527													
279	233	1201	5317	3704	3438	3910	4343	4359	2801	2164	917													

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	155728	251966	254773	325219	332353	268524	208859	1797422
NO. OF DAYS	4	4	4	5	5	4	4	30
AVERAGE	38932	62992	63693	65044	66471	67131	52215	59914

PEAK HR. TOTAL = 5801
TIME OF DAY = 8AM
DAY = 8
WEEKDAY = W

PEAK DAY TOTAL = 68802
MONTH = JUNE
DAY = 3
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 22 WEEKDAY TOTAL = 1432835 WEEKDAY AVERAGE = 65129

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
JULY, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: EAST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
772	511	307	240	280	788	2042	2955	3439	3218	3364	3762	3958	3996	4320	4871	5318	5025	4148	3018	2623	2322	2017	1552	64846	F 1
922	627	391	286	272	482	1003	1504	1972	2446	2801	2979	3313	3307	3222	3192	3296	3102	3019	2383	1978	2035	1795	1542	47869	SA 2
926	593	340	250	202	310	574	713	959	1330	1642	1946	2211	2306	2387	2408	2505	2418	2223	1720	1695	1689	1417	923	33687	SU 3
578	338	222	142	204	348	675	998	1463	1715	1951	2116	2336	2562	2603	2700	2848	3138	3317	3130	3135	3221	1773	1494	43007	M 4
749	330	192	194	218	710	1995	3017	3385	2897	2822	3247	3323	3441	3664	4160	5117	5564	4099	2738	2325	2261	1695	1029	59172	T 5
655	339	222	207	260	809	2139	3170	3768	3189	2870	3375	3404	3436	3777	4273	5347	5650	4759	3175	2672	2550	2004	1191	63241	W 6
629	443	232	232	244	767	2114	3207	3813	3161	3010	3393	3576	3453	3668	4393	5273	5466	4351	2862	2523	2430	1941	1093	62274	TH 7
662	395	272	221	277	771	2112	3128	3393	3168	3072	3670	3589	3689	4073	4635	5282	5342	4333	3080	2531	2157	2007	1638	63497	F 8
1048	588	414	275	270	479	1116	1632	2215	2510	2806	3143	3367	3306	3364	3265	3400	3195	2982	2346	2062	2119	2038	1534	49474	SA 9
876	631	406	234	190	316	630	728	1026	1302	1722	1940	2423	2263	2477	2475	2591	2396	2293	1956	2113	1765	1493	958	35204	SU10
471	284	173	152	273	780	2151	3210	3625	3127	2849	3223	3372	3325	3524	4304	5240	5526	4304	2731	2305	2097	1604	1059	59709	M 11
583	345	232	223	266	806	2161	3235	3890	3130	2825	3408	3521	3491	3626	4130	5390	5618	4269	2828	2451	2317	1847	1113	61705	T 12
675	364	250	208	294	856	2242	3143	3877	3135	3105	3385	3598	3466	3616	4301	5275	5410	4160	2799	2524	2312	1810	1094	61899	W 13
662	407	242	217	295	867	2173	3236	4019	3157	2981	3384	3492	3519	3755	4269	5343	5374	4525	2994	2550	2593	2247	1251	63552	TH14
803	430	266	220	284	794	2060	3146	3661	3252	3151	3612	3796	3932	4223	4825	5102	5153	4415	3151	2600	2461	2174	1680	65191	F 15
1196	702	411	303	322	610	1172	1584	2064	2487	2799	3132	3258	3280	3326	3447	3422	3640	3540	2718	2178	2080	2005	1521	51197	SA16
905	575	409	267	196	386	649	792	1097	1356	1735	1934	2315	2382	2470	2495	2817	2527	2275	1959	1962	1793	1410	897	35603	SU17
574	336	204	186	269	807	2067	3198	3588	3123	2913	3172	3392	3423	3537	4021	5143	5513	4140	2774	2440	2043	1628	962	59453	M 18
560	338	235	195	267	844	2145	3167	3695	3186	2874	3292	3446	3476	3612	4367	5277	5536	4470	2777	2612	2400	1801	1037	61609	T 19
604	347	229	204	294	907	2260	3167	3729	3243	2978	3482	3389	3559	3714	4359	5235	5593	4395	2948	2526	2524	1983	1267	62936	W 20
742	452	263	221	298	865	2222	3271	3835	3279	3049	3548	3585	3603	3737	4487	4699	5418	4449	3037	2644	2500	2293	1231	63728	TH21
732	443	277	231	292	789	1936	3039	3384	3120	3198	3677	3996	3723	4043	4705	5395	5334	4015	2947	2589	2364	2346	1583	64158	F 22
1025	639	369	258	259	483	945	1576	1965	2538	2774	2917	3240	3221	3133	3165	3194	3041	2924	2172	2001	2098	2115	1576	47628	SA23
871	615	392	273	210	331	575	717	1021	1277	1720	1750	2163	2262	2342	2250	2615	2392	2165	1841	1767	1742	1436	893	33620	SU24
562	315	194	202	265	764	1560	2332	2769	2557	2529	3008	3054	2871	3175	3343	3831	3966	3371	2597	2618	2666	1673	1225	51447	M 25
689	329	221	204	253	795	2001	3142	3660	3207	3117	3428	3573	3409	3451	4153	5233	5680	4474	2883	2491	2291	1663	987	61334	T 26
578	330	235	204	245	893	2170	3141	3771	3181	3056	3456	3560	3326	3637	4324	5301	5520	4514	2938	2551	2479	1706	1096	62212	W 27
639	418	269	228	294	781	2148	3190	3815	3176	3151	3374	3444	3558	3731	4291	5290	5382	4347	3030	2715	2552	2082	1255	63160	TH28
656	421	260	242	295	834	2047	3163	3524	3216	3174	3602	3940	3841	4173	5054	5354	5230	4478	2980	2538	2267	1893	1329	64511	F 29
968	561	400	273	274	503	1026	1524	2041	2459	2898	3121	3423	3588	3314	3460	3724	3370	2949	2397	2247	2323	1894	1396	50133	SA30
880	597	445	277	242	313	609	809	1066	1371	1796	1849	2250	2356	2441	2370	2675	2534	2337	1999	1991	1861	1376	908	35352	SU31

DAILY HOURLY TOTALS

23192 8974 8104 50719 89529 84732 101307 106135 136532 116040 73957 57166 1702408
14043 7069 20788 74834 83513 95325 101370 118492 139053 82908 70312 38314

WEEKDAY HOURLY AVERAGES

646 238 270 2020 3529 2954 3493 3698 5062 4254 2570 1914
377 208 789 3012 3068 3363 3481 4284 5259 2925 2419 1246

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	173466	213616	243820	250288	252714	322203	246301	1702408
NO. OF DAYS	5	4	4	4	4	5	5	31
AVERAGE	34693	53404	60955	62572	63179	64441	49260	54916

PEAK HR. TOTAL = 5680
TIME OF DAY = 6PM
DAY = 26
WEEKDAY = T

PEAK DAY TOTAL = 65191
MONTH = JULY
DAY = 15
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 21 WEEKDAY TOTAL = 1282641 WEEKDAY AVERAGE = 61078

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
JULY, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: WEST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
615	387	293	219	409	1120	2747	4818	4928	3729	3563	3753	4085	4261	4258	4740	4476	3995	3600	2854	2416	2317	1873	1346	66802	F 1
737	555	386	238	299	538	1035	1572	2126	2537	3018	3226	3204	3241	3257	3386	3279	3159	3090	2589	2164	1883	1820	1880	49219	SA 2
819	533	371	234	202	341	619	847	1205	1404	1765	1920	2277	2284	2483	2642	2956	2607	2374	2273	1981	1949	1620	1062	36768	SU 3
578	354	224	168	221	419	846	1069	1401	1725	2038	2481	2742	3027	3158	3309	3140	2910	2593	2126	1756	1581	2890	4361	45117	M 4
1554	482	238	247	422	1197	3124	5350	5118	3786	3353	3523	3885	4016	3972	4344	4337	4328	3605	2784	2151	1993	1416	793	66018	T 5
438	257	243	213	391	1263	3104	5460	5500	3896	3391	3475	3824	3953	3946	4466	4607	4625	4089	3029	2383	2243	1553	932	67281	W 6
509	283	272	222	422	1260	3179	5292	5386	3895	3363	3564	3838	3944	3978	4435	4514	4331	3811	2947	2388	2198	1626	989	66646	TH 7
619	358	285	234	406	1159	2902	4986	5142	3796	3449	3639	3861	4052	4143	4489	4605	4348	3845	3051	2387	2312	1831	1297	67197	F 8
729	505	370	227	292	604	1153	1711	2326	2783	3134	3363	3360	3524	3624	3707	3628	3378	3319	2921	2412	2507	1931	1250	52758	SA 9
820	621	402	264	253	378	770	919	1372	1516	1926	2150	2477	2596	2783	2931	3264	3011	2553	2248	2067	1955	1331	785	39402	SU10
414	285	225	199	415	1266	3171	5667	5250	3611	3192	3419	3681	4007	3871	4203	4479	4289	3619	2754	2453	2160	1468	795	64893	M 11
443	260	225	237	407	1229	3206	5228	5438	3804	3299	3490	3670	3950	3931	4338	4409	4465	3675	2799	2351	2227	1586	911	65578	T 12
499	270	235	222	418	1265	3159	5337	5360	3869	3310	3596	3932	4063	3994	4452	4508	4424	3732	2841	2399	2363	1724	928	66900	W 13
572	300	272	254	448	1275	3117	5270	5308	3953	3329	3538	3775	4080	4019	4557	4629	4517	3954	3016	2560	2333	1709	1050	67835	TH14
623	362	276	249	401	1129	2882	5003	5162	3755	3522	3933	4074	4216	4320	4589	4561	4281	3762	3081	2406	2415	1829	1601	68432	F 15
1050	629	374	325	324	630	1133	1687	2282	2873	3312	3259	3513	3483	3473	3656	3601	3318	3075	2504	2337	2354	2033	1909	53134	SA16
1256	592	388	234	289	405	755	936	1178	1504	2016	2227	2562	2684	2742	2860	3215	2881	2466	2380	1918	2132	1508	767	39895	SU17
479	296	210	226	439	1274	3127	5316	5402	3781	3234	3438	3703	3930	3922	4358	4404	4259	3547	2760	2276	2183	1456	802	64822	M 18
448	316	227	270	428	1301	3160	5316	5504	3865	3277	3523	3731	3940	3976	4349	4472	4390	3869	2759	2405	2229	1539	869	66163	T 19
502	313	255	243	469	1240	3200	5519	5309	3914	3409	3632	3809	3930	4066	4367	4506	4561	3898	2988	2630	2374	1688	1039	67861	W 20
550	309	246	275	475	1225	3130	5285	5439	4072	3480	3474	3886	4008	4028	4463	4311	4440	4011	3283	2468	2289	1635	1038	67820	TH21
593	488	308	284	449	1097	2782	4916	5137	3697	3537	3790	3934	4181	4199	4545	4544	4412	4044	2930	2315	2299	1785	1165	67431	F 22
721	506	346	264	329	572	1089	1632	2078	2625	2941	3215	3178	3292	3371	3481	3390	3317	3129	2603	2140	2265	2082	1553	50119	SA23
836	610	435	273	263	368	740	866	1200	1482	1890	2122	2398	2567	2666	2772	3057	2893	2555	2178	2001	1980	1458	906	38516	SU24
473	300	250	230	372	924	2256	3565	3466	2827	2791	3370	3848	3504	3507	3801	3762	3408	3146	2524	2172	2044	2380	1879	56799	M 25
649	289	242	232	482	1233	3109	5506	5386	3817	3326	3491	3686	3880	3960	4329	4505	4442	3807	2790	2329	2148	1578	830	66046	T 26
456	308	248	244	445	1226	3243	5310	5471	3954	3496	3677	3994	4096	4320	4543	4510	4461	3888	3069	2433	2333	1630	949	68304	W 27
526	294	288	272	443	1268	3167	5350	5349	4063	3605	3722	4061	4109	4302	4811	4627	4391	3936	3144	2588	2204	1610	993	69123	TH28
567	355	242	242	453	1141	2899	5024	5068	3876	3575	3917	4148	4464	4659	4908	4768	4456	3944	3195	2407	2389	1910	1251	69858	F 29
724	510	392	301	358	637	1204	1642	2315	2751	3227	3510	3568	3574	3725	3819	3716	3535	3241	2814	2548	2507	2205	1495	54318	SA30
853	569	389	292	270	380	727	915	1357	1608	2088	2354	2796	2799	2915	3011	3384	3177	2718	2481	2238	2040	1381	796	41538	SU31

DAILY HOURLY TOTALS

20652 9158 11694 70735 122963 94856 109500 115568 126164 106895 71479 54085 1832593
12496 7634 29364 117314 98768 101791 113655 124661 121009 85715 68216 38221

WEEKDAY HOURLY AVERAGES

577 253 420 2929 5025 3311 3817 4025 4413 3732 2365 1748
327 237 1167 4980 3699 3545 3981 4400 4273 2892 2221 1229

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	196119	231631	263805	270346	271424	339720	259548	1832593
NO. OF DAYS	5	4	4	4	4	5	5	31
AVERAGE	39224	57908	65951	67587	67856	67944	51910	59116

PEAK HR. TOTAL = 5667
TIME OF DAY = 8AM
DAY = 11
WEEKDAY = M

PEAK DAY TOTAL = 69858
MONTH = JULY
DAY = 29
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 21 WEEKDAY TOTAL = 1376926 WEEKDAY AVERAGE = 65568

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
AUGUST, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: EAST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
529	298	195	154	256	829	1959	3201	3612	2976	2967	3401	3494	3307	3634	4062	5185	5656	4287	2678	2230	2099	1515	958	59482	M 1
560	281	198	209	256	819	2113	3424	3772	3269	2907	3461	3631	3199	3562	4347	5350	5462	4544	2952	2467	2137	1512	949	61381	T 2
564	327	238	211	287	755	2196	3279	3847	3065	2910	3440	3628	3487	3668	4315	5331	5660	4518	3004	2618	2436	1749	1088	62621	W 3
659	348	284	200	273	853	2252	3279	2704	3075	3089	3529	3450	3512	2905	4016	4847	4944	4570	2994	2705	2646	2088	1106	60328	TH 4
692	451	359	251	286	791	2073	2986	3648	3139	3138	3808	3885	3822	4185	4688	5256	5189	4418	3107	2595	2605	2029	1592	64993	F 5
1059	684	411	263	266	543	1107	1668	2216	2595	2903	3268	3469	3568	3672	3658	3554	3323	3006	2339	2181	2294	2095	1590	51732	SA 6
938	668	362	262	220	315	573	798	1041	1475	1901	2080	2454	2466	2411	2348	2672	2571	2301	1903	2034	1829	1351	873	35846	SU 7
540	275	185	181	229	806	2043	3105	3674	2948	2778	3300	3394	3298	3459	4136	5057	5641	4141	2704	2250	2192	1628	872	58836	M 8
526	330	244	215	292	767	2140	3187	3662	2995	2865	3231	3451	3412	3563	4322	5269	5568	4323	2883	2477	2433	1628	936	60719	T 9
548	302	223	188	278	795	2154	3186	3617	3104	2944	3396	3539	3413	3768	4469	4834	5147	4624	2969	2741	2548	1851	1080	61718	W 10
630	441	271	224	300	789	2176	3138	3772	3094	3110	3396	3566	3583	3935	4350	5407	4831	2704	3308	2731	2578	2121	1130	61585	TH11
707	436	307	261	305	816	2314	3265	3641	3136	3283	3672	3863	3776	4139	4704	5353	5006	4648	3129	2598	2418	1908	1419	65104	F 12
962	643	377	276	271	467	1121	1659	2045	2591	2825	3198	3384	3287	3417	3648	3732	3522	3494	2537	2158	2251	1968	1415	51248	SA13
964	675	395	246	221	314	549	764	973	1352	1750	2047	2389	2335	2504	2606	2746	2558	2343	2094	2091	1925	1354	798	35993	SU14
482	292	184	182	290	766	1979	3074	3521	3094	2961	3235	3477	3406	3529	4132	5105	5632	4272	2705	2357	2111	1435	963	59184	M 15
524	341	197	202	253	744	2041	3078	3659	3172	2819	3277	3489	3435	3772	4116	5157	5742	4409	2803	2393	2249	1626	1015	60513	T 16
520	359	238	237	280	767	2142	3211	3532	3117	3031	3516	3461	3319	3566	4192	3800	4815	4484	2798	2765	2418	1720	989	59277	W 17
654	381	271	225	276	746	2039	3381	3587	3027	2948	3282	3444	3478	3697	4492	5283	5488	4381	2914	2614	2446	1895	1110	62059	TH18
670	427	274	214	251	706	1967	3181	3475	3146	3143	3623	3819	3822	4204	4539	5151	5102	4185	2968	2615	2492	2104	1434	63512	F 19
918	646	369	265	294	466	1031	1546	1938	2424	2882	3185	3505	3350	3411	3399	3589	3568	3150	2426	2150	2264	2359	1743	50878	SA20
895	618	404	237	222	351	614	842	989	1344	1735	1902	2394	2342	2421	2442	2772	2535	2329	2064	2131	1903	1359	808	35653	SU21
498	241	166	138	281	751	2053	3138	3619	2847	2774	3288	3418	3365	3680	4470	5297	5700	4140	2720	2319	2086	1603	918	59510	M 22
591	332	235	231	283	761	2145	3270	3858	3155	3088	3362	3530	3400	3629	4495	5346	5571	4248	2866	2495	2208	1845	1488	62432	T 23
794	312	266	223	296	797	2281	3530	3932	3101	2838	3351	3591	3313	3773	4288	5259	5688	4302	2975	2661	2346	1527	922	62366	W 24
566	360	261	204	308	779	2348	3477	3785	3265	2941	3259	3661	3356	3576	4130	5153	5397	4315	2963	2655	2470	1800	1029	62058	TH25
557	408	272	226	283	781	2214	3393	3751	3167	3172	3539	3775	3655	4122	4774	5215	5251	4505	3010	2773	2438	2184	1356	64821	F 26
906	630	426	275	266	497	1085	1472	2060	2462	2991	3203	3489	3281	3407	3493	3600	3417	2965	2350	2262	2226	2072	1636	50471	SA27
904	608	418	244	217	336	565	724	977	1278	1689	1831	2293	2277	2403	2371	2693	2429	2371	2111	2120	1828	1178	740	34605	SU28
413	230	188	176	261	760	2155	3438	3651	3062	2712	3053	3339	3161	3565	4190	5074	5419	4044	2687	2318	1967	1348	764	57975	M 29
512	263	212	202	277	742	2245	3540	3812	3142	2790	3027	3261	3278	3651	4292	5398	5594	4212	2856	2506	2243	1502	879	60436	T 30
498	299	221	226	270	791	2316	3565	3878	3063	2916	3150	3295	3243	3629	4434	5187	5526	4113	2938	2718	2229	1593	922	61020	W 31

DAILY HOURLY TOTALS

20780	8651	8348	55990	96248	66800	104838	108857	143672	120346	75728	53947	1758356	
12906	6848	21200	84799	86680	98310	101946	123918	147952	84755	70315	34522		

WEEKDAY HOURLY AVERAGES

575	239	277	2145	3653	2962	3542	3705	5144	4278	2548	1748		
336	208	779	3275	3094	3374	3437	4346	5393	2910	2339	1083		

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	142097	294987	305481	307002	246030	258430	204329	1758356
NO. OF DAYS	4	5	5	5	4	4	4	31
AVERAGE	35524	58997	61096	61400	61508	64608	51082	56721

PEAK HR. TOTAL = 5742
TIME OF DAY = 6PM
DAY = 16
WEEKDAY = T

PEAK DAY TOTAL = 65104
MONTH = AUGUST
DAY = 12
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 23 WEEKDAY TOTAL = 1411930 WEEKDAY AVERAGE = 61388

UTAH STATE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
AUGUST, 2005
MONTHLY TRAFFIC VOLUME REPORT

STATION NUMBER: 341 STATION DIRECTION: WEST ROUTE: A00080 REF. POST: 124 +OFFSET MI: 0.000 ACCUM MI: 123.54
LOCATION: 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** +OFFSET KM: 0.000 ACCUM KM: 0.00

1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	12PM	TOTAL	DAY
466	276	257	234	444	1264	3180	5488	5306	3713	3257	3487	3740	4018	3968	4299	4330	4304	3647	2713	2226	1992	1338	814	64761	M 1
435	258	250	245	438	1237	3099	5492	5411	3707	3256	3367	3636	3931	3782	4228	4299	4256	3739	2882	2404	2206	1471	801	64830	T 2
481	300	256	256	421	1263	3212	5402	5454	3810	3248	3577	3678	3813	3953	4325	4463	4375	3904	3039	2522	2388	1555	900	66595	W 3
512	348	286	275	464	1221	3112	5287	5232	3766	3538	3564	3857	3914	3581	4437	4527	4402	3926	3110	2573	2397	1560	960	66849	TH 4
604	412	309	303	424	1142	2844	4912	4939	3711	3459	3742	4030	4314	4248	4720	4625	4285	3910	3005	2438	2308	1965	1239	67888	F 5
813	499	411	273	329	616	1117	1632	2216	2729	3104	3419	3464	3532	3571	3707	3646	3503	3629	2948	2589	2483	2019	1399	53648	SA 6
926	635	372	255	259	380	737	897	1352	1495	2054	2264	2592	2677	2992	3065	3343	3082	2695	2389	2361	2058	1281	794	40955	SU 7
430	235	211	219	434	1282	3148	5540	5118	3540	3231	3486	3791	3962	3982	4104	4401	4265	3600	2665	2202	2092	1336	828	64102	M 8
512	276	227	241	429	1233	3118	5518	5285	3786	3345	3320	3768	3962	3979	4222	4501	4411	3840	2801	2311	2176	1476	824	65561	T 9
512	292	241	237	450	1251	3128	5476	5719	3933	3480	3687	4026	4015	4127	4394	4330	4467	3923	2990	2616	2347	1648	973	68262	W 10
542	350	283	310	469	1281	3149	5342	5572	3968	3471	3635	3808	3980	4070	4555	4617	4418	3926	3003	2575	2414	1641	1013	68392	TH11
603	422	304	264	451	1122	2904	4876	5252	4139	3742	3943	4172	4266	4466	4785	4627	3943	3775	3023	2639	2483	1853	1180	69234	F 12
763	561	390	245	359	613	1173	1679	2289	2653	3052	3297	3365	3452	3570	3800	3689	3482	3223	2785	2552	2694	2057	1320	53063	SA13
893	594	445	271	274	406	789	1125	1492	1701	2089	2350	2633	2532	3092	3064	3509	3048	2653	2487	2243	1977	1222	750	41639	SU14
445	270	249	216	419	1184	3106	5060	5136	3677	3301	3531	3727	3991	3955	4363	4396	4453	3474	2732	2169	1930	1258	697	63739	M 15
461	278	269	233	444	1210	3090	5261	5381	3660	3308	3497	3665	3921	3950	4321	4366	4417	3777	2887	2297	1954	1439	832	64918	T 16
498	296	245	235	451	1208	3074	5441	5302	3774	3242	3594	3945	4149	4138	4396	3625	4066	3649	2970	2399	2117	1609	917	65340	W 17
539	358	294	274	441	1230	3053	5355	5401	3672	3400	3616	3904	4046	4223	4563	4457	4470	3866	3073	2630	2181	1460	827	67333	TH18
603	401	271	269	439	1143	2753	5189	5126	3809	3641	4112	4431	4681	4392	4578	4533	4155	3901	3013	2507	2528	1817	1197	69489	F 19
739	506	343	245	308	605	1065	1604	2237	2739	3105	3617	3949	4127	4102	4060	3650	3779	3695	2871	2388	2317	2050	1347	55448	SA20
834	600	406	251	252	367	725	890	1226	1595	2050	2314	2704	2923	2910	2838	3190	3006	2637	2413	2250	1918	1207	716	40222	SU21
429	313	237	222	407	1185	3088	5443	5198	3494	3284	3493	3902	3959	3748	4176	4339	4288	3720	2710	2242	1936	1303	789	63905	M 22
473	272	252	231	419	1194	3130	5477	5425	3668	3315	3492	3631	3916	3965	4294	4652	4588	3929	2887	2271	1988	1354	828	65651	T 23
528	308	233	251	442	1224	3197	5494	5585	3801	3264	3495	3719	3943	3916	4351	4556	4344	3876	2935	2413	2228	1477	851	66431	W 24
490	306	277	275	458	1245	3138	5429	5479	3703	3221	3420	3881	3770	3966	4551	4525	4461	3868	3011	2540	2148	1413	879	66454	TH25
520	348	275	276	420	1114	2820	5261	5222	3711	3298	3616	3998	4156	4338	4616	4642	4251	3888	3072	2563	2454	1750	1195	67804	F 26
776	576	433	312	326	543	1042	1772	2433	2875	3131	3392	3498	3574	3654	3636	3586	3568	3399	2964	2463	2421	1704	1258	53336	SA27
839	599	430	295	250	341	706	823	1266	1501	2055	2261	2599	2715	2722	2901	3257	2945	2575	2346	2197	1654	1176	773	39226	SU28
337	234	226	219	371	1252	3192	5574	5620	3562	3129	3235	3658	3669	3780	4242	4318	4214	3595	2647	2082	1688	1157	667	62668	M 29
389	253	245	226	386	1231	3233	5683	5600	3606	3137	3171	3443	3604	3995	4412	4427	4219	3769	2871	2352	1896	1281	687	64116	T 30
394	283	248	259	408	1254	3216	5624	5520	3676	3049	3197	3528	3724	4112	4518	4687	4385	3827	2839	2493	1976	1327	777	65321	W 31

DAILY HOURLY TOTALS

17786 9175 12286 78338 137794 97256 112742 119247 130113 111835 74507 47204 1897180
11659 7917 31841 134046 103174 104191 117236 128521 125850 88081 67349 29032

WEEKDAY HOURLY AVERAGES

487 258 432 3086 5360 3331 3823 4028 4445 3797 2411 1499
308 251 1216 5375 3734 3534 3987 4411 4323 2908 2166 899

	SUN	MON	TUE	WED	THUR	FRI	SAT	GRAND TOTAL
TOTALS	162042	319175	325076	331949	269028	274415	215495	1897180
NO. OF DAYS	4	5	5	5	4	4	4	31
AVERAGE	40511	63835	65015	66390	67257	68604	53874	61199

PEAK HR. TOTAL = 5719
TIME OF DAY = 9AM
DAY = 10
WEEKDAY = W

PEAK DAY TOTAL = 69489
MONTH = AUGUST
DAY = 19
YEAR = 2005
WEEKDAY = F

NUMBER OF WEEKDAYS = 23 WEEKDAY TOTAL = 1519643 WEEKDAY AVERAGE = 66071

UTAH DEPARTMENT OF TRANSPORTATION
PLANNING STATISTICS SECTION
IN COOPERATION WITH
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AUTOMATIC RECORDER DATA BY MONTHS

YEAR: 2004

LOCATION: A00080 300 EAST, SALT LAKE CITY MP 123.54 FC 11****** STATION: 341
REF POST: 124 + OFFSET MI: 0.000 ACCUM. MI: 123.54
+ OFFSET KM: 0.000 ACCUM. KM: 0.00

MONTH	AVERAGE DAILY NUMBER OF VEHICLES									% THE AVERAGE DAY IS OF THE AVERAGE WEEKDAY	% THE MONTH DAILY AVERAGE IS OF THE YR. DAILY AVE.
	DAY OF THE WEEK							AVERAGE DAY SUN. THRU SATURDAY	AVERAGE WEEKDAY MON. THRU FRIDAY		
	SUN	MON	TUE	WED	THU	FRI	SAT				
JANUARY	60379	112778	117878	116588	107403	118646	92109	103912	114510	90.7	93.9
FEBRUARY	61926	112507	117056	119075	117722	125878	89307	104683	118447	88.4	94.6
MARCH	70530	120276	123200	126148	125475	127738	99905	114281	124390	91.9	103.3
APRIL	68447	119312	123253	122614	124167	128384	98747	113075	123794	91.3	102.2
MAY	68239	109442	120028	122656	125032	125659	95835	107777	120034	89.8	97.4
JUNE	74085	120446	125074	126292	127727	130348	103144	115994	125950	92.1	104.9
JULY	72180	113794	125587	127667	129811	126492	99246	114021	124987	91.2	103.1
AUGUST	74654	121859	125342	128322	130504	130359	103298	115458	126943	91.0	104.4
SEPTEMBER	67861	110406	121660	123337	126389	127256	99028	111782	122087	91.6	101.0
OCTOBER	66597	116693	122246	122467	123264	127592	96738	109462	122697	89.2	98.9
NOVEMBER	62729	118149	122333	124789	109178	119886	90911	107746	118992	90.5	97.4
DECEMBER	67306	118592	120577	120689	122264	114692	92284	109137	119343	91.4	98.7
DAILY AVERAGE FOR YEAR	67907	116284	122171	123443	122373	125048	96656	110626	121878	90.8	
% DAILY AVE. OF YEAR DAILY AVERAGE	61.4	105.1	110.4	111.6	110.6	113.0	87.4				

2004 State Highway Truck Traffic Book

ROUTE NAME	BEG. ACCUM. MILEAGE	END ACCUM. MILEAGE	LOCATION DESCRIPTION	2004 AADT	SINGLE	COMBO	TOTAL % TRUCKS
0077	0.00	2.36	JCT SR 147 SOUTH OF LAKESHORE	1665	9%	4%	13%
0077	2.36	6.91	3200 WEST SR 77 TURNS EAST	1710	8%	4%	12%
0077	6.91	7.17	WEST INCL SPRINGVILLE	1870	6%	5%	11%
0077	7.17	7.50	JCT FAI 15 VIA 400 SO	19140	7%	6%	13%
0077	7.54	8.56	EAST INCL SPRINGVILLE	18445	7%	8%	15%
0077	8.56	9.07	W URB BNDRY SPRINGVILLE-SR 89	18665	8%	9%	17%
0078	0.00	9.03	JCT FAI 15	1055	4%	64%	68%
0078	9.03	9.42	WEST INCL LEVAN-SR 28	1275	4%	64%	68%
0079	0.00	1.11	JCT SR 126	14675	4%	2%	6%
0079	1.11	1.75	WEST INCL OGDEN 1100 WEST	15025	4%	2%	6%
0079	1.75	2.33	FAI 15 31ST ST INT	22680	6%	3%	9%
0079	2.33	2.57	BEGINNING OF ONE WAY COUPLET EB	8535	4%	4%	8%
0079	2.57	3.00	WALL AVE-WASHINGTON BLVD VIA 31ST ST EB	5345	4%	15%	19%
0079	3.00	3.43	WASHINGTON BLVD VIA 30TH ST TWO WAY	9230	9%	4%	13%
0079	3.43	3.58	MADISON AVE VIA 30TH ST	11440	9%	4%	13%
0079	3.58	4.15	MONROE AVE FAU 2027-SR 203 VIA 30TH ST	11440	9%	4%	13%
0079	4.15	4.58	WASHINGTON BLVD VIA 30TH ST WESTBOUND	12365	9%	4%	13%
0079	4.58	4.90	WALL AVE-31ST ST WESTBOUND	9530	9%	4%	13%
0080	0.00	1.48	NEVADA SL	6110	6%	29%	35%
0080	1.48	2.55	WENDOVER INTER	7835	6%	29%	35%
0080	2.55	3.99	EAST INCL WENDOVER	7835	6%	29%	35%
0080	3.99	41.28	BONNEVILLE SPEEDWAY INTER	7626	6%	29%	35%
0080	41.28	48.94	KNOLLS INTERCHANGE	7600	6%	29%	35%
0080	48.94	56.20	CLIVE INTERCHANGE	7850	6%	29%	35%
0080	56.20	61.84	ARAGONITE INTERCHANGE	8323	6%	29%	35%
0080	61.84	69.53	LAKESIDE INTERCHANGE	8255	6%	29%	35%
0080	69.53	76.42	DELLE INTERCHANGE	8285	6%	25%	30%
0080	76.42	83.38	ROWLEY INTERCHANGE	9090	5%	20%	25%
0080	83.38	88.42	STANSBURY INTERCHANGE	10624	4%	16%	21%
0080	88.42	98.63	BURMESTER INTERCHANGE	12753	3%	11%	14%
0080	98.63	101.45	TOOELE INTERCHANGE	32600	3%	9%	12%
0080	101.45	101.54	TOOELE SALT LAKE CL	32600	4%	11%	15%
0080	101.54	104.27	LAKEPOINT JUNCTION INTERCHANGE	19778	6%	13%	18%
0080	104.27	109.41	GARFIELD CONNECTION	20115	7%	14%	21%
0080	109.41	111.29	SOUTH INCL SALT LAKE CITY	20115	7%	14%	21%
0080	111.29	113.28	7200 WEST INTER SALT LAKE URBAN BNDRY	26175	13%	16%	29%
0080	113.28	114.34	5600 WEST INTERCHANGE	37315	9%	12%	21%
0080	114.34	115.36	4800 WEST INTERCHANGE/WRIGHT BROS EXIT	52615	8%	10%	18%
0080	115.36	117.29	4000 WEST INTERCHANGE(BANGERTER HGHWAY)	55215	6%	7%	13%
0080	117.29	117.86	FAI 215 INTERCHANGE	55115	13%	16%	29%
0080	117.86	119.59	REDWOOD RD-JCT FAI 15 IN SLC	55085	4%	3%	7%
0080	122.03	123.25	JCT FAI 15 WEST INCL SO SALT LAKE	115560	4%	3%	7%
0080	123.25	123.85	STATE STREET INTERCHANGE	110630	4%	4%	9%
0080	123.85	124.15	EAST INCL SO SALT LAKE&WEST INCL SLC	110630	4%	4%	9%

L2 Data Collection

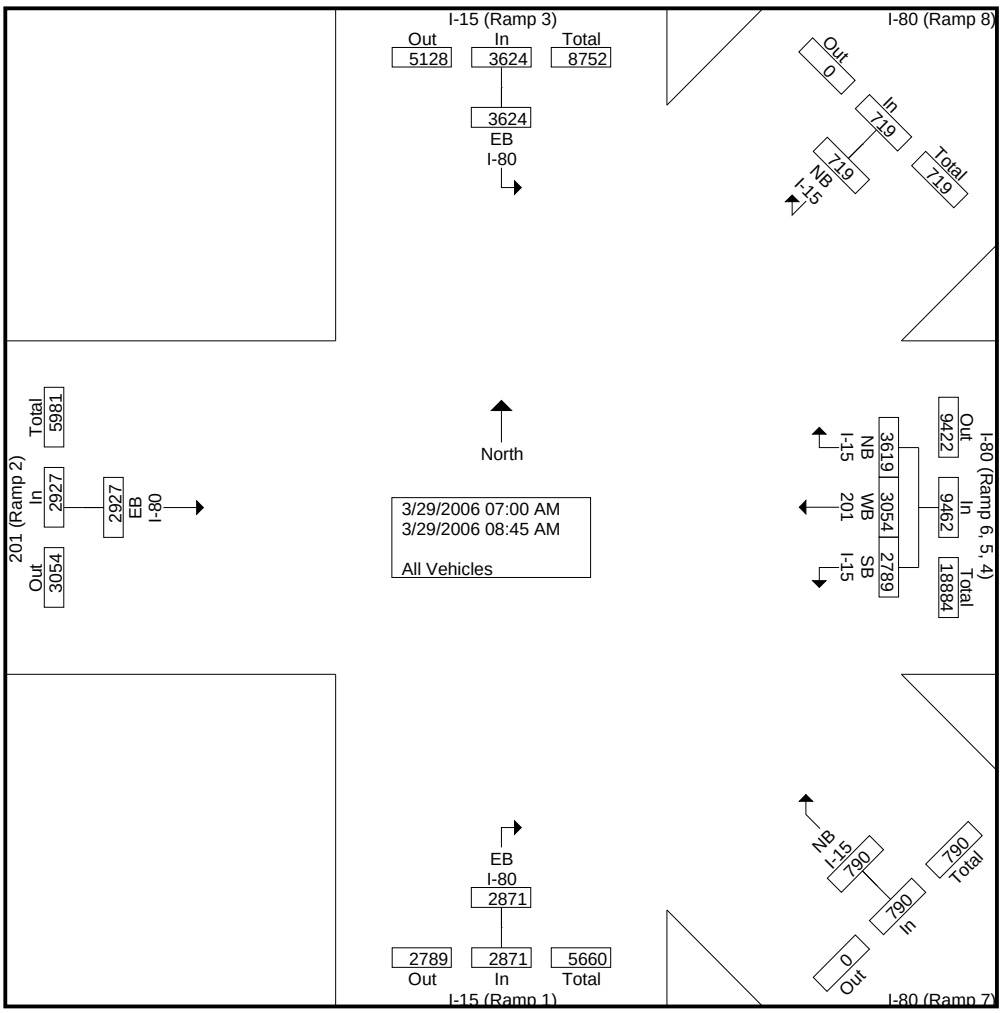
1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange AM
Site Code : AM
Start Date : 3/29/2006
Page No : 1

Groups Printed- All Vehicles

	I-80 (Ramp 7) From Southeast	I-80 (Ramp 8) From Northeast	I-80 (Ramp 6, 5, 4) From East			I-15 (Ramp 3) From North	I-15 (Ramp 1) From South	201 (Ramp 2) From West	
Start Time	NB I-15	NB I-15	NB I-15	WB 201	SB I-15	EB I-80	EB I-80	EB I-80	Int. Total
07:00 AM	52	66	406	302	257	327	334	351	2095
07:15 AM	74	87	481	389	299	430	338	343	2441
07:30 AM	85	92	420	476	406	454	422	399	2754
07:45 AM	146	115	460	451	405	483	415	396	2871
Total	357	360	1767	1618	1367	1694	1509	1489	10161
08:00 AM	116	95	517	369	363	528	391	366	2745
08:15 AM	115	91	432	372	324	498	344	388	2564
08:30 AM	99	83	458	348	348	443	319	321	2419
08:45 AM	103	90	445	347	387	461	308	363	2504
Total	433	359	1852	1436	1422	1930	1362	1438	10232
Grand Total	790	719	3619	3054	2789	3624	2871	2927	20393
Apprch %	100	100	38.2	32.3	29.5	100	100	100	
Total %	3.9	3.5	17.7	15	13.7	17.8	14.1	14.4	



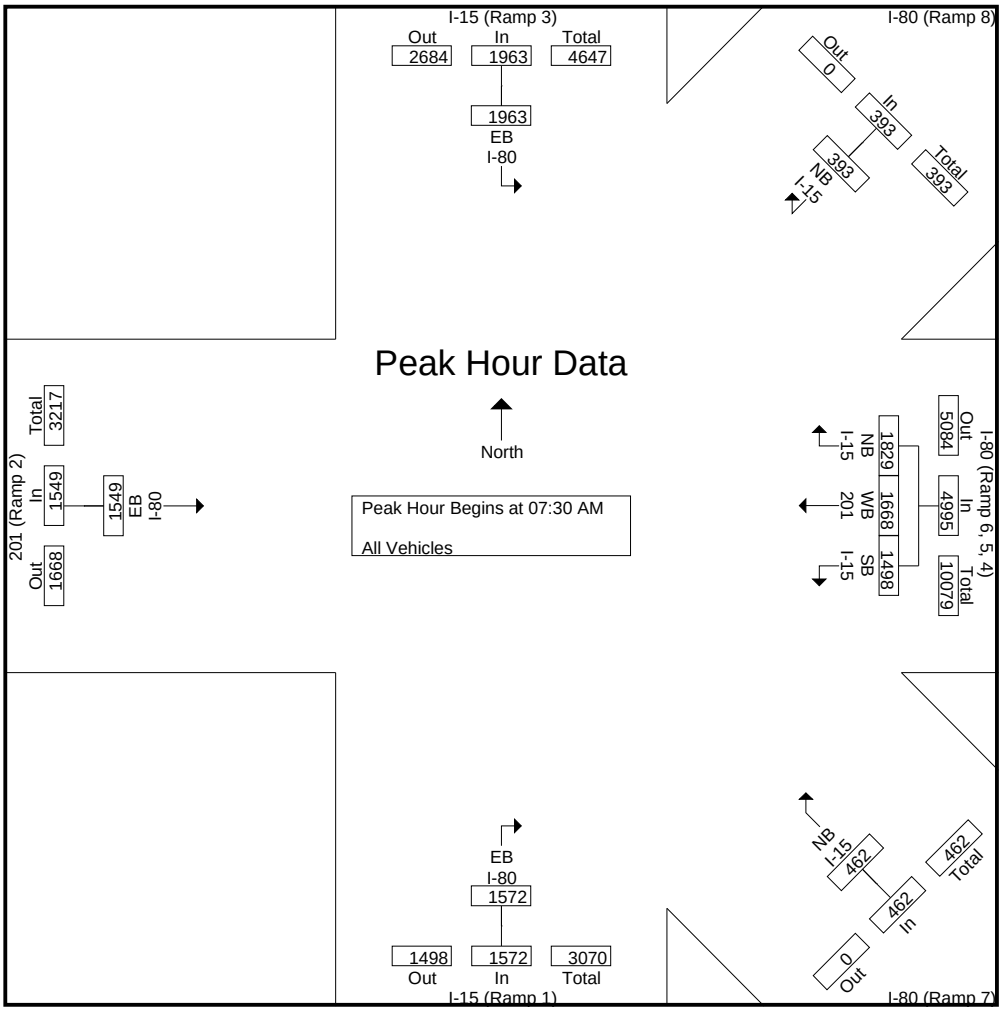
L2 Data Collection

1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange AM
Site Code : AM
Start Date : 3/29/2006
Page No : 2

	I-80 (Ramp 7) From Southeast		I-80 (Ramp 8) From Northeast		I-80 (Ramp 6, 5, 4) From East				I-15 (Ramp 3) From North		I-15 (Ramp 1) From South		201 (Ramp 2) From West		
Start Time	NB I-15	App. Total	NB I-15	App. Total	NB I-15	WB 201	SB I-15	App. Total	EB I-80	App. Total	EB I-80	App. Total	EB I-80	App. Total	Int. 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	85	85	92	92	420	**476**	**406**	1302	454	454	**422**	**422**	**399**	**399**	2754
07:45 AM	**146**	**146**	**115**	**115**	460	451	405	**1316**	483	483	415	415	396	396	**2871**
08:00 AM	116	116	95	95	**517**	369	363	1249	**528**	**528**	391	391	366	366	2745
08:15 AM	115	115	91	91	432	372	324	1128	498	498	344	344	388	388	2564
Total Volume	462	462	393	393	1829	1668	1498	4995	1963	1963	1572	1572	1549	1549	10934
% App. Total	100		100		36.6	33.4	30		100		100		100		
PHF	.791	.791	.854	.854	.884	.876	.922	.949	.929	.929	.931	.931	.971	.971	.952



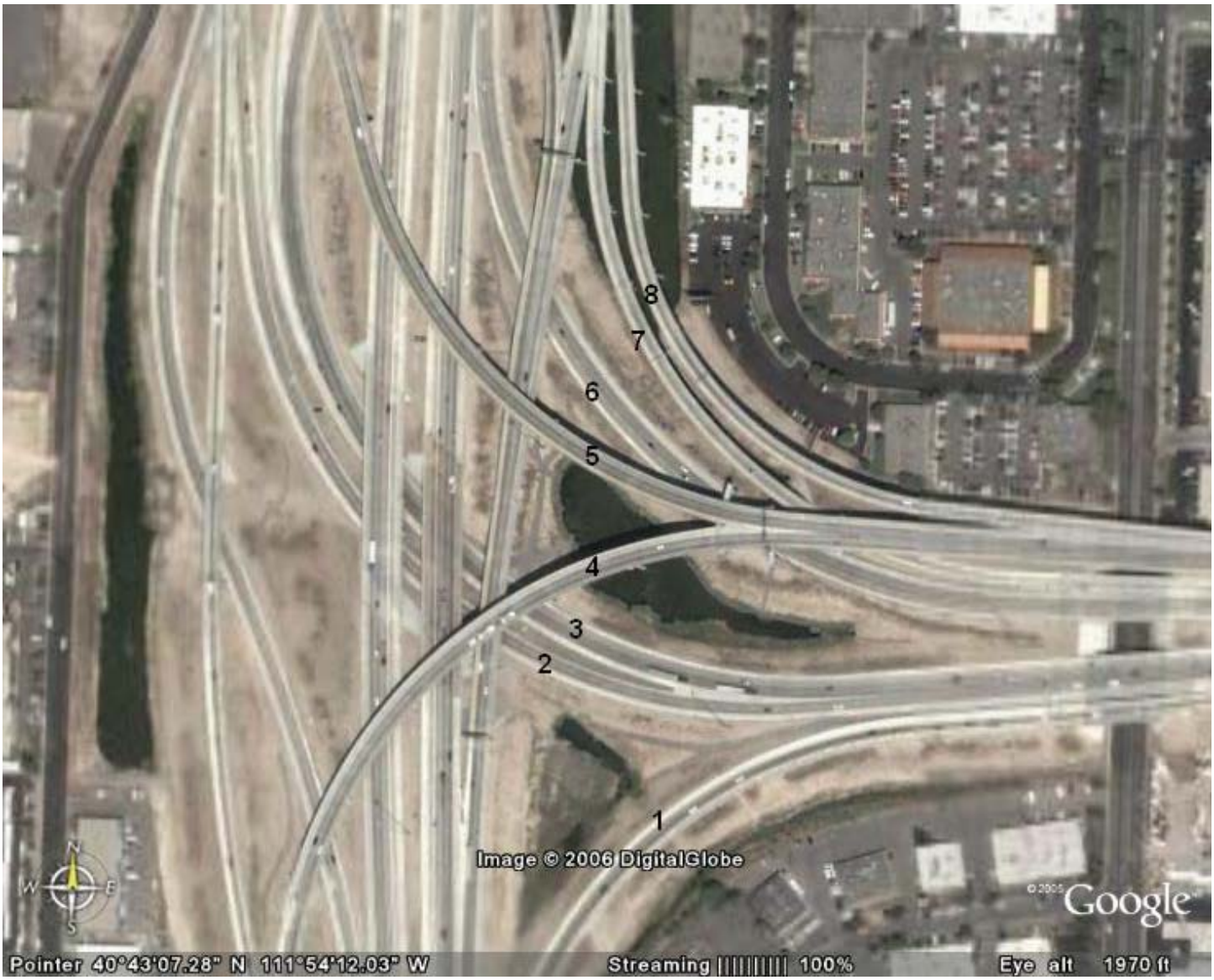
L2 Data Collection

1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange AM
Site Code : AM
Start Date : 3/29/2006
Page No : 3

Image 1



L2 Data Collection

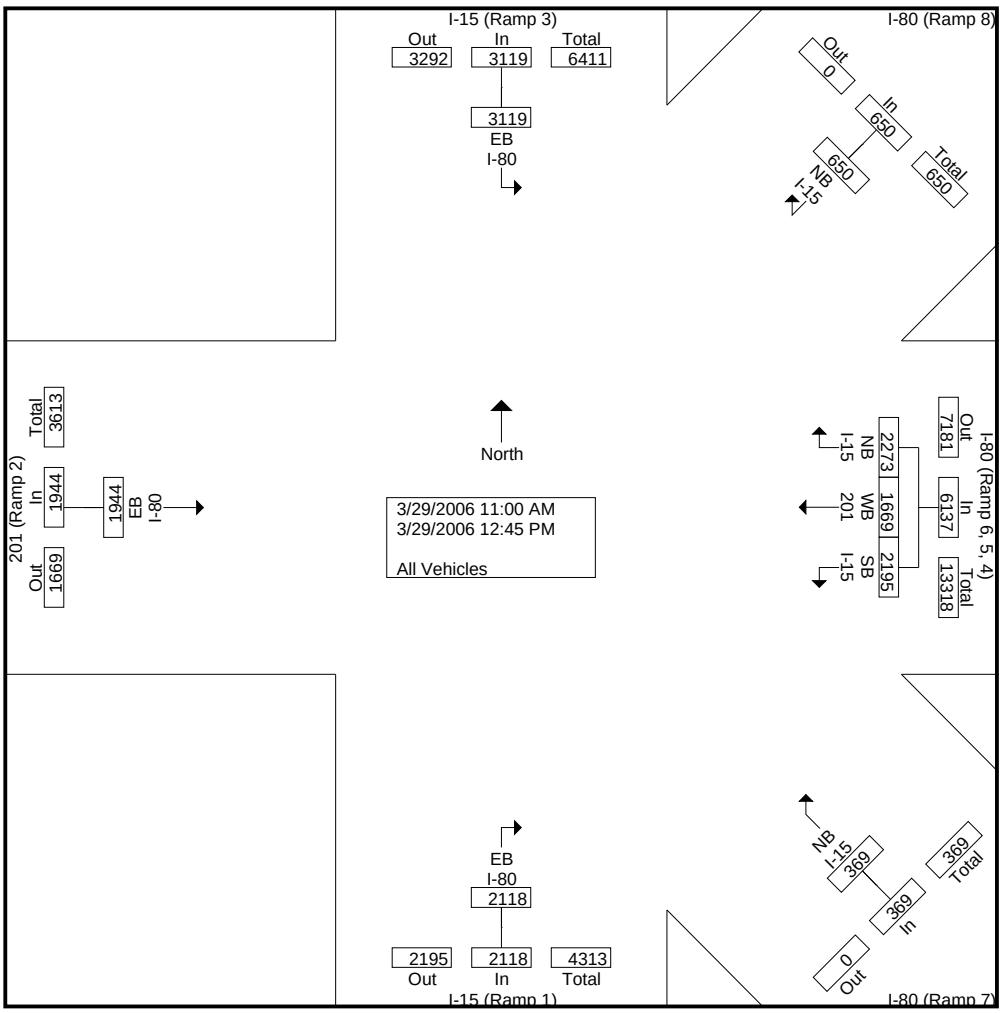
1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange MID
Site Code : MIDDAY
Start Date : 3/29/2006
Page No : 1

Groups Printed- All Vehicles

	I-80 (Ramp 7) From Southeast	I-80 (Ramp 8) From Northeast	I-80 (Ramp 6, 5, 4) From East			I-15 (Ramp 3) From North	I-15 (Ramp 1) From South	201 (Ramp 2) From West	
Start Time	NB I-15	NB I-15	NB I-15	WB 201	SB I-15	EB I-80	EB I-80	EB I-80	Int. Total
11:00 AM	45	79	260	173	245	398	246	252	1698
11:15 AM	50	70	300	198	201	397	276	222	1714
11:30 AM	47	80	286	186	254	361	264	227	1705
11:45 AM	40	79	296	209	282	407	306	243	1862
Total	182	308	1142	766	982	1563	1092	944	6979
12:00 PM	52	85	271	217	280	381	262	238	1786
12:15 PM	39	91	281	195	307	416	262	262	1853
12:30 PM	44	87	285	233	350	372	255	241	1867
12:45 PM	52	79	294	258	276	387	247	259	1852
Total	187	342	1131	903	1213	1556	1026	1000	7358
Grand Total	369	650	2273	1669	2195	3119	2118	1944	14337
Apprch %	100	100	37	27.2	35.8	100	100	100	
Total %	2.6	4.5	15.9	11.6	15.3	21.8	14.8	13.6	



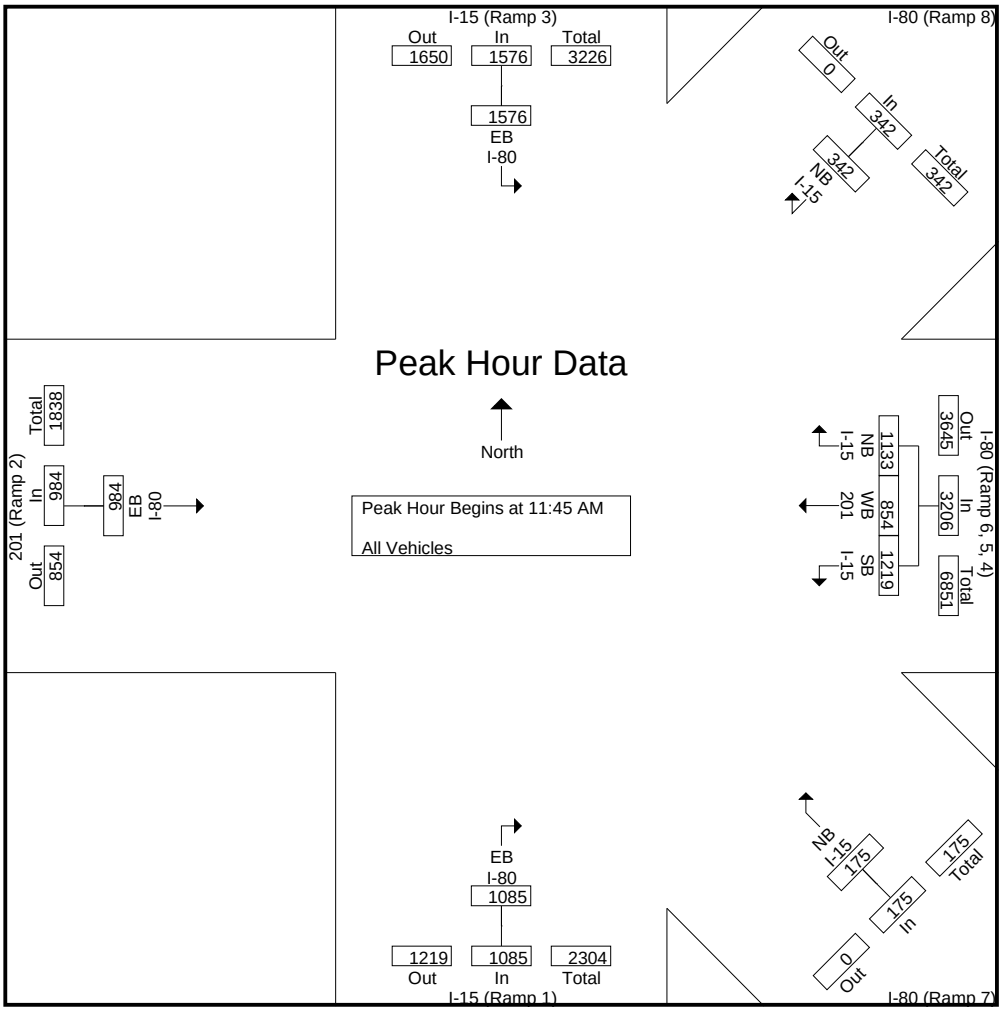
L2 Data Collection

1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange MID
Site Code : MIDDAY
Start Date : 3/29/2006
Page No : 2

	I-80 (Ramp 7) From Southeast		I-80 (Ramp 8) From Northeast		I-80 (Ramp 6, 5, 4) From East				I-15 (Ramp 3) From North		I-15 (Ramp 1) From South		201 (Ramp 2) From West		
Start Time	NB I-15	App. Total	NB I-15	App. Total	NB I-15	WB 201	SB I-15	App. Total	EB I-80	App. Total	EB I-80	App. Total	EB I-80	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1															
Peak Hour for Entire Intersection Begins at 11:45 AM															
11:45 AM	40	40	79	79	**296**	209	282	787	407	407	**306**	**306**	243	243	1862
12:00 PM	**52**	**52**	85	85	271	217	280	768	381	381	262	262	238	238	1786
12:15 PM	39	39	**91**	**91**	281	195	307	783	**416**	**416**	262	262	**262**	**262**	1853
12:30 PM	44	44	87	87	285	**233**	**350**	**868**	372	372	255	255	241	241	**1867**
Total Volume	175	175	342	342	1133	854	1219	3206	1576	1576	1085	1085	984	984	7368
% App. Total	100		100		35.3	26.6	38		100		100		100		
PHF	.841	.841	.940	.940	.957	.916	.871	.923	.947	.947	.886	.886	.939	.939	.987



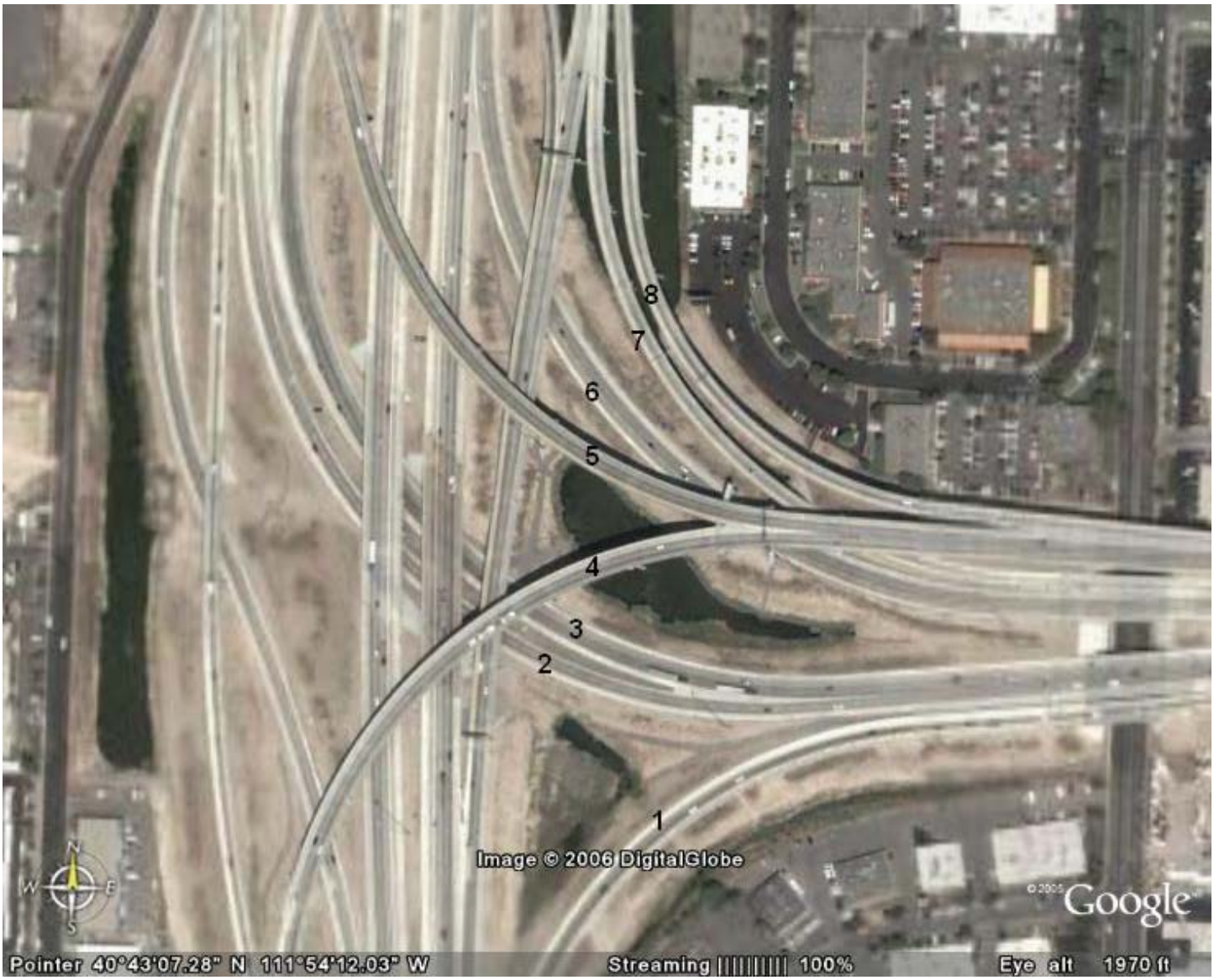
L2 Data Collection

1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange MID
Site Code : MIDDAY
Start Date : 3/29/2006
Page No : 3

Image 1



L2 Data Collection

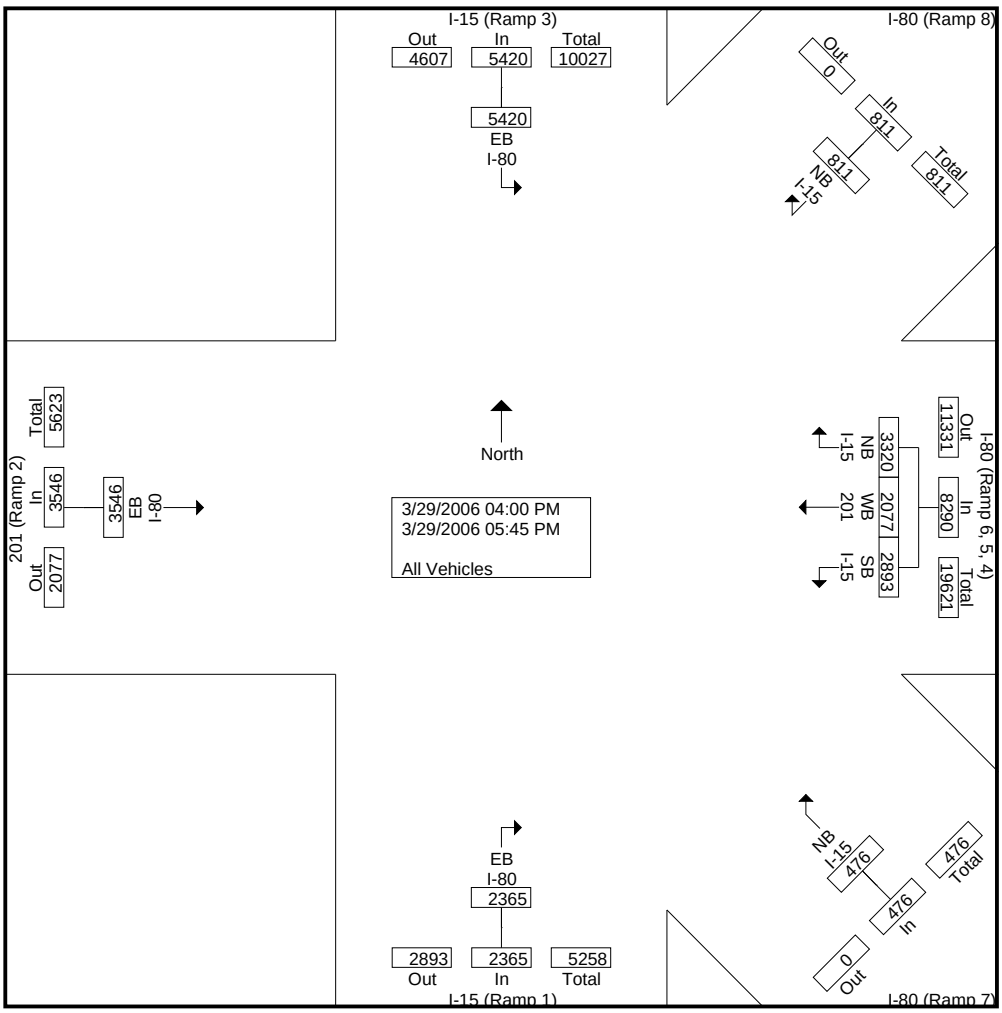
1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange PM
Site Code : PM
Start Date : 3/29/2006
Page No : 1

Groups Printed- All Vehicles

	I-80 (Ramp 7) From Southeast	I-80 (Ramp 8) From Northeast	I-80 (Ramp 6, 5, 4) From East			I-15 (Ramp 3) From North	I-15 (Ramp 1) From South	201 (Ramp 2) From West	
Start Time	NB I-15	NB I-15	NB I-15	WB 201	SB I-15	EB I-80	EB I-80	EB I-80	Int. Total
04:00 PM	57	100	390	282	385	544	296	424	2478
04:15 PM	65	103	409	248	320	697	278	384	2504
04:30 PM	64	98	410	304	416	700	321	470	2783
04:45 PM	62	106	389	283	414	732	334	497	2817
Total	248	407	1598	1117	1535	2673	1229	1775	10582
05:00 PM	49	121	424	294	411	758	294	542	2893
05:15 PM	65	90	451	283	353	754	285	483	2764
05:30 PM	63	97	401	210	307	627	284	438	2427
05:45 PM	51	96	446	173	287	608	273	308	2242
Total	228	404	1722	960	1358	2747	1136	1771	10326
Grand Total	476	811	3320	2077	2893	5420	2365	3546	20908
Apprch %	100	100	40	25.1	34.9	100	100	100	
Total %	2.3	3.9	15.9	9.9	13.8	25.9	11.3	17	



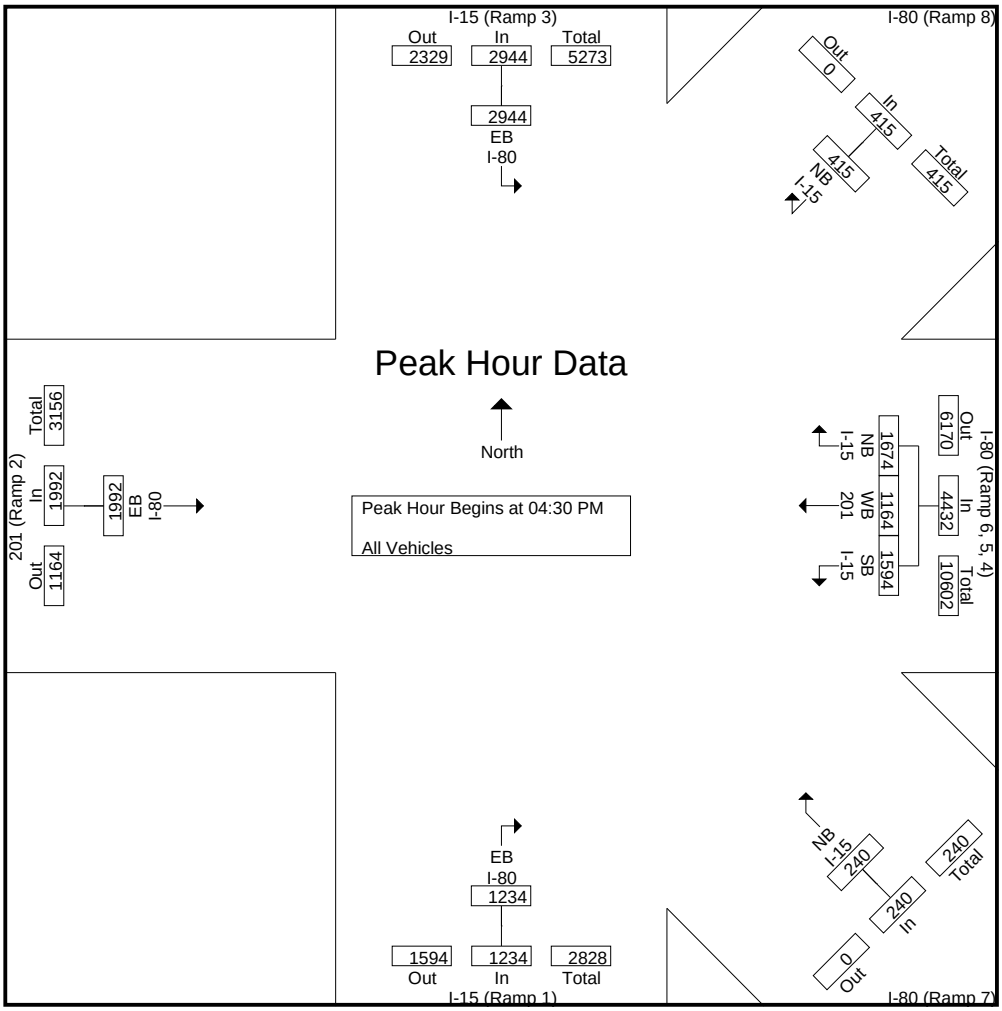
L2 Data Collection

1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange PM
Site Code : PM
Start Date : 3/29/2006
Page No : 2

	I-80 (Ramp 7) From Southeast		I-80 (Ramp 8) From Northeast		I-80 (Ramp 6, 5, 4) From East				I-15 (Ramp 3) From North		I-15 (Ramp 1) From South		201 (Ramp 2) From West		
Start Time	NB I-15	App. Total	NB I-15	App. Total	NB I-15	WB 201	SB I-15	App. Total	EB I-80	App. Total	EB I-80	App. Total	EB I-80	App. Total	Int. 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	64	64	98	98	410	**304**	**416**	**1130**	700	700	321	321	470	470	2783
04:45 PM	62	62	106	106	389	283	414	1086	732	732	**334**	**334**	497	497	2817
05:00 PM	49	49	**121**	**121**	424	294	411	1129	**758**	**758**	294	294	**542**	**542**	**2893**
05:15 PM	**65**	**65**	90	90	**451**	283	353	1087	754	754	285	285	483	483	2764
Total Volume	240	240	415	415	1674	1164	1594	4432	2944	2944	1234	1234	1992	1992	11257
% App. Total	100		100		37.8	26.3	36		100		100		100		
PHF	.923	.923	.857	.857	.928	.957	.958	.981	.971	.971	.924	.924	.919	.919	.973



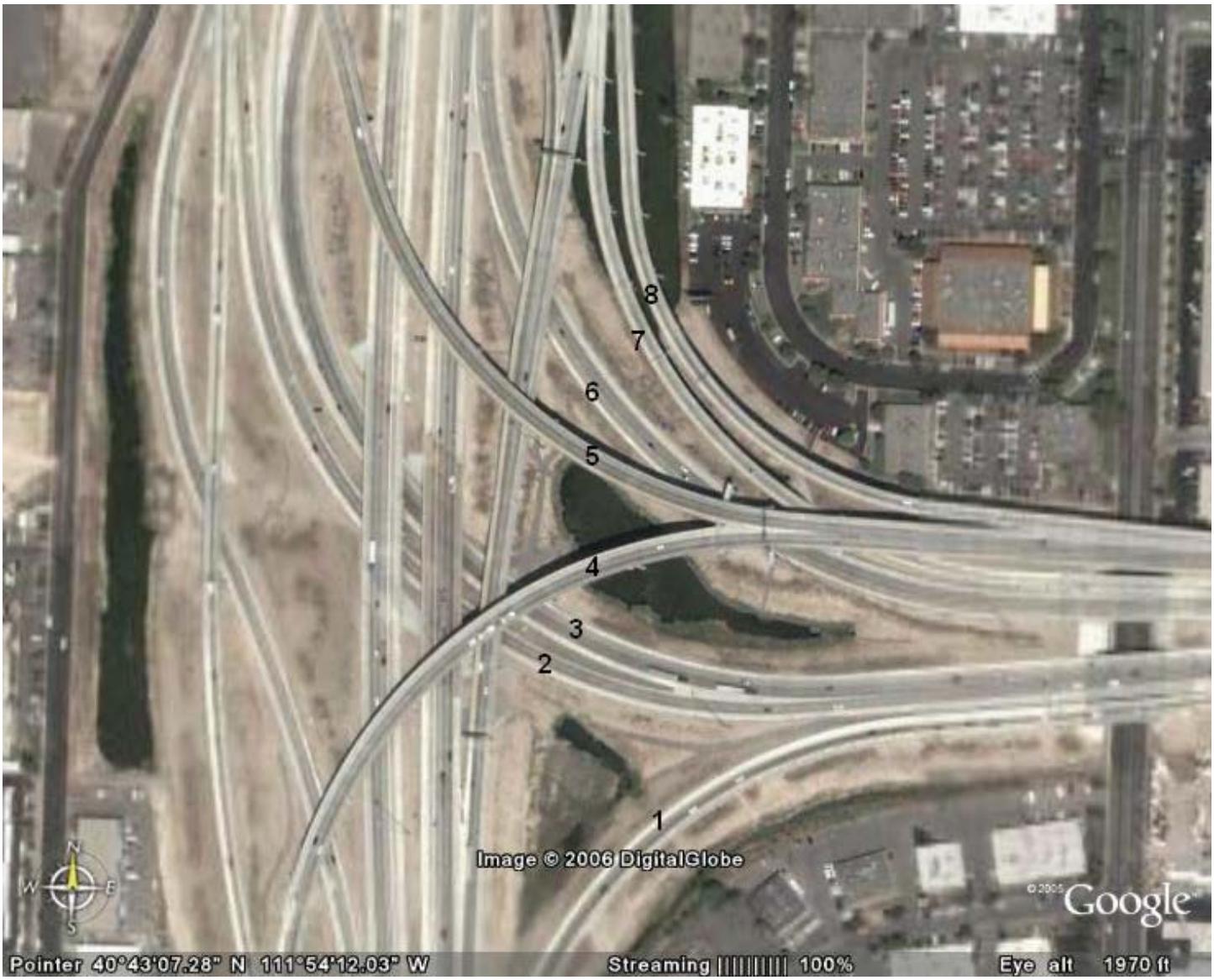
L2 Data Collection

1770 W. State St. #204
Boise, Idaho 83702
(208) 860-7554

Project Manager: Vawdrey
Count: Volume / Direction
Location: I-15 / I-80 Interchange
Control: Free Movement

File Name : I-15 & I-80 Interchange PM
Site Code : PM
Start Date : 3/29/2006
Page No : 3

Image 1



Pneumatic Hose Count Data
Combined
Start Date: 11/16/2005
Start Time: 3:30:00 PM
Site Code: Trax I Plus
Station ID: 300 East at I-80

				24-hr Totals		
	SB	NB	Total	SB	NB	Total
Thursday, November 17, 2005 11:45 PM	6	5	11	3212	3213	6425
Friday, November 18, 2005 11:45 PM	8	11	19	3224	3309	6533
Saturday, November 19, 2005 11:45 PM	20	10	30	2447	2746	5193
Sunday, November 20, 2005 11:45 PM	1	11	12	2086	2213	4299
Monday, November 21, 2005 11:45 PM	6	7	13	3252	3021	6273
Tuesday, November 22, 2005 11:45 PM	16	7	23	3190	3187	6377

ADT	2947	2982	5929

Pneumatic Hose Count Data
Combined
Start Date: 11/16/2005
Start Time: 4:00:00 PM
Site Code: 000000000500
Station ID: 500 West at I-80

				24-hr Totals		
	SB	NB	Total	SB	NB	Total
Thursday, November 17, 2005 11:45 PM	8	8	16	2664	2570	5234
Friday, November 18, 2005 11:45 PM	13	9	22	3453	2118	5571
Saturday, November 19, 2005 11:45 PM	13	8	21	2906	1362	4268
Sunday, November 20, 2005 11:45 PM	6	2	8	2151	1160	3311
Monday, November 21, 2005 11:45 PM	10	2	12	3298	1797	5095
Tuesday, November 22, 2005 11:45 PM	5	2	7	3613	1793	5406

ADT	3049	1839	4887

Pneumatic Hose Count Data
Combined
Start Date: 11/16/2005
Start Time: 4:15:00 PM
Location 1: 600 East at I-80 Overpass

				24-hr Totals		
	NB	SB	Total	NB	SB	Total
Thursday, November 17, 2005 11:45 PM	2	1	3	926	511	1437
Friday, November 18, 2005 11:45 PM	5	3	8	914	608	1522
Saturday, November 19, 2005 11:45 PM	0	3	3	786	516	1302
Sunday, November 20, 2005 11:45 PM	0	0	0	645	419	1064
Monday, November 21, 2005 11:45 PM	0	1	1	916	516	1432
Tuesday, November 22, 2005 11:45 PM	5	2	7	1011	574	1585

ADT	877	528	1405

Route *I-80*

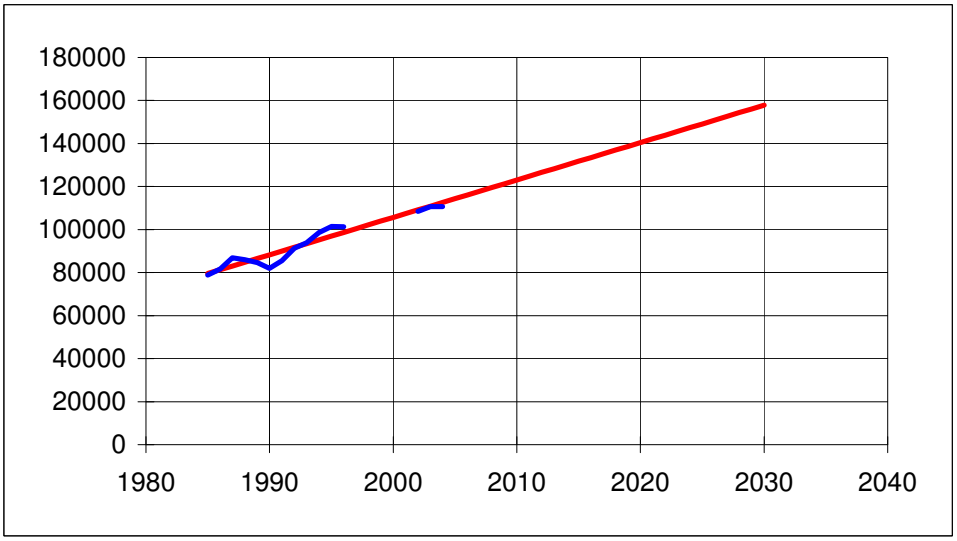
Limits *Between State Street and 700 East*

Year	AADT	Forecast
1985	78,805	79559
1986	81,700	81298
1987	86,950	83038
1988	86,040	84777
1989	84,690	86516
1990	81,895	88256
1991	85,505	89995
1992	91,405	91734
1993	93,910	93474
1994	98,620	95213
1995	101,525	96952
1996	101,265	98692
1997		100431
1998		102170
1999		103910
2000		105649
2001		107388
2002	108,500	109128
2003	110,665	110867
2004	110,630	112606
2005		114345
2006		116085
2007		117824
2008		119563
2009		121303
2010		123042
2011		124781
2012		126521
2013		128260
2014		129999
2015		131739
2016		133478
2017		135217
2018		136957
2019		138696
2020		140435
2021		142175
2022		143914
2023		145653
2024		147393
2025		149132
2026		150871
2027		152610
2028		154350
2029		156089
2030		157828

9% Trucks

Projection based on 1985 to 2004 data

1.6% growth rate → 1,739 vehicles/year

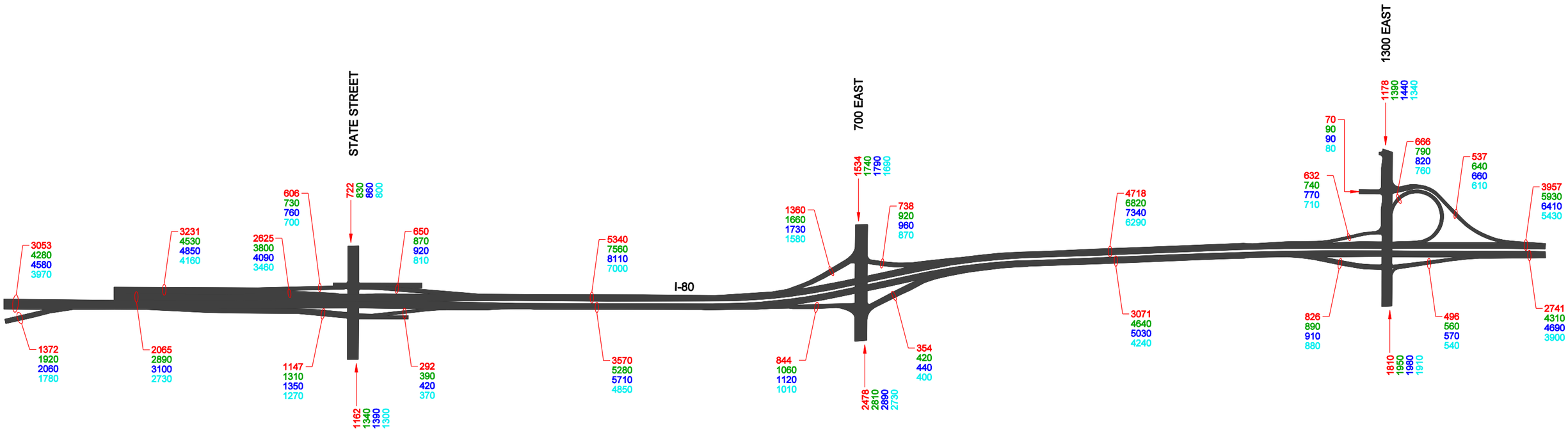


Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.

5/8/2007

AM PEAK TRAFFIC VOLUMES



LEGEND

2005 AM PEAK (BASED ON UDOT PERMANENT STATION & INTERSECTION COUNTS)

2025 AM PEAK

2030 AM PEAK

2020 AM PEAK

N

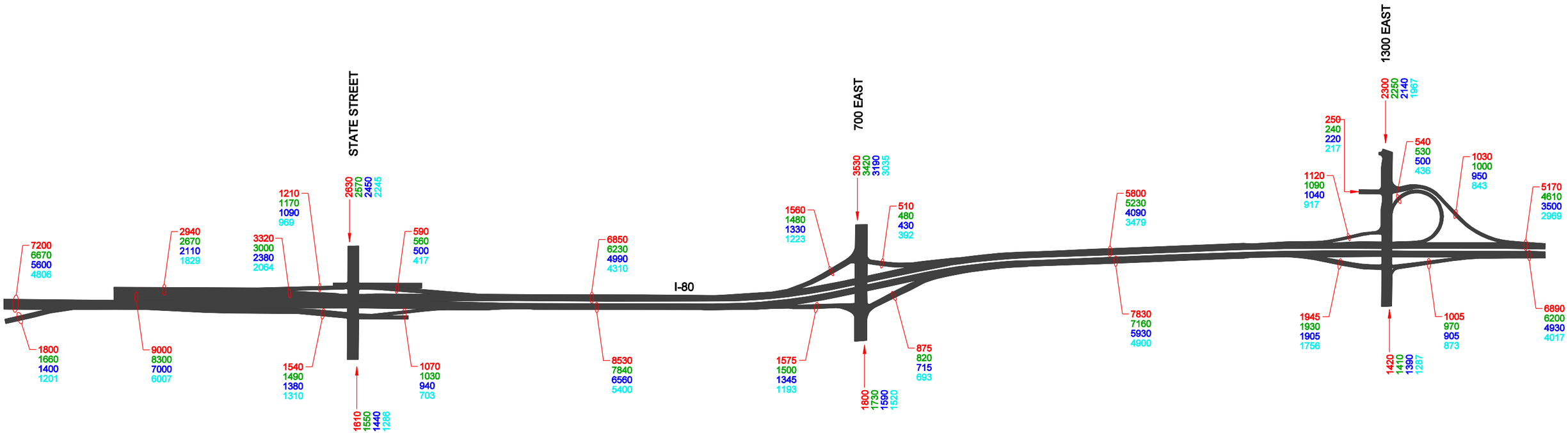
NOT TO SCALE

I-80 STATE STREET to 1300 EAST - ENVIRONMENTAL STUDY

I~80 State Street to 1300 East

O:\12005\0509-078 I-80 Environmental Study\4303_08\Environmental\Figures\4303_Traffic Count AM_Figure-X.dgn 5/11/2007 10:15:45 AM Kim

PM PEAK TRAFFIC VOLUMES



LEGEND

2030 PM PEAK HOUR VOLUMES
2025 PM PEAK HOUR VOLUMES
2015 PM PEAK HOUR VOLUMES
2005 PM PEAK HOUR VOLUMES

N

NOT TO SCALE

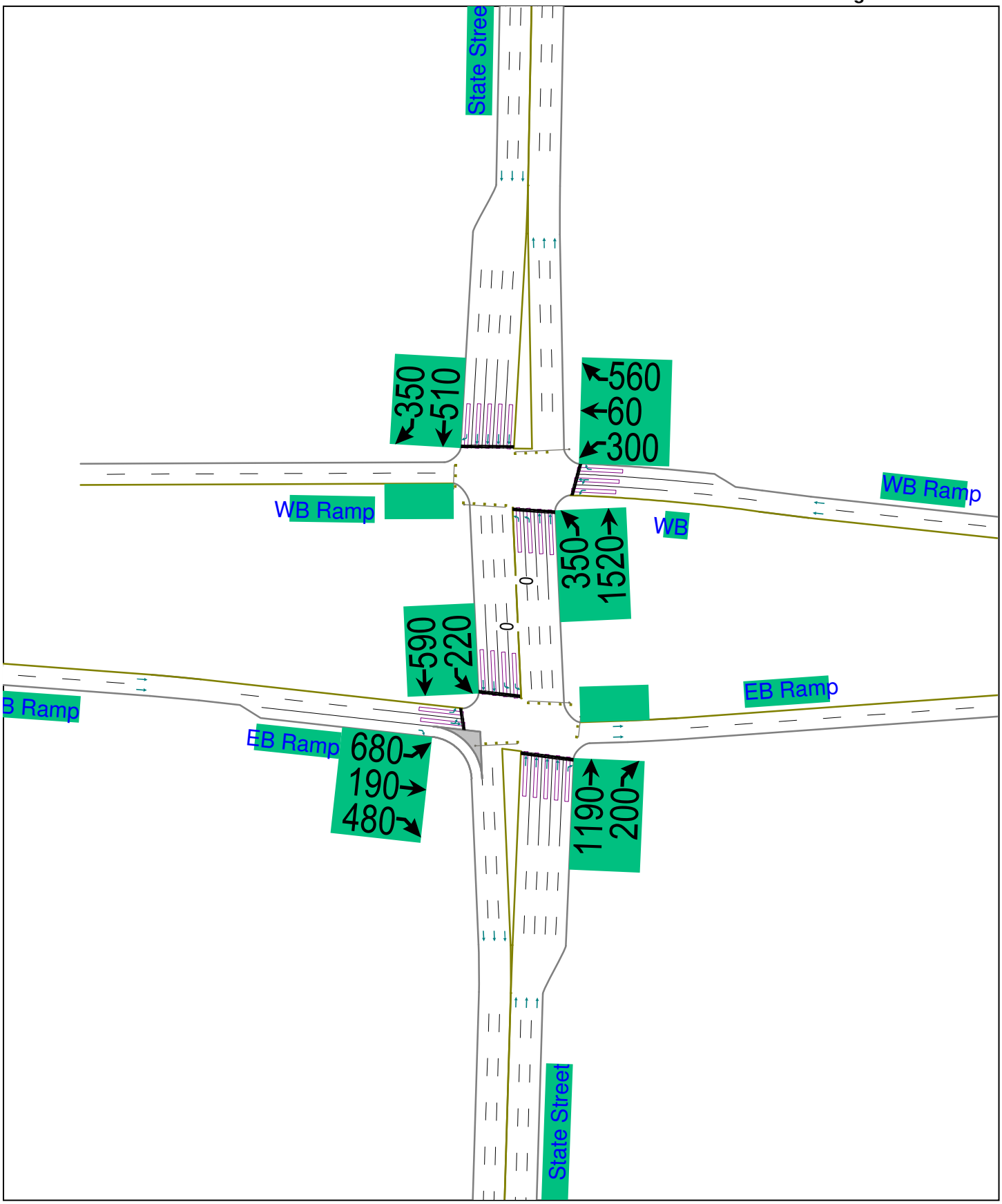
I-80 STATE STREET to 1300 EAST - ENVIRONMENTAL STUDY

I~80
State Street to 1300 East

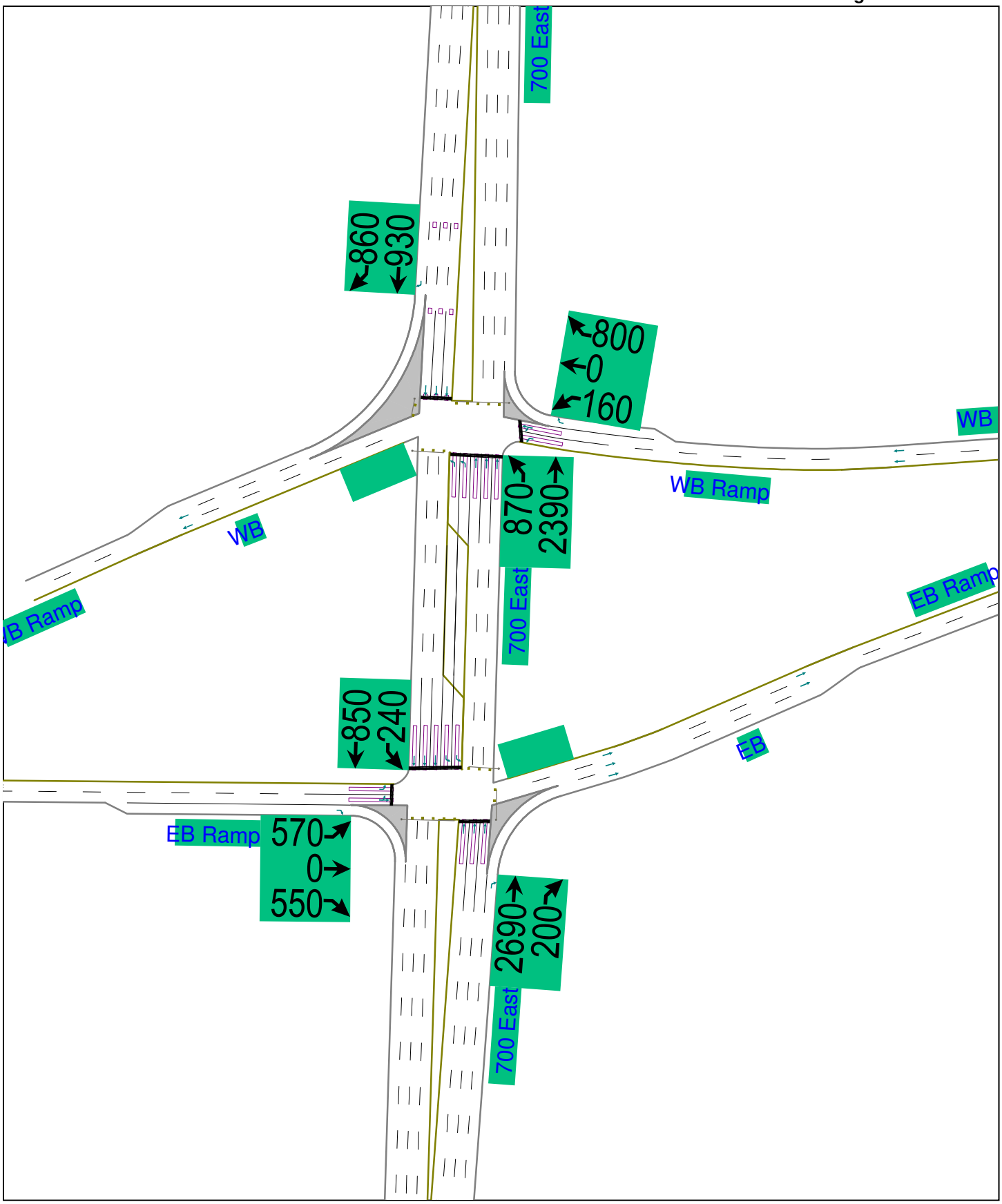
O:\12005\0509-078 I-80 Environmental Study\4303_08\Environmental\Figures\4303_Traffic Count PM_Figure-X.dgn
5/11/2007 10:16:41 AM Kim

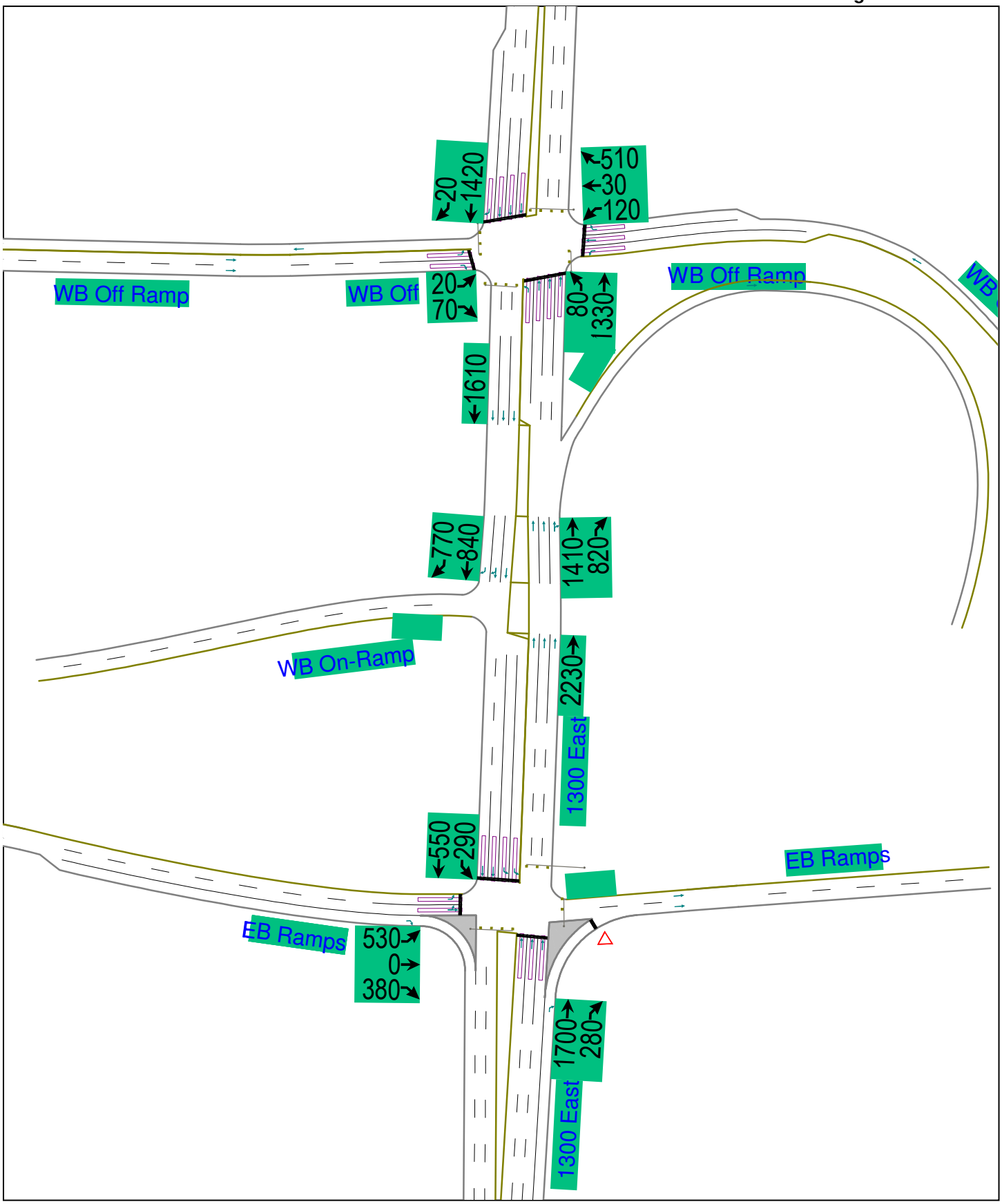
2030 Improved Conditions
I-80 and State Street

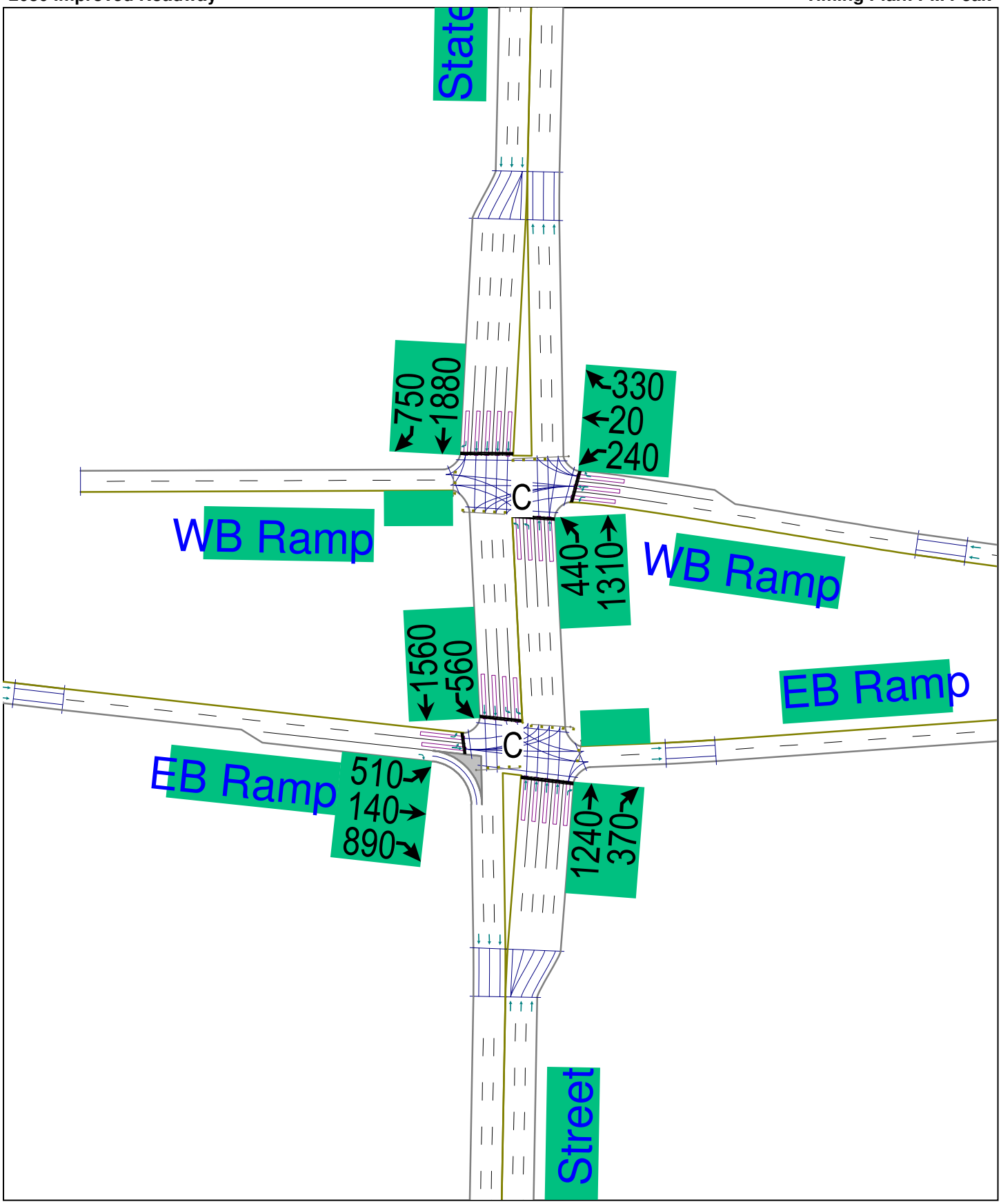
Map - I-80 and State Street
Timing Plan: AM Peak

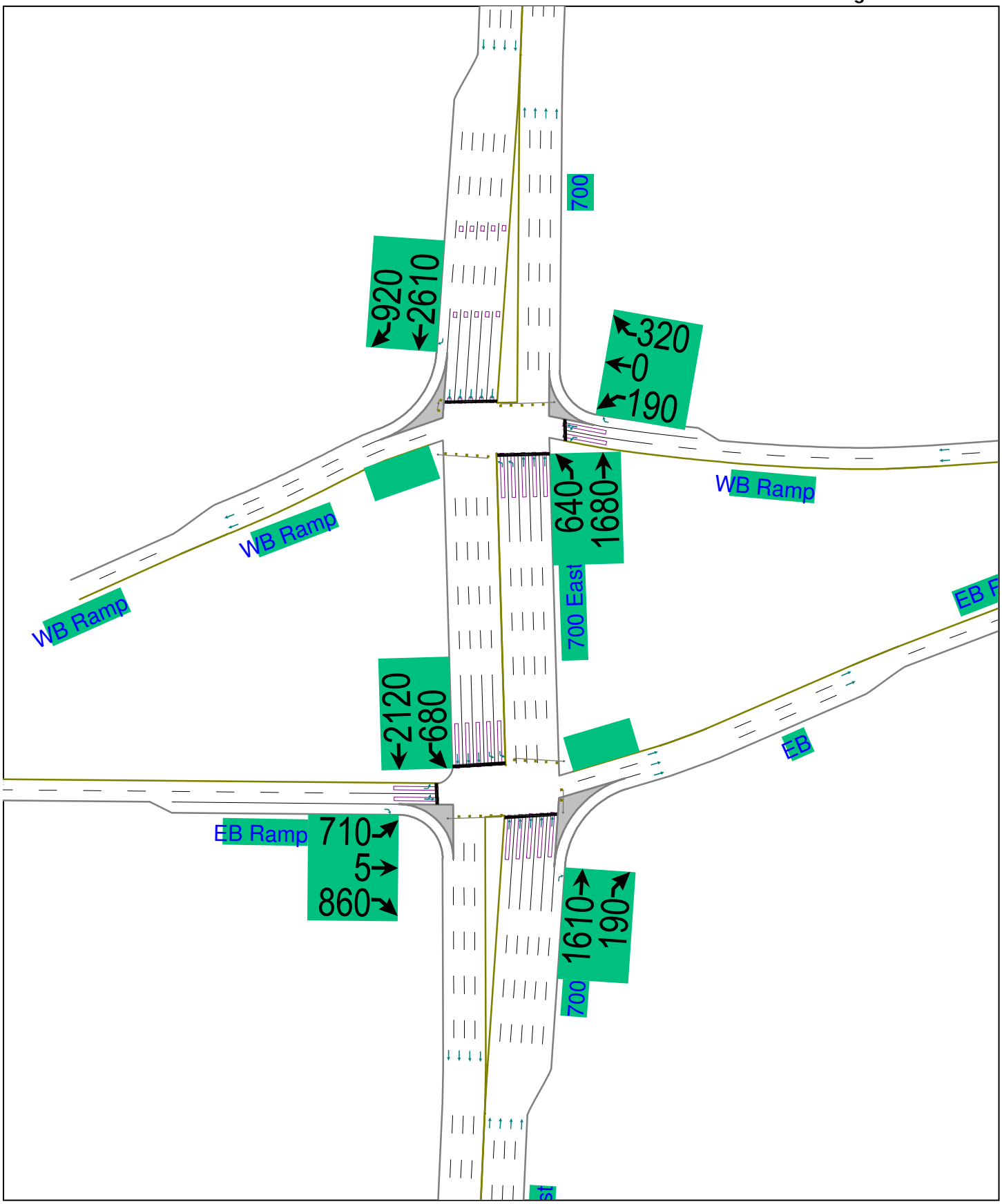


Volume Balance Sheet\My Documents\Current Projects\I-80\Synchro\State Street\AM 2030 Conditions Improved.syn

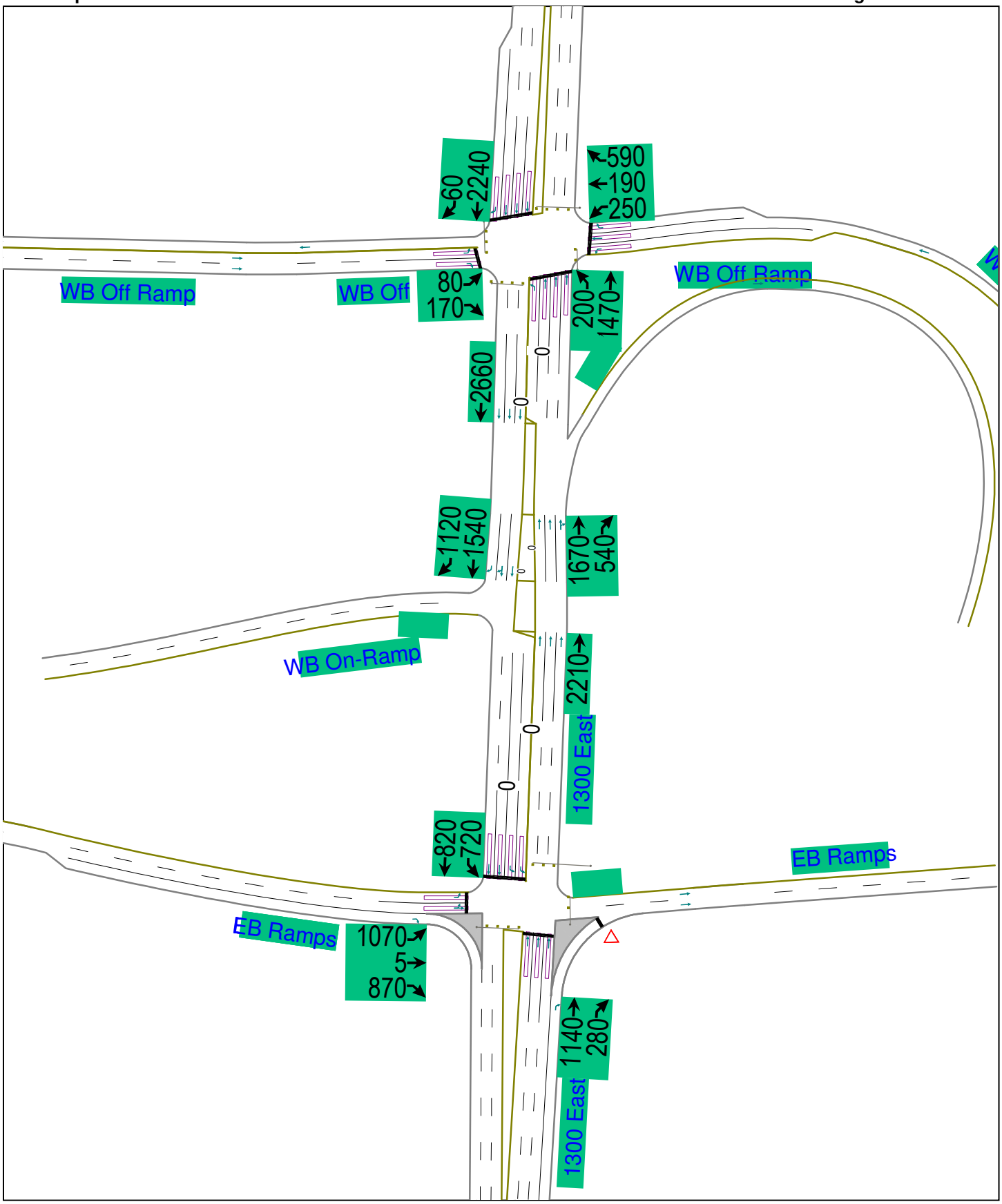

700 East
860
930
800
0
160
WB
WB Ramp
870
2390
WB
WB Ramp
700 East
EB Ramp
850
240
EB
EB Ramp
570
0
550
2690
200
700 East


20
1420
510
30
120
WB Off Ramp
WB Off
20
70
80
1330
WB Off Ramp
1610
770
840
1410
820
WB On-Ramp
2230
1300 East
550
290
EB Ramps
EB Ramps
530
0
380
1700
280
1300 East


State
750
1880
330
20
240
C
WB Ramp
440
1310
WB Ramp
1560
560
EB Ramp
C
EB Ramp
510
140
890
1240
370
Street


700
920
2610
320
0
190
WB Ramp
WB Ramp
WB Ramp
640
1680
700 East
EB R
2120
680
EB
EB Ramp
710
5
860
1610
190
700

I-80 and 1300 East
2030 Improved



I-80 Ramp Metering Queue Analysis Summary
10/4/2006

	Average Queue (ft)	Max Queue (ft)	Recommended Storage (ft)
State Street WB On-Ramp	206	528	300
State Street EB On-Ramp	65	303	150
700 East WB On-Ramp	147	870	350
700 East EB On-Ramp	101	381	200
1300 East WB On-Ramp	127	513	250
1300 East EB On-Ramp	190	1084	400

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	589	135	423	0	0	0	0	1019	143	149	480	0
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	
Lane Util. Factor	0.95	0.91	0.95					0.86		1.00	0.91	
Frt	1.00	0.97	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.98	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1612	1504					6290		1770	5085	
Flt Permitted	0.95	0.98	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1612	1504					6290		1770	5085	
Peak-hour factor, PHF	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)	640	147	460	0	0	0	0	1108	155	162	522	0
RTOR Reduction (vph)	0	7	202	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	429	425	184	0	0	0	0	1245	0	162	522	0
Turn Type	Perm		Perm							Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	38.6	38.6	38.6					47.7		16.2	69.4	
Effective Green, g (s)	40.6	40.6	40.6					49.7		17.7	71.4	
Actuated g/C Ratio	0.34	0.34	0.34					0.41		0.15	0.60	
Clearance Time (s)	6.0	6.0	6.0					6.0		5.5	6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	569	545	509					2605		261	3026	
v/s Ratio Prot								c0.20		c0.09	0.10	
v/s Ratio Perm	0.26	0.26	0.12									
v/c Ratio	0.75	0.78	0.36					0.48		0.62	0.17	
Uniform Delay, d1	35.3	35.7	29.9					25.7		48.0	11.0	
Progression Factor	1.00	1.00	1.00					1.00		0.81	1.59	
Incremental Delay, d2	5.6	7.1	0.4					0.6		4.5	0.1	
Delay (s)	40.9	42.8	30.4					26.3		43.3	17.6	
Level of Service	D	D	C					C		D	B	
Approach Delay (s)		38.3			0.0			26.3			23.7	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	196	41	413	276	1332	0	0	433	289
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
Lane Util. Factor				0.95	0.91	0.95	1.00	0.91			0.86	1.00
Frt				1.00	0.89	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1498	1504	1770	5085			6408	1583
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1498	1504	1770	5085			6408	1583
Peak-hour factor, PHF	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	0	0	213	45	449	300	1448	0	0	471	314
RTOR Reduction (vph)	0	0	0	0	37	37	0	0	0	0	0	170
Lane Group Flow (vph)	0	0	0	192	227	214	300	1448	0	0	471	144
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				24.2	24.2	24.2	25.7	83.8			53.1	53.1
Effective Green, g (s)				26.2	26.2	26.2	26.7	85.8			55.1	55.1
Actuated g/C Ratio				0.22	0.22	0.22	0.22	0.72			0.46	0.46
Clearance Time (s)				6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				367	327	328	394	3636			2942	727
v/s Ratio Prot							c0.17	c0.28			0.07	
v/s Ratio Perm				0.11	0.15	0.14						0.09
v/c Ratio				0.52	0.69	0.65	0.76	0.40			0.16	0.20
Uniform Delay, d1				41.4	43.2	42.8	43.7	6.8			18.9	19.3
Progression Factor				1.00	1.00	1.00	0.34	0.27			1.00	1.00
Incremental Delay, d2				1.3	6.3	4.6	7.6	0.3			0.1	0.6
Delay (s)				42.7	49.5	47.4	22.6	2.1			19.1	19.9
Level of Service				D	D	D	C	A			B	B
Approach Delay (s)		0.0			46.9			5.6			19.4	
Approach LOS		A			D			A			B	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	437	104	769	0	0	0	0	1014	272	431	1353	0
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	
Lane Util. Factor	0.95	0.91	0.95					0.86		1.00	0.91	
Frt	1.00	0.90	0.85					0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1514	1504					6204		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1514	1504					6204		1770	5085	
Peak-hour factor, PHF	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)	475	113	836	0	0	0	0	1102	296	468	1471	0
RTOR Reduction (vph)	0	23	23	0	0	0	0	40	0	0	0	0
Lane Group Flow (vph)	427	489	462	0	0	0	0	1358	0	468	1471	0
Turn Type	Perm		Perm							Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	40.0	40.0	40.0					29.0		33.5	68.0	
Effective Green, g (s)	42.0	42.0	42.0					31.0		35.0	70.0	
Actuated g/C Ratio	0.35	0.35	0.35					0.26		0.29	0.58	
Clearance Time (s)	6.0	6.0	6.0					6.0		5.5	6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	588	530	526					1603		516	2966	
v/s Ratio Prot								c0.22		c0.26	0.29	
v/s Ratio Perm	0.25	0.32	0.31									
v/c Ratio	0.73	0.92	0.88					0.85		0.91	0.50	
Uniform Delay, d1	34.0	37.4	36.6					42.3		40.9	14.7	
Progression Factor	1.00	1.00	1.00					1.00		0.57	0.59	
Incremental Delay, d2	4.5	21.8	15.3					5.7		17.1	0.5	
Delay (s)	38.4	59.3	51.9					48.0		40.3	9.2	
Level of Service	D	E	D					D		D	A	
Approach Delay (s)		50.5			0.0			48.0			16.7	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	157	15	245	351	1100	0	0	1627	618
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
Lane Util. Factor				0.95	0.91	0.95	1.00	0.91			0.86	1.00
Frt				1.00	0.88	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1487	1504	1770	5085			6408	1583
Flt Permitted				0.95	0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1487	1504	1770	5085			6408	1583
Peak-hour factor, PHF	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	0	0	171	16	266	382	1196	0	0	1768	672
RTOR Reduction (vph)	0	0	0	0	104	126	0	0	0	0	0	222
Lane Group Flow (vph)	0	0	0	154	49	20	382	1196	0	0	1768	450
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				14.4	14.4	14.4	30.5	93.6			58.1	58.1
Effective Green, g (s)				16.4	16.4	16.4	31.5	95.6			60.1	60.1
Actuated g/C Ratio				0.14	0.14	0.14	0.26	0.80			0.50	0.50
Clearance Time (s)				6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				230	203	206	465	4051			3209	793
v/s Ratio Prot							c0.22	0.24			0.28	
v/s Ratio Perm				c0.09	0.03	0.01						c0.28
v/c Ratio				0.67	0.24	0.10	0.82	0.30			0.55	0.57
Uniform Delay, d1				49.2	46.3	45.3	41.6	3.2			20.6	20.9
Progression Factor				1.00	1.00	1.00	0.88	1.47			1.00	1.00
Incremental Delay, d2				7.2	0.6	0.2	5.9	0.1			0.7	2.9
Delay (s)				56.4	46.9	45.5	42.4	4.9			21.3	23.8
Level of Service				E	D	D	D	A			C	C
Approach Delay (s)		0.0			49.7			13.9			22.0	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	113	0	625	641	2136	0	0	815	719
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	
Lane Util. Factor				0.95	0.91	0.95	0.97	0.86			0.86	
Frt				1.00	0.86	0.85	1.00	1.00			0.93	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1681	1447	1504	3433	6408			5957	
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1681	1447	1504	3433	6408			5957	
Peak-hour factor, PHF	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	0	0	123	0	679	697	2322	0	0	886	782
RTOR Reduction (vph)	0	0	0	0	4	4	0	0	0	0	123	0
Lane Group Flow (vph)	0	0	0	111	341	342	697	2322	0	0	1545	0
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				33.1	33.1	33.1	31.0	76.9			41.9	
Effective Green, g (s)				33.1	33.1	33.1	31.0	78.9			43.9	
Actuated g/C Ratio				0.28	0.28	0.28	0.26	0.66			0.37	
Clearance Time (s)				4.0	4.0	4.0	4.0	6.0			6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)				464	399	415	887	4213			2179	
v/s Ratio Prot							c0.20	0.36			c0.26	
v/s Ratio Perm				0.07	0.24	0.23						
v/c Ratio				0.24	0.86	0.83	0.79	0.55			1.10dr	
Uniform Delay, d1				33.7	41.2	40.7	41.4	11.0			32.6	
Progression Factor				1.00	1.00	1.00	0.64	0.25			1.00	
Incremental Delay, d2				0.3	16.2	12.6	3.0	0.3			2.0	
Delay (s)				34.0	57.4	53.3	29.5	3.1			34.6	
Level of Service				C	E	D	C	A			C	
Approach Delay (s)		0.0			52.4			9.2			34.6	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	451	0	393	0	0	0	0	2326	152	193	735	0
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	
Lane Util. Factor	0.95	0.91	0.95					0.86		0.97	0.86	
Frt	1.00	0.93	0.85					0.99		1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1540	1504					6349		3433	6408	
Flt Permitted	0.95	0.97	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1540	1504					6349		3433	6408	
Peak-hour factor, PHF	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)	490	0	427	0	0	0	0	2528	165	210	799	0
RTOR Reduction (vph)	0	25	167	0	0	0	0	7	0	0	0	0
Lane Group Flow (vph)	318	284	123	0	0	0	0	2686	0	210	799	0
Turn Type	Perm		Perm							Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	28.5	28.5	28.5					64.5		13.0	81.5	
Effective Green, g (s)	28.5	28.5	28.5					66.5		13.0	83.5	
Actuated g/C Ratio	0.24	0.24	0.24					0.55		0.11	0.70	
Clearance Time (s)	4.0	4.0	4.0					6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	399	366	357					3518		372	4459	
v/s Ratio Prot								c0.42		c0.06	0.12	
v/s Ratio Perm	c0.19	0.18	0.08									
v/c Ratio	0.80	0.78	0.34					0.76		0.56	0.18	
Uniform Delay, d1	43.0	42.8	38.0					20.7		50.8	6.3	
Progression Factor	1.00	1.00	1.00					1.00		1.12	0.44	
Incremental Delay, d2	10.6	9.9	0.6					1.6		4.5	0.1	
Delay (s)	53.6	52.6	38.6					22.3		61.7	2.8	
Level of Service	D	D	D					C		E	A	
Approach Delay (s)		48.5			0.0			22.3			15.1	
Approach LOS		D			A			C			B	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	134	0	258	473	1471	0	0	2285	750
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	
Lane Util. Factor				0.95	0.91	0.95	0.97	0.86			0.86	
Frt				1.00	0.87	0.85	1.00	1.00			0.96	
Flt Protected				0.95	0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1681	1459	1504	3433	6408			6170	
Flt Permitted				0.95	0.99	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1681	1459	1504	3433	6408			6170	
Peak-hour factor, PHF	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	0	0	146	0	280	514	1599	0	0	2484	815
RTOR Reduction (vph)	0	0	0	0	38	38	0	0	0	0	36	0
Lane Group Flow (vph)	0	0	0	131	111	108	514	1599	0	0	3263	0
Turn Type				Perm		Perm	Prot					
Protected Phases					8		5	2			6	
Permitted Phases				8		8						
Actuated Green, G (s)				15.1	15.1	15.1	19.0	94.9			71.9	
Effective Green, g (s)				15.1	15.1	15.1	19.0	96.9			73.9	
Actuated g/C Ratio				0.13	0.13	0.13	0.16	0.81			0.62	
Clearance Time (s)				4.0	4.0	4.0	4.0	6.0			6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)				212	184	189	544	5174			3800	
v/s Ratio Prot							c0.15	0.25			c0.53	
v/s Ratio Perm				c0.08	0.08	0.07						
v/c Ratio				0.62	0.61	0.57	0.94	0.31			0.86	
Uniform Delay, d1				49.7	49.6	49.4	50.0	3.0			18.8	
Progression Factor				1.00	1.00	1.00	0.93	0.01			1.00	
Incremental Delay, d2				5.3	5.5	4.2	14.7	0.1			2.8	
Delay (s)				55.0	55.2	53.6	61.1	0.1			21.6	
Level of Service				D	E	D	E	A			C	
Approach Delay (s)		0.0			54.6			14.9			21.6	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	563	3	627	0	0	0	0	1381	139	551	1868	0
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	
Lane Util. Factor	0.95	0.91	0.95					0.86		0.97	0.86	
Frt	1.00	0.91	0.85					0.99		1.00	1.00	
Flt Protected	0.95	0.98	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1511	1504					6320		3433	6408	
Flt Permitted	0.95	0.98	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1511	1504					6320		3433	6408	
Peak-hour factor, PHF	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)	612	3	682	0	0	0	0	1501	151	599	2030	0
RTOR Reduction (vph)	0	10	10	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	447	424	406	0	0	0	0	1638	0	599	2030	0
Turn Type	Perm		Perm							Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	35.5	35.5	35.5					34.0		36.5	74.5	
Effective Green, g (s)	35.5	35.5	35.5					36.0		36.5	76.5	
Actuated g/C Ratio	0.30	0.30	0.30					0.30		0.30	0.64	
Clearance Time (s)	4.0	4.0	4.0					6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	497	447	445					1896		1044	4085	
v/s Ratio Prot								c0.26		c0.17	0.32	
v/s Ratio Perm	0.27	0.28	0.27									
v/c Ratio	0.90	0.95	0.91					0.86		0.57	0.50	
Uniform Delay, d1	40.5	41.4	40.8					39.7		35.2	11.5	
Progression Factor	1.00	1.00	1.00					1.00		1.44	1.27	
Incremental Delay, d2	18.8	29.6	22.9					5.5		1.2	0.2	
Delay (s)	59.4	70.9	63.6					45.2		52.1	14.9	
Level of Service	E	E	E					D		D	B	
Approach Delay (s)		64.6			0.0			45.2			23.4	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM Average Control Delay	39.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	0	57	96	21	420	63	1255	0	0	1168	10
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
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583	1770	1863	1583	1770	5085			5085	1583
Flt Permitted	0.74		1.00	0.95	1.00	1.00	0.14	1.00			1.00	1.00
Satd. Flow (perm)	1383		1583	1770	1863	1583	253	5085			5085	1583
Peak-hour factor, PHF	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)	14	0	62	104	23	457	68	1364	0	0	1270	11
RTOR Reduction (vph)	0	0	41	0	0	16	0	0	0	0	0	5
Lane Group Flow (vph)	14	0	21	104	23	441	68	1364	0	0	1270	6
Turn Type	custom		custom	Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Actuated Green, G (s)	39.6		39.6	39.6	39.6	39.6	68.4	68.4			56.9	56.9
Effective Green, g (s)	41.6		41.6	41.6	41.6	41.6	69.4	70.4			58.9	58.9
Actuated g/C Ratio	0.35		0.35	0.35	0.35	0.35	0.58	0.59			0.49	0.49
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	479		549	614	646	549	241	2983			2496	777
v/s Ratio Prot					0.01		0.02	c0.27			c0.25	
v/s Ratio Perm	0.01		0.01	0.06		c0.28	0.15					0.00
v/c Ratio	0.03		0.04	0.17	0.04	0.80	0.28	0.46			0.51	0.01
Uniform Delay, d1	25.9		26.0	27.2	25.9	35.5	13.4	14.0			20.7	15.6
Progression Factor	1.00		1.00	1.00	1.00	1.00	0.25	0.24			1.00	1.00
Incremental Delay, d2	0.0		0.0	0.1	0.0	8.3	0.4	0.3			0.7	0.0
Delay (s)	25.9		26.0	27.3	26.0	43.8	3.8	3.6			21.5	15.6
Level of Service	C		C	C	C	D	A	A			C	B
Approach Delay (s)		26.0			40.1			3.6			21.4	
Approach LOS		C			D			A			C	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	0	376	0	0	0	0	1534	276	220	469	0
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	
Lane Util. Factor	0.95	0.91	0.95					0.91		1.00	0.91	
Frt	1.00	0.94	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1544	1504					4969		1770	5085	
Flt Permitted	0.95	0.97	1.00					1.00		0.06	1.00	
Satd. Flow (perm)	1681	1544	1504					4969		117	5085	
Peak-hour factor, PHF	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)	489	0	409	0	0	0	0	1667	300	239	510	0
RTOR Reduction (vph)	0	22	218	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	313	281	64	0	0	0	0	1946	0	239	510	0
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	25.1	25.1	25.1					57.9		83.9	82.9	
Effective Green, g (s)	27.1	27.1	27.1					59.9		84.9	84.9	
Actuated g/C Ratio	0.23	0.23	0.23					0.50		0.71	0.71	
Clearance Time (s)	6.0	6.0	6.0					6.0		5.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	380	349	340					2480		372	3598	
v/s Ratio Prot								c0.39		c0.11	0.10	
v/s Ratio Perm	c0.19	0.18	0.04							0.34		
v/c Ratio	0.82	0.80	0.19					0.78		0.64	0.14	
Uniform Delay, d1	44.2	43.9	37.5					24.7		32.5	5.7	
Progression Factor	1.00	1.00	1.00					1.00		0.53	0.35	
Incremental Delay, d2	13.5	12.6	0.3					2.6		3.4	0.1	
Delay (s)	57.6	56.5	37.8					27.3		20.7	2.1	
Level of Service	E	E	D					C		C	A	
Approach Delay (s)		51.0			0.0			27.3			8.0	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	0	155	222	163	458	202	1335	0	0	1920	47
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
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583	1770	1863	1583	1770	5085			5085	1583
Flt Permitted	0.53		1.00	0.95	1.00	1.00	0.06	1.00			1.00	1.00
Satd. Flow (perm)	981		1583	1770	1863	1583	113	5085			5085	1583
Peak-hour factor, PHF	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)	67	0	168	241	177	498	220	1451	0	0	2087	51
RTOR Reduction (vph)	0	0	125	0	0	46	0	0	0	0	0	16
Lane Group Flow (vph)	67	0	43	241	177	452	220	1451	0	0	2087	35
Turn Type	custom		custom	Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Actuated Green, G (s)	29.0		29.0	29.0	29.0	29.0	79.0	79.0			60.7	60.7
Effective Green, g (s)	31.0		31.0	31.0	31.0	31.0	80.0	81.0			62.7	62.7
Actuated g/C Ratio	0.26		0.26	0.26	0.26	0.26	0.67	0.68			0.52	0.52
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	253		409	457	481	409	273	3432			2657	827
v/s Ratio Prot					0.10		c0.10	0.29			0.41	
v/s Ratio Perm	0.07		0.03	0.14		c0.29	c0.44					0.02
v/c Ratio	0.26		0.11	0.53	0.37	1.11	0.81	0.42			0.79	0.04
Uniform Delay, d1	35.4		33.9	38.2	36.5	44.5	35.0	8.9			23.2	14.0
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.22	0.95			1.00	1.00
Incremental Delay, d2	0.6		0.1	1.1	0.5	76.1	1.6	0.0			2.4	0.1
Delay (s)	36.0		34.0	39.3	36.9	120.6	44.4	8.4			25.6	14.1
Level of Service	D		C	D	D	F	D	A			C	B
Approach Delay (s)		34.6			83.0			13.2			25.3	
Approach LOS		C			F			B			C	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	937	2	817	0	0	0	0	1036	251	620	760	0
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	
Lane Util. Factor	0.95	0.91	0.95					0.91		1.00	0.91	
Frt	1.00	0.93	0.85					0.97		1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1540	1504					4936		1770	5085	
Flt Permitted	0.95	0.97	1.00					1.00		0.11	1.00	
Satd. Flow (perm)	1681	1540	1504					4936		213	5085	
Peak-hour factor, PHF	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)	1018	2	888	0	0	0	0	1126	273	674	826	0
RTOR Reduction (vph)	0	24	111	0	0	0	0	34	0	0	0	0
Lane Group Flow (vph)	662	618	494	0	0	0	0	1365	0	674	826	0
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	40.0	40.0	40.0					29.0		69.0	68.0	
Effective Green, g (s)	42.0	42.0	42.0					31.0		70.0	70.0	
Actuated g/C Ratio	0.35	0.35	0.35					0.26		0.58	0.58	
Clearance Time (s)	6.0	6.0	6.0					6.0		5.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	588	539	526					1275		578	2966	
v/s Ratio Prot								0.28		c0.34	0.16	
v/s Ratio Perm	0.39	0.40	0.33							c0.34		
v/c Ratio	1.13	1.15	0.94					1.07		1.17	0.28	
Uniform Delay, d1	39.0	39.0	37.7					44.5		39.2	12.4	
Progression Factor	1.00	1.00	1.00					1.00		0.64	0.81	
Incremental Delay, d2	76.8	86.0	24.5					46.4		87.2	0.2	
Delay (s)	115.8	125.0	62.3					90.9		112.2	10.3	
Level of Service	F	F	E					F		F	B	
Approach Delay (s)		101.9			0.0			90.9			56.1	
Approach LOS		F			A			F			E	

Intersection Summary			
HCM Average Control Delay	84.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	589	135	423	0	0	0	0	1019	143	149	480	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.86	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1716	1583					6408	1583	3433	3539	
Flt Permitted	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1716	1583					6408	1583	3433	3539	
Peak-hour factor, PHF	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)	640	147	460	0	0	0	0	1108	155	162	522	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	96	0	0	0
Lane Group Flow (vph)	390	397	460	0	0	0	0	1108	59	162	522	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	18.2	18.2	60.0					20.7	20.7	3.6	29.8	
Effective Green, g (s)	20.2	20.2	60.0					22.7	22.7	5.1	31.8	
Actuated g/C Ratio	0.34	0.34	1.00					0.38	0.38	0.08	0.53	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.5	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	566	578	1583					2424	599	292	1876	
v/s Ratio Prot								c0.17		c0.05	0.15	
v/s Ratio Perm	c0.23	0.23	0.29						0.04			
v/c Ratio	0.69	0.69	0.29					0.46	0.10	0.55	0.28	
Uniform Delay, d1	17.2	17.2	0.0					14.0	12.0	26.4	7.8	
Progression Factor	1.00	1.00	1.00					1.00	1.00	1.15	1.07	
Incremental Delay, d2	3.5	3.4	0.5					0.6	0.3	2.3	0.4	
Delay (s)	20.7	20.6	0.5					14.6	12.4	32.7	8.6	
Level of Service	C	C	A					B	B	C	A	
Approach Delay (s)		13.2			0.0			14.4			14.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	196	41	413	276	1332	0	0	433	289
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.95			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.97	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1714	1583	3433	3539			6408	1583
Flt Permitted				0.95	0.97	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1714	1583	3433	3539			6408	1583
Peak-hour factor, PHF	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	0	0	213	45	449	300	1448	0	0	471	314
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	0	204
Lane Group Flow (vph)	0	0	0	128	130	433	300	1448	0	0	471	110
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				18.0	18.0	18.0	6.0	30.0			19.0	19.0
Effective Green, g (s)				20.0	20.0	20.0	7.0	32.0			21.0	21.0
Actuated g/C Ratio				0.33	0.33	0.33	0.12	0.53			0.35	0.35
Clearance Time (s)				6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				560	571	528	401	1887			2243	554
v/s Ratio Prot							0.09	c0.41			0.07	
v/s Ratio Perm				0.08	0.08	c0.27						0.07
v/c Ratio				0.23	0.23	0.82	0.75	0.77			0.21	0.20
Uniform Delay, d1				14.4	14.4	18.3	25.6	11.1			13.7	13.6
Progression Factor				1.00	1.00	1.00	0.40	0.57			1.00	1.00
Incremental Delay, d2				0.2	0.2	9.9	6.9	2.7			0.2	0.8
Delay (s)				14.6	14.6	28.2	17.2	9.0			13.9	14.4
Level of Service				B	B	C	B	A			B	B
Approach Delay (s)		0.0			23.3			10.4			14.1	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	437	104	769	0	0	0	0	1078	272	431	1353	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.86	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1716	1583					6408	1583	3433	3539	
Flt Permitted	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1716	1583					6408	1583	3433	3539	
Peak-hour factor, PHF	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)	475	113	836	0	0	0	0	1172	296	468	1471	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	197	0	0	0
Lane Group Flow (vph)	290	298	836	0	0	0	0	1172	99	468	1471	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	14.0	14.0	60.0					18.0	18.0	10.5	34.0	
Effective Green, g (s)	16.0	16.0	60.0					20.0	20.0	12.0	36.0	
Actuated g/C Ratio	0.27	0.27	1.00					0.33	0.33	0.20	0.60	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.5	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	448	458	1583					2136	528	687	2123	
v/s Ratio Prot								0.18		0.14	c0.42	
v/s Ratio Perm	0.17	0.17	c0.53						0.06			
v/c Ratio	0.65	0.65	0.53					0.55	0.19	0.68	0.69	
Uniform Delay, d1	19.5	19.5	0.0					16.3	14.2	22.2	8.2	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.57	0.40	
Incremental Delay, d2	3.2	3.3	1.3					1.0	0.8	2.1	1.4	
Delay (s)	22.7	22.8	1.3					17.3	15.0	14.7	4.7	
Level of Service	C	C	A					B	B	B	A	
Approach Delay (s)		10.1			0.0			16.9			7.1	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	157	15	245	351	1164	0	0	1627	618
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.95			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1699	1583	3433	3539			6408	1583
Flt Permitted				0.95	0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1699	1583	3433	3539			6408	1583
Peak-hour factor, PHF	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	0	0	171	16	266	382	1265	0	0	1768	672
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	0	0	0	414
Lane Group Flow (vph)	0	0	0	92	95	224	382	1265	0	0	1768	258
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				12.7	12.7	12.7	9.3	35.3			21.0	21.0
Effective Green, g (s)				14.7	14.7	14.7	10.3	37.3			23.0	23.0
Actuated g/C Ratio				0.24	0.24	0.24	0.17	0.62			0.38	0.38
Clearance Time (s)				6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				412	416	388	589	2200			2456	607
v/s Ratio Prot							0.11	c0.36			c0.28	
v/s Ratio Perm				0.05	0.06	c0.14						0.16
v/c Ratio				0.22	0.23	0.58	0.65	0.57			0.72	0.42
Uniform Delay, d1				18.1	18.1	19.9	23.2	6.7			15.8	13.6
Progression Factor				1.00	1.00	1.00	1.66	0.19			1.00	1.00
Incremental Delay, d2				0.3	0.3	2.1	2.1	0.9			1.9	2.2
Delay (s)				18.4	18.4	22.0	40.5	2.2			17.6	15.8
Level of Service				B	B	C	D	A			B	B
Approach Delay (s)		0.0			20.5			11.1			17.1	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	113	0	625	641	2136	0	0	815	719
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.91			0.91	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	1583	3433	5085			5085	1583
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	1583	3433	5085			5085	1583
Peak-hour factor, PHF	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	0	0	123	0	679	697	2322	0	0	886	782
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	61	62	679	697	2322	0	0	886	782
Turn Type				Perm		Free	Prot					Free
Protected Phases					8		5	2			6	
Permitted Phases				8		Free						Free
Actuated Green, G (s)				8.6	8.6	120.0	43.0	101.4			54.4	120.0
Effective Green, g (s)				8.6	8.6	120.0	43.0	103.4			56.4	120.0
Actuated g/C Ratio				0.07	0.07	1.00	0.36	0.86			0.47	1.00
Clearance Time (s)				4.0	4.0		4.0	6.0			6.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				120	120	1583	1230	4382			2390	1583
v/s Ratio Prot							c0.20	c0.46			0.17	
v/s Ratio Perm				0.04	0.04	0.43						c0.49
v/c Ratio				0.51	0.52	0.43	0.57	0.53			0.37	0.49
Uniform Delay, d1				53.7	53.7	0.0	31.0	2.1			20.4	0.0
Progression Factor				1.00	1.00	1.00	0.75	0.53			1.00	1.00
Incremental Delay, d2				3.4	3.7	0.9	0.4	0.3			0.4	1.1
Delay (s)				57.0	57.4	0.9	23.6	1.4			20.9	1.1
Level of Service				E	E	A	C	A			C	A
Approach Delay (s)		0.0			9.5			6.5			11.6	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	451	0	393	0	0	0	0	2326	152	193	735	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.91	1.00	0.97	0.91	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					5085	1583	3433	5085	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					5085	1583	3433	5085	
Peak-hour factor, PHF	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)	490	0	427	0	0	0	0	2528	165	210	799	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	245	245	427	0	0	0	0	2528	165	210	799	0
Turn Type	Perm		Free						Free	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						Free			
Actuated Green, G (s)	21.7	21.7	120.0					73.3	120.0	11.0	88.3	
Effective Green, g (s)	21.7	21.7	120.0					75.3	120.0	11.0	90.3	
Actuated g/C Ratio	0.18	0.18	1.00					0.63	1.00	0.09	0.75	
Clearance Time (s)	4.0	4.0						6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	304	304	1583					3191	1583	315	3826	
v/s Ratio Prot								c0.50		c0.06	0.16	
v/s Ratio Perm	c0.15	0.15	0.27						0.10			
v/c Ratio	0.81	0.81	0.27					0.79	0.10	0.67	0.21	
Uniform Delay, d1	47.1	47.1	0.0					16.6	0.0	52.7	4.4	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.88	0.42	
Incremental Delay, d2	14.4	14.4	0.4					2.1	0.1	5.0	0.1	
Delay (s)	61.5	61.5	0.4					18.7	0.1	51.4	1.9	
Level of Service	E	E	A					B	A	D	A	
Approach Delay (s)		33.1			0.0			17.5			12.2	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	134	0	258	473	1471	0	0	2285	750
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.91			0.91	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	1583	3433	5085			5085	1583
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	1583	3433	5085			5085	1583
Peak-hour factor, PHF	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	0	0	146	0	280	514	1599	0	0	2484	815
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	73	73	280	514	1599	0	0	2484	815
Turn Type				Perm		Free	Prot					Free
Protected Phases					8		5	2			6	
Permitted Phases				8		Free						Free
Actuated Green, G (s)				10.5	10.5	120.0	25.0	99.5			70.5	120.0
Effective Green, g (s)				10.5	10.5	120.0	25.0	101.5			72.5	120.0
Actuated g/C Ratio				0.09	0.09	1.00	0.21	0.85			0.60	1.00
Clearance Time (s)				4.0	4.0		4.0	6.0			6.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				147	147	1583	715	4301			3072	1583
v/s Ratio Prot							c0.15	0.31			c0.49	
v/s Ratio Perm				0.04	0.04	0.18						c0.51
v/c Ratio				0.50	0.50	0.18	0.72	0.37			0.81	0.51
Uniform Delay, d1				52.2	52.2	0.0	44.2	2.1			18.4	0.0
Progression Factor				1.00	1.00	1.00	0.85	1.15			1.00	1.00
Incremental Delay, d2				2.6	2.6	0.2	2.7	0.2			2.4	1.2
Delay (s)				54.9	54.9	0.2	40.3	2.6			20.8	1.2
Level of Service				D	D	A	D	A			C	A
Approach Delay (s)		0.0			19.0			11.8			15.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	563	3	627	0	0	0	0	1381	139	551	1868	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.91	1.00	0.97	0.91	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1686	1583					5085	1583	3433	5085	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1686	1583					5085	1583	3433	5085	
Peak-hour factor, PHF	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)	612	3	682	0	0	0	0	1501	151	599	2030	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	306	309	682	0	0	0	0	1501	151	599	2030	0
Turn Type	Perm		Free						Free	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						Free			
Actuated Green, G (s)	27.1	27.1	120.0					53.3	120.0	25.6	82.9	
Effective Green, g (s)	27.1	27.1	120.0					55.3	120.0	25.6	84.9	
Actuated g/C Ratio	0.23	0.23	1.00					0.46	1.00	0.21	0.71	
Clearance Time (s)	4.0	4.0						6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	380	381	1583					2343	1583	732	3598	
v/s Ratio Prot								c0.30		c0.17	0.40	
v/s Ratio Perm	0.18	0.18	0.43						0.10			
v/c Ratio	0.81	0.81	0.43					0.64	0.10	0.82	0.56	
Uniform Delay, d1	44.0	44.0	0.0					24.7	0.0	45.0	8.5	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.97	0.24	
Incremental Delay, d2	11.7	12.3	0.9					1.4	0.1	4.4	0.4	
Delay (s)	55.7	56.3	0.9					26.1	0.1	47.9	2.4	
Level of Service	E	E	A					C	A	D	A	
Approach Delay (s)		27.0			0.0			23.7			12.8	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

3: WB Off Ramp & 1300 East

Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	0	57	96	21	420	63	1255	0	0	1168	10
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
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583	1770	1863	1583	1770	5085			5085	1583
Flt Permitted	0.74		1.00	0.95	1.00	1.00	0.14	1.00			1.00	1.00
Satd. Flow (perm)	1383		1583	1770	1863	1583	267	5085			5085	1583
Peak-hour factor, PHF	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)	14	0	62	104	23	457	68	1364	0	0	1270	11
RTOR Reduction (vph)	0	0	40	0	0	20	0	0	0	0	0	6
Lane Group Flow (vph)	14	0	22	104	23	437	68	1364	0	0	1270	5
Turn Type	custom		custom	Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Actuated Green, G (s)	22.3		22.3	22.3	22.3	22.3	36.7	35.7			27.2	27.2
Effective Green, g (s)	24.3		24.3	24.3	24.3	24.3	37.7	37.7			29.2	29.2
Actuated g/C Ratio	0.35		0.35	0.35	0.35	0.35	0.54	0.54			0.42	0.42
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	480		550	614	647	550	240	2739			2121	660
v/s Ratio Prot					0.01		0.02	c0.27			c0.25	
v/s Ratio Perm	0.01		0.01	0.06		c0.28	0.13					0.00
v/c Ratio	0.03		0.04	0.17	0.04	0.80	0.28	0.50			0.60	0.01
Uniform Delay, d1	15.1		15.1	15.8	15.1	20.6	15.7	10.2			15.8	11.9
Progression Factor	1.00		1.00	1.00	1.00	1.00	0.31	0.32			1.00	1.00
Incremental Delay, d2	0.0		0.0	0.1	0.0	7.8	0.5	0.5			1.3	0.0
Delay (s)	15.1		15.2	16.0	15.1	28.4	5.3	3.7			17.1	11.9
Level of Service	B		B	B	B	C	A	A			B	B
Approach Delay (s)		15.1			25.7			3.8			17.1	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	0	376	0	0	0	0	1534	276	220	469	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.91	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					5085	1583	3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					5085	1583	3433	3539	
Peak-hour factor, PHF	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)	489	0	409	0	0	0	0	1667	300	239	510	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	158	0	0	0
Lane Group Flow (vph)	244	245	409	0	0	0	0	1667	142	239	510	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	13.9	13.9	70.0					31.1	31.1	8.0	44.1	
Effective Green, g (s)	15.9	15.9	70.0					33.1	33.1	9.0	46.1	
Actuated g/C Ratio	0.23	0.23	1.00					0.47	0.47	0.13	0.66	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	382	382	1583					2404	749	441	2331	
v/s Ratio Prot								c0.33		c0.07	0.14	
v/s Ratio Perm	0.15	0.15	0.26						0.09			
v/c Ratio	0.64	0.64	0.26					0.69	0.19	0.54	0.22	
Uniform Delay, d1	24.5	24.5	0.0					14.5	10.7	28.6	4.8	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.52	0.17	
Incremental Delay, d2	3.5	3.7	0.4					1.7	0.6	1.2	0.2	
Delay (s)	27.9	28.1	0.4					16.1	11.2	16.0	1.0	
Level of Service	C	C	A					B	B	B	A	
Approach Delay (s)		15.4			0.0			15.4			5.8	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	0	155	222	163	458	202	1335	0	0	1920	47
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
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583	1770	1863	1583	1770	5085			5085	1583
Flt Permitted	0.59		1.00	0.95	1.00	1.00	0.11	1.00			1.00	1.00
Satd. Flow (perm)	1106		1583	1770	1863	1583	196	5085			5085	1583
Peak-hour factor, PHF	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)	67	0	168	241	177	498	220	1451	0	0	2087	51
RTOR Reduction (vph)	0	0	116	0	0	27	0	0	0	0	0	24
Lane Group Flow (vph)	67	0	53	241	177	471	220	1451	0	0	2087	27
Turn Type	custom		custom	Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Actuated Green, G (s)	23.0		23.0	23.0	23.0	23.0	45.0	45.0			33.0	33.0
Effective Green, g (s)	25.0		25.0	25.0	25.0	25.0	46.0	47.0			35.0	35.0
Actuated g/C Ratio	0.31		0.31	0.31	0.31	0.31	0.57	0.59			0.44	0.44
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	346		495	553	582	495	270	2987			2225	693
v/s Ratio Prot					0.10		c0.08	0.29			c0.41	
v/s Ratio Perm	0.06		0.03	0.14		c0.30	0.39					0.02
v/c Ratio	0.19		0.11	0.44	0.30	0.95	0.81	0.49			0.94	0.04
Uniform Delay, d1	20.1		19.6	21.9	20.9	26.9	18.3	9.5			21.5	12.9
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.38	0.12			1.00	1.00
Incremental Delay, d2	0.3		0.1	0.6	0.3	28.5	9.4	0.3			9.2	0.1
Delay (s)	20.4		19.6	22.4	21.2	55.5	34.7	1.4			30.7	13.0
Level of Service	C		B	C	C	E	C	A			C	B
Approach Delay (s)		19.9			40.1			5.8			30.2	
Approach LOS		B			D			A			C	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	937	2	817	0	0	0	0	1036	251	620	760	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.91	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1686	1583					5085	1583	3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1686	1583					5085	1583	3433	3539	
Peak-hour factor, PHF	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)	1018	2	888	0	0	0	0	1126	273	674	826	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	201	0	0	0
Lane Group Flow (vph)	509	511	888	0	0	0	0	1126	72	674	826	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	26.0	26.0	80.0					19.0	19.0	18.0	42.0	
Effective Green, g (s)	28.0	28.0	80.0					21.0	21.0	19.0	44.0	
Actuated g/C Ratio	0.35	0.35	1.00					0.26	0.26	0.24	0.55	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	588	590	1583					1335	416	815	1946	
v/s Ratio Prot								c0.22		c0.20	0.23	
v/s Ratio Perm	0.30	0.30	0.56						0.05			
v/c Ratio	0.87	0.87	0.56					0.84	0.17	0.83	0.42	
Uniform Delay, d1	24.2	24.3	0.0					27.9	22.8	28.9	10.6	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.50	0.32	
Incremental Delay, d2	12.7	12.7	1.4					6.6	0.9	3.6	0.3	
Delay (s)	36.9	36.9	1.4					34.6	23.7	18.0	3.8	
Level of Service	D	D	A					C	C	B	A	
Approach Delay (s)		20.4			0.0			32.5			10.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	680	190	480	0	0	0	0	1190	200	220	590	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.86	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1721	1583					6408	1583	3433	3539	
Flt Permitted	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1721	1583					6408	1583	3433	3539	
Peak-hour factor, PHF	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)	739	207	522	0	0	0	0	1293	217	239	641	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	124	0	0	0
Lane Group Flow (vph)	466	480	522	0	0	0	0	1293	93	239	641	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	39.9	39.9	120.0					49.4	49.4	13.2	68.1	
Effective Green, g (s)	41.9	41.9	120.0					51.4	51.4	14.7	70.1	
Actuated g/C Ratio	0.35	0.35	1.00					0.43	0.43	0.12	0.58	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.5	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	587	601	1583					2745	678	421	2067	
v/s Ratio Prot								c0.20		c0.07	0.18	
v/s Ratio Perm	0.28	0.28	0.33						0.06			
v/c Ratio	0.79	0.80	0.33					0.47	0.14	0.57	0.31	
Uniform Delay, d1	35.2	35.2	0.0					24.6	20.8	49.7	12.7	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.84	1.82	
Incremental Delay, d2	7.3	7.3	0.6					0.6	0.4	1.7	0.4	
Delay (s)	42.5	42.6	0.6					25.1	21.3	43.3	23.5	
Level of Service	D	D	A					C	C	D	C	
Approach Delay (s)		27.6			0.0			24.6			28.9	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	300	60	560	350	1520	0	0	510	350
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.95			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.97	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1712	1583	3433	3539			6408	1583
Flt Permitted				0.95	0.97	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1712	1583	3433	3539			6408	1583
Peak-hour factor, PHF	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	0	0	326	65	609	380	1652	0	0	554	380
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	0	0	0	243
Lane Group Flow (vph)	0	0	0	192	199	600	380	1652	0	0	554	137
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				46.1	46.1	46.1	15.6	61.9			41.3	41.3
Effective Green, g (s)				48.1	48.1	48.1	16.6	63.9			43.3	43.3
Actuated g/C Ratio				0.40	0.40	0.40	0.14	0.53			0.36	0.36
Clearance Time (s)				6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				674	686	635	475	1885			2312	571
v/s Ratio Prot							0.11	c0.47			0.09	
v/s Ratio Perm				0.11	0.12	c0.38						0.09
v/c Ratio				0.28	0.29	0.94	0.80	0.88			0.24	0.24
Uniform Delay, d1				24.3	24.4	34.7	50.1	24.6			26.8	26.8
Progression Factor				1.00	1.00	1.00	0.50	0.75			1.00	1.00
Incremental Delay, d2				0.2	0.2	22.9	8.4	5.2			0.2	1.0
Delay (s)				24.6	24.6	57.5	33.6	23.7			27.1	27.8
Level of Service				C	C	E	C	C			C	C
Approach Delay (s)		0.0			44.6			25.5			27.4	
Approach LOS		A			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	510	140	890	0	0	0	0	1240	370	560	1560	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.86	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1720	1583					6408	1583	3433	3539	
Flt Permitted	0.95	0.97	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1720	1583					6408	1583	3433	3539	
Peak-hour factor, PHF	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)	554	152	967	0	0	0	0	1348	402	609	1696	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	221	0	0	0
Lane Group Flow (vph)	349	357	967	0	0	0	0	1348	181	609	1696	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	30.0	30.0	120.0					44.0	44.0	28.5	78.0	
Effective Green, g (s)	32.0	32.0	120.0					46.0	46.0	30.0	80.0	
Actuated g/C Ratio	0.27	0.27	1.00					0.38	0.38	0.25	0.67	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.5	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	448	459	1583					2456	607	858	2359	
v/s Ratio Prot								0.21		0.18	c0.48	
v/s Ratio Perm	c0.21	0.21	0.61						0.11			
v/c Ratio	0.78	0.78	0.61					0.55	0.30	0.71	0.72	
Uniform Delay, d1	40.7	40.7	0.0					28.9	25.8	41.0	12.8	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.60	0.75	
Incremental Delay, d2	8.3	8.1	1.8					0.9	1.3	2.1	1.5	
Delay (s)	49.1	48.8	1.8					29.8	27.0	26.6	11.2	
Level of Service	D	D	A					C	C	C	B	
Approach Delay (s)		21.7			0.0			29.1			15.2	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	240	20	330	440	1310	0	0	1880	750
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.95			0.86	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1698	1583	3433	3539			6408	1583
Flt Permitted				0.95	0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1698	1583	3433	3539			6408	1583
Peak-hour factor, PHF	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	0	0	261	22	359	478	1424	0	0	2043	815
RTOR Reduction (vph)	0	0	0	0	0	46	0	0	0	0	0	313
Lane Group Flow (vph)	0	0	0	141	142	314	478	1424	0	0	2043	502
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				27.0	27.0	27.0	19.6	81.0			56.4	56.4
Effective Green, g (s)				29.0	29.0	29.0	20.6	83.0			58.4	58.4
Actuated g/C Ratio				0.24	0.24	0.24	0.17	0.69			0.49	0.49
Clearance Time (s)				6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				406	410	383	589	2448			3119	770
v/s Ratio Prot							c0.14	0.40			c0.32	
v/s Ratio Perm				0.08	0.08	c0.20						0.32
v/c Ratio				0.35	0.35	0.82	0.81	0.58			0.66	0.65
Uniform Delay, d1				37.7	37.7	43.0	47.8	9.5			23.2	23.2
Progression Factor				1.00	1.00	1.00	1.17	1.37			1.00	1.00
Incremental Delay, d2				0.5	0.5	12.8	7.1	0.8			1.1	4.3
Delay (s)				38.2	38.2	55.8	63.1	13.9			24.3	27.4
Level of Service				D	D	E	E	B			C	C
Approach Delay (s)		0.0			48.0			26.3			25.2	
Approach LOS		A			D			C			C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	160	0	800	870	2390	0	0	930	860
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.91			0.91	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	1583	3433	5085			5085	1583
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	1583	3433	5085			5085	1583
Peak-hour factor, PHF	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	0	0	174	0	870	946	2598	0	0	1011	935
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	87	87	870	946	2598	0	0	1011	935
Turn Type				Perm		Free	Prot					Free
Protected Phases					8		5	2			6	
Permitted Phases				8		Free						Free
Actuated Green, G (s)				11.6	11.6	120.0	43.0	98.4			51.4	120.0
Effective Green, g (s)				11.6	11.6	120.0	43.0	100.4			53.4	120.0
Actuated g/C Ratio				0.10	0.10	1.00	0.36	0.84			0.44	1.00
Clearance Time (s)				4.0	4.0		4.0	6.0			6.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				162	162	1583	1230	4254			2263	1583
v/s Ratio Prot							c0.28	0.51			0.20	
v/s Ratio Perm				0.05	0.05	0.55						c0.59
v/c Ratio				0.54	0.54	0.55	0.77	0.61			0.45	0.59
Uniform Delay, d1				51.6	51.6	0.0	34.1	3.3			23.1	0.0
Progression Factor				1.00	1.00	1.00	0.69	0.50			1.00	1.00
Incremental Delay, d2				3.4	3.4	1.4	1.0	0.2			0.6	1.6
Delay (s)				55.0	55.0	1.4	24.6	1.9			23.7	1.6
Level of Service				E	E	A	C	A			C	A
Approach Delay (s)		0.0			10.3			7.9			13.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	570	0	550	0	0	0	0	2690	200	240	850	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.91	1.00	0.97	0.91	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					5085	1583	3433	5085	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					5085	1583	3433	5085	
Peak-hour factor, PHF	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)	620	0	598	0	0	0	0	2924	217	261	924	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	310	310	598	0	0	0	0	2924	217	261	924	0
Turn Type	Perm		Free						Free	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						Free			
Actuated Green, G (s)	24.6	24.6	120.0					70.2	120.0	11.2	85.4	
Effective Green, g (s)	24.6	24.6	120.0					72.2	120.0	11.2	87.4	
Actuated g/C Ratio	0.20	0.20	1.00					0.60	1.00	0.09	0.73	
Clearance Time (s)	4.0	4.0						6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	345	345	1583					3059	1583	320	3704	
v/s Ratio Prot								c0.57		c0.08	0.18	
v/s Ratio Perm	c0.18	0.18	0.38						0.14			
v/c Ratio	0.90	0.90	0.38					0.96	0.14	0.82	0.25	
Uniform Delay, d1	46.5	46.5	0.0					22.4	0.0	53.4	5.4	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.95	0.45	
Incremental Delay, d2	24.7	24.7	0.7					8.8	0.2	13.8	0.1	
Delay (s)	71.2	71.2	0.7					31.2	0.2	64.3	2.6	
Level of Service	E	E	A					C	A	E	A	
Approach Delay (s)		36.6			0.0			29.1			16.2	
Approach LOS		D			A			C			B	

Intersection Summary			
HCM Average Control Delay	28.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	190	0	320	640	1680	0	0	2610	920
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
Lane Util. Factor				0.95	0.95	1.00	0.97	0.91			0.81	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	1583	3433	5085			7544	1583
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	1583	3433	5085			7544	1583
Peak-hour factor, PHF	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	0	0	207	0	348	696	1826	0	0	2837	1000
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	103	104	348	696	1826	0	0	2837	1000
Turn Type				Perm		Free	Prot					Free
Protected Phases					8		5	2			6	
Permitted Phases				8		Free						Free
Actuated Green, G (s)				12.7	12.7	120.0	34.0	97.3			59.3	120.0
Effective Green, g (s)				12.7	12.7	120.0	34.0	99.3			61.3	120.0
Actuated g/C Ratio				0.11	0.11	1.00	0.28	0.83			0.51	1.00
Clearance Time (s)				4.0	4.0		4.0	6.0			6.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				178	178	1583	973	4208			3854	1583
v/s Ratio Prot							c0.20	0.36			c0.38	
v/s Ratio Perm				0.06	0.06	0.22						c0.63
v/c Ratio				0.58	0.58	0.22	0.72	0.43			0.74	0.63
Uniform Delay, d1				51.1	51.1	0.0	38.6	2.8			23.0	0.0
Progression Factor				1.00	1.00	1.00	0.76	1.23			1.00	1.00
Incremental Delay, d2				4.5	4.8	0.3	1.9	0.2			1.3	1.9
Delay (s)				55.6	56.0	0.3	31.2	3.7			24.3	1.9
Level of Service				E	E	A	C	A			C	A
Approach Delay (s)		0.0			21.0			11.3			18.5	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	710	5	860	0	0	0	0	1610	190	680	2120	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.81	1.00	0.97	0.91	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1686	1583					7544	1583	3433	5085	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1686	1583					7544	1583	3433	5085	
Peak-hour factor, PHF	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)	772	5	935	0	0	0	0	1750	207	739	2304	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	386	391	935	0	0	0	0	1750	207	739	2304	0
Turn Type	Perm		Free						Free	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						Free			
Actuated Green, G (s)	33.2	33.2	120.0					42.1	120.0	30.7	76.8	
Effective Green, g (s)	33.2	33.2	120.0					44.1	120.0	30.7	78.8	
Actuated g/C Ratio	0.28	0.28	1.00					0.37	1.00	0.26	0.66	
Clearance Time (s)	4.0	4.0						6.0		4.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	465	466	1583					2772	1583	878	3339	
v/s Ratio Prot								0.23		c0.22	c0.45	
v/s Ratio Perm	0.23	0.23	0.59						0.13			
v/c Ratio	0.83	0.84	0.59					0.63	0.13	0.84	0.69	
Uniform Delay, d1	40.8	40.9	0.0					31.3	0.0	42.3	12.9	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.87	0.19	
Incremental Delay, d2	11.9	12.5	1.6					1.1	0.2	5.2	0.8	
Delay (s)	52.7	53.4	1.6					32.4	0.2	42.1	3.2	
Level of Service	D	D	A					C	A	D	A	
Approach Delay (s)		25.0			0.0			29.0			12.7	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

3: WB Off Ramp & 1300 East

Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	70	120	30	510	80	1330	0	0	1420	20
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
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583	1770	1863	1583	1770	5085			5085	1583
Flt Permitted	0.74		1.00	0.95	1.00	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)	1370		1583	1770	1863	1583	180	5085			5085	1583
Peak-hour factor, PHF	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)	22	0	76	130	33	554	87	1446	0	0	1543	22
RTOR Reduction (vph)	0	0	48	0	0	26	0	0	0	0	0	13
Lane Group Flow (vph)	22	0	28	130	33	528	87	1446	0	0	1543	9
Turn Type	custom		custom	Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Actuated Green, G (s)	30.6		30.6	30.6	30.6	30.6	47.4	47.4			36.3	36.3
Effective Green, g (s)	32.6		32.6	32.6	32.6	32.6	48.4	49.4			38.3	38.3
Actuated g/C Ratio	0.36		0.36	0.36	0.36	0.36	0.54	0.55			0.43	0.43
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	496		573	641	675	573	222	2791			2164	674
v/s Ratio Prot					0.02		0.03	c0.28			c0.30	
v/s Ratio Perm	0.02		0.02	0.07		c0.33	0.18					0.01
v/c Ratio	0.04		0.05	0.20	0.05	0.92	0.39	0.52			0.71	0.01
Uniform Delay, d1	18.6		18.6	19.8	18.6	27.5	14.0	12.8			21.3	14.9
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.48	0.21			1.00	1.00
Incremental Delay, d2	0.0		0.0	0.2	0.0	20.5	0.7	0.4			2.0	0.0
Delay (s)	18.6		18.7	19.9	18.7	48.0	21.4	3.1			23.4	15.0
Level of Service	B		B	B	B	D	C	A			C	B
Approach Delay (s)		18.7			41.5			4.1			23.2	
Approach LOS		B			D			A			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	530	0	380	0	0	0	0	1700	280	290	550	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.91	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					5085	1583	3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					5085	1583	3433	3539	
Peak-hour factor, PHF	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)	576	0	413	0	0	0	0	1848	304	315	598	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	183	0	0	0
Lane Group Flow (vph)	288	288	413	0	0	0	0	1848	121	315	598	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	21.3	21.3	90.0					33.7	33.7	18.0	56.7	
Effective Green, g (s)	23.3	23.3	90.0					35.7	35.7	19.0	58.7	
Actuated g/C Ratio	0.26	0.26	1.00					0.40	0.40	0.21	0.65	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	435	435	1583					2017	628	725	2308	
v/s Ratio Prot								c0.36		c0.09	0.17	
v/s Ratio Perm	c0.17	0.17	0.26						0.08			
v/c Ratio	0.66	0.66	0.26					0.92	0.19	0.43	0.26	
Uniform Delay, d1	29.8	29.8	0.0					25.7	17.7	30.8	6.5	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.53	0.30	
Incremental Delay, d2	3.8	3.8	0.4					8.0	0.7	0.3	0.2	
Delay (s)	33.6	33.6	0.4					33.8	18.4	16.7	2.2	
Level of Service	C	C	A					C	B	B	A	
Approach Delay (s)		19.7			0.0			31.6			7.2	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

3: WB Off Ramp & 1300 East

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	0	170	250	190	590	200	1470	0	0	2240	60
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
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00	1.00	0.91			0.91	1.00
Frt	1.00		0.85	1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00	0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583	1770	1863	1583	1770	5085			5085	1583
Flt Permitted	0.54		1.00	0.95	1.00	1.00	0.07	1.00			1.00	1.00
Satd. Flow (perm)	1014		1583	1770	1863	1583	131	5085			5085	1583
Peak-hour factor, PHF	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	0	185	272	207	641	217	1598	0	0	2435	65
RTOR Reduction (vph)	0	0	102	0	0	15	0	0	0	0	0	18
Lane Group Flow (vph)	87	0	83	272	207	626	217	1598	0	0	2435	47
Turn Type	custom		custom	Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8		8	2					6
Actuated Green, G (s)	42.0		42.0	42.0	42.0	42.0	66.0	66.0			52.0	52.0
Effective Green, g (s)	44.0		44.0	44.0	44.0	44.0	67.0	68.0			54.0	54.0
Actuated g/C Ratio	0.37		0.37	0.37	0.37	0.37	0.56	0.57			0.45	0.45
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0	5.0	6.0			6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	372		580	649	683	580	210	2882			2288	712
v/s Ratio Prot					0.11		c0.09	0.31			c0.48	
v/s Ratio Perm	0.09		0.05	0.15		c0.40	0.49					0.03
v/c Ratio	0.23		0.14	0.42	0.30	1.08	1.03	0.55			1.06	0.07
Uniform Delay, d1	26.3		25.4	28.4	27.1	38.0	57.2	16.4			33.0	18.7
Progression Factor	1.00		1.00	1.00	1.00	1.00	1.27	0.14			1.00	1.00
Incremental Delay, d2	0.3		0.1	0.4	0.3	60.5	49.3	0.3			38.7	0.2
Delay (s)	26.6		25.5	28.9	27.3	98.5	121.9	2.6			71.7	18.9
Level of Service	C		C	C	C	F	F	A			E	B
Approach Delay (s)		25.9			68.4			16.9			70.3	
Approach LOS		C			E			B			E	

Intersection Summary			
HCM Average Control Delay	50.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1070	5	870	0	0	0	0	1140	280	720	820	0
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	
Lane Util. Factor	0.95	0.95	1.00					0.91	1.00	0.97	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1686	1583					5085	1583	3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1686	1583					5085	1583	3433	3539	
Peak-hour factor, PHF	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)	1163	5	946	0	0	0	0	1239	304	783	891	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	220	0	0	0
Lane Group Flow (vph)	581	587	946	0	0	0	0	1239	84	783	891	0
Turn Type	Perm		Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4		Free						2			
Actuated Green, G (s)	42.9	42.9	120.0					31.1	31.1	29.0	65.1	
Effective Green, g (s)	44.9	44.9	120.0					33.1	33.1	30.0	67.1	
Actuated g/C Ratio	0.37	0.37	1.00					0.28	0.28	0.25	0.56	
Clearance Time (s)	6.0	6.0						6.0	6.0	5.0	6.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	629	631	1583					1403	437	858	1979	
v/s Ratio Prot								c0.24		c0.23	0.25	
v/s Ratio Perm	0.35	0.35	0.60						0.05			
v/c Ratio	0.92	0.93	0.60					0.88	0.19	0.91	0.45	
Uniform Delay, d1	35.9	36.0	0.0					41.6	33.2	43.7	15.6	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.58	0.23	
Incremental Delay, d2	19.3	20.5	1.7					8.4	1.0	5.3	0.2	
Delay (s)	55.2	56.5	1.7					50.0	34.2	30.7	3.8	
Level of Service	E	E	A					D	C	C	A	
Approach Delay (s)		31.6			0.0			46.9			16.3	
Approach LOS		C			A			D			B	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			