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Riverbend Crossing
(Commercial and Residential Developments)
Traffic Impact Study
(LSC #184140)
August 17, 2020

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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August 17, 2020

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, Colorado
Updated Traffic Impact and Access Analysis
LSC #184140

Dear Mr. Toth:

LSC Transportation Consultants, Inc. has prepared this updated traffic impact and access analysis for the proposed River Bend Crossing development to be located generally southwest of US Highway (Hwy) 85-87 (US 85-87) and Main Street in the City of Fountain and unincorporated El Paso County, Colorado. The proposed **commercial development** is the redevelopment of the existing Fountain Valley Shopping Center. The proposed **residential development** site is located just to the west of the commercial development site. Figure 1 shows the site location (both projects).

This report addresses the traffic impacts of both the proposed commercial redevelopment (City of Fountain) and residential (unincorporated El Paso County) projects.

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 Hwy 85-87/Main Street and US Hwy 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-area 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.

Commercial Development

The Fountain Valley Shopping Center, located west of US Hwy 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 61,599 square feet of floor space. The residential site plan and commercial site are shown in Figure 2. Note: the most recent site plan for the commercial project is shown in an attached exhibit following the report figures. **The attached commercial site plan is the most current site plan depicting the latest version of the entry drive traffic laneage.** The existing full-movement signalized access to US Hwy 85-87 (aligning with Main Street) is planned to remain.

The two existing access points to Southmoor Drive are planned to be closed and replaced with a single full-movement access about 520 feet southwest of US Hwy 85-87 (centerline to centerline) and about 75 feet northwest of the existing Fountain Valley Senior Center entrance. Figure 3 shows the existing and proposed spacing of access points on Southmoor Drive.

A 15,625-square-foot parcel located northwest of the intersection of US Hwy 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 Hwy 85-87 just north of Main Street is also outside the property boundary of this site. As required by CDOT, the applicant has updated the site plan to show a vehicular connection to/from this outparcel. This would allow for vehicular access to/from this outparcel if CDOT were to close that parcel's direct access to US Hwy 85/87 in the future.

Residential Development

A 53-acre parcel located adjacent to and southwest of the Fountain Valley Shopping Center is planned to be developed with 209 lots for single-family homes. Note: the most recent site plan for the residential project is shown in an attached exhibit following the report figures. The previous plan was for 221 lots for single-family homes. The residential development would have access to the signalized intersection of US Hwy 85-87/Main Street via a new Community 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 Hwy 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 Hwy 85-87 has two through lanes in each direction and a posted speed limit of 50 miles

per hour (mph). US Hwy 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 Hwy 85-87 is currently signal controlled.

- **Southmoor Drive** forms a loop on the west side of US Hwy 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 Hwy 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

Figure 4 shows the sight distance requirements at the proposed relocated (and consolidated) full-movement access point for the commercial portion of the development to Southmoor Drive. Based on a posted speed limit of 30 miles per hour, the El Paso County required sight distance for a driveway is 300 feet for passenger cars and pickup trucks, 390 feet for single-unit trucks, and 510 feet for multi-unit trucks. As shown in Figure 4, this access would meet El Paso County sight distance criteria.

Figure 5 shows the sight distance requirements at the proposed residential full-movement intersection to Southmoor Drive. Based on a design speed of 40 miles per hour, the El Paso County required public street intersection sight distance is 445 feet. As shown in Figure 5, this access would meet El Paso County sight distance criteria.

PEDESTRIAN AND BICYCLE ROUTE ANALYSIS

Figure 6 shows a pedestrian and bicycle route analysis for the development. The local elementary, junior high, and high schools which will serve this development are all located east of US Hwy 85-87.

Existing Traffic Conditions

Figure 7 shows the morning and afternoon peak-hour traffic volumes at the intersections of US Hwy 85-87/Main, US Hwy 85-87/Southmoor and the existing east Fountain Valley Shopping Center access to Southmoor Drive based on counts conducted by LSC in February 2018. As the existing commercial site access points to Southmoor Drive are proposed to be closed all movements from both site access points to Southmoor Drive were counted as a single intersection (i.e., the southbound right-turn volumes shown include vehicles that turned right at either the north or south access point). The traffic counts at the access points were used to determine the through traffic volumes on Southmoor Drive at the new access location and to estimate the volume of existing traffic that currently uses the Fountain Valley Shopping Center parking to travel to and from Southmoor Drive to the traffic signal at US Hwy 85-87/Main. 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: Level of Service Delay Ranges

| Level of Service | Signalized Intersections | Unsignalized Intersections |
|--|---|--|
| | Average Control Delay (seconds per vehicle) | Average Control Delay (seconds per vehicle) ⁽¹⁾ |
| A | 10.0 sec or less | 10.0 sec or less |
| B | 10.1-20.0 sec | 10.1-15.0 sec |
| C | 20.1-35.0 sec | 15.1-25.0 sec |
| D | 35.1-55.0 sec | 25.1-35.0 sec |
| E | 55.1-80.0 sec | 35.1-50.0 sec |
| F | 80.1 sec or more | 50.1 sec or more |
| (1) 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 Hwy 85-87 was analyzed to determine the existing levels of service using Synchro. The intersection of US Hwy 85-87/Southmoor was analyzed based on the unsignalized intersection method of analysis procedures found in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. Figure 7 shows the detailed level of service analysis results. The level of service (LOS) reports are attached.

All movements at the signalized intersection of US Hwy 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 Hwy 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. Table 2 also shows a trip generation estimate for the 53-acre parcel located adjacent to and southwest of the site.

The shopping center will not be a new “greenfield” development, rather redevelopment of an existing shopping center. 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. About nine percent of the morning peak-hour trips and 24 percent of the afternoon peak-hour trips were assumed to be internal to the site. 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, 2017* by ITE.

The shopping center/non-residential portion of the site is projected to generate about 2,932 non-pass-by, external vehicle-trips on the average weekday, with about half entering and half exiting this portion of the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 a.m. and 8:30 a.m., about 212 vehicles would enter and 166 vehicles would exit this portion of the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 p.m. and 6:15 p.m., about 196 vehicles would enter and 190 vehicles would exit this portion of the site.

The residential portion of the site is projected to generate about 1,874 external vehicle trips on the average weekday, with about half entering and half exiting this portion of the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 a.m. and 8:30 a.m., about 37 vehicles would enter and 110 vehicles would exit this portion of the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 p.m. and 6:15 p.m., about 123 vehicles would enter and 73 vehicles would exit this portion of 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 8 shows the directional distribution estimates for the primary site-generated traffic projected to be generated by the shopping center/non-residential portion of the site. The estimates have been based on the following factors: the site land uses; the site location with respect to the nearby residential, employment, commercial, and activity centers; the street and roadway system serving the site; and the existing/projected traffic volumes. The non-passby trip directional distribution reflects the estimated market area of the shopping center with the highest percentage to/from the east on Main Street. This represents a significant number of “rooftops” within a relatively short travel distance. The split to the south on Highway 85 includes traffic from residential areas accessed via

Fontaine Boulevard (Widefield), Fountain (via Highway 85), and other commercial areas to the south along Highway 85. The split to the north on Highway 85 accounts for trips from Stratmoor Valley and Stratmoor Hills, plus a much larger number of housing units within a reasonable driving time to the site via South Academy Boulevard and Highway 85. The site is also reasonably close to the South Academy Boulevard interchange to draw some diverted trips. Appendix Figure 1 shows commercial trip path assumptions used to assign the site-generated traffic projected to be generated by the shopping center/non-residential portion of the site by lot and/or tract to each of the access points.

Figure 9 shows the directional distribution estimates for the pass-by site-generated 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.

Figure 10 shows the directional distribution estimates for the site-generated traffic projected to be generated by the residential portion of the site. The estimates have been based on the following factors: the site land uses; the site location with respect to the nearby schools, employment, commercial, and activity centers; the street and roadway system serving the site; and the existing/projected traffic volumes. The residential distribution reflects the highest trip percentage oriented to/from the north on Highway 85 up to Academy Boulevard which provides road connections to destinations north and west. The percentage to/from Main Street takes into account the Main Street connection up to Hancock Expressway. From Hancock Expressway, there is quick access to Powers Boulevard north. Main Street split also includes area schools and other commercial centers as trip destinations. The splits to the south account for trip destinations in Fountain (including the commercial to the south), Widefield, the south part of Fort Carson (via Highway 16), and Pueblo. Appendix Figure 2 shows residential trip path assumptions used to assign the site-generated traffic projected to be generated by the residential portion of the site to each of the access points.

When the distribution percentages (from Figures 8 and 9) were applied to the trip generation estimates (from Table 2), the site-generated traffic volumes on the area roadways were determined. Figure 11 shows the site-generated traffic volumes due to development of the shopping center/non-residential portion of the site. Figure 12 shows the projected traffic volumes on the area roadways due to development of the 53-acre residential portion of the site. Note: The volumes shown in Figure 12 are based on the previous plan for the 53-acre site which included 221 lots for single-family homes. The residential portion of the site is now planned to be developed with 209 lots for single-family homes.

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 shopping center/non-residential and residential portions of 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 baseline traffic volumes include traffic estimated to be generated by the existing gas station located northwest of the intersection of US Hwy 85-87 and

Main Street and an estimate of "cut-through" traffic traveling between Southmoor and the traffic signal at Main/US Hwy 85-87 through the site.

Figure 13a shows the estimated short-term baseline traffic volumes. The short-term baseline traffic volumes are based on the existing traffic volumes shown in Figure 7 without traffic estimated to be currently generated by land uses within the existing Fountain Valley Shopping Center that are planned to be razed/removed.

Figure 13b shows the lane geometry, traffic control, and level of service at the key intersections based on the short-term baseline volumes.

Figure 14a shows the estimated 2040 baseline traffic volumes. These volumes are based on the short-term baseline traffic volumes shown in Figure 13a plus additional growth of through traffic on the adjacent streets based on the Colorado Department of Transportation (CDOT) twenty-year growth factor of 1.23 (1% per year) for US Hwy 85-87 adjacent to the site.

Figure 14b shows the lane geometry, traffic control, and level of service at the key intersections based on the 2040 baseline volumes.

TOTAL TRAFFIC

Figure 15a 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 13a plus the site-generated traffic volumes due to development of the shopping center/non-residential portion of the site (from Figure 11) plus the site-generated traffic estimated to be generated by development of the residential portion of the site (from Figure 12). The volumes shown in Figure 15a represent the short-term impacts of the development. Note: The volumes shown in Figure 15a are based on the previous plan for the 53-acre site which included 221 lots for single-family homes. The residential portion of the site is now planned to be developed with 209 lots for single-family homes.

Figure 15b shows the lane geometry, traffic control, and level of service at the key intersections based on the short-term total volumes.

Figure 16a 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 14a plus the site-generated traffic volumes due to development of the shopping center/non-residential portion of the site from (Figure 11) plus site-generated traffic estimated to be generated by development of the residential portion of the site (from Figure 12). Note: The volumes shown in Figure 16a are based on the previous plan for the 53-acre site which included 221 lots for single-family homes. The residential portion of the site is now planned to be developed with 209 lots for single-family homes.

Figure 16b 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 baseline and total traffic volumes. Figures 13b through 16b show the level of service analysis results. The signalized intersection of US Hwy 85-87 was analyzed using Synchro. The intersection of US Hwy 85-87/Southmoor Drive and the site access points to Southmoor Drive 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 Hwy 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 Hwy 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 Hwy 85-87 will be sufficient to accommodate the projected queues based on the total traffic volumes. The 2040 total morning and 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. A separate simulation was also run which assumed a signal preemption due to a trail crossing Main Street just east of US Hwy 85-87 during the peak hours. The analysis assumed the railroad crossing gates would be down for four minutes during which only northbound through and left-turning traffic, southbound through and right-turning traffic and eastbound left and right-turning traffic could occur.

Based on the projected 2040 total traffic volumes, the projected maximum eastbound left-turn queue at the main access approaching US Hwy 85-87 during a typical peak hour is about 143 feet long during the morning peak hour and 131 feet long during the afternoon peak hour. If a signal preemption occurs during the peak hour, the projected maximum eastbound left-turn queue is

150 feet during the morning peak hour and 130 feet during the afternoon peak hour. This estimate is likely conservative as the Synchro modeling software only allows for one eastbound left-turn phase during the 240 second preemption time. The attached site plan shows the proposed lane geometry for the proposed Collector street through the site. The projected maximum queue may extend into the painted taper area about two percent of the morning peak hour and one percent of the afternoon peak hour assuming typical traffic signal timings. If a railroad crossing occurs during the morning peak hour, the queue may back into the painted taper area up to nine percent of the peak hour (again, this estimate is likely conservative as the Synchro modeling software only allows for one eastbound left-turn phase during the 240 second preemption time). The queue is not projected to extend into the first interior parking lot access point.

The projected maximum northbound left-turn queue on US Hwy 85-87 is about 262 feet long during the morning peak hour and 109 feet long during the afternoon peak hour. 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.

STREET CLASSIFICATIONS

Figure 17 shows the existing and recommended street classifications in the vicinity of the site.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

- The shopping center/non-residential portion of the site is projected to generate about 2,932 new external vehicle-trips on the average weekday, with about half entering and half exiting this portion of the site during a 24-hour period. During the morning peak hour about 212 vehicles would enter and 166 vehicles would exit this portion of the site. During the afternoon peak hour about 196 vehicles would enter and 190 vehicles would exit this portion of the site. The shopping center will not be a new “greenfield” development, rather redevelopment of an existing shopping center. 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 1,874 external vehicle-trips on the average weekday, with about half entering and half exiting this portion of the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 a.m. and 8:30 a.m., about 37 vehicles would enter and 110 vehicles would exit this portion of the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 p.m. and 6:15 p.m., about 123 vehicles would enter and 73 vehicles would exit this portion of the site.

Projected Levels of Service

- All movements at the signalized intersection of US Hwy 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 Hwy 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 relocated (and consolidated) site access for the shopping center/non-residential portion of the site on Southmoor Drive will require El Paso County approval.
- 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

- The applicant is planning to upgrade one-half of Southmoor Drive (the project side/west side of the street) to El Paso County-standard Urban Non-Residential Collector cross section adjacent to the site. Figure 18 shows the proposed cross sections for Southmoor Drive. This improvement is not reimbursable under the current MTCP plan.
- Note: If the residential development (with accompanying residential access to Southmoor Drive) precedes the phase of the commercial development responsible for upgrading Southmoor Drive (per El Paso County comments, and reflected in Figure 18), LSC recommends that, if applicable, the residential developer/applicant post assurances for the fair-share amount portion of the overall west-side half section **in leu of** actually constructing improvements to Southmoor Drive.
- Based on projected 2040 total traffic volumes and the criteria contained in the El Paso County Engineering Criteria Manual (ECM), a northbound left-turn deceleration lane would not be required on Southmoor Drive approaching the proposed residential full-movement site access point, as the projected turning volume is below the ECM threshold volume requiring a left-turn deceleration lane. However, Figure 18 shows the recommendation to extend the Non-Residential Collector cross section to a short distance south of the access point. With the Non-Residential Collector cross section extended south of the access, a short northbound

left-turn bay suitable for northbound left-turn vehicle stacking and alignment with the southbound left-turn lane would be striped as part of the cross section of the street. The lane-transition taper could be embedded within the redirect tapers south of the intersection.

- Based on projected 2040 total traffic volumes and the criteria contained in the El Paso County Engineering Criteria Manual (ECM), a northbound left-turn deceleration lane would be required on Southmoor Drive approaching the proposed relocated full-movement site access point for the shopping center/non-residential portion of the site. With required upgrade to Southmoor Drive as shown in Figure 18, deceleration (155 feet required by the ECM), stacking (50 feet required by the ECM), and taper (160 feet required by the ECM) distances could be met, as the road would be widened for a center painted median south to just south of the residential access. However, given numerous driveways on the east side of Southmoor Drive, the cross section shows this left-turn lane striped as a center, two-way, left-turn lane.
- Based on projected 2040 total traffic volumes and the criteria contained in the *El Paso County Engineering Criteria Manual* (ECM) a southbound right-turn deceleration lane would **not** be required on Southmoor Drive approaching the proposed relocated full-movement site access point for the shopping center/non-residential portion of the site and approaching the proposed full-movement intersection for the residential portion of the site.
- The attached site plan shows the proposed laneage for the main access.
- Signal modifications will 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 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 need to be approved by CDOT prior to issuance of a Notice-to-Proceed (NTP).
- There are existing northbound left-turns lane on US Hwy 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 Hwy 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 Hwy 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 applicant has indicated that the pedestrian ramps on the northwest and southwest corners of the intersection of Highway 85/Main Street will meet ADA requirements. The pedestrian crossing distance on the west leg of the intersection is about 106 feet. This translates to a pedestrian clearance time of 30 seconds and a pedestrian interval of 24 seconds. This matches the current pedestrian interval for this leg in use at the intersection.

- Some signal modifications will be necessary including the addition of pedestrian pedestal posts on the northwest and southwest corners of the intersection such that separate push buttons can be provided for each crossing direction. Pedestrian signal heads already exist. Crosswalk markings and stop bars will need to be reinstalled. The mast arm on the signal pole on the southeast corner of the intersection is 35 feet long. Per CDOT standard plan S-614-40A, a design length of 35 feet can accommodate 3 signal heads – one for the left-turn lane and one for each eastbound through lane. However, the overhead left-turn head may not be permitted as a primary left-turn head due to the lateral alignment. Alternatively, a primary post mounted left-turn head may be added on the island in the northeast corner. The left-turn striping may need to be modified from the concept in order to meet the lateral alignment criteria in the MUTCD. The third option is to install a short mast arm perpendicular to the existing signal pole in the northeast corner island on which a left-turn head could be mounted. The fourth option would be to add an additional signal pole with 25' mast arm in the northeast corner island. These options will be evaluated in more detail with the preparation of a signal modification plan to be provided prior to issuance of a Notice-to-Proceed.

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 \$1,221 per single-family dwelling unit. Based on 209 lots, the total building permit fee would be \$255,189.

* * * * *

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

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH:KDF:jas

Enclosures: Table 2
Internal Trip Capture Estimate
Figures 1-18
Appendix Figures 1-2
Commercial Site Plan
Residential Site Plan
Traffic Count Reports
Level of Service Reports
Queuing Reports

Table 2

| Table 2 Trip Generation Estimate River Bend Crossing | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------|--|-----------------------------|--------------------------------------|----------------------|-------|------------------------|-------|-------------------------------|----------------------|-----|------------------------|-----|---|----------------------|-----|------------------------|-----|-------------------------------|----------------------|-----|------------------------|-----|---------------------------------|---------------------------------|
| Tract/ Lot | Land Use Code | Land Use Description | Trip Generation Units | Trip Generation Rates ⁽¹⁾ | | | | | Total Trips Generated | | | | | Internal Trips Generated ⁽²⁾ | | | | | External Trips Generated | | | | | Pass-By Trips ⁽³⁾ | New External Trips Generated |
| | | | | Average Weekday Traffic | Morning Peak Hour | | Afternoon Peak Hour | | Average Weekday Traffic | Morning Peak Hour | | Afternoon Peak Hour | | Average Weekday Traffic | Morning Peak Hour | | Afternoon Peak Hour | | Average Weekday Traffic | Morning Peak Hour | | Afternoon Peak Hour | | | Average Weekday Traffic |
| | | | | | In | Out | In | Out | | In | Out | In | Out | | In | Out | In | Out | | In | Out | In | Out | | |
| Commercial Trip Generation Estimate | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tract A | 820 | Shopping Center | 18.33 KSF ⁽⁴⁾ | 73.73 | 2.09 | 1.28 | 3.08 | 3.34 | 1,352 | 38 | 23 | 56 | 61 | 271 | 5 | 5 | 12 | 11 | 1,081 | 33 | 18 | 44 | 50 | 34% | 713 |
| Tract A | 937 | Coffee/Donut Shop With Drive-Through Window | 0.86 KSF | 820.38 | 45.38 | 43.61 | 21.69 | 21.69 | 706 | 39 | 38 | 19 | 19 | 156 | 3 | 2 | 9 | 10 | 550 | 36 | 36 | 10 | 9 | 89% | 61 |
| Lot 1 | 934 | Fast-Food Restaurant with Drive-Through Window | 2.999 KSF | 470.95 | 20.50 | 19.69 | 16.99 | 15.68 | 1,412 | 61 | 59 | 51 | 47 | 319 | 6 | 6 | 16 | 20 | 1,093 | 55 | 53 | 35 | 27 | 50% | 547 |
| Lot 2 | 820 | Shopping Center | 7.7 KSF | 73.73 | 2.09 | 1.28 | 3.08 | 3.34 | 568 | 16 | 10 | 24 | 26 | 91 | 1 | 1 | 5 | 4 | 477 | 15 | 9 | 19 | 22 | 34% | 315 |
| Tract B | 932 | High-Turnover (Sit-Down) Restaurant | 4.9 KSF | 112.18 | 5.47 | 4.47 | 6.06 | 3.71 | 550 | 27 | 22 | 30 | 18 | 106 | 2 | 2 | 6 | 7 | 444 | 25 | 20 | 24 | 11 | 43% | 253 |
| Tract B | 820 | Shopping Center | 9.31 KSF | 73.73 | 2.09 | 1.28 | 3.08 | 3.34 | 686 | 19 | 12 | 29 | 31 | 146 | 3 | 2 | 7 | 6 | 540 | 16 | 10 | 22 | 25 | 34% | 356 |
| Tract C | 820 | Shopping Center | 8.75 KSF | 73.73 | 2.09 | 1.28 | 3.08 | 3.34 | 645 | 18 | 11 | 27 | 29 | 124 | 2 | 1 | 6 | 6 | 521 | 16 | 10 | 21 | 23 | 34% | 344 |
| Lot 4 | 820 | Shopping Center | 8.75 KSF | 73.73 | 2.09 | 1.28 | 3.08 | 3.34 | 645 | 18 | 11 | 27 | 29 | 124 | 2 | 1 | 6 | 6 | 521 | 16 | 10 | 21 | 23 | 34% | 344 |
| Total Trip Generation Estimate | | | | | | | | | 6,564 | 236 | 186 | 263 | 260 | 1,337 | 24 | 20 | 67 | 70 | 5,227 | 212 | 166 | 196 | 190 | | 2,933 |
| Residential Development Trip Generation Estimate | | | | | | | | | | | | | | | | | | | | | | | | | |
| - - - | 210 | Single Family Detached Housing | 209 DU ⁽⁵⁾ | 9.44 | 0.19 | 0.56 | 0.62 | 0.37 | 1,973 | 39 | 116 | 130 | 77 | 99 | 2 | 6 | 7 | 4 | 1,874 | 37 | 110 | 123 | 73 | 0% | 1,874 |
| Notes: (1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE) (2) See attached NCHRP 684 Internal Trip Capture Estimate Tool Sheets (3) Source: "Trip Generation Handbook - An ITE Proposed Recommended Practice, Third Edition September 2017" by ITE (4) KSF = one thousand square feet of floor space (5) DU = dwelling unit | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source: LSC Transportation Consultants, Inc. | | | | | | | | | | | | | | | | | | | | | | | | | |
| August 2020 | | | | | | | | | | | | | | | | | | | | | | | | | |

Internal Trip Capture Estimate

| 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: | 8/29/2019 | |
| 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 | | | | 178 | 110 | 68 |
| Restaurant | | | | 245 | 127 | 118 |
| Cinema/Entertainment | | | | 0 | 0 | 0 |
| Residential | | | | 0 | 0 | 0 |
| Hotel | | | | 0 | 0 | 0 |
| All Other Land Uses ² | | | | 0 | | |
| | | | | 423 | 237 | 186 |

| 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 | 423 | 237 | 186 |
| Internal Capture Percentage | 9% | 8% | 10% |
| External Vehicle-Trips ⁵ | 387 | 219 | 168 |
| 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 | 7% | 8% |
| 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-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete. |
| ⁵ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A. |
| ⁶ Person-Trips |
| *Indicates computation that has been rounded to the nearest whole number. |
| Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1 |

| 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: | 8/26/2019 | |
| 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 | | | | 339 | 163 | 176 |
| Restaurant | | | | 183 | 99 | 84 |
| Cinema/Entertainment | | | | 0 | 0 | 0 |
| Residential | | | | 0 | 0 | 0 |
| Hotel | | | | 0 | 0 | 0 |
| All Other Land Uses ² | | | | 0 | 0 | 0 |
| | | | | 522 | 262 | 260 |

| 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 | | | | | | |

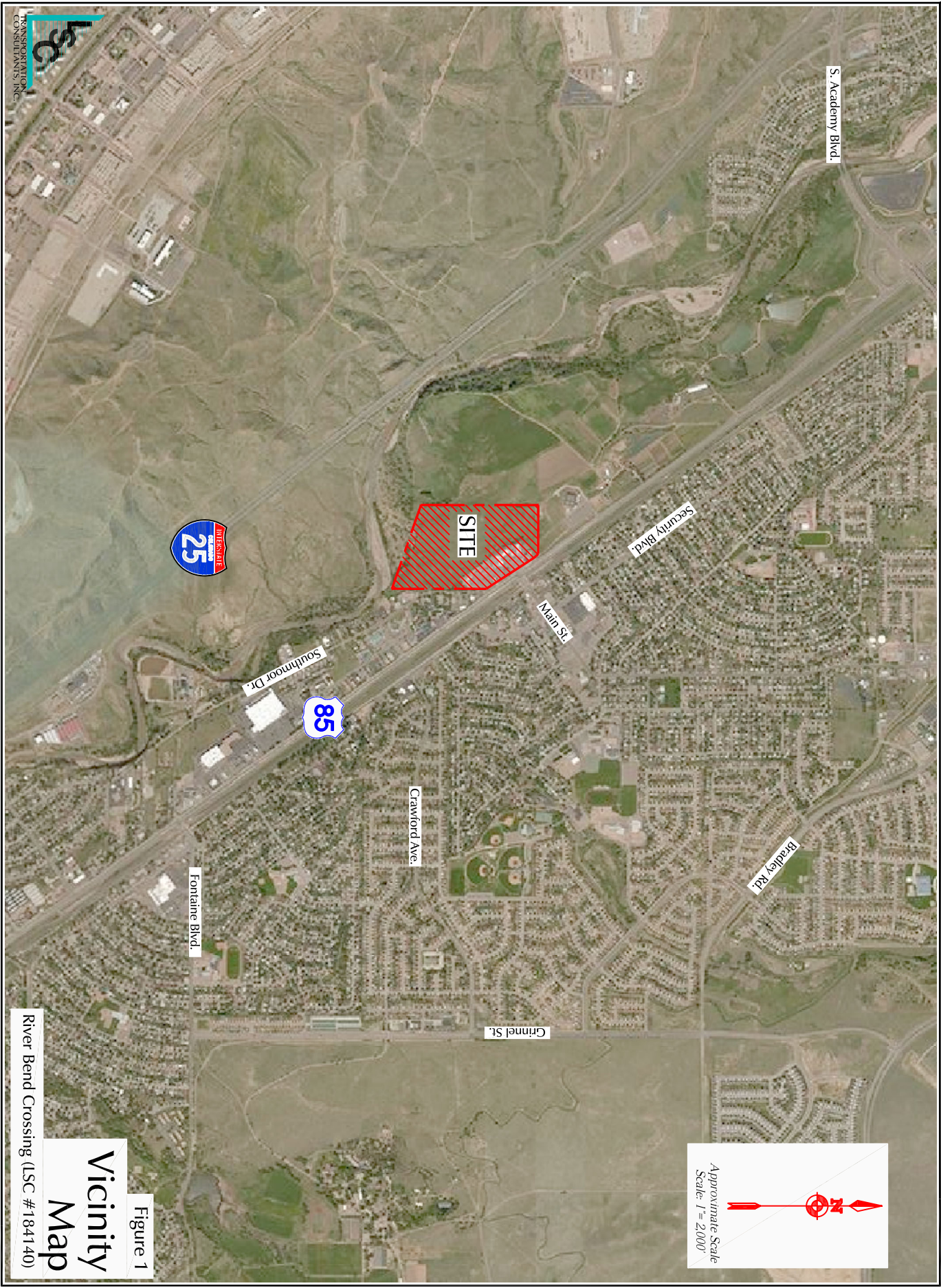
| Table 4-P: Internal Person-Trip Origin-Destination Matrix* | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | | 29 | 0 | 0 | 0 |
| Restaurant | 0 | 34 | | 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 | 522 | 262 | 260 |
| Internal Capture Percentage | 24% | 24% | 24% |
| 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 | 21% | 16% |
| Restaurant | 29% | 40% |
| 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 |

Figures



S. Academy Blvd.

Security Blvd.

Main St.

Bradley Rd.

Crawford Ave.

Grinnel St.

Southmoor Dr.

Fontaine Blvd.

85

25



Approximate Scale
Scale: 1" = 2,000'

Figure 1

Vicinity Map

River Bend Crossing (LSC #184140)



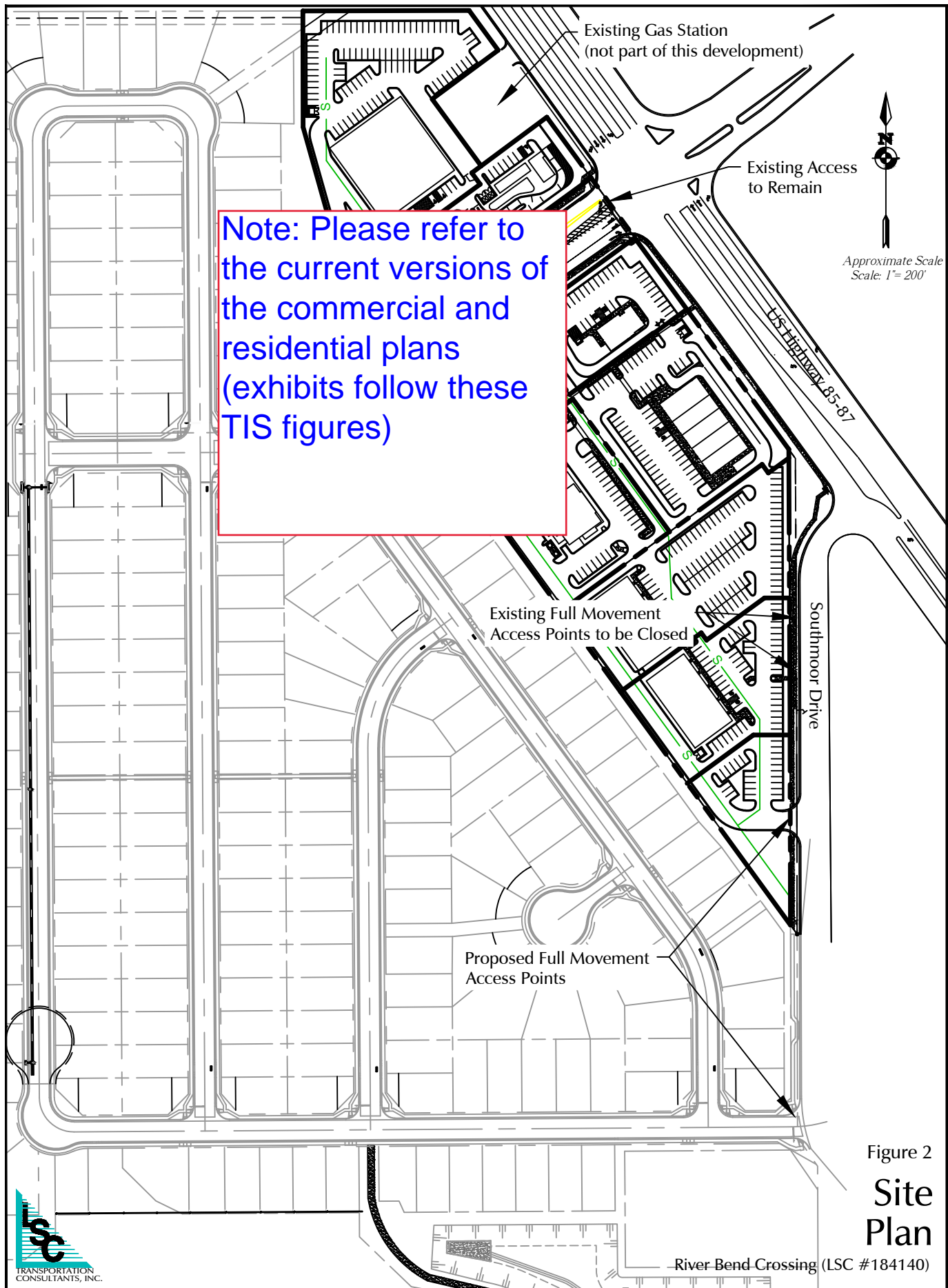


Figure 2
Site
Plan

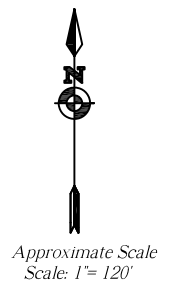
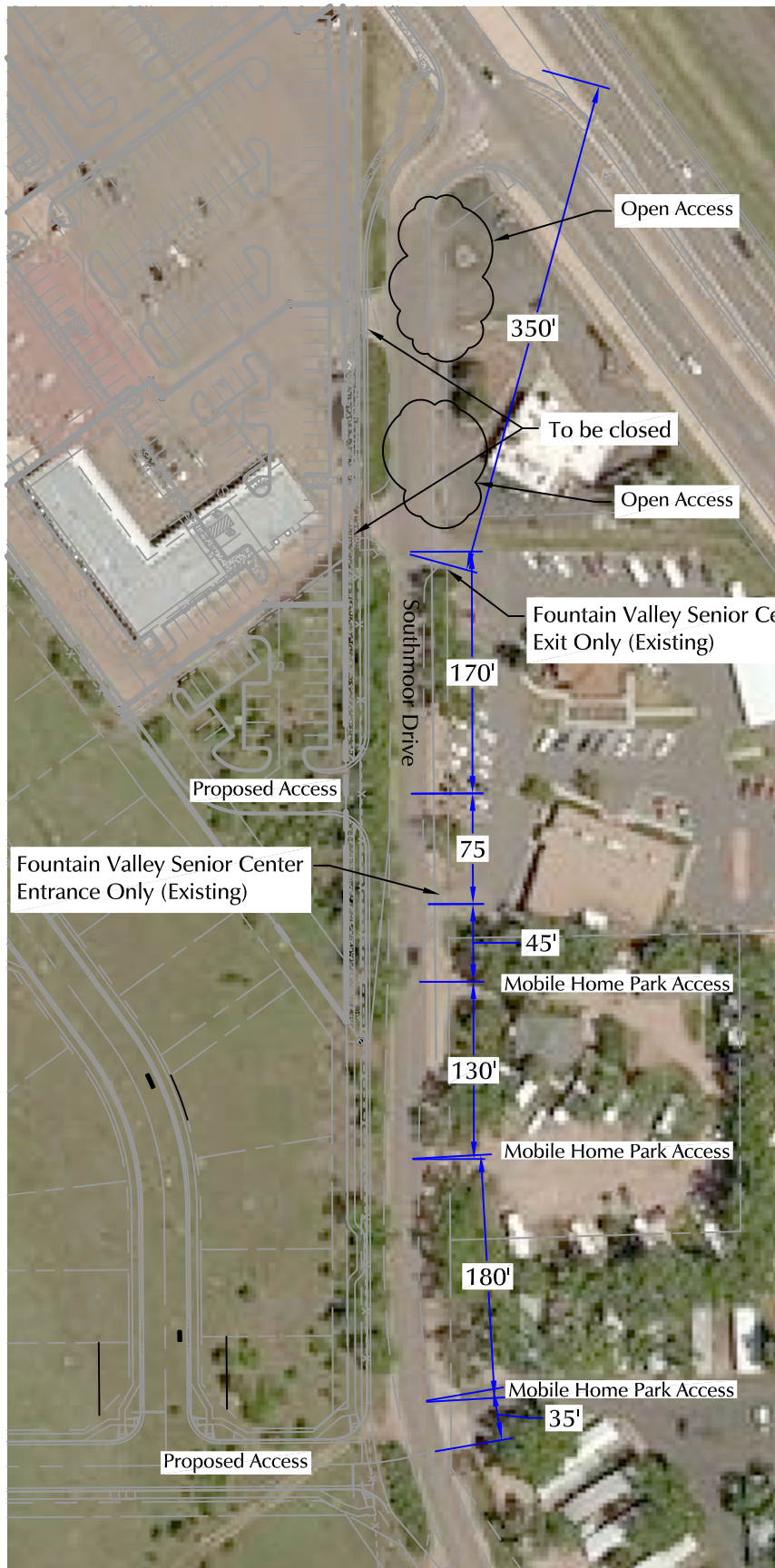
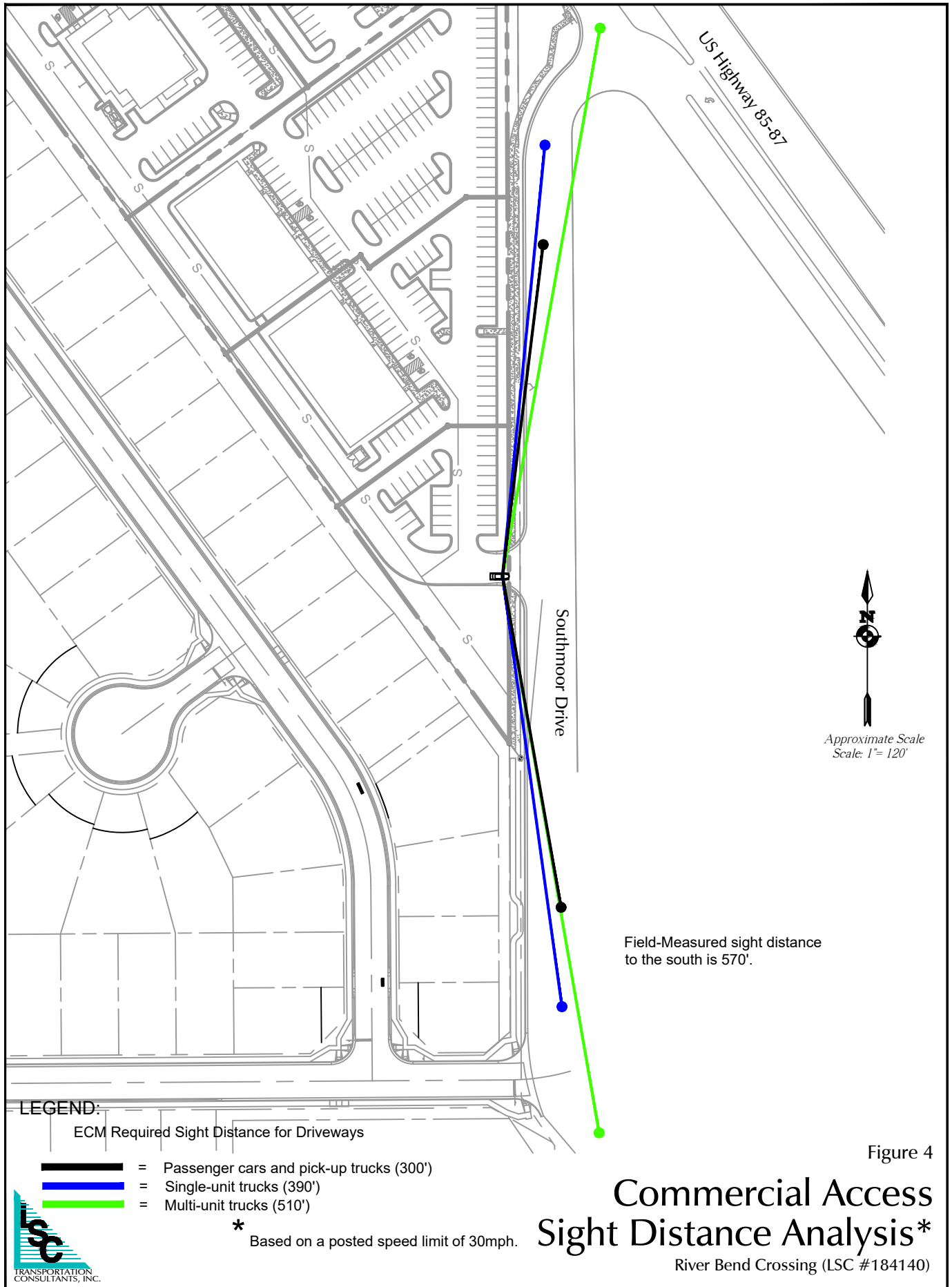
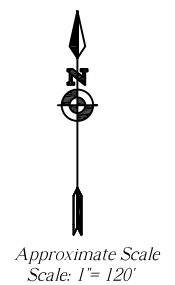


Figure 3

Access Spacing Exhibit Southmoor Drive

River Bend Crossing (LSC #184140)





* Based on a design speed of 40mph.

Figure 5

Residential Access Sight Distance Analysis*

River Bend Crossing (LSC #184140)



Provided existing vegetation is removed (anticipated with project construction), and the site improvements do not add any obstructions that would block the line of sight, more than adequate lines of sight exists to the north and south from the driver's eye location on the proposed public street.



Figure 6

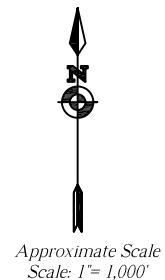
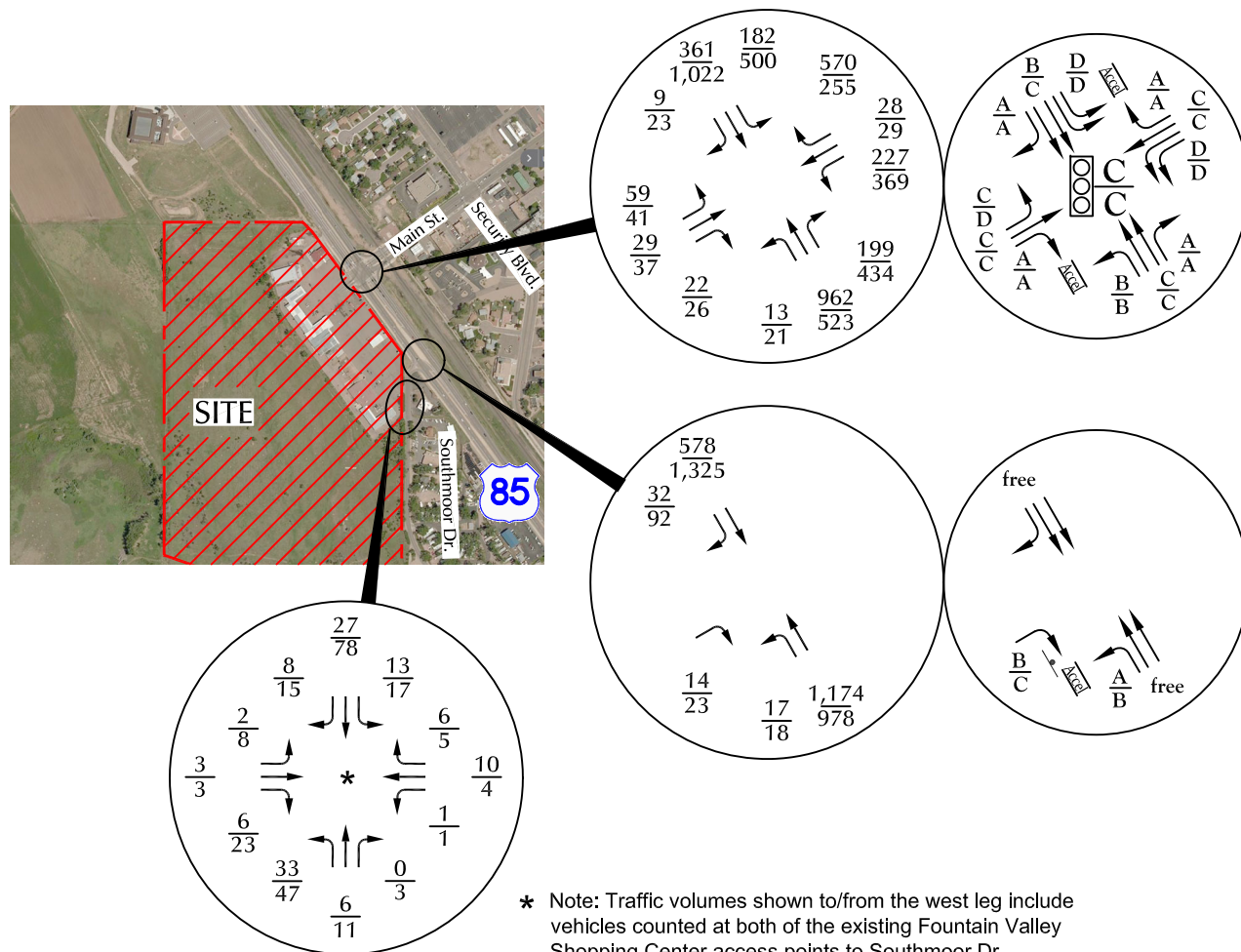
Pedestrian Route Analysis

River Bend Crossing (LSC #184140)



LEGEND:

- = Existing Sidewalk
- = Proposed Sidewalk



LEGEND:

⊥ = Stop Sign

⬢ = Traffic Signal

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

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

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

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

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

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

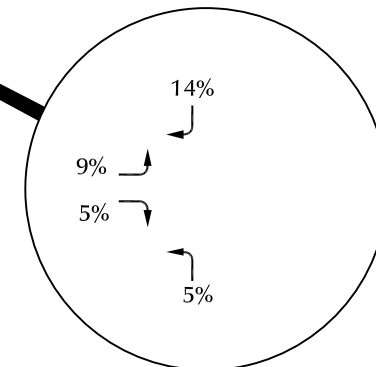
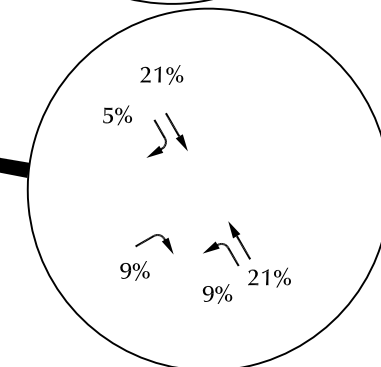
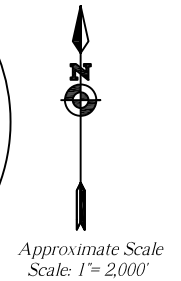
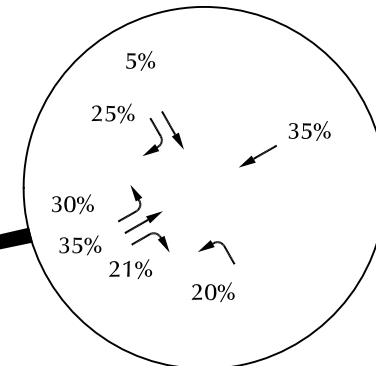
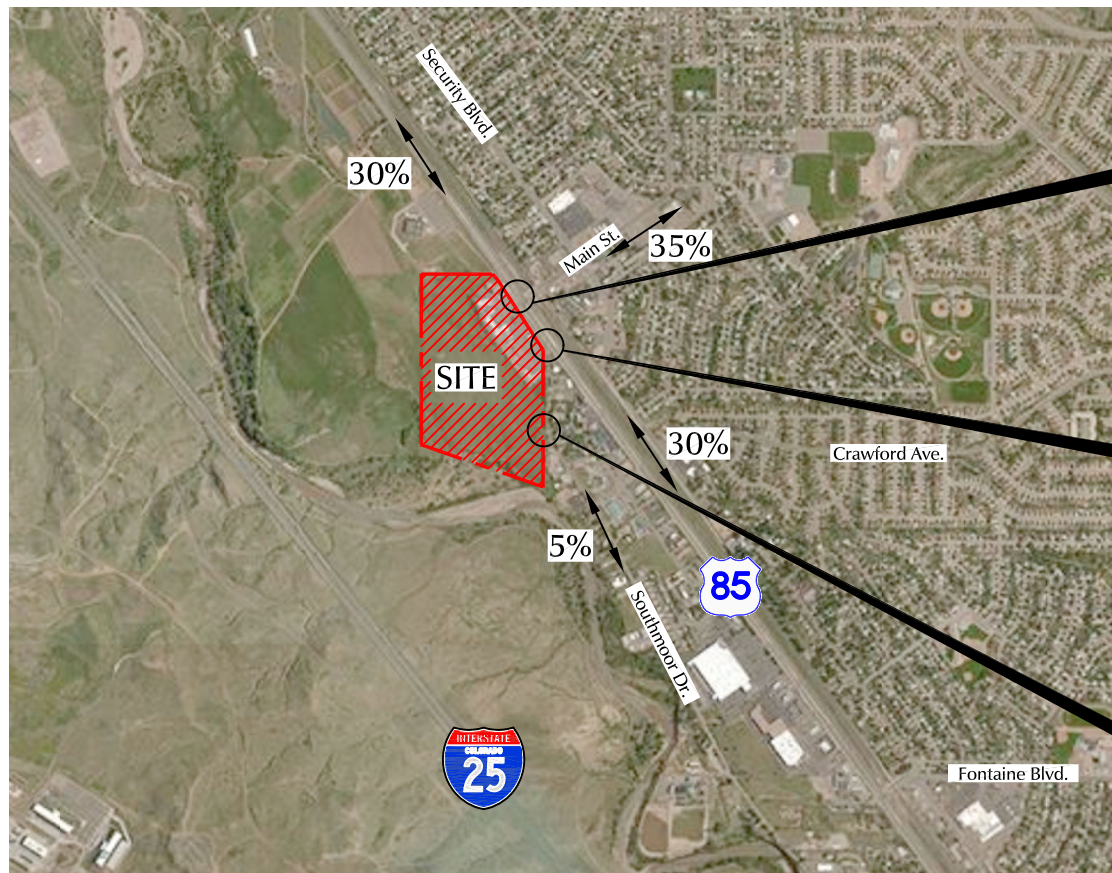
* Note: Traffic volumes shown to/from the west leg include vehicles counted at both of the existing Fountain Valley Shopping Center access points to Southmoor Dr



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

River Bend Crossing (LSC #184140)

Figure 7



Notes: See Appendix Figure 1 for detailed trip path assumptions.
See Table 2 for Internal Trip assumptions

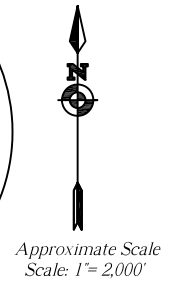
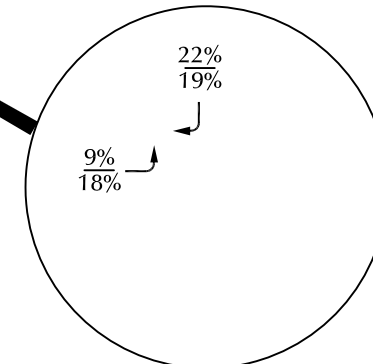
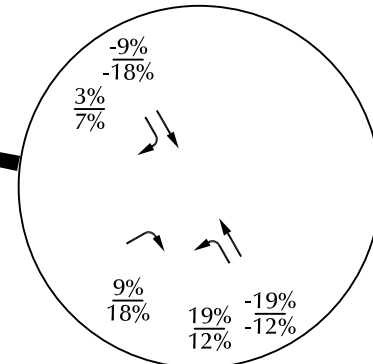
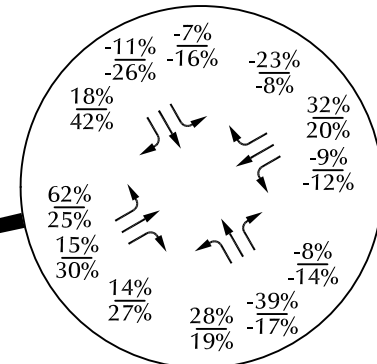
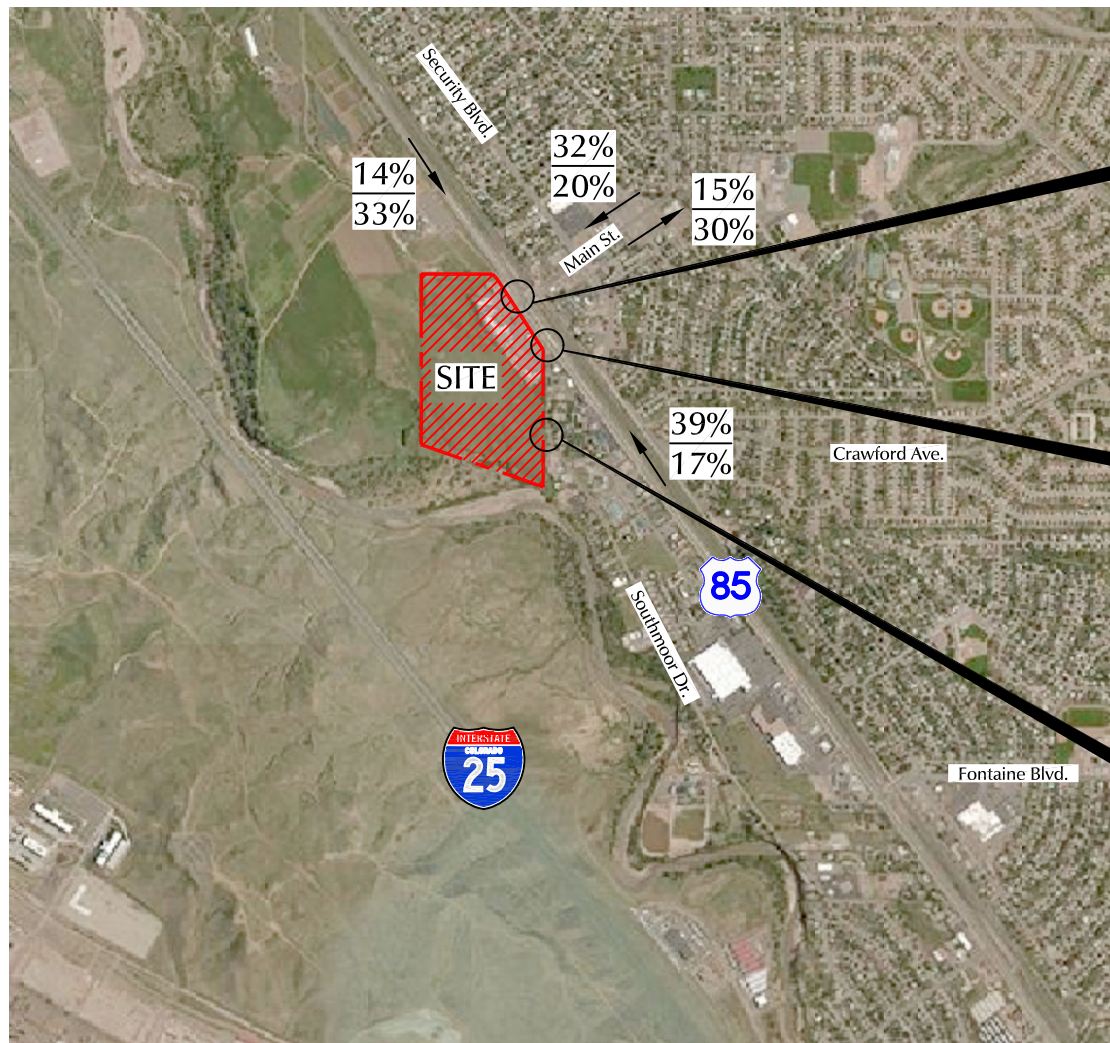
LEGEND:
 = Commercial Percent Directional Distribution of Primary Trips
 (Note: includes diverted trips from South Academy Boulevard and I-25)
 XX%



Directional Distribution of Primary Commercial Site-Generated Traffic

River Bend Crossing (LSC #184140)

Figure 8



Note: See Appendix Figure 1 for detailed trip path assumptions.

Figure 9

Directional Distribution of Pass-by Commercial Site-Generated Traffic

River Bend Crossing (LSC #184140)



LEGEND:



XX%
XX%

AM Commercial Percent Directional Distribution
PM Commercial Percent Directional Distribution

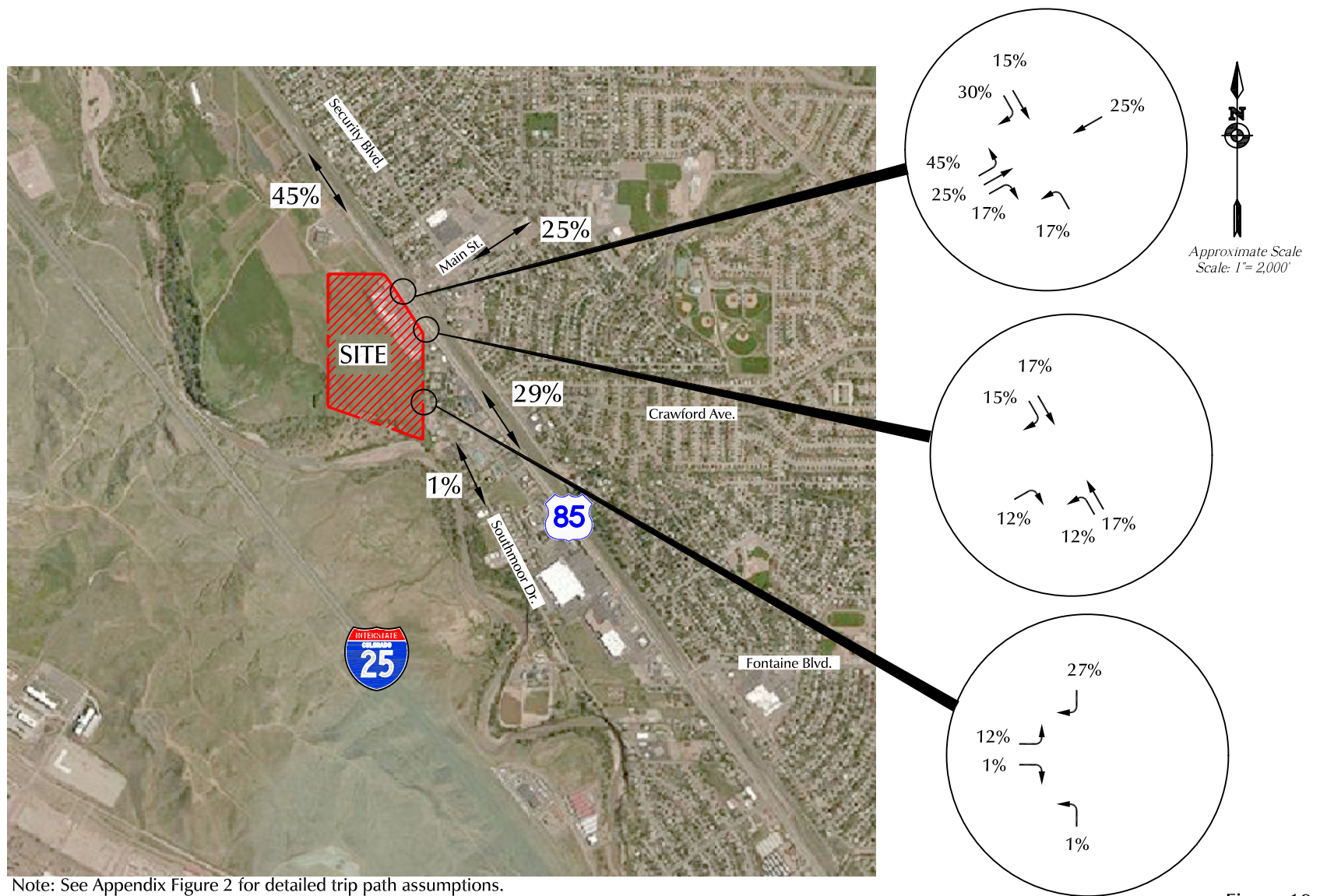


Figure 10

Directional Distribution of Residential Site-Generated Traffic

River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'

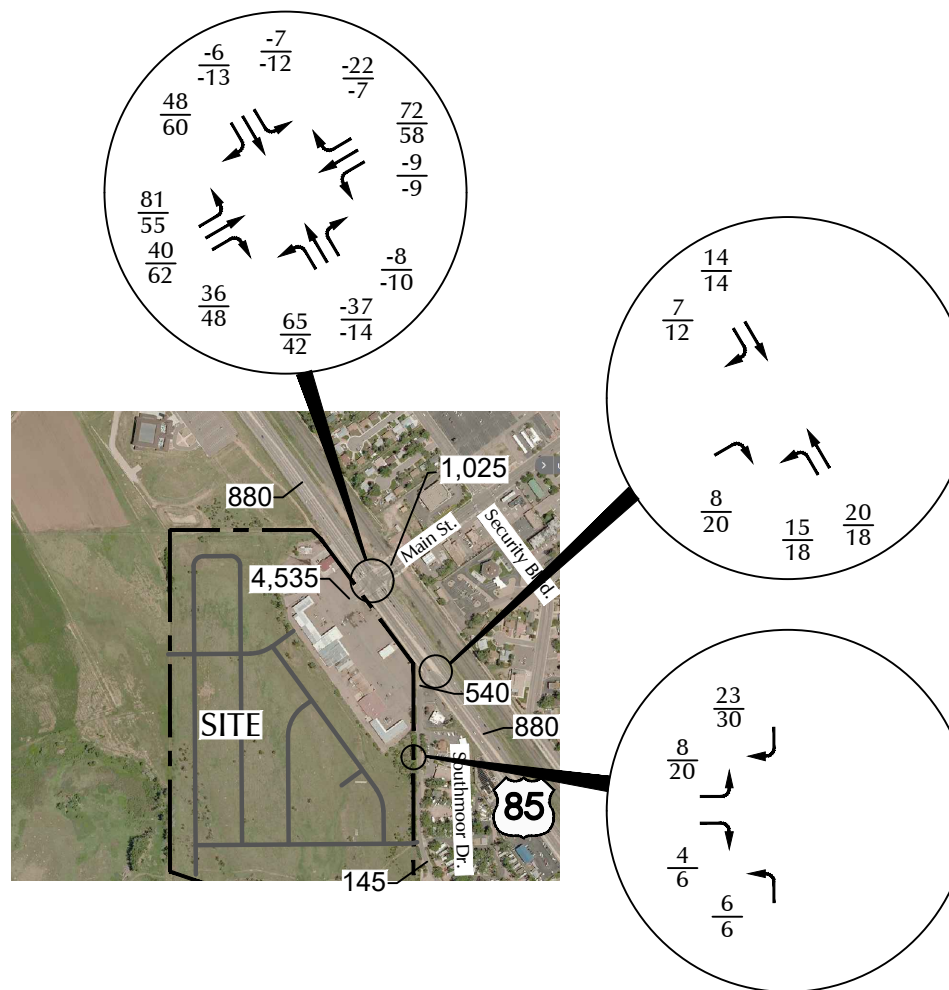


Figure 11

Assignment of Commercial Site-Generated Traffic

River Bend Crossing (LSC #184140)

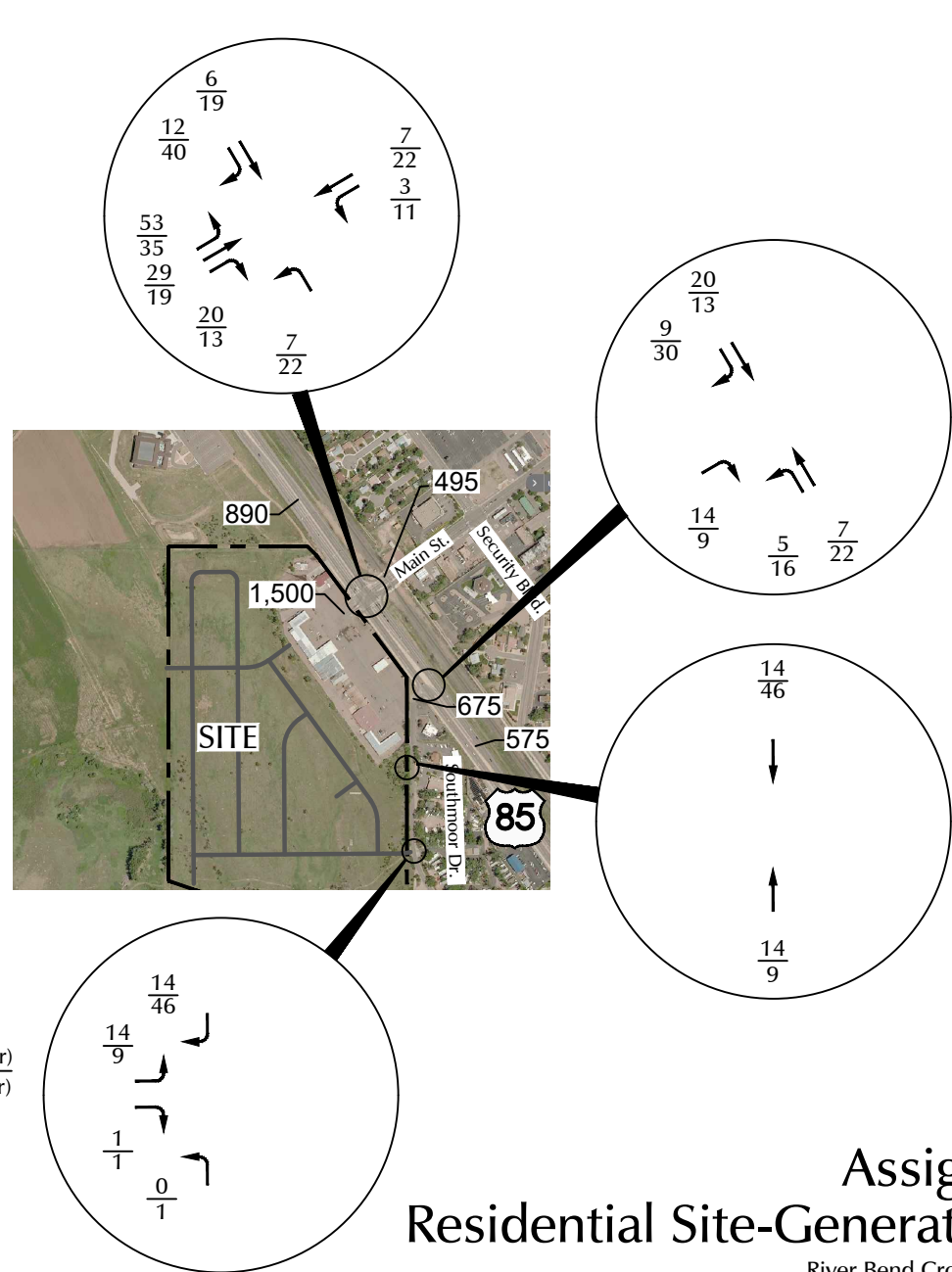


LEGEND:

$\frac{XX}{XX}$ = 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)

Note: The volumes shown on this figure are based on an older plan for the residential area that included 221 lots for single family homes. The current plan includes 209 lots for single family homes (IE lower traffic impact).



Approximate Scale
Scale: 1" = 1,000'

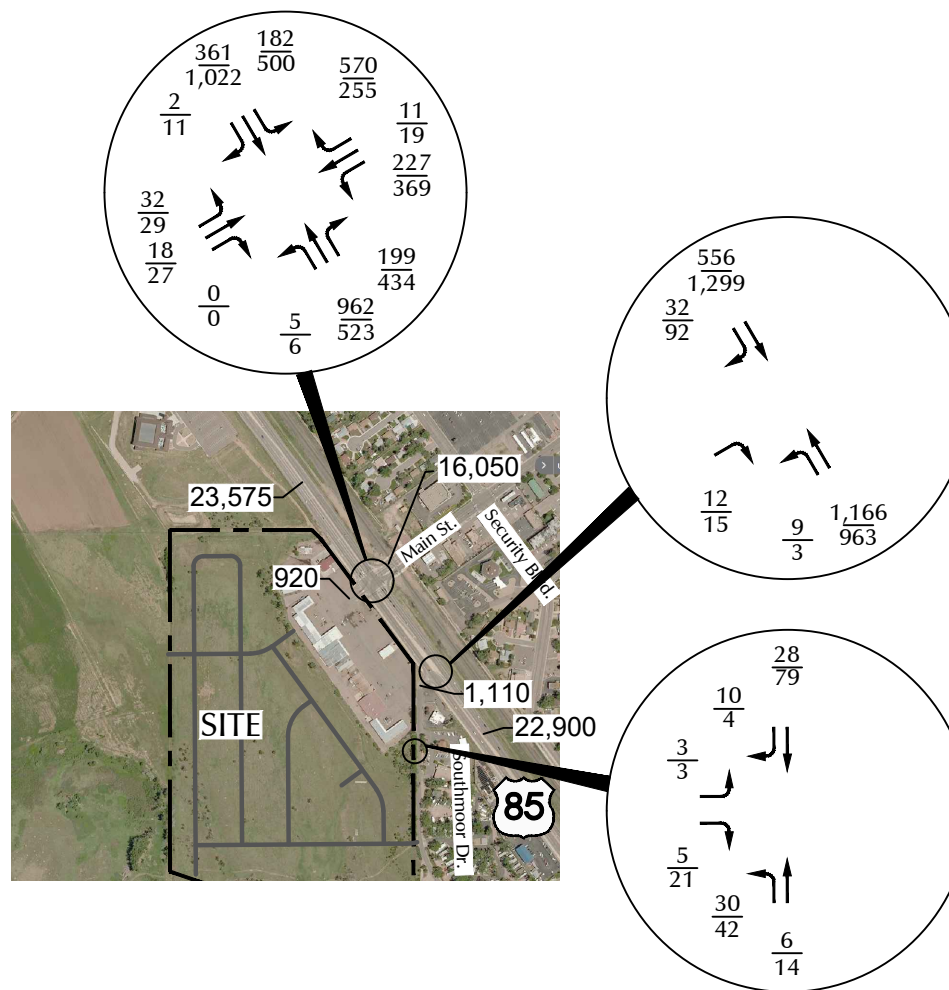
LEGEND:
 $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (vehicles per hour)
 X,XXX = Average Daily Traffic (vehicles per day)



Figure 12
Assignment of Residential 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)

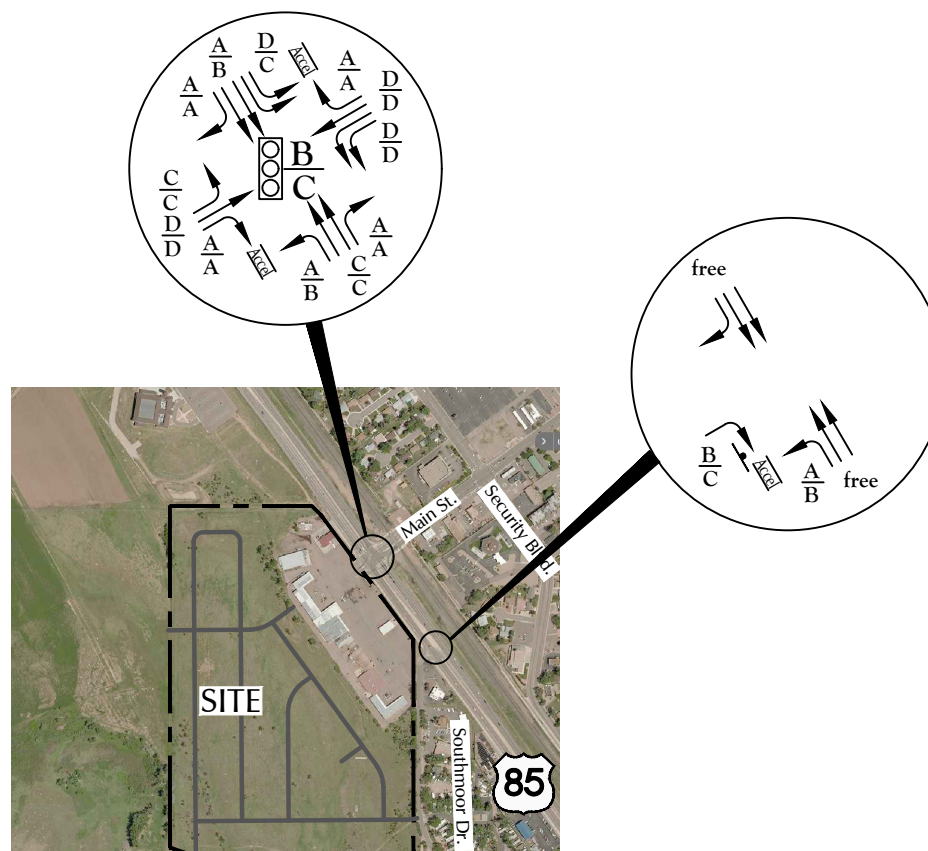
X,XXX= Average Daily Traffic (vehicles per day)



Figure 13a
**Short-Term
 Baseline Traffic**
 River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

 = Stop Sign

 = Traffic Signal

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

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



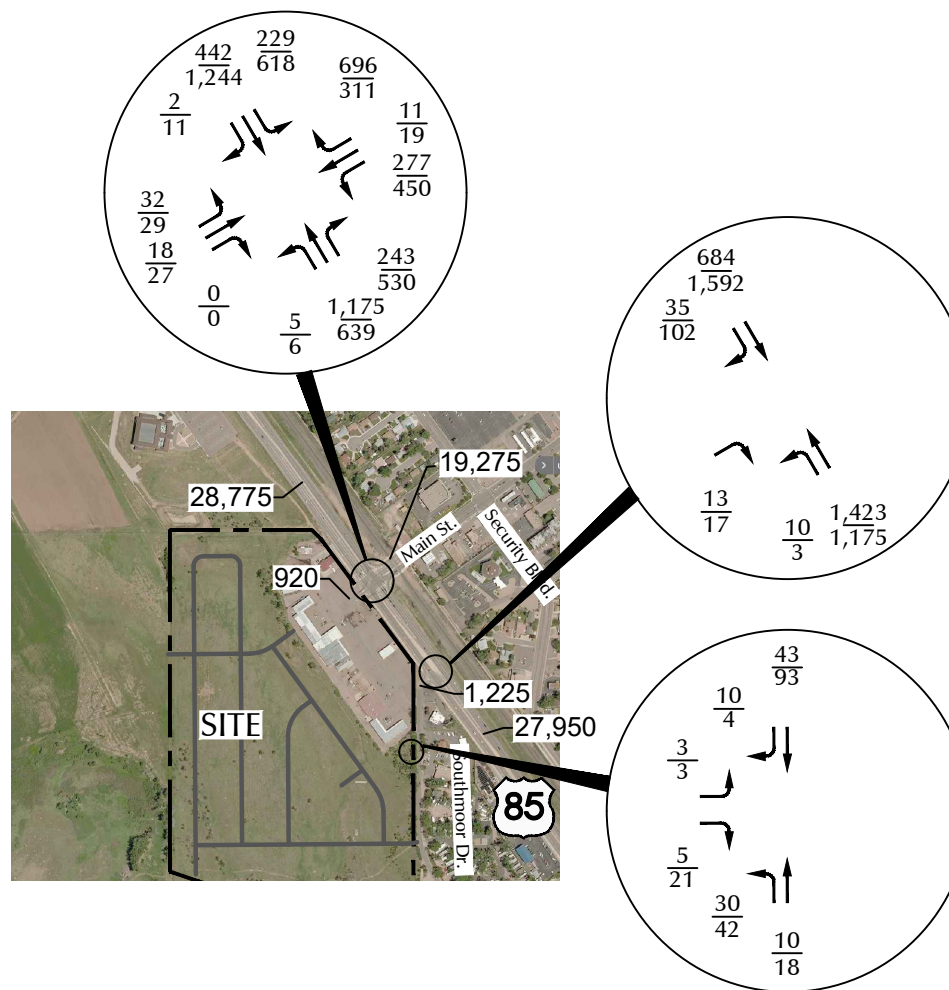
Short-Term Baseline Lane Geometry, Traffic Control and Level of Service

River Bend Crossing (LSC #184140)

Figure 13b



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)



TRANSPORTATION
CONSULTANTS, INC.

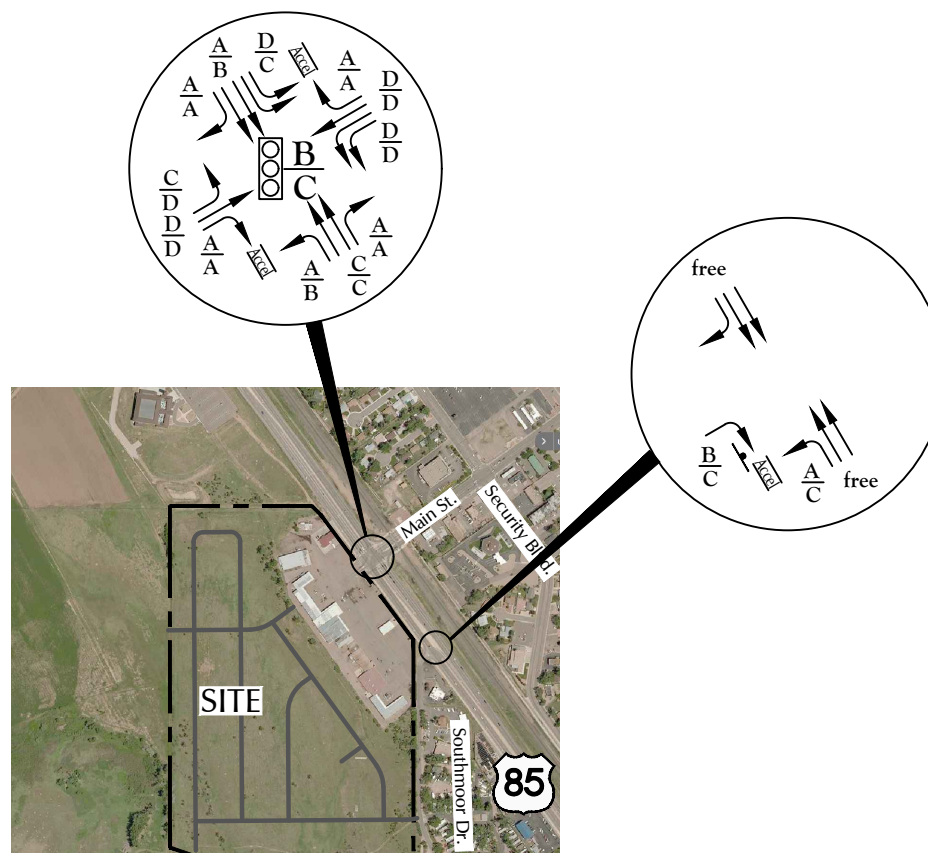
Figure 14a

Year 2040
Baseline Traffic

River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

⊥ = Stop Sign

⊞ = Traffic Signal

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

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

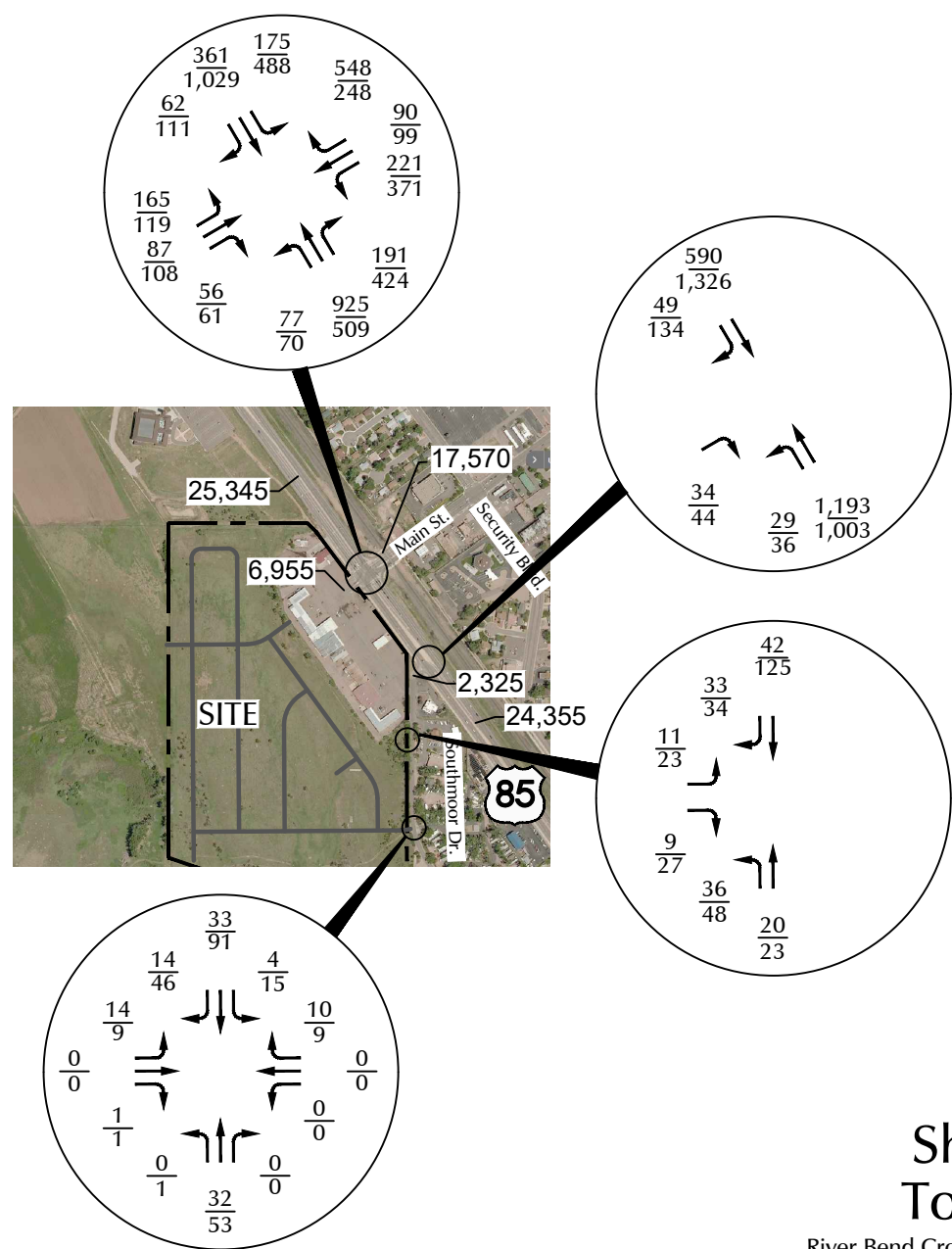
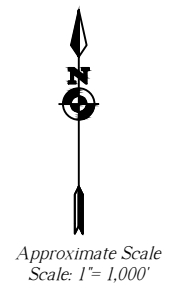


Year 2040 Baseline Lane Geometry, Traffic Control and Level of Service

River Bend Crossing (LSC #184140)

Figure 14b

Note: The volumes shown on this figure include volumes from Figure 12. Please refer to the note on Figure 12.



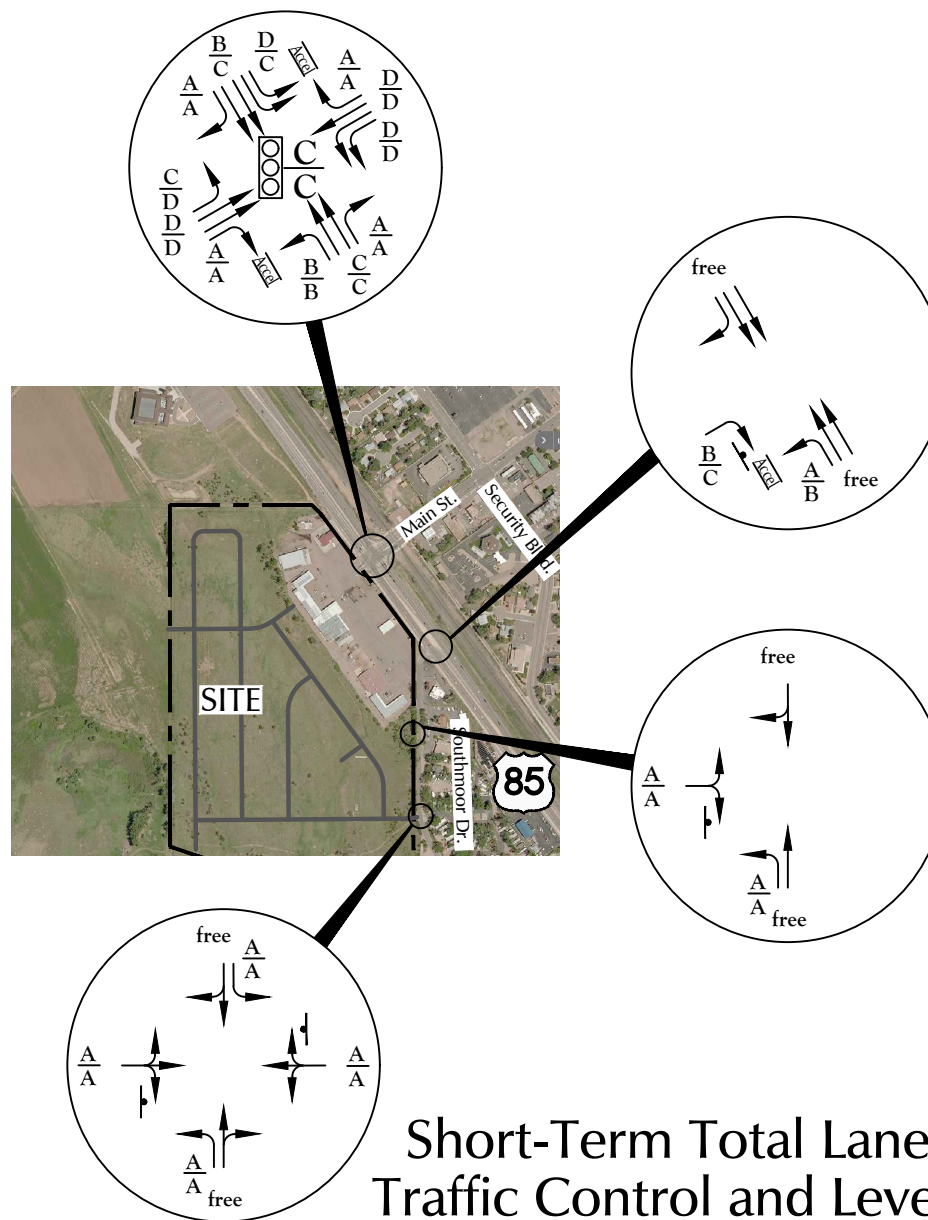
LEGEND:
 $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (vehicles per hour)
 X,XXX = Average Daily Traffic (vehicles per day)



Figure 15a
**Short-Term
 Total Traffic**
 River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

└ = Stop Sign

⬢ = Traffic Signal

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

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

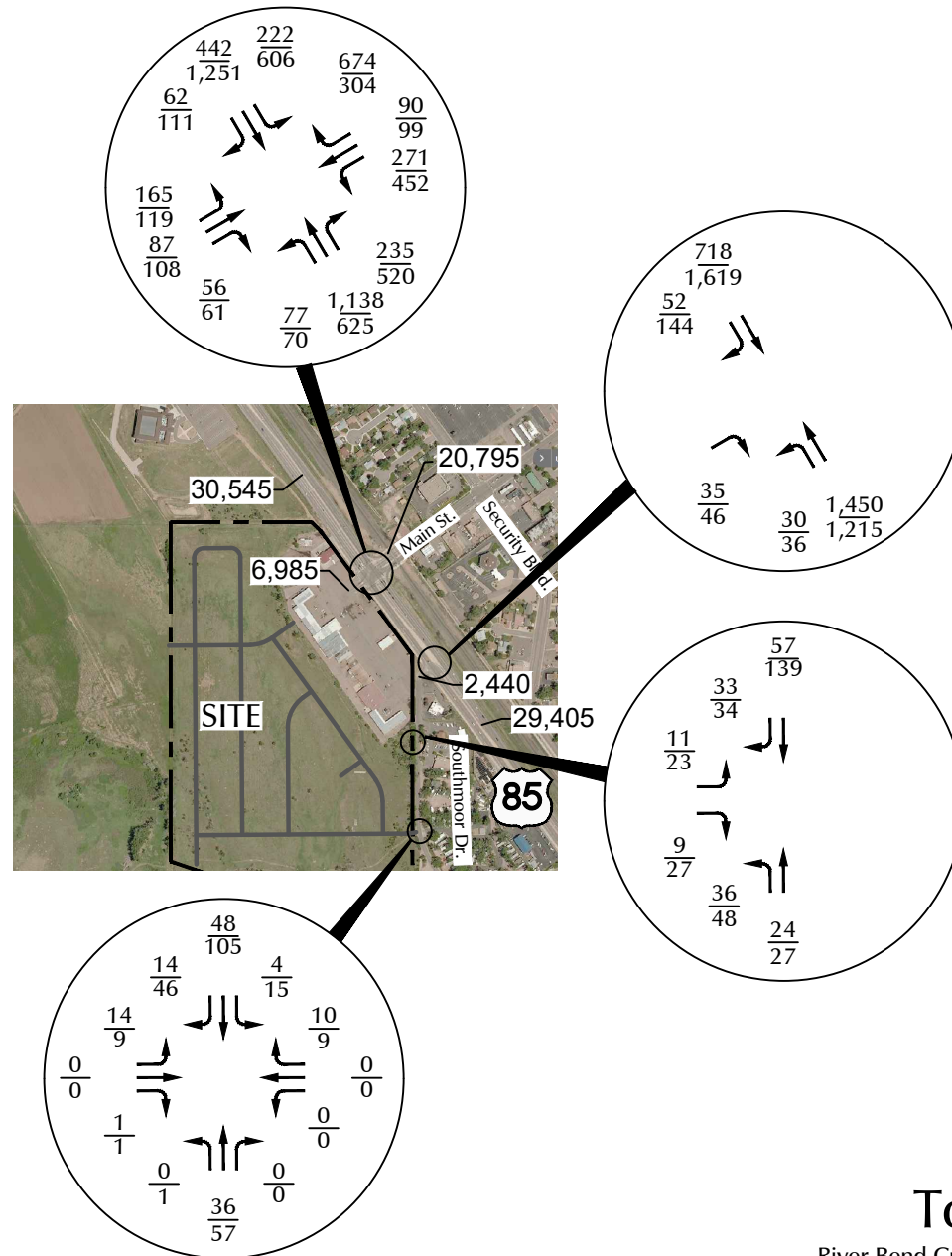
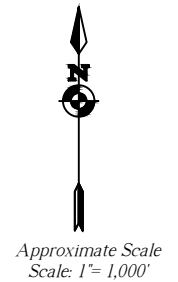


Short-Term Total Lane Geometry, Traffic Control and Level of Service

River Bend Crossing (LSC #184140)

Figure 15b

Note: The volumes shown on this figure include volumes from Figure 12. Please refer to the note on Figure 12.



LEGEND:

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

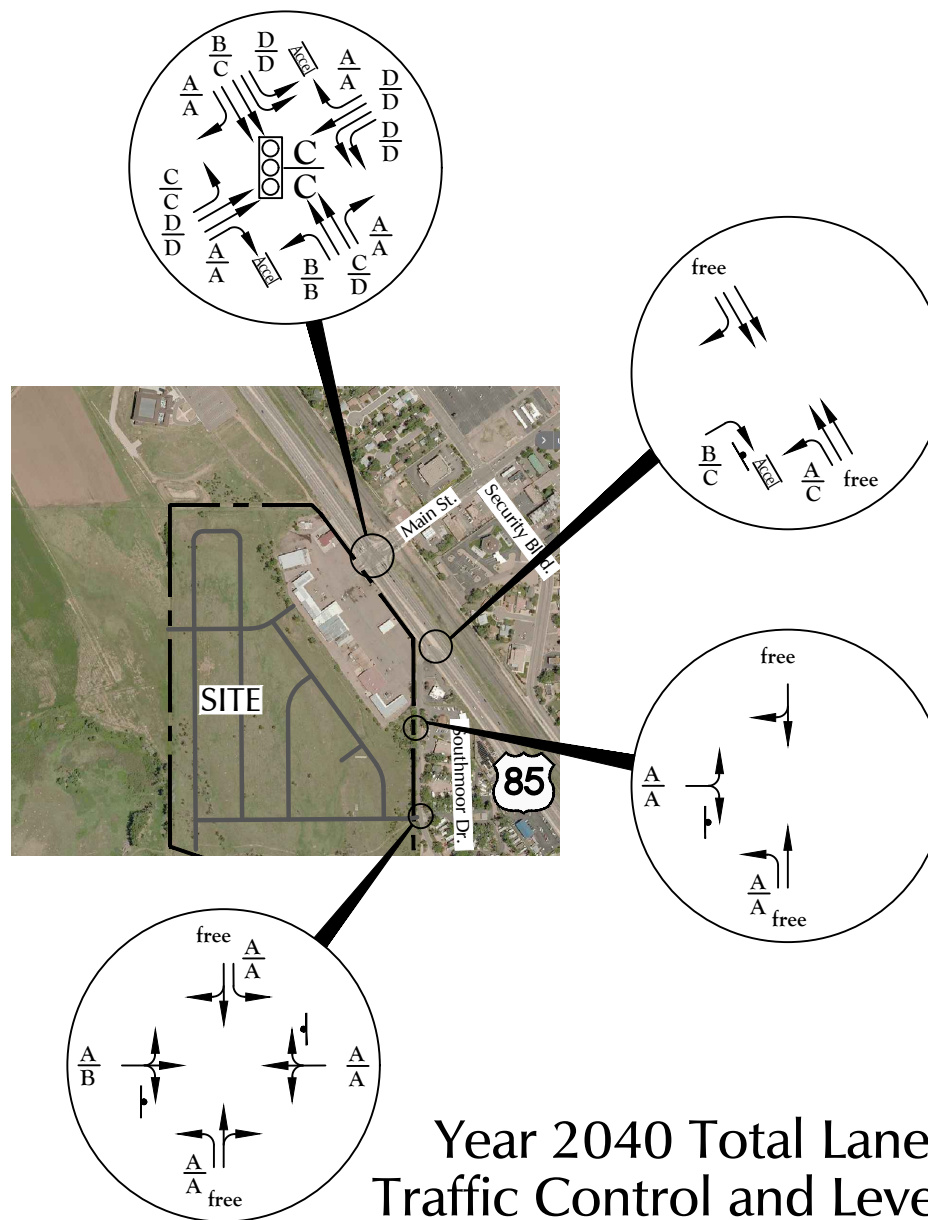
X,XXX= Average Daily Traffic (vehicles per day)



Figure 16a
Year 2040
Total Traffic
 River Bend Crossing (LSC #184140)



Approximate Scale
Scale: 1" = 1,000'



LEGEND:

└ = Stop Sign

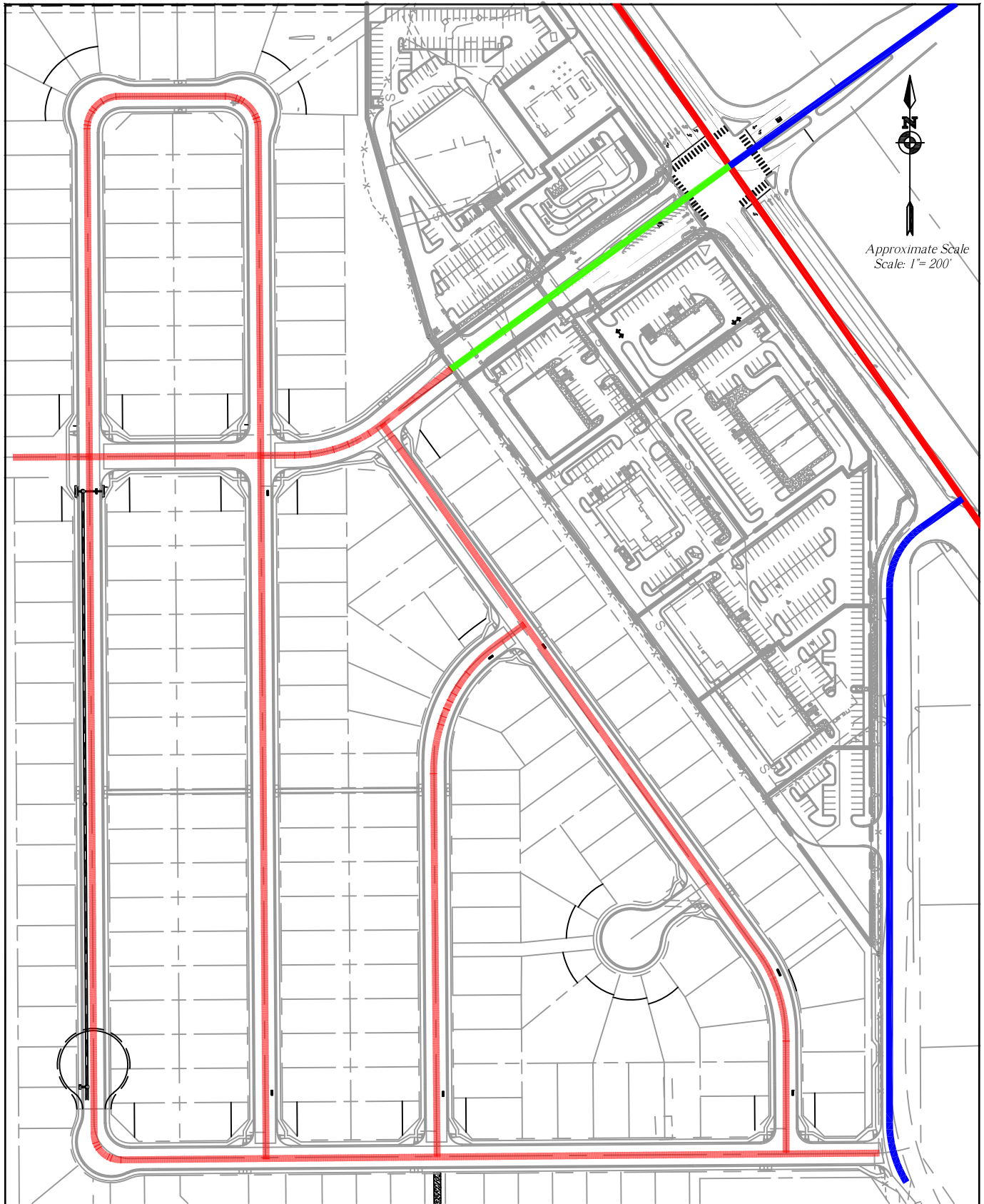
⬢ = Traffic Signal

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

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

Figure 16b
Year 2040 Total Lane Geometry,
Traffic Control and Level of Service

River Bend Crossing (LSC #184140)



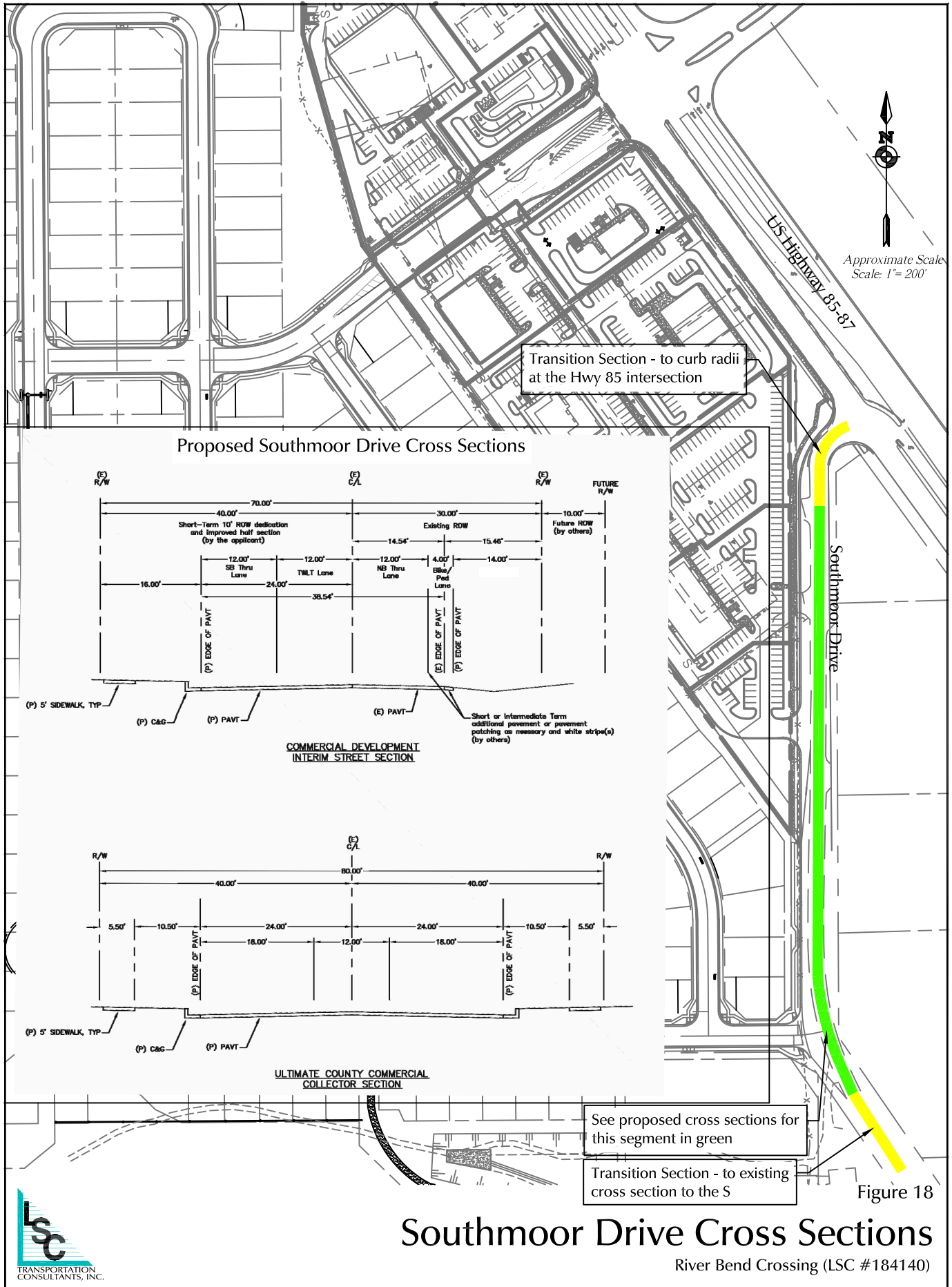
LEGEND:

- = Non-Rural Principal Highway (NR-A CDOT)
- = Urban Non-Residential Collector (El Paso County)
- = Community Collector (City of Fountain)
- = Urban Local (El Paso County)

Figure 17

Street Classifications

River Bend Crossing (LSC #184140)

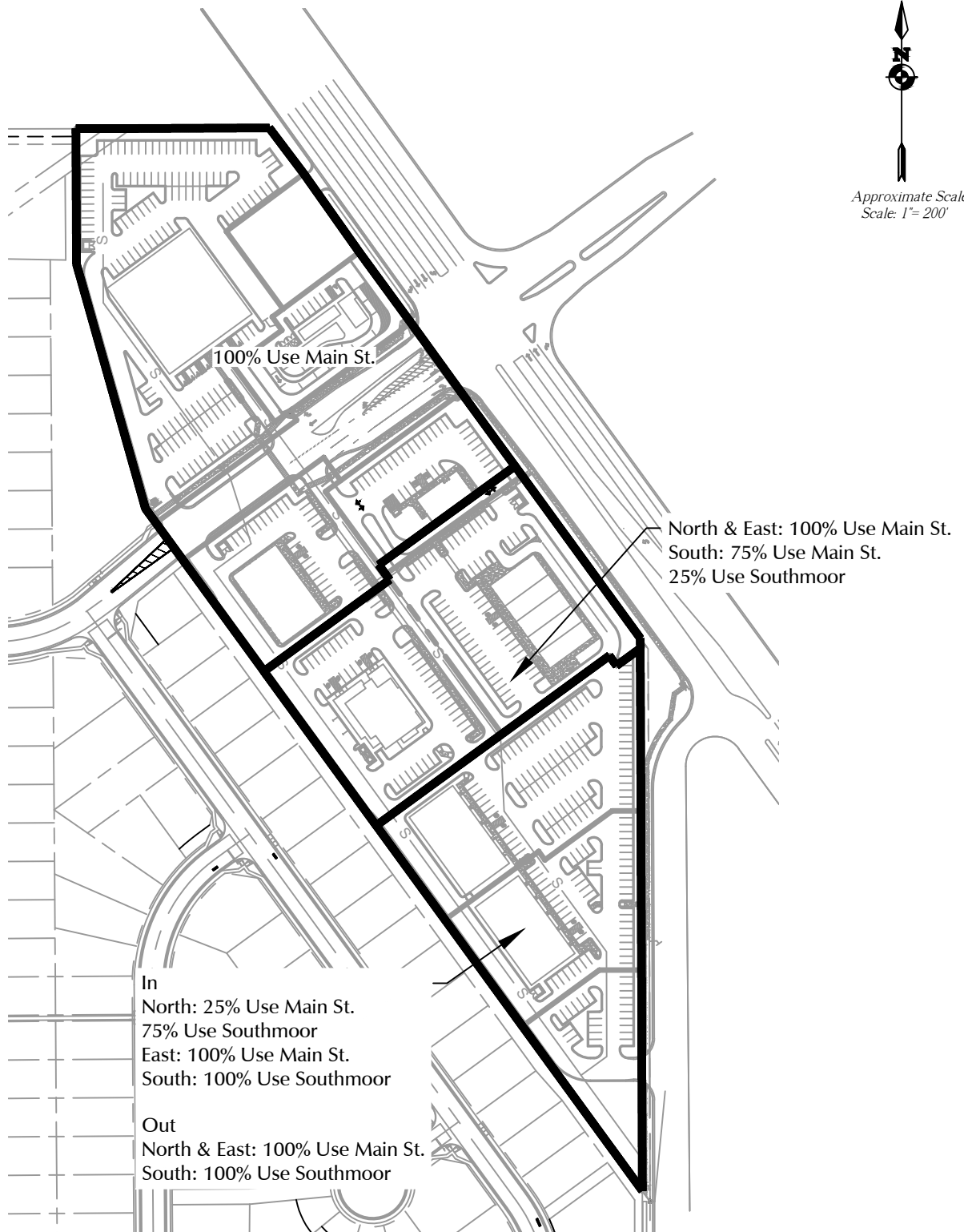


Appendix Figures





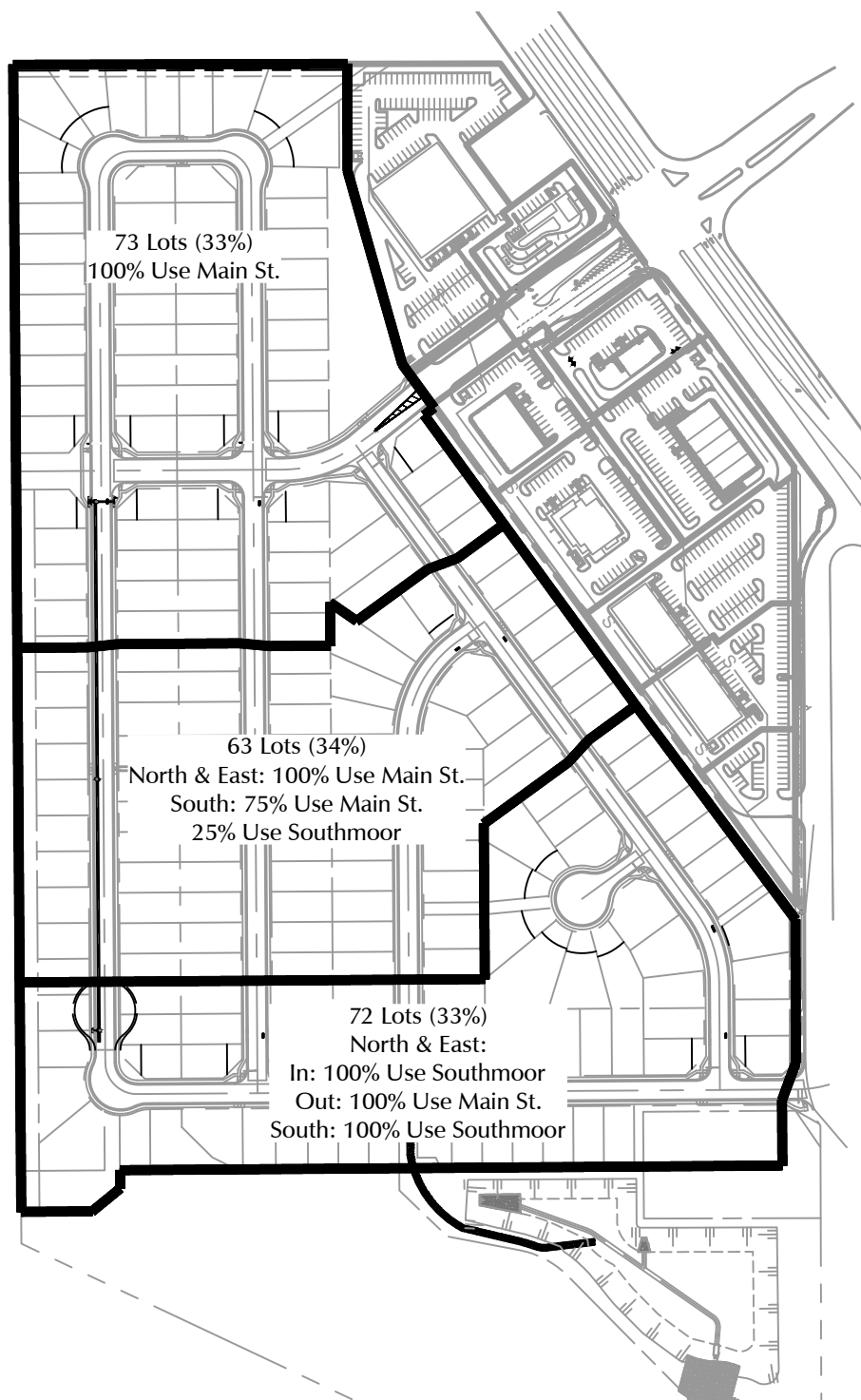
Approximate Scale
Scale: 1"= 200'




Appendix Figure 1

Commercial Trip Paths

River Bend Crossing (LSC #184140)




 Approximate Scale
 Scale: 1" = 300'

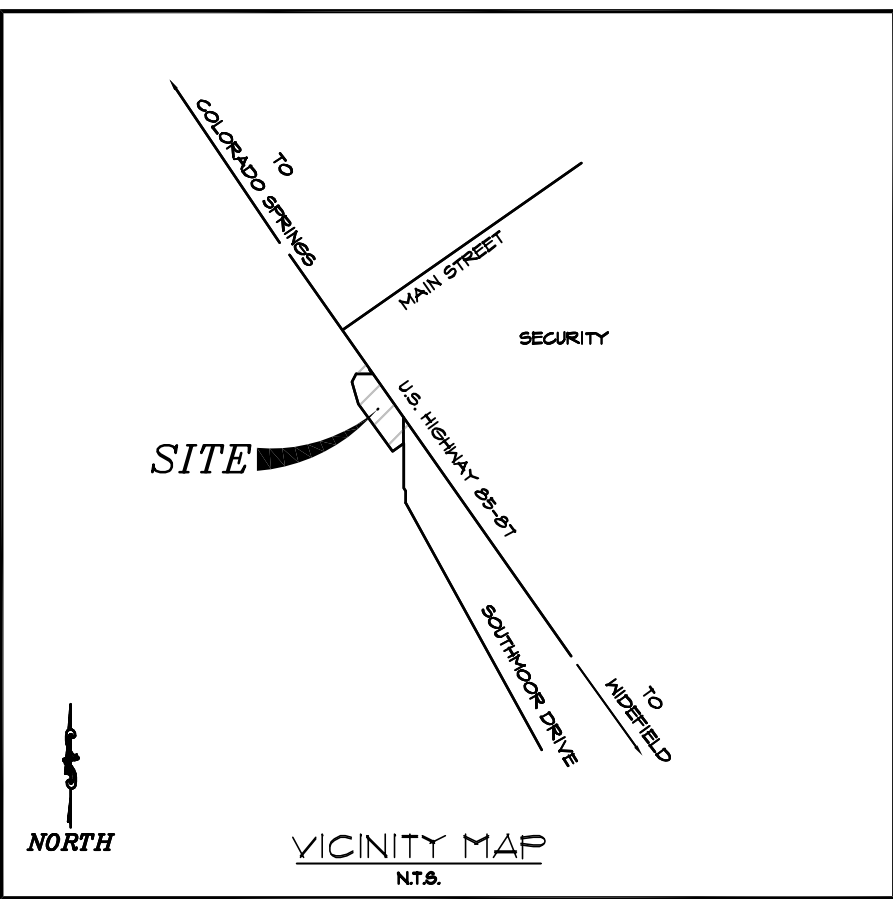
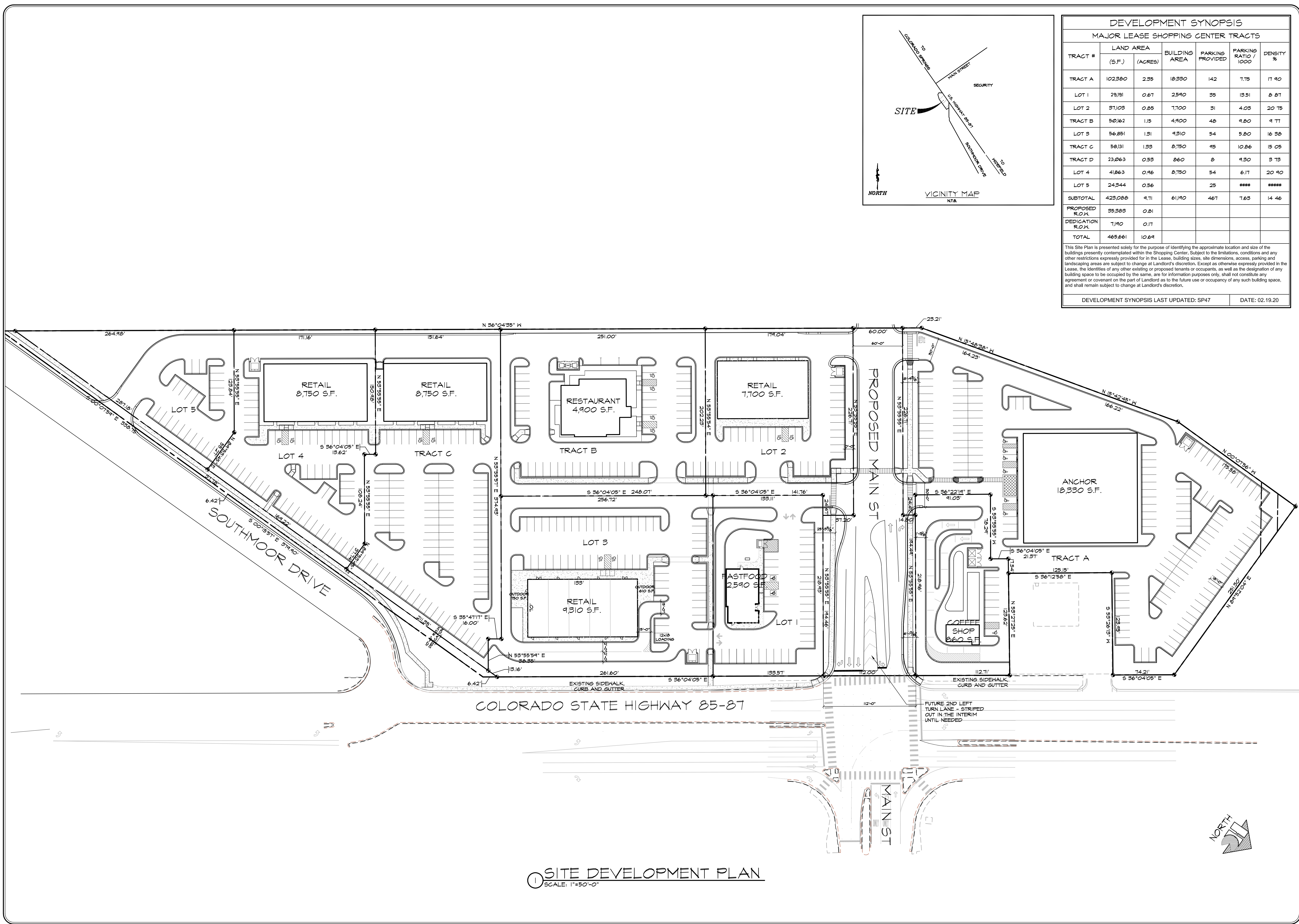
Appendix Figure 2

Residential Trip Paths

River Bend Crossing (LSC #184140)

Commercial Site Plan





| DEVELOPMENT SYNOPSIS | | | | | | |
|------------------------------------|-----------|---------|---------------|------------------|----------------------|-----------|
| MAJOR LEASE SHOPPING CENTER TRACTS | | | | | | |
| TRACT # | LAND AREA | | BUILDING AREA | PARKING PROVIDED | PARKING RATIO / 1000 | DENSITY % |
| | (S.F.) | (ACRES) | | | | |
| TRACT A | 102,380 | 2.35 | 10,330 | 142 | 7.75 | 17.90 |
| LOT 1 | 29,191 | 0.67 | 2,590 | 35 | 13.31 | 8.87 |
| LOT 2 | 37,103 | 0.85 | 7,700 | 31 | 4.03 | 20.75 |
| TRACT B | 50,162 | 1.15 | 4,900 | 48 | 9.80 | 9.77 |
| LOT 3 | 56,851 | 1.31 | 9,310 | 54 | 5.80 | 16.38 |
| TRACT C | 58,131 | 1.33 | 8,750 | 45 | 10.86 | 15.05 |
| TRACT D | 23,063 | 0.53 | 860 | 8 | 9.30 | 3.75 |
| LOT 4 | 41,863 | 0.96 | 8,750 | 54 | 6.17 | 20.90 |
| LOT 5 | 24,344 | 0.56 | | 25 | #### | #### |
| SUBTOTAL | 423,088 | 9.71 | 61,190 | 467 | 7.63 | 14.46 |
| PROPOSED R.O.M. | 55,383 | 0.81 | | | | |
| DEDICATION R.O.M. | 7,190 | 0.17 | | | | |
| TOTAL | 465,661 | 10.69 | | | | |

This Site Plan is presented solely for the purpose of identifying the approximate location and size of the buildings presently contemplated within the Shopping Center. Subject to the limitations, conditions and any other restrictions expressly provided for in the Lease, building sizes, site dimensions, access, parking and landscaping areas are subject to change at Landlord's discretion. Except as otherwise expressly provided in the Lease, the identities of any other existing or proposed tenants or occupants, as well as the designation of any building space to be occupied by the same, are for information purposes only, shall not constitute any agreement or covenant on the part of Landlord as to the future use or occupancy of any such building space, and shall remain subject to change at Landlord's discretion.

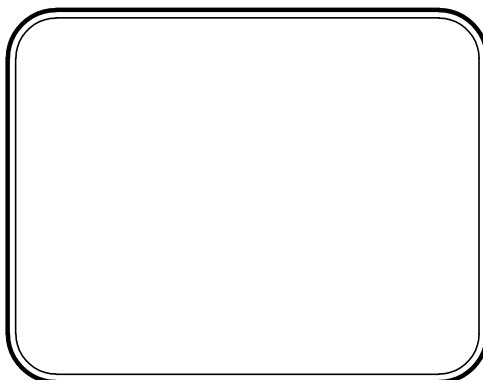
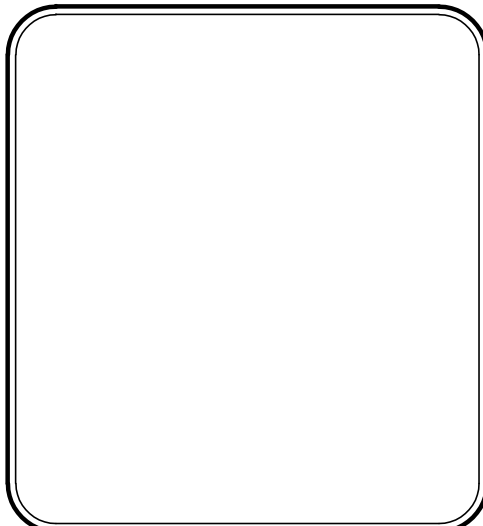
DEVELOPMENT SYNOPSIS LAST UPDATED: SP47 DATE: 02.19.20

HAMMERS
CONSTRUCTION INC.

COMMERCIAL GENERAL CONTRACTORS SPECIALIZING IN DESIGN/BUILD
PRESIDENT: STEVE R. HAMMERS
VICE PRES: DAVID J. HAMMERS
1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, CO 80915
(719) 570-1599 FAX (719) 570-7008
www.hammersconstruction.com

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RIVER BEND CROSSING
AVATAR
HIGHWAY 85-87
FOUNTAIN, CO
EL PASO COUNTY, COLORADO

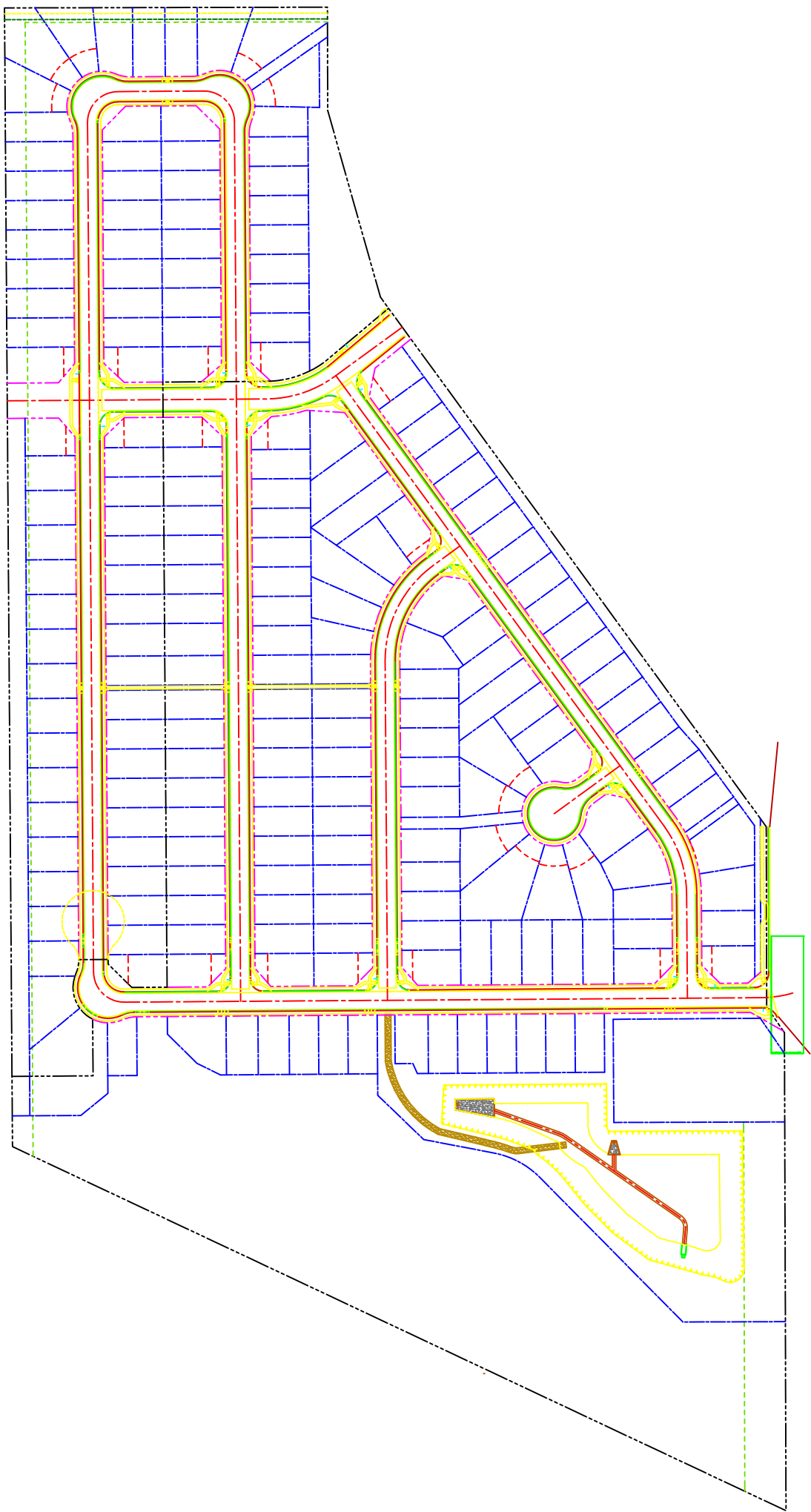


DATE: MAR 04, 2020
DRAWN BY: D. AQUINO
PROJ. MNGR: JOE BUTLER
SCALE: SEE PLAN
APPROVED BY:
JOB NO: 1029

| RESUBMITTALS: |
|---------------|
| |
| |
| |
| |
| |
| |
| |

Residential Site Plan





Traffic Counts

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

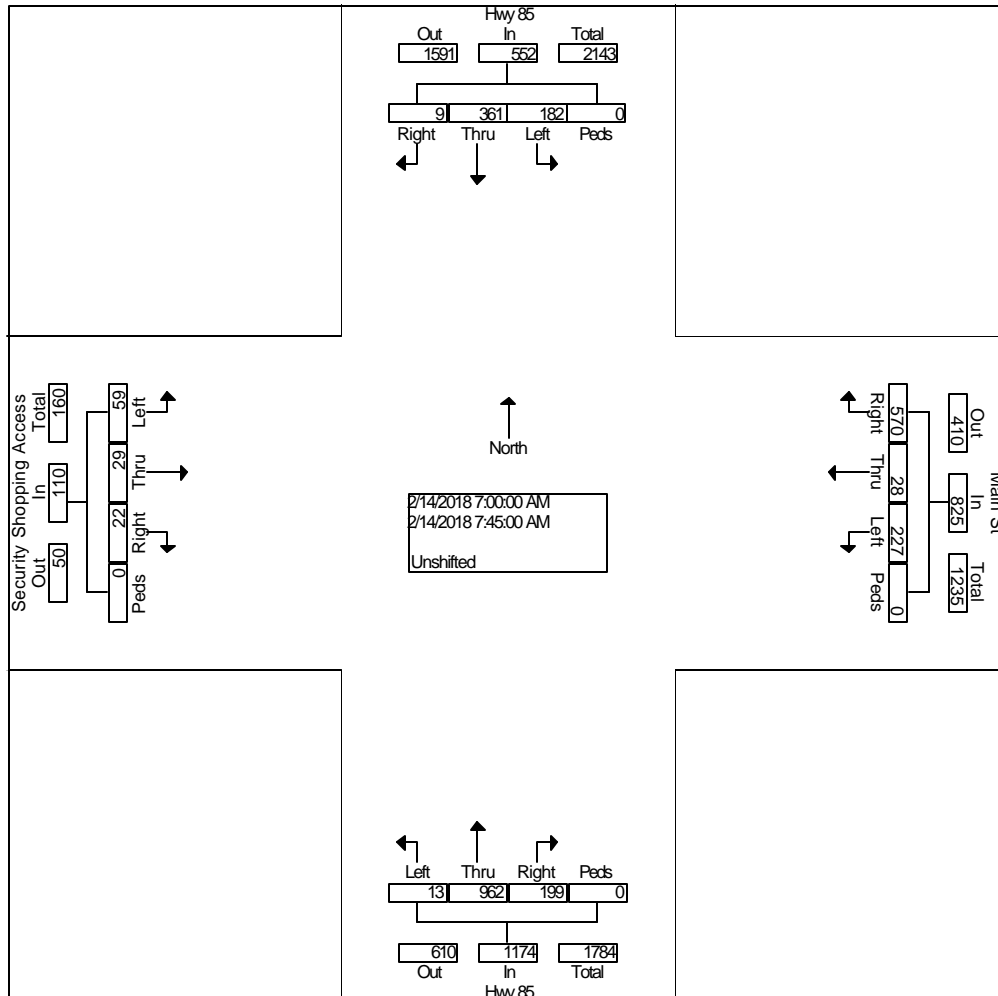
Groups Printed- Unshifted

| | 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

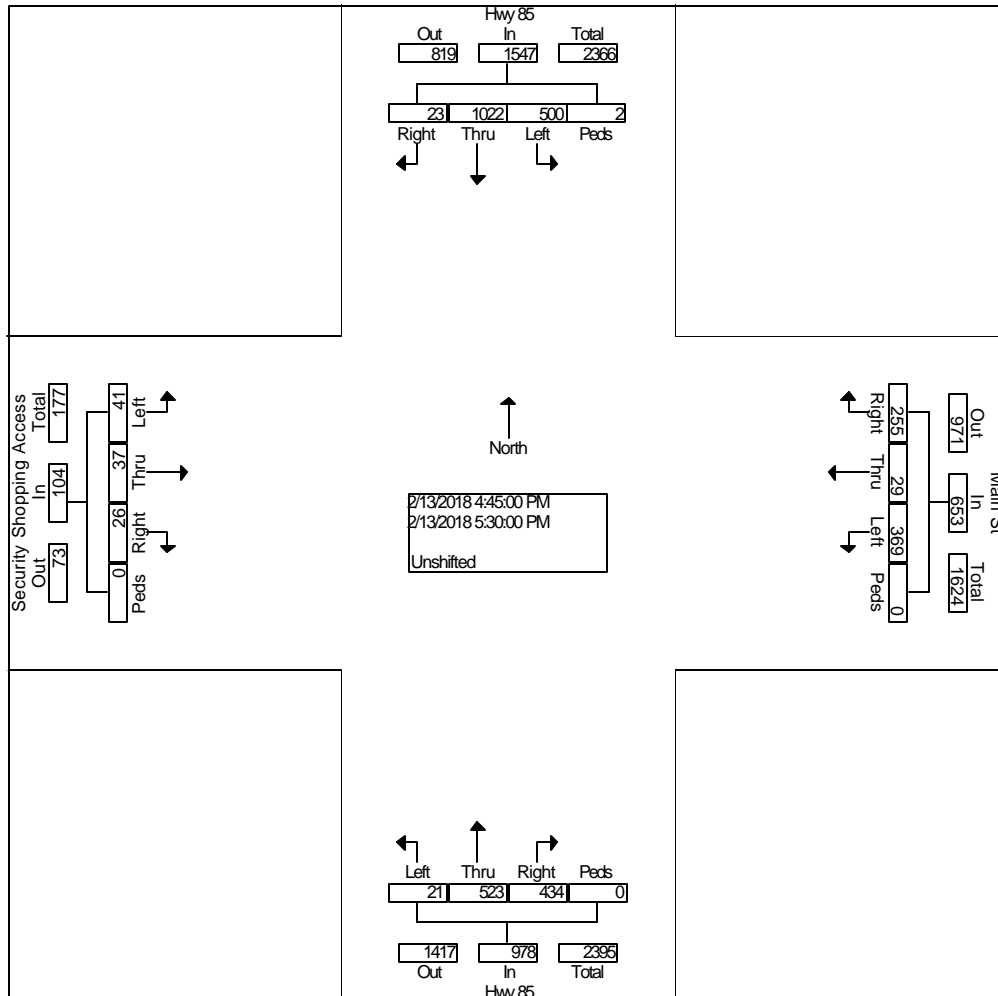
Groups Printed- Unshifted

| | 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 | 3 | 0 | | | | | | | |
| Volume | 6 | 4 | 4 | 0 | 404 | 65 | 6 | 86 | 0 | 157 | 5 | 2 | | 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 | | | | | 0.94 | | | | | 0.83 | | | | | 0.90 | | | | | 0.76 | |
| Factor | | | | | 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

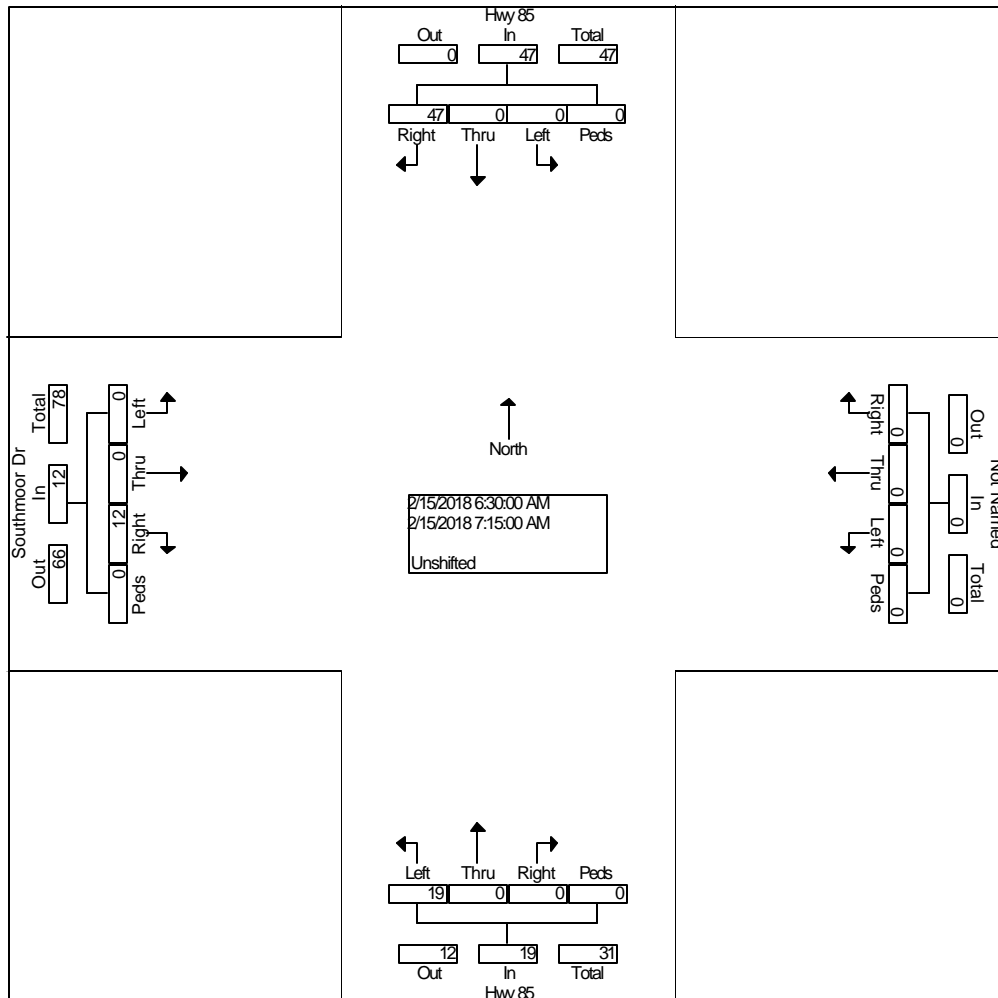
Groups Printed- Unshifted

| | 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

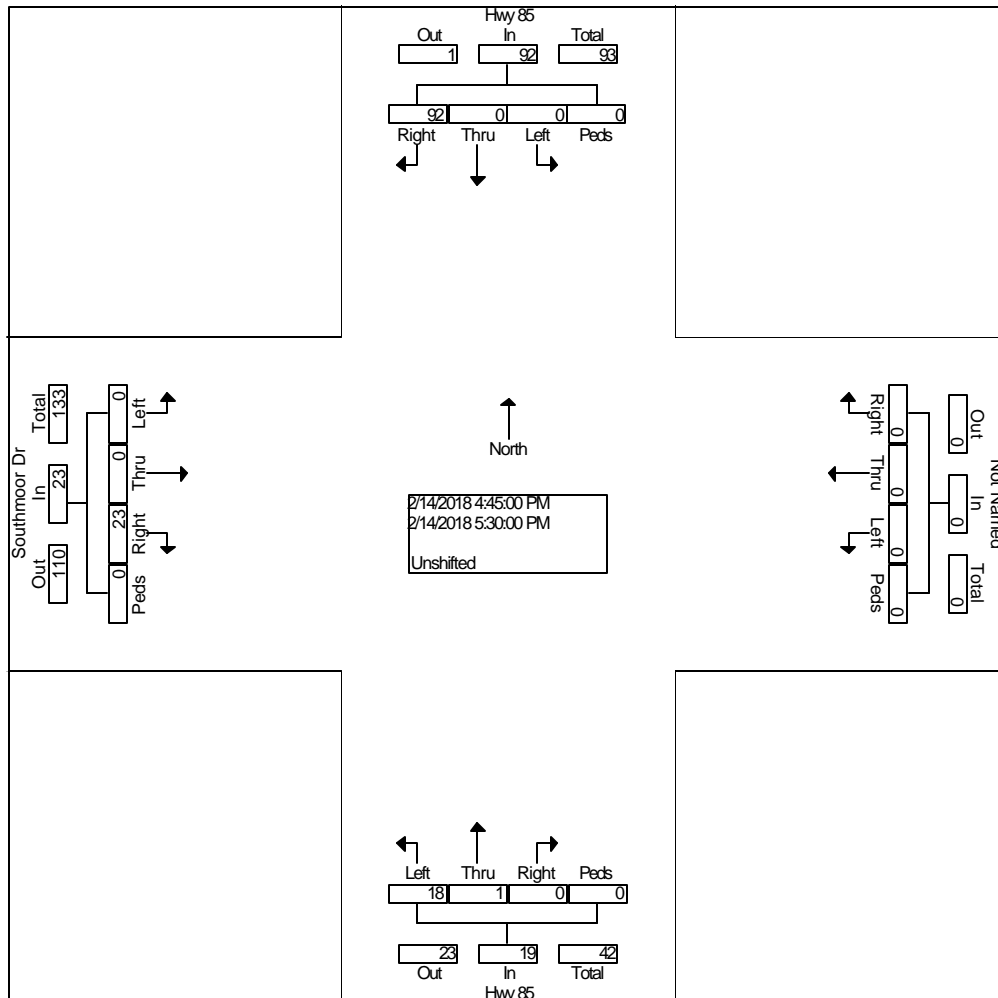
Groups Printed- Unshifted

| | 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 | | |
| 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 Factor | | | | | | | | | | | | | | | | | | | | | 0.931 |
| 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

Page No : 1

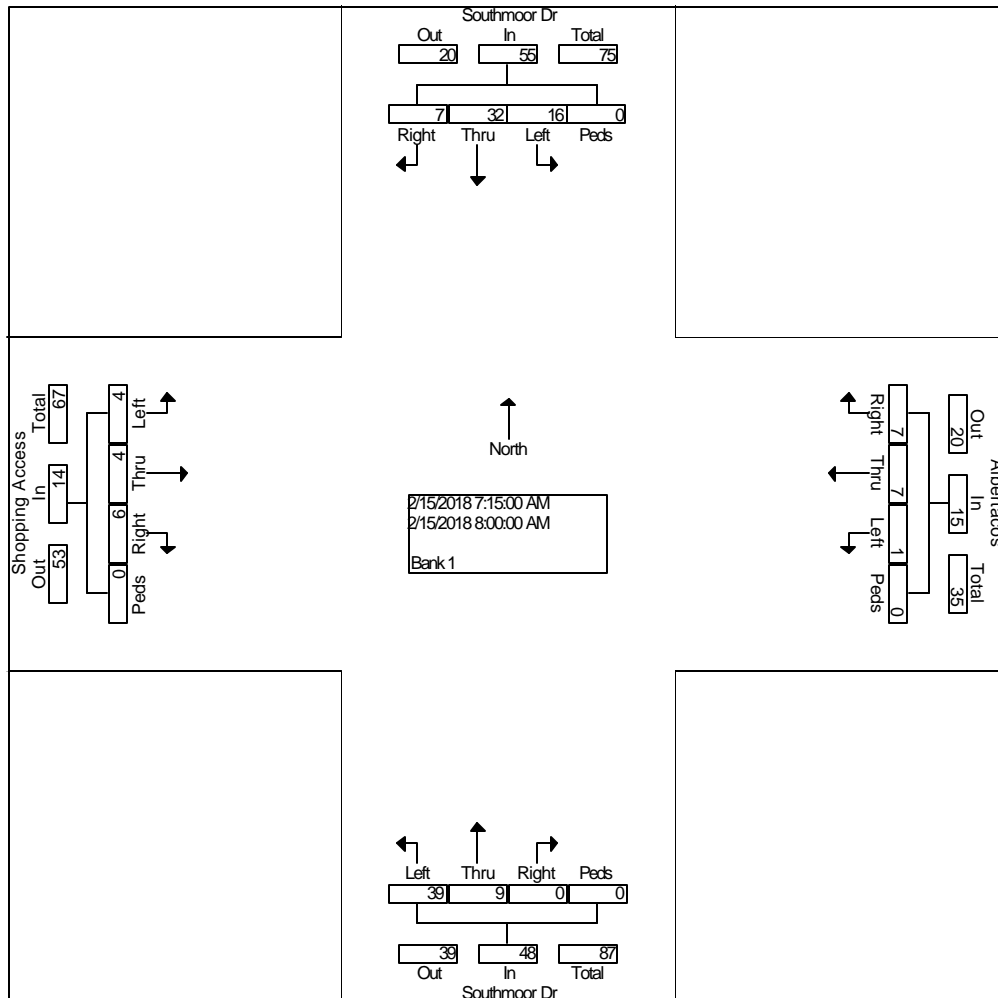
Groups Printed- Bank 1

| | 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 | | | | | |
| | 4 | | | | | 0 | | | | | 7 | | | | | 3 | | | | | |



Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Southmoor Dr - Security Shopping Access PM

Site Code : 00184140

Start Date : 02/14/2018

Page No : 1

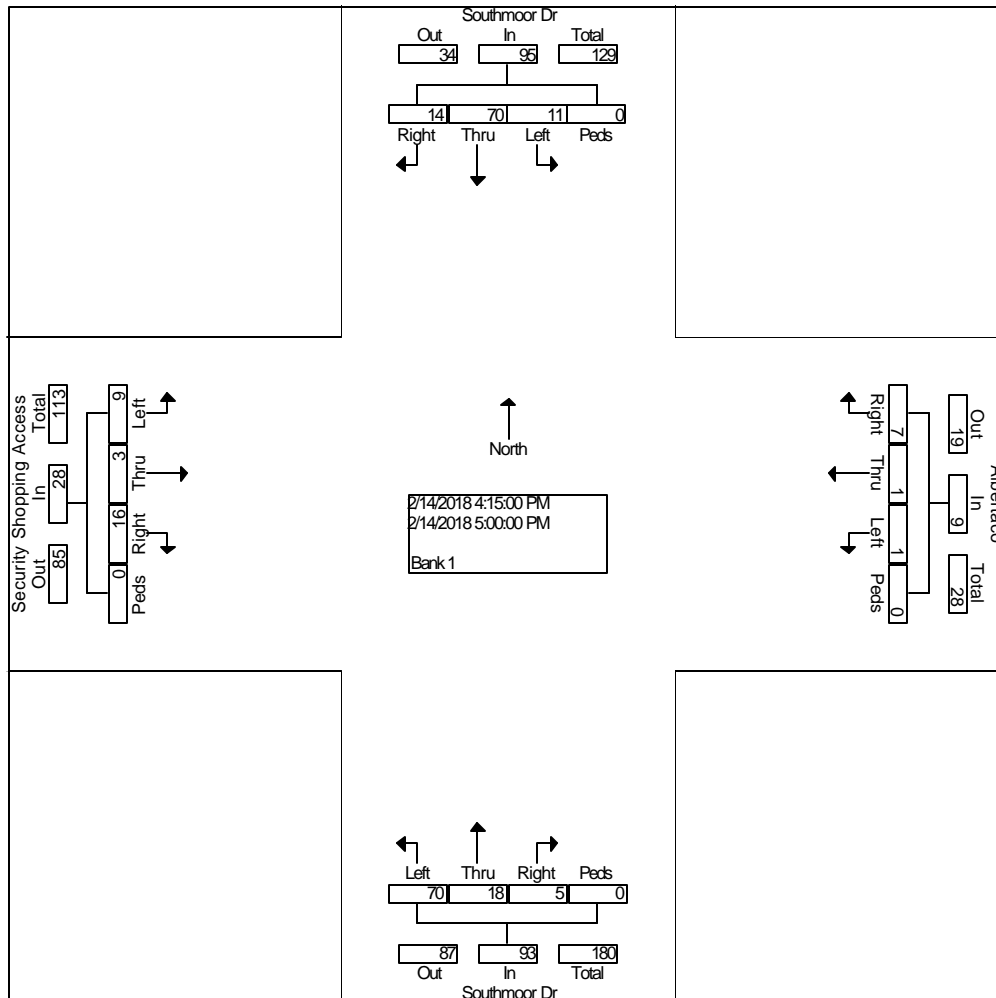
Groups Printed- Bank 1

| | 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 Factor | | | | | | | | | | | | | | | | | | | | | 0.815 |
| 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 | | | | | 0.81 | | | | | 0.37 | | | | | 0.64 | | | | | 0.53 | |
| | | | | | 9 | | | | | 5 | | | | | 6 | | | | | 8 | |



























Levels of Service

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 | Prot | 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 | | | 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 | 34.0 | 34.0 | 10.0 | 35.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 34.0 | 34.0 |
| Total Split (s) | 14.0 | 13.0 | 13.0 | 21.0 | 20.0 | | 17.0 | 39.0 | 39.0 | 17.0 | 39.0 | 39.0 |
| Total Split (%) | 15.6% | 14.4% | 14.4% | 23.3% | 22.2% | | 18.9% | 43.3% | 43.3% | 18.9% | 43.3% | 43.3% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 8.7 | 7.0 | 7.0 | 12.4 | 10.7 | 90.0 | 49.1 | 43.2 | 43.2 | 9.8 | 54.0 | 54.0 |
| Actuated g/C Ratio | 0.10 | 0.08 | 0.08 | 0.14 | 0.12 | 1.00 | 0.55 | 0.48 | 0.48 | 0.11 | 0.60 | 0.60 |
| v/c Ratio | 0.41 | 0.24 | 0.08 | 0.58 | 0.15 | 0.43 | 0.03 | 0.73 | 0.29 | 0.50 | 0.18 | 0.01 |
| Control Delay | 45.5 | 42.7 | 0.5 | 41.0 | 35.7 | 0.9 | 9.0 | 24.7 | 3.6 | 42.4 | 11.3 | 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 | 45.5 | 42.7 | 0.5 | 41.0 | 35.7 | 0.9 | 9.0 | 24.7 | 3.6 | 42.4 | 11.3 | 0.0 |
| LOS | D | D | A | D | D | A | A | C | A | D | B | A |
| Approach Delay | | 35.7 | | | 13.1 | | | 21.0 | | | 21.4 | |
| Approach LOS | | D | | | B | | | C | | | C | |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 65 (72%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 19.2

Intersection LOS: B

Intersection Capacity Utilization 59.1%

ICU Level of Service B

Analysis Period (min) 15

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



























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 | Prot | 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 | | | 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 | 34.0 | 34.0 | 10.0 | 35.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 34.0 | 34.0 |
| Total Split (s) | 17.0 | 12.0 | 12.0 | 22.0 | 17.0 | | 25.0 | 31.0 | 31.0 | 25.0 | 31.0 | 31.0 |
| Total Split (%) | 18.9% | 13.3% | 13.3% | 24.4% | 18.9% | | 27.8% | 34.4% | 34.4% | 27.8% | 34.4% | 34.4% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 11.5 | 6.7 | 6.7 | 14.5 | 12.1 | 90.0 | 39.7 | 33.7 | 33.7 | 17.5 | 52.1 | 52.1 |
| Actuated g/C Ratio | 0.13 | 0.07 | 0.07 | 0.16 | 0.13 | 1.00 | 0.44 | 0.37 | 0.37 | 0.19 | 0.58 | 0.58 |
| v/c Ratio | 0.18 | 0.27 | 0.09 | 0.67 | 0.12 | 0.16 | 0.08 | 0.43 | 0.54 | 0.78 | 0.52 | 0.02 |
| Control Delay | 36.8 | 44.2 | 0.7 | 41.6 | 34.8 | 0.2 | 11.2 | 24.7 | 5.3 | 43.2 | 15.8 | 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 | 36.8 | 44.2 | 0.7 | 41.6 | 34.8 | 0.2 | 11.2 | 24.7 | 5.3 | 43.2 | 15.8 | 0.0 |
| LOS | D | D | A | D | C | A | B | C | A | D | B | A |
| Approach Delay | | 30.4 | | | 25.1 | | | 15.8 | | | 24.4 | |
| Approach LOS | | C | | | C | | | B | | | C | |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 66 (73%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 22.1

Intersection LOS: C

Intersection Capacity Utilization 63.8%

ICU Level of Service B

Analysis Period (min) 15

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

























Timings

1: US Highway 85 & Community Collector/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) | 32 | 18 | 227 | 11 | 570 | 7 | 962 | 199 | 182 | 361 | 2 |
| Future Volume (vph) | 32 | 18 | 227 | 11 | 570 | 7 | 962 | 199 | 182 | 361 | 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 | 32.0 | 10.0 | 32.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 25.0 | 25.0 |
| Total Split (s) | 21.0 | 32.0 | 21.0 | 32.0 | | 11.0 | 32.0 | 32.0 | 15.0 | 36.0 | 36.0 |
| Total Split (%) | 21.0% | 32.0% | 21.0% | 32.0% | | 11.0% | 32.0% | 32.0% | 15.0% | 36.0% | 36.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 13.4 | 6.1 | 13.0 | 9.6 | 100.0 | 60.2 | 54.5 | 54.5 | 10.8 | 68.8 | 68.8 |
| Actuated g/C Ratio | 0.13 | 0.06 | 0.13 | 0.10 | 1.00 | 0.60 | 0.54 | 0.54 | 0.11 | 0.69 | 0.69 |
| v/c Ratio | 0.15 | 0.10 | 0.61 | 0.07 | 0.43 | 0.01 | 0.64 | 0.27 | 0.51 | 0.15 | 0.00 |
| Control Delay | 32.9 | 45.0 | 46.8 | 41.5 | 0.9 | 7.6 | 20.1 | 4.8 | 46.7 | 7.6 | 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 |
| Total Delay | 32.9 | 45.0 | 46.8 | 41.5 | 0.9 | 7.6 | 20.1 | 4.8 | 46.7 | 7.6 | 0.0 |
| LOS | C | D | D | D | A | A | C | A | D | A | A |
| Approach Delay | | 37.3 | | 14.3 | | | 17.4 | | | 20.7 | |
| Approach LOS | | D | | B | | | B | | | C | |

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 17.4

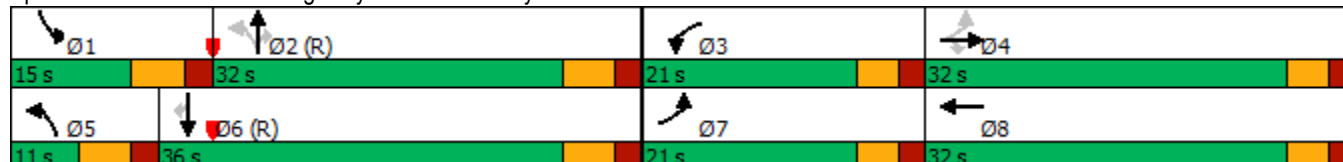
Intersection LOS: B

Intersection Capacity Utilization 59.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/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 | 1166 | 0 | 0 | 556 | 32 | 0 | 0 |
| Future Vol, veh/h | 0 | 12 | 9 | 1166 | 0 | 0 | 556 | 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 | 21 | 11 | 1476 | 0 | 0 | 604 | 35 | 0 | 0 |
| | | | | | | | | | | |
| Major/Minor | Minor2 | Major1 | | Major2 | | | | | | |
| Conflicting Flow All | - | 320 | 639 | 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 | 676 | 941 | - | 0 | 0 | - | - | | |
| Stage 1 | 0 | - | - | - | 0 | 0 | - | - | | |
| Stage 2 | 0 | - | - | - | 0 | 0 | - | - | | |
| Platoon blocked, % | | | | - | | | - | - | | |
| Mov Cap-1 Maneuver | - | 676 | 941 | - | - | - | - | - | | |
| 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) | 941 | - | 676 | - | - | | | | | |
| 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 | - | - | | | | | |

Timings

1: US Highway 85 & Community Collector/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) | 29 | 27 | 369 | 19 | 255 | 6 | 523 | 434 | 500 | 1022 | 11 |
| Future Volume (vph) | 29 | 27 | 369 | 19 | 255 | 6 | 523 | 434 | 500 | 1022 | 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 | 32.0 | 10.0 | 32.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 25.0 | 25.0 |
| Total Split (s) | 21.0 | 32.0 | 21.0 | 32.0 | | 11.0 | 32.0 | 32.0 | 15.0 | 36.0 | 36.0 |
| Total Split (%) | 21.0% | 32.0% | 21.0% | 32.0% | | 11.0% | 32.0% | 32.0% | 15.0% | 36.0% | 36.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 13.7 | 6.3 | 14.8 | 12.5 | 100.0 | 36.9 | 31.2 | 31.2 | 30.1 | 64.8 | 64.8 |
| Actuated g/C Ratio | 0.14 | 0.06 | 0.15 | 0.12 | 1.00 | 0.37 | 0.31 | 0.31 | 0.30 | 0.65 | 0.65 |
| v/c Ratio | 0.12 | 0.12 | 0.73 | 0.08 | 0.16 | 0.03 | 0.52 | 0.58 | 0.50 | 0.46 | 0.01 |
| Control Delay | 29.9 | 45.1 | 49.6 | 38.9 | 0.2 | 11.0 | 30.4 | 5.7 | 32.7 | 11.7 | 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 | 29.9 | 45.1 | 49.6 | 38.9 | 0.2 | 11.0 | 30.4 | 5.7 | 32.7 | 11.7 | 0.0 |
| LOS | C | D | D | D | A | B | C | A | C | B | A |
| Approach Delay | | 37.3 | | 29.7 | | | 19.1 | | | 18.5 | |
| Approach LOS | | D | | C | | | B | | | B | |

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 21.1

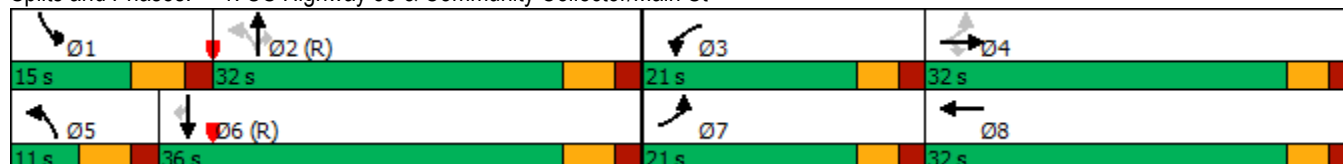
Intersection LOS: C

Intersection Capacity Utilization 63.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/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 | 963 | 0 | 0 | 1299 | 92 | 0 | 0 |
| Future Vol, veh/h | 0 | 15 | 3 | 963 | 0 | 0 | 1299 | 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 | 23 | 3 | 1070 | 0 | 0 | 1312 | 93 | 0 | 0 |
| | | | | | | | | | | |
| Major/Minor | Minor2 | Major1 | | Major2 | | | | | | |
| Conflicting Flow All | - | 703 | 1405 | 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 | 380 | 482 | - | 0 | 0 | - | - | | |
| Stage 1 | 0 | - | - | - | 0 | 0 | - | - | | |
| Stage 2 | 0 | - | - | - | 0 | 0 | - | - | | |
| Platoon blocked, % | | | | - | | | - | - | | |
| Mov Cap-1 Maneuver | - | 380 | 482 | - | - | - | - | - | | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | | |
| Stage 1 | - | - | - | - | - | - | - | - | | |
| Stage 2 | - | - | - | - | - | - | - | - | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Approach | EB | NB | | SB | | | | | | |
| HCM Control Delay, s | 15.1 | 0 | | 0 | | | | | | |
| HCM LOS | C | | | | | | | | | |
| | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | | | | | |
| Capacity (veh/h) | 482 | - | 380 | - | - | | | | | |
| HCM Lane V/C Ratio | 0.007 | - | 0.062 | - | - | | | | | |
| HCM Control Delay (s) | 12.5 | - | 15.1 | - | - | | | | | |
| HCM Lane LOS | B | - | C | - | - | | | | | |
| HCM 95th %tile Q(veh) | 0 | - | 0.2 | - | - | | | | | |

Timings 1: US Highway 85 & Community Collector/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) | 32 | 18 | 277 | 11 | 696 | 5 | 1175 | 243 | 229 | 442 | 2 |
| Future Volume (vph) | 32 | 18 | 277 | 11 | 696 | 5 | 1175 | 243 | 229 | 442 | 2 |
| Turn Type | Prot | NA | Prot | NA | Free | pm+pt | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | 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 | 34.0 | 10.0 | 35.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 34.0 | 34.0 |
| Total Split (s) | 25.0 | 20.0 | 20.0 | 15.0 | | 11.0 | 30.0 | 30.0 | 20.0 | 39.0 | 39.0 |
| Total Split (%) | 27.8% | 22.2% | 22.2% | 16.7% | | 12.2% | 33.3% | 33.3% | 22.2% | 43.3% | 43.3% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 11.9 | 6.0 | 12.6 | 9.1 | 90.0 | 49.8 | 44.2 | 44.2 | 11.6 | 59.4 | 59.4 |
| Actuated g/C Ratio | 0.13 | 0.07 | 0.14 | 0.10 | 1.00 | 0.55 | 0.49 | 0.49 | 0.13 | 0.66 | 0.66 |
| v/c Ratio | 0.15 | 0.08 | 0.61 | 0.06 | 0.46 | 0.01 | 0.71 | 0.29 | 0.55 | 0.20 | 0.00 |
| Control Delay | 34.3 | 39.8 | 41.8 | 37.3 | 1.0 | 8.4 | 23.8 | 4.5 | 41.1 | 8.4 | 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 | 34.3 | 39.8 | 41.8 | 37.3 | 1.0 | 8.4 | 23.8 | 4.5 | 41.1 | 8.4 | 0.0 |
| LOS | C | D | D | D | A | A | C | A | D | A | A |
| Approach Delay | | 36.3 | | 12.9 | | | 20.4 | | | 19.5 | |
| Approach LOS | | D | | B | | | C | | | B | |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 66 (73%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 18.1

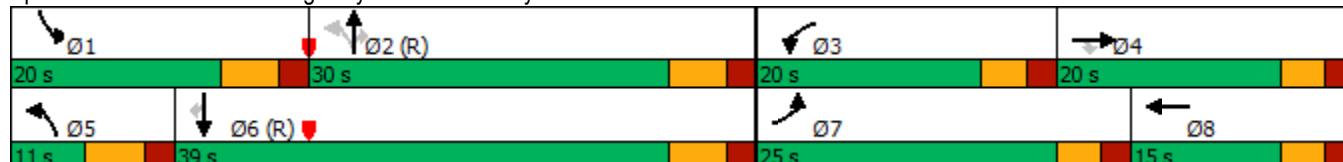
Intersection LOS: B

Intersection Capacity Utilization 67.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/Main St

























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

2040 Background Traffic
AM 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 | 13 | 10 | 1423 | 0 | 0 | 684 | 35 | 0 | 0 |
| Future Vol, veh/h | 0 | 13 | 10 | 1423 | 0 | 0 | 684 | 35 | 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 | 37 | 0 | 0 |
| | | | | | | | | | | |
| Major/Minor | Minor2 | | Major1 | | Major2 | | | | | |
| Conflicting Flow All | - | 379 | 757 | 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 | 850 | - | 0 | 0 | - | - | - | |
| Stage 1 | 0 | - | - | - | 0 | 0 | - | - | - | |
| Stage 2 | 0 | - | - | - | 0 | 0 | - | - | - | |
| Platoon blocked, % | | | | - | | | - | - | | |
| Mov Cap-1 Maneuver | - | 619 | 850 | - | - | - | - | - | - | |
| 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) | 850 | | - | | 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 | | - | | - | |

Timings 1: US Highway 85 & Community Collector/Main St

2040 Background Traffic
PM Peak Hour

| |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 29 | 27 | 450 | 19 | 311 | 6 | 639 | 530 | 618 | 1244 | 11 |
| Future Volume (vph) | 29 | 27 | 450 | 19 | 311 | 6 | 639 | 530 | 618 | 1244 | 11 |
| Turn Type | Prot | NA | Prot | NA | Free | pm+pt | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | 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 | 34.0 | 10.0 | 35.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 34.0 | 34.0 |
| Total Split (s) | 25.0 | 20.0 | 20.0 | 15.0 | | 11.0 | 30.0 | 30.0 | 20.0 | 39.0 | 39.0 |
| Total Split (%) | 27.8% | 22.2% | 22.2% | 16.7% | | 12.2% | 33.3% | 33.3% | 22.2% | 43.3% | 43.3% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 8.7 | 6.2 | 14.7 | 12.3 | 90.0 | 32.8 | 27.1 | 27.1 | 26.4 | 57.1 | 57.1 |
| Actuated g/C Ratio | 0.10 | 0.07 | 0.16 | 0.14 | 1.00 | 0.36 | 0.30 | 0.30 | 0.29 | 0.63 | 0.63 |
| v/c Ratio | 0.18 | 0.11 | 0.85 | 0.08 | 0.21 | 0.03 | 0.63 | 0.64 | 0.65 | 0.58 | 0.01 |
| Control Delay | 39.4 | 40.0 | 51.9 | 35.1 | 0.3 | 10.8 | 30.7 | 6.4 | 32.5 | 13.3 | 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 | 39.4 | 40.0 | 51.9 | 35.1 | 0.3 | 10.8 | 30.7 | 6.4 | 32.5 | 13.3 | 0.0 |
| LOS | D | D | D | D | A | B | C | A | C | B | A |
| Approach Delay | | 39.7 | | 30.9 | | | 19.6 | | | 19.5 | |
| Approach LOS | | D | | C | | | B | | | B | |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 66 (73%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 22.1

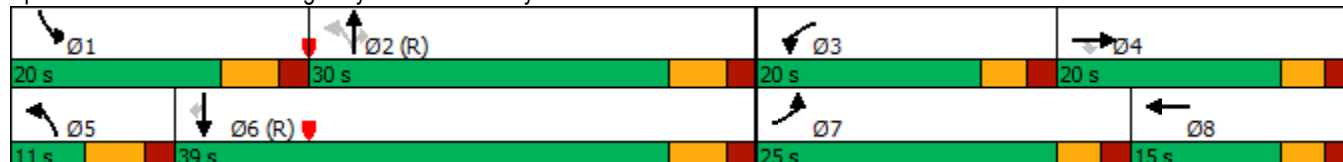
Intersection LOS: C

Intersection Capacity Utilization 72.2%

ICU Level of Service C







Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/Main St



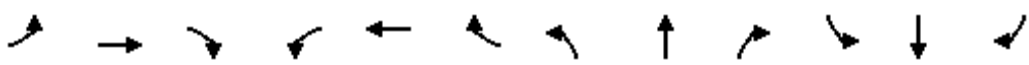












HCM 6th TWSC
2: US Highway 85 & Southmoor Dr

2040 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 | 17 | 3 | 1175 | 0 | 0 | 1592 | 102 | 0 | 0 | |
| Future Vol, veh/h | 0 | 17 | 3 | 1175 | 0 | 0 | 1592 | 102 | 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 | 18 | 3 | 1237 | 0 | 0 | 1676 | 107 | 0 | 0 | |
| | | | | | | | | | | | |
| Major/Minor | Minor2 | | Major1 | | Major2 | | | | | | |
| Conflicting Flow All | - | 892 | 1783 | 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 | 285 | 344 | - | 0 | 0 | - | - | - | | |
| Stage 1 | 0 | - | - | - | 0 | 0 | - | - | - | | |
| Stage 2 | 0 | - | - | - | 0 | 0 | - | - | - | | |
| Platoon blocked, % | | | | - | | | - | - | | | |
| Mov Cap-1 Maneuver | - | 285 | 344 | - | - | - | - | - | - | | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | - | | |
| Stage 1 | - | - | - | - | - | - | - | - | - | | |
| Stage 2 | - | - | - | - | - | - | - | - | - | | |
| | | | | | | | | | | | |
| Approach | EB | | NB | | SB | | | | | | |
| HCM Control Delay, s | 18.5 | | 0 | | 0 | | | | | | |
| HCM LOS | C | | | | | | | | | | |
| | | | | | | | | | | | |
| Minor Lane/Major Mvmt | | | NBL | NBT | EBLn1 | SBT | SBR | | | | |
| Capacity (veh/h) | | | 344 | - | 285 | - | - | | | | |
| HCM Lane V/C Ratio | | | 0.009 | - | 0.063 | - | - | | | | |
| HCM Control Delay (s) | | | 15.6 | - | 18.5 | - | - | | | | |
| HCM Lane LOS | | | C | - | C | - | - | | | | |
| HCM 95th %tile Q(veh) | | | 0 | - | 0.2 | - | - | | | | |

Timings 1: US Highway 85 & Community Collector/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) | 165 | 87 | 56 | 221 | 90 | 548 | 77 | 925 | 191 | 175 | 361 | 62 |
| Future Volume (vph) | 165 | 87 | 56 | 221 | 90 | 548 | 77 | 925 | 191 | 175 | 361 | 62 |
| 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 | 32.0 | 32.0 | 10.0 | 32.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 25.0 | 25.0 |
| Total Split (s) | 21.0 | 32.0 | 32.0 | 21.0 | 32.0 | | 11.0 | 32.0 | 32.0 | 15.0 | 36.0 | 36.0 |
| Total Split (%) | 21.0% | 32.0% | 32.0% | 21.0% | 32.0% | | 11.0% | 32.0% | 32.0% | 15.0% | 36.0% | 36.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 25.6 | 11.9 | 11.9 | 12.9 | 11.1 | 100.0 | 50.8 | 42.7 | 42.7 | 10.5 | 47.5 | 47.5 |
| Actuated g/C Ratio | 0.26 | 0.12 | 0.12 | 0.13 | 0.11 | 1.00 | 0.51 | 0.43 | 0.43 | 0.10 | 0.48 | 0.48 |
| v/c Ratio | 0.51 | 0.24 | 0.20 | 0.60 | 0.52 | 0.42 | 0.18 | 0.78 | 0.31 | 0.50 | 0.22 | 0.08 |
| Control Delay | 31.6 | 40.1 | 1.4 | 46.8 | 50.3 | 0.8 | 11.5 | 31.3 | 6.1 | 46.8 | 18.3 | 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 | 31.6 | 40.1 | 1.4 | 46.8 | 50.3 | 0.8 | 11.5 | 31.3 | 6.1 | 46.8 | 18.3 | 0.2 |
| LOS | C | D | A | D | D | A | B | C | A | D | B | A |
| Approach Delay | | 28.5 | | | 17.8 | | | 26.0 | | | 24.7 | |
| Approach LOS | | C | | | B | | | C | | | C | |

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 23.6

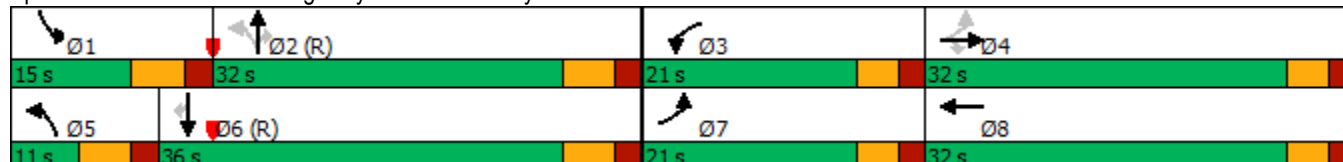
Intersection LOS: C

Intersection Capacity Utilization 60.5%

ICU Level of Service B







Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/Main St








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

Short-Term Total Traffic
AM Peak Hour

| Intersection | | | | | | | | | | |
|--------------------------|--------|---|---|---|---|------|---|---|-------|------|
| Int Delay, s/veh | 0.4 | | | | | | | | | |
| Movement | EBL | EBR | NBL | NBT | NBR | SBL | SBT | SBR | SWL | SWR |
| Lane Configurations | |  |  |  |  | |  |  | | |
| Traffic Vol, veh/h | 0 | 34 | 29 | 1193 | 0 | 0 | 590 | 49 | 0 | 0 |
| Future Vol, veh/h | 0 | 34 | 29 | 1193 | 0 | 0 | 590 | 49 | 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 | 59 | 37 | 1510 | 0 | 0 | 641 | 53 | 0 | 0 |
| | | | | | | | | | | |
| Major/Minor | Minor2 | Major1 | | Major2 | | | | | | |
| Conflicting Flow All | - | 347 | 694 | 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 | 649 | 897 | - | 0 | 0 | - | - | | |
| Stage 1 | 0 | - | - | - | 0 | 0 | - | - | | |
| Stage 2 | 0 | - | - | - | 0 | 0 | - | - | | |
| Platoon blocked, % | | | | - | | | - | - | | |
| Mov Cap-1 Maneuver | - | 649 | 897 | - | - | - | - | - | | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | | |
| Stage 1 | - | - | - | - | - | - | - | - | | |
| Stage 2 | - | - | - | - | - | - | - | - | | |
| | | | | | | | | | | |
| Approach | EB | NB | | SB | | | | | | |
| HCM Control Delay, s | 11.1 | 0.2 | | 0 | | | | | | |
| HCM LOS | B | | | | | | | | | |
| | | | | | | | | | | |
| Minor Lane/Major Mvmt | | NBL | NBT | EBLn1 | SBT | SBR | | | | |
| Capacity (veh/h) | | 897 | - | 649 | - | - | | | | |
| HCM Lane V/C Ratio | | 0.041 | - | 0.09 | - | - | | | | |
| HCM Control Delay (s) | | 9.2 | - | 11.1 | - | - | | | | |
| HCM Lane LOS | | A | - | B | - | - | | | | |
| HCM 95th %tile Q(veh) | | 0.1 | - | 0.3 | - | - | | | | |

HCM 6th TWSC
4: Southmoor Dr & Site Access

Short-Term Total Traffic
AM Peak Hour

| Intersection | | | | | | |
|--------------------------|---|--------|---|---|---|---|
| Int Delay, s/veh | 2.5 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | |  |  |  |  |
| Traffic Vol, veh/h | 11 | 9 | 36 | 20 | 42 | 33 |
| Future Vol, veh/h | 11 | 9 | 36 | 20 | 42 | 33 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 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 | 12 | 10 | 39 | 35 | 63 | 36 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 194 | 81 | 99 | 0 | - | 0 |
| Stage 1 | 81 | - | - | - | - | - |
| Stage 2 | 113 | - | - | - | - | - |
| 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 | 795 | 979 | 1494 | - | - | - |
| Stage 1 | 942 | - | - | - | - | - |
| Stage 2 | 912 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 774 | 979 | 1494 | - | - | - |
| Mov Cap-2 Maneuver | 760 | - | - | - | - | - |
| Stage 1 | 918 | - | - | - | - | - |
| Stage 2 | 912 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 9.4 | 3.9 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1494 | - | 845 | - | - | |
| HCM Lane V/C Ratio | 0.026 | - | 0.026 | - | - | |
| HCM Control Delay (s) | 7.5 | - | 9.4 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.1 | - | - | |

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 | 14 | 0 | 1 | 0 | 0 | 10 | 0 | 32 | 0 | 4 | 33 | 14 |
| Future Vol, veh/h | 14 | 0 | 1 | 0 | 0 | 10 | 0 | 32 | 0 | 4 | 33 | 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 | 15 | 0 | 1 | 0 | 0 | 11 | 0 | 34 | 0 | 4 | 35 | 15 |

























| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 91 | 85 | 43 | 85 | 92 | 34 | 50 | 0 | 0 | 34 | 0 | 0 |
| Stage 1 | 51 | 51 | - | 34 | 34 | - | - | - | - | - | - | - |
| Stage 2 | 40 | 34 | - | 51 | 58 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 893 | 805 | 1027 | 901 | 798 | 1039 | 1557 | - | - | 1578 | - | - |
| Stage 1 | 962 | 852 | - | 982 | 867 | - | - | - | - | - | - | - |
| Stage 2 | 975 | 867 | - | 962 | 847 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 882 | 803 | 1027 | 898 | 796 | 1039 | 1557 | - | - | 1578 | - | - |
| Mov Cap-2 Maneuver | 882 | 803 | - | 898 | 796 | - | - | - | - | - | - | - |
| Stage 1 | 962 | 849 | - | 982 | 867 | - | - | - | - | - | - | - |
| Stage 2 | 965 | 867 | - | 959 | 844 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----|-----|
| HCM Control Delay, s | 9.1 | 8.5 | 0 | 0.6 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h) | 1557 | - | - | 890 1039 | 1578 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.018 0.01 | 0.003 | - | - |
| HCM Control Delay (s) | 0 | - | - | 9.1 8.5 | 7.3 | - | - |
| HCM Lane LOS | A | - | - | A A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 0 | 0 | - | - |

Timings 1: US Highway 85 & Community Collector/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) | 119 | 108 | 61 | 371 | 99 | 248 | 70 | 509 | 424 | 488 | 1029 | 111 |
| Future Volume (vph) | 119 | 108 | 61 | 371 | 99 | 248 | 70 | 509 | 424 | 488 | 1029 | 111 |
| 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 | 32.0 | 32.0 | 10.0 | 32.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 25.0 | 25.0 |
| Total Split (s) | 21.0 | 32.0 | 32.0 | 21.0 | 32.0 | | 11.0 | 32.0 | 32.0 | 15.0 | 36.0 | 36.0 |
| Total Split (%) | 21.0% | 32.0% | 32.0% | 21.0% | 32.0% | | 11.0% | 32.0% | 32.0% | 15.0% | 36.0% | 36.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 21.4 | 8.9 | 8.9 | 14.8 | 12.2 | 100.0 | 34.4 | 27.0 | 27.0 | 27.3 | 49.3 | 49.3 |
| Actuated g/C Ratio | 0.21 | 0.09 | 0.09 | 0.15 | 0.12 | 1.00 | 0.34 | 0.27 | 0.27 | 0.27 | 0.49 | 0.49 |
| v/c Ratio | 0.35 | 0.34 | 0.22 | 0.73 | 0.44 | 0.16 | 0.29 | 0.59 | 0.61 | 0.54 | 0.61 | 0.14 |
| Control Delay | 29.6 | 45.1 | 1.8 | 49.7 | 46.2 | 0.2 | 15.4 | 34.6 | 6.6 | 34.6 | 22.3 | 2.4 |
| 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 | 29.6 | 45.1 | 1.8 | 49.7 | 46.2 | 0.2 | 15.4 | 34.6 | 6.6 | 34.6 | 22.3 | 2.4 |
| LOS | C | D | A | D | D | A | B | C | A | C | C | A |
| Approach Delay | | 29.5 | | | 32.1 | | | 21.4 | | | 24.6 | |
| Approach LOS | | C | | | C | | | C | | | C | |

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 25.5

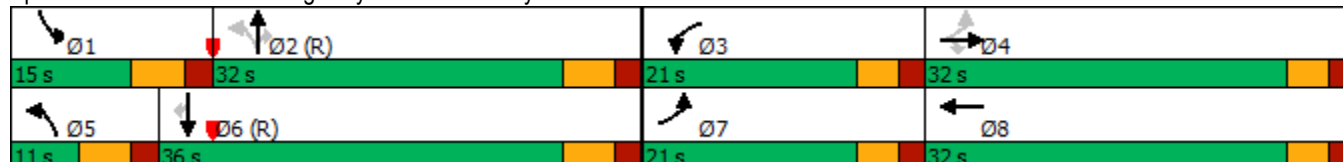
Intersection LOS: C

Intersection Capacity Utilization 64.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/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 | 44 | 36 | 1003 | 0 | 0 | 1326 | 134 | 0 | 0 | |
| Future Vol, veh/h | 0 | 44 | 36 | 1003 | 0 | 0 | 1326 | 134 | 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 | 69 | 40 | 1114 | 0 | 0 | 1339 | 135 | 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 | 17.3 | | 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 | 0.088 | | - | 0.19 | - | - | | | | | |
| HCM Control Delay (s) | 13.7 | | - | 17.3 | - | - | | | | | |
| HCM Lane LOS | B | | - | C | - | - | | | | | |
| HCM 95th %tile Q(veh) | 0.3 | | - | 0.7 | - | - | | | | | |

HCM 6th TWSC
4: Southmoor Dr & Site Access

Short-Term Total Traffic
PM Peak Hour

| Intersection | | | | | | |
|--------------------------|---|--------|---|---|---|---|
| Int Delay, s/veh | 3.1 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | |  |  |  |  |
| Traffic Vol, veh/h | 23 | 27 | 48 | 23 | 125 | 34 |
| Future Vol, veh/h | 23 | 27 | 48 | 23 | 125 | 34 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 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 | 25 | 29 | 52 | 30 | 132 | 37 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 285 | 151 | 169 | 0 | - | 0 |
| Stage 1 | 151 | - | - | - | - | - |
| Stage 2 | 134 | - | - | - | - | - |
| 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 | 705 | 895 | 1409 | - | - | - |
| Stage 1 | 877 | - | - | - | - | - |
| Stage 2 | 892 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 679 | 895 | 1409 | - | - | - |
| Mov Cap-2 Maneuver | 695 | - | - | - | - | - |
| Stage 1 | 845 | - | - | - | - | - |
| Stage 2 | 892 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 9.9 | 4.8 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1409 | - | 790 | - | - | |
| HCM Lane V/C Ratio | 0.037 | - | 0.069 | - | - | |
| HCM Control Delay (s) | 7.7 | - | 9.9 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.2 | - | - | |

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 | 9 | 0 | 1 | 0 | 0 | 9 | 1 | 53 | 0 | 15 | 91 | 46 |
| Future Vol, veh/h | 9 | 0 | 1 | 0 | 0 | 9 | 1 | 53 | 0 | 15 | 91 | 46 |
| 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 | 9 | 0 | 1 | 0 | 0 | 9 | 1 | 56 | 0 | 16 | 96 | 48 |

























| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 215 | 210 | 120 | 211 | 234 | 56 | 144 | 0 | 0 | 56 | 0 | 0 |
| Stage 1 | 152 | 152 | - | 58 | 58 | - | - | - | - | - | - | - |
| Stage 2 | 63 | 58 | - | 153 | 176 | - | - | - | - | - | - | - |
| 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 | 742 | 687 | 931 | 746 | 666 | 1011 | 1438 | - | - | 1549 | - | - |
| Stage 1 | 850 | 772 | - | 954 | 847 | - | - | - | - | - | - | - |
| Stage 2 | 948 | 847 | - | 849 | 753 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 729 | 679 | 931 | 739 | 659 | 1011 | 1438 | - | - | 1549 | - | - |
| Mov Cap-2 Maneuver | 729 | 679 | - | 739 | 659 | - | - | - | - | - | - | - |
| Stage 1 | 849 | 764 | - | 953 | 846 | - | - | - | - | - | - | - |
| Stage 2 | 938 | 846 | - | 839 | 745 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|-----|--|-----|--|-----|--|-----|--|
| HCM Control Delay, s | 9.9 | | 8.6 | | 0.1 | | 0.7 | |
| HCM LOS | A | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------------|------|-----|-----|
| Capacity (veh/h) | 1438 | - | - | 745 1011 | 1549 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.014 0.009 | 0.01 | - | - |
| HCM Control Delay (s) | 7.5 | - | - | 9.9 8.6 | 7.3 | - | - |
| HCM Lane LOS | A | - | - | A A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 0 | 0 | - | - |

Timings
1: US Highway 85 & Community Collector/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) | 165 | 87 | 56 | 271 | 90 | 674 | 77 | 1138 | 235 | 222 | 442 | 62 |
| Future Volume (vph) | 165 | 87 | 56 | 271 | 90 | 674 | 77 | 1138 | 235 | 222 | 442 | 62 |
| 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 | 32.0 | 32.0 | 10.0 | 32.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 25.0 | 25.0 |
| Total Split (s) | 21.0 | 32.0 | 32.0 | 21.0 | 32.0 | | 11.0 | 32.0 | 32.0 | 15.0 | 36.0 | 36.0 |
| Total Split (%) | 21.0% | 32.0% | 32.0% | 21.0% | 32.0% | | 11.0% | 32.0% | 32.0% | 15.0% | 36.0% | 36.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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 | 10.3 | 10.3 | 13.3 | 10.4 | 100.0 | 51.9 | 44.3 | 44.3 | 12.3 | 51.4 | 51.4 |
| Actuated g/C Ratio | 0.22 | 0.10 | 0.10 | 0.13 | 0.10 | 1.00 | 0.52 | 0.44 | 0.44 | 0.12 | 0.51 | 0.51 |
| v/c Ratio | 0.49 | 0.25 | 0.20 | 0.63 | 0.49 | 0.45 | 0.15 | 0.76 | 0.30 | 0.56 | 0.26 | 0.07 |
| Control Delay | 33.0 | 41.8 | 1.5 | 47.1 | 50.1 | 0.9 | 11.0 | 30.4 | 6.3 | 46.1 | 17.1 | 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 | 33.0 | 41.8 | 1.5 | 47.1 | 50.1 | 0.9 | 11.0 | 30.4 | 6.3 | 46.1 | 17.1 | 0.2 |
| LOS | C | D | A | D | D | A | B | C | A | D | B | A |
| Approach Delay | | 29.8 | | | 17.3 | | | 25.5 | | | 24.5 | |
| Approach LOS | | C | | | B | | | C | | | C | |

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

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

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 23.2

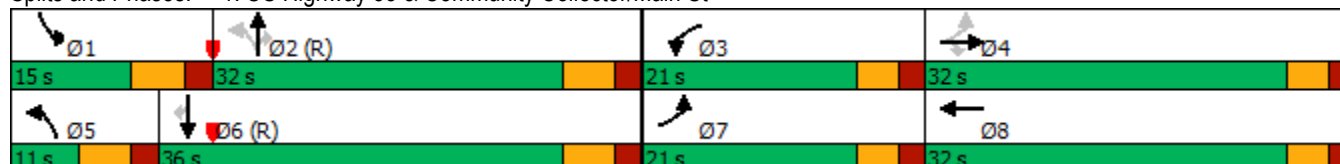
Intersection LOS: C

Intersection Capacity Utilization 67.8%

ICU Level of Service C







Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/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 | 35 | 30 | 1450 | 0 | 0 | 718 | 52 | 0 | 0 | |
| Future Vol, veh/h | 0 | 35 | 30 | 1450 | 0 | 0 | 718 | 52 | 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 | 37 | 32 | 1526 | 0 | 0 | 756 | 55 | 0 | 0 | |
| | | | | | | | | | | | |
| Major/Minor | Minor2 | | Major1 | | Major2 | | | | | | |
| Conflicting Flow All | - | 406 | 811 | 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 | 594 | 811 | - | 0 | 0 | - | - | | | |
| Stage 1 | 0 | - | - | - | 0 | 0 | - | - | | | |
| Stage 2 | 0 | - | - | - | 0 | 0 | - | - | | | |
| Platoon blocked, % | | | | - | | | | - | | | |
| Mov Cap-1 Maneuver | - | 594 | 811 | - | - | - | - | - | | | |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | | | |
| Stage 1 | - | - | - | - | - | - | - | - | | | |
| Stage 2 | - | - | - | - | - | - | - | - | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Approach | EB | | NB | | SB | | | | | | |
| HCM Control Delay, s | 11.5 | | 0.2 | | 0 | | | | | | |
| HCM LOS | B | | | | | | | | | | |
| | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBL | | NBT | EBLn1 | SBT | SBR | | | | | |
| Capacity (veh/h) | 811 | | - | 594 | - | - | | | | | |
| HCM Lane V/C Ratio | 0.039 | | - | 0.062 | - | - | | | | | |
| HCM Control Delay (s) | 9.6 | | - | 11.5 | - | - | | | | | |
| HCM Lane LOS | A | | - | B | - | - | | | | | |
| HCM 95th %tile Q(veh) | 0.1 | | - | 0.2 | - | - | | | | | |

HCM 6th TWSC
4: Southmoor Dr & Site Access

2040 Total Traffic
AM Peak Hour

| Intersection | | | | | | |
|--------------------------|---|--------|---|---|---|---|
| Int Delay, s/veh | 2.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | |  |  |  |  |
| Traffic Vol, veh/h | 11 | 9 | 36 | 24 | 57 | 33 |
| Future Vol, veh/h | 11 | 9 | 36 | 24 | 57 | 33 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 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 | 12 | 9 | 38 | 25 | 60 | 35 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 179 | 78 | 95 | 0 | - | 0 |
| Stage 1 | 78 | - | - | - | - | - |
| Stage 2 | 101 | - | - | - | - | - |
| 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 | 811 | 983 | 1499 | - | - | - |
| Stage 1 | 945 | - | - | - | - | - |
| Stage 2 | 923 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 791 | 983 | 1499 | - | - | - |
| Mov Cap-2 Maneuver | 772 | - | - | - | - | - |
| Stage 1 | 921 | - | - | - | - | - |
| Stage 2 | 923 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 9.3 | 4.5 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1499 | - | 855 | - | - | |
| HCM Lane V/C Ratio | 0.025 | - | 0.025 | - | - | |
| HCM Control Delay (s) | 7.5 | - | 9.3 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.1 | - | - | |

Intersection

Int Delay, s/veh 2

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 14 | 0 | 1 | 0 | 0 | 10 | 0 | 36 | 0 | 4 | 48 | 14 |
| Future Vol, veh/h | 14 | 0 | 1 | 0 | 0 | 10 | 0 | 36 | 0 | 4 | 48 | 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 | 15 | 0 | 1 | 0 | 0 | 11 | 0 | 38 | 0 | 4 | 51 | 15 |

























| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 111 | 105 | 59 | 105 | 112 | 38 | 66 | 0 | 0 | 38 | 0 | 0 |
| Stage 1 | 67 | 67 | - | 38 | 38 | - | - | - | - | - | - | - |
| Stage 2 | 44 | 38 | - | 67 | 74 | - | - | - | - | - | - | - |
| 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 | 867 | 785 | 1007 | 875 | 778 | 1034 | 1536 | - | - | 1572 | - | - |
| Stage 1 | 943 | 839 | - | 977 | 863 | - | - | - | - | - | - | - |
| Stage 2 | 970 | 863 | - | 943 | 833 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 857 | 783 | 1007 | 872 | 776 | 1034 | 1536 | - | - | 1572 | - | - |
| Mov Cap-2 Maneuver | 857 | 783 | - | 872 | 776 | - | - | - | - | - | - | - |
| Stage 1 | 943 | 836 | - | 977 | 863 | - | - | - | - | - | - | - |
| Stage 2 | 960 | 863 | - | 940 | 831 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|----|-----|
| HCM Control Delay, s | 9.2 | 8.5 | 0 | 0.4 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h) | 1536 | - | - | 866 1034 | 1572 | - | - |
| HCM Lane V/C Ratio | - | - | - | 0.018 0.01 | 0.003 | - | - |
| HCM Control Delay (s) | 0 | - | - | 9.2 8.5 | 7.3 | - | - |
| HCM Lane LOS | A | - | - | A A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 0 | 0 | - | - |

Timings
1: US Highway 85 & Community Collector/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) | 119 | 108 | 61 | 452 | 99 | 304 | 70 | 625 | 520 | 606 | 1251 | 111 |
| Future Volume (vph) | 119 | 108 | 61 | 452 | 99 | 304 | 70 | 625 | 520 | 606 | 1251 | 111 |
| 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 | 32.0 | 32.0 | 10.0 | 32.0 | | 11.0 | 25.0 | 25.0 | 11.0 | 25.0 | 25.0 |
| Total Split (s) | 23.0 | 32.0 | 32.0 | 23.0 | 32.0 | | 11.0 | 30.0 | 30.0 | 15.0 | 34.0 | 34.0 |
| Total Split (%) | 23.0% | 32.0% | 32.0% | 23.0% | 32.0% | | 11.0% | 30.0% | 30.0% | 15.0% | 34.0% | 34.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 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 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| 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) | 19.4 | 8.7 | 8.7 | 17.1 | 15.1 | 100.0 | 31.4 | 24.0 | 24.0 | 28.2 | 47.2 | 47.2 |
| Actuated g/C Ratio | 0.19 | 0.09 | 0.09 | 0.17 | 0.15 | 1.00 | 0.31 | 0.24 | 0.24 | 0.28 | 0.47 | 0.47 |
| v/c Ratio | 0.42 | 0.37 | 0.23 | 0.81 | 0.37 | 0.20 | 0.36 | 0.78 | 0.69 | 0.66 | 0.79 | 0.14 |
| Control Delay | 30.1 | 46.1 | 2.0 | 51.7 | 42.4 | 0.3 | 19.4 | 42.7 | 8.0 | 36.2 | 28.6 | 2.5 |
| 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 | 30.1 | 46.1 | 2.0 | 51.7 | 42.4 | 0.3 | 19.4 | 42.7 | 8.0 | 36.2 | 28.6 | 2.5 |
| LOS | C | D | A | D | D | A | B | D | A | D | C | A |
| Approach Delay | | 30.2 | | | 32.3 | | | 26.5 | | | 29.5 | |
| Approach LOS | | C | | | C | | | C | | | C | |

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

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

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 29.2

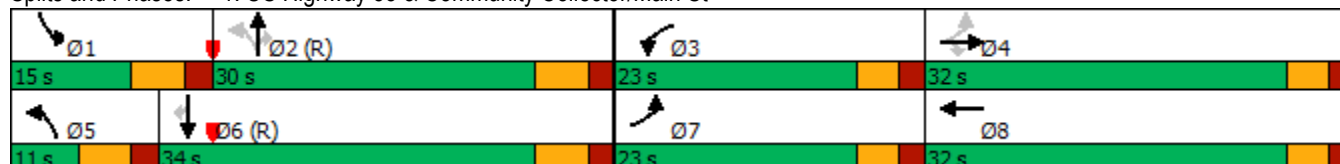
Intersection LOS: C

Intersection Capacity Utilization 72.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: US Highway 85 & Community Collector/Main St



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

2040 Total Traffic
PM 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 | 46 | 36 | 1215 | 0 | 0 | 1619 | 144 | 0 | 0 |
| Future Vol, veh/h | 0 | 46 | 36 | 1215 | 0 | 0 | 1619 | 144 | 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 | 48 | 38 | 1279 | 0 | 0 | 1704 | 152 | 0 | 0 |






| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - | 928 | 1856 |
| 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 | 270 | 322 |
| Stage 1 | 0 | - | - |
| Stage 2 | 0 | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | 270 | 322 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 21.2 | 0.5 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 322 | - | 270 | - | - |
| HCM Lane V/C Ratio | 0.118 | - | 0.179 | - | - |
| HCM Control Delay (s) | 17.7 | - | 21.2 | - | - |
| HCM Lane LOS | C | - | C | - | - |
| HCM 95th %tile Q(veh) | 0.4 | - | 0.6 | - | - |

HCM 6th TWSC
4: Southmoor Dr & Site Access

2040 Total Traffic
PM Peak Hour

| Intersection | | | | | | |
|--------------------------|---|--------|---|---|---|---|
| Int Delay, s/veh | 2.9 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | |  |  |  |  |
| Traffic Vol, veh/h | 23 | 27 | 48 | 27 | 139 | 34 |
| Future Vol, veh/h | 23 | 27 | 48 | 27 | 139 | 34 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | 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 | 24 | 28 | 51 | 28 | 146 | 36 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 294 | 164 | 182 | 0 | - | 0 |
| Stage 1 | 164 | - | - | - | - | - |
| Stage 2 | 130 | - | - | - | - | - |
| 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 | 697 | 881 | 1393 | - | - | - |
| Stage 1 | 865 | - | - | - | - | - |
| Stage 2 | 896 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 671 | 881 | 1393 | - | - | - |
| Mov Cap-2 Maneuver | 689 | - | - | - | - | - |
| Stage 1 | 833 | - | - | - | - | - |
| Stage 2 | 896 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 9.9 | 4.9 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1393 | - | 781 | - | - | |
| HCM Lane V/C Ratio | 0.036 | - | 0.067 | - | - | |
| HCM Control Delay (s) | 7.7 | - | 9.9 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.2 | - | - | |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 9 | 0 | 1 | 0 | 0 | 9 | 1 | 57 | 0 | 15 | 105 | 46 |
| Future Vol, veh/h | 9 | 0 | 1 | 0 | 0 | 9 | 1 | 57 | 0 | 15 | 105 | 46 |
| 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 | 9 | 0 | 1 | 0 | 0 | 9 | 1 | 60 | 0 | 16 | 111 | 48 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 234 | 229 | 135 | 230 | 253 | 60 | 159 | 0 | 0 | 60 | 0 | 0 |
| Stage 1 | 167 | 167 | - | 62 | 62 | - | - | - | - | - | - | - |
| Stage 2 | 67 | 62 | - | 168 | 191 | - | - | - | - | - | - | - |
| 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 | 721 | 671 | 914 | 725 | 650 | 1005 | 1420 | - | - | 1544 | - | - |
| Stage 1 | 835 | 760 | - | 949 | 843 | - | - | - | - | - | - | - |
| Stage 2 | 943 | 843 | - | 834 | 742 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 708 | 664 | 914 | 718 | 643 | 1005 | 1420 | - | - | 1544 | - | - |
| Mov Cap-2 Maneuver | 708 | 664 | - | 718 | 643 | - | - | - | - | - | - | - |
| Stage 1 | 834 | 752 | - | 948 | 842 | - | - | - | - | - | - | - |
| Stage 2 | 933 | 842 | - | 824 | 735 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|----|--|-----|--|-----|--|-----|--|
| HCM Control Delay, s | 10 | | 8.6 | | 0.1 | | 0.7 | |
| HCM LOS | B | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|------|-----|-----|
| Capacity (veh/h) | 1420 | - | - | 724 | 1005 | 1544 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | - | 0.015 | 0.009 | 0.01 | - | - |
| HCM Control Delay (s) | 7.5 | - | - | 10 | 8.6 | 7.4 | - | - |
| HCM Lane LOS | A | - | - | B | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | 0 | 0 | - | - |

Queuing Reports

Queuing and Blocking Report

Intersection: 1: US Highway 85 & Community Collector/Main St

| Movement | EB | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | L | T | L | T | T | R | L |
| Maximum Queue (ft) | 143 | 69 | 73 | 48 | 245 | 288 | 137 | 262 | 466 | 450 | 111 | 161 |
| Average Queue (ft) | 78 | 28 | 30 | 18 | 98 | 172 | 65 | 44 | 285 | 257 | 16 | 51 |
| 95th Queue (ft) | 135 | 59 | 65 | 40 | 229 | 258 | 118 | 139 | 418 | 401 | 65 | 129 |
| Link Distance (ft) | | 190 | 190 | | | 380 | 380 | | 484 | 484 | 484 | |
| Upstream Blk Time (%) | | | | | | | | | 1 | 1 | | |
| Queuing Penalty (veh) | | | | | | | | | 3 | 3 | | |
| Storage Bay Dist (ft) | 130 | | | 130 | 230 | | | 335 | | | | 775 |
| Storage Blk Time (%) | 2 | | | | 0 | 2 | | | 5 | | | |
| Queuing Penalty (veh) | 1 | | | | 0 | 3 | | | 4 | | | |

Intersection: 1: US Highway 85 & Community Collector/Main St

| Movement | SB | SB | SB | SB |
|-----------------------|-----|------|------|------|
| Directions Served | L | T | T | R |
| Maximum Queue (ft) | 180 | 197 | 151 | 36 |
| Average Queue (ft) | 112 | 76 | 56 | 11 |
| 95th Queue (ft) | 167 | 150 | 113 | 31 |
| Link Distance (ft) | | 1067 | 1067 | 1067 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 775 | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: US Highway 85 & Southmoor Dr

| Movement | EB | NB | NB | NB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | R | L | T | T |
| Maximum Queue (ft) | 43 | 21 | 50 | 21 |
| Average Queue (ft) | 19 | 9 | 2 | 1 |
| 95th Queue (ft) | 44 | 24 | 23 | 10 |
| Link Distance (ft) | 117 | | 813 | 813 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 400 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Queuing and Blocking Report

Intersection: 4: Southmoor Dr & Site Access

| Movement | EB | NB |
|-----------------------|----|-----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 30 | 41 |
| Average Queue (ft) | 12 | 4 |
| 95th Queue (ft) | 36 | 22 |
| Link Distance (ft) | 86 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 200 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: Southmoor Dr & Residential Access

| Movement | EB |
|-----------------------|-----|
| Directions Served | LR |
| Maximum Queue (ft) | 30 |
| Average Queue (ft) | 13 |
| 95th Queue (ft) | 37 |
| Link Distance (ft) | 201 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Zone Summary

| |
|-------------------------------|
| Zone wide Queuing Penalty: 14 |
|-------------------------------|

Queuing and Blocking Report

Intersection: 1: US Highway 85 & Community Collector/Main St

| Movement | EB | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | L | T | L | T | T | R | L |
| Maximum Queue (ft) | 131 | 104 | 111 | 73 | 315 | 384 | 302 | 109 | 261 | 236 | 304 | 280 |
| Average Queue (ft) | 65 | 36 | 36 | 25 | 208 | 266 | 85 | 46 | 166 | 139 | 134 | 170 |
| 95th Queue (ft) | 116 | 75 | 77 | 58 | 304 | 376 | 208 | 88 | 237 | 208 | 254 | 257 |
| Link Distance (ft) | | 190 | 190 | | | 380 | 380 | | 484 | 484 | 484 | |
| Upstream Blk Time (%) | | | | | | 2 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 130 | | | 130 | 230 | | | 335 | | | | 775 |
| Storage Blk Time (%) | 1 | | 0 | | 1 | 21 | | | | | | |
| Queuing Penalty (veh) | 1 | | 0 | | 3 | 47 | | | | | | |

Intersection: 1: US Highway 85 & Community Collector/Main St

| Movement | SB | SB | SB | SB |
|-----------------------|-----|------|------|------|
| Directions Served | L | T | T | R |
| Maximum Queue (ft) | 313 | 403 | 462 | 69 |
| Average Queue (ft) | 209 | 222 | 247 | 24 |
| 95th Queue (ft) | 276 | 358 | 390 | 49 |
| Link Distance (ft) | | 1067 | 1067 | 1067 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 775 | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: US Highway 85 & Southmoor Dr

| Movement | EB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | R | L | T | TR |
| Maximum Queue (ft) | 68 | 63 | 20 | 21 |
| Average Queue (ft) | 27 | 19 | 1 | 1 |
| 95th Queue (ft) | 52 | 48 | 11 | 10 |
| Link Distance (ft) | 117 | | 484 | 484 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 400 | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Queuing and Blocking Report

Intersection: 4: Southmoor Dr & Site Access

| Movement | EB | NB |
|-----------------------|----|-----|
| Directions Served | LR | L |
| Maximum Queue (ft) | 54 | 39 |
| Average Queue (ft) | 26 | 9 |
| 95th Queue (ft) | 51 | 34 |
| Link Distance (ft) | 86 | |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | 200 |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: Southmoor Dr & Residential Access

| Movement | EB |
|-----------------------|-----|
| Directions Served | LR |
| Maximum Queue (ft) | 30 |
| Average Queue (ft) | 8 |
| 95th Queue (ft) | 30 |
| Link Distance (ft) | 201 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Zone Summary

| |
|-------------------------------|
| Zone wide Queuing Penalty: 51 |
|-------------------------------|

Queuing and Blocking Report

With Train Crossing

Intersection: 1: US Highway 85 & Main St

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|-----------------------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | L | T | R | L | T | T | R |
| Maximum Queue (ft) | 150 | 157 | 50 | 26 | 76 | 74 | 117 | 65 | 82 | 271 | 231 | 104 |
| Average Queue (ft) | 112 | 73 | 17 | 18 | 69 | 54 | 83 | 59 | 45 | 188 | 159 | 47 |
| 95th Queue (ft) | 173 | 163 | 55 | 32 | 93 | 98 | 125 | 67 | 96 | 298 | 267 | 132 |
| Link Distance (ft) | | 282 | 282 | | 68 | 68 | 68 | | | 483 | 483 | 483 |
| Upstream Blk Time (%) | | | | | 53 | 14 | 14 | 2 | | | | |
| Queuing Penalty (veh) | | | | | 181 | 50 | 50 | 0 | | | | |
| Storage Bay Dist (ft) | 130 | | | 130 | | | | 230 | 335 | | | |
| Storage Blk Time (%) | 9 | | | | | | 14 | 2 | | | | |
| Queuing Penalty (veh) | 4 | | | | | | 97 | 1 | | | | |

Intersection: 1: US Highway 85 & Main St

| Movement | SB | SB | SB | SB | SB |
|-----------------------|-----|-----|------|------|------|
| Directions Served | L | L | T | T | R |
| Maximum Queue (ft) | 173 | 198 | 123 | 109 | 18 |
| Average Queue (ft) | 144 | 170 | 60 | 58 | 8 |
| 95th Queue (ft) | 224 | 223 | 131 | 122 | 22 |
| Link Distance (ft) | | | 1066 | 1066 | 1066 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 775 | 775 | | | |
| Storage Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |

Queuing and Blocking Report

With Train Crossing

Intersection: 1: US Highway 85 & Main St

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | T | T | R | L | L | T | R | L | T | T | R |
| Maximum Queue (ft) | 130 | 152 | 117 | 78 | 99 | 78 | 122 | 68 | 110 | 245 | 210 | 521 |
| Average Queue (ft) | 90 | 89 | 44 | 31 | 86 | 74 | 74 | 47 | 53 | 132 | 109 | 380 |
| 95th Queue (ft) | 138 | 160 | 106 | 75 | 102 | 82 | 117 | 87 | 115 | 230 | 194 | 645 |
| Link Distance (ft) | | 282 | 282 | | 68 | 68 | 68 | | | 483 | 483 | 483 |
| Upstream Blk Time (%) | | | | | 88 | 63 | 23 | 1 | | | | 8 |
| Queuing Penalty (veh) | | | | | 251 | 179 | 65 | 0 | | | | 34 |
| Storage Bay Dist (ft) | 130 | | | 130 | | | | 230 | 335 | | | |
| Storage Blk Time (%) | 4 | 4 | 0 | | | | 23 | 1 | | | | |
| Queuing Penalty (veh) | 2 | 5 | 0 | | | | 69 | 1 | | | | |

Intersection: 1: US Highway 85 & Main St

| Movement | SB | SB | SB | SB | SB |
|-----------------------|-----|-----|------|------|------|
| Directions Served | L | L | T | T | R |
| Maximum Queue (ft) | 825 | 872 | 1081 | 1036 | 64 |
| Average Queue (ft) | 691 | 733 | 498 | 405 | 27 |
| 95th Queue (ft) | 944 | 985 | 1131 | 940 | 58 |
| Link Distance (ft) | | | 1066 | 1066 | 1066 |
| Upstream Blk Time (%) | | | 13 | | |
| Queuing Penalty (veh) | | | 0 | | |
| Storage Bay Dist (ft) | 775 | 775 | | | |
| Storage Blk Time (%) | 23 | 31 | | | |
| Queuing Penalty (veh) | 142 | 193 | | | |