



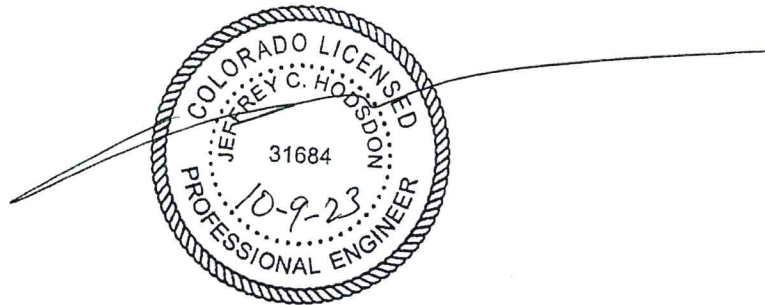
LSC TRANSPORTATION CONSULTANTS, INC.
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Please see comments provided on the TIS in SF2321 and resubmit revised version.

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.

D. 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

LSC Transportation Consultants

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

LSC #S234300

EPC PCD File No.: SF2321



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 Level of Service Reports



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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

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

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 be 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

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.

| Table 1 | | | |
|--|--|--------------------------|--|
| Intersection Levels of Service Delay Ranges | | | |
| Level of Service | Signalized Intersections | | Unsignalized Intersections |
| | Average Control Delay (seconds per vehicle) | V/C⁽¹⁾ | Average Control Delay (seconds per vehicle)⁽²⁾ |
| 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.

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

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, 6th 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.

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

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.

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

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.

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

Table 2



Table 2: Trip Generation Estimate

| Weekdays | | | | | | | | | | | | | |
|-----------------|--------------------|--------------|---------------------------|---|---------------|-----------|-------------|---------------------------------------|------------------------|----------------------------|-----------|-------------|---|
| ITE | | Value | Units ¹ | Trip Generation Rates ² | | | | Total Driveway Trips Generated | | | | | |
| Code | Description | | | Average Weekday | A.M. | | P.M. | | Average Weekday | A.M. | | P.M. | |
| | | | | In | Out | In | Out | | In | Out | In | Out | |
| 560 | Church | 9.730 | KSF | 7.60 | 0.12 | 0.07 | 0.37 | 0.46 | 74 | 2 | 1 | 4 | 5 |
| 565 | Daycare Center | 80 | Students | 4.09 | | | | | 327 | 3 | 1 | 0 | 1 |
| | | | | | | | | | 401 | 5 | 2 | 4 | 6 |
| | | | | | | | | | | PEAK HOUR OF THE GENERATOR | | | |
| 565 | Daycare Center | 80 | Students | | | | | | 33 | 30 | 30 | 35 | |
| Sundays | | | | | | | | | | | | | |
| ITE | | Value | Units ¹ | Trip Generation Rates ² | | | | Total Driveway Trips Generated | | | | | |
| Code | Description | | | Average Sunday | Sunday | | | | Average Sunday | Sunday | | | |
| | | | | In | Out | | | In | Out | | | | |
| 560 | Church | 9.73 | KSF | 31.46 | | | | 306 | | | | | |
| 560 | Church | 250 | Seats | | 0.25 | 0.26 | | | 63 | 66 | | | |
| 560 | Church | 350 | Seats | | 0.25 | 0.26 | | | 88 | 92 | | | |

¹ DU = dwelling units, KSF = 1,000 square feet

² Source: *Trip Generation, 11th Edition (2021)* by the Institute of Transportation Engineers (ITE)

Figures 1-9





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

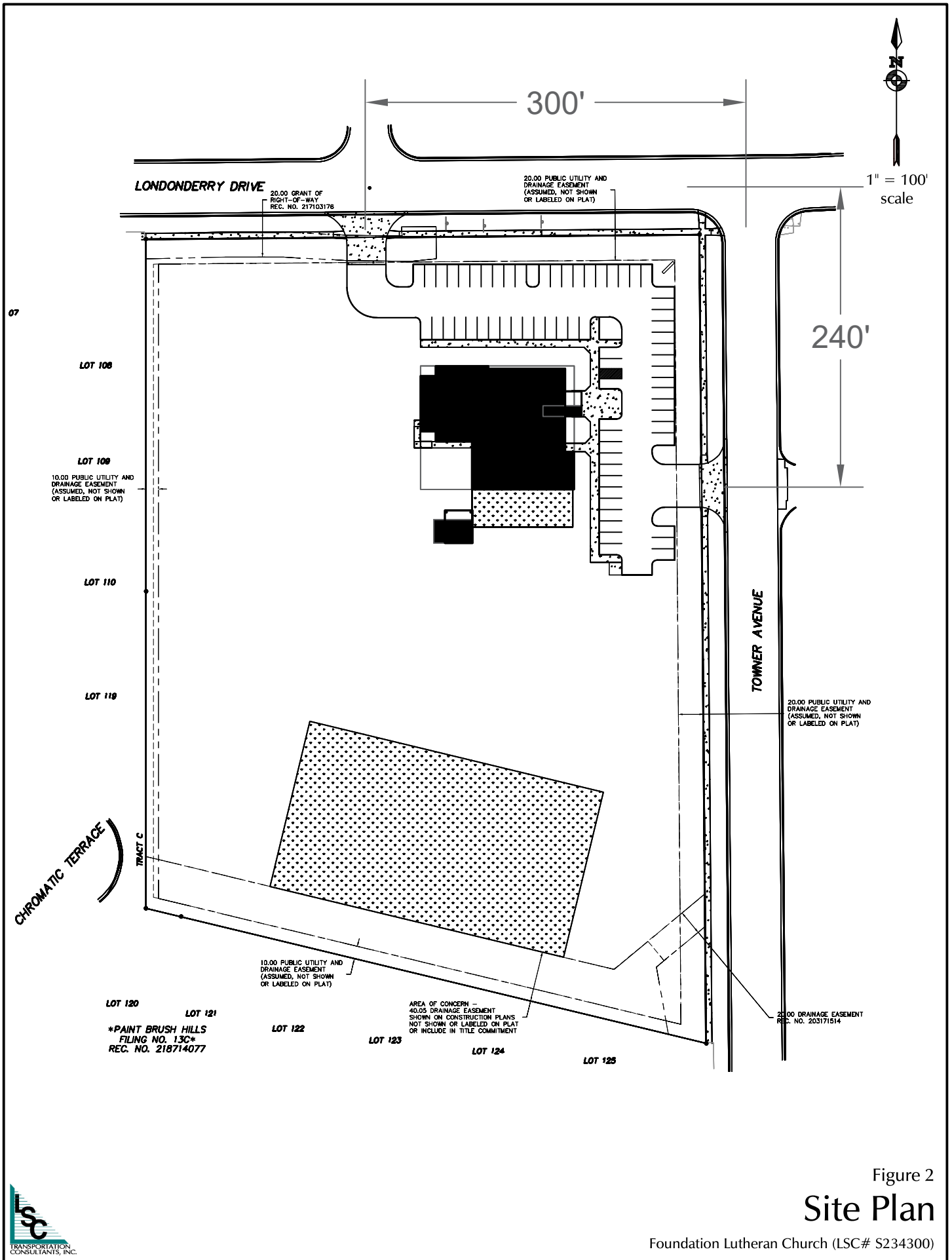


Figure 2
Site Plan

Foundation Lutheran Church (LSC# S234300)



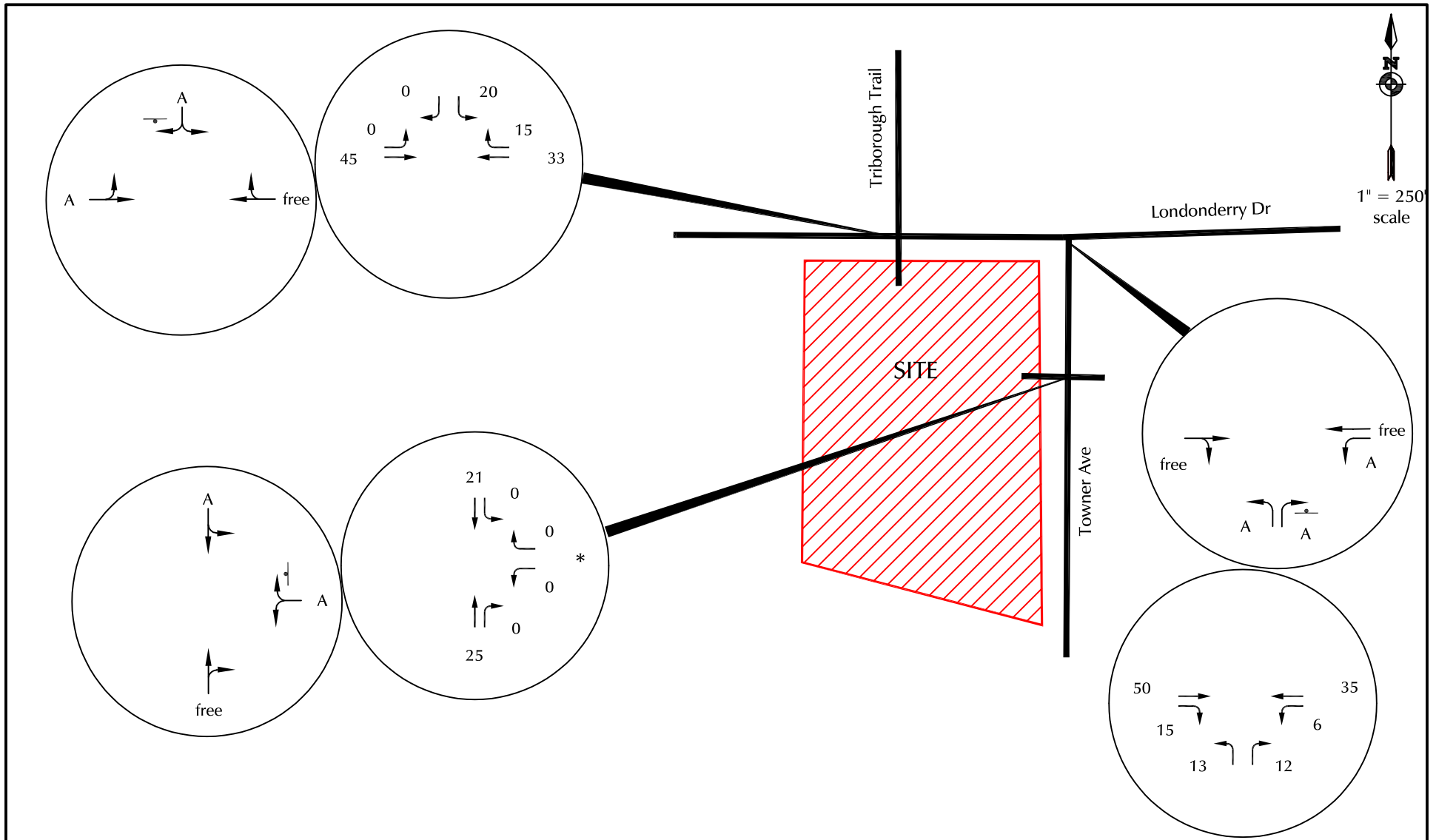


Figure 3
**Existing Sunday Morning Peak-Hour
 Traffic, Lane Geometry, LOS, and
 Traffic Control**



*Estimated by LSC
 ** with minor adjustments by LSC

Foundation Lutheran Church (LSC# S234300)

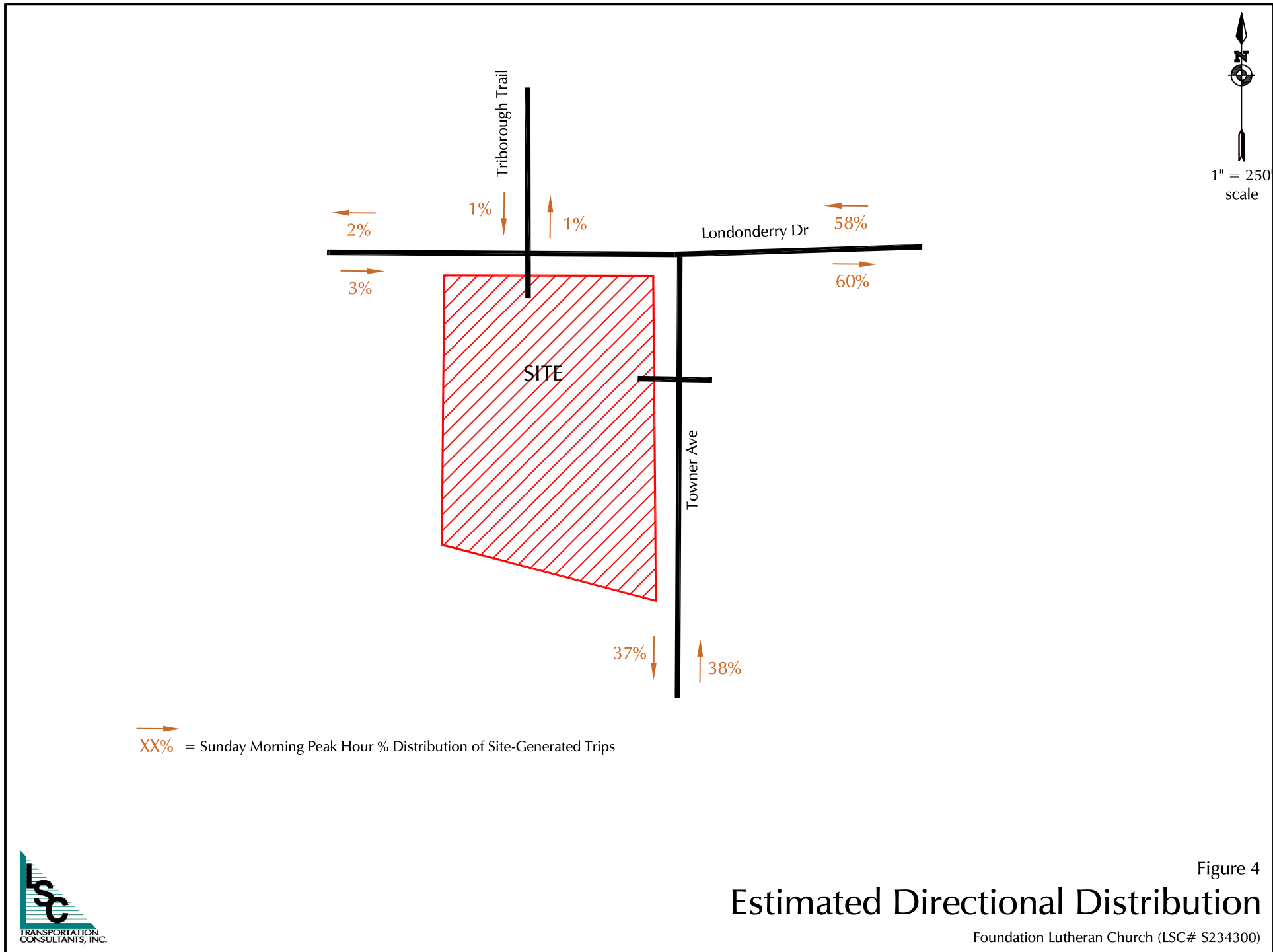
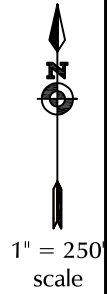
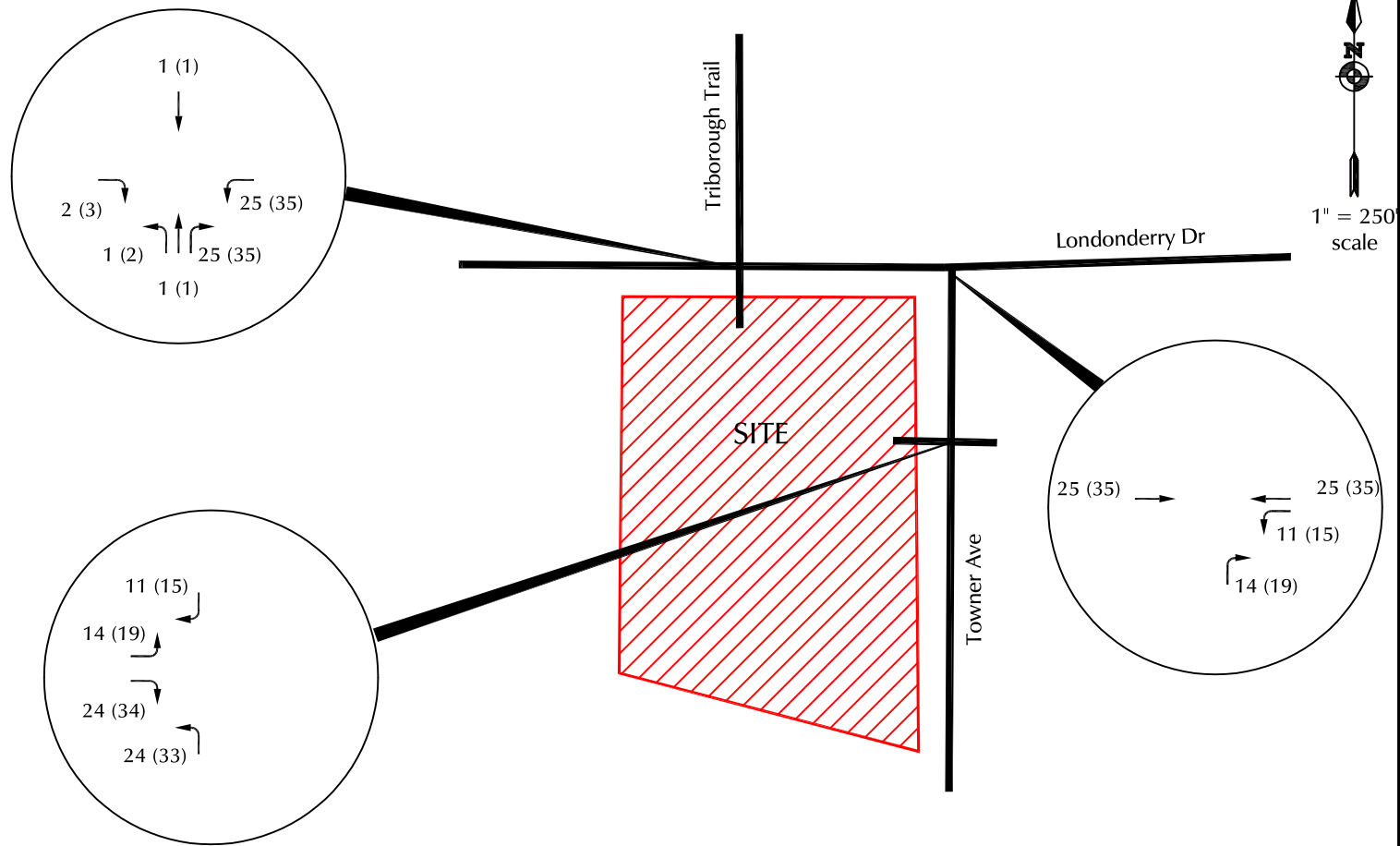


Figure 4
Estimated Directional Distribution

Foundation Lutheran Church (LSC# S234300)





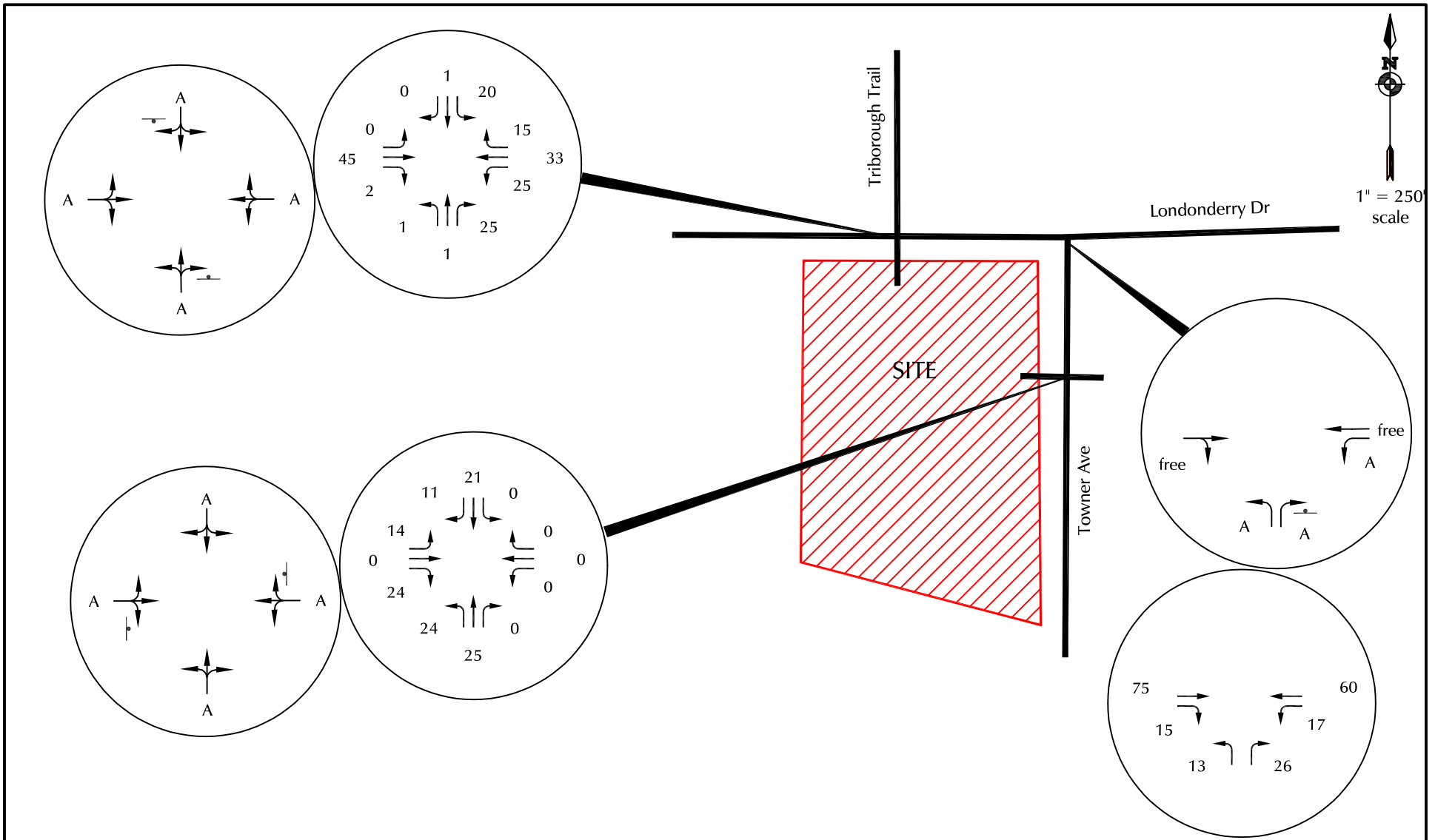
XX (XX) = Short-Term (Long-Term) Sunday Morning Peak-Hour Traffic (Veh/Hour)

Site-Generated Sunday Morning Peak-Hour Traffic

Figure 5

Foundation Lutheran Church (LSC# S234300)



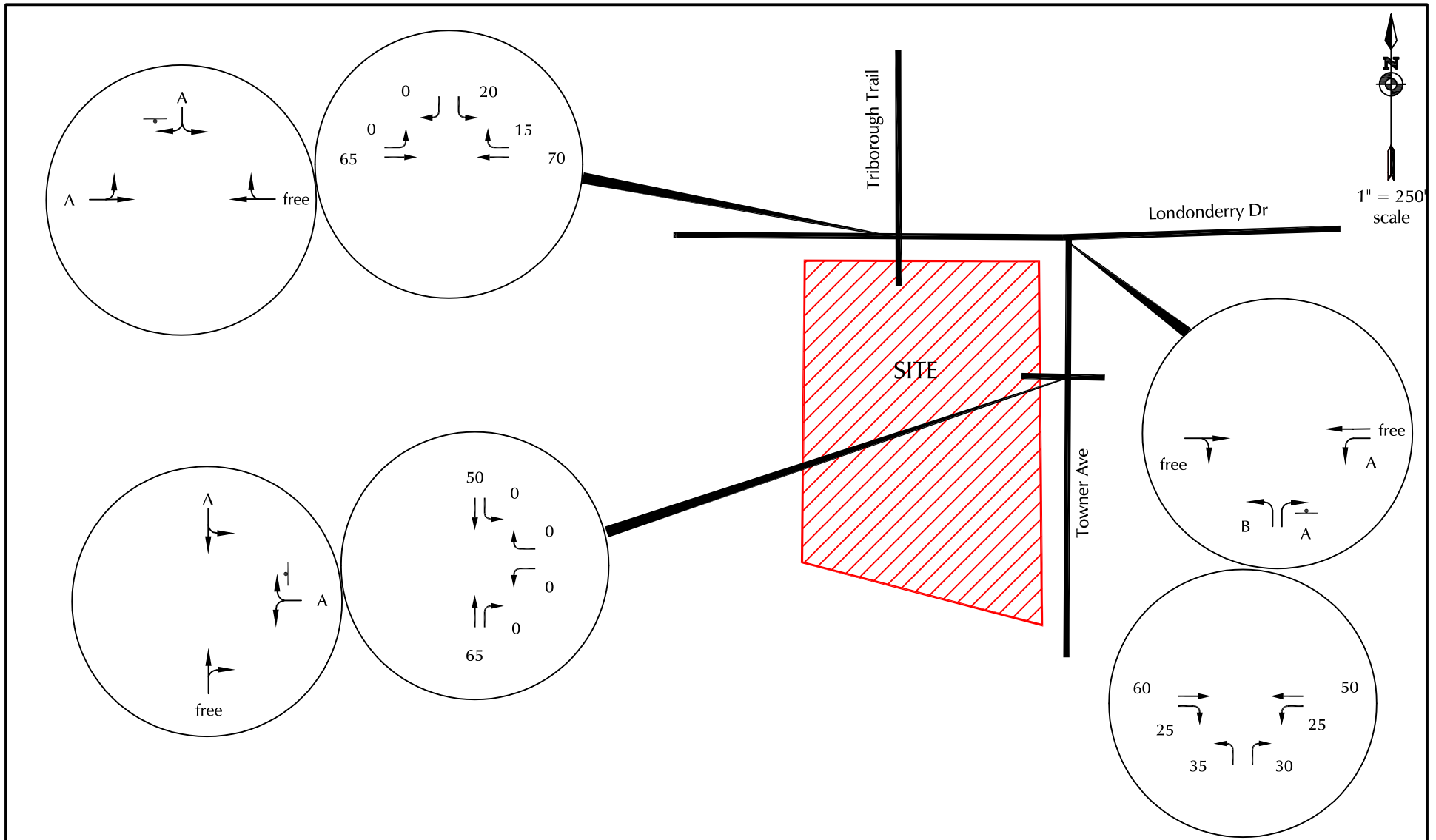


XX = Sunday Morning Peak-Hour Traffic (Veh/Hour)
 X = Sunday Morning Peak-Hour Individual Movement Peak-Hour LOS

⊥ = Stop Sign

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





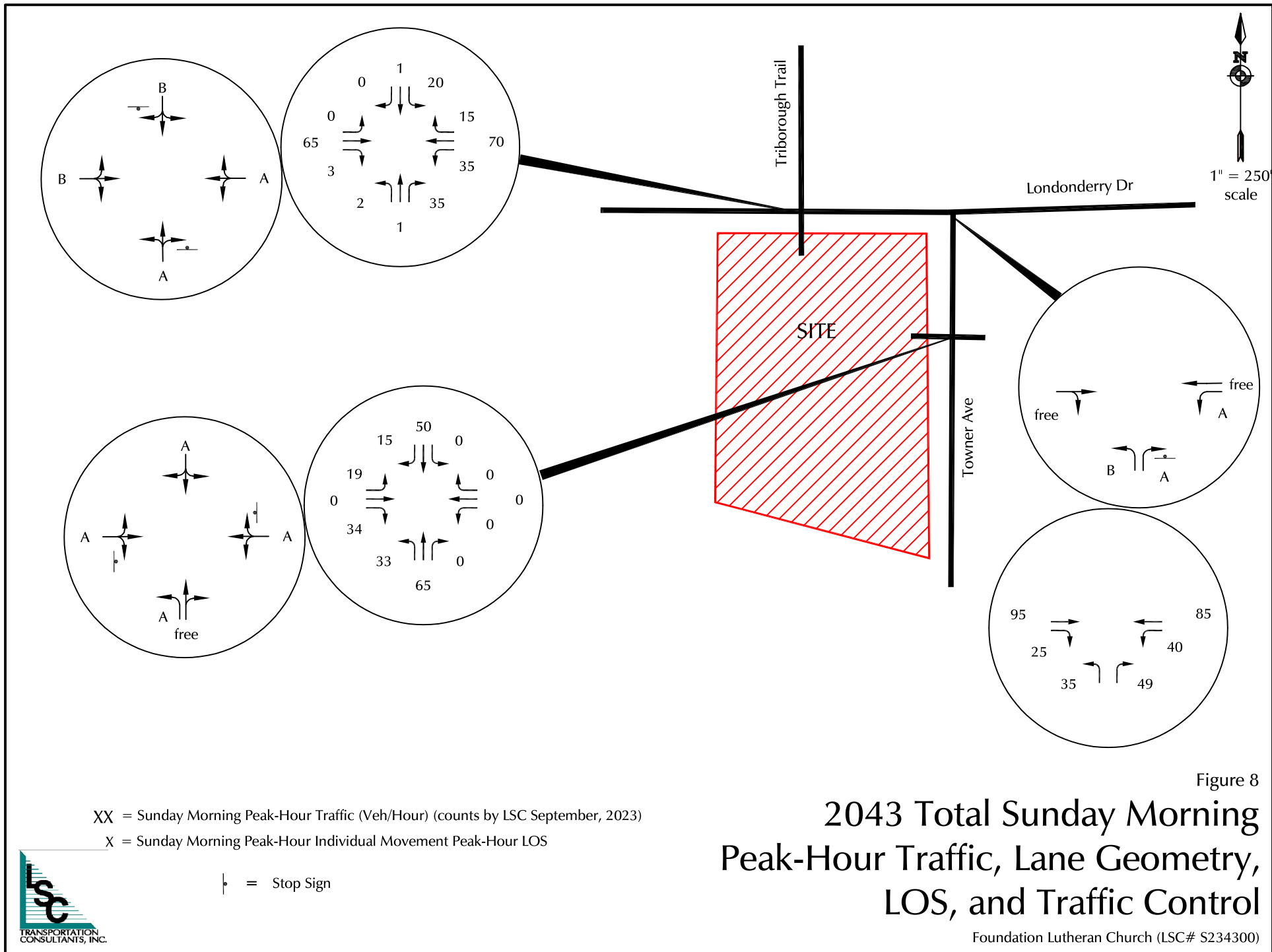
XX = Sunday Morning Peak-Hour Traffic (Veh/Hour)
 X = Sunday Morning Peak-Hour Individual Movement Peak-Hour LOS

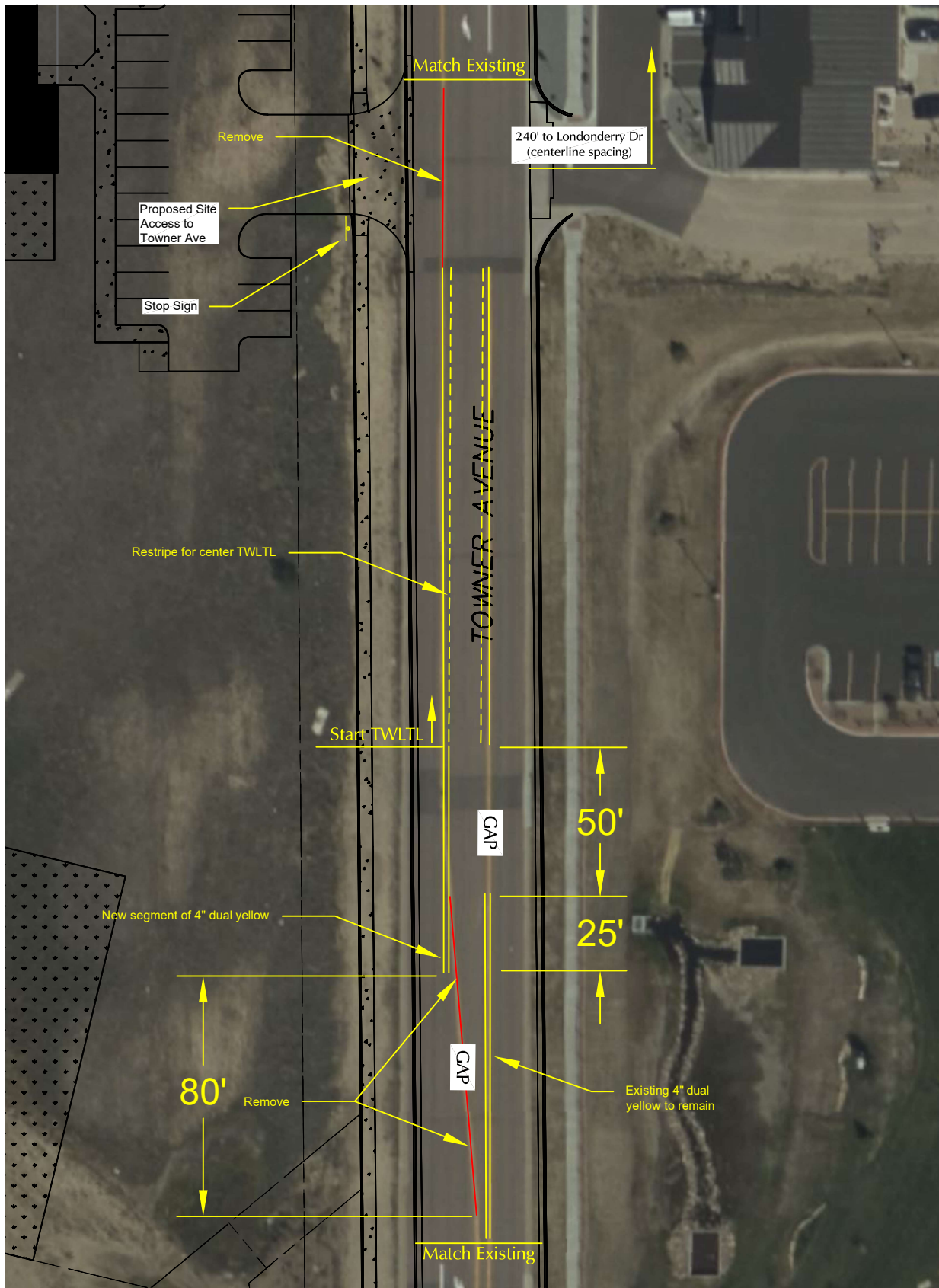
⊥ = Stop Sign



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



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

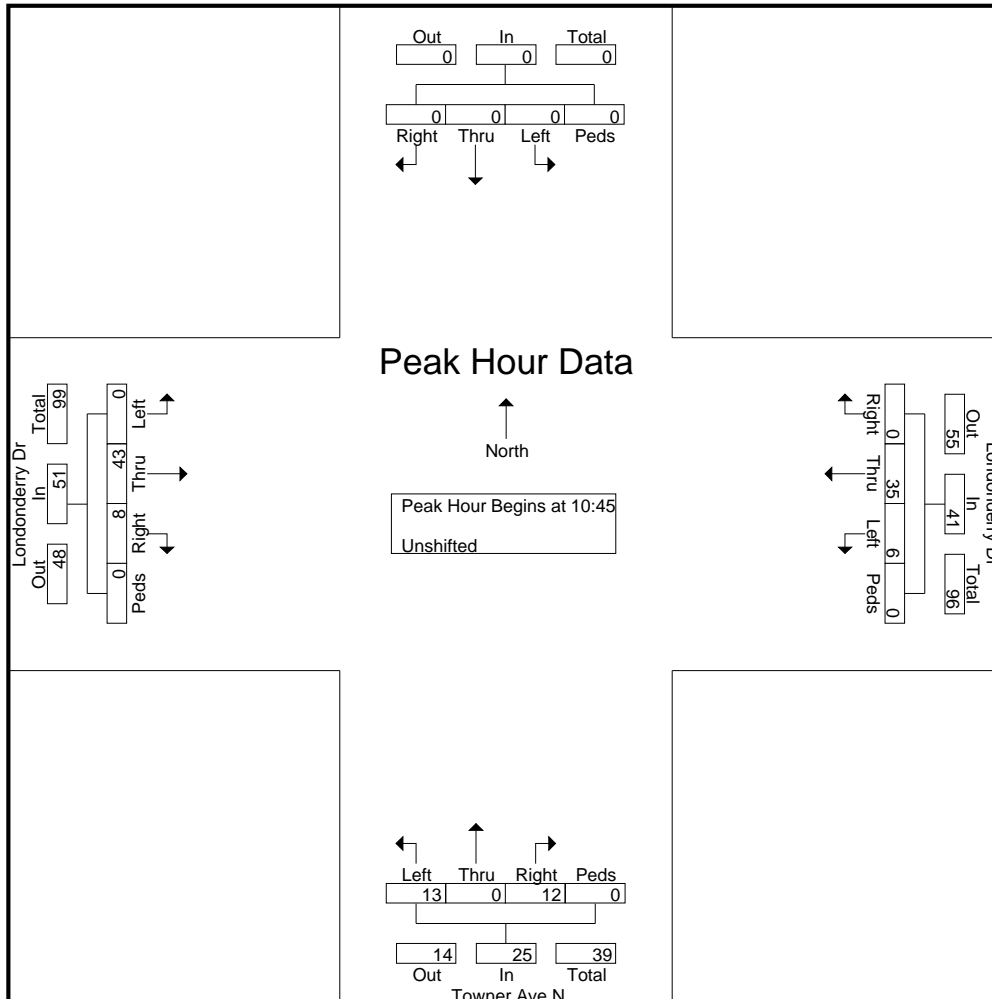
| Start Time | Southbound | | | | | Londonderry Dr Westbound | | | | | Towner Ave N Northbound | | | | | Londonderry Dr Eastbound | | | | | Int. Total |
|-------------|------------|------|------|------|------------|--------------------------|------|------|------|------------|-------------------------|------|------|------|------------|--------------------------|------|------|------|------------|------------|
| | 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 |
| Total | 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 | 1 | 2 | 3 | 0 | 0 | 5 | 8 | |
| 11:05 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 3 | 8 | |
| 11:10 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 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 | 3 | 1 | 3 | 0 | 0 | 4 | 8 | |
| 11:20 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 3 | 3 | 0 | 3 | 0 | 0 | 3 | 11 | |
| 11:25 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 2 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 1 | 7 | |
| 11:30 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 1 | 0 | 0 | 1 | 1 | 5 | 0 | 0 | 6 | 10 | |
| 11:35 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 4 | 9 | |
| 11:40 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 1 | 0 | 1 | 2 | 0 | 5 | 0 | 0 | 5 | 13 | |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 6 | 0 | 41 | 12 | 0 | 13 | 25 | 8 | 43 | 0 | 0 | 51 | 117 | |
| Apprch % | 0 | 0 | 0 | 0 | 0 | 0 | 85.4 | 14.6 | 0 | | 48 | 0 | 52 | 0 | 15.7 | 84.3 | 0 | 0 | | | |
| Total % | 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.

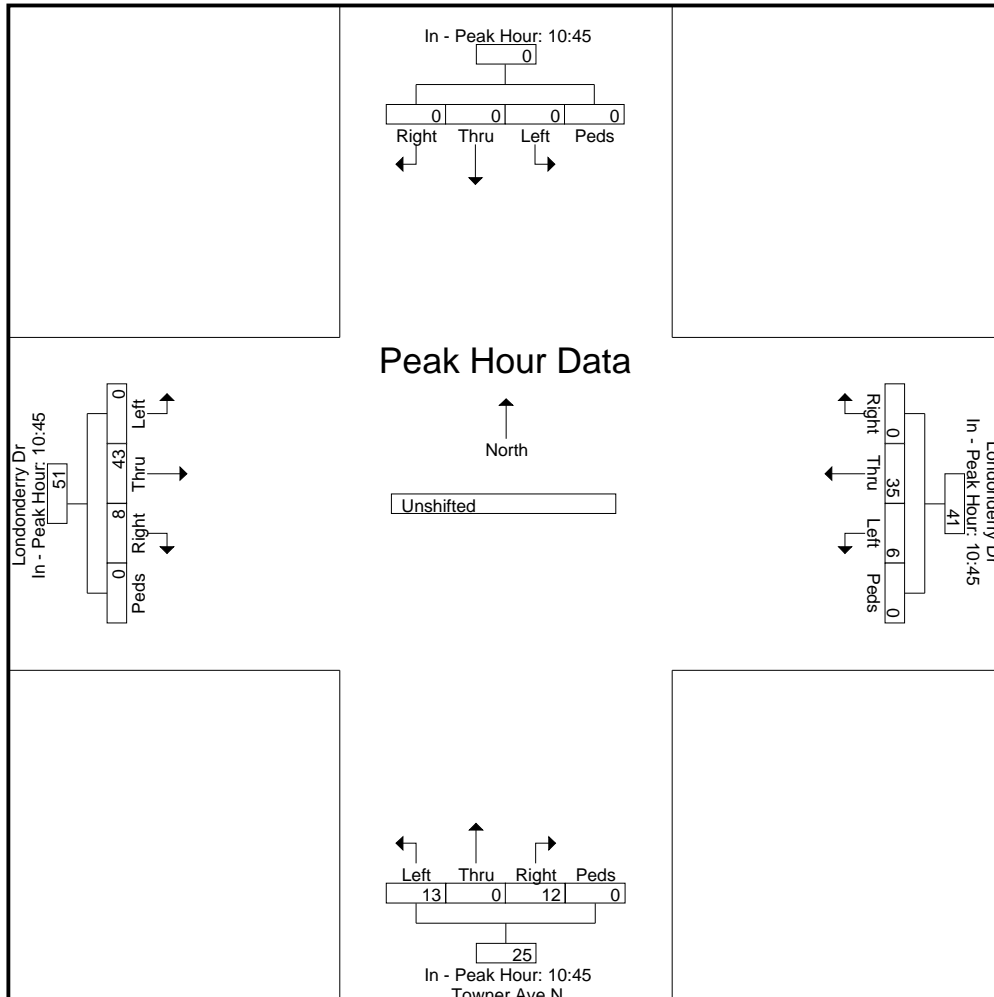
2504 E. Pikes Peak Ave, Suite 304
 Colorado Springs, CO 80909
 719-633-2868

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 |



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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 |
| Total | 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 | |

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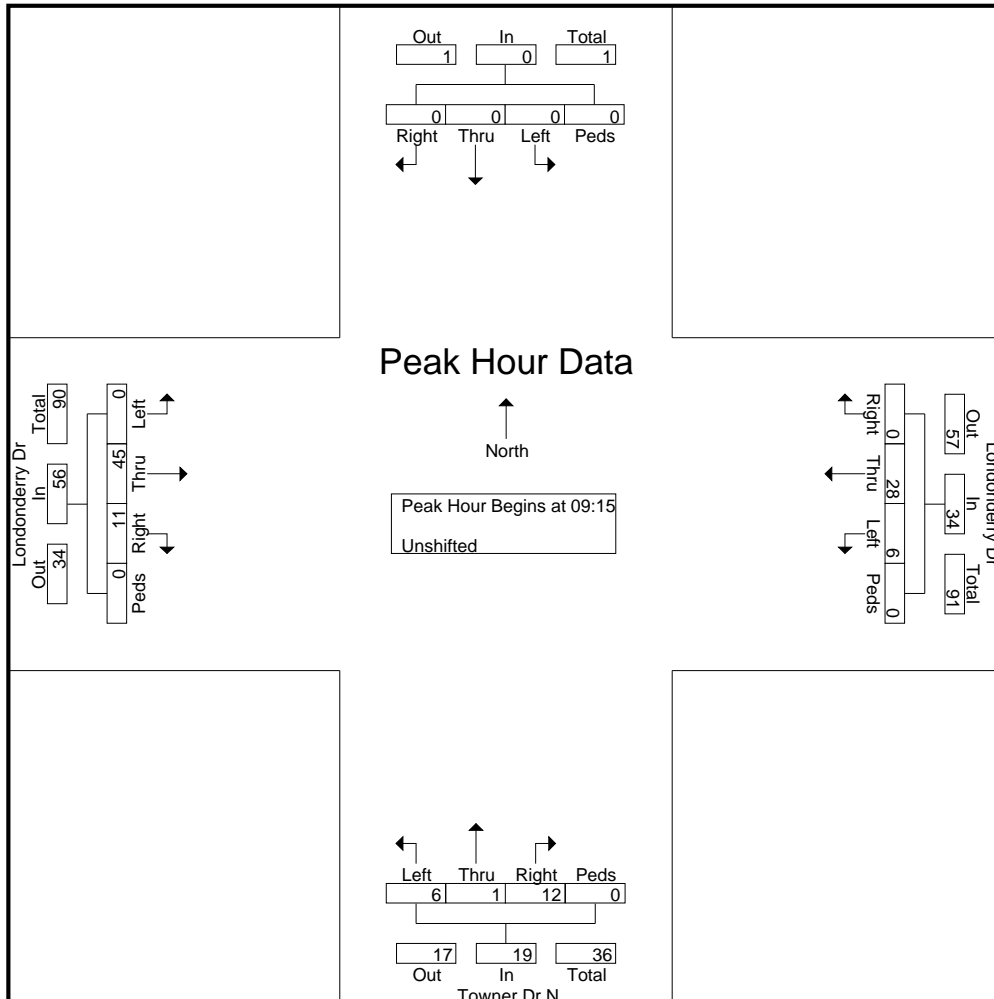
File Name : Towner Ave N - Londonderry Dr Pre-Service Sun

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 |

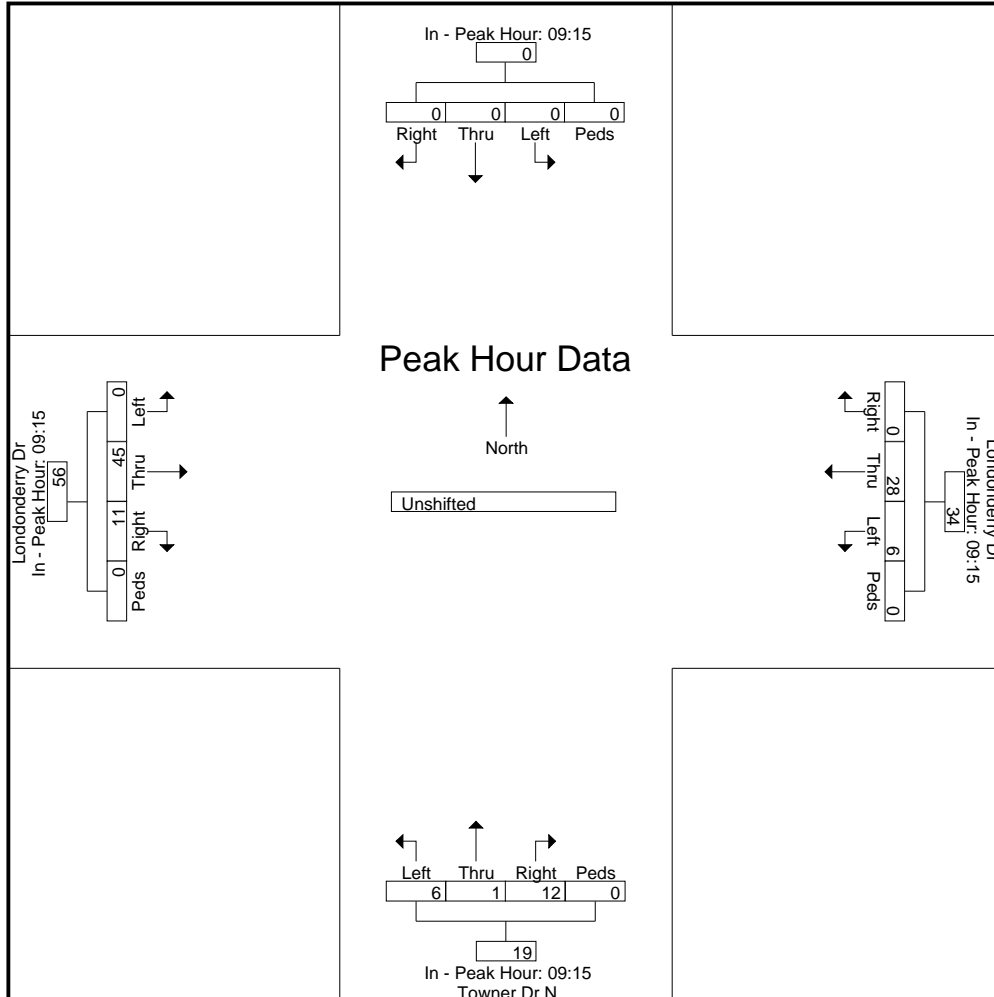


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File Name : Towner Ave N - Londonderry Dr Pre-Service Sun
 Site Code : S234300
 Start Date : 9/10/2023
 Page No : 3

| 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 | |
| +5 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 3 | 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 | |
| +15 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 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 | |
| +25 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 1 | 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 | |
| +35 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 2 | 0 | 1 | 0 | 3 | 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 | |
| +45 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 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 | |
| +55 mins. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 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 | |
| % 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 | |



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

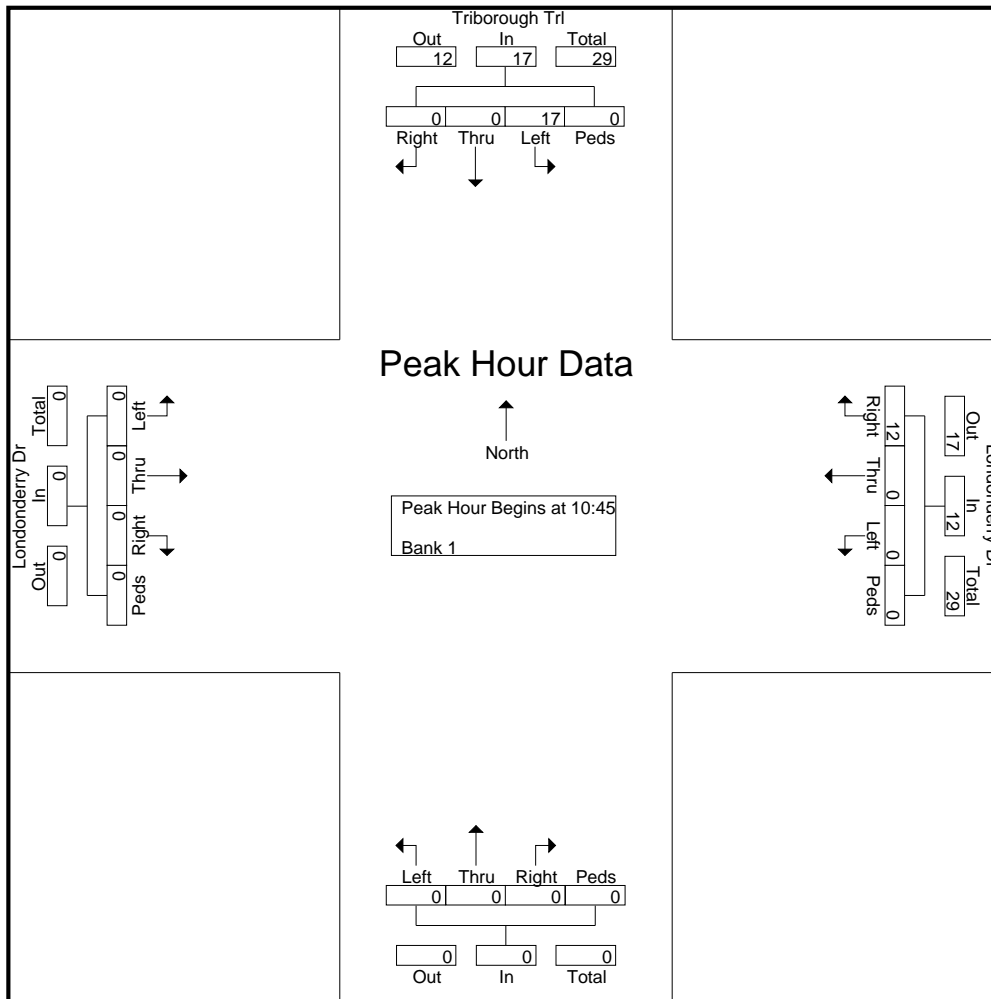
Site Code : S234300

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 | |



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 719-633-2868

File Name : Triborough Trl - Londonderry Dr Post Service Sun

Site Code : S234300

Start Date : 9/10/2023

Page No : 3

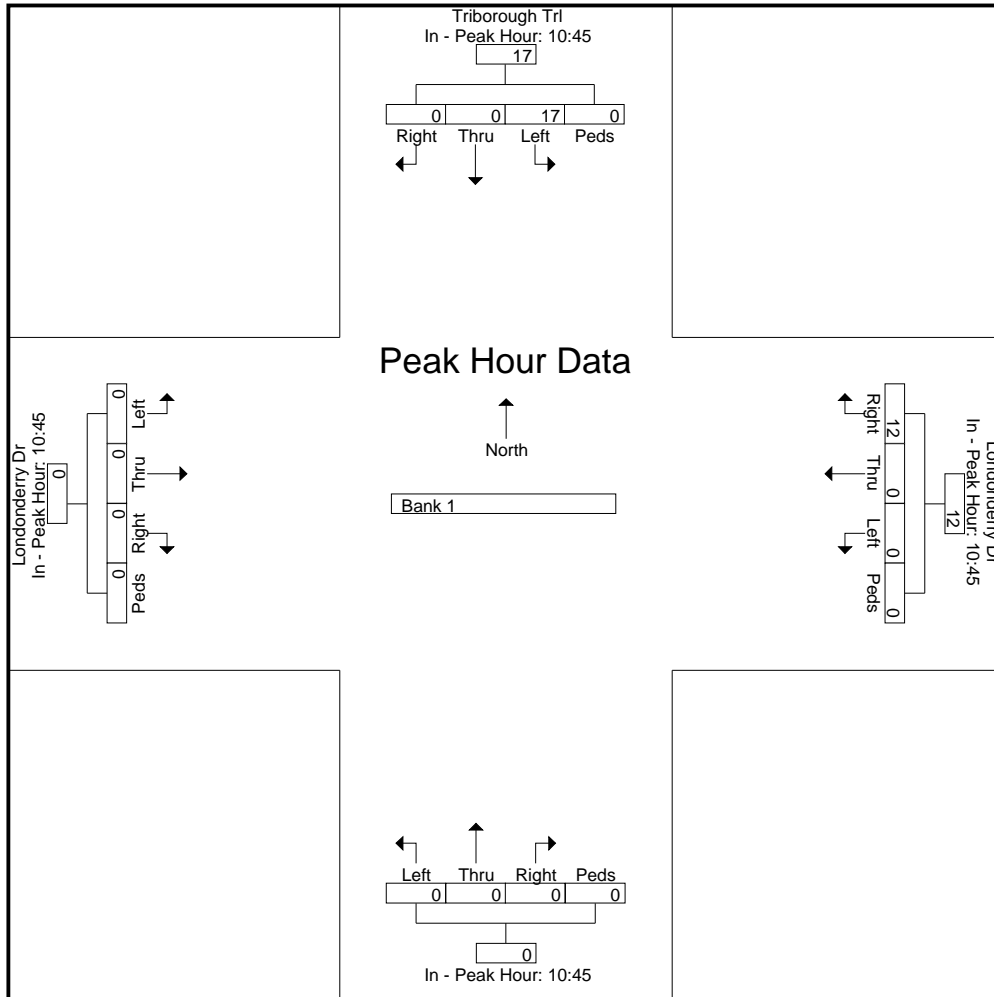
Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

| 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
 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 : 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 | 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 |
| Total | 0 | 0 | 12 | 0 | 12 | 5 | 0 | 0 | 0 | 5 | 0 | 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 | 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 | 0 | 2 |
| Grand Total | 0 | 0 | 14 | 0 | 14 | 7 | 0 | 0 | 0 | 7 | 0 | 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 | | 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 | |

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

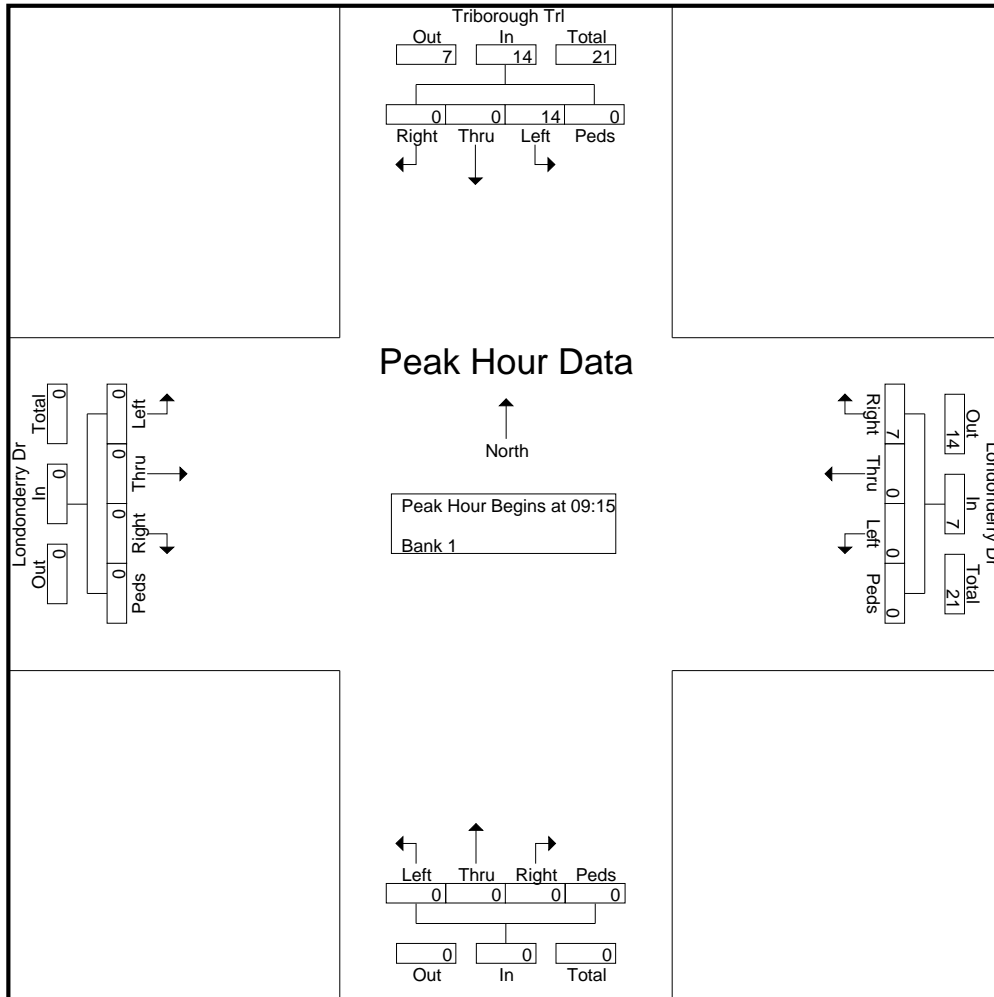
Site Code : S234300

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 | | 0 | |
| PHF | .000 | .000 | .583 | .000 | .583 | .292 | .000 | .000 | .000 | .292 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .583 |



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Start Date : 9/10/2023

Page No : 3

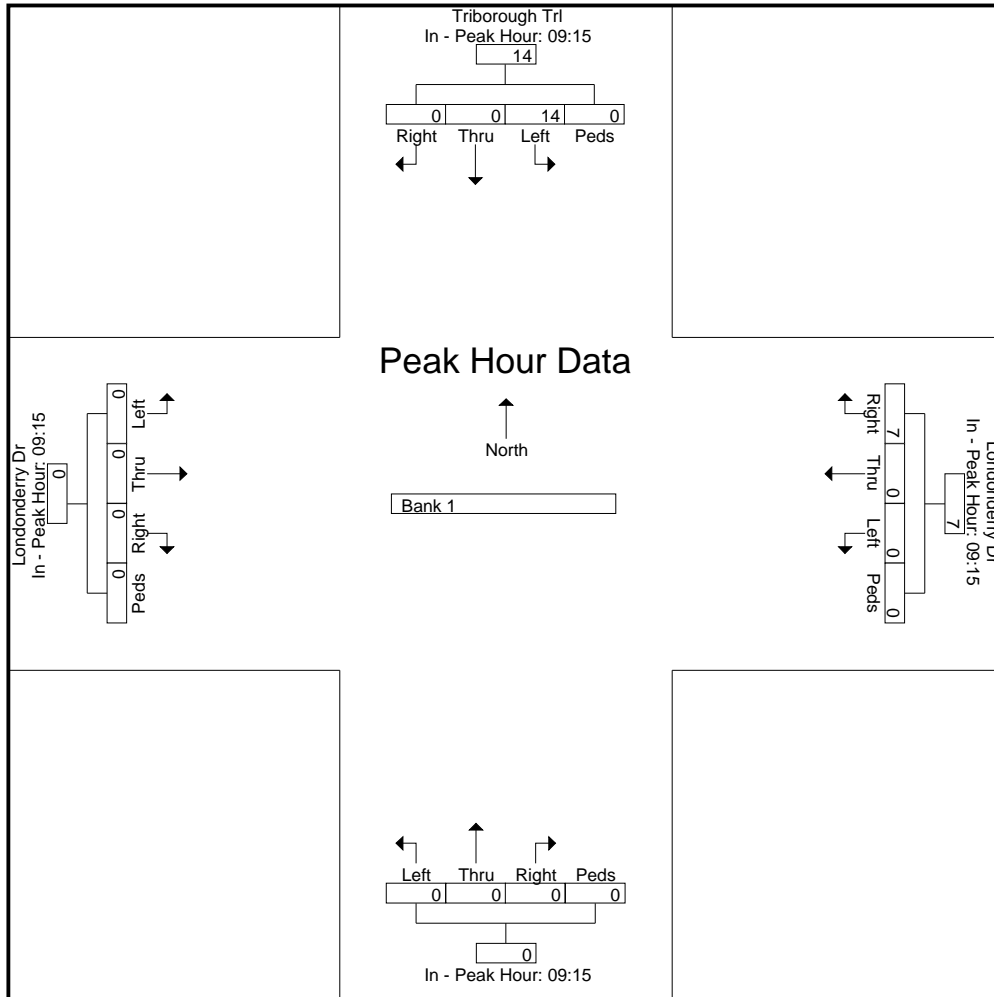
Note: Includes Left and Right Turning Movements Only. Thru movements shown in the report reflect volume balancing with the count at the Londonderry/Towner intersection.

| 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 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



| 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 | - |

HCM 6th TWSC
2: Londonderry Dr & Triborough Trail

10/09/2023

| 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 | - |

| 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 | - |

V2_TIS Comments.pdf Markup Summary

Carlos (1)



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Please see comments provided on the TIS in SF2321 and resubmit revised version.