April 17, 2020

TPD No. EKAN.00002

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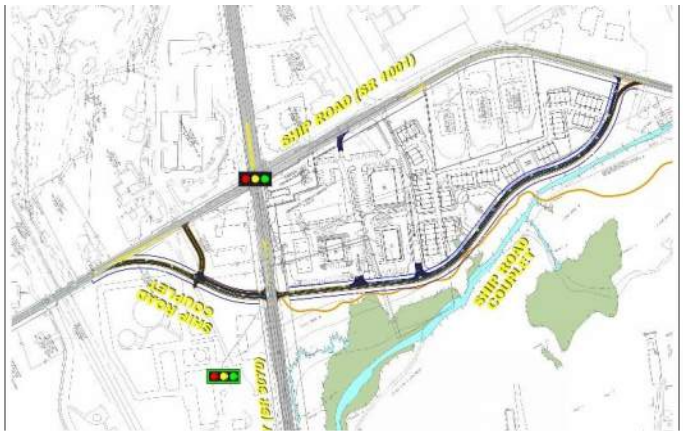

Ship Road Southwest Quadrant & Laborers District Council Property Developments

Transportation Impact Study

West Whiteland Township, Chester County, PA

SHIP ROAD SOUTHWEST QUADRANT
AND LABORERS DISTRICT COUNCIL PROPERTY DEVELOPMENTS
TRANSPORTATION IMPACT STUDY

FOR SUBMISSION TO:

West Whiteland Township, Chester County, PA
& PennDOT District 6-0

Prepared For:
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April 17, 2020

TPD No. EKAN.00002

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Table of Contents

EXECUTIVE SUMMARY i
INTRODUCTION 1
EXISTING ROADWAY NETWORK 1
EXISTING TRAFFIC CONDITIONS 4
BASE (NO-BUILD) CONDITIONS 4
SCHEDULED ROADWAY IMPROVEMENTS 5
PROPOSED SITE DEVELOPMENT 6
TRIP GENERATION 6
TRIP DISTRIBUTION 10
PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES 11
DRIVEWAY CLASSIFICATION 12
LEVELS OF SERVICE FOR AN INTERSECTION 12
CAPACITY ANALYSIS METHODOLOGY 13
LEVELS OF SERVICE IN THE STUDY AREA 14
95TH PERCENTILE QUEUE ANALYSIS 18
AUXILIARY TURN LANE ANALYSIS 21
RECOMMENDATIONS 21
CONCLUSIONS 22

SCHEMATIC FIGURES 1-32

TECHNICAL APPENDICES

Appendix A: Project Correspondence
Appendix B: Study Area Photographs
Appendix C: Manual Traffic Count Printouts
Appendix D: Crash Data
Appendix E: Nearby Developments
Appendix F: Volume Development Worksheets
Appendix G: Capacity Analysis Worksheets
Appendix H: Existing Traffic Signal Plans
Appendix I: Critical and Follow-Up Headway Calculations
Appendix J: Auxiliary Turn Lane Warrant Analysis
Appendix K: Township *Capital Improvements Plan* Conceptual Layout

EXECUTIVE SUMMARY

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Study (TIS) for the proposed Ship Road southwest quadrant and Laborers District Property developments in West Whiteland Township, Chester County, Pennsylvania. The project sites are located on the southwest corner of the intersection of Lincoln Highway (SR 3070) and Ship Road (SR 1001) and extend west to the Laborers District property as shown in **Figure 1**. The land use context of the site and surrounding area is defined as Suburban Center in the *Smart Transportation Guidebook*, dated March 2008. The proposed Wawa and Medical Office development will replace multiple buildings currently occupying the site. This TIS assumes that the projects will be constructed in multiple phases and identifies the traffic impacts and roadway improvements associated with each individual land use/phase.

1. The developments will consist of the following uses, as shown in **Figures 2A and 2B**:

   Commercial

   - 5,585 square-foot (s.f.) Wawa Convenience Market with sixteen (16) fueling positions (Phase 1);
   - 16,690 medical office building (Phase 1);

   Residential

   - 95 single family homes (Phase 2); and,
   - 53 townhomes (Phase 3).

2. **Land Development Phasing**

   - **Phase 1** will consist of the commercial portion of the development along Lincoln Highway and to be completed by **2023**.
   - **Phase 2** will be comprised of 95 single family homes and will be developed by **2023**.
     - **Phase 2 (Scenario A)** assumes the construction of the single family homes **without** construction of the commercial land uses in Phase 1.
     - **Phase 2 (Scenario B)** assumes the construction of the single family homes **with** construction of the commercial land uses in Phase 1.
   - **Phase 3** is an analysis of full build-out of Phase 1 and 2 and an additional 53 townhouses and will be completed by **2028**.

3. **Access**

   - **Phase 1** (commercial portion) and **Phase 3** (residential townhouse) will be served by:
     - an ingress only (left-in/right-in) driveway (i.e. the proposed Ship Road Couplet)
     - a right-in/right-out driveway on Lincoln Highway (SR 3070)
     - a right-in only driveway to Ship Road (SR 1001)
     - one full-access driveway to Ship Road (SR 1001) opposite Springdale Drive, and
     - one egress only (left-out/right-out only) driveway on Ship Road (i.e. the proposed Ship Road Couplet).

- **Phase 2** (single family homes)
  - Use of the existing full access to Lincoln Highway (SR 3070) (i.e. existing Laborers Union Driveway)
  - a proposed full access to Ship Road via a Laborers Union Driveway extension.

4. The proposed **commercial development** is anticipated to generate approximately 164 new vehicle-trips during the weekday A.M. peak hour, 133 new-vehicle trips during the weekday P.M. peak hour, and 162 new vehicle-trips during the Saturday midday peak hour at full build out.
5. The proposed **residential development** is anticipated to generate approximately 98 new vehicle-trips during the weekday A.M. peak hour, 126 new-vehicle trips during the weekday P.M. peak hour, and 122 new vehicle-trips during the Saturday midday peak hour at full build out.
6. Levels of Service (LOS) for the study area intersections have been summarized in matrix form. **Table I and II** details the overall intersection LOS for each study area intersection. **Table III** outlines Roadway Improvements to help mitigate the ILOS E during PM Peak Hour at the intersection of Lincoln Highway and Ship Road.

TABLE I
OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Time Period	Existing	Opening Year 2023				Meets LOS Requirements?
		Base	Phase 1	Phase 2 (Scenario A)	Phase 2 (Scenario B)	
Lincoln Highway and Ship Road						
A.M.	B(19.1)	C(23.3)	C(26.2)	C(24.3)	C(27.1)	Yes
P.M.	C(23.4)	D(44.2)	D(46.9)	D(46.8)	D(49.9)	
SAT	B(18.9)	D(35.8)	D(40.2)	D(37.9)	D(42.6)	
Ship Road and Springdale Drive / Proposed Access Driveway						
A.M.	A(0.4)	A(0.3)	A(4.8)	A(0.3)	A(5.0)	Yes
P.M.	A(3.5)	A(2.8)	B(10.6)	A(4.1)	B(11.5)	
SAT	A(0.2)	A(0.2)	A(3.3)	A(0.2)	A(3.5)	
Lincoln Highway and Laborers Union Driveway						
A.M.	A (0.1)	A(0.1)	A(0.1)	A(0.4)	A(0.5)	Yes
P.M.	A (0.1)	A(0.1)	A(0.1)	A(0.4)	A(0.4)	
SAT	A (0.6)	A(0.6)	A(0.5)	A(0.7)	A(0.7)	
Lincoln Highway and Loop Road (Future Ship Road Couplet)						
A.M.	---	---	A(0.7)	---	A(0.7)	Yes
P.M.	---	---	A(0.4)	---	A(0.4)	
SAT	---	---	A(0.4)	---	A(0.4)	
Lincoln Highway and Proposed Access Driveway (RI/RO Driveway)						
A.M.	---	---	A(0.9)	---	A(0.9)	Yes
P.M.	---	---	A(0.5)	---	A(0.5)	
SAT	---	---	A(0.5)	---	A(0.5)	
Ship Road and Loop Road (Future Ship Road Couplet)						
A.M.	---	---	A(1.1)	---	A(1.1)	Yes
P.M.	---	---	A(1.0)	---	A(1.0)	
SAT	---	---	A(0.9)	---	A(0.9)	
Ship Road and Proposed Access Driveway (RI Only)						
A.M.	---	---	A(0.0)	---	A(0.0)	Yes
P.M.	---	---	A(0.0)	---	A(0.0)	
SAT	---	---	A(0.0)	---	A(0.0)	
Ship Road and Laborers Union Driveway Extension						
A.M.	---	---	---	A(0.4)	A(0.4)	Yes
P.M.	---	---	---	A(0.3)	A(0.3)	
SAT	---	---	---	A(0.5)	A(0.5)	

Base = No-Build scenario, Projected = Build scenario; ILOS = Overall Intersection Level of Service
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies.

TABLE II
OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Time Period	Existing	Opening Year 2028		Meets LOS Requirements?
		Base	Phase 3	
Lincoln Highway and Ship Road				
A.M.	B(19.1)	C(25.0)	C(29.3)	No
P.M.	C(23.4)	D(48.3)	E(56.6)	
SAT	B(18.9)	D(38.6)	D(47.0)	
Ship Road and Springdale Drive / Proposed Access Driveway				
A.M.	A(0.4)	A(0.3)	A(6.2)	Yes
P.M.	A(3.5)	A(3.0)	B(15.6)	
SAT	A(0.2)	A(0.2)	A(3.9)	
Lincoln Highway and Laborers Union Driveway				
A.M.	A (0.1)	A(0.1)	A(0.4)	Yes
P.M.	A (0.1)	A(0.1)	A(0.4)	
SAT	A (0.6)	A(0.6)	A(0.8)	
Lincoln Highway and Loop Road (Future Ship Road Couplet)				
A.M.	---	---	A(0.7)	Yes
P.M.	---	---	A(0.4)	
SAT	---	---	A(0.4)	
Lincoln Highway and Proposed Access Driveway (RI/RO Driveway)				
A.M.	---	---	A(0.9)	Yes
P.M.	---	---	A(0.5)	
SAT	---	---	A(0.5)	
Ship Road and Loop Road (Future Ship Road Couplet)				
A.M.	---	---	A(1.3)	Yes
P.M.	---	---	A(1.2)	
SAT	---	---	A(1.0)	
Ship Road and Proposed Access Driveway (RI Only)				
A.M.	---	---	A(0.0)	Yes
P.M.	---	---	A(0.0)	
SAT	---	---	A(0.0)	
Ship Road and Laborers Union Driveway Extension				
A.M.	---	---	A(0.4)	Yes
P.M.	---	---	A(0.3)	
SAT	---	---	A(0.5)	

Base = No-Build scenario, Projected = Build scenario; ILOS = Overall Intersection Level of Service
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies.

TABLE III
ROADWAY IMPROVEMENTS SUMMARY

Roadway Improvements	
Location	**Description**
Phase 1	
Lincoln Highway and Ship Road	Construct a new one-way road for southbound Ship Road on the south side of Lincoln Highway.
Auxiliary Turn Lanes	
Primary Development Access Points	Lincoln Highway RI/RO Access – Eastbound RT Lane
	Ship Road Full-Access – Northbound LT Lane
Loop Road (SB Ship Road Couplet) Access Points	Lincoln Highway Intersection – Eastbound RT Lane
	Lincoln Highway Intersection – Westbound LT Lane[1]
Phase 2 (Scenario A)	
Auxiliary Turn Lanes	
Laborers Union Driveway Access Points	Lincoln Highway Access – Eastbound RT Lane
	Lincoln Highway Access – Westbound LT Lane[1]
Phase 2 (Scenario B)	
See Phase 1 and Phase 2 (Scenario A) improvements above.	
Phase 3	
See Phase 1 and Phase 2 (Scenario A) improvements above.	
West Whiteland Township's Capital Improvement Plan[2]	
Lincoln Highway and Ship Road	Construct a new one-way road for southbound Ship Road on the north side of Lincoln Highway.

1- Using existing Two-Way Left Turn Control Lane
2- To be performed by others.

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Study (TIS) for the proposed Ship Road southwest quadrant and Laborers District Property developments in West Whiteland Township, Chester County, Pennsylvania. The project sites are located on the southwest corner of the intersection of Lincoln Highway (SR 3070) and Ship Road (SR 1001) and extend west to the Laborers District property as shown in **Figure 1**. The land use context of the site and surrounding area is defined as Suburban Center in the *Smart Transportation Guidebook*, dated March 2008. The proposed Wawa and Medical Office development will replace multiple buildings currently occupying the site. This TIS assumes that the projects will be constructed in multiple phases and identifies the traffic impacts and roadway improvements associated with each individual land use/phase.

The developments will consist of the following uses, as shown in **Figures 2A and 2B**:

Commercial

- 5,585 square-foot (s.f.) Wawa Convenience Market with sixteen (16) fueling positions (Phase 1);
- 16,690 medical office building (Phase 1);

Residential

- 95 single family homes (Phase 2); and,
- 53 townhomes (Phase 3).

The developments will consist of the following phases:

- **Phase 1** will consist of the commercial portion of the development along Lincoln Highway and to be completed by **2023**.
- **Phase 2** will be comprised of 95 single family homes and will be developed by **2023**.
  - **Phase 2 (Scenario A)** assumes the construction of the single family homes **without** construction of the commercial land uses in Phase 1.
  - **Phase 2 (Scenario B)** assumes the construction of the single family homes **with** construction of the commercial land uses in Phase 1.
- **Phase 3** is an analysis of full build-out of Phase 1 and 2 and an additional 53 townhouses and will be completed by **2028**.

The synchro analysis does not include the West Whiteland Township *Capital Improvement Plan*. This report has been prepared in accordance with PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's Publication 282, Appendix A, dated July, 2017. All relevant correspondence pertaining to this project has been included in **Appendix A**.

Site Access Locations

Numerous vehicular and pedestrian access points serve the uses currently occupying the sites to Lincoln Highway (SR 3070) and Ship Road (SR 1001). The proposed site accesses for both the residential and commercial development consist of the following:

Access

- **Phase 1** (commercial portion) and **Phase 3** (residential townhouse) will be served by:
  - an ingress only (left-in/right-in) driveway (i.e. the proposed Ship Road Couplet)
  - a right-in/right-out driveway on Lincoln Highway (SR 3070)
  - a right-in only driveway to Ship Road (SR 1001)
  - one full-access driveway to Ship Road (SR 1001) opposite Springdale Drive, and
  - one egress only (left-out/right-out only) driveway on Ship Road (i.e. the proposed Ship Road Couplet).
- **Phase 2** (single family homes)
  - Use of the existing full access to Lincoln Highway (SR 3070) (i.e. existing Laborers Union Driveway)
  - a proposed full access to Ship Road via a Laborers Union Driveway extension.

EXISTING ROADWAY NETWORK

A field review of the existing roadway system in the study area was conducted. The existing roadway characteristics within the study area are summarized in **Table 1**. Photographs of the study area intersections are included in **Appendix B**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Roadway	Ownership	Functional Classification/ Roadway Type	Predominant Directional Orientation	Posted Speed Limit	AADT
Lincoln Highway	State (SR 3070)	Urban Principal Arterial	East-West	45 mph	13,571 [1]
Ship Road	State (SR 1001)	Urban Collector	North-South	35 mph	7,889 [1]
Springdale Drive	Township	Local Road	East-West	25 mph	2,630 [2]
Laborers Union Driveway	Private	Private	North-South	---	---

1 = Average Daily Traffic volumes obtained from PennDOT TIRe Website
2 = Volumes estimated from Turning Movement Counts

Land Use Context

In Chapter 4 of the *Smart Transportation Guidebook*, dated March 2008, there is guidance pertaining to defining the land use context(s) for a given area. Based upon review of this information, the land uses surrounding the proposed site best fit the Suburban Center designation, as described below:

> **Suburban Center,** *"Often a mixed use, cohesive collection of land uses that may include residential, office, retail, and restaurant uses where commercial uses serve surrounding neighborhoods. These areas are typically designed to be accessible by car, and may include large parking areas and garages. They are less accommodating to pedestrians than town centers, and opportunities to cross the primary roadway can be limited. On-street parking may or may not be provided."*

Roadway Type

In Chapter 5 of the *Smart Transportation Guidebook*, there is guidance pertaining to defining the transportation context(s) for a given area. Comparing the existing condition roadway characteristics to the various options presented in Table 5.1 of the *Smart Transportation Guidebook*, the study area roadways best fit the following categories, as described below:

Community Arterial, traffic volumes of 5,000 to 25,000 vehicles per day, intersection spacing of 300 to 1,320 feet, a desired operating speed of 25-55 mph, and a description as follows: *"often classified as Minor Arterial in traditional classification but may include road segments classified as Principal Arterial."*

- Lincoln Highway (SR 3070)

Community Collector, traffic volumes of 5,000 to 15,000 vehicles per day, intersection spacing of 300 to 660 feet, a desired operating speed of 25-55 mph, and a description as follows: *"often similar in appearance to a community arterial. Typically classified as Major Collector."*

- Ship Road (SR 1001)

Local Road, traffic volumes of <3,000 vehicles per day, intersection spacing of 000 to 660 feet, a desired operating speed of 20-30 mph.

- Springdale Drive

Bicycle and Pedestrian Facilities

Based on observations during field visits at the study area intersections, there is an existing sidewalk on the east side of Ship Road south from the intersection with Lincoln Highway (SR 3070) along the funeral home site frontage. Pedestrian push buttons, crosswalks, and curb ramps are provided at the signalized intersection of Lincoln Highway and Ship Road.

The Chester Valley Trail generally runs parallel to Lincoln Highway less than 0.25 miles north of the signalized intersection of Lincoln Highway and Ship Road providing east-west connections throughout the Township. A signalized trail crossing is provided on Lincoln Highway approximately 2,500 feet west of Ship Road.

Mass Transit Facilities

SEPTA bus Route 204 runs along Lincoln Highway in the study area with stops at Ship Road and Springdale Drive. The Exton Rail Station located approximately 1.5 miles from the site, provides access to SEPTA Regional Rail via the Paoli Thorndale Line, and Amtrak along the Keystone Corridor.

Crash Data Investigation

Crash data were obtained from PennDOT for the study area intersections. PennDOT defines a reportable crash as follows, "A reportable (crash) is one in which an injury or fatality occurs or if at least one of the vehicles involved requires towing from the scene." Reportable crashes were tabulated for the five-year time period beginning 01/01/2014 and ending 12/31/2018. For a given intersection, PennDOT considers a crash occurrence of 5 reportable, correctable crashes over a continuous twelve-month period during the past five years to be a threshold value, above which the intersection design should be reviewed to examine if corrective measures can be taken to enhance safety. The number of reportable crashes at the study area intersections is shown in **Table 2.**

TABLE 2
PENNDOT REPORTABLE CRASH DATA

Study Area Intersection	Number of Reportable Crashes				
	2014	2015	2016	2017	2018
Lincoln Highway and Ship Road	1	0	1	1	0
Ship Road and Springdale Drive	0	0	0	0	1
Lincoln Highway and Laborers Union Driveway	0	0	0	0	1

Based on a review of the crash data, there were no continuous twelve-month periods during the past five years where 5 or more crashes occurred that were deemed correctable.

EXISTING TRAFFIC CONDITIONS

Manual Traffic Counts

Manual traffic counts were conducted for 15-minute intervals during the weekday morning (7:00 to 9:00 A.M.), weekday evening (4:00 to 6:00 P.M.), and Saturday midday (11:00 A.M. to 1:00 P.M.) peak periods. Data pertaining to heavy vehicles, pedestrians and transit vehicles were observed during the manual counts. Peak hours and count dates for the study area intersections are identified in **Table 3**.

TABLE 3
MANUAL TRAFFIC COUNT INFORMATION

Intersection	Time Period	Source	Date of Traffic Count	Intersection Peak Hour[1]
Lincoln Highway (SR 3070) & Ship Road (SR 1001)	A.M.	MCM	Thursday, January 26, 2017	7:45 to 8:45 AM
	P.M.	MCM	Thursday, January 26, 2017	4:30 to 5:30 PM
	SAT	TPD	Saturday April 22, 2017	12:00 to 1:00 PM
Ship Road (SR 1001) & Springdale Drive	A.M.	MCM	Wednesday February 22, 2017	7:45 to 8:45 AM
	P.M.	MCM	Wednesday February 22, 2017	4:45 to 5:45 PM
	SAT	TPD	Saturday April 29, 2017	11:00 AM to 12:00 PM
Lincoln Highway (SR 3070) & Laborers Union Driveway	A.M.	TPD	Thursday September 20, 2018	7:30 to 8:30 AM
	P.M.	TPD	Thursday September 20, 2018	4:45 to 5:45 PM
	SAT	TPD	Saturday September 22, 2018	11:45 AM to 12:45 PM

1 = Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur.
TPD = Traffic Planning and Design, Inc.
MCM = McMahon Associates, Inc.

The existing condition traffic volumes for the weekday A.M., P.M., and Saturday midday peak hours are shown in **Figures 3-5**, respectively. Manual traffic count data sheets are provided in **Appendix C**.

BASE (NO-BUILD) CONDITIONS

Annual Background Growth

A background growth factor for the roadways in the study area was developed based on growth factors for August 2019 to July 2020 obtained from the PennDOT Bureau of Planning and Research (BPR). The PennDOT BPR suggests using a background growth trend factor of 0.52% per year in Chester County for

urban non-interstate roadways. As such, the background growth factor was applied annually to yield overall growth percentages of 3.16% (0.52% per year, compounded over 6 years) for the 2023 opening year and 5.87% (0.52% per year, compounded over 11 years) for the 2028 design year.

Nearby Proposed Developments

Base (no-build) traffic conditions were calculated to include traffic volumes from proposed developments, which, though not operating under existing conditions, may be operating by the opening year (2023) and design year (2028) of the proposed development. The following nearby planned developments were specifically included in this study:

- **Lochiel Farm** is a proposed residential community consisting of 150 townhomes. The site is located along Lincoln Highway opposite of Belden Boulevard.
- **Teva Flats** is a proposed development consisting of 240 apartments and 1,550 square-feet of office space. The site is located on the north side of Lincoln Highway (SR 3070) west of Pottstown Pike (SR 0100).
- **Waterloo Reserve** is a proposed development consisting of 86 townhomes. The site is located on the west side of Whitford Road in the vicinity of Waterloo Boulevard.
- **Boy Scouts Recreational Redevelopment** is a proposed development consisting of 7,500 square-feet of office space. The site is located along Lincoln Highway, east of Whitford Road.
- **Ashbridge (Main Street at Exton)** is a proposed residential development consisting of 410 apartments. The site is located within Main Street at Exton.
- **Whole Foods Market** is a proposed redevelopment of the existing Kmart located on the east side of PA Route 100 between Swedesford Road and Lincoln Highway into a 55,000 square-foot grocery store.
- **Glenloch Reserve** is a proposed residential community located along the east side of Dunwoody Drive and west of US 202.
- **Parkview Apartments** is a proposed residential development consisting of 276 apartments. The site is located along Creamery Way in the vicinity of Whitford Road.
- **Exton Knoll** is a proposed residential development consisting of 169 townhomes. The site is located on the north side of Lincoln Highway, at Springdale Drive.
- **4 Tabas Lane** is a proposed mini-warehouse building consisting of 74,385 sf. located along Lincoln Highway and west of Laborers Union Driveway.

The additional traffic volumes due to background growth and background developments were added to the existing traffic data to produce 2023 and 2028 base (no-build) condition traffic volumes. Base condition volumes for the weekday A.M., P.M., and Saturday midday peak hours are illustrated in **Figures 6-8** for the 2023 opening year conditions and **Figures 9-11** for the 2028 design year conditions. Trip distributions for the background developments are provided in **Appendix E**.

SCHEDULED ROADWAY IMPROVEMENTS

Programmed Improvements

Based on a review of the DVRPC Transportation Improvement Program (TIP) there are no programmed roadway improvements in the vicinity of the proposed site.

Regional Improvements By Others

As part of the on-going land development application for 740 N. Ship Road, a proposed residential community along Lincoln Highway opposite of Belden Boulevard, the applicant's traffic engineer explored the feasibility of installing a traffic signal at the intersection of Lincoln Highway and Belden Boulevard. A traffic signal at this location would result in the redistribution of Whiteland Business Park vehicles from other Business Park access

points, particularly the egress movement from Springdale Drive onto Ship Road. A similar traffic diversion, as assumed by McMahon Associates in their traffic study prepared for the 740 N. Ship Road project, was utilized for purposes of determining impacts for this development proposal.

Act 209 Capital Improvements

As part of West Whiteland Township's *Capital Improvements Plan*, the intersection of Lincoln Highway and Ship Road was identified for improvements. The following traffic improvements were proposed:

- Construct a new, one-way road for southbound Ship Road on the north and south sides of Lincoln Highway.
- Reconfigure northbound Ship Road to provide two thru lanes with separate left and right turn lanes.
- Construct an additional eastbound Lincoln Highway thru lane.
- Construct an additional westbound Lincoln Highway thru lane.
- Construct a westbound Lincoln Highway left-turn lane.
- Install new signal equipment at the new southbound Ship Road intersection and optimize traffic signal timing.

The impacts of these capital improvements on the proposed Ship Road southwest quadrant development was further explored under the Regional Improvements Analysis section of this report. The latest *Capital Improvement Plan Set* is in **Appendix K**.

PROPOSED DEVELOPMENTS

This TIS assumes that the projects will be constructed in multiple phases and identifies the traffic impacts and roadway improvements associated with each individual land use/phase. The developments will consist of the following uses:

Commercial

- 5,585 square-foot (s.f.) Wawa Convenience Market with sixteen (16) fueling positions (Phase 1);
- 16,690 medical office building (Phase 1);

Residential

- 95 single family homes (Phase 2); and,
- 53 townhomes (Phase 3).

The developments will consist of the following phases:

- **Phase 1** will consist of the commercial portion of the development along Lincoln Highway and to be completed by **2023**.
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  - **Phase 2 (Scenario A)** assumes the construction of the single family homes **without** construction of the commercial land uses in Phase 1.
  - **Phase 2 (Scenario B)** assumes the construction of the single family homes **with** construction of the commercial land uses in Phase 1.
- **Phase 3** is an analysis of full build-out of Phase 1 and 2 and an additional 53 townhouses and will be completed by **2028**.

TRIP GENERATION

The trip generation rates for the developments were obtained from the manual *Trip Generation*, 10th Edition, 2017, an Institute of Transportation Engineers (ITE) Informational Report. The statistics in *Trip Generation* are empirical data based on more than 4,800 trip generation studies. The data are categorized by Land Use Codes, with total vehicular trips for a given land use estimated using an independent variable and statistically generated rates or equations.

For the proposed Ship Road southwest quadrant development, Land Use Codes: 220 (Multifamily Housing), 960 (Super Convenience Market/Gas Station), and 720 (Medical Office Building). The proposed Laborers Union Driveway development, Land Use Code: 210 (Single Family Housing). Both developments used the *Trip Generation* was used to calculate the number of vehicular trips the development will generate during the following time periods: (1) average weekday; (2) weekday A.M. peak hour; (3) weekday P.M. peak hour; and (4) Saturday midday peak hour.

Table 4 shows the rates/equations and directional percentages for the analyzed time periods.

TABLE 4
ITE TRIP GENERATION DATA

Time Period	Rate	Size (X)	Directional Split		Pass-By
			Entering	Exiting	
Super Convenience Market with Gasoline – ITE #960					
Average Weekday	T = 837.58*(X)	5.585 ksf	50%	50%	---
Weekday AM	T = 137.38*(X)-264.53		50%	50%	76%
Weekday PM	T = 69.28*(X)		50%	50%	76%
Saturday Midday	T = 104.71*(X)-204.23		50%	50%	66%[1]
Medical-Dental Office Building – ITE #720					
Average Weekday	T=38.42*(X)-87.62	16.69 ksf	50%	50%	---
Weekday AM	ln(T) = 0.89*ln(X)+1.31		78%	22%	--
Weekday PM	T = 3.39*(X)+2.02		28%	72%	--
Saturday Midday	T = 4.94*(X)-50.78		57%	43%	--
Multifamily Housing (Low Rise) – ITE #220					
Average Weekday	T = 7.32*(X)	53 du	50%	50%	---
Weekday AM	Ln(T)=0.95*Ln(X)-0.51		23%	77%	---
Weekday PM	Ln(T)=0.89*Ln(X)-0.02		63%	37%	---
Saturday Midday	T = 1.08*(X)-33.24		54%[2]	46%	---
Single Family Housing – ITE #210					
Average Weekday	Ln(T)=0.92*Ln(X)+2.71	95 du	50%	50%	---
Weekday AM	T = 0.71*(X) + 4.80		25%	75%	---
Weekday PM	Ln(T)=0.96*Ln(X)+0.20		63%	37%	---
Saturday Midday	T = 0.84*(X)+17.99		54%	46%	---

T = number of site-generated vehicular trips X = independent variable (ksf, thousand square feet of gross leasable area, dwelling units)
[1] = No data available, used 10% less than P.M. peak hour.
[2] = Data not available, utilized LUC 210

Internal Trips

For mixed-use developments, the *Trip Generation* manual recommends applying an interaction factor to the site trip generation to determine the quantity of "external trips" (trips from external roadways) and "internal capture trips" (trips between the various uses onsite that do not utilize the external roadways, in this case between the retail stores and the office buildings and vice versa).

It is anticipated that there will be interaction between the proposed retail uses and the residential uses. Internal capture for the proposed development was calculated in accordance with current ITE recommendations during the weekday A.M. and P.M. peak periods.

Pass-By Trips and Diverted Linked Trips

According to the *Trip Generation* manual, not all of the trips generated by the proposed development will be new to the surrounding area. A distinction was made between "new" trips, which are trips made to/from the study area for the express purpose of visiting the site, "pass-by" trips, which are trips made to the site by traffic passing the retail center on the adjacent roadways en route to another destination, and "diverted-linked" trips, which are trips made to the site by traffic diverting from a nearby roadway or freeway. For the purposes of this study, the diverted linked trips were treated as new trips at the study area intersections since it is difficult to quantify the specific origin/destination of the diverted linked trips. The pass-by trips do not add any additional traffic to the study area intersections but will result in shifts in turning movement at the site driveway intersections.

Pedestrian Trip Generation

The proposed site is located along high-speed roadways with no sidewalks, and it is not located near any major residential subdivisions. Therefore, the pedestrian trip generation for the site is expected to be minimal, and all trips to/from the proposed site were assumed to be motor vehicles in order to assume worst-case volumes for assessing traffic impact.

Multi-Modal Trip Reduction

For developments that accommodate alternative modes of transportation (i.e. rail, bus, bicycle and pedestrians), reductions in trip generation can be made to account for these non-vehicular trips or mass-transit facilities. To be conservative, no modal split was applied.

The calculated trip generation for the proposed developments are shown in **Table 5**. Based on the trip generation analysis summarized in **Table 6**, the proposed commercial development is anticipated to generate approximately 164 new vehicle-trips during the weekday A.M. peak hour, 133 new-vehicle trips during the weekday P.M. peak hour, and 162 new vehicle-trips during the Saturday midday peak hour at full build out. The proposed residential development is anticipated to generate approximately 98 new vehicle-trips during the weekday A.M. peak hour, 126 new-vehicle trips during the weekday P.M. peak hour, and 122 new vehicle-trips during the Saturday midday peak hour at full build out.

TABLE 5
TRIP GENERATION FOR PROPOSED DEVELOPMENTS

Description	Total Trips	Internal Trips	External Trips			Pass-By Trips			New External Trips		
			Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday											
Wawa	4,678	---	4,678	2,339	2,339	---	---	---	---	---	---
Medical Office	554	---	554	277	277	---	---	---	---	---	---
Townhomes	360	---	360	180	180	---	---	---	---	---	---
SFH	993	---	993	497	496	---	---	---	---	---	---
Total Site	**6,585**	**---**	**6,585**	**3,293**	**3,292**	**---**	**---**	**---**	**---**	**---**	**---**
Weekday AM Peak Hour											
Wawa	503	6	497	249	248	378	189	189	119	60	59
Medical Office	45	---	45	35	10	---	---	---	45	35	10
Townhomes	26	---	26	6	20	---	---	---	26	6	20
SFH	72	---	72	18	54	---	---	---	72	18	54
Total Site	**646**	**---**	**640**	**308**	**332**	**378**	**189**	**189**	**262**	**119**	**143**
Weekday PM Peak Hour											
Wawa	387	48	339	169	170	258	129	129	81	40	41
Medical Office	59	7	52	15	37	---	---	---	52	15	37
Townhomes	34	5	29	18	11	---	---	---	29	18	11
SFH	97	---	97	61	36	---	---	---	97	61	36
Total Site	**577**	**30**	**517**	**263**	**254**	**258**	**129**	**129**	**259**	**134**	**125**
Saturday Midday Peak Hour											
Wawa	381	---	381	191	190	251	126	125	130	65	65
Medical Office	32	---	32	18	14	---	---	---	32	18	14
Townhomes	24	---	24	13	11	---	---	---	24	13	11
SFH	98	---	98	53	45	---	---	---	98	53	45
Total Site	**535**	**---**	**535**	**275**	**260**	**251**	**126**	**125**	**284**	**149**	**135**

Int. = Internal Capture Trips

TABLE 6
TRIP GENERATION SUMMARY

Time Period	New External Trips		
	Enter	Exit	Total
Phase 1 (Commercial)			
Weekday	2,616	2,616	**5,232**
A.M. Peak Hour	95	69	**164**
P.M. Peak Hour	55	78	**133**
Saturday Midday Peak Hour	83	79	**162**
Phase 2 (Residential)			
Weekday	497	496	**993**
A.M. Peak Hour	18	54	**72**
P.M. Peak Hour	61	36	**97**
Saturday Midday Peak Hour	53	45	**98**
Phase 3 (Residential)			
Weekday	180	180	**360**
A.M. Peak Hour	6	20	**26**
P.M. Peak Hour	18	11	**29**
Saturday Midday Peak Hour	13	11	**24**
Commercial Total			
Weekday	2,616	2,616	**5,232**
A.M. Peak Hour	95	69	**164**
P.M. Peak Hour	55	78	**133**
Saturday Midday Peak Hour	83	79	**162**
Residential Total			
Weekday	677	676	**1,353**
A.M. Peak Hour	24	74	**98**
P.M. Peak Hour	79	47	**126**
Saturday Midday Peak Hour	66	56	**122**

TRIP DISTRIBUTION

The distribution of trips generated by the proposed developments was based on the local road network, the existing traffic patterns, the proposed use of the site, and the site driveway locations. The new trips for the proposed developments were distributed to the local roadway network based on the percentages shown in **Table 7**. The pass-by trips for the proposed commercial development were distributed to the local road network based on the existing traffic volumes passing the proposed site driveways.

TABLE 7
TRIP DISTRIBUTION PERCENTAGES – NEW TRIPS

Direction - To/From	Assignment (To/From)	Distribution Percentage
East	via Lincoln Highway	26%
West	via Lincoln Highway	29%
North	via Ship Road	25%
	via Laborers Union Driveway	1%
South	via Ship Road	18%
	via Laborers Union Driveway	1%

Pass-By Trips

Pass-by trips were established based on the existing traffic patterns in the vicinity of the site and the location and configuration of the site driveways. The percentages used for the distribution of pass-by trips to the project site are shown below in **Table 8**.

TABLE 8
TRIP DISTRIBUTION PERCENTAGES – PASS-BY TRIPS

Direction - To/From	Pass-by Trip Distribution Percentages		
	Weekday A.M.	Weekday P.M.	Saturday Midday
Eastbound on Lincoln Highway	31%	24%	24%
Westbound on Lincoln Highway	24%	31%	31%
Northbound on Ship Road	25%	25%	25%
Southbound on Ship Road	20%	20%	20%

The assignment of site-generated trips for the proposed developments during the weekday A.M., P.M., and Saturday midday peak hours are shown in Phase 1 for **Figures 12-14,** Phase 2A (Scenario A) for **Figures 18-20,** and Phase 3 for **Figures 27-29**.

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed developments were added to the 2023 and 2028 base (no-build) condition traffic volumes to develop 2023 and 2028 projected (build) condition traffic volumes. Projected condition traffic volumes for the Phase 1 opening year of 2023 for the weekday A.M., P.M., and Saturday midday peak hours are shown in **Figures 15-17**. Projected condition traffic volumes for the Phase 2A (Scenario A) opening year of 2023 for the weekday A.M., P.M., and Saturday midday peak hours are shown in **Figures 21-23**. Projected condition traffic volumes for the Phase 2B (Scenario B) opening year of 2023 for the weekday A.M., P.M., and Saturday midday peak hours are shown in **Figures 24-26**. Projected condition traffic volumes for the Phase 3 full build out opening year of 2028 for the weekday A.M., P.M., and Saturday midday peak hours are shown in **Figures 30-32**.

Traffic volume development worksheets for the study area intersections are contained in **Appendix F**.

DRIVEWAY CLASSIFICATION

Driveways intersecting state roads are classified in the Pennsylvania Code, Title 67, Chapter 441. Low volume driveways are used by 25 to 750 vehicles per day. A medium volume driveway is used by 750 to 1500 vehicles per day. High volume driveways are used by more than 1500 vehicles per day. Based on the anticipated site trip generation and the assignment of site traffic, the classifications of the site driveways intersecting state roads (Lincoln Highway and Ship Road) are listed in **Table 9**.

TABLE 9
DRIVEWAY CLASSIFICATIONS

State Road	Driveway	Weekday Trips	Weekday Vehicles	Driveway Type
Lincoln Highway	Limited-Access Driveway (RI/RO)	1,362	681	Low Volume
	Loop Road Driveway (Enter Only)	1,114	557	Low Volume
	Laborers Union Driveway	601	301	Low Volume
Ship Road	Limited-Access Driveway (RI)	235	118	Low Volume
	Full-Access Driveway	2,170	1,085	Medium Volume
	Loop Road Driveway (Exit Only)	651	326	Low Volume
	Laborers Union Driveway Extension	452	226	Low Volume

Note: A "trip" equals an entering or an exiting vehicle. Therefore, weekday vehicles = weekday trips/2.

LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 10**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 10
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED AND SIGNALIZED INTERSECTIONS [1]

Level of Service	Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	< 10	< 10
B	> 10 and < 20	> 10 and < 15
C	> 20 and < 35	> 15 and < 25
D	> 35 and < 55	> 25 and < 35
E	> 55 and < 80	> 35 and < 50
F	> 80 or v/c > 1.0	> 50 or v/c > 1.0

[1] *Obtained from Exhibits 18-4 and 19-1 of the Transportation Research Board's Highway Capacity Manual 2010*

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M., P.M., and Saturday midday peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the 2010 *Highway Capacity Manual* (HCM) using *Synchro 10* software, a Trafficware product. The following conditions were analyzed and does not include analysis with the West Whiteland Township *Capital Improvement Plan*, as applicable:

- Existing conditions;
- 2023 Base conditions (Build-out year without redevelopment);
- 2023 Phase 1 Projected conditions (Build-out year with redevelopment of only the gas station and medical offices);
- 2023 Phase 2A (Scenario A) Projected conditions (Build-out year with redevelopment of only single-family detached houses);
- 2023 Phase 2B (Scenario B) Projected conditions (Build-out year with redevelopment of both the gas station, medical offices, and single family detached homes);
- 2028 Base conditions (Design year without redevelopment);
- 2028 Phase 3 Full Build-out Projected conditions (Opening year with redevelopment full build-out including the townhouses).

In addition, capacity analyses were conducted at the proposed site driveway intersections under the 2023 and 2028 projected conditions. The capacity analysis worksheets are included in **Appendix G**. The PennDOT-approved signal plans are included in **Appendix H**. The critical and follow-up headway calculations for unsignalized intersections are included in **Appendix I**. It should be noted that based on methodologies contained in Chapter 10 of PennDOT's Publication 46, TPD adjusted the 2010 HCM default values in the *Synchro 10* capacity analysis. These adjustments were made at the study area intersections for all time periods based on the study area location being classified as Suburban.

PennDOT's Transportation Impact Study Guidelines outlined in Strike-Off Letter 470-09-4, dated February 12, 2009 contain the following criteria regarding levels of service:

- Page 29 of the Guidelines state that if evaluation of the With Development Horizon Year Scenario to the Without Development Horizon Year Scenario indicates that the overall intersection level of service has dropped, the applicant will be required to mitigate the level of service if the increase in overall

intersection delay is greater than 10-seconds. If the overall intersection delay increase is less than or equal to 10-seconds, mitigation of the intersection will not be required.

- Page 29 of the Guidelines state that for mitigation scenarios, applicants are expected to mitigate the overall intersection LOS to the original Without Development LOS; the 10-second delay variance is not applied to mitigation scenarios. Applicants may be required to address available storage and queue lengths at critical movements or approaches even if the overall LOS requirements are met.
- Page 31 of the Guidelines state that if signalization is the preferred alternative for mitigation, overall intersection LOS C in rural areas and LOS D in urban areas is acceptable.
- Page 31 of the Guidelines states new signalized or unsignalized intersection established to serve as access to the development shall be designed to operate at minimum LOS C for rural areas, and minimum LOS D for urban areas.

Based on PennDOT criteria, signal timings were optimized under base (future no-build) conditions. These optimized timings were utilized under subsequent projected (future build) conditions in order to determine the proposed site's impact.

LEVELS OF SERVICE IN THE STUDY AREA

Level of service (LOS) matrices for the study area intersections are shown in **Tables 11 and 12** for the weekday A.M., P.M., and Saturday midday peak hours.

As shown in **Table 11**, under Phase 1, 2A, and 2B projected 2023 conditions with the redevelopment of the proposed site, the study area intersections will satisfy PennDOT LOS Criteria during the studied time periods.

As shown in **Table 12**, under Phase 3 projected 2028 conditions with the redevelopment of the proposed site, the study area intersections will satisfy PennDOT LOS Criteria for all studied conditions except for the PM Peak Hour for the Lincoln Highway and Ship Road intersection with an ILOS E (56.6).

TABLE 11
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY – OPENING YEAR (2023)

Movement	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Saturday Midday Peak Hour		
	Existing	Opening Year 2023		Existing	Opening Year 2023		Existing	Opening Year 2023	
		Base	Phase 1		Base	Phase 1		Base	Phase 1
Lincoln Highway (SR 3070) and Ship Road (SR 1001)									
EB L	C	C	C	C	D	E(55.8)	C	D	E(61.3)
EB TR	C	C	C	B	C	C	C	C	C
WB L	C	D	D	C	C	C	C	C	C
WB TR	B	B	C	C	F (76.4)	F(81.2)	C	D	D
NB L	B	B	B	B	C	C	B	D	D
NB T	B	B	B	B	C	C	B	C	C
NB R	A	B	B	B	B	B	B	B	C
SB LTR	C	C	D	C	D	D	C	D	E(56.1)
ILOS	**B(19.1)**	**C(23.3)**	**C(26.2)**	**C(23.4)**	**D(44.2)**	**D(46.9)**	**B(18.9)**	**D(35.8)**	**D(40.2)**
Ship Road (SR 1001) and Springdale Drive / Proposed Access Driveway									
EB App	---	---	D	---	---	F(84.6)	---	---	D
WB App	B	B	C	C	C	E(39.0)	B	C	C
NB L	---	---	A	---	---	A	---	---	A
ILOS	**A(0.4)**	**A(0.3)**	**A(4.8)**	**A(3.5)**	**A(2.8)**	**B(10.6)**	**A(0.2)**	**A(0.2)**	**A(3.3)**
Lincoln Highway (SR 3070) and Laborers Union Driveway									
WB L	B	B	B	A	A	A	A	D	B
NB App	B	B	B	C	C	B	C	B	C
ILOS	**A (0.1)**	**A(0.1)**	**A(0.1)**	**A (0.1)**	**A(0.1)**	**A(0.1)**	**A (0.6)**	**A(0.6)**	**A(0.5)**
Lincoln Highway and Loop Road Enter Only (Future Ship Road Couplet)									
EB R	---	---	A	---	---	A	---	---	A
WB L	---	---	B	---	---	B	---	---	B
ILOS	---	---	**A(0.7)**	---	---	**A(0.4)**	---	---	**A(0.4)**
Lincoln Highway and Proposed Access Driveway (RI/RO Driveway)									
NB App	---	---	B	---	---	B	---	---	B
ILOS	---	---	**A(0.9)**	---	---	**A(0.5)**	---	---	**A(0.5)**
Ship Road and Loop Road Exit Only (Future Ship Road Couplet)									
EB App	---	---	C	---	---	D	---	---	C
ILOS	---	---	**A(1.1)**	---	---	**A(1.0)**	---	---	**A(0.9)**
Ship Road and Proposed Access Driveway (RI Only Driveway)									
SB App	---	---	A	---	---	A	---	---	A
ILOS	---	---	**A(0.0)**	---	---	**A(0.0)**	---	---	**A(0.0)**
Ship Road and Laborers Union Driveway Extension									
EB App	---	---	---	---	---	---	---	---	---
NB L	---	---	---	---	---	---	---	---	---
ILOS	---	---	---	---	---	---	---	---	---

Base = No-Build scenario, Projected = Build scenario; ILOS = Overall Intersection Level of Service
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies.

TABLE 11 (CONTINUED)
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY – OPENING YEAR (2023)

Movement	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour		Saturday Midday Peak Hour	
	Opening Year 2023		Opening Year 2023		Opening Year 2023	
	Phase 2 (Scenario A)	Phase 2 (Scenario B)	Phase 2 (Scenario A)	Phase 2 (Scenario B)	Phase 2 (Scenario A)	Phase 2 (Scenario B)
Lincoln Highway (SR 3070) and Ship Road (SR 1001)						
EB L	C	C	D	E(60.1)	E(55.7)	E(67.3)
EB TR	C	C	C	C	C	C
WB L	D	D	C	C	C	C
WB TR	B	C	F(81.2)	F(85.8)	D	E(56.2)
NB L	B	B	C	C	D	D
NB T	B	B	C	C	C	C
NB R	B	B	B	B	B	C
SB LTR	C	D	D	E(63.5)	D	E(65.6)
ILOS	**C(24.3)**	**C(27.1)**	**D(46.8)**	**D(49.9)**	**D(37.9)**	**D(42.6)**
Ship Road (SR 1001) and Springdale Drive / Proposed Access Driveway						
EB App	---	D	---	F(93.7)	---	D
WB App	C	C	D	E(42.6)	C	C
NB L	---	A	---	A	---	A
ILOS	**A(0.3)**	**A(5.0)**	**A(4.1)**	**B(11.5)**	**A(0.2)**	**A(3.5)**
Lincoln Highway (SR 3070) and Laborers Union Driveway						
WB L	B	B	A	B	B	B
NB App	B	B	B	B	C	C
ILOS	**A(0.4)**	**A(0.5)**	**A(0.4)**	**A(0.4)**	**A(0.7)**	**A(0.7)**
Lincoln Highway and Loop Road Enter Only (Future Ship Road Couplet)						
EB R	---	A	---	A	---	A
WB L	---	B	---	B	---	B
ILOS	---	**A(0.7)**	---	**A(0.4)**	---	**A(0.4)**
Lincoln Highway and Proposed Access Driveway (RI/RO Driveway)						
NB App	---	B	---	B	---	B
ILOS	---	**A(0.9)**	---	**A(0.5)**	---	**A(0.5)**
Ship Road and Loop Road Exit Only (Future Ship Road Couplet)						
EB App	---	C	---	D	---	C
ILOS	---	**A(1.1)**	---	**A(1.0)**	---	**A(0.9)**
Ship Road and Proposed Access Driveway (RI Only Driveway)						
SB App	---	A	---	A	---	A
ILOS	---	**A(0.0)**	---	**A(0.0)**	---	**A(0.0)**
Ship Road and Laborers Union Driveway Extension						
EB App	C	C	B	C	C	C
NB L	A	A	A	B	A	A
ILOS	**A(0.4)**	**A(0.4)**	**A(0.3)**	**A(0.3)**	**A(0.5)**	**A(0.5)**

Base = No-Build scenario, Projected = Build scenario; ILOS = Overall Intersection Level of Service
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies.

TABLE 12
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY – OPENING YEAR (2028)

Movement	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour		Saturday Midday Peak Hour	
	Opening Year 2028		Opening Year 2028		Opening Year 2028	
	Base	Phase 3	Base	Phase 3	Base	Phase 3
Lincoln Highway (SR 3070) and Ship Road (SR 1001)						
EB L	C	C	D	E(61.4)	D	E(69.0)
EB TR	C	D	C	C(22.4)	C	C
WB L	D	D	C	C(34.5)	C	D
WB TR	B	C	F (84.4)	F(96.0)	D	F(61.7)
NB L	B	B	C	C(34.0)	D	E(55.9)
NB T	B	B	C	C(26.9)	C	C
NB R	B	B	B	B(17.4)	B	B
SB LTR	C	D	D	F(85.5)	D	E(79.7)
ILOS	**C(25.0)**	**C(29.3)**	**D(48.3)**	**E(56.6)**	**D(38.6)**	**D(47.0)**
Ship Road (SR 1001) and Springdale Drive / Proposed Access Driveway						
EB App	---	E(42.7)	---	F(137.7)	---	E(39.1)
WB App	B	C	D	E(49.8)	C	C
NB L	---	A	---	B	---	A
ILOS	**A(0.3)**	**A(6.2)**	**A(3.0)**	**B(15.6)**	**A(0.2)**	**A(3.9)**
Lincoln Highway (SR 3070) and Laborers Union Driveway						
WB L	B	B	A	A	B	B
NB App	B	B	C	B	D	C
ILOS	**A(0.1)**	**A(0.4)**	**A(0.1)**	**A(0.4)**	**A(0.6)**	**A(0.8)**
Lincoln Highway and Loop Road Enter Only (Future Ship Road Couplet)						
EB R	---	A	---	A	---	A
WB L	---	B	---	B	---	B
ILOS	---	**A(0.7)**	---	**A(0.4)**	---	**A(0.4)**
Lincoln Highway and Proposed Access Driveway (RI/RO Driveway)						
NB App	---	B	---	B	---	B
ILOS	---	**A(0.9)**	---	**A(0.5)**	---	**A(0.5)**
Ship Road and Loop Road Exit Only (Future Ship Road Couplet)						
EB App	---	C	---	D	---	C
ILOS	---	**A(1.3)**	---	**A(1.2)**	---	**A(1.0)**
Ship Road and Proposed Access Driveway (RI Only Driveway)						
SB App	---	A	---	A	---	A
ILOS	---	**A(0.0)**	---	**A(0.0)**	---	**A(0.0)**
Ship Road and Laborers Union Driveway Extension						
EB App	---	C	---	C	---	C
NB L	---	A	---	B	---	A
ILOS	---	**A(0.4)**	---	**A(0.3)**	---	**A(0.5)**

Base = No-Build scenario, Projected = Build scenario; ILOS = Overall Intersection Level of Service
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies.

95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 10* software. For this analysis, the 95th percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example, for a signal with a 90-second cycle, this means that the 95th percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Table 13** for the analyzed peak hours.

TABLE 13
95TH PERCENTILE QUEUE ANALYSIS

Intersection	Lane Group	2023 Base Conditions				2023 Phase 1 Projected Conditions			
		Storage Length	95th Percentile Queue			Storage Length	95th Percentile Queue		
			A.M.	P.M.	SAT		A.M.	P.M.	SAT
Lincoln Highway and Ship Road	EB L	160′	35	40	45	160′	45	53	65
	EB TR	---	400	338	398	---	455	355	418
	WB L	TWLTL	50	75	58	TWLTL	68	83	68
	WB TR	[980′]	228	965	780	[980′]	263	1010	833
	NB L	140′	63	45	180	140′	83	105	255
	NB T	[405′]	153	365	248	[405′]	175	375	253
	NB R	115′	45	30	58	115′	78	60	90
	SB LTR	---	318	358	350	---	375	395	393
Ship Road and Springdale Drive/Access	EB App	---	---	---	---	---	68	115	53
	WB App	---	3	40	3	---	5	80	3
	NB L	---	---	---	---	75′	8	5	5
Lincoln Hwy and Laborers Union	WB L	---	0	0	5	TWLTL	0	0	5
	NB App	---	0	3	8	---	0	3	5
Lincoln Hwy Access And Loop Road Enter Only (Future Couplet)	EB R	---	---	---	---	125′	0	0	0
	WB L	---	---	---	---	TWLTL	10	8	8
Lincoln Highway and RIRO Access Driveway	NB App	---	---	---	---	---	18	10	13
Ship Road Access And Loop Road Exit Only (Future Couplet)	EB App	---	---	---	---	---	18	23	15
Ship Road and RI Only Access Driveway	SB App	---	---	---	---	---	0	0	0
Ship Road and Laborers Union	EB App	---	---	---	---	---	---	---	---
	NB L	---	---	---	---	---	---	---	---

[--] = Distance to adjacent study area or signalized intersection
{--} = Distance to proposed access driveway

TABLE 13 (CONTINUED)
95TH PERCENTILE QUEUE ANALYSIS

Intersection	Lane Group	2023 Phase 2 (Scenario A) Conditions				2023 Phase 2 (Scenario B) Conditions			
		Storage Length	95th Percentile Queue			Storage Length	95th Percentile Queue		
			A.M.	P.M.	SAT		A.M.	P.M.	SAT
Lincoln Highway and Ship Road	EB L	160'	40	45	55	160'	50	63	75
	EB TR	---	423	343	405	---	480	360	428
	WB L	TWLTL	55	83	63	TWLTL	70	90	75
	WB TR	[980']	235	1010	808	[980']	268	1050	858
	NB L	140'	65	50	193	140'	83	108	260
	NB T	[405']	168	373	253	[405']	183	380	258
	NB R	115'	48	33	60	115'	80	63	95
	SB LTR	---	333	390	380	---	383	440	435
Ship Road and Springdale Drive/Access	EB App	---	---	---	---	---	70	123	55
	WB App	---	5	88	3	---	5	85	3
	NB L	---	---	---	---	75'	8	5	5
Lincoln Hwy and Laborers Union	WB L	TWLTL	0	3	8	TWLTL	3	3	8
	NB App	---	8	5	10	---	8	5	10
Lincoln Hwy Access And Loop Road Enter Only (Future Couplet)	EB R	---	---	---	---	125'	0	0	0
	WB L	---	---	---	---	TWLTL	10	8	8
Lincoln Highway and RIRO Access Driveway	NB App	---	---	---	---	---	18	10	13
Ship Road Access And Loop Road Exit Only (Future Couplet)	EB App	---	---	---	---	---	18	25	18
Ship Road and RI Only Access Driveway	SB App	---	---	---	---	---	0	0	0
Ship Road and Laborers Union	EB App	---	5	5	5	---	8	8	8
	NB L	---	0	0	0	---	0	0	0

[--] = Distance to adjacent study area or signalized intersection
{--} = Distance to proposed access driveway

TABLE 13 (CONTINUED)
95TH PERCENTILE QUEUE ANALYSIS

Intersection	Lane Group	2028 Base Conditions				2028 Phase 3 Projected Conditions			
		Storage Length	95th Percentile Queue			Storage Length	95th Percentile Queue		
			A.M.	P.M.	SAT		A.M.	P.M.	SAT
Lincoln Highway and Ship Road	EB L	160'	38	43	48	160'	53	65	78
	EB TR	---	435	348	413	---	528	370	445
	WB L	TWLTL	55	80	60	TWLTL	78	95	78
	WB TR	[980']	245	1038	828	[980']	285	1143	913
	NB L	140'	68	63	200	140'	90	143	285
	NB T	[405']	168	378	255	[405']	193	398	270
	NB R	115'	48	30	60	115'	85	63	98
	SB LTR	---	345	393	373	---	408	518	485
Ship Road and Springdale Drive/Access	EB App	---	---	---	---	---	93	153	65
	WB App	---	3	45	3	---	5	100	5
	NB L	---	---	---	---	75'	8	5	5
Lincoln Hwy and Laborers Union	WB L	---	0	0	5	TWLTL	3	3	8
	NB App	---	0	3	10	---	8	8	13
Lincoln Hwy Access And Loop Road Enter Only (Future Couplet)	EB R	---	---	---	---	125'	0	0	0
	WB L	---	---	---	---	TWLTL	10	8	10
Lincoln Highway and RIRO Access Driveway	NB App	---	---	---	---	---	18	10	13
Ship Road Access And Loop Road Exit Only (Future Couplet)	EB App	---	---	---	---	---	23	30	20
Ship Road and RI Only Access Driveway	SB App	---	---	---	---	---	0	0	0
Ship Road and Laborers Union	EB App	---	---	---	---	---	8	8	8
	NB L	---	---	---	---	---	0	0	0

[--] = Distance to adjacent study area or signalized intersection
{--} = Distance to proposed access driveway

As shown in **Table 13,** queuing from the signalized intersection of Lincoln Highway and Ship Road is anticipated to extend past the proposed Lincoln Highway right-in/right-out access driveway under 2028 projected (build) conditions. For 2028 projected (build) conditions for the signalized intersection of Lincoln Highway and Ship Road, anticipated queuing will extend past the storage length for the northbound left turn on Ship Road approach. The proposed storage length for all access driveway turn lanes will satisfy the anticipated queuing for the projected (build) conditions.

AUXILIARY TURN LANE ANALYSIS

Methodology

TPD evaluated auxiliary turn lane warrants at the site access intersections. The warrant analysis methodology contained within Chapter 11 of PennDOT's *Publication 46*, Section 11.17 and Strike-Off Letter 470-08-07 was utilized for this evaluation.

Findings

Table 14 summarizes the results of the auxiliary turn lane analysis at the site access intersections:

TABLE 14
AUXILIARY TURN LANE ANALYSIS SUMMARY

Intersection	Auxiliary Lane	Warrant Satisfied?	Required Lane Length	Proposed Lane Length
Lincoln Highway and Laborers Union Driveway	EB Right-Turn Lane	Yes	125'	125'
	WB Left-Turn Lane	Yes	125'	TWLTL
Lincoln Highway and Loop Road	EB Right-Turn Lane	Yes	125'	125'
	WB Left-Turn Lane	Yes	200'	TWLTL
Lincoln Highway and Proposed Right-In/ Right-Out Only Driveway	EB Right-Turn Lane	Yes	125'	165'
Ship Road and Proposed Right-In Only Driveway	SB Right-Turn Lane	No	---	---
Ship Road and Springdale Drive	NB Left-Turn Lane	Yes	75'	75'
	SB Right-Turn Lane	No	---	---
Ship Road and Laborers Union Driveway	NB Left-Turn Lane	No	---	---
	SB Right-Turn Lane	No	---	---

1- Using existing Two-Way Left Turn Control Lane

For the Phase 3 projected 2028 condition, the auxiliary turn lane warrants calculations are included in **Appendix J**.

RECOMMENDATIONS

TPD has made the following recommendations in relation to the proposed developments with the necessary roadway improvements summarized in **Table 15**.

TABLE 15
ROADWAY IMPROVEMENTS SUMMARY

Roadway Improvements	
Location	**Description**
Phase 1	
Lincoln Highway and Ship Road	Construct a new one-way road for southbound Ship Road on the south side of Lincoln Highway.
Auxiliary Turn Lanes	
Primary Development Access Points	Lincoln Highway RI/RO Access – Eastbound RT Lane
	Ship Road Full-Access – Northbound LT Lane
Loop Road (SB Ship Road Couplet) Access Points	Lincoln Highway Intersection – Eastbound RT Lane
	Lincoln Highway Intersection – Westbound LT Lane[1]
Phase 2 (Scenario A)	
Auxiliary Turn Lanes	
Laborers Union Driveway Access Points	Lincoln Highway Access – Eastbound RT Lane
	Lincoln Highway Access – Westbound LT Lane[1]
Phase 2 (Scenario B)	
See Phase 1 and Phase 2A (Scenario A) improvements above.	
Phase 3	
See Phase 1 and 2A improvements above.	
West Whiteland Township's Capital Improvement Plan[2]	
Lincoln Highway and Ship Road	Construct a new one-way road for southbound Ship Road on the north side of Lincoln Highway.

1- Using existing Two-Way Left Turn Control Lane
2- To be performed by others.

TPD recommends the West Whiteland Township Capital Improvements Plan to help mitigate the Phase 3 projected 2028 condition for the intersection at Lincoln Highway and Ship Road. Others would perform this work and the latest plan set from West Whiteland Township is in **Appendix K**.

CONCLUSIONS

Based on the results of the transportation impact study, TPD offers the following conclusions:

- Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Study (TIS) for the proposed Ship Road southwest quadrant and Laborers District Property developments in West Whiteland Township, Chester County, Pennsylvania.
- This TIS assumes that the projects will be constructed in multiple phases and identifies the traffic impacts and roadway improvements associated with each individual land use/phase. The developments will consist of the following uses:

  Commercial

  - 5,585 square-foot (s.f.) Wawa Convenience Market with sixteen (16) fueling positions (Phase 1);
  - 16,690 medical office building (Phase 1);

  Residential

  - 95 single family homes (Phase 2); and,
  - 53 townhomes (Phase 3).

- The developments will consist of the following phases:
  - **Phase 1** will consist of the commercial portion of the development along Lincoln Highway and to be completed by **2023**.
  - **Phase 2** will be comprised of 95 single family homes and will be developed by **2023**.
    - **Phase 2 (Scenario A)** assumes the construction of the single family homes **without** construction of the commercial land uses in Phase 1.
    - **Phase 2 (Scenario B)** assumes the construction of the single family homes **with** construction of the commercial land uses in Phase 1.
  - **Phase 3** is an analysis of full build-out of Phase 1 and 2 and an additional 53 townhouses and will be completed by **2028**.

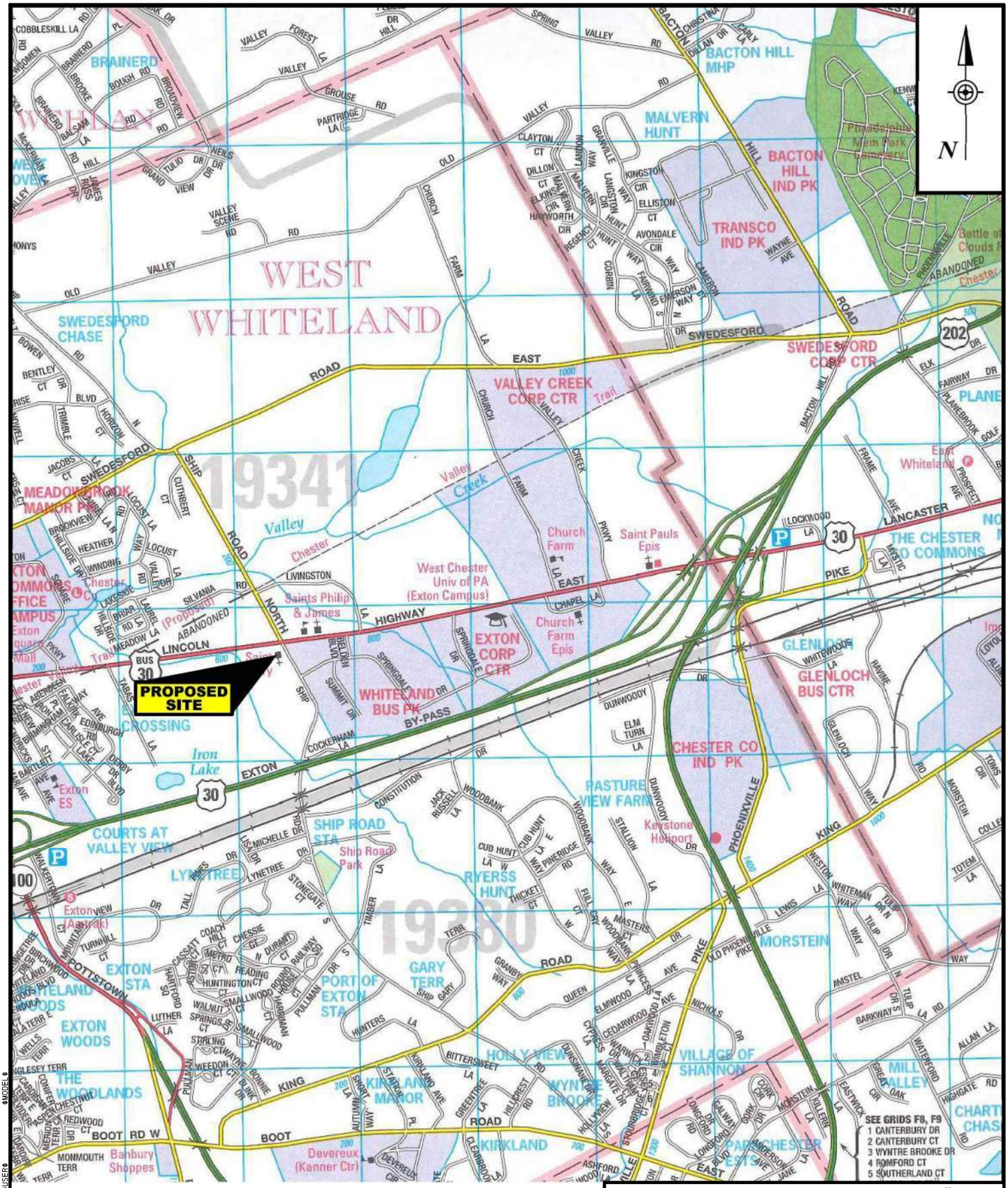
- Numerous vehicular and pedestrian access points serve the uses currently occupying the sites to Lincoln Highway (SR 3070) and Ship Road (SR 1001). The proposed site accesses for both the residential and commercial development consist of the following:

Access

  - **Phase 1** (commercial portion) and **Phase 3** (residential townhouse) will be served by:
    - an ingress only (left-in/right-in) driveway (i.e. the proposed Ship Road Couplet)
    - a right-in/right-out driveway on Lincoln Highway (SR 3070)
    - a right-in only driveway to Ship Road (SR 1001)
    - one full-access driveway to Ship Road (SR 1001) opposite Springdale Drive, and
    - one egress only (left-out/right-out only) driveway on Ship Road (i.e. the proposed Ship Road Couplet).
  - **Phase 2** (single family homes)
    - Use of the existing full access to Lincoln Highway (SR 3070) (i.e. existing Laborers Union Driveway)
    - a proposed full access to Ship Road via a Laborers Union Driveway extension.
- The proposed **commercial development** is anticipated to generate approximately **164** new vehicle-trips during the weekday A.M. peak hour, **133** new-vehicle trips during the weekday P.M. peak hour, and **162** new vehicle-trips during the Saturday midday peak hour at full build out.

- The proposed **residential development** is anticipated to generate approximately **98** new vehicle-trips during the weekday A.M. peak hour, **126** new-vehicle trips during the weekday P.M. peak hour, and **122** new vehicle-trips during the Saturday midday peak hour at full build out.

- The overall ILOS for the study area intersections is acceptable by PennDOT at an ILOS D or better except for the Lincoln Highway and Ship Road intersection during the PM Peak Hour with an ILOS E (56.6). TPD recommends the West Whiteland Township Capital Improvements Plan to help mitigate the Phase 3 projected 2028 condition for the intersection at Lincoln Highway and Ship Road. Others would perform this work to help mitigate the ILOS E at Lincoln Highway and Ship Road intersection during the Phase 3 projected 2028 conditions.



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Scale 1"=2000'

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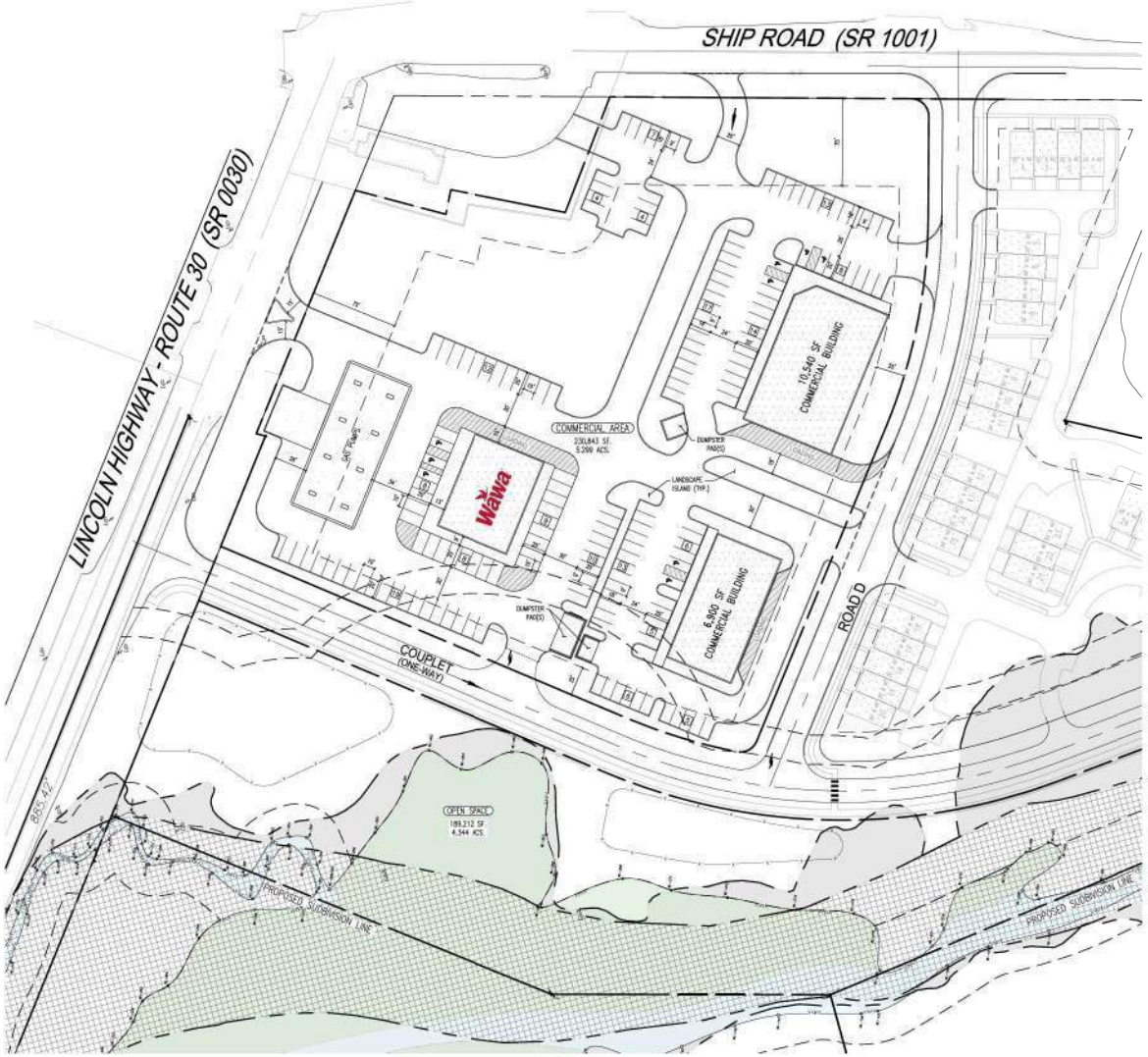
FIGURE 1

PROJECT LOCATION

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

$FILE$
$DATE$ $TIME$ $USER$ $MODEL$



SITE PLAN
SCALE: 1"=50'

50 0 25 50 100

GRAPHIC SCALE
1 inch = 50 feet

N

KEY:
SCHEMATIC DRAWING:NOT TO SCALE

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FIGURE 2A

SITE PLAN
COMMERCIAL ONLY

$FILE$
$DATE$ $TIME$ $USER$ $MODEL$

KEY:
SCHEMATIC DRAWING:NOT TO SCALE

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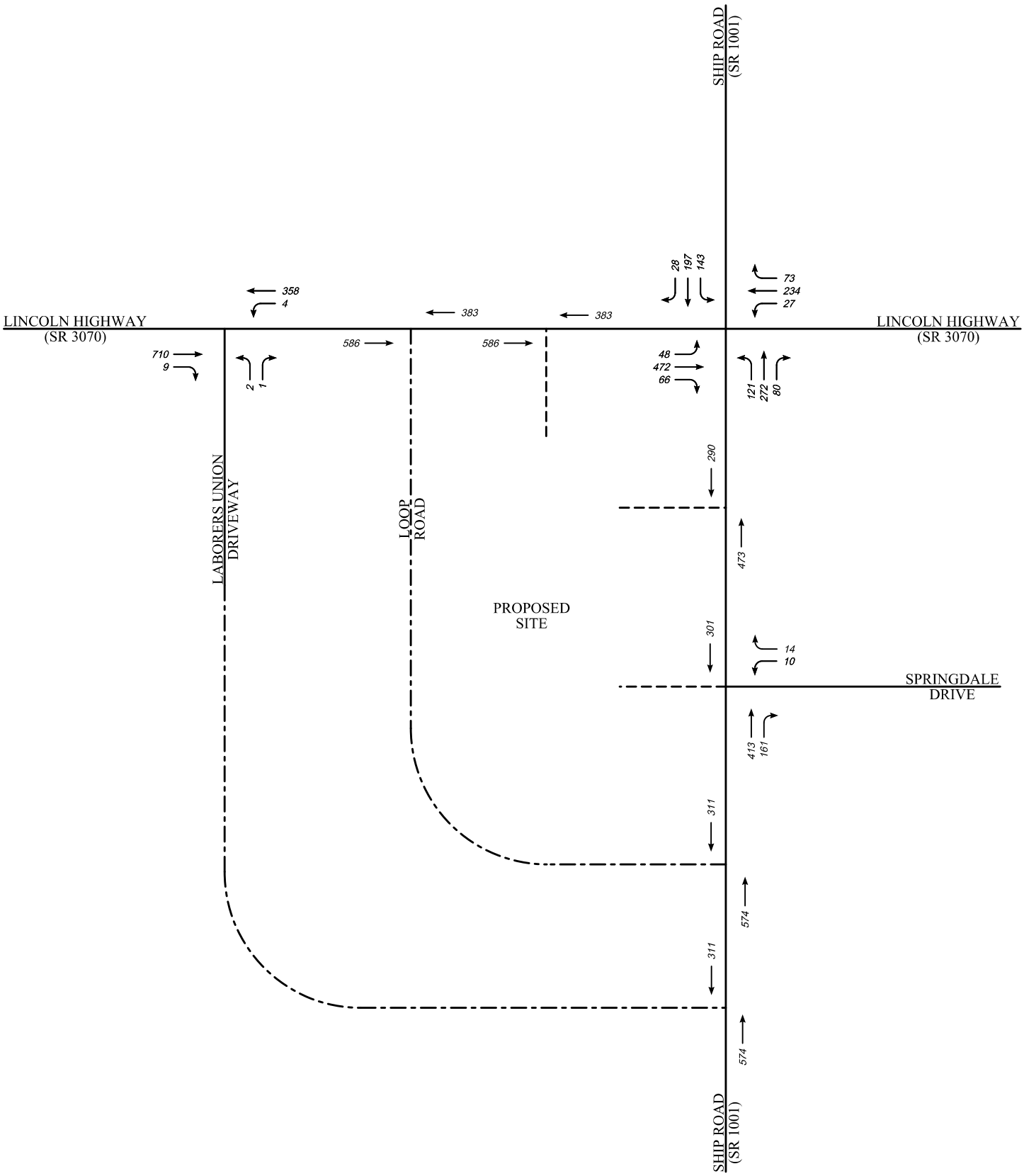
FIGURE 2B

OVERALL SITE PLAN
COMMERCIAL AND RESIDENTIAL



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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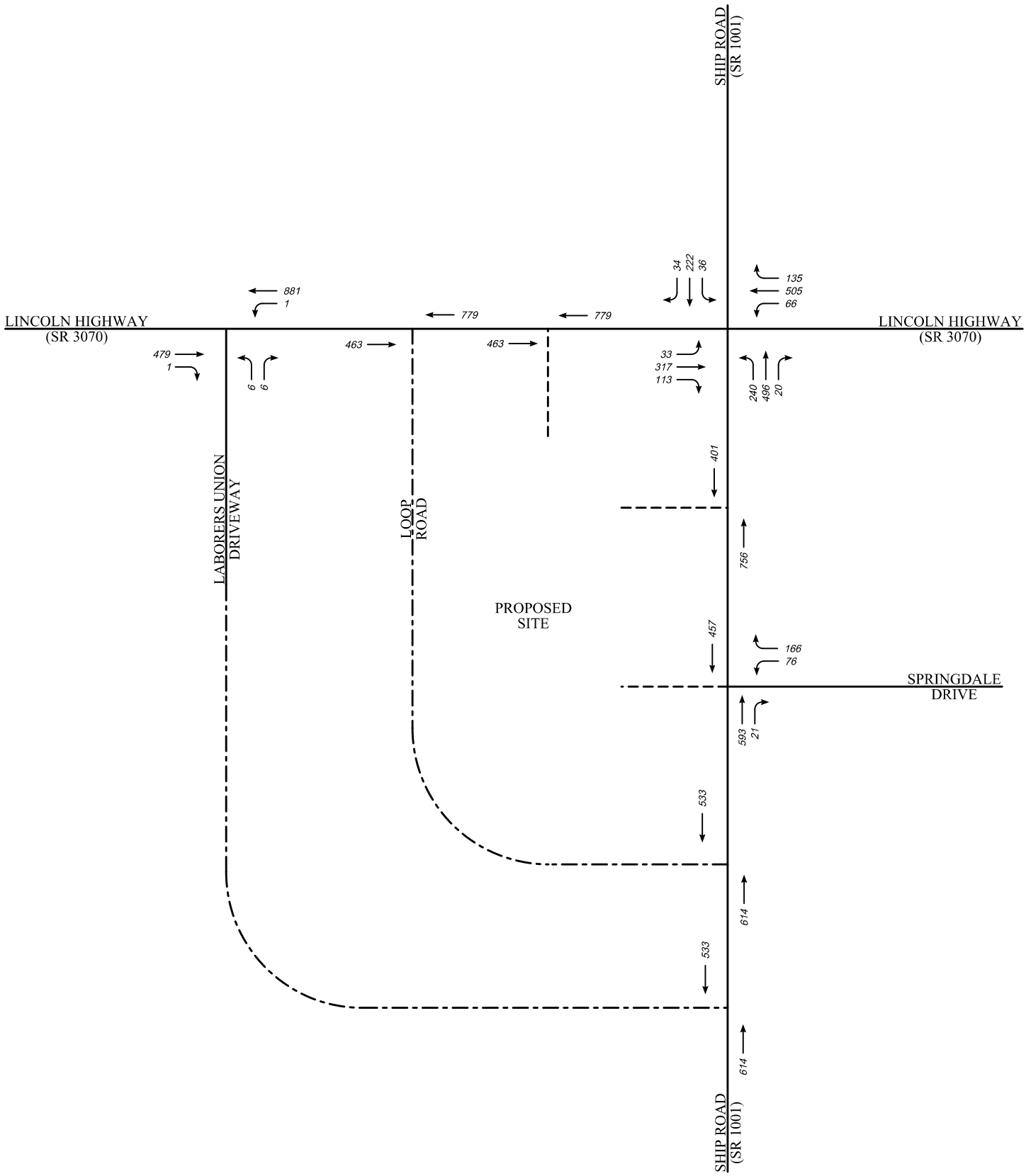
FIGURE 3

EXISTING CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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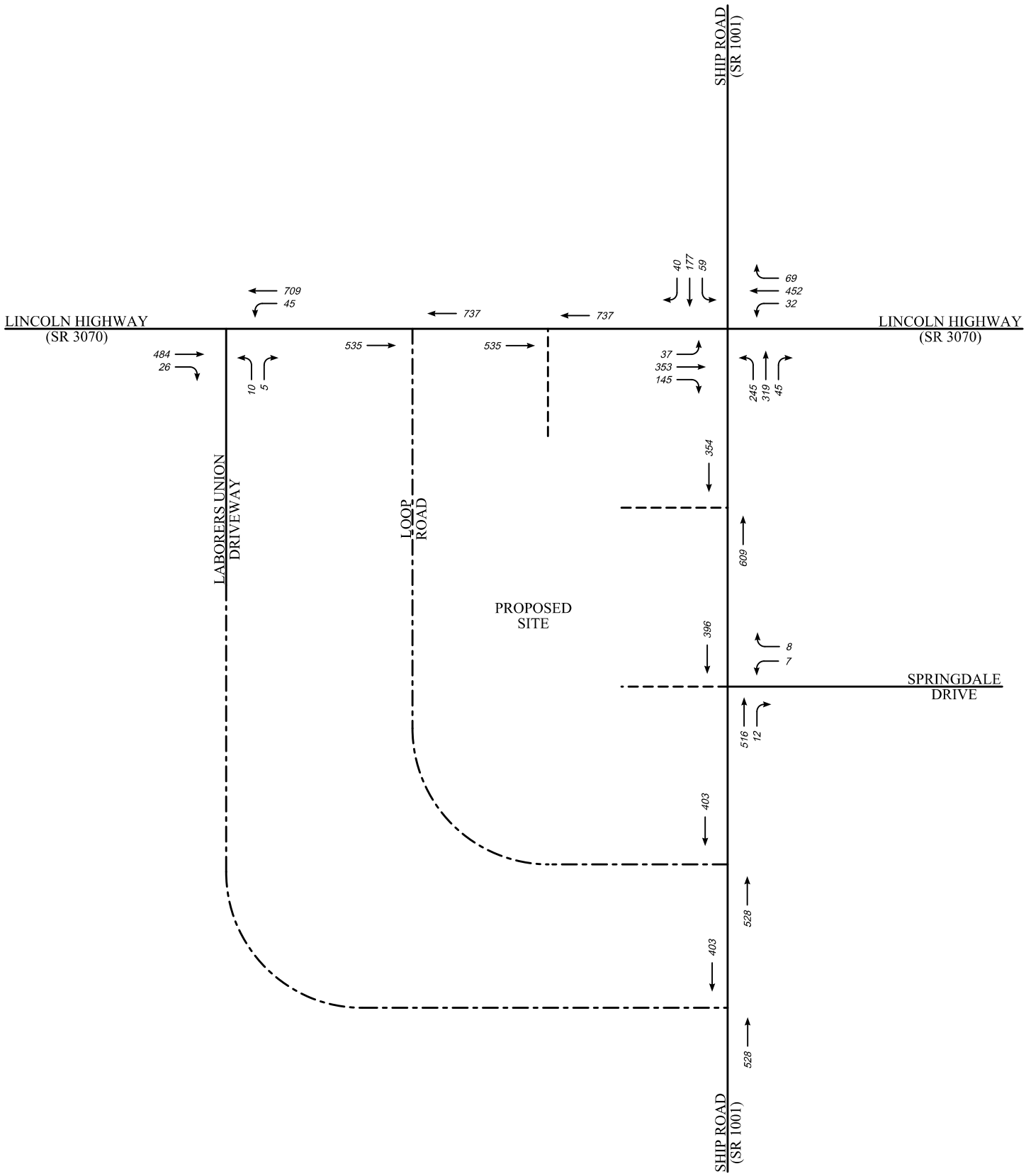
FIGURE 4

EXISTING CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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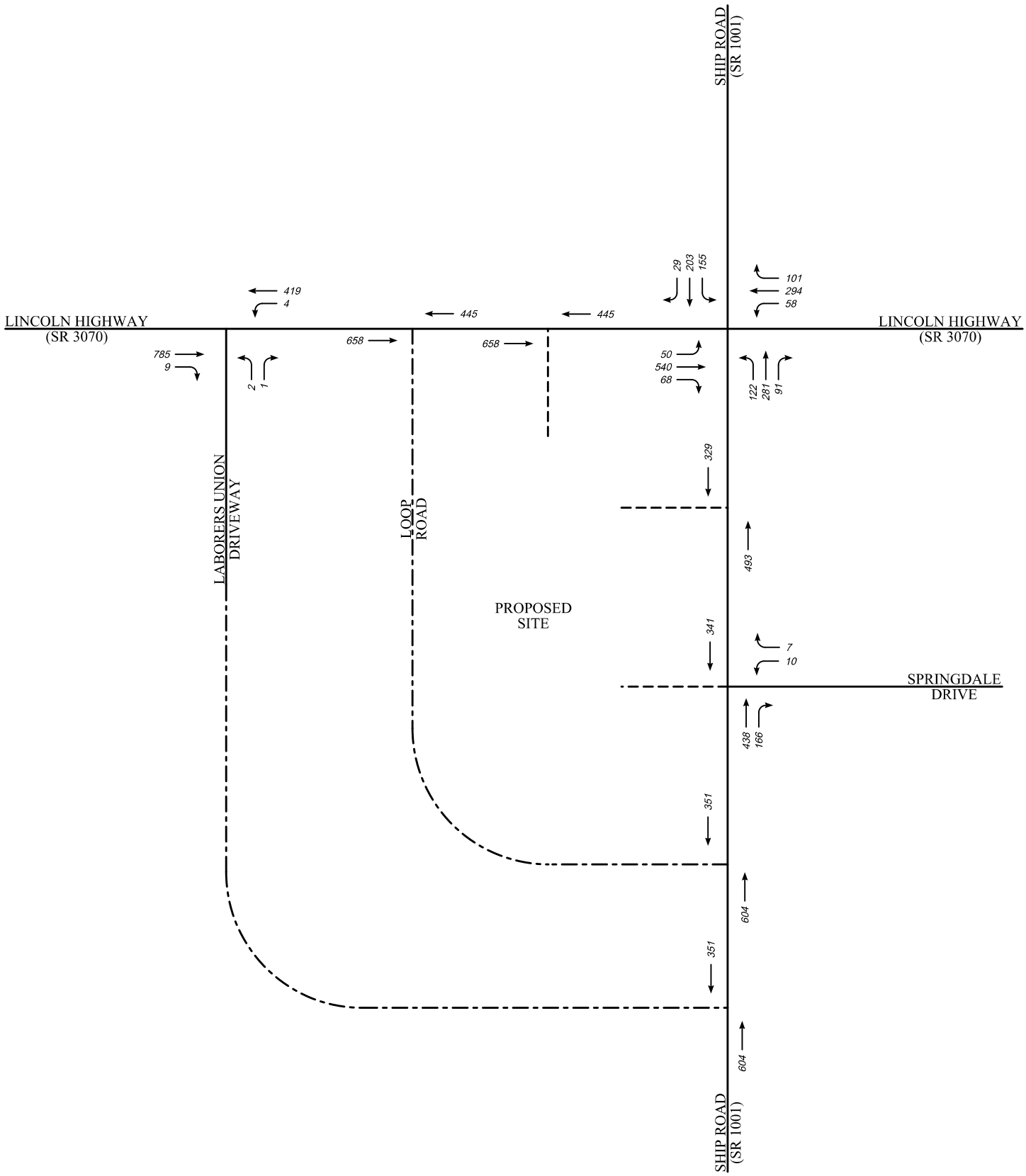
FIGURE 5

EXISTING CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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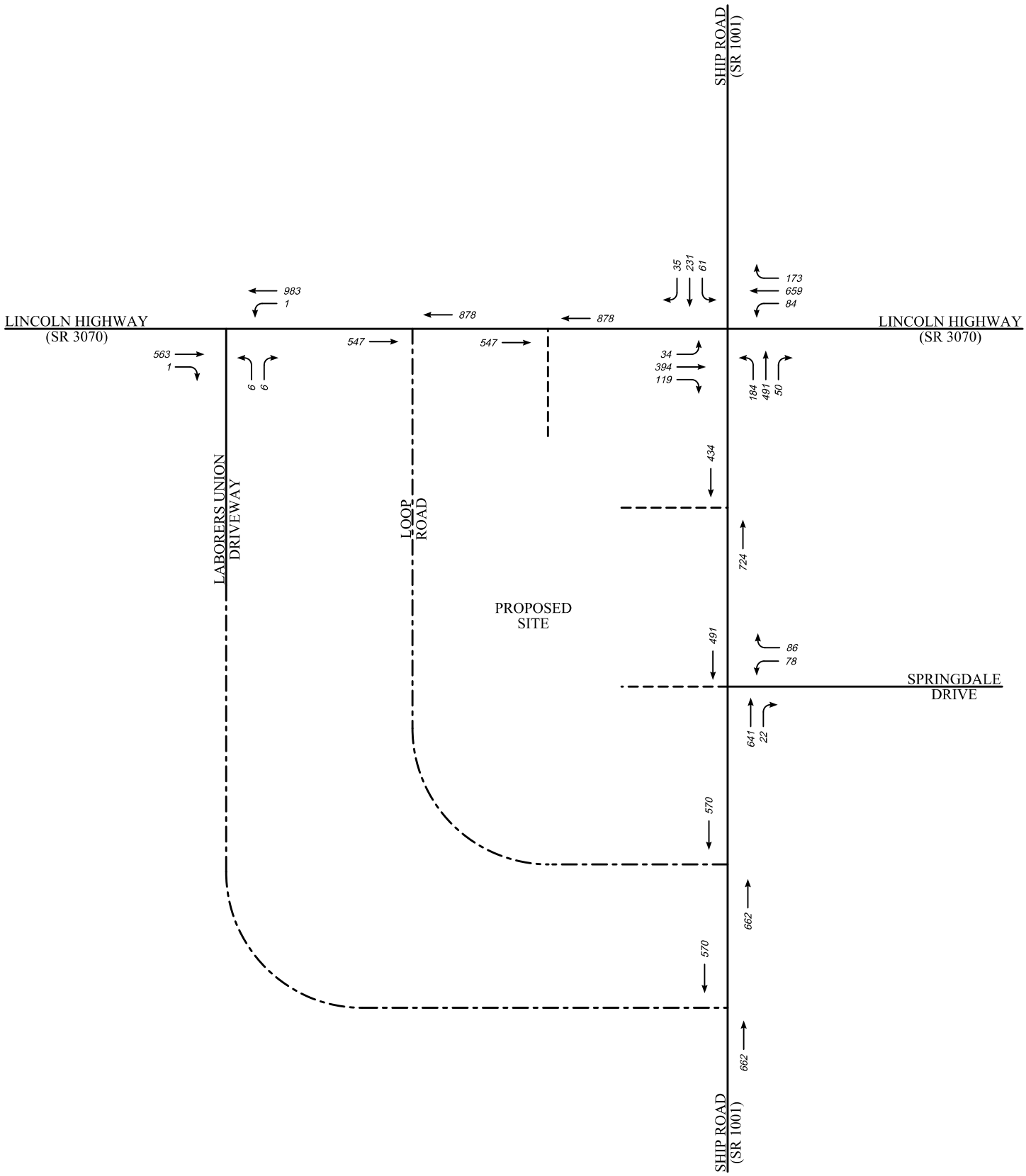
FIGURE 6

2023 BASE CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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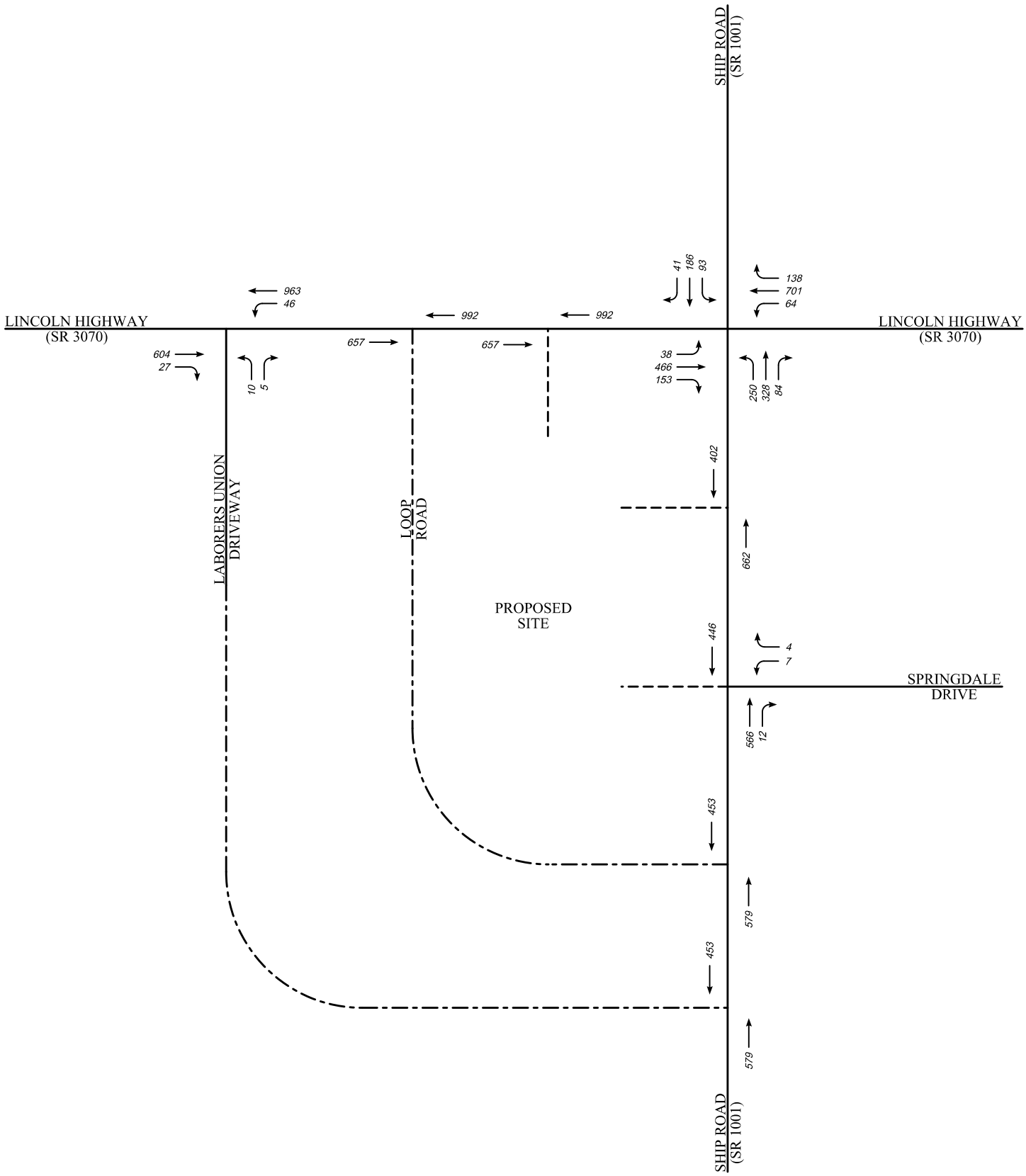
FIGURE 7

2023 BASE CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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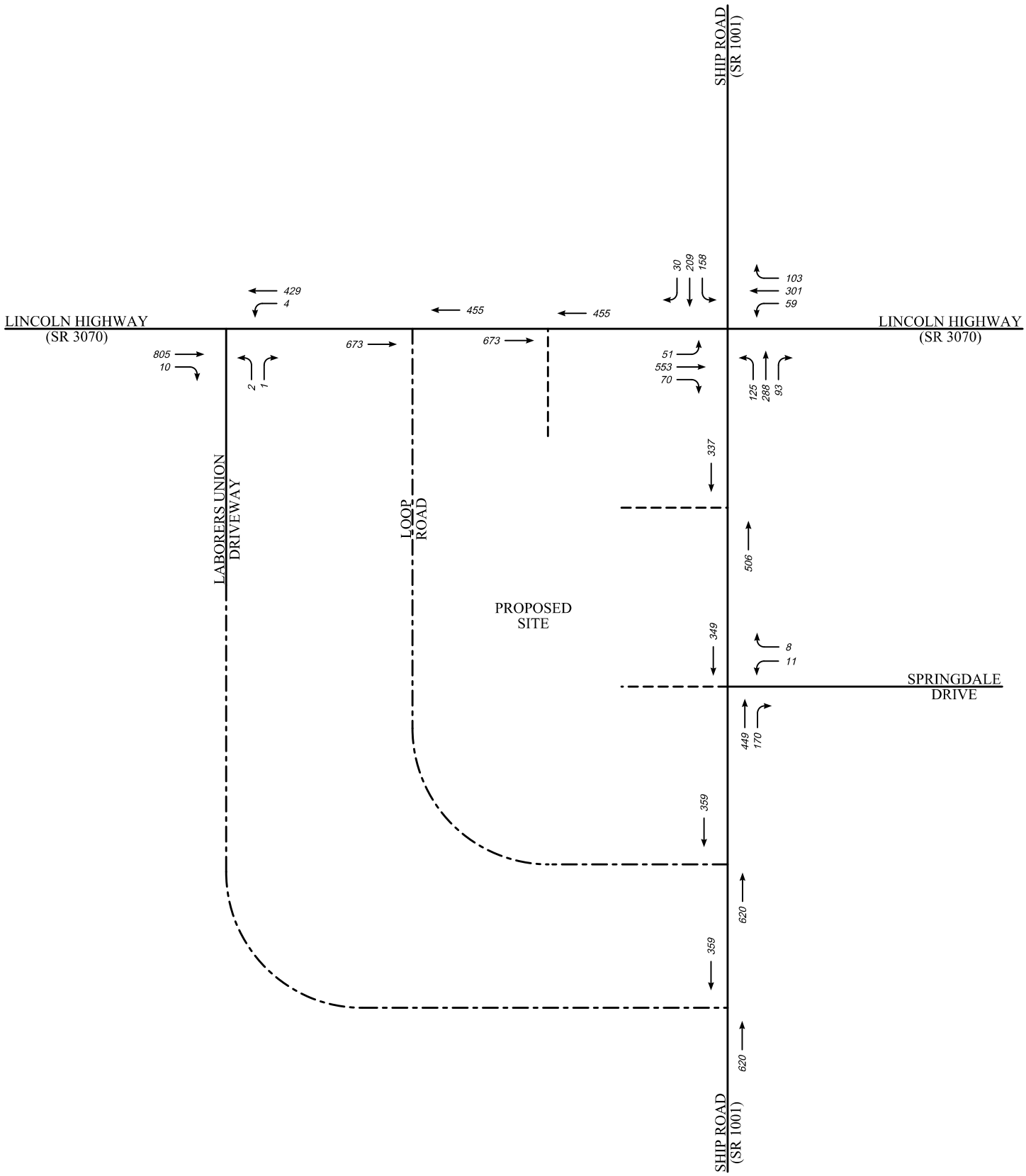
FIGURE 8

2023 BASE CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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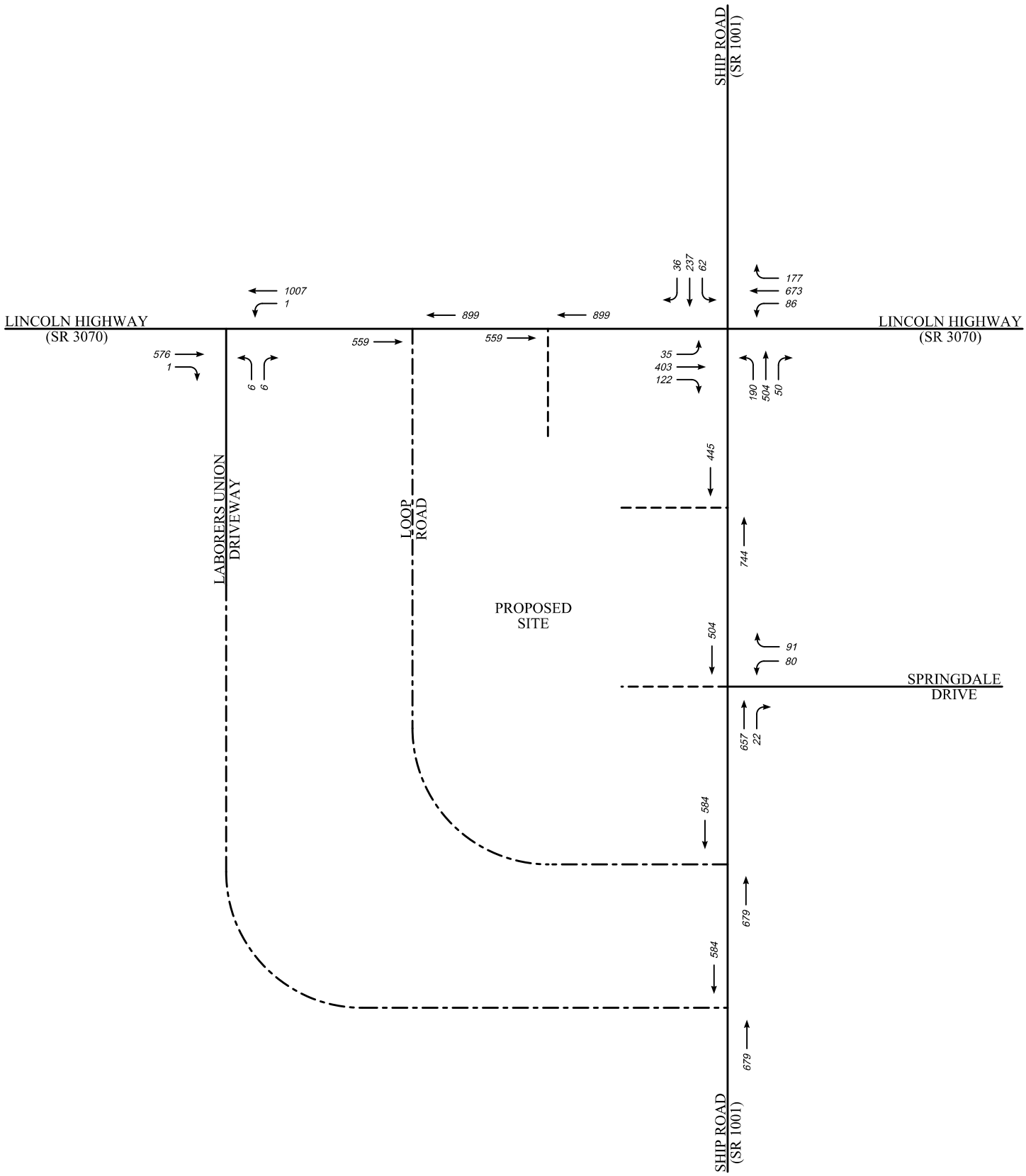
FIGURE 9

2028 BASE CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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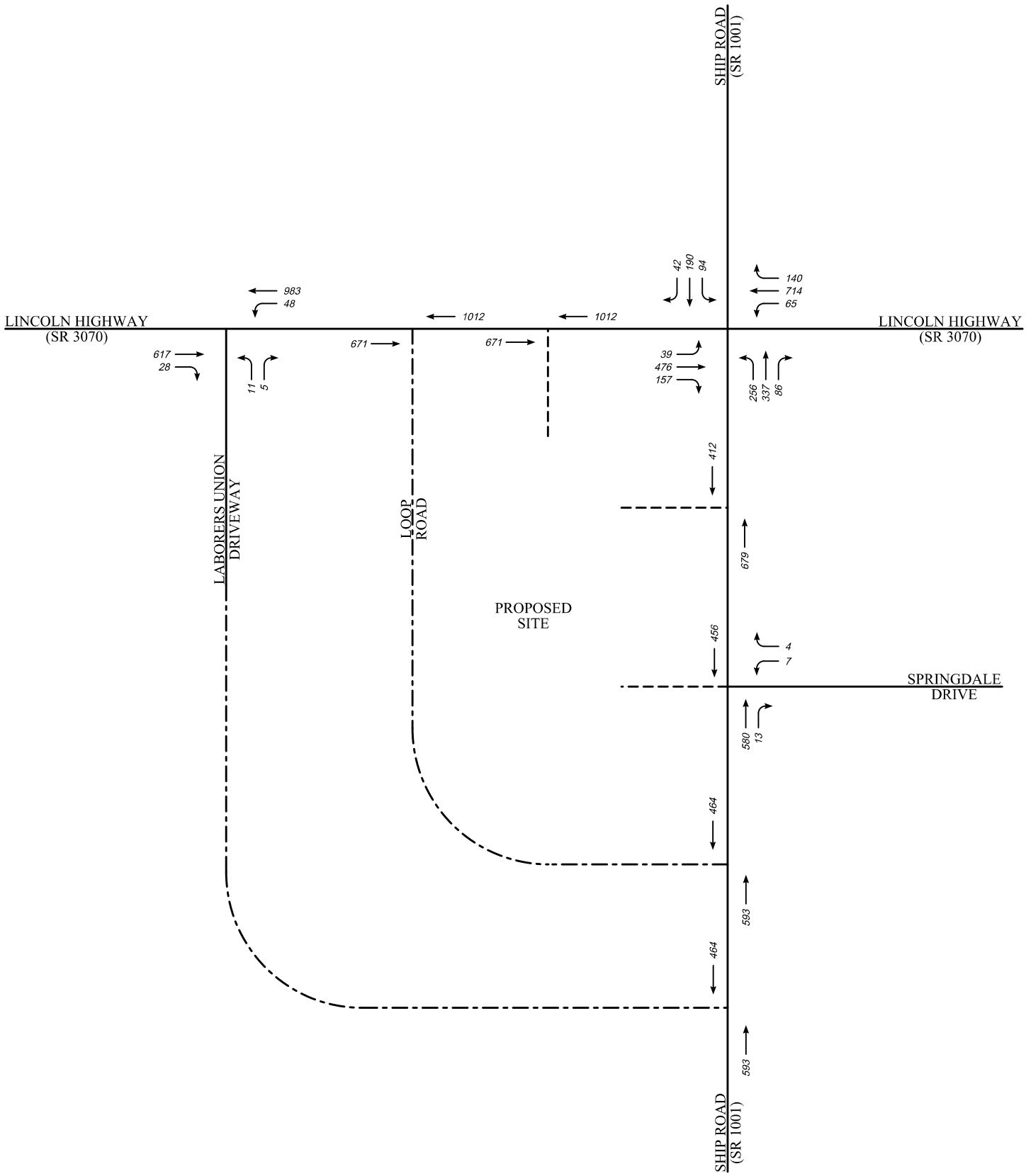
FIGURE 10

2028 BASE CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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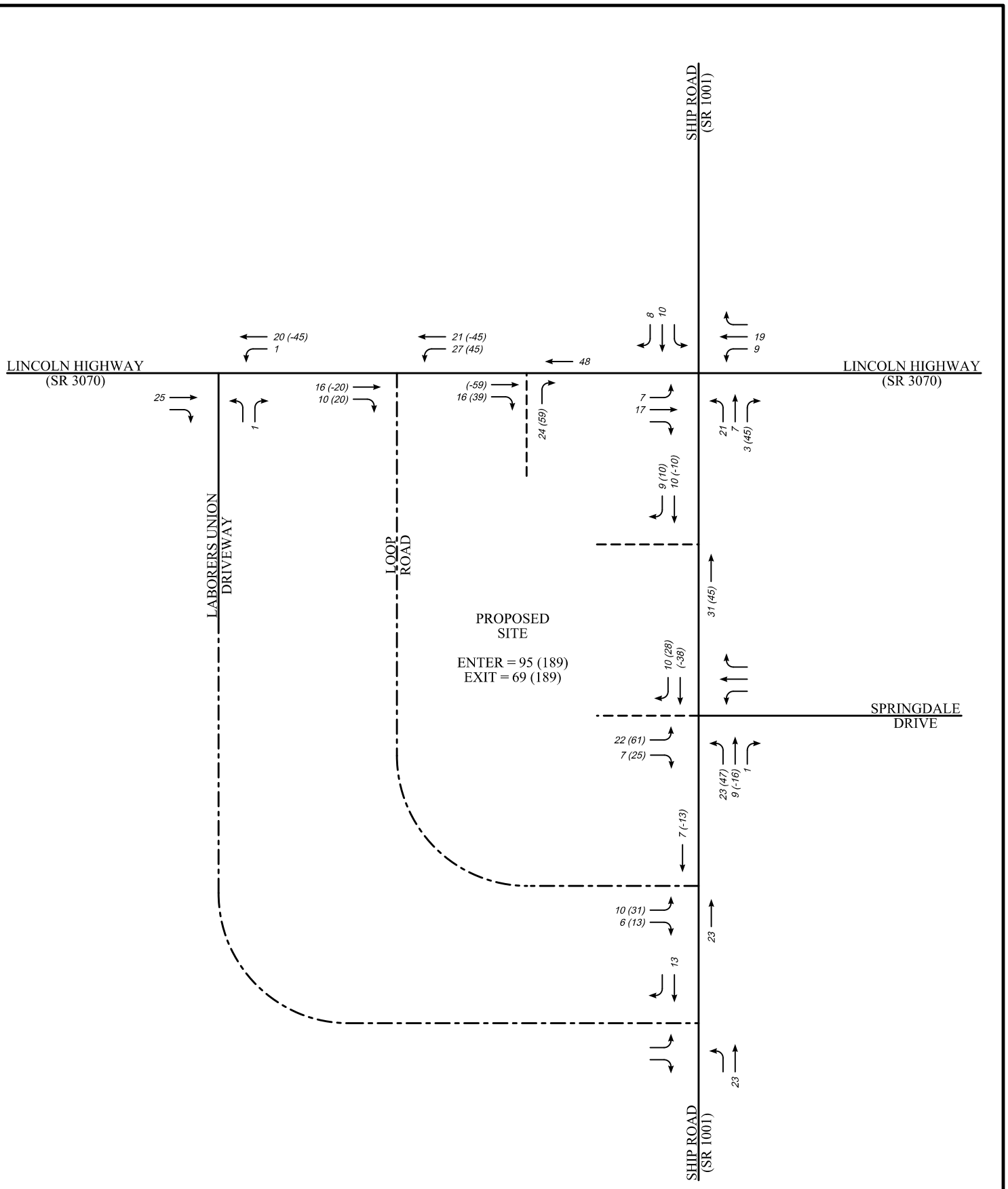
FIGURE 11

2028 BASE CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

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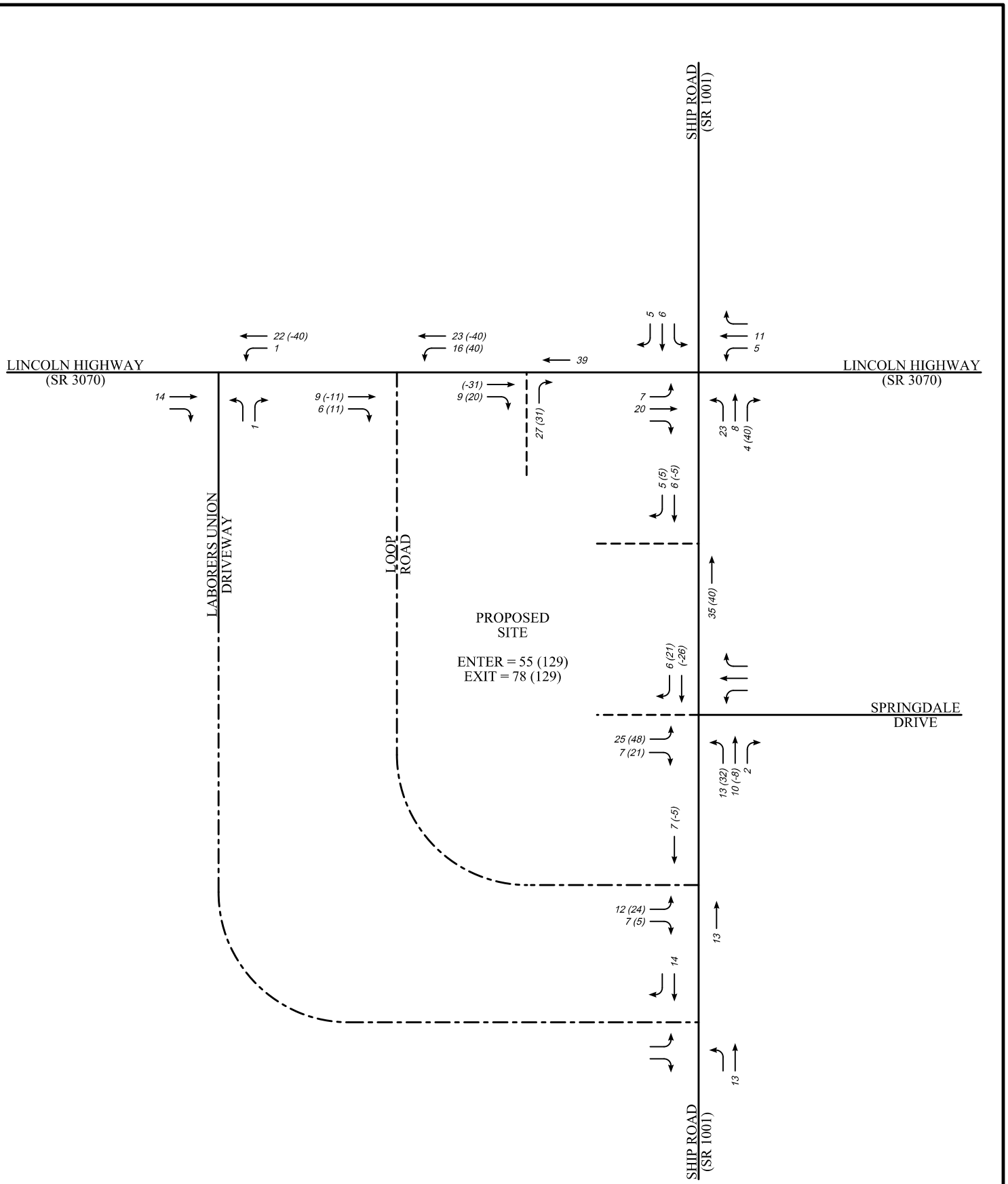
FIGURE 12

TRIP DISTIRBUTION
WEEKDAY AM PEAK HOUR
PHASE 1

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

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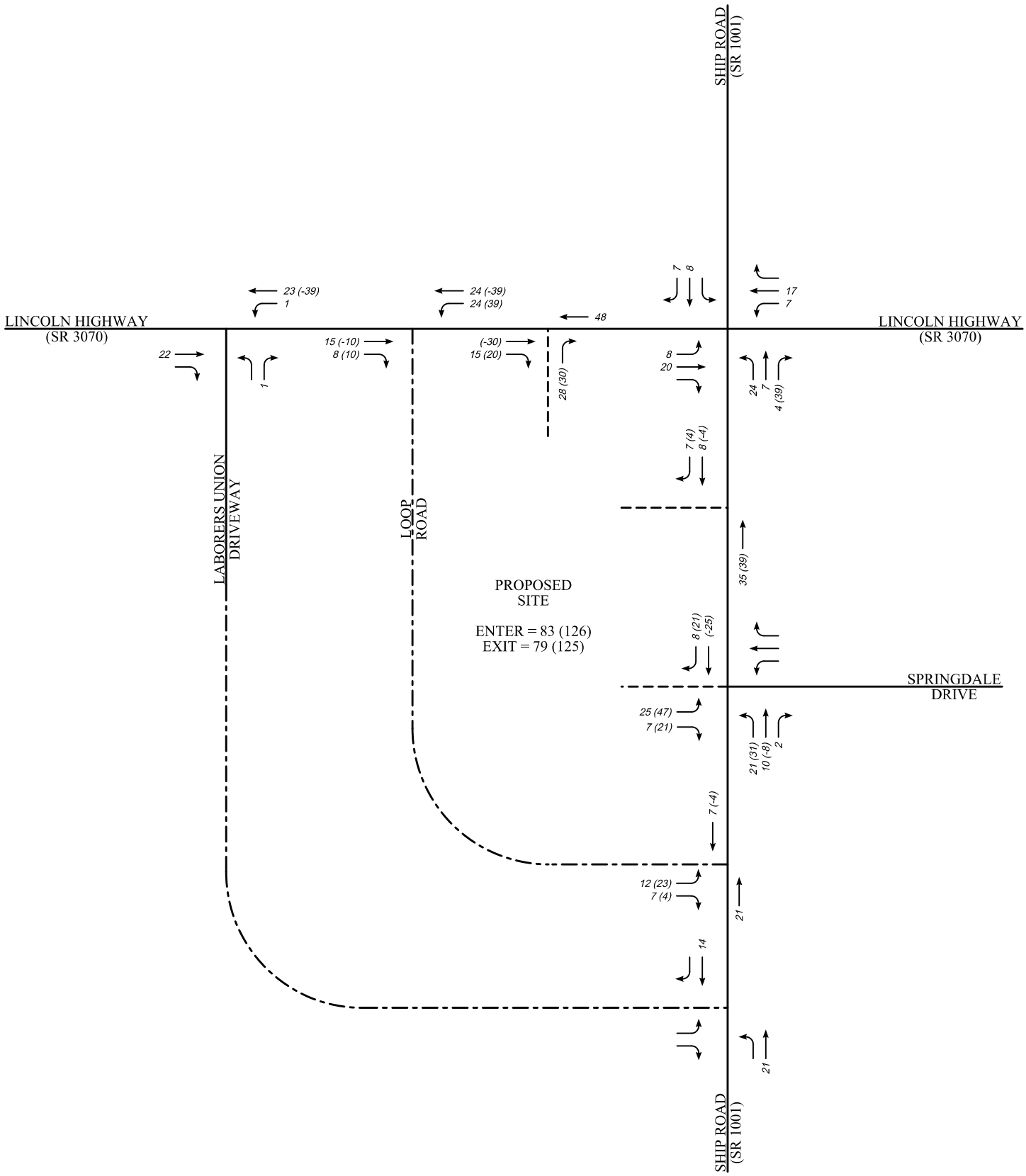
FIGURE 13

TRIP DISTIRBUTION
WEEKDAY PM PEAK HOUR
PHASE 1

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

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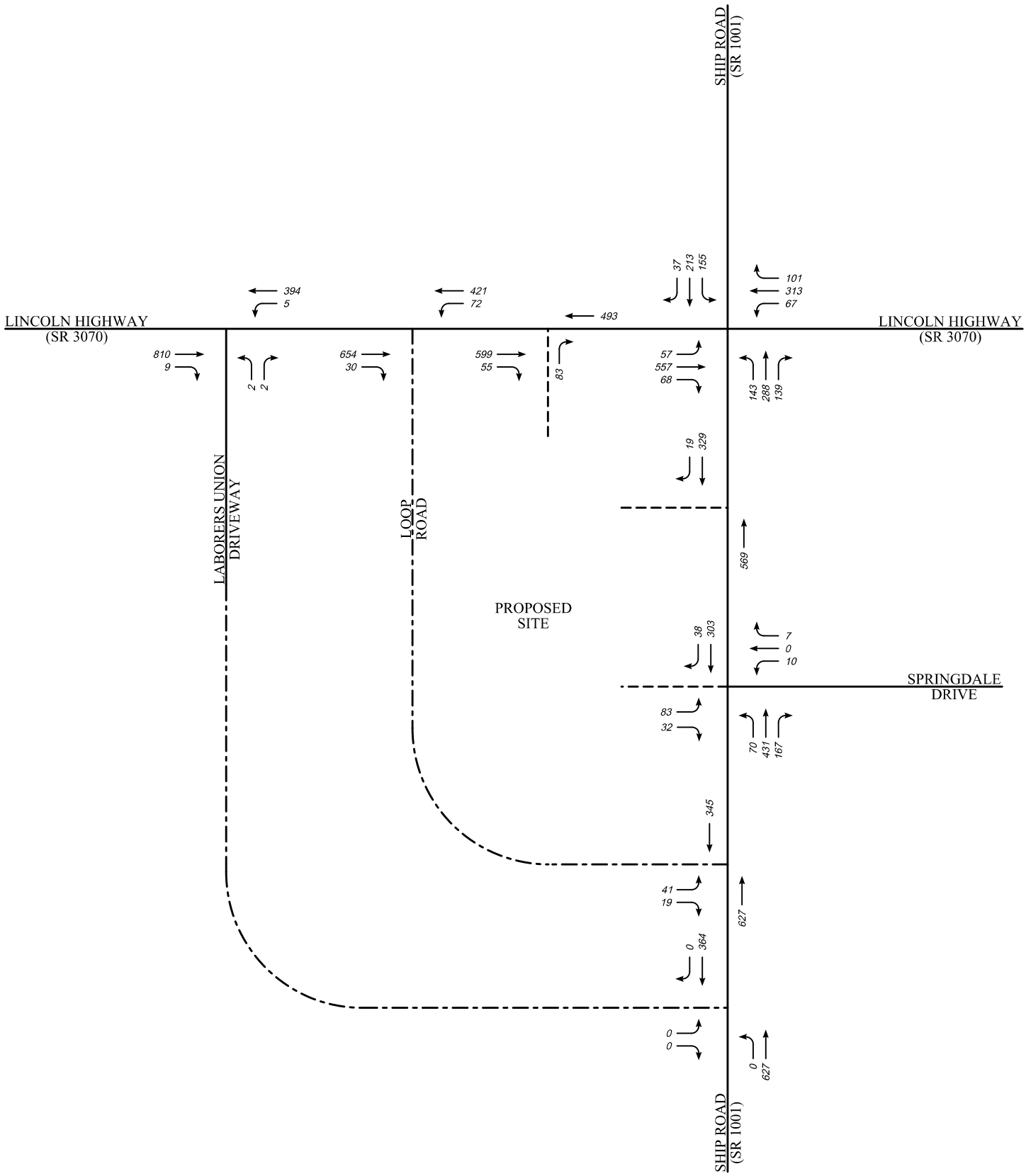
FIGURE 14

TRIP DISTIRBUTION
SATURDAY MIDDAY PEAK HOUR
PHASE 1

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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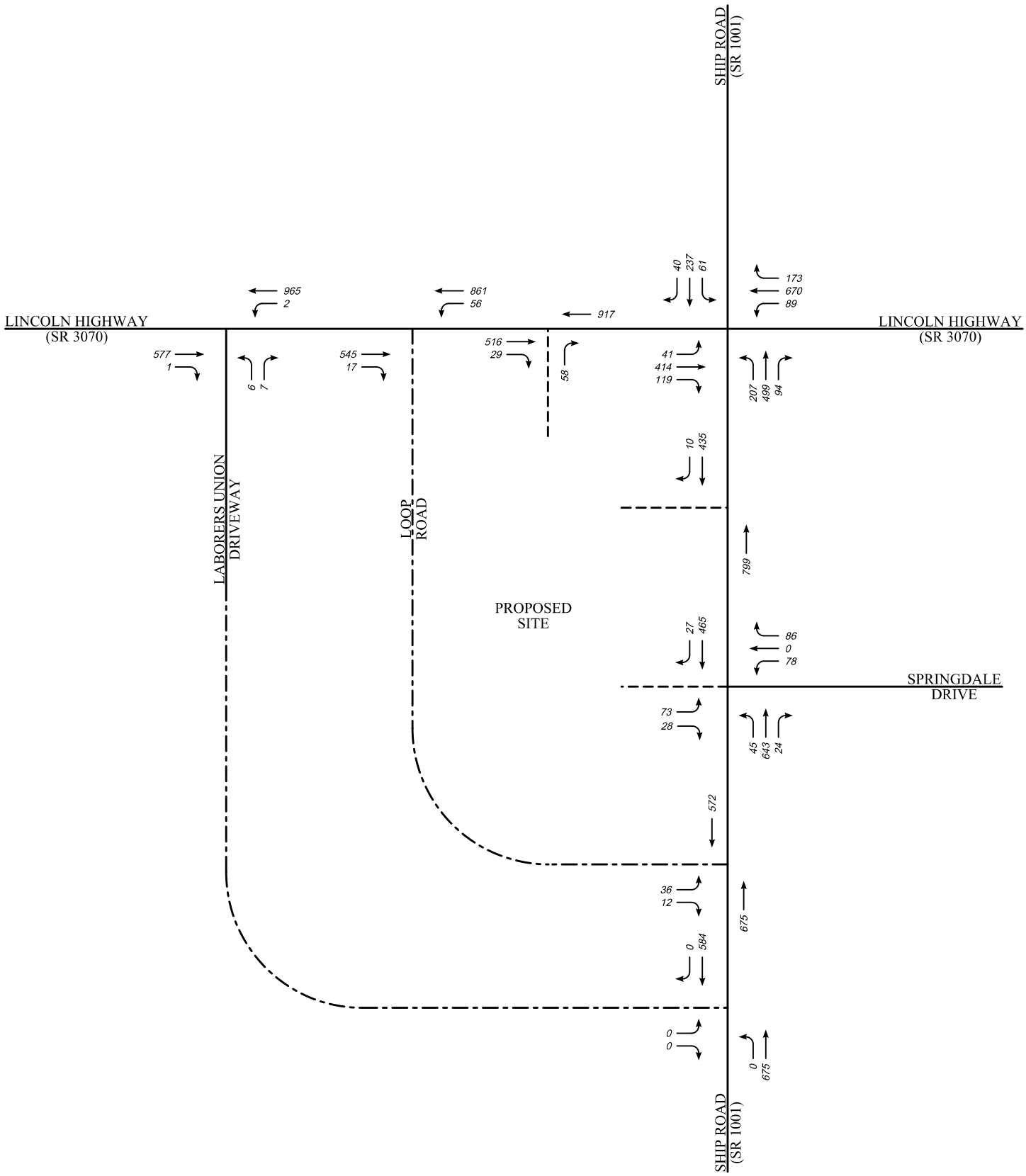
FIGURE 15

2023 PROJECTED CONDITIONS
WEEKDAY AM PEAK HOUR
PHASE 1 TRAFFIC VOLUMES

$FILE$
$DATE$
$TIME$
$USER$
$MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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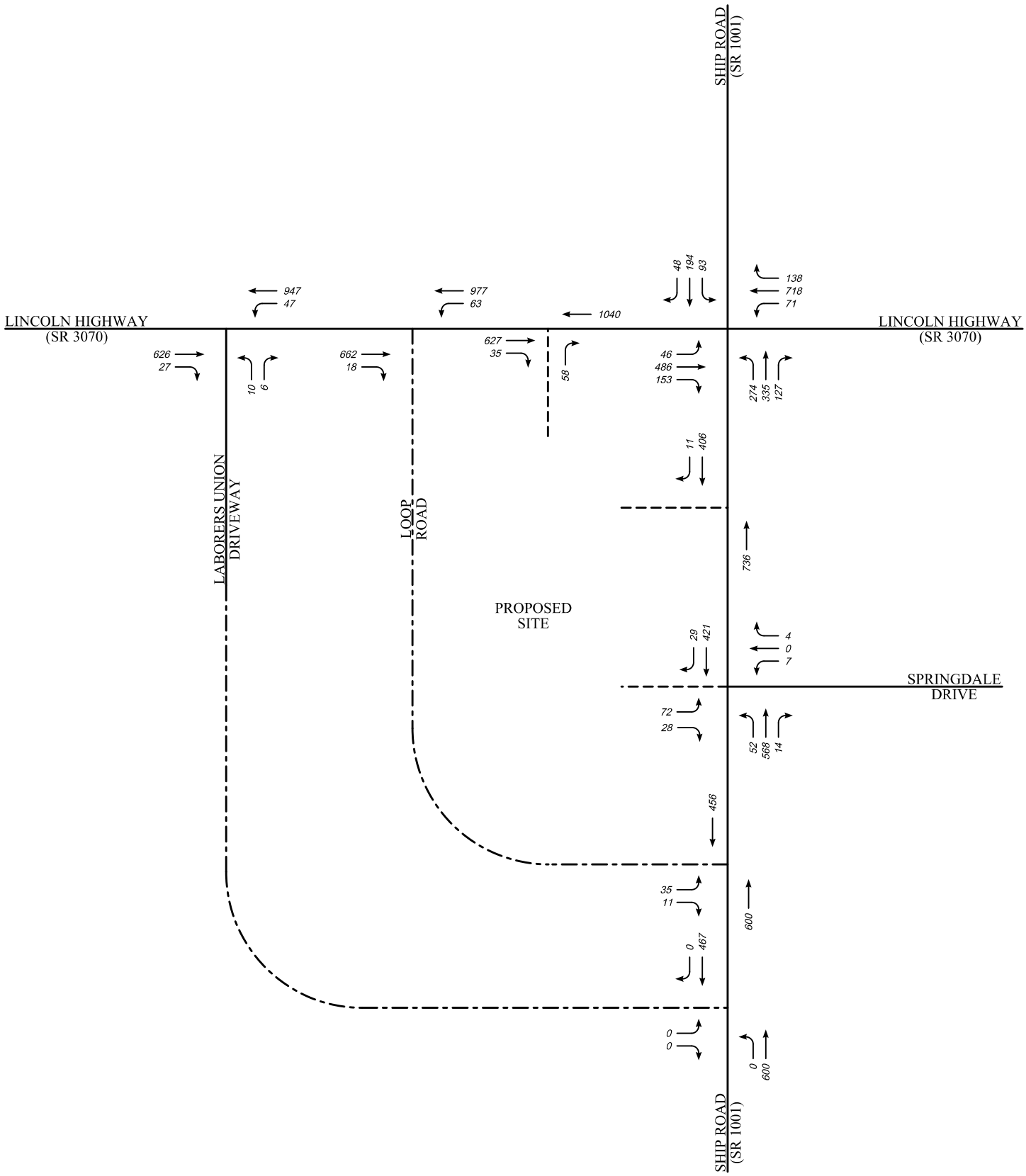
FIGURE 16

2023 PROJECTED CONDITIONS
WEEKDAY PM PEAK HOUR
PHASE 1 TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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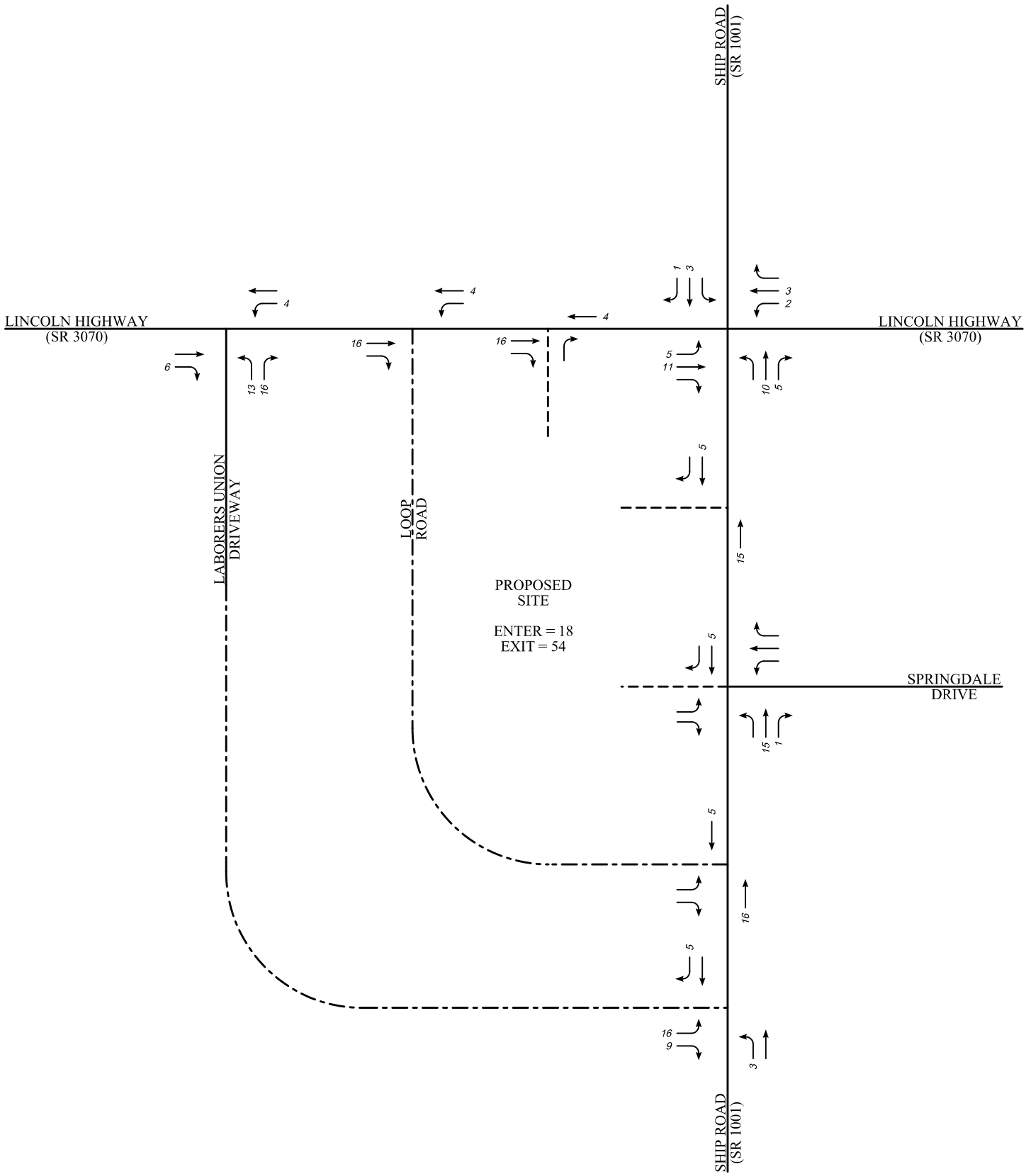
FIGURE 17

2023 PROJECTED CONDITIONS
SATURDAY MIDDAY PEAK HOUR
PHASE 1 TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

N

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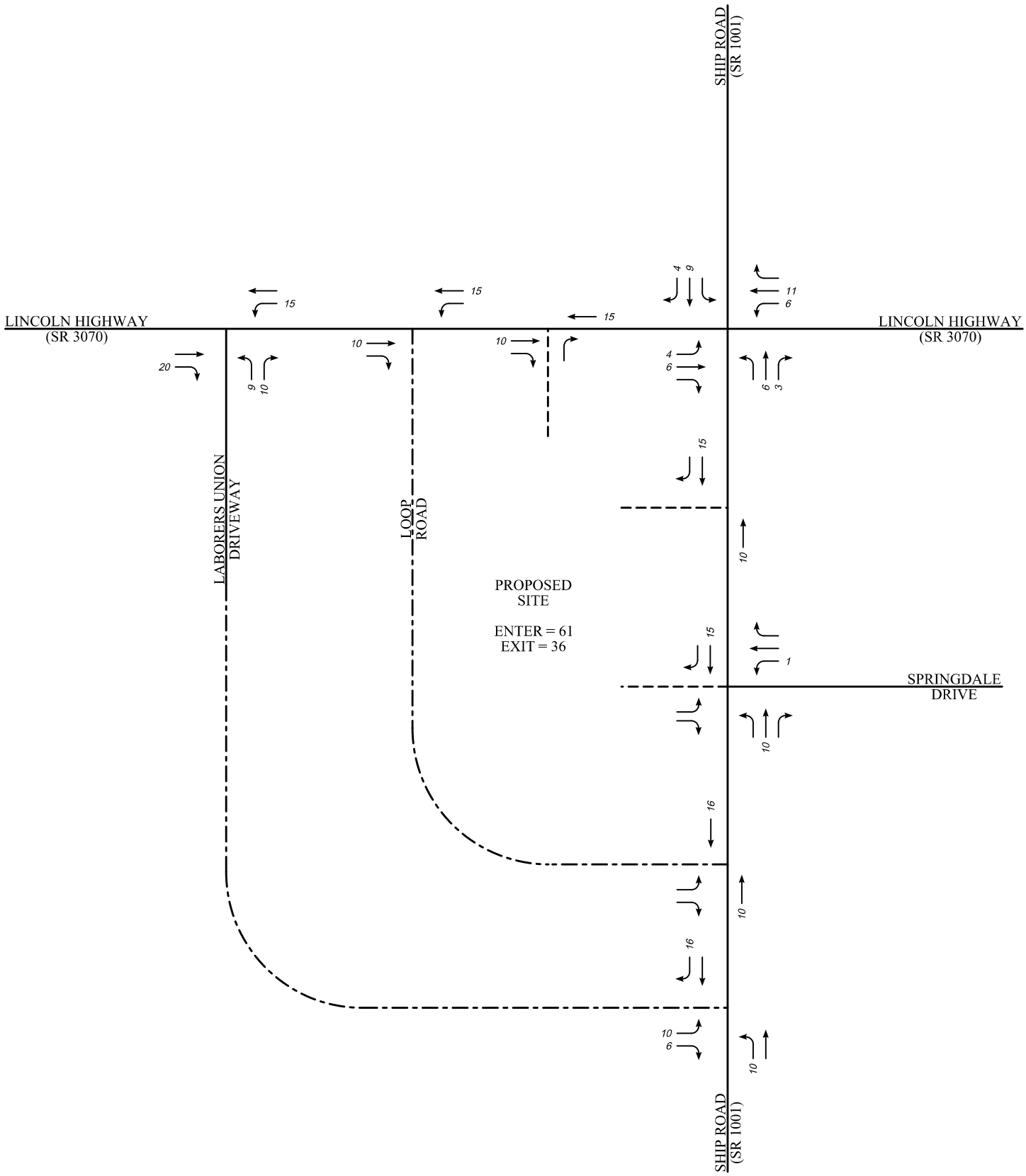
FIGURE 18

TRIP DISTIRBUTION
WEEKDAY AM PEAK HOUR
PHASE 2

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

— - — - — PROPOSED ROADWAY

– – – – – PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

N

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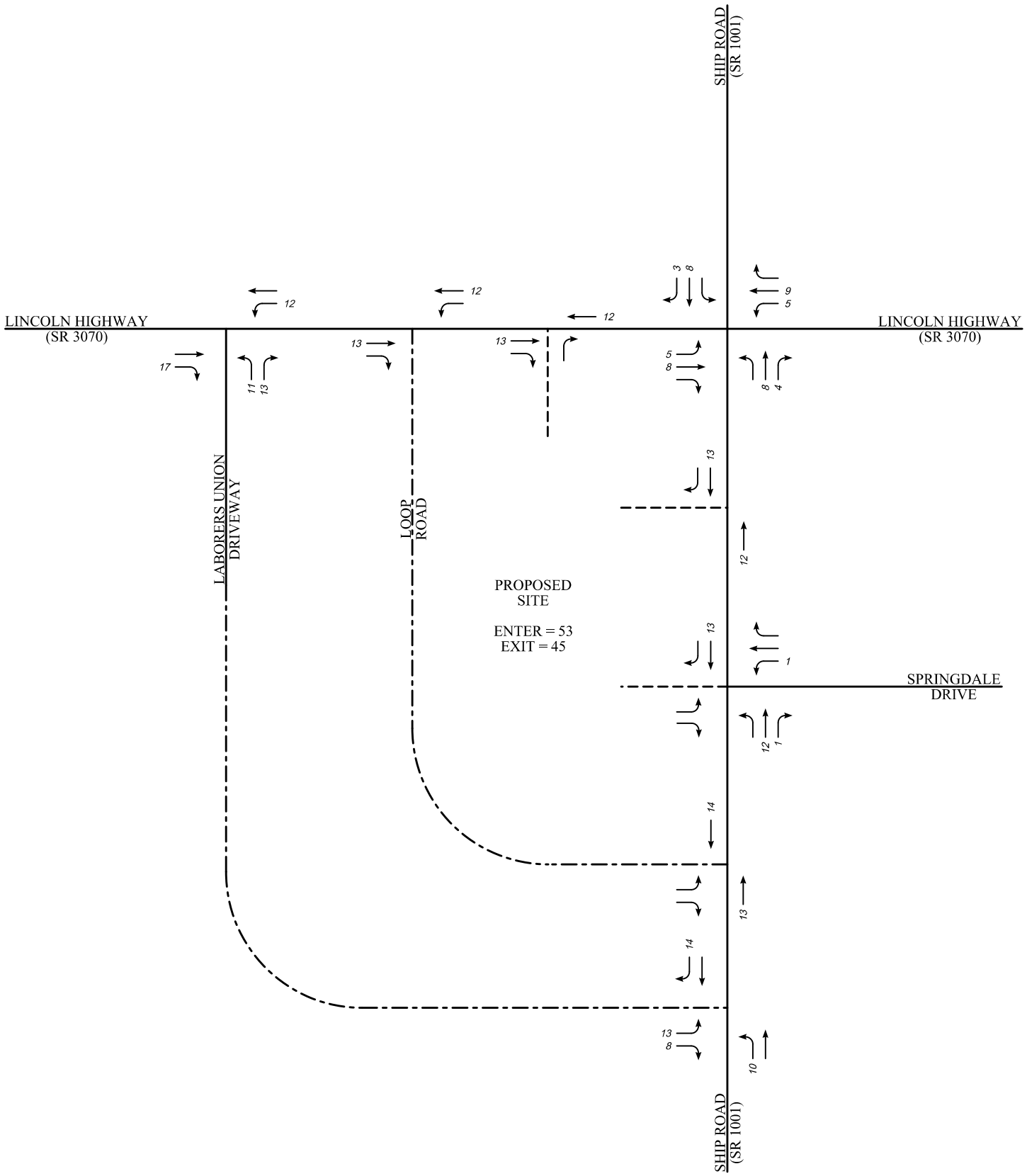
FIGURE 19

TRIP DISTIRBUTION
WEEKDAY PM PEAK HOUR
PHASE 2

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

— - — - — PROPOSED ROADWAY

– – – – – PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

N

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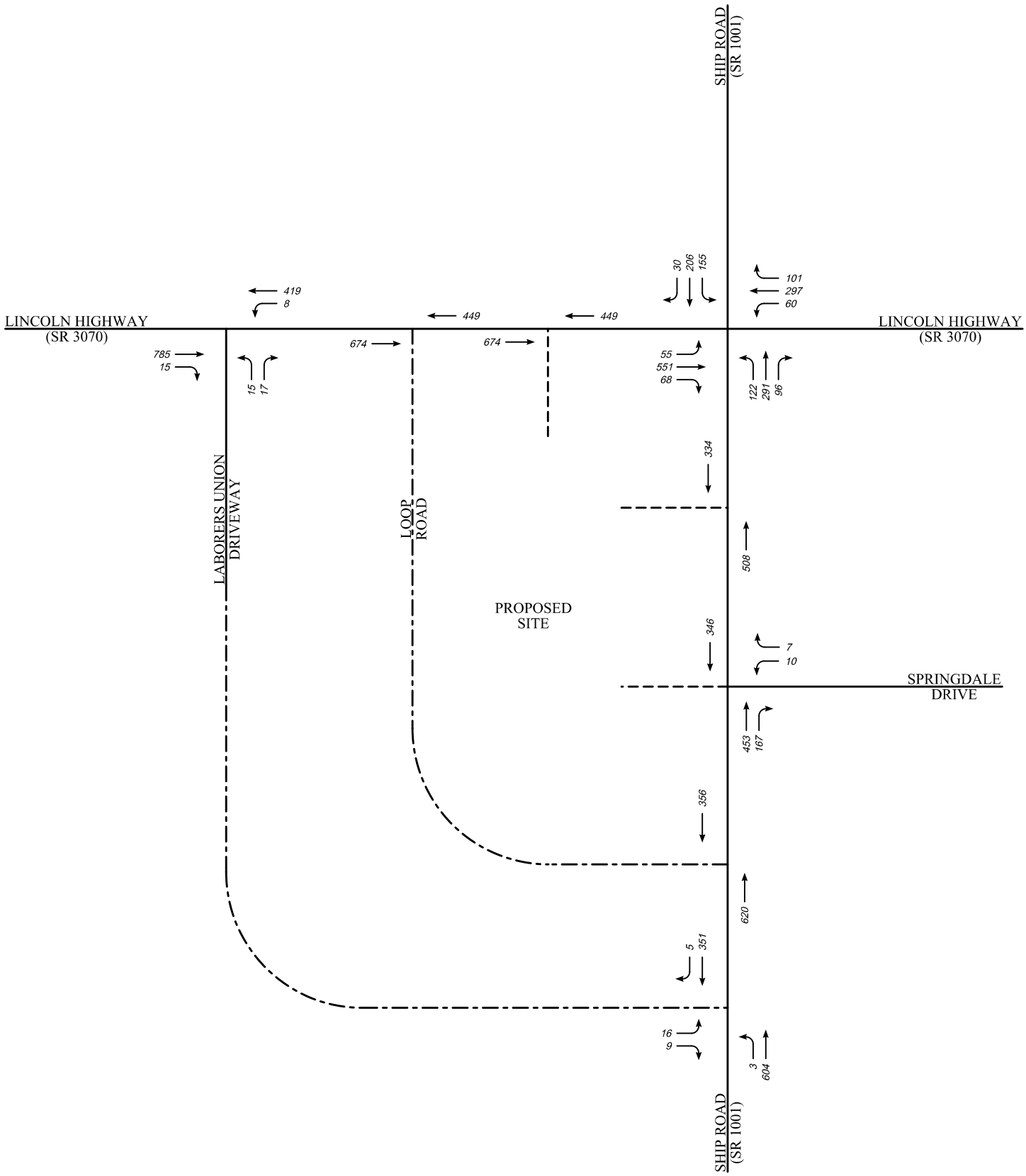
FIGURE 20

TRIP DISTIRBUTION
SATURDAY MIDDAY PEAK HOUR
PHASE 2

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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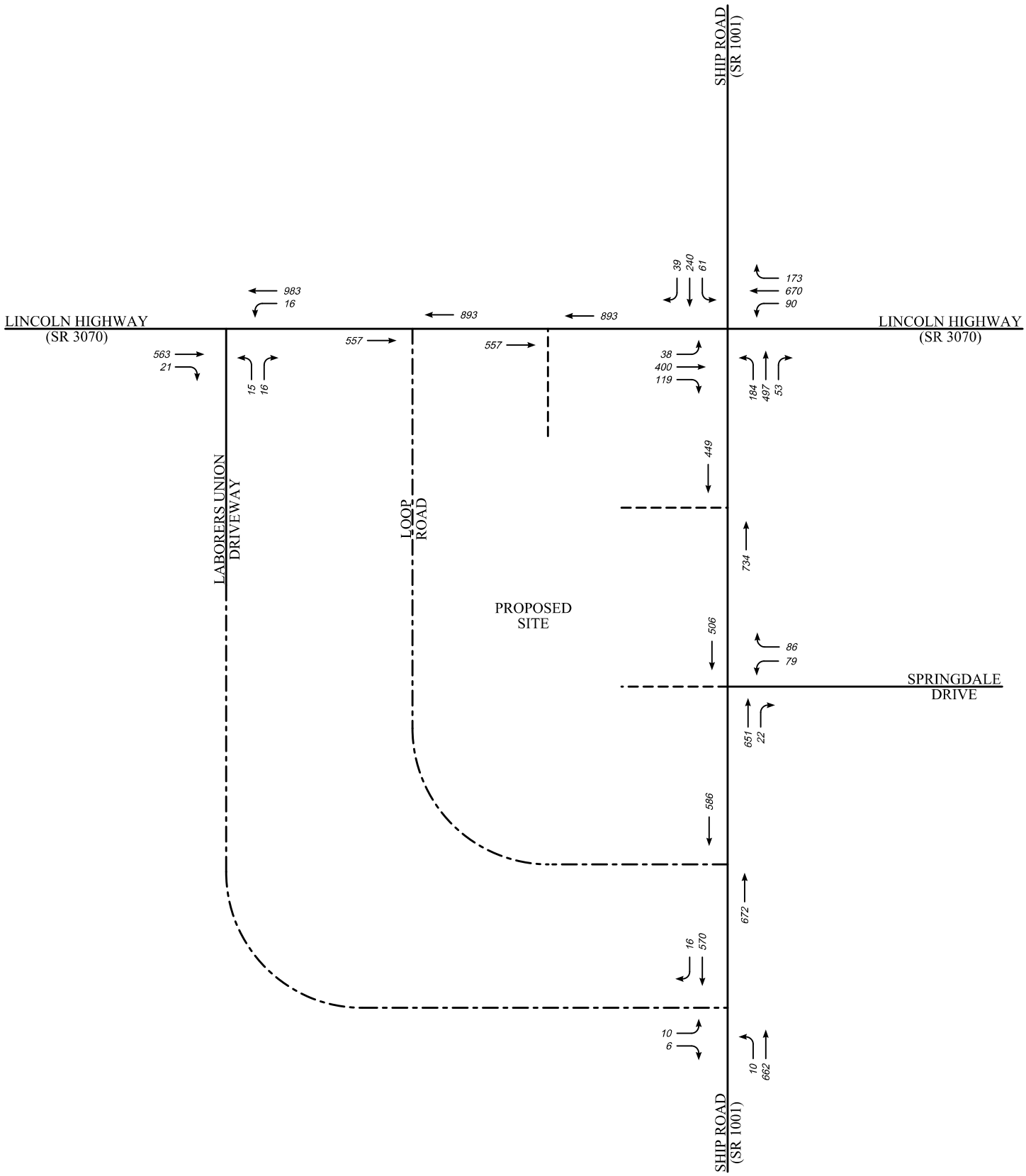
FIGURE 21

2023 PROJECTED CONDITIONS
WEEKDAY AM PEAK HOUR
PHASE 2A (SCENARIO A) TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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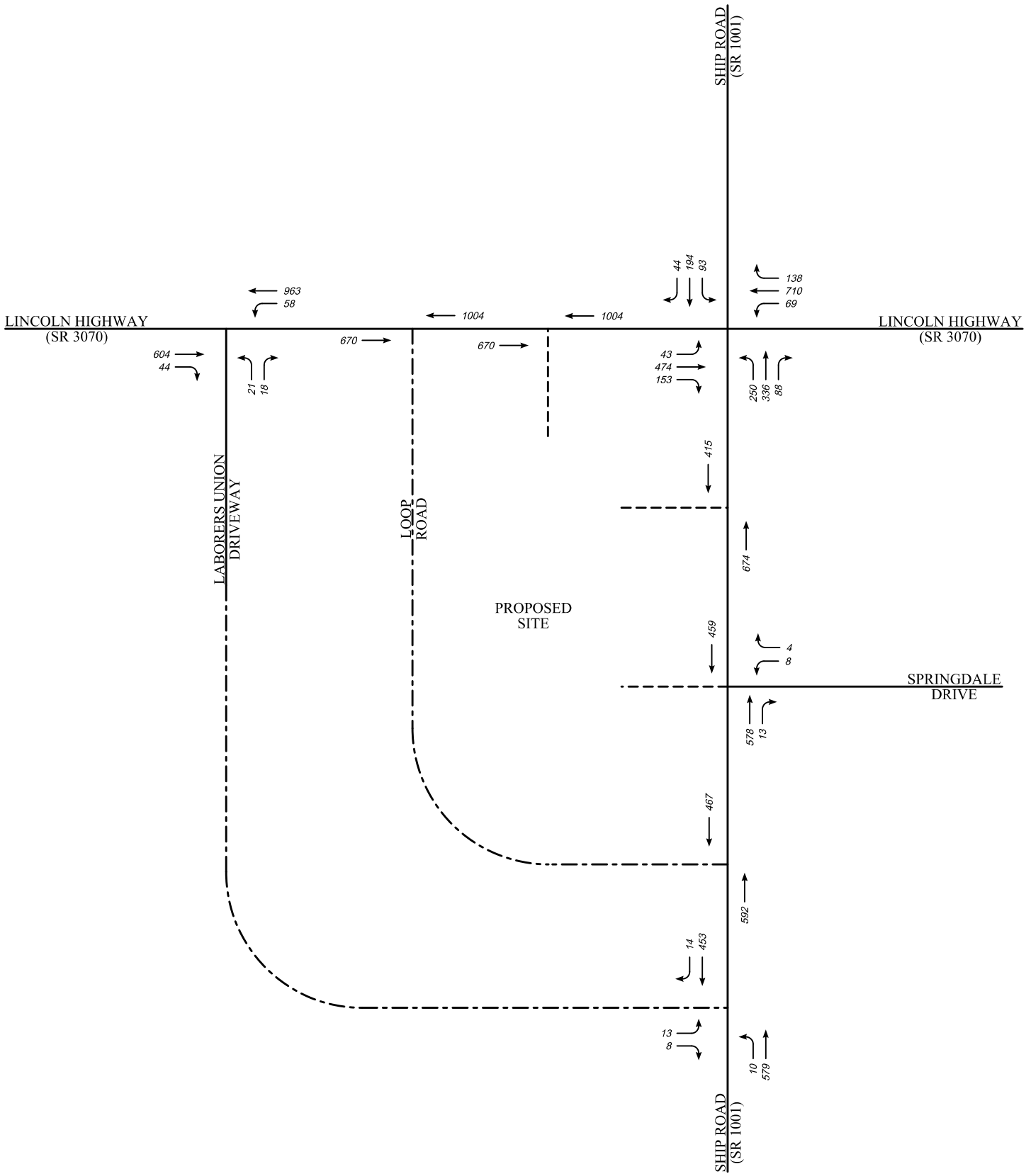
FIGURE 22

2023 PROJECTED CONDITIONS
WEEKDAY PM PEAK HOUR
PHASE 2A (SCENARIO A) TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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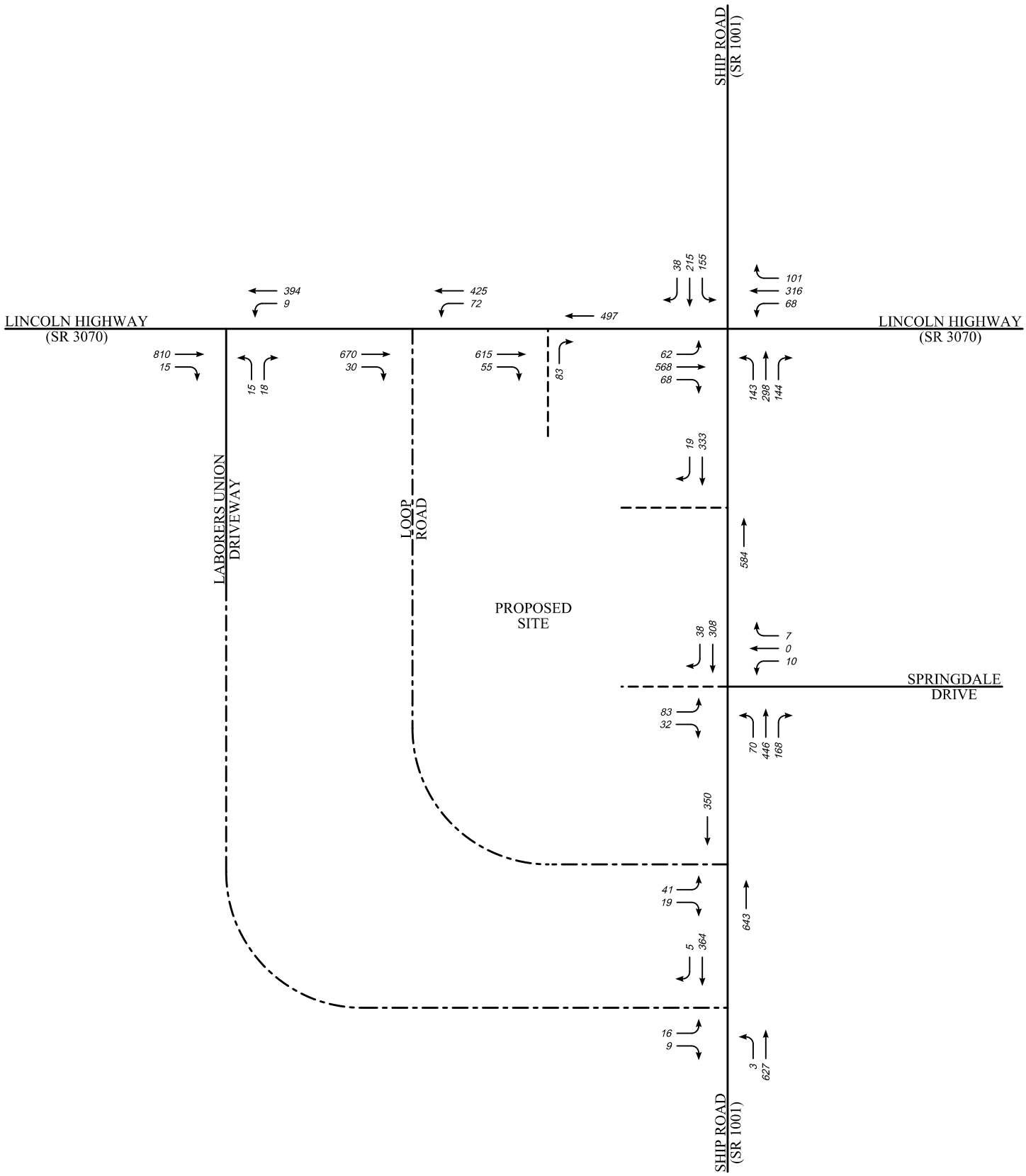
FIGURE 23

2023 PROJECTED CONDITIONS
SATURDAY MIDDAY PEAK HOUR
PHASE 2A (SCENARIO A)TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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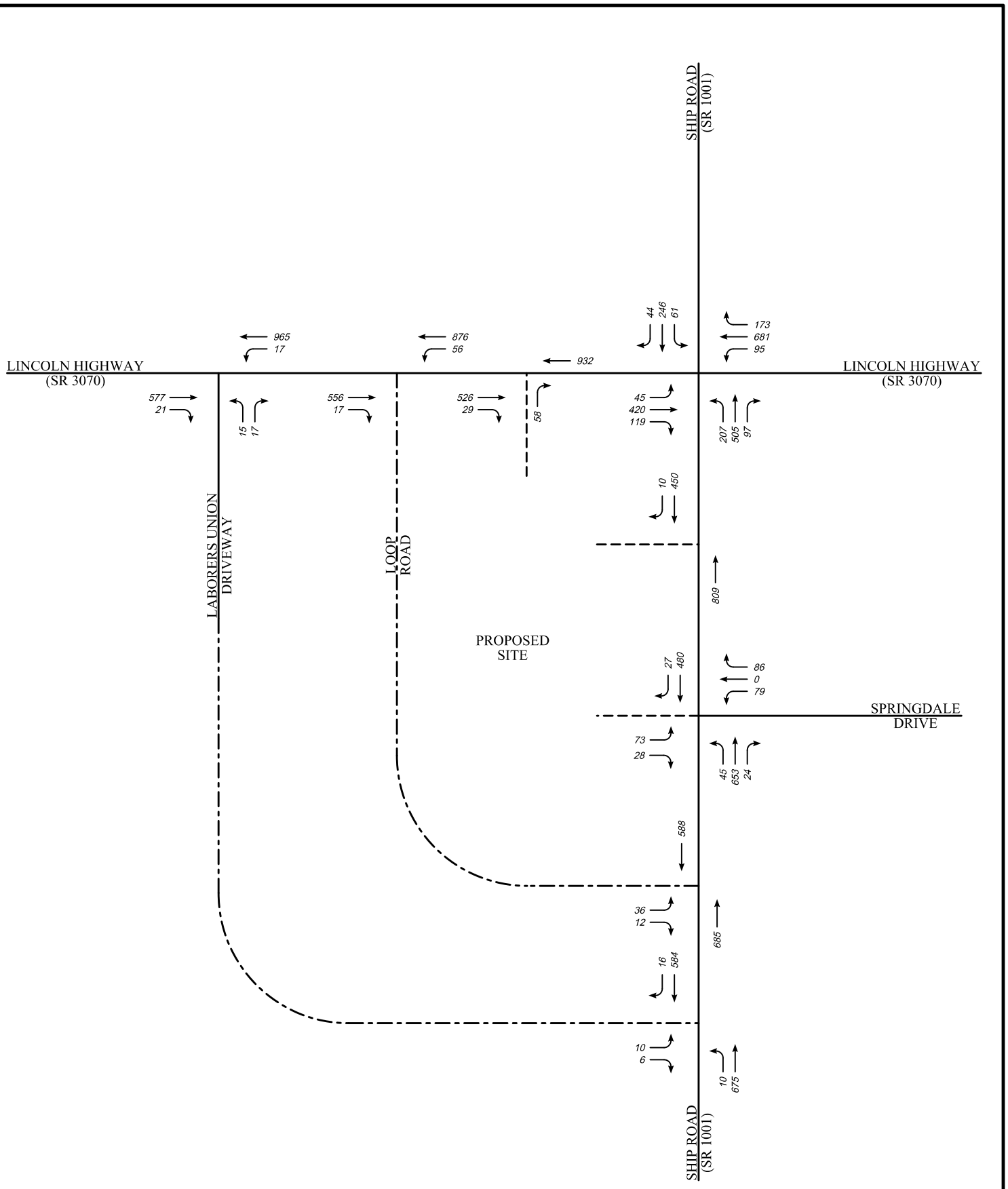
FIGURE 24

2023 PROJECTED CONDITIONS
WEEKDAY AM PEAK HOUR
PHASE 2B (SCENARIO B) TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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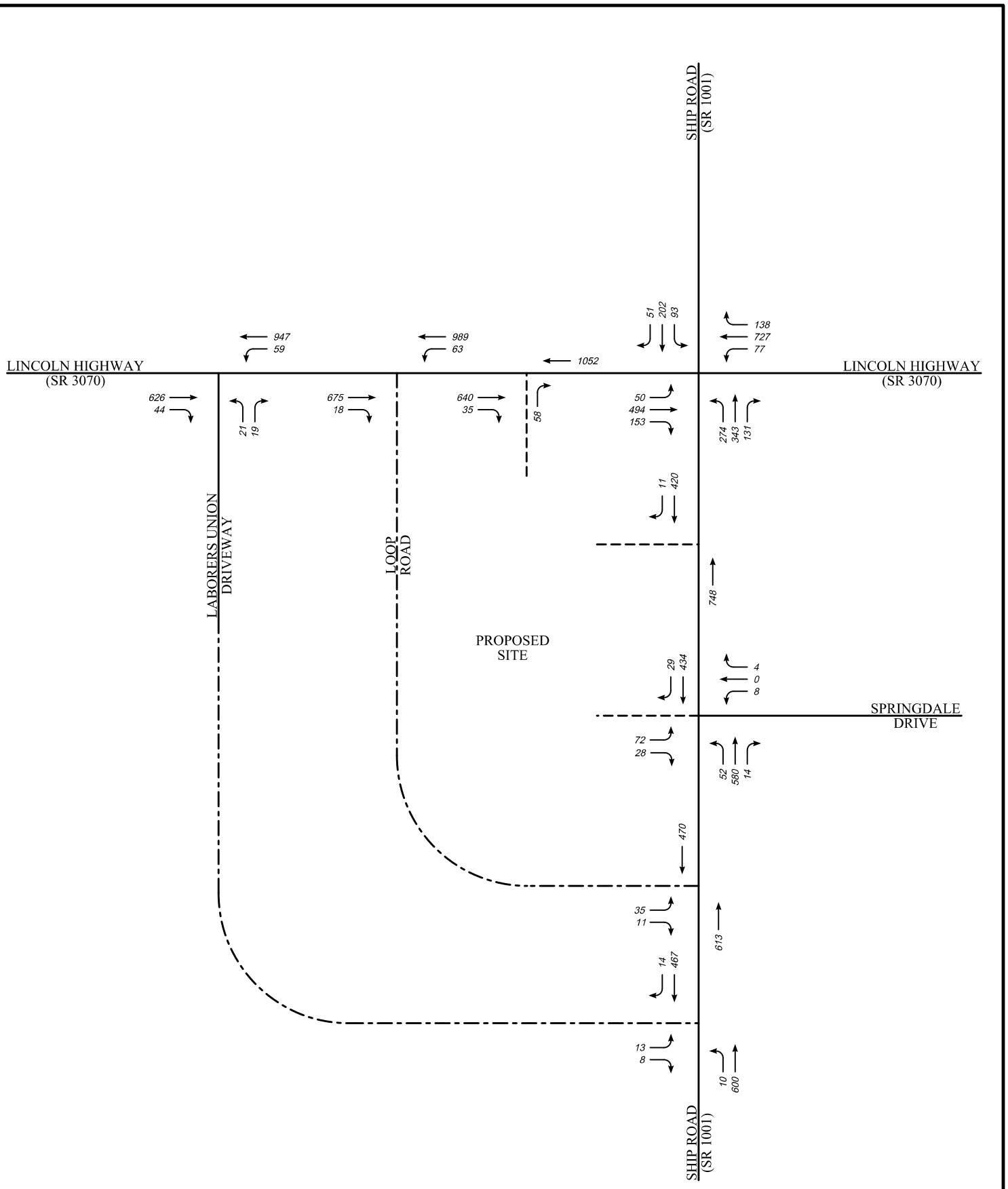
FIGURE 25

2023 PROJECTED CONDITIONS
WEEKDAY PM PEAK HOUR
PHASE 2B (SCENARIO B) TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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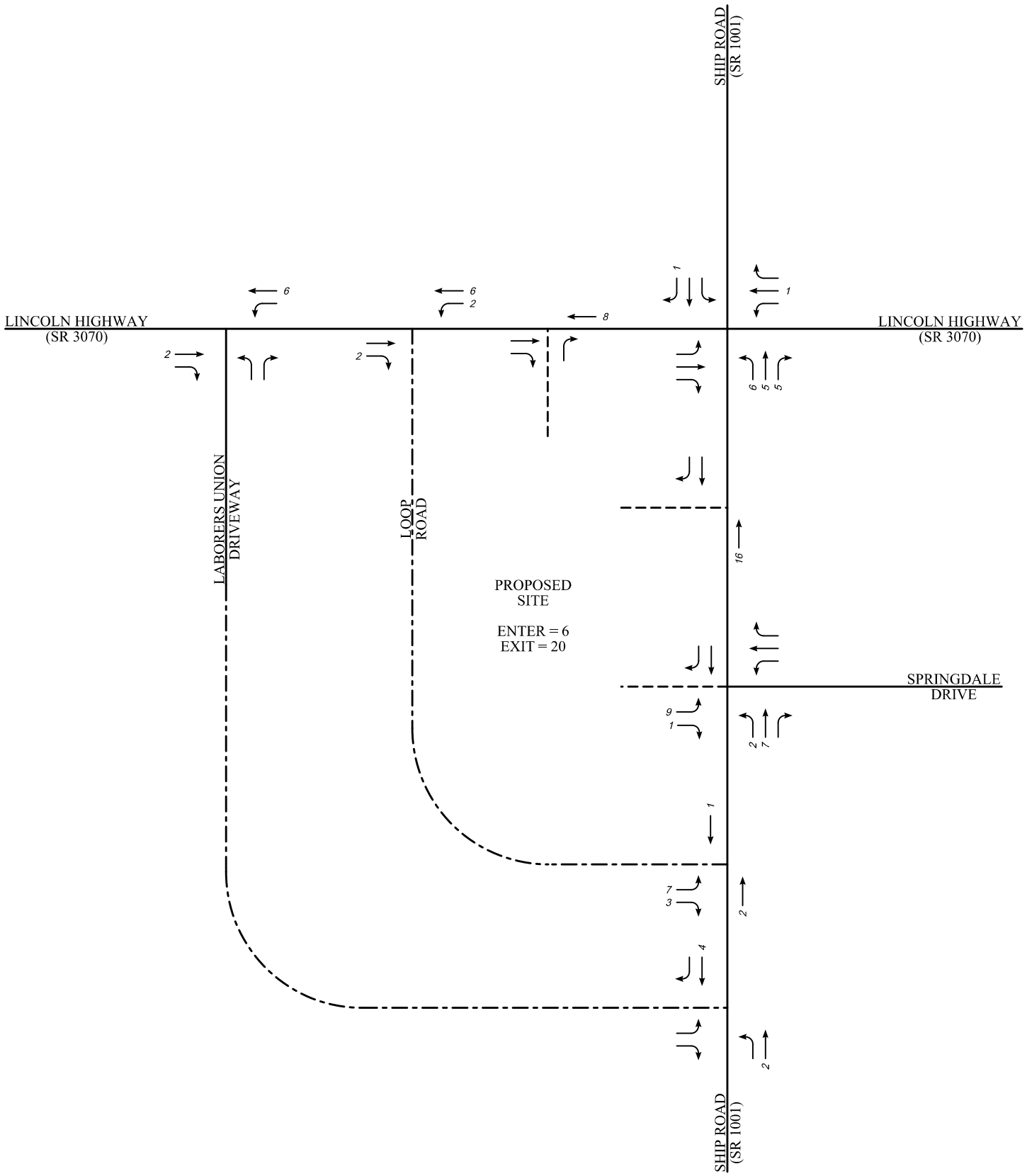
FIGURE 26

2023 PROJECTED CONDITIONS
SATURDAY MIDDAY PEAK HOUR
PHASE 2B (SCENARIO B) TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

— - — - — PROPOSED ROADWAY

– – – – – PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

N

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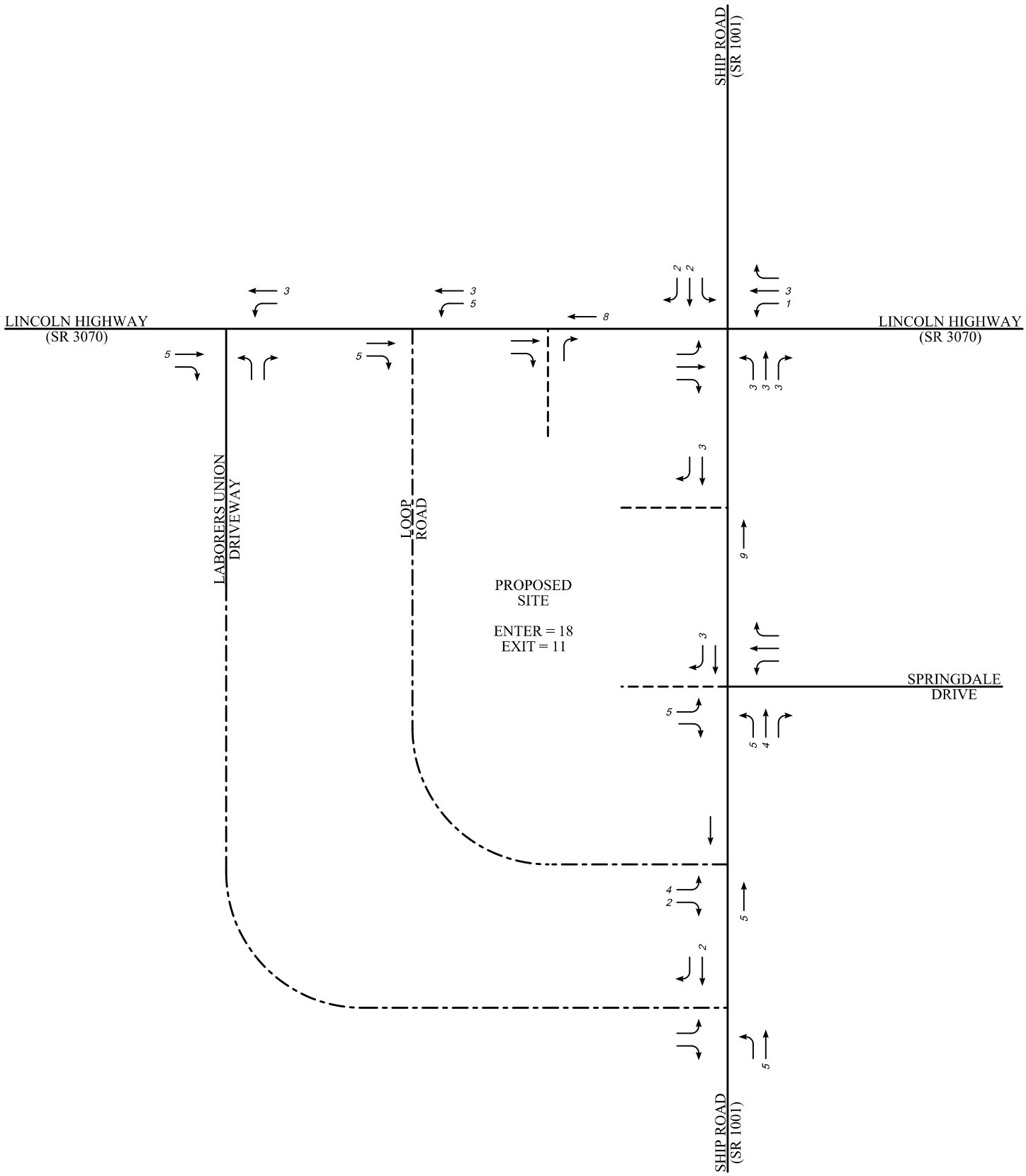
FIGURE 27

TRIP DISTIRBUTION
WEEKDAY AM PEAK HOUR
PHASE 3

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

N

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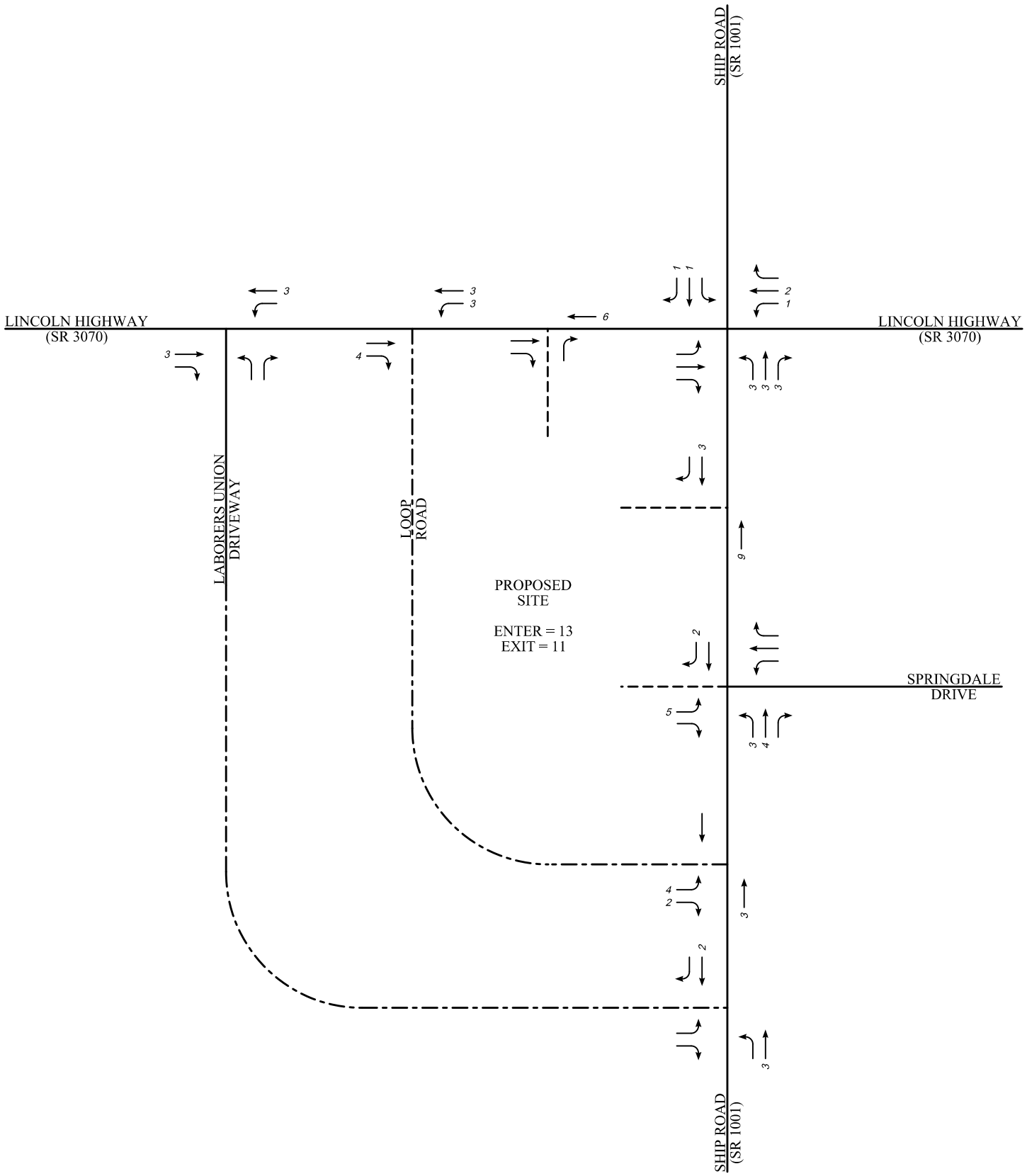
FIGURE 28

TRIP DISTIRBUTION
WEEKDAY PM PEAK HOUR
PHASE 3

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

— - — - — PROPOSED ROADWAY

– – – – – PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

N

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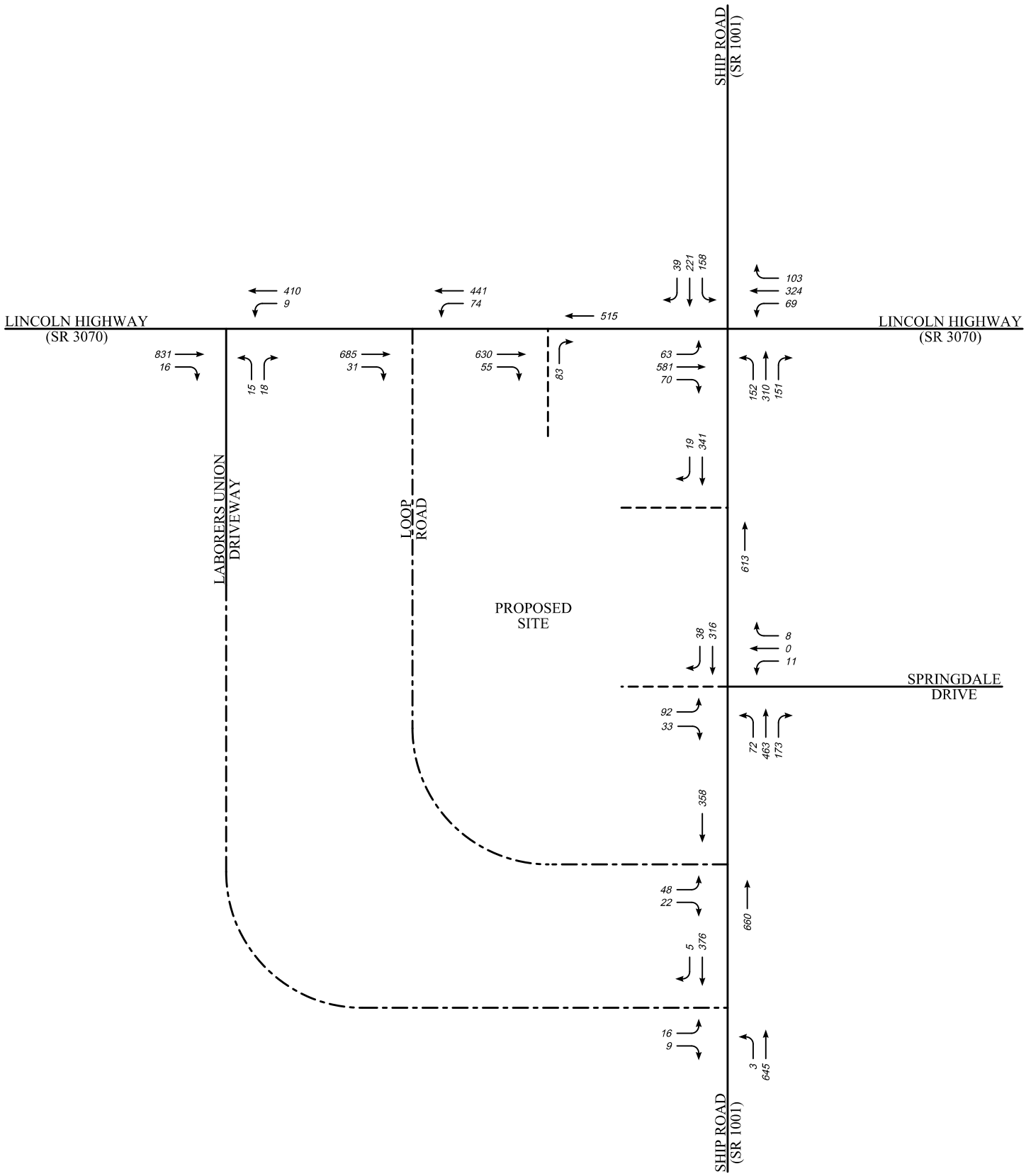
FIGURE 29

TRIP DISTIRBUTION
SATURDAY MIDDAY PEAK HOUR
PHASE 3

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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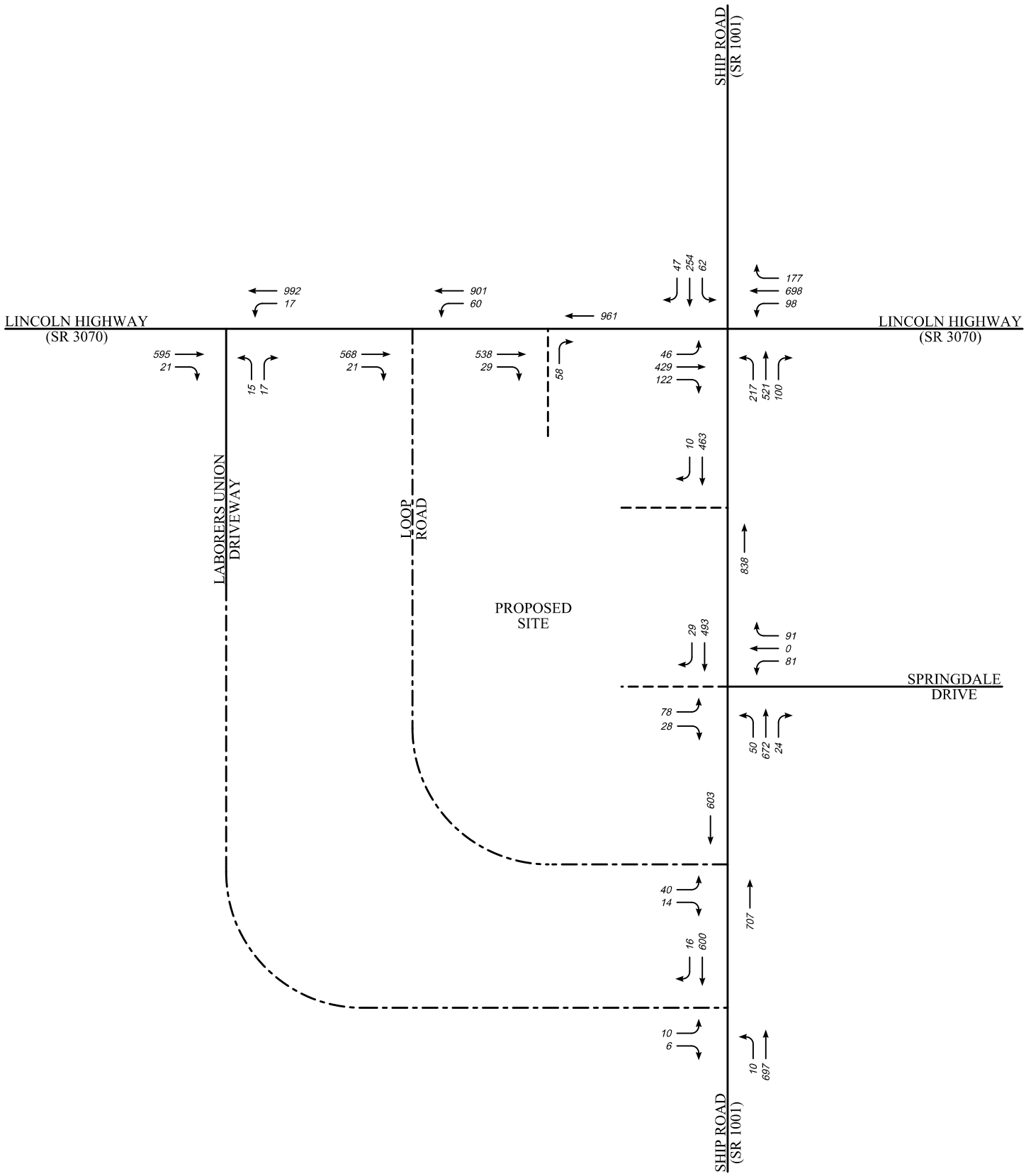
FIGURE 30

2028 PROJECTED CONDITIONS
WEEKDAY AM PEAK HOUR
PHASE 3 TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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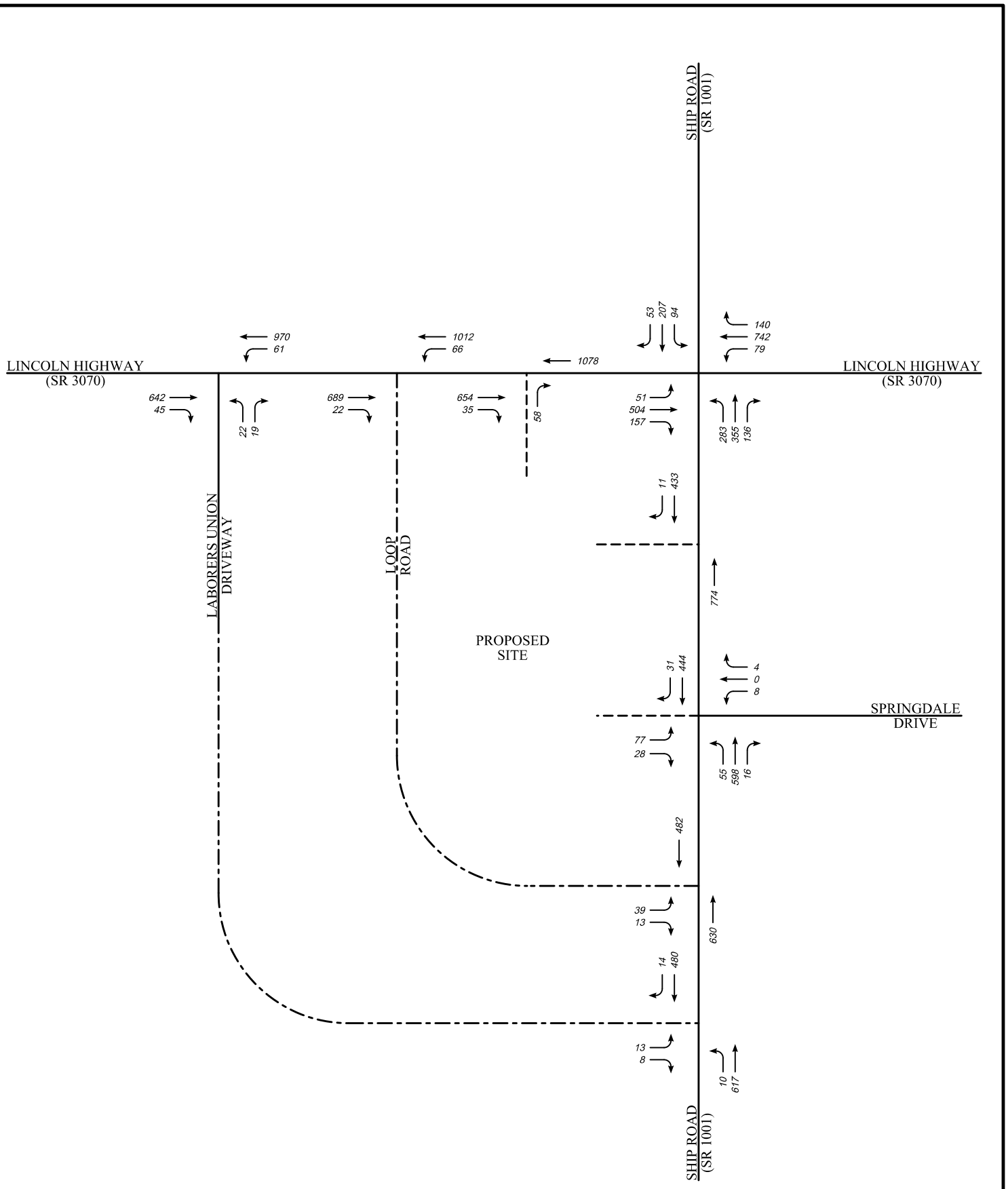
FIGURE 31

2028 PROJECTED CONDITIONS
WEEKDAY PM PEAK HOUR
PHASE 3 TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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Providing transportation engineering and related services across the eastern United States

FIGURE 32

2028 PROJECTED CONDITIONS
SATURDAY MIDDAY PEAK HOUR
PHASE 3 TRAFFIC VOLUMES

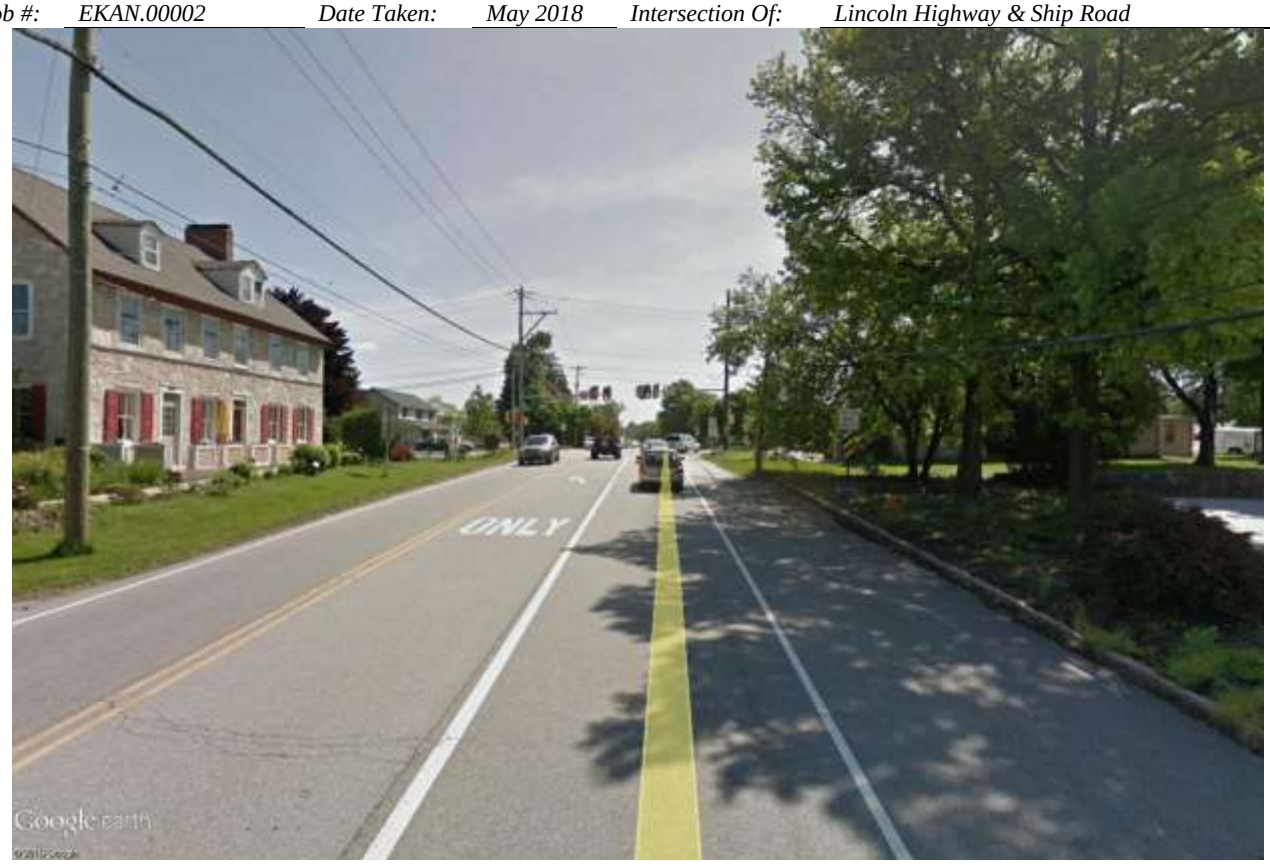
$FILE$
$DATE$
$TIME$
$USER$
$MODEL$

APPENDIX A:
Project Correspondence

Reserved for Future Use.

APPENDIX B:
Study Area Photographs

Job #: *EKAN.00002* *Date Taken:* *May 2018* *Intersection Of:* *Lincoln Highway & Ship Road*



Direction / Road: EB Lincoln Highway
Approach / Departure: Approach
Distance:

Direction / Road: WB Lincoln Highway
Approach / Departure: Approach
Distance:

Job #: *EKAN.00002* *Date Taken:* *May 2018* *Intersection Of:* *Lincoln Highway & Laborers Ship Road*

Direction / Road: NB Ship Road
Approach / Departure: Approach
Distance:

Direction / Road: SB Ship Road
Approach / Departure: Approach
Distance:

Job #: *EKAN.00002* *Date Taken:* *May 2018* *Intersection Of:* *Ship Road & Springdale Avenue*

Direction / Road: NB Ship Road
Approach / Departure: Approach
Distance:

Direction / Road: SB Ship Road
Approach / Departure: Approach
Distance:

Job #: *EKAN.00002* *Date Taken:* *May 2018* *Intersection Of:* *Ship Road & Springdale Avenue*

Direction / Road: WB Springdale Avenue

Approach / Departure: Approach

Distance:

Job #: *EKAN.00002* *Date Taken:* *May 2018* *Intersection Of:* *Lincoln Highway & Laborers Union Driveway*

Direction / Road: EB Lincoln Highway
Approach / Departure: Approach
Distance:

Direction / Road: WB Lincoln Highway
Approach / Departure: Approach
Distance:

Job #: *EKAN.00002* *Date Taken:* *May 2018* *Intersection Of:* *Lincoln Highway & Laborers Union Driveway*

Direction / Road: NB Laborers Union Driveway
Approach / Departure: Approach
Distance:

Direction / Road: SB Laborers Union Driveway
Approach / Departure: Departure
Distance:

APPENDIX C:
Manual Traffic Count Printouts

McMahon Associates, Inc.

425 Commerce Drive, Suite 200
Fort Washington, P A 19034

Municipality: West Whiteland Township
Location: Bus. Route 30 (Lincoln Hwy) &
Ship Road
Counter/Board #: BW

File Name : ship02w
Site Code : 81657102
Start Date : 1/26/2017
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

	Ship Rd Southbound				Bus. Rt 30 (Lincoln Hwy) Westbound				Ship Rd Northbound				Bus. Rt 30 (Lincoln Hwy) Eastbound				
Start Time	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Int. Total
07:00	21	26	0	4	5	45	0	9	19	38	0	21	3	87	0	14	292
07:15	35	43	0	5	4	39	0	14	26	52	0	9	8	98	0	14	347
07:30	26	63	0	3	2	46	0	14	27	53	0	26	5	97	0	17	379
07:45	28	58	0	5	7	61	0	21	33	75	0	28	10	113	0	16	455
Total	110	190	0	17	18	191	0	58	105	218	0	84	26	395	0	61	1473
08:00	28	40	0	8	11	62	0	37	25	70	0	20	13	116	0	21	451
08:15	45	42	0	7	5	55	0	7	31	76	0	18	11	128	0	20	445
08:30	42	57	0	8	4	56	0	8	32	51	0	14	14	115	0	9	410
08:45	40	46	0	7	4	57	0	11	39	74	0	24	3	123	0	9	437
Total	155	185	0	30	24	230	0	63	127	271	0	76	41	482	0	59	1743
16:00	14	54	0	14	8	100	0	28	63	125	0	9	6	88	0	30	539
16:15	9	48	0	9	16	122	0	24	57	96	0	7	11	73	0	42	514
16:30	8	40	0	11	10	140	0	27	58	123	0	7	10	72	0	27	533
16:45	8	57	0	3	22	107	0	39	59	127	0	5	7	74	0	31	539
Total	39	199	0	37	56	469	0	118	237	471	0	28	34	307	0	130	2125
17:00	7	64	0	10	17	125	0	34	63	131	0	6	6	94	0	32	589
17:15	13	61	0	10	17	133	0	35	60	115	0	2	10	77	0	23	556
17:30	11	50	0	6	17	112	0	24	73	92	0	8	7	85	0	34	519
17:45	11	51	0	17	11	90	0	23	58	100	0	13	9	67	0	35	485
Total	42	226	0	43	62	460	0	116	254	438	0	29	32	323	0	124	2149
Grand Total	346	800	0	127	160	1350	0	355	723	1398	0	217	133	1507	0	374	7490
Apprch %	27.2	62.8	0	10	8.6	72.4	0	19	30.9	59.8	0	9.3	6.6	74.8	0	18.6	
Total %	4.6	10.7	0	1.7	2.1	18	0	4.7	9.7	18.7	0	2.9	1.8	20.1	0	5	
Passenger Vehicles	337	779	0	125	155	1291	0	345	703	1379	0	209	127	1469	0	362	7281
% Passenger Vehicles	97.4	97.4	0	98.4	96.9	95.6	0	97.2	97.2	98.6	0	96.3	95.5	97.5	0	96.8	97.2
Heavy Vehicles	9	21	0	2	5	59	0	10	20	19	0	8	6	38	0	12	209
% Heavy Vehicles	2.6	2.6	0	1.6	3.1	4.4	0	2.8	2.8	1.4	0	3.7	4.5	2.5	0	3.2	2.8

Zero Pedestrians were observed during this study.

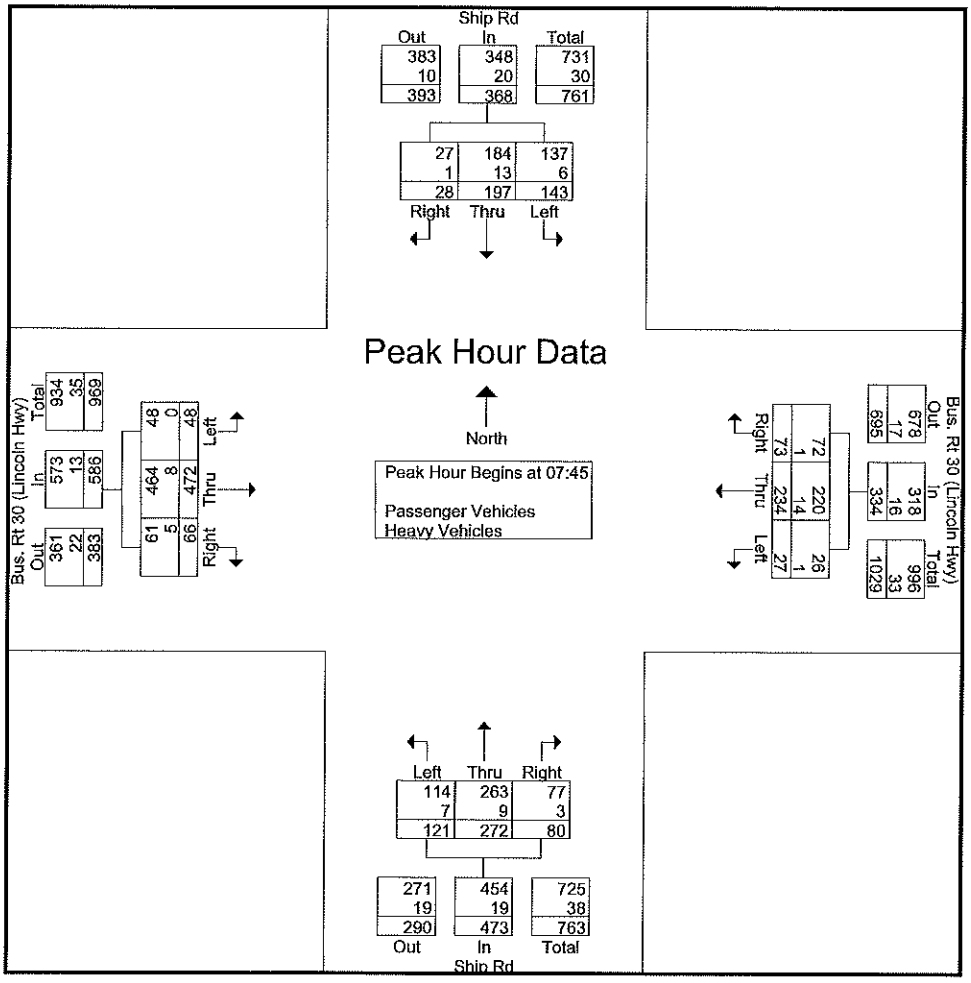
McMahon Associates, Inc.

425 Commerce Drive, Suite 200
Fort Washington, P A 19034

Municipality: West Whiteland Township
Location: Bus. Route 30 (Lincoln Hwy) &
Ship Road
Counter/Board #: BW

File Name : ship02w
Site Code : 81657102
Start Date : 1/26/2017
Page No : 2

	Ship Rd Southbound					Bus. Rt 30 (Lincoln Hwy) Westbound					Ship Rd Northbound					Bus. Rt 30 (Lincoln Hwy) Eastbound					
Start Time	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	28	58	0	5	91	7	61	0	21	89	33	75	0	28	136	10	113	0	16	139	455
08:00	28	40	0	8	76	11	62	0	37	110	25	70	0	20	115	13	116	0	21	150	451
08:15	45	42	0	7	94	5	55	0	7	67	31	76	0	18	125	11	128	0	20	159	445
08:30	42	57	0	8	107	4	56	0	8	68	32	51	0	14	97	14	115	0	9	138	410
Total Volume	143	197	0	28	368	27	234	0	73	334	121	272	0	80	473	48	472	0	66	586	1761
% App. Total	38.9	53.5	0	7.6		8.1	70.1	0	21.9		25.6	57.5	0	16.9		8.2	80.5	0	11.3		
PHF	.794	.849	.000	.875	.860	.614	.944	.000	.493	.759	.917	.895	.000	.714	.869	.857	.922	.000	.786	.921	.968
Passenger Vehicles																					
% Passenger Vehicles	95.8	93.4	0	96.4	94.6	96.3	94.0	0	98.6	95.2	94.2	96.7	0	96.3	96.0	100	98.3	0	92.4	97.8	96.1
Heavy Vehicles																					
% Heavy Vehicles	4.2	6.6	0	3.6	5.4	3.7	6.0	0	1.4	4.8	5.8	3.3	0	3.8	4.0	0	1.7	0	7.6	2.2	3.9



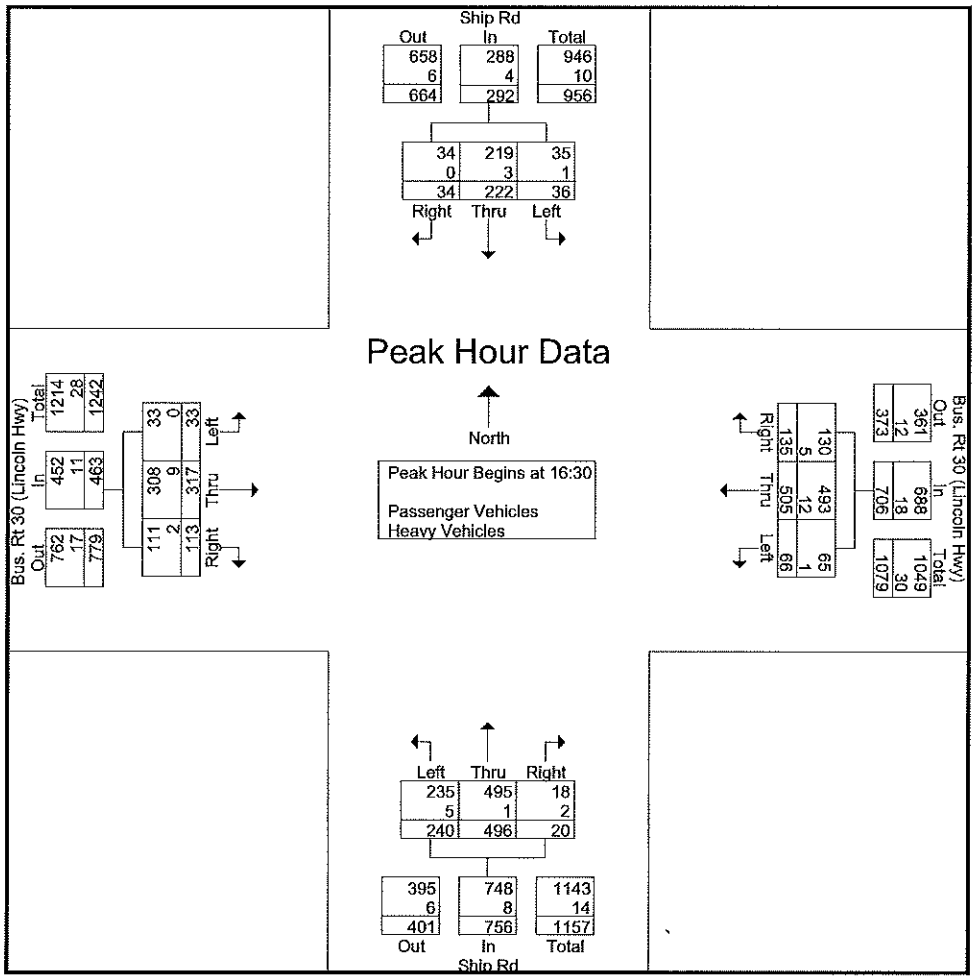
McMahon Associates, Inc.

425 Commerce Drive, Suite 200
Fort Washington, P A 19034

Municipality: West Whiteland Township
Location: Bus. Route 30 (Lincoln Hwy) &
Ship Road
Counter/Board #: BW

File Name : ship02w
Site Code : 81657102
Start Date : 1/26/2017
Page No : 3

	Ship Rd Southbound					Bus. Rt 30 (Lincoln Hwy) Westbound					Ship Rd Northbound					Bus. Rt 30 (Lincoln Hwy) Eastbound					
Start Time	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	8	40	0	11	59	10	140	0	27	177	58	123	0	7	188	10	72	0	27	109	533
16:45	8	57	0	3	68	22	107	0	39	168	59	127	0	5	191	7	74	0	31	112	539
17:00	7	64	0	10	81	17	125	0	34	176	63	131	0	6	200	6	94	0	32	132	589
17:15	13	61	0	10	84	17	133	0	35	185	60	115	0	2	177	10	77	0	23	110	556
Total Volume	36	222	0	34	292	66	505	0	135	706	240	496	0	20	756	33	317	0	113	463	2217
% App. Total	12.3	76	0	11.6		9.3	71.5	0	19.1		31.7	65.6	0	2.6		7.1	68.5	0	24.4		
PHF	.692	.867	.000	.773	.869	.750	.902	.000	.865	.954	.952	.947	.000	.714	.945	.825	.843	.000	.883	.877	.941
Passenger Vehicles																					
% Passenger Vehicles	97.2	98.6	0	100	98.6	98.5	97.6	0	96.3	97.5	97.9	99.8	0	90.0	98.9	100	97.2	0	98.2	97.6	98.2
Heavy Vehicles																					
% Heavy Vehicles	2.8	1.4	0	0	1.4	1.5	2.4	0	3.7	2.5	2.1	0.2	0	10.0	1.1	0	2.8	0	1.8	2.4	1.8



Counted By:: Mio
Set Up By:: JH
Weather:: Clear

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhudak@trafficpd.com

Count Name: Ship Rd & Licoln Highway (Business Rt 30) Sat
Site Code:
Start Date: 04/22/2017

Turning Movement Data

Start Time	Lincoln Highway (Business Rt. 30) Eastbound						Lincoln Highway (Business Rt. 30) Westbound						Ship Rd Northbound						Ship Rd Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
11:00 AM	10	66	31	0	0	107	11	106	16	1	0	134	46	71	6	0	0	123	13	46	11	0	0	70	434
11:15 AM	9	72	32	0	0	113	5	107	17	1	0	130	57	61	10	1	0	129	8	36	5	0	0	49	421
11:30 AM	6	90	33	0	0	129	10	96	15	0	0	121	65	59	7	0	0	131	10	40	15	0	0	65	446
11:45 AM	7	82	41	0	0	130	9	125	12	0	0	146	62	61	8	1	0	132	9	50	8	0	0	67	475
Hourly Total	32	310	137	0	0	479	35	434	60	2	0	531	230	252	31	2	0	515	40	172	39	0	0	251	1776
12:00 PM	13	95	40	0	0	148	5	113	21	0	0	139	62	81	14	0	0	157	13	37	14	2	0	66	510
12:15 PM	7	83	44	0	0	134	9	125	12	0	0	146	65	87	11	0	0	163	14	56	10	0	0	80	523
12:30 PM	4	91	37	0	0	132	6	98	16	0	0	120	62	71	12	0	0	145	21	39	6	1	0	67	464
12:45 PM	13	84	24	0	0	121	12	116	20	0	0	148	56	80	8	0	0	144	11	45	7	0	0	63	476
Hourly Total	37	353	145	0	0	535	32	452	69	0	0	553	245	319	45	0	0	609	59	177	37	3	0	276	1973
Grand Total	69	663	282	0	0	1014	67	886	129	2	0	1084	475	571	76	2	0	1124	99	349	76	3	0	527	3749
Approach %	6.8	65.4	27.8	0.0	-	-	6.2	81.7	11.9	0.2	-	-	42.3	50.8	6.8	0.2	-	-	18.8	66.2	14.4	0.6	-	-	-
Total %	1.8	17.7	7.5	0.0	-	27.0	1.8	23.6	3.4	0.1	-	28.9	12.7	15.2	2.0	0.1	-	30.0	2.6	9.3	2.0	0.1	-	14.1	-
Lights	67	652	282	0	-	1001	66	870	128	2	-	1066	474	570	72	2	-	1118	97	348	74	3	-	522	3707
% Lights	97.1	98.3	100.0	-	-	98.7	98.5	98.2	99.2	100.0	-	98.3	99.8	99.8	94.7	100.0	-	99.5	98.0	99.7	97.4	100.0	-	99.1	98.9
Other Vehicles	2	11	0	0	-	13	1	14	1	0	-	16	1	1	4	0	-	6	2	0	2	0	-	4	39
% Other Vehicles	2.9	1.7	0.0	-	-	1.3	1.5	1.6	0.8	0.0	-	1.5	0.2	0.2	5.3	0.0	-	0.5	2.0	0.0	2.6	0.0	-	0.8	1.0
Bicycles on Road	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	0	1	0	0	-	1	3
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	0.0	-	0.2	0.0	0.0	0.0	0.0	-	0.0	0.0	0.3	0.0	0.0	-	0.2	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Ship Rd & Licoln Highway (Business Rt 30) Sat
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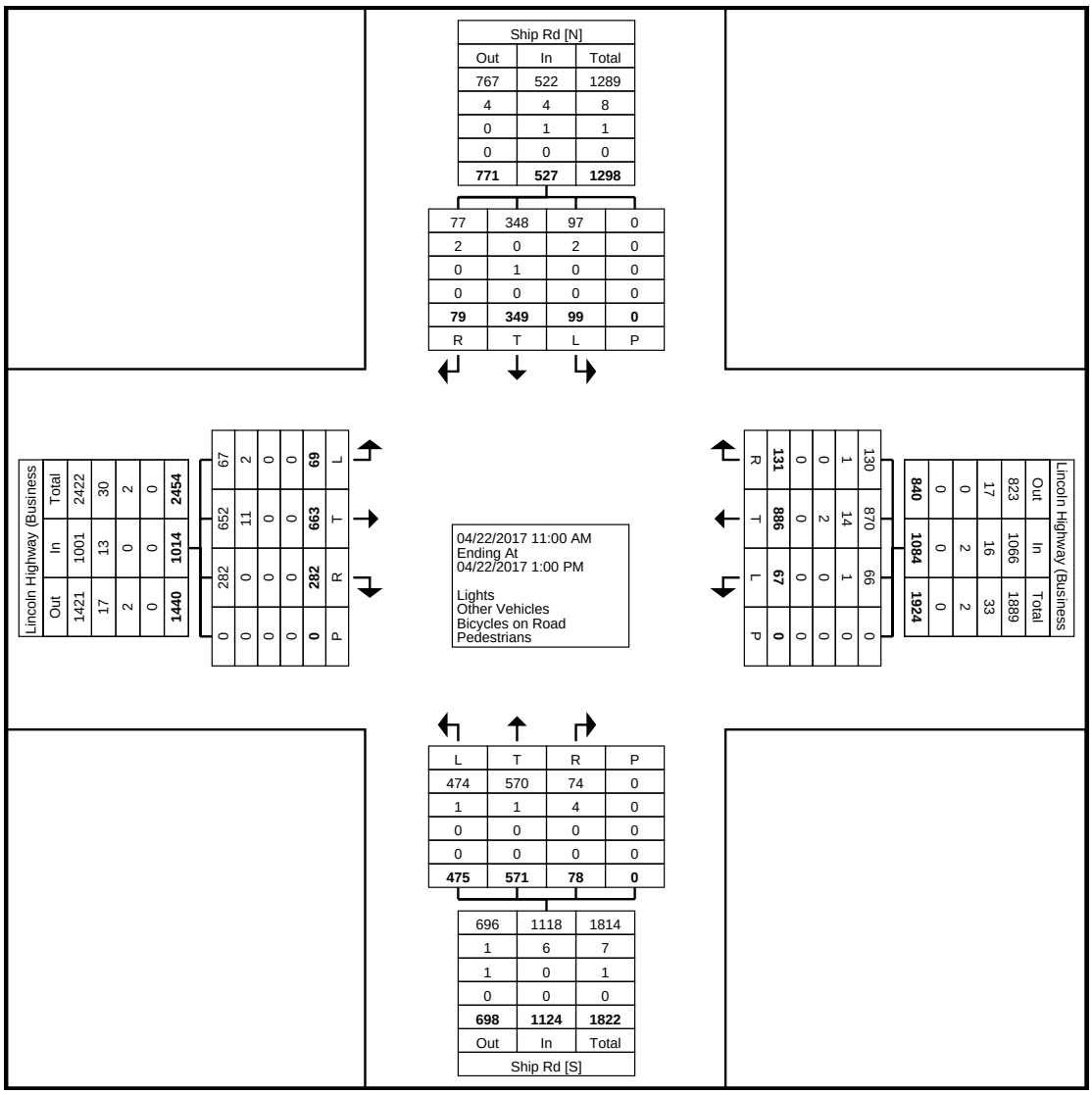
Start Date: 04/22/2017



Turning Movement Data Plot

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Count Name: Ship Rd & Licoln Highway (Business Rt 30) Sat
Site Code:
Start Date: 04/22/2017

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Lincoln Highway (Business Rt. 30) Eastbound						Lincoln Highway (Business Rt. 30) Westbound						Ship Rd Northbound						Ship Rd Southbound						Int. Total
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	
12:00 PM	13	95	40	0	0	148	5	113	21	0	0	139	62	81	14	0	0	157	13	37	14	2	0	66	510
12:15 PM	7	83	44	0	0	134	9	125	12	0	0	146	65	87	11	0	0	163	14	56	10	0	0	80	523
12:30 PM	4	91	37	0	0	132	6	98	16	0	0	120	62	71	12	0	0	145	21	39	6	1	0	67	464
12:45 PM	13	84	24	0	0	121	12	116	20	0	0	148	56	80	8	0	0	144	11	45	7	0	0	63	476
Total	37	353	145	0	0	535	32	452	69	0	0	553	245	319	45	0	0	609	59	177	37	3	0	276	1973
Approach %	6.9	66.0	27.1	0.0	-	-	5.8	81.7	12.5	0.0	-	-	40.2	52.4	7.4	0.0	-	-	21.4	64.1	13.4	1.1	-	-	-
Total %	1.9	17.9	7.3	0.0	-	27.1	1.6	22.9	3.5	0.0	-	28.0	12.4	16.2	2.3	0.0	-	30.9	3.0	9.0	1.9	0.2	-	14.0	-
PHF	0.712	0.929	0.824	0.000	-	0.904	0.667	0.904	0.821	0.000	-	0.934	0.942	0.917	0.804	0.000	-	0.934	0.702	0.790	0.661	0.375	-	0.863	0.943
Lights	36	349	145	0	-	530	32	446	68	0	-	546	245	319	42	0	-	606	58	177	36	3	-	274	1956
% Lights	97.3	98.9	100.0	-	-	99.1	100.0	98.7	98.6	-	-	98.7	100.0	100.0	93.3	-	-	99.5	98.3	100.0	97.3	100.0	-	99.3	99.1
Other Vehicles	1	4	0	0	-	5	0	6	1	0	-	7	0	0	3	0	-	3	1	0	1	0	-	2	17
% Other Vehicles	2.7	1.1	0.0	-	-	0.9	0.0	1.3	1.4	-	-	1.3	0.0	0.0	6.7	-	-	0.5	1.7	0.0	2.7	0.0	-	0.7	0.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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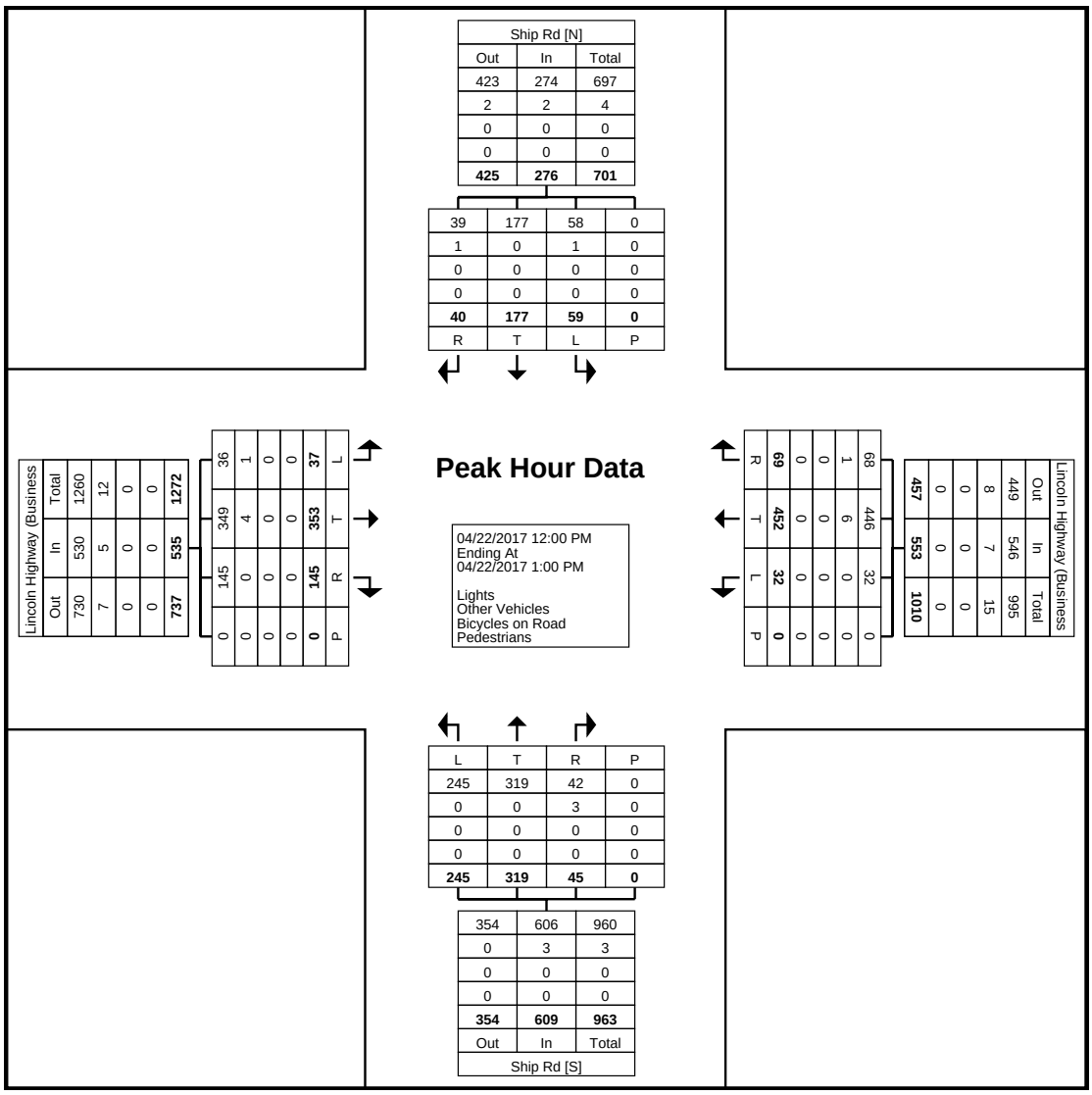


Turning Movement Peak Hour Data Plot (12:00 PM)

McMahon Associates, Inc.

425 Commerce Drive, Suite 200
Fort Washington, P A 19034

Municipality: West Whiteland Township
Location: Ship Road &
Springdale Drive
Counter/Board #: LB

File Name : ship04w
Site Code : 81657102
Start Date : 2/22/2017
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

	Ship Rd Southbound		Springdale Dr Westbound		Ship Rd Northbound		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00	0	50	2	0	65	16	133
07:15	0	52	0	2	81	24	159
07:30	0	59	1	0	66	12	138
07:45	0	86	2	2	92	35	217
Total	0	247	5	4	304	87	647
08:00	2	63	1	2	119	33	220
08:15	0	80	1	6	129	47	263
08:30	1	72	6	4	73	46	202
08:45	1	87	6	11	77	20	202
Total	4	302	14	23	398	146	887
16:00	0	89	13	35	114	5	256
16:15	1	88	4	28	127	5	253
16:30	1	109	18	27	144	6	305
16:45	0	125	11	37	144	7	324
Total	2	411	46	127	529	23	1138
17:00	0	96	32	73	144	4	349
17:15	0	127	15	30	153	4	329
17:30	0	109	18	26	152	6	311
17:45	0	101	17	18	130	8	274
Total	0	433	82	147	579	22	1263
Grand Total	6	1393	147	301	1810	278	3935
Apprch %	0.4	99.6	32.8	67.2	86.7	13.3	
Total %	0.2	35.4	3.7	7.6	46	7.1	
Passenger Vehicles	6	1366	144	291	1779	272	3858
% Passenger Vehicles	100	98.1	98	96.7	98.3	97.8	98
Heavy Vehicles	0	27	3	10	31	6	77
% Heavy Vehicles	0	1.9	2	3.3	1.7	2.2	2

Zero Pedestrians were observed during this study.

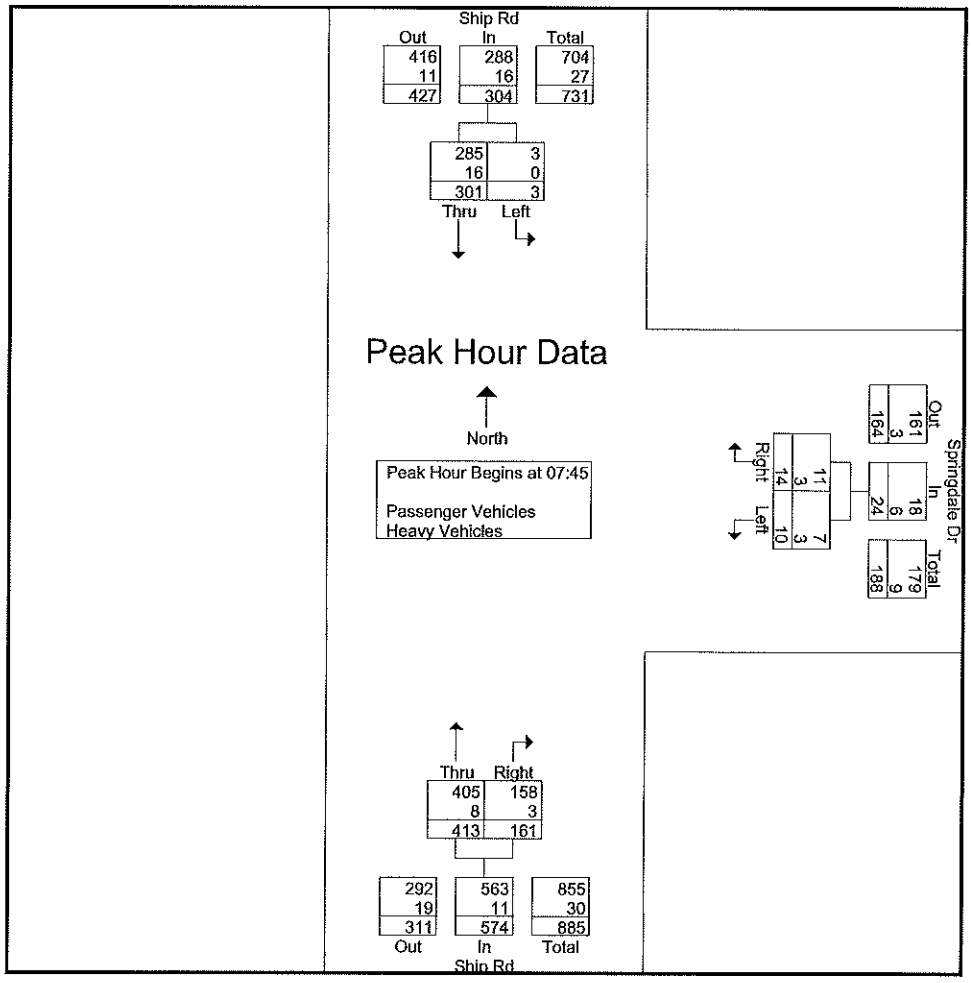
McMahon Associates, Inc.

425 Commerce Drive, Suite 200
Fort Washington, P A 19034

Municipality: West Whiteland Township
Location: Ship Road &
Springdale Drive
Counter/Board #: LB

File Name : ship04w
Site Code : 81657102
Start Date : 2/22/2017
Page No : 2

	Ship Rd Southbound			Springdale Dr Westbound			Ship Rd Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45										
07:45	0	86	86	2	2	4	92	35	127	217
08:00	2	63	65	1	2	3	119	33	152	220
08:15	0	80	80	1	6	7	129	47	176	263
08:30	1	72	73	6	4	10	73	46	119	202
Total Volume	3	301	304	10	14	24	413	161	574	902
% App. Total	1	99		41.7	58.3		72	28		
PHF	.375	.875	.884	.417	.583	.600	.800	.856	.815	.857
Passenger Vehicles	3	285	288	7	11	18	405	158	563	869
% Passenger Vehicles	100	94.7	94.7	70.0	78.6	75.0	98.1	98.1	98.1	96.3
Heavy Vehicles	0	16	16	3	3	6	8	3	11	33
% Heavy Vehicles	0	5.3	5.3	30.0	21.4	25.0	1.9	1.9	1.9	3.7



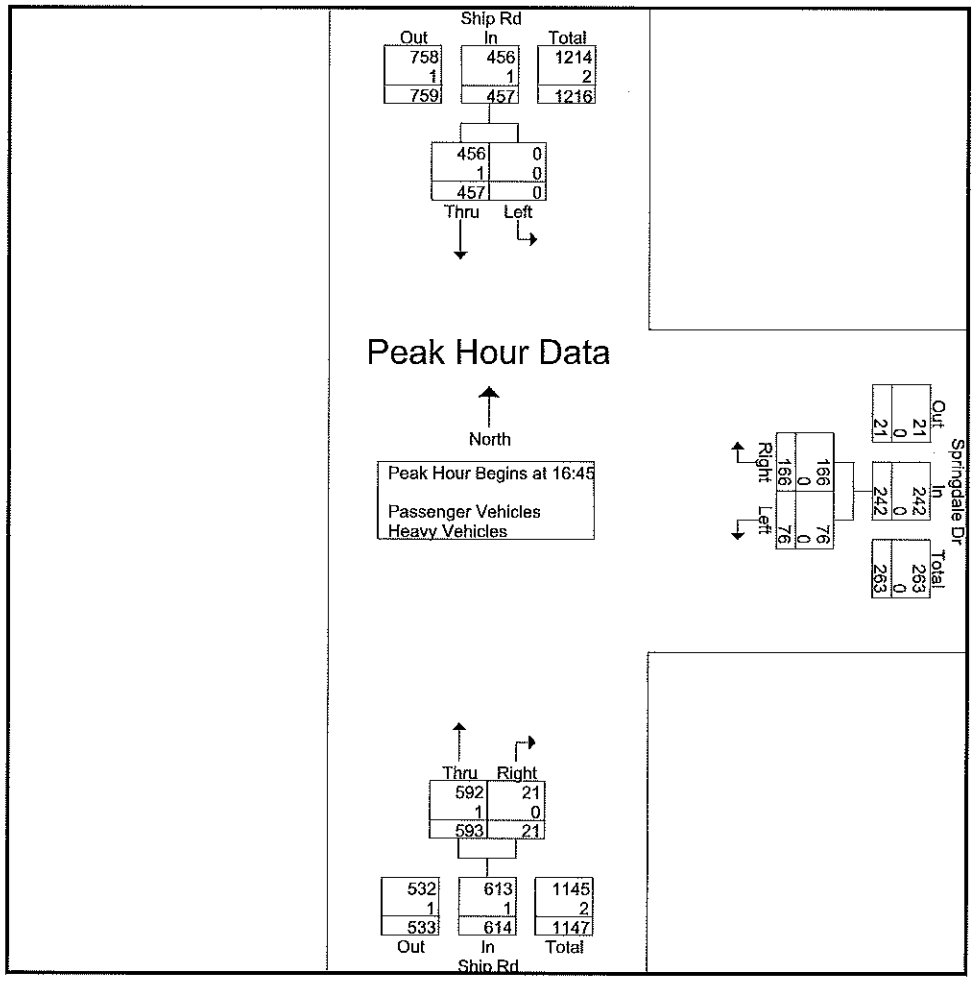
McMahon Associates, Inc.

425 Commerce Drive, Suite 200
Fort Washington, P A 19034

Municipality: West Whiteland Township
Location: Ship Road &
Springdale Drive
Counter/Board #: LB

File Name : ship04w
Site Code : 81657102
Start Date : 2/22/2017
Page No : 3

	Ship Rd Southbound			Springdale Dr Westbound			Ship Rd Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 16:45										
16:45	0	125	125	11	37	48	144	7	151	324
17:00	0	96	96	32	73	105	144	4	148	349
17:15	0	127	127	15	30	45	153	4	157	329
17:30	0	109	109	18	26	44	152	6	158	311
Total Volume	0	457	457	76	166	242	593	21	614	1313
% App. Total	0	100		31.4	68.6		96.6	3.4		
PHF	.000	.900	.900	.594	.568	.576	.969	.750	.972	.941
Passenger Vehicles	0	456	456	76	166	242	592	21	613	1311
% Passenger Vehicles	0	99.8	99.8	100	100	100	99.8	100	99.8	99.8
Heavy Vehicles	0	1	1	0	0	0	1	0	1	2
% Heavy Vehicles	0	0.2	0.2	0	0	0	0.2	0	0.2	0.2



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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Ship Rd & Springdale Drive Sat
Site Code:
Start Date: 04/29/2017

Turning Movement Data

Start Time	Springdale Drive Westbound				Ship Rd Northbound				Ship Rd Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
11:00 AM	5	1	0	6	100	2	0	102	0	84	0	84	192
11:15 AM	2	1	0	3	120	4	0	124	0	88	0	88	215
11:30 AM	2	0	0	2	128	2	0	130	0	73	0	73	205
11:45 AM	2	2	0	4	129	3	0	132	1	70	0	71	207
Hourly Total	11	4	0	15	477	11	0	488	1	315	0	316	819
12:00 PM	2	3	0	5	131	3	0	134	0	93	0	93	232
12:15 PM	1	1	0	2	133	1	0	134	0	103	0	103	239
12:30 PM	0	2	0	2	131	6	0	137	0	96	0	96	235
12:45 PM	4	2	0	6	121	2	0	123	0	104	0	104	233
Hourly Total	7	8	0	15	516	12	0	528	0	396	0	396	939
Grand Total	18	12	0	30	993	23	0	1016	1	711	0	712	1758
Approach %	60.0	40.0	-	-	97.7	2.3	-	-	0.1	99.9	-	-	-
Total %	1.0	0.7	-	1.7	56.5	1.3	-	57.8	0.1	40.4	-	40.5	-
Lights	18	12	-	30	989	23	-	1012	1	709	-	710	1752
% Lights	100.0	100.0	-	100.0	99.6	100.0	-	99.6	100.0	99.7	-	99.7	99.7
Other Vehicles	0	0	-	0	4	0	-	4	0	1	-	1	5
% Other Vehicles	0.0	0.0	-	0.0	0.4	0.0	-	0.4	0.0	0.1	-	0.1	0.3
Bicycles on Road	0	0	-	0	0	0	-	0	0	1	-	1	1
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.1	-	0.1	0.1
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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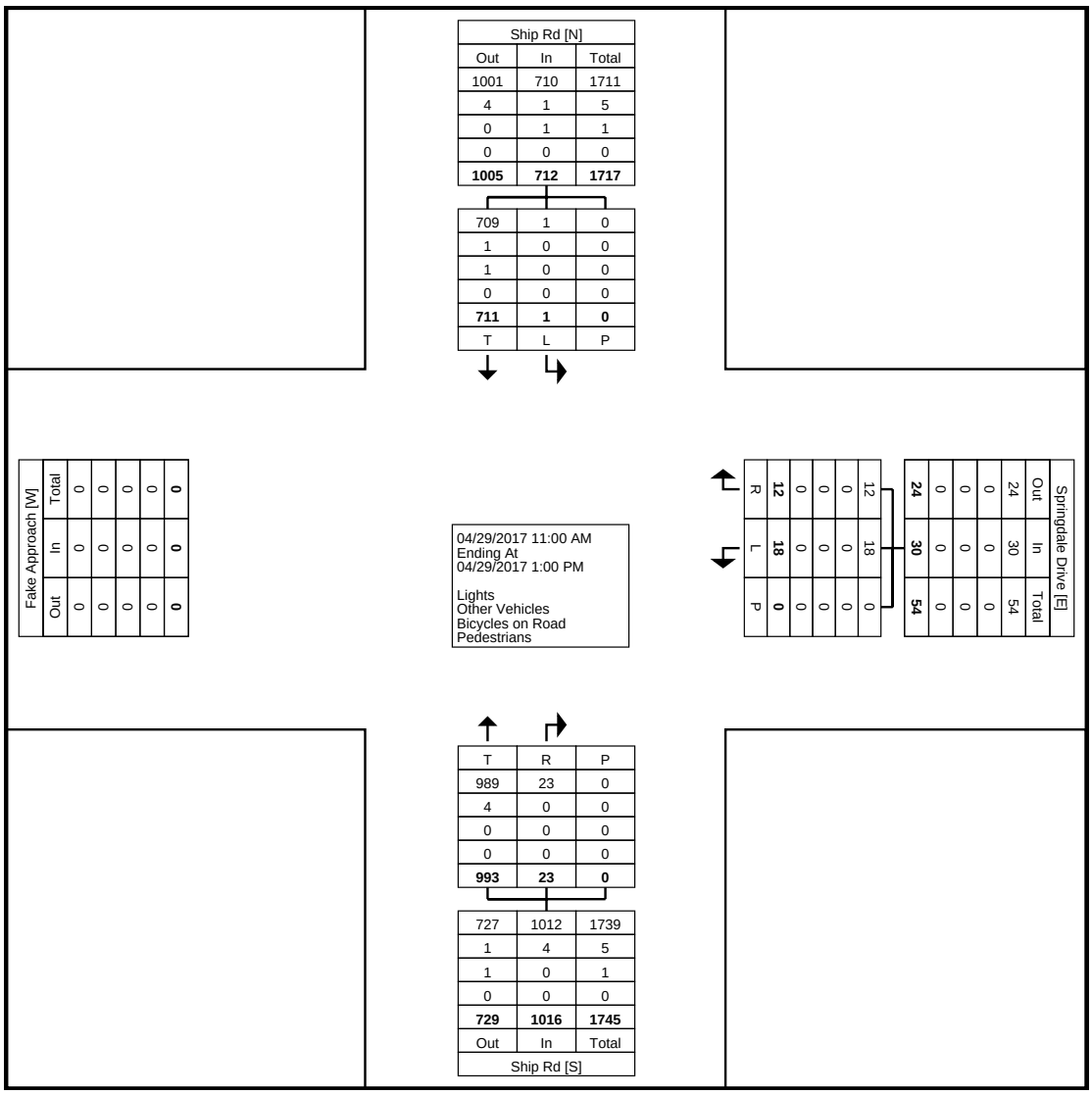

Turning Movement Data Plot

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Turning Movement Peak Hour Data (11:00 AM)

Start Time	Springdale Drive Westbound				Ship Rd Northbound				Ship Rd Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
11:00 AM	5	1	0	6	100	2	0	102	0	84	0	84	192
11:15 AM	2	1	0	3	120	4	0	124	0	88	0	88	215
11:30 AM	2	0	0	2	128	2	0	130	0	73	0	73	205
11:45 AM	2	2	0	4	129	3	0	132	1	70	0	71	207
Total	11	4	0	15	477	11	0	488	1	315	0	316	819
Approach %	73.3	26.7	-	-	97.7	2.3	-	-	0.3	99.7	-	-	-
Total %	1.3	0.5	-	1.8	58.2	1.3	-	59.6	0.1	38.5	-	38.6	-
PHF	0.550	0.500	-	0.625	0.924	0.688	-	0.924	0.250	0.895	-	0.898	0.952
Lights	11	4	-	15	475	11	-	486	1	314	-	315	816
% Lights	100.0	100.0	-	100.0	99.6	100.0	-	99.6	100.0	99.7	-	99.7	99.6
Other Vehicles	0	0	-	0	2	0	-	2	0	1	-	1	3
% Other Vehicles	0.0	0.0	-	0.0	0.4	0.0	-	0.4	0.0	0.3	-	0.3	0.4
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

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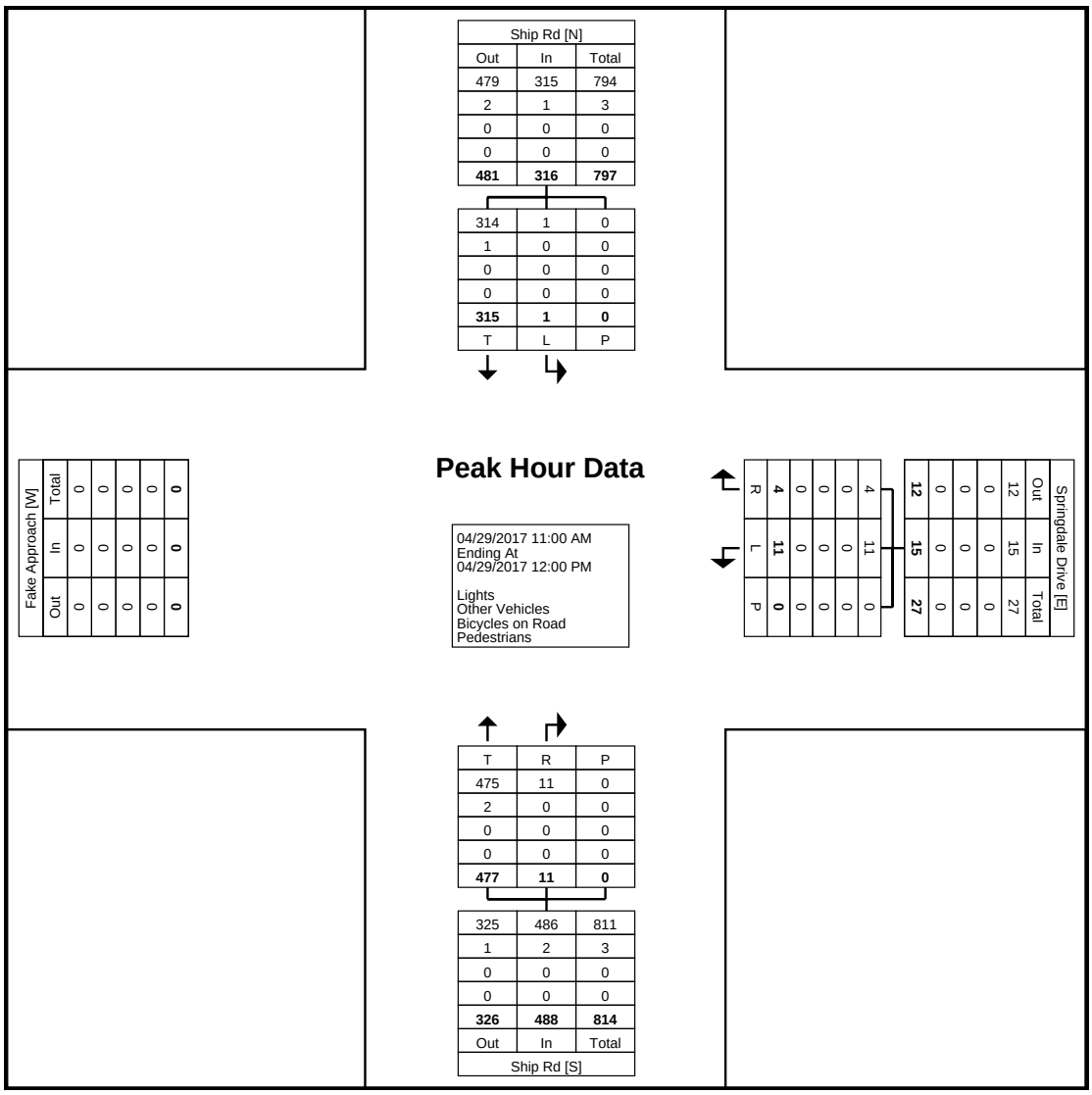

Turning Movement Peak Hour Data Plot (11:00 AM)

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Start Date: 04/29/2017

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Springdale Drive Westbound				Ship Rd Northbound				Ship Rd Southbound				
	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
12:00 PM	2	3	0	5	131	3	0	134	0	93	0	93	232
12:15 PM	1	1	0	2	133	1	0	134	0	103	0	103	239
12:30 PM	0	2	0	2	131	6	0	137	0	96	0	96	235
12:45 PM	4	2	0	6	121	2	0	123	0	104	0	104	233
Total	7	8	0	15	516	12	0	528	0	396	0	396	939
Approach %	46.7	53.3	-	-	97.7	2.3	-	-	0.0	100.0	-	-	-
Total %	0.7	0.9	-	1.6	55.0	1.3	-	56.2	0.0	42.2	-	42.2	-
PHF	0.438	0.667	-	0.625	0.970	0.500	-	0.964	0.000	0.952	-	0.952	0.982
Lights	7	8	-	15	514	12	-	526	0	395	-	395	936
% Lights	100.0	100.0	-	100.0	99.6	100.0	-	99.6	-	99.7	-	99.7	99.7
Other Vehicles	0	0	-	0	2	0	-	2	0	0	-	0	2
% Other Vehicles	0.0	0.0	-	0.0	0.4	0.0	-	0.4	-	0.0	-	0.0	0.2
Bicycles on Road	0	0	-	0	0	0	-	0	0	1	-	1	1
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	-	0.3	-	0.3	0.1
Pedestrians	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
2500 East High Street
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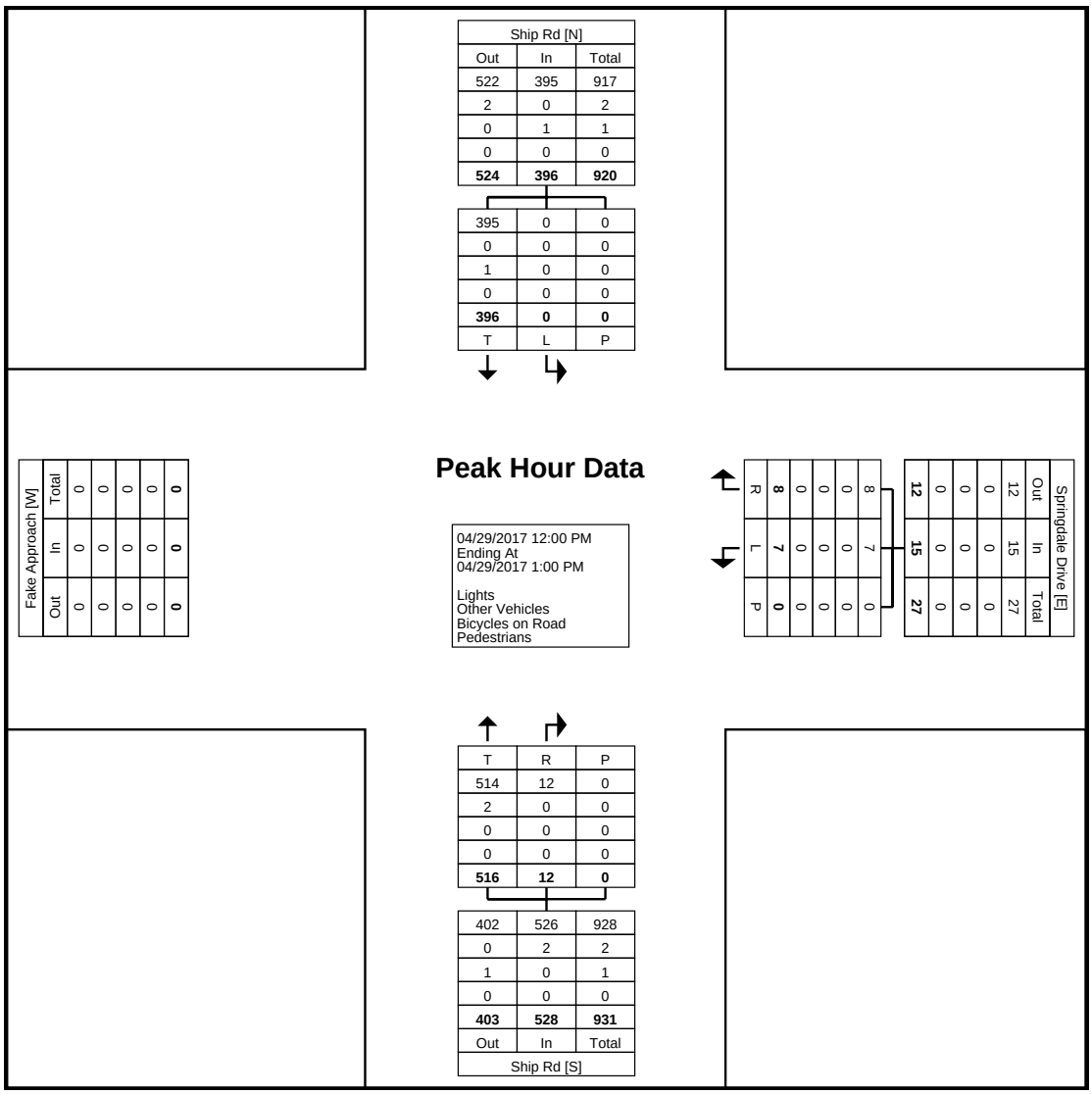
610.326.3100 jhudak@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Ship Rd & Springdale Drive Sat
Site Code:
Start Date: 04/29/2017



Turning Movement Peak Hour Data Plot (12:00 PM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counter::
Counted By::
Weather::

Count Name: Laborers Union Driveway and Linoln HIghway
Site Code:
Start Date: 09/20/2018

Turning Movement Data

Start Time	Lincoln Highway Eastbound					Lincoln Highway Westbound					Laborer's Union Drive Northbound					Southbound Approach Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00	0	123	3	0	126	1	65	0	0	66	0	0	0	0	0	0	0	0	0	0	192
7:15	0	170	0	0	170	0	75	0	0	75	0	0	0	0	0	0	0	0	0	0	245
7:30	0	183	0	0	183	1	83	0	0	84	0	0	0	0	0	0	0	0	0	0	267
7:45	0	206	3	0	209	1	84	0	0	85	0	0	0	0	0	0	0	0	0	0	294
Hourly Total	0	682	6	0	688	3	307	0	0	310	0	0	0	0	0	0	0	0	0	0	998
8:00	0	146	1	0	147	1	91	0	0	92	2	0	1	0	3	0	0	0	0	0	242
8:15	0	175	5	0	180	1	100	0	0	101	0	0	0	0	0	0	0	0	0	0	281
8:30	0	140	3	0	143	1	102	0	0	103	0	0	0	0	0	0	0	0	0	0	246
8:45	0	133	3	0	136	3	120	0	0	123	0	0	0	0	0	0	0	0	0	0	259
Hourly Total	0	594	12	0	606	6	413	0	0	419	2	0	1	0	3	0	0	0	0	0	1028
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16:00	0	135	0	0	135	0	172	0	0	172	1	0	3	0	4	0	0	0	5	0	311
16:15	1	136	0	0	137	0	212	0	0	212	1	0	0	0	1	0	0	0	0	0	350
16:30	1	127	1	0	129	0	192	0	0	192	2	0	1	0	3	0	0	0	3	0	324
16:45	0	120	1	0	121	0	212	0	0	212	3	0	5	0	8	0	0	0	0	0	341
Hourly Total	2	518	2	0	522	0	788	0	0	788	7	0	9	0	16	0	0	0	8	0	1326
17:00	0	121	0	0	121	1	229	0	0	230	2	0	0	0	2	0	0	0	0	0	353
17:15	0	125	0	0	125	0	219	0	0	219	0	0	0	0	0	0	0	0	0	0	344
17:30	0	113	0	0	113	0	221	1	0	222	1	0	1	0	2	0	0	0	0	0	337
17:45	0	141	0	0	141	0	196	0	0	196	0	0	0	0	0	0	0	0	0	0	337
Hourly Total	0	500	0	0	500	1	865	1	0	867	3	0	1	0	4	0	0	0	0	0	1371
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00	0	115	5	0	120	10	178	0	0	188	0	0	1	0	1	0	0	0	0	0	309
11:15	1	100	6	0	107	15	138	0	0	153	1	0	0	0	1	0	0	0	0	0	261
11:30	0	112	4	0	116	7	158	0	0	165	0	0	1	0	1	0	0	0	0	0	282
11:45	1	131	6	0	138	10	197	0	0	207	0	0	1	0	1	0	0	0	1	0	346
Hourly Total	2	458	21	0	481	42	671	0	0	713	1	0	3	0	4	0	0	0	1	0	1198
12:00	0	121	4	0	125	11	186	0	0	197	5	0	0	0	5	0	0	0	0	0	327
12:15	0	123	8	0	131	12	156	0	0	168	2	0	1	0	3	0	0	0	0	0	302
12:30	0	109	8	0	117	12	170	0	0	182	3	0	3	0	6	0	0	0	0	0	305
12:45	0	134	8	0	142	11	185	0	0	196	2	0	1	0	3	0	0	0	0	0	341
Hourly Total	0	487	28	0	515	46	697	0	0	743	12	0	5	0	17	0	0	0	0	0	1275
Grand Total	4	3239	69	0	3312	98	3741	1	0	3840	25	0	19	0	44	0	0	0	9	0	7196
Approach %	0.1	97.8	2.1	-	-	2.6	97.4	0.0	-	-	56.8	0.0	43.2	-	-	0.0	0.0	0.0	-	-	-
Total %	0.1	45.0	1.0	-	46.0	1.4	52.0	0.0	-	53.4	0.3	0.0	0.3	-	0.6	0.0	0.0	0.0	-	0.0	-
Lights	4	3160	67	-	3231	97	3630	1	-	3728	18	0	18	-	36	0	0	0	-	0	6995
% Lights	100.0	97.6	97.1	-	97.6	99.0	97.0	100.0	-	97.1	72.0	-	94.7	-	81.8	-	-	-	-	-	97.2
Other Vehicles	0	79	2	-	81	1	110	0	-	111	0	0	1	-	1	0	0	0	-	0	193
% Other Vehicles	0.0	2.4	2.9	-	2.4	1.0	2.9	0.0	-	2.9	0.0	-	5.3	-	2.3	-	-	-	-	-	2.7
Bicycles on Road	0	0	0	-	0	0	1	0	-	1	7	0	0	-	7	0	0	0	-	0	8
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	28.0	-	0.0	-	15.9	-	-	-	-	-	0.1
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	9	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Traffic Planning and Design, Inc
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Suite 650
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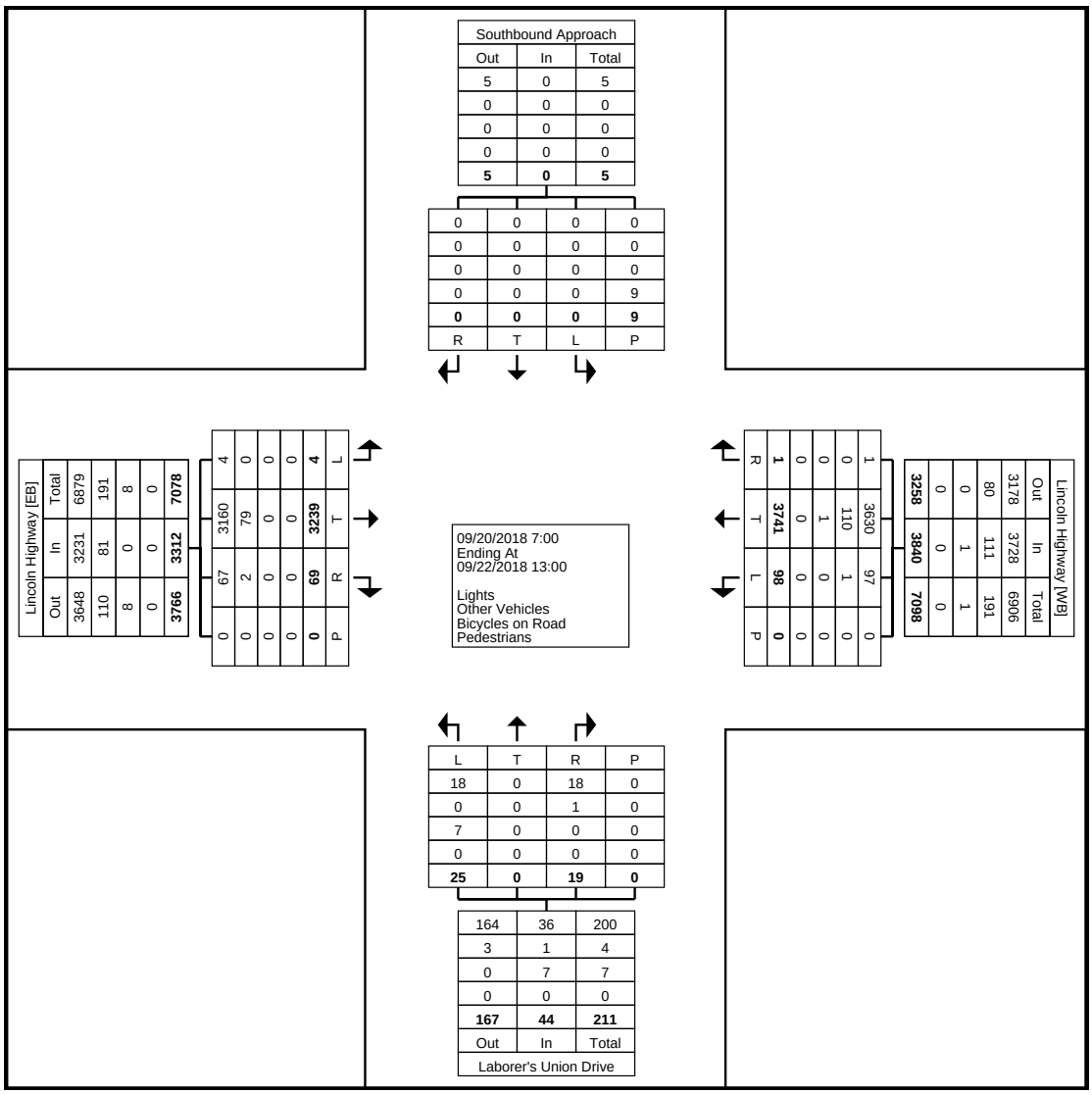
Counter::
Counted By::
Weather::

Count Name: Laborers Union Driveway and Linoln HIghway
Site Code:
Start Date: 09/20/2018



Turning Movement Data Plot

Traffic Planning and Design, Inc
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Counter::
Counted By::
Weather::

Count Name: Laborers Union Driveway and Linoln HIghway
Site Code:
Start Date: 09/20/2018

Turning Movement Peak Hour Data (7:30)

Start Time	Lincoln Highway Eastbound					Lincoln Highway Westbound					Laborer's Union Drive Northbound					Southbound Approach Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:30	0	183	0	0	183	1	83	0	0	84	0	0	0	0	0	0	0	0	0	0	267
7:45	0	206	3	0	209	1	84	0	0	85	0	0	0	0	0	0	0	0	0	0	294
8:00	0	146	1	0	147	1	91	0	0	92	2	0	1	0	3	0	0	0	0	0	242
8:15	0	175	5	0	180	1	100	0	0	101	0	0	0	0	0	0	0	0	0	0	281
Total	0	710	9	0	719	4	358	0	0	362	2	0	1	0	3	0	0	0	0	0	1084
Approach %	0.0	98.7	1.3	-	-	1.1	98.9	0.0	-	-	66.7	0.0	33.3	-	-	0.0	0.0	0.0	-	-	-
Total %	0.0	65.5	0.8	-	66.3	0.4	33.0	0.0	-	33.4	0.2	0.0	0.1	-	0.3	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.862	0.450	-	0.860	1.000	0.895	0.000	-	0.896	0.250	0.000	0.250	-	0.250	0.000	0.000	0.000	-	0.000	0.922
Lights	0	689	9	-	698	4	322	0	-	326	2	0	1	-	3	0	0	0	-	0	1027
% Lights	-	97.0	100.0	-	97.1	100.0	89.9	-	-	90.1	100.0	-	100.0	-	100.0	-	-	-	-	-	94.7
Other Vehicles	0	21	0	-	21	0	36	0	-	36	0	0	0	-	0	0	0	0	-	0	57
% Other Vehicles	-	3.0	0.0	-	2.9	0.0	10.1	-	-	9.9	0.0	-	0.0	-	0.0	-	-	-	-	-	5.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	-	0.0	-	-	-	-	-	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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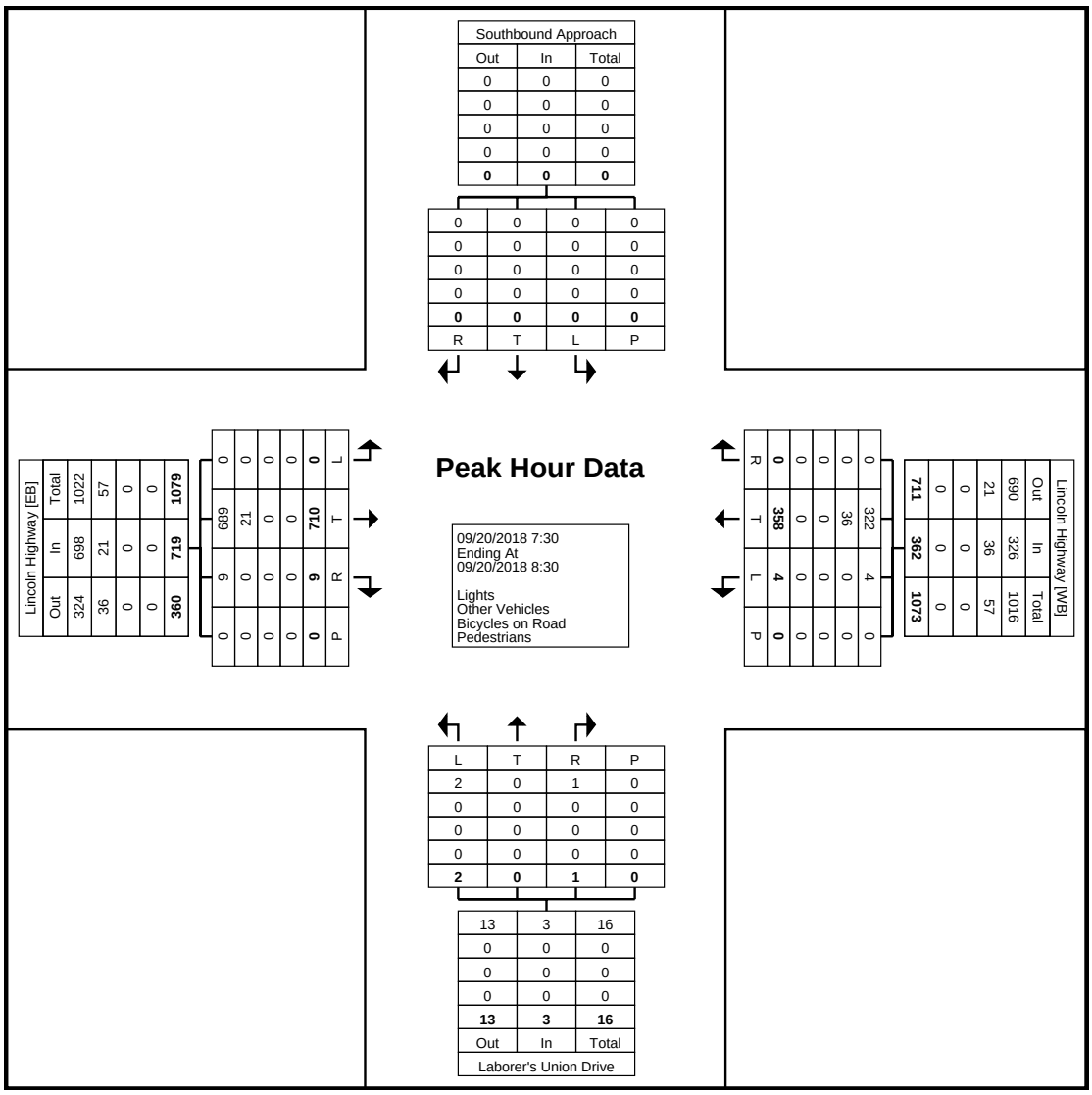
610.326.3100 mbressler@trafficpd.com

Counter::
Counted By::
Weather::

Count Name: Laborers Union Driveway and Linoln HIghway
Site Code:
Start Date: 09/20/2018



Turning Movement Peak Hour Data Plot (7:30)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
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Counter::
Counted By::
Weather::

Count Name: Laborers Union Driveway and Linoln HIghway
Site Code:
Start Date: 09/20/2018

Turning Movement Peak Hour Data (16:45)

Start Time	Lincoln Highway Eastbound					Lincoln Highway Westbound					Laborer's Union Drive Northbound					Southbound Approach Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:45	0	120	1	0	121	0	212	0	0	212	3	0	5	0	8	0	0	0	0	0	341
17:00	0	121	0	0	121	1	229	0	0	230	2	0	0	0	2	0	0	0	0	0	353
17:15	0	125	0	0	125	0	219	0	0	219	0	0	0	0	0	0	0	0	0	0	344
17:30	0	113	0	0	113	0	221	1	0	222	1	0	1	0	2	0	0	0	0	0	337
Total	0	479	1	0	480	1	881	1	0	883	6	0	6	0	12	0	0	0	0	0	1375
Approach %	0.0	99.8	0.2	-	-	0.1	99.8	0.1	-	-	50.0	0.0	50.0	-	-	0.0	0.0	0.0	-	-	-
Total %	0.0	34.8	0.1	-	34.9	0.1	64.1	0.1	-	64.2	0.4	0.0	0.4	-	0.9	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.958	0.250	-	0.960	0.250	0.962	0.250	-	0.960	0.500	0.000	0.300	-	0.375	0.000	0.000	0.000	-	0.000	0.974
Lights	0	472	1	-	473	1	865	1	-	867	6	0	5	-	11	0	0	0	-	0	1351
% Lights	-	98.5	100.0	-	98.5	100.0	98.2	100.0	-	98.2	100.0	-	83.3	-	91.7	-	-	-	-	-	98.3
Other Vehicles	0	7	0	-	7	0	16	0	-	16	0	0	1	-	1	0	0	0	-	0	24
% Other Vehicles	-	1.5	0.0	-	1.5	0.0	1.8	0.0	-	1.8	0.0	-	16.7	-	8.3	-	-	-	-	-	1.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	-	-	-	-	-	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Counter::
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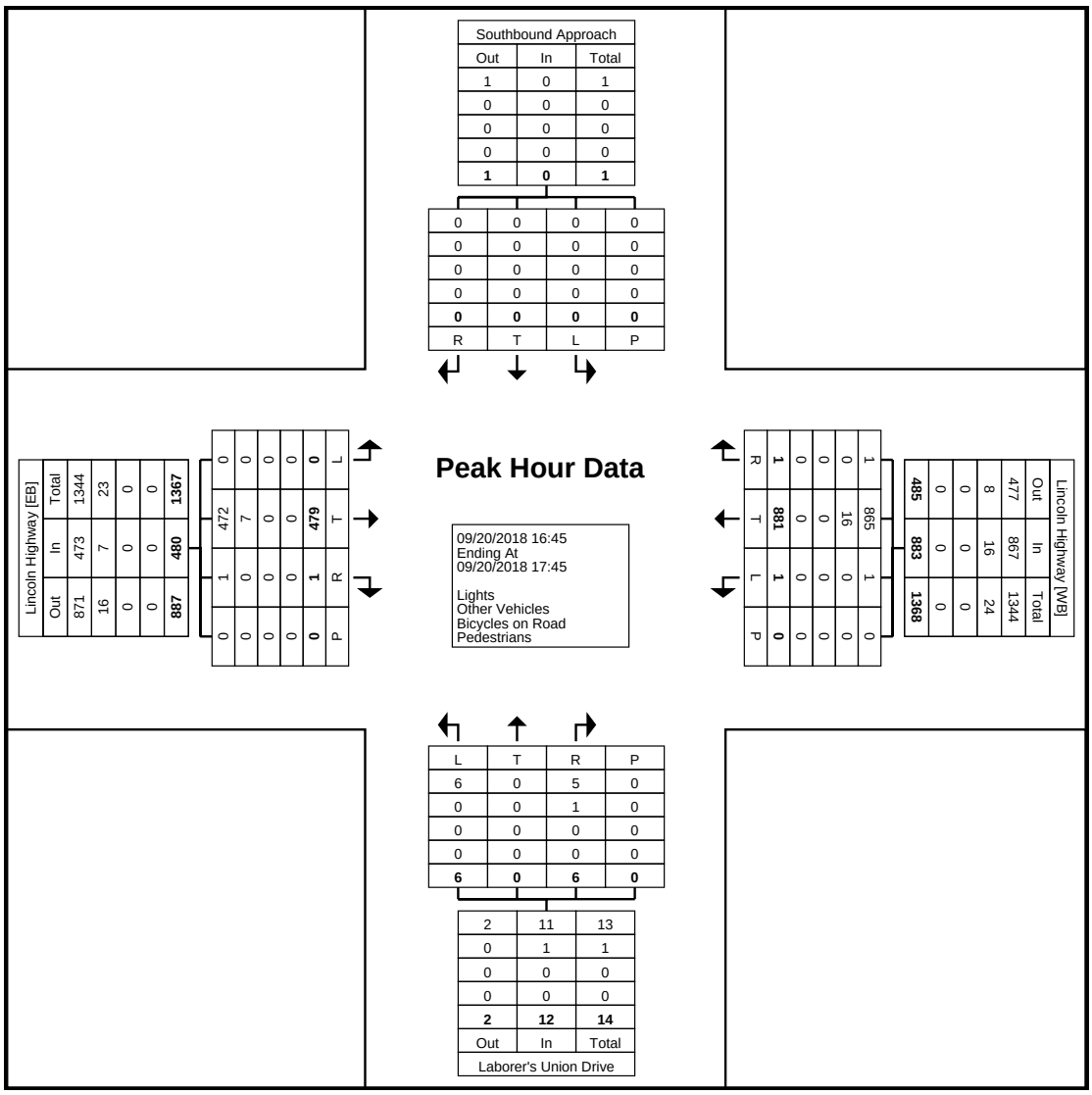
Site Code:
Start Date: 09/20/2018



Turning Movement Peak Hour Data Plot (16:45)

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Counter::
Counted By::
Weather::

Count Name: Laborers Union Driveway and Linoln HIghway
Site Code:
Start Date: 09/20/2018

Turning Movement Peak Hour Data (11:45)

Start Time	Lincoln Highway Eastbound					Lincoln Highway Westbound					Laborer's Union Drive Northbound					Southbound Approach Southbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:45	1	131	6	0	138	10	197	0	0	207	0	0	1	0	1	0	0	0	1	0	346
12:00	0	121	4	0	125	11	186	0	0	197	5	0	0	0	5	0	0	0	0	0	327
12:15	0	123	8	0	131	12	156	0	0	168	2	0	1	0	3	0	0	0	0	0	302
12:30	0	109	8	0	117	12	170	0	0	182	3	0	3	0	6	0	0	0	0	0	305
Total	1	484	26	0	511	45	709	0	0	754	10	0	5	0	15	0	0	0	1	0	1280
Approach %	0.2	94.7	5.1	-	-	6.0	94.0	0.0	-	-	66.7	0.0	33.3	-	-	0.0	0.0	0.0	-	-	-
Total %	0.1	37.8	2.0	-	39.9	3.5	55.4	0.0	-	58.9	0.8	0.0	0.4	-	1.2	0.0	0.0	0.0	-	0.0	-
PHF	0.250	0.924	0.813	-	0.926	0.938	0.900	0.000	-	0.911	0.500	0.000	0.417	-	0.625	0.000	0.000	0.000	-	0.000	0.925
Lights	1	480	26	-	507	45	701	0	-	746	5	0	5	-	10	0	0	0	-	0	1263
% Lights	100.0	99.2	100.0	-	99.2	100.0	98.9	-	-	98.9	50.0	-	100.0	-	66.7	-	-	-	-	-	98.7
Other Vehicles	0	4	0	-	4	0	8	0	-	8	0	0	0	-	0	0	0	0	-	0	12
% Other Vehicles	0.0	0.8	0.0	-	0.8	0.0	1.1	-	-	1.1	0.0	-	0.0	-	0.0	-	-	-	-	-	0.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	5	0	0	-	5	0	0	0	-	0	5
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	50.0	-	0.0	-	33.3	-	-	-	-	-	0.4
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Counter::
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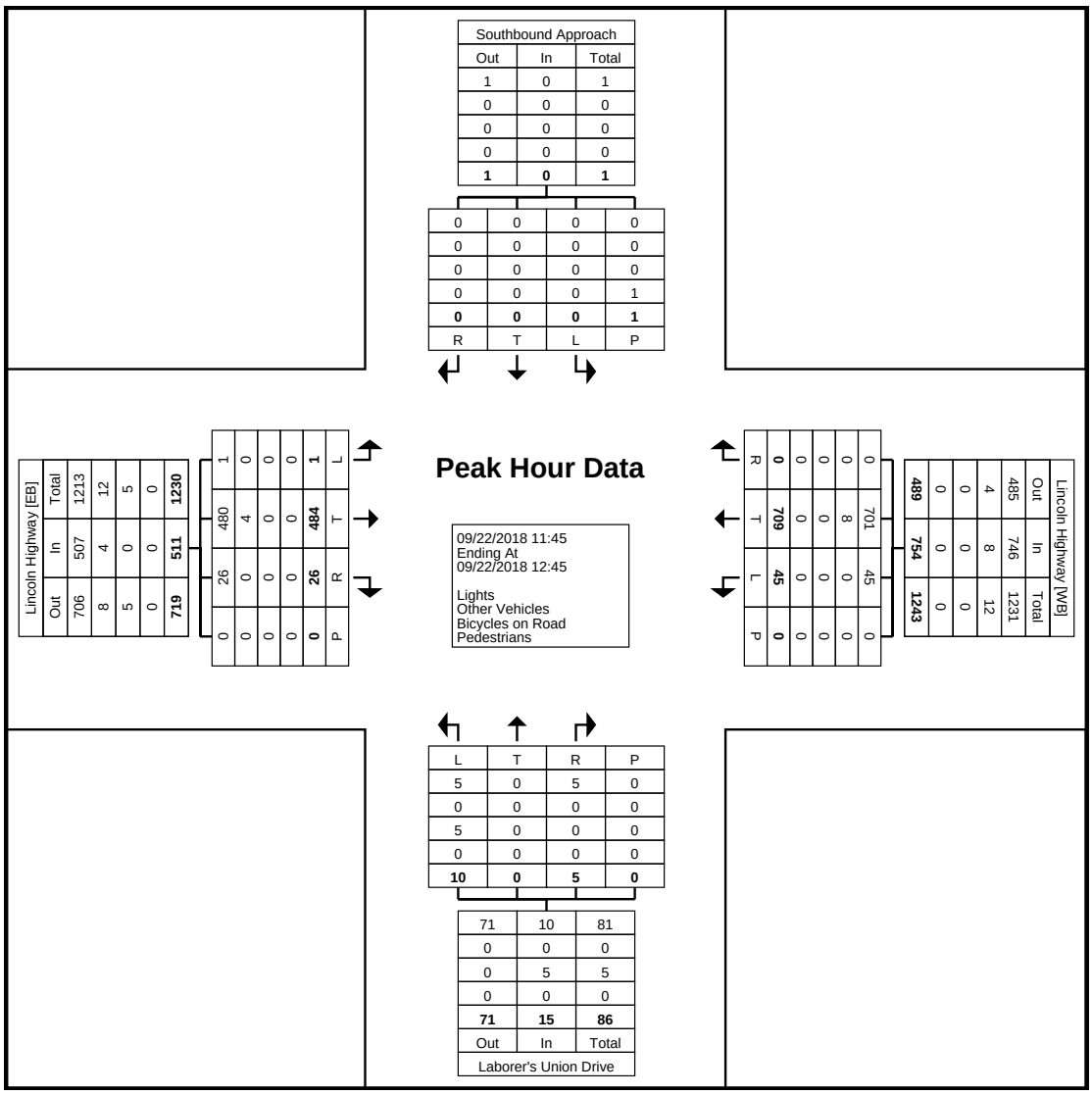
Site Code:
Start Date: 09/20/2018



Turning Movement Peak Hour Data Plot (11:45)

APPENDIX D:
Crash Data

Pennsylvania Crash Information Tool

Business US 30 (SR 3070) in West Whiteland Twp, Chester Co.

Date Range: 01/01/2014 to 12/31/2018

Area of Interest: (In County 15 On State Route 3070(P) Between Segment 0392 Offset 0000 and Segment 0402 Offset 0000)

USER_ID / QUERY ID: b-bhaesler / *0320200327823*

MONTH OF YEAR

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	OCT	NOV	TOTAL
CRASHES	3	2	2	3	1	1	3	5	4	1	25
PCT	12%	8%	8%	12%	4%	4%	12%	20%	16%	4%	100%

DAY OF WEEK

	SUN	MON	TUE	WED	THR	FRI	SAT	TOTAL
CRASHES	5	4	5	2	1	7	1	25
PCT	20%	16%	20%	8%	4%	28%	4%	100%

HOUR OF DAY

	03	06	08	09	12	13	14	15	16	17	18	20	22	TOTAL
CRASHES	1	1	4	1	3	2	1	2	3	2	2	2	1	25
PCT	4%	4%	16%	4%	12%	8%	4%	8%	12%	8%	8%	8%	4%	100%

YEAR

	CRASHES	PCT
2014	7	28%
2015	4	16%
2016	4	16%
2017	5	20%
2018	5	20%
TOTAL	25	100%

COLLISION TYPE

	CRASHES	PCT
REAR END	11	44%
ANGLE	6	24%
HIT FIX OBJ	3	12%
HEAD ON	2	8%
PEDESTRIAN	1	4%
SAME DIR SS	1	4%
UNKNOWN	1	4%
TOTAL	25	100%

CRASH SEVERITY LEVEL

	CRASHES	PCT
SUSP SERIOUS	1	4%
SUSP MINOR	2	8%
POSSIBLE INJURY	1	4%
UNK SEVERITY	7	28%
PDO	14	56%
TOTAL	25	100%

SEVERITY COUNT

	PERSONS
FATALITIES	0
SUSPECTED SERIOUS	1
SUSPECTED MINOR	2
POSSIBLE INJURY	4
UNK SEVERITY	8
UNK IF INJURED	0

DRIVER ACTIONS

	ACTIONS	PCT
NO CONTRIBUTING ACTION	27	42%
TAILGATING	9	14%
DRIVER WAS DISTRACTED	6	9%
RUNNING RED LIGHT	4	6%
IMPROPER/CARELESS TURN	3	5%
OTHER IMPROPER DRIVING	3	5%
WRONG SIDE OF ROADWAY	3	5%
AFFECTED PHYSICAL COND	2	3%
SUDDEN SLOWING/STOP	2	3%
CARELESS PASS/LN CHNG	1	2%
FAILR MAINT PROP SPEED	1	2%
IMPROPER ENTRANCE HWY	1	2%
OTHERS	2	3%
TOTAL	64	100%

VEHICLE TYPE

	VEHICLES	PCT
AUTOMOBILE	32	59%
SUV	14	26%
SMALL TRUCK	5	9%
VAN	2	4%
TOTAL	53	98%

ROAD CONDITION

	CRASHES	PCT
DRY	23	92%
WET	2	8%
TOTAL	25	100%

ILLUMINATION

	CRASHES	PCT
DAYLIGHT	19	76%
DARK	4	16%
DUSK	1	4%
STREET LIGHTS	1	4%
TOTAL	25	100%

WEATHER

	CRASHES	PCT
CLEAR	24	96%
RAIN	1	4%
TOTAL	25	100%

ENVIR/ROADWAY FACTORS

	FACTORS	PCT
NONE	22	88%
ANIMAL IN RDWY	2	8%
DEER IN ROADWAY	1	4%
TOTAL	25	100%

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NOTES:

1 Injury Severity Disclaimer

Please note that beginning January 1, 2016, PennDOT adopted the Federal standard for collecting injury severity data. The field descriptions and definitions changed from the state standard that had been in use for decades. This resulted in a substantial shift in severity levels. Therefore, comparison of the “Suspected Serious Injury”, “Suspected Minor Injury” and “Possible Injury” categories will not be consistent for crashes taking place before versus after the adoption of the new standard.

REPORT PARAMETERS:

Query ID: *0320200327823*

User ID: b-bhaesler

Area of Interest: (In County 15 On State Route 3070(P) Between Segment 0392 Offset 0000 and Segment 0402 Offset 0000)

Date Range: 01/01/2014 to 12/31/2018

Criteria:

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Business US 30 (SR 3070) in West Whiteland Twp, Chester Co.

Sorted by County, Route, Segment, Offset

Date Range: 01/01/2014 to 12/31/2018

USER ID / QUERY ID: b-bhaesler / *0320200327821*

Area of Interest: (In County 15 On State Route 3070(P) Between Segment 0392 Offset 0000 and Segment 0402 Offset 0000)

	CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
1	**2014050584**	15	05/13/2014	TUE	15:25	DAYLIGHT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												ANGLE
	4WAY		1001/0040/2434		3070/0402/0000								
	VEH: 1 AUTOMOBILE TRAVELING NORTH IN LEFT TURN LANE TURNING LEFT												
	VEH EVENTS: STRUCK BY UNIT 02												
	DVR ACTIONS: IMPROPER/CARELESS TURN												
	VEH: 2 SUV TRAVELING SOUTH IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
2	**2016121183**	15	11/18/2016	FRI	18:32	DUSK	DRY	CLEAR	0	1	0	2	UNK SEVERITY
	ENV RDWY FACTORS: NONE												HEAD-ON
	4WAY		1001/0040/2434		3070/0402/0000								
	VEH: 1 AUTOMOBILE TRAVELING SOUTH IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: RUNNING RED LIGHT DRIVING WRONG SIDE OF ROAD												
	VEH: 2 SMALL TRUCK TRAVELING NORTH IN LEFT TURN LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: RUNNING RED LIGHT												
3	**2017034980**	15	04/03/2017	MON	20:31	STREET LT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												ANGLE
	4WAY		1001/0040/2434		3070/0402/0000								
	VEH: 1 AUTOMOBILE TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: STRUCK BY UNIT 02												
	DVR ACTIONS: RUNNING RED LIGHT OTHER IMPROPER DRIV ACTIONS												
	VEH: 2 AUTOMOBILE TRAVELING SOUTH IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
4	**2018001682**	15	01/03/2018	WED	12:45	DAYLIGHT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												ANGLE
	MIDB		3070/0392/0063										
	VEH: 1 AUTOMOBILE TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: RUNNING RED LIGHT												
	VEH: 2 AUTOMOBILE TRAVELING SOUTH IN LEFT TURN LANE TURNING LEFT												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
5	**2018018509**	15	02/02/2018	FRI	06:39	DARK	DRY	CLEAR	0	1	1	1	SUSPECTED SERIOUS INJURY
	ENV RDWY FACTORS: NONE												PEDESTRIAN
	4WAY		3070/0392/0065		EXTON SQUARE PY		LINCOLN HW						
	VEH: 1												
	VEH EVENTS: STRUCK BY UNIT 02												
	VEH: 2 SUV TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												

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	CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
6	2017029589	15	03/17/2017	FRI	12:39	DAYLIGHT	WET	CLEAR	0	1	0	2	UNK SEVERITY
	ENV RDWY FACTORS: NONE												ANGLE
	MIDB 3070/0392/0121												
	VEH: 1 SUV TRAVELING EAST IN RIGHT LANE TURNING LEFT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: IMPROPER/CARELESS TURN												
	VEH: 2 SUV TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
7	2017044523	15	04/26/2017	WED	14:00	DAYLIGHT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												SAME DIR SIDESW
	MIDB 3070/0392/0167												
	VEH: 1 SUV TRAVELING WEST IN RIGHT LANE CHANGING LANES OR MERGING												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: CARELESS PASS OR LANE CHANGE												
	VEH: 2 SUV TRAVELING WEST IN LEFT LANE GOING STRAIGHT												
	VEH EVENTS: STRUCK BY UNIT 01 OVERTURN/ROLL OVER												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
8	2015084064	15	08/16/2015	SUN	16:00	DAYLIGHT	DRY	CLEAR	0	3	0	2	SUSPECTED MINOR INJURY
	ENV RDWY FACTORS: NONE												HEAD-ON
	MIDB 3070/0392/0822												
	VEH: 1 SUV TRAVELING EAST IN CENTER TURN LANE TURNING LEFT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: IMPROPER/CARELESS TURN												
	VEH: 2 AUTOMOBILE TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												ALC TEST: 02
	VEH EVENTS: HIT UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
9	2018035421	15	03/23/2018	FRI	17:30	DAYLIGHT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/0952												
	VEH: 1 SMALL TRUCK TRAVELING WEST IN RIGHT LANE SLOWING OR STOPPING IN LANE												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING FAILED MAINTAIN PROPER SPEED SUDDEN SLOWING / STOPPING												
	VEH: 2 AUTOMOBILE TRAVELING WEST IN RIGHT LANE SLOWING OR STOPPING IN LANE												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: OTHER IMPROPER DRIV ACTIONS												
10	2017103496	15	10/03/2017	TUE	15:30	DAYLIGHT	DRY	CLEAR	0	1	0	1	UNK SEVERITY
	ENV RDWY FACTORS: NONE												HIT FIXED OBJ
	MIDB 3070/0392/0983												
	VEH: 1 AUTOMOBILE TRAVELING WEST IN ONCOMING TRAFFIC LANE GOING STRAIGHT												ALC TEST: 99
	VEH EVENTS: HIT CURB HIT UTILITY POLE HIT TRAFFIC SIGN												
	DVR ACTIONS: AFFECTED BY PHYSICAL COND DRIVING WRONG SIDE OF ROAD												
11	2015004752	15	01/11/2015	SUN	03:57	DARK	DRY	CLEAR	0	1	0	4	UNK SEVERITY
	ENV RDWY FACTORS: NONE												HIT FIXED OBJ
	MIDB 3070/0392/1154												
	VEH: 1 SUV TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												ALC TEST: 26
	VEH EVENTS: HIT UTILITY POLE HIT TRAFFIC SIGN HIT BUILDING												
	DVR ACTIONS: AFFECTED BY PHYSICAL COND DRIVING WRONG SIDE OF ROAD OTHER IMPROPER DRIV ACTIONS												

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Business US 30 (SR 3070) in West Whiteland Twp, Chester Co.

Sorted by County, Route, Segment, Offset

Date Range: 01/01/2014 to 12/31/2018

USER ID / QUERY ID: b-bhaesler / *0320200327821*

Area of Interest: (In County 15 On State Route 3070(P) Between Segment 0392 Offset 0000 and Segment 0402 Offset 0000)

	CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
12	2018111369	15	10/23/2018	TUE	08:14	DAYLIGHT	DRY	CLEAR	0	0	0	4	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/1530												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING												
	VEH: 2 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 01 HIT UNIT 03												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 3 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 02 HIT UNIT 04												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 4 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 03												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
13	2016086548	15	08/18/2016	THR	12:54	DAYLIGHT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/1552												
	VEH: 1 VAN TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING												
	VEH: 2 SUV TRAVELING EAST IN RIGHT LANE SLOWING OR STOPPING IN LANE												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
14	2014079610	15	08/15/2014	FRI	08:10	DAYLIGHT	DRY	CLEAR	0	0	0	1	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												HIT FIXED OBJ
	MIDB 3070/0392/1572												
	VEH: 1 VAN TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UTILITY POLE												
	DVR ACTIONS: DRIVER WAS DISTRACTED												
15	2014062104	15	06/16/2014	MON	17:57	DAYLIGHT	DRY	CLEAR	0	0	0	3	PROP DMG ONLY
	ENV RDWY FACTORS: OTHER ANIMAL IN ROADWAY												REAR-END
	MIDB 3070/0392/1582												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING												
	VEH: 2 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 01 HIT UNIT 03												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 3 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 02												
	DVR ACTIONS: NO CONTRIBUTING ACTION												

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	CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
16	**2015090913**	15	08/31/2015	MON	09:27	DAYLIGHT	DRY	CLEAR	0	2	0	2	SUSPECTED MINOR INJURY
	ENV RDWY FACTORS: NONE												ANGLE
	MIDB 3070/0392/1584												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN OTHER FWD MOVING LANE TURNING RIGHT												
	VEH EVENTS: HIT UNIT 02 HIT CURB HIT TRAFFIC SIGN												
	DVR ACTIONS: TURNING FROM WRONG LANE												
	VEH: 2 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
17	**2016023034**	15	02/26/2016	FRI	22:00	DARK	DRY	CLEAR	0	0	0	1	PROP DMG ONLY
	ENV RDWY FACTORS: DEER IN ROADWAY												UNKNOWN
	MIDB 3070/0392/1827												
	VEH: 1 AUTOMOBILE TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT DEER												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
18	**2018011005**	15	01/23/2018	TUE	08:23	DAYLIGHT	WET	RAIN	0	0	0	3	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/1929												
	VEH: 1 SMALL TRUCK TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: DRIVER WAS DISTRACTED												
	VEH: 2 SUV TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 01 HIT UNIT 03												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 3 SUV TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 02												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
19	**2014065233**	15	07/01/2014	TUE	18:38	DAYLIGHT	DRY	CLEAR	0	1	0	2	POSSIBLE INJURY
	ENV RDWY FACTORS: OTHER ANIMAL IN ROADWAY												REAR-END
	MIDB 3070/0392/1941												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING												
	VEH: 2 AUTOMOBILE TRAVELING EAST IN RIGHT LANE SLOWING OR STOPPING IN LANE												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: SUDDEN SLOWING / STOPPING												

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Business US 30 (SR 3070) in West Whiteland Twp, Chester Co.

Sorted by County, Route, Segment, Offset

Date Range: 01/01/2014 to 12/31/2018

USER ID / QUERY ID: b-bhaesler / *0320200327821*

Area of Interest: (In County 15 On State Route 3070(P) Between Segment 0392 Offset 0000 and Segment 0402 Offset 0000)

	CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
20	2014104329	15	10/17/2014	FRI	13:01	DAYLIGHT	DRY	CLEAR	0	2	0	5	UNK SEVERITY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/1951												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: DRIVER WAS DISTRACTED TAILGATING												
	VEH: 2 SUV TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 01 HIT UNIT 03												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 3 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 02 HIT UNIT 04												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 4 SUV TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 03 HIT UNIT 05												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 5 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 04												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
21	2017044005	15	04/17/2017	MON	08:05	DAYLIGHT	DRY	CLEAR	0	1	0	2	UNK SEVERITY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/2074												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: DRIVER WAS DISTRACTED												
	VEH: 2 SMALL TRUCK TRAVELING EAST IN RIGHT LANE SLOWING OR STOPPING IN LANE												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
22	2015084129	15	08/16/2015	SUN	20:20	DARK	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												ANGLE
	MIDB 3070/0392/2443												
	VEH: 1 AUTOMOBILE TRAVELING SOUTH IN OTHER TURNING LEFT												
	VEH EVENTS: STRUCK BY UNIT 02												
	DVR ACTIONS: PROCEED W/O CLEARANCE IMPROPER ENTRANCE TO HIGHWAY												
	VEH: 2 AUTOMOBILE TRAVELING WEST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
23	2016077966	15	07/24/2016	SUN	16:19	DAYLIGHT	DRY	CLEAR	0	1	0	3	UNK SEVERITY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/2486												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING												
	VEH: 2 AUTOMOBILE TRAVELING EAST IN RIGHT LANE SLOWING OR STOPPING IN LANE												
	VEH EVENTS: STRUCK BY UNIT 01 HIT UNIT 03												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
	VEH: 3 AUTOMOBILE TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 02												
	DVR ACTIONS: NO CONTRIBUTING ACTION												

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Sorted by County, Route, Segment, Offset

Date Range: 01/01/2014 to 12/31/2018

USER ID / QUERY ID: b-bhaesler / *0320200327821*

Area of Interest: (In County 15 On State Route 3070(P) Between Segment 0392 Offset 0000 and Segment 0402 Offset 0000)

	CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
24	**2014071184**	15	07/19/2014	SAT	16:00	DAYLIGHT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/2490												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING												
	VEH: 2 SUV TRAVELING EAST IN RIGHT LANE STOPPED IN TRAFFIC LANE												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												
25	**2014100155**	15	10/12/2014	SUN	13:26	DAYLIGHT	DRY	CLEAR	0	0	0	2	PROP DMG ONLY
	ENV RDWY FACTORS: NONE												REAR-END
	MIDB 3070/0392/2490												
	VEH: 1 AUTOMOBILE TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: HIT UNIT 02												
	DVR ACTIONS: TAILGATING DRIVER WAS DISTRACTED												
	VEH: 2 SMALL TRUCK TRAVELING EAST IN RIGHT LANE GOING STRAIGHT												
	VEH EVENTS: STRUCK BY UNIT 01												
	DVR ACTIONS: NO CONTRIBUTING ACTION												

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Business US 30 (SR 3070) in West Whiteland Twp, Chester Co.

Sorted by County, Route, Segment, Offset

NOTES:

1 Injury Severity Disclaimer
Please note that beginning January 1, 2016, PennDOT adopted the Federal standard for collecting injury severity data. The field descriptions and definitions changed from the state standard that had been in use for decades. This resulted in a substantial shift in severity levels. Therefore, comparison of the “Suspected Serious Injury”, “Suspected Minor Injury” and “Possible Injury” categories will not be consistent for crashes taking place before versus after the adoption of the new standard.

REPORT PARAMETERS:

Query ID: 0320200327821

User ID: b-bhaesler

Area of Interest: (In County 15 On State Route 3070(P) Between Segment 0392 Offset 0000 and Segment 0402 Offset 0000)

Date Range: 01/01/2014 to 12/31/2018

Criteria:

Pennsylvania Crash Information Tool

Ship Road (SR 1001) and Springdale Drive Intersesction in West Whiteland Twp, Chester Co.

Date Range: 01/01/2014 to 12/31/2018

Area of Interest: (In County 15 On State Route 1001(P) Between Segment 0040 Offset 1732 and Segment 0040 Offset 2132)

USER_ID / QUERY ID: b-bhaesler / *0320200402741*

MONTH OF YEAR

	APR	TOTAL
CRASHES	1	1
PCT	100%	100%

DAY OF WEEK

	TUE	TOTAL
CRASHES	1	1
PCT	100%	100%

HOUR OF DAY

	19	TOTAL
CRASHES	1	1
PCT	100%	100%

YEAR

	CRASHES	PCT
2018	1	100%
TOTAL	1	100%

COLLISION TYPE

	CRASHES	PCT
HIT FIX OBJ	1	100%
TOTAL	1	100%

CRASH SEVERITY LEVEL

	CRASHES	PCT
UNK IF INJURED	1	100%
TOTAL	1	100%

SEVERITY COUNT

	PERSONS
FATALITIES	0
SUSPECTED SERIOUS	0
SUSPECTED MINOR	0
POSSIBLE INJURY	0
UNK SEVERITY	0
UNK IF INJURED	1

DRIVER ACTIONS

	ACTIONS	PCT
AFFECTED PHYSICAL COND	1	100%
TOTAL	1	100%

VEHICLE TYPE

	VEHICLES	PCT
SMALL TRUCK	1	100%
TOTAL	1	100%

ROAD CONDITION

	CRASHES	PCT
DRY	1	100%
TOTAL	1	100%

ILLUMINATION

	CRASHES	PCT
DAYLIGHT	1	100%
TOTAL	1	100%

WEATHER

	CRASHES	PCT
CLEAR	1	100%
TOTAL	1	100%

ENVIR/ROADWAY FACTORS

	FACTORS	PCT
NONE	1	100%
TOTAL	1	100%

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NOTES:

1 Injury Severity Disclaimer

Please note that beginning January 1, 2016, PennDOT adopted the Federal standard for collecting injury severity data. The field descriptions and definitions changed from the state standard that had been in use for decades. This resulted in a substantial shift in severity levels. Therefore, comparison of the “Suspected Serious Injury”, “Suspected Minor Injury” and “Possible Injury” categories will not be consistent for crashes taking place before versus after the adoption of the new standard.

REPORT PARAMETERS:

Query ID: *0320200402741*

User ID: b-bhaesler

Area of Interest: (In County 15 On State Route 1001(P) Between Segment 0040 Offset 1732 and Segment 0040 Offset 2132)

Date Range: 01/01/2014 to 12/31/2018

Criteria:

IMPORTANT: This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. §3754 and 23 U.S.C. §409 and may not be disclosed or used in litigation without written permission from PennDOT.

Pennsylvania Crash Information Tool

Ship Road (SR 1001) and Springdale Drive Intersesction in West Whiteland Twp, Chester Co.

Sorted by County, Route, Segment, Offset

Date Range: 01/01/2014 to 12/31/2018

USER ID / QUERY ID: b-bhaesler / *0320200402721*

Area of Interest: (In County 15 On State Route 1001(P) Between Segment 0040 Offset 1732 and Segment 0040 Offset 2132)

	CRN	CO	DATE	DAY	TIME	LIGHTING	ROAD SURF	WEATHER	FAT	INJ	PED	VEH	MAX SEVERITY
1	2018041811	15	04/10/2018	TUE	19:39	DAYLIGHT	DRY	CLEAR	0	0	0	1	UNK IF INJURED
	ENV RDWY FACTORS: NONE												HIT FIXED OBJ
	MIDB		1001/0040/1917										

VEH: 1 SMALL TRUCK TRAVELING SOUTH IN SHOULDER RIGHT GOING STRAIGHT

VEH EVENTS: HIT UTILITY POLE

DVR ACTIONS: AFFECTED BY PHYSICAL COND

IMPORTANT: This traffic engineering and safety study is confidential pursuant to 75 Pa. C.S. §3754 and 23 U.S.C. §409 and may not be disclosed or used in litigation without written permission from PennDOT.

Ship Road (SR 1001) and Springdale Drive Intersesction in West Whiteland Twp, Chester Co.

Sorted by County, Route, Segment, Offset

NOTES:

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Please note that beginning January 1, 2016, PennDOT adopted the Federal standard for collecting injury severity data. The field descriptions and definitions changed from the state standard that had been in use for decades. This resulted in a substantial shift in severity levels. Therefore, comparison of the “Suspected Serious Injury”, “Suspected Minor Injury” and “Possible Injury” categories will not be consistent for crashes taking place before versus after the adoption of the new standard.

REPORT PARAMETERS:

Query ID: 0320200402721

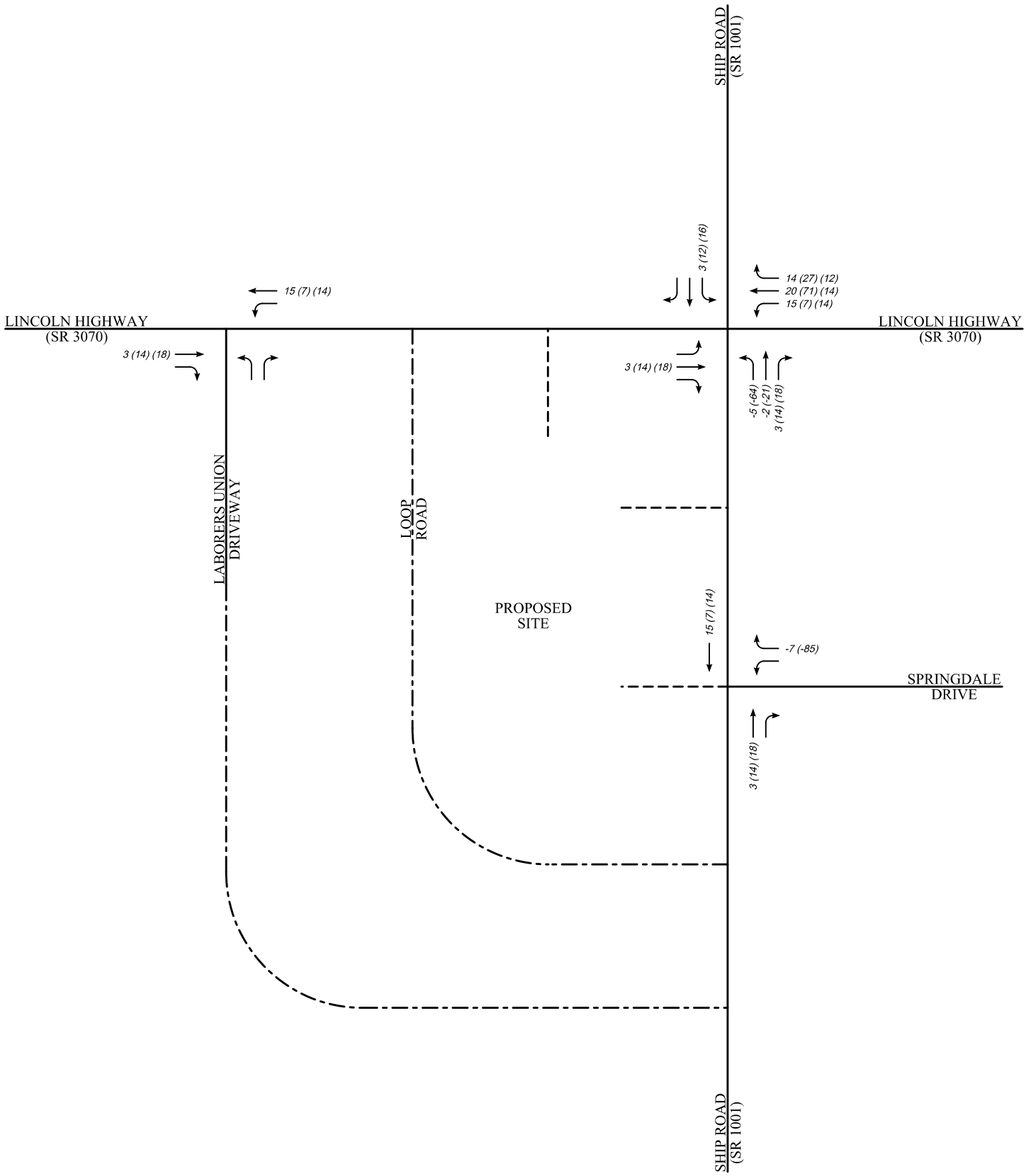
User ID: b-bhaesler

Area of Interest: (In County 15 On State Route 1001(P) Between Segment 0040 Offset 1732 and Segment 0040 Offset 2132)

Date Range: 01/01/2014 to 12/31/2018

Criteria:

APPENDIX E:
Nearby Developments



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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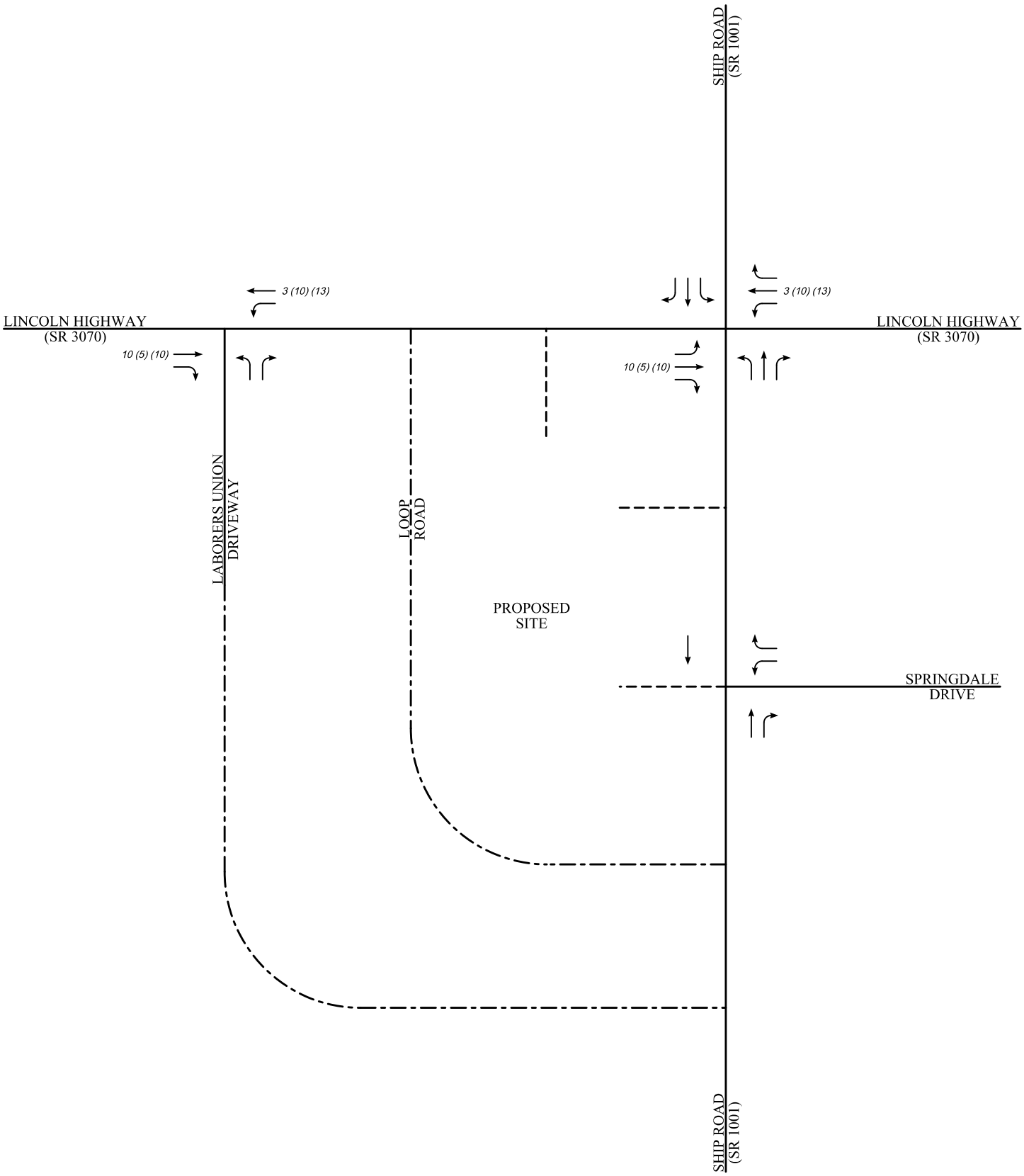
FIGURE E-1

LOCHIEL FARM
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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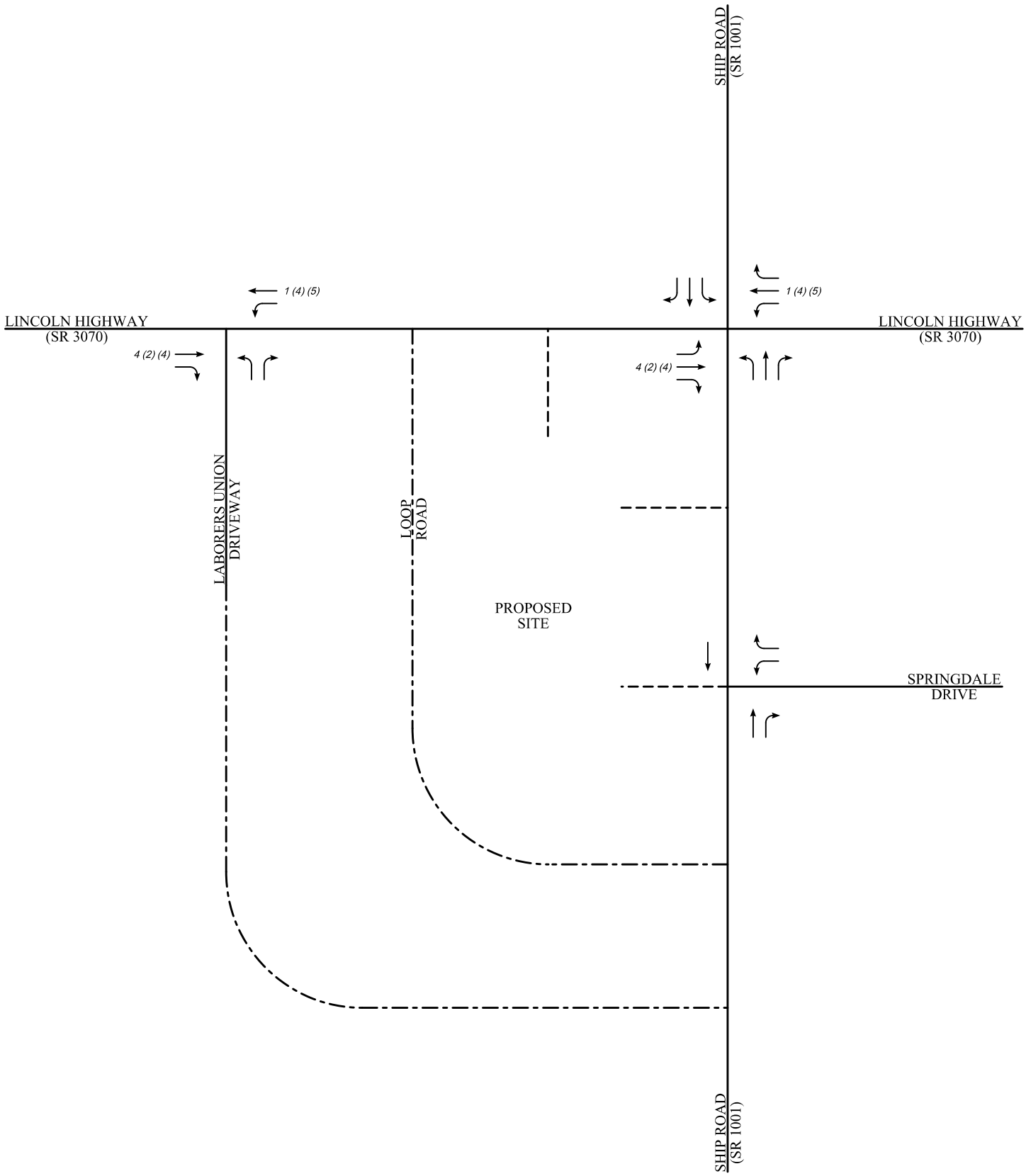
FIGURE E-2

TEVA FLATS
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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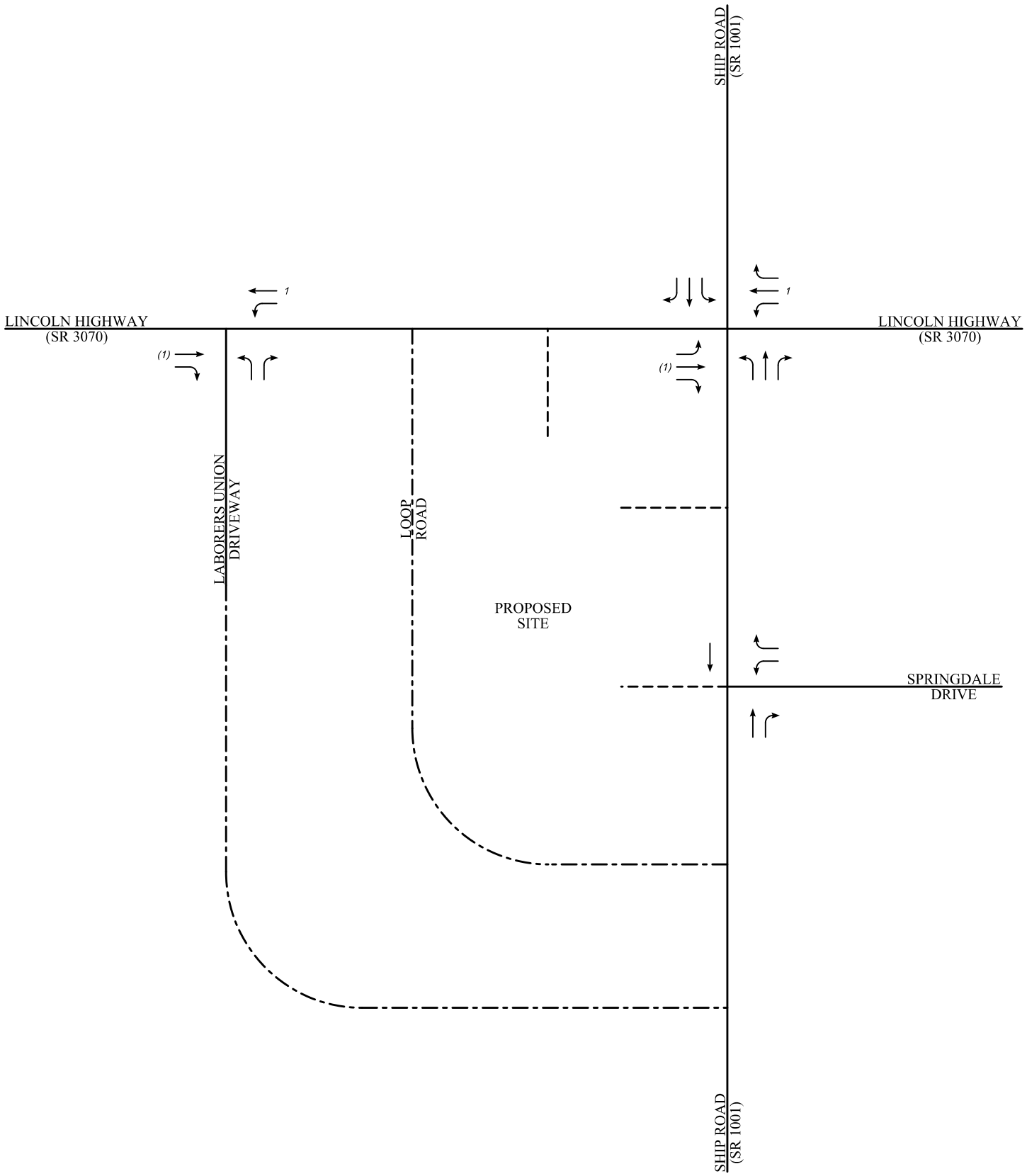
FIGURE E-3

WATERLOO RESERVE
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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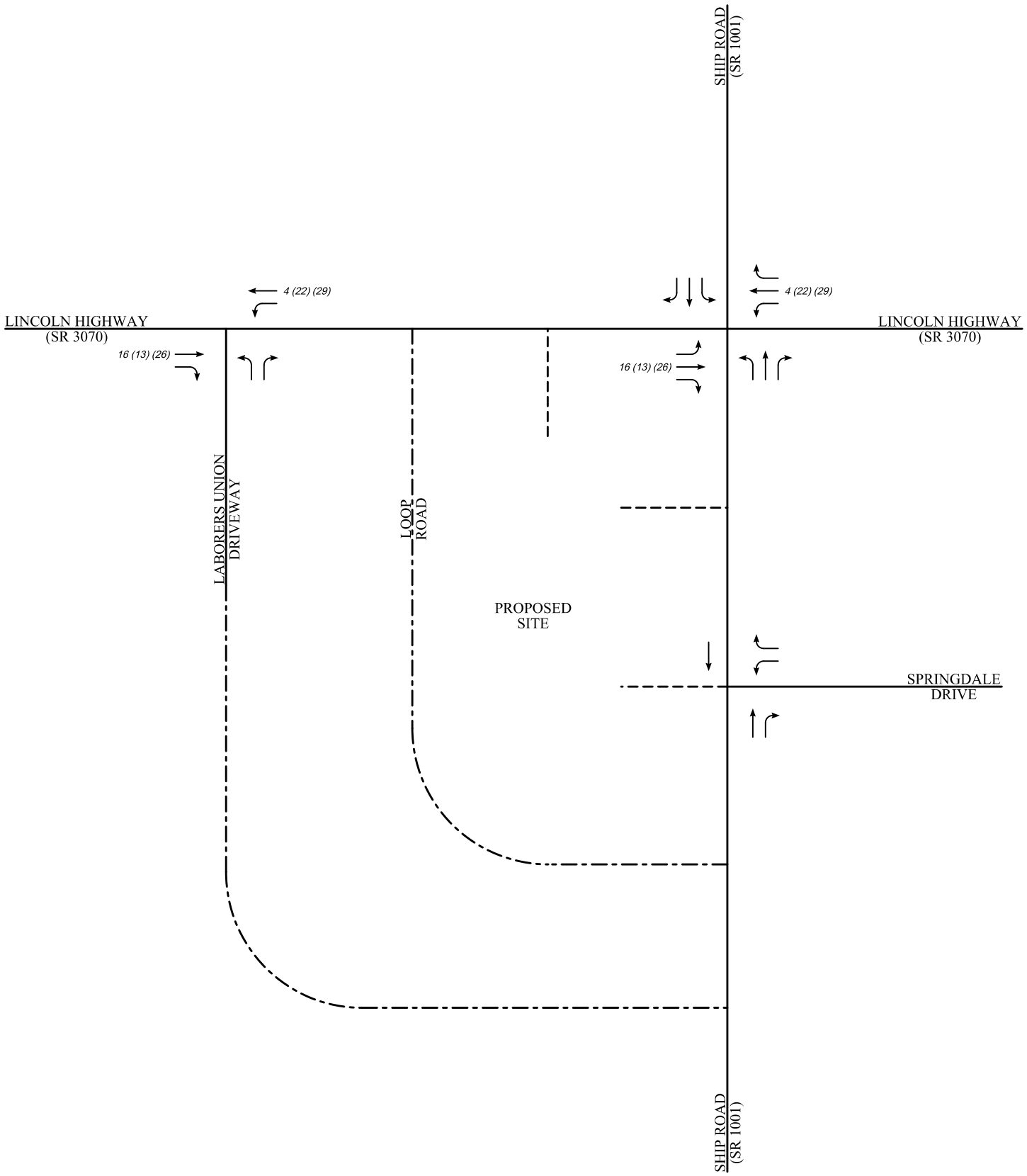
FIGURE E-4

BOY SCOUTS RECREATIONAL DEVELOPMENT
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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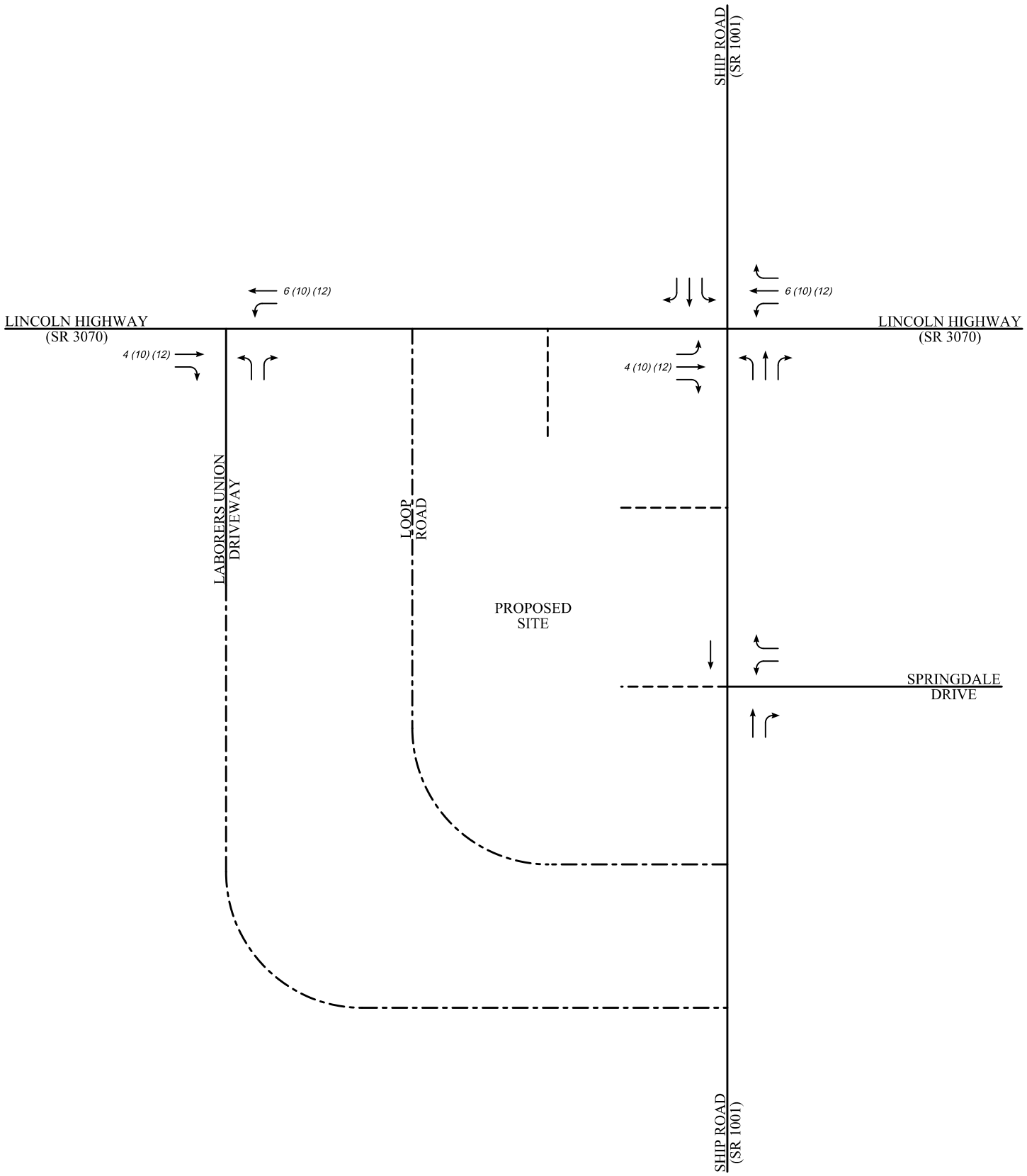
FIGURE E-5

ASHBRIDGE (MAIN STREET AT EXTON)
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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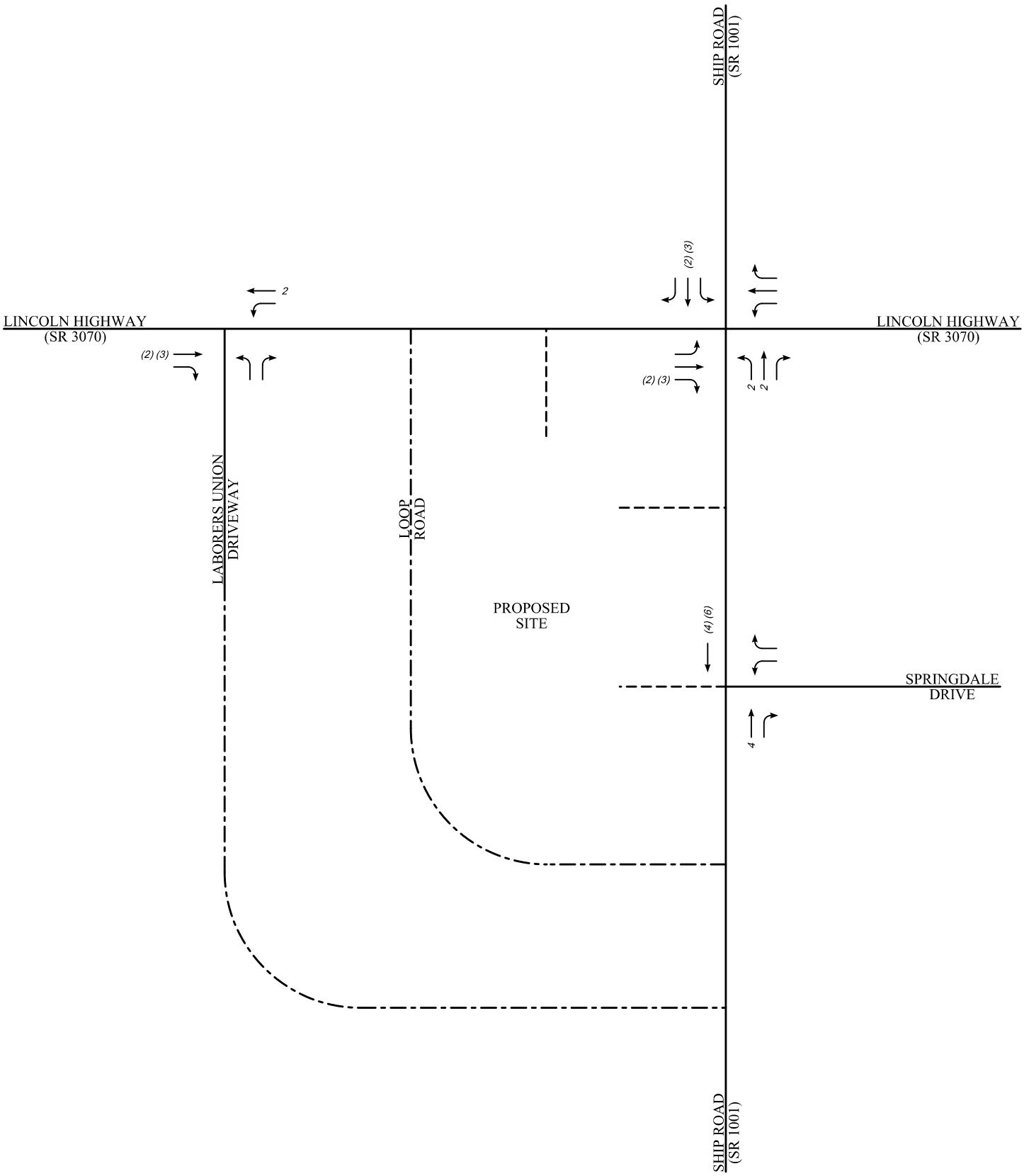
FIGURE E-6

WHOLE FOODS MARKET
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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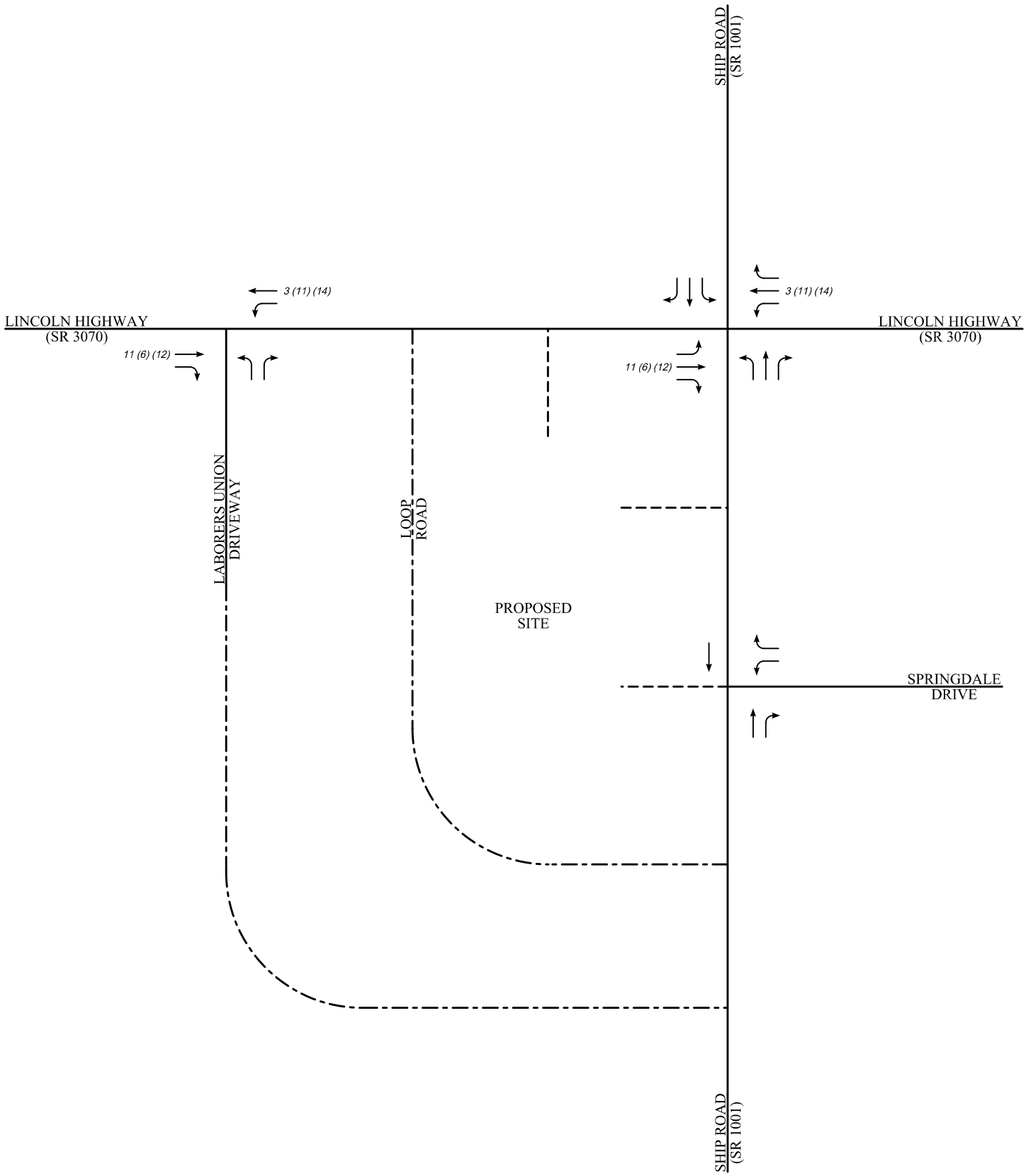
FIGURE E-7

GLENLOCH RESERVE
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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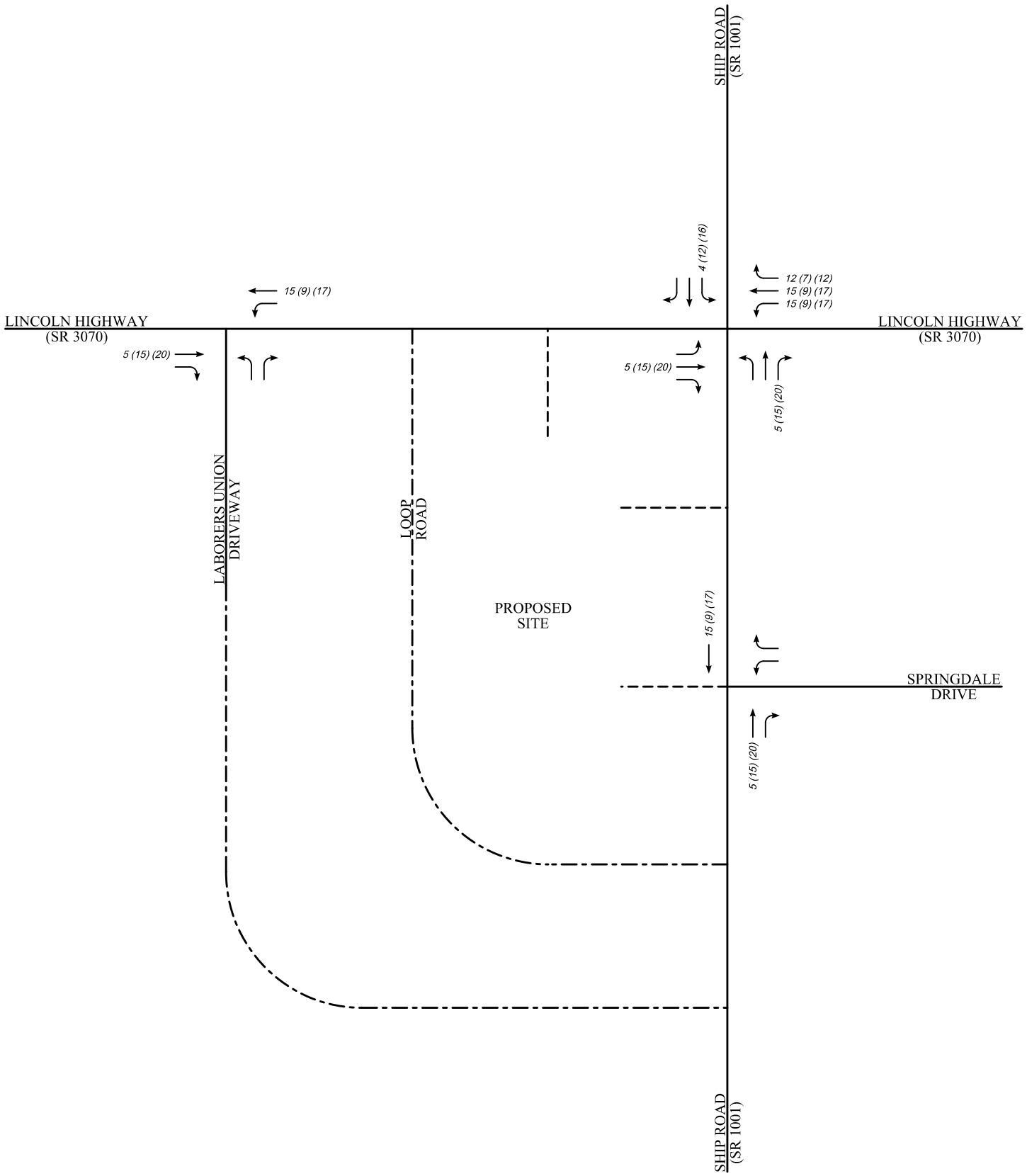
FIGURE E-8

PARKVIEW APARTMENTS
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

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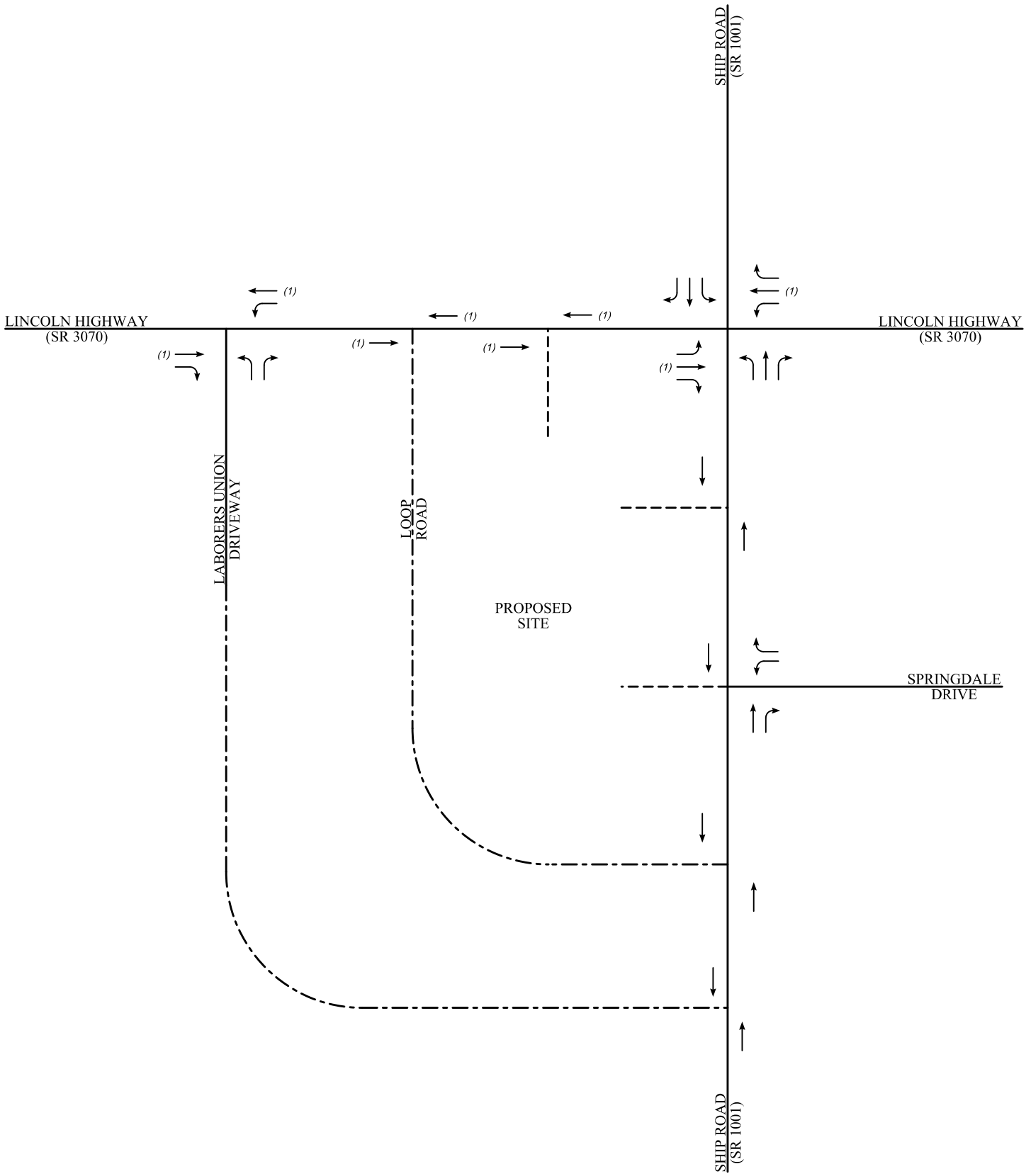
FIGURE E-9

EXTON KNOLL
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$



KEY:

PROPOSED ROADWAY

PROPOSED DRIVEWAY

SCHEMATIC DRAWING:NOT TO SCALE

N

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FIGURE E-10

4 TABAS LANE
BACKGROUND DEVELOPMENT
TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

APPENDIX F:
Volume Development Worksheets

TPD# EKAN.00002
4/3/2020
Traffic Volumes Worksheet

Intersection:	**Lincoln Highway & Ship Road**									
Synchro Node:	**1**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**48**	**472**	**66**	**27**	**234**	**73**	**121**	**272**	**80**	**143**	**197**	**28**	**1761**
Balancing													0
2017 Existing Volumes (Balanced)	**48**	**472**	**66**	**27**	**234**	**73**	**121**	**272**	**80**	**143**	**197**	**28**	**1761**
Base growth (0.52% compounded for 6 yrs)	2	15	2	1	7	2	4	9	3	5	6	1	57
740 N. Ship Road Residential Development		3		15	20	14	-5	-2	3	3			51
Marquis at Exton		10			3								
Waterloo Gardens Redevelopment		4			1								
Boy Scouts Recreatonal Development					1								
Main Street at Exton Development		16			4								
Kmart Redevelopment		4			6								
Glenloch Residential							2	2					
Parkview Apartments		11			3								
Frame Property		5		15	15	12			5	4			56
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**50**	**540**	**68**	**58**	**294**	**101**	**122**	**281**	**91**	**155**	**203**	**29**	**1992**
Phase 1 New Trips	7	17		9	19		21	7	3		10	8	100
Phase 1 Pass-by Trips									(45)				45
Total Trip Distribution	**7**	**17**	**0**	**9**	**19**	**0**	**21**	**7**	**48**	**0**	**10**	**8**	**145**
2023 Phase 1 Projected (Build) Volumes	**57**	**557**	**68**	**67**	**313**	**101**	**143**	**288**	**139**	**155**	**213**	**37**	**2137**
Phase 2B New Trips	5	11		2	3			10	5		3	1	40
Phase 2B Pass-by Trips													0
Total Trip Distribution	**5**	**11**	**0**	**2**	**3**	**0**	**0**	**10**	**5**	**0**	**3**	**1**	**40**
2023 Phase 1 & 2 Projected (Build) Volumes	**62**	**568**	**68**	**68**	**316**	**101**	**143**	**298**	**144**	**155**	**215**	**38**	**2177**
Base growth (0.52% compounded for 11 yrs)	3	28	4	2	14	4	7	16	5	8	12	2	105
2028 Base (No-Build) Volumes	**51**	**553**	**70**	**59**	**301**	**103**	**125**	**288**	**93**	**158**	**209**	**30**	**2040**
Phase 3 New Trips					1		6	5	5			1	18
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**1**	**0**	**6**	**5**	**5**	**0**	**0**	**1**	**18**
2028 Projected (Build) Volumes	**63**	**581**	**70**	**69**	**324**	**103**	**152**	**310**	**151**	**158**	**221**	**39**	**2242**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**33**	**317**	**113**	**66**	**505**	**135**	**240**	**496**	**20**	**36**	**222**	**34**	**2217**
Balancing													0
2017 Existing Volumes (Balanced)	**33**	**317**	**113**	**66**	**505**	**135**	**240**	**496**	**20**	**36**	**222**	**34**	**2217**
Base growth (0.52% compounded for 6 yrs)	1	10	4	2	16	4	8	16	1	1	7	1	71
740 N. Ship Road Residential Development		14		7	71	27	-64	-21	14	12			60
Marquis at Exton		5			10								
Waterloo Gardens Redevelopment		2			4								
Boy Scouts Recreatonal Development		1											
Main Street at Exton Development		13			22								
Kmart Redevelopment		10			10								
Glenloch Residential			2								2		
Parkview Apartments		6			11								
Frame Property		15		9	9	7			15	12			67
4 Tabas Lane		1			1								2
2023 Base (No-Build) Volumes	**34**	**394**	**119**	**84**	**659**	**173**	**184**	**491**	**50**	**61**	**231**	**35**	**2515**
Phase 1 New Trips	7	20		5	11		23	8	4		6	5	88
Phase 1 Pass-by Trips									(40)				40
Total Trip Distribution	**7**	**20**	**0**	**5**	**11**	**0**	**23**	**8**	**44**	**0**	**6**	**5**	**128**
2023 Phase 1 Projected (Build) Volumes	**41**	**414**	**119**	**89**	**670**	**173**	**207**	**499**	**94**	**61**	**237**	**40**	**2643**
Phase 2B New Trips	4	6		6	11			6	3		9	4	50
Phase 2B Pass-by Trips													0
Total Trip Distribution	**4**	**6**	**0**	**6**	**11**	**0**	**0**	**6**	**3**	**0**	**9**	**4**	**50**
2023 Phase 1 & 2 Projected (Build) Volumes	**45**	**420**	**119**	**95**	**681**	**173**	**207**	**505**	**97**	**61**	**246**	**44**	**2693**
Base growth (0.52% compounded for 11 yrs)	2	19	7	4	30	8	14	29	1	2	13	2	131

2028 Base (No-Build) Volumes	**35**	**403**	**122**	**86**	**673**	**177**	**190**	**504**	**50**	**62**	**237**	**36**	**2575**
Phase 3 New Trips				1	3		3	3	3		2	2	16
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**1**	**3**	**0**	**3**	**3**	**3**	**0**	**2**	**2**	**16**
2028 Projected (Build) Volumes	**46**	**429**	**122**	**98**	**698**	**177**	**217**	**521**	**100**	**62**	**254**	**47**	**2769**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**37**	**353**	**145**	**32**	**452**	**69**	**245**	**319**	**45**	**59**	**177**	**40**	**1973**
Balancing													0
2017 Existing Volumes (Balanced)	**37**	**353**	**145**	**32**	**452**	**69**	**245**	**319**	**45**	**59**	**177**	**40**	**1973**
Base growth (0.52% compounded for 6 yrs)	1	11	5	1	14	2	8	10	1	2	6	1	62
740 N. Ship Road Residential Development		18		14	145	55	-3	-1	18	16			262
Marquis at Exton		10			13								
Waterloo Gardens Redevelopment		4			5								
Boy Scouts Recreatonal Development		0			0								
Main Street at Exton Development		26			29								
Kmart Redevelopment		12			12								
Glenloch Residential			3								3		
Parkview Apartments		12			14								
Frame Property		20		17	17	12			20	16			102
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**38**	**466**	**153**	**64**	**701**	**138**	**250**	**328**	**84**	**93**	**186**	**41**	**2542**
Phase 1 New Trips	8	20		7	17		24	7	4		8	7	102
Phase 1 Pass-by Trips									(39)				39
Total Trip Distribution	**8**	**20**	**0**	**7**	**17**	**0**	**24**	**7**	**43**	**0**	**8**	**7**	**141**
2023 Phase 1 Projected (Build) Volumes	**46**	**486**	**153**	**71**	**718**	**138**	**274**	**335**	**127**	**93**	**194**	**48**	**2683**
Phase 2B New Trips	5	8		5	9			8	4		8	3	50
Phase 2B Pass-by Trips													0
Total Trip Distribution	**5**	**8**	**0**	**5**	**9**	**0**	**0**	**8**	**4**	**0**	**8**	**3**	**50**
2023 Phase 1 & 2 Projected (Build) Volumes	**50**	**494**	**153**	**77**	**727**	**138**	**274**	**343**	**131**	**93**	**202**	**51**	**2733**
Base growth (0.52% compounded for 11 yrs)	2	21	9	2	27	4	14	19	3	3	10	2	116
2028 Base (No-Build) Volumes	**39**	**476**	**157**	**65**	**714**	**140**	**256**	**337**	**86**	**94**	**190**	**42**	**2596**
Phase 3 New Trips				1	2		3	3	3		1	1	14
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**1**	**2**	**0**	**3**	**3**	**3**	**0**	**1**	**1**	**14**
2028 Projected (Build) Volumes	**51**	**504**	**157**	**79**	**742**	**140**	**283**	**355**	**136**	**94**	**207**	**53**	**2801**

TPD# EKAN.00002
4/3/2020
Traffic Volumes Worksheet

Intersection:	**Ship Road & Springdale Drive**									
Synchro Node:	**2**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**10**	**0**	**14**	**0**	**413**	**161**	**0**	**301**	**0**	**899**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**10**	**0**	**14**	**0**	**413**	**161**	**0**	**301**	**0**	**899**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	13	5	0	10	0	28
740 N. Ship Road Residential Development						-7		3			15		11
Marquis at Exton													
Waterloo Gardens Redevelopment													
Boy Scouts Recreatonal Development													
Main Street at Exton Development													
Kmart Redevelopment													
Glenloch Residential								4					
Parkview Apartments													
Frame Property								5			15		20
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**10**	**0**	**7**	**0**	**438**	**166**	**0**	**341**	**0**	**962**
Phase 1 New Trips	22		7				23	9	1			10	72
Phase 1 Pass-by Trips	(61)		(25)				(47)	(-16)			(-38)	(28)	107
Total Trip Distribution	**83**	**0**	**32**	**0**	**0**	**0**	**70**	**-7**	**1**	**0**	**-38**	**38**	**179**
2023 Phase 1 Projected (Build) Volumes	**83**	**0**	**32**	**10**	**0**	**7**	**70**	**431**	**167**	**0**	**303**	**38**	**1141**
Phase 2B New Trips				0				15	1		5		21
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**1**	**0**	**5**	**0**	**21**
2023 Phase 1 & 2 Projected (Build) Volumes	**83**	**0**	**32**	**10**	**0**	**7**	**70**	**446**	**168**	**0**	**308**	**38**	**1161**
Base growth (0.52% compounded for 11 yrs)	0	0	0	1	0	1	0	24	9	0	18	0	53
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**11**	**0**	**8**	**0**	**449**	**170**	**0**	**349**	**0**	**987**
Phase 3 New Trips	9		1				2	7	0				19
Phase 3 Pass-by Trips													0
Total Trip Distribution	**9**	**0**	**1**	**0**	**0**	**0**	**2**	**7**	**0**	**0**	**0**	**0**	**19**
2028 Projected (Build) Volumes	**92**	**0**	**33**	**11**	**0**	**8**	**72**	**463**	**173**	**0**	**316**	**38**	**1205**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**76**	**0**	**166**	**0**	**593**	**21**	**0**	**457**	**0**	**1313**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**76**	**0**	**166**	**0**	**593**	**21**	**0**	**457**	**0**	**1313**
Base growth (0.52% compounded for 6 yrs)	0	0	0	2	0	5	0	19	1	0	14	0	41
740 N. Ship Road Residential Development						-85		14			7		-64
Marquis at Exton													
Waterloo Gardens Redevelopment													
Boy Scouts Recreatonal Development													
Main Street at Exton Development													
Kmart Redevelopment													
Glenloch Residential											4		
Parkview Apartments													
Frame Property								15			9		24
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**78**	**0**	**86**	**0**	**641**	**22**	**0**	**491**	**0**	**1318**
Phase 1 New Trips	25		7				13	10	2			6	62
Phase 1 Pass-by Trips	(48)		(21)				(32)	(-8)			(-26)	(21)	88
Total Trip Distribution	**73**	**0**	**28**	**0**	**0**	**0**	**45**	**2**	**2**	**0**	**-26**	**27**	**150**
2023 Phase 1 Projected (Build) Volumes	**73**	**0**	**28**	**78**	**0**	**86**	**45**	**643**	**24**	**0**	**465**	**27**	**1468**
Phase 2B New Trips				1				10			15		26
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**10**	**0**	**0**	**15**	**0**	**26**
2023 Phase 1 & 2 Projected (Build) Volumes	**73**	**0**	**28**	**79**	**0**	**86**	**45**	**653**	**24**	**0**	**480**	**27**	**1494**
Base growth (0.52% compounded for 11 yrs)	0	0	0	4	0	10	0	35	1	0	27	0	77

2028 Base (No-Build) Volumes	**0**	**0**	**0**	**80**	**0**	**91**	**0**	**657**	**22**	**0**	**504**	**0**	**1354**
Phase 3 New Trips	5		0				5	4	0			3	17
Phase 3 Pass-by Trips													0
Total Trip Distribution	**5**	**0**	**0**	**0**	**0**	**0**	**5**	**4**	**0**	**0**	**0**	**3**	**17**
2028 Projected (Build) Volumes	**78**	**0**	**28**	**81**	**0**	**91**	**50**	**672**	**24**	**0**	**493**	**29**	**1547**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**7**	**0**	**8**	**0**	**516**	**12**	**0**	**396**	**0**	**939**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**7**	**0**	**8**	**0**	**516**	**12**	**0**	**396**	**0**	**939**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	16	0	0	13	0	29
740 N. Ship Road Residential Development						-4		14			14		24
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								0			6		
Parkview Apartments								0			0		
Frame Property								20			17		37
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**7**	**0**	**4**	**0**	**566**	**12**	**0**	**446**	**0**	**1035**
Phase 1 New Trips	25		7				21	10	2			8	73
Phase 1 Pass-by Trips	(47)		(21)				(31)	(-8)			(-25)	(21)	87
Total Trip Distribution	**72**	**0**	**28**	**0**	**0**	**0**	**52**	**2**	**2**	**0**	**-25**	**29**	**160**
2023 Phase 1 Projected (Build) Volumes	**72**	**0**	**28**	**7**	**0**	**4**	**52**	**568**	**14**	**0**	**421**	**29**	**1195**
Phase 2B New Trips				1				12	1		13		27
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**12**	**1**	**0**	**13**	**0**	**27**
2023 Phase 1 & 2 Projected (Build) Volumes	**72**	**0**	**28**	**8**	**0**	**4**	**52**	**580**	**14**	**0**	**434**	**29**	**1223**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	30	1	0	23	0	54
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**7**	**0**	**4**	**0**	**580**	**13**	**0**	**456**	**0**	**1060**
Phase 3 New Trips	5		0				3	4	0			2	15
Phase 3 Pass-by Trips													0
Total Trip Distribution	**5**	**0**	**0**	**0**	**0**	**0**	**3**	**4**	**0**	**0**	**0**	**2**	**15**
2028 Projected (Build) Volumes	**77**	**0**	**28**	**8**	**0**	**4**	**55**	**598**	**16**	**0**	**444**	**31**	**1262**

4/3/2020
Traffic Volumes Worksheet

Intersection:	**Lincoln Highway & Laborers Union Driveway**									
Synchro Node:	**3**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**710**	**9**	**4**	**358**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1084**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**710**	**9**	**4**	**358**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1084**
Base growth (0.52% compounded for 6 yrs)	0	22	0	0	11	0	0	0	0	0	0	0	33
740 N. Ship Road Residential Development		3			15								18
Marquis at Exton		10			3								
Waterloo Gardens Redevelopment		4			1								
Boy Scouts Recreatonal Development		0			1								
Main Street at Exton Development		16			4								
Kmart Redevelopment		4			6								
Glenloch Residential		0			2								
Parkview Apartments		11			3								
Frame Property		5			15								20
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**785**	**9**	**4**	**419**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1220**
Phase 1 New Trips		25		1	20				1				46
Phase 1 Pass-by Trips					(-45)								-45
Total Trip Distribution	**0**	**25**	**0**	**1**	**-25**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
2023 Phase 1 Projected (Build) Volumes	**0**	**810**	**9**	**5**	**394**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**1221**
Phase 2B New Trips			6	4			13		16				39
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**6**	**4**	**0**	**0**	**13**	**0**	**16**	**0**	**0**	**0**	**39**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**810**	**15**	**9**	**394**	**0**	**15**	**0**	**18**	**0**	**0**	**0**	**1260**
Base growth (0.52% compounded for 11 yrs)	0	42	1	0	21	0	0	0	0	0	0	0	64
2028 Base (No-Build) Volumes	**0**	**805**	**10**	**4**	**429**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**1251**
Phase 3 New Trips		2		0	6				0				8
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**2**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**
2028 Projected (Build) Volumes	**0**	**831**	**16**	**9**	**410**	**0**	**15**	**0**	**18**	**0**	**0**	**0**	**1299**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**479**	**1**	**1**	**881**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**1374**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**479**	**1**	**1**	**881**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**1374**
Base growth (0.52% compounded for 6 yrs)	0	15	0	0	28	0	0	0	0	0	0	0	43
740 N. Ship Road Residential Development		14			7								21
Marquis at Exton		5			10								
Waterloo Gardens Redevelopment		2			4								
Boy Scouts Recreatonal Development		1			0								
Main Street at Exton Development		13			22								
Kmart Redevelopment		10			10								
Glenloch Residential		2			0								
Parkview Apartments		6			11								
Frame Property		15			9								24
4 Tabas Lane		1			1								2
2023 Base (No-Build) Volumes	**0**	**563**	**1**	**1**	**983**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**1560**
Phase 1 New Trips		14		1	22				1				38
Phase 1 Pass-by Trips					(-40)								-40
Total Trip Distribution	**0**	**14**	**0**	**1**	**-18**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**-2**
2023 Phase 1 Projected (Build) Volumes	**0**	**577**	**1**	**2**	**965**	**0**	**6**	**0**	**7**	**0**	**0**	**0**	**1558**
Phase 2B New Trips			20	15			9		10				54
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**20**	**15**	**0**	**0**	**9**	**0**	**10**	**0**	**0**	**0**	**54**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**577**	**21**	**17**	**965**	**0**	**15**	**0**	**17**	**0**	**0**	**0**	**1612**
Base growth (0.52% compounded for 11 yrs)	0	28	0	0	52	0	0	0	0	0	0	0	80

2028 Base (No-Build) Volumes	**0**	**576**	**1**	**1**	**1007**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**1597**
Phase 3 New Trips		5		0	3				0				8
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**5**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**
2028 Projected (Build) Volumes	**0**	**595**	**21**	**17**	**992**	**0**	**15**	**0**	**17**	**0**	**0**	**0**	**1657**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**484**	**26**	**45**	**709**	**0**	**10**	**0**	**5**	**0**	**0**	**0**	**1279**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**484**	**26**	**45**	**709**	**0**	**10**	**0**	**5**	**0**	**0**	**0**	**1279**
Base growth (0.52% compounded for 6 yrs)	0	15	1	1	22	0	0	0	0	0	0	0	39
740 N. Ship Road Residential Development		18			142								160
Marquis at Exton		10			13								
Waterloo Gardens Redevelopment		4			5								
Boy Scouts Recreatonal Development		0			0								
Main Street at Exton Development		26			29								
Kmart Redevelopment		12			12								
Glenloch Residential		3			0								
Parkview Apartments		12			14								
Frame Property		20			17								37
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**604**	**27**	**46**	**963**	**0**	**10**	**0**	**5**	**0**	**0**	**0**	**1655**
Phase 1 New Trips		22		1	23				1				46
Phase 1 Pass-by Trips					(-39)								-39
Total Trip Distribution	**0**	**22**	**0**	**1**	**-16**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**7**
2023 Phase 1 Projected (Build) Volumes	**0**	**626**	**27**	**47**	**947**	**0**	**10**	**0**	**6**	**0**	**0**	**0**	**1662**
Phase 2B New Trips			17	12			11		13				53
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**17**	**12**	**0**	**0**	**11**	**0**	**13**	**0**	**0**	**0**	**53**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**626**	**44**	**59**	**947**	**0**	**21**	**0**	**19**	**0**	**0**	**0**	**1715**
Base growth (0.52% compounded for 11 yrs)	0	28	2	3	42	0	1	0	0	0	0	0	76
2028 Base (No-Build) Volumes	**0**	**617**	**28**	**48**	**983**	**0**	**11**	**0**	**5**	**0**	**0**	**0**	**1692**
Phase 3 New Trips		3		0	3				0				7
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**3**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**
2028 Projected (Build) Volumes	**0**	**642**	**45**	**61**	**970**	**0**	**22**	**0**	**19**	**0**	**0**	**0**	**1759**

TPD# EKAN.00002
4/3/2020
Traffic Volumes Worksheet

Intersection:	**Lincoln Highway & Loop Road**									
Synchro Node:	**4**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**586**	**0**	**0**	**383**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**969**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**586**	**0**	**0**	**383**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**969**
Base growth (0.52% compounded for 6 yrs)	0	19	0	0	12	0	0	0	0	0	0	0	31
740 N. Ship Road Residential Development		3			15								18
Marquis at Exton		10			3								
Waterloo Gardens Redevelopment		4			1								
Boy Scouts Recreatonal Development		0			1								
Main Street at Exton Development		16			4								
Kmart Redevelopment		4			6								
Glenloch Residential		0			2								
Parkview Apartments		11			3								
Frame Property		5			15								20
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**658**	**0**	**0**	**445**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1103**
Phase 1 New Trips		16	10	27	21								73
Phase 1 Pass-by Trips		(-20)	(20)	(45)	(-45)								0
Total Trip Distribution	**0**	**-4**	**30**	**72**	**-24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**73**
2023 Phase 1 Projected (Build) Volumes	**0**	**654**	**30**	**72**	**421**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1176**
Phase 2B New Trips		16			4								20
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**16**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**670**	**30**	**72**	**425**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1196**
Base growth (0.52% compounded for 11 yrs)	0	34	0	0	22	0	0	0	0	0	0	0	56
2028 Base (No-Build) Volumes	**0**	**673**	**0**	**0**	**455**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1128**
Phase 3 New Trips			2	2	6								9
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**2**	**2**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**
2028 Projected (Build) Volumes	**0**	**685**	**31**	**74**	**441**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1230**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**463**	**0**	**0**	**779**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1242**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**463**	**0**	**0**	**779**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1242**
Base growth (0.52% compounded for 6 yrs)	0	15	0	0	25	0	0	0	0	0	0	0	40
740 N. Ship Road Residential Development		14			7								21
Marquis at Exton		5			10								
Waterloo Gardens Redevelopment		2			4								
Boy Scouts Recreatonal Development		1			0								
Main Street at Exton Development		13			22								
Kmart Redevelopment		10			10								
Glenloch Residential		2			0								
Parkview Apartments		6			11								
Frame Property		15			9								24
4 Tabas Lane		1			1								2
2023 Base (No-Build) Volumes	**0**	**547**	**0**	**0**	**878**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1425**
Phase 1 New Trips		9	6	16	23								54
Phase 1 Pass-by Trips		(-11)	(11)	(40)	(-40)								0
Total Trip Distribution	**0**	**-2**	**17**	**56**	**-17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**54**
2023 Phase 1 Projected (Build) Volumes	**0**	**545**	**17**	**56**	**861**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1479**
Phase 2B New Trips		10			15								25
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**10**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**556**	**17**	**56**	**876**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1505**
Base growth (0.52% compounded for 11 yrs)	0	27	0	0	46	0	0	0	0	0	0	0	73

2028 Base (No-Build) Volumes	**0**	**559**	**0**	**0**	**899**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1458**
Phase 3 New Trips			5	5	3								13
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**5**	**5**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**
2028 Projected (Build) Volumes	**0**	**568**	**21**	**60**	**901**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1550**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**535**	**0**	**0**	**737**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1272**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**535**	**0**	**0**	**737**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1272**
Base growth (0.52% compounded for 6 yrs)	0	17	0	0	23	0	0	0	0	0	0	0	40
740 N. Ship Road Residential Development		18			142								160
Marquis at Exton		10			13								
Waterloo Gardens Redevelopment		4			5								
Boy Scouts Recreatonal Development		0			0								
Main Street at Exton Development		26			29								
Kmart Redevelopment		12			12								
Glenloch Residential		3			0								
Parkview Apartments		12			14								
Frame Property		20			17								37
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**657**	**0**	**0**	**992**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1649**
Phase 1 New Trips		15	8	24	24								71
Phase 1 Pass-by Trips		(-10)	(10)	(39)	(-39)								0
Total Trip Distribution	**0**	**5**	**18**	**63**	**-15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**71**
2023 Phase 1 Projected (Build) Volumes	**0**	**662**	**18**	**63**	**977**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1720**
Phase 2B New Trips		13			12								25
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**13**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**675**	**18**	**63**	**989**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1745**
Base growth (0.52% compounded for 11 yrs)	0	31	0	0	43	0	0	0	0	0	0	0	74
2028 Base (No-Build) Volumes	**0**	**671**	**0**	**0**	**1012**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1683**
Phase 3 New Trips			4	3	3								10
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**4**	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**
2028 Projected (Build) Volumes	**0**	**689**	**22**	**66**	**1012**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1789**

TPD# EKAN.00002
4/3/2020
Traffic Volumes Worksheet

Intersection:	**Lincoln Highway & Proposed Site Access RIRO**									
Synchro Node:	**5**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**586**	**0**	**0**	**383**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**969**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**586**	**0**	**0**	**383**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**969**
Base growth (0.52% compounded for 6 yrs)	0	19	0	0	12	0	0	0	0	0	0	0	31
740 N. Ship Road Residential Development		3			15								18
Marquis at Exton		10			3								
Waterloo Gardens Redevelopment		4			1								
Boy Scouts Recreatonal Development		0			1								
Main Street at Exton Development		16			4								
Kmart Redevelopment		4			6								
Glenloch Residential		0			2								
Parkview Apartments		11			3								
Frame Property		5			15								20
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**658**	**0**	**0**	**445**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1103**
Phase 1 New Trips			16		48				24				89
Phase 1 Pass-by Trips		(-59)	(39)						(59)				39
Total Trip Distribution	**0**	**-59**	**55**	**0**	**48**	**0**	**0**	**0**	**83**	**0**	**0**	**0**	**128**
2023 Phase 1 Projected (Build) Volumes	**0**	**599**	**55**	**0**	**493**	**0**	**0**	**0**	**83**	**0**	**0**	**0**	**1231**
Phase 2B New Trips		16			4								20
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**16**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**615**	**55**	**0**	**497**	**0**	**0**	**0**	**83**	**0**	**0**	**0**	**1250**
Base growth (0.52% compounded for 11 yrs)	0	34	0	0	22	0	0	0	0	0	0	0	56
2028 Base (No-Build) Volumes	**0**	**673**	**0**	**0**	**455**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1128**
Phase 3 New Trips					8								8
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**
2028 Projected (Build) Volumes	**0**	**630**	**55**	**0**	**515**	**0**	**0**	**0**	**83**	**0**	**0**	**0**	**1283**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**463**	**0**	**0**	**779**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1242**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**463**	**0**	**0**	**779**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1242**
Base growth (0.52% compounded for 6 yrs)	0	15	0	0	25	0	0	0	0	0	0	0	40
740 N. Ship Road Residential Development		14			7								21
Marquis at Exton		5			10								
Waterloo Gardens Redevelopment		2			4								
Boy Scouts Recreatonal Development		1			0								
Main Street at Exton Development		13			22								
Kmart Redevelopment		10			10								
Glenloch Residential		2			0								
Parkview Apartments		6			11								
Frame Property		15			9								24
4 Tabas Lane		1			1								2
2023 Base (No-Build) Volumes	**0**	**547**	**0**	**0**	**878**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1425**
Phase 1 New Trips			9		39				27				76
Phase 1 Pass-by Trips		(-31)	(20)						(31)				20
Total Trip Distribution	**0**	**-31**	**29**	**0**	**39**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**96**
2023 Phase 1 Projected (Build) Volumes	**0**	**516**	**29**	**0**	**917**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**1521**
Phase 2B New Trips		10			15								25
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**10**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**526**	**29**	**0**	**932**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**1546**
Base growth (0.52% compounded for 11 yrs)	0	27	0	0	46	0	0	0	0	0	0	0	73

2028 Base (No-Build) Volumes	**0**	**559**	**0**	**0**	**899**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1458**
Phase 3 New Trips					8								8
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**
2028 Projected (Build) Volumes	**0**	**538**	**29**	**0**	**961**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**1587**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**535**	**0**	**0**	**737**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1272**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**535**	**0**	**0**	**737**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1272**
Base growth (0.52% compounded for 6 yrs)	0	17	0	0	23	0	0	0	0	0	0	0	40
740 N. Ship Road Residential Development		18			142								160
Marquis at Exton		10			13								
Waterloo Gardens Redevelopment		4			5								
Boy Scouts Recreatonal Development		0			0								
Main Street at Exton Development		26			29								
Kmart Redevelopment		12			12								
Glenloch Residential		3			0								
Parkview Apartments		12			14								
Frame Property		20			17								37
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**657**	**0**	**0**	**992**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1649**
Phase 1 New Trips			15		48				28				90
Phase 1 Pass-by Trips		(-30)	(20)						(30)				20
Total Trip Distribution	**0**	**-30**	**35**	**0**	**48**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**110**
2023 Phase 1 Projected (Build) Volumes	**0**	**627**	**35**	**0**	**1040**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**1759**
Phase 2B New Trips		13			12								25
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**13**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**640**	**35**	**0**	**1052**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**1785**
Base growth (0.52% compounded for 11 yrs)	0	31	0	0	43	0	0	0	0	0	0	0	74
2028 Base (No-Build) Volumes	**0**	**671**	**0**	**0**	**1012**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1683**
Phase 3 New Trips					6								6
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**
2028 Projected (Build) Volumes	**0**	**654**	**35**	**0**	**1078**	**0**	**0**	**0**	**58**	**0**	**0**	**0**	**1825**

TPD# EKAN.00002
4/3/2020
Traffic Volumes Worksheet

Intersection:	**Ship Road & Proposed Site Access RI**											
Synchro Node:	**6**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**473**	**0**	**0**	**290**	**0**	**763**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**473**	**0**	**0**	**290**	**0**	**763**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	15	0	0	9	0	24
740 N. Ship Road Residential Development								-4			15		11
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								4			0		
Parkview Apartments								0			0		
Frame Property								5			15		20
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**493**	**0**	**0**	**329**	**0**	**822**
Phase 1 New Trips								31			10	9	49
Phase 1 Pass-by Trips								(45)			(-10)	(10)	45
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**76**	**0**	**0**	**-1**	**19**	**94**
2023 Phase 1 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**569**	**0**	**0**	**329**	**19**	**916**
Phase 2B New Trips								15			5		19
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**0**	**5**	**0**	**19**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**584**	**0**	**0**	**333**	**19**	**935**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	28	0	0	17	0	45
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**506**	**0**	**0**	**337**	**0**	**843**
Phase 3 New Trips								16					16
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**16**
2028 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**613**	**0**	**0**	**341**	**19**	**972**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**756**	**0**	**0**	**401**	**0**	**1157**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**756**	**0**	**0**	**401**	**0**	**1157**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	24	0	0	13	0	37
740 N. Ship Road Residential Development								-71			7		-64
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								0			4		
Parkview Apartments								0			0		
Frame Property								15			9		24
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**724**	**0**	**0**	**434**	**0**	**1158**
Phase 1 New Trips								35			6	5	46
Phase 1 Pass-by Trips								(40)			(-5)	(5)	40
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**75**	**0**	**0**	**1**	**10**	**86**
2023 Phase 1 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**799**	**0**	**0**	**435**	**10**	**1244**
Phase 2B New Trips								10			15		25
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**15**	**0**	**25**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**809**	**0**	**0**	**450**	**10**	**1269**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	44	0	0	24	0	68

2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**744**	**0**	**0**	**445**	**0**	**1189**
Phase 3 New Trips								9			3		12
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**3**	**0**	**12**
2028 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**838**	**0**	**0**	**463**	**10**	**1311**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**609**	**0**	**0**	**354**	**0**	**963**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**609**	**0**	**0**	**354**	**0**	**963**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	19	0	0	11	0	30
740 N. Ship Road Residential Development								14			14		28
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								0			6		
Parkview Apartments								0			0		
Frame Property								20			17		37
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**662**	**0**	**0**	**402**	**0**	**1064**
Phase 1 New Trips								35			8	7	51
Phase 1 Pass-by Trips								(39)			(-4)	(4)	39
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**74**	**0**	**0**	**4**	**11**	**90**
2023 Phase 1 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**736**	**0**	**0**	**406**	**11**	**1154**
Phase 2B New Trips								12			13		25
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**13**	**0**	**25**
2023 Phase 1 & 2 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**748**	**0**	**0**	**420**	**11**	**1179**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	36	0	0	21	0	57
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**679**	**0**	**0**	**412**	**0**	**1091**
Phase 3 New Trips								9			3		12
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**3**	**0**	**12**
2028 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**774**	**0**	**0**	**433**	**11**	**1218**

TPD# EKAN.00002
4/3/2020
Traffic Volumes Worksheet

Intersection:	**Ship Road & Loop Road**									
Synchro Node:	**7**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**574**	**0**	**0**	**311**	**0**	**885**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**574**	**0**	**0**	**311**	**0**	**885**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	18	0	0	10	0	28
740 N. Ship Road Residential Development								3			15		18
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								4			0		
Parkview Apartments								0			0		
Frame Property								5			15		20
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**604**	**0**	**0**	**351**	**0**	**955**
Phase 1 New Trips	10		6					23			7		47
Phase 1 Pass-by Trips	(31)		(13)								(-13)		31
Total Trip Distribution	**41**	**0**	**19**	**0**	**0**	**0**	**0**	**23**	**0**	**0**	**-6**	**0**	**78**
2023 Phase 1 Projected (Build) Volumes	**41**	**0**	**19**	**0**	**0**	**0**	**0**	**627**	**0**	**0**	**345**	**0**	**1033**
Phase 2B New Trips								16			5		21
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**5**	**0**	**21**
2023 Phase 1 & 2 Projected (Build) Volumes	**41**	**0**	**19**	**0**	**0**	**0**	**0**	**643**	**0**	**0**	**350**	**0**	**1053**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	34	0	0	18	0	52
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**620**	**0**	**0**	**359**	**0**	**979**
Phase 3 New Trips	7		3					2			1		12
Phase 3 Pass-by Trips													0
Total Trip Distribution	**7**	**0**	**3**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**12**
2028 Projected (Build) Volumes	**48**	**0**	**22**	**0**	**0**	**0**	**0**	**660**	**0**	**0**	**358**	**0**	**1089**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**614**	**0**	**0**	**533**	**0**	**1147**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**614**	**0**	**0**	**533**	**0**	**1147**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	19	0	0	17	0	36
740 N. Ship Road Residential Development								14			7		21
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								0			4		
Parkview Apartments								0			0		
Frame Property								15			9		24
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**662**	**0**	**0**	**570**	**0**	**1232**
Phase 1 New Trips	12		7					13			7		39
Phase 1 Pass-by Trips	(24)		(5)								(-5)		24
Total Trip Distribution	**36**	**0**	**12**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**2**	**0**	**63**
2023 Phase 1 Projected (Build) Volumes	**36**	**0**	**12**	**0**	**0**	**0**	**0**	**675**	**0**	**0**	**572**	**0**	**1295**
Phase 2B New Trips								10			16		27
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**16**	**0**	**27**
2023 Phase 1 & 2 Projected (Build) Volumes	**36**	**0**	**12**	**0**	**0**	**0**	**0**	**685**	**0**	**0**	**588**	**0**	**1322**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	36	0	0	31	0	67

2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**679**	**0**	**0**	**584**	**0**	**1263**
Phase 3 New Trips	4		2					5			0		10
Phase 3 Pass-by Trips													0
Total Trip Distribution	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**10**
2028 Projected (Build) Volumes	**40**	**0**	**14**	**0**	**0**	**0**	**0**	**707**	**0**	**0**	**603**	**0**	**1363**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**528**	**0**	**0**	**403**	**0**	**931**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**528**	**0**	**0**	**403**	**0**	**931**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	17	0	0	13	0	30
740 N. Ship Road Residential Development								14			14		28
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								0			6		
Parkview Apartments								0			0		
Frame Property								20			17		37
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**579**	**0**	**0**	**453**	**0**	**1032**
Phase 1 New Trips	12		7					21			7		47
Phase 1 Pass-by Trips	(23)		(4)								(-4)		23
Total Trip Distribution	**35**	**0**	**11**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**3**	**0**	**70**
2023 Phase 1 Projected (Build) Volumes	**35**	**0**	**11**	**0**	**0**	**0**	**0**	**600**	**0**	**0**	**456**	**0**	**1102**
Phase 2B New Trips								13			14		27
Phase 2B Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**14**	**0**	**27**
2023 Phase 1 & 2 Projected (Build) Volumes	**35**	**0**	**11**	**0**	**0**	**0**	**0**	**613**	**0**	**0**	**470**	**0**	**1129**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	31	0	0	24	0	55
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**593**	**0**	**0**	**464**	**0**	**1057**
Phase 3 New Trips	4		2					3			0		9
Phase 3 Pass-by Trips													0
Total Trip Distribution	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**9**
2028 Projected (Build) Volumes	**39**	**0**	**13**	**0**	**0**	**0**	**0**	**630**	**0**	**0**	**482**	**0**	**1163**

TPD# EKAN.00002
4/3/2020
Traffic Volumes Worksheet

Intersection:	**Ship Road & Laborers Union Extension**											
Synchro Node:	**8**	**Adjacent intersections:**	**West**	**0**	**East**	**0**	**North**	**0**	**South**	**0**		

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**574**	**0**	**0**	**311**	**0**	**885**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**574**	**0**	**0**	**311**	**0**	**885**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	18	0	0	10	0	28
740 N. Ship Road Residential Development								3			15		18
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								4			0		
Parkview Apartments								0			0		
Frame Property								5			15		20
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**604**	**0**	**0**	**351**	**0**	**955**
Phase 1 New Trips								23			13		36
Phase 1 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**0**	**13**	**0**	**36**
2023 Phase 1 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**627**	**0**	**0**	**364**	**0**	**991**
Phase 2B New Trips	16		9				3					5	33
Phase 2B Pass-by Trips													0
Total Trip Distribution	**16**	**0**	**9**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**5**	**33**
2023 Phase 1 & 2 Projected (Build) Volumes	**16**	**0**	**9**	**0**	**0**	**0**	**3**	**627**	**0**	**0**	**364**	**5**	**1024**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	34	0	0	18	0	52
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**620**	**0**	**0**	**359**	**0**	**979**
Phase 3 New Trips								2			4		5
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**4**	**0**	**5**
2028 Projected (Build) Volumes	**16**	**0**	**9**	**0**	**0**	**0**	**3**	**645**	**0**	**0**	**376**	**5**	**1053**

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**614**	**0**	**0**	**533**	**0**	**1147**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**614**	**0**	**0**	**533**	**0**	**1147**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	19	0	0	17	0	36
740 N. Ship Road Residential Development								14			7		21
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								0			4		
Parkview Apartments								0			0		
Frame Property								15			9		24
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**662**	**0**	**0**	**570**	**0**	**1232**
Phase 1 New Trips								13			14		27
Phase 1 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**14**	**0**	**27**
2023 Phase 1 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**675**	**0**	**0**	**584**	**0**	**1259**
Phase 2B New Trips	10		6				10					16	43
Phase 2B Pass-by Trips													0
Total Trip Distribution	**10**	**0**	**6**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**16**	**43**
2023 Phase 1 & 2 Projected (Build) Volumes	**10**	**0**	**6**	**0**	**0**	**0**	**10**	**675**	**0**	**0**	**584**	**16**	**1302**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	36	0	0	31	0	67

2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**679**	**0**	**0**	**584**	**0**	**1263**
Phase 3 New Trips								5			2		6
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**2**	**0**	**6**
2028 Projected (Build) Volumes	**10**	**0**	**6**	**0**	**0**	**0**	**10**	**697**	**0**	**0**	**600**	**16**	**1340**

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	Volume
2017 Existing Counts	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**528**	**0**	**0**	**403**	**0**	**931**
Balancing													0
2017 Existing Volumes (Balanced)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**528**	**0**	**0**	**403**	**0**	**931**
Base growth (0.52% compounded for 6 yrs)	0	0	0	0	0	0	0	17	0	0	13	0	30
740 N. Ship Road Residential Development								14			14		28
Marquis at Exton								0			0		
Waterloo Gardens Redevelopment								0			0		
Boy Scouts Recreatonal Development								0			0		
Main Street at Exton Development								0			0		
Kmart Redevelopment								0			0		
Glenloch Residential								0			6		
Parkview Apartments								0			0		
Frame Property								20			17		37
4 Tabas Lane													0
2023 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**579**	**0**	**0**	**453**	**0**	**1032**
Phase 1 New Trips								21			14		35
Phase 1 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**14**	**0**	**35**
2023 Phase 1 Projected (Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**600**	**0**	**0**	**467**	**0**	**1067**
Phase 2B New Trips	13		8				10					14	45
Phase 2B Pass-by Trips													0
Total Trip Distribution	**13**	**0**	**8**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**14**	**45**
2023 Phase 1 & 2 Projected (Build) Volumes	**13**	**0**	**8**	**0**	**0**	**0**	**10**	**600**	**0**	**0**	**467**	**14**	**1112**
Base growth (0.52% compounded for 11 yrs)	0	0	0	0	0	0	0	31	0	0	24	0	55
2028 Base (No-Build) Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**593**	**0**	**0**	**464**	**0**	**1057**
Phase 3 New Trips								3			2		5
Phase 3 Pass-by Trips													0
Total Trip Distribution	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**2**	**0**	**5**
2028 Projected (Build) Volumes	**13**	**0**	**8**	**0**	**0**	**0**	**10**	**617**	**0**	**0**	**480**	**14**	**1142**

APPENDIX G:
Capacity Analysis Worksheets

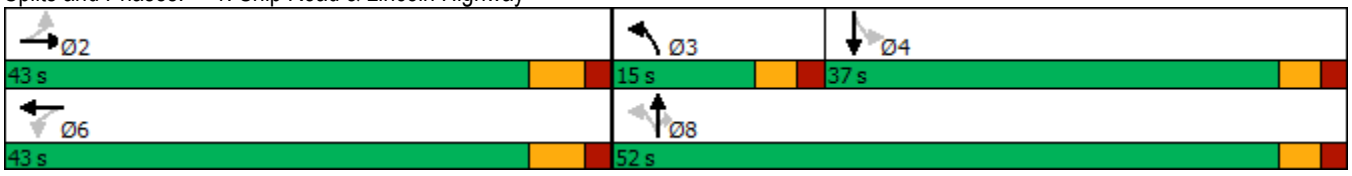
Existing Conditions

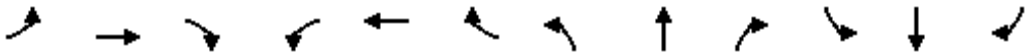
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	472	66	27	234	73	121	272	80	143	197	28
Future Volume (vph)	48	472	66	27	234	73	121	272	80	143	197	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2239			1258			523			797	
Travel Time (s)		33.9			19.1			10.2			15.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	8%	4%	6%	1%	6%	3%	4%	4%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	43.0	43.0		43.0	43.0		15.0	52.0	52.0	37.0	37.0	
Total Split (%)	45.3%	45.3%		45.3%	45.3%		15.8%	54.7%	54.7%	38.9%	38.9%	
Maximum Green (s)	37.0	37.0		37.0	37.0		10.0	47.0	47.0	32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 83.7
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	472	66	27	234	73	121	272	80	143	197	28
Future Volume (veh/h)	48	472	66	27	234	73	121	272	80	143	197	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1772	1772	1744	1716	1716	1716	1758	1744	1702	1702	1702
Adj Flow Rate, veh/h	49	487	68	28	241	75	125	280	82	147	203	29
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	4	6	6	6	3	4	7	7	7
Cap, veh/h	374	591	83	194	488	152	544	847	712	225	263	34
Arrive On Green	0.39	0.39	0.37	0.39	0.39	0.37	0.09	0.48	0.48	0.32	0.33	0.32
Sat Flow, veh/h	1080	1521	212	840	1255	391	1634	1758	1478	457	787	103
Grp Volume(v), veh/h	49	0	555	28	0	316	125	280	82	379	0	0
Grp Sat Flow(s),veh/h/ln	1080	0	1734	840	0	1645	1634	1758	1478	1346	0	0
Q Serve(g_s), s	2.5	0.0	20.0	2.1	0.0	10.1	3.1	6.8	2.1	16.1	0.0	0.0
Cycle Q Clear(g_c), s	12.1	0.0	20.0	21.6	0.0	10.1	3.1	6.8	2.1	18.3	0.0	0.0
Prop In Lane	1.00		0.12	1.00		0.24	1.00		1.00	0.39		0.08
Lane Grp Cap(c), veh/h	374	0	674	194	0	640	544	847	712	503	0	0
V/C Ratio(X)	0.13	0.00	0.82	0.14	0.00	0.49	0.23	0.33	0.12	0.75	0.00	0.00
Avail Cap(c_a), veh/h	545	0	949	327	0	900	657	1215	1021	687	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	19.1	28.6	0.0	16.2	11.0	11.1	9.9	21.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	4.1	0.3	0.0	0.6	0.2	0.2	0.1	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	12.0	0.7	0.0	6.0	1.8	4.2	1.1	9.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	23.3	28.9	0.0	16.7	11.2	11.3	9.9	24.6	0.0	0.0
LnGrp LOS	C	A	C	C	A	B	B	B	A	C	A	A
Approach Vol, veh/h		604			344			487			379	
Approach Delay, s/veh		23.1			17.7			11.1			24.6	
Approach LOS		C			B			B			C	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		32.0	10.2	27.2		32.0		37.4				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		37.0	10.0	32.0		37.0		47.0				
Max Q Clear Time (g_c+I1), s		22.0	5.6	20.3		24.1		9.3				
Green Ext Time (p_c), s		3.1	0.1	1.9		1.5		2.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.1									
HCM 6th LOS			B									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	14	413	161	0	301
Future Volume (vph)	10	14	413	161	0	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		498			523
Travel Time (s)	9.9		9.7			10.2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	30%	21%	2%	2%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	14	413	161	0	301
Future Vol, veh/h	10	14	413	161	0	301
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	30	21	2	2	0	5
Mvmt Flow	12	16	480	187	0	350

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	830	480	0	-	-	-
Stage 1	480	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	-	-
Critical Hdwy Stg 1	5.7	-	-	-	-	-
Critical Hdwy Stg 2	5.7	-	-	-	-	-
Follow-up Hdwy	3.1	3.2	-	-	-	-
Pot Cap-1 Maneuver	363	597	-	0	0	-
Stage 1	663	-	-	0	0	-
Stage 2	773	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	363	597	-	-	-	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	773	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	363	597	-
HCM Lane V/C Ratio	-	0.032	0.027	-
HCM Control Delay (s)	-	15.2	11.2	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	0.1	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	710	9	4	358	2	1
Future Volume (vph)	710	9	4	358	2	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	582			2239	619	
Travel Time (s)	8.8			33.9	16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	10%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	710	9	4	358	2	1
Future Vol, veh/h	710	9	4	358	2	1
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	-	-	-1	-5	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	10	0	0
Mvmt Flow	772	10	4	389	2	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	782	0	1174	777
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	397	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	642	-	323	465
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	642	-	320	465
Mov Cap-2 Maneuver	-	-	-	-	472	-
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	861	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.7
HCM LOS			B

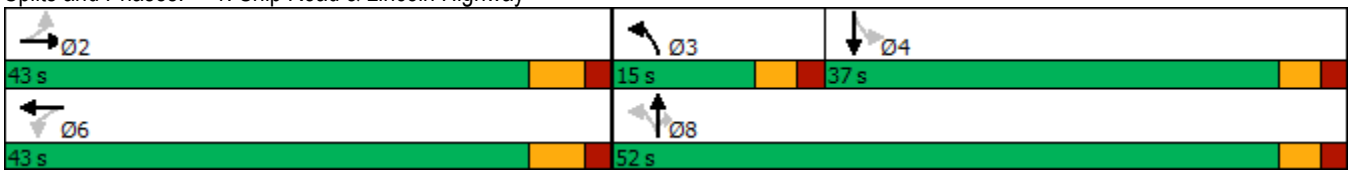
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	470	-	-	642	-
HCM Lane V/C Ratio	0.007	-	-	0.007	-
HCM Control Delay (s)	12.7	-	-	10.6	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	0	-

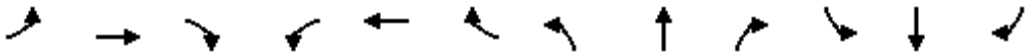
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	317	113	66	505	135	240	496	20	36	222	34
Future Volume (vph)	33	317	113	66	505	135	240	496	20	36	222	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2240			1012			536			767	
Travel Time (s)		33.9			15.3			10.4			14.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	43.0	43.0		43.0	43.0		15.0	52.0	52.0	37.0	37.0	
Total Split (%)	45.3%	45.3%		45.3%	45.3%		15.8%	54.7%	54.7%	38.9%	38.9%	
Maximum Green (s)	37.0	37.0		37.0	37.0		10.0	47.0	47.0	32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 84.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

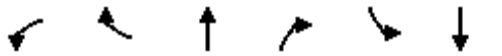




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	317	113	66	505	135	240	496	20	36	222	34
Future Volume (veh/h)	33	317	113	66	505	135	240	496	20	36	222	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	35	337	120	70	537	144	255	528	21	38	236	36
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	168	563	200	331	612	164	502	769	606	81	314	45
Arrive On Green	0.45	0.45	0.44	0.45	0.45	0.44	0.14	0.43	0.43	0.23	0.24	0.23
Sat Flow, veh/h	771	1238	441	934	1346	361	1688	1786	1406	123	1310	188
Grp Volume(v), veh/h	35	0	457	70	0	681	255	528	21	310	0	0
Grp Sat Flow(s),veh/h/ln	771	0	1679	934	0	1707	1688	1786	1406	1621	0	0
Q Serve(g_s), s	3.4	0.0	16.1	4.7	0.0	28.4	8.2	18.8	0.7	7.8	0.0	0.0
Cycle Q Clear(g_c), s	31.3	0.0	16.1	20.3	0.0	28.4	8.2	18.8	0.7	14.1	0.0	0.0
Prop In Lane	1.00		0.26	1.00		0.21	1.00		1.00	0.12		0.12
Lane Grp Cap(c), veh/h	168	0	763	331	0	776	502	769	606	419	0	0
V/C Ratio(X)	0.21	0.00	0.60	0.21	0.00	0.88	0.51	0.69	0.03	0.74	0.00	0.00
Avail Cap(c_a), veh/h	191	0	813	359	0	827	502	1093	861	700	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.4	0.0	16.1	23.4	0.0	19.5	16.0	18.1	12.9	28.0	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.1	0.3	0.0	10.1	0.8	1.1	0.0	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	9.3	1.8	0.0	17.3	5.5	11.6	0.4	9.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	17.2	23.8	0.0	29.6	16.9	19.2	12.9	30.6	0.0	0.0
LnGrp LOS	C	A	B	C	A	C	B	B	B	C	A	A
Approach Vol, veh/h		492			751			804			310	
Approach Delay, s/veh		18.4			29.1			18.3			30.6	
Approach LOS		B			C			B			C	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		40.7	15.0	22.8		40.7		37.8				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		37.0	10.0	32.0		37.0		47.0				
Max Q Clear Time (g_c+I1), s		33.8	10.7	16.1		30.4		21.3				
Green Ext Time (p_c), s		0.9	0.0	1.7		2.5		3.5				

Intersection Summary												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			C									



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	76	166	593	21	0	457
Future Volume (vph)	76	166	593	21	0	457
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		424			536
Travel Time (s)	9.9		8.3			10.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	76	166	593	21	0	457
Future Vol, veh/h	76	166	593	21	0	457
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	1	0	1
Mvmt Flow	81	177	631	22	0	486

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1117	631	0	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	253	508	-	0	0	-
Stage 1	599	-	-	0	0	-
Stage 2	704	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	253	508	-	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	704	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	253	508	-
HCM Lane V/C Ratio	-	0.32	0.348	-
HCM Control Delay (s)	-	25.8	15.8	-
HCM Lane LOS	-	D	C	-
HCM 95th %tile Q(veh)	-	1.3	1.5	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	479	1	1	881	6	6
Future Volume (vph)	479	1	1	881	6	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	550			2240	560	
Travel Time (s)	8.3			33.9	15.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	2%	0%	17%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	479	1	1	881	6	6
Future Vol, veh/h	479	1	1	881	6	6
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	-	-	-1	-5	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	0	0	2	0	17
Mvmt Flow	494	1	1	908	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	495	0	1405	495
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	910	-
Critical Hdwy	-	-	4.3	-	5.4	5.8
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.2
Pot Cap-1 Maneuver	-	-	811	-	248	626
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	811	-	248	626
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	562	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.5
HCM LOS			C

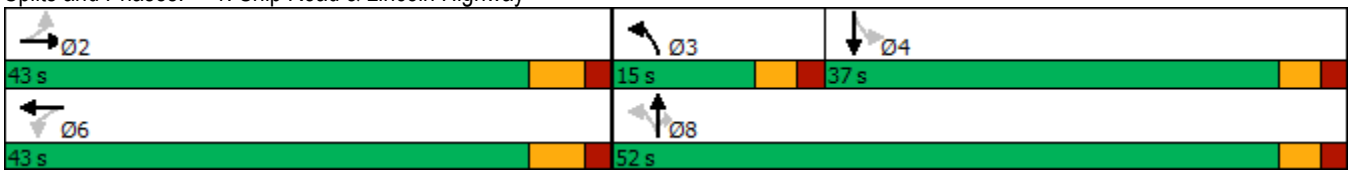
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	355	-	-	811	-
HCM Lane V/C Ratio	0.035	-	-	0.001	-
HCM Control Delay (s)	15.5	-	-	9.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

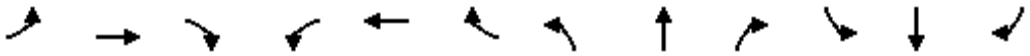
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	353	145	32	452	69	245	319	45	59	177	40
Future Volume (vph)	37	353	145	32	452	69	245	319	45	59	177	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2242			1107			563			367	
Travel Time (s)		34.0			16.8			11.0			7.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	43.0	43.0		43.0	43.0		15.0	52.0	52.0	37.0	37.0	
Total Split (%)	45.3%	45.3%		45.3%	45.3%		15.8%	54.7%	54.7%	38.9%	38.9%	
Maximum Green (s)	37.0	37.0		37.0	37.0		10.0	47.0	47.0	32.0	32.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 78.4
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	353	145	32	452	69	245	319	45	59	177	40
Future Volume (veh/h)	37	353	145	32	452	69	245	319	45	59	177	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	39	376	154	34	481	73	261	339	48	63	188	43
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	224	482	198	228	612	93	585	820	646	123	268	56
Arrive On Green	0.41	0.41	0.39	0.41	0.41	0.39	0.15	0.46	0.46	0.23	0.25	0.23
Sat Flow, veh/h	868	1185	485	874	1503	228	1688	1786	1406	239	1093	228
Grp Volume(v), veh/h	39	0	530	34	0	554	261	339	48	294	0	0
Grp Sat Flow(s),veh/h/ln	868	0	1671	874	0	1731	1688	1786	1406	1559	0	0
Q Serve(g_s), s	2.7	0.0	18.6	2.3	0.0	18.8	6.9	8.5	1.3	7.8	0.0	0.0
Cycle Q Clear(g_c), s	21.0	0.0	18.6	20.4	0.0	18.8	6.9	8.5	1.3	11.8	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.13	1.00		1.00	0.21		0.15
Lane Grp Cap(c), veh/h	224	0	680	228	0	705	585	820	646	424	0	0
V/C Ratio(X)	0.17	0.00	0.78	0.15	0.00	0.79	0.45	0.41	0.07	0.69	0.00	0.00
Avail Cap(c_a), veh/h	361	0	943	365	0	977	600	1274	1003	791	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	0.0	17.5	26.0	0.0	17.5	12.6	12.1	10.2	23.6	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	2.8	0.3	0.0	2.9	0.5	0.3	0.0	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	10.6	0.8	0.0	11.0	4.3	5.4	0.6	7.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	0.0	20.3	26.3	0.0	20.4	13.2	12.5	10.2	25.7	0.0	0.0
LnGrp LOS	C	A	C	C	A	C	B	B	B	C	A	A
Approach Vol, veh/h		569			588			648			294	
Approach Delay, s/veh		20.8			20.7			12.6			25.7	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		32.4	14.4	20.5		32.4		34.9				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		37.0	10.0	32.0		37.0		47.0				
Max Q Clear Time (g_c+I1), s		23.5	9.4	13.8		22.9		11.0				
Green Ext Time (p_c), s		2.9	0.0	1.7		3.0		2.3				

Intersection Summary												
HCM 6th Ctrl Delay			18.9									
HCM 6th LOS			B									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	8	516	12	0	396
Future Volume (vph)	7	8	516	12	0	396
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		430			563
Travel Time (s)	9.9		8.4			11.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	8	516	12	0	396
Future Vol, veh/h	7	8	516	12	0	396
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	7	8	527	12	0	404

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	931	527	0	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	330	583	-	0	0	-
Stage 1	673	-	-	0	0	-
Stage 2	771	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	330	583	-	-	-	-
Mov Cap-2 Maneuver	330	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	330	583	-
HCM Lane V/C Ratio	-	0.022	0.014	-
HCM Control Delay (s)	-	16.2	11.3	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	484	26	45	709	10	5
Future Volume (vph)	484	26	45	709	10	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	394			2242	479	
Travel Time (s)	6.0			34.0	13.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	484	26	45	709	10	5
Future Vol, veh/h	484	26	45	709	10	5
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	-	-	-1	-5	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	520	28	48	762	11	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	548	0	1392	534
Stage 1	-	-	-	-	534	-
Stage 2	-	-	-	-	858	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	777	-	251	622
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	777	-	224	622
Mov Cap-2 Maneuver	-	-	-	-	224	-
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	526	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	18.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	285	-	-	777	-
HCM Lane V/C Ratio	0.057	-	-	0.062	-
HCM Control Delay (s)	18.4	-	-	9.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

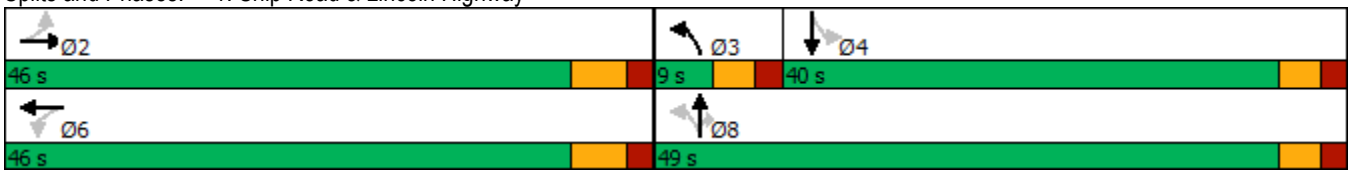
2023 Base Conditions

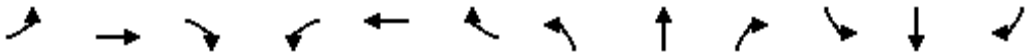
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	540	68	58	294	101	122	281	91	155	203	29
Future Volume (vph)	50	540	68	58	294	101	122	281	91	155	203	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2239			1258			523			797	
Travel Time (s)		33.9			19.1			10.2			15.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	8%	4%	6%	1%	6%	3%	4%	4%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	46.0	46.0		46.0	46.0		9.0	49.0	49.0	40.0	40.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		9.5%	51.6%	51.6%	42.1%	42.1%	
Maximum Green (s)	40.0	40.0		40.0	40.0		4.0	44.0	44.0	35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 84.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	540	68	58	294	101	122	281	91	155	203	29
Future Volume (veh/h)	50	540	68	58	294	101	122	281	91	155	203	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1772	1772	1744	1716	1716	1716	1758	1744	1702	1702	1702
Adj Flow Rate, veh/h	52	557	70	60	303	104	126	290	94	160	209	30
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	4	6	6	6	3	4	7	7	7
Cap, veh/h	344	678	85	187	537	184	473	797	670	226	254	34
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.06	0.45	0.45	0.33	0.35	0.33
Sat Flow, veh/h	994	1543	194	786	1221	419	1634	1758	1478	480	734	99
Grp Volume(v), veh/h	52	0	627	60	0	407	126	290	94	399	0	0
Grp Sat Flow(s),veh/h/ln	994	0	1737	786	0	1640	1634	1758	1478	1313	0	0
Q Serve(g_s), s	3.4	0.0	26.6	6.0	0.0	15.6	4.0	9.1	3.1	22.4	0.0	0.0
Cycle Q Clear(g_c), s	18.5	0.0	26.6	32.1	0.0	15.6	4.0	9.1	3.1	24.3	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.26	1.00		1.00	0.40		0.08
Lane Grp Cap(c), veh/h	344	0	764	187	0	721	473	797	670	498	0	0
V/C Ratio(X)	0.15	0.00	0.82	0.32	0.00	0.56	0.27	0.36	0.14	0.80	0.00	0.00
Avail Cap(c_a), veh/h	393	0	849	225	0	801	473	943	792	605	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.2	0.0	20.7	34.5	0.0	17.6	14.5	15.0	13.4	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	5.9	1.0	0.0	0.7	0.3	0.3	0.1	6.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	16.0	2.0	0.0	9.1	2.5	6.1	1.8	12.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	0.0	26.6	35.5	0.0	18.4	14.8	15.3	13.5	32.2	0.0	0.0
LnGrp LOS	C	A	C	D	A	B	B	B	B	C	A	A
Approach Vol, veh/h		679			467			510			399	
Approach Delay, s/veh		26.5			20.6			14.8			32.2	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		41.9	9.0	33.0		41.9		42.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		40.0	4.0	35.0		40.0		44.0				
Max Q Clear Time (g_c+I1), s		28.6	6.5	26.3		34.6		11.6				
Green Ext Time (p_c), s		3.2	0.0	1.8		1.3		2.1				

Intersection Summary												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	7	438	166	0	341
Future Volume (vph)	10	7	438	166	0	341
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		498			523
Travel Time (s)	9.9		9.7			10.2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	30%	21%	2%	2%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	7	438	166	0	341
Future Vol, veh/h	10	7	438	166	0	341
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	30	21	2	2	0	5
Mvmt Flow	12	8	509	193	0	397

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	906	509	0	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	-	-
Critical Hdwy Stg 1	5.7	-	-	-	-	-
Critical Hdwy Stg 2	5.7	-	-	-	-	-
Follow-up Hdwy	3.1	3.2	-	-	-	-
Pot Cap-1 Maneuver	326	574	-	0	0	-
Stage 1	641	-	-	0	0	-
Stage 2	731	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	326	574	-	-	-	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	326	574	-
HCM Lane V/C Ratio	-	0.036	0.014	-
HCM Control Delay (s)	-	16.5	11.4	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	785	9	4	419	2	1
Future Volume (vph)	785	9	4	419	2	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	582			2239	619	
Travel Time (s)	8.8			33.9	16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	10%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	785	9	4	419	2	1
Future Vol, veh/h	785	9	4	419	2	1
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	-	-	-1	-5	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	10	0	0
Mvmt Flow	853	10	4	455	2	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	863	0	1321	858
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	463	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	600	-	273	422
Stage 1	-	-	-	-	589	-
Stage 2	-	-	-	-	821	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	600	-	271	422
Mov Cap-2 Maneuver	-	-	-	-	430	-
Stage 1	-	-	-	-	589	-
Stage 2	-	-	-	-	814	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.5
HCM LOS			B

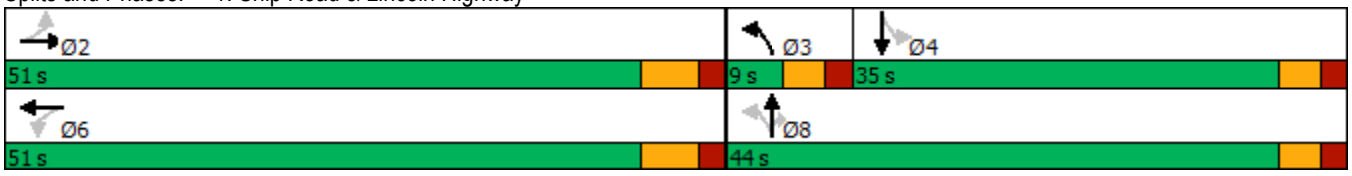
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	427	-	-	600	-
HCM Lane V/C Ratio	0.008	-	-	0.007	-
HCM Control Delay (s)	13.5	-	-	11	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	0	-

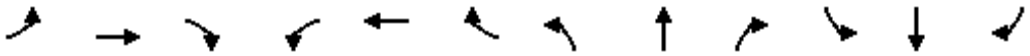
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	394	119	84	659	173	184	491	50	61	231	35
Future Volume (vph)	34	394	119	84	659	173	184	491	50	61	231	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2240			1012			536			767	
Travel Time (s)		33.9			15.3			10.4			14.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	51.0	51.0		51.0	51.0		9.0	44.0	44.0	35.0	35.0	
Total Split (%)	53.7%	53.7%		53.7%	53.7%		9.5%	46.3%	46.3%	36.8%	36.8%	
Maximum Green (s)	45.0	45.0		45.0	45.0		4.0	39.0	39.0	30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 92.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	394	119	84	659	173	184	491	50	61	231	35
Future Volume (veh/h)	34	394	119	84	659	173	184	491	50	61	231	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	36	419	127	89	701	184	196	522	53	65	246	37
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	627	190	284	655	172	332	752	592	92	295	41
Arrive On Green	0.48	0.48	0.47	0.48	0.48	0.47	0.05	0.42	0.42	0.32	0.33	0.32
Sat Flow, veh/h	638	1295	392	861	1353	355	1688	1786	1406	143	905	125
Grp Volume(v), veh/h	36	0	546	89	0	885	196	522	53	348	0	0
Grp Sat Flow(s),veh/h/ln	638	0	1687	861	0	1708	1688	1786	1406	1173	0	0
Q Serve(g_s), s	0.5	0.0	23.5	8.3	0.0	46.0	5.0	22.7	2.2	13.9	0.0	0.0
Cycle Q Clear(g_c), s	46.0	0.0	23.5	31.3	0.0	46.0	5.0	22.7	2.2	28.1	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.21	1.00		1.00	0.19		0.11
Lane Grp Cap(c), veh/h	79	0	817	284	0	827	332	752	592	415	0	0
V/C Ratio(X)	0.45	0.00	0.67	0.31	0.00	1.07	0.59	0.69	0.09	0.84	0.00	0.00
Avail Cap(c_a), veh/h	79	0	817	284	0	827	332	752	592	415	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	18.8	30.4	0.0	24.6	20.5	22.5	16.5	31.6	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	2.1	0.6	0.0	51.8	2.8	2.8	0.1	14.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	13.5	3.0	0.0	38.6	1.8	14.6	1.2	14.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.0	20.9	31.1	0.0	76.4	23.2	25.3	16.6	45.6	0.0	0.0
LnGrp LOS	D	A	C	C	A	F	C	C	B	D	A	A
Approach Vol, veh/h		582			974			771			348	
Approach Delay, s/veh		22.8			72.2			24.2			45.6	
Approach LOS		C			E			C			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		51.0	9.0	35.0		51.0		44.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		45.0	4.0	30.0		45.0		39.0				
Max Q Clear Time (g_c+I1), s		48.5	7.5	30.1		48.0		25.2				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.9				

Intersection Summary												
HCM 6th Ctrl Delay			44.2									
HCM 6th LOS			D									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	78	86	641	22	0	491
Future Volume (vph)	78	86	641	22	0	491
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		424			536
Travel Time (s)	9.9		8.3			10.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	78	86	641	22	0	491
Future Vol, veh/h	78	86	641	22	0	491
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	1	0	1
Mvmt Flow	83	91	682	23	0	522

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1204	682	0	-	-	-
Stage 1	682	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	224	474	-	0	0	-
Stage 1	566	-	-	0	0	-
Stage 2	676	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	224	474	-	-	-	-
Mov Cap-2 Maneuver	224	-	-	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	676	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	224	474	-
HCM Lane V/C Ratio	-	0.37	0.193	-
HCM Control Delay (s)	-	30.2	14.4	-
HCM Lane LOS	-	D	B	-
HCM 95th %tile Q(veh)	-	1.6	0.7	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	563	1	1	983	6	6
Future Volume (vph)	563	1	1	983	6	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	550			2240	560	
Travel Time (s)	8.3			33.9	15.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	2%	0%	17%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	563	1	1	983	6	6
Future Vol, veh/h	563	1	1	983	6	6
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	-	-	-1	-5	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	0	0	2	0	17
Mvmt Flow	580	1	1	1013	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	581	0	1596	581
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	1015	-
Critical Hdwy	-	-	4.3	-	5.4	5.8
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.2
Pot Cap-1 Maneuver	-	-	756	-	198	565
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	756	-	197	565
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	512	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.9
HCM LOS			C

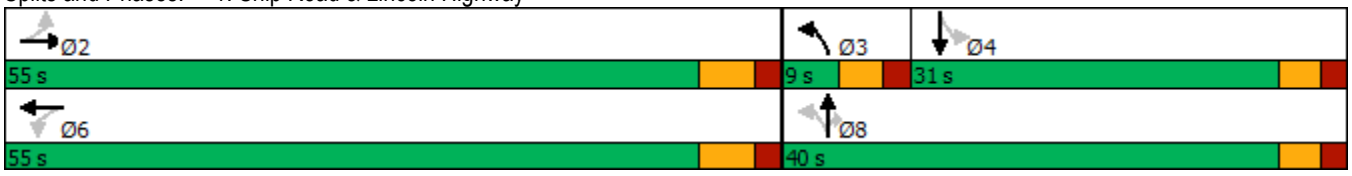
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	292	-	-	756	-
HCM Lane V/C Ratio	0.042	-	-	0.001	-
HCM Control Delay (s)	17.9	-	-	9.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

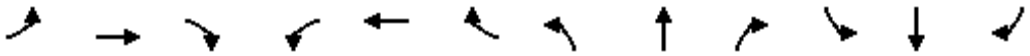
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	466	153	64	701	138	250	328	84	93	186	41
Future Volume (vph)	38	466	153	64	701	138	250	328	84	93	186	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2242			1107			563			367	
Travel Time (s)		34.0			16.8			11.0			7.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	55.0	55.0		55.0	55.0		9.0	40.0	40.0	31.0	31.0	
Total Split (%)	57.9%	57.9%		57.9%	57.9%		9.5%	42.1%	42.1%	32.6%	32.6%	
Maximum Green (s)	49.0	49.0		49.0	49.0		4.0	35.0	35.0	26.0	26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 93.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	466	153	64	701	138	250	328	84	93	186	41
Future Volume (veh/h)	38	466	153	64	701	138	250	328	84	93	186	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	40	496	163	68	746	147	266	349	89	99	198	44
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	89	667	219	251	757	149	358	677	533	139	236	48
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.05	0.38	0.38	0.27	0.28	0.27
Sat Flow, veh/h	633	1267	416	775	1438	283	1688	1786	1406	316	830	170
Grp Volume(v), veh/h	40	0	659	68	0	893	266	349	89	341	0	0
Grp Sat Flow(s),veh/h/ln	633	0	1683	775	0	1721	1688	1786	1406	1315	0	0
Q Serve(g_s), s	2.0	0.0	29.0	7.1	0.0	48.5	5.0	14.3	4.0	18.5	0.0	0.0
Cycle Q Clear(g_c), s	50.0	0.0	29.0	35.6	0.0	48.5	5.0	14.3	4.0	24.3	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.16	1.00		1.00	0.29		0.13
Lane Grp Cap(c), veh/h	89	0	886	251	0	906	358	677	533	409	0	0
V/C Ratio(X)	0.45	0.00	0.74	0.27	0.00	0.99	0.74	0.52	0.17	0.83	0.00	0.00
Avail Cap(c_a), veh/h	89	0	886	251	0	906	358	677	533	409	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.2	0.0	17.6	31.2	0.0	22.2	27.1	22.8	19.6	33.7	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	3.4	0.6	0.0	26.4	8.1	0.7	0.1	13.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	15.9	2.3	0.0	31.2	7.2	9.9	2.3	14.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	0.0	21.1	31.8	0.0	48.6	35.2	23.5	19.7	47.5	0.0	0.0
LnGrp LOS	D	A	C	C	A	D	D	C	B	D	A	A
Approach Vol, veh/h		699			961			704			341	
Approach Delay, s/veh		22.8			47.4			27.4			47.5	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		55.0	9.0	31.0		55.0		40.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		49.0	4.0	26.0		49.0		35.0				
Max Q Clear Time (g_c+I1), s		52.5	7.5	26.3		50.5		16.8				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.2				

Intersection Summary												
HCM 6th Ctrl Delay			35.8									
HCM 6th LOS			D									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	4	566	12	0	446
Future Volume (vph)	7	4	566	12	0	446
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		430			563
Travel Time (s)	9.9		8.4			11.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	4	566	12	0	446
Future Vol, veh/h	7	4	566	12	0	446
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	7	4	578	12	0	455

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1033	578	0	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	285	545	-	0	0	-
Stage 1	635	-	-	0	0	-
Stage 2	729	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	285	545	-	-	-	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	729	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	285	545	-
HCM Lane V/C Ratio	-	0.025	0.007	-
HCM Control Delay (s)	-	18	11.7	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	604	27	46	963	10	5
Future Volume (vph)	604	27	46	963	10	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	394			2242	479	
Travel Time (s)	6.0			34.0	13.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	604	27	46	963	10	5
Future Vol, veh/h	604	27	46	963	10	5
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	-	-	-1	-5	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	649	29	49	1035	11	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	678	0	1797	664
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	1133	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	699	-	156	533
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	699	-	130	533
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	387	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	27.8
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	174	-	-	699	-
HCM Lane V/C Ratio	0.093	-	-	0.071	-
HCM Control Delay (s)	27.8	-	-	10.5	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

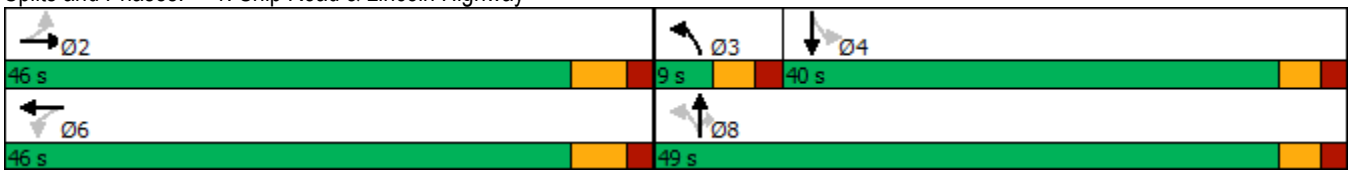
2023 Phase 1 Projected Conditions

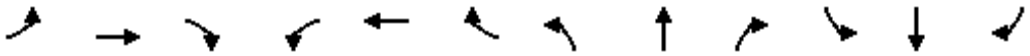
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	557	68	67	313	101	143	288	139	155	213	37
Future Volume (vph)	57	557	68	67	313	101	143	288	139	155	213	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		338			1258			298			797	
Travel Time (s)		5.1			19.1			5.8			15.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	8%	4%	6%	1%	6%	3%	4%	4%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	46.0	46.0		46.0	46.0		9.0	49.0	49.0	40.0	40.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		9.5%	51.6%	51.6%	42.1%	42.1%	
Maximum Green (s)	40.0	40.0		40.0	40.0		4.0	44.0	44.0	35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 88
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

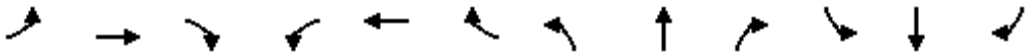




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	557	68	67	313	101	143	288	139	155	213	37
Future Volume (veh/h)	57	557	68	67	313	101	143	288	139	155	213	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1772	1772	1744	1716	1716	1716	1758	1744	1702	1702	1702
Adj Flow Rate, veh/h	59	574	70	69	323	104	147	297	143	160	220	38
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	4	6	6	6	3	4	7	7	7
Cap, veh/h	329	691	84	175	554	178	446	802	674	216	257	42
Arrive On Green	0.45	0.45	0.43	0.45	0.45	0.43	0.05	0.46	0.46	0.35	0.36	0.35
Sat Flow, veh/h	976	1549	189	774	1243	400	1634	1758	1478	453	718	117
Grp Volume(v), veh/h	59	0	644	69	0	427	147	297	143	418	0	0
Grp Sat Flow(s),veh/h/ln	976	0	1738	774	0	1644	1634	1758	1478	1288	0	0
Q Serve(g_s), s	4.4	0.0	29.9	7.9	0.0	17.9	5.0	10.1	5.3	26.7	0.0	0.0
Cycle Q Clear(g_c), s	21.7	0.0	29.9	37.3	0.0	17.9	5.0	10.1	5.3	28.6	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.24	1.00		1.00	0.38		0.09
Lane Grp Cap(c), veh/h	329	0	775	175	0	733	446	802	674	501	0	0
V/C Ratio(X)	0.18	0.00	0.83	0.39	0.00	0.58	0.33	0.37	0.21	0.83	0.00	0.00
Avail Cap(c_a), veh/h	330	0	778	177	0	736	446	864	726	546	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.0	0.0	22.4	38.5	0.0	19.1	15.8	16.3	15.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	7.6	1.4	0.0	1.2	0.4	0.3	0.2	10.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	18.2	2.7	0.0	10.5	3.3	7.0	3.1	15.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	0.0	30.0	40.0	0.0	20.3	16.2	16.6	15.2	38.1	0.0	0.0
LnGrp LOS	C	A	C	D	A	C	B	B	B	D	A	A
Approach Vol, veh/h		703			496			587			418	
Approach Delay, s/veh		29.8			23.0			16.2			38.1	
Approach LOS		C			C			B			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		45.8	9.0	36.8		45.8		45.8				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		40.0	4.0	35.0		40.0		44.0				
Max Q Clear Time (g_c+I1), s		31.9	7.5	30.6		39.8		12.6				
Green Ext Time (p_c), s		2.7	0.0	1.1		0.1		2.3				

Intersection Summary												
HCM 6th Ctrl Delay			26.2									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	0	32	10	0	7	70	431	167	0	303	38
Future Volume (vph)	83	0	32	10	0	7	70	431	167	0	303	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		335			436			498			226	
Travel Time (s)		9.1			9.9			9.7			4.4	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	2%	2%	30%	2%	21%	2%	2%	2%	0%	5%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	0	32	10	0	7	70	431	167	0	303	38
Future Vol, veh/h	83	0	32	10	0	7	70	431	167	0	303	38
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	30	2	21	2	2	2	0	5	2
Mvmt Flow	97	0	37	12	0	8	81	501	194	0	352	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1041	1037	374	1056	1059	501	396	0	-	-	-	0
Stage 1	374	374	-	663	663	-	-	-	-	-	-	-
Stage 2	667	663	-	393	396	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.52	6.3	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.4	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.4	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3.1	4.018	3.2	3	-	-	-	-	-
Pot Cap-1 Maneuver	229	231	712	214	224	580	878	-	0	0	-	-
Stage 1	740	618	-	469	459	-	-	-	0	0	-	-
Stage 2	503	459	-	681	604	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	210	210	712	189	203	580	878	-	-	-	-	-
Mov Cap-2 Maneuver	210	210	-	189	203	-	-	-	-	-	-	-
Stage 1	672	618	-	426	417	-	-	-	-	-	-	-
Stage 2	450	417	-	645	604	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.4	19.5	1.3	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	878	-	261	189	580	-	-
HCM Lane V/C Ratio	0.093	-	0.512	0.062	0.014	-	-
HCM Control Delay (s)	9.5	-	32.4	25.3	11.3	-	-
HCM Lane LOS	A	-	D	D	B	-	-
HCM 95th %tile Q(veh)	0.3	-	2.7	0.2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	810	9	5	394	2	2
Future Volume (vph)	810	9	5	394	2	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	582			1607	619	
Travel Time (s)	8.8			24.3	16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	10%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	810	9	5	394	2	2
Future Vol, veh/h	810	9	5	394	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	10	0	0
Mvmt Flow	880	10	5	428	2	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	890	0	1318	880
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	587	-	274	411
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	587	-	271	411
Mov Cap-2 Maneuver	-	-	-	-	428	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	419	-	-	587	-
HCM Lane V/C Ratio	0.01	-	-	0.009	-
HCM Control Delay (s)	13.7	-	-	11.2	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	654	30	72	421	0	0
Future Volume (vph)	654	30	72	421	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1607			294	286	
Travel Time (s)	24.3			4.5	7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	6%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	654	30	72	421	0	0
Future Vol, veh/h	654	30	72	421	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	6	2	2
Mvmt Flow	711	33	78	458	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	744	0	1325	711
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	614	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	662	-	172	433
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	662	-	145	433
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	455	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	662	-
HCM Lane V/C Ratio	-	-	-	0.118	-
HCM Control Delay (s)	0	-	-	11.2	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0.4	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	599	55	0	493	0	83
Future Volume (vph)	599	55	0	493	0	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	294			338	207	
Travel Time (s)	4.5			5.1	5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	6%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

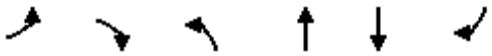
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↑		↱
Traffic Vol, veh/h	599	55	0	493	0	83
Future Vol, veh/h	599	55	0	493	0	83
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	6	2	2
Mvmt Flow	651	60	0	536	0	90

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	651
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	493
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	493
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	493	-	-	-
HCM Lane V/C Ratio	0.183	-	-	-
HCM Control Delay (s)	13.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	569	329	19
Future Volume (vph)	0	0	0	569	329	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	225			226	298	
Travel Time (s)	6.1			4.4	5.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	8%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

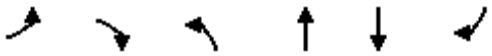
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	569	329	19
Future Vol, veh/h	0	0	0	569	329	19
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	4	8	2
Mvmt Flow	0	0	0	618	358	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	369	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	717	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	717	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	19	0	627	345	0
Future Volume (vph)	41	19	0	627	345	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	278			353	554	
Travel Time (s)	7.6			6.9	10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	5%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	19	0	627	345	0
Future Vol, veh/h	41	19	0	627	345	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	5	2
Mvmt Flow	45	21	0	682	375	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1057	375	-	0	-	0
Stage 1	375	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	274	711	0	-	-	0
Stage 1	794	-	0	-	-	0
Stage 2	563	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	274	711	-	-	-	-
Mov Cap-2 Maneuver	274	-	-	-	-	-
Stage 1	794	-	-	-	-	-
Stage 2	563	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

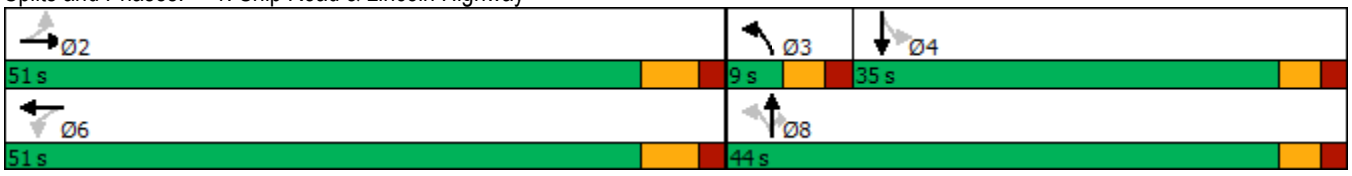
Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	340	-
HCM Lane V/C Ratio	-	0.192	-
HCM Control Delay (s)	-	18.1	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.7	-

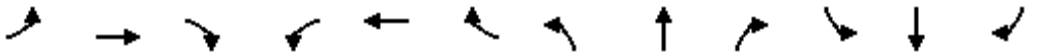
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	414	119	89	670	173	207	499	94	61	237	40
Future Volume (vph)	41	414	119	89	670	173	207	499	94	61	237	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	175		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		319			1012			282			767	
Travel Time (s)		4.8			15.3			5.5			14.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	51.0	51.0		51.0	51.0		9.0	44.0	44.0	35.0	35.0	
Total Split (%)	53.7%	53.7%		53.7%	53.7%		9.5%	46.3%	46.3%	36.8%	36.8%	
Maximum Green (s)	45.0	45.0		45.0	45.0		4.0	39.0	39.0	30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 93.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

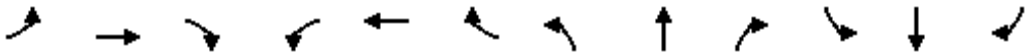




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	414	119	89	670	173	207	499	94	61	237	40
Future Volume (veh/h)	41	414	119	89	670	173	207	499	94	61	237	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	44	440	127	95	713	184	220	531	100	65	252	43
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	635	183	269	658	170	312	752	592	88	283	44
Arrive On Green	0.48	0.48	0.47	0.48	0.48	0.47	0.05	0.42	0.42	0.32	0.33	0.32
Sat Flow, veh/h	630	1311	378	844	1358	351	1688	1786	1406	132	868	136
Grp Volume(v), veh/h	44	0	567	95	0	897	220	531	100	360	0	0
Grp Sat Flow(s),veh/h/ln	630	0	1690	844	0	1709	1688	1786	1406	1135	0	0
Q Serve(g_s), s	0.5	0.0	24.8	9.3	0.0	46.0	5.0	23.3	4.2	15.2	0.0	0.0
Cycle Q Clear(g_c), s	46.0	0.0	24.8	33.6	0.0	46.0	5.0	23.3	4.2	30.0	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.21	1.00		1.00	0.18		0.12
Lane Grp Cap(c), veh/h	79	0	818	269	0	827	312	752	592	403	0	0
V/C Ratio(X)	0.56	0.00	0.69	0.35	0.00	1.08	0.71	0.71	0.17	0.89	0.00	0.00
Avail Cap(c_a), veh/h	79	0	818	269	0	827	312	752	592	403	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	19.1	31.9	0.0	24.6	22.6	22.7	17.1	32.5	0.0	0.0
Incr Delay (d2), s/veh	8.3	0.0	2.5	0.8	0.0	56.6	7.1	3.0	0.1	21.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	0.0	14.2	3.3	0.0	40.4	4.2	15.0	2.4	15.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	0.0	21.6	32.7	0.0	81.2	29.7	25.7	17.3	53.9	0.0	0.0
LnGrp LOS	E	A	C	C	A	F	C	C	B	D	A	A
Approach Vol, veh/h		611			992			851			360	
Approach Delay, s/veh		24.1			76.5			25.7			53.9	
Approach LOS		C			E			C			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		51.0	9.0	35.0		51.0		44.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		45.0	4.0	30.0		45.0		39.0				
Max Q Clear Time (g_c+I1), s		48.5	7.5	32.0		48.0		25.8				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			46.9									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	0	28	78	0	86	45	643	24	0	465	27
Future Volume (vph)	73	0	28	78	0	86	45	643	24	0	465	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		318			436			424			253	
Travel Time (s)		8.7			9.9			8.3			4.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	0%	1%	0%	1%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	0	28	78	0	86	45	643	24	0	465	27
Future Vol, veh/h	73	0	28	78	0	86	45	643	24	0	465	27
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	0	2	0	2	0	1	0	1	2
Mvmt Flow	78	0	30	83	0	91	48	684	26	0	495	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1336	1290	510	1305	1304	684	524	0	-	-	-	0
Stage 1	510	510	-	780	780	-	-	-	-	-	-	-
Stage 2	826	780	-	525	524	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3	4.018	3.1	3	-	-	-	-	-
Pot Cap-1 Maneuver	142	163	594	150	160	473	792	-	0	0	-	-
Stage 1	619	538	-	435	406	-	-	-	0	0	-	-
Stage 2	408	406	-	609	530	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	109	153	594	136	150	473	792	-	-	-	-	-
Mov Cap-2 Maneuver	109	153	-	136	150	-	-	-	-	-	-	-
Stage 1	581	538	-	408	381	-	-	-	-	-	-	-
Stage 2	309	381	-	578	530	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	84.8	39	0.6	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	792	-	141	136	473	-	-
HCM Lane V/C Ratio	0.06	-	0.762	0.61	0.193	-	-
HCM Control Delay (s)	9.8	-	84.8	66.1	14.4	-	-
HCM Lane LOS	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	4.6	3.2	0.7	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	577	1	2	965	6	7
Future Volume (vph)	577	1	2	965	6	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	550			1659	560	
Travel Time (s)	8.3			25.1	15.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	2%	0%	17%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	577	1	2	965	6	7
Future Vol, veh/h	577	1	2	965	6	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	0	0	2	0	17
Mvmt Flow	595	1	2	995	6	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	596	0	1594	595
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	999	-
Critical Hdwy	-	-	4.3	-	5.4	5.8
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.2
Pot Cap-1 Maneuver	-	-	747	-	198	555
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	747	-	197	555
Mov Cap-2 Maneuver	-	-	-	-	363	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	518	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	446	-	-	747	-
HCM Lane V/C Ratio	0.03	-	-	0.003	-
HCM Control Delay (s)	13.3	-	-	9.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	545	17	56	861	0	0
Future Volume (vph)	545	17	56	861	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1659			262	331	
Travel Time (s)	25.1			4.0	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	545	17	56	861	0	0
Future Vol, veh/h	545	17	56	861	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	592	18	61	936	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	610	0	1650	592
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	1058	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	739	-	109	506
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	334	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	739	-	90	506
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	277	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	739	-
HCM Lane V/C Ratio	-	-	-	0.082	-
HCM Control Delay (s)	0	-	-	10.3	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	516	29	0	917	0	58
Future Volume (vph)	516	29	0	917	0	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	262			319	294	
Travel Time (s)	4.0			4.8	8.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

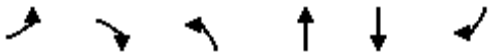
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	516	29	0	917	0	58
Future Vol, veh/h	516	29	0	917	0	58
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	561	32	0	997	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	561
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	555
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	555
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	555	-	-	-
HCM Lane V/C Ratio	0.114	-	-	-
HCM Control Delay (s)	12.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	799	435	10
Future Volume (vph)	0	0	0	799	435	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	180			253	282	
Travel Time (s)	4.9			4.9	5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

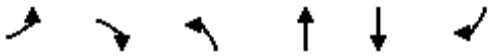
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	799	435	10
Future Vol, veh/h	0	0	0	799	435	10
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	868	473	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	479	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	619	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	619	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	36	12	0	675	572	0
Future Volume (vph)	36	12	0	675	572	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	267			328	567	
Travel Time (s)	7.3			6.4	11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	1%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	12	0	675	572	0
Future Vol, veh/h	36	12	0	675	572	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	1	2
Mvmt Flow	39	13	0	734	622	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1356	622	-	0	-	0
Stage 1	622	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	178	512	0	-	-	0
Stage 1	603	-	0	-	-	0
Stage 2	531	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	178	512	-	-	-	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	603	-	-	-	-	-
Stage 2	531	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.3	0	0
HCM LOS	D		

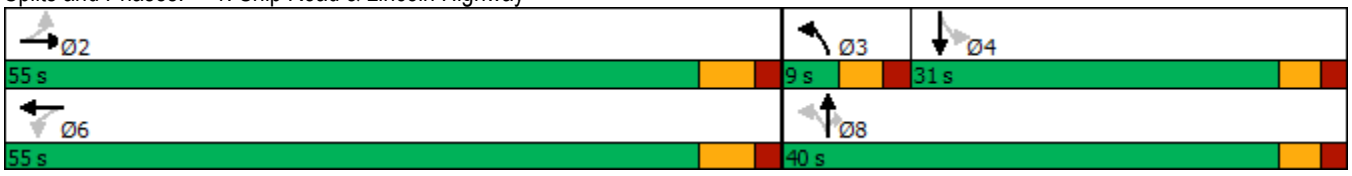
Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	213	-
HCM Lane V/C Ratio	-	0.245	-
HCM Control Delay (s)	-	27.3	-
HCM Lane LOS	-	D	-
HCM 95th %tile Q(veh)	-	0.9	-

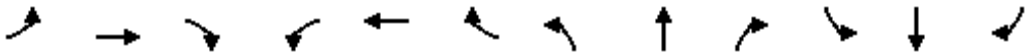
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	486	153	71	718	138	274	335	127	93	194	48
Future Volume (vph)	46	486	153	71	718	138	274	335	127	93	194	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		310			1107			262			367	
Travel Time (s)		4.7			16.8			5.1			7.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	55.0	55.0		55.0	55.0		9.0	40.0	40.0	31.0	31.0	
Total Split (%)	57.9%	57.9%		57.9%	57.9%		9.5%	42.1%	42.1%	32.6%	32.6%	
Maximum Green (s)	49.0	49.0		49.0	49.0		4.0	35.0	35.0	26.0	26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 94.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

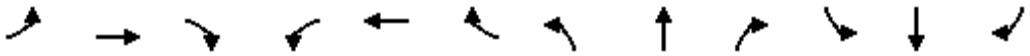




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	486	153	71	718	138	274	335	127	93	194	48
Future Volume (veh/h)	46	486	153	71	718	138	274	335	127	93	194	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	49	517	163	76	764	147	291	356	135	99	206	51
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	674	213	236	760	146	340	677	533	132	229	52
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.05	0.38	0.38	0.27	0.28	0.27
Sat Flow, veh/h	622	1281	404	760	1444	278	1688	1786	1406	293	804	183
Grp Volume(v), veh/h	49	0	680	76	0	911	291	356	135	356	0	0
Grp Sat Flow(s),veh/h/ln	622	0	1685	760	0	1722	1688	1786	1406	1281	0	0
Q Serve(g_s), s	0.5	0.0	30.5	8.3	0.0	50.0	5.0	14.7	6.3	19.8	0.0	0.0
Cycle Q Clear(g_c), s	50.0	0.0	30.5	38.3	0.0	50.0	5.0	14.7	6.3	26.0	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.16	1.00		1.00	0.28		0.14
Lane Grp Cap(c), veh/h	79	0	887	236	0	906	340	677	533	399	0	0
V/C Ratio(X)	0.62	0.00	0.77	0.32	0.00	1.01	0.86	0.53	0.25	0.89	0.00	0.00
Avail Cap(c_a), veh/h	79	0	887	236	0	906	340	677	533	399	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	18.0	32.9	0.0	22.6	29.3	22.9	20.3	34.6	0.0	0.0
Incr Delay (d2), s/veh	13.9	0.0	4.1	0.8	0.0	31.2	18.8	0.8	0.2	21.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	16.7	2.7	0.0	33.3	10.2	10.1	3.6	15.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	0.0	22.0	33.7	0.0	53.8	48.1	23.6	20.5	56.1	0.0	0.0
LnGrp LOS	E	A	C	C	A	F	D	C	C	E	A	A
Approach Vol, veh/h		729			987			782			356	
Approach Delay, s/veh		24.7			52.2			32.2			56.1	
Approach LOS		C			D			C			E	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		55.0	9.0	31.0		55.0		40.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		49.0	4.0	26.0		49.0		35.0				
Max Q Clear Time (g_c+I1), s		52.5	7.5	28.0		52.0		17.2				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.4				

Intersection Summary												
HCM 6th Ctrl Delay			40.2									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	0	28	7	0	4	52	568	14	0	421	29
Future Volume (vph)	72	0	28	7	0	4	52	568	14	0	421	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		443			436			430			300	
Travel Time (s)		12.1			9.9			8.4			5.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	1%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	0	28	7	0	4	52	568	14	0	421	29
Future Vol, veh/h	72	0	28	7	0	4	52	568	14	0	421	29
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	0	2	0	2	1	0	0	0	2
Mvmt Flow	73	0	29	7	0	4	53	580	14	0	430	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1133	1131	445	1146	1146	580	460	0	-	-	-	0
Stage 1	445	445	-	686	686	-	-	-	-	-	-	-
Stage 2	688	686	-	460	460	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3	4.018	3.1	3	-	-	-	-	-
Pot Cap-1 Maneuver	197	203	648	194	199	543	834	-	0	0	-	-
Stage 1	674	575	-	493	448	-	-	-	0	0	-	-
Stage 2	490	448	-	663	566	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	186	190	648	176	186	543	834	-	-	-	-	-
Mov Cap-2 Maneuver	186	190	-	176	186	-	-	-	-	-	-	-
Stage 1	631	575	-	461	419	-	-	-	-	-	-	-
Stage 2	455	419	-	634	566	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.2	21	0.8	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	834	-	232	176	543	-	-
HCM Lane V/C Ratio	0.064	-	0.44	0.041	0.008	-	-
HCM Control Delay (s)	9.6	-	32.2	26.3	11.7	-	-
HCM Lane LOS	A	-	D	D	B	-	-
HCM 95th %tile Q(veh)	0.2	-	2.1	0.1	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	626	27	47	947	10	6
Future Volume (vph)	626	27	47	947	10	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	394			1639	479	
Travel Time (s)	6.0			24.8	13.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	626	27	47	947	10	6
Future Vol, veh/h	626	27	47	947	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	673	29	51	1018	11	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	702	0	1793	673
Stage 1	-	-	-	-	673	-
Stage 2	-	-	-	-	1120	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	685	-	157	527
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	470	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	685	-	130	527
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	390	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	16.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	341	-	-	685	-
HCM Lane V/C Ratio	0.05	-	-	0.074	-
HCM Control Delay (s)	16.1	-	-	10.7	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	662	18	63	977	0	0
Future Volume (vph)	662	18	63	977	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1639			293	355	
Travel Time (s)	24.8			4.4	9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	662	18	63	977	0	0
Future Vol, veh/h	662	18	63	977	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	720	20	68	1062	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	740	0	1918	720
Stage 1	-	-	-	-	720	-
Stage 2	-	-	-	-	1198	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	664	-	74	428
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	286	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	664	-	56	428
Mov Cap-2 Maneuver	-	-	-	-	157	-
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	215	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	664	-
HCM Lane V/C Ratio	-	-	-	0.103	-
HCM Control Delay (s)	0	-	-	11	0
HCM Lane LOS	A	-	-	B	A
HCM 95th %tile Q(veh)	-	-	-	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	627	35	0	1040	0	58
Future Volume (vph)	627	35	0	1040	0	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	293			310	293	
Travel Time (s)	4.4			4.7	8.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

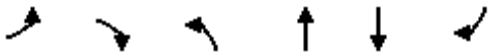
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↑		↱
Traffic Vol, veh/h	627	35	0	1040	0	58
Future Vol, veh/h	627	35	0	1040	0	58
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	682	38	0	1130	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	682
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	473
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	473
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	473	-	-	-
HCM Lane V/C Ratio	0.133	-	-	-
HCM Control Delay (s)	13.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	736	406	11
Future Volume (vph)	0	0	0	736	406	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	183			300	262	
Travel Time (s)	5.0			5.8	5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

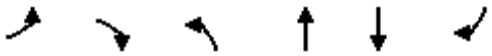
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	736	406	11
Future Vol, veh/h	0	0	0	736	406	11
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	800	441	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	447	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	646	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	646	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	11	0	600	456	0
Future Volume (vph)	35	11	0	600	456	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	280			333	546	
Travel Time (s)	7.6			6.5	10.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	11	0	600	456	0
Future Vol, veh/h	35	11	0	600	456	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	12	0	652	496	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1148	496	-	0	-	0
Stage 1	496	-	-	-	-	-
Stage 2	652	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	241	606	0	-	-	0
Stage 1	694	-	0	-	-	0
Stage 2	583	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	241	606	-	-	-	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	694	-	-	-	-	-
Stage 2	583	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	282	-
HCM Lane V/C Ratio	-	0.177	-
HCM Control Delay (s)	-	20.5	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.6	-

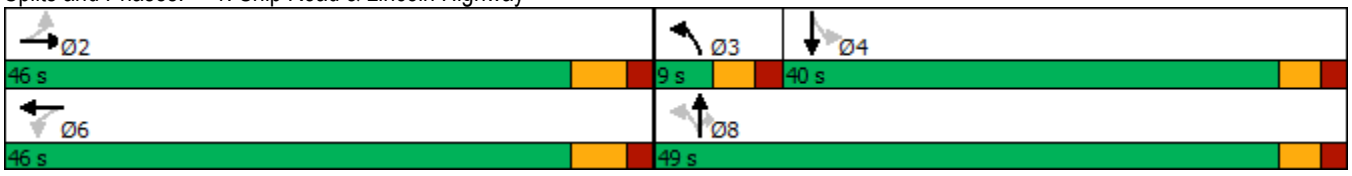
2023 Phase 2A Projected Conditions

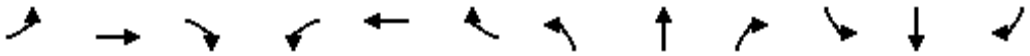
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	551	68	60	297	101	122	291	96	155	206	30
Future Volume (vph)	55	551	68	60	297	101	122	291	96	155	206	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		338			1258			298			797	
Travel Time (s)		5.1			19.1			5.8			15.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	8%	4%	6%	1%	6%	3%	4%	4%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	46.0	46.0		46.0	46.0		9.0	49.0	49.0	40.0	40.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		9.5%	51.6%	51.6%	42.1%	42.1%	
Maximum Green (s)	40.0	40.0		40.0	40.0		4.0	44.0	44.0	35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 85.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	551	68	60	297	101	122	291	96	155	206	30
Future Volume (veh/h)	55	551	68	60	297	101	122	291	96	155	206	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1772	1772	1744	1716	1716	1716	1758	1744	1702	1702	1702
Adj Flow Rate, veh/h	57	568	70	62	306	104	126	300	99	160	212	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	4	6	6	6	3	4	7	7	7
Cap, veh/h	345	687	85	182	544	185	464	795	668	223	254	35
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.06	0.45	0.45	0.34	0.35	0.34
Sat Flow, veh/h	991	1547	191	778	1225	416	1634	1758	1478	474	730	100
Grp Volume(v), veh/h	57	0	638	62	0	410	126	300	99	403	0	0
Grp Sat Flow(s),veh/h/ln	991	0	1738	778	0	1641	1634	1758	1478	1305	0	0
Q Serve(g_s), s	3.9	0.0	27.9	6.5	0.0	16.1	4.1	9.8	3.4	23.6	0.0	0.0
Cycle Q Clear(g_c), s	19.5	0.0	27.9	34.0	0.0	16.1	4.1	9.8	3.4	25.5	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.25	1.00		1.00	0.40		0.08
Lane Grp Cap(c), veh/h	345	0	771	182	0	728	464	795	668	497	0	0
V/C Ratio(X)	0.17	0.00	0.83	0.34	0.00	0.56	0.27	0.38	0.15	0.81	0.00	0.00
Avail Cap(c_a), veh/h	375	0	823	205	0	778	464	914	769	584	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.9	0.0	21.2	35.8	0.0	17.9	15.0	15.7	13.9	26.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	6.7	1.1	0.0	0.8	0.3	0.3	0.1	7.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	16.9	2.2	0.0	9.4	2.6	6.7	1.9	13.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	27.9	36.9	0.0	18.8	15.3	16.0	14.0	34.0	0.0	0.0
LnGrp LOS	C	A	C	D	A	B	B	B	B	C	A	A
Approach Vol, veh/h		695			472			525			403	
Approach Delay, s/veh		27.6			21.2			15.4			34.0	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		43.4	9.0	34.1		43.4		43.1				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		40.0	4.0	35.0		40.0		44.0				
Max Q Clear Time (g_c+I1), s		29.9	6.6	27.5		36.5		12.3				
Green Ext Time (p_c), s		3.0	0.0	1.6		0.9		2.1				

Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	7	453	167	0	346
Future Volume (vph)	10	7	453	167	0	346
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	30		35			35
Link Distance (ft)	436		498			226
Travel Time (s)	9.9		9.7			4.4
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	30%	21%	2%	2%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	7	453	167	0	346
Future Vol, veh/h	10	7	453	167	0	346
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	30	21	2	2	0	5
Mvmt Flow	12	8	527	194	0	402

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	929	527	0	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Critical Hdwy	7.2	6.3	-	-	-	-
Critical Hdwy Stg 1	5.7	-	-	-	-	-
Critical Hdwy Stg 2	5.7	-	-	-	-	-
Follow-up Hdwy	3.1	3.2	-	-	-	-
Pot Cap-1 Maneuver	263	560	-	0	0	-
Stage 1	627	-	-	0	0	-
Stage 2	727	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	263	560	-	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	336	-
HCM Lane V/C Ratio	-	0.059	-
HCM Control Delay (s)	-	16.4	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	785	15	8	419	15	17
Future Volume (vph)	785	15	8	419	15	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	582			1607	619	
Travel Time (s)	8.8			24.3	16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	10%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

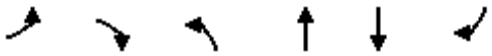
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	785	15	8	419	15	17
Future Vol, veh/h	785	15	8	419	15	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	10	0	0
Mvmt Flow	853	16	9	455	16	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	869	0	1326	853
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	473	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	597	-	271	425
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	815	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	597	-	266	425
Mov Cap-2 Maneuver	-	-	-	-	427	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	799	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	426	-	-	597	-
HCM Lane V/C Ratio	0.082	-	-	0.015	-
HCM Control Delay (s)	14.2	-	-	11.1	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	9	3	604	351	5
Future Volume (vph)	16	9	3	604	351	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	364			463	353	
Travel Time (s)	9.9			9.0	6.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	9	3	604	351	5
Future Vol, veh/h	16	9	3	604	351	5
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	17	10	3	657	382	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1048	385	387	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	279	703	884	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	578	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	278	703	884	-	-	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	578	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16	0	0
HCM LOS	C		

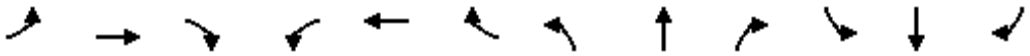
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	884	-	355	-	-
HCM Lane V/C Ratio	0.004	-	0.077	-	-
HCM Control Delay (s)	9.1	0	16	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	400	119	90	670	173	184	497	53	61	240	39
Future Volume (vph)	38	400	119	90	670	173	184	497	53	61	240	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	175		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		319			1012			282			767	
Travel Time (s)		4.8			15.3			5.5			14.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	51.0	51.0		51.0	51.0		9.0	44.0	44.0	35.0	35.0	
Total Split (%)	53.7%	53.7%		53.7%	53.7%		9.5%	46.3%	46.3%	36.8%	36.8%	
Maximum Green (s)	45.0	45.0		45.0	45.0		4.0	39.0	39.0	30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 93.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	400	119	90	670	173	184	497	53	61	240	39
Future Volume (veh/h)	38	400	119	90	670	173	184	497	53	61	240	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	40	426	127	96	713	184	196	529	56	65	255	41
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	630	188	279	658	170	314	752	592	89	290	43
Arrive On Green	0.48	0.48	0.47	0.48	0.48	0.47	0.05	0.42	0.42	0.32	0.33	0.32
Sat Flow, veh/h	630	1300	388	855	1358	351	1688	1786	1406	134	888	131
Grp Volume(v), veh/h	40	0	553	96	0	897	196	529	56	361	0	0
Grp Sat Flow(s),veh/h/ln	630	0	1688	855	0	1709	1688	1786	1406	1153	0	0
Q Serve(g_s), s	0.5	0.0	23.9	9.2	0.0	46.0	5.0	23.1	2.3	15.1	0.0	0.0
Cycle Q Clear(g_c), s	46.0	0.0	23.9	32.6	0.0	46.0	5.0	23.1	2.3	29.7	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.21	1.00		1.00	0.18		0.11
Lane Grp Cap(c), veh/h	79	0	817	279	0	827	314	752	592	409	0	0
V/C Ratio(X)	0.51	0.00	0.68	0.34	0.00	1.08	0.62	0.70	0.09	0.88	0.00	0.00
Avail Cap(c_a), veh/h	79	0	817	279	0	827	314	752	592	409	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	18.9	31.1	0.0	24.6	20.6	22.6	16.6	32.4	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.0	2.2	0.7	0.0	56.6	3.8	3.0	0.1	19.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	13.7	3.3	0.0	40.4	2.0	14.9	1.3	15.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	0.0	21.1	31.8	0.0	81.2	24.5	25.6	16.6	52.1	0.0	0.0
LnGrp LOS	D	A	C	C	A	F	C	C	B	D	A	A
Approach Vol, veh/h		593			993			781			361	
Approach Delay, s/veh		23.3			76.4			24.7			52.1	
Approach LOS		C			E			C			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		51.0	9.0	35.0		51.0		44.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		45.0	4.0	30.0		45.0		39.0				
Max Q Clear Time (g_c+I1), s		48.5	7.5	31.7		48.0		25.6				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.9				

Intersection Summary												
HCM 6th Ctrl Delay			46.8									
HCM 6th LOS			D									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	79	86	651	22	0	506
Future Volume (vph)	79	86	651	22	0	506
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	30		35			35
Link Distance (ft)	436		424			253
Travel Time (s)	9.9		8.3			4.9
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	79	86	651	22	0	506
Future Vol, veh/h	79	86	651	22	0	506
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	1	0	1
Mvmt Flow	84	91	693	23	0	538

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1231	693	0	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	215	467	-	0	0	-
Stage 1	559	-	-	0	0	-
Stage 2	664	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	215	467	-	-	-	-
Mov Cap-2 Maneuver	215	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.8	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	299	-
HCM Lane V/C Ratio	-	0.587	-
HCM Control Delay (s)	-	32.8	-
HCM Lane LOS	-	D	-
HCM 95th %tile Q(veh)	-	3.5	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	563	21	16	983	15	16
Future Volume (vph)	563	21	16	983	15	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	550			1659	560	
Travel Time (s)	8.3			25.1	15.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	2%	0%	17%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

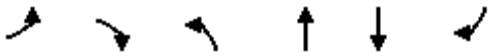
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	563	21	16	983	15	16
Future Vol, veh/h	563	21	16	983	15	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	0	0	2	0	17
Mvmt Flow	580	22	16	1013	15	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	602	0	1625	580
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	1045	-
Critical Hdwy	-	-	4.3	-	5.4	5.8
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.2
Pot Cap-1 Maneuver	-	-	744	-	191	566
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	744	-	182	566
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	476	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	430	-	-	744	-
HCM Lane V/C Ratio	0.074	-	-	0.022	-
HCM Control Delay (s)	14	-	-	9.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	6	10	662	570	16
Future Volume (vph)	10	6	10	662	570	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	366			271	328	
Travel Time (s)	10.0			5.3	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	6	10	662	570	16
Future Vol, veh/h	10	6	10	662	570	16
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	11	7	11	720	620	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1371	629	637	0	-	0
Stage 1	629	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	176	509	723	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	509	723	-	-	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22	0.1	0
HCM LOS	C		

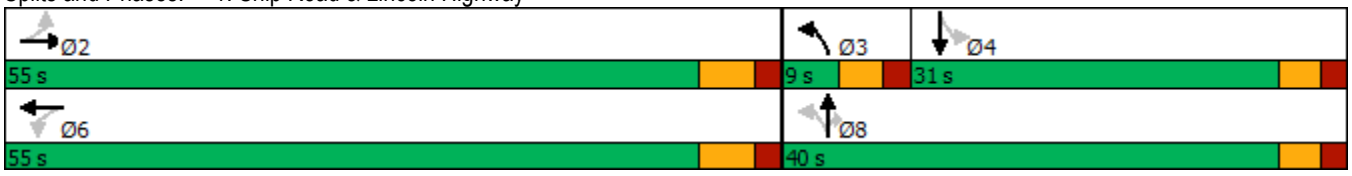
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	723	-	229	-	-
HCM Lane V/C Ratio	0.015	-	0.076	-	-
HCM Control Delay (s)	10.1	0	22	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

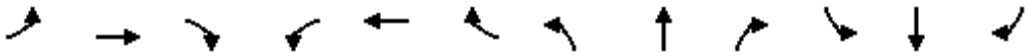
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	474	153	69	710	138	250	336	88	93	194	44
Future Volume (vph)	43	474	153	69	710	138	250	336	88	93	194	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		310			1107			262			367	
Travel Time (s)		4.7			16.8			5.1			7.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	55.0	55.0		55.0	55.0		9.0	40.0	40.0	31.0	31.0	
Total Split (%)	57.9%	57.9%		57.9%	57.9%		9.5%	42.1%	42.1%	32.6%	32.6%	
Maximum Green (s)	49.0	49.0		49.0	49.0		4.0	35.0	35.0	26.0	26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 94.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	474	153	69	710	138	250	336	88	93	194	44
Future Volume (veh/h)	43	474	153	69	710	138	250	336	88	93	194	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	46	504	163	73	755	147	266	357	94	99	206	47
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	82	670	217	245	758	148	343	677	533	134	233	49
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.05	0.38	0.38	0.27	0.28	0.27
Sat Flow, veh/h	628	1272	411	769	1441	281	1688	1786	1406	300	821	173
Grp Volume(v), veh/h	46	0	667	73	0	902	266	357	94	352	0	0
Grp Sat Flow(s),veh/h/ln	628	0	1684	769	0	1721	1688	1786	1406	1294	0	0
Q Serve(g_s), s	1.0	0.0	29.6	7.8	0.0	49.5	5.0	14.7	4.2	19.6	0.0	0.0
Cycle Q Clear(g_c), s	50.0	0.0	29.6	36.9	0.0	49.5	5.0	14.7	4.2	25.8	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.16	1.00		1.00	0.28		0.13
Lane Grp Cap(c), veh/h	82	0	886	245	0	906	343	677	533	403	0	0
V/C Ratio(X)	0.56	0.00	0.75	0.30	0.00	1.00	0.78	0.53	0.18	0.87	0.00	0.00
Avail Cap(c_a), veh/h	82	0	886	245	0	906	343	677	533	403	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.4	0.0	17.8	31.9	0.0	22.5	27.5	22.9	19.6	34.4	0.0	0.0
Incr Delay (d2), s/veh	8.3	0.0	3.7	0.7	0.0	28.8	10.7	0.8	0.2	18.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	0.0	16.2	2.5	0.0	32.3	7.7	10.1	2.4	15.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	0.0	21.4	32.6	0.0	51.2	38.1	23.7	19.8	53.1	0.0	0.0
LnGrp LOS	E	A	C	C	A	D	D	C	B	D	A	A
Approach Vol, veh/h		713			975			717			352	
Approach Delay, s/veh		23.6			49.8			28.5			53.1	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		55.0	9.0	31.0		55.0		40.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		49.0	4.0	26.0		49.0		35.0				
Max Q Clear Time (g_c+I1), s		52.5	7.5	27.8		51.5		17.2				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.2				

Intersection Summary												
HCM 6th Ctrl Delay			37.9									
HCM 6th LOS			D									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	4	578	13	0	459
Future Volume (vph)	8	4	578	13	0	459
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	30		35			35
Link Distance (ft)	436		430			300
Travel Time (s)	9.9		8.4			5.8
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	4	578	13	0	459
Future Vol, veh/h	8	4	578	13	0	459
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	8	4	590	13	0	468

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1058	590	0	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	275	536	-	0	0	-
Stage 1	627	-	-	0	0	-
Stage 2	718	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	275	536	-	-	-	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	718	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	328	-
HCM Lane V/C Ratio	-	0.037	-
HCM Control Delay (s)	-	16.4	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	604	44	58	963	21	18
Future Volume (vph)	604	44	58	963	21	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	394			1639	479	
Travel Time (s)	6.0			24.8	13.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

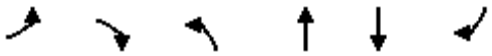
Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	604	44	58	963	21	18
Future Vol, veh/h	604	44	58	963	21	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	649	47	62	1035	23	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	696	0	1808	649
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	1159	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	689	-	154	542
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	689	-	121	542
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	358	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	346	-	-	689	-
HCM Lane V/C Ratio	0.121	-	-	0.091	-
HCM Control Delay (s)	16.8	-	-	10.7	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	0.3	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	8	10	579	453	14
Future Volume (vph)	13	8	10	579	453	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	452			278	333	
Travel Time (s)	12.3			5.4	6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	8	10	579	453	14
Future Vol, veh/h	13	8	10	579	453	14
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	14	9	11	629	492	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1151	500	507	0	-	0
Stage 1	500	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	241	604	803	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	236	604	803	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	586	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	803	-	307	-	-
HCM Lane V/C Ratio	0.014	-	0.074	-	-
HCM Control Delay (s)	9.5	0	17.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

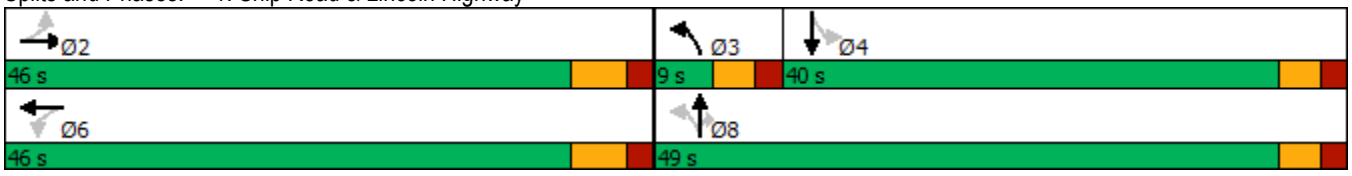
2023 Phase 2B Projected Conditions

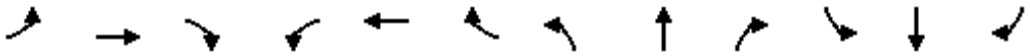
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	568	68	68	316	101	143	298	144	155	215	38
Future Volume (vph)	62	568	68	68	316	101	143	298	144	155	215	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		338			1258			298			797	
Travel Time (s)		5.1			19.1			5.8			15.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	8%	4%	6%	1%	6%	3%	4%	4%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	46.0	46.0		46.0	46.0		9.0	49.0	49.0	40.0	40.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		9.5%	51.6%	51.6%	42.1%	42.1%	
Maximum Green (s)	40.0	40.0		40.0	40.0		4.0	44.0	44.0	35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 88.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

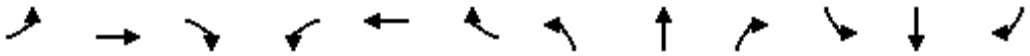




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	568	68	68	316	101	143	298	144	155	215	38
Future Volume (veh/h)	62	568	68	68	316	101	143	298	144	155	215	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1772	1772	1744	1716	1716	1716	1758	1744	1702	1702	1702
Adj Flow Rate, veh/h	64	586	70	70	326	104	147	307	148	160	222	39
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	4	6	6	6	3	4	7	7	7
Cap, veh/h	323	689	82	164	553	177	444	806	678	215	258	43
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.05	0.46	0.46	0.35	0.36	0.35
Sat Flow, veh/h	973	1553	186	765	1247	398	1634	1758	1478	446	713	118
Grp Volume(v), veh/h	64	0	656	70	0	430	147	307	148	421	0	0
Grp Sat Flow(s),veh/h/ln	973	0	1739	765	0	1644	1634	1758	1478	1278	0	0
Q Serve(g_s), s	4.9	0.0	31.1	8.3	0.0	18.2	5.0	10.6	5.6	27.3	0.0	0.0
Cycle Q Clear(g_c), s	22.6	0.0	31.1	38.9	0.0	18.2	5.0	10.6	5.6	29.4	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.24	1.00		1.00	0.38		0.09
Lane Grp Cap(c), veh/h	323	0	772	164	0	730	444	806	678	501	0	0
V/C Ratio(X)	0.20	0.00	0.85	0.43	0.00	0.59	0.33	0.38	0.22	0.84	0.00	0.00
Avail Cap(c_a), veh/h	323	0	772	164	0	730	444	857	720	537	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.7	0.0	23.0	40.1	0.0	19.4	15.8	16.4	15.0	28.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	8.9	1.8	0.0	1.2	0.4	0.3	0.2	10.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	19.2	2.8	0.0	10.7	3.3	7.3	3.2	15.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	31.9	41.8	0.0	20.7	16.2	16.7	15.2	39.0	0.0	0.0
LnGrp LOS	C	A	C	D	A	C	B	B	B	D	A	A
Approach Vol, veh/h		720			500			602			421	
Approach Delay, s/veh		31.6			23.6			16.2			39.0	
Approach LOS		C			C			B			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		46.0	9.0	37.4		46.0		46.4				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		40.0	4.0	35.0		40.0		44.0				
Max Q Clear Time (g_c+I1), s		33.1	7.5	31.4		41.4		13.1				
Green Ext Time (p_c), s		2.4	0.0	1.0		0.0		2.4				

Intersection Summary												
HCM 6th Ctrl Delay			27.1									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	0	32	10	0	7	70	446	168	0	308	38
Future Volume (vph)	83	0	32	10	0	7	70	446	168	0	308	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		335			436			498			226	
Travel Time (s)		9.1			9.9			9.7			4.4	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	2%	2%	30%	2%	21%	2%	2%	2%	0%	5%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	83	0	32	10	0	7	70	446	168	0	308	38
Future Vol, veh/h	83	0	32	10	0	7	70	446	168	0	308	38
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	30	2	21	2	2	2	0	5	2
Mvmt Flow	97	0	37	12	0	8	81	519	195	0	358	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1065	1061	380	1080	1083	519	402	0	-	-	-	0
Stage 1	380	380	-	681	681	-	-	-	-	-	-	-
Stage 2	685	681	-	399	402	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.52	6.3	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.4	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.4	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3.1	4.018	3.2	3	-	-	-	-	-
Pot Cap-1 Maneuver	220	224	706	206	217	566	874	-	0	0	-	-
Stage 1	734	614	-	457	450	-	-	-	0	0	-	-
Stage 2	491	450	-	675	600	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	202	203	706	181	197	566	874	-	-	-	-	-
Mov Cap-2 Maneuver	202	203	-	181	197	-	-	-	-	-	-	-
Stage 1	666	614	-	414	408	-	-	-	-	-	-	-
Stage 2	439	408	-	639	600	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	34.4	20.2	1.3	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	874	-	252	181	566	-	-
HCM Lane V/C Ratio	0.093	-	0.531	0.064	0.014	-	-
HCM Control Delay (s)	9.5	-	34.4	26.3	11.5	-	-
HCM Lane LOS	A	-	D	D	B	-	-
HCM 95th %tile Q(veh)	0.3	-	2.8	0.2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	810	15	9	394	15	18
Future Volume (vph)	810	15	9	394	15	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	582			1607	619	
Travel Time (s)	8.8			24.3	16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	10%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	810	15	9	394	15	18
Future Vol, veh/h	810	15	9	394	15	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	10	0	0
Mvmt Flow	880	16	10	428	16	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	896	0	1328	880
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	448	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	584	-	271	411
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	584	-	265	411
Mov Cap-2 Maneuver	-	-	-	-	424	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	814	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	417	-	-	584	-
HCM Lane V/C Ratio	0.086	-	-	0.017	-
HCM Control Delay (s)	14.4	-	-	11.3	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	670	30	72	425	0	0
Future Volume (vph)	670	30	72	425	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1607			294	286	
Travel Time (s)	24.3			4.5	7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	6%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	670	30	72	425	0	0
Future Vol, veh/h	670	30	72	425	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	6	2	2
Mvmt Flow	728	33	78	462	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	761	0	1346	728
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	618	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	653	-	167	423
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	538	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	653	-	140	423
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	451	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	653	-
HCM Lane V/C Ratio	-	-	-	0.12	-
HCM Control Delay (s)	0	-	-	11.3	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0.4	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	615	55	0	497	0	83
Future Volume (vph)	615	55	0	497	0	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	294			338	207	
Travel Time (s)	4.5			5.1	5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	6%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

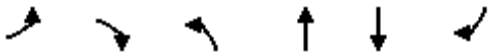
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	615	55	0	497	0	83
Future Vol, veh/h	615	55	0	497	0	83
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	6	2	2
Mvmt Flow	668	60	0	540	0	90

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	668
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	482
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	482
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	482	-	-	-
HCM Lane V/C Ratio	0.187	-	-	-
HCM Control Delay (s)	14.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	584	333	19
Future Volume (vph)	0	0	0	584	333	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	225			226	298	
Travel Time (s)	6.1			4.4	5.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	8%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

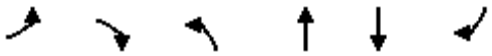
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	584	333	19
Future Vol, veh/h	0	0	0	584	333	19
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	4	8	2
Mvmt Flow	0	0	0	635	362	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	373	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	713	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	713	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	19	0	643	350	0
Future Volume (vph)	41	19	0	643	350	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	278			353	554	
Travel Time (s)	7.6			6.9	10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	5%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

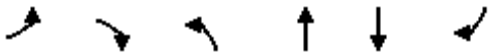
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	19	0	643	350	0
Future Vol, veh/h	41	19	0	643	350	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	5	2
Mvmt Flow	45	21	0	699	380	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1079	380	-	0	-	0
Stage 1	380	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	266	706	0	-	-	0
Stage 1	790	-	0	-	-	0
Stage 2	553	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	266	706	-	-	-	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	553	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	331	-
HCM Lane V/C Ratio	-	0.197	-
HCM Control Delay (s)	-	18.5	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.7	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	9	3	627	364	5
Future Volume (vph)	16	9	3	627	364	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	364			463	353	
Travel Time (s)	9.9			9.0	6.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	9	3	627	364	5
Future Vol, veh/h	16	9	3	627	364	5
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	17	10	3	682	396	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1087	399	401	0	-	0
Stage 1	399	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	264	690	874	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	262	690	874	-	-	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	562	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.6	0	0
HCM LOS	C		

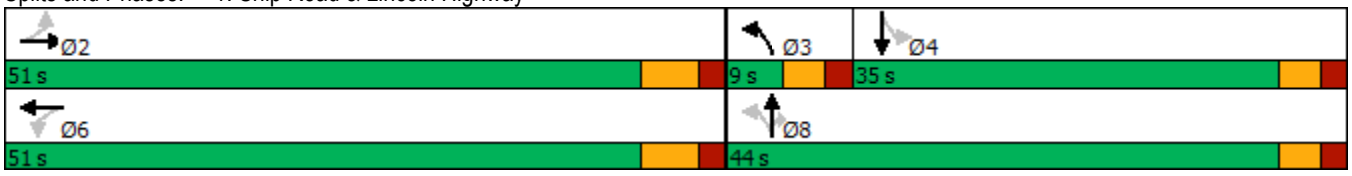
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	874	-	337	-	-
HCM Lane V/C Ratio	0.004	-	0.081	-	-
HCM Control Delay (s)	9.1	0	16.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

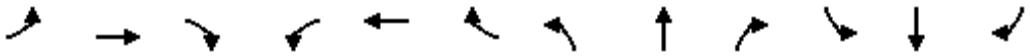
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	420	119	95	681	173	207	505	97	61	246	44
Future Volume (vph)	45	420	119	95	681	173	207	505	97	61	246	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	175		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		319			1012			282			767	
Travel Time (s)		4.8			15.3			5.5			14.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	51.0	51.0		51.0	51.0		9.0	44.0	44.0	35.0	35.0	
Total Split (%)	53.7%	53.7%		53.7%	53.7%		9.5%	46.3%	46.3%	36.8%	36.8%	
Maximum Green (s)	45.0	45.0		45.0	45.0		4.0	39.0	39.0	30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 94.5
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

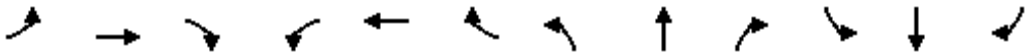




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	420	119	95	681	173	207	505	97	61	246	44
Future Volume (veh/h)	45	420	119	95	681	173	207	505	97	61	246	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	48	447	127	101	724	184	220	537	103	65	262	47
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	637	181	263	660	168	309	752	592	85	279	46
Arrive On Green	0.48	0.48	0.47	0.48	0.48	0.47	0.05	0.42	0.42	0.32	0.33	0.32
Sat Flow, veh/h	624	1317	374	839	1363	346	1688	1786	1406	124	855	141
Grp Volume(v), veh/h	48	0	574	101	0	908	220	537	103	374	0	0
Grp Sat Flow(s),veh/h/ln	624	0	1691	839	0	1710	1688	1786	1406	1119	0	0
Q Serve(g_s), s	0.5	0.0	25.2	10.1	0.0	46.0	5.0	23.6	4.3	14.9	0.0	0.0
Cycle Q Clear(g_c), s	46.0	0.0	25.2	34.8	0.0	46.0	5.0	23.6	4.3	30.0	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.20	1.00		1.00	0.17		0.13
Lane Grp Cap(c), veh/h	79	0	819	263	0	828	309	752	592	398	0	0
V/C Ratio(X)	0.61	0.00	0.70	0.38	0.00	1.10	0.71	0.71	0.17	0.94	0.00	0.00
Avail Cap(c_a), veh/h	79	0	819	263	0	828	309	752	592	398	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	19.2	32.5	0.0	24.6	22.8	22.8	17.2	33.3	0.0	0.0
Incr Delay (d2), s/veh	12.6	0.0	2.7	0.9	0.0	61.2	7.5	3.2	0.1	30.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	0.0	14.4	3.6	0.0	42.0	4.3	15.2	2.5	17.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	21.9	33.5	0.0	85.8	30.4	26.0	17.3	63.5	0.0	0.0
LnGrp LOS	E	A	C	C	A	F	C	C	B	E	A	A
Approach Vol, veh/h		622			1009			860			374	
Approach Delay, s/veh		24.9			80.5			26.1			63.5	
Approach LOS		C			F			C			E	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		51.0	9.0	35.0		51.0		44.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		45.0	4.0	30.0		45.0		39.0				
Max Q Clear Time (g_c+I1), s		48.5	7.5	32.0		48.0		26.1				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			49.9									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	0	28	79	0	86	45	653	24	0	480	27
Future Volume (vph)	73	0	28	79	0	86	45	653	24	0	480	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		318			436			424			253	
Travel Time (s)		8.7			9.9			8.3			4.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	0%	1%	0%	1%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	0	28	79	0	86	45	653	24	0	480	27
Future Vol, veh/h	73	0	28	79	0	86	45	653	24	0	480	27
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	0	2	0	2	0	1	0	1	2
Mvmt Flow	78	0	30	84	0	91	48	695	26	0	511	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1363	1317	526	1332	1331	695	540	0	-	-	-	0
Stage 1	526	526	-	791	791	-	-	-	-	-	-	-
Stage 2	837	791	-	541	540	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3	4.018	3.1	3	-	-	-	-	-
Pot Cap-1 Maneuver	136	157	582	144	154	466	782	-	0	0	-	-
Stage 1	606	529	-	429	401	-	-	-	0	0	-	-
Stage 2	402	401	-	596	521	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	104	147	582	130	145	466	782	-	-	-	-	-
Mov Cap-2 Maneuver	104	147	-	130	145	-	-	-	-	-	-	-
Stage 1	569	529	-	403	377	-	-	-	-	-	-	-
Stage 2	303	377	-	565	521	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	93.7	42.6	0.6	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	782	-	135	130	466	-	-
HCM Lane V/C Ratio	0.061	-	0.796	0.646	0.196	-	-
HCM Control Delay (s)	9.9	-	93.7	73.1	14.6	-	-
HCM Lane LOS	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	4.9	3.4	0.7	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	577	21	17	965	15	17
Future Volume (vph)	577	21	17	965	15	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	550			1659	560	
Travel Time (s)	8.3			25.1	15.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	2%	0%	17%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	577	21	17	965	15	17
Future Vol, veh/h	577	21	17	965	15	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	0	0	2	0	17
Mvmt Flow	595	22	18	995	15	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	617	0	1626	595
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	1031	-
Critical Hdwy	-	-	4.3	-	5.4	5.8
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.2
Pot Cap-1 Maneuver	-	-	735	-	191	555
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	507	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	735	-	180	555
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	479	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	430	-	-	735	-
HCM Lane V/C Ratio	0.077	-	-	0.024	-
HCM Control Delay (s)	14.1	-	-	10	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	556	17	56	876	0	0
Future Volume (vph)	556	17	56	876	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1659			262	331	
Travel Time (s)	25.1			4.0	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	556	17	56	876	0	0
Future Vol, veh/h	556	17	56	876	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	604	18	61	952	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	622	0	1678	604
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	1074	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	732	-	104	498
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	328	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	732	-	86	498
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	270	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	732	-
HCM Lane V/C Ratio	-	-	-	0.083	-
HCM Control Delay (s)	0	-	-	10.4	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	526	29	0	932	0	58
Future Volume (vph)	526	29	0	932	0	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	262			319	294	
Travel Time (s)	4.0			4.8	8.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

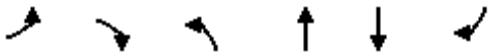
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↑		↱
Traffic Vol, veh/h	526	29	0	932	0	58
Future Vol, veh/h	526	29	0	932	0	58
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	572	32	0	1013	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	572
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	547
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	547
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	547	-	-	-
HCM Lane V/C Ratio	0.115	-	-	-
HCM Control Delay (s)	12.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	809	450	10
Future Volume (vph)	0	0	0	809	450	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	180			253	282	
Travel Time (s)	4.9			4.9	5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

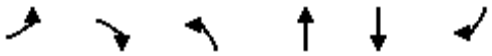
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	809	450	10
Future Vol, veh/h	0	0	0	809	450	10
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	879	489	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	495	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	606	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	606	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	36	12	0	685	588	0
Future Volume (vph)	36	12	0	685	588	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	267			328	567	
Travel Time (s)	7.3			6.4	11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	1%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

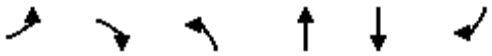
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	12	0	685	588	0
Future Vol, veh/h	36	12	0	685	588	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	1	2
Mvmt Flow	39	13	0	745	639	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1384	639	-	0	-	0
Stage 1	639	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	171	501	0	-	-	0
Stage 1	591	-	0	-	-	0
Stage 2	525	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	171	501	-	-	-	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.5	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	205	-
HCM Lane V/C Ratio	-	0.255	-
HCM Control Delay (s)	-	28.5	-
HCM Lane LOS	-	D	-
HCM 95th %tile Q(veh)	-	1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	6	10	675	584	16
Future Volume (vph)	10	6	10	675	584	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	366			271	328	
Travel Time (s)	10.0			5.3	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	6	10	675	584	16
Future Vol, veh/h	10	6	10	675	584	16
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	11	7	11	734	635	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1400	644	652	0	-	0
Stage 1	644	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	169	499	714	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	165	499	714	-	-	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	520	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.8	0.1	0
HCM LOS	C		

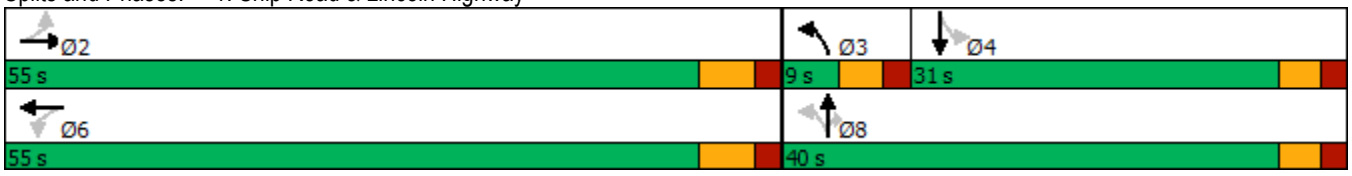
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	714	-	220	-	-
HCM Lane V/C Ratio	0.015	-	0.079	-	-
HCM Control Delay (s)	10.1	0	22.8	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

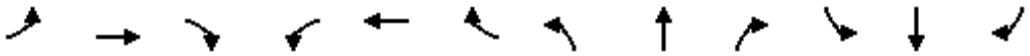
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	494	153	77	727	138	274	343	131	93	202	51
Future Volume (vph)	50	494	153	77	727	138	274	343	131	93	202	51
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		310			1107			262			367	
Travel Time (s)		4.7			16.8			5.1			7.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	55.0	55.0		55.0	55.0		9.0	40.0	40.0	31.0	31.0	
Total Split (%)	57.9%	57.9%		57.9%	57.9%		9.5%	42.1%	42.1%	32.6%	32.6%	
Maximum Green (s)	49.0	49.0		49.0	49.0		4.0	35.0	35.0	26.0	26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

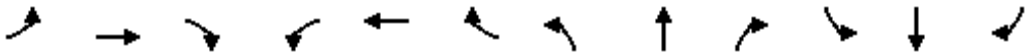




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	494	153	77	727	138	274	343	131	93	202	51
Future Volume (veh/h)	50	494	153	77	727	138	274	343	131	93	202	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	53	526	163	82	773	147	291	365	139	99	215	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	677	210	229	762	145	336	677	533	127	226	52
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.05	0.38	0.38	0.27	0.28	0.27
Sat Flow, veh/h	617	1287	399	754	1447	275	1688	1786	1406	277	795	184
Grp Volume(v), veh/h	53	0	689	82	0	920	291	365	139	368	0	0
Grp Sat Flow(s),veh/h/ln	617	0	1686	754	0	1722	1688	1786	1406	1257	0	0
Q Serve(g_s), s	0.5	0.0	31.2	9.2	0.0	50.0	5.0	15.2	6.5	19.3	0.0	0.0
Cycle Q Clear(g_c), s	50.0	0.0	31.2	39.9	0.0	50.0	5.0	15.2	6.5	26.0	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.16	1.00		1.00	0.27		0.15
Lane Grp Cap(c), veh/h	79	0	887	229	0	907	336	677	533	392	0	0
V/C Ratio(X)	0.67	0.00	0.78	0.36	0.00	1.01	0.87	0.54	0.26	0.94	0.00	0.00
Avail Cap(c_a), veh/h	79	0	887	229	0	907	336	677	533	392	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	18.1	33.8	0.0	22.6	29.5	23.0	20.3	35.3	0.0	0.0
Incr Delay (d2), s/veh	19.8	0.0	4.4	0.9	0.0	33.6	20.4	0.9	0.3	30.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	0.0	17.1	3.0	0.0	34.3	10.4	10.3	3.8	17.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	0.0	22.5	34.7	0.0	56.2	49.9	23.9	20.6	65.6	0.0	0.0
LnGrp LOS	E	A	C	C	A	F	D	C	C	E	A	A
Approach Vol, veh/h		742			1002			795			368	
Approach Delay, s/veh		25.7			54.5			32.8			65.6	
Approach LOS		C			D			C			E	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		55.0	9.0	31.0		55.0		40.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		49.0	4.0	26.0		49.0		35.0				
Max Q Clear Time (g_c+I1), s		52.5	7.5	28.0		52.0		17.7				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.4				

Intersection Summary												
HCM 6th Ctrl Delay			42.6									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	0	28	8	0	4	52	580	14	0	434	29
Future Volume (vph)	72	0	28	8	0	4	52	580	14	0	434	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		443			436			430			300	
Travel Time (s)		12.1			9.9			8.4			5.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	1%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	0	28	8	0	4	52	580	14	0	434	29
Future Vol, veh/h	72	0	28	8	0	4	52	580	14	0	434	29
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	0	2	0	2	1	0	0	0	2
Mvmt Flow	73	0	29	8	0	4	53	592	14	0	443	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1158	1156	458	1171	1171	592	473	0	-	-	-	0
Stage 1	458	458	-	698	698	-	-	-	-	-	-	-
Stage 2	700	698	-	473	473	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3	4.018	3.1	3	-	-	-	-	-
Pot Cap-1 Maneuver	189	197	637	187	193	535	825	-	0	0	-	-
Stage 1	663	567	-	485	442	-	-	-	0	0	-	-
Stage 2	482	442	-	651	558	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	178	184	637	170	181	535	825	-	-	-	-	-
Mov Cap-2 Maneuver	178	184	-	170	181	-	-	-	-	-	-	-
Stage 1	621	567	-	454	414	-	-	-	-	-	-	-
Stage 2	448	414	-	622	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	34.1	22.1	0.8	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	825	-	223	170	535	-	-
HCM Lane V/C Ratio	0.064	-	0.458	0.048	0.008	-	-
HCM Control Delay (s)	9.7	-	34.1	27.2	11.8	-	-
HCM Lane LOS	A	-	D	D	B	-	-
HCM 95th %tile Q(veh)	0.2	-	2.2	0.1	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	626	44	59	947	21	19
Future Volume (vph)	626	44	59	947	21	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	394			1639	479	
Travel Time (s)	6.0			24.8	13.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	626	44	59	947	21	19
Future Vol, veh/h	626	44	59	947	21	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	673	47	63	1018	23	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	720	0	1817	673
Stage 1	-	-	-	-	673	-
Stage 2	-	-	-	-	1144	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	675	-	153	527
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	460	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	675	-	120	527
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	361	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	346	-	-	675	-
HCM Lane V/C Ratio	0.124	-	-	0.094	-
HCM Control Delay (s)	16.9	-	-	10.9	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	675	18	63	989	0	0
Future Volume (vph)	675	18	63	989	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1639			293	355	
Travel Time (s)	24.8			4.4	9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	675	18	63	989	0	0
Future Vol, veh/h	675	18	63	989	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	734	20	68	1075	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	754	0	1945	734
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	1211	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	657	-	71	420
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	282	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	657	-	53	420
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	210	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	657	-
HCM Lane V/C Ratio	-	-	-	0.104	-
HCM Control Delay (s)	0	-	-	11.1	0
HCM Lane LOS	A	-	-	B	A
HCM 95th %tile Q(veh)	-	-	-	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	640	35	0	1052	0	58
Future Volume (vph)	640	35	0	1052	0	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	293			310	293	
Travel Time (s)	4.4			4.7	8.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

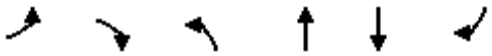
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	640	35	0	1052	0	58
Future Vol, veh/h	640	35	0	1052	0	58
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	696	38	0	1143	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	696
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	464
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	464
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	464	-	-	-
HCM Lane V/C Ratio	0.136	-	-	-
HCM Control Delay (s)	14	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	748	420	11
Future Volume (vph)	0	0	0	748	420	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	183			300	262	
Travel Time (s)	5.0			5.8	5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

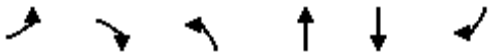
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	748	420	11
Future Vol, veh/h	0	0	0	748	420	11
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	813	457	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	463	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	633	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	633	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	11	0	613	470	0
Future Volume (vph)	35	11	0	613	470	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	280			333	546	
Travel Time (s)	7.6			6.5	10.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

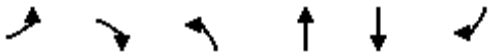
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	11	0	613	470	0
Future Vol, veh/h	35	11	0	613	470	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	12	0	666	511	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1177	511	-	0	-	0
Stage 1	511	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	231	594	0	-	-	0
Stage 1	683	-	0	-	-	0
Stage 2	574	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	231	594	-	-	-	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	271	-
HCM Lane V/C Ratio	-	0.185	-
HCM Control Delay (s)	-	21.3	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.7	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	8	10	600	467	14
Future Volume (vph)	13	8	10	600	467	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	452			278	333	
Travel Time (s)	12.3			5.4	6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	8	10	600	467	14
Future Vol, veh/h	13	8	10	600	467	14
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	14	9	11	652	508	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1190	516	523	0	-	0
Stage 1	516	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	228	591	793	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	223	591	793	-	-	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	793	-	292	-	-
HCM Lane V/C Ratio	0.014	-	0.078	-	-
HCM Control Delay (s)	9.6	0	18.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

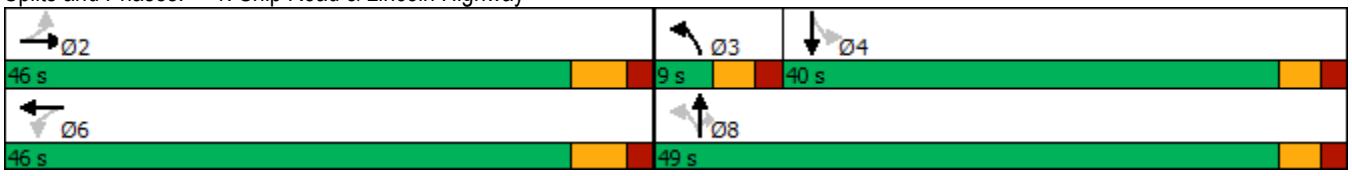
2028 Base Conditions

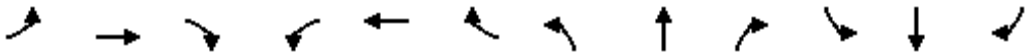
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	553	70	59	301	103	125	288	93	158	209	30
Future Volume (vph)	51	553	70	59	301	103	125	288	93	158	209	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2239			1258			523			797	
Travel Time (s)		33.9			19.1			10.2			15.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	8%	4%	6%	1%	6%	3%	4%	4%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	46.0	46.0		46.0	46.0		9.0	49.0	49.0	40.0	40.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		9.5%	51.6%	51.6%	42.1%	42.1%	
Maximum Green (s)	40.0	40.0		40.0	40.0		4.0	44.0	44.0	35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 87.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

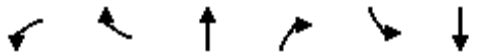




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	553	70	59	301	103	125	288	93	158	209	30
Future Volume (veh/h)	51	553	70	59	301	103	125	288	93	158	209	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1772	1772	1744	1716	1716	1716	1758	1744	1702	1702	1702
Adj Flow Rate, veh/h	53	570	72	61	310	106	129	297	96	163	215	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	4	6	6	6	3	4	7	7	7
Cap, veh/h	339	685	86	178	543	186	462	797	670	226	256	35
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.06	0.45	0.45	0.34	0.35	0.34
Sat Flow, veh/h	986	1542	195	775	1223	418	1634	1758	1478	479	728	99
Grp Volume(v), veh/h	53	0	642	61	0	416	129	297	96	409	0	0
Grp Sat Flow(s),veh/h/ln	986	0	1737	775	0	1641	1634	1758	1478	1306	0	0
Q Serve(g_s), s	3.7	0.0	28.6	6.6	0.0	16.6	4.2	9.8	3.3	24.5	0.0	0.0
Cycle Q Clear(g_c), s	19.8	0.0	28.6	34.7	0.0	16.6	4.2	9.8	3.3	26.3	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.25	1.00		1.00	0.40		0.08
Lane Grp Cap(c), veh/h	339	0	771	178	0	728	462	797	670	501	0	0
V/C Ratio(X)	0.16	0.00	0.83	0.34	0.00	0.57	0.28	0.37	0.14	0.82	0.00	0.00
Avail Cap(c_a), veh/h	361	0	811	196	0	766	462	901	758	577	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.4	0.0	21.6	36.6	0.0	18.3	15.1	15.8	14.0	27.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	7.1	1.1	0.0	0.9	0.3	0.3	0.1	7.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	17.4	2.2	0.0	9.8	2.7	6.7	1.9	13.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	28.7	37.7	0.0	19.2	15.5	16.1	14.1	34.9	0.0	0.0
LnGrp LOS	C	A	C	D	A	B	B	B	B	C	A	A
Approach Vol, veh/h		695			477			522			409	
Approach Delay, s/veh		28.5			21.6			15.6			34.9	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		44.0	9.0	34.8		44.0		43.8				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		40.0	4.0	35.0		40.0		44.0				
Max Q Clear Time (g_c+I1), s		30.6	6.7	28.3		37.2		12.3				
Green Ext Time (p_c), s		2.9	0.0	1.5		0.8		2.1				

Intersection Summary												
HCM 6th Ctrl Delay			25.0									
HCM 6th LOS			C									



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	8	449	170	0	349
Future Volume (vph)	11	8	449	170	0	349
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		498			523
Travel Time (s)	9.9		9.7			10.2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	30%	21%	2%	2%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	8	449	170	0	349
Future Vol, veh/h	11	8	449	170	0	349
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	30	21	2	2	0	5
Mvmt Flow	13	9	522	198	0	406

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	928	522	0	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	-	-
Critical Hdwy Stg 1	5.7	-	-	-	-	-
Critical Hdwy Stg 2	5.7	-	-	-	-	-
Follow-up Hdwy	3.1	3.2	-	-	-	-
Pot Cap-1 Maneuver	316	564	-	0	0	-
Stage 1	631	-	-	0	0	-
Stage 2	724	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	316	564	-	-	-	-
Mov Cap-2 Maneuver	316	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	316	564	-
HCM Lane V/C Ratio	-	0.04	0.016	-
HCM Control Delay (s)	-	16.9	11.5	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	0.1	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	805	10	4	429	2	1
Future Volume (vph)	805	10	4	429	2	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	582			2239	619	
Travel Time (s)	8.8			33.9	16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	10%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	805	10	4	429	2	1
Future Vol, veh/h	805	10	4	429	2	1
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	-	-	-1	-5	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	10	0	0
Mvmt Flow	875	11	4	466	2	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	886	0	1355	881
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	474	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	589	-	262	411
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	814	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	589	-	260	411
Mov Cap-2 Maneuver	-	-	-	-	421	-
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	807	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.7
HCM LOS			B

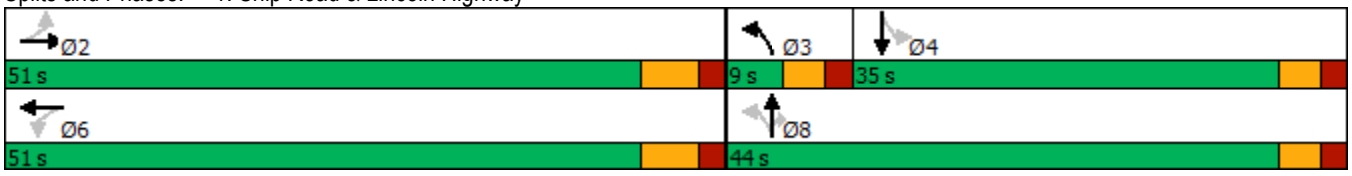
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	418	-	-	589	-
HCM Lane V/C Ratio	0.008	-	-	0.007	-
HCM Control Delay (s)	13.7	-	-	11.2	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	0	-

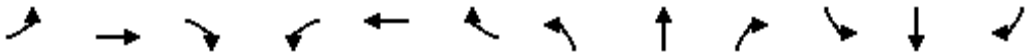
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	403	122	86	673	177	190	504	50	62	237	36
Future Volume (vph)	35	403	122	86	673	177	190	504	50	62	237	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2240			1012			536			767	
Travel Time (s)		33.9			15.3			10.4			14.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	51.0	51.0		51.0	51.0		9.0	44.0	44.0	35.0	35.0	
Total Split (%)	53.7%	53.7%		53.7%	53.7%		9.5%	46.3%	46.3%	36.8%	36.8%	
Maximum Green (s)	45.0	45.0		45.0	45.0		4.0	39.0	39.0	30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 93.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

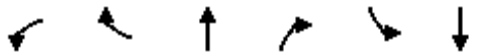




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	403	122	86	673	177	190	504	50	62	237	36
Future Volume (veh/h)	35	403	122	86	673	177	190	504	50	62	237	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	37	429	130	91	716	188	202	536	53	66	252	38
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	627	190	274	655	172	314	752	592	89	283	39
Arrive On Green	0.48	0.48	0.47	0.48	0.48	0.47	0.05	0.42	0.42	0.32	0.33	0.32
Sat Flow, veh/h	626	1295	392	850	1353	355	1688	1786	1406	134	869	120
Grp Volume(v), veh/h	37	0	559	91	0	904	202	536	53	356	0	0
Grp Sat Flow(s),veh/h/ln	626	0	1687	850	0	1708	1688	1786	1406	1122	0	0
Q Serve(g_s), s	0.5	0.0	24.3	8.7	0.0	46.0	5.0	23.6	2.2	14.9	0.0	0.0
Cycle Q Clear(g_c), s	46.0	0.0	24.3	32.6	0.0	46.0	5.0	23.6	2.2	30.0	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.21	1.00		1.00	0.19		0.11
Lane Grp Cap(c), veh/h	79	0	817	274	0	827	314	752	592	399	0	0
V/C Ratio(X)	0.47	0.00	0.68	0.33	0.00	1.09	0.64	0.71	0.09	0.89	0.00	0.00
Avail Cap(c_a), veh/h	79	0	817	274	0	827	314	752	592	399	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	19.0	31.3	0.0	24.6	21.0	22.7	16.5	32.6	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	2.4	0.7	0.0	59.8	4.5	3.2	0.1	21.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	13.9	3.2	0.0	41.5	2.5	15.1	1.2	15.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	0.0	21.4	32.0	0.0	84.4	25.4	25.9	16.6	54.0	0.0	0.0
LnGrp LOS	D	A	C	C	A	F	C	C	B	D	A	A
Approach Vol, veh/h		596			995			791			356	
Approach Delay, s/veh		23.3			79.6			25.2			54.0	
Approach LOS		C			E			C			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		51.0	9.0	35.0		51.0		44.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		45.0	4.0	30.0		45.0		39.0				
Max Q Clear Time (g_c+I1), s		48.5	7.5	32.0		48.0		26.1				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.9				

Intersection Summary												
HCM 6th Ctrl Delay			48.3									
HCM 6th LOS			D									



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	80	91	657	22	0	504
Future Volume (vph)	80	91	657	22	0	504
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		40			40
Link Distance (ft)	436		424			536
Travel Time (s)	9.9		7.2			9.1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	91	657	22	0	504
Future Vol, veh/h	80	91	657	22	0	504
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	1	0	1
Mvmt Flow	85	97	699	23	0	536

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1235	699	0	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	214	464	-	0	0	-
Stage 1	555	-	-	0	0	-
Stage 2	666	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	214	464	-	-	-	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	555	-	-	-	-	-
Stage 2	666	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	214	464	-
HCM Lane V/C Ratio	-	0.398	0.209	-
HCM Control Delay (s)	-	32.5	14.8	-
HCM Lane LOS	-	D	B	-
HCM 95th %tile Q(veh)	-	1.8	0.8	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	576	1	1	1007	6	6
Future Volume (vph)	576	1	1	1007	6	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	550			2240	560	
Travel Time (s)	8.3			33.9	15.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	2%	0%	17%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	576	1	1	1007	6	6
Future Vol, veh/h	576	1	1	1007	6	6
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	-	-	-1	-5	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	0	0	2	0	17
Mvmt Flow	594	1	1	1038	6	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	595	0	1635	595
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	1040	-
Critical Hdwy	-	-	4.3	-	5.4	5.8
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.2
Pot Cap-1 Maneuver	-	-	748	-	189	555
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	748	-	188	555
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	501	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.4
HCM LOS			C

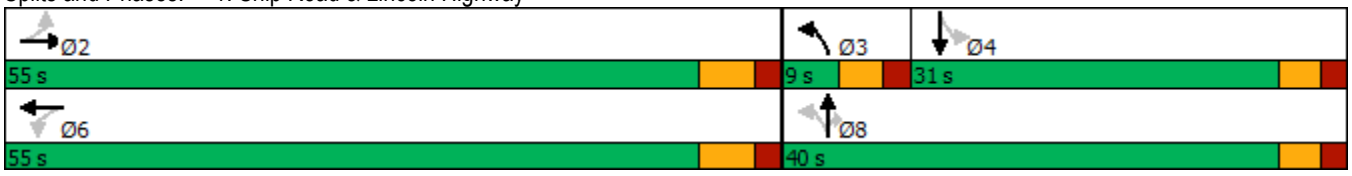
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	281	-	-	748	-
HCM Lane V/C Ratio	0.044	-	-	0.001	-
HCM Control Delay (s)	18.4	-	-	9.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

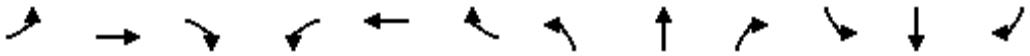
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	476	157	65	714	140	256	337	86	94	190	42
Future Volume (vph)	39	476	157	65	714	140	256	337	86	94	190	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		2242			1107			563			367	
Travel Time (s)		34.0			16.8			11.0			7.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	55.0	55.0		55.0	55.0		9.0	40.0	40.0	31.0	31.0	
Total Split (%)	57.9%	57.9%		57.9%	57.9%		9.5%	42.1%	42.1%	32.6%	32.6%	
Maximum Green (s)	49.0	49.0		49.0	49.0		4.0	35.0	35.0	26.0	26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 94.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	476	157	65	714	140	256	337	86	94	190	42
Future Volume (veh/h)	39	476	157	65	714	140	256	337	86	94	190	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	41	506	167	69	760	149	272	359	91	100	202	45
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	666	220	240	757	148	347	677	533	135	230	47
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.05	0.38	0.38	0.27	0.28	0.27
Sat Flow, veh/h	623	1265	418	765	1439	282	1688	1786	1406	304	810	166
Grp Volume(v), veh/h	41	0	673	69	0	909	272	359	91	347	0	0
Grp Sat Flow(s),veh/h/ln	623	0	1683	765	0	1721	1688	1786	1406	1280	0	0
Q Serve(g_s), s	0.5	0.0	30.1	7.4	0.0	50.0	5.0	14.8	4.1	19.3	0.0	0.0
Cycle Q Clear(g_c), s	50.0	0.0	30.1	36.9	0.0	50.0	5.0	14.8	4.1	25.7	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.16	1.00		1.00	0.29		0.13
Lane Grp Cap(c), veh/h	79	0	886	240	0	906	347	677	533	399	0	0
V/C Ratio(X)	0.52	0.00	0.76	0.29	0.00	1.00	0.78	0.53	0.17	0.87	0.00	0.00
Avail Cap(c_a), veh/h	79	0	886	240	0	906	347	677	533	399	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	17.9	32.2	0.0	22.6	27.7	22.9	19.6	34.4	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	3.9	0.6	0.0	30.7	11.2	0.8	0.2	18.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	16.5	2.4	0.0	33.1	8.0	10.2	2.4	14.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	0.0	21.7	32.8	0.0	53.3	38.9	23.7	19.7	52.5	0.0	0.0
LnGrp LOS	D	A	C	C	A	F	D	C	B	D	A	A
Approach Vol, veh/h		714			978			722			347	
Approach Delay, s/veh		23.6			51.9			28.9			52.5	
Approach LOS		C			D			C			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		55.0	9.0	31.0		55.0		40.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		49.0	4.0	26.0		49.0		35.0				
Max Q Clear Time (g_c+I1), s		52.5	7.5	27.7		52.0		17.3				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.2				

Intersection Summary												
HCM 6th Ctrl Delay			38.6									
HCM 6th LOS			D									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	4	580	13	0	456
Future Volume (vph)	7	4	580	13	0	456
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	30		35			35
Link Distance (ft)	436		430			563
Travel Time (s)	9.9		8.4			11.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	4	580	13	0	456
Future Vol, veh/h	7	4	580	13	0	456
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	7	4	592	13	0	465

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1057	592	0	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	276	535	-	0	0	-
Stage 1	626	-	-	0	0	-
Stage 2	721	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	276	535	-	-	-	-
Mov Cap-2 Maneuver	276	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	721	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	276	535	-
HCM Lane V/C Ratio	-	0.026	0.008	-
HCM Control Delay (s)	-	18.4	11.8	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	0.1	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	617	28	48	983	11	5
Future Volume (vph)	617	28	48	983	11	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	394			2242	479	
Travel Time (s)	6.0			34.0	13.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	617	28	48	983	11	5
Future Vol, veh/h	617	28	48	983	11	5
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	-	-	-1	-5	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	663	30	52	1057	12	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	693	0	1839	678
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	1161	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	690	-	149	524
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	453	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	690	-	122	524
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	370	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	30.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	160	-	-	690	-
HCM Lane V/C Ratio	0.108	-	-	0.075	-
HCM Control Delay (s)	30.2	-	-	10.6	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

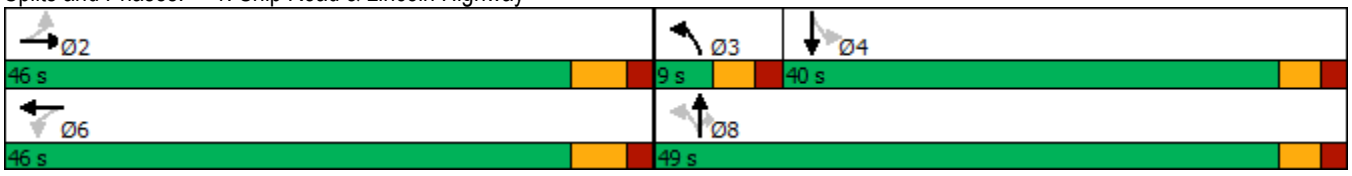
2028 Phase 3 Projected Conditions

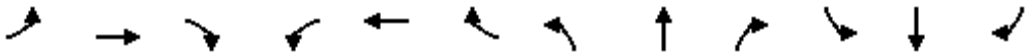
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	581	70	69	324	103	152	310	151	158	221	39
Future Volume (vph)	63	581	70	69	324	103	152	310	151	158	221	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		338			1258			298			797	
Travel Time (s)		5.1			19.1			5.8			15.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	8%	4%	6%	1%	6%	3%	4%	4%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	46.0	46.0		46.0	46.0		9.0	49.0	49.0	40.0	40.0	
Total Split (%)	48.4%	48.4%		48.4%	48.4%		9.5%	51.6%	51.6%	42.1%	42.1%	
Maximum Green (s)	40.0	40.0		40.0	40.0		4.0	44.0	44.0	35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 90.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

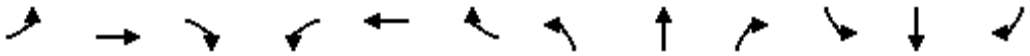




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	581	70	69	324	103	152	310	151	158	221	39
Future Volume (veh/h)	63	581	70	69	324	103	152	310	151	158	221	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1772	1772	1744	1716	1716	1716	1758	1744	1702	1702	1702
Adj Flow Rate, veh/h	65	599	72	71	334	106	157	320	156	163	228	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	4	6	6	6	3	4	7	7	7
Cap, veh/h	303	676	81	142	544	173	443	824	692	215	260	43
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.05	0.47	0.47	0.36	0.37	0.36
Sat Flow, veh/h	964	1552	187	754	1248	396	1634	1758	1478	434	697	116
Grp Volume(v), veh/h	65	0	671	71	0	440	157	320	156	431	0	0
Grp Sat Flow(s),veh/h/ln	964	0	1738	754	0	1644	1634	1758	1478	1247	0	0
Q Serve(g_s), s	5.2	0.0	33.4	8.1	0.0	19.4	5.0	11.1	5.9	29.1	0.0	0.0
Cycle Q Clear(g_c), s	24.1	0.0	33.4	41.0	0.0	19.4	5.0	11.1	5.9	31.7	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.24	1.00		1.00	0.38		0.09
Lane Grp Cap(c), veh/h	303	0	758	142	0	717	443	824	692	504	0	0
V/C Ratio(X)	0.21	0.00	0.89	0.50	0.00	0.61	0.35	0.39	0.23	0.85	0.00	0.00
Avail Cap(c_a), veh/h	303	0	758	142	0	717	443	841	707	516	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.6	0.0	24.4	43.3	0.0	20.6	15.6	16.2	14.9	28.6	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	12.2	2.8	0.0	1.6	0.5	0.3	0.2	13.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	0.0	21.1	3.1	0.0	11.4	3.6	7.7	3.4	16.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	0.0	36.7	46.1	0.0	22.1	16.1	16.5	15.0	41.6	0.0	0.0
LnGrp LOS	C	A	D	D	A	C	B	B	B	D	A	A
Approach Vol, veh/h		736			511			633			431	
Approach Delay, s/veh		36.1			25.4			16.1			41.6	
Approach LOS		D			C			B			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		46.0	9.0	39.1		46.0		48.1				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		40.0	4.0	35.0		40.0		44.0				
Max Q Clear Time (g_c+I1), s		35.4	7.5	33.7		43.5		13.6				
Green Ext Time (p_c), s		1.9	0.0	0.4		0.0		2.5				

Intersection Summary												
HCM 6th Ctrl Delay			29.3									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	0	33	11	0	8	72	463	173	0	316	38
Future Volume (vph)	92	0	33	11	0	8	72	463	173	0	316	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		335			436			498			226	
Travel Time (s)		9.1			9.9			9.7			4.4	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	2%	2%	30%	2%	21%	2%	2%	2%	0%	5%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	0	33	11	0	8	72	463	173	0	316	38
Future Vol, veh/h	92	0	33	11	0	8	72	463	173	0	316	38
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	30	2	21	2	2	2	0	5	2
Mvmt Flow	107	0	38	13	0	9	84	538	201	0	367	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1100	1095	389	1114	1117	538	411	0	-	-	-	0
Stage 1	389	389	-	706	706	-	-	-	-	-	-	-
Stage 2	711	706	-	408	411	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.52	6.3	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.4	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.4	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3.1	4.018	3.2	3	-	-	-	-	-
Pot Cap-1 Maneuver	208	214	698	195	207	552	867	-	0	0	-	-
Stage 1	725	608	-	442	439	-	-	-	0	0	-	-
Stage 2	475	439	-	667	595	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	189	193	698	171	187	552	867	-	-	-	-	-
Mov Cap-2 Maneuver	189	193	-	171	187	-	-	-	-	-	-	-
Stage 1	655	608	-	399	396	-	-	-	-	-	-	-
Stage 2	422	396	-	630	595	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42.7	20.9	1.3	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	867	-	234	171	552	-	-
HCM Lane V/C Ratio	0.097	-	0.621	0.075	0.017	-	-
HCM Control Delay (s)	9.6	-	42.7	27.7	11.6	-	-
HCM Lane LOS	A	-	E	D	B	-	-
HCM 95th %tile Q(veh)	0.3	-	3.7	0.2	0.1	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	831	16	9	410	15	18
Future Volume (vph)	831	16	9	410	15	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	582			1607	619	
Travel Time (s)	8.8			24.3	16.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	10%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	831	16	9	410	15	18
Future Vol, veh/h	831	16	9	410	15	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	10	0	0
Mvmt Flow	903	17	10	446	16	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	920	0	1369	903
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	573	-	258	400
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	573	-	252	400
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	800	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	405	-	-	573	-
HCM Lane V/C Ratio	0.089	-	-	0.017	-
HCM Control Delay (s)	14.8	-	-	11.4	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	685	31	74	441	0	0
Future Volume (vph)	685	31	74	441	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1607			294	286	
Travel Time (s)	24.3			4.5	7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	6%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	685	31	74	441	0	0
Future Vol, veh/h	685	31	74	441	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	6	2	2
Mvmt Flow	745	34	80	479	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	779	0	1384	745
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	639	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	643	-	158	414
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	526	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	643	-	131	414
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	469	-
Stage 2	-	-	-	-	437	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	643	-
HCM Lane V/C Ratio	-	-	-	0.125	-
HCM Control Delay (s)	0	-	-	11.4	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0.4	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	630	55	0	515	0	83
Future Volume (vph)	630	55	0	515	0	83
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	294			338	207	
Travel Time (s)	4.5			5.1	5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	6%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

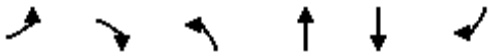
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	630	55	0	515	0	83
Future Vol, veh/h	630	55	0	515	0	83
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	6	2	2
Mvmt Flow	685	60	0	560	0	90

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	685
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	471
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	471
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	471	-	-	-
HCM Lane V/C Ratio	0.192	-	-	-
HCM Control Delay (s)	14.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	613	341	19
Future Volume (vph)	0	0	0	613	341	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	225			226	298	
Travel Time (s)	6.1			4.4	5.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	4%	8%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

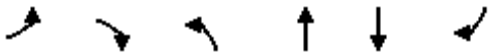
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	613	341	19
Future Vol, veh/h	0	0	0	613	341	19
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	4	8	2
Mvmt Flow	0	0	0	666	371	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	382	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	704	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	704	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	22	0	660	358	0
Future Volume (vph)	48	22	0	660	358	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	278			353	554	
Travel Time (s)	7.6			6.9	10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	5%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

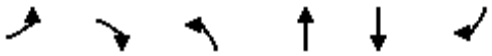
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	22	0	660	358	0
Future Vol, veh/h	48	22	0	660	358	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	5	2
Mvmt Flow	52	24	0	717	389	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1106	389	-	0	-	0
Stage 1	389	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	256	698	0	-	-	0
Stage 1	782	-	0	-	-	0
Stage 2	542	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	256	698	-	-	-	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	542	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	320	-
HCM Lane V/C Ratio	-	0.238	-
HCM Control Delay (s)	-	19.7	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.9	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	9	3	645	376	5
Future Volume (vph)	16	9	3	645	376	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	364			463	353	
Travel Time (s)	9.9			9.0	6.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	9	3	645	376	5
Future Vol, veh/h	16	9	3	645	376	5
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	17	10	3	701	409	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1119	412	414	0	-	0
Stage 1	412	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	252	678	865	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	250	678	865	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	550	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.1	0	0
HCM LOS	C		

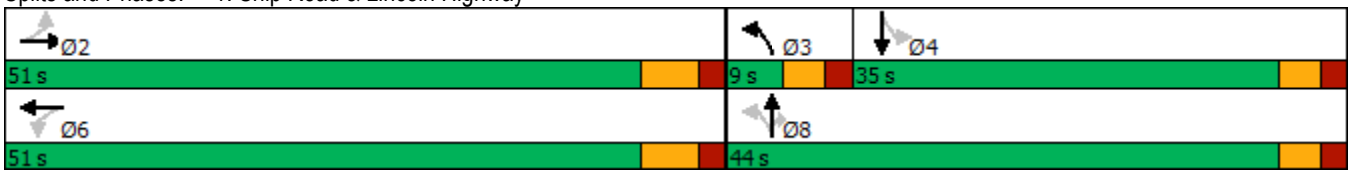
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	865	-	324	-	-
HCM Lane V/C Ratio	0.004	-	0.084	-	-
HCM Control Delay (s)	9.2	0	17.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

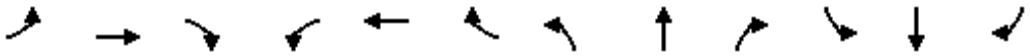
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	429	122	98	698	177	217	521	100	62	254	47
Future Volume (vph)	46	429	122	98	698	177	217	521	100	62	254	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	175		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		319			1012			282			767	
Travel Time (s)		4.8			15.3			5.5			14.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	51.0	51.0		51.0	51.0		9.0	44.0	44.0	35.0	35.0	
Total Split (%)	53.7%	53.7%		53.7%	53.7%		9.5%	46.3%	46.3%	36.8%	36.8%	
Maximum Green (s)	45.0	45.0		45.0	45.0		4.0	39.0	39.0	30.0	30.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

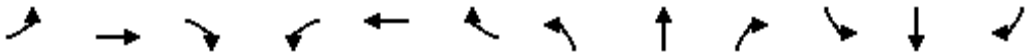




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	429	122	98	698	177	217	521	100	62	254	47
Future Volume (veh/h)	46	429	122	98	698	177	217	521	100	62	254	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	49	456	130	104	743	188	231	554	106	66	270	50
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	637	182	254	661	167	307	752	592	81	264	45
Arrive On Green	0.48	0.48	0.47	0.48	0.48	0.47	0.05	0.42	0.42	0.32	0.33	0.32
Sat Flow, veh/h	611	1315	375	829	1365	345	1688	1786	1406	113	809	137
Grp Volume(v), veh/h	49	0	586	104	0	931	231	554	106	386	0	0
Grp Sat Flow(s),veh/h/ln	611	0	1690	829	0	1710	1688	1786	1406	1058	0	0
Q Serve(g_s), s	0.5	0.0	26.1	10.7	0.0	46.0	5.0	24.7	4.5	13.8	0.0	0.0
Cycle Q Clear(g_c), s	46.0	0.0	26.1	36.2	0.0	46.0	5.0	24.7	4.5	30.0	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.20	1.00		1.00	0.17		0.13
Lane Grp Cap(c), veh/h	79	0	818	254	0	828	307	752	592	379	0	0
V/C Ratio(X)	0.62	0.00	0.72	0.41	0.00	1.12	0.75	0.74	0.18	1.02	0.00	0.00
Avail Cap(c_a), veh/h	79	0	818	254	0	828	307	752	592	379	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	19.4	33.4	0.0	24.6	24.1	23.1	17.2	34.2	0.0	0.0
Incr Delay (d2), s/veh	13.9	0.0	3.0	1.1	0.0	71.4	10.0	3.8	0.1	51.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	14.8	3.8	0.0	45.7	5.7	15.9	2.5	20.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	0.0	22.4	34.5	0.0	96.0	34.0	26.9	17.4	85.5	0.0	0.0
LnGrp LOS	E	A	C	C	A	F	C	C	B	F	A	A
Approach Vol, veh/h		635			1035			891			386	
Approach Delay, s/veh		25.5			89.9			27.6			85.5	
Approach LOS		C			F			C			F	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		51.0	9.0	35.0		51.0		44.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		45.0	4.0	30.0		45.0		39.0				
Max Q Clear Time (g_c+I1), s		48.5	7.5	32.0		48.0		27.2				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		3.0				

Intersection Summary	
HCM 6th Ctrl Delay	56.6
HCM 6th LOS	E



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	0	28	81	0	91	50	672	24	0	493	29
Future Volume (vph)	78	0	28	81	0	91	50	672	24	0	493	29
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		318			436			424			253	
Travel Time (s)		8.7			9.9			8.3			4.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	0%	1%	0%	1%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	15.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	0	28	81	0	91	50	672	24	0	493	29
Future Vol, veh/h	78	0	28	81	0	91	50	672	24	0	493	29
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	0	2	0	2	0	1	0	1	2
Mvmt Flow	83	0	30	86	0	97	53	715	26	0	524	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1410	1361	540	1376	1376	715	555	0	-	-	-	0
Stage 1	540	540	-	821	821	-	-	-	-	-	-	-
Stage 2	870	821	-	555	555	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3	4.018	3.1	3	-	-	-	-	-
Pot Cap-1 Maneuver	125	148	571	134	145	454	772	-	0	0	-	-
Stage 1	595	521	-	412	389	-	-	-	0	0	-	-
Stage 2	384	389	-	585	513	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	93	138	571	120	135	454	772	-	-	-	-	-
Mov Cap-2 Maneuver	93	138	-	120	135	-	-	-	-	-	-	-
Stage 1	554	521	-	384	362	-	-	-	-	-	-	-
Stage 2	281	362	-	554	513	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	137.7	49.8	0.7	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	772	-	119	120	454	-	-
HCM Lane V/C Ratio	0.069	-	0.948	0.718	0.213	-	-
HCM Control Delay (s)	10	-	137.7	88.7	15.1	-	-
HCM Lane LOS	B	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	6.1	4	0.8	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	595	21	17	992	15	17
Future Volume (vph)	595	21	17	992	15	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	550			1659	560	
Travel Time (s)	8.3			25.1	15.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	2%	0%	17%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	595	21	17	992	15	17
Future Vol, veh/h	595	21	17	992	15	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	0	0	2	0	17
Mvmt Flow	613	22	18	1023	15	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	635	0	1672	613
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	1059	-
Critical Hdwy	-	-	4.3	-	5.4	5.8
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.2
Pot Cap-1 Maneuver	-	-	724	-	181	544
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	724	-	171	544
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	466	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	419	-	-	724	-
HCM Lane V/C Ratio	0.079	-	-	0.024	-
HCM Control Delay (s)	14.3	-	-	10.1	0
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	568	21	60	901	0	0
Future Volume (vph)	568	21	60	901	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1659			262	331	
Travel Time (s)	25.1			4.0	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	568	21	60	901	0	0
Future Vol, veh/h	568	21	60	901	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	617	23	65	979	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	640	0	1726	617
Stage 1	-	-	-	-	617	-
Stage 2	-	-	-	-	1109	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	721	-	98	490
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	316	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	721	-	79	490
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	253	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	721	-
HCM Lane V/C Ratio	-	-	-	0.09	-
HCM Control Delay (s)	0	-	-	10.5	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	538	29	0	961	0	58
Future Volume (vph)	538	29	0	961	0	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	262			319	294	
Travel Time (s)	4.0			4.8	8.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

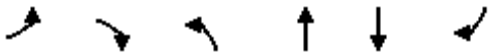
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	538	29	0	961	0	58
Future Vol, veh/h	538	29	0	961	0	58
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	585	32	0	1045	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	585
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	538
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	538
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	538	-	-	-
HCM Lane V/C Ratio	0.117	-	-	-
HCM Control Delay (s)	12.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	838	463	10
Future Volume (vph)	0	0	0	838	463	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	180			253	282	
Travel Time (s)	4.9			4.9	5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

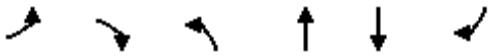
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	838	463	10
Future Vol, veh/h	0	0	0	838	463	10
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	911	503	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	509	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	595	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	595	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	40	14	0	707	603	0
Future Volume (vph)	40	14	0	707	603	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	267			328	567	
Travel Time (s)	7.3			6.4	11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	1%	2%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

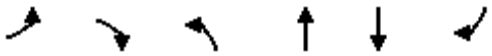
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	14	0	707	603	0
Future Vol, veh/h	40	14	0	707	603	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	1	2
Mvmt Flow	43	15	0	768	655	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1423	655	-	0	-	0
Stage 1	655	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	162	490	0	-	-	0
Stage 1	581	-	0	-	-	0
Stage 2	511	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	162	490	-	-	-	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	511	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	196	-
HCM Lane V/C Ratio	-	0.299	-
HCM Control Delay (s)	-	31	-
HCM Lane LOS	-	D	-
HCM 95th %tile Q(veh)	-	1.2	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	6	10	697	600	16
Future Volume (vph)	10	6	10	697	600	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	366			271	328	
Travel Time (s)	10.0			5.3	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	6	10	697	600	16
Future Vol, veh/h	10	6	10	697	600	16
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	11	7	11	758	652	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1441	661	669	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	159	488	704	-	-	-
Stage 1	579	-	-	-	-	-
Stage 2	507	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	488	704	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	563	-	-	-	-	-
Stage 2	507	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.9	0.1	0
HCM LOS	C		

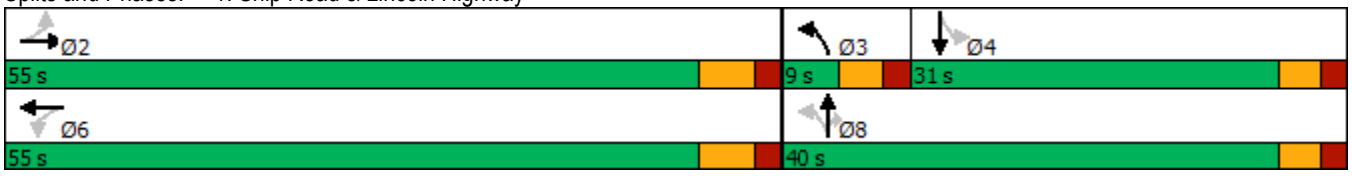
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	704	-	208	-	-
HCM Lane V/C Ratio	0.015	-	0.084	-	-
HCM Control Delay (s)	10.2	0	23.9	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

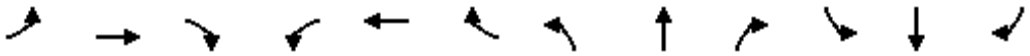
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	504	157	79	742	140	283	355	136	94	207	53
Future Volume (vph)	51	504	157	79	742	140	283	355	136	94	207	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	165		0	195		0	185		180	0		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	40			25			25			25		
Right Turn on Red			No			No			No			No
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		310			1107			262			367	
Travel Time (s)		4.7			16.8			5.1			7.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	3%	2%	2%	2%	4%	2%	1%	10%	3%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Detector Phase	2	2		6	6		3	8	8	4	4	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0		4.0	3.0	3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		9.0	8.0	8.0	31.0	31.0	
Total Split (s)	55.0	55.0		55.0	55.0		9.0	40.0	40.0	31.0	31.0	
Total Split (%)	57.9%	57.9%		57.9%	57.9%		9.5%	42.1%	42.1%	32.6%	32.6%	
Maximum Green (s)	49.0	49.0		49.0	49.0		4.0	35.0	35.0	26.0	26.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0		-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0		4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Walk Time (s)										26.0	26.0	
Flash Dont Walk (s)										0.0	0.0	
Pedestrian Calls (#/hr)										0	0	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Ship Road & Lincoln Highway

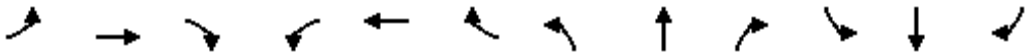




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	504	157	79	742	140	283	355	136	94	207	53
Future Volume (veh/h)	51	504	157	79	742	140	283	355	136	94	207	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1758	1758	1772	1772	1772	1772	1786	1660	1786	1786	1786
Adj Flow Rate, veh/h	54	536	167	84	789	149	301	378	145	100	220	56
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	2	2	1	10	1	1	1
Cap, veh/h	79	676	211	219	763	144	335	677	533	123	218	51
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.05	0.38	0.38	0.27	0.28	0.27
Sat Flow, veh/h	607	1285	400	744	1449	274	1688	1786	1406	263	768	180
Grp Volume(v), veh/h	54	0	703	84	0	938	301	378	145	376	0	0
Grp Sat Flow(s),veh/h/ln	607	0	1686	744	0	1723	1688	1786	1406	1212	0	0
Q Serve(g_s), s	0.5	0.0	32.2	9.8	0.0	50.0	5.0	15.8	6.8	18.7	0.0	0.0
Cycle Q Clear(g_c), s	50.0	0.0	32.2	41.5	0.0	50.0	5.0	15.8	6.8	26.0	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.16	1.00		1.00	0.27		0.15
Lane Grp Cap(c), veh/h	79	0	887	219	0	907	335	677	533	380	0	0
V/C Ratio(X)	0.68	0.00	0.79	0.38	0.00	1.03	0.90	0.56	0.27	0.99	0.00	0.00
Avail Cap(c_a), veh/h	79	0	887	219	0	907	335	677	533	380	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	0.0	18.4	34.9	0.0	22.6	30.2	23.2	20.4	36.2	0.0	0.0
Incr Delay (d2), s/veh	21.6	0.0	5.0	1.1	0.0	39.2	25.8	1.0	0.3	43.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	0.0	17.8	3.1	0.0	36.5	11.4	10.8	3.9	19.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	0.0	23.3	36.1	0.0	61.7	55.9	24.3	20.7	79.7	0.0	0.0
LnGrp LOS	E	A	C	D	A	F	E	C	C	E	A	A
Approach Vol, veh/h		757			1022			824			376	
Approach Delay, s/veh		26.6			59.6			35.2			79.7	
Approach LOS		C			E			D			E	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		55.0	9.0	31.0		55.0		40.0				
Change Period (Y+Rc), s		6.0	5.0	5.0		6.0		5.0				
Max Green Setting (Gmax), s		49.0	4.0	26.0		49.0		35.0				
Max Q Clear Time (g_c+I1), s		52.5	7.5	28.0		52.0		18.3				
Green Ext Time (p_c), s		0.0	0.0	0.0		0.0		2.5				

Intersection Summary												
HCM 6th Ctrl Delay			47.0									
HCM 6th LOS			D									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	0	28	8	0	4	55	598	16	0	444	31
Future Volume (vph)	77	0	28	8	0	4	55	598	16	0	444	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			30			35			35	
Link Distance (ft)		443			436			430			300	
Travel Time (s)		12.1			9.9			8.4			5.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	1%	0%	0%	0%	2%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	77	0	28	8	0	4	55	598	16	0	444	31
Future Vol, veh/h	77	0	28	8	0	4	55	598	16	0	444	31
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	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	75	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	0	2	0	2	1	0	0	0	2
Mvmt Flow	79	0	29	8	0	4	56	610	16	0	453	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1193	1191	469	1206	1207	610	485	0	-	-	-	0
Stage 1	469	469	-	722	722	-	-	-	-	-	-	-
Stage 2	724	722	-	484	485	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.3	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.018	3.1	3	4.018	3.1	3	-	-	-	-	-
Pot Cap-1 Maneuver	179	187	628	176	183	522	817	-	0	0	-	-
Stage 1	653	561	-	470	431	-	-	-	0	0	-	-
Stage 2	467	431	-	642	552	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	168	174	628	159	170	522	817	-	-	-	-	-
Mov Cap-2 Maneuver	168	174	-	159	170	-	-	-	-	-	-	-
Stage 1	608	561	-	438	401	-	-	-	-	-	-	-
Stage 2	432	401	-	613	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39.1	23.3	0.8	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	817	-	209	159	522	-	-
HCM Lane V/C Ratio	0.069	-	0.513	0.051	0.008	-	-
HCM Control Delay (s)	9.7	-	39.1	28.9	12	-	-
HCM Lane LOS	A	-	E	D	B	-	-
HCM 95th %tile Q(veh)	0.2	-	2.6	0.2	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	642	45	61	970	22	19
Future Volume (vph)	642	45	61	970	22	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	0%			-1%	-5%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	394			1639	479	
Travel Time (s)	6.0			24.8	13.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	0%	0%	1%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	642	45	61	970	22	19
Future Vol, veh/h	642	45	61	970	22	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	-5	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	690	48	66	1043	24	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	738	0	1865	690
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	1175	-
Critical Hdwy	-	-	4.3	-	5.4	5.7
Critical Hdwy Stg 1	-	-	-	-	4.4	-
Critical Hdwy Stg 2	-	-	-	-	4.4	-
Follow-up Hdwy	-	-	3	-	3	3.1
Pot Cap-1 Maneuver	-	-	665	-	144	517
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	448	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	665	-	110	517
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	342	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	330	-	-	665	-
HCM Lane V/C Ratio	0.134	-	-	0.099	-
HCM Control Delay (s)	17.6	-	-	11	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	689	22	66	1012	0	0
Future Volume (vph)	689	22	66	1012	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Storage Length (ft)		125	0		0	0
Storage Lanes		1	0		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	45			45	25	
Link Distance (ft)	1639			293	355	
Travel Time (s)	24.8			4.4	9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	689	22	66	1012	0	0
Future Vol, veh/h	689	22	66	1012	0	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	-	125	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	749	24	72	1100	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	773	0	1993	749
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	1244	-
Critical Hdwy	-	-	4.3	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	3	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	647	-	66	412
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	647	-	47	412
Mov Cap-2 Maneuver	-	-	-	-	142	-
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	194	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	647	-
HCM Lane V/C Ratio	-	-	-	0.111	-
HCM Control Delay (s)	0	-	-	11.3	0
HCM Lane LOS	A	-	-	B	A
HCM 95th %tile Q(veh)	-	-	-	0.4	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	654	35	0	1078	0	58
Future Volume (vph)	654	35	0	1078	0	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%			-1%	0%	
Link Speed (mph)	45			45	25	
Link Distance (ft)	293			310	293	
Travel Time (s)	4.4			4.7	8.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

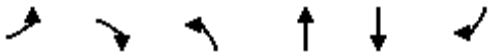
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	654	35	0	1078	0	58
Future Vol, veh/h	654	35	0	1078	0	58
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
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	711	38	0	1172	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	711
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.1
Pot Cap-1 Maneuver	-	-	0	-	0	455
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	455
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	455	-	-	-
HCM Lane V/C Ratio	0.139	-	-	-
HCM Control Delay (s)	14.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	774	433	11
Future Volume (vph)	0	0	0	774	433	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	183			300	262	
Travel Time (s)	5.0			5.8	5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

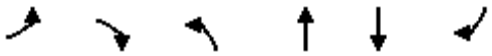
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	774	433	11
Future Vol, veh/h	0	0	0	774	433	11
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	841	471	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	477	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.1	-	-	-	-
Pot Cap-1 Maneuver	0	621	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	621	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	39	13	0	630	482	0
Future Volume (vph)	39	13	0	630	482	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	280			333	546	
Travel Time (s)	7.6			6.5	10.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

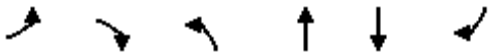
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	13	0	630	482	0
Future Vol, veh/h	39	13	0	630	482	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	14	0	685	524	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1209	524	-	0	-	0
Stage 1	524	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	-	-
Pot Cap-1 Maneuver	220	584	0	-	-	0
Stage 1	673	-	0	-	-	0
Stage 2	562	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	220	584	-	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	562	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	261	-
HCM Lane V/C Ratio	-	0.217	-
HCM Control Delay (s)	-	22.6	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.8	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	8	10	617	480	14
Future Volume (vph)	13	8	10	617	480	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Link Speed (mph)	25			35	35	
Link Distance (ft)	452			278	333	
Travel Time (s)	12.3			5.4	6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	8	10	617	480	14
Future Vol, veh/h	13	8	10	617	480	14
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	14	9	11	671	522	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1223	530	537	0	-	0
Stage 1	530	-	-	-	-	-
Stage 2	693	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3	3.1	3	-	-	-
Pot Cap-1 Maneuver	218	581	784	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	581	784	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.9	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	784	-	281	-	-
HCM Lane V/C Ratio	0.014	-	0.081	-	-
HCM Control Delay (s)	9.7	0	18.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

APPENDIX H:
Existing Traffic Signal Plans

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+6				3+8				4+8				FLASHING
INTERVAL / SIGNALS	1	2	3		4	5	6		7	8	9		
1,2	G	Y	R		R	R	R		R	R	R		Y
3,4	G	Y	R		R	R	R		R	R	R		Y
5,6	R	R	R		R	R	R		G	Y	R		R
7	R	R	R		G/⊘	Y/⊘	R/⊘		G	Y	R		R
8	R	R	R		G	Y/⊘	R/⊘		G	Y	R		R
9,10,11,12	G	Y	R		R	R	R		R	R	R		OUT
13,14	R	R	R		R	R	R		G	Y	R		OUT
15,16	R	R	R		R	R	R		G	Y	R		OUT

FIXED		4	2			3	2			3	2	
MINIMUM	26				3				3			
PASSAGE	++				3				3			
MAXIMUM 1	37				10				32			
MAXIMUM 2	37				10				32			
PEDESTRIAN*									26			
MEMORY	MN				NL				NL			

* UPON PEDESTRIAN ACTUATION ONLY

- REFER TO SYSTEM PERMIT # I-0023 FOR PROGRAM TIMES AND TIME-OF-DAY OPERATION.

NOTE:
MAXIMUM 1 TO OPERATE FROM 6:00 AM-6:00PM MONDAY-FRIDAY
MAXIMUM 2 TO OPERATE AT ALL OTHER TIMES

OPERATION NOTES

① G IF FOLLOWED BY 4+8
② G IF FOLLOWED BY 4+8

++ADVANCE DILEMMA ZONE NOTES

EST. TIME OF ARRIVAL MIN. 2.5-MAX. 5.5 SEC.
RANGE OF PROTECTION MIN. 0-MAX. 450 FT
SPEED MIN. 27 MPH-MAX. 100 MPH

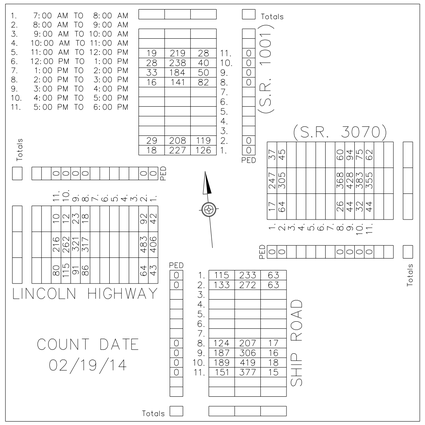
++ DENSITY ZONE NOTES

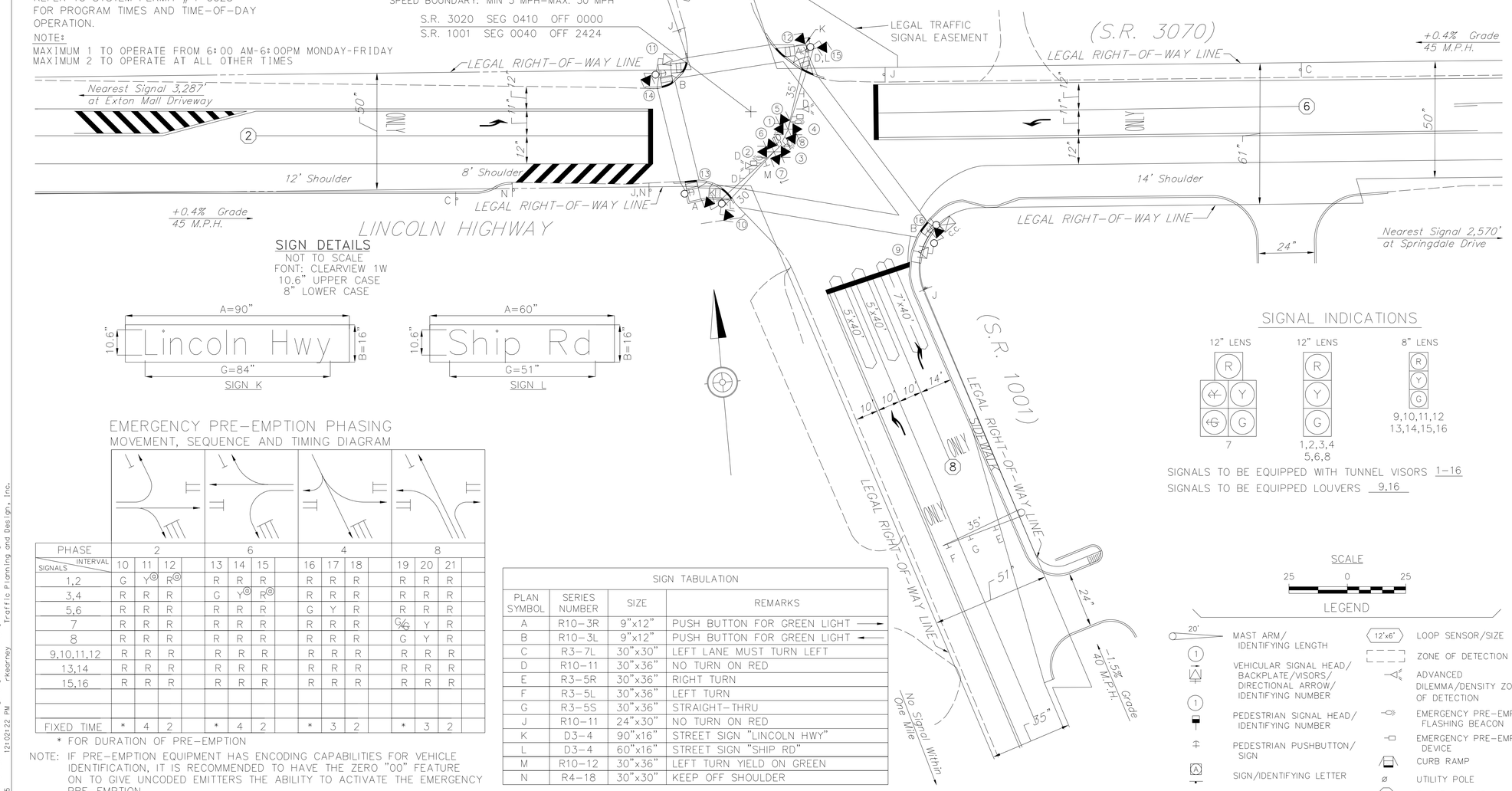
RANGE OF PROTECTION: 0 TO 100 FROM STOP BAR
SPEED BOUNDARY: MIN 5 MPH-MAX. 30 MPH

S.R. 3020 SEG 0410 OFF 0000
S.R. 1001 SEG 0040 OFF 2424

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE EASTBOUND & WESTBOUND APPROACHES OF LINCOLN HIGHWAY (S.R. 3070) AND THE NORTHBOUND & SOUTHBOUND APPROACHES OF SHIP ROAD (S.R. 1001) WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH. LOCATION OF EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY, THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW. ONLY THOSE PHASES NOT POSING A YELLOW TRAP CONDITION MAY REMAIN GREEN (3+8) WHEN GOVERNED BY APPROACHING EMERGENCY VEHICLE.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF SIGNALS HAVE BEEN ACTUATED BY PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED, THE PEDESTRIAN TIME SHALL BE SPLIT BETWEEN "PED WALK" AND "PED CLEAR". THE "PED WALK" INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "PED CLEAR" INTERVAL. THIS INTERVAL SHALL TIME OUT FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE GOING INTO EMERGENCY PRE-EMPTION.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION, PHASE 2,4,6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.





SIGN DETAILS

NOT TO SCALE
FONT: CLEARVIEW 1W
10.6" UPPER CASE
8" LOWER CASE

SIGNAL INDICATIONS

SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS 1-16
SIGNALS TO BE EQUIPPED LOUVERS 9,16

SCALE
25 0 25

LEGEND

- MAST ARM/ IDENTIFYING LENGTH
- VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- SIGN/IDENTIFYING LETTER
- VIDEO DETECTOR
- C.C. CONTROLLER CABINET
- LOOP SENSOR/SIZE
- ZONE OF DETECTION
- ADVANCED DILEMMA/DENSITY ZONE OF DETECTION
- EMERGENCY PRE-EMPTION FLASHING BEACON
- EMERGENCY PRE-EMPTION DEVICE
- CURB RAMP
- UTILITY POLE
- PHASE NUMBER
- INLET

EMERGENCY PRE-EMPTION PHASING
MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2				6				4				8			
INTERVAL / SIGNALS	10	11	12		13	14	15		16	17	18		19	20	21	
1,2	G	Y/⊘	R/⊘		R	R	R		R	R	R		R	R	R	
3,4	R	R	R		G	Y/⊘	R/⊘		R	R	R		R	R	R	
5,6	R	R	R		R	R	R		G	Y	R		R	R	R	
7	R	R	R		R	R	R		R	R	R		G/⊘	Y	R	
8	R	R	R		R	R	R		R	R	R		G	Y	R	
9,10,11,12	R	R	R		R	R	R		R	R	R		R	R	R	
13,14	R	R	R		R	R	R		R	R	R		R	R	R	
15,16	R	R	R		R	R	R		R	R	R		R	R	R	
FIXED TIME	*	4	2		*	4	2		*	3	2		*	3	2	

* FOR DURATION OF PRE-EMPTION

NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

⊘ SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION.

SIGN TABULATION

PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-3R	9"x12"	PUSH BUTTON FOR GREEN LIGHT →
B	R10-3L	9"x12"	PUSH BUTTON FOR GREEN LIGHT ←
C	R3-7L	30"x30"	LEFT LANE MUST TURN LEFT
D	R10-11	30"x36"	NO TURN ON RED
E	R3-5R	30"x36"	RIGHT TURN
F	R3-5L	30"x36"	LEFT TURN
G	R3-5S	30"x36"	STRAIGHT-THRU
J	R10-11	24"x30"	NO TURN ON RED
K	D3-4	90"x16"	STREET SIGN "LINCOLN HWY"
L	D3-4	60"x16"	STREET SIGN "SHIP RD"
M	R10-12	30"x36"	LEFT TURN YIELD ON GREEN
N	R4-18	30"x30"	KEEP OFF SHOULDER

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

SYSTEM PERMIT # I-0023

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER
MUNICIPALITY: WEST WHITELAND TOWNSHIP
INTERSECTION: LINCOLN HIGHWAY (S.R. 3070) & SHIP ROAD (S.R. 1001)

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

MARK L. KRAY 1/28/88

WERNER J. EICHORN 1/28/88
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	REVISED TIMING AND COORDINATION	PAI	5/11/99	MK	6/11/99	DWM	6/11/99
2	ADDED SIGNS D & J ON LINCOLN HIGHWAY	RFW	7/21/99	MK	7/21/99	DWM	7/21/99
3	NEW DWG, ADDED CLS, TIMING CHANGE	SHG	11/25/03	LUTZ	12/1/03	LRB	12/1/03
4	ADDED MAST ARMS/OSNS	PAI	6/10/04	MLK	7/2/04	LRB	7/9/04
5	MOVE SIGN K TO SHAFT OF NE/SW CORNER MA AND RELOCATE PEDESTAL ON SE CORNER	SHG	1/7/05	MLK	1/7/05	LRB	1/12/05
6	REVISED CURB RAMPS, PEDESTRIAN BUTTONS AND PEDESTRIAN TIMES	MCM	2/18/11	LUTZ	2/23/11	LRB	3/1/11
7	ADD NORTHBOUND LEFT TURN PHASE ADD DELIMMA ZONE DETECTION	TPD					
8							

SHEET 2 OF 2 | PERMIT # 62-1485 | FILE # 1485

J:\VMWT\00165 (Bus 30-Woodledge Signal)\CADD\Signals\File #1485.dgn
1/30/2015 12:02:22 PM rKearney Traffic Planning and Design, Inc.

APPENDIX I: Critical Headway and Follow-Up Headway Calculations

CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 4.3)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

LEFT TURN FROM MINOR ROADWAY - TWO LANES - 4-LEG INTERSECTION ($t_{c,\,base}$ = 7.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
1	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
2	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
3	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
4	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
5	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
6	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
7	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
8	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
9	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
10	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2

THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.5)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
1	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
2	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
3	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
4	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
5	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
6	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
7	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
8	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
9	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
10	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.2)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
10	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3

CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 4.3)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4

LEFT TURN FROM MINOR ROADWAY - TWO LANES - 3-LEG INTERSECTION ($t_{c,\,base}$ = 7.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
1	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
2	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
3	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
4	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
5	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
6	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
7	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
8	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
9	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
10	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.2)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
10	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3

FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$t_{f,x} = t_{f,\,base} + t_{f,HV} * P_{HV}$

where:

$t_{f,x}$ = follow-up headway for movement x (s)
$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46
$t_{f,HV}$ = adjustment factor for heavy vehciles (0.9 for major streets with one lane in each direction; 1.0 for major streets with two or three lanes in each direction) (s)
P_{HV} = proportion of heavy vehciles for movement (expressed as a decimal; e.g., P_{HV}=0.02 for 2% heavy vehciles)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

LEFT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
10	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1

THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 4.0)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
6	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
8	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
9	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
10	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.1)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
10	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2

APPENDIX J:
Auxiliary Turn Lane Warrant Analysis

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	9	0.0%	9
	Through	-	410	10.0%	431
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	831	3.0%	844
	Right	Yes	16	0.0%	16

Advancing Volume:	440
Opposing Volume:	860
Left Turn Volume:	9
% Left Turns in Advancing Volume:	2.05%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	831	3.0%	N/A
	Right	-	16	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 3

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	9
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

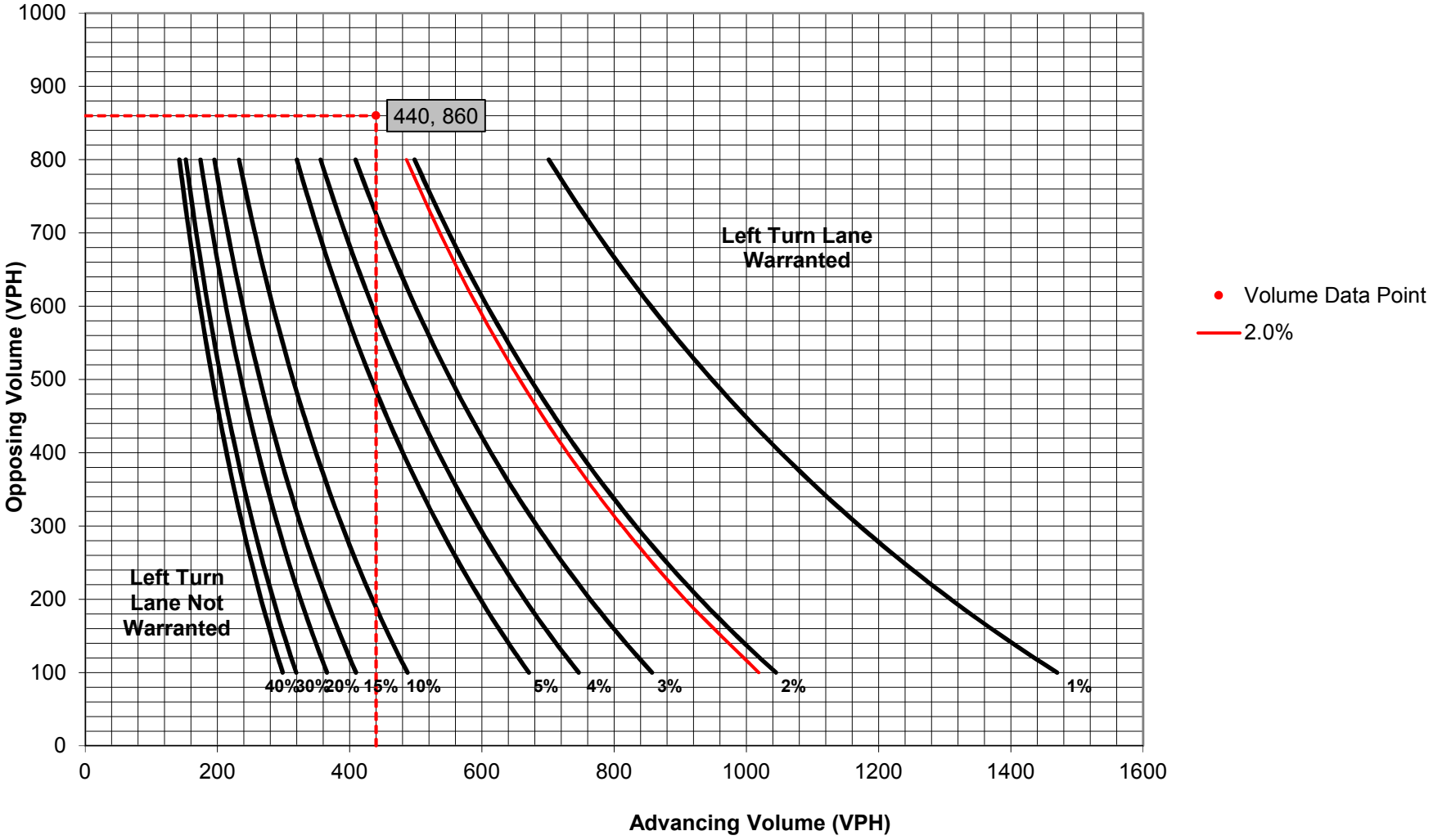
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 3. Warrant for left turn lanes on two-lane highways (45 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	17	0.0%	17
	Through	-	992	2.0%	1002
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	595	2.0%	601
	Right	Yes	21	0.0%	21

Advancing Volume:	1019
Opposing Volume:	622
Left Turn Volume:	17
% Left Turns in Advancing Volume:	1.67%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	595	2.0%	N/A
	Right	-	21	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 3

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	17
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

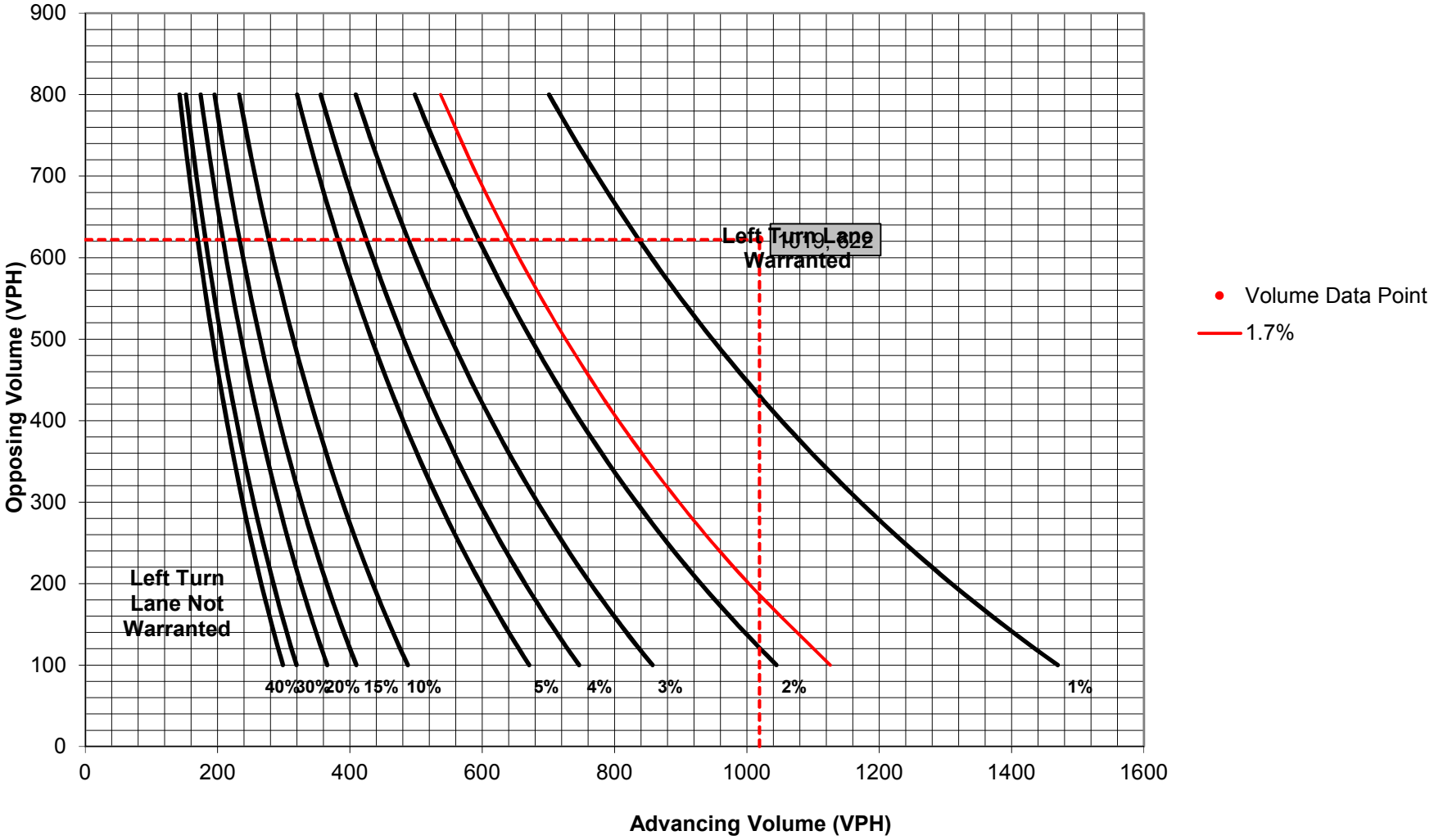
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	125	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 3. Warrant for left turn lanes on two-lane highways (45 mph speed, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	61	0.0%	61
	Through	-	970	1.0%	975
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	642	1.0%	646
	Right	Yes	45	0.0%	45

Advancing Volume:	1036
Opposing Volume:	691
Left Turn Volume:	61
% Left Turns in Advancing Volume:	5.89%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	642	2.0%	N/A
	Right	-	45	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 3

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	61
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

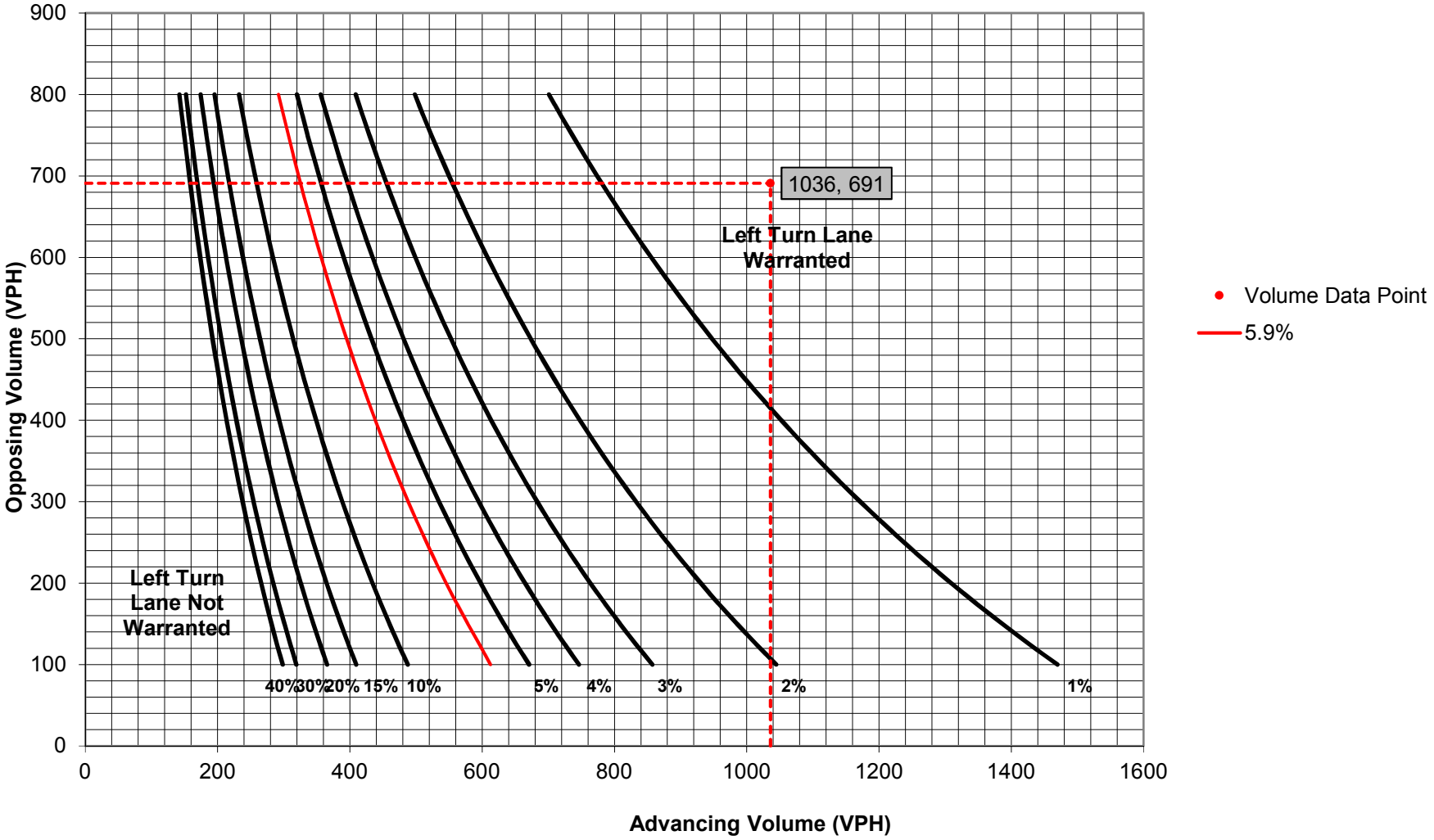
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	125	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 3. Warrant for left turn lanes on two-lane highways (45 mph speed, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45	**Type of Analysis**	
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	9	0.0%	N/A
	Through	-	410	10.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	831	3.0%	N/A
	Right	Yes	16	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	831	3.0%	844
	Right	-	16	0.0%	16

Advancing Volume:	860
Right Turn Volume:	16

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	16
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

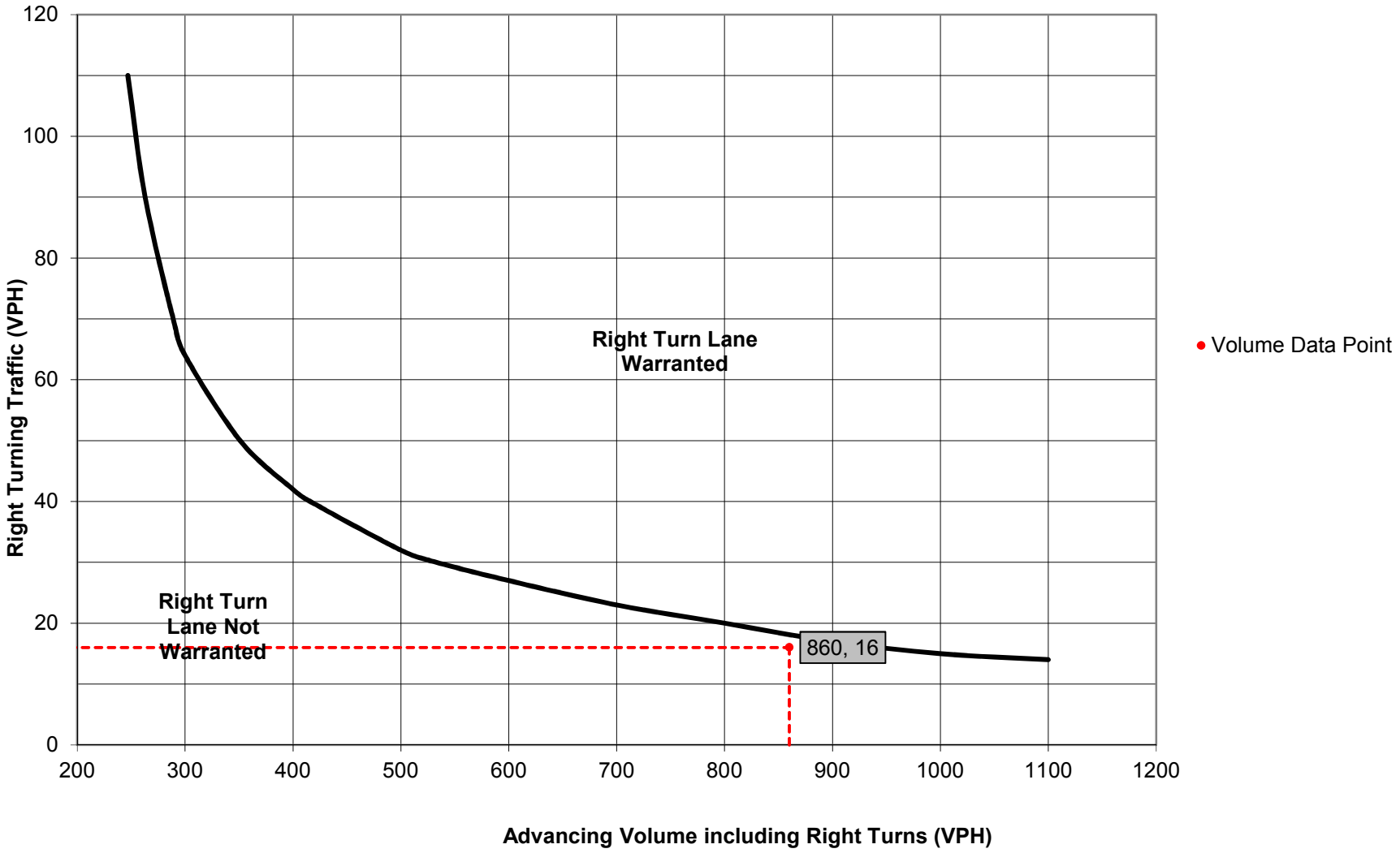
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	17	0.0%	N/A
	Through	-	992	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	595	2.0%	N/A
	Right	Yes	21	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	595	2.0%	601
	Right	-	21	0.0%	21

Advancing Volume:	622
Right Turn Volume:	21

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	21
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

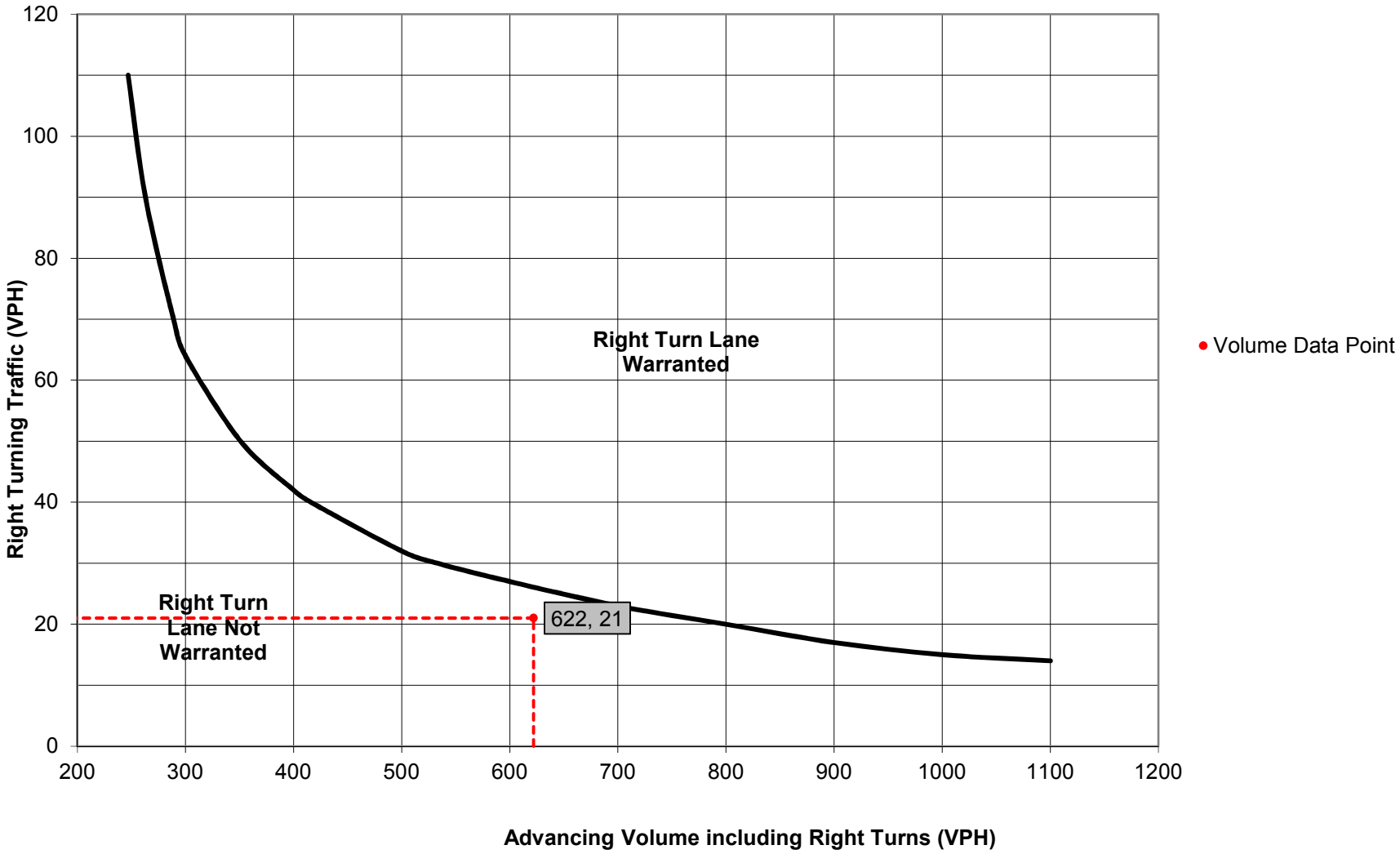
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	61	0.0%	N/A
	Through	-	970	1.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	642	1.0%	N/A
	Right	Yes	45	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	642	2.0%	649
	Right	-	45	0.0%	45

Advancing Volume:	694
Right Turn Volume:	45

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	45
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

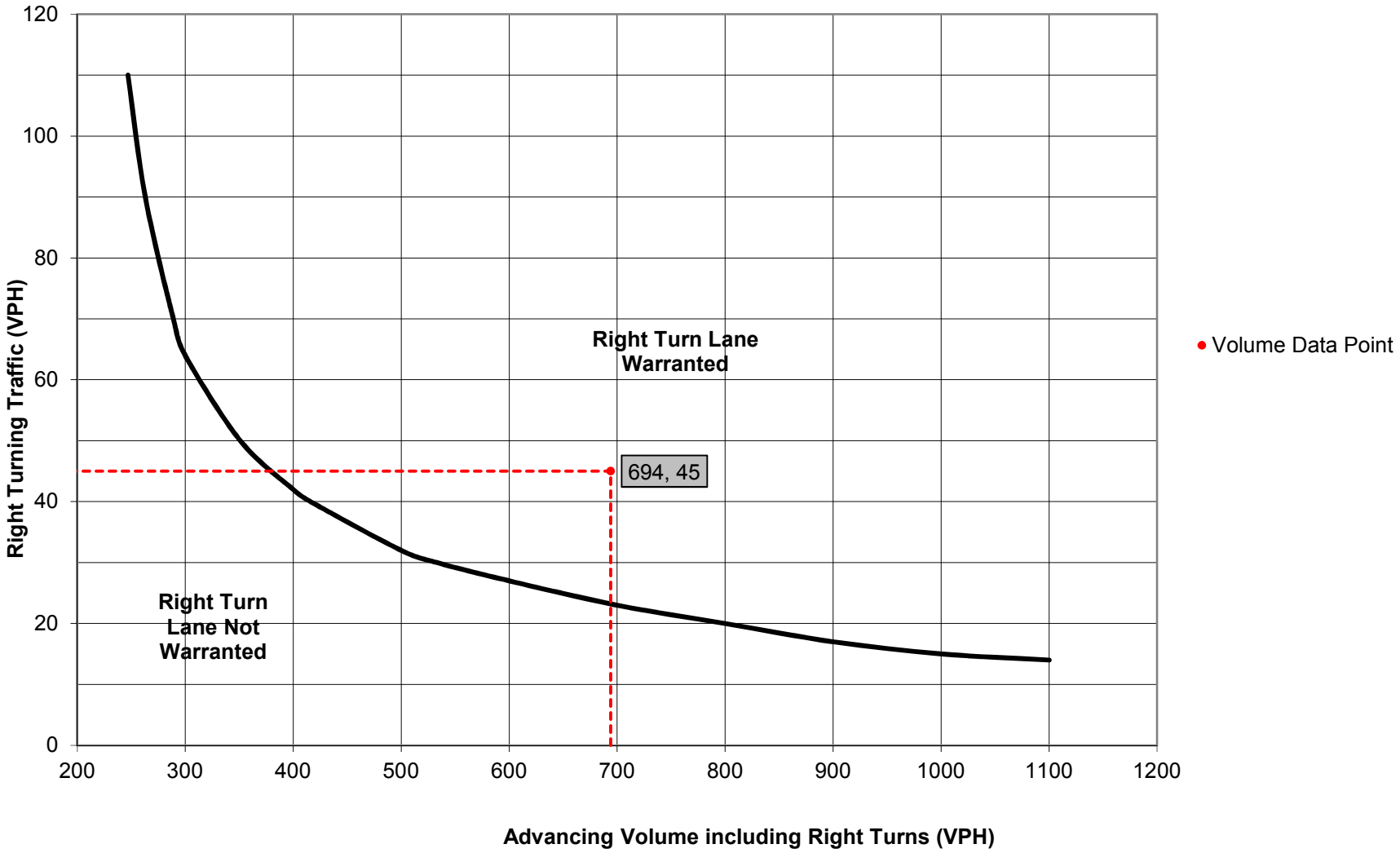
Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	125	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Loop Road

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	74	2.0%	75
	Through	-	441	6.0%	455
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	685	3.0%	696
	Right	Yes	31	2.0%	32

Advancing Volume:	530
Opposing Volume:	728
Left Turn Volume:	75
% Left Turns in Advancing Volume:	14.15%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	685	3.0%	N/A
	Right	-	31	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 3

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	75
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

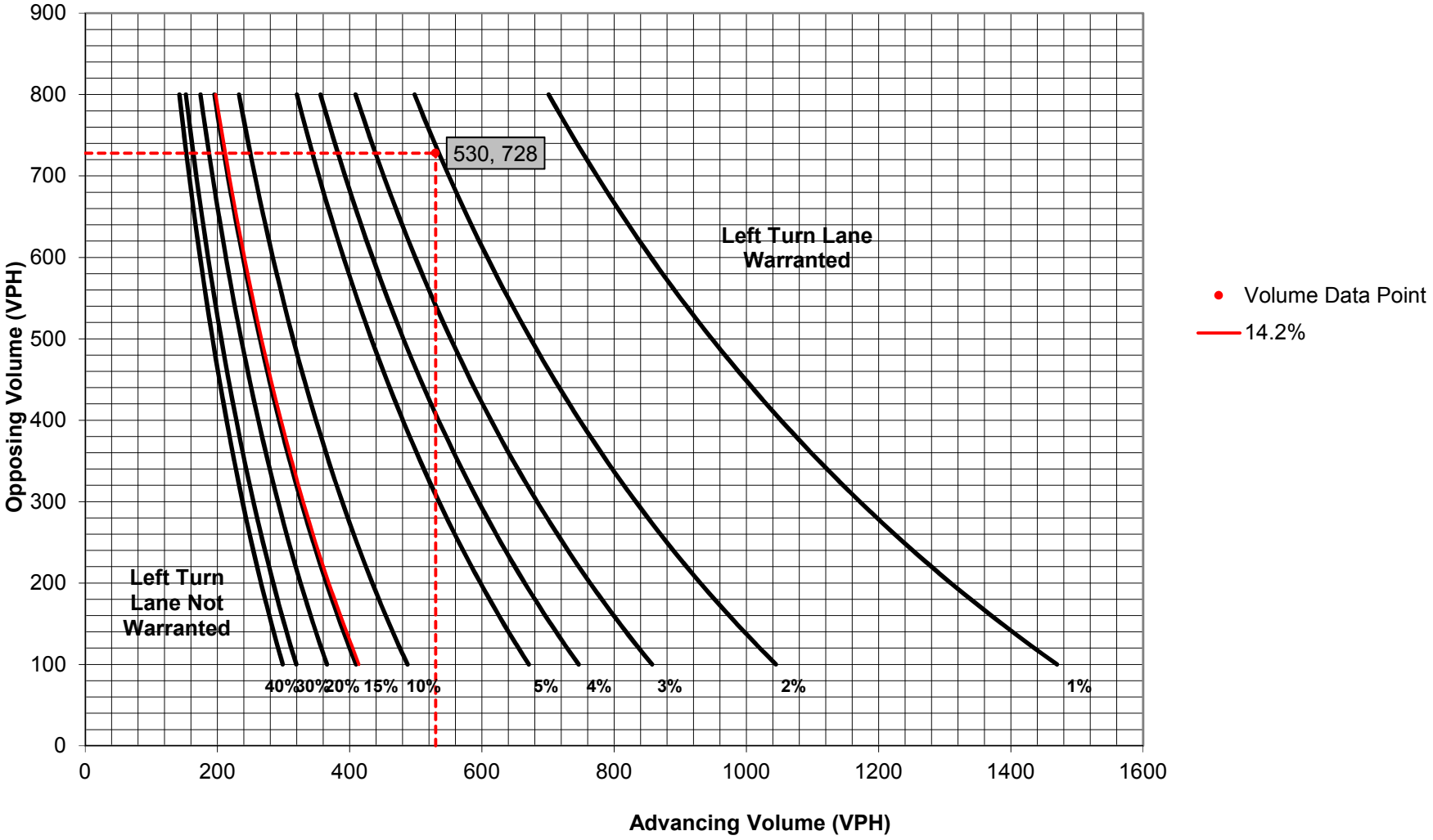
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	200	Feet
Required Left Turn Lane Storage Length:	200	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 3. Warrant for left turn lanes on two-lane highways (45 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Loop Road

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	60	2.0%	61
	Through	-	901	2.0%	911
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	568	3.0%	577
	Right	Yes	21	2.0%	22

Advancing Volume:	972
Opposing Volume:	599
Left Turn Volume:	61
% Left Turns in Advancing Volume:	6.28%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	568	3.0%	N/A
	Right	-	21	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 3

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	61
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

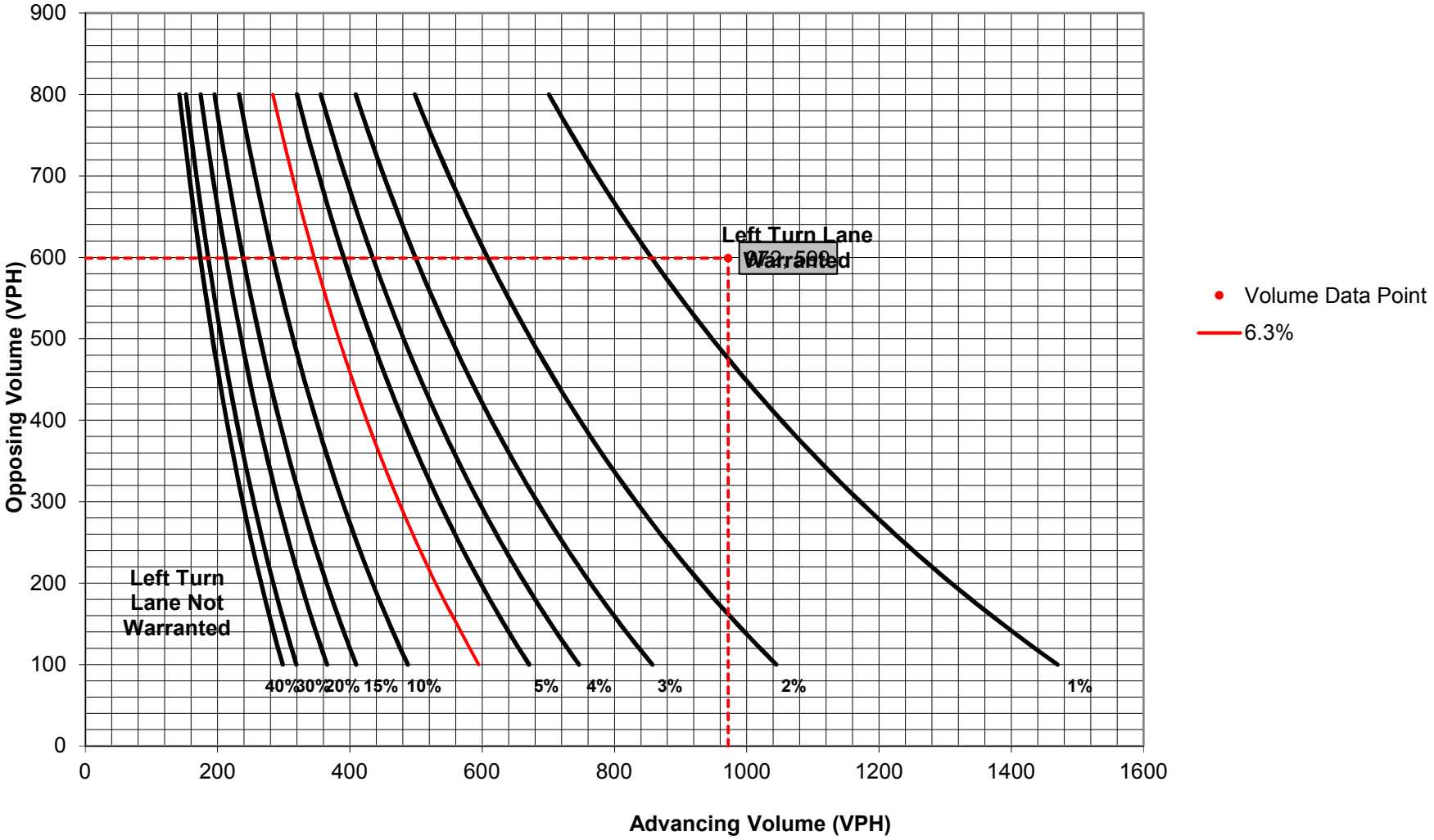
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	125	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 3. Warrant for left turn lanes on two-lane highways (45 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Loop Road

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	66	2.0%	67
	Through	-	1012	2.0%	1023
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	689	3.0%	700
	Right	Yes	22	2.0%	23

Advancing Volume:	1090
Opposing Volume:	723
Left Turn Volume:	67
% Left Turns in Advancing Volume:	6.15%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	689	3.0%	N/A
	Right	-	22	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 3

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	67
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

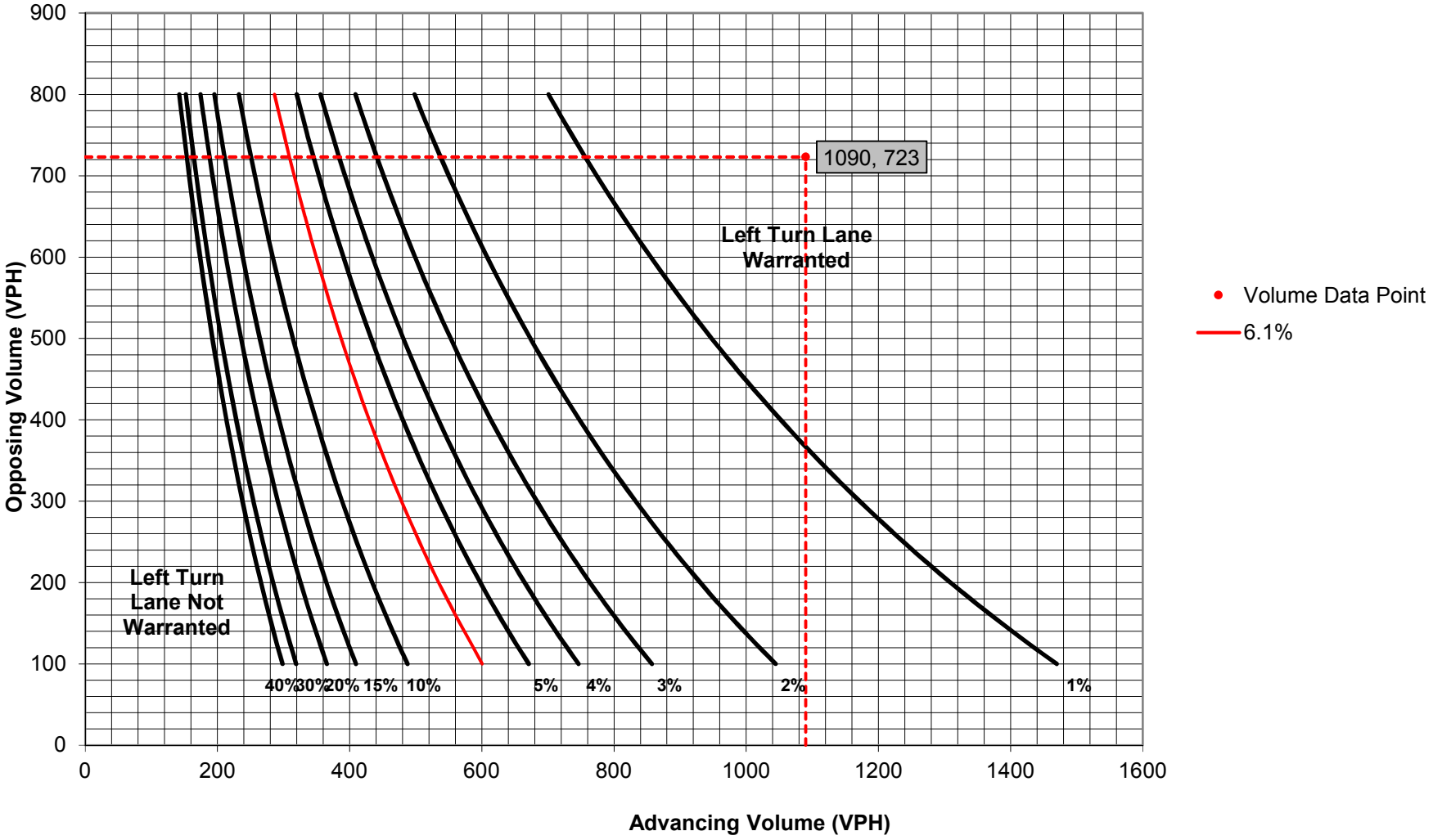
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	125	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 3. Warrant for left turn lanes on two-lane highways (45 mph speed, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Loop Road

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	74	2.0%	N/A
	Through	-	441	6.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	685	3.0%	N/A
	Right	Yes	31	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	685	3.0%	696
	Right	-	31	2.0%	32

Advancing Volume:	728
Right Turn Volume:	32

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	32
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

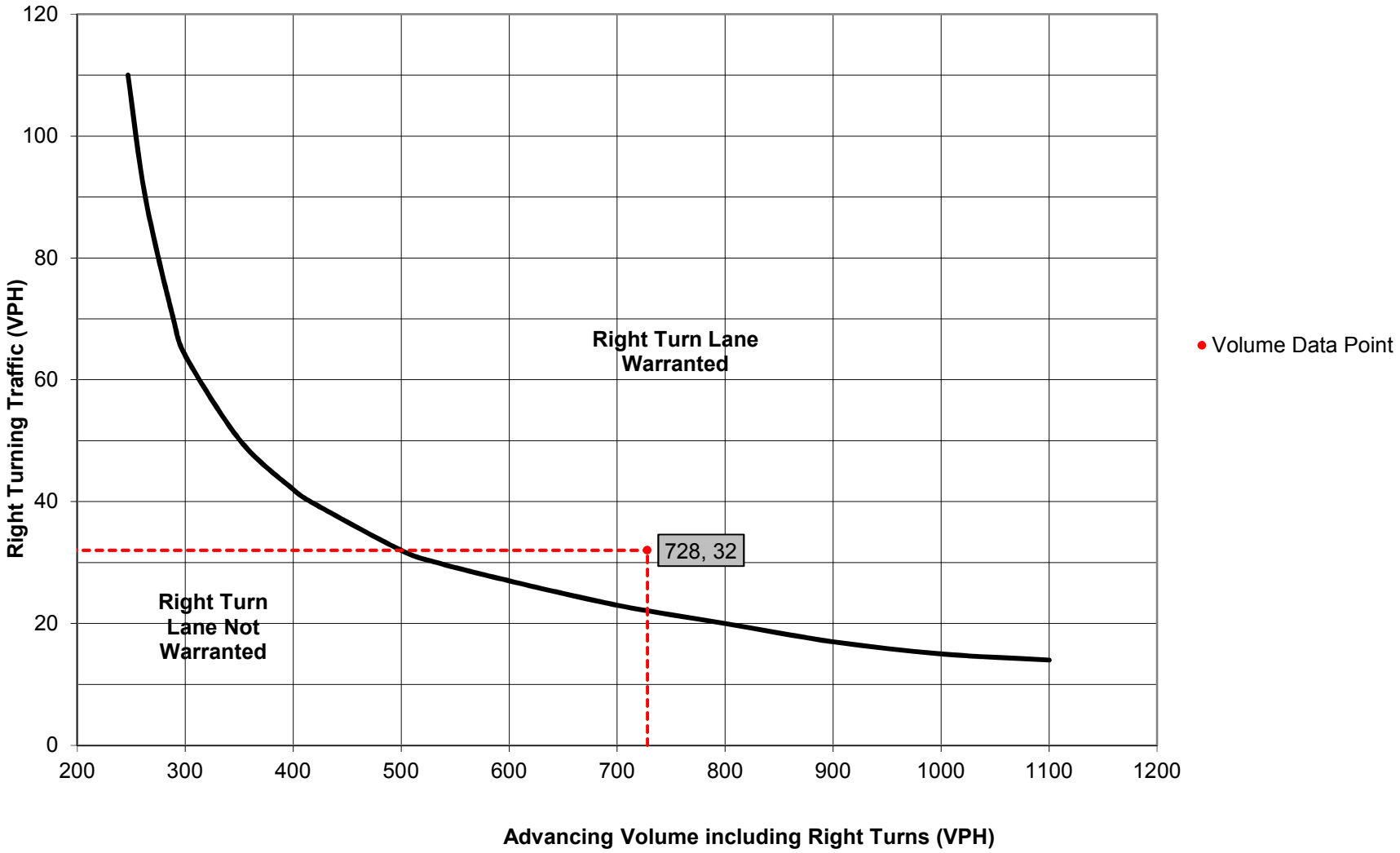
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	125	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Loop Road

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	60	2.0%	N/A
	Through	-	901	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	568	3.0%	N/A
	Right	Yes	21	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	568	3.0%	577
	Right	-	21	2.0%	22

Advancing Volume:	599
Right Turn Volume:	22

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	22
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

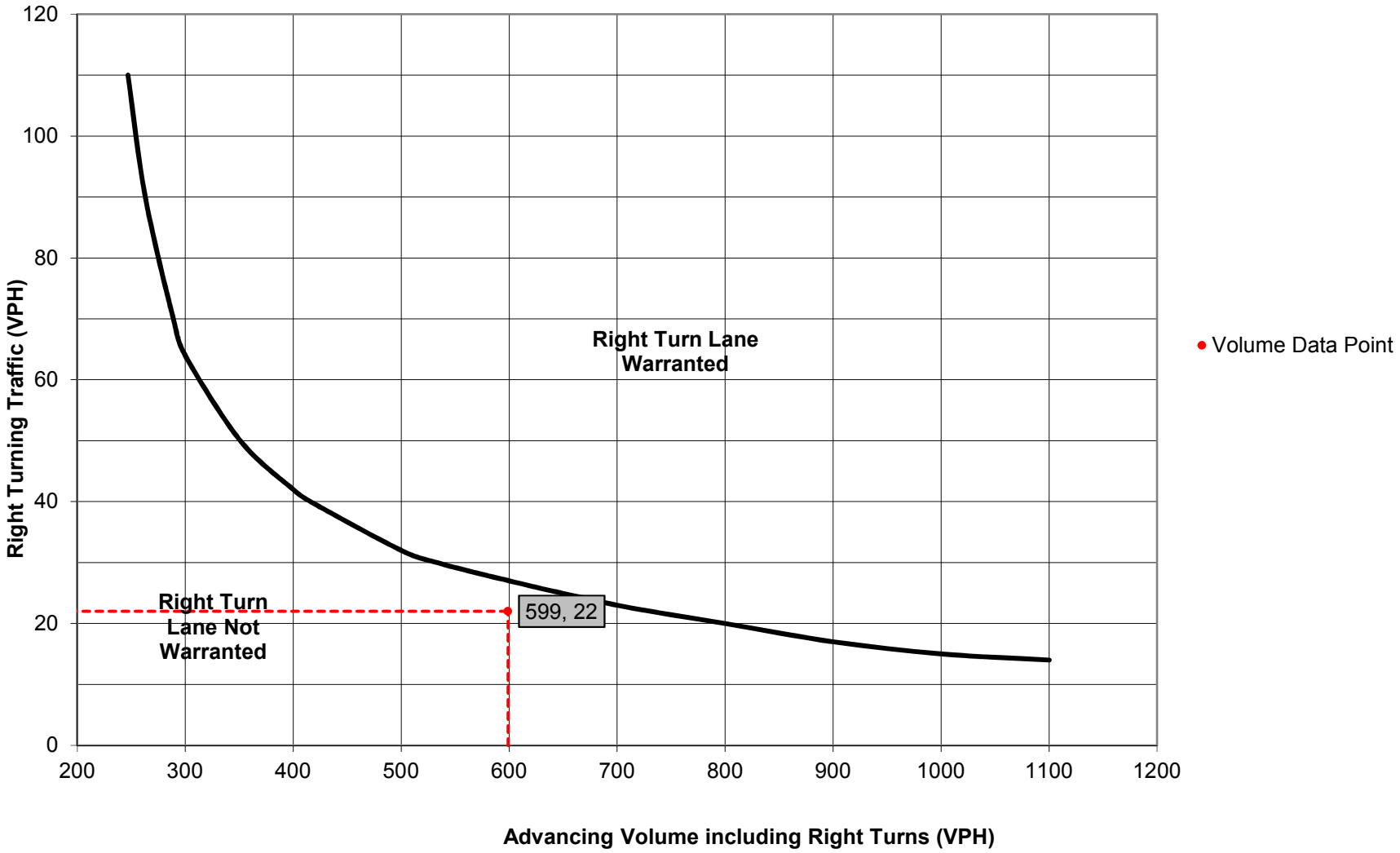
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Loop Road

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	66	2.0%	N/A
	Through	-	1012	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	689	3.0%	N/A
	Right	Yes	22	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	689	3.0%	700
	Right	-	22	2.0%	23

Advancing Volume:	723
Right Turn Volume:	23

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	23
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

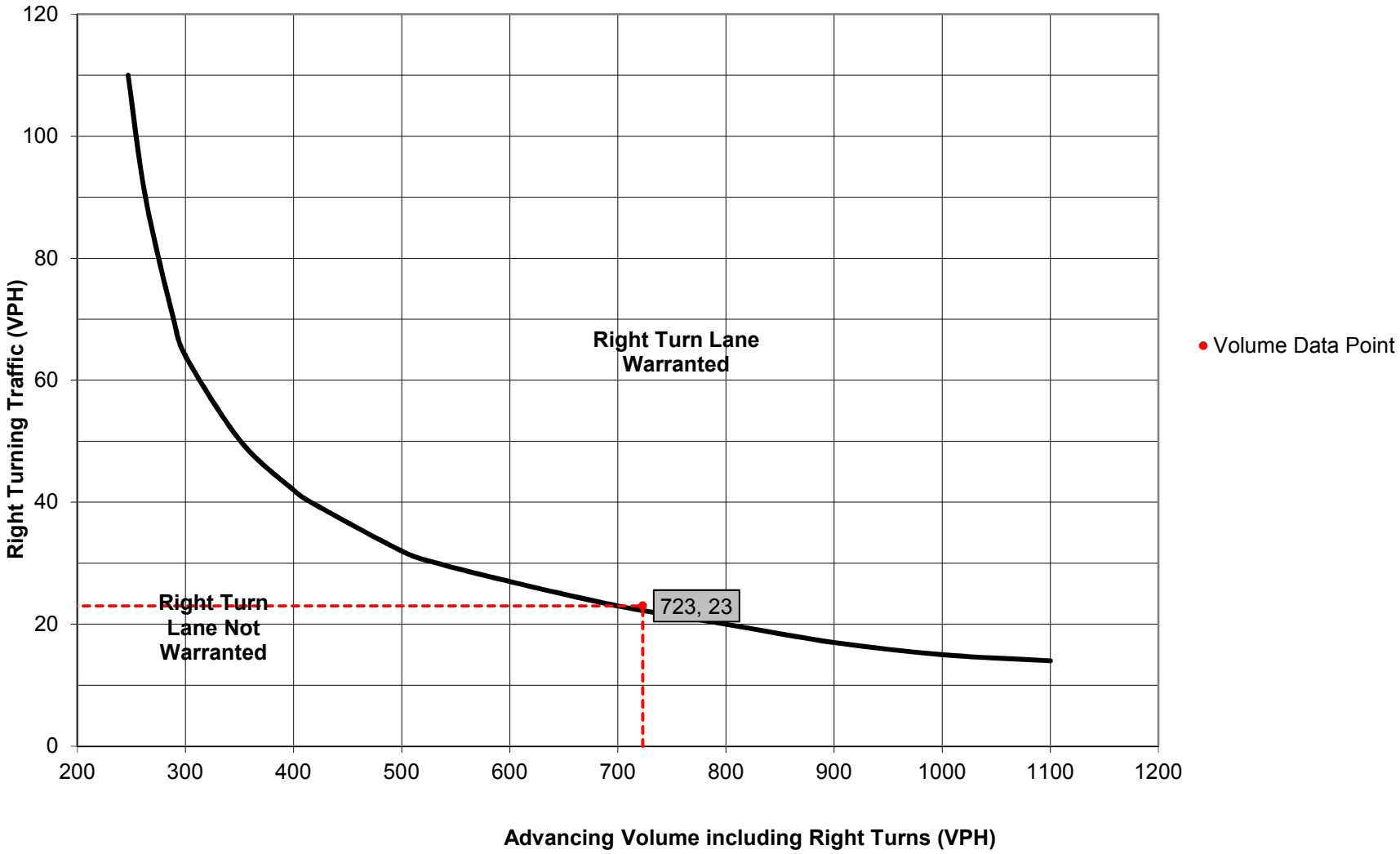
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	125	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Proposed RI/RO Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes		2.0%	N/A
	Through	-		11.0%	N/A
	Right	Yes	0	2.0%	N/A
Opposing	Left	Yes	0	2.0%	N/A
	Through	-		11.0%	N/A
	Right	Yes		2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	2.0%	0
	Through	-	630	3.0%	640
	Right	-	55	2.0%	56

Advancing Volume:	696
Right Turn Volume:	56

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	56
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

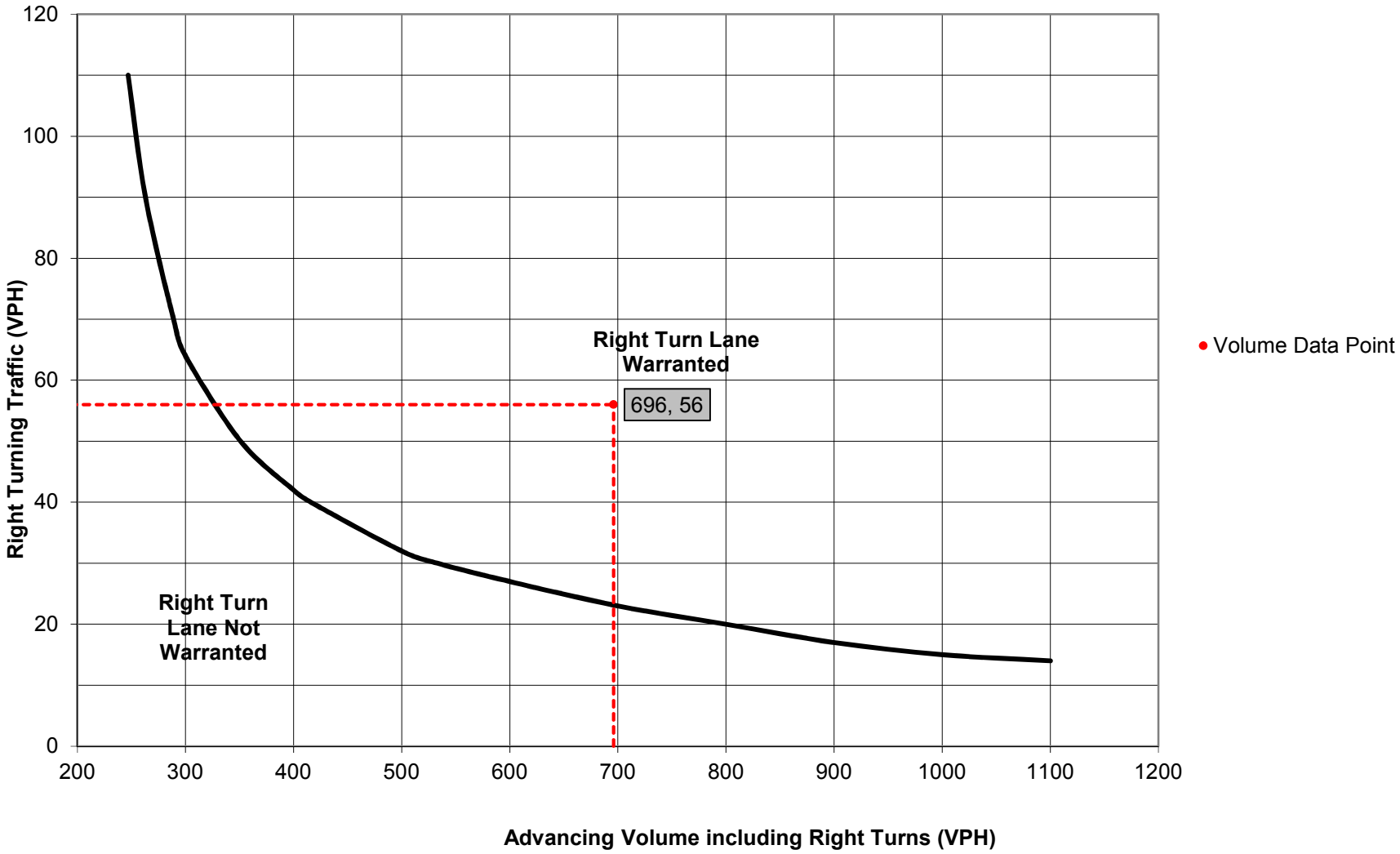
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	125	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Proposed RI/RO Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes		2.0%	N/A
	Through	-		11.0%	N/A
	Right	Yes	0	2.0%	N/A
Opposing	Left	Yes	0	2.0%	N/A
	Through	-		11.0%	N/A
	Right	Yes		2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	2.0%	0
	Through	-	538	3.0%	547
	Right	-	29	2.0%	30

Advancing Volume:	577
Right Turn Volume:	30

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	30
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

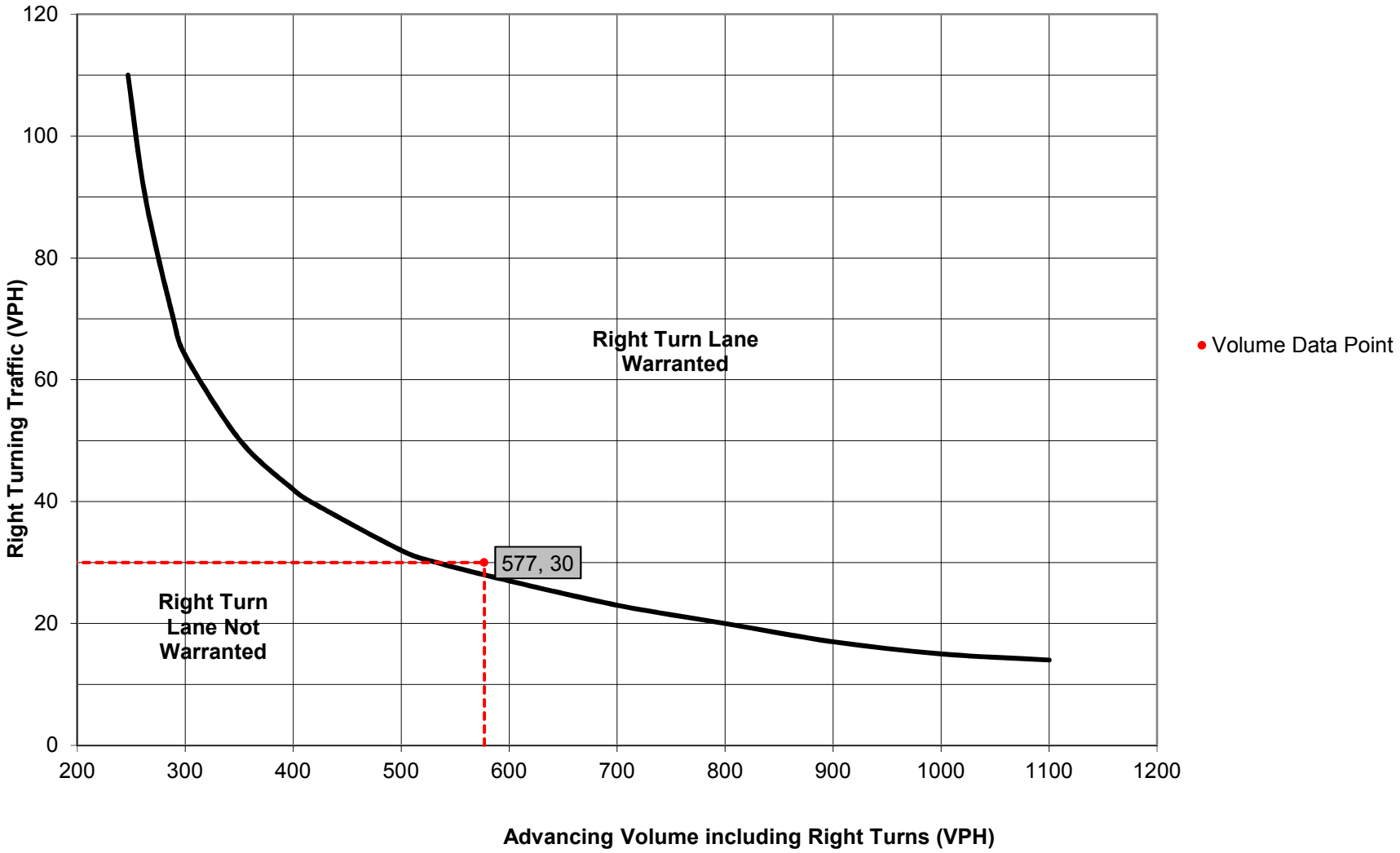
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	125	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Lincoln Highway & Proposed RI/RO Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	45		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes		2.0%	N/A
	Through	-		11.0%	N/A
	Right	Yes	0	2.0%	N/A
Opposing	Left	Yes	0	2.0%	N/A
	Through	-		11.0%	N/A
	Right	Yes		2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	2.0%	0
	Through	-	654	3.0%	664
	Right	-	35	2.0%	36

Advancing Volume:	700
Right Turn Volume:	36

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 10

Warrant Met?: Yes

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	36
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

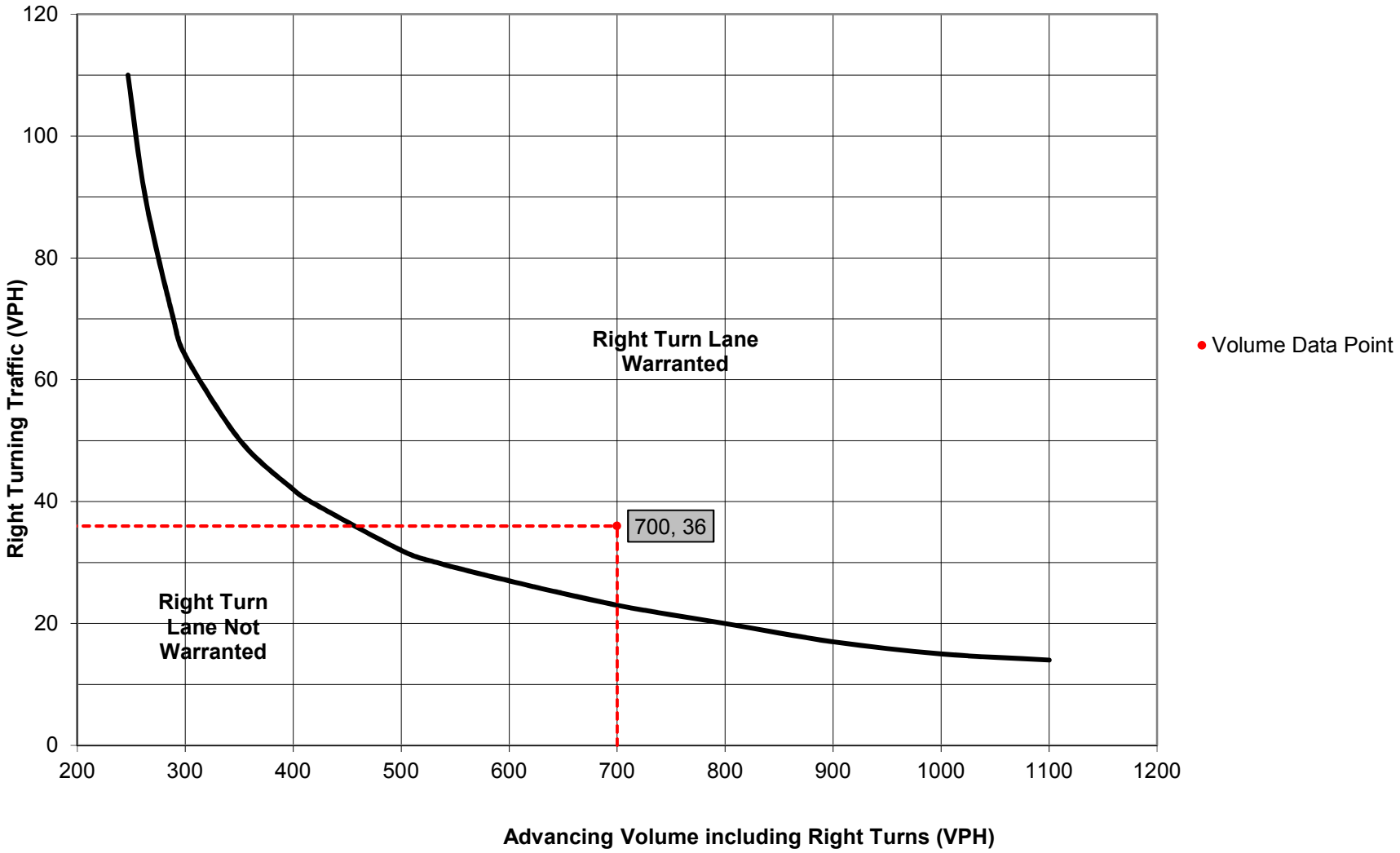
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	125	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	125	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Right-In Only Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	2.0%	N/A
	Through	-	0	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	369	5.0%	N/A
	Right	Yes	1	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	341	5.0%	350
	Right	-	19	2.0%	20

Advancing Volume:	370
Right Turn Volume:	20

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	20
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

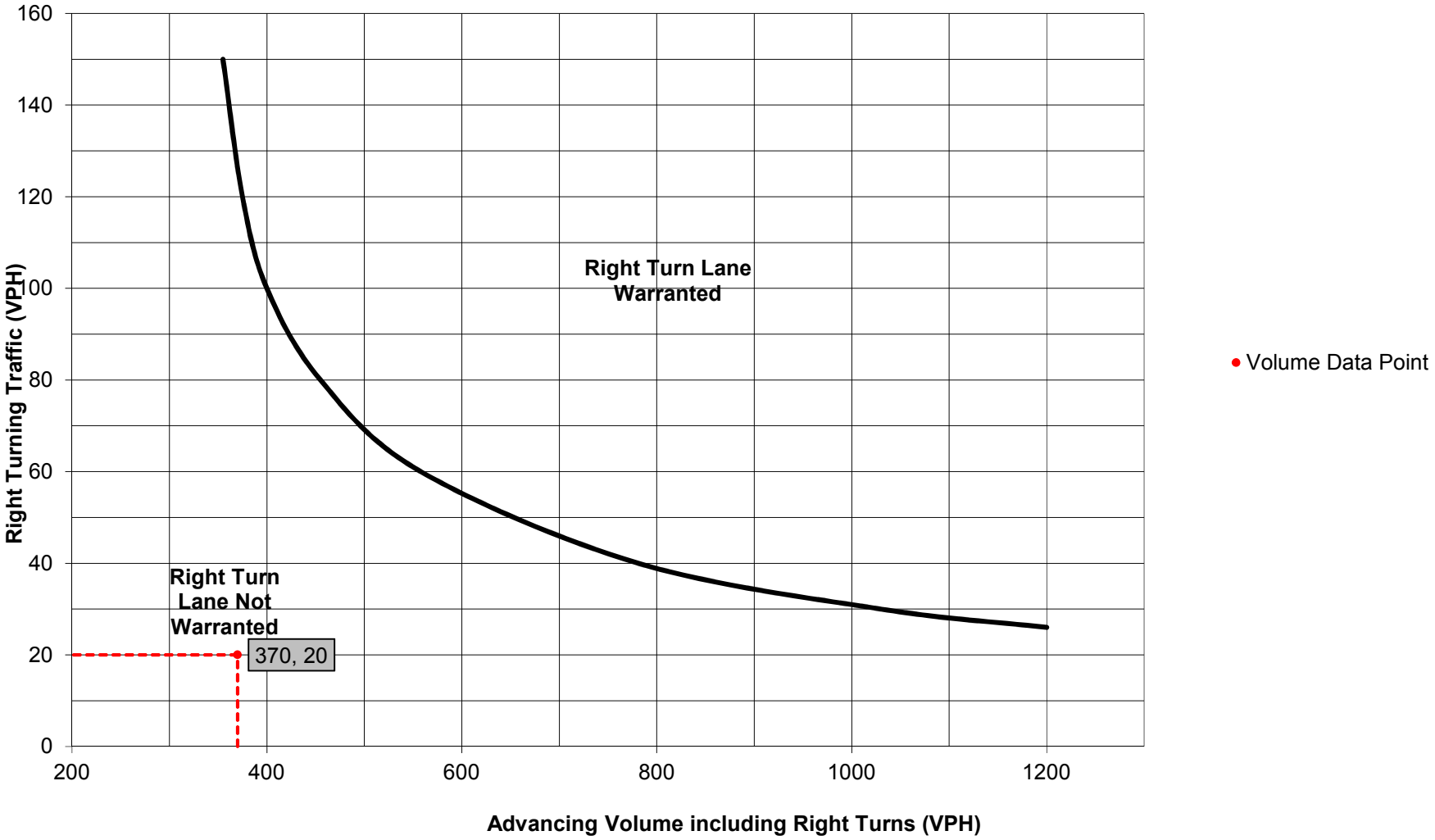
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Right-In Only Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	2.0%	N/A
	Through	-	0	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	463	5.0%	N/A
	Right	Yes	10	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	463	2.0%	468
	Right	-	10	2.0%	11

Advancing Volume:	479
Right Turn Volume:	11

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	11
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

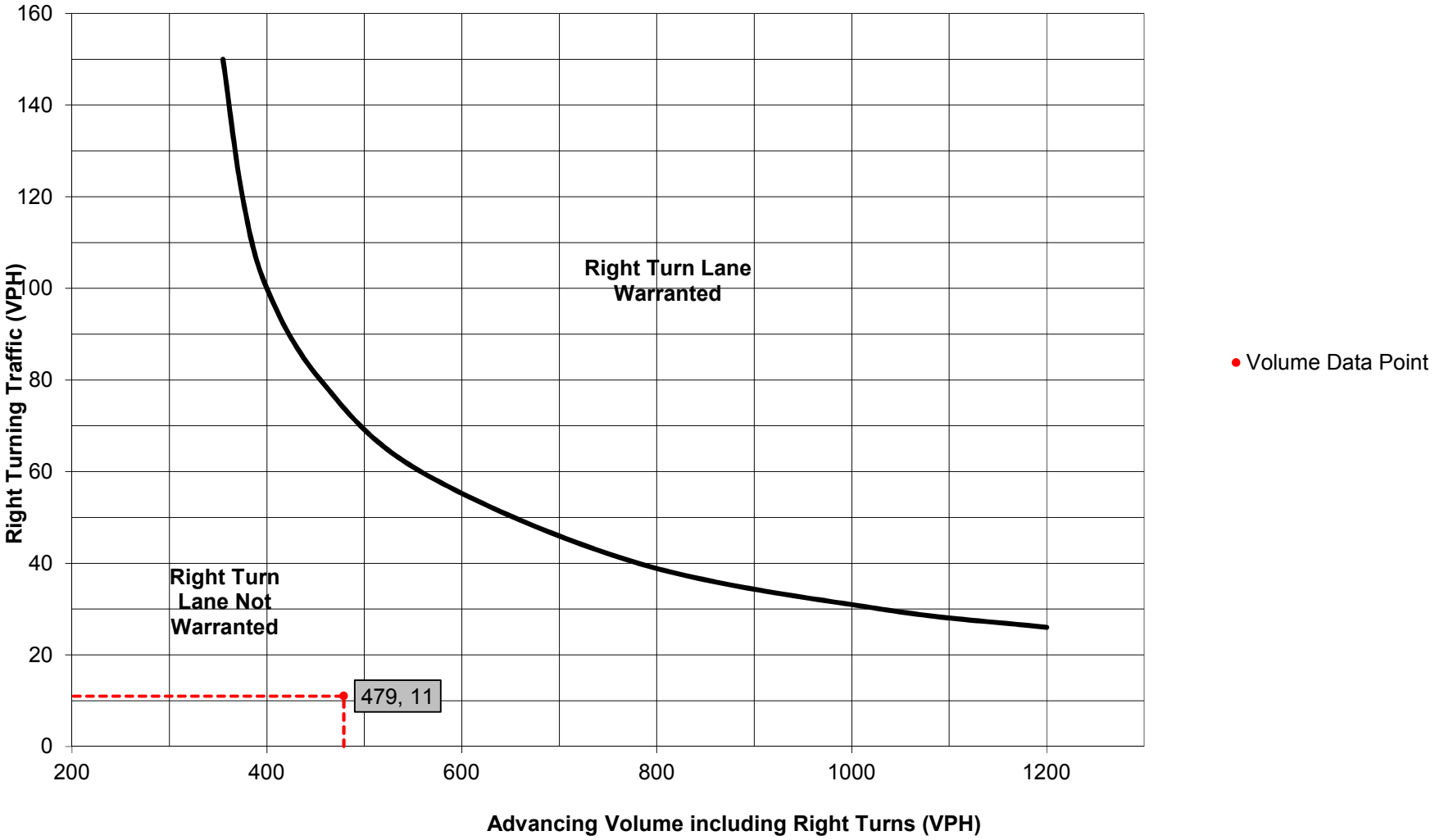
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Right-In Only Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	2.0%	N/A
	Through	-	0	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	433	5.0%	N/A
	Right	Yes	11	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	433	2.0%	438
	Right	-	11	2.0%	12

Advancing Volume:	450
Right Turn Volume:	12

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	12
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

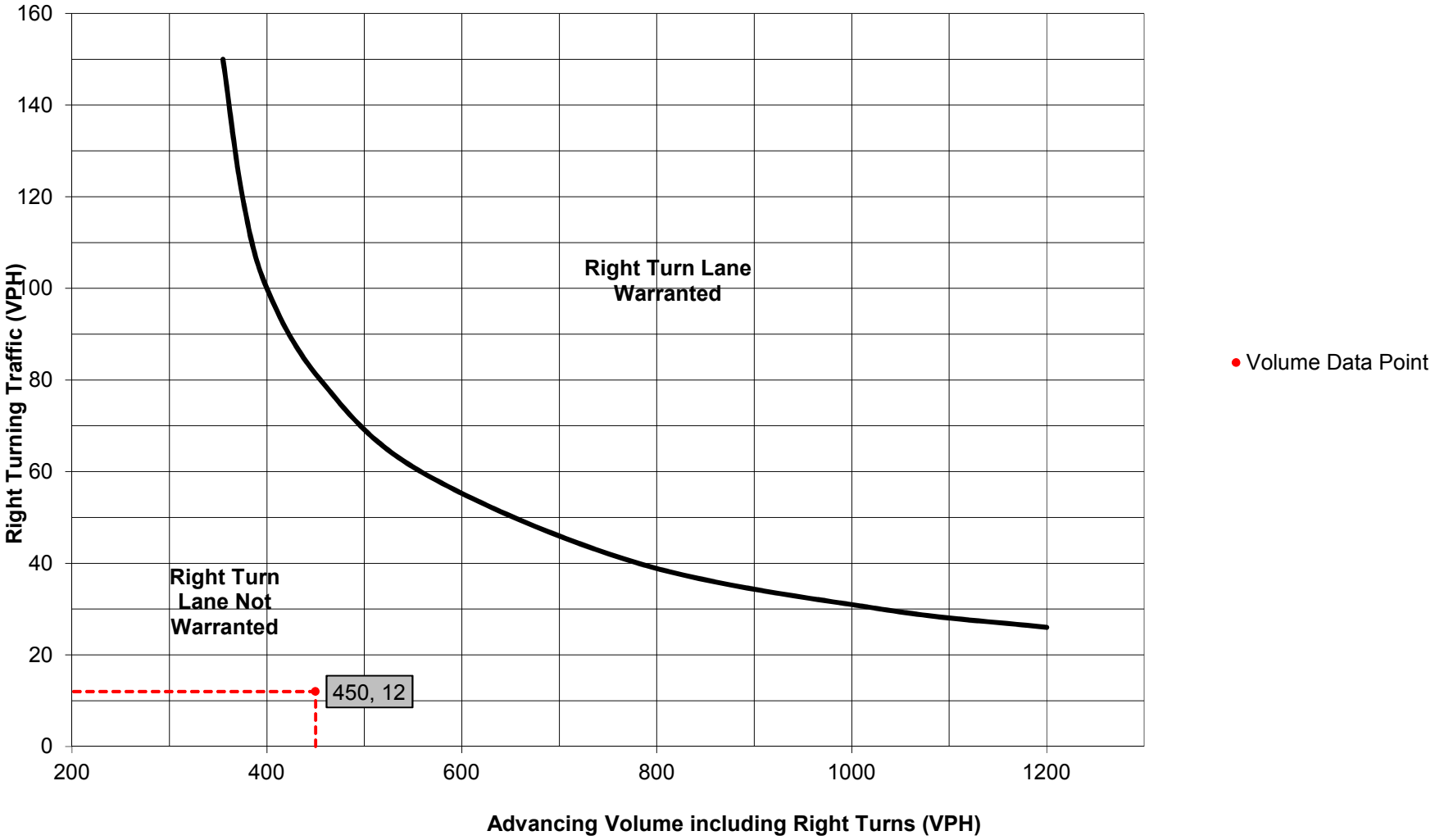
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Springdale Drive

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	72	2.0%	73
	Through	-	463	2.0%	468
	Right	Yes	173	2.0%	175
Opposing	Left	No	0	0.0%	N/A
	Through	-	316	5.0%	324
	Right	Yes	38	2.0%	39

Advancing Volume:	716
Opposing Volume:	363
Left Turn Volume:	73
% Left Turns in Advancing Volume:	10.20%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	316	5.0%	N/A
	Right	-	38	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	73
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

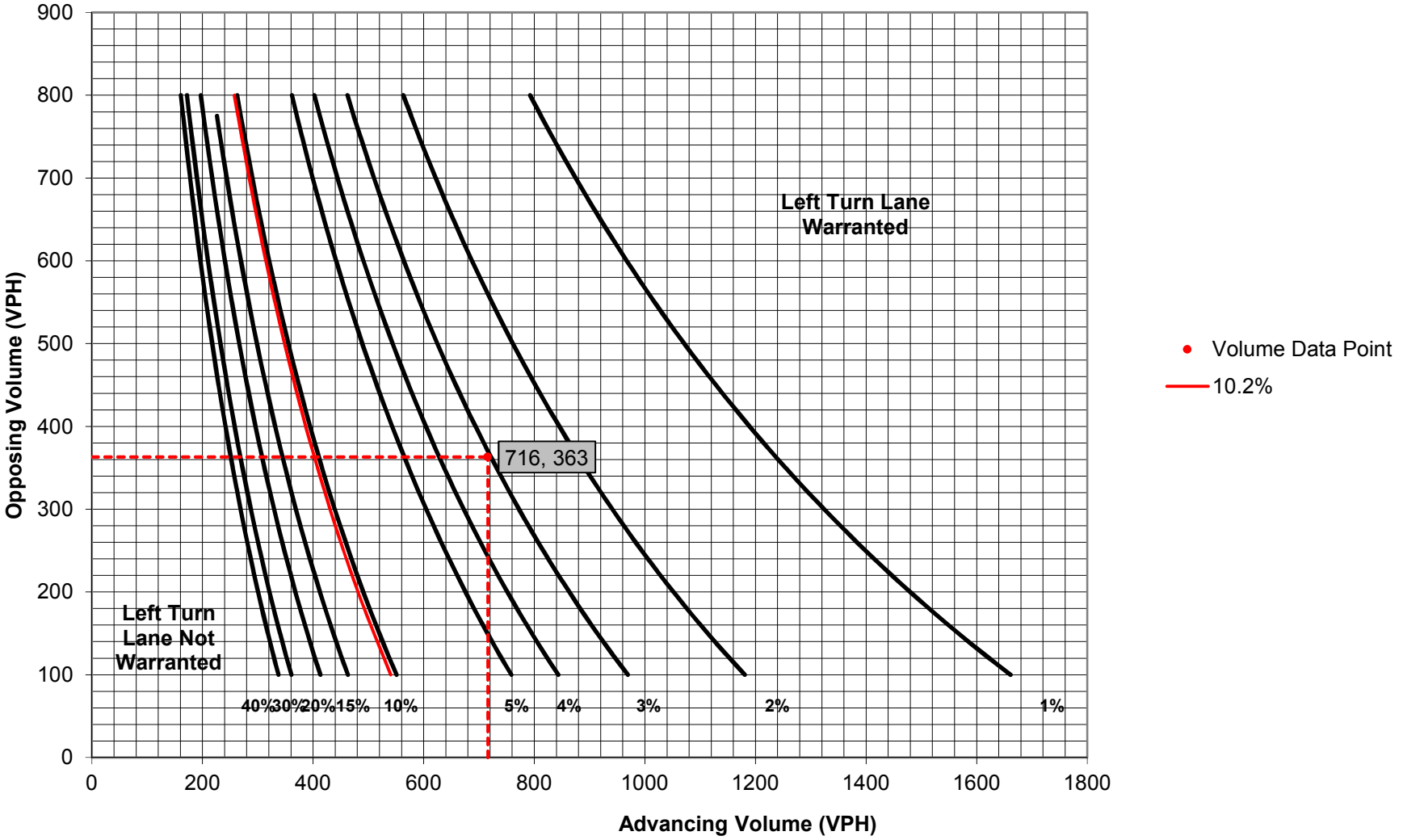
Left Turn Lane Storage Length, Condition A:	75	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	75	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Springdale Drive

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	50	2.0%	51
	Through	-	672	0.0%	672
	Right	Yes	24	1.0%	25
Opposing	Left	No	0	0.0%	N/A
	Through	-	493	1.0%	496
	Right	Yes	29	2.0%	30

Advancing Volume:	748
Opposing Volume:	526
Left Turn Volume:	51
% Left Turns in Advancing Volume:	6.82%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	493	5.0%	N/A
	Right	-	29	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	51
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

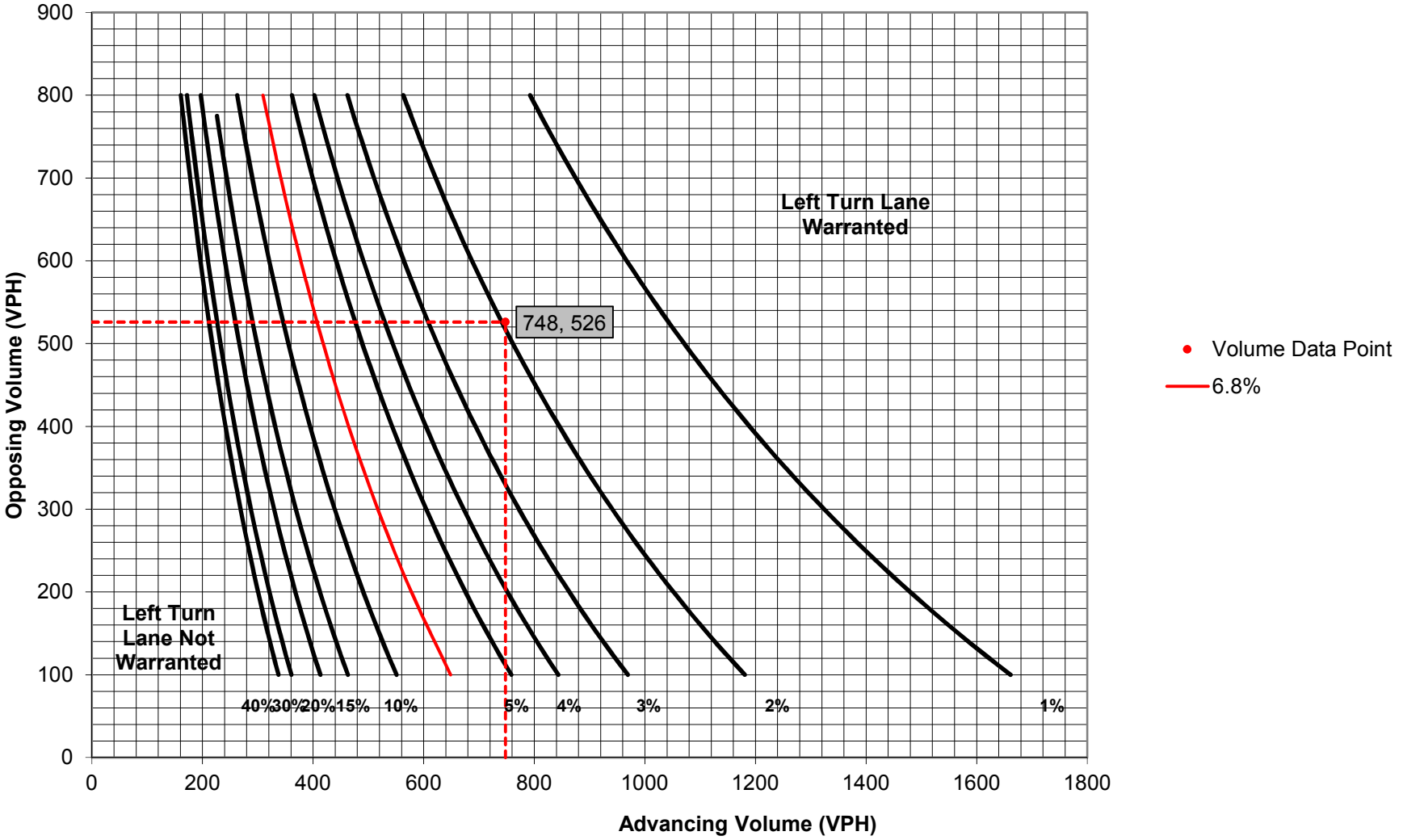
Left Turn Lane Storage Length, Condition A:	75	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	75	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Springdale Drive

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	55	2.0%	56
	Through	-	598	1.0%	601
	Right	Yes	16	0.0%	16
Opposing	Left	No	0	0.0%	N/A
	Through	-	444	0.0%	444
	Right	Yes	31	2.0%	32

Advancing Volume:	673
Opposing Volume:	476
Left Turn Volume:	56
% Left Turns in Advancing Volume:	8.32%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	444	0.0%	N/A
	Right	-	31	2.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: Yes

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	56
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: 1.0

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

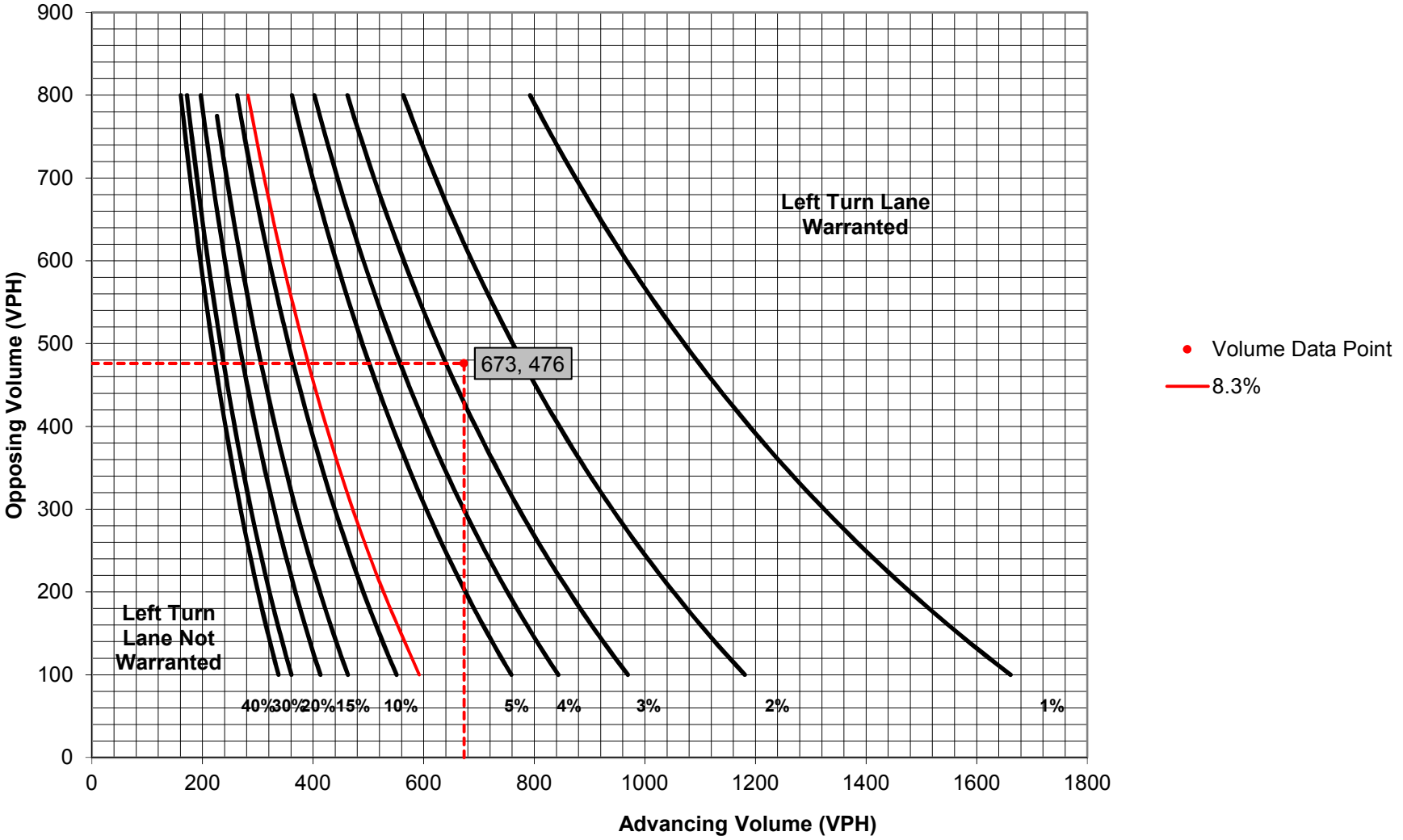
Left Turn Lane Storage Length, Condition A:	75	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	75	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Springdale Drive

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	72	2.0%	N/A
	Through	-	463	2.0%	N/A
	Right	Yes	173	2.0%	N/A
Opposing	Left	No	0	0.0%	N/A
	Through	-	316	5.0%	N/A
	Right	Yes	38	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	316	5.0%	324
	Right	-	38	2.0%	39

Advancing Volume:	363
Right Turn Volume:	39

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	39
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

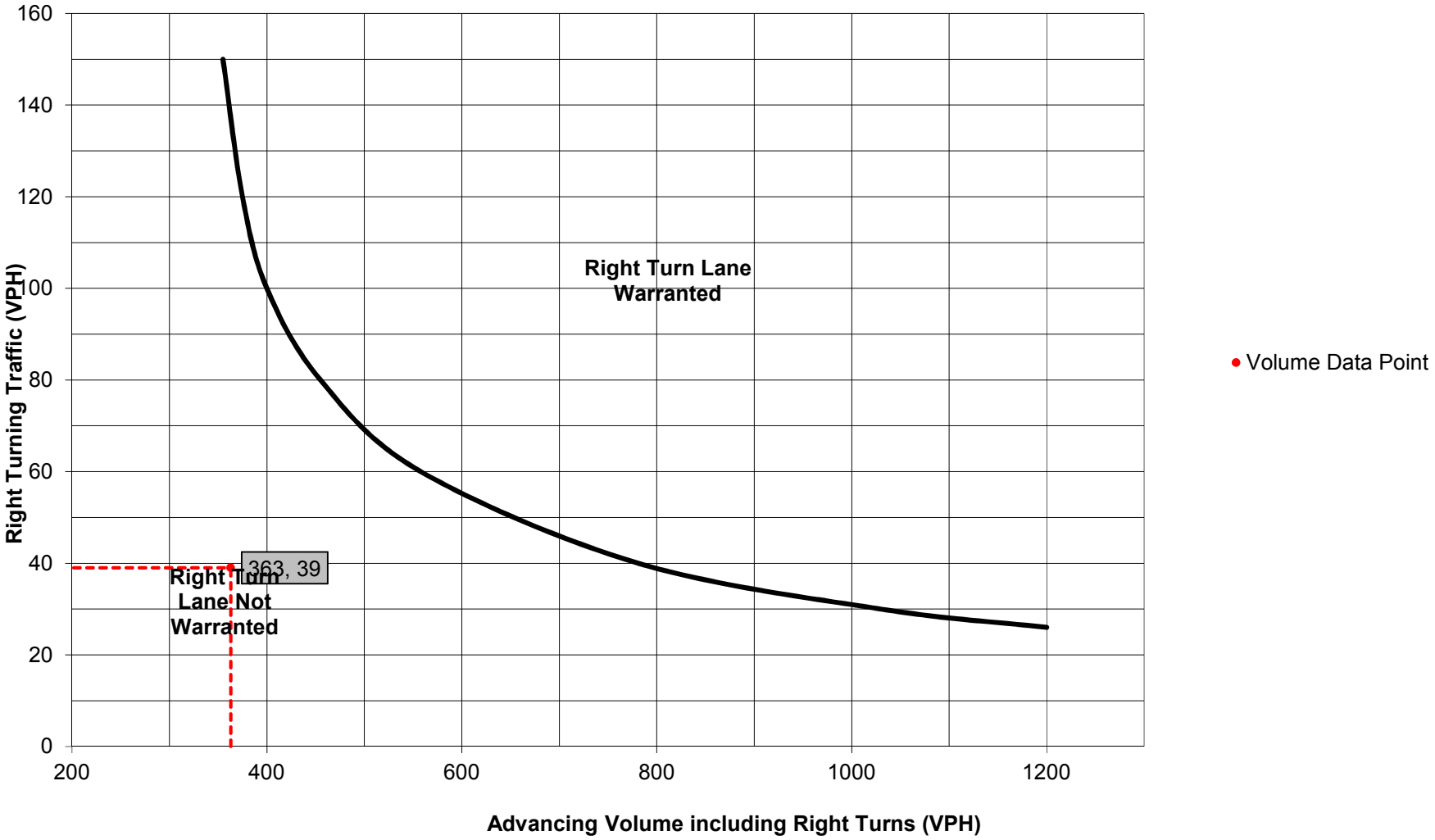
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Springdale Drive

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	50	2.0%	N/A
	Through	-	672	0.0%	N/A
	Right	Yes	24	1.0%	N/A
Opposing	Left	No	0	0.0%	N/A
	Through	-	493	1.0%	N/A
	Right	Yes	29	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	No	0	0.0%	N/A
	Through	-	493	5.0%	506
	Right	-	29	2.0%	30

Advancing Volume:	536
Right Turn Volume:	30

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	30
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

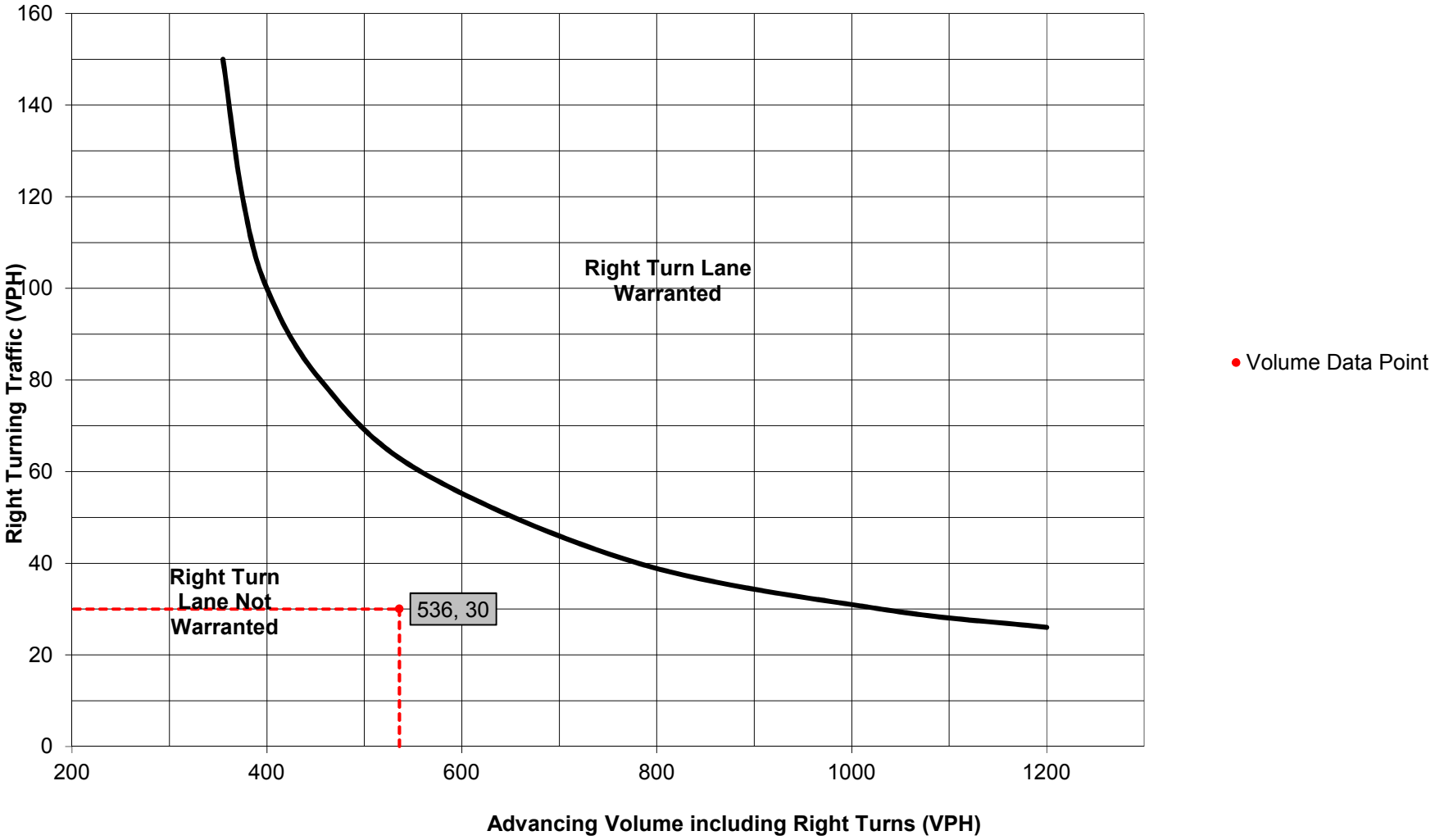
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Springdale Drive

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	55	2.0%	N/A
	Through	-	598	1.0%	N/A
	Right	Yes	16	0.0%	N/A
Opposing	Left	No	0	0.0%	N/A
	Through	-	444	0.0%	N/A
	Right	Yes	31	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	444	0.0%	444
	Right	-	31	2.0%	32

Advancing Volume:	476
Right Turn Volume:	32

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	32
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

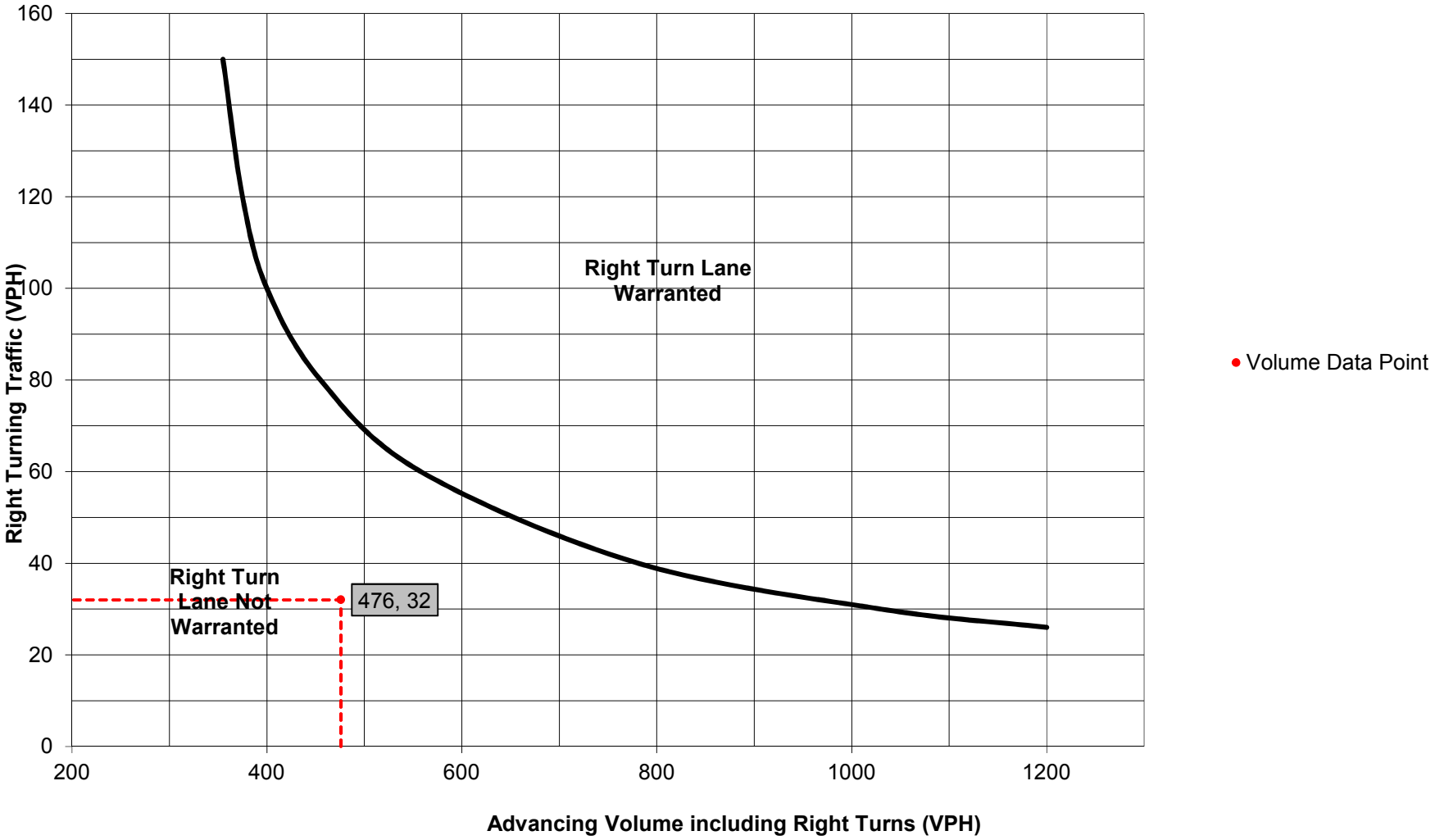
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	3	0.0%	3
	Through	-	645	2.0%	652
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	376	5.0%	386
	Right	Yes	5	0.0%	5

Advancing Volume:	655
Opposing Volume:	391
Left Turn Volume:	3
% Left Turns in Advancing Volume:	0.46%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	376	5.0%	N/A
	Right	-	5	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	3
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

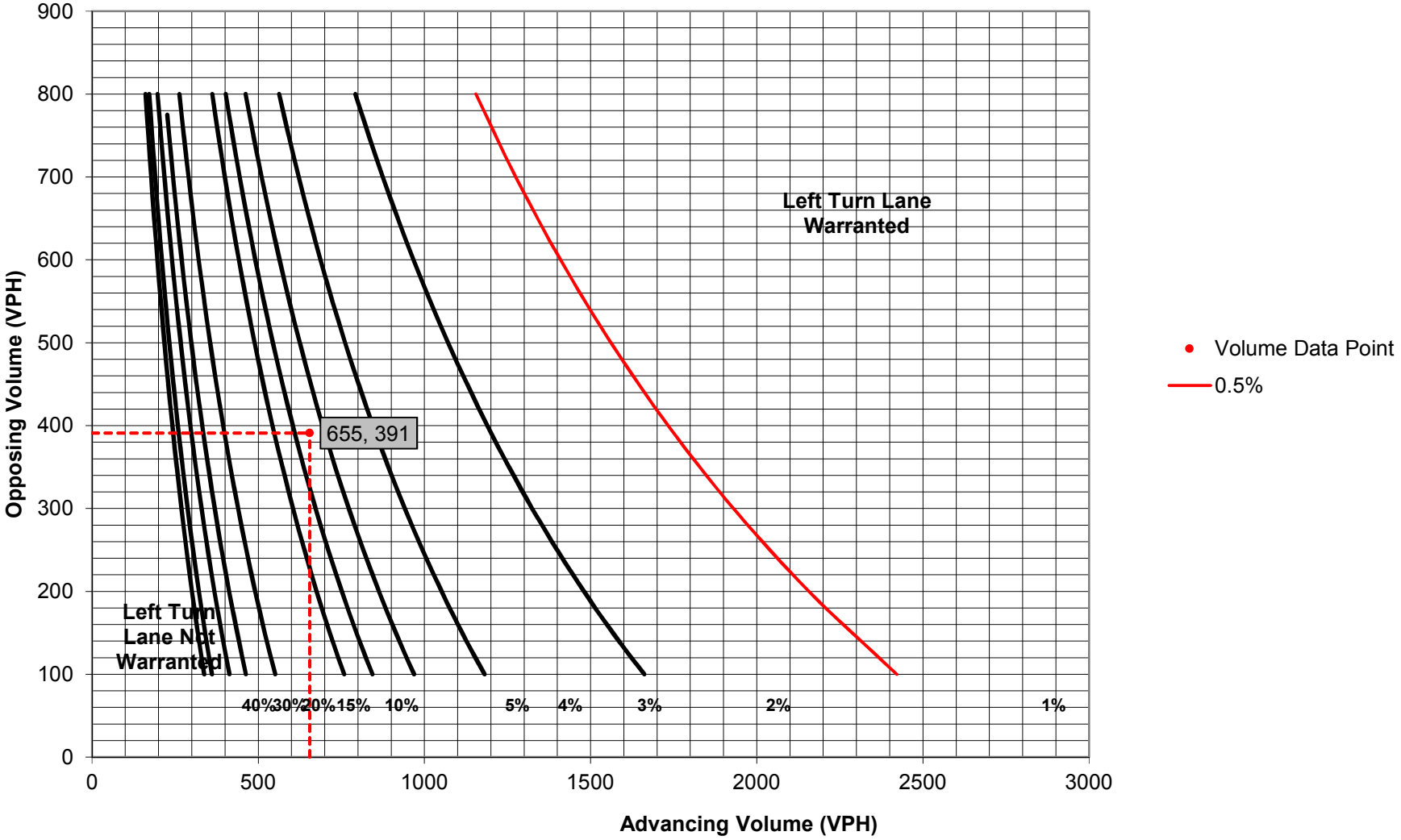
Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	10	0.0%	10
	Through	-	697	2.0%	704
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	600	2.0%	606
	Right	Yes	16	0.0%	16

Advancing Volume:	714
Opposing Volume:	622
Left Turn Volume:	10
% Left Turns in Advancing Volume:	1.40%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	594	2.0%	N/A
	Right	-	16	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	10
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

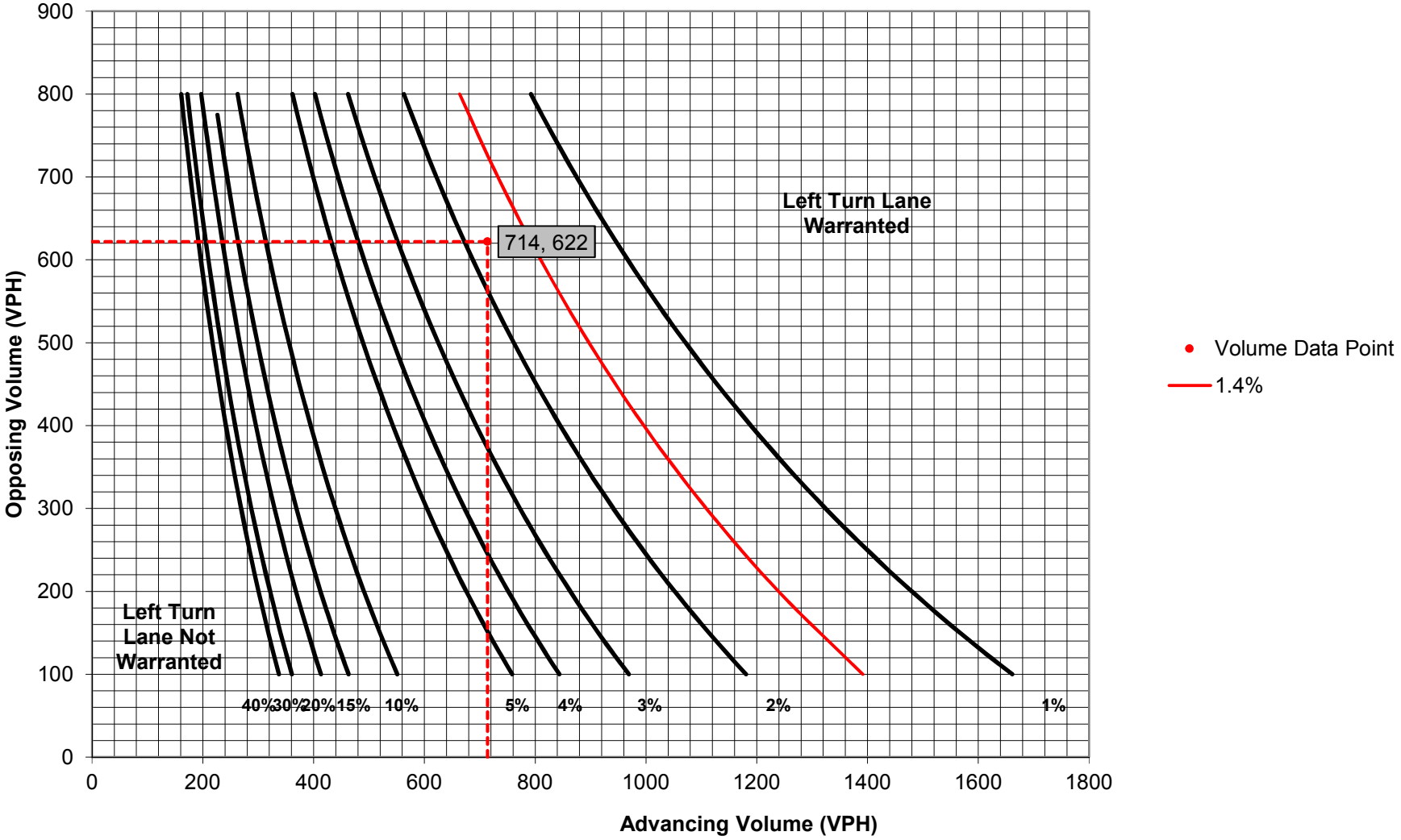
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

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Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Left Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	10	0.0%	10
	Through	-	617	2.0%	624
	Right	Yes	0	0.0%	0
Opposing	Left	Yes	0	0.0%	0
	Through	-	480	2.0%	485
	Right	Yes	14	0.0%	14

Advancing Volume:	634
Opposing Volume:	499
Left Turn Volume:	10
% Left Turns in Advancing Volume:	1.58%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	N/A
	Through	-	480	2.0%	N/A
	Right	-	14	0.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 1

Warrant Met?: No

Right Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	10
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

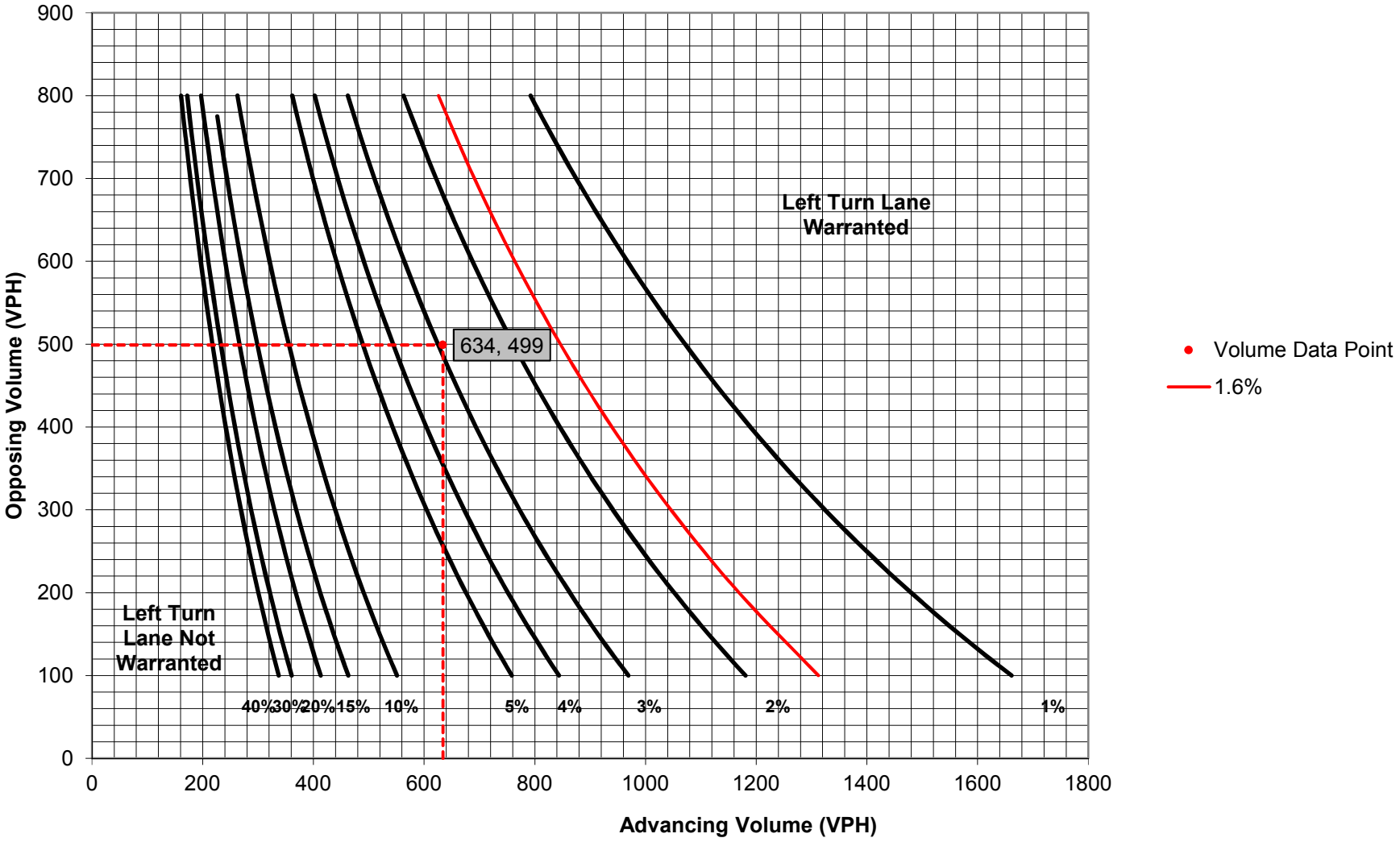
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Left Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Left Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	3	0.0%	N/A
	Through	-	645	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	376	5.0%	N/A
	Right	Yes	5	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	376	5.0%	386
	Right	-	5	0.0%	5

Advancing Volume:	391
Right Turn Volume:	5

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	5
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

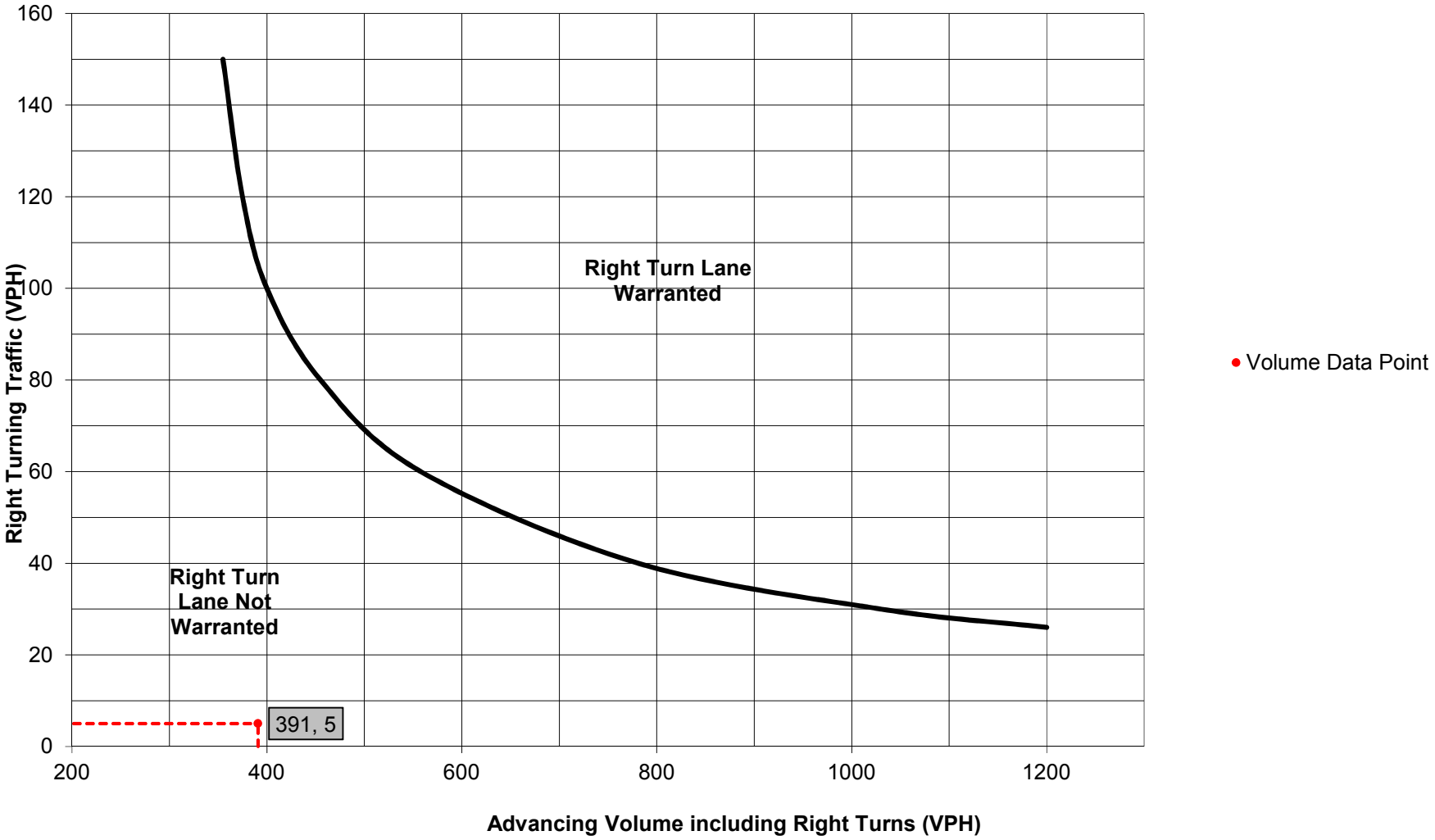
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	10	0.0%	N/A
	Through	-	697	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	600	2.0%	N/A
	Right	Yes	16	0.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	600	2.0%	606
	Right	-	16	0.0%	16

Advancing Volume:	622
Right Turn Volume:	16

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	16
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

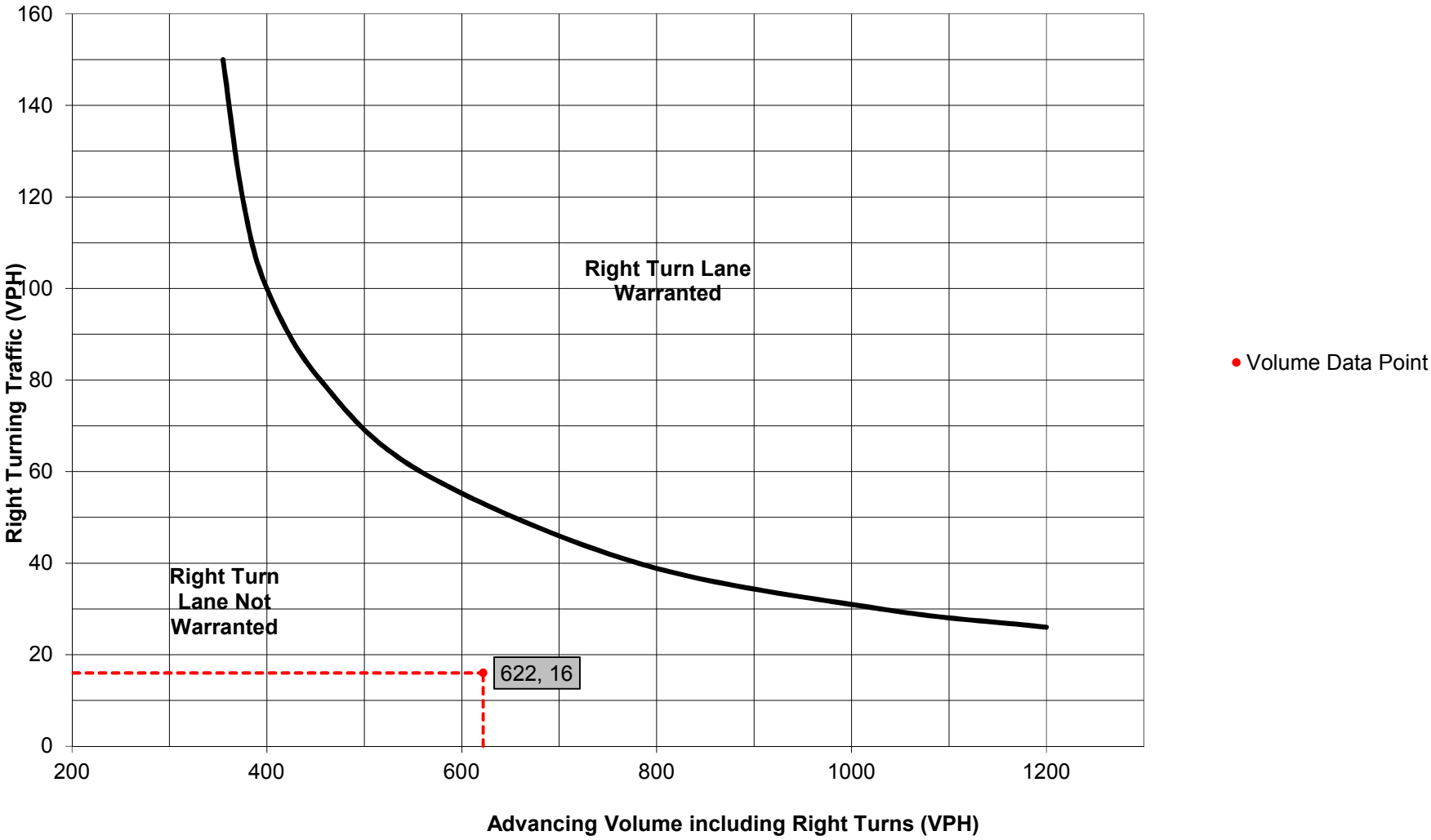
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	West Whiteland Township	**Analysis Date:**	3/31/2020
County:	Chester County	**Conducted By:**	EK
PennDOT Engineering District:	6	**Checked By:**	AM
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Ship Road & Laborers Union Driveway

Analysis Period:	2028 Projected (Build)	**Number of Approach Lanes:**	1
Design Hour:	SAT. Midday Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		**Type of Analysis**
Type of Terrain:	Level	**Left or Right-Turn Lane Analysis?:**	Right Turn Lane

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	10	2.0%	N/A
	Through	-	617	2.0%	N/A
	Right	Yes	0	0.0%	N/A
Opposing	Left	Yes	0	0.0%	N/A
	Through	-	480	2.0%	N/A
	Right	Yes	14	2.0%	N/A

Advancing Volume:	N/A
Opposing Volume:	N/A
Left Turn Volume:	N/A
% Left Turns in Advancing Volume:	N/A

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	0	0.0%	0
	Through	-	480	2.0%	485
	Right	-	14	2.0%	15

Advancing Volume:	500
Right Turn Volume:	15

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: N/A

Warrant Met?: N/A

Right Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 9

Warrant Met?: No

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	15
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

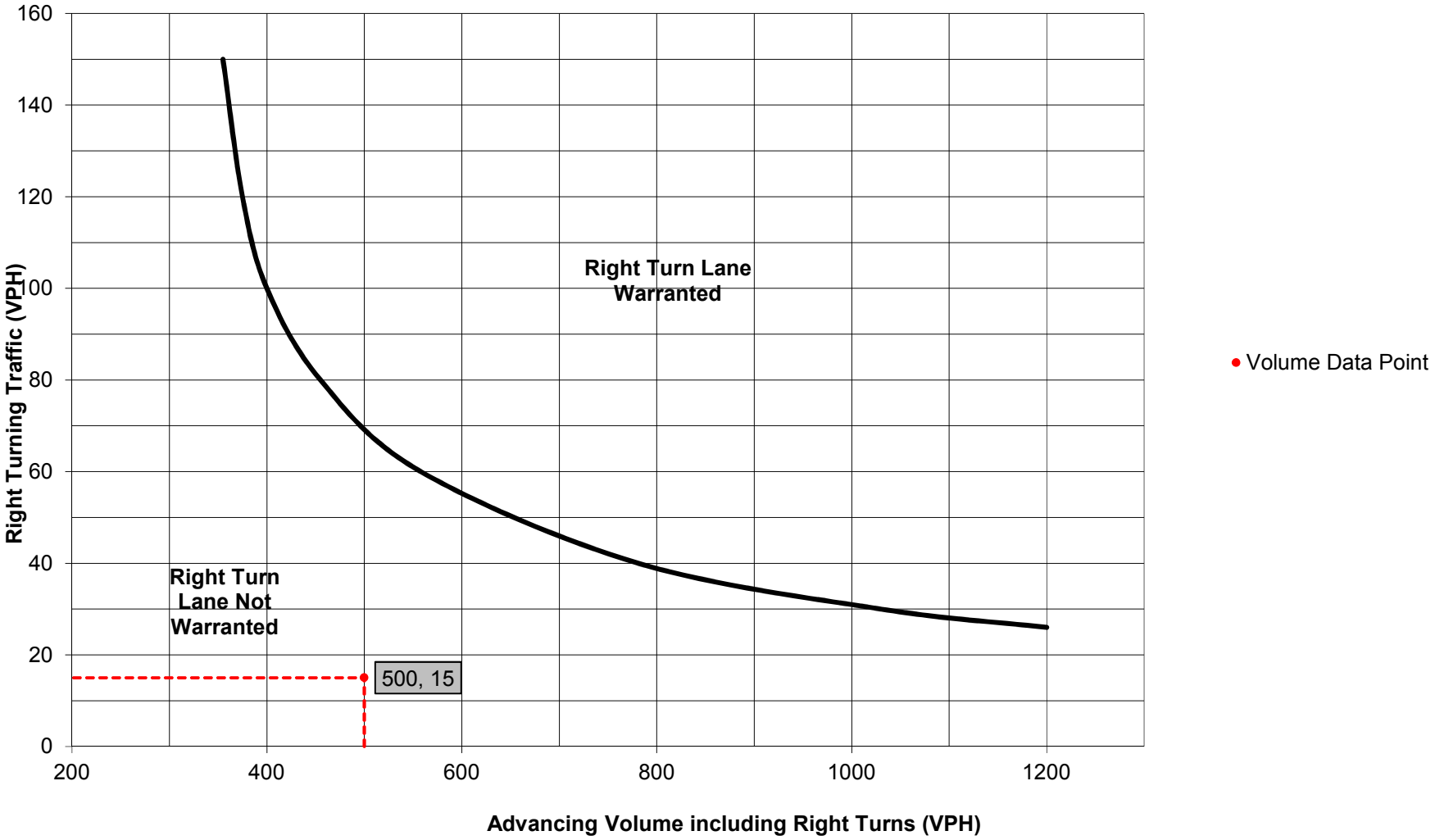
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

Right Turn Lane Storage Length, Condition A:	N/A	Feet
Condition B:	N/A	Feet
Condition C:	N/A	Feet
Required Right Turn Lane Storage Length:	N/A	Feet

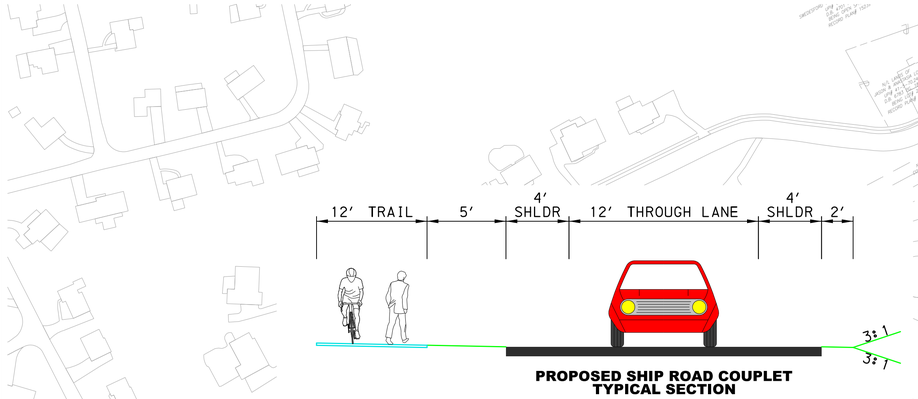
Additional Findings: N/A

Additional Comments / Justifications:

Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



APPENDIX K:
Township *Capital Improvement Plan* Conceptual Layout



PROPOSED SHIP ROAD COUPLET
TYPICAL SECTION

0 125 250 FEET

LEGEND

- EXISTING ROADWAY
- PROPOSED ROADWAY
- EXISTING WATERWAY
- EXISTING WETLANDS
- PROPOSED TRAIL

SHIP ROAD COUPLET

LINCOLN HIGHWAY (SR 3070)

BELDEN BLVD

SPRINGDALE DRIVE

SHIP ROAD (SR 1001)

SHIP ROAD COUPLET

PRIVATE CONNECTOR ROAD

FLOOD ZONE AE

FLOOD ZONE X (SHADED)

FLOOD ZONE X (UNSHADED)

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1

SHIP ROAD COUPLET

SHIP ROAD (SR 1001)

LINCOLN HIGHWAY (SR 3070)

SPRINGDALE DRIVE

REQUIRED RIGHT-OF-WAY

PROPOSED MULTI-USE TRAIL

52'

50'

12' TRAIL | 5' | 4' SHLDR | 12' THROUGH LANE | 4' SHLDR | 2'

3:1

3:1

PROPOSED SHIP ROAD COUPLET
TYPICAL SECTION

0 60 120 FEET

LEGEND

- EXISTING ROADWAY
- PROPOSED ROADWAY
- EXISTING WATERWAY
- EXISTING WETLANDS
- PROPOSED TRAIL

PROPOSED CHURCH PARKING
17 SPACES

EXISTING CHURCH PROPERTY

ULTIMATE R.O.W.

SIGNAGE

TRASH ENCLOSURES

TRASH ENCLOSURE

AIR MACHINES

FLOOD ZONE AE

FLOOD ZONE X (SHADED)

Waters - 2

Wetlands - 1

Wetlands - 2

N/L LANDS OF COUNTY OF CHES. UPI# 41-5-74(E) D.B. 4074 PG. 2014

N/L LANDS OF SUNOCO PARTNERS MARKETING & TERMINALS UPI# 41-5-76 D.B. 5655 PG. 640

N/L LANDS OF SS PHILIP & JAMES ROMAN CATHOLIC PARISH UPI# 41-5-95(E)

N/L LANDS OF MICHAEL PERSON UPI# 41-5-75 D.B. 5351 PG. 2228

N/L LANDS OF ARENA STRONG PARTNERSHIP UPI# 41-5-191.3 D.B. 64 PG. 189 BEING LOT# 3 RECORD PLAN# 4377

N/L LANDS OF DANIELS FAMILY HOLDINGS LL UPI# 41-5-191.2 D.B. 9342 PG. 614 BEING LOT# 11 RECORD PLAN# 43

2

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SPRINGDALE DRIVE

SHIP ROAD (SR 1001)

SHIP ROAD COUPLET

PRIVATE CONNECTOR ROAD

SIGNAGE

TRASH ENCLOSURES

TRASH ENCLOSURE

B

C

GREEN COURT

116 Ship Road
N/F William J. Curley
Parcel 41-5-176.1
(not included)

120 Ship Road
N/F Mary A. McGowan
Parcel 41-5-176.2
(not included)

124 Ship Road
N/F Maureen C. Gerbstadt
Parcel 41-5-176.3
(not included)

PROPOSED MULTI-USE TRAIL

REQUIRED RIGHT-OF-WAY

50'

12' TRAIL | 5' | 4' SHLDR | 12' THROUGH LANE | 4' SHLDR | 2'

3:1

3:1

PROPOSED SHIP ROAD COUPLET
TYPICAL SECTION

0 60 120 FEET

LEGEND

- EXISTING ROADWAY
- PROPOSED ROADWAY
- EXISTING WATERWAY
- EXISTING WETLANDS
- PROPOSED TRAIL

Wetlands - 5

Wetlands - 3

Wetlands - 4

FLOOD ZONE AE

FLOODWAY

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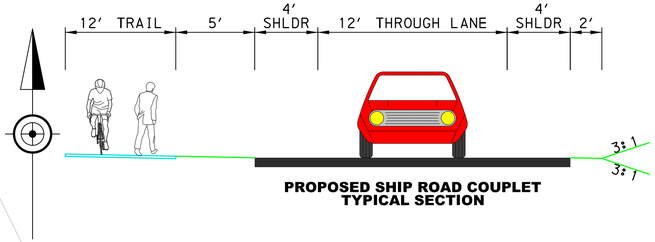
PROPOSED MULTI-USE TRAIL

REQUIRED RIGHT-OF-WAY



PROPOSED SHIP ROAD COUPLET TYPICAL SECTION

SHIP ROAD COUPLET

REQUIRED RIGHT-OF-WAY

EXISTING DRIVEWAY TO BE RELOCATED

LINCOLN HIGHWAY (SR 3070)

SHIP ROAD (SR 1001)

ULTIMATE R.O.W.

ONLY

AIR MACHINES

PROPOSE

EXISTING CHURCH PROP

SUNOCO PARTNERS MARKETING & TERMINALS L.P.
N/L LANDS OF
UPI# 41-5-76
D.B. 5655 PG. 640

N/L LANDS OF
MICHAEL PERSON
UPI# 41-5-75
D.B. 5351 PG. 2228

N/L LANDS OF
DONALD & MARIAN ROSS
UPI# 41-5-96
D.B. 2398 PG. 147

S. OF CHESTER
5-74(E)
4 PG. 2024

0 60 120 FEET

LEGEND

- EXISTING ROADWAY
- PROPOSED ROADWAY
- EXISTING WATERWAY
- EXISTING WETLANDS
- PROPOSED TRAIL

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