

# North Bay at Woodmoor

## Traffic Impact Study Update

Prepared for:

Ms. Beth A. Diana  
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9540 Federal Drive, Suite 200  
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JUNE 2, 2021

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LSC Transportation Consultants  
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LSC # S214850



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June 2, 2022

Ms. Beth A. Diana  
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RE: North Bay at Woodmoor  
Traffic Impact Study Update  
El Paso County, CO  
LSC # S214850

Dear Ms. Diana,

LSC Transportation Consultants, Inc. has prepared this traffic impact study for the proposed North Bay at Woodmoor subdivision to be located southeast of the intersection of Woodmoor Drive and Deer Creek Road in El Paso County, Colorado. The subdivision is planned to contain 35 single-family attached/multi-family homes. Two access points are planned to Deer Creek Road: one across from Burning Oak Way and the other located about 260 feet to the east.

This report has been prepared for submittal to El Paso County.

## **REPORT CONTENTS**

The preparation of this report included the following:

- Inventory of existing adjacent and nearby area street system. This included surface conditions, functional classifications, roadway widths, lane configurations, traffic control, posted speed limits, pavement markings, intersection and access spacing, roadway and intersection alignments, auxiliary left- and right-turn lanes, intersection sight distances, etc.;
- Summary of morning and late-afternoon peak-hour turning-movement traffic counts at the following "study-area" intersection:
- Woodmoor Drive/Deer Creek Road
- Estimates of average weekday and peak-hour trip generation for the proposed development;
- Estimation of directional distribution of site-generated vehicle trips on the area street system, at the study-area intersections, and at the proposed site-access points on Woodmoor Drive.;

- Projections of site-generated turning-movement traffic volumes at the following “study-area” intersections:
- Woodmoor Drive/Deer Creek Road
- Deer Creek Road/Burning Oak Way
- Deer Creek Road/proposed east site access
- Estimates of short- and long-term background traffic volumes at the study-area intersections and access points;
- Total traffic (site traffic-plus-background traffic) projections at these intersections for the short and long term;
- Level of service (LOS) analysis at the study-area intersections;
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes based on the criteria in El Paso County’s *Engineering Criteria Manual (ECM)*;
- Other recommended improvements and modifications to the study-area streets and intersections; and
- Summary of compiled data, analysis, findings, and recommendations.

#### **PRIOR AREA TRAFFIC REPORTS**

LSC utilized the following previous traffic reports to assist in the production of this report:

- *North Bay at Woodmoor* (dated September 19, 2017)
- *Waterside* (Current)

#### **LAND USE AND ACCESS**

Figure 1 shows the site location relative to the adjacent and nearby streets. The proposed North Bay at Woodmoor subdivision to be located southeast of the intersection of Woodmoor Drive and Deer Creek Road in El Paso County, Colorado. The subdivision is planned to contain 35 single-family attached/multi-family homes.

Two access points are planned to Deer Creek Road:

- Across from Burning Oak Way
- Located about 260 feet to the east

No access is proposed to Woodmoor Drive. A copy of the site plan is shown in Figure 2, which shows the proposed site plan and access points.

#### **Sight Distance**

The proposed access points to Deer Creek Road will need to meet County standards for sight distance as prescribed in *ECM* section 2.4.1.D for a posted speed limit of 25 miles per hour (mph). Site improvements such as landscaping, buildings, fencing, parking areas, etc. must not impede

the lines of sight required for *ECM*-prescribed “sight distance along a roadway” or “entering sight distance for driveways.”

## **ROAD AND TRAFFIC CONDITIONS**

Figure 1 shows the streets adjacent to and in the vicinity of the site. Adjacent streets serving the site are identified below followed by a brief description of each:

**Woodmoor Drive** extends north from SH 105 between the I-25 off-ramps to Doewood Drive before continuing east to Furrow Road. Woodmoor Drive is classified as a Collector on El Paso County’s *Major Transportation Corridors Plan (MTCP)*. Adjacent to the site, the posted speed limit of Woodmoor Drive is 35 miles per hour (mph). There are existing 20 mph school speed limit signs adjacent to/in the vicinity of the site. Please refer to Figures 3 and 4 for locations. Auxiliary left- and right-turn lanes exist on the northbound and southbound approaches at the two-way stop-sign-controlled (TWSC) intersection of Woodmoor Drive/Woodmoor Barn Community Center access.

**Deer Creek Road** is a two-lane local street extending from Monument Hill Road to White Fawn Drive. No auxiliary turn lanes currently exist on any approach at the TWSC intersection of Woodmoor Drive/Deer Creek Road. The posted speed limit adjacent to the site is 30 mph. A signed and marked school pedestrian crossing is located across the south leg of Woodmoor Drive/Deer Creek Road.

### **Existing Traffic Volumes**

Vehicular turning-movement counts were conducted at the following intersections, dates, and times:

- Woodmoor Drive/Deer Creek Road
- Thursday, September 30, 2021 from 6:30 – 8:30 a.m.
- Wednesday, September 22, 2021 from 4:00 – 6:00 p.m.

Figure 4 shows these turning-movement volumes, as well as the estimated current average weekday traffic volumes on the study-area streets. Raw count data is attached.

### **Pedestrian Facilities**

Please refer to Figure 3 which shows the planned future pedestrian facilities within and adjacent to the site. There are two existing schools located within two miles of the site, Lewis Palmer Middle School and Lewis Palmer Elementary School. Regarding pedestrian facilities for walking to Lewis Palmer Middle School, please also refer to the attached pedestrian exhibits (Figures from the Waterside traffic report). Walking to Lewis Palmer Elementary School is not likely as it would be a 1.7-mile walk. For unlikely walking trips to the school, the likely route would be along the

east side of Woodmoor Drive to Lake Woodmoor Drive, then east along Lake Woodmoor Drive to the school.

## **TRIP GENERATION**

Estimates of the existing and projected vehicle trips to be generated by the site have been made using the following nationally-published average trip-generation rates – land-use codes “215 – Single-Family (Attached) Housing” and “220 – Multi-Family Housing (Low-Rise)” in *Trip Generation, 11<sup>th</sup> Edition, 2021* by the Institute of Transportation Engineers (ITE). Table 2 (attached) presents the estimated site trip generation.

### **Current Trip Generation Estimate**

Based on the ITE estimate for the proposed residential development, the site would generate about 249 external vehicle trips on the average weekday. During the weekday morning peak hour, approximately 5 vehicles would enter and 12 vehicles would exit the site. Approximately 12 entering vehicles and 8 exiting vehicles are projected during the weekday afternoon peak hour.

### **Change in Trip Generation**

Compared to the previously-proposed site plan, the new North Bay at Woodmoor development is projected to generate:

- Average 24-hour weekday – 86 additional trips
- AM peak hour – 3 additional entering and 2 additional exiting trips
- PM peak hour – 2 additional entering and 3 additional exiting trips

## **TRIP DISTRIBUTION AND ASSIGNMENT**

### **Trip Directional Distribution**

Estimating the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site’s traffic impacts. Figure 6 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site’s major approaches. Estimates have been based on the following factors: the proposed new land use, the area street and road system serving the site, and the site’s geographic location relative to the balance of the El Paso County and the Pikes Peak region.

### **Site-Generated Traffic**

Figure 7 shows the projected site-generated traffic volumes for the weekday morning and evening peak hours. Site-generated traffic volumes at the following intersections have been

calculated by applying the directional-distribution percentages estimated by LSC (from Figure 6) to the trip-generation estimates (from Table 2):

- Woodmoor Drive/Deer Creek Road
- Deer Creek Road/Burning Oak Way
- Deer Creek Road/proposed east site access

Based on counts shown on Figure 7, Average weekday trips is 265, but Table 2 shows trips as 249. Please reconcile trip count between Table 2 and Figure 7

### Existing-Plus-Waterside-Plus-Site-Generated Traffic Volumes

Figure 8 shows the sum of the existing traffic volumes (from Figure 4) and site-generated peak-hour traffic volumes (shown in Figure 7). These volumes also include the addition of traffic to be generated by the adjacent Waterside development. These volumes represent the estimated short-term total traffic, following site buildout of Waterside and North Bay.

Include as an excerpt, what added traffic volume is from Waterside

Note: LSC has prepared a separate traffic report for Waterside.

Provide Project #

### Estimated Future 2042 Background Traffic Volumes

Figure 5 shows the projected 20-year background traffic volumes for the year 2042. Projected 20-year background traffic volumes do **not** include projected traffic to be generated by the proposed North Bay at Woodmoor residential development. Note: these volumes include the projected Waterside project traffic volumes.

Include as an excerpt, what projected future traffic volume from Waterside

The projected long-term future volumes reflect about 1.25-percent annual growth rate for Woodmoor Drive and about 4.5-percent annual growth for Deer Creek Road (west of Woodmoor Drive). Minimal background growth has been estimated for Deer Creek Road east of Woodmoor Drive as this area is primarily built out (except for North Bay).

### Future 2042 Total Traffic Volumes

Figure 9 shows the projected 2042 total traffic volumes, which are the sum of 2042 background traffic volumes (from Figure 5) plus the site-generated traffic volumes (from Figure 7).

### LEVEL OF SERVICE ANALYSIS

The following intersections have been analyzed to determine the projected intersection levels of service for short- and long-term traffic scenarios for the morning, mid-afternoon, and evening peak-hour time periods:

- Woodmoor Drive/Woodmoor Barn Community Center access
- Woodmoor Drive/proposed north site access
- Woodmoor Drive/Deer Creek Road

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



delay. LOS F indicates a high level of congestion or delay. Table 1 shows the level of service delay ranges for signalized and unsignalized intersections.

**Table 1: Intersection Levels of Service Delay Ranges**

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle) <sup>1</sup>
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1sec or more

<sup>1</sup> For unsignalized intersections, if v/c ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

Detailed Synchro reports are attached. A summary of LOS during the weekday morning and evening peak hours for the following unsignalized intersections is shown in the following figures:

- Figure 4: Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 5: 2042 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 8: Existing + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 9: 2042 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

### **Woodmoor Drive/Deer Creek Road**

All approaches and individual turning movements at the intersection of Woodmoor Drive/Deer Creek Road are projected to be LOS D or better through 2042 during peak hours. Please refer to the Figures and LOS sheets for complete results.

### **Woodmoor Drive/Proposed Site Accesses**

All individual approaches at the proposed site accesses to Deer Creek Road are projected to operate at LOS A through the 20-year horizon.

### **AUXILIARY TURN-LANE NEEDS ANALYSIS**

#### **Deer Creek Road/Site Access Points**

The projected turning volumes at the site-access points would not exceed the *ECM* thresholds requiring auxiliary turn lanes.

## **Woodmoor Drive/Deer Creek Road**

### Northbound Right-Turn Lane

Per *ECM* criteria, exclusive right-turn lanes shall be provided for any access on a Minor Arterial or Collector with a projected peak-hour ingress turning volume of 50 vph or greater. The projected northbound right-turn volume at the site-access point is **not** expected to exceed the *ECM*-minimum right-turn-volume thresholds prescribing a turn lane upon site buildout.

### Southbound Left-Turn Lane

Per *ECM* criteria, exclusive left-turn lanes shall be provided for any access on a Minor Arterial or Collector with a projected peak-hour ingress turning volume of 25 vehicles per hour (vph) or greater. The projected southbound left-turn volume at the site-access point is **not** expected to exceed the *ECM*-minimum left-turn-volume thresholds prescribing a turn lane upon site buildout.

### Northbound Left-Turn Lane

The projected northbound left-turn volume at this intersection currently exceeds the *ECM*-minimum left-turn-volume threshold of 25 vph prescribing a turn lane on Woodmoor Drive approaching Deer Creek Road. This North Bay project would not add turning vehicles to the northbound left-turn movement. The nearby Waterside project (please refer to separate TIS report) is projected to add 5 vehicles per hour to this turning movement during the morning peak hour (six percent increase over existing). However, as discussed in the prior/2017 North Bay Traffic Impact Study report, with only two through lanes and no auxiliary lanes, the pedestrian crossing distance for the school pedestrian crossing is shorter and less complex for young pedestrians than it would be with auxiliary turn lanes. The addition of auxiliary turn lanes would likely increase vehicle speeds as well. LSC recommends these factors be considered if a northbound left-turn lane is ever contemplated for installation by the County.

## **Woodmoor Drive/Proposed Site Accesses**

No auxiliary turn lanes would be needed at the proposed access points.

## **INTERNAL STREET CLASSIFICATIONS**

The streets internal to the site will be private.

## **MULTI-MODAL AND PEDESTRIAN/BIKE TRANSPORTATION**

- A Park-and-Ride facility is located just to the south at the northwest corner of Woodmoor Drive/State Highway 105.
- A trail along the west side of the site and a sidewalk along Woodmoor Drive are proposed, and all internal streets within the site will have sidewalks.

## **ROADWAY IMPROVEMENT FEE PROGRAM**

### **Anticipated Fees and PID Option**

This project will be required to participate in the El Paso County Road Improvement Fee Program. The applicant will identify the PID option prior to plat approval.

### **Potentially Reimbursable Improvements Under the MTCP Fee Program**

Nearby improvement projects which are potentially reimbursable under the Fee Program are (from *MTCP* Map No. 13) include:

- U20 - Monument Hill Road (Woodmoor Drive to County Line Road) – upgrade to Rural 2-lane Collector
- U21 - Deer Creek Road (Monument Hill Road to Woodmoor Drive) – upgrade to Rural 2-lane Collector

## **DEVIATIONS/PUD MODIFICATIONS**

**Access spacing along a Rural Local roadway:** Please refer to Deviation Request Form. The request is to allow access intersection spacing of 260 feet along Deer Creek Road between Shoreditch Heights and Redbridge Point (the proposed new south leg of the Burning Creek Way/Deer Creek Road intersection).

## **FINDINGS & CONCLUSIONS**

### **Trip Generation and LOS**

- The site is projected to generate about 249 external vehicle trips on the average weekday.
- During the weekday morning peak hour, approximately 5 vehicles would enter and 12 vehicles would exit the site.
- During the weekday evening peak hour of adjacent street traffic, 12 vehicles would enter the site while 8 vehicles would exit.
- Please refer to the “Level of Service” section above for detailed LOS analysis results for individual turning movements and approaches at all studied intersections, during both peak hours through the 2042 horizon year.

### Auxiliary Turn Lanes

- Based on the criteria contained in El Paso County’s *Engineering Criteria Manual* and the projected 2042 total traffic volumes, a southbound left-turn lane would **not** be required on Woodmoor Drive approaching Deer Creek Road.
- Based on *ECM* criteria and existing traffic counts, the volumes exceed the thresholds for northbound left-turn and southbound right-turn lanes on Woodmoor Drive approaching Deer Creek Road. As North Bay at Woodmoor is not projected to add any vehicles to these turning movements, this development should **not** be required to address these existing deficiencies. Moreover, with only two through lanes and no auxiliary lanes, the pedestrian crossing distance for the school pedestrian crossing is shorter and less complex for young pedestrians than it would be with auxiliary turn lanes. The addition of auxiliary turn lanes would likely increase vehicle speeds as well. LSC recommends these factors be considered if a northbound left-turn lane is ever contemplated for installation by the County.
- No auxiliary turn lanes would be required on Deer Creek Road approaching the proposed site-access points.
- Please refer to the “Auxiliary Turn Lane Analysis” section for details regarding the auxiliary turn-lane needs evaluation at the study-area intersections.

### Site Impacts

- North Bay at Woodmoor is projected to increase the existing daily traffic volume on Deer Creek Road just east of Woodmoor Road by about 22 percent. Between Woodmoor Drive and the site, the project would add about 249 vehicle-trips per day to this 600-foot section of roadway. The project is not expected to have a perceptible impact on Deer Creek Road east of the site. The section of Deer Creek Road east of Woodmoor Drive is projected to be about 240 vehicles per day over the *ECM* design average daily traffic for a rural local roadway (750 vehicles per day). The higher density of the Woodmoor neighborhood results in higher trip generation per acre when compared to 2.5-acre or lower density rural developments. The higher unit density and resulting higher trip generation generally translates to higher average daily traffic volumes on local roads when compared to 2.5-acre or 5-acre rural subdivisions.
- The North Bay at Woodmoor development is projected to increase the existing daily traffic volume on Woodmoor Road just south of Deer Creek Road by about 3 percent.

\* \* \* \* \*

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

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH/JAB:jas

Enclosures: Table 2  
Figure 1 - Figure 9  
Traffic Count Reports  
Synchro LOS Reports  
Pedestrian and Bike Circulation Exhibits

# Tables

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**Table 2: Trip Generation Estimate**

ITE		Value	Units 1	Trip Generation Rates 2				Total Trips Generated					
				Average	A.M.		P.M.		Average	A.M.		P.M.	
Code	Description			Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
<b>Current Traffic Report</b>													
215	Single-Family (Attached) Housing	27	DU	7.12	0.14	0.32	0.32	0.24	192	4	9	9	7
220	Multi-Family Housing (Low-Rise)	8	DU	7.16	0.13	0.41	0.40	0.24	57	1	3	3	2
	<b>Total</b>	<b>35</b>	<b>DU</b>						<b>249</b>	<b>5</b>	<b>12</b>	<b>12</b>	<b>8</b>
<b>Prior Traffic Report</b>													
230	Residential Condominium/Townhome	28	DU	-	-	-	-	-	163	2	10	10	5
				<b>Increase From Prior Traffic Study</b>				<b>86</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>3</b>	

<sup>1</sup> DU = dwelling units

<sup>2</sup> Source: Trip Generation, 11th Edition (2021) by the Institute of Transportation Engineers (ITE)

# Figures

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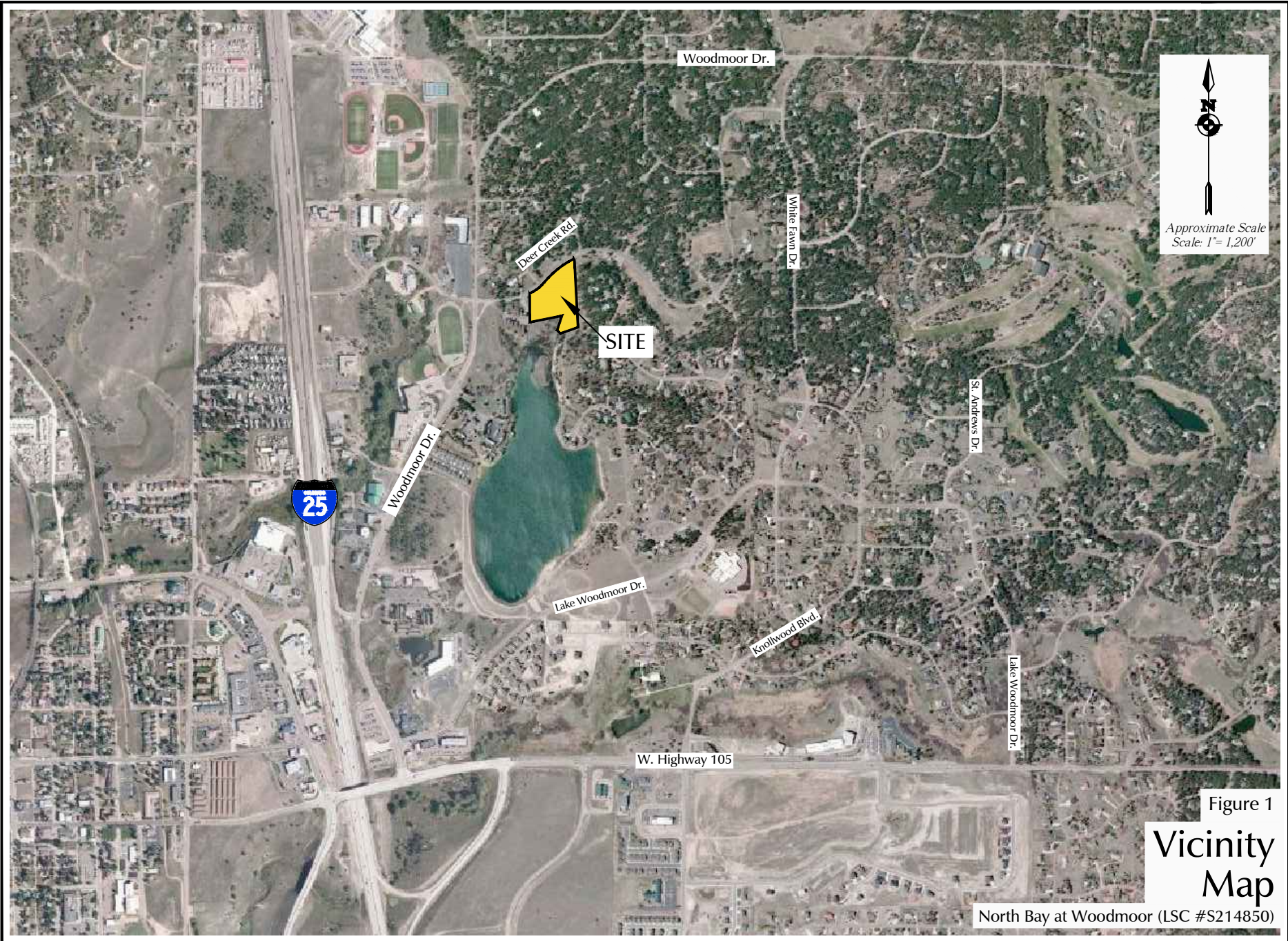


Figure 1  
**Vicinity  
Map**

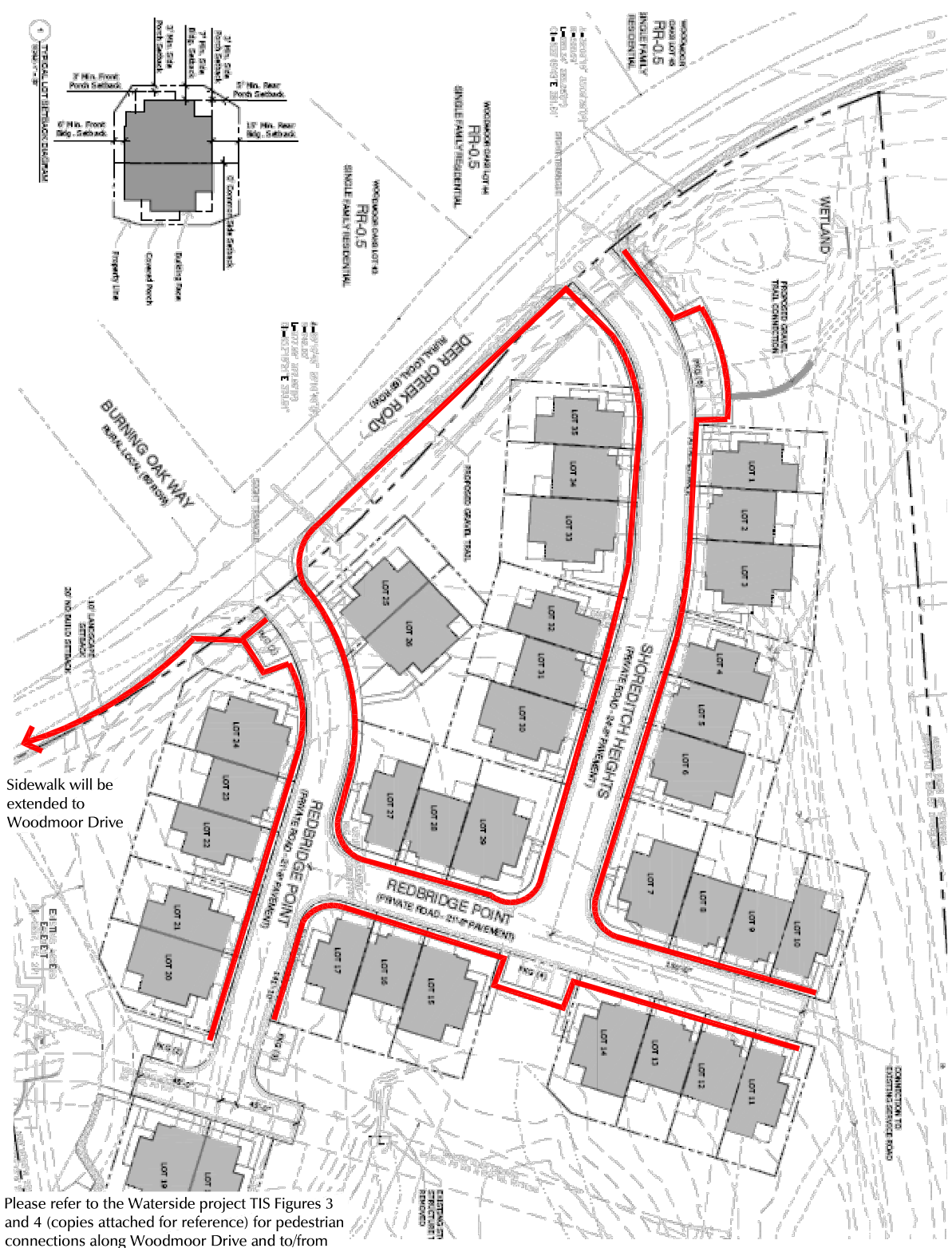
North Bay at Woodmoor (LSC #S214850)







1" = 80'  
scale



Sidewalk will be extended to Woodmoor Drive

Please refer to the Waterside project TIS Figures 3 and 4 (copies attached for reference) for pedestrian connections along Woodmoor Drive and to/from Lewis Palmer Middle School.

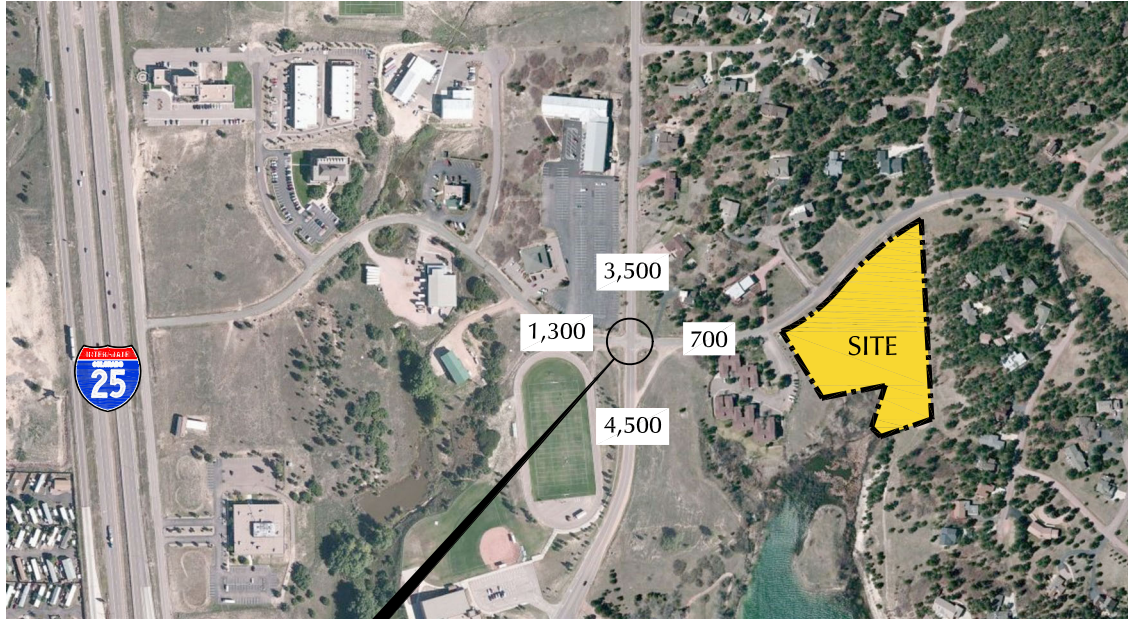
Proposed/Future Sidewalk

Figure 3

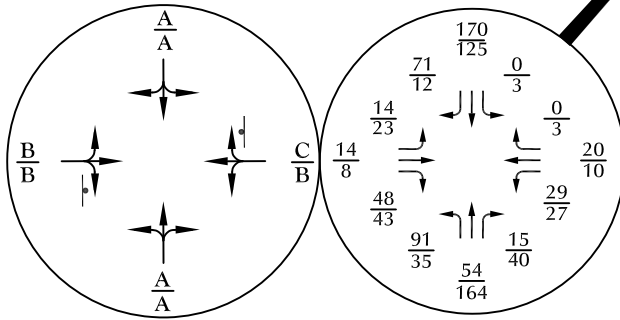
# Proposed Pedestrian Facilities and Connectivity

North Bay at Woodmoor (LSC# 214850)





1" = 400'  
scale

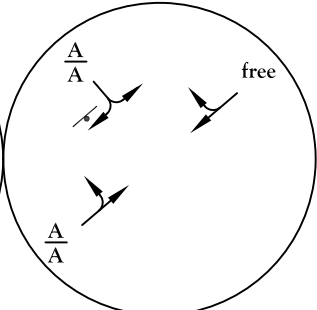
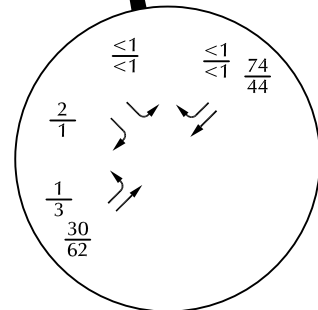
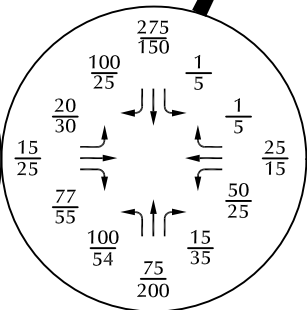
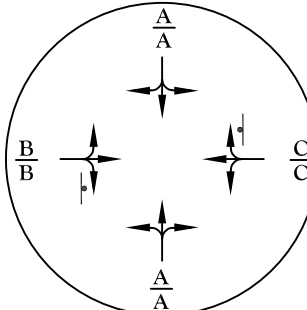
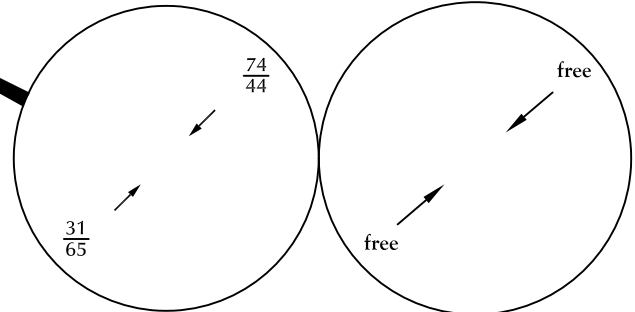
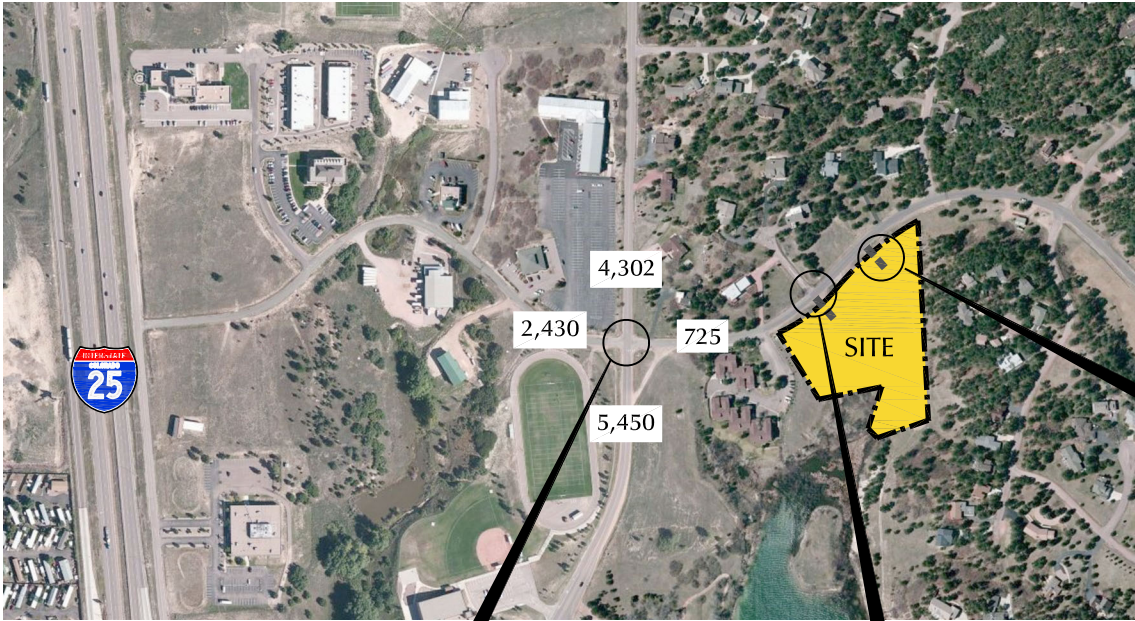


- $\frac{X}{X}$  = AM Individual Movement Peak-Hour LOS  
PM Individual Movement Peak-Hour LOS
  - $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (Veh/Hour)  
PM Weekday Peak-Hour Traffic (Veh/Hour)
  - X,XXX = Average Daily Traffic (Vehicles/Day)
  - $\perp$  = Stop Sign
  - A.M. = 7:00 - 8:00 a.m.
  - P.M. = 4:30 - 5:30 p.m.
- Counts by LSC (September 2021)

Figure 4  
Existing Traffic, Lane Geometry,  
Traffic Control, and LOS  
North Bay at Woodmoor (LSC# 214850)





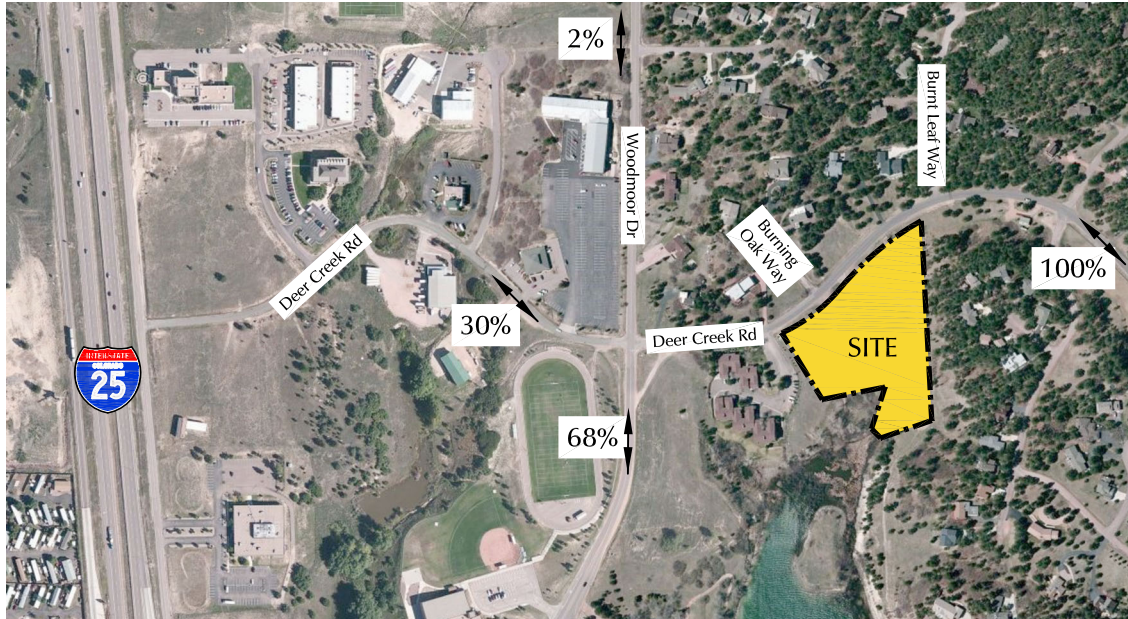


$\frac{X}{X}$  = AM Individual Movement Peak-Hour LOS  
 PM Individual Movement Peak-Hour LOS  
 $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (Veh/Hour)  
 PM Weekday Peak-Hour Traffic (Veh/Hour)  
 X,XXX = Average Daily Traffic (Vehicles/Day)

A.M. = 7:00 - 8:00 a.m.  
 P.M. = 4:30 - 5:30 p.m.  
 † = Stop Sign

Figure 5  
 2042 Background  
 Traffic, Lane Geometry,  
 Traffic Control, and LOS

North Bay at Woodmoor (LSC# 214850)



1" = 400'  
scale

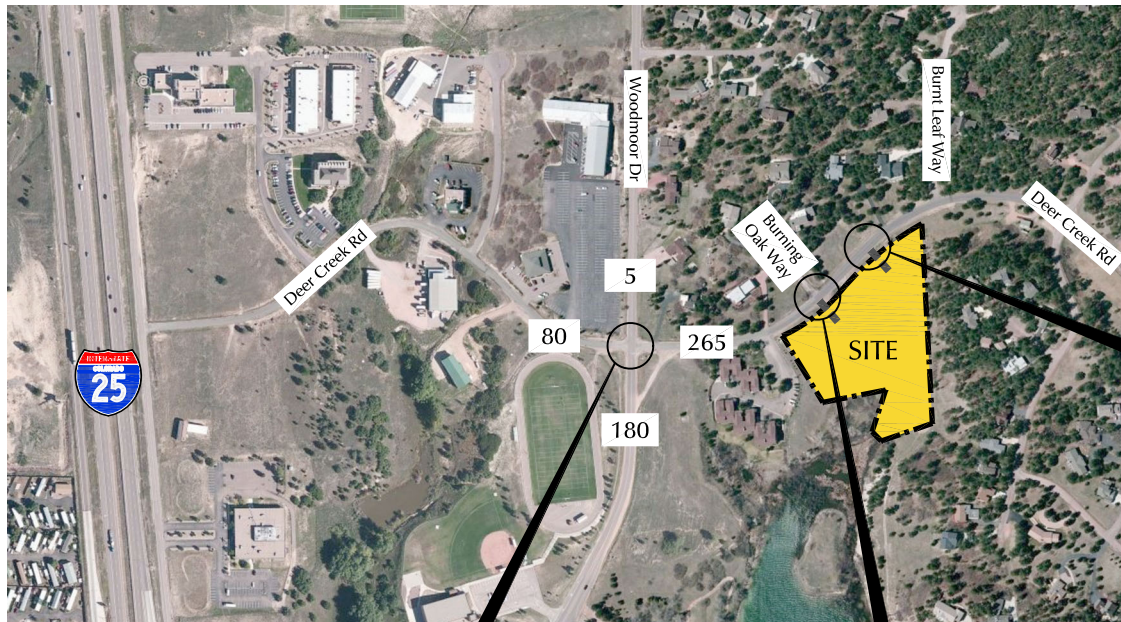


XX% = Percent Directional Distribution

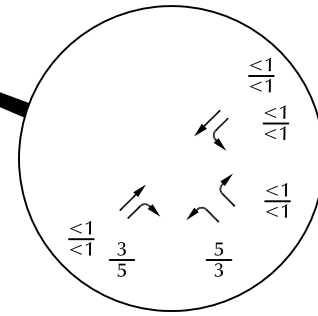
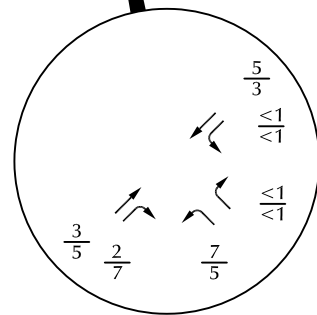
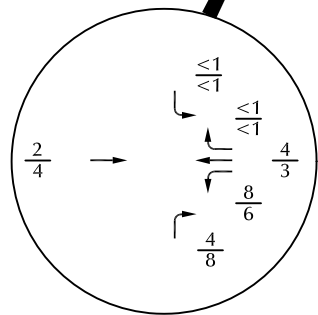
Figure 6  
Directional Distribution

North Bay at Woodmoor (LSC# 214850)





1" = 400'  
scale



$\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (Veh/Hour)  
 $\frac{XX}{XX}$  = PM Weekday Peak-Hour Traffic (Veh/Hour)  
 X,XXX = Average Daily Traffic (Vehicles/Day)

Figure 7  
**Site-Generated Traffic**  
 North Bay at Woodmoor (LSC# 214850)

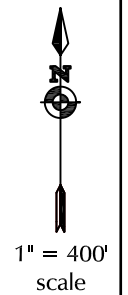
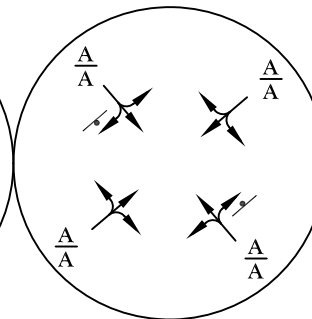
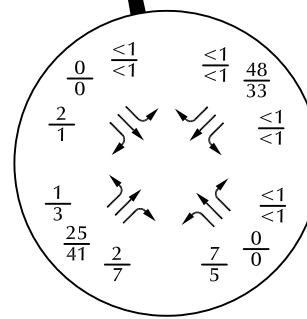
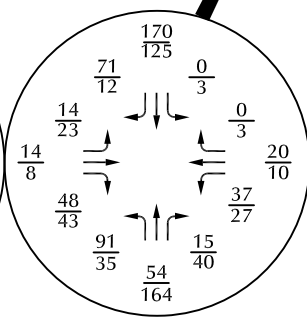
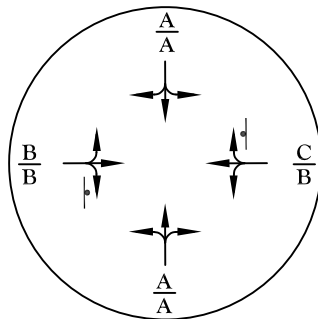
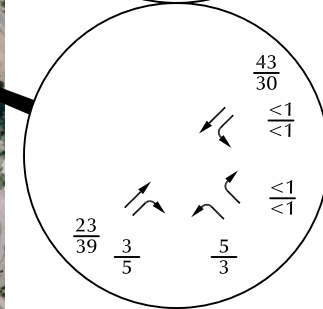
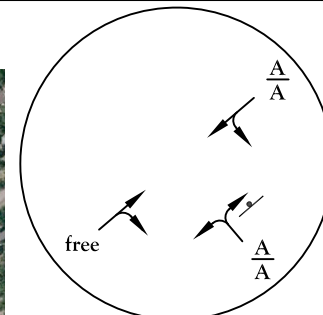
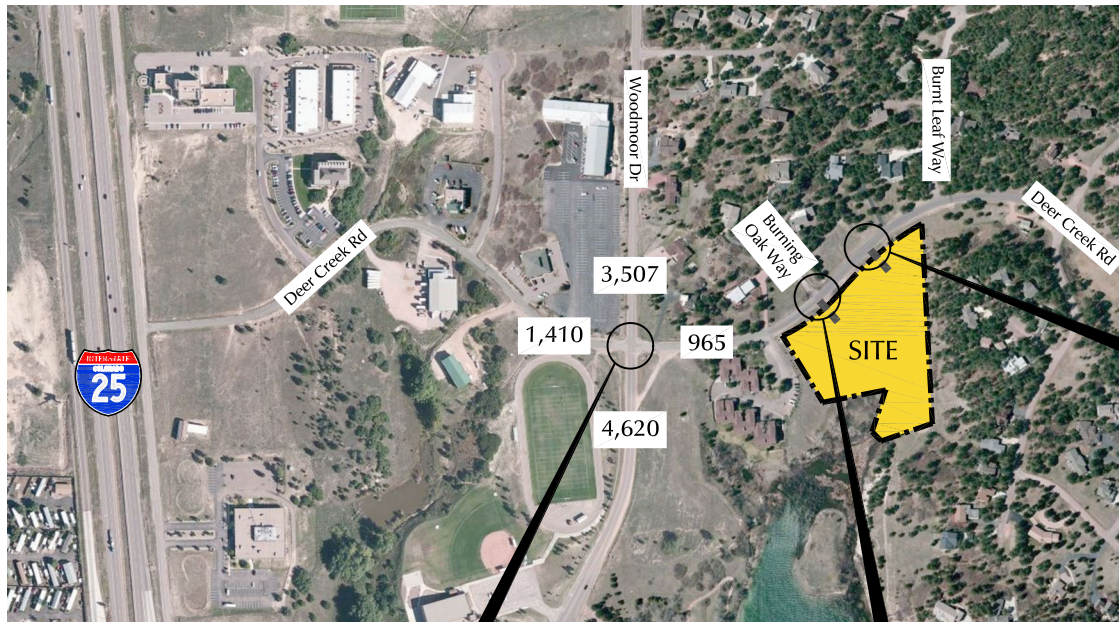
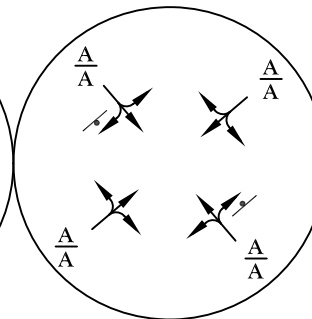
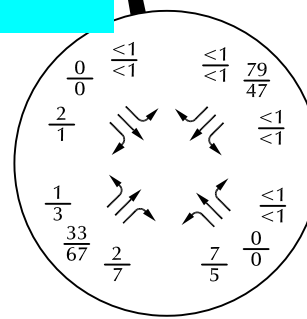
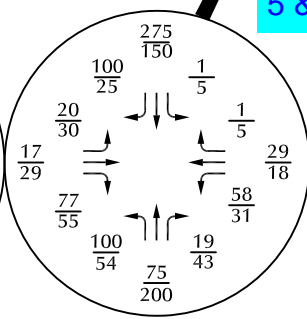
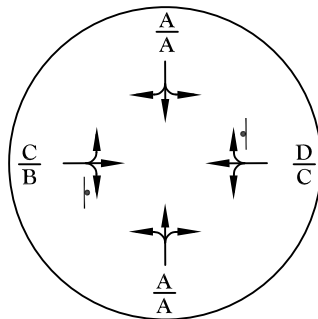
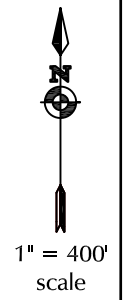
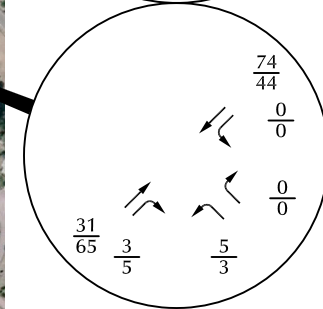
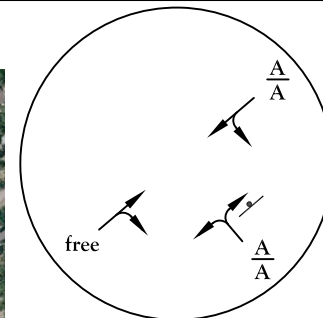
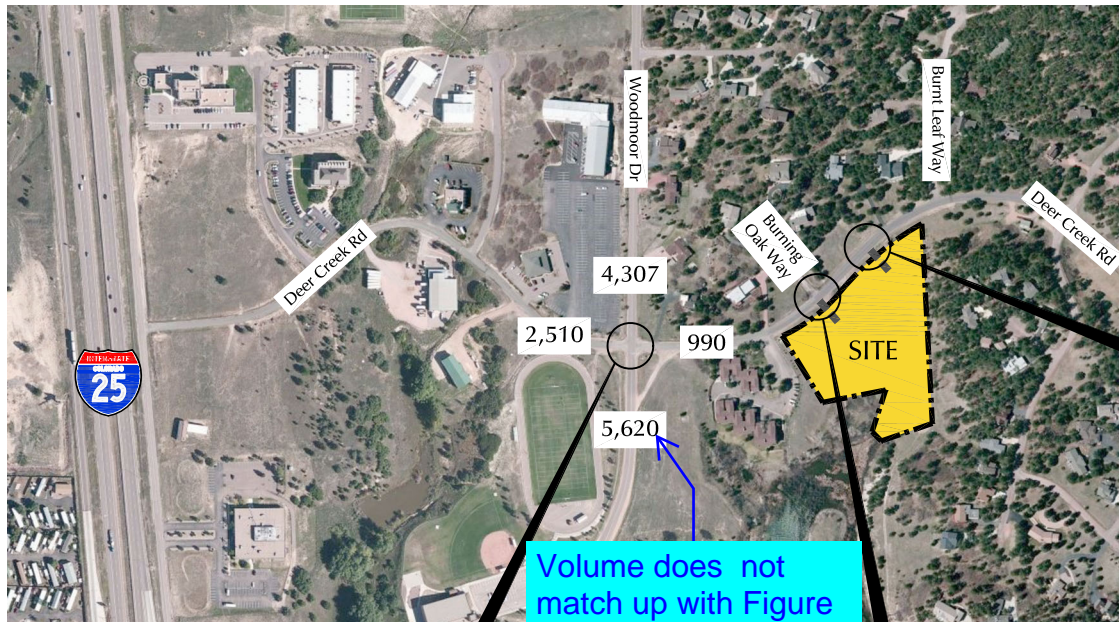


Figure 8  
Existing + Waterside + Site  
Traffic, Lane Geometry,  
Traffic Control, and LOS

- $\frac{X}{X}$  = AM Individual Movement Peak-Hour LOS
- $\frac{X}{X}$  = PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (Veh/Hour)
- $\frac{XX}{XX}$  = PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day)
- A.M. = 7:00 - 8:00 a.m.
- P.M. = 4:30 - 5:30 p.m.
- ‡ = Stop Sign







Volume does not match up with Figure 5 & 7 volumes.

Figure 9  
2042 Background + Site  
Traffic, Lane Geometry,  
Traffic Control, and LOS



$\frac{X}{X}$  = AM Individual Movement Peak-Hour LOS  
 $\frac{X}{X}$  = PM Individual Movement Peak-Hour LOS  
 $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (Veh/Hour)  
 $\frac{XX}{XX}$  = PM Weekday Peak-Hour Traffic (Veh/Hour)  
 X,XXX = Average Daily Traffic (Vehicles/Day)

A.M. = 7:00 - 8:00 a.m.  
 P.M. = 4:30 - 5:30 p.m.  
 = Stop Sign

North Bay at Woodmoor (LSC# 214850)

# Traffic Counts

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

File Name : Woodmoor Dr - Deer Creek Rd AM  
 Site Code : S214860  
 Start Date : 9/30/2021  
 Page No : 1

### Groups Printed- Unshifted

Start Time	Woodmoor Rd Southbound					Deer Creek Rd Westbound					Woodmoor Rd Northbound					Deer Creek Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
06:30 AM	0	23	0	0	23	0	0	0	0	0	3	5	0	0	8	0	0	2	0	2	33
06:45 AM	0	34	3	0	37	2	0	0	0	2	9	8	1	0	18	0	0	9	0	9	66
Total	0	57	3	0	60	2	0	0	0	2	12	13	1	0	26	0	0	11	0	11	99
07:00 AM	0	63	13	0	76	13	4	0	0	17	26	18	4	0	48	1	0	25	0	26	167
07:15 AM	0	41	49	0	90	8	4	0	0	12	49	10	3	0	62	2	3	11	0	16	180
07:30 AM	0	29	5	0	34	3	7	0	0	10	5	13	0	0	18	10	9	6	0	25	87
07:45 AM	0	37	4	0	41	5	1	0	0	6	6	13	4	0	23	1	0	4	0	5	75
Total	0	170	71	0	241	29	16	0	0	45	86	54	11	0	151	14	12	46	0	72	509
08:00 AM	1	30	0	0	31	6	1	1	0	8	9	13	1	0	23	1	0	4	0	5	67
08:15 AM	0	35	3	0	38	1	1	1	0	3	13	16	6	0	35	0	0	2	0	2	78
Grand Total	1	292	77	0	370	38	18	2	0	58	120	96	19	0	235	15	12	63	0	90	753
Apprch %	0.3	78.9	20.8	0		65.5	31	3.4	0		51.1	40.9	8.1	0		16.7	13.3	70	0		
Total %	0.1	38.8	10.2	0	49.1	5	2.4	0.3	0	7.7	15.9	12.7	2.5	0	31.2	2	1.6	8.4	0	12	

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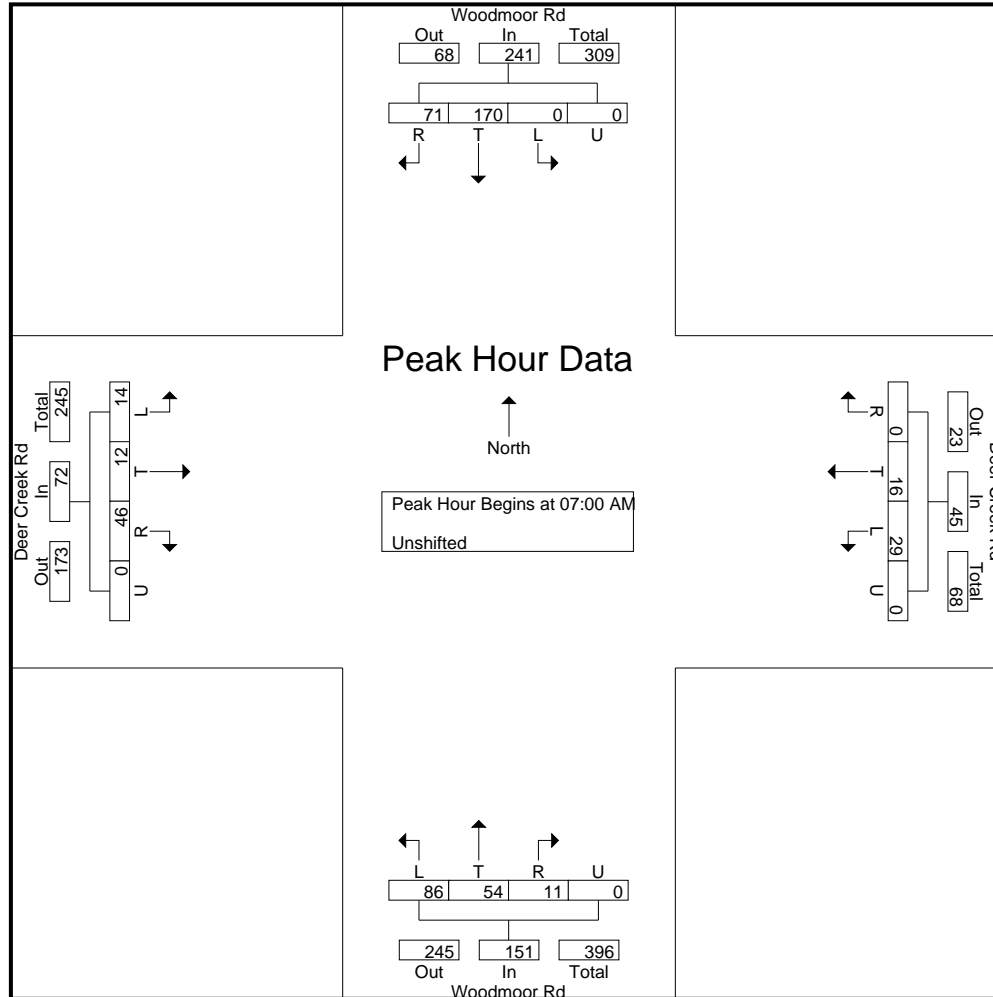
File Name : Woodmoor Dr - Deer Creek Rd AM  
 Site Code : S214860  
 Start Date : 9/30/2021  
 Page No : 2

Start Time	Woodmoor Rd Southbound					Deer Creek Rd Westbound					Woodmoor Rd Northbound					Deer Creek Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
<b>Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1</b>																					
Peak Hour for Entire Intersection Begins at 7:00:00 AM																					
7:00:00 AM	0	63	13	0	76	13	4	0	0	17	26	18	4	0	48	1	0	25	0	26	167
7:15:00 AM	0	41	49	0	90	8	4	0	0	12	49	10	3	0	62	2	3	11	0	16	180
7:30:00 AM	0	29	5	0	34	3	7	0	0	10	5	13	0	0	18	10	9	6	0	25	87
7:45:00 AM	0	37	4	0	41	5	1	0	0	6	6	13	4	0	23	1	0	4	0	5	75
Total Volume	0	170	71	0	241	29	16	0	0	45	86	54	11	0	151	14	12	46	0	72	509
% App. Total	0	70.5	29.5	0		64.4	35.6	0	0		57	35.8	7.3	0		19.4	16.7	63.9	0		
PHF	.000	.675	.362	.000	.669	.558	.571	.000	.000	.662	.439	.750	.688	.000	.609	.350	.333	.460	.000	.692	.707

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File Name : Woodmoor Dr - Deer Creek Rd AM  
 Site Code : S214860  
 Start Date : 9/30/2021  
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 719-633-2868

File Name : Woodmoor Dr - Deer Creek Rd AM  
 Site Code : S214860  
 Start Date : 9/30/2021  
 Page No : 4

Start Time	Woodmoor Rd Southbound					Deer Creek Rd Westbound					Woodmoor Rd Northbound					Deer Creek Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	

**Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1**

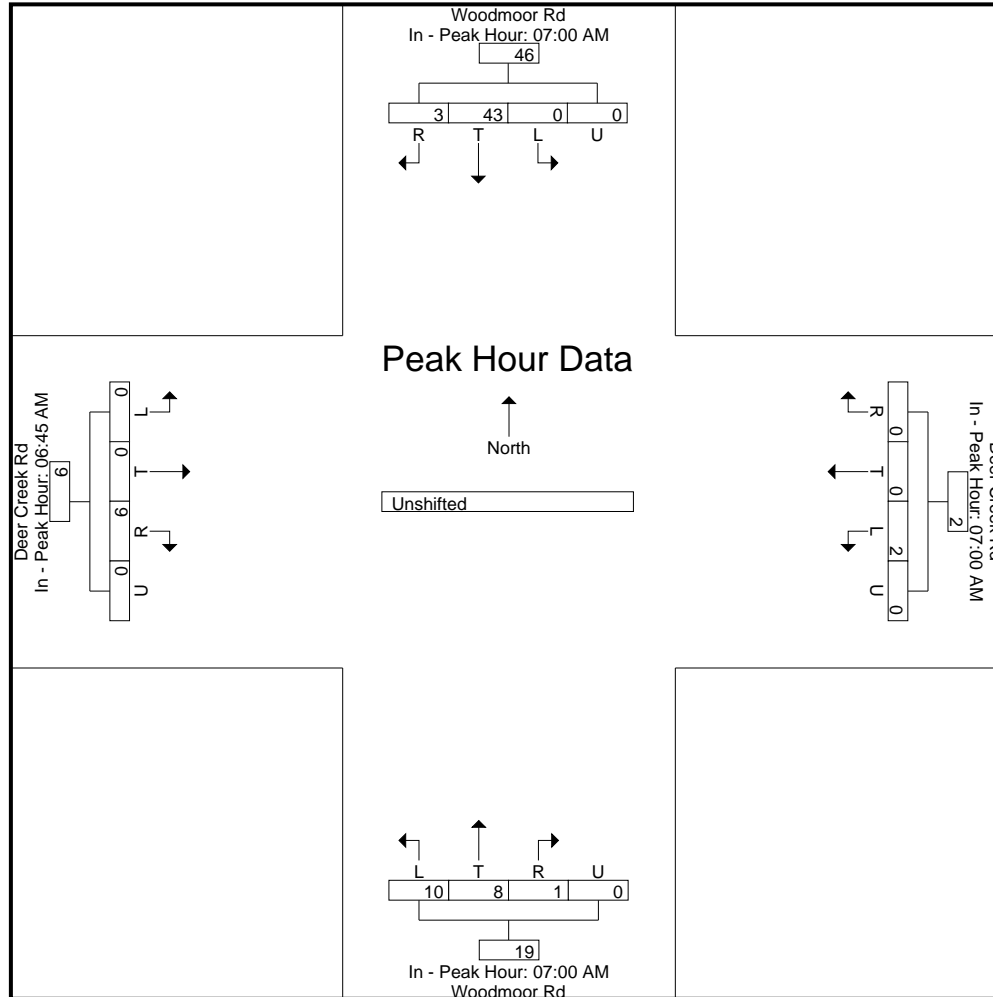
Peak Hour for Each Approach Begins at:

	7:00:00 AM					7:00:00 AM					7:00:00 AM					6:45:00 AM				
+0 mins.	0	<b>63</b>	13	0	76	<b>13</b>	4	0	0	<b>17</b>	26	<b>18</b>	4	0	48	0	0	9	0	9
+5 mins.	0	41	<b>49</b>	0	<b>90</b>	8	4	0	0	12	<b>49</b>	10	3	0	<b>62</b>	1	0	<b>25</b>	0	<b>26</b>
+10 mins.	0	29	5	0	34	3	<b>7</b>	0	0	10	5	13	0	0	18	2	3	11	0	16
+15 mins.	0	37	4	0	41	5	1	0	0	6	6	13	4	0	23	<b>10</b>	<b>9</b>	6	0	25
Total Volume	0	170	71	0	241	29	16	0	0	45	86	54	11	0	151	13	12	51	0	76
% App. Total	0	70.5	29.5	0		64.4	35.6	0	0		57	35.8	7.3	0		17.1	15.8	67.1	0	
PHF	.000	.675	.362	.000	.669	.558	.571	.000	.000	.662	.439	.750	.688	.000	.609	.325	.333	.510	.000	.731

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File Name : Woodmoor Dr - Deer Creek Rd AM  
Site Code : S214860  
Start Date : 9/30/2021  
Page No : 5



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2504 E Pikes Peak Ave, Suite 304  
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File Name : Woodmoor Dr - Deer Creek Rd PM  
 Site Code : S214860  
 Start Date : 9/22/2021  
 Page No : 1

### Groups Printed- Unshifted

Start Time	Woodmoor Dr Southbound					Deer Creek Rd Westbound					Woodmoor Dr Northbound					Deer Creek Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
04:00 PM	1	29	4	0	34	6	1	0	0	7	12	42	11	0	65	5	2	21	0	28	134
04:15 PM	0	38	4	0	42	6	0	0	0	6	4	33	6	0	43	5	0	5	0	10	101
04:30 PM	0	25	2	0	27	4	1	0	0	5	9	45	11	0	65	5	1	8	0	14	111
04:45 PM	1	35	6	0	42	2	1	0	0	3	7	41	5	0	53	2	2	5	0	9	107
Total	2	127	16	0	145	18	3	0	0	21	32	161	33	0	226	17	5	39	0	61	453
05:00 PM	0	39	2	0	41	7	3	0	0	10	8	33	9	0	50	7	0	17	0	24	125
05:15 PM	2	26	2	0	30	8	2	3	0	13	7	45	7	0	59	9	1	8	0	18	120
05:30 PM	0	28	5	0	33	6	0	0	0	6	6	29	8	0	43	8	0	4	0	12	94
05:45 PM	0	34	8	0	42	3	2	0	0	5	6	34	3	0	43	3	3	13	0	19	109
Total	2	127	17	0	146	24	7	3	0	34	27	141	27	0	195	27	4	42	0	73	448
Grand Total	4	254	33	0	291	42	10	3	0	55	59	302	60	0	421	44	9	81	0	134	901
Apprch %	1.4	87.3	11.3	0		76.4	18.2	5.5	0		14	71.7	14.3	0		32.8	6.7	60.4	0		
Total %	0.4	28.2	3.7	0	32.3	4.7	1.1	0.3	0	6.1	6.5	33.5	6.7	0	46.7	4.9	1	9	0	14.9	



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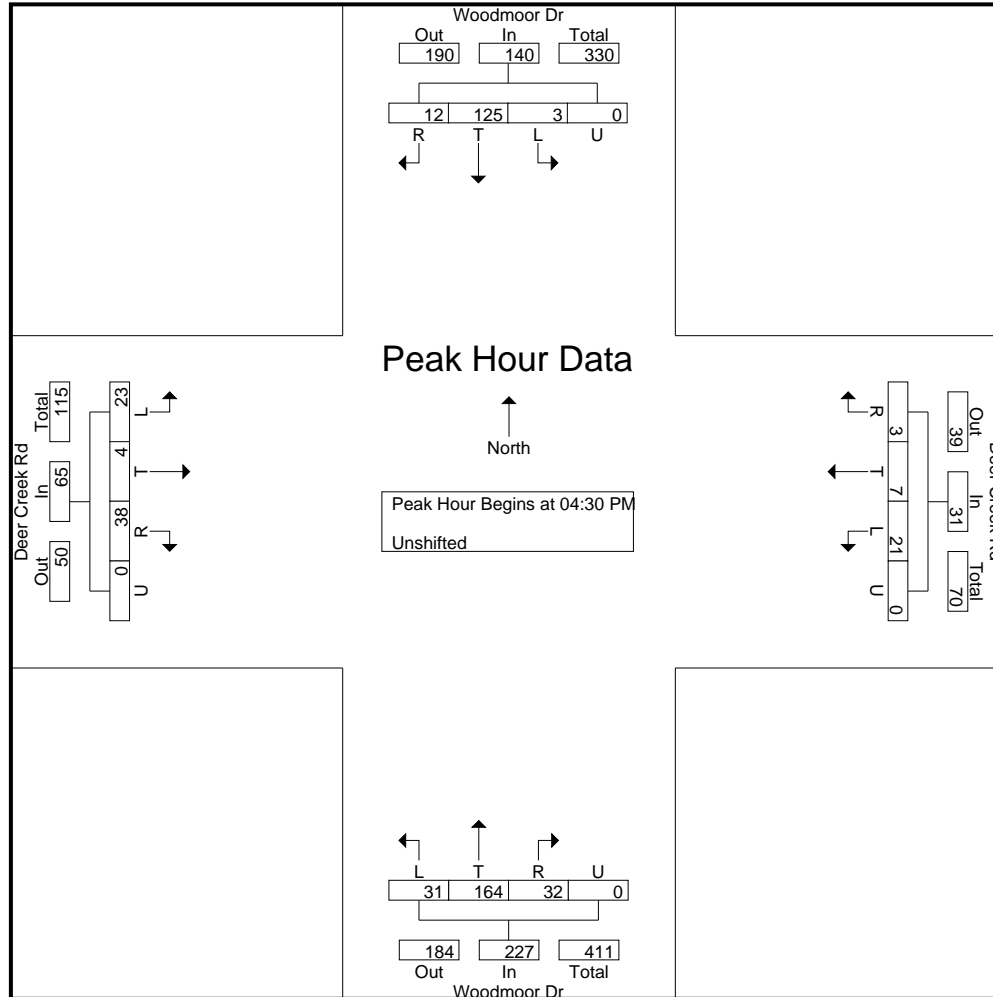
File Name : Woodmoor Dr - Deer Creek Rd PM  
 Site Code : S214860  
 Start Date : 9/22/2021  
 Page No : 2

Start Time	Woodmoor Dr Southbound					Deer Creek Rd Westbound					Woodmoor Dr Northbound					Deer Creek Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
<b>Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1</b>																					
Peak Hour for Entire Intersection Begins at 4:30:00 PM																					
4:30:00 PM	0	25	2	0	27	4	1	0	0	5	9	45	11	0	65	5	1	8	0	14	111
4:45:00 PM	1	35	6	0	42	2	1	0	0	3	7	41	5	0	53	2	2	5	0	9	107
5:00:00 PM	0	39	2	0	41	7	3	0	0	10	8	33	9	0	50	7	0	17	0	24	125
5:15:00 PM	2	26	2	0	30	8	2	3	0	13	7	45	7	0	59	9	1	8	0	18	120
Total Volume	3	125	12	0	140	21	7	3	0	31	31	164	32	0	227	23	4	38	0	65	463
% App. Total	2.1	89.3	8.6	0		67.7	22.6	9.7	0		13.7	72.2	14.1	0		35.4	6.2	58.5	0		
PHF	.375	.801	.500	.000	.833	.656	.583	.250	.000	.596	.861	.911	.727	.000	.873	.639	.500	.559	.000	.677	.926

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File Name : Woodmoor Dr - Deer Creek Rd PM  
 Site Code : S214860  
 Start Date : 9/22/2021  
 Page No : 3



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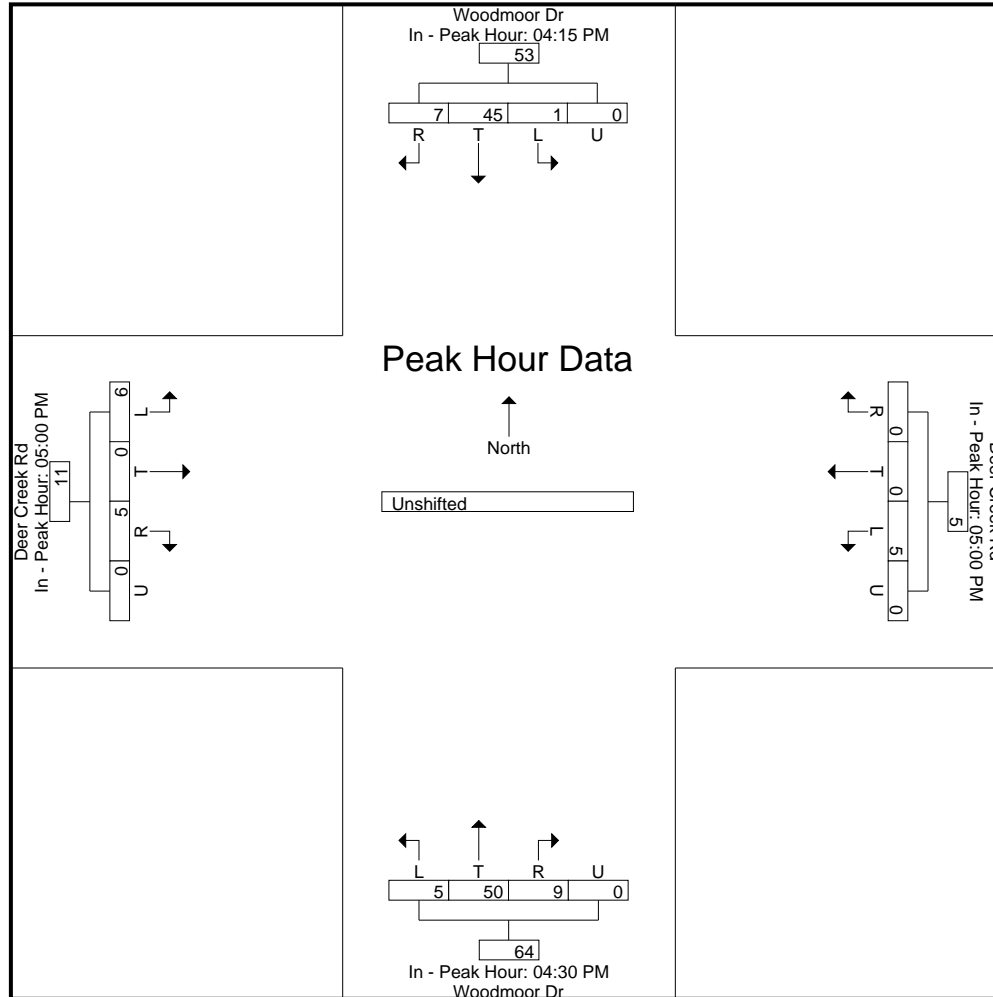
File Name : Woodmoor Dr - Deer Creek Rd PM  
 Site Code : S214860  
 Start Date : 9/22/2021  
 Page No : 4

Start Time	Woodmoor Dr Southbound					Deer Creek Rd Westbound					Woodmoor Dr Northbound					Deer Creek Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
<b>Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1</b>																					
Peak Hour for Each Approach Begins at:																					
	4:15:00 PM					5:00:00 PM					4:30:00 PM					5:00:00 PM					
+0 mins.	0	38	4	0	<b>42</b>	7	<b>3</b>	0	0	10	<b>9</b>	<b>45</b>	<b>11</b>	0	<b>65</b>	7	0	<b>17</b>	0	<b>24</b>	
+5 mins.	0	25	2	0	27	<b>8</b>	2	<b>3</b>	0	<b>13</b>	7	41	5	0	53	<b>9</b>	1	8	0	18	
+10 mins.	<b>1</b>	35	<b>6</b>	0	42	6	0	0	0	6	8	33	9	0	50	8	0	4	0	12	
+15 mins.	0	<b>39</b>	2	0	41	3	2	0	0	5	7	45	7	0	59	3	<b>3</b>	13	0	19	
Total Volume	1	137	14	0	152	24	7	3	0	34	31	164	32	0	227	27	4	42	0	73	
% App. Total	0.7	90.1	9.2	0		70.6	20.6	8.8	0		13.7	72.2	14.1	0		37	5.5	57.5	0		
PHF	.250	.878	.583	.000	.905	.750	.583	.250	.000	.654	.861	.911	.727	.000	.873	.750	.333	.618	.000	.760	

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719-633-2868

File Name : Woodmoor Dr - Deer Creek Rd PM  
Site Code : S214860  
Start Date : 9/22/2021  
Page No : 5



# Levels of Service

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Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	12	46	29	16	0	86	54	11	0	170	71
Future Vol, veh/h	14	12	46	29	16	0	86	54	11	0	170	71
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	75	75	75	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	14	55	37	21	0	115	72	15	0	243	101

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	616	615	298	642	658	82	346	0	0	89	0	0
Stage 1	296	296	-	312	312	-	-	-	-	-	-	-
Stage 2	320	319	-	330	346	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	403	407	741	387	384	978	1213	-	-	1506	-	-
Stage 1	712	668	-	699	658	-	-	-	-	-	-	-
Stage 2	692	653	-	683	635	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	355	365	739	320	344	976	1211	-	-	1503	-	-
Mov Cap-2 Maneuver	355	365	-	320	344	-	-	-	-	-	-	-
Stage 1	640	667	-	628	591	-	-	-	-	-	-	-
Stage 2	601	586	-	617	634	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	13		18.3		4.7		0			
HCM LOS	B		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1211	-	-	535	328	1503	-	-
HCM Lane V/C Ratio	0.095	-	-	0.162	0.176	-	-	-
HCM Control Delay (s)	8.3	0	-	13	18.3	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.6	0.6	0	-	-

HCM 6th TWSC  
3: Deer Creek Rd & Burning Oak Way

Existing  
AM

Intersection						
Int Delay, s/veh	0.3					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	0	2	1	22	45	0
Future Vol, veh/h	0	2	1	22	45	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	1	28	58	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	88	58	58	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	913	1008	1546	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	912	1008	1546	-	-	-
Mov Cap-2 Maneuver	912	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	8.6	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET SELn1	SWT	SWR
Capacity (veh/h)	1546	- 1008	-	-
HCM Lane V/C Ratio	0.001	- 0.003	-	-
HCM Control Delay (s)	7.3	0 8.6	-	-
HCM Lane LOS	A	A A	-	-
HCM 95th %tile Q(veh)	0	- 0	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	4	38	21	7	3	31	164	32	3	125	12
Future Vol, veh/h	23	4	38	21	7	3	31	164	32	3	125	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	83	83	83	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	5	46	27	9	4	37	198	39	3	144	14

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	455	468	151	475	456	218	158	0	0	237	0	0
Stage 1	157	157	-	292	292	-	-	-	-	-	-	-
Stage 2	298	311	-	183	164	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	515	493	895	500	501	822	1422	-	-	1330	-	-
Stage 1	845	768	-	716	671	-	-	-	-	-	-	-
Stage 2	711	658	-	819	762	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	493	477	895	460	485	822	1422	-	-	1330	-	-
Mov Cap-2 Maneuver	493	477	-	460	485	-	-	-	-	-	-	-
Stage 1	820	766	-	695	651	-	-	-	-	-	-	-
Stage 2	677	638	-	771	760	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		13.1		1		0.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	667	486	1330	-	-
HCM Lane V/C Ratio	0.026	-	-	0.117	0.082	0.003	-	-
HCM Control Delay (s)	7.6	0	-	11.1	13.1	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-



Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	14	50	37	20	0	92	54	15	0	170	71
Future Vol, veh/h	14	14	50	37	20	0	92	54	15	0	170	71
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	19	67	49	27	0	123	72	20	0	227	95

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	619	617	279	650	654	84	324	0	0	94	0	0
Stage 1	277	277	-	330	330	-	-	-	-	-	-	-
Stage 2	342	340	-	320	324	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	401	405	760	382	386	975	1236	-	-	1500	-	-
Stage 1	729	681	-	683	646	-	-	-	-	-	-	-
Stage 2	673	639	-	692	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	347	361	757	307	344	973	1234	-	-	1498	-	-
Mov Cap-2 Maneuver	347	361	-	307	344	-	-	-	-	-	-	-
Stage 1	652	680	-	611	577	-	-	-	-	-	-	-
Stage 2	574	571	-	613	649	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.3		19.8		4.7		0	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1234	-	-	537	319	1498	-	-
HCM Lane V/C Ratio	0.099	-	-	0.194	0.238	-	-	-
HCM Control Delay (s)	8.2	0	-	13.3	19.8	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.7	0.9	0	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	0	22	3	0	45
Future Vol, veh/h	5	0	22	3	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	29	4	0	60

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	91	31	0	0	33	0
Stage 1	31	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	909	1043	-	-	1579	-
Stage 1	992	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	909	1043	-	-	1579	-
Mov Cap-2 Maneuver	909	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	963	-	-	-	-	-

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

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	909	1579
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	9	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC  
 3: Deer Creek Rd & The Cove Access/Burning Oak Way

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**Intersection**

Int Delay, s/veh 1.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	2	7	0	0	1	25	2	0	50	0
Future Vol, veh/h	1	0	2	7	0	0	1	25	2	0	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	3	9	0	0	1	33	3	0	67	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	104	105	67	106	104	35	67	0	0	36	0	0
Stage 1	67	67	-	37	37	-	-	-	-	-	-	-
Stage 2	37	38	-	69	67	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	876	785	997	873	786	1038	1535	-	-	1575	-	-
Stage 1	943	839	-	978	864	-	-	-	-	-	-	-
Stage 2	978	863	-	941	839	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	875	784	997	870	785	1038	1535	-	-	1575	-	-
Mov Cap-2 Maneuver	875	784	-	870	785	-	-	-	-	-	-	-
Stage 1	942	839	-	977	863	-	-	-	-	-	-	-
Stage 2	977	862	-	938	839	-	-	-	-	-	-	-

Approach	SE		NW		NE		SW	
HCM Control Delay, s	8.8		9.2		0.3		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1535	-	-	870	953	1575	-
HCM Lane V/C Ratio	0.001	-	-	0.011	0.004	-	-
HCM Control Delay (s)	7.3	0	-	9.2	8.8	0	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	8	44	27	9	3	35	164	40	3	125	12
Future Vol, veh/h	23	8	44	27	9	3	35	164	40	3	125	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	87	87	87	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	10	53	35	12	4	40	189	46	4	151	14

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	466	481	158	490	465	212	165	0	0	235	0	0
Stage 1	166	166	-	292	292	-	-	-	-	-	-	-
Stage 2	300	315	-	198	173	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	507	485	887	489	495	828	1413	-	-	1332	-	-
Stage 1	836	761	-	716	671	-	-	-	-	-	-	-
Stage 2	709	656	-	804	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	482	468	887	440	477	828	1413	-	-	1332	-	-
Mov Cap-2 Maneuver	482	468	-	440	477	-	-	-	-	-	-	-
Stage 1	808	759	-	692	649	-	-	-	-	-	-	-
Stage 2	670	634	-	744	754	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		13.7		1.1		0.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1413	-	-	655	465	1332	-	-
HCM Lane V/C Ratio	0.028	-	-	0.138	0.108	0.003	-	-
HCM Control Delay (s)	7.6	0	-	11.4	13.7	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0	-	-

HCM 6th TWSC  
 3: Deer Creek Rd & The Cove Access/Burning Oak Way

Existing + Site  
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Intersection												
Int Delay, s/veh	0.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	5	0	0	3	41	7	0	34	0
Future Vol, veh/h	0	0	1	5	0	0	3	41	7	0	34	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	83	83	83	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	6	0	0	4	49	8	0	44	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	105	109	44	106	105	53	44	0	0	57	0	0
Stage 1	44	44	-	61	61	-	-	-	-	-	-	-
Stage 2	61	65	-	45	44	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	875	781	1026	873	785	1014	1564	-	-	1547	-	-
Stage 1	970	858	-	950	844	-	-	-	-	-	-	-
Stage 2	950	841	-	969	858	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	873	779	1026	870	783	1014	1564	-	-	1547	-	-
Mov Cap-2 Maneuver	873	779	-	870	783	-	-	-	-	-	-	-
Stage 1	967	858	-	947	841	-	-	-	-	-	-	-
Stage 2	947	838	-	968	858	-	-	-	-	-	-	-

Approach	SE		NW		NE		SW	
HCM Control Delay, s	8.5		9.2		0.4		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1564	-	-	870	1026	1547	-
HCM Lane V/C Ratio	0.002	-	-	0.007	0.001	-	-
HCM Control Delay (s)	7.3	0	-	9.2	8.5	0	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

Intersection						
Int Delay, s/veh	0.5					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	1	36	5	3	31
Future Vol, veh/h	1	1	36	5	3	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	46	6	4	40

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	97	49	0	0	52
Stage 1	49	-	-	-	-
Stage 2	48	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	902	1020	-	-	1554
Stage 1	973	-	-	-	-
Stage 2	974	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	899	1020	-	-	1554
Mov Cap-2 Maneuver	899	-	-	-	-
Stage 1	973	-	-	-	-
Stage 2	971	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	8.8	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	956	1554
HCM Lane V/C Ratio	-	-	0.003	0.002
HCM Control Delay (s)	-	-	8.8	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	15	75	50	25	1	95	75	15	1	275	100
Future Vol, veh/h	20	15	75	50	25	1	95	75	15	1	275	100
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	87	87	87	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	18	90	60	30	1	109	86	17	1	299	109

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	686	681	358	727	727	97	410	0	0	105	0	0
Stage 1	358	358	-	315	315	-	-	-	-	-	-	-
Stage 2	328	323	-	412	412	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	362	373	686	339	351	959	1149	-	-	1486	-	-
Stage 1	660	628	-	696	656	-	-	-	-	-	-	-
Stage 2	685	650	-	617	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	309	334	684	259	314	957	1147	-	-	1484	-	-
Mov Cap-2 Maneuver	309	334	-	259	314	-	-	-	-	-	-	-
Stage 1	593	626	-	625	588	-	-	-	-	-	-	-
Stage 2	584	583	-	519	592	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	14.7		24.2		4.3		0			
HCM LOS	B		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1147	-	-	502	278	1484	-	-
HCM Lane V/C Ratio	0.095	-	-	0.264	0.329	0.001	-	-
HCM Control Delay (s)	8.5	0	-	14.7	24.2	7.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	1.1	1.4	0	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	0	2	1	30	76	0
Future Vol, veh/h	0	2	1	30	76	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	1	38	97	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	137	97	97	0	0
Stage 1	97	-	-	-	-
Stage 2	40	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	856	959	1496	-	-
Stage 1	927	-	-	-	-
Stage 2	982	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	855	959	1496	-	-
Mov Cap-2 Maneuver	855	-	-	-	-
Stage 1	926	-	-	-	-
Stage 2	982	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	8.8	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1496	-	959	-	-
HCM Lane V/C Ratio	0.001	-	0.003	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	25	50	25	15	5	50	200	35	5	150	25
Future Vol, veh/h	30	25	50	25	15	5	50	200	35	5	150	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	92	92	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	30	60	32	19	6	54	217	38	6	172	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	556	562	187	588	557	236	201	0	0	255	0	0
Stage 1	199	199	-	344	344	-	-	-	-	-	-	-
Stage 2	357	363	-	244	213	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	442	436	855	421	439	803	1371	-	-	1310	-	-
Stage 1	803	736	-	671	637	-	-	-	-	-	-	-
Stage 2	661	625	-	760	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	407	414	855	355	417	803	1371	-	-	1310	-	-
Mov Cap-2 Maneuver	407	414	-	355	417	-	-	-	-	-	-	-
Stage 1	766	732	-	640	608	-	-	-	-	-	-	-
Stage 2	606	596	-	674	722	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.6		15.5		1.4		0.2	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1371	-	-	545	400	1310	-	-
HCM Lane V/C Ratio	0.04	-	-	0.232	0.144	0.004	-	-
HCM Control Delay (s)	7.7	0	-	13.6	15.5	7.8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.5	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	1	3	62	45	0
Future Vol, veh/h	0	1	3	62	45	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	4	75	58	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	141	58	58	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	83	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	852	1008	1546	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	849	1008	1546	-	-	-
Mov Cap-2 Maneuver	849	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	940	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	8.6	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET SELn1	SWT	SWR
Capacity (veh/h)	1546	- 1008	-	-
HCM Lane V/C Ratio	0.002	- 0.001	-	-
HCM Control Delay (s)	7.3	0 8.6	-	-
HCM Lane LOS	A	A A	-	-
HCM 95th %tile Q(veh)	0	- 0	-	-

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	17	75	58	29	1	95	75	19	1	275	100
Future Vol, veh/h	20	17	75	58	29	1	95	75	19	1	275	100
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	87	87	87	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	20	90	70	35	1	109	86	22	1	299	109

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	691	686	358	730	729	99	410	0	0	110	0	0
Stage 1	358	358	-	317	317	-	-	-	-	-	-	-
Stage 2	333	328	-	413	412	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	359	370	686	338	350	957	1149	-	-	1480	-	-
Stage 1	660	628	-	694	654	-	-	-	-	-	-	-
Stage 2	681	647	-	616	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	302	331	684	257	313	955	1147	-	-	1478	-	-
Mov Cap-2 Maneuver	302	331	-	257	313	-	-	-	-	-	-	-
Stage 1	593	626	-	623	587	-	-	-	-	-	-	-
Stage 2	575	580	-	516	592	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15		26		4.3		0	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1147	-	-	493	276	1478	-	-
HCM Lane V/C Ratio	0.095	-	-	0.274	0.384	0.001	-	-
HCM Control Delay (s)	8.5	0	-	15	26	7.4	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	1.1	1.7	0	-	-

Intersection												
Int Delay, s/veh	0.7											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	2	7	0	0	1	33	2	0	81	0
Future Vol, veh/h	0	0	2	7	0	0	1	33	2	0	81	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	3	9	0	0	1	42	3	0	98	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	144	145	98	146	144	44	98	0	0	45	0	0
Stage 1	98	98	-	46	46	-	-	-	-	-	-	-
Stage 2	46	47	-	100	98	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	825	746	958	823	747	1026	1495	-	-	1563	-	-
Stage 1	908	814	-	968	857	-	-	-	-	-	-	-
Stage 2	968	856	-	906	814	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	824	745	958	821	746	1026	1495	-	-	1563	-	-
Mov Cap-2 Maneuver	824	745	-	821	746	-	-	-	-	-	-	-
Stage 1	907	814	-	967	856	-	-	-	-	-	-	-
Stage 2	967	855	-	904	814	-	-	-	-	-	-	-

Approach	SE		NW		NE		SW	
HCM Control Delay, s	8.8		9.4		0.2		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1495	-	-	821	958	1563	-
HCM Lane V/C Ratio	0.001	-	-	0.011	0.003	-	-
HCM Control Delay (s)	7.4	0	-	9.4	8.8	0	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	5	0	30	3	0	76
Future Vol, veh/h	5	0	30	3	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	0	38	4	0	92

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	132	40	0	0	42	0
Stage 1	40	-	-	-	-	-
Stage 2	92	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	862	1031	-	-	1567	-
Stage 1	982	-	-	-	-	-
Stage 2	932	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	862	1031	-	-	1567	-
Mov Cap-2 Maneuver	862	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	932	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	862	1567
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	9.2	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	29	50	31	17	5	50	200	43	5	150	25
Future Vol, veh/h	30	29	50	31	17	5	50	200	43	5	150	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	92	92	92	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	35	60	37	20	6	54	217	47	6	172	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	561	571	187	595	562	241	201	0	0	264	0	0
Stage 1	199	199	-	349	349	-	-	-	-	-	-	-
Stage 2	362	372	-	246	213	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	438	431	855	416	436	798	1371	-	-	1300	-	-
Stage 1	803	736	-	667	633	-	-	-	-	-	-	-
Stage 2	657	619	-	758	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	402	409	855	348	414	798	1371	-	-	1300	-	-
Mov Cap-2 Maneuver	402	409	-	348	414	-	-	-	-	-	-	-
Stage 1	766	732	-	636	604	-	-	-	-	-	-	-
Stage 2	601	591	-	668	722	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.9		16.1		1.3		0.2	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1371	-	-	534	389	1300	-	-
HCM Lane V/C Ratio	0.04	-	-	0.246	0.164	0.004	-	-
HCM Control Delay (s)	7.7	0	-	13.9	16.1	7.8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0.6	0	-	-

Intersection												
Int Delay, s/veh	0.6											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	5	0	0	3	67	5	0	48	0
Future Vol, veh/h	0	0	1	5	0	0	3	67	5	0	48	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	6	0	0	4	81	6	0	58	0

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	150	153	58	151	150	84	58	0	0	87	0	0
Stage 1	58	58	-	92	92	-	-	-	-	-	-	-
Stage 2	92	95	-	59	58	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	818	739	1008	816	742	975	1546	-	-	1509	-	-
Stage 1	954	847	-	915	819	-	-	-	-	-	-	-
Stage 2	915	816	-	953	847	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	816	737	1008	813	740	975	1546	-	-	1509	-	-
Mov Cap-2 Maneuver	816	737	-	813	740	-	-	-	-	-	-	-
Stage 1	951	847	-	912	817	-	-	-	-	-	-	-
Stage 2	912	814	-	952	847	-	-	-	-	-	-	-

Approach	SE		NW		NE		SW	
HCM Control Delay, s	8.6		9.5		0.3		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1546	-	-	813	1008	1509	-
HCM Lane V/C Ratio	0.002	-	-	0.008	0.001	-	-
HCM Control Delay (s)	7.3	0	-	9.5	8.6	0	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	3	0	62	5	0	45
Future Vol, veh/h	3	0	62	5	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	75	6	0	58

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	136	78	0	0	81
Stage 1	78	-	-	-	-
Stage 2	58	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	857	983	-	-	1517
Stage 1	945	-	-	-	-
Stage 2	965	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	857	983	-	-	1517
Mov Cap-2 Maneuver	857	-	-	-	-
Stage 1	945	-	-	-	-
Stage 2	965	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

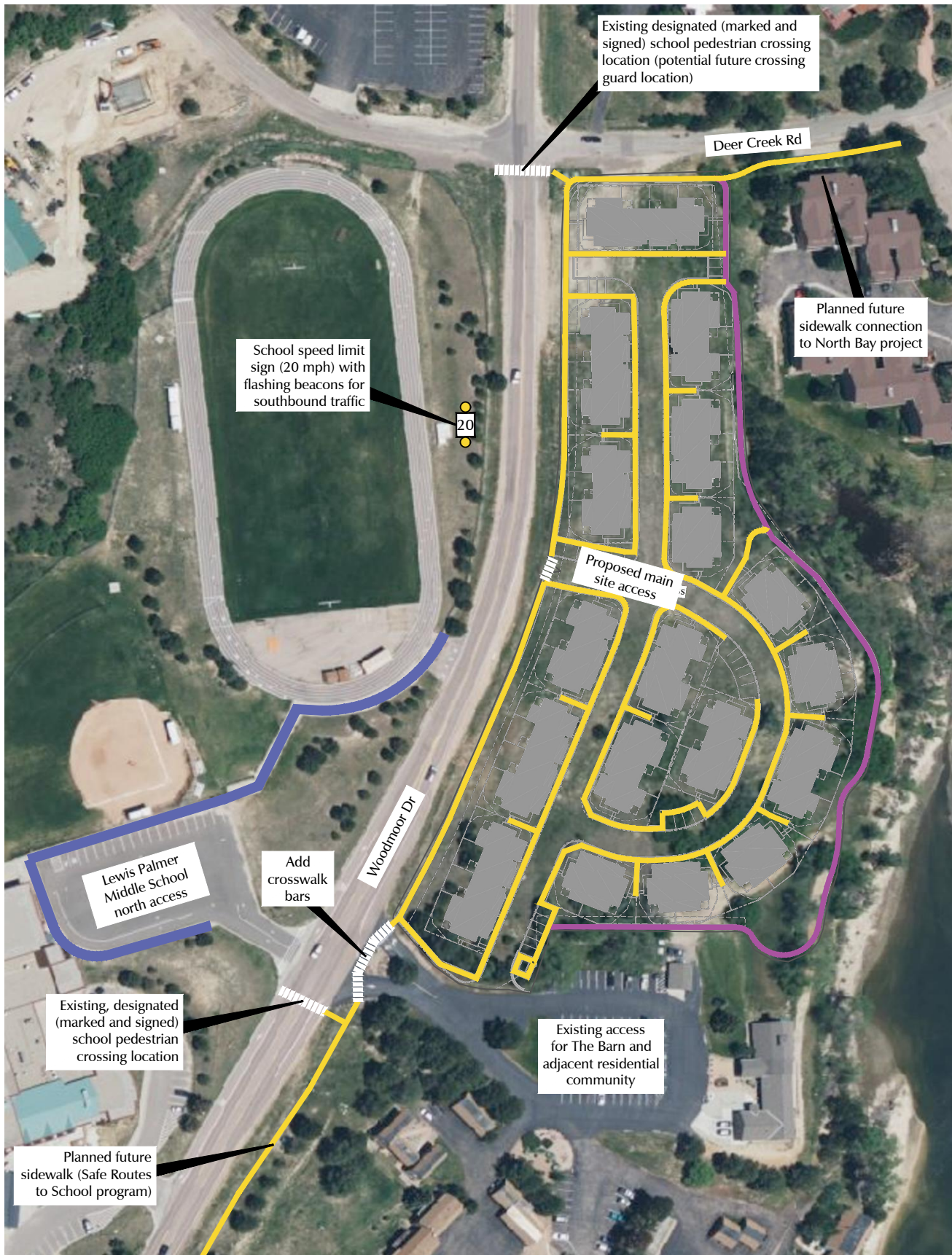
Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	857	1517
HCM Lane V/C Ratio	-	-	0.004	-
HCM Control Delay (s)	-	-	9.2	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0



# Pedestrian & Bicycle Circulation (from the Waterside report)

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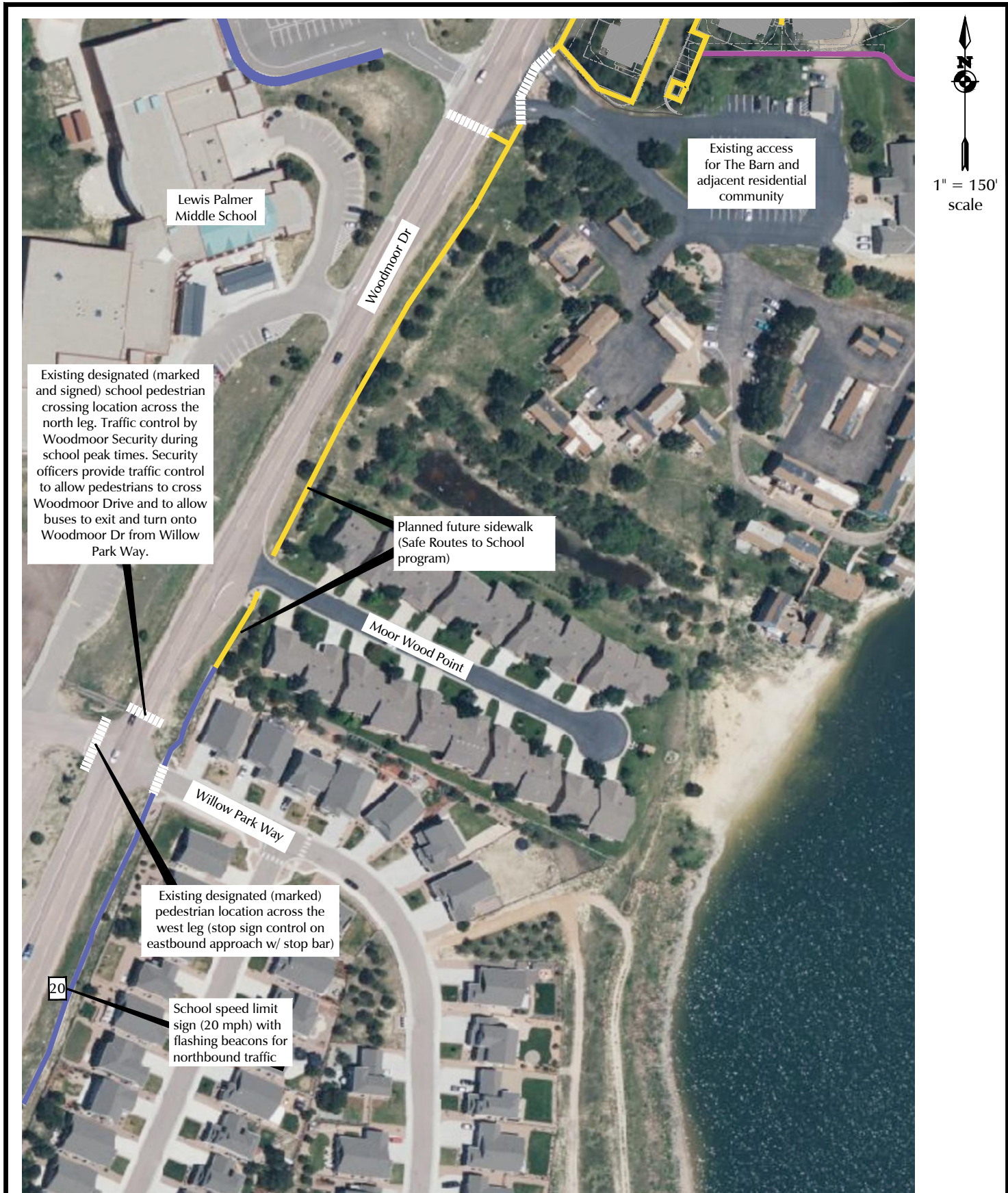


1" = 150' scale

- Existing crosswalk markings (or proposed, where noted)
- Proposed/future sidewalk
- Proposed trail
- Existing concrete path

Figure 3  
**Pedestrian and Bike  
 Circulation (Part 1)**





- Existing crosswalk markings
- Proposed sidewalk
- Proposed trail
- Existing concrete path
- No sidewalk on west side

Figure 4  
**Pedestrian and Bike  
 Circulation (Part 2)**