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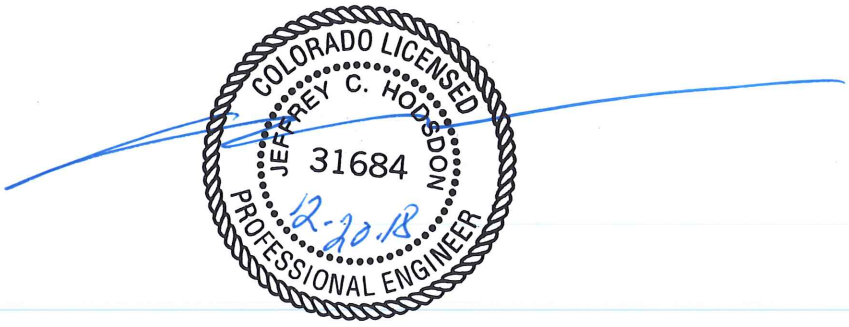
Tamlin Road Site Rezone
Traffic Impact Study
(LSC #184610)
December 18, 2018

Traffic Engineer's Statement

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



Developer's Statement

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

12-18-18
Date

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December 20, 2018

Peter Carroll
C&M Properties
12748 Barossa Valley Road
Colorado Springs, CO 80921

RE: Tamlin Road Site Rezone
El Paso County, CO
Traffic Impact Study
LSC #184610

Dear Mr. Carroll,

LSC Transportation Consultants, Inc. has prepared this traffic impact study for the proposed Tamlin Road Site Rezone. The site is located south of Tamlin Road and east of Marksheffel Road in El Paso County, Colorado.

REPORT CONTENTS

The report contains the following:

- Existing roadway and traffic conditions adjacent to and in the vicinity of the site, including the intersection lane geometries, traffic controls, posted speed limits, functional classifications, intersection spacing and alignment, sight distances, etc.
- Existing peak-hour turning movement traffic counts on Tamlin Road and at the intersections of Marksheffel Road/Tamlin Road (located southwest of the site).
- Description of the existing land uses in the vicinity of the site.
- The status of Marksheffel Road and the potential for future connection to the master-planned Banning Lewis Ranch Roadway network.
- Estimates of short- and long-term baseline/background traffic volumes at the proposed site access intersections on Tamlin Road and the intersection of Marksheffel/Tamlin.
- A description of the land use scenarios assumed in this report for the proposed rezone of the site.
- Trip generation estimates for each of the land use scenarios and estimates of the trip directional distribution.
- Assignment of projected peak-hour and daily site-generated traffic volumes at the study area access point intersections.
- Resulting traffic impacts of the proposed development expressed in terms of intersection levels of service.

- Analysis of potential future intersection configurations at Marksheffel/Tamliin given that a future traffic signal is unlikely to be allowed at this intersection.
- Recommendations for the roadway classification of Tamlin Road and auxiliary left/right turn lanes at the site access points and the Marksheffel/Tamlin intersection.
- Summary of findings and recommendations.

LAND USE AND ACCESS

The 16-acre site is located south of Tamlin Road and east of Marksheffel Road in El Paso County. The proposed rezone to commercial would apply to the entire site. Figure 1 shows the site location and the adjacent roadways. Lot 1 is shown as 8.5 acres on the site plan, consisting of 18 mini-warehouse buildings totaling approximately 115,600 square feet. There are no current plans for development of the 7.5-acre Lot 2.

Site Development Scenarios

The proposed commercial rezone applies to the entire site. Therefore, LSC has analyzed three scenarios to address the potential traffic impacts associated with the proposed rezone to commercial. These are a short-term scenario, a "moderate-intensity" (in terms of vehicle-trip generation associated with land use) buildout scenario, and a "high-intensity" buildout scenario.

Short-Term Scenario: This scenario assumes the proposed mini-storage development on Lot 2 with Lot 1 remaining vacant in the short term.

Moderate-Intensity Buildout Scenario: This scenario assumes the proposed 115,600-square-foot mini-warehouse development on Lot 2 plus buildout development on Lot 1. This LSC-developed scenario assumes the following land use mix for Lot 1:

- 21,500 square feet of general office
- 21,500 square feet of general light industrial
- 16,000 square feet of "shopping center" (retail center) land uses

This scenario **may** be more likely than the high-intensity scenario presented below given the location of the site.

High-Intensity Buildout Scenario

The high-intensity buildout scenario assumed that Lots 1 and 2 would collectively consist of 113,000 total square feet of shopping center/retail space. This scenario assumes no mini-storage. This scenario has been analyzed as a reasonable representation of the "highest and best use" of the property following a rezone to commercial and associated estimate of "worst-case" trip generation resulting from the proposed property rezone.

Proposed Site Access

The proposed Lot 2 access point to Tamlin Road is shown on the site plan. This eastern lot site access point would align with the Trojan Storage of Stetson Hills access. Lot 1 access is anticipated to be located either aligning with the People's United Methodist Church access and/or approximately 300 to 500 feet northeast of the intersection of Marksheffel/Tamlin.

The access point(s) will be determined with the Preliminary Plan/Site Development Plan stage. Access points must meet ECM standards for sight distance, should be placed a sufficient distance from Marksheffel for acceptable traffic operations, constructed in a location where any necessary auxiliary turn lanes can be installed, and result in adequate spacing between access points. Access points are anticipated to be stop-controlled, full-movement intersections with Tamlin Road.

ROADWAYS AND TRAFFIC CONDITIONS

Area Roadways

Study area roadways are identified below, followed by a brief description of each:

Marksheffel Road is designated as a Principal Arterial on the El Paso County Major Thoroughfare Plan. Currently a two-lane road, Marksheffel extends north-to-south for 17.4 miles between Link Road in the City of Fountain to the south (at the intersection of C&S Road/Link Road) and just north of Woodmen Road. Marksheffel Road is planned to be extended north to Vollmer Road in the short term. In the vicinity of the site, the posted speed limit on Marksheffel Road is 55 miles per hour (mph).

Tamlin Road is a rural, paved, local roadway that extends northeast from Marksheffel Road for just over one mile and serves the properties located within the unincorporated County enclave. Tamlin continues east as a gravel road through the Banning Lewis Ranch property to Meridian Road. However, use of the road is minimal and will be removed as future Banning Lewis Ranch development occurs. Tamlin is classified as a Collector on the El Paso County Major Thoroughfare Plan. Adjacent to the site, the posted speed limit is 35 mph.

Existing Traffic Volumes

Vehicular turning movement counts were conducted at the intersection of Marksheffel/Tamlin on Tuesday, July 10, 2018 from 6:30-8:30 a.m. and from 4:00-6:00 p.m. Existing morning and evening weekday peak-hour traffic volumes at this intersection is shown in Figure 3. Raw count reports are attached. LSC has estimated the current peak hour turning movements (based on the land use and standard trip generation rates) at the existing storage business access point on Tamlin Road. The figure also shows estimated weekday traffic volumes.

SIGHT DISTANCE

Based on the following spot-grades along Tamlin Road on the westbound approach, the prescribed stopping sight distance is 315 feet (downgrade of 3 percent). All sight distance field measurements utilized a driver's eye height of 3.5 feet and a height of 3.5 feet for a southwest-bound vehicle approaching from the northeast. The following analysis corresponds to field-measured sight distances for a Lot 2 site access aligning with the existing Trojan Storage of Stetson Hills access and a potential future Lot 1 access if aligned with the existing People's United Methodist Church access.

Lot 2 Access Aligned with the Trojan Storage of Stetson Hills Access

Field-measured sight distances for passenger vehicles are 445 feet to/from the southwest and 489 feet to/from the northeast. Assuming a 35-mph posted speed limit, field-measured sight distances for both approaches from this proposed site access location exceed the required 350-foot requirement for passenger vehicles per ECM Table 2-35. The requirement of 455 feet for single-unit trucks would be met as well with the drivers' eye being significantly higher than 3.5 feet for single unit trucks. Therefore, access entering sight distance **would** be acceptable if the proposed site access point aligns with the existing Trojan Storage of Stetson Hills access. If the access is planned for regular use by multi-unit trucks, the sight distance should be verified for this design vehicle.

Potential Lot 1 Access Aligning with the People's United Methodist Church Access

What is this sight distance?

Lot 1 access will be determined with the Preliminary Plan. Regarding a potential access aligning with the People's United Methodist Church, access, sight distance to/from the southwest is unobstructed downhill to the stop-sign-controlled intersection of Marksheffel/Tamlin. The field-measured sight distance to/from the northeast along Tamlin Road is 226 feet. Based on the current 35-mph posted speed limit, this field-measured sight distance of 226 feet would not meet sight distance requirements in ECM Tables 2-33 and 2-34.

Explain this sight distance. It appears that the distance between the two existing access points is approximately 430'. Is there a hump obstructing the sight distance?

TRIP GENERATION

Estimates of the vehicle-trips projected to be generated by the proposed storage facility have been made using the nationally-published trip generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Table 1 shows a summary of the results of the trip generation estimate. The morning peak hour generally occurs for one hour between 6:30 and 8:30 a.m., and the afternoon peak hour occurs for one hour between 4:00 and 6:00 p.m. A detailed trip generation estimate for the development, including ITE rates for the proposed land use, is presented in Table 4 (attached). Figure 2 contains a diagram of the proposed site plan.

Table 1: Estimated Site Vehicle-Trip Generation

Analysis Period	In	Out	Total
Initial Development (Lot 2 Only)			
Morning peak hour (vehicle trips/hour)	7	5	12
Evening peak hour (vehicle trips/hour)	9	10	20
Weekday -- non-pass-by (vehicle trips/day)	87	87	175
Low-Intensity Buildout			
Morning peak hour (vehicle trips/hour)	141	71	211
Evening peak hour (vehicle trips/hour)	82	116	198
Weekday -- non-pass-by (vehicle trips/day)	1110	1110	2220
High-Intensity Buildout			
Morning peak hour (vehicle trips/hour)	129	79	208
Evening peak hour (vehicle trips/hour)	286	309	595
Weekday -- non-pass-by (vehicle trips/day)	3267	3267	6533

Short-Term Initial Development (Lot 2 Only)

During the short-term, the Lot 2 mini-storage development is expected to generate about 175 vehicle-trips on the average weekday (one-half entering and one-half exiting in a 24-hour period). During the morning peak hour, 7 vehicles are projected to enter the site while 5 are projected to exit. Approximately 9 vehicles would enter and 10 vehicles would exit the site during the evening peak hour.

Moderate-Intensity Buildout

The entire site is expected to generate about 2,220 vehicle-trips on the average weekday (one-half entering and one-half exiting in a 24-hour period) in the moderate-intensity buildout scenario. During the morning peak hour, 141 vehicles are projected to enter the site while 71 are projected to exit. Approximately 82 vehicles would enter and 116 vehicles would exit the site during the evening peak hour.

High-Intensity Buildout

The entire site is expected to generate about 6,533 vehicle-trips on the average weekday (one-half entering and one-half exiting in a 24-hour period) in the high-intensity buildout scenario. During the morning peak hour, 129 vehicles are projected to enter the site while 79 are projected to exit. Approximately 286 vehicles would enter and 309 vehicles would exit the site during the evening peak hour.

Trip Distribution and Assignment

An estimate of the directional distribution of site-generated vehicle-trips to the study area streets and intersections is a necessary component in determining the site's traffic impacts. Figure 4 shows the directional distribution estimate for the site-generated trips and the percentages of the site-generated vehicle-trips projected to be oriented to and from the site's major approaches. Estimates were based on the following factors: traffic counts conducted at nearby intersections, the proposed land use and access plan, the existing and anticipated future area roadway system serving the site, the site's geographic location, adjacent existing land uses, projected traffic growth in the area, and lane geometry modifications to nearby turning movements.

Site-generated traffic volumes have been calculated at the following intersections:

- Tamlin Road/proposed site access points
- Marksheffel Road/Tamlin Road

Directional distribution percentages estimated by LSC (from Figure 4) were applied to the trip generation estimates (from Table 1).

- Figure 5 shows the projected site-generated traffic volumes for the weekday evening peak hour during the short-term/initial development scenario only.
- Figure 6 shows the projected weekday evening peak-hour site-generated traffic volumes for the moderate-intensity scenario.
- Figure 7 shows the projected weekday peak-hour site-generated traffic volumes for the high-intensity scenario.

Existing-Plus-Site-Generated Traffic Volumes

Figure 8 shows the sum of the existing traffic volumes (from Figure 3) and site-generated peak-hour traffic volumes for the short-term scenario (shown in Figure 5). These volumes represent the projected short-term total traffic following the development of the mini-storage on Lot 2.

Estimated Future Background Traffic Volumes

Figure 9 shows the projected 20-year background traffic volumes for the year 2038. Traffic from the proposed buildout land uses on Lots 1 and 2 are not included in the 2038 background traffic volumes. The 2038 background/baseline through traffic volumes on Marksheffel Road are based on MTCP projections. Background increases in vehicle turning movements at the intersection of Marksheffel Road/Tamlin Road could potentially vary from those estimated herein with significant other development projects served by Tamlin Road. However, any other significant development project would likely be required to also complete a traffic impact report. Traffic from the site is not included in the 2038 background traffic volumes.

2038 Total Traffic Volumes

Moderate-Intensity Buildout

Figure 10 shows the sum of 2038 background traffic volumes plus the moderate-intensity site-generated traffic volumes (from Figure 6).

High-Intensity Buildout

Figure 11 shows the sum of 2038 background traffic volumes plus the high-intensity site-generated traffic volumes (from Figure 7).

LEVEL OF SERVICE ANALYSIS

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 2: Intersection Levels of Service Delay Ranges

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

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

The following intersections have been analyzed to determine the projected levels of service:

- Tamlin Road/proposed Lot 1 site access
- Tamlin Road/proposed Lot 2 site access
- Marksheffel Road/Tamlin Road

A summary of current and projected existing plus site-generated LOS during the weekday evening peak hour is shown in Table 3. Please refer to the detailed Synchro reports (attached) for additional details.

Table 3: Level of Service Analysis Results

Scenario	Land Uses	Marksheffel Rd/ Tamlin Rd				Lot 2 Access	Lot 1 Access
		Traffic Control	SBL	SWL	SWR	NWL	NWL
Scenario Traffic Control and Laneage Assumed							
2018 Existing	-	TWSC			-	-	-
2018 Existing + Site	Mini-Warehouses Only	TWSC			-	-	
2038 Background	-	TWSC			-	-	-
2038 Background + Site	Low-Intensity Buildout	3/4 Movement (Unsignalized)		-	 Free		
	High-Intensity Buildout	Channelized-T (Unsignalized)					
Summary of LOS Results by Scenario							
A.M. Peak Hour							
2018 Existing	-	TWSC	A	F	-	-	-
2018 Existing + Site	Mini-Warehouses Only			C		A	
2038 Background	-	TWSC	A	D		-	
2038 Background + Site	Low-Intensity Buildout	3/4 Movement (Unsignalized)	B	-	Free	A	A
	High-Intensity Buildout	Channelized-T (Unsignalized)	D	C	B		
P.M. Peak Hour							
2018 Existing	-	TWSC	B	F	-	-	-
2018 Existing + Site	Mini-Warehouses Only			E		A	
2038 Background	-	TWSC	C	F		-	
2038 Background + Site	Low-Intensity Buildout	3/4 Movement (Unsignalized)	C	-	Free	A	A
	High-Intensity Buildout	Channelized-T (Unsignalized)	B	F	F		B

Proposed Site Access/Tamlin Road

All turning movements at both proposed site access points are projected to operate at LOS B or better during all short- and long-term scenarios during both the morning and evening peak hours.

Marksheffel Road/Tamlin Road

2018 Short-Term Scenario

The southbound shared left/through turn lane currently operates at LOS F during both the morning and peak hour. An additional through lane will be constructed in the short term to convert Marksheffel from one through lane per direction to two. Following the roadway expansion on Marksheffel, the southbound shared left/through turn lane is projected to operate at LOS C during the morning peak hour and LOS E during the evening peak hour.

2038 Long-Term Site Buildout Scenarios

Three separate traffic control conditions were analyzed for the 2038 traffic scenarios:

- Two-way stop sign-control (TWSC)
- Three-quarter movement (unsignalized)
- Channelized-T

If the intersection of Marksheffel/Tamlin were to remain TWSC, the westbound left-turn movement is projected to operate at LOS F during the 2038 background scenario evening peak hour, and the southbound left-turn movement is projected to operate at LOS C.

During the moderate-intensity 2038 total traffic scenario, the westbound left-turn movement from Tamlin Road has been eliminated, while the westbound right-turn operates at LOS C or better as a free movement.

A channelized-T intersection was assumed during the high-intensity 2038 buildout scenario, where the southbound through lanes bypass the intersection, the southbound left-turn lane has a median-separated storage lane, and the westbound left-turn lane has an interior acceleration lane. The westbound left-turn lane is projected to operate at LOS F during the evening peak hour.

AUXILIARY TURN LANES

Marksheffel/Tamlin Road

Left-Turn Deceleration Lane

According to the El Paso County *Engineering Criteria Manual* (ECM), exclusive left-turn lanes shall be provided for any access on a Principal Arterial with a projected peak-hour ingress turning volume of 10 vehicles per hour (vph) or greater. The projected southbound left-turn volume at the intersection of Marksheffel/Tamlin during the short-term buildout scenario (10 vph) meets the minimum left-turn volume threshold outlined in the ECM upon short-term site buildout. A left-turn deceleration lane is also warranted based on both 2038 background plus site (moderate-intensity **and** high-intensity) scenarios upon buildout of Lots 1 and 2.

For the short-term scenario, LSC recommends a southbound left-turn deceleration lane on Marksheffel Road approaching the Tamlin Road intersection. The required lane dimensions include a 290-foot deceleration distance (adjusted for grade as applicable) plus 50 feet of stacking distance plus an ECM standard-length 240-foot bay taper. Redirect tapers at a 55:1 ratio would also be necessary.

For the long-term scenarios, the southbound left-turn deceleration lane stacking distance would be required to increase from 50 feet to (up to) 150 feet (for the high-intensity scenario).

Right-Turn/Left-Turn Acceleration Lanes

A northbound right-turn acceleration lane on Marksheffel Road would be required for either of the buildout scenarios. A southbound left-turn acceleration lane with **channelizing raised median design** would be part of the channelized T traffic control option analyzed with the high-intensity site buildout scenario. This lane would likely extend south to Barnes Road and could potentially be configured as a continuous acceleration/deceleration southbound left-turn lane. A raised right-turn channelizing island for the westbound lane into the northbound acceleration lane would be an option to consider as, if properly designed, it could reasonably prevent westbound left-turn movements. A raised center median with three-quarter intersection design is another potential solution to consider.

Right-Turn Deceleration Lane

A northbound right-turn deceleration lane currently exists at the intersection of Marksheffel/ Tamlin and meets turn lane design criteria in the ECM. No modifications to its existing geometry are required.

Tamlin Road/Site Access Points

Based on ECM criteria, an eastbound right-turn deceleration lane plus taper would be required at the west site access for either buildout scenario. At the east access, the right-turn volume threshold requiring a turn lane would be exceeded for the high-intensity scenario.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

Please refer to the Table 1 for a summary of the results of the trip generation estimate for the moderate- and high-intensity short- and long-term traffic scenarios. A detailed trip generation estimate for the development, including ITE rates for the proposed land use, is presented in attached in Table 4.

Level of Service Analysis

Access points to Tamlin Road are projected to operate at LOS A or B for all scenarios.

The westbound approach at the intersection of Marksheffel/Tamlin currently operates at LOS F and is projected to operate at a low level of service with the addition of the short-term scenario/ mini-storage development.

With significant development beyond the mini-storage development, the level of service is likely to be LOS F for the westbound-to-southbound left-turn movement. The buildout moderate scenario shows a levels of service C as conversion of the intersection to a three-quarter movement (restriction of the eastbound left turn) is shown as part of the scenario.

Given the LOS F projected for the channelized T configuration (as part of the high-intensity buildout scenario), a directional traffic signal would likely need to be considered. This would likely improve the LOS to acceptable levels and acceptable progression bandwidths would likely be easy to achieve with a directional signal rather than a "full" signal. However, the concept of a directional signal would need to be acceptable to the County and/or the City. A roundabout intersection would not likely be a viable solution as it would be inconsistent with the other intersections in the Marksheffel corridor.

Please refer to the Level of Service Analysis section above for detailed LOS results.

Access Points

The Lot 2 access point is planned to align with the existing Trojan Storage at Stetson Hills access on the north side of Tamlin Road.

The Lot 1 access point(s) will be determined with the Preliminary Plan/Site Development Plan stage. However, Lot 1 access is anticipated to be located either aligning with the People's United Methodist Church access and/or approximately 300 to 500 feet northeast of the intersection of Marksheffel/Tamlin. Access points must meet ECM standards for sight distance, should be placed a sufficient distance from Marksheffel for acceptable traffic operations, constructed in a location where any necessary auxiliary turn lanes can be installed, and result in adequate spacing between access points. Access points are anticipated to be stop-controlled, full-movement intersections with Tamlin Road.

Auxiliary Turn Lanes

Per criteria in the ECM, a southbound left-turn lane is required at the intersection of Marksheffel/ Tamlin for the short-term scenario. Additional turn lanes at Marksheffel/Tamlin and the site access points are projected to be warranted based on the buildout scenarios. Please refer to the

The site plan for the proposed Lot 2 development will have to show the installation of the southbound left-turn lane.

Auxiliary Turn Lanes section above for details and turn lane design recommendations for the short-term recommendation.

Sight Distance

I believe you mean Lot 1 here. Revise.

LSC recommends that the proposed Lot 2 site access align with the existing Trojan Storage at Stetson Hills access on the north side of Tamlin Road. Lot 2 sight distance is **not** acceptable if the proposed site access were to be located as an extension of the People's United Methodist Church existing access. Additional Lot 1 access to the west of this location may be considered, however access points must meet ECM standards for sight distance. The access point(s) will be determined with the Preliminary Plan/Site Development Plan stage.

Roadway Classification/Upgrade

Tamlin Road is classified as a Collector on the El Paso County Major Thoroughfare Plan. The short-term mini-storage development would not increase traffic volumes on Tamlin Road above the Rural Local Roadway level. However, Tamlin Road would likely need to be improved to County Collector standards with the either buildout land use scenario. During the long term, Tamlin Road should be upgraded to an Urban Collector for both the moderate-intensity and high-intensity scenarios for Lots 1 and 2.

El Paso County Roadway Improvement Fee Program

This development will be subject to participation in the El Paso County Roadway Improvement Fee Program.

* * *

Please contact me if you have any questions regarding this report.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH:JAB

Enclosures: Table 4
Figure 1 – Figure 11
Traffic Count Reports
Level of Service Reports

-If an intersection does not meet LOS D or better, discuss what steps can be taken to bring the intersection to a satisfactory level. It appears that the intersection at Tamlin/Marksheffel operates at a LOS F.

-Provide the trigger points for the construction of all required future improvements including but not limited to turn lanes, signals, widenings, and openings or closing of accesses.

-State whether or not any improvements affected by the project are reimbursable under the current MTCP.

-State whether the MTCP or other approved corridor study calls for the construction of improvements in the immediate area.

-State what the current applicable Transportation Impact Fees are and what options the developer will be selecting for payment.

-Provide how the road improvements will be paid for between the two lots.

Table 4: Trip Generation Estimate and Comparison

Lot	Acres	ITE Code	ITE Description	Value	Units [1]	Trip Generation Rates [2] Average Weekday	A.M. In	A.M. Out	P.M. In	P.M. Out	Driveway Trips Generated Average Weekday	A.M. In	A.M. Out	P.M. In	P.M. Out	% Primary	% Non-Primary	Non-Pass-by Trips Generated Average Weekday	A.M. In	A.M. Out	P.M. In	P.M. Out
INITIAL DEVELOPMENT																						
Lot 2 Only																						
1	7.5	-	Vacant	-	-	-	-	-	-	-	0	0	0	0	0	-	-	0	0	0	0	0
2	8.5	151	Mini-Warehousing	115.600	KSF	1.51	0.06	0.04	0.08	0.09	175	7	5	9	10	100%	0%	175	7	5	9	10
										Total	**175**	**7**	**5**	**9**	**10**			**175**	**7**	**5**	**9**	**10**
BUILDOUT SCENARIOS																						
Low-Intensity																						
1	7.5	710	General Office Building	21.500	KSF	9.74	1.00	0.16	0.18	0.97	209	21	3	4	21	100%	0%	209	21	3	4	21
		110	General Light Industrial	21.500	KSF	4.96	0.62	0.08	0.08	0.55	107	13	2	2	12	100%	0%	107	13	2	2	12
		820	Shopping Center	16.000	KSF	108.07	6.19	3.79	4.20	4.55	1729	99	61	67	73	42%	58%	726	42	26	28	31
2	8.5	151	Mini-Warehousing	115.600	KSF	1.51	0.06	0.04	0.08	0.09	175	7	5	9	10	100%	0%	175	7	5	9	10
										Total	**2220**	**141**	**71**	**82**	**116**			**1217**	**83**	**35**	**43**	**10**
High-Intensity																						
1 + 2	16.0	820	Shopping Center	113.000	KSF	57.81	1.14	0.70	2.53	2.74	**6533**	**129**	**79**	**286**	**309**	42%	58%	**2744**	**54**	**33**	**120**	**130**

(1) KSF = 1,000 square feet

(2) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)

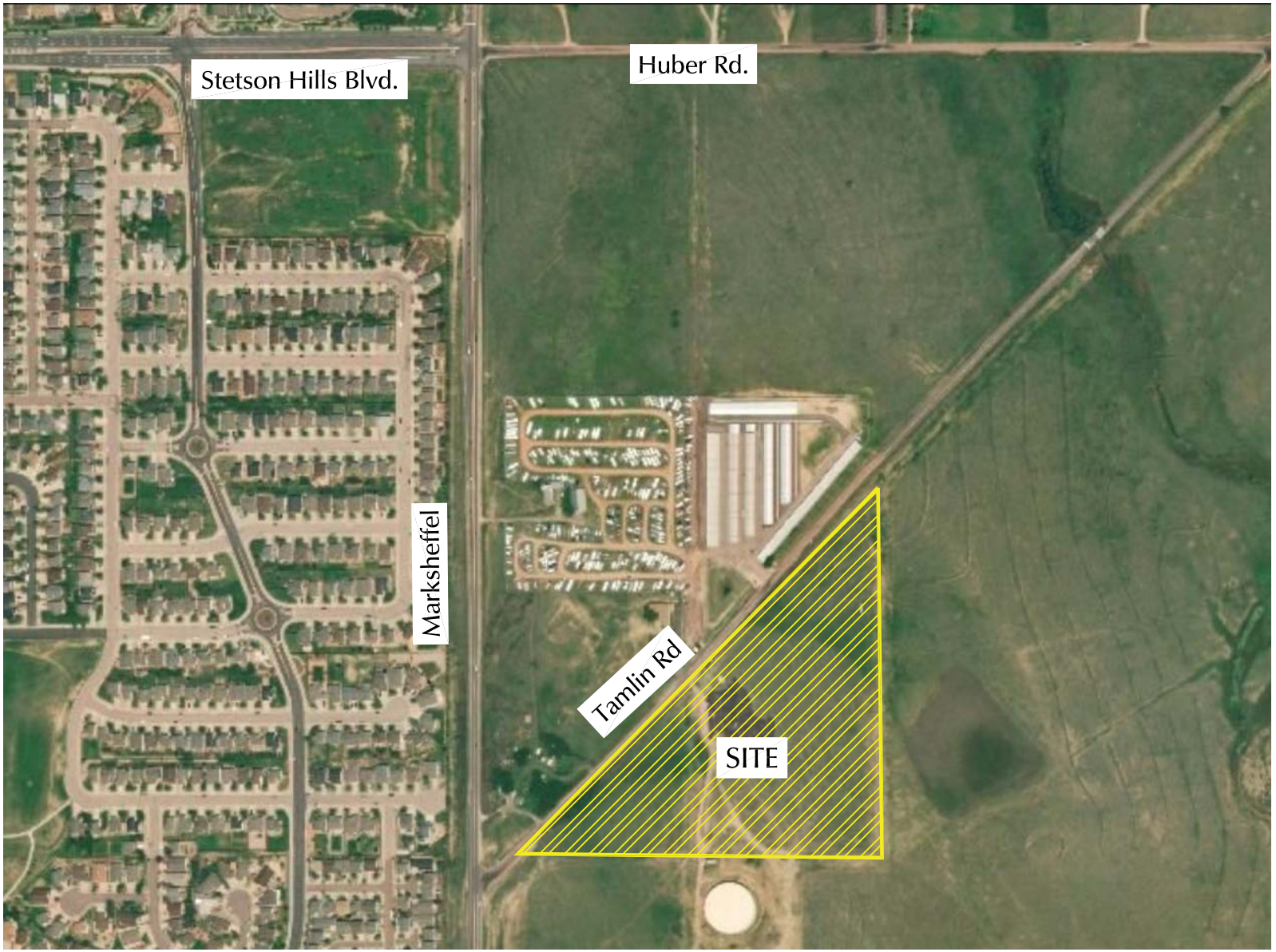


Figure 1

Vicinity

Tamlin Rd. Rezone (LSC# 184610)

LSC TRANSPORTATION CONSULTANTS, INC.

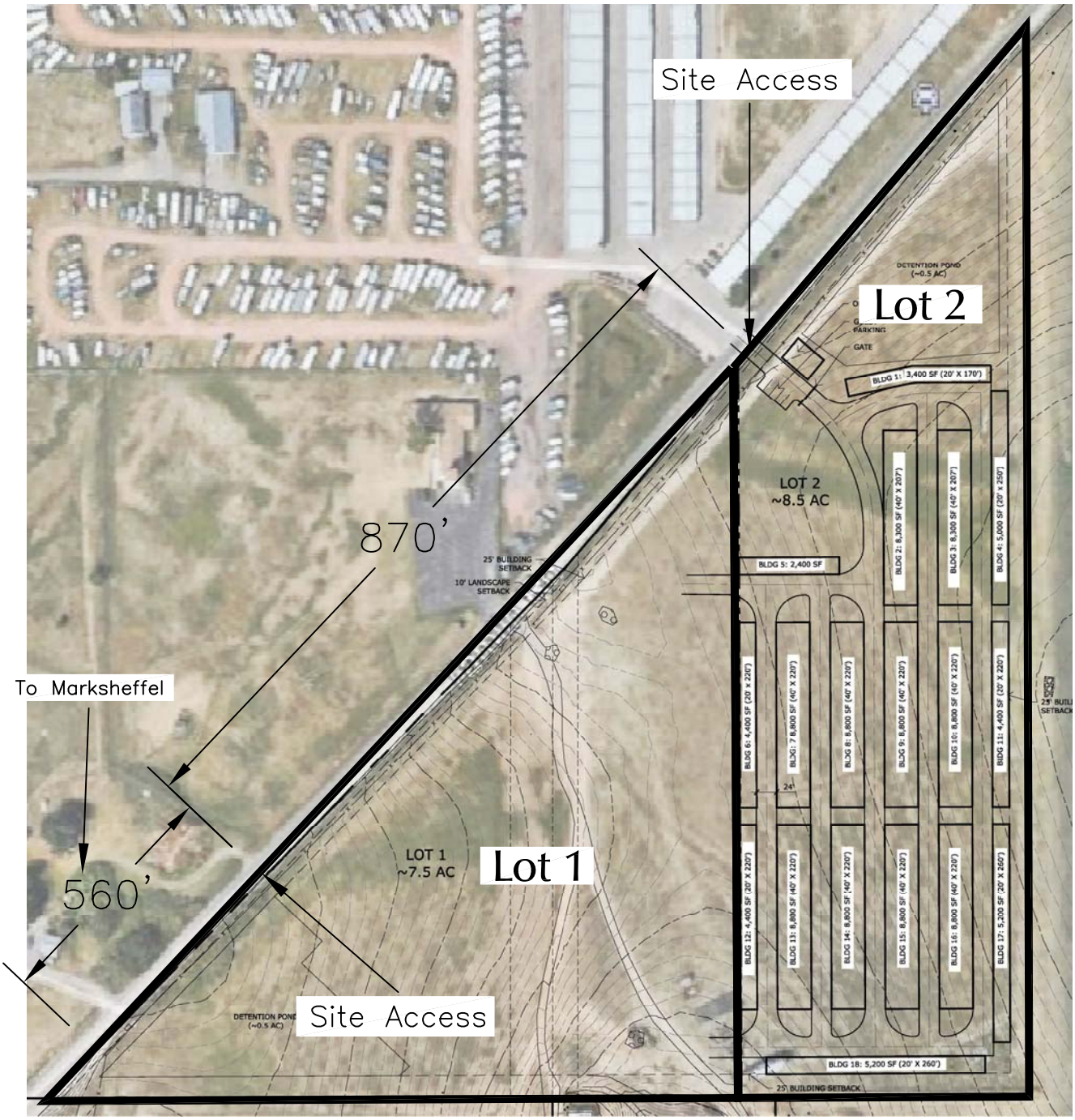
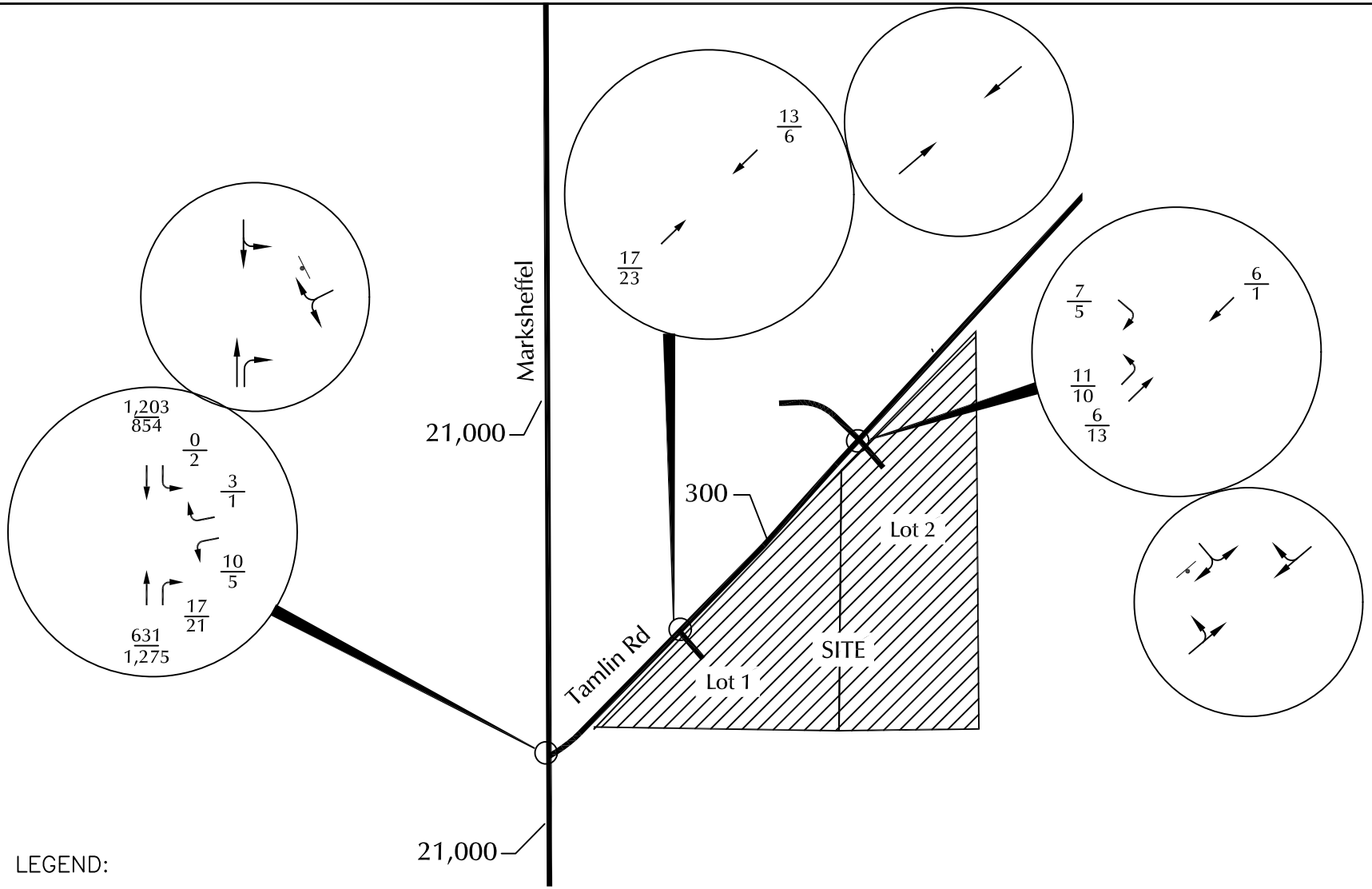


Figure 2

Site Plan

Tamlin Rd. Rezone (LSC# 184610)

LSC TRANSPORTATION CONSULTANTS, INC.



LEGEND:

= Stop Sign

XX/XX = AM Weekday Peak–Hour Traffic (vehicles per hour) / PM Weekday Peak–Hour Traffic (vehicles per hour)

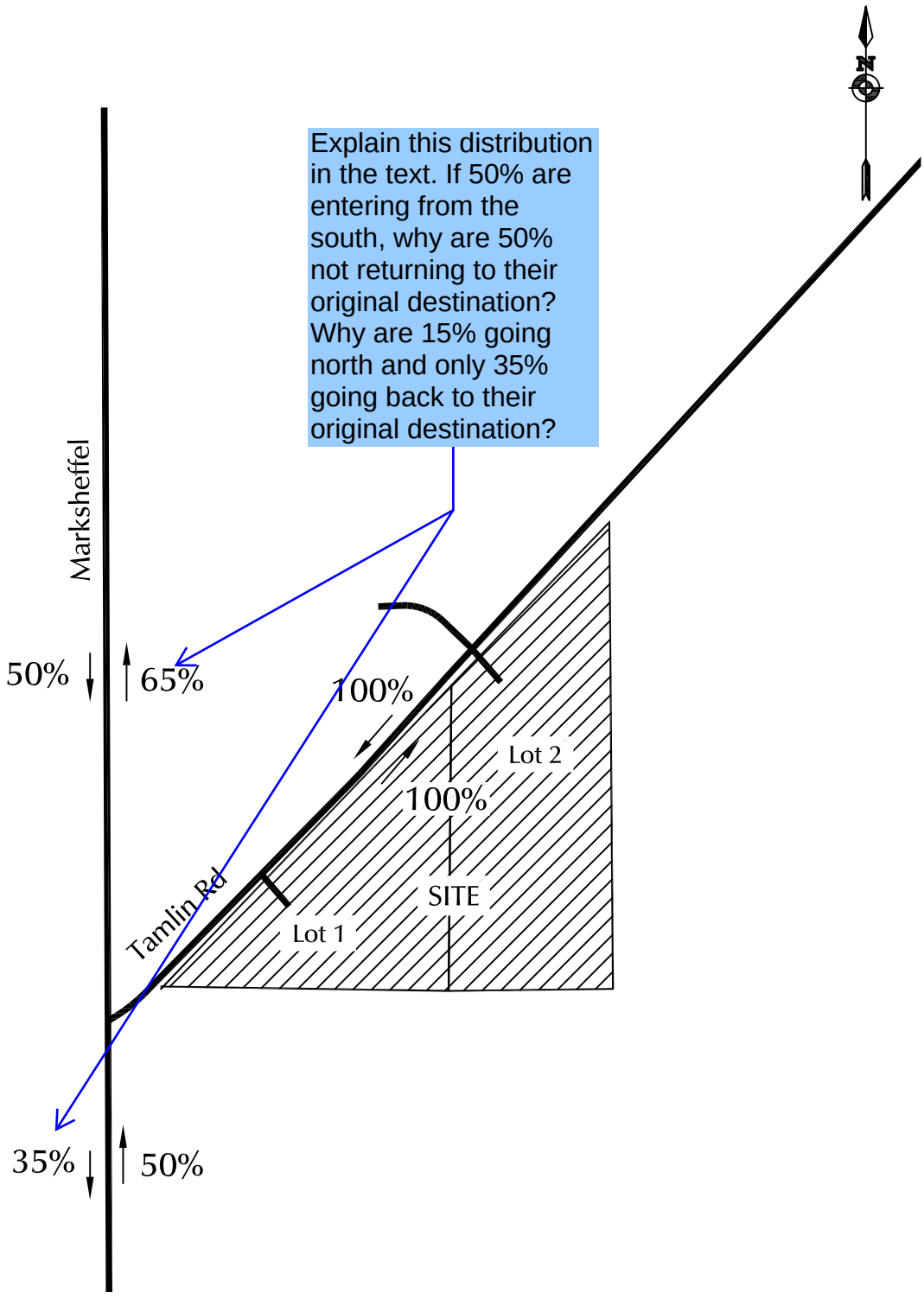
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 3

Existing Traffic, Lane Geometry, andTraffic Control

Tamlin Rd. Rezone (LSC# 184610)



LEGEND:

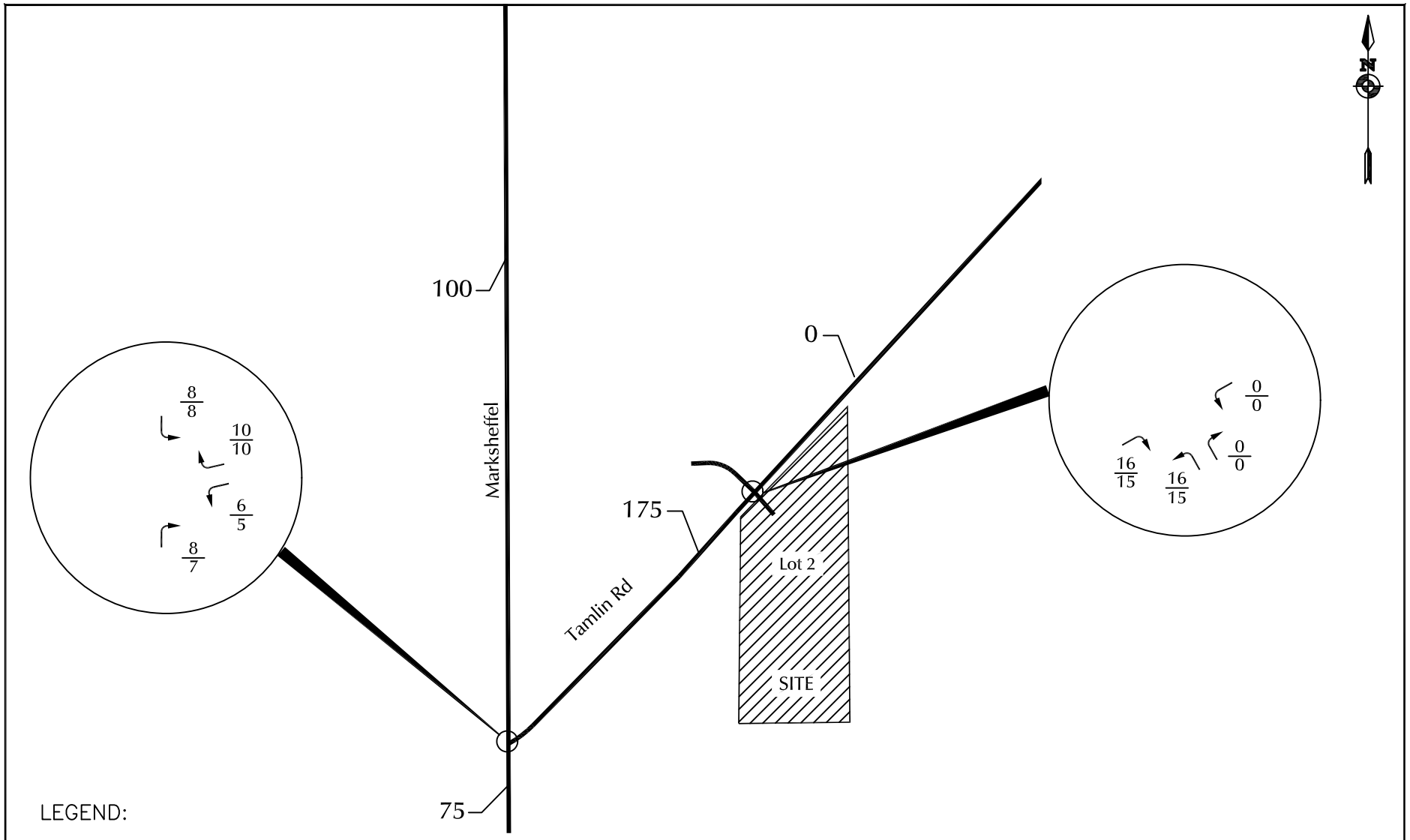
XX% = Percent Directional Distribution

Figure 4

Directional Distribution

Tamlin Rd. Rezone (LSC# 184610)

LSC TRANSPORTATION CONSULTANTS, INC.



XX / XX = AM Weekday Peak–Hour Traffic (vehicles per hour) / PM Weekday Peak–Hour Traffic (vehicles per hour)

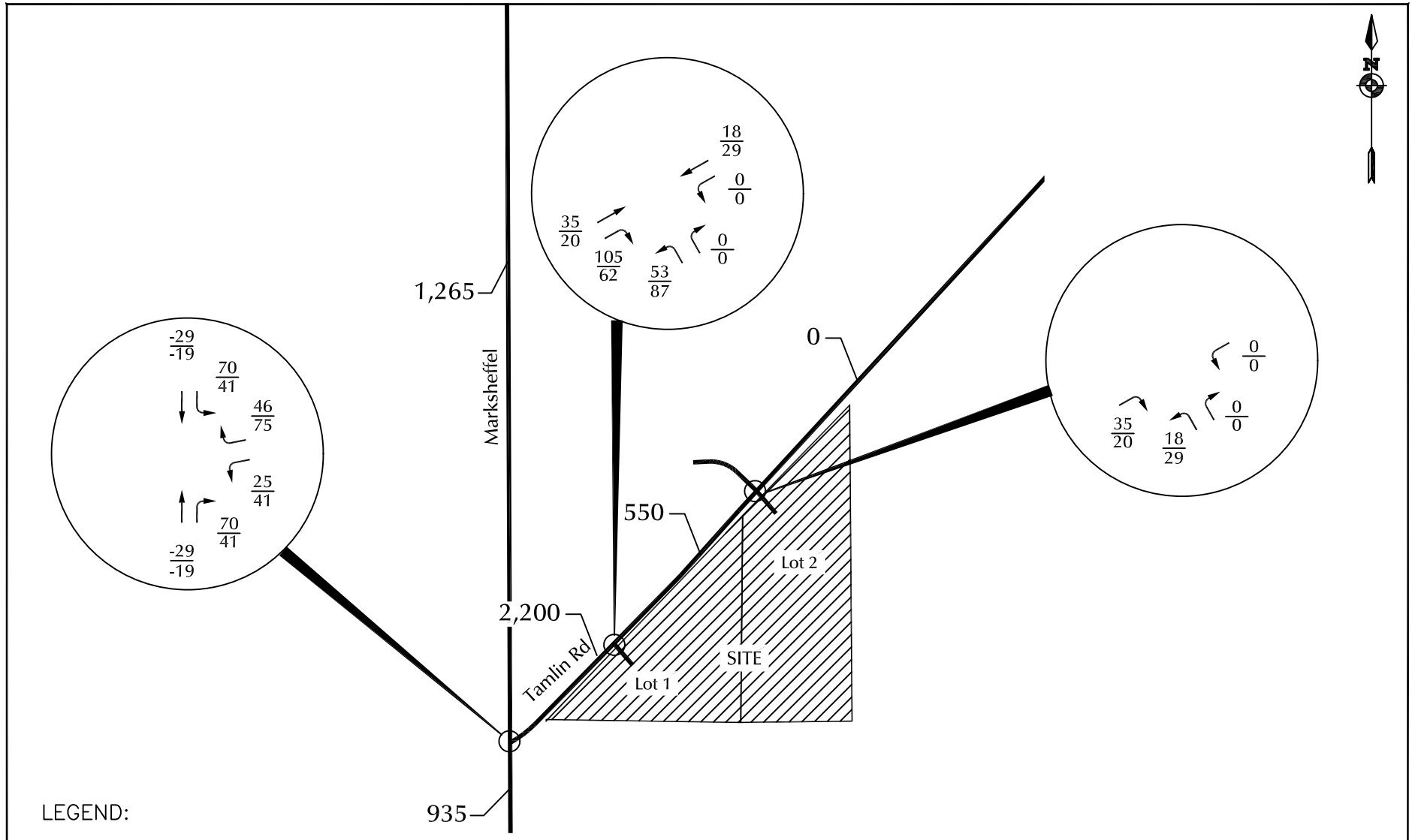
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 5

Site-Generated Traffic Mini-Warehouse Only

Tamlin Rd. Rezone (LSC# 184610)



$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

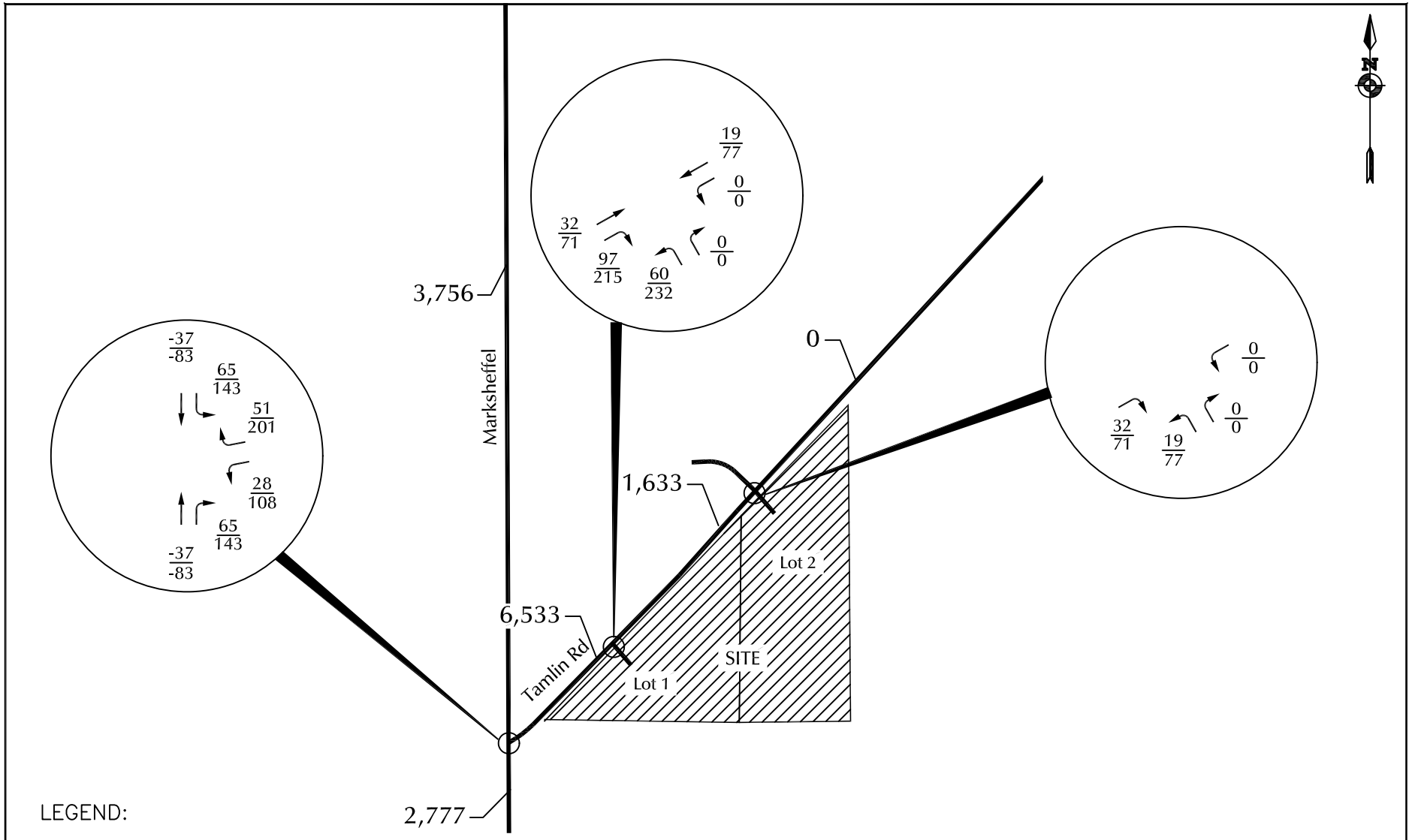
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 6

Site-Generated Traffic Moderate-Intensity Buildout

Tamlin Rd. Rezone (LSC# 184610)



XX/XX = AM Weekday Peak–Hour Traffic (vehicles per hour) / PM Weekday Peak–Hour Traffic (vehicles per hour)

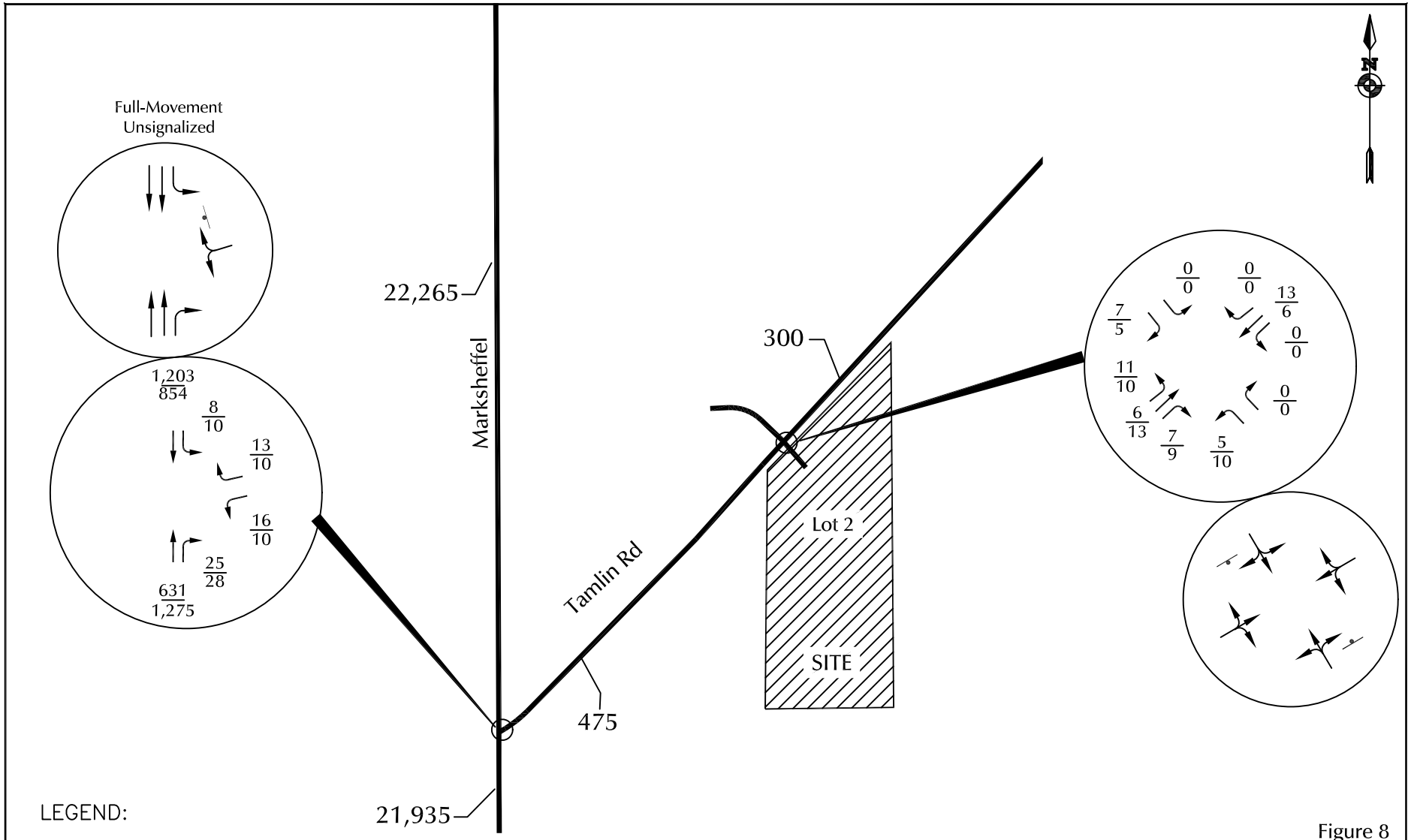
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 7

Site-Generated Traffic High-Intensity Buildout

Tamlin Rd. Rezone (LSC# 184610)



LEGEND:

= Stop Sign

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak–Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak–Hour Traffic (vehicles per hour)}}$

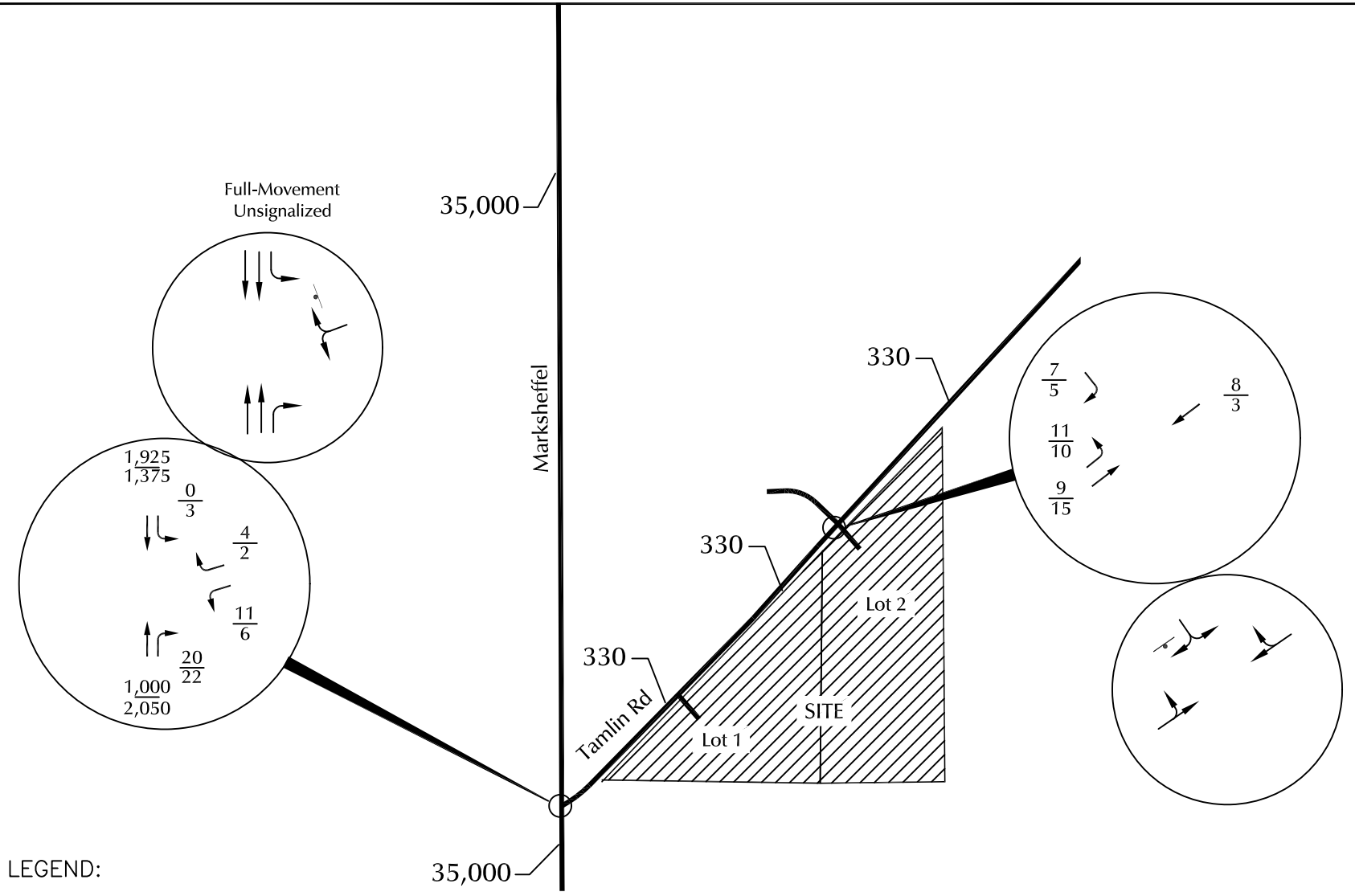
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 8

2018 Existing plus Site-Generated Traffic (Warehouse Only), Lane Geometry, and Traffic Control

Tamlin Rd. Rezone (LSC# 184610)



LEGEND:

= Stop Sign

XX/XX = AM Weekday Peak–Hour Traffic (vehicles per hour) / PM Weekday Peak–Hour Traffic (vehicles per hour)

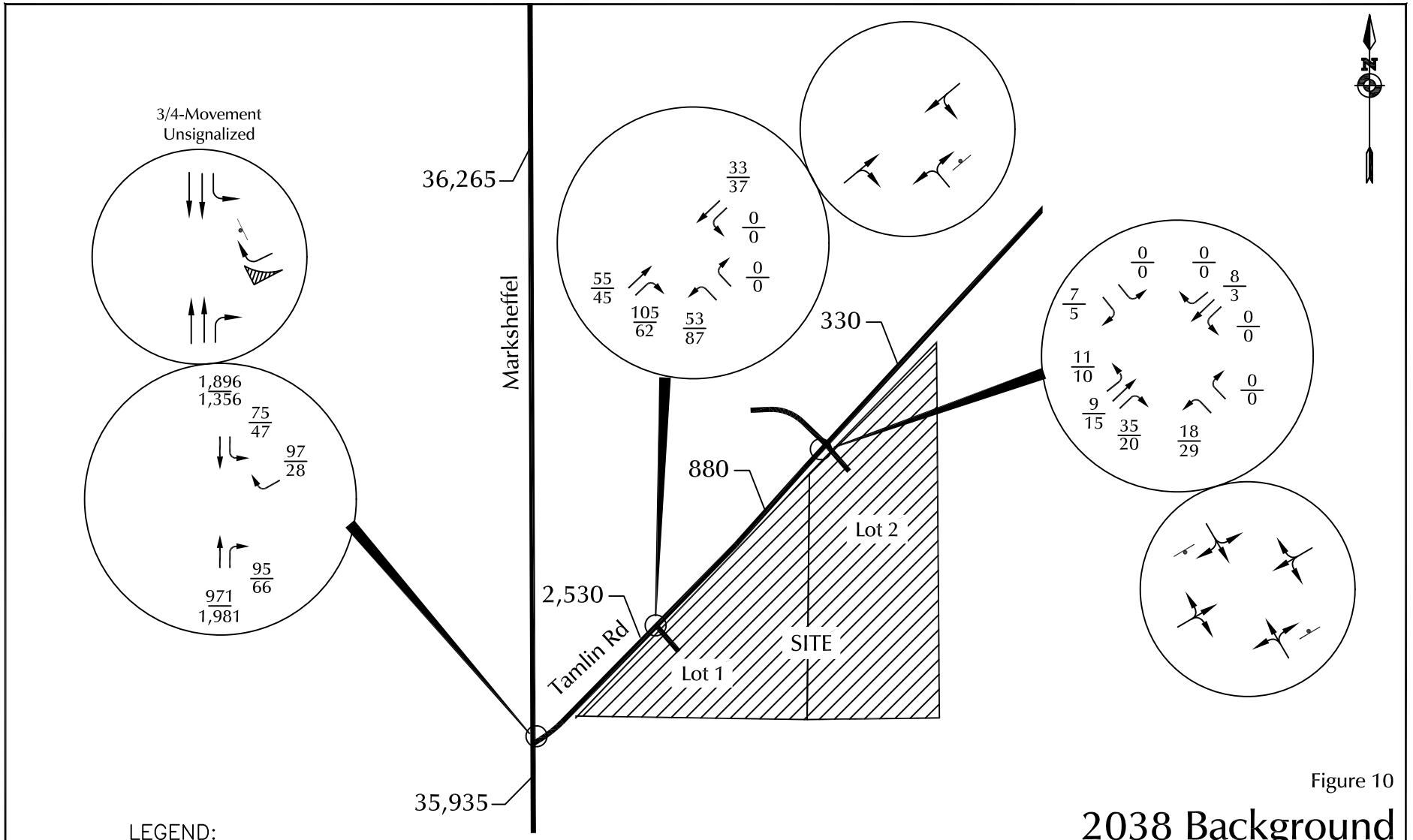
XXX = Average Weekday Traffic (vehicles per day)

Figure 9

2038 Background Traffic, Lane Geometry, and Traffic Control

Tamlin Rd. Rezone (LSC# 184610)

TRANSPORTATION CONSULTANTS, INC.



LEGEND:

⊦ = Stop Sign

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak–Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak–Hour Traffic (vehicles per hour)}}$

XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 10

2038 Background plus Moderate-Intensity Buildout Site-Generated Traffic, Lane Geometry, and Traffic Control

Tamlin Rd. Rezone (LSC# 184610)

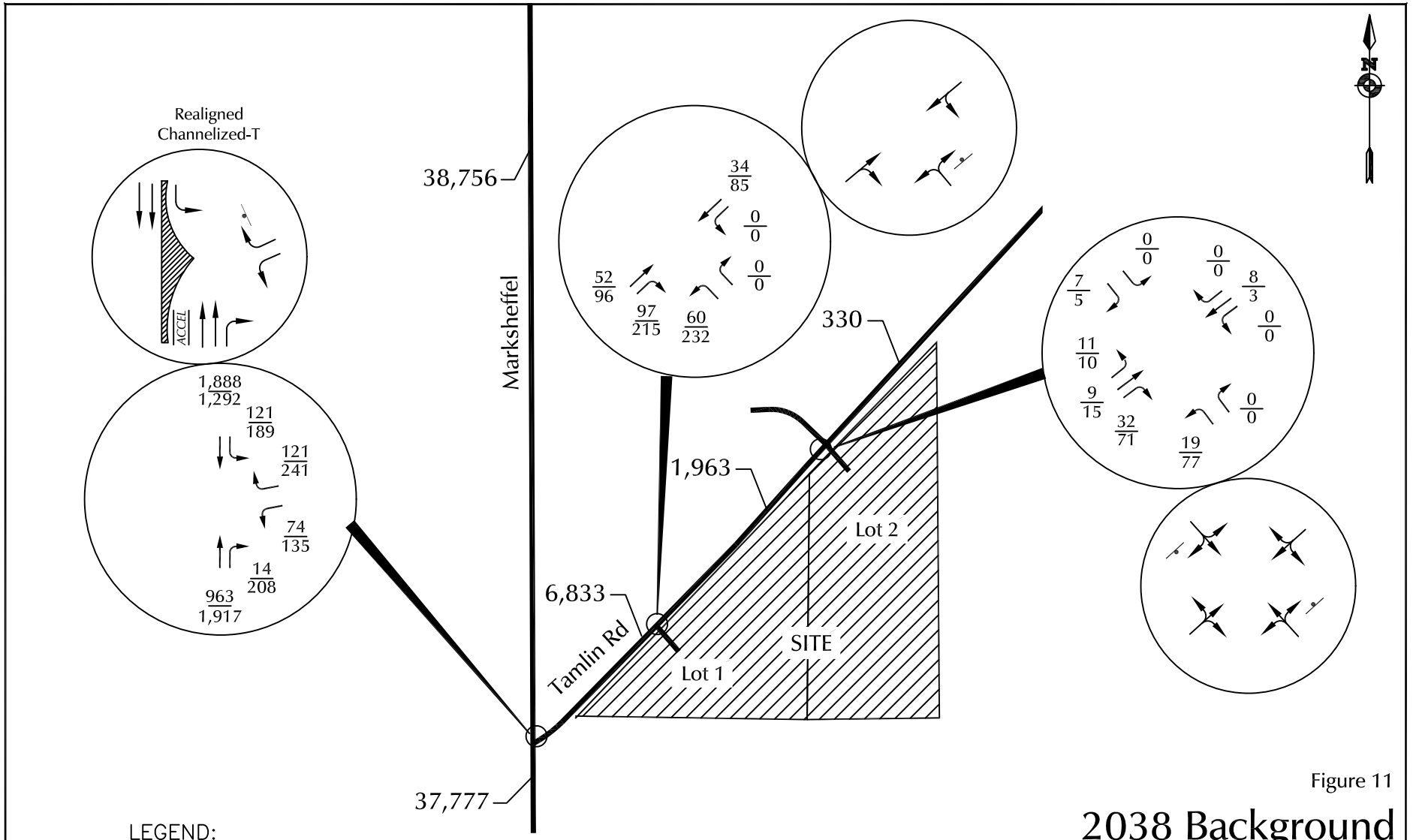


Figure 11

2038 Background plus High-Intensity Buildout Site-Generated Traffic, Lane Geometry, and Traffic Control

Tamlin Rd. Rezone (LSC# 184610)

LEGEND:

⊦ = Stop Sign

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

XXX Average Weekday Traffic (vehicles per day)

LSC TRANSPORTATION CONSULTANTS, INC.

LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Marksheffel rd - Tamlin Rd AM
Site Code : 184610
Start Date : 7/10/2018
Page No : 1

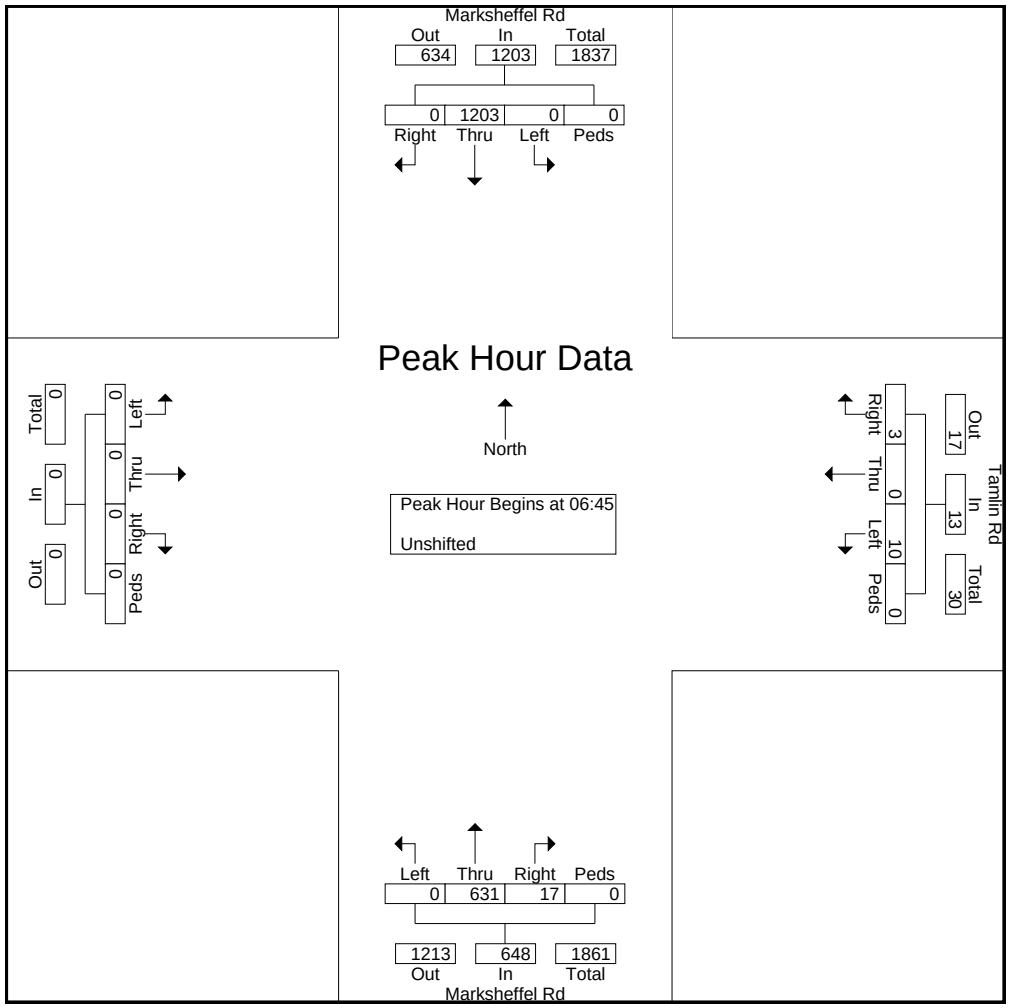
Groups Printed- Unshifted

	Marksheffel Rd Southbound				Tamlin Rd Westbound				Marksheffel Rd Northbound				Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
06:30	0	257	0	0	4	0	0	0	0	143	5	0	0	0	0	0	409
06:45	0	302	0	0	3	0	0	0	0	147	8	0	0	0	0	0	460
Total	0	559	0	0	7	0	0	0	0	290	13	0	0	0	0	0	869
07:00	0	306	0	0	2	0	0	0	0	158	5	0	0	0	0	0	471
07:15	0	312	0	0	2	0	3	0	0	166	3	0	0	0	0	0	486
07:30	0	283	0	0	3	0	0	0	0	160	1	0	0	0	0	0	447
07:45	0	278	0	0	2	0	0	0	0	165	2	0	0	0	0	0	447
Total	0	1179	0	0	9	0	3	0	0	649	11	0	0	0	0	0	1851
08:00	0	272	0	0	2	0	0	0	0	157	2	0	0	0	0	0	433
08:15	0	263	0	0	1	0	0	0	0	149	1	0	0	0	0	0	414
Grand Total	0	2273	0	0	19	0	3	0	0	1245	27	0	0	0	0	0	3567
Apprch %	0	100	0	0	86.4	0	13.6	0	0	97.9	2.1	0	0	0	0	0	
Total %	0	63.7	0	0	0.5	0	0.1	0	0	34.9	0.8	0	0	0	0	0	

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Marksheffel rd - Tamlin Rd AM
Site Code : 184610
Start Date : 7/10/2018

	Marksheffel Rd Southbound					Tamlin Rd Westbound					Marksheffel Rd Northbound					Eastbound					
Start Time	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
Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:45																					
06:45	0	302	0	0	302	**3**	0	0	0	3	0	147	**8**	0	155	0	0	0	0	0	460
07:00	0	306	0	0	306	2	0	0	0	2	0	158	5	0	163	0	0	0	0	0	471
07:15	0	**312**	0	0	**312**	2	0	**3**	0	**5**	0	**166**	3	0	**169**	0	0	0	0	0	**486**
07:30	0	283	0	0	283	3	0	0	0	3	0	160	1	0	161	0	0	0	0	0	447
Total Volume	0	1203	0	0	1203	10	0	3	0	13	0	631	17	0	648	0	0	0	0	0	1864
% App. Total	0	100	0	0		76.9	0	23.1	0		0	97.4	2.6	0		0	0	0	0		
PHF	.000	.964	.000	.000	.964	.833	.000	.250	.000	.650	.000	.950	.531	.000	.959	.000	.000	.000	.000	.000	.959



LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
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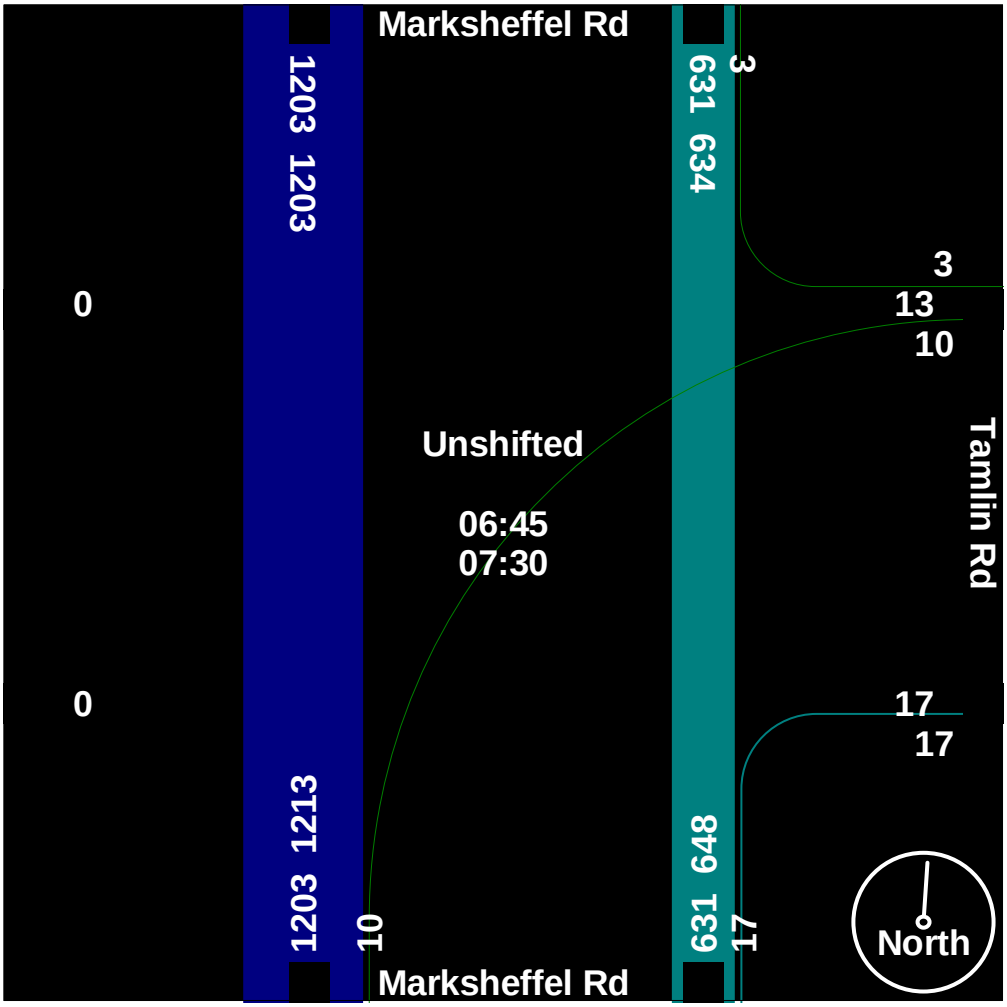
719-633-2868

File Name : Marksheffel rd - Tamlin Rd AM
Site Code : 184610
Start Date : 7/10/2018
Page No : 3



LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Marksheffel rd - Tamlin Rd PM
Site Code : 184610
Start Date : 7/10/2018
Page No : 1

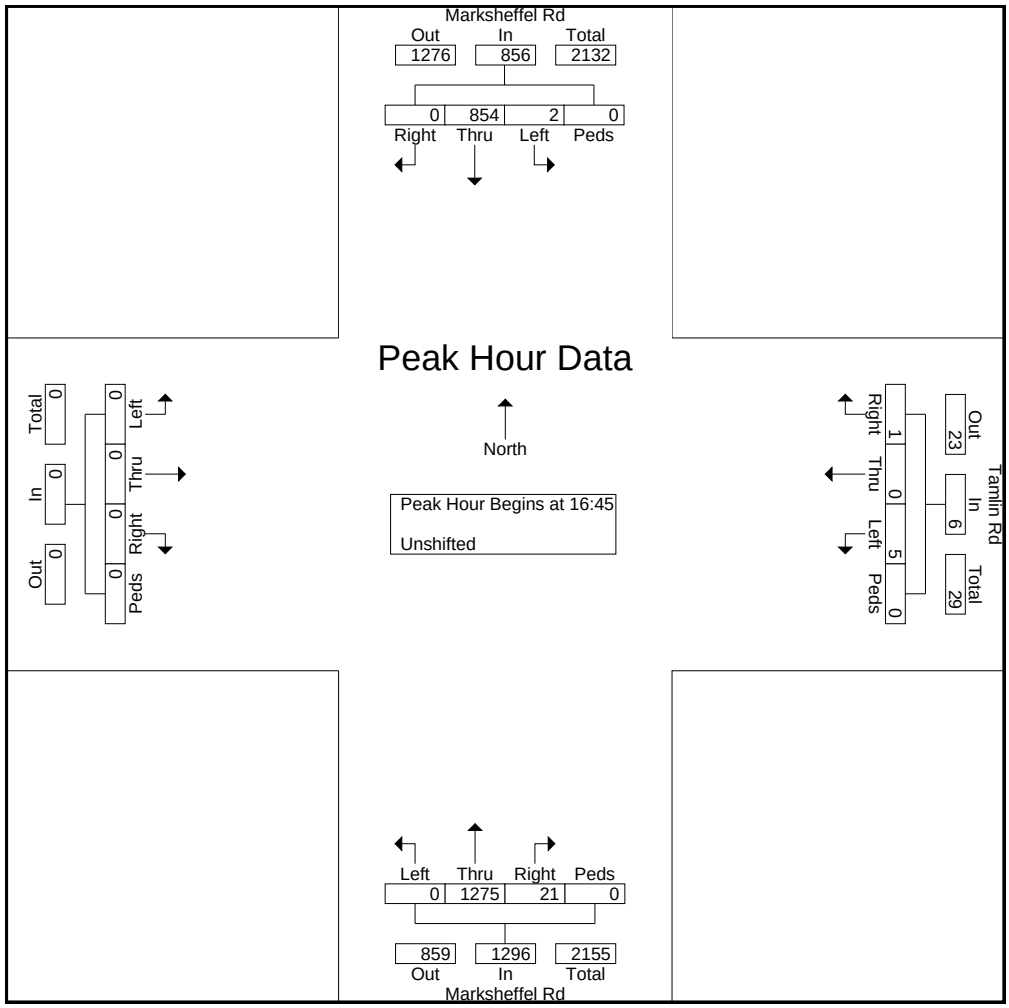
Groups Printed- Unshifted

	Marksheffel Rd Southbound				Tamlin Rd Westbound				Marksheffel Rd Northbound				Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
16:00	1	184	0	0	1	0	1	0	0	273	2	0	0	0	0	0	462
16:15	0	207	0	0	2	0	2	0	0	283	7	0	0	0	0	0	501
16:30	0	199	0	0	1	0	0	0	0	304	1	0	0	0	0	0	505
16:45	0	211	0	0	0	0	0	0	0	330	5	0	0	0	0	0	546
Total	1	801	0	0	4	0	3	0	0	1190	15	0	0	0	0	0	2014
17:00	1	192	0	0	3	0	1	0	0	330	6	0	0	0	0	0	533
17:15	1	214	0	0	1	0	0	0	0	307	4	0	0	0	0	0	527
17:30	0	237	0	0	1	0	0	0	0	308	6	0	0	0	0	0	552
17:45	0	174	0	0	2	0	1	0	0	263	3	0	0	0	0	0	443
Total	2	817	0	0	7	0	2	0	0	1208	19	0	0	0	0	0	2055
Grand Total	3	1618	0	0	11	0	5	0	0	2398	34	0	0	0	0	0	4069
Apprch %	0.2	99.8	0	0	68.8	0	31.2	0	0	98.6	1.4	0	0	0	0	0	
Total %	0.1	39.8	0	0	0.3	0	0.1	0	0	58.9	0.8	0	0	0	0	0	

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

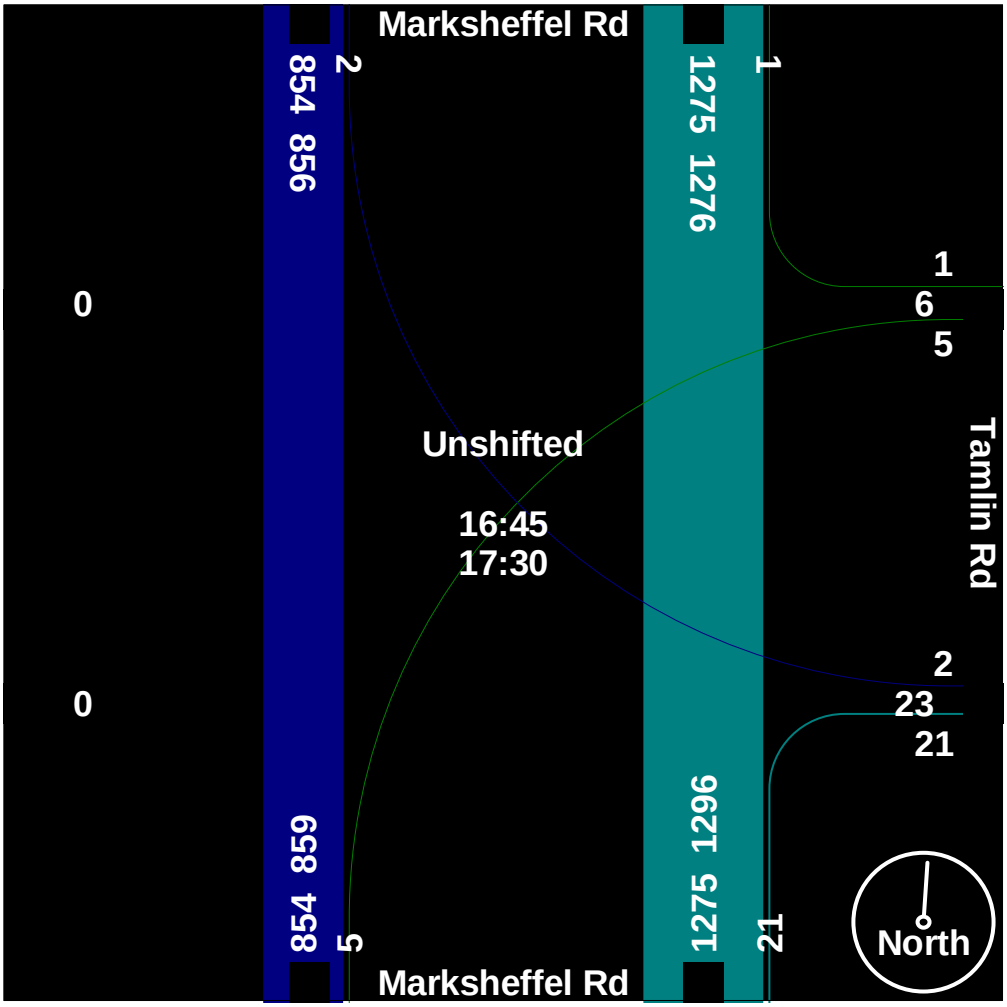
File Name : Marksheffel rd - Tamlin Rd PM
Site Code : 184610
Start Date : 7/10/2018
Page No : 2

	Marksheffel Rd Southbound					Tamlin Rd Westbound					Marksheffel Rd Northbound					Eastbound					
Start Time	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
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	211	0	0	211	0	0	0	0	0	0	**330**	5	0	335	0	0	0	0	0	546
17:00	**1**	192	0	0	193	**3**	0	**1**	0	**4**	0	330	**6**	0	**336**	0	0	0	0	0	533
17:15	1	214	0	0	215	1	0	0	0	1	0	307	4	0	311	0	0	0	0	0	527
17:30	0	**237**	0	0	**237**	1	0	0	0	1	0	308	6	0	314	0	0	0	0	0	**552**
Total Volume	2	854	0	0	856	5	0	1	0	6	0	1275	21	0	1296	0	0	0	0	0	2158
% App. Total	0.2	99.8	0	0		83.3	0	16.7	0		0	98.4	1.6	0		0	0	0	0		
PHF	.500	.901	.000	.000	.903	.417	.000	.250	.000	.375	.000	.966	.875	.000	.964	.000	.000	.000	.000	.000	.977



LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Marksheffel rd - Tamlin Rd PM
Site Code : 184610
Start Date : 7/10/2018
Page No : 3



Intersection	
Int Delay, s/veh	0.6

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	631	17	0	1203	10	3
Future Vol, veh/h	631	17	0	1203	10	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	657	18	0	1253	15	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	675	0	1910	657
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	1253	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	916	-	75	465
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	269	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	916	-	75	465
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	269	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	54
HCM LOS			F

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBR	SWLn1
Capacity (veh/h)	-	-	916	-	93
HCM Lane V/C Ratio	-	-	-	-	0.215
HCM Control Delay (s)	-	-	0	-	54
HCM Lane LOS	-	-	A	-	F
HCM 95th %tile Q(veh)	-	-	0	-	0.8

Intersection	
Int Delay, s/veh	4.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	7	0	0	0	11	6	0	0	6	0
Future Vol, veh/h	0	0	7	0	0	0	11	6	0	0	6	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,#	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	0	0	0	12	7	0	0	7	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	38	38	7	42	38	7	7	0	0	7	0	0
Stage 1	7	7	-	31	31	-	-	-	-	-	-	-
Stage 2	31	31	-	11	7	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	967	854	1075	961	854	1075	1614	-	-	1614	-	-
Stage 1	1015	890	-	986	869	-	-	-	-	-	-	-
Stage 2	986	869	-	1010	890	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	962	848	1075	949	848	1075	1614	-	-	1614	-	-
Mov Cap-2 Maneuver	962	848	-	949	848	-	-	-	-	-	-	-
Stage 1	1008	890	-	979	863	-	-	-	-	-	-	-
Stage 2	979	863	-	1003	890	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.4	0	4.7	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1614	-	-	-	1075	1614	-	-
HCM Lane V/C Ratio	0.007	-	-	-	0.007	-	-	-
HCM Control Delay (s)	7.2	0	-	0	8.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1275	21	2	854	5	1
Future Vol, veh/h	1275	21	2	854	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	90	90	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1328	22	2	949	8	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1350	0	2281	1328
Stage 1	-	-	-	-	1328	-
Stage 2	-	-	-	-	953	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	510	-	44	190
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	375	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	510	-	44	190
Mov Cap-2 Maneuver	-	-	-	-	44	-
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	372	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	92.6
HCM LOS			F

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1
Capacity (veh/h)	-	-	510	-	50
HCM Lane V/C Ratio	-	-	0.004	-	0.185
HCM Control Delay (s)	-	-	12.1	0	92.6
HCM Lane LOS	-	-	B	A	F
HCM 95th %tile Q(veh)	-	-	0	-	0.6

Intersection	
Int Delay, s/veh	3.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	5	0	0	0	10	13	0	0	1	0
Future Vol, veh/h	0	0	5	0	0	0	10	13	0	0	1	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,-#		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	0	0	0	11	14	0	0	1	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	37	37	1	40	37	14	1	0	0	14	0	0
Stage 1	1	1	-	36	36	-	-	-	-	-	-	-
Stage 2	36	36	-	4	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	968	855	1084	964	855	1066	1622	-	-	1604	-	-
Stage 1	1022	895	-	980	865	-	-	-	-	-	-	-
Stage 2	980	865	-	1018	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	963	849	1084	954	849	1066	1622	-	-	1604	-	-
Mov Cap-2 Maneuver	963	849	-	954	849	-	-	-	-	-	-	-
Stage 1	1015	895	-	973	859	-	-	-	-	-	-	-
Stage 2	973	859	-	1013	895	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.3	0	3.1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1622	-	-	-	1084	1604	-	-
HCM Lane V/C Ratio	0.007	-	-	-	0.005	-	-	-
HCM Control Delay (s)	7.2	0	-	0	8.3	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	631	20	3	1203	12	6
Future Vol, veh/h	631	20	3	1203	12	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	664	21	3	1266	13	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	685	0	1303	332
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	639	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	904	-	152	664
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	488	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	904	-	152	664
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	487	-

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

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1
Capacity (veh/h)	-	-	904	-	356
HCM Lane V/C Ratio	-	-	0.003	-	0.053
HCM Control Delay (s)	-	-	9	-	15.7
HCM Lane LOS	-	-	A	-	C
HCM 95th %tile Q(veh)	-	-	0	-	0.2

Intersection	
Int Delay, s/veh	3.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	7	5	0	0	11	6	7	0	13	0
Future Vol, veh/h	0	0	7	5	0	0	11	6	7	0	13	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,-#		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	5	0	0	12	6	7	0	14	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	48	51	14	52	48	10	14	0	0	13	0	0
Stage 1	14	14	-	34	34	-	-	-	-	-	-	-
Stage 2	34	37	-	18	14	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	953	840	1066	947	844	1071	1604	-	-	1606	-	-
Stage 1	1006	884	-	982	867	-	-	-	-	-	-	-
Stage 2	982	864	-	1001	884	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	947	833	1066	935	837	1071	1604	-	-	1606	-	-
Mov Cap-2 Maneuver	947	833	-	935	837	-	-	-	-	-	-	-
Stage 1	998	884	-	974	860	-	-	-	-	-	-	-
Stage 2	974	857	-	994	884	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.4	8.9	3.3	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1604	-	-	935	1066	1606	-	-
HCM Lane V/C Ratio	0.007	-	-	0.006	0.007	-	-	-
HCM Control Delay (s)	7.3	0	-	8.9	8.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1275	26	7	854	9	8
Future Vol, veh/h	1275	26	7	854	9	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	215	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	90	90	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1328	27	8	949	14	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1355	0	1819	664
Stage 1	-	-	-	-	1328	-
Stage 2	-	-	-	-	491	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	504	-	69	403
Stage 1	-	-	-	-	212	-
Stage 2	-	-	-	-	581	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	504	-	68	403
Mov Cap-2 Maneuver	-	-	-	-	68	-
Stage 1	-	-	-	-	212	-
Stage 2	-	-	-	-	572	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0.1	46.7
HCM LOS			E

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBR	SWLn1
Capacity (veh/h)	-	-	504	-	112
HCM Lane V/C Ratio	-	-	0.015	-	0.234
HCM Control Delay (s)	-	-	12.3	-	46.7
HCM Lane LOS	-	-	B	-	E
HCM 95th %tile Q(veh)	-	-	0	-	0.8

Intersection	
Int Delay, s/veh	3.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	5	10	0	0	10	13	9	0	6	0
Future Vol, veh/h	0	0	5	10	0	0	10	13	9	0	6	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,-#		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	11	0	0	11	14	10	0	7	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	48	53	7	51	48	19	7	0	0	24	0	0
Stage 1	7	7	-	41	41	-	-	-	-	-	-	-
Stage 2	41	46	-	10	7	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	953	838	1075	948	844	1059	1614	-	-	1591	-	-
Stage 1	1015	890	-	974	861	-	-	-	-	-	-	-
Stage 2	974	857	-	1011	890	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	948	832	1075	939	838	1059	1614	-	-	1591	-	-
Mov Cap-2 Maneuver	948	832	-	939	838	-	-	-	-	-	-	-
Stage 1	1008	890	-	967	855	-	-	-	-	-	-	-
Stage 2	967	851	-	1006	890	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.4	8.9	2.3	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1614	-	-	939	1075	1591	-	-
HCM Lane V/C Ratio	0.007	-	-	0.012	0.005	-	-	-
HCM Control Delay (s)	7.2	0	-	8.9	8.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1000	20	0	1925	11	4
Future Vol, veh/h	1000	20	0	1925	11	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1053	21	0	2026	12	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1074	0	2066	527
Stage 1	-	-	-	-	1053	-
Stage 2	-	-	-	-	1013	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	645	-	47	496
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	312	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	645	-	47	496
Mov Cap-2 Maneuver	-	-	-	-	160	-
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	312	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	25.1
HCM LOS			D

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBR	SWLn1
Capacity (veh/h)	-	-	645	-	195
HCM Lane V/C Ratio	-	-	-	-	0.081
HCM Control Delay (s)	-	-	0	-	25.1
HCM Lane LOS	-	-	A	-	D
HCM 95th %tile Q(veh)	-	-	0	-	0.3

Intersection	
Int Delay, s/veh	4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	7	0	0	0	11	9	0	0	8	0
Future Vol, veh/h	0	0	7	0	0	0	11	9	0	0	8	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,-#		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	0	0	0	12	9	0	0	8	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	41	41	8	45	41	9	8	0	0	9	0	0
Stage 1	8	8	-	33	33	-	-	-	-	-	-	-
Stage 2	33	33	-	12	8	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	963	851	1074	957	851	1073	1612	-	-	1611	-	-
Stage 1	1013	889	-	983	868	-	-	-	-	-	-	-
Stage 2	983	868	-	1009	889	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	958	845	1074	946	845	1073	1612	-	-	1611	-	-
Mov Cap-2 Maneuver	958	845	-	946	845	-	-	-	-	-	-	-
Stage 1	1006	889	-	976	862	-	-	-	-	-	-	-
Stage 2	976	862	-	1002	889	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.4	0	4	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1612	-	-	-	1074	1611	-	-
HCM Lane V/C Ratio	0.007	-	-	-	0.007	-	-	-
HCM Control Delay (s)	7.2	0	-	0	8.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	2050	22	3	1375	6	2
Future Vol, veh/h	2050	22	3	1375	6	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2158	23	3	1447	6	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2181	0	2888	1079
Stage 1	-	-	-	-	2158	-
Stage 2	-	-	-	-	730	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	240	-	13	214
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	438	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	240	-	13	214
Mov Cap-2 Maneuver	-	-	-	-	60	-
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	433	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	60.6
HCM LOS			F

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1
Capacity (veh/h)	-	-	240	-	73
HCM Lane V/C Ratio	-	-	0.013	-	0.115
HCM Control Delay (s)	-	-	20.2	-	60.6
HCM Lane LOS	-	-	C	-	F
HCM 95th %tile Q(veh)	-	-	0	-	0.4

Intersection	
Int Delay, s/veh	3.5

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	5	0	0	0	10	15	0	0	3	0
Future Vol, veh/h	0	0	5	0	0	0	10	15	0	0	3	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	0	0	0	11	16	0	0	3	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	41	41	3	44	41	16	3	0	0	16	0	0
Stage 1	3	3	-	38	38	-	-	-	-	-	-	-
Stage 2	38	38	-	6	3	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	963	851	1081	958	851	1063	1619	-	-	1602	-	-
Stage 1	1020	893	-	977	863	-	-	-	-	-	-	-
Stage 2	977	863	-	1016	893	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	958	845	1081	948	845	1063	1619	-	-	1602	-	-
Mov Cap-2 Maneuver	958	845	-	948	845	-	-	-	-	-	-	-
Stage 1	1013	893	-	970	857	-	-	-	-	-	-	-
Stage 2	970	857	-	1011	893	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.3	0	2.9	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1619	-	-	-	1081	1602	-	-
HCM Lane V/C Ratio	0.007	-	-	-	0.005	-	-	-
HCM Control Delay (s)	7.2	0	-	0	8.3	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	86	971	90	70	1896
Future Volume (vph)	0	86	971	90	70	1896
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		215	265	
Storage Lanes	0	1		1	1	
Taper Length (ft)	25				220	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	1611	3539	1583	1770	3539
Flt Permitted					0.950	
Satd. Flow (perm)	0	1611	3539	1583	1770	3539
Link Speed (mph)	35		55			55
Link Distance (ft)	1522		1152			1313
Travel Time (s)	29.6		14.3			16.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	91	1022	95	74	1996
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	91	1022	95	74	1996
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	L NA	R NA	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	7	18	0	0	11	9	35	0	8	0
Future Vol, veh/h	0	0	7	18	0	0	11	9	35	0	8	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	19	0	0	12	9	37	0	8	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	60	78	8	64	60	28	8	0	0	46	0	0
Stage 1	8	8	-	52	52	-	-	-	-	-	-	-
Stage 2	52	70	-	12	8	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	936	812	1074	930	831	1047	1612	-	-	1562	-	-
Stage 1	1013	889	-	961	852	-	-	-	-	-	-	-
Stage 2	961	837	-	1009	889	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	930	806	1074	918	824	1047	1612	-	-	1562	-	-
Mov Cap-2 Maneuver	930	806	-	918	824	-	-	-	-	-	-	-
Stage 1	1005	889	-	953	845	-	-	-	-	-	-	-
Stage 2	953	830	-	1002	889	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.4	9	1.4	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1612	-	-	918	1074	1562	-	-
HCM Lane V/C Ratio	0.007	-	-	0.021	0.007	-	-	-
HCM Control Delay (s)	7.2	0	-	9	8.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	53	0	55	105	0	33
Future Vol, veh/h	53	0	55	105	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	0	58	111	0	35

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	149	114	0	0	169	0
Stage 1	114	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	843	939	-	-	1409	-
Stage 1	911	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	843	939	-	-	1409	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	987	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	843	1409	-
HCM Lane V/C Ratio	-	-	0.066	-	-
HCM Control Delay (s)	-	-	9.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	1981	63	44	1356	0	124
Future Volume (vph)	1981	63	44	1356	0	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		215	265		0	0
Storage Lanes		1	1		0	1
Taper Length (ft)			220		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected			0.950			
Satd. Flow (prot)	3539	1583	1770	3539	0	1611
Flt Permitted			0.950			
Satd. Flow (perm)	3539	1583	1770	3539	0	1611
Link Speed (mph)	55			55	35	
Link Distance (ft)	1152			1313	741	
Travel Time (s)	14.3			16.3	14.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	2085	66	46	1427	0	131
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2085	66	46	1427	0	131
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	L NA	R NA	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	5	29	0	0	10	15	20	0	3	0
Future Vol, veh/h	0	0	5	29	0	0	10	15	20	0	3	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,#	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	31	0	0	11	16	21	0	3	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	52	62	3	55	52	27	3	0	0	37	0	0
Stage 1	3	3	-	49	49	-	-	-	-	-	-	-
Stage 2	49	59	-	6	3	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	947	829	1081	943	839	1048	1619	-	-	1574	-	-
Stage 1	1020	893	-	964	854	-	-	-	-	-	-	-
Stage 2	964	846	-	1016	893	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	942	823	1081	934	833	1048	1619	-	-	1574	-	-
Mov Cap-2 Maneuver	942	823	-	934	833	-	-	-	-	-	-	-
Stage 1	1013	893	-	957	848	-	-	-	-	-	-	-
Stage 2	957	840	-	1011	893	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.3	9	1.6	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1619	-	-	934	1081	1574	-	-
HCM Lane V/C Ratio	0.007	-	-	0.033	0.005	-	-	-
HCM Control Delay (s)	7.2	0	-	9	8.3	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	87	0	45	62	0	37
Future Vol, veh/h	87	0	45	62	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	0	47	65	0	39

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	119	80	0	0	112	0
Stage 1	80	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	877	980	-	-	1478	-
Stage 1	943	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	877	980	-	-	1478	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	983	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	877	1478	-
HCM Lane V/C Ratio	-	-	0.104	-	-
HCM Control Delay (s)	-	-	9.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	1018	65	1888	0	0
Future Volume (vph)	0	1018	65	1888	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	15%		0%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.860	0.850		
Flt Protected						
Satd. Flow (prot)	0	3539	1408	1391	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1408	1391	0	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		382	2665		389	
Travel Time (s)		4.7	33.0		8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1072	68	1987	0	0
Shared Lane Traffic (%)				49%		
Lane Group Flow (vph)	0	1072	1042	1013	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.11	1.11	1.00	1.00
Turning Speed (mph)	15			55	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	55	963	85	65	0
Future Vol, veh/h	39	55	963	85	65	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	265	-	-
Veh in Median Storage, #	0	-	0	-	-	16979
Grade, %	0	-	0	-	-	15
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	58	1014	89	68	0

Major/Minor	Minor1		Major1		
Conflicting Flow All	1014	507	0	0	
Stage 1	1014	-	-	-	
Stage 2	0	-	-	-	
Critical Hdwy	6.84	6.94	-	-	
Critical Hdwy Stg 1	5.84	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	
Follow-up Hdwy	3.52	3.32	-	-	
Pot Cap-1 Maneuver	235	511	-	-	
Stage 1	311	-	-	-	
Stage 2	-	-	-	-	
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	235	511	-	-	
Mov Cap-2 Maneuver	317	-	-	-	
Stage 1	311	-	-	-	
Stage 2	-	-	-	-	

Approach	WB	NB
HCM Control Delay, s	15	0
HCM LOS	C	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2
Capacity (veh/h)	-	-	317	511
HCM Lane V/C Ratio	-	-	0.13	0.113
HCM Control Delay (s)	-	-	18	12.9
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.4	0.4

Intersection	
Int Delay, s/veh	3.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	7	19	0	0	11	9	32	0	8	0
Future Vol, veh/h	0	0	7	19	0	0	11	9	32	0	8	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,#	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	20	0	0	12	9	34	0	8	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	58	75	8	62	58	26	8	0	0	43	0	0
Stage 1	8	8	-	50	50	-	-	-	-	-	-	-
Stage 2	50	67	-	12	8	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	939	815	1074	933	833	1050	1612	-	-	1566	-	-
Stage 1	1013	889	-	963	853	-	-	-	-	-	-	-
Stage 2	963	839	-	1009	889	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	933	808	1074	921	826	1050	1612	-	-	1566	-	-
Mov Cap-2 Maneuver	933	808	-	921	826	-	-	-	-	-	-	-
Stage 1	1005	889	-	955	846	-	-	-	-	-	-	-
Stage 2	955	832	-	1002	889	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.4	9	1.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1612	-	-	921	1074	1566	-	-
HCM Lane V/C Ratio	0.007	-	-	0.022	0.007	-	-	-
HCM Control Delay (s)	7.2	0	-	9	8.4	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	60	0	52	97	0	34
Future Vol, veh/h	60	0	52	97	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	22355
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	0	55	102	0	36

Major/Minor	Minor1		Major1	
Conflicting Flow All	106	106	0	0
Stage 1	106	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.42	6.22	-	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-
Pot Cap-1 Maneuver	892	948	-	-
Stage 1	918	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	892	948	-	-
Mov Cap-2 Maneuver	892	-	-	-
Stage 1	918	-	-	-
Stage 2	-	-	-	-

Approach	NB	NE
HCM Control Delay, s	9.3	0
HCM LOS	A	

Minor Lane/Major Mvmt	NET	NER	NBLn1
Capacity (veh/h)	-	-	892
HCM Lane V/C Ratio	-	-	0.071
HCM Control Delay (s)	-	-	9.3
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.2

Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	2120	146	1292	0	0
Future Volume (vph)	0	2120	146	1292	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	15%		0%	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.880	0.850		
Flt Protected						
Satd. Flow (prot)	0	3539	1440	1391	0	0
Flt Permitted						
Satd. Flow (perm)	0	3539	1440	1391	0	0
Link Speed (mph)		55	55		30	
Link Distance (ft)		382	2665		389	
Travel Time (s)		4.7	33.0		8.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2232	154	1360	0	0
Shared Lane Traffic (%)				45%		
Lane Group Flow (vph)	0	2232	766	748	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.11	1.11	1.00	1.00
Turning Speed (mph)	15			55	15	9
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	9.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	114	203	1917	165	146	0
Future Vol, veh/h	114	203	1917	165	146	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	265	-	-
Veh in Median Storage, #	0	-	0	-	-	16979
Grade, %	0	-	0	-	-	15
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	214	2018	174	154	0

Major/Minor	Minor1		Major1		
Conflicting Flow All	2018	1009	0	0	
Stage 1	2018	-	-	-	
Stage 2	0	-	-	-	
Critical Hdwy	6.84	6.94	-	-	
Critical Hdwy Stg 1	5.84	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	
Follow-up Hdwy	3.52	3.32	-	-	
Pot Cap-1 Maneuver	~ 51	238	-	-	
Stage 1	~ 89	-	-	-	
Stage 2	-	-	-	-	
Platoon blocked, %			-	-	
Mov Cap-1 Maneuver	~ 51	238	-	-	
Mov Cap-2 Maneuver	175	-	-	-	
Stage 1	~ 89	-	-	-	
Stage 2	-	-	-	-	

Approach	WB	NB
HCM Control Delay, s	72.4	0
HCM LOS	F	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2
Capacity (veh/h)	-	-	175	238
HCM Lane V/C Ratio	-	-	0.686	0.898
HCM Control Delay (s)	-	-	61.4	78.6
HCM Lane LOS	-	-	F	F
HCM 95th %tile Q(veh)	-	-	4.1	7.6

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

Intersection	
Int Delay, s/veh	4.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	5	77	0	0	10	15	71	0	3	0
Future Vol, veh/h	0	0	5	77	0	0	10	15	71	0	3	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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,-#		0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	5	81	0	0	11	16	75	0	3	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	79	116	3	82	79	54	3	0	0	91	0	0
Stage 1	3	3	-	76	76	-	-	-	-	-	-	-
Stage 2	76	113	-	6	3	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	910	774	1081	905	811	1013	1619	-	-	1504	-	-
Stage 1	1020	893	-	933	832	-	-	-	-	-	-	-
Stage 2	933	802	-	1016	893	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	905	769	1081	896	805	1013	1619	-	-	1504	-	-
Mov Cap-2 Maneuver	905	769	-	896	805	-	-	-	-	-	-	-
Stage 1	1013	893	-	926	826	-	-	-	-	-	-	-
Stage 2	926	796	-	1011	893	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	8.3	9.4	0.8	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1619	-	-	896	1081	1504	-	-
HCM Lane V/C Ratio	0.007	-	-	0.09	0.005	-	-	-
HCM Control Delay (s)	7.2	0	-	9.4	8.3	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	5

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	232	0	96	215	0	85
Future Vol, veh/h	232	0	96	215	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	22355
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	244	0	101	226	0	89

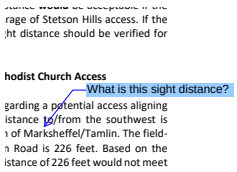
Major/Minor	Minor1		Major1	
Conflicting Flow All	214	214	0	0
Stage 1	214	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.42	6.22	-	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-
Pot Cap-1 Maneuver	774	826	-	-
Stage 1	822	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	774	826	-	-
Mov Cap-2 Maneuver	774	-	-	-
Stage 1	822	-	-	-
Stage 2	-	-	-	-

Approach	NB	NE
HCM Control Delay, s	11.8	0
HCM LOS	B	

Minor Lane/Major Mvmt	NET	NER	NBLn1
Capacity (veh/h)	-	-	774
HCM Lane V/C Ratio	-	-	0.316
HCM Control Delay (s)	-	-	11.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	1.4

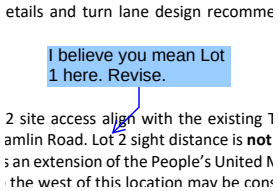
Markup Summary

dsdgrimm (6)



Subject: Engineer
Page Label: 5
Lock: Unlocked
Author: dsdgrimm
Date: 1/3/2019 4:55:50 PM
Color:

What is this sight distance?



Subject: Engineer
Page Label: 13
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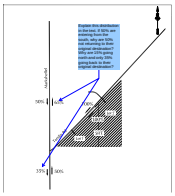
Author: dsdgrimm
Date: 1/7/2019 1:56:21 PM
Color:

I believe you mean Lot 1 here. Revise.



Subject: Engineer
Page Label: 19
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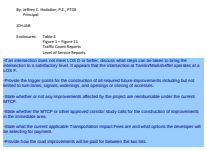
Author: dsdgrimm
Date: 1/7/2019 2:49:00 PM
Color:

Explain this distribution in the text. If 50% are entering from the south, why are 50% not returning to their original destination? Why are 15% going north and only 35% going back to their original destination?



Subject: Engineer
Page Label: 14
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Author: dsdgrimm
Date: 1/7/2019 2:49:29 PM
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-If an intersection does not meet LOS D or better, discuss what steps can be taken to bring the intersection to a satisfactory level. It appears that the intersection at Tamlin/Marksheffel operates at a LOS F.

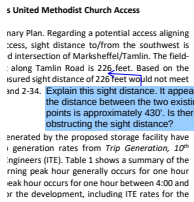
-Provide the trigger points for the construction of all required future improvements including but not limited to turn lanes, signals, widenings, and openings or closing of accesses.

-State whether or not any improvements affected by the project are reimbursable under the current MTCP.

-State whether the MTCP or other approved corridor study calls for the construction of improvements in the immediate area.

-State what the current applicable Transportation Impact Fees are and what options the developer will be selecting for payment.

-Provide how the road improvements will be paid for between the two lots.



Subject: Engineer
Page Label: 5
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Author: dsdgrimm
Date: 1/7/2019 9:07:54 AM
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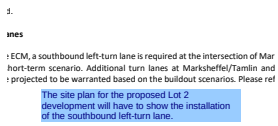
Explain this sight distance. It appears that the distance between the two existing access points is approximately 430'. Is there a hump obstructing the sight distance?



Subject: Engineer
Page Label: 12
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Author: dsdgrimm
Date: 1/7/2019 9:36:55 AM
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The site plan for the proposed Lot 2 development will have to show the installation of the southbound left-turn lane.

jchodsdon (1)

Subject: Rectangle
Page Label: 18
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Author: jchodsdon
Date: 12/20/2018 1:06:34 PM
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