August 12, 2025
TPD# JDAI.00005

Info@TPDinc.com

Transportation Impact Study

4974 Lees Lane Development

Hellam Township, York County, PA

For Submission To:

Hellam Township, York County

Moving ***Forward*** **Together**®

4974 LEES LANE DEVELOPMENT
TRANSPORTATION IMPACT STUDY

FOR SUBMISSION TO:
Hellam Township, York County, PA

Prepared For:
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August 12, 2025
TPD # JDAI.00005

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EXECUTIVE SUMMARY

The purpose of this Transportation Impact Study (TIS) is to assess potential traffic impact associated with the 4974 Lees Lane development on the roadway network in Hellam Township, York County, PA. Based on this evaluation, the following conclusions were reached:

1. This report has been prepared in accordance with Appendix A – *Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permits* of PennDOT *Publication* 282 and Section 430-17. Preliminary Plan E(2)(g) *Traffic Impact* of the Hellam Township Subdivision and Land Development Ordinance (SALDO).
2. The project scope and the extent of the study area were based on the contents of the Traffic Impact Study (TIS) Scope Determination Request, dated June 25, 2025, and associated feedback from the Hellam Township Engineer (related documentation provided in Appendix A):
   - Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road;
   - Kreutz Creek Road (SR 1014) & US Route 30 West Ramps;
   - Kreutz Creek Road (SR 1014) & US Route 30 East Ramps.
3. The project site is located just north of US Route 30 and east of Kreutz Creek Road (SR 1014) in Hellam Township, PA.
4. At full build-out, the proposed 4974 Lees Lane development is expected to consist of a 250,900 square foot warehouse building along with a proposed travel stop that provides 12 passenger vehicle fueling positions and 5 truck fueling positions.
5. Access to the development is proposed via one (1) access to Lees Lane to the east of the Lees Lane/ Kreutz Creek Road (SR 1014) intersection.
6. The available sight distances on Lees Lane at its intersection with Kreutz Creek Road exceed applicable sight distance requirements.
7. At full build-out, the proposed development is expected to generate 300 total external trips during the weekday A.M. peak hour (232 passenger vehicle trips and 68 truck trips), 311 total external trips during the weekday P.M. peak hour (239 passenger vehicle trips and 72 truck trips), and 257 total trips during the Saturday midday peak hour (210 passenger vehicle trips and 47 truck trips).
8. Capacity analyses were conducted to determine the quality of operation (LOS) at the study area intersections for the 2025 existing condition, 2038 design year base (no-build) condition, and 2038 design year projected (build) condition. Normally, PennDOT requires a five-year design horizon beyond build-out for TIS analysis; however, a 10-year horizon was assumed in this study to comply with applicable Township ordinance requirements. The capacity analyses were conducted in accordance with the standards contained in *Appendix A - Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permits* of *PennDOT Publication 282* and with Section 430-17. Preliminary Plan E(2)(g)[2][n]. *Required Levels of Service* in *Traffic Impact* of the Hellam Township Subdivision and Land Development Ordinance (SALDO).
9. Levels of Service (LOS) for the study area intersections have been summarized below in matrix form. **Table I** details the overall intersection LOS for each study area intersection for the existing and 2038 design year conditions.

TABLE I
OVERALL INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Time Period	Overall Intersection Level of Service Summary				Meets LOS Requirements?
		2025 Existing	Design Year 2038			
			Base	Projected	Projected[1]	
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road	AM Peak	A (0.9)	A (0.9)	A (3.8)	--	YES
	PM Peak	A (1.2)	A (1.2)	A (5.3)	--	YES
	SAT Peak	A (1.7)	A (1.7)	A (4.2)	--	YES
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps	AM Peak	B (10.5)	B (11.1)	B (12.1)	B (11.0)	YES
	PM Peak	C (19.4)	C (23.3)	D (34.9)	B (13.9)	YES
	SAT Peak	B (10.9)	B (11.2)	B (11.7)	B (10.8)	YES
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps	AM Peak	A (5.7)	A (6.1)	A (7.4)	--	YES
	PM Peak	A (2.3)	A (2.3)	A (3.6)	--	YES
	SAT Peak	A (2.3)	A (2.3)	A (3.3)	--	YES

Base = No-Build scenario; Projected = Full Build-out scenario with Lees Lane Development;
Unsignalized ILOS calculated in accordance with Figure 5 of Policies and Procedures for Transportation Impact Studies
[1] Projected condition with implementation of recommended improvements in this TIS.

10. Under 2038 design year projected conditions, with implementation of the recommended improvements outlined below, all overall intersection level of service (ILOS) will operate in accordance with the standards contained in *Appendix A – Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permits* from PennDOT *Publication 282*, along with Section 430-17. Preliminary Plan E(2)(g)[2][n] of the Hellam Township SALDO.

11. Traffic Planning and Design Inc. (TPD) offers the following traffic-related roadway improvements as outlined at the following study area intersections:

Kreutz Creek Road (SR 1014) & Lees Lane (T-947)

- Modify the Lees Lane intersection geometry to accommodate the turning movements of a WB-62 design vehicle to/from the south (northbound right turn movements from Kreutz Creek Road, eastbound left turn movements from Lees Lane).
- Modify the Lees Lane intersection geometry to accommodate the turning movements of a Single-Unit vehicle to/from the north (southbound left turn movements from Kreutz Creek Road, eastbound right turn movements from Lees Lane).
- Prohibit right turn movements of trucks over 30' in length via installation of appropriate signage on Lees Lane and on the eastbound approach of Lees Lane to the Kreutz Creek Road intersection.

Lees Lane (T-947) from Kreutz Creek Road to Proposed Site Driveway

- Reconstruct the existing pavement structure with a section that accommodates the anticipated truck traffic.
- Widen Lees Lane to the extent needed to accommodate the anticipated movements of a WB-62 design vehicle.

Lees Lane (T-947) & Proposed Site Driveway

- Design the driveway with a full-movement configuration with geometry accommodating WB-62 turning movements to/from the west (towards the Lees Lane/Kreutz Creek Road intersection).
- Install a "Stop" sign, R1-1, size 30" x 30" on the egress driveway approach.

Kreutz Creek Road (SR 1014) & Route 30 Westbound On/Off Ramps

- Enter into a signal monitoring agreement with Hellam Township; if/when signal warrants are met, install a fully-actuated, uncoordinated traffic signal with 3-phase control as follows:
  - Include an advance left turn phase for northbound left turns using a Flashing Yellow Arrow (protected/permitted);
  - Place stop bars to accommodate turning movements of a WB-62 design vehicle.

12. As part of PennDOT HOP process and the Township's land development process, the applicant will coordinate and fund the implementation of the recommended roadway improvements identified in this TIS. The proposed roadway improvements will be designed and constructed in compliance with ADA requirements to the extent feasible, unless otherwise directed or approved by the Department and/or Township, as applicable.

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Study (TIS) for the proposed 4974 Lees Lane development in Hellam Township, York County, Pennsylvania. As shown in **Figure 1**, the project site is located to north of US Route 30 and east of Kreutz Creek Road.

At full build-out, the proposed development is expected to consist of a 250,900 square foot warehouse building along with a proposed travel stop that provides 12 passenger vehicle fueling positions and 5 truck fueling positions.

Access to the development is proposed via one (1) access to Lees Lane to the east of the Lees Lane/ Kreutz Creek Road (SR 1014) intersection. The site plan is shown in **Figure 2.**

This report has been prepared in accordance with *Appendix A - Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permits of PennDOT Publication 282* and Section 430-17. Preliminary Plan E(2)(g)[2][n] of the Hellam Township SALDO. The project scope and the extent of the study area were based on the contents of the approved TIS Scoping email and the associated feedback from representatives of Hellam Township. All relevant correspondence pertaining to this project has been included in **Appendix A**.

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, and field notes are included in **Appendix B**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Roadway	Ownership	Functional Classification/ Roadway Type	Predominant Directional Orientation	Average Daily Traffic[1]		Posted Speed Limit
SR 30 WB Off-Ramp	State (SR 8010)	Other (Freeway Ramp)	East-West	3,197		NP
SR 30 WB On-Ramp	State (SR 8010)	Other (Freeway Ramp)	East-West	2,103		NP
SR 30 EB Off-Ramp	State (SR 8010)	Other (Freeway Ramp)	East-West	2,321		NP
SR 30 EB On-Ramp	State (SR 8010)	Other (Freeway Ramp)	East-West	3,202		NP
Kreutz Creek Road	State (SR 1014)	Minor Arterial	North-South	(North of RT 30) 1,018	(South of RT 30) 10,942	40 MPH
Pleasant Valley Road	State (T-955)	Local Road	East-West	--		NP
Lees Lane	Township (T-947)	Local Road	East-West	--		NP

1 = Average Daily Traffic Volume (ADT) data obtained using factored link data from PennDOT's Traffic Information Repository
NP = Not Posted

Land Use Context

In *Publication 13 Design Manual Part 2* (Contextual Roadway Design), there is guidance pertaining to defining the land use context(s) for a given area. Based upon review of this information, the given study area surrounding the proposed site best fits the **Rural Town** designation, as described below:

» ***"Rural Town**, areas with low to medium density (e.g. single-family houses and other single purpose structures); commercial uses predominantly along main streets (ranging from lower to higher densities); and on-street parking and sidewalks with predominantly small setbacks.*

Roadway Type

PennDOT *Publication 13 Design Manual Part 2* (Contextual Roadway Design) contains guidance pertaining to defining the transportation context(s) for a given area. Comparing the existing condition roadway characteristics to the various options presented in this document, the study area roadways best fit the following designations:

Freeway Ramps:

» US Route 30 East and West Ramps.

***Minor Arterial,** corridors of regional or community importance connecting centers of activity.*

» Kreutz Creek Road (SR 1014).

***Local Road,** roadways with no regional importance, providing local circulation and access.*

» Pleasant Valley Road;

» Lees Lane.

Bicycle and Pedestrian Facilities

Based on observations at the study area intersections, pedestrians and bicyclists are currently served by paved shoulders and travel lanes within the study area. The proposed development will not adversely impact any existing/proposed pedestrian or bicycle facilities.

Mass Transit Facilities

Mass transit in York County is provided by Rabbit Transit. Route 12 provides services to East York Walmart, Hallam, Wrightsville, and Columbia. The closest stop to the proposed site is approximately 0.5 miles to the east along W. Market Street (SR 0462), just west of Claire Avenue.

EXISTING TRAFFIC CONDITIONS

Average Daily Traffic

The existing Average Daily Traffic (ADT) volumes are based on data obtained from PennDOT Traffic Information Repository (TIRe) website. The traffic volume map contained on the PennDOT TIRe website was reviewed in July 2025 to determine the Average Daily Traffic (ADT) for a typical weekday along the State-maintained roadways in the vicinity of the proposed site. The existing ADT volumes are shown on **Table 1** and the traffic volume maps from PennDOT TIRe website are provided in **Appendix B.**

Manual Turning Movement Counts

Manual traffic counts were conducted in 15-minute intervals during the weekday morning (6:00 to 9:00 A.M.), weekday evening (3:00 to 6:00 P.M.) and midday Saturday (11:00 A.M. to 2:00 P.M.) peak periods. Data pertaining to passenger vehicles, heavy vehicles, and pedestrians were observed during the manual counts. Peak hours and count dates for the study area intersections are identified in **Table 2**. The weekday counts were conducted when area schools were in session.

TABLE 2
MANUAL TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour[1]
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road	Thursday, May 8, 2025	Weekday A.M.	7:00-8:00 AM
		Weekday P.M.	4:30-5:30 PM
	Saturday, July 19, 2025	Saturday Midday	11:15 AM – 12:15 PM
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps	Thursday, May 8, 2025	Weekday A.M.	7:00-8:00 AM
		Weekday P.M.	4:30-5:30 PM
	Saturday, July 19, 2025	Saturday Midday	12:30-1:15 PM
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps	Thursday, May 8, 2025	Weekday A.M.	7:00-8:00 AM
		Weekday P.M.	4:30-5:30 PM
	Saturday, July 19, 2025	Saturday Midday	12:00-1:15 PM

1 = Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur

The 2025 existing condition peak hour traffic volumes are illustrated in **Figure 3**. Manual traffic count data sheets are provided in **Appendix C**. Traffic volume development worksheets are provided in **Appendix D**.

BASE (NO-BUILD) CONDITIONS

Annual Background Growth

A background growth factor for the roadways in the study area was developed based on growth factors obtained from the PennDOT Bureau of Planning and Research (BPR) for August 2024 to July 2025. The PennDOT BPR suggests using a background growth trend factor of 0.37% per year in York County for urban, non-interstate roadways, as the study area is located with the urbanized boundary shown on PennDOT's York County Functional Classification Map. As such, the background growth factor was applied to adjust existing volumes accordingly.

Nearby Proposed Developments

Base (no-build) traffic conditions are typically calculated to include traffic volumes from proposed developments, which, though not operating under existing conditions, may be operating by the build-out of the proposed Lees Lane development. No nearby developments were identified for inclusion in the TIS by the Township during the TIS scoping process.

The additional traffic volumes due to background growth were added to the existing traffic data to produce the 2038 base (no-build) condition traffic volumes. The resulting 2038 base (no-build) condition volumes are illustrated in **Figures 6**.

SCHEDULED ROADWAY IMPROVEMENTS

Programmed Improvements

Based on a review of the Transportation Improvement Program (TIP) for PennDOT, the following projects are programmed:

> **Project ID: 116116** (Arsenal Rd Resurfacing 2) consisting of resurfacing on US-30 and associated ramps; this project is expected to be completed by the end of 2027.

Roadway Improvements by Other Developments

There were no other roadways improvements/modifications by others identified.

PROPOSED SITE ACCESS

Access to the development is proposed via one (1) access to Lees Lane to the east of the Lees Lane/ Kreutz Creek Road (SR 1014) intersection. The proposed access is shown on the site plan as illustrated in **Figure 2.**

Sight Distance Analysis

A sight distance analysis was prepared for Lees Lane at its intersection with Kreutz Creek Road (SR 1014). Completed PennDOT M-950S forms are included in **Appendix B**. In general, recommended safe sight distances depend upon the posted speed limit and roadway grades. The existing sight distances at the proposed driveway were measured in accordance with PennDOT Publication 282 Highway Occupancy Permit Guidelines and compared to AASHTO's intersection sight distance standard, which is identified in Chapter 9.5 of the "A Policy on Geometric Design of Highways and Streets", 2018 7th Edition. In addition, measured sight distances were compared to PennDOT's safe stopping sight distance standard, which is calculated by the following equation:

$$\mathbf{SSSD = 1.47VT + \frac{V^2}{30(f \pm g)}}$$

SSSD = Safe stopping sight distance (acceptable sight distance)

V = Vehicle Speed

T = Perception Reaction Time of Driver (2.5 seconds)

f = Coefficient of Friction for Wet Pavements

g = Percent of Roadway Grade Divided by 100

Table 3 provides a sight distance evaluation.

TABLE 3
SIGHT DISTANCE ANALYSIS

Movement	Direction	Posted Speed	Grade[1]	Sight Distances (feet)		
				SSSD	ISD (Car / Truck)	EXIST (Car/Truck)
Lees Lane (T-947) approach to Kreutz Creek Road (SR 1014)						
Exiting Movements	To the left	40 mph	+1%	309'	500'[2] / 760'[2]	1000'+ / 1000'+
	To the right		-2%	325'	500'[2] / 760'[2]	750' / 1000'+
Entering Left Turns	Approaching same direction		-2%	325'	--	750' / 1000'+
	Approaching opposite direction		+1%	309'	355'[3] / 485'[3]	1000'+ / 1000'+

1 = Roadway Grade Approaching Minor Street
2 = Assumed 3 lanes crossed
3 = Assumed 2 lanes crossed
ISD = AASHTO Intersection Sight Distance
EXIST = Existing (measured) Sight Distance
SSSD = PennDOT Safe Stopping Sight Distance

As shown in **Table 3**, the measured sight distances exceed PennDOT's acceptable sight distances (SSSD) and AASHTO's intersection sight distance (ISD) requirements for both passenger cars and combination trucks.

TRIP GENERATION

Warehouse

Trip generation was prepared in accordance with Institute of Transportation Engineers (ITE) and PennDOT Strike-Off-Letter 494-24-02, which updates PennDOT *Publication 282* to provide guidance on trip generation determinations for warehouse facilities when an end user is not identified. Since the proposed development includes one warehouse building that is less than 500,000 square feet, trip generation was calculated per PennDOT's Publication 282 requirements using ITE Land Use 150 (Warehousing) data filters by region/size. The trip generation methodology was confirmed by the Township during the TIS scoping process.

Travel Stop

For the proposed travel stop, trip generation was prepared using the average rates from the *"Love's Travel Stops Trip Generation Study" dated July 2021*, since this data/user is similar to the type of anticipated travel stop user proposed on-site. This local trip generation study provides a breakdown between pass-by, primary trips (new trips), and diverted link trips.

The following should be noted with respect to the trip generation methodology:

- PennDOT *Publication 282* does not provide specific guidance on trip generation for warehouse buildings <500 ksf for the Saturday midday peak hour for passenger vehicles or trucks; therefore, ITE's LUC 150 trip rate for the Saturday peak of generator was utilized (unfiltered, since the data filter for the Northeast & Mid-Atlantic is based on a very small sample size during the Saturday peak hour).
- Pass-by trip percentages were utilized as specified in the local pass-by data provided in the aforementioned Love's Travel Stop study.

- Pass-by rates were reduced to not exceed 15% of adjacent roadway volume. The volume of pass-by trips above the 15% threshold were assumed to be diverted link trips.
- Due to limited existing truck traffic on Kreutz Creek Road near the Lees Lane intersection, all truck pass-by trips were assumed to be diverted link.

» It is reasonable to assume that internal capture trips will occur between the warehouse building and proposed travel stop. For the internal capture calculations, TPD used NCHRP 684's Internal Capture Estimation Tool to estimate internal trips between the warehouse building (Office data) and the travel stop (Retail data). Internal trip rates for the Average Weekday were assumed to be the average of the AM/PM peak hour rates.

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

TABLE 4
ITE/LOCAL TRIP GENERATION DATA – LEES LANE

Land Use	ITE #	Time Period	Trip Type	Equations/Rates	Entering %	[1]Pass-By %	Diverted %
Warehouse	150	Weekday	Passenger Vehicle	T = 3.02*(X)	50%	--	--
			Truck	T = 0.60*(X)	50%	--	--
		Weekday A.M. Peak Hour	Passenger Vehicle	T = 0.42*(X)	72%	--	--
			Truck	T = 0.05*(X)	56%	--	--
		Weekday P.M. Peak Hour	Passenger Vehicle	T =0.37*(X)	27%	--	--
			Truck	T =0.06*(X)	53%	--	--
		Saturday Midday Peak Hour	Passenger Vehicle	T =0.05*(X)	64%	--	--
			Truck	T =0.03*(X)	52%	--	--
Travel Stop	Local	Weekday	Passenger Vehicle	P.M. Peak Hour * k-factor of 10	50%	--	--
			Truck	P.M. Peak Hour * k-factor of 10	50%	--	--
		Weekday A.M. Peak Hour	Passenger Vehicle	T = 12.66*(Y)	51%	44%	24%
			Truck	T = 12.52*(Y)	49%	--	54%
		Weekday P.M. Peak Hour	Passenger Vehicle	T =14.55*(Y)	49%	49%	30%
			Truck	T =12.43*(Y)	50%	--	55%
		Saturday Midday Peak Hour	Passenger Vehicle	T =17.45*(Y)	52%	24%	51%
			Truck	T =7.83*(Y)	49%	--	45%

T = number of site-generated vehicular trips *X = independent variable (ksf = 1,000 s.f. gross floor area)*
1 = Reduced pass by as described above *Y = independent variable (vfp = vehicle fueling positions)*

The calculated trip generation for the proposed development is shown in **Table 5**. Detailed trip generation calculations and supporting data have been provided in **Appendix D**.

TABLE 5
TRIP GENERATION SUMMARY

Land Use	Total Trips	Total Internal Trips	Total External Trips	Pass-by Trips			Diverted-Link Trips			New Trips		
				Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Weekday A.M. Peak Hour												
Warehouse (Passenger Vehicles)	96	8	88	0	0	0	0	0	0	88	69	19
Warehouse (Trucks)	13	4	9	0	0	0	0	0	0	9	6	3
Travel Stop (Passenger Vehicles)	152	8	144	64	32	32	34	17	17	46	23	23
Travel Stop (Trucks)	63	4	59	0	0	0	32	16	16	27	12	15
Total	**324**	**24**	**300**	**64**	**32**	**32**	**66**	**33**	**33**	**170**	**110**	**60**
Weekday P.M. Peak Hour												
Warehouse (Passenger Vehicles)	80	8	72	0	0	0	0	0	0	72	17	55
Warehouse (Trucks)	16	3	13	0	0	0	0	0	0	13	7	6
Travel Stop (Passenger Vehicles)	175	8	167	82	41	41	50	25	25	35	13	22
Travel Stop (Trucks)	62	3	59	0	0	0	32	16	16	27	13	14
Total	**333**	**22**	**311**	**82**	**41**	**41**	**82**	**41**	**41**	**147**	**50**	**97**
Saturday Midday Peak Hour												
Warehouse (Passenger Vehicles)	5	2	3	0	0	0	0	0	0	3	3	0
Warehouse (Trucks)	8	0	8	0	0	0	0	0	0	8	4	4
Travel Stop (Passenger Vehicles)	209	2	207	50	26	24	106	55	51	51	27	24
Travel Stop (Trucks)	39	0	39	0	0	0	18	9	9	21	10	11
Total	**261**	**4**	**257**	**50**	**26**	**24**	**124**	**64**	**60**	**83**	**44**	**39**
Average Weekday												
Warehouse (Passenger Vehicles)	627	120	507	0	0	0	0	0	0	507	263	244
Warehouse (Trucks)	155	42	113	0	0	0	0	0	0	113	60	53
Travel Stop (Passenger Vehicles)	1750	120	1630	0	0	0	0	0	0	1630	805	825
Travel Stop (Trucks)	620	42	578	0	0	0	0	0	0	578	286	292
Total	**3152**	**324**	**2828**	**0**	**0**	**0**	**0**	**0**	**0**	**2828**	**1414**	**1414**

External Trips = (Total Trips – Internal Trips)

Based on the analysis provided in **Table 5**, the proposed development will generate **170** new trips during the weekday A.M. peak hour, **147** new trips during the weekday P.M. peak hour, **83** new trips during the Saturday midday peak hour, and **2,828** new trips during an average weekday.

TRIP DISTRIBUTION

The distribution of trips associated with the proposed warehouse and travel stop were based on a gravity model using the residence locations of workers employed within the study area (passenger car traffic for the warehouse) and on an analysis of existing traffic patterns for passenger vehicles/trucks within the study area. The site-generated for the proposed development were distributed to the local roadway network based on the percentages shown in **Tables 6-7** and as shown in **Figures 7-21**. The trip distribution methodologies utilized in this TIS were confirmed with the Township during the TIS scoping process.

TABLE 6
TRIP DISTRIBUTION PERCENTAGES – PASSENGER VEHICLES

Assignment – To/From	Land Use	Distribution Percentages		
		New Trip %	Pass-by Trip %	Diverted Trip%
East via US Route 30	Warehouse	8%	--	--
	Travel Stop	24%	--	49%
West via US Route 30	Warehouse	65%	--	--
	Travel Stop	19%	--	51%
North via Kreutz Creek Road (SR 1014)	Warehouse	7%	--	--
	Travel Stop	9%	48%(59%)[56%]	--
South via Kreutz Creek Road (SR 1014)	Warehouse	17%	--	--
	Travel Stop	46%	52%(41%)[44%]	--
West via Pleasant Valley Road	Warehouse	3%	--	--
	Travel Stop	2%	--	--

X(Y)[Z] = AM(PM)[SAT]

TABLE 7
TRIP DISTRIBUTION PERCENTAGES – TRUCKS

Assignment – To/From	Land Use	Distribution Percentages		
		New Trip %	Pass-by Trip %	Diverted Trip%
East via US Route 30	Warehouse	43%	--	--
	Travel Stop	43%	--	48%
West via US Route 30	Warehouse	46%	--	--
	Travel Stop	46%	--	52%
North via Kreutz Creek Road (SR 1014)	Warehouse	--	--	--
	Travel Stop	--	--	--
South via Kreutz Creek Road (SR 1014)	Warehouse	11%	--	--
	Travel Stop	11%	--	--
West via Pleasant Valley Road	Warehouse	--	--	--
	Travel Stop	--	--	--

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed development were added to the 2038 base (no-build) condition traffic volumes to develop 2038 projected (build) condition traffic volumes. Projected (build) condition traffic volumes for the weekday A.M., weekday P.M., and Saturday midday peak hours are illustrated in **Figure 22** for the 2038 design year conditions, respectively. Traffic volume development worksheets are contained in **Appendix D**.

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 are 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 8.** 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 8
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 the Transportation Research Board's Highway Capacity Manual 7th Edition.

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M., weekday P.M., and Saturday midday peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in *Highway Capacity Manual 7th Edition* (HCM 7) using *Synchro 12* software (Version 12.2, Build 4, Revision 32), a CUBIC ITS, Inc. product.

The following conditions were analyzed, as applicable:

- 2025 Existing conditions;
- 2038 Base conditions (Build-out year without development);
- 2038 Projected conditions (Build-out year with development);
- 2038 Projected conditions with Improvements (Build-out year with development);

The following items should be noted with respect to the capacity analyses:

- The Pennsylvania default values for the suburban land use context contained in Chapter 10 of PennDOT's Publication 46 were utilized for the base saturation flow rates for signalized intersections. The saturation flow rate was changed from the default value of 1900 to 1800 based on Exhibit 10-9.
- The Pennsylvania default values for two-way stop-controlled intersections in a suburban land use context contained in Chapter 10 of PennDOT's Publication 46 were utilized for the base critical headway and base follow-up headways at unsignalized intersections. Worksheets related to the calculated critical and follow-up headways are included in **Appendix E**.

The capacity analysis worksheets are included in **Appendix E**.

PennDOT Standards

PennDOT's Transportation Impact Study Guidelines outlined in PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's Publication 282, Appendix A, dated February 2024 contain the following criteria regarding levels of service:

- Page 32 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. If the intersection level of service meets the level of service requirements, applicants may still be required to provide mitigation to address critical lanes or approaches. For locations where the level of service of the design horizon year without the development is LOS F and with development, the delay increases more than 10 seconds, the remedies shall provide an estimated delay which will be no worse than the delay for the design year without the development.
- Page 33 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 34 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 35 of the Guidelines states new signalized or unsignalized intersections 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.

Hellam Township Standards

Section 430-17. Preliminary Plan E(2)(g)[2][n]. *Required Levels of Service* in *Traffic Impact* of the Hellam Township Subdivision and Land Development Ordinance (SALDO) contains the following standards regarding levels of service:

- Provide safe and efficient movement of traffic within the site and on surrounding roads;
- Minimize the impact of the project upon non-site trips;
- Not allow the levels of service at intersections currently rated A or B to be worse than C; and;
- Not reduce the current levels of service at intersections with ratings of C or lower.

LEVELS OF SERVICE IN THE STUDY AREA

Levels of service (LOS) at the study area intersections for the analyzed peak hours are summarized in matrix form in **Tables 9-11** for the 2025 existing conditions, 2038 base (no-build) conditions, and 2038 projected (build) conditions.

TABLE 9
LEVEL OF SERVICE SUMMARY (DELAY) – AM PEAK HOUR

Intersection	Approach/ Movement	2025 Existing	Design Year 2038		
			Base	Projected	Projected[1]
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road	EB L/T/R	A	A	A	--
	WB L/T/R	A	A	B	--
	NB L	A	A	A	--
	SB L	A	A	A	--
	ILOS	**A (0.9)**	**A (0.9)**	**A (3.8)**	**--**
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps	WB L/T	C	C	D	B
	WB R	A	A	A	A
	NB L	A	A	A	A
	NB T	--	--	--	A
	SB T	--	--	--	B
	SB R	--	--	--	B
	ILOS	**B (10.5)**	**B (11.4)**	**B (12.6)**	**B (11.1)**
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps	EB L/T	C	C	D	--
	EB R	C	C	C	
	SB L	A	A	A	--
	ILOS	**A (5.7)**	**A (6.2)**	**A (7.6)**	**--**

Base = No-Build scenario; Projected = Build scenario; ILOS = Overall Intersection Level of Service;
Projected[1] = Build scenario w/ Improvements;

TABLE 10
LEVEL OF SERVICE SUMMARY (DELAY) – PM PEAK HOUR

Intersection	Approach/ Movement	2025 Existing	Design Year 2038		
			Base	Projected	Projected[1]
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road	EB L/T/R	A	A	A	--
	WB L/T/R	B	B	B	--
	NB L	A	A	A	--
	SB L	A	A	A	--
	ILOS	**A (1.2)**	**A (1.2)**	**A (5.3)**	**--**
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps	WB L/T	D	E	F	B
	WB R	A	A	A	A
	NB L	A	A	A	A
	NB T	--	--	--	A
	SB T	--	--	--	B
	SB R	--	--	--	B
	ILOS	**C (19.4)**	**D (25.0)**	**E (38.0)**	**B (14.0)**
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps	EB L/T	C	C	D	--
	EB R	B	B	B	--
	SB L	A	A	A	--
	ILOS	**A (2.3)**	**A (2.4)**	**A (3.7)**	**--**

Base = No-Build scenario; Projected = Build scenario; ILOS = Overall Intersection Level of Service;
Projected[1] = Build scenario w/ Improvements;

TABLE 11
LEVEL OF SERVICE SUMMARY (DELAY) – SAT PEAK HOUR

Intersection	Approach/ Movement	2025 Existing	Design Year 2038		
			Base	Projected	Projected[1]
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road	EB L/T/R	A	A	A	--
	WB L/T/R	A	A	B	--
	NB L	A	A	A	--
	SB L	A	A	A	--
	ILOS	**A (1.7)**	**A (1.7)**	**A (4.2)**	**--**
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps	WB L/T	C	C	E	B
	WB R	A	A	A	A
	NB L	A	A	A	A
	NB T	--	--	--	A
	SB T	--	--	--	B
	SB R	--	--	--	B
	ILOS	**B (10.9)**	**B (12.1)**	**B (13.3)**	**B (11.0)**
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps	EB L/T	B	B	C	--
	EB R	A	A	A	--
	SB L	A	A	A	
	ILOS	**A (2.3)**	**A (2.3)**	**A (3.4)**	**--**

Base = No-Build scenario; Projected = Build scenario; ILOS = Overall Intersection Level of Service;
Projected[1] = Build scenario w/ Improvements;

As shown in **Tables 9-11**, under 2038 projected (build) conditions with implementation of the recommended improvements, the study area intersections will operate in accordance with the standards

contained in *Appendix A – Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permits of PennDOT Publication 282* and Section 430-17. Preliminary Plan E(2)(g)[2][n] of the Hellam Township SALDO.

QUEUE ANALYSIS

A queue analysis was conducted at the study area intersections using Synchro 12 software and includes both HCM 7th Edition 95th percentile queues and Synchro 50th and 95th percentile queues (as applicable). The queue analysis results for the 2038 design year conditions are summarized in **Tables 12-14** for the weekday A.M., P.M., and Saturday midday peak hours, respectively.

TABLE 12
QUEUE ANALYSIS SUMMARY (FEET) – AM PEAK HOUR

Movement/ Approach	Available Storage (Proposed)	2038 Base Conditions			2038 Projected Condition			2038 Projected w/ Improvements Conditions		
		Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th1
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road										
EB L/T/R	1000'+	--	--	3'	--	--	3'	--	--	--
WB L/T/R	200'	--	--	0'	--	--	23'	--	--	--
NB L	75'	--	--	0'	--	--	0'	--	--	--
SB L	100'	--	--	0'	--	--	3'	--	--	--
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps										
WB L/T	1000'	--	--	80'	--	--	128'	71'	150'	98'
WB R	125'	--	--	0'	--	--	5	0'	5'	0'
NB L	250'	--	--	13'	--	--	13'	26'	67'	25'
NB T	500'	--	--	--	--	--	--	10'	26'	8'
SB T	150'	--	--	--	--	--	--	20'	52'	18'
SB R	150'	--	--	--	--	--	--	0'	17'	18'
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps										
EB L/T	1000'	--	--	10'	--	--	58'	--	--	--
EB R	125'	--	--	123'	--	--	128'	--	--	--
SB L	250'	--	--	3'	--	--	8'	--	--	--

TABLE 13
QUEUE ANALYSIS SUMMARY (FEET) – PM PEAK HOUR

Movement/ Approach	Available Storage (Proposed)	2038 Base Conditions			2038 Projected Condition			2038 Projected w/ Improvements Conditions		
		Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th1
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road										
EB L/T/R	1000'+	--	--	3'	--	--	3'	--	--	--
WB L/T/R	200'	--	--	0'	--	--	43'	--	--	--
NB L	75'	--	--	3'	--	--	3'	--	--	--
SB L	100'	--	--	0'	--	--	3'	--	--	--
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps										
WB L/T	1000'	--	--	248'	--	--	363'	139'	240'	195'
WB R	125'	--	--	3'	--	--	5'	0'	14'	0'
NB L	250'	--	--	10'	--	--	10'	28'	76'	35'
NB T	500'	--	--	--	--	--	--	15'	40'	15'
SB T	150'	--	--	--	--	--	--	28'	66'	30'
SB R	150'	--	--	--	--	--	--	0'	22'	27'
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps										
EB L/T	1000'	--	--	13'	--	--	43'	--	--	--
EB R	125'	--	--	25'	--	--	25'	--	--	--
SB L	250'	--	--	3'	--	--	8'	--	--	--

TABLE 14
QUEUE ANALYSIS SUMMARY (FEET) – SAT PEAK HOUR

Movement/ Approach	Available Storage (Proposed)	2038 Base Conditions			2038 Projected Condition			2038 Projected w/ Improvements Conditions		
		Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th	Synchro 50th	Synchro 95th	HCM 95th1
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road										
EB L/T/R	1000'+	--	--	3'	--	--	3'	--	--	--
WB L/T/R	200'	--	--	0'	--	--	18'	--	--	--
NB L	75'	--	--	3'	--	--	3'	--	--	--
SB L	100'	--	--	0'	--	--	0'	--	--	--
Kreutz Creek Road (SR 1014) & US Route 30 West Ramps										
WB L/T	1000'	--	--	98'	--	--	140'	71'	145'	100'
WB R	125'	--	--	3'	--	--	5'	0'	14'	0'
NB L	250'	--	--	13'	--	--	13'	24'	51'	28'
NB T	500'	--	--	--	--	--	--	11'	24'	8'
SB T	150'	--	--	--	--	--	--	21'	53'	20'
SB R	150'	--	--	--	--	--	--	0'	10'	15'
Kreutz Creek Road (SR 1014) & US Route 30 East Ramps										
EB L/T	1000'	--	--	5'	--	--	23'	--	--	--
EB R	125'	--	--	18'	--	--	18'	--	--	--
SB L	250'	--	--	3'	--	--	8'	--	--	--

As shown in **Tables 12-14**, under the 2038 projected (build) conditions with implementation of the recommended improvements, the queues will be accommodated within the available storage.

Queue analysis worksheets are included with the capacity analysis worksheets provided in **Appendix E**.

AUXILIARY TURN LANE ANALYSIS

Methodology

TPD evaluated auxiliary turn lane warrants on Kreutz Creek Road approaching Lees Lane. The warrant analysis was conducted according to the methodologies contained within Chapter 11 of PennDOT's *Publication 46*, Section 11.17 utilizing 2038 projected (build) condition traffic volumes and the posted speed limit.

Findings

Table 14 summarizes the results of the auxiliary turn lane analysis.

TABLE 14
AUXILIARY TURN LANE ANALYSIS SUMMARY

Intersection	Auxiliary Lane	Peak Hour	Warrant Satisfied?	Warranted Length	Required Lane Length	Proposed Lane Length
Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road	Southbound Left Turn Lane	A.M.	No	--	--	--
		P.M.	No	--		
		SAT	No	--		
	Northbound Right Turn Lane	A.M.	No	--	--	--
		P.M.	No	--		
		SAT	No	--		

The calculations for the auxiliary turn lane warrants are included in **Appendix F**.

SIGNAL WARRANT ANALYSIS

A preliminary traffic signal warrant analysis was completed for the following intersections:

- Kreutz Creek Road (SR 1014) & US Route 30 West Ramps

Preliminary traffic signal warrant analyses were conducted in accordance with PennDOT Publication 212, *Official Traffic Control Devices*, Subchapter D, "Highway Traffic Signals". In order to determine the 12-hour existing traffic volumes, manual traffic counts were conducted during an average weekday (6:00 A.M.-6:00 P.M.) at the intersection. All relevant signal warrant analyses worksheets are included in **Appendix G**.

Kreutz Creek Road (SR 1014) & US Route 30 West Ramps

TPD evaluated signal warrants at the intersection of Kreutz Creek Road (SR 1014) & US Route 30 West Ramps. The warrant analysis methodology contained within Chapter 11 of PennDOT's *Publication 46*, Section 4.3 was utilized for this evaluation and was conducted in accordance with PennDOT Publication 212, *Official Traffic Control Devices*, Subchapter D, "Highway Traffic Signals".

TPD completed an evaluation of 2038 horizon year volumes (design year full buildout) to determine if any of the following MUTCD signal warrants will be satisfied:

- Warrant 1, Eight-Hour Volume Warrant;
- Warrant 2, Four-Hour Volume Warrant;
- Warrant 3, Peak Hour Volume Warrant.

Due to existing channelization of right turn movements at this intersection, right turn volumes were removed for the westbound channelized right turn movements for all applicable signal warrants evaluated.

The following are the results of the 2038 full buildout horizon year projected (build) condition traffic signal warrants:

- Warrant 1: exceeds threshold volumes for 0 hours, 8 hours needed **(not satisfied)**
- Warrant 2: exceeds threshold volumes for 3 hours, 4 hours needed **(not satisfied)**
- Warrant 3: exceeds threshold volumes for 0 hours, 1 hour needed **(not satisfied).**

At full buildout of the proposed development, traffic signal warrants are **not satisfied** at the intersection of Kreutz Creek Road (SR 1014) & US Route 30 West Ramps **during the 2038 (projected) conditions**. However, given the LOS projections (LOS F in some cases) on the US Route 30 West off-ramp, it is recommended that the developer enter into a signal monitoring agreement with the Township and install a traffic signal if/when signal warrants are met.

RECOMMENDATIONS AND CONCLUSIONS

The recommendations and conclusions for this Transportation Impact Study are identified in the Executive Summary.

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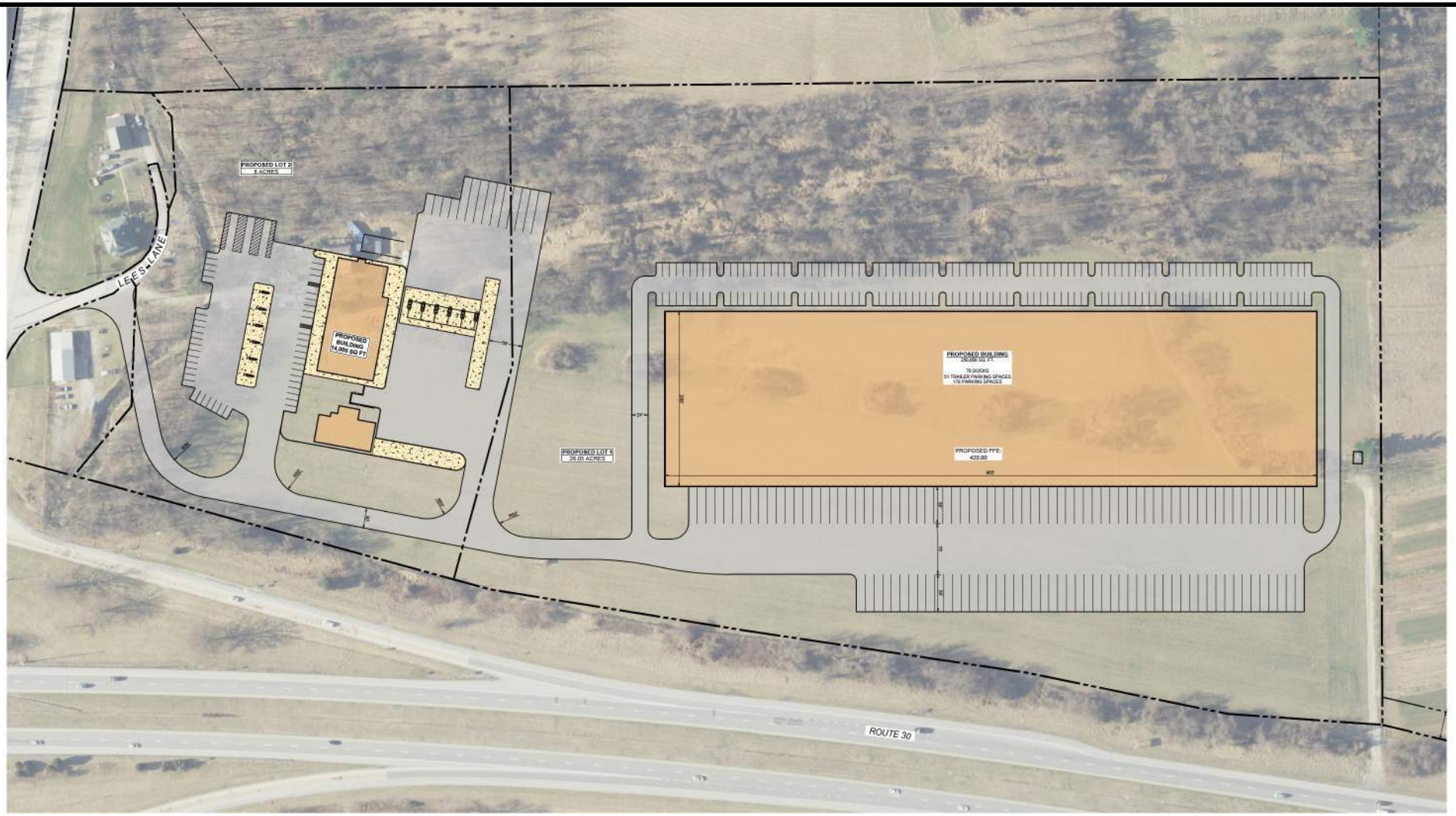
FIGURE 1

LOCATION MAP



0 60' 120'
SCALE: 1" = 60'

LEES LANE

HELLAM, PENNSYLVANIA
HELLAM TOWNSHIP, YORK COUNTY

drawing title: SKETCH PLAN - WITH LOVES
sheet no.: 1 OF 1
drawing set: SKETCH
date: 03/25/2025
project no.: 24-0335
project mgr.: JJS
drawn by: DJB

WAREHAUS
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FIGURE 2

SITE PLAN

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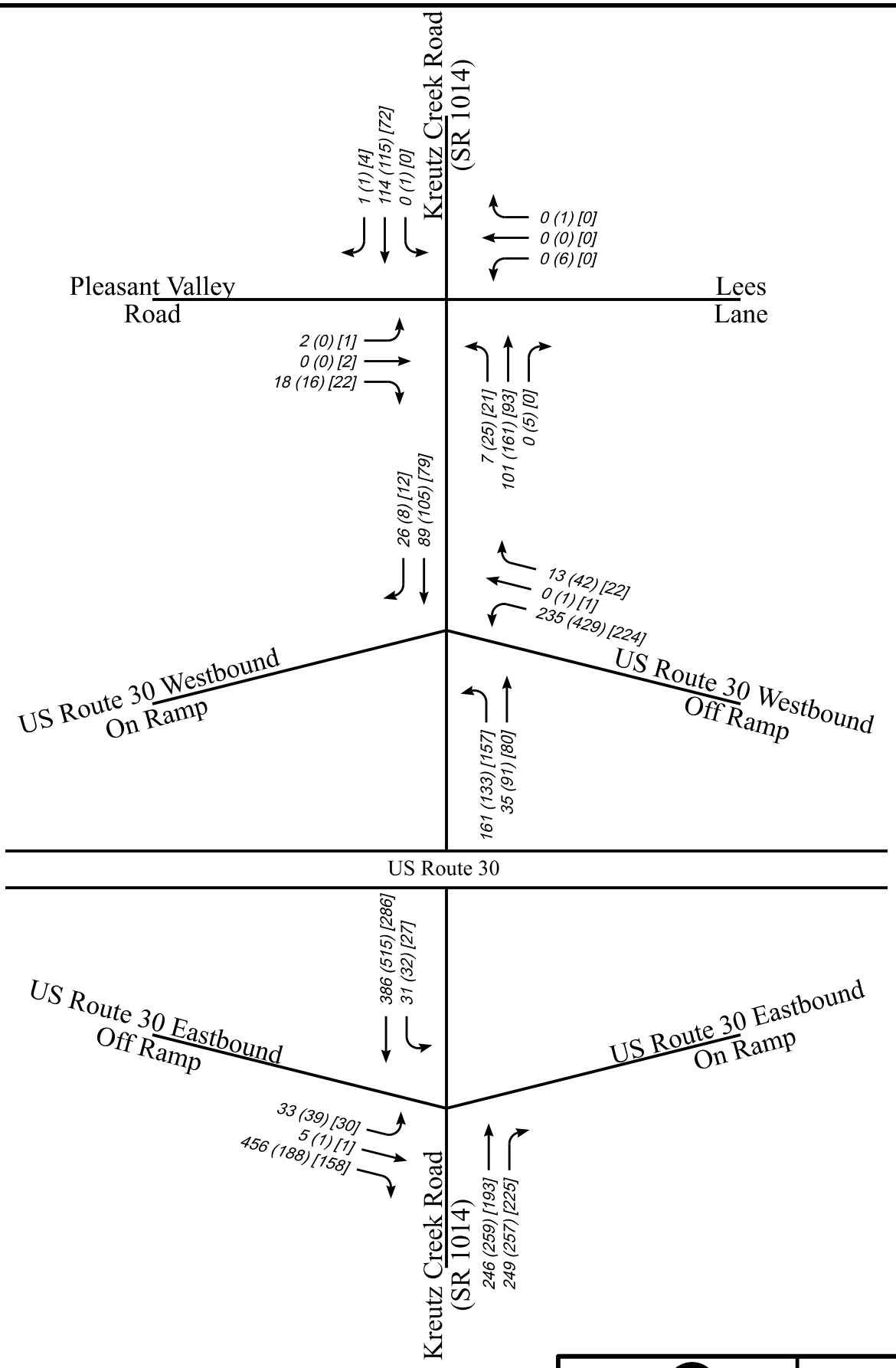

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FIGURE 3

2025 EXISTING CONIDTIONS
AM (PM) [SAT] PEAK HOUR
TOTAL TRAFFIC VOLUME

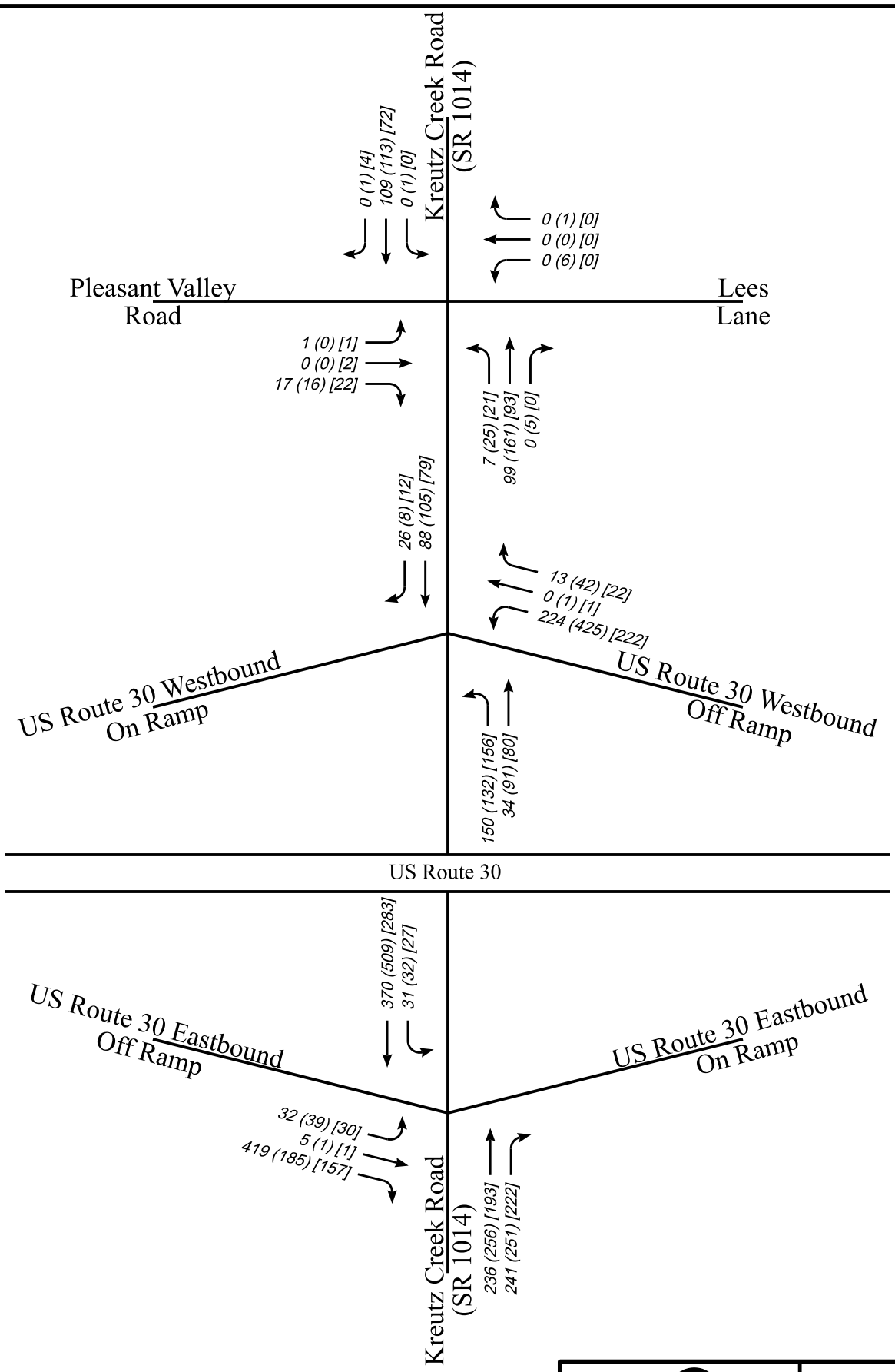

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FIGURE 4

2025 EXISTING CONIDTIONS
AM (PM) [SAT] PEAK HOUR
PASSENGER VEHICLES

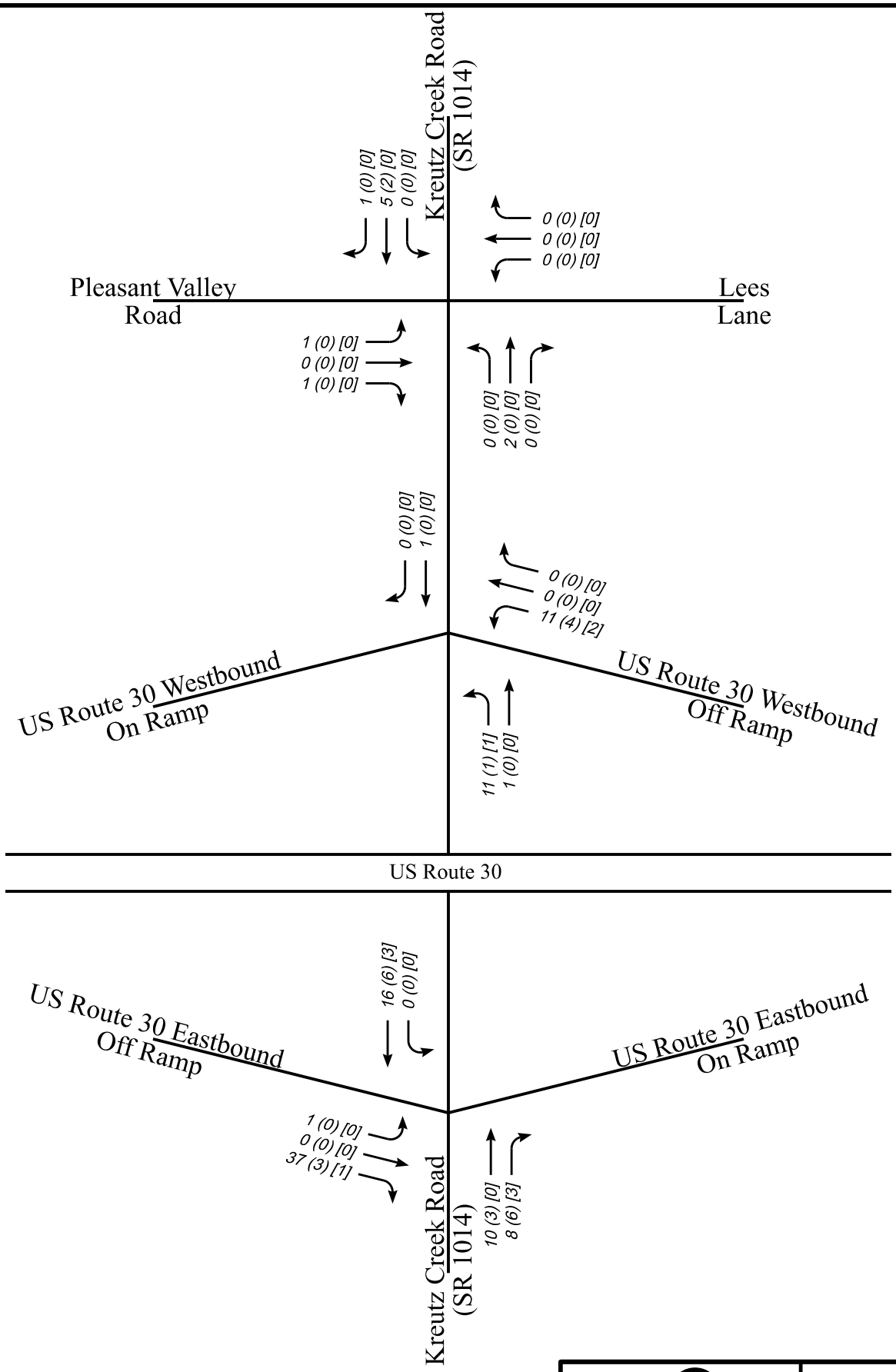

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FIGURE 5

2025 EXISTING CONIDTIONS
AM (PM) [SAT] PEAK HOUR
HEAVY VEHICLES

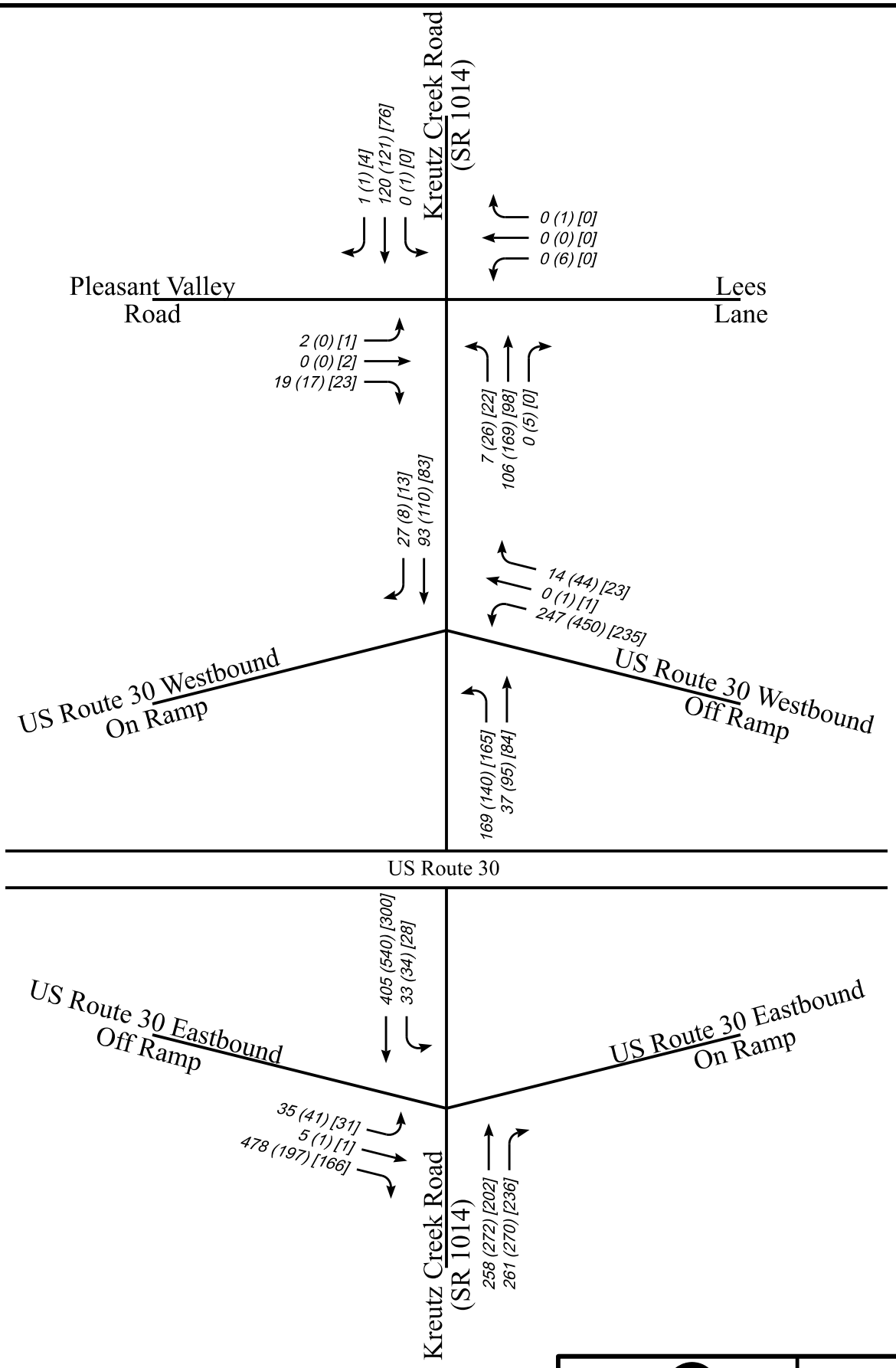

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FIGURE 6

2038 BASE (NO-BUILD) CONIDTIONS
AM (PM) [SAT] PEAK HOUR
TOTAL TRAFFIC VOLUME

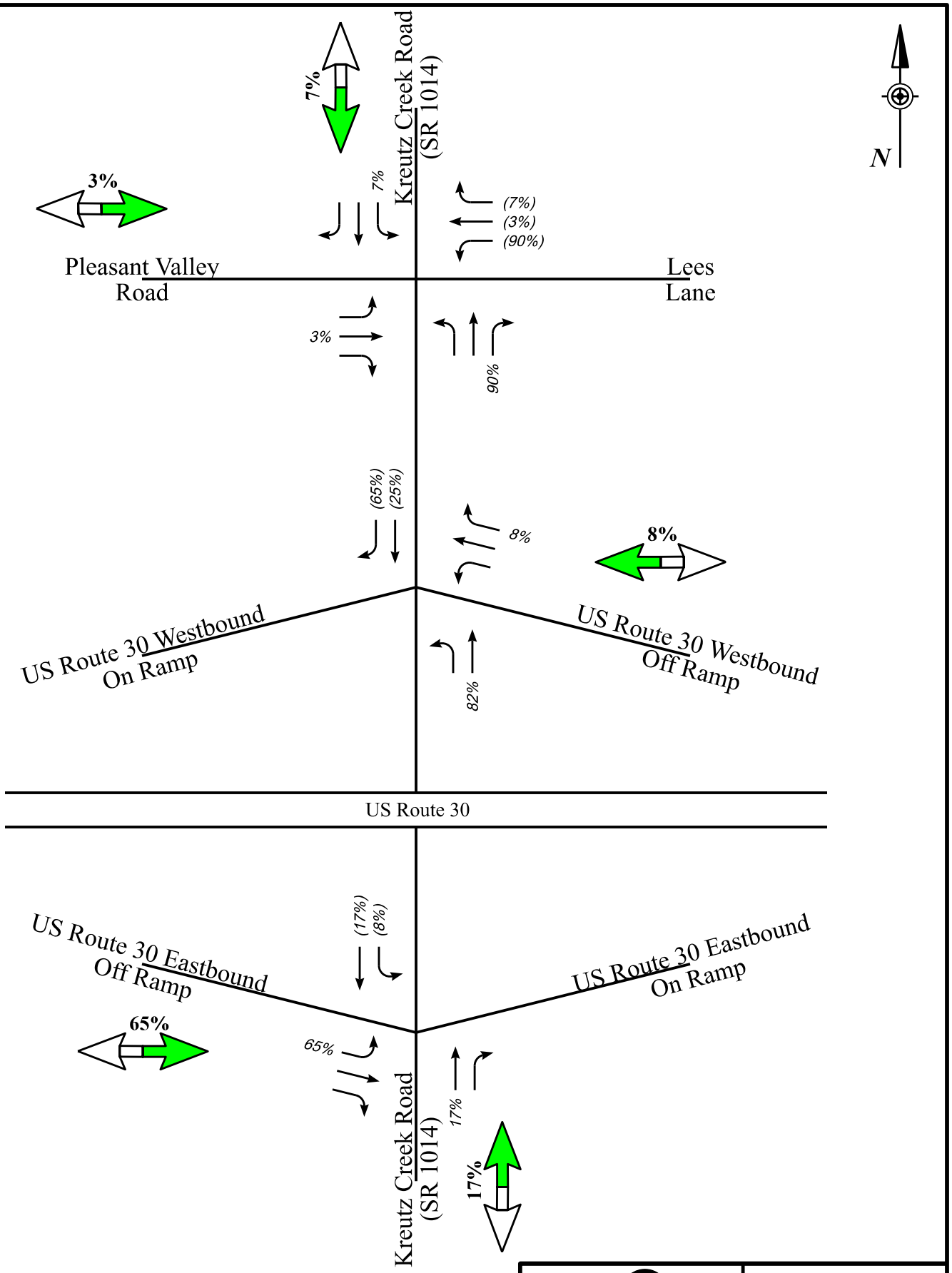

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FIGURE 7

LEES LANE WAREHOUSE
ENTER (EXIT) NEW TRIP PERCENT
WAREHOUSE PASSENGER VECHICLE

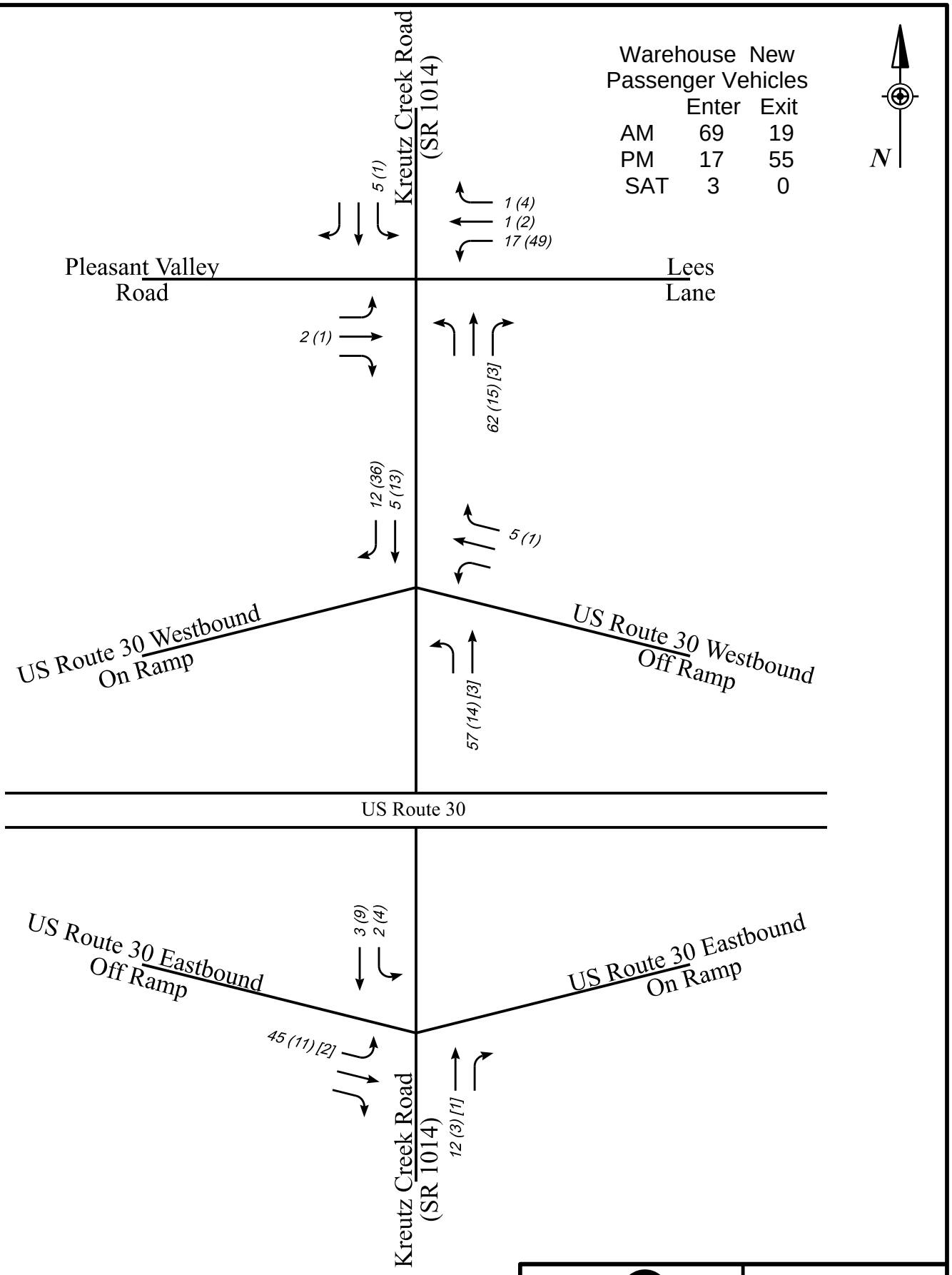

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FIGURE 8

LEES LANE WAREHOUSE
AM (PM) [SAT] PEAK HOUR
NEW WAREHOUSE PASSENGER VEHICLES

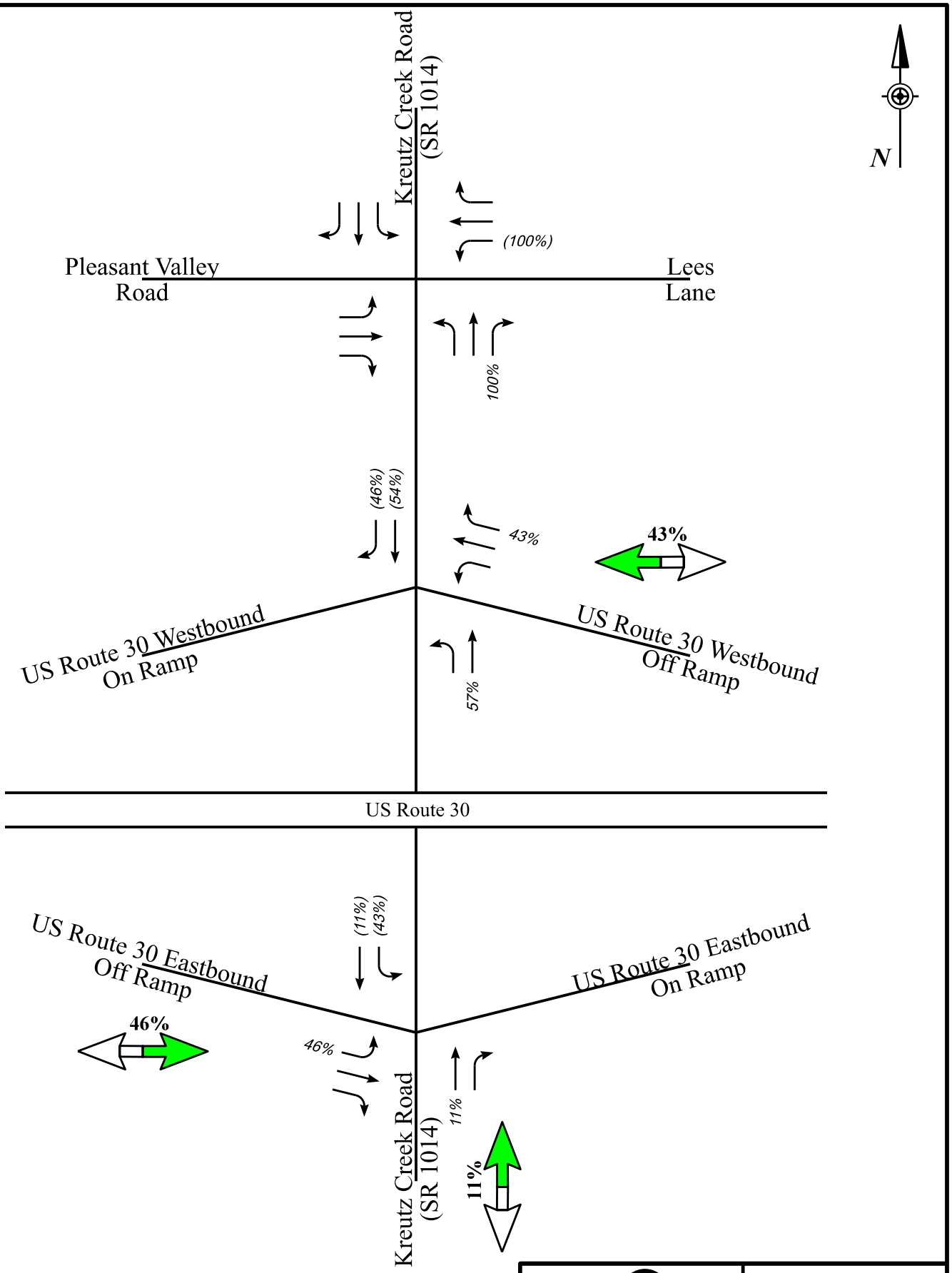

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FIGURE 9

LEES LANE WAREHOUSE
ENTER (EXIT) NEW TRIP PERCENT
NEW WAREHOUSE HEAVY VECHICLE

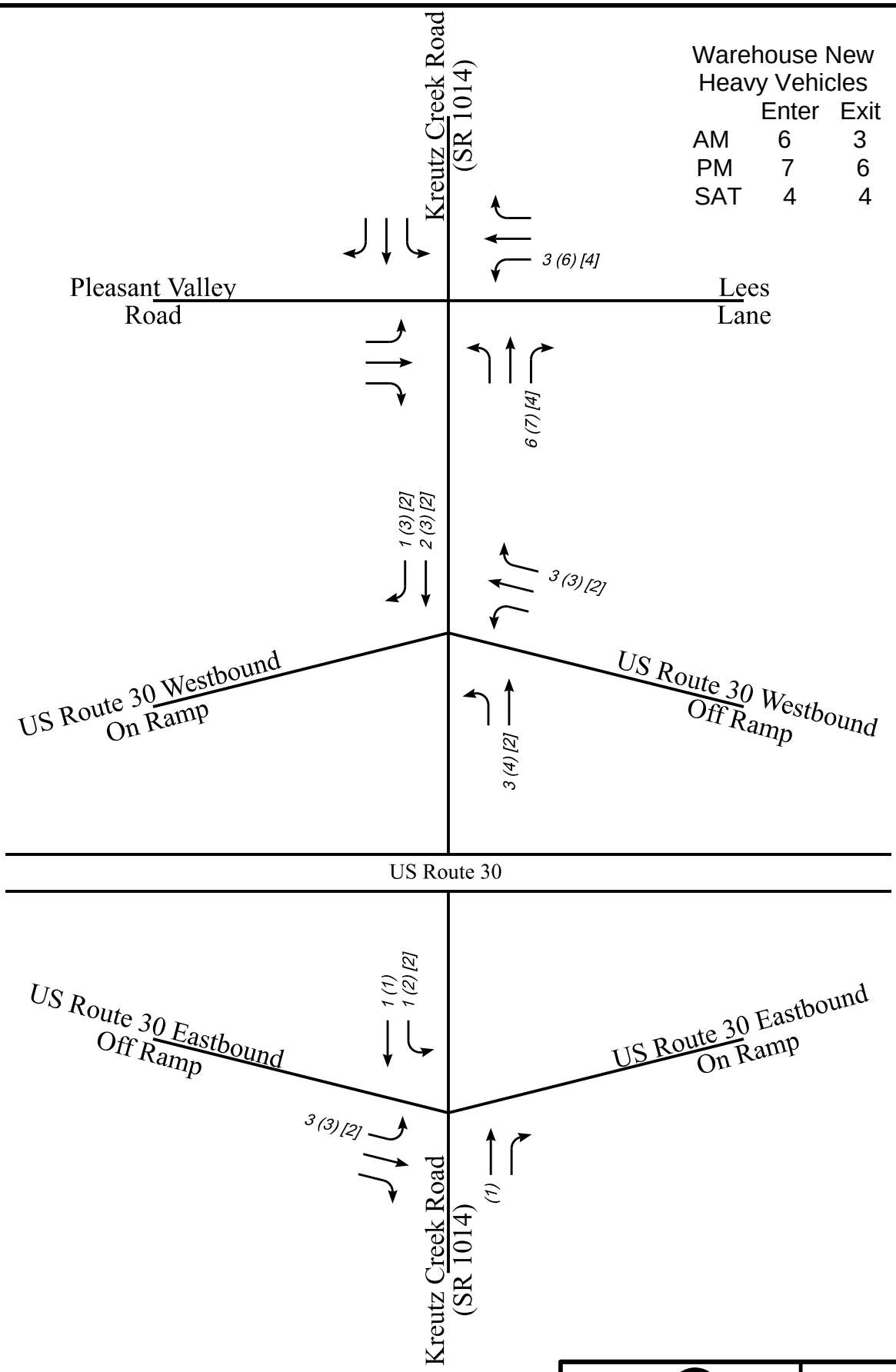

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FIGURE 10

LEES LANE WAREHOUSE
AM (PM) [SAT] PEAK HOUR
NEW WAREHOUSE HEAVY VEHICLES

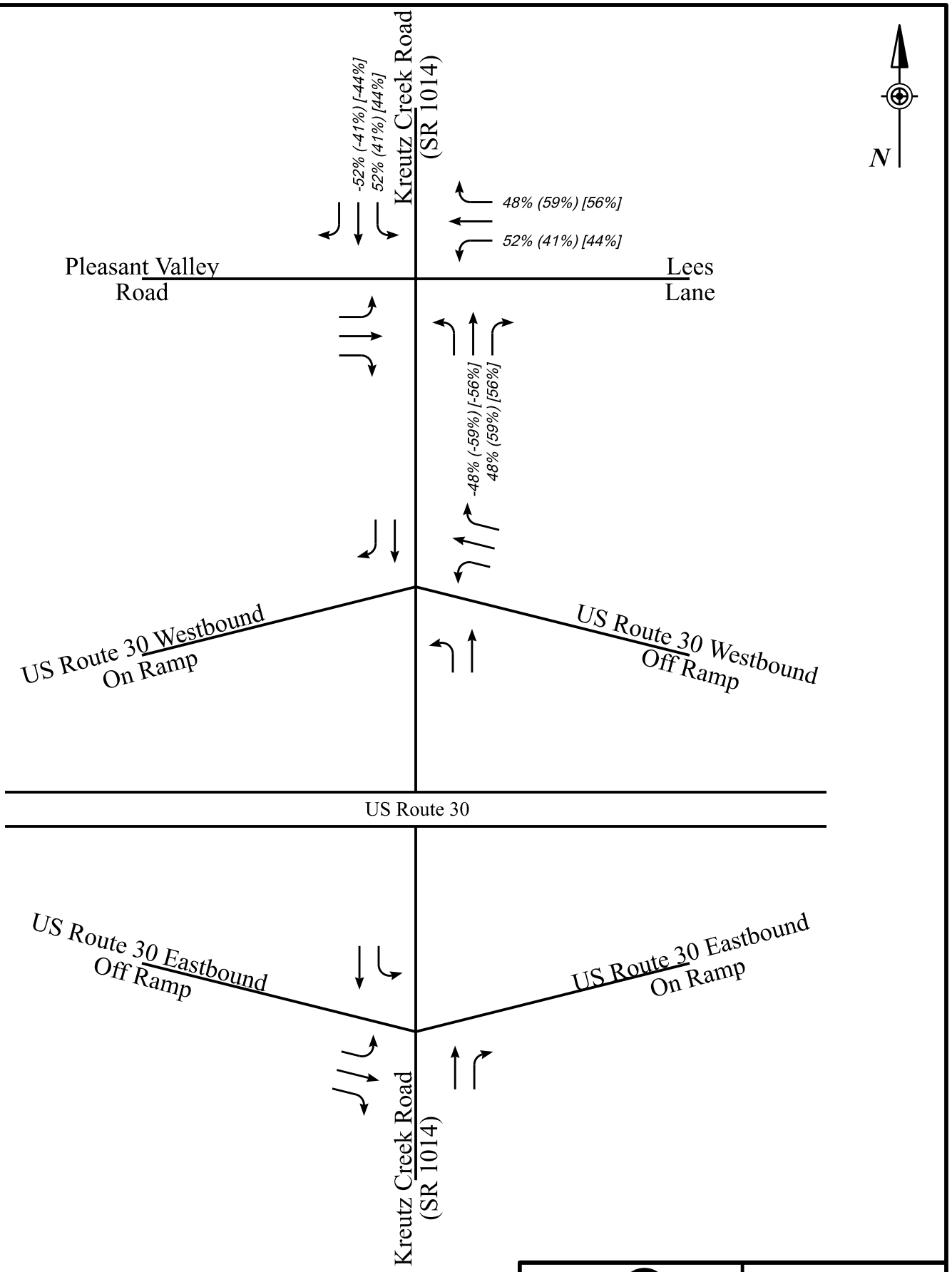

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FIGURE 11

LEES LANE GAS STATION
AM (PM) [SAT] PASS-BY PERCENT
GAS STATION PASS-BY PASSENGER VEHICLE

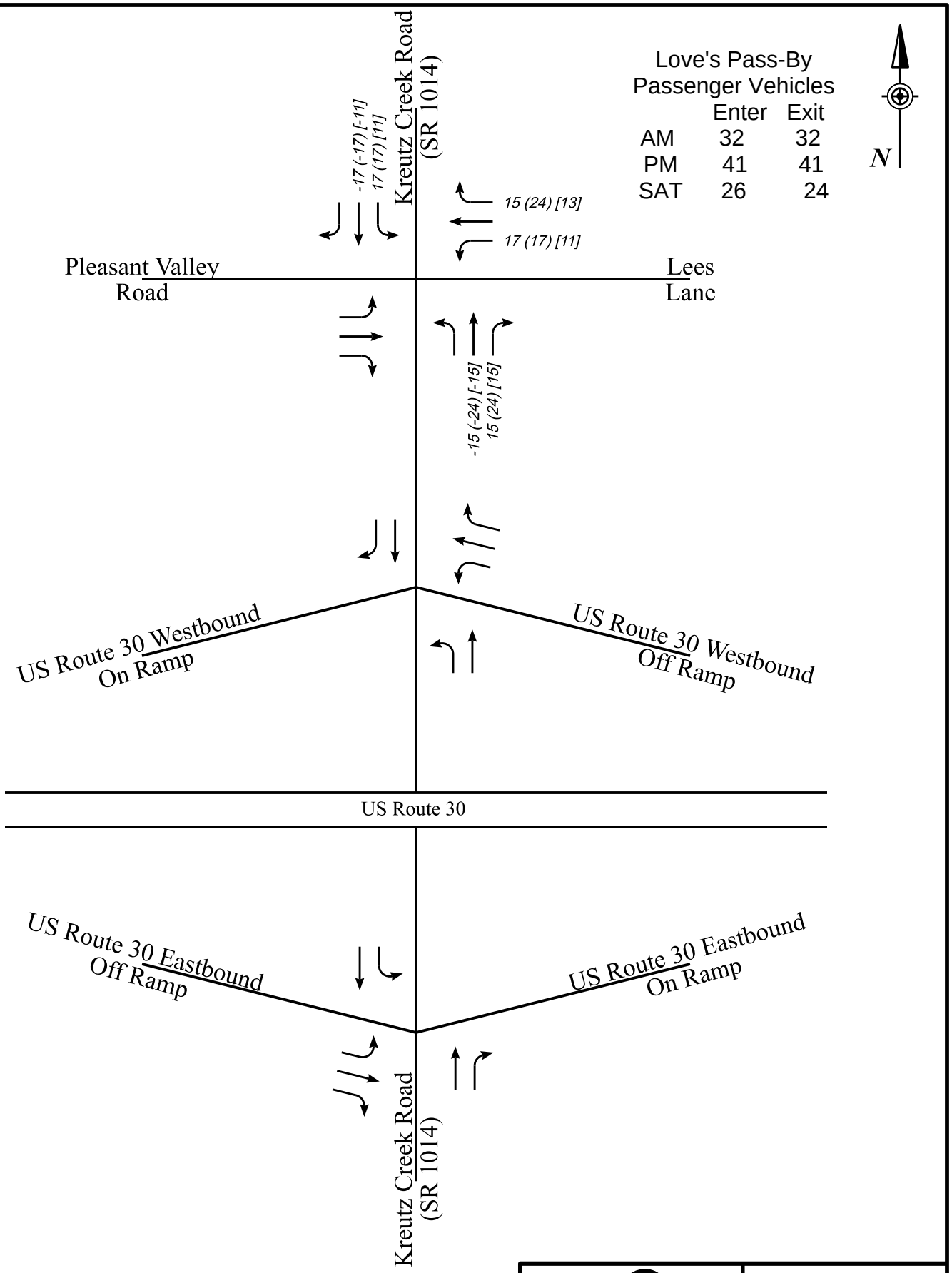

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FIGURE 12

LEES LANE GAS STATION
AM (PM) [SAT] PEAK HOUR
GAS STATION PASS-BY PASSENGER VEHICLES

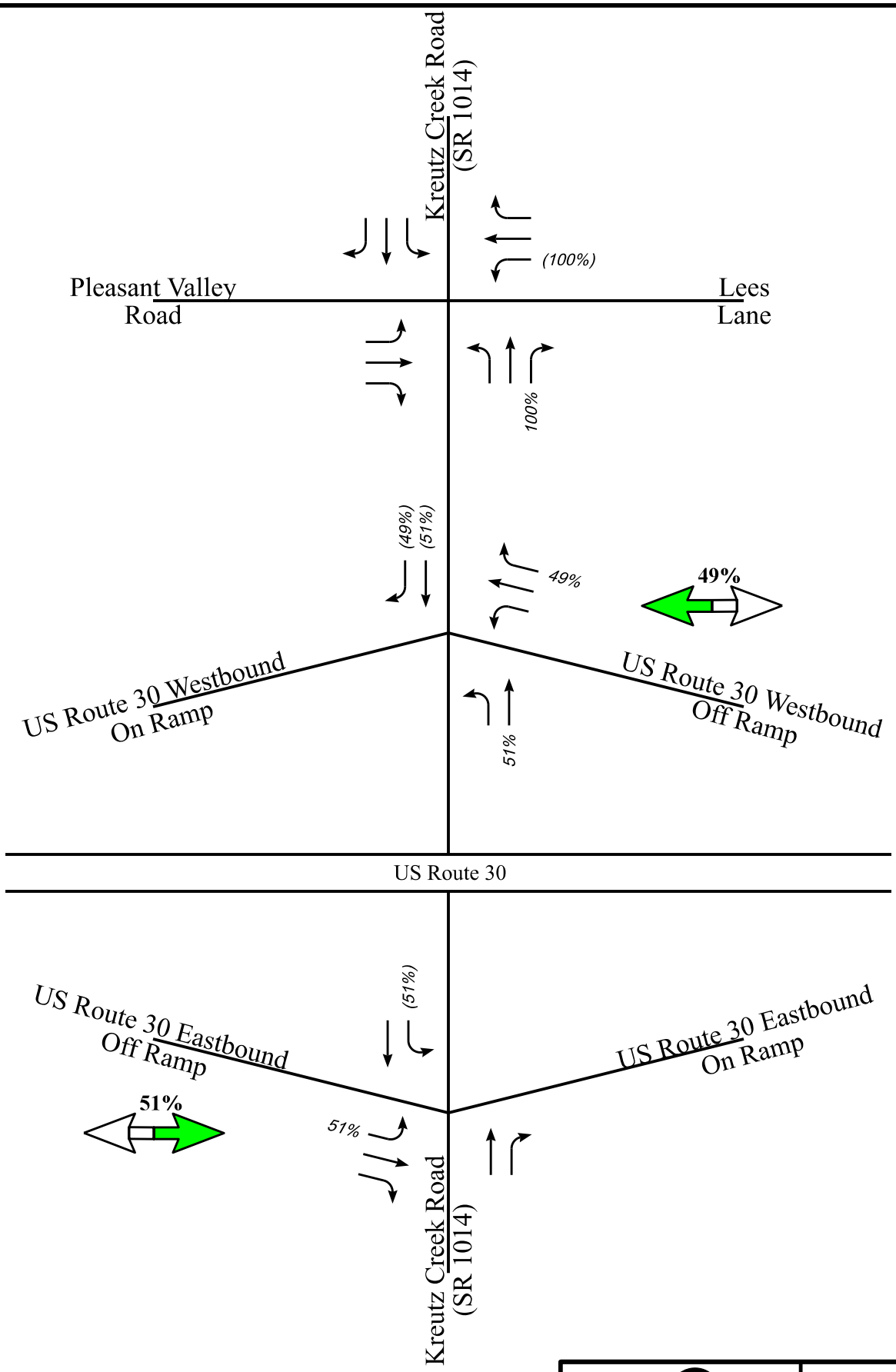

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FIGURE 13

LEES LANE GAS STATION
ENTER (EXIT) DIVERTED PERCENT
GAS STATION DIVERTED PASSENGER VEHICLE

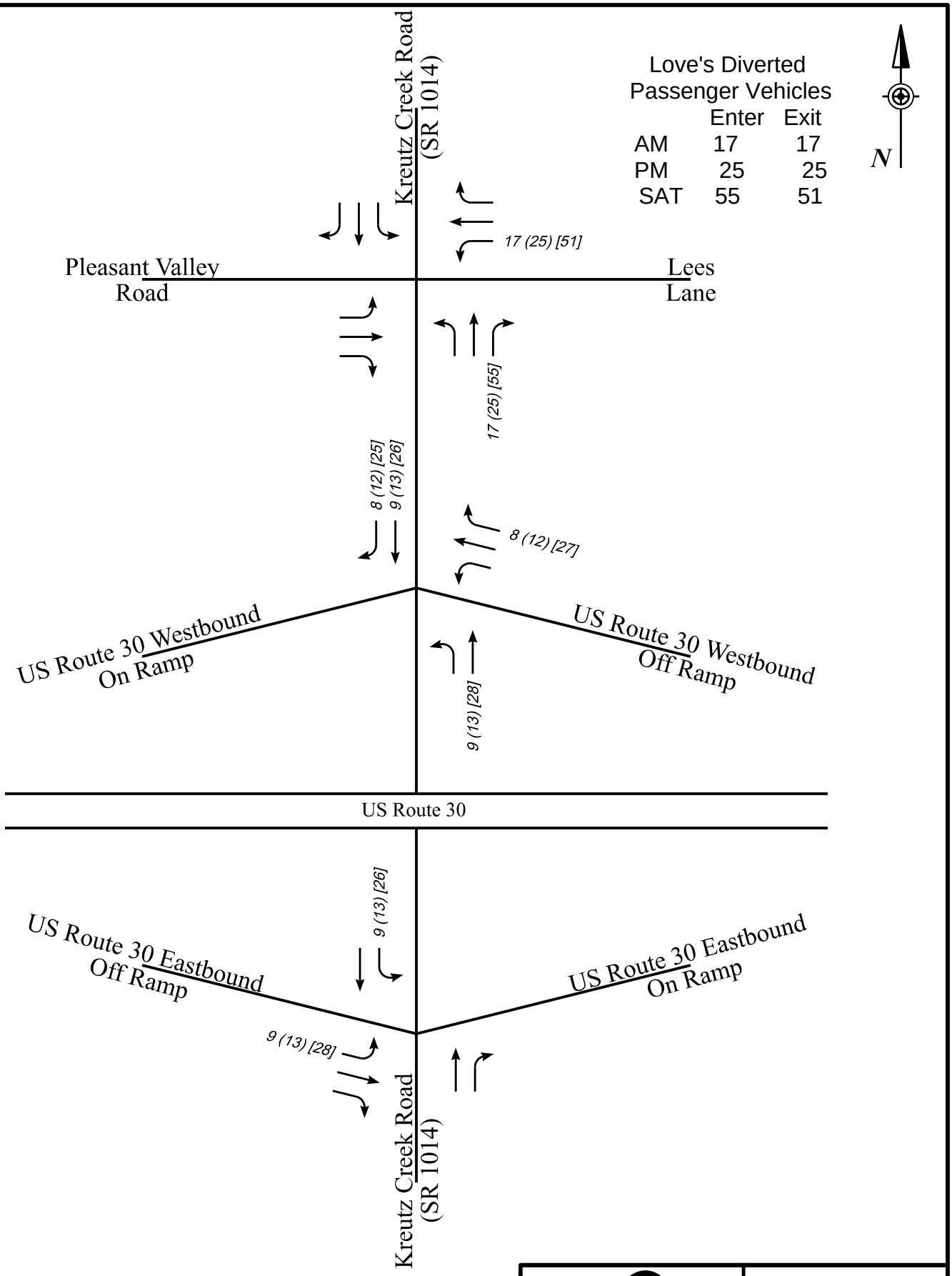

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FIGURE 14

LEES LANE GAS STATION
AM (PM) [SAT] PEAK HOUR
GAS STATION DIVERTED PASSENGER VEHICLES

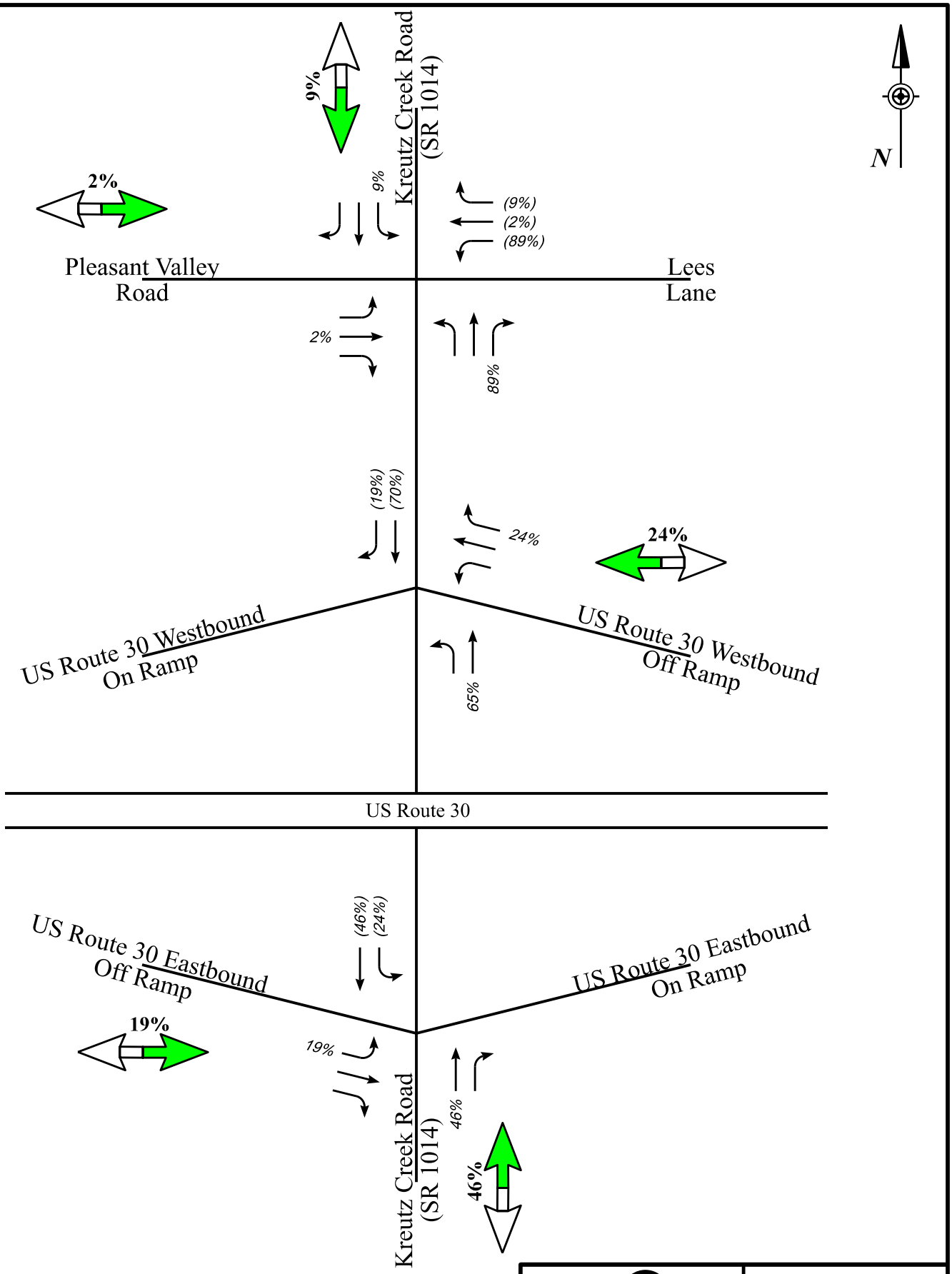

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FIGURE 15

LEES LANE GAS STATION
ENTER (EXIT) NEW TRIP PERCENT
GAS STATION NEW PASSENGER VECHICLE

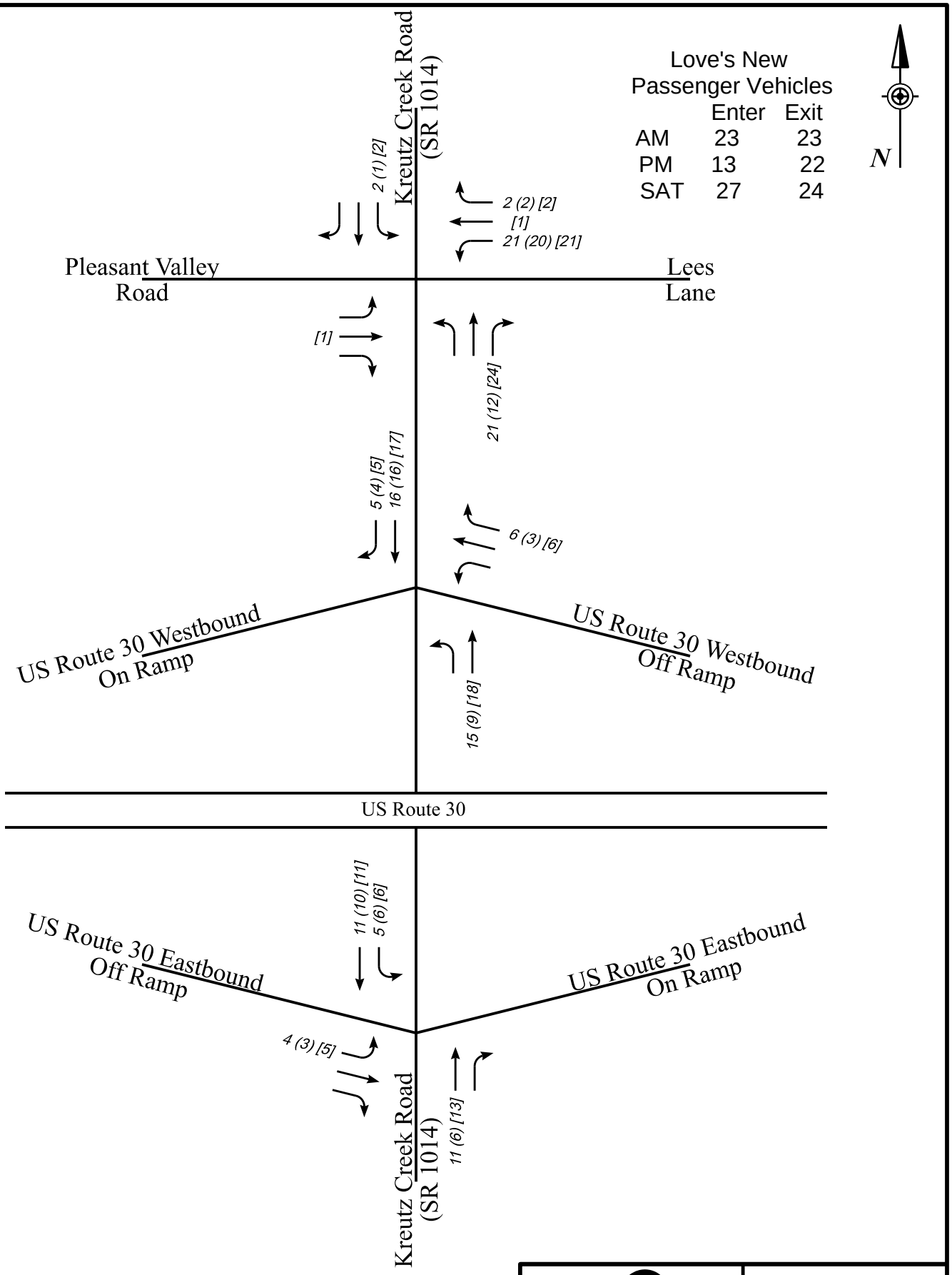

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FIGURE 16

LEES LANE GAS STATION
AM (PM) [SAT] PEAK HOUR
GAS STATION NEW PASSENGER VECHICLE

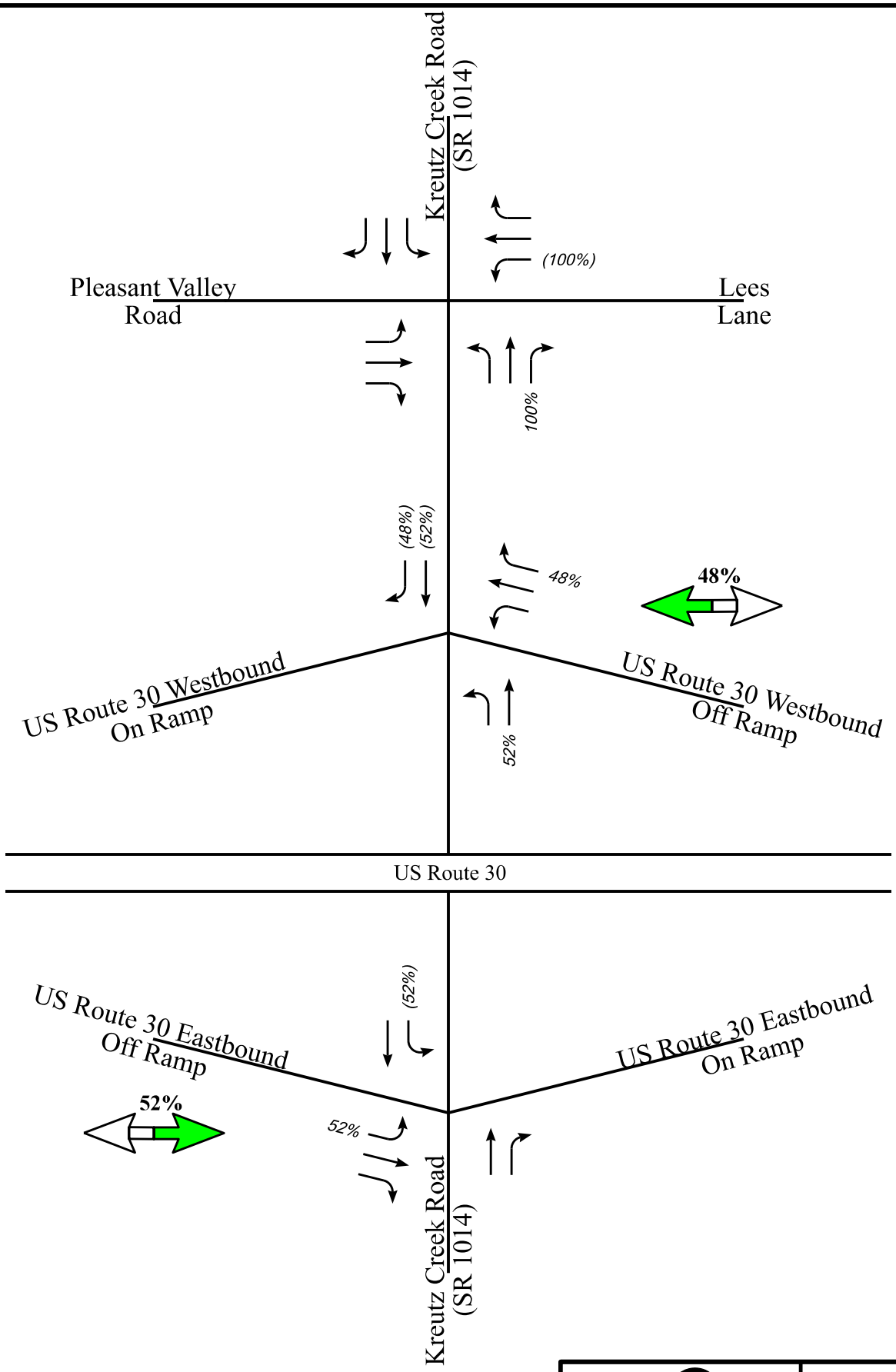

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FIGURE 17

LEES LANE GAS STATION
ENTER (EXIT) DIVERTED PERCENT
GAS STATION DIVERTED HEAVY VEHICLE

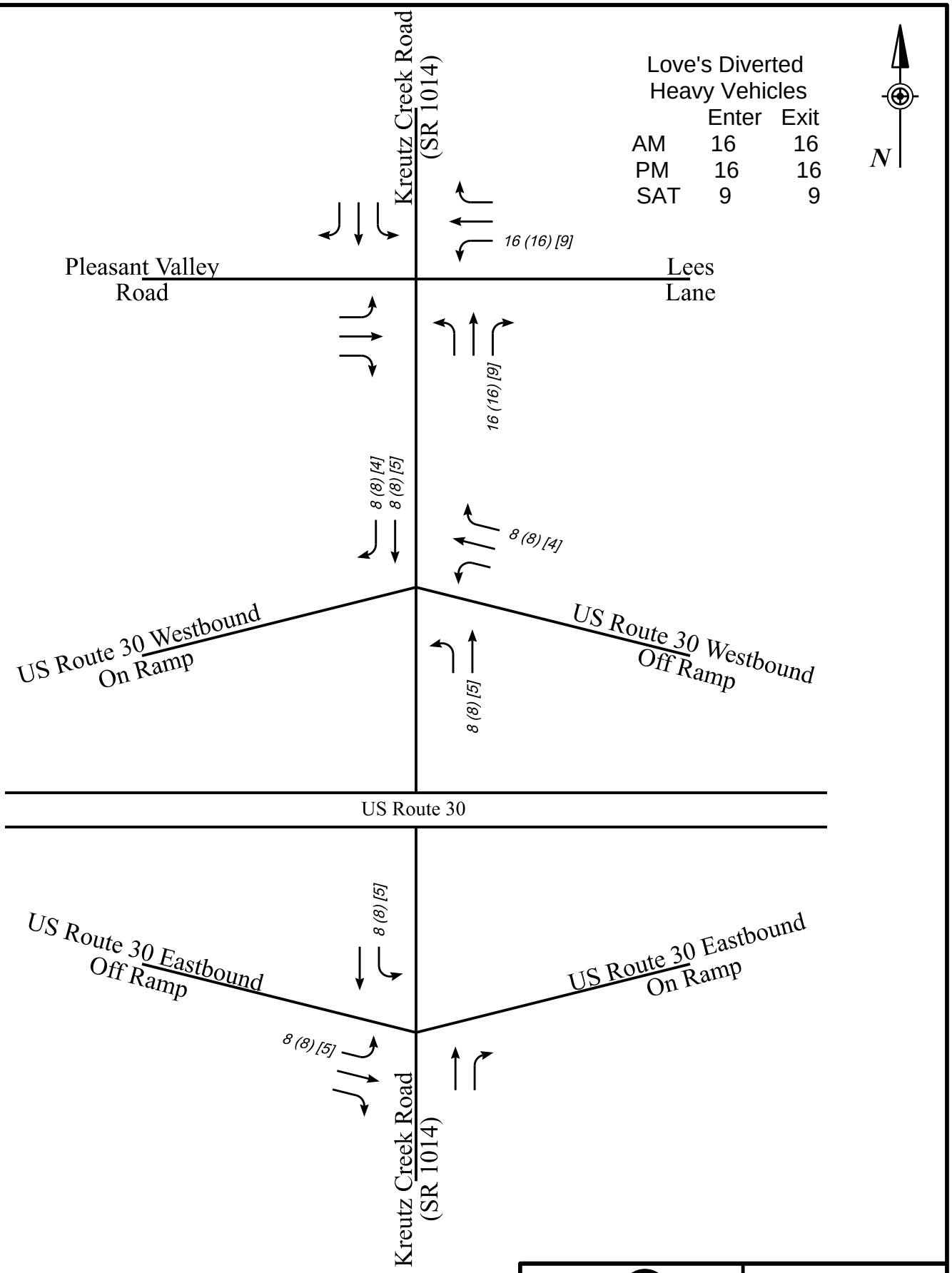

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FIGURE 18

LEES LANE GAS STATION
AM (PM) [SAT] PEAK HOUR
GAS STATION DIVERTED HEAVY VEHICLES

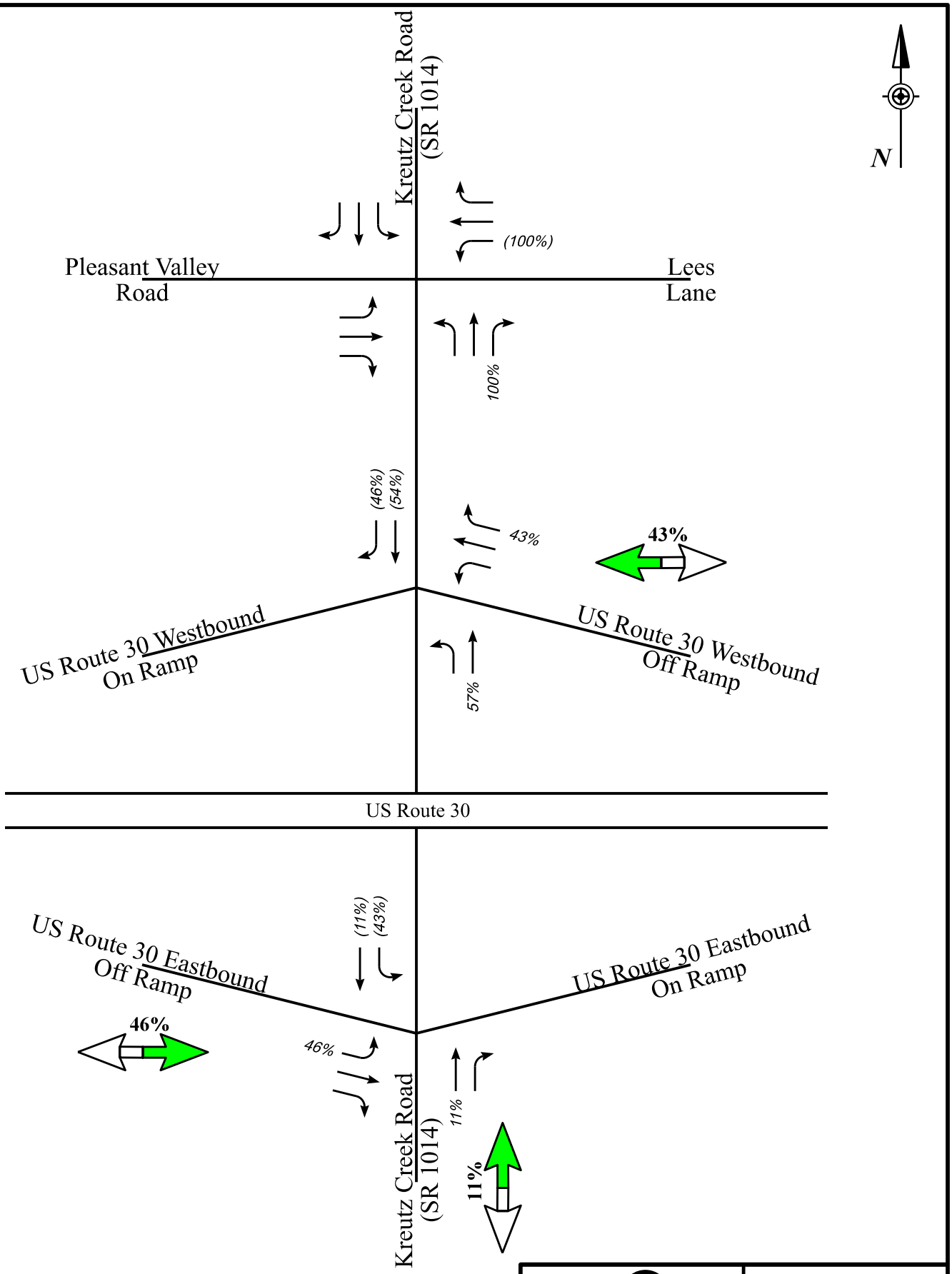

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FIGURE 19

LEES LANE GAS STATION
ENTER (EXIT) NEW TRIP PERCENT
GAS STATION NEW HEAVY VECHICLE

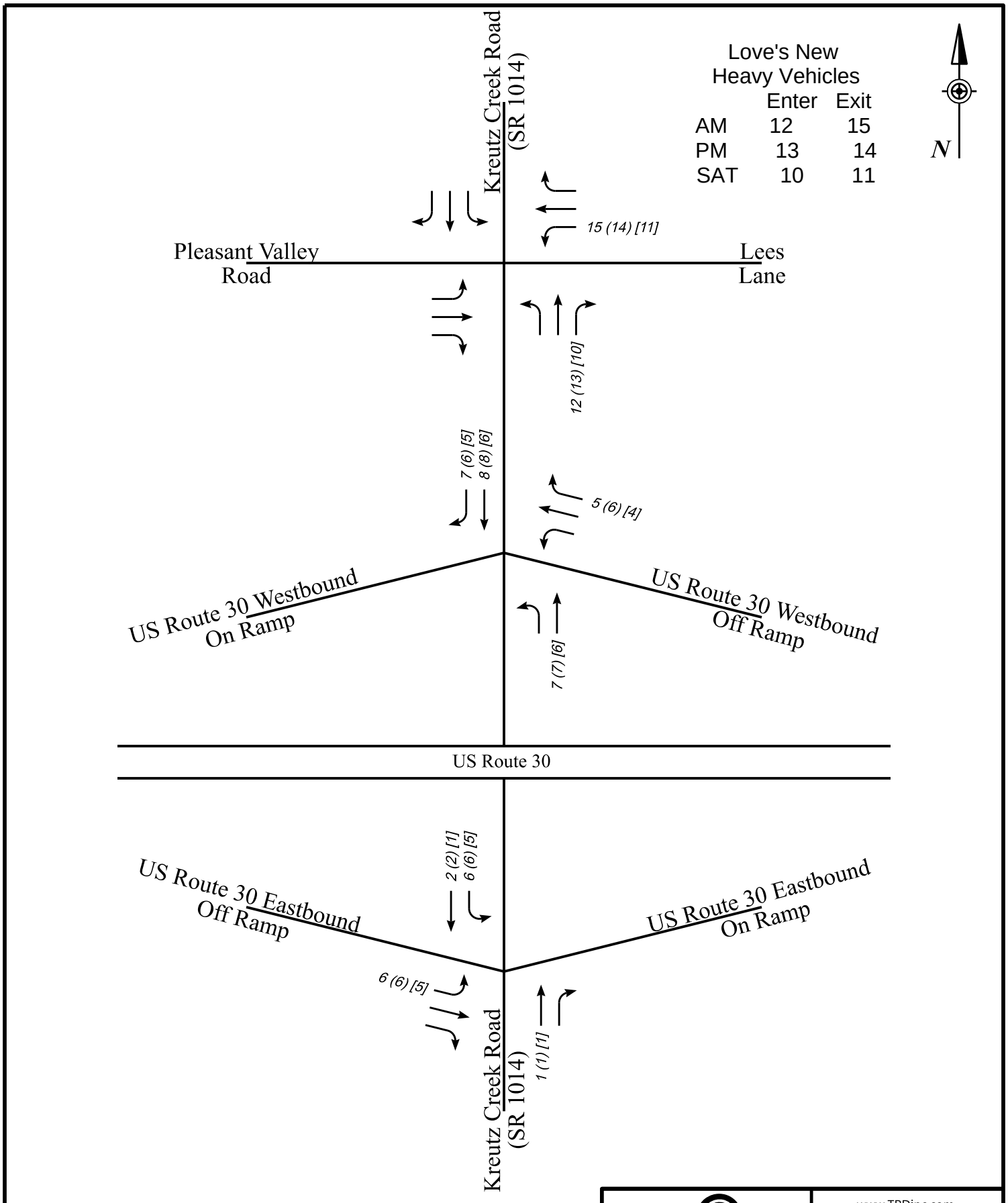

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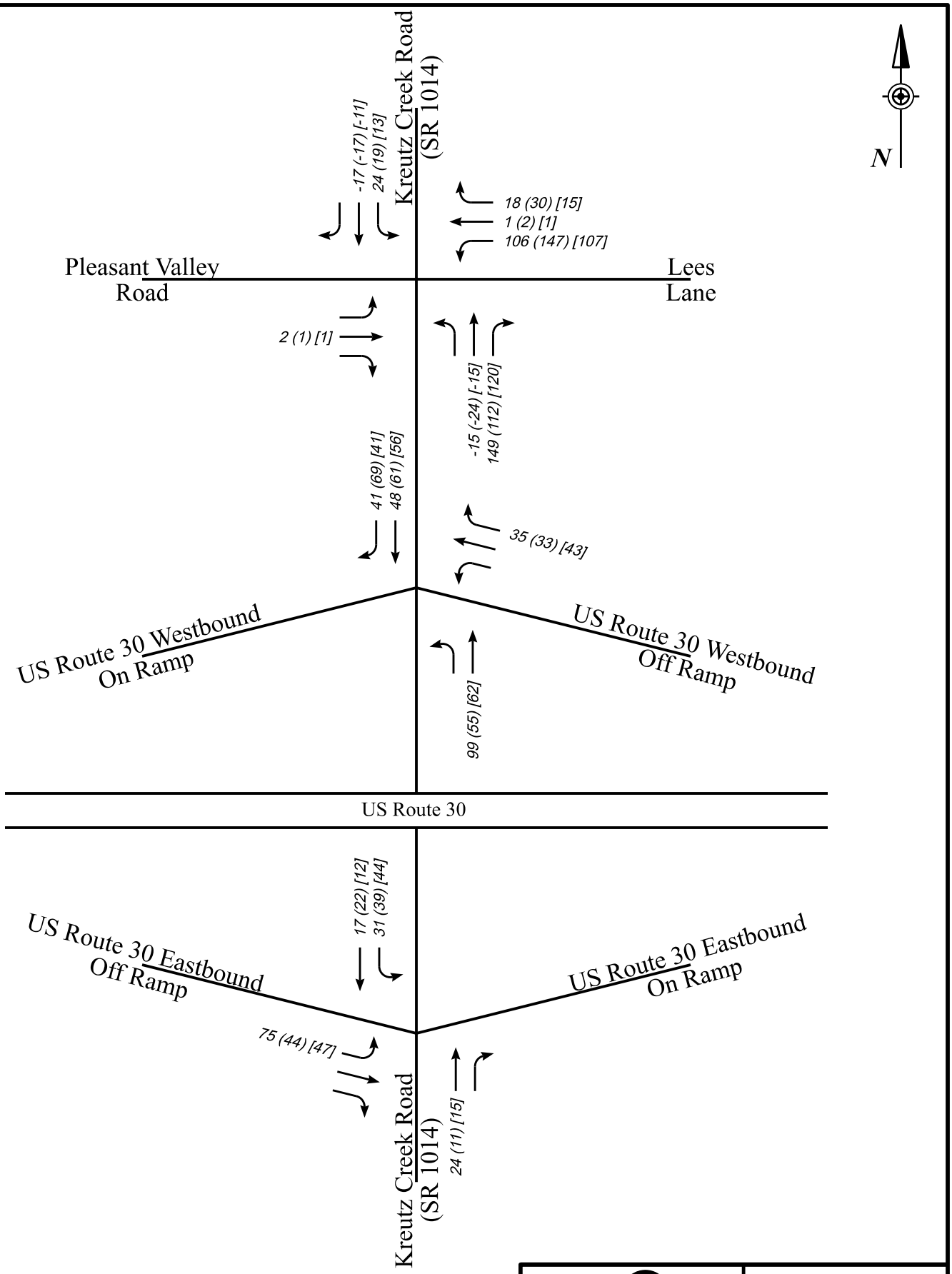
FIGURE 20

LEES LANE GAS STATION
AM (PM) [SAT] PEAK HOUR
GAS STATION NEW HEAVY VECHICLES



KEY:

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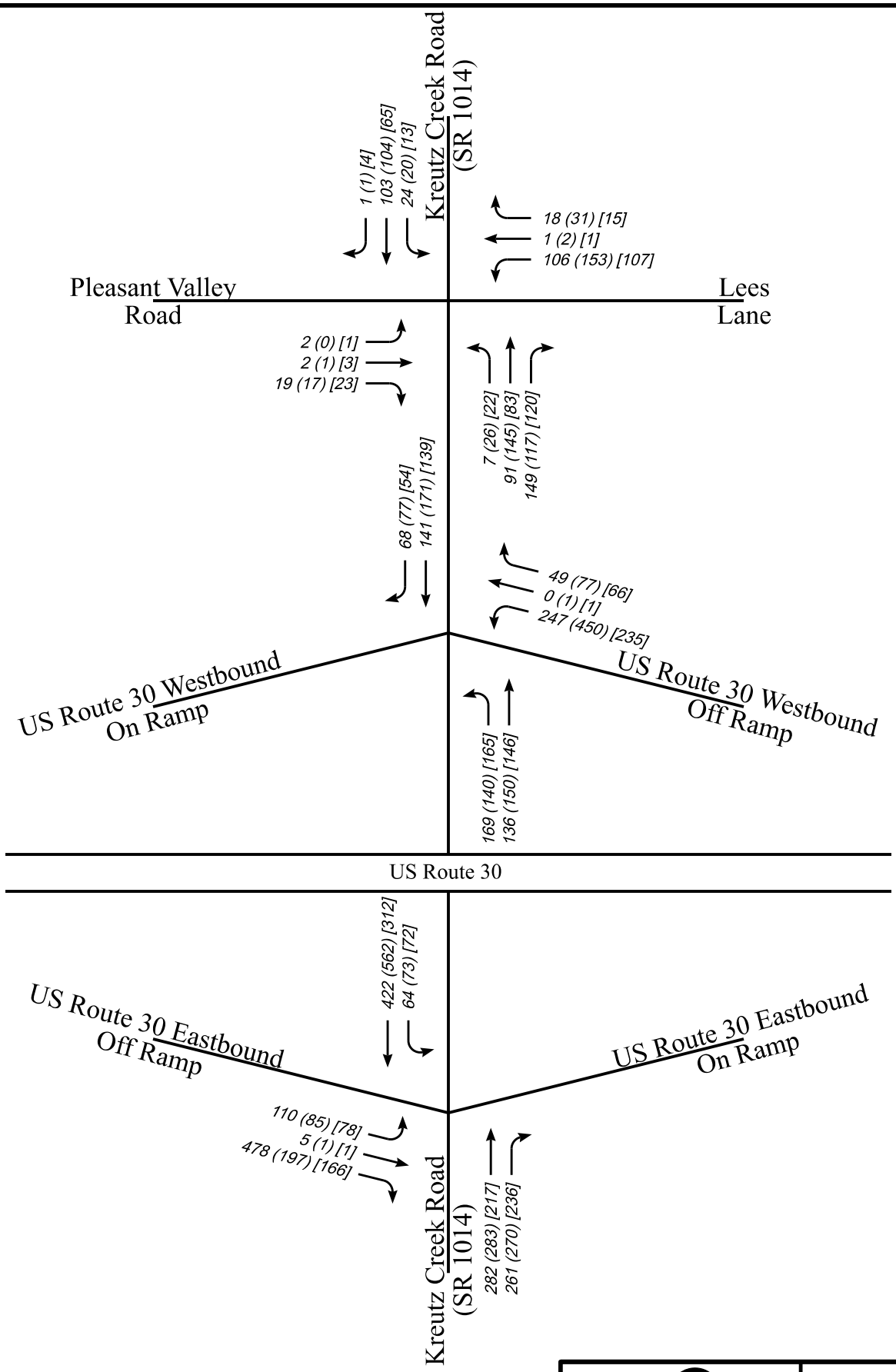
FIGURE 21

LEES LANE FULL DEVELOPMENT
AM (PM) [SAT] PEAK HOUR
TOTAL NEW TRAFFIC VOLUMES



KEY:

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FIGURE 22

2038 PROJECTED (BUILD) CONIDTIONS
AM (PM) [SAT] PEAK HOUR
TOTAL TRAFFIC VOLUME

Appendix A:

Project Correspondence

4000 Crums Mill Road, Suite 102, Harrisburg, PA 17112
717.234.1430 | INFO@TPDINC.COM
WWW.TPDINC.COM

August 12, 2025

Attention: Mr. Mark Henise, P.E. – ELA Group

Re: Response to TIS Scope Review 1

4974 Lees Lane Development

Hellam Township, York County, PA

TPD# JDAI.00005

Dear Mark:

On behalf of the Applicant, TPD is submitting this response letter to the TIS Scoping review comments prepared by ELA Group, Inc., dated 7/14/25.

RESPONSE TO ELA GROUP JULY 14, 2025 REVIEW LETTER:

For the discussion below, Hellam Township comments from ELA Group's 07/14/2025 TIS review letter are shown in *blue italics*, with the corresponding TPD responses in **bold** type.

Transportation Impact Study

1. *Analysis Years – We acknowledge that the SALDO requirement of a 10-year horizon year differs from PennDOT's 5-year horizon year, however it is the current ordinance standard, so the 10-year horizon year analysis will be required. You may, at your discretion, include a 5-year analysis in the study, with the understanding that if a PennDOT HOP is required, the 5-year analysis will be submitted to PennDOT.*

   Noted, a 10-year analysis period of 2038 has been analyzed in the TIS.

2. *Given that a large portion of convenience store/truck stop traffic will either be pass-by traffic or diverted link traffic from US 30, please provide information on the ADT and Truck ADT for the nearest limited access highways to the 3 sites used in the trip generation study and provide a statement on the correlation between the trip generation data for those 3 sites and a site along US 30. Also provide a comparison between the 3 sites studied and whether the adjacent road ADT's impacted trip generation.*

   As requested, ADT data for the adjacent limited-access highways and site frontage roadways have been provided in the tables below for the Slippery Rock, Jonestown, Londonderry and Hellam locations.

   As shown below, the current ADT along Route 30 (Hellam) is higher than the three (3) sites included in the trip generation summary, however the ADT along the subject frontage road (Kreutz Creek Road) is significantly lower than the Slippery Rock, Jonestown, and Londonderry locations.

   Additionally, the proposed Travel Stop site is currently proposed to provide less vehicle fueling positions (12 passenger car & 5 Truck) than the three sites surveyed which average 15 passenger car and 8 Truck vehicle fueling positions.

Since the trip generation rates in the study were calculated based on the weighted average rates using vehicle fueling positions as the independent variables, it is TPD's opinion that the methodology used for this TIS is consistent with the typical engineering standards for trip generation.

Location	ADT - Adjacent Highway	
	Total ADT	Truck ADT
Slippery Rock, PA – Route 79	23,667	3,572
Jonestown, PA – Interstate 81	22,396	8,631
Londonderry, PA – Route 283	37,427	5,721
Average ADT	27,830	5,975
Proposed Location ADT – Route 30	45,651	5,608

Location	ADT – Site Frontage Road
	Total ADT
Slippery Rock, PA	6,666
Jonestown, PA	9,603
Londonderry, PA	14,022
Average ADT	10,097
Proposed Location ADT	1,018

3. If you intend to use the this same study for approval of the C-store/truck stop in the future, a Saturday analysis should be included in the TIS.

Noted, the Saturday midday time period has been analyzed as part of the TIS.

If you have any questions or require additional information to process this application, please call anytime.

Sincerely,
TPD

Craig Mellott, P.E., PTOE
Vice President

CMellott@TPDinc.com

Zerphey, Dylan

From: Mark Henise, PE <mlhenise@elagroup.com>
Sent: Monday, July 14, 2025 8:00 AM
To: Mellott, Craig; Chad Peters; Cory McCoy; Jason Test; Corina Mann; Heather Bitner
Cc: Joe Stein (jstein@warehausae.com); Wheeler, Jason; David Kane; Cole Sanford; Tripp Bailey; Denise Layell; Harrison Todd; Joseph Marley; MacNeal, Stacey R.
Subject: RE: Lees Lane Development - TIS Scope Determination Request

Hi Craig. The submitted scope is acceptable with the following exceptions:

1. Analysis Years – We acknowledge that the SALDO requirement of a 10-year horizon year differs from PennDOT's 5-year horizon year, however it is the current ordinance standard, so the 10-year horizon year analysis will be required. You may, at your discretion, include a 5-year analysis in the study, with the understanding that if a PennDOT HOP is required, the 5-year analysis will be submitted to PennDOT.
2. Given that a large portion of convenience store/truck stop traffic will either be pass-by traffic or diverted link traffic from US 30, please provide information on the ADT and Truck ADT for the nearest limited access highways to the 3 sites used in the trip generation study and provide a statement on the correlation between the trip generation data for those 3 sites and a site along US 30. Also provide a comparison between the 3 sites studied and whether the adjacent road ADT's impacted trip generation.
3. If you intend to use the this same study for approval of the C-store/truck stop in the future, a Saturday analysis should be included in the TIS.

Please let me know if you have any questions. Thanks.

Mark

ELA GROUP
ENGINEERS + LANDSCAPE ARCHITECTS

MARK HENISE, PE
Director: Transportation Engineering
T: (717) 626-7271
D: (717) 625-7665
M: (717) 468-0317
EPHRATA | STATE COLLEGE | BUTLER

100% Employee Owned Company (ESOP)

Note: Our corporate headquarters has moved to 4139 Oregon Pike, Ephrata, PA 17522.

From: Mellott, Craig <cmellott@tpdinc.com>
Sent: Wednesday, June 25, 2025 4:21 PM
To: Chad Peters <CDP@csdavidson.com>; Cory McCoy <cam@csdavidson.com>; Mark Henise, PE <mlhenise@elagroup.com>; Jason Test <jtest@hellamtownship.com>; Corina Mann <cmann@hellamtownship.com>;

Heather Bitner <hbitner@ycpc.org>
Cc: Joe Stein (jstein@warehausae.com) <jstein@warehausae.com>; Wheeler, Jason <jwheeler@tpdinc.com>; David Kane <dkane@johnsondevelopment.net>; Cole Sanford <csanford@johnsondevelopment.net>; Tripp Bailey <tbailey@johnsondevelopment.net>; Denise Layell <denise@nationalld.com>; Harrison Todd <harrison@nationalld.com>; Joseph Marley <jmarley@nationalld.com>; MacNeal, Stacey R. <smacneal@barley.com>
Subject: Lees Lane Development - TIS Scope Determination Request

All: as a follow up to our Teams call on May 19th, TPD is requesting a TIS scope determination for a proposed commercial development in Hellam Township along Lees Lane, just west of the Lees Lane/Kreutz Creek Road intersection.

The following documents are being provided for Twp/County review and feedback at the link below:

1. **Sketch plan showing a proposed warehouse building along with a proposed C-store/travel stop.** Although only zoning approvals for the warehouse are advancing at this time, the TIS will account for both uses so that a comprehensive evaluation of traffic impact can be provided.
2. **Proposed Trip Generation Calculations**. The trip generation calculations for the warehouse are prepared in accordance with current PennDOT standards. For the travel stop, since ITE does not have close-fit data for this type of travel stop use, TPD proposes to use local data collected for a typical travel stop user that would fit the footprint shown on the attached sketch plan.
3. **Proposed Trip Distribution Calculations**
4. **Traffic Count Data at Proposed Study Area**

TPD proposed the following TIS scope:

Study Area

1. Lees Lane (T-947)/Pleasant Valley Road and Kreutz Creek Road (SR 1014)
2. US Route 30 West Ramps and Kreutz Creek Road
3. US Route 30 East Ramps and Kreutz Creek Road
4. Proposed Site Driveway and Lees Lane

Analysis Years

Existing Conditions and a 2033 horizon year (5 years after an assumed 2028 build out year), consistent with current PennDOT TIS standards. We note that the Township's TIS ordinance assumes a 10 year horizon (presumably tied to a previous PennDOT TIS standard), so let us know your thoughts on this issue.

Analysis Periods

Weekday AM (6-9 AM) and Weekday PM (3-6 PM) peak periods using traffic counts provided with this submission

Trip Generation

Methodology as shown on the attached calculations.

Trip Distribution

Methodology as shown on the attached calculations.

Background Growth

0.37% per year compounded annually per PennDOT's current growth factor data for urban non-interstate routes in York County.

Background Developments and Improvements

Is the Township or County aware of any nearby planned developments or roadway improvements that should be factored into the TIS?

Thank you for your review and feedback. Please let me know if you need any additional information to confirm the required TIS scope of work for this project.

https://tpd.box.com/s/n7h78q1ggdlee8urvwpt8vz5rzncav4s

Craig Mellott, P.E., PTOE, *Vice President*

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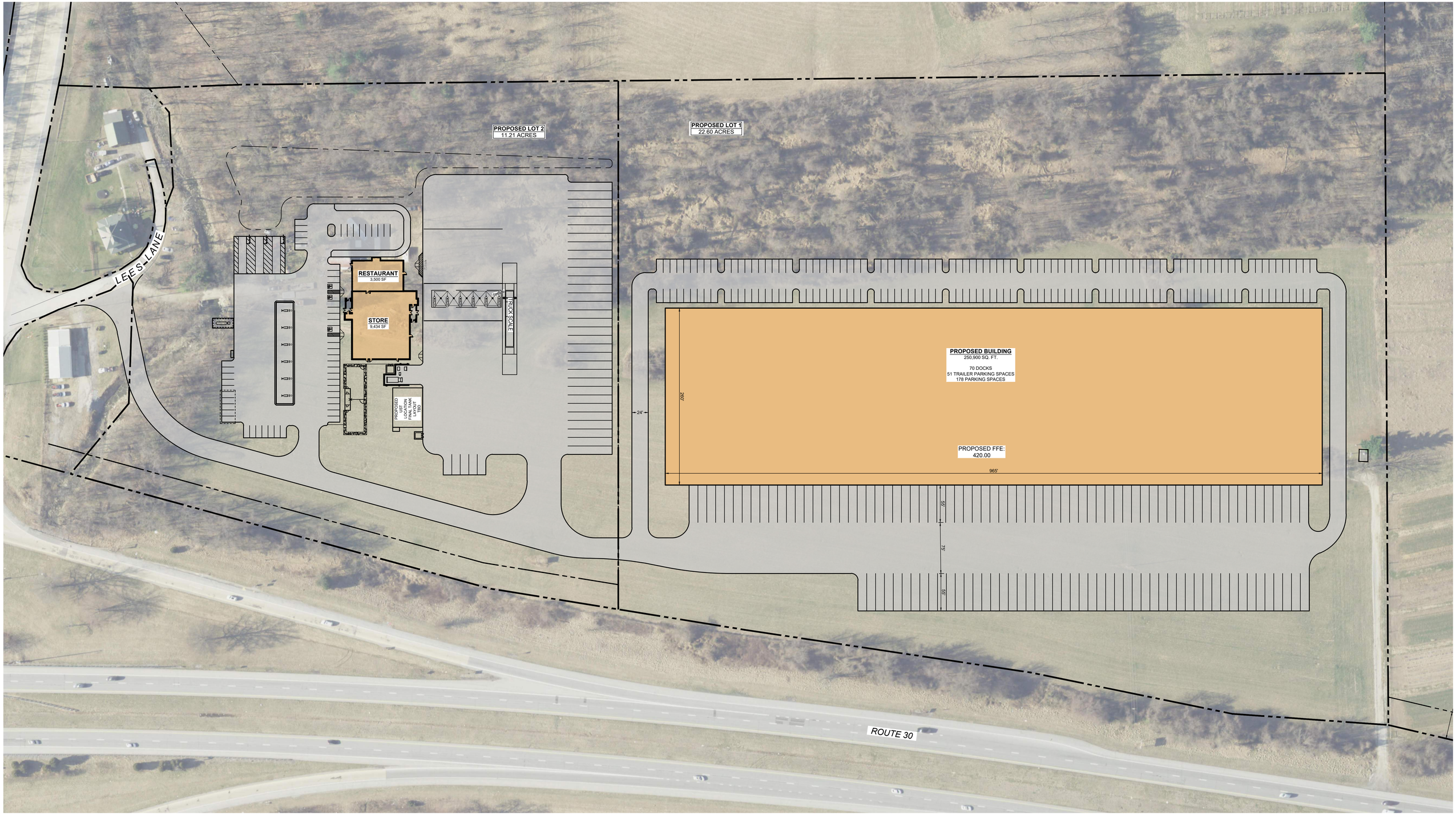

0 60' 120'
SCALE: 1" = 60'

N

LEES LANE

HELLAM, PENNSYLVANIA
HELLAM TOWNSHIP, YORK COUNTY

drawing title
SKETCH PLAN

sheet no.
1 OF 1

drawing set
SKETCH

date
06/23/2025

project no.
24-0335

project mgr.
JJS

drawn by
DJB

WAREHAUS
architects/engineers/designers
WarehausAE.com
231 N. George St. | York, PA 17401 | 717.845.8383

Weekday A.M. Peak Hour

Land Use	ITE #	Size (X)		Rate/Equation a	Rate/Equation b	Total Trips Total	Total Trips Enter %	Total Trips Enter	Total Trips Exit	Internal Trips Enter	Internal Trips Exit	External Trips Total	External Trips Enter	External Trips Exit	Pass-By Trips PB %	Pass-By Trips Total	Pass-By Trips Enter	Pass-By Trips Exit	Diverted Trips DV %	Diverted Trips Total	Diverted Trips Enter	Diverted Trips Exit	New Trips Total	New Trips Enter	New Trips Exit
Warehouse	150	250,900	SF	See PennDOT SOL		109	72%	78	31	3	9	97	75	22	0%	0	0	0	0%	0	0	0	97	75	22
Gas Station Passenger Vehicle	Local	12	Fuel Positions	12.66		152	51%	78	74	6	2	144	72	72	44%	64	32	32	24%	34	17	17	46	23	23
Gas Station Truck	Local	5	Fuel Positions	12.52		63	49%	31	32	3	1	59	28	31	0%	0	0	0	54%	32	16	16	27	12	15
Total						**324**		**187**	**137**	**12**	**12**	**300**	**175**	**125**		**64**	**32**	**32**		**66**	**33**	**33**	**170**	**110**	**60**

Weekday P.M. Peak Hour

Land Use	ITE #	Size (X)		Rate/Equation a	Rate/Equation b	Total Trips Total	Total Trips Enter %	Total Trips Enter	Total Trips Exit	Internal Trips Enter	Internal Trips Exit	External Trips Total	External Trips Enter	External Trips Exit	Pass-By Trips PB %	Pass-By Trips Total	Pass-By Trips Enter	Pass-By Trips Exit	Diverted Trips DV %	Diverted Trips Total	Diverted Trips Enter	Diverted Trips Exit	New Trips Total	New Trips Enter	New Trips Exit
Warehouse	150	250,900	SF	See PennDOT SOL		96	27%	26	70	2	9	85	24	61	0%	0	0	0	0%	0	0	0	85	24	61
Gas Station Passenger Vehicle	Local	12	Fuel Positions	14.55		175	49%	86	89	7	1	167	79	88	49%	82	41	41	30%	50	25	25	35	13	22
Gas Station Truck	Local	5	Fuel Positions	12.43		62	50%	31	31	2	1	59	29	30	0%	0	0	0	55%	32	16	16	27	13	14
Total						**333**		**143**	**190**	**11**	**11**	**311**	**132**	**179**		**82**	**41**	**41**		**82**	**41**	**41**	**147**	**50**	**97**

Average Weekday

Land Use	ITE #	Size (X)		Rate/Equation a	Rate/Equation b	Total Trips Total	Total Trips Enter %	Total Trips Enter	Total Trips Exit	Internal Trips Enter	Internal Trips Exit	External Trips Total	External Trips Enter	External Trips Exit	Pass-By Trips PB %	Pass-By Trips Total	Pass-By Trips Enter	Pass-By Trips Exit	Diverted Trips DV %	Diverted Trips Total	Diverted Trips Enter	Diverted Trips Exit	New Trips Total	New Trips Enter	New Trips Exit
Warehouse	150	250,900	SF	See PennDOT SOL		782	50%	391	391	68	94	620	323	297	0%	0	0	0	0%	0	0	0	620	323	297
Gas Station Passenger Vehicle	Local	12	Fuel Positions	P.M. Peak Hour * k-factor of 10		1750	50%	875	875	70	50	1630	805	825	0%	0	0	0	0%	0	0	0	1630	805	825
Gas Station Truck	Local	5	Fuel Positions	P.M. Peak Hour * k-factor of 10		620	50%	310	310	24	18	578	286	292	0%	0	0	0	0%	0	0	0	578	286	292
Total						**3152**		**1576**	**1576**	**162**	**162**	**2828**	**1414**	**1414**	**0**	**0**	**0**	**0**					**2828**	**1414**	**1414**

Pass-by Rates reduced to not exceed 15% of adjacent roadway volume

Remaining pass-by not utlized due to 15% adjacent roadway volume constraint became diverted link

Due to limited existing truck traffic at site driveway intersection, all "Truck Pass-by" trips were assumed to be diverted link

Internal Trips assumed to occur between the Warehouse and Love's Travel Stop. Used NCHRP 684 Internal Capture Estimation Tool to estimate internal trips between Warehouse (Office) and Love's Travel Stop (Retail). Internal trip rates for the Average Weekday assumed to be the average of the AM/PM peak hour rates

Pass-by Percentage Rate Calculations
Based on Maximum pass-by of 15%
of Adjacent Roadway volume

A.M. Peak Hour
Pass by vehicles 215*0.15=32
Pass by trips 32 * 2 = 64
Pass by enter = 32
Pass by exit = 32

P.M. Peak Hour
Pass by vehicles 276*0.15=41
Pass by trips 41 * 2 = 82
Pass by enter = 41
Pass by exit = 41

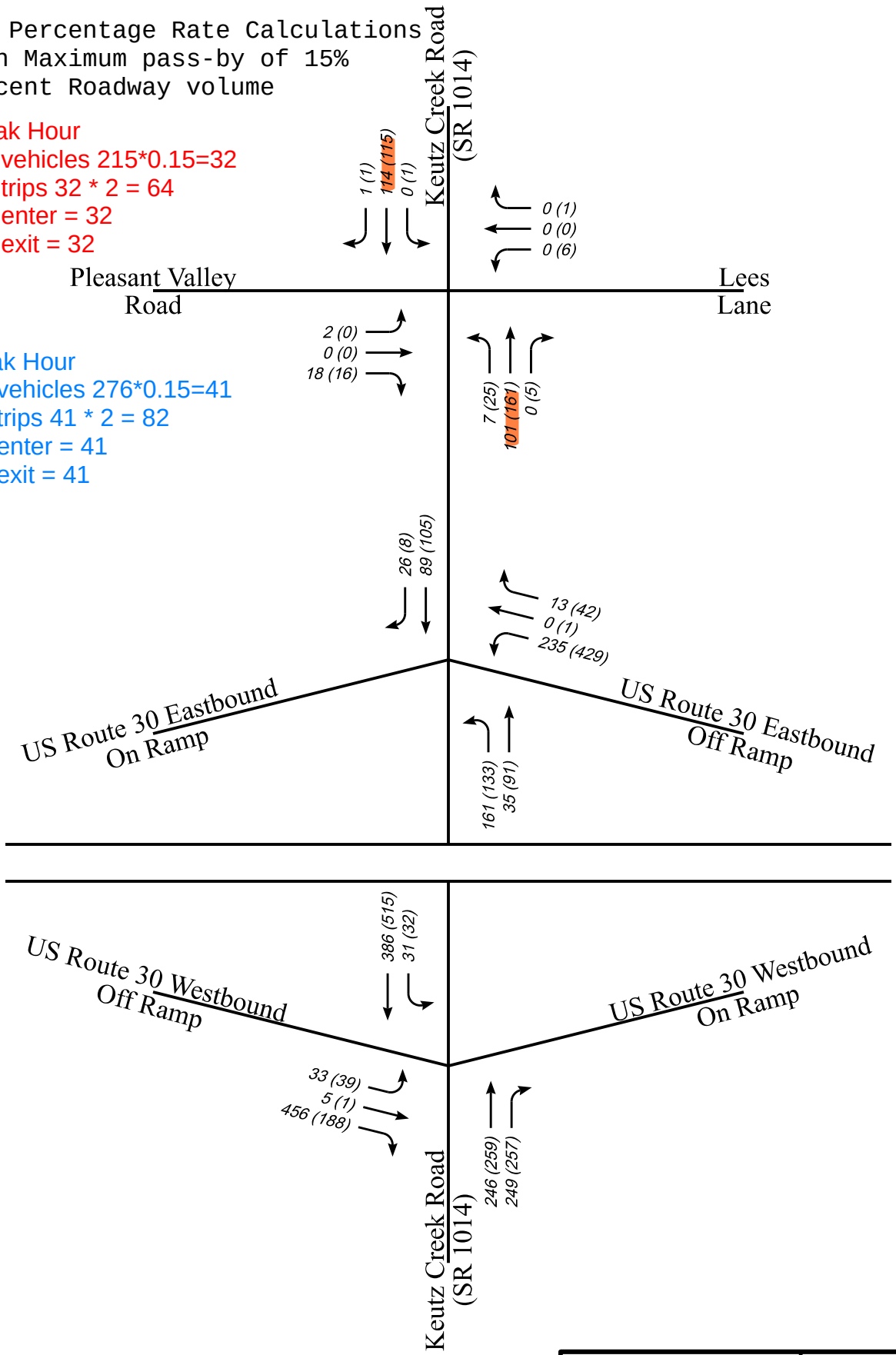

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FIGURE 3

2025 EXISTING CONIDTIONS
WEEKDAY AM (PM) PEAK HOUR
TRAFFIC VOLUME

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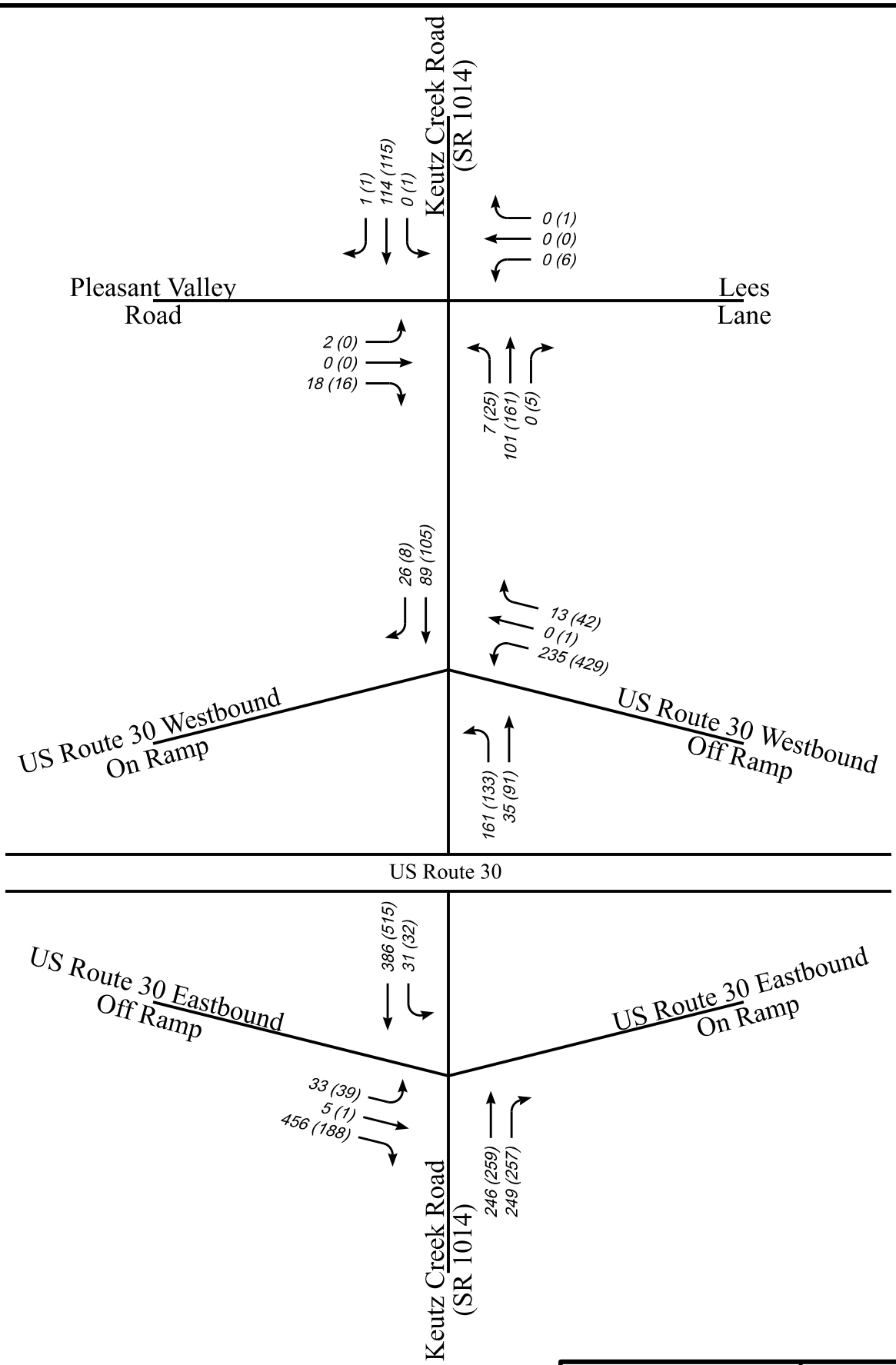
FIGURE 1

LOCATION MAP



KEY:

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FIGURE 3

2025 EXISTING CONIDTIONS
WEEKDAY AM (PM) PEAK HOUR
TOTAL TRAFFIC VOLUME

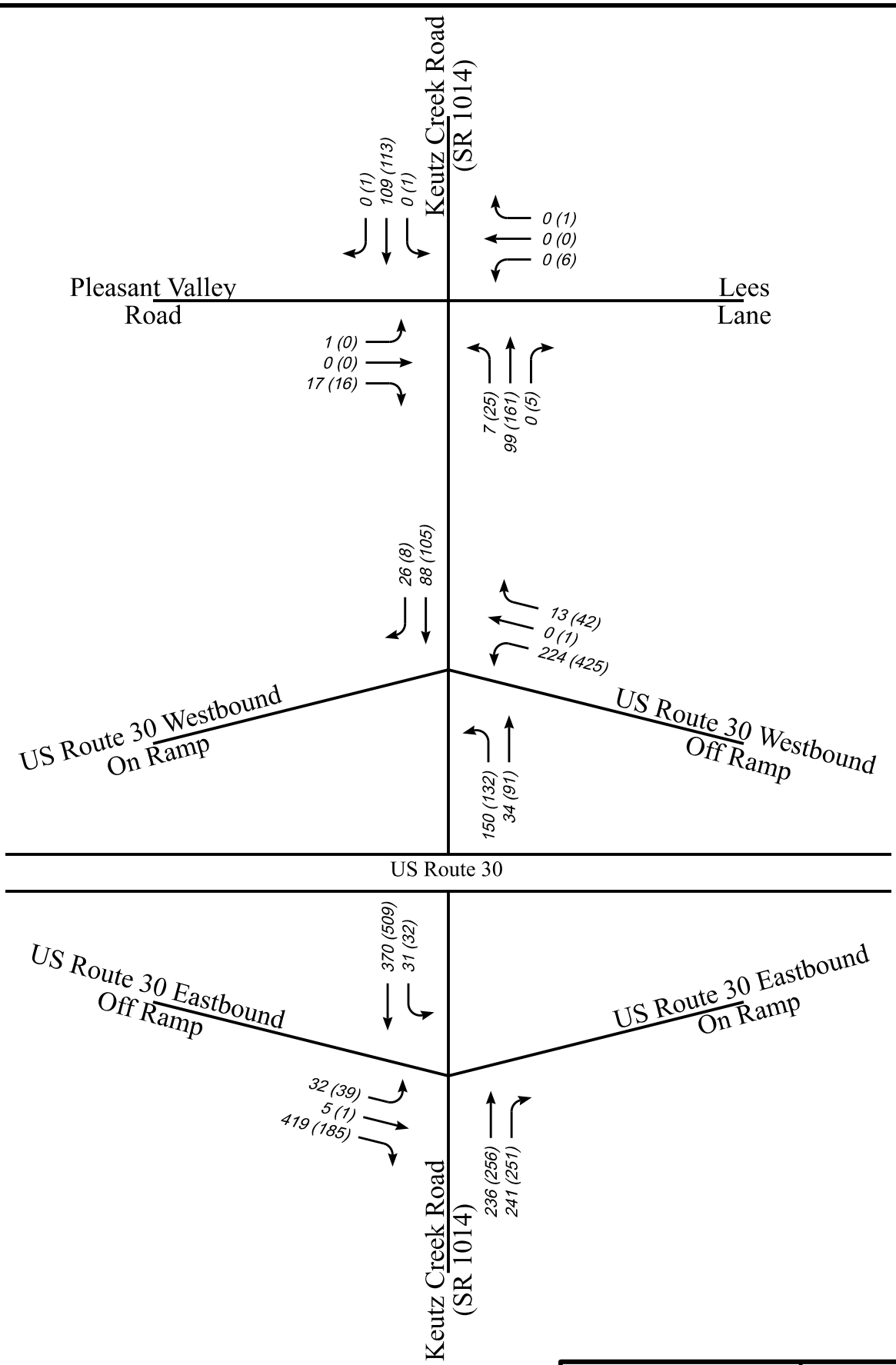

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FIGURE 4

2025 EXISTING CONIDTIONS
WEEKDAY AM (PM) PEAK HOUR
PASSENGER VEHICLES

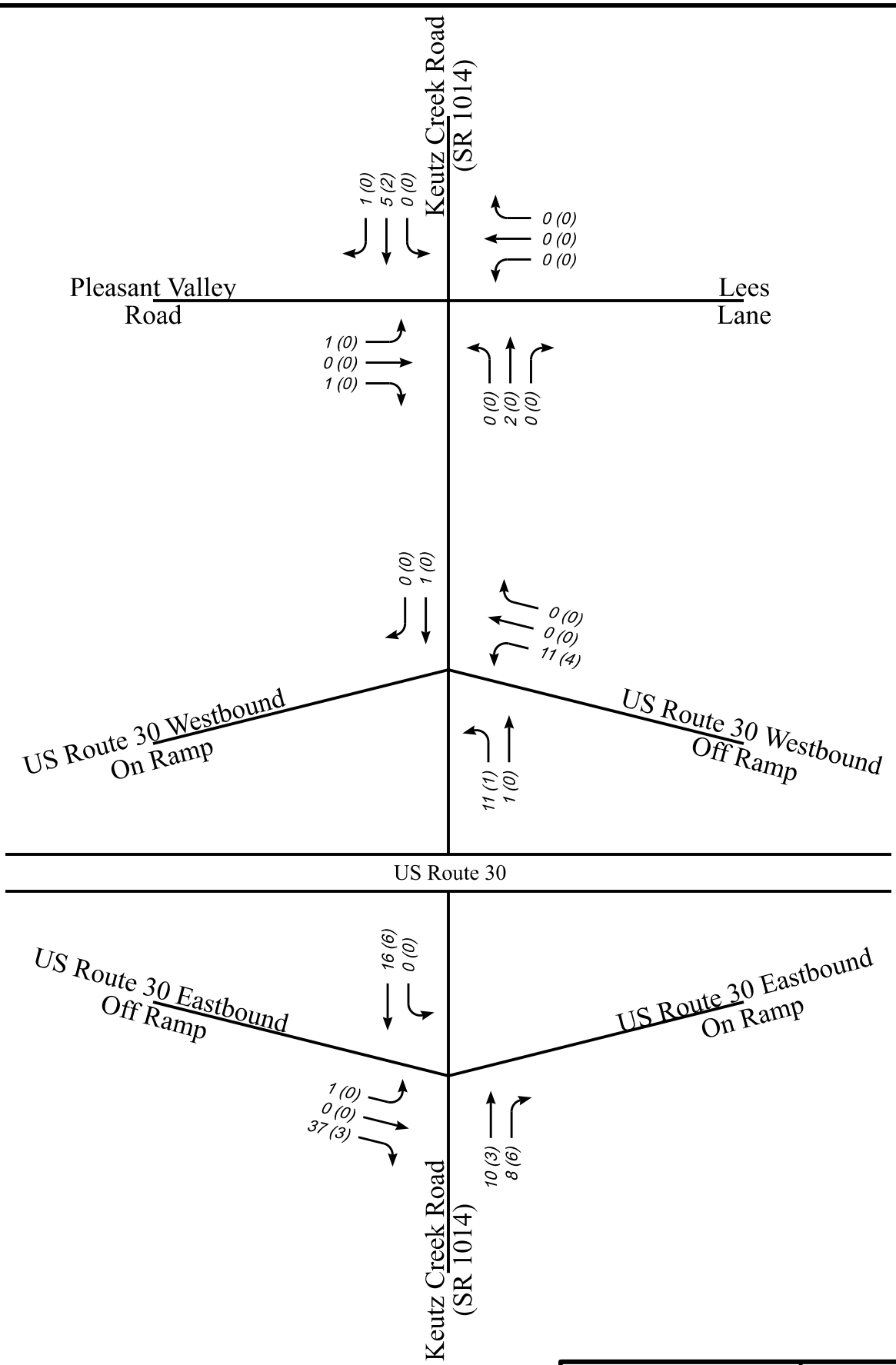

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FIGURE 5

2025 EXISTING CONIDTIONS
WEEKDAY AM (PM) PEAK HOUR
HEAVY VEHICLES

ZIP Codes (ZCTA) as Home Destination Area	2022 Count	Share
All ZIP Codes (ZCTA)	17,658	100.0%
17404	1,486	8.4%
17406	1,177	6.7%
17403	1,101	6.2%
17402	1,013	5.7%
17315	926	5.2%
17408	736	4.2%
17401	686	3.9%
17356	572	3.2%
17345	377	2.1%
17347	333	1.9%
17313	310	1.8%
17331	279	1.6%
17368	250	1.4%
17362	193	1.1%
17366	189	1.1%
17319	169	1.0%
17370	168	1.0%
17512	147	0.8%
17603	143	0.8%
17601	128	0.7%
17022	122	0.7%
17552	121	0.7%
17363	111	0.6%
17011	107	0.6%
17360	107	0.6%
All Other Locations	6,707	38.0%

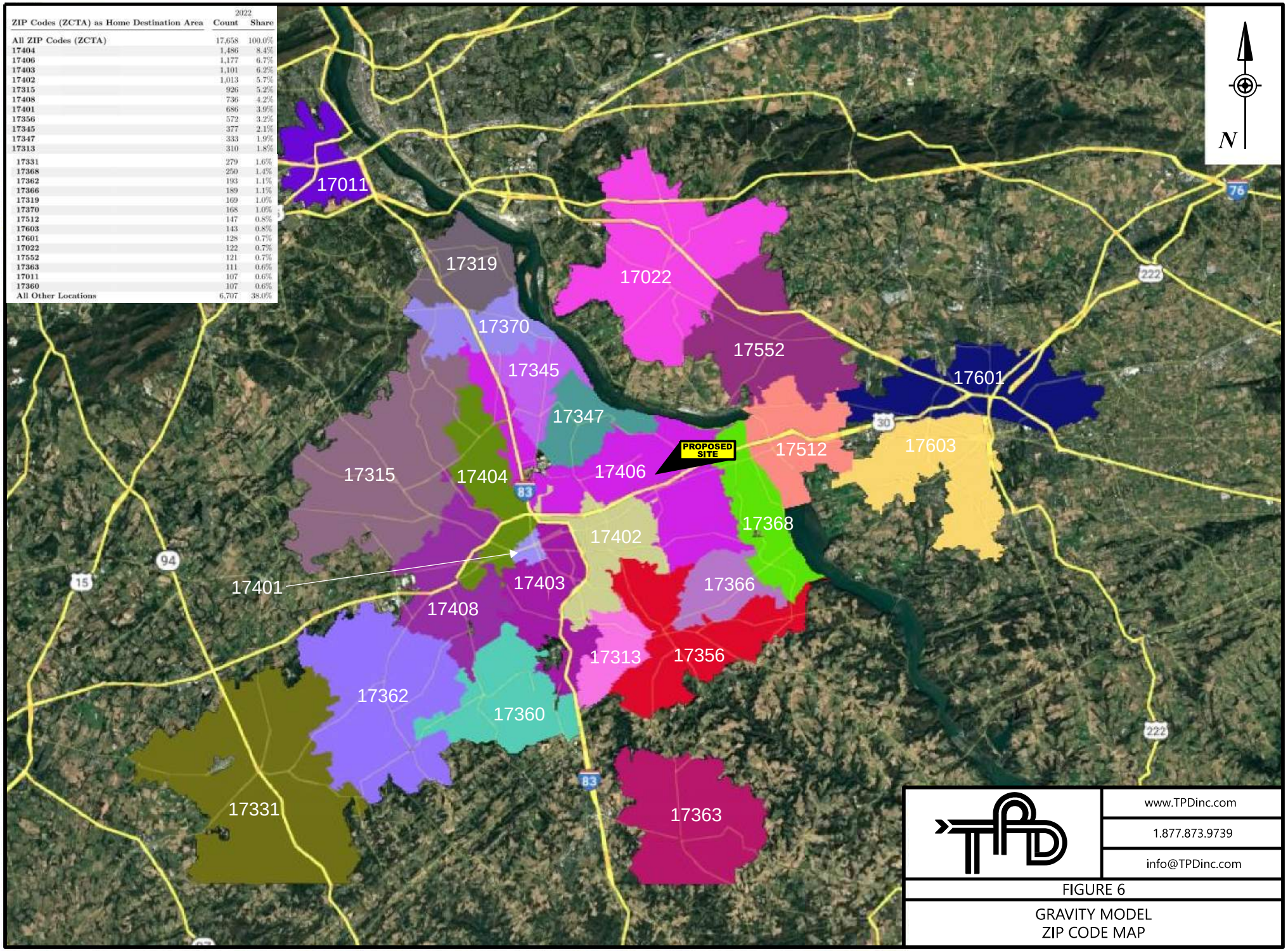

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FIGURE 6

GRAVITY MODEL
ZIP CODE MAP

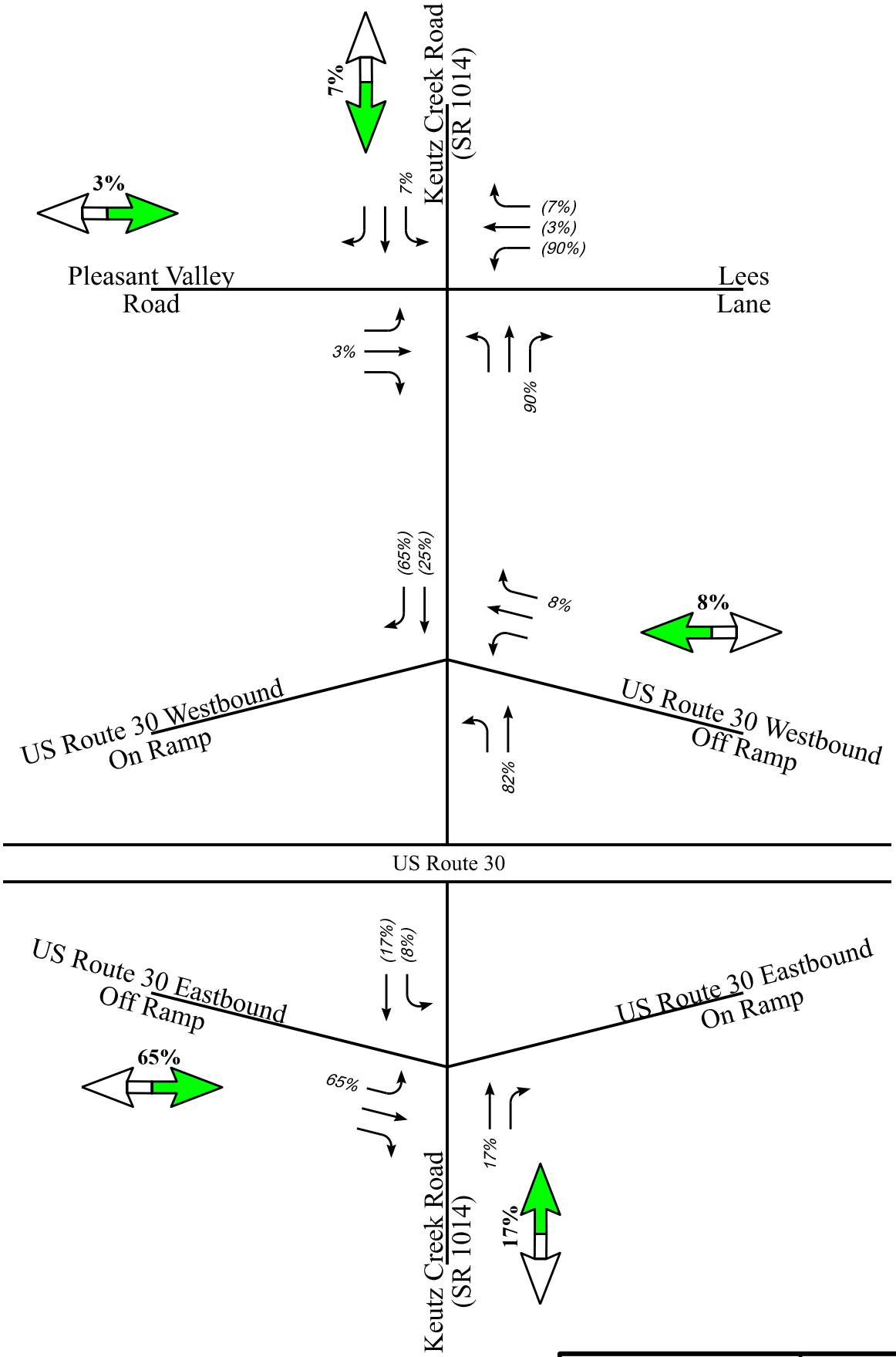

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FIGURE 7

LEES LANE DEVELOPMENT
ENTER (EXIT) NEW TRIP PERCENT
WAREHOUSE PASSENGER VECHICLE

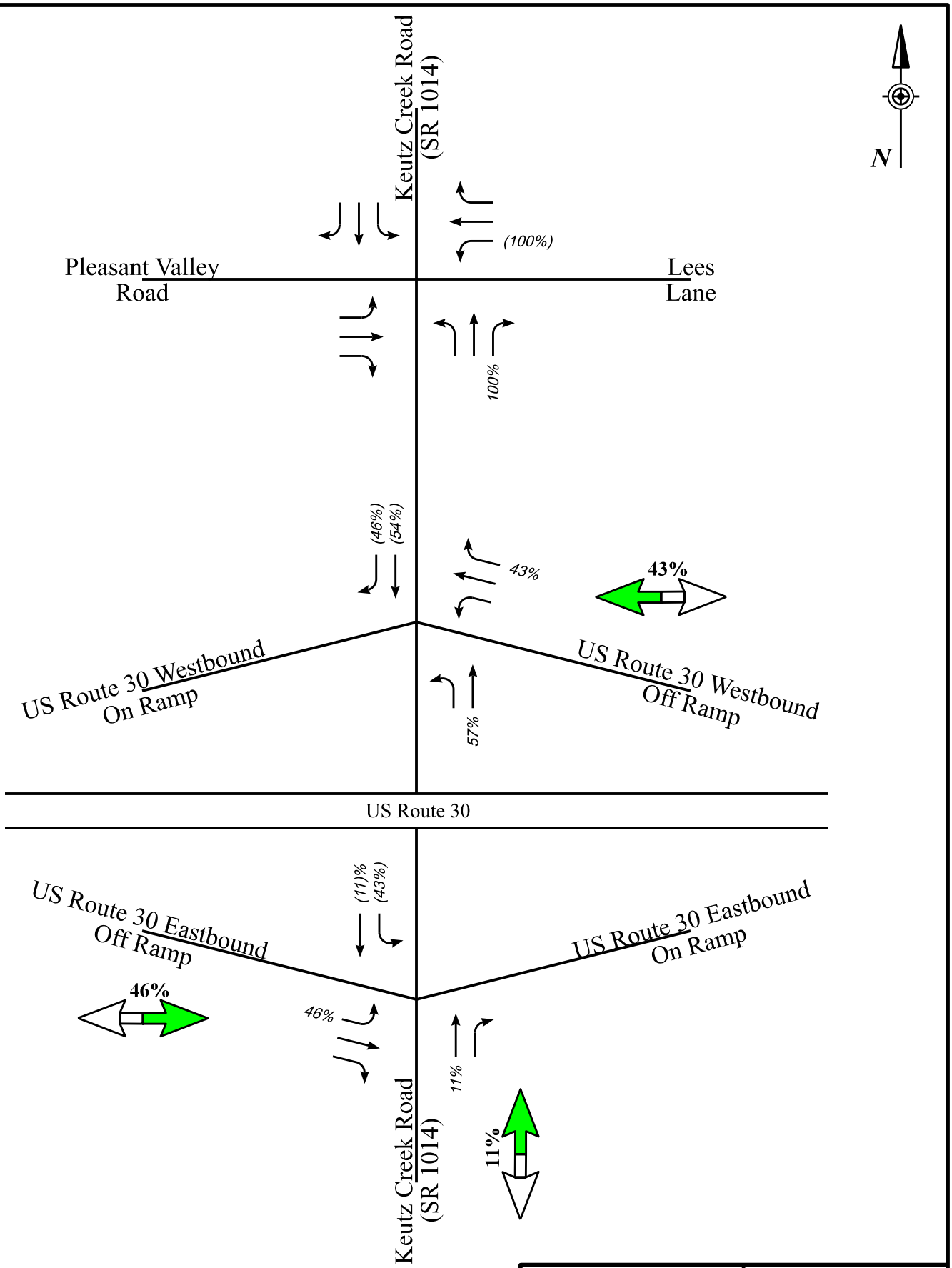

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FIGURE 8

LEES LANE DEVELOPMENT
ENTER (EXIT) NEW TRIP PERCENT
WAREHOUSE HEAVY VEHICLE

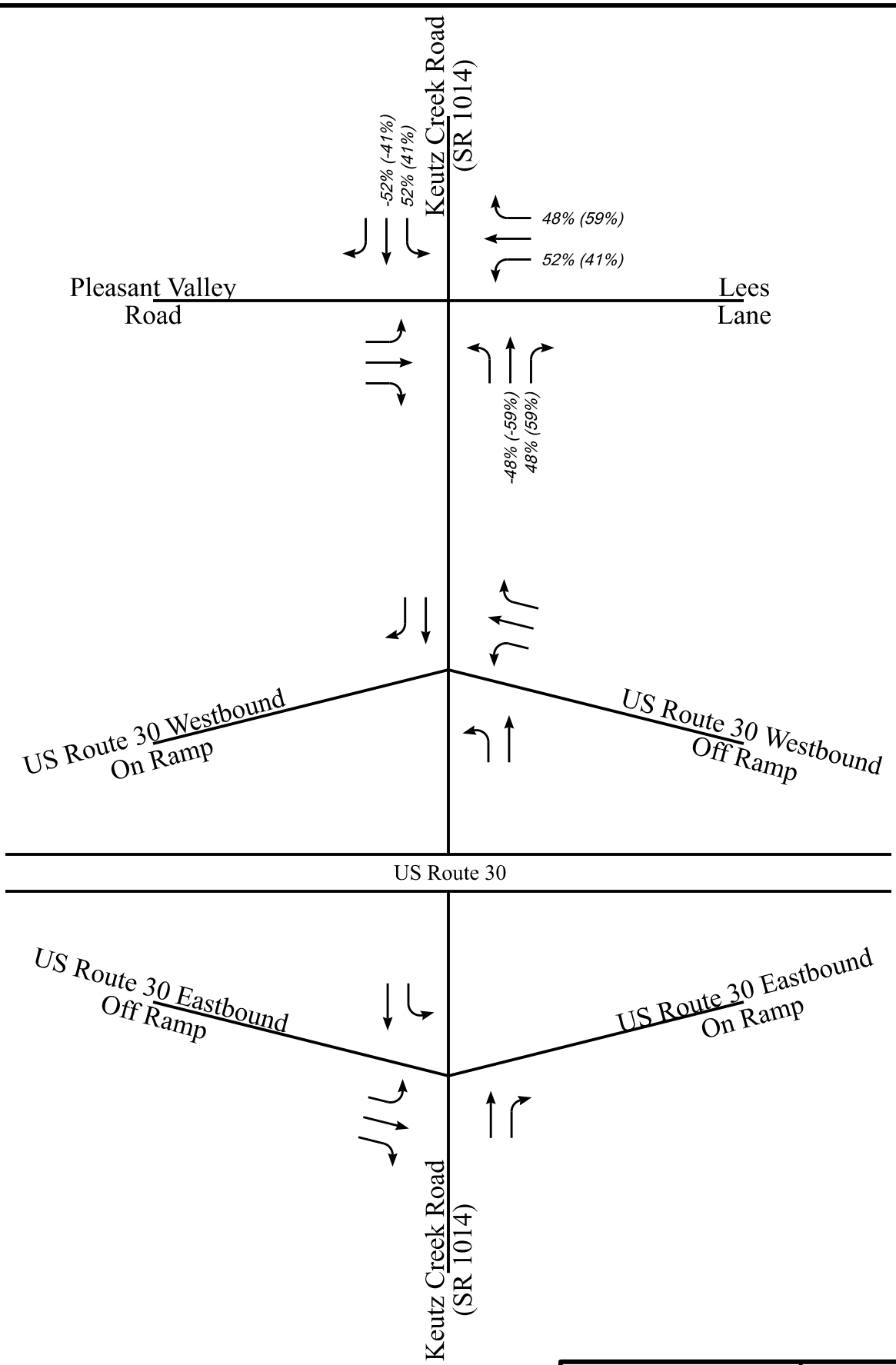

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FIGURE 9

LEES LANE DEVELOPMENT
AM (PM) PASS-BY PERCENT
GAS STATION PASSENGER VECHICLE

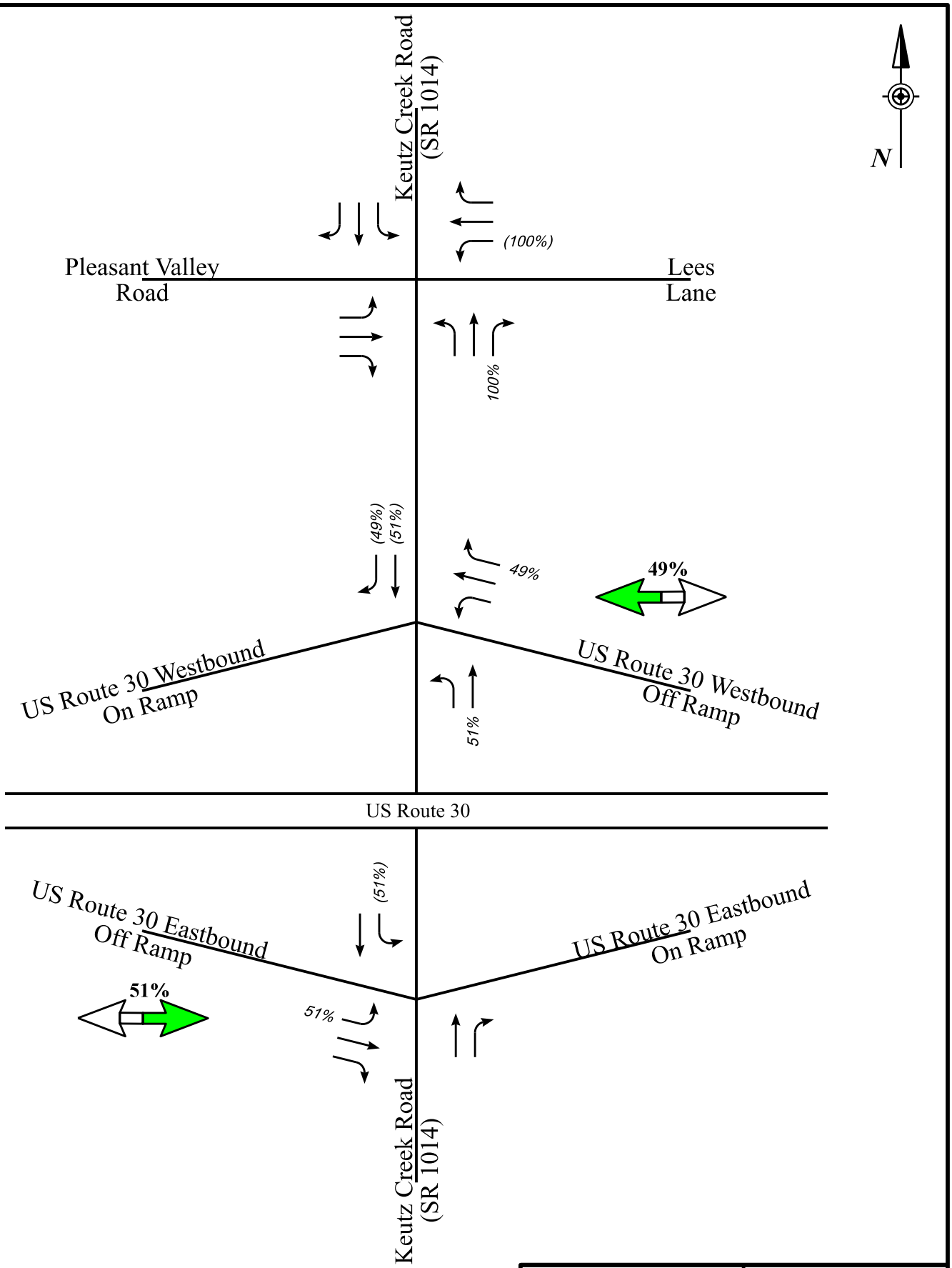

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FIGURE 10

LEES LANE DEVELOPMENT
ENTER (EXIT) DIVERTED PERCENT
GAS STATION PASSENGER VECHICLE

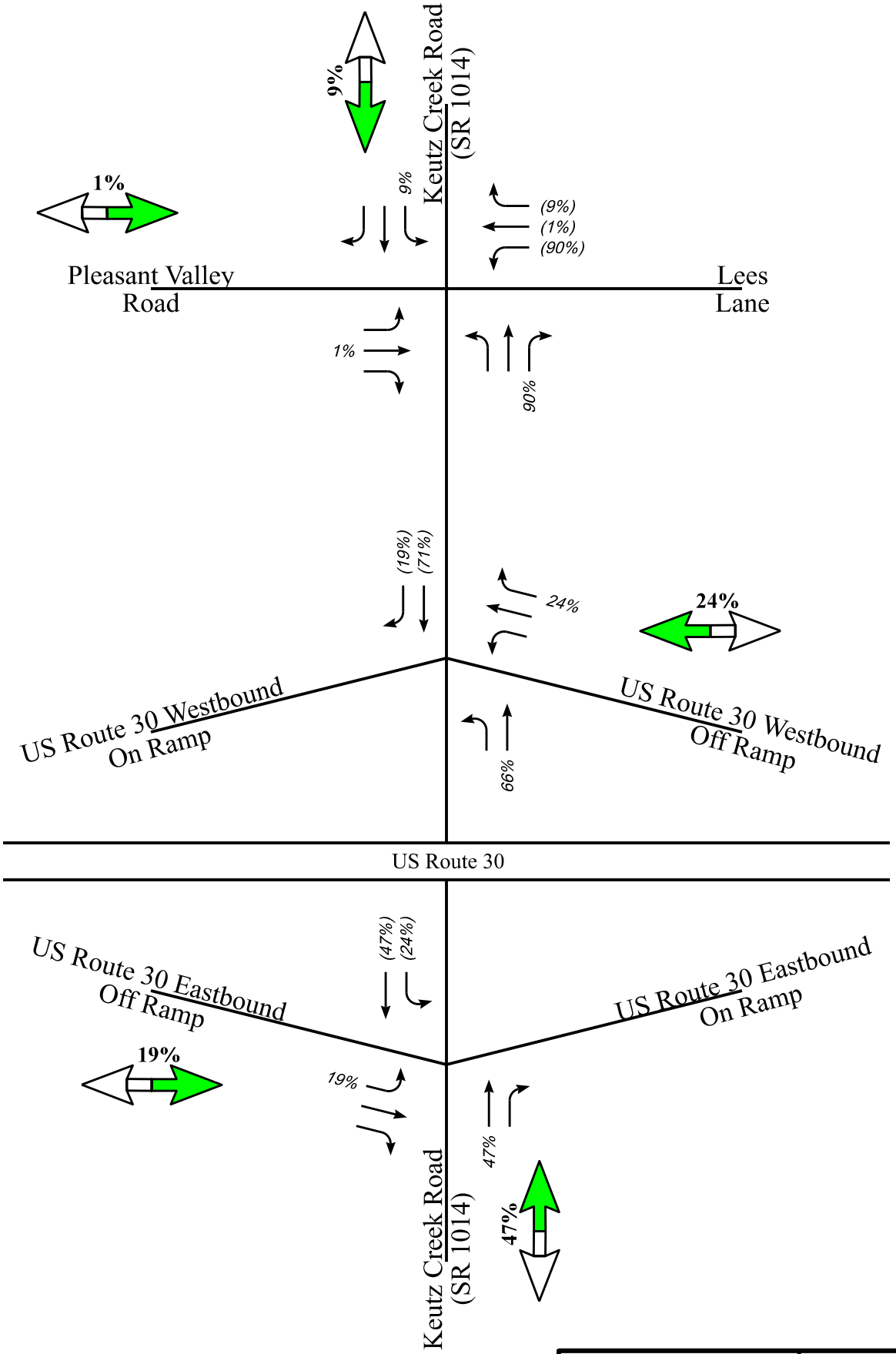

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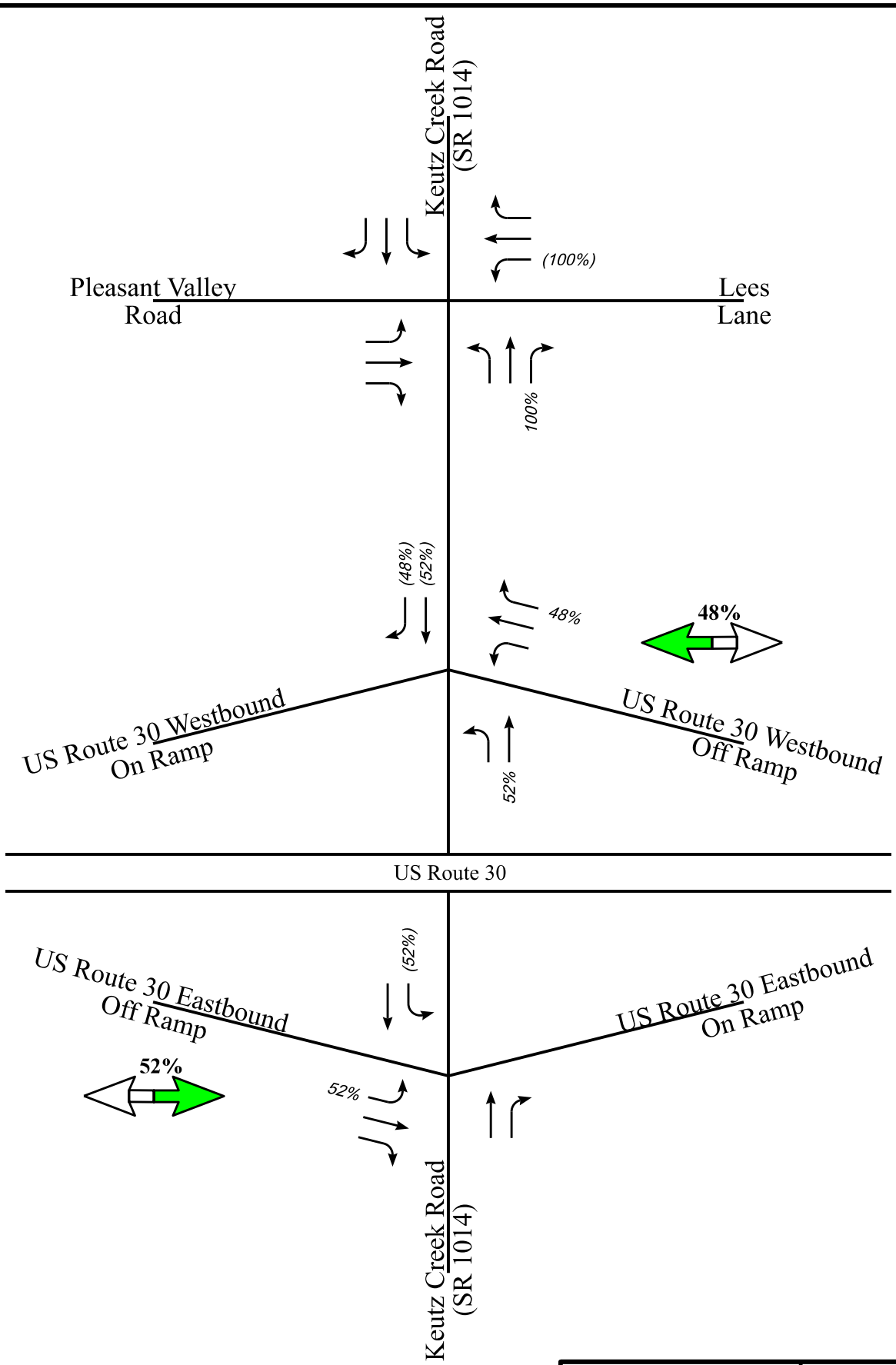
FIGURE 11

LEES LANE DEVELOPMENT
ENTER (EXIT) NEW TRIP PERCENT
GAS STATION PASSENGER VECHICLE



KEY:

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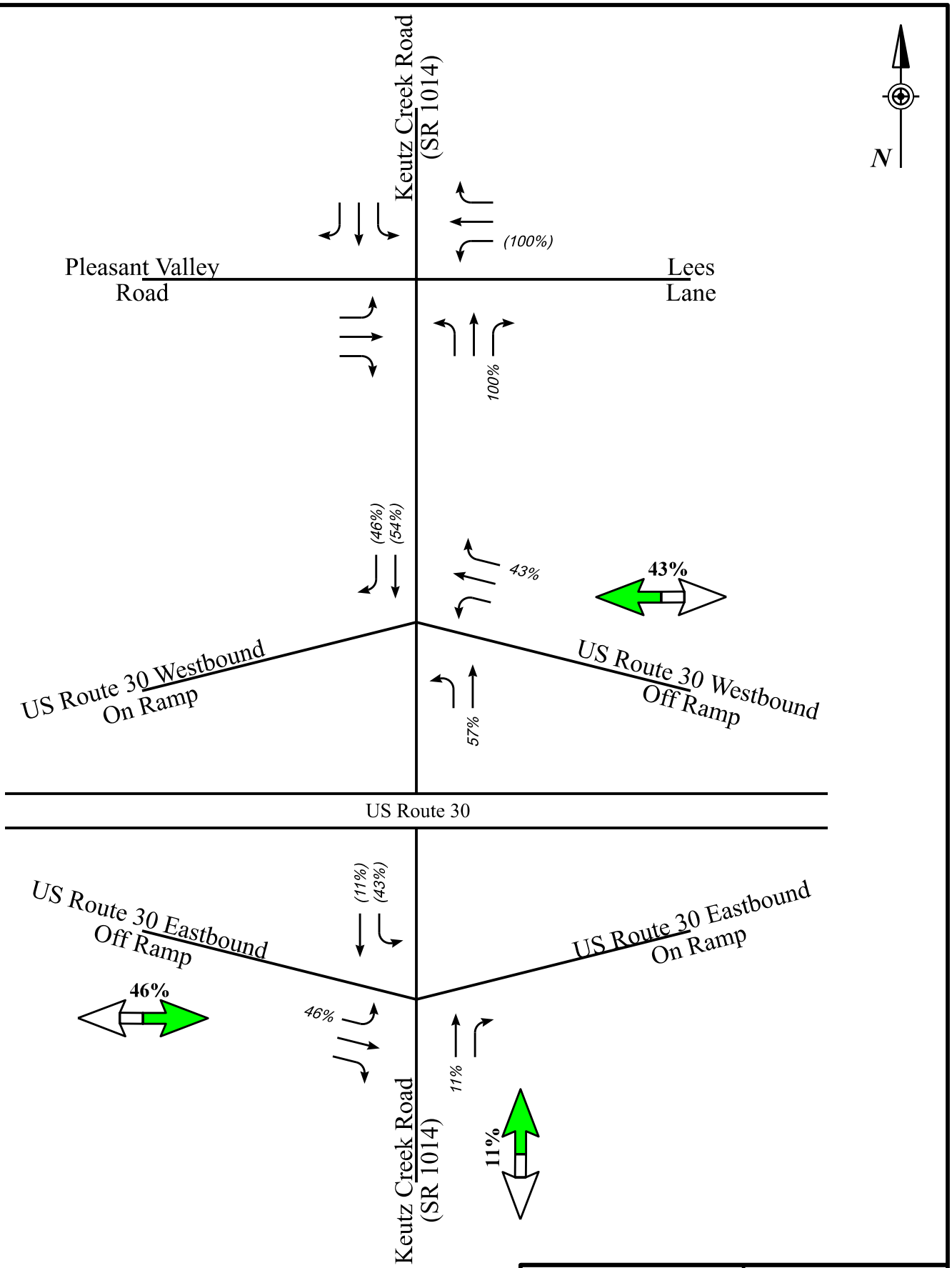
FIGURE 12

LEES LANE DEVELOPMENT
ENTER (EXIT) DIVERTED PERCENT
GAS STATION HEAVY VEHICLE



KEY:

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FIGURE 13

LEES LANE DEVELOPMENT
ENTER (EXIT) NEW TRIP PERCENT
GAS STATION HEAVY VEHICLE

Gravity Model

Home Destination Report - Where Workers Reside Who Work in the Selection Area - by ZIP Codes (ZCTA)

Selection Area: Hellam Township, York County

Home (Destination) ZIP Code	Count	Percent	To/From East	To/From West		To/From North	To/From South	Assignment Notes
			US 30	US 30	Pleasant Valley Road	Keutz Creek Road (SR 2001)	Keutz Creek Road (SR 2001)	
17404 York	1486	8%		75%		25%		Majority of Traffic To/From North York Via US 30
17406 York	1177	7%		30%	30%	10%	30%	Traffic Split To/From Yorkana/Hallam/Pleasureville/Emigsville
17403 York	1101	6%		80%			20%	Majority of Traffic To/From South York Via US 30
17402 York	1013	6%		75%			25%	Majority of Traffic To/From East York Via US 30
17315 Dover	926	5%		100%				All Traffic To/From Dover Via US 30
17408 York	736	4%		100%				All Traffic To/From West York Via US 30
17401 York	686	4%		100%				All Traffic To/From York Via US 30
17356 Red Lion	572	3%					100%	All Traffic To/From Red Lion Via Keutz Creek Road
17345 Manchester	377	2%		75%		25%		Majority of Traffic To/From Manchester Via US 30
17347 Mount Wolf	333	2%		50%		50%		Traffic Split To/From Mount Wolf Via US 30 or Keutz Creek Road
17313 Dallastown	310	2%		50%			50%	Traffic Split To/From Mount Wolf Via US 30 or Keutz Creek Road
17331 Hanover	279	2%		100%				All Traffic To/From Hanover Via US 30
17368 Wrightsville	250	1%	75%				25%	Majority of Traffic To/From Wrightsville Via US 30
17362 Spring Grove	193	1%		100%				All Traffic To/From Spring Grove Via US 30
17366 Windsor	189	1%					100%	All Traffic To/From Windsor Via Keutz Creek Road
17319 Etters	169	1%		100%				All Traffic To/From Etters Via US 30
17370 York Haven	168	1%		100%				All Traffic To/From York Haven Via US 30
17512 Columbia	147	1%	100%					All Traffic To/From Columbia Via US 30
17603 Lancaster	143	1%	100%					All Traffic To/From South West Lancaster Via US 30
17601 Lancaster	128	1%	100%					All Traffic To/From North Lancaster Via US 30
17022 Elizabethtown	122	1%	100%					All Traffic To/From Elizabethtown Via US 34
17552 Mount Joy	121	1%	100%					All Traffic To/From Mount Joy Via US 35
17363 Stewartstown	111	1%		50%			50%	Traffic Split To/From Mount Wolf Via US 30 or Keutz Creek Road
17011 Camp Hill	107	1%		100%				All Traffic To/From Camp Hill Via US 30
17360 Seven Valleys	107	1%		100%				All Traffic To/From Seven Valleys Via US 30
All Other Locations	**6707**	**37.98%**						

Weighted Trip Distributions

To/From East	To/From West		To/From North	To/From South
US 30	US 30	Pleasant Valley Road	Keutz Creek Road (SR 2001)	Keutz Creek Road (SR 2001)
0%	**6%**	0%	**2%**	0%
0%	**2%**	**2%**	**1%**	**2%**
0%	**5%**	0%	0%	**1%**
0%	**4%**	0%	0%	**1%**
0%	**5%**	0%	0%	0%
0%	**4%**	0%	0%	0%
0%	**4%**	0%	0%	0%
0%	0%	0%	0%	**3%**
0%	**2%**	0%	**1%**	0%
0%	**1%**	0%	**1%**	0%
0%	**1%**	0%	0%	**1%**
0%	**2%**	0%	0%	0%
1%	0%	0%	0%	**0%**
0%	**1%**	0%	0%	0%
0%	0%	0%	0%	**1%**
0%	**1%**	0%	0%	0%
0%	**1%**	0%	0%	0%
1%	0%	0%	0%	0%
1%	0%	0%	0%	0%
1%	0%	0%	0%	0%
1%	0%	0%	0%	0%
0%	**0%**	0%	0%	**0%**
0%	**1%**	0%	0%	0%
0%	**1%**	0%	0%	0%
5%	**40%**	**2%**	**4%**	**11%**

	To/From East	To/From West		To/From North	To/From South	
	US 30	US 30	Pleasant Valley Road	Keutz Creek Road (SR 2001)	Keutz Creek Road (SR 2001)	
Total Weighted to 100%	7.7%	65.2%	3.2%	6.8%	17.0%	100%
Totals (Adjusted)	8%	65%	3%	7%	17%	100%

United States Census Bureau OnTheMap

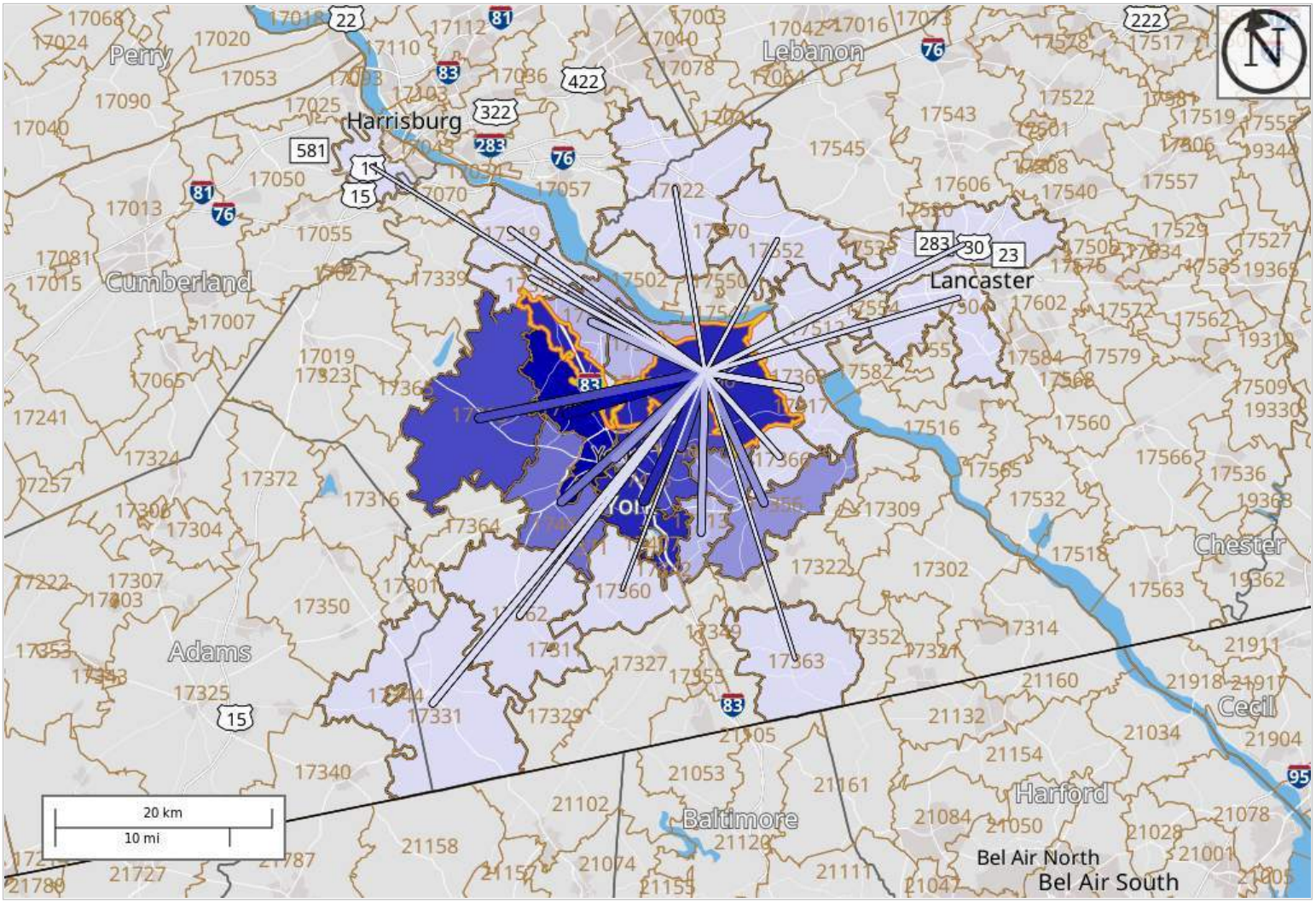
Destination Analysis

Workers: *Employed in 17406*
Showing: *Residential locations grouped by ZIP Codes (ZCTA)*

Created by the U.S. Census Bureau's OnTheMap `https://onthemap.ces.census.gov` on 06/19/2025

Counts of All Jobs from Work Selection Area to Home ZIP Codes (ZCTA) in 2022

All Workers



Map Legend

Job Count
- 1,290 - 1,486
- 1,093 - 1,289
- 896 - 1,092
- 699 - 895
- 502 - 698
- 305 - 501
- 107 - 304

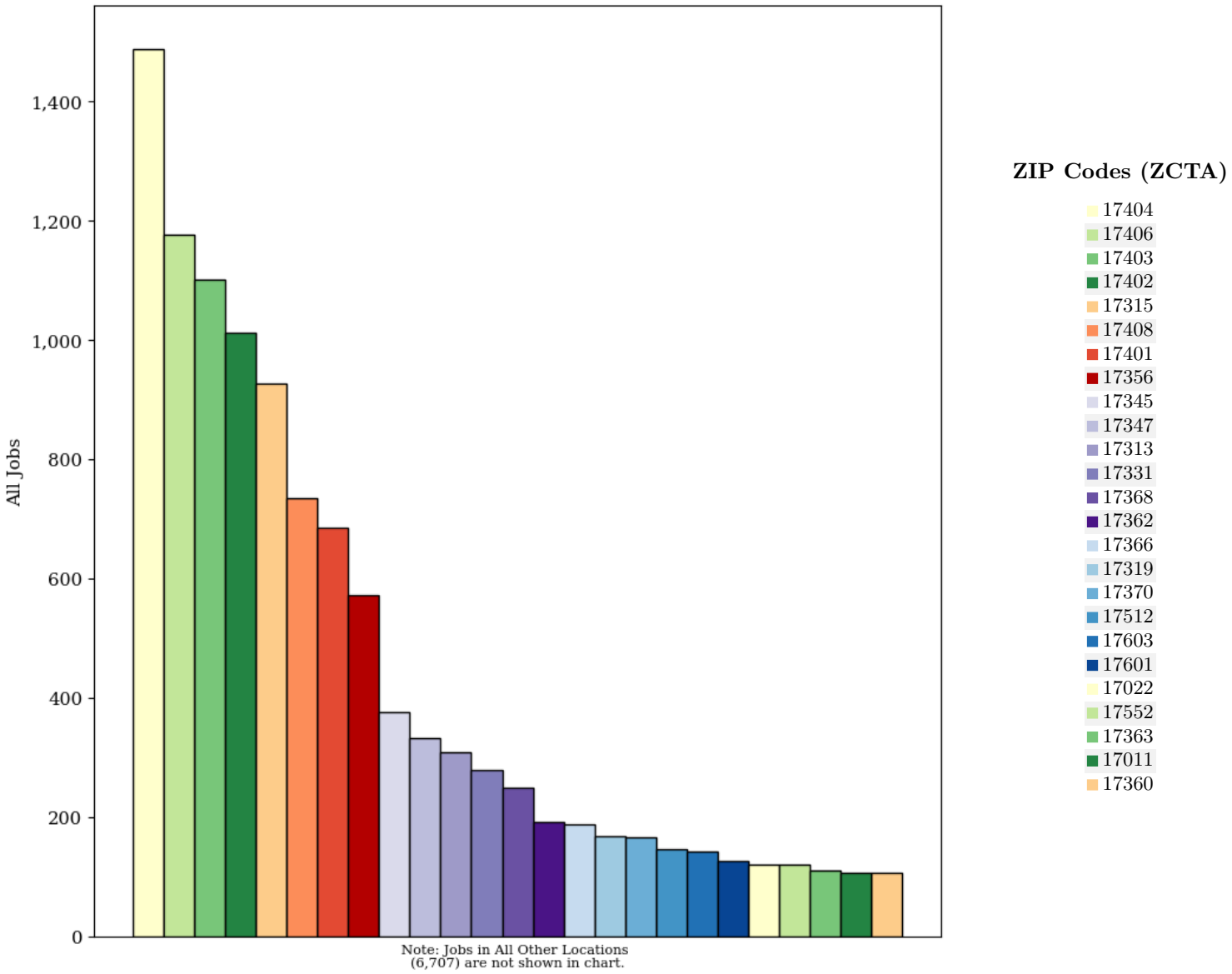
Selection Areas
- Work Area

Job Count
- 1,290 - 1,486
- 1,093 - 1,289
- 896 - 1,092
- 699 - 895
- 502 - 698
- 305 - 501
- 107 - 304

United States Census Bureau

All Jobs from Work Selection Area to Home ZIP Codes (ZCTA) in 2022

All Workers



All Jobs from Work Selection Area to Home ZIP Codes (ZCTA) in 2022

All Workers

ZIP Codes (ZCTA) as Home Destination Area	2022 Count	2022 Share
All ZIP Codes (ZCTA)	17,658	100.0%
17404	1,486	8.4%
17406	1,177	6.7%
17403	1,101	6.2%
17402	1,013	5.7%
17315	926	5.2%
17408	736	4.2%
17401	686	3.9%
17356	572	3.2%
17345	377	2.1%
17347	333	1.9%
17313	310	1.8%

ZIP Codes (ZCTA) as Home Destination Area	2022 Count	Share
17331	279	1.6%
17368	250	1.4%
17362	193	1.1%
17366	189	1.1%
17319	169	1.0%
17370	168	1.0%
17512	147	0.8%
17603	143	0.8%
17601	128	0.7%
17022	122	0.7%
17552	121	0.7%
17363	111	0.6%
17011	107	0.6%
17360	107	0.6%
All Other Locations	6,707	38.0%

Additional Information

Analysis Settings

Analysis Type	Destination
Destination Type	ZIP Codes (ZCTA)
Selection area as	Work
Year(s)	2022
Job Type	All Jobs
Selection Area	17406 from ZIP Codes (ZCTA)
Selected Census Blocks	418
Analysis Generation Date	06/19/2025 17:26 - OnTheMap 6.25.1
Code Revision	d7e653d6dda5dbfeaebf0121d6547c7bdf6e3686
LODES Data Vintage	20241022_1605

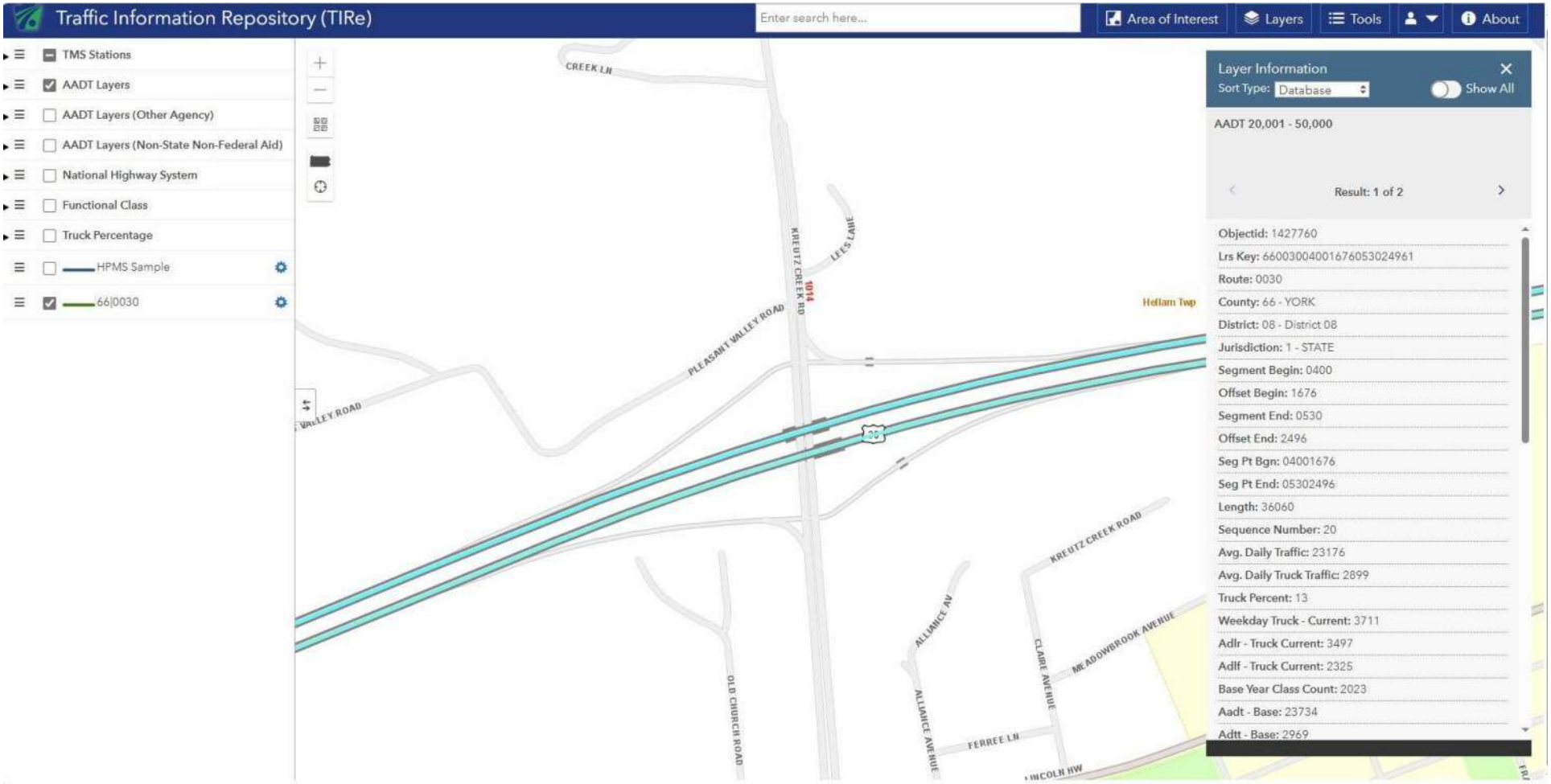
Data Sources

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2022).

Notes

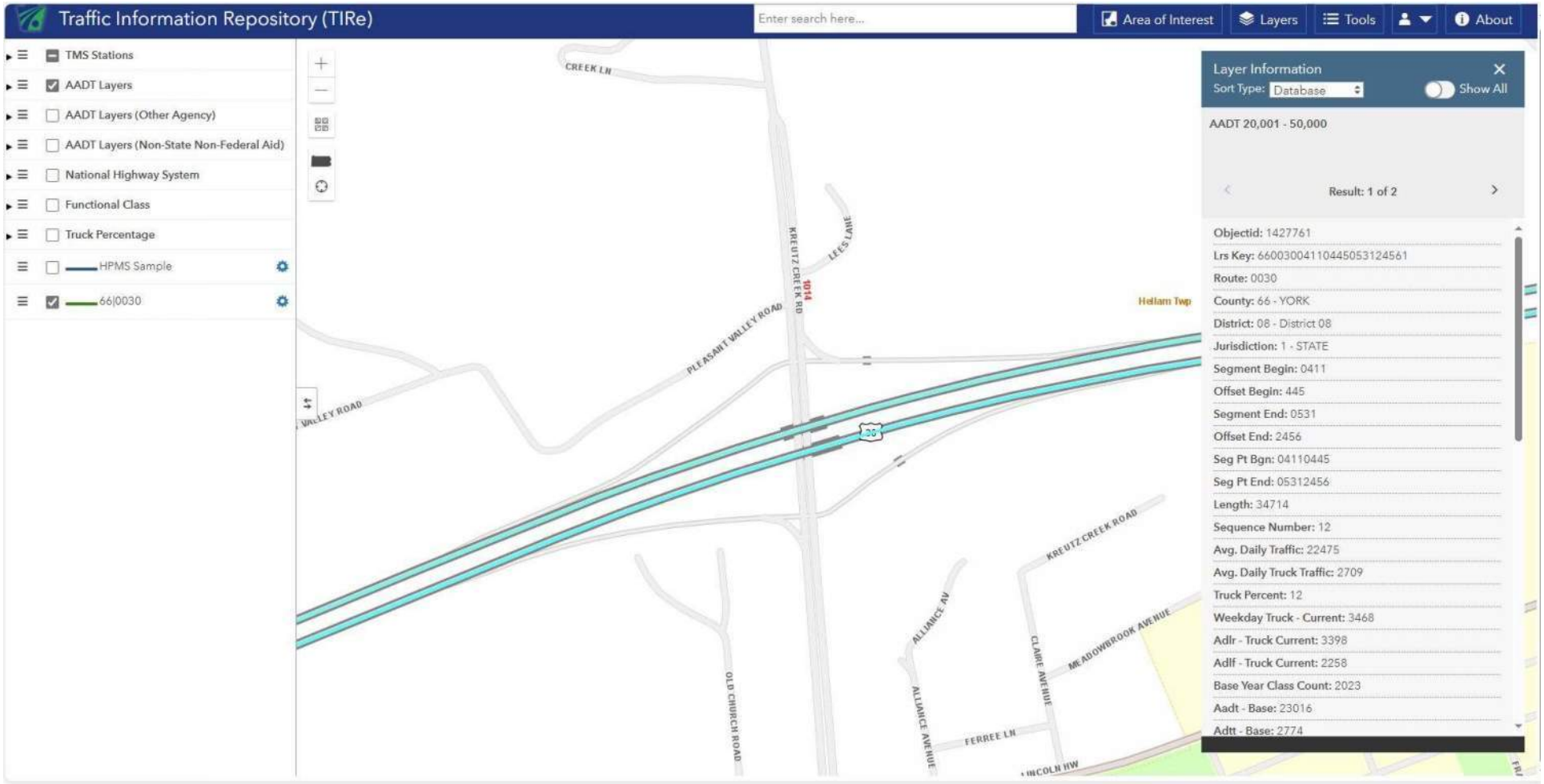
1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and are not available before 2009.
2. Educational Attainment is only produced for workers aged 30 and over.
3. Firm Age and Firm Size statistics are beta release results for All Private jobs and are not available before 2011.

US 30 Eastbound



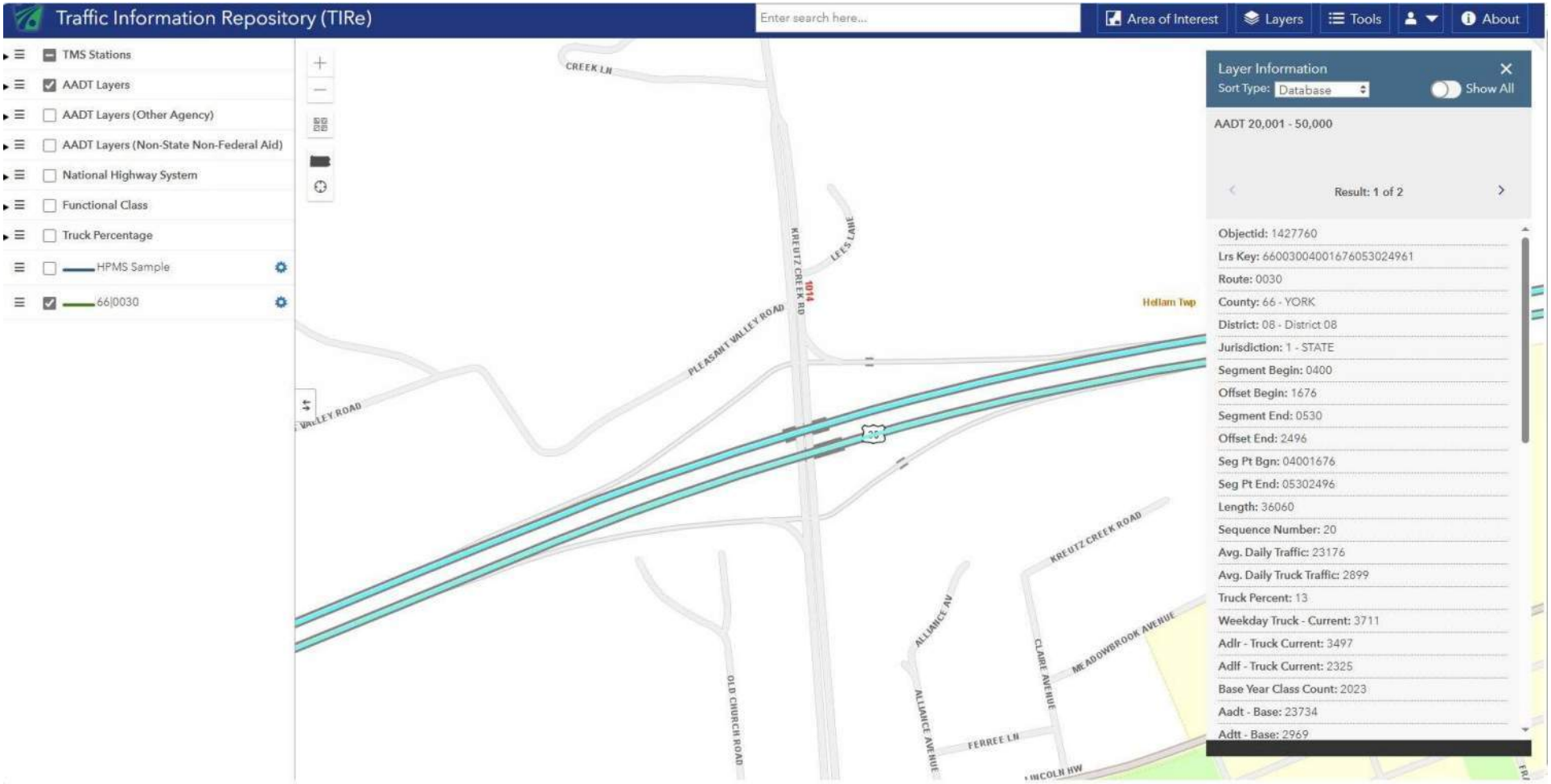
ADT 23,176

US 30 Westbound



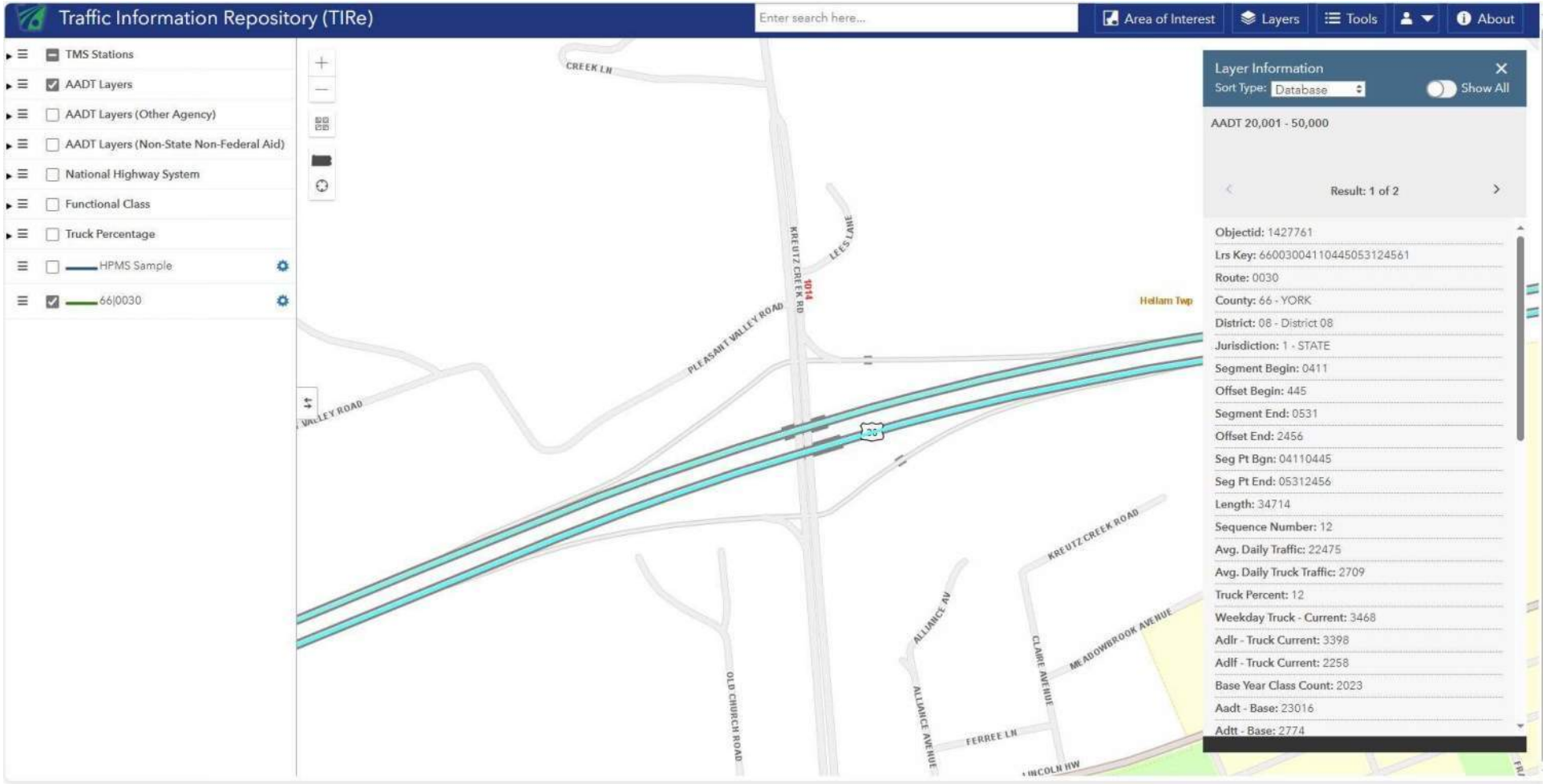
ADT 22,475

US 30 Eastbound



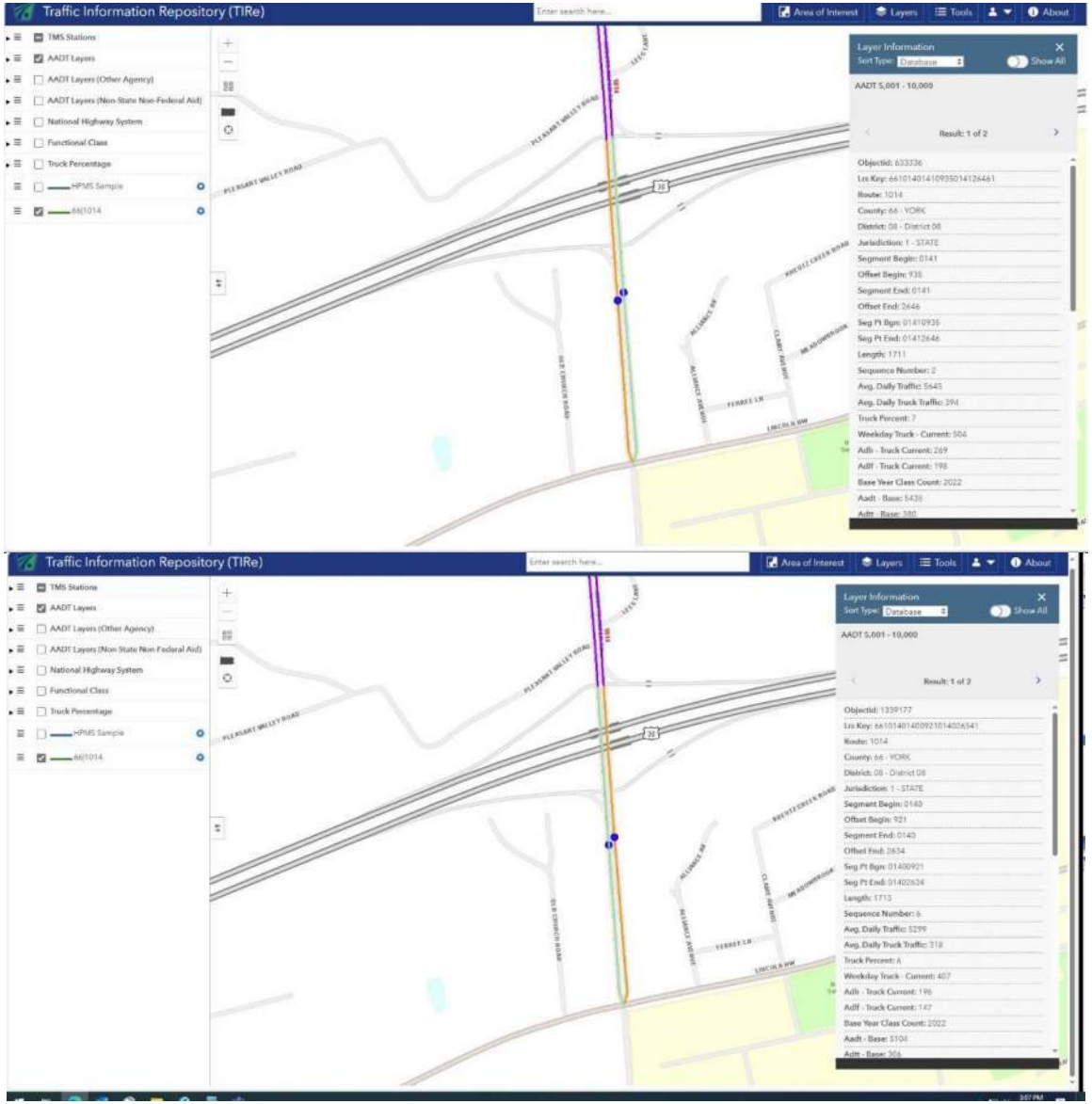
Truck ADT 2,899

US 30 Westbound



Truck ADT 2,709

North/South Kreutz Creek Road (SR 1014)



Truck ADT 394(N)+318(S)=712 Total

Trip Distribution Calculation References

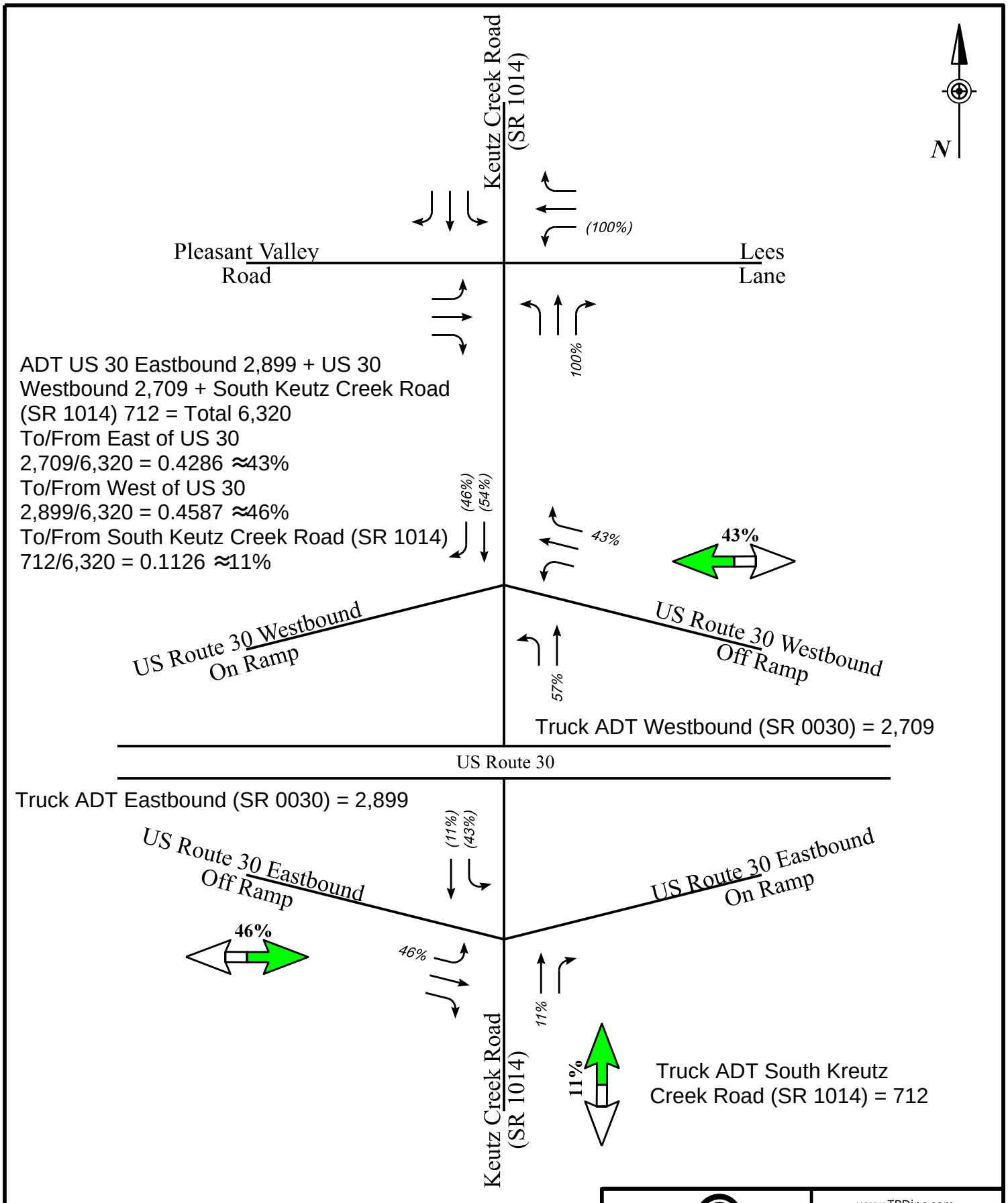


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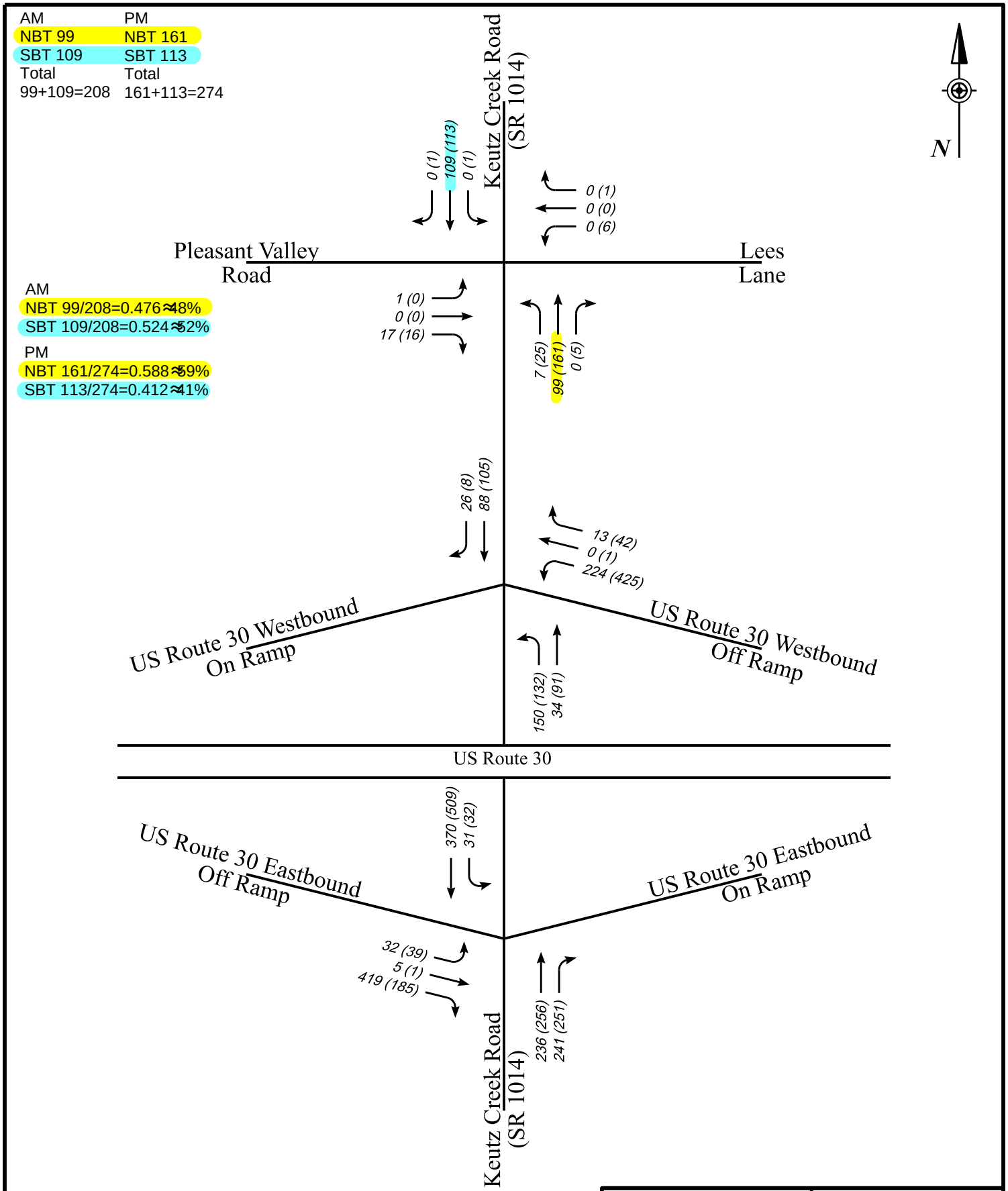
FIGURE 8

LEES LANE DEVELOPMENT
ENTER (EXIT) NEW TRIP PERCENT
WAREHOUSE HEAVY VEHICLE



KEY:

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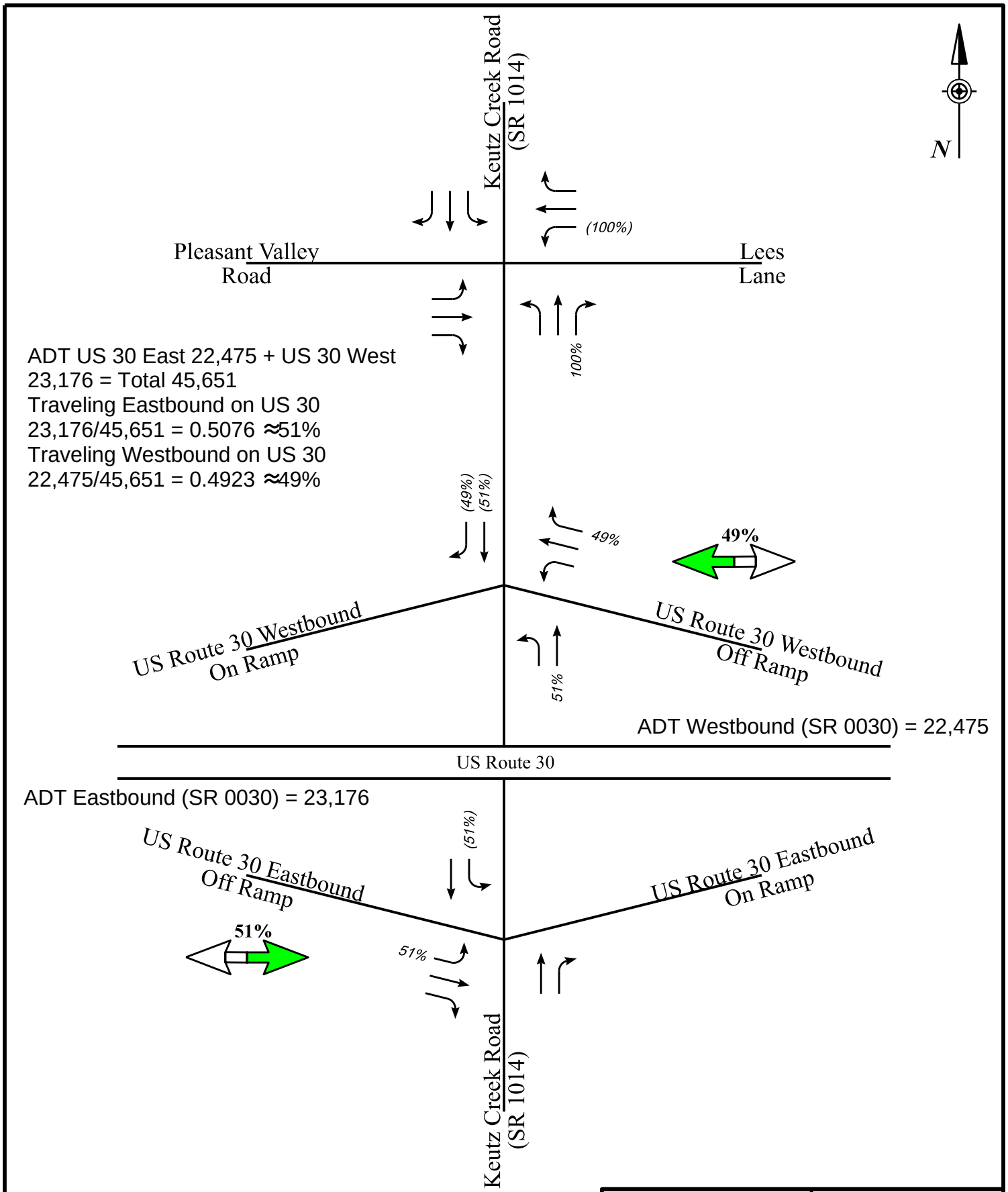
FIGURE 4 Ref Figure 9

2025 EXISTING CONIDTIONS
WEEKDAY AM (PM) PEAK HOUR
PASSENGER VEHICLES



KEY:

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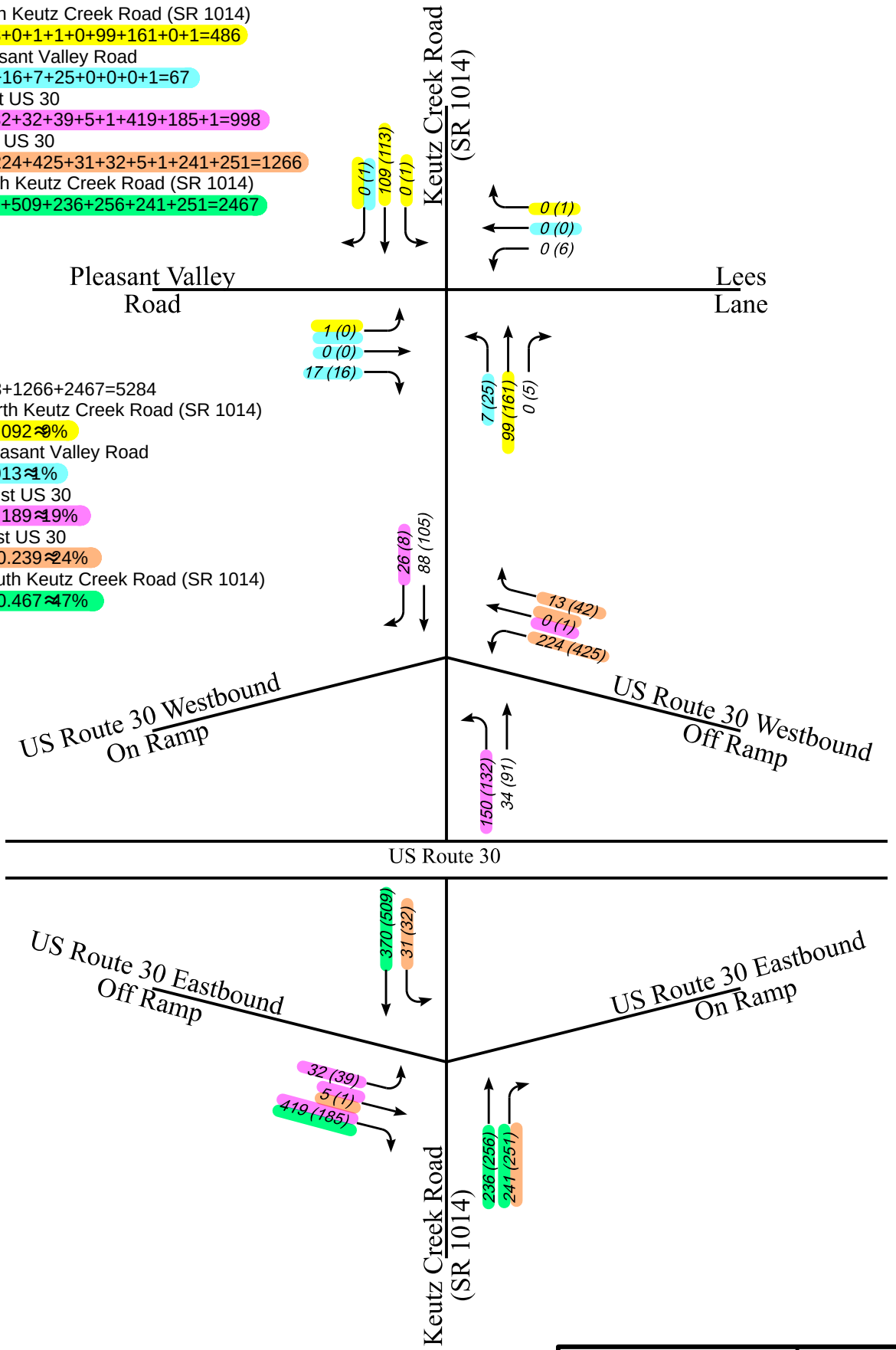
FIGURE 10

LEES LANE DEVELOPMENT
ENTER (EXIT) DIVERTED PERCENT
GAS STATION PASSENGER VECHICLE

To/From North Keutz Creek Road (SR 1014)
0+1+109+113+0+1+1+0+99+161+0+1=486
To/From Pleasant Valley Road
1+0+0+0+17+16+7+25+0+0+0+1=67
To/From West US 30
26+8+150+132+32+39+5+1+419+185+1=998
To/From East US 30
13+42+0+1+224+425+31+32+5+1+241+251=1266
To/From South Keutz Creek Road (SR 1014)
419+185+370+509+236+256+241+251=2467



Total Trips
486+67+998+1266+2467=5284
To/From North Keutz Creek Road (SR 1014)
486/5284=0.092≈9%
To/From Pleasant Valley Road
67/5284=0.013≈1%
To/From West US 30
998/5284=0.189≈19%
To/From East US 30
1266/5284=0.239≈24%
To/From South Keutz Creek Road (SR 1014)
2467/5284=0.467≈47%

KEY:
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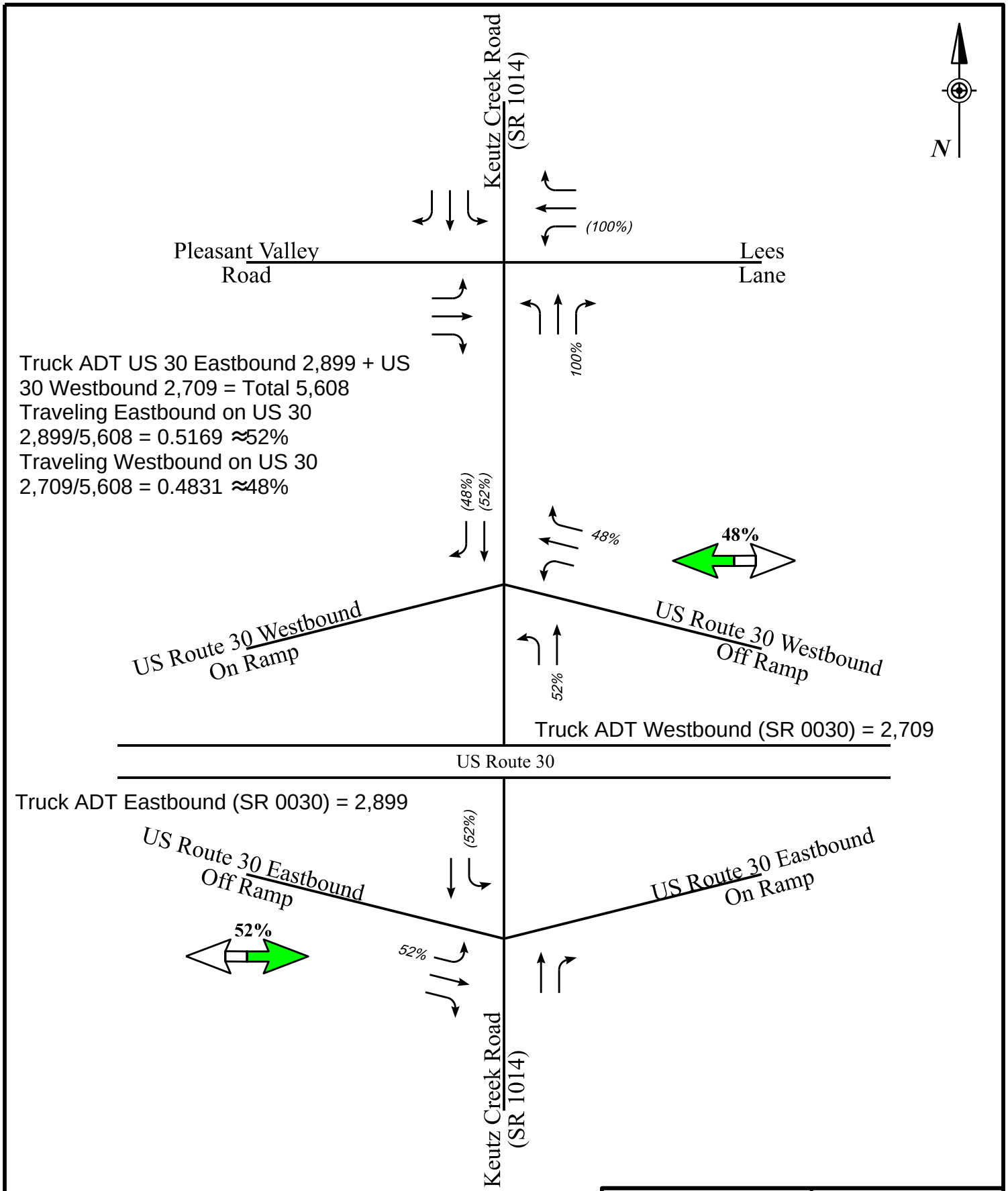
FIGURE 4 Ref Figure 11

2025 EXISTING CONIDTIONS
WEEKDAY AM (PM) PEAK HOUR
PASSENGER VEHICLES



KEY:

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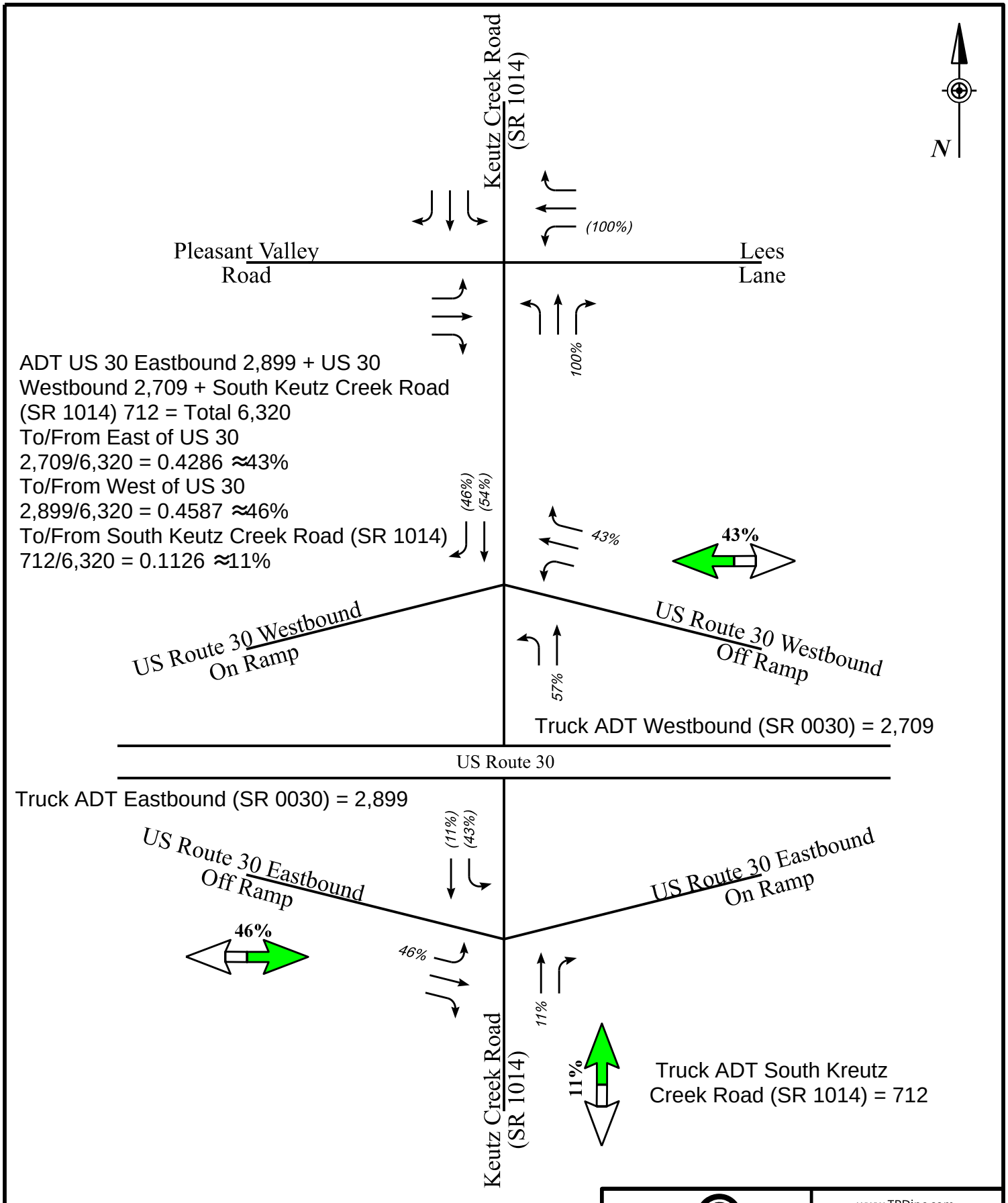
FIGURE 12

LEES LANE DEVELOPMENT
ENTER (EXIT) DIVERTED PERCENT
GAS STATION HEAVY VEHICLE



KEY:

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FIGURE 13

LEES LANE DEVELOPMENT
ENTER (EXIT) NEW TRIP PERCENT
GAS STATION HEAVY VEHICLE

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025

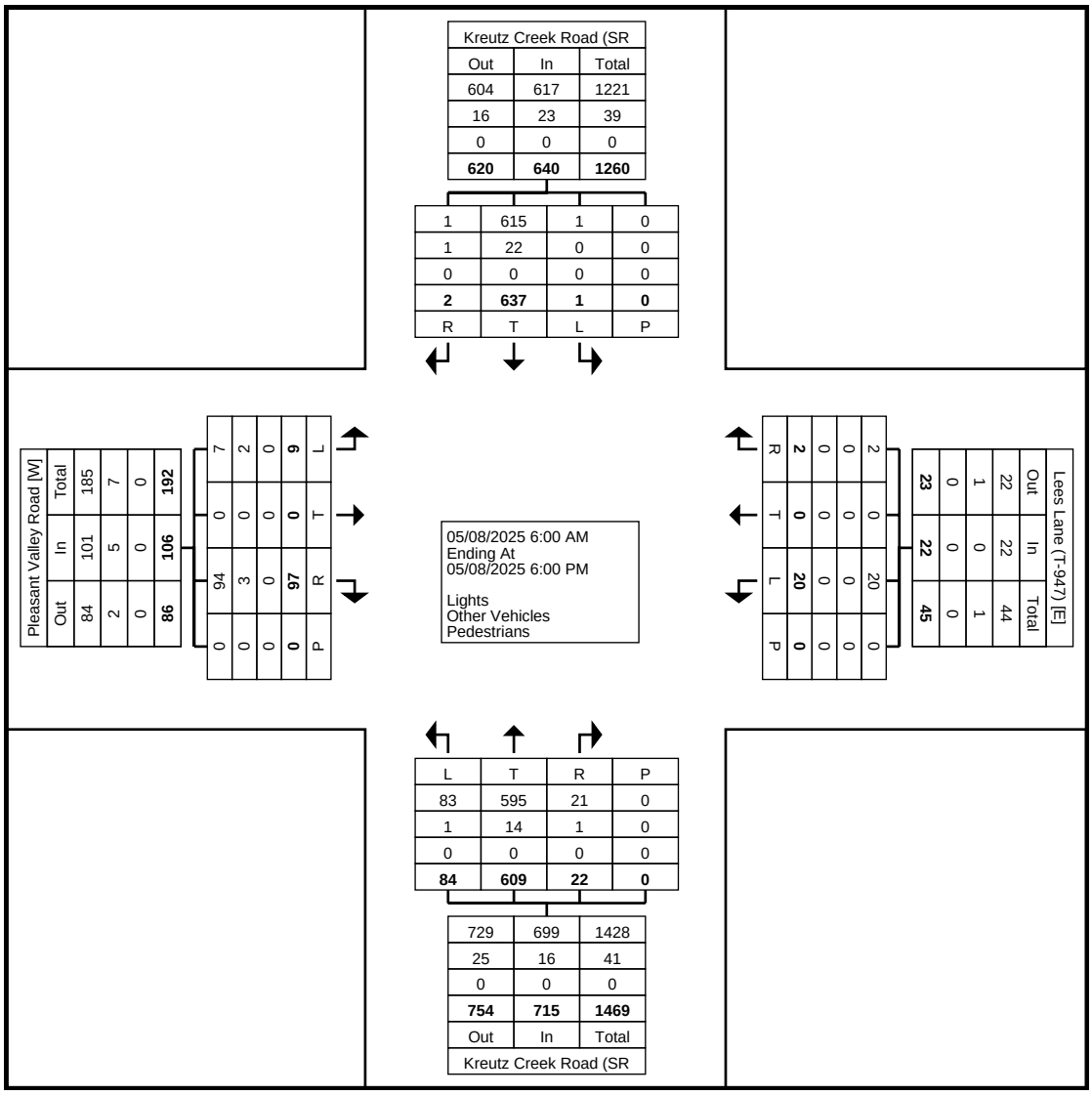
Turning Movement Data

Start Time	Pleasant Valley Road Eastbound					Lees Lane (T-947) Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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
6:00 AM	0	0	2	0	2	0	0	0	0	0	1	5	1	0	7	0	13	0	0	13	22
6:15 AM	0	0	1	0	1	0	0	0	0	0	0	7	1	0	8	0	20	0	0	20	29
6:30 AM	1	0	4	0	5	0	0	0	0	0	0	11	0	0	11	0	38	0	0	38	54
6:45 AM	0	0	5	0	5	0	0	0	0	0	1	13	0	0	14	0	25	0	0	25	44
Hourly Total	1	0	12	0	13	0	0	0	0	0	2	36	2	0	40	0	96	0	0	96	149
7:00 AM	0	0	5	0	5	0	0	0	0	0	2	19	0	0	21	0	30	1	0	31	57
7:15 AM	1	0	7	0	8	0	0	0	0	0	2	36	0	0	38	0	23	0	0	23	69
7:30 AM	0	0	3	0	3	0	0	0	0	0	3	20	0	0	23	0	33	0	0	33	59
7:45 AM	1	0	3	0	4	0	0	0	0	0	0	26	0	0	26	0	28	0	0	28	58
Hourly Total	2	0	18	0	20	0	0	0	0	0	7	101	0	0	108	0	114	1	0	115	243
8:00 AM	1	0	3	0	4	0	0	0	0	0	2	16	1	0	19	0	31	0	0	31	54
8:15 AM	1	0	6	0	7	1	0	0	0	1	2	16	1	0	19	0	24	0	0	24	51
8:30 AM	1	0	0	0	1	0	0	0	0	0	1	12	3	0	16	0	28	0	0	28	45
8:45 AM	0	0	3	0	3	1	0	0	0	1	3	16	3	0	22	0	21	0	0	21	47
Hourly Total	3	0	12	0	15	2	0	0	0	2	8	60	8	0	76	0	104	0	0	104	197
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	0	1	0	2	1	0	1	0	2	3	37	2	0	42	0	23	0	0	23	69
3:15 PM	0	0	3	0	3	4	0	0	0	4	10	30	0	0	40	0	28	0	0	28	75
3:30 PM	0	0	9	0	9	0	0	0	0	0	4	33	1	0	38	0	25	0	0	25	72
3:45 PM	0	0	5	0	5	0	0	0	0	0	4	33	0	0	37	0	38	0	0	38	80
Hourly Total	1	0	18	0	19	5	0	1	0	6	21	133	3	0	157	0	114	0	0	114	296
4:00 PM	1	0	6	0	7	0	0	0	0	0	6	36	0	0	42	0	29	0	0	29	78
4:15 PM	0	0	9	0	9	3	0	0	0	3	9	27	1	0	37	0	21	0	0	21	70
4:30 PM	0	0	2	0	2	0	0	0	0	0	5	35	0	0	40	0	28	0	0	28	70
4:45 PM	0	0	3	0	3	0	0	1	0	1	7	45	1	0	53	0	34	0	0	34	91
Hourly Total	1	0	20	0	21	3	0	1	0	4	27	143	2	0	172	0	112	0	0	112	309
5:00 PM	0	0	1	0	1	3	0	0	0	3	5	36	4	0	45	0	28	0	0	28	77
5:15 PM	0	0	10	0	10	3	0	0	0	3	8	45	0	0	53	1	25	1	0	27	93
5:30 PM	0	0	5	0	5	1	0	0	0	1	3	33	2	0	38	0	19	0	0	19	63
5:45 PM	1	0	1	0	2	3	0	0	0	3	3	22	1	0	26	0	25	0	0	25	56
Hourly Total	1	0	17	0	18	10	0	0	0	10	19	136	7	0	162	1	97	1	0	99	289
Grand Total	9	0	97	0	106	20	0	2	0	22	84	609	22	0	715	1	637	2	0	640	1483
Approach %	8.5	0.0	91.5	-	-	90.9	0.0	9.1	-	-	11.7	85.2	3.1	-	-	0.2	99.5	0.3	-	-	-
Total %	0.6	0.0	6.5	-	7.1	1.3	0.0	0.1	-	1.5	5.7	41.1	1.5	-	48.2	0.1	43.0	0.1	-	43.2	-
Lights	7	0	94	-	101	20	0	2	-	22	83	595	21	-	699	1	615	1	-	617	1439
% Lights	77.8	-	96.9	-	95.3	100.0	-	100.0	-	100.0	98.8	97.7	95.5	-	97.8	100.0	96.5	50.0	-	96.4	97.0
Other Vehicles	2	0	3	-	5	0	0	0	-	0	1	14	1	-	16	0	22	1	-	23	44
% Other Vehicles	22.2	-	3.1	-	4.7	0.0	-	0.0	-	0.0	1.2	2.3	4.5	-	2.2	0.0	3.5	50.0	-	3.6	3.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025



Turning Movement Data Plot

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025

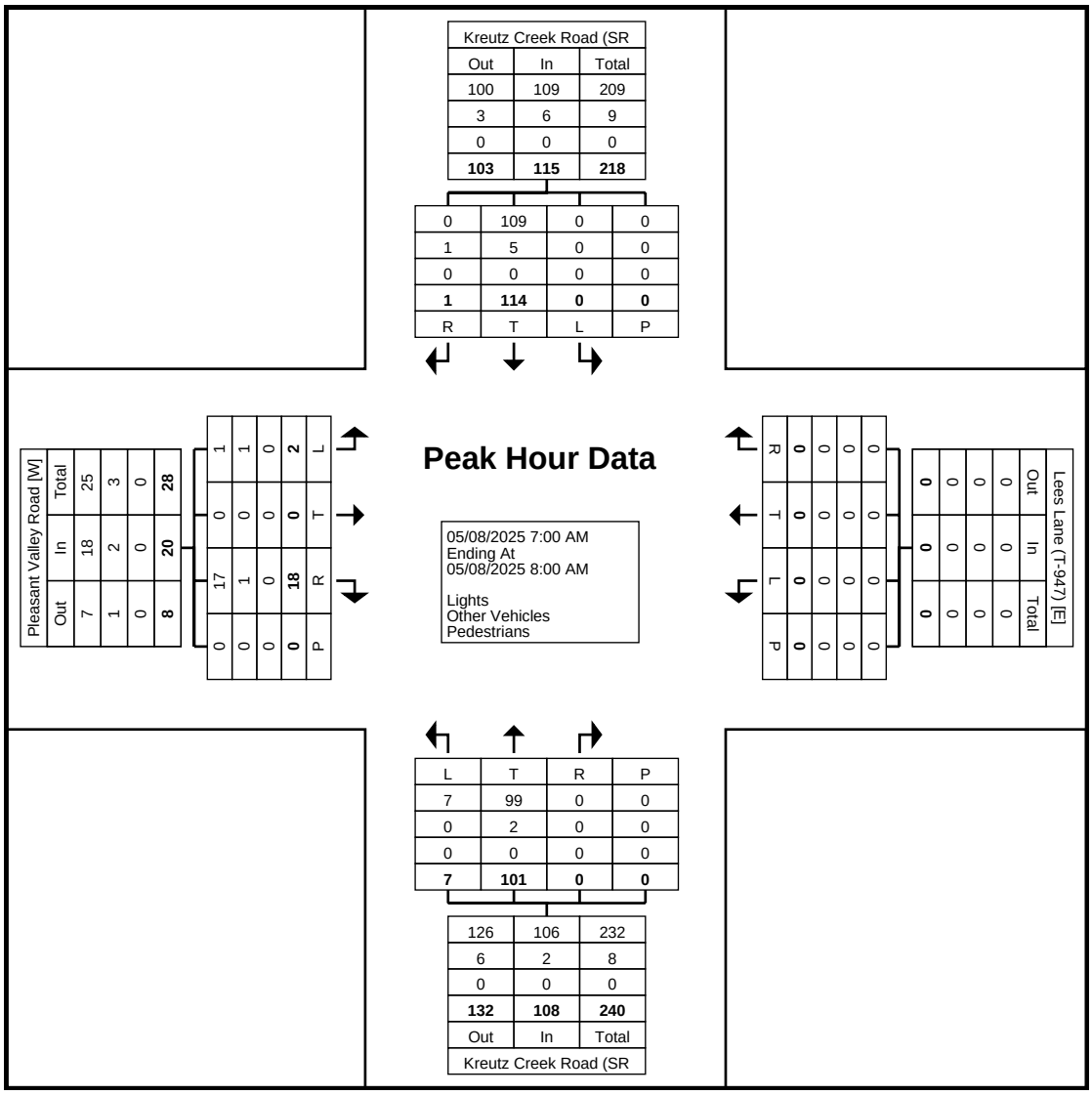
Turning Movement Peak Hour Data (7:00 AM)

Start Time	Pleasant Valley Road Eastbound					Lees Lane (T-947) Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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 AM	0	0	5	0	5	0	0	0	0	0	2	19	0	0	21	0	30	1	0	31	57
7:15 AM	1	0	7	0	8	0	0	0	0	0	2	36	0	0	38	0	23	0	0	23	69
7:30 AM	0	0	3	0	3	0	0	0	0	0	3	20	0	0	23	0	33	0	0	33	59
7:45 AM	1	0	3	0	4	0	0	0	0	0	0	26	0	0	26	0	28	0	0	28	58
Total	2	0	18	0	20	0	0	0	0	0	7	101	0	0	108	0	114	1	0	115	243
Approach %	10.0	0.0	90.0	-	-	0.0	0.0	0.0	-	-	6.5	93.5	0.0	-	-	0.0	99.1	0.9	-	-	-
Total %	0.8	0.0	7.4	-	8.2	0.0	0.0	0.0	-	0.0	2.9	41.6	0.0	-	44.4	0.0	46.9	0.4	-	47.3	-
PHF	0.500	0.000	0.643	-	0.625	0.000	0.000	0.000	-	0.000	0.583	0.701	0.000	-	0.711	0.000	0.864	0.250	-	0.871	0.880
Lights	1	0	17	-	18	0	0	0	-	0	7	99	0	-	106	0	109	0	-	109	233
% Lights	50.0	-	94.4	-	90.0	-	-	-	-	-	100.0	98.0	-	-	98.1	-	95.6	0.0	-	94.8	95.9
Other Vehicles	1	0	1	-	2	0	0	0	-	0	0	2	0	-	2	0	5	1	-	6	10
% Other Vehicles	50.0	-	5.6	-	10.0	-	-	-	-	-	0.0	2.0	-	-	1.9	-	4.4	100.0	-	5.2	4.1
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Counter Mio:
Set up by JH:

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (7:00 AM)

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Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Pleasant Valley Road Eastbound					Lees Lane (T-947) Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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
4:30 PM	0	0	2	0	2	0	0	0	0	0	5	35	0	0	40	0	28	0	0	28	70
4:45 PM	0	0	3	0	3	0	0	1	0	1	7	45	1	0	53	0	34	0	0	34	91
5:00 PM	0	0	1	0	1	3	0	0	0	3	5	36	4	0	45	0	28	0	0	28	77
5:15 PM	0	0	10	0	10	3	0	0	0	3	8	45	0	0	53	1	25	1	0	27	93
Total	0	0	16	0	16	6	0	1	0	7	25	161	5	0	191	1	115	1	0	117	331
Approach %	0.0	0.0	100.0	-	-	85.7	0.0	14.3	-	-	13.1	84.3	2.6	-	-	0.9	98.3	0.9	-	-	-
Total %	0.0	0.0	4.8	-	4.8	1.8	0.0	0.3	-	2.1	7.6	48.6	1.5	-	57.7	0.3	34.7	0.3	-	35.3	-
PHF	0.000	0.000	0.400	-	0.400	0.500	0.000	0.250	-	0.583	0.781	0.894	0.313	-	0.901	0.250	0.846	0.250	-	0.860	0.890
Lights	0	0	16	-	16	6	0	1	-	7	25	161	5	-	191	1	113	1	-	115	329
% Lights	-	-	100.0	-	100.0	100.0	-	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	98.3	100.0	-	98.3	99.4
Other Vehicles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	2	0	-	2	2
% Other Vehicles	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	1.7	0.0	-	1.7	0.6
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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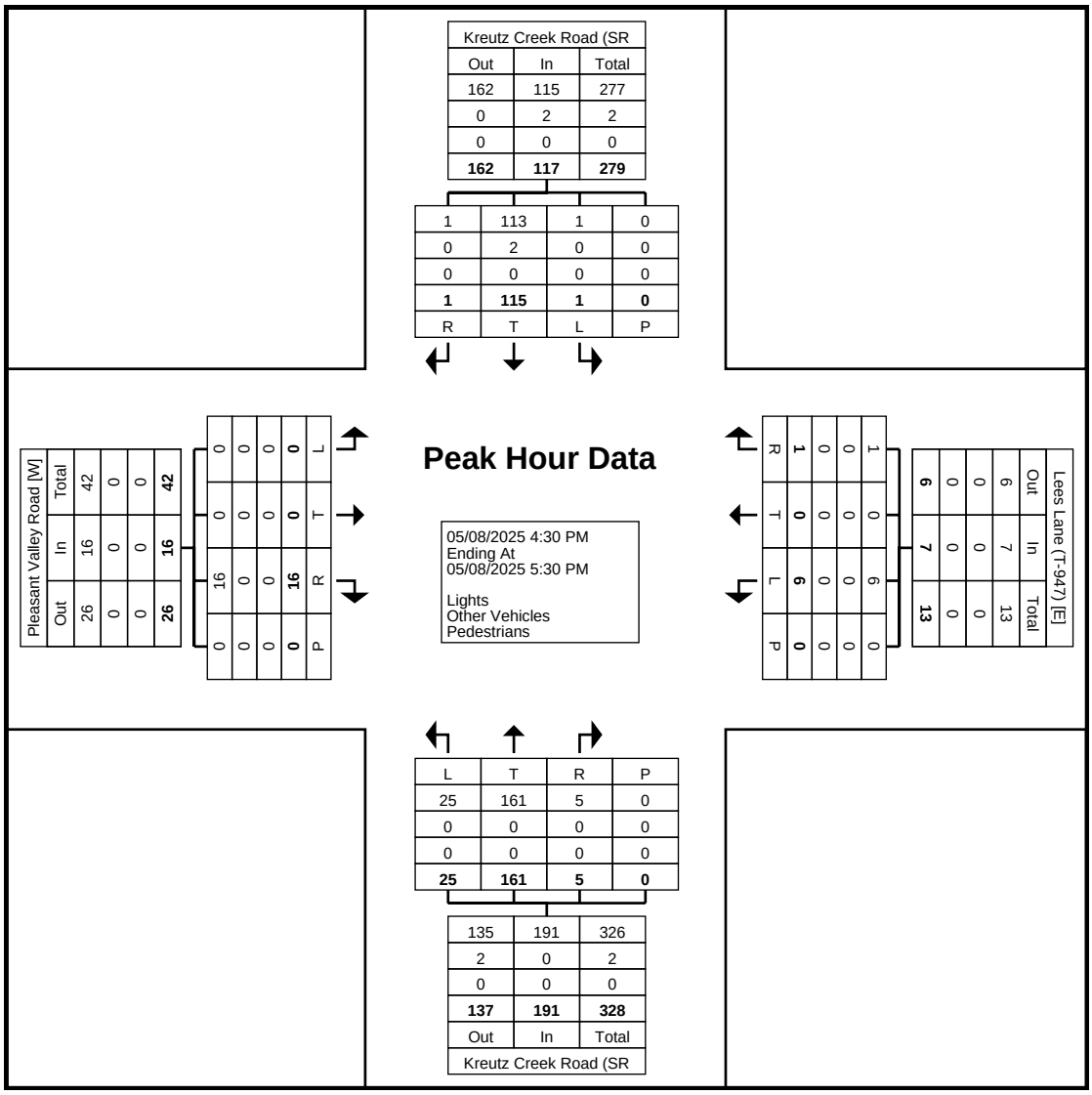
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (4:30 PM)

Counter Mio:
Set up by JH:

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2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhertzler@tpdinc.com

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025

Turning Movement Data

Start Time	US Route 30 East Ramps Eastbound					US Route 30 East Ramps Westbound		Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
6:00 AM	1	0	12	0	13	0	0	51	86	0	137	6	30	0	36	186
6:15 AM	1	0	17	0	18	0	0	36	89	0	125	9	42	0	51	194
6:30 AM	0	1	25	0	26	0	0	52	115	0	167	12	53	0	65	258
6:45 AM	2	0	87	0	89	0	0	56	81	0	137	15	65	0	80	306
Hourly Total	4	1	141	0	146	0	0	195	371	0	566	42	190	0	232	944
7:00 AM	4	3	128	0	135	0	0	58	73	0	131	8	81	0	89	355
7:15 AM	18	2	102	0	122	0	0	76	83	0	159	10	102	0	112	393
7:30 AM	3	0	94	0	97	0	0	60	64	0	124	9	101	0	110	331
7:45 AM	8	0	132	0	140	0	0	52	29	0	81	4	102	0	106	327
Hourly Total	33	5	456	0	494	0	0	246	249	0	495	31	386	0	417	1406
8:00 AM	10	12	65	0	87	0	0	47	71	0	118	9	70	0	79	284
8:15 AM	4	0	30	0	34	0	0	54	54	0	108	7	61	0	68	210
8:30 AM	8	0	27	0	35	0	0	45	75	0	120	4	70	0	74	229
8:45 AM	6	1	46	0	53	0	0	43	57	0	100	7	62	0	69	222
Hourly Total	28	13	168	0	209	0	0	189	257	0	446	27	263	0	290	945
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	6	0	41	0	47	0	0	69	58	0	127	8	74	0	82	256
3:15 PM	12	0	58	0	70	0	0	41	48	0	89	4	95	0	99	258
3:30 PM	9	0	49	1	58	0	0	54	66	0	120	3	112	0	115	293
3:45 PM	6	0	65	0	71	0	0	58	50	0	108	11	125	0	136	315
Hourly Total	33	0	213	1	246	0	0	222	222	0	444	26	406	0	432	1122
4:00 PM	6	0	42	0	48	0	0	76	78	0	154	11	97	0	108	310
4:15 PM	12	0	48	0	60	0	0	51	69	0	120	9	140	0	149	329
4:30 PM	4	0	39	0	43	0	0	70	57	0	127	5	142	0	147	317
4:45 PM	12	1	43	0	56	0	0	60	68	0	128	7	134	0	141	325
Hourly Total	34	1	172	0	207	0	0	257	272	0	529	32	513	0	545	1281
5:00 PM	11	0	48	0	59	0	0	68	77	0	145	10	105	0	115	319
5:15 PM	12	0	58	0	70	0	0	61	55	0	116	10	134	0	144	330
5:30 PM	12	0	54	0	66	0	0	53	53	0	106	8	121	0	129	301
5:45 PM	6	0	64	0	70	0	0	52	57	0	109	6	99	0	105	284
Hourly Total	41	0	224	0	265	0	0	234	242	0	476	34	459	0	493	1234
Grand Total	173	20	1374	1	1567	0	0	1343	1613	0	2956	192	2217	0	2409	6932
Approach %	11.0	1.3	87.7	-	-	-	-	45.4	54.6	-	-	8.0	92.0	-	-	-
Total %	2.5	0.3	19.8	-	22.6	-	0.0	19.4	23.3	-	42.6	2.8	32.0	-	34.8	-
Lights	166	18	1303	-	1487	-	0	1293	1559	-	2852	192	2158	-	2350	6689
% Lights	96.0	90.0	94.8	-	94.9	-	-	96.3	96.7	-	96.5	100.0	97.3	-	97.6	96.5
Other Vehicles	7	2	71	-	80	-	0	50	54	-	104	0	59	-	59	243
% Other Vehicles	4.0	10.0	5.2	-	5.1	-	-	3.7	3.3	-	3.5	0.0	2.7	-	2.4	3.5
Pedestrians	-	-	-	1	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Counter Mio:
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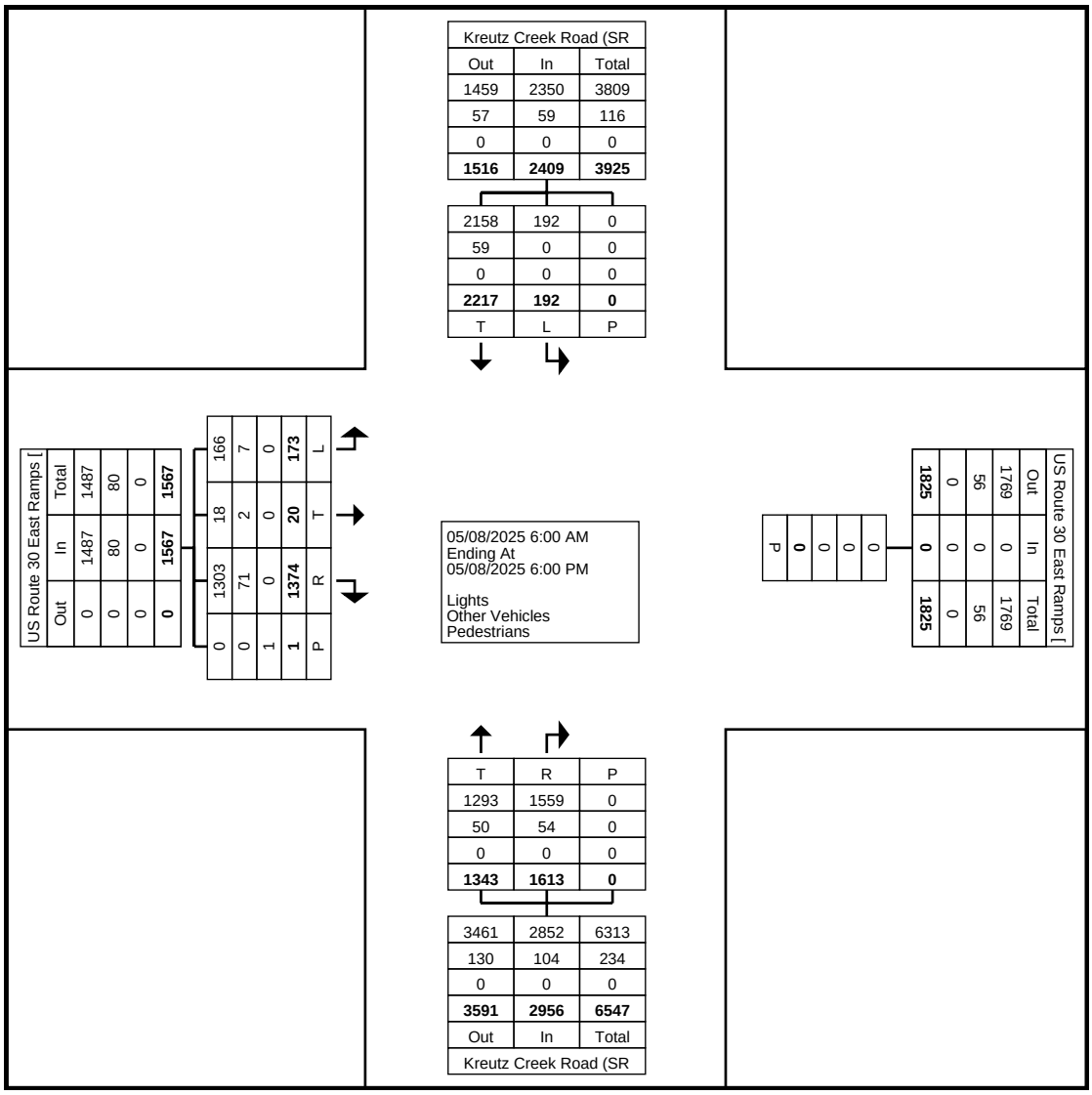
Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025



Turning Movement Data Plot

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Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025

Turning Movement Peak Hour Data (7:00 AM)

Start Time	US Route 30 East Ramps Eastbound					US Route 30 East Ramps Westbound		Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
7:00 AM	4	3	128	0	135	0	0	58	73	0	131	8	81	0	89	355
7:15 AM	18	2	102	0	122	0	0	76	83	0	159	10	102	0	112	393
7:30 AM	3	0	94	0	97	0	0	60	64	0	124	9	101	0	110	331
7:45 AM	8	0	132	0	140	0	0	52	29	0	81	4	102	0	106	327
Total	33	5	456	0	494	0	0	246	249	0	495	31	386	0	417	1406
Approach %	6.7	1.0	92.3	-	-	-	-	49.7	50.3	-	-	7.4	92.6	-	-	-
Total %	2.3	0.4	32.4	-	35.1	-	0.0	17.5	17.7	-	35.2	2.2	27.5	-	29.7	-
PHF	0.458	0.417	0.864	-	0.882	-	0.000	0.809	0.750	-	0.778	0.775	0.946	-	0.931	0.894
Lights	32	5	419	-	456	-	0	236	241	-	477	31	370	-	401	1334
% Lights	97.0	100.0	91.9	-	92.3	-	-	95.9	96.8	-	96.4	100.0	95.9	-	96.2	94.9
Other Vehicles	1	0	37	-	38	-	0	10	8	-	18	0	16	-	16	72
% Other Vehicles	3.0	0.0	8.1	-	7.7	-	-	4.1	3.2	-	3.6	0.0	4.1	-	3.8	5.1
Pedestrians	-	-	-	0	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Counter Mio:
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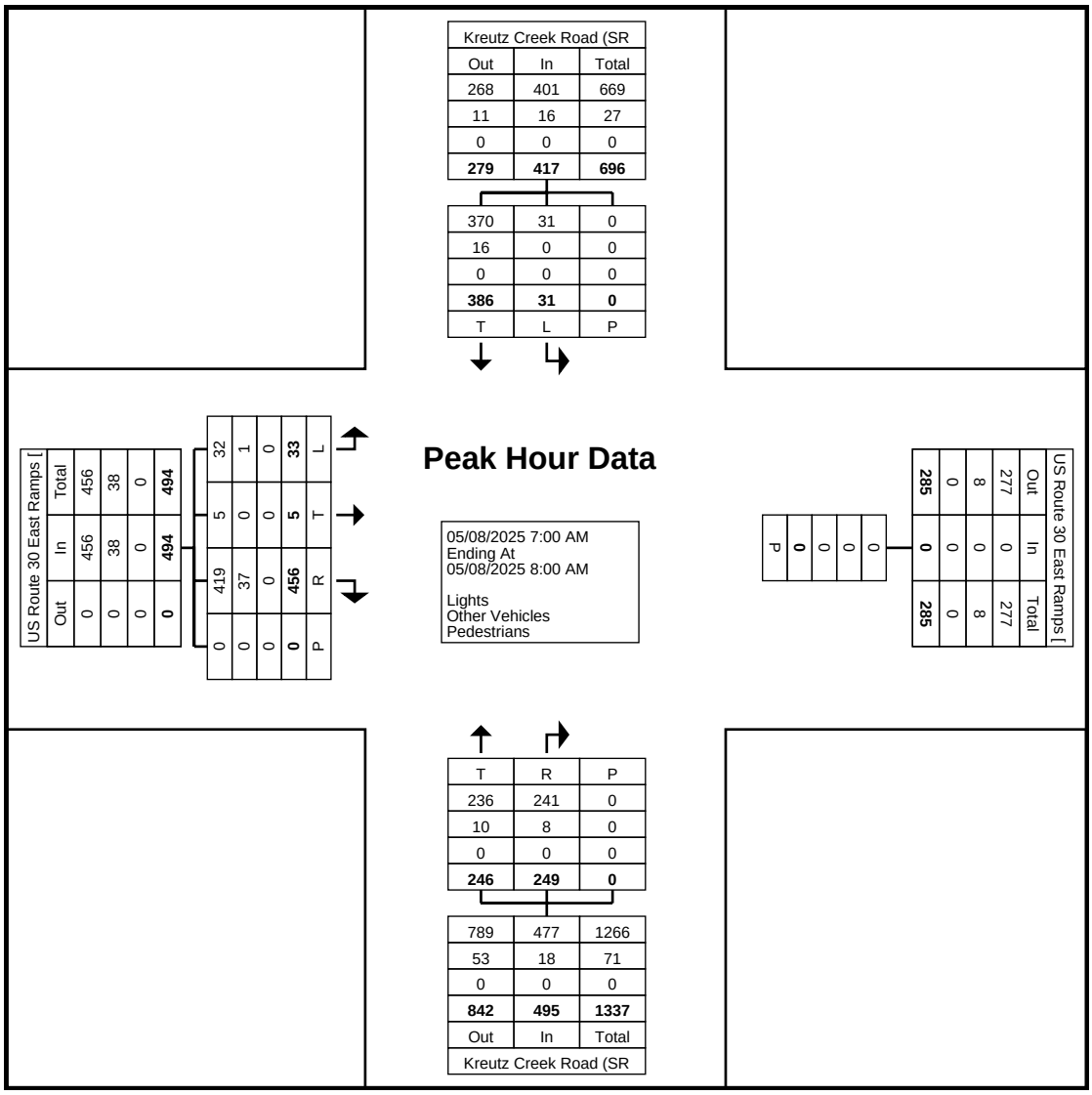
Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (7:00 AM)

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Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	US Route 30 East Ramps Eastbound					US Route 30 East Ramps Westbound		Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
4:30 PM	4	0	39	0	43	0	0	70	57	0	127	5	142	0	147	317
4:45 PM	12	1	43	0	56	0	0	60	68	0	128	7	134	0	141	325
5:00 PM	11	0	48	0	59	0	0	68	77	0	145	10	105	0	115	319
5:15 PM	12	0	58	0	70	0	0	61	55	0	116	10	134	0	144	330
Total	39	1	188	0	228	0	0	259	257	0	516	32	515	0	547	1291
Approach %	17.1	0.4	82.5	-	-	-	-	50.2	49.8	-	-	5.9	94.1	-	-	-
Total %	3.0	0.1	14.6	-	17.7	-	0.0	20.1	19.9	-	40.0	2.5	39.9	-	42.4	-
PHF	0.813	0.250	0.810	-	0.814	-	0.000	0.925	0.834	-	0.890	0.800	0.907	-	0.930	0.978
Lights	39	1	185	-	225	-	0	256	251	-	507	32	509	-	541	1273
% Lights	100.0	100.0	98.4	-	98.7	-	-	98.8	97.7	-	98.3	100.0	98.8	-	98.9	98.6
Other Vehicles	0	0	3	-	3	-	0	3	6	-	9	0	6	-	6	18
% Other Vehicles	0.0	0.0	1.6	-	1.3	-	-	1.2	2.3	-	1.7	0.0	1.2	-	1.1	1.4
Pedestrians	-	-	-	0	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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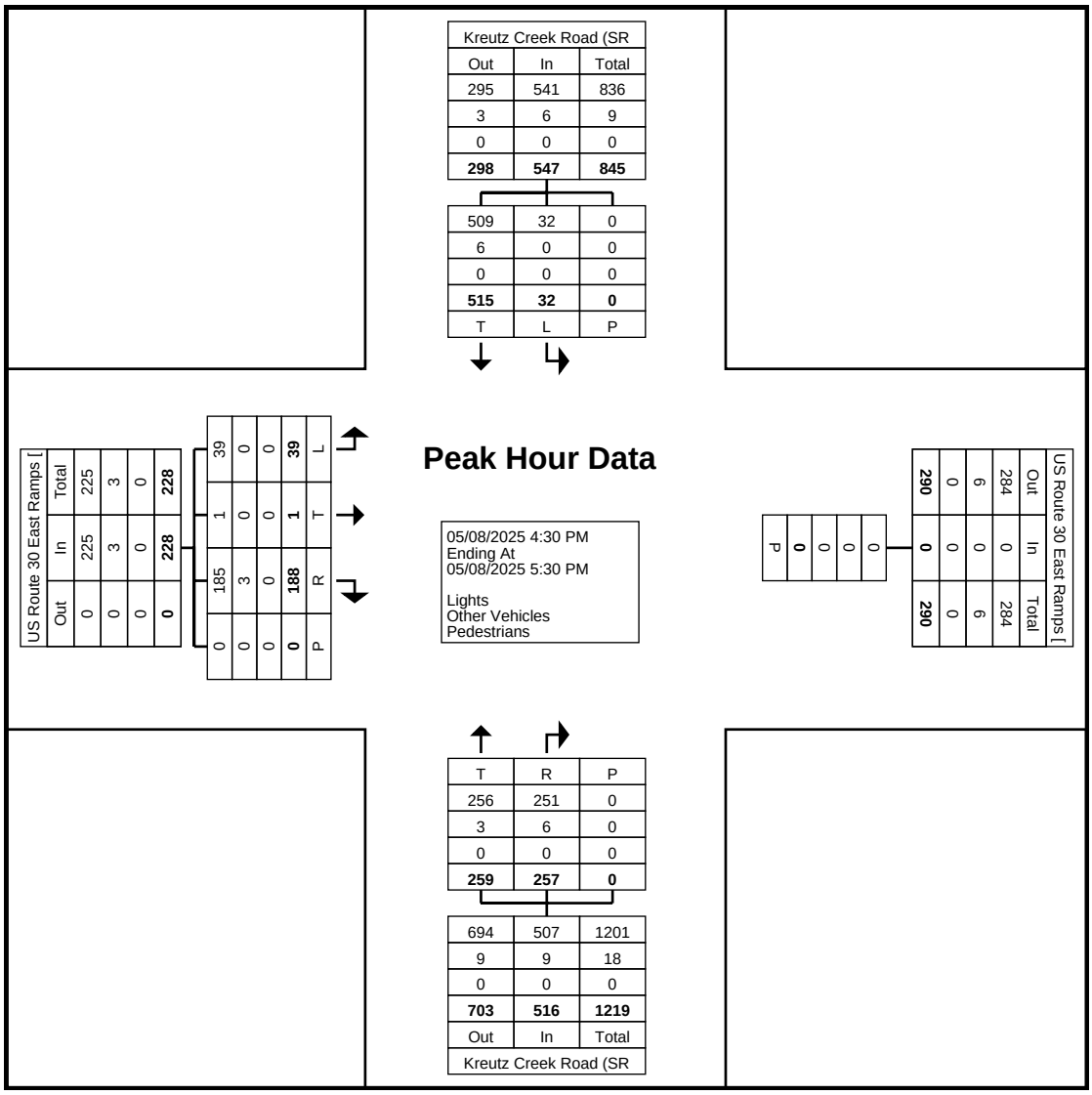
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (4:30 PM)

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610.326.3100 jhertzler@tpdinc.com

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code:
Start Date: 05/22/2025

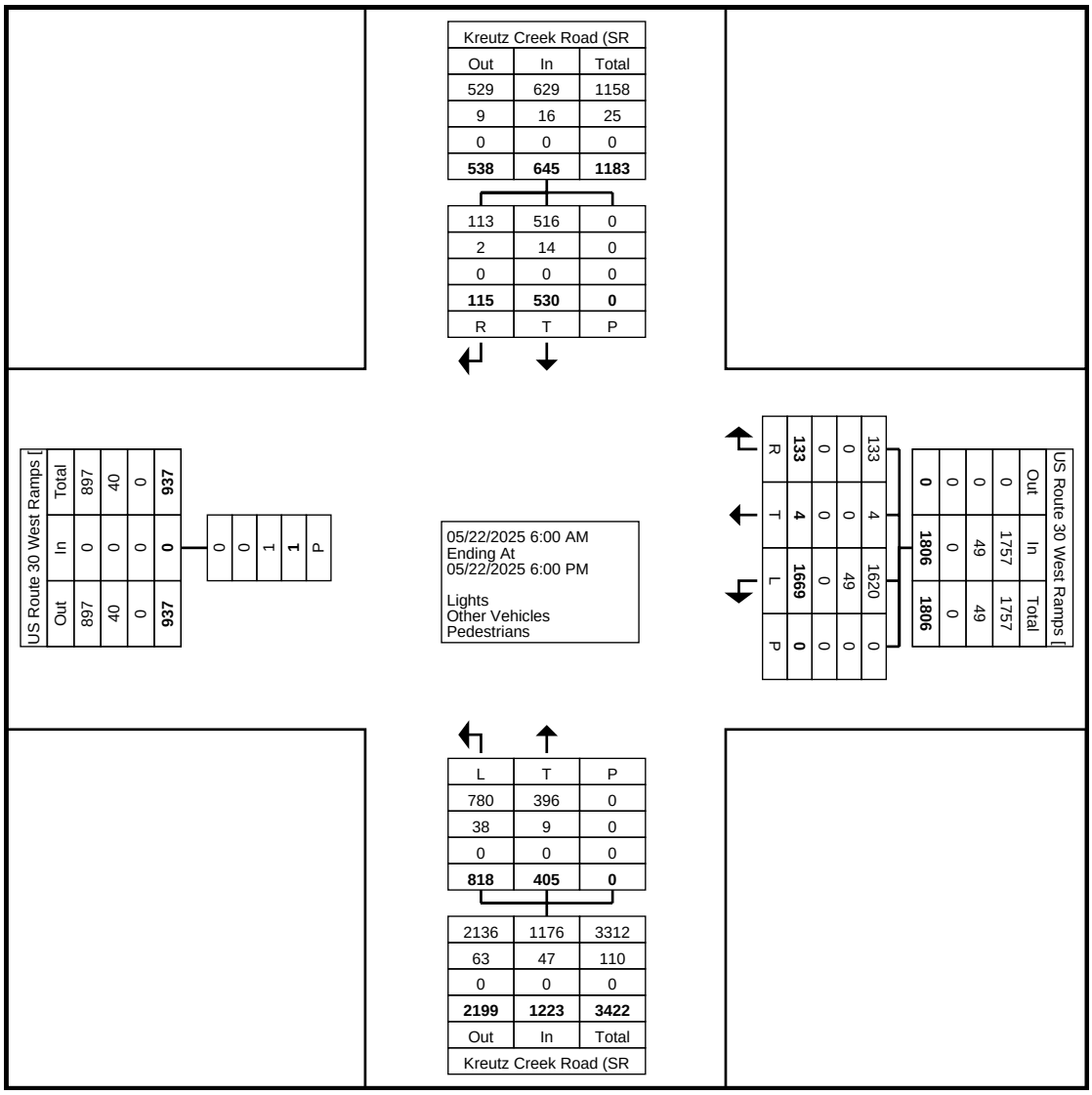
Turning Movement Data

Start Time	US Route 30 West Ramps Eastbound		US Route 30 West Ramps Westbound					Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	
6:00 AM	0	0	24	0	2	0	26	38	9	0	47	13	9	0	22	95
6:15 AM	0	0	33	1	1	0	35	20	13	0	33	19	2	0	21	89
6:30 AM	0	0	26	0	3	0	29	42	7	0	49	21	10	0	31	109
6:45 AM	0	0	53	0	6	0	59	47	5	0	52	23	5	0	28	139
Hourly Total	0	0	136	1	12	0	149	147	34	0	181	76	26	0	102	432
7:00 AM	0	0	45	0	2	0	47	35	11	0	46	24	4	0	28	121
7:15 AM	0	0	59	0	7	0	66	47	6	0	53	22	8	0	30	149
7:30 AM	0	0	58	0	1	0	59	46	11	0	57	21	9	0	30	146
7:45 AM	0	0	73	0	3	0	76	33	7	0	40	22	5	0	27	143
Hourly Total	0	0	235	0	13	0	248	161	35	0	196	89	26	0	115	559
8:00 AM	0	0	39	0	1	0	40	26	8	0	34	16	4	0	20	94
8:15 AM	0	0	42	0	2	0	44	25	10	0	35	32	5	0	37	116
8:30 AM	0	0	39	0	3	0	42	34	8	0	42	23	5	0	28	112
8:45 AM	0	0	36	0	0	0	36	36	19	0	55	24	2	0	26	117
Hourly Total	0	0	156	0	6	0	162	121	45	0	166	95	16	0	111	439
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	72	0	4	0	76	32	26	0	58	21	4	0	25	159
3:15 PM	0	0	83	1	6	0	90	41	23	0	64	18	4	0	22	176
3:30 PM	0	0	75	0	7	0	82	32	25	0	57	22	6	0	28	167
3:45 PM	0	0	109	0	11	0	120	41	21	0	62	24	7	0	31	213
Hourly Total	0	0	339	1	28	0	368	146	95	0	241	85	21	0	106	715
4:00 PM	1	0	98	0	8	0	106	31	35	0	66	23	7	0	30	202
4:15 PM	0	0	103	1	10	0	114	24	24	0	48	22	4	0	26	188
4:30 PM	0	0	105	0	8	0	113	38	28	0	66	17	2	0	19	198
4:45 PM	0	0	109	0	9	0	118	31	23	0	54	34	2	0	36	208
Hourly Total	1	0	415	1	35	0	451	124	110	0	234	96	15	0	111	796
5:00 PM	0	0	114	1	8	0	123	30	22	0	52	24	1	0	25	200
5:15 PM	0	0	101	0	17	0	118	34	18	0	52	30	3	0	33	203
5:30 PM	0	0	100	0	7	0	107	23	28	0	51	22	3	0	25	183
5:45 PM	0	0	73	0	7	0	80	32	18	0	50	13	4	0	17	147
Hourly Total	0	0	388	1	39	0	428	119	86	0	205	89	11	0	100	733
Grand Total	1	0	1669	4	133	0	1806	818	405	0	1223	530	115	0	645	3674
Approach %	-	-	92.4	0.2	7.4	-	-	66.9	33.1	-	-	82.2	17.8	-	-	-
Total %	-	0.0	45.4	0.1	3.6	-	49.2	22.3	11.0	-	33.3	14.4	3.1	-	17.6	-
Lights	-	0	1620	4	133	-	1757	780	396	-	1176	516	113	-	629	3562
% Lights	-	-	97.1	100.0	100.0	-	97.3	95.4	97.8	-	96.2	97.4	98.3	-	97.5	97.0
Other Vehicles	-	0	49	0	0	-	49	38	9	-	47	14	2	-	16	112
% Other Vehicles	-	-	2.9	0.0	0.0	-	2.7	4.6	2.2	-	3.8	2.6	1.7	-	2.5	3.0
Pedestrians	1	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Counter Mio:
Set up by JH:

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code:
Start Date: 05/22/2025



Turning Movement Data Plot

Counter Mio:
Set up by JH:

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

Turning Movement Peak Hour Data (7:00 AM)

Start Time	US Route 30 West Ramps Eastbound		US Route 30 West Ramps Westbound					Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	
7:00 AM	0	0	45	0	2	0	47	35	11	0	46	24	4	0	28	121
7:15 AM	0	0	59	0	7	0	66	47	6	0	53	22	8	0	30	149
7:30 AM	0	0	58	0	1	0	59	46	11	0	57	21	9	0	30	146
7:45 AM	0	0	73	0	3	0	76	33	7	0	40	22	5	0	27	143
Total	0	0	235	0	13	0	248	161	35	0	196	89	26	0	115	559
Approach %	-	-	94.8	0.0	5.2	-	-	82.1	17.9	-	-	77.4	22.6	-	-	-
Total %	-	0.0	42.0	0.0	2.3	-	44.4	28.8	6.3	-	35.1	15.9	4.7	-	20.6	-
PHF	-	0.000	0.805	0.000	0.464	-	0.816	0.856	0.795	-	0.860	0.927	0.722	-	0.958	0.938
Lights	-	0	224	0	13	-	237	150	34	-	184	88	26	-	114	535
% Lights	-	-	95.3	-	100.0	-	95.6	93.2	97.1	-	93.9	98.9	100.0	-	99.1	95.7
Other Vehicles	-	0	11	0	0	-	11	11	1	-	12	1	0	-	1	24
% Other Vehicles	-	-	4.7	-	0.0	-	4.4	6.8	2.9	-	6.1	1.1	0.0	-	0.9	4.3
Pedestrians	0	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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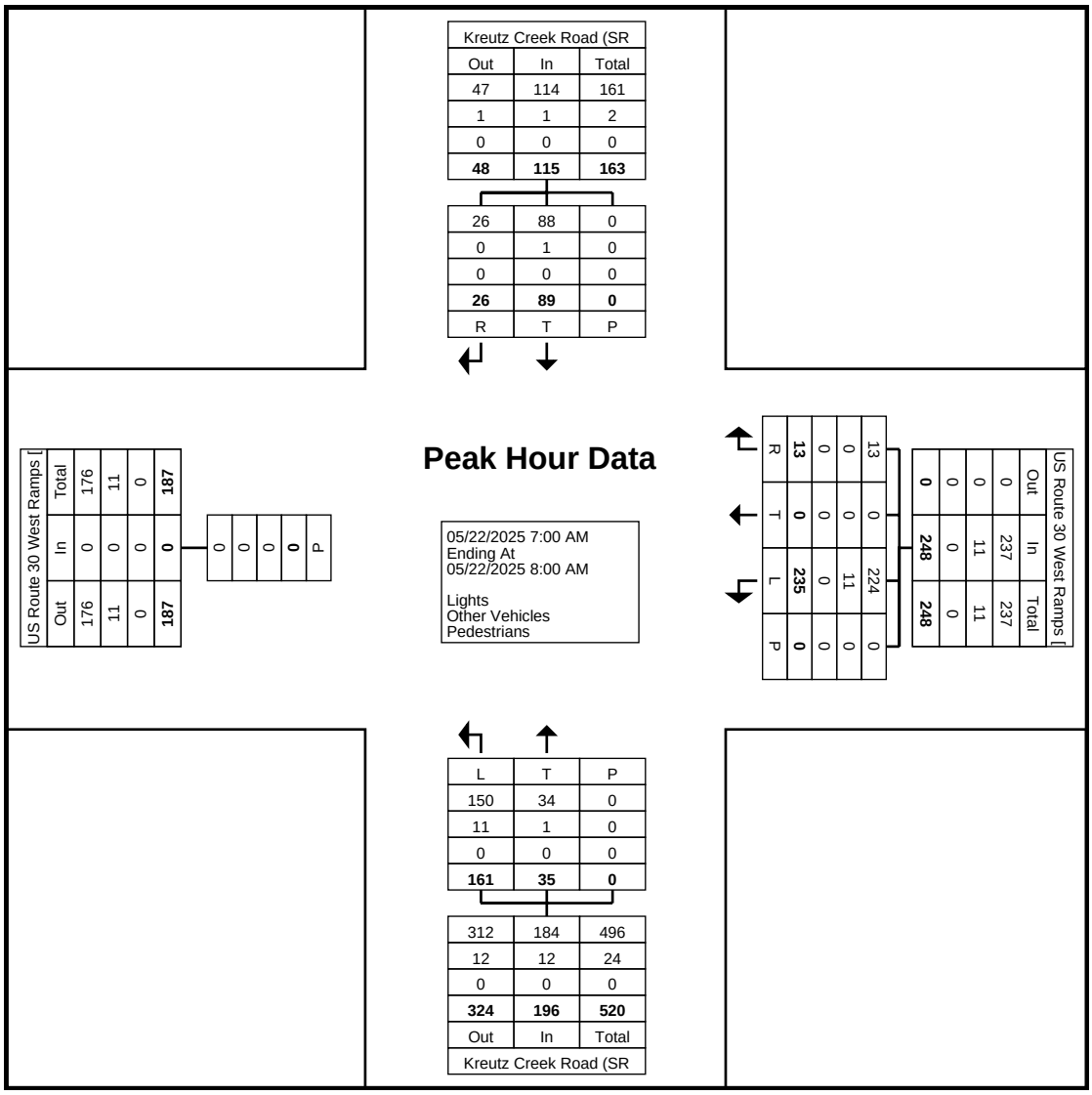
Counter Mio:
Set up by JH:

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code:
Start Date: 05/22/2025



Turning Movement Peak Hour Data Plot (7:00 AM)

Counter Mio:
Set up by JH:

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

Turning Movement Peak Hour Data (4:30 PM)

Start Time	US Route 30 West Ramps Eastbound		US Route 30 West Ramps Westbound					Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	
4:30 PM	0	0	105	0	8	0	113	38	28	0	66	17	2	0	19	198
4:45 PM	0	0	109	0	9	0	118	31	23	0	54	34	2	0	36	208
5:00 PM	0	0	114	1	8	0	123	30	22	0	52	24	1	0	25	200
5:15 PM	0	0	101	0	17	0	118	34	18	0	52	30	3	0	33	203
Total	0	0	429	1	42	0	472	133	91	0	224	105	8	0	113	809
Approach %	-	-	90.9	0.2	8.9	-	-	59.4	40.6	-	-	92.9	7.1	-	-	-
Total %	-	0.0	53.0	0.1	5.2	-	58.3	16.4	11.2	-	27.7	13.0	1.0	-	14.0	-
PHF	-	0.000	0.941	0.250	0.618	-	0.959	0.875	0.813	-	0.848	0.772	0.667	-	0.785	0.972
Lights	-	0	425	1	42	-	468	132	91	-	223	105	8	-	113	804
% Lights	-	-	99.1	100.0	100.0	-	99.2	99.2	100.0	-	99.6	100.0	100.0	-	100.0	99.4
Other Vehicles	-	0	4	0	0	-	4	1	0	-	1	0	0	-	0	5
% Other Vehicles	-	-	0.9	0.0	0.0	-	0.8	0.8	0.0	-	0.4	0.0	0.0	-	0.0	0.6
Pedestrians	0	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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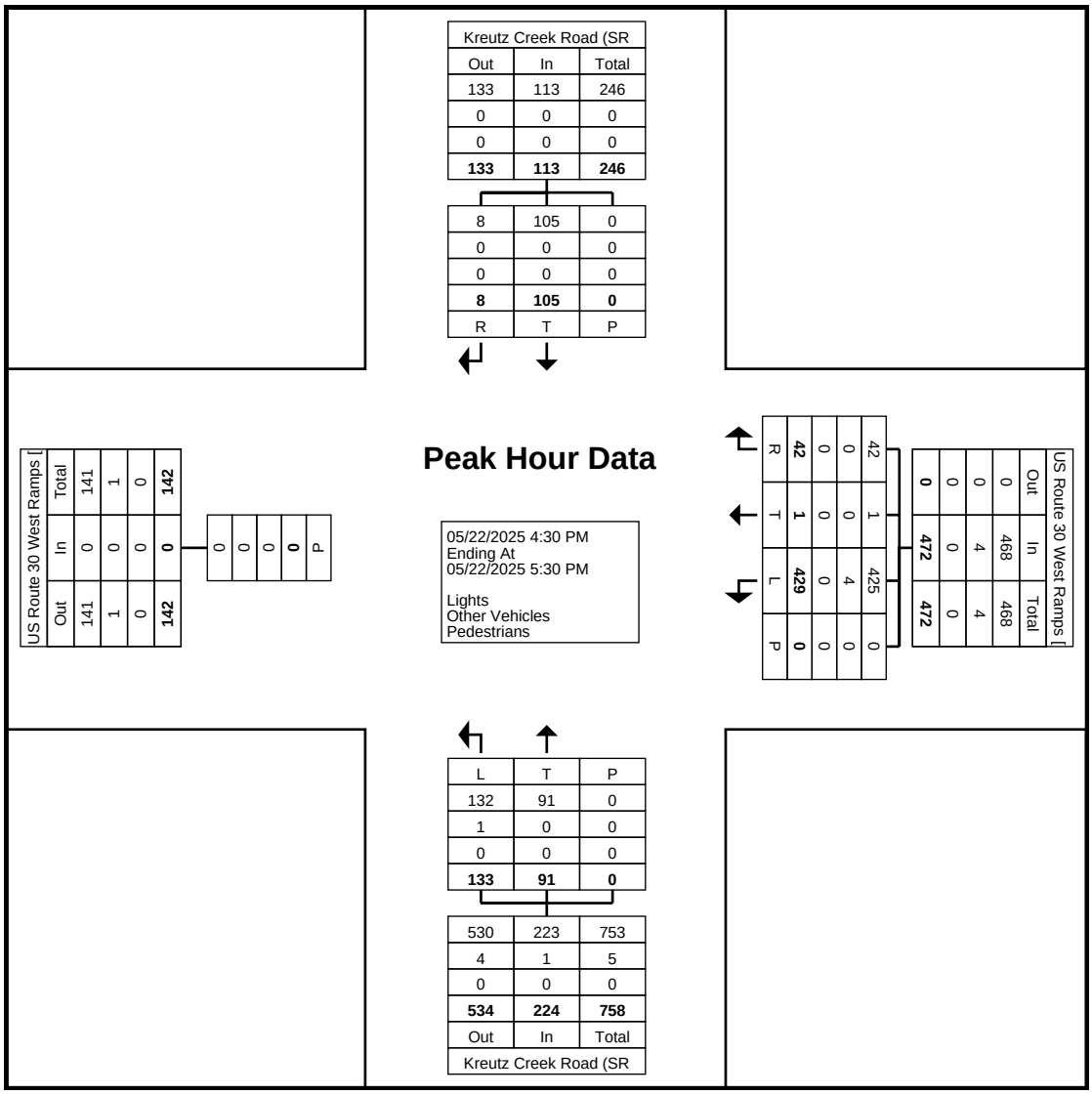
Counter Mio:
Set up by JH:

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code:
Start Date: 05/22/2025



Turning Movement Peak Hour Data Plot (4:30 PM)

Appendix B:

Existing Roadway Conditions

Job #:	Date Taken:	Intersection Of:
JDAI.00005	5/7/2025	Kreutz Creek Road (SR 1014) & Lees Lane / Pleasant Valley Road

Direction / Road: **Nb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 200 Feet

Job #:	Date Taken:	Intersection Of:
JDAI.00005	5/7/2025	Kreutz Creek Road (SR 1014) & Lees Lane / Pleasant Valley Road

Direction / Road: **Sb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *JDAI.00005* *Date Taken:* *5/7/2025* *Intersection Of:* *Kreutz Creek Road (SR 1014) & Lees Lane / Pleasant Valley Road*

Direction / Road: **Eb** / ***Pleasant Valley Road***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb** / ***Pleasant Valley Road***
Approach / Departure: Approach
Distance: 200 Feet

Job #:	*JDAI.00005*	*Date Taken:*	*5/7/2025*	*Intersection Of:*	*Kreutz Creek Road (SR 1014) & Lees Lane / Pleasant Valley Road*

Direction / Road: **Wb / *Lees Lane***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb / *Lees Lane***
Approach / Departure: Approach
Distance: 200 Feet

Job #:	Date Taken:	Intersection Of:
JDAI.00005	5/7/2025	Kreutz Creek Road (SR 1014) & US Route 30 West Ramps

Direction / Road: **Nb / *Kreutz Creek Road (SR 1014)***

Approach / Departure: Approach

Distance: 50 feet

Direction / Road: **Nb / *Kreutz Creek Road (SR 1014)***

Approach / Departure: Approach

Distance: 200 Feet

Job #: *JDAI.00005* *Date Taken:* *5/7/2025* *Intersection Of:* *Kreutz Creek Road (SR 1014) & US Route 30 West Ramps*

Direction / Road: **Sb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *JDAI.00005* *Date Taken:* *5/7/2025* *Intersection Of:* *Kreutz Creek Road (SR 1014) & US Route 30 West Ramps*

Direction / Road: **Wb / *US Route 30 West Ramps***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb / *US Route 30 West Ramps***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *JDAI.00005* *Date Taken:* *5/7/2025* *Intersection Of:* *Kreutz Creek Road (SR 1014) & US Route 30 West Ramps*

Direction / Road: **Wb / *US Route 30 West Ramps***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Wb / *US Route 30 West Ramps***
Approach / Departure: Departure
Distance: Start of On-Ramp

Job #: *JDAI.00005* *Date Taken:* *5/7/2025* *Intersection Of:* *Kreutz Creek Road (SR 1014) & US Route 30 East Ramps*

Direction / Road: **Nb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Nb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *JDAI.00005* *Date Taken:* *5/7/2025* *Intersection Of:* *Kreutz Creek Road (SR 1014) & US Route 30 East Ramps*

Direction / Road: **Sb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Sb / *Kreutz Creek Road (SR 1014)***
Approach / Departure: Approach
Distance: 200 Feet

Job #: *JDAI.00005* *Date Taken:* *5/7/2025* *Intersection Of:* *Kreutz Creek Road (SR 1014) & US Route 30 East Ramps*

Direction / Road: **Eb / *US Route 30 East Ramps***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb / *US Route 30 East Ramps***
Approach / Departure: Approach
Distance: 200 Feet

Job #: JDAI.00005 *Date Taken:* 5/7/2025 *Intersection Of:* Kreutz Creek Road (SR 1014) & US Route 30 East Ramps

Direction / Road: **Eb / *US Route 30 East Ramps***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb / *US Route 30 East Ramps***
Approach / Departure: Departure
Distance: Start of On-Ramp

Job #:	JDAI.00005	Date Taken:	5/21/2025	Intersection Of:	Kreutz Creek Road (SR 1014) & Lees Lane/Proposed Site Driveway

Direction / Road: Center Driveway – Looking Out

Approach / Departure:

Distance:

Direction / Road: Center Driveway – Looking In

Approach / Departure:

Distance:

Job #: JDAI.00005 *Date Taken:* 5/21/2025 *Intersection Of:* Kreutz Creek Road (SR 1014) & Lees Lane/Proposed Site Driveway

Direction / Road: Center Driveway – Looking Right

Approach / Departure:

Distance:

Direction / Road: Center Driveway – Looking Left

Approach / Departure:

Distance:

Job #: JDAI.00005 *Date Taken:* 5/7/2025 *Intersection Of:* Kreutz Creek Road (SR 1014) & US Route 30 East Ramps

Direction / Road: Center Driveway – Front Left Tur
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb / *US Route 30 East Ramps***
Approach / Departure: Approach
Distance: 200 Feet

Job #: JDAI.00005 *Date Taken:* 5/7/2025 *Intersection Of:* Kreutz Creek Road (SR 1014) & US Route 30 East Ramps

Direction / Road: **Eb / *US Route 30 East Ramps***
Approach / Departure: Approach
Distance: 50 feet

Direction / Road: **Eb / *US Route 30 East Ramps***
Approach / Departure: Departure
Distance: Start of On-Ramp

M-950S
(03-04)
PENNDOT

DRIVEWAY SIGHT DISTANCE MEASUREMENTS
(FOR LOCAL ROADS, USE PENNDOT PUB 70)

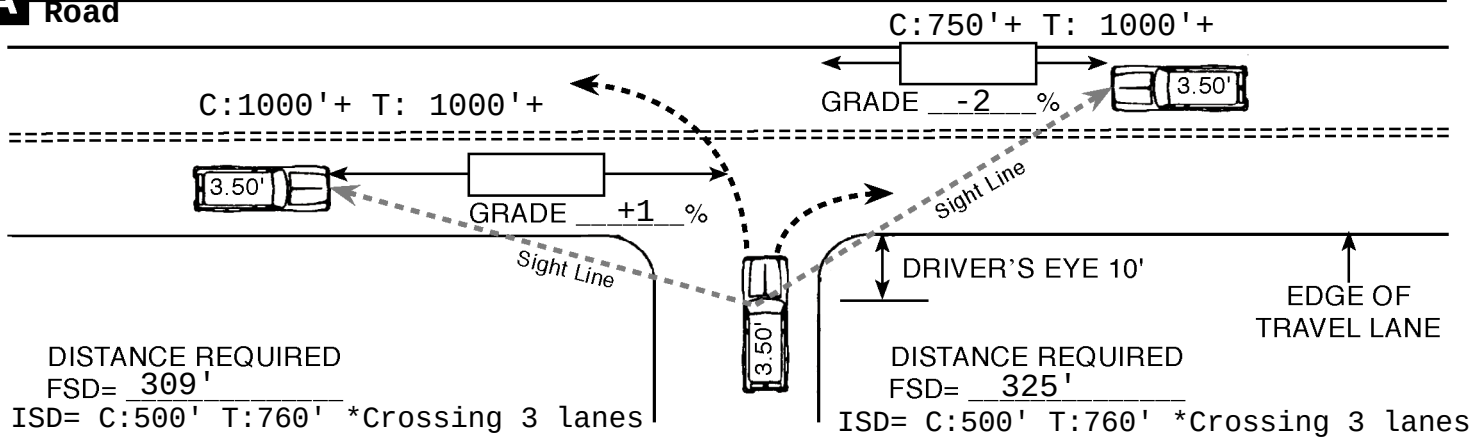
APPLICANT Lees Lane Development APPLICATION NO. JDAI.00005

S.R. 1014 SEG. 141 OFFSET 0651 LEGAL SPEED LIMIT 40 mph

MEASURED BY TPD DATE 07/21/2025

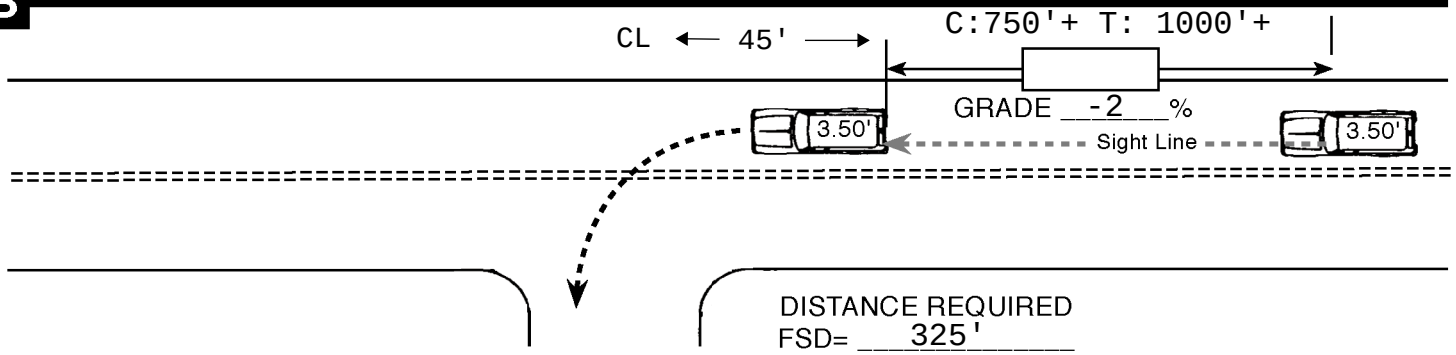
FOR DEPARTMENT USE ONLY: Safe-Running Speed _____ 85th Percentile Speed _____

A Kreutz Creek Road (SR 1014) & Lees Lane (Proposed Driveway)/ Pleasant Valley Road



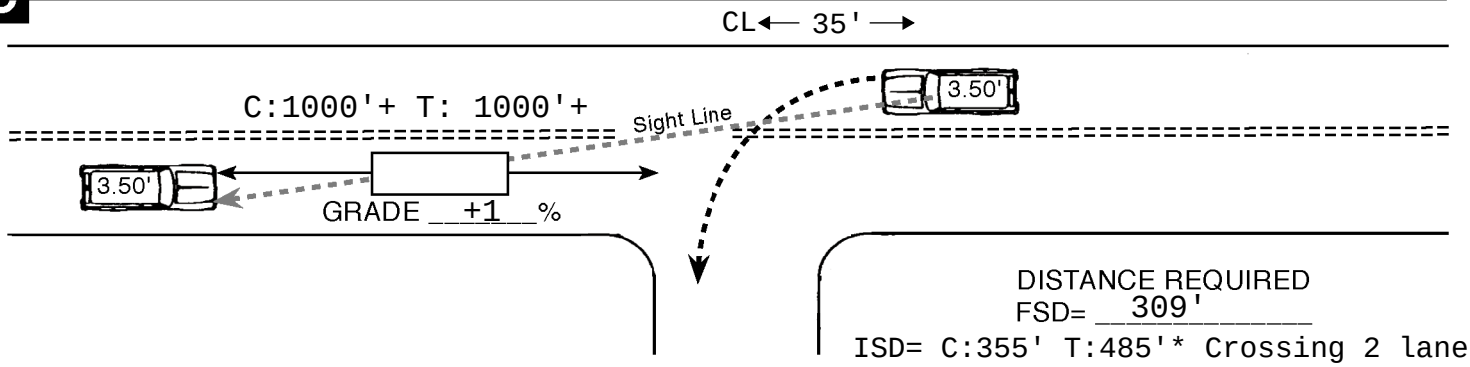
THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

B

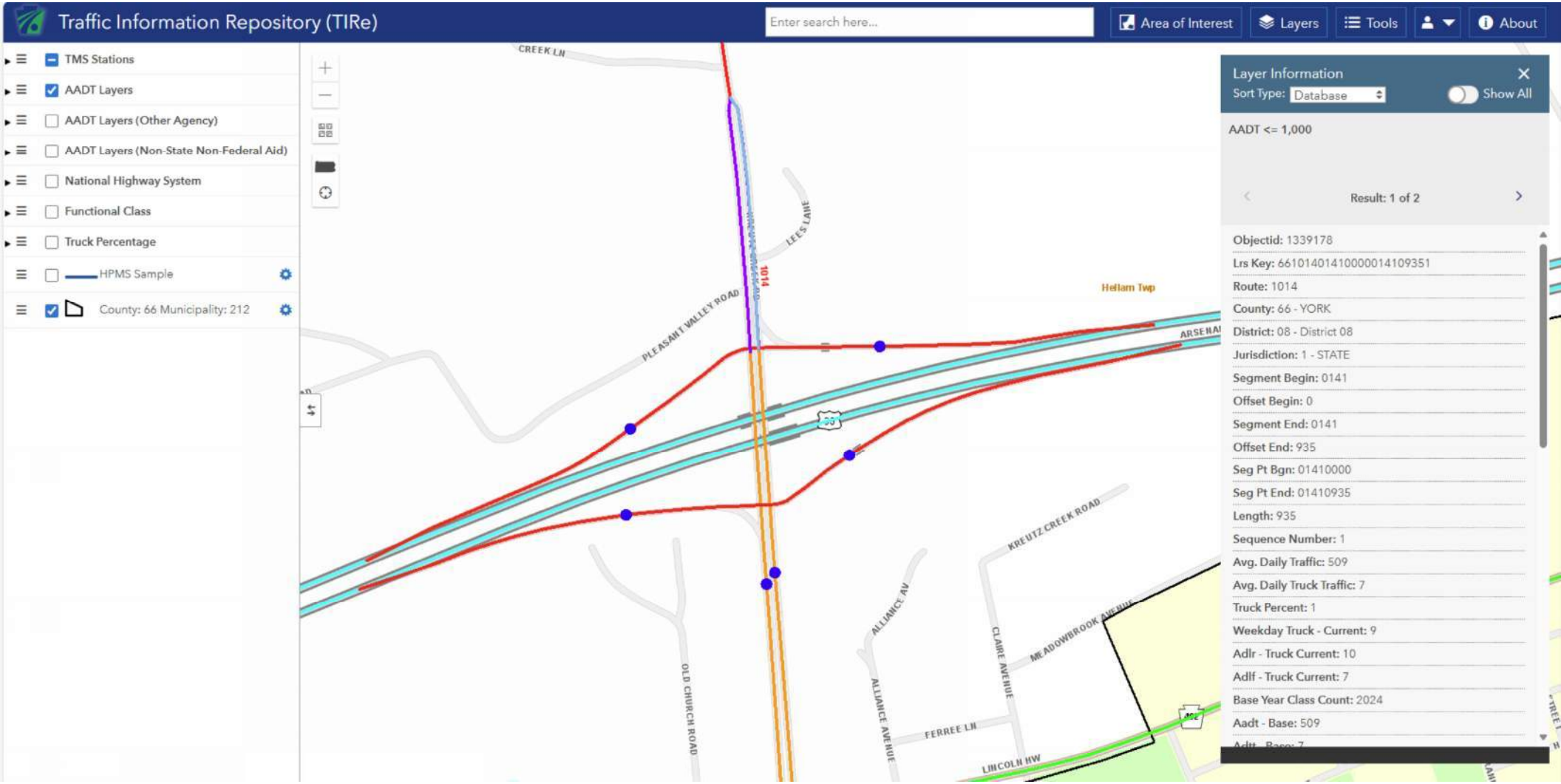


THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER ON THE ROADWAY CAN CONTINUOUSLY SEE THE REAR OF A VEHICLE WHICH IS LOCATED IN THE DRIVER'S TRAVEL LANE AND WHICH IS POSITIONED TO MAKE A LEFT TURN INTO A DRIVEWAY.

C



THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER OF A VEHICLE INTENDING TO MAKE A LEFT TURN INTO A DRIVEWAY CAN CONTINUOUSLY SEE A VEHICLE APPROACHING FROM THE OPPOSITE DIRECTION.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Area of Interest
Layers
Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
CREEK LN
LEES LANE
1014
PLEASANT VALLEY ROAD
Hellam Twp
KREUTZ CREEK ROAD
ALLIANCE AV
CLAIRE AVENUE
MEADOWBROOK AVENUE
OLD CHURCH ROAD
ALLIANCE AVENUE
FERREE LN
LINCOLN HW
Layer Information
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Show All
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Result: 1 of 2
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Lrs Key: 66101401410000014109351
Route: 1014
County: 66 - YORK
District: 08 - District 08
Jurisdiction: 1 - STATE
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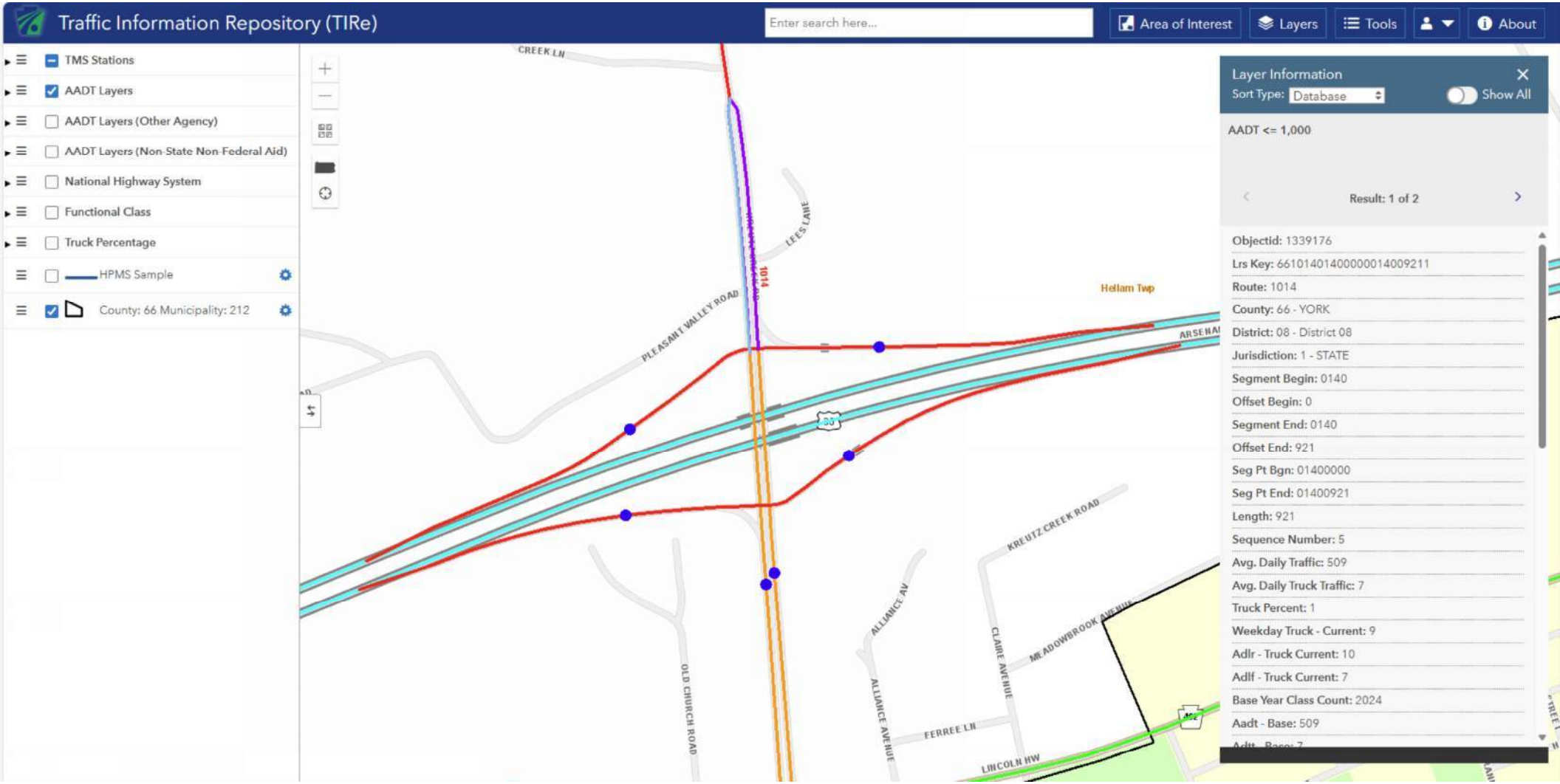
Offset Begin: 0
Segment End: 0141
Offset End: 935
Seg Pt Bgn: 01410000
Seg Pt End: 01410935
Length: 935
Sequence Number: 1
Avg. Daily Traffic: 509
Avg. Daily Truck Traffic: 7
Truck Percent: 1
Weekday Truck - Current: 9
Adlr - Truck Current: 10
Adlf - Truck Current: 7
Base Year Class Count: 2024
Aadt - Base: 509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Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
CREEK LN
LEES LANE
1014
PLEASANT VALLEY ROAD
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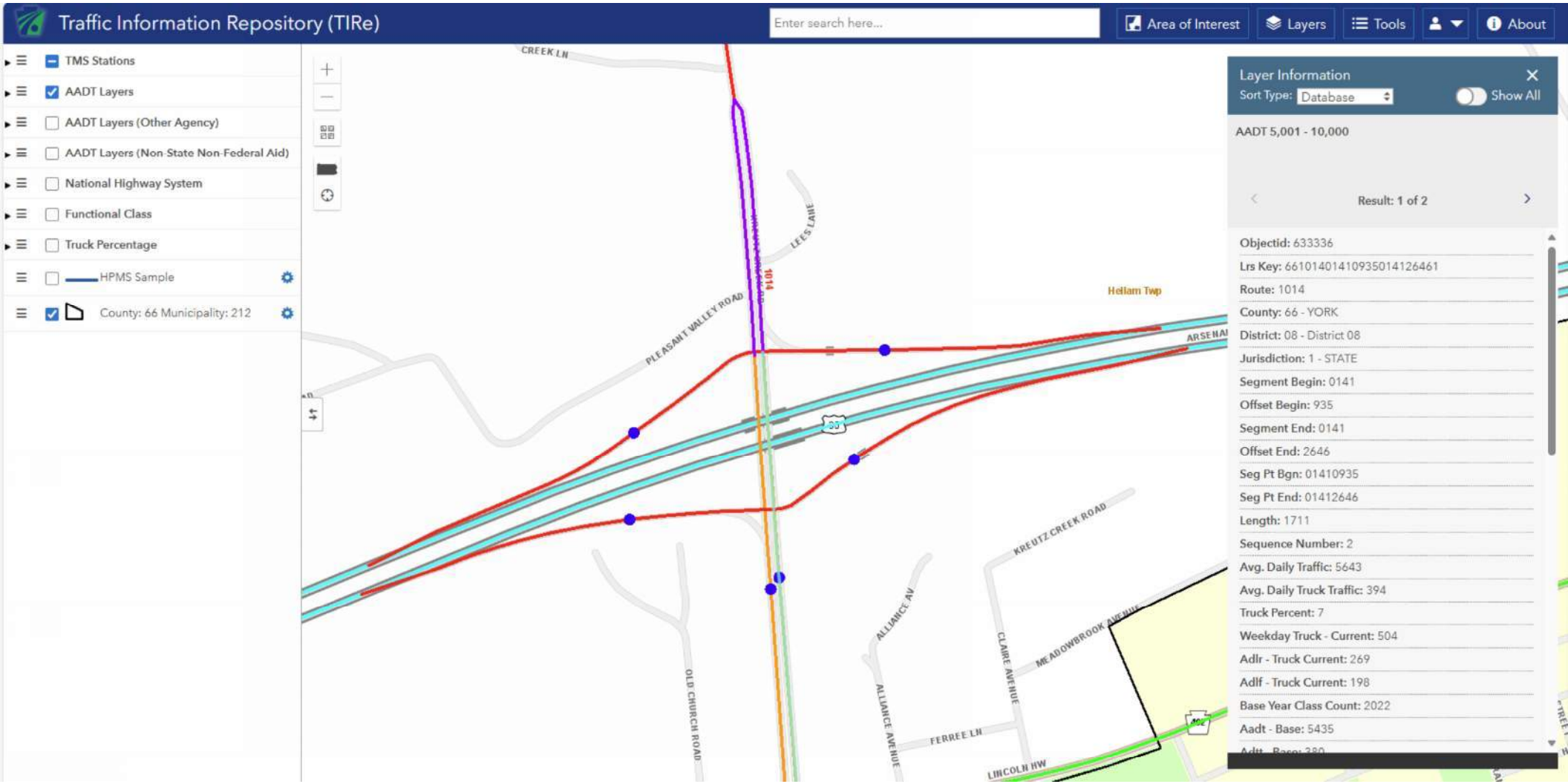
KREUTZ CREEK ROAD
ALLIANCE AV
CLAIRE AVENUE
MEADOWBROOK AVENUE
OLD CHURCH ROAD
ALLIANCE AVENUE
FERREE LN
LINCOLN HW
Layer Information
Sort Type: Database
Show All
AADT <= 1,000
Result: 1 of 2
Objectid: 1339176
Lrs Key: 66101401400000014009211
Route: 1014
County: 66 - YORK
District: 08 - District 08
Jurisdiction: 1 - STATE
Segment Begin: 0140
Offset Begin: 0
Segment End: 0140
Offset End: 921
Seg Pt Bgn: 01400000
Seg Pt End: 01400921
Length: 921
Sequence Number: 5
Avg. Daily Traffic: 509
Avg. Daily Truck Traffic: 7
Truck Percent: 1
Weekday Truck - Current: 9
Adlr - Truck Current: 10
Adlf - Truck Current: 7
Base Year Class Count: 2024
Aadt - Base: 509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Area of Interest
Layers
Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
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District: 08 - District 08
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Offset End: 2646
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Length: 1711
Sequence Number: 2
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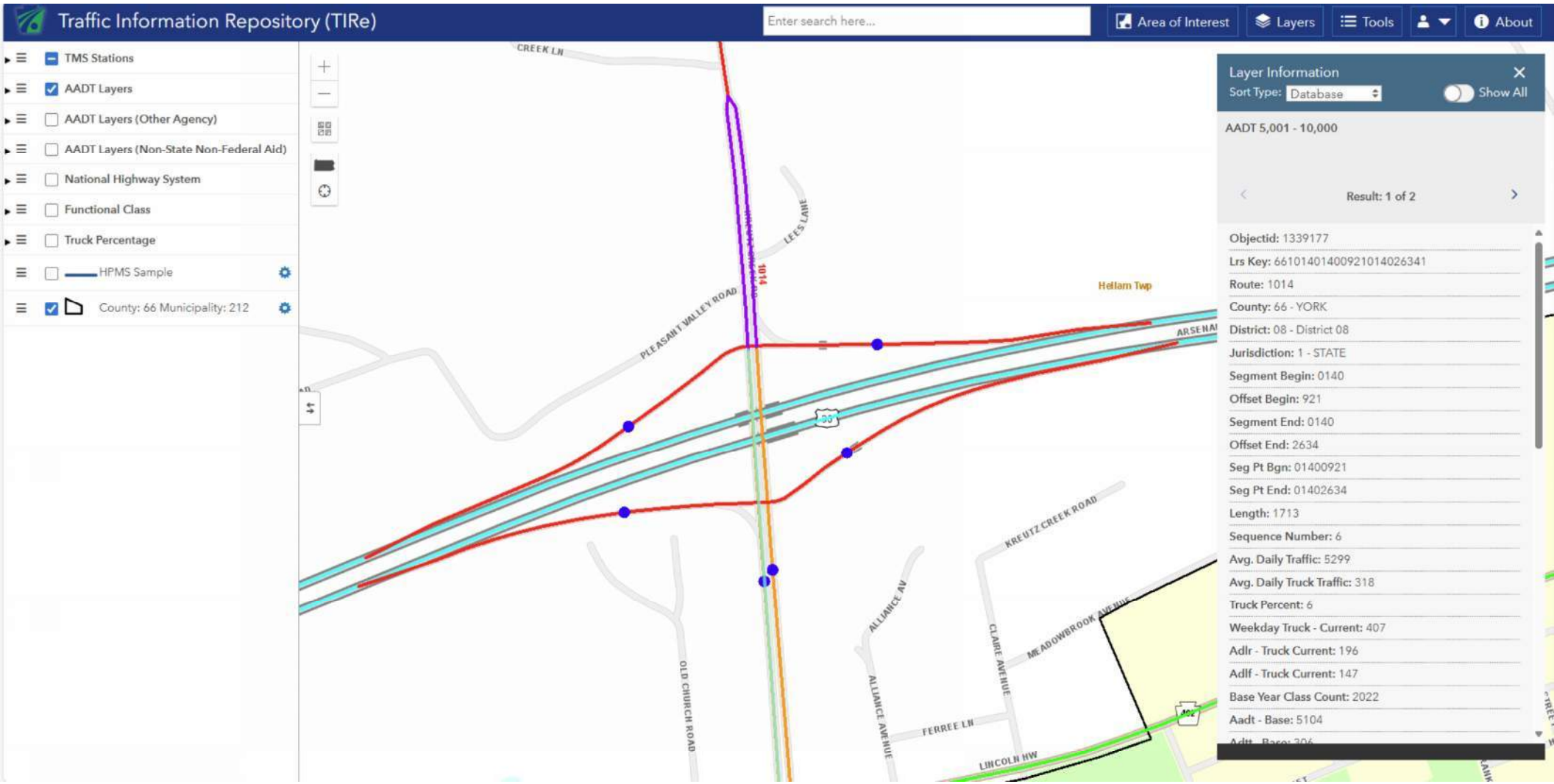
Avg. Daily Truck Traffic: 394
Truck Percent: 7
Weekday Truck - Current: 504
Adlr - Truck Current: 269
Adlf - Truck Current: 198
Base Year Class Count: 2022
Aadt - Base: 5435
CREEK LN
LEES LANE
1014
Hellam Twp
PLEASANT VALLEY ROAD
KREUTZ CREEK ROAD
ALLIANCE AV
CLAIRE AVENUE
MEADOWBROOK AVENUE
ALLIANCE AVENUE
FERREE LN
OLD CHURCH ROAD
LINCOLN HW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Area of Interest
Layers
Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
Layer Information
Sort Type: Database
Show All
AADT 5,001 - 10,000
Result: 1 of 2
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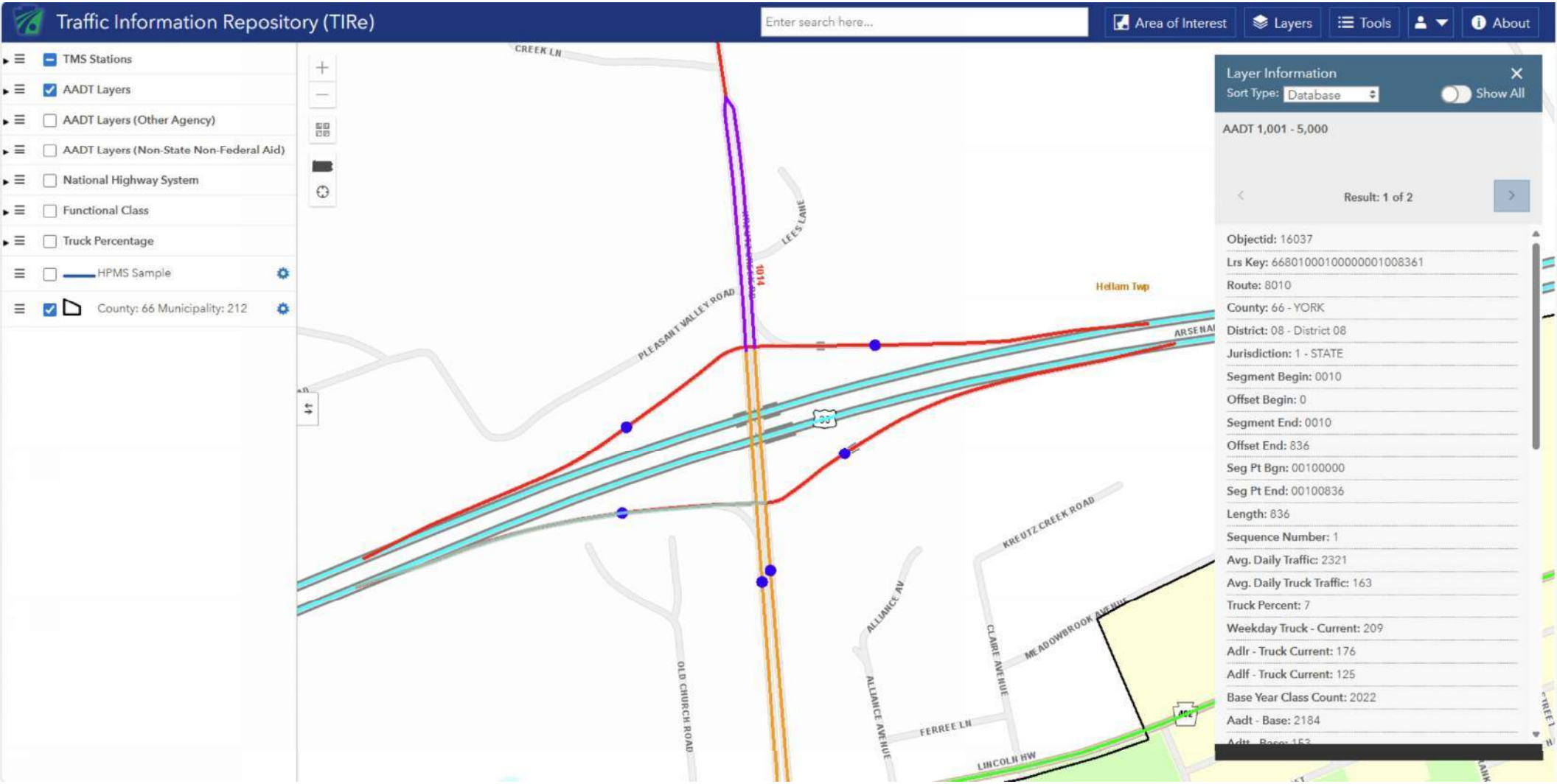
Route: 1014
County: 66 - YORK
District: 08 - District 08
Jurisdiction: 1 - STATE
Segment Begin: 0140
Offset Begin: 921
Segment End: 0140
Offset End: 2634
Seg Pt Bgn: 01400921
Seg Pt End: 01402634
Length: 1713
Sequence Number: 6
Avg. Daily Traffic: 5299
Avg. Daily Truck Traffic: 318
Truck Percent: 6
Weekday Truck - Current: 407
Adlr - Truck Current: 196
Adlf - Truck Current: 147
Base Year Class Count: 2022
Aadt - Base: 5104
Hellam Twp
PLEASANT VALLEY ROAD
KREUTZ CREEK ROAD
MEADOWBROOK AVENUE
CLAIRE AVENUE
ALLIANCE AV
ALLIANCE AVENUE
FERREE LN
LINCOLN HW
OLD CHURCH ROAD
LEES LANE
1014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Area of Interest
Layers
Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
Layer Information
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Show All
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Route: 8010
County: 66 - YORK
District: 08 - District 08
Jurisdiction: 1 - STATE
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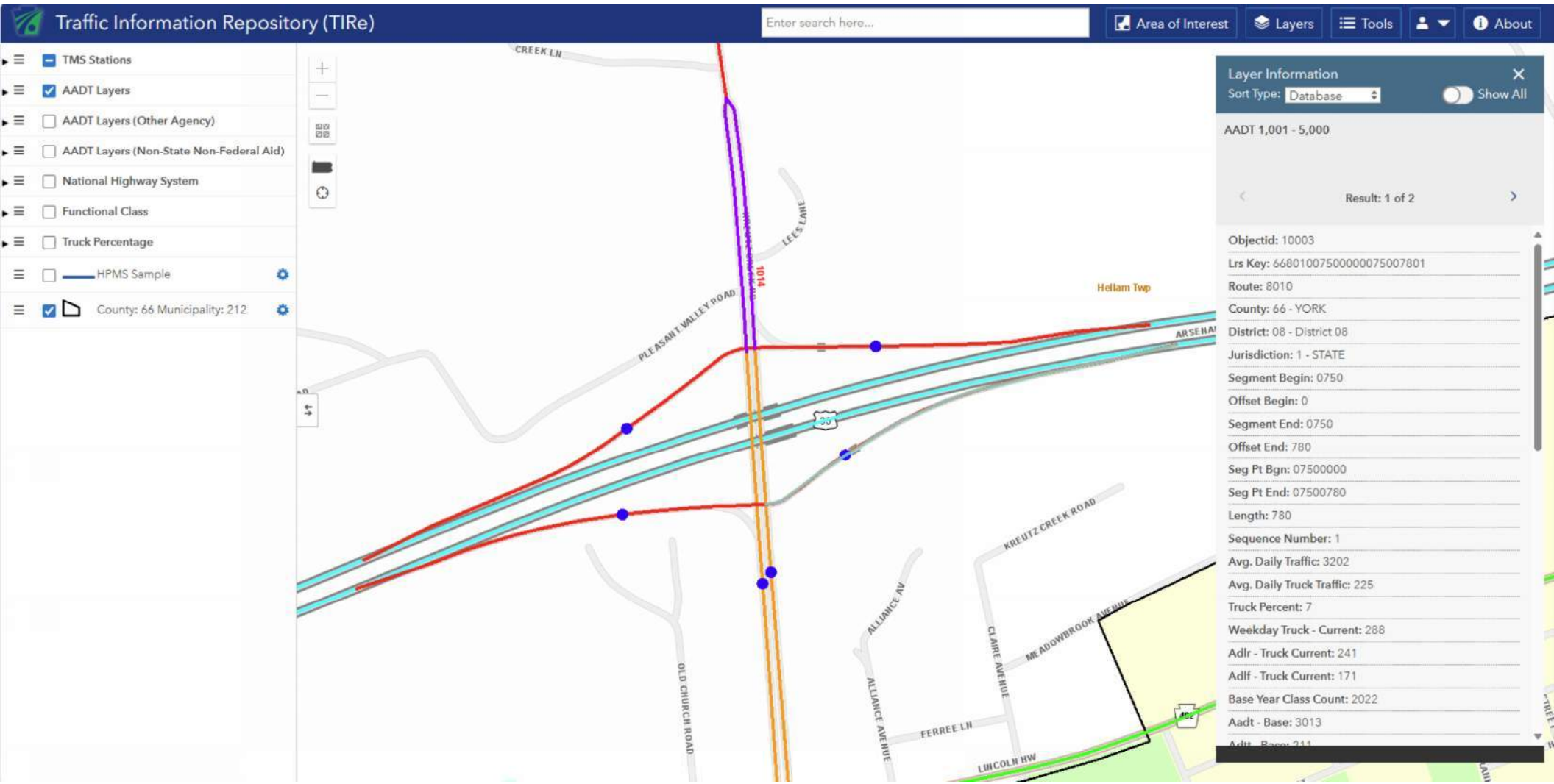
Offset Begin: 0
Segment End: 0010
Offset End: 836
Seg Pt Bgn: 00100000
Seg Pt End: 00100836
Length: 836
Sequence Number: 1
Avg. Daily Traffic: 2321
Avg. Daily Truck Traffic: 163
Truck Percent: 7
Weekday Truck - Current: 209
Adlr - Truck Current: 176
Adlf - Truck Current: 125
Base Year Class Count: 2022
Aadt - Base: 2184
Hellam Twp
PLEASANT VALLEY ROAD
LEES LANE
KREUTZ CREEK ROAD
ALLIANCE AV
CLAIRE AVENUE
MEADOWBROOK AVENUE
OLD CHURCH ROAD
FERREE LN
LINCOLN HW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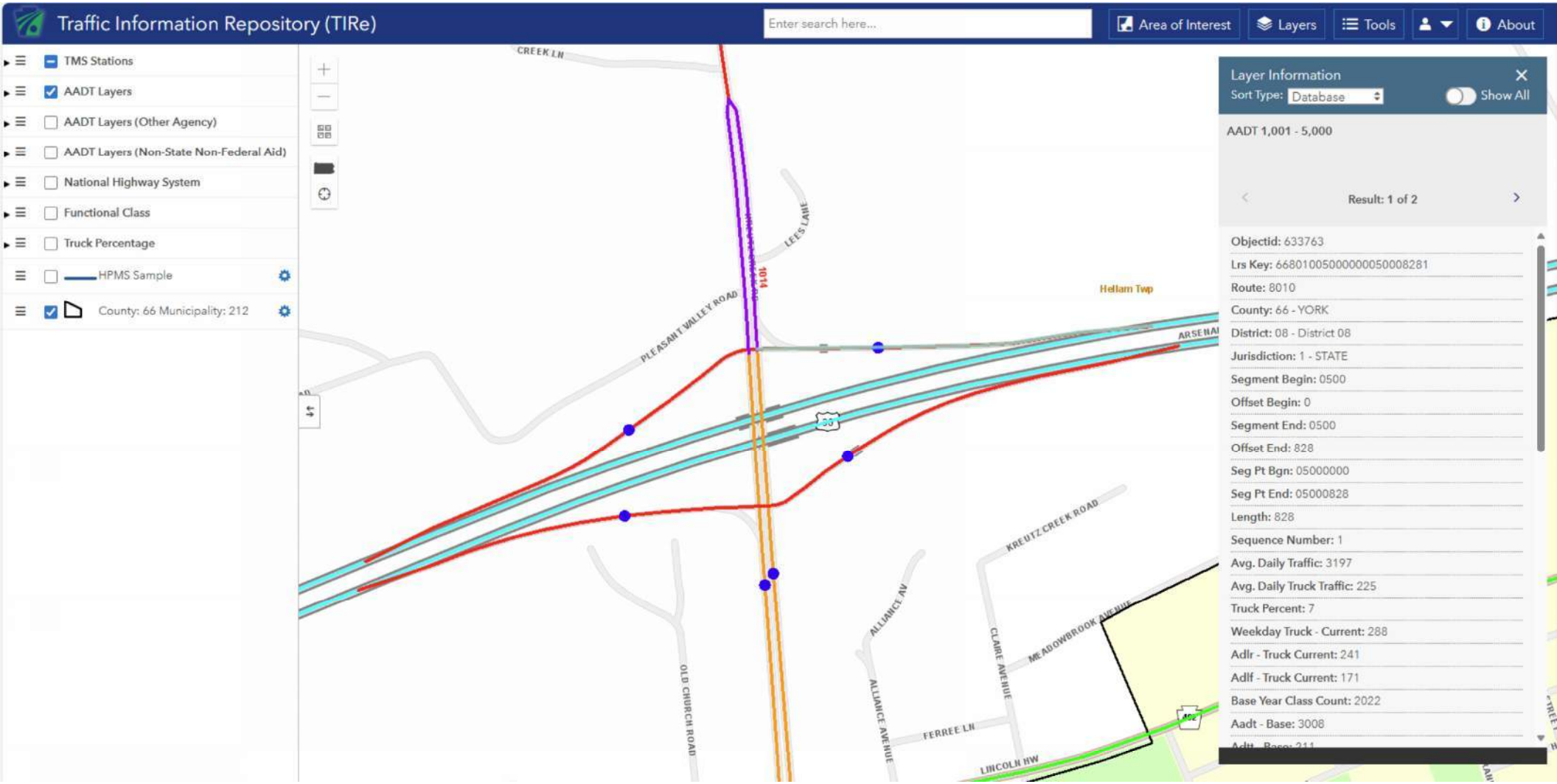
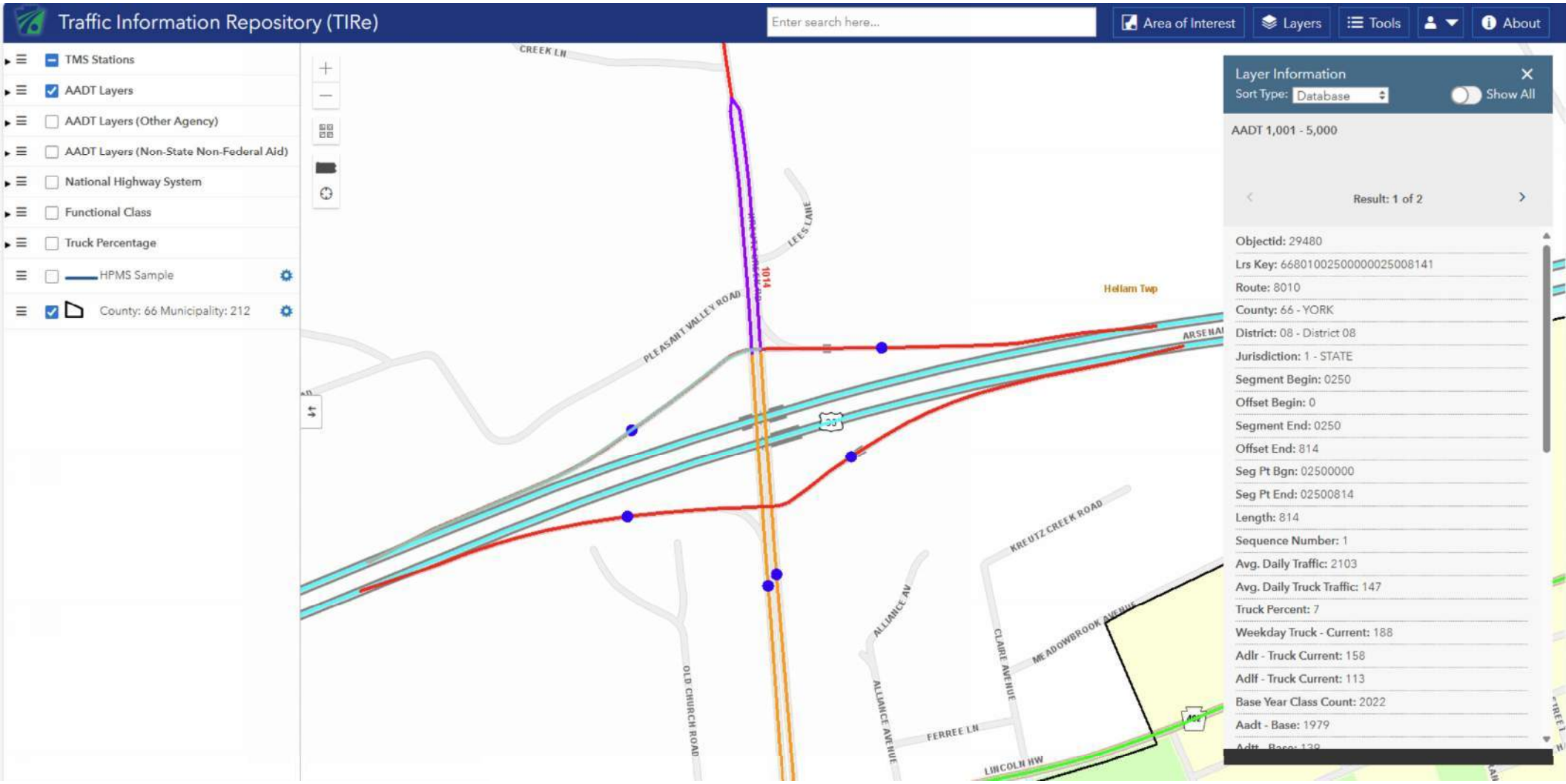
Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
Layer Information
Sort Type: Database
Show All
AADT 1,001 - 5,000
Result: 1 of 2
Objectid: 10003
Lrs Key: 66801007500000075007801
Route: 8010
County: 66 - YORK
District: 08 - District 08
Jurisdiction: 1 - STATE
Segment Begin: 0750
Offset Begin: 0
Segment End: 0750
Offset End: 780
Seg Pt Bgn: 07500000
Seg Pt End: 07500780
Length: 780
Sequence Number: 1
Avg. Daily Traffic: 3202
Avg. Daily Truck Traffic: 225
Truck Percent: 7
Weekday Truck - Current: 288
Adlr - Truck Current: 241
Adlf - Truck Current: 171
Base Year Class Count: 2022
Aadt - Base: 3013
Hellam Twp
PLEASANT VALLEY ROAD
LEES LANE
KREUTZ CREEK ROAD
MEADOWBROOK AVENUE
CLAIRE AVENUE
ALLIANCE AV
ALLIANCE AVENUE
FERREE LN
LINCOLN HW
OLD CHURCH ROAD
1014
30
462


Traffic Information Repository (TIRe)
Enter search here...
Area of Interest
Layers
Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
Layer Information
Sort Type: Database
Show All
AADT 1,001 - 5,000
Result: 1 of 2
Objectid: 633763
Lrs Key: 66801005000000050008281
Route: 8010
County: 66 - YORK
District: 08 - District 08
Jurisdiction: 1 - STATE
Segment Begin: 0500
Offset Begin: 0
Segment End: 0500
Offset End: 828
Seg Pt Bgn: 05000000
Seg Pt End: 05000828
Length: 828
Sequence Number: 1
Avg. Daily Traffic: 3197
Avg. Daily Truck Traffic: 225
Truck Percent: 7
Weekday Truck - Current: 288
Adlr - Truck Current: 241
Adlf - Truck Current: 171
Base Year Class Count: 2022
Aadt - Base: 3008
Hellam Twp
PLEASANT VALLEY ROAD
LEES LANE
KREUTZ CREEK ROAD
MEADOWBROOK AVENUE
ALLIANCE AV
ALLIANCE AVENUE
CLAIRE AVENUE
FERREE LN
LINCOLN HW
OLD CHURCH ROAD
CREEK LN


Traffic Information Repository (TIRe)
Enter search here...
Area of Interest
Layers
Tools
About
TMS Stations
AADT Layers
AADT Layers (Other Agency)
AADT Layers (Non-State Non-Federal Aid)
National Highway System
Functional Class
Truck Percentage
HPMS Sample
County: 66 Municipality: 212
Layer Information
Sort Type: Database
Show All
AADT 1,001 - 5,000
Result: 1 of 2
Objectid: 29480
Lrs Key: 66801002500000025008141
Route: 8010
County: 66 - YORK
District: 08 - District 08
Jurisdiction: 1 - STATE
Segment Begin: 0250
Offset Begin: 0
Segment End: 0250
Offset End: 814
Seg Pt Bgn: 02500000
Seg Pt End: 02500814
Length: 814
Sequence Number: 1
Avg. Daily Traffic: 2103
Avg. Daily Truck Traffic: 147
Truck Percent: 7
Weekday Truck - Current: 188
Adlr - Truck Current: 158
Adlf - Truck Current: 113
Base Year Class Count: 2022
Aadt - Base: 1979
CREEK LN
LEES LANE
PLEASANT VALLEY ROAD
Heilam Twp
KREUTZ CREEK ROAD
ALLIANCE AV
CLAIRE AVENUE
MEADOWBROOK AVENUE
OLD CHURCH ROAD
ALLIANCE AVENUE
FERREE LN
LINCOLN HW

Appendix C:

Manual Traffic Count Data

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025

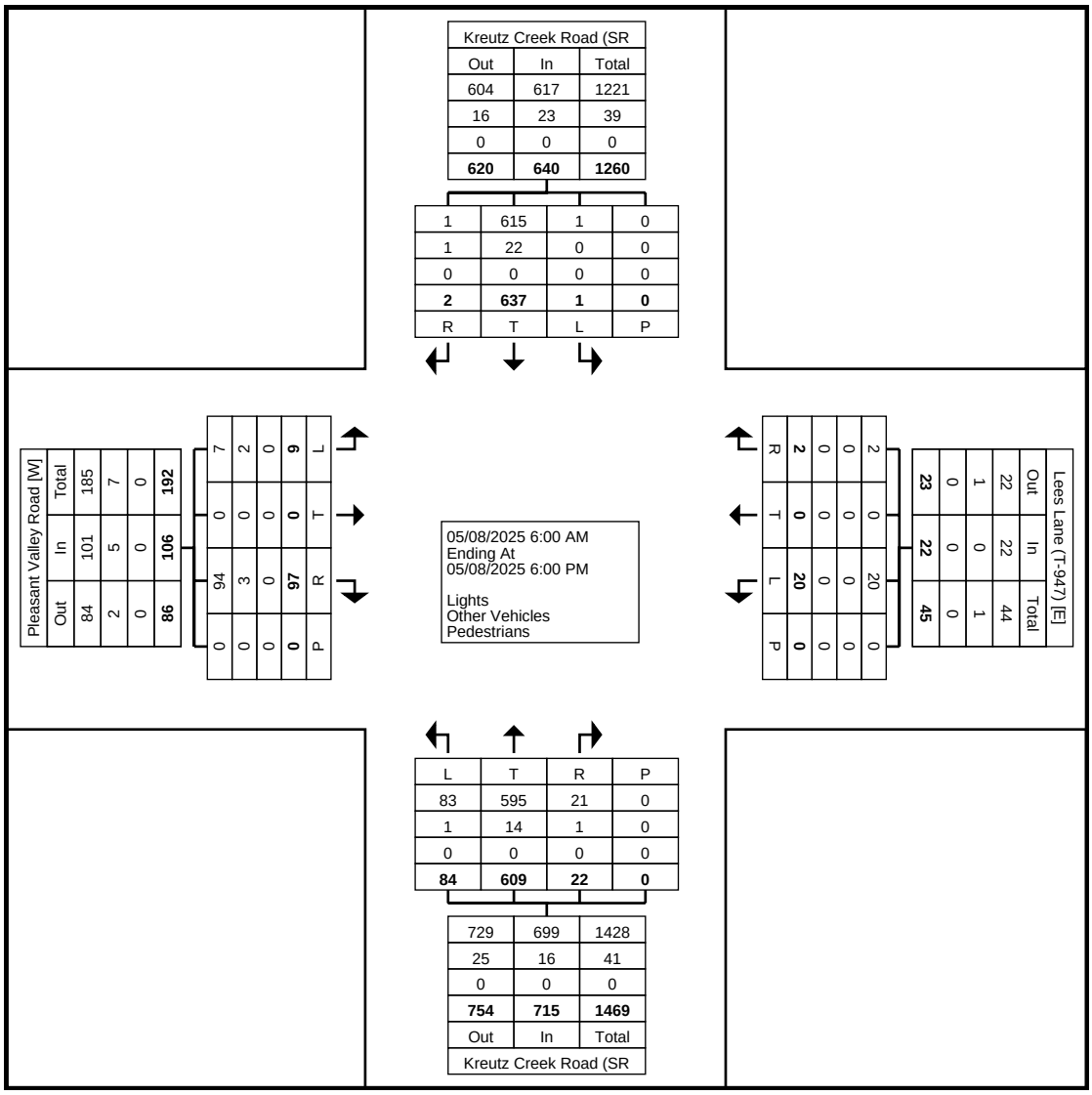
Turning Movement Data

Start Time	Pleasant Valley Road Eastbound					Lees Lane (T-947) Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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
6:00 AM	0	0	2	0	2	0	0	0	0	0	1	5	1	0	7	0	13	0	0	13	22
6:15 AM	0	0	1	0	1	0	0	0	0	0	0	7	1	0	8	0	20	0	0	20	29
6:30 AM	1	0	4	0	5	0	0	0	0	0	0	11	0	0	11	0	38	0	0	38	54
6:45 AM	0	0	5	0	5	0	0	0	0	0	1	13	0	0	14	0	25	0	0	25	44
Hourly Total	1	0	12	0	13	0	0	0	0	0	2	36	2	0	40	0	96	0	0	96	149
7:00 AM	0	0	5	0	5	0	0	0	0	0	2	19	0	0	21	0	30	1	0	31	57
7:15 AM	1	0	7	0	8	0	0	0	0	0	2	36	0	0	38	0	23	0	0	23	69
7:30 AM	0	0	3	0	3	0	0	0	0	0	3	20	0	0	23	0	33	0	0	33	59
7:45 AM	1	0	3	0	4	0	0	0	0	0	0	26	0	0	26	0	28	0	0	28	58
Hourly Total	2	0	18	0	20	0	0	0	0	0	7	101	0	0	108	0	114	1	0	115	243
8:00 AM	1	0	3	0	4	0	0	0	0	0	2	16	1	0	19	0	31	0	0	31	54
8:15 AM	1	0	6	0	7	1	0	0	0	1	2	16	1	0	19	0	24	0	0	24	51
8:30 AM	1	0	0	0	1	0	0	0	0	0	1	12	3	0	16	0	28	0	0	28	45
8:45 AM	0	0	3	0	3	1	0	0	0	1	3	16	3	0	22	0	21	0	0	21	47
Hourly Total	3	0	12	0	15	2	0	0	0	2	8	60	8	0	76	0	104	0	0	104	197
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	1	0	1	0	2	1	0	1	0	2	3	37	2	0	42	0	23	0	0	23	69
3:15 PM	0	0	3	0	3	4	0	0	0	4	10	30	0	0	40	0	28	0	0	28	75
3:30 PM	0	0	9	0	9	0	0	0	0	0	4	33	1	0	38	0	25	0	0	25	72
3:45 PM	0	0	5	0	5	0	0	0	0	0	4	33	0	0	37	0	38	0	0	38	80
Hourly Total	1	0	18	0	19	5	0	1	0	6	21	133	3	0	157	0	114	0	0	114	296
4:00 PM	1	0	6	0	7	0	0	0	0	0	6	36	0	0	42	0	29	0	0	29	78
4:15 PM	0	0	9	0	9	3	0	0	0	3	9	27	1	0	37	0	21	0	0	21	70
4:30 PM	0	0	2	0	2	0	0	0	0	0	5	35	0	0	40	0	28	0	0	28	70
4:45 PM	0	0	3	0	3	0	0	1	0	1	7	45	1	0	53	0	34	0	0	34	91
Hourly Total	1	0	20	0	21	3	0	1	0	4	27	143	2	0	172	0	112	0	0	112	309
5:00 PM	0	0	1	0	1	3	0	0	0	3	5	36	4	0	45	0	28	0	0	28	77
5:15 PM	0	0	10	0	10	3	0	0	0	3	8	45	0	0	53	1	25	1	0	27	93
5:30 PM	0	0	5	0	5	1	0	0	0	1	3	33	2	0	38	0	19	0	0	19	63
5:45 PM	1	0	1	0	2	3	0	0	0	3	3	22	1	0	26	0	25	0	0	25	56
Hourly Total	1	0	17	0	18	10	0	0	0	10	19	136	7	0	162	1	97	1	0	99	289
Grand Total	9	0	97	0	106	20	0	2	0	22	84	609	22	0	715	1	637	2	0	640	1483
Approach %	8.5	0.0	91.5	-	-	90.9	0.0	9.1	-	-	11.7	85.2	3.1	-	-	0.2	99.5	0.3	-	-	-
Total %	0.6	0.0	6.5	-	7.1	1.3	0.0	0.1	-	1.5	5.7	41.1	1.5	-	48.2	0.1	43.0	0.1	-	43.2	-
Lights	7	0	94	-	101	20	0	2	-	22	83	595	21	-	699	1	615	1	-	617	1439
% Lights	77.8	-	96.9	-	95.3	100.0	-	100.0	-	100.0	98.8	97.7	95.5	-	97.8	100.0	96.5	50.0	-	96.4	97.0
Other Vehicles	2	0	3	-	5	0	0	0	-	0	1	14	1	-	16	0	22	1	-	23	44
% Other Vehicles	22.2	-	3.1	-	4.7	0.0	-	0.0	-	0.0	1.2	2.3	4.5	-	2.2	0.0	3.5	50.0	-	3.6	3.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025



Turning Movement Data Plot

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025

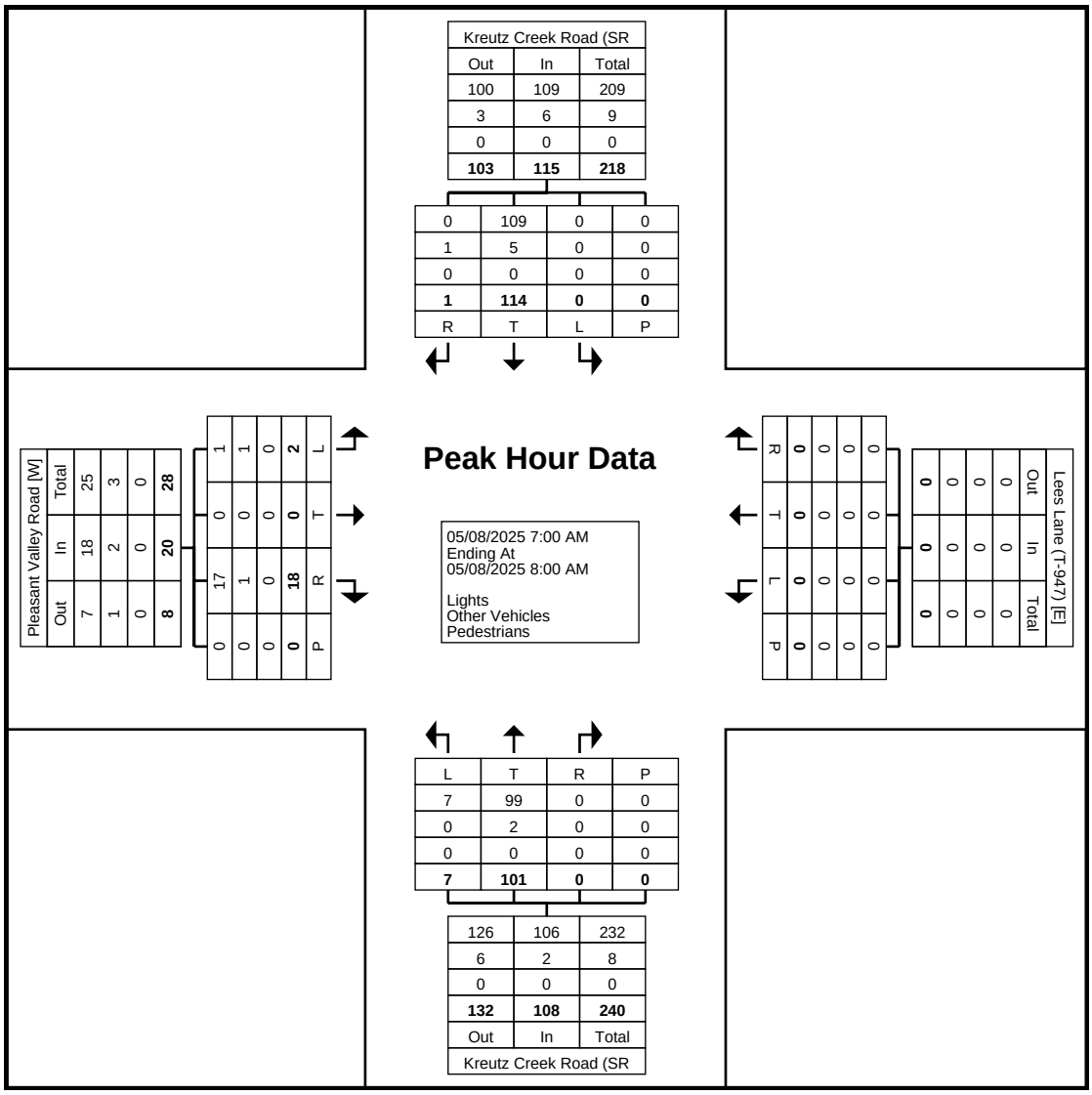
Turning Movement Peak Hour Data (7:00 AM)

Start Time	Pleasant Valley Road Eastbound					Lees Lane (T-947) Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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 AM	0	0	5	0	5	0	0	0	0	0	2	19	0	0	21	0	30	1	0	31	57
7:15 AM	1	0	7	0	8	0	0	0	0	0	2	36	0	0	38	0	23	0	0	23	69
7:30 AM	0	0	3	0	3	0	0	0	0	0	3	20	0	0	23	0	33	0	0	33	59
7:45 AM	1	0	3	0	4	0	0	0	0	0	0	26	0	0	26	0	28	0	0	28	58
Total	2	0	18	0	20	0	0	0	0	0	7	101	0	0	108	0	114	1	0	115	243
Approach %	10.0	0.0	90.0	-	-	0.0	0.0	0.0	-	-	6.5	93.5	0.0	-	-	0.0	99.1	0.9	-	-	-
Total %	0.8	0.0	7.4	-	8.2	0.0	0.0	0.0	-	0.0	2.9	41.6	0.0	-	44.4	0.0	46.9	0.4	-	47.3	-
PHF	0.500	0.000	0.643	-	0.625	0.000	0.000	0.000	-	0.000	0.583	0.701	0.000	-	0.711	0.000	0.864	0.250	-	0.871	0.880
Lights	1	0	17	-	18	0	0	0	-	0	7	99	0	-	106	0	109	0	-	109	233
% Lights	50.0	-	94.4	-	90.0	-	-	-	-	-	100.0	98.0	-	-	98.1	-	95.6	0.0	-	94.8	95.9
Other Vehicles	1	0	1	-	2	0	0	0	-	0	0	2	0	-	2	0	5	1	-	6	10
% Other Vehicles	50.0	-	5.6	-	10.0	-	-	-	-	-	0.0	2.0	-	-	1.9	-	4.4	100.0	-	5.2	4.1
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Counter Mio:
Set up by JH:

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (7:00 AM)

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Pleasant Valley Road Eastbound					Lees Lane (T-947) Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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
4:30 PM	0	0	2	0	2	0	0	0	0	0	5	35	0	0	40	0	28	0	0	28	70
4:45 PM	0	0	3	0	3	0	0	1	0	1	7	45	1	0	53	0	34	0	0	34	91
5:00 PM	0	0	1	0	1	3	0	0	0	3	5	36	4	0	45	0	28	0	0	28	77
5:15 PM	0	0	10	0	10	3	0	0	0	3	8	45	0	0	53	1	25	1	0	27	93
Total	0	0	16	0	16	6	0	1	0	7	25	161	5	0	191	1	115	1	0	117	331
Approach %	0.0	0.0	100.0	-	-	85.7	0.0	14.3	-	-	13.1	84.3	2.6	-	-	0.9	98.3	0.9	-	-	-
Total %	0.0	0.0	4.8	-	4.8	1.8	0.0	0.3	-	2.1	7.6	48.6	1.5	-	57.7	0.3	34.7	0.3	-	35.3	-
PHF	0.000	0.000	0.400	-	0.400	0.500	0.000	0.250	-	0.583	0.781	0.894	0.313	-	0.901	0.250	0.846	0.250	-	0.860	0.890
Lights	0	0	16	-	16	6	0	1	-	7	25	161	5	-	191	1	113	1	-	115	329
% Lights	-	-	100.0	-	100.0	100.0	-	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	98.3	100.0	-	98.3	99.4
Other Vehicles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	2	0	-	2	2
% Other Vehicles	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	1.7	0.0	-	1.7	0.6
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Pottstown, Pennsylvania, United States 19464
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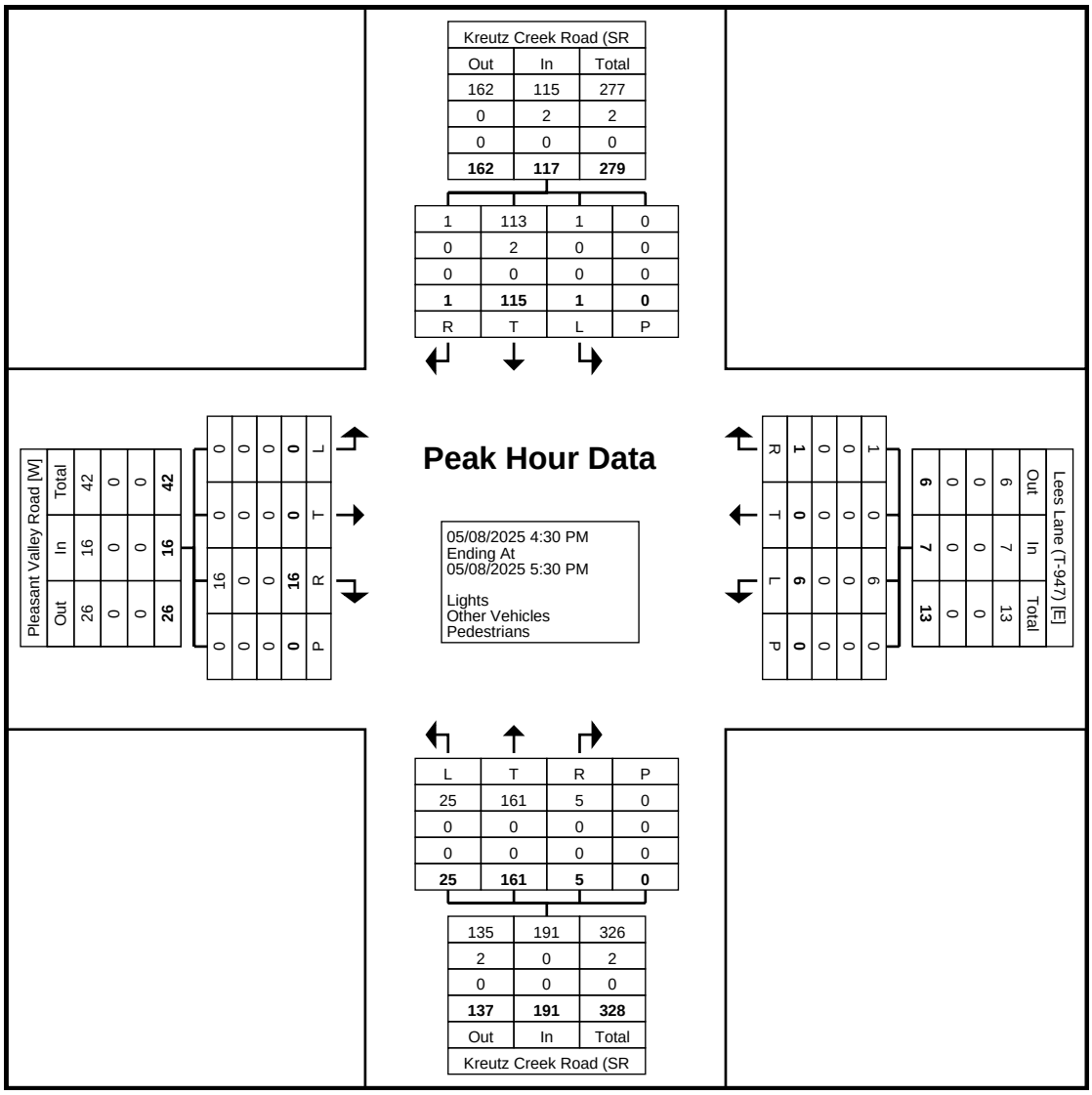
Counter Mio:
Set up by JH:

Count Name: AM_PM Kreutz Creek Road (SR 1014) & Lees Lane (T-947)/ Pleasant Valley Road
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (4:30 PM)

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025

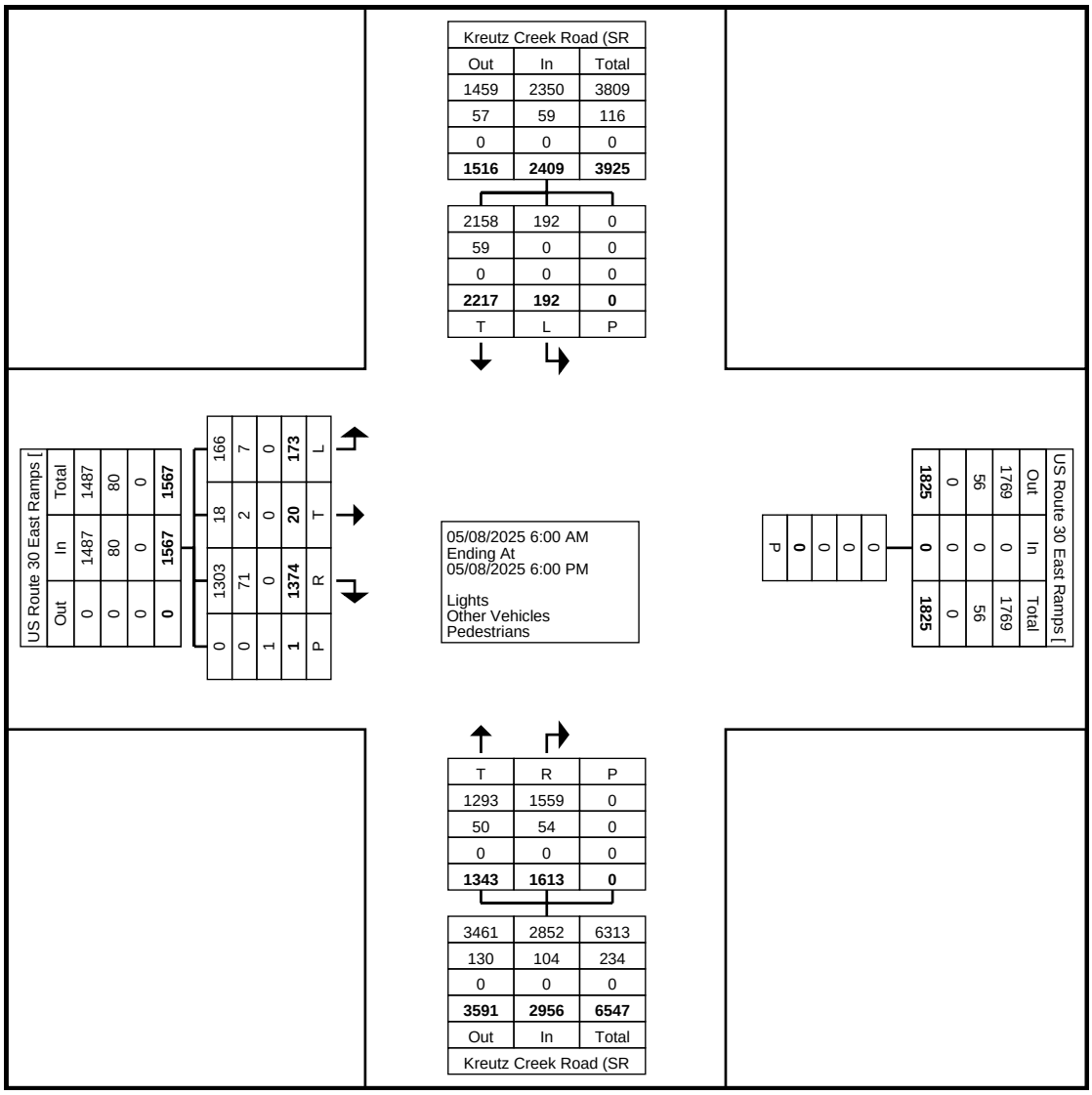
Turning Movement Data

Start Time	US Route 30 East Ramps Eastbound					US Route 30 East Ramps Westbound		Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
6:00 AM	1	0	12	0	13	0	0	51	86	0	137	6	30	0	36	186
6:15 AM	1	0	17	0	18	0	0	36	89	0	125	9	42	0	51	194
6:30 AM	0	1	25	0	26	0	0	52	115	0	167	12	53	0	65	258
6:45 AM	2	0	87	0	89	0	0	56	81	0	137	15	65	0	80	306
Hourly Total	4	1	141	0	146	0	0	195	371	0	566	42	190	0	232	944
7:00 AM	4	3	128	0	135	0	0	58	73	0	131	8	81	0	89	355
7:15 AM	18	2	102	0	122	0	0	76	83	0	159	10	102	0	112	393
7:30 AM	3	0	94	0	97	0	0	60	64	0	124	9	101	0	110	331
7:45 AM	8	0	132	0	140	0	0	52	29	0	81	4	102	0	106	327
Hourly Total	33	5	456	0	494	0	0	246	249	0	495	31	386	0	417	1406
8:00 AM	10	12	65	0	87	0	0	47	71	0	118	9	70	0	79	284
8:15 AM	4	0	30	0	34	0	0	54	54	0	108	7	61	0	68	210
8:30 AM	8	0	27	0	35	0	0	45	75	0	120	4	70	0	74	229
8:45 AM	6	1	46	0	53	0	0	43	57	0	100	7	62	0	69	222
Hourly Total	28	13	168	0	209	0	0	189	257	0	446	27	263	0	290	945
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	6	0	41	0	47	0	0	69	58	0	127	8	74	0	82	256
3:15 PM	12	0	58	0	70	0	0	41	48	0	89	4	95	0	99	258
3:30 PM	9	0	49	1	58	0	0	54	66	0	120	3	112	0	115	293
3:45 PM	6	0	65	0	71	0	0	58	50	0	108	11	125	0	136	315
Hourly Total	33	0	213	1	246	0	0	222	222	0	444	26	406	0	432	1122
4:00 PM	6	0	42	0	48	0	0	76	78	0	154	11	97	0	108	310
4:15 PM	12	0	48	0	60	0	0	51	69	0	120	9	140	0	149	329
4:30 PM	4	0	39	0	43	0	0	70	57	0	127	5	142	0	147	317
4:45 PM	12	1	43	0	56	0	0	60	68	0	128	7	134	0	141	325
Hourly Total	34	1	172	0	207	0	0	257	272	0	529	32	513	0	545	1281
5:00 PM	11	0	48	0	59	0	0	68	77	0	145	10	105	0	115	319
5:15 PM	12	0	58	0	70	0	0	61	55	0	116	10	134	0	144	330
5:30 PM	12	0	54	0	66	0	0	53	53	0	106	8	121	0	129	301
5:45 PM	6	0	64	0	70	0	0	52	57	0	109	6	99	0	105	284
Hourly Total	41	0	224	0	265	0	0	234	242	0	476	34	459	0	493	1234
Grand Total	173	20	1374	1	1567	0	0	1343	1613	0	2956	192	2217	0	2409	6932
Approach %	11.0	1.3	87.7	-	-	-	-	45.4	54.6	-	-	8.0	92.0	-	-	-
Total %	2.5	0.3	19.8	-	22.6	-	0.0	19.4	23.3	-	42.6	2.8	32.0	-	34.8	-
Lights	166	18	1303	-	1487	-	0	1293	1559	-	2852	192	2158	-	2350	6689
% Lights	96.0	90.0	94.8	-	94.9	-	-	96.3	96.7	-	96.5	100.0	97.3	-	97.6	96.5
Other Vehicles	7	2	71	-	80	-	0	50	54	-	104	0	59	-	59	243
% Other Vehicles	4.0	10.0	5.2	-	5.1	-	-	3.7	3.3	-	3.5	0.0	2.7	-	2.4	3.5
Pedestrians	-	-	-	1	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025



Turning Movement Data Plot

Counter Mio:
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2500 East High Street
Suite 650
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610.326.3100 jhertzler@tpdinc.com

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025

Turning Movement Peak Hour Data (7:00 AM)

Start Time	US Route 30 East Ramps Eastbound					US Route 30 East Ramps Westbound		Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
7:00 AM	4	3	128	0	135	0	0	58	73	0	131	8	81	0	89	355
7:15 AM	18	2	102	0	122	0	0	76	83	0	159	10	102	0	112	393
7:30 AM	3	0	94	0	97	0	0	60	64	0	124	9	101	0	110	331
7:45 AM	8	0	132	0	140	0	0	52	29	0	81	4	102	0	106	327
Total	33	5	456	0	494	0	0	246	249	0	495	31	386	0	417	1406
Approach %	6.7	1.0	92.3	-	-	-	-	49.7	50.3	-	-	7.4	92.6	-	-	-
Total %	2.3	0.4	32.4	-	35.1	-	0.0	17.5	17.7	-	35.2	2.2	27.5	-	29.7	-
PHF	0.458	0.417	0.864	-	0.882	-	0.000	0.809	0.750	-	0.778	0.775	0.946	-	0.931	0.894
Lights	32	5	419	-	456	-	0	236	241	-	477	31	370	-	401	1334
% Lights	97.0	100.0	91.9	-	92.3	-	-	95.9	96.8	-	96.4	100.0	95.9	-	96.2	94.9
Other Vehicles	1	0	37	-	38	-	0	10	8	-	18	0	16	-	16	72
% Other Vehicles	3.0	0.0	8.1	-	7.7	-	-	4.1	3.2	-	3.6	0.0	4.1	-	3.8	5.1
Pedestrians	-	-	-	0	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Counter Mio:
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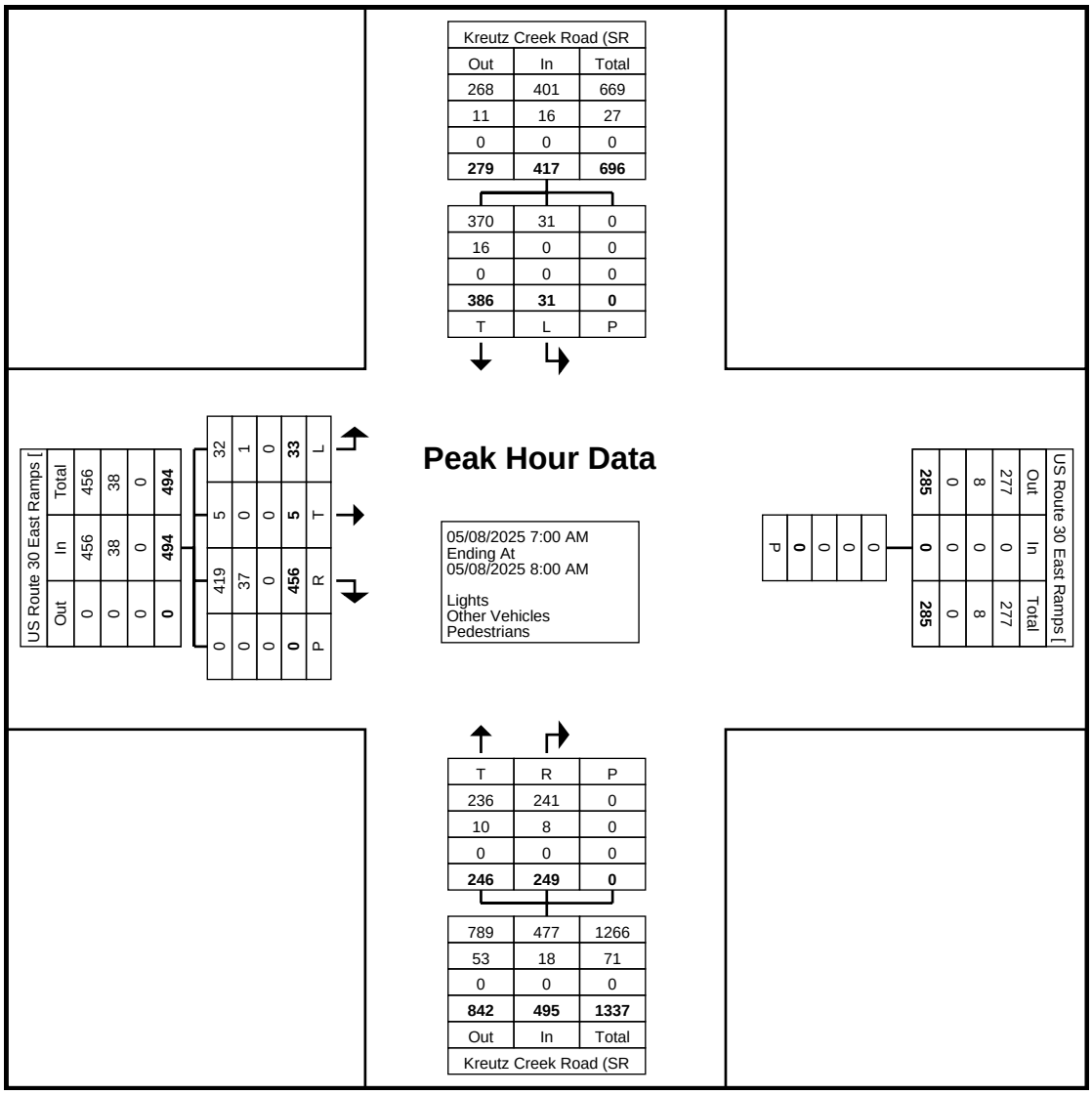
Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (7:00 AM)

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025

Turning Movement Peak Hour Data (4:30 PM)

Start Time	US Route 30 East Ramps Eastbound					US Route 30 East Ramps Westbound		Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
4:30 PM	4	0	39	0	43	0	0	70	57	0	127	5	142	0	147	317
4:45 PM	12	1	43	0	56	0	0	60	68	0	128	7	134	0	141	325
5:00 PM	11	0	48	0	59	0	0	68	77	0	145	10	105	0	115	319
5:15 PM	12	0	58	0	70	0	0	61	55	0	116	10	134	0	144	330
Total	39	1	188	0	228	0	0	259	257	0	516	32	515	0	547	1291
Approach %	17.1	0.4	82.5	-	-	-	-	50.2	49.8	-	-	5.9	94.1	-	-	-
Total %	3.0	0.1	14.6	-	17.7	-	0.0	20.1	19.9	-	40.0	2.5	39.9	-	42.4	-
PHF	0.813	0.250	0.810	-	0.814	-	0.000	0.925	0.834	-	0.890	0.800	0.907	-	0.930	0.978
Lights	39	1	185	-	225	-	0	256	251	-	507	32	509	-	541	1273
% Lights	100.0	100.0	98.4	-	98.7	-	-	98.8	97.7	-	98.3	100.0	98.8	-	98.9	98.6
Other Vehicles	0	0	3	-	3	-	0	3	6	-	9	0	6	-	6	18
% Other Vehicles	0.0	0.0	1.6	-	1.3	-	-	1.2	2.3	-	1.7	0.0	1.2	-	1.1	1.4
Pedestrians	-	-	-	0	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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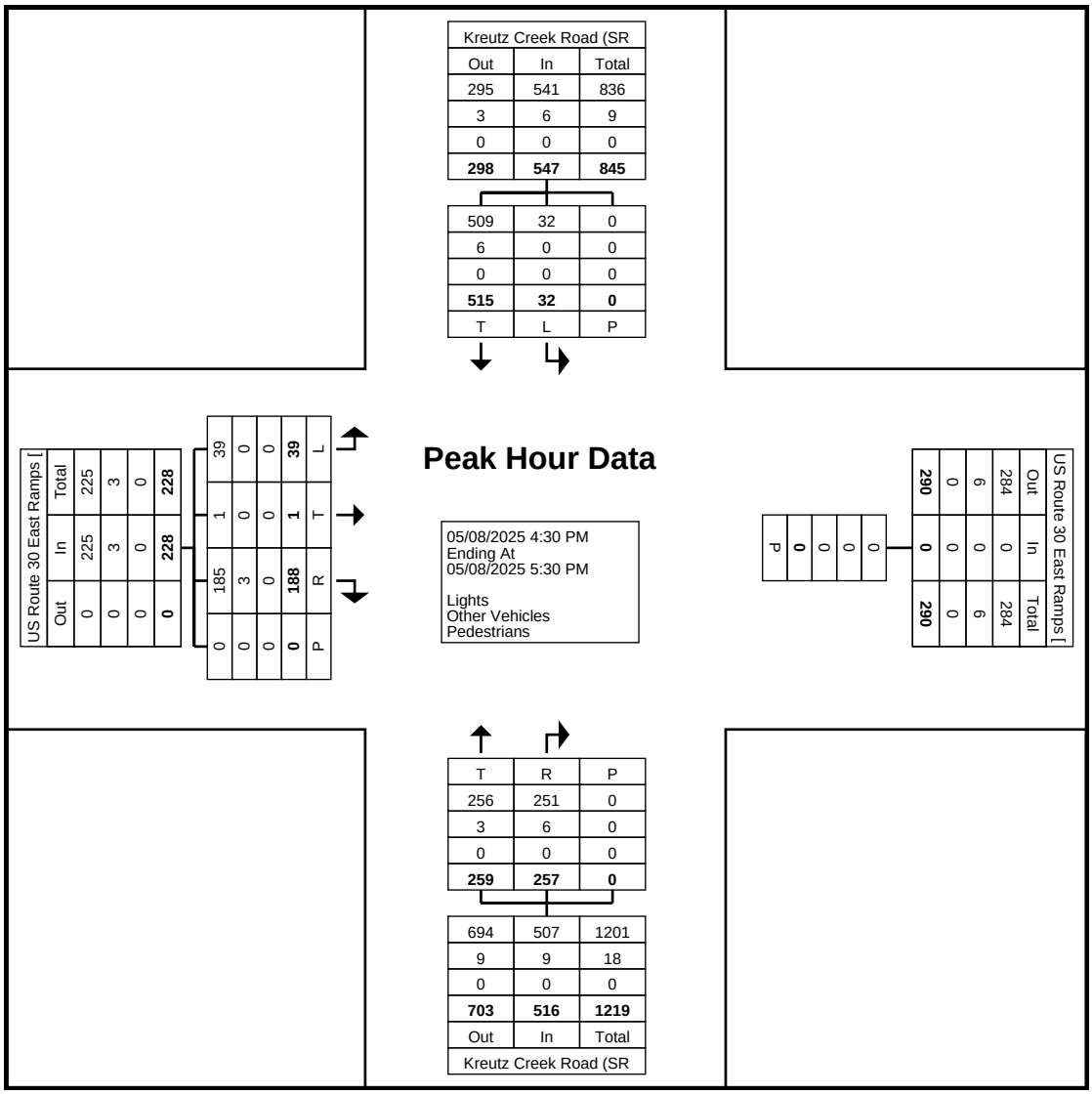
Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 East Ramps
Site Code:
Start Date: 05/08/2025



Turning Movement Peak Hour Data Plot (4:30 PM)

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code:
Start Date: 05/22/2025

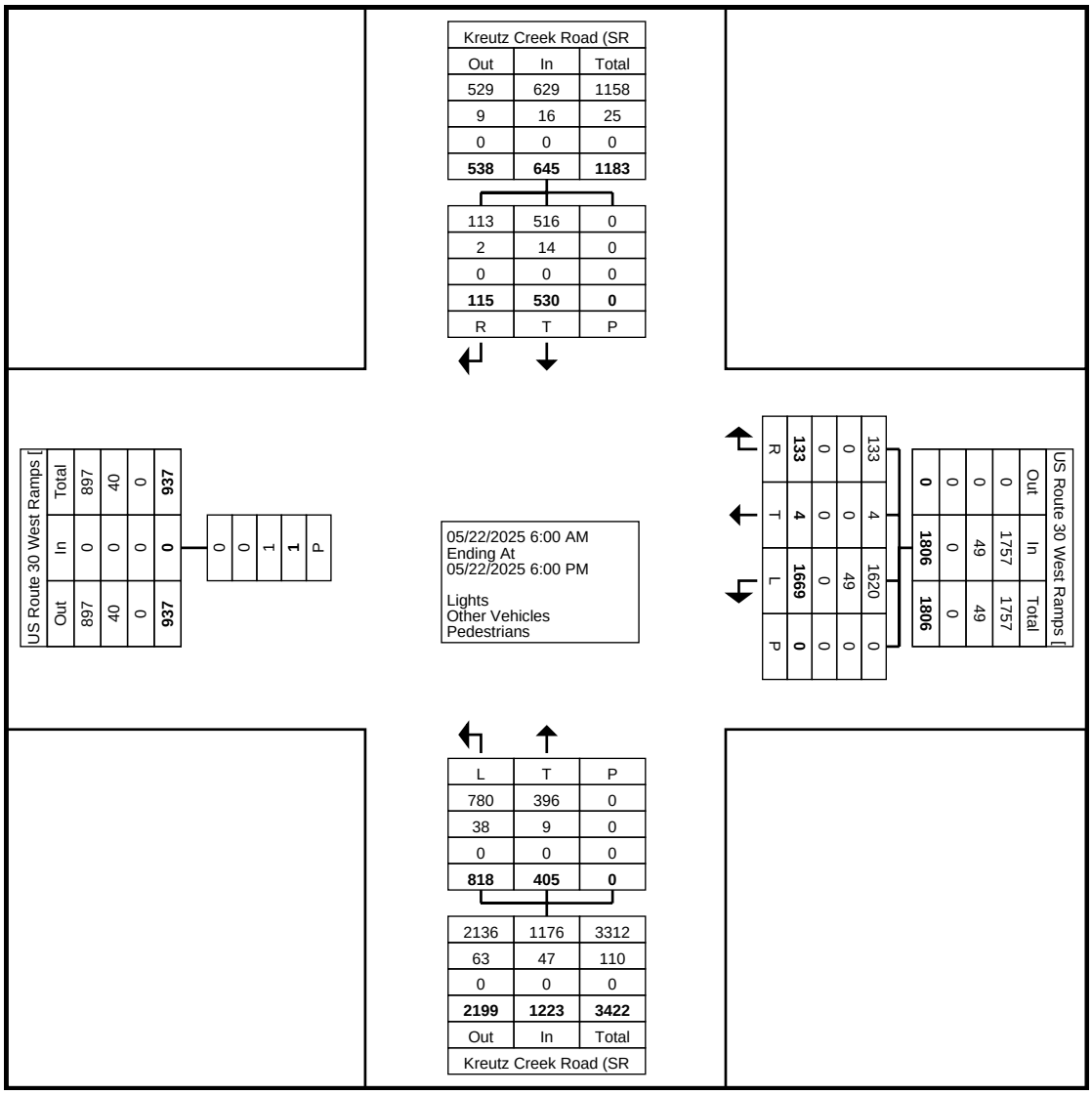
Turning Movement Data

Start Time	US Route 30 West Ramps Eastbound		US Route 30 West Ramps Westbound					Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	
6:00 AM	0	0	24	0	2	0	26	38	9	0	47	13	9	0	22	95
6:15 AM	0	0	33	1	1	0	35	20	13	0	33	19	2	0	21	89
6:30 AM	0	0	26	0	3	0	29	42	7	0	49	21	10	0	31	109
6:45 AM	0	0	53	0	6	0	59	47	5	0	52	23	5	0	28	139
Hourly Total	0	0	136	1	12	0	149	147	34	0	181	76	26	0	102	432
7:00 AM	0	0	45	0	2	0	47	35	11	0	46	24	4	0	28	121
7:15 AM	0	0	59	0	7	0	66	47	6	0	53	22	8	0	30	149
7:30 AM	0	0	58	0	1	0	59	46	11	0	57	21	9	0	30	146
7:45 AM	0	0	73	0	3	0	76	33	7	0	40	22	5	0	27	143
Hourly Total	0	0	235	0	13	0	248	161	35	0	196	89	26	0	115	559
8:00 AM	0	0	39	0	1	0	40	26	8	0	34	16	4	0	20	94
8:15 AM	0	0	42	0	2	0	44	25	10	0	35	32	5	0	37	116
8:30 AM	0	0	39	0	3	0	42	34	8	0	42	23	5	0	28	112
8:45 AM	0	0	36	0	0	0	36	36	19	0	55	24	2	0	26	117
Hourly Total	0	0	156	0	6	0	162	121	45	0	166	95	16	0	111	439
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	72	0	4	0	76	32	26	0	58	21	4	0	25	159
3:15 PM	0	0	83	1	6	0	90	41	23	0	64	18	4	0	22	176
3:30 PM	0	0	75	0	7	0	82	32	25	0	57	22	6	0	28	167
3:45 PM	0	0	109	0	11	0	120	41	21	0	62	24	7	0	31	213
Hourly Total	0	0	339	1	28	0	368	146	95	0	241	85	21	0	106	715
4:00 PM	1	0	98	0	8	0	106	31	35	0	66	23	7	0	30	202
4:15 PM	0	0	103	1	10	0	114	24	24	0	48	22	4	0	26	188
4:30 PM	0	0	105	0	8	0	113	38	28	0	66	17	2	0	19	198
4:45 PM	0	0	109	0	9	0	118	31	23	0	54	34	2	0	36	208
Hourly Total	1	0	415	1	35	0	451	124	110	0	234	96	15	0	111	796
5:00 PM	0	0	114	1	8	0	123	30	22	0	52	24	1	0	25	200
5:15 PM	0	0	101	0	17	0	118	34	18	0	52	30	3	0	33	203
5:30 PM	0	0	100	0	7	0	107	23	28	0	51	22	3	0	25	183
5:45 PM	0	0	73	0	7	0	80	32	18	0	50	13	4	0	17	147
Hourly Total	0	0	388	1	39	0	428	119	86	0	205	89	11	0	100	733
Grand Total	1	0	1669	4	133	0	1806	818	405	0	1223	530	115	0	645	3674
Approach %	-	-	92.4	0.2	7.4	-	-	66.9	33.1	-	-	82.2	17.8	-	-	-
Total %	-	0.0	45.4	0.1	3.6	-	49.2	22.3	11.0	-	33.3	14.4	3.1	-	17.6	-
Lights	-	0	1620	4	133	-	1757	780	396	-	1176	516	113	-	629	3562
% Lights	-	-	97.1	100.0	100.0	-	97.3	95.4	97.8	-	96.2	97.4	98.3	-	97.5	97.0
Other Vehicles	-	0	49	0	0	-	49	38	9	-	47	14	2	-	16	112
% Other Vehicles	-	-	2.9	0.0	0.0	-	2.7	4.6	2.2	-	3.8	2.6	1.7	-	2.5	3.0
Pedestrians	1	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Counter Mio:
Set up by JH:

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code:
Start Date: 05/22/2025



Turning Movement Data Plot

Counter Mio:
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2500 East High Street
Suite 650
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610.326.3100 jhertzler@tpdinc.com

Turning Movement Peak Hour Data (7:00 AM)

Start Time	US Route 30 West Ramps Eastbound		US Route 30 West Ramps Westbound					Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	
7:00 AM	0	0	45	0	2	0	47	35	11	0	46	24	4	0	28	121
7:15 AM	0	0	59	0	7	0	66	47	6	0	53	22	8	0	30	149
7:30 AM	0	0	58	0	1	0	59	46	11	0	57	21	9	0	30	146
7:45 AM	0	0	73	0	3	0	76	33	7	0	40	22	5	0	27	143
Total	0	0	235	0	13	0	248	161	35	0	196	89	26	0	115	559
Approach %	-	-	94.8	0.0	5.2	-	-	82.1	17.9	-	-	77.4	22.6	-	-	-
Total %	-	0.0	42.0	0.0	2.3	-	44.4	28.8	6.3	-	35.1	15.9	4.7	-	20.6	-
PHF	-	0.000	0.805	0.000	0.464	-	0.816	0.856	0.795	-	0.860	0.927	0.722	-	0.958	0.938
Lights	-	0	224	0	13	-	237	150	34	-	184	88	26	-	114	535
% Lights	-	-	95.3	-	100.0	-	95.6	93.2	97.1	-	93.9	98.9	100.0	-	99.1	95.7
Other Vehicles	-	0	11	0	0	-	11	11	1	-	12	1	0	-	1	24
% Other Vehicles	-	-	4.7	-	0.0	-	4.4	6.8	2.9	-	6.1	1.1	0.0	-	0.9	4.3
Pedestrians	0	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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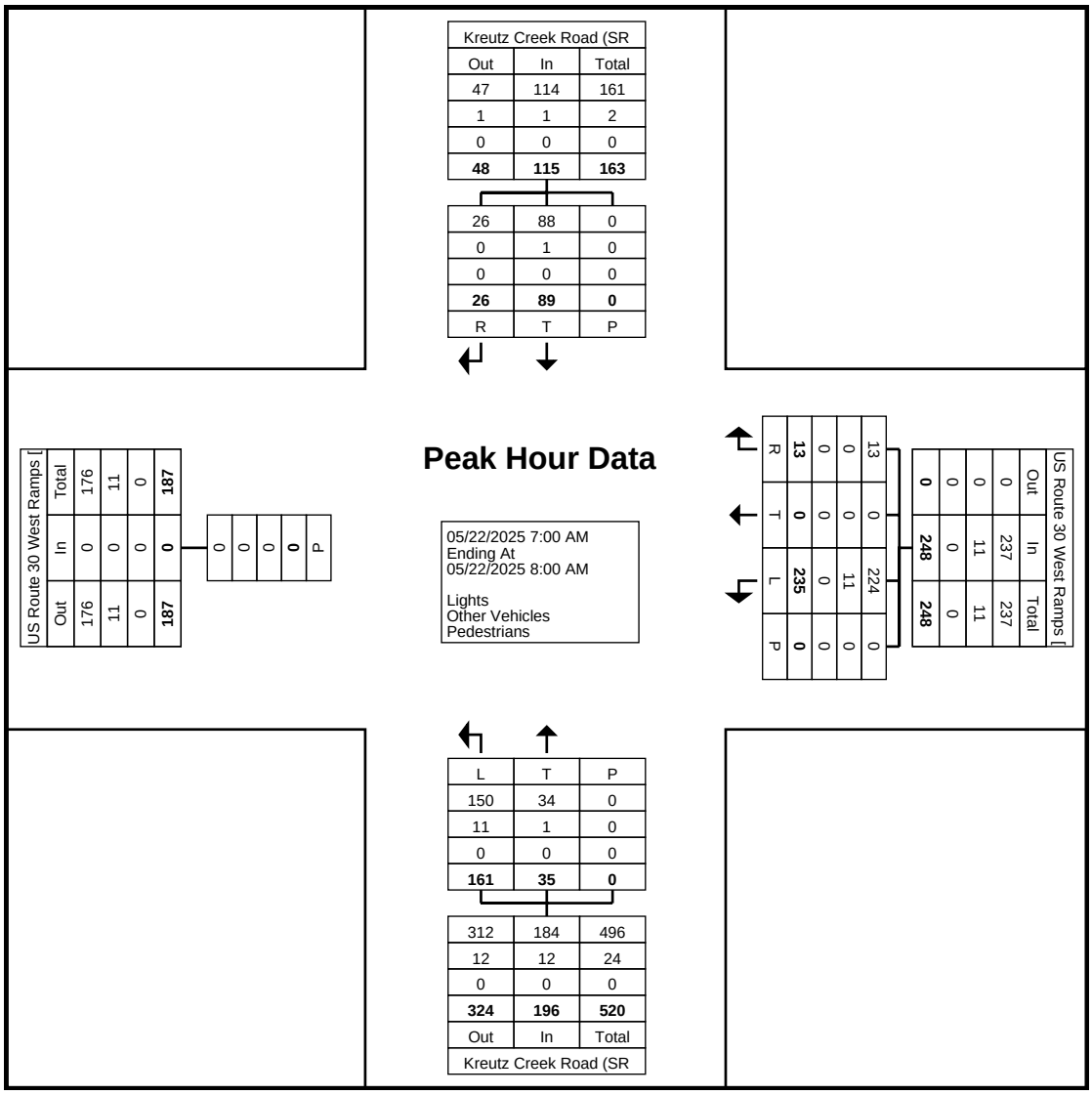
Site Code:
Start Date: 05/22/2025



Turning Movement Peak Hour Data Plot (7:00 AM)

Counter Mio:
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2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 jhertzler@tpdinc.com

Turning Movement Peak Hour Data (4:30 PM)

Start Time	US Route 30 West Ramps Eastbound		US Route 30 West Ramps Westbound					Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	
4:30 PM	0	0	105	0	8	0	113	38	28	0	66	17	2	0	19	198
4:45 PM	0	0	109	0	9	0	118	31	23	0	54	34	2	0	36	208
5:00 PM	0	0	114	1	8	0	123	30	22	0	52	24	1	0	25	200
5:15 PM	0	0	101	0	17	0	118	34	18	0	52	30	3	0	33	203
Total	0	0	429	1	42	0	472	133	91	0	224	105	8	0	113	809
Approach %	-	-	90.9	0.2	8.9	-	-	59.4	40.6	-	-	92.9	7.1	-	-	-
Total %	-	0.0	53.0	0.1	5.2	-	58.3	16.4	11.2	-	27.7	13.0	1.0	-	14.0	-
PHF	-	0.000	0.941	0.250	0.618	-	0.959	0.875	0.813	-	0.848	0.772	0.667	-	0.785	0.972
Lights	-	0	425	1	42	-	468	132	91	-	223	105	8	-	113	804
% Lights	-	-	99.1	100.0	100.0	-	99.2	99.2	100.0	-	99.6	100.0	100.0	-	100.0	99.4
Other Vehicles	-	0	4	0	0	-	4	1	0	-	1	0	0	-	0	5
% Other Vehicles	-	-	0.9	0.0	0.0	-	0.8	0.8	0.0	-	0.4	0.0	0.0	-	0.0	0.6
Pedestrians	0	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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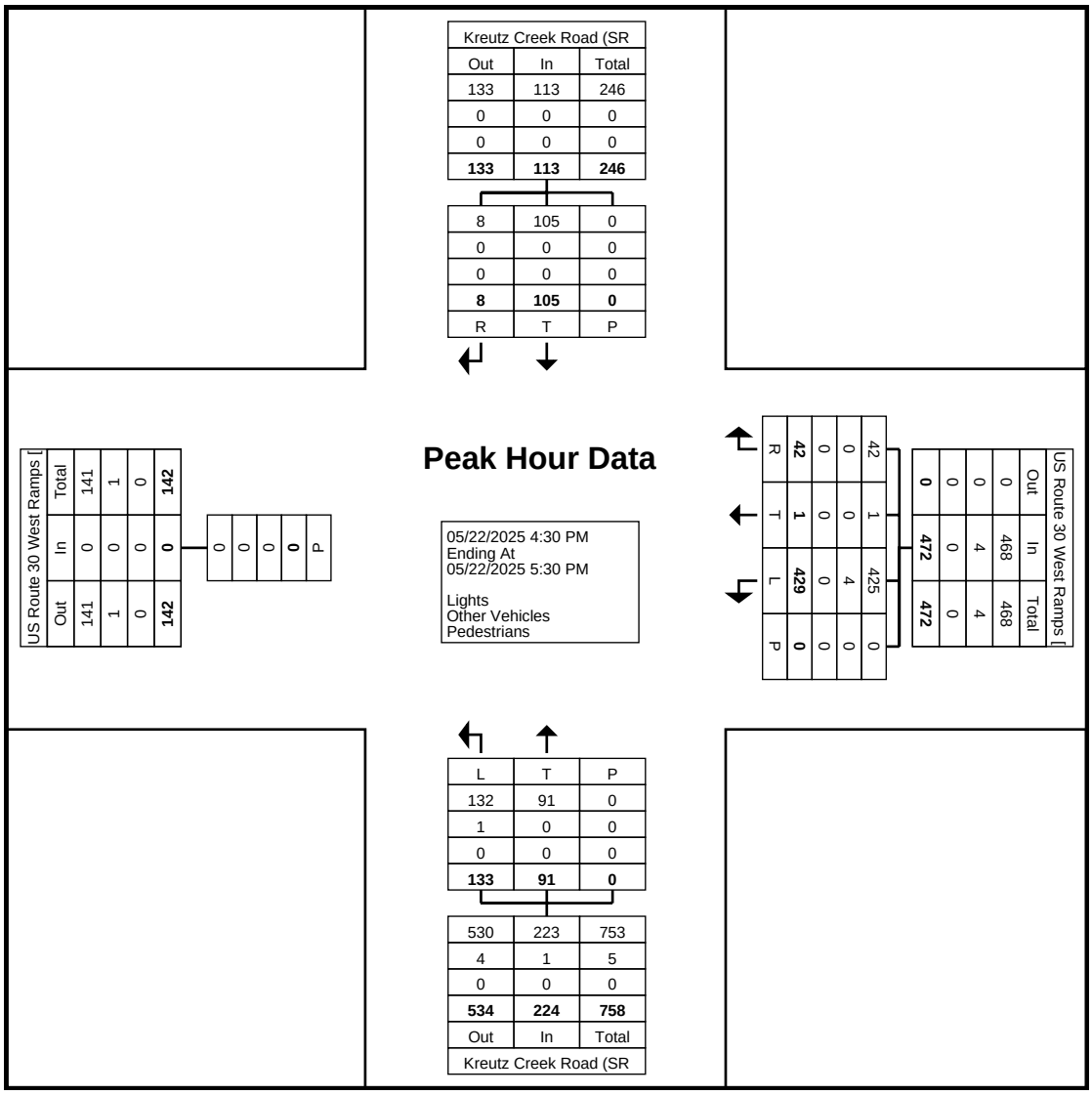
Site Code:
Start Date: 05/22/2025



Turning Movement Peak Hour Data Plot (4:30 PM)

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

Count Name: SAT Kreutz Creek Rd (SR 1014) & Lees Ln (T-947) Pleasant Valley Rd
Site Code: Kreutz Creek Rd & Lees Ln/Pleasant Valley Rd
Start Date: 07/19/2025

Turning Movement Data

Start Time	Pleasant Valley Road Eastbound					Lees Lane Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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
11:00 AM	0	0	3	0	3	0	0	0	0	0	2	24	0	0	26	0	15	0	0	15	44
11:15 AM	0	0	4	0	4	0	0	0	0	0	4	29	0	0	33	0	20	1	0	21	58
11:30 AM	1	1	6	0	8	0	0	0	0	0	5	19	0	0	24	0	20	2	0	22	54
11:45 AM	0	1	6	0	7	0	0	0	0	0	6	15	0	0	21	0	13	1	0	14	42
Hourly Total	1	2	19	0	22	0	0	0	0	0	17	87	0	0	104	0	68	4	0	72	198
12:00 PM	0	0	6	0	6	0	0	0	0	0	6	30	0	0	36	0	19	0	0	19	61
12:15 PM	0	0	6	0	6	0	0	0	0	0	4	25	1	0	30	0	11	0	0	11	47
12:30 PM	0	0	5	0	5	0	0	0	0	0	3	31	0	0	34	0	17	0	0	17	56
12:45 PM	0	0	4	0	4	0	0	0	0	0	2	21	0	0	23	0	24	0	0	24	51
Hourly Total	0	0	21	0	21	0	0	0	0	0	15	107	1	0	123	0	71	0	0	71	215
1:00 PM	0	0	3	0	3	0	0	0	0	0	2	21	1	0	24	0	14	0	0	14	41
1:15 PM	0	0	4	0	4	0	0	0	0	0	3	22	0	0	25	0	19	1	0	20	49
1:30 PM	0	0	4	1	4	0	0	0	0	0	0	29	2	0	31	0	14	0	0	14	49
1:45 PM	0	0	3	0	3	0	0	0	0	0	5	20	0	0	25	0	22	1	0	23	51
Hourly Total	0	0	14	1	14	0	0	0	0	0	10	92	3	0	105	0	69	2	0	71	190
Grand Total	1	2	54	1	57	0	0	0	0	0	42	286	4	0	332	0	208	6	0	214	603
Approach %	1.8	3.5	94.7	-	-	0.0	0.0	0.0	-	-	12.7	86.1	1.2	-	-	0.0	97.2	2.8	-	-	-
Total %	0.2	0.3	9.0	-	9.5	0.0	0.0	0.0	-	0.0	7.0	47.4	0.7	-	55.1	0.0	34.5	1.0	-	35.5	-
Lights	1	2	54	-	57	0	0	0	-	0	42	286	4	-	332	0	208	6	-	214	603
% Lights	100.0	100.0	100.0	-	100.0	-	-	-	-	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	100.0
Mediums	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Mediums	0.0	0.0	0.0	-	0.0	-	-	-	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	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	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Traffic Planning and Design, Inc
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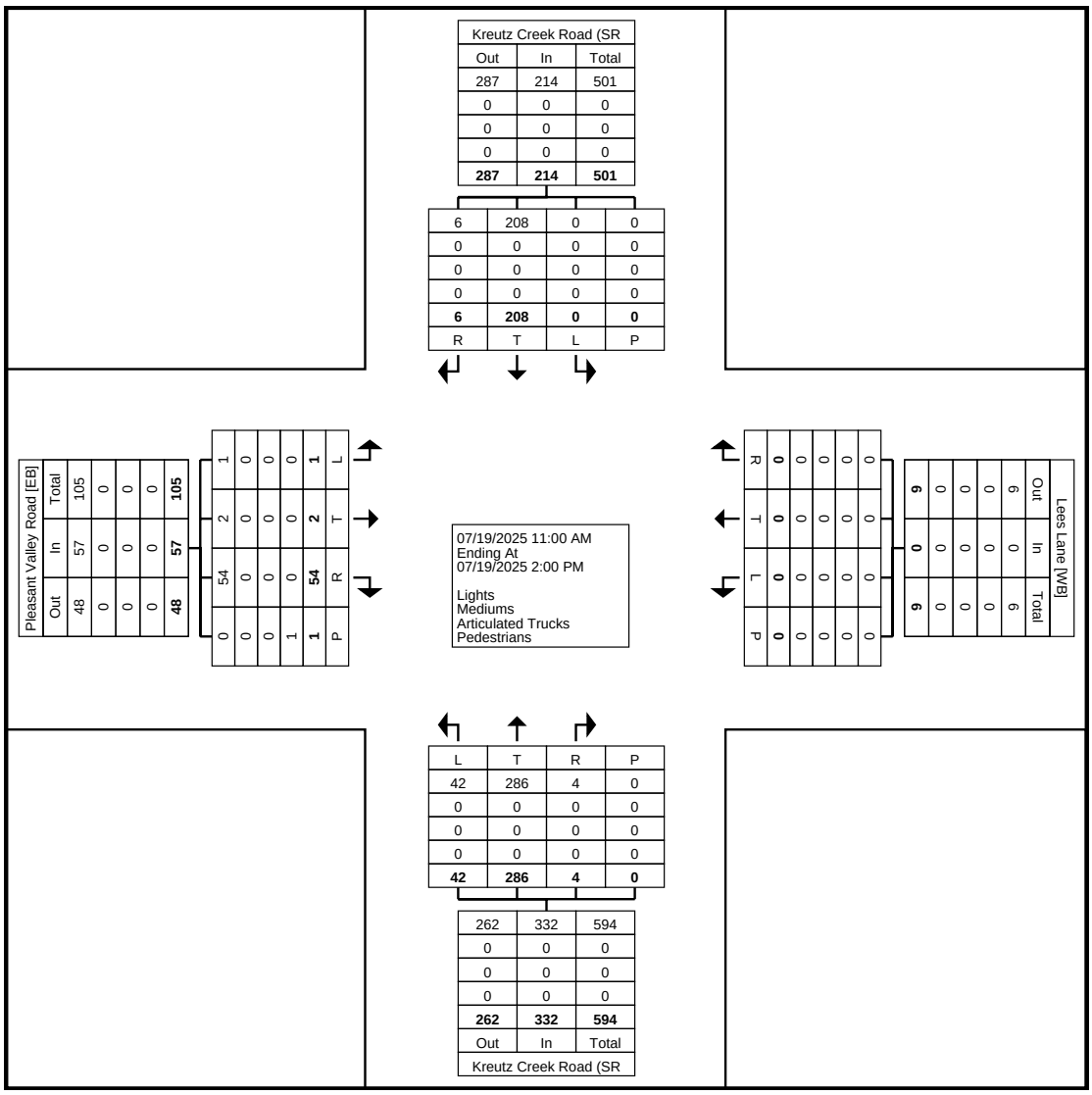
Count Name: SAT Kreutz Creek Rd (SR 1014) & Lees Ln (T-947) Pleasant Valley Rd
Site Code: Kreutz Creek Rd & Lees Ln/Pleasant Valley Rd
Start Date: 07/19/2025



Turning Movement Data Plot

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Site Code: Kreutz Creek Rd & Lees Ln/Pleasant Valley Rd
Start Date: 07/19/2025

Turning Movement Peak Hour Data (11:15 AM)

Start Time	Pleasant Valley Road Eastbound					Lees Lane Westbound					Kreutz Creek Road (SR 1014) Northbound					Kreutz Creek Road (SR 1014) 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
11:15 AM	0	0	4	0	4	0	0	0	0	0	4	29	0	0	33	0	20	1	0	21	58
11:30 AM	1	1	6	0	8	0	0	0	0	0	5	19	0	0	24	0	20	2	0	22	54
11:45 AM	0	1	6	0	7	0	0	0	0	0	6	15	0	0	21	0	13	1	0	14	42
12:00 PM	0	0	6	0	6	0	0	0	0	0	6	30	0	0	36	0	19	0	0	19	61
Total	1	2	22	0	25	0	0	0	0	0	21	93	0	0	114	0	72	4	0	76	215
Approach %	4.0	8.0	88.0	-	-	0.0	0.0	0.0	-	-	18.4	81.6	0.0	-	-	0.0	94.7	5.3	-	-	-
Total %	0.5	0.9	10.2	-	11.6	0.0	0.0	0.0	-	0.0	9.8	43.3	0.0	-	53.0	0.0	33.5	1.9	-	35.3	-
PHF	0.250	0.500	0.917	-	0.781	0.000	0.000	0.000	-	0.000	0.875	0.775	0.000	-	0.792	0.000	0.900	0.500	-	0.864	0.881
Lights	1	2	22	-	25	0	0	0	-	0	21	93	0	-	114	0	72	4	-	76	215
% Lights	100.0	100.0	100.0	-	100.0	-	-	-	-	-	100.0	100.0	-	-	100.0	-	100.0	100.0	-	100.0	100.0
Mediums	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Mediums	0.0	0.0	0.0	-	0.0	-	-	-	-	-	0.0	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	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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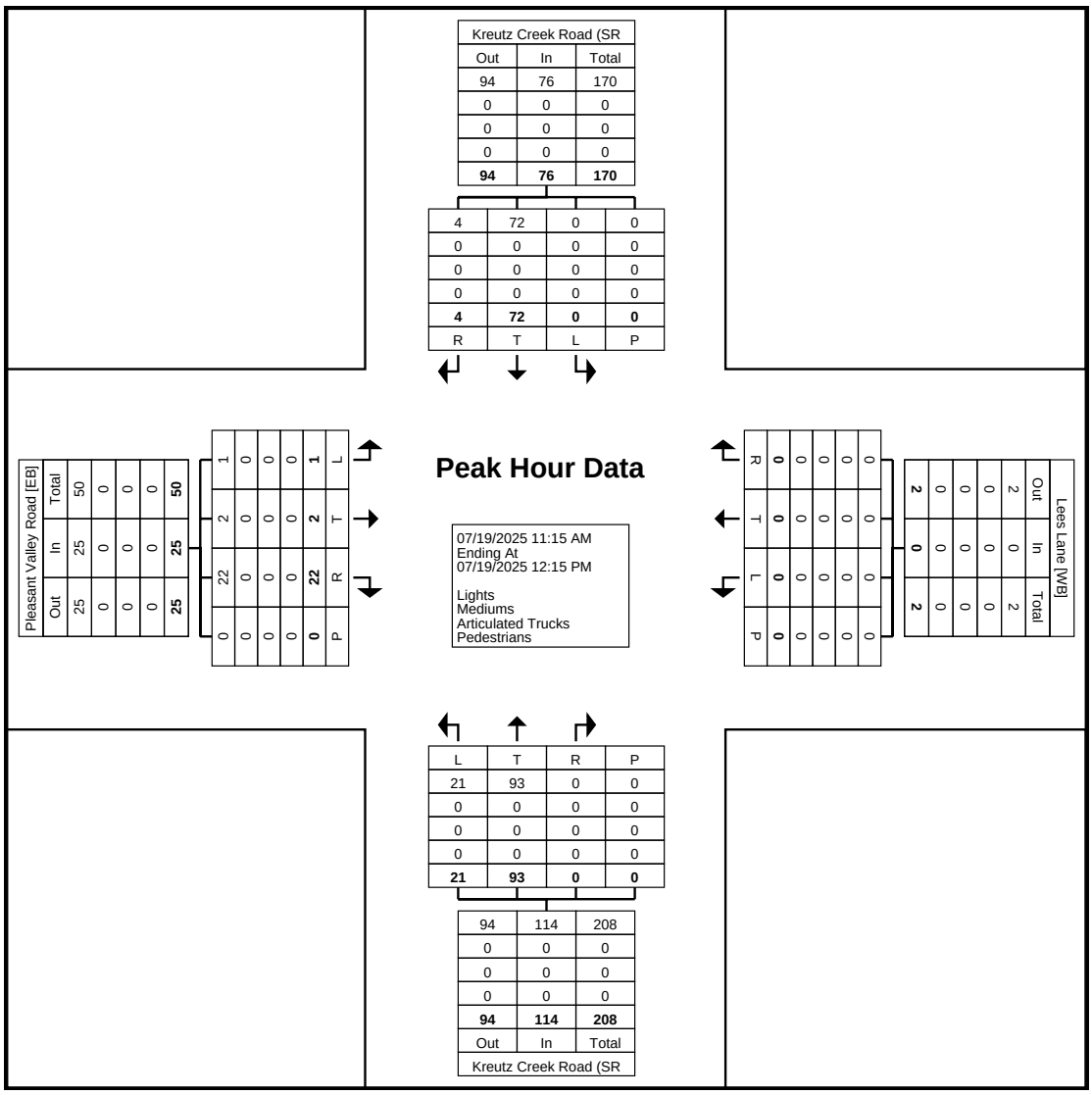

Turning Movement Peak Hour Data Plot (11:15 AM)

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Count Name: SAT Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code: Kreutz Creek Rd & US Route 30 West Ramp
Start Date: 07/19/2025

Turning Movement Data

Start Time	Eastbound Approach		US 30 Off Ramp					Kreutz Creek Road (SR 1014)				Kreutz Creek Road (SR 1014)				
	Eastbound		Westbound					Northbound				Southbound				
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	0	45	0	4	0	49	29	26	0	55	16	3	0	19	123
11:15 AM	0	0	49	0	7	0	56	23	24	0	47	23	2	0	25	128
11:30 AM	0	0	39	0	3	0	42	39	21	0	60	19	7	0	26	128
11:45 AM	0	0	53	0	7	0	60	40	14	0	54	15	3	0	18	132
Hourly Total	0	0	186	0	21	0	207	131	85	0	216	73	15	0	88	511
12:00 PM	0	0	52	0	5	0	57	28	27	0	55	24	1	0	25	137
12:15 PM	0	0	62	0	5	0	67	31	25	0	56	13	2	0	15	138
12:30 PM	0	0	66	0	10	0	76	42	27	0	69	16	3	0	19	164
12:45 PM	0	0	53	0	7	0	60	35	11	0	46	27	2	0	29	135
Hourly Total	0	0	233	0	27	0	260	136	90	0	226	80	8	0	88	574
1:00 PM	0	0	56	0	4	0	60	30	23	0	53	17	2	0	19	132
1:15 PM	0	0	49	1	1	0	51	50	19	0	69	19	5	0	24	144
1:30 PM	1	0	56	0	7	0	63	32	27	0	59	15	3	0	18	140
1:45 PM	0	0	61	0	5	0	66	30	21	0	51	21	3	0	24	141
Hourly Total	1	0	222	1	17	0	240	142	90	0	232	72	13	0	85	557
Grand Total	1	0	641	1	65	0	707	409	265	0	674	225	36	0	261	1642
Approach %	-	-	90.7	0.1	9.2	-	-	60.7	39.3	-	-	86.2	13.8	-	-	-
Total %	-	0.0	39.0	0.1	4.0	-	43.1	24.9	16.1	-	41.0	13.7	2.2	-	15.9	-
Lights	-	0	630	1	65	-	696	406	265	-	671	225	36	-	261	1628
% Lights	-	-	98.3	100.0	100.0	-	98.4	99.3	100.0	-	99.6	100.0	100.0	-	100.0	99.1
Mediums	-	0	8	0	0	-	8	3	0	-	3	0	0	-	0	11
% Mediums	-	-	1.2	0.0	0.0	-	1.1	0.7	0.0	-	0.4	0.0	0.0	-	0.0	0.7
Articulated Trucks	-	0	3	0	0	-	3	0	0	-	0	0	0	-	0	3
% Articulated Trucks	-	-	0.5	0.0	0.0	-	0.4	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Pedestrians	1	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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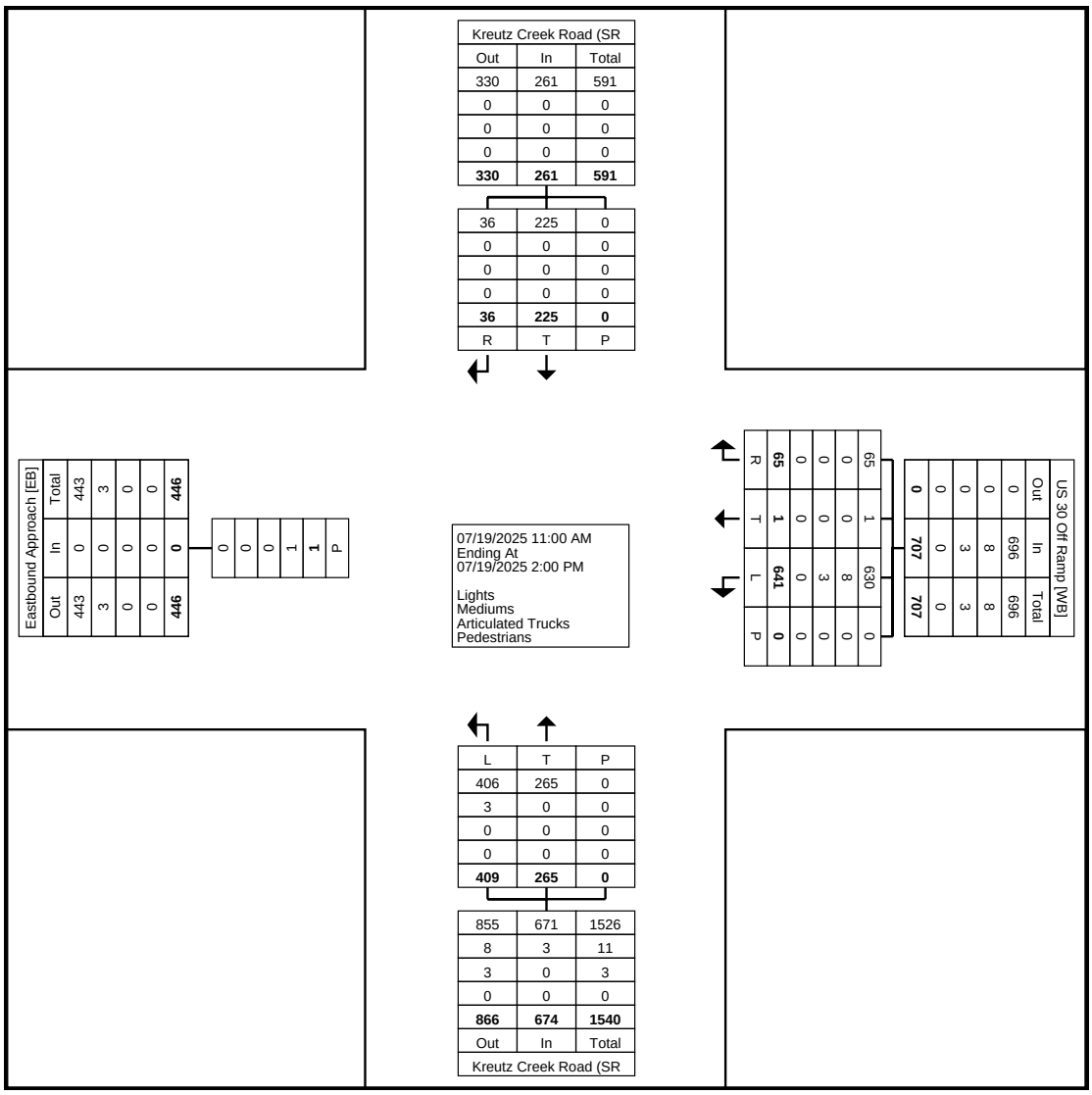
Site Code: Kreutz Creek Rd & US Route 30 West Ramp
Start Date: 07/19/2025



Turning Movement Data Plot

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Count Name: SAT Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code: Kreutz Creek Rd & US Route 30 West Ramp
Start Date: 07/19/2025

Turning Movement Peak Hour Data (12:30 PM)

Start Time	Eastbound Approach		US 30 Off Ramp					Kreutz Creek Road (SR 1014)				Kreutz Creek Road (SR 1014)				
	Eastbound		Westbound					Northbound				Southbound				
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
12:30 PM	0	0	66	0	10	0	76	42	27	0	69	16	3	0	19	164
12:45 PM	0	0	53	0	7	0	60	35	11	0	46	27	2	0	29	135
1:00 PM	0	0	56	0	4	0	60	30	23	0	53	17	2	0	19	132
1:15 PM	0	0	49	1	1	0	51	50	19	0	69	19	5	0	24	144
Total	0	0	224	1	22	0	247	157	80	0	237	79	12	0	91	575
Approach %	-	-	90.7	0.4	8.9	-	-	66.2	33.8	-	-	86.8	13.2	-	-	-
Total %	-	0.0	39.0	0.2	3.8	-	43.0	27.3	13.9	-	41.2	13.7	2.1	-	15.8	-
PHF	-	0.000	0.848	0.250	0.550	-	0.813	0.785	0.741	-	0.859	0.731	0.600	-	0.784	0.877
Lights	-	0	222	1	22	-	245	156	80	-	236	79	12	-	91	572
% Lights	-	-	99.1	100.0	100.0	-	99.2	99.4	100.0	-	99.6	100.0	100.0	-	100.0	99.5
Mediums	-	0	1	0	0	-	1	1	0	-	1	0	0	-	0	2
% Mediums	-	-	0.4	0.0	0.0	-	0.4	0.6	0.0	-	0.4	0.0	0.0	-	0.0	0.3
Articulated Trucks	-	0	1	0	0	-	1	0	0	-	0	0	0	-	0	1
% Articulated Trucks	-	-	0.4	0.0	0.0	-	0.4	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.2
Pedestrians	0	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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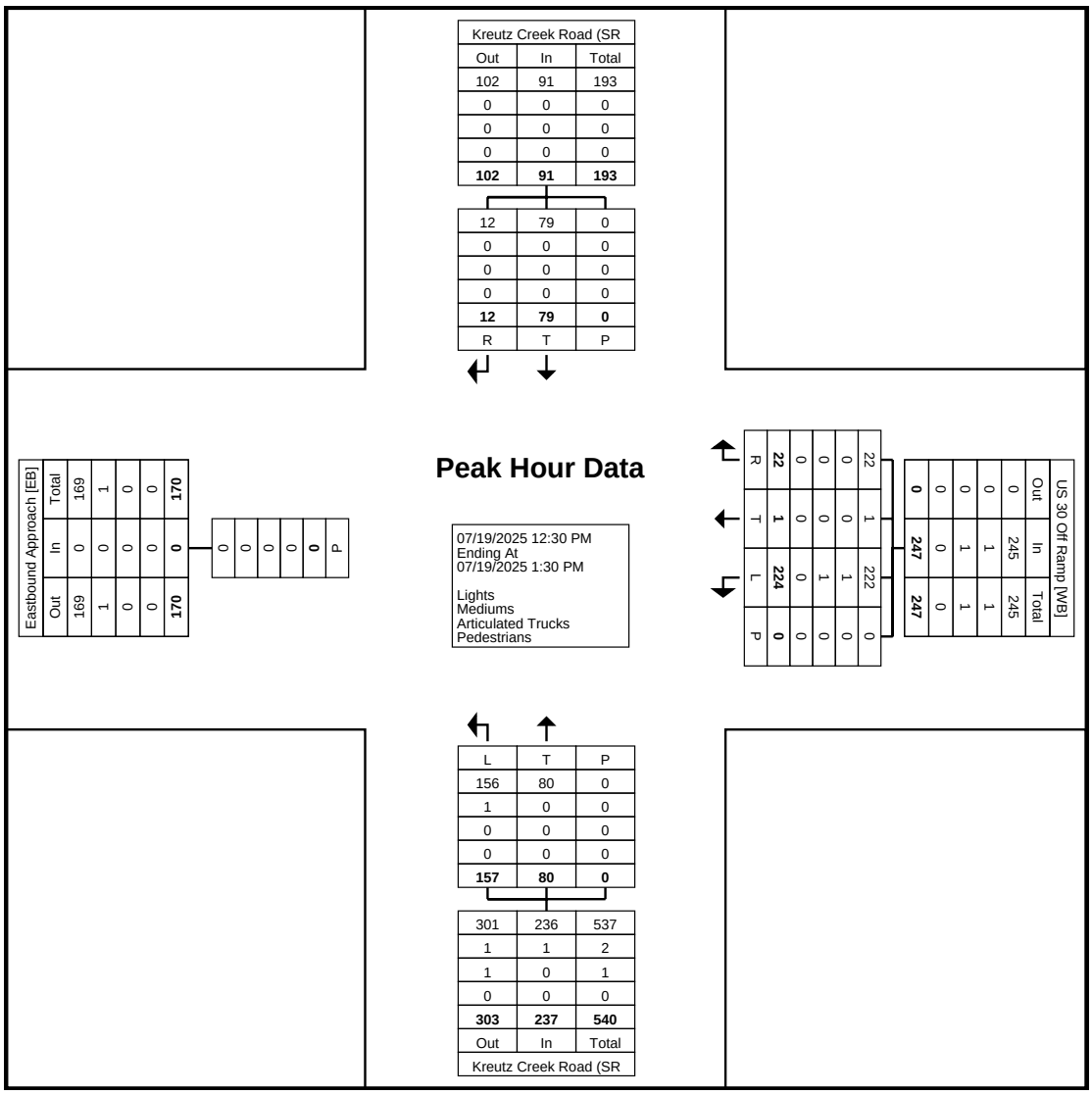
Start Date: 07/19/2025



Turning Movement Peak Hour Data Plot (12:30 PM)

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Count Name: SAT Kreutz Creek Rd (SR 1014) & US 30 East Ramps
Site Code: Kreutz Creek Rd (SR 1014) & US 30 East Ramps
Start Date: 07/19/2025

Turning Movement Data

Start Time	US 30 East Off Ramp					Westbound Approach		Kreutz Creek Rd (SR 1014)					Kreutz Creek Rd (SR 1014)				Int. Total
	Eastbound					Westbound		Northbound					Southbound				
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
11:00 AM	8	0	38	0	46	0	0	0	46	57	0	103	4	62	0	66	215
11:15 AM	11	0	45	0	56	0	0	0	37	53	0	90	8	65	0	73	219
11:30 AM	8	0	30	0	38	0	0	0	52	68	0	120	4	54	0	58	216
11:45 AM	3	0	30	0	33	0	0	0	55	53	0	108	4	64	0	68	209
Hourly Total	30	0	143	0	173	0	0	0	190	231	0	421	20	245	0	265	859
12:00 PM	8	0	39	0	47	0	0	0	46	55	0	101	11	62	0	73	221
12:15 PM	9	0	39	0	48	0	0	1	47	61	0	109	3	71	0	74	231
12:30 PM	9	1	39	0	49	0	0	0	61	58	0	119	4	80	0	84	252
12:45 PM	4	0	41	0	45	0	0	0	39	51	0	90	9	73	0	82	217
Hourly Total	30	1	158	0	189	0	0	1	193	225	0	419	27	286	0	313	921
1:00 PM	8	0	34	0	42	0	0	0	47	48	0	95	5	65	0	70	207
1:15 PM	6	0	27	0	33	0	0	0	65	44	0	109	1	64	0	65	207
1:30 PM	7	0	30	1	37	0	0	0	51	49	0	100	7	64	0	71	208
1:45 PM	7	1	45	0	53	0	0	0	41	40	0	81	9	73	0	82	216
Hourly Total	28	1	136	1	165	0	0	0	204	181	0	385	22	266	0	288	838
Grand Total	88	2	437	1	527	0	0	1	587	637	0	1225	69	797	0	866	2618
Approach %	16.7	0.4	82.9	-	-	-	-	0.1	47.9	52.0	-	-	8.0	92.0	-	-	-
Total %	3.4	0.1	16.7	-	20.1	-	0.0	0.0	22.4	24.3	-	46.8	2.6	30.4	-	33.1	-
Lights	88	2	434	-	524	-	0	1	583	632	-	1216	69	786	-	855	2595
% Lights	100.0	100.0	99.3	-	99.4	-	-	100.0	99.3	99.2	-	99.3	100.0	98.6	-	98.7	99.1
Mediums	0	0	3	-	3	-	0	0	4	2	-	6	0	8	-	8	17
% Mediums	0.0	0.0	0.7	-	0.6	-	-	0.0	0.7	0.3	-	0.5	0.0	1.0	-	0.9	0.6
Articulated Trucks	0	0	0	-	0	-	0	0	0	3	-	3	0	3	-	3	6
% Articulated Trucks	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	0.5	-	0.2	0.0	0.4	-	0.3	0.2
Pedestrians	-	-	-	1	-	0	-	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-

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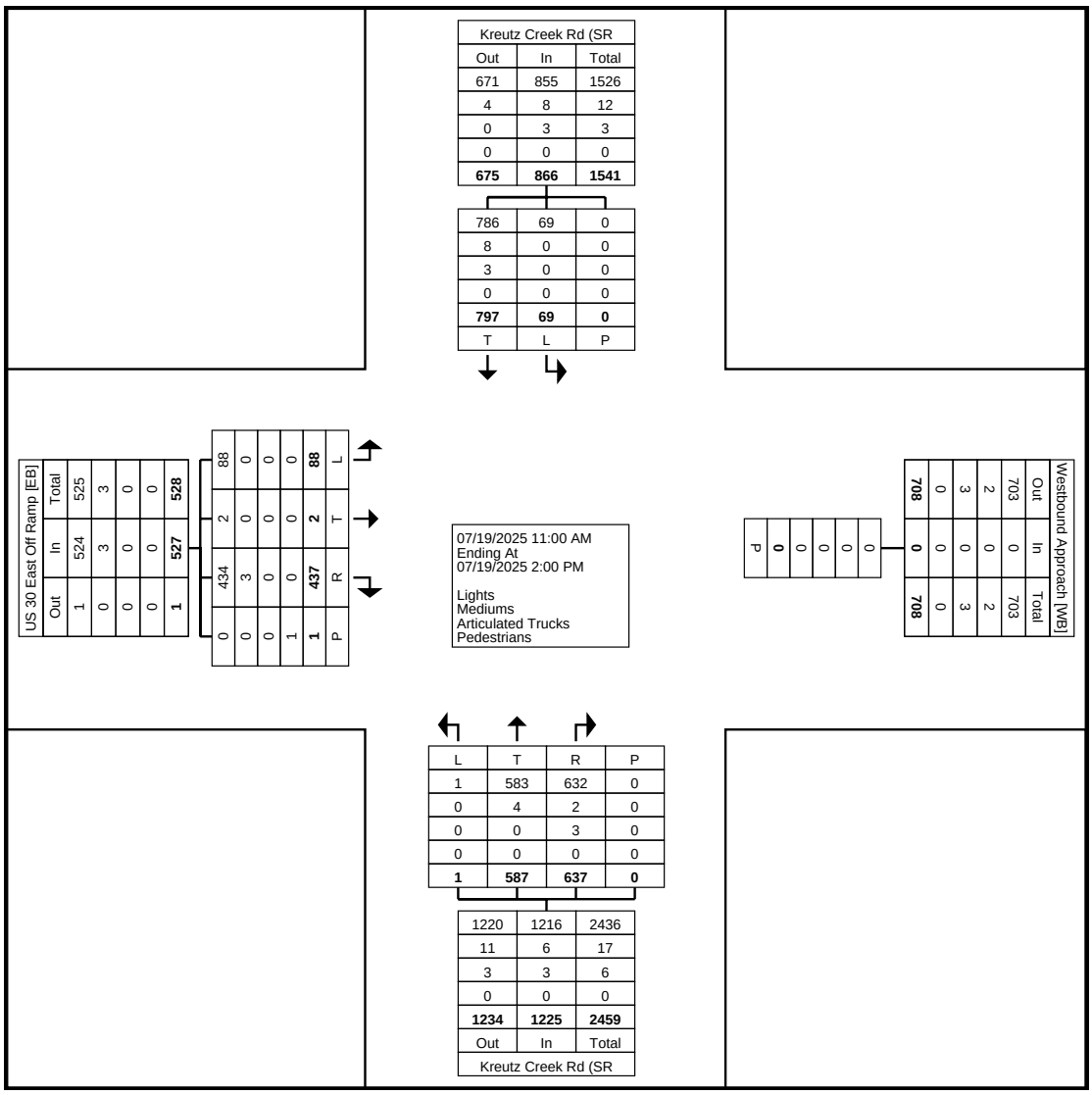

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Turning Movement Peak Hour Data (12:00 PM)

Start Time	US 30 East Off Ramp					Westbound Approach		Kreutz Creek Rd (SR 1014)					Kreutz Creek Rd (SR 1014)				Int. Total
	Eastbound					Westbound		Northbound					Southbound				
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	
12:00 PM	8	0	39	0	47	0	0	0	46	55	0	101	11	62	0	73	221
12:15 PM	9	0	39	0	48	0	0	1	47	61	0	109	3	71	0	74	231
12:30 PM	9	1	39	0	49	0	0	0	61	58	0	119	4	80	0	84	252
12:45 PM	4	0	41	0	45	0	0	0	39	51	0	90	9	73	0	82	217
Total	30	1	158	0	189	0	0	1	193	225	0	419	27	286	0	313	921
Approach %	15.9	0.5	83.6	-	-	-	-	0.2	46.1	53.7	-	-	8.6	91.4	-	-	-
Total %	3.3	0.1	17.2	-	20.5	-	0.0	0.1	21.0	24.4	-	45.5	2.9	31.1	-	34.0	-
PHF	0.833	0.250	0.963	-	0.964	-	0.000	0.250	0.791	0.922	-	0.880	0.614	0.894	-	0.932	0.914
Lights	30	1	157	-	188	-	0	1	193	222	-	416	27	283	-	310	914
% Lights	100.0	100.0	99.4	-	99.5	-	-	100.0	100.0	98.7	-	99.3	100.0	99.0	-	99.0	99.2
Mediums	0	0	1	-	1	-	0	0	0	1	-	1	0	1	-	1	3
% Mediums	0.0	0.0	0.6	-	0.5	-	-	0.0	0.0	0.4	-	0.2	0.0	0.3	-	0.3	0.3
Articulated Trucks	0	0	0	-	0	-	0	0	0	2	-	2	0	2	-	2	4
% Articulated Trucks	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	0.9	-	0.5	0.0	0.7	-	0.6	0.4
Pedestrians	-	-	-	0	-	0	-	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Vehicle removed due to making an illegal U-Turn via signage along Kreutz Creek Road

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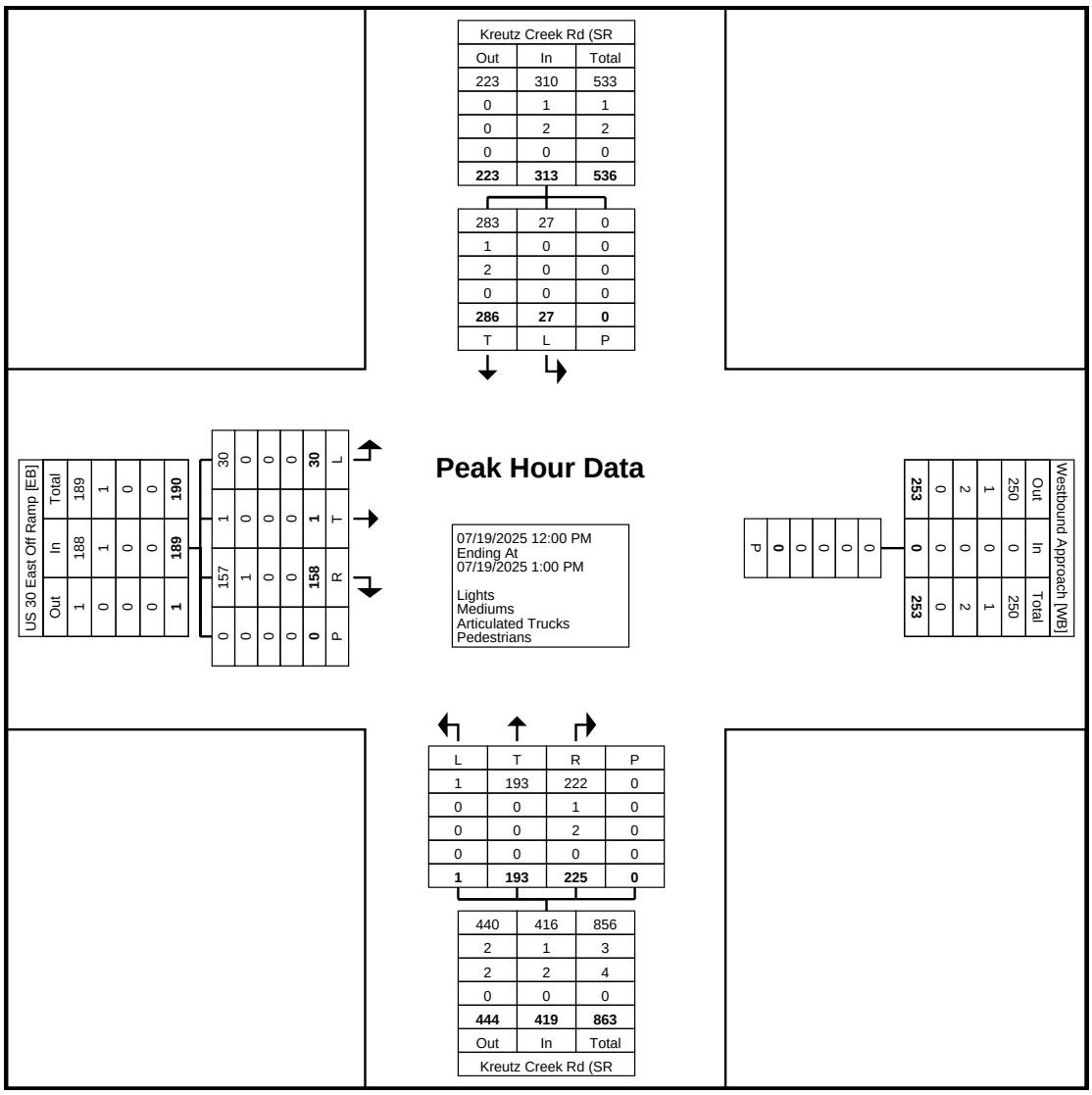


Turning Movement Peak Hour Data Plot (12:00 PM)

Appendix D:

Volume Development Worksheets

TPD# JDAI.00005
8/8/2025
Traffic Volumes Worksheet
Intersection: **Kreutz Creek Road (SR 1014) & Lee Lane/Pleasant Valley Road**
Synchro Node: **1**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**2**	**0**	**18**	**0**	**0**	**0**	**7**	**101**	**0**	**0**	**114**	**1**	**243**
Existing Heavy Vehicles	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**5**	**1**	**10**
Existing Passenger Vehicles	**1**	**0**	**17**	**0**	**0**	**0**	**7**	**99**	**0**	**0**	**109**	**0**	**233**
Base growth (0.37% compounded for 13 yrs)	0	0	1	0	0	0	0	5	0	0	6	0	12
2038 Base (No-Build) Volumes - Growth Rate Only	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**6**	**0**	**12**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**2**	**0**	**19**	**0**	**0**	**0**	**7**	**106**	**0**	**0**	**120**	**1**	**255**
SITE TRIPS													
New PV Warehouse		2		17	1	1			62	5			88
New Truck Warehouse				3					6				9
Pass-By PV Gas				17		15		-15	15	17	-17		32
Diverted PV Gas				17					17				34
New PV Gas				21		2			21	2			46
Diverted Truck Gas				16					16				32
New Truck Gas				15					12				27
Total Site Trip Distribution	**0**	**2**	**0**	**106**	**1**	**18**	**0**	**-15**	**149**	**24**	**-17**	**0**	**268**
2038 Projected (Build) Volumes	**2**	**2**	**19**	**106**	**1**	**18**	**7**	**91**	**149**	**24**	**103**	**1**	**523**
Existing/Base	**50%**	**0%**	**6%**	**0%**	**0%**	**0%**	**0%**	**2%**	**0%**	**0%**	**4%**	**100%**	**0.88**
Projected HV %	**50%**	**2%**	**6%**	**18%**	**2%**	**2%**	**0%**	**2%**	**15%**	**2%**	**5%**	**100%**	

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**0**	**0**	**16**	**6**	**0**	**1**	**25**	**161**	**5**	**1**	**115**	**1**	**331**
Existing Heavy Vehicles	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**
Existing Passenger Vehicles	**0**	**0**	**16**	**6**	**0**	**1**	**25**	**161**	**5**	**1**	**113**	**1**	**329**
Base growth (0.37% compounded for 13 yrs)	0	0	1	0	0	0	1	8	0	0	6	0	16
2038 Base (No-Build) Volumes - Growth Rate Only	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**6**	**0**	**16**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**0**	**0**	**17**	**6**	**0**	**1**	**26**	**169**	**5**	**1**	**121**	**1**	**347**
SITE TRIPS													
New PV Warehouse		1		49	2	4			15	1			72
New Truck Warehouse				6					7				13
Pass-By PV Gas				17		24		-24	24	17	-17		41
Diverted PV Gas				25					25				50
New PV Gas				20		2			12	1			35
Diverted Truck Gas				16					16				32
New Truck Gas				14					13				27
Total Site Trip Distribution	**0**	**1**	**0**	**147**	**2**	**30**	**0**	**-24**	**112**	**19**	**-17**	**0**	**270**
2038 Projected (Build) Volumes	**0**	**1**	**17**	**153**	**2**	**31**	**26**	**145**	**117**	**20**	**104**	**1**	**617**
Existing/Base	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**2%**	**0%**	**0.89**
Projected HV %	**0%**	**2%**	**0%**	**14%**	**2%**	**2%**	**0%**	**0%**	**20%**	**2%**	**2%**	**0%**	

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**1**	**2**	**22**	**0**	**0**	**0**	**21**	**93**	**0**	**0**	**72**	**4**	**215**
Existing Heavy Vehicles	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Existing Passenger Vehicles	**1**	**2**	**22**	**0**	**0**	**0**	**21**	**93**	**0**	**0**	**72**	**4**	**215**
Base growth (0.37% compounded for 13 yrs)	0	0	1	0	0	0	1	5	0	0	4	0	11
2038 Base (No-Build) Volumes - Growth Rate Only	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**4**	**0**	**11**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**1**	**2**	**23**	**0**	**0**	**0**	**22**	**98**	**0**	**0**	**76**	**4**	**226**
SITE TRIPS													
New PV Warehouse									3				3
New Truck Warehouse				4					4				8
Pass-By PV Gas				11		13		-15	15	11	-11		24
Diverted PV Gas				51					55				106
New PV Gas		1		21	1	2			24	2			51
Diverted Truck Gas				9					9				18
New Truck Gas				11					10				21
Total Site Trip Distribution	**0**	**1**	**0**	**107**	**1**	**15**	**0**	**-15**	**120**	**13**	**-11**	**0**	**231**
2038 Projected (Build) Volumes	**1**	**3**	**23**	**107**	**1**	**15**	**22**	**83**	**120**	**13**	**65**	**4**	**457**
Existing/Base	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0.88**
Projected HV %	**0%**	**2%**	**0%**	**12%**	**2%**	**2%**	**0%**	**0%**	**11%**	**2%**	**0%**	**0%**	

TPD# JDAI.00005
8/8/2025
Traffic Volumes Worksheet
Intersection: **Kreutz Creek Road (SR 1014) & US Route 30 West Ramps**
Synchro Node: **2**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**0**	**0**	**0**	**235**	**0**	**13**	**161**	**35**	**0**	**0**	**89**	**26**	**559**
Existing Heavy Vehicles	**0**	**0**	**0**	**11**	**0**	**0**	**11**	**1**	**0**	**0**	**1**	**0**	**24**
Existing Passenger Vehicles	**0**	**0**	**0**	**224**	**0**	**13**	**150**	**34**	**0**	**0**	**88**	**26**	**535**
Base growth (0.37% compounded for 13 yrs)	0	0	0	12	0	1	8	2	0	0	4	1	28
2038 Base (No-Build) Volumes - Growth Rate Only	**0**	**0**	**0**	**12**	**0**	**1**	**8**	**2**	**0**	**0**	**4**	**1**	**28**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**0**	**0**	**0**	**247**	**0**	**14**	**169**	**37**	**0**	**0**	**93**	**27**	**587**
SITE TRIPS													
New PV Warehouse						5		57			5	12	79
New Truck Warehouse						3		3			2	1	9
Pass-By PV Gas													0
Diverted PV Gas						8		9			9	8	34
New PV Gas						6		15			16	5	42
Diverted Truck Gas						8		8			8	8	32
New Truck Gas						5		7			8	7	27
Total Site Trip Distribution	**0**	**0**	**0**	**0**	**0**	**35**	**0**	**99**	**0**	**0**	**48**	**41**	**223**
2038 Projected (Build) Volumes	**0**	**0**	**0**	**247**	**0**	**49**	**169**	**136**	**0**	**0**	**141**	**68**	**810**
Existing/Base	**0%**	**0%**	**0%**	**5%**	**0%**	**0%**	**7%**	**3%**	**0%**	**0%**	**1%**	**0%**	**0.94**
Projected HV %	**0%**	**0%**	**0%**	**5%**	**0%**	**22%**	**7%**	**9%**	**0%**	**0%**	**8%**	**13%**	

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**0**	**0**	**0**	**429**	**1**	**42**	**133**	**91**	**0**	**0**	**105**	**8**	**809**
Existing Heavy Vehicles	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**5**
Existing Passenger Vehicles	**0**	**0**	**0**	**425**	**1**	**42**	**132**	**91**	**0**	**0**	**105**	**8**	**804**
Base growth (0.37% compounded for 13 yrs)	0	0	0	21	0	2	7	4	0	0	5	0	39
2038 Base (No-Build) Volumes - Growth Rate Only	**0**	**0**	**0**	**21**	**0**	**2**	**7**	**4**	**0**	**0**	**5**	**0**	**39**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**0**	**0**	**0**	**450**	**1**	**44**	**140**	**95**	**0**	**0**	**110**	**8**	**848**
SITE TRIPS													
New PV Warehouse						1		14			13	36	64
New Truck Warehouse						3		4			3	3	13
Pass-By PV Gas													0
Diverted PV Gas						12		13			13	12	50
New PV Gas						3		9			16	4	32
Diverted Truck Gas						8		8			8	8	32
New Truck Gas						6		7			8	6	27
Total Site Trip Distribution	**0**	**0**	**0**	**0**	**0**	**33**	**0**	**55**	**0**	**0**	**61**	**69**	**218**
2038 Projected (Build) Volumes	**0**	**0**	**0**	**450**	**1**	**77**	**140**	**150**	**0**	**0**	**171**	**77**	**1066**
Existing/Base	**0%**	**0%**	**0%**	**1%**	**0%**	**0%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0.97**
Projected HV %	**0%**	**0%**	**0%**	**1%**	**0%**	**14%**	**1%**	**8%**	**0%**	**0%**	**6%**	**14%**	

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**0**	**0**	**0**	**224**	**1**	**22**	**157**	**80**	**0**	**0**	**79**	**12**	**575**
Existing Heavy Vehicles	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**
Existing Passenger Vehicles	**0**	**0**	**0**	**222**	**1**	**22**	**156**	**80**	**0**	**0**	**79**	**12**	**572**
Base growth (0.37% compounded for 13 yrs)	0	0	0	11	0	1	8	4	0	0	4	1	29
2038 Base (No-Build) Volumes - Growth Rate Only	**0**	**0**	**0**	**11**	**0**	**1**	**8**	**4**	**0**	**0**	**4**	**1**	**29**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**0**	**0**	**0**	**235**	**1**	**23**	**165**	**84**	**0**	**0**	**83**	**13**	**604**
SITE TRIPS													
New PV Warehouse								3					3
New Truck Warehouse						2		2			2	2	8
Pass-By PV Gas													0
Diverted PV Gas						27		28			26	25	106
New PV Gas						6		18			17	5	46
Diverted Truck Gas						4		5			5	4	18
New Truck Gas						4		6			6	5	21
Total Site Trip Distribution	**0**	**0**	**0**	**0**	**0**	**43**	**0**	**62**	**0**	**0**	**56**	**41**	**202**
2038 Projected (Build) Volumes	**0**	**0**	**0**	**235**	**1**	**66**	**165**	**146**	**0**	**0**	**139**	**54**	**806**
Existing/Base	**0%**	**0%**	**0%**	**1%**	**0%**	**0%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0.88**
Projected HV %	**0%**	**0%**	**0%**	**1%**	**0%**	**9%**	**1%**	**5%**	**0%**	**0%**	**5%**	**11%**	

TPD# JDAI.00005
8/8/2025
Traffic Volumes Worksheet
Intersection: **Kreutz Creek Road (SR 1014) & US Route 30 East Ramps**
Synchro Node: **3**

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**33**	**5**	**456**	**0**	**0**	**0**	**0**	**246**	**249**	**31**	**386**	**0**	**1406**
Existing Heavy Vehicles	**1**	**0**	**37**	**0**	**0**	**0**	**0**	**10**	**8**	**0**	**16**	**0**	**72**
Existing Passenger Vehicles	**32**	**5**	**419**	**0**	**0**	**0**	**0**	**236**	**241**	**31**	**370**	**0**	**1334**
Base growth (0.37% compounded for 13 yrs)	2	0	22	0	0	0	0	12	12	2	19	0	69
2038 Base (No-Build) Volumes - Growth Rate Only	**2**	**0**	**22**	**0**	**0**	**0**	**0**	**12**	**12**	**2**	**19**	**0**	**69**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**35**	**5**	**478**	**0**	**0**	**0**	**0**	**258**	**261**	**33**	**405**	**0**	**1475**
SITE TRIPS													
New PV Warehouse	45							12		2	3		62
New Truck Warehouse	3									1	1		5
Pass-By PV Gas													0
Diverted PV Gas	9									9			18
New PV Gas	4							11		5	11		31
Diverted Truck Gas	8									8			16
New Truck Gas	6							1		6	2		15
Total Site Trip Distribution	**75**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**	**31**	**17**	**0**	**147**
2038 Projected (Build) Volumes	**110**	**5**	**478**	**0**	**0**	**0**	**0**	**282**	**261**	**64**	**422**	**0**	**1622**
Existing/Base	**3%**	**0%**	**8%**	**0%**	**0%**	**0%**	**0%**	**4%**	**3%**	**0%**	**4%**	**0%**	**0.89**
Projected HV %	**11%**	**0%**	**8%**	**0%**	**0%**	**0%**	**0%**	**4%**	**3%**	**14%**	**4%**	**0%**	

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**39**	**1**	**188**	**0**	**0**	**0**	**0**	**259**	**257**	**32**	**515**	**0**	**1291**
Existing Heavy Vehicles	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**6**	**0**	**6**	**0**	**18**
Existing Passenger Vehicles	**39**	**1**	**185**	**0**	**0**	**0**	**0**	**256**	**251**	**32**	**509**	**0**	**1273**
Base growth (0.37% compounded for 13 yrs)	2	0	9	0	0	0	0	13	13	2	25	0	64
2038 Base (No-Build) Volumes - Growth Rate Only	**2**	**0**	**9**	**0**	**0**	**0**	**0**	**13**	**13**	**2**	**25**	**0**	**64**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**41**	**1**	**197**	**0**	**0**	**0**	**0**	**272**	**270**	**34**	**540**	**0**	**1355**
SITE TRIPS													
New PV Warehouse	11							3		4	9		27
New Truck Warehouse	3							1		2	1		7
Pass-By PV Gas													0
Diverted PV Gas	13									13			26
New PV Gas	3							6		6	10		25
Diverted Truck Gas	8									8			16
New Truck Gas	6							1		6	2		15
Total Site Trip Distribution	**44**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**39**	**22**	**0**	**116**
2038 Projected (Build) Volumes	**85**	**1**	**197**	**0**	**0**	**0**	**0**	**283**	**270**	**73**	**562**	**0**	**1471**
Existing/Base	**0%**	**0%**	**2%**	**0%**	**0%**	**0%**	**0%**	**1%**	**2%**	**0%**	**1%**	**0%**	**0.98**
Projected HV %	**13%**	**0%**	**2%**	**0%**	**0%**	**0%**	**0%**	**1%**	**2%**	**14%**	**1%**	**0%**	

Time Period: Saturday Midday Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	**30**	**1**	**158**	**0**	**0**	**0**	**0**	**193**	**225**	**27**	**286**	**0**	**920**
Existing Heavy Vehicles	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**0**	**7**
Existing Passenger Vehicles	**30**	**1**	**157**	**0**	**0**	**0**	**0**	**193**	**222**	**27**	**283**	**0**	**913**
Base growth (0.37% compounded for 13 yrs)	1	0	8	0	0	0	0	9	11	1	14	0	44
2038 Base (No-Build) Volumes - Growth Rate Only	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**9**	**11**	**1**	**14**	**0**	**44**
BACKGROUND DEVELOPMENTS													
No Nearby Developments													0
Total Background Development Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2038 Base (No-Build) Volumes	**31**	**1**	**166**	**0**	**0**	**0**	**0**	**202**	**236**	**28**	**300**	**0**	**964**
SITE TRIPS													
New PV Warehouse	2							1					3
New Truck Warehouse	2									2			4
Pass-By PV Gas													0
Diverted PV Gas	28									26			54
New PV Gas	5							13		6	11		35
Diverted Truck Gas	5									5			10
New Truck Gas	5							1		5	1		12
Total Site Trip Distribution	**47**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**44**	**12**	**0**	**118**
2038 Projected (Build) Volumes	**78**	**1**	**166**	**0**	**0**	**0**	**0**	**217**	**236**	**72**	**312**	**0**	**1082**
Existing/Base	**0%**	**0%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**	**1%**	**0%**	**1%**	**0%**	**0.91**
Projected HV %	**9%**	**0%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**	**1%**	**10%**	**1%**	**0%**	

Updated Trip Generation & Distribution

Weekday A.M. Peak Hour

Land Use	ITE #	Size (X)		Rate/Equation		Total Trips				Internal Trips		External Trips			Pass-By Trips			Diverted Trips			New Trips		
				a	b	Total	Enter %	Enter	Exit	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Warehouse (Passenger Vehicle)	150	250,900	SF	See PennDOT SOL		96	72%	71	25	2	6	88	69	19	0	0	0	0	0	0	88	69	19
Warehouse (Truck)	150	250,900	SF	See PennDOT SOL		13	56%	7	6	1	3	9	6	3	0	0	0	0	0	0	9	6	3
Travel Stop (Passenger Vehicle)	Local	12	Fuel Positions	12.66		152	51%	78	74	6	2	144	72	72	64	32	32	34	17	17	46	23	23
Travel Stop (Truck)	Local	5	Fuel Positions	12.52		63	49%	31	32	3	1	59	28	31	0	0	0	32	16	16	27	12	15
Total						**324**		**187**	**137**	**12**	**12**	**300**	**175**	**125**	**64**	**32**	**32**	**66**	**33**	**33**	**170**	**110**	**60**

Weekday P.M. Peak Hour

Land Use	ITE #	Size (X)		Rate/Equation		Total Trips				Internal Trips		External Trips			Pass-By Trips			Diverted Trips			New Trips		
				a	b	Total	Enter %	Enter	Exit	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Warehouse (Passenger Vehicle)	150	250,900	SF	See PennDOT SOL		80	27%	18	62	1	7	72	17	55	0	0	0	0	0	0	72	17	55
Warehouse Truck	150	250,900	SF	See PennDOT SOL		16	53%	8	8	1	2	13	7	6	0	0	0	0	0	0	13	7	6
Travel Stop (Passenger Vehicle)	Local	12	Fuel Positions	14.55		175	49%	86	89	7	1	167	79	88	82	41	41	50	25	25	35	13	22
Travel Stop (Truck)	Local	5	Fuel Positions	12.43		62	50%	31	31	2	1	59	29	30	0	0	0	32	16	16	27	13	14
Total						**333**		**143**	**190**	**11**	**11**	**311**	**132**	**179**	**82**	**41**	**41**	**82**	**41**	**41**	**147**	**50**	**97**

Saturday Midday Peak Hour

Land Use	ITE #	Size (X)		Rate/Equation		Total Trips				Internal Trips		External Trips			Pass-By Trips			Diverted Trips			New Trips		
				a	b	Total	Enter %	Enter	Exit	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Warehouse (Passenger Vehicle)	150	250,900	SF	See PennDOT SOL		5	64%	4	1	1	1	3	3	0	0	0	0	0	0	0	3	3	0
Warehouse Truck	150	250,900	SF	See PennDOT SOL		8	52%	4	4	0	0	8	4	4	0	0	0	0	0	0	8	4	4
Travel Stop (Passenger Vehicle)	Local	12	Fuel Positions	17.45		209	52%	109	100	1	1	207	108	99	50	26	24	106	55	51	51	27	24
Travel Stop (Truck)	Local	5	Fuel Positions	7.83		39	49%	19	20	0	0	39	19	20	0	0	0	18	9	9	21	10	11
Total						**261**		**136**	**125**	**2**	**2**	**257**	**134**	**123**	**50**	**26**	**24**	**124**	**64**	**60**	**83**	**44**	**39**

Average Weekday

Land Use	ITE #	Size (X)		Rate/Equation		Total Trips				Internal Trips		External Trips			Pass-By Trips			Diverted Trips			New Trips		
				a	b	Total	Enter %	Enter	Exit	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Warehouse (Passenger Vehicle)	150	250,900	SF	See PennDOT SOL		627	50%	313	314	50	70	507	263	244	0	0	0	0	0	0	507	263	244
Warehouse Truck	150	250,900	SF	See PennDOT SOL		155	50%	78	77	18	24	113	60	53	0	0	0	0	0	0	113	60	53
Travel Stop (Passenger Vehicle)	Local	12	Fuel Positions	P.M. Peak Hour * k-factor of 10		1750	50%	875	875	70	50	1630	805	825	0	0	0	0	0	0	1630	805	825
Travel Stop (Truck)	Local	5	Fuel Positions	P.M. Peak Hour * k-factor of 10		620	50%	310	310	24	18	578	286	292	0	0	0	0	0	0	578	286	292
Total						**3152**		**1576**	**1576**	**162**	**162**	**2828**	**1414**	**1414**	**0**	**0**	**0**	**0**	**0**	**0**	**2828**	**1414**	**1414**

Pass-by rates were reduced to not exceed 15% of adjacent roadway volume

Remaining pass-by not utlized due to 15% adjacent roadway volume constraint became diverted link

Due to limited existing truck traffic at site driveway intersection, all "Truck Pass-by" trips were assumed to be diverted link

Internal Trips assumed to occur between the Warehouse and Travel Stop. Used NCHRP 684 Internal Capture Estimation Tool to estimate internal trips between Warehouse (Office) and Travel Stop (Retail). Internal trip rates for the Average Weekday and Saturday assumed to be the average of the AM/PM peak hour rates

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Lees Lane Dev	**Organization:**	TPD, Inc.
Project Location:	Hellam Township, York County	**Performed By:**	DEZ
Scenario Description:	Full Build-Out	**Date:**	6/23/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**Average Weekday**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	Warehouse	250,900	s.f.	782	391	391
Retail	Travel Stop			2,370	1,185	1,185
Restaurant				0		
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
				3,152	1,576	1,576

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		94	0	0	0	0
Retail	68		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	3,152	1,576	1,576
Internal Capture Percentage	10%	10%	10%
External Vehicle-Trips[5]	2,828	1,414	1,414
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	17%	24%
Retail	8%	6%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Lees Lane Dev
Analysis Period:	**Average Weekday**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	391	391	1.00	391	391
Retail	1.00	1,185	1185	1.00	1,185	1185
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		94	131	0	6	0
Retail	184		249	24	237	30
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		237	0	0	0	0
Retail	68		0	0	0	0
Restaurant	86	344		0	0	0
Cinema/Entertainment	12	24	0		0	0
Residential	117	160	0	0		0
Hotel	6	36	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	68	323	391	323	0	0
Retail	94	1091	1185	1091	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	94	297	391	297	0	0
Retail	68	1117	1185	1117	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table 7.1a Adjusted Internal Trip Capture Rates for Trip Origins within a Multi-Use Development				
Land Use Pairs		Weekday		Weekday*
		AM Peak Hour	PM Peak Hour	ADT
From OFFICE	To Office	0.0%	0.0%	0.0%
	To Retail	28.0%	20.0%	24.0%
	To Restaurant	63.0%	4.0%	33.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	1.0%	2.0%	1.5%
	To Hotel	0.0%	0.0%	0.0%
From RETAIL	To Office	29.0%	2.0%	15.5%
	To Retail	0.0%	0.0%	0.0%
	To Restaurant	13.0%	29.0%	21.0%
	To Cinema/Entertainment	0.0%	4.0%	2.0%
	To Residential	14.0%	26.0%	20.0%
	To Hotel	0.0%	5.0%	2.5%
From RESTAURANT	To Office	31.0%	3.0%	17.0%
	To Retail	14.0%	41.0%	27.5%
	To Restaurant	0.0%	0.0%	0.0%
	To Cinema/Entertainment	0.0%	8.0%	4.0%
	To Residential	4.0%	18.0%	11.0%
	To Hotel	3.0%	7.0%	5.0%
From CINEMA/ENTERTAINMENT	To Office	0.0%	2.0%	1.0%
	To Retail	0.0%	21.0%	10.5%
	To Restaurant	0.0%	31.0%	15.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	0.0%	8.0%	4.0%
	To Hotel	0.0%	2.0%	1.0%
From RESIDENTIAL	To Office	2.0%	4.0%	3.0%
	To Retail	1.0%	42.0%	21.5%
	To Restaurant	20.0%	21.0%	20.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	0.0%	0.0%	0.0%
	To Hotel	0.0%	3.0%	1.5%
From HOTEL	To Office	75.0%	0.0%	37.5%
	To Retail	14.0%	16.0%	15.0%
	To Restaurant	9.0%	68.0%	38.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	0.0%	2.0%	1.0%
	To Hotel	0.0%	0.0%	0.0%

* Weekday ADT rates derived by taking half of the average of weekday AM & weekday PM

Table 7.2a Adjusted Internal Trip Capture Rates for Trip Destinations within a Multi-Use Development				
Land Use Pairs		Weekday		Weekday*
		AM Peak Hour	PM Peak Hour	ADT
To OFFICE	From Office	0.0%	0.0%	0.0%
	From Retail	4.0%	31.0%	17.5%
	From Restaurant	14.0%	30.0%	22.0%
	From Cinema/Entertainment	0.0%	6.0%	3.0%
	From Residential	3.0%	57.0%	30.0%
	From Hotel	3.0%	0.0%	1.5%
To RETAIL	From Office	32.0%	8.0%	20.0%
	From Retail	0.0%	0.0%	0.0%
	From Restaurant	8.0%	50.0%	29.0%
	From Cinema/Entertainment	0.0%	4.0%	2.0%
	From Residential	17.0%	10.0%	13.5%
	From Hotel	4.0%	2.0%	3.0%
To RESTAURANT	From Office	23.0%	2.0%	12.5%
	From Retail	50.0%	29.0%	39.5%
	From Restaurant	0.0%	0.0%	0.0%
	From Cinema/Entertainment	0.0%	3.0%	1.5%
	From Residential	20.0%	14.0%	17.0%
	From Hotel	6.0%	5.0%	5.5%
To CINEMA/ENTERTAINMENT	From Office	0.0%	1.0%	0.5%
	From Retail	0.0%	26.0%	13.0%
	From Restaurant	0.0%	32.0%	16.0%
	From Cinema/Entertainment	0.0%	0.0%	0.0%
	From Residential	0.0%	0.0%	0.0%
	From Hotel	0.0%	0.0%	0.0%
To RESIDENTIAL	From Office	0.0%	4.0%	2.0%
	From Retail	2.0%	46.0%	24.0%
	From Restaurant	5.0%	16.0%	10.5%
	From Cinema/Entertainment	0.0%	4.0%	2.0%
	From Residential	0.0%	0.0%	0.0%
	From Hotel	0.0%	0.0%	0.0%
To HOTEL	From Office	0.0%	0.0%	0.0%
	From Retail	0.0%	17.0%	8.5%
	From Restaurant	4.0%	71.0%	37.5%
	From Cinema/Entertainment	0.0%	1.0%	0.5%
	From Residential	0.0%	12.0%	6.0%
	From Hotel	0.0%	0.0%	0.0%

* Weekday ADT rates derived by taking half of the average of weekday AM & weekday PM

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Lees Lane Dev	**Organization:**	TPD, Inc.
Project Location:	Hellam Township, York County	**Performed By:**	DEZ
Scenario Description:	Full Build-Out	**Date:**	6/23/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	Warehouse	250,900	sf	109	78	31
Retail	Travel Stop			215	109	106
Restaurant				0		
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
				324	187	137

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	0	0	0	0
Retail	3		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	324	187	137
Internal Capture Percentage	7%	6%	9%
External Vehicle-Trips[5]	300	175	125
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	4%	29%
Retail	8%	3%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Lees Lane Dev
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	78	78	1.00	31	31
Retail	1.00	109	109	1.00	106	106
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	20	0	0	0
Retail	31		14	0	15	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		35	0	0	0	0
Retail	3		0	0	0	0
Restaurant	11	9		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	19	0	0		0
Hotel	2	4	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	3	75	78	75	0	0
Retail	9	100	109	100	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	9	22	31	22	0	0
Retail	3	103	106	103	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Lees Lane Dev	**Organization:**	TPD, Inc.
Project Location:	Hellam Township, York County	**Performed By:**	DEZ
Scenario Description:	Full Build-Out	**Date:**	6/23/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	Warehouse	250,900	sf	96	26	70
Retail	Travel Stop			237	117	120
Restaurant				0		
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
				333	143	190

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	0	0	0	0
Retail	2		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	333	143	190
Internal Capture Percentage	7%	8%	6%
External Vehicle-Trips[5]	311	132	179
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	8%	13%
Retail	8%	2%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Lees Lane Dev
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	26	26	1.00	70	70
Retail	1.00	117	117	1.00	120	120
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		14	3	0	1	0
Retail	2		35	5	31	6
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	0	0	0	0
Retail	8		0	0	0	0
Restaurant	8	59		0	0	0
Cinema/Entertainment	2	5	0		0	0
Residential	15	12	0	0		0
Hotel	0	2	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	2	24	26	24	0	0
Retail	9	108	117	108	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	9	61	70	61	0	0
Retail	2	118	120	118	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Lees Lane Dev	**Organization:**	TPD, Inc.
Project Location:	Hellam Township, York County	**Performed By:**	DEZ
Scenario Description:	Full Build-Out	**Date:**	6/23/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**Saturday Midday Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	Warehouse	250,900	sf	13	8	5
Retail	Travel Stop			248	128	120
Restaurant				0		
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
				261	136	125

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	0	0
Retail	1		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	261	136	125
Internal Capture Percentage	2%	1%	2%
External Vehicle-Trips[5]	257	134	123
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	13%	20%
Retail	1%	1%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Lees Lane Dev
Analysis Period:	**Saturday Midday Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	8	8	1.00	5	5
Retail	1.00	128	128	1.00	120	120
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	2	0	0	0
Retail	19		25	2	24	3
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		26	0	0	0	0
Retail	1		0	0	0	0
Restaurant	2	37		0	0	0
Cinema/Entertainment	0	3	0		0	0
Residential	2	17	0	0		0
Hotel	0	4	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	1	7	8	7	0	0
Retail	1	127	128	127	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	1	4	5	4	0	0
Retail	1	119	120	119	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table 7.1a Adjusted Internal Trip Capture Rates for Trip Origins within a Multi-Use Development				
Land Use Pairs		Weekday		Saturday*
		AM Peak Hour	PM Peak Hour	Peak Hour
From OFFICE	To Office	0.0%	0.0%	0.0%
	To Retail	28.0%	20.0%	24.0%
	To Restaurant	63.0%	4.0%	33.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	1.0%	2.0%	1.5%
	To Hotel	0.0%	0.0%	0.0%
From RETAIL	To Office	29.0%	2.0%	15.5%
	To Retail	0.0%	0.0%	0.0%
	To Restaurant	13.0%	29.0%	21.0%
	To Cinema/Entertainment	0.0%	4.0%	2.0%
	To Residential	14.0%	26.0%	20.0%
	To Hotel	0.0%	5.0%	2.5%
From RESTAURANT	To Office	31.0%	3.0%	17.0%
	To Retail	14.0%	41.0%	27.5%
	To Restaurant	0.0%	0.0%	0.0%
	To Cinema/Entertainment	0.0%	8.0%	4.0%
	To Residential	4.0%	18.0%	11.0%
	To Hotel	3.0%	7.0%	5.0%
From CINEMA/ENTERTAINMENT	To Office	0.0%	2.0%	1.0%
	To Retail	0.0%	21.0%	10.5%
	To Restaurant	0.0%	31.0%	15.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	0.0%	8.0%	4.0%
	To Hotel	0.0%	2.0%	1.0%
From RESIDENTIAL	To Office	2.0%	4.0%	3.0%
	To Retail	1.0%	42.0%	21.5%
	To Restaurant	20.0%	21.0%	20.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	0.0%	0.0%	0.0%
	To Hotel	0.0%	3.0%	1.5%
From HOTEL	To Office	75.0%	0.0%	37.5%
	To Retail	14.0%	16.0%	15.0%
	To Restaurant	9.0%	68.0%	38.5%
	To Cinema/Entertainment	0.0%	0.0%	0.0%
	To Residential	0.0%	2.0%	1.0%
	To Hotel	0.0%	0.0%	0.0%

* Saturday rates derived by taking half of the average of weekday AM & weekday PM

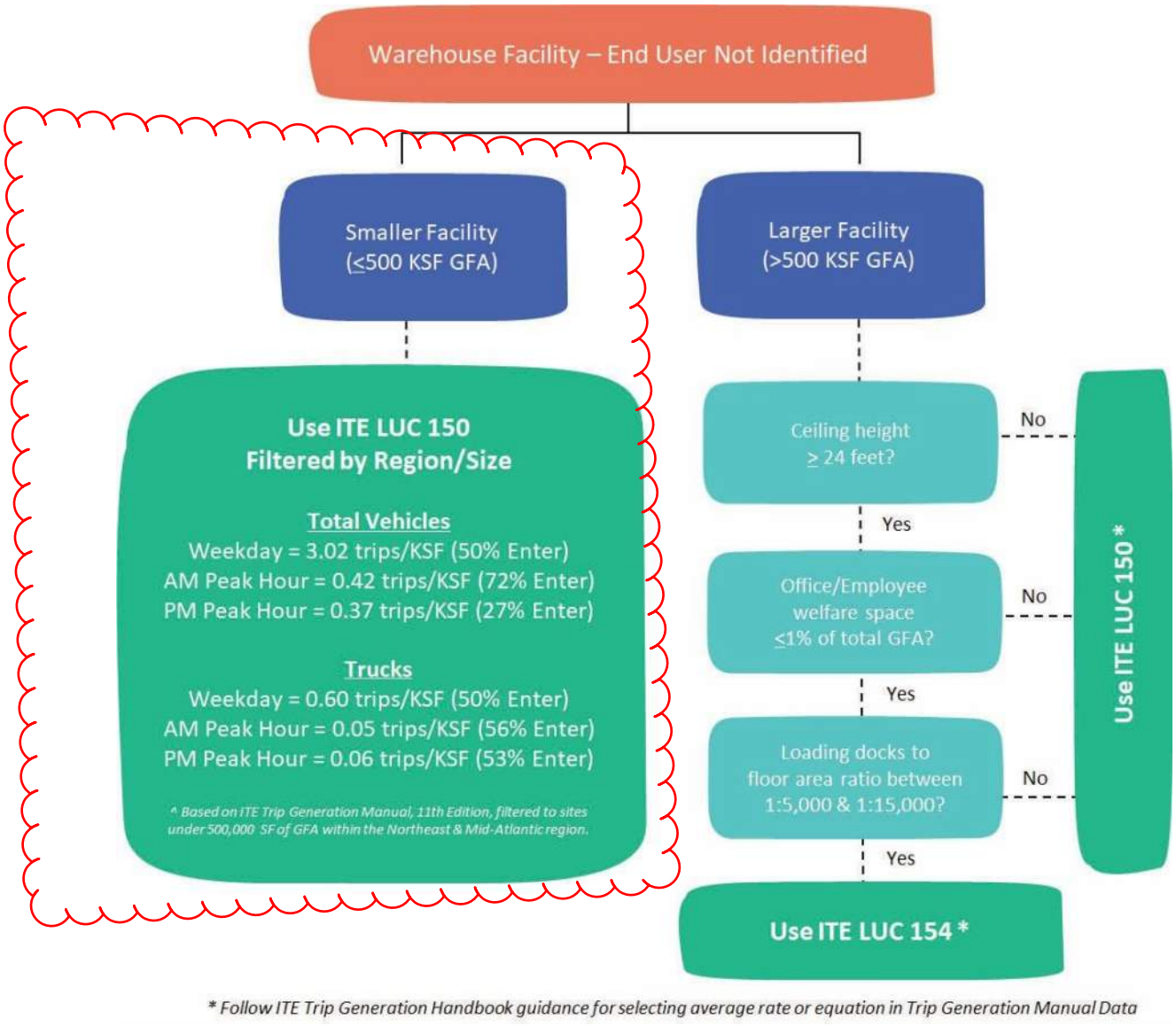
Table 7.2a Adjusted Internal Trip Capture Rates for Trip Destinations within a Multi-Use Development				
Land Use Pairs		Weekday		Saturday*
		AM Peak Hour	PM Peak Hour	Peak Hour
To OFFICE	From Office	0.0%	0.0%	0.0%
	From Retail	4.0%	31.0%	17.5%
	From Restaurant	14.0%	30.0%	22.0%
	From Cinema/Entertainment	0.0%	6.0%	3.0%
	From Residential	3.0%	57.0%	30.0%
	From Hotel	3.0%	0.0%	1.5%
To RETAIL	From Office	32.0%	8.0%	20.0%
	From Retail	0.0%	0.0%	0.0%
	From Restaurant	8.0%	50.0%	29.0%
	From Cinema/Entertainment	0.0%	4.0%	2.0%
	From Residential	17.0%	10.0%	13.5%
	From Hotel	4.0%	2.0%	3.0%
To RESTAURANT	From Office	23.0%	2.0%	12.5%
	From Retail	50.0%	29.0%	39.5%
	From Restaurant	0.0%	0.0%	0.0%
	From Cinema/Entertainment	0.0%	3.0%	1.5%
	From Residential	20.0%	14.0%	17.0%
	From Hotel	6.0%	5.0%	5.5%
To CINEMA/ENTERTAINMENT	From Office	0.0%	1.0%	0.5%
	From Retail	0.0%	26.0%	13.0%
	From Restaurant	0.0%	32.0%	16.0%
	From Cinema/Entertainment	0.0%	0.0%	0.0%
	From Residential	0.0%	0.0%	0.0%
	From Hotel	0.0%	0.0%	0.0%
To RESIDENTIAL	From Office	0.0%	4.0%	2.0%
	From Retail	2.0%	46.0%	24.0%
	From Restaurant	5.0%	16.0%	10.5%
	From Cinema/Entertainment	0.0%	4.0%	2.0%
	From Residential	0.0%	0.0%	0.0%
	From Hotel	0.0%	0.0%	0.0%
To HOTEL	From Office	0.0%	0.0%	0.0%
	From Retail	0.0%	17.0%	8.5%
	From Restaurant	4.0%	71.0%	37.5%
	From Cinema/Entertainment	0.0%	1.0%	0.5%
	From Residential	0.0%	12.0%	6.0%
	From Hotel	0.0%	0.0%	0.0%

* Saturday rates derived by taking half of the average of weekday AM & weekday PM

WAREHOUSE FACILITIES

Based on the findings from a Department study, the following best practices guidance was developed for Districts to consider when permitting speculative warehouse facilities:

- Understand the use in the land use: The amount of traffic associated with a warehouse facility can vary greatly depending on the function and logistics designation. As part of the scoping meeting, applicants should document the characteristics of the warehouse use.
    - Cross docks may signify major distribution centers or large fulfillment centers.
    - Building height greater than 40 feet may signify cold storage facilities.
    - Large parking fields may signify larger employee count for the facility indicative of fulfillment centers.
    - Parking fields that accommodate various vehicle types may signify a last- mile fulfillment center.
    - Facilities with very high truck parking ratios to dock positions may signify a parcel hub.
- Utilize data subsets in ITE TripGen web app: The ITE digital trip generation database can be filtered to provide a better estimation of trips for smaller facilities. If employed, consider the use of ITE Land Use Code 150 warehouse trip data filtered by size (under 500 KSF) and region (Northeast & Mid-Atlantic) for smaller facilities.
- Specify Land Use Code 150 permits are not inclusive: Understanding trip characteristics vary based on the function and logistics of a warehouse facility, consider clearly specifying that highway occupancy permits classified under Land Use 150 are not inclusive of other warehouse-type facility, including but not limited to cold storage, last-mile fulfillment centers, and parcel hubs. If tenancy changes occur in the future, applicants should be required to supplement the existing permit with additional information so the Department can determine if additional traffic mitigations are warranted.
- A step-by-step procedure (flow chart) is provided below for the Department to consider in determining how best to estimate trip generation for future speculative warehouse facilities until such time that a new version of ITE's Trip Generation Manual is published.



Note: The Department's Warehouse Trip Generation Study can be found in the Department's P:\permits shared folder.

TRIP GENERATION STUDY

Prepared for:
Love's Travel Stops & Country Stores
10601 N Pennsylvania Ave
Hallam, PA 73120

Prepared by:
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July 2021

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1. Introduction

1.1. Purpose

The purpose of this report is to determine the trip generation data for a proposed Love's Travel Stop in Hallam, Pennsylvania. Currently, trip generation data must be obtained from the 10th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.

Three (3) Love's Travel Stops sites were selected within the state of Pennsylvania (see Figure 1). These sites were relatively similar in size, design, and land use on-site (i.e. fast-food restaurants with and without drive throughs). Trip generation data was obtained at the selected sites according to guidelines set forth in the ITE Trip Generation Manual.

The following sections of this report discuss the methodology in determining the trip generation data for a proposed Love's Travel Stop.

1.2. Study Procedure

In order to determine the trip generation data for the proposed Love's Travel Stop, the following steps were taken:

1. Three (3) similar Love's Travel Stops were chosen within the state of Pennsylvania to be included in this analysis.

2. Manual driveway counts were conducted by Tri-State Traffic Data, Inc. at each of the selected sites during a typical weekday (Tuesday, Wednesday, Thursday) during the following AM and PM Peak Hour time frames: 6:00 AM – 9:00 AM, 11:00 AM – 1:00 PM, and 4:00 – 6:00 PM and during a Saturday during the following time frame: 11:00 AM – 3:00 PM.

3. Interviews were conducted on-site at each site to determine pass-by and non-pass-by trips to the site.

4. Summarize the data to determine inbound and outbound trips at each access driveway for each study location.

5. Determine the average trip rate for each study location based on a weighted average trip rate.

6. Perform a regression analysis for each study location to determine the percent of variance in the number of trips associated with the variance in the size of the independent variable.

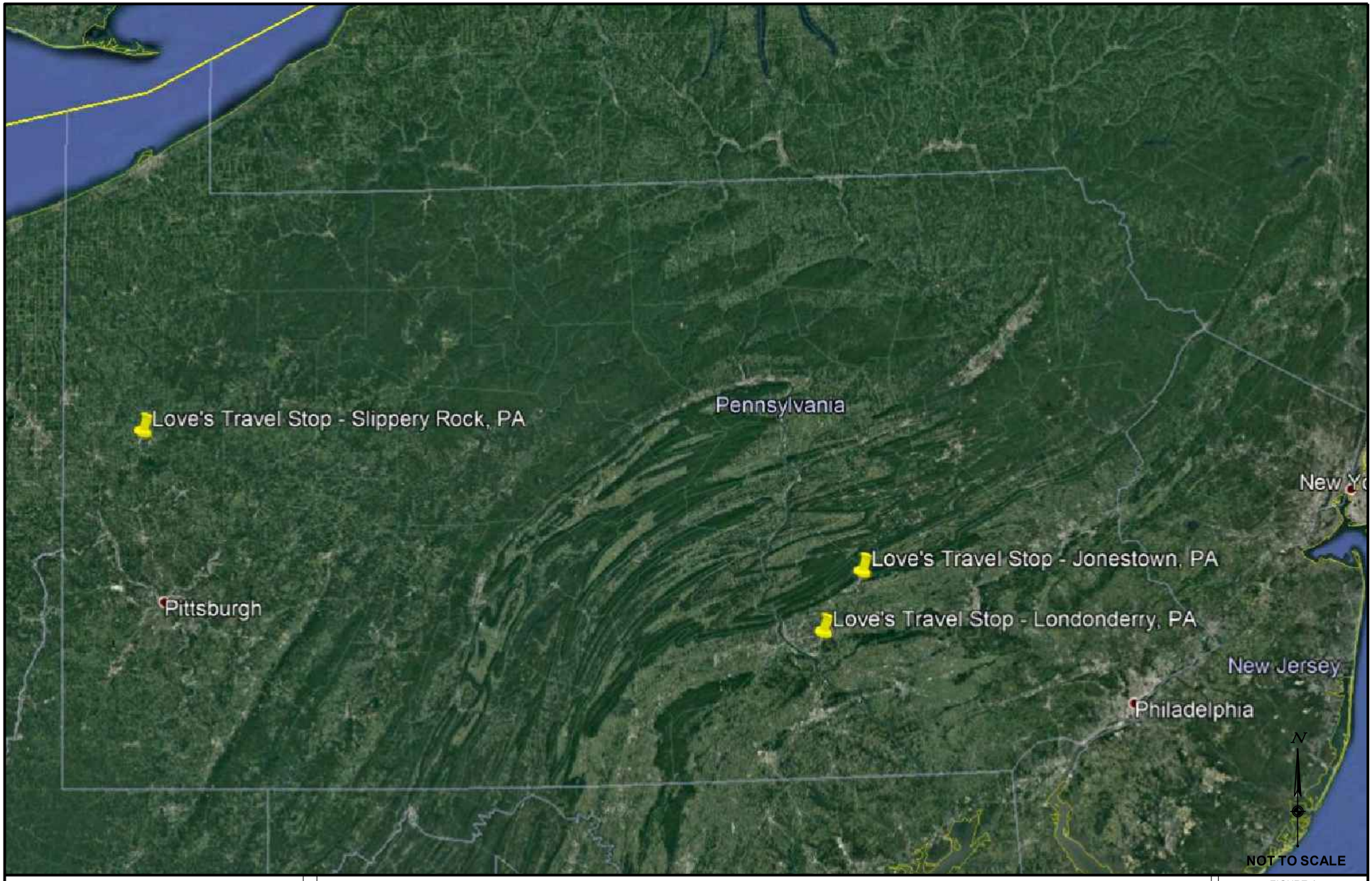
7. Summarize the trip rates for each site individually and summarize trip rates of all three (3) study locations together.

1.3. References

This report utilizes information provided by the following sources:

1. *Trip Generation Manual.* 10th Edition. Washington, DC: Institute of Transportation Engineers, 2017.

2. *Trip Generation Handbook*, 3rd Edition. Washington, DC: Institute of Transportation Engineers, 2017.



CESO
WWW.CESOINC.COM

STUDY LOCATIONS

LOVE'S TRAVEL STOPS TRIP GENERATION STUDY

FIGURE 1	
DATE:	07/21/2021
JOB NO.:	758045-02
DESIGN:	JMP
DRAWN:	JMP
CHECKED:	TMC
PAGE:	4

2. Definition of Terms

The following is a summary of the terms that are used in the study. These terms are defined in order to explain the data analysis and results obtained from this study. These terms were taken from Chapter 3 of the 10th Edition of the ITE *Trip Generation Manual*.

Average Trip Rate

The average trip rate is the weighted average of the number of vehicle or person trips entering or exiting a development site per one unit of the independent variable (e.g., trip ends per occupied dwelling unit or employee) using a site's driveway(s). The weighted average rate is calculated by summing all trips or trip ends and all independent variable units where paired data are available, and then dividing the sum of the trip ends by the sum of the independent variable units. The weighted average rate is used rather than the average of the individual rates because of the variance within each data set or generating unit. Data sets with a large variance will over-influence the average rate if they are not weighted. The data plot includes a dashed line corresponding to the weighted average rate, extending between the lowest and highest independent variable values for data points.

Average Trip Rate for the Peak Hour of the Adjacent Street Traffic

The average trip rate for the peak hour of the adjacent street traffic is the one-hour weighted average vehicle trip generation rate at the site between 6 AM and 9 AM, 11 AM and 1 PM, and 4 PM and 6 PM, when the combination of its traffic and the traffic on the adjacent street is the highest. If the adjacent street traffic volumes are unknown, the average trip rate for the peak hour of the adjacent street represents the highest hourly vehicle trip ends generated by the site during the traditional commuting peak periods of 6 AM to 9 AM, 11 AM to 1 PM, and 4 PM to 6 PM.

AM, PM, and Saturday Peak Hour Volume of Adjacent Street Traffic

The AM, PM, and Saturday peak hour volume of adjacent street traffic is the highest hourly volume of traffic on the adjacent street during the AM, PM, and Saturday, respectively.

Average Trip Rate for the Peak Hour of the Generator

The average trip rate for the peak hour of the generator is the weighted average vehicle trip generation rate during the hour of highest volume of traffic entering and exiting the site during the AM, the PM, or Saturday hours. It may or may not coincide in time or volume with the trip rate for the peak hour of the adjacent street traffic. The trip rate for the peak hour of the generator will be equal to or greater than the trip rate for the peak hour between 6 AM and 9 AM, 11 AM and 1 PM, or between 4 PM and 6 PM.

Vehicle Fueling Positions

Defined as the maximum number of vehicles that can be fueled simultaneously. Gasoline/service stations in this land use include "pay-at-the-pump" and traditional fueling stations.

Independent Variable

An independent variable is a physical, measurable, or predictable unit describing the study site or generator that can be used to predict the value of the dependent variable (trip ends). Some examples of independent variables used in this book are GFA (gross floor area), employees, seats, vehicle fueling positions, and dwelling units.

Trip or Trip End

A trip or trip end is a single or one direction vehicle movement with either the origin or the destination (exiting or entering) inside a study site. For trip generation purposes, the total trip ends for a land use over a given period of time are the total of all trips entering plus all trips exiting a site during a designated time period.

3. Data Collection

3.1. Site Characteristics

Data was collected at three (3) similar sites within the state of Pennsylvania. The following is a summary of each site in terms of fueling positions.

Table 1
Site Characteristics

Love's Location	Cars	Trucks	Unit
Slippery Rock, PA	12	7	Fueling Positions
Jonestown, PA	16	8	Fueling Positions
Londonderry, PA	16	8	Fueling Positions

These study sites range in size from 12 to 16 car fueling positions and 7 to 8 truck fueling positions.

3.2. Summary of Count Data

Manual counts were conducted at each of the above listed study locations during the following time periods:

- Weekday AM Peak Hour (6:00 AM – 9:00 AM)
- Weekday Mid-Day Peak Hour (11:00 AM – 1:00 PM)
- Weekday PM Peak Hour (4:00 PM – 6:00 PM)
- Saturday Peak Hour (11:00 AM – 3:00 PM)

These counts focused on collecting the inbound and outbound volumes at each driveway for each study location. Traffic Count Data Sheets for each of the three (3) study locations can be found in Appendix A through Appendix C.

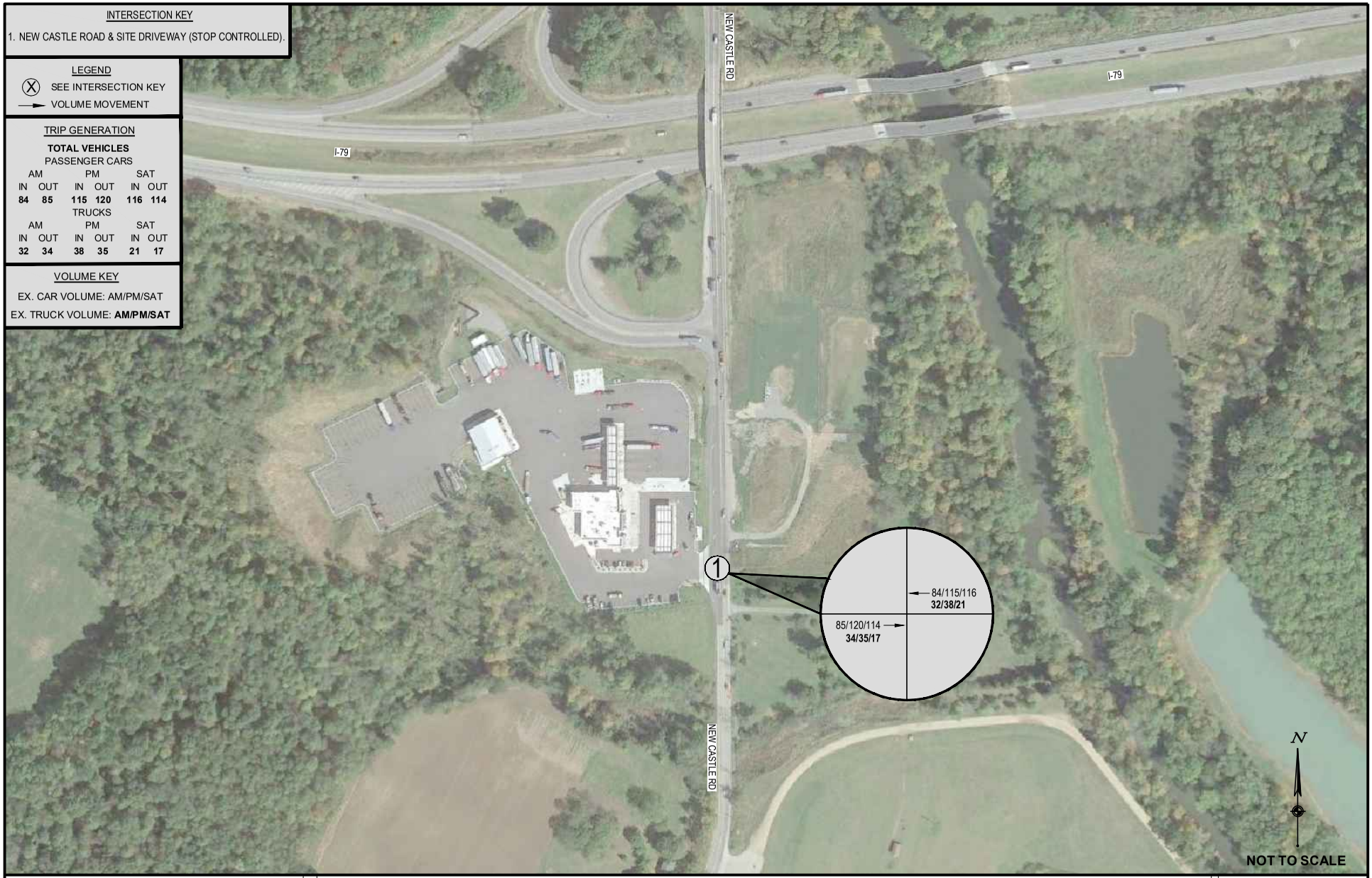
Table 2 summarizes the inbound and outbound volumes for the following peak time periods.

- Weekday – AM Peak Hour of Adjacent Street Traffic
- Weekday – PM Peak Hour of Adjacent Street Traffic
- Saturday – Peak Hour of Adjacent Street Traffic

Table 2
Summary of Driveway Volumes (Inbound & Outbound) During Peak Hour Time Periods

Location	Size	Unit	Total Generated Trips								
			Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
			Trips			Trips			Trips		
			Tot	In	Out	Tot	In	Out	Tot	In	Out
Slippery Rock, PA	12	Car Fueling Positions	169	84	85	235	115	120	230	116	114
	Entering (%)/Exiting (%)		*100%*	*49%*	*51%*	*100%*	*49%*	*51%*	*100%*	*51%*	*49%*
	7	Truck Fueling Positions	66	32	34	73	38	35	38	21	17
	Entering (%)/Exiting (%)		*100%*	*48%*	*52%*	*100%*	*52%*	*48%*	*100%*	*55%*	*45%*
Jonestown, PA	16	Car Fueling Positions	162	84	78	190	97	93	263	146	117
	Entering (%)/Exiting (%)		*100%*	*52%*	*48%*	*100%*	*51%*	*49%*	*100%*	*56%*	*44%*
	8	Truck Fueling Positions	129	68	61	129	65	64	106	51	55
	Entering (%)/Exiting (%)		*100%*	*53%*	*47%*	*100%*	*51%*	*49%*	*100%*	*48%*	*52%*
Londonderry, PA	16	Car Fueling Positions	226	114	112	215	99	116	275	136	139
	Entering (%)/Exiting (%)		*100%*	*51%*	*49%*	*100%*	*46%*	*54%*	*100%*	*49%*	*51%*
	8	Truck Fueling Positions	93	44	49	84	40	44	36	16	20
	Entering (%)/Exiting (%)		*100%*	*47%*	*53%*	*100%*	*48%*	*52%*	*100%*	*44%*	*56%*
Total Average Car Rate			*100%*	*51%*	*49%*	*100%*	*49%*	*51%*	*100%*	*52%*	*48%*
Total Average Truck Rate			*100%*	*49%*	*51%*	*100%*	*50%*	*50%*	*100%*	*49%*	*51%*

The Weekday AM, PM, and Saturday inbound and outbound traffic volumes for each of the three (3) locations are illustrated on Figures 2-4 of the report.



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EXISTING TRAFFIC VOLUMES (YEAR 2021) - CARS & TRUCKS

LOVE'S TRAVEL STOPS TRIP GENERATION STUDY

SLIPPERY ROCK — BUTLER COUNTY, PENNSYLVANIA

FIGURE 2	
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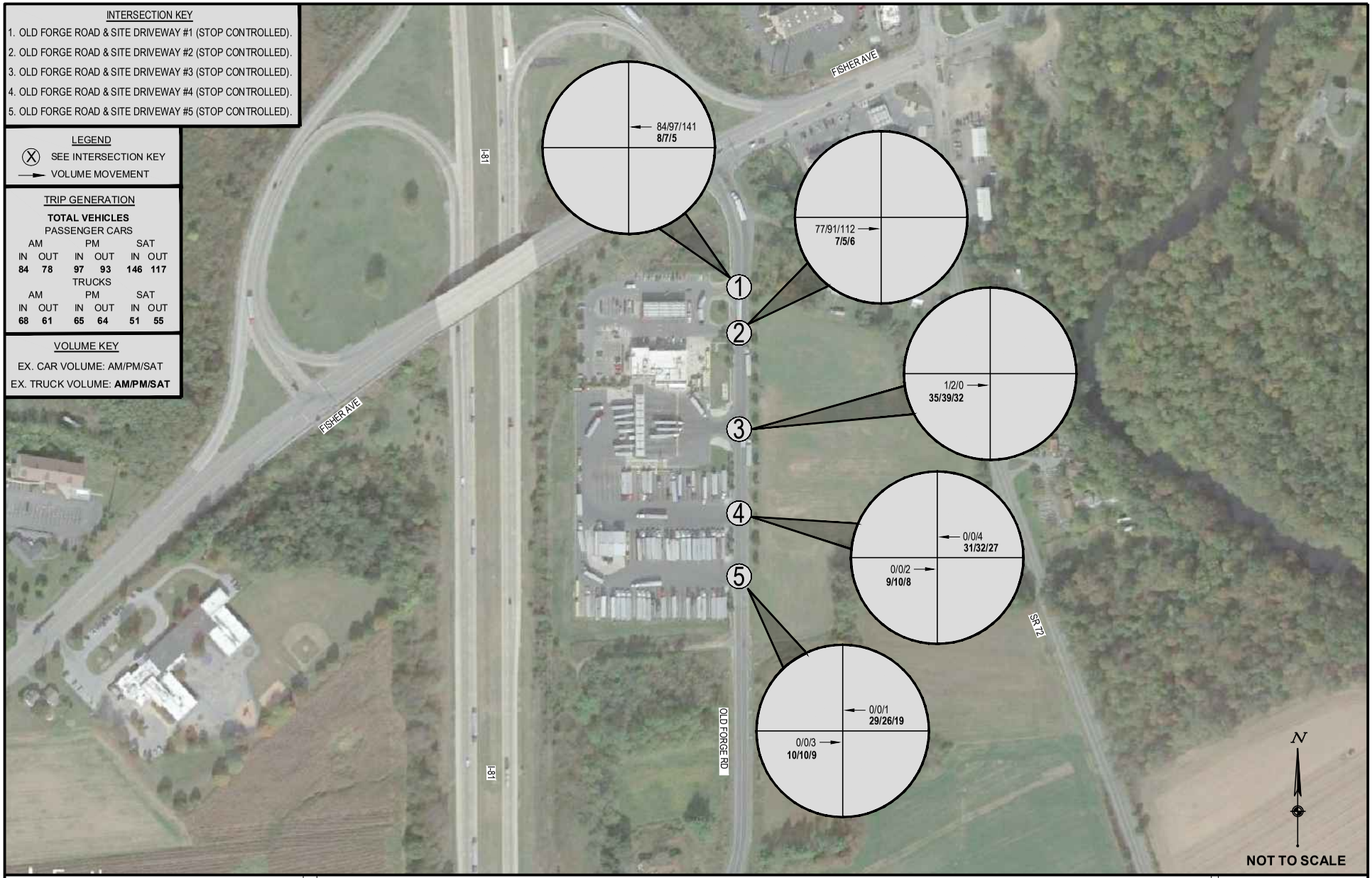
JOB NO.:	758045-02
DESIGN:	JMP
DRAWN:	JMP
CHECKED:	TMC
PAGE:	8



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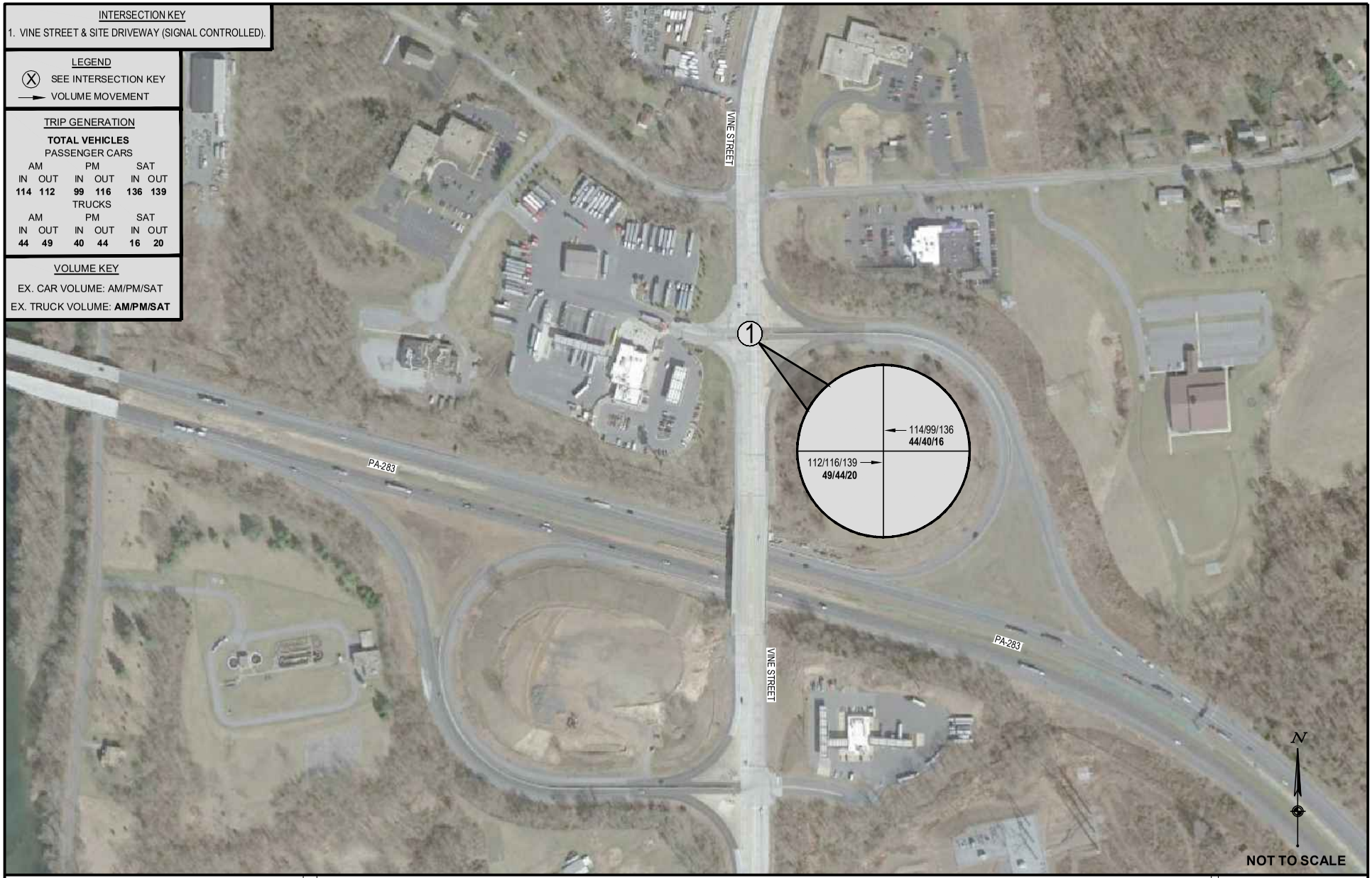
EXISTING TRAFFIC VOLUMES (YEAR 2021) - CARS & TRUCKS

LOVE'S TRAVEL STOPS TRIP GENERATION STUDY

JONESTOWN — LEBANON COUNTY, PENNSYLVANIA

FIGURE	3
DATE:	07/21/2021
JOB NO.:	758045-02
DESIGN:	JMP
DRAWN:	JMP
CHECKED:	TMC
PAGE:	9



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EXISTING TRAFFIC VOLUMES (YEAR 2021) - CARS & TRUCKS

LOVE'S TRAVEL STOPS TRIP GENERATION STUDY

LONDONDERRY DAUPHIN COUNTY, PENNSYLVANIA

FIGURE	4
DATE:	07/21/2021
JOB NO.:	758045-02
DESIGN:	JMP
DRAWN:	JMP
CHECKED:	TMC
PAGE:	10

3.3. Summary of Pass-by and Non-Pass-By Trips

Interviews were conducted at each of the above listed study locations during the following time periods to determine travel mode:

- Weekday AM Peak Hour (6:00 AM – 9:00 AM)
- Weekday Mid-Day Peak Hour (11:00 AM – 1:00 PM)
- Weekday PM Peak Hour (4:00 PM – 6:00 PM)
- Saturday Peak Hour (11:00 AM – 3:00 PM)

A sample form for conducting the pass-by and diverted trip interviews was pulled from Figure 12.5 from the *Trip Generation Handbook*, 3rd Edition. The interviews asked the following questions:

- Q1. Where did your trip begin immediately prior to arriving at this site?
  - A. Home
  - B. Work
  - C. Other Retail
  - D. Other (describe)
- Q2. Will you go directly back to your origin from here?
  - Y. Yes [end survey]
  - N. No
- Q3. Would have driven by this site if you had not stopped here now?
  - Y. Yes [end survey]
  - N. No
- Q4. If No to Q3, how many miles out of your way did you travel to get here?
  - (Description of route is acceptable if miles are not known.)

A response of 'yes' to Question 2 should be counted as a **primary trip**. A survey response of "yes" to Question 3 should be counted as a **pass-by trip**. The remainder of the trips should be considered **diverted trips**. Table 2 summarizes the Pass-By and Non-Pass-By Trips during peak hour time periods for passenger cars and Table 3 summarizes the Pass-By and Non-Pass-By Trips during peak hour time periods for trucks.

Table 3
Summary of Pass-By and Non-Pass-By Trips During Peak Hour Time Periods (Passenger Cars)

Location	Survey Date	Vehicle Fueling Positions	Fast-Food Restaurant On Site?	No. of Interviews	Time Period	Pass-by Trip (%)	Non-Pass By Trips (%)		
							Primary	Diverted	Total
Slippery Rock, PA	6/24/21	12	Yes	61	7:00 AM – 9:00 AM	64	20	16	36
	6/24/21	12	Yes	---	4:00 PM – 6:00 PM	---	---	---	---
	6/26/21	12	Yes	---	11:00 AM – 3:00 PM	---	---	---	---
Jonestown, PA	6/17/21	16	Yes	43	7:00 AM – 9:00 AM	58	30	12	42
	6/17/21	16	Yes	59	4:00 PM – 6:00 PM	66	32	2	34
	6/19/21	16	Yes	145	11:00 AM – 3:00 PM	68	28	4	32
Londonderry, PA	6/17/21	16	Yes	50	7:00 AM – 9:00 AM	82	18	0	18
	6/17/21	16	Yes	43	4:00 PM – 6:00 PM	91	7	2	9
	6/19/21	16	Yes	77	11:00 AM – 3:00 PM	82	13	5	18

Average Pass-By Trip Percentage: 68 (AM), 79 (PM), 75 (Saturday)

Table 4
Summary of Pass-by and Non-Pass-By Trips During Peak Hour Time Periods (Trucks)

Location	Survey Date	Vehicle Fueling Positions	Fast-Food Restaurant On Site?	No. of Interviews	Time Period	Pass-by Trip (%)	Non-Pass By Trips (%)		
							Primary	Primary	Primary
Slippery Rock, PA	6/24/21	7	Yes	26	7:00 AM – 9:00 AM	42	50	8	58
	6/24/21	7	Yes	---	4:00 PM – 6:00 PM	---	---	---	---
	6/26/21	7	Yes	---	11:00 AM – 3:00 PM	---	---	---	---
Jonestown, PA	6/17/21	8	Yes	34	7:00 AM – 9:00 AM	38	24	38	62
	6/17/21	8	Yes	16	4:00 PM – 6:00 PM	44	44	12	56
	6/19/21	8	Yes	42	11:00 AM – 3:00 PM	33	41	26	67
Londonderry, PA	6/17/21	8	Yes	52	7:00 AM – 9:00 AM	81	11	8	19
	6/17/21	8	Yes	41	4:00 PM – 6:00 PM	66	27	7	34
	6/19/21	8	Yes	64	11:00 AM – 3:00 PM	56	36	8	44

Average Pass-By Trip Percentage: 54 (AM), 55 (PM), 45 (Saturday)

NOTE: Interviews had to be stopped early at the Slippery Rock, PA location due to managerial concerns with store operations, therefore, interviews were only conducted from 6:00 – 9:00 AM at this location.

Interview Summary Sheets for each of the three (3) study locations can be found in Appendix D through Appendix F. Actual raw data sheets are available upon request.

4. Data Analysis

4.1. Reported Statistics

Each of the three (3) study locations were analyzed to determine the weighted average trip rate and regression analysis. The following is a discussion of each of the above reported statistics and how they were obtained:

4.1a. Average Trip Rate (Weighted)

The average trip generation rates shown in this study were calculated on the basis of a weighted average trip rate. As with the ITE *Trip Generation Manual*, 10th Edition, the weighted average trip rate was used rather than the average of the individual rates because of the variance found within each data set. Sites with a large variance from the mean would have over-influenced the average rate had they not been weighted. Table 5 summarizes the average trip rate for each study.

4.1b. Regression Analysis

This analysis examined the independent variable and the number of trips in order to generate a regression curve, a regression equation, and a coefficient of determination (R^2) for each time period. According to the information found in the ITE *Trip Generation Manual*, 10th Edition, "the coefficient of determination is defined as the percent of the variance in the number of trips associated with the variance in the size of the independent variable. If the R^2 value is 0.75, then 75 percent of the variance in the number of trips is accounted for by the variance in the size of the independent variable."

Table 5
Summary of Average Trip During Peak Hour Time Periods

Location	Fueling Positions	Weekday AM Peak Hour of Adjacent Street Traffic	Weekday PM Peak Hour of Adjacent Street Traffic	Saturday Peak Hour of Adjacent Street Traffic
Passenger Cars				
Slippery Rock, PA	12	14.08	19.58	19.17
Jonestown, PA	16	10.13	11.88	16.44
Londonderry, PA	16	14.13	13.44	17.19
Average Trip Rate	---	**12.78**	**14.94**	**17.60**
Trucks				
Slippery Rock, PA	7	9.43	10.43	5.43
Jonestown, PA	8	16.13	16.13	13.25
Londonderry, PA	8	11.63	10.50	4.50
Average Trip Rate	---	**12.40**	**12.35**	**7.73**

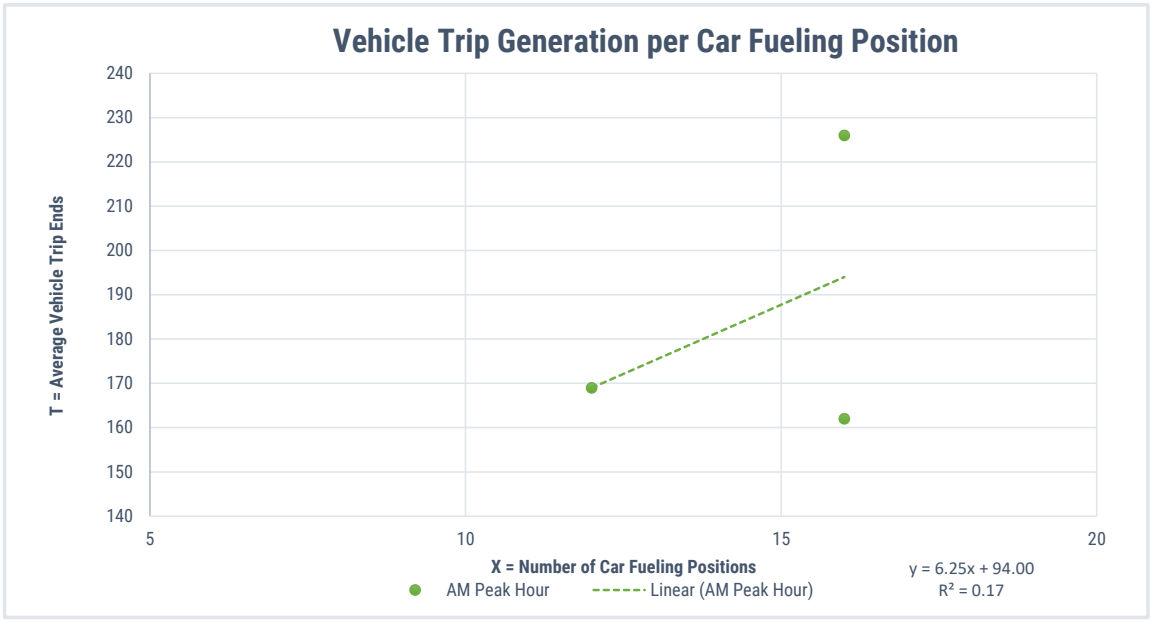
Table 6
Summary of Average Trip Rate (Weighted) During Peak Hour Time Periods

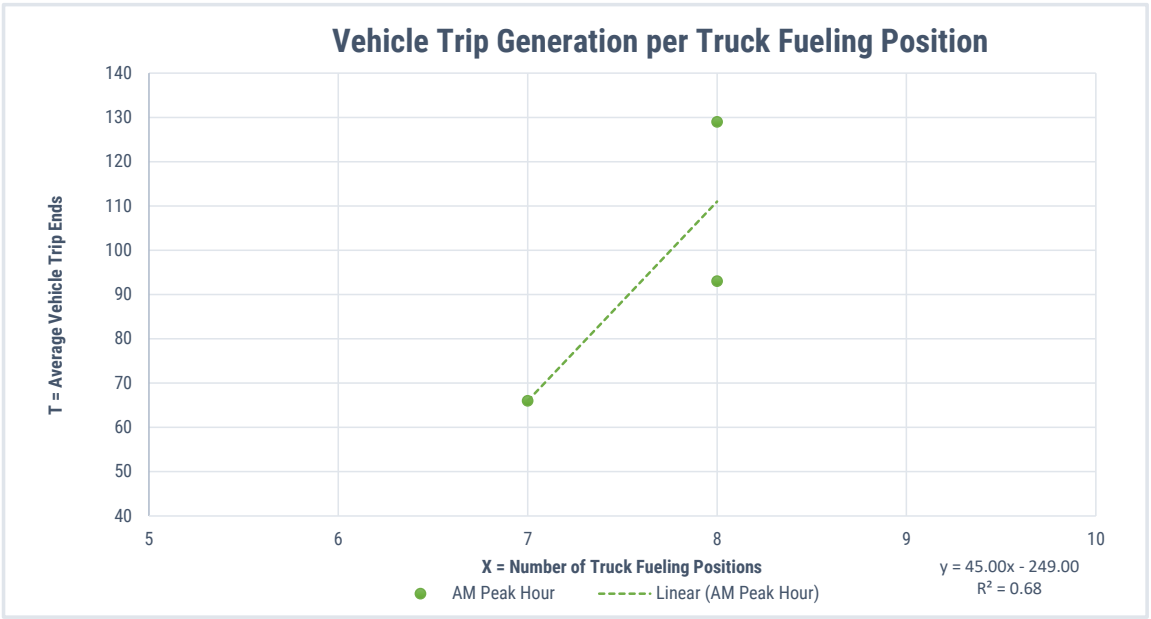
Location	Fueling Positions	Weekday AM Peak Hour of Adjacent Street Traffic	Weekday PM Peak Hour of Adjacent Street Traffic	Saturday Peak Hour of Adjacent Street Traffic
Passenger Cars				
Slippery Rock, PA	12	169	235	230
Jonestown, PA	16	162	190	263
Londonderry, PA	16	226	215	275
Total Trips	---	**557**	**640**	**768**
Average Trip Rate	---	**12.66**	**14.55**	**17.45**
Trucks				
Slippery Rock, PA	7	66	73	38
Jonestown, PA	8	129	129	106
Londonderry, PA	8	93	84	36
Total Trips	---	**288**	**286**	**180**
Average Trip Rate	---	**12.52**	**12.43**	**7.83**

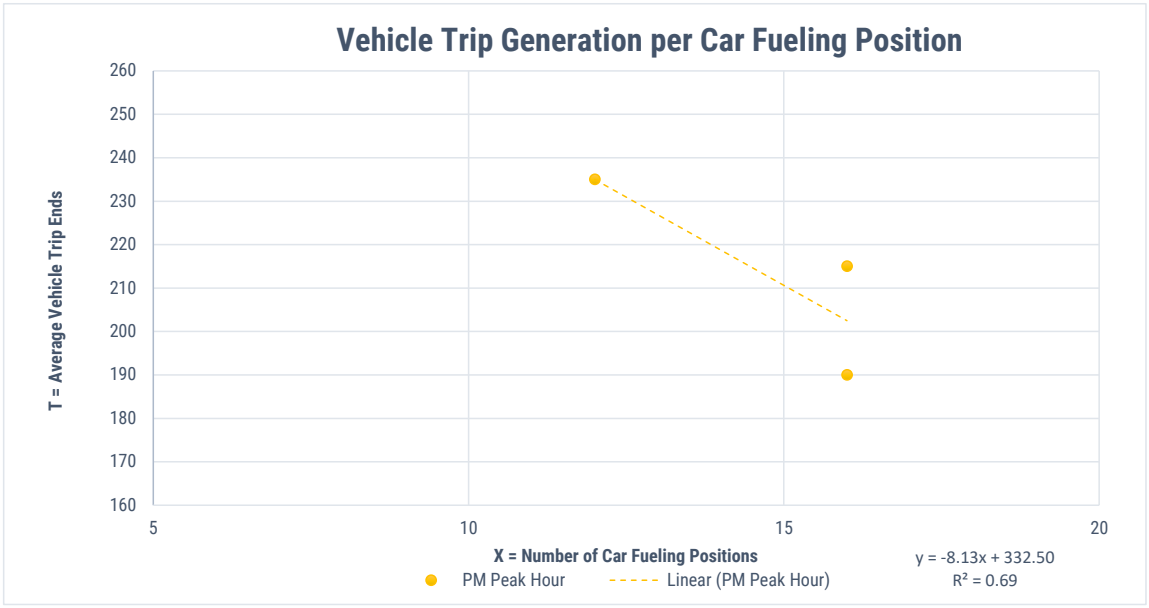
4.2. Data Plots

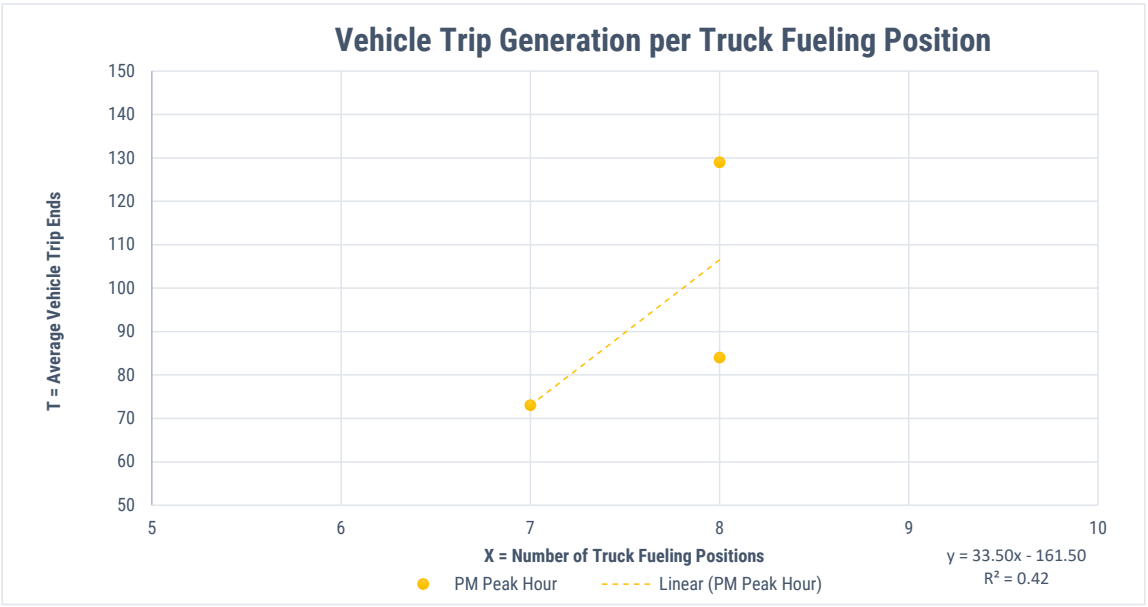
Each of the three (3) study locations were converted into data plots. Data plots provide a display of the variance within the data base. The data points represented on the plots are not trip generation rates; rather, they are the observed number of trips, plotted against the size of the independent variable (vehicle fueling positions). Data plots have been made for each of the three (3) study locations (illustrated on Figures 5-7) for the following time periods:

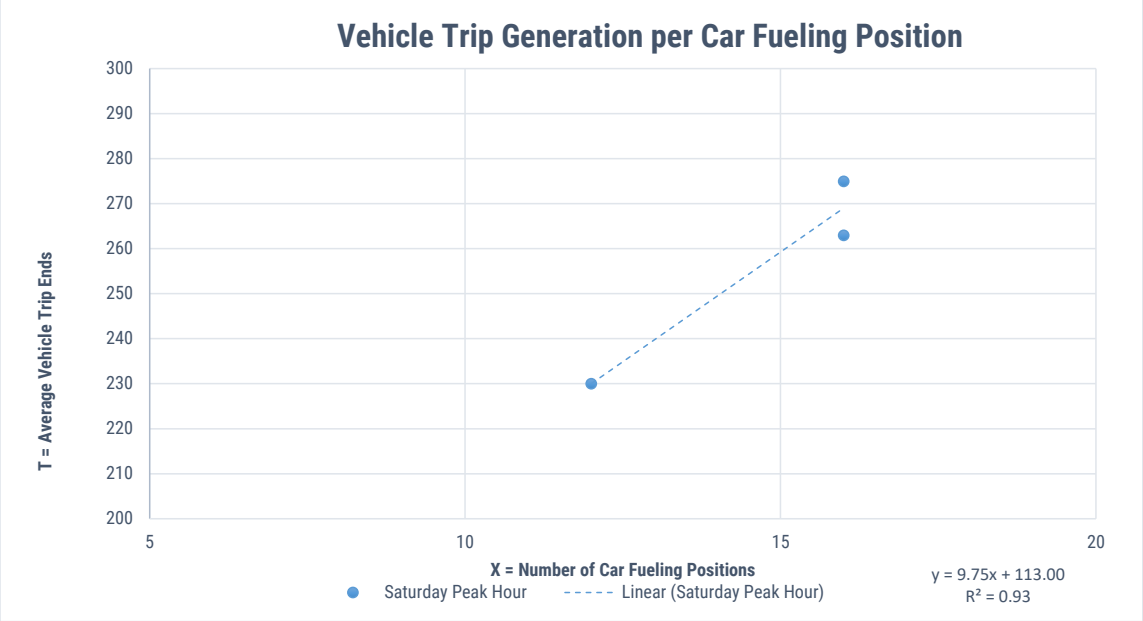
- Weekday – AM Peak Hour of Adjacent Street Traffic
- Weekday – PM Peak Hour of Adjacent Street Traffic
- Saturday – Peak Hour of Adjacent Street Traffic

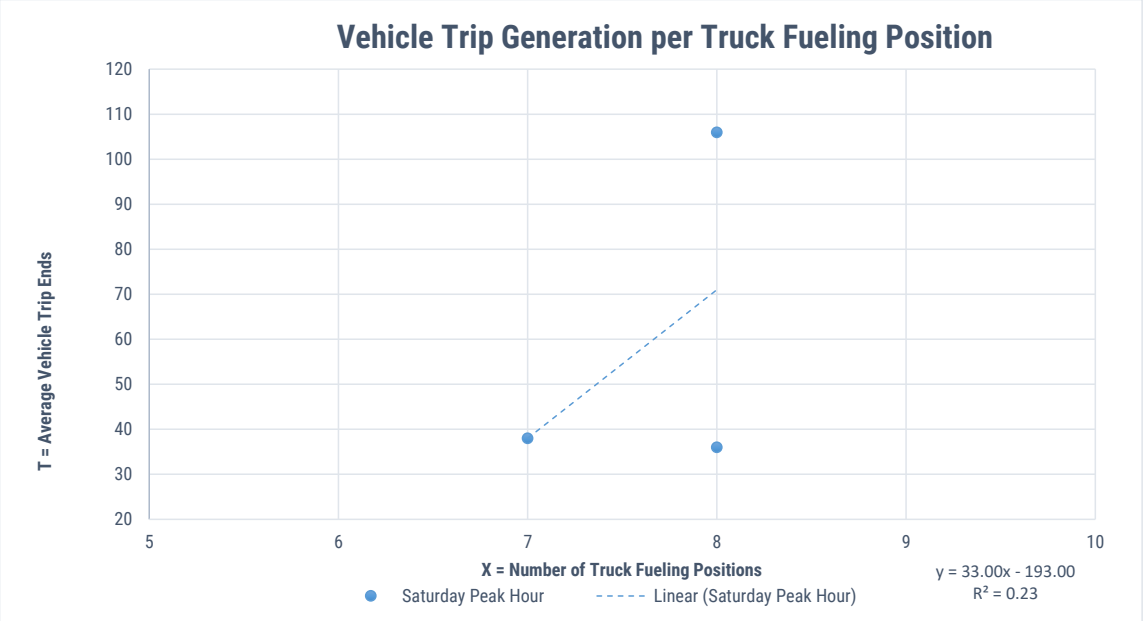

Vehicle Trip Generation per Car Fueling Position
T = Average Vehicle Trip Ends
240
230
220
210
200
190
180
170
160
150
140
5
10
15
20
X = Number of Car Fueling Positions
AM Peak Hour
Linear (AM Peak Hour)
y = 6.25x + 94.00
R² = 0.17


Vehicle Trip Generation per Truck Fueling Position
T = Average Vehicle Trip Ends
140
130
120
110
100
90
80
70
60
50
40
5
6
7
8
9
10
X = Number of Truck Fueling Positions
AM Peak Hour
Linear (AM Peak Hour)
y = 45.00x - 249.00
R² = 0.68


Vehicle Trip Generation per Car Fueling Position
T = Average Vehicle Trip Ends
260
250
240
230
220
210
200
190
180
170
160
5
10
15
20
X = Number of Car Fueling Positions
y = -8.13x + 332.50
R² = 0.69
PM Peak Hour
Linear (PM Peak Hour)

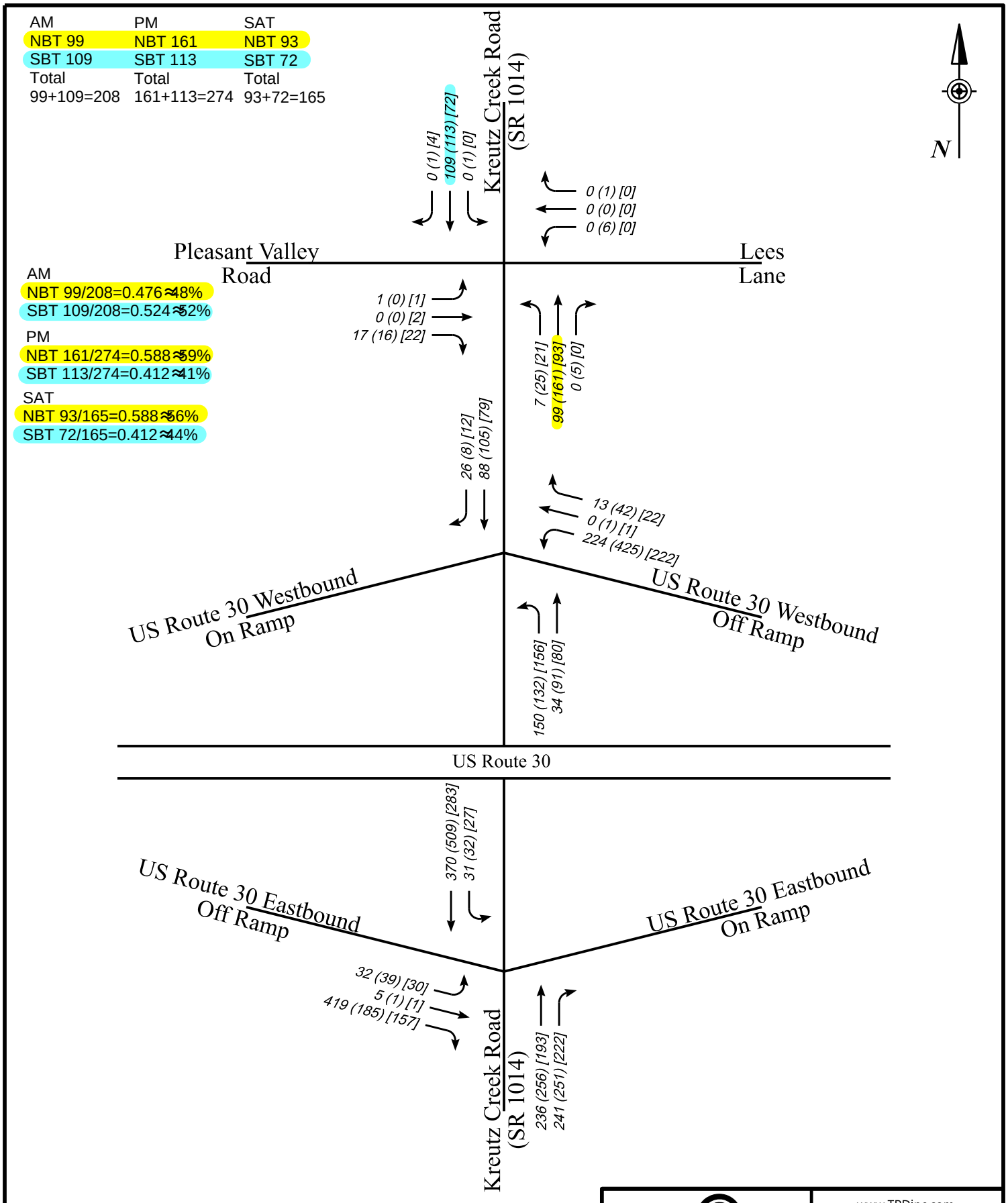

Vehicle Trip Generation per Truck Fueling Position
T = Average Vehicle Trip Ends
150
140
130
120
110
100
90
80
70
60
50
5
6
7
8
9
10
X = Number of Truck Fueling Positions
y = 33.50x - 161.50
R² = 0.42
PM Peak Hour
Linear (PM Peak Hour)


Vehicle Trip Generation per Car Fueling Position
T = Average Vehicle Trip Ends
300
290
280
270
260
250
240
230
220
210
200
5
10
15
20
X = Number of Car Fueling Positions
Saturday Peak Hour
Linear (Saturday Peak Hour)
y = 9.75x + 113.00
R² = 0.93


Vehicle Trip Generation per Truck Fueling Position
T = Average Vehicle Trip Ends
120
110
100
90
80
70
60
50
40
30
20
5
6
7
8
9
10
X = Number of Truck Fueling Positions
Saturday Peak Hour
Linear (Saturday Peak Hour)
y = 33.00x - 193.00
R² = 0.23

5. Conclusions

Based on the data collected compared with ITE land use code 960, CESO recommends that the calculated weighted average trip generation rates be used for the proposed Love's Travel Stops Development to be located in Hallam, PA. In summary, a rate of 25.18 will be used for the AM Peak Hour, a rate of 26.98 will be used for the PM Peak Hour, and a rate of 25.28 will be used for the entire development. This depicted a more accurate result of trips generated for a typical Love's Travel Stops Development.



KEY:

SCHEMATIC DRAWING:NOT TO SCALE

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FIGURE 4 Ref Figure 9

2025 EXISTING CONIDTIONS
AM (PM) [SAT] PEAK HOUR
PASSENGER VEHICLES

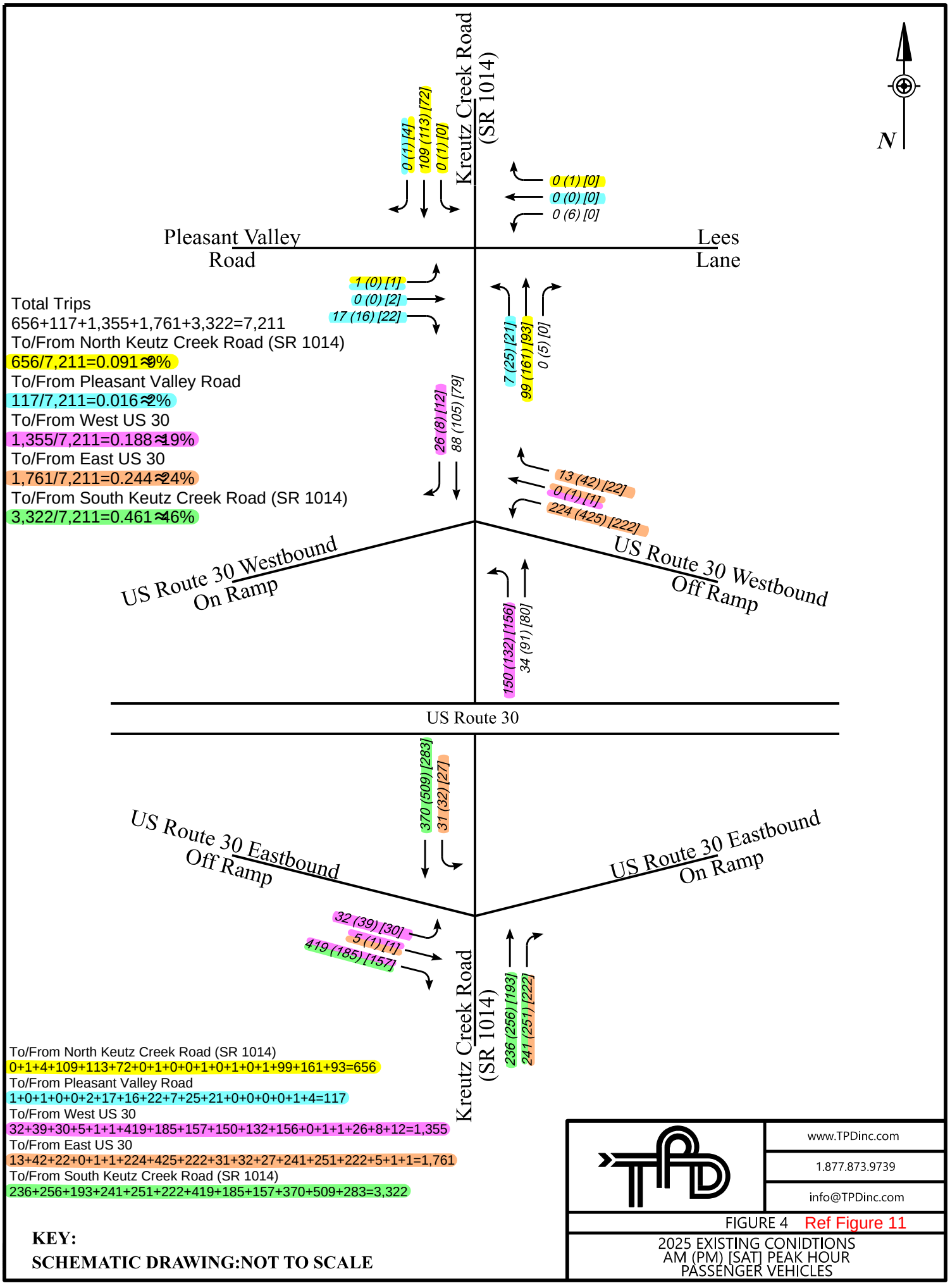

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FIGURE 4 Ref Figure 11

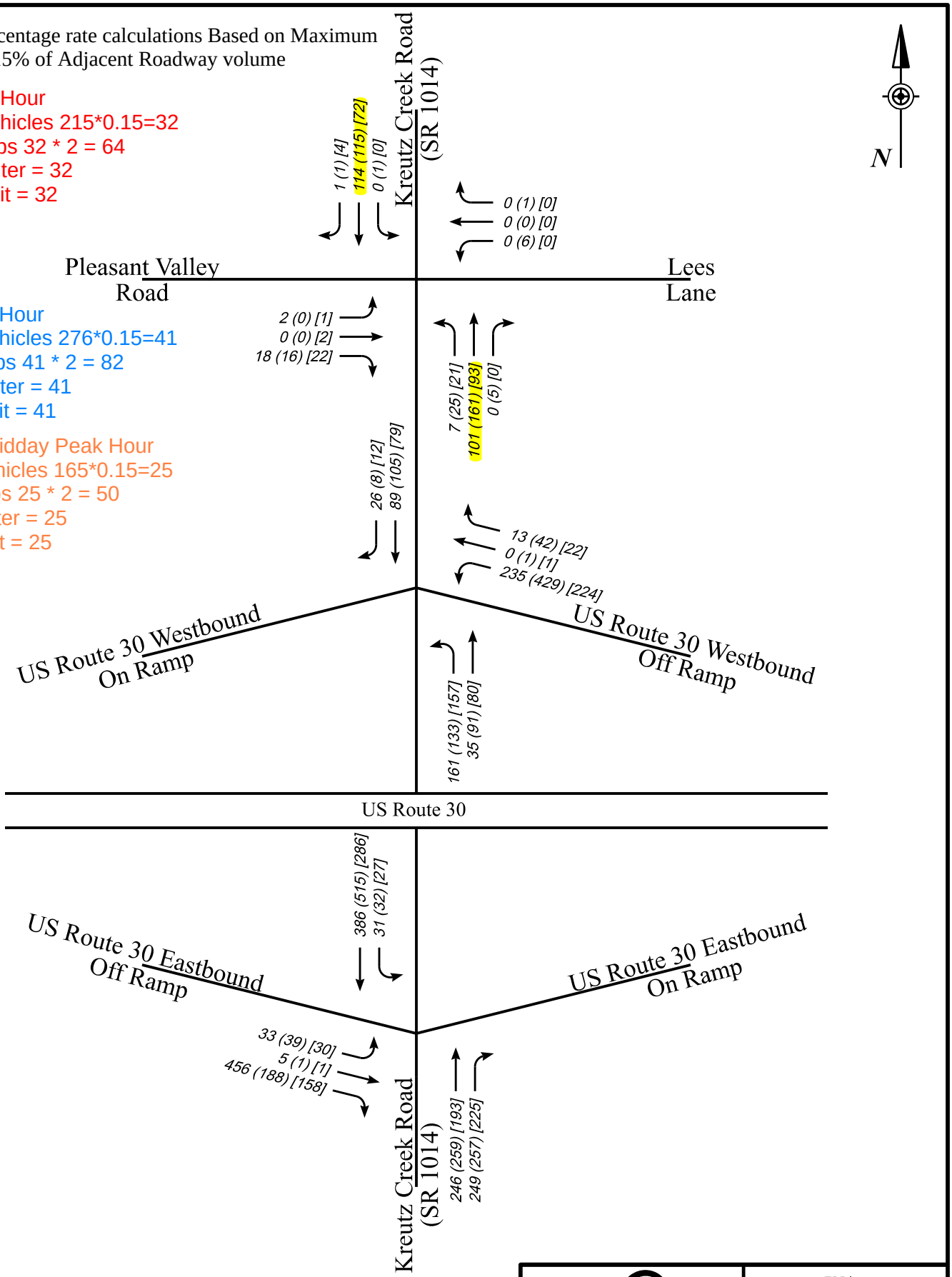
2025 EXISTING CONIDTIONS
AM (PM) [SAT] PEAK HOUR
PASSENGER VEHICLES

Pass-by percentage rate calculations Based on Maximum pass-by of 15% of Adjacent Roadway volume

A.M. Peak Hour
Pass by vehicles 215*0.15=32
Pass by trips 32 * 2 = 64
Pass by enter = 32
Pass by exit = 32

P.M. Peak Hour
Pass by vehicles 276*0.15=41
Pass by trips 41 * 2 = 82
Pass by enter = 41
Pass by exit = 41

Saturday Midday Peak Hour
Pass by vehicles 165*0.15=25
Pass by trips 25 * 2 = 50
Pass by enter = 25
Pass by exit = 25



KEY:

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FIGURE 3

2025 EXISTING CONIDTIONS
AM (PM) [SAT] PEAK HOUR
TOTAL TRAFFIC VOLUME

Appendix E:

Capacity Analysis Worksheets

JDAI.00005 Suburban 4-Leg Intersection (4 lanes)

Kreutz Creek Road (SR 1014) & Lees Lane/ Pleasant Valley Road

2025 Existing/2038 Base (No-Build) Conditions

Critical Headway

		Movement	tc base	tc hv	phv	t cg	G	t 3lt	**Base Crit**
major left	AM	NB L	3.9	2	0%	0	2	0	**3.9**
	PM	NB L	3.9	2	0%	0	2	0	**3.9**
	SAT	NB L	3.9	2	0%	0	2	0	**3.9**
	AM	SB L	3.9	2	0%	0	-2	0	**3.9**
	PM	SB L	3.9	2	0%	0	-2	0	**3.9**
	SAT	SB L	3.9	2	0%	0	-2	0	**3.9**
minor right	AM	EB R	7.2	2	6%	0.1	0	0	**7.3**
	PM	EB R	7.2	2	0%	0.1	0	0	**7.2**
	SAT	EB R	7.2	2	0%	0.1	0	0	**7.2**
	AM	WB R	7.2	2	0%	0.1	0	0	**7.2**
	PM	WB R	7.2	2	0%	0.1	0	0	**7.2**
	SAT	WB R	7.2	2	0%	0.1	0	0	**7.2**
minor left	AM	EB L	8.4	2	50%	0.2	0	0	**9.4**
	PM	EB L	8.4	2	0%	0.2	0	0	**8.4**
	SAT	EB L	8.4	2	0%	0.2	0	0	**8.4**
	AM	WB L	8.4	2	0%	0.2	0	0	**8.4**
	PM	WB L	8.4	2	0%	0.2	0	0	**8.4**
	SAT	WB L	8.4	2	0%	0.2	0	0	**8.4**

Follow-up headway

		Movement	t fbase	t fhv	phv	**Follow-up**
major left	AM	NB L	2.4	1	0%	**2.4**
	PM	NB L	2.4	1	0%	**2.4**
	SAT	NB L	2.4	1	0%	**2.4**
	AM	SB L	2.4	1	0%	**2.4**
	PM	SB L	2.4	1	0%	**2.4**
	SAT	SB L	2.4	1	0%	**2.4**
minor right	AM	EB R	2.9	1	6%	**3.0**
	PM	EB R	2.9	1	0%	**2.9**
	SAT	EB R	2.9	1	0%	**2.9**
	AM	WB R	2.9	1	0%	**2.9**
	PM	WB R	2.9	1	0%	**2.9**
	SAT	WB R	2.9	1	0%	**2.9**
minor left	AM	EB L	2.8	1	50%	**3.3**
	PM	EB L	2.8	1	0%	**2.8**
	SAT	EB L	2.8	1	0%	**2.8**
	AM	WB L	2.8	1	0%	**2.8**
	PM	WB L	2.8	1	0%	**2.8**
	SAT	WB L	2.8	1	0%	**2.8**

JDAI.00005 Suburban 4-Leg Intersection (4 lanes)

Kreutz Creek Road (SR 1014) & Lees Lane/ Pleasant Valley Road

2038 Projected (Build) Conditions

Critical Headway

		Movement	tc base	tc hv	phv	t cg	G	t 3lt	**Base Crit**
major left	AM	NB L	3.9	2	0%	0	2	0	**3.9**
	PM	NB L	3.9	2	0%	0	2	0	**3.9**
	SAT	NB L	3.9	2	0%	0	2	0	**3.9**
	AM	SB L	3.9	2	2%	0	-2	0	**3.9**
	PM	SB L	3.9	2	2%	0	-2	0	**3.9**
	SAT	SB L	3.9	2	2%	0	-2	0	**3.9**
minor right	AM	EB R	7.2	2	6%	0.1	0	0	**7.3**
	PM	EB R	7.2	2	0%	0.1	0	0	**7.2**
	SAT	EB R	7.2	2	0%	0.1	0	0	**7.2**
	AM	WB R	7.2	2	2%	0.1	0	0	**7.2**
	PM	WB R	7.2	2	2%	0.1	0	0	**7.2**
	SAT	WB R	7.2	2	2%	0.1	0	0	**7.2**
minor left	AM	EB L	8.4	2	50%	0.2	0	0	**9.4**
	PM	EB L	8.4	2	0%	0.2	0	0	**8.4**
	SAT	EB L	8.4	2	0%	0.2	0	0	**8.4**
	AM	WB L	8.4	2	18%	0.2	0	0	**8.8**
	PM	WB L	8.4	2	14%	0.2	0	0	**8.7**
	SAT	WB L	8.4	2	12%	0.2	0	0	**8.6**

Follow-up headway

		Movement	t fbase	t fhv	phv	**Follow-up**
major left	AM	NB L	2.4	1	0%	**2.4**
	PM	NB L	2.4	1	0%	**2.4**
	SAT	NB L	2.4	1	0%	**2.4**
	AM	SB L	2.4	1	2%	**2.4**
	PM	SB L	2.4	1	2%	**2.4**
	SAT	SB L	2.4	1	2%	**2.4**
minor right	AM	EB R	2.9	1	6%	**3.0**
	PM	EB R	2.9	1	0%	**2.9**
	SAT	EB R	2.9	1	0%	**2.9**
	AM	WB R	2.9	1	2%	**2.9**
	PM	WB R	2.9	1	2%	**2.9**
	SAT	WB R	2.9	1	2%	**2.9**
minor left	AM	EB L	2.8	1	50%	**3.3**
	PM	EB L	2.8	1	0%	**2.8**
	SAT	EB L	2.8	1	0%	**2.8**
	AM	WB L	2.8	1	18%	**3.0**
	PM	WB L	2.8	1	14%	**2.9**
	SAT	WB L	2.8	1	12%	**2.9**

JDAI.00005 Suburban T-Intersection (4 lanes)

Kreutz Creek Road (SR 1014) & US Route 30 West Ramps

2025 Existing/2038 Base (No-Build) Conditions

Crititcal Headway

			tc base	tc hv	phv	t cg	G	t 3lt	**Base Crit**
major left	AM	NB L	3.9	2	7%	0	1	0	**4.0**
	PM	NB L	3.9	2	1%	0	1	0	**3.9**
	SAT	NB L	3.9	2	1%	0	1	0	**3.9**
minor right	AM	WB R	7.2	2	0%	0.1	0	0	**7.2**
	PM	WB R	7.2	2	0%	0.1	0	0	**7.2**
	SAT	WB R	7.2	2	0%	0.1	0	0	**7.2**
minor left	AM	WB L	8.4	2	5%	0.2	0	0.7	**7.8**
	PM	WB L	8.4	2	1%	0.2	0	0.7	**7.7**
	SAT	WB L	8.4	2	1%	0.2	0	0.7	**7.7**

Follow-up headway

				t fhv	phv	**Follow-up**
major left	AM	NB L	2.4	1	7%	**2.5**
	PM	NB L	2.4	1	1%	**2.4**
	SAT	NB L	2.4	1	1%	**2.4**
minor right	AM	WB R	2.9	1	0%	**2.9**
	PM	WB R	2.9	1	0%	**2.9**
	SAT	WB R	2.9	1	0%	**2.9**
minor left	AM	WB L	2.8	1	5%	**2.9**
	PM	WB L	2.8	1	1%	**2.8**
	SAT	WB L	2.8	1	1%	**2.8**

JDAI.00005 Suburban T-Intersection (4 lanes)

Kreutz Creek Road (SR 1014) & US Route 30 West Ramps

2038 Projected (Build) Conditions

Crititcal Headway

			tc base	tc hv	phv	t cg	G	t 3lt	**Base Crit**
major left	AM	NB L	3.9	2	7%	0	1	0	**4.0**
	PM	NB L	3.9	2	1%	0	1	0	**3.9**
	SAT	NB L	3.9	2	1%	0	1	0	**3.9**
minor right	AM	WB R	7.2	2	22%	0.1	0	0	**7.6**
	PM	WB R	7.2	2	14%	0.1	0	0	**7.5**
	SAT	WB R	7.2	2	9%	0.1	0	0	**7.4**
minor left	AM	WB L	8.4	2	5%	0.2	0	0.7	**7.8**
	PM	WB L	8.4	2	1%	0.2	0	0.7	**7.7**
	SAT	WB L	8.4	2	1%	0.2	0	0.7	**7.7**

Follow-up headway

				t fhv	phv	**Follow-up**
major left	AM	NB L	2.4	1	7%	**2.5**
	PM	NB L	2.4	1	1%	**2.4**
	SAT	NB L	2.4	1	1%	**2.4**
minor right	AM	WB R	2.9	1	22%	**3.1**
	PM	WB R	2.9	1	14%	**3.0**
	SAT	WB R	2.9	1	9%	**3.0**
minor left	AM	WB L	2.8	1	5%	**2.9**
	PM	WB L	2.8	1	1%	**2.8**
	SAT	WB L	2.8	1	1%	**2.8**

JDAI.00005 Suburban T-Intersection (4 lanes)

Kreutz Creek Road (SR 1014) & US Route 30 East Ramps

2025 Existing/2038 Base (No-Build) Conditions

Crititcal Headway

			tc base	tc hv	phv	t cg	G	t 3lt	**Base Crit**
major left	AM	SB L	3.9	2	0%	0	0	0	**3.9**
	PM	SB L	3.9	2	0%	0	0	0	**3.9**
	SAT	SB L	3.9	2	0%	0	0	0	**3.9**
minor right	AM	EB R	7.2	2	8%	0.1	0	0	**7.4**
	PM	EB R	7.2	2	2%	0.1	0	0	**7.2**
	SAT	EB R	7.2	2	1%	0.1	0	0	**7.2**
minor left	AM	EB L	8.4	2	3%	0.2	0	0.7	**7.8**
	PM	EB L	8.4	2	0%	0.2	0	0.7	**7.7**
	SAT	EB L	8.4	2	0%	0.2	0	0.7	**7.7**

Follow-up headway

				t fhv	phv	**Follow-up**
major left	AM	SB L	2.4	1	0%	**2.4**
	PM	SB L	2.4	1	0%	**2.4**
	SAT	SB L	2.4	1	0%	**2.4**
minor right	AM	EB R	2.9	1	8%	**3.0**
	PM	EB R	2.9	1	2%	**2.9**
	SAT	EB R	2.9	1	1%	**2.9**
minor left	AM	EB L	2.8	1	3%	**2.8**
	PM	EB L	2.8	1	0%	**2.8**
	SAT	EB L	2.8	1	0%	**2.8**

JDAI.00005 Suburban T-Intersection (4 lanes)

Kreutz Creek Road (SR 1014) & US Route 30 East Ramps

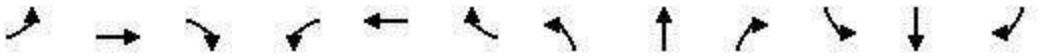
2038 Projected (Build) Conditions

Crititcal Headway

			tc base	tc hv	phv	t cg	G	t 3lt	**Base Crit**
major left	AM	SB L	3.9	2	14%	0	0	0	**4.2**
	PM	SB L	3.9	2	14%	0	0	0	**4.2**
	SAT	SB L	3.9	2	10%	0	0	0	**4.1**
minor right	AM	EB R	7.2	2	8%	0.1	0	0	**7.4**
	PM	EB R	7.2	2	2%	0.1	0	0	**7.2**
	SAT	EB R	7.2	2	1%	0.1	0	0	**7.2**
minor left	AM	EB L	8.4	2	11%	0.2	0	0.7	**7.9**
	PM	EB L	8.4	2	13%	0.2	0	0.7	**8.0**
	SAT	EB L	8.4	2	9%	0.2	0	0.7	**7.9**

Follow-up headway

				t fhv	phv	**Follow-up**
major left	AM	SB L	2.4	1	14%	**2.5**
	PM	SB L	2.4	1	14%	**2.5**
	SAT	SB L	2.4	1	10%	**2.5**
minor right	AM	EB R	2.9	1	8%	**3.0**
	PM	EB R	2.9	1	2%	**2.9**
	SAT	EB R	2.9	1	1%	**2.9**
minor left	AM	EB L	2.8	1	11%	**2.9**
	PM	EB L	2.8	1	13%	**2.9**
	SAT	EB L	2.8	1	9%	**2.9**



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	18	0	0	0	7	101	0	0	114	1
Future Volume (vph)	2	0	18	0	0	0	7	101	0	0	114	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	50%	0%	6%	0%	0%	0%	0%	2%	0%	0%	4%	100%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	0	0	8	115	0	0	131	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	18	0	0	0	7	101	0	0	114	1
Future Vol, veh/h	2	0	18	0	0	0	7	101	0	0	114	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	50	0	6	0	0	0	0	2	0	0	4	100
Mvmt Flow	2	0	20	0	0	0	8	115	0	0	130	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	203	261	65	195	261	57	131	0	0	115	0	0
Stage 1	130	130	-	131	131	-	-	-	-	-	-	-
Stage 2	73	131	-	65	131	-	-	-	-	-	-	-
Critical Hdwy	9.4	6.5	7.3	8.4	6.5	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.3	4	3	2.8	4	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	703	647	1080	878	647	1133	1360	-	-	1376	-	-
Stage 1	882	792	-	1068	792	-	-	-	-	-	-	-
Stage 2	968	792	-	1173	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	699	644	1080	857	643	1133	1360	-	-	1376	-	-
Mov Cap-2 Maneuver	699	644	-	857	643	-	-	-	-	-	-	-
Stage 1	882	792	-	1062	787	-	-	-	-	-	-	-
Stage 2	963	787	-	1151	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.59	0	0.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1360	-	-	1024	-	1376	-	-
HCM Lane V/C Ratio	0.006	-	-	0.022	-	-	-	-
HCM Ctrl Dly (s/v)	7.7	-	-	8.6	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	235	0	13	161	35	0	0	89	26
Future Volume (vph)	0	0	0	235	0	13	161	35	0	0	89	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			830			611			246	
Travel Time (s)		17.3			22.6			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	5%	0%	0%	7%	3%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	250	14	171	37	0	0	95	28
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	235	0	13	161	35	0	0	89	26
Future Vol, veh/h	0	0	0	235	0	13	161	35	0	0	89	26
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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	5	0	0	7	3	0	0	1	0
Mvmt Flow	0	0	0	250	0	14	171	37	0	0	95	28

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	427	502	19	122	0	-	-	-	0
Stage 1	380	380	-	-	-	-	-	-	-
Stage 2	47	122	-	-	-	-	-	-	-
Critical Hdwy	7.8	6.5	7.2	4	-	-	-	-	-
Critical Hdwy Stg 1	5.9	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.9	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.9	4	2.9	2.5	-	-	-	-	-
Pot Cap-1 Maneuver	582	474	1205	1311	-	0	0	-	-
Stage 1	773	618	-	-	-	0	0	-	-
Stage 2	1171	798	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	506	0	1205	1311	-	-	-	-	-
Mov Cap-2 Maneuver	506	0	-	-	-	-	-	-	-
Stage 1	672	0	-	-	-	-	-	-	-
Stage 2	1171	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	18.32	6.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1311	-	506	1205	-	-
HCM Lane V/C Ratio	0.131	-	0.495	0.011	-	-
HCM Ctrl Dly (s/v)	8.2	-	18.9	8	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	2.7	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	5	456	0	0	0	0	246	249	31	386	0
Future Volume (vph)	33	5	456	0	0	0	0	246	249	31	386	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		862			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	0%	8%	0%	0%	0%	0%	4%	3%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	512	0	0	0	0	556	0	35	434	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	5	456	0	0	0	0	246	249	31	386	0
Future Vol, veh/h	33	5	456	0	0	0	0	246	249	31	386	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	0	8	0	0	0	0	4	3	0	4	0
Mvmt Flow	37	6	512	0	0	0	0	276	280	35	434	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	642	1060	217	-	0	0	556	0	0
Stage 1	503	503	-	-	-	-	-	-	-
Stage 2	138	556	-	-	-	-	-	-	-
Critical Hdwy	7.8	6.5	7.4	-	-	-	3.9	-	-
Critical Hdwy Stg 1	5.86	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	3	-	-	-	2.4	-	-
Pot Cap-1 Maneuver	407	226	840	0	-	-	983	-	0
Stage 1	685	545	-	0	-	-	-	-	0
Stage 2	1083	516	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	392	0	840	-	-	-	983	-	-
Mov Cap-2 Maneuver	392	0	-	-	-	-	-	-	-
Stage 1	685	0	-	-	-	-	-	-	-
Stage 2	1044	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	15.72	0	0.65
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	392	840	983	-
HCM Lane V/C Ratio	-	-	0.109	0.61	0.035	-
HCM Ctrl Dly (s/v)	-	-	15.3	15.8	8.8	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	4.3	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	16	6	0	1	25	161	5	1	115	1
Future Volume (vph)	0	0	16	6	0	1	25	161	5	1	115	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	8	0	28	187	0	1	130	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	16	6	0	1	25	161	5	1	115	1
Future Vol, veh/h	0	0	16	6	0	1	25	161	5	1	115	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	0	0	18	7	0	1	28	181	6	1	129	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	279	375	65	307	372	93	130	0	0	187	0	0
Stage 1	132	132	-	240	240	-	-	-	-	-	-	-
Stage 2	147	243	-	67	133	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.5	7.2	8.4	6.5	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.8	4	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	746	559	1119	706	561	1069	1360	-	-	1303	-	-
Stage 1	1066	791	-	914	711	-	-	-	-	-	-	-
Stage 2	1044	709	-	1169	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	730	547	1119	680	549	1069	1360	-	-	1303	-	-
Mov Cap-2 Maneuver	730	547	-	680	549	-	-	-	-	-	-	-
Stage 1	1065	790	-	895	696	-	-	-	-	-	-	-
Stage 2	1021	694	-	1150	790	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.27	10.07	1.01	0.07
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1360	-	-	1119	717	1303	-	-
HCM Lane V/C Ratio	0.021	-	-	0.016	0.011	0.001	-	-
HCM Ctrl Dly (s/v)	7.7	-	-	8.3	10.1	7.8	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	429	1	42	133	91	0	0	105	8
Future Volume (vph)	0	0	0	429	1	42	133	91	0	0	105	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			831			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	443	43	137	94	0	0	108	8
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	19.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	429	1	42	133	91	0	0	105	8
Future Vol, veh/h	0	0	0	429	1	42	133	91	0	0	105	8
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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	0	0	1	0	0	0	0	0
Mvmt Flow	0	0	0	442	1	43	137	94	0	0	108	8

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	422	485	47	116	0	-	-	-	0
Stage 1	368	368	-	-	-	-	-	-	-
Stage 2	54	116	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	3.9	-	-	-	-	-
Critical Hdwy Stg 1	5.82	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.4	-	-	-	-	-
Pot Cap-1 Maneuver	611	485	1152	1374	-	0	0	-	-
Stage 1	815	625	-	-	-	0	0	-	-
Stage 2	1203	803	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	550	0	1152	1374	-	-	-	-	-
Mov Cap-2 Maneuver	550	0	-	-	-	-	-	-	-
Stage 1	734	0	-	-	-	-	-	-	-
Stage 2	1203	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	31.01	4.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1374	-	550	1152	-	-
HCM Lane V/C Ratio	0.1	-	0.805	0.038	-	-
HCM Ctrl Dly (s/v)	7.9	-	33.2	8.2	-	-
HCM Lane LOS	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.3	-	7.8	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	1	188	0	0	0	0	259	257	32	515	0
Future Volume (vph)	39	1	188	0	0	0	0	259	257	32	515	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		860			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	1%	2%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	192	0	0	0	0	526	0	33	526	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	1	188	0	0	0	0	259	257	32	515	0
Future Vol, veh/h	39	1	188	0	0	0	0	259	257	32	515	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
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, %	0	0	2	0	0	0	0	1	2	0	1	0
Mvmt Flow	40	1	192	0	0	0	0	264	262	33	526	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	723	1117	263	-	0	0	527	0	0
Stage 1	591	591	-	-	-	-	-	-	-
Stage 2	132	527	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	-	-	-	3.9	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	-	-	-	2.4	-	-
Pot Cap-1 Maneuver	358	209	814	0	-	-	1005	-	0
Stage 1	619	498	-	0	-	-	-	-	0
Stage 2	1093	532	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	346	0	814	-	-	-	1005	-	-
Mov Cap-2 Maneuver	346	0	-	-	-	-	-	-	-
Stage 1	619	0	-	-	-	-	-	-	-
Stage 2	1058	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.83	0	0.51
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	346	814	1005	-
HCM Lane V/C Ratio	-	-	0.118	0.236	0.032	-
HCM Ctrl Dly (s/v)	-	-	16.8	10.8	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.9	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	22	0	0	0	21	93	0	0	72	4
Future Volume (vph)	1	2	22	0	0	0	21	93	0	0	72	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	0	0	24	106	0	0	87	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	22	0	0	0	21	93	0	0	72	4
Future Vol, veh/h	1	2	22	0	0	0	21	93	0	0	72	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	25	0	0	0	24	106	0	0	82	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	185	238	43	195	240	53	86	0	0	106	0	0
Stage 1	84	84	-	153	153	-	-	-	-	-	-	-
Stage 2	101	153	-	42	86	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.5	7.2	8.4	6.5	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.8	4	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	897	667	1159	878	665	1141	1406	-	-	1385	-	-
Stage 1	1141	829	-	1034	774	-	-	-	-	-	-	-
Stage 2	1115	774	-	1211	827	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	882	656	1159	842	654	1141	1406	-	-	1385	-	-
Mov Cap-2 Maneuver	882	656	-	842	654	-	-	-	-	-	-	-
Stage 1	1141	829	-	1016	761	-	-	-	-	-	-	-
Stage 2	1096	761	-	1182	827	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.43	0	1.4	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	1079	-	1385	-	-
HCM Lane V/C Ratio	0.017	-	-	0.026	-	-	-	-
HCM Ctrl Dly (s/v)	7.6	-	-	8.4	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	224	1	22	157	80	0	0	79	12
Future Volume (vph)	0	0	0	224	1	22	157	80	0	0	79	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			830			611			246	
Travel Time (s)		17.3			22.6			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	256	25	178	91	0	0	90	14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	10.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	224	1	22	157	80	0	0	79	12
Future Vol, veh/h	0	0	0	224	1	22	157	80	0	0	79	12
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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	1	0	0	1	0	0	0	0	0
Mvmt Flow	0	0	0	255	1	25	178	91	0	0	90	14

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	493	551	45	103	0	-	-	-	0
Stage 1	448	448	-	-	-	-	-	-	-
Stage 2	45	103	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	3.9	-	-	-	-	-
Critical Hdwy Stg 1	5.82	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.4	-	-	-	-	-
Pot Cap-1 Maneuver	540	445	1154	1388	-	0	0	-	-
Stage 1	738	576	-	-	-	0	0	-	-
Stage 2	1217	813	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	470	0	1154	1388	-	-	-	-	-
Mov Cap-2 Maneuver	470	0	-	-	-	-	-	-	-
Stage 1	643	0	-	-	-	-	-	-	-
Stage 2	1217	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	20.23	5.28	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1388	-	470	1154	-	-
HCM Lane V/C Ratio	0.129	-	0.544	0.022	-	-
HCM Ctrl Dly (s/v)	8	-	21.4	8.2	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	3.2	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1	158	0	0	0	0	193	225	27	286	0
Future Volume (vph)	30	1	158	0	0	0	0	193	225	27	286	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		860			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	0%	1%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	34	174	0	0	0	0	459	0	30	314	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	1	158	0	0	0	0	193	225	27	286	0
Future Vol, veh/h	30	1	158	0	0	0	0	193	225	27	286	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	0	0	0	0	1	0	1	0
Mvmt Flow	33	1	174	0	0	0	0	212	247	30	314	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	480	833	157	-	0	0	459	0	0
Stage 1	374	374	-	-	-	-	-	-	-
Stage 2	106	459	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	-	-	-	3.9	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	-	-	-	2.4	-	-
Pot Cap-1 Maneuver	552	307	965	0	-	-	1059	-	0
Stage 1	812	621	-	0	-	-	-	-	0
Stage 2	1129	570	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	537	0	965	-	-	-	1059	-	-
Mov Cap-2 Maneuver	537	0	-	-	-	-	-	-	-
Stage 1	812	0	-	-	-	-	-	-	-
Stage 2	1097	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.98	0	0.73
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	537	965	1059	-
HCM Lane V/C Ratio	-	-	0.063	0.18	0.028	-
HCM Ctrl Dly (s/v)	-	-	12.2	9.5	8.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.7	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	19	0	0	0	7	106	0	0	120	1
Future Volume (vph)	2	0	19	0	0	0	7	106	0	0	120	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	50%	0%	6%	0%	0%	0%	0%	2%	0%	0%	4%	100%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	0	0	8	120	0	0	137	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

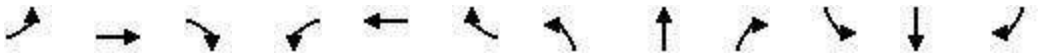
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	19	0	0	0	7	106	0	0	120	1
Future Vol, veh/h	2	0	19	0	0	0	7	106	0	0	120	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	50	0	6	0	0	0	0	2	0	0	4	100
Mvmt Flow	2	0	22	0	0	0	8	120	0	0	136	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	213	273	69	205	274	60	138	0	0	120	0	0
Stage 1	137	137	-	136	136	-	-	-	-	-	-	-
Stage 2	76	136	-	68	138	-	-	-	-	-	-	-
Critical Hdwy	9.4	6.5	7.3	8.4	6.5	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.3	4	3	2.8	4	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	688	637	1074	863	637	1127	1353	-	-	1370	-	-
Stage 1	873	787	-	1059	787	-	-	-	-	-	-	-
Stage 2	964	787	-	1167	787	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	684	633	1074	841	633	1127	1353	-	-	1370	-	-
Mov Cap-2 Maneuver	684	633	-	841	633	-	-	-	-	-	-	-
Stage 1	873	787	-	1053	783	-	-	-	-	-	-	-
Stage 2	958	783	-	1144	787	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.62	0	0.48	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1353	-	-	1019	-	1370	-	-
HCM Lane V/C Ratio	0.006	-	-	0.023	-	-	-	-
HCM Ctrl Dly (s/v)	7.7	-	-	8.6	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	247	0	14	169	37	0	0	93	27
Future Volume (vph)	0	0	0	247	0	14	169	37	0	0	93	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			830			611			246	
Travel Time (s)		17.3			22.6			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	5%	0%	0%	7%	3%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	263	15	180	39	0	0	99	29
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	11.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	247	0	14	169	37	0	0	93	27
Future Vol, veh/h	0	0	0	247	0	14	169	37	0	0	93	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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	5	0	0	7	3	0	0	1	0
Mvmt Flow	0	0	0	263	0	15	180	39	0	0	99	29

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	448	527	20	128	0	-	-	-	0
Stage 1	399	399	-	-	-	-	-	-	-
Stage 2	49	128	-	-	-	-	-	-	-
Critical Hdwy	7.8	6.5	7.2	4	-	-	-	-	-
Critical Hdwy Stg 1	5.9	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.9	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.9	4	2.9	2.5	-	-	-	-	-
Pot Cap-1 Maneuver	560	459	1203	1306	-	0	0	-	-
Stage 1	755	606	-	-	-	0	0	-	-
Stage 2	1168	794	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	483	0	1203	1306	-	-	-	-	-
Mov Cap-2 Maneuver	483	0	-	-	-	-	-	-	-
Stage 1	651	0	-	-	-	-	-	-	-
Stage 2	1168	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	20.31	6.72	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1306	-	483	1203	-	-
HCM Lane V/C Ratio	0.138	-	0.544	0.012	-	-
HCM Ctrl Dly (s/v)	8.2	-	21	8	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	3.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	5	478	0	0	0	0	258	261	33	405	0
Future Volume (vph)	35	5	478	0	0	0	0	258	261	33	405	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		863			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	0%	8%	0%	0%	0%	0%	4%	3%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	537	0	0	0	0	583	0	37	455	0
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	35	5	478	0	0	0	0	258	261	33	405	0
Future Vol, veh/h	35	5	478	0	0	0	0	258	261	33	405	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	0	8	0	0	0	0	4	3	0	4	0
Mvmt Flow	39	6	537	0	0	0	0	290	293	37	455	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	674	1112	228	-	0	0	583	0	0
Stage 1	529	529	-	-	-	-	-	-	-
Stage 2	145	583	-	-	-	-	-	-	-
Critical Hdwy	7.8	6.5	7.4	-	-	-	3.9	-	-
Critical Hdwy Stg 1	5.86	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.86	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	3	-	-	-	2.4	-	-
Pot Cap-1 Maneuver	383	210	825	0	-	-	963	-	0
Stage 1	663	530	-	0	-	-	-	-	0
Stage 2	1074	502	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	369	0	825	-	-	-	963	-	-
Mov Cap-2 Maneuver	369	0	-	-	-	-	-	-	-
Stage 1	663	0	-	-	-	-	-	-	-
Stage 2	1032	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	17.03	0	0.67
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	369	825	963	-
HCM Lane V/C Ratio	-	-	0.122	0.651	0.039	-
HCM Ctrl Dly (s/v)	-	-	16.1	17.1	8.9	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0.4	4.9	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	17	6	0	1	26	169	5	1	121	1
Future Volume (vph)	0	0	17	6	0	1	26	169	5	1	121	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	8	0	29	196	0	1	137	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

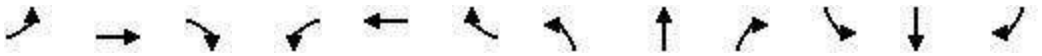
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	17	6	0	1	26	169	5	1	121	1
Future Vol, veh/h	0	0	17	6	0	1	26	169	5	1	121	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	0	0	19	7	0	1	29	190	6	1	136	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	292	393	69	321	390	98	137	0	0	196	0	0
Stage 1	139	139	-	251	251	-	-	-	-	-	-	-
Stage 2	153	254	-	70	139	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.5	7.2	8.4	6.5	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.8	4	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	727	547	1113	687	548	1062	1353	-	-	1295	-	-
Stage 1	1056	786	-	899	703	-	-	-	-	-	-	-
Stage 2	1034	701	-	1164	785	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	710	534	1113	660	536	1062	1353	-	-	1295	-	-
Mov Cap-2 Maneuver	710	534	-	660	536	-	-	-	-	-	-	-
Stage 1	1055	785	-	880	688	-	-	-	-	-	-	-
Stage 2	1011	686	-	1143	785	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.29	10.22	1	0.06
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1353	-	-	1113	697	1295	-	-
HCM Lane V/C Ratio	0.022	-	-	0.017	0.011	0.001	-	-
HCM Ctrl Dly (s/v)	7.7	-	-	8.3	10.2	7.8	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	450	1	44	140	95	0	0	110	8
Future Volume (vph)	0	0	0	450	1	44	140	95	0	0	110	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			832			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	465	45	144	98	0	0	113	8
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	25

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	450	1	44	140	95	0	0	110	8
Future Vol, veh/h	0	0	0	450	1	44	140	95	0	0	110	8
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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	0	0	1	0	0	0	0	0
Mvmt Flow	0	0	0	464	1	45	144	98	0	0	113	8

Major/Minor	Minor1		Major1		Major2				
Conflicting Flow All	443	508	49	122	0	-	-	-	0
Stage 1	387	387	-	-	-	-	-	-	-
Stage 2	57	122	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	3.9	-	-	-	-	-
Critical Hdwy Stg 1	5.82	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.4	-	-	-	-	-
Pot Cap-1 Maneuver	589	471	1148	1369	-	0	0	-	-
Stage 1	797	613	-	-	-	0	0	-	-
Stage 2	1199	799	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	527	0	1148	1369	-	-	-	-	-
Mov Cap-2 Maneuver	527	0	-	-	-	-	-	-	-
Stage 1	713	0	-	-	-	-	-	-	-
Stage 2	1199	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	40.65	4.73	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1369	-	527	1148	-	-
HCM Lane V/C Ratio	0.105	-	0.882	0.04	-	-
HCM Ctrl Dly (s/v)	7.9	-	43.8	8.3	-	-
HCM Lane LOS	A	-	E	A	-	-
HCM 95th %tile Q(veh)	0.4	-	9.9	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	1	197	0	0	0	0	272	270	34	540	0
Future Volume (vph)	41	1	197	0	0	0	0	272	270	34	540	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		860			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	1%	2%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	201	0	0	0	0	554	0	35	551	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	1	197	0	0	0	0	272	270	34	540	0
Future Vol, veh/h	41	1	197	0	0	0	0	272	270	34	540	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
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, %	0	0	2	0	0	0	0	1	2	0	1	0
Mvmt Flow	42	1	201	0	0	0	0	278	276	35	551	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	759	1173	276	-	0	0	553	0	0
Stage 1	620	620	-	-	-	-	-	-	-
Stage 2	139	553	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	-	-	-	3.9	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	-	-	-	2.4	-	-
Pot Cap-1 Maneuver	336	194	798	0	-	-	985	-	0
Stage 1	597	483	-	0	-	-	-	-	0
Stage 2	1085	518	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	324	0	798	-	-	-	985	-	-
Mov Cap-2 Maneuver	324	0	-	-	-	-	-	-	-
Stage 1	597	0	-	-	-	-	-	-	-
Stage 2	1046	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.22	0	0.52
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	324	798	985	-
HCM Lane V/C Ratio	-	-	0.132	0.252	0.035	-
HCM Ctrl Dly (s/v)	-	-	17.8	11	8.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	1	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	23	0	0	0	22	98	0	0	76	4
Future Volume (vph)	1	2	23	0	0	0	22	98	0	0	76	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	0	0	25	111	0	0	91	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

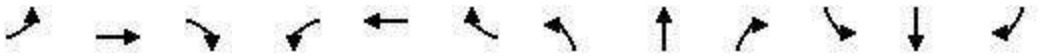
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	23	0	0	0	22	98	0	0	76	4
Future Vol, veh/h	1	2	23	0	0	0	22	98	0	0	76	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	2	26	0	0	0	25	111	0	0	86	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	194	250	45	206	252	56	91	0	0	111	0	0
Stage 1	89	89	-	161	161	-	-	-	-	-	-	-
Stage 2	106	161	-	44	91	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.5	7.2	8.4	6.5	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.8	4	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	880	656	1154	861	654	1136	1401	-	-	1379	-	-
Stage 1	1134	825	-	1022	768	-	-	-	-	-	-	-
Stage 2	1107	768	-	1207	824	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	865	645	1154	824	643	1136	1401	-	-	1379	-	-
Mov Cap-2 Maneuver	865	645	-	824	643	-	-	-	-	-	-	-
Stage 1	1134	825	-	1004	755	-	-	-	-	-	-	-
Stage 2	1087	755	-	1177	824	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.44	0	1.4	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1401	-	-	1075	-	1379	-	-
HCM Lane V/C Ratio	0.018	-	-	0.027	-	-	-	-
HCM Ctrl Dly (s/v)	7.6	-	-	8.4	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	235	1	23	165	84	0	0	83	13
Future Volume (vph)	0	0	0	235	1	23	165	84	0	0	83	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			830			611			246	
Travel Time (s)		17.3			22.6			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	268	26	188	95	0	0	94	15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	12.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	235	1	23	165	84	0	0	83	13
Future Vol, veh/h	0	0	0	235	1	23	165	84	0	0	83	13
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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	1	0	0	1	0	0	0	0	0
Mvmt Flow	0	0	0	267	1	26	188	95	0	0	94	15

Major/Minor	Minor1		Major1		Major2				
Conflicting Flow All	518	580	48	109	0	-	-	-	0
Stage 1	470	470	-	-	-	-	-	-	-
Stage 2	47	109	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	3.9	-	-	-	-	-
Critical Hdwy Stg 1	5.82	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	2.4	-	-	-	-	-
Pot Cap-1 Maneuver	516	429	1150	1382	-	0	0	-	-
Stage 1	718	563	-	-	-	0	0	-	-
Stage 2	1213	809	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	446	0	1150	1382	-	-	-	-	-
Mov Cap-2 Maneuver	446	0	-	-	-	-	-	-	-
Stage 1	620	0	-	-	-	-	-	-	-
Stage 2	1213	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	23.05	5.31	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1382	-	446	1150	-	-
HCM Lane V/C Ratio	0.136	-	0.601	0.023	-	-
HCM Ctrl Dly (s/v)	8	-	24.5	8.2	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	3.9	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1	166	0	0	0	0	202	236	28	300	0
Future Volume (vph)	31	1	166	0	0	0	0	202	236	28	300	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		860			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	0%	1%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	182	0	0	0	0	481	0	31	330	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	1	166	0	0	0	0	202	236	28	300	0
Future Vol, veh/h	31	1	166	0	0	0	0	202	236	28	300	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	0	0	0	0	1	0	1	0
Mvmt Flow	34	1	182	0	0	0	0	222	259	31	330	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	502	873	165	-	0	0	481	0	0
Stage 1	391	391	-	-	-	-	-	-	-
Stage 2	111	481	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.2	-	-	-	3.9	-	-
Critical Hdwy Stg 1	5.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	2.9	-	-	-	2.4	-	-
Pot Cap-1 Maneuver	531	291	953	0	-	-	1041	-	0
Stage 1	794	610	-	0	-	-	-	-	0
Stage 2	1122	557	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	515	0	953	-	-	-	1041	-	-
Mov Cap-2 Maneuver	515	0	-	-	-	-	-	-	-
Stage 1	794	0	-	-	-	-	-	-	-
Stage 2	1089	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.13	0	0.73
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	515	953	1041	-
HCM Lane V/C Ratio	-	-	0.068	0.191	0.03	-
HCM Ctrl Dly (s/v)	-	-	12.5	9.7	8.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.7	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	19	106	1	18	7	91	149	24	103	1
Future Volume (vph)	2	2	19	106	1	18	7	91	149	24	103	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	50%	2%	6%	18%	2%	2%	0%	2%	15%	2%	5%	100%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	0	0	141	0	8	272	0	27	118	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	19	106	1	18	7	91	149	24	103	1
Future Vol, veh/h	2	2	19	106	1	18	7	91	149	24	103	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	50	2	6	18	2	2	0	2	15	2	5	100
Mvmt Flow	2	2	22	120	1	20	8	103	169	27	117	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	240	461	59	318	377	136	118	0	0	273	0	0
Stage 1	172	172	-	204	204	-	-	-	-	-	-	-
Stage 2	68	289	-	114	173	-	-	-	-	-	-	-
Critical Hdwy	9.4	6.54	7.3	8.8	6.54	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	7.5	5.54	-	6.86	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.54	-	6.86	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.3	4.02	3	3	4.02	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	649	496	1091	628	553	998	1372	-	-	1221	-	-
Stage 1	824	755	-	885	732	-	-	-	-	-	-	-
Stage 2	976	672	-	1012	755	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	617	482	1091	595	538	998	1372	-	-	1221	-	-
Mov Cap-2 Maneuver	617	482	-	595	538	-	-	-	-	-	-	-
Stage 1	805	738	-	880	727	-	-	-	-	-	-	-
Stage 2	949	668	-	967	738	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9	12.35	0.22	1.5
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1372	-	-	927	631	1221	-	-
HCM Lane V/C Ratio	0.006	-	-	0.028	0.225	0.022	-	-
HCM Ctrl Dly (s/v)	7.6	-	-	9	12.3	8	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.9	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	247	0	49	169	136	0	0	141	68
Future Volume (vph)	0	0	0	247	0	49	169	136	0	0	141	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			831			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	5%	0%	22%	7%	9%	0%	0%	8%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	263	52	180	145	0	0	150	72
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

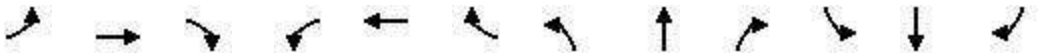
Intersection	
Int Delay, s/veh	12.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	247	0	49	169	136	0	0	141	68
Future Vol, veh/h	0	0	0	247	0	49	169	136	0	0	141	68
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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	5	0	22	7	9	0	0	8	13
Mvmt Flow	0	0	0	263	0	52	180	145	0	0	150	72

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	579	727	72	222	0	-	-	-	0
Stage 1	504	504	-	-	-	-	-	-	-
Stage 2	75	222	-	-	-	-	-	-	-
Critical Hdwy	7.8	6.5	7.6	4	-	-	-	-	-
Critical Hdwy Stg 1	5.9	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.9	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.9	4	3.1	2.5	-	-	-	-	-
Pot Cap-1 Maneuver	443	353	1028	1214	-	0	0	-	-
Stage 1	661	544	-	-	-	0	0	-	-
Stage 2	1131	723	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	377	0	1028	1214	-	-	-	-	-
Mov Cap-2 Maneuver	377	0	-	-	-	-	-	-	-
Stage 1	563	0	-	-	-	-	-	-	-
Stage 2	1131	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	29.6	4.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1214	-	377	1028	-	-
HCM Lane V/C Ratio	0.148	-	0.697	0.051	-	-
HCM Ctrl Dly (s/v)	8.5	-	33.7	8.7	-	-
HCM Lane LOS	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.5	-	5.1	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	5	478	0	0	0	0	282	261	64	422	0
Future Volume (vph)	110	5	478	0	0	0	0	282	261	64	422	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		861			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	11%	0%	8%	0%	0%	0%	0%	4%	3%	14%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	537	0	0	0	0	610	0	72	474	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	5	478	0	0	0	0	282	261	64	422	0
Future Vol, veh/h	110	5	478	0	0	0	0	282	261	64	422	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	11	0	8	0	0	0	0	4	3	14	4	0
Mvmt Flow	124	6	537	0	0	0	0	317	293	72	474	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	776	1228	237	-	0	0	610	0	0
Stage 1	618	618	-	-	-	-	-	-	-
Stage 2	158	610	-	-	-	-	-	-	-
Critical Hdwy	7.9	6.5	7.4	-	-	-	4.2	-	-
Critical Hdwy Stg 1	6.02	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.02	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.9	4	3	-	-	-	2.5	-	-
Pot Cap-1 Maneuver	304	180	812	0	-	-	867	-	0
Stage 1	561	484	-	0	-	-	-	-	0
Stage 2	1015	488	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	279	0	812	-	-	-	867	-	-
Mov Cap-2 Maneuver	279	0	-	-	-	-	-	-	-
Stage 1	561	0	-	-	-	-	-	-	-
Stage 2	930	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.77	0	1.25
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	279	812	867	-
HCM Lane V/C Ratio	-	-	0.464	0.661	0.083	-
HCM Ctrl Dly (s/v)	-	-	28.6	17.6	9.5	-
HCM Lane LOS	-	-	D	C	A	-
HCM 95th %tile Q(veh)	-	-	2.3	5.1	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	17	153	2	31	26	145	117	20	104	1
Future Volume (vph)	0	1	17	153	2	31	26	145	117	20	104	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	14%	2%	2%	0%	0%	20%	2%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	209	0	29	294	0	22	118	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

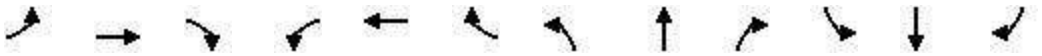
Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	17	153	2	31	26	145	117	20	104	1
Future Vol, veh/h	0	1	17	153	2	31	26	145	117	20	104	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	2	0	14	2	2	0	0	20	2	2	0
Mvmt Flow	0	1	19	172	2	35	29	163	131	22	117	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	303	515	59	391	450	147	118	0	0	294	0	0
Stage 1	162	162	-	287	287	-	-	-	-	-	-	-
Stage 2	141	353	-	104	163	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.54	7.2	8.7	6.54	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.78	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.78	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4.02	2.9	2.9	4.02	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	711	462	1130	563	503	981	1373	-	-	1201	-	-
Stage 1	1021	763	-	810	673	-	-	-	-	-	-	-
Stage 2	1052	630	-	1064	762	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	656	444	1130	530	483	981	1373	-	-	1201	-	-
Mov Cap-2 Maneuver	656	444	-	530	483	-	-	-	-	-	-	-
Stage 1	1002	748	-	793	659	-	-	-	-	-	-	-
Stage 2	990	616	-	1025	748	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.53	14.84	0.69	1.29
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1373	-	-	1040	573	1201	-	-
HCM Lane V/C Ratio	0.021	-	-	0.019	0.365	0.019	-	-
HCM Ctrl Dly (s/v)	7.7	-	-	8.5	14.8	8.1	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.7	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	450	1	77	140	150	0	0	171	77
Future Volume (vph)	0	0	0	450	1	77	140	150	0	0	171	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			831			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	14%	1%	8%	0%	0%	6%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	465	79	144	155	0	0	176	79
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	38

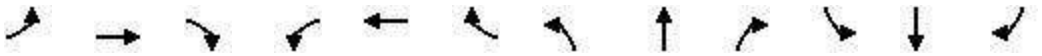
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	450	1	77	140	150	0	0	171	77
Future Vol, veh/h	0	0	0	450	1	77	140	150	0	0	171	77
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	0	14	1	8	0	0	6	14
Mvmt Flow	0	0	0	464	1	79	144	155	0	0	176	79

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	531	699	77	256	0	-	-	-	0
Stage 1	443	443	-	-	-	-	-	-	-
Stage 2	88	256	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.5	3.9	-	-	-	-	-
Critical Hdwy Stg 1	5.82	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	3	2.4	-	-	-	-	-
Pot Cap-1 Maneuver	504	366	1055	1237	-	0	0	-	-
Stage 1	742	579	-	-	-	0	0	-	-
Stage 2	1154	700	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 445	0	1055	1237	-	-	-	-	-
Mov Cap-2 Maneuver	~ 445	0	-	-	-	-	-	-	-
Stage 1	656	0	-	-	-	-	-	-	-
Stage 2	1154	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	74.51	4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1237	-	445	1055	-	-
HCM Lane V/C Ratio	0.117	-	1.045	0.075	-	-
HCM Ctrl Dly (s/v)	8.3	-	85.7	8.7	-	-
HCM Lane LOS	A	-	F	A	-	-
HCM 95th %tile Q(veh)	0.4	-	14.5	0.2	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	1	197	0	0	0	0	283	270	73	562	0
Future Volume (vph)	85	1	197	0	0	0	0	283	270	73	562	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		862			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	2%	0%	0%	0%	0%	1%	2%	14%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	88	201	0	0	0	0	565	0	74	573	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	1	197	0	0	0	0	283	270	73	562	0
Future Vol, veh/h	85	1	197	0	0	0	0	283	270	73	562	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
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, %	13	0	2	0	0	0	0	1	2	14	1	0
Mvmt Flow	87	1	201	0	0	0	0	289	276	74	573	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	867	1287	287	-	0	0	564	0	0
Stage 1	722	722	-	-	-	-	-	-	-
Stage 2	144	564	-	-	-	-	-	-	-
Critical Hdwy	8	6.5	7.2	-	-	-	4.2	-	-
Critical Hdwy Stg 1	6.06	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.06	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.9	4	2.9	-	-	-	2.5	-	-
Pot Cap-1 Maneuver	251	166	784	0	-	-	901	-	0
Stage 1	485	434	-	0	-	-	-	-	0
Stage 2	1031	512	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	231	0	784	-	-	-	901	-	-
Mov Cap-2 Maneuver	231	0	-	-	-	-	-	-	-
Stage 1	485	0	-	-	-	-	-	-	-
Stage 2	946	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	16.87	0	1.08
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	231	784	901	-
HCM Lane V/C Ratio	-	-	0.381	0.257	0.083	-
HCM Ctrl Dly (s/v)	-	-	29.9	11.2	9.4	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	1.7	1	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	23	107	1	15	22	83	120	13	65	4
Future Volume (vph)	1	3	23	107	1	15	22	83	120	13	65	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	11	11	11	11	11	11
Grade (%)		0%			0%			2%			-2%	
Storage Length (ft)	0		0	0		0	75		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		311			218			246			582	
Travel Time (s)		8.5			5.9			4.2			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	12%	2%	2%	0%	0%	11%	2%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	140	0	25	230	0	15	79	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	23	107	1	15	22	83	120	13	65	4
Future Vol, veh/h	1	3	23	107	1	15	22	83	120	13	65	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	75	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	2	-	-	-2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	2	0	12	2	2	0	0	11	2	0	0
Mvmt Flow	1	3	26	122	1	17	25	94	136	15	74	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	203	386	39	281	320	115	78	0	0	231	0	0
Stage 1	106	106	-	213	213	-	-	-	-	-	-	-
Stage 2	98	281	-	68	108	-	-	-	-	-	-	-
Critical Hdwy	8.4	6.54	7.2	8.6	6.54	7.2	3.9	-	-	3.9	-	-
Critical Hdwy Stg 1	6.5	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4.02	2.9	2.9	4.02	2.9	2.4	-	-	2.4	-	-
Pot Cap-1 Maneuver	865	546	1166	709	595	1032	1414	-	-	1260	-	-
Stage 1	1107	807	-	907	725	-	-	-	-	-	-	-
Stage 2	1119	677	-	1123	805	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	824	531	1166	669	578	1032	1414	-	-	1260	-	-
Mov Cap-2 Maneuver	824	531	-	669	578	-	-	-	-	-	-	-
Stage 1	1094	797	-	891	713	-	-	-	-	-	-	-
Stage 2	1080	665	-	1080	796	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.66	11.44	0.74	1.25
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1414	-	-	1015	698	1260	-	-
HCM Lane V/C Ratio	0.018	-	-	0.03	0.2	0.012	-	-
HCM Ctrl Dly (s/v)	7.6	-	-	8.7	11.4	7.9	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.7	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	235	1	66	165	146	0	0	139	54
Future Volume (vph)	0	0	0	235	1	66	165	146	0	0	139	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			831			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	9%	1%	5%	0%	0%	5%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	268	75	188	166	0	0	158	61
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	13.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	235	1	66	165	146	0	0	139	54
Future Vol, veh/h	0	0	0	235	1	66	165	146	0	0	139	54
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	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	50	-	0	250	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	1	0	9	1	5	0	0	5	11
Mvmt Flow	0	0	0	267	1	75	188	166	0	0	158	61

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	620	760	83	219	0	-	-	-	0
Stage 1	541	541	-	-	-	-	-	-	-
Stage 2	79	219	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.5	7.4	3.9	-	-	-	-	-
Critical Hdwy Stg 1	5.82	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.82	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.8	4	3	2.4	-	-	-	-	-
Pot Cap-1 Maneuver	430	338	1047	1271	-	0	0	-	-
Stage 1	657	524	-	-	-	0	0	-	-
Stage 2	1167	725	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	367	0	1047	1271	-	-	-	-	-
Mov Cap-2 Maneuver	367	0	-	-	-	-	-	-	-
Stage 1	560	0	-	-	-	-	-	-	-
Stage 2	1167	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	31.05	4.41	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1271	-	367	1047	-	-
HCM Lane V/C Ratio	0.147	-	0.731	0.072	-	-
HCM Ctrl Dly (s/v)	8.3	-	37.3	8.7	-	-
HCM Lane LOS	A	-	E	A	-	-
HCM 95th %tile Q(veh)	0.5	-	5.6	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1	166	0	0	0	0	217	236	72	312	0
Future Volume (vph)	78	1	166	0	0	0	0	217	236	72	312	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	15	12	12	12	11	11	11	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	50		0	0		0	0		0	150		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			25			25			25		
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		861			789			1128			611	
Travel Time (s)		23.5			17.9			19.2			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	0%	1%	0%	0%	0%	0%	0%	1%	10%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	87	182	0	0	0	0	497	0	79	343	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	1	166	0	0	0	0	217	236	72	312	0
Future Vol, veh/h	78	1	166	0	0	0	0	217	236	72	312	0
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	9	0	1	0	0	0	0	0	1	10	1	0
Mvmt Flow	86	1	182	0	0	0	0	238	259	79	343	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	620	999	171	-	0	0	498	0	0
Stage 1	501	501	-	-	-	-	-	-	-
Stage 2	119	498	-	-	-	-	-	-	-
Critical Hdwy	7.9	6.5	7.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.98	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.98	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	2.9	4	2.9	-	-	-	2.5	-	-
Pot Cap-1 Maneuver	404	245	943	0	-	-	966	-	0
Stage 1	656	546	-	0	-	-	-	-	0
Stage 2	1068	548	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	371	0	943	-	-	-	966	-	-
Mov Cap-2 Maneuver	371	0	-	-	-	-	-	-	-
Stage 1	656	0	-	-	-	-	-	-	-
Stage 2	981	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.28	0	1.7
HCM LOS	B		

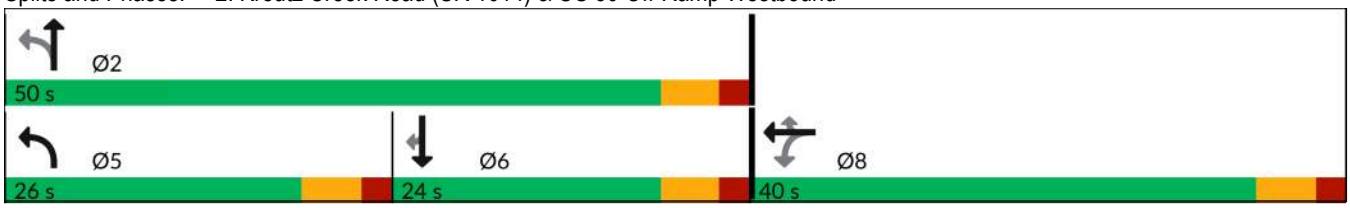
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	SBL	SBT
Capacity (veh/h)	-	-	371	943	966	-
HCM Lane V/C Ratio	-	-	0.234	0.193	0.082	-
HCM Ctrl Dly (s/v)	-	-	17.6	9.7	9.1	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.7	0.3	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	247	0	49	169	136	0	0	141	68
Future Volume (vph)	0	0	0	247	0	49	169	136	0	0	141	68
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			831			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	5%	0%	22%	7%	9%	0%	0%	8%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	263	52	180	145	0	0	150	72
Turn Type				Perm	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2					6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	10.0			10.0	10.0
Minimum Split (s)				11.0	11.0	11.0	11.0	16.0			16.0	16.0
Total Split (s)				40.0	40.0	40.0	26.0	50.0			24.0	24.0
Total Split (%)				44.4%	44.4%	44.4%	28.9%	55.6%			26.7%	26.7%
Maximum Green (s)				34.0	34.0	34.0	20.0	44.0			18.0	18.0
Yellow Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
All-Red Time (s)				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
Total Lost Time (s)					5.0	5.0	5.0	5.0			5.0	5.0
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
Minimum Gap (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Time Before Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Recall Mode				None	None	None	None	Min			Min	Min
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio					0.58	0.12	0.31	0.09			0.24	0.20
Control Delay (s/veh)					23.2	1.2	8.7	6.9			21.6	4.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)					23.2	1.2	8.7	6.9			21.6	4.1
Queue Length 50th (ft)					71	0	26	10			20	0
Queue Length 95th (ft)					150	5	67	26			52	17
Internal Link Dist (ft)		682			751			531			166	
Turn Bay Length (ft)							250					
Base Capacity (vph)					1110	891	714	2549			1101	540
Starvation Cap Reductn					0	0	0	0			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.24	0.06	0.25	0.06			0.14	0.13

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 54.1	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Kreutz Creek Road (SR 1014) & US 30 Off-Ramp Westbound



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	247	0	49	169	136	0	0	141	68
Future Volume (veh/h)	0	0	0	247	0	49	169	136	0	0	141	68
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1799	1872	1551	1696	1668	0	0	1724	1652
Adj Flow Rate, veh/h				263	0	0	180	145	0	0	150	72
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				5	0	22	7	9	0	0	8	13
Cap, veh/h				396	0		653	1693	0	0	879	376
Arrive On Green				0.20	0.00	0.00	0.14	0.53	0.00	0.00	0.27	0.27
Sat Flow, veh/h				1783	0	1314	1615	3253	0	0	3361	1400
Grp Volume(v), veh/h				263	0	0	180	145	0	0	150	72
Grp Sat Flow(s),veh/h/ln				1783	0	1314	1615	1585	0	0	1637	1400
Q Serve(g_s), s				5.6	0.0	0.0	2.7	0.9	0.0	0.0	1.4	1.6
Cycle Q Clear(g_c), s				5.6	0.0	0.0	2.7	0.9	0.0	0.0	1.4	1.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				396	0		653	1693	0	0	879	376
V/C Ratio(X)				0.66	0.00		0.28	0.09	0.00	0.00	0.17	0.19
Avail Cap(c_a), veh/h				1522	0		1248	3479	0	0	1518	649
HCM Platoon Ratio				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	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				15.0	0.0	0.0	6.6	4.7	0.0	0.0	11.5	11.6
Incr Delay (d2), s/veh				1.9	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.2
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				3.9	0.0	0.0	1.0	0.3	0.0	0.0	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				17.0	0.0	0.0	6.9	4.7	0.0	0.0	11.6	11.8
LnGrp LOS				B			A	A			B	B
Approach Vol, veh/h					263			325			222	
Approach Delay, s/veh					17.0			5.9			11.7	
Approach LOS					B			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		26.9			10.9	16.0		14.1				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		44.0			20.0	18.0		34.0				
Max Q Clear Time (g_c+I1), s		3.4			5.2	3.9		7.6				
Green Ext Time (p_c), s		1.2			0.4	0.6		0.9				

Intersection Summary		
HCM 7th Control Delay, s/veh	11.1	
HCM 7th LOS	B	

Notes

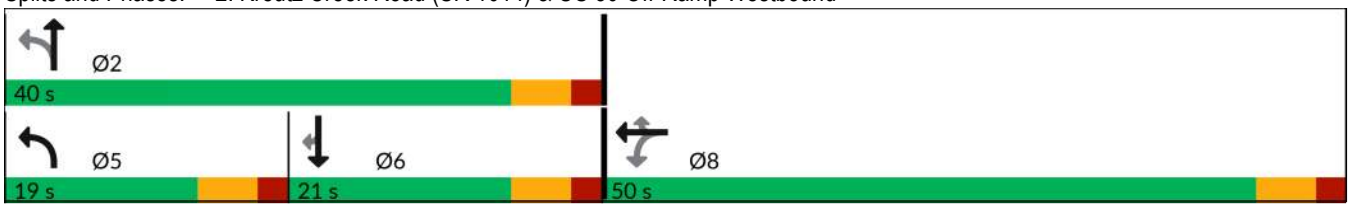
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	450	1	77	140	150	0	0	171	77
Future Volume (vph)	0	0	0	450	1	77	140	150	0	0	171	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			831			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	14%	1%	8%	0%	0%	6%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	465	79	144	155	0	0	176	79
Turn Type				Perm	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2					6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	10.0			10.0	10.0
Minimum Split (s)				11.0	11.0	11.0	11.0	16.0			16.0	16.0
Total Split (s)				50.0	50.0	50.0	19.0	40.0			21.0	21.0
Total Split (%)				55.6%	55.6%	55.6%	21.1%	44.4%			23.3%	23.3%
Maximum Green (s)				44.0	44.0	44.0	13.0	34.0			15.0	15.0
Yellow Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
All-Red Time (s)				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
Total Lost Time (s)					5.0	5.0	5.0	5.0			5.0	5.0
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
Minimum Gap (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Time Before Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Recall Mode				None	None	None	None	Min			Min	Min
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio					0.68	0.13	0.29	0.12			0.28	0.22
Control Delay (s/veh)					21.2	2.0	13.3	11.3			25.3	5.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)					21.2	2.0	13.3	11.3			25.3	5.2
Queue Length 50th (ft)					139	0	28	15			28	0
Queue Length 95th (ft)					240	14	76	40			66	22
Internal Link Dist (ft)		682			751			531			166	
Turn Bay Length (ft)							250					
Base Capacity (vph)					1361	1101	561	1973			928	462
Starvation Cap Reductn					0	0	0	0			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.34	0.07	0.26	0.08			0.19	0.17

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 57.6	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Kreutz Creek Road (SR 1014) & US 30 Off-Ramp Westbound



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	1	77	140	150	0	0	171	77
Future Volume (veh/h)	0	0	0	450	1	77	140	150	0	0	171	77
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1857	1872	1668	1780	1682	0	0	1752	1638
Adj Flow Rate, veh/h				464	1	0	144	155	0	0	176	79
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				1	0	14	1	8	0	0	6	14
Cap, veh/h				601	1		550	1446	0	0	768	320
Arrive On Green				0.32	0.34	0.00	0.12	0.45	0.00	0.00	0.23	0.23
Sat Flow, veh/h				1779	4	1413	1696	3280	0	0	3416	1388
Grp Volume(v), veh/h				465	0	0	144	155	0	0	176	79
Grp Sat Flow(s),veh/h/ln				1783	0	1413	1696	1598	0	0	1664	1388
Q Serve(g_s), s				11.2	0.0	0.0	2.7	1.3	0.0	0.0	2.0	2.2
Cycle Q Clear(g_c), s				11.2	0.0	0.0	2.7	1.3	0.0	0.0	2.0	2.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				602	0		550	1446	0	0	768	320
V/C Ratio(X)				0.77	0.00		0.26	0.11	0.00	0.00	0.23	0.25
Avail Cap(c_a), veh/h				1684	0		850	2347	0	0	1118	466
HCM Platoon Ratio				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	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.6	0.0	0.0	9.6	7.5	0.0	0.0	14.9	14.9
Incr Delay (d2), s/veh				2.1	0.0	0.0	0.3	0.0	0.0	0.0	0.2	0.4
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				7.8	0.0	0.0	1.4	0.6	0.0	0.0	1.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				16.8	0.0	0.0	9.9	7.5	0.0	0.0	15.0	15.3
LnGrp LOS				B			A	A			B	B
Approach Vol, veh/h					465			299			255	
Approach Delay, s/veh					16.8			8.7			15.1	
Approach LOS					B			A			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	26.6		10.6	16.0		21.1						
Change Period (Y+Rc), s	6.0		6.0	6.0		6.0						
Max Green Setting (Gmax), s	34.0		13.0	15.0		44.0						
Max Q Clear Time (g_c+I1), s	3.8		5.2	4.5		13.2						
Green Ext Time (p_c), s	1.2		0.2	0.7		1.9						

Intersection Summary	
HCM 7th Control Delay, s/veh	14.0
HCM 7th LOS	B

Notes

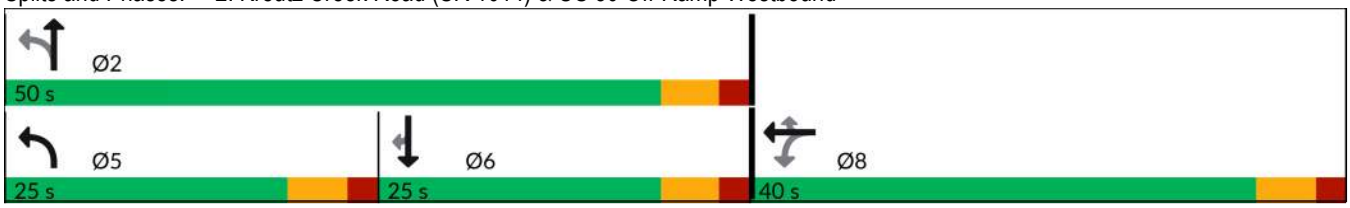
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	235	1	66	165	146	0	0	139	54
Future Volume (vph)	0	0	0	235	1	66	165	146	0	0	139	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	13	13	13	11	11	11	11	11	11
Grade (%)		0%			0%			1%			-1%	
Storage Length (ft)	0		0	50		0	250		0	0		0
Storage Lanes	0		0	1		1	1		0	0		1
Taper Length (ft)	25			75			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		762			831			611			246	
Travel Time (s)		17.3			22.7			10.4			4.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	1%	0%	9%	1%	5%	0%	0%	5%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	268	75	188	166	0	0	158	61
Turn Type				Perm	NA	Perm	pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2					6
Detector Phase				8	8	8	5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0	5.0	5.0	10.0			10.0	10.0
Minimum Split (s)				11.0	11.0	11.0	11.0	16.0			16.0	16.0
Total Split (s)				40.0	40.0	40.0	25.0	50.0			25.0	25.0
Total Split (%)				44.4%	44.4%	44.4%	27.8%	55.6%			27.8%	27.8%
Maximum Green (s)				34.0	34.0	34.0	19.0	44.0			19.0	19.0
Yellow Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
All-Red Time (s)				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
Total Lost Time (s)					5.0	5.0	5.0	5.0			5.0	5.0
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
Minimum Gap (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Time Before Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Recall Mode				None	None	None	None	Min			Min	Min
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio					0.57	0.16	0.30	0.10			0.24	0.17
Control Delay (s/veh)					22.7	2.8	8.4	6.7			21.2	2.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)					22.7	2.8	8.4	6.7			21.2	2.9
Queue Length 50th (ft)					71	0	24	11			21	0
Queue Length 95th (ft)					145	14	51	24			53	10
Internal Link Dist (ft)		682			751			531			166	
Turn Bay Length (ft)							250					
Base Capacity (vph)					1164	998	742	2664			1200	575
Starvation Cap Reductn					0	0	0	0			0	0
Spillback Cap Reductn					0	0	0	0			0	0
Storage Cap Reductn					0	0	0	0			0	0
Reduced v/c Ratio					0.23	0.08	0.25	0.06			0.13	0.11

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 53.7	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Kreutz Creek Road (SR 1014) & US 30 Off-Ramp Westbound



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	235	1	66	165	146	0	0	139	54
Future Volume (veh/h)	0	0	0	235	1	66	165	146	0	0	139	54
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)				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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1857	1872	1741	1780	1724	0	0	1766	1681
Adj Flow Rate, veh/h				267	1	0	188	166	0	0	158	61
Peak Hour Factor				0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %				1	0	9	1	5	0	0	5	11
Cap, veh/h				400	1		675	1745	0	0	895	380
Arrive On Green				0.20	0.22	0.00	0.14	0.53	0.00	0.00	0.27	0.27
Sat Flow, veh/h				1777	7	1475	1696	3362	0	0	3444	1424
Grp Volume(v), veh/h				268	0	0	188	166	0	0	158	61
Grp Sat Flow(s),veh/h/ln				1783	0	1475	1696	1638	0	0	1678	1424
Q Serve(g_s), s				5.7	0.0	0.0	2.7	1.0	0.0	0.0	1.5	1.4
Cycle Q Clear(g_c), s				5.7	0.0	0.0	2.7	1.0	0.0	0.0	1.5	1.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				401	0		675	1745	0	0	895	380
V/C Ratio(X)				0.67	0.00		0.28	0.10	0.00	0.00	0.18	0.16
Avail Cap(c_a), veh/h				1513	0		1251	3573	0	0	1627	690
HCM Platoon Ratio				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	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				15.1	0.0	0.0	6.7	4.7	0.0	0.0	11.6	11.6
Incr Delay (d2), s/veh				1.9	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.2
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				4.0	0.0	0.0	1.1	0.3	0.0	0.0	0.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				17.0	0.0	0.0	6.9	4.8	0.0	0.0	11.7	11.8
LnGrp LOS				B			A	A			B	B
Approach Vol, veh/h					268			354			219	
Approach Delay, s/veh					17.0			5.9			11.8	
Approach LOS					B			A			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	27.0		11.0	16.0		14.3						
Change Period (Y+Rc), s	6.0		6.0	6.0		6.0						
Max Green Setting (Gmax), s	44.0		19.0	19.0		34.0						
Max Q Clear Time (g_c+I1), s	3.5		5.2	4.0		7.7						
Green Ext Time (p_c), s	1.4		0.4	0.7		1.0						

Intersection Summary	
HCM 7th Control Delay, s/veh	11.0
HCM 7th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Appendix F:

Auxiliary Turn Lane Warrant Analysis Worksheets

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Hellam Township	**Analysis Date:**	8/8/2025
County:	York County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Kreutz Creek Road (SR 1014) & lees Lane/Proposed Site Driveway

Analysis Period:	2038 Build	**Number of Approach Lanes:**	2
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**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	24	2.0%	N/A
	Through	-	103	5.0%	N/A
	Right	Yes	1	100.0%	N/A
Opposing	Left	Yes	7	0.0%	N/A
	Through	-	91	2.0%	N/A
	Right	Yes	149	15.0%	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	7	0.0%	7
	Through	-	91	2.0%	92
	Right	-	149	15.0%	161

Advancing Volume:	260
Right Turn Volume:	161

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 11**

Warrant Met?: **No**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	161
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

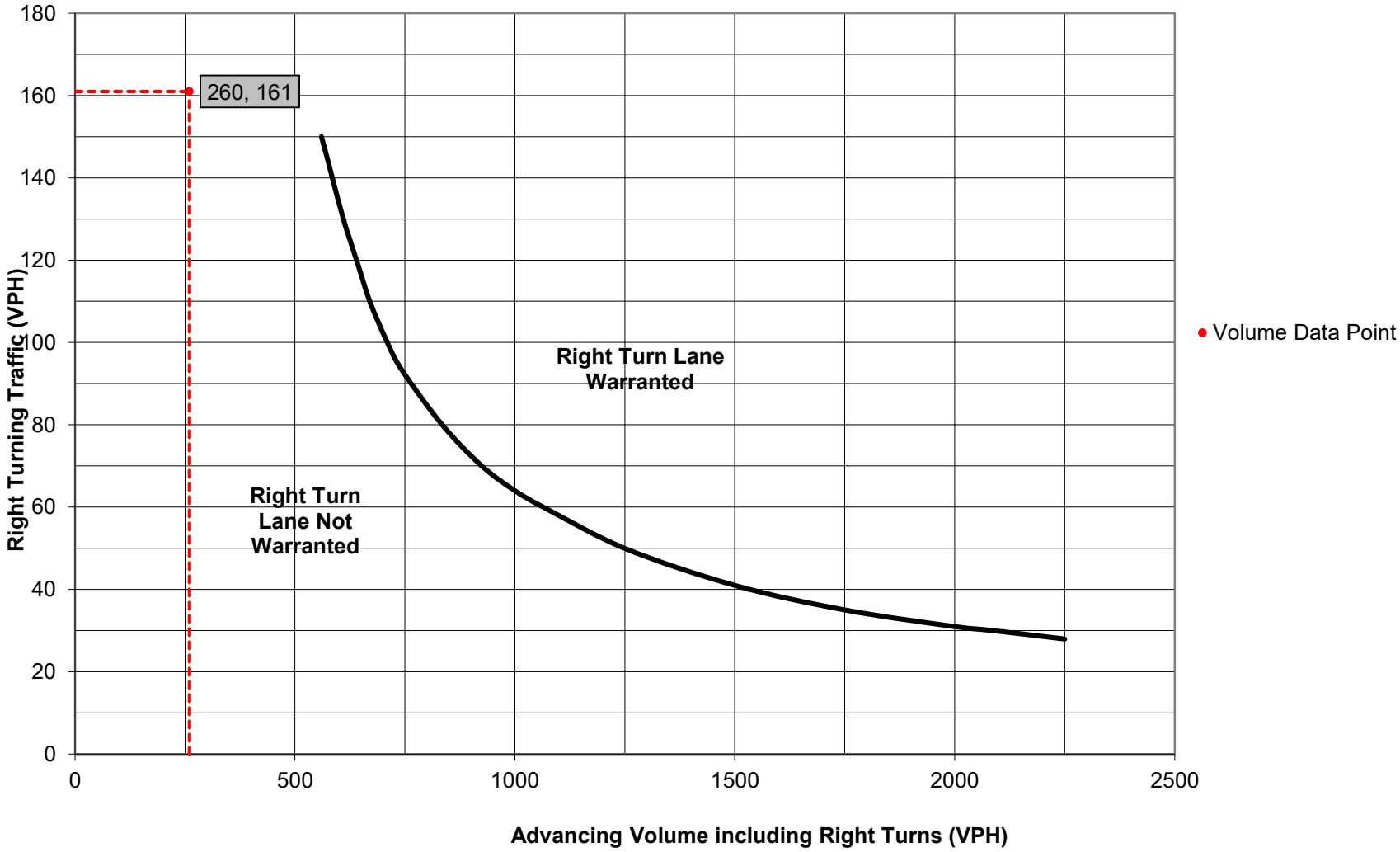
Right Turn Lane Storage Length, Condition A:	**N/A**	Feet
Condition B:	**N/A**	Feet
Condition C:	**N/A**	Feet
Required Right Turn Lane Storage Length:	**N/A**	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 11. Warrant for right turn lanes on four-lane roadways (40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Hellam Township	**Analysis Date:**	8/8/2025
County:	York County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Kreutz Creek Road (SR 1014) & lees Lane/Proposed Site Driveway

Analysis Period:	2038 Build	**Number of Approach Lanes:**	2
Design Hour:	AM Peak Hour	**Undivided or Divided Highway:**	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**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	24	2.0%	25
	Through	-	103	5.0%	106
	Right	Yes	1	100.0%	2
Opposing	Left	Yes	7	0.0%	7
	Through	-	91	2.0%	92
	Right	Yes	149	15.0%	161

Advancing Volume:	133
Opposing Volume:	260
Left Turn Volume:	25
% Left Turns in Advancing Volume:	18.80%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	7	0.0%	N/A
	Through	-	91	2.0%	N/A
	Right	-	149	15.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 8

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:	25
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

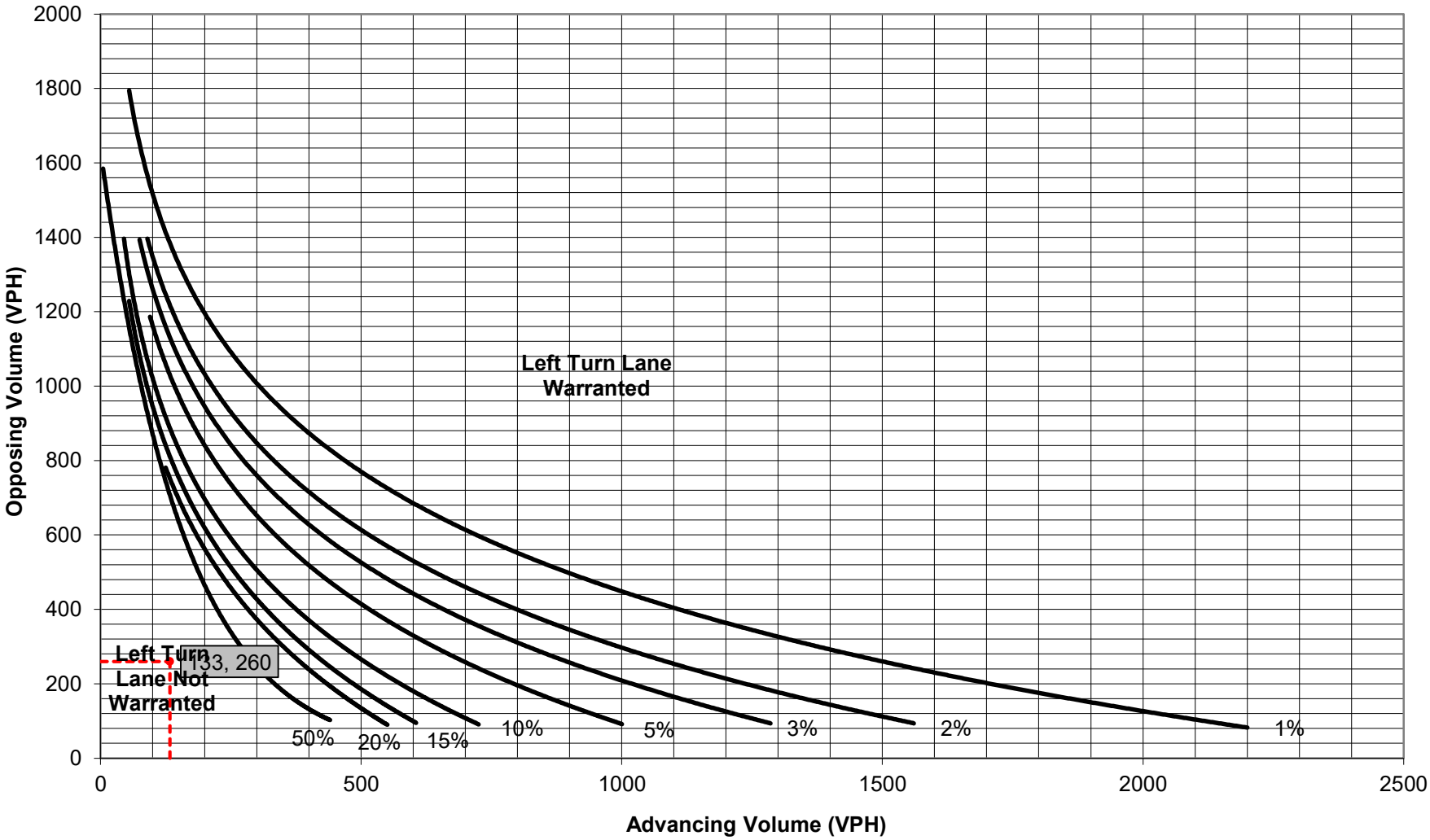
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

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 8. Warrant for left turn lanes on four-lane, divided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

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County:	York County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Kreutz Creek Road (SR 1014) & lees Lane/Proposed Site Driveway

Analysis Period:	2038 Build	**Number of Approach Lanes:**	2
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**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	20	2.0%	N/A
	Through	-	104	2.0%	N/A
	Right	Yes	1	0.0%	N/A
Opposing	Left	Yes	26	0.0%	N/A
	Through	-	145	0.0%	N/A
	Right	Yes	117	20.0%	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	26	0.0%	26
	Through	-	145	0.0%	145
	Right	-	117	20.0%	129

Advancing Volume:	300
Right Turn Volume:	129

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 11**

Warrant Met?: **No**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	129
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

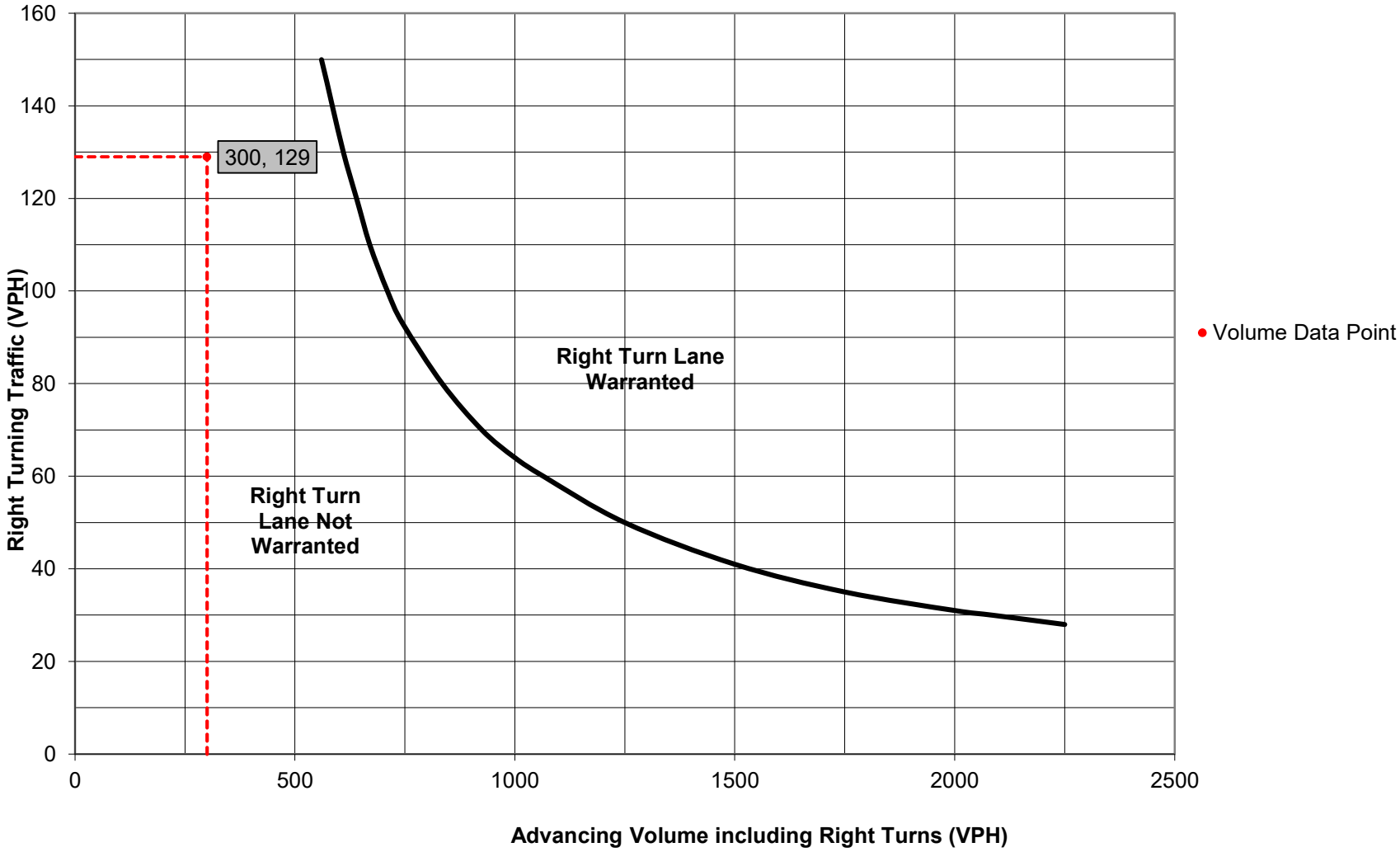
Right Turn Lane Storage Length, Condition A:	**N/A**	Feet
Condition B:	**N/A**	Feet
Condition C:	**N/A**	Feet
Required Right Turn Lane Storage Length:	**N/A**	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 11. Warrant for right turn lanes on four-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Hellam Township	**Analysis Date:**	8/8/2025
County:	York County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Kreutz Creek Road (SR 1014) & lees Lane/Proposed Site Driveway

Analysis Period:	2038 Build	**Number of Approach Lanes:**	2
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**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	20	2.0%	21
	Through	-	104	2.0%	106
	Right	Yes	1	0.0%	1
Opposing	Left	Yes	26	0.0%	26
	Through	-	145	0.0%	145
	Right	Yes	117	20.0%	129

Advancing Volume:	128
Opposing Volume:	300
Left Turn Volume:	21
% Left Turns in Advancing Volume:	16.41%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	26	0.0%	N/A
	Through	-	145	0.0%	N/A
	Right	-	117	20.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 8

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:	21
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

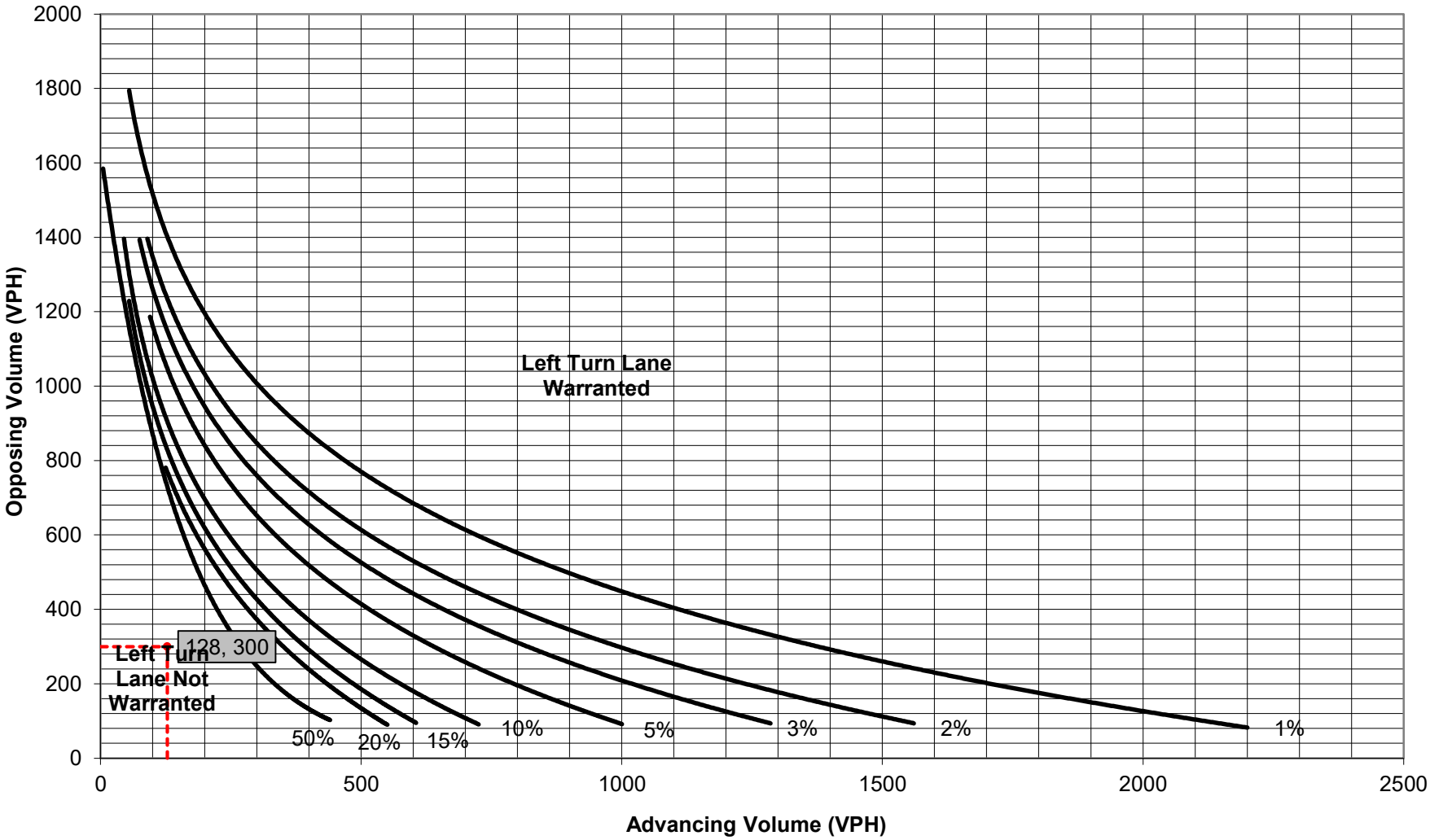
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

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 8. Warrant for left turn lanes on four-lane, divided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Hellam Township	**Analysis Date:**	8/8/2025
County:	York County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Checked By:**	JW
		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Kreutz Creek Road (SR 1014) & lees Lane/Proposed Site Driveway

Analysis Period:	2038 Build	**Number of Approach Lanes:**	2
Design Hour:	SAT Peak Hour	**Undivided or Divided Highway:**	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**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	13	2.0%	N/A
	Through	-	65	0.0%	N/A
	Right	Yes	4	0.0%	N/A
Opposing	Left	Yes	22	0.0%	N/A
	Through	-	83	0.0%	N/A
	Right	Yes	120	11.0%	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	22	0.0%	22
	Through	-	83	0.0%	83
	Right	-	120	11.0%	127

Advancing Volume:	232
Right Turn Volume:	127

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 11**

Warrant Met?: **No**

TURN LANE LENGTH CALCULATIONS

Intersection Control:	Unsignalized
Design Hour Volume of Turning Lane:	127
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

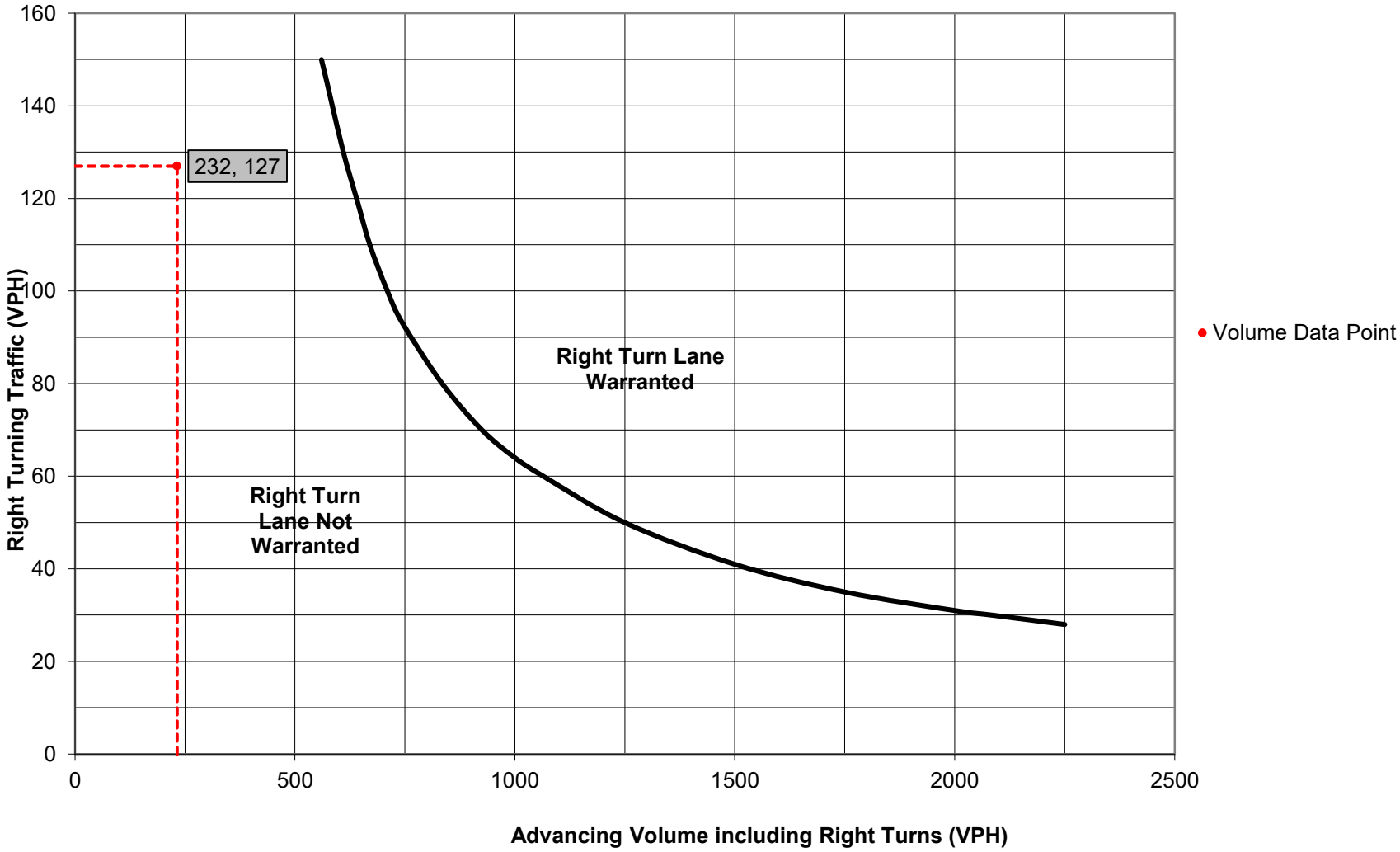
Right Turn Lane Storage Length, Condition A:	**N/A**	Feet
Condition B:	**N/A**	Feet
Condition C:	**N/A**	Feet
Required Right Turn Lane Storage Length:	**N/A**	Feet

Additional Findings:

N/A

Additional Comments / Justifications:

Figure 11. Warrant for right turn lanes on four-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

Municipality:	Hellam Township	**Analysis Date:**	8/8/2025
County:	York County	**Conducted By:**	DZ
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		Agency/Company Name:	Traffic Planning and Design, Inc.

Intersection & Approach Description: Kreutz Creek Road (SR 1014) & lees Lane/Proposed Site Driveway

Analysis Period:	2038 Build	**Number of Approach Lanes:**	2
Design Hour:	SAT Peak Hour	**Undivided or Divided Highway:**	Divided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	40		**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	13	2.0%	14
	Through	-	65	0.0%	65
	Right	Yes	4	0.0%	4
Opposing	Left	Yes	22	0.0%	22
	Through	-	83	0.0%	83
	Right	Yes	120	11.0%	127

Advancing Volume:	83
Opposing Volume:	232
Left Turn Volume:	14
% Left Turns in Advancing Volume:	16.87%

Right Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	22	0.0%	N/A
	Through	-	83	0.0%	N/A
	Right	-	120	11.0%	N/A

Advancing Volume:	N/A
Right Turn Volume:	N/A

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: Figure 8

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:	14
Cycles Per Hour (Assumed):	60
Cycles Per Hour (If Known):	

Average # of Vehicles/Cycle: N/A

PennDOT Publication 46, Exhibit 11-6

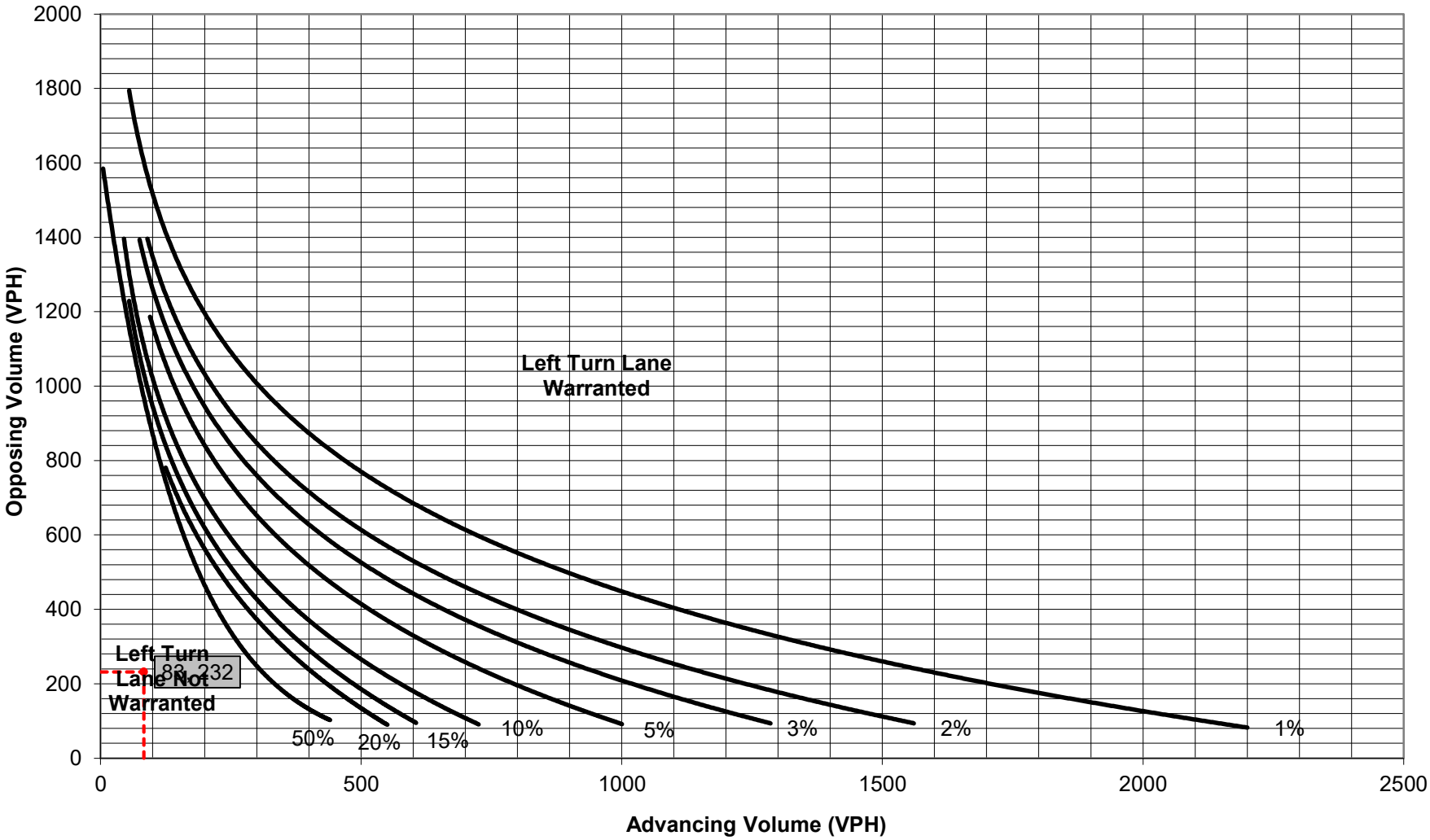
Type of Traffic Control	Speed (MPH)					
	25-35		40-45		50-60	
	Turn Demand Volume					
	High	Low	High	Low	High	Low
Signalized	A	A	B or C	B or C	B or C	B or C
Unsignalized	A	A	C	B	B or C	B

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 8. Warrant for left turn lanes on four-lane, divided highways (unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Appendix G:

Signal Warrant Analysis

Counter Mio:
Set up by JH:

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

Count Name: AM_PM Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code:
Start Date: 05/22/2025

Turning Movement Data

Start Time	US Route 30 West Ramps Eastbound		US Route 30 West Ramps Westbound					Kreutz Creek Road (SR 1014) Northbound				Kreutz Creek Road (SR 1014) Southbound				Int. Total
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	
6:00 AM	0	0	24	0	2	0	26	38	9	0	47	13	9	0	22	95
6:15 AM	0	0	33	1	1	0	35	20	13	0	33	19	2	0	21	89
6:30 AM	0	0	26	0	3	0	29	42	7	0	49	21	10	0	31	109
6:45 AM	0	0	53	0	6	0	59	47	5	0	52	23	5	0	28	139
Hourly Total	0	0	136	1	12	0	149	147	34	0	181	76	26	0	102	432
7:00 AM	0	0	45	0	2	0	47	35	11	0	46	24	4	0	28	121
7:15 AM	0	0	59	0	7	0	66	47	6	0	53	22	8	0	30	149
7:30 AM	0	0	58	0	1	0	59	46	11	0	57	21	9	0	30	146
7:45 AM	0	0	73	0	3	0	76	33	7	0	40	22	5	0	27	143
Hourly Total	0	0	235	0	13	0	248	161	35	0	196	89	26	0	115	559
8:00 AM	0	0	39	0	1	0	40	26	8	0	34	16	4	0	20	94
8:15 AM	0	0	42	0	2	0	44	25	10	0	35	32	5	0	37	116
8:30 AM	0	0	39	0	3	0	42	34	8	0	42	23	5	0	28	112
8:45 AM	0	0	36	0	0	0	36	36	19	0	55	24	2	0	26	117
Hourly Total	0	0	156	0	6	0	162	121	45	0	166	95	16	0	111	439
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	72	0	4	0	76	32	26	0	58	21	4	0	25	159
3:15 PM	0	0	83	1	6	0	90	41	23	0	64	18	4	0	22	176
3:30 PM	0	0	75	0	7	0	82	32	25	0	57	22	6	0	28	167
3:45 PM	0	0	109	0	11	0	120	41	21	0	62	24	7	0	31	213
Hourly Total	0	0	339	1	28	0	368	146	95	0	241	85	21	0	106	715
4:00 PM	1	0	98	0	8	0	106	31	35	0	66	23	7	0	30	202
4:15 PM	0	0	103	1	10	0	114	24	24	0	48	22	4	0	26	188
4:30 PM	0	0	105	0	8	0	113	38	28	0	66	17	2	0	19	198
4:45 PM	0	0	109	0	9	0	118	31	23	0	54	34	2	0	36	208
Hourly Total	1	0	415	1	35	0	451	124	110	0	234	96	15	0	111	796
5:00 PM	0	0	114	1	8	0	123	30	22	0	52	24	1	0	25	200
5:15 PM	0	0	101	0	17	0	118	34	18	0	52	30	3	0	33	203
5:30 PM	0	0	100	0	7	0	107	23	28	0	51	22	3	0	25	183
5:45 PM	0	0	73	0	7	0	80	32	18	0	50	13	4	0	17	147
Hourly Total	0	0	388	1	39	0	428	119	86	0	205	89	11	0	100	733
Grand Total	1	0	1669	4	133	0	1806	818	405	0	1223	530	115	0	645	3674
Approach %	-	-	92.4	0.2	7.4	-	-	66.9	33.1	-	-	82.2	17.8	-	-	-
Total %	-	0.0	45.4	0.1	3.6	-	49.2	22.3	11.0	-	33.3	14.4	3.1	-	17.6	-
Lights	-	0	1620	4	133	-	1757	780	396	-	1176	516	113	-	629	3562
% Lights	-	-	97.1	100.0	100.0	-	97.3	95.4	97.8	-	96.2	97.4	98.3	-	97.5	97.0
Other Vehicles	-	0	49	0	0	-	49	38	9	-	47	14	2	-	16	112
% Other Vehicles	-	-	2.9	0.0	0.0	-	2.7	4.6	2.2	-	3.8	2.6	1.7	-	2.5	3.0
Pedestrians	1	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Count Name: Midday Kreutz Creek Road (SR 1014) & US Route 30 West Ramps
Site Code: Kreutz Creek Road (SR 1014) & US Route 30 West Ra
Start Date: 05/22/2025

Turning Movement Data

Start Time	Eastbound Approach		US Route 30 West Ramps					Kreutz Creek Road (SR 1014)				Kreutz Creek Road (SR 1014)				
	Eastbound		Westbound					Northbound				Southbound				
	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
9:00 AM	0	0	31	2	3	0	36	23	11	0	34	11	7	0	18	88
9:15 AM	0	0	38	1	3	0	42	35	5	0	40	16	6	0	22	104
9:30 AM	0	0	31	0	2	0	33	31	14	0	45	13	5	0	18	96
9:45 AM	0	0	47	0	2	0	49	26	10	0	36	16	1	0	17	102
Hourly Total	0	0	147	3	10	0	160	115	40	0	155	56	19	0	75	390
10:00 AM	0	0	18	0	1	0	19	20	14	0	34	19	6	0	25	78
10:15 AM	0	0	30	0	3	0	33	30	14	0	44	14	2	0	16	93
10:30 AM	0	0	31	0	1	0	32	33	12	0	45	21	4	0	25	102
10:45 AM	0	0	25	0	1	0	26	15	12	0	27	10	5	0	15	68
Hourly Total	0	0	104	0	6	0	110	98	52	0	150	64	17	0	81	341
11:00 AM	0	0	36	1	0	0	37	22	13	0	35	17	5	0	22	94
11:15 AM	0	0	38	0	3	0	41	23	14	0	37	4	6	0	10	88
11:30 AM	0	0	38	0	5	0	43	27	11	0	38	15	1	0	16	97
11:45 AM	0	0	43	0	3	0	46	23	16	0	39	15	1	0	16	101
Hourly Total	0	0	155	1	11	0	167	95	54	0	149	51	13	0	64	380
12:00 PM	0	0	39	0	3	0	42	23	14	0	37	10	3	0	13	92
12:15 PM	0	0	43	0	5	0	48	34	17	0	51	15	3	0	18	117
12:30 PM	0	0	45	0	2	0	47	25	16	0	41	9	1	0	10	98
12:45 PM	0	0	36	1	2	0	39	27	15	0	42	14	0	0	14	95
Hourly Total	0	0	163	1	12	0	176	109	62	0	171	48	7	0	55	402
1:00 PM	0	0	42	0	1	0	43	39	15	0	54	14	6	0	20	117
1:15 PM	0	0	61	0	2	0	63	27	14	0	41	20	1	0	21	125
1:30 PM	0	0	47	0	4	0	51	32	9	0	41	26	1	0	27	119
1:45 PM	0	0	62	0	5	0	67	25	19	0	44	14	3	0	17	128
Hourly Total	0	0	212	0	12	0	224	123	57	0	180	74	11	0	85	489
2:00 PM	0	0	52	0	1	0	53	27	14	0	41	15	3	0	18	112
2:15 PM	0	0	61	0	5	0	66	25	18	0	43	11	5	0	16	125
2:30 PM	0	0	66	0	5	0	71	27	17	0	44	20	4	0	24	139
2:45 PM	0	0	72	0	3	0	75	31	23	0	54	27	3	0	30	159
Hourly Total	0	0	251	0	14	0	265	110	72	0	182	73	15	0	88	535
Grand Total	0	0	1032	5	65	0	1102	650	337	0	987	366	82	0	448	2537
Approach %	-	-	93.6	0.5	5.9	-	-	65.9	34.1	-	-	81.7	18.3	-	-	-
Total %	-	0.0	40.7	0.2	2.6	-	43.4	25.6	13.3	-	38.9	14.4	3.2	-	17.7	-
Lights	-	0	940	4	64	-	1008	594	322	-	916	352	79	-	431	2355
% Lights	-	-	91.1	80.0	98.5	-	91.5	91.4	95.5	-	92.8	96.2	96.3	-	96.2	92.8
Mediums	-	0	50	1	1	-	52	24	15	-	39	14	3	-	17	108
% Mediums	-	-	4.8	20.0	1.5	-	4.7	3.7	4.5	-	4.0	3.8	3.7	-	3.8	4.3
Articulated Trucks	-	0	42	0	0	-	42	32	0	-	32	0	0	-	0	74
% Articulated Trucks	-	-	4.1	0.0	0.0	-	3.8	4.9	0.0	-	3.2	0.0	0.0	-	0.0	2.9
Pedestrians	0	-	-	-	-	0	-	-	-	0	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hourly Site Trip Calculations

4974 Lees Lane Development	LU #	Daily Trips	Daily Trucks	Daily Cars	*% Enter*	Enter/Exit Trucks	Enter/Exit Cars
Warehouse	150	620	113	507	*50%*	57	254
Gas Station	Local	2208	578	1630	*50%*	289	815

Development	Truck Distribution: % NBT Enter				% SBT Exit	% SBR Exit	Car Distribution: % NBT Enter				% SBT Exit	% SBR Exit
Warehouse	57%				54%	46%	82%				25%	65%
Gas Station	65%				70%	19%	57%				54%	46%

LU #	Development	Truck Trips: % NBT Enter				% SBT Exit	% SBR Exit	Car Trips: % NBT Enter				% SBT Exit	% SBR Exit
150	Warehouse	32	0	0	0	31	26	208	0	0	0	64	165
Local	Gas Station	188	0	0	0	202	55	465	0	0	0	440	375

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	150
Land Use	Warehousing
Setting	General Urban/Suburban
Time Period	Weekday
# Data Sites	15

% of 24-Hour Vehicle Trips

Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.3%	0.2%	0.4%
1:00 - 2:00 AM	0.5%	0.2%	0.8%
2:00 - 3:00 AM	0.3%	0.2%	0.4%
3:00 - 4:00 AM	0.5%	0.5%	0.5%
4:00 - 5:00 AM	1.2%	1.2%	1.2%
5:00 - 6:00 AM	3.0%	3.9%	2.2%
6:00 - 7:00 AM	5.9%	9.0%	2.8%
7:00 - 8:00 AM	6.5%	8.6%	4.6%
8:00 - 9:00 AM	6.2%	7.6%	4.9%
9:00 - 10:00 AM	7.2%	8.8%	5.7%
10:00 - 11:00 AM	6.0%	6.0%	6.0%
11:00 - 12:00 PM	7.3%	7.2%	7.4%
12:00 - 1:00 PM	8.7%	9.6%	7.8%
1:00 - 2:00 PM	6.2%	6.7%	5.6%
2:00 - 3:00 PM	7.1%	7.9%	6.2%
3:00 - 4:00 PM	9.0%	6.4%	11.4%
4:00 - 5:00 PM	7.4%	5.0%	9.7%
5:00 - 6:00 PM	6.8%	4.7%	8.8%
6:00 - 7:00 PM	3.8%	1.9%	5.6%
7:00 - 8:00 PM	1.3%	1.0%	1.5%
8:00 - 9:00 PM	0.8%	0.8%	0.9%
9:00 - 10:00 PM	2.3%	0.7%	3.8%
10:00 - 11:00 PM	0.9%	1.3%	0.5%
11:00 - 12:00 AM	0.9%	0.6%	1.2%

New Vehicular Trips

Total	Enter	Exit
508	**254**	**254**
1	0	1
2	0	2
2	1	1
2	1	1
6	3	3
16	10	6
30	23	7
34	22	12
31	19	12
36	22	14
30	15	15
37	18	19
44	24	20
31	17	14
36	20	16
45	16	29
38	13	25
34	12	22
19	5	14
6	2	4
4	2	2
12	2	10
4	3	1
5	2	3
505	252	253

Hourly Distribution of Entering and Exiting Truck Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	150
Land Use	Warehousing
Setting	General Urban/Suburban
Time Period	Weekday
# Data Sites	11

% of 24-Hour Truck Trips

Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.3%	0.3%	0.3%
1:00 - 2:00 AM	0.2%	0.3%	0.0%
2:00 - 3:00 AM	1.3%	1.1%	1.4%
3:00 - 4:00 AM	1.3%	1.7%	0.7%
4:00 - 5:00 AM	2.4%	1.7%	3.1%
5:00 - 6:00 AM	3.5%	3.4%	3.5%
6:00 - 7:00 AM	4.4%	5.2%	3.5%
7:00 - 8:00 AM	5.3%	3.2%	8.0%
8:00 - 9:00 AM	5.5%	4.3%	6.9%
9:00 - 10:00 AM	9.9%	12.1%	7.3%
10:00 - 11:00 AM	9.7%	8.0%	11.8%
11:00 - 12:00 PM	11.2%	10.6%	11.8%
12:00 - 1:00 PM	6.8%	8.0%	5.2%
1:00 - 2:00 PM	8.0%	8.3%	7.6%
2:00 - 3:00 PM	6.1%	6.3%	5.9%
3:00 - 4:00 PM	9.3%	10.6%	7.6%
4:00 - 5:00 PM	6.9%	7.5%	6.3%
5:00 - 6:00 PM	3.9%	3.4%	4.5%
6:00 - 7:00 PM	0.9%	0.9%	1.0%
7:00 - 8:00 PM	0.6%	0.6%	0.7%
8:00 - 9:00 PM	1.6%	1.7%	1.4%
9:00 - 10:00 PM	0.8%	0.3%	1.4%
10:00 - 11:00 PM	0.0%	0.0%	0.0%
11:00 - 12:00 AM	0.2%	0.3%	0.0%

New Truck Trips

Total	Enter	Exit
114	**57**	**57**
0	0	0
0	0	0
2	1	1
1	1	0
3	1	2
4	2	2
5	3	2
7	2	5
6	2	4
11	7	4
12	5	7
13	6	7
8	5	3
9	5	4
7	4	3
10	6	4
8	4	4
5	2	3
1	0	1
0	0	0
2	1	1
1	0	1
0	0	0
0	0	0
115	57	58

Development	Truck Distribution: % NBT Enter				% SBT Exit	% SBR Exit	Car Distribution: % NBT Enter				% SBT Exit	% SBR Exit
Warehouse	57%				54%	46%	82%				25%	65%
12:00 - 1:00 AM	0				0	0	0				0	1
1:00 - 2:00 AM	0				0	0	0				1	1
2:00 - 3:00 AM	1				1	0	1				0	1
3:00 - 4:00 AM	1				0	0	1				0	1
4:00 - 5:00 AM	1				1	1	2				1	2
5:00 - 6:00 AM	1				1	1	8				2	4
6:00 - 7:00 AM	2				1	1	19				2	5
7:00 - 8:00 AM	1				3	2	18				3	8
8:00 - 9:00 AM	1				2	2	16				3	8
9:00 - 10:00 AM	4				2	2	18				4	9
10:00 - 11:00 AM	3				4	3	12				4	10
11:00 - 12:00 PM	3				4	3	15				5	12
12:00 - 1:00 PM	3				2	1	20				5	13
1:00 - 2:00 PM	3				2	2	14				4	9
2:00 - 3:00 PM	2				2	1	16				4	10
3:00 - 4:00 PM	3				2	2	13				7	19
4:00 - 5:00 PM	2				2	2	11				6	16
5:00 - 6:00 PM	1				2	1	10				6	14
6:00 - 7:00 PM	0				1	0	4				4	9
7:00 - 8:00 PM	0				0	0	2				1	3
8:00 - 9:00 PM	1				1	0	2				1	1
9:00 - 10:00 PM	0				1	0	2				3	7
10:00 - 11:00 PM	0				0	0	2				0	1
11:00 - 12:00 AM	0				0	0	2				1	2
	33				34	24	208				67	166

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	945
Land Use	Convenience Store/Gas Station
Setting	General Urban/Suburban
Time Period	Weekday
# Data Sites	5

% of 24-Hour Vehicle Trips

Time	Total	Entering	Exiting
12:00 - 1:00 AM	1.3%	1.2%	1.3%
1:00 - 2:00 AM	0.8%	0.8%	0.9%
2:00 - 3:00 AM	0.6%	0.6%	0.6%
3:00 - 4:00 AM	0.8%	0.8%	0.7%
4:00 - 5:00 AM	1.5%	1.6%	1.5%
5:00 - 6:00 AM	3.1%	3.1%	3.0%
6:00 - 7:00 AM	4.6%	4.7%	4.5%
7:00 - 8:00 AM	5.9%	6.0%	5.9%
8:00 - 9:00 AM	6.5%	6.5%	6.4%
9:00 - 10:00 AM	5.7%	5.6%	5.7%
10:00 - 11:00 AM	5.3%	5.3%	5.3%
11:00 - 12:00 PM	5.8%	5.8%	5.7%
12:00 - 1:00 PM	6.6%	6.6%	6.6%
1:00 - 2:00 PM	6.1%	6.2%	5.9%
2:00 - 3:00 PM	6.1%	6.0%	6.2%
3:00 - 4:00 PM	6.8%	6.8%	6.8%
4:00 - 5:00 PM	6.4%	6.3%	6.5%
5:00 - 6:00 PM	6.8%	6.7%	6.9%
6:00 - 7:00 PM	5.4%	5.3%	5.4%
7:00 - 8:00 PM	4.0%	3.9%	4.0%
8:00 - 9:00 PM	3.4%	3.4%	3.4%
9:00 - 10:00 PM	2.7%	2.8%	2.7%
10:00 - 11:00 PM	2.1%	2.1%	2.1%
11:00 - 12:00 AM	1.9%	1.9%	2.0%

New Vehicular Trips

Total	Enter	Exit
1630	**815**	**815**
21	10	11
13	6	7
10	5	5
12	6	6
25	13	12
49	25	24
74	38	36
97	49	48
105	53	52
92	46	46
86	43	43
95	48	47
108	54	54
98	50	48
100	49	51
110	55	55
104	51	53
111	55	56
87	43	44
65	32	33
55	28	27
45	23	22
34	17	17
31	15	16
1627	814	813

Hourly Distribution of Entering and Exiting Truck Trips by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	945
Land Use	Convenience Store/Gas Station
Setting	General Urban/Suburban
Time Period	Weekday
# Data Sites	2

% of 24-Hour Vehicle Trips

Time	Total	Entering	Exiting
12:00 - 1:00 AM	1.8%	2.9%	0.7%
1:00 - 2:00 AM	1.1%	0.0%	2.2%
2:00 - 3:00 AM	1.5%	1.5%	1.5%
3:00 - 4:00 AM	0.7%	0.7%	0.7%
4:00 - 5:00 AM	1.5%	1.5%	1.5%
5:00 - 6:00 AM	8.1%	8.8%	7.4%
6:00 - 7:00 AM	7.0%	8.1%	5.9%
7:00 - 8:00 AM	9.2%	8.8%	9.6%
8:00 - 9:00 AM	11.1%	11.0%	11.1%
9:00 - 10:00 AM	8.9%	8.1%	9.6%
10:00 - 11:00 AM	10.0%	10.3%	9.6%
11:00 - 12:00 PM	7.4%	7.4%	7.4%
12:00 - 1:00 PM	7.0%	6.6%	7.4%
1:00 - 2:00 PM	9.2%	10.3%	8.1%
2:00 - 3:00 PM	6.6%	5.1%	8.1%
3:00 - 4:00 PM	3.7%	3.7%	3.7%
4:00 - 5:00 PM	3.7%	3.7%	3.7%
5:00 - 6:00 PM	0.7%	0.7%	0.7%
6:00 - 7:00 PM	0.7%	0.7%	0.7%
7:00 - 8:00 PM	0.0%	0.0%	0.0%
8:00 - 9:00 PM	0.0%	0.0%	0.0%
9:00 - 10:00 PM	0.0%	0.0%	0.0%
10:00 - 11:00 PM	0.0%	0.0%	0.0%
11:00 - 12:00 AM	0.0%	0.0%	0.0%

New Truck Trips

Total	Enter	Exit
578	**289**	**289**
11	9	2
6	0	6
8	4	4
4	2	2
8	4	4
47	26	21
40	23	17
54	26	28
64	32	32
51	23	28
58	30	28
42	21	21
40	19	21
54	30	24
39	15	24
22	11	11
22	11	11
4	2	2
4	2	2
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
578	290	288

Development	Truck Distribution: % NBT Enter				% SBT Exit	% SBR Exit	Car Distribution: % NBT Enter				% SBT Exit	% SBR Exit
Gas Station	65%	0%	0%	0%	70%	19%	57%	0%	0%	0%	54%	46%
12:00 - 1:00 AM	6				1	0	6				6	5
1:00 - 2:00 AM	0				4	1	3				4	3
2:00 - 3:00 AM	3				3	1	3				3	2
3:00 - 4:00 AM	1				1	0	3				3	3
4:00 - 5:00 AM	3				3	1	7				6	6
5:00 - 6:00 AM	17				15	4	14				13	11
6:00 - 7:00 AM	15				12	3	22				19	17
7:00 - 8:00 AM	17				20	5	28				26	22
8:00 - 9:00 AM	21				22	6	30				28	24
9:00 - 10:00 AM	15				20	5	26				25	21
10:00 - 11:00 AM	20				20	5	25				23	20
11:00 - 12:00 PM	14				15	4	27				25	22
12:00 - 1:00 PM	12				15	4	31				29	25
1:00 - 2:00 PM	20				17	5	29				26	22
2:00 - 3:00 PM	10				17	5	28				28	23
3:00 - 4:00 PM	7				8	2	31				30	25
4:00 - 5:00 PM	7				8	2	29				29	24
5:00 - 6:00 PM	1				1	0	31				30	26
6:00 - 7:00 PM	1				1	0	25				24	20
7:00 - 8:00 PM	0				0	0	18				18	15
8:00 - 9:00 PM	0				0	0	16				15	12
9:00 - 10:00 PM	0				0	0	13				12	10
10:00 - 11:00 PM	0				0	0	10				9	8
11:00 - 12:00 AM	0				0	0	12				9	7
	190				203	53	467				440	373

Hourly Background Trips

	EB	WB	SB	NB
12:00 AM	0	0	13	12
12:15 AM				
12:30 AM				
12:45 AM				
1:00 AM	0	0	14	3
1:15 AM				
1:30 AM				
1:45 AM				
2:00 AM	0	0	11	8
2:15 AM				
2:30 AM				
2:45 AM				
3:00 AM	0	0	8	6
3:15 AM				
3:30 AM				
3:45 AM				
4:00 AM	0	0	21	13
4:15 AM				
4:30 AM				
4:45 AM				
5:00 AM	0	0	51	40
5:15 AM				
5:30 AM				
5:45 AM				
6:00 AM	0	0	60	58
6:15 AM				
6:30 AM				
6:45 AM				
7:00 AM	0	0	89	64
7:15 AM				
7:30 AM				
7:45 AM				
8:00 AM	0	0	95	68
8:15 AM				
8:30 AM				
8:45 AM				
9:00 AM	0	0	88	63
9:15 AM				
9:30 AM				
9:45 AM				
10:00 AM	0	0	89	60
10:15 AM				
10:30 AM				
10:45 AM				
11:00 AM	0	0	90	59
11:15 AM				
11:30 AM				
11:45 AM				
12:00 PM	0	0	94	66
12:15 PM				
12:30 PM				
12:45 PM				
1:00 PM	0	0	87	66
1:15 PM				
1:30 PM				
1:45 PM				
2:00 PM	0	0	90	56
2:15 PM				
2:30 PM				
2:45 PM				
3:00 PM	0	0	95	54
3:15 PM				
3:30 PM				
3:45 PM				
4:00 PM	0	0	89	49
4:15 PM				
4:30 PM				
4:45 PM				
5:00 PM	0	0	80	43
5:15 PM				
5:30 PM				
5:45 PM				
6:00 PM	0	0	59	30
6:15 PM				
6:30 PM				
6:45 PM				
7:00 PM	0	0	37	20
7:15 PM				
7:30 PM				
7:45 PM				
8:00 PM	0	0	30	19
8:15 PM				
8:30 PM				
8:45 PM				
9:00 PM	0	0	33	15
9:15 PM				
9:30 PM				
9:45 PM				
10:00 PM	0	0	18	12
10:15 PM				
10:30 PM				
10:45 PM				
11:00 PM	0	0	19	14
11:15 PM				
11:30 PM				
11:45 PM				

Development	Truck Distribution: % NBT Enter				% SBT Exit	% SBR Exit	Car Distribution: % NBT Enter				% SBT Exit	% SBR Exit
12:00 - 1:00 AM	6				1	0	6				6	6
1:00 - 2:00 AM	0				4	1	3				5	4
2:00 - 3:00 AM	4				4	1	4				3	3
3:00 - 4:00 AM	2				1	0	4				3	4
4:00 - 5:00 AM	4				4	2	9				7	8
5:00 - 6:00 AM	18				16	5	22				15	15
6:00 - 7:00 AM	17				13	4	41				21	22
7:00 - 8:00 AM	18				23	7	46				29	30
8:00 - 9:00 AM	22				24	8	46				31	32
9:00 - 10:00 AM	19				22	7	44				29	30
10:00 - 11:00 AM	23				24	8	37				27	30
11:00 - 12:00 PM	17				19	7	42				30	34
12:00 - 1:00 PM	15				17	5	51				34	38
1:00 - 2:00 PM	23				19	7	43				30	31
2:00 - 3:00 PM	12				19	6	44				32	33
3:00 - 4:00 PM	10				10	4	44				37	44
4:00 - 5:00 PM	9				10	4	40				35	40
5:00 - 6:00 PM	2				3	1	41				36	40
6:00 - 7:00 PM	1				2	0	29				28	29
7:00 - 8:00 PM	0				0	0	20				19	18
8:00 - 9:00 PM	1				1	0	18				16	13
9:00 - 10:00 PM	0				1	0	15				15	17
10:00 - 11:00 PM	0				0	0	12				9	9
11:00 - 12:00 AM	0				0	0	14				10	9
	223				237	77	675				507	539

	2025 Existing Volumes				Growth:	Base - 2038 (Existing + Background Growth)				Site Trips per Hour				Site Trips Per 15-Minutes				Projected - 2038 (Base + Site Trips)			
	EB	WB	SB	NB	0.0492	EB	WB	SB	NB	EB	WB	SB	NB	EB	WB	SB	NB	EB	WB	SB	NB
6:00 AM	0	24	13	47		0	25	14	49	0	0	60	58	0	0	15	15	0	25	29	64
6:15 AM	0	34	19	33		0	36	20	35	0	0	0	0	0	0	15	14	0	36	35	49
6:30 AM	0	26	21	49		0	27	22	51	0	0	0	0	0	0	15	15	0	27	37	66
6:45 AM	0	53	23	52		0	56	24	55	0	0	0	0	0	0	15	14	0	56	39	69
7:00 AM	0	45	24	46		0	47	25	48	0	0	89	64	0	0	22	16	0	47	47	64
7:15 AM	0	59	22	53		0	62	23	56	0	0	0	0	0	0	23	16	0	62	46	72
7:30 AM	0	58	21	57		0	61	22	60	0	0	0	0	0	0	22	16	0	61	44	76
7:45 AM	0	73	22	40		0	77	23	42	0	0	0	0	0	0	22	16	0	77	45	58
8:00 AM	0	39	16	34		0	41	17	36	0	0	95	68	0	0	24	17	0	41	41	53
8:15 AM	0	42	32	35		0	44	34	37	0	0	0	0	0	0	24	17	0	44	58	54
8:30 AM	0	39	23	42		0	41	24	44	0	0	0	0	0	0	24	17	0	41	48	61
8:45 AM	0	36	24	55		0	38	25	58	0	0	0	0	0	0	23	17	0	38	48	75
9:00 AM	0	33	11	34		0	35	12	36	0	0	88	63	0	0	22	16	0	35	34	52
9:15 AM	0	39	16	40		0	41	17	42	0	0	0	0	0	0	22	16	0	41	39	58
9:30 AM	0	31	13	45		0	33	14	47	0	0	0	0	0	0	22	16	0	33	36	63
9:45 AM	0	47	16	36		0	49	17	38	0	0	0	0	0	0	22	15	0	49	39	53
10:00 AM	0	18	19	34		0	19	20	36	0	0	89	60	0	0	22	15	0	19	42	51
10:15 AM	0	30	14	44		0	31	15	46	0	0	0	0	0	0	23	15	0	31	38	61
10:30 AM	0	31	21	45		0	33	22	47	0	0	0	0	0	0	22	15	0	33	44	62
10:45 AM	0	25	10	27		0	26	10	28	0	0	0	0	0	0	22	15	0	26	32	43
11:00 AM	0	37	17	35		0	39	18	37	0	0	90	59	0	0	23	15	0	39	41	52
11:15 AM	0	38	4	37		0	40	4	39	0	0	0	0	0	0	22	15	0	40	26	54
11:30 AM	0	38	15	38		0	40	16	40	0	0	0	0	0	0	23	15	0	40	39	55
11:45 AM	0	43	15	39		0	45	16	41	0	0	0	0	0	0	22	14	0	45	38	55
12:00 PM	0	39	10	37		0	41	10	39	0	0	94	66	0	0	24	17	0	41	34	56
12:15 PM	0	43	15	51		0	45	16	54	0	0	0	0	0	0	23	16	0	45	39	70
12:30 PM	0	45	9	41		0	47	9	43	0	0	0	0	0	0	24	17	0	47	33	60
12:45 PM	0	37	14	42		0	39	15	44	0	0	0	0	0	0	23	16	0	39	38	60
1:00 PM	0	42	14	54		0	44	15	57	0	0	87	66	0	0	22	17	0	44	37	74
1:15 PM	0	61	20	41		0	64	21	43	0	0	0	0	0	0	22	16	0	64	43	59
1:30 PM	0	47	26	41		0	49	27	43	0	0	0	0	0	0	22	17	0	49	49	60
1:45 PM	0	62	14	44		0	65	15	46	0	0	0	0	0	0	21	16	0	65	36	62
2:00 PM	0	52	15	41		0	55	16	43	0	0	90	56	0	0	23	14	0	55	39	57
2:15 PM	0	61	11	43		0	64	12	45	0	0	0	0	0	0	22	14	0	64	34	59
2:30 PM	0	66	20	44		0	69	21	46	0	0	0	0	0	0	23	14	0	69	44	60
2:45 PM	0	72	27	54		0	76	28	57	0	0	0	0	0	0	22	14	0	76	50	71
3:00 PM	0	72	21	58		0	76	22	61	0	0	95	54	0	0	24	14	0	76	46	75
3:15 PM	0	84	18	64		0	88	19	67	0	0	0	0	0	0	24	13	0	88	43	80
3:30 PM	0	75	22	57		0	79	23	60	0	0	0	0	0	0	24	14	0	79	47	74
3:45 PM	0	109	24	62		0	114	25	65	0	0	0	0	0	0	23	13	0	114	48	78
4:00 PM	0	98	23	66		0	103	24	69	0	0	89	49	0	0	22	12	0	103	46	81
4:15 PM	0	104	22	48		0	109	23	50	0	0	0	0	0	0	23	13	0	109	46	63
4:30 PM	0	105	17	66		0	110	18	69	0	0	0	0	0	0	22	12	0	110	40	81
4:45 PM	0	109	34	54		0	114	36	57	0	0	0	0	0	0	22	12	0	114	58	69
5:00 PM	0	115	24	52		0	121	25	55	0	0	80	43	0	0	20	11	0	121	45	66
5:15 PM	0	101	30	52		0	106	31	55	0	0	0	0	0	0	20	11	0	106	51	66
5:30 PM	0	100	22	51		0	105	23	54	0	0	0	0	0	0	20	11	0	105	43	65
5:45 PM	0	73	13	50		0	77	14	52	0	0	0	0	0	0	20	10	0	77	34	62

Traffic Signal Warrant Analysis Workbook

8/12/2025

STUDY AND ANALYSIS INFORMATION

Municipality:	Hellam Twp	**Analysis Date:**	8/12/2025
County:	York County	**Conducted By:**	DZ
PennDOT Engineering District:	8	**Agency/Company Name:**	TPD

Analysis Information

Data Collection Date:	5/8/2025
Day of the Week:	Thursday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Major Street Information

Major Street Name and Route Number:	Kreutz Creek Road (SR 1014)
Major Street Approach #1 Direction:	N-Bound
Major Street Approach #2 Direction:	S-Bound

Number of Lanes for Moving Traffic on Each Major Street Approach:	2	**LANE(S)**
Speed Limit or 85th Percentile Speed on the Major Street:	40	**MPH**

Minor Street Information

Minor Street Name and Route Number:	US Route 30 West Ramps
Minor Street Approach #1 Direction:	W-Bound
Minor Street Approach #2 Direction:	N/A

Number of Lanes for Moving Traffic on Each Minor Street Approach:	1	**LANE(S)**

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Met?
Warrant 1, Eight-Hour Vehicular Volume	**Yes**	**No**
Warrant 2, Four-Hour Vehicular Volume	**Yes**	**No**
Warrant 3, Peak Hour	**Yes**	**No**
Warrant 4, Pedestrian Volume	**No**	**N/A**
Warrant 5, School Crossing	**No**	**N/A**
Warrant 6, Coordinated Signal System	**No**	**N/A**
Warrant 7, Crash Experience	**No**	**N/A**
Warrant 8, Roadway Network	**No**	**N/A**
Warrant 9, Intersection Near a Grade Crossing	**No**	**N/A**
Warrant PA-1, ADT Volume Warrant	**No**	**N/A**
Warrant PA-2, Midblock and Trail Crossings	**No**	**N/A**

ENTER VOLUME DATA PER 15 MINUTE INTERVAL, PER APPROACH						
Time Interval		Major Street Approach #1 (N-Bound)	Major Street Approach #2 (S-Bound)	Major Street Combined	Minor Street Approach #1 (W-Bound)	Minor Street Approach #2 (N/A)
Begin At	End Of	Volume	Volume	Total Volume	Volume	Volume
12:00 AM	12:14 AM			0		
12:15 AM	12:29 AM			0		
12:30 AM	12:44 AM			0		
12:45 AM	12:59 AM			0		
1:00 AM	1:14 AM			0		
1:15 AM	1:29 AM			0		
1:30 AM	1:44 AM			0		
1:45 AM	1:59 AM			0		
2:00 AM	2:14 AM			0		
2:15 AM	2:29 AM			0		
2:30 AM	2:44 AM			0		
2:45 AM	2:59 AM			0		
3:00 AM	3:14 AM			0		
3:15 AM	3:29 AM			0		
3:30 AM	3:44 AM			0		
3:45 AM	3:59 AM			0		
4:00 AM	4:14 AM			0		
4:15 AM	4:29 AM			0		
4:30 AM	4:44 AM			0		
4:45 AM	4:59 AM			0		
5:00 AM	5:14 AM			0		
5:15 AM	5:29 AM			0		
5:30 AM	5:44 AM			0		
5:45 AM	5:59 AM			0		
6:00 AM	6:14 AM	64	29	93	25	0
6:15 AM	6:29 AM	49	35	84	36	0
6:30 AM	6:44 AM	66	37	103	27	0
6:45 AM	6:59 AM	69	39	108	56	0
7:00 AM	7:14 AM	64	47	111	47	0
7:15 AM	7:29 AM	72	46	118	62	0
7:30 AM	7:44 AM	76	44	120	61	0
7:45 AM	7:59 AM	58	45	103	77	0
8:00 AM	8:14 AM	53	41	94	41	0
8:15 AM	8:29 AM	54	58	112	44	0
8:30 AM	8:44 AM	61	48	109	41	0
8:45 AM	8:59 AM	75	48	123	38	0
9:00 AM	9:14 AM	52	34	86	35	0
9:15 AM	9:29 AM	58	39	97	41	0
9:30 AM	9:44 AM	63	36	99	33	0
9:45 AM	9:59 AM	53	39	92	49	0
10:00 AM	10:14 AM	51	42	93	19	0
10:15 AM	10:29 AM	61	38	99	31	0
10:30 AM	10:44 AM	62	44	106	33	0
10:45 AM	10:59 AM	43	32	75	26	0
11:00 AM	11:14 AM	52	41	93	39	0
11:15 AM	11:29 AM	54	26	80	40	0
11:30 AM	11:44 AM	55	39	94	40	0
11:45 AM	11:59 AM	55	38	93	45	0
12:00 PM	12:14 PM	56	34	90	41	0
12:15 PM	12:29 PM	70	39	109	45	0
12:30 PM	12:44 PM	60	33	93	47	0
12:45 PM	12:59 PM	60	38	98	39	0
1:00 PM	1:14 PM	74	37	111	44	0
1:15 PM	1:29 PM	59	43	102	64	0
1:30 PM	1:44 PM	60	49	109	49	0
1:45 PM	1:59 PM	62	36	98	65	0
2:00 PM	2:14 PM	57	39	96	55	0
2:15 PM	2:29 PM	59	34	93	64	0
2:30 PM	2:44 PM	60	44	104	69	0
2:45 PM	2:59 PM	71	50	121	76	0
3:00 PM	3:14 PM	75	46	121	76	0
3:15 PM	3:29 PM	80	43	123	88	0
3:30 PM	3:44 PM	74	47	121	79	0
3:45 PM	3:59 PM	78	48	126	114	0
4:00 PM	4:14 PM	81	46	127	103	0
4:15 PM	4:29 PM	63	46	109	109	0
4:30 PM	4:44 PM	81	40	121	110	0
4:45 PM	4:59 PM	69	58	127	114	0
5:00 PM	5:14 PM	66	45	111	121	0
5:15 PM	5:29 PM	66	51	117	106	0
5:30 PM	5:44 PM	65	43	108	105	0
5:45 PM	5:59 PM	62	34	96	77	0
6:00 PM	6:14 PM			0		
6:15 PM	6:29 PM			0		
6:30 PM	6:44 PM			0		
6:45 PM	6:59 PM			0		
7:00 PM	7:14 PM			0		
7:15 PM	7:29 PM			0		
7:30 PM	7:44 PM			0		
7:45 PM	7:59 PM			0		
8:00 PM	8:14 PM			0		
8:15 PM	8:29 PM			0		
8:30 PM	8:44 PM			0		
8:45 PM	8:59 PM			0		
9:00 PM	9:14 PM			0		
9:15 PM	9:29 PM			0		
9:30 PM	9:44 PM			0		
9:45 PM	9:59 PM			0		
10:00 PM	10:14 PM			0		
10:15 PM	10:29 PM			0		
10:30 PM	10:44 PM			0		
10:45 PM	10:59 PM			0		
11:00 PM	11:14 PM			0		
11:15 PM	11:29 PM			0		
11:30 PM	11:44 PM			0		
11:45 PM	11:59 PM			0		
	Approach Totals:	3028	1988	5016	2846	0

MUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	No

Combination of Conditions A and B Necessary?*: No

**Only applicable for Warrant 1 if after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems. See Section 4C.02 of the 2009 MUTCD for application.*

Condition A - Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor street approach (one direction only)			
Major Street	**Minor Street**	**100%**	**80%**	**70%**	**56%**	**100%**	**80%**	**70%**	**56%**
1	**1**	500	400	350	280	150	120	105	84
2 or More	**1**	600	480	420	336	150	120	105	84
2 or More	**2 or More**	600	480	420	336	200	160	140	112
1	**2 or More**	500	400	350	280	200	160	140	112

Condition B - Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor street approach (one direction only)			
Major Street	**Minor Street**	**100%**	**80%**	**70%**	**56%**	**100%**	**80%**	**70%**	**56%**
1	**1**	750	600	525	420	75	60	53	42
2 or More	**1**	900	720	630	504	75	60	53	42
2 or More	**2 or More**	900	720	630	504	100	80	70	56
1	**2 or More**	750	600	525	420	100	80	70	56

Condition A Evaluation

Number of Unique Hours Met: 0 **Condition A Satisfied?** No

Condition B Evaluation

Number of Unique Hours Met: 0 **Condition B Satisfied?** No

Combination of Condition A and Condition B Evaluation

Number of Unique Hours Met for Condition A: N/A

Number of Unique Hours Met for Condition B: N/A

Combination of Condition A and Condition B Satisfied? N/A

MUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Total Number of Unique Hours Met On Figure 4C-1
3

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	No

Hourly Vehicular Volume			
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Hour Met?
12:00 AM	0	0	
12:15 AM	0	0	
12:30 AM	0	0	
12:45 AM	0	0	
1:00 AM	0	0	
1:15 AM	0	0	
1:30 AM	0	0	
1:45 AM	0	0	
2:00 AM	0	0	
2:15 AM	0	0	
2:30 AM	0	0	
2:45 AM	0	0	
3:00 AM	0	0	
3:15 AM	0	0	
3:30 AM	0	0	
3:45 AM	0	0	
4:00 AM	0	0	
4:15 AM	0	0	
4:30 AM	0	0	
4:45 AM	0	0	
5:00 AM	0	0	
5:15 AM	93	25	
5:30 AM	177	61	
5:45 AM	280	88	
6:00 AM	388	144	
6:15 AM	406	166	
6:30 AM	440	192	
6:45 AM	457	226	
7:00 AM	452	247	
7:15 AM	435	241	
7:30 AM	429	223	
7:45 AM	418	203	
8:00 AM	438	164	
8:15 AM	430	158	
8:30 AM	415	155	
8:45 AM	405	147	
9:00 AM	374	158	
9:15 AM	381	142	
9:30 AM	383	132	
9:45 AM	390	132	
10:00 AM	373	109	
10:15 AM	373	129	
10:30 AM	354	138	
10:45 AM	342	145	
11:00 AM	360	164	
11:15 AM	357	166	
11:30 AM	386	171	
11:45 AM	385	178	
12:00 PM	390	172	
12:15 PM	411	175	
12:30 PM	404	194	
12:45 PM	420	196	
1:00 PM	420	222	
1:15 PM	405	233	
1:30 PM	396	233	
1:45 PM	391	253	
2:00 PM	414	264	
2:15 PM	439	285	
2:30 PM	469	309	
2:45 PM	486	319	
3:00 PM	491	357	Met
3:15 PM	497	384	Met
3:30 PM	483	405	Met
3:45 PM	483	436	Met
4:00 PM	484	436	Met
4:15 PM	468	454	Met
4:30 PM	476	451	Met
4:45 PM	463	446	Met
5:00 PM	432	409	Met
5:15 PM	321	288	
5:30 PM	204	182	
5:45 PM	96	77	
6:00 PM	0	0	
6:15 PM	0	0	
6:30 PM	0	0	
6:45 PM	0	0	
7:00 PM	0	0	
7:15 PM	0	0	
7:30 PM	0	0	
7:45 PM	0	0	
8:00 PM	0	0	
8:15 PM	0	0	
8:30 PM	0	0	
8:45 PM	0	0	
9:00 PM	0	0	
9:15 PM	0	0	
9:30 PM	0	0	
9:45 PM	0	0	
10:00 PM	0	0	
10:15 PM	0	0	
10:30 PM	0	0	
10:45 PM	0	0	
11:00 PM	0	0	

MUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	No
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	Yes

Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*	
Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	No
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes
**if applicable, attach all supporting calculations and documentation.*	

Total Number of Unique Hours Met On Figure 4C-3
0

Hourly Vehicular Volume			
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Hour Met?
12:00 AM	0	0	
12:15 AM	0	0	
12:30 AM	0	0	
12:45 AM	0	0	
1:00 AM	0	0	
1:15 AM	0	0	
1:30 AM	0	0	
1:45 AM	0	0	
2:00 AM	0	0	
2:15 AM	0	0	
2:30 AM	0	0	
2:45 AM	0	0	
3:00 AM	0	0	
3:15 AM	0	0	
3:30 AM	0	0	
3:45 AM	0	0	
4:00 AM	0	0	
4:15 AM	0	0	
4:30 AM	0	0	
4:45 AM	0	0	
5:00 AM	0	0	
5:15 AM	93	25	
5:30 AM	177	61	
5:45 AM	280	88	
6:00 AM	388	144	
6:15 AM	406	166	
6:30 AM	440	192	
6:45 AM	457	226	
7:00 AM	452	247	
7:15 AM	435	241	
7:30 AM	429	223	
7:45 AM	418	203	
8:00 AM	438	164	
8:15 AM	430	158	
8:30 AM	415	155	
8:45 AM	405	147	
9:00 AM	374	158	
9:15 AM	381	142	
9:30 AM	383	132	
9:45 AM	390	132	
10:00 AM	373	109	
10:15 AM	373	129	
10:30 AM	354	138	
10:45 AM	342	145	
11:00 AM	360	164	
11:15 AM	357	166	
11:30 AM	386	171	
11:45 AM	385	178	
12:00 PM	390	172	
12:15 PM	411	175	
12:30 PM	404	194	
12:45 PM	420	196	
1:00 PM	420	222	
1:15 PM	405	233	
1:30 PM	396	233	
1:45 PM	391	253	
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2:15 PM	439	285	
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5:00 PM	432	409	
5:15 PM	321	288	
5:30 PM	204	182	
5:45 PM	96	77	
6:00 PM	0	0	
6:15 PM	0	0	
6:30 PM	0	0	
6:45 PM	0	0	
7:00 PM	0	0	
7:15 PM	0	0	
7:30 PM	0	0	
7:45 PM	0	0	
8:00 PM	0	0	
8:15 PM	0	0	
8:30 PM	0	0	
8:45 PM	0	0	
9:00 PM	0	0	
9:15 PM	0	0	
9:30 PM	0	0	
9:45 PM	0	0	
10:00 PM	0	0	
10:15 PM	0	0	
10:30 PM	0	0	
10:45 PM	0	0	
11:00 PM	0	0	