Van Tuyl Village
Updated Traffic Impact Analysis Report

June 25, 2007

TRANSPORTATION
CONSULTANTS, INC.

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LSC TRANSPORTATION CONSULTANTS, INC.

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June 25, 2007

West Elk Investments, LLC
c/o Mr. Robert Williams
Williams Engineering, LLC
80 Camino Del Rio, Suite 1
Gunnison, Colorado 81230

RE: Van Tuyl Village
Updated Traffic Impact Analysis Report
LSC #066250

Dear Mr. Williams:

In response to your request, LSC Transportation Consultants, Inc. (LSC) has prepared this updated traffic impact analysis report for the proposed Van Tuyl Village mixed-use development located in Gunnison, Colorado. This report is an update to the *August 30, 2006 Van Tuyl Village Updated Traffic Impact Analysis Report* by LSC. The report accounts for the proposed primary State Highway 135/site access intersection being converted from the previously proposed three-quarter movement to a right-in/right-out movement, based on negotiations between the Colorado Department of Transportation and City of Gunnison staff.

We trust our findings and recommendations will assist you in planning and gaining approval of the proposed Van Tuyl Village mixed-use development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By _____
Christopher S. McGranahan, P.E., PTOE
Associate

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PROFESSIONAL ENGINEER

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Van Tuyl Village
Updated Traffic Impact Analysis Report

June 25, 2007

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LSC #066250

June 25, 2007

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Executive Summary

TRANSPORTATION
CONSULTANTS, INC.

Executive Summary

INTRODUCTION

LSC Transportation Consultants, Inc. (LSC) has prepared this updated traffic impact analysis report for the proposed Van Tuyl Village mixed-use development. The site is located on the west side of State Highway (SH) 135 between Spencer Avenue and County Road 13 (CR 13) on the north side of Gunnison, Colorado.

The site is proposed as approximately 61 single-family homes, 82 apartment units, and a maximum of 162,000 square feet of shopping center space based on the square footage to acreage ratio of 35 percent requested by the City of Gunnison staff. The amount ultimately built will likely be less than 162,000 square feet.

PROPOSED SITE ACCESS

The proposed primary SH 135/site access intersection does not meet the spacing criteria in the *Colorado State Highway Access Code* for full movement intersections, but would align with the existing Colorado Street and is supported by the City of Gunnison staff. It is unlikely that the SH 135/site access intersection would ever be signalized due to its proximity to the existing SH 135/ Spencer Avenue intersection's traffic signal. For these reasons, the primary SH 135/site access intersection is proposed as a right-in/right-out movement with no left-turn movements allowed to or from SH 135. The right-in/right-out movement would be controlled by signing and a pork-chop median. Colorado Street is proposed to remain full movement.

The secondary SH 135 site access would be via the existing Spencer Avenue signalized intersection and the existing CR 13 unsignalized intersection.

TRAFFIC COUNTS

The traffic counts were conducted during July 2006 in order to capture the summer season peak traffic volumes. The Spencer Avenue traffic volumes were increased by

approximately 50 westbound vehicles and 30 eastbound vehicles during the morning peak hour in an attempt to approximate school traffic volumes.

TRIP GENERATION

The site is projected to generate about 8,840 new vehicle-trips on the typical weekday, with about half entering and half exiting the site in a 24-hour period. During the weekday morning peak hour, about 150 vehicles would enter and 155 vehicles would exit the site. During the weekday afternoon peak hour, about 485 vehicles would enter and 490 vehicles would exit the site.

PROJECTED LEVELS OF SERVICE

All of the movements at the analyzed intersections are projected to operate at acceptable levels of service through the year 2026 with the addition of the site-generated traffic volumes, with the following exceptions.

The eastbound left-turn movement from CR 13 onto SH 135 is projected to operate at LOS F during the afternoon peak hour based on the 2026 total traffic volumes. During the afternoon peak hour, it is projected there will be sufficient capacity for this eastbound left-turn movement to be made at Spencer Avenue.

RECOMMENDED ROADWAY IMPROVEMENTS

Table 4 shows the roadway improvements required to achieve the projected levels of service, a projected timeline for each improvement, and the recommended party responsible for funding each improvement.

CDOT STATE HIGHWAY ACCESS PERMITS

The Colorado Department of Transportation (CDOT) will require CDOT State Highway Access Permits for the proposed primary site access aligning with Colorado Street and the two secondary site access points at the western Spencer Avenue and CR 13 approaches to SH 135. The access permit applications will be based on the 2006 total traffic volumes.

RECOMMENDED SIDEWALK AND BICYCLE IMPROVEMENTS

A sidewalk is proposed for the site's internal streets and along the site perimeter. In addition, a sidewalk is proposed to connect the site perimeter to the traffic signal pedestrian crossing at SH 135 and Spencer Avenue. On-street bicycle lanes are proposed on both sides of Vulcan Street along the site frontage.

LOCAL NEIGHBORHOOD TRAFFIC IMPACTS

The site-generated traffic volumes will increase the traffic volumes on the local streets surrounding the site. The neighborhood traffic impact is expected to be relatively minor, with most of the traffic impact occurring along Spencer Avenue and CR 13. Significant street capacity will remain after the addition of the site-generated traffic volumes. For example, the 2026 total east/west through traffic volumes projected on Spencer Avenue and CR 13 could double from the estimates and all the side roads would still be projected to operate at acceptable levels of service.

Updated Traffic Impact Analysis Report

TRANSPORTATION
CONSULTANTS, INC.

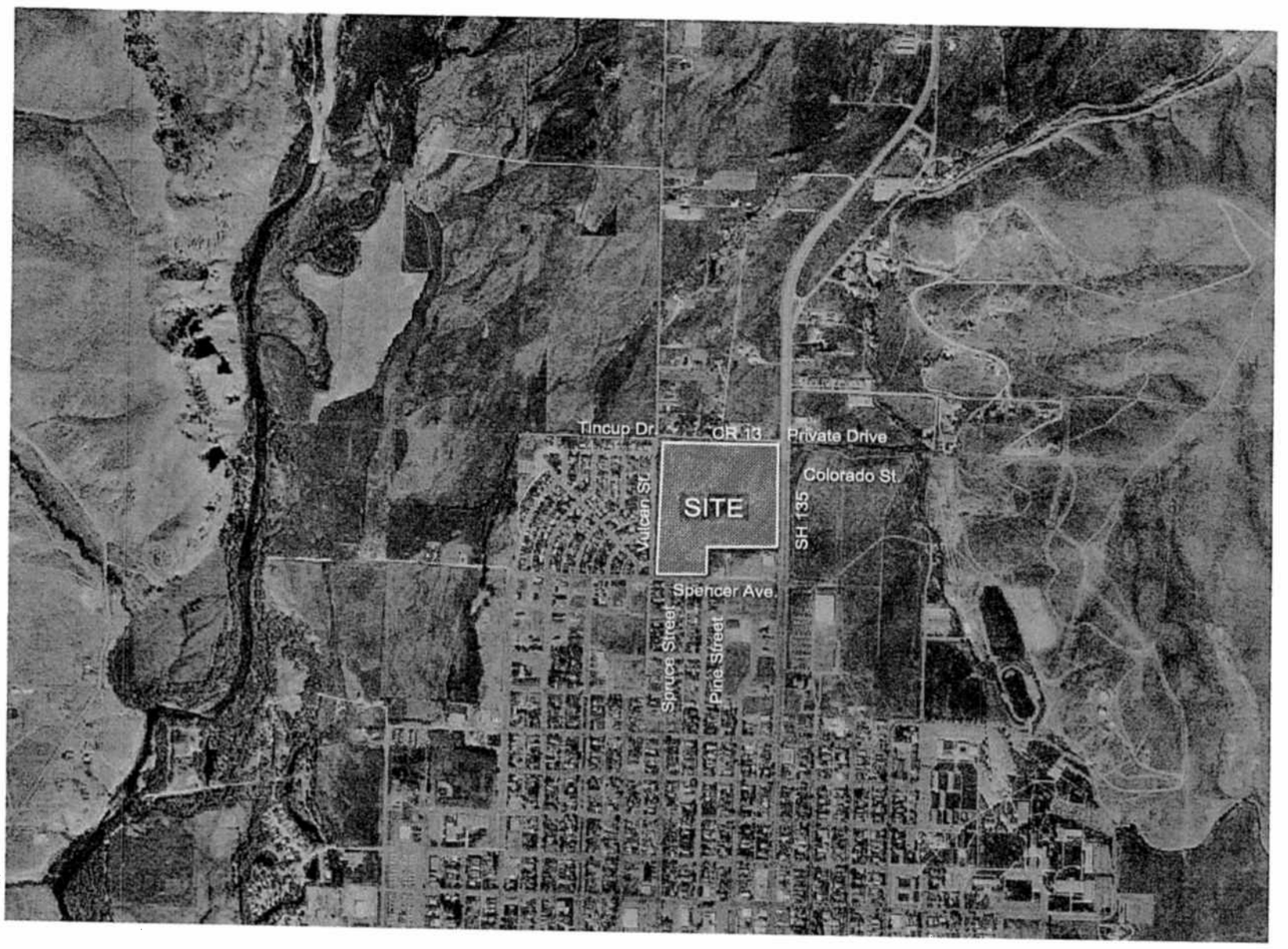
SECTION A

Introduction

LSC Transportation Consultants, Inc. (LSC) has prepared this updated traffic impact analysis report for the proposed Van Tuyl Village mixed-use development. As shown on Figure 1, the site is located on the west side of State Highway (SH) 135 between Spencer Avenue and County Road 13 (CR 13) on the north side of Gunnison, Colorado. The purpose of this updated report is to account for the primary SH 135/site access intersection being converted from the previously proposed three-quarter movement to a right-in/right-out movement, based on an agreement between the Colorado Department of Transportation (CDOT) and City of Gunnison staff.

This report is being prepared as part of a submittal to the City of Gunnison and CDOT. The report identifies the traffic impacts of the proposed development on the surrounding street system and the street system improvements needed to mitigate the traffic impacts.

The report contains the following: a determination of the existing traffic and street conditions in the vicinity of the site including the lane geometries and traffic controls; the projected weekday, morning peak-hour, and afternoon peak-hour vehicle-trips to be generated by the proposed development; the assignment of the projected traffic volumes to the surrounding street system; a projection of the future 2026 background and 2026 total traffic volumes on the street system; and the resulting traffic impacts. Based on the traffic impacts, LSC has recommended improvements to the surrounding street system, along with a projected time horizon and proposed funding responsibility for each improvement.



LSC TRANSPORTATION CONSULTANTS, INC.

Vicinity Map

Van Tuyl Village

Figure 1
LSC # 066250

SECTION B

Land Use and Access

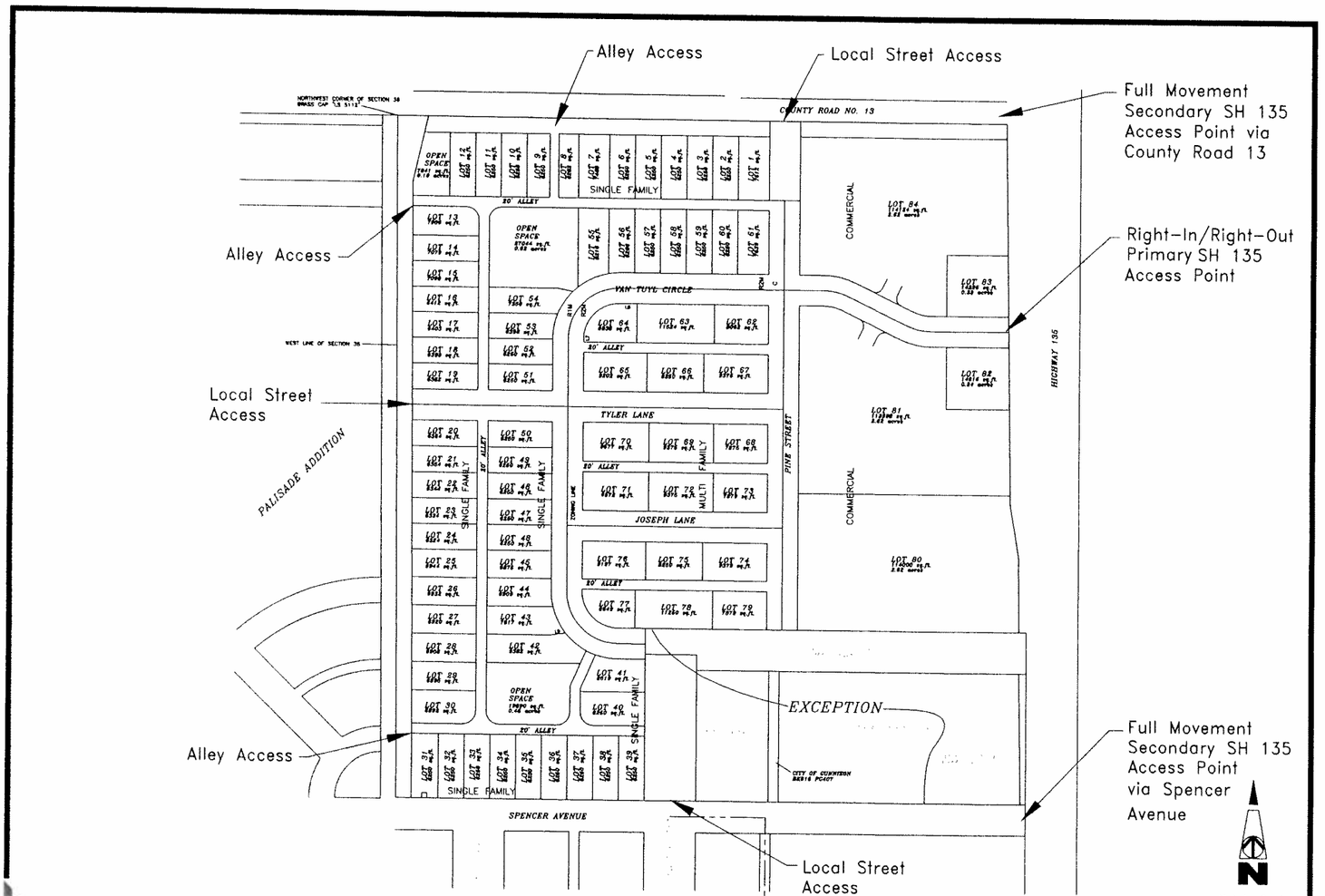
The existing land use in the vicinity of the site is agricultural.

Figure 2 shows the preliminary site plan. The site is proposed as approximately 61 single-family homes, 82 apartment units, and a maximum of 162,000 square feet of shopping center space based on the square footage to acreage ratio of 35 percent required by the City of Gunnison staff. The amount ultimately built will likely be less than 162,000 square feet.

Table 1 shows the site access points to SH 135.

The proposed primary SH 135/site access intersection does not meet the spacing criteria in the *Colorado State Highway Access Code* for full movement intersections, but would align with the existing Colorado Street and is supported by the City of Gunnison staff. It is unlikely that the SH 135/site access intersection would ever be signalized due to its proximity to the existing SH 135/ Spencer Avenue intersection's traffic signal. Therefore, the primary SH 135/site access intersection is proposed as a right-in/right-out movement with no left-turn movements allowed to or from SH 135. The right-in/right-out movement would be controlled by signing and a pork-chop median. Colorado Street is proposed to remain full movement.

The secondary SH 135 site access would be via the existing Spencer Avenue signalized intersection and the existing CR 13 unsignalized intersection.



Site Plan

Van Tuyl Village

Figure 2

LSC # 066250

TRANSPORTATION CONSULTANTS, INC.

Table 1
Van Tuyl Village
State Highway Access Description

Timeline	Primary Site Access	Secondary Site Access	Secondary Site Access
2006 Total Traffic	Right-in/right-out access on State Highway 135 aligning with Colorado Street	Full-movement unsignalized access on State Highway 135 via County Road 13	Full-movement signalized access on State Highway 135 via Spencer Avenue
2026 Total Traffic	Right-in/right-out access on State Highway 135 aligning with Colorado Street	Full-movement unsignalized access on State Highway 135 via County Road 13	Full-movement signalized access on State Highway 135 via Spencer Avenue

Source: LSC Transportation Consultants, Inc.

SECTION C

Area Roadways

The roadways adjacent to the site are shown on Figure 1, and are listed below followed by a brief description.

- **State Highway 135 (SH 135)** is a north/south route extending from the southern terminus at US Highway 50 (US 50) in downtown Gunnison to the northern terminus in the area of Crested Butte, Colorado. Adjacent to the site, SH 135 is a five-lane roadway classified as a Non-Rural Arterial (N-RA) by CDOT. The posted speed limit on SH 135 is 40 miles per hour (mph) in the vicinity of the site, and transitions to 55 mph just north of CR 13.

- **County Road 13 (CR 13)** is a relatively narrow paved County Road that provides access to SH 135 on the north side of the site. The posted speed limit on CR 13 is 25 mph in the vicinity of the site.

- **Colorado Street** is a city street accessing SH 135 from the east. The primary site access is proposed to align with Colorado Street.

- **Pine Street** is a city street extending south from Spencer Avenue through the City of Gunnison's grid system to US 50. The site's primary north/south street is proposed to align with Pine Street at Spencer Avenue.

- **Spencer Avenue** is a city street located south of the site. Spencer Avenue is improved with curb and gutter, and has signalized access to SH 135. The posted speed limit on Spencer Avenue is 30 mph in the vicinity of the site. To the east of SH 135, Spencer Avenue accesses the north end of the WalMart and City Market development.

- **Spruce Street** is a city street extending south from Spencer Avenue through the City of Gunnison's grid system to US 50.

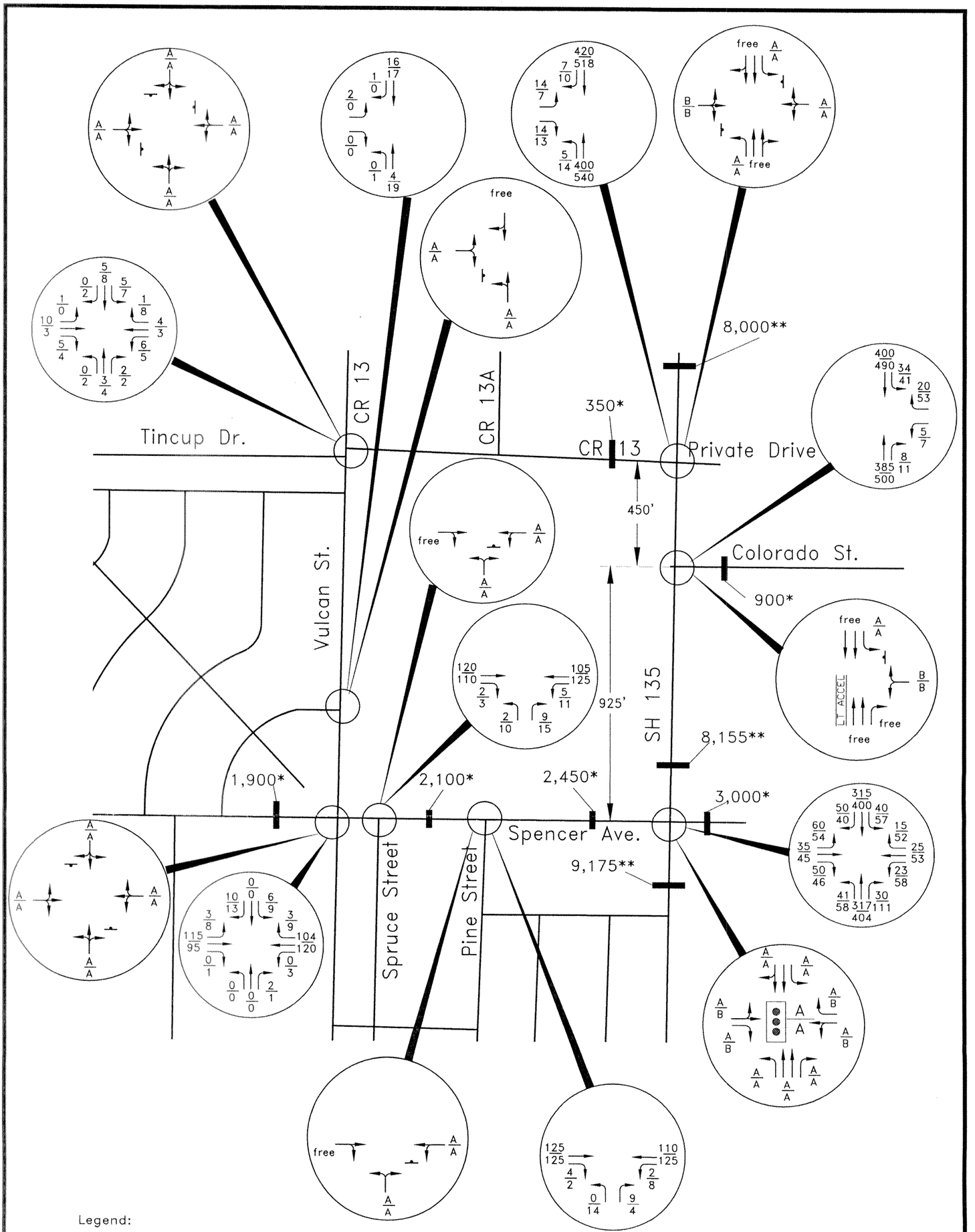
- **Vulcan Street** is a city street extending south from CR 13 on the west side of the site. Unlike Pine Street and Spruce Street, Vulcan Street does not extend south all the way to US 50, but rather terminates at Arthur Avenue.

SECTION D

Existing Traffic

Figure 3 shows the existing morning and afternoon peak-hour traffic volumes for the intersections in the vicinity of the site, as well as the estimated weekday traffic volumes on the streets surrounding the site. Figure 3 also shows the existing lane geometries, traffic controls, and levels of service for the intersections surrounding the site.

The traffic counts were conducted during July 2006 in order to capture the summer season peak traffic volumes. The Spencer Avenue traffic volumes were increased by approximately 50 westbound vehicles and 30 eastbound vehicles during the morning peak hour in an attempt to approximate school traffic volumes.



Legend:

xxx/xxx am/pm –Weekday peak-hour traffic (vehicles per hour)

XX,XXX –Average weekday traffic (vehicles per day)

* Estimated by LSC from the peak hour counts

** Based on information obtained from the CDOT website

X/X am/pm –Individual movement peak-hour Level of Service

X/X am/pm –Entire intersection peak-hour Level of Service (weighted average of all movements)

–Stop sign

–Traffic Signal

Not to Scale

Existing Traffic, Lane Geometry, Traffic Control and Level of Service

Figure 3

Van Tuyl Village

LSC # 066250

TRANSPORTATION CONSULTANTS, INC.

SECTION E

Trip Generation

Estimates of the traffic volumes expected to be generated by the development have been made using the nationally published trip generation rates found in *Trip Generation, 6th Edition, 1997* by the Institute of Transportation Engineers (ITE). Table 2 shows the results of the trip generation estimates for the site assuming a maximum shopping center floor area to acreage ratio of 35 percent, as required by the City of Gunnison staff. The amount ultimately built will likely be less than 162,000 square feet.

A pass-by trip is one made by a motorist who would already be on an adjacent street regardless of this development, but who stops in at the site while passing by. The motorist would then continue on his or her way to a final destination in the original direction. To be conservative, the pass-by trips assumed for the site are half of those recommended by the "Trip Generation Handbook - An ITE Proposed Recommended Practice, October 1998" by ITE.

The site is projected to generate about 8,840 new vehicle-trips on the typical weekday, with about half entering and half exiting the site in a 24-hour period. During the weekday morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 150 vehicles would enter and 155 vehicles would exit the site. During the weekday afternoon peak hour, which generally occurs for one hour between 4:30 and 6:30 p.m., about 485 vehicles would enter and 490 vehicles would exit the site.

Table 2
Van Tuyl Village
Trip Generation Estimates

Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates [1]					Total Trips Generated					Trips Generated	
			Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Pass-By Trips [2]	Average New Weekday Traffic
				In	Out	In	Out		In	Out	In	Out		
210	Single-Family Detached Housing	61 DU [3]	9.57	0.19	0.56	0.65	0.36	584	11	34	39	22	0%	584
220	Apartment	82 DU	6.63	0.08	0.43	0.42	0.20	544	7	35	34	17	0%	544
820	Shopping Center [4]	162 KSF [5]	57.38	0.80	0.51	2.56	2.77	9,296	130	83	414	449	17%	7,716
Total								**10,423**	**148**	**152**	**487**	**488**		**8,843**

Notes:
(1) Source: "Trip Generation, 6th Edition, 1997" by the Institute of Transportation Engineers (ITE)
(2) Source: "Trip Generation Handbook - An ITE Proposed Recommended Practice, October 1998" by ITE
(3) DU = dwelling unit
(4) Assumes the shopping center at a 35 percent floor area ratio, as required by the City of Gunnison staff. The amount ultimately built will likely be less than 162,000 square feet.
(5) KSF = thousand square feet

Source: LSC Transportation Consultants, Inc.

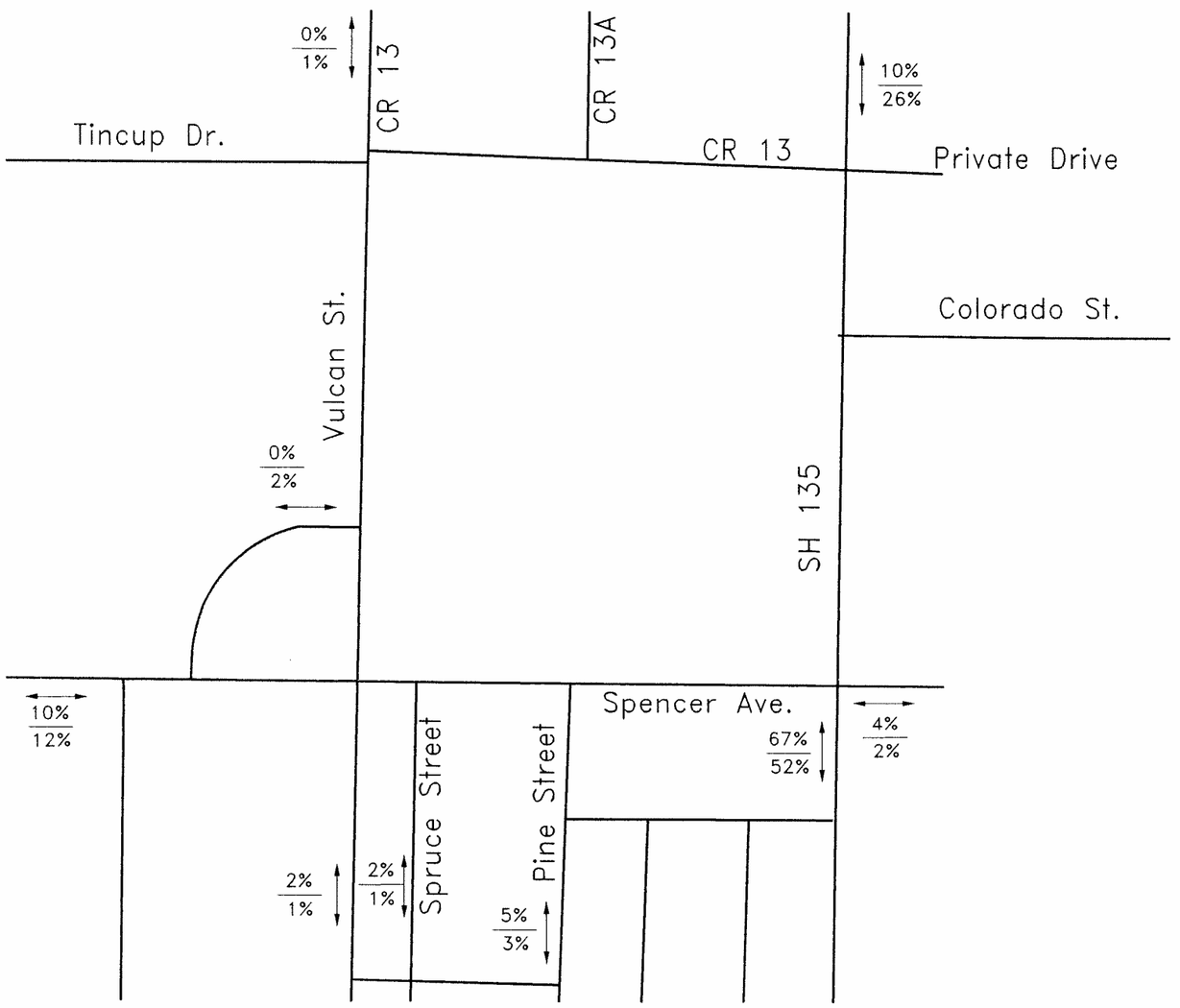
SECTION F

Trip Distribution and Assignment

The directional distribution of the traffic volumes to be generated by the development is an important factor in determining the site's traffic impacts. There are many factors that determine the distribution including: the location of the site with respect to the residential, employment, and activity centers and the balance of the City of Gunnison area; the land uses proposed for the site; and the proposed access and street system serving the site.

Figure 4 shows the projected weekday, morning peak-hour, and afternoon peak-hour site-generated traffic distribution for the residential and commercial portions of the site.

The site-generated traffic volumes on the adjacent street system were determined by applying the distribution percentages (from Figure 4) to the trip generation estimates (from Table 2). Figure 5 shows the site-generated traffic volumes.



Legend:

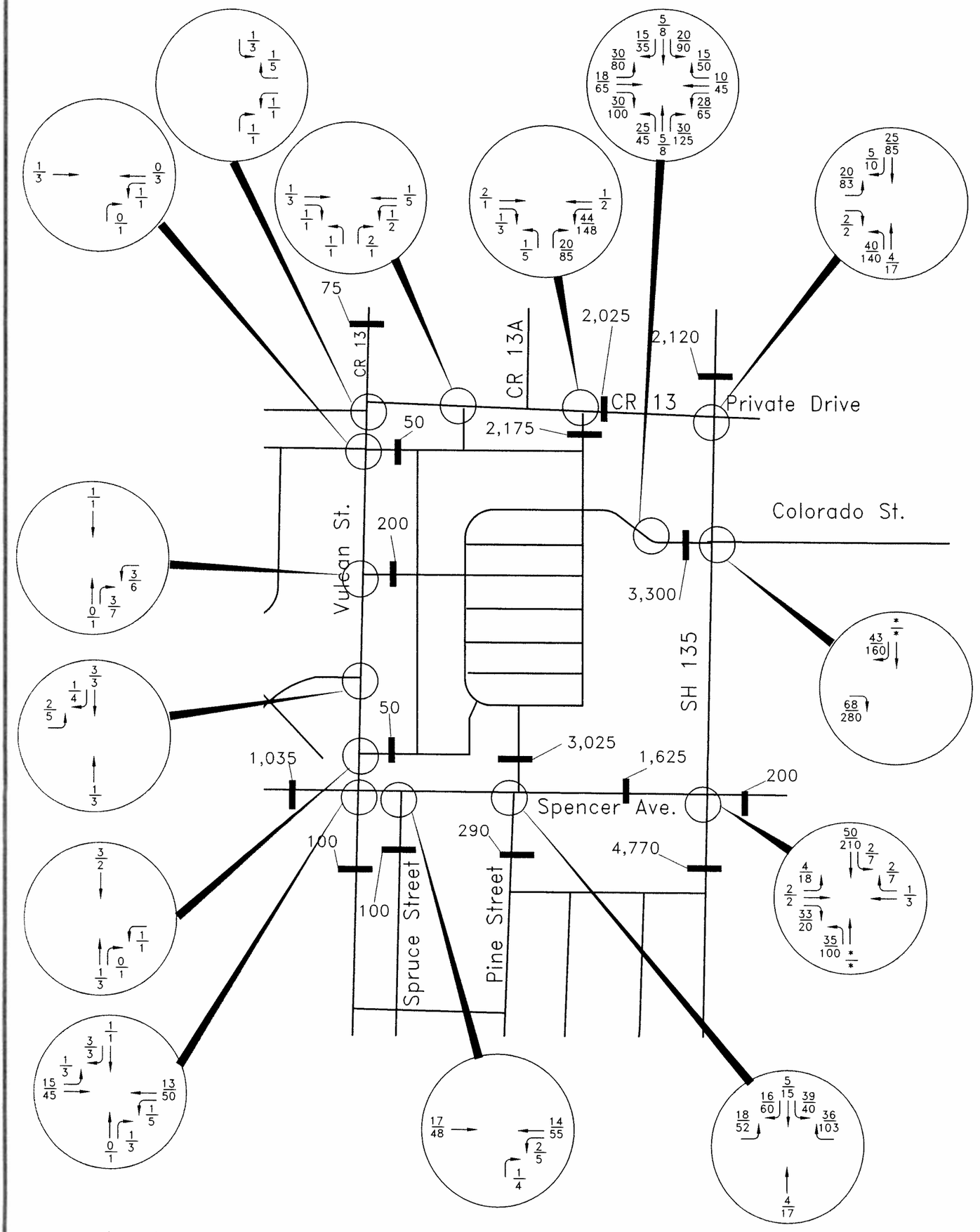
XX –Residential directional distribution of site-generated traffic
XX –Commercial directional distribution of site-generated traffic

Not to Scale

TRANSPORTATION CONSULTANTS, INC.

Directional Distribution
Van Tuyl Village

Figure 4
LSC # 066250



Legend:

xxx / xxx (am / pm) –Weekday peak-hour traffic (vehicles per hour)

XX,XXX –Average weekday traffic (vehicles per day)

* –Includes Pass-by Trips

NOTE:
City of Gunnison staff required a very conservative 35 % commercial floor area to acreage ratio.

Not to Scale

TRANSPORTATION CONSULTANTS, INC.

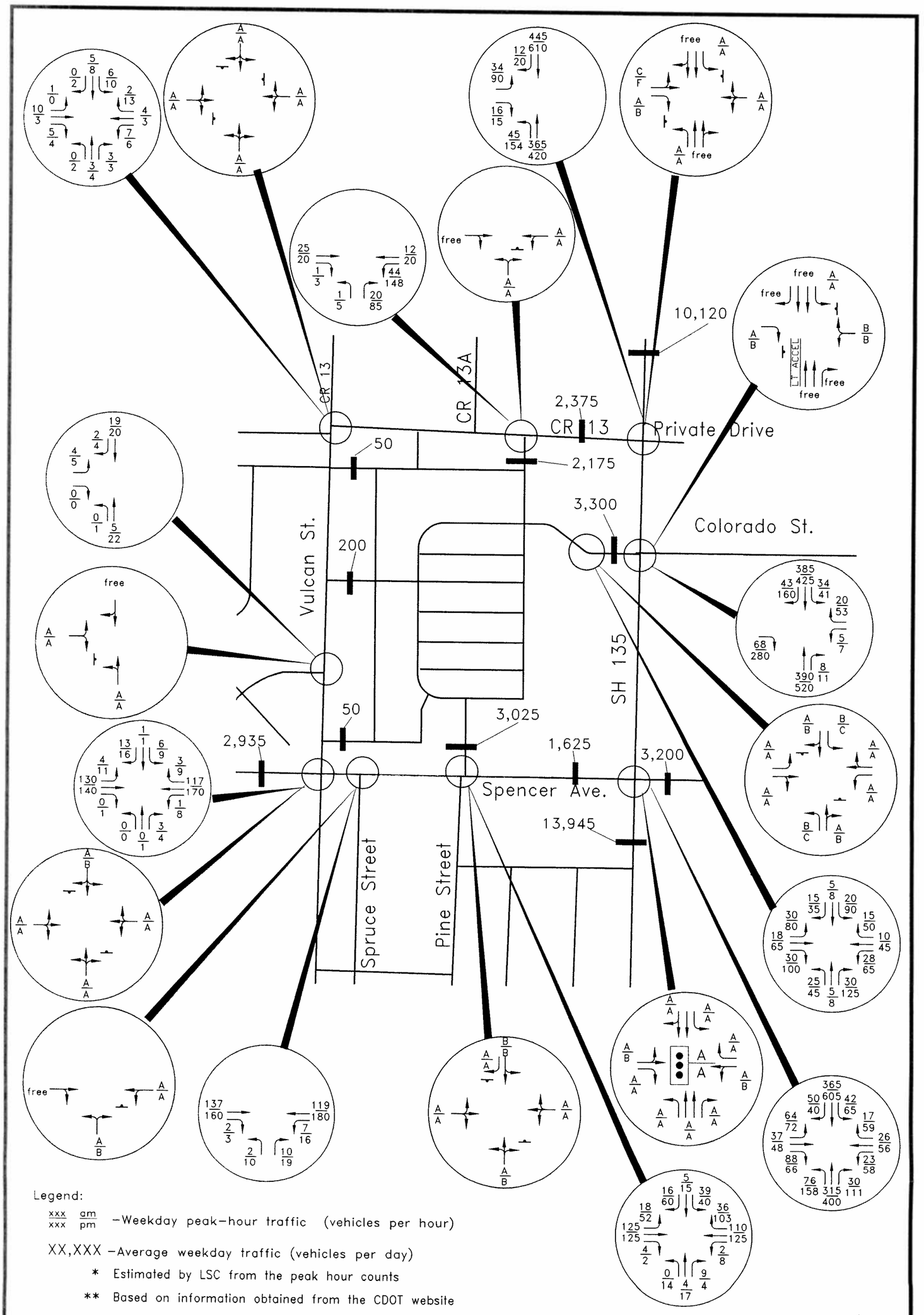
Site-Generated Traffic
Van Tuyl Village

Figure 5
LSC # 066250

SECTION G

2006 Total Traffic

Figure 6 shows the sum of the existing traffic volumes (from Figure 3) plus the site-generated traffic volumes (from Figure 5). The 2006 total traffic volumes represents the site's short-term traffic impacts on the surrounding street system. Figure 6 also shows the proposed lane geometries, traffic controls, and projected levels of service for the intersections surrounding the site.



2006 Total Traffic, Lane Geometry, Traffic Control and Level of Service

Figure 6

Van Tuyl Village

LSC # 066250

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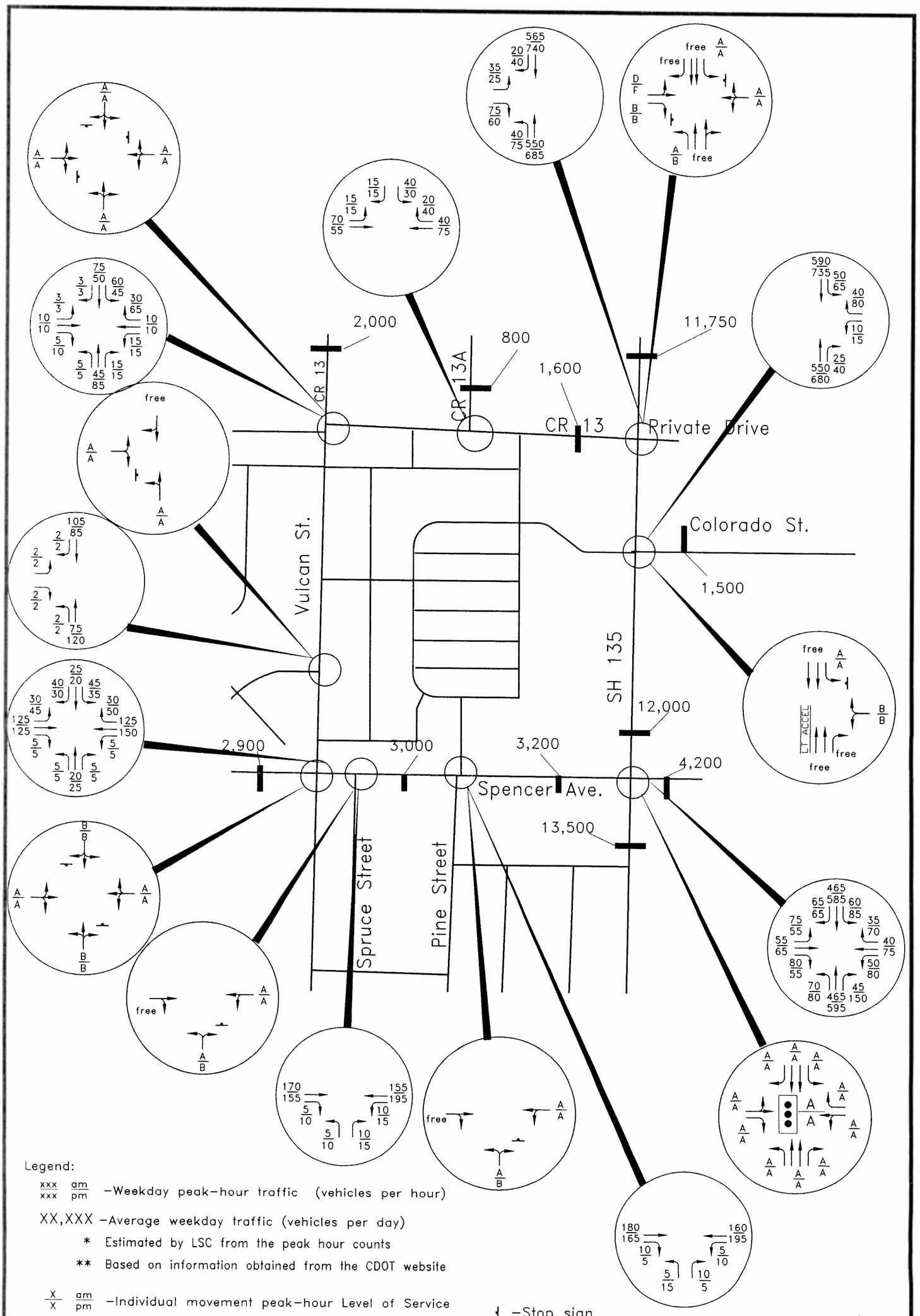
SECTION H

2026 Background Traffic

Figure 7 shows the background traffic volume estimates for the year 2026. Background traffic is the traffic estimated to be on the street system without consideration of the site-generated traffic volumes. The background traffic volumes include the traffic generated by future surrounding developments and the through traffic on the area streets. Figure 7 also shows the proposed lane geometries, traffic controls, and projected levels of service for the intersections surrounding the site.

The 2026 background traffic volumes were based on the SH 135 growth rates obtained from CDOT's website and on rough future land use assumptions obtained from the City of Gunnison staff.

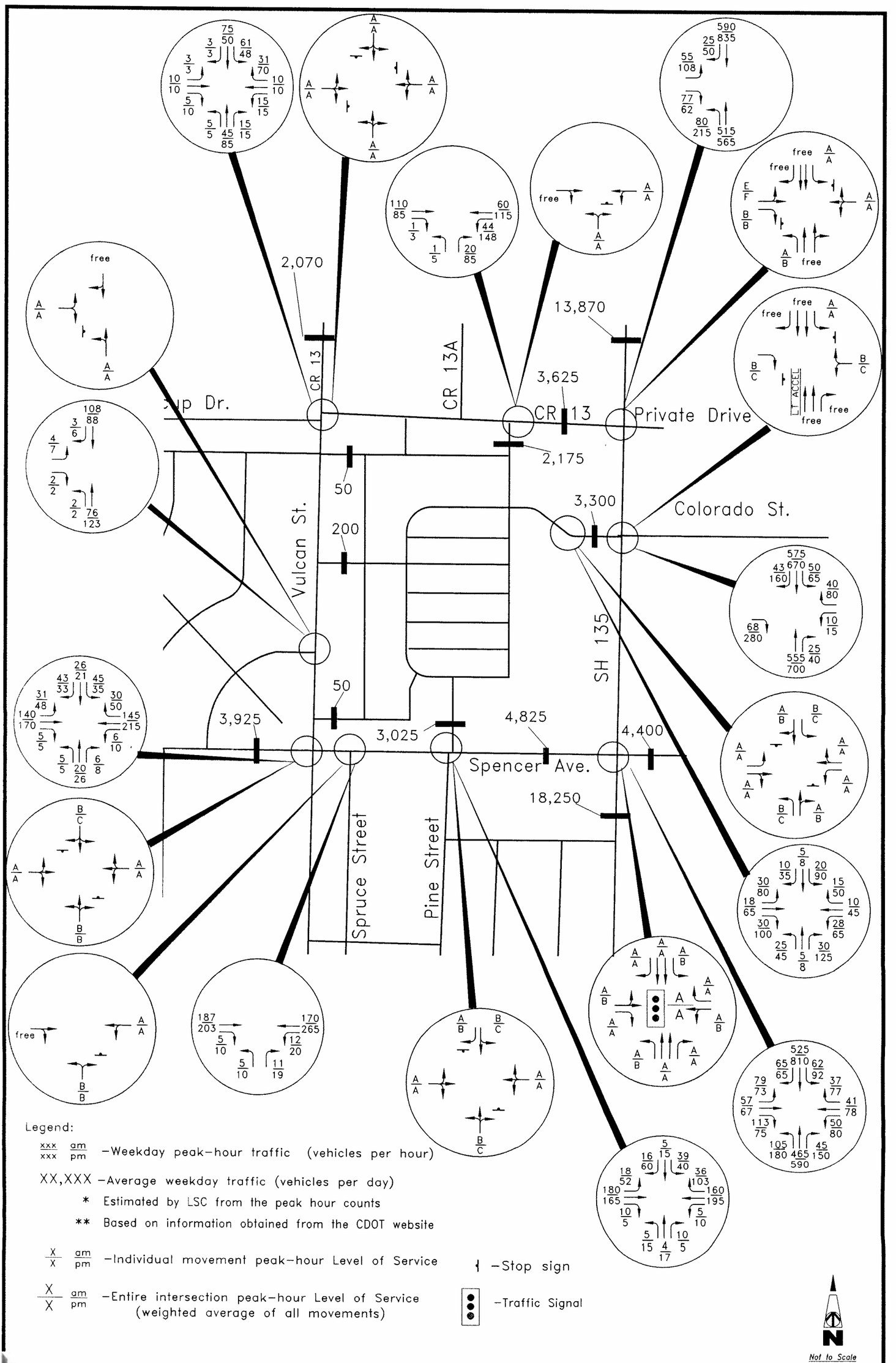


2026 Background Traffic, Lane Geometry, Traffic Control and Level of Service Figure 7

Van Tuyl Village

LSC # 066250

TRANSPORTATION CONSULTANTS, INC.



2026 Total Traffic, Lane Geometry, Traffic Control and Level of Service

Van Tuyl Village

Figure 8

LSC # 066250

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SECTION J

Projected Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of very little congestion or delay. LOS F is indicative of a high level of congestion or delay.

The Synchro Version 6 software package was used to determine the projected levels of service for the intersections in the vicinity of the site based on the 2006 total, 2026 background, and 2026 total traffic volumes. Table 3 and Figures 6, 7, and 8 show the level of service analysis results. The level of service reports are attached in the Appendix.

All of the movements at the analyzed intersections are projected to operate at acceptable levels of service through the year 2026 with the addition of the site-generated traffic volumes, with the following exceptions.

The eastbound left-turn movement from CR 13 onto SH 135 is projected to operate at LOS F during the afternoon peak hour based on the 2026 total traffic volumes. During the afternoon peak hour, it is projected there will be sufficient capacity for this eastbound left-turn movement to be made at Spencer Avenue.

Table 4 shows the improvements required to achieve the projected levels of service, a projected timeline for each improvement, and the recommended party responsible for funding each improvement.

Table 3
Van Tuyl Village
Levels of Service

Short-Term Levels of Service

Intersection	Traffic Control	Peak Hour	Existing Traffic												2006 Total Traffic											
			EB [1]			WB			NB			SB			EB			WB			NB			SB		
			L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
State Highway 135 / County Road 13	Two-Way Stop	AM	B	B	B	A	A	A	A	free	free	A	free	free	C	C	A	A	A	A	A	free	free	A	free	free
		PM	B	B	B	A	A	A	A	free	free	A	free	free	F	F	B	A	A	A	A	free	free	A	free	free
State Highway 135 / Colorado Street	One-Way or Two-Way Stop	AM	—	—	—	B	—	B	—	free	free	A	free	—	—	—	A	B	—	B	—	free	free	A	free	free
		PM	—	—	—	B	—	B	—	free	free	A	free	—	—	—	B	B	—	B	—	free	free	A	free	free
State Highway 135 / Spencer Avenue	Traffic Signal	AM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
		PM	B	B	B	B	B	B	A	A	A	A	A	A	B	B	A	B	B	A	B	A	A	A	A	A
County Road 13 / Tincup Drive	Three-Way Stop	AM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
		PM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
County Road 13 / Site Access	One-Way Stop	AM	—	—	—	—	—	—	—	—	—	—	—	—	—	free	free	A	A	—	A	—	A	—	—	—
		PM	—	—	—	—	—	—	—	—	—	—	—	—	—	free	free	A	A	—	A	—	A	—	—	—
Dorchester Avenue / Vulcan Street	One-Way Stop	AM	A	—	A	—	—	—	A	A	—	—	free	free	A	—	A	—	—	—	A	A	—	—	free	free
		PM	A	—	A	—	—	—	A	A	—	—	free	free	A	—	A	—	—	—	A	A	—	—	free	free
Pine Street / Spencer Avenue	One-Way or Two-Way Stop	AM	—	free [2]	free	A	A	—	A	—	A	—	—	—	A	A	A	A	A	A	A	A	A	B	B	A
		PM	—	free	free	A	A	—	A	—	A	—	—	—	A	A	A	A	A	A	B	B	B	B	B	A
Spencer Avenue / Spruce Street	One-Way Stop	AM	—	free	free	A	A	—	A	—	A	—	—	—	—	free	free	A	A	—	A	—	A	—	—	—
		PM	—	free	free	A	A	—	A	—	A	—	—	—	—	free	free	A	A	—	B	—	B	—	—	—
Spencer Avenue / Vulcan Street	Two-Way Stop	AM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
		PM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B
Commercial Access / Site Access	Two-Way Stop	AM	—	—	—	—	—	—	—	—	—	—	—	—	A	A	A	A	A	A	B	A	A	B	A	A
		PM	—	—	—	—	—	—	—	—	—	—	—	—	A	A	A	A	A	A	C	B	B	C	B	B

Projected Long-Term Levels of Service

Intersection	Traffic Control	Peak Hour	2026 Background Traffic												2026 Total Traffic											
			EB			WB			NB			SB			EB			WB			NB			SB		
			L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
State Highway 135 / County Road 13	Two-Way Stop	AM	D	D	B	A	A	A	A	free	free	A	free	free	E	E	B	A	A	A	A	free	free	A	free	free
		PM	F	F	B	A	A	A	B	free	free	A	free	free	F	F	B	A	A	A	B	free	free	A	free	free
State Highway 135 / Colorado Street	Two-Way Stop	AM	—	—	—	B	—	B	—	free	free	A	free	—	—	—	B	B	—	B	—	free	free	A	free	free
		PM	—	—	—	B	—	B	—	free	free	A	free	—	—	—	C	C	—	C	—	free	free	A	free	free
State Highway 135 / Spencer Avenue	Traffic Signal	AM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
		PM	A	A	A	A	A	A	A	A	A	A	A	A	B	B	A	B	B	A	A	A	A	A	A	A
County Road 13 / Tincup Drive	Three-Way Stop	AM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
		PM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
County Road 13 / Site Access	One-Way Stop	AM	—	—	—	—	—	—	—	—	—	—	—	—	—	free	free	A	A	—	A	—	A	—	—	—
		PM	—	—	—	—	—	—	—	—	—	—	—	—	—	free	free	A	A	—	A	—	A	—	—	—
Dorchester Avenue / Vulcan Street	One-Way Stop	AM	A	—	A	—	—	—	A	A	—	—	free	free	A	—	A	—	—	—	A	A	—	—	free	free
		PM	A	—	A	—	—	—	A	A	—	—	free	free	A	—	A	—	—	—	A	A	—	—	free	free
Pine Street / Spencer Avenue	Two-Way Stop	AM	—	free	free	A	A	—	A	—	A	—	—	—	A	A	A	A	A	A	B	B	B	B	B	A
		PM	—	free	free	A	A	—	B	—	B	—	—	—	A	A	A	A	A	A	C	C	C	C	C	B
Spencer Avenue / Spruce Street	One-Way Stop	AM	—	free	free	A	A	—	A	—	A	—	—	—	—	free	free	A	A	—	B	—	B	—	—	—
		PM	—	free	free	A	A	—	B	—	B	—	—	—	—	free	free	A	A	—	B	—	B	—	—	—
Spencer Avenue / Vulcan Street	Two-Way Stop	AM	A	A	A	A	A	A	B	B	B	B	B	B	A	A	A	A	A	A	B	B	B	B	B	B
		PM	A	A	A	A	A	A	B	B	B	B	B	B	A	A	A	A	A	A	B	B	B	C	C	C
Commercial Access / Site Access	Two-Way Stop	AM	—	—	—	—	—	—	—	—	—	—	—	—	A	A	A	A	A	A	B	A	A	B	A	A
		PM	—	—	—	—	—	—	—	—	—	—	—	—	A	A	A	A	A	A	C	B	B	C	B	B

Notes:
(1) Approaches: EB = eastbound, WB = westbound, NB = northbound, SB = southbound, L = left, T = through, R = right
(2) Free level of service indicates the movement is not required to yield to other vehicles

Source: LSC Transportation Consultants, Inc.

Table 4
Van Tuyl Village
Time Horizon For Improvements

Time Horizon	Improvements	Responsibility
2006 Total Traffic	**State Highway 135 (SH 135) Improvements:** A right-in/right-out access, aligning with Colorado Street, should be constructed. The following auxiliary lane is required: a 40 mile per hour (mph) southbound right-turn deceleration lane (226-foot lane plus a 144-foot transition taper). No acceleration lane is required because the posted speed limit is not greater than 40 mph.	Van Tuyl Village
	Local Street Improvements: The proposed site access points should be located as shown on the report figures. The southbound approach to Spencer Avenue aligning with Pine Street should have a shared through/left-turn lane and a short dedicated right-turn lane. The internal intersection located west of the right-in/right-out access to State Highway 135 should have a shared through/right-turn lane and a dedicated left-turn lane for each approach, in order to avoid queuing and stacking issues.	
2026 Background Traffic	A potential improvement would be mitigation of the eastbound movement's failing level of service at the State Highway 135/County Road 13 intersection. A traffic signal warrant is unlikely to be met, based on the traffic volumes proposed at this time. The proposed future land use may ultimately drive a signal warrant.	City of Gunnison, Gunnison County, or future development
	A potential improvement would be adding a 40 mph southbound right-turn deceleration lane (226-foot lane plus 144-foot transition taper) on State Highway 135 at Spencer Avenue.	City of Gunnison, Gunnison County, or future development
	A potential improvement would be adding a 55 mph southbound right-turn deceleration lane (378-foot lane plus 222-foot transition taper) on State Highway 135 at County Road 13.	City of Gunnison, Gunnison County, or future development
2026 Total Traffic	No additional improvements beyond those recommended for the 2026 background traffic.	N/A

Source: LSC Transportation Consultants, Inc.

SECTION K

Conclusions and Recommendations

Van Tuyl Village is proposed as approximately 61 single-family homes, 82 apartment units, and a maximum of 162,000 square feet of shopping center space based on the square footage to acreage ratio of 35 percent required by the City of Gunnison staff. The amount ultimately built will likely be less than 162,000 square feet.

PROPOSED SITE ACCESS

The proposed primary SH 135/site access intersection does not meet the spacing criteria in the *Colorado State Highway Access Code* for full movement intersections, but would align with the existing Colorado Street and is supported by the City of Gunnison staff. It is unlikely the SH 135/site access intersection would ever be signalized due to its proximity to the existing SH 135/Spencer Avenue intersection's traffic signal. Therefore, the primary SH 135/site access intersection is proposed as a right-in/right-out movement with no left-turn movements allowed to or from SH 135. The right-in/right-out movement would be controlled by signing and a pork-chop median. Colorado Street is proposed to remain full movement.

The secondary SH 135 site access would be via the existing Spencer Avenue signalized intersection and the existing CR 13 unsignalized intersection.

TRAFFIC COUNTS

The traffic counts were conducted during July 2006 in order to capture the summer season peak traffic volumes. The Spencer Avenue traffic volumes were increased by approximately 50 westbound vehicles and 30 eastbound vehicles during the morning peak hour in an attempt to approximate school traffic volumes.

TRIP GENERATION

The site is projected to generate about 8,840 new vehicle-trips on the typical weekday, with about half entering and half exiting the site in a 24-hour period. During the weekday morning peak hour, about 150 vehicles would enter and about 155 vehicles would exit the site. During the weekday afternoon peak hour, about 485 vehicles would enter and 490 vehicles would exit the site.

PROJECTED LEVELS OF SERVICE

All of the movements at the analyzed intersections are projected to operate at acceptable levels of service through the year 2026 with the addition of the site-generated traffic volumes, with the following exceptions.

The eastbound left-turn movement from CR 13 onto SH 135 is projected to operate at LOS F during the afternoon peak hour based on the 2026 total traffic volumes. During the afternoon peak hour, it is projected there will be sufficient capacity for this eastbound left-turn movement to be made at Spencer Avenue.

RECOMMENDED ROADWAY IMPROVEMENTS

Table 4 shows the roadway improvements required to achieve the projected levels of service, a projected timeline for each improvement, and the recommended party responsible for funding each improvement.

CDOT STATE HIGHWAY ACCESS PERMITS

CDOT will require CDOT State Highway Access Permits for the proposed primary site access aligning with Colorado Street and the two secondary site access points at the western Spencer Avenue and CR 13 approaches to SH 135. The access permit applications will be based on the 2006 total traffic volumes.

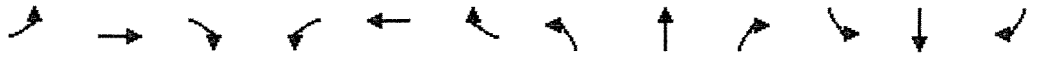
RECOMMENDED SIDEWALK AND BICYCLE IMPROVEMENTS

A sidewalk is proposed for the site's internal streets and along the site perimeter. In addition, a sidewalk is proposed to connect the site perimeter to the traffic signal pedestrian crossing at SH 135 and Spencer Avenue. On-street bicycle lanes are proposed on both sides of Vulcan Street along the site frontage.

LOCAL NEIGHBORHOOD TRAFFIC IMPACTS

The site-generated traffic volumes will increase the traffic volumes on the local streets surrounding the site. The neighborhood traffic impact is expected to be relatively minor, with most of the traffic impact occurring along Spencer Avenue and CR 13. Significant street capacity will remain after the addition of the site-generated traffic volumes. For example, the 2026 total east/west through traffic volumes projected on Spencer Avenue and CR 13 could double from the estimates and all the side roads would still be projected to operate at acceptable levels of service.

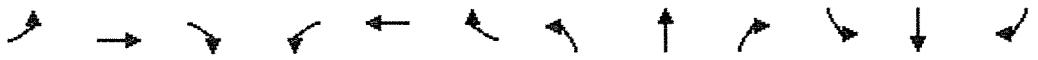
Appendix



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	14	0	14	0	0	0	5	400	0	0	420	7
Peak Hour Factor	0.70	0.60	0.70	0.60	0.60	0.60	0.60	0.95	0.60	0.60	0.95	0.65
Hourly flow rate (vph)	20	0	20	0	0	0	8	421	0	0	442	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	675	885	226	679	891	211	453			421		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	675	885	226	679	891	211	453			421		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	97	100	100	100	99			100		
cM capacity (veh/h)	340	282	780	329	280	798	1111			1142		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	40	0	8	281	140	0	295	158
Volume Left	20	0	8	0	0	0	0	0
Volume Right	20	0	0	0	0	0	0	11
cSH	473	1700	1111	1700	1700	1700	1700	1700
Volume to Capacity	0.08	0.00	0.01	0.17	0.08	0.00	0.17	0.09
Queue Length 95th (ft)	7	0	1	0	0	0	0	0
Control Delay (s)	13.3	0.0	8.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	13.3	0.0	0.2			0.0		
Approach LOS	B	A						

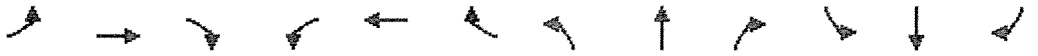
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	0	13	0	0	0	14	540	0	0	518	10
Peak Hour Factor	0.65	0.60	0.70	0.60	0.60	0.60	0.75	0.95	0.60	0.60	0.95	0.70
Hourly flow rate (vph)	11	0	19	0	0	0	19	568	0	0	545	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	874	1158	280	897	1165	284	560			568		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	874	1158	280	897	1165	284	560			568		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	97	100	100	100	98			100		
cM capacity (veh/h)	242	193	720	227	191	716	1015			1007		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	29	0	19	379	189	0	364	196
Volume Left	11	0	19	0	0	0	0	0
Volume Right	19	0	0	0	0	0	0	14
cSH	418	1700	1015	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.00	0.02	0.22	0.11	0.00	0.21	0.12
Queue Length 95th (ft)	6	0	1	0	0	0	0	0
Control Delay (s)	14.3	0.0	8.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	A					
Approach Delay (s)	14.3	0.0	0.3			0.0		
Approach LOS	B	A						

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	34	0	16	0	0	0	45	365	0	0	445	12
Peak Hour Factor	0.85	0.60	0.70	0.60	0.60	0.60	0.65	0.95	0.60	0.60	0.95	0.75
Hourly flow rate (vph)	40	0	23	0	0	0	69	384	0	0	468	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	807	999	242	780	1007	192	484			384		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	807	999	242	780	1007	192	484			384		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	100	97	100	100	100	94			100		
cM capacity (veh/h)	261	228	762	265	226	820	1082			1178		

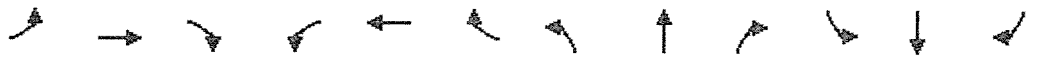
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	40	23	0	69	256	128	0	312	172
Volume Left	40	0	0	69	0	0	0	0	0
Volume Right	0	23	0	0	0	0	0	0	16
cSH	261	762	1700	1082	1700	1700	1700	1700	1700
Volume to Capacity	0.15	0.03	0.00	0.06	0.15	0.08	0.00	0.18	0.10
Queue Length 95th (ft)	13	2	0	5	0	0	0	0	0
Control Delay (s)	21.3	9.9	0.0	8.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	A	A	A					
Approach Delay (s)	17.1		0.0	1.3			0.0		
Approach LOS	C		A						

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	90	0	15	0	0	0	154	420	0	0	610	20
Peak Hour Factor	0.95	0.60	0.85	0.60	0.60	0.60	0.95	0.95	0.60	0.60	0.95	0.85
Hourly flow rate (vph)	95	0	18	0	0	0	162	442	0	0	642	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1199	1420	333	1105	1432	221	666			442		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1199	1420	333	1105	1432	221	666			442		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	23	100	97	100	100	100	83			100		
cM capacity (veh/h)	123	113	666	140	111	786	926			1121		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	95	18	0	162	295	147	0	428	238
Volume Left	95	0	0	162	0	0	0	0	0
Volume Right	0	18	0	0	0	0	0	0	24
cSH	123	666	1700	926	1700	1700	1700	1700	1700
Volume to Capacity	0.77	0.03	0.00	0.17	0.17	0.09	0.00	0.25	0.14
Queue Length 95th (ft)	111	2	0	16	0	0	0	0	0
Control Delay (s)	95.8	10.6	0.0	9.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	A	A					
Approach Delay (s)	82.4		0.0	2.6			0.0		
Approach LOS	F		A						

Intersection Summary			
Average Delay	7.8		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	35	0	75	0	0	0	40	550	0	0	565	20
Peak Hour Factor	0.85	0.60	0.90	0.60	0.60	0.60	0.85	0.95	0.60	0.60	0.95	0.75
Hourly flow rate (vph)	41	0	83	0	0	0	47	579	0	0	595	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	978	1268	297	1054	1294	289	621			579		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	978	1268	297	1054	1294	289	621			579		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	100	88	100	100	100	95			100		
cM capacity (veh/h)	198	160	702	154	155	710	962			998		

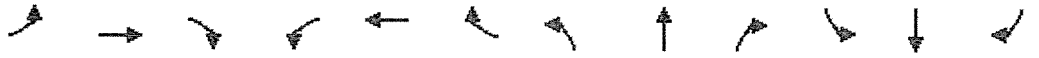
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	41	83	0	47	386	193	0	297	297	27
Volume Left	41	0	0	47	0	0	0	0	0	0
Volume Right	0	83	0	0	0	0	0	0	0	27
cSH	198	702	1700	962	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.21	0.12	0.00	0.05	0.23	0.11	0.00	0.17	0.17	0.02
Queue Length 95th (ft)	19	10	0	4	0	0	0	0	0	0
Control Delay (s)	27.8	10.8	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B	A	A						
Approach Delay (s)	16.4		0.0	0.7			0.0			
Approach LOS	C		A							

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	25	0	60	0	0	0	75	685	0	0	740	40
Peak Hour Factor	0.80	0.60	0.85	0.60	0.60	0.60	0.85	0.95	0.60	0.60	0.95	0.85
Hourly flow rate (vph)	31	0	71	0	0	0	88	721	0	0	779	47
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1316	1676	389	1358	1724	361	826			721		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1316	1676	389	1358	1724	361	826			721		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	71	100	88	100	100	100	89			100		
cM capacity (veh/h)	107	85	612	88	79	639	807			883		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	31	71	0	88	481	240	0	389	389	47
Volume Left	31	0	0	88	0	0	0	0	0	0
Volume Right	0	71	0	0	0	0	0	0	0	47
cSH	107	612	1700	807	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.29	0.12	0.00	0.11	0.28	0.14	0.00	0.23	0.23	0.03
Queue Length 95th (ft)	28	10	0	9	0	0	0	0	0	0
Control Delay (s)	52.1	11.6	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	A	B						
Approach Delay (s)	24.1		0.0	1.1			0.0			
Approach LOS	C		A							

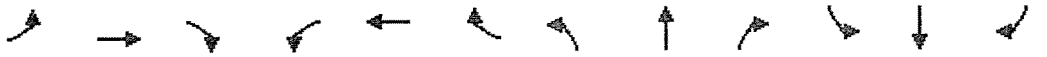
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	55	0	77	0	0	0	80	515	0	0	590	25
Peak Hour Factor	0.85	0.60	0.90	0.60	0.60	0.60	0.85	0.95	0.60	0.60	0.95	0.80
Hourly flow rate (vph)	65	0	86	0	0	0	94	542	0	0	621	31
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1080	1351	311	1126	1383	271	652			542		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1080	1351	311	1126	1383	271	652			542		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	60	100	88	100	100	100	90			100		
cM capacity (veh/h)	160	135	688	130	129	730	937			1030		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	65	86	0	94	361	181	0	311	311	31
Volume Left	65	0	0	94	0	0	0	0	0	0
Volume Right	0	86	0	0	0	0	0	0	0	31
cSH	160	688	1700	937	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.40	0.12	0.00	0.10	0.21	0.11	0.00	0.18	0.18	0.02
Queue Length 95th (ft)	44	11	0	8	0	0	0	0	0	0
Control Delay (s)	41.9	11.0	0.0	9.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B	A	A						
Approach Delay (s)	24.3		0.0	1.4			0.0			
Approach LOS	C		A							

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	108	0	62	0	0	0	215	565	0	0	835	50
Peak Hour Factor	0.95	0.60	0.90	0.60	0.60	0.60	0.95	0.98	0.60	0.60	0.98	0.90
Hourly flow rate (vph)	114	0	69	0	0	0	226	577	0	0	852	56
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1593	1881	426	1524	1937	288	908			577		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1593	1881	426	1524	1937	288	908			577		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	88	100	100	100	70			100		
cM capacity (veh/h)	56	50	580	55	46	711	752			1000		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	114	69	0	226	384	192	0	426	426	56
Volume Left	114	0	0	226	0	0	0	0	0	0
Volume Right	0	69	0	0	0	0	0	0	0	56
cSH	56	580	1700	752	1700	1700	1700	1700	1700	1700
Volume to Capacity	2.04	0.12	0.00	0.30	0.23	0.11	0.00	0.25	0.25	0.03
Queue Length 95th (ft)	277	10	0	32	0	0	0	0	0	0
Control Delay (s)	643.5	12.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	A	B						
Approach Delay (s)	405.2		0.0	3.3			0.0			
Approach LOS	F		A							

Intersection Summary			
Average Delay	40.5		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	5	20	385	8	34	400
Peak Hour Factor	0.60	0.75	0.95	0.65	0.80	0.95
Hourly flow rate (vph)	8	27	405	12	42	421
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			924			
pX, platoon unblocked						
vC, conflicting volume	701	203			418	
vC1, stage 1 conf vol	405					
vC2, stage 2 conf vol	296					
vCu, unblocked vol	701	203			418	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	97			96	
cM capacity (veh/h)	472	808			1145	

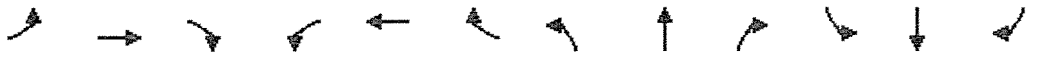
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	35	203	203	12	42	211	211
Volume Left	8	0	0	0	42	0	0
Volume Right	27	0	0	12	0	0	0
cSH	690	1700	1700	1700	1145	1700	1700
Volume to Capacity	0.05	0.12	0.12	0.01	0.04	0.12	0.12
Queue Length 95th (ft)	4	0	0	0	3	0	0
Control Delay (s)	10.5	0.0	0.0	0.0	8.3	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	10.5	0.0			0.8		
Approach LOS	B						

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	7	53	500	11	41	490
Peak Hour Factor	0.65	0.85	0.95	0.70	0.85	0.95
Hourly flow rate (vph)	11	62	526	16	48	516
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			924			
pX, platoon unblocked						
vC, conflicting volume	881	263			542	
vC1, stage 1 conf vol	526					
vC2, stage 2 conf vol	354					
vCu, unblocked vol	881	263			542	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	92			95	
cM capacity (veh/h)	399	738			1030	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	73	263	263	16	48	258	258
Volume Left	11	0	0	0	48	0	0
Volume Right	62	0	0	16	0	0	0
cSH	656	1700	1700	1700	1030	1700	1700
Volume to Capacity	0.11	0.15	0.15	0.01	0.05	0.15	0.15
Queue Length 95th (ft)	9	0	0	0	4	0	0
Control Delay (s)	11.2	0.0	0.0	0.0	8.7	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	11.2	0.0			0.7		
Approach LOS	B						

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	68	5	0	20	0	390	8	34	385	43
Peak Hour Factor	0.50	0.50	0.85	0.65	0.50	0.75	0.85	0.95	0.65	0.85	0.95	0.85
Hourly flow rate (vph)	0	0	80	8	0	27	0	411	12	40	405	51
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					1							
Upstream signal (ft)								924				
pX, platoon unblocked												
vC, conflicting volume	717	908	203	773	946	205	456			423		
vC1, stage 1 conf vol				411	411							
vC2, stage 2 conf vol				363	536							
vCu, unblocked vol	717	908	203	773	946	205	456			423		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)				6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	90	98	100	97	100			96		
cM capacity (veh/h)	300	266	808	376	364	804	1108			1140		

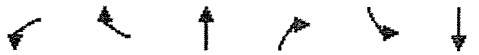
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	80	34	205	205	12	40	203	203	51
Volume Left	0	8	0	0	0	40	0	0	0
Volume Right	80	27	0	0	12	0	0	0	51
cSH	808	641	1700	1700	1700	1140	1700	1700	1700
Volume to Capacity	0.10	0.05	0.12	0.12	0.01	0.04	0.12	0.12	0.03
Queue Length 95th (ft)	8	4	0	0	0	3	0	0	0
Control Delay (s)	9.9	10.9	0.0	0.0	0.0	8.3	0.0	0.0	0.0
Lane LOS	A	B				A			
Approach Delay (s)	9.9	10.9	0.0			0.7			
Approach LOS	A	B							

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	280	7	0	53	0	520	11	41	425	160
Peak Hour Factor	0.60	0.60	0.95	0.65	0.60	0.85	0.95	0.95	0.70	0.85	0.95	0.95
Hourly flow rate (vph)	0	0	295	11	0	62	0	547	16	48	447	168
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					1							
Upstream signal (ft)								924				
pX, platoon unblocked												
vC, conflicting volume	880	1107	224	1162	1260	274	616			563		
vC1, stage 1 conf vol				547	547							
vC2, stage 2 conf vol				615	712							
vCu, unblocked vol	880	1107	224	1162	1260	274	616			563		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)				6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	62	94	100	91	100			95		
cM capacity (veh/h)	214	200	783	194	283	727	967			1011		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	295	73	274	274	16	48	224	224	168
Volume Left	0	11	0	0	0	48	0	0	0
Volume Right	295	62	0	0	16	0	0	0	168
cSH	783	518	1700	1700	1700	1011	1700	1700	1700
Volume to Capacity	0.38	0.14	0.16	0.16	0.01	0.05	0.13	0.13	0.10
Queue Length 95th (ft)	44	12	0	0	0	4	0	0	0
Control Delay (s)	12.3	13.1	0.0	0.0	0.0	8.7	0.0	0.0	0.0
Lane LOS	B	B				A			
Approach Delay (s)	12.3	13.1	0.0			0.6			
Approach LOS	B	B							

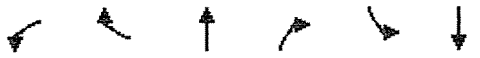
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	10	40	550	25	50	590
Peak Hour Factor	0.70	0.85	0.95	0.75	0.85	0.95
Hourly flow rate (vph)	14	47	579	33	59	621
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			924			
pX, platoon unblocked						
vC, conflicting volume	1007	289			612	
vC1, stage 1 conf vol	579					
vC2, stage 2 conf vol	428					
vCu, unblocked vol	1007	289			612	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	93			94	
cM capacity (veh/h)	356	710			970	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	61	289	289	33	59	311	311
Volume Left	14	0	0	0	59	0	0
Volume Right	47	0	0	33	0	0	0
cSH	576	1700	1700	1700	970	1700	1700
Volume to Capacity	0.11	0.17	0.17	0.02	0.06	0.18	0.18
Queue Length 95th (ft)	9	0	0	0	5	0	0
Control Delay (s)	12.0	0.0	0.0	0.0	9.0	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	12.0	0.0			0.8		
Approach LOS	B						

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	15	80	680	40	65	735
Peak Hour Factor	0.70	0.90	0.95	0.85	0.85	0.95
Hourly flow rate (vph)	21	89	716	47	76	774
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			924			
pX, platoon unblocked						
vC, conflicting volume	1256	358			763	
vC1, stage 1 conf vol	716					
vC2, stage 2 conf vol	540					
vCu, unblocked vol	1256	358			763	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	86			91	
cM capacity (veh/h)	284	642			852	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	110	358	358	47	76	387	387
Volume Left	21	0	0	0	76	0	0
Volume Right	89	0	0	47	0	0	0
cSH	516	1700	1700	1700	852	1700	1700
Volume to Capacity	0.21	0.21	0.21	0.03	0.09	0.23	0.23
Queue Length 95th (ft)	20	0	0	0	7	0	0
Control Delay (s)	13.9	0.0	0.0	0.0	9.6	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	13.9	0.0			0.9		
Approach LOS	B						

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	68	10	0	40	0	555	25	50	575	43
Peak Hour Factor	0.60	0.60	0.85	0.70	0.60	0.85	0.85	0.95	0.75	0.85	0.95	0.85
Hourly flow rate (vph)	0	0	80	14	0	47	0	584	33	59	605	51
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					1							
Upstream signal (ft)								924				
pX, platoon unblocked												
vC, conflicting volume	1062	1340	303	1084	1358	292	656			618		
vC1, stage 1 conf vol				584	584							
vC2, stage 2 conf vol				500	773							
vCu, unblocked vol	1062	1340	303	1084	1358	292	656			618		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)				6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	89	95	100	93	100			94		
cM capacity (veh/h)	159	143	696	272	260	707	934			965		

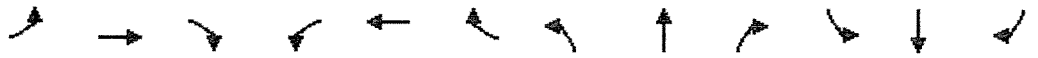
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	80	61	292	292	33	59	303	303	51
Volume Left	0	14	0	0	0	59	0	0	0
Volume Right	80	47	0	0	33	0	0	0	51
cSH	696	515	1700	1700	1700	965	1700	1700	1700
Volume to Capacity	0.11	0.12	0.17	0.17	0.02	0.06	0.18	0.18	0.03
Queue Length 95th (ft)	10	10	0	0	0	5	0	0	0
Control Delay (s)	10.8	12.9	0.0	0.0	0.0	9.0	0.0	0.0	0.0
Lane LOS	B	B				A			
Approach Delay (s)	10.8	12.9	0.0			0.7			
Approach LOS	B	B							

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	280	15	0	80	0	700	40	65	670	160
Peak Hour Factor	0.60	0.60	0.95	0.70	0.60	0.90	0.95	0.95	0.85	0.85	0.95	0.95
Hourly flow rate (vph)	0	0	295	21	0	89	0	737	47	76	705	168
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					1							
Upstream signal (ft)								924				
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	1316	1642	353	1537	1763	368	874			784		
vC1, stage 1 conf vol				737	737							
vC2, stage 2 conf vol				800	1027							
vCu, unblocked vol	1309	1639	353	1533	1761	352	874			772		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)				6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	54	83	100	86	100			91		
cM capacity (veh/h)	94	90	647	123	188	641	774			837		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	295	110	368	368	47	76	353	353	168
Volume Left	0	21	0	0	0	76	0	0	0
Volume Right	295	89	0	0	47	0	0	0	168
cSH	647	353	1700	1700	1700	837	1700	1700	1700
Volume to Capacity	0.46	0.31	0.22	0.22	0.03	0.09	0.21	0.21	0.10
Queue Length 95th (ft)	60	33	0	0	0	8	0	0	0
Control Delay (s)	15.1	19.8	0.0	0.0	0.0	9.7	0.0	0.0	0.0
Lane LOS	C	C				A			
Approach Delay (s)	15.1	19.8	0.0			0.8			
Approach LOS	C	C							

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		



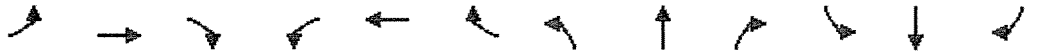
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1825	1599		1838	1599	1787	3539	1599	1787	3456	
Flt Permitted		0.78	1.00		0.82	1.00	0.52	1.00	1.00	0.55	1.00	
Satd. Flow (perm)		1468	1599		1552	1599	972	3539	1599	1035	3456	
Volume (vph)	60	35	50	23	25	15	41	317	30	40	315	50
Peak-hour factor, PHF	0.85	0.80	0.85	0.80	0.75	0.75	0.75	0.95	0.80	0.85	0.95	0.75
Adj. Flow (vph)	71	44	59	29	33	20	55	334	38	47	332	67
RTOR Reduction (vph)	0	0	39	0	0	13	0	0	24	0	37	0
Lane Group Flow (vph)	0	115	20	0	62	7	55	334	14	47	362	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		7.6	7.6		7.6	7.6	8.2	8.2	8.2	8.2	8.2	
Effective Green, g (s)		9.6	9.6		9.6	9.6	10.2	10.2	10.2	10.2	10.2	
Actuated g/C Ratio		0.35	0.35		0.35	0.35	0.37	0.37	0.37	0.37	0.37	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		507	552		536	552	357	1298	587	380	1268	
v/s Ratio Prot								0.09			c0.10	
v/s Ratio Perm		c0.08	0.01		0.04	0.00	0.06		0.01	0.05		
v/c Ratio		0.23	0.04		0.12	0.01	0.15	0.26	0.02	0.12	0.29	
Uniform Delay, d1		6.5	6.0		6.2	6.0	5.9	6.2	5.6	5.8	6.2	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2	0.0		0.1	0.0	0.2	0.1	0.0	0.1	0.1	
Delay (s)		6.7	6.1		6.3	6.0	6.1	6.3	5.6	6.0	6.3	
Level of Service		A	A		A	A	A	A	A	A	A	
Approach Delay (s)		6.5			6.2			6.2			6.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	27.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1831	1599		1833	1599	1787	3539	1599	1787	3539	1599
Flt Permitted		0.81	1.00		0.82	1.00	0.50	1.00	1.00	0.50	1.00	1.00
Satd. Flow (perm)		1527	1599		1543	1599	950	3539	1599	945	3539	1599
Volume (vph)	54	45	46	58	53	52	58	404	111	57	400	40
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.85	0.95	0.85
Adj. Flow (vph)	64	53	54	68	62	61	68	425	117	67	421	47
RTOR Reduction (vph)	0	0	35	0	0	40	0	0	57	0	0	23
Lane Group Flow (vph)	0	117	19	0	130	21	68	425	60	67	421	24
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		21.0	21.0		21.0	21.0	31.0	31.0	31.0	31.0	31.0	31.0
Effective Green, g (s)		21.0	21.0		21.0	21.0	31.0	31.0	31.0	31.0	31.0	31.0
Actuated g/C Ratio		0.35	0.35		0.35	0.35	0.52	0.52	0.52	0.52	0.52	0.52
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)		534	560		540	560	491	1828	826	488	1828	826
v/s Ratio Prot								c0.12			0.12	
v/s Ratio Perm		0.08	0.01		c0.08	0.01	0.07		0.04	0.07		0.02
v/c Ratio		0.22	0.03		0.24	0.04	0.14	0.23	0.07	0.14	0.23	0.03
Uniform Delay, d1		13.7	12.8		13.8	12.8	7.5	8.0	7.3	7.5	8.0	7.1
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9	0.1		1.1	0.1	0.6	0.3	0.2	0.6	0.3	0.1
Delay (s)		14.7	12.9		14.9	13.0	8.1	8.3	7.5	8.1	8.2	7.2
Level of Service		B	B		B	B	A	A	A	A	A	A
Approach Delay (s)		14.1			14.3			8.1			8.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1824	1599		1838	1599	1787	3539	1599	1787	3473	
Flt Permitted		0.78	1.00		0.82	1.00	0.50	1.00	1.00	0.55	1.00	
Satd. Flow (perm)		1459	1599		1545	1599	932	3539	1599	1037	3473	
Volume (vph)	64	37	88	23	26	17	76	315	30	42	365	50
Peak-hour factor, PHF	0.85	0.85	0.85	0.80	0.80	0.75	0.85	0.95	0.80	0.85	0.95	0.85
Adj. Flow (vph)	75	44	104	29	32	23	89	332	38	49	384	59
RTOR Reduction (vph)	0	0	69	0	0	15	0	0	24	0	26	0
Lane Group Flow (vph)	0	119	35	0	61	8	89	332	14	49	417	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		7.7	7.7		7.7	7.7	8.9	8.9	8.9	8.9	8.9	
Effective Green, g (s)		9.7	9.7		9.7	9.7	10.9	10.9	10.9	10.9	10.9	
Actuated g/C Ratio		0.34	0.34		0.34	0.34	0.38	0.38	0.38	0.38	0.38	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		495	542		524	542	355	1349	609	395	1324	
v/s Ratio Prot								0.09			c0.12	
v/s Ratio Perm		c0.08	0.02		0.04	0.00	0.10		0.01	0.05		
v/c Ratio		0.24	0.07		0.12	0.01	0.25	0.25	0.02	0.12	0.31	
Uniform Delay, d1		6.8	6.4		6.5	6.3	6.1	6.0	5.5	5.7	6.2	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.1		0.1	0.0	0.4	0.1	0.0	0.1	0.1	
Delay (s)		7.1	6.4		6.6	6.3	6.4	6.1	5.5	5.9	6.4	
Level of Service		A	A		A	A	A	A	A	A	A	
Approach Delay (s)		6.8			6.5			6.1			6.3	
Approach LOS		A			A			A			A	

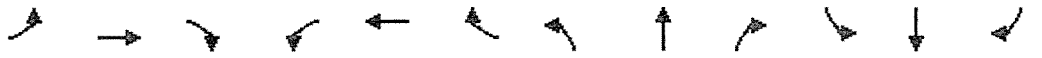
Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	28.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1829	1599		1835	1599	1787	3539	1599	1787	3505	
Flt Permitted		0.76	1.00		0.78	1.00	0.37	1.00	1.00	0.51	1.00	
Satd. Flow (perm)		1422	1599		1474	1599	705	3539	1599	952	3505	
Volume (vph)	72	48	66	58	56	59	158	400	111	65	605	40
Peak-hour factor, PHF	0.95	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.90	0.85	0.95	0.85
Adj. Flow (vph)	76	56	78	68	66	69	166	421	123	76	637	47
RTOR Reduction (vph)	0	0	54	0	0	48	0	0	64	0	10	0
Lane Group Flow (vph)	0	132	24	0	134	21	166	421	59	76	674	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		9.0	9.0		9.0	9.0	15.3	15.3	15.3	15.3	15.3	
Effective Green, g (s)		11.0	11.0		11.0	11.0	17.3	17.3	17.3	17.3	17.3	
Actuated g/C Ratio		0.30	0.30		0.30	0.30	0.48	0.48	0.48	0.48	0.48	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		431	485		447	485	336	1687	762	454	1670	
v/s Ratio Prot								0.12			0.19	
v/s Ratio Perm		c0.09	0.01		0.09	0.01	c0.24		0.04	0.08		
v/c Ratio		0.31	0.05		0.30	0.04	0.49	0.25	0.08	0.17	0.40	
Uniform Delay, d1		9.7	8.9		9.7	8.9	6.5	5.6	5.2	5.4	6.2	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4	0.0		0.4	0.0	1.1	0.1	0.0	0.2	0.2	
Delay (s)		10.1	9.0		10.1	9.0	7.6	5.7	5.2	5.6	6.3	
Level of Service		B	A		B	A	A	A	A	A	A	
Approach Delay (s)		9.7			9.7			6.1			6.2	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	36.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

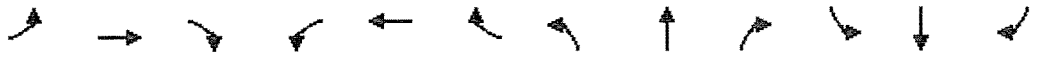
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.97	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1830	1599		1830	1599	1787	3539	1599	1787	3472	
Flt Permitted		0.77	1.00		0.77	1.00	0.44	1.00	1.00	0.47	1.00	
Satd. Flow (perm)		1454	1599		1443	1599	828	3539	1599	891	3472	
Volume (vph)	75	55	80	50	40	35	70	465	45	60	465	65
Peak-hour factor, PHF	0.90	0.85	0.90	0.85	0.85	0.85	0.85	0.95	0.85	0.85	0.95	0.85
Adj. Flow (vph)	83	65	89	59	47	41	82	489	53	71	489	76
RTOR Reduction (vph)	0	0	59	0	0	27	0	0	32	0	26	0
Lane Group Flow (vph)	0	148	30	0	106	14	82	489	21	71	539	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		8.5	8.5		8.5	8.5	10.5	10.5	10.5	10.5	10.5	
Effective Green, g (s)		10.5	10.5		10.5	10.5	12.5	12.5	12.5	12.5	12.5	
Actuated g/C Ratio		0.34	0.34		0.34	0.34	0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		492	542		489	542	334	1427	645	359	1400	
v/s Ratio Prot								0.14			c0.16	
v/s Ratio Perm		c0.10	0.02		0.07	0.01	0.10		0.01	0.08		
v/c Ratio		0.30	0.06		0.22	0.03	0.25	0.34	0.03	0.20	0.39	
Uniform Delay, d1		7.5	6.9		7.3	6.8	6.1	6.4	5.6	6.0	6.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.0		0.2	0.0	0.4	0.1	0.0	0.3	0.2	
Delay (s)		7.9	7.0		7.5	6.9	6.5	6.5	5.6	6.3	6.7	
Level of Service		A	A		A	A	A	A	A	A	A	
Approach Delay (s)		7.5			7.3			6.5			6.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	31.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.98	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1839	1599		1834	1599	1787	3539	1599	1787	3485	
Flt Permitted		0.79	1.00		0.77	1.00	0.36	1.00	1.00	0.40	1.00	
Satd. Flow (perm)		1482	1599		1451	1599	682	3539	1599	757	3485	
Volume (vph)	55	65	55	80	75	70	80	595	150	85	585	65
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95	0.95	0.85	0.95	0.85
Adj. Flow (vph)	65	76	65	94	88	82	94	626	158	100	616	76
RTOR Reduction (vph)	0	0	43	0	0	54	0	0	89	0	19	0
Lane Group Flow (vph)	0	141	22	0	182	28	94	626	69	100	673	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		9.8	9.8		9.8	9.8	13.3	13.3	13.3	13.3	13.3	
Effective Green, g (s)		11.8	11.8		11.8	11.8	15.3	15.3	15.3	15.3	15.3	
Actuated g/C Ratio		0.34	0.34		0.34	0.34	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		498	538		488	538	297	1543	697	330	1519	
v/s Ratio Prot								0.18			c0.19	
v/s Ratio Perm		0.10	0.01		c0.13	0.02	0.14		0.04	0.13		
v/c Ratio		0.28	0.04		0.37	0.05	0.32	0.41	0.10	0.30	0.44	
Uniform Delay, d1		8.5	7.8		8.8	7.9	6.5	6.8	5.8	6.4	6.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3	0.0		0.5	0.0	0.6	0.2	0.1	0.5	0.2	
Delay (s)		8.9	7.9		9.3	7.9	7.1	7.0	5.9	7.0	7.1	
Level of Service		A	A		A	A	A	A	A	A	A	
Approach Delay (s)		8.5			8.9			6.8			7.1	
Approach LOS		A			A			A			A	

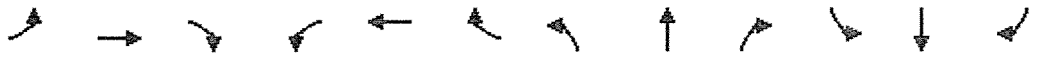
Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	35.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.97	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1829	1599		1831	1599	1787	3539	1599	1787	3479	
Flt Permitted		0.77	1.00		0.77	1.00	0.41	1.00	1.00	0.47	1.00	
Satd. Flow (perm)		1448	1599		1445	1599	762	3539	1599	891	3479	
Volume (vph)	79	57	113	50	41	37	105	465	45	62	525	65
Peak-hour factor, PHF	0.90	0.85	0.95	0.85	0.85	0.85	0.90	0.95	0.85	0.85	0.95	0.85
Adj. Flow (vph)	88	67	119	59	48	44	117	489	53	73	553	76
RTOR Reduction (vph)	0	0	80	0	0	30	0	0	30	0	21	0
Lane Group Flow (vph)	0	155	39	0	107	14	117	489	23	73	608	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		9.0	9.0		9.0	9.0	12.5	12.5	12.5	12.5	12.5	
Effective Green, g (s)		11.0	11.0		11.0	11.0	14.5	14.5	14.5	14.5	14.5	
Actuated g/C Ratio		0.33	0.33		0.33	0.33	0.43	0.43	0.43	0.43	0.43	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		475	525		474	525	330	1532	692	386	1506	
v/s Ratio Prot								0.14			c0.17	
v/s Ratio Perm		c0.11	0.02		0.07	0.01	0.15		0.01	0.08		
v/c Ratio		0.33	0.07		0.23	0.03	0.35	0.32	0.03	0.19	0.40	
Uniform Delay, d1		8.5	7.7		8.2	7.6	6.4	6.3	5.5	5.9	6.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4	0.1		0.2	0.0	0.7	0.1	0.0	0.2	0.2	
Delay (s)		8.9	7.8		8.4	7.6	7.0	6.4	5.5	6.1	6.7	
Level of Service		A	A		A	A	A	A	A	A	A	
Approach Delay (s)		8.4			8.2			6.4			6.6	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	7.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	33.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98	1.00		0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1836	1599		1835	1599	1787	3539	1599	1787	3499	
Flt Permitted		0.77	1.00		0.77	1.00	0.26	1.00	1.00	0.41	1.00	
Satd. Flow (perm)		1443	1599		1440	1599	492	3539	1599	764	3499	
Volume (vph)	73	67	75	80	78	77	180	590	150	92	810	65
Peak-hour factor, PHF	0.95	0.85	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.95	0.85
Adj. Flow (vph)	77	79	83	89	87	86	189	621	158	102	853	76
RTOR Reduction (vph)	0	0	60	0	0	62	0	0	71	0	10	0
Lane Group Flow (vph)	0	156	23	0	176	24	189	621	87	102	919	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	1%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		10.9	10.9		10.9	10.9	23.5	23.5	23.5	23.5	23.5	
Effective Green, g (s)		12.9	12.9		12.9	12.9	25.5	25.5	25.5	25.5	25.5	
Actuated g/C Ratio		0.28	0.28		0.28	0.28	0.55	0.55	0.55	0.55	0.55	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		401	445		400	445	270	1945	879	420	1923	
v/s Ratio Prot								0.18			0.26	
v/s Ratio Perm		0.11	0.01		c0.12	0.01	c0.38		0.05	0.13		
v/c Ratio		0.39	0.05		0.44	0.05	0.70	0.32	0.10	0.24	0.48	
Uniform Delay, d1		13.6	12.3		13.8	12.3	7.6	5.7	5.0	5.4	6.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.6	0.0		0.8	0.1	7.9	0.1	0.0	0.3	0.2	
Delay (s)		14.2	12.3		14.6	12.3	15.6	5.8	5.0	5.7	6.6	
Level of Service		B	B		B	B	B	A	A	A	A	
Approach Delay (s)		13.5			13.8			7.6			6.5	
Approach LOS		B			B			A			A	

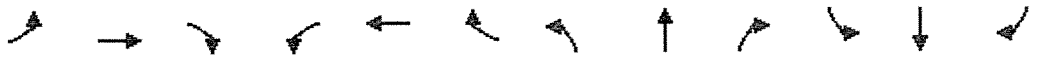
Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	46.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	10	5	6	4	1	0	3	2	5	5	0
Peak Hour Factor	0.60	0.70	0.60	0.65	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.60
Hourly flow rate (vph)	2	14	8	9	7	2	0	5	3	8	8	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	24	18	8	15
Volume Left (vph)	2	9	0	8
Volume Right (vph)	8	2	3	0
Hadj (s)	-0.18	0.07	-0.22	0.12
Departure Headway (s)	3.8	4.0	3.8	4.1
Degree Utilization, x	0.03	0.02	0.01	0.02
Capacity (veh/h)	936	881	928	862
Control Delay (s)	6.9	7.1	6.8	7.2
Approach Delay (s)	6.9	7.1	6.8	7.2
Approach LOS	A	A	A	A

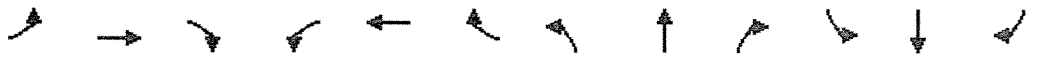
Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	14.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	3	4	5	3	8	2	4	2	7	8	2
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.65	0.60	0.60	0.60	0.65	0.65	0.60
Hourly flow rate (vph)	0	5	7	8	5	12	3	7	3	11	12	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	12	26	13	26
Volume Left (vph)	0	8	3	11
Volume Right (vph)	7	12	3	3
Hadj (s)	-0.33	-0.21	-0.08	0.02
Departure Headway (s)	3.7	3.8	3.9	4.0
Degree Utilization, x	0.01	0.03	0.01	0.03
Capacity (veh/h)	959	935	896	884
Control Delay (s)	6.7	6.9	7.0	7.1
Approach Delay (s)	6.7	6.9	7.0	7.1
Approach LOS	A	A	A	A

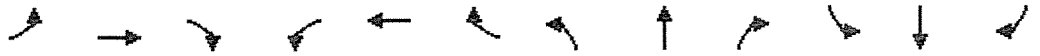
Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	15.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	10	5	7	4	2	0	3	3	6	5	0
Peak Hour Factor	0.60	0.70	0.65	0.65	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.60
Hourly flow rate (vph)	2	14	8	11	7	3	0	5	5	9	8	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	24	21	10	17
Volume Left (vph)	2	11	0	9
Volume Right (vph)	8	3	5	0
Hadj (s)	-0.16	0.02	-0.28	0.13
Departure Headway (s)	3.8	4.0	3.7	4.1
Degree Utilization, x	0.03	0.02	0.01	0.02
Capacity (veh/h)	930	887	941	858
Control Delay (s)	6.9	7.1	6.8	7.2
Approach Delay (s)	6.9	7.1	6.8	7.2
Approach LOS	A	A	A	A

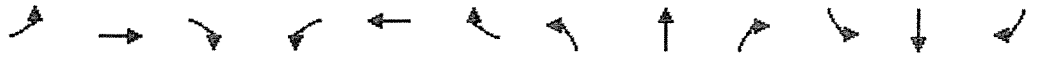
Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	15.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	3	4	6	3	13	2	4	3	10	8	2
Peak Hour Factor	0.60	0.60	0.65	0.65	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.60
Hourly flow rate (vph)	0	5	6	9	5	22	3	7	5	15	12	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	11	36	15	31
Volume Left (vph)	0	9	3	15
Volume Right (vph)	6	22	5	3
Hadj (s)	-0.31	-0.29	-0.14	0.05
Departure Headway (s)	3.7	3.7	3.9	4.1
Degree Utilization, x	0.01	0.04	0.02	0.03
Capacity (veh/h)	949	952	902	872
Control Delay (s)	6.8	6.9	6.9	7.2
Approach Delay (s)	6.8	6.9	6.9	7.2
Approach LOS	A	A	A	A

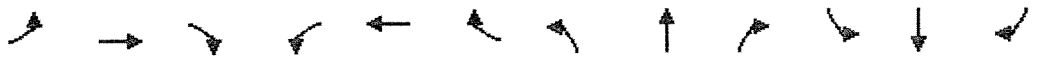
Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	16.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	10	5	15	10	30	5	45	15	60	75	3
Peak Hour Factor	0.60	0.70	0.65	0.70	0.70	0.80	0.65	0.85	0.70	0.85	0.85	0.60
Hourly flow rate (vph)	5	14	8	21	14	38	8	53	21	71	88	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	27	73	82	164
Volume Left (vph)	5	21	8	71
Volume Right (vph)	8	38	21	5
Hadj (s)	-0.12	-0.23	-0.12	0.08
Departure Headway (s)	4.4	4.2	4.2	4.3
Degree Utilization, x	0.03	0.09	0.10	0.20
Capacity (veh/h)	755	790	826	816
Control Delay (s)	7.6	7.7	7.6	8.3
Approach Delay (s)	7.6	7.7	7.6	8.3
Approach LOS	A	A	A	A

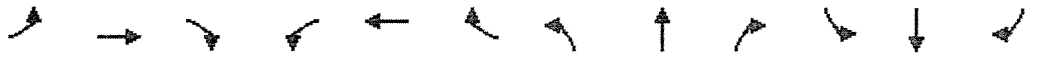
Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	10	10	15	10	65	5	85	15	45	50	3
Peak Hour Factor	0.60	0.70	0.65	0.70	0.70	0.80	0.65	0.85	0.70	0.85	0.85	0.60
Hourly flow rate (vph)	5	14	15	21	14	81	8	100	21	53	59	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	35	117	129	117
Volume Left (vph)	5	21	8	53
Volume Right (vph)	15	81	21	5
Hadj (s)	-0.22	-0.36	-0.07	0.08
Departure Headway (s)	4.4	4.1	4.3	4.5
Degree Utilization, x	0.04	0.13	0.15	0.14
Capacity (veh/h)	769	812	800	766
Control Delay (s)	7.6	7.8	8.1	8.2
Approach Delay (s)	7.6	7.8	8.1	8.2
Approach LOS	A	A	A	A

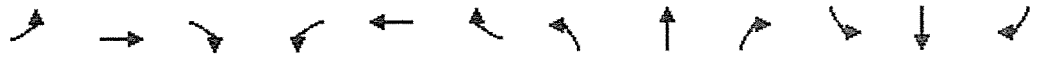
Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	10	5	15	10	31	5	45	15	61	75	3
Peak Hour Factor	0.60	0.70	0.65	0.70	0.70	0.80	0.65	0.85	0.70	0.85	0.85	0.60
Hourly flow rate (vph)	5	14	8	21	14	39	8	53	21	72	88	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	27	74	82	165
Volume Left (vph)	5	21	8	72
Volume Right (vph)	8	39	21	5
Hadj (s)	-0.12	-0.24	-0.12	0.09
Departure Headway (s)	4.4	4.2	4.2	4.3
Degree Utilization, x	0.03	0.09	0.10	0.20
Capacity (veh/h)	754	790	825	815
Control Delay (s)	7.6	7.7	7.6	8.4
Approach Delay (s)	7.6	7.7	7.6	8.4
Approach LOS	A	A	A	A

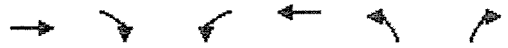
Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	10	10	15	10	70	5	85	15	48	50	3
Peak Hour Factor	0.60	0.70	0.65	0.70	0.70	0.85	0.65	0.85	0.75	0.85	0.85	0.60
Hourly flow rate (vph)	5	14	15	21	14	82	8	100	20	56	59	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	35	118	128	120
Volume Left (vph)	5	21	8	56
Volume Right (vph)	15	82	20	5
Hadj (s)	-0.22	-0.37	-0.06	0.09
Departure Headway (s)	4.4	4.1	4.3	4.5
Degree Utilization, x	0.04	0.14	0.15	0.15
Capacity (veh/h)	757	811	797	766
Control Delay (s)	7.6	7.8	8.1	8.2
Approach Delay (s)	7.6	7.8	8.1	8.2
Approach LOS	A	A	A	A

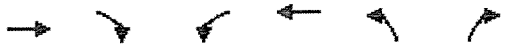
Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	25	1	44	12	1	22
Peak Hour Factor	0.85	0.60	0.80	0.70	0.60	0.80
Hourly flow rate (vph)	29	2	55	17	2	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			31		157	30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			31		157	30
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	97
cM capacity (veh/h)			1588		807	1047

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	31	72	29
Volume Left	0	55	2
Volume Right	2	0	28
cSH	1700	1588	1030
Volume to Capacity	0.02	0.03	0.03
Queue Length 95th (ft)	0	3	2
Control Delay (s)	0.0	5.7	8.6
Lane LOS		A	A
Approach Delay (s)	0.0	5.7	8.6
Approach LOS			A

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	19.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	20	3	148	20	5	85
Peak Hour Factor	0.75	0.60	0.95	0.80	0.65	0.85
Hourly flow rate (vph)	27	5	156	25	8	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			32		366	29
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			32		366	29
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		99	90
cM capacity (veh/h)			1581		571	1046

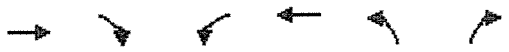
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	32	181	108
Volume Left	0	156	8
Volume Right	5	0	100
cSH	1700	1581	987
Volume to Capacity	0.02	0.10	0.11
Queue Length 95th (ft)	0	8	9
Control Delay (s)	0.0	6.6	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	6.6	9.1
Approach LOS			A

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	110	1	44	60	1	22
Peak Hour Factor	0.95	0.60	0.80	0.85	0.60	0.80
Hourly flow rate (vph)	116	2	55	71	2	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			117		297	117
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			117		297	117
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		100	97
cM capacity (veh/h)			1477		670	938

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	117	126	29
Volume Left	0	55	2
Volume Right	2	0	28
cSH	1700	1477	917
Volume to Capacity	0.07	0.04	0.03
Queue Length 95th (ft)	0	3	2
Control Delay (s)	0.0	3.5	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	3.5	9.1
Approach LOS			A

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	85	3	148	115	5	85
Peak Hour Factor	0.90	0.60	0.95	0.95	0.65	0.90
Hourly flow rate (vph)	94	5	156	121	8	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			99		530	97
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			99		530	97
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		98	90
cM capacity (veh/h)			1500		458	962

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	99	277	102
Volume Left	0	156	8
Volume Right	5	0	94
cSH	1700	1500	889
Volume to Capacity	0.06	0.10	0.11
Queue Length 95th (ft)	0	9	10
Control Delay (s)	0.0	4.7	9.6
Lane LOS		A	A
Approach Delay (s)	0.0	4.7	9.6
Approach LOS			A

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	2	0	0	4	16	1
Peak Hour Factor	0.60	0.60	0.60	0.65	0.70	0.60
Hourly flow rate (vph)	3	0	0	6	23	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	30	24	25			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	30	24	25			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	987	1056	1597			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	3	6	25
Volume Left	3	0	0
Volume Right	0	0	2
cSH	987	1597	1700
Volume to Capacity	0.00	0.00	0.01
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	1	19	17	0
Peak Hour Factor	0.60	0.60	0.60	0.70	0.75	0.60
Hourly flow rate (vph)	0	0	2	27	23	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	53	23	23			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	53	23	23			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	957	1057	1599			

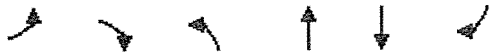
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	29	23
Volume Left	0	2	0
Volume Right	0	0	0
cSH	1700	1599	1700
Volume to Capacity	0.00	0.00	0.01
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.4	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	0.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	4	0	0	5	19	2
Peak Hour Factor	0.60	0.60	0.60	0.65	0.70	0.60
Hourly flow rate (vph)	7	0	0	8	27	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	37	29	30			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	37	29	30			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	979	1049	1589			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	7	8	30
Volume Left	7	0	0
Volume Right	0	0	3
cSH	979	1589	1700
Volume to Capacity	0.01	0.00	0.02
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	5	0	1	22	20	4
Peak Hour Factor	0.65	0.60	0.60	0.75	0.75	0.60
Hourly flow rate (vph)	8	0	2	29	27	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	63	30	33			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	63	30	33			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	945	1047	1585			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	8	31	33
Volume Left	8	2	0
Volume Right	0	0	7
cSH	945	1585	1700
Volume to Capacity	0.01	0.00	0.02
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.8	0.4	0.0
Lane LOS	A	A	
Approach Delay (s)	8.8	0.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	2	2	2	75	105	2
Peak Hour Factor	0.60	0.60	0.60	0.85	0.95	0.60
Hourly flow rate (vph)	3	3	3	88	111	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	207	112	114			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	207	112	114			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	782	944	1482			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	7	92	114
Volume Left	3	3	0
Volume Right	3	0	3
cSH	855	1482	1700
Volume to Capacity	0.01	0.00	0.07
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.2	0.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	0.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	15.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	2	2	2	120	85	2
Peak Hour Factor	0.60	0.60	0.60	0.85	0.95	0.60
Hourly flow rate (vph)	3	3	3	141	89	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	239	91	93			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	239	91	93			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	750	969	1508			

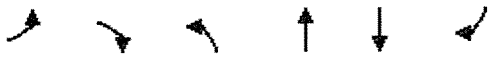
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	7	145	93
Volume Left	3	3	0
Volume Right	3	0	3
cSH	845	1508	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.3	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.3	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	4	2	2	76	108	3
Peak Hour Factor	0.60	0.60	0.60	0.90	0.95	0.60
Hourly flow rate (vph)	7	3	3	84	114	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	207	116	119			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	207	116	119			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	782	939	1476			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	10	88	119
Volume Left	7	3	0
Volume Right	3	0	5
cSH	828	1476	1700
Volume to Capacity	0.01	0.00	0.07
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.4	0.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	0.3	0.0
Approach LOS	A		

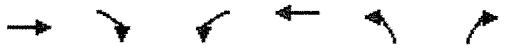
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	15.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	7	2	2	123	88	6
Peak Hour Factor	0.65	0.60	0.60	0.95	0.90	0.65
Hourly flow rate (vph)	11	3	3	129	98	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	239	102	107			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	239	102	107			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	750	955	1490			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	14	133	107
Volume Left	11	3	0
Volume Right	3	0	9
cSH	790	1490	1700
Volume to Capacity	0.02	0.00	0.06
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.6	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.2	0.0
Approach LOS	A		

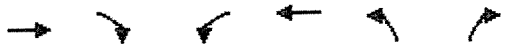
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	125	4	2	110	0	9
Peak Hour Factor	0.95	0.60	0.60	0.65	0.60	0.85
Hourly flow rate (vph)	132	7	3	169	0	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				751		
pX, platoon unblocked						
vC, conflicting volume			138		311	135
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			138		311	135
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1452		682	917

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	138	173	11
Volume Left	0	3	0
Volume Right	7	0	11
cSH	1700	1452	917
Volume to Capacity	0.08	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.2	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	0.2	9.0
Approach LOS			A

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	125	2	8	125	14	4
Peak Hour Factor	0.95	0.60	0.65	0.95	0.70	0.60
Hourly flow rate (vph)	132	3	12	132	20	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				751		
pX, platoon unblocked						
vC, conflicting volume			135		289	133
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			135		289	133
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	99
cM capacity (veh/h)			1456		697	919

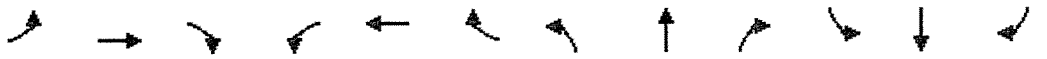
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	135	144	27
Volume Left	0	12	20
Volume Right	3	0	7
cSH	1700	1456	742
Volume to Capacity	0.08	0.01	0.04
Queue Length 95th (ft)	0	1	3
Control Delay (s)	0.0	0.7	10.0
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	10.0
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	18	125	4	2	110	36	0	4	9	39	5	16
Peak Hour Factor	0.70	0.95	0.70	0.65	0.90	0.75	0.65	0.65	0.70	0.75	0.65	0.70
Hourly flow rate (vph)	26	132	6	3	122	48	0	6	13	52	8	23
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					751							
pX, platoon unblocked												
vC, conflicting volume	170			137			365	362	134	354	341	146
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	170			137			365	362	134	354	341	146
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	99	99	91	99	97
cM capacity (veh/h)	1413			1453			563	555	917	580	571	903

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	163	173	19	60	23
Volume Left	26	3	0	52	0
Volume Right	6	48	13	0	23
cSH	1413	1453	757	579	903
Volume to Capacity	0.02	0.00	0.03	0.10	0.03
Queue Length 95th (ft)	1	0	2	9	2
Control Delay (s)	1.3	0.2	9.9	11.9	9.1
Lane LOS	A	A	A	B	A
Approach Delay (s)	1.3	0.2	9.9	11.1	
Approach LOS			A	B	

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	52	125	2	8	125	103	14	17	4	40	15	60
Peak Hour Factor	0.85	0.95	0.60	0.65	0.95	0.80	0.70	0.75	0.60	0.80	0.75	0.85
Hourly flow rate (vph)	61	132	3	12	132	129	20	23	7	50	20	71
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					751							
pX, platoon unblocked												
vC, conflicting volume	260			135			557	541	133	494	478	196
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	260			135			557	541	133	494	478	196
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			95	95	99	89	96	92
cM capacity (veh/h)	1310			1456			376	425	919	445	461	848

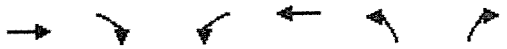
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	196	273	49	70	71
Volume Left	61	12	20	50	0
Volume Right	3	129	7	0	71
cSH	1310	1456	434	449	848
Volume to Capacity	0.05	0.01	0.11	0.16	0.08
Queue Length 95th (ft)	4	1	10	14	7
Control Delay (s)	2.7	0.4	14.4	14.5	9.6
Lane LOS	A	A	B	B	A
Approach Delay (s)	2.7	0.4	14.4	12.0	
Approach LOS			B	B	

Intersection Summary				
Average Delay	4.6			
Intersection Capacity Utilization	41.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	180	10	5	160	5	10
Peak Hour Factor	0.95	0.70	0.65	0.95	0.65	0.70
Hourly flow rate (vph)	189	14	8	168	8	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				751		
pX, platoon unblocked						
vC, conflicting volume			204		380	197
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			204		380	197
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	98
cM capacity (veh/h)			1374		620	847

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	204	176	22
Volume Left	0	8	8
Volume Right	14	0	14
cSH	1700	1374	751
Volume to Capacity	0.12	0.01	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.4	9.9
Lane LOS		A	A
Approach Delay (s)	0.0	0.4	9.9
Approach LOS			A

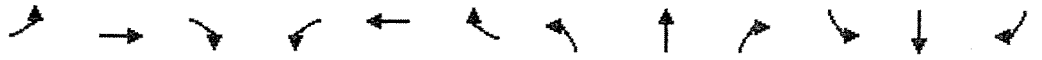
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	165	5	10	195	15	5
Peak Hour Factor	0.95	0.65	0.70	0.95	0.70	0.65
Hourly flow rate (vph)	174	8	14	205	21	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				751		
pX, platoon unblocked						
vC, conflicting volume			181		411	178
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			181		411	178
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	99
cM capacity (veh/h)			1400		593	868

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	181	220	29
Volume Left	0	14	21
Volume Right	8	0	8
cSH	1700	1400	647
Volume to Capacity	0.11	0.01	0.05
Queue Length 95th (ft)	0	1	4
Control Delay (s)	0.0	0.6	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.6	10.8
Approach LOS			B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↕	↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	18	180	10	5	160	36	5	4	10	39	5	16
Peak Hour Factor	0.75	0.95	0.70	0.65	0.95	0.75	0.65	0.60	0.70	0.75	0.65	0.70
Hourly flow rate (vph)	24	189	14	8	168	48	8	7	14	52	8	23
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					751							
pX, platoon unblocked												
vC, conflicting volume	216			204			479	476	197	470	460	192
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	216			204			479	476	197	470	460	192
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			98	99	98	89	98	97
cM capacity (veh/h)	1359			1374			471	478	847	483	488	852

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	228	224	29	60	23
Volume Left	24	8	8	52	0
Volume Right	14	48	14	0	23
cSH	1359	1374	607	484	852
Volume to Capacity	0.02	0.01	0.05	0.12	0.03
Queue Length 95th (ft)	1	0	4	10	2
Control Delay (s)	0.9	0.3	11.2	13.5	9.3
Lane LOS	A	A	B	B	A
Approach Delay (s)	0.9	0.3	11.2	12.3	
Approach LOS			B	B	

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	52	165	5	10	195	103	15	17	5	40	15	60
Peak Hour Factor	0.85	0.95	0.65	0.70	0.95	0.90	0.75	0.75	0.65	0.80	0.75	0.85
Hourly flow rate (vph)	61	174	8	14	205	114	20	23	8	50	20	71
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					751							
pX, platoon unblocked												
vC, conflicting volume	320			181			672	648	178	610	595	262
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	320			181			672	648	178	610	595	262
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			94	94	99	86	95	91
cM capacity (veh/h)	1246			1400			310	368	868	368	394	779

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	243	334	50	70	71
Volume Left	61	14	20	50	0
Volume Right	8	114	8	0	71
cSH	1246	1400	373	375	779
Volume to Capacity	0.05	0.01	0.14	0.19	0.09
Queue Length 95th (ft)	4	1	12	17	7
Control Delay (s)	2.4	0.4	16.2	16.8	10.1
Lane LOS	A	A	C	C	B
Approach Delay (s)	2.4	0.4	16.2	13.4	
Approach LOS			C	B	

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	120	2	5	105	2	9
Peak Hour Factor	0.95	0.60	0.85	0.60	0.60	0.65
Hourly flow rate (vph)	126	3	6	175	3	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			130		315	128
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			130		315	128
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1462		677	925

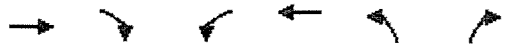
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	130	181	17
Volume Left	0	6	3
Volume Right	3	0	14
cSH	1700	1462	864
Volume to Capacity	0.08	0.00	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.3	9.3
Lane LOS		A	A
Approach Delay (s)	0.0	0.3	9.3
Approach LOS			A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	110	3	11	125	10	15
Peak Hour Factor	0.90	0.60	0.70	0.95	0.70	0.70
Hourly flow rate (vph)	122	5	16	132	14	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			127		288	125
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			127		288	125
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			1465		697	929

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	127	147	36
Volume Left	0	16	14
Volume Right	5	0	21
cSH	1700	1465	820
Volume to Capacity	0.07	0.01	0.04
Queue Length 95th (ft)	0	1	3
Control Delay (s)	0.0	0.9	9.6
Lane LOS		A	A
Approach Delay (s)	0.0	0.9	9.6
Approach LOS			A

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	137	2	7	119	2	10
Peak Hour Factor	0.95	0.60	0.65	0.95	0.60	0.70
Hourly flow rate (vph)	144	3	11	125	3	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			148		293	146
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			148		293	146
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	98
cM capacity (veh/h)			1440		695	904

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	148	136	18
Volume Left	0	11	3
Volume Right	3	0	14
cSH	1700	1440	855
Volume to Capacity	0.09	0.01	0.02
Queue Length 95th (ft)	0	1	2
Control Delay (s)	0.0	0.7	9.3
Lane LOS		A	A
Approach Delay (s)	0.0	0.7	9.3
Approach LOS			A

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	160	3	16	180	10	19
Peak Hour Factor	0.95	0.60	0.75	0.95	0.70	0.75
Hourly flow rate (vph)	168	5	21	189	14	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			173		403	171
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			173		403	171
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		98	97
cM capacity (veh/h)			1409		596	875

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	173	211	40
Volume Left	0	21	14
Volume Right	5	0	25
cSH	1700	1409	749
Volume to Capacity	0.10	0.02	0.05
Queue Length 95th (ft)	0	1	4
Control Delay (s)	0.0	0.9	10.1
Lane LOS		A	B
Approach Delay (s)	0.0	0.9	10.1
Approach LOS			B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	170	5	10	155	5	10
Peak Hour Factor	0.95	0.65	0.70	0.95	0.65	0.70
Hourly flow rate (vph)	179	8	14	163	8	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			187		375	183
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			187		375	183
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	98
cM capacity (veh/h)			1394		622	862

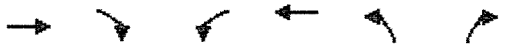
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	187	177	22
Volume Left	0	14	8
Volume Right	8	0	14
cSH	1700	1394	760
Volume to Capacity	0.11	0.01	0.03
Queue Length 95th (ft)	0	1	2
Control Delay (s)	0.0	0.7	9.9
Lane LOS		A	A
Approach Delay (s)	0.0	0.7	9.9
Approach LOS			A

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	155	10	15	195	10	15
Peak Hour Factor	0.95	0.70	0.70	0.95	0.70	0.70
Hourly flow rate (vph)	163	14	21	205	14	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			177		418	170
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			177		418	170
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		98	98
cM capacity (veh/h)			1405		584	876

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	177	227	36
Volume Left	0	21	14
Volume Right	14	0	21
cSH	1700	1405	730
Volume to Capacity	0.10	0.02	0.05
Queue Length 95th (ft)	0	1	4
Control Delay (s)	0.0	0.8	10.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	10.2
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	187	5	12	170	5	11
Peak Hour Factor	0.95	0.65	0.70	0.95	0.65	0.70
Hourly flow rate (vph)	197	8	17	179	8	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			205		414	201
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			205		414	201
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	98
cM capacity (veh/h)			1373		589	843

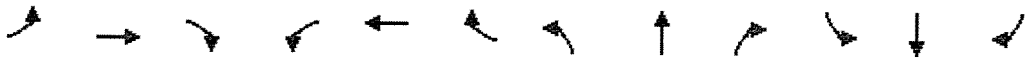
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	205	196	23
Volume Left	0	17	8
Volume Right	8	0	16
cSH	1700	1373	738
Volume to Capacity	0.12	0.01	0.03
Queue Length 95th (ft)	0	1	2
Control Delay (s)	0.0	0.8	10.0
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	10.0
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	203	10	20	265	10	19
Peak Hour Factor	0.95	0.70	0.75	0.95	0.70	0.75
Hourly flow rate (vph)	214	14	27	279	14	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1108		
pX, platoon unblocked						
vC, conflicting volume			228		553	221
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			228		553	221
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		97	97
cM capacity (veh/h)			1346		486	821

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	228	306	40
Volume Left	0	27	14
Volume Right	14	0	25
cSH	1700	1346	658
Volume to Capacity	0.13	0.02	0.06
Queue Length 95th (ft)	0	2	5
Control Delay (s)	0.0	0.8	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	10.8
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	115	0	0	104	3	0	0	2	6	0	10
Peak Hour Factor	0.60	0.90	0.60	0.60	0.85	0.60	0.60	0.60	0.60	0.65	0.60	0.70
Hourly flow rate (vph)	5	128	0	0	122	5	0	0	3	9	0	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	127			128			277	265	128	266	263	125
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	127			128			277	265	128	266	263	125
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	99	100	98
cM capacity (veh/h)	1465			1464			665	640	925	684	642	928

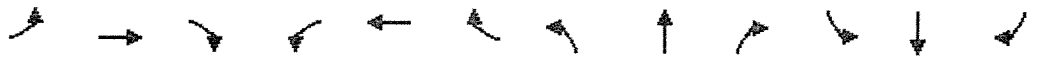
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	133	127	3	24
Volume Left	5	0	0	9
Volume Right	0	5	3	14
cSH	1465	1464	925	814
Volume to Capacity	0.00	0.00	0.00	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.3	0.0	8.9	9.6
Lane LOS	A		A	A
Approach Delay (s)	0.3	0.0	8.9	9.6
Approach LOS			A	A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	95	1	3	120	9	0	0	1	9	0	13
Peak Hour Factor	0.65	0.90	0.60	0.60	0.95	0.70	0.60	0.60	0.60	0.65	0.60	0.70
Hourly flow rate (vph)	12	106	2	5	126	13	0	0	2	14	0	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	139			107			292	280	106	275	275	133
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	139			107			292	280	106	275	275	133
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	98	100	98
cM capacity (veh/h)	1450			1490			643	622	951	672	627	919

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	120	144	2	32
Volume Left	12	5	0	14
Volume Right	2	13	2	19
cSH	1450	1490	951	794
Volume to Capacity	0.01	0.00	0.00	0.04
Queue Length 95th (ft)	1	0	0	3
Control Delay (s)	0.8	0.3	8.8	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.8	0.3	8.8	9.7
Approach LOS			A	A

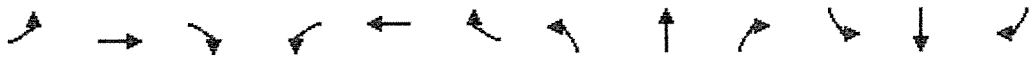
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	130	0	1	117	3	0	0	3	6	1	13
Peak Hour Factor	0.60	0.95	0.60	0.60	0.90	0.60	0.60	0.60	0.60	0.65	0.60	0.70
Hourly flow rate (vph)	7	137	0	2	130	5	0	0	5	9	2	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	135			137			305	289	137	291	286	132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	135			137			305	289	137	291	286	132
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	99	100	98
cM capacity (veh/h)	1456			1453			632	620	914	657	622	919

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	144	137	5	29
Volume Left	7	2	0	9
Volume Right	0	5	5	19
cSH	1456	1453	914	798
Volume to Capacity	0.00	0.00	0.01	0.04
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.4	0.1	9.0	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.4	0.1	9.0	9.7
Approach LOS			A	A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	22.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	11	140	1	8	170	9	0	1	4	9	1	16
Peak Hour Factor	0.70	0.95	0.60	0.65	0.95	0.65	0.60	0.60	0.65	0.65	0.60	0.75
Hourly flow rate (vph)	16	147	2	12	179	14	0	2	6	14	2	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	193			149			412	397	148	397	391	186
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	193			149			412	397	148	397	391	186
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	100	99	97	100	98
cM capacity (veh/h)	1387			1439			529	531	901	551	535	859

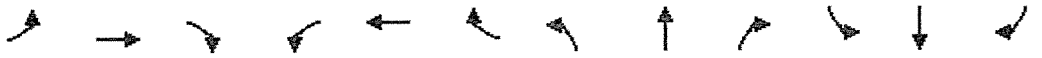
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	165	205	8	37
Volume Left	16	12	0	14
Volume Right	2	14	6	21
cSH	1387	1439	785	694
Volume to Capacity	0.01	0.01	0.01	0.05
Queue Length 95th (ft)	1	1	1	4
Control Delay (s)	0.8	0.5	9.6	10.5
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	0.5	9.6	10.5
Approach LOS			A	B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	125	5	5	125	30	5	20	5	45	25	40
Peak Hour Factor	0.80	0.95	0.65	0.65	0.95	0.80	0.65	0.75	0.65	0.85	0.80	0.85
Hourly flow rate (vph)	38	132	8	8	132	38	8	27	8	53	31	47
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	169			139			439	395	135	397	380	150
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	169			139			439	395	135	397	380	150
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			98	95	99	90	94	95
cM capacity (veh/h)	1415			1450			468	526	916	525	536	899

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	177	177	42	131
Volume Left	38	8	8	53
Volume Right	8	38	8	47
cSH	1415	1450	557	621
Volume to Capacity	0.03	0.01	0.08	0.21
Queue Length 95th (ft)	2	0	6	20
Control Delay (s)	1.8	0.4	12.0	12.3
Lane LOS	A	A	B	B
Approach Delay (s)	1.8	0.4	12.0	12.3
Approach LOS			B	B

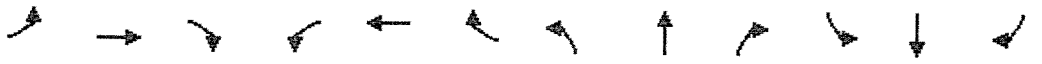
Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	45	125	5	5	150	50	5	25	5	35	20	30
Peak Hour Factor	0.80	0.65	0.65	0.65	0.85	0.80	0.65	0.75	0.65	0.85	0.75	0.85
Hourly flow rate (vph)	56	192	8	8	176	62	8	33	8	41	27	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	239			200			580	563	196	556	536	208
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	239			200			580	563	196	556	536	208
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			98	92	99	90	94	96
cM capacity (veh/h)	1334			1378			376	416	848	397	431	835

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	256	247	49	103
Volume Left	56	8	8	41
Volume Right	8	62	8	35
cSH	1334	1378	444	497
Volume to Capacity	0.04	0.01	0.11	0.21
Queue Length 95th (ft)	3	0	9	19
Control Delay (s)	2.0	0.3	14.1	14.1
Lane LOS	A	A	B	B
Approach Delay (s)	2.0	0.3	14.1	14.1
Approach LOS			B	B

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	140	5	6	145	30	5	20	6	45	26	43
Peak Hour Factor	0.80	0.95	0.65	0.65	0.95	0.85	0.65	0.75	0.65	0.85	0.80	0.85
Hourly flow rate (vph)	39	147	8	9	153	35	8	27	9	53	32	51
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	188			155			484	435	151	440	421	170
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	188			155			484	435	151	440	421	170
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			98	95	99	89	94	94
cM capacity (veh/h)	1392			1431			432	498	898	489	507	876

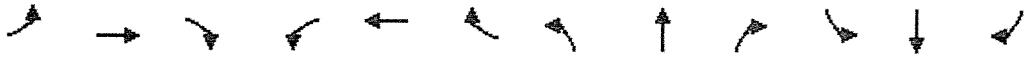
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	194	197	44	136
Volume Left	39	9	8	53
Volume Right	8	35	9	51
cSH	1392	1431	534	591
Volume to Capacity	0.03	0.01	0.08	0.23
Queue Length 95th (ft)	2	0	7	22
Control Delay (s)	1.7	0.4	12.3	12.9
Lane LOS	A	A	B	B
Approach Delay (s)	1.7	0.4	12.3	12.9
Approach LOS			B	B

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	48	170	5	10	215	50	5	26	8	35	21	33
Peak Hour Factor	0.85	0.95	0.65	0.70	0.95	0.85	0.65	0.75	0.65	0.80	0.75	0.80
Hourly flow rate (vph)	56	179	8	14	226	59	8	35	12	44	28	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1255							
pX, platoon unblocked												
vC, conflicting volume	285			187			635	609	183	610	584	256
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	285			187			635	609	183	610	584	256
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			98	91	99	88	93	95
cM capacity (veh/h)	1283			1394			338	389	862	360	402	785

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	243	299	55	113
Volume Left	56	14	8	44
Volume Right	8	59	12	41
cSH	1283	1394	433	464
Volume to Capacity	0.04	0.01	0.13	0.24
Queue Length 95th (ft)	3	1	11	24
Control Delay (s)	2.1	0.5	14.5	15.3
Lane LOS	A	A	B	C
Approach Delay (s)	2.1	0.5	14.5	15.3
Approach LOS			B	C

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	18	30	28	10	15	25	5	30	20	5	15
Peak Hour Factor	0.70	0.75	0.70	0.85	0.80	0.85	0.85	0.65	0.85	0.80	0.65	0.75
Hourly flow rate (vph)	43	24	43	33	12	18	29	8	35	25	8	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	30			67			233	227	45	236	240	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	30			67			233	227	45	236	240	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			96	99	97	96	99	98
cM capacity (veh/h)	1589			1541			678	642	1027	664	632	1059

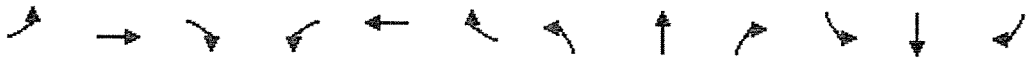
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	43	67	33	30	29	43	25	28
Volume Left	43	0	33	0	29	0	25	0
Volume Right	0	43	0	18	0	35	0	20
cSH	1589	1700	1541	1700	678	927	664	891
Volume to Capacity	0.03	0.04	0.02	0.02	0.04	0.05	0.04	0.03
Queue Length 95th (ft)	2	0	2	0	3	4	3	2
Control Delay (s)	7.3	0.0	7.4	0.0	10.6	9.1	10.6	9.2
Lane LOS	A		A		B	A	B	A
Approach Delay (s)	2.9		3.9		9.7		9.9	
Approach LOS					A		A	

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	80	65	100	65	45	50	45	8	125	90	8	35
Peak Hour Factor	0.87	0.85	0.90	0.85	0.85	0.85	0.85	0.75	0.95	0.90	0.70	0.85
Hourly flow rate (vph)	92	76	111	76	53	59	53	11	132	100	11	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	112			188			569	581	132	633	607	82
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			188			569	581	132	633	607	82
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			95			86	97	86	67	97	96
cM capacity (veh/h)	1484			1393			371	378	920	302	366	980

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	92	188	76	112	53	142	100	53
Volume Left	92	0	76	0	53	0	100	0
Volume Right	0	111	0	59	0	132	0	41
cSH	1484	1700	1393	1700	371	831	302	718
Volume to Capacity	0.06	0.11	0.05	0.07	0.14	0.17	0.33	0.07
Queue Length 95th (ft)	5	0	4	0	12	15	35	6
Control Delay (s)	7.6	0.0	7.7	0.0	16.3	10.2	22.7	10.4
Lane LOS	A		A		C	B	C	B
Approach Delay (s)	2.5		3.1		11.9		18.5	
Approach LOS					B		C	

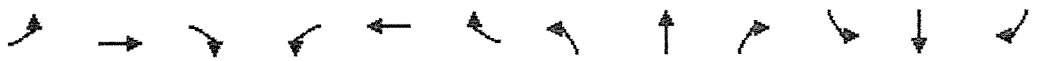
Intersection Summary			
Average Delay	7.9		
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	18	30	28	10	15	25	5	30	20	5	15
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.65	0.70	0.70	0.65	0.70
Hourly flow rate (vph)	43	26	43	40	14	21	36	8	43	29	8	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	36			69			252	249	47	263	259	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	36			69			252	249	47	263	259	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			95	99	96	95	99	98
cM capacity (veh/h)	1582			1539			655	621	1025	630	613	1054

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	43	69	40	36	36	51	29	29
Volume Left	43	0	40	0	36	0	29	0
Volume Right	0	43	0	21	0	43	0	21
cSH	1582	1700	1539	1700	655	933	630	886
Volume to Capacity	0.03	0.04	0.03	0.02	0.05	0.05	0.05	0.03
Queue Length 95th (ft)	2	0	2	0	4	4	4	3
Control Delay (s)	7.3	0.0	7.4	0.0	10.8	9.1	11.0	9.2
Lane LOS	A		A		B	A	B	A
Approach Delay (s)	2.8		3.9		9.8		10.1	
Approach LOS					A		B	

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	80	65	100	65	45	50	45	8	125	90	8	35
Peak Hour Factor	0.85	0.90	0.90	0.85	0.80	0.80	0.85	0.80	0.95	0.95	0.80	0.85
Hourly flow rate (vph)	94	72	111	76	56	62	53	10	132	95	10	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	119			183			571	588	128	637	612	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	119			183			571	588	128	637	612	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			95			86	97	86	68	97	96
cM capacity (veh/h)	1476			1398			370	374	925	300	362	974

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	94	183	76	119	53	142	95	51
Volume Left	94	0	76	0	53	0	95	0
Volume Right	0	111	0	62	0	132	0	41
cSH	1476	1700	1398	1700	370	838	300	732
Volume to Capacity	0.06	0.11	0.05	0.07	0.14	0.17	0.32	0.07
Queue Length 95th (ft)	5	0	4	0	12	15	33	6
Control Delay (s)	7.6	0.0	7.7	0.0	16.3	10.2	22.5	10.3
Lane LOS	A		A		C	B	C	B
Approach Delay (s)	2.6		3.0		11.8		18.2	
Approach LOS					B		C	

Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		