

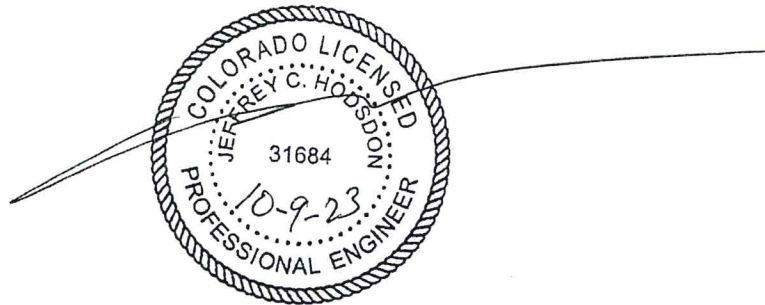


LSC TRANSPORTATION CONSULTANTS, INC.  
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Foundation Lutheran Church  
Traffic Impact Study  
EPC PCD File No. SF2321  
(LSC #S234300)  
October 9, 2023

**Traffic Engineer's Statement**

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



**Developer's Statement**

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

*P. D. Beery*

10-9-23  
Date

# Foundation Lutheran Church

## Traffic Impact Study

Prepared for:

Ms. Jennifer Zezlina  
Rocky Mountain Group  
2910 Austin Bluffs Parkway, Suite 100  
Colorado Springs, CO 80918

OCTOBER 9, 2023

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LSC Transportation Consultants

Prepared by: Jeffrey C. Hodsdon, P.E.

LSC #S234300

EPC PCD File No.: SF2321



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October 9, 2023

Ms. Jennifer Zezlina  
Rocky Mountain Group  
2910 Austin Bluffs Parkway, Suite 100  
Colorado Springs, CO 80918

RE: Foundation Lutheran Church  
El Paso County, Colorado  
Traffic Impact Analysis  
EPC PCD File No.: SF2321  
LSC #S234300

Dear Ms. Zezlina:

In response to your request, LSC Transportation Consultants, Inc. has prepared this traffic impact analysis for the proposed Foundation Lutheran Church development in El Paso County, Colorado. As shown in Figure 1, the site is located southwest of the north Londonderry Drive/Towner Avenue intersection in unincorporated El Paso County.

## REPORT CONTENTS

This report is being prepared as part of a submittal to El Paso County. It identifies the traffic impacts of this development. The report contains the following:

- Existing Sunday morning peak hour traffic volumes street conditions.
- Projections of short-term (2024) and long-term (2043) baseline/background traffic volumes.
- The projected average Sunday and Sunday morning peak-hour vehicle-trips to be generated by the church.
- The assignment of the site's projected trips to the adjacent streets and intersections for the short and long term and the resulting total traffic volumes for the short and long term.
- The resulting traffic impacts including level of service analysis at key intersections and average daily traffic volumes on key street sections in the vicinity of the site.
- Recommended improvements.
- Recommended lane configuration for the site access point to Londonderry Drive.

## PREVIOUS TRAFFIC IMPACT STUDIES

LSC completed the following “master” traffic study for Paint Brush Hills (previously Falcon Hills):

- **Falcon Hills [Master] Traffic Impact Study** - April 8, 2004

The following are the most recent traffic studies for Paint Brush Hills (previously Falcon Hills) completed in the past 5-6 years.

- **Paint Brush Hills Filings 13C and 13D** - January 9, 2017
- **D-49 Elementary School** - May 30, 2017.
- **Paint Brush Hills Filing 14** - July 16, 2018
- **Paint Brush Hills Filing 13E** – October 18, 2018

## LAND USE AND ACCESS

The proposed Foundation Lutheran Church is located southwest of the north intersection of Londonderry Drive and Towner Avenue. There are existing single-family homes north, west, and south of the site. The Bennett Ranch elementary school is located east of the site.

The proposed church will be 9,730 square feet. The church sanctuary will have 250 seats in the short term and 350 seats in the long term.

On weekdays, the building will host a preschool which will have a maximum of 80 students. Per the applicant, the preschool parent drop-off and pick-up times will be off-peak from the area schools and general peak traffic times. Therefore, this report focuses on Sunday morning peak hour.

## Access for the Foundation Lutheran Church

Two full-movement access points are proposed. Access to Londonderry Drive is proposed to align with Triborough Trail (about 302 feet west of Towner Avenue and 502 feet east of Beckham Street). Access to Towner Avenue is proposed to align with the existing metro district driveway on the east side of Towner (about 240 feet south of Londonderry Drive). The site plan is shown in Figure 2.

### Sight Distance

as these are driveways  
entering sight distance should  
be used instead of intersection  
sight distance

The required intersection sight distance at the site access point intersections is 455 feet based on the design speed of 40 miles per hour per ECM criteria. The line of sight is available to achieve the required sight distance at the new access points. The sight distance for 20 mph is 240 feet. This is about the same distance looking north from the Towner Access to the Londonderry Intersection to observe a westbound to southbound left turning vehicle (assuming a turning

State the criteria and  
table used

Address any line of sight impact from  
transformer location at the northern  
access point. This looks to need to be  
relocated both for line of sight and  
intersection design.

speed of 20 mph). Site improvements such as structures, solid fences, landscaping, parking areas, monument signs, etc. must not impede lines of sight required for these required sight distances.

The required stopping sight distance for eastbound and westbound traffic on Londonderry Drive and northbound Towner Avenue is 305 feet. This distance **can is met**. The stopping sight distance on southbound Towner approaching the site access based on a vehicle speed having completed a turn from Londonderry (about 25 mph) would be 155 feet (the distance from this point to the access is about 185 feet).

## ROADWAY AND TRAFFIC CONDITIONS

### Area Roadways

(paved)

The area roadways in the site's vicinity are shown in Figures 1 and are described below.

- **Londonderry Drive** is a two-lane Urban Residential Collector that currently extends west from Eastonville Road to 2,460 feet west of Towner Avenue and then loops to the south to intersect Towner Avenue again about one-half mile to the south. The posted speed limit adjacent to the site is 35 miles per hour (mph).
- **Towner Avenue** is a 40-foot-wide Urban Residential Collector street (within Paint Brush Hills) that extends south from Londonderry Drive to just south of Woodmen Hills Drive. The posted speed limit is 35 miles per hour.
- **Triborough Trail** is a north/south local street that extends north from Londonderry Drive to just east of Beckham Street. The posted speed limit is 25 miles per hour.

### Existing Traffic

Figure 3 shows the current Sunday morning peak hour traffic volumes at the intersections of Londonderry Drive/Towner Avenue and Londonderry Drive/Triborough Trail. These traffic volumes are based on traffic counts conducted by LSC in September 2023. The traffic count reports are attached.

### Existing Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. Table 1 shows the level of service delay ranges.

<b>Table 1</b>			
<b>Intersection Levels of Service Delay Ranges</b>			
<b>Level of Service</b>	<b>Signalized Intersections</b>		<b>Unsignalized Intersections</b>
	<b>Average Control Delay (seconds per vehicle)</b>	<b>V/C<sup>(1)</sup></b>	<b>Average Control Delay (seconds per vehicle)<sup>(2)</sup></b>
A	10.0 sec or less	less than 0.60	10.0 sec or less
B	10.1-20.0 sec	0.60-0.69	10.1-15.0 sec
C	20.1-35.0 sec	0.70-0.79	15.1-25.0 sec
D	35.1-55.0 sec	0.80-0.89	25.1-35.0 sec
E	55.1-80.0 sec	0.90-0.99	35.1-50.0 sec
F	80.1 sec or more	1.00 and greater	50.1 sec or more

(1) Source: *Transportation Research Circular 212*  
 (2) For unsignalized intersections if V/C ratio is greater than 1.0 the level of service is LOS F regardless of the projected average control delay per vehicle.

The intersections of Londonderry Drive and Towner Avenue and Londonderry Drive/Triborough Trail were analyzed to determine the existing levels of service using the unsignalized method of analysis procedures outlined in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board.

Figure 3 shows the level of service analysis results. As shown on the figure, all movements these intersections are level of service B or better during the Sunday peak hour. The level of service (LOS) reports are attached.

**TRIP GENERATION**

The site-generated vehicle-trips were estimated using the nationally published trip generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE).

Table 2 (attached) shows the trip generation estimate for Foundation Lutheran Church.

**Weekdays**

As shown in Table 2, the church is expected to generate about 401 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 5 vehicles would enter and 2 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 4 vehicles would enter and 6 vehicles would exit the site.

State the expected times and days of the week for the preschool operation

As the preschool is not planned to operate during the typical peak hours or school peak hours, a separate “peak hour of the generator” analysis was run as shown in Table 4. During the preschool AM peak hour, about 33 vehicles would enter and 30 vehicles would exit the site. During the preschool PM peak hour, about 30 vehicles would enter and 35 vehicles would exit the site.

**Sundays**



state what the peak hour times for Sunday are.

A church has the highest trip generation on Sunday's. Table 4 shows the trip generation estimate for the church on an average Sunday. As presented in the table, the church is estimated to generate about 306 vehicle-trips on the average Sunday, with about half entering and half exiting the site during a Sunday 24-hour period based on the church square footage of 9,743 square feet.

During the Sunday Morning peak hour, about 63 vehicles would enter and 66 vehicles would exit the site based on 250 seats proposed in the short term. In the long term, the church will increase to 350 seats. During the peak hour, the church will then have about 88 vehicles entering and 92 vehicles exiting the site. As the peak hour is higher on Sunday's, the following analysis is based on the Sunday morning peak hour instead of a typical weekday peak hour(s) or weekday school peak hours.

## **BACKGROUND TRAFFIC**

Background traffic is the traffic estimated to be on the area streets and roadways without consideration of the proposed church development.

### **Short Term**

Figure 3 shows the existing traffic volumes plus minor adjustments to account for a slightly earlier church peak hour if that were to occur.

### **Long Term (2043)**

Figure 7 shows the projected background traffic volumes for the long term (2024). These volumes are estimates by LSC and take into account the future development of undeveloped lots to the northwest.

## **DIRECTIONAL DISTRIBUTION**

The directional distribution of the site-generated traffic volumes on the area roadways is an important factor in determining the site's traffic impacts. Figure 4 shows the short-term and long-term directional distribution estimates for the site-generated traffic volumes. The estimates have been based on the following factors: the site's location with respect to nearby communities and neighborhoods and the balance of the Falcon and northeast Colorado Springs area; the site's proposed land use; the site's proposed access points; and the phasing of the existing and future roadway system serving the site.



## SITE-GENERATED TRAFFIC

Figure 5 shows the projected short-term and long-term site-generated traffic volumes, respectively. The site-generated traffic volumes were calculated by applying the directional distribution percentages (from Figure 4) to the trip generation estimates from Table 2.

## TOTAL TRAFFIC

Figure 6 shows the projected short-term total traffic volumes. The short-term total traffic volumes are the sum of the existing traffic volumes (from Figure 3) plus the short-term site-generated traffic volumes from Figure 5.

Figure 8 shows the projected 2043 total traffic volumes. The 2043 total traffic volumes are the sum of the 2043 background traffic volumes (from Figure 7) plus the long-term site-generated traffic volumes from Figure 5.

## PROJECTED LEVELS OF SERVICE

The access point intersections and the intersection of Londonderry/Towner were analyzed to determine the projected levels of service for the background and total traffic volumes based on the unsignalized method of analysis procedures from the *Highway Capacity Manual, 6<sup>th</sup> Edition* by the Transportation Research Board. Figures 3, 6, 7, and 8 show the level of service analysis results. The level of service reports are attached.

### Towner/Londonderry

All movements at the north and south intersections of Towner/Londonderry, Londonderry/Triborough Trail, and the site access intersection on Towner are projected to operate at LOS A or B during the Sunday morning peak hour based on the projected short-term and 2043 total traffic volumes.

identify the lane length characteristics required per ECM and what is proposed. Volumes provided meet the threshold for turn lanes

## RECOMMENDATIONS

### Auxiliary Lanes

- Based on the criteria contained in the *El Paso County Engineering Criteria Manual (ECM)* and the projected short-term and 2043 total Sunday morning peak hour traffic volumes, no auxiliary turn lanes would be required on Londonderry Drive approaching the north site access.
- Based on the criteria contained in the *El Paso County Engineering Criteria Manual (ECM)* and the projected 2043 total traffic volumes, the turning volume threshold of 25 vph would be met during the Sunday morning peak hour at the east access to Towner. Although opposing traffic is expected to be light, LSC recommends restriping the center painted median (currently two sets of dual yellow centerline stripes) to accommodate

A WB left turn lane will be required at the northern access point on Londonderry. Provide exhibit.

The Towner access point will be required to be restriped.

northbound left turns from Towner into the access driveway. A concept for the recommended restriping is shown in Figure 9.

### Intersection Traffic Control

The site access driveways should be controlled with Stop-signs.

As a tax-exempt entity, you cannot join a PID.

### County Road Impact Fee Program

- The applicant will be required to participate in the County Road Impact Fee Program.
  - If the applicant joins the five-mil PID, the up-front, building permit fee portion would be \$16,006.
  - If the applicant opts-out of the PID options, the up-front, building permit fee would be \$32,810.

### Deviations

While no deviations are included with this submittal, deviations may be required.

The site only has access to two Collector streets, with no ability to access a local street. However, the *ECM* does not allow private access to a Collector Street.

While the access points are proposed to align with an existing public street and an existing driveway, a deviation(s) may be required for the centerline spacing from the Londonderry/Towner intersection.

### CONCLUSIONS AND RECOMMENDATIONS

Submit one deviation to address access to collector roadways. Provide exhibits of the intersections in the Deviation. Deviation was discussed in the EA20172

### Trip Generation

- The Foundation Lutheran Church is expected to generate about 401 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour about 5 vehicles would enter and 2 vehicles would exit the site. During the afternoon peak hour about 4 vehicles would enter and 6 vehicles would exit the site.
- The peak hours for the preschool, which are anticipated to be off-peak, would result in about 33 vehicles entering and 30 vehicles exiting in the AM peak hour and 30 vehicles entering and 35 vehicles exiting in the PM peak hour.
- On Sunday's, the church is expected to generate about 306 vehicle-trips with about half entering and half exiting the site during a 24-hour period. In the short-term with 250 seats, about 63 vehicles would enter and 66 vehicles would exit the site. In the long-term with 350 seats, about 88 vehicles would enter and 92 vehicles would exit the site.

please also discuss pedestrian facilities

Road Impact fees will need to be paid at time of plat recording or at time of building permit.

### Level of Service

All movements at the access points and study area intersections are projected to operate at LOS A or B during the Sunday morning peak hour through 2043.

Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E., PTOE  
Principal

JCH:jas

Enclosures: Table 2  
Figures 1-9  
Traffic Count Reports  
Level of Service Reports

Study Area. Per ECM B.2.3 Please address and discuss the following intersections and if thresholds have been met from site generated traffic and if any improvements are needed.

Southern Londonberry & Towner Int  
Towner and Stapleton Int  
Londonberry and Meridian Int

Discuss any missing and required pedestrian ramps at the planned access points. Ensure CDs and Site development plan are consistent.

Review Paint Brush Hills Filing 13E and PCD File SF189 for CDs that reflect PED ramps on north side of Londonberry.

# Table 2

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The table area is currently blank.





# Figures 1-9

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Figure 1  
**Vicinity Map**  
Foundation Lutheran Church (LSC# S234300)

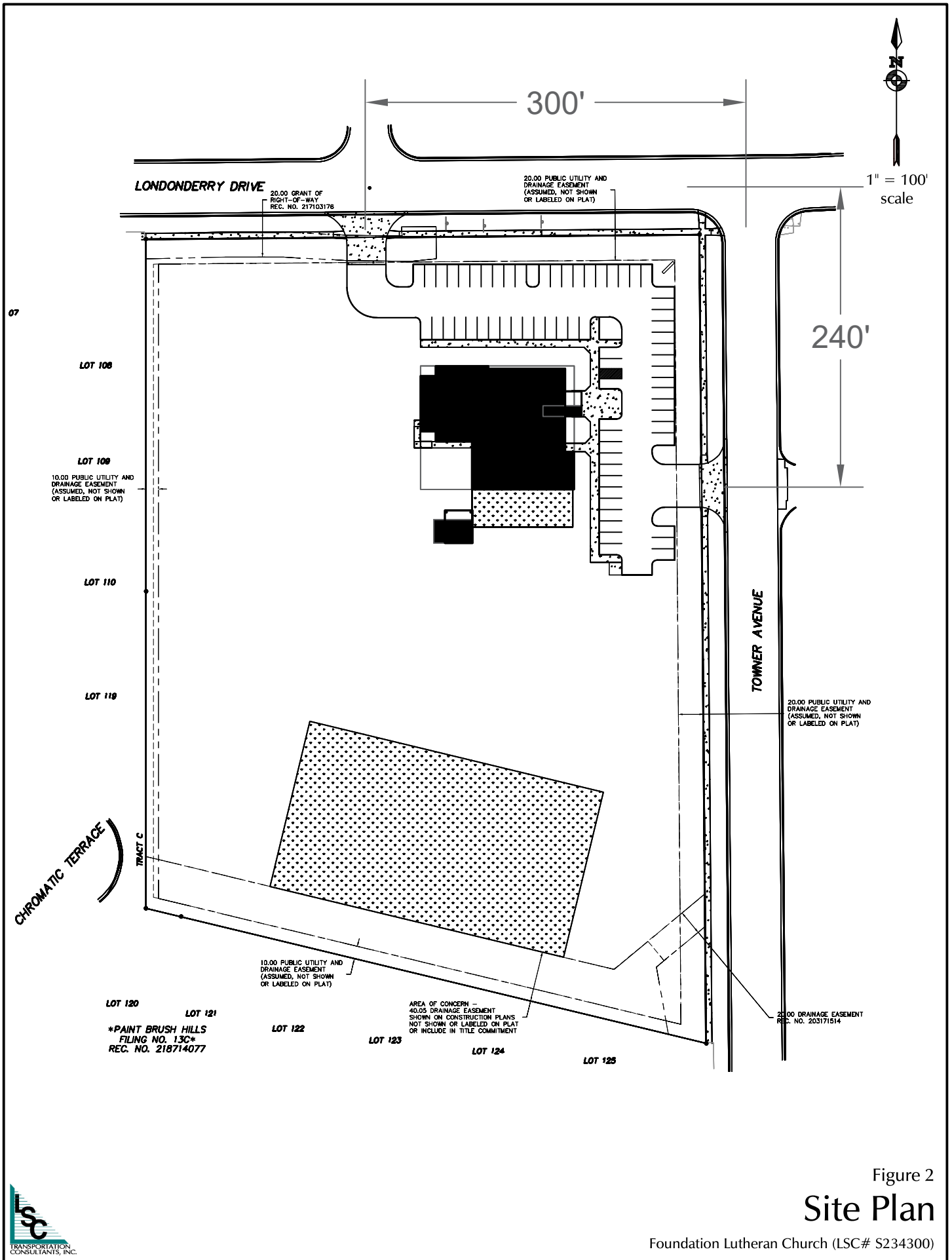
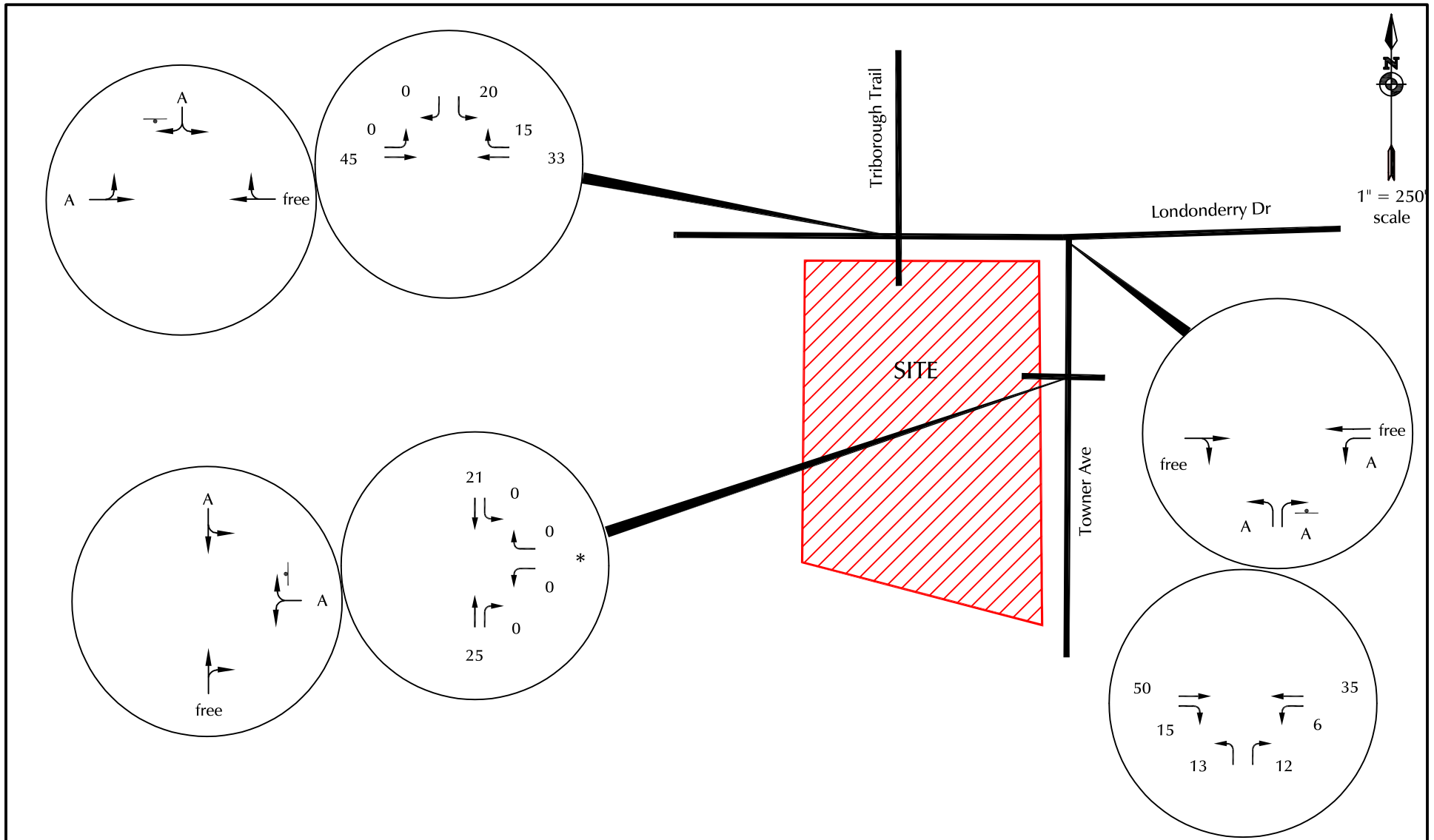


Figure 2  
**Site Plan**

Foundation Lutheran Church (LSC# S234300)







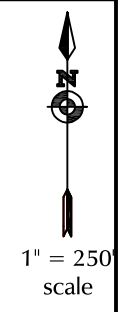
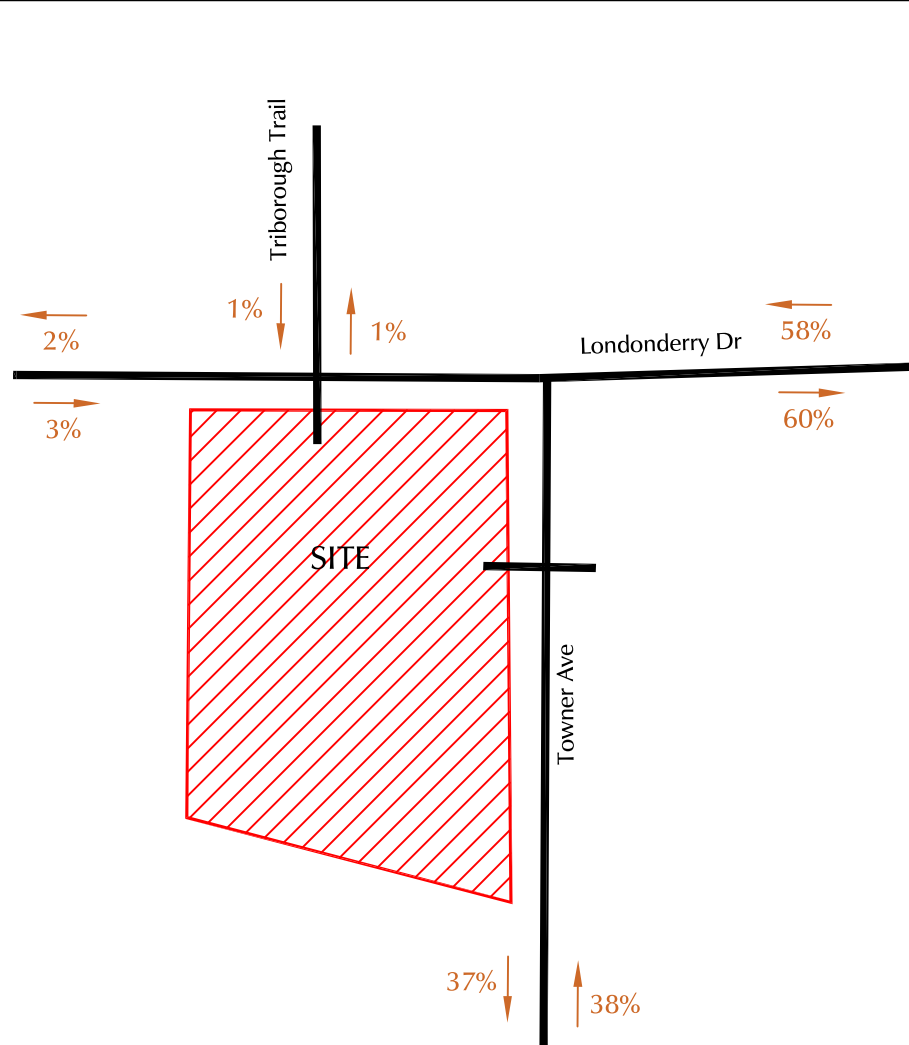
XX = Sunday AM Peak-Hour Traffic (Veh/Hour) (counts by LSC September, 2023)\*\*  
 X = Sunday AM Peak-Hour Individual Movement Peak-Hour LOS

⊥ = Stop Sign

\*Estimated by LSC  
 \*\* with minor adjustments by LSC

Figure 3  
**Existing Sunday Morning Peak-Hour  
 Traffic, Lane Geometry, LOS, and  
 Traffic Control**



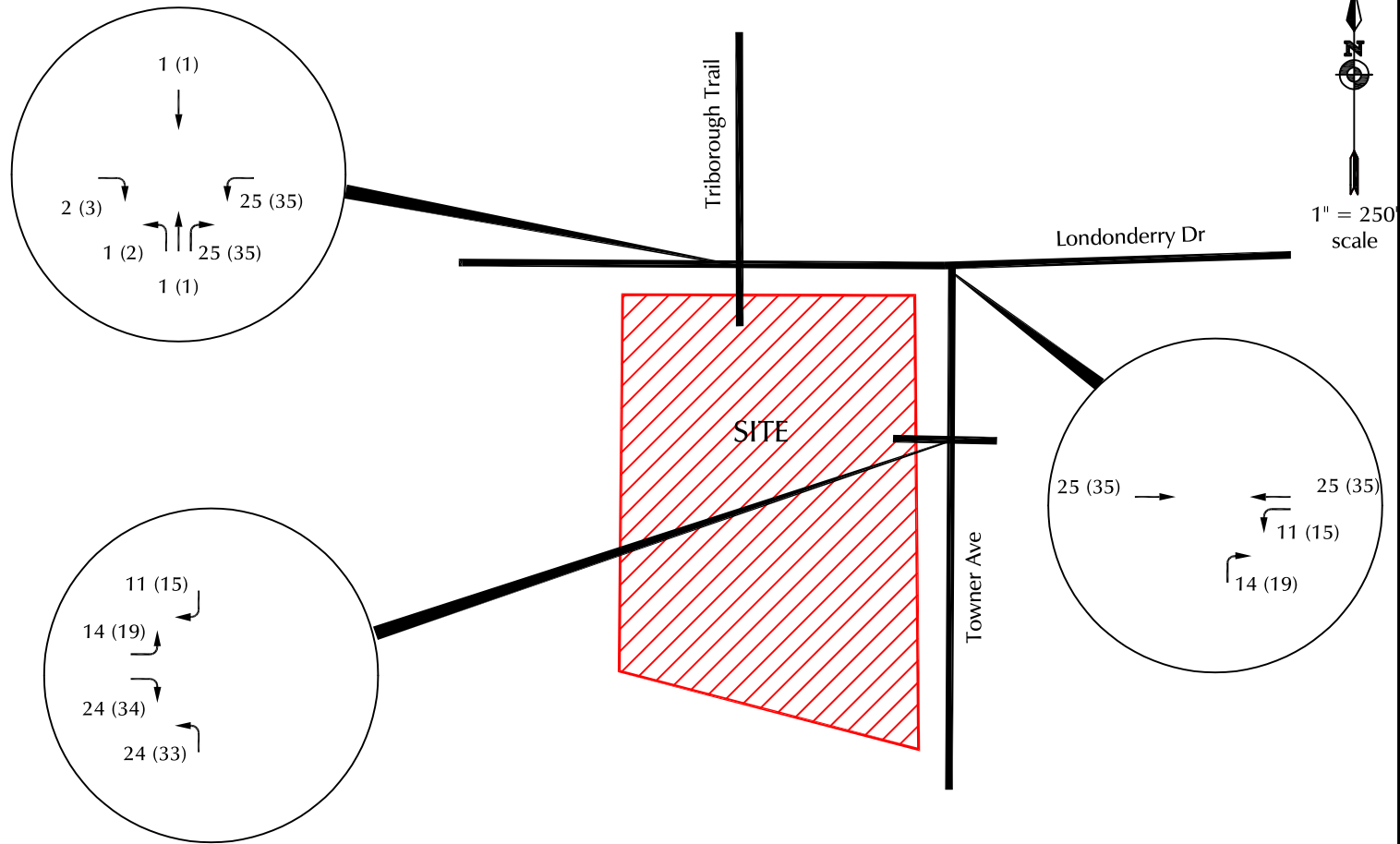


→ XX% = Sunday Morning Peak Hour % Distribution of Site-Generated Trips



Figure 4  
Estimated Directional Distribution

Foundation Lutheran Church (LSC# S234300)



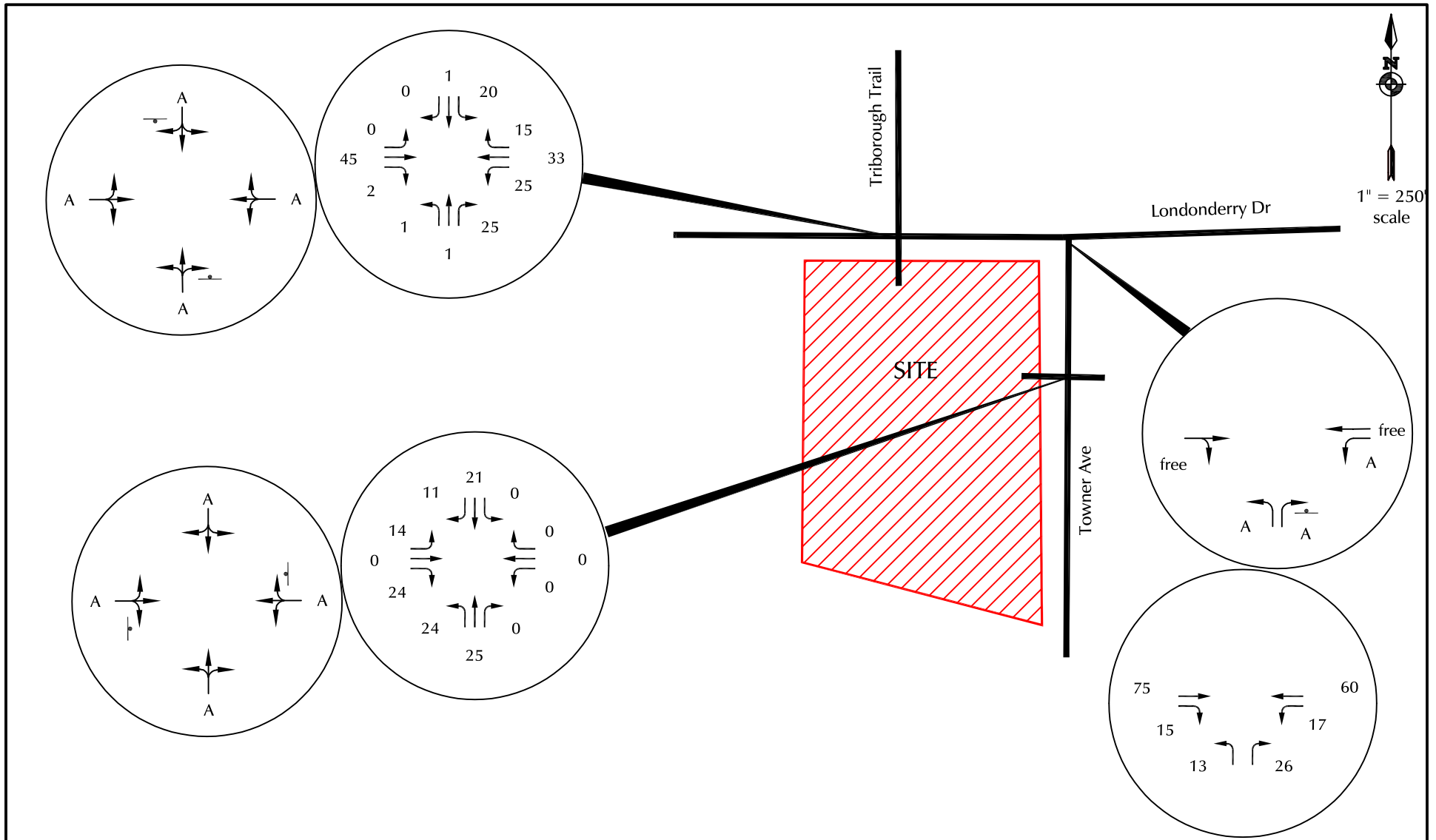
XX (XX) = Short-Term (Long-Term) Sunday Morning Peak-Hour Traffic (Veh/Hour)

## Site-Generated Sunday Morning Peak-Hour Traffic

Figure 5

Foundation Lutheran Church (LSC# S234300)



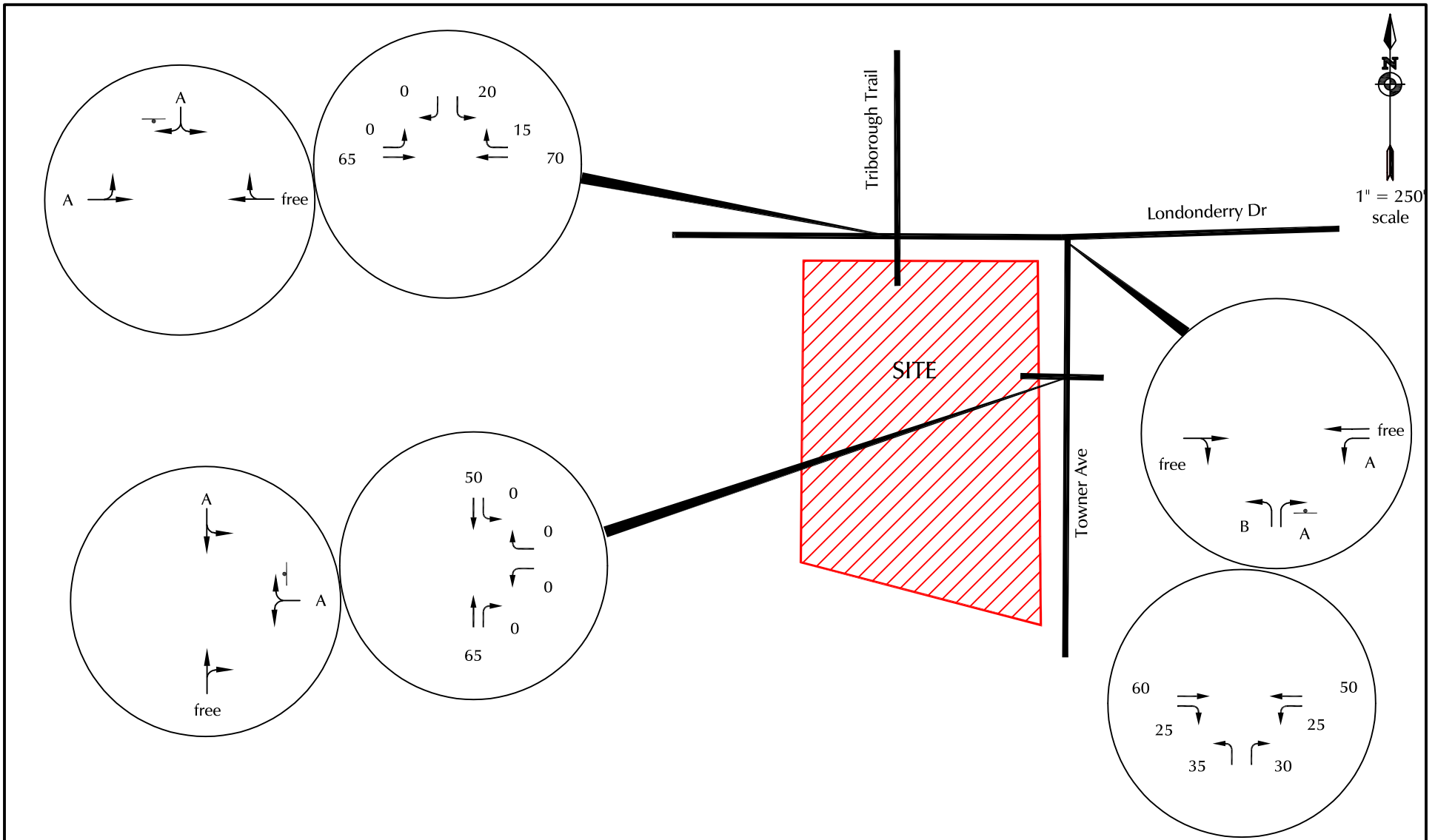


XX = Sunday Morning Peak-Hour Traffic (Veh/Hour)  
 X = Sunday Morning Peak-Hour Individual Movement Peak-Hour LOS

⊥ = Stop Sign

Figure 6  
 Existing plus Site-Generated Sunday  
 Morning Peak-Hour Traffic, Lane  
 Geometry, LOS, and Traffic Control





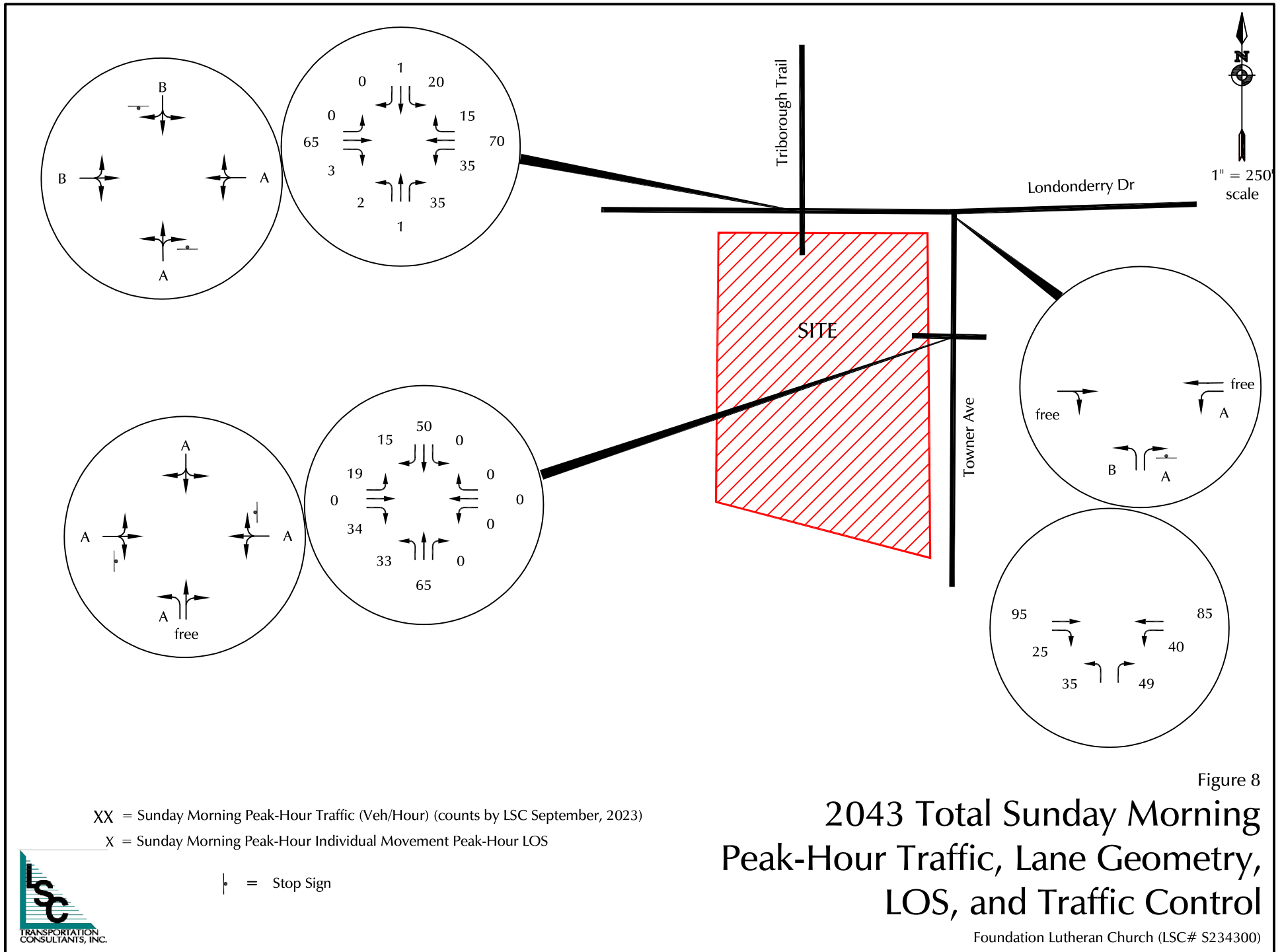
XX = Sunday Morning Peak-Hour Traffic (Veh/Hour)  
 X = Sunday Morning Peak-Hour Individual Movement Peak-Hour LOS

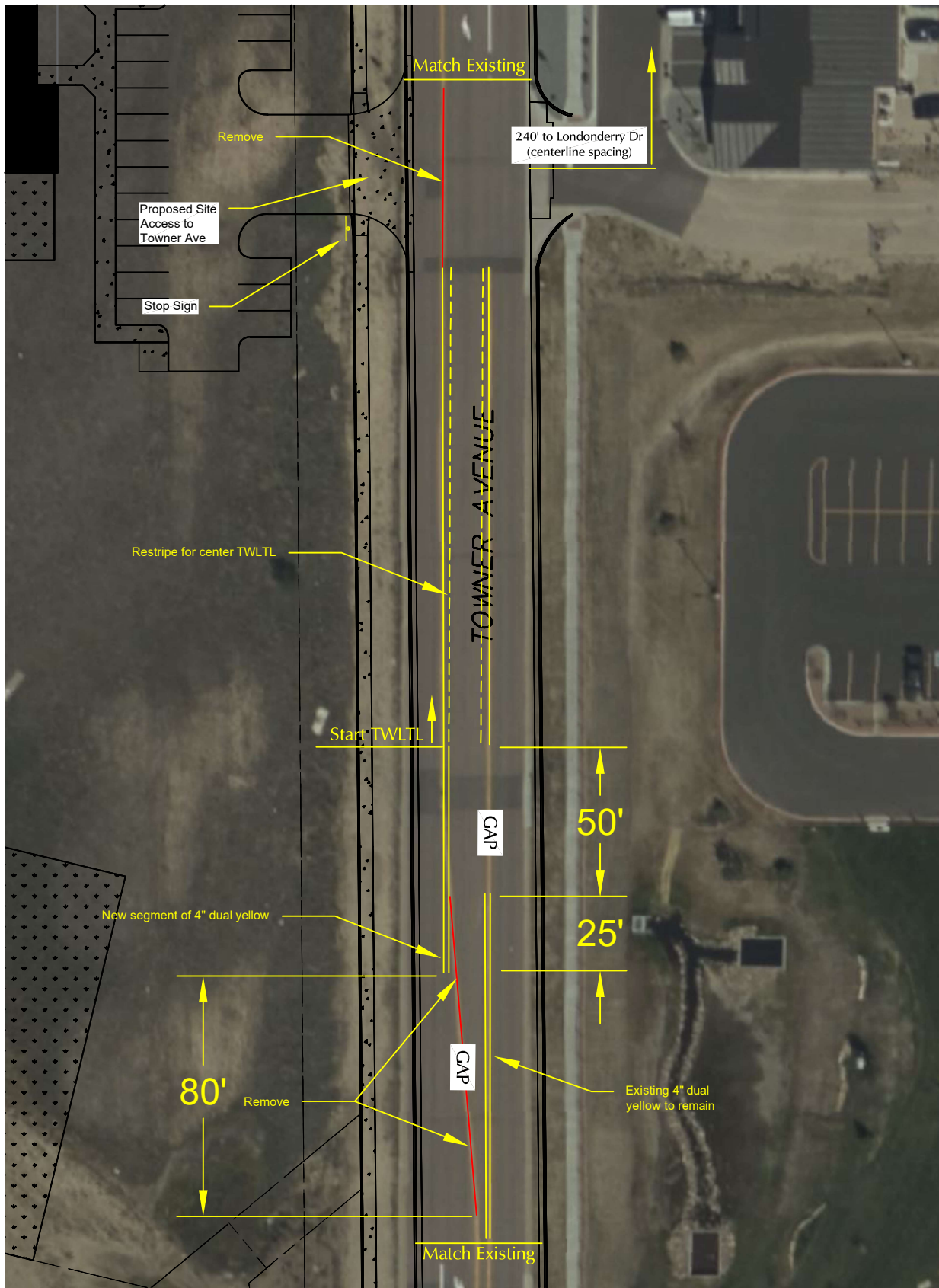
⊥ = Stop Sign



Figure 7  
**2043 Background Sunday  
 Traffic, Lane Geometry, LOS,  
 and Traffic Control**

Foundation Lutheran Church (LSC# S234300)





Approximate Scale  
1" = 50'

Figure 9

# Proposed Restriping on Towner Ave at the Site Access



Concept only, not for construction.

Foundation Lutheran Church (LSC# S234300)

# Traffic Counts

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# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Towner Ave N - Londonderry Dr Post-Service Sun

Site Code : S234300

Start Date : 9/10/2023

Page No : 1

### Groups Printed- Unshifted

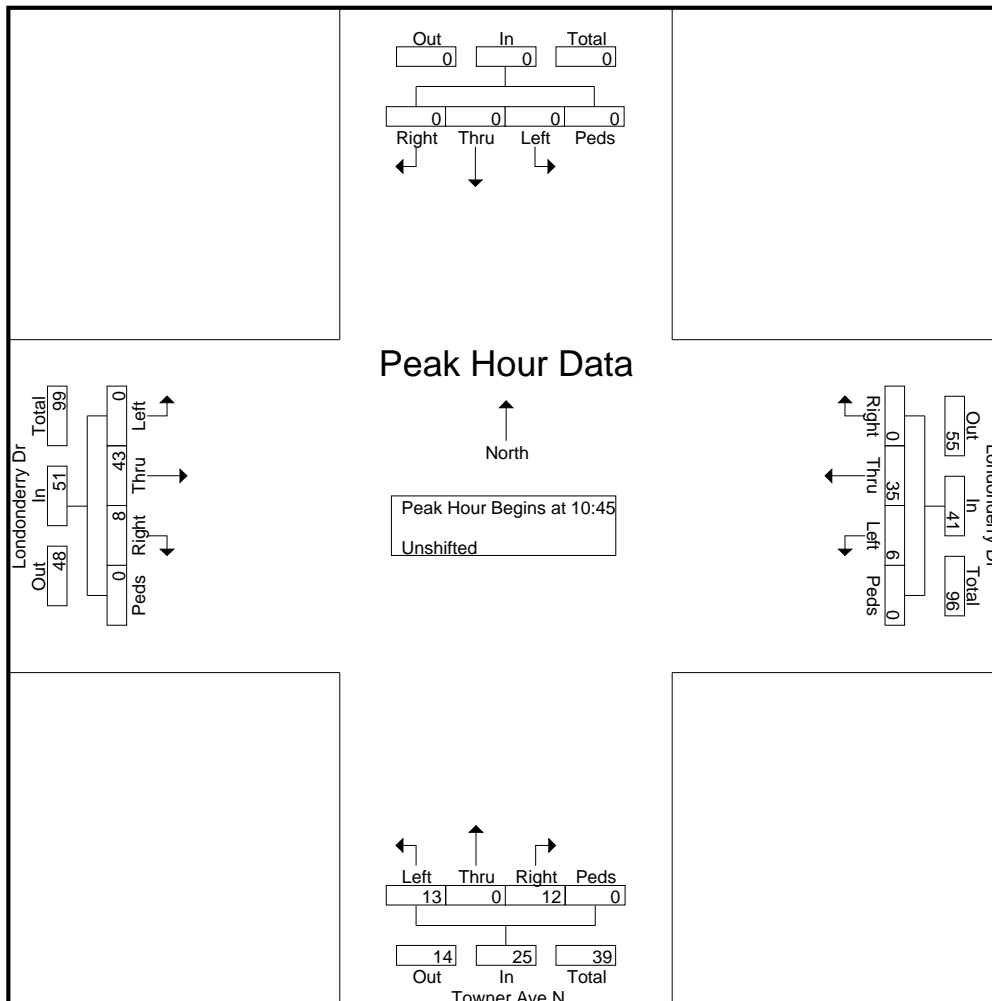
Start Time	Southbound					Londonderry Dr Westbound					Towner Ave N Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
10:45	0	0	0	0	0	0	3	1	0	4	1	0	2	0	3	1	5	0	0	6	13
10:50	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	1	0	0	1	8
10:55	0	0	0	0	0	0	2	2	0	4	1	0	2	0	3	1	6	0	0	7	14
<b>Total</b>	0	0	0	0	0	0	9	3	0	12	3	0	6	0	9	2	12	0	0	14	35
11:00	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	2	3	0	0	5	8
11:05	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	1	2	0	0	3	8
11:10	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	5	0	0	6	8
11:15	0	0	0	0	0	0	1	0	0	1	1	0	2	0	3	1	3	0	0	4	8
11:20	0	0	0	0	0	0	5	0	0	5	0	0	3	0	3	0	3	0	0	3	11
11:25	0	0	0	0	0	0	3	1	0	4	2	0	0	0	2	0	1	0	0	1	7
11:30	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	1	5	0	0	6	10
11:35	0	0	0	0	0	0	2	0	0	2	3	0	0	0	3	0	4	0	0	4	9
11:40	0	0	0	0	0	0	6	0	0	6	1	0	1	0	2	0	5	0	0	5	13
<b>Grand Total</b>	0	0	0	0	0	0	35	6	0	41	12	0	13	0	25	8	43	0	0	51	117
<b>Apprch %</b>	0	0	0	0	0	0	85.4	14.6	0		48	0	52	0		15.7	84.3	0	0		
<b>Total %</b>	0	0	0	0	0	0	29.9	5.1	0	35	10.3	0	11.1	0	21.4	6.8	36.8	0	0	43.6	

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Towner Ave N - Londonderry Dr Post-Service Sun  
 Site Code : S234300  
 Start Date : 9/10/2023  
 Page No : 2

Start Time	Southbound					Londonderry Dr Westbound					Towner Ave N Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 10:45 to 11:40 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 10:45																					
10:45	0	0	0	0	0	0	3	1	0	4	1	0	2	0	3	1	5	0	0	6	13
10:50	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	1	0	0	1	8
10:55	0	0	0	0	0	0	2	2	0	4	1	0	2	0	3	1	6	0	0	7	14
11:00	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	2	3	0	0	5	8
11:05	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	1	2	0	0	3	8
11:10	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	5	0	0	6	8
11:15	0	0	0	0	0	0	1	0	0	1	1	0	2	0	3	1	3	0	0	4	8
11:20	0	0	0	0	0	0	5	0	0	5	0	0	3	0	3	0	3	0	0	3	11
11:25	0	0	0	0	0	0	3	1	0	4	2	0	0	0	2	0	1	0	0	1	7
11:30	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	1	5	0	0	6	10
11:35	0	0	0	0	0	0	2	0	0	2	3	0	0	0	3	0	4	0	0	4	9
11:40	0	0	0	0	0	0	6	0	0	6	1	0	1	0	2	0	5	0	0	5	13
Total Volume	0	0	0	0	0	0	35	6	0	41	12	0	13	0	25	8	43	0	0	51	117
% App. Total	0	0	0	0	0	0	85.4	14.6	0		48	0	52	0		15.7	84.3	0	0		
PHF	.000	.000	.000	.000	.000	.000	.486	.250	.000	.569	.333	.000	.361	.000	.694	.333	.597	.000	.000	.607	.696



# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Towner Ave N - Londonderry Dr Post-Service Sun

Site Code : S234300

Start Date : 9/10/2023

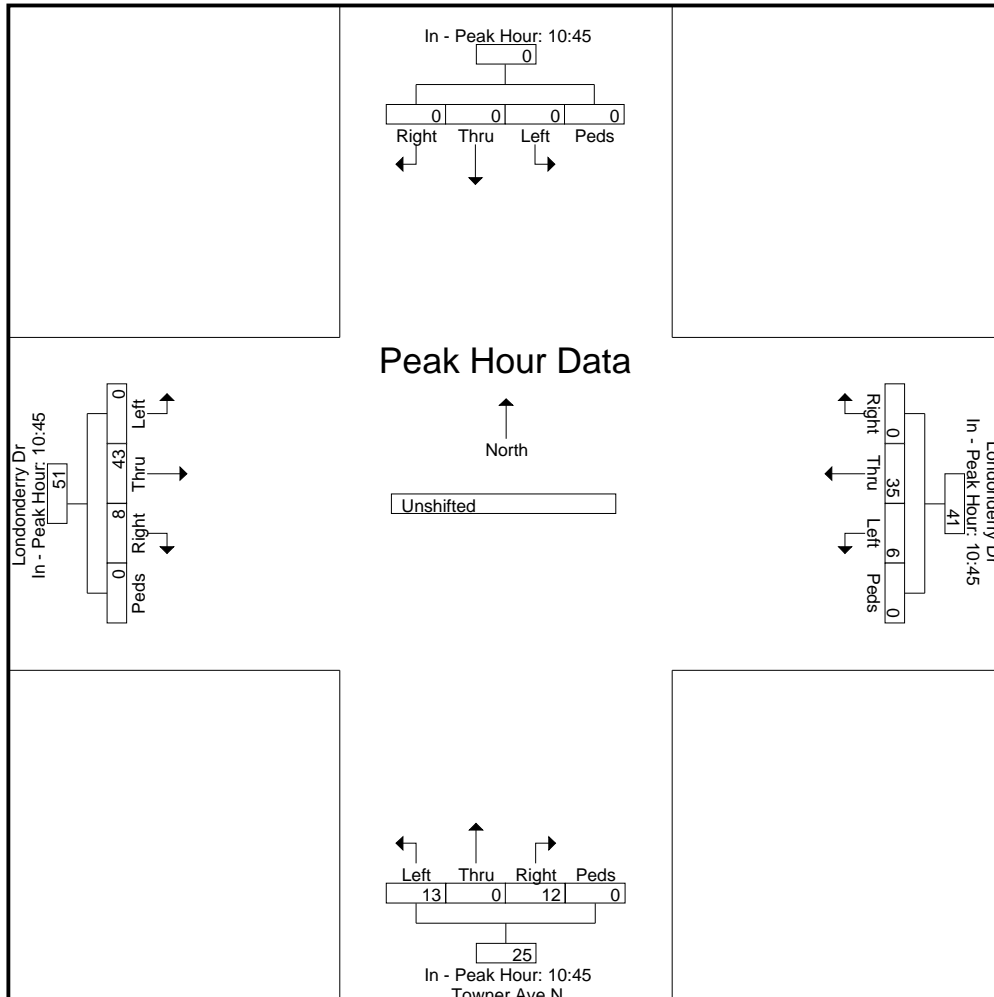
Page No : 3

Start Time	Southbound					Londonderry Dr Westbound					Towner Ave N Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 10:45 to 11:40 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	10:45					10:45					10:45					10:45				
+0 mins.	0	0	0	0	0	0	3	1	0	4	1	0	2	0	3	1	5	0	0	6
+5 mins.	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	1	0	0	1
+10 mins.	0	0	0	0	0	0	2	2	0	4	1	0	2	0	3	1	6	0	0	7
+15 mins.	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	2	3	0	0	5
+20 mins.	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	1	2	0	0	3
+25 mins.	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	5	0	0	6
+30 mins.	0	0	0	0	0	0	1	0	0	1	1	0	2	0	3	1	3	0	0	4
+35 mins.	0	0	0	0	0	0	5	0	0	5	0	0	3	0	3	0	3	0	0	3
+40 mins.	0	0	0	0	0	0	3	1	0	4	2	0	0	0	2	0	1	0	0	1
+45 mins.	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	1	5	0	0	6
+50 mins.	0	0	0	0	0	0	2	0	0	2	3	0	0	0	3	0	4	0	0	4
+55 mins.	0	0	0	0	0	0	6	0	0	6	1	0	1	0	2	0	5	0	0	5
Total Volume	0	0	0	0	0	0	35	6	0	41	12	0	13	0	25	8	43	0	0	51
% App. Total	0	0	0	0	0	0	85.4	14.6	0	41	48	0	52	0	25	15.7	84.3	0	0	51
PHF	.000	.000	.000	.000	.000	.000	.486	.250	.000	.569	.333	.000	.361	.000	.694	.333	.597	.000	.000	.607



# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Towner Ave N - Londonderry Dr Pre-Service Sun

Site Code : S234300

Start Date : 9/10/2023

Page No : 1

### Groups Printed- Unshifted

Start Time	Southbound					Londonderry Dr Westbound					Towner Dr N Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
09:15	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	3
09:20	0	0	0	0	0	0	1	0	0	1	2	0	1	0	3	0	4	0	0	4	8
09:25	0	0	0	0	0	0	5	0	0	5	0	0	2	0	2	0	1	0	0	1	8
09:30	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	10
09:35	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	1	2	0	0	3	6
09:40	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	4	0	0	4	9
09:45	0	0	0	0	0	0	1	2	0	3	0	0	1	0	1	1	2	0	0	3	7
09:50	0	0	0	0	0	0	3	1	0	4	2	0	1	0	3	1	5	0	0	6	13
09:55	0	0	0	0	0	0	4	0	0	4	4	0	0	0	4	4	3	0	0	7	15
<b>Total</b>	0	0	0	0	0	0	23	5	0	28	9	1	6	0	16	8	27	0	0	35	79
10:00	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	8	0	0	8	12
10:05	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	1	4	0	0	5	8
10:10	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	2	6	0	0	8	10
Grand Total	0	0	0	0	0	0	28	6	0	34	12	1	6	0	19	11	45	0	0	56	109
Apprch %	0	0	0	0	0	0	82.4	17.6	0		63.2	5.3	31.6	0		19.6	80.4	0	0		
Total %	0	0	0	0	0	0	25.7	5.5	0	31.2	11	0.9	5.5	0	17.4	10.1	41.3	0	0	51.4	

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

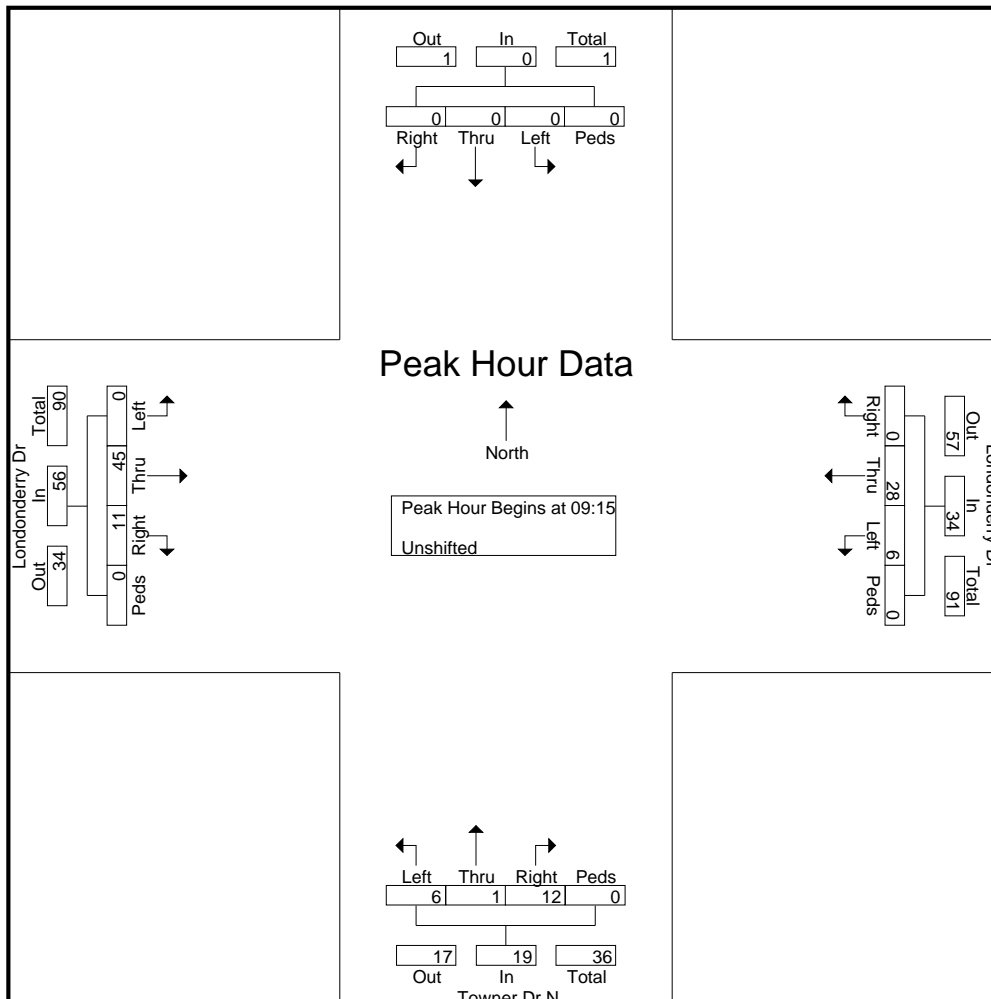
File Name : Towner Ave N - Londonderry Dr Pre-Service Sun

Site Code : S234300

Start Date : 9/10/2023

Page No : 2

Start Time	Southbound					Londonderry Dr Westbound					Towner Dr N Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 09:15 to 10:10 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 09:15																					
09:15	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	3
09:20	0	0	0	0	0	0	1	0	0	1	2	0	1	0	3	0	4	0	0	4	8
09:25	0	0	0	0	0	0	5	0	0	5	0	0	2	0	2	0	1	0	0	1	8
09:30	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	10
09:35	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	1	2	0	0	3	6
09:40	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	4	0	0	4	9
09:45	0	0	0	0	0	0	1	2	0	3	0	0	1	0	1	1	2	0	0	3	7
09:50	0	0	0	0	0	0	3	1	0	4	2	0	1	0	3	1	5	0	0	6	13
09:55	0	0	0	0	0	0	4	0	0	4	4	0	0	0	4	4	3	0	0	7	15
10:00	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	8	0	0	8	12
10:05	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	1	4	0	0	5	8
10:10	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	2	6	0	0	8	10
Total Volume	0	0	0	0	0	0	28	6	0	34	12	1	6	0	19	11	45	0	0	56	109
% App. Total	0	0	0	0	0	0	82.4	17.6	0		63.2	5.3	31.6	0		19.6	80.4	0	0		
PHF	.000	.000	.000	.000	.000	.000	.467	.250	.000	.567	.250	.083	.250	.000	.396	.229	.469	.000	.000	.583	.606

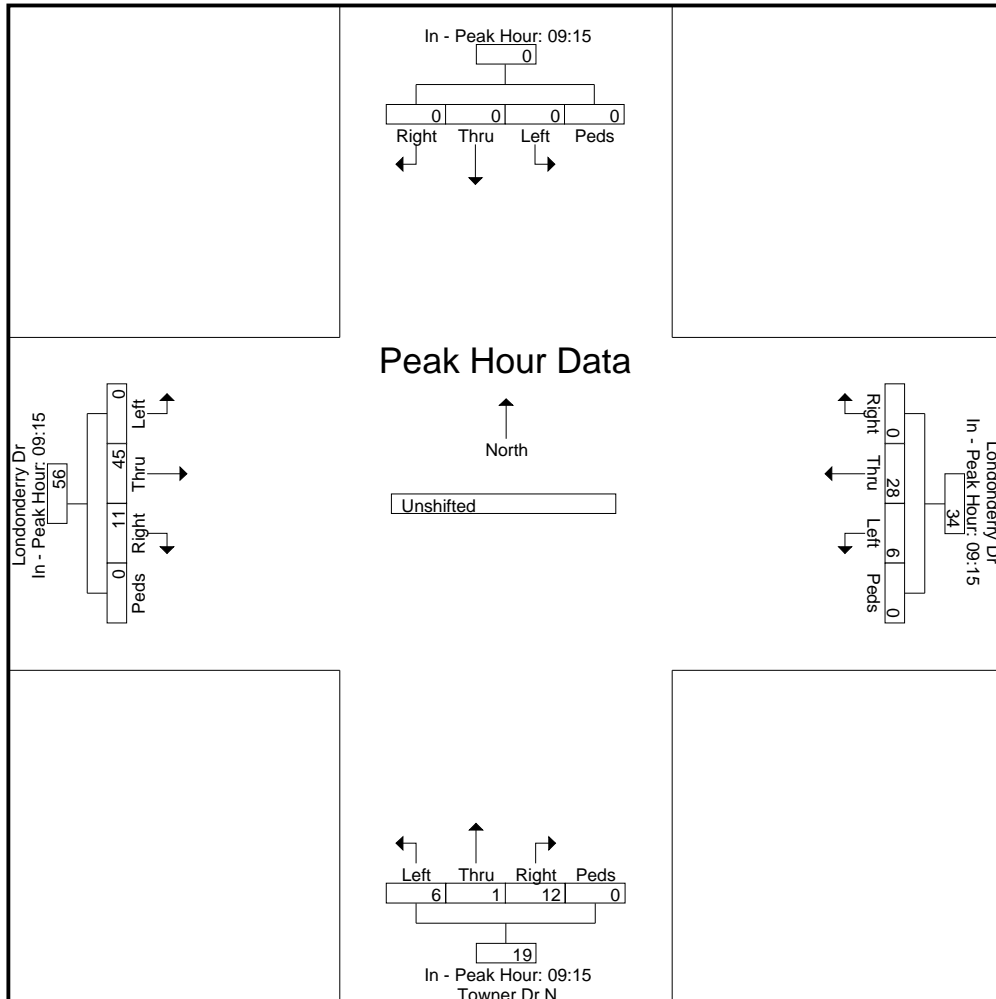


# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Towner Ave N - Londonderry Dr Pre-Service Sun  
 Site Code : S234300  
 Start Date : 9/10/2023  
 Page No : 3

Start Time	Southbound					Londonderry Dr Westbound					Towner Dr N Northbound					Londonderry Dr Eastbound					Int. Total				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total					
Peak Hour Analysis From 09:15 to 10:10 - Peak 1 of 1																									
Peak Hour for Each Approach Begins at:																									
	09:15					09:15					09:15					09:15									
+0 mins.	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	1	0	0	0	1
+5 mins.	0	0	0	0	0	0	1	0	0	1	2	0	1	0	3	0	4	0	0	4	0	4	0	0	4
+10 mins.	0	0	0	0	0	0	5	0	0	5	0	0	2	0	2	0	1	0	0	1	0	1	0	0	1
+15 mins.	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	6	0	0	6
+20 mins.	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	1	2	0	0	3	1	2	0	0	3
+25 mins.	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	4	0	0	4	0	4	0	0	4
+30 mins.	0	0	0	0	0	0	1	2	0	3	0	0	1	0	1	1	2	0	0	3	1	2	0	0	3
+35 mins.	0	0	0	0	0	0	3	1	0	4	2	0	1	0	3	1	5	0	0	6	1	5	0	0	6
+40 mins.	0	0	0	0	0	0	4	0	0	4	4	0	0	0	4	4	3	0	0	7	4	3	0	0	7
+45 mins.	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	8	0	0	8	0	8	0	0	8
+50 mins.	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	1	4	0	0	5	1	4	0	0	5
+55 mins.	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	2	6	0	0	8	2	6	0	0	8
Total Volume	0	0	0	0	0	0	28	6	0	34	12	1	6	0	19	11	45	0	0	56	11	45	0	0	56
% App. Total	0	0	0	0	0	0	82.4	17.6	0	34	63.2	5.3	31.6	0	19	19.6	80.4	0	0	56	19.6	80.4	0	0	56
PHF	.000	.000	.000	.000	.000	.000	.467	.250	.000	.567	.250	.083	.250	.000	.396	.229	.469	.000	.000	.583	.229	.469	.000	.000	.583



# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Triborough Trl - Londonderry Dr Post Service Sun

Site Code : S234300

Start Date : 9/10/2023

Page No : 1

Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

## Groups Printed- Bank 1

Start Time	Triborough Trl Southbound					Londonderry Dr Westbound					Northbound					Londonderry Dr Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
10:45	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
10:50	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
10:55	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	4	0	4	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	9
11:00	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
11:05	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
11:10	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:15	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***																						
11:25	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
11:30	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
*** BREAK ***																						
11:40	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	17	0	17	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	29
Apprch %	0	0	100	0		100	0	0	0		0	0	0	0		0	0	0	0		0	
Total %	0	0	58.6	0	58.6	41.4	0	0	0	41.4	0	0	0	0		0	0	0	0		0	

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Triborough Trl - Londonderry Dr Post Service Sun

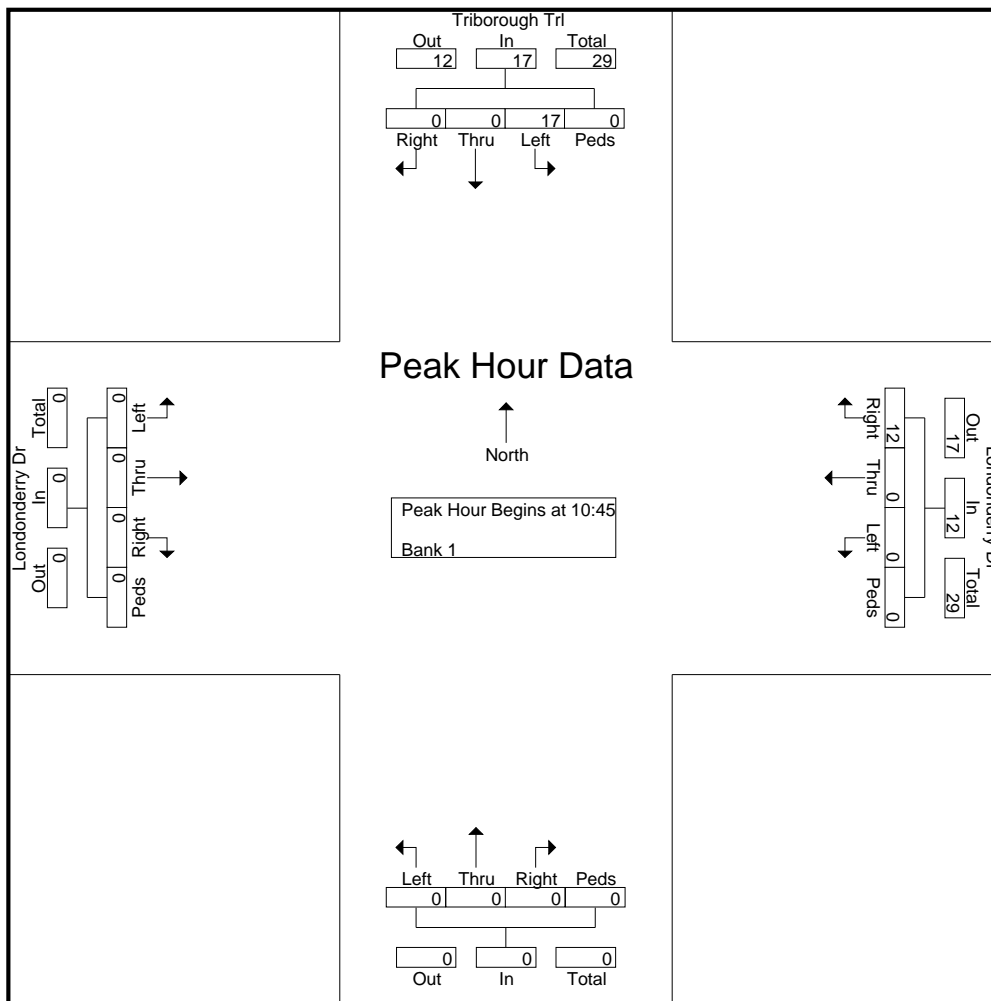
Site Code : S234300

Start Date : 9/10/2023

Page No : 2

Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

Start Time	Triborough Trl Southbound					Londonderry Dr Westbound					Northbound					Londonderry Dr Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
Peak Hour Analysis From 10:45 to 11:40 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 10:45																						
10:45	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
10:50	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
10:55	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
11:00	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
11:05	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
11:10	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:15	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:25	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
11:30	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
11:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:40	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	17	0	17	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	29
% App. Total	0	0	100	0		100	0	0	0		0	0	0	0		0	0	0	0			
PHF	.000	.000	.472	.000	.472	.333	.000	.000	.000	.333	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.604	





# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Triborough Trl - Londonderry Dr Post Service Sun

Site Code : S234300

Start Date : 9/10/2023

Page No : 3

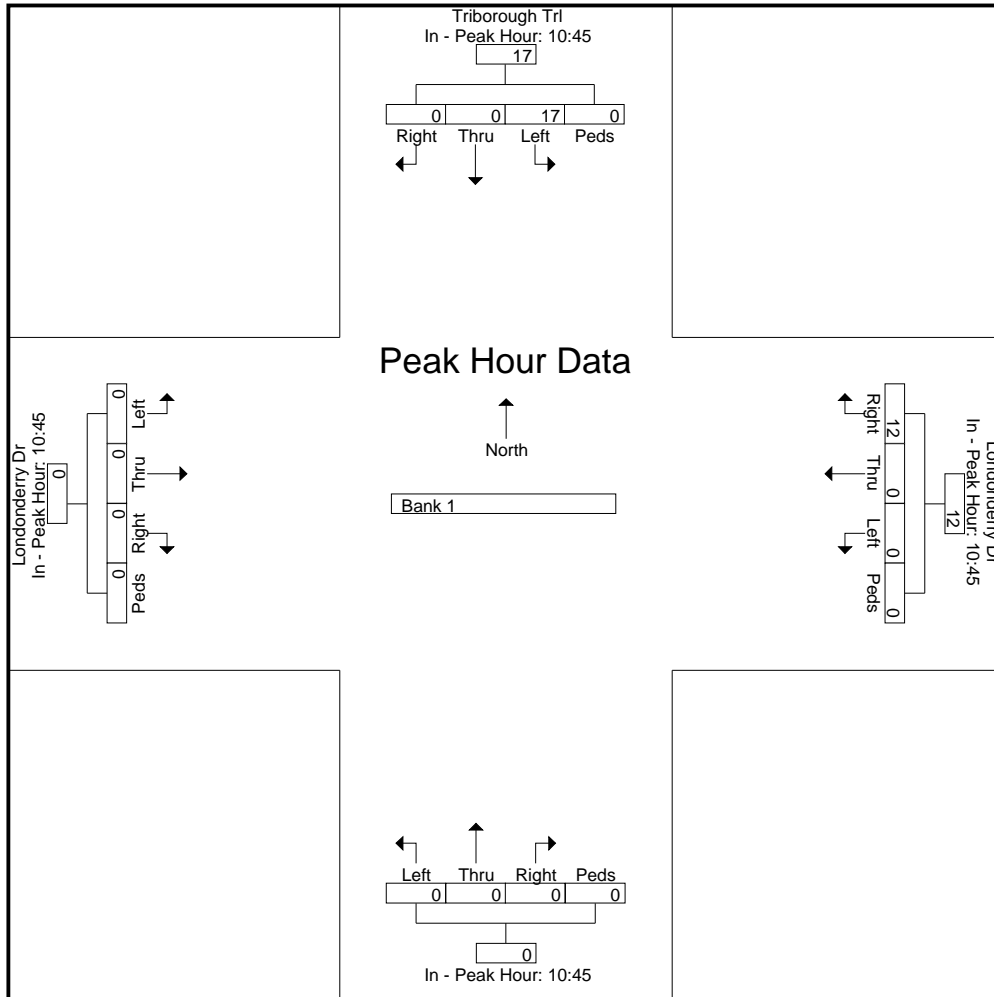
Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

Start Time	Triborough Trl Southbound					Londonderry Dr Westbound					Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 10:45 to 11:40 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	10:45					10:45					10:45					10:45									
+0 mins.	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+5 mins.	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+20 mins.	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+25 mins.	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+35 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+40 mins.	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+50 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+55 mins.	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	17	0	17	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	100	0		100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
PHF	.000	.000	.472	.000	.472	.333	.000	.000	.000	.333	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
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 719-633-2868

File Name : Triborough Trl - Londonderry Dr Pre-Service Sun

Site Code : S234300

Start Date : 9/10/2023

Page No : 1

Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

### Groups Printed- Bank 1

Start Time	Triborough Trl Southbound					Londonderry Dr Westbound					Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
09:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:20	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:25	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:35	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:40	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:50	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:55	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	12	0	12	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	17
10:00	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***																					
10:10	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	14	0	14	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	21
Apprch %	0	0	100	0		100	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	66.7	0	66.7	33.3	0	0	0	33.3	0	0	0	0	0	0	0	0	0	0	

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : Triborough Trl - Londonderry Dr Pre-Service Sun

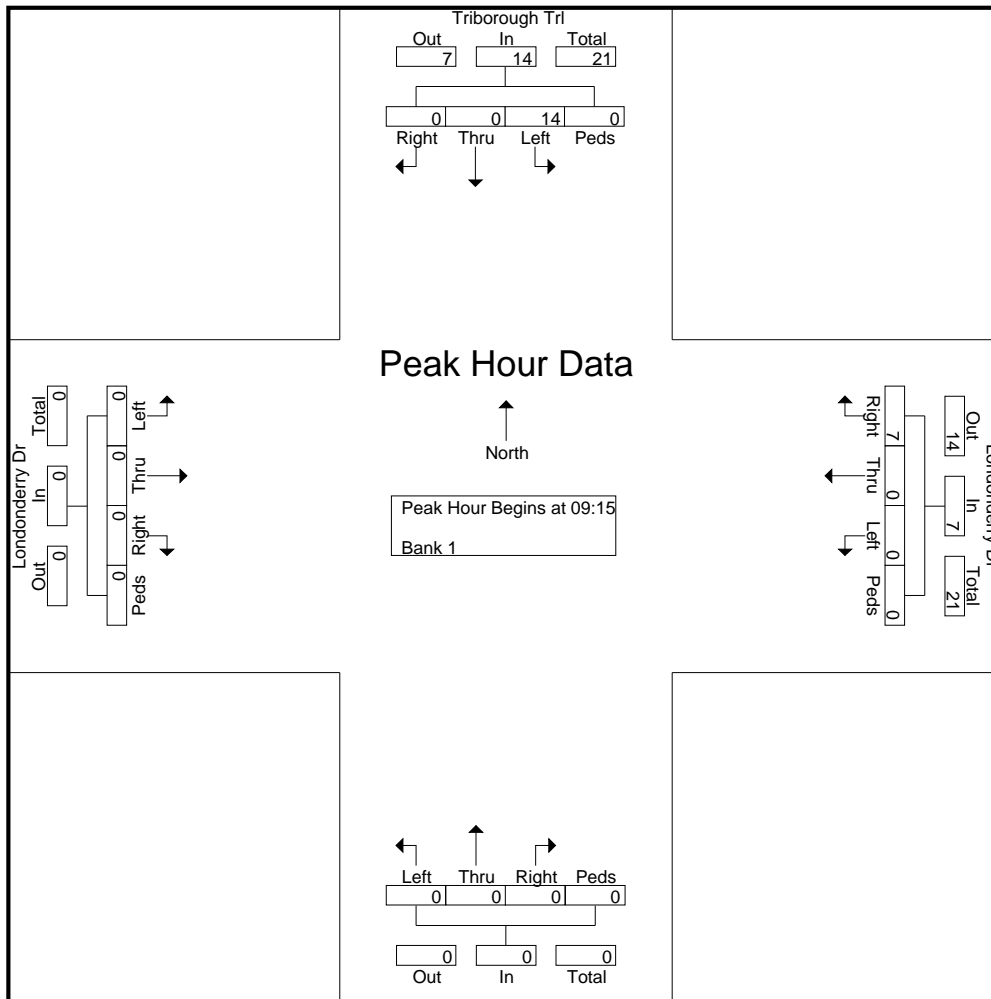
Site Code : S234300

Start Date : 9/10/2023

Page No : 2

Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

Start Time	Triborough Trl Southbound					Londonderry Dr Westbound					Northbound					Londonderry Dr Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
Peak Hour Analysis From 09:15 to 10:10 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 09:15																						
09:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:20	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:25	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
09:30	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
09:35	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
09:40	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
09:50	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
09:55	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:00	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
10:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:10	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	14	0	14	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	21
% App. Total	0	0	100	0		100	0	0	0		0	0	0	0		0	0	0	0			
PHF	.000	.000	.583	.000	.583	.292	.000	.000	.000	.292	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.583	



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Page No : 3

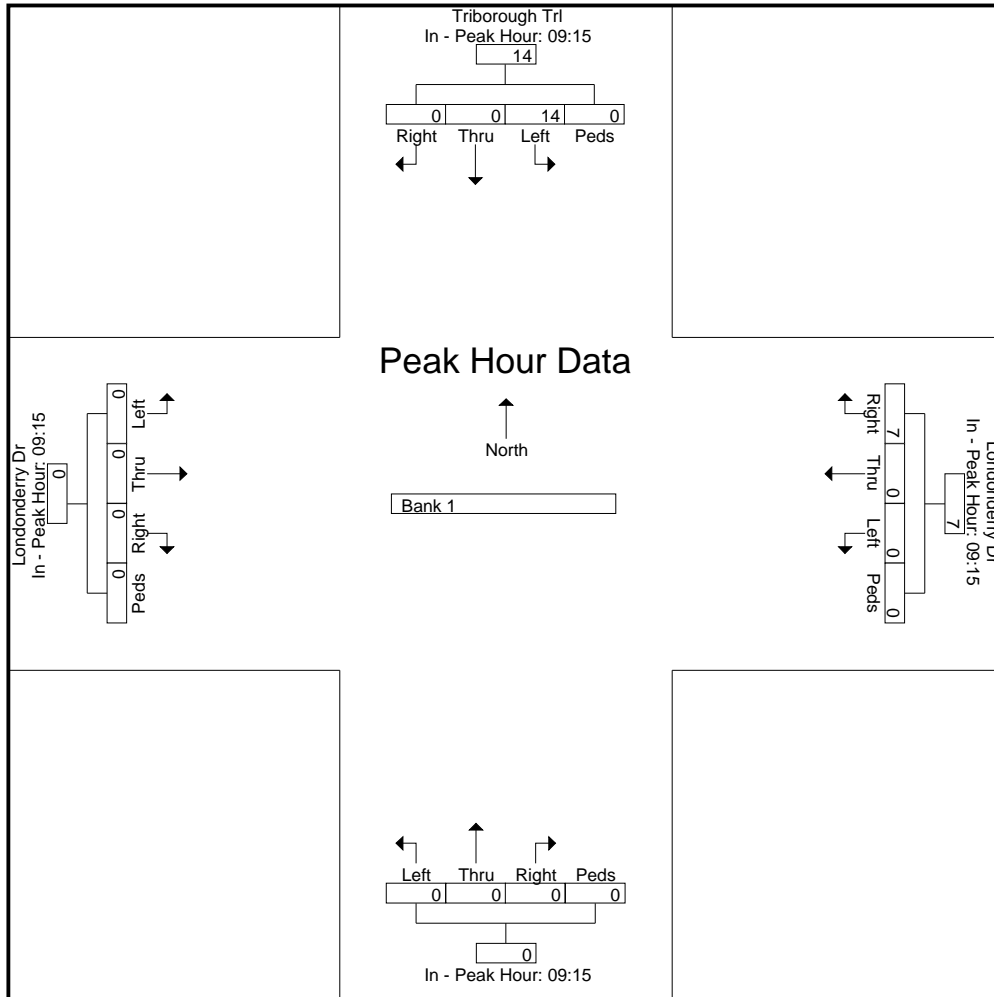
Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

Start Time	Triborough Trl Southbound					Londonderry Dr Westbound					Northbound					Londonderry Dr Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 09:15 to 10:10 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	09:15					09:15					09:15					09:15									
+0 mins.	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+5 mins.	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+10 mins.	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+20 mins.	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+25 mins.	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+35 mins.	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+40 mins.	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+50 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+55 mins.	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	14	0	14	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	100	0		100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
PHF	.000	.000	.583	.000	.583	.292	.000	.000	.000	.292	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



# Levels of Service

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Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	50	15	6	35	13	12
Future Vol, veh/h	50	15	6	35	13	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	64	19	8	45	17	16

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	83	0	135 74
Stage 1	-	-	-	-	74 -
Stage 2	-	-	-	-	61 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1527	-	863 993
Stage 1	-	-	-	-	954 -
Stage 2	-	-	-	-	967 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1527	-	859 993
Mov Cap-2 Maneuver	-	-	-	-	859 -
Stage 1	-	-	-	-	954 -
Stage 2	-	-	-	-	962 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	859	993	-	-	1527	-
HCM Lane V/C Ratio	0.02	0.016	-	-	0.005	-
HCM Control Delay (s)	9.3	8.7	-	-	7.4	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	45	33	15	20	0
Future Vol, veh/h	0	45	33	15	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	58	42	19	27	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	61	0	-	0	110 52
Stage 1	-	-	-	-	52 -
Stage 2	-	-	-	-	58 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1555	-	-	-	892 1021
Stage 1	-	-	-	-	976 -
Stage 2	-	-	-	-	970 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1555	-	-	-	892 1021
Mov Cap-2 Maneuver	-	-	-	-	892 -
Stage 1	-	-	-	-	976 -
Stage 2	-	-	-	-	970 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1555	-	-	-	892
HCM Lane V/C Ratio	-	-	-	-	0.03
HCM Control Delay (s)	0	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	25	0	0	21
Future Vol, veh/h	0	0	25	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	33	0	0	28

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	61	33	0	0	33	0
Stage 1	33	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	950	1046	-	-	1592	-
Stage 1	995	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	950	1046	-	-	1592	-
Mov Cap-2 Maneuver	950	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1592
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0



Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	75	15	17	60	13	26
Future Vol, veh/h	75	15	17	60	13	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	125	25	28	100	17	35

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	150	0	294
Stage 1	-	-	-	-	138
Stage 2	-	-	-	-	156
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1444	-	701
Stage 1	-	-	-	-	894
Stage 2	-	-	-	-	877
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1444	-	688
Mov Cap-2 Maneuver	-	-	-	-	688
Stage 1	-	-	-	-	894
Stage 2	-	-	-	-	860

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	688	916	-	-	1444	-
HCM Lane V/C Ratio	0.025	0.038	-	-	0.02	-
HCM Control Delay (s)	10.4	9.1	-	-	7.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-

HCM 6th TWSC  
 2: North Site Access/Triborough Trail & Londonderry Dr

10/09/2023

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	45	2	25	33	15	1	1	25	20	1	0
Future Vol, veh/h	0	45	2	25	33	15	1	1	25	20	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	50	50	78	78	50	50	50	75	50	75
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	58	4	50	42	19	2	2	50	27	2	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	61	0	0	62	0	0	213	221	60	238	214	52
Stage 1	-	-	-	-	-	-	60	60	-	152	152	-
Stage 2	-	-	-	-	-	-	153	161	-	86	62	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1555	-	-	1554	-	-	748	681	1011	721	687	1021
Stage 1	-	-	-	-	-	-	957	849	-	855	775	-
Stage 2	-	-	-	-	-	-	854	769	-	927	847	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1555	-	-	1554	-	-	728	659	1011	666	664	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	659	-	666	664	-
Stage 1	-	-	-	-	-	-	957	849	-	855	749	-
Stage 2	-	-	-	-	-	-	824	744	-	879	847	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.3	8.9	10.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	978	1555	-	-	1554	-	-	666
HCM Lane V/C Ratio	0.055	-	-	-	0.032	-	-	0.043
HCM Control Delay (s)	8.9	0	-	-	7.4	0	-	10.6
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

HCM 6th TWSC  
3: Towner Ave & East Site Access

10/09/2023

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	0	24	0	0	0	24	25	0	0	21	11
Future Vol, veh/h	14	0	24	0	0	0	24	25	0	0	21	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	75	75	75	50	75	75	75	75	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	28	0	48	0	0	0	48	33	0	0	28	22

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	168	168	39	192	179	33	50	0	0	33	0	0
Stage 1	39	39	-	129	129	-	-	-	-	-	-	-
Stage 2	129	129	-	63	50	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	800	728	1038	772	718	1046	1570	-	-	1592	-	-
Stage 1	981	866	-	880	793	-	-	-	-	-	-	-
Stage 2	880	793	-	953	857	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	781	705	1038	719	696	1046	1570	-	-	1592	-	-
Mov Cap-2 Maneuver	781	705	-	719	696	-	-	-	-	-	-	-
Stage 1	951	866	-	853	768	-	-	-	-	-	-	-
Stage 2	853	768	-	909	857	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	0	4.3	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1570	-	-	926	-	1592	-	-
HCM Lane V/C Ratio	0.031	-	-	0.082	-	-	-	-
HCM Control Delay (s)	7.4	0	-	9.2	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	-	0	-	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	60	25	25	50	35	30
Future Vol, veh/h	60	25	25	50	35	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	75	78	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	73	30	33	64	46	39

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	103	0	218 88
Stage 1	-	-	-	-	88 -
Stage 2	-	-	-	-	130 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1502	-	775 976
Stage 1	-	-	-	-	940 -
Stage 2	-	-	-	-	901 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1502	-	758 976
Mov Cap-2 Maneuver	-	-	-	-	758 -
Stage 1	-	-	-	-	940 -
Stage 2	-	-	-	-	881 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.5	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	758	976	-	-	1502	-
HCM Lane V/C Ratio	0.061	0.04	-	-	0.022	-
HCM Control Delay (s)	10.1	8.8	-	-	7.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	65	70	15	20	0
Future Vol, veh/h	0	65	70	15	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	82	82	75	75
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	81	85	18	27	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	103	0	-	0	175 94
Stage 1	-	-	-	-	94 -
Stage 2	-	-	-	-	81 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1502	-	-	-	819 968
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	947 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1502	-	-	-	819 968
Mov Cap-2 Maneuver	-	-	-	-	819 -
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	947 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1502	-	-	-	819
HCM Lane V/C Ratio	-	-	-	-	0.033
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	65	0	0	50
Future Vol, veh/h	0	0	65	0	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	80	80	78	78
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	81	0	0	64

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	145	81	0	0	81	0
Stage 1	81	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	852	985	-	-	1529	-
Stage 1	947	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	852	985	-	-	1529	-
Mov Cap-2 Maneuver	852	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	964	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1529
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	25	40	85	35	49
Future Vol, veh/h	95	25	40	85	35	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	60	60	77	78
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	158	42	67	142	45	63

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	200	0	455 179
Stage 1	-	-	-	-	179 -
Stage 2	-	-	-	-	276 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1384	-	567 869
Stage 1	-	-	-	-	857 -
Stage 2	-	-	-	-	775 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1384	-	540 869
Mov Cap-2 Maneuver	-	-	-	-	540 -
Stage 1	-	-	-	-	857 -
Stage 2	-	-	-	-	738 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.5	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	540	869	-	-	1384	-
HCM Lane V/C Ratio	0.084	0.072	-	-	0.048	-
HCM Control Delay (s)	12.3	9.5	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.2	-

HCM 6th TWSC  
 2: North Site Access/Triborough Trail & Londonderry Dr

10/09/2023

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	65	3	35	70	15	2	1	35	20	1	0
Future Vol, veh/h	0	65	3	35	70	15	2	1	35	20	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	50	50	80	80	50	50	50	75	50	75
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	81	6	70	88	19	4	2	70	27	2	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	107	0	0	87	0	0	323	331	84	358	325	98
Stage 1	-	-	-	-	-	-	84	84	-	238	238	-
Stage 2	-	-	-	-	-	-	239	247	-	120	87	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1497	-	-	1522	-	-	634	592	981	601	596	963
Stage 1	-	-	-	-	-	-	929	829	-	770	712	-
Stage 2	-	-	-	-	-	-	769	706	-	889	827	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1522	-	-	609	563	981	535	567	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	609	563	-	535	567	-
Stage 1	-	-	-	-	-	-	929	829	-	770	677	-
Stage 2	-	-	-	-	-	-	729	671	-	824	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3	9.2	12.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	933	1497	-	-	1522	-	-	537
HCM Lane V/C Ratio	0.081	-	-	-	0.046	-	-	0.053
HCM Control Delay (s)	9.2	0	-	-	7.5	0	-	12.1
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2



HCM 6th TWSC  
3: Towner Ave & East Site Access

10/09/2023

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	0	34	0	0	0	33	65	0	0	50	15
Future Vol, veh/h	19	0	34	0	0	0	33	65	0	0	50	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	75	75	75	50	80	80	78	78	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	38	0	68	0	0	0	66	81	0	0	64	30

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	292	292	79	326	307	81	94	0	0	81	0	0
Stage 1	79	79	-	213	213	-	-	-	-	-	-	-
Stage 2	213	213	-	113	94	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	664	622	987	631	610	985	1513	-	-	1529	-	-
Stage 1	935	833	-	794	730	-	-	-	-	-	-	-
Stage 2	794	730	-	897	821	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	641	593	987	567	582	985	1513	-	-	1529	-	-
Mov Cap-2 Maneuver	641	593	-	567	582	-	-	-	-	-	-	-
Stage 1	892	833	-	757	696	-	-	-	-	-	-	-
Stage 2	757	696	-	835	821	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	0	3.4	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1513	-	-	827	-	1529	-
HCM Lane V/C Ratio	0.044	-	-	0.128	-	-	-
HCM Control Delay (s)	7.5	0	-	10	0	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	-	0	-