



Traffic Impact Study

Mayberry Communities

Filing 4 Traffic Impact Study

PCD File No. CS233 and SF2317

El Paso County, Colorado

Updated

January 5, 2024



Traffic Impact Studies

Traffic Engineer's Statement

The attached 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.

Phil Johnson, PE # 59119

Date

Developer's Statement

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

Scott Souders, Director of Development

Date

Mayberry Communities

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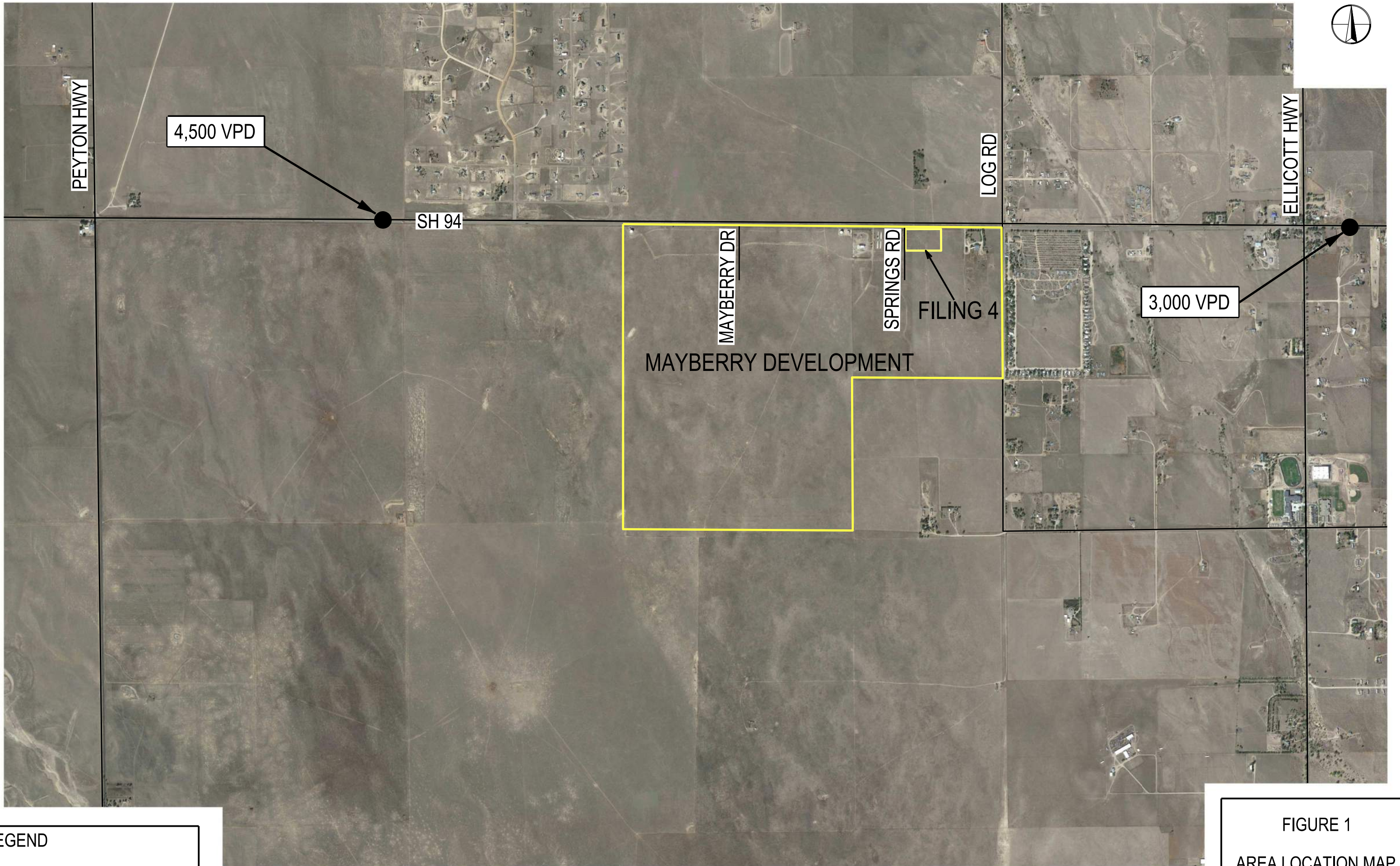
Introduction

Mayberry Communities have retained HDR Engineering, Inc. to perform a Traffic Impact Study (TIS) for the proposed Filing 4 development located in the southeast quadrant of Springs Road and SH 94 near Ellicott, Colorado, as shown in **Figure 1**. The development is currently a Planned Unit Development (PUD) and is being rezoned to Commercial Services (CS). This study serves as part of an update to the approved *2020 - June - Ellicott Town Center Commercial Rezone TIS Report (LSC 194060) (Ref. 1)* and uses assumptions and traffic data from the *2022 - September - Mayberry Filing No. 3 Traffic Technical Memorandum (Ref. 2)*.

Filing 4 is part of the broader proposed Mayberry Communities Development just west of Ellicott between Peyton Highway and Log Road. This community is being developed in phases, and this report details the traffic impacts only due to the Filing 4 development phase.

The project site is vacant and is currently zoned for Commercial Services. The development is expected to be complete by 2026. The development will comprise eight lots totaling 88,000 square feet of light industrial space. Discussing with El Paso County and Mayberry Communities, light industrial was selected because the type of land use will be warehouse-type facilities that share office/retail space. Typical businesses include auto/boat storage, mini-warehouse, repair/rental shop, and recreational vehicle repair. These businesses fall outside manufacturing, closely align with light industrial, and are allowable land uses for Commercial Services zoning per the El Paso County Land Development Code. Any business that falls outside the anticipated land use type will go through the appropriate approvals to gain county conditional approval before building their business.

The current connections to the Mayberry Community Development are at Mayberry Drive (formerly New Log Road) and Springs Road. Mayberry Drive is the main entrance to the development, which provides full movement and is located on the west side of the development. Springs Road, located on the east side of the development, is a Right-In Right-Out connection. The impact that Filing 4 will have on the network is anticipated to be negligible and all onsite roadways are anticipated to remain at their currently-proposed classifications.



LEGEND

X VPD = EXISTING (2022) ADT

Background Map Copyrighted by Google, 2022

FIGURE 1
AREA LOCATION MAP

Analysis Assumptions

This traffic impact study uses the Highway Capacity Manual 6 (HCM6) (Ref. 3) as a basis for the capacity analysis as well as primary data and engineering judgment, which is required to estimate background traffic, pass-by trips, and internal capture reductions. These assumptions and engineering judgments are further described in the following paragraphs. See **Appendix A** for a brief description of the HCM methods.

Directional Distribution

Existing traffic projections are based on data collected for the development of the *2022 - September - Mayberry Filing No. 3* traffic study. Turning movement counts were collected for the Peyton Highway/SH 94 intersection (west of Mayberry Communities) and the Ellicott Highway/SH 94 intersection (east of Mayberry Communities). An exhibit showing these turning movement volumes is provided in **Appendix B**.

This study follows the assumption established in the *2022 – September – Mayberry Filing No. 3* traffic study that 90% of vehicle trips go to and come from points west of the development, while 10% go to and come from points east of the development. Following the 90/10 assumption, future traffic is then assumed to be proportional to the turning movement counts collected at Peyton Highway and Ellicott Highway intersections. These counts provide the basis for the overall directional distribution of the generated traffic approaching and departing the project site at these two adjacent intersections, as summarized in **Table 1** and shown graphically in **Figure 2**.

Table 1: Forecasted Overall Directional Distribution Site-Oriented Traffic

Direction/Roadway	AM % Overall Distribution	PM % Overall Distribution
SH 94 W	82.4%	76.6%
SH 94 E	5.3%	6.0%
Peyton Hwy S	2.3%	5.9%
Peyton Hwy N	5.3%	7.5%
Ellicott Hwy S	4.0%	2.3%
Ellicott Hwy N	0.6%	1.7%

N/S indicates the direction traffic is originating from or destined to for both Peyton Highway and Ellicott Highway.

Based on the current land use at the site, this study takes a conservative approach, assuming no use of pass-by, pedestrian, and bicycle reductions. Given the unique nature of the site and the desire to provide a comprehensive understanding of potential impacts, the analysis did not assume internal capture. There are currently no other planned developments in the project area, therefore, no cumulative projects are assumed in this analysis.

Filing 3 Roadway Improvements

The Filing 4 analysis is based on the proposed improvements from 2022 - *September - Mayberry Filing No. 3*. The roadway network proposed in Filing 3 is assumed to be in place at the time of completion for Filing 4.

Mayberry Drive and SH 94 will be an unsignalized intersection with stop control on the northbound approach. The approaches will be constructed according to the following parameters:

- One left-turn lane and one right-turn lane for the northbound approach on Mayberry Drive
- One through lane and one dedicated right-turn lane on the eastbound approach of SH 94
- One dedicated left-turn lane and one through lane on the westbound approach of SH 94

The ability of the roadway network to accommodate the generated traffic of Filing 4 is contingent upon the completion of an internal roadway network comprised of Village Main Street, Mayberry Drive, Positive Place, and Springs Road. The existing internal roadway network is described in more detail in the following section.

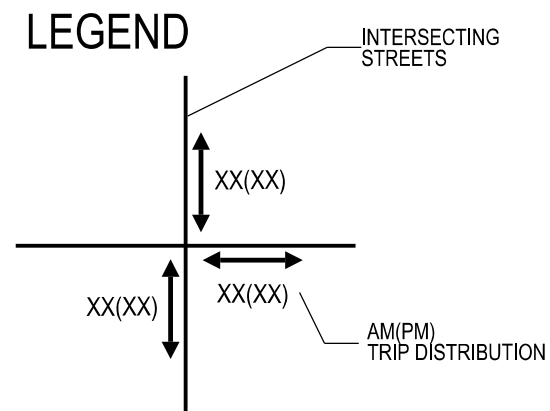
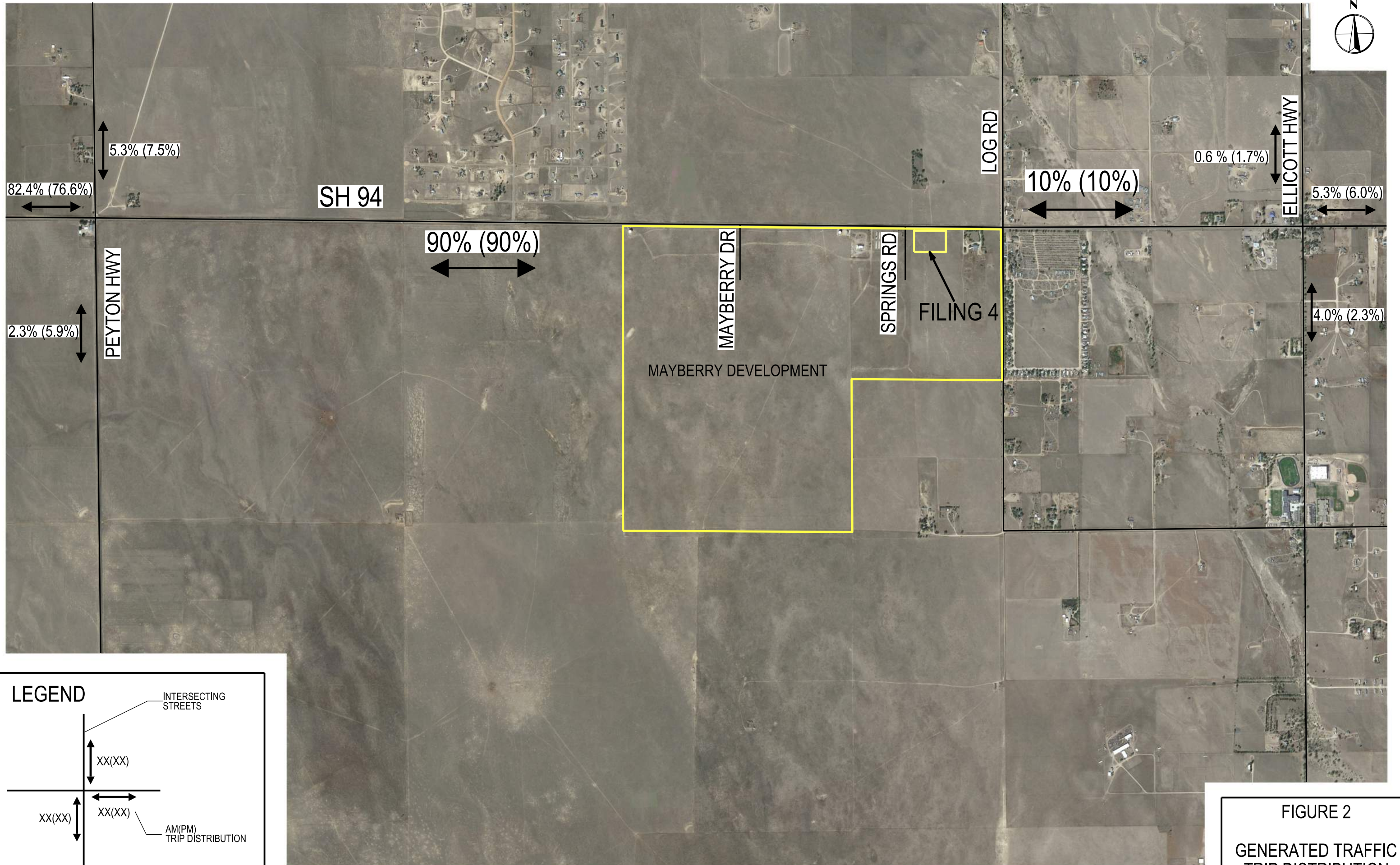


FIGURE 2
GENERATED TRAFFIC TRIP DISTRIBUTION

Existing Thoroughfare System

As indicated on the area location map (Figure 1) and the conceptual site plan (Figure 3), the project is located in the southeast quadrant of Mayberry Drive and SH 94, near Ellicott, CO.

Average daily traffic estimates on SH 94 were obtained from the Colorado Department of Transportation (CDOT) Online Transportation Information System (OTIS) and turning movement counts provided in the previous TIS dated September 2022. To adequately describe these roadways, further characterization is provided for each adjacent major roadway to the development.

SH 94

CDOT classifies SH 94 as a functional type Minor Arterial and an access control type as a Non-Rural Principal Highway (NR-A) west of County Road 493 and a Regional Highway (R-A) east of County Road 493. The posted speed limit is 65 miles per hour near the development. Traffic volumes from OTIS for SH 94 near the project site are provided in Appendix B. According to CDOT's traffic volume database, the existing daily traffic volume on SH 94 is listed below:

- 4,500 vpd between Peyton Highway and Ellicott Highway
- 3,000 vpd east of Ellicott Highway

Peyton Highway

The *El Paso County 2040 Major Transportation Corridor Plan* (MTCP)(Ref. 4) classifies Peyton Highway as a Minor Arterial and has a speed limit of 55 mph adjacent to the project site. Peyton Highway is a two-lane north-south highway (one lane in each direction).

Ellicott Highway

The El Paso County MTCP classifies Ellicott Highway as a Minor Arterial and has a speed limit of 55 mph adjacent to the project site. Ellicott Highway is a two-lane north-south highway (one lane in each direction).

Mayberry Drive

Mayberry Drive (formerly New Log Road) is a proposed Minor Arterial roadway which is planned to be constructed as a couplet, with two separate two-lane, one-way roadways separated by a large parkway. Currently, the ultimate northbound-only portion of the couplet has been constructed for interim use in both directions. The northbound "half couplet" has a similar cross section to an Urban Local roadway, and currently functions as such.

Positive Place

Positive Place (formerly Mayberry Drive) is a proposed Residential Major Collector roadway which runs east-west internal to the Mayberry Site. It is currently constructed as a two-lane undivided roadway and functions as an Urban Local roadway.

Site Internal Roadways

Springs Road, Village Main Street, Marketplace Drive, Indian Grass Street, Garden Park Avenue, Blanket Flower Street, Atchison Way, Galveston Terrace, Cattlemen Run, and Solaire Loop, Besseyi Way, Asano Way, and Kona Way are all Urban Local roadways internal to the Mayberry Site which are assumed to be in place for the Filing 4 analysis. All site internal roadways, including Mayberry Drive and Positive Place, currently have a posted speed limit of 25 mph.

Site and Access Characteristics

As shown in **Figure 3**, access to Filing 4 will be provided via one full-movement driveway on Springs Road, directly across from the Filing 2 access.

Traffic Analysis

To assess the traffic impacts of the proposed development, two (2) time periods (AM Peak Hour and PM Peak Hour) and six (6) travel conditions were evaluated in conformance with the El Paso County Engineering Criteria Manual (Ref. 5):

- 2026 Opening Year
- 2026 Background plus Filings 1-3 Traffic Conditions
- 2026 Background plus Filings 1-4 Traffic Conditions
- 2044 Horizon Year
- 2044 Background plus Filings 1-3 Traffic Conditions
- 2044 Background plus Filings 1-4 Traffic Conditions

Intersections in the vicinity of the site are the locations of principal concern because they are the locations of the highest traffic conflict and delay. The standard used to evaluate traffic conditions at intersections is level of service (LOS), which is a qualitative measure of the effect of factors such as speed, the volume of traffic, geometric features, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost.

2026 Opening Year Traffic Conditions

The analysis of existing traffic conditions required the collection of data on the major roadways and intersections. Traffic counts for the following intersections were collected in March and August 2022 on a typical weekday while schools were in session unless otherwise noted:

- Peyton Highway and SH 94
- Ellicott Highway and SH 94

The existing TMC values were grown by a one (1) percent per year as a growth rate provided by OTIS to reach a 2026 forecast year. This process used trends established by prior data for the major roadways and intersections near the project site. The 2026 Opening Year turning movement volumes are provided in **Figure 4**. Descriptions of existing study intersections are discussed in the following sections as well as the forecasted LOS for the Year 2026. **Table 2** provides the summary of both LOS and delay.

Peyton Highway and SH 94

Peyton Highway and SH 94 is currently an unsignalized intersection with stop controls on the northbound and southbound approaches. The northbound and southbound approaches of Peyton Highway provide one left-turn/through/right-turn shared lane. The eastbound and westbound approaches of SH 94 provide one left-turn lane and one through/right-turn shared lane. The northbound leg of the intersection is anticipated to operate at LOS B under the 2026 Opening Year traffic conditions during both the AM and PM peak periods.

Ellicott Highway and SH 94

Ellicott Highway and SH 94 is currently an unsignalized intersection with stop controls on the northbound and southbound approaches. The northbound and southbound approaches of Ellicott Highway provide one left-turn/through/right-turn shared lane. The eastbound and westbound approaches of SH 94 provide one left-turn lane and one through/right-turn shared lane. The intersection is anticipated to operate at LOS C under the existing traffic conditions during both the AM and PM peak periods.

Table 2: 2026 Opening Year Level of Service Summary

Intersection	2026 Opening Year	
	AM	PM
Peyton Highway and SH 94	B (14.3)	B (13.6)
Ellicott Highway and SH 94	C (16.4)	C (16.0)

Note: Highest delay minor street lane is reported for all unsignalized intersections.

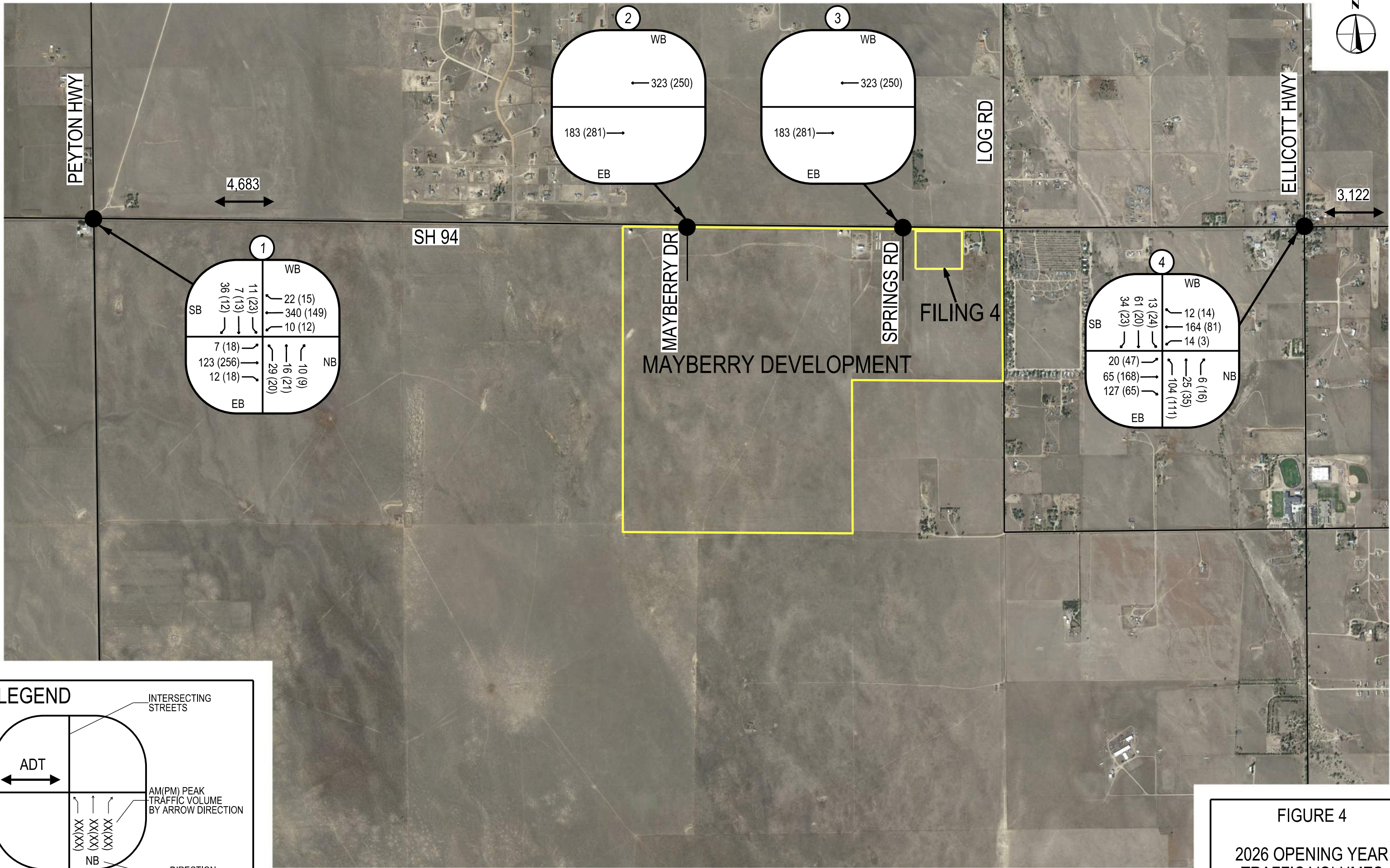


FIGURE 4
2026 OPENING YEAR
TRAFFIC VOLUMES

2026 Background plus Filings 1-3 Traffic Conditions

The generated traffic from the previous Filings 1, 2, and 3 are assumed to be part of the background traffic. The proposed access roads that will accommodate this traffic are studied for the background traffic and the development traffic to follow. The additional intersections that will be built as part of Mayberry Filing 3 are listed below:

- Mayberry Drive and SH 94
- Springs Road and SH 94

Filings 1- 3 Site-Generated Traffic

Unadjusted daily trips and the peak hour traffic associated with the development of the previous Filings of the project were estimated using recommendations and data contained in the Institute of Transportation Engineers' *Trip Generation Manual, 11th Edition* (Ref. 6).

These previous Filings generate approximately 2,420 unadjusted daily trips upon build-out. **Table 3** provides a detailed trip generation summary related to the assumed land use plan.

Table 3: Summary of Unadjusted Daily and Peak Hour Trip Generation from Filings 1-3

Site	Land Use	Land Use Code	Size	Trip Generation Method ¹	24-Hour Two-Way Volume	AM Peak Hour		PM Peak Hour	
						Enter	Exit	Enter	Exit
Filing 1/1A/3	Single Family Detached Housing	210	240 DU	Fitted Curve	2,257	43	123	143	84
Filing 2	General Light Industrial	110	30 KSF	Fitted Curve	163	21	3	2	15
Total					2,420	64	126	145	99

¹Trip Generation is based on the higher of the ITE's average rate and fitted curve method for all land uses.

The LOS summary for the 2026 Opening Year plus trips generated from the previous Filings are discussed below. **Table 4** provides the summary of both LOS and delay. 2026 Background plus Filings 1-3 volumes are shown in **Figure 5**.

Peyton Highway and SH 94

The intersection is anticipated to operate at LOS C under 2026 Background plus Filings 1-3 Traffic Conditions during the AM and PM peak hours.

Mayberry Drive and SH 94

Mayberry Drive and SH 94 will be an unsignalized intersection with stop controls on the northbound approach. The northbound approach of Mayberry Drive will provide one left-turn lane and one right-turn lane. The eastbound approach of SH 94 will provide one through lane and one right-turn lane. The westbound approach of SH 94 will provide one left-turn lane and one through lane. These improvements will be built concurrently with Filings 1, 2, and 3 and will be in place by the time Filing 4 is constructed. The intersection is anticipated to operate at LOS C under 2026 Background plus Filings 1-3 Traffic Conditions during the AM and PM peak hours.

Springs Road and SH 94

Under CDOT's permitting requirements, an eastbound right-turn deceleration lane was constructed at the intersection of Springs Road and SH 94 in 2022. Concurrently, CDOT required the construction of a median to prohibit the left-turn movement from westbound SH 94 to Springs Road. With this intersection only being a right-in/right-out only facility, the intersection is anticipated to operate at LOS A and B under 2026 Background plus Filings 1-3 Traffic Conditions during the AM and PM peak hours, respectively.

Ellicott Highway and SH 94

The intersection is anticipated to operate at LOS C under 2026 Background plus Previous Filings 1-3 Traffic Conditions during the AM and PM peak hours.

Table 4: 2026 Background + Filings 1- 3 Level of Service Summary

Intersection	2026 Background + Filings 1-3	
	AM	PM
Peyton Highway and SH 94	C (17.3)	C (18.1)
Mayberry Drive and SH 94	C (15.7)	C (16.7)
Springs Road and SH 94	A (9.4)	B (10.0)
Ellicott Highway and SH 94	C (17.2)	C (16.7)

Note: Highest delay minor street lane is reported for all unsignalized intersections.

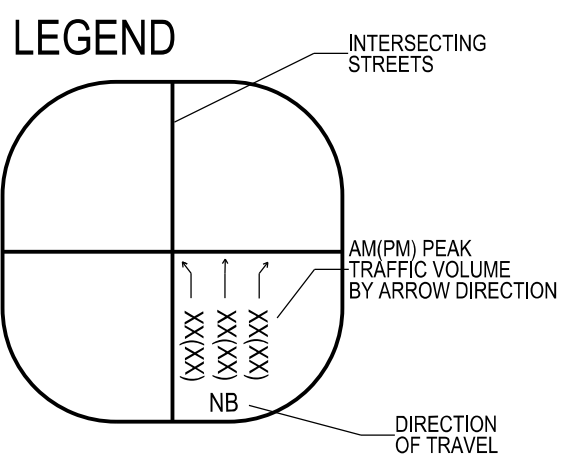
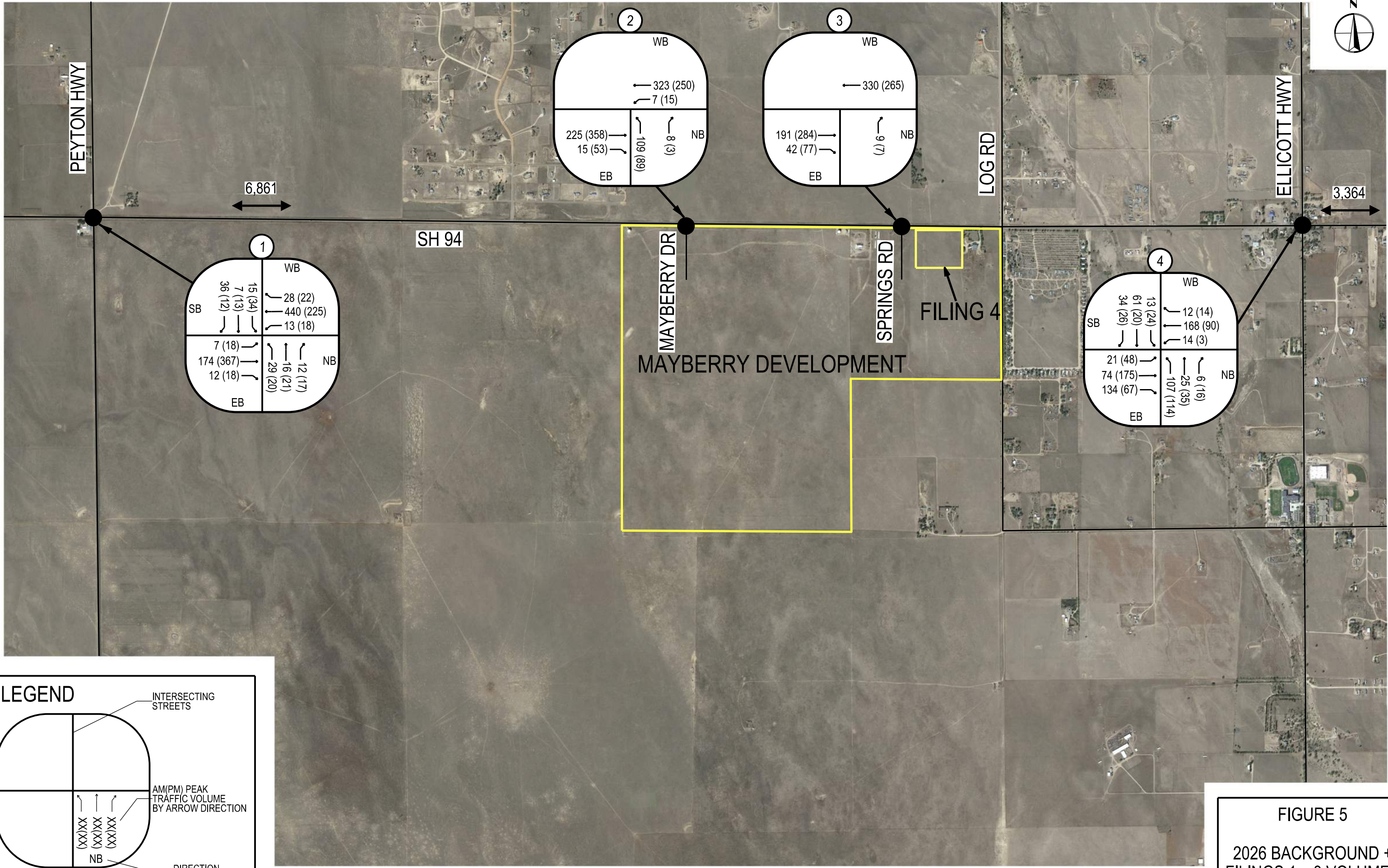


FIGURE 5
 2026 BACKGROUND +
 FILINGS 1 – 3 VOLUMES

Background Map Copyrighted by Google, 2022

2026 Background plus Filings 1-4 Traffic Conditions

The proposed Filing 4 is anticipated to be completed in 2026. The Filing 4 traffic was projected using available information and then added to the 2026 background plus previous Filings traffic and used to assess the major roadway impacts and evaluate potential improvements. All analysis assumes the completion of Mayberry Drive and Springs Road improvements upon which previous filings are contingent.

Filing 4 Site Generated Traffic

Unadjusted total trips per day and the peak hour traffic associated with the development of Filing 4 were estimated using recommendations and data contained in the Institute of Transportation Engineers' *Trip Generation Manual, 11th Edition*.

As discussed in the Letter of Intent, found in **Appendix C**, Filing 4 is anticipated to consist of 88,000 square feet of general light industrial development. Typical businesses include auto/boat storage, mini-warehouse, repair/rental shop, and recreational vehicle repair. These businesses closely align with light industrial per ITE Land Use Code 110, and are allowable land uses for Commercial Services zoning per the El Paso County Land Development Code. Light industrial development generates more trips per floor area than related uses such as Industrial Park and Manufacturing, so light industrial is chosen as the most conservative choice given uncertainty about the specific uses of Filing 4 land.

The proposed Filing 4 development is anticipated to generate approximately 381 daily trips upon build-out. **Table 5** provides a detailed trip generation summary based on the land use plan.

Table 5: Summary of Daily and Peak Hour Trip Generation from Filing 4

Site	Land Use	Land Use Code	Size	Trip Generation Method ¹	24-Hour Two-Way Volume	AM Peak Hour		PM Peak Hour	
						Enter	Exit	Enter	Exit
Filing 4	General Light Industrial	110	88 KSF	Fitted Curve	381	56	8	5	32

¹Trip Generation is based on the higher of the ITE's average rate and fitted curve method for all land uses.

The LOS summary for the 2026 total traffic conditions, including trips generated from Filing 4 are discussed below. **Table 6** provides the summary of both LOS and delay. Filing 4 generated volumes are shown in **Figure 6**, and 2026 Background plus Filings 1-4 volumes are shown in **Figure 7**.

Site internal trips were addressed with Filing 4. Anticipated daily and peak hour trips shown in Table 3 and Table 5 were totaled, then distributed to on-site roadways to show how traffic would flow on the Mayberry site. This internal distribution was determined by studying the land use intensities and locations of each filing of development relative to the access locations and external trip distribution. **Figure 8** shows the total site internal traffic.

Peyton Highway and SH 94

The intersection is anticipated to operate at LOS C under 2026 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours. There are no improvements recommended at this intersection as part of this TIS.

Mayberry Drive and SH 94

The intersection is anticipated to operate at LOS C under 2026 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours with the improvements assumed to be in place for Filing 3. There are no additional improvements recommended at this intersection as part of this TIS.

Springs Road and SH 94

The intersection is anticipated to operate at LOS A and B under 2026 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours, respectively. Assuming the improvements identified in Filing 3 are provided, there are no additional improvements recommended at this intersection as part of this TIS.

Ellicott Highway and SH 94

The intersection is anticipated to operate at LOS C under 2026 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours. There are no improvements recommended at this intersection as part of this TIS.

Table 6: 2026 Background plus Filings 1-4 Level of Service Summary

Intersection	2026 Background + Filings 1-4	
	AM	PM
Peyton Highway and SH 94	C (18.5)	C (19.1)
Mayberry Drive and SH 94	C (17.5)	C (18.2)
Springs Road and SH 94	A (9.4)	B (10.0)
Ellicott Highway and SH 94	C (17.5)	C (16.8)

Note: Highest delay minor street lane is reported for all unsignalized intersections.

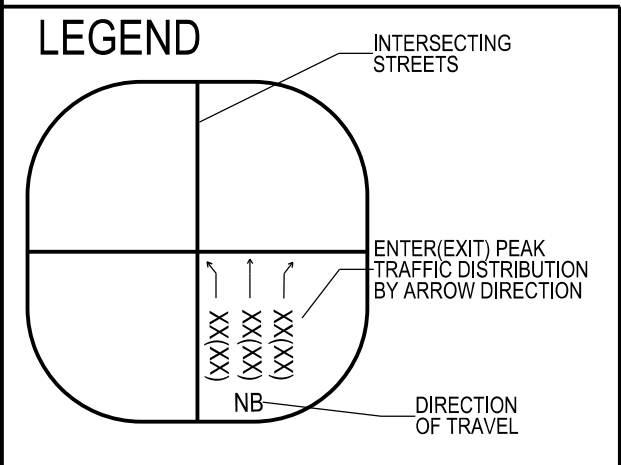
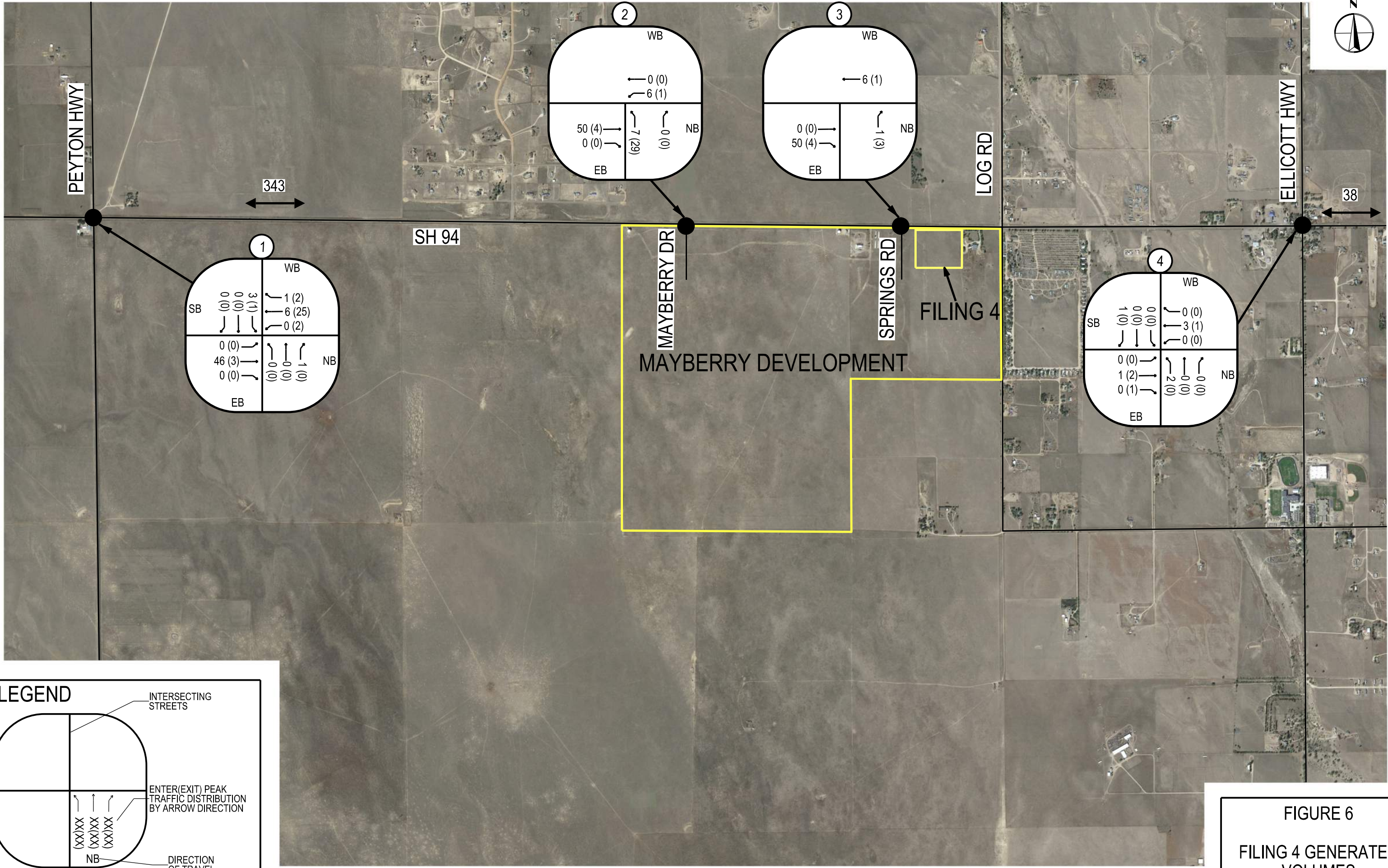


FIGURE 6
FILING 4 GENERATED VOLUMES

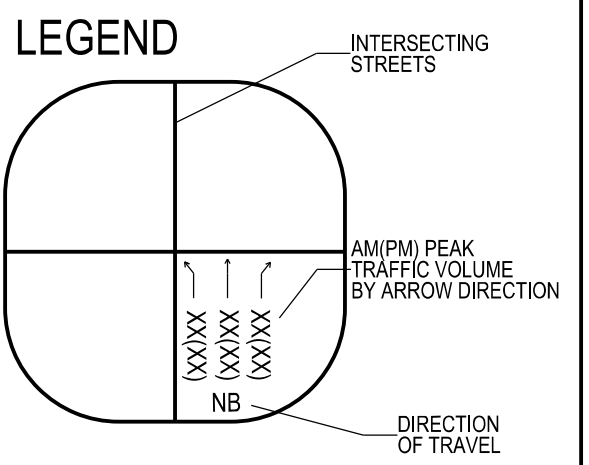
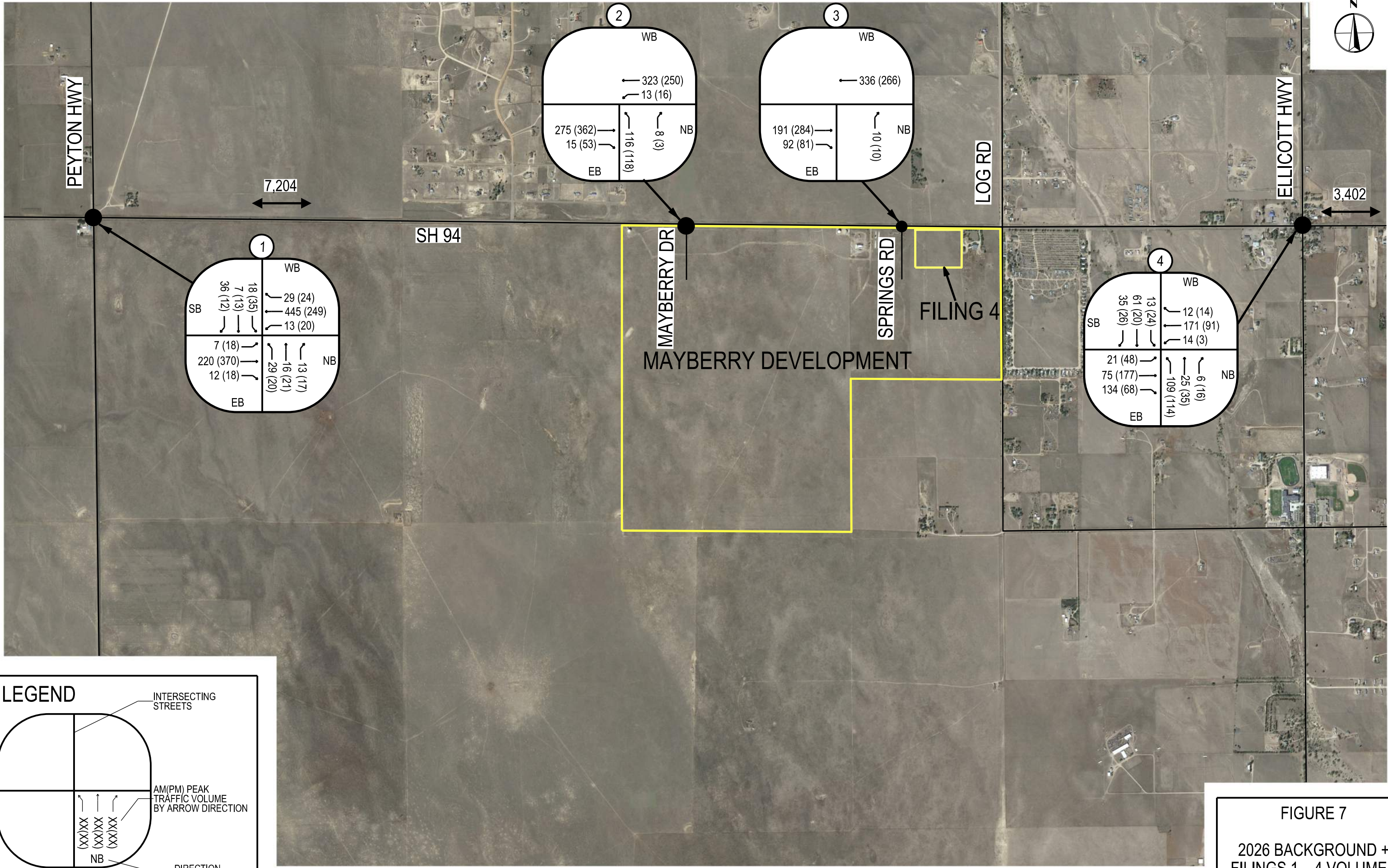
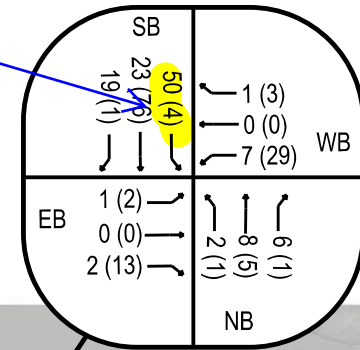


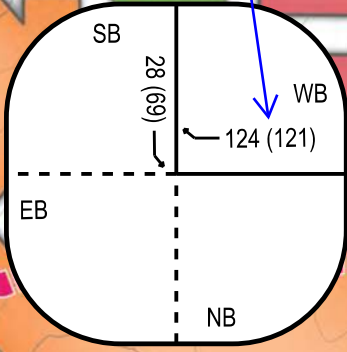
FIGURE 7
 2026 BACKGROUND +
 FILINGS 1 – 4 VOLUMES



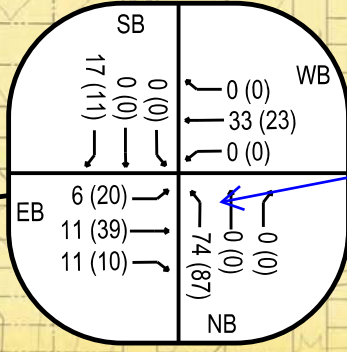
ECM 2.3.7D criteria is being met for exclusive left turn lanes at this intersection. Please discuss in the report improvements or interim solutions.



ECM 2.3.7D criteria is being met for exclusive left turn lanes at this intersection. Please discuss in the report improvements or interim solutions.



ECM 2.3.7D criteria is being met for exclusive left turn lanes at this intersection. Please discuss in the report improvements or interim solutions.



ECM 2.3.7D criteria is being met for exclusive right turn lanes at this intersection. Please discuss in the report improvements or interim solutions.

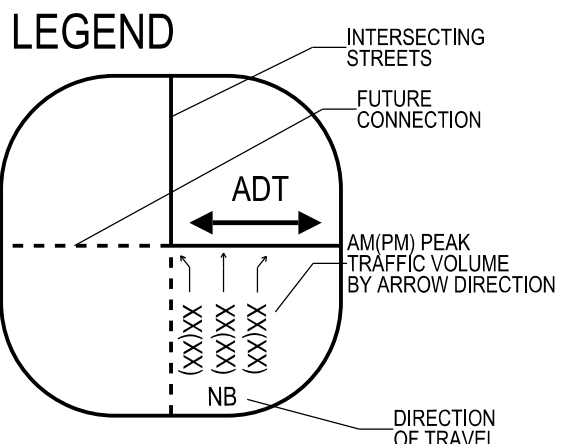
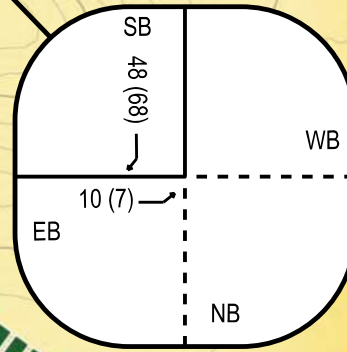
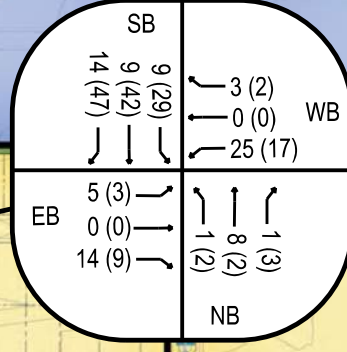
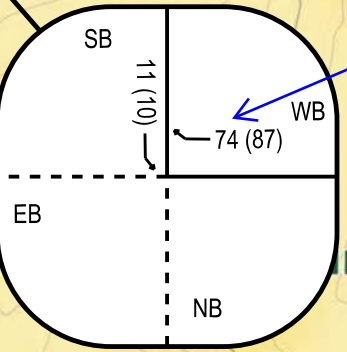


FIGURE 8
SITE INTERNAL TRIPS

2044 Horizon Year Traffic Conditions

The proposed Filing 4 is anticipated to be completed in 2026. However, a horizon year 2044 analysis was performed in accordance with the El Paso County Engineering Criteria Manual, Appendix B. The existing TMC volumes were grown by a one (1) percent per year growth rate provided by OTIS to reach a 2044 forecast year. This process used trends established by prior data for the major roadways and intersections near the project site. The 2044 forecasted turning movement volumes are provided in **Figure 9**. Descriptions of study intersections are discussed in the following sections as well as the forecasted LOS for the Year 2044. **Table 7** provides the summary of both LOS and delay for Peyton Highway and Ellicott Highway under 2044 horizon year conditions.

Table 7: 2044 Horizon Year Level of Service Summary

Intersection	2044 Horizon Year	
	AM	PM
Peyton Highway and SH 94	C (16.7)	C (15.6)
Ellicott Highway and SH 94	C (21.8)	C (20.7)

Note: Highest delay minor street lane is reported for all unsignalized intersections.

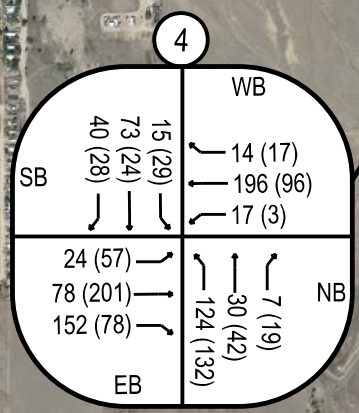
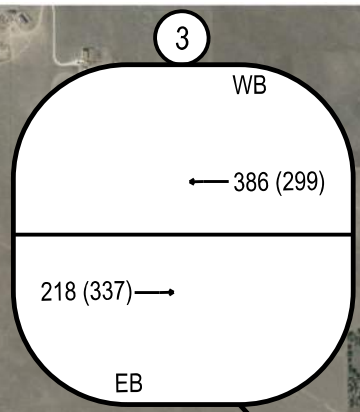
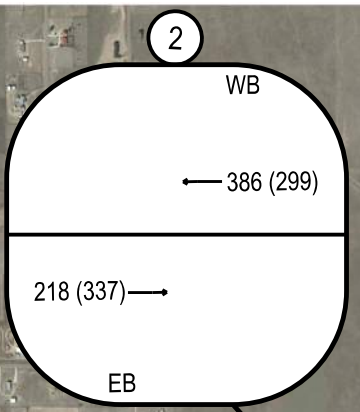
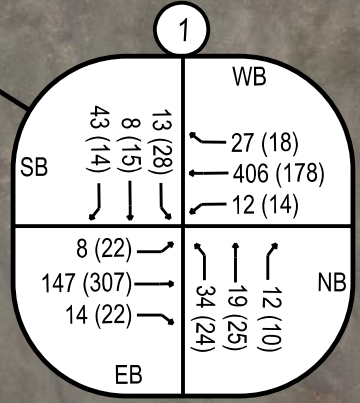
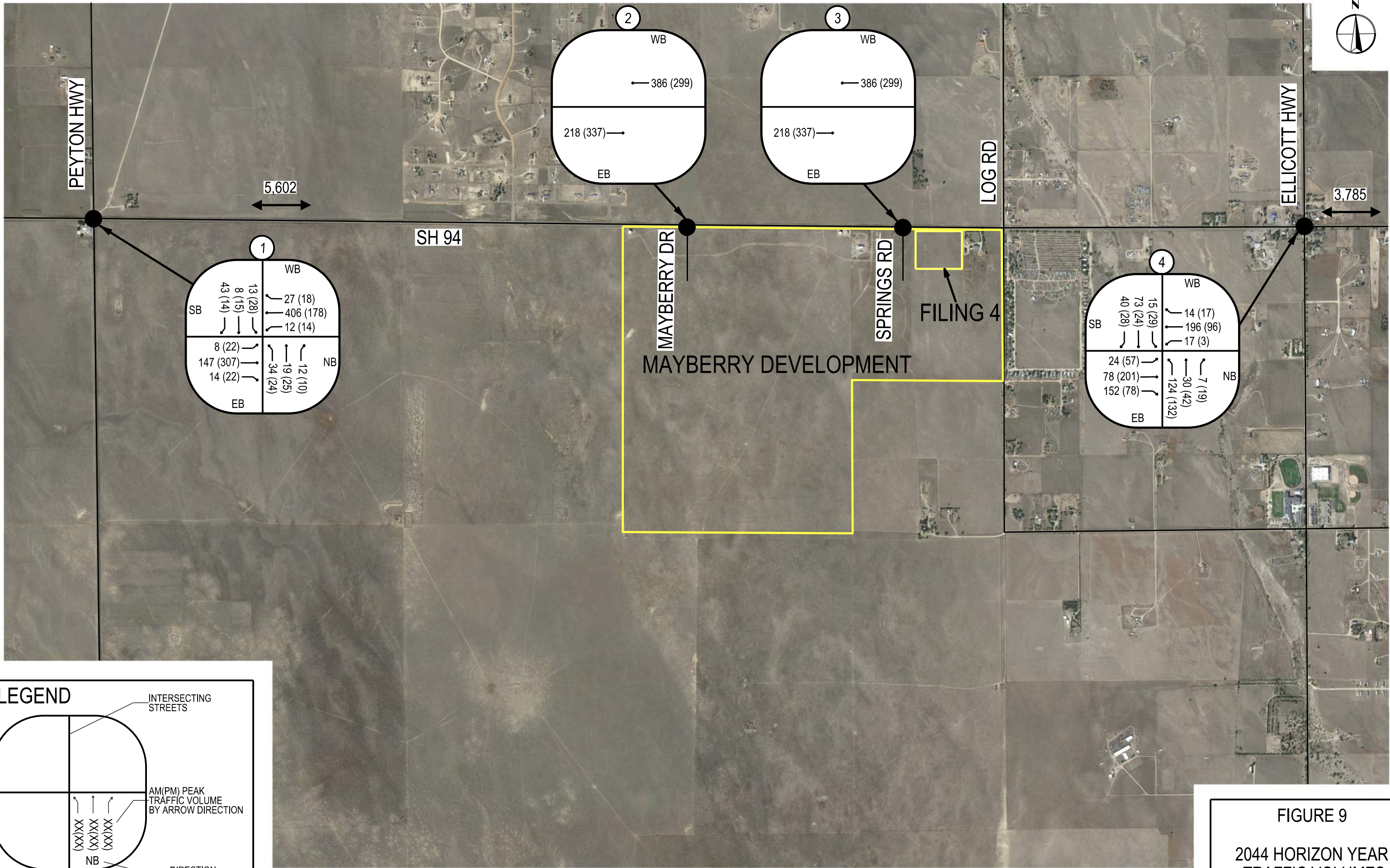


FIGURE 9
2044 HORIZON YEAR TRAFFIC VOLUMES

Background Map Copyrighted by Google, 2022

2044 Background plus Filings 1-3 Traffic Conditions

The 2044 plus Filings 1-3 background traffic was projected using the growth rate obtained from OTIS and traffic generated from previous project filings. These volumes were used to assess the major roadway impacts and evaluate potential improvements. All analysis assumes the completion of roadway and intersection improvements upon which Filings 1-3 are contingent.

The LOS summary for the 2044 Background plus Filings 1-3 traffic conditions are described below. **Table 8** provides the summary of both LOS and delay. 2044 forecasted plus Filings 1-3 traffic volumes are shown in **Figure 10**.

Peyton Highway and SH 94

The intersection is anticipated to operate at LOS C under 2044 Background plus Filings 1-3 traffic conditions during the AM and PM peak hours. There are no improvements recommended at this intersection as part of this TIS.

Mayberry Drive and SH 94

The intersection is anticipated to operate at LOS C under 2044 Background plus Filings 1-3 traffic conditions during the AM and PM peak hours with the improvements identified in Filings 1-3 assumed to be in place. There are no additional improvements recommended at this intersection as part of this TIS.

Springs Road and SH 94

The intersection is anticipated to operate at LOS A and B under 2044 Background plus Filings 1-3 traffic conditions during the AM and PM peak hours, respectively. Assuming the improvements identified in previous Filings are provided, there are no additional improvements recommended at this intersection as part of this TIS.

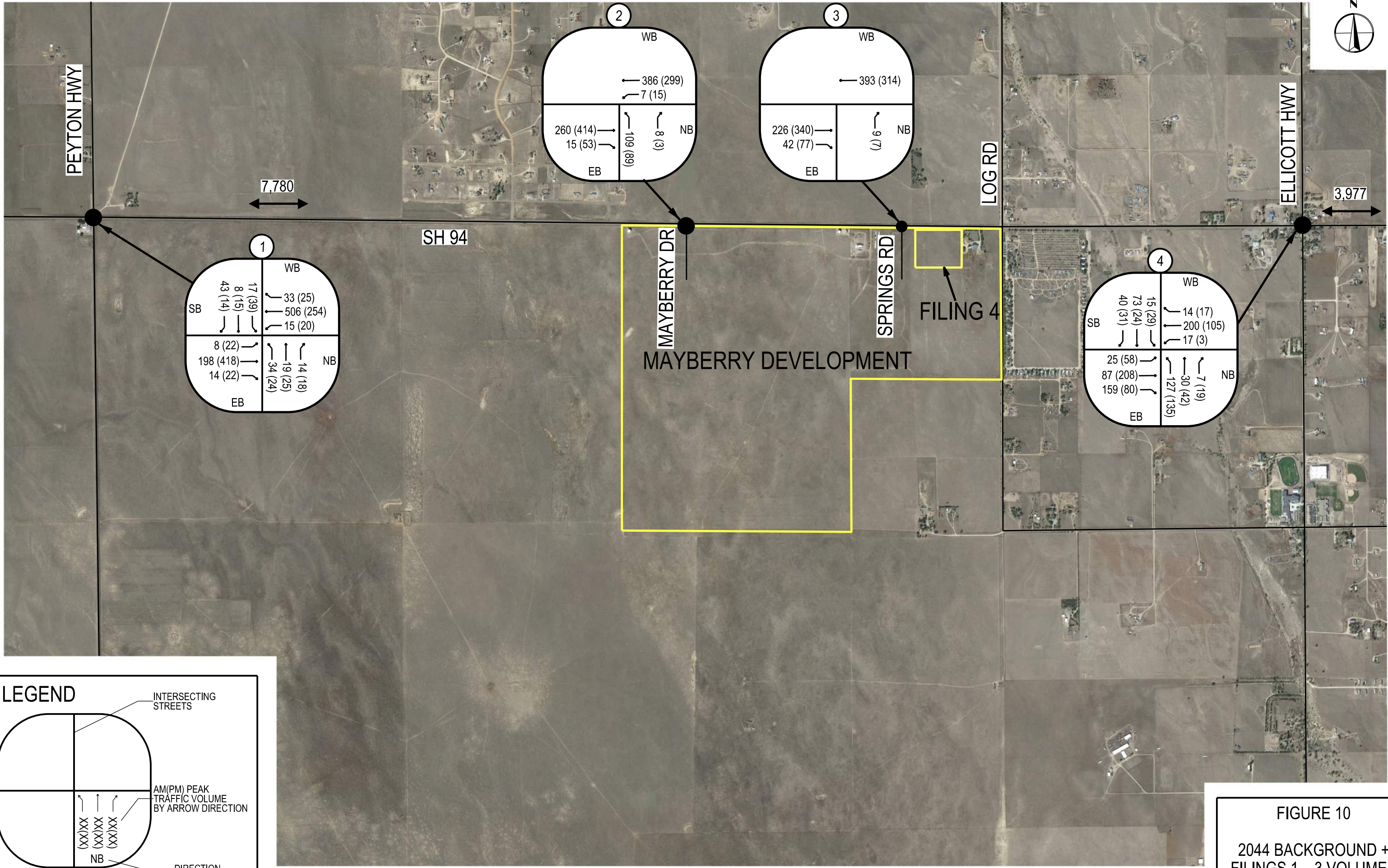
Ellicott Highway and SH 94

The intersection is anticipated to operate at LOS C under 2044 Background plus Filings 1-3 traffic conditions during the AM and PM peak hours. There are no improvements recommended at this intersection as part of this TIS.

Table 8: 2044 Background plus Filings 1-3 Level of Service Summary

Intersection	2044 Background + Filings 1-3	
	AM	PM
Peyton Highway and SH 94	C (21.0)	C (21.8)
Mayberry Drive and SH 94	C (18.1)	C (19.4)
Springs Road and SH 94	A (9.6)	B (10.4)
Ellicott Highway and SH 94	C (23.3)	C (22.1)

Note: Highest delay minor street lane is reported for all unsignalized intersections.



7,780

3,977

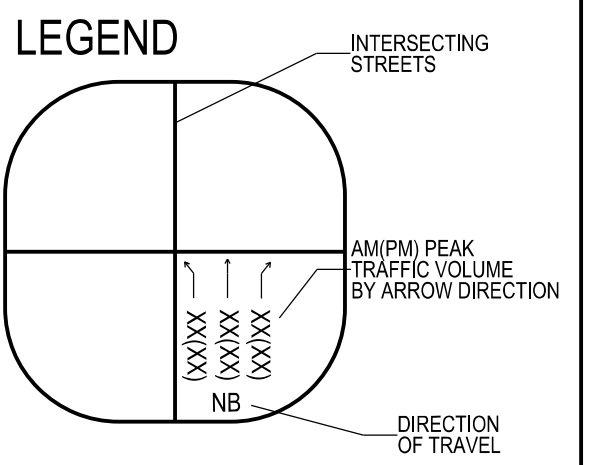
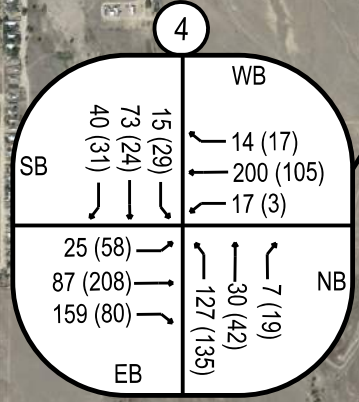
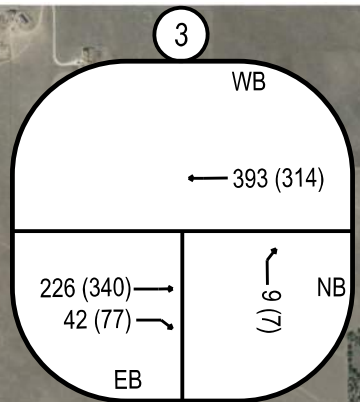
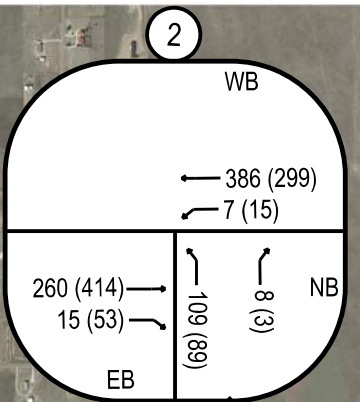
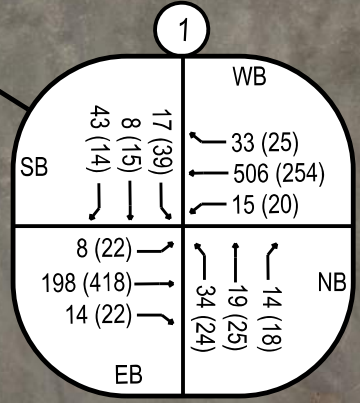


FIGURE 10
2044 BACKGROUND +
FILINGS 1 – 3 VOLUMES

Background Map Copyrighted by Google, 2022

2044 Background plus Filings 1-4 Traffic Conditions

The forecasted traffic was projected using the 2044 Background plus Filings 1-3 total traffic, plus Filing 4 traffic, and was used to assess the major roadway impacts and evaluate potential improvements. All analysis assumes the completion of roadway and intersection improvements upon which previous filings are contingent.

The LOS summary for the 2044 Background plus Filings 1-4 traffic conditions are described below. **Table 9** provides the summary of both LOS and delay. 2044 total traffic volumes, including Filing 4 site-generated traffic, are shown in **Figure 11**.

Peyton Highway and SH 94

The intersection is anticipated to operate at LOS C under 2044 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours. There are no improvements recommended at this intersection as part of this TIS.

Mayberry Drive and SH 94

The intersection is anticipated to operate at LOS C under 2044 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours with the improvements identified in Filings 1-3 assumed to be in place. There are no additional improvements recommended at this intersection as part of this TIS.

Springs Road and SH 94

The intersection is anticipated to operate at LOS A and B under 2044 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours, respectively. Assuming the improvements identified in previous Filings are provided, there are no additional improvements recommended at this intersection as part of this TIS.

Ellicott Highway and SH 94

The intersection is anticipated to operate at LOS C under 2044 Background plus Filings 1-4 traffic conditions during the AM and PM peak hours. There are no improvements recommended at this intersection as part of this TIS.

Table 9: 2044 Background plus Filings 1-4 Level of Service Summary

Intersection	2044 Background + Filings 1-4	
	AM	PM
Peyton Highway and SH 94	C (22.8)	C (23.5)
Mayberry Drive and SH 94	C (20.5)	C (21.7)
Springs Road and SH 94	A (9.6)	B (10.4)
Ellicott Highway and SH 94	C (24.0)	C (22.3)

Note: Highest delay minor street lane is reported for all unsignalized intersections.

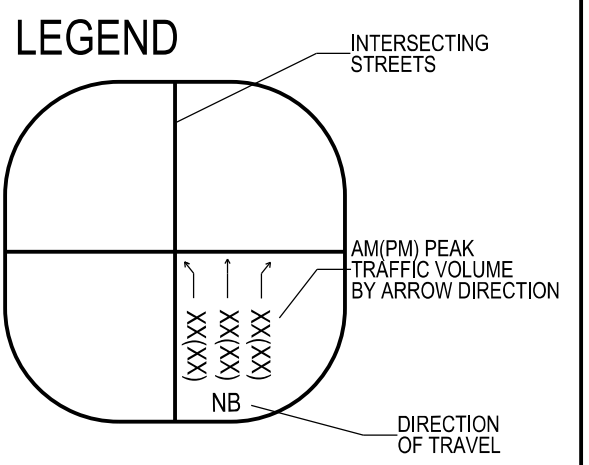
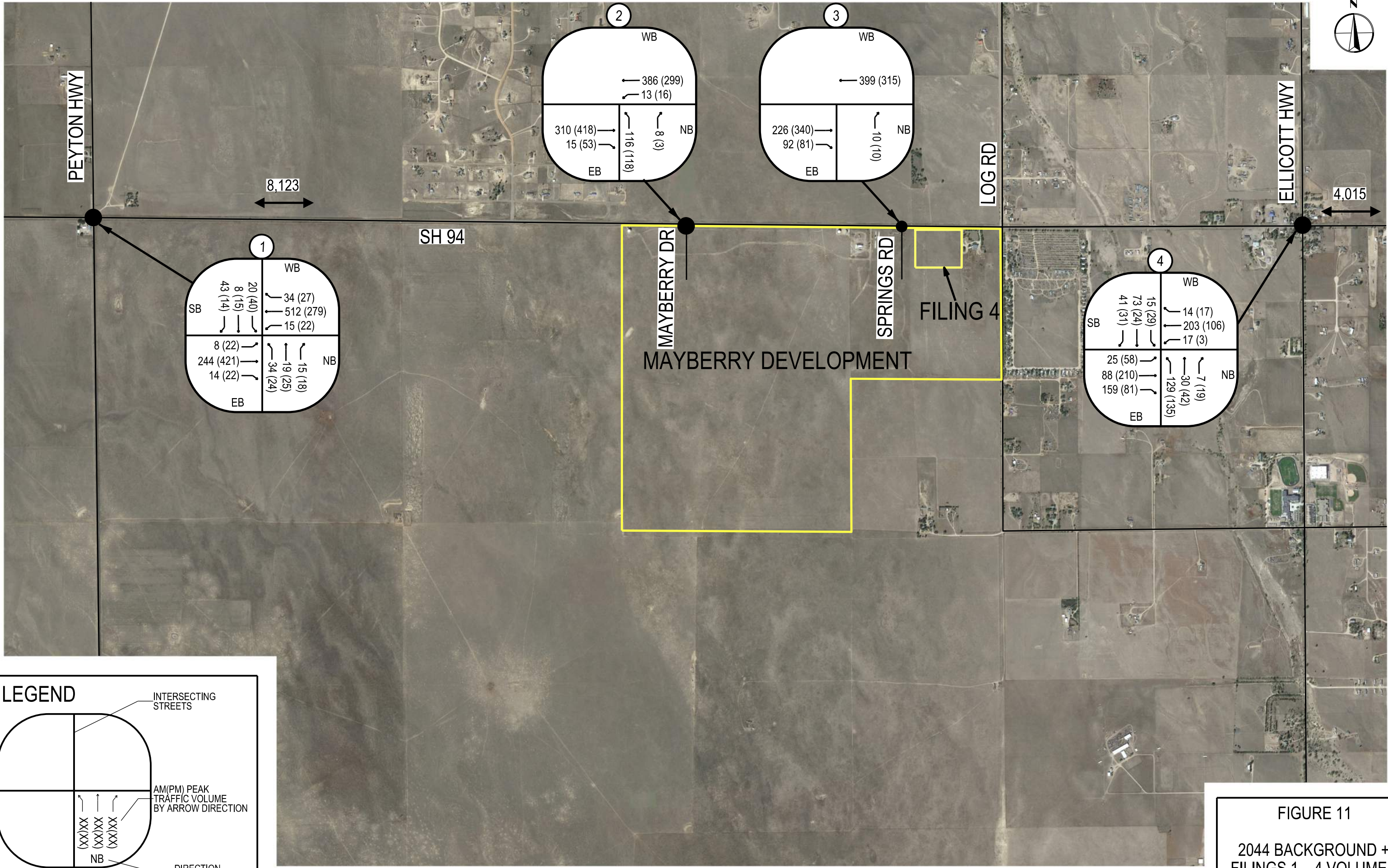


FIGURE 11
2044 BACKGROUND +
FILINGS 1 – 4 VOLUMES

Summary of Findings

The study area intersections on SH 94 are anticipated to operate at LOS C or better for all scenarios analyzed in this TIS. Therefore, the infrastructure that is anticipated to be in place by the time Filing 3 and Filing 4 are developed and operational are anticipated to have the capacity necessary to serve the generated traffic. No improvements are needed for the addition of Filing 4 to the Mayberry Communities Development. Intersection LOS and delay results are presented in **Table 10**. The Synchro 11 LOS calculation sheets for all scenarios are provided in **Appendix D**.

Table 12a from the *2020 - June - Ellicott Town Center Commercial Rezone TIS Report* summarized roadway improvements to be implemented with each Filing of the Mayberry Phase 1 development, and it was updated with each subsequent Filing to reflect the latest information regarding improvements. This table has been updated with the new street names, filing numbers, and improvements associated with Filing 4 of Mayberry Phase 1. The revised table is presented below as **Table 11** and shows that Filing 4 is only responsible for constructing access to its own site from Springs Road to the east.

Table 10: Level of Service Summary

Intersection	2026 Opening Year		2026 Background + Filings 1-3		2026 Background + Filings 1-4		2044 Horizon Year		2044 Background + Filings 1-3		2044 Background + Filings 1-4	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Highest delay minor street lane is reported for all unsignalized intersections.												
Peyton Highway and SH 94	B (14.3)	B (13.6)	C (17.3)	C (18.1)	C (18.5)	C (19.1)	C (16.7)	C (15.6)	C (21.0)	C (21.8)	C (22.8)	C (23.5)
Mayberry Drive and SH 94	-	-	C (15.7)	C (16.7)	C (17.5)	C (18.2)			C (18.1)	C (19.4)	C (20.5)	C (21.7)
Springs Road and SH 94	-	-	A (9.4)	B (10.0)	A (9.4)	B (10.0)			A (9.6)	B (10.4)	A (9.6)	B (10.4)
Ellicott Highway and SH 94	C (16.4)	C (16.0)	C (17.2)	C (16.7)	C (17.5)	C (16.8)	C (21.8)	C (20.7)	C (23.3)	C (22.1)	C (24.0)	C (22.3)

Note: Highest delay minor street lane is reported for all unsignalized intersections.

Table 11: El Paso County Roadway Improvements

El Paso County Roadway Improvements Revised January 2024			
Item	Improvement	Timing	Responsibility
1	Mayberry Drive (formerly New Log Road) (Highway 94 south into the project) construct as an Urban Minor Arterial per the PUD	With Filing No. 1: <i>Note: Phased half-section (northbound couplet) for Filing 1 and full couplet segments beyond Filing 1 per the PUD plans.</i>	Applicant
2a	Positive Place (formerly Mayberry Drive) (Garden Park Avenue to Springs Road) construct as a gravel, secondary access road	With Filing No. 1: <i>Note: An interim gravel street connection (to be paved once ADT exceeds 200 vpd) will be provided with Filing No. 1.</i>	Applicant
2b	Positive Place (formerly Mayberry Drive) - construct half - section	With Filing No. 3.	Applicant
2c	Positive Place (formerly Mayberry Drive) - Complete Full section (IE construct the remaining half - section)	Future - To be determined w/Future PUDs beyond Phase 1.	Applicant
3	Springs Road (Highway 94 south into the project) construct street with 65' ROW; design attributes to meet Urban Collector standards.	With Filing No. 1: The classification of Springs Road is: Urban Minor Collector with 65' of ROW adjacent to Filings 2 and an Urban Local with 65' of ROW south of that point adjacent to Filing No. 3. Design attributes will meet Collector standards.	Applicant
4	Cattlemen Run west of Springs Road into Filing Nos. 2 and 2A as a Local Street	With Filing Nos. 2 and 2a.	Applicant
5	Cattlemen Run east of Springs Road (into Filing No. 4 commercial development east of Springs Road) as a Local Street	With Filing No. 4.	Applicant
6	Positive Place (formerly Mayberry Drive) & Springs Road Intersection	With Filing No. 3. - Construct as a one-lane roundabout intersection.	Applicant
7	Besseyi Way & Springs Road Intersection	With Filing No. 3. Construct as four leg, conventional, two-way, stop-sign controlled (TWSC) intersection.	Applicant

Mayberry ADT Threshold

Mayberry Drive is a proposed Minor Arterial roadway which is planned to be constructed as a couplet, with two separate two-lane, one-way roadways separated by a large parkway. The ultimate northbound-only portion of the couplet has been constructed and is proposed for interim use for both directions of travel. The *2022 - September - Mayberry Filing No. 3 Traffic Technical Memorandum* stated that a volume of over 3,000 vehicles per day on Mayberry Drive would require the couplet southbound lanes built. As shown in Tables 3 and 5, the total trip generation for Filings 1-4, including trips projected to use Springs Road instead of Mayberry Drive, would be 2,801 ADT. Therefore, traffic would remain under the 3,000 ADT threshold and Mayberry Drive would not need to be upgraded to the full couplet.

CDOT Permits

Because the posted speed limit on SH 94 is greater than 40 MPH, auxiliary turn lanes may be necessary for public safety and traffic operations. These requirements have been explored in the previously submitted TIS and are currently being implemented at Mayberry Drive and SH 94 and have been completed in 2022 for Springs Road and SH 94.

Road Impact Fees

The Filing 4 development will be subject to fees addressed through El Paso County's Road Impact Fee schedule. Since Filing 4 has been rezoned to Commercial Services, the future developments within Filing 4 will pay Road Impact Fees per Resolution 19-471 at the time of building permit approval as calculated in their individual TIS or site development plan. The specific PID option (or opt-out option) will be provided with the plats.

Deviations

Refer to the *Mayberry Phase 1 PUD Amendment Transportation Memorandum* dated February 17, 2022 (Ref. 7), and the *Mayberry Filing 3 TIS*, dated September 1, 2022, which contain an "Approved Deviations" section. No additional deviations from the El Paso County Engineering Criteria Manual are proposed with the development of Filing 4. **Appendix E** contains excerpts from the previous TIS reports describing the approved deviations.

References

1. 2020 - June - Ellicott Town Center Commercial Rezone TIS Report, LSC, PCD File Nos. CS192 & SF1910
2. 2022 - September - Mayberry Filing No. 3, LSC, PCD File No. SF2219
3. Transportation Research Board 2016 Highway Capacity Manual, 6th Edition, Washington, D.C.
4. El Paso County 2016 Major Transportation Corridor Plan Update
5. El Paso County Engineering Criteria Manual Appendix B, October 14, 2020
6. Institute of Transportation Engineers 2017 Trip Generation Manual, An Informational Report, 11th Edition, Washington D.C.
7. 2022 - February - Mayberry Phase 1 PUD Amendment Memo, LSC, PCD File No. PUDSP219
8. Trafficware Ltd 2017 Synchro 11, Sugar Land, Texas

Appendix A: Highway Capacity Manual Description

HCM Unsignalized Intersection Level of Service

Unsignalized intersections were analyzed for this study. Unsignalized intersection LOS is defined in terms of average control delay and, in some cases, volume to capacity (v/c) ratio. Control delay is that portion of total delay attributed to traffic control measures, either traffic signals or stop signs. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

For two-way stop-controlled intersections, the analysis method assumes that major street-through traffic is not affected by minor street flows. Major street left-turning traffic and the traffic on the minor approaches will be affected by opposing movements. Stop or yield signs are used to assign the right-of-way to the major street, and this designation forces drivers on the controlled street to judgmentally select gaps in the major street flow through which to execute crossing or turning maneuvers. Thus, the capacity of the controlled legs is based on two factors:

- The distribution of gaps in the major street traffic stream.
- Driver judgment in selecting gaps through which to execute their desired maneuvers.

The LOS procedure computes a capacity for each movement based on the critical time gap required to complete the maneuver and the volume of traffic that is opposing the movement. The average control delay for any particular movement is calculated as a function of the capacity of the approach and the degree of saturation (v/c ratio). The degree of saturation is defined as the volume for a movement, expressed as an hourly flow rate, divided by the movement's capacity, expressed as an hourly flow rate. With the HCM 6 methodology (Ref. 3), overall intersection LOS is best quantified based on minor street movement average control delay. The HCM 6 methodology adjusts individual movement delay to account for a degree of saturation (v/c ratio) that is greater than 1.0. Those movements are assigned a LOS of F, regardless of the average control delay. Engineering judgment must be used to determine which minor street movement controls for overall intersection LOS and whether unacceptable LOS on minor street movements appropriately reflects unacceptable LOS for the overall intersection.

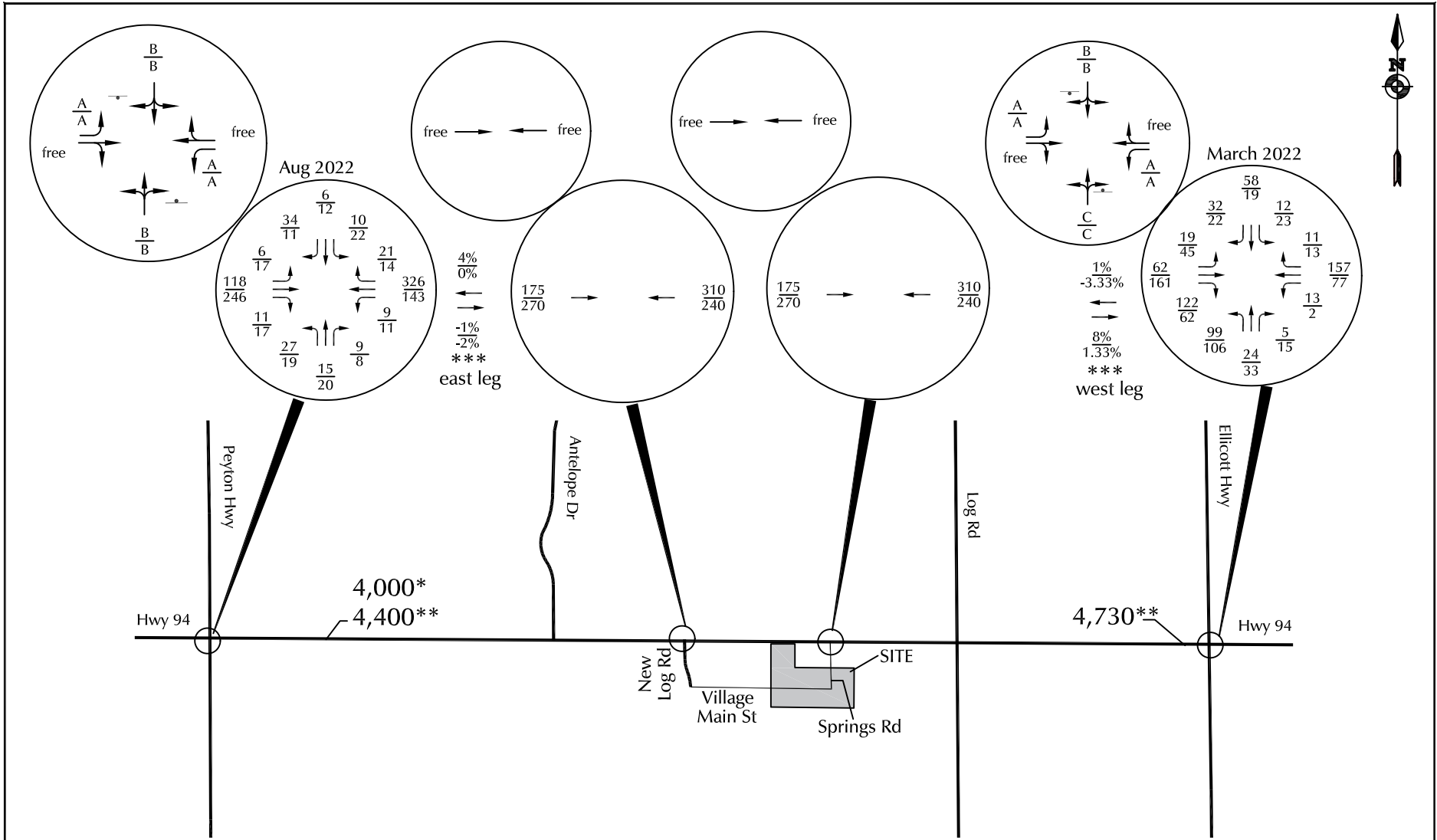
Table 2 shows the relationship between the average control delay and the LOS. The LOS range for unsignalized intersections is different than that for signalized intersections, and this difference is because drivers expect different levels of performance from other kinds of transportation facilities. Unsignalized intersections carry less traffic volume than signalized intersections, and delays at unsignalized intersections are variable. For these reasons, control delay would be less for an unsignalized intersection than for a signalized intersection. The overall approach LOS is computed as a weighted average of the vehicle delay for each movement; therefore, an approach may have an overall LOS of C or D and have individual movements, which are LOS E or F.

Analysis was performed using the microcomputer program "Synchro 11" (Ref. 6), based on the procedures contained in the Highway Capacity Manual.

**Table 1: Unsignalized Intersection:
Level of Service Measurement**

Level of Service	Control Delay Per Vehicle (sec)
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

Appendix B: Existing Traffic Volumes



LEGEND:

$\frac{XX}{XX}$ = AM Peak-Hour Traffic (veh/hr)
 $\frac{XX}{XX}$ = PM Peak-Hour Traffic (veh/hr)

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

* CDOT (2021) ** 2022 Estimate by LSC (based on 10x PM)










┆ = Stop Sign

***These percentages represent the change in intersection approach/departure leg volumes between those on Figure 3 of the 2020 TIS report and the current 2022 counts on these intersection legs. The change (+ or-) has been expressed as an annual growth rate (+ or-) since the prior counts were conducted.

Figure 3
**Existing Traffic, Lane
 Geometry, and Traffic Control**

Mayberry Filing No 3 (LSC# 224210)



	Station ID	Route	Start	End	Description	AADT	Year	Single Unit	Comb Trucks	% Trucks	20 Year Factor	DHV	DVMT	DD
	103943	094A	0.548	1	ON SH 94 E/O MARKSHEFFEL RD, COLORAD...	11,000	2022	180	140	2.9	1.24	12	5,170	63
	103944	094A	1	8.085	ON SH 94 E/O SPACE VILLAGE AVE CR 2804	11,000	2022	210	180	3.5	1.21	12	77,847	59
	103945	094A	8.085	9.094	ON SH 94 E/O CURTIS RD, CR 439	11,000	2022	170	140	2.8	1.21	14	10,967	62
	103946	094A	9.094	13.095	ON SH 94 E/O ENOCH RD, CR 441	5,400	2022	200	130	6.1	1.23	11	21,519	57
	103947	094A	13.095	17.1	ON SH 94 E/O PEYTON HWY, CR 463	4,500	2022	170	130	6.6	1.2	11	17,969	57
	103948	094A	17.1	24.022	ON SH 94 E/O ELLICOTT HWY, CR 493, ELL...	3,000	2022	110	110	7.3	1.23	12	20,694	57
	103949	094A	24.022	26.024	ON SH 94 E/O CALHAN HWY, CR 523	2,000	2022	60	130	9.4	1.18	11	4,002	57
	103950	094A	26.024	30.084	ON SH 94 E/O YODER RD, CR 1639	1,300	2022	70	80	10.8	1.23	11	5,221	57
	103951	094A	30.084	33.079	ON SH 94 E/O RAMAH HWY, CR 577	1,200	2022	70	110	14.5	1.18	11	3,578	57
	103952	094A	33.079	45.054	ON SH 94 E/O CR 2	680	2022	70	50	17.3	1.14	12	8,155	57
	103954	094A	45.054	54.581	ON SH 94 W/O SH 71, PUNKIN CENTER	420	2022	20	60	18.4	1.14	11	3,999	57
	103955	094A	54.581	86.174	ON SH 94 E/O SH 71, PUNKIN CENTER	440	2022	40	60	23.5	1.09	12	13,944	57

Appendix C: Letter of Intent

APPLICANT-OWNER/CONSULTANT INFORMATION:

OWNER/APPLICANT

MAYBERRY COMMUNITIES, LLC
428 GARDEN PARK AVENUE,
MAYBERRY, CO 80808
scottsouders@mayberrycoloradosprings.com
719-922-2181

PLANNING SUPPORT

KIMLEY-HORN AND ASSOCIATES, INC.
2 NORTH NEVADA AVENUE, SUITE 900
COLORADO SPRINGS, CO 80903
Larry.salazar@kimley-horn.com
719-284-7829

ENGINEERING/SURVEYING

R&R ENGINEERING AND SURVEYORS, INC.
1635 WEST 13TH AVENUE, SUITE 310
DENVER, CO 80204
cdayton@rrengineers.com
720-390-5513

LOCATION, ACREAGE, PARCEL ID INFO, & ZONING

The application for a map amendment (rezoning) includes Parcel No. 3414102015. The proposed rezoning is located near the southeast corner of the intersection of State Highway 94 and future Springs Road (see vicinity map insert and map exhibit for details). The total acreage of the proposed rezone is ±4.28. (Currently Zoned: Planned Unit Development [PUD]).



REQUEST

The application is to Rezone 4.28 acres from the PUD zone to the Commercial Services zoning district (CS). The application includes the following request:

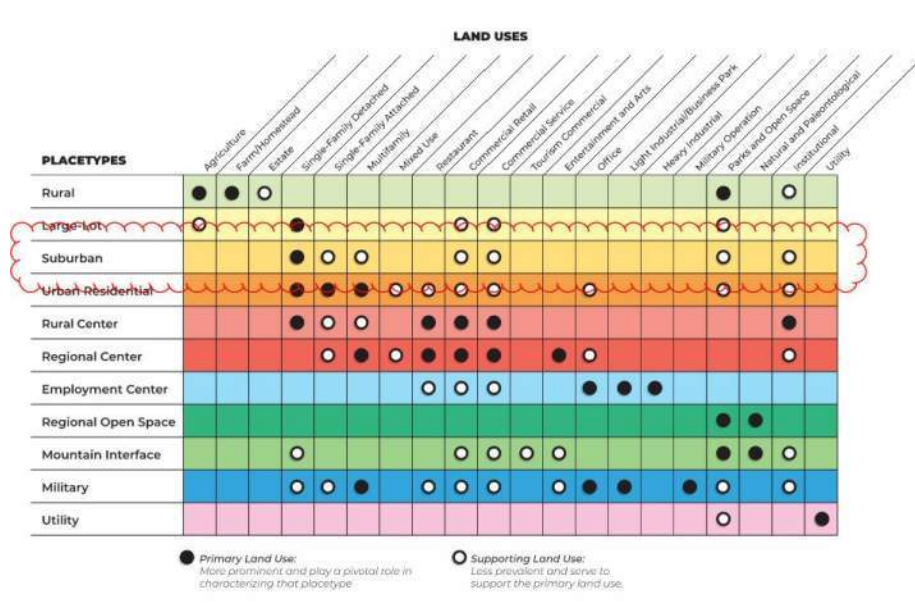
- Approval to rezone Parcel No. 3414102015 to CS to match adjacent Parcels, 3414102013 and 3414102014, located west of said parcel.
- The Rezone process is projected to run concurrently with the site development plan of all three parcels for the purpose of being replated at a later date to include a total of eight (8) commercial lots.
- The rezone of will be for light industrial use. Conditions of approval are guaranteed upon approval of the final plat, the traffic report shall be amended if alternative or intensive uses are proposed.

JUSTIFICATION

The applicant requests approval of the rezoning based on findings of compliance with the following Goals:

- Goal 1.1 - Ensure compatibility with established character and infrastructure capacity.
- Goal 1.3 - Encourage a range of development types to support a variety of land uses.

The proposed Rezone from the PUD district to the CS district provides opportunity for the developer to include additional commercial uses in this area, designating a CS zoned district creates a buffer from the residential use PUD development to the south from the State Highway 94 corridor. The proposed CS district and future plans to subdivide the parcels into eight (8) commercial lots allow the developer to maintain compliance with the previously approved Ellicott Town Center (SKP-05-005), soon to be amended to the proposed "Mayberry Communities Sketch Plan". In addition, the subject parcels directly abut State Highway 94 which is a busy corridor with vehicles traveling at high rates of speed creating above average noise. Providing commercial development directly adjacent to this expressway will act as a transition from this corridor into the Mayberry development. Furthermore, this commercial development, with any buffering and code compliant landscaping, will buffer future and planned residential developments in the surrounding area that are located within the Suburban and Rural placetypes to the east, west, and south.



Key Areas:

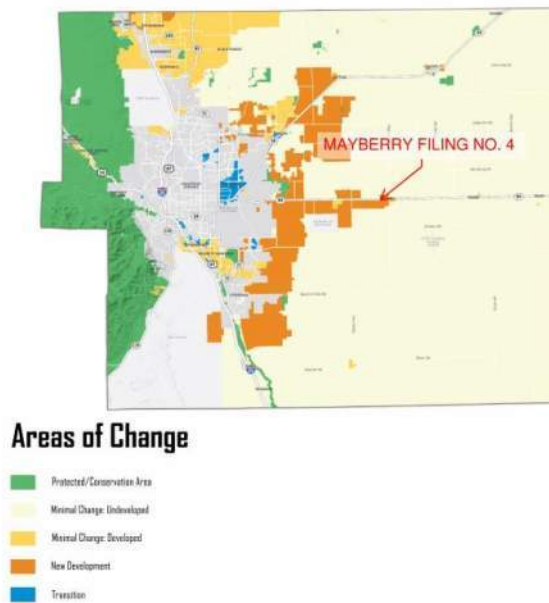


Key Areas

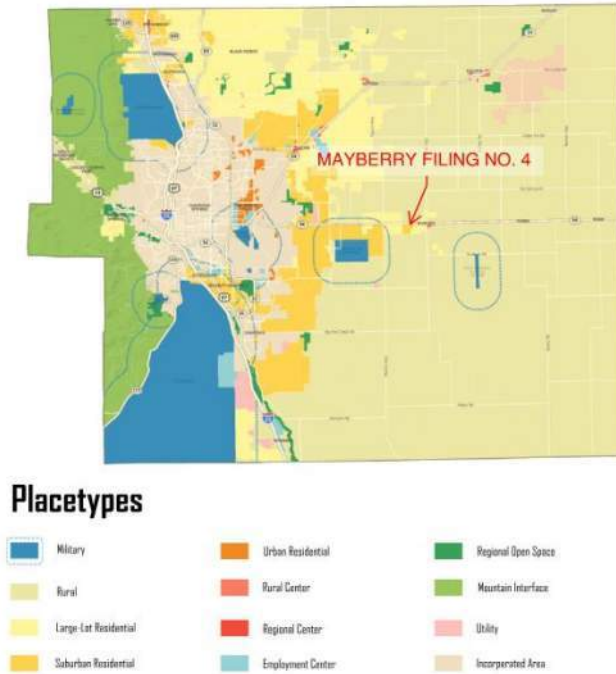
- Military Installations and 2-Mile Notification Zone
- Potential Area For Association
- Enclaves or Near-Enclaves
- Pikes Peak Influence Area
- Small Town & Rural Communities
- Forested Area
- Fountain Creek Watershed Flood Control & Greenway District
- Tri-Lakes Area
- Colorado Springs Airport/Petersen Air Force Base
- Uncommon Natural Resources

The property is not located within the ten (10) classifications of key areas.

Areas of Change:



Mayberry Filing No 4 Rezone is located in the area expected for “New Development”. It is understood that these areas will be significantly transformed as new development takes place on lands currently largely designated as undeveloped or agricultural areas. Undeveloped portions of the County that are adjacent to a built out area will be developed to match the character of that adjacent development or to a different supporting or otherwise complementary one, such as an employment hub or business park adjacent to an urban neighborhood.



Mayberry Filing No. 4 is located within the Suburban Residential type. This land use is designated for Suburban Residential, Traditional Residential neighborhoods with supporting commercial uses at key intersections. The Suburban place type generally supports the proposed development pattern and the support of limited accessory dwelling units as well.

- The rezone would be consistent with this placetype.
- The rezone and the code would protect the intent of the Placetype, by the procedures and standards intended to promote safe and orderly development.
- The proposal would provide for the land uses in relation to existing and predicted patterns of growth in the area.
- The proposal is consistent with available and necessary services.
- The rezone would have no impact on any currently approved sketch plans.

Sec. 5.3.5.B Map Amendment (Rezoning)

(B) Criteria for Approval. In approving a Map Amendment, the following findings shall be made:

- The application is in general conformance with the El Paso County Master Plan including applicable Small Area Plans or there has been a substantial change in the character of the neighborhood since the land was last zoned;

The site, and zone change are in conformance with the El Paso County Master Plan, the rezone is a minor portion of the overall Mayberry Communities Sketch Plan Amendment (SKP-05-005), adjacent properties are zoned CS and PUD.

- The rezoning is in compliance with all applicable statutory provisions, including but not limited to C.R.S. § 30-28-111 § 30-28-113, and § 30-28-116;
The requested rezone is in compliance with applicable statutory provisions.
- The proposed land use or zone district is compatible with the existing and permitted land uses and zone districts in all directions;
The proposed land use of CS is adjacent to existing CS zones and is in compliance with the existing Sketch Plan (SKP-05-005) and proposed Mayberry Communities Sketch Plan Amendment, to be approved.
- The site is suitable for the intended use, including the ability to meet the standards as described in Chapter 5 of the Land Development Code, for the intended zone district.
Site is suitable for intended use.

Water Master Plan:

Under the Colorado Revised Statutes, Title 32. This property is within the Ellicott Utilities district boundary and will consistently follow the rules and regulations per the El Paso County Water Master Plan,

- A sufficient water supply has been clarified or provided through existing private wells. The wells have been permitted per quantity and quality standards set forth in the State water supply standards.

Wastewater systems:

- Wastewater services will be provided by way of Ellicott Utilities district boundary.

Electric

- Electric service will be provided through Mountain View Electric.

Gas

- Gas service will be provided through Black Hills Energy.

Natural or Physical site features:

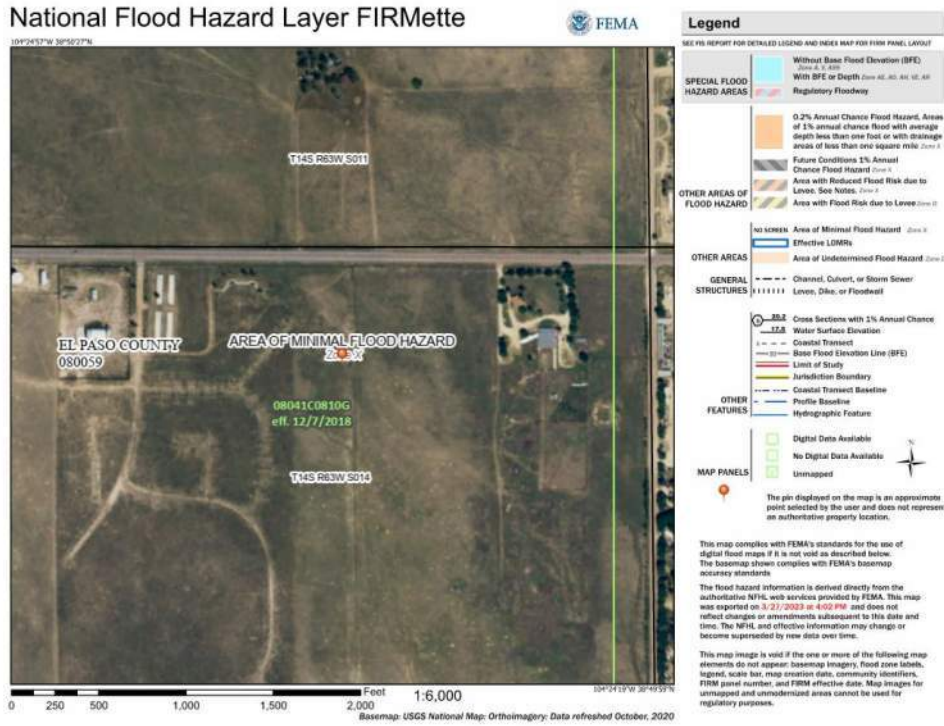
The Zone Change will support the preservation of the natural features and drainages of the site and surrounding lands:

- Site Natural Features:
 - Site is located within the Ellicott Consolidated drainage basin (CHWS0200). Data provided by Muller Engineering Company; (1988)

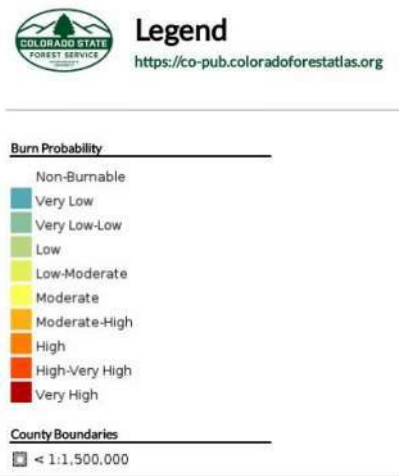
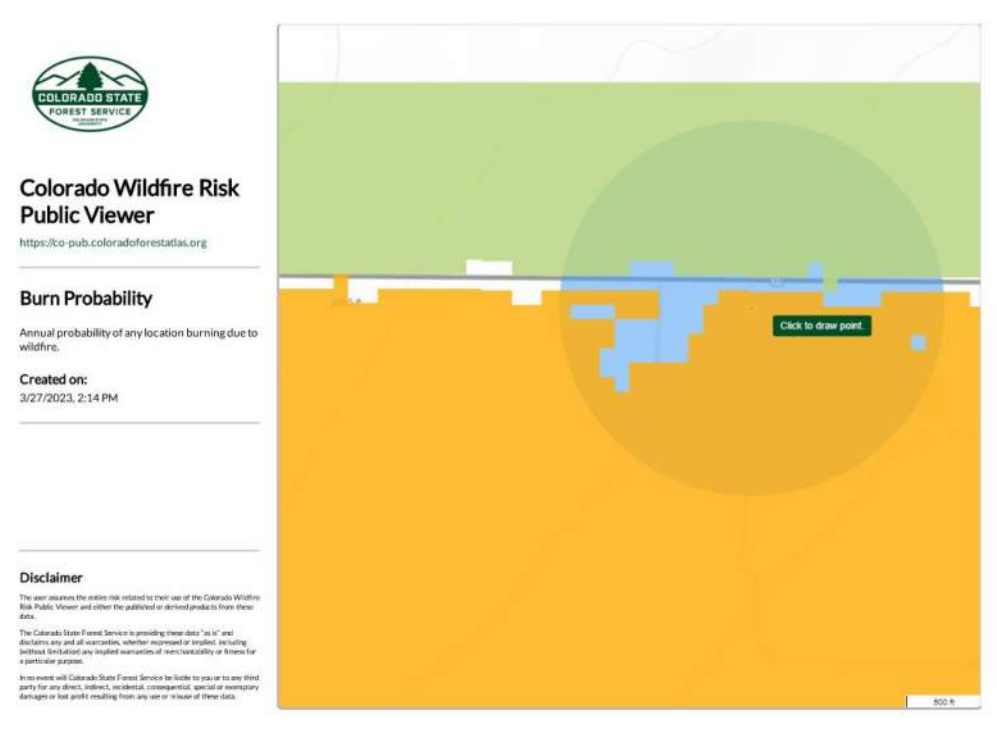


- The topography of the site includes rolling hills with one drainage way, extending from north to south through the property. The existing drainage ways are wide and without a defined flow path; no erosion is anticipated.

- o The site consists of;
 - An area of minimal flood hazard "Zone X" per the National Flood Hazard Layer FIRMette (08041C0820G)



- o Said Site is mapped as low to moderate-high per the wildfire risk public viewer.



Wildlife:

Impacts are expected to be very low.

Community Outreach:

Summarizing any community outreach efforts by the applicant that have occurred or are planned as part of the request.

- **Adjacent owner notification letters were sent out 3/24/2023 informing neighbors that a rezone and replat of said property will be completed. No comments have been received at this time.**
- **No additional community outreach has been conducted on the zone change to date.**

A Summary of anticipated traffic generation and access

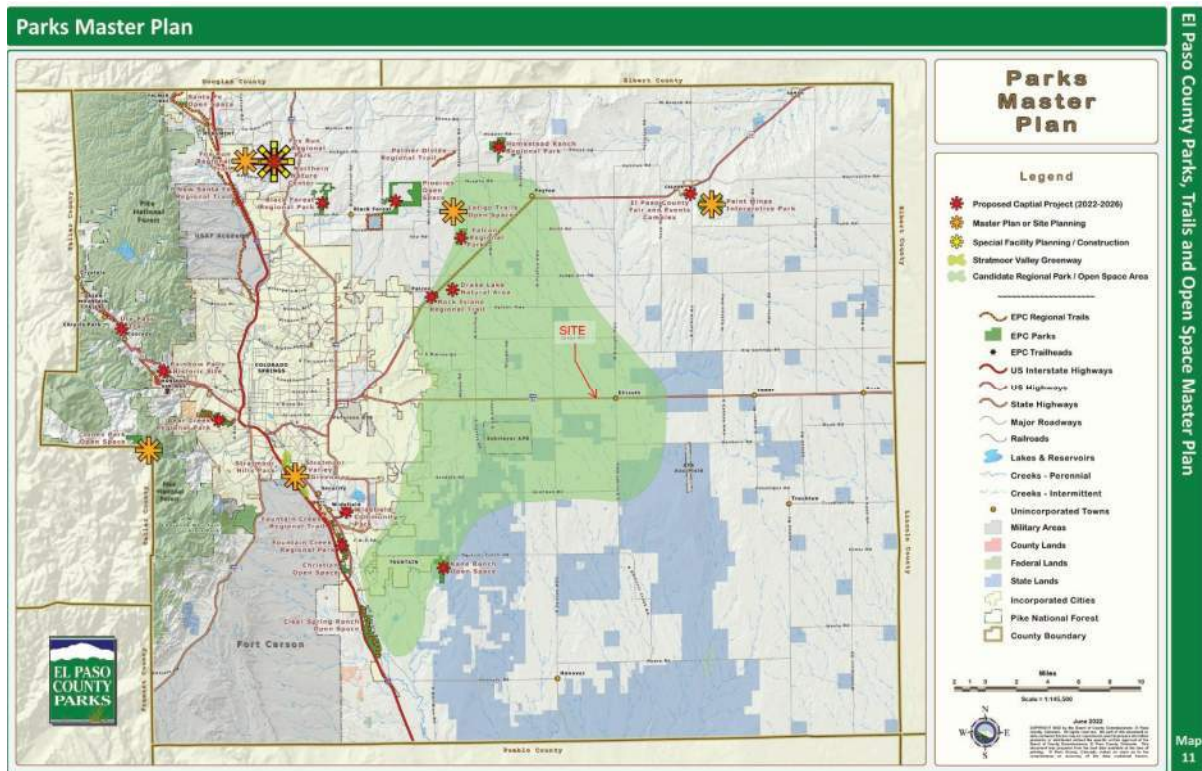
A traffic study has been completed by HDR Engineering, Inc.

- The intersection will operate at LOS A and B under 2024 site plus forecasted traffic conditions during the AM and PM peak periods, respectively. Assuming the connections at both New Log Road and Springs Road are provided, there are no improvements recommended at this intersection as part of this TIS.
- Intersections adjacent to the development on SH 94 will operate at LOS C or better for all scenarios analyzed in this TIA. Therefore, the infrastructure that is anticipated to be in place by the time Filing 3 and Filing 4 are developed and occupied will have the capacity to handle the generated traffic. No improvements are needed for the addition of Filing 4 to the Mayberry Communities development. Intersection LOS and delay results are presented in Table 7 below.

Table 7: Level of Service Summary

Intersection	2024 Existing		2024 Background + Filings 1,2 & ,3		2024 Background + Filing 4	
	AM	PM	AM	PM	AM	PM
Highest delay minor street approach is reported for all unsignalized intersections.						
Peyton Highway and SH 94	B (14.1)	B (13.5)	C (15.8)	C (18.7)	C (16.7)	C (19.8)
New Log Road and SH 94	-	-	B (14.5)	B (15.4)	C (15.2)	C (16.4)
Springs Road and SH 94	-	-	A (9.2)	B (10.1)	A (9.2)	B (10.2)
Ellicott Highway and SH 94	C (16.0)	C (15.5)	C (16.7)	C (16.4)	C (16.9)	C (16.5)

Parks Master Plan



The site can is located in the “Candidate for Regional Park/Open Space Areas”.

The Developer of the Mayberry Communities Sketch Plan Amendment has the intention to incorporate Filing No. 4 with trails for connectivity to parks throughout the Proposed Mayberry Communities Sketch Plan Amendment.

Connectivity throughout said sketch plan will help with the work live play aspect allowing individuals to live and work within 5-minute walk.

The proposed Sketch Plan Amendment, to be recorded, incorporates the goals and objectives of the El Paso County Parks Master Plan.

Goal 1.B to provide and support large community events and provide visitor destinations and experiences between parks within the Sketch Plan Amendment, to be recorded.

Goal 2.A to provide regional parks, recreation areas, trails and open space

Goal 2.B to continue participation in development review for long range planning within the El Paso County development services, transportation and public park needs to anticipate future growth.

Goal 3.A to refine the definition of active trails between residential and commercial uses.

Regional Trails

Goal 1.A a regional trail is proposed along the State Highway 94 corridor, Mayberry Communities Sketch Plan Amendment, to be approved, acknowledges the proposed regional trail system and has incorporated an east/west trail within the community that ties into the adjacent proposed trail easement.

Additional Park and Open Space items are to be provided on the Proposed Mayberry Communities Sketch Plan Amendment (SKP-05-005).

Appendix D: Synchro Outputs

HCM 6th TWSC
1: Peyton Highway & SH 94

12/22/2023

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	7	123	12	10	340	22	29	16	10	11	7	36
Future Vol, veh/h	7	123	12	10	340	22	29	16	10	11	7	36
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	134	13	11	370	24	32	17	11	12	8	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	394	0	0	147	0	0	585	573	141	575	567	382
Stage 1	-	-	-	-	-	-	157	157	-	404	404	-
Stage 2	-	-	-	-	-	-	428	416	-	171	163	-
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	1165	-	-	1435	-	-	422	430	907	429	433	665
Stage 1	-	-	-	-	-	-	845	768	-	623	599	-
Stage 2	-	-	-	-	-	-	605	592	-	831	763	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1165	-	-	1435	-	-	387	424	907	406	427	665
Mov Cap-2 Maneuver	-	-	-	-	-	-	387	424	-	406	427	-
Stage 1	-	-	-	-	-	-	839	763	-	619	594	-
Stage 2	-	-	-	-	-	-	558	587	-	797	758	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			14.3			12.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	445	1165	-	-	1435	-	-	553
HCM Lane V/C Ratio	0.134	0.007	-	-	0.008	-	-	0.106
HCM Control Delay (s)	14.3	8.1	-	-	7.5	-	-	12.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.4

HCM 6th TWSC
2: Ellicott Highway & SH 94

12/22/2023

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	20	65	127	14	164	12	104	25	6	13	61	34
Future Vol, veh/h	20	65	127	14	164	12	104	25	6	13	61	34
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	71	138	15	178	13	113	27	7	14	66	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	191	0	0	209	0	0	450	405	140	416	468	185
Stage 1	-	-	-	-	-	-	184	184	-	215	215	-
Stage 2	-	-	-	-	-	-	266	221	-	201	253	-
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	1383	-	-	1362	-	-	519	535	908	547	493	857
Stage 1	-	-	-	-	-	-	818	747	-	787	725	-
Stage 2	-	-	-	-	-	-	739	720	-	801	698	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1383	-	-	1362	-	-	435	521	908	511	480	857
Mov Cap-2 Maneuver	-	-	-	-	-	-	435	521	-	511	480	-
Stage 1	-	-	-	-	-	-	805	735	-	774	717	-
Stage 2	-	-	-	-	-	-	635	712	-	754	687	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.6			16.4			13.1		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	460	1383	-	-	1362	-	-	562
HCM Lane V/C Ratio	0.319	0.016	-	-	0.011	-	-	0.209
HCM Control Delay (s)	16.4	7.6	-	-	7.7	-	-	13.1
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.4	0	-	-	0	-	-	0.8

HCM 6th TWSC
1: Peyton Highway & SH 94

12/22/2023

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	18	256	18	12	149	15	20	21	9	23	13	12
Future Vol, veh/h	18	256	18	12	149	15	20	21	9	23	13	12
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	278	20	13	162	16	22	23	10	25	14	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	178	0	0	298	0	0	538	532	288	541	534	170
Stage 1	-	-	-	-	-	-	328	328	-	196	196	-
Stage 2	-	-	-	-	-	-	210	204	-	345	338	-
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	1398	-	-	1263	-	-	454	453	751	452	452	874
Stage 1	-	-	-	-	-	-	685	647	-	806	739	-
Stage 2	-	-	-	-	-	-	792	733	-	671	641	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1398	-	-	1263	-	-	428	442	751	420	441	874
Mov Cap-2 Maneuver	-	-	-	-	-	-	428	442	-	420	441	-
Stage 1	-	-	-	-	-	-	675	638	-	795	732	-
Stage 2	-	-	-	-	-	-	757	726	-	629	632	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.5			13.6			13.2		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	471	1398	-	-	1263	-	-	490
HCM Lane V/C Ratio	0.115	0.014	-	-	0.01	-	-	0.106
HCM Control Delay (s)	13.6	7.6	-	-	7.9	-	-	13.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.4

HCM 6th TWSC
2: Ellicott Highway & SH 94

12/22/2023

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	47	168	65	3	81	14	111	35	16	24	20	23
Future Vol, veh/h	47	168	65	3	81	14	111	35	16	24	20	23
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	183	71	3	88	15	121	38	17	26	22	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	103	0	0	254	0	0	446	430	219	450	458	96
Stage 1	-	-	-	-	-	-	321	321	-	102	102	-
Stage 2	-	-	-	-	-	-	125	109	-	348	356	-
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	1489	-	-	1311	-	-	523	518	821	519	499	960
Stage 1	-	-	-	-	-	-	691	652	-	904	811	-
Stage 2	-	-	-	-	-	-	879	805	-	668	629	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1489	-	-	1311	-	-	478	499	821	465	481	960
Mov Cap-2 Maneuver	-	-	-	-	-	-	478	499	-	465	481	-
Stage 1	-	-	-	-	-	-	668	630	-	873	809	-
Stage 2	-	-	-	-	-	-	831	803	-	593	608	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.2			16			12.2		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	503	1489	-	-	1311	-	-	572
HCM Lane V/C Ratio	0.35	0.034	-	-	0.002	-	-	0.127
HCM Control Delay (s)	16	7.5	-	-	7.8	-	-	12.2
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.6	0.1	-	-	0	-	-	0.4

HCM 6th TWSC
1: Peyton Highway & SH 94

12/22/2023

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	7	174	12	13	440	28	29	16	12	15	7	36
Future Vol, veh/h	7	174	12	13	440	28	29	16	12	15	7	36
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	189	13	14	478	30	32	17	13	16	8	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	508	0	0	202	0	0	757	748	196	748	739	493
Stage 1	-	-	-	-	-	-	212	212	-	521	521	-
Stage 2	-	-	-	-	-	-	545	536	-	227	218	-
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	1057	-	-	1370	-	-	324	341	845	329	345	576
Stage 1	-	-	-	-	-	-	790	727	-	539	532	-
Stage 2	-	-	-	-	-	-	523	523	-	776	723	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1057	-	-	1370	-	-	293	335	845	307	339	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	293	335	-	307	339	-
Stage 1	-	-	-	-	-	-	784	721	-	535	527	-
Stage 2	-	-	-	-	-	-	476	518	-	740	717	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			17.3			14.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	354	1057	-	-	1370	-	-	439
HCM Lane V/C Ratio	0.175	0.007	-	-	0.01	-	-	0.144
HCM Control Delay (s)	17.3	8.4	-	-	7.7	-	-	14.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.5

HCM 6th TWSC
2: Ellicott Highway & SH 94

12/22/2023

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	21	74	134	14	168	12	107	25	6	13	61	34
Future Vol, veh/h	21	74	134	14	168	12	107	25	6	13	61	34
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	80	146	15	183	13	116	27	7	14	66	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	196	0	0	226	0	0	470	425	153	436	492	190
Stage 1	-	-	-	-	-	-	199	199	-	220	220	-
Stage 2	-	-	-	-	-	-	271	226	-	216	272	-
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	1377	-	-	1342	-	-	504	521	893	531	478	852
Stage 1	-	-	-	-	-	-	803	736	-	782	721	-
Stage 2	-	-	-	-	-	-	735	717	-	786	685	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1377	-	-	1342	-	-	420	506	893	495	465	852
Mov Cap-2 Maneuver	-	-	-	-	-	-	420	506	-	495	465	-
Stage 1	-	-	-	-	-	-	789	723	-	769	713	-
Stage 2	-	-	-	-	-	-	631	709	-	738	673	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.6			17.2			13.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	444	1377	-	-	1342	-	-	547
HCM Lane V/C Ratio	0.338	0.017	-	-	0.011	-	-	0.215
HCM Control Delay (s)	17.2	7.7	-	-	7.7	-	-	13.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0	-	-	0.8

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Vol, veh/h	225	15	7	323	109	8
Future Vol, veh/h	225	15	7	323	109	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	16	8	351	118	9

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	261	0	612	245
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	367	-
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	-	-	1303	-	456	794
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	701	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1303	-	453	794
Mov Cap-2 Maneuver	-	-	-	-	453	-
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	697	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	15.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	453	794	-	-	1303	-
HCM Lane V/C Ratio	0.262	0.011	-	-	0.006	-
HCM Control Delay (s)	15.7	9.6	-	-	7.8	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	1	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	191	42	0	330	0	9
Future Vol, veh/h	191	42	0	330	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	208	46	0	359	0	10

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	208
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	832
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	832
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	832	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s)	9.4	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	18	367	18	18	225	22	20	21	17	34	13	12
Future Vol, veh/h	18	367	18	18	225	22	20	21	17	34	13	12
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	399	20	20	245	24	22	23	18	37	14	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	269	0	0	419	0	0	760	758	409	767	756	257
Stage 1	-	-	-	-	-	-	449	449	-	297	297	-
Stage 2	-	-	-	-	-	-	311	309	-	470	459	-
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	1295	-	-	1140	-	-	323	336	642	319	337	782
Stage 1	-	-	-	-	-	-	589	572	-	712	668	-
Stage 2	-	-	-	-	-	-	699	660	-	574	566	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1295	-	-	1140	-	-	299	325	642	286	326	782
Mov Cap-2 Maneuver	-	-	-	-	-	-	299	325	-	286	326	-
Stage 1	-	-	-	-	-	-	580	563	-	701	656	-
Stage 2	-	-	-	-	-	-	661	648	-	527	558	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.6			16.8			18.1		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	367	1295	-	-	1140	-	-	339
HCM Lane V/C Ratio	0.172	0.015	-	-	0.017	-	-	0.189
HCM Control Delay (s)	16.8	7.8	-	-	8.2	-	-	18.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.7

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	48	175	67	3	90	14	114	35	16	24	20	26
Future Vol, veh/h	48	175	67	3	90	14	114	35	16	24	20	26
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	190	73	3	98	15	124	38	17	26	22	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	263	0	0	468	450	227	470	479	106
Stage 1	-	-	-	-	-	-	331	331	-	112	112	-
Stage 2	-	-	-	-	-	-	137	119	-	358	367	-
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	1476	-	-	1301	-	-	505	504	812	504	486	948
Stage 1	-	-	-	-	-	-	682	645	-	893	803	-
Stage 2	-	-	-	-	-	-	866	797	-	660	622	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1476	-	-	1301	-	-	459	485	812	451	468	948
Mov Cap-2 Maneuver	-	-	-	-	-	-	459	485	-	451	468	-
Stage 1	-	-	-	-	-	-	658	622	-	862	801	-
Stage 2	-	-	-	-	-	-	815	795	-	585	600	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0.2			16.7			12.3		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	485	1476	-	-	1301	-	-	567
HCM Lane V/C Ratio	0.37	0.035	-	-	0.003	-	-	0.134
HCM Control Delay (s)	16.7	7.5	-	-	7.8	-	-	12.3
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0	-	-	0.5

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Vol, veh/h	358	53	15	250	89	3
Future Vol, veh/h	358	53	15	250	89	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	389	58	16	272	97	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	447	0	693
Stage 1	-	-	-	-	389
Stage 2	-	-	-	-	304
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1113	-	409
Stage 1	-	-	-	-	685
Stage 2	-	-	-	-	748
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1113	-	403
Mov Cap-2 Maneuver	-	-	-	-	403
Stage 1	-	-	-	-	685
Stage 2	-	-	-	-	738

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	403	659	-	-	1113	-
HCM Lane V/C Ratio	0.24	0.005	-	-	0.015	-
HCM Control Delay (s)	16.7	10.5	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	284	77	0	265	0	7
Future Vol, veh/h	284	77	0	265	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	309	84	0	288	0	8

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	309
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	731
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	731
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	731	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	10	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	7	220	12	13	445	29	29	16	13	18	7	36
Future Vol, veh/h	7	220	12	13	445	29	29	16	13	18	7	36
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	239	13	14	484	32	32	17	14	20	8	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	516	0	0	252	0	0	814	806	246	805	796	500
Stage 1	-	-	-	-	-	-	262	262	-	528	528	-
Stage 2	-	-	-	-	-	-	552	544	-	277	268	-
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	1050	-	-	1313	-	-	297	316	793	301	320	571
Stage 1	-	-	-	-	-	-	743	691	-	534	528	-
Stage 2	-	-	-	-	-	-	518	519	-	729	687	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1050	-	-	1313	-	-	268	310	793	279	314	571
Mov Cap-2 Maneuver	-	-	-	-	-	-	268	310	-	279	314	-
Stage 1	-	-	-	-	-	-	737	685	-	530	522	-
Stage 2	-	-	-	-	-	-	470	513	-	693	682	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			18.5			15.6		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	329	1050	-	-	1313	-	-	407
HCM Lane V/C Ratio	0.192	0.007	-	-	0.011	-	-	0.163
HCM Control Delay (s)	18.5	8.5	-	-	7.8	-	-	15.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.6

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	21	75	134	14	171	12	109	25	6	13	61	35
Future Vol, veh/h	21	75	134	14	171	12	109	25	6	13	61	35
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	82	146	15	186	13	118	27	7	14	66	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	199	0	0	228	0	0	476	430	155	441	497	193
Stage 1	-	-	-	-	-	-	201	201	-	223	223	-
Stage 2	-	-	-	-	-	-	275	229	-	218	274	-
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	1373	-	-	1340	-	-	499	518	891	527	475	849
Stage 1	-	-	-	-	-	-	801	735	-	780	719	-
Stage 2	-	-	-	-	-	-	731	715	-	784	683	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1373	-	-	1340	-	-	415	503	891	491	462	849
Mov Cap-2 Maneuver	-	-	-	-	-	-	415	503	-	491	462	-
Stage 1	-	-	-	-	-	-	787	723	-	767	711	-
Stage 2	-	-	-	-	-	-	626	707	-	736	671	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.5			17.5			13.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	439	1373	-	-	1340	-	-	546
HCM Lane V/C Ratio	0.347	0.017	-	-	0.011	-	-	0.217
HCM Control Delay (s)	17.5	7.7	-	-	7.7	-	-	13.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0	-	-	0.8

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	275	15	13	323	116	8
Future Vol, veh/h	275	15	13	323	116	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	299	16	14	351	126	9

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	315	0	678 299
Stage 1	-	-	-	-	299 -
Stage 2	-	-	-	-	379 -
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	-	-	1245	-	418 741
Stage 1	-	-	-	-	752 -
Stage 2	-	-	-	-	692 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1245	-	413 741
Mov Cap-2 Maneuver	-	-	-	-	413 -
Stage 1	-	-	-	-	752 -
Stage 2	-	-	-	-	684 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	413	741	-	-	1245	-
HCM Lane V/C Ratio	0.305	0.012	-	-	0.011	-
HCM Control Delay (s)	17.5	9.9	-	-	7.9	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	191	92	0	336	0	10
Future Vol, veh/h	191	92	0	336	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	208	100	0	365	0	11

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	208
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	832
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	832
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	832	-	-	-
HCM Lane V/C Ratio	0.013	-	-	-
HCM Control Delay (s)	9.4	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
1: Peyton Highway & SH 94

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Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	18	370	18	20	249	24	20	21	17	35	13	12
Future Vol, veh/h	18	370	18	20	249	24	20	21	17	35	13	12
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	402	20	22	271	26	22	23	18	38	14	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	297	0	0	422	0	0	794	793	412	801	790	284
Stage 1	-	-	-	-	-	-	452	452	-	328	328	-
Stage 2	-	-	-	-	-	-	342	341	-	473	462	-
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	1264	-	-	1137	-	-	306	321	640	303	322	755
Stage 1	-	-	-	-	-	-	587	570	-	685	647	-
Stage 2	-	-	-	-	-	-	673	639	-	572	565	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1264	-	-	1137	-	-	283	310	640	270	311	755
Mov Cap-2 Maneuver	-	-	-	-	-	-	283	310	-	270	311	-
Stage 1	-	-	-	-	-	-	578	561	-	674	635	-
Stage 2	-	-	-	-	-	-	634	627	-	524	556	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.6			17.4			19.1		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	352	1264	-	-	1137	-	-	320
HCM Lane V/C Ratio	0.179	0.015	-	-	0.019	-	-	0.204
HCM Control Delay (s)	17.4	7.9	-	-	8.2	-	-	19.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.8

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	48	177	68	3	91	14	114	35	16	24	20	26
Future Vol, veh/h	48	177	68	3	91	14	114	35	16	24	20	26
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	192	74	3	99	15	124	38	17	26	22	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	114	0	0	266	0	0	471	453	229	474	483	107
Stage 1	-	-	-	-	-	-	333	333	-	113	113	-
Stage 2	-	-	-	-	-	-	138	120	-	361	370	-
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	1475	-	-	1298	-	-	503	503	810	501	483	947
Stage 1	-	-	-	-	-	-	681	644	-	892	802	-
Stage 2	-	-	-	-	-	-	865	796	-	657	620	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1475	-	-	1298	-	-	457	484	810	448	465	947
Mov Cap-2 Maneuver	-	-	-	-	-	-	457	484	-	448	465	-
Stage 1	-	-	-	-	-	-	657	621	-	861	800	-
Stage 2	-	-	-	-	-	-	814	794	-	582	598	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0.2			16.8			12.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	483	1475	-	-	1298	-	-	564
HCM Lane V/C Ratio	0.371	0.035	-	-	0.003	-	-	0.135
HCM Control Delay (s)	16.8	7.5	-	-	7.8	-	-	12.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0	-	-	0.5

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	362	53	16	250	118	3
Future Vol, veh/h	362	53	16	250	118	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	393	58	17	272	128	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	451	0	699
Stage 1	-	-	-	-	393
Stage 2	-	-	-	-	306
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1109	-	406
Stage 1	-	-	-	-	682
Stage 2	-	-	-	-	747
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1109	-	400
Mov Cap-2 Maneuver	-	-	-	-	400
Stage 1	-	-	-	-	682
Stage 2	-	-	-	-	736

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	18
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	400	656	-	-	1109	-
HCM Lane V/C Ratio	0.321	0.005	-	-	0.016	-
HCM Control Delay (s)	18.2	10.5	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.4	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	284	81	0	266	0	10
Future Vol, veh/h	284	81	0	266	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	309	88	0	289	0	11

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	309
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	731
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	731
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	731	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-
HCM Control Delay (s)	10	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	8	147	14	12	406	27	34	19	12	13	8	43
Future Vol, veh/h	8	147	14	12	406	27	34	19	12	13	8	43
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	160	15	13	441	29	37	21	13	14	9	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	470	0	0	175	0	0	696	682	168	685	675	456
Stage 1	-	-	-	-	-	-	186	186	-	482	482	-
Stage 2	-	-	-	-	-	-	510	496	-	203	193	-
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	1092	-	-	1401	-	-	356	372	876	362	376	604
Stage 1	-	-	-	-	-	-	816	746	-	565	553	-
Stage 2	-	-	-	-	-	-	546	545	-	799	741	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1092	-	-	1401	-	-	318	366	876	337	370	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	318	366	-	337	370	-
Stage 1	-	-	-	-	-	-	809	740	-	560	548	-
Stage 2	-	-	-	-	-	-	491	540	-	759	735	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			16.7			13.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	377	1092	-	-	1401	-	-	487
HCM Lane V/C Ratio	0.187	0.008	-	-	0.009	-	-	0.143
HCM Control Delay (s)	16.7	8.3	-	-	7.6	-	-	13.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.5

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	78	152	17	196	14	124	30	7	15	73	40
Future Vol, veh/h	24	78	152	17	196	14	124	30	7	15	73	40
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	85	165	18	213	15	135	33	8	16	79	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	228	0	0	250	0	0	538	484	168	497	559	221
Stage 1	-	-	-	-	-	-	220	220	-	257	257	-
Stage 2	-	-	-	-	-	-	318	264	-	240	302	-
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	1340	-	-	1316	-	-	454	483	876	483	438	819
Stage 1	-	-	-	-	-	-	782	721	-	748	695	-
Stage 2	-	-	-	-	-	-	693	690	-	763	664	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1340	-	-	1316	-	-	359	467	876	442	424	819
Mov Cap-2 Maneuver	-	-	-	-	-	-	359	467	-	442	424	-
Stage 1	-	-	-	-	-	-	767	707	-	734	685	-
Stage 2	-	-	-	-	-	-	572	680	-	707	651	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.6			21.8			14.9		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	386	1340	-	-	1316	-	-	502
HCM Lane V/C Ratio	0.453	0.019	-	-	0.014	-	-	0.277
HCM Control Delay (s)	21.8	7.7	-	-	7.8	-	-	14.9
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0	-	-	1.1

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	22	307	22	14	178	18	24	25	10	28	15	14
Future Vol, veh/h	22	307	22	14	178	18	24	25	10	28	15	14
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	334	24	15	193	20	26	27	11	30	16	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	213	0	0	358	0	0	643	637	346	646	639	203
Stage 1	-	-	-	-	-	-	394	394	-	233	233	-
Stage 2	-	-	-	-	-	-	249	243	-	413	406	-
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	1357	-	-	1201	-	-	386	395	697	385	394	838
Stage 1	-	-	-	-	-	-	631	605	-	770	712	-
Stage 2	-	-	-	-	-	-	755	705	-	616	598	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1357	-	-	1201	-	-	358	383	697	350	382	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	358	383	-	350	382	-
Stage 1	-	-	-	-	-	-	620	594	-	756	703	-
Stage 2	-	-	-	-	-	-	715	697	-	568	587	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.5			15.6			15.1		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1357	-	-	1201	-	-	419
HCM Lane V/C Ratio	0.16	0.018	-	-	0.013	-	-	0.148
HCM Control Delay (s)	15.6	7.7	-	-	8	-	-	15.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-	-	0.5

HCM 6th TWSC
2: Ellicott Highway & SH 94

12/22/2023

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	57	201	78	3	96	17	132	42	19	29	24	28
Future Vol, veh/h	57	201	78	3	96	17	132	42	19	29	24	28
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	218	85	3	104	18	143	46	21	32	26	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	303	0	0	532	513	261	537	546	113
Stage 1	-	-	-	-	-	-	385	385	-	119	119	-
Stage 2	-	-	-	-	-	-	147	128	-	418	427	-
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	1465	-	-	1258	-	-	458	465	778	455	445	940
Stage 1	-	-	-	-	-	-	638	611	-	885	797	-
Stage 2	-	-	-	-	-	-	856	790	-	612	585	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1465	-	-	1258	-	-	408	445	778	394	425	940
Mov Cap-2 Maneuver	-	-	-	-	-	-	408	445	-	394	425	-
Stage 1	-	-	-	-	-	-	611	585	-	848	795	-
Stage 2	-	-	-	-	-	-	799	788	-	526	560	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.2			20.7			13.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	1465	-	-	1258	-	-	507
HCM Lane V/C Ratio	0.481	0.042	-	-	0.003	-	-	0.174
HCM Control Delay (s)	20.7	7.6	-	-	7.9	-	-	13.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	2.6	0.1	-	-	0	-	-	0.6

HCM 6th TWSC
1: Peyton Highway & SH 94

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Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	8	198	14	15	506	33	34	19	14	17	8	43
Future Vol, veh/h	8	198	14	15	506	33	34	19	14	17	8	43
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	215	15	16	550	36	37	21	15	18	9	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	586	0	0	230	0	0	869	859	223	859	848	568
Stage 1	-	-	-	-	-	-	241	241	-	600	600	-
Stage 2	-	-	-	-	-	-	628	618	-	259	248	-
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	989	-	-	1338	-	-	272	294	817	277	298	522
Stage 1	-	-	-	-	-	-	762	706	-	488	490	-
Stage 2	-	-	-	-	-	-	471	481	-	746	701	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	989	-	-	1338	-	-	238	288	817	253	292	522
Mov Cap-2 Maneuver	-	-	-	-	-	-	238	288	-	253	292	-
Stage 1	-	-	-	-	-	-	755	700	-	484	484	-
Stage 2	-	-	-	-	-	-	416	475	-	704	695	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			21			16.6		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	297	989	-	-	1338	-	-	384
HCM Lane V/C Ratio	0.245	0.009	-	-	0.012	-	-	0.192
HCM Control Delay (s)	21	8.7	-	-	7.7	-	-	16.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.7

HCM 6th TWSC
2: Ellicott Highway & SH 94

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Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	25	87	159	17	200	14	127	30	7	15	73	40
Future Vol, veh/h	25	87	159	17	200	14	127	30	7	15	73	40
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	95	173	18	217	15	138	33	8	16	79	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	268	0	0	558	504	182	517	583	225
Stage 1	-	-	-	-	-	-	236	236	-	261	261	-
Stage 2	-	-	-	-	-	-	322	268	-	256	322	-
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	1336	-	-	1296	-	-	440	470	861	469	424	814
Stage 1	-	-	-	-	-	-	767	710	-	744	692	-
Stage 2	-	-	-	-	-	-	690	687	-	749	651	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1336	-	-	1296	-	-	346	454	861	428	410	814
Mov Cap-2 Maneuver	-	-	-	-	-	-	346	454	-	428	410	-
Stage 1	-	-	-	-	-	-	752	696	-	729	682	-
Stage 2	-	-	-	-	-	-	569	677	-	693	638	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.6			23.3			15.3		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	372	1336	-	-	1296	-	-	488
HCM Lane V/C Ratio	0.479	0.02	-	-	0.014	-	-	0.285
HCM Control Delay (s)	23.3	7.8	-	-	7.8	-	-	15.3
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	2.5	0.1	-	-	0	-	-	1.2

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	260	15	7	386	109	8
Future Vol, veh/h	260	15	7	386	109	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	283	16	8	420	118	9
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	299	0	719	283
Stage 1	-	-	-	-	283	-
Stage 2	-	-	-	-	436	-
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	-	-	1262	-	395	756
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	652	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1262	-	393	756
Mov Cap-2 Maneuver	-	-	-	-	393	-
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	648	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.1	17.5			
HCM LOS				C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	393	756	-	-	1262	-
HCM Lane V/C Ratio	0.301	0.012	-	-	0.006	-
HCM Control Delay (s)	18.1	9.8	-	-	7.9	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	226	42	0	393	0	9
Future Vol, veh/h	226	42	0	393	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	246	46	0	427	0	10

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	246
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	793
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	793
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	793	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s)	9.6	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
1: Peyton Highway & SH 94

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Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	22	418	22	20	254	25	24	25	18	39	15	14
Future Vol, veh/h	22	418	22	20	254	25	24	25	18	39	15	14
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	454	24	22	276	27	26	27	20	42	16	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	303	0	0	478	0	0	863	861	466	872	860	290
Stage 1	-	-	-	-	-	-	514	514	-	334	334	-
Stage 2	-	-	-	-	-	-	349	347	-	538	526	-
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	1258	-	-	1084	-	-	275	293	597	271	294	749
Stage 1	-	-	-	-	-	-	543	535	-	680	643	-
Stage 2	-	-	-	-	-	-	667	635	-	527	529	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1258	-	-	1084	-	-	250	282	597	236	283	749
Mov Cap-2 Maneuver	-	-	-	-	-	-	250	282	-	236	283	-
Stage 1	-	-	-	-	-	-	533	525	-	667	630	-
Stage 2	-	-	-	-	-	-	624	622	-	474	519	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.6			20			21.8		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	312	1258	-	-	1084	-	-	287
HCM Lane V/C Ratio	0.233	0.019	-	-	0.02	-	-	0.258
HCM Control Delay (s)	20	7.9	-	-	8.4	-	-	21.8
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.1	-	-	1

HCM 6th TWSC
2: Ellicott Highway & SH 94

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Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	58	208	80	3	105	17	135	42	19	29	24	31
Future Vol, veh/h	58	208	80	3	105	17	135	42	19	29	24	31
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	226	87	3	114	18	147	46	21	32	26	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	132	0	0	313	0	0	555	534	270	558	568	123
Stage 1	-	-	-	-	-	-	396	396	-	129	129	-
Stage 2	-	-	-	-	-	-	159	138	-	429	439	-
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	1453	-	-	1247	-	-	442	452	769	440	432	928
Stage 1	-	-	-	-	-	-	629	604	-	875	789	-
Stage 2	-	-	-	-	-	-	843	782	-	604	578	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1453	-	-	1247	-	-	392	432	769	380	413	928
Mov Cap-2 Maneuver	-	-	-	-	-	-	392	432	-	380	413	-
Stage 1	-	-	-	-	-	-	602	578	-	837	787	-
Stage 2	-	-	-	-	-	-	784	780	-	518	553	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.2			22.1			13.8		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	420	1453	-	-	1247	-	-	500
HCM Lane V/C Ratio	0.507	0.043	-	-	0.003	-	-	0.183
HCM Control Delay (s)	22.1	7.6	-	-	7.9	-	-	13.8
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	2.8	0.1	-	-	0	-	-	0.7

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	414	53	15	299	89	3
Future Vol, veh/h	414	53	15	299	89	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	450	58	16	325	97	3

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	508	0	807	450
Stage 1	-	-	-	-	450	-
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	-	-	1057	-	351	609
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1057	-	346	609
Mov Cap-2 Maneuver	-	-	-	-	346	-
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	697	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	346	609	-	-	1057	-
HCM Lane V/C Ratio	0.28	0.005	-	-	0.015	-
HCM Control Delay (s)	19.4	10.9	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	340	77	0	314	0	7
Future Vol, veh/h	340	77	0	314	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	370	84	0	341	0	8
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	370
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	676
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	676
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	10.4			
HCM LOS						B
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	676	-	-	-		
HCM Lane V/C Ratio	0.011	-	-	-		
HCM Control Delay (s)	10.4	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

HCM 6th TWSC
1: Peyton Highway & SH 94

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Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	8	244	14	15	512	34	34	19	15	20	8	43
Future Vol, veh/h	8	244	14	15	512	34	34	19	15	20	8	43
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	265	15	16	557	37	37	21	16	22	9	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	594	0	0	280	0	0	927	917	273	917	906	576
Stage 1	-	-	-	-	-	-	291	291	-	608	608	-
Stage 2	-	-	-	-	-	-	636	626	-	309	298	-
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	982	-	-	1283	-	-	249	272	766	253	276	517
Stage 1	-	-	-	-	-	-	717	672	-	483	486	-
Stage 2	-	-	-	-	-	-	466	477	-	701	667	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	982	-	-	1283	-	-	217	266	766	229	270	517
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	266	-	229	270	-
Stage 1	-	-	-	-	-	-	711	666	-	479	480	-
Stage 2	-	-	-	-	-	-	411	471	-	659	661	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			22.8			17.9		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	275	982	-	-	1283	-	-	355
HCM Lane V/C Ratio	0.269	0.009	-	-	0.013	-	-	0.217
HCM Control Delay (s)	22.8	8.7	-	-	7.8	-	-	17.9
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.8

HCM 6th TWSC
2: Ellicott Highway & SH 94

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Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	25	88	159	17	203	14	129	30	7	15	73	41
Future Vol, veh/h	25	88	159	17	203	14	129	30	7	15	73	41
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	96	173	18	221	15	140	33	8	16	79	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	236	0	0	269	0	0	564	509	183	522	588	229
Stage 1	-	-	-	-	-	-	237	237	-	265	265	-
Stage 2	-	-	-	-	-	-	327	272	-	257	323	-
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	1331	-	-	1295	-	-	436	467	859	465	421	810
Stage 1	-	-	-	-	-	-	766	709	-	740	689	-
Stage 2	-	-	-	-	-	-	686	685	-	748	650	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1331	-	-	1295	-	-	341	451	859	424	407	810
Mov Cap-2 Maneuver	-	-	-	-	-	-	341	451	-	424	407	-
Stage 1	-	-	-	-	-	-	751	695	-	725	679	-
Stage 2	-	-	-	-	-	-	565	675	-	692	637	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.6			24			15.4		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	366	1331	-	-	1295	-	-	486
HCM Lane V/C Ratio	0.493	0.02	-	-	0.014	-	-	0.289
HCM Control Delay (s)	24	7.8	-	-	7.8	-	-	15.4
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	2.6	0.1	-	-	0	-	-	1.2

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	310	15	13	386	116	8
Future Vol, veh/h	310	15	13	386	116	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	337	16	14	420	126	9

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	353	0	785	337
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	448	-
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	-	-	1206	-	361	705
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1206	-	357	705
Mov Cap-2 Maneuver	-	-	-	-	357	-
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	19.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	357	705	-	-	1206	-
HCM Lane V/C Ratio	0.353	0.012	-	-	0.012	-
HCM Control Delay (s)	20.5	10.2	-	-	8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.6	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	226	92	0	399	0	10
Future Vol, veh/h	226	92	0	399	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	246	100	0	434	0	11

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	246
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	793
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	793
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	793	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-
HCM Control Delay (s)	9.6	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	22	421	22	22	279	27	24	25	18	40	15	14
Future Vol, veh/h	22	421	22	22	279	27	24	25	18	40	15	14
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	532	-	-	532	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	458	24	24	303	29	26	27	20	43	16	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	332	0	0	482	0	0	899	898	470	908	896	318
Stage 1	-	-	-	-	-	-	518	518	-	366	366	-
Stage 2	-	-	-	-	-	-	381	380	-	542	530	-
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	1227	-	-	1081	-	-	260	279	594	256	280	723
Stage 1	-	-	-	-	-	-	541	533	-	653	623	-
Stage 2	-	-	-	-	-	-	641	614	-	525	527	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1227	-	-	1081	-	-	235	267	594	221	268	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	235	267	-	221	268	-
Stage 1	-	-	-	-	-	-	530	522	-	640	609	-
Stage 2	-	-	-	-	-	-	597	600	-	472	516	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.6			21.1			23.5		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	296	1227	-	-	1081	-	-	269
HCM Lane V/C Ratio	0.246	0.019	-	-	0.022	-	-	0.279
HCM Control Delay (s)	21.1	8	-	-	8.4	-	-	23.5
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.1	-	-	1.1

HCM 6th TWSC
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Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	58	210	81	3	106	17	135	42	19	29	24	31
Future Vol, veh/h	58	210	81	3	106	17	135	42	19	29	24	31
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	200	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	228	88	3	115	18	147	46	21	32	26	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	133	0	0	316	0	0	558	537	272	562	572	124
Stage 1	-	-	-	-	-	-	398	398	-	130	130	-
Stage 2	-	-	-	-	-	-	160	139	-	432	442	-
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	1452	-	-	1244	-	-	440	450	767	438	430	927
Stage 1	-	-	-	-	-	-	628	603	-	874	789	-
Stage 2	-	-	-	-	-	-	842	782	-	602	576	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1452	-	-	1244	-	-	389	430	767	378	411	927
Mov Cap-2 Maneuver	-	-	-	-	-	-	389	430	-	378	411	-
Stage 1	-	-	-	-	-	-	601	577	-	836	787	-
Stage 2	-	-	-	-	-	-	783	780	-	516	551	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.2			22.3			13.8		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	417	1452	-	-	1244	-	-	498
HCM Lane V/C Ratio	0.511	0.043	-	-	0.003	-	-	0.183
HCM Control Delay (s)	22.3	7.6	-	-	7.9	-	-	13.8
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	2.8	0.1	-	-	0	-	-	0.7

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	418	53	16	299	118	3
Future Vol, veh/h	418	53	16	299	118	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	570	570	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	454	58	17	325	128	3

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	512	0	813	454
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	359	-
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	-	-	1053	-	348	606
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1053	-	342	606
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	696	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	21.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	342	606	-	-	1053	-
HCM Lane V/C Ratio	0.375	0.005	-	-	0.017	-
HCM Control Delay (s)	21.7	11	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.7	0	-	-	0.1	-

HCM 6th TWSC
4: Springs Road & SH 94

12/22/2023

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	340	81	0	315	0	10
Future Vol, veh/h	340	81	0	315	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	250	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	370	88	0	342	0	11

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	370
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	676
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	676
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	676	-	-	-
HCM Lane V/C Ratio	0.016	-	-	-
HCM Control Delay (s)	10.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Appendix E: Approved Deviations



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Mayberry Phase 1
Amendment to the Ellicott Town Center
Phase 1 PUD/Preliminary Plan
Transportation Memorandum
PCD FILE NO.: PUDSP219
(LSC #S214300)
February 17, 2022

Traffic Engineer's Statement

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



Developer's Statement

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





Date

STREET CLASSIFICATIONS

The attached Exhibit 1 shows the proposed street classifications. This exhibit is a modified version of Figure 13 from the June 2020 TIS report. The figure has been modified to illustrate the minor street network modifications. These modifications include:

- Removal of local street connections through commercial Filings 2 and 3 (except Springs Road).
- Modification to Village Main Street. This PUD has been updated to include a discontinuity between New Log Road and Springs Road. The resulting short segment west of Springs Road is now shown as Besseyi Way. This change will likely result in a shift of some traffic to Mayberry Drive, a Collector Street. This is actually an improvement in the plan, as it would shift through traffic to the collector street – such as future commercial traffic which will need to travel east/west internally to and from New Log Road due to the left-turn restriction at SH 94/Springs Road. This would not affect the SH 94 projections and intersection analysis because a minor shift in travel route to Mayberry Drive would not likely change the turning volumes at the SH 94 intersections.

In the interim (Filings 1 and 4), prior to full construction of Mayberry Drive, a temporary 24-foot-wide, gravel road segment (to be paved once ADT exceeds 200 vehicles per day) connecting Garden Park Avenue in Filing 1 with Springs Road via the Mayberry Drive alignment – as shown in the attached exhibit – will be used until Filing 4 is developed and Mayberry Drive is completed.

- Several deviations have been approved for variations to the standard *ECM* cross sections by classification. Copies are attached for reference.

APPROVED DEVIATIONS

Attached are several approved deviations which apply to this application. Proposed Changes are indicated in **bold**.

- **Village Main Street** is ultimately classified as an Urban Non-Residential Collector through the Town Center area, and an Urban Local through the residential areas. The approved deviation consists of modified cross-section elements including a 36-foot asphalt width for the Non-Residential Collector and a 30-foot asphalt width for the Urban Local road segments. The right-of-way through the residential area will be 60 feet (matching the deviation).

PROPOSED CHANGES: The segment through the residential areas is no longer proposed to be continuous east to Springs Road. The interim secondary road connecting Filing 1 and Springs Road will not be on the Village Main Street alignment, rather on the Mayberry Drive alignment.

- **New Log Road** is ultimately classified as an Urban Minor Arterial roadway. The approved deviation consists of:
 - Modified cross-section elements including 15-foot attached sidewalks, bike lanes permitted, and on-street parking allowed for the ultimate road section, as well as an interim rural-asphalt-road section during the initial phase of development.
 - The *ECM*-prescribed minimum horizontal-centerline radius for an Urban Minor Arterial is 565 feet. This approved deviation also allows for a slightly reduced minimum centerline radius of 527 feet at couplet transitions as depicted on the attached Plan & Profile Drawing.

PROPOSED CHANGES: None

- **Mayberry Boulevard** is classified as a Collector. The approved deviation consists of modified cross-section elements including an ultimate divided section with landscaped median and a Phase 1 half-section with a 29-foot asphalt width.

PROPOSED CHANGES: The interim secondary road connecting Filing 1 and Springs Road will not be on the Village Main Street alignment, rather on the Mayberry Drive alignment. It is planned to be gravel, initially, but must be paved once ADT exceeds 200 vehicles per day.

- **Springs Road:** Prior PUD approvals addressed deviations for the 65' Springs Road ROW. **CURRENT NOTES (May reflect changes): With this Phase 1 development, Springs Road would extend from SH 94 to the south boundary of Filing 4. Although classified as Urban Minor Collector adjacent to Filings 2 and 3 and Urban Local south of that point (as shown in the attached Exhibit 1-Roadway Classifications), the design attributes shown on the plans are consistent with current Urban Collector standards, and no lots are shown fronting Springs Road.**

CHANGES FROM THE JUNE 2020 TIS REPORT

- The classification figure, Figure 13 from the June 2020 TIS Report, has been revised. The updated version (updated February 17, 2022) is presented in this memo as "**Exhibit 1.**"
- The improvements Table, Table 12 from the June 2020 TIS Report, was updated with the last submittal. The updated version is attached to this memo and was expanded into a two-part table: Table 12 – Roadway Improvements (basically containing only the CDOT improvements) **and** a new Table 12a – El Paso County Roadway Improvements (updated February 17, 2022).
- This PUD has been updated to include a Village Main discontinuity west of Springs Road. The resulting short segment west of Springs Road is now shown as Besseyi Way. This change will likely result in a shift of some traffic to Mayberry Drive, a Collector Street. This is actually an improvement in the plan, as it would shift through traffic to the Collector street – such as Filings 2 and 3 future commercial traffic which will need to



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Mayberry Filing No. 3
Traffic Technical Memorandum
PCD File No. SF2219
(LSC #S224210)
September 1, 2022

Traffic Engineer's Statement

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



Developer's Statement

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





Date

Also, regarding CDOT improvements, please refer to the separate “Mayberry Filing No. 3 CDOT Access Permit Memo” included with this submittal. This memo has been prepared to accompany the CDOT access permit application for Filing 3 and is essentially an “addendum” to the **June 2020** TIS report entitled *Ellicott Town Center Filings 2 and 3 Traffic Impact Study March 31, 2020** (*Note: *Minor Revision June 2, 2020*). That report addressed the traffic impacts of Mayberry Phase 1 (Filings 1 through 4). As part of this CDOT memo, Improvements Table 12 has been updated/revised and a copy of that table has been attached to this report.

New Log Road Phasing

Following with review of the PUD/Preliminary Plan TIS, the PCD Engineering Manager requested that the phasing of the one-way, New Log Road couplet south of SH 94 be addressed in this report.

The ultimate northbound-only portion of the one-way couplet has been and is proposed for interim use for **both** directions of travel and the separate, southbound-only portion of the couplet would be constructed later as future development occurs.

The trips on New Log Road would not exceed 3,000 vehicles per day (vpd) ADT with the buildout of Filings 1, 2, and 3. Given the northbound “half couplet” would have a similar cross section to an Urban Local roadway, and the design ADT of an Urban Local is 3,000 ADT, staff has indicated this volume as an approximate trigger for construction and use of the southbound lanes of the couplet. As shown in Table 1 the total trip generation for Filings 1-3 (including trips projected to use Springs Road instead of New Log Road) would be below 3,000 ADT.

SUBDIVISION STREET CLASSIFICATIONS

Please refer to the *Mayberry Phase 1 PUD Amendment Transportation Memorandum* dated February 17, 2022, which contains a “Street Classifications” section and an associated exhibit.

ROADWAY IMPROVEMENT FEE PROGRAM

This project will be required to participate in the El Paso County Road Improvement Fee Program. Mayberry Filing 3 will join the ten-mil PID. The ten-mil PID building permit fee portion associated with this option is \$1,221 per single-family dwelling unit. The total building permit fee would be \$172,382 for the 142 dwelling units. Note: This is based on the current rate, which is subject to change. El Paso County updates this rate periodically.

DEVIATIONS

Please refer to the *Mayberry Phase 1 PUD Amendment Transportation Memorandum* dated February 17, 2022, which contains an “Approved Deviations” section.

An additional deviation (PUD Modification) was submitted with the PUD, which modifies the corner clearance across lots on the inside of and adjacent to ninety-degree “knuckles.”

ROUNABOUT ANALYSIS & DESIGN

A modern roundabout with a 120-foot inscribed circle diameter is proposed as the traffic control for the intersection of Mayberry Drive/Springs Road. Exhibits containing roundabout technical analysis are attached, along with a roundabout parameters table.

The horizontal layout, analysis, and roundabout report have been completed using the criteria contained in the Wisconsin DOT roundabout design manual (as required by El Paso County). The attached exhibits and roundabout parameters table contain all the details for the currently-proposed roundabout. The inscribed circle diameter is 120-feet and the design vehicle is a WB-50 truck (per the *ECM*). However, the roundabout has also been designed to accommodate a larger WB-67 truck. The roundabout will also accommodate the standard county snowplow vehicle. The design accommodates pedestrians. Please refer to the attached roundabout parameters table and exhibits for details. Also, please refer to the roundabout design report, which is included with the CD submittal.

CDOT ACCESS PERMITS

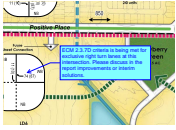
The CDOT access permits for New Log Road and Springs Road public street connections (access points) to SH 94 are 218053 and 218054. Both permits have been finalized. These permits were issued for Filings 1 and 2. A new “change of use” access-permit application is being submitted for Filing No. 3. This application has been submitted to CDOT, along with the **addendum memo** to the June 2020 TIS report, which addressed the impacts of the Phase 1 development, including the currently-proposed Filing No. 3. Please refer to the “Filing No. 3 CDOT Access Permits Memo,” which is a separate document included with this submittal.

The number of lots (142) in Filing 3 is the same number as studied in the June 2020 comprehensive TIS report for the commercial rezone submitted to and accepted by CDOT. The Filing No. 3 site circulation and connections to Highway 94 also remain consistent with the 2020 study. The primary change is that Filing No. 3 is being developed ahead of the commercial Filing No. 4 (previously called Filing No. 3 in that 2020 TIS report). The addendum memo addresses this change in development order.

Note: The Improvements Table in the February 2022 PUD TIS report references these approved access permits for all CDOT-facility improvements. This improvements table (Table 12 – CDOT Improvements) has been updated as requested by County staff. Note: Table 12a, which addresses El Paso County road improvements, has also been updated (and is also attached). Table 12 (attached) has been updated with the new plat numbers and contains revisions to address the

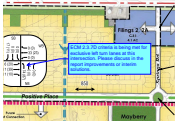
V4_Traffic Impact Study Comments.pdf Markup Summary

Carlos (5)



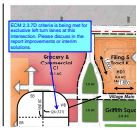
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ECM 2.3.7D criteria is being met for exclusive right turn lanes at this intersection. Please discuss in the report improvements or interim solutions.



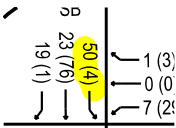
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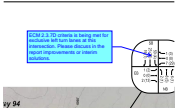


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Author: Carlos
Date: 1/11/2024 5:33:07 PM
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ECM 2.3.7D criteria is being met for exclusive left turn lanes at this intersection. Please discuss in the report improvements or interim solutions.