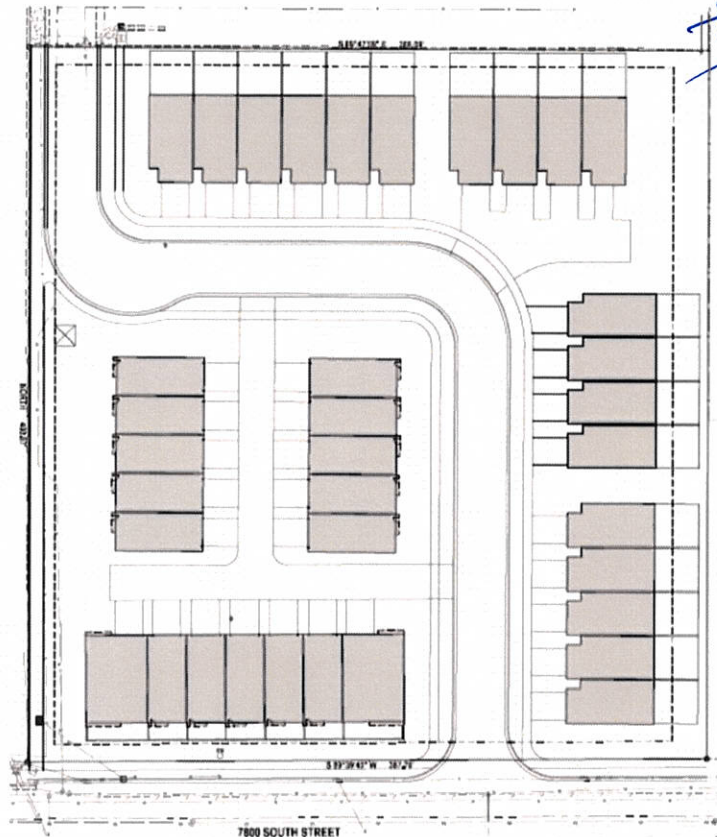
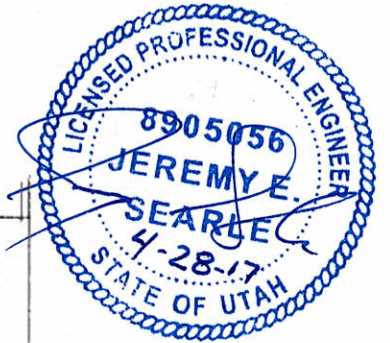


7800 South Townhomes Updated Traffic Impact Study



Sandy, Utah

April 2017

UT17-989

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed townhome development located in Sandy, Utah. The townhome project is located on the north side of 7800 South, at approximately 800 East.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site.

TRAFFIC ANALYSIS

The following is an outline of the traffic analysis performed by Hales Engineering for the traffic conditions of this project.

Existing (2017) Background Conditions Analysis

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

- Spruce Tree Lane / 7800 South
- Chad Street / Lyndy Drive
- Lyndy Drive / 700 East (SR-71)

The counts were performed on Tuesday, January 10, 2017. The morning peak hour was determined to be between 7:15 and 8:15 a.m. and the evening peak hour was determined to be between 5:00 and 6:00 p.m. The morning peak hour volumes were 23 percent lower than the evening peak hour volumes. Therefore, the evening peak hour volumes were used in the analysis to represent the worst-case conditions.

As shown in Table ES-1, all study intersections are currently operating at acceptable levels of service during the evening peak hour except the Lyndy Drive / 700 East (SR-71) intersection, which has constrained operations. No significant queueing was observed during the evening peak hour.

Project Conditions Analysis

The proposed land use for the development has been identified as follows:

- Townhomes 36 Units

The total trip generation for the development is as follows:

- Daily Trips: 266
- Morning Peak Hour Trips: 24
- Evening Peak Hour Trips: 28

Existing (2017) Plus Project Conditions Analysis

As shown in Table ES-1, all intersections are anticipated to operate at similar levels of service during the evening peak hour with project traffic added. No significant queuing is anticipated during the evening peak hour.

TABLE ES-1 Evening Peak Hour Sandy - 7800 South Townhomes TIS		
Intersection	Existing 2017 Background	Existing 2017 Plus Project
Description	LOS (Sec/Veh ¹)	LOS (Sec/Veh ¹)
Spruce Tree Lane & Townhome Access / 7800 South	C (17.7) / NB	B (13.3) / NB
Chad Street / Lyndy Drive	A (2.3) / NB	A (3.8) / NB
Lyndy Drive / 700 East (SR-71)	F (>50) / WB	F (>50) / WB
<small>1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average for roundabout, signalized, all-way stop controlled intersections and the worst approach for all other unsignalized intersections.</small>		
<small>Source: Hales Engineering, April 2017</small>		

RECOMMENDATIONS

Existing (2017) Background Conditions Analysis

Although the Lyndy Drive / 700 East (SR-71) intersection is currently operating under constrained conditions during the evening peak hour, this type of delay is expected for vehicles attempting to make a left-turn onto a busy arterial. There isn't enough traffic at this intersection to meet signal warrants, and the location does not meet signal spacing requirements. The only other available mitigation measure would be to limit movements at the intersection, however, UDOT has recently stated that it is the intent to keep this intersection as a full movement intersection.

It was also noted that there is an existing sight distance issue at the 90 degree bend on Chad Street at the church access. The southwest corner has a brick fence that prevents drivers from seeing around the bend, potentially causing crashes. It is recommended that the city place a stop sign on the northbound approach on Chad Street. This will force vehicles to stop and assess if it is clear to make a turn.

Existing (2017) Plus Project Conditions Analysis

As part of the project, the development team plans to widen 7800 South to match the existing cross section to the east and west of the property, as well as construct curb, gutter, and sidewalk. This widened cross section will allow 7800 South to be striped as a three lane roadway, with a center TWLTL, similar to the cross section of 7800 South west of 700 East (SR-71) and east of 1000 East. This will improve safety and operations by providing a center turn lane for left-turning vehicles. No additional mitigation measures are recommended.

SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

The following is a summary of key findings and recommendations:

- All study intersections are currently operating at acceptable levels of service during the evening peak hour except the Lyndy Drive / 700 East (SR-71) intersection.
 - Although the Lyndy Drive / 700 East (SR-71) intersection is currently operating under constrained conditions during the evening peak hour, this type of delay is expected for vehicles attempting to make a left-turn onto a busy arterial. There isn't enough traffic at this intersection to meet signal warrants, and the location does not meet signal spacing requirements. The only other available mitigation measure would be to limit movements at the intersection, however, UDOT has recently stated that it is the intent to keep this intersection as a full movement intersection.
 - It was also noted that there is an existing sight distance issue at the 90 degree bend on Chad Street at the church access. The southwest corner has a brick fence that prevents drivers from seeing around the bend, potentially causing crashes. It is recommended that the city place a stop sign on the northbound approach on Chad Street.
- The development will consist of 36 residential townhomes and have an access to 7800 South directly across from Spruce Tree Lane, and a secondary access to the stub road for Chad Street.
 - Although it is likely that some traffic will use the new connection through the proposed development as a cut-through route, it is not anticipated that this will not draw very much traffic because of the circuitous route and out-of-direction travel.

- The average daily traffic on Chad Street is approximately 100 – 150 vehicles per day. It is estimated that as much as 80 trips per day from the proposed development may use the Chad Street connection. In addition, it is anticipated that some of the existing neighbors will also use the new connection to access 7800 South (as much as 60 – 100 trips per day). Therefore, the total increase in traffic to Chad Street is estimated at 140 – 180 trips per day. This is well within the capacity of a two lane roadway.
- All study intersections are anticipated to operate at similar levels of service during the evening peak hour with project traffic added. No significant queueing is anticipated during the evening peak hour.
- As part of the project, the development team plans to widen 7800 South to match the existing cross section to the east and west of the property, as well as construct curb, gutter, and sidewalk. This widened cross section will allow 7800 South to be striped as a three lane roadway, with a center TWLTL, similar to the cross section of 7800 South west of 700 East (SR-71) and east of 1000 East. This will improve safety and operations by providing a center turn lane for left-turning vehicles. No additional mitigation measures are recommended.

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed townhome development located in Sandy, Utah. The townhome project is located on the north side of 7800 South, at approximately 800 East. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site.

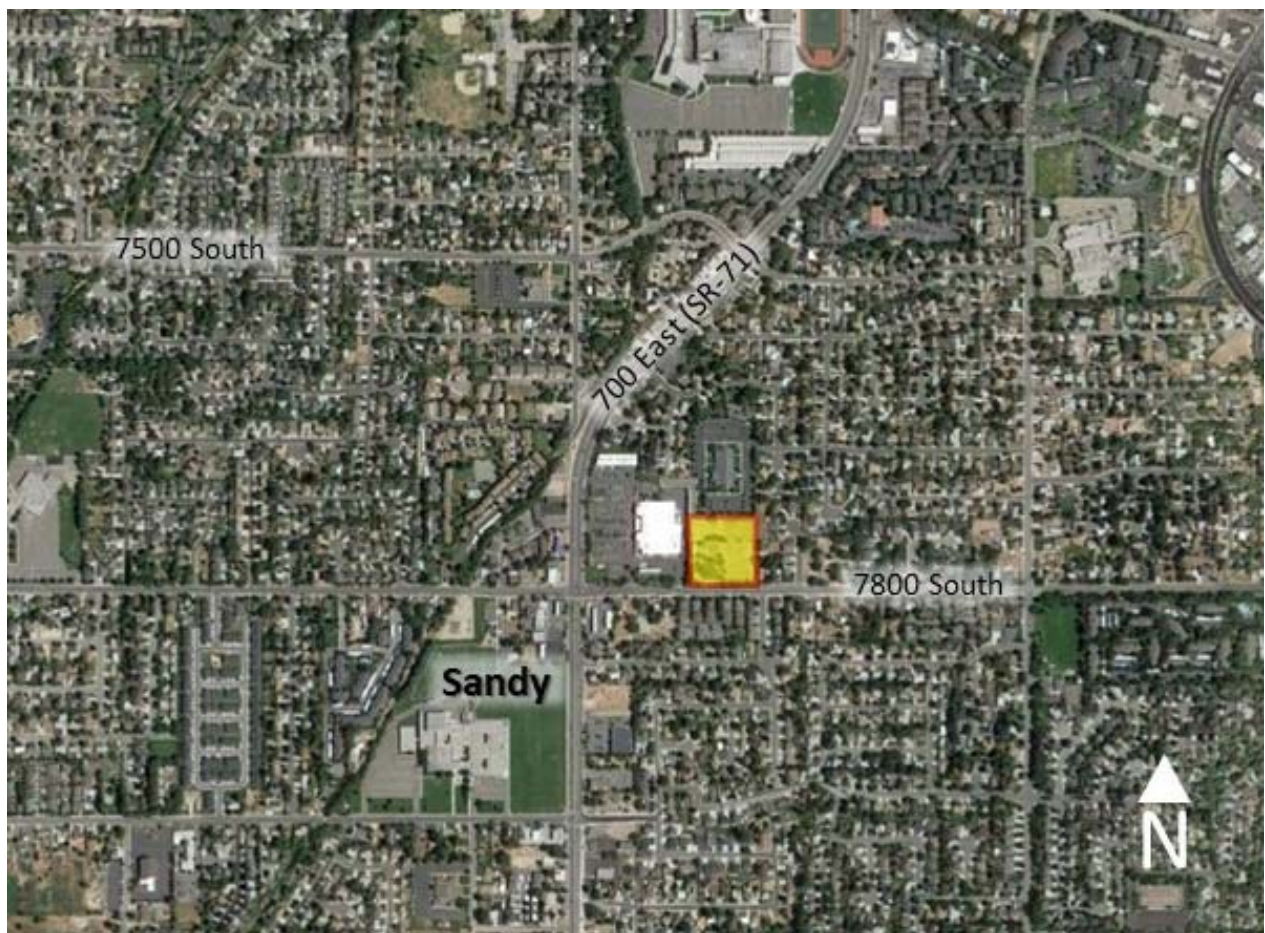


Figure 1 Vicinity Map Showing the Project Location in Sandy, Utah

B. Scope

The study area was defined based on conversations with the development team and city staff. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- Spruce Tree Lane / 7800 South
- Chad Street / Lyndy Drive
- Lyndy Drive / 700 East (SR-71)

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections. Figure 2 provides a visual representation of each LOS letter designation.

The Highway Capacity Manual 2010 (HCM 2010) methodology was used in this study to remain consistent with “state-of-the-practice” professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized and all-way stop intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections LOS is reported based on the worst approach.

D. Level of Service Standards

For the purposes of this study, a minimum overall intersection performance for each of the study intersections was set at LOS D. However, if LOS E or F conditions exist, an explanation and/or mitigation measures will be presented. An LOS D threshold is consistent with “state-of-the-practice” traffic engineering principles for urbanized areas.

Table 1 Level of Service Description

Level of Service	Description of Traffic Conditions	Average Delay (seconds/vehicle)
Signalized Intersections		Overall Intersection
A	Extremely favorable progression and a very low level of control delay. Individual users are virtually unaffected by others in the traffic stream.	$0 \leq 10.0$
B	Good progression and a low level of control delay. The presence of other users in the traffic stream becomes noticeable.	> 10.0 and ≤ 20.0
C	Fair progression and a moderate level of control delay. The operation of individual users becomes somewhat affected by interactions with others in the traffic stream.	>20.0 and ≤ 35.0
D	Marginal progression with relatively high levels of control delay. Operating conditions are noticeably more constrained.	> 35.0 and ≤ 55.0
E	Poor progression with unacceptably high levels of control delay. Operating conditions are at or near capacity.	> 55.0 and ≤ 80.0
F	Unacceptable progression with forced or breakdown operating conditions.	> 80.0
Unsignalized Intersections		Worst Approach
A	Free Flow / Insignificant Delay	$0 \leq 10.0$
B	Stable Operations / Minimum Delays	>10.0 and ≤ 15.0
C	Stable Operations / Acceptable Delays	>15.0 and ≤ 25.0
D	Approaching Unstable Flows / Tolerable Delays	>25.0 and ≤ 35.0
E	Unstable Operations / Significant Delays Can Occur	>35.0 and ≤ 50.0
F	Forced Flows / Unpredictable Flows / Excessive Delays Occur	> 50.0

Source: Hales Engineering Descriptions, based on Highway Capacity Manual, 2010 Methodology (Transportation Research Board, 2010)

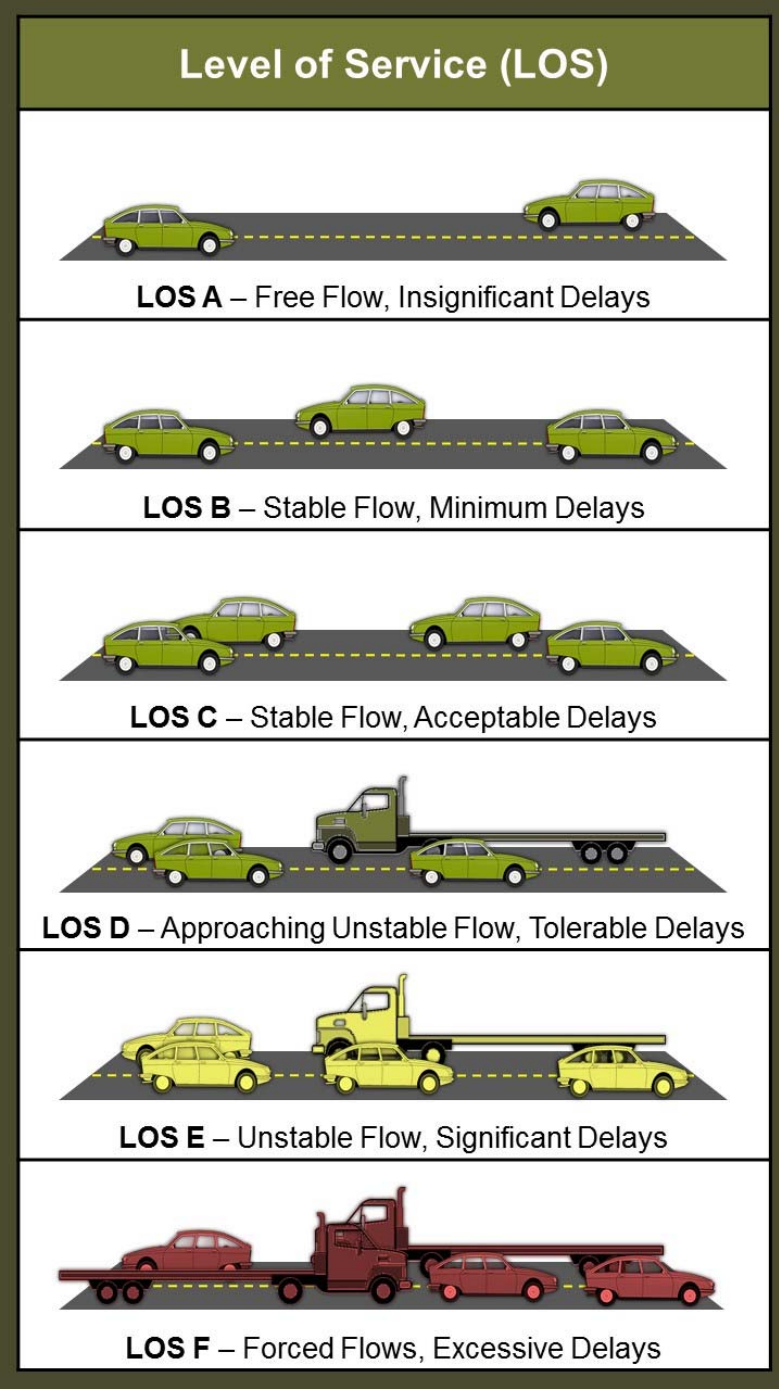


Figure 2 LOS Letter Designation

II. EXISTING (2017) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified and potential mitigation measures recommended. This analysis will provide a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

7800 South – is classified by Sandy City as a minor collector. The roadway has one through lane in each direction adjacent to the site. The posted speed limit is 35 mph in the study area.

700 East (SR-71) – is classified by UDOT as a Regional Priority – Urban Importance, Access Category 5 roadway. An access category 5 roadway has minimum signal spacing of 2,640 feet, minimum street spacing of 660 feet, and minimum access spacing of 350 feet. Adjacent to the site, 700 East (SR-71) has two through lanes in each direction, and a center two-way left-turn lane (TWLTL). The posted speed limit on 700 East (SR-71) is 40 mph.

UDOT is currently evaluating a raised median project on 700 East (SR-71) that would include constructing raised medians along a major portion of the roadway through this area. However, the final design has not yet been determined. At this point, Lyndy Drive is planned to remain a full access intersection. Therefore, this study assumed that no changes are made to the Lyndy Drive / 700 East (SR-71) intersection.

C. Traffic Volumes

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

- Spruce Tree Lane / 7800 South
- Chad Street / Lyndy Drive
- Lyndy Drive / 700 East (SR-71)

The counts were performed on Tuesday, January 10, 2017. The morning peak hour was determined to be between 7:15 and 8:15 a.m. and the evening peak hour was determined to be between 5:00 and 6:00 p.m. The morning peak hour volumes were 23 percent lower than the

evening peak hour volumes. Therefore, the evening peak hour volumes were used in the analysis to represent the worst-case conditions. Detailed count data are included in Appendix A.

Figure 3 shows the existing evening peak hour volume as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the evening peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 2 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2017) conditions. As shown in Table 2, all study intersections are currently operating at acceptable levels of service during the evening peak hour except the Lyndy Drive / 700 East (SR-71) intersection.

Table 2 Background (2017) Evening Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach ^{1,3}	Aver. Delay (Sec/Veh) ¹	LOS ¹	Aver. Delay (Sec/Veh) ²	LOS ²
Spruce Tree Lane / 7800 South	NB Stop	NB	17.7	C	-	-
Chad Street / Lyndy Drive	NB Yield	NB	2.3	A	-	-
Lyndy Drive / 700 East (SR-71)	WB Stop	WB	> 50	F	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.
3. SB = Southbound approach, etc.

Source: Hales Engineering, January 2017



E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. No significant queuing was observed during the evening peak hour.

F. Mitigation Measures

Although the Lyndy Drive / 700 East (SR-71) intersection is currently operating under constrained conditions during the evening peak hour, this type of delay is expected for vehicles attempting to make a left-turn onto a busy arterial. There isn't enough traffic at this intersection to meet signal warrants, and the location does not meet signal spacing requirements. The only other available mitigation measure would be to limit movements at the intersection, however, UDOT has recently stated that it is the intent to keep this intersection as a full movement intersection.

It was also noted that there is an existing sight distance issue at the 90 degree bend on Chad Street at the church access. The southwest corner has a brick fence that prevents drivers from seeing around the bend, potentially causing crashes. It is recommended that the city place a stop sign on the northbound approach on Chad Street. This will force vehicles to stop and assess if it is clear to make a turn.

III. PROJECT CONDITIONS

A. Purpose

The project conditions analysis explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in the Introduction.

B. Project Description

This study addresses the traffic impacts associated with the proposed townhome development located in Sandy, Utah. The townhome project is located on the north side of 7800 South, at approximately 800 East. The development will consist of 36 residential townhomes. A concept plan for the proposed developments has been included in Appendix C.

The proposed land use for the development has been identified as follows:

- Townhomes 36 Units

C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation (9th Edition, 2012). Trip Generation for the proposed project is included in Table 3.

The total trip generation for the development is as follows:

- Daily Trips: 266
- Morning Peak Hour Trips: 24
- Evening Peak Hour Trips: 28

Table 3
Sandy - 7800 South Townhomes
Trip Generation

Weekday Daily								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total Daily Trips
Residential Condominium/Townhouse (230)	36	Dwelling Units	266	50%	50%	133	133	266
Project Total Daily Trips						133	133	266
A.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total a.m. Trips
Residential Condominium/Townhouse (230)	36	Dwelling Units	24	17%	83%	4	20	24
Project Total a.m. Peak Hour Trips						4	20	24
P.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total p.m. Trips
Residential Condominium/Townhouse (230)	36	Dwelling Units	28	67%	33%	19	9	28
Project Total p.m. Peak Hour Trips						19	9	28

1. Land Use Code from the Institute of Transportation Engineers Trip Generation Manual (9th Edition - 2012)

SOURCE: Hales Engineering, 2017

D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially in close proximity to the site. The resulting distribution of project generated trips during the evening peak hour is as follows:

To/From Project:

- 35% North via 700 East (SR-71)
- 30% South via 700 East (SR-71)
- 15% West via 7800 South
- 20% East via 7800 South

These trip distribution assumptions were used to assign the evening peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 4.



E. Access

The proposed access for the site will be gained at the following locations (see also concept plan in Appendix C):

7800 South:

- Access 1 will be located directly across from Spruce Tree Lane, forming a 4-leg intersection. The access will be stop-controlled. The proposed access is located approximately 150 feet west of Ponderosa Way.

Chad Street:

- The second access to the site will be gained from the Chad Street stub road on the northwest corner of the property. This access will connect through the project to Access 1. Vehicles using this access can travel north on Chad Street to Lyndy Drive, and access 700 East (SR-71)
 - Although it is likely that some traffic will use the new connection through the proposed development as a cut-through route, it is not anticipated that this will draw very much traffic because of the circuitous route and out-of-direction travel.
 - The average daily traffic on Chad Street is approximately 100 – 150 vehicles per day. It is estimated that as much as 80 trips per day from the proposed development may use the Chad Street connection. In addition, it is anticipated that some of the existing neighbors will also use the new connection to access 7800 South (as much as 60 – 100 trips per day). Therefore, the total increase in traffic to Chad Street is estimated at 140 – 180 trips per day. This is well within the capacity of a two lane roadway.

IV. EXISTING (2017) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2017) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Project trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. The existing (2017) plus project evening peak hour volumes were generated for the study intersections and are shown in Figure 5.

C. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the evening peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 4 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. As shown in Table 4, all intersections are anticipated to operate at similar levels of service during the evening peak hour with project traffic added.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. No significant queuing is anticipated during the evening peak hour.

E. Mitigation Measures

As part of the project, the development team plans to widen 7800 South to match the existing cross section to the east and west of the property, as well as construct curb, gutter, and sidewalk. This widened cross section will allow 7800 South to be striped as a three lane roadway, with a center TWLTL, similar to the cross section of 7800 South west of 700 East (SR-71) and east of 1000 East. This will improve safety and operations by providing a center turn lane for left-turning vehicles. No additional mitigation measures are recommended.



Table 4 Existing (2017) Plus Project Evening Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach ^{1,3}	Aver. Delay (Sec/Veh) ¹	LOS ¹	Aver. Delay (Sec/Veh) ²	LOS ²
Spruce Tree Lane / 7800 South	NB Stop	NB	13.3	B	-	-
Chad Street / Lyndy Drive	NB Yield	NB	3.8	A	-	-
Lyndy Drive / 700 East (SR-71)	WB Stop	WB	> 50	F	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.
3. SB = Southbound approach, etc.

Source: Hales Engineering, January 2017

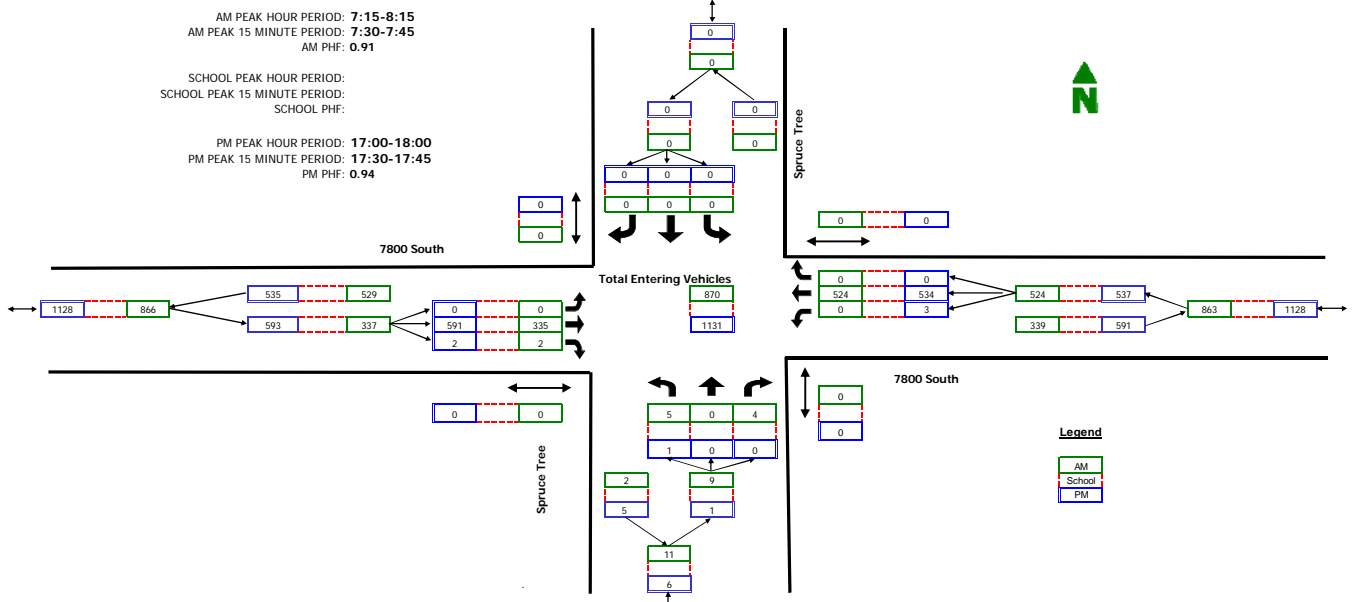
APPENDIX A

Turning Movement Counts

Intersection Turning Movement Summary

Intersection: Spruce Tree / 7800 South
North/South: Spruce Tree
East/West: 7800 South
Jurisdiction: Sandy
Project Title: Sandy 7800 South Townhomes TIS
Project No: UT17-989
Weather: Overcast

Date: 1-10-17, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

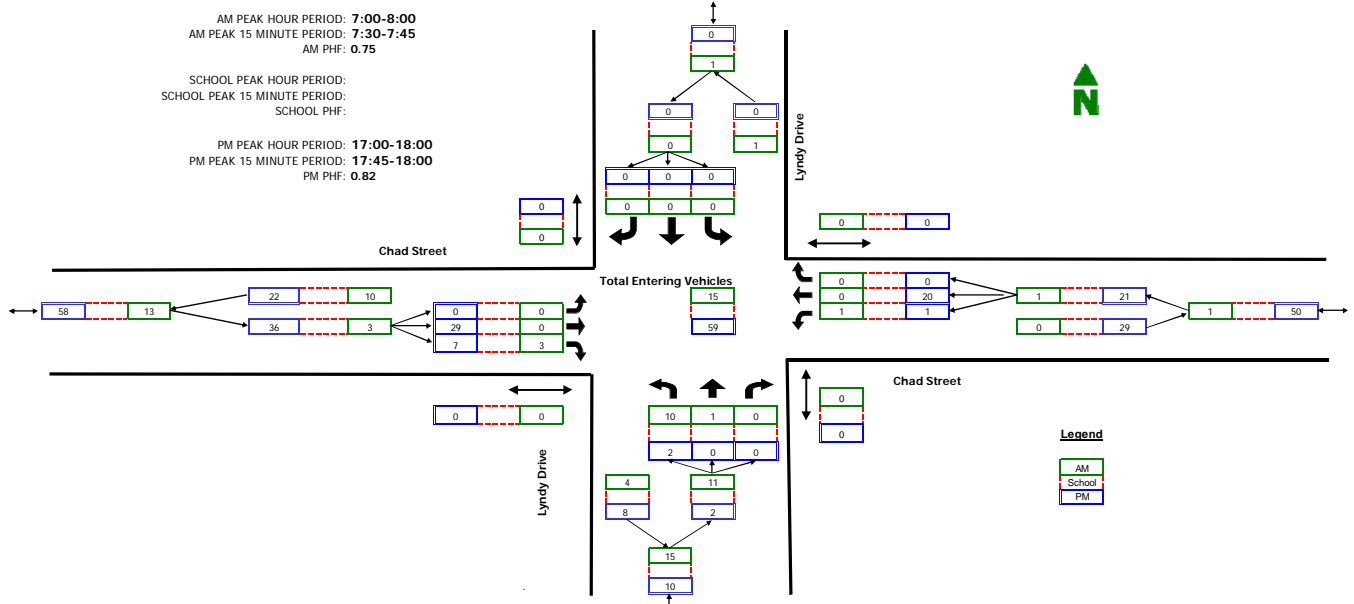


RAW COUNT SUMMARIES	Spruce Tree Northbound				Spruce Tree Southbound				7800 South Eastbound				7800 South Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	2	0	1	0	0	0	0	0	0	59	0	0	0	123	0	0	185
7:30-7:45	1	0	2	0	0	0	0	0	0	74	2	0	0	160	0	0	239
7:45-8:00	2	0	1	0	0	0	0	0	0	97	0	0	0	131	0	0	231
8:00-8:15	0	0	0	0	0	0	0	0	0	105	0	0	0	110	0	0	215
8:15-8:30	0	0	2	0	0	0	0	0	0	90	0	0	0	79	0	0	171
8:30-8:45	0	0	1	0	0	0	0	0	0	85	0	0	0	90	0	0	176
8:45-9:00	0	0	1	0	0	0	0	0	0	82	0	0	1	84	0	0	168
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00-9:15	1	0	0	0	0	0	0	0	0	76	0	0	0	72	0	0	149
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30-9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45-10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30-13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45-14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00-14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15-14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30-14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45-15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00-15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15-15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30-15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45-16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00-16:15	0	0	0	0	0	0	0	0	0	125	1	0	0	121	0	0	247
16:15-16:30	1	0	1	0	0	0	0	0	0	125	1	0	0	136	0	0	264
16:30-16:45	1	0	0	0	0	0	0	0	0	124	2	0	0	122	0	0	249
16:45-17:00	0	0	1	0	0	0	0	0	0	120	2	0	0	130	0	0	253
17:00-17:15	0	0	0	0	0	0	0	0	0	139	1	0	0	140	0	0	280
17:15-17:30	0	0	0	0	0	0	0	0	0	146	1	0	1	129	0	0	277
17:30-17:45	0	0	0	0	0	0	0	0	0	165	0	0	2	135	0	0	302
17:45-18:00	1	0	0	0	0	0	0	0	0	141	0	0	0	130	0	0	272

Intersection Turning Movement Summary

Intersection: Lyndy Drive / Chad Street
North/South: Lyndy Drive
East/West: Chad Street
Jurisdiction: Sandy
Project Title: Sandy 7800 South Townhomes TIS
Project No: UT17-989
Weather: Overcast

Date: 1-10-17, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

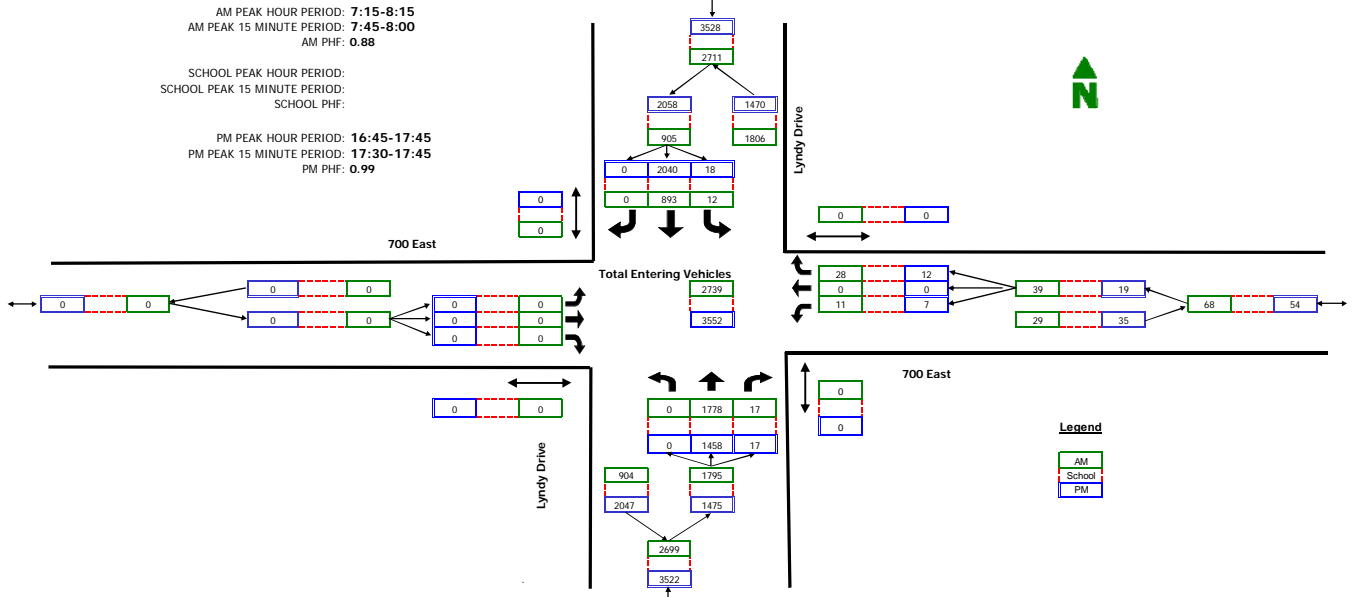


RAW COUNT SUMMARIES	Lyndy Drive Northbound				Lyndy Drive Southbound				Chad Street Eastbound				Chad Street Westbound				TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15-7:30	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3
7:30-7:45	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5
7:45-8:00	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
8:00-8:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15-8:30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30-8:45	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
8:45-9:00	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
MIDDAY PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
9:00-9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30-9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45-10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30-13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45-14:00	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
14:00-14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15-14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30-14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45-15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00-15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15-15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30-15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45-16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00-16:15	0	0	0	0	0	0	0	0	0	7	1	0	0	2	0	0	10
16:15-16:30	1	0	0	0	0	0	0	0	0	5	1	0	0	1	0	0	8
16:30-16:45	2	0	0	0	0	0	0	0	0	8	2	0	0	1	0	0	13
16:45-17:00	1	0	0	0	0	0	0	0	0	8	3	0	0	3	0	0	15
17:00-17:15	0	0	0	0	0	0	0	0	0	9	1	0	0	3	0	0	13
17:15-17:30	0	0	0	0	0	0	0	0	0	5	1	0	0	7	0	0	13
17:30-17:45	2	0	0	0	0	0	0	0	0	8	2	0	1	2	0	0	15
17:45-18:00	0	0	0	0	0	0	0	0	0	7	3	0	0	8	0	0	18

Intersection Turning Movement Summary

Intersection: Lyndy Drive / 700 East
North/South: Lyndy Drive
East/West: 700 East
Jurisdiction: Sandy
Project Title: Sandy 7800 South Townhomes TIS
Project No: UT17-989
Weather: Overcast

Date: 1-10-17, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0



RAW COUNT SUMMARIES	Lyndy Drive Northbound				Lyndy Drive Southbound				700 East Eastbound				700 East Westbound				TOTAL	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
AM PERIOD COUNTS																		
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL	
7:00-7:15	0	296	0	0	1	142	0	0	0	0	0	0	0	0	0	7	0	446
7:15-7:30	0	404	1	0	0	187	0	0	0	0	0	0	0	2	0	6	0	600
7:30-7:45	0	474	8	0	6	238	0	0	0	0	0	0	0	6	0	10	0	742
7:45-8:00	0	499	6	0	4	263	0	0	0	0	0	0	0	2	0	7	0	781
8:00-8:15	0	401	2	0	2	205	0	0	0	0	0	0	0	1	0	5	0	616
8:15-8:30	0	353	2	0	5	174	0	0	0	0	0	0	0	4	0	10	0	548
8:30-8:45	0	342	3	0	2	182	0	0	0	0	0	0	0	1	0	3	0	533
8:45-9:00	0	288	1	0	1	178	0	0	0	0	0	0	0	2	0	8	0	478
MIDDAY PERIOD COUNTS																		
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL	
9:00-9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30-9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45-10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30-13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45-14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00-14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15-14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30-14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45-15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00-15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15-15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30-15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45-16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PERIOD COUNTS																		
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL	
16:00-16:15	0	323	6	0	4	414	0	0	0	0	0	0	0	0	0	2	0	749
16:15-16:30	0	299	3	0	3	424	0	0	0	0	0	0	0	0	1	0	0	730
16:30-16:45	0	311	1	0	12	465	0	0	0	0	0	0	0	0	3	0	0	792
16:45-17:00	0	330	5	0	4	544	0	0	0	0	0	0	0	1	0	2	0	886
17:00-17:15	0	360	6	0	6	507	0	0	0	0	0	0	0	0	0	3	0	882
17:15-17:30	0	391	2	0	3	488	0	0	0	0	0	0	0	1	0	6	0	891
17:30-17:45	0	377	4	0	5	501	0	0	0	0	0	0	0	5	0	1	0	893
17:45-18:00	0	345	11	0	3	505	0	0	0	0	0	0	0	1	0	7	0	872

APPENDIX B

LOS Results

SimTraffic LOS Report

Project: Sandy - 7800 South Towhomes TIS
Analysis Period: Existing (2017) Background
Time Period: p.m. Peak Hour **Project #:** UT17-989

Intersection: Spruce Tree Lane & 7800 South
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	1	1	100	17.7	C
	Subtotal	1	1	100	17.7	C
EB	T	591	572	97	2.0	A
	R	2	2	100	1.6	A
	Subtotal	593	574	97	2.0	A
WB	L	3	2	67	5.1	A
	T	534	535	100	1.4	A
	Subtotal	537	537	100	1.4	A
Total		1,131	1,112	98	1.7	A

Intersection: Chad Street & Lyndy Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	2	2	100	2.3	A
	Subtotal	2	2	100	2.3	A
WB	L	1	1	100	0.2	A
	R	20	20	99	0.1	A
	Subtotal	21	21	100	0.1	A
SE	L	29	29	101	0.4	A
	T	1	1	133	0.4	A
	R	7	9	129	0.4	A
	Subtotal	37	39	105	0.4	A
Total		60	62	104	0.4	A

SimTraffic LOS Report

Project: Sandy - 7800 South Towhomes TIS
Analysis Period: Existing (2017) Background
Time Period: p.m. Peak Hour **Project #:** UT17-989

Intersection: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	8	7	85	226.4	F
	R	14	15	105	12.3	B
	Subtotal	22	22	100	80.4	F
NE	T	1,484	1,464	99	4.9	A
	R	18	21	115	4.8	A
	Subtotal	1,502	1,485	99	4.9	A
SW	L	18	18	99	16.3	C
	T	2,040	2,040	100	1.7	A
	Subtotal	2,058	2,058	100	1.8	A
Total		3,583	3,565	100	3.7	A

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: Spruce Tree Lane & 7800 South Performance by movement Interval #1 4:30

Movement	EBT	EBR	WBL	WBT	NBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0			0.4		0.2
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	1.9			1.1		1.6
Vehicles Entered	141	0	0	128	0	269
Vehicles Exited	143	0	0	129	0	272
Hourly Exit Rate	572	0	0	516	0	1088
Input Volume	578	2	3	523	1	1107
% of Volume	99	0	0	99	0	98

1: Spruce Tree Lane & 7800 South Performance by movement Interval #2 4:45

Movement	EBT	EBR	WBL	WBT	NBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0			0.4		0.2
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.0			1.2		1.6
Vehicles Entered	139	0	0	138	0	277
Vehicles Exited	136	0	0	138	0	274
Hourly Exit Rate	544	0	0	552	0	1096
Input Volume	578	2	3	523	1	1107
% of Volume	94	0	0	106	0	99

1: Spruce Tree Lane & 7800 South Performance by movement Interval #3 5:00

Movement	EBT	EBR	WBL	WBT	NBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.4	0.4		0.2
Total Delay (hr)	0.1	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	1.9	1.2	4.2	1.3		1.7
Vehicles Entered	149	1	1	139	0	290
Vehicles Exited	152	1	1	137	0	291
Hourly Exit Rate	608	4	4	548	0	1164
Input Volume	629	2	3	568	1	1203
% of Volume	97	200	133	96	0	97

1: Spruce Tree Lane & 7800 South Performance by movement Interval #4 5:15

Movement	EBT	EBR	WBL	WBT	NBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0			0.4		0.2
Total Delay (hr)	0.1	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	2.0			1.7		1.9
Vehicles Entered	142	0	0	129	0	271
Vehicles Exited	141	0	0	131	0	272
Hourly Exit Rate	564	0	0	524	0	1088
Input Volume	578	2	3	523	1	1107
% of Volume	98	0	0	100	0	98

1: Spruce Tree Lane & 7800 South Performance by movement Entire Run

Movement	EBT	EBR	WBL	WBT	NBL	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.6	0.4	0.1	0.2
Total Delay (hr)	0.3	0.0	0.0	0.2	0.0	0.5
Total Del/Veh (s)	2.0	1.6	5.1	1.4	17.7	1.7
Vehicles Entered	571	2	2	534	1	1110
Vehicles Exited	572	2	2	535	1	1112
Hourly Exit Rate	572	2	2	535	1	1112
Input Volume	591	2	3	534	1	1131
% of Volume	97	100	67	100	100	98

2: Chad Street & Lyndy Drive Performance by movement Interval #1 4:30

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.0	0.8	0.5		0.6	0.4
Vehicles Entered	0	5	1	8	0	3	17
Vehicles Exited	0	5	1	8	0	3	17
Hourly Exit Rate	0	20	4	32	0	12	68
Input Volume	1	20	2	28	1	7	59
% of Volume	0	100	200	114	0	171	115

2: Chad Street & Lyndy Drive Performance by movement Interval #2 4:45

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1		0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.0		0.3		0.3	0.2
Vehicles Entered	0	5	0	7	0	2	14
Vehicles Exited	0	5	0	8	0	2	15
Hourly Exit Rate	0	20	0	32	0	8	60
Input Volume	1	20	2	28	1	7	59
% of Volume	0	100	0	114	0	114	102

2: Chad Street & Lyndy Drive Performance by movement Interval #3 5:00

Movement	WBL	WBR	NBL	SEL	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1		0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.1		0.3	0.3	0.4
Vehicles Entered	0	5	0	8	2	15
Vehicles Exited	0	5	0	8	2	15
Hourly Exit Rate	0	20	0	32	8	60
Input Volume	1	21	2	31	7	62
% of Volume	0	95	0	103	114	97

2: Chad Street & Lyndy Drive Performance by movement Interval #4 5:15

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.2	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.1	1.6	0.5		0.2	0.4
Vehicles Entered	0	4	1	6	0	2	13
Vehicles Exited	0	5	1	6	0	2	14
Hourly Exit Rate	0	20	4	24	0	8	56
Input Volume	1	20	2	28	1	7	59
% of Volume	0	100	200	86	0	114	95

2: Chad Street & Lyndy Drive Performance by movement Entire Run

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.1	2.3	0.4	0.4	0.4	0.4
Vehicles Entered	1	20	2	29	1	9	62
Vehicles Exited	1	20	2	29	1	9	62
Hourly Exit Rate	1	20	2	29	1	9	62
Input Volume	1	20	2	29	1	7	60
% of Volume	100	99	100	101	133	129	104

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #1 4:30

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	2.1	0.6	0.4
Total Delay (hr)	0.1	0.0	0.5	0.0	0.0	0.1	0.8
Total Del/Veh (s)	153.2	9.9	4.8	5.1	18.4	0.8	3.1
Vehicles Entered	2	4	364	5	6	504	885
Vehicles Exited	2	4	362	6	6	504	884
Hourly Exit Rate	8	16	1448	24	24	2016	3536
Input Volume	8	14	1452	18	18	1997	3507
% of Volume	100	114	100	133	133	101	101

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #2 4:45

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	2.2	0.6	0.3
Total Delay (hr)	0.1	0.0	0.4	0.0	0.0	0.1	0.7
Total Del/Veh (s)	196.2	10.6	4.4	3.4	15.7	0.7	2.8
Vehicles Entered	1	4	352	5	4	501	867
Vehicles Exited	1	4	354	5	4	501	869
Hourly Exit Rate	4	16	1416	20	16	2004	3476
Input Volume	8	14	1452	18	18	1997	3507
% of Volume	50	114	98	111	89	100	99

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #3 5:00

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.2	0.0	0.0	1.9	0.8	0.5
Total Delay (hr)	0.1	0.0	0.6	0.0	0.0	0.3	1.0
Total Del/Veh (s)	139.9	15.3	5.4	5.4	11.5	1.7	3.6
Vehicles Entered	2	4	396	6	4	542	954
Vehicles Exited	2	4	390	6	4	538	944
Hourly Exit Rate	8	16	1560	24	16	2152	3776
Input Volume	9	15	1578	19	19	2170	3810
% of Volume	89	107	99	126	84	99	99

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #4 5:15

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.2	0.2
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	2.7	1.5	0.9
Total Delay (hr)	0.2	0.0	0.5	0.0	0.0	0.5	1.2
Total Del/Veh (s)	226.3	10.3	4.5	4.3	18.5	3.5	4.8
Vehicles Entered	2	3	354	5	4	493	861
Vehicles Exited	2	4	358	4	4	497	869
Hourly Exit Rate	8	16	1432	16	16	1988	3476
Input Volume	8	14	1452	18	18	1997	3507
% of Volume	100	114	99	89	89	100	99

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Entire Run

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.5	0.5
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	2.2	0.9	0.5
Total Delay (hr)	0.5	0.1	2.0	0.0	0.1	1.0	3.6
Total Del/Veh (s)	226.4	12.3	4.9	4.8	16.3	1.7	3.7
Vehicles Entered	7	15	1466	21	18	2040	3567
Vehicles Exited	7	15	1464	21	18	2040	3565
Hourly Exit Rate	7	15	1464	21	18	2040	3565
Input Volume	8	14	1484	18	18	2040	3583
% of Volume	85	105	99	115	99	100	100

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #1 4:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.5	1.0	3.5	0.0	0.0	0.0	2.4	0.5	2.4	0.0	0.0	0.0
Total Delay (hr)	0.8	0.7	0.3	0.7	0.8	0.2	0.8	1.4	0.1	0.7	3.2	0.2
Total Del/Veh (s)	70.3	55.4	28.8	67.9	56.8	14.0	72.1	17.7	8.6	51.4	26.2	17.1
Vehicles Entered	37	43	35	33	46	50	35	278	54	47	414	46
Vehicles Exited	35	39	34	30	42	48	33	287	55	47	422	46
Hourly Exit Rate	140	156	136	120	168	192	132	1148	220	188	1688	184
Input Volume	147	166	147	137	186	201	147	1122	218	196	1634	176
% of Volume	95	94	93	88	90	96	90	102	101	96	103	105

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #1 4:30

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.6
Total Delay (hr)	9.9
Total Del/Veh (s)	30.1
Vehicles Entered	1118
Vehicles Exited	1118
Hourly Exit Rate	4472
Input Volume	4477
% of Volume	100

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #2 4:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.3	0.9	3.5	0.0	0.0	0.0	2.3	0.5	2.5	0.0	0.0	0.0
Total Delay (hr)	1.1	0.7	0.3	0.8	0.9	0.2	0.9	1.5	0.1	0.9	4.9	0.4
Total Del/Veh (s)	88.5	52.8	28.8	70.5	62.2	15.6	77.2	19.8	8.5	62.0	41.1	29.0
Vehicles Entered	38	41	40	37	48	53	37	273	49	47	414	41
Vehicles Exited	40	44	42	40	52	54	39	263	49	46	392	40
Hourly Exit Rate	160	176	168	160	208	216	156	1052	196	184	1568	160
Input Volume	147	166	147	137	186	201	147	1122	218	196	1634	176
% of Volume	109	106	114	117	112	107	106	94	90	94	96	91

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #2 4:45

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.6
Total Delay (hr)	12.8
Total Del/Veh (s)	39.0
Vehicles Entered	1118
Vehicles Exited	1101
Hourly Exit Rate	4404
Input Volume	4477
% of Volume	98

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #3 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.5	1.1	3.4	0.0	0.0	0.0	2.4	0.6	2.4	0.0	0.0	0.0
Total Delay (hr)	1.0	0.7	0.4	0.9	0.7	0.3	1.1	1.9	0.2	1.2	6.6	0.5
Total Del/Veh (s)	86.3	55.9	32.1	80.8	56.8	18.1	98.5	22.1	10.8	75.8	49.4	38.4
Vehicles Entered	37	46	42	37	44	56	40	302	59	52	440	48
Vehicles Exited	34	42	39	34	42	55	37	313	59	50	445	47
Hourly Exit Rate	136	168	156	136	168	220	148	1252	236	200	1780	188
Input Volume	160	181	160	149	202	218	160	1219	237	213	1775	191
% of Volume	85	93	98	91	83	101	92	103	100	94	100	98

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #3 5:00

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.6
Total Delay (hr)	15.7
Total Del/Veh (s)	43.8
Vehicles Entered	1203
Vehicles Exited	1197
Hourly Exit Rate	4788
Input Volume	4865
% of Volume	98

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #4 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.5	0.9	3.6	0.0	0.0	0.0	2.4	0.5	2.4	0.0	0.0	0.0
Total Delay (hr)	0.8	0.6	0.3	1.1	1.0	0.2	0.9	1.6	0.1	1.0	6.9	0.6
Total Del/Veh (s)	67.0	48.2	27.5	95.5	66.7	17.3	76.6	20.5	8.9	69.7	55.8	45.0
Vehicles Entered	39	40	39	35	46	50	35	276	55	44	410	45
Vehicles Exited	41	44	42	38	47	49	37	269	54	45	407	45
Hourly Exit Rate	164	176	168	152	188	196	148	1076	216	180	1628	180
Input Volume	147	166	147	137	186	201	147	1122	218	196	1634	176
% of Volume	112	106	114	111	101	98	101	96	99	92	100	102

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #4 5:15

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.6
Total Delay (hr)	15.2
Total Del/Veh (s)	45.5
Vehicles Entered	1114
Vehicles Exited	1118
Hourly Exit Rate	4472
Input Volume	4477
% of Volume	100

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.2	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	3.5	1.0	3.5	0.0	0.0	0.0	2.4	0.5	2.4	0.0	0.0	0.0
Total Delay (hr)	3.7	2.7	1.4	3.5	3.4	1.0	3.7	6.5	0.6	3.7	21.7	1.7
Total Del/Veh (s)	86.6	57.4	31.0	87.7	66.0	16.9	88.4	20.5	9.4	69.5	45.8	34.1
Vehicles Entered	151	169	156	143	185	208	147	1129	216	191	1678	179
Vehicles Exited	150	168	156	141	182	206	146	1131	216	188	1666	179
Hourly Exit Rate	150	168	156	141	182	206	146	1131	216	188	1666	179
Input Volume	150	170	150	140	190	205	150	1146	223	200	1669	180
% of Volume	100	99	104	101	96	100	97	99	97	94	100	100

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Entire Run

Movement	All
Denied Delay (hr)	0.8
Denied Del/Veh (s)	0.6
Total Delay (hr)	53.6
Total Del/Veh (s)	41.8
Vehicles Entered	4552
Vehicles Exited	4529
Hourly Exit Rate	4529
Input Volume	4574
% of Volume	99

Total Network Performance By Interval

Interval Start	4:30	4:45	5:00	5:15	All
Denied Delay (hr)	0.3	0.3	0.3	0.4	1.3
Denied Del/Veh (s)	0.9	0.9	1.0	1.3	1.0
Total Delay (hr)	11.5	14.3	17.5	17.2	60.5
Total Del/Veh (s)	33.3	41.7	46.8	49.3	46.4
Vehicles Entered	1126	1126	1218	1115	4586
Vehicles Exited	1132	1105	1202	1125	4565
Hourly Exit Rate	4528	4420	4808	4500	4565
Input Volume	13656	13656	14835	13656	13951
% of Volume	33	32	32	33	33

Intersection: 1: Spruce Tree Lane & 7800 South, Interval #1

Movement	NB
Directions Served	LR
Maximum Queue (ft)	9
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	176
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 1: Spruce Tree Lane & 7800 South, Interval #2

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	13	3
Average Queue (ft)	2	0
95th Queue (ft)	22	7
Link Distance (ft)	1465	176
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: Spruce Tree Lane & 7800 South, Interval #3

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	14	9
Average Queue (ft)	2	2
95th Queue (ft)	19	14
Link Distance (ft)	1465	176
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: Spruce Tree Lane & 7800 South, Interval #4

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	30	9
Average Queue (ft)	5	1
95th Queue (ft)	49	9
Link Distance (ft)	1465	176
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 1: Spruce Tree Lane & 7800 South, All Intervals

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	53	21
Average Queue (ft)	2	1
95th Queue (ft)	28	11
Link Distance (ft)	1465	176
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Chad Street & Lyndy Drive, Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 2: Chad Street & Lyndy Drive, Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 2: Chad Street & Lyndy Drive, Interval #3

Movement	NB
Directions Served	LR
Maximum Queue (ft)	2
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	466
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Chad Street & Lyndy Drive, Interval #4

Movement	NB
Directions Served	LR
Maximum Queue (ft)	2
Average Queue (ft)	0
95th Queue (ft)	5
Link Distance (ft)	466
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Chad Street & Lyndy Drive, All Intervals

Movement	NB
Directions Served	LR
Maximum Queue (ft)	5
Average Queue (ft)	0
95th Queue (ft)	4
Link Distance (ft)	466
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #1

Movement	NW	NW	SW
Directions Served	L	R	L
Maximum Queue (ft)	43	39	38
Average Queue (ft)	15	14	16
95th Queue (ft)	47	43	44
Link Distance (ft)	182		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	100
Storage Blk Time (%)	8	0	
Queuing Penalty (veh)	1	0	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #2

Movement	NW	NW	SW
Directions Served	L	R	L
Maximum Queue (ft)	34	40	34
Average Queue (ft)	13	15	12
95th Queue (ft)	42	44	36
Link Distance (ft)	182		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	100
Storage Blk Time (%)	12	1	
Queuing Penalty (veh)	2	0	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #3

Movement	NW	NW	NE	NE	SW	SW	SW
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	42	52	3	2	32	73	56
Average Queue (ft)	13	18	0	0	10	4	2
95th Queue (ft)	44	54	5	4	32	58	28
Link Distance (ft)	182		1383	1383		374	374
Upstream Blk Time (%)						0	0
Queuing Penalty (veh)						0	0
Storage Bay Dist (ft)		50			100		
Storage Blk Time (%)	8	1				1	
Queuing Penalty (veh)	1	0				0	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #4

Movement	NW	NW	NE	SW	SW	SW
Directions Served	L	R	TR	L	T	T
Maximum Queue (ft)	47	36	2	50	70	60
Average Queue (ft)	21	15	0	17	39	36
95th Queue (ft)	56	46	5	75	232	220
Link Distance (ft)	182		1383		374	374
Upstream Blk Time (%)					3	3
Queuing Penalty (veh)					0	0
Storage Bay Dist (ft)		50		100		
Storage Blk Time (%)	17	0			4	
Queuing Penalty (veh)	2	0			1	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, All Intervals

Movement	NW	NW	NE	NE	SW	SW	SW
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	61	66	3	4	62	73	60
Average Queue (ft)	16	15	0	0	14	11	10
95th Queue (ft)	48	47	3	3	50	114	106
Link Distance (ft)	182		1383	1383		374	374
Upstream Blk Time (%)						1	1
Queuing Penalty (veh)						0	0
Storage Bay Dist (ft)		50			100		
Storage Blk Time (%)	11	1				1	
Queuing Penalty (veh)	2	0				0	

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	181	233	176	164	284	115	245	356	365	150	249	540
Average Queue (ft)	119	143	82	106	149	60	125	247	219	88	167	396
95th Queue (ft)	209	271	180	182	279	118	243	386	399	180	292	598
Link Distance (ft)		932			828			487	487			1383
Upstream Blk Time (%)								0	1			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	20	23	5	20	25		23	25	14	0	7	25
Queuing Penalty (veh)	63	67	16	79	85		127	36	30	1	60	49

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #1

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	531	200
Average Queue (ft)	389	116
95th Queue (ft)	587	257
Link Distance (ft)	1383	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)	28	0
Queuing Penalty (veh)	50	4

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	209	289	184	178	350	150	242	378	325	158	250	643
Average Queue (ft)	159	202	113	143	211	79	158	249	197	74	169	491
95th Queue (ft)	254	360	209	212	391	185	272	401	356	176	294	911
Link Distance (ft)		932			828			487	487			1383
Upstream Blk Time (%)								0				
Queuing Penalty (veh)								0				
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	35	23	7	32	34		33	27	16	0	6	33
Queuing Penalty (veh)	111	66	22	123	114		183	40	34	2	50	64

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #2

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	641	184
Average Queue (ft)	487	102
95th Queue (ft)	907	242
Link Distance (ft)	1383	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)	37	0
Queuing Penalty (veh)	64	2

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	209	298	158	176	285	184	284	433	392	160	250	935
Average Queue (ft)	139	178	94	127	159	84	174	333	278	95	179	658
95th Queue (ft)	248	318	190	199	318	198	303	491	428	195	306	1096
Link Distance (ft)		932			828			487	487			1383
Upstream Blk Time (%)								1	0			0
Queuing Penalty (veh)								0	0			3
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	33	27	9	32	23		48	29	20	0	10	32
Queuing Penalty (veh)	111	86	32	136	84		293	46	46	2	91	69

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #3

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	940	200
Average Queue (ft)	656	119
95th Queue (ft)	1075	261
Link Distance (ft)	1383	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	3	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	35	0
Queuing Penalty (veh)	66	1

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	217	279	181	179	413	274	235	360	304	158	250	942
Average Queue (ft)	146	168	103	138	248	98	149	249	190	85	164	686
95th Queue (ft)	239	303	194	210	525	291	261	402	340	179	288	1242
Link Distance (ft)		932			828			487	487			1383
Upstream Blk Time (%)					1			1	0			1
Queuing Penalty (veh)					6			0	0			5
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	25	19	6	40	28		32	28	16	0	5	36
Queuing Penalty (veh)	78	57	20	157	95		177	41	34	1	43	71

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #4

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	937	200
Average Queue (ft)	675	138
95th Queue (ft)	1228	271
Link Distance (ft)	1383	
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	7	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	39	0
Queuing Penalty (veh)	69	3

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	235	368	199	180	478	304	289	480	463	160	250	1018
Average Queue (ft)	141	172	98	129	192	80	151	270	221	85	170	558
95th Queue (ft)	240	317	195	205	397	210	273	431	391	183	296	1025
Link Distance (ft)		932			828			487	487			1383
Upstream Blk Time (%)					0			1	0			0
Queuing Penalty (veh)					1			0	0			2
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	28	23	7	31	27		34	27	16	0	7	32
Queuing Penalty (veh)	91	69	23	124	94		195	41	36	1	61	63

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, All Intervals

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	998	200
Average Queue (ft)	552	119
95th Queue (ft)	1013	259
Link Distance (ft)	1383	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	2	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	35	0
Queuing Penalty (veh)	62	2

Network Summary

Network wide Queuing Penalty, Interval #1: 668
Network wide Queuing Penalty, Interval #2: 878
Network wide Queuing Penalty, Interval #3: 1070
Network wide Queuing Penalty, Interval #4: 868
Network wide Queuing Penalty, All Intervals: 871

SimTraffic LOS Report

Project: Sandy - 7800 South Townhomes TIS
Analysis Period: Existing (2017) Plus Project
Time Period: p.m. Peak Hour **Project #:** UT17-989

Intersection: Spruce Tree Lane/Townhome Access & 7800 South
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	1	1	100	13.3	B
	Subtotal	1	1	100	13.3	B
SB	L	2	3	150	9.2	A
	R	4	6	150	5.8	A
	Subtotal	6	9	150	6.9	A
EB	L	10	9	88	4.4	A
	T	592	588	99	2.2	A
	R	2	3	150	2.3	A
	Subtotal	604	600	99	2.2	A
WB	L	3	2	67	6.5	A
	T	534	532	100	1.3	A
	R	4	4	100	0.9	A
	Subtotal	541	538	99	1.3	A
Total		1,152	1,148	100	1.9	A

Intersection: Chad Street & Lyndy Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	5	6	120	3.8	A
	Subtotal	5	6	120	3.8	A
WB	L	1	0	0		
	R	20	21	104	0.0	A
	Subtotal	21	21	100	0.0	A
SE	L	29	29	101	0.5	A
	T	2	2	100	0.9	A
	R	12	13	106	0.4	A
	Subtotal	43	44	102	0.5	A
Total		69	71	103	0.6	A

SimTraffic LOS Report

Project: Sandy - 7800 South Towhomes TIS
Analysis Period: Existing (2017) Plus Project
Time Period: p.m. Peak Hour **Project #:** UT17-989

Intersection: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NW	L	8	8	97	350.9	F
	R	17	18	104	21.0	C
	Subtotal	25	26	104	122.5	F
NE	T	1,484	1,460	98	5.1	A
	R	18	20	110	4.5	A
	Subtotal	1,502	1,480	99	5.1	A
SW	L	23	23	99	16.8	C
	T	2,041	2,048	100	1.5	A
	Subtotal	2,064	2,071	100	1.7	A
Total		3,592	3,577	100	4.1	A

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: Spruce Tree Lane/Townhome Access & 7800 South Performance by movement Interval #1 4:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.4	0.2			0.1	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	3.7	2.2	1.3		1.4	0.6		6.7	9.3	1.9
Vehicles Entered	3	138	1	0	133	1	0	0	1	277
Vehicles Exited	3	139	1	0	133	1	0	1	1	279
Hourly Exit Rate	12	556	4	0	532	4	0	4	4	1116
Input Volume	10	579	2	3	523	4	1	2	4	1128
% of Volume	120	96	200	0	102	100	0	200	100	99

1: Spruce Tree Lane/Townhome Access & 7800 South Performance by movement Interval #2 4:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0		0.4	0.5		0.1	0.2	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.3	2.2	1.6		1.2	0.9		5.9	4.4	1.7
Vehicles Entered	2	143	1	0	129	1	0	1	2	279
Vehicles Exited	2	142	1	0	130	1	0	1	2	279
Hourly Exit Rate	8	568	4	0	520	4	0	4	8	1116
Input Volume	10	579	2	3	523	4	1	2	4	1128
% of Volume	80	98	200	0	99	100	0	200	200	99

1: Spruce Tree Lane/Townhome Access & 7800 South Performance by movement Interval #3 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.4	0.6		0.1	0.1	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	5.2	2.1	1.8	3.6	1.4	1.1		4.6	10.2	1.8
Vehicles Entered	2	152	1	1	143	1	0	1	1	302
Vehicles Exited	2	154	1	1	142	1	0	1	1	303
Hourly Exit Rate	8	616	4	4	568	4	0	4	4	1212
Input Volume	11	629	2	3	568	4	1	2	4	1224
% of Volume	73	98	200	133	100	100	0	200	100	99

1: Spruce Tree Lane/Townhome Access & 7800 South Performance by movement Interval #4 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.4	0.4		0.1	0.1	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	4.0	2.3	2.1	2.7	1.2	1.1		10.6	6.6	1.9
Vehicles Entered	2	156	1	1	127	1	0	1	1	290
Vehicles Exited	2	154	1	1	128	1	0	1	1	289
Hourly Exit Rate	8	616	4	4	512	4	0	4	4	1156
Input Volume	10	579	2	3	523	4	1	2	4	1128
% of Volume	80	106	200	133	98	100	0	200	100	102

1: Spruce Tree Lane/Townhome Access & 7800 South Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.4	0.4	0.1	0.1	0.1	0.2
Total Delay (hr)	0.0	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.6
Total Del/Veh (s)	4.4	2.2	2.3	6.5	1.3	0.9	13.3	9.2	5.8	1.9
Vehicles Entered	9	589	3	2	532	4	1	2	6	1148
Vehicles Exited	9	588	3	2	532	4	1	3	6	1148
Hourly Exit Rate	9	588	3	2	532	4	1	3	6	1148
Input Volume	10	592	2	3	534	4	1	2	4	1152
% of Volume	88	99	150	67	100	100	100	150	150	100

2: Chad Street & Lyndy Drive Performance by movement Interval #1 4:30

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.0	1.8	0.5		0.3	0.5
Vehicles Entered	0	5	2	7	0	5	19
Vehicles Exited	0	5	2	7	0	5	19
Hourly Exit Rate	0	20	8	28	0	20	76
Input Volume	1	20	5	28	2	12	68
% of Volume	0	100	160	100	0	167	112

2: Chad Street & Lyndy Drive Performance by movement Interval #2 4:45

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.1	1.8	0.5	0.3	0.4	0.5
Vehicles Entered	0	6	2	7	1	3	19
Vehicles Exited	0	6	2	7	1	3	19
Hourly Exit Rate	0	24	8	28	4	12	76
Input Volume	1	20	5	28	2	12	68
% of Volume	0	120	160	100	200	100	112

2: Chad Street & Lyndy Drive Performance by movement Interval #3 5:00

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.0	1.5	0.5	0.7	0.4	0.4
Vehicles Entered	0	5	1	7	1	3	17
Vehicles Exited	0	5	1	7	1	3	17
Hourly Exit Rate	0	20	4	28	4	12	68
Input Volume	1	21	5	31	2	13	73
% of Volume	0	95	80	90	200	92	93

2: Chad Street & Lyndy Drive Performance by movement Interval #4 5:15

Movement	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.0	7.0	0.5		0.4	1.2
Vehicles Entered	4	2	7	0	3	16
Vehicles Exited	4	2	7	0	3	16
Hourly Exit Rate	16	8	28	0	12	64
Input Volume	20	5	28	2	12	68
% of Volume	80	160	100	0	100	94

2: Chad Street & Lyndy Drive Performance by movement Entire Run

Movement	WBL	WBR	NBL	SEL	SET	SER	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.0	3.8	0.5	0.9	0.4	0.6
Vehicles Entered	0	21	6	29	2	13	71
Vehicles Exited	0	21	6	29	2	13	71
Hourly Exit Rate	0	21	6	29	2	13	71
Input Volume	1	20	5	29	2	12	69
% of Volume	0	104	120	101	100	106	103

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #1 4:30

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	2.2	0.6	0.4
Total Delay (hr)	0.1	0.0	0.5	0.0	0.0	0.1	0.7
Total Del/Veh (s)	132.0	11.4	4.7	4.0	13.2	0.7	3.0
Vehicles Entered	3	5	366	5	6	491	876
Vehicles Exited	2	4	364	5	6	491	872
Hourly Exit Rate	8	16	1456	20	24	1964	3488
Input Volume	8	17	1452	18	23	1998	3516
% of Volume	100	94	100	111	104	98	99

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #2 4:45

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	2.0	0.5	0.3
Total Delay (hr)	0.2	0.0	0.5	0.0	0.0	0.1	0.8
Total Del/Veh (s)	250.7	9.2	4.8	4.2	15.7	0.6	3.4
Vehicles Entered	3	5	355	6	6	498	873
Vehicles Exited	2	5	356	6	5	498	872
Hourly Exit Rate	8	20	1424	24	20	1992	3488
Input Volume	8	17	1452	18	23	1998	3516
% of Volume	100	118	98	133	87	100	99

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #3 5:00

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	5.7	0.4	0.0	0.0	2.2	0.7	0.4
Total Delay (hr)	0.4	0.0	0.6	0.0	0.0	0.2	1.3
Total Del/Veh (s)	428.1	17.3	5.5	4.9	18.7	1.5	4.6
Vehicles Entered	2	5	389	5	6	555	962
Vehicles Exited	2	5	384	5	6	552	954
Hourly Exit Rate	8	20	1536	20	24	2208	3816
Input Volume	9	18	1578	19	24	2171	3819
% of Volume	89	111	97	105	100	102	100

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Interval #4 5:15

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	2.5	0.7	0.4
Total Delay (hr)	0.3	0.0	0.5	0.0	0.0	0.5	1.3
Total Del/Veh (s)	269.1	44.7	4.7	3.9	16.7	3.2	5.3
Vehicles Entered	2	4	348	4	5	507	870
Vehicles Exited	3	3	355	4	6	507	878
Hourly Exit Rate	12	12	1420	16	24	2028	3512
Input Volume	8	17	1452	18	23	1998	3516
% of Volume	150	71	98	89	104	102	100

3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive Performance by movement Entire Run

Movement	NWL	NWR	NET	NER	SWL	SWT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.4	0.4
Denied Del/Veh (s)	1.1	0.1	0.0	0.0	2.2	0.6	0.4
Total Delay (hr)	1.0	0.1	2.1	0.0	0.1	0.9	4.1
Total Del/Veh (s)	350.9	21.0	5.1	4.5	16.8	1.5	4.1
Vehicles Entered	10	18	1458	20	23	2050	3579
Vehicles Exited	8	18	1460	20	23	2048	3577
Hourly Exit Rate	8	18	1460	20	23	2048	3577
Input Volume	8	17	1484	18	23	2041	3592
% of Volume	97	104	98	110	99	100	100

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #1 4:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.5	0.8	3.6	0.0	0.0	0.0	3.0	0.9	2.5	0.0	0.0	0.0
Total Delay (hr)	0.8	0.7	0.3	0.9	0.8	0.2	1.0	1.6	0.1	0.7	3.2	0.2
Total Del/Veh (s)	74.2	55.8	29.9	81.4	62.4	16.3	92.0	19.4	9.2	50.8	26.4	18.6
Vehicles Entered	36	40	39	36	48	51	36	282	56	48	404	42
Vehicles Exited	31	38	38	33	43	52	34	289	56	48	412	42
Hourly Exit Rate	124	152	152	132	172	208	136	1156	224	192	1648	168
Input Volume	147	169	147	140	187	201	147	1122	224	197	1634	176
% of Volume	84	90	103	94	92	103	93	103	100	97	101	95

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #1 4:30

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.7
Total Delay (hr)	10.6
Total Del/Veh (s)	32.3
Vehicles Entered	1118
Vehicles Exited	1116
Hourly Exit Rate	4464
Input Volume	4491
% of Volume	99

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #2 4:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	5.5	4.7	6.9	0.0	0.0	0.0	2.8	1.0	2.8	0.0	0.0	0.0
Total Delay (hr)	1.0	0.7	0.4	0.7	0.7	0.2	1.2	1.8	0.2	0.8	4.2	0.3
Total Del/Veh (s)	91.7	57.3	42.3	59.2	48.4	15.5	100.6	22.9	10.0	58.1	35.3	23.6
Vehicles Entered	34	40	36	34	46	52	39	280	57	48	407	45
Vehicles Exited	37	41	35	38	50	52	39	271	56	48	388	44
Hourly Exit Rate	148	164	140	152	200	208	156	1084	224	192	1552	176
Input Volume	147	169	147	140	187	201	147	1122	224	197	1634	176
% of Volume	101	97	95	109	107	103	106	97	100	97	95	100

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #2 4:45

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	1.0
Total Delay (hr)	12.3
Total Del/Veh (s)	37.5
Vehicles Entered	1118
Vehicles Exited	1099
Hourly Exit Rate	4396
Input Volume	4491
% of Volume	98

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #3 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	7.2	5.1	6.1	0.0	0.0	0.0	4.5	2.8	4.8	0.0	0.0	0.0
Total Delay (hr)	1.1	1.1	0.7	1.0	0.9	0.3	1.3	2.1	0.2	1.3	7.4	0.7
Total Del/Veh (s)	105.7	73.8	53.3	86.7	61.2	20.5	112.3	23.5	13.0	77.7	54.7	47.2
Vehicles Entered	36	47	43	39	51	53	37	302	61	54	450	49
Vehicles Exited	32	44	40	35	45	53	36	309	61	50	445	47
Hourly Exit Rate	128	176	160	140	180	212	144	1236	244	200	1780	188
Input Volume	160	184	160	152	203	218	160	1219	244	214	1775	191
% of Volume	80	96	100	92	89	97	90	101	100	93	100	98

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #3 5:00

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	1.7
Total Delay (hr)	18.1
Total Del/Veh (s)	49.9
Vehicles Entered	1222
Vehicles Exited	1197
Hourly Exit Rate	4788
Input Volume	4880
% of Volume	98

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #4 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	3.6	0.9	3.6	0.0	0.0	0.0	5.4	2.6	4.8	0.0	0.2	0.0
Total Delay (hr)	1.2	0.9	0.5	0.9	0.8	0.2	1.3	2.0	0.2	1.5	9.0	0.8
Total Del/Veh (s)	98.8	58.4	41.0	73.3	51.2	16.1	110.8	25.0	13.8	92.3	71.1	57.1
Vehicles Entered	35	44	36	36	46	48	36	280	56	49	415	45
Vehicles Exited	39	50	40	38	50	48	38	266	56	53	407	45
Hourly Exit Rate	156	200	160	152	200	192	152	1064	224	212	1628	180
Input Volume	147	169	147	140	187	201	147	1122	224	197	1634	176
% of Volume	106	118	109	109	107	96	103	95	100	108	100	102

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Interval #4 5:15

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.4
Total Delay (hr)	19.1
Total Del/Veh (s)	55.8
Vehicles Entered	1126
Vehicles Exited	1130
Hourly Exit Rate	4520
Input Volume	4491
% of Volume	101

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.1	0.2	0.0	0.0	0.0	0.2	0.6	0.2	0.0	0.0	0.0
Denied Del/Veh (s)	4.9	2.9	5.0	0.0	0.0	0.0	3.9	1.8	3.7	0.0	0.0	0.0
Total Delay (hr)	4.1	3.3	1.9	3.4	3.2	1.0	4.8	7.4	0.8	4.3	23.8	2.0
Total Del/Veh (s)	104.0	68.4	45.0	82.3	60.3	17.8	115.2	23.2	11.7	76.5	50.3	39.5
Vehicles Entered	141	172	154	145	190	204	148	1144	230	200	1676	180
Vehicles Exited	139	173	154	144	188	204	147	1135	229	198	1651	179
Hourly Exit Rate	139	173	154	144	188	204	147	1135	229	198	1651	179
Input Volume	150	173	150	143	191	205	150	1146	229	201	1669	180
% of Volume	93	100	102	101	98	99	98	99	100	98	99	100

4: 700 East (SR-71)/700 East (SRS-71) & 7800 South Performance by movement Entire Run

Movement	All
Denied Delay (hr)	1.5
Denied Del/Veh (s)	1.2
Total Delay (hr)	60.1
Total Del/Veh (s)	46.6
Vehicles Entered	4584
Vehicles Exited	4541
Hourly Exit Rate	4541
Input Volume	4588
% of Volume	99

Total Network Performance By Interval

Interval Start	4:30	4:45	5:00	5:15	All
Denied Delay (hr)	0.3	0.4	0.7	0.6	2.0
Denied Del/Veh (s)	1.0	1.3	2.0	1.8	1.5
Total Delay (hr)	12.1	13.9	20.2	21.3	67.5
Total Del/Veh (s)	35.3	40.6	53.2	59.1	51.2
Vehicles Entered	1128	1131	1240	1136	4637
Vehicles Exited	1131	1108	1206	1146	4594
Hourly Exit Rate	4524	4432	4824	4584	4594
Input Volume	13754	13754	14940	13754	14050
% of Volume	33	32	32	33	33

Intersection: 1: Spruce Tree Lane/Townhome Access & 7800 South, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	28	21	6	30
Average Queue (ft)	5	5	1	8
95th Queue (ft)	28	47	9	31
Link Distance (ft)	833	1459	176	360
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 1: Spruce Tree Lane/Townhome Access & 7800 South, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	11	9	33
Average Queue (ft)	6	2	2	9
95th Queue (ft)	29	14	13	33
Link Distance (ft)	833	1459	176	360
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 1: Spruce Tree Lane/Townhome Access & 7800 South, Interval #3

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	24	28	6	31
Average Queue (ft)	3	4	1	7
95th Queue (ft)	25	30	9	28
Link Distance (ft)	833	1459	176	360
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 1: Spruce Tree Lane/Townhome Access & 7800 South, Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	21	11	3	27
Average Queue (ft)	2	2	0	7
95th Queue (ft)	19	14	6	28
Link Distance (ft)	833	1459	176	360
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 1: Spruce Tree Lane/Townhome Access & 7800 South, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	55	47	18	38
Average Queue (ft)	4	3	1	8
95th Queue (ft)	26	29	9	30
Link Distance (ft)	833	1459	176	360
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Chad Street & Lyndy Drive, Interval #1

Movement	NB
Directions Served	LR
Maximum Queue (ft)	8
Average Queue (ft)	1
95th Queue (ft)	10
Link Distance (ft)	462
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Chad Street & Lyndy Drive, Interval #2

Movement	NB
Directions Served	LR
Maximum Queue (ft)	3
Average Queue (ft)	1
95th Queue (ft)	6
Link Distance (ft)	462
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Chad Street & Lyndy Drive, Interval #3

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Chad Street & Lyndy Drive, Interval #4

Movement	NB
Directions Served	LR
Maximum Queue (ft)	8
Average Queue (ft)	1
95th Queue (ft)	8
Link Distance (ft)	462
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Chad Street & Lyndy Drive, All Intervals

Movement	NB
Directions Served	LR
Maximum Queue (ft)	11
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	462
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #1

Movement	NW	NW	SW
Directions Served	L	R	L
Maximum Queue (ft)	37	47	37
Average Queue (ft)	17	18	14
95th Queue (ft)	49	54	41
Link Distance (ft)	191		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	100
Storage Blk Time (%)	9	0	
Queuing Penalty (veh)	2	0	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #2

Movement	NW	NW	NE	SW	SW
Directions Served	L	R	TR	L	T
Maximum Queue (ft)	56	48	4	37	12
Average Queue (ft)	23	19	1	13	2
95th Queue (ft)	71	53	9	40	24
Link Distance (ft)	191		1384		374
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		50		100	
Storage Blk Time (%)	24	1			0
Queuing Penalty (veh)	4	0			0

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #3

Movement	NW	NW	NE	SW	SW	SW
Directions Served	L	R	TR	L	T	T
Maximum Queue (ft)	60	50	4	44	31	3
Average Queue (ft)	35	19	1	17	4	0
95th Queue (ft)	102	60	7	50	35	6
Link Distance (ft)	191		1384		374	374
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		50		100		
Storage Blk Time (%)	35	1		0	0	
Queuing Penalty (veh)	6	0		5	0	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, Interval #4

Movement	NW	NW	SW	SW	SW
Directions Served	L	R	L	T	T
Maximum Queue (ft)	80	58	57	59	49
Average Queue (ft)	37	17	22	30	21
95th Queue (ft)	119	60	79	174	153
Link Distance (ft)	191			374	374
Upstream Blk Time (%)	2			1	0
Queuing Penalty (veh)	1			0	0
Storage Bay Dist (ft)		50	100		
Storage Blk Time (%)	32	1		2	
Queuing Penalty (veh)	5	0		1	

Intersection: 3: 700 East (SRS-71)/700 East (SR-71) & Lyndy Drive, All Intervals

Movement	NW	NW	NE	SW	SW	SW
Directions Served	L	R	TR	L	T	T
Maximum Queue (ft)	91	79	8	70	77	52
Average Queue (ft)	28	18	0	17	9	5
95th Queue (ft)	90	57	5	55	86	73
Link Distance (ft)	191		1384		374	374
Upstream Blk Time (%)	1				0	0
Queuing Penalty (veh)	0				0	0
Storage Bay Dist (ft)		50		100		
Storage Blk Time (%)	25	0		0	1	
Queuing Penalty (veh)	4	0		1	0	

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	174	268	161	179	343	168	265	424	374	160	242	561
Average Queue (ft)	116	159	86	130	191	79	142	297	253	92	155	388
95th Queue (ft)	220	348	179	213	377	185	275	474	438	187	279	658
Link Distance (ft)		932			833			487	487			1384
Upstream Blk Time (%)								4	1			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	18	22	5	34	26		30	24	15	0	6	24
Queuing Penalty (veh)	55	64	17	130	89		171	36	33	2	52	47

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #1

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	557	200
Average Queue (ft)	387	113
95th Queue (ft)	649	257
Link Distance (ft)	1384	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)	28	0
Queuing Penalty (veh)	49	0

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	204	314	170	170	271	180	273	444	401	156	250	582
Average Queue (ft)	140	213	90	129	174	85	185	291	240	83	185	444
95th Queue (ft)	244	567	169	199	301	192	304	463	428	175	300	704
Link Distance (ft)		932			833			487	487			1384
Upstream Blk Time (%)		4						4	1			
Queuing Penalty (veh)		0						0	0			
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	22	18	7	22	24		49	28	19	0	7	33
Queuing Penalty (veh)	68	52	24	84	82		275	42	42	2	55	64

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #2

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	578	200
Average Queue (ft)	438	114
95th Queue (ft)	695	251
Link Distance (ft)	1384	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)	37	0
Queuing Penalty (veh)	65	2

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	221	364	192	180	367	173	286	465	428	160	249	1046
Average Queue (ft)	141	249	107	136	193	84	192	343	295	94	182	725
95th Queue (ft)	253	665	213	210	399	191	332	528	489	196	307	1217
Link Distance (ft)		932			833			487	487			1384
Upstream Blk Time (%)		7			0			6	2			0
Queuing Penalty (veh)		0			1			0	0			1
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	30	30	13	39	29		51	28	21	1	11	33
Queuing Penalty (veh)	102	97	44	166	106		313	45	52	5	95	70

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #3

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1020	200
Average Queue (ft)	709	120
95th Queue (ft)	1194	259
Link Distance (ft)	1384	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	35	0
Queuing Penalty (veh)	67	3

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	207	339	188	175	330	149	255	411	381	151	250	1115
Average Queue (ft)	159	240	105	141	196	75	170	293	240	91	182	854
95th Queue (ft)	259	563	209	199	382	209	293	472	439	190	297	1488
Link Distance (ft)		932			833			487	487			1384
Upstream Blk Time (%)		0						9	3			0
Queuing Penalty (veh)		0						0	0			4
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	34	30	7	36	23		48	31	21	2	12	36
Queuing Penalty (veh)	107	90	21	140	79		270	45	48	12	95	71

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, Interval #4

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1106	200
Average Queue (ft)	840	120
95th Queue (ft)	1454	261
Link Distance (ft)	1384	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	3	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	40	0
Queuing Penalty (veh)	70	2

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	242	417	199	180	471	263	290	521	494	160	250	1179
Average Queue (ft)	139	215	97	134	188	81	172	306	257	90	176	603
95th Queue (ft)	247	551	194	206	368	195	305	488	452	188	298	1148
Link Distance (ft)		932			833			487	487			1384
Upstream Blk Time (%)		3			0			6	2			0
Queuing Penalty (veh)		0			0			0	0			1
Storage Bay Dist (ft)	125		100	100		350	110			110	150	
Storage Blk Time (%)	26	25	8	33	26		45	28	19	1	9	31
Queuing Penalty (veh)	83	75	26	130	89		257	42	44	5	74	63

Intersection: 4: 700 East (SR-71)/700 East (SRS-71) & 7800 South, All Intervals

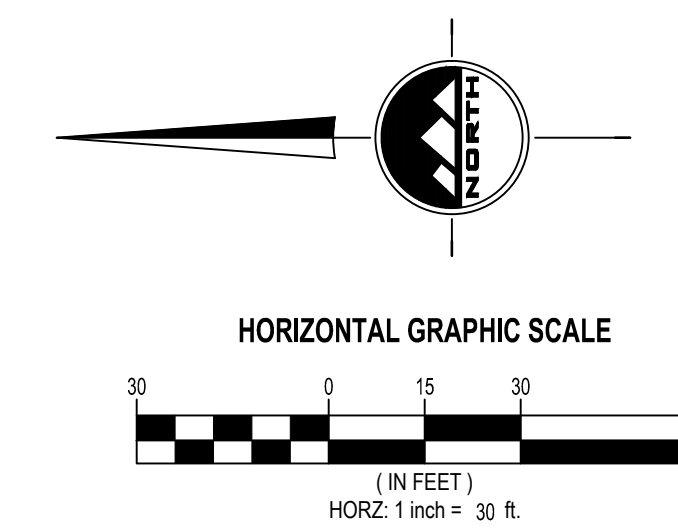
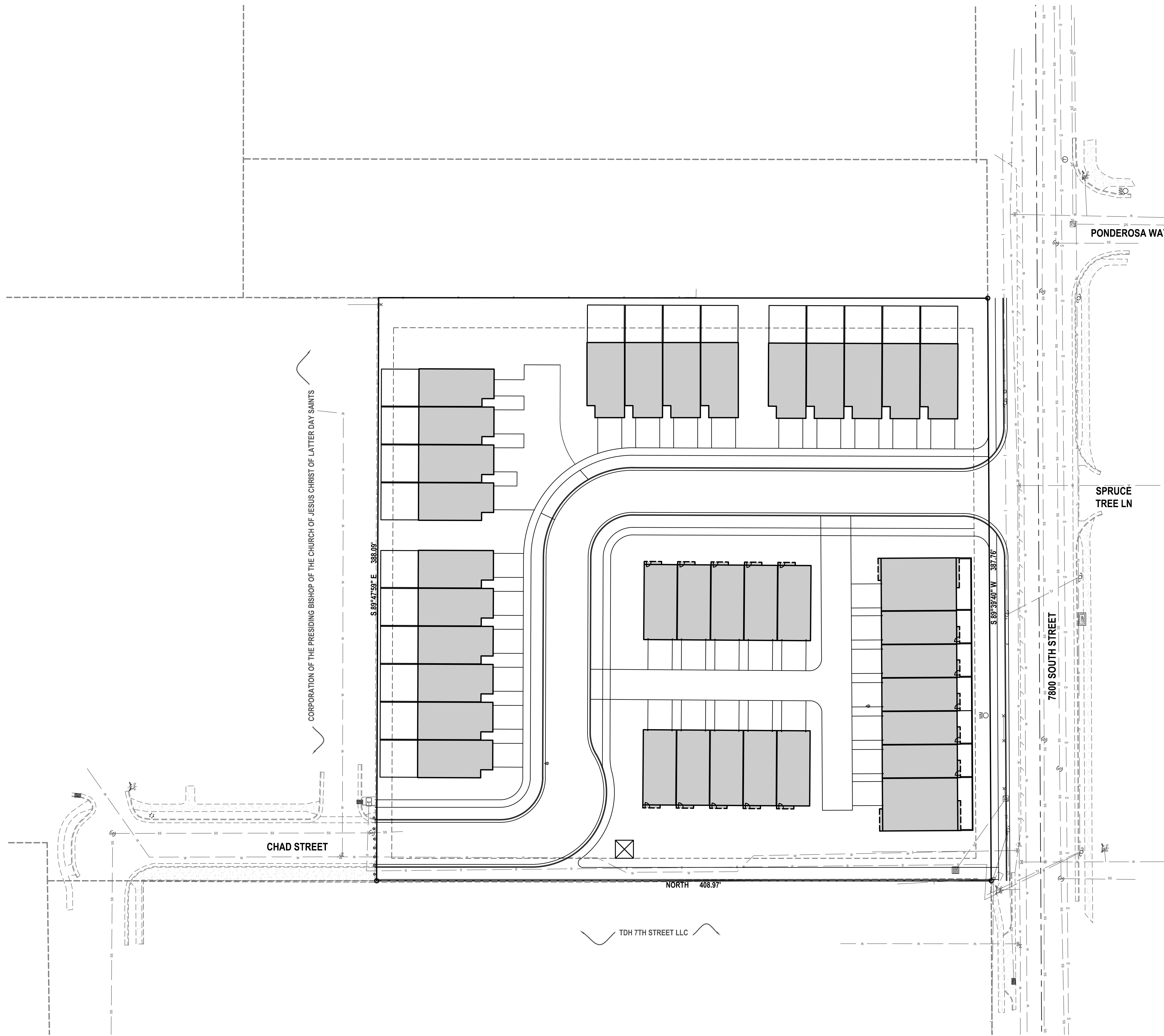
Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1160	200
Average Queue (ft)	593	117
95th Queue (ft)	1125	257
Link Distance (ft)	1384	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	35	0
Queuing Penalty (veh)	63	2

Network Summary

Network wide Queuing Penalty, Interval #1: 747
Network wide Queuing Penalty, Interval #2: 861
Network wide Queuing Penalty, Interval #3: 1178
Network wide Queuing Penalty, Interval #4: 1064
Network wide Queuing Penalty, All Intervals: 962

APPENDIX C

Site Plan



ENSIGN
THE STANDARD IN ENGINEERING

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
A BETTER QUALITY HOME, LLC
11683 SOUTH GROVE MEADOW CIRCLE
SOUTH JORDAN UTAH 84095

CONTACT:
DAVID GEORGE
PHONE: 801-548-6302

SANDY RESIDENTIAL

7800 EAST 7800 SOUTH
SANDY UTAH

CONCEPT PLAN

PROJECT NUMBER: 7135
PRINT DATE: 4/20/17
DRAWN BY:
CHECKED BY:
PROJECT MANAGER:

1 OF 1

APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Sandy - 7800 South Townhomes TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)



Project #: UT17-989

Intersection	Time Period	NB	NE		NW		SW		WB
		LR	T	TR	L	R	L	T	LT
700 East (SRS-71)/700 East (SR-71) & Lyndy Drive	Existing (2017) Background	--	3	3	48	47	50	110	--
Chad Street & Lyndy Drive	Existing (2017) Background	4	--	--	--	--	--	--	--
Spruce Tree Lane & 7800 South	Existing (2017) Background	11	--	--	--	--	--	--	28

SimTraffic Queueing Report

Project: Sandy - 7800 South Towhomes TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)

Intersection	Time Period	EB	NB		NE	NW		SB	SW		WB
		LTR	LR	LTR	TR	L	R	LTR	L	T	LTR
700 East (SRS-71)/700 East (SR-71) & Lyndy Drive	Existing (2017) Plus Project	--	--	--	5	90	57	--	55	80	--
Chad Street & Lyndy Drive	Existing (2017) Plus Project	--	7	--	--	--	--	--	--	--	--
Spruce Tree Lane/Townhome ACESS & 7800 South	Existing (2017) Plus Project	26	--	9	--	--	--	30	--	--	29