



LSC TRANSPORTATION CONSULTANTS, INC.
2504 East Pikes Peak Avenue, Suite 304
Colorado Springs, CO 80909
(719) 633-2868
FAX (719) 633-5430
E-mail: lsc@lsctrans.com
Website: <http://www.lsctrans.com>

Rock Creek Mesa
Master Traffic Impact Study
PCD File No. P209
(LSC #184380)
July 12, 2021

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.

Kelly Nelson

7-21-2021

Date



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July 12, 2021

Colorado Springs Equities
ATTN: Kelly Nelson
Development Manager
90 South Cascade Avenue, Suite 1500
Colorado Springs, CO 80903

RE: Rock Creek Mesa
El Paso County, CO
Traffic Impact Study
LSC # 184380

Dear Ms. Nelson,

LSC Transportation Consultants, Inc. has prepared this traffic impact study for the proposed Rock Creek Mesa residential development with approximately 165 units in unincorporated El Paso County, Colorado. The site is located west of State Highway (SH) 115 and accessed via Cherokee Road and Pawnee Road, which will serve as the development access to SH 115. Direct access to SH 115 is not proposed.

This report has been prepared for submittal to El Paso County and the Colorado Department of Transportation (CDOT).

REPORT CONTENTS

The preparation of this report included the following:

- An inventory the existing adjacent and nearby area roadway system, including roadway surface conditions, functional classifications, roadway widths, lane configurations, traffic controls, posted speed limits, pavement markings, intersection and access spacing, roadway and intersection alignments, auxiliary left- and right-turn lanes, and intersection sight distances.
- Morning and afternoon peak-hour turning-movement traffic counts at the intersections of State Highway 115/Pawnee Road and State Highway 115/Cherokee Drive.
- CDOT annual average daily traffic (AADT) volume data for State Highway 115 adjacent to Pawnee Road and Cherokee Drive.

- Projections of current/short-term and 20-year background (baseline) traffic volumes on State Highway 115 in the vicinity of Pawnee Road and Cherokee Drive and at the study-area intersections.
- The proposed site land use and access plan.
- Estimates of average weekday 24-hour and weekday peak-hour trip generation for the proposed Rock Creek Mesa development.
- Estimates of the directional distribution of site-generated vehicle trips to the north and south on Highway 115.
- Projections of site-generated turning-movement traffic volumes at study-area intersections.
 - State Highway 115/Pawnee Road
 - State Highway 115/Cherokee Drive
- Calculations of the total traffic (site traffic plus background traffic) at the study-area roadways and intersections for the short and long term.
- Level of service analysis at the study-area intersections.
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the adequacy of existing auxiliary right-/left-turn lanes on State Highway 115 at the study-area intersections for the affected turning movements, based on the criteria in the *Colorado State Highway Access Code*.
- Recommendations for roadway and state highway improvements. A summary of report findings and conclusions.

LAND USE AND ACCESS

Figure 1 shows the site location relative to the adjacent and nearby roadways. Rock Creek Mesa is a planned 165-dwelling-unit, single-family residential development. Access to State Highway 115 from the residential development will be via the existing Pawnee Road and Cherokee Road. No direct access is proposed to State Highway 115. Figure 2 contains the proposed site plan showing the proposed development areas, new streets, and access points.

Intersection Sight Distance

The proposed access points/private driveways and proposed public street intersections with the County roadways will need to meet *Engineering Criteria Manual (ECM)* criteria for sight distance. The sight distance for private access points/driveways is per *ECM* Tables 2-33 and 2-35. Proposed public roadway intersections on Pawnee will need to meet sight distance criteria in Table 2-21.

The line-of-sight triangles must allow for sufficient entering sight distance and sight distance along the roadway. Landscaping, site improvements, etc. will need to be kept out of the line of sight “triangles.”

An exhibit will be provided with the subsequent application when the design of the project is "finalized" (as required by El Paso County).

ROAD AND TRAFFIC CONDITIONS

Figure 1 shows the streets and roads adjacent to and in the vicinity of the development parcels. Roads serving the site are identified below followed by a brief description of each. Also, please refer to Exhibit 2 - the existing roadway conditions exhibit attached to this report.

State Highway 115 (SH 115) is classified as “E-X: Expressway, Major Bypass” by CDOT and extends from Canon City to Colorado Springs. The posted speed limit along State Highway 115A in the vicinity of the site is 60 miles per hour (mph). In the vicinity of the site, the State Highway right-of-way (ROW) is about 100 feet. There are four through lanes (two per direction) and existing auxiliary left- and right-turn lanes on SH 115 at its intersections with Pawnee Road and Cherokee Drive.

Pawnee Road is a local east-west, two-lane El Paso County roadway with a posted speed limit of 20 mph. The paved roadway width is about 24 feet and 60 feet of right-of-way. This width does not meet the current *ECM* standard width for Rural Local roadways. Currently, there is a single eastbound shared right/left turn lane at its stop-sign-controlled T-intersection with SH 115. The following auxiliary turn lanes currently exist at the intersection of SH 115/Pawnee Road: southbound right-turn deceleration lane, northbound left-turn deceleration lane, and northbound left-turn acceleration lane.

Cherokee Drive is a local east-west, two-lane El Paso County roadway with a 60-foot right-of-way. The current pavement width is about 22 feet. The posted speed limit is 20 mph. Currently, there is a single eastbound shared right/left turn lane at its stop-sign-controlled T-intersection with SH 115. The following auxiliary turn lanes currently exist at the intersection of SH 115/Cherokee Drive: southbound right-turn deceleration lane, northbound left-turn deceleration lane, and northbound left-turn acceleration lane.

The following are Rural Local roadways without a posted speed limit adjacent to the site. Please refer to Exhibit 2 (attached) for details regarding each roadway, including roadway widths and surface descriptions.

- Delaware Road
- Seneca Road
- Comanche Road
- Sioux Road – Does not yet exist

Existing Traffic Volumes

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

- State Highway 115/Pawnee Road
 - Tuesday, March 2, 2021 from 6:00 – 8:00 a.m.
 - Thursday, October 15, 2020 from 6:30 – 8:30 a.m.
 - Thursday, October 15, 2020 from 4:30 – 6:30 p.m.
- State Highway 115/Cherokee Drive
 - Tuesday, October 20, 2020 from 6:30 – 8:30 a.m.
 - Tuesday, October 20, 2020 from 4:30 – 6:30 p.m.

Figure 3 shows these turning-movement volumes, as well as the average weekday traffic volumes (estimated based on factored peak-hour count data) on the local county roads within the study area. Raw count data are attached. Daily volumes shown for SH 115 are CDOT Annual Average Daily Traffic volumes.

Existing Level of Service

Please refer to Figure 3 for existing level of service analysis. Based on the HCM procedures and the LSC model for the existing channelized-T configuration, calculations indicate LOS A for the eastbound approaches to State Highway 115 at the Pawnee and Cherokee intersections. Please refer to the “Level of Service” section of this report for explanation, details and complete results.

Crash/Accident History

A crash analysis was completed with the most recently available accident data (through October 2020) from the Colorado State Patrol. Detailed crash type data (i.e., property or bodily injury type, high-speed, left-turn, involving pedestrians/cyclists, etc.) were included in the crash reports. There were two crashes at the intersection of SH 115/Pawnee Road and one crash at the intersection of SH 115/Cherokee Drive three years prior to October 2020. None of the three crashes were fatal.

TRIP GENERATION

Estimates of the vehicle trips projected to be generated by the 165-dwelling-unit Rock Creek Mesa residential development have been made using the nationally published trip-generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Land use category “210 – Single-Family (Detached) Housing,” along with corresponding trip generation rates, have been used to develop the trip-generation estimates for the site development.

Table 1 below presents a summary of the estimated site trip generation. The detailed trip-generation estimate for the development, including ITE rates for the proposed land use, is presented in Table 2 (attached).

Table 1: Estimated Site External Vehicle-Trip Generation

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	31	92	123
Afternoon Peak Hour	107	60	167
Daily/24-hour	790	790	1,589

Rock Creek Mesa residential development is projected to generate about 1,589 vehicle trips on the average weekday during a 24-hour period, with approximately half entering and half exiting the site. During the morning peak hour, approximately 31 entering vehicles and 92 exiting vehicles would be generated by the developed site. Approximately 107 entering vehicles and 60 exiting vehicles would be generated by the site during the afternoon peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

An estimate of the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 5 shows the directional-distribution estimate for the site-generated trips. The figure shows the percentages of the site-generated vehicle trips projected to be oriented to and from the north and south on SH 115. Estimates have been based on the following factors: the proposed land use, the area road system serving the site (basically Highway 115), the directional split of existing counts, and the site's geographic location relative to the City of Colorado Springs and the Pikes Peak region.

Site-Generated Traffic

Site-generated traffic volumes on Pawnee Road, Cherokee Road and SH 115 have been calculated by applying the directional-distribution percentages estimated by LSC (from Figure 5) to the trip-generation estimates (from Table 2). Local trip routing of trips was then estimated based on development parcel locations and proposed development street connections to the existing roadways. Also, these volumes reflect the assumed conversion of Cherokee/SH 115 to a **right in/right out** intersection. Site-generated left-turning movements to/from State Highway 115 are shown to occur at the Pawnee/SH 115 intersection. Figure 6 shows the projected site-generated traffic volumes for the weekday evening peak hour.

SHORT-TERM ANALYSIS

Short-term Baseline Volumes

Figure 4 shows the "short-term baseline" volumes and levels of service. Short-term baseline represents shifted existing volumes from Figure 3 to reflect the assumed conversion of

Cherokee/SH 115 to a right in/right out. The volumes in Figure 4 reflect left turns at Cherokee shifted up to the Pawnee/SH 115 intersection.

Short-Term Baseline-Plus-Site-Generated Traffic Volumes

Figure 7 shows the sum of the short-term baseline traffic volumes (from Figure 4) and site-generated peak-hour traffic volumes (shown in Figure 6). These volumes represent the projected short-term total traffic assuming buildout of Rock Creek Mesa residential development.

LONG TERM ANALYSIS

Estimated Future 2040 Background Traffic Volumes

Figure 8 shows the projected 20-year background traffic volumes for the year 2040. The estimated 2040 background northbound and southbound through traffic volumes on SH 115 are based on the CDOT 20-year growth factor of 1.24. The 2040 background volumes reflect the assumed conversion of Cherokee/SH 115 to a **right in/right out** intersection. Traffic from the proposed Rock Creek Mesa residential development is not included in the **background** traffic volumes.

Note: LSC has estimated additional background traffic for currently-vacant platted residential lots (under different ownership and not part of this development) also served by Cherokee and Pawnee.

Note: Potential future trip generation for the vacant 17.5-acre parcel directly northwest of SH 115/Pawnee (parcel ID 6530300023) **has not been included** in the background traffic estimates. This parcel is currently zoned F-5 (Forestry and Recreation) but could potentially be rezoned for development in the future. LSC is not aware of any such plans. If the property owner were to apply for rezoning for development of this parcel in the future, the owner/developer would likely need to provide a separate traffic impact study report to address the additional impact of a rezone/development.

Future 2040 Total Traffic Volumes

Figure 9 shows the sum of 2040 background traffic volumes (from Figure 8) plus the site-generated traffic volumes (from Figure 6).

LEVEL OF SERVICE ANALYSIS

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

Table 3: Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (Seconds per Vehicle)	Average Control Delay (Seconds per Vehicle) ¹
A	≤ 10.0	≤ 10.0
B	10.1 - 20.0	10.1 - 15.0
C	20.1 - 35.0	15.1 - 25.0
D	35.1 - 55.0	25.1 - 35.0
E	55.1 - 80.0	35.1 - 50.0
F	≥ 80.1	≥ 50.1
¹ For unsignalized intersections, if v/c is > 1.00, then LOS is LOS F, regardless of the projected average control delay per vehicle		

The following intersections have been analyzed to determine the projected levels of service for worst-case turning movement.

- State Highway 115/Pawnee Road
- State Highway 115/Cherokee Drive

A summary of all short-term and 2040-traffic-scenario levels of service during the weekday morning and evening peak hours are shown in the attached figures. Detailed Synchro reports are attached.

SH 115/Cherokee Drive

All approaches are projected to operate at LOS B for the eastbound right-turn movement (worst-case turning movement) during both peak hours through the 20-year horizon, with or without the addition of site-generated traffic.

SH 115/Pawnee Road

All approaches are projected to operate at LOS C for the eastbound approach (worst-case lane group/turning movement) during both peak hours through the 20-year horizon, with or without the addition of site-generated traffic.

TRAFFIC SIGNAL WARRANT ANALYSIS

The intersection of SH 115/Pawnee Road has been analyzed to evaluate the potential for meeting a warrant(s) for a traffic-control signal in the future. The combination of major street approach volumes (includes the sum of northbound and southbound approach volumes) and minor street left-turn volumes (eastbound approach volume) were analyzed to determine if the combination would exceed the threshold criteria for Four-Hour Vehicular-Volume Traffic-Signal Warrants and applicable other warrants in the *2009 Manual on Uniform Traffic Control Devices (MUTCD)*.

Five separate one-hour periods within the following morning and late-afternoon/evening periods have been analyzed:

- 6:00 – 7:00 a.m. (short-term only)
- 7:00 – 8:00 a.m.
- 8:00 – 9:00 a.m.
- 4:00 – 5:00 p.m.
- 5:00 – 6:00 p.m.

Warrant 2 - Four-Hour Vehicular Warrant

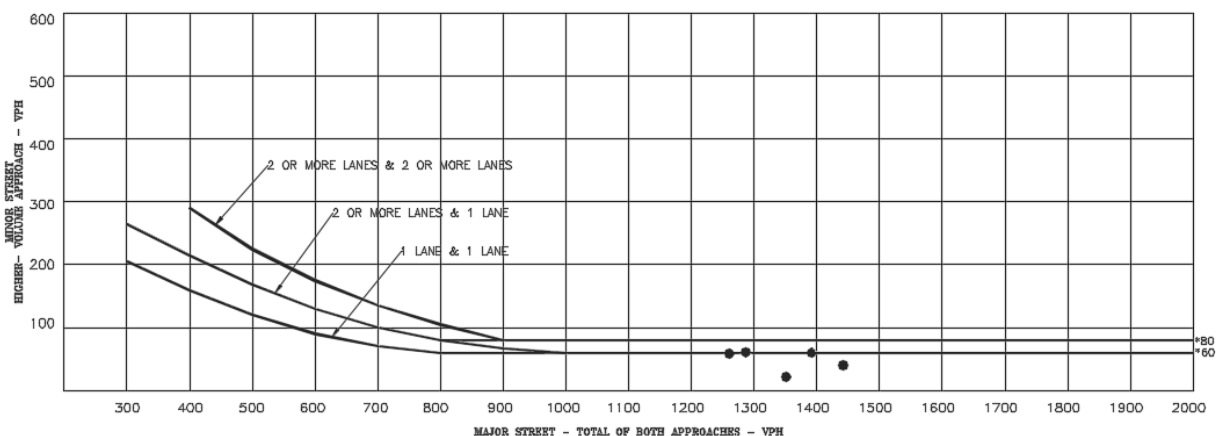
The *MUTCD* Warrant 2 (Four-Hour Vehicular Volume) contains a graph with threshold curves based on major- and minor-street traffic volumes, the number of intersection approach lanes on the major and minor streets, and the speed of the major street. This graph is shown in *MUTCD* Figure 4C-2. Details of this warrant are contained in Section 4C.03 of the *MUTCD*.

Short-Term Baseline Traffic

Results from the four-hour traffic-signal warrant analysis for the short-term baseline (background only) traffic scenario are shown in the Warrant 2, Four-Hour Vehicular-Volume (*MUTCD* Figure 4C-2) signal-warrant chart in Figure 11. Two separate major-/minor-street-volume data points exceeded the minimum threshold curve for an intersection with two or more lanes for the major street and one lane for the minor approach. As a result, the Four-Hour Vehicular-Volume Traffic-Signal Warrant at the intersection of SH 115/Pawnee Road is **not** projected to be met, based on the short-term baseline traffic scenario.

Note: both eastbound-approach turning movements have been included in the side-street volumes.

Figure 11: MUTCD Warrant 2, Four-Hour Vehicular Volume (Short-Term Baseline)



Major and minor street volumes shown in Figure 11 above are summarized in Table 4 below.

Table 4: Major/Minor Volumes for 4-Hour Signal Warrants (Short-Term Baseline)

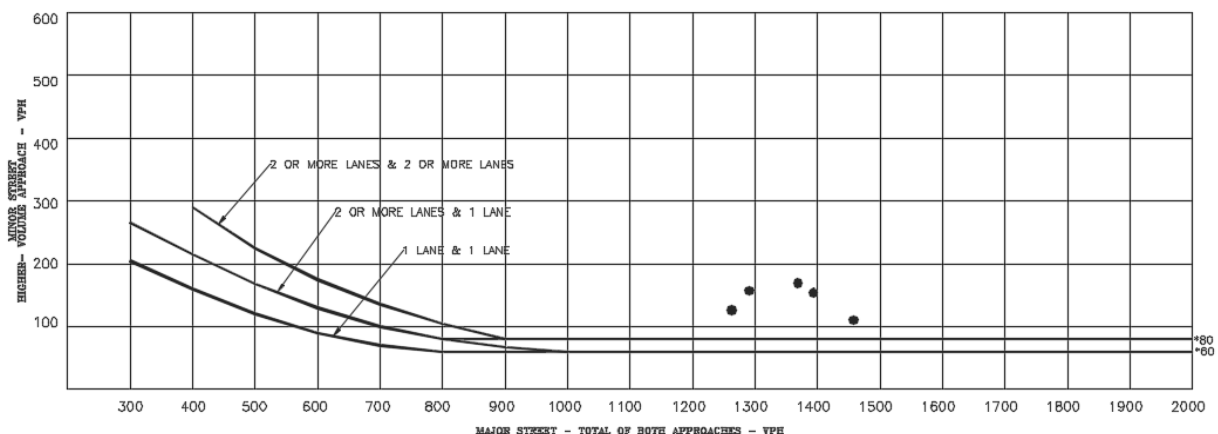
Start	End	Major Street Volume	Minor Street Volume	4-Hour Warrant Threshold Met?
6:00	7:00	1262	59	No
7:00	8:00	1390	61	Yes
8:00	9:00	1285	63	Yes
16:00	17:00	1438	47	No
17:00	18:00	1353	22	No
# of hours meeting respective warrant thresholds/hours required to satisfy the warrant				2 / 5 (No)

Short-Term Baseline Plus Site-Generated Traffic

Results from the four-hour traffic signal warrant analysis for the short-term baseline plus site-generated traffic scenario are shown in the Warrant 2, Four-Hour Vehicular-Volume (*MUTCD* Figure 4C-2) signal warrant chart in Figure 12. Five separate major-/minor-street volume data points are shown to exceed the minimum threshold curve for an intersection with two or more lanes on the major street and one lane for the minor street approach. As a result, the Four-Hour Vehicular Volume Traffic-Signal Warrant at the intersection of SH 115/Pawnee Road is projected to be met, based on the short-term baseline plus site-generated traffic scenario.

Note: both eastbound-approach turning movements have been included in the side-street volumes.

Figure 12: MUTCD Warrant 2, Four-Hour Vehicular Volume (Short-Term Baseline + Site)



Major and minor street volumes shown Figure 12 above are summarized in Table below.

Table 5: Major/Minor Volumes for 4-Hour Signal Warrants (Short-Term Baseline + Site)

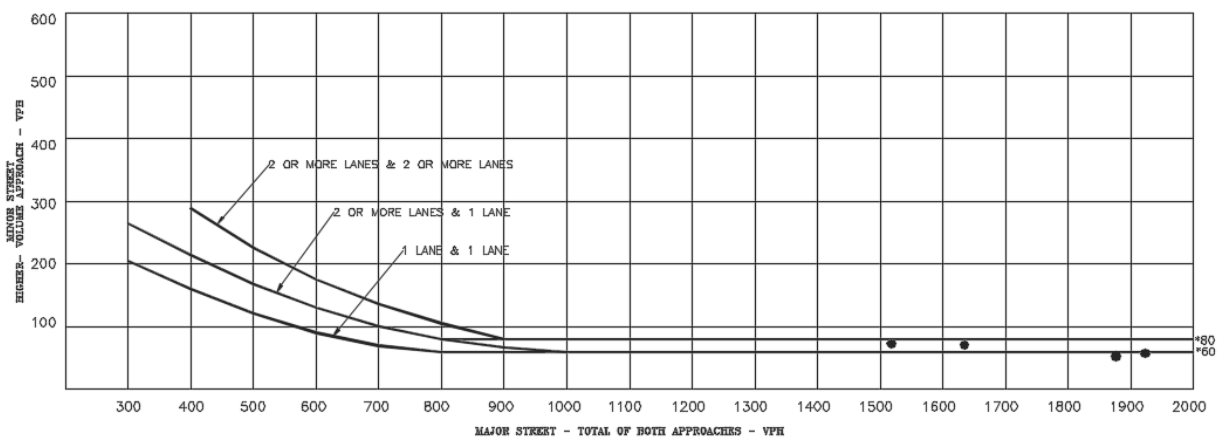
Start	End	Major Street Volume	Minor Street Volume	4-Hour Warrant Threshold Met?
6:00	7:00	1267	123	Yes
7:00	8:00	1397	149	Yes
8:00	9:00	1292	154	Yes
16:00	17:00	1461	106	Yes
17:00	18:00	1375	148	Yes
<i># of hours meeting respective warrant thresholds/hours required to satisfy the warrant</i>				5 / 5 (Yes)

2040 Background Traffic

Results from the four-hour traffic-signal warrant analysis for the 2040-background-traffic scenario are shown in the Warrant 2, Four-Hour Vehicular-Volume (*MUTCD* Figure 4C-2) signal-warrant chart in Figure 13. Two separate major/minor street estimated future volume data points are shown to exceed the minimum threshold curve for an intersection with two or more lanes for the major street and one lane for the minor street approach. Although two other data points are close to the threshold line, the Four-Hour Vehicular-Volume Traffic-Signal Warrant at the intersection of SH 115/Pawnee Road **is not** projected to be met, based on this analysis of the 2040 background traffic scenario. This could change depending on future development of the parcel northwest of SH 115/Pawnee.

Note: both turning movements have been included in the minor street volumes.

Figure 13: MUTCD Warrant 2, Four-Hour Vehicular Volume (2040 Background)



Major and minor street volumes shown in Figure 13 above are summarized in Table 6 below.

Table 6: Major/Minor Volumes for 4-Hour Signal Warrants (2040 Background)

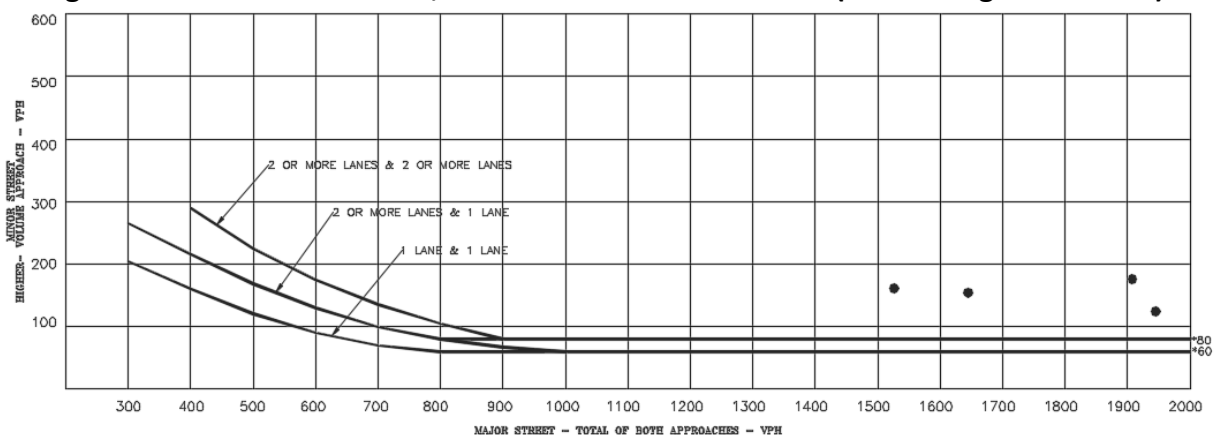
Start	End	Major Street Volume	Minor Street Volume	4-Hour Warrant Threshold Met?
7:00	8:00	1633	70	Yes
8:00	9:00	1510	72	Yes
16:00	17:00	1921	56	No
17:00	18:00	1884	55	No
# of hours meeting respective warrant thresholds/hours required to satisfy the warrant				2 / 4 (No)

2040 Background Plus Site-Generated Traffic

Results from the four-hour traffic-signal warrant analysis for the short-term-baseline plus site-generated traffic scenario are shown in the Warrant 2, Four-Hour Vehicular-Volume (*MUTCD* Figure 4C-2) signal-warrant chart in Figure 14. Four separate major/minor street volume data points exceeded the minimum threshold curve for an intersection with one lane for the major approach and one lane. As a result, the Four-Hour Vehicular-Volume Traffic-Signal Warrant threshold at the intersection of SH 115/Pawnee Road is projected to be exceeded, based on the 2040 background plus site-generated traffic scenario.

Note: both turning movements have been included in the side-street volumes.

Figure 14: MUTCD Warrant 2, Four-Hour Vehicular Volume (2040 Background + Site)



Major and minor street volumes shown in Figure 14 above are summarized in Table 7 below.

Table 7: Major/Minor Volumes for 4-Hour Signal Warrants (2040 Background + Site)

Start	End	Major Street Volume	Minor Street Volume	4-Hour Warrant Threshold Met?
7:00	8:00	1640	158	Yes
8:00	9:00	1517	163	Yes
16:00	17:00	1944	115	Yes
17:00	18:00	1906	181	Yes
<i># of hours meeting respective warrant thresholds/hours required to satisfy the warrant</i>				4 / 4 (Yes)

AUXILIARY TURN-LANE ANALYSIS

The following presents analysis of the evaluation of existing auxiliary turn lanes and needs for any additional turn lanes, based on the projected intersection turning movements.

SH 115/Pawnee Road

Southbound Right-Turn Deceleration Lane

Currently, a 545-foot exclusive southbound right-turn deceleration lane exists at the intersection of SH 115/Pawnee Road, consisting of the following lengths:

- 545-foot deceleration length
- 240-foot transition taper (20:1 ratio, which does not meet the required 25:1 ratio)

The current southbound right-turn deceleration lane does **not** meet CDOT design criteria listed in Table 4-6 and Table 4-8 of the *State Highway Access Code*. The CDOT access code criteria prescribe the following:

- 700-foot deceleration length (adjusted for highway grades as applicable)
- 300-foot transition taper (25:1 ratio)

Potentially, minor modifications to the shoulder and restriping could bring the turn lane up to standards, or a CDOT design waiver could be submitted if modifications would be extensive. This could be determined at the design stage.

Southbound Right-Turn Acceleration Lane

A southbound **right-turn** acceleration lane would **not** be required at the intersection of SH 115/Pawnee, based on projected traffic volumes and criteria in 3.7.4(d) of the *State Highway Access Code*. Although the right-turn acceleration lanes are not required as the turning volume is projected to fall

below the threshold requiring the lane, there is a continuous southbound right-turn lane between these two intersections.

Northbound Left-Turn Deceleration Lane

For the 60-mph design speed and EX category, the CDOT access code prescribes a standard length of 1,025 feet consisting of:

- 700-foot deceleration length
- 300-foot transition taper (25:1 ratio)
- 25 feet of storage stacking distance

The intersections of Pawnee Road and Cherokee Drive are separated by 380 feet (centerline distance along SH 115). Therefore, it is not possible for the northbound left-turn deceleration lane to meet the required 1,000-foot minimum CDOT criteria. However, assuming the conversion of Cherokee/SH 115 to a right-in/right-out intersection, the northbound left-turn lane for the Pawnee Road intersection could be 1,025 feet (including transition taper) by utilizing the current left-turn lane for Cherokee as additional length for the Pawnee left-turn lane. Traffic using the lane for northbound-left deceleration for a left turn onto Pawnee is minimal as the majority of the traffic arrives from the north.

Northbound Left-Turn Acceleration Lane

Currently, the 945-foot **northbound** left-turn acceleration lane consists of 635 feet of a full-width lane and what appears to be an approximately 750-foot merge taper. The roadway grade on SH 115 at this existing left-turn acceleration lane is approximately 6 percent for a portion of the lane north of Pawnee. However, the grades are less than six percent closer to the intersection. Although the criteria in Table 4-7 of the *State Highway Access Code* shows a grade adjustment factor of 0.5 applied for acceleration lanes on roadways with a posted speed limit of 60 mph and a 5%-7% downgrade, a portion of this lane has a grade of less than 5 percent. The standard length per Table 4-6 of the *State Highway Access Code* for acceleration lanes on EX highways with grades of less than three percent is a 1,170-foot acceleration lane length plus 300 feet of transition taper length (25:1 ratio), totaling 1,470 feet.

A detailed survey and centerline profile of the section of Highway 115 will be beneficial in developing the design. The grades are variable, which affects vehicle acceleration, and the existing laneage is difficult to determine in the field without a survey. This level of detail will best be provided as plans for development progress. A survey within Highway 115 would be difficult, so completing one at this zoning stage would be premature. These design details would be provided with the access permit process and CDOT approval of a design for highway improvements would be required prior to issuance of a "notice-to proceed" (part of the access permit process).

Eastbound Left-Turn Deceleration Lane

Staff has indicated that, based on the existing and projected peak-hour volumes, an exclusive eastbound left-turn deceleration lane may be needed per ECM 2.3.7. as the 25-vehicle-per-hour

turning-volume threshold requiring a left-turn lane is exceeded. However, this is a T-intersection and the right-turn volume is projected to be light. The need for this exclusive turn lane will be further analyzed when design plans for the development are submitted. The applicant will likely need to install the turn lane or submit a **deviation request**.

A deviation request may consider that although the left-turn volume exceeds 25 vph, this is a T-intersection and there will be no eastbound through traffic creating a situation with a significant speed differential between turning traffic and through traffic (as all eastbound traffic will be turning). Aside from the eastbound right-turning traffic volume being low, the right-turning traffic will have a stop condition as well (if a directional signal is installed in the future, the right-turning traffic will need to slow significantly to make the right turn). This eliminates the need for an auxiliary "speed-change lane" to mitigate speed differential. Moreover, since the predominant movement is the eastbound left turn, the right-turning motorists will expect the lead vehicle to be a left turner.

As the speed differential reason for a separate turn lane would not likely exist in this situation, there would be a few situations where separate left- and right-turn lanes would potentially be beneficial or warranted: 1) for "convenience" for right turners, not having to wait behind left-turning vehicles 2) to maintain satisfactory LOS (i.e., if a single-lane approach has a low level of service, and separate right-turn and left-turn lanes improve the LOS or 3) to reduce queue length, if necessary, in the shared approach lane. The deviation and future analysis should consider LOS and queue lengths for the single eastbound approach lane. Note: if the parcel on the northwest corner of SH 115/Pawnee Road develops with a land use that would add significant eastbound right-turning traffic, the benefit/potential need for separate left- and right-turn lanes could significantly increase. Again, the need for this exclusive eastbound left-turn lane will be further analyzed when design plans for the development are submitted.

SH 115/Cherokee Drive

Southbound Right-Turn Deceleration Lane

Due to the close proximity between these two intersections (380 feet centerline spacing), it would not be possible for a southbound right-turn deceleration lane to meet CDOT design criteria. Thus, there is an existing continuous southbound right-turn lane on SH 115 between Pawnee Road and Cherokee Drive.

Southbound Right-Turn Acceleration Lane

A southbound right-turn **acceleration** lane would **not** be necessary on SH 115 at its intersection with Cherokee Drive, based on the projected short-term and long-term-background plus site-generated volumes and criteria in the *State Highway Access Code*, as shown in Figure 7 and Figure 9. Fewer than 10 total vehicles are projected to turn eastbound-right from Cherokee Drive to head southbound on SH 115 during either peak hour.

Northbound Left-Turn Deceleration Lane

Currently, a 635-foot exclusive northbound left-turn deceleration lane exists at the intersection of SH 115/Cherokee Drive, consisting of the following lengths:

- 415-foot deceleration length
- 222-foot transition taper (18.5:1 ratio)

The current northbound left-turn deceleration lane is short of the 60-mph standard length listed in Table 4-6 and Table 4-8 of the *State Highway Access Code*. **However**, assuming the conversion of the Cherokee/SH 115 to a **right-in/right-out intersection**, the northbound left-turn lane would not be needed for the Cherokee intersection, and the lane length could be used for the left-turn lane for Pawnee.

Northbound Left-Turn Acceleration Lane

The intersections of Pawnee Road and Cherokee Drive are separated by 380 feet (centerline distance along SH 115). Therefore, an **exclusive** northbound left-turn **acceleration** lane is not feasible. The current configuration is for a continuous shared northbound left-turn lane for northbound left turns at Pawnee and for eastbound-to-northbound left turns accelerating from both intersections.

Assuming the conversion of the Cherokee/SH 115 to a right-in/right-out intersection, the northbound left-turn acceleration lane would **not be needed** for the Cherokee intersection.

COUNTY STREET CLASSIFICATIONS (PRELIMINARY)

Figure 10 shows preliminary recommendations for roadway classifications. Note: Staff has indicated the following in their review comments: *“FYI: The proposed classifications and access of the roadways will be further reviewed when the actual design plans are submitted with the preliminary plan/final plat application is submitted. Acceptance of this TIS at this Rezone stage does not constitute approval of the recommended classification of the roadways.”*

Pawnee Road

Pawnee Road is currently classified as a Rural Local roadway. However, estimated current traffic and projected future traffic exceed the design ADT of 750 vehicles per day for Rural Local roadway on the section east of Comanche Road. The projected ADT of 2,847 vehicles per day (vpd) is within the design ADT range of an Urban Local street. However, since the potential future land use and trip generation of the parcel northwest of SH 115/Pawnee is not known, LSC recommends an Urban Collector classification for the section of Pawnee from State Highway 115 west to a point 1,100 feet west of Highway 115. Between this point and Piute Road, LSC recommends Urban Local classification. The section between Piute Road and Comanche Road may also need to be classified as an Urban Local rather than a Rural Local. The projected volume on this segment (and other considerations) will be

reevaluated with future studies. Also, the applicant may elect to submit a deviation request with a future application to allow this segment to remain classified as “Rural Local.”

Cherokee Drive

Cherokee Drive is currently classified as a Rural Local roadway. The estimated current traffic is consistent with that classification.

Other Existing Roadways within the Study Area

Piute Road and existing portions of Delaware Road, Seneca Road and Sioux Road are shown to remain Rural Local roads.

Rock Creek Mesa Subdivision Streets

Figure 10 shows the recommended street classifications for the new Rock Creek Mesa subdivision streets. Streets are shown as Urban Local or Urban Local Low Volume streets.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

Transportation Impact Fees

Per ECM Appendix B: State what the current applicable Transportation Impact Fees are and what option the developer will be selecting for payment.

The applicant intends to join the 10 mil PID.

For this PID option, the current upfront fee amount **rate** is \$1,221 **per dwelling unit**. The total upfront fee amount under this option would be \$201,465, based on a planned 165 dwelling units. Note: This is the current rate and is subject to change. El Paso County updates this rate periodically.

PEDESTRIAN AND BICYCLE FACILITIES

- Pawnee Road and Cherokee Drive do not currently have sidewalks or dedicated bicycle lanes to accommodate pedestrians or bicycles, but sidewalks would be required on certain roadway segments following site buildout per *ECM* Table 2-7. Urban Collector – sidewalks required
 - Urban Local – sidewalks required
 - Urban Local Low-Volume – sidewalks required

Please refer to Figure 10 for proposed roadway classifications adjacent to the site.

MTCP PLANNED/PROGRAMMED IMPROVEMENTS IN THE AREA

There are no apparent MTCP roadway improvements planned or programmed in the vicinity of the site.

ROADWAY SYSTEM IMPROVEMENTS

The attached Table 8 presents a summary of roadway system improvements.

SUMMARY & CONCLUSIONS

- The site would generate about 1,579 new driveway vehicle trips on the average weekday.
- During the weekday morning peak hour of adjacent street traffic, 31 vehicles would enter the site while 92 vehicles would exit.
- During the weekday evening peak hour of adjacent street traffic, 107 vehicles would enter the site while 60 vehicles would exit.
- All approaches at the intersection of SH 115/Pawnee Road are projected to operate at LOS C or better through the 2040 horizon year during the morning and evening peak hours.
- The eastbound right turn at the intersection of SH 115/Cherokee Drive (**analyzed as a right-in/right-out intersection**) is projected to operate at LOS B or better through the 2040 horizon year during the morning and evening peak hours.
- Please refer to the “Auxiliary Turn Lane Analysis” section above for complete analysis of existing and proposed auxiliary turn lanes. Some of the auxiliary lanes do not meet CDOT EX standards.
- This report assumes conversion of the Cherokee/SH 115 intersection to a right-in/right-out. A raised center median would be needed to physically prevent left-turning movements.
- The intersection of Pawnee/SH 115 is projected to meet a four-hour traffic-signal warrant with the conversion of Cherokee/SH 115 to a right-in/right-out intersection and with the addition of site-generated traffic. Although the level of service is C with the channelized-T configuration, there may be a point in the future when a signal may need to be installed. Moreover, potential future development and resulting trip generation of the parcel northwest of SH 115/Pawnee would also likely add turning movements which could result in the future need for the signal.
- Due to the potential future need to signalize the intersection of Pawnee/SH 115, and the need to mitigate the intersection spacing of less than one-mile along Highway 115, the future signal would need to be a “directional” signal with the channelized-T configuration. Raised curb channelization would be necessary to allow for a potential future directional traffic signal.

- The recommended classification for Pawnee is **Urban Collector** from SH 115 to 1,100 feet west of SH 115 and **Urban Local** from this point west to Piute Road as shown in Figure 10. The section between Piute Road and Comanche Road may also need to be classified as an Urban Local (as reflected in Figure 10) rather than a Rural Local. The projected volume on this segment (and other considerations) will be reevaluated with future studies. Also, the applicant may elect to submit a deviation request with a future application to allow this segment to remain classified as “Rural Local.” West of Comanche Road, the recommended roadway classification is Rural Local. The roadway will need to be upgraded between SH 115 and Comanche Road.
- Cherokee Road is a Rural Local road
- Please refer to Table 8 (attached) which summarizes the roadway system improvements.
- Additional traffic studies will be provided with the subsequent applications.
- A State Highway Access Permit will be required for the west legs of both the intersection of SH 115/Pawnee Road and SH 115/Cherokee Drive, due to changes in use (*State Highway Access Code* section 2.6). The traffic volume on the west leg of both intersections would increase by more than 20 percent. El Paso County would be the “Permittee” and the developer would be the “Applicant.”

* * * * *

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

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

Jeffrey C. Hodsdon, P.E.

Principal

JCH:JAB:jas

Enclosures: Table 2 and Table 8
Figure 1 – Figure 10
Exhibit 1
Exhibit 2
Traffic Count Reports
Level of Service Reports

Tables

Table 2: Detailed Trip Generation Estimate

ITE		Value	Units ¹	Trip Generation Rates ²					External Trips Generated				
				Average	A.M.		P.M.		Average	A.M.		P.M.	
Code	Description			Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
210	Single-Family Detached Housing	165	DU	9.57	0.19	0.56	0.65	0.36	1579	31	92	107	60

¹ DU = dwelling units, KSF = 1,000 square feet

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

Table 8
Improvements Table
Pinon Mesa Rock Creek

Improvement	Timing /"Trigger Point(s)"	Required Length	Proposed Length	Responsibility
Roadway Segment Improvements				
Reconstruct Pawnee as an Urban Collector between SH 115 and a point 1,100 feet west of SH 115.	With this development	---	1,100'	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
Reconstruct Pawnee as an Urban Local between a point 1,100 feet west of SH 115.and Commanche Road.	With this development	---	1,200'	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
Reconstruct Commanche Road as a Rural Local road north and south -of Pawnee Road.	With this development	---	1,335'	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
Proposed Subdivision Streets - Construct as Urban Local or Urban Local Low Volume streets as shown in Figure 10.	With this development	---	Varies	Applicant
Auxiliary Turn Lane Improvements				
SH 115/Pawnee - Convert the current northbound left turn lane length for the SH 115/Cherokee intersection into additional length for the northbound left turn lane for the SH 115/Pawnee intersection.	The need, timing and design details to be determined as part of the access permit process	700' deceleration length, 25' storage length, plus 300' Taper	700' deceleration length, 25' storage length, plus 300' Taper	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
SH 115/Pawnee - Potentially lengthen southbound right turn deceleration lane to CDOT EX standards or submit a CDOT Design Waiver form.	The need, timing and design details to be determined as part of the access permit process	700' lane* + 300' Taper	TBD	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
SH 115/Pawnee - Potentially Lengthen northbound left turn acceleration lane to CDOT EX standards or submit a CDOT Design Waiver form.	The need, timing and design details to be determined as part of the access permit process	1,170-foot lane length** plus 300 feet of transition taper length	TBD	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
SH 115/Pawnee - Potentially add an eastbound left turn deceleration lane at this intersection, or submit an EPC deviation request.	Please refer to the report narrative for details, but the existing and projected eastbound left turn volume exceeds the ECM left turn volume threshold of 25 vehicles per hour. The need for this exclusive eastbound left turn lane will be further analyzed when design plans for the development are submitted.	To be determined with further analysis when design plans for the development are submitted.	TBD	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
Other Intersection Improvements				
SH 115/Pawnee - Install median channelization if required by CDOT. Design details to be determined with the access permit process	Need and timing to be determined as part of the access permit process	---	---	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
SH 115/Cherokee - Restrict to RI/RO Intersection. Design details to be determined with the access permit process.	Timing to be determined as part of the access permit process	---	---	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
Traffic Signal Escrow - if required by CDOT for potential future traffic signal at SH 115/Pawnee	If required, with platting and as part of the access permit process.	---	---	Applicant and potentially applicants for future developments in this area served by Cherokee & Pawnee (notably potential development on the northwest corner of SH 115/Pawnee).
Notes:				
*Length for grades less than three percent - may be reduced to adjust for grades greater than three percent on SH 115.				
**Length for grades less than three percent - may be reduced to adjust for grades greater than three percent on SH 115				
LSC Transportation Consultants, Inc. (REVISED 7-12-2021)				

Figures



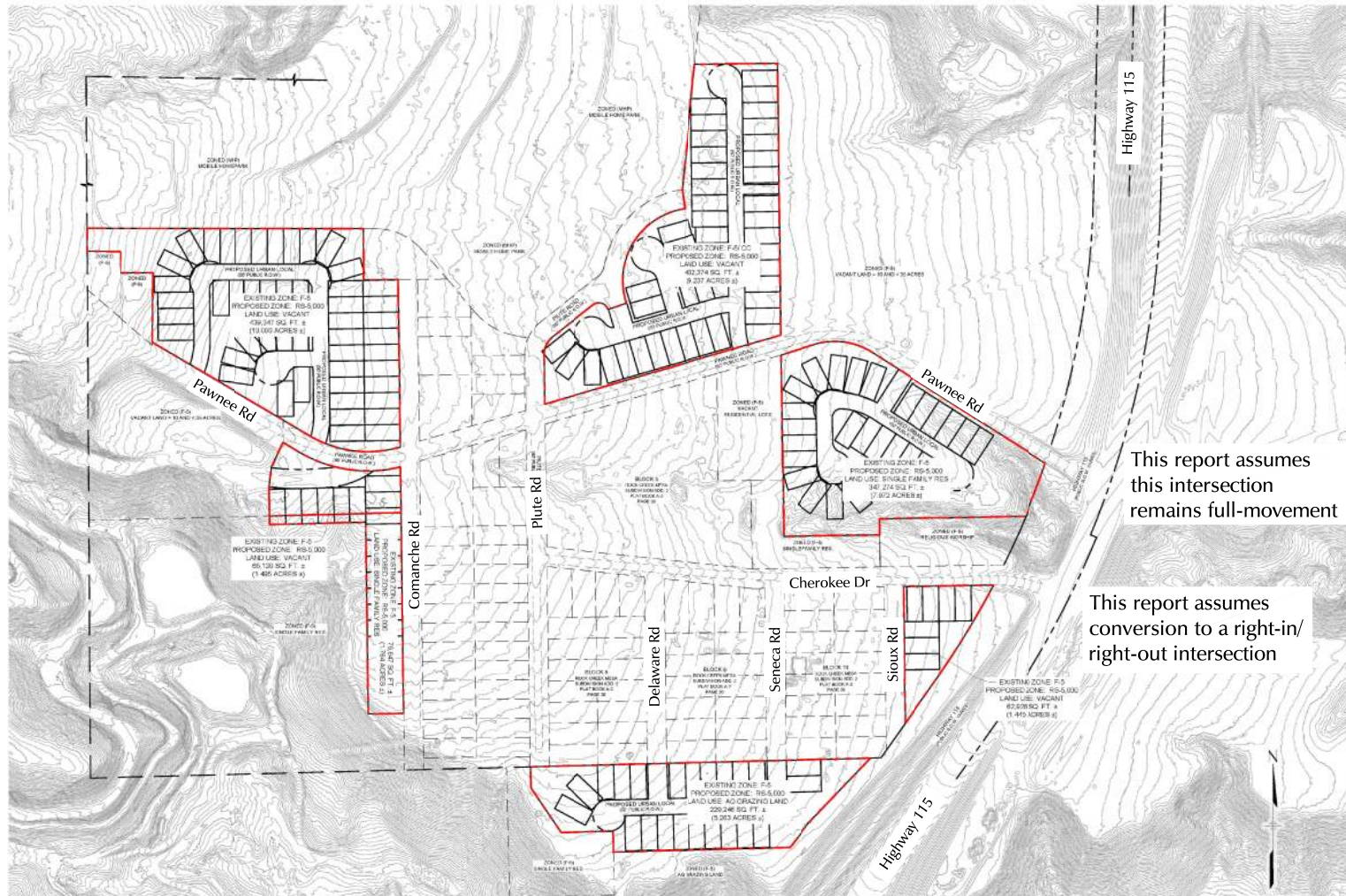
Not to
scale



Parcels part of this application

Figure 1
Vicinity Map
Rock Creek Mesa (LSC# 184380)

ROCK CREEK MESA CONCEPT SITE PLAN



This report assumes
this intersection
remains full-movement

This report assumes
conversion to a right-in/
right-out intersection

3400 W. UNIVERSITY BLVD., SUITE 300
COLORADO SPRINGS, CO 80906
PHONE: (719) 575-1000
FAX: (719) 575-0200

OWNER: COLORADO SPRINGS EQUITIES LLC
85 N. CASCADE AVE., SUITE 1000
COLORADO SPRINGS, CO 80903
(719) 490-7333

Not to scale

PROJECT: ROCK CREEK MESA

EL PASO COUNTY, COLORADO
INITIAL SUBMITTAL: NOVEMBER 23, 2020

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO.: 20-224-021

DRAWN BY: JAF

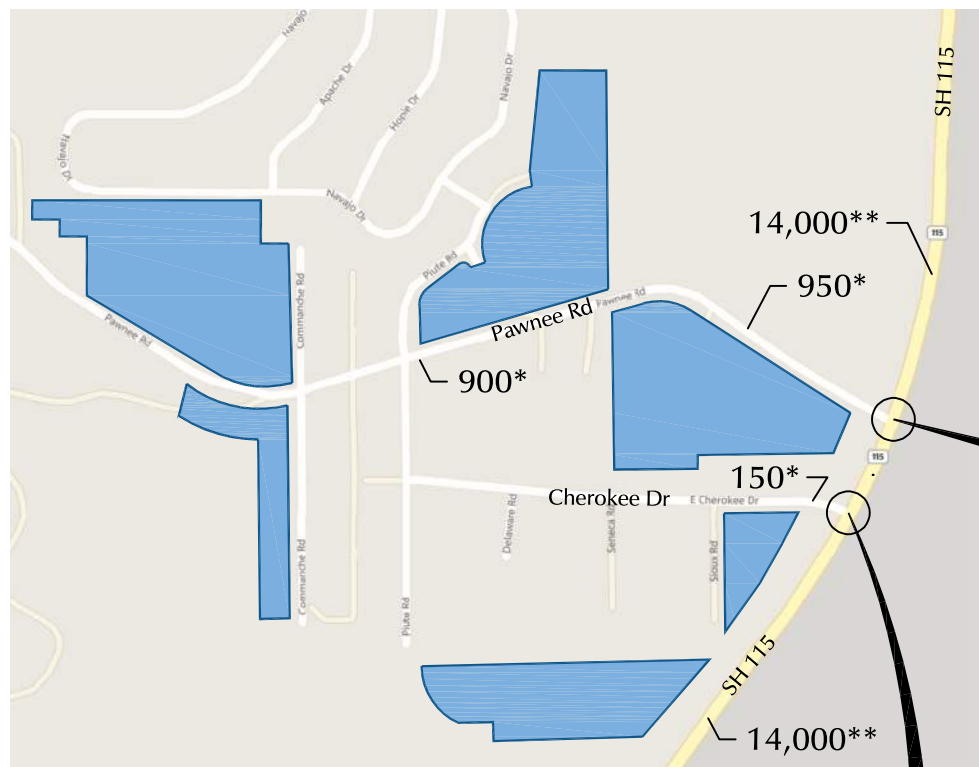
CHECKED BY: JAF

APPROVED BY: JAF

SHEET TITLE:

CONCEPT SITE PLAN

Figure 2
Site Plan
Rock Creek Mesa (LSC# 184380)



Counts by LSC (May 2018 and October 2020)

* ADT estimated by LSC

** AADT by CDOT (2019)

AM peak hour = as noted

PM peak hour = 4:15-5:15pm

⊥ = Stop Sign

⓪ = Traffic Signal

$\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS

$\frac{X}{X}$ = PM Individual Movement Peak-Hour LOS

$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)

$\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)

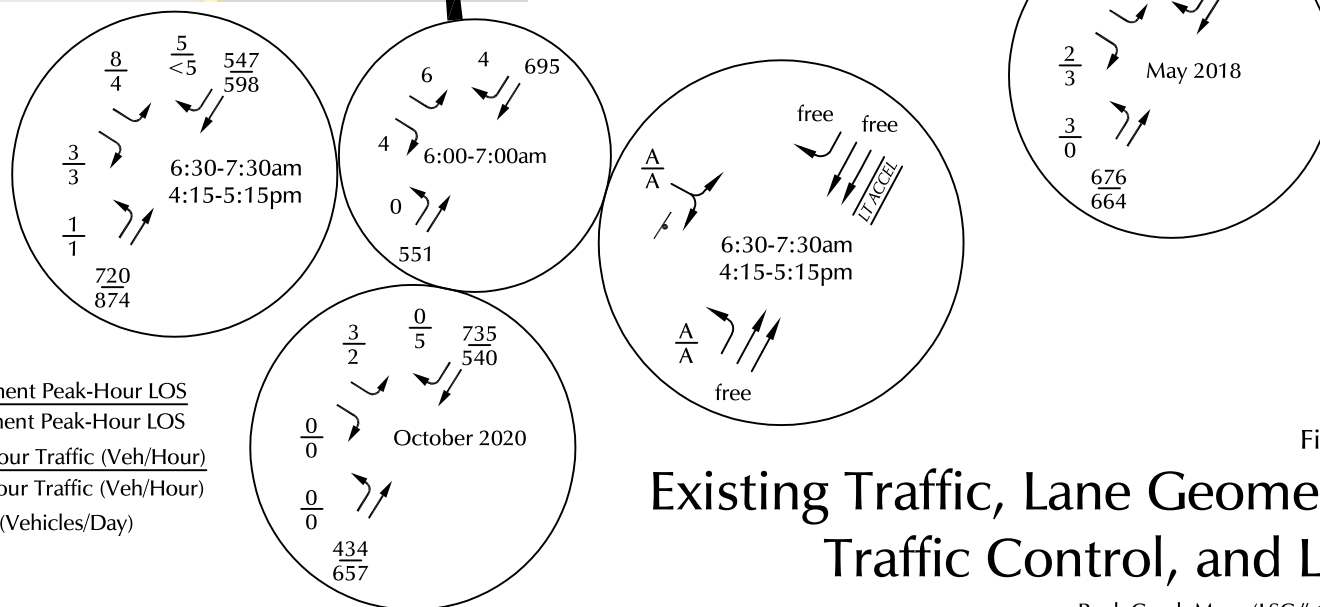
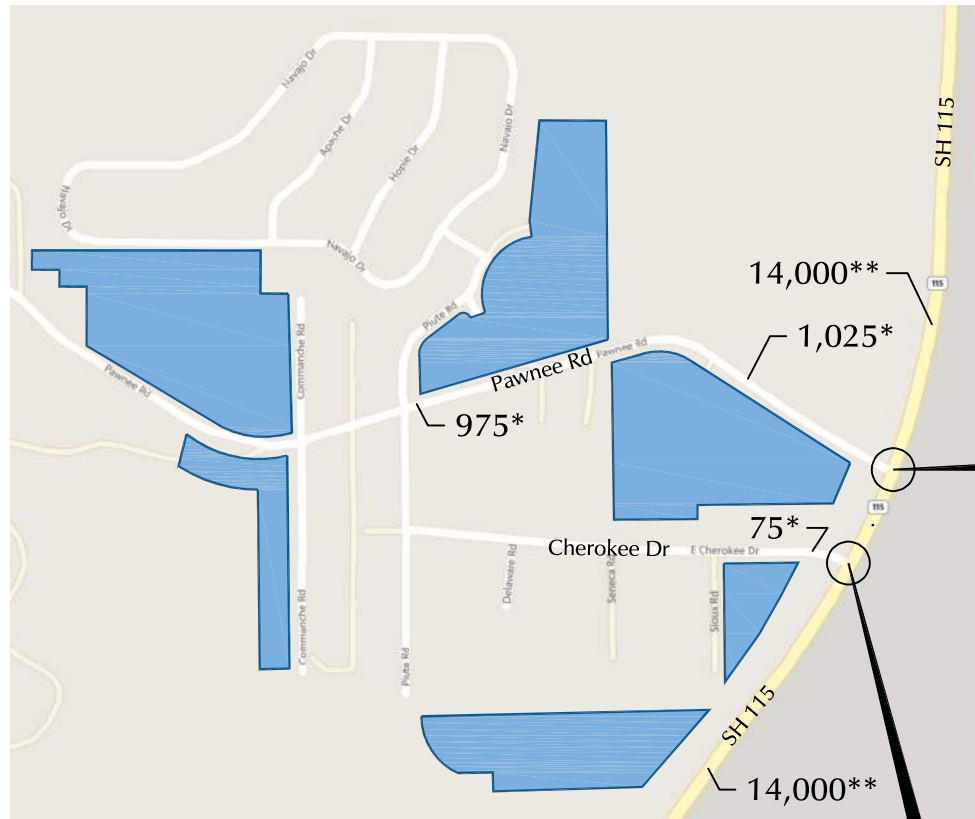


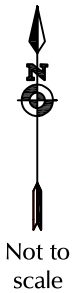
Figure 3

Existing Traffic, Lane Geometry, Traffic Control, and LOS

Rock Creek Mesa (LSC# 184380)



* Short-Term Baseline represents shifted "adjusted existing" volumes from Figure 3 to reflect the assumed conversion of SH 115/Cherokee Dr to a right-in/right-out (i.e., left turns at Cherokee Dr were shifted to Pawnee Rd)



* AADT estimated by LSC (adjusted for RIRO)

** AADT by CDOT (2019)

AM peak hour = 7:15-8:15am

PM peak hour = 4:15-5:15pm

⊥ = Stop Sign

⊞ = Traffic Signal

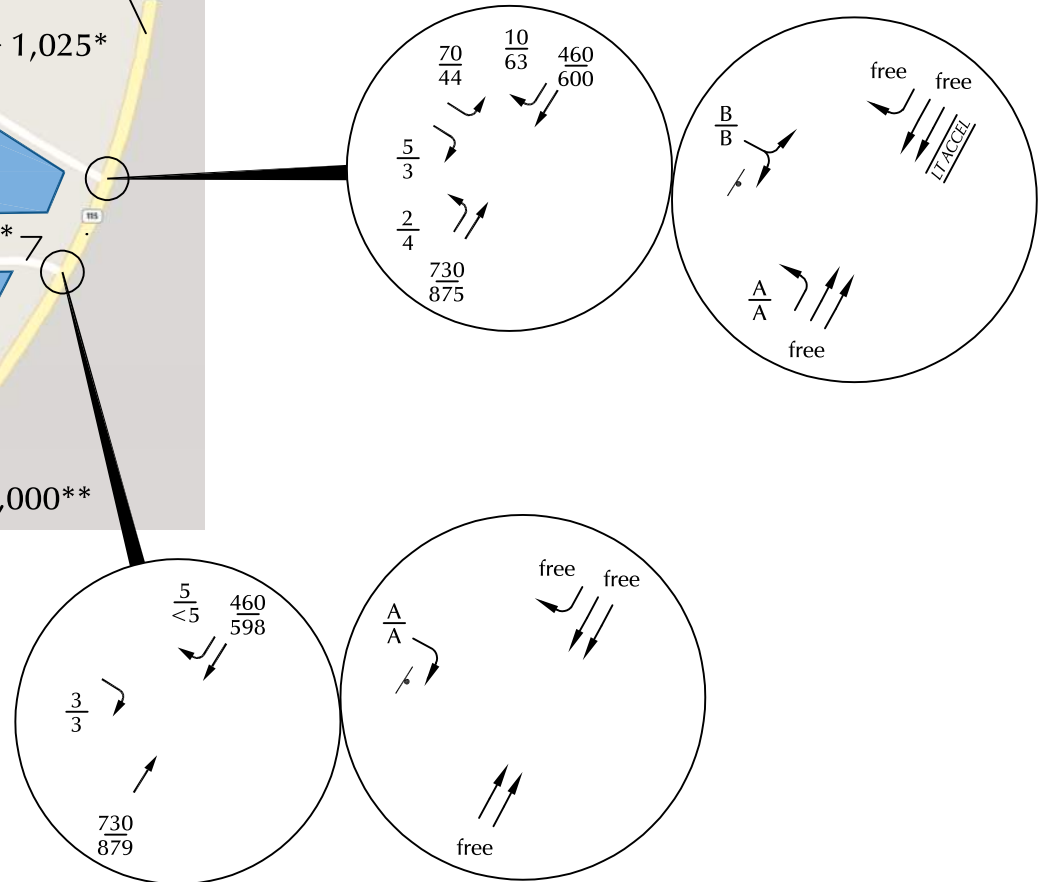
$\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS

PM Individual Movement Peak-Hour LOS

$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)

PM Weekday Peak-Hour Traffic (Veh/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)



Short-Term Baseline* Traffic, Lane Geometry, Traffic Control, and LOS

Figure 4

Rock Creek Mesa (LSC# 184380)





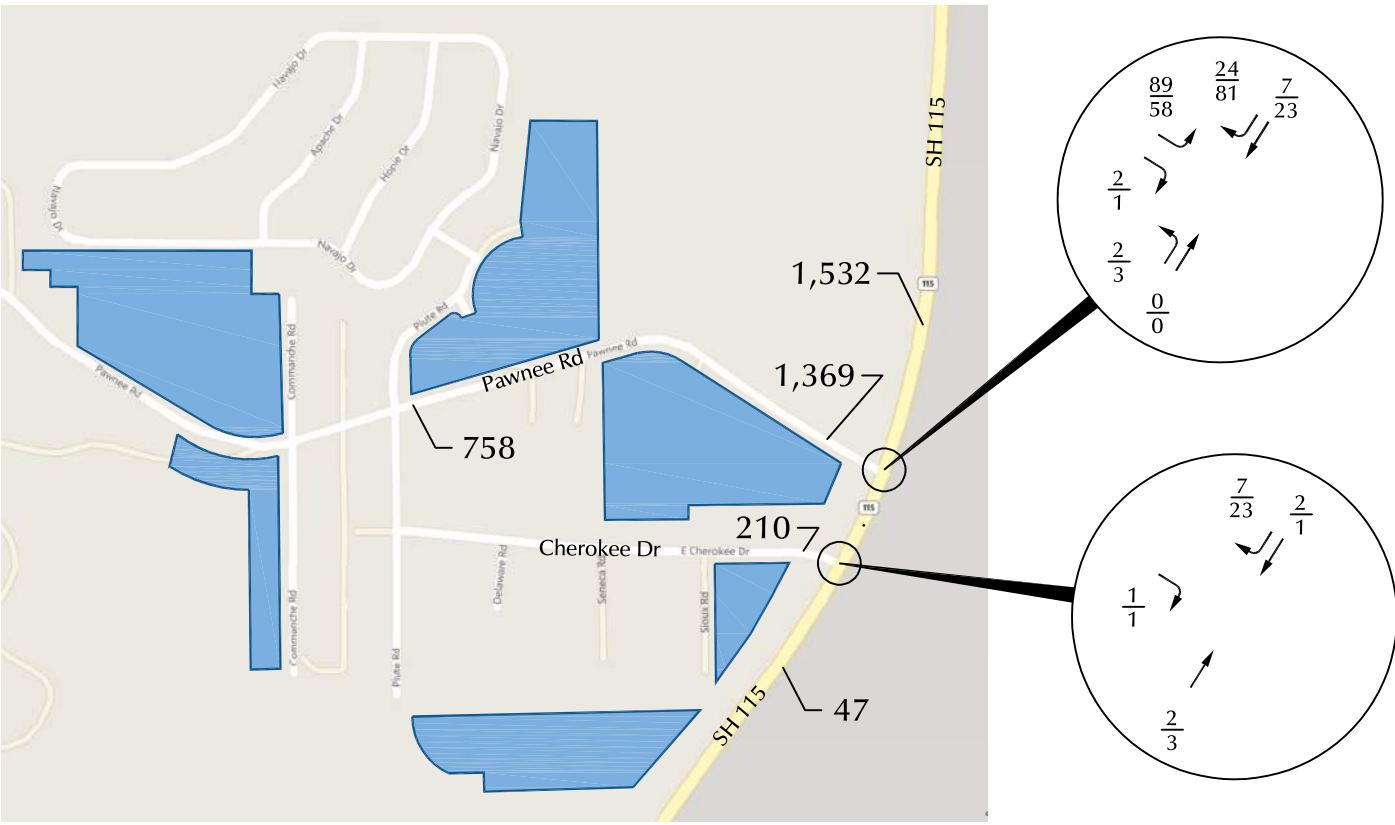
 XX%* = % of Entering or Exiting Traffic
 XX% = Peak Hour % Distribution of Site-Generated Trips

Figure 5
Directional Distribution
 Rock Creek Mesa (LSC# 184380)



Not to
scale

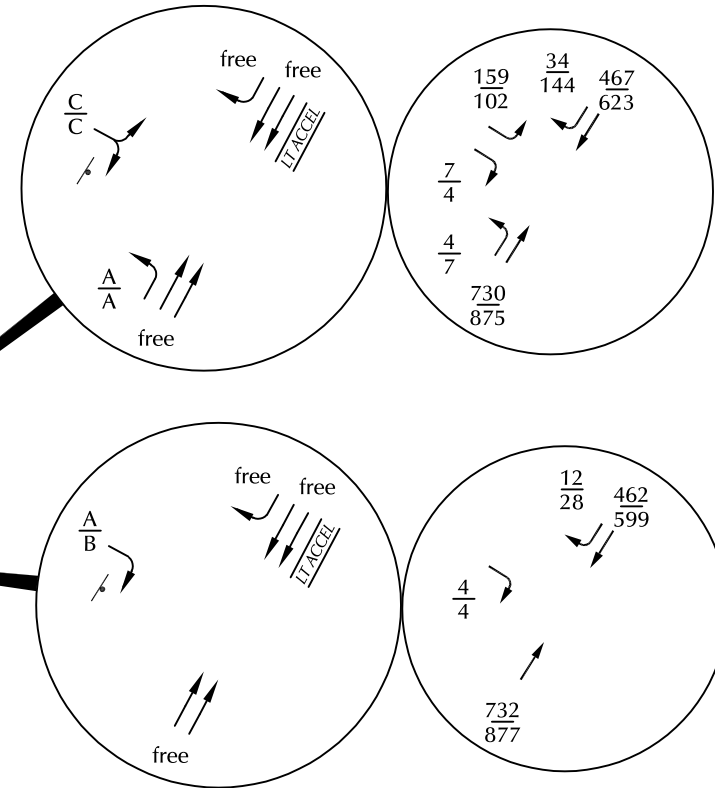
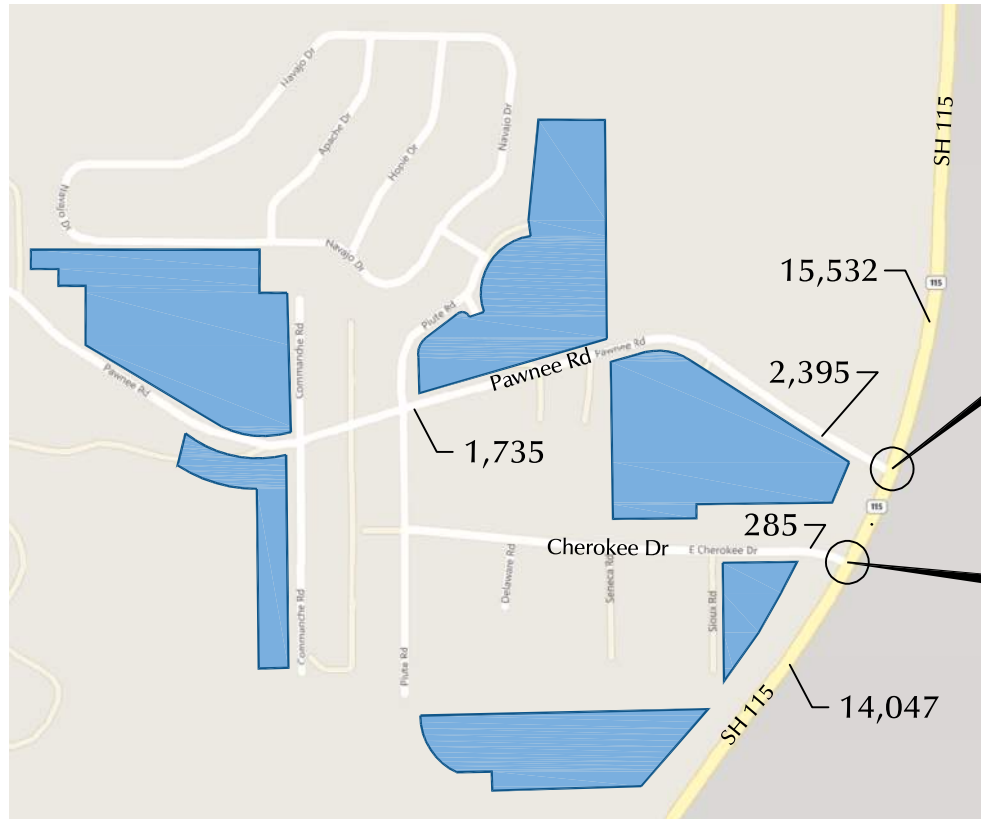


AM peak hour = 7:15-8:15am

PM peak hour = 4:15-5:15pm

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

Figure 6
Site-Generated Traffic
Rock Creek Mesa (LSC# 184380)



AM peak hour = 7:15-8:15am

PM peak hour = 4:15-5:15pm



= Traffic Signal



= Stop Sign

$\frac{X}{X}$

= AM Individual Movement Peak-Hour LOS

$\frac{XX}{XX}$

= PM Individual Movement Peak-Hour LOS

$\frac{XX}{XX}$

= AM Weekday Peak-Hour Traffic (Veh/Hour)

$\frac{XX}{XX}$

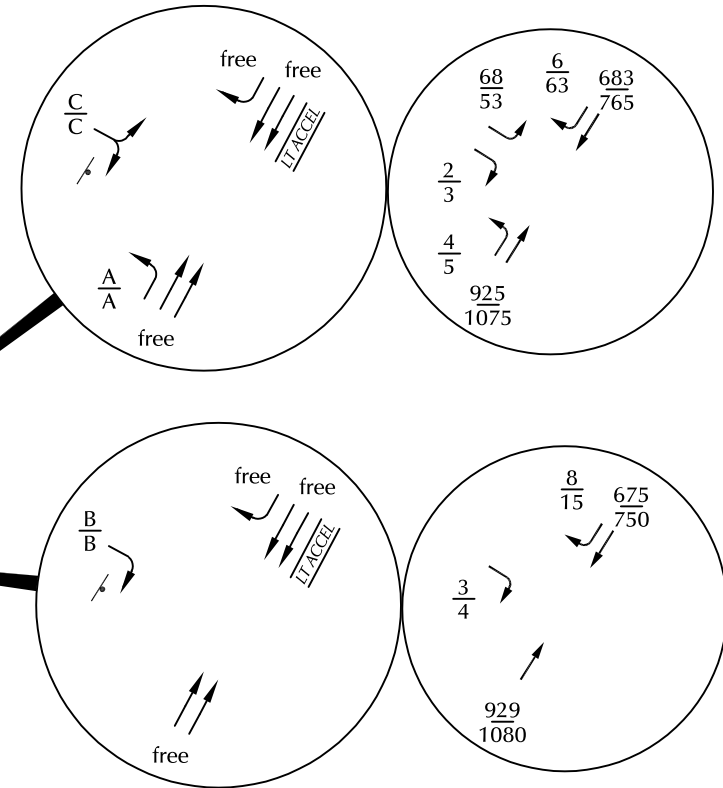
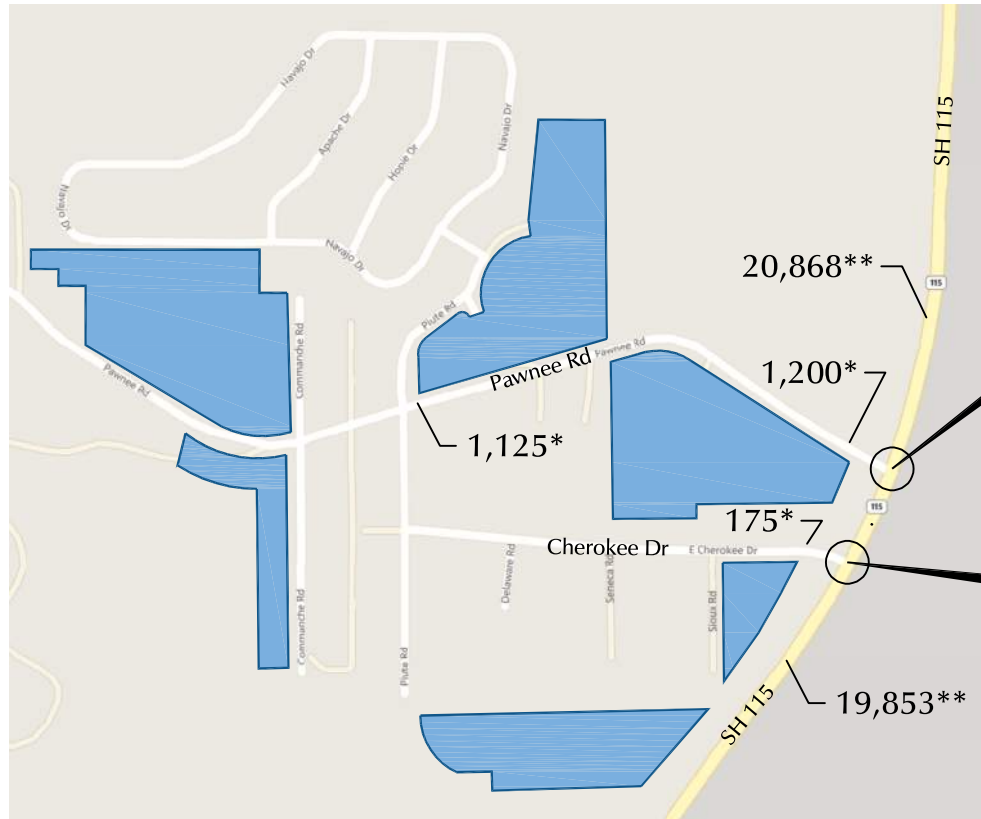
= PM Weekday Peak-Hour Traffic (Veh/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)



Figure 7
Short-Term Baseline + Site
Traffic, Lane Geometry,
Traffic Control, and LOS

Rock Creek Mesa (LSC# 184380)



AM peak hour = 7:15-8:15am

PM peak hour = 4:15-5:15pm

* ADT estimated by LSC (adjusted for RIRO traffic control)

** AADT by CDOT (2040)



= Traffic Signal = Stop Sign

$\frac{X}{X}$

= AM Individual Movement Peak-Hour LOS
= PM Individual Movement Peak-Hour LOS

$\frac{XX}{XX}$

= AM Weekday Peak-Hour Traffic (Veh/Hour)
= PM Weekday Peak-Hour Traffic (Veh/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)

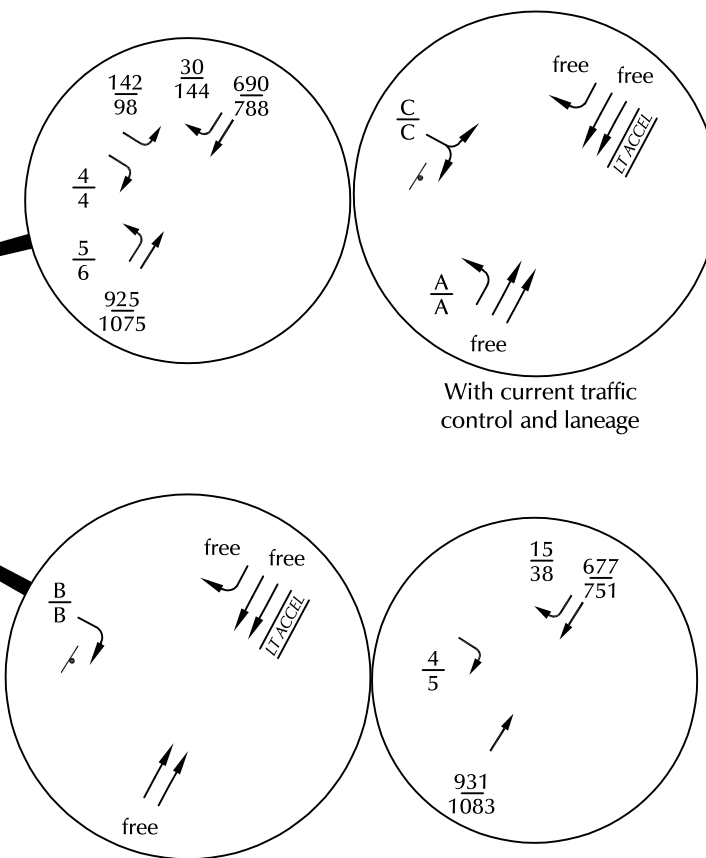
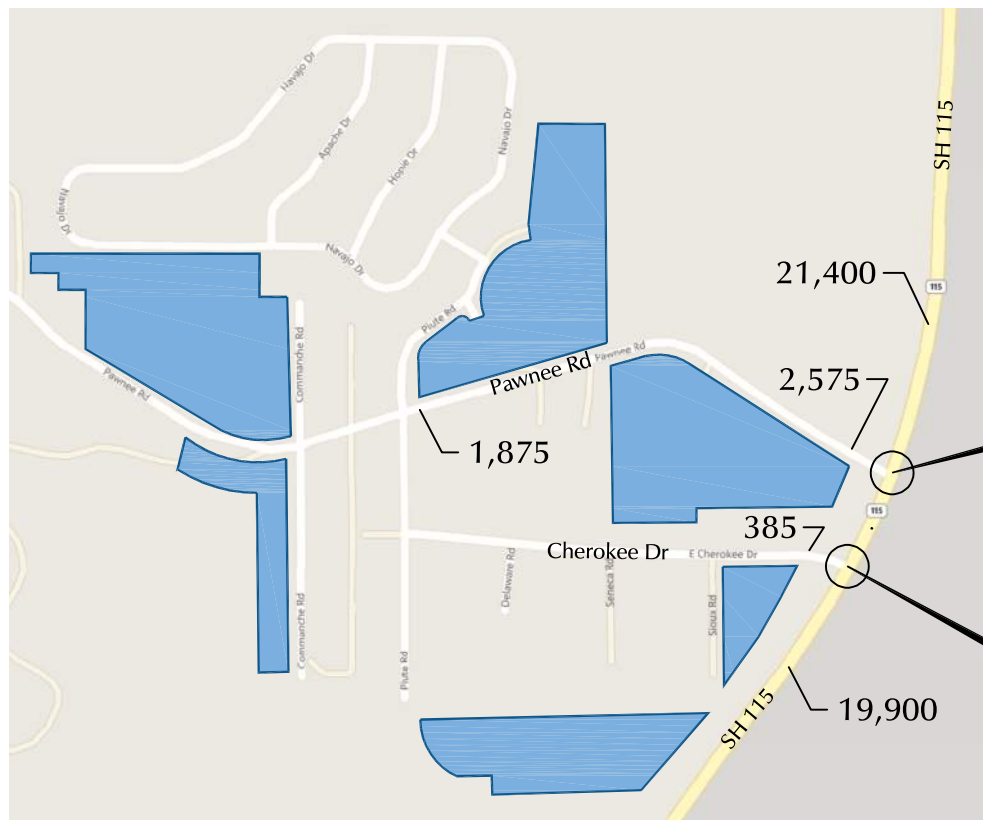


Figure 8
2040 Background Traffic,
Lane Geometry, Traffic
Control, and LOS

Rock Creek Mesa (LSC# 184380)



Not to scale



With current traffic control and laneage

AM peak hour = 7:15-8:15am

PM peak hour = 4:15-5:15pm



= Traffic Signal



= Stop Sign

$\frac{X}{X}$

= AM Individual Movement Peak-Hour LOS
= PM Individual Movement Peak-Hour LOS

$\frac{XX}{XX}$

= AM Weekday Peak-Hour Traffic (Veh/Hour)
= PM Weekday Peak-Hour Traffic (Veh/Hour)

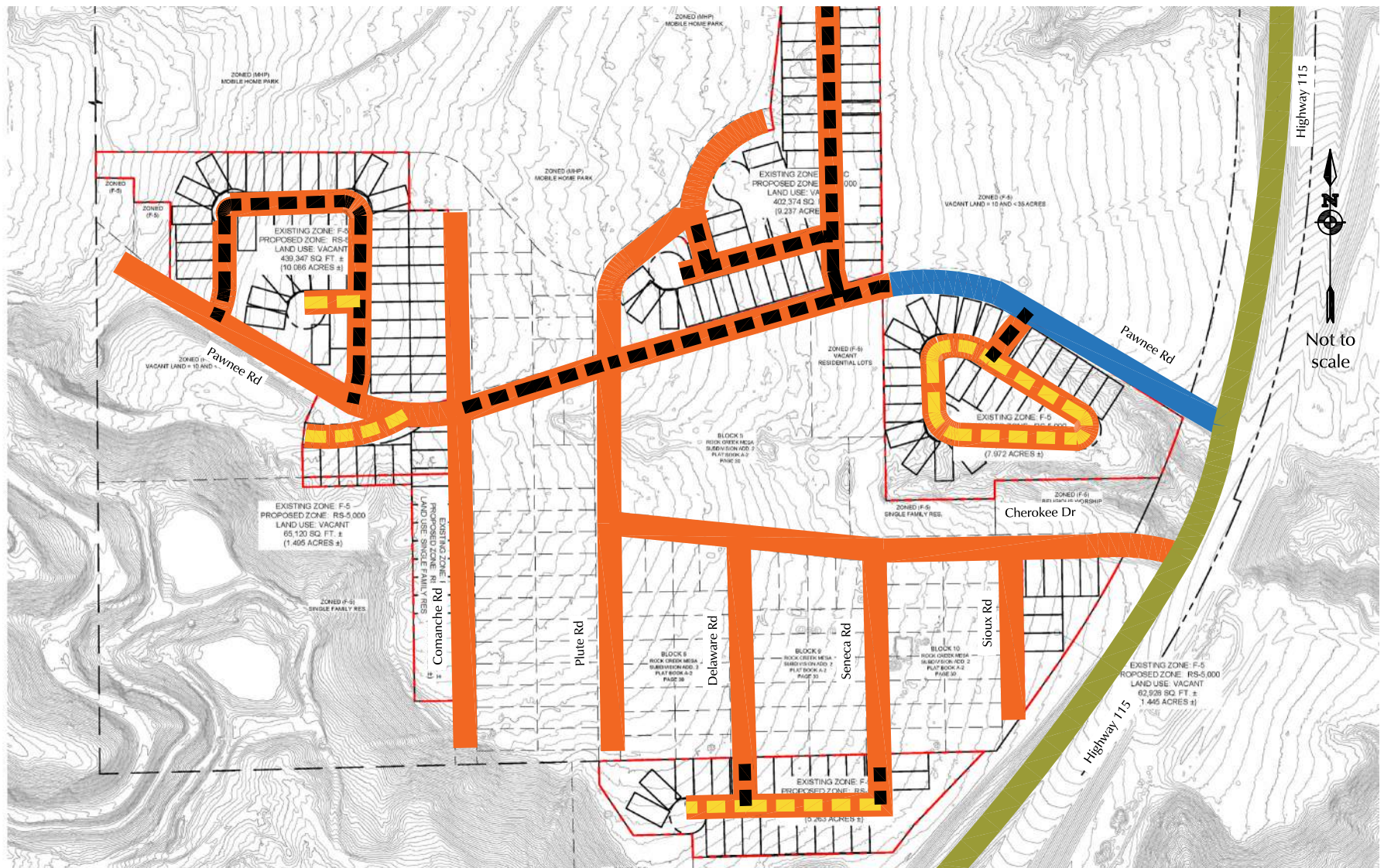
X,XXX = Average Daily Traffic (Vehicles/Day)



2040 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

Figure 9

Rock Creek Mesa (LSC# 184380)



-  EX - Expressway (CDOT)
-  Urban Collector
-  Rural Local
-  Urban Local Low Volume
-  Urban Local



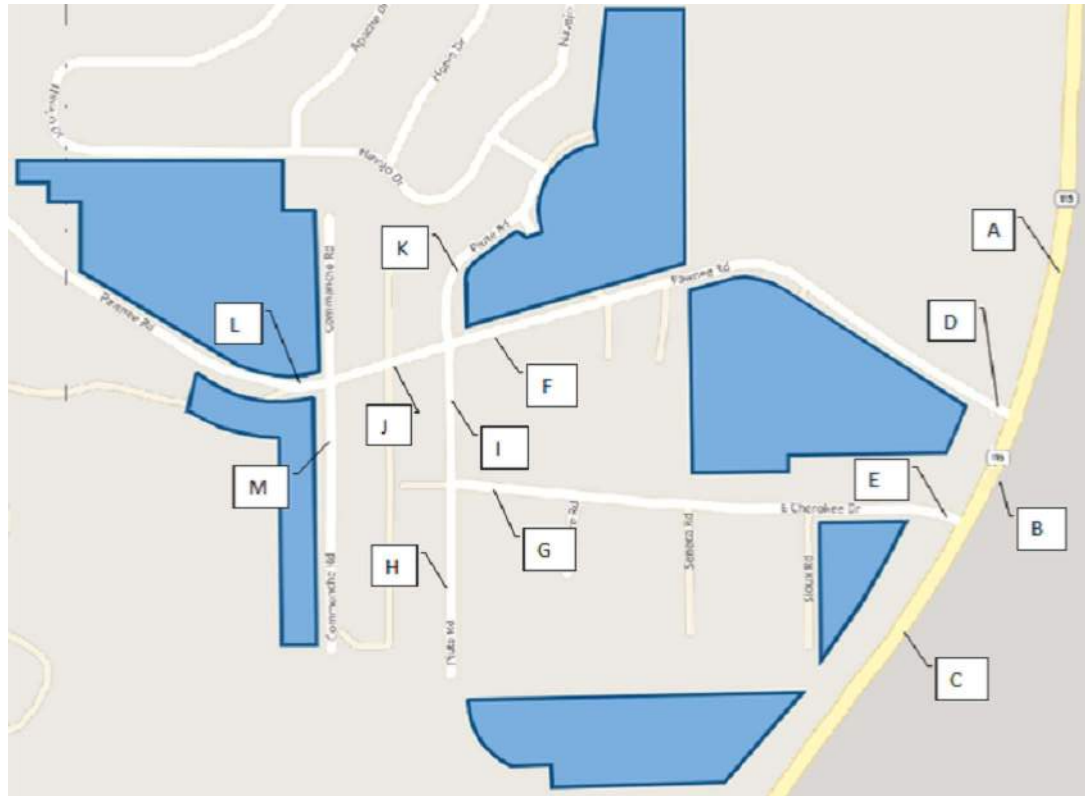
Figure 10
**Proposed Roadway
 Classifications**
 Rock Creek Mesa (LSC# 184380)

Exhibits





Parcels part of
this application

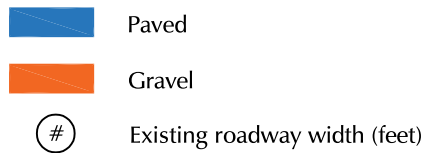


Not to
scale

* Assumes adjustment to background traffic with conversion of SH 115/Cherokee Dr to a right-in/right-out intersection

Location	Existing	Short-Term Baseline*	Site-Generated	Short-Term Baseline + Site	2040 Background*	2040 Background + Site
A	14000	14000	1532	15532	20868	22400
B	14000	14000	442	14442	19864	20306
C	14000	14000	47	14047	19853	19900
D	950	1025	1369	2395	1200	2575
E	150	75	210	285	175	385
F	900	975	758	1735	1125	1875
G	49	125	209	334	225	434
H	21	21	18	38	48	66
I	75	150	210	360	250	460
J	225	225	548	773	266	814
K	600	600	0	600	711	711
L	185	185	455	640	225	674
M	25	25	89	114	30	118

* Note: Assumes adjustment to background traffic with conversion of SH 115/Cherokee Drive from a full-movement to a right-in/right-out intersection



Rock Creek Mesa (LSC# 184380)

Traffic Counts

LSC Transportation Consultants, Inc.

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

File Name : SH 115 - Cherokee Dr AM
Site Code : 00184380
Start Date : 3/2/2021
Page No : 1

Groups Printed- Bank 1

Start Time	SH 115 Southbound					Westbound					SH 115 Northbound					cherokeeDr Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2
06:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	4	0	1	0	5	7
*** BREAK ***																					
07:15 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	5
07:30 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	4
07:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	3
Total	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	6	0	1	0	7	12
Grand Total	0	0	6	0	6	0	0	0	0	0	1	0	0	0	1	10	0	2	0	12	19
Apprch %	0	0	100	0		0	0	0	0		100	0	0	0		83.3	0	16.7	0		
Total %	0	0	31.6	0	31.6	0	0	0	0	0	5.3	0	0	0	5.3	52.6	0	10.5	0	63.2	

LSC Transportation Consultants, Inc.

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

File Name : SH 115 - Cherokee Dr AM
Site Code : 00184380
Start Date : 3/2/2021
Page No : 2

	SH 115 Southbound					Westbound					SH 115 Northbound					cherokeeDr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:00:00 AM to 7:45:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 7:00:00 AM																					
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	5
7:30:00 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	4
7:45:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	3
Total Volume	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	6	0	1	0	7	12
% App. Total	0	0	100	0		0	0	0	0		0	0	0	0		85.7	0	14.3	0		
PHF	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.250	.000	.583	.600

LSC Transportation Consultants, Inc.

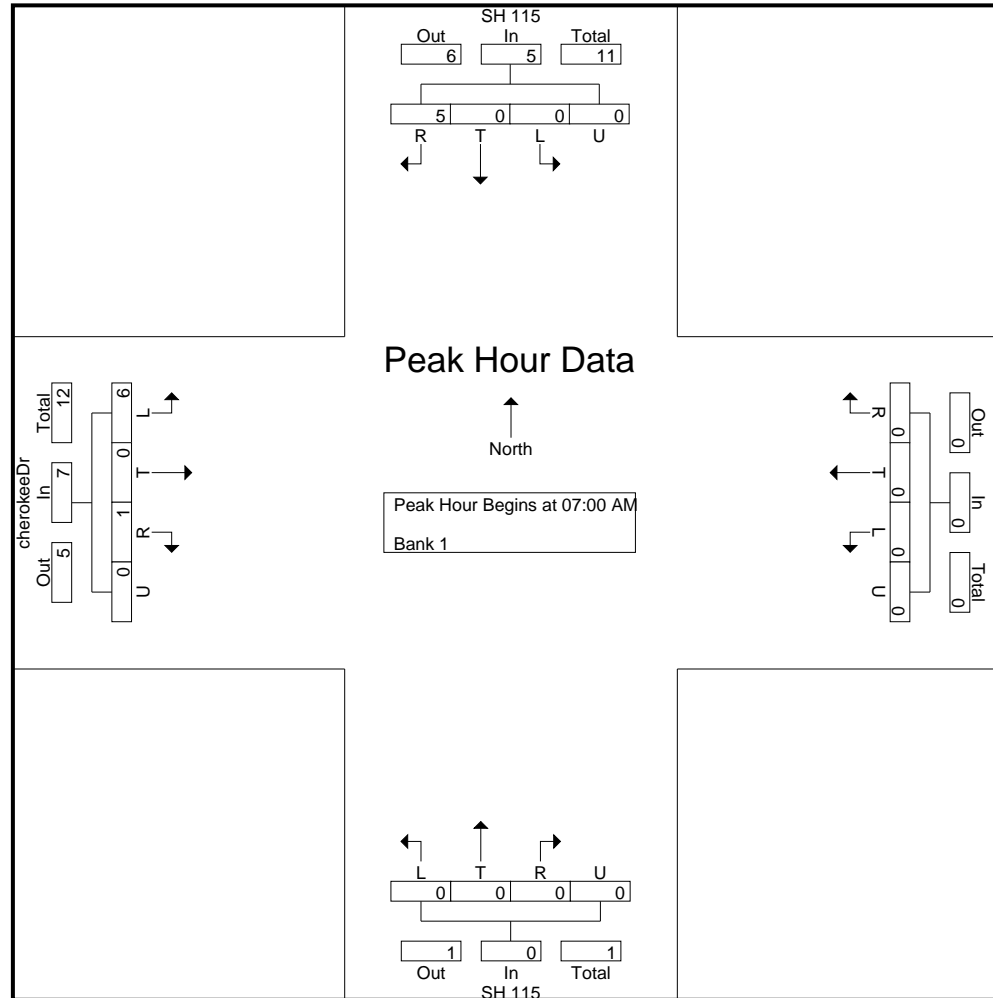
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : SH 115 - Cherokee Dr AM

Site Code : 00184380

Start Date : 3/2/2021

Page No : 3



LSC Transportation Consultants, Inc.

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

File Name : SH 115 - Cherokee Dr AM
Site Code : 00184380
Start Date : 3/2/2021
Page No : 4

	SH 115 Southbound					Westbound					SH 115 Northbound					cherokeeDr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:00:00 AM to 7:45:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	6:45:00 AM					6:00:00 AM					6:00:00 AM					7:00:00 AM					
+0 mins.	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+5 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	
+10 mins.	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	1	0	1	0	2	
+15 mins.	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
Total Volume	0	0	5	0	5	0	0	0	0	0	1	0	0	0	1	6	0	1	0	7	
% App. Total	0	0	100	0		0	0	0	0		100	0	0	0		85.7	0	14.3	0		
PHF	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.500	.000	.250	.000	.583	

LSC Transportation Consultants, Inc.

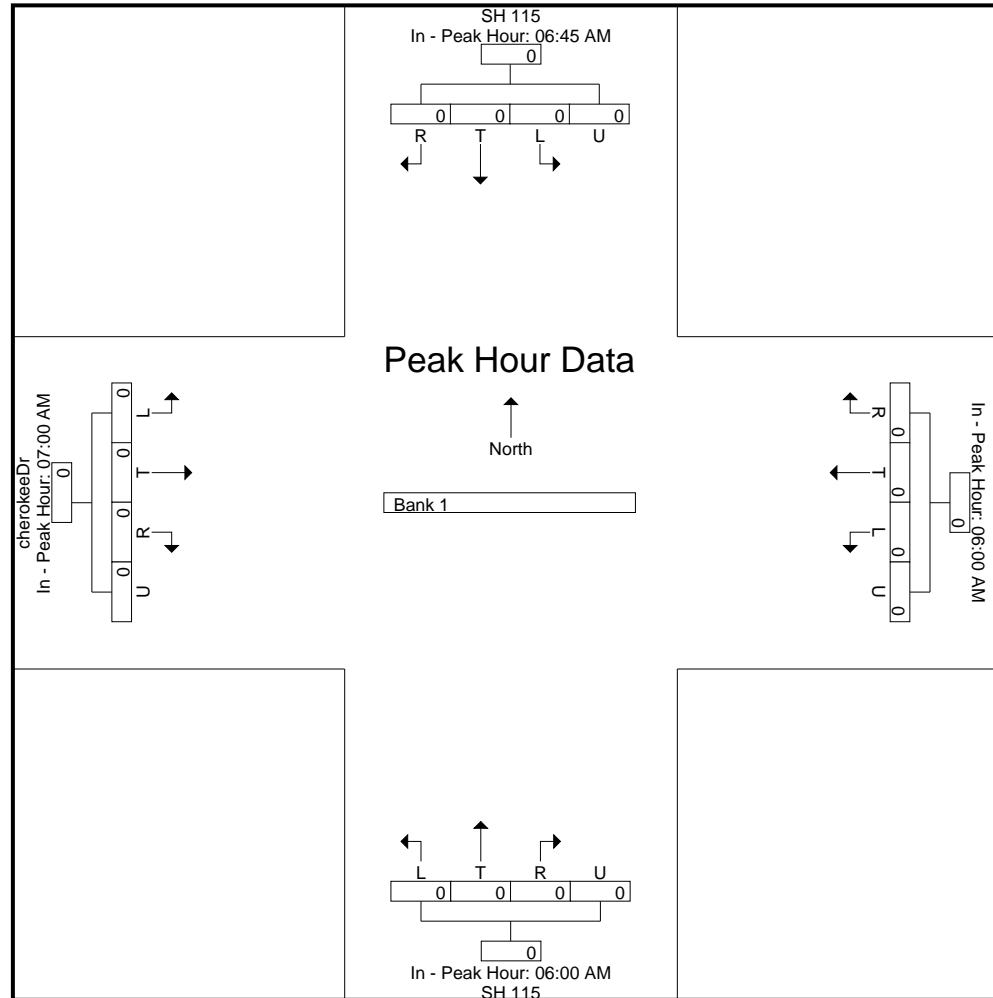
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : SH 115 - Cherokee Dr AM

Site Code : 00184380

Start Date : 3/2/2021

Page No : 5



LSC Transportation Consultants, Inc.

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

File Name : Hwy 115 - Cherokee Dr AM
Site Code : 00184380
Start Date : 10/20/2020
Page No : 1

Groups Printed- Unshifted

Start Time	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Cherokee Dr Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
07:00 AM	0	111	0	0	111	0	0	0	0	0	0	142	0	0	142	1	0	0	0	1	254
07:15 AM	0	139	0	0	139	0	0	0	0	0	0	148	0	0	148	3	0	0	0	3	290
07:30 AM	0	112	0	0	112	0	0	0	0	0	0	204	0	0	204	0	0	0	0	0	316
07:45 AM	0	100	0	0	100	0	0	0	0	0	0	131	0	0	131	0	0	0	0	0	231
Total	0	462	0	0	462	0	0	0	0	0	0	625	0	0	625	4	0	0	0	4	1091
08:00 AM	0	137	0	0	137	0	0	0	0	0	0	122	0	0	122	0	0	0	0	0	259
08:15 AM	0	177	0	0	177	0	0	0	0	0	0	90	0	0	90	1	0	1	0	2	269
08:30 AM	0	214	0	0	214	0	0	0	0	0	0	118	0	0	118	1	0	0	0	1	333
08:45 AM	0	207	0	0	207	0	0	0	0	0	0	104	0	0	104	2	0	0	0	2	313
Total	0	735	0	0	735	0	0	0	0	0	0	434	0	0	434	4	0	1	0	5	1174
Grand Total	0	1197	0	0	1197	0	0	0	0	0	0	1059	0	0	1059	8	0	1	0	9	2265
Apprch %	0	100	0	0		0	0	0	0		0	100	0	0		88.9	0	11.1	0		
Total %	0	52.8	0	0	52.8	0	0	0	0	0	0	46.8	0	0	46.8	0.4	0	0	0	0.4	

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

File Name : Hwy 115 - Cherokee Dr AM
Site Code : 00184380
Start Date : 10/20/2020
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	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Cherokee Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 8:00:00 AM																					
8:00:00 AM	0	137	0	0	137	0	0	0	0	0	0	122	0	0	122	0	0	0	0	0	259
8:15:00 AM	0	177	0	0	177	0	0	0	0	0	0	90	0	0	90	1	0	1	0	2	269
8:30:00 AM	0	214	0	0	214	0	0	0	0	0	0	118	0	0	118	1	0	0	0	1	333
8:45:00 AM	0	207	0	0	207	0	0	0	0	0	0	104	0	0	104	2	0	0	0	2	313
Total Volume	0	735	0	0	735	0	0	0	0	0	0	434	0	0	434	4	0	1	0	5	1174
% App. Total	0	100	0	0		0	0	0	0		0	100	0	0		80	0	20	0		
PHF	.000	.859	.000	.000	.859	.000	.000	.000	.000	.000	.000	.889	.000	.000	.889	.500	.000	.250	.000	.625	.881

LSC Transportation Consultants, Inc.

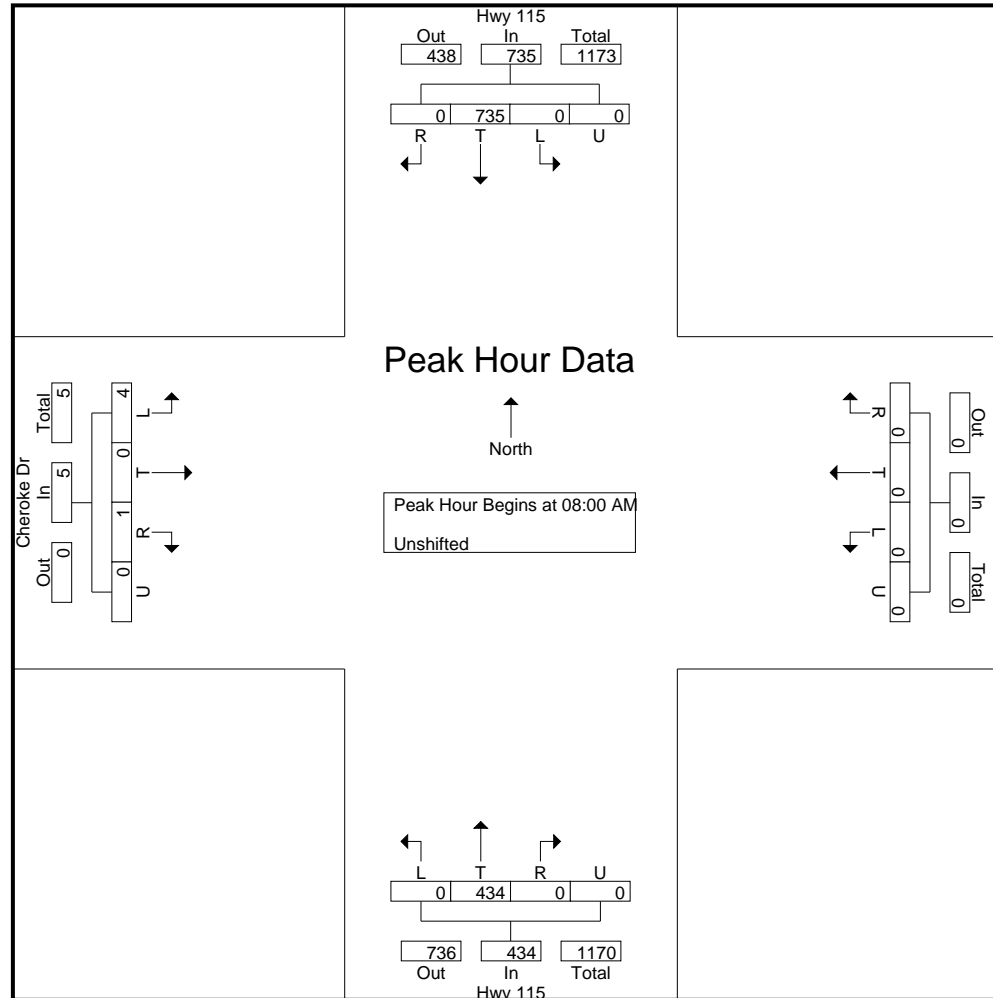
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File Name : Hwy 115 - Cherokee Dr AM

Site Code : 00184380

Start Date : 10/20/2020

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LSC Transportation Consultants, Inc.

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

File Name : Hwy 115 - Cherokee Dr AM
Site Code : 00184380
Start Date : 10/20/2020
Page No : 4

	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Cherokee Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	8:00:00 AM					7:00:00 AM					7:00:00 AM					8:00:00 AM					
+0 mins.	0	137	0	0	137	0	0	0	0	0	0	142	0	0	142	0	0	0	0	0	
+5 mins.	0	177	0	0	177	0	0	0	0	0	0	148	0	0	148	1	0	1	0	2	
+10 mins.	0	214	0	0	214	0	0	0	0	0	0	204	0	0	204	1	0	0	0	1	
+15 mins.	0	207	0	0	207	0	0	0	0	0	0	131	0	0	131	2	0	0	0	2	
Total Volume	0	735	0	0	735	0	0	0	0	0	0	625	0	0	625	4	0	1	0	5	
% App. Total	0	100	0	0		0	0	0	0		0	100	0	0		80	0	20	0		
PHF	.000	.859	.000	.000	.859	.000	.000	.000	.000	.000	.000	.766	.000	.000	.766	.500	.000	.250	.000	.625	

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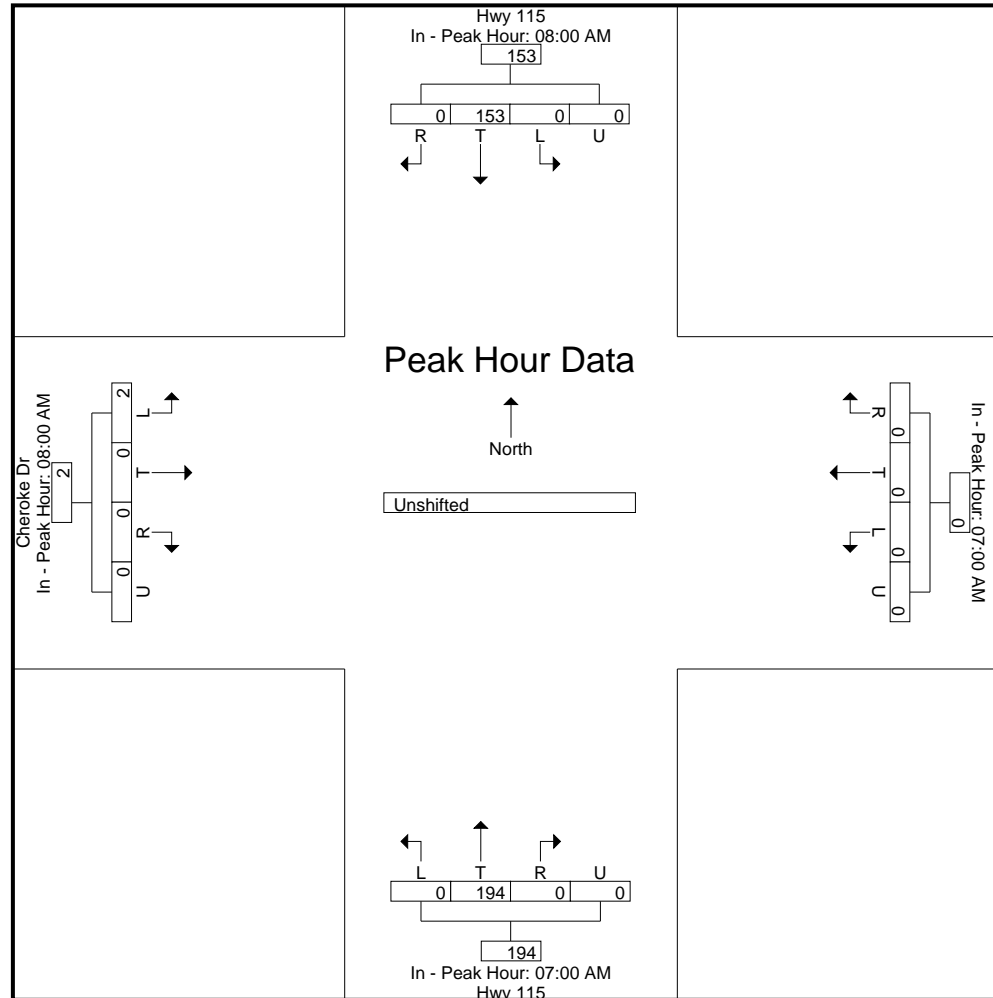
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719-633-2868

File Name : Hwy 115 - Cherokee Dr AM

Site Code : 00184380

Start Date : 10/20/2020

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LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : Hwy 115 - Cherokee Dr PM
Site Code : 00184380
Start Date : 10/20/2020
Page No : 1

Groups Printed- Unshifted

Start Time	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Cherokee Dr Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
04:00 PM	0	116	1	0	117	0	0	0	0	0	1	177	0	0	178	1	0	0	0	1	296
04:15 PM	0	141	2	0	143	0	0	0	0	0	0	164	0	0	164	1	0	0	0	1	308
04:30 PM	0	129	1	0	130	0	0	0	0	0	0	171	0	0	171	0	0	0	0	0	301
04:45 PM	0	110	2	0	112	0	0	0	0	0	0	124	0	0	124	0	0	0	0	0	236
Total	0	496	6	0	502	0	0	0	0	0	1	636	0	0	637	2	0	0	0	2	1141
05:00 PM	0	160	0	0	160	0	0	0	0	0	0	198	0	0	198	1	0	0	0	1	359
05:15 PM	0	127	0	0	127	0	0	0	0	0	0	165	0	0	165	0	0	0	0	0	292
05:30 PM	0	132	1	0	133	0	0	0	0	0	0	142	0	0	142	0	0	1	0	1	276
05:45 PM	0	94	0	0	94	0	0	0	0	0	0	98	0	0	98	0	0	0	0	0	192
Total	0	513	1	0	514	0	0	0	0	0	0	603	0	0	603	1	0	1	0	2	1119
Grand Total	0	1009	7	0	1016	0	0	0	0	0	1	1239	0	0	1240	3	0	1	0	4	2260
Apprch %	0	99.3	0.7	0		0	0	0	0		0.1	99.9	0	0		75	0	25	0		
Total %	0	44.6	0.3	0	45	0	0	0	0	0	0	54.8	0	0	54.9	0.1	0	0	0	0.2	

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545 E Pikes Peak Ave, Suite 210
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File Name : Hwy 115 - Cherokee Dr PM
Site Code : 00184380
Start Date : 10/20/2020
Page No : 2

	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Cherokee Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:15:00 PM																					
4:15:00 PM	0	141	2	0	143	0	0	0	0	0	0	164	0	0	164	1	0	0	0	1	308
4:30:00 PM	0	129	1	0	130	0	0	0	0	0	0	171	0	0	171	0	0	0	0	0	301
4:45:00 PM	0	110	2	0	112	0	0	0	0	0	0	124	0	0	124	0	0	0	0	0	236
5:00:00 PM	0	160	0	0	160	0	0	0	0	0	0	198	0	0	198	1	0	0	0	1	359
Total Volume	0	540	5	0	545	0	0	0	0	0	0	657	0	0	657	2	0	0	0	2	1204
% App. Total	0	99.1	0.9	0		0	0	0	0		0	100	0	0		100	0	0	0		
PHF	.000	.844	.625	.000	.852	.000	.000	.000	.000	.000	.000	.830	.000	.000	.830	.500	.000	.000	.000	.500	.838

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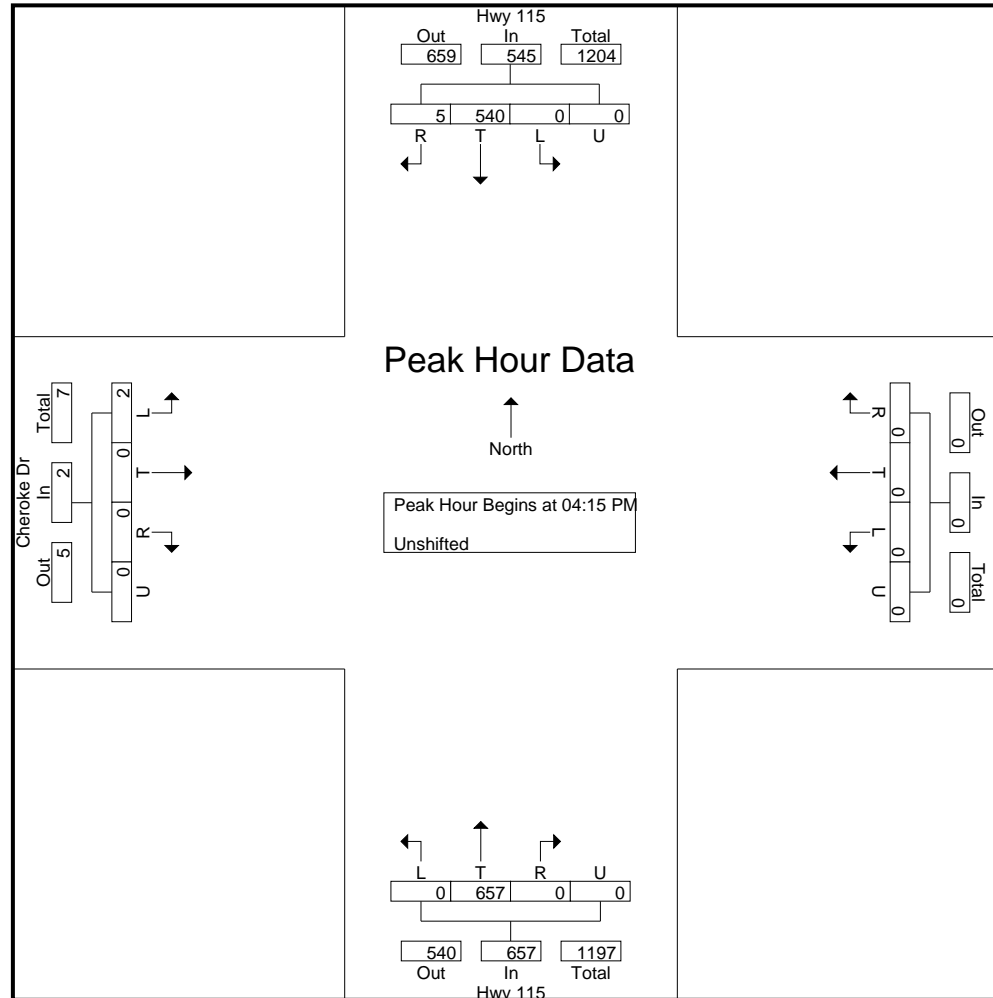
545 E Pikes Peak Ave, Suite 210
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File Name : Hwy 115 - Cherokee Dr PM

Site Code : 00184380

Start Date : 10/20/2020

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File Name : Hwy 115 - Cherokee Dr PM
Site Code : 00184380
Start Date : 10/20/2020
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	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Cherokee Dr Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:15:00 PM					4:00:00 PM					4:30:00 PM					4:00:00 PM					
+0 mins.	0	141	2	0	143	0	0	0	0	0	0	171	0	0	171	1	0	0	0	1	
+5 mins.	0	129	1	0	130	0	0	0	0	0	0	124	0	0	124	1	0	0	0	1	
+10 mins.	0	110	2	0	112	0	0	0	0	0	0	198	0	0	198	0	0	0	0	0	
+15 mins.	0	160	0	0	160	0	0	0	0	0	0	165	0	0	165	0	0	0	0	0	
Total Volume	0	540	5	0	545	0	0	0	0	0	0	658	0	0	658	2	0	0	0	2	
% App. Total	0	99.1	0.9	0		0	0	0	0		0	100	0	0		100	0	0	0		
PHF	.000	.844	.625	.000	.852	.000	.000	.000	.000	.000	.000	.831	.000	.000	.831	.500	.000	.000	.000	.500	

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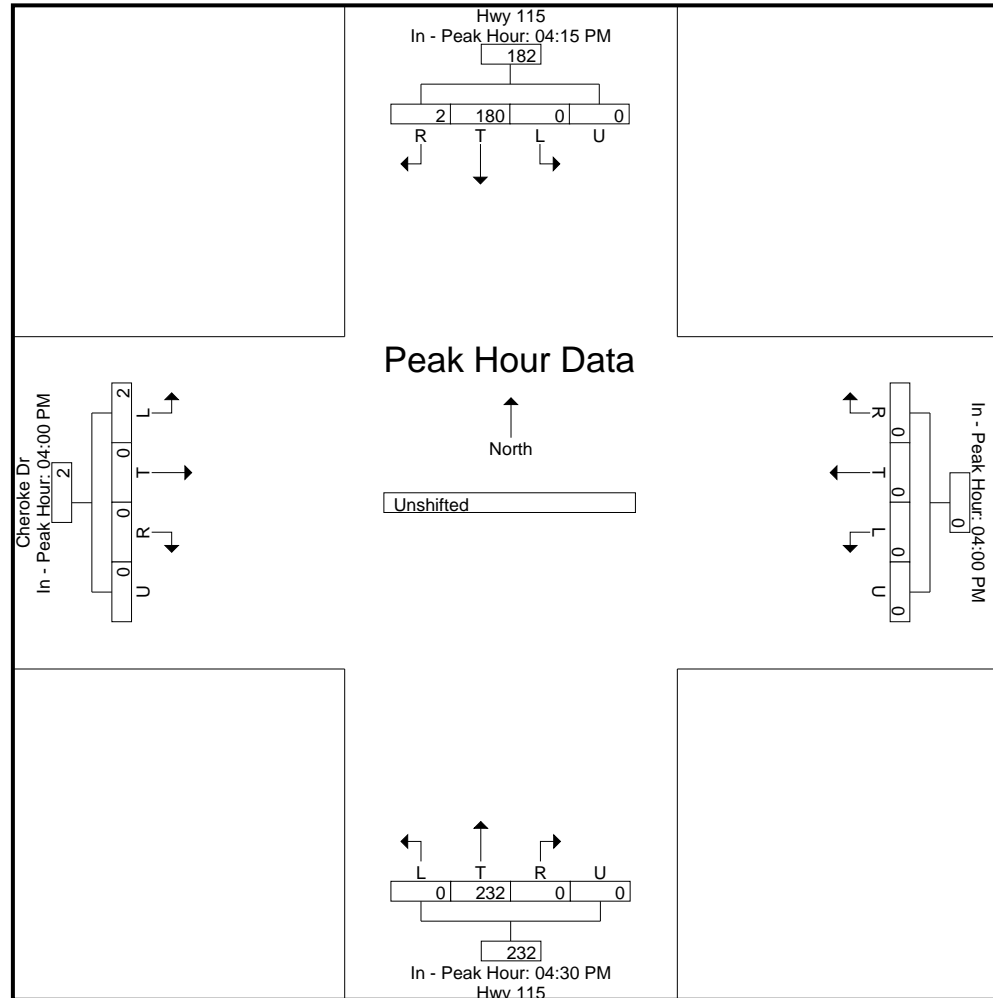
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File Name : Hwy 115 - Cherokee Dr PM

Site Code : 00184380

Start Date : 10/20/2020

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LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : SH 115 - Pawnee Rd AM
Site Code : 00184380
Start Date : 3/2/2021
Page No : 1

Groups Printed- Unshifted

Start Time	SH 115 Southbound					Westbound					SH 115 Northbound					Pawnee Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
06:00 AM	0	296	3	0	299	0	0	0	0	0	0	91	0	0	91	11	0	1	0	12	402
06:15 AM	0	161	3	0	164	0	0	0	0	0	0	106	0	0	106	11	0	1	0	12	282
06:30 AM	0	132	3	0	135	0	0	0	0	0	0	190	0	0	190	16	0	0	0	16	341
06:45 AM	0	106	1	0	107	0	0	0	0	0	0	170	0	0	170	17	0	2	0	19	296
Total	0	695	10	0	705	0	0	0	0	0	0	557	0	0	557	55	0	4	0	59	1321
07:00 AM	0	105	0	0	105	0	0	0	0	0	1	174	0	0	175	17	0	2	0	19	299
07:15 AM	0	116	6	0	122	0	0	0	0	0	0	196	0	0	196	12	0	1	0	13	331
07:30 AM	0	101	5	0	106	0	0	0	0	0	0	219	0	0	219	16	0	0	0	16	341
07:45 AM	0	143	4	0	147	0	0	0	0	0	0	176	0	0	176	12	0	2	0	14	337
Total	0	465	15	0	480	0	0	0	0	0	1	765	0	0	766	57	0	5	0	62	1308
Grand Total	0	1160	25	0	1185	0	0	0	0	0	1	1322	0	0	1323	112	0	9	0	121	2629
Apprch %	0	97.9	2.1	0		0	0	0	0		0.1	99.9	0	0		92.6	0	7.4	0		
Total %	0	44.1	1	0	45.1	0	0	0	0	0	0	50.3	0	0	50.3	4.3	0	0.3	0	4.6	

LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
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File Name : SH 115 - Pawnee Rd AM
Site Code : 00184380
Start Date : 3/2/2021
Page No : 2

	SH 115 Southbound					Westbound					SH 115 Northbound					Pawnee Rd Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:00:00 AM to 7:45:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 6:00:00 AM																					
6:00:00 AM	0	296	3	0	299	0	0	0	0	0	0	91	0	0	91	11	0	1	0	12	402
6:15:00 AM	0	161	3	0	164	0	0	0	0	0	0	106	0	0	106	11	0	1	0	12	282
6:30:00 AM	0	132	3	0	135	0	0	0	0	0	0	190	0	0	190	16	0	0	0	16	341
6:45:00 AM	0	106	1	0	107	0	0	0	0	0	0	170	0	0	170	17	0	2	0	19	296
Total Volume	0	695	10	0	705	0	0	0	0	0	0	557	0	0	557	55	0	4	0	59	1321
% App. Total	0	98.6	1.4	0		0	0	0	0		0	100	0	0		93.2	0	6.8	0		
PHF	.000	.587	.833	.000	.589	.000	.000	.000	.000	.000	.000	.733	.000	.000	.733	.809	.000	.500	.000	.776	.822

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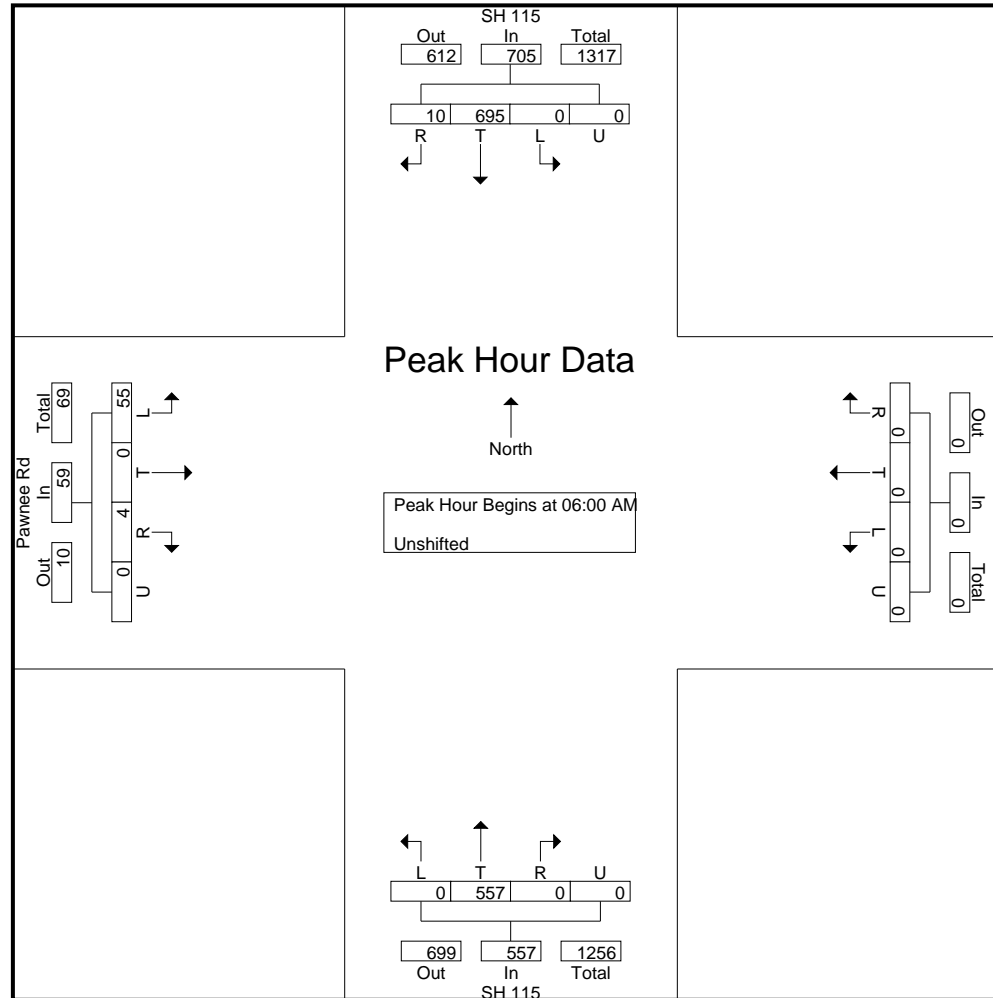
545 E Pikes Peak Ave, Suite 210
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File Name : SH 115 - Pawnee Rd AM

Site Code : 00184380

Start Date : 3/2/2021

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LSC Transportation Consultants, Inc.

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File Name : SH 115 - Pawnee Rd AM
Site Code : 00184380
Start Date : 3/2/2021
Page No : 4

	SH 115 Southbound					Westbound					SH 115 Northbound					Pawnee Rd Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 6:00:00 AM to 7:45:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	6:00:00 AM					6:00:00 AM					7:00:00 AM					6:30:00 AM					
+0 mins.	0	296	3	0	299	0	0	0	0	0	1	174	0	0	175	16	0	0	0	16	
+5 mins.	0	161	3	0	164	0	0	0	0	0	0	196	0	0	196	17	0	2	0	19	
+10 mins.	0	132	3	0	135	0	0	0	0	0	0	219	0	0	219	17	0	2	0	19	
+15 mins.	0	106	1	0	107	0	0	0	0	0	0	176	0	0	176	12	0	1	0	13	
Total Volume	0	695	10	0	705	0	0	0	0	0	1	765	0	0	766	62	0	5	0	67	
% App. Total	0	98.6	1.4	0		0	0	0	0		0.1	99.9	0	0		92.5	0	7.5	0		
PHF	.000	.587	.833	.000	.589	.000	.000	.000	.000	.000	.250	.873	.000	.000	.874	.912	.000	.625	.000	.882	

LSC Transportation Consultants, Inc.

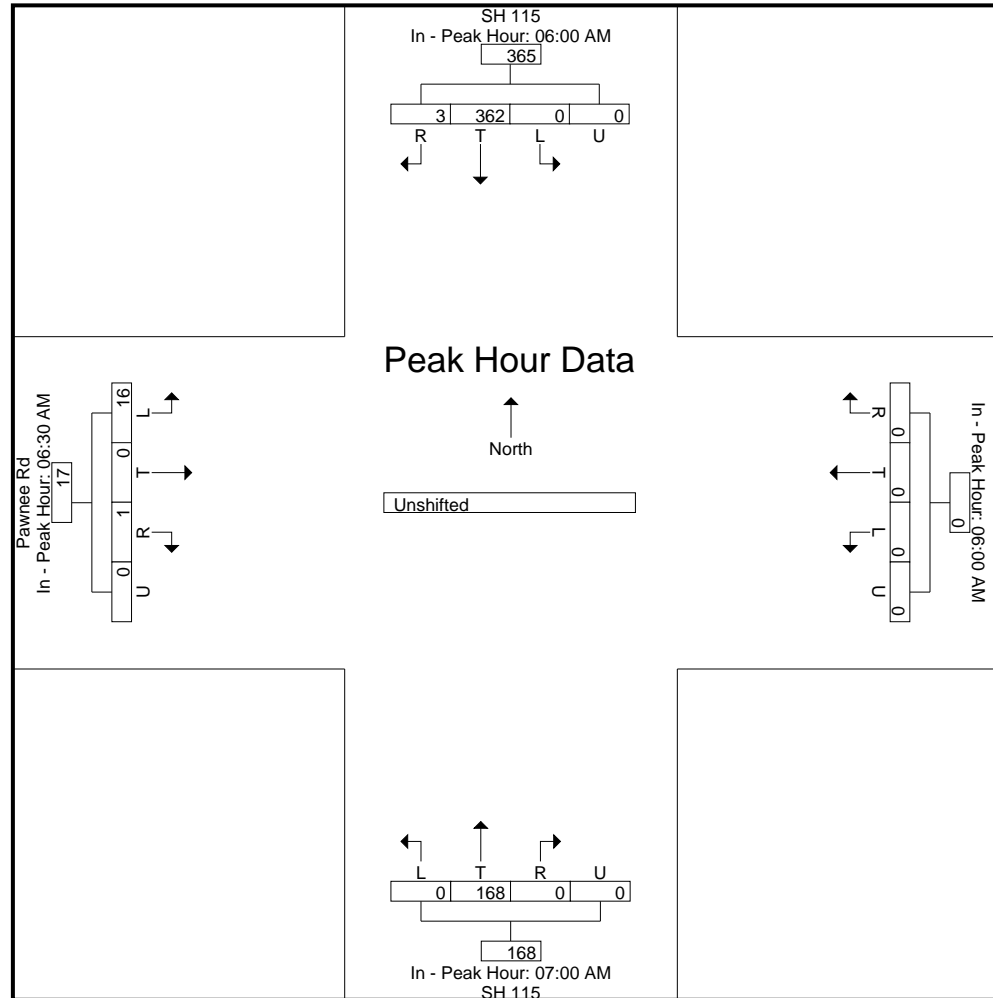
545 E Pikes Peak Ave, Suite 210
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File Name : SH 115 - Pawnee Rd AM

Site Code : 00184380

Start Date : 3/2/2021

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File Name : Hwy 115 - Pawnee Rd AM
Site Code : 00184380
Start Date : 10/15/2020
Page No : 1

Groups Printed- Unshifted

Start Time	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Pawnee Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
07:00 AM	0	108	0	0	108	0	0	0	0	0	0	142	0	0	142	6	0	1	0	7	257
07:15 AM	0	95	3	0	98	0	0	0	0	0	1	166	0	0	167	19	0	0	0	19	284
07:30 AM	0	117	1	0	118	0	0	0	0	0	0	210	0	0	210	13	0	0	0	13	341
07:45 AM	0	103	2	0	105	0	0	0	0	0	0	148	0	0	148	9	0	0	0	9	262
Total	0	423	6	0	429	0	0	0	0	0	1	666	0	0	667	47	0	1	0	48	1144
08:00 AM	0	122	2	0	124	0	0	0	0	0	0	98	0	0	98	12	0	0	0	12	234
08:15 AM	0	169	9	0	178	0	0	0	0	0	0	123	0	0	123	6	0	0	0	6	307
08:30 AM	0	217	3	0	220	0	0	0	0	0	0	124	0	0	124	5	0	0	0	5	349
08:45 AM	0	217	2	0	219	0	0	0	0	0	0	119	0	0	119	8	0	2	0	10	348
Total	0	725	16	0	741	0	0	0	0	0	0	464	0	0	464	31	0	2	0	33	1238
Grand Total	0	1148	22	0	1170	0	0	0	0	0	1	1130	0	0	1131	78	0	3	0	81	2382
Apprch %	0	98.1	1.9	0		0	0	0	0		0.1	99.9	0	0		96.3	0	3.7	0		
Total %	0	48.2	0.9	0	49.1	0	0	0	0	0	0	47.4	0	0	47.5	3.3	0	0.1	0	3.4	

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719-633-2868

File Name : Hwy 115 - Pawnee Rd AM
Site Code : 00184380
Start Date : 10/15/2020
Page No : 2

	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Pawnee Rd Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 8:00:00 AM																					
8:00:00 AM	0	122	2	0	124	0	0	0	0	0	0	98	0	0	98	12	0	0	0	12	234
8:15:00 AM	0	169	9	0	178	0	0	0	0	0	0	123	0	0	123	6	0	0	0	6	307
8:30:00 AM	0	217	3	0	220	0	0	0	0	0	0	124	0	0	124	5	0	0	0	5	349
8:45:00 AM	0	217	2	0	219	0	0	0	0	0	0	119	0	0	119	8	0	2	0	10	348
Total Volume	0	725	16	0	741	0	0	0	0	0	0	464	0	0	464	31	0	2	0	33	1238
% App. Total	0	97.8	2.2	0		0	0	0	0		0	100	0	0		93.9	0	6.1	0		
PHF	.000	.835	.444	.000	.842	.000	.000	.000	.000	.000	.000	.935	.000	.000	.935	.646	.000	.250	.000	.688	.887

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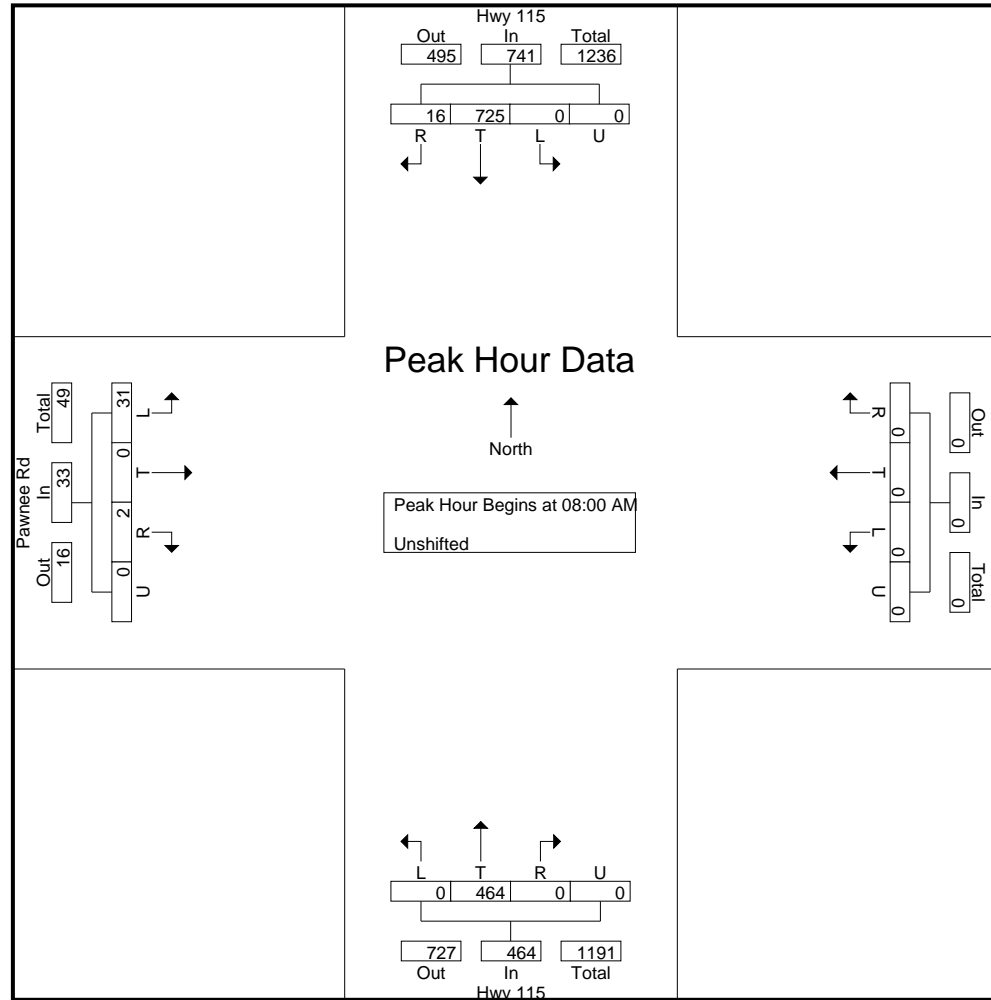
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719-633-2868

File Name : Hwy 115 - Pawnee Rd AM

Site Code : 00184380

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File Name : Hwy 115 - Pawnee Rd AM
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	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Pawnee Rd Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	8:00:00 AM					7:00:00 AM					7:00:00 AM					7:15:00 AM					
+0 mins.	0	122	2	0	124	0	0	0	0	0	0	142	0	0	142	19	0	0	0	19	
+5 mins.	0	169	9	0	178	0	0	0	0	0	1	166	0	0	167	13	0	0	0	13	
+10 mins.	0	217	3	0	220	0	0	0	0	0	0	210	0	0	210	9	0	0	0	9	
+15 mins.	0	217	2	0	219	0	0	0	0	0	0	148	0	0	148	12	0	0	0	12	
Total Volume	0	725	16	0	741	0	0	0	0	0	1	666	0	0	667	53	0	0	0	53	
% App. Total	0	97.8	2.2	0		0	0	0	0		0.1	99.9	0	0		100	0	0	0		
PHF	.000	.835	.444	.000	.842	.000	.000	.000	.000	.000	.250	.793	.000	.000	.794	.697	.000	.000	.000	.697	

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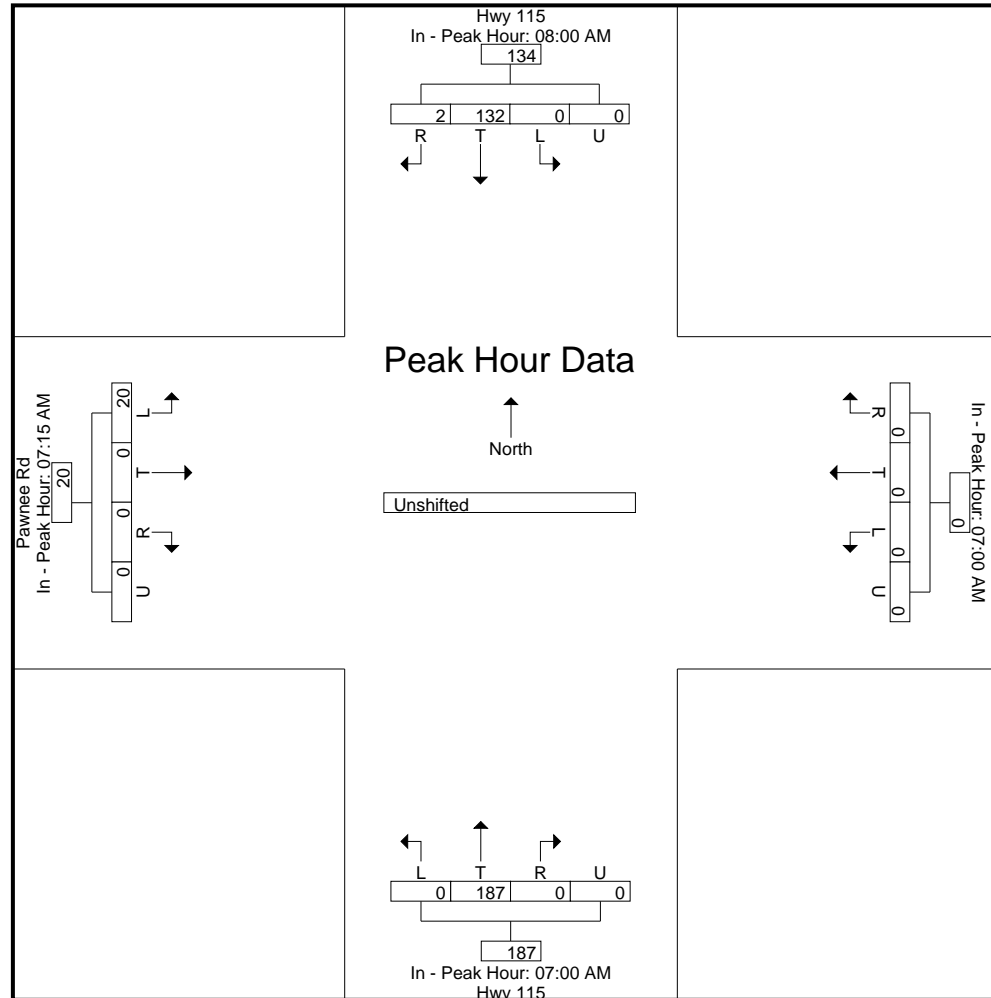
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File Name : Hwy 115 - Pawnee Rd PM
Site Code : 00184380
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Groups Printed- Unshifted

Start Time	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Pawnee Rd Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
04:00 PM	0	142	9	0	151	0	0	0	0	0	0	189	0	0	189	11	0	0	0	11	351
04:15 PM	0	137	12	0	149	0	0	0	0	0	2	232	0	0	234	8	0	1	0	9	392
04:30 PM	0	148	13	0	161	0	0	0	0	0	1	208	0	0	209	11	0	0	0	11	381
04:45 PM	0	132	13	0	145	0	0	0	0	0	0	199	0	0	199	6	0	2	0	8	352
Total	0	559	47	0	606	0	0	0	0	0	3	828	0	0	831	36	0	3	0	39	1476
05:00 PM	0	142	25	0	167	0	0	0	0	0	0	230	0	0	230	7	0	0	0	7	404
05:15 PM	0	130	13	0	143	0	0	0	0	0	0	175	0	0	175	6	0	1	0	7	325
05:30 PM	0	125	17	0	142	0	0	0	0	0	0	188	0	0	188	6	0	0	0	6	336
05:45 PM	0	126	14	0	140	0	0	0	0	0	0	136	0	0	136	12	0	0	0	12	288
Total	0	523	69	0	592	0	0	0	0	0	0	729	0	0	729	31	0	1	0	32	1353
Grand Total	0	1082	116	0	1198	0	0	0	0	0	3	1557	0	0	1560	67	0	4	0	71	2829
Apprch %	0	90.3	9.7	0		0	0	0	0		0.2	99.8	0	0		94.4	0	5.6	0		
Total %	0	38.2	4.1	0	42.3	0	0	0	0		0.1	55	0	0	55.1	2.4	0	0.1	0	2.5	

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	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Pawnee Rd Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:15:00 PM																					
4:15:00 PM	0	137	12	0	149	0	0	0	0	0	2	232	0	0	234	8	0	1	0	9	392
4:30:00 PM	0	148	13	0	161	0	0	0	0	0	1	208	0	0	209	11	0	0	0	11	381
4:45:00 PM	0	132	13	0	145	0	0	0	0	0	0	199	0	0	199	6	0	2	0	8	352
5:00:00 PM	0	142	25	0	167	0	0	0	0	0	0	230	0	0	230	7	0	0	0	7	404
Total Volume	0	559	63	0	622	0	0	0	0	0	3	869	0	0	872	32	0	3	0	35	1529
% App. Total	0	89.9	10.1	0		0	0	0	0		0.3	99.7	0	0		91.4	0	8.6	0		
PHF	.000	.944	.630	.000	.931	.000	.000	.000	.000	.000	.375	.936	.000	.000	.932	.727	.000	.375	.000	.795	.946

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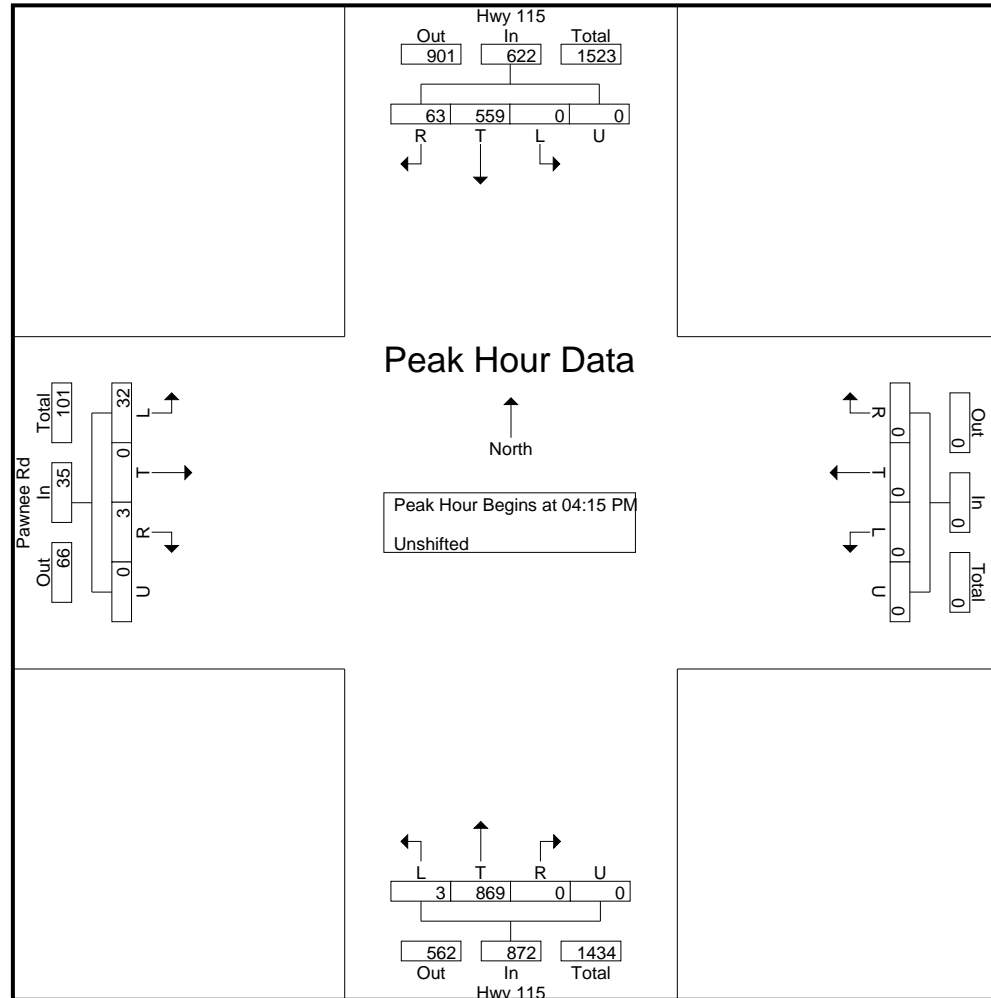
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File Name : Hwy 115 - Pawnee Rd PM

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	Hwy 115 Southbound					Westbound					Hwy 115 Northbound					Pawnee Rd Eastbound					
Start Time	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:15:00 PM					4:00:00 PM					4:15:00 PM					4:00:00 PM					
+0 mins.	0	137	12	0	149	0	0	0	0	0	2	232	0	0	234	11	0	0	0	11	
+5 mins.	0	148	13	0	161	0	0	0	0	0	1	208	0	0	209	8	0	1	0	9	
+10 mins.	0	132	13	0	145	0	0	0	0	0	0	199	0	0	199	11	0	0	0	11	
+15 mins.	0	142	25	0	167	0	0	0	0	0	0	230	0	0	230	6	0	2	0	8	
Total Volume	0	559	63	0	622	0	0	0	0	0	3	869	0	0	872	36	0	3	0	39	
% App. Total	0	89.9	10.1	0		0	0	0	0		0.3	99.7	0	0		92.3	0	7.7	0		
PHF	.000	.944	.630	.000	.931	.000	.000	.000	.000	.000	.375	.936	.000	.000	.932	.818	.000	.375	.000	.886	

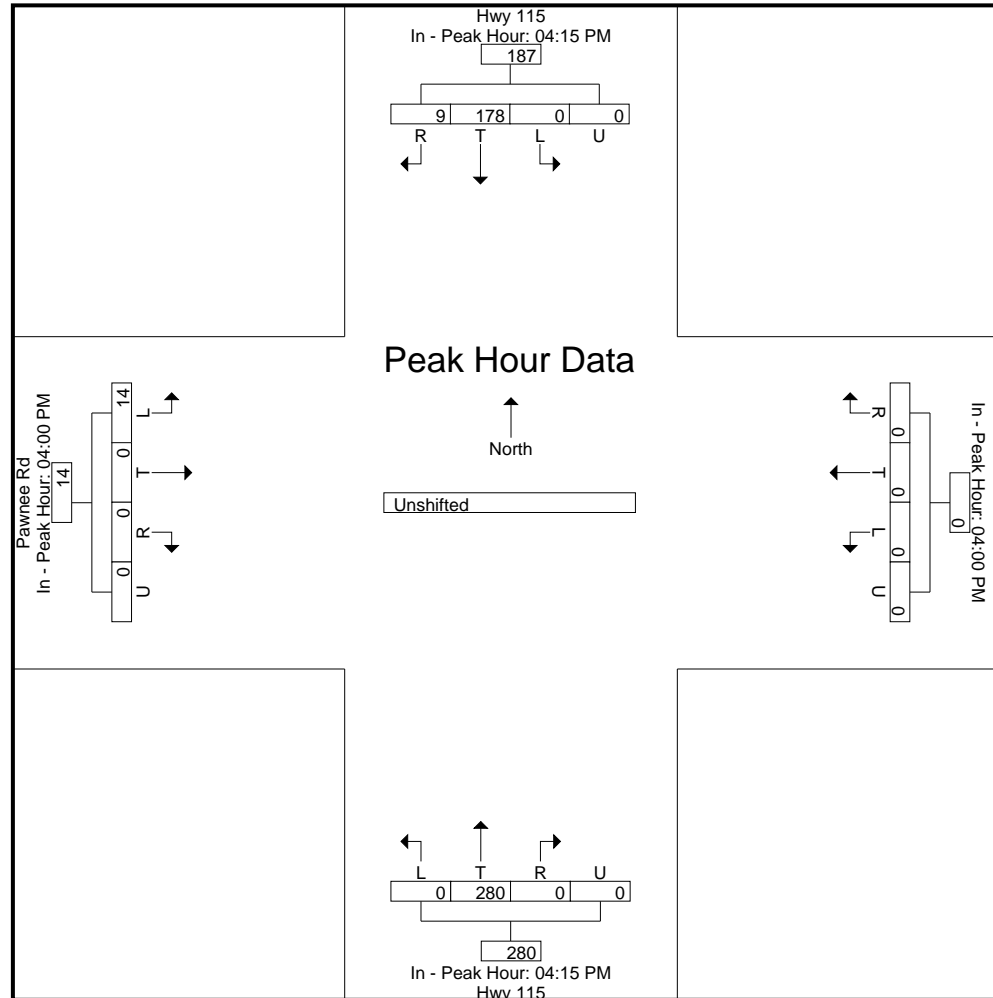
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File Name : Hwy 115 - Pawnee Rd PM





Site Code : 00184380

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Levels of Service

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	5	1	0	460	10
Future Vol, veh/h	62	5	1	0	460	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	6	1	0	495	11

Major/Minor	Minor2		Major2	
Conflicting Flow All	495	248	-	0
Stage 1	495	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.84	6.94	-	-
Critical Hdwy Stg 1	5.84	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	504	752	-	-
Stage 1	578	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	504	752	-	-
Mov Cap-2 Maneuver	504	-	-	-
Stage 1	578	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	13.2	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	517	-	-
HCM Lane V/C Ratio	0.149	-	-
HCM Control Delay (s)	13.2	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-

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	3	1	5	720	0	547	5	0	0
Future Vol, veh/h	0	3	1	5	720	0	547	5	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	-	415	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	1	5	774	0	588	5	0	0





Major/Minor	Minor2		Major1		Major2			
Conflicting Flow All	982	294	593	0	0	-	-	0
Stage 1	588	-	-	-	-	-	-	-
Stage 2	394	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-	-	-
Pot Cap-1 Maneuver	261	703	981	-	-	0	-	-
Stage 1	519	-	-	-	-	0	-	-
Stage 2	680	-	-	-	-	0	-	-
Platoon blocked, %				-	-	-	-	-
Mov Cap-1 Maneuver	261	703	981	-	-	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-	-	-
Stage 1	518	-	-	-	-	-	-	-
Stage 2	680	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBT	SBR
Capacity (veh/h)	981	-	-	703	-	-
HCM Lane V/C Ratio	0.001	-	-	0.005	-	-
HCM Control Delay (s)	8.7	-	-	10.1	-	-
HCM Lane LOS	A	-	-	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	-

Intersection







Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	3	3	0	600	63
Future Vol, veh/h	40	3	3	0	600	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	3	3	0	645	68

Major/Minor	Minor2		Major2	
Conflicting Flow All	645	323	-	0
Stage 1	645	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.84	6.94	-	-
Critical Hdwy Stg 1	5.84	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	405	673	-	-
Stage 1	484	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	405	673	-	-
Mov Cap-2 Maneuver	405	-	-	-
Stage 1	484	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	14.8	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	417	-	-
HCM Lane V/C Ratio	0.119	-	-
HCM Control Delay (s)	14.8	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-

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	3	1	3	875	0	598	5	0	0
Future Vol, veh/h	0	3	1	3	875	0	598	5	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	-	415	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	1	3	941	0	643	5	0	0





Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	1119	322	648	0	0	-	0
Stage 1	643	-	-	-	-	-	-
Stage 2	476	-	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-	-
Pot Cap-1 Maneuver	214	674	936	-	-	0	-
Stage 1	486	-	-	-	-	0	-
Stage 2	624	-	-	-	-	0	-
Platoon blocked, %				-	-	-	-
Mov Cap-1 Maneuver	214	674	936	-	-	-	-
Mov Cap-2 Maneuver	214	-	-	-	-	-	-
Stage 1	486	-	-	-	-	-	-
Stage 2	624	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBT	SBR
Capacity (veh/h)	936	-	-	674	-	-
HCM Lane V/C Ratio	0.001	-	-	0.006	-	-
HCM Control Delay (s)	8.9	-	-	10.4	-	-
HCM Lane LOS	A	-	-	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	-






HCM 6th TWSC
1: SH 115 & Pawnee Rd

Short-Term Baseline
AM -- RIRO Adjustment

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	5	2	0	460	10
Future Vol, veh/h	70	5	2	0	460	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	6	2	0	495	11
Major/Minor	Minor2		Major2			
Conflicting Flow All	495	248			-	0
Stage 1	495	-			-	-
Stage 2	0	-			-	-
Critical Hdwy	6.84	6.94			-	-
Critical Hdwy Stg 1	5.84	-			-	-
Critical Hdwy Stg 2	-	-			-	-
Follow-up Hdwy	3.52	3.32			-	-
Pot Cap-1 Maneuver	504	752			-	-
Stage 1	578	-			-	-
Stage 2	-	-			-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	504	752			-	-
Mov Cap-2 Maneuver	504	-			-	-
Stage 1	578	-			-	-
Stage 2	-	-			-	-
Approach	EB		SB			
HCM Control Delay, s	13.4		0			
HCM LOS	B					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	515	-	-			
HCM Lane V/C Ratio	0.167	-	-			
HCM Control Delay (s)	13.4	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0.6	-	-			

HCM 6th TWSC
2: SH 115 & Cherokee Dr

Short-Term Baseline
AM -- RIRO Adjustment

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	3	0	2	730	0	460	5	0	0
Future Vol, veh/h	0	3	0	2	730	0	460	5	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	0	2	785	0	495	5	0	0





Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 248	- 0	0 - - 0
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -
Critical Hdwy	- 6.93	- -	- - - -
Critical Hdwy Stg 1	- -	- -	- - - -
Critical Hdwy Stg 2	- -	- -	- - - -
Follow-up Hdwy	- 3.319	- -	- - - -
Pot Cap-1 Maneuver	0 753	0 -	- 0 - -
Stage 1	0 -	0 -	- 0 - -
Stage 2	0 -	0 -	- 0 - -
Platoon blocked, %		- -	- - - -
Mov Cap-1 Maneuver	- 753	- -	- - - -
Mov Cap-2 Maneuver	- -	- -	- - - -
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	753	-	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	-	-	9.8	-	-
HCM Lane LOS	-	-	A	-	-
HCM 95th %tile Q(veh)	-	-	0	-	-






HCM 6th TWSC
1: SH 115 & Pawnee Rd





Short-Term Baseline
PM -- RIRO Adjustment

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	3	4	0	600	63
Future Vol, veh/h	44	3	4	0	600	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	3	4	0	645	68
Major/Minor	Minor2		Major2			
Conflicting Flow All	645	323			-	0
Stage 1	645	-			-	-
Stage 2	0	-			-	-
Critical Hdwy	6.84	6.94			-	-
Critical Hdwy Stg 1	5.84	-			-	-
Critical Hdwy Stg 2	-	-			-	-
Follow-up Hdwy	3.52	3.32			-	-
Pot Cap-1 Maneuver	405	673			-	-
Stage 1	484	-			-	-
Stage 2	-	-			-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	405	673			-	-
Mov Cap-2 Maneuver	405	-			-	-
Stage 1	484	-			-	-
Stage 2	-	-			-	-
Approach	EB		SB			
HCM Control Delay, s	14.9		0			
HCM LOS	B					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	416	-	-			
HCM Lane V/C Ratio	0.13	-	-			
HCM Control Delay (s)	14.9	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0.4	-	-			

HCM 6th TWSC
2: SH 115 & Cherokee Dr

Short-Term Baseline
PM -- RIRO Adjustment






Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	3	0	4	875	0	598	5	0	0
Future Vol, veh/h	0	3	0	4	875	0	598	5	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	0	4	941	0	643	5	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	322	-	0	0	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.93	-	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.319	-	-	-	-	-	-		
Pot Cap-1 Maneuver	0	674	0	-	-	0	-	-		
Stage 1	0	-	0	-	-	0	-	-		
Stage 2	0	-	0	-	-	0	-	-		
Platoon blocked, %				-	-		-	-		
Mov Cap-1 Maneuver	-	674	-	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	10.4		0		0					
HCM LOS	B									
Minor Lane/Major Mvmt	NBT		NBR EBLn1		SBT		SBR			
Capacity (veh/h)	-		-		674		-		-	
HCM Lane V/C Ratio	-		-		0.006		-		-	
HCM Control Delay (s)	-		-		10.4		-		-	
HCM Lane LOS	-		-		B		-		-	
HCM 95th %tile Q(veh)	-		-		0		-		-	





Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	159	7	4	0	467	34
Future Vol, veh/h	159	7	4	0	467	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	183	8	4	0	502	37

Major/Minor	Minor2		Major2	
Conflicting Flow All	502	251	-	0
Stage 1	502	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.84	6.94	-	-
Critical Hdwy Stg 1	5.84	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	499	749	-	-
Stage 1	573	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	499	749	-	-
Mov Cap-2 Maneuver	499	-	-	-
Stage 1	573	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	16.4	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	506	-	-
HCM Lane V/C Ratio	0.377	-	-
HCM Control Delay (s)	16.4	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.7	-	-






Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	4	0	4	732	0	462	12	0	0
Future Vol, veh/h	0	4	0	4	732	0	462	12	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	0	4	787	0	497	13	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	249	-	0	0	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.93	-	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.319	-	-	-	-	-	-		
Pot Cap-1 Maneuver	0	752	0	-	-	0	-	-		
Stage 1	0	-	0	-	-	0	-	-		
Stage 2	0	-	0	-	-	0	-	-		
Platoon blocked, %				-	-		-	-		
Mov Cap-1 Maneuver	-	752	-	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	9.8		0		0					
HCM LOS	A									
Minor Lane/Major Mvmt	NBT		NBR EBLn1		SBT		SBR			
Capacity (veh/h)	-		-		752		-		-	
HCM Lane V/C Ratio	-		-		0.007		-		-	
HCM Control Delay (s)	-		-		9.8		-		-	
HCM Lane LOS	-		-		A		-		-	
HCM 95th %tile Q(veh)	-		-		0		-		-	





Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	102	4	7	0	623	144
Future Vol, veh/h	102	4	7	0	623	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	117	5	8	0	670	155

Major/Minor	Minor2		Major2	
Conflicting Flow All	670	335	-	0
Stage 1	670	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.84	6.94	-	-
Critical Hdwy Stg 1	5.84	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	390	661	-	-
Stage 1	470	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	390	661	-	-
Mov Cap-2 Maneuver	390	-	-	-
Stage 1	470	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	18.1	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	396	-	-
HCM Lane V/C Ratio	0.308	-	-
HCM Control Delay (s)	18.1	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.3	-	-






Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	4	0	7	876	0	623	28	0	0
Future Vol, veh/h	0	4	0	7	876	0	623	28	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	0	8	942	0	670	30	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	335	-	0	0	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.93	-	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.319	-	-	-	-	-	-		
Pot Cap-1 Maneuver	0	662	0	-	-	0	-	-		
Stage 1	0	-	0	-	-	0	-	-		
Stage 2	0	-	0	-	-	0	-	-		
Platoon blocked, %				-	-		-	-		
Mov Cap-1 Maneuver	-	662	-	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	10.5		0		0					
HCM LOS	B									
Minor Lane/Major Mvmt	NBT		NBR EBLn1		SBT		SBR			
Capacity (veh/h)	-		-		662		-		-	
HCM Lane V/C Ratio	-		-		0.008		-		-	
HCM Control Delay (s)	-		-		10.5		-		-	
HCM Lane LOS	-		-		B		-		-	
HCM 95th %tile Q(veh)	-		-		0		-		-	





Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	68	2	4	0	683	6
Future Vol, veh/h	68	2	4	0	683	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	2	4	0	734	6

Major/Minor	Minor2		Major2	
Conflicting Flow All	734	367	-	0
Stage 1	734	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.84	6.94	-	-
Critical Hdwy Stg 1	5.84	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	355	630	-	-
Stage 1	436	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	355	630	-	-
Mov Cap-2 Maneuver	355	-	-	-
Stage 1	436	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	17.9	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	359	-	-
HCM Lane V/C Ratio	0.224	-	-
HCM Control Delay (s)	17.9	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.8	-	-






Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	3	0	4	929	0	675	8	0	0
Future Vol, veh/h	0	3	0	4	929	0	675	8	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	0	4	999	0	726	9	0	0
Major/Minor	Minor2		Major1		Major2					
Conflicting Flow All	-	363	-	0	0	-	-	0		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Critical Hdwy	-	6.93	-	-	-	-	-	-		
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-		
Follow-up Hdwy	-	3.319	-	-	-	-	-	-		
Pot Cap-1 Maneuver	0	635	0	-	-	0	-	-		
Stage 1	0	-	0	-	-	0	-	-		
Stage 2	0	-	0	-	-	0	-	-		
Platoon blocked, %				-	-		-	-		
Mov Cap-1 Maneuver	-	635	-	-	-	-	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-		
Approach	EB		NB		SB					
HCM Control Delay, s	10.7		0		0					
HCM LOS	B									
Minor Lane/Major Mvmt	NBT		NBR EBLn1		SBT		SBR			
Capacity (veh/h)	-		-		635		-		-	
HCM Lane V/C Ratio	-		-		0.006		-		-	
HCM Control Delay (s)	-		-		10.7		-		-	
HCM Lane LOS	-		-		B		-		-	
HCM 95th %tile Q(veh)	-		-		0		-		-	

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	3	5	0	765	63
Future Vol, veh/h	53	3	5	0	765	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	3	5	0	823	68

Major/Minor	Minor2		Major2	
Conflicting Flow All	823	412	-	0
Stage 1	823	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.84	6.94	-	-
Critical Hdwy Stg 1	5.84	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	312	589	-	-
Stage 1	392	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	312	589	-	-
Mov Cap-2 Maneuver	312	-	-	-
Stage 1	392	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	19.1	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	320	-	-
HCM Lane V/C Ratio	0.201	-	-
HCM Control Delay (s)	19.1	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.7	-	-

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	4	0	5	1080	0	750	15	0	0
Future Vol, veh/h	0	4	0	5	1080	0	750	15	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	0	5	1161	0	806	16	0	0











Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 403	- 0	0 - - 0
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -
Critical Hdwy	- 6.93	- -	- - - -
Critical Hdwy Stg 1	- -	- -	- - - -
Critical Hdwy Stg 2	- -	- -	- - - -
Follow-up Hdwy	- 3.319	- -	- - - -
Pot Cap-1 Maneuver	0 598	0 -	- 0 - -
Stage 1	0 -	0 -	- 0 - -
Stage 2	0 -	0 -	- 0 - -
Platoon blocked, %		- -	- - - -
Mov Cap-1 Maneuver	- 598	- -	- - - -
Mov Cap-2 Maneuver	- -	- -	- - - -
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	598	-	-
HCM Lane V/C Ratio	-	-	0.009	-	-
HCM Control Delay (s)	-	-	11.1	-	-
HCM Lane LOS	-	-	B	-	-
HCM 95th %tile Q(veh)	-	-	0	-	-

Lanes, Volumes, Timings
1: SH 115 & Pawnee Rd

2040 Background + Site
AM (Signal)

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	142	4	5	0	690	30
Future Volume (vph)	142	4	5	0	690	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			575
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.996					0.850
Flt Protected	0.954		0.950			
Satd. Flow (prot)	1770	0	1770	0	3539	1583
Flt Permitted	0.954		0.376			
Satd. Flow (perm)	1770	0	700	0	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2					32
Link Speed (mph)	25			60	60	
Link Distance (ft)	563			371	838	
Travel Time (s)	15.4			4.2	9.5	
Peak Hour Factor	0.83	0.83	0.95	0.95	0.95	0.95
Adj. Flow (vph)	171	5	5	0	726	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	176	0	5	0	726	32
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	L NA	Left	Left	R NA
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1		2	1
Detector Template	Left		Left		Thru	Right
Leading Detector (ft)	20		20		100	20
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		20		6	20
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)					94	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Turn Type	Prot		Perm		NA	Perm
Protected Phases	4				6	
Permitted Phases			2			6

Lanes, Volumes, Timings
1: SH 115 & Pawnee Rd

2040 Background + Site
AM (Signal)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	24.5		24.5		24.5	24.5
Total Split (s)	12.0		48.0		48.0	48.0
Total Split (%)	20.0%		80.0%		80.0%	80.0%
Maximum Green (s)	6.0		42.0		42.0	42.0
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		Min	Min
Act Effect Green (s)	6.1		17.3		17.3	17.3
Actuated g/C Ratio	0.17		0.49		0.49	0.49
v/c Ratio	0.58		0.01		0.42	0.04
Control Delay	22.4		5.0		6.9	2.5
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	22.4		5.0		6.9	2.5
LOS	C		A		A	A
Approach Delay	22.4			5.0	6.7	
Approach LOS	C			A	A	
Queue Length 50th (ft)	27		0		40	0
Queue Length 95th (ft)	#63		3		63	7
Internal Link Dist (ft)	483			291	758	
Turn Bay Length (ft)						575
Base Capacity (vph)	303		700		3539	1583
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.58		0.01		0.21	0.02

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 35.5

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 9.6

Intersection LOS: A

Intersection Capacity Utilization 37.2%

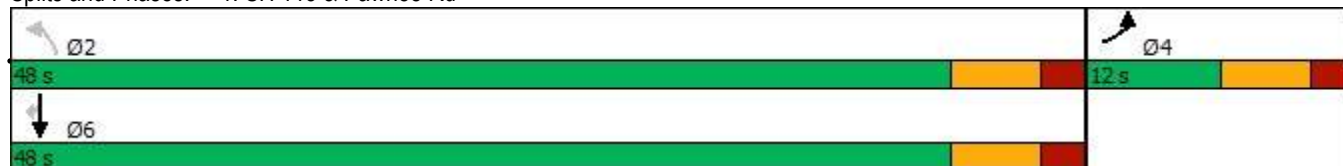
ICU Level of Service A





Analysis Period (min) 15






95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: SH 115 & Pawnee Rd



Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	142	4	5	0	690	30
Future Vol, veh/h	142	4	5	0	690	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	5	5	0	742	32
Major/Minor	Minor2		Major2			
Conflicting Flow All	742	371			-	0
Stage 1	742	-			-	-
Stage 2	0	-			-	-
Critical Hdwy	6.84	6.94			-	-
Critical Hdwy Stg 1	5.84	-			-	-
Critical Hdwy Stg 2	-	-			-	-
Follow-up Hdwy	3.52	3.32			-	-
Pot Cap-1 Maneuver	351	626			-	-
Stage 1	432	-			-	-
Stage 2	-	-			-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	351	626			-	-
Mov Cap-2 Maneuver	351	-			-	-
Stage 1	432	-			-	-
Stage 2	-	-			-	-
Approach	EB		SB			
HCM Control Delay, s	23.9		0			
HCM LOS	C					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	355	-	-			
HCM Lane V/C Ratio	0.473	-	-			
HCM Control Delay (s)	23.9	-	-			
HCM Lane LOS	C	-	-			
HCM 95th %tile Q(veh)	2.4	-	-			

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	4	0	5	931	0	677	15	0	0
Future Vol, veh/h	0	4	0	5	931	0	677	15	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	0	5	1001	0	728	16	0	0











Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 364	- 0	0 - - 0
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -
Critical Hdwy	- 6.93	- -	- - - -
Critical Hdwy Stg 1	- -	- -	- - - -
Critical Hdwy Stg 2	- -	- -	- - - -
Follow-up Hdwy	- 3.319	- -	- - - -
Pot Cap-1 Maneuver	0 634	0 -	- 0 - -
Stage 1	0 -	0 -	- 0 - -
Stage 2	0 -	0 -	- 0 - -
Platoon blocked, %		- -	- - - -
Mov Cap-1 Maneuver	- 634	- -	- - - -
Mov Cap-2 Maneuver	- -	- -	- - - -
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	634	-	-
HCM Lane V/C Ratio	-	-	0.008	-	-
HCM Control Delay (s)	-	-	10.7	-	-
HCM Lane LOS	-	-	B	-	-
HCM 95th %tile Q(veh)	-	-	0	-	-

Lanes, Volumes, Timings
1: SH 115 & Pawnee Rd

2040 Background + Site
PM (Signal)

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	98	4	6	0	788	144
Future Volume (vph)	98	4	6	0	788	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			575
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.995					0.850
Flt Protected	0.954		0.950			
Satd. Flow (prot)	1768	0	1770	0	3539	1583
Flt Permitted	0.954		0.340			
Satd. Flow (perm)	1768	0	633	0	3539	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3					152
Link Speed (mph)	25			60	60	
Link Distance (ft)	563			371	838	
Travel Time (s)	15.4			4.2	9.5	
Peak Hour Factor	0.83	0.83	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	5	6	0	829	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	123	0	6	0	829	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	L NA	Left	Left	R NA
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1		2	1
Detector Template	Left		Left		Thru	Right
Leading Detector (ft)	20		20		100	20
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		20		6	20
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)					94	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Turn Type	Prot		Perm		NA	Perm
Protected Phases	4				6	
Permitted Phases			2			6

Lanes, Volumes, Timings
1: SH 115 & Pawnee Rd

2040 Background + Site
PM (Signal)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	24.5		24.5		24.5	24.5
Total Split (s)	12.0		48.0		48.0	48.0
Total Split (%)	20.0%		80.0%		80.0%	80.0%
Maximum Green (s)	6.0		42.0		42.0	42.0
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.0		6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		Min	Min
Act Effect Green (s)	6.1		24.0		24.0	24.0
Actuated g/C Ratio	0.16		0.64		0.64	0.64
v/c Ratio	0.42		0.01		0.37	0.14
Control Delay	19.7		4.5		5.5	1.6
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	19.7		4.5		5.5	1.6
LOS	B		A		A	A
Approach Delay	19.7			4.5	4.9	
Approach LOS	B			A	A	
Queue Length 50th (ft)	25		1		47	0
Queue Length 95th (ft)	51		4		75	15
Internal Link Dist (ft)	483			291	758	
Turn Bay Length (ft)						575
Base Capacity (vph)	291		626		3498	1566
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.42		0.01		0.24	0.10

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 37.6

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 6.5

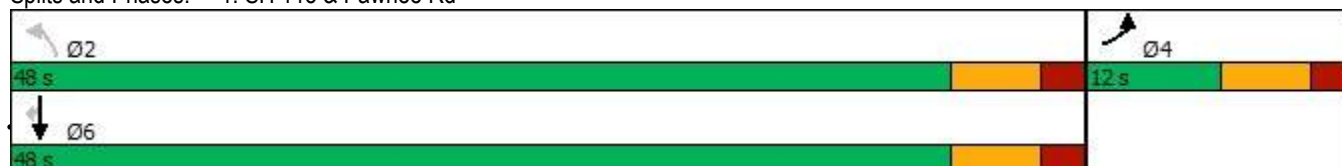
Intersection LOS: A

Intersection Capacity Utilization 37.5%

ICU Level of Service A





Analysis Period (min) 15

Splits and Phases: 1: SH 115 & Pawnee Rd



Lanes, Volumes, Timings






JAB

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	98	4	6	0	788	144
Future Vol, veh/h	98	4	6	0	788	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	575
Veh in Median Storage, #	0	-	-	16979	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	113	5	6	0	847	155

Major/Minor	Minor2		Major2	
Conflicting Flow All	847	424	-	0
Stage 1	847	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.84	6.94	-	-
Critical Hdwy Stg 1	5.84	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	301	579	-	-
Stage 1	381	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	301	579	-	-
Mov Cap-2 Maneuver	301	-	-	-
Stage 1	381	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	23.8	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	307	-	-
HCM Lane V/C Ratio	0.382	-	-
HCM Control Delay (s)	23.8	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.7	-	-

Intersection										
Int Delay, s/veh	0									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations										
Traffic Vol, veh/h	0	5	0	6	1083	0	751	38	0	0
Future Vol, veh/h	0	5	0	6	1083	0	751	38	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	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	16974	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	78	78	93	93	93	93	93	93	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	0	6	1165	0	808	41	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 404	- 0	0 - - 0
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -
Critical Hdwy	- 6.93	- -	- - - -
Critical Hdwy Stg 1	- -	- -	- - - -
Critical Hdwy Stg 2	- -	- -	- - - -
Follow-up Hdwy	- 3.319	- -	- - - -
Pot Cap-1 Maneuver	0 597	0 -	- 0 - -
Stage 1	0 -	0 -	- 0 - -
Stage 2	0 -	0 -	- 0 - -
Platoon blocked, %		- -	- - - -
Mov Cap-1 Maneuver	- 597	- -	- - - -
Mov Cap-2 Maneuver	- -	- -	- - - -
Stage 1	- -	- -	- - - -
Stage 2	- -	- -	- - - -

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	597	-	-
HCM Lane V/C Ratio	-	-	0.011	-	-
HCM Control Delay (s)	-	-	11.1	-	-
HCM Lane LOS	-	-	B	-	-
HCM 95th %tile Q(veh)	-	-	0	-	-