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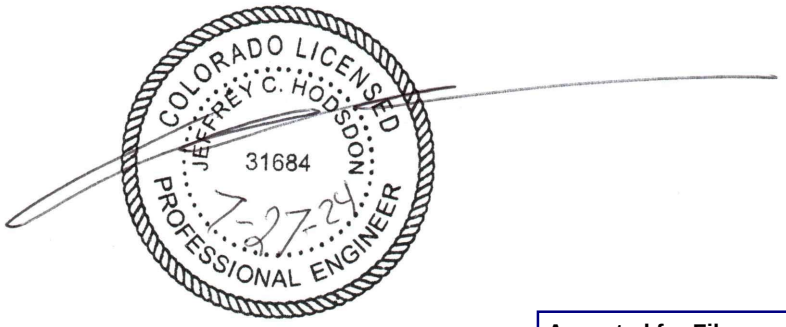
Settlers Ranch Filing No. 3
Transportation Memorandum
PCD File No.: P2223
(LSC #S234130)
July 24, 2024

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.



Accepted for File
By: Gilbert LaForce, P.E.
Engineering Manager
Date: 10/15/2024 5:24:58 PM
El Paso County Department of Public Works

Developer's Statement

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

MM

7/24/24
Date

Settlers Ranch, Filing No. 3

Transportation Memorandum

Prepared for:
Mark Davis
<via email>

JULY 24, 2024

LSC Transportation Consultants
Prepared by: Jeffrey C. Hodsdon, P.E.

PCD File: P2223

LSC # S234130

CONTENTS

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July 24, 2024

Mark Davis
<via email>

RE: Settlers Ranch, Filing No. 3
Transportation Memorandum
El Paso County, CO
PCD File: P2223
LSC # S234130

Dear Mr. Davis,

LSC Transportation Consultants, Inc. has prepared this traffic impact study for Filing No. 3 of the Settlers Ranch residential development in El Paso County, Colorado. The site is located generally northwest of the intersection of Hodgen Road/Steppler Road. Filing No. 3 is proposed to include 24 lots for single-family homes.

Access is proposed to Settlers Ranch Road. The completion of Settlers Ranch Road to Steppler Road is proposed as part of this subdivision plat. This report has been prepared for submittal to El Paso County.

REPORT CONTENTS

The preparation of this report included the following:

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

- Projections of site-generated turning-movement traffic volumes at the study-area intersections;
- Estimates of short- and long-term background traffic volumes at the study-area intersections;
- Total traffic (site traffic-plus-background traffic) projections at these intersections for the short term and long term;
- Level of service (LOS) analysis at the study-area intersections;
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes based on the criteria in El Paso County's *Engineering Criteria Manual (ECM);*
- Comparison of pedestrian and multi-modal facilities and conformance with the County's *Major Transportation Corridors Plan (MTCP)*;
- Other recommended improvements and modifications to the study-area streets and intersections; and
- Summary of compiled data, analysis, findings, and recommendations.

PRIOR AREA TRAFFIC REPORTS

LSC utilized the following previous traffic reports (completed within the past five years) to assist in the production of this report:

- Settlers View Subdivision, Final Plat – dated December 18, 2018 (PCD File No. SF1841)
- Walden Preserve 2, Filing No. 5 – dated March 1, 2022 (PCD File No. SF2211)
- 16850 Steppler Road Traffic Study Memorandum (TIS) AUG 2, 2023 (Not prepared by LSC - EPC PCD File No. P233)

LAND USE AND ACCESS

Figure 1 shows the site location relative to the adjacent and nearby streets. The proposed Settlers Ranch Filing No. 3 residential subdivision, shown in Figure 2, would consist of 24 lots for single-family residential dwelling units. The site is located generally northwest of the intersection of Hodgen Road/Steppler Road in El Paso County, Colorado.

Access is proposed to the existing portion of Settlers Ranch Road west of Timber Meadow Drive, as well as to the currently-proposed extension of Settlers Ranch Road and connection to Steppler Road. This report has been prepared for submittal to El Paso County. A copy of the subdivision plat is attached, for reference.

The extension of Abert Ranch Drive south to the new section of Settlers Ranch Road is assumed in this report. Trips generated by the Abert Ranch and Settlers View subdivisions have been included in the background traffic.

Adjacent Subdivisions – Existing and Proposed

Settlers Ranch Filing Nos. 1 and 2

These subdivisions have been completed, with about five vacant lots for single-family homes remaining. The portion of Settlers Ranch Road that has been constructed northeast of Timber Meadow Drive provides access to these subdivisions.

Abert Ranch

Abert Ranch is a single-family residential subdivision consisting of 10 lots, each a minimum of 2.5 acres. Site access to Steppler Road is currently through the Settlers View subdivision and the extension of Silver Nell Drive. A second access will become available via the extension of Abert Ranch Drive to the proposed extension of Settlers Ranch Road (with this Settlers Ranch Filing No. 3 subdivision) once constructed by the applicant.

Settlers View

Settlers View is an existing single-family residential subdivision consisting of 14 lots, each a minimum of 2.5 acres. Located generally north of the site, Settlers View has been developed. A second access will become available through the Abert Ranch subdivision via the extension of Abert Ranch Drive to the proposed extension of Settlers Ranch Road (with this Settlers Ranch Filing No. 3 subdivision) once constructed by the applicant.

Grandview

Grandview is located to the north of the Settlers View and Abert Ranch sites. It is developed, and Silver Nell Drive through Grandview exists and connects to Steppler Road. Silver Nell Drive has provided the initial access to both the Settlers View and Abert Ranch subdivisions.

16850 Steppler Road Project (EPC PCD File P233)

A single-family residential development is proposed for parcel no. 6100000485 (16850 Steppler Road), which has been rezoned for 2.5ac lots. There is a pending 12 lot subdivision (EPC PCD File No. P233) A traffic study/memorandum update report has been prepared. This report accounts for the additional projected traffic forecasted in that study/memo.

SIGHT DISTANCE

Steppler Road/Settlers Ranch Road (Proposed w/ Completion of Settlers Ranch Road)

The proposed access point to Steppler Road, which is a planned public street connection, must meet *Engineering Criteria Manual* (*ECM*) standards for sight distance. LSC has field-measured and evaluated the proposed Settlers Ranch Road connection to Steppler Road for sight distance.

Note: site improvements, such as landscaping, buildings, fencing, parking areas, etc., must not impede the lines of sight required for *ECM*-prescribed entering or stopping sight distance.

LSC did not see any speed limit signs (MUTCD R2-1) on Steppler Road in the field. The 2019 EPC Road Inventory identifies Steppler as a "local service" roadway with 24 feet of pavement. Based on *ECM* Rural Local criteria, the posted speed and design speeds are 30 mph. Note: the section north of the Silver Nell intersection is gravel. Note: The 2016 *MTCP* 2040 plan calls out Steppler as a Collector classification but indicates that an "unimproved paved roadway" would be adequate. It appears that half of an 80-foot ROW for a Rural Minor Collector has been dedicated along the project frontage.

Intersection Sight Distance (ECM 2.3.6.G)

Sight distance field measurements utilized a height of 3.5 feet for driver's eye height on the proposed Settlers Ranch Road approach to Steppler Road at the proposed Steppler Road/Settlers Ranch Road connection **and** a height of 3.5 feet for vehicles approaching from the north or south on Steppler Road. Roadway gradients adjacent to the proposed intersection location are between 0 and 2 percent approaching from each direction. Note: north of the north property line, the grades are between 6 and 8 percent approaching from the north.

These measurements were conducted in the field by LSC. The measurements were taken from a driver's eye height of 3.5 feet to an approaching vehicle height of 3.5 feet.

Field measurements recorded about 434 feet of sight distance looking to the north and 730 feet looking to the south from the proposed Steppler Road/Settlers Ranch Road intersection, as shown in Figure 3.

Based on a 30-mph design speed, the minimum required intersection sight distance at the proposed Steppler Road/Settlers Ranch Road intersection is 335 feet for passenger vehicles (per Table 2-21 of the County's *Engineering Criteria Manual*). Sight distances to the south would exceed 335.

Please refer to the attached sight-distance exhibits for details. The line of sight for the access-point intersection will need to be kept clear of any sight-distance obstructions. This includes landscaping, signage, etc. proposed for the residential development.

Stopping Sight Distance (Approaching an Intersection)

Stopping sight distance along Steppler Road approaching the proposed Settlers Ranch Road intersection location have been evaluated for stopping sight-distance requirements in *ECM* Table 2-17. The following are the existing sight-distance measurements. These measurements were conducted in the field by LSC. The measurements were taken from the driver's eye height (3.5 feet) of an approaching vehicle to a height of 3.5 feet at the center of the intersection.

- 415 feet south to the proposed Steppler Road/Settlers Ranch Road intersection, from a southbound motorist on Steppler Road approaching the intersection from the north.
- 730 feet north to the proposed Steppler Road/Settlers Ranch Road intersection, from a northbound motorist on Steppler Road approaching the intersection from the south.

Assuming a 30-mph design speed, the minimum required stopping sight distance for motorists on Steppler Road approaching the proposed Steppler Road/Settlers Ranch Road intersection is 200 feet for passenger vehicles (per Table 2-17 of the County's *Engineering Criteria Manual*). Stopping sight distances approaching from the north or south exceed the 200-foot requirement.

Settlers Ranch Road/Timber Meadow Drive (Existing Intersection)

Sight distance exceeds 750 feet to the north on Timber Meadow Drive, and there is a clear line of sight south to the intersection of Hodgen Road/Timber Meadow Drive (about 600 feet). These sight distances exceed the *ECM*-prescribed values for intersection sight distance and stopping sight distance (approaching an Intersection).

ROAD AND TRAFFIC CONDITIONS

Area Roadways

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

State Highway (SH) 83 extends from Colorado Springs north to Parker and areas of southeast Denver. In the vicinity of the site, SH 83 is classified as a Regional Highway (R-A). At this location, SH 83 is a two-lane rural highway with two-to-four-foot shoulders and a speed limit of 60 mph. Its intersection with Hodgen Road is signalized.

Hodgen Road is a two-lane paved Rural Minor Arterial that extends east from the intersection of Roller Coaster Road/Baptist Road to Eastonville Road. The speed limit on Hodgen Road is generally 55 mph east of SH 83. Auxiliary left-turn and right-turn deceleration lanes currently exist on both the eastbound and westbound approaches on Hodgen Road at Timber Meadow Drive.

Timber Meadow Drive is a Rural Minor Collector roadway (not indicated as such on the 2024 *MTCP*) that extends south from the intersection of Walden Way/Pond View Place to just south of Hodgen Road. The posted speed limit is 30 mph.

Steppler Road extends north from Hodgen Road to Walker Road. Steppler is an unimproved, two-lane, paved roadway between Hodgen Road and Silver Nell Drive. North of Silver Nell Drive, the roadway surface is gravel. LSC did not see any speed limit signs (MUTCD R2-1) on Steppler Road in the field. The 2019 EPC Road Inventory identifies Steppler as a "local service" roadway with 24 feet of pavement. Note: The design speed for an *ECM*-standard Rural Local roadway is 30 mph. The 2024 *MTCP* 2045 plan calls out Steppler as a Rural Local roadway. It appears that half of an 80-foot ROW for a Rural Minor Collector has been dedicated along the project frontage. An eastbound-left-turn lane currently exists on Hodgen Road approaching Steppler Road. Steppler Road is paved south of Silver Nell Road and gravel north of Silver Nell Road.

Existing Traffic Volumes

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

- Hodgen Road/Timber Meadow Drive
  - Tuesday, September 12, 2023 from 6:30 – 8:30 a.m.
  - Tuesday, September 12, 2023 from 4:00 – 6:00 p.m.
- Timber Meadow Drive/Settlers Ranch Road
  - Tuesday, September 12, 2023 from 6:30 – 8:30 a.m.
  - Tuesday, September 12, 2023 from 4:00 – 6:00 p.m.
- Hodgen Road/Steppler Road
  - Tuesday, March 7, 2023 from 6:30 – 8:30 a.m.
  - Tuesday, March 7, 2023 from 4:00 – 6:00 p.m.

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

TRIP GENERATION

Estimates of the vehicle trips to be generated by Filing No. 3 have been made using the following nationally-published trip-generation rates for land use code "210 – Single-Family (Detached) Housing" in *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE).

Table 1 below presents a summary of the estimated site trip generation for Filing No. 3. A detailed trip-generation estimate for the development, including ITE rates for the proposed 24 dwelling units within Filing 3, is presented in Table 3 (attached).

Table 1: Estimated Site Vehicle-Trip Generation – Filing 3 Only

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	5	15	20
Evening Peak Hour	16	10	26
Daily/24-hour	136	136	271

Based on the ITE estimate for the proposed **Filing No. 3** residential development, the site could generate about 271 external vehicle trips on the average weekday. During the weekday morning peak hour, approximately 5 vehicles would enter, and 15 vehicles would exit the site. Approximately 16 entering vehicles and 10 exiting vehicles are projected for the weekday afternoon peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

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

Site-Generated Traffic

Figure 7 shows the projected site-generated traffic volumes for the weekday morning and evening peak hours. Site-generated traffic volumes at the study-area intersections have been calculated by applying the directional-distribution percentages estimated by LSC (from Figure 6), combined localized trip routing estimates by LSC, to the trip-generation estimates (from Table 2).

Short-Term Baseline Traffic Volumes

Figure 5 shows estimated short-term baseline traffic volumes at the study-area intersections. This scenario incorporates the following adjustments to existing traffic volumes (Figure 4):

- Assumes that the proposed Settlers Ranch Road connection to Steppler Road completed.
- Minor shifts to existing traffic volumes on Settlers Ranch Road for trips currently being generated by Filing Nos. 1 and 2.
- Shifts in traffic from the Abert Ranch and Settlers View residential developments with the connection of Abert Ranch Drive to Settlers Ranch Road.

- Trips from five additional homes to be developed on currently platted but vacant lots within existing Filing Nos. 1 and 2.
- Additional trips projected to be generated by the proposed 16850 Steppler Road Project, as projected in the TIS prepared for that project.

Short-Term Total Traffic Volumes

Figure 8 shows the sum of the short-term baseline traffic volumes (from Figure 5) and Filing No. 3 site-generated peak-hour traffic volumes (shown in Figure 7). These volumes represent the estimated short-term total traffic following completion and buildout of the Filing No. 3 development.

Estimated Future 2043 Background Traffic Volumes

Figure 9 shows the projected 20-year background traffic volumes for the year 2043. Projected 20-year background traffic volumes do not include projected traffic to be generated by the proposed Settlers Ranch Filing No. 3. LSC used projected long-term volumes from nearby traffic studies, including Settlers View Subdivision Final Plat and Walden Preserve 2 Filing 5 and others listed above. Annual growth rates of 2.75-3.0 percent were applied to eastbound-through and westbound-through traffic volumes on Hodgen Road during both long-term peak hours. Long-term background traffic growth on minor streets at the study-area intersections reflects increases in traffic from currently-undeveloped residential lots nearby and potential additional trips originating north of Walden Preserve Filing No. 5. The long-term background traffic also includes additional trips projected to be generated by the proposed 16850 Steppler Road Project.

Future 2043 Total Traffic Volumes

Figure 10 shows the projected 2043 total traffic volumes, which are the sum of 2043 background traffic volumes (Figure 9) plus the site-generated traffic volumes (from Figure 7).

LEVEL OF SERVICE ANALYSIS

The following intersections have been analyzed to determine the projected intersection levels of service for short- and long-term traffic scenarios for the AM and PM peak-hour time periods:

- Hodgen Road/Timber Meadow Drive
- Timber Meadow Drive/Settlers Ranch Road
- Steppler Road/Settlers Ranch Road
- Hodgen Road/Steppler Road

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from “A” to “F.” LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 2: 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 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more

[1] For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

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

- Figure 4: 2023 Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 5: Short-Term Baseline Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 8: 2023 Existing + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 9: 2043 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 10: 2043 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

Hodgen/Timber Meadow

All movements at the stop-sign-controlled intersection of Timber Meadows Drive/Hodgen Road are projected to continue to operate at LOS D or better during both short-term peak hours, based on the projected short-term total traffic volumes.

Long Term with Current Laneage

By 2043, the northbound approach is projected to operate at LOS F during both peak hours. The southbound approach is projected to operate at LOS F during the long-term AM peak hour with or without the addition of Filing No. 3 site-generated traffic (assuming the single-lane approach, assuming no right-turn maneuvering around a queued left/through vehicle). The southbound, afternoon peak hour would be LOS D during the long-term PM peak hour However, both the northbound and southbound approaches would have a volume-to-capacity (v/c) ratio below 0.74 during all long-term peak hours and would benefit from gaps in traffic at the nearby signalized intersection of SH 83/Hodgen Road. It is unlikely that a traffic-signal warrant would be met at this intersection, based on the northbound and southbound through and left-turn volumes.

Long Term with Modified Laneage (Two Southbound Lanes)

If the southbound approach were to be reconstructed for a right-only and shared-left/through turn lanes, the higher-volume southbound-right lane would operate at LOS D or better during all 2043 peak periods. The southbound shared-left/through lane would operate at LOS E during the AM peak and LOS F during the PM peak, with or without the addition of site-generated traffic. All minor-street individual turning movements would have a v/c ratio below 0.52 during all 2043 scenarios with two southbound turn lanes. It is unlikely that a traffic-signal warrant would be met at this intersection, based on the northbound and southbound through and left-turn volumes.

Timber Meadow/Settlers Ranch Road

All approaches and individual turning movements at the intersection of Timber Meadow/Settlers Ranch Road currently operate at and are projected to remain at LOS B or better through 2043 during both peak hours.

Steppler Road/Settlers Ranch Road

All approaches and individual turning movements at the proposed Settlers Ranch Road connection to Steppler Road are projected to operate at LOS A through 2043 during both peak hours.

Hodgen Road/Steppler Road

All approaches and individual turning movements at the intersection of Hodgen Road/Steppler Road currently operate at and are projected to remain at LOS C or better through 2043 during both peak hours.

AUXILIARY TURN-LANE NEEDS ANALYSIS

Hodgen/Timber Meadow

<u>Eastbound-Left-Turn Lane</u>

An eastbound-left-turn deceleration lane current exists on Hodgen Road approaching Timber Meadow Drive. Currently, the eastbound-left-turn lane is 680 feet total, consisting of 290 feet of deceleration length, a 240-foot taper, and 150 feet of additional storage (for stop-sign-controlled intersections). No modifications to this existing left-turn lane on Hodgen Road approaching Timber Meadow Drive would be required, as it meets the *ECM*-required 680-foot total length.

Westbound-Right-Turn Lane

A westbound-right-turn deceleration lane currently exists on Hodgen Road approaching Timber Meadow Drive. Currently, the eastbound-left-turn lane is 760 feet total, consisting of 520 feet of deceleration length plus a 240-foot taper. No modifications to this existing right-turn lane on Hodgen Road approaching Timber Meadow Drive would be required, as it meets the *ECM*-required 530-foot total length.

Westbound-Right-Turn-Acceleration Lane

Based on the current version of the *ECM* and the current 2024 *MTCP*, Hodgen Road is classified as Minor Arterial, and per *ECM* section 2.3.7.D.2: a right-turn acceleration lane is "*generally not required.*"

The original LSC TIS report indicated that the westbound right-turn acceleration lane would be required, based on the *County Major Thoroughfares Plan* (Hodgen Road was classified as a Major Arterial) and *El Paso County Access Code* (prior to the *ECM*) in effect at the time. BOCC Resolution **(09-159)** indicated: *An escrow agreement to provide for a westbound acceleration lane on Hodgen Road at Timber Meadow Drive shall be filed at the time of recording the Final Plat. Escrow funds shall be provided prior to plat recordation.*

Potential "Trigger Points" for a Right-Turn Acceleration Lane on Hodgen Road

LSC suggests the following "trigger points" for potential future installation of the westbound right-turn acceleration lane on Hodgen Road:

Potential Trigger No. 1: Mitigation for LOS below "D:"

ECM Criteria requiring acceptable LOS: Right-turn acceleration lanes have the potential to reduce delay and mitigate substandard level of service in cases with a relatively high side-street right-turn volume (i.e., right turns from a stop-sign-controlled approach). The current TIS shows a **LOS D (meets *ECM* standards) assuming** modification of the southbound intersection approach on Timber Meadow Drive to accommodate a southbound, exclusive right-turn bay on the southbound approach. Assuming the current single-lane, southbound approach (all approach traffic in one lane), the LOS is projected to be F (20 year/2043 analysis). The purpose of the right-turn bay would be to mitigate the projected LOS. The function of the turn lane would be to allow southbound right-turning vehicles to maneuver to the right of and bypass any southbound-left or straight-through motorists queued on the intersection approach.

With the separate right-turn lane, the calculated "trigger" volumes that would cause the southbound right-turn movement to go from LOS D to LOS E:

-- AM = 171 vph (an increase of 23 vs. 148 shown on figures)
-- PM = 418 vph (an increase of 323 vs. 95 shown on figures - very unlikely to be reached)

Potential Trigger No. 2: Traffic Signal Warrant Satisfied

If the right-turn acceleration lane would mitigate an identified need for a traffic signal in the future. Specifically, if the combination of hourly intersection volumes at the intersection of Hodgen Road/Timber Meadow Drive increase to the point at which the intersection meets one of the *MUTCD* traffic signal warrants **and** the installation of the westbound right-turn acceleration lane would reduce the warrant-threshold volumes such that a warrant would **not** be satisfied.

Potential Trigger No. 3: Safety/Vehicle Crash Reports

If future crash reports indicate an unacceptable safety record due to the types of crashes which could be mitigated with the addition of a westbound right-turn acceleration lane on Hodgen Road.

Evaluation of Proposed "Triggers"

Evaluation of Trigger No. 1: The LOS analysis based on LSC projections indicates that provided a southbound, exclusive right turn bay on the southbound approach to Hodgen Road on Timber Meadow Drive is added, the 2045 right turn movement level of service would not drop below LOS D, and this trigger would not be met.

Evaluation of Trigger No. 2: Appendix A contains analysis of the *MUTCD* signal-warrant thresholds for the intersection of Hodgen Road/Timber Meadow Drive based on the count data collected, LSC projected volumes and the assumption of a separate, exclusive right-turn bay on the southbound approach. The analysis indicates that a four-hour traffic-signal warrant (*MUTCD* Warrant No. 2) would not be met in the short or long term (2043). Please refer to Appendix A for details.

Hodgen/Steppler Road

Eastbound-Left-Turn Lane

An eastbound-left-turn deceleration lane currently exists on Hodgen Road approaching Steppler Road. Currently, the eastbound-left-turn lane is 655 feet total, consisting of 290 feet of deceleration length, a 240-foot taper, and 125 feet of additional storage length. No modifications to this existing left-turn lane on Hodgen Road approaching Timber Meadow Drive would be required, as it meets the *ECM*-required 605-foot total length (290 feet of deceleration length, a 240-foot taper, and 50-75 feet of additional storage length).

Westbound-Right-Turn Lane

Per *ECM* criteria, exclusive right-turn lanes shall be provided for any access on a Minor Arterial with a projected peak-hour ingress turning volume of 50 vehicles per hour (vph) or greater. The

projected westbound-left-turn volume on Hodgen Road approaching Steppler Road is **not** expected to exceed the *ECM*-minimum right-turn volume thresholds prescribing a turn lane upon Filing No. 3 site buildout.

STEPPLER ROAD

MTCP Analysis

Steppler Road is shown to have classification of Collector on the 2016 *MTCP* 2040 Roadway Plan. The roadway is currently an unimproved paved roadway in the vicinity of the site (between Silver Nell and Hodgen Road). The 2040 *MTCP* plan shows Steppler Road as a current paved, unimproved roadway, although the north segment is gravel. The *MTCP* Unimproved Roadway Analysis shows the roadway as "adequate" as a paved, unimproved roadway.

Steppler Road Paving (North Segment)

Please refer to the Letter of Intent submitted with the application. The following summarizes:

Because of the subdivisions' previous contribution to improving and paving Steppler Road, no additional escrow is being required for future Steppler Road improvements.

The developer voluntarily participated in the paving of Steppler Road south of Silver Nell Drive at the time that Grandview Estates was constructed. This prior paving of Steppler Road satisfies the obligation to participate in any future paving of Steppler Road north of Silver Nell Drive.

The projected net site-generated ADT on Steppler Road north of Silver Nell Drive is projected to be 42 vehicles per day.

Long Term

In the long term, Settlers Ranch Filing No. 3 traffic would constitute about 7 percent of the total long-term daily traffic on Steppler Road north of Silver Nell Drive. (42 vehicles per day (vpd) site traffic divided by 600 vpd total traffic [x100 for percent]).

STREET CLASSIFICATIONS

Streets internal to Filing No. 3 will be **Rural Local**.

MULTI-MODAL AND PEDESTRIAN/BIKE TRANSPORTATION

Pedestrian facilities do not currently exist on Hodgen or Timber Meadow adjacent to the site. No multi-modal improvement projects are shown adjacent to the site on "Map 15: Bicycle and Pedestrian Network and Improvements" on El Paso County's *Major Transportation Corridors Plan*

(*MTCP*). Sidewalks would not be required on Setters Ranch Road adjacent to the site, as the subdivision is classified as Rural.

DEVIATIONS

No deviations are requested as part of this application.

ROADWAY IMPROVEMENT FEE PROGRAM

Anticipated Fees and PID Option

This project will be required to participate in the El Paso County Road Improvement Fee Program. The applicant will opt-out of the PID options. The 2019 "full fee" building permit fee associated with the opt-out option is $3,850 per dwelling unit for single-family residential. Based on 24 dwelling units, the total "full fee" payable at building permit would be $92,400. Note: program fees are subject to change.

RECOMMENDED IMPROVEMENTS

The "Auxiliary Turn-Lane Analysis" section above identifies the need for modification of the southbound intersection approach on Timber Meadow Drive to accommodate a southbound, exclusive right-turn bay. This would require minor widening on the west side of Timber Meadow Drive just north of Hodgen Road. The timing of the need would likely be in the intermediate term, but before 2043. The projected short-term baseline plus site LOS is C and the 2043 total LOS is shown as a 56-second "F" (which is 15 seconds per vehicle over the cut-off for LOS E).

The function of the right-turn bay would be to allow southbound right-turning vehicles to maneuver to the right of and bypass any southbound-left or straight-through motorists queued on the intersection approach. Potentially, the existing center raised entry median island could be modified (narrowed) as a design solution to achieve the southbound two-lane approach (shared left/through lane and separate right-turn lane). Although the through volume is low, the alignment/resulting offset with the southbound receiving lane on the south side of Hodgen would be a consideration.

ESCROW FOR A POTENTIAL FUTURE WESTBOUND RIGHT-TURN ACCELERATION LANE

Regarding the potential future need for a westbound right-turn acceleration lane on Hodgen Road at the intersection of Hodgen Road/Timber Meadow Drive,

Staff comments indicate:

> *Please compute what the fair share contribution will be for the Settlers Ranch development for the W/B acceleration lane. This was the required part of the previous*

BoCC Resolution [copy attached for reference] *vs outright construction. That amount of escrow would be submitted as part of the Settlers Ranch plat submission.*

Site-generated traffic would represent about 3.7 percent of the projected total 2043 southbound right-turn volume (AM and PM peak volumes combined) at the Hodgen Road/Timber Meadow Drive intersection. **Any other future development project that would also add trips to this southbound right-turn movement (or intersection approach) should also be required to participate.**

The total improvement amount should include both the cost of a future right-turn acceleration lane **and** the cost of widening the southbound approach to add an exclusive southbound right-turn bay.

Any development which improves the southbound approach to add an exclusive southbound right-turn bay should receive a credit against the total escrow amount required. Also, the Settlers Ranch developer should receive credit for any funds escrowed with Filing No. 2.

POTENTIALLY REIMBURSABLE IMPROVEMENTS UNDER THE MTCP FEE PROGRAM

Nearby improvement projects *which are potentially reimbursable* under the Fee Program (from Figure 27 in the *MTCP*) include No. 127 – Hodgen from SH 83 to Roller Coaster Road and Walker Road – Several MTCP projects shown; No. 277 – The intersection of SH 83 & Hodgen Road.

FINDINGS & CONCLUSIONS

- The site is projected to generate about 271 vehicle trips on the average weekday during Filing No. 3.
- During the weekday morning peak hour for Filing No. 3, approximately 5 vehicles would enter and 15 vehicles would exit the site.
- During the weekday evening peak hour of adjacent street traffic for Filing No. 3, 16 vehicles would enter the site while 10 vehicles would exit.
- Please refer to the “Level of Service” section above for detailed LOS analysis results for individual turning movements and approaches at all studied intersections, during both peak hours through the 2043 horizon year.
- Because of the subdivisions' previous contribution to improving and paving Steppler Road, no additional escrow is being required for future Steppler Road improvements.
- Please refer to the “Auxiliary Turn-Lane Analysis” section for details regarding the auxiliary turn-lane needs evaluation at the study-area intersections. This section includes proposed “triggers” for a potential future westbound right turn acceleration lane at the intersection of

Hodgen Road/Timber Meadow Drive. Per staff comments, a section has been added to the report to address the required escrow of funds toward this potential future improvement.

- Please refer to the "Recommendations" section for details regarding a recommended southbound right-turn bay at the intersection of Hodgen Road/Timber Meadow Drive.

* * * * *

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

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH/JAB:jas

Enclosures: Table 3
Figure 1 - Figure 11
Traffic Count Reports
Synchro LOS Reports
Appendix A
BOCC Resolution (09-159)

Table 3

TRANSPORTATION
CONSULTANTS, INC.

Table 3: Trip Generation Estimate

ITE Code	ITE Description	Value	Units [1]	Trip Generation Rates [2]					Total External Trips Generated				
				Average Weekday	A.M. In	A.M. Out	P.M. In	P.M. Out	Average Weekday	A.M. In	A.M. Out	P.M. In	P.M. Out
Filing 3 Only													
210	Single-Family (Detached) Housing	24	DU	11.31	0.22	0.63	0.68	0.40	271	5	15	16	10

[1] DU = dwelling units

[2] Source: *Trip Generation, 11th Edition (2021)* by the Institute of Transportation Engineers (ITE)

Figures 1-11

TRANSPORTATION
CONSULTANTS, INC.

N

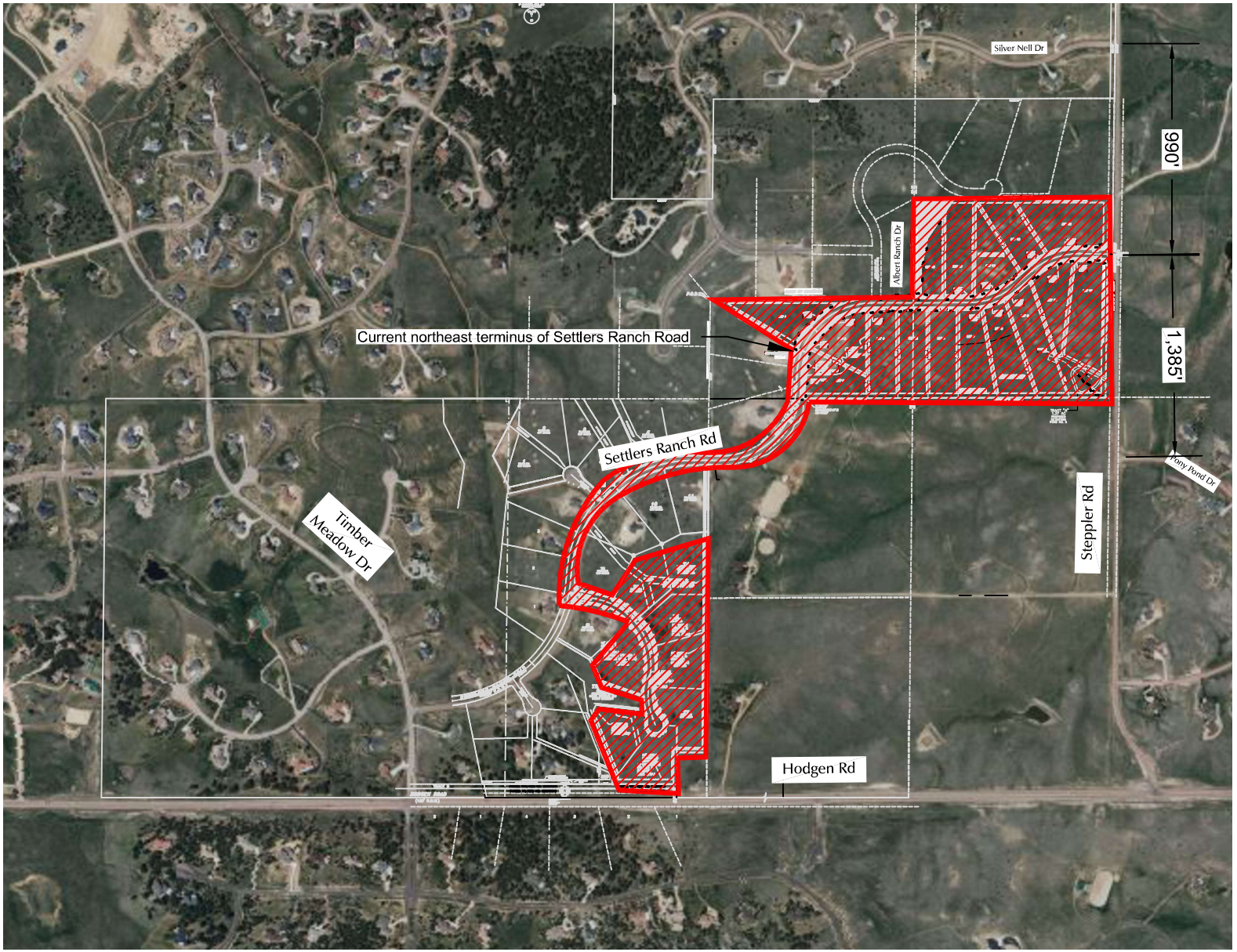
Not to scale

TRANSPORTATION CONSULTANTS, INC.

Figure 1

Vicinity Map

Settlers Ranch Filing No. 3 (LSC#S234130)



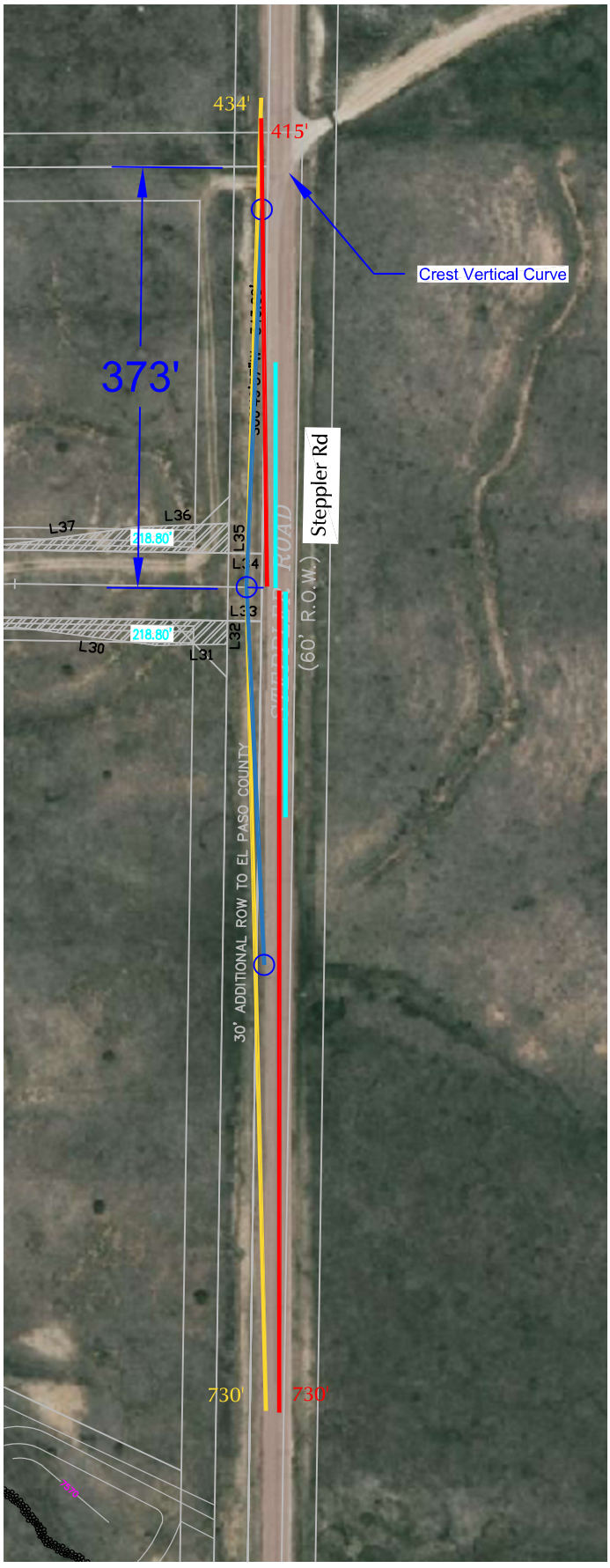
Approximate Scale
1" = 1,000'

Figure 2

Site Plan

Settlers Ranch Filing No. 3 (LSC#S234130)

LSC TRANSPORTATION CONSULTANTS, INC.



Approximate Scale 1" = 150'

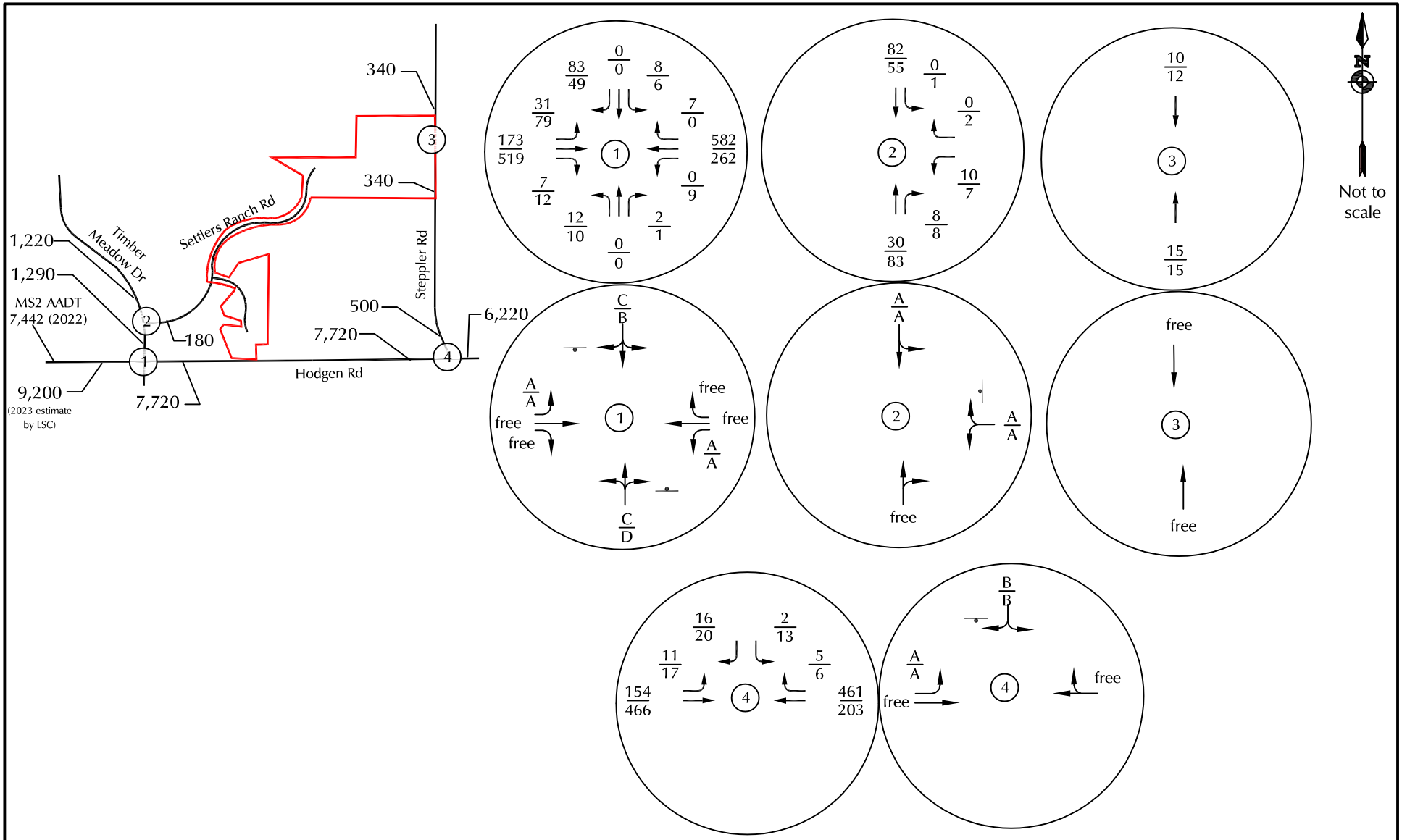
- Required intersection sight distance (ECM Table 2-21) 335' (30 mph design speed)
- Field-measured intersection sight distance
- Field-measured stopping sight distance
- Required stopping sight distance (ECM Table 2-17) 200'

Figure 3

Sight Distance

Settlers Ranch Filing No. 3 (LSC#S234130)

LSC TRANSPORTATION CONSULTANTS, INC.



$\frac{X}{X}$ = 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)

= Yield Sign

= Stop Sign

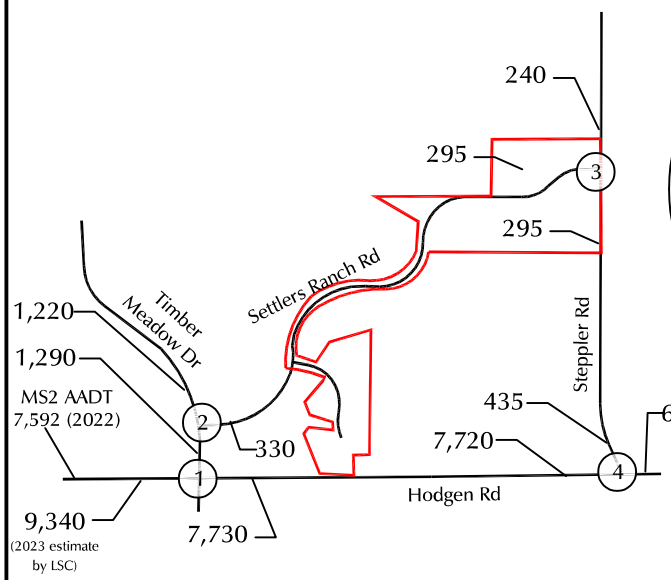
= Traffic Signal

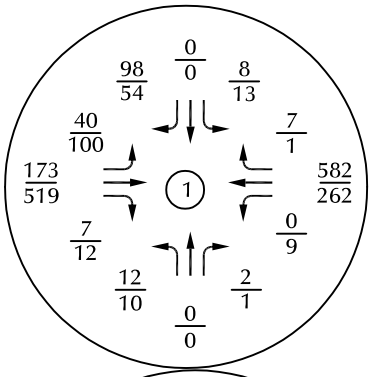
Counts by LSC September 2023

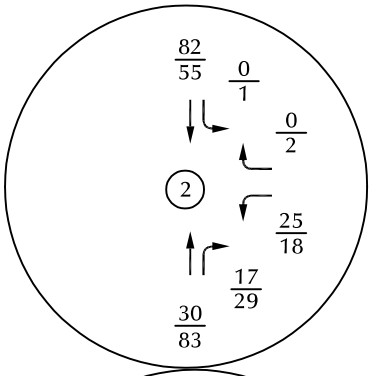
Figure 4

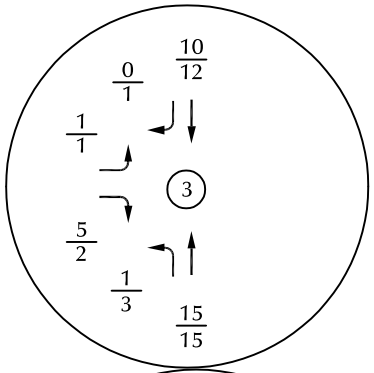
Existing Traffic, Lane Geometry, Traffic Control, and LOS

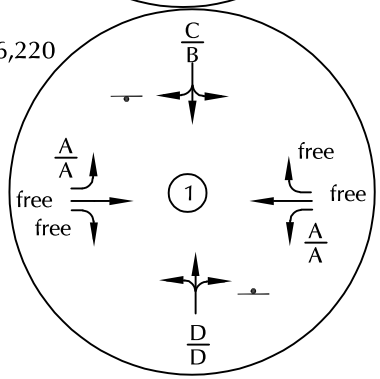
Settlers Ranch Filing No. 3 (LSC#S234130)

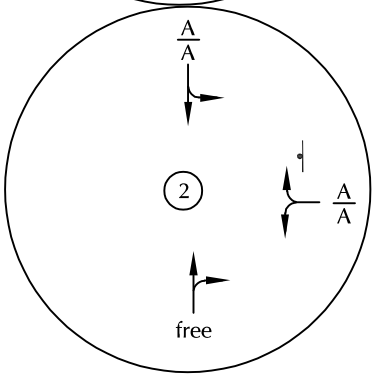


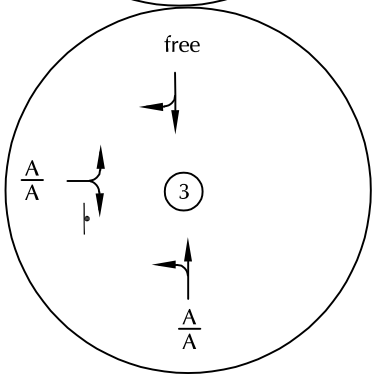


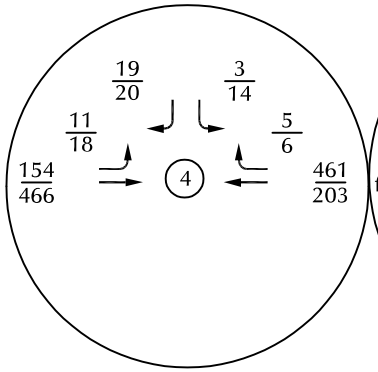


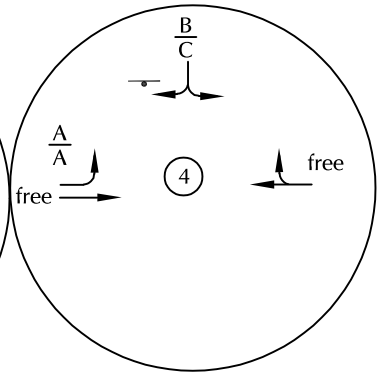












Not to scale

Figure 5

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

Settlers Ranch Filing No. 3 (LSC#S234130)

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

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

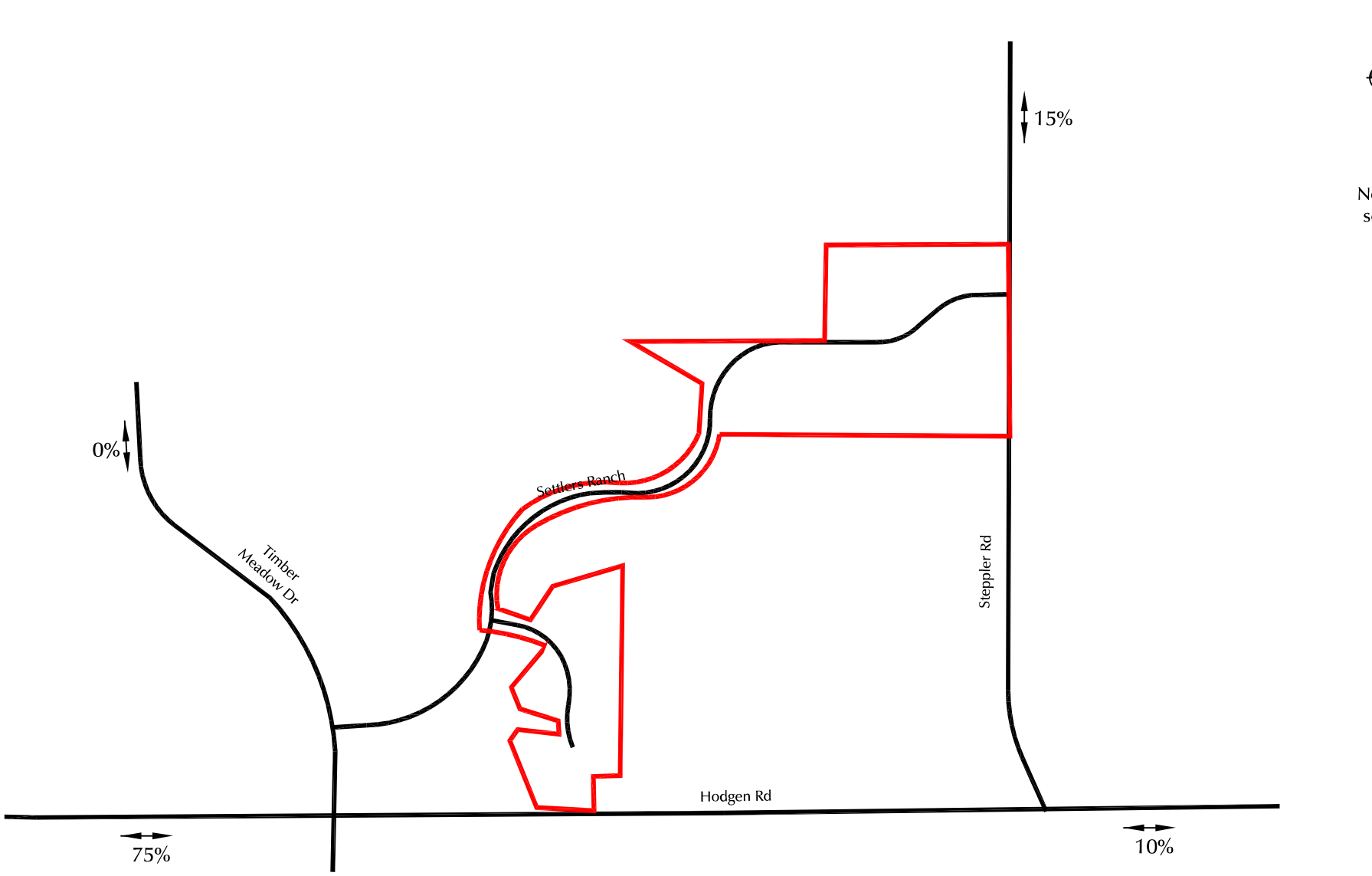
X,XXX = Average Daily Traffic (Vehicles/Day)

= Yield Sign

= Stop Sign

= Traffic Signal

Counts by LSC September 2023



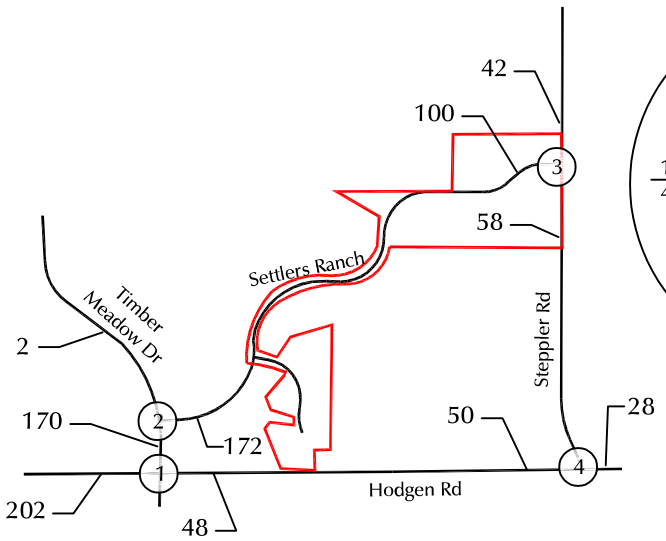
XX% = Estimated % Trip Distribution

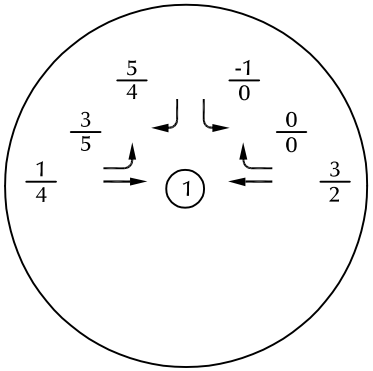
Figure 6

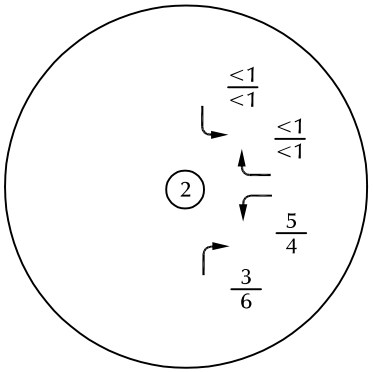
Estimated Directional Distribution

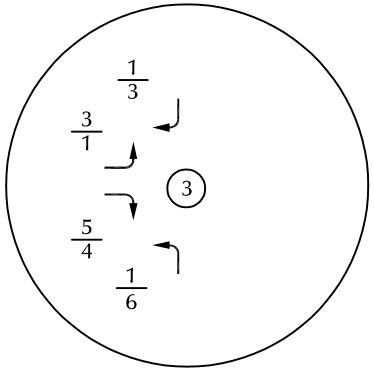
Settlers Ranch Filing No. 3 (LSC#S234130)

LSC TRANSPORTATION CONSULTANTS, INC.

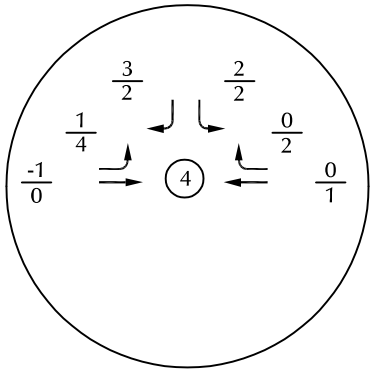








Not to scale



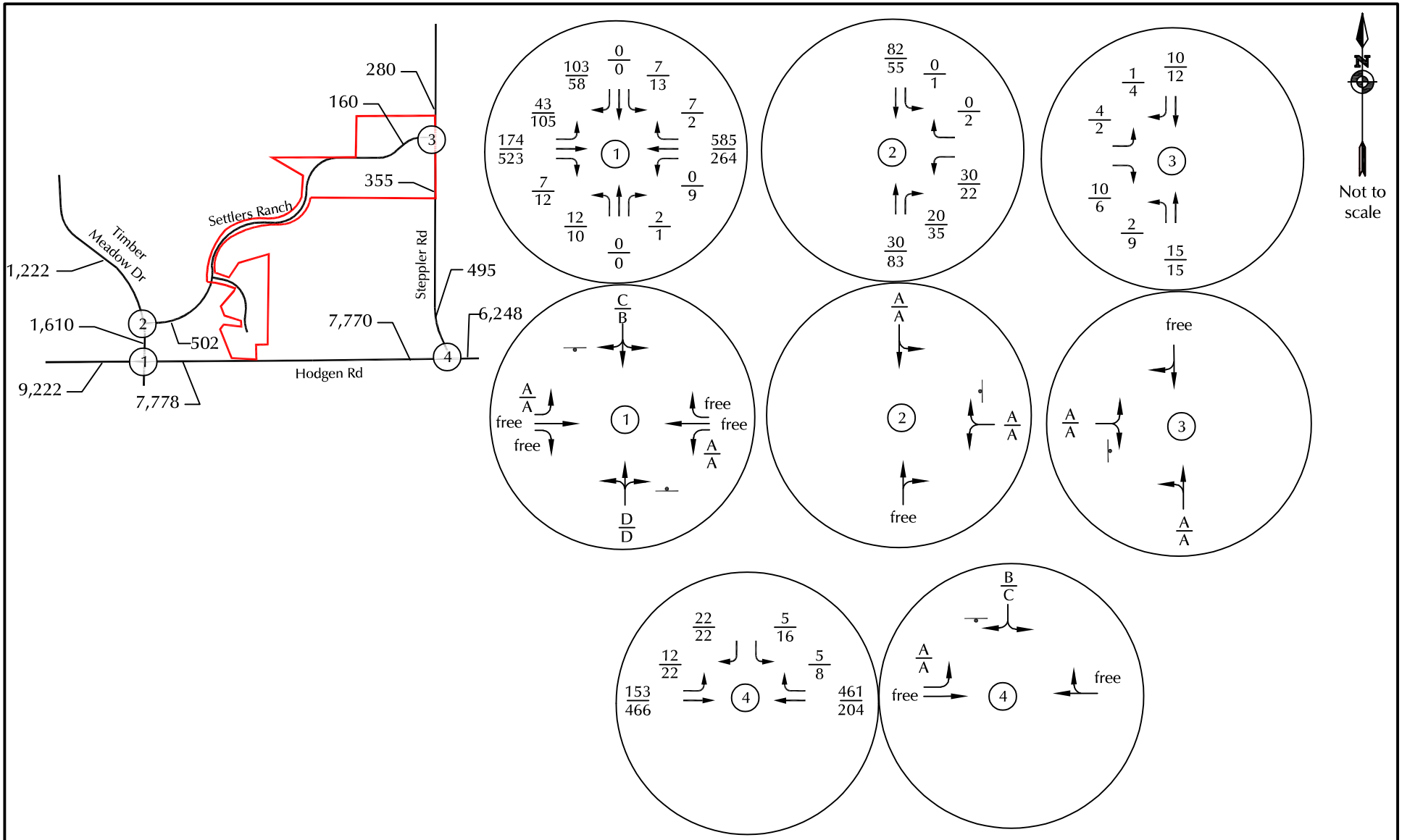
XX / XX = AM Weekday Peak-Hour Traffic (Veh/Hour) / PM Weekday Peak-Hour Traffic (Veh/Hour)

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

Figure 7

Site-Generated Traffic

Settlers Ranch Filing No. 3 (LSC#S234130)



Not to scale

Figure 8

Short-Term Baseline plus Site-Generated Traffic, Lane Geometry, Traffic Control, and LOS

Settlers Ranch Filing No. 3 (LSC#S234130)

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

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

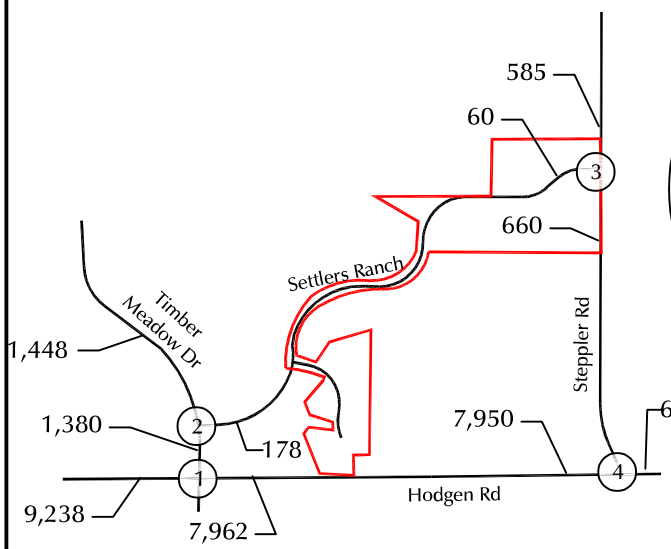
X,XXX = Average Daily Traffic (Vehicles/Day)

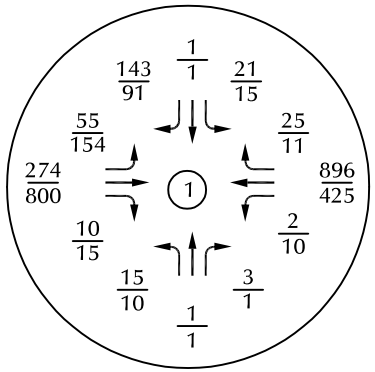
= Yield Sign

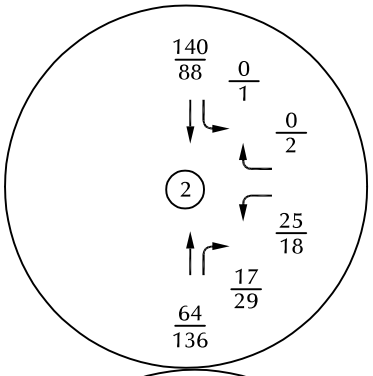
= Stop Sign

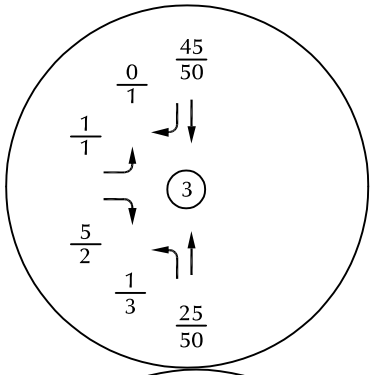
= Traffic Signal

LSC TRANSPORTATION CONSULTANTS, INC.



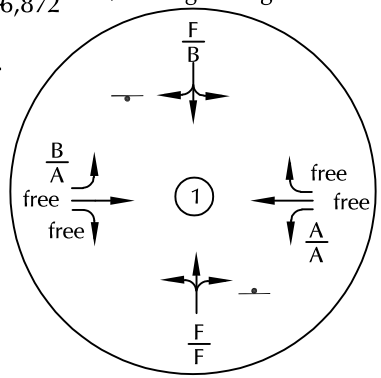


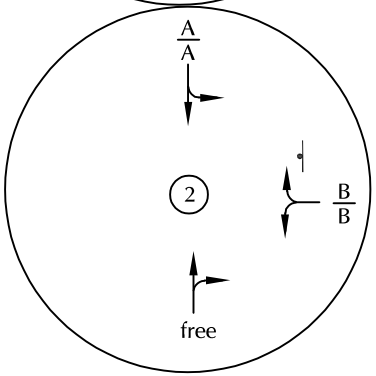


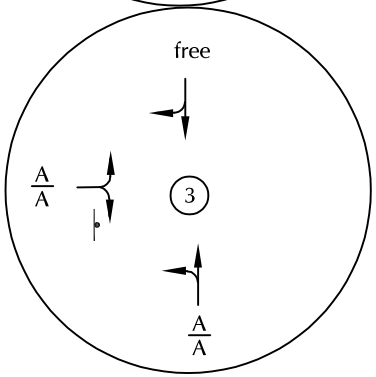


Not to scale

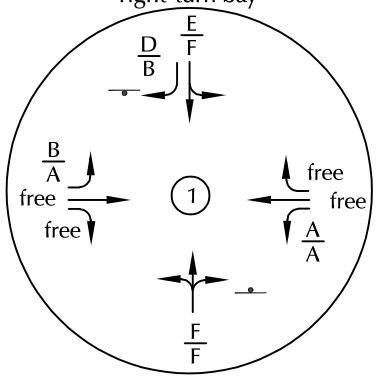
w/Existing Laneage

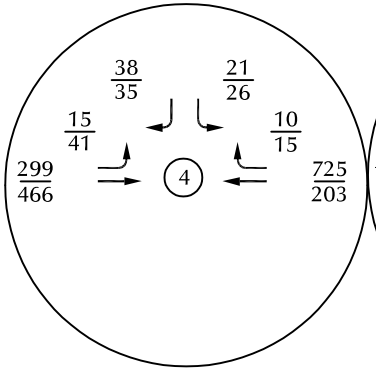


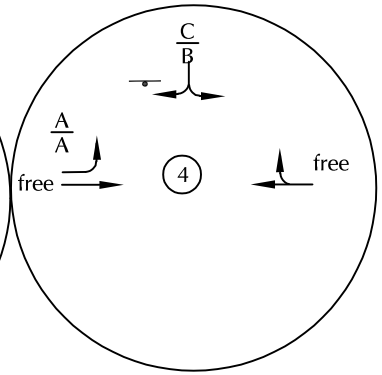




w/exclusive southbound right-turn bay







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

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

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

= Yield Sign

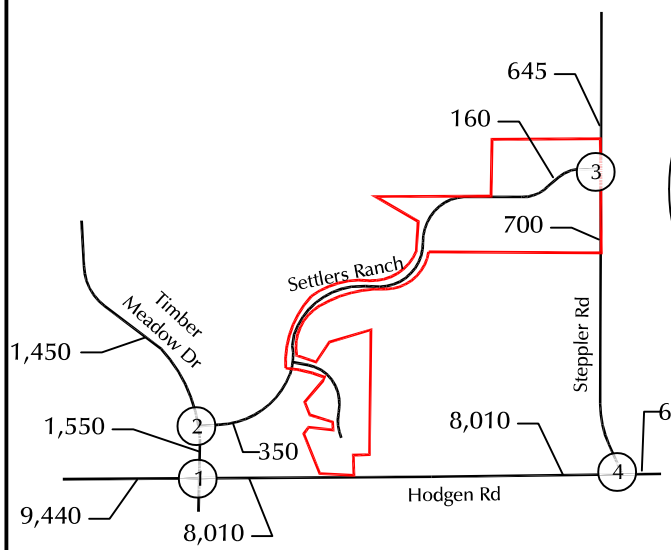
= Stop Sign

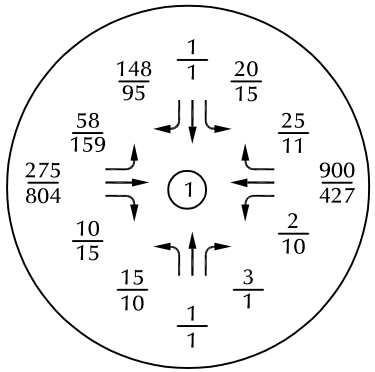
= Traffic Signal

Figure 9

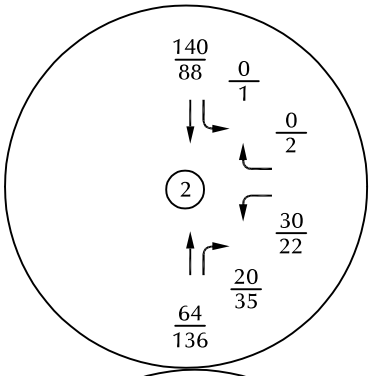
2043 Background Traffic, Lane Geometry, Traffic Control, and LOS

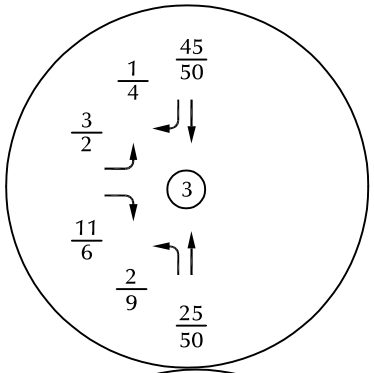
Settlers Ranch Filing 3 (LSC#S234130)





w/Existing Laneage





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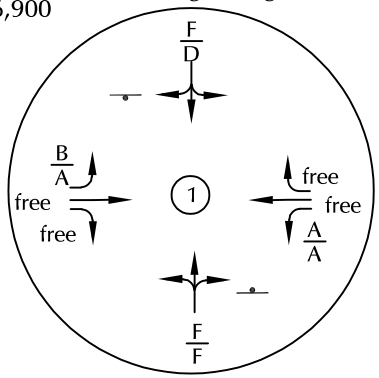
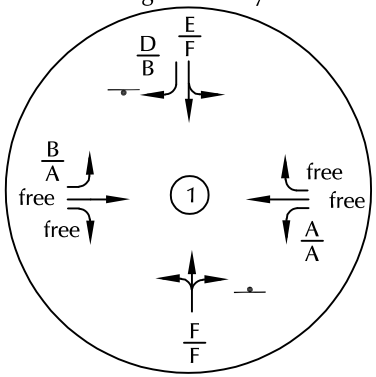
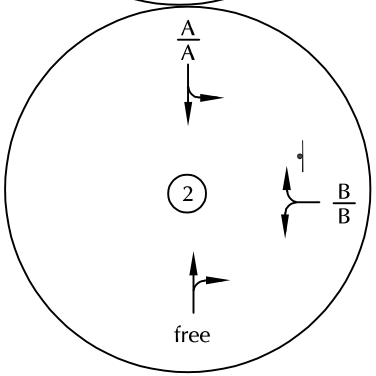
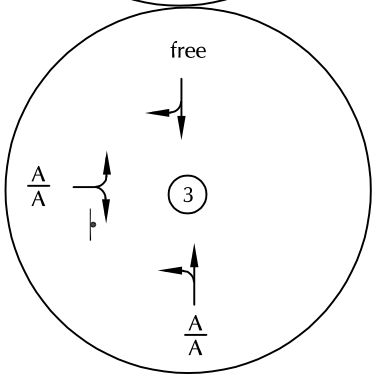
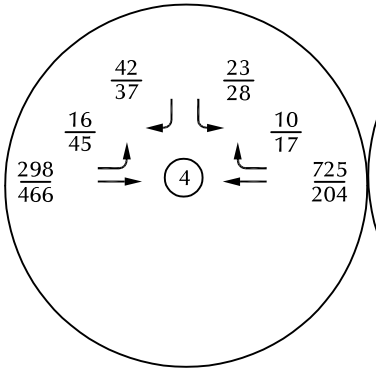


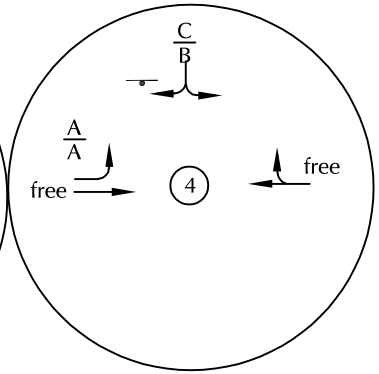
w/exclusive southbound right-turn bay











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

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

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

= Yield Sign

= Stop Sign

= Traffic Signal

Figure 10

2043 Total Traffic, Lane Geometry, Traffic Control, and LOS

Settlers Ranch Filing 3 (LSC#S234130)

Traffic Counts

TRANSPORTATION
CONSULTANTS, INC.

LSC Transportation Consultants, Inc.

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

File Name : Steppler Rd - Hodgen Rd AM
Site Code : S234130
Start Date : 3/7/2023

Groups Printed- Unshifted

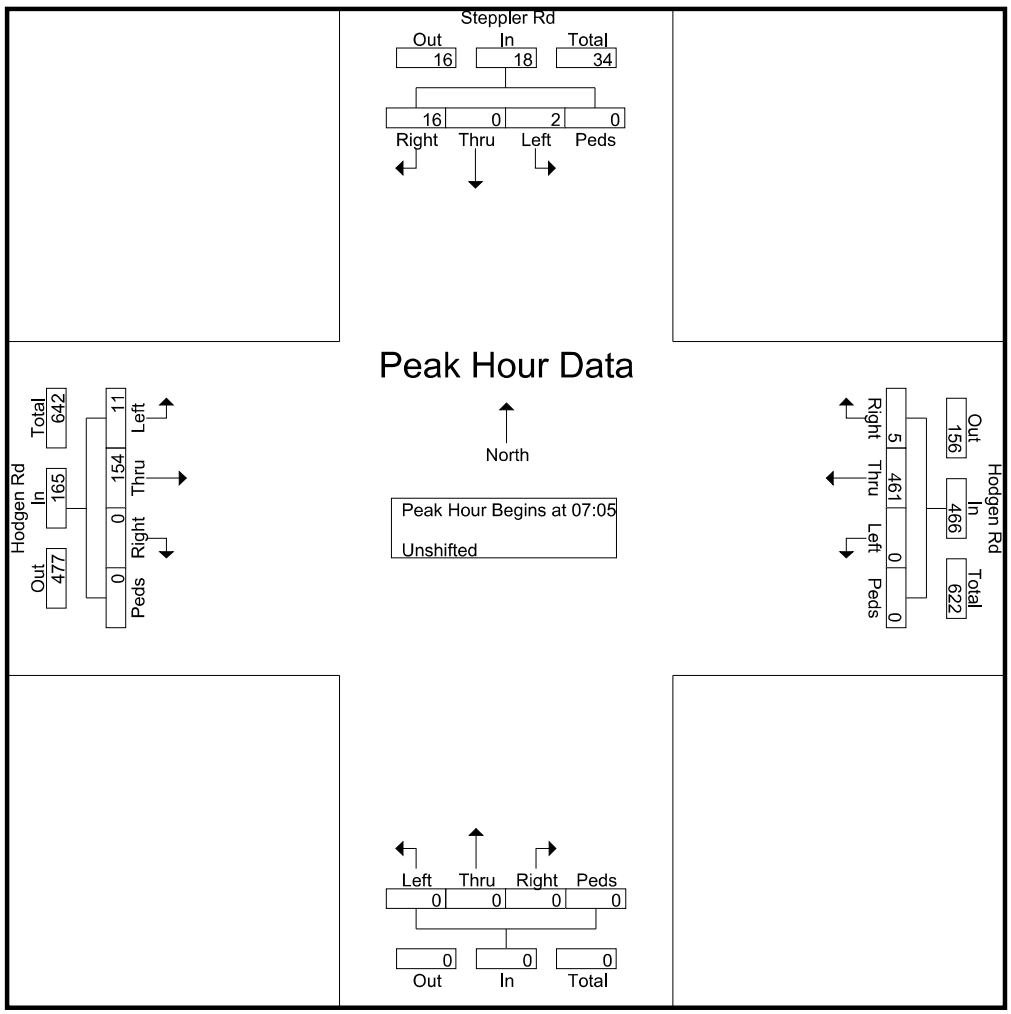
	Steppler Rd Southbound					Hodgen Rd Westbound					Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	2	0	0	0	2	0	25	0	0	25	0	0	0	0	0	0	11	1	0	12	39
06:35	3	0	0	0	3	0	25	0	0	25	0	0	0	0	0	0	6	0	0	6	34
06:40	2	0	1	0	3	0	30	0	0	30	0	0	0	0	0	0	5	0	0	5	38
06:45	2	0	1	0	3	0	33	0	0	33	0	0	0	0	0	0	9	3	0	12	48
06:50	2	0	1	0	3	1	30	0	0	31	0	0	0	0	0	0	17	0	0	17	51
06:55	1	0	0	0	1	0	33	0	0	33	0	0	0	0	0	0	5	0	0	5	39
Total	12	0	3	0	15	1	176	0	0	177	0	0	0	0	0	0	53	4	0	57	249
07:00	3	0	0	0	3	2	21	0	0	23	0	0	0	0	0	0	8	0	0	8	34
07:05	1	0	0	0	1	0	27	0	0	27	0	0	0	0	0	0	6	1	0	7	35
07:10	0	0	0	0	0	0	41	0	0	41	0	0	0	0	0	0	14	0	0	14	55
07:15	2	0	1	0	3	0	39	0	0	39	0	0	0	0	0	0	11	2	0	13	55
07:20	3	0	0	0	3	1	40	0	0	41	0	0	0	0	0	0	5	1	0	6	50
07:25	1	0	0	0	1	0	41	0	0	41	0	0	0	0	0	0	18	2	0	20	62
07:30	4	0	0	0	4	1	65	0	0	66	0	0	0	0	0	0	9	1	0	10	80
07:35	0	0	0	0	0	0	37	0	0	37	0	0	0	0	0	0	16	0	0	16	53
07:40	0	0	0	0	0	0	43	0	0	43	0	0	0	0	0	0	10	0	0	10	53
07:45	1	0	0	0	1	1	47	0	0	48	0	0	0	0	0	0	15	1	0	16	65
07:50	3	0	1	0	4	1	32	0	0	33	0	0	0	0	0	0	15	2	0	17	54
07:55	1	0	0	0	1	1	25	0	0	26	0	0	0	0	0	0	15	0	0	15	42
Total	19	0	2	0	21	7	458	0	0	465	0	0	0	0	0	0	142	10	0	152	638
08:00	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	20	1	0	21	45
08:05	1	0	0	0	1	0	26	0	0	26	0	0	0	0	0	0	7	1	0	8	35
08:10	1	0	0	0	1	0	22	0	0	22	0	0	0	0	0	0	19	1	0	20	43
08:15	0	0	0	0	0	3	35	0	0	38	0	0	0	0	0	0	15	2	0	17	55
08:20	1	0	0	0	1	0	33	0	0	33	0	0	0	0	0	0	8	3	0	11	45
08:25	1	0	0	0	1	0	26	0	0	26	0	0	0	0	0	0	6	1	0	7	34
Grand Total	35	0	5	0	40	11	800	0	0	811	0	0	0	0	0	0	270	23	0	293	1144
Apprch %	87.5	0	12.5	0		1.4	98.6	0	0		0	0	0	0		0	92.2	7.8	0		
Total %	3.1	0	0.4	0	3.5	1	69.9	0	0	70.9	0	0	0	0	0	0	23.6	2	0	25.6	

LSC Transportation Consultants, Inc.

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

File Name : Steppler Rd - Hodgen Rd AM
Site Code : S234130
Start Date : 3/7/2023
Page No : 2

	Steppler Rd Southbound					Hodgen Rd Westbound					Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:05																					
07:05	1	0	0	0	1	0	27	0	0	27	0	0	0	0	0	0	6	1	0	7	35
07:10	0	0	0	0	0	0	41	0	0	41	0	0	0	0	0	0	14	0	0	14	55
07:15	2	0	**1**	0	3	0	39	0	0	39	0	0	0	0	0	0	11	**2**	0	13	55
07:20	3	0	0	0	3	**1**	40	0	0	41	0	0	0	0	0	0	5	1	0	6	50
07:25	1	0	0	0	1	0	41	0	0	41	0	0	0	0	0	0	18	2	0	20	62
07:30	**4**	0	0	0	**4**	1	**65**	0	0	**66**	0	0	0	0	0	0	9	1	0	10	**80**
07:35	0	0	0	0	0	0	37	0	0	37	0	0	0	0	0	0	16	0	0	16	53
07:40	0	0	0	0	0	0	43	0	0	43	0	0	0	0	0	0	10	0	0	10	53
07:45	1	0	0	0	1	1	47	0	0	48	0	0	0	0	0	0	15	1	0	16	65
07:50	3	0	1	0	4	1	32	0	0	33	0	0	0	0	0	0	15	2	0	17	54
07:55	1	0	0	0	1	1	25	0	0	26	0	0	0	0	0	0	15	0	0	15	42
08:00	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	**20**	1	0	**21**	45
Total Volume	16	0	2	0	18	5	461	0	0	466	0	0	0	0	0	0	154	11	0	165	649
% App. Total	88.9	0	11.1	0		1.1	98.9	0	0		0	0	0	0		0	93.3	6.7	0		
PHF	.333	.000	.167	.000	.375	.417	.591	.000	.000	.588	.000	.000	.000	.000	.000	.000	.642	.458	.000	.655	.676

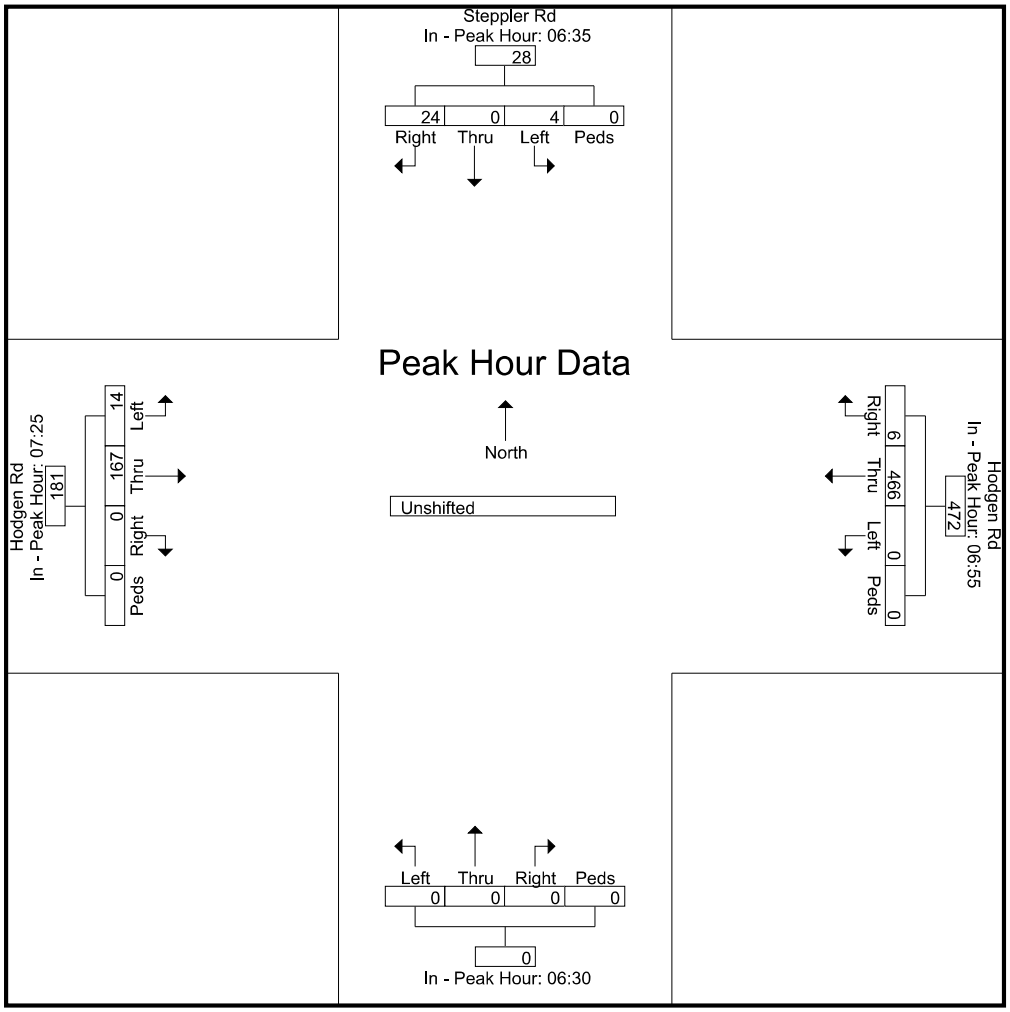


LSC Transportation Consultants, Inc.

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

File Name : Steppler Rd - Hodgen Rd AM
Site Code : S234130
Start Date : 3/7/2023
Page No : 3

	Steppler Rd Southbound					Hodgen Rd Westbound					Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	06:35					06:55					06:30					07:25					
+0 mins.	3	0	0	0	3	0	33	0	0	33	0	0	0	0	0	0	18	2	0	20	
+5 mins.	2	0	**1**	0	3	**2**	21	0	0	23	0	0	0	0	0	0	9	1	0	10	
+10 mins.	2	0	1	0	3	0	27	0	0	27	0	0	0	0	0	0	16	0	0	16	
+15 mins.	2	0	1	0	3	0	41	0	0	41	0	0	0	0	0	0	10	0	0	10	
+20 mins.	1	0	0	0	1	0	39	0	0	39	0	0	0	0	0	0	15	1	0	16	
+25 mins.	3	0	0	0	3	1	40	0	0	41	0	0	0	0	0	0	15	2	0	17	
+30 mins.	1	0	0	0	1	0	41	0	0	41	0	0	0	0	0	0	15	0	0	15	
+35 mins.	0	0	0	0	0	1	**65**	0	0	**66**	0	0	0	0	0	0	**20**	1	0	**21**	
+40 mins.	2	0	1	0	3	0	37	0	0	37	0	0	0	0	0	0	7	1	0	8	
+45 mins.	3	0	0	0	3	0	43	0	0	43	0	0	0	0	0	0	19	1	0	20	
+50 mins.	1	0	0	0	1	1	47	0	0	48	0	0	0	0	0	0	15	2	0	17	
+55 mins.	**4**	0	0	0	**4**	1	32	0	0	33	0	0	0	0	0	0	8	**3**	0	11	
Total Volume	24	0	4	0	28	6	466	0	0	472	0	0	0	0	0	0	167	14	0	181	
% App. Total	85.7	0	14.3	0		1.3	98.7	0	0		0	0	0	0		0	92.3	7.7	0		
PHF	.500	.000	.333	.000	.583	.250	.597	.000	.000	.596	.000	.000	.000	.000	.000	.000	.696	.389	.000	.718	



LSC Transportation Consultants, Inc.

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

File Name : Steppler Rd - Hodgen Rd PM
Site Code : S234130
Start Date : 3/7/2023

Groups Printed- Unshifted

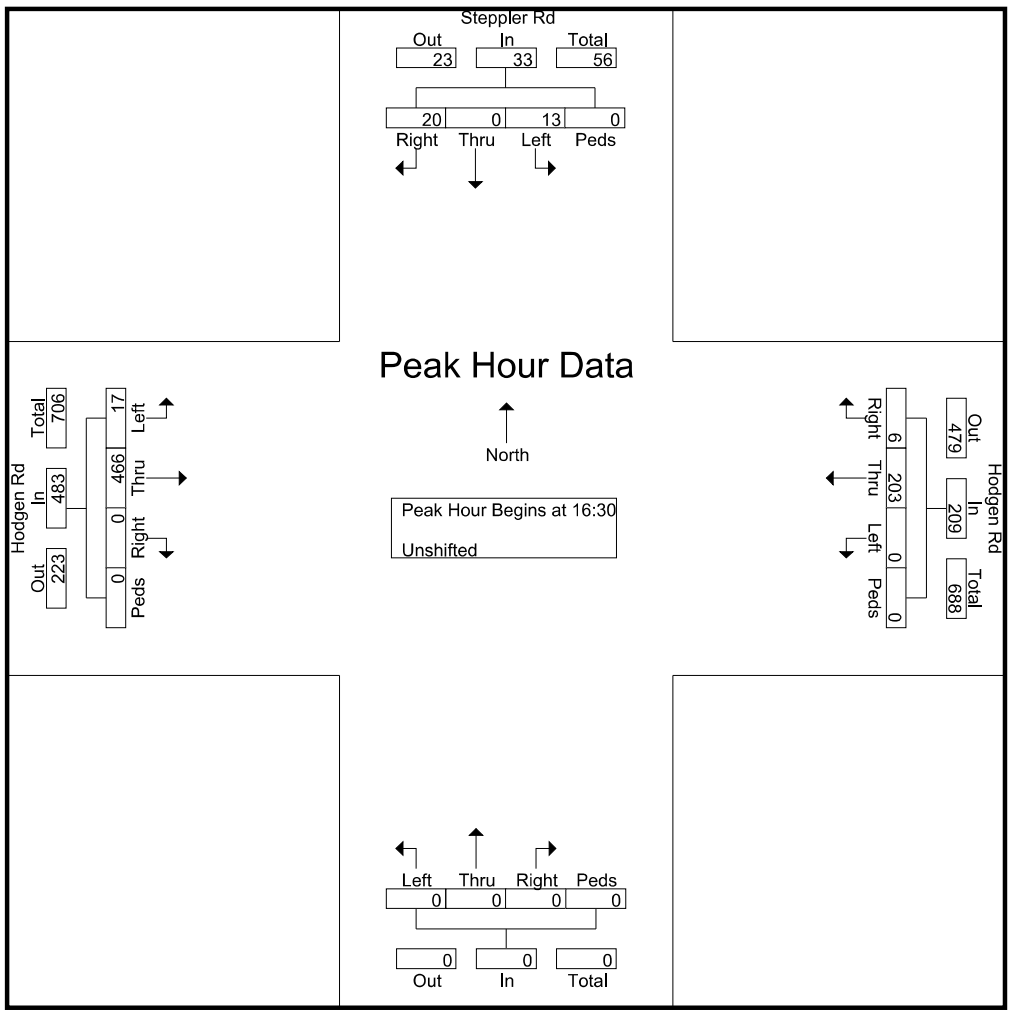
	Steppler Rd Southbound					Hodgen Rd Westbound					Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
16:00	1	0	0	0	1	0	18	0	0	18	0	0	0	0	0	0	22	0	0	22	41
16:05	0	0	1	0	1	0	21	0	0	21	0	0	0	0	0	0	25	1	0	26	48
16:10	2	0	1	0	3	1	20	0	0	21	0	0	0	0	0	0	19	1	0	20	44
16:15	0	0	1	0	1	1	21	0	0	22	0	0	0	0	0	0	38	0	0	38	61
16:20	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	28	2	0	30	49
16:25	1	0	0	0	1	0	21	0	0	21	0	0	0	0	0	0	35	5	0	40	62
16:30	1	0	0	0	1	0	21	0	0	21	0	0	0	0	0	0	45	2	0	47	69
16:35	2	0	1	0	3	1	17	0	0	18	0	0	0	0	0	0	43	1	0	44	65
16:40	3	0	4	0	7	0	17	0	0	17	0	0	0	0	0	0	34	1	0	35	59
16:45	3	0	1	0	4	1	27	0	0	28	0	0	0	0	0	0	33	2	0	35	67
16:50	1	0	1	0	2	2	13	0	0	15	0	0	0	0	0	0	32	0	0	32	49
16:55	2	0	1	0	3	0	17	0	0	17	0	0	0	0	0	0	29	2	0	31	51
Total	16	0	11	0	27	6	232	0	0	238	0	0	0	0	0	0	383	17	0	400	665
17:00	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	40	1	0	41	55
17:05	1	0	0	0	1	0	21	0	0	21	0	0	0	0	0	0	41	1	0	42	64
17:10	3	0	2	0	5	0	15	0	0	15	0	0	0	0	0	0	37	1	0	38	58
17:15	1	0	0	0	1	0	12	0	0	12	0	0	0	0	0	0	39	1	0	40	53
17:20	2	0	0	0	2	1	15	0	0	16	0	0	0	0	0	0	41	2	0	43	61
17:25	1	0	3	0	4	1	14	0	0	15	0	0	0	0	0	0	52	3	0	55	74
17:30	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	0	17	1	0	18	26
17:35	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	37	0	0	37	50
17:40	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	31	5	0	36	49
17:45	0	0	1	0	1	1	11	0	0	12	0	0	0	0	0	0	22	3	0	25	38
17:50	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	0	25	2	0	27	45
17:55	0	0	1	0	1	0	17	0	0	17	0	0	0	0	0	0	41	1	0	42	60
Total	10	0	7	0	17	3	169	0	0	172	0	0	0	0	0	0	423	21	0	444	633
Grand Total	26	0	18	0	44	9	401	0	0	410	0	0	0	0	0	0	806	38	0	844	1298
Apprch %	59.1	0	40.9	0		2.2	97.8	0	0		0	0	0	0		0	95.5	4.5	0		
Total %	2	0	1.4	0	3.4	0.7	30.9	0	0	31.6	0	0	0	0	0	0	62.1	2.9	0	65	

LSC Transportation Consultants, Inc.

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

File Name : Steppler Rd - Hodgen Rd PM
Site Code : S234130
Start Date : 3/7/2023

	Steppler Rd Southbound					Hodgen Rd Westbound					Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	1	0	0	0	1	0	21	0	0	21	0	0	0	0	0	0	45	2	0	47	69
16:35	2	0	1	0	3	1	17	0	0	18	0	0	0	0	0	0	43	1	0	44	65
16:40	**3**	0	**4**	0	**7**	0	17	0	0	17	0	0	0	0	0	0	34	1	0	35	59
16:45	3	0	1	0	4	1	**27**	0	0	**28**	0	0	0	0	0	0	33	2	0	35	67
16:50	1	0	1	0	2	**2**	13	0	0	15	0	0	0	0	0	0	32	0	0	32	49
16:55	2	0	1	0	3	0	17	0	0	17	0	0	0	0	0	0	29	2	0	31	51
17:00	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	40	1	0	41	55
17:05	1	0	0	0	1	0	21	0	0	21	0	0	0	0	0	0	41	1	0	42	64
17:10	3	0	2	0	5	0	15	0	0	15	0	0	0	0	0	0	37	1	0	38	58
17:15	1	0	0	0	1	0	12	0	0	12	0	0	0	0	0	0	39	1	0	40	53
17:20	2	0	0	0	2	1	15	0	0	16	0	0	0	0	0	0	41	2	0	43	61
17:25	1	0	3	0	4	1	14	0	0	15	0	0	0	0	0	0	**52**	**3**	0	**55**	**74**
Total Volume	20	0	13	0	33	6	203	0	0	209	0	0	0	0	0	0	466	17	0	483	725
% App. Total	60.6	0	39.4	0		2.9	97.1	0	0		0	0	0	0		0	96.5	3.5	0		
PHF	.556	.000	.271	.000	.393	.250	.627	.000	.000	.622	.000	.000	.000	.000	.000	.000	.747	.472	.000	.732	.816

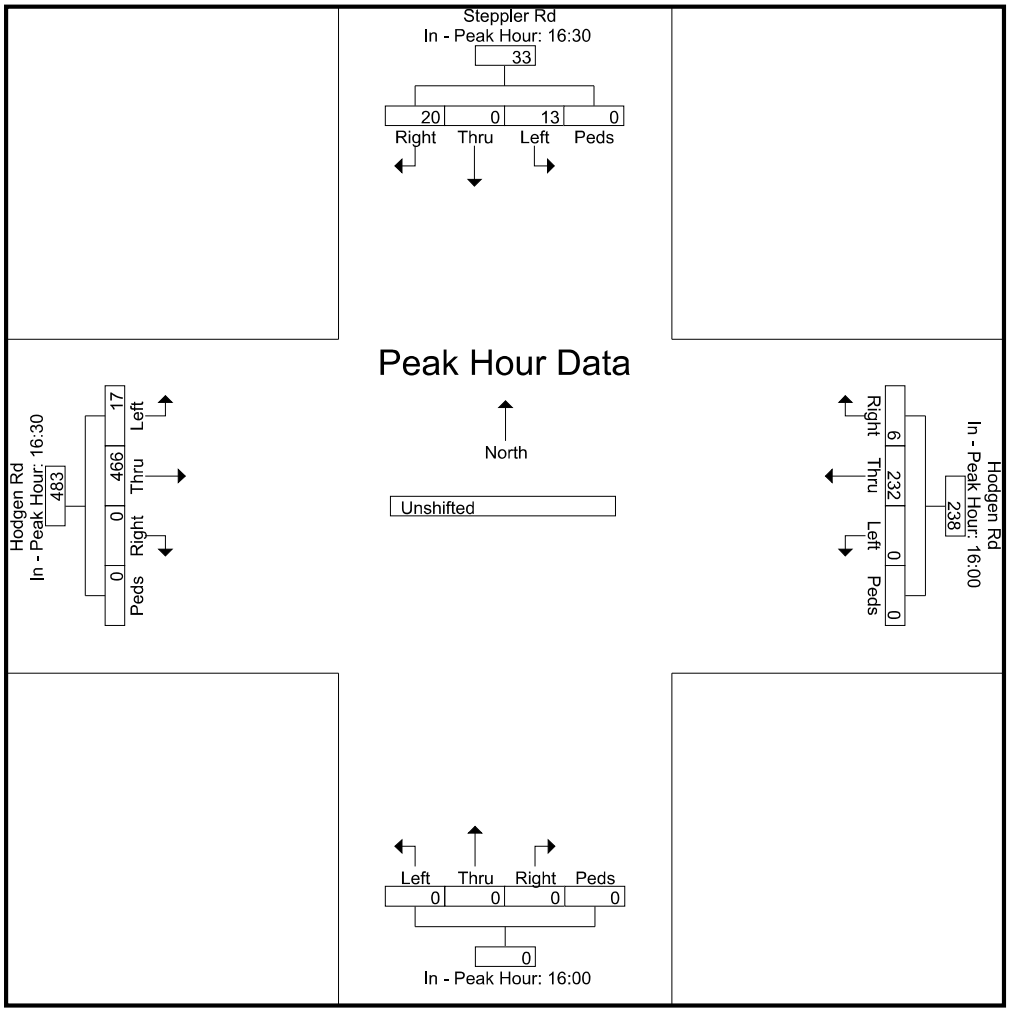


LSC Transportation Consultants, Inc.

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

File Name : Steppler Rd - Hodgen Rd PM
Site Code : S234130
Start Date : 3/7/2023
Page No : 3

	Steppler Rd Southbound					Hodgen Rd Westbound					Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:30					16:00					16:00					16:30					
+0 mins.	1	0	0	0	1	0	18	0	0	18	0	0	0	0	0	0	45	2	0	47	
+5 mins.	2	0	1	0	3	0	21	0	0	21	0	0	0	0	0	0	43	1	0	44	
+10 mins.	**3**	0	**4**	0	**7**	1	20	0	0	21	0	0	0	0	0	0	34	1	0	35	
+15 mins.	3	0	1	0	4	1	21	0	0	22	0	0	0	0	0	0	33	2	0	35	
+20 mins.	1	0	1	0	2	0	19	0	0	19	0	0	0	0	0	0	32	0	0	32	
+25 mins.	2	0	1	0	3	0	21	0	0	21	0	0	0	0	0	0	29	2	0	31	
+30 mins.	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	0	40	1	0	41	
+35 mins.	1	0	0	0	1	1	17	0	0	18	0	0	0	0	0	0	41	1	0	42	
+40 mins.	3	0	2	0	5	0	17	0	0	17	0	0	0	0	0	0	37	1	0	38	
+45 mins.	1	0	0	0	1	1	**27**	0	0	**28**	0	0	0	0	0	0	39	1	0	40	
+50 mins.	2	0	0	0	2	**2**	13	0	0	15	0	0	0	0	0	0	41	2	0	43	
+55 mins.	1	0	3	0	4	0	17	0	0	17	0	0	0	0	0	0	**52**	**3**	0	**55**	
Total Volume	20	0	13	0	33	6	232	0	0	238	0	0	0	0	0	0	466	17	0	483	
% App. Total	60.6	0	39.4	0		2.5	97.5	0	0		0	0	0	0		0	96.5	3.5	0		
PHF	.556	.000	.271	.000	.393	.250	.716	.000	.000	.708	.000	.000	.000	.000	.000	.000	.747	.472	.000	.732	



LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Hodgen Rd AM 9-23
Site Code : S234130
Start Date : 9/12/2023
Page No : 1

Groups Printed- Unshifted

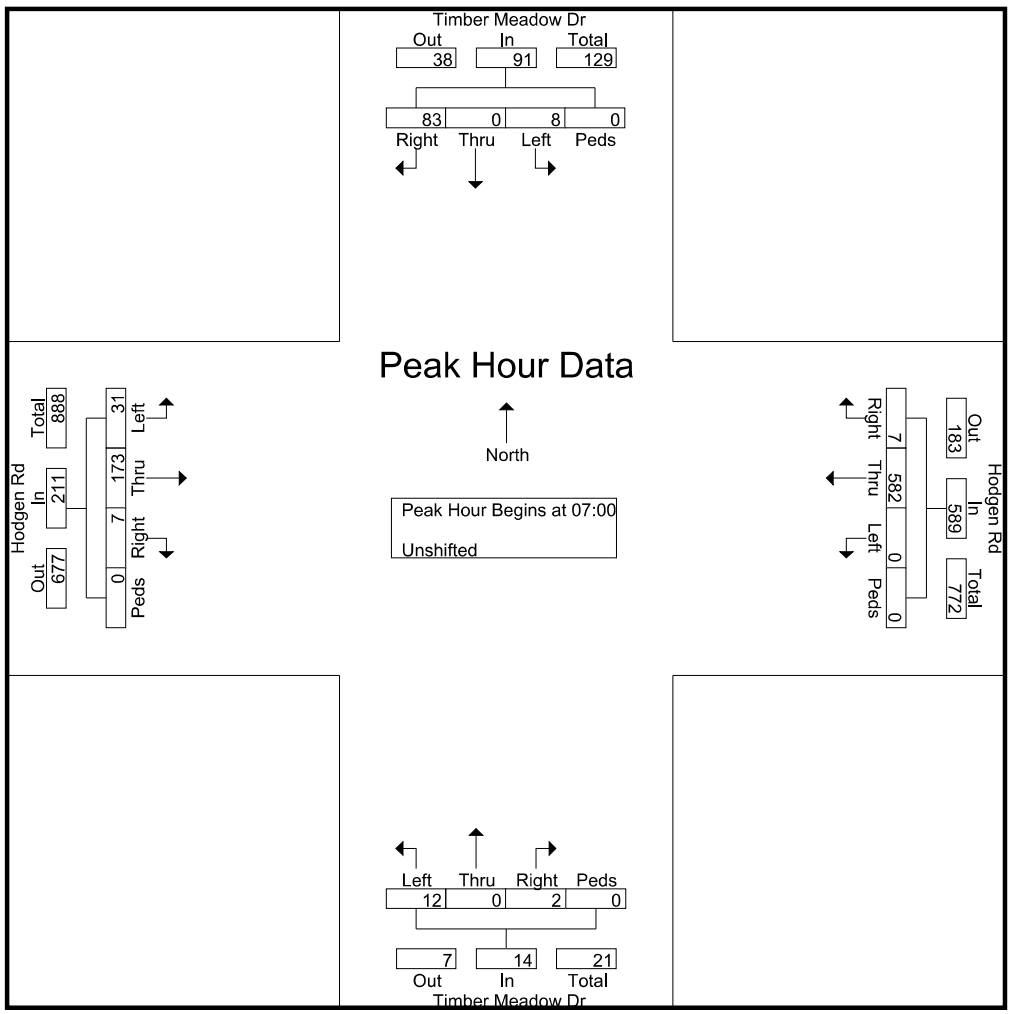
	Timber Meadow Dr Southbound					Hodgen Rd Westbound					Timber Meadow Dr Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	2	0	0	0	2	0	24	0	0	24	1	0	0	0	1	0	6	2	0	8	35
06:35	7	1	1	0	9	1	28	0	0	29	0	0	0	0	0	0	13	0	0	13	51
06:40	1	0	0	0	1	0	28	0	0	28	0	0	1	0	1	0	8	2	0	10	40
06:45	3	0	0	0	3	0	41	0	0	41	0	0	2	0	2	0	9	0	0	9	55
06:50	6	0	0	0	6	0	31	0	0	31	0	0	0	0	0	0	8	0	0	8	45
06:55	6	0	0	0	6	0	39	0	0	39	0	0	1	0	1	0	9	0	0	9	55
Total	25	1	1	0	27	1	191	0	0	192	1	0	4	0	5	0	53	4	0	57	281
07:00	3	0	1	0	4	1	39	0	0	40	1	0	1	0	2	1	10	1	0	12	58
07:05	9	0	1	0	10	0	45	0	0	45	0	0	0	0	0	0	13	0	0	13	68
07:10	13	0	3	0	16	0	51	0	0	51	0	0	1	0	1	0	9	2	0	11	79
07:15	5	0	0	0	5	0	65	0	0	65	0	0	0	0	0	0	10	4	0	14	84
07:20	8	0	1	0	9	0	56	0	0	56	0	0	1	0	1	0	10	1	0	11	77
07:25	6	0	0	0	6	1	53	0	0	54	0	0	1	0	1	1	12	3	0	16	77
07:30	6	0	0	0	6	0	38	0	0	38	0	0	4	0	4	1	13	3	0	17	65
07:35	11	0	0	0	11	3	55	0	0	58	0	0	1	0	1	1	23	5	0	29	99
07:40	11	0	0	0	11	2	49	0	0	51	0	0	0	0	0	1	20	4	0	25	87
07:45	4	0	0	0	4	0	43	0	0	43	0	0	1	0	1	1	22	4	0	27	75
07:50	4	0	1	0	5	0	48	0	0	48	0	0	1	0	1	0	21	1	0	22	76
07:55	3	0	1	0	4	0	40	0	0	40	1	0	1	0	2	1	10	3	0	14	60
Total	83	0	8	0	91	7	582	0	0	589	2	0	12	0	14	7	173	31	0	211	905
08:00	4	0	1	0	5	0	29	0	0	29	0	0	1	0	1	0	17	1	0	18	53
08:05	6	1	0	0	7	0	30	0	0	30	0	0	3	0	3	3	19	2	0	24	64
08:10	6	0	0	0	6	0	31	0	0	31	0	0	0	0	0	0	13	6	0	19	56
08:15	7	0	1	0	8	0	31	0	0	31	0	0	1	0	1	0	10	2	0	12	52
08:20	7	0	2	0	9	0	33	0	0	33	0	0	0	0	0	0	20	4	0	24	66
08:25	3	0	0	0	3	1	31	1	0	33	0	0	2	0	2	0	14	4	0	18	56
Grand Total	141	2	13	0	156	9	958	1	0	968	3	0	23	0	26	10	319	54	0	383	1533
Apprch %	90.4	1.3	8.3	0		0.9	99	0.1	0		11.5	0	88.5	0		2.6	83.3	14.1	0		
Total %	9.2	0.1	0.8	0	10.2	0.6	62.5	0.1	0	63.1	0.2	0	1.5	0	1.7	0.7	20.8	3.5	0	25	

LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Hodgen Rd AM 9-23
Site Code : S234130
Start Date : 9/12/2023

	Timber Meadow Dr Southbound					Hodgen Rd Westbound					Timber Meadow Dr Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	3	0	1	0	4	1	39	0	0	40	**1**	0	1	0	2	**1**	10	1	0	12	58
07:05	9	0	1	0	10	0	45	0	0	45	0	0	0	0	0	0	13	0	0	13	68
07:10	**13**	0	**3**	0	**16**	0	51	0	0	51	0	0	1	0	1	0	9	2	0	11	79
07:15	5	0	0	0	5	0	**65**	0	0	**65**	0	0	0	0	0	0	10	4	0	14	84
07:20	8	0	1	0	9	0	56	0	0	56	0	0	1	0	1	0	10	1	0	11	77
07:25	6	0	0	0	6	1	53	0	0	54	0	0	1	0	1	1	12	3	0	16	77
07:30	6	0	0	0	6	0	38	0	0	38	0	0	**4**	0	**4**	1	13	3	0	17	65
07:35	11	0	0	0	11	**3**	55	0	0	58	0	0	1	0	1	1	**23**	**5**	0	**29**	**99**
07:40	11	0	0	0	11	2	49	0	0	51	0	0	0	0	0	1	20	4	0	25	87
07:45	4	0	0	0	4	0	43	0	0	43	0	0	1	0	1	1	22	4	0	27	75
07:50	4	0	1	0	5	0	48	0	0	48	0	0	1	0	1	0	21	1	0	22	76
07:55	3	0	1	0	4	0	40	0	0	40	1	0	1	0	2	1	10	3	0	14	60
Total Volume	83	0	8	0	91	7	582	0	0	589	2	0	12	0	14	7	173	31	0	211	905
% App. Total	91.2	0	8.8	0		1.2	98.8	0	0		14.3	0	85.7	0		3.3	82	14.7	0		
PHF	.532	.000	.222	.000	.474	.194	.746	.000	.000	.755	.167	.000	.250	.000	.292	.583	.627	.517	.000	.606	.762



LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
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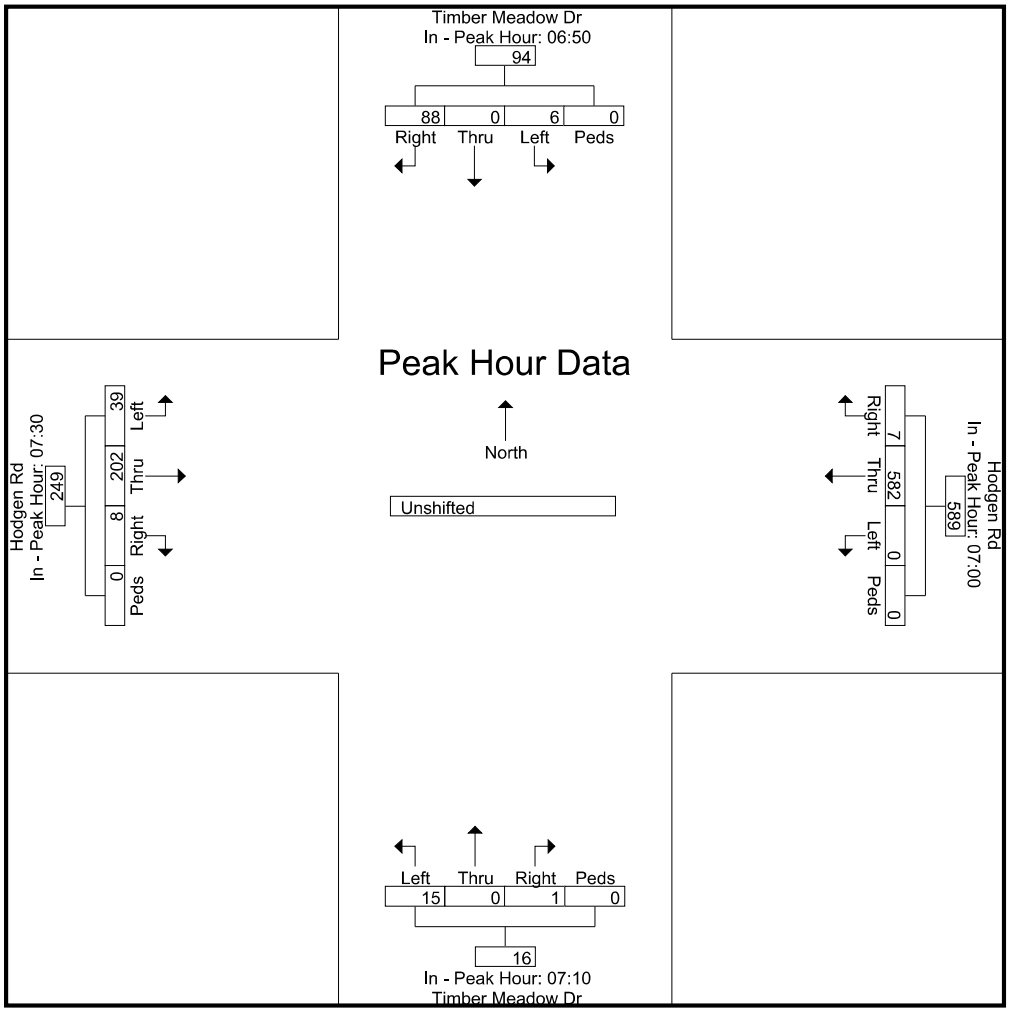
719-633-2868

File Name : Timber Meadow Dr - Hodgen Rd AM 9-23
Site Code : S234130
Start Date : 9/12/2023
Page No : 3

	Timber Meadow Dr Southbound					Hodgen Rd Westbound					Timber Meadow Dr Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	06:50					07:00					07:10					07:30					
+0 mins.	6	0	0	0	6	1	39	0	0	40	0	0	1	0	1	1	13	3	0	17	
+5 mins.	6	0	0	0	6	0	45	0	0	45	0	0	0	0	0	1	**23**	5	0	**29**	
+10 mins.	3	0	1	0	4	0	51	0	0	51	0	0	1	0	1	1	20	4	0	25	
+15 mins.	9	0	1	0	10	0	**65**	0	0	**65**	0	0	1	0	1	1	22	4	0	27	
+20 mins.	**13**	0	**3**	0	**16**	0	56	0	0	56	0	0	**4**	0	**4**	0	21	1	0	22	
+25 mins.	5	0	0	0	5	1	53	0	0	54	0	0	1	0	1	1	10	3	0	14	
+30 mins.	8	0	1	0	9	0	38	0	0	38	0	0	0	0	0	0	17	1	0	18	
+35 mins.	6	0	0	0	6	**3**	55	0	0	58	0	0	1	0	1	**3**	19	2	0	24	
+40 mins.	6	0	0	0	6	2	49	0	0	51	0	0	1	0	1	0	13	**6**	0	19	
+45 mins.	11	0	0	0	11	0	43	0	0	43	**1**	0	1	0	2	0	10	2	0	12	
+50 mins.	11	0	0	0	11	0	48	0	0	48	0	0	1	0	1	0	20	4	0	24	
+55 mins.	4	0	0	0	4	0	40	0	0	40	0	0	3	0	3	0	14	4	0	18	
Total Volume	88	0	6	0	94	7	582	0	0	589	1	0	15	0	16	8	202	39	0	249	
% App. Total	93.6	0	6.4	0		1.2	98.8	0	0		6.2	0	93.8	0		3.2	81.1	15.7	0		
PHF	.564	.000	.167	.000	.490	.194	.746	.000	.000	.755	.083	.000	.313	.000	.333	.222	.732	.542	.000	.716	



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

File Name : Timber Meadow Dr - Hodgen Rd PM 9-23
Site Code : S234130
Start Date : 9/12/2023
Page No : 1

Groups Printed- Unshifted

	Timber Meadow Dr Southbound					Hodgen Rd Westbound					Timber Meadow Dr Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
16:00	5	1	0	0	6	0	24	0	0	24	0	0	4	0	4	1	41	5	0	47	81
16:05	8	2	2	0	12	1	23	0	0	24	0	0	0	0	0	1	36	8	0	45	81
16:10	5	2	0	0	7	0	24	0	0	24	0	1	0	0	1	1	26	8	0	35	67
16:15	6	0	2	0	8	0	20	1	0	21	0	0	1	0	1	1	42	2	0	45	75
16:20	5	0	0	0	5	0	26	0	0	26	0	0	1	0	1	1	29	4	0	34	66
16:25	6	0	0	0	6	0	40	0	0	40	0	0	0	0	0	0	35	5	0	40	86
16:30	4	0	1	0	5	1	19	0	0	20	0	0	0	0	0	1	30	4	0	35	60
16:35	5	0	0	0	5	0	29	0	0	29	0	0	2	0	2	0	42	5	0	47	83
16:40	5	0	0	0	5	0	20	0	0	20	1	0	0	0	1	0	38	8	0	46	72
16:45	6	0	1	0	7	0	22	0	0	22	0	0	0	0	0	0	41	5	0	46	75
16:50	5	0	0	0	5	0	21	0	0	21	0	0	2	0	2	1	29	8	0	38	66
16:55	1	0	1	0	2	2	12	0	0	14	0	0	0	0	0	0	57	3	0	60	76
Total	61	5	7	0	73	4	280	1	0	285	1	1	10	0	12	7	446	65	0	518	888
17:00	5	0	0	0	5	0	18	0	0	18	0	0	0	0	0	1	44	5	0	50	73
17:05	8	0	0	0	8	2	19	0	0	21	0	0	2	0	2	0	44	7	0	51	82
17:10	3	0	1	0	4	1	32	0	0	33	1	0	0	0	1	1	41	8	0	50	88
17:15	3	0	2	0	5	2	27	0	0	29	0	0	1	0	1	1	48	7	0	56	91
17:20	5	0	0	0	5	0	18	0	0	18	0	0	0	0	0	3	46	9	0	58	81
17:25	5	0	1	0	6	0	26	0	0	26	0	0	1	0	1	1	46	5	0	52	85
17:30	4	0	0	0	4	0	15	0	0	15	0	0	0	0	0	1	44	8	0	53	72
17:35	3	0	0	0	3	1	35	0	0	36	0	0	0	0	0	1	31	10	0	42	81
17:40	4	0	1	0	5	1	20	0	0	21	0	0	2	0	2	1	43	3	0	47	75
17:45	3	0	0	0	3	0	19	0	0	19	0	0	2	0	2	1	46	6	0	53	77
17:50	6	0	0	0	6	1	26	0	0	27	1	0	0	0	1	1	16	7	0	24	58
17:55	3	0	0	0	3	0	13	0	0	13	0	0	0	0	0	0	30	5	0	35	51
Total	52	0	5	0	57	8	268	0	0	276	2	0	8	0	10	12	479	80	0	571	914
Grand Total	113	5	12	0	130	12	548	1	0	561	3	1	18	0	22	19	925	145	0	1089	1802
Apprch %	86.9	3.8	9.2	0		2.1	97.7	0.2	0		13.6	4.5	81.8	0		1.7	84.9	13.3	0		
Total %	6.3	0.3	0.7	0	7.2	0.7	30.4	0.1	0	31.1	0.2	0.1	1	0	1.2	1.1	51.3	8	0	60.4	

LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
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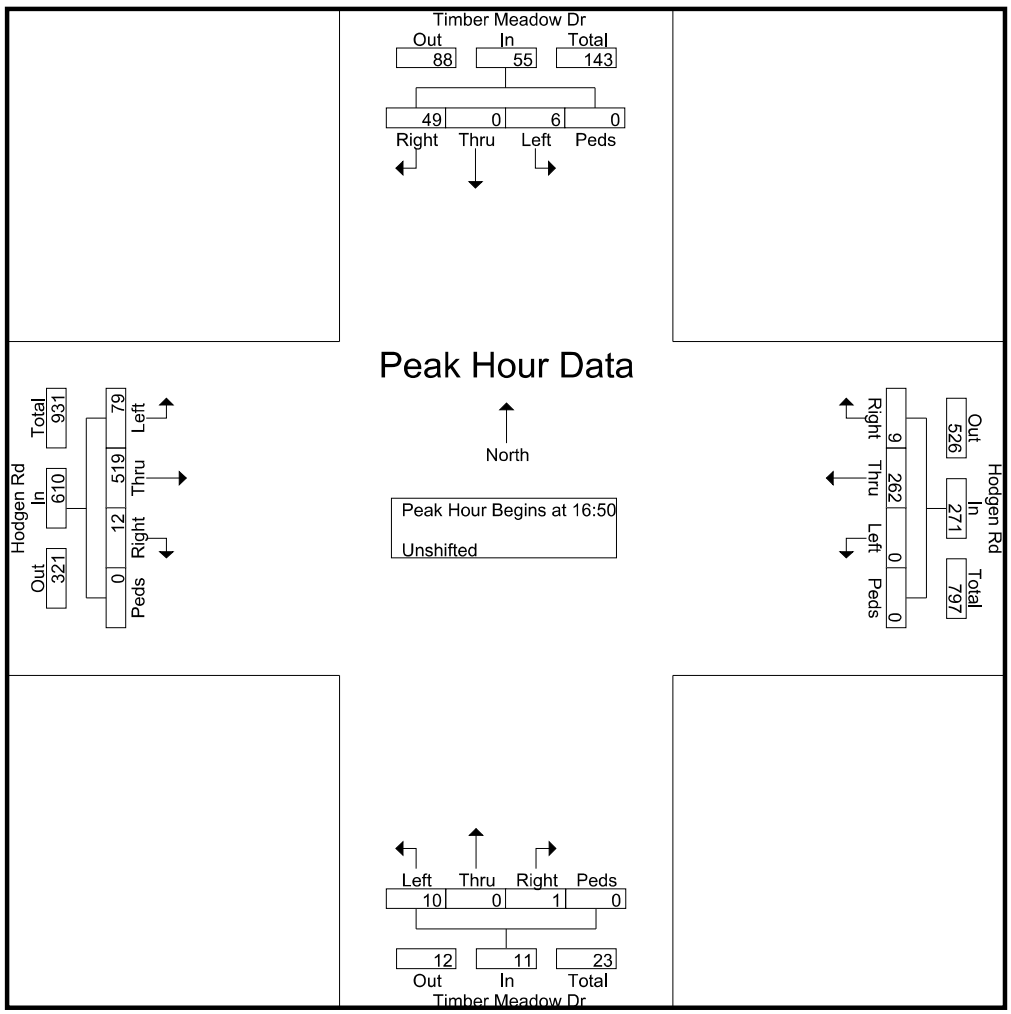
719-633-2868

File Name : Timber Meadow Dr - Hodgen Rd PM 9-23
Site Code : S234130
Start Date : 9/12/2023
Page No : 2

	Timber Meadow Dr Southbound					Hodgen Rd Westbound					Timber Meadow Dr Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:50																					
16:50	5	0	0	0	5	0	21	0	0	21	0	0	**2**	0	**2**	1	29	8	0	38	66
16:55	1	0	1	0	2	**2**	12	0	0	14	0	0	0	0	0	0	**57**	3	0	**60**	76
17:00	5	0	0	0	5	0	18	0	0	18	0	0	0	0	0	1	44	5	0	50	73
17:05	**8**	0	0	0	**8**	2	19	0	0	21	0	0	2	0	2	0	44	7	0	51	82
17:10	3	0	1	0	4	1	32	0	0	33	**1**	0	0	0	1	1	41	8	0	50	88
17:15	3	0	**2**	0	5	2	27	0	0	29	0	0	1	0	1	1	48	7	0	56	**91**
17:20	5	0	0	0	5	0	18	0	0	18	0	0	0	0	0	**3**	46	9	0	58	81
17:25	5	0	1	0	6	0	26	0	0	26	0	0	1	0	1	1	46	5	0	52	85
17:30	4	0	0	0	4	0	15	0	0	15	0	0	0	0	0	1	44	8	0	53	72
17:35	3	0	0	0	3	1	**35**	0	0	**36**	0	0	0	0	0	1	31	**10**	0	42	81
17:40	4	0	1	0	5	1	20	0	0	21	0	0	2	0	2	1	43	3	0	47	75
17:45	3	0	0	0	3	0	19	0	0	19	0	0	2	0	2	1	46	6	0	53	77
Total Volume	49	0	6	0	55	9	262	0	0	271	1	0	10	0	11	12	519	79	0	610	947
% App. Total	89.1	0	10.9	0		3.3	96.7	0	0		9.1	0	90.9	0		2	85.1	13	0		
PHF	.510	.000	.250	.000	.573	.375	.624	.000	.000	.627	.083	.000	.417	.000	.458	.333	.759	.658	.000	.847	.867

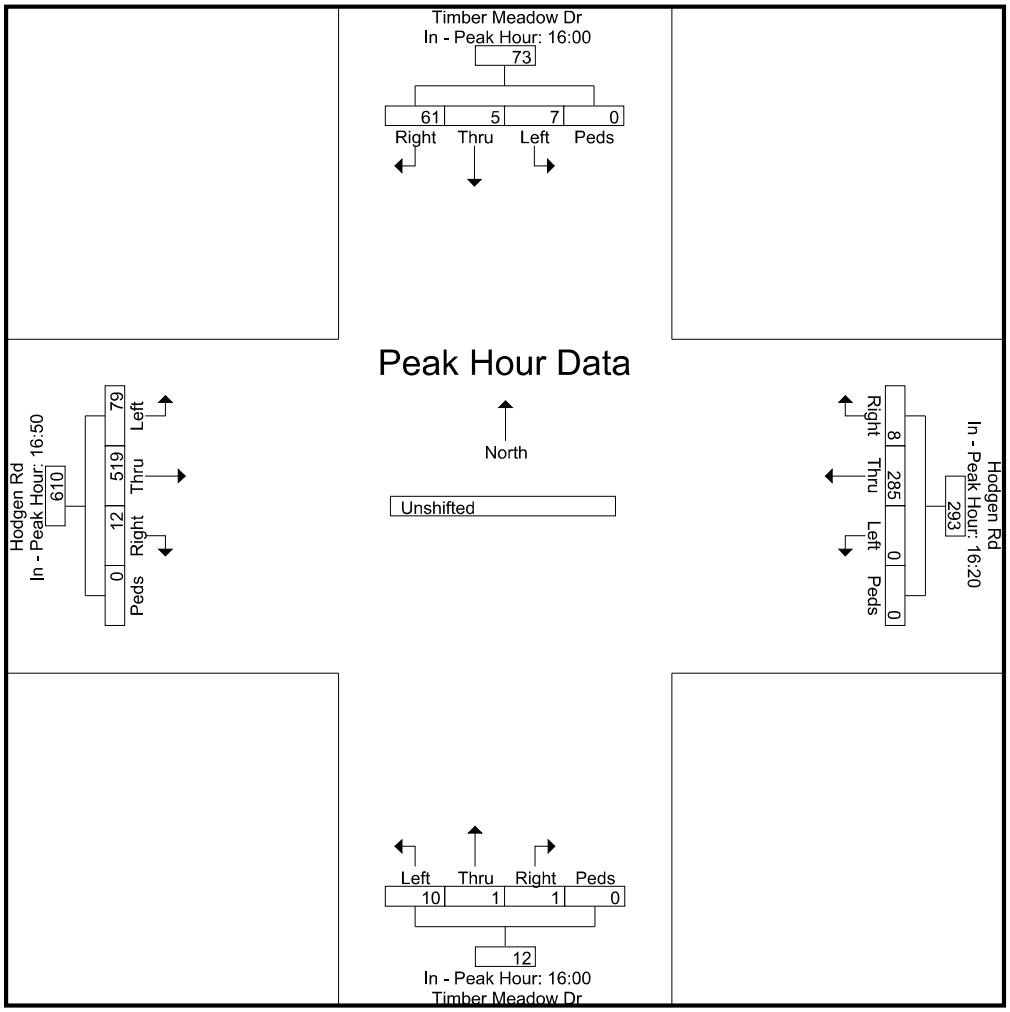


LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Hodgen Rd PM 9-23
Site Code : S234130
Start Date : 9/12/2023

	Timber Meadow Dr Southbound					Hodgen Rd Westbound					Timber Meadow Dr Northbound					Hodgen Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:00					16:20					16:00					16:50					
+0 mins.	5	1	0	0	6	0	26	0	0	26	0	0	**4**	0	**4**	1	29	8	0	38	
+5 mins.	**8**	**2**	**2**	0	**12**	0	**40**	0	0	**40**	0	0	0	0	0	0	**57**	3	0	**60**	
+10 mins.	5	2	0	0	7	1	19	0	0	20	0	**1**	0	0	1	1	44	5	0	50	
+15 mins.	6	0	2	0	8	0	29	0	0	29	0	0	1	0	1	0	44	7	0	51	
+20 mins.	5	0	0	0	5	0	20	0	0	20	0	0	1	0	1	1	41	8	0	50	
+25 mins.	6	0	0	0	6	0	22	0	0	22	0	0	0	0	0	1	48	7	0	56	
+30 mins.	4	0	1	0	5	0	21	0	0	21	0	0	0	0	0	**3**	46	9	0	58	
+35 mins.	5	0	0	0	5	**2**	12	0	0	14	0	0	2	0	2	1	46	5	0	52	
+40 mins.	5	0	0	0	5	0	18	0	0	18	**1**	0	0	0	1	1	44	8	0	53	
+45 mins.	6	0	1	0	7	2	19	0	0	21	0	0	0	0	0	1	31	**10**	0	42	
+50 mins.	5	0	0	0	5	1	32	0	0	33	0	0	2	0	2	1	43	3	0	47	
+55 mins.	1	0	1	0	2	2	27	0	0	29	0	0	0	0	0	1	46	6	0	53	
Total Volume	61	5	7	0	73	8	285	0	0	293	1	1	10	0	12	12	519	79	0	610	
% App. Total	83.6	6.8	9.6	0		2.7	97.3	0	0		8.3	8.3	83.3	0		2	85.1	13	0		
PHF	.635	.208	.292	.000	.507	.333	.594	.000	.000	.610	.083	.083	.208	.000	.250	.333	.759	.658	.000	.847	



LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Settlers Ranch Rd AM
Site Code : S234130
Start Date : 9/12/2023
Page No : 1

Groups Printed- Bank 1

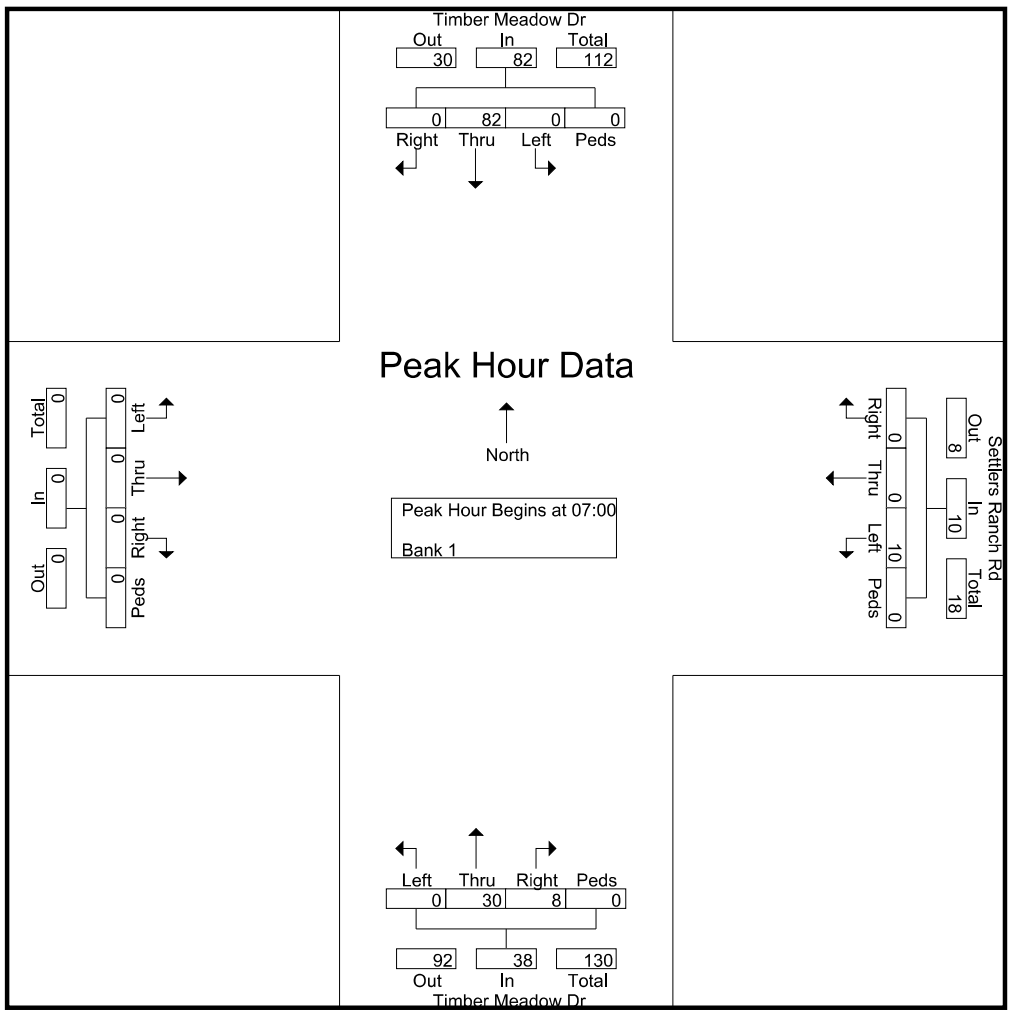
	Timber Meadow Dr Southbound					Settlers Ranch Rd Westbound					Timber Meadow Dr Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
06:35	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	8
06:40	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3
06:45	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
06:50	0	6	0	0	6	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	7
06:55	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	25	0	0	25	0	0	1	0	1	1	4	0	0	5	0	0	0	0	0	31
07:00	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	7
07:05	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
07:10	0	14	0	0	14	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	17
07:15	0	4	0	0	4	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	8
07:20	0	7	0	0	7	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	10
07:25	0	5	0	0	5	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	10
07:30	0	6	0	0	6	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	10
07:35	0	9	0	0	9	0	0	1	0	1	2	6	0	0	8	0	0	0	0	0	18
07:40	0	9	0	0	9	0	0	2	0	2	1	4	0	0	5	0	0	0	0	0	16
07:45	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
07:50	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	6
07:55	0	3	0	0	3	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	7
Total	0	82	0	0	82	0	0	10	0	10	8	30	0	0	38	0	0	0	0	0	130
08:00	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
08:05	0	5	1	0	6	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	9
08:10	0	8	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
08:15	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	8
08:20	0	7	0	0	7	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	12
08:25	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
Grand Total	0	143	1	0	144	0	0	13	0	13	9	53	0	0	62	0	0	0	0	0	219
Apprch %	0	99.3	0.7	0		0	0	100	0		14.5	85.5	0	0		0	0	0	0		
Total %	0	65.3	0.5	0	65.8	0	0	5.9	0	5.9	4.1	24.2	0	0	28.3	0	0	0	0	0	

LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Settlers Ranch Rd AM
Site Code : S234130
Start Date : 9/12/2023

	Timber Meadow Dr Southbound					Settlers Ranch Rd Westbound					Timber Meadow Dr Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	7
07:05	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
07:10	0	**14**	0	0	**14**	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	17
07:15	0	4	0	0	4	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	8
07:20	0	7	0	0	7	0	0	**2**	0	**2**	0	1	0	0	1	0	0	0	0	0	10
07:25	0	5	0	0	5	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	10
07:30	0	6	0	0	6	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	10
07:35	0	9	0	0	9	0	0	1	0	1	**2**	**6**	0	0	**8**	0	0	0	0	0	**18**
07:40	0	9	0	0	9	0	0	2	0	2	1	4	0	0	5	0	0	0	0	0	16
07:45	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
07:50	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	6
07:55	0	3	0	0	3	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	7
Total Volume	0	82	0	0	82	0	0	10	0	10	8	30	0	0	38	0	0	0	0	0	130
% App. Total	0	100	0	0		0	0	100	0		21.1	78.9	0	0		0	0	0	0		
PHF	.000	.488	.000	.000	.488	.000	.000	.417	.000	.417	.333	.417	.000	.000	.396	.000	.000	.000	.000	.000	.602

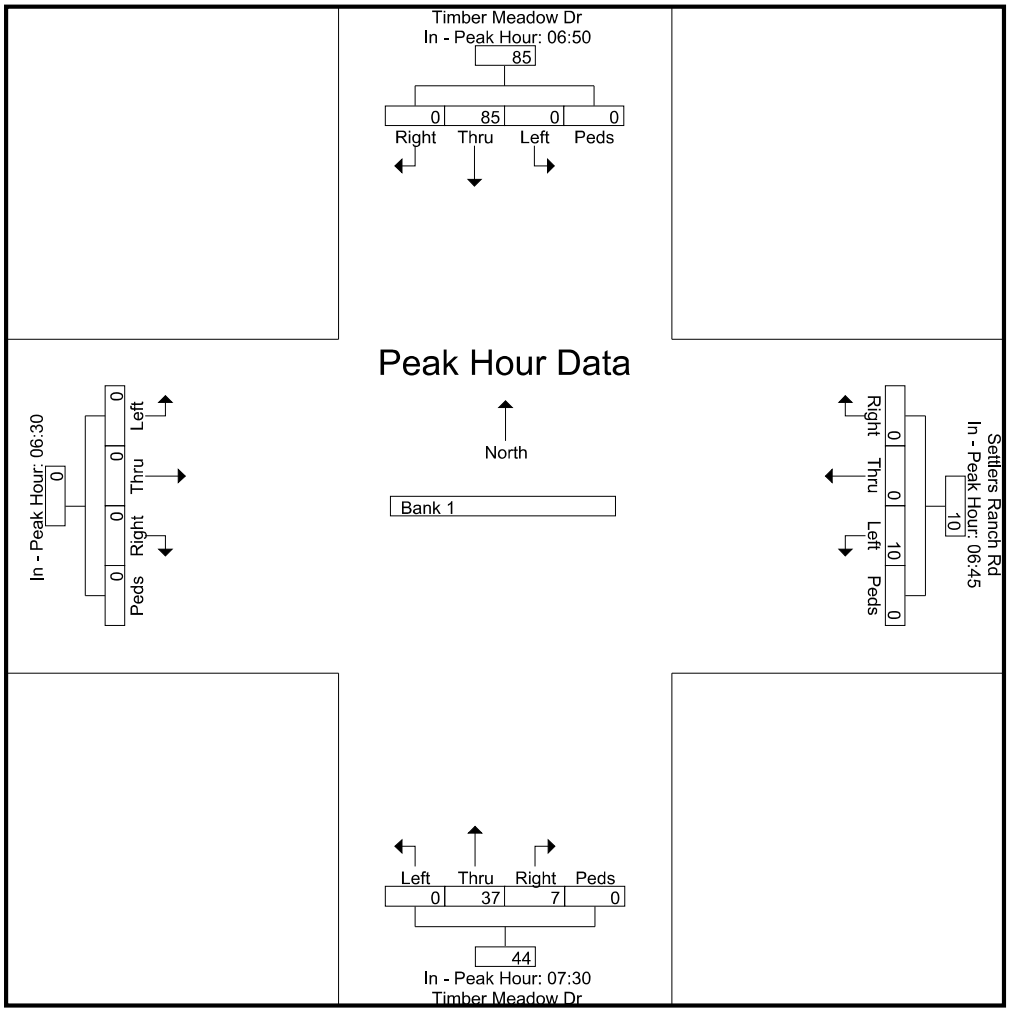


LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Settlers Ranch Rd AM
Site Code : S234130
Start Date : 9/12/2023
Page No : 3

	Timber Meadow Dr Southbound					Settlers Ranch Rd Westbound					Timber Meadow Dr Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	06:50					06:45					07:30					06:30					
+0 mins.	0	6	0	0	6	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	
+5 mins.	0	5	0	0	5	0	0	1	0	1	**2**	**6**	0	0	**8**	0	0	0	0	0	
+10 mins.	0	4	0	0	4	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	
+15 mins.	0	12	0	0	12	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	
+20 mins.	0	**14**	0	0	**14**	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	
+25 mins.	0	4	0	0	4	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	
+30 mins.	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
+35 mins.	0	5	0	0	5	0	0	**2**	0	**2**	0	2	0	0	2	0	0	0	0	0	
+40 mins.	0	6	0	0	6	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	
+45 mins.	0	9	0	0	9	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	
+50 mins.	0	9	0	0	9	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	
+55 mins.	0	4	0	0	4	0	0	2	0	2	0	5	0	0	5	0	0	0	0	0	
Total Volume	0	85	0	0	85	0	0	10	0	10	7	37	0	0	44	0	0	0	0	0	
% App. Total	0	100	0	0		0	0	100	0		15.9	84.1	0	0		0	0	0	0		
PHF	.000	.506	.000	.000	.506	.000	.000	.417	.000	.417	.292	.514	.000	.000	.458	.000	.000	.000	.000	.000	



LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Settlers Ranch Rd PM
Site Code : S234130
Start Date : 9/12/2023
Page No : 1

Groups Printed- Bank 1

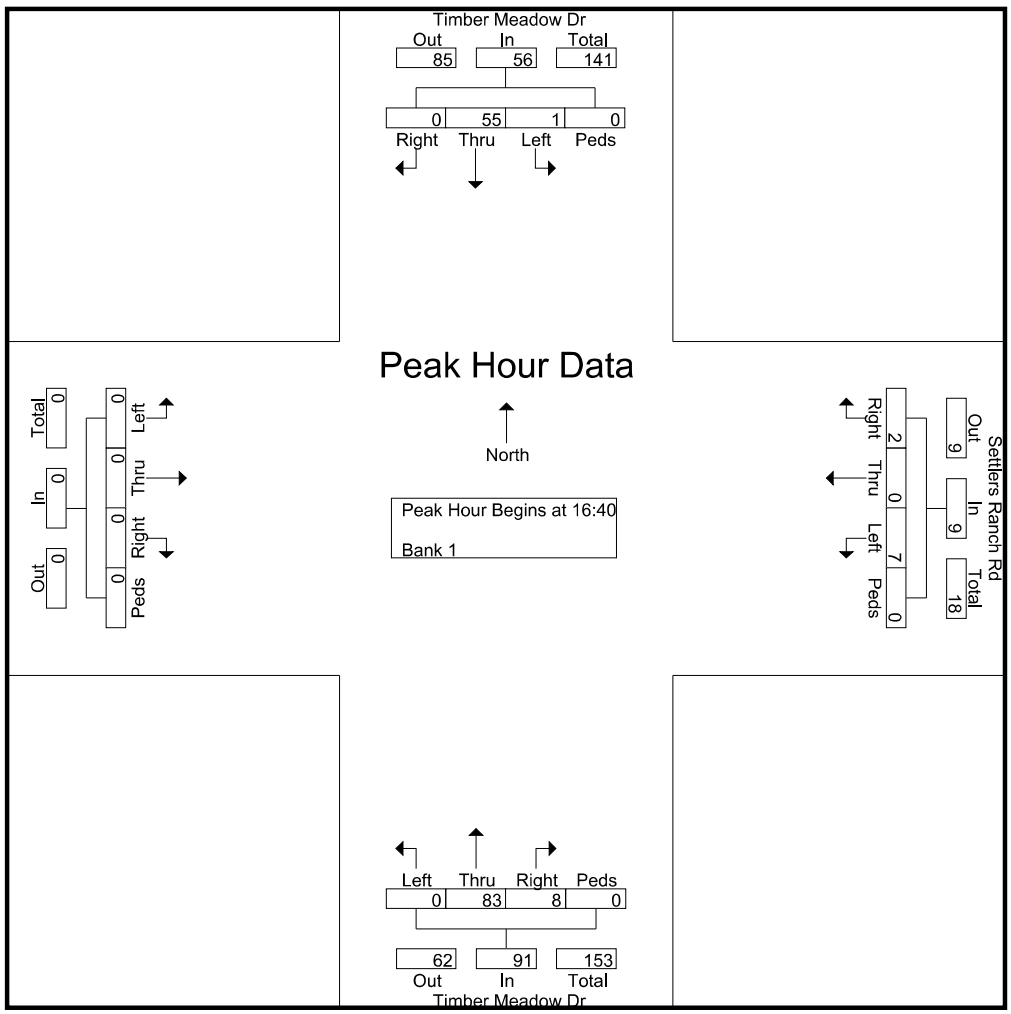
	Timber Meadow Dr Southbound					Settlers Ranch Rd Westbound					Timber Meadow Dr Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
16:00	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
16:05	0	11	1	0	12	1	0	1	0	2	0	10	0	0	10	0	0	0	0	0	24
16:10	0	7	1	0	8	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	15
16:15	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	11
16:20	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
16:25	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	12
16:30	0	3	0	0	3	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	7
16:35	0	5	0	0	5	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	10
16:40	0	5	0	0	5	1	0	1	0	2	2	5	0	0	7	0	0	0	0	0	14
16:45	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	13
16:50	0	6	0	0	6	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	14
16:55	0	2	1	0	3	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	9
Total	0	70	3	0	73	2	0	3	0	5	6	63	0	0	69	0	0	0	0	0	147
17:00	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
17:05	0	6	0	0	6	0	0	3	0	3	0	10	0	0	10	0	0	0	0	0	19
17:10	0	3	0	0	3	0	0	2	0	2	2	6	0	0	8	0	0	0	0	0	13
17:15	0	5	0	0	5	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	15
17:20	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	13
17:25	0	6	0	0	6	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	11
17:30	0	4	0	0	4	1	0	0	0	1	1	6	0	0	7	0	0	0	0	0	12
17:35	0	3	0	0	3	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	13
17:40	0	3	0	0	3	0	0	3	0	3	0	5	0	0	5	0	0	0	0	0	11
17:45	0	2	0	0	2	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	9
17:50	0	7	0	0	7	0	0	0	0	0	2	6	0	0	8	0	0	0	0	0	15
17:55	0	2	0	0	2	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	7
Total	0	50	0	0	50	1	0	9	0	10	8	80	0	0	88	0	0	0	0	0	148
Grand Total	0	120	3	0	123	3	0	12	0	15	14	143	0	0	157	0	0	0	0	0	295
Apprch %	0	97.6	2.4	0		20	0	80	0		8.9	91.1	0	0		0	0	0	0		
Total %	0	40.7	1	0	41.7	1	0	4.1	0	5.1	4.7	48.5	0	0	53.2	0	0	0	0	0	

LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Settlers Ranch Rd PM
Site Code : S234130
Start Date : 9/12/2023
Page No : 2

	Timber Meadow Dr Southbound					Settlers Ranch Rd Westbound					Timber Meadow Dr Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:40																					
16:40	0	5	0	0	5	**1**	0	1	0	2	**2**	5	0	0	7	0	0	0	0	0	14
16:45	0	**6**	0	0	**6**	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	13
16:50	0	6	0	0	6	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	14
16:55	0	2	**1**	0	3	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	9
17:00	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
17:05	0	6	0	0	6	0	0	**3**	0	**3**	0	**10**	0	0	**10**	0	0	0	0	0	**19**
17:10	0	3	0	0	3	0	0	2	0	2	2	6	0	0	8	0	0	0	0	0	13
17:15	0	5	0	0	5	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	15
17:20	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	13
17:25	0	6	0	0	6	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	11
17:30	0	4	0	0	4	1	0	0	0	1	1	6	0	0	7	0	0	0	0	0	12
17:35	0	3	0	0	3	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	13
Total Volume	0	55	1	0	56	2	0	7	0	9	8	83	0	0	91	0	0	0	0	0	156
% App. Total	0	98.2	1.8	0		22.2	0	77.8	0		8.8	91.2	0	0		0	0	0	0		
PHF	.000	.764	.083	.000	.778	.167	.000	.194	.000	.250	.333	.692	.000	.000	.758	.000	.000	.000	.000	.000	.684

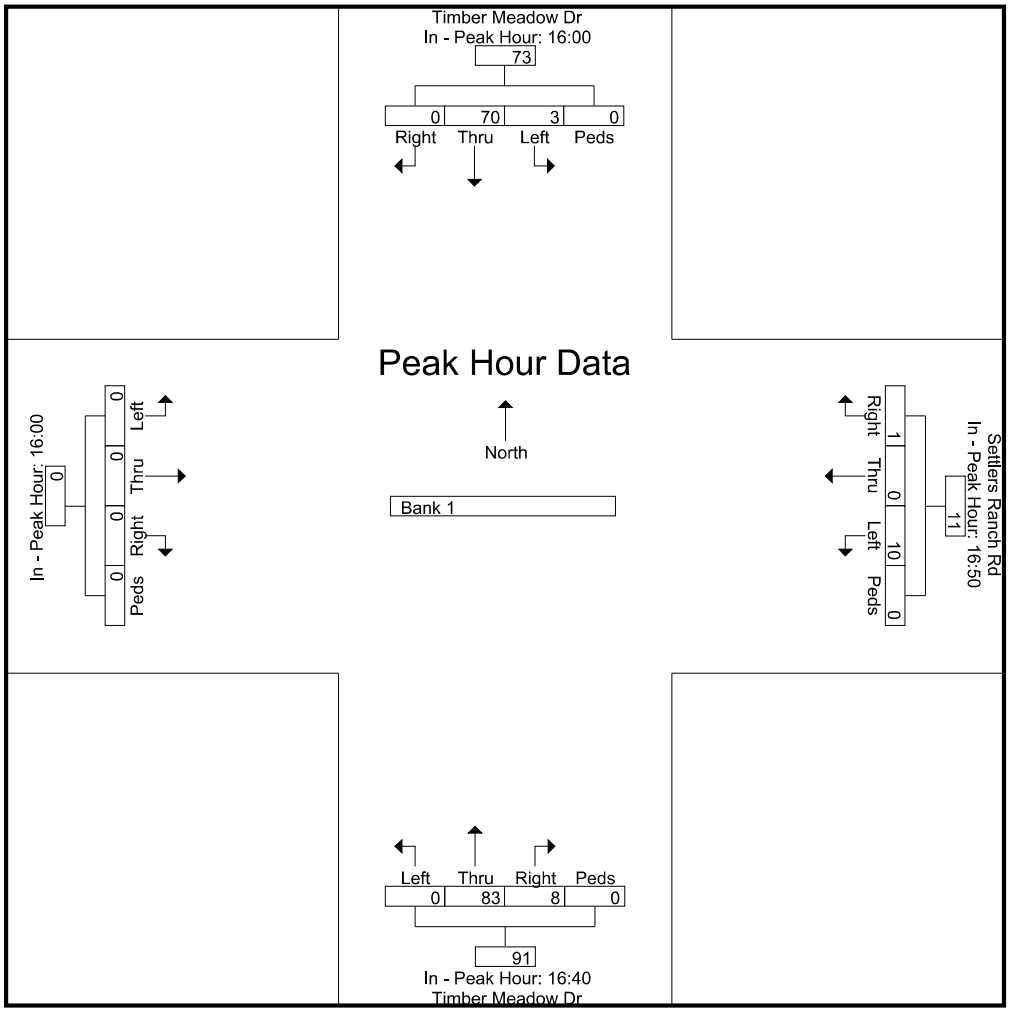


LSC Transportation Consultants, Inc.

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

File Name : Timber Meadow Dr - Settlers Ranch Rd PM
Site Code : S234130
Start Date : 9/12/2023
Page No : 3

	Timber Meadow Dr Southbound					Settlers Ranch Rd Westbound					Timber Meadow Dr Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:00					16:50					16:40					16:00					
+0 mins.	0	5	0	0	5	0	0	0	0	0	**2**	5	0	0	7	0	0	0	0	0	
+5 mins.	0	**11**	**1**	0	**12**	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	
+10 mins.	0	7	1	0	8	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	
+15 mins.	0	8	0	0	8	0	0	**3**	0	**3**	0	5	0	0	5	0	0	0	0	0	
+20 mins.	0	5	0	0	5	0	0	2	0	2	0	5	0	0	5	0	0	0	0	0	
+25 mins.	0	7	0	0	7	0	0	0	0	0	0	**10**	0	0	**10**	0	0	0	0	0	
+30 mins.	0	3	0	0	3	0	0	0	0	0	2	6	0	0	8	0	0	0	0	0	
+35 mins.	0	5	0	0	5	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	
+40 mins.	0	5	0	0	5	**1**	0	0	0	1	0	9	0	0	9	0	0	0	0	0	
+45 mins.	0	6	0	0	6	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	
+50 mins.	0	6	0	0	6	0	0	3	0	3	1	6	0	0	7	0	0	0	0	0	
+55 mins.	0	2	1	0	3	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	
Total Volume	0	70	3	0	73	1	0	10	0	11	8	83	0	0	91	0	0	0	0	0	
% App. Total	0	95.9	4.1	0		9.1	0	90.9	0		8.8	91.2	0	0		0	0	0	0		
PHF	.000	.530	.250	.000	.507	.083	.000	.278	.000	.306	.333	.692	.000	.000	.758	.000	.000	.000	.000	.000	



Level of Service Reports

TRANSPORTATION
CONSULTANTS, INC.

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	173	7	0	582	7	12	0	2	8	0	83
Future Vol, veh/h	31	173	7	0	582	7	12	0	2	8	0	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	93	93	93	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	199	8	0	626	8	15	0	3	10	0	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	634	0	0	207	0	0	951	905	199	903	905	626
Stage 1	-	-	-	-	-	-	271	271	-	626	626	-
Stage 2	-	-	-	-	-	-	680	634	-	277	279	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	949	-	-	1364	-	-	240	276	842	258	276	484
Stage 1	-	-	-	-	-	-	735	685	-	472	477	-
Stage 2	-	-	-	-	-	-	441	473	-	729	680	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	949	-	-	1364	-	-	185	266	842	250	266	484
Mov Cap-2 Maneuver	-	-	-	-	-	-	185	266	-	250	266	-
Stage 1	-	-	-	-	-	-	707	659	-	454	477	-
Stage 2	-	-	-	-	-	-	350	473	-	699	654	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0	23.9	15.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	208	949	-	-	1364	-	-	447
HCM Lane V/C Ratio	0.086	0.038	-	-	-	-	-	0.245
HCM Control Delay (s)	23.9	8.9	-	-	0	-	-	15.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	1

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	30	8	0	82
Future Vol, veh/h	10	0	30	8	0	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	0	38	10	0	99

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	142	43	0	0	48	0
Stage 1	43	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	851	1027	-	-	1559	-
Stage 1	979	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	851	1027	-	-	1559	-
Mov Cap-2 Maneuver	851	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	925	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	851	1559	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s)	-	-	9.3	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	154	461	5	2	16
Future Vol, veh/h	11	154	461	5	2	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	92	92	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	177	501	5	3	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	506	0	-	0	707	504
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1059	-	-	-	402	568
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	831	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1059	-	-	-	397	568
Mov Cap-2 Maneuver	-	-	-	-	397	-
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	831	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1059	-	-	-	542
HCM Lane V/C Ratio	0.012	-	-	-	0.043
HCM Control Delay (s)	8.4	-	-	-	11.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	79	519	12	9	262	0	10	0	1	6	0	49
Future Vol, veh/h	79	519	12	9	262	0	10	0	1	6	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	558	13	10	285	0	13	0	1	7	0	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	285	0	0	571	0	0	1063	1033	558	1040	1046	285
Stage 1	-	-	-	-	-	-	728	728	-	305	305	-
Stage 2	-	-	-	-	-	-	335	305	-	735	741	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1277	-	-	1002	-	-	201	232	529	208	228	754
Stage 1	-	-	-	-	-	-	415	429	-	705	662	-
Stage 2	-	-	-	-	-	-	679	662	-	411	423	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1277	-	-	1002	-	-	174	214	529	196	211	754
Mov Cap-2 Maneuver	-	-	-	-	-	-	174	214	-	196	211	-
Stage 1	-	-	-	-	-	-	387	400	-	658	655	-
Stage 2	-	-	-	-	-	-	620	655	-	383	395	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.3	26.1	12.1
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	185	1277	-	-	1002	-	-	575
HCM Lane V/C Ratio	0.076	0.067	-	-	0.01	-	-	0.115
HCM Control Delay (s)	26.1	8	-	-	8.6	-	-	12.1
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	2	83	8	1	55
Future Vol, veh/h	7	2	83	8	1	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	100	10	1	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	173	105	0	0	110	0
Stage 1	105	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	817	949	-	-	1480	-
Stage 1	919	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	816	949	-	-	1480	-
Mov Cap-2 Maneuver	816	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	954	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	842	1480	-
HCM Lane V/C Ratio	-	-	0.014	0.001	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	466	203	6	13	20
Future Vol, veh/h	17	466	203	6	13	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	87	87	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	507	233	7	17	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	240	0	-	0	780	237
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	543	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1327	-	-	-	364	802
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	582	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1327	-	-	-	359	802
Mov Cap-2 Maneuver	-	-	-	-	359	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	582	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1327	-	-	-	540
HCM Lane V/C Ratio	0.014	-	-	-	0.078
HCM Control Delay (s)	7.8	-	-	-	12.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	173	7	0	582	7	12	0	2	8	0	90
Future Vol, veh/h	37	173	7	0	582	7	12	0	2	8	0	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	93	93	93	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	199	8	0	626	8	15	0	3	10	0	108

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	634	0	0	207	0	0	969	919	199	917	919	626
Stage 1	-	-	-	-	-	-	285	285	-	626	626	-
Stage 2	-	-	-	-	-	-	684	634	-	291	293	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	949	-	-	1364	-	-	233	271	842	253	271	484
Stage 1	-	-	-	-	-	-	722	676	-	472	477	-
Stage 2	-	-	-	-	-	-	439	473	-	717	670	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	949	-	-	1364	-	-	175	259	842	243	259	484
Mov Cap-2 Maneuver	-	-	-	-	-	-	175	259	-	243	259	-
Stage 1	-	-	-	-	-	-	690	646	-	451	477	-
Stage 2	-	-	-	-	-	-	341	473	-	682	640	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0	25.1	15.9
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	197	949	-	-	1364	-	-	448
HCM Lane V/C Ratio	0.091	0.045	-	-	-	-	-	0.264
HCM Control Delay (s)	25.1	9	-	-	0	-	-	15.9
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	1

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	0	30	14	0	82
Future Vol, veh/h	17	0	30	14	0	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	38	18	0	99

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	146	47	0	0	56	0
Stage 1	47	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	846	1022	-	-	1549	-
Stage 1	975	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1022	-	-	1549	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	925	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	846	1549	-
HCM Lane V/C Ratio	-	-	0.026	-	-
HCM Control Delay (s)	-	-	9.4	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	154	461	5	3	19
Future Vol, veh/h	11	154	461	5	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	92	92	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	177	501	5	4	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	506	0	-	0	707	504
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1059	-	-	-	402	568
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	831	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1059	-	-	-	397	568
Mov Cap-2 Maneuver	-	-	-	-	397	-
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	831	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1059	-	-	-	536
HCM Lane V/C Ratio	0.012	-	-	-	0.053
HCM Control Delay (s)	8.4	-	-	-	12.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	519	12	9	262	0	10	0	1	13	0	49
Future Vol, veh/h	91	519	12	9	262	0	10	0	1	13	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	558	13	10	285	0	13	0	1	16	0	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	285	0	0	571	0	0	1089	1059	558	1066	1072	285
Stage 1	-	-	-	-	-	-	754	754	-	305	305	-
Stage 2	-	-	-	-	-	-	335	305	-	761	767	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1277	-	-	1002	-	-	193	224	529	200	220	754
Stage 1	-	-	-	-	-	-	401	417	-	705	662	-
Stage 2	-	-	-	-	-	-	679	662	-	398	411	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1277	-	-	1002	-	-	166	205	529	186	201	754
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	205	-	186	201	-
Stage 1	-	-	-	-	-	-	370	385	-	651	655	-
Stage 2	-	-	-	-	-	-	620	655	-	367	379	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.3	27.1	14.3
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	177	1277	-	-	1002	-	-	460
HCM Lane V/C Ratio	0.08	0.077	-	-	0.01	-	-	0.162
HCM Control Delay (s)	27.1	8.1	-	-	8.6	-	-	14.3
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	2	83	20	1	55
Future Vol, veh/h	13	2	83	20	1	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	3	100	24	1	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	180	112	0	0	124	0
Stage 1	112	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	810	941	-	-	1463	-
Stage 1	913	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	809	941	-	-	1463	-
Mov Cap-2 Maneuver	809	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	954	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	824	1463	-
HCM Lane V/C Ratio	-	-	0.023	0.001	-
HCM Control Delay (s)	-	-	9.5	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	466	18	203	6	14	20
Future Vol, veh/h	466	18	203	6	14	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	87	87	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	507	20	233	7	18	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	240	0	-	0	1271	237
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	1034	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1327	-	-	-	185	802
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	343	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1327	-	-	-	114	802
Mov Cap-2 Maneuver	-	-	-	-	114	-
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	343	-

Approach	EB	WB	SB
HCM Control Delay, s	9	0	24.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1327	-	-	-	230
HCM Lane V/C Ratio	0.382	-	-	-	0.19
HCM Control Delay (s)	9.4	-	-	-	24.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	1.8	-	-	-	0.7

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	174	7	0	585	7	12	0	2	7	0	95
Future Vol, veh/h	40	174	7	0	585	7	12	0	2	7	0	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	93	93	93	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	200	8	0	629	8	15	0	3	8	0	114

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	637	0	0	208	0	0	982	929	200	927	929	629
Stage 1	-	-	-	-	-	-	292	292	-	629	629	-
Stage 2	-	-	-	-	-	-	690	637	-	298	300	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	947	-	-	1363	-	-	228	268	841	249	268	482
Stage 1	-	-	-	-	-	-	716	671	-	470	475	-
Stage 2	-	-	-	-	-	-	435	471	-	711	666	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	947	-	-	1363	-	-	167	255	841	239	255	482
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	255	-	239	255	-
Stage 1	-	-	-	-	-	-	681	638	-	447	475	-
Stage 2	-	-	-	-	-	-	332	471	-	674	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0	26	15.9
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	189	947	-	-	1363	-	-	451
HCM Lane V/C Ratio	0.095	0.049	-	-	-	-	-	0.272
HCM Control Delay (s)	26	9	-	-	0	-	-	15.9
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	1.1

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	0	30	17	0	82
Future Vol, veh/h	22	0	30	17	0	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	0	38	22	0	99

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	148	49	0	0	60	0
Stage 1	49	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	844	1020	-	-	1544	-
Stage 1	973	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	844	1020	-	-	1544	-
Mov Cap-2 Maneuver	844	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	925	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	844	1544	-
HCM Lane V/C Ratio	-	-	0.033	-	-
HCM Control Delay (s)	-	-	9.4	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	153	461	5	5	22
Future Vol, veh/h	12	153	461	5	5	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	92	92	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	176	501	5	6	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	506	0	-	0	708	504
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	204	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1059	-	-	-	401	568
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	830	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1059	-	-	-	396	568
Mov Cap-2 Maneuver	-	-	-	-	396	-
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1059	-	-	-	526
HCM Lane V/C Ratio	0.013	-	-	-	0.066
HCM Control Delay (s)	8.4	-	-	-	12.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	96	523	12	9	264	0	10	0	1	13	0	53
Future Vol, veh/h	96	523	12	9	264	0	10	0	1	13	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	103	562	13	10	287	0	13	0	1	16	0	64

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	287	0	0	575	0	0	1107	1075	562	1082	1088	287
Stage 1	-	-	-	-	-	-	768	768	-	307	307	-
Stage 2	-	-	-	-	-	-	339	307	-	775	781	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1275	-	-	998	-	-	188	220	526	195	216	752
Stage 1	-	-	-	-	-	-	394	411	-	703	661	-
Stage 2	-	-	-	-	-	-	676	661	-	391	405	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1275	-	-	998	-	-	160	200	526	181	197	752
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	200	-	181	197	-
Stage 1	-	-	-	-	-	-	362	378	-	646	654	-
Stage 2	-	-	-	-	-	-	612	654	-	359	372	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.3	27.9	14.4
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	171	1275	-	-	998	-	-	464
HCM Lane V/C Ratio	0.082	0.081	-	-	0.01	-	-	0.171
HCM Control Delay (s)	27.9	8.1	-	-	8.6	-	-	14.4
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	2	83	26	1	55
Future Vol, veh/h	17	2	83	26	1	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	3	100	31	1	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	184	116	0	0	131	0
Stage 1	116	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	805	936	-	-	1454	-
Stage 1	909	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	804	936	-	-	1454	-
Mov Cap-2 Maneuver	804	-	-	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	954	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	816	1454	-
HCM Lane V/C Ratio	-	-	0.03	0.001	-
HCM Control Delay (s)	-	-	9.5	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	466	204	8	16	22
Future Vol, veh/h	22	466	204	8	16	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	87	87	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	507	234	9	21	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	243	0	-	0	794	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	555	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1323	-	-	-	357	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	575	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1323	-	-	-	351	800
Mov Cap-2 Maneuver	-	-	-	-	351	-
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	575	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1323	-	-	-	520
HCM Lane V/C Ratio	0.018	-	-	-	0.094
HCM Control Delay (s)	7.8	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	274	10	2	896	25	15	1	3	21	1	135
Future Vol, veh/h	52	274	10	2	896	25	15	1	3	21	1	135
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	93	93	93	78	78	78	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	298	11	2	963	27	19	1	4	24	1	155

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	990	0	0	309	0	0	1471	1406	298	1387	1390	963
Stage 1	-	-	-	-	-	-	412	412	-	967	967	-
Stage 2	-	-	-	-	-	-	1059	994	-	420	423	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	698	-	-	1252	-	-	105	139	741	120	142	310
Stage 1	-	-	-	-	-	-	617	594	-	306	333	-
Stage 2	-	-	-	-	-	-	271	323	-	611	588	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	698	-	-	1252	-	-	49	127	741	111	130	310
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	127	-	111	130	-
Stage 1	-	-	-	-	-	-	566	545	-	281	332	-
Stage 2	-	-	-	-	-	-	135	322	-	557	540	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0	101.1	50.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	60	698	-	-	1252	-	-	248
HCM Lane V/C Ratio	0.406	0.081	-	-	0.002	-	-	0.728
HCM Control Delay (s)	101.1	10.6	-	-	7.9	-	-	50.5
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.5	0.3	-	-	0	-	-	5

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	0	64	14	0	140
Future Vol, veh/h	17	0	64	14	0	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	77	17	0	169

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	255	86	0	0	94	0
Stage 1	86	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	734	973	-	-	1500	-
Stage 1	937	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	734	973	-	-	1500	-
Mov Cap-2 Maneuver	734	-	-	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	861	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	734	1500	-
HCM Lane V/C Ratio	-	-	0.03	-	-
HCM Control Delay (s)	-	-	10.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection						
Int Delay, s/veh	1.3					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	299	725	10	21	38
Future Vol, veh/h	15	299	725	10	21	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	325	780	11	25	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	791	0	-	0	1143	786
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	357	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	829	-	-	-	221	392
Stage 1	-	-	-	-	449	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	829	-	-	-	217	392
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	708	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	20.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	829	-	-	-	305
HCM Lane V/C Ratio	0.02	-	-	-	0.233
HCM Control Delay (s)	9.4	-	-	-	20.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	274	10	2	896	25	15	1	3	21	1	135
Future Vol, veh/h	52	274	10	2	896	25	15	1	3	21	1	135
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	93	93	93	78	78	78	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	298	11	2	963	27	19	1	4	24	1	155

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	990	0	0	309	0	0	1471	1406	298	1387	1390	963
Stage 1	-	-	-	-	-	-	412	412	-	967	967	-
Stage 2	-	-	-	-	-	-	1059	994	-	420	423	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	698	-	-	1252	-	-	105	139	741	120	142	310
Stage 1	-	-	-	-	-	-	617	594	-	306	333	-
Stage 2	-	-	-	-	-	-	271	323	-	611	588	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	698	-	-	1252	-	-	49	127	741	111	130	310
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	127	-	111	130	-
Stage 1	-	-	-	-	-	-	566	545	-	281	332	-
Stage 2	-	-	-	-	-	-	135	322	-	557	540	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0	101.1	30.3
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	60	698	-	-	1252	-	-	112	310
HCM Lane V/C Ratio	0.406	0.081	-	-	0.002	-	-	0.226	0.501
HCM Control Delay (s)	101.1	10.6	-	-	7.9	-	-	46.3	27.7
HCM Lane LOS	F	B	-	-	A	-	-	E	D
HCM 95th %tile Q(veh)	1.5	0.3	-	-	0	-	-	0.8	2.6

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	145	800	15	10	425	10	10	1	1	15	1	86
Future Vol, veh/h	145	800	15	10	425	10	10	1	1	15	1	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	156	860	16	11	462	11	13	1	1	18	1	104

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	473	0	0	876	0	0	1714	1667	860	1665	1672	462
Stage 1	-	-	-	-	-	-	1172	1172	-	484	484	-
Stage 2	-	-	-	-	-	-	542	495	-	1181	1188	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1089	-	-	771	-	-	71	96	356	77	96	600
Stage 1	-	-	-	-	-	-	234	266	-	564	552	-
Stage 2	-	-	-	-	-	-	525	546	-	232	262	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1089	-	-	771	-	-	51	81	356	67	81	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	51	81	-	67	81	-
Stage 1	-	-	-	-	-	-	201	228	-	483	544	-
Stage 2	-	-	-	-	-	-	427	538	-	197	225	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	90	29.2
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	57	1089	-	-	771	-	-	269
HCM Lane V/C Ratio	0.27	0.143	-	-	0.014	-	-	0.457
HCM Control Delay (s)	90	8.9	-	-	9.7	-	-	29.2
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.9	0.5	-	-	0	-	-	2.2

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	2	136	20	1	88
Future Vol, veh/h	13	2	136	20	1	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	87	87	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	3	156	23	1	106

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	276	168	0	0	179	0
Stage 1	168	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	714	876	-	-	1397	-
Stage 1	862	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	713	876	-	-	1397	-
Mov Cap-2 Maneuver	713	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	915	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	731	1397	-
HCM Lane V/C Ratio	-	-	0.026	0.001	-
HCM Control Delay (s)	-	-	10.1	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection						
Int Delay, s/veh	1.5					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	41	466	203	15	26	35
Future Vol, veh/h	41	466	203	15	26	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	87	87	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	507	233	17	31	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	250	0	-	0	839	242
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	597	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1316	-	-	-	336	797
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	550	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1316	-	-	-	325	797
Mov Cap-2 Maneuver	-	-	-	-	325	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	550	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1316	-	-	-	492
HCM Lane V/C Ratio	0.034	-	-	-	0.149
HCM Control Delay (s)	7.8	-	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	145	800	15	10	425	10	10	1	1	15	1	86
Future Vol, veh/h	145	800	15	10	425	10	10	1	1	15	1	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	156	860	16	11	462	11	13	1	1	18	1	104

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	473	0	0	876	0	0	1714	1667	860	1665	1672	462
Stage 1	-	-	-	-	-	-	1172	1172	-	484	484	-
Stage 2	-	-	-	-	-	-	542	495	-	1181	1188	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1089	-	-	771	-	-	71	96	356	77	96	600
Stage 1	-	-	-	-	-	-	234	266	-	564	552	-
Stage 2	-	-	-	-	-	-	525	546	-	232	262	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1089	-	-	771	-	-	51	81	356	67	81	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	51	81	-	67	81	-
Stage 1	-	-	-	-	-	-	201	228	-	483	544	-
Stage 2	-	-	-	-	-	-	427	538	-	197	225	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	90	22.5
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	57	1089	-	-	771	-	-	68	600
HCM Lane V/C Ratio	0.27	0.143	-	-	0.014	-	-	0.283	0.173
HCM Control Delay (s)	90	8.9	-	-	9.7	-	-	77.7	12.2
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	0.9	0.5	-	-	0	-	-	1	0.6

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	275	10	2	900	25	15	1	3	20	1	148
Future Vol, veh/h	58	275	10	2	900	25	15	1	3	20	1	148
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	93	93	93	78	78	78	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	299	11	2	968	27	19	1	4	23	1	170

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	995	0	0	310	0	0	1496	1424	299	1405	1408	968
Stage 1	-	-	-	-	-	-	425	425	-	972	972	-
Stage 2	-	-	-	-	-	-	1071	999	-	433	436	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	695	-	-	1250	-	-	101	136	741	117	139	308
Stage 1	-	-	-	-	-	-	607	586	-	304	331	-
Stage 2	-	-	-	-	-	-	267	321	-	601	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	695	-	-	1250	-	-	42	123	741	107	126	308
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	123	-	107	126	-
Stage 1	-	-	-	-	-	-	552	533	-	276	330	-
Stage 2	-	-	-	-	-	-	119	320	-	542	527	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0	128.3	56.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	51	695	-	-	1250	-	-	250
HCM Lane V/C Ratio	0.478	0.091	-	-	0.002	-	-	0.777
HCM Control Delay (s)	128.3	10.7	-	-	7.9	-	-	56.1
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.8	0.3	-	-	0	-	-	5.7

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	0	64	17	0	140
Future Vol, veh/h	22	0	64	17	0	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	0	77	20	0	169

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	256	87	0	0	97	0
Stage 1	87	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	733	971	-	-	1496	-
Stage 1	936	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	733	971	-	-	1496	-
Mov Cap-2 Maneuver	733	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	861	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	733	1496	-
HCM Lane V/C Ratio	-	-	0.038	-	-
HCM Control Delay (s)	-	-	10.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	298	725	10	23	42
Future Vol, veh/h	16	298	725	10	23	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	324	780	11	28	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	791	0	-	0	1144	786
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	358	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	829	-	-	-	221	392
Stage 1	-	-	-	-	449	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	829	-	-	-	216	392
Mov Cap-2 Maneuver	-	-	-	-	216	-
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	707	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	829	-	-	-	304
HCM Lane V/C Ratio	0.021	-	-	-	0.258
HCM Control Delay (s)	9.4	-	-	-	20.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	275	10	2	900	25	15	1	3	20	1	148
Future Vol, veh/h	58	275	10	2	900	25	15	1	3	20	1	148
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	93	93	93	78	78	78	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	299	11	2	968	27	19	1	4	23	1	170

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	995	0	0	310	0	0	1496	1424	299	1405	1408	968
Stage 1	-	-	-	-	-	-	425	425	-	972	972	-
Stage 2	-	-	-	-	-	-	1071	999	-	433	436	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	695	-	-	1250	-	-	101	136	741	117	139	308
Stage 1	-	-	-	-	-	-	607	586	-	304	331	-
Stage 2	-	-	-	-	-	-	267	321	-	601	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	695	-	-	1250	-	-	42	123	741	107	126	308
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	123	-	107	126	-
Stage 1	-	-	-	-	-	-	552	533	-	276	330	-
Stage 2	-	-	-	-	-	-	119	320	-	542	527	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0	128.3	32.4
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	51	695	-	-	1250	-	-	108	308
HCM Lane V/C Ratio	0.478	0.091	-	-	0.002	-	-	0.223	0.552
HCM Control Delay (s)	128.3	10.7	-	-	7.9	-	-	47.7	30.2
HCM Lane LOS	F	B	-	-	A	-	-	E	D
HCM 95th %tile Q(veh)	1.8	0.3	-	-	0	-	-	0.8	3.1

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	275	10	2	900	25	15	1	3	20	1	171
Future Vol, veh/h	58	275	10	2	900	25	15	1	3	20	1	171
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	93	93	93	78	78	78	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	299	11	2	968	27	19	1	4	23	1	197

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	995	0	0	310	0	0	1510	1424	299	1405	1408	968
Stage 1	-	-	-	-	-	-	425	425	-	972	972	-
Stage 2	-	-	-	-	-	-	1085	999	-	433	436	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	695	-	-	1250	-	-	99	136	741	117	139	308
Stage 1	-	-	-	-	-	-	607	586	-	304	331	-
Stage 2	-	-	-	-	-	-	262	321	-	601	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	695	-	-	1250	-	-	33	123	741	107	126	308
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	123	-	107	126	-
Stage 1	-	-	-	-	-	-	552	533	-	276	330	-
Stage 2	-	-	-	-	-	-	94	320	-	542	527	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0	179.8	36.6
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	41	695	-	-	1250	-	-	108	308
HCM Lane V/C Ratio	0.594	0.091	-	-	0.002	-	-	0.223	0.638
HCM Control Delay (s)	179.8	10.7	-	-	7.9	-	-	47.7	35.2
HCM Lane LOS	F	B	-	-	A	-	-	E	E
HCM 95th %tile Q(veh)	2.2	0.3	-	-	0	-	-	0.8	4.1

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	159	804	15	10	427	11	10	1	1	15	1	95
Future Vol, veh/h	159	804	15	10	427	11	10	1	1	15	1	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	171	865	16	11	464	12	13	1	1	18	1	114

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	476	0	0	881	0	0	1757	1705	865	1702	1709	464
Stage 1	-	-	-	-	-	-	1207	1207	-	486	486	-
Stage 2	-	-	-	-	-	-	550	498	-	1216	1223	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1086	-	-	767	-	-	66	91	353	72	91	598
Stage 1	-	-	-	-	-	-	224	256	-	563	551	-
Stage 2	-	-	-	-	-	-	519	544	-	221	252	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1086	-	-	767	-	-	46	76	353	62	76	598
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	76	-	62	76	-
Stage 1	-	-	-	-	-	-	189	216	-	475	543	-
Stage 2	-	-	-	-	-	-	413	536	-	184	212	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.2	103.6	31.1
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	51	1086	-	-	767	-	-	268
HCM Lane V/C Ratio	0.302	0.157	-	-	0.014	-	-	0.499
HCM Control Delay (s)	103.6	8.9	-	-	9.8	-	-	31.1
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1	0.6	-	-	0	-	-	2.6

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	2	136	26	1	88
Future Vol, veh/h	17	2	136	26	1	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	87	87	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	3	156	30	1	106

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	279	171	0	0	186	0
Stage 1	171	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	711	873	-	-	1388	-
Stage 1	859	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	710	873	-	-	1388	-
Mov Cap-2 Maneuver	710	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	915	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	724	1388	-
HCM Lane V/C Ratio	-	-	0.034	0.001	-
HCM Control Delay (s)	-	-	10.1	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	466	204	17	28	37
Future Vol, veh/h	45	466	204	17	28	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	415	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	87	87	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	507	234	20	34	45

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	254	0	-	0	849	244
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	605	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1311	-	-	-	331	795
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	545	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1311	-	-	-	319	795
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	545	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1311	-	-	-	484
HCM Lane V/C Ratio	0.037	-	-	-	0.162
HCM Control Delay (s)	7.9	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	159	804	15	10	427	11	10	1	1	15	1	95
Future Vol, veh/h	159	804	15	10	427	11	10	1	1	15	1	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	171	865	16	11	464	12	13	1	1	18	1	114

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	476	0	0	881	0	0	1757	1705	865	1702	1709	464
Stage 1	-	-	-	-	-	-	1207	1207	-	486	486	-
Stage 2	-	-	-	-	-	-	550	498	-	1216	1223	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1086	-	-	767	-	-	66	91	353	72	91	598
Stage 1	-	-	-	-	-	-	224	256	-	563	551	-
Stage 2	-	-	-	-	-	-	519	544	-	221	252	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1086	-	-	767	-	-	46	76	353	62	76	598
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	76	-	62	76	-
Stage 1	-	-	-	-	-	-	189	216	-	475	543	-
Stage 2	-	-	-	-	-	-	413	536	-	184	212	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.2	103.6	23
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	51	1086	-	-	767	-	-	63	598
HCM Lane V/C Ratio	0.302	0.157	-	-	0.014	-	-	0.306	0.191
HCM Control Delay (s)	103.6	8.9	-	-	9.8	-	-	85.6	12.4
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1	0.6	-	-	0	-	-	1.1	0.7

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	159	804	15	10	427	11	10	1	1	15	1	95
Future Vol, veh/h	159	804	15	10	427	11	10	1	1	15	1	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	460	-	410	520	-	520	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	78	78	78	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	171	865	16	11	464	12	13	1	1	18	1	114

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	476	0	0	881	0	0	1757	1705	865	1702	1709	464
Stage 1	-	-	-	-	-	-	1207	1207	-	486	486	-
Stage 2	-	-	-	-	-	-	550	498	-	1216	1223	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1086	-	-	767	-	-	66	91	353	72	91	598
Stage 1	-	-	-	-	-	-	224	256	-	563	551	-
Stage 2	-	-	-	-	-	-	519	544	-	221	252	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1086	-	-	767	-	-	46	76	353	62	76	598
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	76	-	62	76	-
Stage 1	-	-	-	-	-	-	189	216	-	475	543	-
Stage 2	-	-	-	-	-	-	413	536	-	184	212	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.2	103.6	23
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	51	1086	-	-	767	-	-	63	598
HCM Lane V/C Ratio	0.302	0.157	-	-	0.014	-	-	0.306	0.191
HCM Control Delay (s)	103.6	8.9	-	-	9.8	-	-	85.6	12.4
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1	0.6	-	-	0	-	-	1.1	0.7

Appendix A - Traffic Signal Warrant No. 2 Threshold Analysis

TRANSPORTATION
CONSULTANTS, INC.

APPENDIX A-1: MUTCD TRAFFIC SIGNAL WARRANT No. 2 THRESHOLD ANALYSIS
w/All Southbound Approach Traffic* Included for the Southbound Minor Street Volume

Intersection: Hodgen Road/Timber Meadow Drive
Scenario: 2043 Total Traffic* (2043 Background + Site-Generated)

- ***50 percent southbound right turn reduction applied**
- **Assuming a two-lane approach – a left/through lane and a separate right turn lane.**
- **Warrant thresholds for 1 Lane on the MAJOR Street and 2 Lanes on the MINOR Street**

Time periods: weekday AM and PM

- AM hour 1 = 6:30am - 7:30am
- AM hour 2 = 7:30am - 8:30am
- PM hour 1 = 4:00pm - 5:00pm
- PM hour 2 = 5:00pm - 6:00pm

Evaluated as **alternate** data points instead of AM and PM, 1 and 2, above:

- **AM peak hour = 7:00am - 8:00am**
- **PM peak hour = 4:50pm - 5:50pm**

This Appendix A-1 analysis includes all southbound approach traffic for evaluation of "1 (major) lane and 2 or more (minor) lanes" for the southbound approach on the traffic signal warrant chart. Please refer to Appendix Figures 1 and 2. The volume pairs from the tables below have been plotted on the charts in these two Appendix figures. :

Volume Tables

Appendix Table 1 includes a 50-percent volume reduction for southbound-right turning movements only:

Appendix Table 1: Projected 2043 Turning Movement Volumes by Hour Period

Type	Turn	AM			PM		
		Peak 7:00-8:00	Hour 1 6:30-7:30	Hour 2 7:30-8:30	Peak 4:50-5:50	Hour 1 4:00-5:00	Hour 2 5:00-6:00
Minor 1	SBR	74	62	64	48	59	50
Minor 1	SBT	1	0	0	1	0	0
Minor 1	SBL	20	18	15	15	18	13
Major	WBR	25	11	21	11	5	10
Major	WBT	899	772	707	427	456	437
Major	WBL	2	0	0	10	0	0
Minor 2	NBR	3	3	2	1	1	2
Minor 2	NBT	1	0	0	1	0	0
Minor 2	NBL	15	10	19	10	10	8
Major	EBR	10	3	11	15	9	15
Major	EBT	275	186	321	804	691	742
Major	EBL	58	28	73	159	131	161

Appendix Table 2 includes a 50-percent volume reduction for southbound-right turning movements only:

Appendix Table 2: Major and Minor Street Volumes

Hour Period	Volumes		
	Major	Minor 1*	Minor 2*
AM Peak	**1,269**	**95**	**19**
AM Hour 1	1,000	79	13
AM Hour 2	1,134	79	20
PM Peak	**1,426**	**64**	**12**
PM Hour 1	1,292	77	11
PM Hour 2	1,365	63	10
* Includes all minor street volumes			

Appendix Table 3 summarizes volumes which are plotted on the traffic signal warrant charts (Appendix Figures 1 and 2):

Appendix Table 3: Warrant Analysis Volumes with Higher of Minor 1 and Minor 2

Hour Period	Volumes	
	Major	Minor*
AM Peak	**1,269**	**95**
AM Hour 1	1,000	79
AM Hour 2	1,134	79
PM Peak	**1,426**	**64**
PM Hour 1	1,292	77
PM Hour 2	1,365	63
* Includes all minor street volumes		

It is important to note that for each of the AM periods,

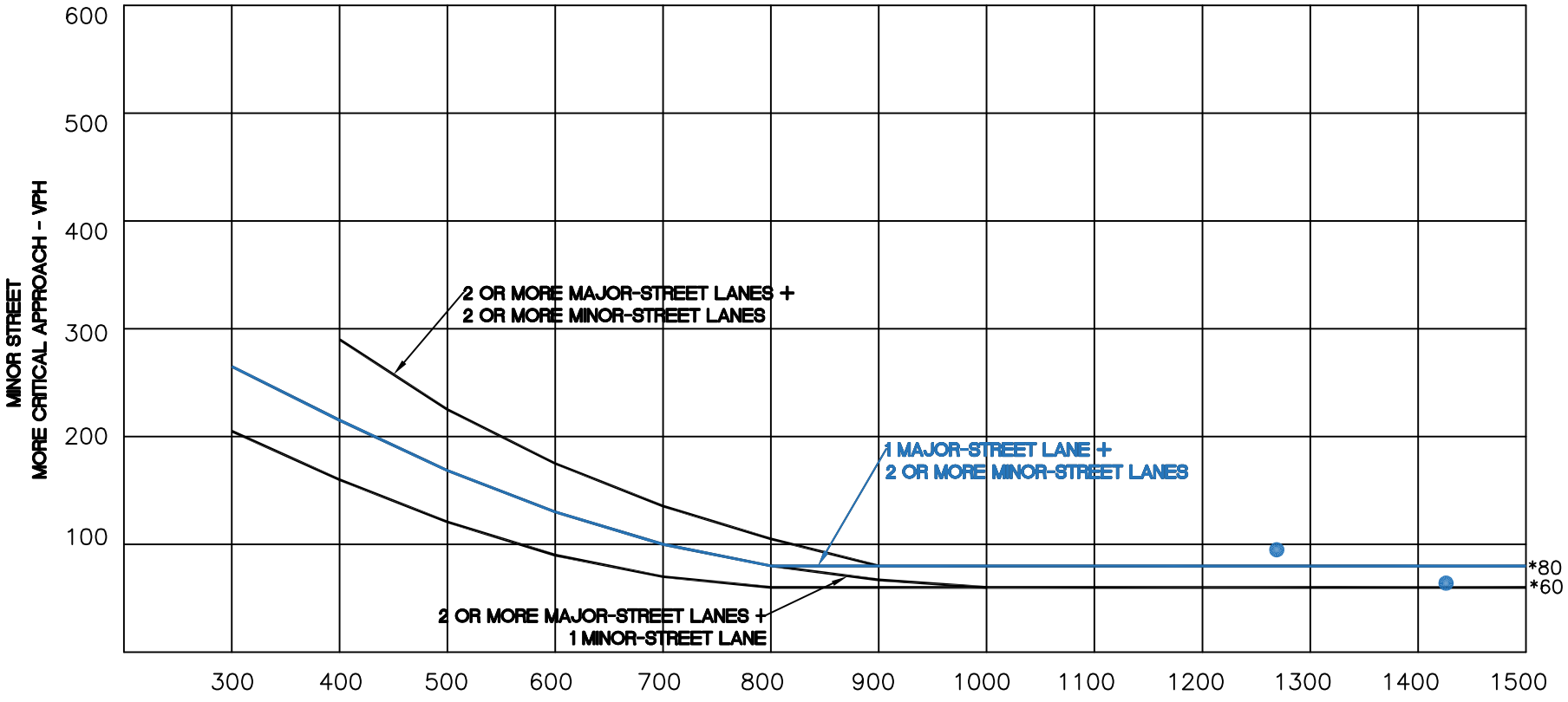
- Both AM Hour 1 **and** AM Hour 2 are used as evaluation volume pairs, **OR**
- The AM Peak Hour is used as an evaluation volume pair.

All three cannot be used as evaluation pairs because the AM Peak Hour overlaps with AM Hour 1 and AM Hour 2. This is why the peak hour volumes are shown in separate figures from AM Hour 1 and AM Hour 2. The same applies to the PM Periods.

Analysis Results: Based on this analysis, the warrant threshold is only satisfied for the **AM Peak** hour volume pair (1 hour out of 4 required for the warrant to be satisfied). However, as shown in Appendix Figure 2, three of the four hourly volume pairs are close to the threshold value of 80. There are potentially other hours of the day outside of these “two-hour windows” of time around the AM and PM peak hours for which the warrants may be met.

Figure 4C-2. Warrant 2 Four-Hour Vehicular Volume (70% Factor)

(Community Less than 10,000 population or above 40 mph on Major Street)



VOLUMES ON WARRANT CHART

Peak	Start - End	(Major, Minor)
AM peak	7:00am - 8:00am	(1,269 , 95)
PM peak	4:50pm - 5:50pm	(1,426 , 64)

* Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane

Appendix Figure 1

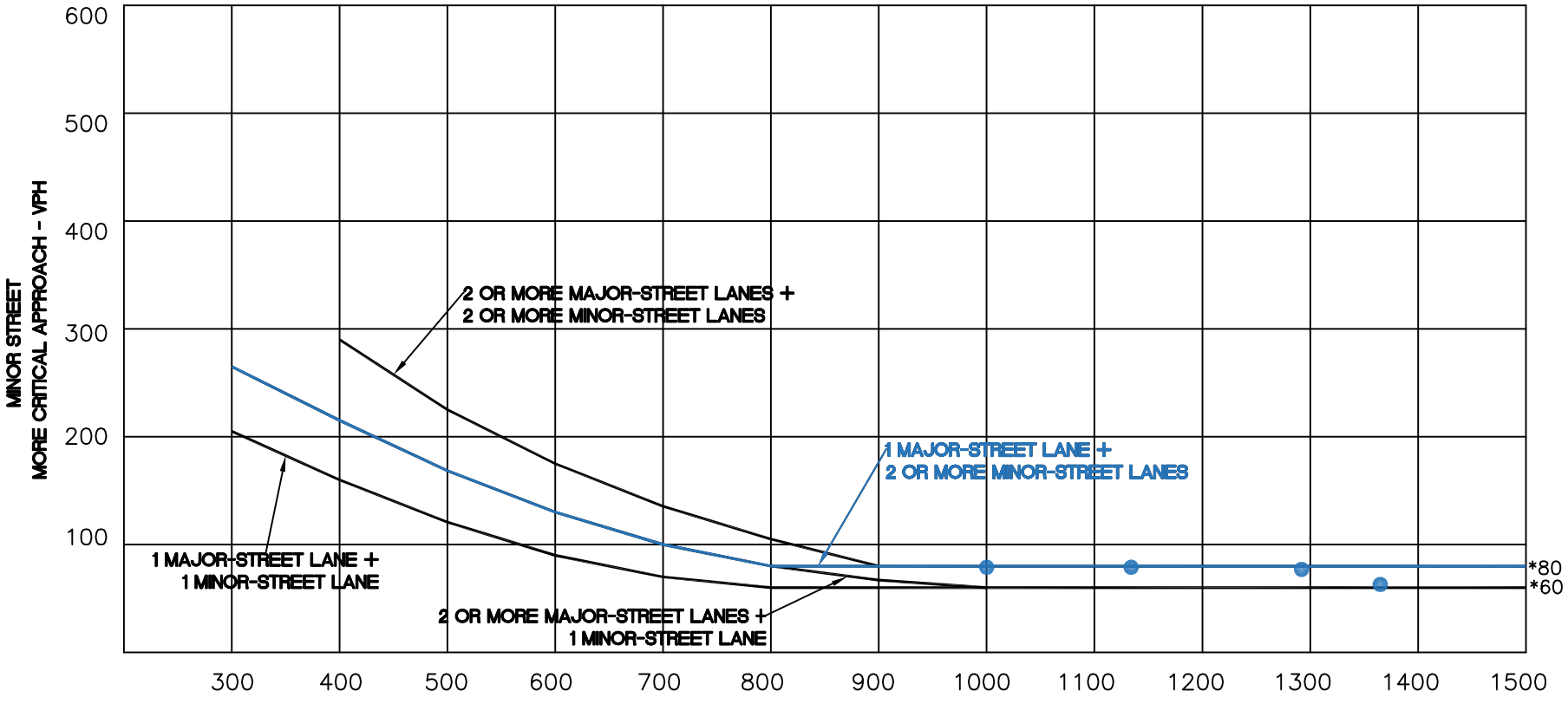
70% Traffic Signal Warrant No. 2 Threshold Analysis
Hodgen Rd + Timber Meadow Dr
Including All Southbound Approach Traffic - Peak Hours Only

Settlers Ranch, Filing 3 (LSC# S234130)

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 4C-2. Warrant 2 Four-Hour Vehicular Volume (70% Factor)

(Community Less than 10,000 population or above 40 mph on Major Street)



VOLUMES ON WARRANT CHART

Peak	Start - End	(Major, Minor)
AM hour 1	6:30am - 7:30am	(1,000 , 79)
AM hour 2	7:30am - 8:30am	(1,134 , 79)
PM hour 1	4:00pm - 5:00pm	(1,292 , 77)
PM hour 2	5:00pm - 6:00pm	(1,365 , 63)

* Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane

Appendix Figure 2

70% Traffic Signal Warrant No. 2 Threshold Analysis
Hodgen Rd + Timber Meadow Dr
Including All Southbound Approach Traffic

Settlers Ranch, Filing 3 (LSC# S234130)

LSC TRANSPORTATION CONSULTANTS, INC.

APPENDIX A-2: MUTCD TRAFFIC SIGNAL WARRANT No. 2 THRESHOLD ANALYSIS
Including ONLY Southbound Right Turning Traffic* as the Southbound Minor Street Volume

Intersection: Hodgen Road/Timber Meadow Drive
Scenario: 2043 Total Traffic* (2043 Background + Site-Generated)

- ***50 percent southbound right turn reduction applied**
- **Includes Only the southbound right turn lane and 50% of the right-turn volume.**
- **Warrant Thresholds for 1 Lane on the MAJOR Street and 1 Lanes on the MINOR Street**

Time periods: weekday AM and PM

- AM hour 1 = 6:30am - 7:30am
- AM hour 2 = 7:30am - 8:30am
- PM hour 1 = 4:00pm - 5:00pm
- PM hour 2 = 5:00pm - 6:00pm

Evaluated as **alternate** data points instead of AM and PM, 1 and 2, above:

- **AM peak hour = 7:00am - 8:00am**
- **PM peak hour = 4:50pm - 5:50pm**

Appendix A-2 analysis includes only minor-street right-turn volumes on the southbound approach for evaluation of "1 (major) lane and 1 (minor) lane" on the traffic signal warrant chart. Please refer to Appendix Figures 3 and 4. The volume pairs from the tables below have been plotted on the charts in these two Appendix figures. :

Appendix Table 4 includes a 50-percent volume reduction for southbound-right turning movements only:

Appendix Table 4: Projected 2043 Turning Movement Volumes by Hour Period

Type	Turn	AM			PM		
		Peak 7:00-8:00	Hour 1 6:30-7:30	Hour 2 7:30-8:30	Peak 4:50-5:50	Hour 1 4:00-5:00	Hour 2 5:00-6:00
Minor 1	SBR	74	62	64	48	59	50
Minor 1	SBT	1	0	0	1	0	0
Minor 1	SBL	20	18	15	15	18	13
Major	WBR	25	11	21	11	5	10
Major	WBT	899	772	707	427	456	437
Major	WBL	2	0	0	10	0	0
Minor 2	NBR	3	3	2	1	1	2
Minor 2	NBT	1	0	0	1	0	0
Minor 2	NBL	15	10	19	10	10	8
Major	EBR	10	3	11	15	9	15
Major	EBT	275	186	321	804	691	742
Major	EBL	58	28	73	159	131	161

Appendix Table 5 includes a 50-percent volume reduction for southbound-right turning movements only:

Appendix Table 5: Major and Minor Street Volumes

Hour Period	Volumes		
	Major	Minor 1*	Minor 2
AM Peak	**1,269**	**74**	**0**
AM Hour 1	1,000	62	0
AM Hour 2	1,134	64	0
PM Peak	**1,426**	**48**	**0**
PM Hour 1	1,292	59	0
PM Hour 2	1,365	50	0
* Right turns only on SB approach			

Appendix Table 6 summarizes volumes which are plotted on the traffic signal warrant charts (Appendix Figures 3 and 4):

Appendix Table 6: Warrant Analysis Volumes with Higher of Minor 1 and Minor 2

Hour Period	Volumes	
	Major	Minor*
AM Peak	**1,269**	**74**
AM Hour 1	1,000	62
AM Hour 2	1,134	64
PM Peak	**1,426**	**48**
PM Hour 1	1,292	59
PM Hour 2	1,365	50
* Right turns only on SB approach		

It is important to note that for each of the AM periods,

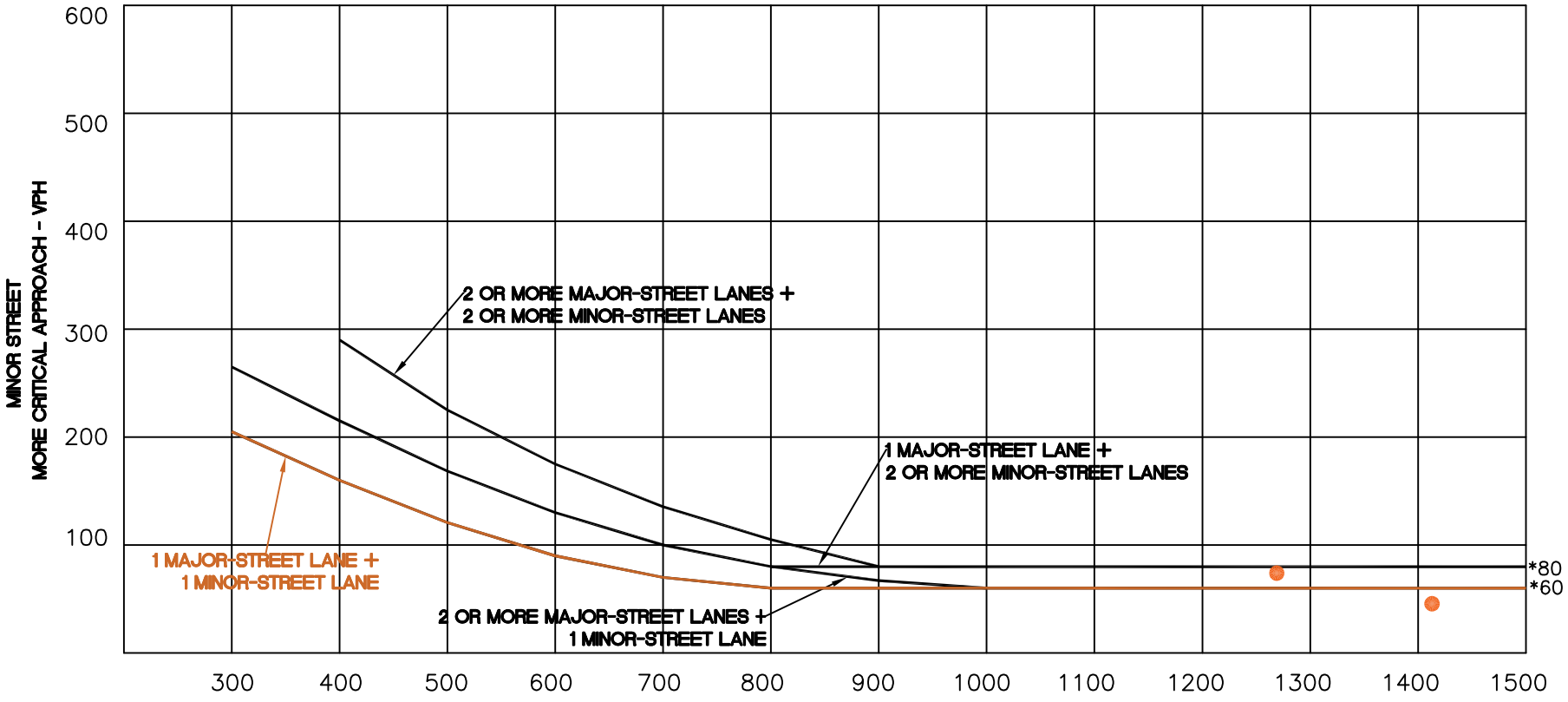
- Both AM Hour 1 **and** AM Hour 2 are used as evaluation volume pairs,
  OR
- The AM Peak Hour is used as an evaluation volume pair.

All three cannot be used as evaluation pairs because the AM Peak Hour overlaps with AM Hour 1 and AM Hour 2. This is why the peak hour volumes are shown in separate figures from AM Hour 1 and AM Hour 2. The same applies to the PM Periods.

Analysis Results: Based on this analysis, the warrant threshold is satisfied for AM Hour 1 and AM Hour 2 volume pairs (2 hour out of 4 required for the warrant to be satisfied). However, as shown in Appendix Figure 4, the PM Hour 1 pair is close to the threshold value of 60. There are potentially other hours of the day outside of these “two-hour windows” of time around the AM and PM peak hours for which the warrants may be met.

Figure 4C-2. Warrant 2 Four-Hour Vehicular Volume (70% Factor)

(Community Less than 10,000 population or above 40 mph on Major Street)



VOLUMES ON WARRANT CHART

Peak	Start - End	(Major, Minor)
AM peak	7:00am - 8:00am	(1,269 , 74)
PM peak	4:50pm - 5:50pm	(1,426 , 48)

* Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane

Appendix Figure 3

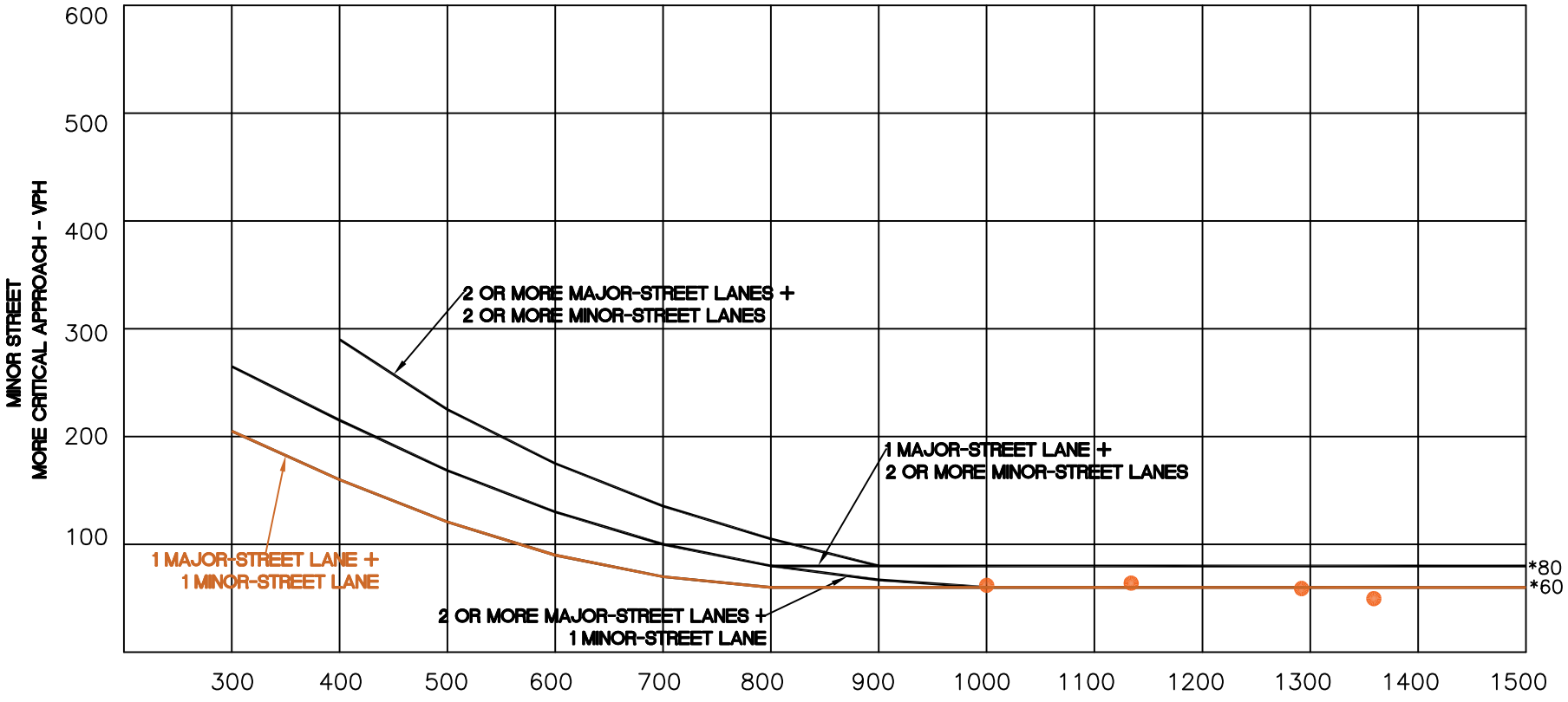
70% Traffic Signal Warrant No. 2 Threshold Analysis
Hodgen Rd + Timber Meadow Dr
Southbound Right Turns Only - Peak Hours Only

Settlers Ranch, Filing 3 (LSC# S234130)

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 4C-2. Warrant 2 Four-Hour Vehicular Volume (70% Factor)

(Community Less than 10,000 population or above 40 mph on Major Street)



VOLUMES ON WARRANT CHART

Peak	Start - End	(Major, Minor)
AM hour 1	6:30am - 7:30am	(1,000 , 62)
AM hour 2	7:30am - 8:30am	(1,134 , 64)
PM hour 1	4:00pm - 5:00pm	(1,292 , 59)
PM hour 2	5:00pm - 6:00pm	(1,365 , 50)

* Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane

Appendix Figure 4

70% Traffic Signal Warrant No. 2 Threshold Analysis
Hodgen Rd + Timber Meadow Dr
Southbound Right Turns Only

Settlers Ranch, Filing 3 (LSC# S234130)

LSC TRANSPORTATION CONSULTANTS, INC.

BOCC Resolution (09-159)

TRANSPORTATION
CONSULTANTS, INC.

NEW DOC

RESOLUTION NO. 09-159

BOARD OF COUNTY COMMISSIONERS
COUNTY OF EL PASO, STATE OF COLORADO

APPROVE FINAL PLAT FOR SETTLERS RANCH FILING NO. 2 (SF-06-026)-HODGEN SETTLERS RANCH, LLC

WHEREAS, Hodgen Settlers Ranch, LLC, did file an application with the Development Services Division of El Paso County for the approval of a Final Plat for Settlers Ranch Filing No. 2 for the herein described property in the unincorporated area of El Paso County; and

WHEREAS, a public hearing was held by the El Paso County Planning Commission on November 18, 2008, upon which date the Planning Commission did by formal resolution recommend approval of the subject Final Plat with conditions and notation; and

WHEREAS, a public hearing was held by this Board on April 23, 2009; and

WHEREAS, based on the evidence, testimony, exhibits, study of the master plan for the unincorporated area of the county, recommendations of the El Paso County Planning Commission, comments of the El Paso County Development Services Division, comments of public officials and agencies, and comments from all interested parties, this Board finds as follows:

1. Proper posting, publication, and public notice were provided as required by law for the hearings before the Planning Commission and the Board of County Commissioners of El Paso County.

2. The hearings before the Planning Commission and the Board of County Commissioners were extensive and complete, all pertinent facts, matters and issues were submitted and reviewed, and all interested parties were heard at those hearings.

3. The proposed subdivision of land is in compliance with the recommendations set forth in the master plan for the unincorporated area of the county.

4. That the subdivision is in substantial conformance with the approved Preliminary Plan.

5. That the subdivision is consistent with the subdivision design standards and regulations and meets all planning, engineering, and surveying requirements of El Paso County for maps, data, surveys, analyses, studies, reports, plans, designs, documents, and other supporting materials.

6. That a sufficient water supply has been acquired in terms of quantity, quality, and dependability for the type of subdivision proposed, as determined in accordance with the standards set forth in the water supply standards [C.R.S. §30-28-133(6)(1)] and the requirements of Chapter 8 of the Land Development Code.

7. That a public sewage disposal system has been established and, if other methods of sewage disposal are proposed, the system complies with State and local laws and regulations [C.R.S. §30-28-133(6)(b)] and the requirements of Chapter 8 of the Land Development Code.

8. That all areas of the proposed subdivision which may involve soil or topographical conditions presenting hazards or requiring special precautions have been identified and that the proposed subdivision is compatible with such conditions [C.R.S. §30-28-133(6)(c)].

9. That adequate drainage improvements are proposed that comply with State Statute [C.R.S. §30-28-133(3)(c)(VIII)] and the requirements of the El Paso County Land Development Code and Engineering Criteria Manual.

10. That necessary services, including police and fire protection, recreation, utilities, and transportation systems, are or will be made available to serve the proposed subdivision.

11. That final plans provide evidence to show that the proposed methods for fire protection comply with Chapter 6 of the Land Development Code.

12. That off-site impacts were evaluated and related off-site improvements are roughly proportional and will mitigate the impacts of the subdivision in accordance with applicable requirements of Chapter 8 of the Land Development Code.

13. That adequate public facilities or infrastructure, or cash-in-lieu, for impacts reasonably related to the proposed subdivision have been constructed or are financially guaranteed through the Subdivision Improvements Agreement so the impacts of the subdivision will be adequately mitigated.

14. That the subdivision meets other applicable sections of Chapters 6 and 8 of the Land Development Code.

15. That the extraction of any known commercial mining deposit shall not be impeded by this subdivision [C.R.S. §§34-1-302(1), et. seq.]

16. The El Paso County Parks Board recommends fees in lieu of land dedication in the amount of $15,175.00 (Park Region 2).

17. Lewis Palmer School District No. 38 recommends fees in lieu of land dedication in the amount of $13,244.00.

18. That the proposed subdivision of land conforms to the El Paso County Zoning Resolutions.

19. For the above-stated and other reasons, the proposed subdivision is in the best interest of the health, safety, morals, convenience, order, prosperity, and welfare of the citizens of El Paso County.

NOW, THEREFORE, BE IT RESOLVED the Board of County Commissioners of El Paso County, Colorado, hereby approves the Settlers Ranch Filing No. 2 Final Plat request as submitted by Hodgen Settlers Ranch, LLC, for the unincorporated area of El Paso County as described in Exhibit A, which is attached hereto and incorporated by reference;

BE IT FURTHER RESOLVED the following conditions and notations shall be placed upon this approval:

CONDITIONS:

1. Developer shall comply with federal and state laws, regulations, ordinances, review and permit requirement, and other agency requirements, if any, of applicable agencies including, but not limited to, the Colorado Division of Wildlife, Colorado Department of Transportation, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service regarding the Endangered Species Act, particularly as it relates to the Preble's meadow jumping mouse as a listed species.

2. A completed U.S. Army Corps of engineers permit shall be provided to the El Paso County Development Services Division prior to project commencement if ground-disturbing activities would occur in wetland areas. Alternatively, a letter from a qualified wetland scientist indicating why such a permit is not requires for this project may be acceptable.

3. Fees in lieu of land dedication in the amount of $13,244.00 shall be paid to El Paso County for the benefit of Lewis Palmer School District No. 38.

4. Fees in lieu of regional parkland dedication in the amount off $15,175.00 shall be paid to El Paso County (Park Region 2).

5. All Deed of Trust holders shall ratify the plat. The applicant shall provide a current Title Commitment at the time of submittal of the Mylar for recording.

6. Colorado statute requires that at the time of the approval of platting, the subdivider provides the certification of the County Treasurer's Office that all ad valorem taxes applicable to such subdivided land, for years prior to that year in which approval is granted, have been paid. Therefore, this plat is approved by the Board of County Commissioners on the condition that the subdivider or developer must provide to the Development Services Division, at the time of recording the plat, a certification from the County Treasurer's Office that all prior years' taxes have been paid in full.

7. The subdivider or developer must pay, for each parcel of property, the fee for tax certification in effect at the time of recording the plat.

8. The Subdivision Improvements Agreement, including the Estimate of Guaranteed Funds as approved by the El Paso County Development Services Division, shall be filed at the time of recording of the Final Plat.

9. Collateral sufficient to ensure that the public improvements as listed in the approved Estimate of Guaranteed Funds/Surety Estimate shall be provided when the Final Plat is recorded.

10. Prior to recording the Plat, a letter from the Colorado Department of Transportation shall be provided stating that any requirements or contributions in regard to the traffic signal at the intersection of Hodgen Road and State Highway 83 have been met.

11. An escrow agreement to provide for a westbound acceleration lane on Hodgen Road at Timber Meadow Drive shall be filed at the time of recording the Final Plat. Escrow funds shall be provided prior to plat recordation.

12. The County Attorney's Conditions of Compliance shall be adhered to at the appropriate time.

13. A driveway access permit will be required from the El Paso County Development Services Division for any access to a county maintained roadway.

14. The owner/developer/builder of each lot within this subdivision shall have the responsibility of meeting the 2003 International Fire Code (IFC) standards. At the time of approval of this project, this property is located within the Tri-Lakes Fire Protection District, which has adopted the 2003, IFC requiring fire sprinklers for covered structures over 6,000 square feet in size and other fire mitigation requirements depending upon the level of fire risk associated with the property and structures. The owner of any lot should contact the fire district to determine the exact development requirements relative to the 2003 IFC.

15. Applicant shall submit the Mylar to Enumerations for addressing prior to recording the Final Plat.

16. Home Owners Association documents shall be recorded with the Final Plat.

NOTATION:

1. Failure to record the Plat within one (1) year following Board of County Commissioners' approval will require reconsideration by the Board. Said reconsideration may involve compliance with new criteria, regulations, and updated fees.

AND BE IT FURTHER RESOLVED the record and recommendations of the El Paso County Planning Commission be adopted.

DONE THIS 23rd day of April 2009, at Colorado Springs, Colorado.

BOARD OF COUNTY COMMISSIONERS
OF EL PASO COUNTY, COLORADO

ATTEST:

By: _____
Chairman

By: _____
County Clerk & Recorder

NEW DOC

JPS ENGINEERING

ESTIMATE OF GUARANTEED FUNDS

SUBDIVIDER: HODGEN SETTLERS RANCH LLC
SUBDIVISION NAME: SETTLERS RANCH FILING NO. 2

Item No.	Description	Quantity	Unit	Unit Cost ($$$)	Total Cost ($$$)
	ON-SITE ROADWAY IMPROVEMENTS (165-AC.; 8,130 LF OF ROADWAY; 43 LOTS)				
203	Clearing & Grubbing	15.0	AC	$2,600	$39,000
203	Excavation / Embankment (roadways)	28,500	CY	$2.00	$57,000
203	Fine Grading	28,900	SY	$0.25	$7,225
304	15'W Gravel Trail	3,150	LF	$1.00	$3,150
304	Class 6 Base Course (shoulders)	7,230	SY	$6.50	$46,995
403	Asphalt Pavement (4" full-depth HBP assumed)	21,700	SY	$15.00	$325,500
625	Construction Staking	43	LOT	$500	$21,500
626	Mobilization	1	LS	$35,000	$35,000
630	Traffic Control / Signing / Striping / Barricades	1	LS	$15,000	$15,000
	SUBTOTAL				**$550,370**
	STORM DRAIN IMPROVEMENTS				
506	Riprap Spillway Lining	370	CY	$35	$12,950
506	Riprap Aprons	70	CY	$35	$2,450
603	18" RCP Culvert w/ FES	325	LF	$50	$16,250
603	24" RCP Culvert w/ FES	125	LF	$60	$7,500
603	36" RCP Culvert w/ FES	186	LF	$80	$14,880
604	Detention Pond #4 Outlet Structure	1	EA	$5,000	$5,000
604	Detention Pond #5 Outlet Structure	1	EA	$3,500	$3,500
	SUBTOTAL				**$62,530**
	EROSION CONTROL DEVICES				
208	Straw Bales	100	EA	$20	$2,000
208	Vehicle Tracking Pad (Erosion Control)	2	EA	$1,500	$3,000
208	Silt Fence	2,500	LF	$2	$5,000
210	Seeding (incl. 3" topsoil)	10.0	AC	$1,000	$10,000
216	Erosion Control Blanket Ditch / Channel Lining	1500	SY	$4	$6,000
	SUBTOTAL				**$26,000**
	OFF-SITE ROADWAY IMPROVEMENTS (1,700 LF STEPPLER ROAD)				
203	Fine Grading	6,000	SY	$0.25	$1,500
208	Straw Bales	24	EA	$20	$480
210	Seeding (incl. 3" topsoil)	2.3	AC	$1,000	$2,300
403	Steppler Road Paving Improvements	4,500	SY	$15.00	$67,500
603	18" RCP Culvert w/ FES (Driveway)	41	LF	$50	$2,050
603	24" RCP Culvert w/ FES	45	LF	$60	$2,700
	SUBTOTAL				**$76,530**
	TOTAL				**$715,430**
	Contingency @ 25%				$178,858
	GRAND TOTAL				**$894,288**

Estimate Prepared by: John P. Schwab, P.E.
Date: 6/3/08

Approved by Petitioner: Date: 6-2-08

Approved by County Engineer: Date:

RECEIVED
JUN 0 3 2008
EPC DEVELOPMENT SERVICES
6/2/2008

VERSION # 4
DATE 6-4-08