



LSC TRANSPORTATION CONSULTANTS, INC.
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River Bend Crossing Traffic Impact and Access Analysis (LSC #184140) August 2, 2018

Traffic Engineer's Statement

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

Developer's Statement

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

Date



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DRAFT

August 2, 2018

Mr. Alan Toth
Avatar Fountain
c/o Avatar Equities
6800 Jericho Turnpike, Suite 120W, #204
Syosset, NY 11791

RE: River Bend Crossing
City of Fountain & Unincorporated
El Paso County, Colorado
Traffic Impact and Access Analysis
LSC #184140

Dear Mr. Toth:

LSC Transportation Consultants, Inc. has prepared this traffic impact and access analysis for the proposed River Bend Crossing development to be located generally southwest of US Highway 85-87 (US 85-87) and Main Street in the City of Fountain and unincorporated El Paso County, Colorado. The proposed plan includes the redevelopment of the existing Fountain Valley Shopping Center and a new residential development southwest of the shopping center. Figure 1 shows the site location.

REPORT CONTENTS

The report contains the following:

- The proposed land uses for the site.
- The roadways in the study area including the number of lanes, classifications, posted speed limits, existing and proposed intersection/access spacing, lane geometries, traffic controls, etc.
- The existing traffic volumes at the intersections of US 85-87/Main Street and US 85-87/Southmoor Drive.
- The projected future peak-hour traffic volumes for the site access points and the key area intersections.
- The resulting traffic impacts. The traffic impacts have been quantified by determining the future levels of service at the study intersections.
- Findings and recommendations

SITE LAND USE AND ACCESS

The Fountain Valley Shopping Center is located within the city limits of Fountain and the residential development site is located outside the city limits in unincorporated El Paso County.

The Fountain Valley Shopping Center, located west of US 85-87 and Main Street, includes about 83,000 square feet of floor space including a discount store, inline retail, a bowling alley, and a restaurant. The site is planned to be razed and redeveloped for new retail uses with a total of 61,407 square feet of floor space. The proposed site plan is shown in Figure 2. The existing full-movement signalized access to US 85-87 (aligning with Main Street) and two existing access points to Southmoor Drive are planned to remain. A 15,625-square-foot parcel located northwest of the intersection of US 85-87 and Main Street is not included in this development. The existing gas station with convenience market located on this parcel is under different ownership and is not part of this site or redevelopment. A right-in/right-out-only access point for the gas station to US 85-87 just north of Main Street is also outside the property boundary of this site.

A 53-acre parcel located adjacent to and southwest of the Fountain Valley Shopping Center is planned to be developed with 225 lots for single-family homes. The residential development would have access to the signalized intersection of US 85-87/Main Street via a new collector street that will extend through the redeveloped commercial parcel. An additional full-movement site access is proposed to Southmoor Drive about 925 feet south of US 85-87.

EXISTING ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The roadways in the study area are shown on Figure 1 and are described below.

- **US Highway 85-87** is a major north/south route serving Fountain Valley. Adjacent to the site US 85-87 has two through lanes in each direction and a posted speed limit of 50 miles per hour (mph). US 85-87 is classified by the Colorado Department of Transportation as a Rural Highway (NR-B) south of Main Street and a Non-Rural Principal Highway (NR-A) north of Main Street. The intersection of US 85-87 is currently signal controlled.
- **Southmoor Drive** forms a loop on the west side of SH 85-87 from just north of Mesa Ridge Parkway to just south of Main Street. This is an El Paso County Roadway from US Highway 85-87 to Lovitt Lane. South of Lovitt Lane, it is a City of Fountain street. Access to this site would be to the El Paso County-owned section. The El Paso County roadway inventory identifies Southmoor Drive as an Urban Collector (FC-17). Fountain classifies Southmoor Drive as a two-lane Community Collector. The north intersection of Southmoor Drive and US 85-87 is a “three-quarter-movement” intersection and is restricted to left-in/right-in/right-out only. The eastbound approach to the state highway is Stop-sign controlled. The posted speed limit is 30 mph.

INTERSECTION ACCESS SIGHT DISTANCE

The existing shopping center access points along Southmoor Drive are proposed to remain for the shopping center redevelopment. The intersection sight distance “triangles,” or the area along Southmoor Drive, including the area east of a line extending straight north to the edge of the state highway from a point at the north access 13 feet back from the west edge of the Southmoor Drive, should be kept free of landscaping, signs, and other obstructions.

The proposed residential street access point to Southmoor Drive would meet El Paso County sight distance criteria. This access would be located on the outside of the horizontal curve.

Existing Traffic Conditions

Figure 3 shows the morning and afternoon peak-hour traffic volumes at the intersections of US 85-87/ Main, US 85-87/Southmoor and the existing east Fountain Valley Shopping Center access to Southmoor Drive based on counts conducted by LSC in February 2018. All movements from both site access points to Southmoor Drive were counted as a single intersection. The traffic count reports are attached.

Existing 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 represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. Table 1 shows the level of service delay ranges.

Table 1			
Intersection Levels of Service Delay Ranges			
Level of Service	Signalized Intersections		Unsignalized Intersections
	Average Control Delay (seconds per vehicle)	V/C⁽¹⁾	Average Control Delay (seconds per vehicle)⁽²⁾
A	10.0 sec or less	less than 0.60	10.0 sec or less
B	10.1-20.0 sec	0.60-0.69	10.1-15.0 sec
C	20.1-35.0 sec	0.70-0.79	15.1-25.0 sec
D	35.1-55.0 sec	0.80-0.89	25.1-35.0 sec
E	55.1-80.0 sec	0.90-0.99	35.1-50.0 sec
F	80.1 sec or more	1.00 and greater	50.1 sec or more
(1) Source: <i>Transportation Research Circular 212</i>			
(2) For unsignalized intersections if V/C ratio is greater than 1.0 the level of service is LOS F regardless of the projected average control delay per vehicle.			

The signalized intersection of US 85-87 was analyzed to determine the existing levels of service using Synchro. The intersection of US 85-87/Southmoor and the Fountain Valley Shopping Center access point to Southmoor were analyzed based on the unsignalized intersection method of analysis procedures found in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. Figure 3 shows the detailed level of service analysis results. The level of service (LOS) reports are attached.

All movements at the signalized intersection of US 85-87 are currently operating at LOS D or better during the morning and afternoon peak hours.

All movements at the three-quarter movement intersection of US 85-87/Southmoor are currently operating at LOS C or better during the morning and afternoon peak hours.

TRIP GENERATION

Estimates of the traffic volumes expected to be generated by the site were made using the nationally published trip generation rates found in *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Table 2 shows the trip generation estimates.

The shopping center will not be a new “greenfield” development, rather redevelopment of an existing shopping center. The overall net decrease in building square footage is 21,593. The following trip generation estimate for the shopping center redevelopment represents the post-redevelopment trip generation with current trips generated removed. Note: the gas station outparcel is not a part of this project.

The total number of vehicle-trips generated by the land uses has been reduced to account for the internal vehicle-trips made within the site between land uses, without use of the external streets surrounding the site. Table 2 shows the number of internal trips assumed for each land use. The internal trip reduction is an estimate by LSC based on National Highway Cooperative Highway Research Program (NCHRP) Report 684 Enhancing Internal Trip Capture Estimation for Mixed-Use Developments. The results of the spreadsheet model are attached.

The total number of vehicle-trips generated has also been reduced to take into account the “pass-by” phenomena. A pass-by trip is made by a motorist who would already be on the adjacent roadways regardless of the proposed 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. The pass-by percentages shown on Table 2 are from the *Trip Generation Handbook - An ITE Proposed Recommended Practice, 3rd Edition, 2014* by ITE.

The shopping center/non-residential portion of the site is projected to generate about 2,880 non-pass-by, external vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 173 vehicles would enter and 127 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 190 vehicles would enter and 184 vehicles would exit the site.

The residential portion of the site is projected to generate about 2,018 new external vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour about 40 vehicles would enter and 119 vehicles would exit the site. During the afternoon peak hour about 133 vehicles would enter and 78 vehicles would exit the site.

TRIP DISTRIBUTION AND ASSIGNMENT

The estimated directional distribution of the site-generated traffic volumes on the adjacent roadways is an important factor in determining the site's traffic impacts. Figure 4 shows the directional distribution estimates for the primary site-generated traffic. Figure 4 shows separate estimates for the residential and retail portions of the site. The estimates have been based on the following factors: the site land uses; the site location; the street and roadway system serving the site; and the existing/projected traffic volumes.

The pass-by trips were assigned based in large part on the magnitude and direction of the existing and projected background traffic volumes on the adjacent roadways.

When the distribution percentages (from Figure 4) were applied to the trip generation estimates (from Table 2), the site-generated traffic volumes on the area roadways were determined. Figures 5 and 6 show the site-generated traffic volumes for the residential and retail portions of the site, respectively.

BASELINE (BACKGROUND) TRAFFIC

Baseline traffic is the traffic estimated to be on the adjacent roadways and at adjacent intersections without the proposed development's trip generation of site-generated traffic volumes. Background traffic includes the through traffic and the traffic generated by nearby developments, but assumes zero traffic generated by the site. The baseline traffic volumes also do not include any traffic estimated to be currently generated by land uses within the existing Fountain Valley Shopping Center that are planned to be razed.

The residential subdivision plan includes a "stub" for a potential future street connection to the adjacent property to the west. However, as it is our understanding that the adjacent property will not be developed. Future background traffic from this property has not been included in this report.

Figure 7a shows the estimated short-term baseline traffic volumes. The short-term baseline traffic volumes are based on the existing traffic volumes shown in Figure 3 with traffic estimated to be currently generated by land uses within the existing Fountain Valley Shopping Center that are planned to be razed/removed.

Figure 7b shows the lane geometry, traffic control, and level of service at the key intersections based on the short-term baseline volumes.

Figure 8a shows the estimated 2040 baseline traffic volumes. These volumes are based on the short-term baseline traffic volumes shown in Figure 7a plus additional growth of through traffic on the

adjacent streets based on the Colorado Department of Transportation (CDOT) twenty-year growth factor for US 85-87 adjacent to the site.

Figure 8b shows the lane geometry, traffic control, and level of service at the key intersections based on the 2040 baseline volumes.

TOTAL TRAFFIC

Figure 9a shows the projected short-term total traffic volumes at the site access points and key adjacent intersections. The short-term total traffic volumes are the sum of the short-term baseline traffic volumes from Figure 7a plus the residential site-generated traffic volumes from Figure 5 plus the retail site-generated traffic volumes from Figure 6. The volumes shown in Figure 9a represent the short-term impacts of the development.

Figure 9b shows the lane geometry, traffic control, and level of service at the key intersections based on the short-term total volumes.

Figure 10a shows the projected 2040 total traffic volumes at the site access points and key adjacent intersections. The 2040 total traffic volumes are the sum of the 2040 baseline traffic volumes from Figure 8a plus the residential site-generated traffic volumes from Figure 5 plus the retail site-generated traffic volumes from Figure 6.

Figure 10b shows the lane geometry, traffic control, and level of service at the key intersections based on the 2040 total volumes.

PROJECTED LEVELS OF SERVICE

Intersection Levels of Service

The site access points and key area intersections were analyzed to determine the projected levels of service for the short-term and 2040 total traffic volumes. Figures 9b and 10b show the level of service analysis results. The signalized intersection of SH 85-87 was analyzed using Synchro. The site access points and other area intersections were analyzed using the unsignalized/two-way, Stop-sign-controlled intersection method of analysis procedures found in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. The level of service (LOS) reports are attached.

US 85-87/Main

All movements at the signalized intersection of US 85-87 Main are projected to operate at LOS D or better during the peak hours based on the projected short-term and 2040 total traffic volumes.

US 85-87/Southmoor

All movements at the three-quarter movement (left-in/right-in/right-out-only) intersection of US 85-87/Southmoor are projected to operate at LOS C or better during the peak hours based on the projected short-term and 2040 total traffic volumes.

Site Access Points

The site access points to Southmoor Drive are projected to operate at LOS B or better for all movements as two-way, Stop-sign-controlled intersections based on the projected short-term and 2040 total traffic volumes.

QUEUING ANALYSIS

A queuing analysis was performed using Synchro/SimTraffic to determine if the proposed laneage for the main access to US 85-87 will be sufficient to accommodate the projected queues based on the total traffic volumes. The 2040 total afternoon peak-hour traffic volumes were entered into the Synchro model. The simulation was run five times and the results were averaged. The queueing reports are attached.

Based on the projected 2040 total traffic volumes, the projected maximum eastbound left-turn queue at the main access approaching US 85-87 is about 129 feet long. This queue could be accommodated by the proposed laneage.

The projected maximum northbound left-turn queue on US 85-87 is about 105 feet long. The existing northbound left-turn lane at this intersection is about 335 feet long. Based on the criteria contained in The Colorado State Highway Access Code for a roadway with a classification of NR-B and a posted speed limit greater than 40 mph, the required turn lane length for the northbound left-turn lane would be 320 feet plus a 180-foot taper.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

- The retail portion of the site is projected to generate about 2,880 new external vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour about 173 vehicles would enter and 127 vehicles would exit the site. During the afternoon peak hour about 190 vehicles would enter and 184 vehicles would exit the site. The shopping center will not be a new “greenfield” development, rather redevelopment of an existing shopping center. The overall net decrease in building square footage is 21,593. This trip generation estimate for the shopping center redevelopment represents the post-redevelopment trip generation with current trips generated removed. Note: the gas station outparcel is not a part of this project.

- The residential portion of the site is projected to generate about 2,018 new external vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour about 40 vehicles would enter and 119 vehicles would exit the site. During the afternoon peak hour about 133 vehicles would enter and 78 vehicles would exit the site.

Projected Levels of Service

- All movements at the signalized intersection of US 85-87 are projected to operate at LOS D or better during the peak hours based on the projected short-term and 2040 total traffic volumes.
- All movements at the three-quarter movement (left-in/right-in/right-out only) intersection of US 85-87/Southmoor are projected to operate at LOS C or better during the peak hours based on the projected short-term and 2040 total traffic volumes.
- The site access points to Southmoor Drive are projected to operate at a satisfactory level of service for all movements as two-way Stop-sign-controlled intersections based on the projected short-term and 2040 total traffic volumes.

Access Permitting

- The proposed residential site access on Southmoor Drive will require El Paso County approval.
- CDOT will require the submittal of a Colorado State Highway Access Permit Applications for the main access at the US Highway 85-87 intersection. They may also require the submittal of an application for the intersection of Southmoor Drive/US Highway 85-87.

Recommendations

- Southmoor Drive should be improved to an El Paso County-standard Urban Collector street adjacent to the site.
- A short southbound right-turn bay should be added on Southmoor Drive approaching the north site access point.
- Figure 11 shows the proposed laneage for the main access to the shopping center and the residential development.
- Signal modifications may be needed to the existing traffic signal at the intersection of US 85-87/Main Street to accommodate the recommended modifications to the site access (west leg). CDOT will likely require a signal modification plan as part of the terms and conditions of the State Highway Access Permit. CDOT will also likely require the submittal of design plans for the west leg intersection improvements. These will likely need to be approved by CDOT prior to issuance of a Notice-to-Proceed (NTP).

- There are existing northbound left-turns lane on US 85-87 approaching Southmoor Drive and Main Street. These lanes meet the criteria contained in The Colorado State Highway Access Code based on a classification of NR-B with a posted speed limit greater than 40 mph.
- There are existing continuous right-turn acceleration/deceleration lanes on US 85-87 between the right-in/right-out access just north of Main Street to Mesa Ridge Parkway.
- There is an existing 70-foot right-turn deceleration lane on US 85-87 approaching the right-in/right-out access just north of Main Street. Based on criteria contained in The Colorado State Highway Access Code this lane should be extended to 350 feet plus a 150-foot taper.
- The streets within the residential subdivision should be classified as El Paso County Urban Local streets.

Roadway Improvement Fee Program

- The residential portion of the project will be required to participate in the El Paso County Road Improvement Fee Program. They will join the ten-mil PID. The ten-mil PID building permit fee portion associated with this option is \$923 per single-family dwelling unit. Based on 225 lots, the total building permit fee would be \$207,675.

* * * * *

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

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Kirstin Day Ferrin, P.E.
Senior Transportation Engineer

JCH:KDF:bjwb

Enclosures: Table 2
Figures 1-11
Spreadsheet Model Results
Traffic Count Reports
Level of Service Reports

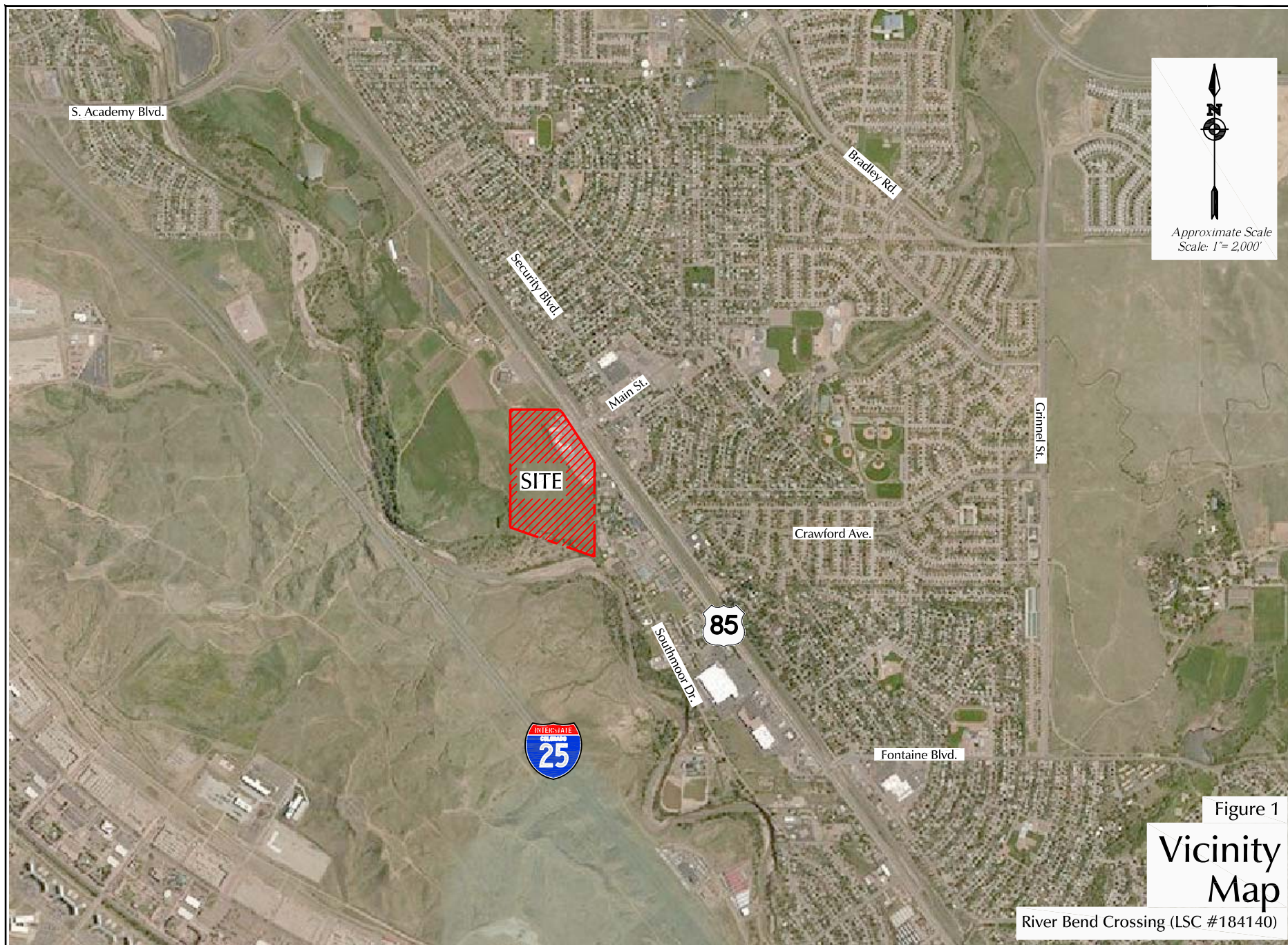
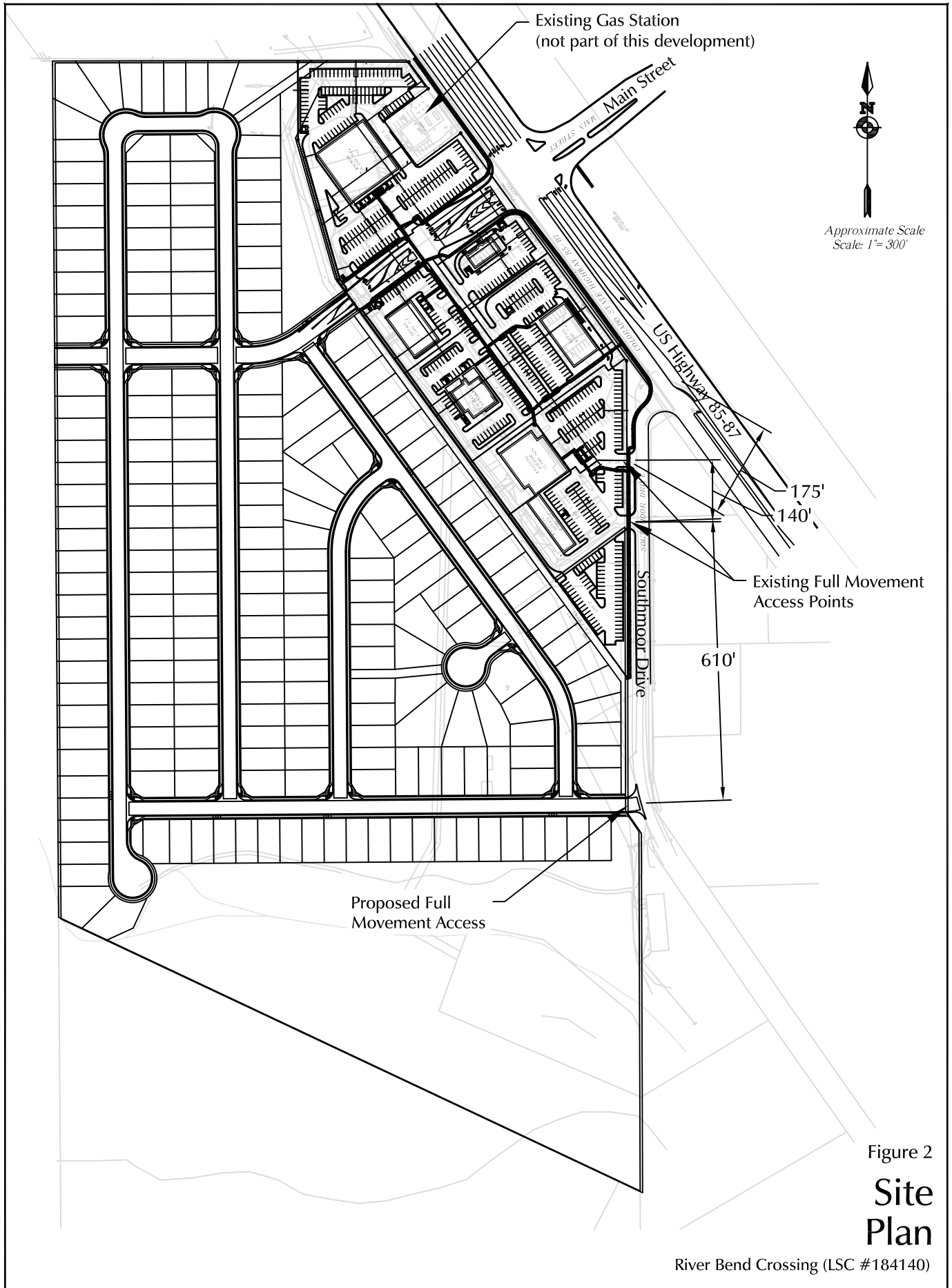
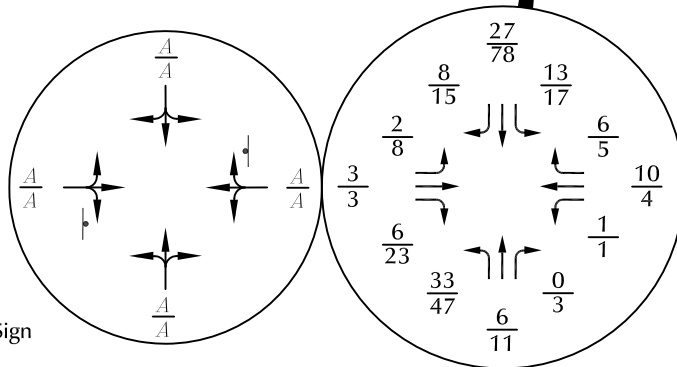
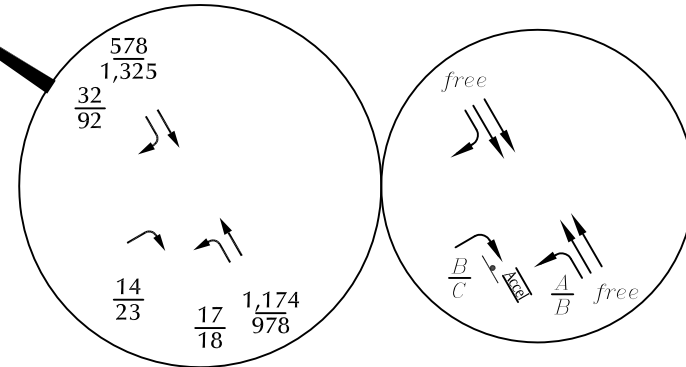
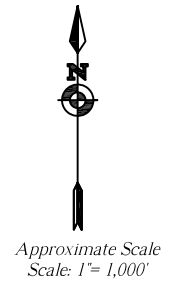
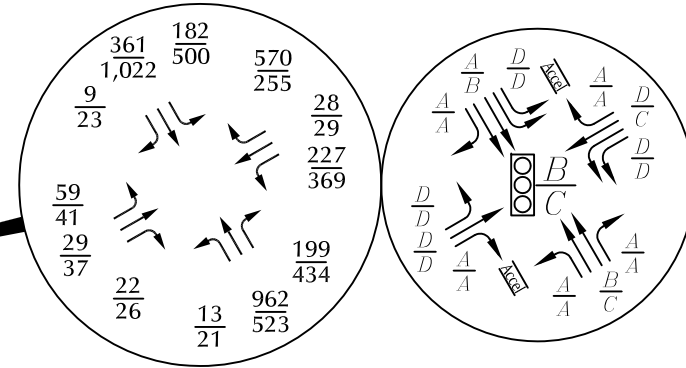
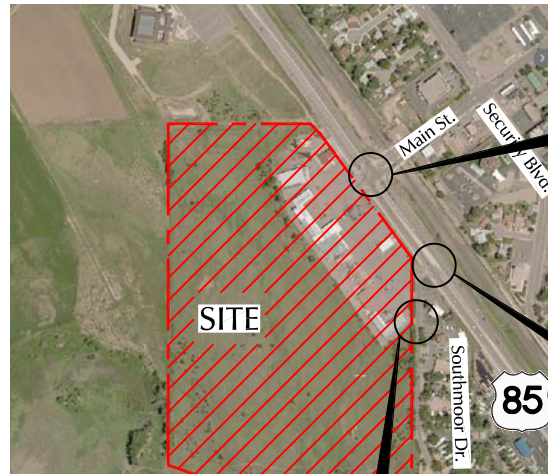


Figure 1
**Vicinity
Map**
River Bend Crossing (LSC #184140)





LEGEND:

⊥ = Stop Sign

⬢ = Traffic Signal

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

PM Weekday Peak-Hour Traffic (vehicles per hour)

$\frac{A}{B}$ = AM Individual Movement Peak-Hour Level of Service

PM Individual Movement Peak-Hour Level of Service

$\frac{C}{C}$ = AM Entire Intersection Peak-Hour Level of Service

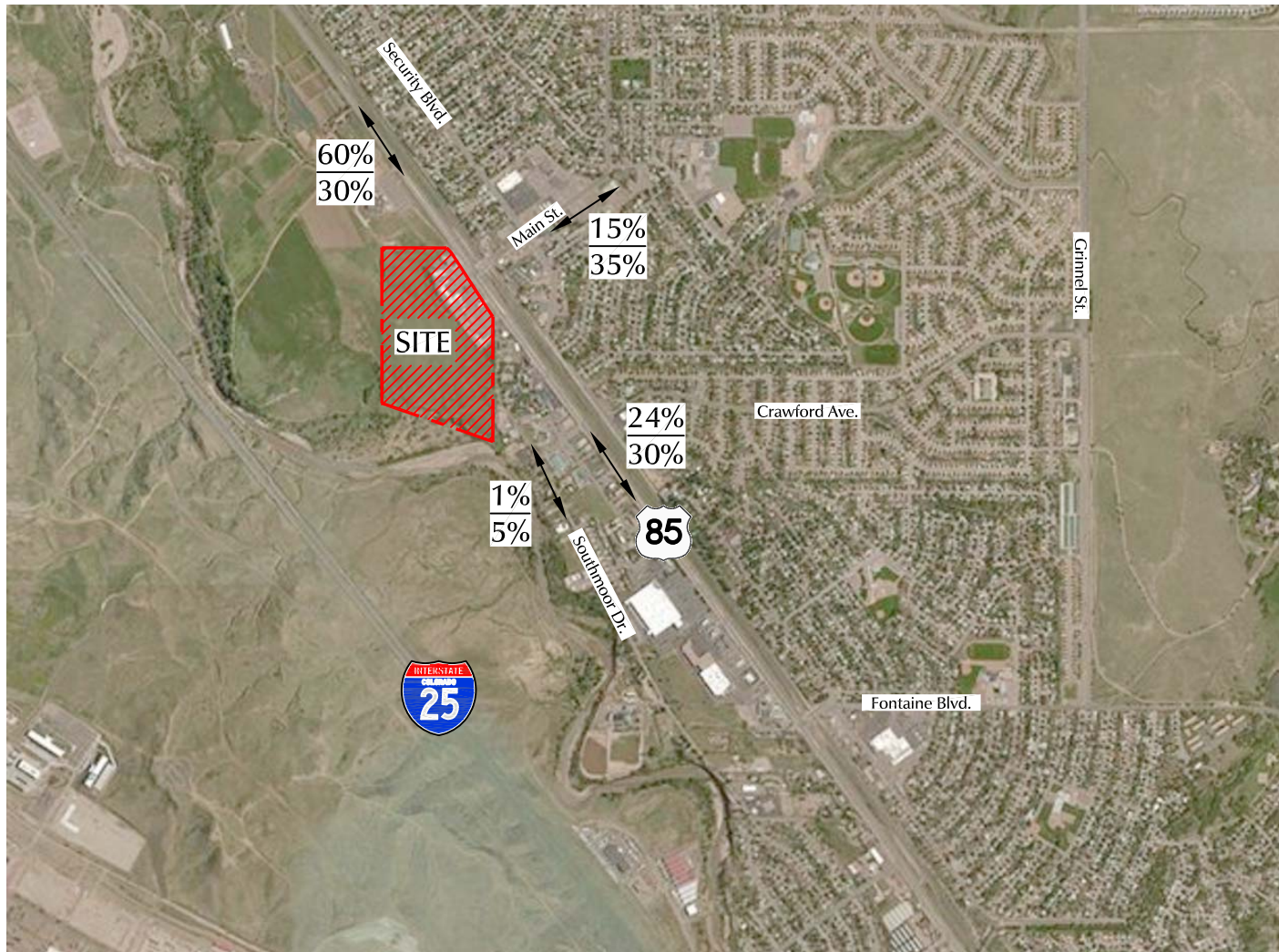
PM Entire Intersection Peak-Hour Level of Service

X,XXX= Average Daily Traffic (vehicles per day) Estimates by LSC unless otherwise noted.

Figure 3

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

River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 2,000'

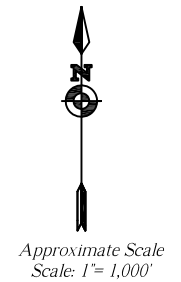
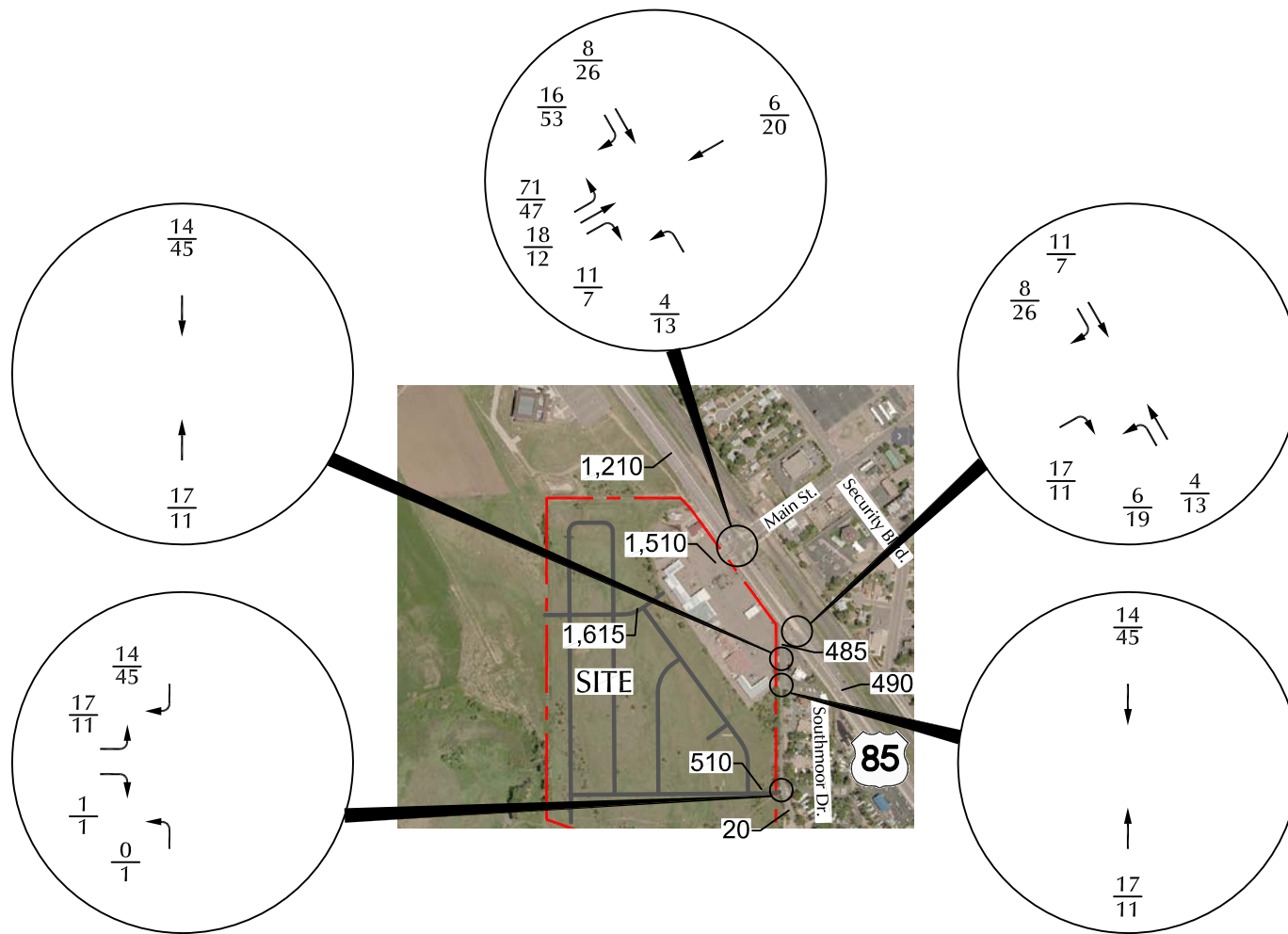
Directional Distribution of Site-Generated Traffic

River Bend Crossing (LSC #184140)

LEGEND:

$\frac{XX\%}{XX\%}$ = Residential Percent Directional Distribution
 $\frac{XX\%}{XX\%}$ = Commercial Percent Directional Distribution

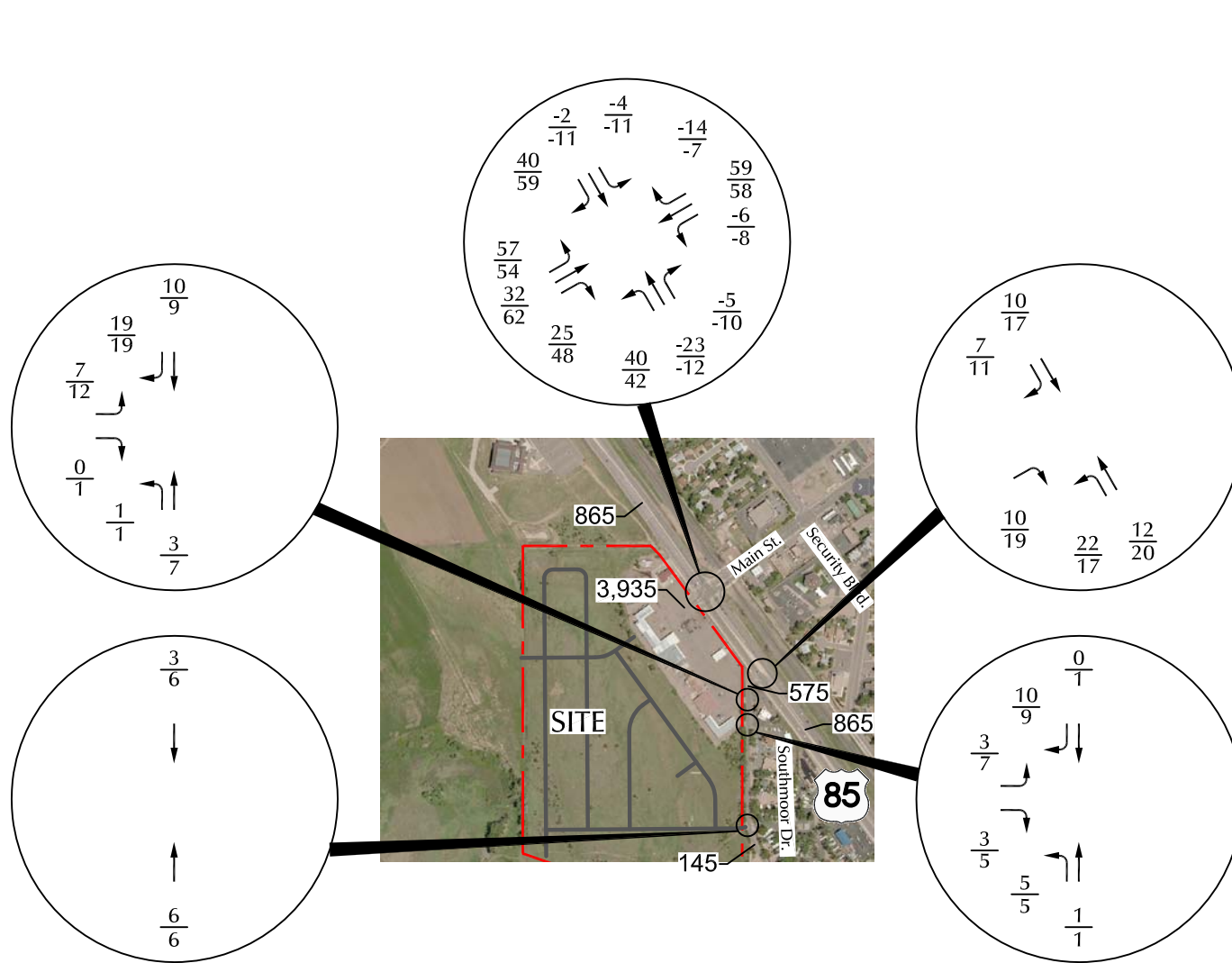
Figure 4



LEGEND:

- $\frac{XX}{XX} =$ AM Weekday Peak-Hour Traffic (vehicles per hour)
 $\frac{XX}{XX} =$ PM Weekday Peak-Hour Traffic (vehicles per hour)
 X,XXX= Average Daily Traffic (vehicles per day)

Figure 5
**Assignment of
 Residential Site-Generated Traffic**
 River Bend Crossing (LSC #184140)



LEGEND:

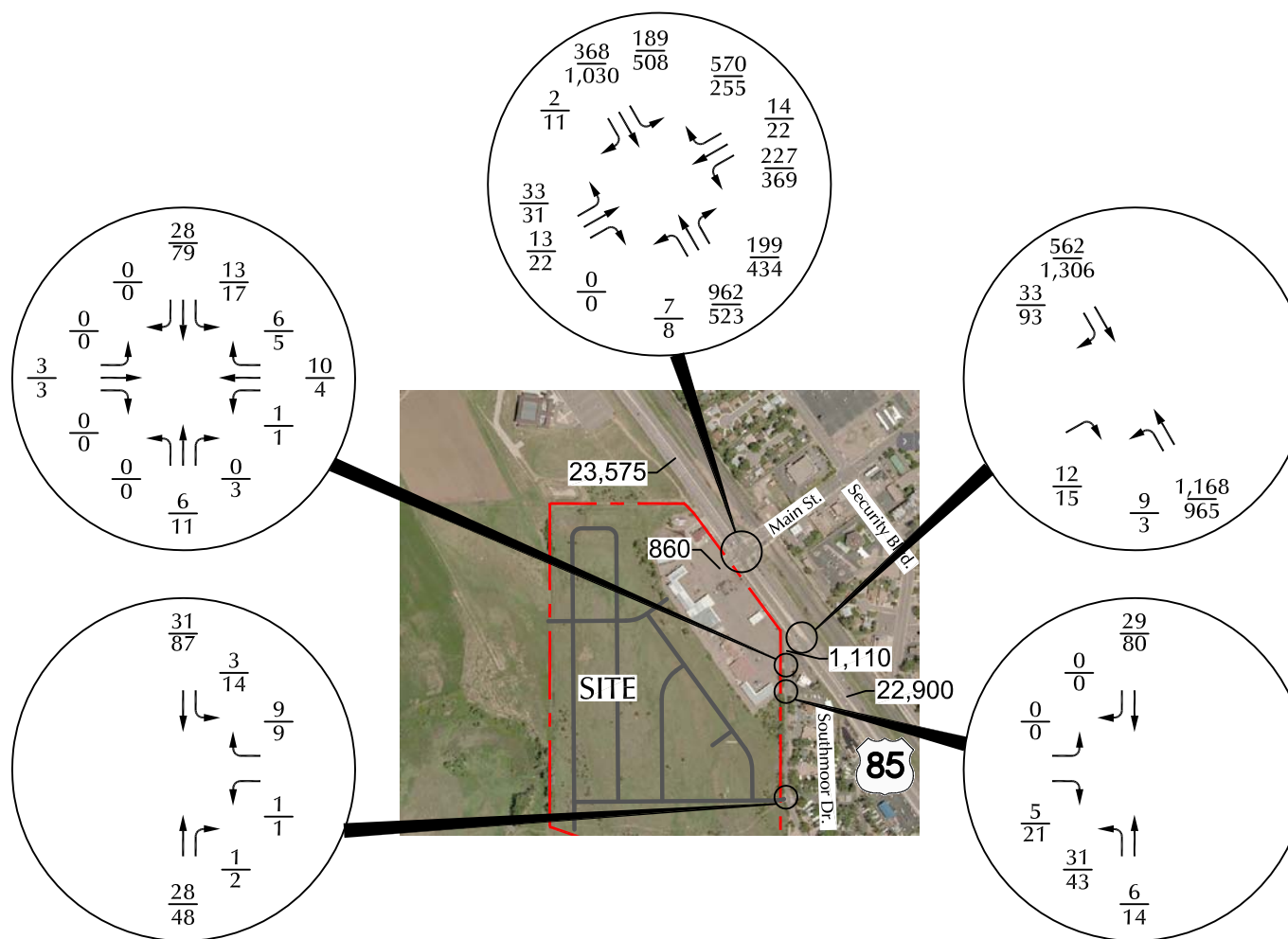
$\frac{XX}{XX} =$ AM Weekday Peak-Hour Traffic (vehicles per hour)
 $\frac{XX}{XX} =$ PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX= Average Daily Traffic (vehicles per day)

Figure 6
**Assignment of
 Commercial Site-Generated Traffic**
 River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

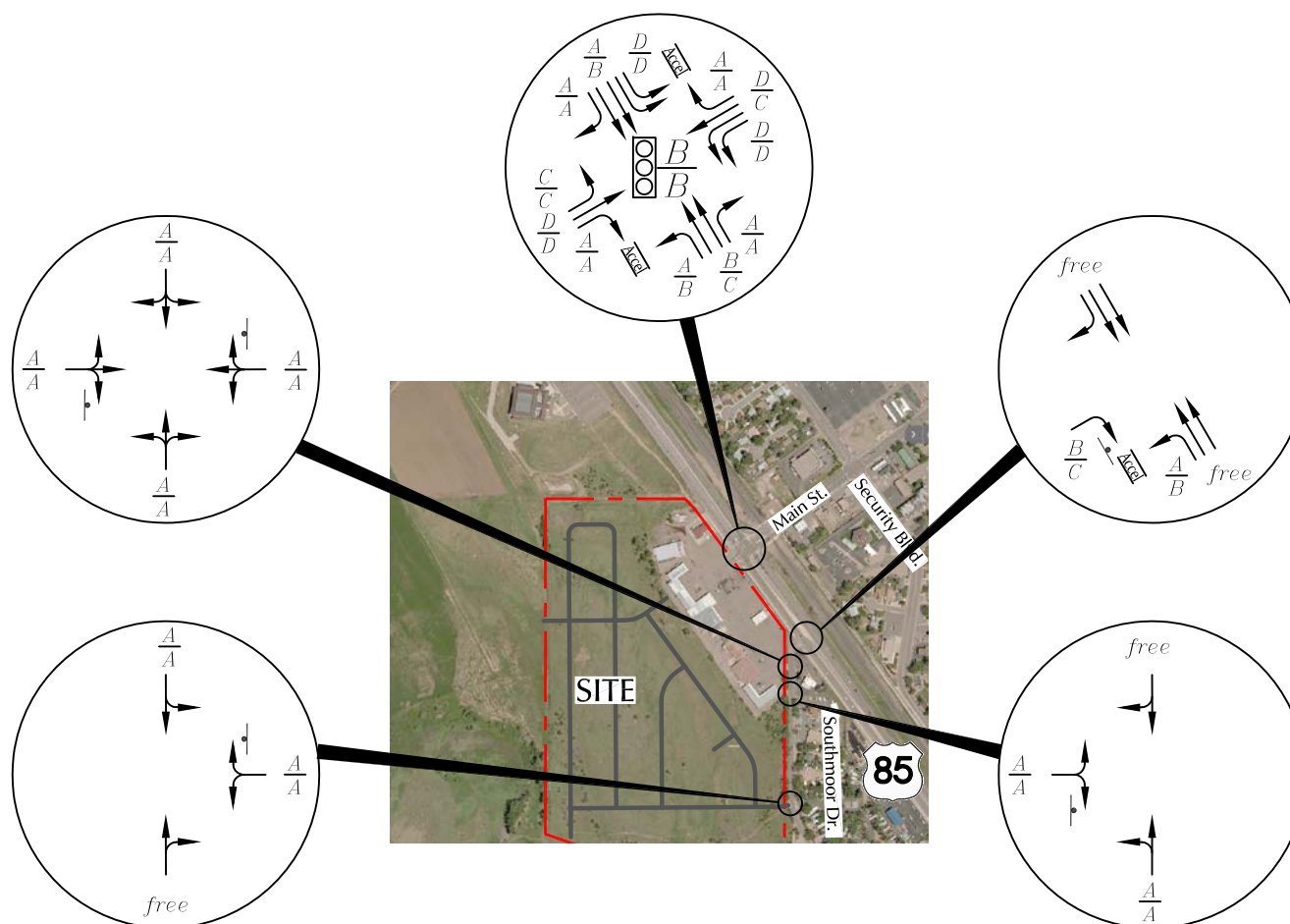
$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX= Average Daily Traffic (vehicles per day)

Figure 7a
**Short-Term
Background Traffic**
River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

┤ = Stop Sign

⬮ = Traffic Signal

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{C}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

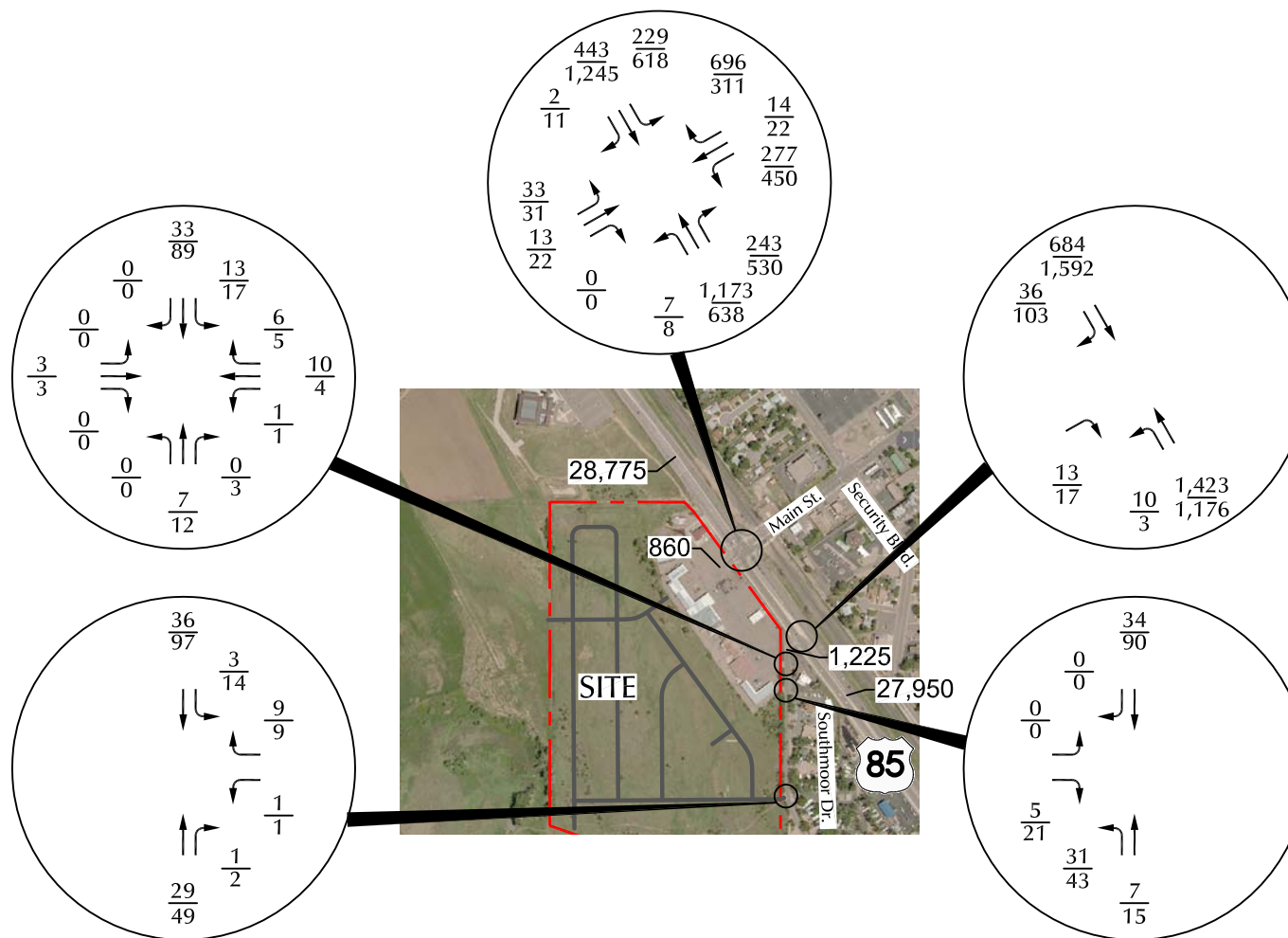
Figure 7b

Short-Term Background Lane Geometry, Traffic Control and Level of Service

River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

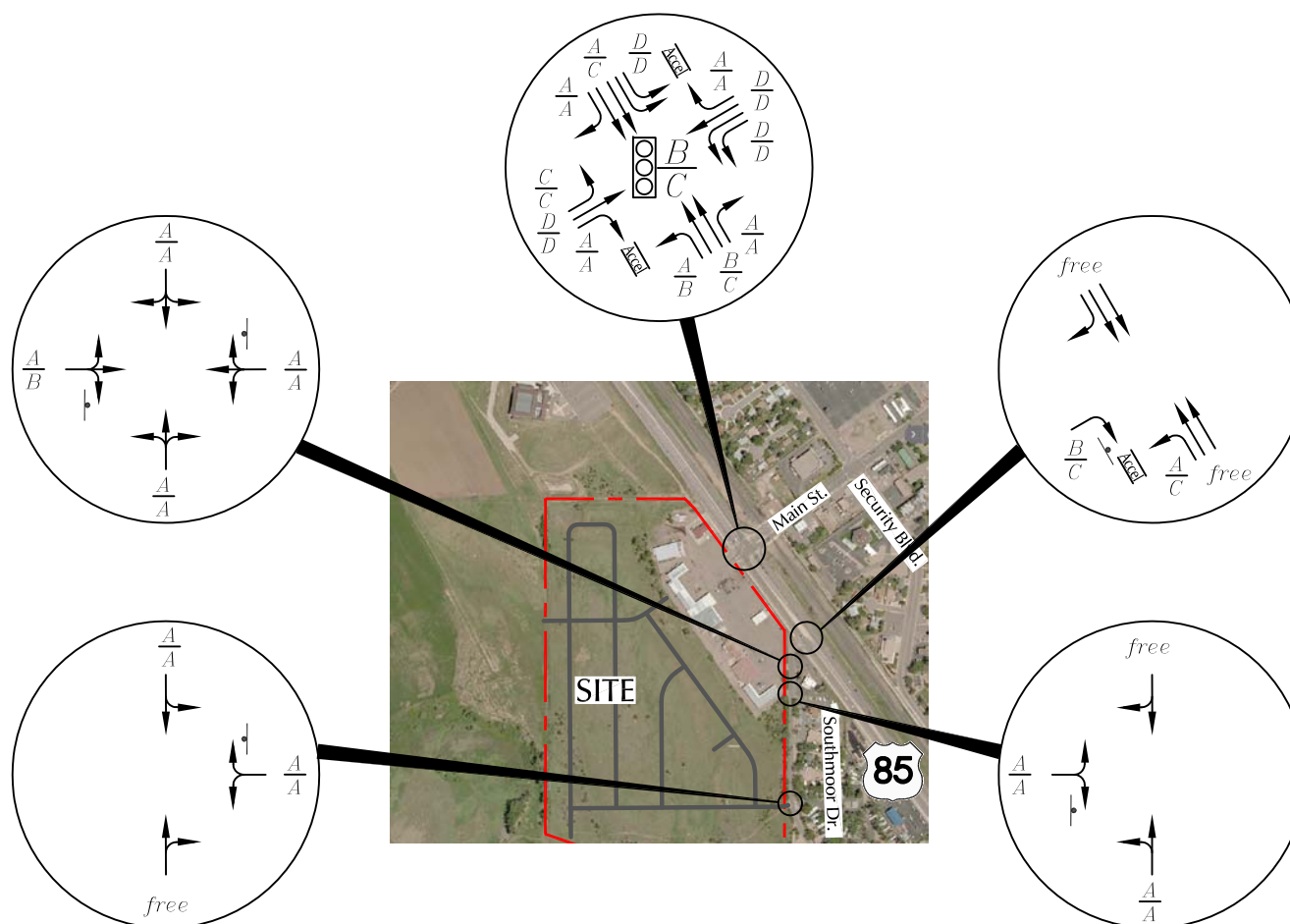
$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX= Average Daily Traffic (vehicles per day)

Figure 8a
Year 2040
Background Traffic
 River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

 = Stop Sign

 = Traffic Signal

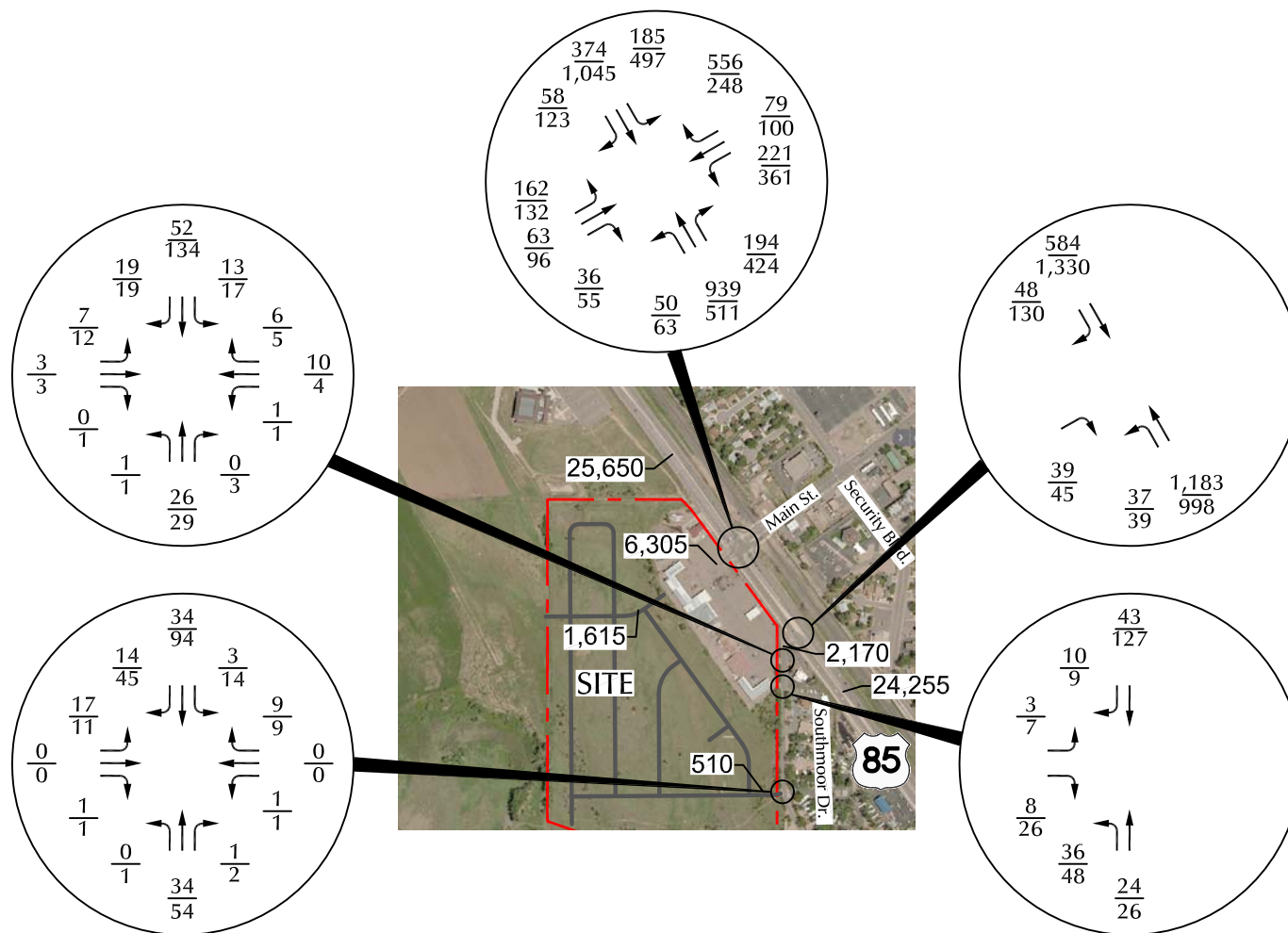
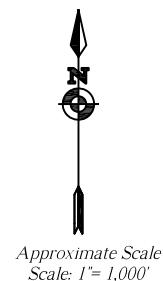
$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{C}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

Figure 8b

Year 2040 Background Lane Geometry, Traffic Control and Level of Service

River Bend Crossing (LSC #184140)



LEGEND:

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

X,XXX= Average Daily Traffic (vehicles per day)

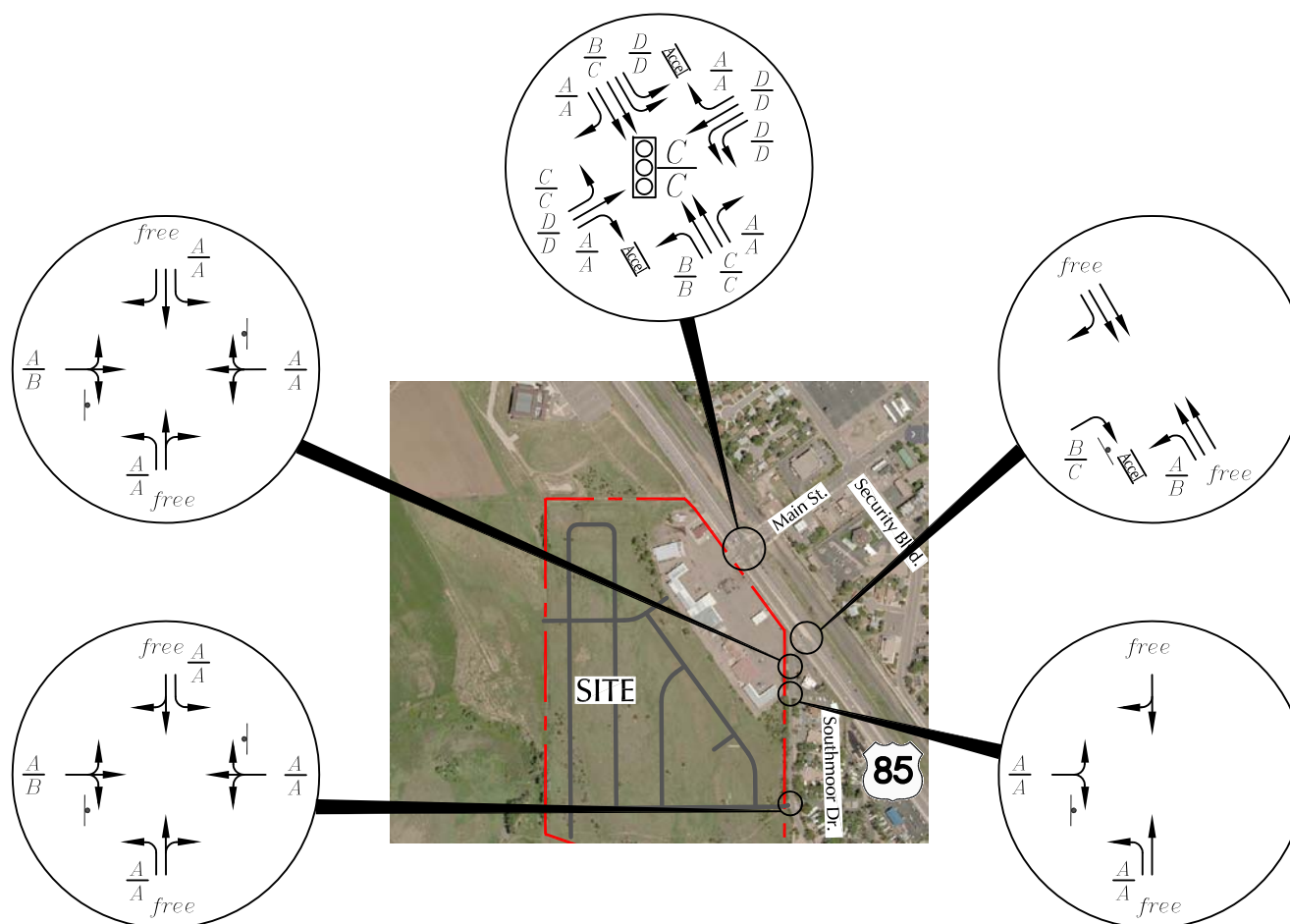
Figure 9a

Short-Term Total Traffic

River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

└ = Stop Sign

⬢ = Traffic Signal

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{C}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

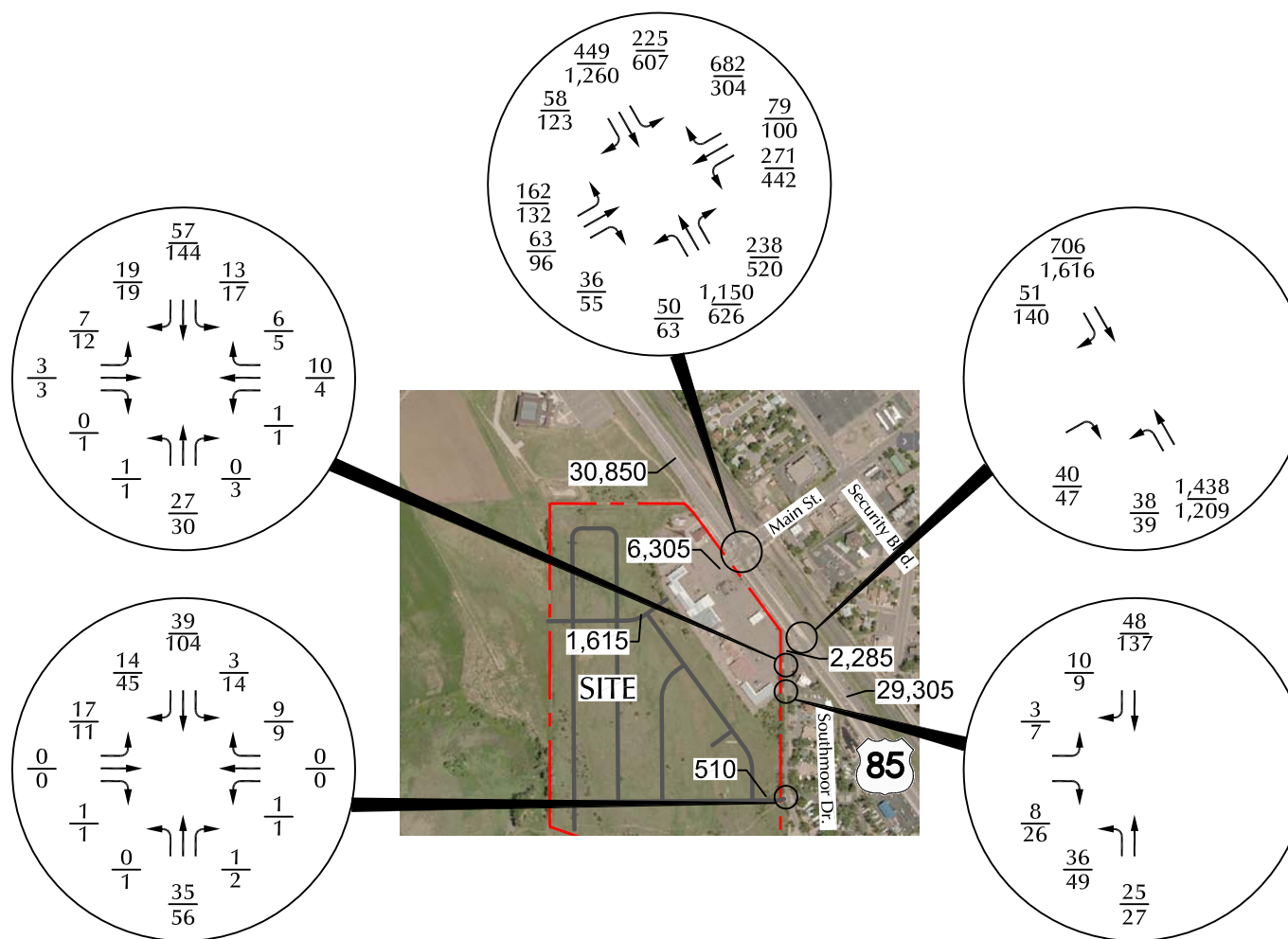
Figure 9b

Short-Term Total Lane Geometry, Traffic Control and Level of Service

River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

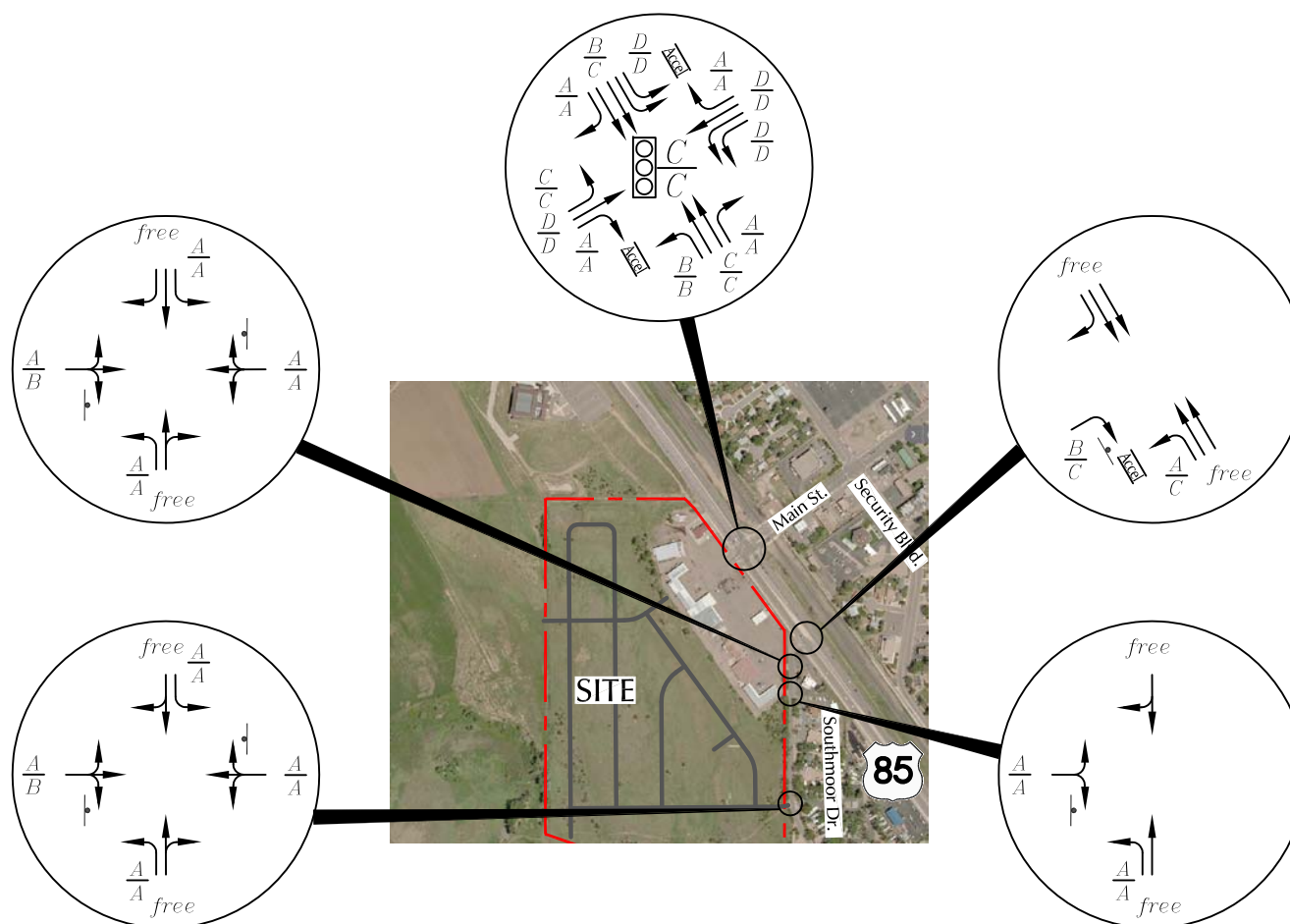
$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX= Average Daily Traffic (vehicles per day)

Figure 10a
Year 2040
Total Traffic
 River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

┐ = Stop Sign

⬢ = Traffic Signal

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{C}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

Figure 10b

Year 2040 Total Lane Geometry, Traffic Control and Level of Service

River Bend Crossing (LSC #184140)

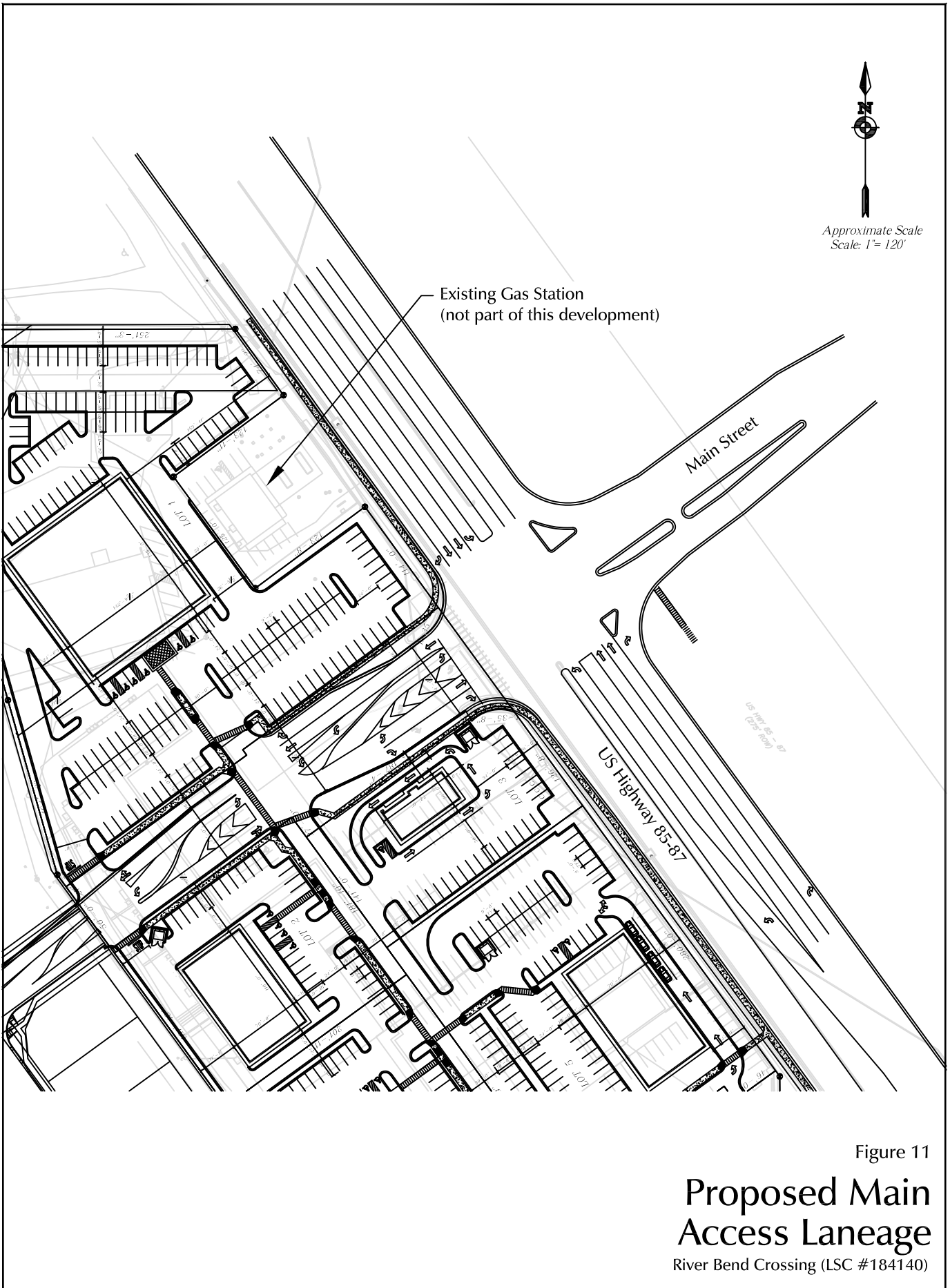


Figure 11

Proposed Main Access Laneage

River Bend Crossing (LSC #184140)

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	River Bend Crossing	Organization:	LSC Transportation Consultants, Inc.		
Project Location:	SH 85-87/Main St	Performed By:	KDF		
Scenario Description:	Buildout	Date:	4/3/2018		
Analysis Year:	2040	Checked By:			
Analysis Period:	AM Street Peak Hour	Date:			

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0	0	0
Retail				179	111	68
Restaurant				163	85	78
Cinema/Entertainment				0	0	0
Residential				0	0	0
Hotel				0	0	0
All Other Land Uses ²				0		
				342	196	146

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		9	0	0	0
Restaurant	0	9		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	342	196	146
Internal Capture Percentage	11%	9%	12%
External Vehicle-Trips ⁵	306	178	128
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	8%	13%
Restaurant	11%	12%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

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

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

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

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

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

⁶Person-Trips

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

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

Project Name:	River Bend Crossing
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	111	111	1.00	68	68
Restaurant	1.00	85	85	1.00	78	78
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	20		9	0	10	0
Restaurant	24	11		0	3	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		36	20	0	0	0
Retail	0		43	0	0	0
Restaurant	0	9		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	19	17	0		0
Hotel	0	4	5	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	9	102	111	102	0	0
Restaurant	9	76	85	76	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	9	59	68	59	0	0
Restaurant	9	69	78	69	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
² Person-Trips
³ Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	River Bend Crossing	Organization:	LSC Transportation Consultants, Inc.		
Project Location:	SH 85-87/Main St	Performed By:	KDF		
Scenario Description:	Buildout	Date:	4/3/2018		
Analysis Year:	2040	Checked By:			
Analysis Period:	PM Street Peak Hour	Date:			

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0	0	0
Retail				352	169	183
Restaurant				142	79	63
Cinema/Entertainment				0	0	0
Residential				0	0	0
Hotel				0	0	0
All Other Land Uses ²				0	0	0
				494	248	246

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		23	0	0	0
Restaurant	0	26		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	494	248	246
Internal Capture Percentage	20%	20%	20%
External Vehicle-Trips ⁵	396	199	197
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	15%	13%
Restaurant	29%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

¹ Land Use Codes (LUCs) from <i>Trip Generation Manual</i> , published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
³ Enter trips assuming no transit or non-motorized trips (as assumed in ITE <i>Trip Generation Manual</i>).
⁴ Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be
⁵ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.
⁶ Person-Trips
[*] Indicates computation that has been rounded to the nearest whole number.
Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	River Bend Crossing
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	169	169	1.00	183	183
Restaurant	1.00	79	79	1.00	63	63
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	4		53	7	48	9
Restaurant	2	26		5	11	4
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		14	2	0	0	0
Retail	0		23	0	0	0
Restaurant	0	85		0	0	0
Cinema/Entertainment	0	7	2		0	0
Residential	0	17	11	0		0
Hotel	0	3	4	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	26	143	169	143	0	0
Restaurant	23	56	79	56	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	23	160	183	160	0	0
Restaurant	26	37	63	37	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

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

²Person-Trips

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

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

Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Hwy 85 - Main St AM

Site Code : 00184140

Start Date : 02/14/2018

Page No : 1

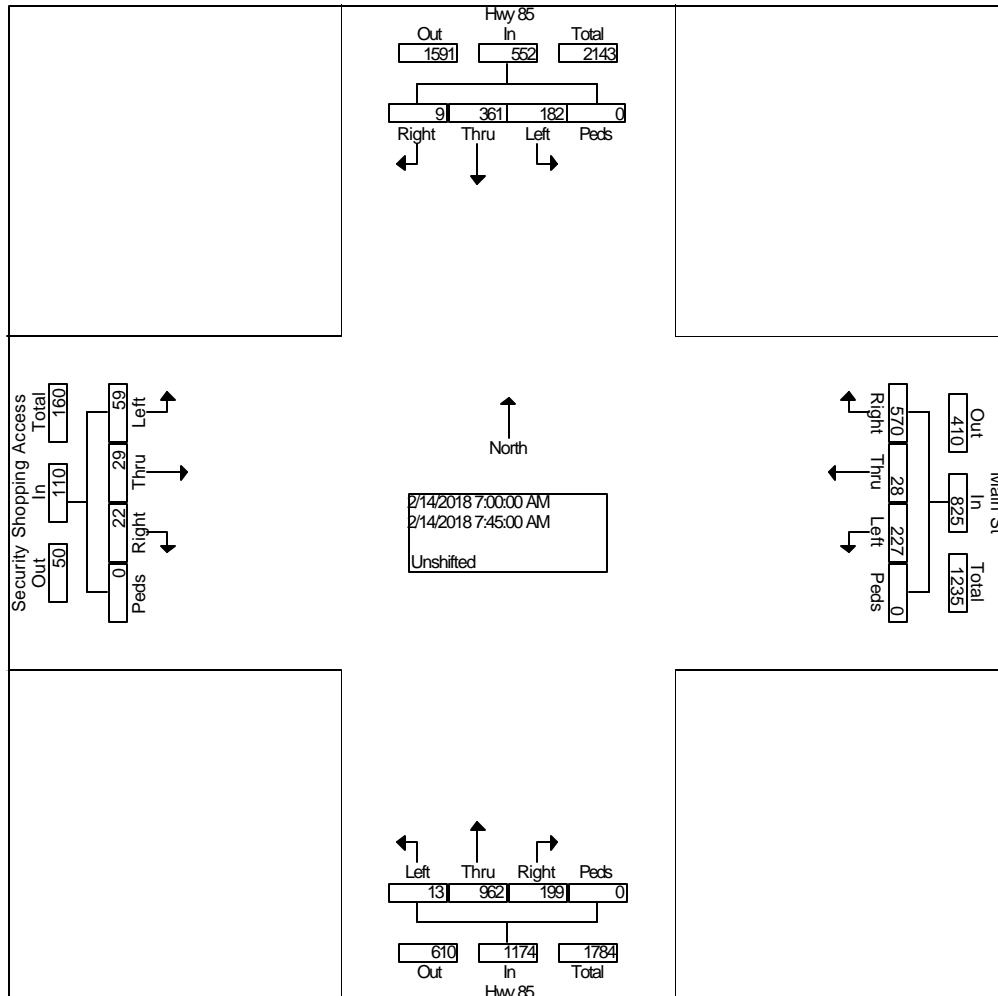
Groups Printed- Unshifted

	Hwy 85 From North				Main St From East				Hwy 85 From South				Security Shopping Access From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	1	53	21	0	105	6	42	0	29	193	1	0	8	6	13	0	478
06:45 AM	2	80	31	0	94	6	52	0	32	166	1	0	4	3	14	0	485
Total	3	133	52	0	199	12	94	0	61	359	2	0	12	9	27	0	963
07:00 AM	0	79	59	0	125	8	59	0	49	191	4	0	6	9	12	0	601
07:15 AM	2	86	36	0	144	11	57	0	40	257	7	0	8	8	18	0	674
07:30 AM	5	95	43	0	180	3	66	0	58	317	2	0	4	8	20	0	801
07:45 AM	2	101	44	0	121	6	45	0	52	197	0	0	4	4	9	0	585
Total	9	361	182	0	570	28	227	0	199	962	13	0	22	29	59	0	2661
08:00 AM	2	75	43	0	69	5	49	0	41	154	0	0	1	6	6	0	451
08:15 AM	3	98	33	0	94	4	63	0	44	132	2	0	2	8	6	0	489
Grand Total	17	667	310	0	932	49	433	0	345	1607	17	0	37	52	98	0	4564
Apprch %	1.7	67.1	31.2	0.0	65.9	3.5	30.6	0.0	17.5	81.6	0.9	0.0	19.8	27.8	52.4	0.0	
Total %	0.4	14.6	6.8	0.0	20.4	1.1	9.5	0.0	7.6	35.2	0.4	0.0	0.8	1.1	2.1	0.0	

Counts by LSC

File Name : Hwy 85 - Main St AM
 Site Code : 00184140
 Start Date : 02/14/2018
 Page No : 2

	Hwy 85 From North					Main St From East					Hwy 85 From South					Security Shopping Access From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	9	36	18	0	552	57	28	22	0	825	19	96	13	0	1174	22	29	59	0	110	2661
		1	2			0		7			9	2									
Percent	1.6	65.	33.	0.0		69.	3.4	27.	0.0		17.	81.	1.1	0.0		20.	26.	53.	0.0		
		4	0			1		5			0	9				0	4	6			
07:30																					
Volume	5	95	43	0	143	18	3	66	0	249	58	31	2	0	377	4	8	20	0	32	801
						0						7									
Peak Factor																					0.831
High Int.	07:45 AM					07:30 AM					07:30 AM					07:15 AM					
Volume	2	10	44	0	147	18	3	66	0	249	58	31	2	0	377	8	8	18	0	34	
		1				0						7									
Peak Factor					0.93					0.82					0.77					0.80	
					9					8					9					9	



Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Hwy 85 - Main St PM

Site Code : 00184140

Start Date : 02/13/2018

Page No : 1

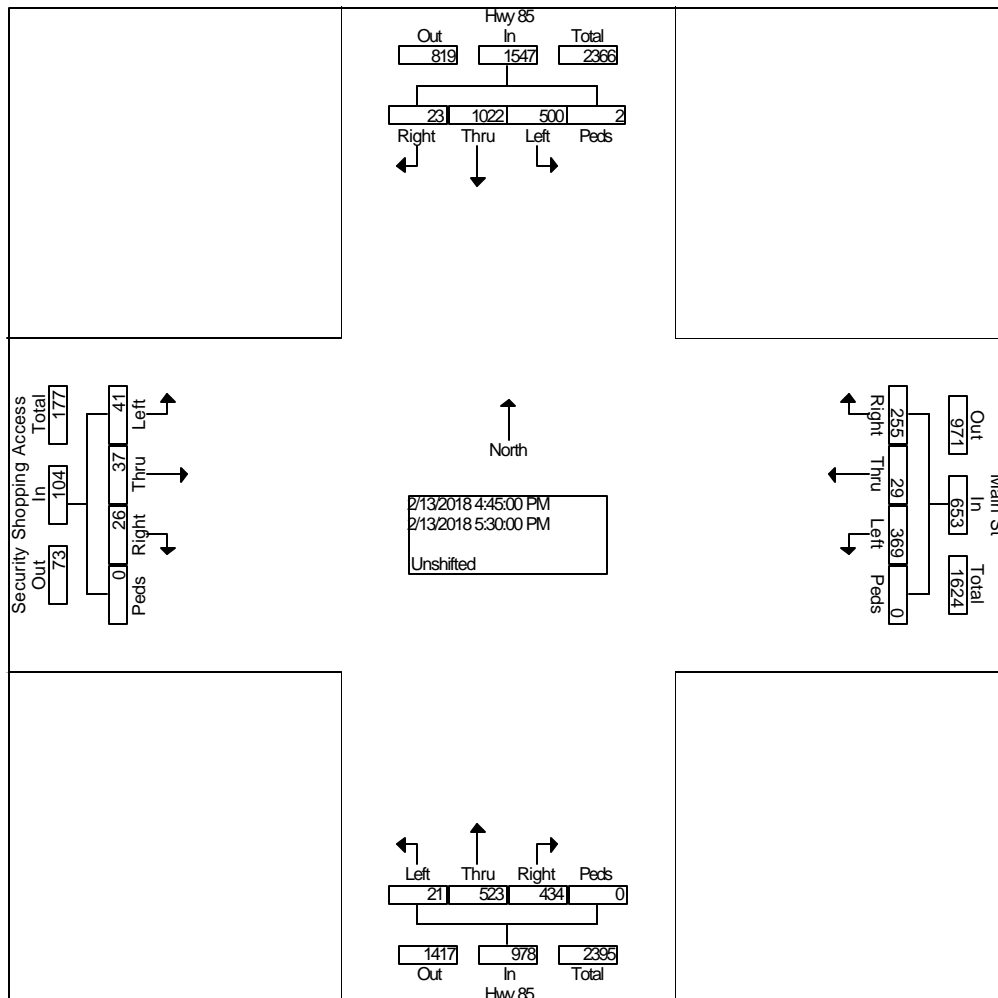
Groups Printed- Unshifted

	Hwy 85 From North				Main St From East				Hwy 85 From South				Security Shopping Access From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	6	244	115	0	55	2	115	0	81	119	4	0	4	13	12	0	770
04:15 PM	7	220	123	0	45	6	91	0	99	105	4	0	11	8	10	0	729
04:30 PM	3	238	124	0	53	8	109	0	88	132	2	1	3	9	10	0	780
04:45 PM	6	264	134	0	65	6	86	0	115	152	3	0	8	7	9	0	855
Total	22	966	496	0	218	22	401	0	383	508	13	1	26	37	41	0	3134
05:00 PM	8	244	123	0	59	4	74	0	116	126	12	0	3	9	10	0	788
05:15 PM	8	282	119	1	70	7	86	0	109	123	1	0	10	11	13	0	840
05:30 PM	1	232	124	1	61	12	123	0	94	122	5	0	5	10	9	0	799
05:45 PM	4	239	129	1	53	4	110	0	129	123	2	0	6	13	5	0	818
Total	21	997	495	3	243	27	393	0	448	494	20	0	24	43	37	0	3245
Grand Total	43	1963	991	3	461	49	794	0	831	1002	33	1	50	80	78	0	6379
Apprch %	1.4	65.4	33.0	0.1	35.4	3.8	60.9	0.0	44.5	53.7	1.8	0.1	24.0	38.5	37.5	0.0	
Total %	0.7	30.8	15.5	0.0	7.2	0.8	12.4	0.0	13.0	15.7	0.5	0.0	0.8	1.3	1.2	0.0	

Counts by LSC

File Name : Hwy 85 - Main St PM
 Site Code : 00184140
 Start Date : 02/13/2018
 Page No : 2

	Hwy 85 From North					Main St From East					Hwy 85 From South					Security Shopping Access From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	23	10	50	2	1547	25	29	36	0	653	43	52	21	0	978	26	37	41	0	104	3282
		22	0			5		9			4	3									
Percent	1.5	66.	32.	0.1		39.	4.4	56.	0.0		44.	53.	2.1	0.0		25.	35.	39.	0.0		
		1	3			1		5			4	5				0	6	4			
04:45		26	13								11	15									
Volume	6	4	4	0	404	65	6	86	0	157	5	2	3	0	270	8	7	9	0	24	855
Peak																					
Factor																					0.960
High Int.	05:15 PM					05:30 PM					04:45 PM					05:15 PM					
Volume	8	28	11	1	410	61	12	12	0	196	11	15	3	0	270	10	11	13	0	34	
		2	9					3			5	2									
Peak																					
Factor					0.94					0.83					0.90					0.76	
					3					3					6					5	



Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Hwy 85 - Southmoor Dr AM

Site Code : 00184140

Start Date : 02/15/2018

Page No : 1

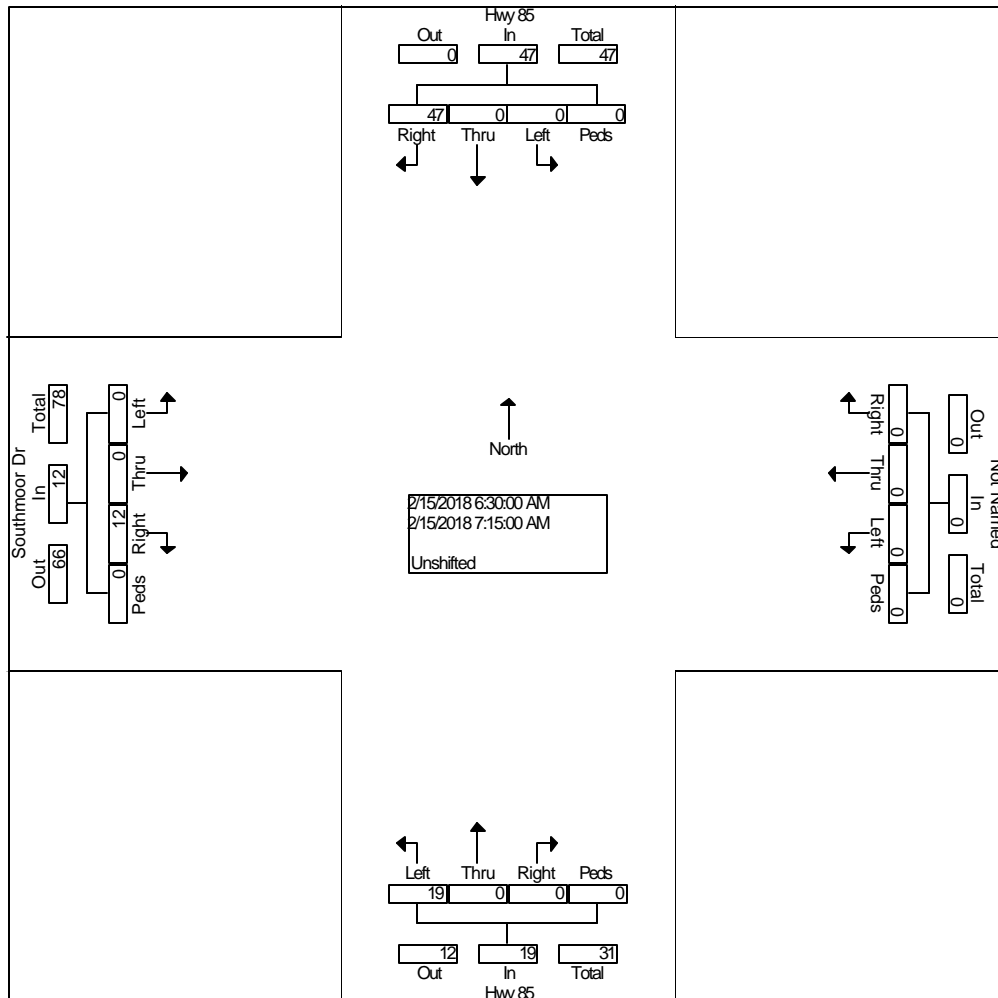
Groups Printed- Unshifted

	Hwy 85 From North				From East				Hwy 85 From South				Southmoor Dr From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	12	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	20
06:45 AM	17	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	25
Total	29	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	45
07:00 AM	6	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	11
07:15 AM	12	0	0	0	0	0	0	0	0	0	7	0	3	0	0	0	22
07:30 AM	8	0	0	0	0	0	0	0	0	0	2	0	6	0	0	0	16
07:45 AM	6	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	14
Total	32	0	0	0	0	0	0	0	0	0	17	0	14	0	0	0	63
08:00 AM	12	0	0	0	0	0	0	0	0	0	5	0	7	0	0	0	24
08:15 AM	7	0	0	0	0	0	0	0	0	0	4	0	3	0	0	0	14
Grand Total	80	0	0	0	0	0	0	0	0	0	34	0	32	0	0	0	146
Apprch %	100. 0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100. 0	0.0	100. 0	0.0	0.0	0.0	
Total %	54.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	0.0	21.9	0.0	0.0	0.0	

Counts by LSC

File Name : Hwy 85 - Southmoor Dr AM
 Site Code : 00184140
 Start Date : 02/15/2018
 Page No : 2

	Hwy 85 From North					From East					Hwy 85 From South					Southmoor Dr From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	06:30 AM																				
Volume	47	0	0	0	47	0	0	0	0	0	0	0	19	0	19	12	0	0	0	12	78
Percent	10	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	10	0.0		10	0.0	0.0	0.0		
	0.0												0.0			0.0					
06:45																					
Volume	17	0	0	0	17	0	0	0	0	0	0	0	4	0	4	4	0	0	0	4	25
Peak																					0.780
Factor																					
High Int.	06:45 AM					6:15:00 AM					07:15 AM					06:30 AM					
Volume	17	0	0	0	17	0	0	0	0	0	0	0	7	0	7	4	0	0	0	4	
Peak																					
Factor	0.69										0.67					0.75					
	1										9					0					



Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Hwy 85 - Southmoor Dr PM

Site Code : 00184140

Start Date : 02/14/2018

Page No : 1

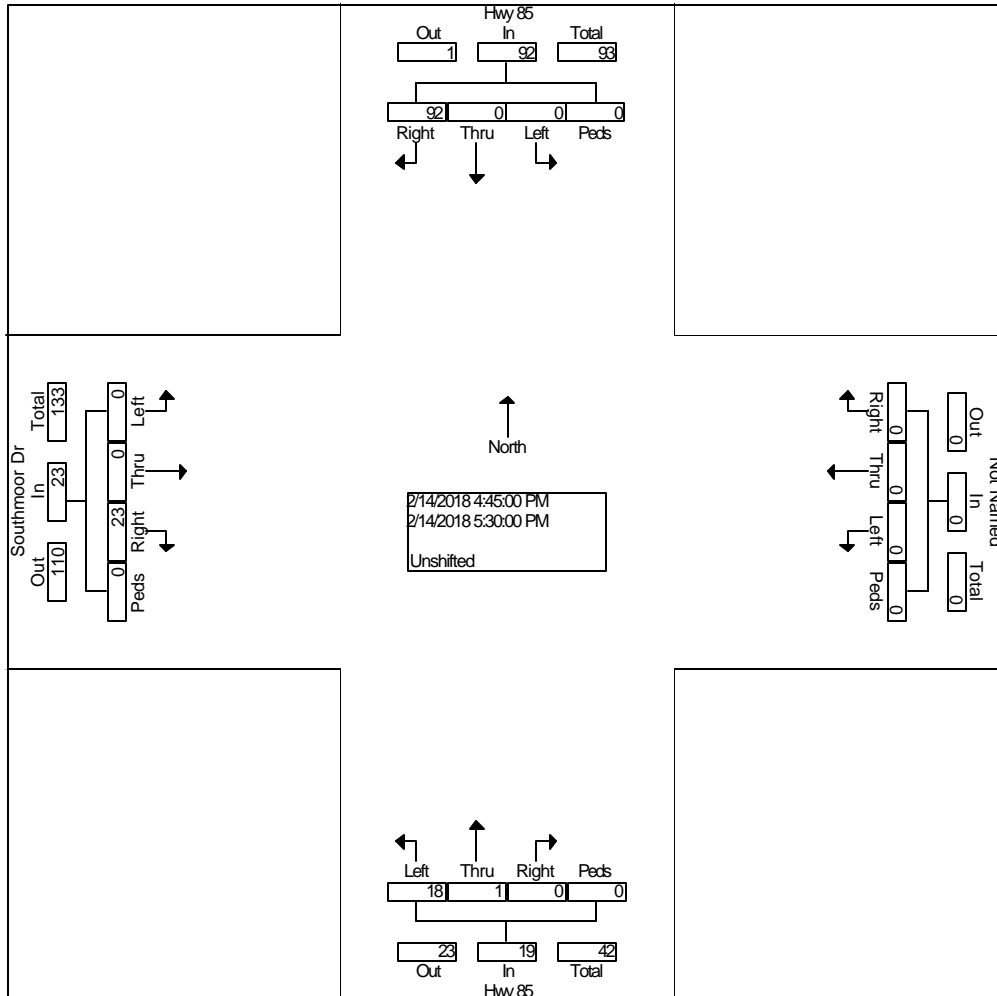
Groups Printed- Unshifted

	Hwy 85 From North				From East				Hwy 85 From South				Southmoor Dr From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	14	0	0	0	0	0	0	0	0	2	2	0	4	0	0	0	22
04:15 PM	21	0	0	0	0	0	0	0	0	1	2	0	16	0	0	0	40
04:30 PM	18	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	22
04:45 PM	15	0	0	0	0	0	0	0	0	1	8	0	9	0	0	0	33
Total	68	0	0	0	0	0	0	0	0	4	15	0	30	0	0	0	117
05:00 PM	24	0	0	0	0	0	0	0	0	0	5	0	7	0	0	0	36
05:15 PM	23	0	0	0	0	0	0	0	0	0	2	0	5	0	0	0	30
05:30 PM	30	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	35
05:45 PM	19	0	0	0	0	0	0	0	0	0	4	0	9	0	0	0	32
Total	96	0	0	0	0	0	0	0	0	0	14	0	23	0	0	0	133
Grand Total	164	0	0	0	0	0	0	0	0	4	29	0	53	0	0	0	250
Apprch %	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	87.9	0.0	100.0	0.0	0.0	0.0	
Total %	65.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	11.6	0.0	21.2	0.0	0.0	0.0	

Counts by LSC

File Name : Hwy 85 - Southmoor Dr PM
 Site Code : 00184140
 Start Date : 02/14/2018
 Page No : 2

	Hwy 85 From North					From East					Hwy 85 From South					Southmoor Dr From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	92	0	0	0	92	0	0	0	0	0	0	1	18	0	19	23	0	0	0	23	134
Percent	10	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	5.3	94.7	0.0		10	0.0	0.0	0.0		
	0.0															0.0					
05:00																					
Volume	24	0	0	0	24	0	0	0	0	0	0	0	5	0	5	7	0	0	0	7	36
Peak																					0.931
Factor																					
High Int.	05:30 PM					3:45:00 PM					04:45 PM					04:45 PM					
Volume	30	0	0	0	30	0	0	0	0	0	0	1	8	0	9	9	0	0	0	9	
Peak																					
Factor	0.76										0.52					0.63					
	7										8					9					



Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Southmoor Dr - Security Shopping Access AM

Site Code : 00184140

Start Date : 02/15/2018

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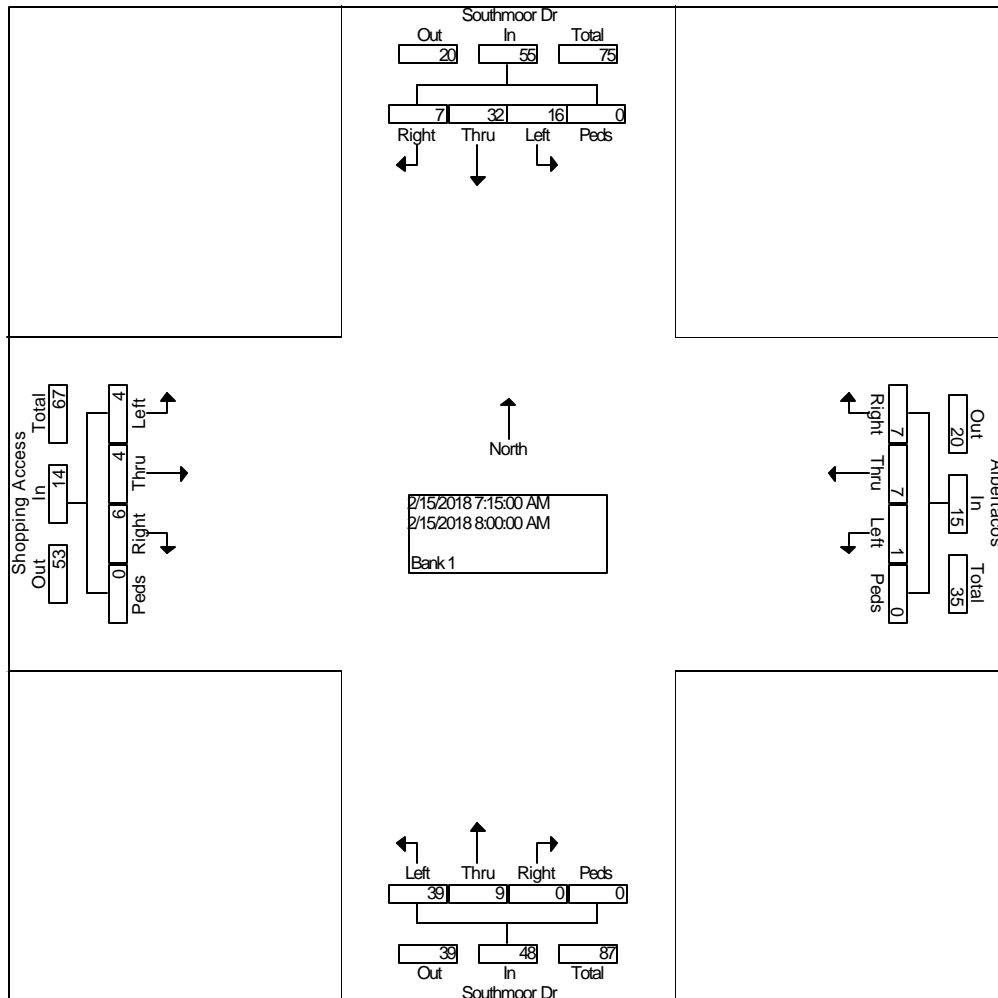
Groups Printed- Bank 1

	Southmoor Dr From North				Albertacos From East				Southmoor Dr From South				Shopping Access From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	2	12	2	0	0	0	0	0	0	4	10	0	2	0	0	0	32
06:45 AM	2	17	2	0	3	0	0	0	0	1	5	0	0	1	0	0	31
Total	4	29	4	0	3	0	0	0	0	5	15	0	2	1	0	0	63
07:00 AM	3	4	3	0	1	4	0	0	0	0	0	0	0	1	0	0	16
07:15 AM	3	10	5	0	2	3	0	0	0	1	16	0	1	2	0	0	43
07:30 AM	1	5	3	0	2	1	1	0	0	4	14	0	1	0	0	0	32
07:45 AM	1	8	2	0	1	2	0	0	0	1	3	0	4	0	2	0	24
Total	8	27	13	0	6	10	1	0	0	6	33	0	6	3	2	0	115
08:00 AM	2	9	6	0	2	1	0	0	0	3	6	0	0	2	2	0	33
08:15 AM	1	9	1	0	2	4	1	0	0	1	5	0	0	0	0	0	24
Grand Total	15	74	24	0	13	15	2	0	0	15	59	0	8	6	4	0	235
Apprch %	13.3	65.5	21.2	0.0	43.3	50.0	6.7	0.0	0.0	20.3	79.7	0.0	44.4	33.3	22.2	0.0	
Total %	6.4	31.5	10.2	0.0	5.5	6.4	0.9	0.0	0.0	6.4	25.1	0.0	3.4	2.6	1.7	0.0	

Counts by LSC

File Name : Southmoor Dr - Security Shopping Access AM
 Site Code : 00184140
 Start Date : 02/15/2018
 Page No : 2

	Southmoor Dr From North					Albertacos From East					Southmoor Dr From South					Shopping Access From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	7	32	16	0	55	7	7	1	0	15	0	9	39	0	48	6	4	4	0	14	132
Percent	12.	58.	29.	0.0		46.	46.	6.7	0.0		0.0	18.	81.	0.0		42.	28.	28.	0.0		
	7	2	1			7	7					8	3			9	6	6			
07:15 Volume	3	10	5	0	18	2	3	0	0	5	0	1	16	0	17	1	2	0	0	3	43
Peak Factor																					0.767
High Int.	07:15 AM					07:15 AM					07:30 AM					07:45 AM					
Volume	3	10	5	0	18	2	3	0	0	5	0	4	14	0	18	4	0	2	0	6	
Peak Factor	0.76					0.75					0.66					0.58					3
	4					0					7										



Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Southmoor Dr - Security Shopping Access PM

Site Code : 00184140

Start Date : 02/14/2018

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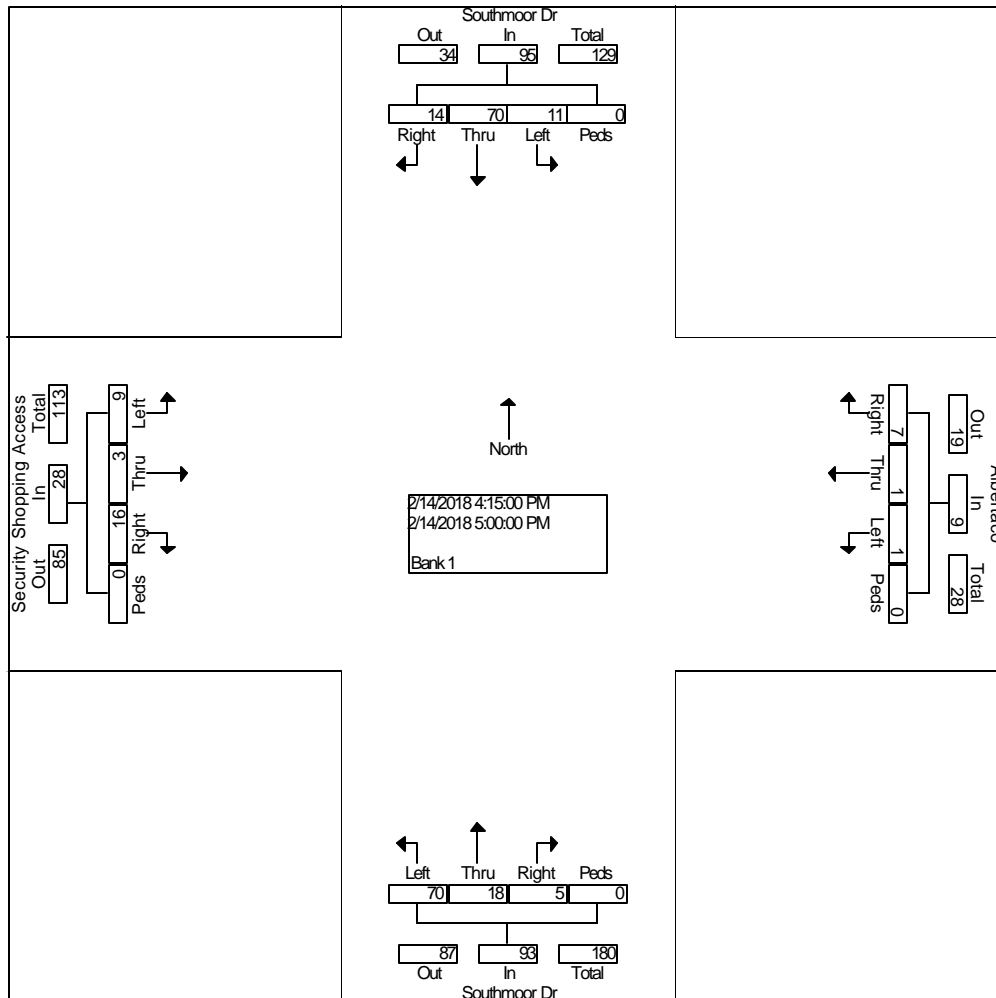
Groups Printed- Bank 1

	Southmoor Dr From North				Albertaco From East				Southmoor Dr From South				Security Shopping Access From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	2	10	4	0	0	0	0	0	0	2	22	0	7	0	0	0	47
04:15 PM	1	19	2	0	5	0	1	0	1	9	26	0	2	1	2	0	69
04:30 PM	3	18	0	0	0	1	0	0	1	0	18	0	2	0	1	0	44
04:45 PM	5	13	5	0	1	0	0	0	0	6	12	0	8	1	4	0	55
Total	11	60	11	0	6	1	1	0	2	17	78	0	19	2	7	0	215
05:00 PM	5	20	4	0	1	0	0	0	3	3	14	0	4	1	2	0	57
05:15 PM	2	22	1	0	2	1	1	0	0	2	10	0	7	1	1	0	50
05:30 PM	3	23	7	0	1	3	0	0	0	0	11	0	4	0	1	0	53
05:45 PM	6	15	4	0	3	2	0	0	0	1	8	0	1	0	5	0	45
Total	16	80	16	0	7	6	1	0	3	6	43	0	16	2	9	0	205
Grand Total	27	140	27	0	13	7	2	0	5	23	121	0	35	4	16	0	420
Apprch %	13.9	72.2	13.9	0.0	59.1	31.8	9.1	0.0	3.4	15.4	81.2	0.0	63.6	7.3	29.1	0.0	
Total %	6.4	33.3	6.4	0.0	3.1	1.7	0.5	0.0	1.2	5.5	28.8	0.0	8.3	1.0	3.8	0.0	

Counts by LSC

File Name : Southmoor Dr - Security Shopping Access PM
 Site Code : 00184140
 Start Date : 02/14/2018
 Page No : 2

	Southmoor Dr From North					Albertaco From East					Southmoor Dr From South					Security Shopping Access From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	14	70	11	0	95	7	1	1	0	9	5	18	70	0	93	16	3	9	0	28	225
Percent	14.	73.	11.	0.0		77.	11.	11.	0.0		5.4	19.	75.	0.0		57.	10.	32.	0.0		
	7	7	6			8	1	1				4	3			1	7	1			
04:15																					
Volume	1	19	2	0	22	5	0	1	0	6	1	9	26	0	36	2	1	2	0	5	69
Peak																					0.815
Factor																					
High Int.	05:00 PM					04:15 PM					04:15 PM					04:45 PM					
Volume	5	20	4	0	29	5	0	1	0	6	1	9	26	0	36	8	1	4	0	13	
Peak																					
Factor																					0.53
																					8



























Timings

1: US Highway 85 & Main St

Existing Traffic

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	29	22	227	28	570	13	962	199	182	361	9
Future Volume (vph)	59	29	22	227	28	570	13	962	199	182	361	9
Turn Type	Split	NA	Perm	Split	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			Free	2		2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	12.0	12.0	12.0	15.0	15.0		10.0	48.0	48.0	15.0	53.0	53.0
Total Split (%)	13.3%	13.3%	13.3%	16.7%	16.7%		11.1%	53.3%	53.3%	16.7%	58.9%	58.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	6.7	6.7	6.7	9.8	9.8	90.0	51.4	46.3	46.3	9.3	56.6	56.6
Actuated g/C Ratio	0.07	0.07	0.07	0.11	0.11	1.00	0.57	0.51	0.51	0.10	0.63	0.63
v/c Ratio	0.53	0.25	0.10	0.73	0.17	0.43	0.03	0.68	0.27	0.53	0.17	0.01
Control Delay	54.8	43.7	0.8	51.2	38.5	0.9	6.5	19.7	2.6	43.9	8.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	43.7	0.8	51.2	38.5	0.9	6.5	19.7	2.6	43.9	8.6	0.0
LOS	D	D	A	D	D	A	A	B	A	D	A	A
Approach Delay		41.0			16.0			16.7			20.1	
Approach LOS		D			B			B			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 18.1

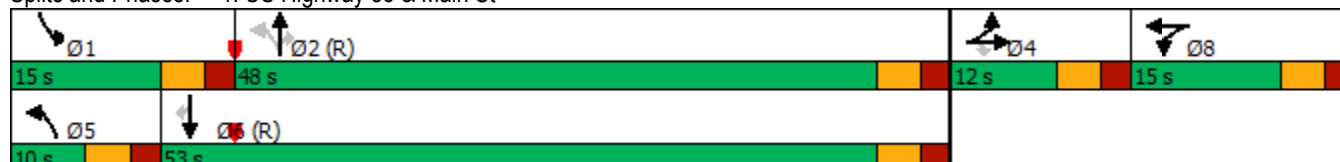
Intersection LOS: B

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

Existing Traffic
AM Peak Hour

Intersection										
Int Delay, s/veh	0.2									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	14	17	1174	0	0	578	32	0	0
Future Vol, veh/h	0	14	17	1174	0	0	578	32	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	58	58	79	79	79	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	22	1486	0	0	628	35	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	332	663
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.94	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.32	2.22
Pot Cap-1 Maneuver	0	664	922
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	664	922
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	922	-	664	-	-
HCM Lane V/C Ratio	0.023	-	0.036	-	-
HCM Control Delay (s)	9	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 6th TWSC
3: Southmoor Dr & Fountain Valley Shopping Ctr/Albertacos

Existing Traffic
AM Peak Hour

























Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	3	6	1	10	6	33	6	0	13	27	8
Future Vol, veh/h	2	3	6	1	10	6	33	6	0	13	27	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	85	85	85	57	57	57	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	7	1	12	7	58	11	0	19	40	12
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	221	211	46	216	217	11	52	0	0	11	0	0
Stage 1	84	84	-	127	127	-	-	-	-	-	-	-
Stage 2	137	127	-	89	90	-	-	-	-	-	-	-
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	735	686	1023	740	681	1070	1554	-	-	1608	-	-
Stage 1	924	825	-	877	791	-	-	-	-	-	-	-
Stage 2	866	791	-	918	820	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	693	652	1023	704	647	1070	1554	-	-	1608	-	-
Mov Cap-2 Maneuver	693	652	-	704	647	-	-	-	-	-	-	-
Stage 1	889	815	-	844	761	-	-	-	-	-	-	-
Stage 2	815	761	-	898	810	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.4		9.9			6.3			2			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1554	-	-	824	756	1608	-	-				
HCM Lane V/C Ratio	0.037	-	-	0.015	0.026	0.012	-	-				
HCM Control Delay (s)	7.4	0	-	9.4	9.9	7.3	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0	0.1	0	-	-				

Timings

1: US Highway 85 & Main St

Existing Traffic

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	37	26	369	29	255	21	523	434	500	1022	23
Future Volume (vph)	41	37	26	369	29	255	21	523	434	500	1022	23
Turn Type	Split	NA	Perm	Split	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			Free	2		2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	10.0	10.0	10.0	20.0	20.0		10.0	35.0	35.0	25.0	50.0	50.0
Total Split (%)	11.1%	11.1%	11.1%	22.2%	22.2%		11.1%	38.9%	38.9%	27.8%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	5.0	5.0	5.0	13.8	13.8	90.0	40.6	35.3	35.3	17.9	54.2	54.2
Actuated g/C Ratio	0.06	0.06	0.06	0.15	0.15	1.00	0.45	0.39	0.39	0.20	0.60	0.60
v/c Ratio	0.42	0.36	0.09	0.70	0.10	0.16	0.08	0.41	0.52	0.76	0.50	0.02
Control Delay	54.3	51.0	0.7	43.8	33.0	0.2	9.8	22.5	4.6	41.9	12.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.3	51.0	0.7	43.8	33.0	0.2	9.8	22.5	4.6	41.9	12.9	0.0
LOS	D	D	A	D	C	A	A	C	A	D	B	A
Approach Delay		39.7			26.3			14.3			22.1	
Approach LOS		D			C			B			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 21.0

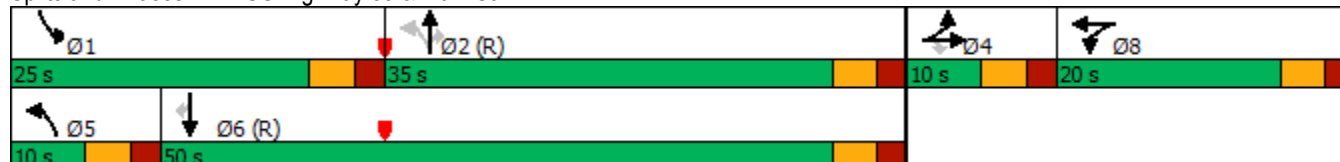
Intersection LOS: C

Intersection Capacity Utilization 62.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

Existing Traffic
PM Peak Hour

Intersection										
Int Delay, s/veh	0.3									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	23	18	978	0	0	1325	92	0	0
Future Vol, veh/h	0	23	18	978	0	0	1325	92	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	64	64	90	90	90	99	99	99	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	20	1087	0	0	1338	93	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	716	1431	0	-	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.94	4.14	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-		
Pot Cap-1 Maneuver	0	373	471	-	0	0	-	-		
Stage 1	0	-	-	-	0	0	-	-		
Stage 2	0	-	-	-	0	0	-	-		
Platoon blocked, %				-			-	-		
Mov Cap-1 Maneuver	-	373	471	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	15.7		0.2		0					
HCM LOS	C									
Minor Lane/Major Mvmt	NBL		NBT EBLn1		SBT SBR					
Capacity (veh/h)	471		- 373		- -					
HCM Lane V/C Ratio	0.042		- 0.096		- -					
HCM Control Delay (s)	13		- 15.7		- -					
HCM Lane LOS	B		- C		- -					
HCM 95th %tile Q(veh)	0.1		- 0.3		- -					

HCM 6th TWSC
3: Southmoor Dr & Fountain Valley Shopping Ctr/Albertacos

Existing Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	3	23	1	4	5	47	11	3	17	78	15
Future Vol, veh/h	8	3	23	1	4	5	47	11	3	17	78	15
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	100	100	100	100	100	100	76	76	76	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	3	23	1	4	5	62	14	4	18	82	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	271	268	90	279	274	16	98	0	0	18	0	0
Stage 1	126	126	-	140	140	-	-	-	-	-	-	-
Stage 2	145	142	-	139	134	-	-	-	-	-	-	-
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	682	638	968	673	633	1063	1495	-	-	1599	-	-
Stage 1	878	792	-	863	781	-	-	-	-	-	-	-
Stage 2	858	779	-	864	785	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	648	604	968	628	599	1063	1495	-	-	1599	-	-
Mov Cap-2 Maneuver	648	604	-	628	599	-	-	-	-	-	-	-
Stage 1	841	782	-	827	748	-	-	-	-	-	-	-
Stage 2	814	746	-	830	776	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.5		9.7		5.8		1.1	
HCM LOS	A		A					























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1495	-	-	828	771	1599	-
HCM Lane V/C Ratio	0.041	-	-	0.041	0.013	0.011	-
HCM Control Delay (s)	7.5	0	-	9.5	9.7	7.3	0
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-

Timings

1: US Highway 85 & Main St

Short-Term Background Traffic

AM Peak Hour

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	33	13	227	14	570	7	962	199	189	368	2
Future Volume (vph)	33	13	227	14	570	7	962	199	189	368	2
Turn Type	pm+pt	NA	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4				Free	2		2			6
Detector Phase	7	4	3	8		5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	25.0	15.0	25.0	15.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	27.8%	16.7%	27.8%	16.7%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	9.8	6.3	13.7	9.6	90.0	54.1	48.4	48.4	10.4	61.6	61.6
Actuated g/C Ratio	0.11	0.07	0.15	0.11	1.00	0.60	0.54	0.54	0.12	0.68	0.68
v/c Ratio	0.20	0.12	0.52	0.09	0.43	0.01	0.65	0.27	0.49	0.16	0.00
Control Delay	33.2	40.7	38.3	36.5	0.9	7.3	19.5	4.3	41.2	7.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	40.7	38.3	36.5	0.9	7.3	19.5	4.3	41.2	7.4	0.0
LOS	C	D	D	D	A	A	B	A	D	A	A
Approach Delay		35.4		11.9			16.8			18.8	
Approach LOS		D		B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 16.0

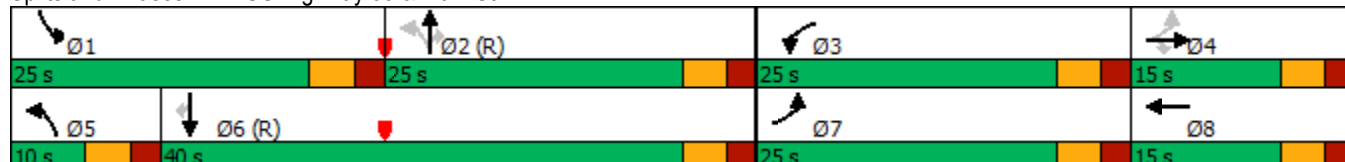
Intersection LOS: B

Intersection Capacity Utilization 57.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St







HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

Short-Term Background Traffic
AM Peak Hour

Intersection										
Int Delay, s/veh	0.2									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	12	9	1168	0	0	562	33	0	0
Future Vol, veh/h	0	12	9	1168	0	0	562	33	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	58	58	79	79	79	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	11	1478	0	0	611	36	0	0
Major/Minor	Minor2	Major1		Major2						
Conflicting Flow All	-	324	647	0	-	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.94	4.14	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-		
Pot Cap-1 Maneuver	0	672	934	-	0	0	-	-		
Stage 1	0	-	-	-	0	0	-	-		
Stage 2	0	-	-	-	0	0	-	-		
Platoon blocked, %				-			-	-		
Mov Cap-1 Maneuver	-	672	934	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB	NB		SB						
HCM Control Delay, s	10.5	0.1		0						
HCM LOS	B									
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR					
Capacity (veh/h)	934	-	672	-	-					
HCM Lane V/C Ratio	0.012	-	0.031	-	-					
HCM Control Delay (s)	8.9	-	10.5	-	-					
HCM Lane LOS	A	-	B	-	-					
HCM 95th %tile Q(veh)	0	-	0.1	-	-					




HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

Short-Term Background Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	0	1	10	6	0	6	0	13	28	0
Future Vol, veh/h	0	3	0	1	10	6	0	6	0	13	28	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	85	85	85	57	57	57	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	0	1	12	7	0	11	0	19	42	0
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	101	91	42	93	91	11	42	0	0	11	0	0
Stage 1	80	80	-	11	11	-	-	-	-	-	-	-
Stage 2	21	11	-	82	80	-	-	-	-	-	-	-
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	880	799	1029	891	799	1070	1567	-	-	1608	-	-
Stage 1	929	828	-	1010	886	-	-	-	-	-	-	-
Stage 2	998	886	-	926	828	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	856	789	1029	880	789	1070	1567	-	-	1608	-	-
Mov Cap-2 Maneuver	856	789	-	880	789	-	-	-	-	-	-	-
Stage 1	929	818	-	1010	886	-	-	-	-	-	-	-
Stage 2	978	886	-	911	818	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.6		9.2			0			2.3			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1567	-	-	789	875	1608	-	-				
HCM Lane V/C Ratio	-	-	-	0.004	0.023	0.012	-	-				
HCM Control Delay (s)	0	-	-	9.6	9.2	7.3	0	-				
HCM Lane LOS	A	-	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-				




HCM 6th TWSC
4: Southmoor Dr & South Site Access

Short-Term Background Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	31	6	29	0
Future Vol, veh/h	0	5	31	6	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	57	67	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	34	11	43	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	122	43	43	0	-	0
Stage 1	43	-	-	-	-	-
Stage 2	79	-	-	-	-	-
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	873	1027	1566	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	854	1027	1566	-	-	-
Mov Cap-2 Maneuver	854	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	5.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1566	-	1027	-	-	
HCM Lane V/C Ratio	0.022	-	0.005	-	-	
HCM Control Delay (s)	7.3	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0	-	-	

HCM 6th TWSC
5: Southmoor Dr & Mobile Home Access

Short-Term Background Traffic
AM Peak Hour























Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	9	28	1	3	31
Future Vol, veh/h	1	9	28	1	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	95	95	57	95	95	67
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	49	1	3	46
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	102	50	0	0	50	0
Stage 1	50	-	-	-	-	-
Stage 2	52	-	-	-	-	-
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	896	1018	-	-	1557	-
Stage 1	972	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	894	1018	-	-	1557	-
Mov Cap-2 Maneuver	894	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		0.5		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1004	1557	-	
HCM Lane V/C Ratio	-	-	0.01	0.002	-	
HCM Control Delay (s)	-	-	8.6	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Timings

1: US Highway 85 & Main St

Short-Term Background Traffic

PM Peak Hour

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	31	22	369	22	255	8	523	434	508	1030	11
Future Volume (vph)	31	22	369	22	255	8	523	434	508	1030	11
Turn Type	pm+pt	NA	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4				Free	2		2			6
Detector Phase	7	4	3	8		5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	25.0	15.0	25.0	15.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	27.8%	16.7%	27.8%	16.7%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	11.4	6.6	14.9	13.2	90.0	42.0	36.3	36.3	18.7	57.8	57.8
Actuated g/C Ratio	0.13	0.07	0.17	0.15	1.00	0.47	0.40	0.40	0.21	0.64	0.64
v/c Ratio	0.14	0.16	0.65	0.08	0.16	0.03	0.40	0.52	0.74	0.47	0.01
Control Delay	26.1	41.2	40.4	32.0	0.2	11.2	23.3	5.2	39.8	12.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	41.2	40.4	32.0	0.2	11.2	23.3	5.2	39.8	12.0	0.0
LOS	C	D	D	C	A	B	C	A	D	B	A
Approach Delay		32.3		24.3			15.1			21.0	
Approach LOS		C		C			B			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 20.0

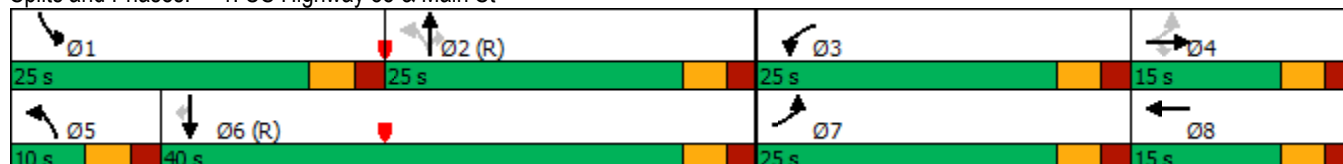
Intersection LOS: B

Intersection Capacity Utilization 62.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

Short-Term Background Traffic
PM Peak Hour

Intersection										
Int Delay, s/veh	0.1									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	15	3	965	0	0	1306	93	0	0
Future Vol, veh/h	0	15	3	965	0	0	1306	93	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	64	64	90	90	90	99	99	99	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	3	1072	0	0	1319	94	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	707	1413	0	-	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.94	4.14	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-		
Pot Cap-1 Maneuver	0	378	478	-	0	0	-	-		
Stage 1	0	-	-	-	0	0	-	-		
Stage 2	0	-	-	-	0	0	-	-		
Platoon blocked, %				-			-	-		
Mov Cap-1 Maneuver	-	378	478	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	15.2		0		0					
HCM LOS	C									
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR				
Capacity (veh/h)		478	-	378	-	-				
HCM Lane V/C Ratio		0.007	-	0.062	-	-				
HCM Control Delay (s)		12.6	-	15.2	-	-				
HCM Lane LOS		B	-	C	-	-				
HCM 95th %tile Q(veh)		0	-	0.2	-	-				

HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

Short-Term Background Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	0	1	4	5	0	11	3	17	79	0
Future Vol, veh/h	0	3	0	1	4	5	0	11	3	17	79	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	100	100	100	100	100	100	76	76	76	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	0	1	4	5	0	14	4	18	83	0




Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	140	137	83	137	135	16	83	0	0	18	0	0
Stage 1	119	119	-	16	16	-	-	-	-	-	-	-
Stage 2	21	18	-	121	119	-	-	-	-	-	-	-
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	830	754	976	834	756	1063	1514	-	-	1599	-	-
Stage 1	885	797	-	1004	882	-	-	-	-	-	-	-
Stage 2	998	880	-	883	797	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	815	745	976	824	747	1063	1514	-	-	1599	-	-
Mov Cap-2 Maneuver	815	745	-	824	747	-	-	-	-	-	-	-
Stage 1	885	787	-	1004	882	-	-	-	-	-	-	-
Stage 2	989	880	-	869	787	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.9		9.1		0		1.3	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1514	-	-	745 887	1599	-	-
HCM Lane V/C Ratio	-	-	-	0.004 0.011	0.011	-	-
HCM Control Delay (s)	0	-	-	9.9 9.1	7.3	0	-
HCM Lane LOS	A	-	-	A A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0 0	0	-	-




HCM 6th TWSC
4: Southmoor Dr & South Site Access

Short-Term Background Traffic
PM Peak Hour

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	43	14	80	0
Future Vol, veh/h	0	21	43	14	80	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	76	95	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	23	47	18	84	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	196	84	84	0	-	0
Stage 1	84	-	-	-	-	-
Stage 2	112	-	-	-	-	-
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	793	975	1513	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	768	975	1513	-	-	-
Mov Cap-2 Maneuver	768	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	5.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1513	-	975	-	-	
HCM Lane V/C Ratio	0.031	-	0.023	-	-	
HCM Control Delay (s)	7.5	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

























HCM 6th TWSC
5: Southmoor Dr & Mobile Home Access

Short-Term Background Traffic
PM Peak Hour

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	9	48	2	14	87
Future Vol, veh/h	1	9	48	2	14	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	76	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	63	2	15	92
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	186	64	0	0	65	0
Stage 1	64	-	-	-	-	-
Stage 2	122	-	-	-	-	-
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	803	1000	-	-	1537	-
Stage 1	959	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	795	1000	-	-	1537	-
Mov Cap-2 Maneuver	795	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	975	1537	-	
HCM Lane V/C Ratio	-	-	0.011	0.01	-	
HCM Control Delay (s)	-	-	8.7	7.4	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Timings
1: US Highway 85 & Main St

Short-Term Total Traffic
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	63	36	221	79	556	50	939	194	185	374	58
Future Volume (vph)	162	63	36	221	79	556	50	939	194	185	374	58
Turn Type	pm+pt	NA	Perm	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			Free	2		2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	25.0	15.0	15.0	25.0	15.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	27.8%	16.7%	16.7%	27.8%	16.7%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	22.4	10.4	10.4	12.3	9.7	90.0	45.3	39.1	39.1	10.3	45.2	45.2
Actuated g/C Ratio	0.25	0.12	0.12	0.14	0.11	1.00	0.50	0.43	0.43	0.11	0.50	0.50
v/c Ratio	0.49	0.34	0.12	0.57	0.47	0.42	0.12	0.78	0.31	0.49	0.22	0.07
Control Delay	28.4	39.7	0.6	40.8	44.9	0.8	11.3	29.9	5.7	41.2	15.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	39.7	0.6	40.8	44.9	0.8	11.3	29.9	5.7	41.2	15.7	0.2
LOS	C	D	A	D	D	A	B	C	A	D	B	A
Approach Delay		27.2			15.2			25.1			21.9	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 21.8

Intersection LOS: C

Intersection Capacity Utilization 59.4%

ICU Level of Service B







Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St










HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

Short-Term Total Traffic
AM Peak Hour

Intersection											
Int Delay, s/veh	0.5										
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	
Lane Configurations											
Traffic Vol, veh/h	0	39	37	1183	0	0	584	48	0	0	
Future Vol, veh/h	0	39	37	1183	0	0	584	48	0	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	None	-	-	
Storage Length	-	0	400	-	400	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	58	58	79	79	79	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	67	47	1497	0	0	635	52	0	0	
Major/Minor	Minor2		Major1		Major2						
Conflicting Flow All	-	344	687	0	-	-	-	0			
Stage 1	-	-	-	-	-	-	-	-			
Stage 2	-	-	-	-	-	-	-	-			
Critical Hdwy	-	6.94	4.14	-	-	-	-	-			
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-			
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-			
Pot Cap-1 Maneuver	0	652	903	-	0	0	-	-			
Stage 1	0	-	-	-	0	0	-	-			
Stage 2	0	-	-	-	0	0	-	-			
Platoon blocked, %				-			-	-			
Mov Cap-1 Maneuver	-	652	903	-	-	-	-	-			
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-			
Stage 1	-	-	-	-	-	-	-	-			
Stage 2	-	-	-	-	-	-	-	-			
Approach	EB		NB		SB						
HCM Control Delay, s	11.2		0.3		0						
HCM LOS	B										
Minor Lane/Major Mvmt	NBL		NBT	EBLn1	SBT	SBR					
Capacity (veh/h)	903		-	652	-	-					
HCM Lane V/C Ratio	0.052		-	0.103	-	-					
HCM Control Delay (s)	9.2		-	11.2	-	-					
HCM Lane LOS	A		-	B	-	-					
HCM 95th %tile Q(veh)	0.2		-	0.3	-	-					





HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

Short-Term Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	3	0	1	10	6	1	26	0	13	52	19
Future Vol, veh/h	7	3	0	1	10	6	1	26	0	13	52	19
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	-	-	-	-	-	-	25	-	-	50	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	85	85	85	57	57	57	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	3	0	1	12	7	2	46	0	19	78	28
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	176	166	78	182	194	46	106	0	0	46	0	0
Stage 1	116	116	-	50	50	-	-	-	-	-	-	-
Stage 2	60	50	-	132	144	-	-	-	-	-	-	-
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	786	727	983	779	701	1023	1485	-	-	1562	-	-
Stage 1	889	800	-	963	853	-	-	-	-	-	-	-
Stage 2	951	853	-	871	778	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	762	718	983	768	692	1023	1485	-	-	1562	-	-
Mov Cap-2 Maneuver	762	718	-	768	692	-	-	-	-	-	-	-
Stage 1	888	790	-	962	852	-	-	-	-	-	-	-
Stage 2	930	852	-	857	769	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.9		9.7		0.3		1.1					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1485	-	-	748	786	1562	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.015	0.025	0.012	-	-				
HCM Control Delay (s)	7.4	-	-	9.9	9.7	7.3	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-				







HCM 6th TWSC
4: Southmoor Dr & South Site Access

Short-Term Total Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	8	36	24	43	10
Future Vol, veh/h	3	8	36	24	43	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	57	67	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	9	39	42	64	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	190	70	75	0	-	0
Stage 1	70	-	-	-	-	-
Stage 2	120	-	-	-	-	-
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	799	993	1524	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	778	993	1524	-	-	-
Mov Cap-2 Maneuver	778	-	-	-	-	-
Stage 1	928	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1524	-	923	-	-	
HCM Lane V/C Ratio	0.026	-	0.013	-	-	
HCM Control Delay (s)	7.4	-	9	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0	-	-	

























HCM 6th TWSC
5: Southmoor Dr & Residential Access

Short-Term Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	1	1	0	9	0	34	1	3	34	14
Future Vol, veh/h	17	0	1	1	0	9	0	34	1	3	34	14
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	92	95	95	95	92	57	95	95	67	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	1	1	0	9	0	60	1	3	51	15
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	130	126	59	126	133	61	66	0	0	61	0	0
Stage 1	65	65	-	61	61	-	-	-	-	-	-	-
Stage 2	65	61	-	65	72	-	-	-	-	-	-	-
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	843	764	1007	848	758	1004	1536	-	-	1542	-	-
Stage 1	946	841	-	950	844	-	-	-	-	-	-	-
Stage 2	946	844	-	946	835	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	834	762	1007	845	756	1004	1536	-	-	1542	-	-
Mov Cap-2 Maneuver	834	762	-	845	756	-	-	-	-	-	-	-
Stage 1	946	839	-	950	844	-	-	-	-	-	-	-
Stage 2	937	844	-	943	833	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	9.4		8.7		0			0.3				
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1536	-	-	842	985	1542	-	-				
HCM Lane V/C Ratio	-	-	-	0.023	0.011	0.002	-	-				
HCM Control Delay (s)	0	-	-	9.4	8.7	7.3	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-				

Timings
1: US Highway 85 & Main St

Short-Term Total Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	96	55	361	100	248	63	511	424	497	1045	123
Future Volume (vph)	132	96	55	361	100	248	63	511	424	497	1045	123
Turn Type	pm+pt	NA	Perm	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			Free	2		2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	25.0	15.0	15.0	25.0	15.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	27.8%	16.7%	16.7%	27.8%	16.7%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	19.2	9.5	9.5	14.7	13.2	90.0	36.3	30.1	30.1	18.0	44.0	44.0
Actuated g/C Ratio	0.21	0.11	0.11	0.16	0.15	1.00	0.40	0.33	0.33	0.20	0.49	0.49
v/c Ratio	0.40	0.49	0.16	0.65	0.37	0.16	0.27	0.47	0.56	0.76	0.63	0.15
Control Delay	25.6	46.2	0.9	40.5	37.3	0.2	15.6	28.2	5.9	41.4	22.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	46.2	0.9	40.5	37.3	0.2	15.6	28.2	5.9	41.4	22.0	3.0
LOS	C	D	A	D	D	A	B	C	A	D	C	A
Approach Delay		27.8			25.9			17.9			26.4	
Approach LOS		C			C			B			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 24.0

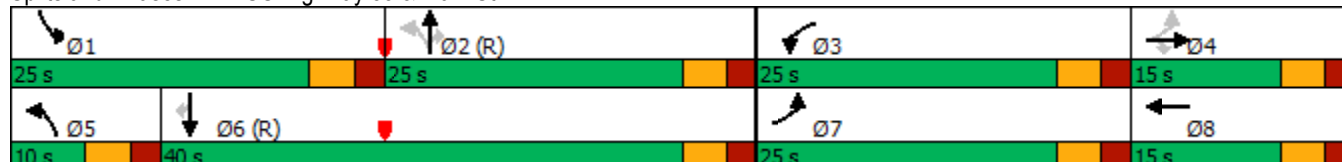
Intersection LOS: C

Intersection Capacity Utilization 62.5%

ICU Level of Service B







Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

Short-Term Total Traffic
PM Peak Hour

Intersection											
Int Delay, s/veh	0.7										
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	
Lane Configurations											
Traffic Vol, veh/h	0	45	39	998	0	0	1330	130	0	0	
Future Vol, veh/h	0	45	39	998	0	0	1330	130	0	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	-	None	-	-	None	-	-	
Storage Length	-	0	400	-	400	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-	
Grade, %	0	-	-	0	-	-	0	-	0	-	
Peak Hour Factor	64	64	90	90	90	99	99	99	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	70	43	1109	0	0	1343	131	0	0	
Major/Minor	Minor2		Major1		Major2						
Conflicting Flow All	-	737	1474	0	-	-	-	0			
Stage 1	-	-	-	-	-	-	-	-			
Stage 2	-	-	-	-	-	-	-	-			
Critical Hdwy	-	6.94	4.14	-	-	-	-	-			
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-			
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-			
Pot Cap-1 Maneuver	0	361	453	-	0	0	-	-			
Stage 1	0	-	-	-	0	0	-	-			
Stage 2	0	-	-	-	0	0	-	-			
Platoon blocked, %				-				-	-		
Mov Cap-1 Maneuver	-	361	453	-	-	-	-	-			
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-			
Stage 1	-	-	-	-	-	-	-	-			
Stage 2	-	-	-	-	-	-	-	-			
Approach	EB		NB		SB						
HCM Control Delay, s	17.4	0.5		0							
HCM LOS	C										
Minor Lane/Major Mvmt	NBL		NBT	EBLn1	SBT	SBR					
Capacity (veh/h)	453		-	361	-	-					
HCM Lane V/C Ratio	0.096		-	0.195	-	-					
HCM Control Delay (s)	13.8		-	17.4	-	-					
HCM Lane LOS	B		-	C	-	-					
HCM 95th %tile Q(veh)	0.3		-	0.7	-	-					

HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

Short-Term Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	↔
Traffic Vol, veh/h	12	3	1	1	4	5	1	29	3	17	134	19
Future Vol, veh/h	12	3	1	1	4	5	1	29	3	17	134	19
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	-	-	-	-	-	-	25	-	-	50	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	76	76	76	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	3	1	1	4	5	1	38	4	18	141	20






Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	224	221	141	231	239	40	161	0	0	42	0	0
Stage 1	177	177	-	42	42	-	-	-	-	-	-	-
Stage 2	47	44	-	189	197	-	-	-	-	-	-	-
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	732	678	907	724	662	1031	1418	-	-	1567	-	-
Stage 1	825	753	-	972	860	-	-	-	-	-	-	-
Stage 2	967	858	-	813	738	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	718	670	907	714	654	1031	1418	-	-	1567	-	-
Mov Cap-2 Maneuver	718	670	-	714	654	-	-	-	-	-	-	-
Stage 1	824	745	-	971	859	-	-	-	-	-	-	-
Stage 2	957	857	-	800	730	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.1		9.5		0.2		0.7	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1418	-	-	718	809	1567	-
HCM Lane V/C Ratio	0.001	-	-	0.022	0.012	0.011	-
HCM Control Delay (s)	7.5	-	-	10.1	9.5	7.3	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-







HCM 6th TWSC
4: Southmoor Dr & South Site Access

Short-Term Total Traffic
PM Peak Hour

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	26	48	26	127	9
Future Vol, veh/h	7	26	48	26	127	9
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	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	76	95	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	28	52	34	134	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	277	139	144	0	-	0
Stage 1	139	-	-	-	-	-
Stage 2	138	-	-	-	-	-
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	713	909	1438	-	-	-
Stage 1	888	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	687	909	1438	-	-	-
Mov Cap-2 Maneuver	687	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.4	4.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1438	-	851	-	-	
HCM Lane V/C Ratio	0.036	-	0.042	-	-	
HCM Control Delay (s)	7.6	-	9.4	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	



























HCM 6th TWSC
5: Southmoor Dr & Residential Access

Short-Term Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	1	1	0	9	1	54	2	14	94	45
Future Vol, veh/h	11	0	1	1	0	9	1	54	2	14	94	45
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	92	95	95	95	92	76	95	95	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	1	1	0	9	1	71	2	15	99	49
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	233	229	124	228	252	72	148	0	0	73	0	0
Stage 1	154	154	-	74	74	-	-	-	-	-	-	-
Stage 2	79	75	-	154	178	-	-	-	-	-	-	-
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	722	671	927	727	651	990	1434	-	-	1527	-	-
Stage 1	848	770	-	935	833	-	-	-	-	-	-	-
Stage 2	930	833	-	848	752	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	709	664	927	720	644	990	1434	-	-	1527	-	-
Mov Cap-2 Maneuver	709	664	-	720	644	-	-	-	-	-	-	-
Stage 1	847	762	-	934	832	-	-	-	-	-	-	-
Stage 2	920	832	-	839	744	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	10.1		8.8		0.1			0.7				
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1434	-	-	723	954	1527	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.018	0.011	0.01	-	-				
HCM Control Delay (s)	7.5	-	-	10.1	8.8	7.4	-	-				
HCM Lane LOS	A	-	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-				

Timings
1: US Highway 85 & Main St

2040 Background Traffic
AM Peak Hour

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			 				 		 	 	
Traffic Volume (vph)	33	13	277	14	696	7	1173	243	229	443	2
Future Volume (vph)	33	13	277	14	696	7	1173	243	229	443	2
Turn Type	pm+pt	NA	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4				Free	2		2			6
Detector Phase	7	4	3	8		5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	30.0	10.0	30.0	10.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	33.3%	11.1%	33.3%	11.1%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	11.0	6.3	13.0	9.9	90.0	53.6	47.9	47.9	11.6	62.3	62.3
Actuated g/C Ratio	0.12	0.07	0.14	0.11	1.00	0.60	0.53	0.53	0.13	0.69	0.69
v/c Ratio	0.16	0.11	0.59	0.07	0.46	0.01	0.66	0.27	0.55	0.19	0.00
Control Delay	30.5	40.6	40.7	35.8	1.0	7.1	20.0	4.4	41.1	7.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	40.6	40.7	35.8	1.0	7.1	20.0	4.4	41.1	7.2	0.0
LOS	C	D	D	D	A	A	B	A	D	A	A
Approach Delay		33.4		12.6			17.2			18.7	
Approach LOS		C		B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 16.3

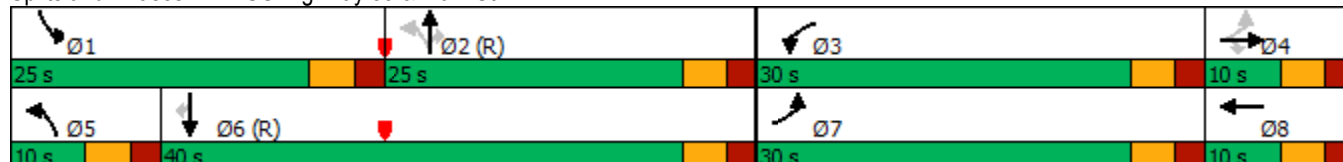
Intersection LOS: B

Intersection Capacity Utilization 66.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



Intersection										
Int Delay, s/veh	0.1									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	13	10	1423	0	0	684	36	0	0
Future Vol, veh/h	0	13	10	1423	0	0	684	36	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	11	1498	0	0	720	38	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	379	758	0	-	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.94	4.14	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-		
Pot Cap-1 Maneuver	0	619	849	-	0	0	-	-		
Stage 1	0	-	-	-	0	0	-	-		
Stage 2	0	-	-	-	0	0	-	-		
Platoon blocked, %				-			-	-		
Mov Cap-1 Maneuver	-	619	849	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	10.9		0.1		0					
HCM LOS	B									
Minor Lane/Major Mvmt	NBL		NBT EBLn1		SBT		SBR			
Capacity (veh/h)	849		-		619		-			
HCM Lane V/C Ratio	0.012		-		0.022		-			
HCM Control Delay (s)	9.3		-		10.9		-			
HCM Lane LOS	A		-		B		-			
HCM 95th %tile Q(veh)	0		-		0.1		-			

HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

2040 Background Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	0	1	10	6	0	7	0	13	33	0
Future Vol, veh/h	0	3	0	1	10	6	0	7	0	13	33	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	0	1	11	6	0	7	0	14	35	0




Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	79	70	35	72	70	7	35	0	0	7	0	0
Stage 1	63	63	-	7	7	-	-	-	-	-	-	-
Stage 2	16	7	-	65	63	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	910	821	1038	919	821	1075	1576	-	-	1614	-	-
Stage 1	948	842	-	1015	890	-	-	-	-	-	-	-
Stage 2	1004	890	-	946	842	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	890	814	1038	910	814	1075	1576	-	-	1614	-	-
Mov Cap-2 Maneuver	890	814	-	910	814	-	-	-	-	-	-	-
Stage 1	948	834	-	1015	890	-	-	-	-	-	-	-
Stage 2	986	890	-	934	834	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.1	0	2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1576	-	-	814	896	1614	-
HCM Lane V/C Ratio	-	-	-	0.004	0.02	0.008	-
HCM Control Delay (s)	0	-	-	9.4	9.1	7.2	0
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-




HCM 6th TWSC
4: Southmoor Dr & South Site Access

2040 Background Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	31	7	34	0
Future Vol, veh/h	0	5	31	7	34	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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	33	7	36	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	109	36	36	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	73	-	-	-	-	-
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	888	1037	1575	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	869	1037	1575	-	-	-
Mov Cap-2 Maneuver	869	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1575	-	1037	-	-	
HCM Lane V/C Ratio	0.021	-	0.005	-	-	
HCM Control Delay (s)	7.3	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0	-	-	

























HCM 6th TWSC
5: Southmoor Dr & Mobile Home Access

2040 Background Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	9	29	1	3	36
Future Vol, veh/h	1	9	29	1	3	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	31	1	3	38
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	76	32	0	0	32	0
Stage 1	32	-	-	-	-	-
Stage 2	44	-	-	-	-	-
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	927	1042	-	-	1580	-
Stage 1	991	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	925	1042	-	-	1580	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.5	0		0.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1029	1580	-	
HCM Lane V/C Ratio	-	-	0.01	0.002	-	
HCM Control Delay (s)	-	-	8.5	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Timings
1: US Highway 85 & Main St

2040 Background Traffic
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	97	56	442	100	304	63	626	520	607	1260	124
Future Volume (vph)	133	97	56	442	100	304	63	626	520	607	1260	124
Turn Type	pm+pt	NA	Perm	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			Free	2		2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	25.0	15.0	15.0	25.0	15.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	27.8%	16.7%	16.7%	27.8%	16.7%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	19.5	9.2	9.2	17.0	14.6	90.0	32.0	26.3	26.3	19.8	42.4	42.4
Actuated g/C Ratio	0.22	0.10	0.10	0.19	0.16	1.00	0.36	0.29	0.29	0.22	0.47	0.47
v/c Ratio	0.41	0.53	0.17	0.72	0.35	0.20	0.33	0.64	0.64	0.85	0.79	0.16
Control Delay	25.0	48.7	1.1	40.8	35.6	0.3	19.1	33.7	6.9	45.4	28.1	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	48.7	1.1	40.8	35.6	0.3	19.1	33.7	6.9	45.4	28.1	3.2
LOS	C	D	A	D	D	A	B	C	A	D	C	A
Approach Delay		28.4			25.6			21.4			31.8	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 27.5

Intersection LOS: C

Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

2040 Background Traffic
PM Peak Hour

Intersection										
Int Delay, s/veh	0.6									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	47	39	1209	0	0	1617	141	0	0
Future Vol, veh/h	0	47	39	1209	0	0	1617	141	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	49	41	1273	0	0	1702	148	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	925	1850	0	-	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.94	4.14	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-		
Pot Cap-1 Maneuver	0	271	324	-	0	0	-	-		
Stage 1	0	-	-	-	0	0	-	-		
Stage 2	0	-	-	-	0	0	-	-		
Platoon blocked, %				-			-	-		
Mov Cap-1 Maneuver	-	271	324	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	21.2		0.6		0					
HCM LOS	C									
Minor Lane/Major Mvmt	NBL		NBT EBLn1		SBT		SBR			
Capacity (veh/h)	324		- 271		-		-			
HCM Lane V/C Ratio	0.127		- 0.183		-		-			
HCM Control Delay (s)	17.7		- 21.2		-		-			
HCM Lane LOS	C		- C		-		-			
HCM 95th %tile Q(veh)	0.4		- 0.7		-		-			

HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

2040 Background Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	3	1	1	4	5	1	30	3	17	144	19
Future Vol, veh/h	12	3	1	1	4	5	1	30	3	17	144	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	3	1	1	4	5	1	32	3	18	152	20




Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	238	235	162	236	244	34	172	0	0	35	0	0
Stage 1	198	198	-	36	36	-	-	-	-	-	-	-
Stage 2	40	37	-	200	208	-	-	-	-	-	-	-
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	716	666	883	718	658	1039	1405	-	-	1576	-	-
Stage 1	804	737	-	980	865	-	-	-	-	-	-	-
Stage 2	975	864	-	802	730	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	701	657	883	707	649	1039	1405	-	-	1576	-	-
Mov Cap-2 Maneuver	701	657	-	707	649	-	-	-	-	-	-	-
Stage 1	803	727	-	979	864	-	-	-	-	-	-	-
Stage 2	964	863	-	787	721	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.3		9.5		0.2		0.7	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1405	-	-	701	807	1576	-
HCM Lane V/C Ratio	0.001	-	-	0.024	0.013	0.011	-
HCM Control Delay (s)	7.6	0	-	10.3	9.5	7.3	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

HCM 6th TWSC
4: Southmoor Dr & South Site Access

2040 Background Traffic
PM Peak Hour




Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	26	49	27	137	10
Future Vol, veh/h	7	26	49	27	137	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	27	52	28	144	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	282	150	155	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	132	-	-	-	-	-
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	708	896	1425	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	682	896	1425	-	-	-
Mov Cap-2 Maneuver	682	-	-	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.5	4.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1425	-	840	-	-	
HCM Lane V/C Ratio	0.036	-	0.041	-	-	
HCM Control Delay (s)	7.6	0	9.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

HCM 6th TWSC
5: Southmoor Dr & Mobile Home Access

2040 Background Traffic
PM Peak Hour

Intersection

Int Delay, s/veh 1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	9	49	2	14	97
Future Vol, veh/h	1	9	49	2	14	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	52	2	15	102

























Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	185	53	0
Stage 1	53	-	-
Stage 2	132	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	804	1014	-
Stage 1	970	-	-
Stage 2	894	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	796	1014	-
Mov Cap-2 Maneuver	796	-	-
Stage 1	960	-	-
Stage 2	894	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	987	1551
HCM Lane V/C Ratio	-	-	0.011	0.01
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings
1: US Highway 85 & Main St

2040 Total Traffic
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	63	36	271	79	682	50	1150	238	225	449	58
Future Volume (vph)	162	63	36	271	79	682	50	1150	238	225	449	58
Turn Type	pm+pt	NA	Perm	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			Free	2		2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	30.0	10.0	10.0	30.0	10.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	33.3%	11.1%	11.1%	33.3%	11.1%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	20.6	9.5	9.5	15.0	10.1	90.0	42.5	36.2	36.2	11.5	45.6	45.6
Actuated g/C Ratio	0.23	0.11	0.11	0.17	0.11	1.00	0.47	0.40	0.40	0.13	0.51	0.51
v/c Ratio	0.47	0.34	0.11	0.50	0.40	0.45	0.11	0.85	0.33	0.54	0.26	0.07
Control Delay	28.5	41.2	0.6	37.8	42.3	0.9	10.9	34.0	5.9	41.1	15.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	41.2	0.6	37.8	42.3	0.9	10.9	34.0	5.9	41.1	15.2	0.2
LOS	C	D	A	D	D	A	B	C	A	D	B	A
Approach Delay		27.7			13.8			28.6			22.0	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 22.7

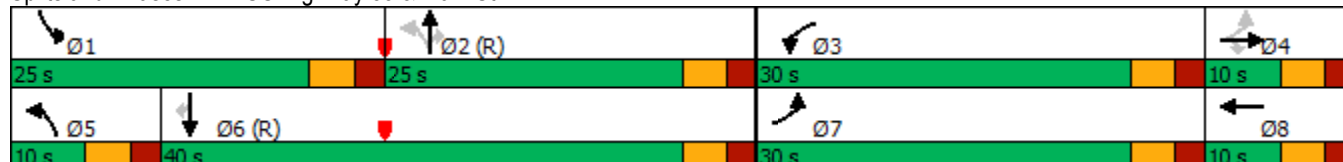
Intersection LOS: C

Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

2040 Total Traffic
AM Peak Hour

Intersection										
Int Delay, s/veh	0.3									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	40	38	1438	0	0	706	51	0	0
Future Vol, veh/h	0	40	38	1438	0	0	706	51	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	40	1514	0	0	743	54	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	399	797	0	-	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.94	4.14	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.32	2.22	-	-	-	-	-		
Pot Cap-1 Maneuver	0	601	821	-	0	0	-	-		
Stage 1	0	-	-	-	0	0	-	-		
Stage 2	0	-	-	-	0	0	-	-		
Platoon blocked, %				-			-	-		
Mov Cap-1 Maneuver	-	601	821	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	11.4		0.2		0					
HCM LOS	B									
Minor Lane/Major Mvmt	NBL		NBT EBLn1		SBT		SBR			
Capacity (veh/h)	821		-		601		-		-	
HCM Lane V/C Ratio	0.049		-		0.07		-		-	
HCM Control Delay (s)	9.6		-		11.4		-		-	
HCM Lane LOS	A		-		B		-		-	
HCM 95th %tile Q(veh)	0.2		-		0.2		-		-	

HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

2040 Total Traffic
AM Peak Hour

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	7	3	0	1	10	6	1	27	0	13	57	19
Future Vol, veh/h	7	3	0	1	10	6	1	27	0	13	57	19
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	-	-	-	-	-	-	25	-	-	50	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	3	0	1	11	6	1	28	0	14	60	20

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	127	118	60	130	138	28	80	0
Stage 1	88	88	-	30	30	-	-	-
Stage 2	39	30	-	100	108	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	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	-
Pot Cap-1 Maneuver	846	772	1005	843	753	1047	1518	-
Stage 1	920	822	-	987	870	-	-	-
Stage 2	976	870	-	906	806	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	826	764	1005	835	745	1047	1518	-
Mov Cap-2 Maneuver	826	764	-	835	745	-	-	-
Stage 1	919	815	-	986	869	-	-	-
Stage 2	958	869	-	895	799	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.4	0.3	1.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1518	-	-	806	835	1585	-
HCM Lane V/C Ratio	0.001	-	-	0.013	0.021	0.009	-
HCM Control Delay (s)	7.4	-	-	9.5	9.4	7.3	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-

HCM 6th TWSC
4: Southmoor Dr & South Site Access

2040 Total Traffic
AM Peak Hour

Intersection

Int Delay, s/veh 2.8

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 3 8 36 25 48 10

Future Vol, veh/h 3 8 36 25 48 10

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - 200 - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 95 95 95 95 95 95

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 3 8 38 26 51 11

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 159 57 62 0 - 0

Stage 1 57 - - - - -

Stage 2 102 - - - - -

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 832 1009 1541 - - -

Stage 1 966 - - - - -

Stage 2 922 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 811 1009 1541 - - -

Mov Cap-2 Maneuver 811 - - - - -

Stage 1 942 - - - - -

Stage 2 922 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.9 4.4 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1541 - 946 - -

HCM Lane V/C Ratio 0.025 - 0.012 - -







HCM Control Delay (s) 7.4 - 8.9 - -

HCM Lane LOS A - A - -

HCM 95th %tile Q(veh) 0.1 - 0 - -

HCM 6th TWSC
5: Southmoor Dr & Residential Access

2040 Total Traffic
AM Peak Hour

























Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	1	1	0	9	0	35	1	3	39	14
Future Vol, veh/h	17	0	1	1	0	9	0	35	1	3	39	14
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	1	1	0	9	0	37	1	3	41	15
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	97	93	49	93	100	38	56	0	0	38	0	0
Stage 1	55	55	-	38	38	-	-	-	-	-	-	-
Stage 2	42	38	-	55	62	-	-	-	-	-	-	-
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	885	797	1020	891	790	1034	1549	-	-	1572	-	-
Stage 1	957	849	-	977	863	-	-	-	-	-	-	-
Stage 2	972	863	-	957	843	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	875	795	1020	889	788	1034	1549	-	-	1572	-	-
Mov Cap-2 Maneuver	875	795	-	889	788	-	-	-	-	-	-	-
Stage 1	957	847	-	977	863	-	-	-	-	-	-	-
Stage 2	963	863	-	954	841	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.2		8.6			0			0.4			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1549	-	-	882	1017	1572	-	-				
HCM Lane V/C Ratio	-	-	-	0.021	0.01	0.002	-	-				
HCM Control Delay (s)	0	-	-	9.2	8.6	7.3	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-				

Timings

1: US Highway 85 & Main St

2040 Total Traffic

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	96	55	442	100	304	63	626	520	607	1260	123
Future Volume (vph)	132	96	55	442	100	304	63	626	520	607	1260	123
Turn Type	pm+pt	NA	Perm	Prot	NA	Free	pm+pt	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			Free	2		2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	25.0	15.0	15.0	25.0	15.0		10.0	25.0	25.0	25.0	40.0	40.0
Total Split (%)	27.8%	16.7%	16.7%	27.8%	16.7%		11.1%	27.8%	27.8%	27.8%	44.4%	44.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	19.5	9.2	9.2	17.0	14.6	90.0	32.0	26.3	26.3	19.8	42.4	42.4
Actuated g/C Ratio	0.22	0.10	0.10	0.19	0.16	1.00	0.36	0.29	0.29	0.22	0.47	0.47
v/c Ratio	0.41	0.53	0.17	0.72	0.35	0.20	0.33	0.64	0.64	0.85	0.79	0.16
Control Delay	25.0	48.4	1.0	40.8	35.6	0.3	19.1	33.7	6.9	45.4	28.1	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	48.4	1.0	40.8	35.6	0.3	19.1	33.7	6.9	45.4	28.1	3.1
LOS	C	D	A	D	D	A	B	C	A	D	C	A
Approach Delay		28.3			25.6			21.4			31.8	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 27.5

Intersection LOS: C

Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Main St



HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

2040 Total Traffic
PM Peak Hour

Intersection										
Int Delay, s/veh	0.6									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations		↗	↘	↑↑↑			↑↑			
Traffic Vol, veh/h	0	47	39	1209	0	0	1616	140	0	0
Future Vol, veh/h	0	47	39	1209	0	0	1616	140	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	-	None	-	-
Storage Length	-	0	400	-	400	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	49	41	1273	0	0	1701	147	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	924 1848	0 - - - 0
Stage 1	-	-	- - - - -
Stage 2	-	-	- - - - -
Critical Hdwy	-	6.94 4.14	- - - - -
Critical Hdwy Stg 1	-	-	- - - - -
Critical Hdwy Stg 2	-	-	- - - - -
Follow-up Hdwy	-	3.32 2.22	- - - - -
Pot Cap-1 Maneuver	0	271 324	- 0 0 - -
Stage 1	0	-	- 0 0 - -
Stage 2	0	-	- 0 0 - -
Platoon blocked, %			- - - - -
Mov Cap-1 Maneuver	-	271 324	- - - - -
Mov Cap-2 Maneuver	-	-	- - - - -
Stage 1	-	-	- - - - -
Stage 2	-	-	- - - - -

Approach	EB	NB	SB
HCM Control Delay, s	21.2	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	324	-	271	-	-
HCM Lane V/C Ratio	0.127	-	0.183	-	-
HCM Control Delay (s)	17.7	-	21.2	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	0.7	-	-

HCM 6th TWSC
3: Southmoor Dr & North Site Access/Albertacos

2040 Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	12	3	1	1	4	5	1	30	3	17	144	19
Future Vol, veh/h	12	3	1	1	4	5	1	30	3	17	144	19
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	-	-	-	-	-	-	25	-	-	50	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	3	1	1	4	5	1	32	3	18	152	20

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	228	225	152	236	244	34	172	0	0	35	0	0
Stage 1	188	188	-	36	36	-	-	-	-	-	-	-
Stage 2	40	37	-	200	208	-	-	-	-	-	-	-
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	727	674	894	718	658	1039	1405	-	-	1576	-	-
Stage 1	814	745	-	980	865	-	-	-	-	-	-	-
Stage 2	975	864	-	802	730	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	713	666	894	708	650	1039	1405	-	-	1576	-	-
Mov Cap-2 Maneuver	713	666	-	708	650	-	-	-	-	-	-	-
Stage 1	813	737	-	979	864	-	-	-	-	-	-	-
Stage 2	965	863	-	789	722	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.2		9.5		0.2		0.7	
HCM LOS	B		A					






Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1405	-	-	713 808	1576	-	-
HCM Lane V/C Ratio	0.001	-	-	0.024 0.013	0.011	-	-
HCM Control Delay (s)	7.6	-	-	10.2 9.5	7.3	-	-
HCM Lane LOS	A	-	-	B A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1 0	0	-	-

HCM 6th TWSC
4: Southmoor Dr & South Site Access

2040 Total Traffic
PM Peak Hour

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	26	49	27	137	9
Future Vol, veh/h	7	26	49	27	137	9
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	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	27	52	28	144	9





Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	281	149	153
Stage 1	149	-	-
Stage 2	132	-	-
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	709	898	1428
Stage 1	879	-	-
Stage 2	894	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	683	898	1428
Mov Cap-2 Maneuver	697	-	-
Stage 1	847	-	-
Stage 2	894	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	4.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1428	-	846	-	-
HCM Lane V/C Ratio	0.036	-	0.041	-	-
HCM Control Delay (s)	7.6	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 6th TWSC
5: Southmoor Dr & Residential Access

2040 Total Traffic
PM Peak Hour

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	1	1	0	9	1	56	2	14	104	45
Future Vol, veh/h	11	0	1	1	0	9	1	56	2	14	104	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	1	1	0	9	1	59	2	15	109	47
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	230	226	133	225	248	60	156	0	0	61	0	0
Stage 1	163	163	-	62	62	-	-	-	-	-	-	-
Stage 2	67	63	-	163	186	-	-	-	-	-	-	-
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	725	673	916	730	655	1005	1424	-	-	1542	-	-
Stage 1	839	763	-	949	843	-	-	-	-	-	-	-
Stage 2	943	842	-	839	746	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	712	665	916	723	647	1005	1424	-	-	1542	-	-
Mov Cap-2 Maneuver	712	665	-	723	647	-	-	-	-	-	-	-
Stage 1	838	755	-	948	842	-	-	-	-	-	-	-
Stage 2	933	841	-	829	738	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.1		8.8		0.1		0.6					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1424	-	-	725	967	1542	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.017	0.011	0.01	-	-				
HCM Control Delay (s)	7.5	0	-	10.1	8.8	7.4	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-				

Queuing and Blocking Report

Intersection: 1: US Highway 85 & Main St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	L	T	L	T	T	R	L	L
Maximum Queue (ft)	129	107	79	265	337	210	105	247	242	243	270	294
Average Queue (ft)	65	52	27	144	210	78	42	167	147	130	161	203
95th Queue (ft)	115	96	60	269	308	161	83	240	225	223	243	278
Link Distance (ft)		282			380	380		493	493	493		
Upstream Blk Time (%)					0							
Queuing Penalty (veh)					0							
Storage Bay Dist (ft)	130		145	230			335				775	775
Storage Blk Time (%)	0	0		0	8	0						
Queuing Penalty (veh)	0	0		0	17	0						

Intersection: 1: US Highway 85 & Main St

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	381	403	63
Average Queue (ft)	225	245	22
95th Queue (ft)	336	358	48
Link Distance (ft)	1067	1067	1067
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			