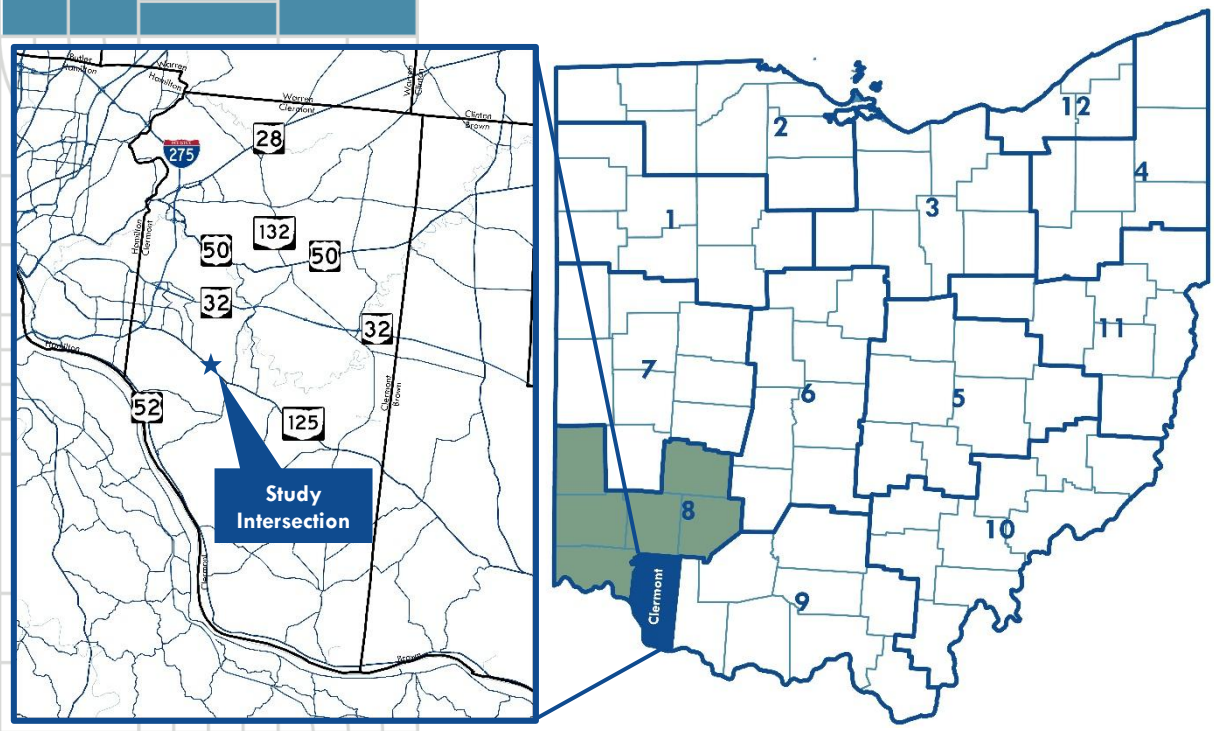
CLE-125 at White Oak Road | SAFETY STUDY

ODOT District 8

July 7th, 2025



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1.0 EXECUTIVE SUMMARY

1.1 Background

This study focuses on two intersections in Clermont County, Ohio:

- State Route (SR) 125 at White Oak Road, and
- White Oak Road at Lewis Road.

SR 125 is a five-lane roadway with a posted speed limit of 45 MPH. The intersection at SR 125 and White Oak Road is controlled by a two-way stop on the minor approach. The second intersection—White Oak Road at Lewis Road—is located approximately 35 feet from the SR 125 intersection. This close spacing and existing geometry contribute to safety concerns.

Crash data indicates a high frequency of angle crashes at these intersections. Over the past six years, 53% of angle crashes resulted in injuries, highlighting the severity of the issue.

1.2 Purpose and Need

The SR 125 and White Oak Road intersection was ranked #261 on the 2021 Ohio Department of Transportation (ODOT) Highway Safety Improvement Program (HSIP) Priority List for suburban intersections. The purpose of this study is to identify crash trends, evaluate potential safety countermeasures, and assess their effectiveness using Highway Safety Manual methodology and cost-benefit analysis.

1.3 Overview of Safety Concerns

Between 2018 and 2023, 31 crashes occurred at the two intersections, including 15 injury crashes and no fatalities.

- Angle crashes accounted for 48% of all incidents.
- Several crash reports noted that vehicles at the downstream intersection (White Oak Road and Lewis Road) had limited visibility of oncoming traffic from SR 125, contributing to unsafe maneuvers.

1.4 Recommended Countermeasures

Several intersection control alternatives were evaluated to address the crash patterns and operational challenges at the study intersections. These included various combinations of restricted turning movements, roadway realignments, and signalization. Based on crash data, site characteristics, and analysis results, the most effective long-term solution is the implementation of a Left-in/Right-in/Right-out (LIRIRO) configuration at SR 125 and White Oak Road, along with a Right-in/Right-out (RIRO) configuration at White Oak Road and Lewis Road.

To accelerate safety improvements, a short-term version of this alternative is also recommended. Developed in coordination with ODOT District 8, Clermont County, and Pierce Township, the short-term solution focuses on the highest-priority crash reduction measures—specifically, restricting the most hazardous turning movements—while deferring more complex improvements such as permanent medians and access management to a future phase. This approach requires no right-of-way acquisition, has a lower construction cost, and receives strong stakeholder support. With

a benefit-cost ratio of 2.11, the short-term alternative offers a cost-effective and timely opportunity to improve safety while preserving flexibility for long-term enhancements.

2.0 PURPOSE AND NEED

This study evaluates the intersections of SR 125 at White Oak Road and White Oak Road at Lewis Road in Clermont County. These intersections are located within 35 feet of each other, creating operational and safety challenges due to their proximity.

The SR 125 and White Oak Road intersection has appeared on the ODOT HSIP Priority list three times in the past decade, highlighting a persistent need for safety improvements:

- #242 for Suburban Intersections in 2017
- #132 for Suburban Intersections in 2018
- #261 for Suburban Intersections in 2021

Between 2018 and 2023, a total of 31 crashes were reported at these intersections, with an injury rate of 48% and no fatalities. Of these crashes, 16 were attributed to failure to yield, likely influenced by the limited spacing between the two intersections.

The purpose of this study is to analyze crash patterns, evaluate potential countermeasures, and assess their effectiveness using Highway Safety Manual methodology and cost-benefit analysis. The study also considers phased implementation strategies to address the most critical safety concerns in the near term, while allowing for more comprehensive improvements in the future. The following sections present the study's approach, key findings, and recommended improvements.

3.0 EXISTING CONDITIONS

The study area—suburban in character—includes the intersections of SR 125 at White Oak Road and White Oak Road at Lewis Road, located in Pierce Township, Clermont County, within the Cincinnati metropolitan area.

- SR 125 runs northwest to southeast.
- White Oak Road runs northeast to southwest.
- Lewis Road runs north south.

Figure 1 shows a regional overview of the study area's location, while **Figure 2** illustrates the complex geometry and close spacing of the intersections.

Figure 1: Study Intersection Location

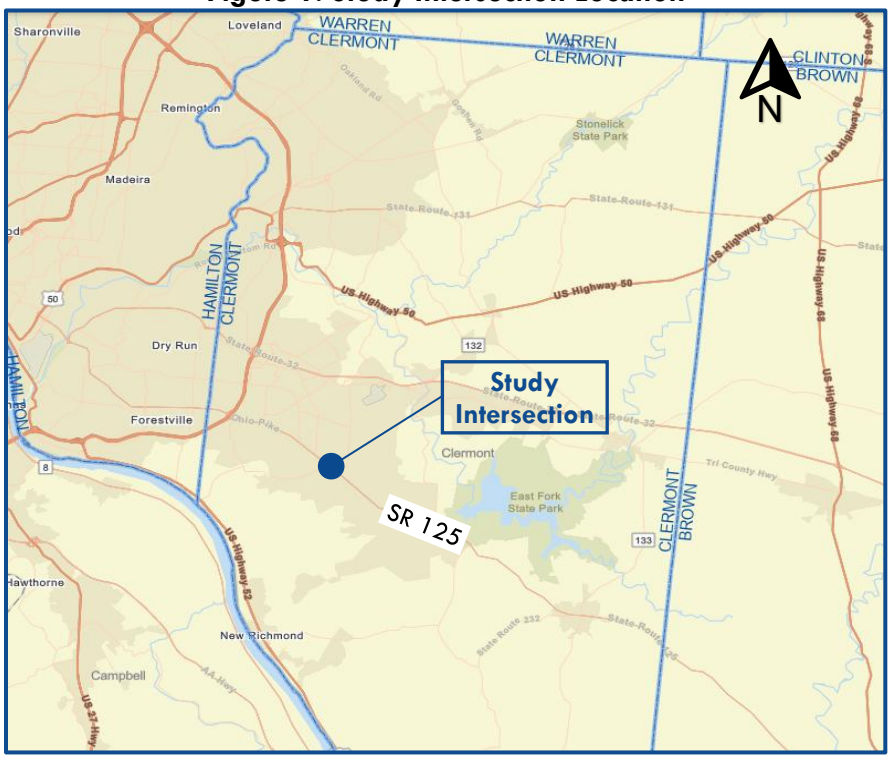
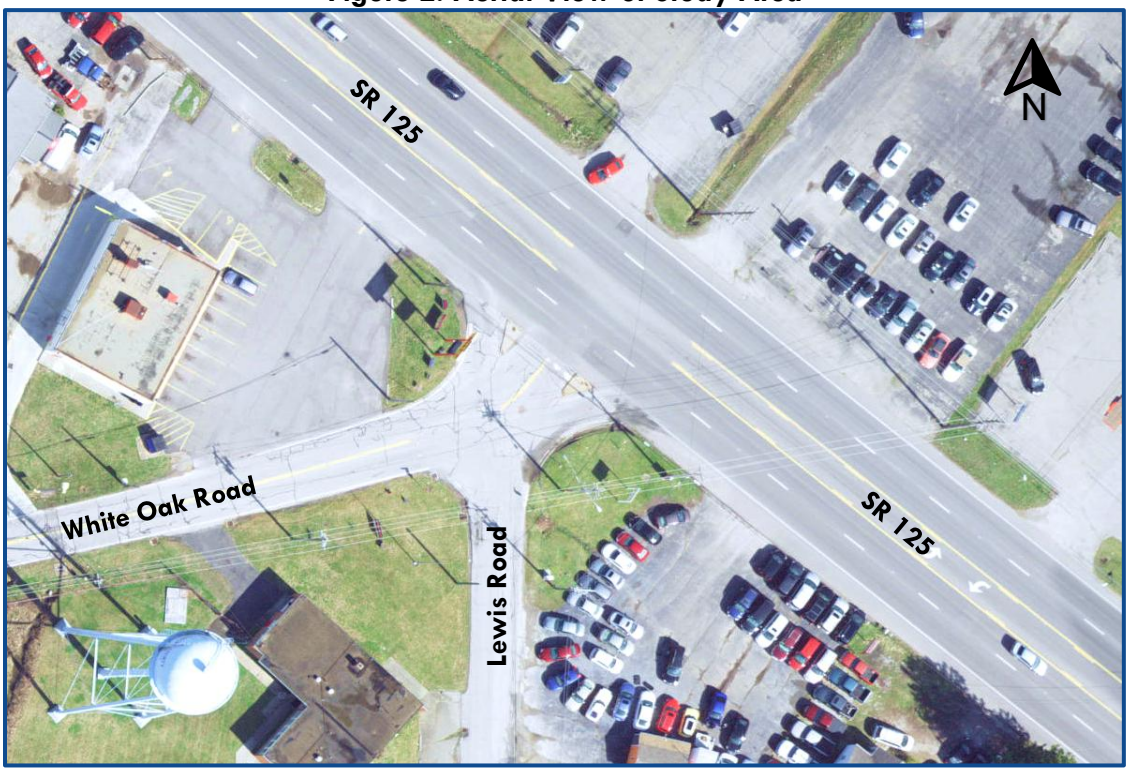


Figure 2: Aerial View of Study Area



3.1 Roadway information

SR 125 is a five-lane roadway with two travel lanes in each direction and a two-way left-turn lane.

- Classified by ODOT as an Urban Principal Arterial
- 2023 AADT: 31,409 vehicles/day
- Lane widths: ~11 feet
- Shoulders: 4-8 feet paved
- Posted speed limit: 45 MPH.

White Oak Road is a two-lane undivided roadway under Pierce Township jurisdiction.

- Classified as an Urban Local Road
- 2023 AADT: 3,289 vehicles/day
- Lane widths: ~9 feet
- Shoulders: ~1 foot paved
- Posted speed limit: 40 MPH

Lewis Road is a township-maintained, two-lane undivided roadway serving primarily residential property.

- Classified as an Urban Local Road
- No AADT data available
- Lane widths: ~8 feet
- No pavement edge lines present

3.2 Intersection Geometry and Conditions

The study area consists of two closely spaced T-intersections with unconventional geometry, contributing to sight distance limitations and operational confusion. The spacing between the intersections is approximately 35 feet, offering minimal storage for queued vehicles.

SR 125 at White Oak Road:

- Two-way stop-controlled (TWSC) intersection
- SR 125 is free-flow with a two-way left-turn lane for vehicles entering White Oak Road
- The White Oak Road approach includes a short-left turn lane, and a flared right-turn slip lane
- Limited vehicle storage on White Oak Road due to proximity of Lewis Road

White Oak Road at Lewis Road:

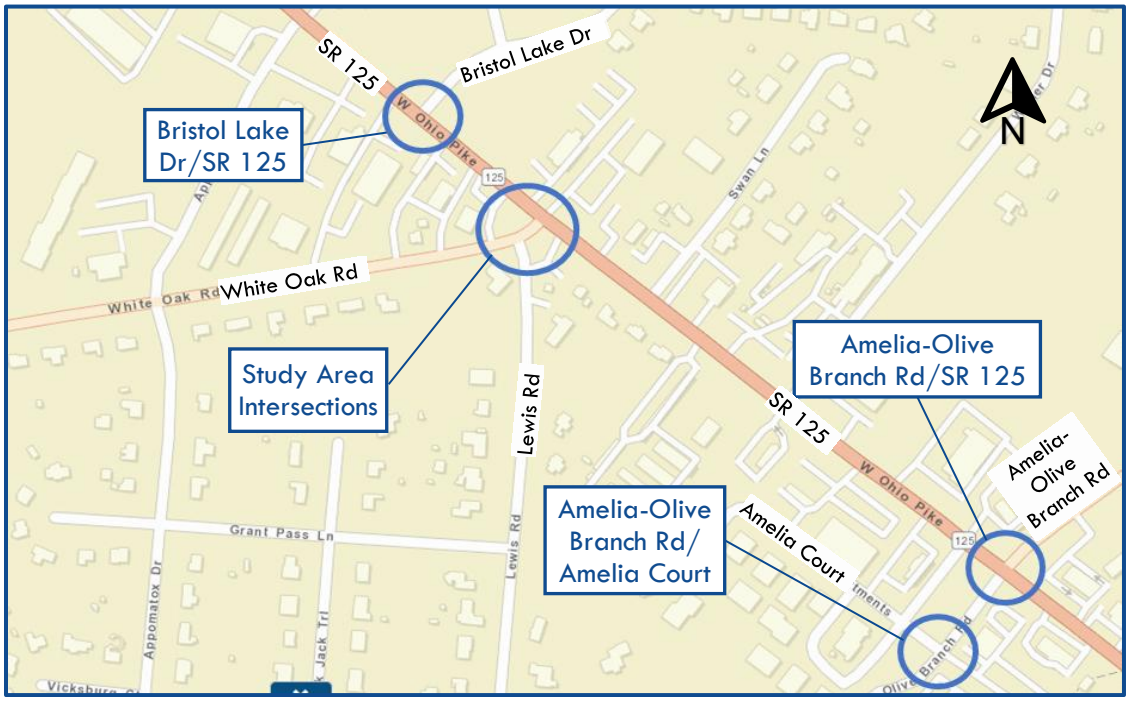
- Stop-controlled for northbound Lewis Road and eastbound White Oak Road
- Westbound White Oak Road is free flow
- Vehicles on the stopped controlled approaches have a limited view of approaching vehicles entering White Oak Road from SR 125, often destined for Lewis Road
- No dedicated turn lanes
- Lighting consists of two overhead lights on a wooden utility pole at the shared radius return between Lewis Road and SR 125

The surrounding area includes multiple commercial access points along SR 125. A business in the northwest quadrant has two access driveways along the southbound approach of SR 125 and a third, undefined access point along White Oak Road. There are five signalized intersections along SR 125 within a one-mile radius. The nearest signal is approximately ¼ mile southeast of the study area. No pedestrian or bicycle facilities are present within the study area.

4.0 TRAFFIC DATA

Turning movement counts were collected at the study intersections (as shown in **Figure 3**) and provided to EMH&T by ODOT District 8.

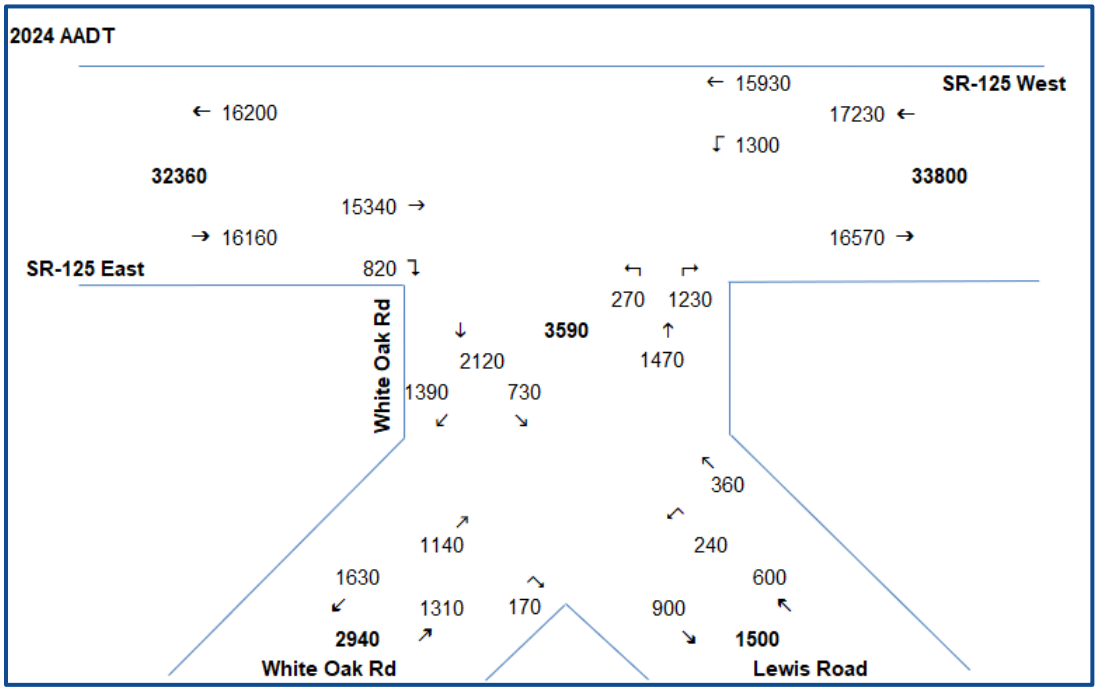
FIGURE 3: Traffic Count Locations



The traffic data was collected for 18 hours on Wednesday, May 08, 2024, from 6:00 AM to 12:00 AM. The AM and PM peak hours were identified as 6:45 AM to 7:45 AM and 3:15 PM to 4:15 PM, respectively.

EMH&T estimated 2024 AADT at each intersection using ODOT's Partial Count Factor Form. The process included applying an expansion factor to convert partial-day counts into 24-hour turning movement volumes. Volumes were then seasonally adjusted using ODOT's Seasonal Adjustment Factor Report. **Figure 4** presents the estimated 2024 AADT for the study intersections.

FIGURE 4: 2024 AADT

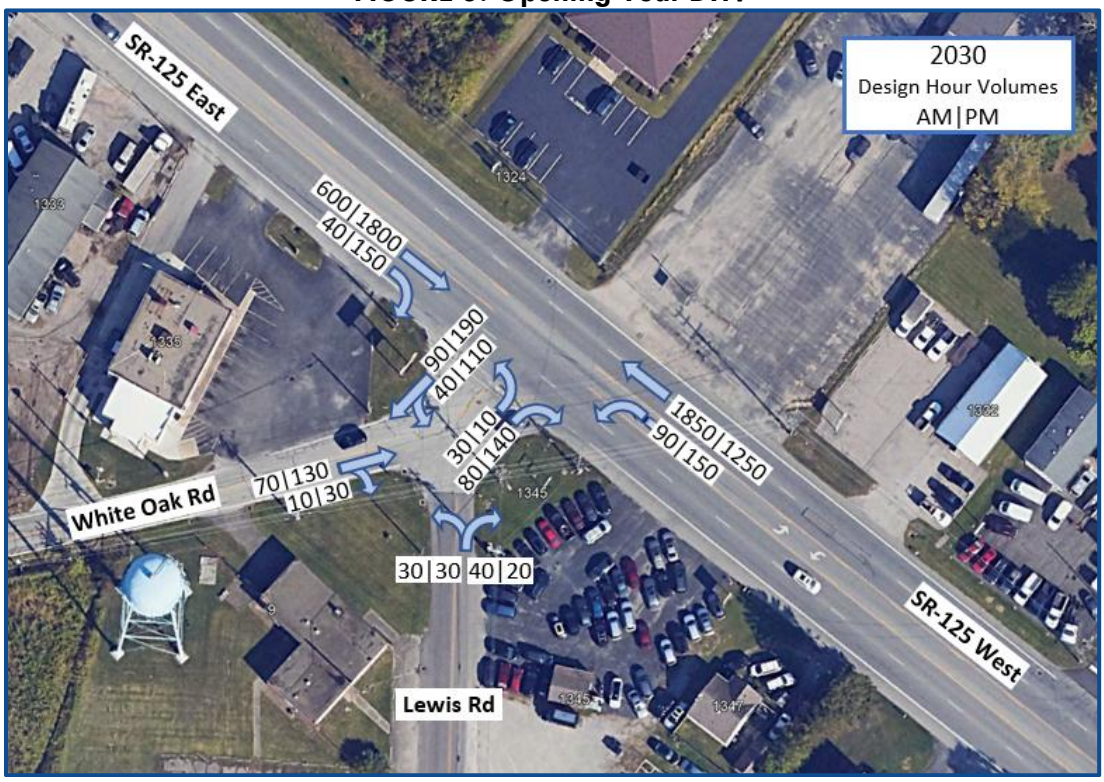


Traffic projections were developed in accordance with the Ohio Traffic Forecasting Manual for an Opening Year of 2030 and Horizon Year of 2050. ODOT District 8 provided an annual growth rate of 0.5%, which was applied linearly to estimate future volumes.

Design hour traffic volumes were calculated by applying Peak Hour to Design Hour Factors from ODOT's 2022 tables, based on the date of the count and the functional classification of each approach. The final volumes were rounded to the nearest 10 vehicles. **Figure 5** displays the 2030 Opening Year Design Hour Volumes (DHV).

All supporting documentation, including raw traffic counts, adjustment factors, growth rate correspondence, and DHV traffic plates is provided in **Appendix A**.

FIGURE 5: Opening Year DHV



5.0 CRASH DATA

5.1 Crash Summary

Crash data for the study area was compiled from two sources: ODOT District 8 provided data from 2018 to 2022, and EMH&T obtained 2023 data using ODOT's GIS Crash Analysis Tool (GCAT). All crash records were analyzed using ODOT's Crash Analysis Module (CAM) Tool and reviewed for accuracy and relevance to the study intersections. A collision diagram illustrating all reported crashes within a 600-foot radius of the study intersections is included in **Appendix B**.

In addition, crash data from the nearby intersection of SR 125 and Amelia-Olive Branch Road (2019-2023) was reviewed. While no detailed analysis was conducted for that location, a collision diagram is also provided in **Appendix B** for reference.

A total of 31 intersection-related crashes occurred between 2018 and 2023. Of these, 15 resulted in injuries, yielding a 48% injury rate. No serious injuries or fatalities were reported. Crashes unrelated to the study intersections were excluded from the analysis.

Angle crashes were the most common, accounting for 48% of all crashes. Rear-end crashes made up 23% and left-turn crashes accounted for 16%. The remaining incidents included two sideswipes, one right-turn crash, and one fixed-object collision. **Figure 6** summarizes crash types and severities, while **Table 1** provides a detailed breakdown of crash data.

FIGURE 6: Crash Type and Severity at Study Intersection Crashes

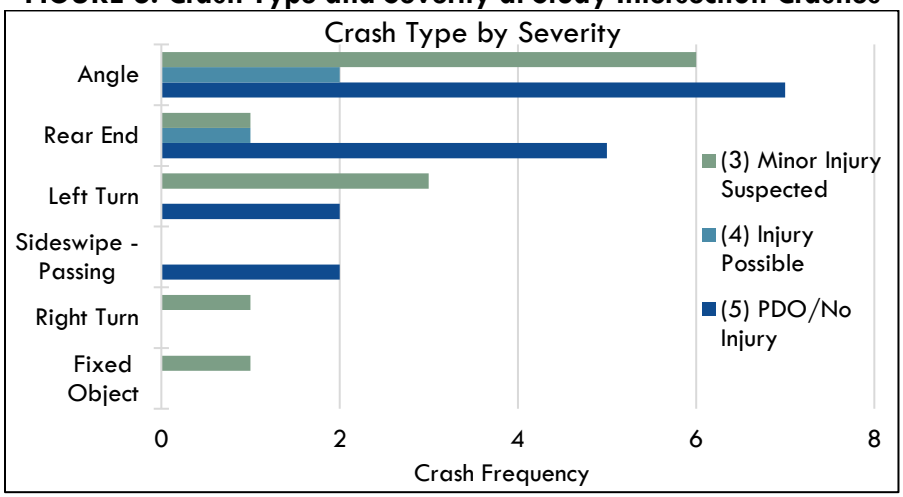


TABLE 1: Crash Data at Study Intersections

Crashes Per Year	5.17
Fatal and All Injury Crashes	15
Percent Injury	48.4%
Equivalent PDO Index Value	3.48

Location	Crashes	%
White Oak Rd/SR-125	22	71.0%
Lewis Rd/White Oak Rd	9	29.0%
Grand Total	31	100%

Fatalities	0
Serious Injuries	0
Other Injuries	20

Contributing Factor	Crashes	%
Failure to Yield	16	51.6%
Following Too Closely/ACDA	8	25.8%
Ran Stop Sign	2	6.5%
Improper Lane Change	2	6.5%
Drove off Road	1	3.2%
Not Discernible	1	3.2%
None	1	3.2%
Grand Total	31	100%

Older Driver (65+)	Crashes	%
No	20	64.5%
Yes	11	35.5%
Grand Total	31	100%

Young Driver (15-25)	Crashes	%
No	21	67.7%
Yes	10	32.3%
Grand Total	31	100%

Road Condition	Crashes	%
Dry	28	90.3%
Wet	3	9.7%
Grand Total	31	100%

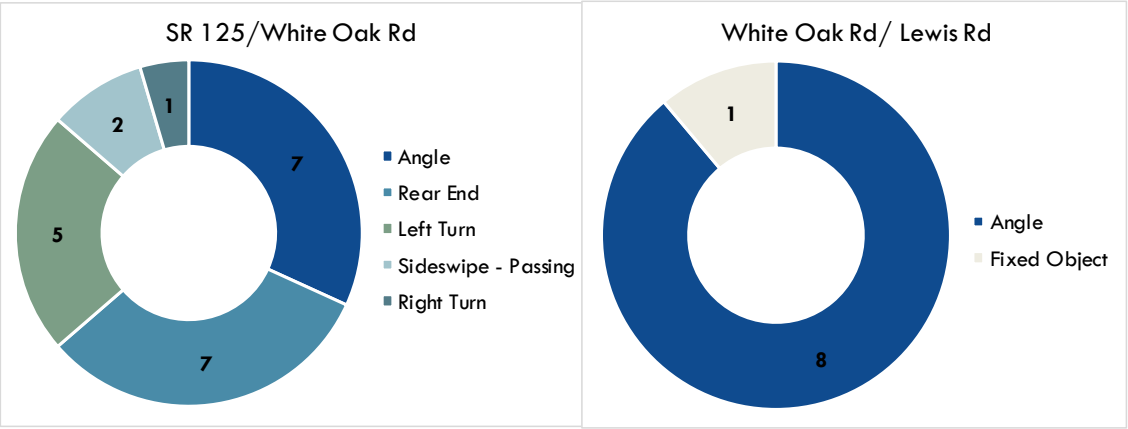
Light Condition	Crashes	%
Daylight	26	83.9%
Dawn/Dusk	3	9.7%
Dark	2	6.5%
Grand Total	31	100%

At the SR 125 and White Oak Road intersection, 22 crashes were reported. These included 7 angle crashes and 7 rear-end crashes. Notably, six of the angle crashes resulted in injuries, and all involved vehicles on White Oak attempting to turn left onto SR 125. All rear-end and left-turn crashes at this intersection involved vehicles traveling along SR 125.

Although left-turning vehicles from White Oak Road represent only 18% of the AADT on that approach, they were involved in 88% of the crashes originating from that leg of the intersection—highlighting a disproportionate crash risk.

At the White Oak Road and Lewis Road intersection, 9 crashes were reported. Eight were angle crashes and one was a fixed-object collision. Three of the crashes resulted in injuries. All eight angle crashes involved a vehicle turning from SR 125 onto White Oak Road and then attempting to turn immediately onto Lewis Road. In several cases, crash reports noted that both vehicles entered the intersection simultaneously and fault could not be clearly assigned. **Figure 7** illustrates crash types by intersection.

Figure 7: Crash Types Per Intersection



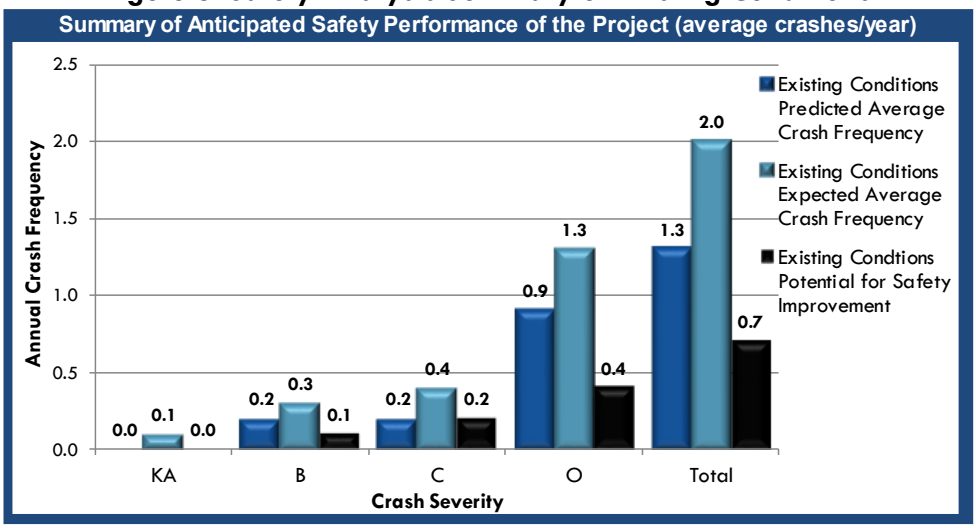
5.2 Safety Analysis

The safety performance of the study intersection was evaluated using ODOT's Economic Crash Analysis Tool (ECAT). This tool compares the intersection's crash history and characteristics facilities statewide, providing a data-driven assessment of safety performance. The ECAT analysis includes the following key metrics:

- **Predicted Crash Frequency**: An estimate of how the intersection is expected to perform based on statewide averages for similar intersections.
- **Expected Crash Frequency**: A reflection of the intersection's actual crash history.
- **Potential for Safety Improvement (PSI)**: The difference between expected and predicted crash frequencies. A positive PSI indicates that the location is performing worse than expected and may benefit significantly from safety improvements.

For the study intersection, the expected crash frequency exceeds the predicted frequency, resulting in a positive PSI of 0.7 crashes per year. This suggests a meaningful opportunity for safety enhancement. The existing safety performance is illustrated in **Figure 8**.

Figure 8: Safety Analysis Summary of Existing Conditions



5.3 Contributing Factors

Angle crashes were the most frequent crash type observed at the study intersections. Their high occurrence at SR 125 and White Oak Road is likely influenced by the high volumes and speeds on SR 125, which make it difficult for drivers on side streets to judge safe gaps in traffic. Additionally, the limited storage length on White Oak Road may create pressure for drivers to proceed quickly, especially during queue buildup. All angle crashes for this intersection occurred between vehicles traveling on SR 125 and vehicles turning left from White Oak Road. These vehicles must cross three lanes on SR-125 before merging with westbound traffic. Although left-turning vehicles from White Oak Road represent less than 20% of the total traffic volume, they were involved in over 85% of the crashes originating from that approach.

Angle crashes accounted for all but one crash at White Oak Road and Lewis Road. The intersections proximity to SR 125 limits sight distance for drivers attempting to turn, further increasing the risk of angle collisions.

Rear-end crashes were the second most common type, with all seven incidents occurring along SR 125. The most frequently cited contributing factor was "following too closely." The presence of multiple commercial driveways near the intersection likely contributes to frequent interruptions in traffic flow, increasing the likelihood of rear-end collisions.

Between 2018 and 2023, five left-turn crashes were reported at the SR 125 and White Oak Road intersection, three of which involved injuries. These crashes typically occurred during or near the midday and PM peak periods, and all were attributed to westbound traffic failing to yield to oncoming eastbound traffic on SR 125. High traffic volumes amongst multiple through lanes on SR-125 East make it harder for drivers to gauge a suitable gap to complete their left-turn.

Other crash types included two sideswipes, one right-turn crash, and one fixed-object crash. These incidents did not exhibit any consistent patterns or contributing factors.

6.0 EXISTING CAPACITY ANALYSIS

Intersection capacity was evaluated to assess current operational performance and to inform the analysis of potential countermeasures. EMH&T used Highway Capacity Software (HCS) 2024 to determine Level of Service (LOS) and average delay under existing conditions. Per the ODOT Analysis and Traffic Simulation (OATS) Manual, LOS D or better is considered acceptable.

The analysis included **Design Hour Volumes (DHV)** for both **AM and PM peak periods** in the **2030 Build Year** and **2050 Horizon Year**. Peak hour factors and heavy vehicle percentages were calculated from the raw partial-day traffic counts.

For analysis purposes:

- White Oak Road was treated as the northbound approach at the SR 125 intersection.
- At the White Oak Road and Lewis Road intersection (two-way stop control), White Oak Road was modeled as eastbound on the stop-controlled leg, with the free-flow leg assigned as southbound. Lewis Road was assigned as westbound.

Capacity analysis was also conducted at the adjacent unsignalized intersection of **SR 125 and Bristol Lake Drive** and the signalized **SR 125 and Amelia-Olive Branch Road** intersection. EMH&T evaluated the Amelia-Olive branch Road intersection using existing signal timings provided by

ODOT District 8. **Table 2** summarizes LOS and delay results for all intersections. Full capacity analysis reports are included in **Appendix C.**

Results indicate that the White Oak Road approach to SR 125 performs poorly across all four peak periods, with the highest delays occurring during the PM peak. Capacity constraints are also anticipated during the AM peak at the SR 125 and Amelia-Olive Branch Road intersection. Additionally, the Bristol Lake Drive approach is expected to operate inefficiently throughout all time periods.

Table 2: Summary of No Build Capacity Analysis

Time Period	Condition	Intersection Name	Eastbound Approach	Westbound Approach	Northbound Approach	Southbound Approach	Intersection Total
AM Peak	2030 No Build	SR 125/Bristol Lake Dr.	A/0.3	A/0.0	-	F/76.4	**A/2.7**
		SR 125/White Oak Rd.	A/0.0	A/0.4	E/37.9	-	**A/1.9**
		White Oak Rd./Lewis Rd.	B/10.7	A/10.0	-	A/2.8	**A/6.8**
		SR 125/Amelia-Olive Branch Rd.	B/16.7	D/36.5	C/33.1	F/327.9	**E/77.6**
	2050 No Build	SR 125/Bristol Lake Dr.	A/0.3	A/0.0	-	F/150.2	**A/5.3**
		SR 125/ White Oak Rd.	A/0.0	A/0.4	F/55.6	-	**A/2.7**
		White Oak Rd./Lewis Rd.	B/10.9	A/10.0	-	A/2.6	**A/6.9**
		SR 125/Amelia-Olive Branch Rd.	B/18.4	E/64.3	C/33.0	F/395	**F/105.7**
PM Peak	2030 No Build	SR 125/Bristol Lake Dr.	A/0.4	A/0.0	-	F/80.1	**A/1.7**
		SR 125/ White Oak Rd.	A/0.0	A/4.2	F/916	-	**E/40.9**
		White Oak Rd./Lewis Rd.	C/16.2	B/12.0	-	A/3.7	**A/8.5**
		SR 125/Amelia-Olive Branch Rd.	C/30.0	C/32.6	D/36.7	D/53.7	**C/34.8**
	2050 No Build	SR 125/Bristol Lake Dr.	A/0.4	A/0.0	-	F/173.1	**A/3.1**
		SR 125/White Oak Rd.	A/0.0	A/8.4	F/5480	-	**F/230.5**
		White Oak Rd./Lewis Rd.	C/18.5	B/13.0	-	A/3.8	**A/9.3**
		SR 125/Amelia-Olive Branch Rd.	D/35.6	D/35.5	D/47.4	F/98.2	**D/45.5**

7.0 CONSIDERED INTERSECTION ALTERNATIVES

7.1 Roadway Realignment

Pierce Township conducted a preliminary assessment of the study area and identified several potential realignment alternatives. These concepts are considered long-term countermeasures aimed at improving both safety and traffic operations. Each would require significant construction costs, right-of-way acquisition, and longer implementation timelines. The baseline realignment concepts include:

- Realigning Lewis Road to the southwest to increase the spacing between the two study intersections.
- Realigning White Oak Road to the north to form a four-leg intersection with SR 125 and Bristol Lake Drive.
- Realigning White Oak Road with Amelia Court to consolidate access.

Preliminary layouts of these alternatives are included in **Appendix D**.

7.2 Traffic Signal

Traffic signals are a commonly recommended countermeasure for addressing high frequencies of angle crashes, as they reduce reliance on driver judgment for gap selection. However, signalizing the SR 125 and White Oak Road intersection would require changes to the current traffic control at White Oak Road and Lewis Road. Specifically, White Oak Road would need to operate as a free-flow segment between the two intersections, rather than being stop-controlled at Lewis Road.

The proximity of Lewis Road to SR 125 presents challenges for signal coordination and queue management. To mitigate these issues, Lewis Road would likely need to be realigned westward or restricted to right-in/right-out (RIRO) movements to prevent spillback into the signalized intersection.

EMH&T conducted a traffic signal warrant analysis using the methodology outlined in the Ohio Manual of Uniform Traffic Control Devices (OMUTCD). Warrants were evaluated using 2024 traffic volumes, with right-turn reductions applied per ODOT's Traffic Engineering Manual (TEM). The analysis considered both 100% and high-speed 70% volume thresholds.

Although Warrants 1 and 2 met the 70% thresholds, they did not meet the 100% thresholds required for signal installation. Per TEM Section 402-3.2, a new signal cannot be justified unless five or more signal-correctable crashes occur within a 12-month period—this condition was not met. Therefore, a traffic signal at this location is not warranted or recommended at this time. Results are summarized in **Tables 3** and **Table 4**.

Table 3: Signal Warrants Evaluated

Signal Warrant	Analyzed or Not Applicable
Warrant 1: Eight Hour Vehicular Volume	Analyzed
Warrant 2: Four Hour Vehicular Volume	Analyzed
Warrant 3: Peak Hour	Analyzed
Warrant 4: Pedestrian Volume	Not Applicable
Warrant 5: School Crossing	Not Applicable
Warrant 6: Coordinated Signal System	Not Applicable
Warrant 7: Crash Experience	Analyzed
Warrant 8: Roadway Network	Not Applicable
Warrant 9: Intersection Near a Grade Crossing	Not Applicable

Table 4: Signal Warrant Result Summary

Signal Warrant	100% Threshold	70% Threshold	Warrant Satisfied?
Warrant 1: Eight Hour Vehicular Volume	Condition A: 0 hours met Condition B: 4 hours met	Condition A: 0 hours met Condition B: 13 hours met	NO
Warrant 2: Four Hour Vehicular Volume	3 hours met	12 hours met	NO
Warrant 3: Peak Hour	0 hours met	0 hours met	NO
Warrant 7: Crash Experience	-	-	NO

A separate signal warrant analysis was conducted for the realignment of White Oak Road across from Bristol Lake Drive. In this scenario, Warrants 2 and 3 were satisfied at the 100% threshold, indicating that a signal may be justified if this realignment is pursued. Detailed results are provided in **Appendix E**.

7.3 Restricted Turning Movements

Restricting or prohibiting turning movements is an effective strategy for reducing conflict points and crash risk at intersections. Converting minor approaches to right-in/right-out (RIRO) access eliminates left-turn movements, which are often associated with higher crash severity.

Implementing RIRO configurations at Lewis Road and/or White Oak Road could help mitigate the observed crash patterns by reducing conflict points. However, any turning restrictions should be carefully evaluated in the context of adjacent intersections and access points to ensure they do not introduce new safety concerns or negatively impact overall traffic operations.

8.0 ALTERNATIVE COMPARISION

Based on the results of the safety and operational analyses, as well as feedback from stakeholder meetings, four intersection alternatives were selected for further evaluation.

- **Alternative 1**: Left-in/Right-in/Right-out (LIRIRO) at SR 125 and White Oak Road, with RIRO at White Oak Road and Lewis Road
- **Alternative 2**: RIRO at both SR 125 and White Oak Road, and White Oak Road and Lewis Road (prohibiting all left-turn movements)
- **Alternative 3**: LIRIRO at SR 125 and White Oak Road, with realignment of Lewis Road to the south.
- **Alternative 4**: Signalization of SR 125 and White Oak Road, with cul-de-sac termination of Lewis Road

8.1 Capacity Analysis

Intersection capacity was evaluated for each alternative using 2030 Build Year and 2050 Horizon Year Design Hour Volumes (DHV) for both AM and PM peak periods. Some alternatives required rerouting traffic due to restricted movements or removed approaches. Traffic volume plates for each alternative are included in **Appendix A**.

8.1.1 SR 125 and White Oak Road

Alternatives involving restricted turning movements and signalization were analyzed. Signalization is not warranted currently. However, volume thresholds are close to the thresholds and will likely be warranted in future years if volumes for the area rise as expected. All alternatives are expected to operate at an acceptable LOS during the AM peak periods in both 2030 and 2050. However, none of the alternatives meet operational goals during the 2050 PM peak hour. While the restricted-turn alternatives show an overall intersection LOS of A, they result in high delays for the White Oak Road approach. Summary results are provided in **Table 5**, with full reports in **Appendix C**.

Table 5: Capacity Analysis Results for Build Alternatives at SR 125/White Oak Road

2050 AM	No Build				Build Alternative 1&3 - LIRIRO on White Oak Rd				Build Alternative 2 - RIRO on White Oak Rd				Build Alternative 4 - Signal (90s cycle)			
Movement	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR
EBT	A/0.0	-	-	-	A/0.0	-	-	-	A/0.0	-	-	-	A/9.6	0.34	139.0	0.2
EBR	A/0.0	-	-	-	A/0.0	-	-	-	A/0.0	-	-	-	A/7.9	0.06	18.0	0.1
EB Approach	**A/0.0**	-	-	-	**A/0.0**	-	-	-	**A/0.0**	-	-	-	**A/9.5**	-	-	-
WBL	A/9.8	0.11	10.2	0.0	A/9.8	0.11	10.2	0.0					B/11.6	0.84	399.0	15.7
WBT	A/0.0	-	-	-	A/0.0	-	-	-	A/0.0	-	-	-	A/5.6	0.17	20.0	0.8
WB Approach	**A/0.4**	-	-	-	**A/0.4**	-	-	-	**A/0.0**	-	-	-	**B/11.4**	-	-	-
NBL	F/55.6	0.69	108.4	3.6									C/34.7	0.13	28.0	0.3
NBR					B/12.0	0.17	15.1	0.2	B/12.0	0.17	15.1	0.2	C/30.5	0.32	87.0	0.1
NB Approach	**F/55.6**	-	-		**B/12.0**	-	-	-	**B/12.0**	-	-	-	**C/31.5**	-	-	-
Intersection	**A/6.9**				**A/0.7**				**A/0.4**				**B/11.8**			

2050 PM	No Build				Build Alternative 1&3 - LIRIRO on White Oak Rd				Build Alternative 2 - RIRO on White Oak Rd				Build Alternative 4 - Signal (90s cycle)			
Movement	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR
EBT	A/0.0	-	-	-	A/0.0	-	-	-	A/0.0	-	-	-	C/30.8	0.97	704.0	0.9
EBR	A/0.0	-	-	-	A/0.0	-	-	-	A/0.0	-	-	-	A/7.7	0.17	55.0	0.3
EB Approach	**A/0.0**	-	-	-	**A/0.0**	-	-	-	**A/0.0**	-	-	-	**C/29.0**	-	-	-
WBL	F/76.7	0.86	167.6	0.6	F/76.7	0.86	167.6	0.6					D/46.4	0.81	218.0	1.1
WBT	A/0.0	-	-	-	A/0.0	-	-	-	A/0.0	-	-	-	A/5.3	0.56	169.0	0.2
WB Approach	**A/8.4**	-	-	-	**A/8.4**	-	-	-	**A/0.0**	-	-	-	**B/9.8**	-	-	-
NBL	F/5480	12.03	569.5	19.0									C/35.0	0.05	9.0	0.1
NBR					F/79.9	0.84	153.7	1.7	F/79.9	0.84	153.7	1.7	E/62.9	0.83	205.0	0.2
NB Approach	**F/5480**	-	-	-	**F/79.9**	-	-	-	**F/79.9**	-	-	-	**E/61.1**	-	-	-
Intersection	**F/230.5**				**A/6.5**				**A/3.1**				**C/22.6**			

8.1.2 White Oak Road and Lewis Road

Alternatives considered for this intersection include converting Lewis Road to RIRO access and realigning the road further south and maintaining all movements. All options are expected to meet performance criteria, with slight operational improvements over the no-build scenario. Summary results are shown in **Table 6**.

Table 6: Capacity Analysis Results for Build Alternatives at White Oak Road/Lewis Road

2050 AM	No Build				Build Alternative 1&2 - RIRO on Lewis Rd				Build Alternative 3 - Realign Lewis Rd			
Movement	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR
WBL	A/10.0	0.11	10.2	0.0					B/12.4	0.10	7.5	0.0
WBR					A/8.8	0.01	0.0	0.0				
WB Approach	**A/10.0**	-	-	-	**A/8.8**	-	-	-	**B/12.4**	-	-	-
NBT	A/10.9	0.14	12.6	0.0	A/0.0	-	-	-	A/0.0	-	-	-
NBR					A/0.0	-	-	-	A/0.0	-	-	-
NB Approach	**A/10.9**	-	-	-	**A/0.0**	-	-	-	**A/0.0**	-	-	-
SBL	A/8.2	0.04	-	-					A/7.8	0.08	10.2	0.1
SBT	A/0.0	-	-	-	A/0.0	-	-	-	A/0.7	-	-	-
SB Approach	**A/2.6**	-	-	-	**A/0.0**	-	-	-	**A/3.3**	-	-	-
Intersection	**A/6.9**				**A/0.7**				**A/3.2**			

2050 PM	No Build				Build Alternative 1&2 - RIRO on Lewis Rd				Build Alternative 3 - Realign Lewis Rd			
Movement	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR	LOS/ Delay(s)	v/c	95th %ile Queue (ft)	QSR
WBL	B/13.0	0.13	10.0	0.0					B/13.7	0.13	12.5	0.0
WBR					A/9.1	0.01	0.0	0.0				
WB Approach	**B/13.0**	-	-	-	**A/9.1**	-	-	-	**B/13.7**	-	-	-
NBT	C/18.5	0.41	50.4	0.1	A/0.0	-	-	-	A/0.0	-	-	-
NBR					A/0.0	-	-	-	A/0.0	-	-	-
NB Approach	**A/10.9**	-	-	-	**A/0.0**	-	-	-	**A/0.0**	-	-	-
SBL	A/8.5	0.11	-	-					A/7.8	0.09	7.5	0.0
SBT	A/0.0	-	-	-	A/0.0	-	-	-	A/0.8	-	-	-
SB Approach	**A/3.8**	-	-	-	**A/0.0**	-	-	-	**A/3.4**	-	-	-
Intersection	**A/9.3**				**A/0.2**				**A/3.4**			

8.2 ECAT

Each alternative was evaluated using ODOT's Economic Crash Analysis Tool (ECAT), which applies predictive methods from the Highway Safety Manual (HSM) to estimate crash frequency. Crash Modification Factors (CMFs) were used to estimate the safety impact of each alternative. Where CMFs were not preloaded in ECAT, values were manually entered using data from the CMF Clearinghouse.

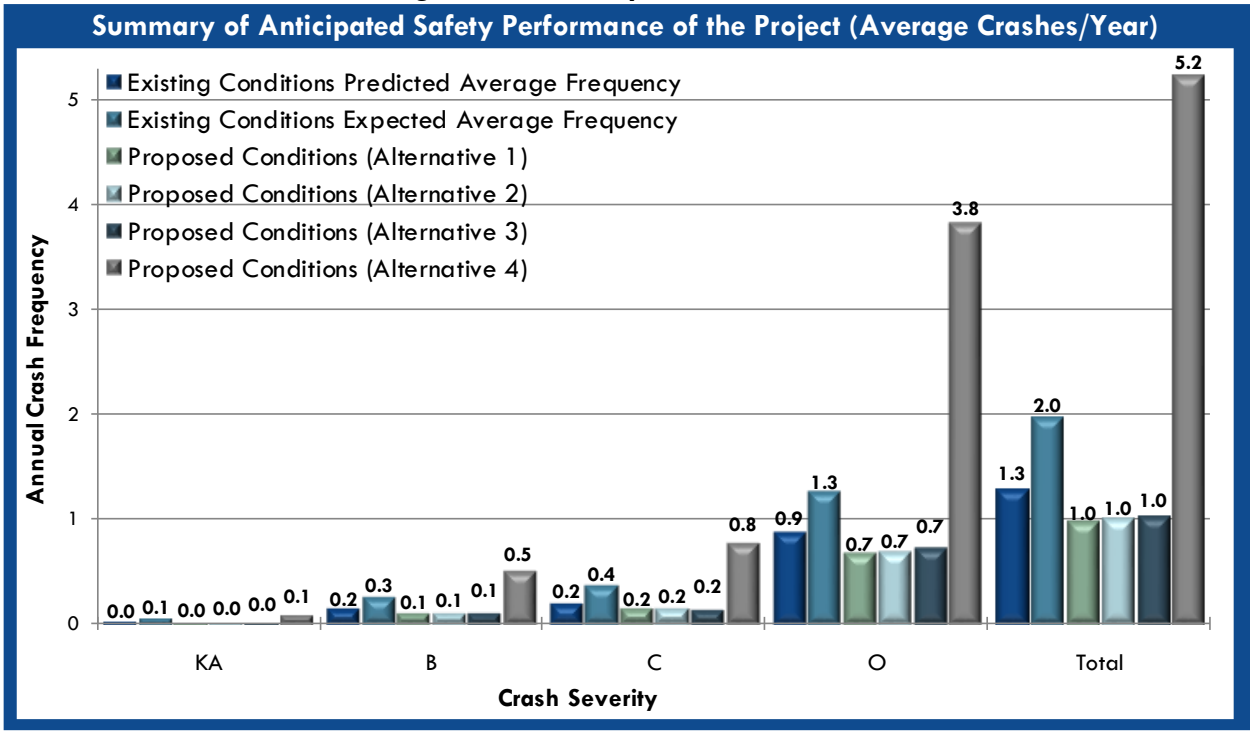
Key CMFs used in the analysis include:

- **Modify Stop-Controlled Approach to RIRO (CMF: 0.55)** – Applied to all crash types at 3-leg urban intersections (CMF ID: 9821)
- **Increase Triangle Sight Distance**: Applied to Alternative 3 to reflect the increased spacing between intersections

No CMF was available for the LIRIRO configuration at SR 125 and White Oak Road. To estimate its impact, a custom CMF of 0.01 was applied to angle crashes, reflecting the expected reduction in conflict points by prohibiting left turns from White Oak Road.

Figure 9 summarizes the ECAT results for each alternative. Full results and CMF documentation are provided in **Appendix F**.

Figure 9: Summary of ECAT Results



Alternatives 1, 2, and 3 are all predicted to reduce crash frequency at similar levels. Alternative 1 is expected to achieve the greatest reduction, with an estimated 1.01 crashes avoided per year, followed closely by Alternative 2 at 0.98 crashes per year.

These estimates apply only to the study intersections and do not reflect potential impacts on nearby intersections. Restricting left-turn movements from White Oak will shift impacted volumes to other intersections. Left-turn volumes on White Oak Road are relatively low at 270 vehicles per day in 2024 and are expected to have minimal impact on adjacent intersections. These vehicles will likely utilize Appomatox Drive to reach their destination. While this intersection has similar SR 125 volumes, there are fewer nearby access drives at increased spacing and more traditional intersection geometry.

Left-turn volumes for westbound SR 125 averaged 1,300 vehicle per day in 2024 and account for approximately 62% of daily volumes entering White Oak Road. Should the westbound SR 125 left-turns be restricted, these vehicles are anticipated to reroute northwest to Appomattox Drive where they will face similar challenges of high oncoming volumes.

Signalizing SR 125 and White Oak Road is projected to increase crash frequency. Since the signal warrant is not met, a benefit-cost analysis was not conducted for this alternative.

8.2.1 Benefit Cost Analysis

Benefit cost analysis compares the expected safety benefits of each alternative to its implementation cost over the project's lifespan. A benefit-cost ratio greater than 1.0 indicates a positive return on investment. ECAT calculates the net present value of safety benefits based on crash reductions.

Conceptual designs and preliminary cost estimates were prepared for Alternatives 1 through 3. These are included in **Appendix G**. No cost estimate was developed for the signal alternative.

Alternative 1- LIRIRO + RIRO

- Estimated Cost: $460,000
- Key Features: Median barrier to restrict left turns; improved access management for adjacent commercial properties
- Benefit-Cost Ratio: Less and 1.0
- Note: Vehicles turning left from White Oak Road to westbound SR 125 would be rerouted via Appomatox Drive
- ECAT results shown in **Figure 10**

Alternative 2 – RIRO + RIRO

- Estimated Cost: $481,500
- Benefit-Cost Ratio: Less than 1.0
- ECAT results shown in **Figure 11.**

Alternative 3 – LIRIRO + Realignment of Lewis Road

- Estimated cost: $1,437,600
- Benefit-Cost Ratio: Less than 1.0
- ECAT results shown in **Figure 12.**

Figure 10: Benefit - Cost Analysis for Alternative 1

Alternative 1 ECAT Benefit - Cost Calculator	
Net Present Value of Project	$409,050.00
Net Present Value of Safety Benefits	$164,522.37
Net Benefit	($244,527.63)
Benefit / Cost Ratio	0.40

ECAT Expected Annual Crash Adjustment	
Number of Fatal & Incapacitating Injury Crashes	-0.011
Number of Injury Crashes	-0.113
Number of Total Crashes	-0.313

Figure 11: Benefit - Cost Analysis for Alternative 2

Alternative 2 ECAT Benefit - Cost Calculator	
Net Present Value of Project	$427,275.00
Net Present Value of Safety Benefits	$131,541.14
Net Benefit	($295,733.86)
Benefit / Cost Ratio	0.31

ECAT Expected Annual Crash Adjustment	
Number of Fatal & Incapacitating Injury Crashes	-0.009
Number of Injury Crashes	-0.091
Number of Total Crashes	-0.284

Figure 12: Benefit - Cost Analysis for Alternative 3

Alternative 3 ECAT Benefit - Cost Calculator	
Net Present Value of Project	$1,279,260.00
Net Present Value of Safety Benefits	$166,953.52
Net Benefit	($1,112,306.48)
Benefit / Cost Ratio	0.13

ECAT Expected Annual Crash Adjustment	
Number of Fatal & Incapacitating Injury Crashes	-0.011
Number of Injury Crashes	-0.115
Number of Total Crashes	-0.273

8.3 Short-Term Countermeasure

In collaboration with ODOT District 8, Clermont County, and Pierce Township, EMH&T developed a short-term version of Alternative 1 to address key safety concerns without requiring any right-of-way acquisition. This approach is intended to deliver near-term safety benefits at a lower cost with a shorter construction timeline.

The proposed short-term countermeasure has an estimated construction cost of $85,600 and demonstrates a benefit-cost ratio of 1.97, indicating a strong return on investment.

Key features of the short-term alternative include:

- LIRIRO configuration on White Oak Road at SR 125
- RIRO configuration on Lewis Road, enforced with a concrete median barrier
- Use of re-boundable centerline delineators to discourage vehicles from using adjacent commercial driveways to access Lewis Road
- No access management improvements are included in this version

An exhibit illustrating the short-term alternative is provided in **Appendix G**.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The intersection of SR 125 and White Oak Road was ranked #261 on the 2021 ODOT HSIP Priority List for suburban intersections. Between 2018 and 2023, the study intersections—SR 125 at White Oak Road and White Oak Road at Lewis Road—experienced a combined average of approximately five crashes per year. The predominate crash type was angle crashes, with 15 injury crashes and no fatalities reported during the six-year period. Angle crashes between vehicles on SR 125 and left-turning vehicles from White Oak Road had the highest concentration of injuries amongst all crash patterns at the study intersections with an 87% injury rate.

At the White Oak Road and Lewis Road intersection, nine crashes were recorded—89% of which were angle crashes involving vehicles entering from SR 125 and attempting to turn onto Lewis Road. The crash history strongly suggests that the proximity of the intersections and their existing control types are key contributors to the observed crash patterns.

Three build alternatives were evaluated. All are projected to reduce crash frequency and improve Level of Service (LOS) at the SR 125 and White Oak Road intersection in both the opening and horizon years. However, each alternative is expected to experience high delays on the minor approach during the 2050 PM peak hour. A traffic signal is not warranted at this location based on current volumes and crash history.
The ECAT analysis showed the following crash reduction and benefit-cost results:

- Alternative 1: 1.01 crashes/year reduced; benefit-cost = 0.40
- Alternative 2: 0.98 crashes/year reduced; benefit-cost = 0.31
- Alternative 3: 0.97 crashes/year reduced; benefit-cost = 0.13

Based on the combined results of the capacity analysis, safety performance, and cost-effectiveness, Alternative 1 is identified as the preferred countermeasure. This alternative—implementing a LIRIRO at SR 125 and White Oak Road and a RIRO at White Oak Road and Lewis Road—offers the best balance of safety improvement, cost, and minimal impact to downstream traffic operations.

In addition, the **short-term version of Alternative 1 is recommended for implementation**. This option targets the highest-priority safety concerns—specifically, the high-risk turning movements—while deferring more complex improvements such as ideal lane widths, permanent medians, and access management changes to a future project. By focusing on the most impactful crash reduction measures, the short-term alternative offers a cost-effective and timely solution that requires no right-of-way acquisition.

Importantly, this phased approach received strong support from project stakeholders, including ODOT District 8, Clermont County, and Pierce Township, who were in favor of both the short-term implementation and the proposed movement restrictions. With a benefit-cost ratio of 1.97, the short-term alternative provides a practical and timely opportunity to improve safety while preserving flexibility for future enhancements.

EMH&T

Engineers, Surveyors, Planners, Scientists

APPENDIX A

Traffic Volume Data

Traffic Count Data
SR-125/White Oak Road/Lewis Road

Intersection Name	4 LEGS, marked
City	
State	
Northbound Street	
Southbound Street	
Eastbound Street	
Westbound Street	

NB
SB
EB
WB

North



Date and Time of Start of Count 1	05/8/2024	0:00:00
Date and Time of End of Count 1	05/9/2024	0:00:00
Date and Time of Start of Count 2		
Date and Time of End of Count 2		
Date and Time of Start of Count 3		
Date and Time of End of Count 3		

Classification Schema
2-Classification Count

NOTES	

Traffic Count Data
SR-125/White Oak Road/Lewis Road

Cars

Date	Time	Southbound						Westbound						Northbound						Eastbound					
		U Turns	Left Turns	Straight Through	Right Turns	EB Ped Crossings	WB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	NB Ped Crossings	SB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	EB Ped Crossings	WB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	NB Ped Crossings	SB Ped Crossings
05/8/2024	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00	0	48	1	0	0	0	0	0	1	280	0	0	0	1	2	0	0	0	0	0	5	1	0	0
	6:15	0	55	1	1	0	0	0	0	8	314	0	0	0	2	9	4	0	0	0	1	6	2	0	0
	6:30	0	80	0	0	0	0	0	0	6	373	0	0	0	3	5	1	0	0	0	0	16	1	0	0
	6:45	0	96	4	0	0	0	0	0	10	381	0	0	0	4	8	2	0	0	0	0	17	1	0	0
	7:00	0	119	4	0	0	0	0	1	24	412	0	0	0	7	7	2	0	0	0	0	16	2	0	0
	7:15	0	137	10	2	0	0	0	0	19	410	0	0	0	7	7	4	0	0	0	0	15	0	0	0
	7:30	0	155	11	2	0	0	0	0	18	398	0	0	0	9	6	5	0	0	0	0	18	0	0	0
	7:45	0	152	5	0	0	0	0	1	15	286	0	0	0	7	10	5	0	0	0	0	17	7	0	0
	8:00	0	151	5	2	0	0	0	4	17	277	0	0	0	2	5	2	1	0	0	0	15	0	1	1
	8:15	0	154	6	1	0	0	0	1	14	279	0	0	0	7	5	0	0	0	0	0	14	3	1	0
	8:30	0	134	6	2	0	0	0	3	17	331	0	0	0	4	4	2	0	0	0	1	19	0	0	0
	8:45	0	149	4	1	0	0	0	4	8	266	0	0	0	7	7	5	0	0	0	2	19	1	0	0
	9:00	0	175	2	3	0	0	0	1	15	263	0	0	0	4	2	4	0	0	0	0	16	1	0	0
	9:15	0	166	4	5	0	0	0	0	21	273	0	0	0	1	6	3	0	0	0	0	28	3	0	0
	9:30	0	167	5	3	0	0	0	2	16	276	0	0	0	2	3	1	0	0	0	1	21	1	0	0
	9:45	1	159	5	4	0	0	0	1	16	221	0	0	0	4	4	2	0	0	0	2	18	0	0	0
	10:00	0	189	2	7	0	0	0	2	18	230	0	0	0	2	3	5	0	0	0	0	20	1	0	0
	10:15	0	208	5	1	0	0	0	2	20	258	0	0	0	5	3	4	0	0	0	2	18	1	0	0
	10:30	0	186	4	2	0	0	0	2	9	264	0	0	0	4	5	2	0	0	0	1	16	3	0	0
	10:45	0	221	3	2	0	0	0	2	8	265	0	0	0	3	5	1	0	0	0	1	24	2	0	0
	11:00	0	218	5	2	0	0	0	2	19	256	0	0	0	2	2	4	0	0	0	2	11	0	0	0
	11:15	0	222	8	1	0	0	0	2	14	264	0	0	0	4	9	2	0	0	0	1	21	2	0	0
	11:30	0	245	6	0	0	0	0	1	18	238	0	0	0	1	8	2	0	0	0	1	14	2	0	0
	11:45	0	226	9	5	0	0	0	1	19	234	0	0	0	2	5	3	0	0	0	2	15	2	0	0
	12:00	0	232	6	1	0	0	0	1	23	276	0	0	0	3	5	0	0	0	0	2	14	2	0	0
	12:15	0	263	11	2	0	0	0	4	16	298	0	0	0	5	6	2	0	0	0	1	15	4	0	0
	12:30	0	282	10	3	0	0	0	1	16	279	0	0	0	1	6	1	0	0	0	0	14	6	0	0
	12:45	0	262	11	4	0	0	0	3	13	264	0	0	0	4	7	3	0	0	0	0	17	1	0	0
	13:00	0	261	14	2	0	0	0	1	14	252	0	0	0	3	2	3	0	0	0	1	15	1	1	0
	13:15	0	249	10	2	0	0	0	2	14	263	0	0	0	2	7	4	0	0	0	1	21	5	0	0
	13:30	0	262	4	3	0	0	0	2	12	233	0	0	0	2	3	4	0	0	0	1	22	4	0	0
	13:45	0	293	3	2	0	0	0	1	18	272	0	0	0	2	2	1	0	0	0	1	19	3	0	0
	14:00	0	290	9	1	0	0	0	1	20	240	0	0	0	4	2	6	0	0	0	1	26	1	0	0
	14:15	0	312	9	1	0	0	0	1	20	256	0	0	0	5	3	4	0	0	0	1	19	3	0	0
	14:30	0	281	15	3	0	0	0	3	20	273	0	0	0	6	6	2	0	0	0	0	17	5	1	0
	14:45	0	358	16	4	0	0	0	7	18	229	0	0	0	2	1	1	0	0	0	6	18	3	0	0
	15:00	0	356	21	5	0	0	0	5	20	279	0	0	0	11	1	7	0	0	0	2	32	5	0	0
	15:15	0	345	15	2	0	0	0	5	24	294	0	0	0	3	1	3	0	0	0	1	22	3	0	0
	15:30	0	360	11	5	0	0	0	3	29	282	0	0	0	7	1	4	0	0	0	1	29	3	0	0
	15:45	0	393	22	8	0	0	0	2	23	275	0	0	0	7	0	1	0	0	0	0	26	11	0	0
	16:00	0	371	17	6	0	0	0	7	30	221	0	0	0	5	3	0	0	0	0	0	39	6	0	0
	16:15	0	433	28	5	0	0	0	1	28	260	0	0	0	7	2	5	0	0	0	0	27	7	0	0
	16:30	0	419	23	6	0	0	0	3	33	283	0	0	0	9	0	4	0	0	0	0	31	5	0	0
	16:45	0	306	23	17	0	0	0	1	36	264	0	0	0	9	3	2	0	0	0	1	29	6	0	0
	17:00	0	360	14	9	0	0	0	2	30	275	0	0	0	6	3	2	0	0	0	2	30	6	0	1
	17:15	0	329	13	2	0	0	0	0	19	265	0	0	0	5	1	5	0	0	0	0	24	4	0	0
	17:30	0	320	18	11	0	0	0	4	30	277	0	0	0	7	4	5	0	0	0	6	27	6	0	0
	17:45	0	387	19	5	0	0	0	3	22	297	0	0	0	2	4	4	0	0	0	2	32	6	0	0
	18:00	0	336	10	2	0	0	0	1	36	271	0	0	0	10	2	1	0	0	0	0	29	4	0	0
	18:15	0	328	12	8	0	0	0	1	34	293	0	0	0	4	2	2	0	0	0	1	22	6	0	0
	18:30	0	332	10	4	0	0	0	4	17	241	0	0	0	7	2	2	0	0	0	2	16	5	0	0
	18:45	0	279	9	6	0	0	0	7	12	231	0	0	0	5	3	2	0	0	0	0	24	5	0	0
	19:00	0	276	7	6	0	0	0	2	25	231	0	0	0	5	2	1	0	0	0	0	21	4	0	0
	19:15	0	277	15	5	0	0	0	5	33	182	0	0	0	2	3	3	0	0	0	2	20	5	0	0
	19:30	0	247	5	4	0	0	0	2	15	178	0	0	0	2	2	0	0	0	0	3	22	1	0	0
	19:45	0	255	4	10	0	0	0	1	24	162	0	0	0	3	6	3	0	0	0	0	10	2	0	0
	20:00	0	266	11	7	0	0	0	1	36	195	0	0	0	4	4	0	0	0	0	0	11	6	0	0
	20:15	0	235	13	4	0	0	0	5	13	181	0	0	0	2	4	0	0	0	0	0	15	5	0	0
	20:30	0	220	14	5	0	0	0	2	22	165	0	0	0	2	1	1	0	0	0	0	15	1	0	0
	20:45	0	207	10	4	0	0	0	4	11	114	0	0	0	1	3	1	0	0	0	1	12	0	0	0
	21:00	0	187	14	8	0	0	0	2	16	108	0	0	0	1	1	2	0	0	0	1	8	1	0	0
	21:15	0	152	5	2	0	0	0	1	10	91	0	0	0	2	2	1	0	0	0	0	8	0	0	0
	21:30	0	146	6	0	0	0	0	0	3	88	0	0	0	1	4	1	0	0	0	0	10	1	1	0

Traffic Count Data
SR-125/White Oak Road/Lewis Road

	21:45	0	117	1	0	0	0	0	1	7	68	0	0	0	3	0	0	0	0	0	0	9	3	0	0
	22:00	0	121	6	0	0	0	0	3	9	66	0	0	0	0	1	3	0	0	0	1	3	0	0	0
	22:15	0	102	2	0	0	0	0	0	1	55	0	0	0	0	1	0	0	0	0	0	5	1	0	0
	22:30	0	72	3	0	0	0	0	0	4	45	0	0	0	0	0	0	0	0	0	0	4	0	0	0
	22:45	0	72	3	2	0	0	0	1	2	39	0	0	0	0	0	2	0	0	0	0	2	0	0	0
	23:00	0	67	0	0	0	0	0	0	4	33	0	0	0	0	2	0	0	0	0	0	4	0	0	0
	23:15	0	34	2	0	0	0	0	0	1	33	0	0	0	0	1	0	0	0	0	0	1	0	0	0
	23:30	0	37	0	0	0	0	0	0	1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	23:45	0	21	2	0	0	0	0	0	1	17	0	0	0	0	2	0	0	0	0	0	1	0	0	0
	Totals	**1**	**15922**	**621**	**232**	**0**	**0**	**0**	**138**	**1215**	**16567**	**0**	**0**	**0**	**265**	**251**	**163**	**1**	**0**	**0**	**58**	**1236**	**192**	**5**	**3**

Traffic Count Data
SR-125/White Oak Road/Lewis Road

Heavy Vehicles

Date	Time	Southbound						Westbound						Northbound						Eastbound					
		U Turns	Left Turns	Straight Through	Right Turns	EB Ped Crossings	WB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	NB Ped Crossings	SB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	EB Ped Crossings	WB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	NB Ped Crossings	SB Ped Crossings
05/8/2024	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00	0	48	1	0	0	0	0	0	1	280	0	0	0	1	2	0	0	0	0	0	5	1	0	0
	6:15	0	55	1	1	0	0	0	0	8	314	0	0	0	2	9	4	0	0	0	1	6	2	0	0
	6:30	0	80	0	0	0	0	0	0	6	373	0	0	0	3	5	1	0	0	0	0	16	1	0	0
	6:45	0	96	4	0	0	0	0	0	10	381	0	0	0	4	8	2	0	0	0	0	17	1	0	0
	7:00	0	119	4	0	0	0	0	1	24	412	0	0	0	7	7	2	0	0	0	0	16	2	0	0
	7:15	0	137	10	2	0	0	0	0	19	410	0	0	0	7	7	4	0	0	0	0	15	0	0	0
	7:30	0	155	11	2	0	0	0	0	18	398	0	0	0	9	6	5	0	0	0	0	18	0	0	0
	7:45	0	152	5	0	0	0	0	1	15	286	0	0	0	7	10	5	0	0	0	0	17	7	0	0
	8:00	0	151	5	2	0	0	0	4	17	277	0	0	0	2	5	2	1	0	0	0	15	0	1	1
	8:15	0	154	6	1	0	0	0	1	14	279	0	0	0	7	5	0	0	0	0	0	14	3	1	0
	8:30	0	134	6	2	0	0	0	3	17	331	0	0	0	4	4	2	0	0	0	1	19	0	0	0
	8:45	0	149	4	1	0	0	0	4	8	266	0	0	0	7	7	5	0	0	0	2	19	1	0	0
	9:00	0	175	2	3	0	0	0	1	15	263	0	0	0	4	2	4	0	0	0	0	16	1	0	0
	9:15	0	166	4	5	0	0	0	0	21	273	0	0	0	1	6	3	0	0	0	0	28	3	0	0
	9:30	0	167	5	3	0	0	0	2	16	276	0	0	0	2	3	1	0	0	0	1	21	1	0	0
	9:45	1	159	5	4	0	0	0	1	16	221	0	0	0	4	4	2	0	0	0	2	18	0	0	0
	10:00	0	189	2	7	0	0	0	2	18	230	0	0	0	2	3	5	0	0	0	0	20	1	0	0
	10:15	0	208	5	1	0	0	0	2	20	258	0	0	0	5	3	4	0	0	0	2	18	1	0	0
	10:30	0	186	4	2	0	0	0	2	9	264	0	0	0	4	5	2	0	0	0	1	16	3	0	0
	10:45	0	221	3	2	0	0	0	2	8	265	0	0	0	3	5	1	0	0	0	1	24	2	0	0
	11:00	0	218	5	2	0	0	0	2	19	256	0	0	0	2	2	4	0	0	0	2	11	0	0	0
	11:15	0	222	8	1	0	0	0	2	14	264	0	0	0	4	9	2	0	0	0	1	21	2	0	0
	11:30	0	245	6	0	0	0	0	1	18	238	0	0	0	1	8	2	0	0	0	1	14	2	0	0
	11:45	0	226	9	5	0	0	0	1	19	234	0	0	0	2	5	3	0	0	0	2	15	2	0	0
	12:00	0	232	6	1	0	0	0	1	23	276	0	0	0	3	5	0	0	0	0	2	14	2	0	0
	12:15	0	263	11	2	0	0	0	4	16	298	0	0	0	5	6	2	0	0	0	1	15	4	0	0
	12:30	0	282	10	3	0	0	0	1	16	279	0	0	0	1	6	1	0	0	0	0	14	6	0	0
	12:45	0	262	11	4	0	0	0	3	13	264	0	0	0	4	7	3	0	0	0	0	17	1	0	0
	13:00	0	261	14	2	0	0	0	1	14	252	0	0	0	3	2	3	0	0	0	1	15	1	1	0
	13:15	0	249	10	2	0	0	0	2	14	263	0	0	0	2	7	4	0	0	0	1	21	5	0	0
	13:30	0	262	4	3	0	0	0	2	12	233	0	0	0	2	3	4	0	0	0	1	22	4	0	0
	13:45	0	293	3	2	0	0	0	1	18	272	0	0	0	2	2	1	0	0	0	1	19	3	0	0
	14:00	0	290	9	1	0	0	0	1	20	240	0	0	0	4	2	6	0	0	0	1	26	1	0	0
	14:15	0	312	9	1	0	0	0	1	20	256	0	0	0	5	3	4	0	0	0	1	19	3	0	0
	14:30	0	281	15	3	0	0	0	3	20	273	0	0	0	6	6	2	0	0	0	0	17	5	1	0
	14:45	0	358	16	4	0	0	0	7	18	229	0	0	0	2	1	1	0	0	0	6	18	3	0	0
	15:00	0	356	21	5	0	0	0	5	20	279	0	0	0	11	1	7	0	0	0	2	32	5	0	0
	15:15	0	345	15	2	0	0	0	5	24	294	0	0	0	3	1	3	0	0	0	1	22	3	0	0
	15:30	0	360	11	5	0	0	0	3	29	282	0	0	0	7	1	4	0	0	0	1	29	3	0	0
	15:45	0	393	22	8	0	0	0	2	23	275	0	0	0	7	0	1	0	0	0	0	26	11	0	0
	16:00	0	371	17	6	0	0	0	7	30	221	0	0	0	5	3	0	0	0	0	0	39	6	0	0
	16:15	0	433	28	5	0	0	0	1	28	260	0	0	0	7	2	5	0	0	0	0	27	7	0	0
	16:30	0	419	23	6	0	0	0	3	33	283	0	0	0	9	0	4	0	0	0	0	31	5	0	0
	16:45	0	306	23	17	0	0	0	1	36	264	0	0	0	9	3	2	0	0	0	1	29	6	0	0
	17:00	0	360	14	9	0	0	0	2	30	275	0	0	0	6	3	2	0	0	0	2	30	6	0	1
	17:15	0	329	13	2	0	0	0	0	19	265	0	0	0	5	1	5	0	0	0	0	24	4	0	0
	17:30	0	320	18	11	0	0	0	4	30	277	0	0	0	7	4	5	0	0	0	6	27	6	0	0
	17:45	0	387	19	5	0	0	0	3	22	297	0	0	0	2	4	4	0	0	0	2	32	6	0	0
	18:00	0	336	10	2	0	0	0	1	36	271	0	0	0	10	2	1	0	0	0	0	29	4	0	0
	18:15	0	328	12	8	0	0	0	1	34	293	0	0	0	4	2	2	0	0	0	1	22	6	0	0
	18:30	0	332	10	4	0	0	0	4	17	241	0	0	0	7	2	2	0	0	0	2	16	5	0	0
	18:45	0	279	9	6	0	0	0	7	12	231	0	0	0	5	3	2	0	0	0	0	24	5	0	0
	19:00	0	276	7	6	0	0	0	2	25	231	0	0	0	5	2	1	0	0	0	0	21	4	0	0
	19:15	0	277	15	5	0	0	0	5	33	182	0	0	0	2	3	3	0	0	0	2	20	5	0	0
	19:30	0	247	5	4	0	0	0	2	15	178	0	0	0	2	2	0	0	0	0	3	22	1	0	0
	19:45	0	255	4	10	0	0	0	1	24	162	0	0	0	3	6	3	0	0	0	0	10	2	0	0
	20:00	0	266	11	7	0	0	0	1	36	195	0	0	0	4	4	0	0	0	0	0	11	6	0	0
	20:15	0	235	13	4	0	0	0	5	13	181	0	0	0	2	4	0	0	0	0	0	15	5	0	0
	20:30	0	220	14	5	0	0	0	2	22	165	0	0	0	2	1	1	0	0	0	0	15	1	0	0
	20:45	0	207	10	4	0	0	0	4	11	114	0	0	0	1	3	1	0	0	0	1	12	0	0	0
	21:00	0	187	14	8	0	0	0	2	16	108	0	0	0	1	1	2	0	0	0	1	8	1	0	0
	21:15	0	152	5	2	0	0	0	1	10	91	0	0	0	2	2	1	0	0	0	0	8	0	0	0
	21:30	0	146	6	0	0	0	0	0	3	88	0	0	0	1	4	1	0	0	0	0	10	1	1	0

Traffic Count Data
SR-125/White Oak Road/Lewis Road

	21:45	0	117	1	0	0	0	0	1	7	68	0	0	0	3	0	0	0	0	0	0	9	3	0	0
	22:00	0	121	6	0	0	0	0	3	9	66	0	0	0	0	1	3	0	0	0	1	3	0	0	0
	22:15	0	102	2	0	0	0	0	0	1	55	0	0	0	0	1	0	0	0	0	0	5	1	0	0
	22:30	0	72	3	0	0	0	0	0	4	45	0	0	0	0	0	0	0	0	0	0	4	0	0	0
	22:45	0	72	3	2	0	0	0	1	2	39	0	0	0	0	0	2	0	0	0	0	2	0	0	0
	23:00	0	67	0	0	0	0	0	0	4	33	0	0	0	0	2	0	0	0	0	0	4	0	0	0
	23:15	0	34	2	0	0	0	0	0	1	33	0	0	0	0	1	0	0	0	0	0	1	0	0	0
	23:30	0	37	0	0	0	0	0	0	1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	23:45	0	21	2	0	0	0	0	0	1	17	0	0	0	0	2	0	0	0	0	0	1	0	0	0
	Totals	**1**	**15922**	**621**	**232**	**0**	**0**	**0**	**138**	**1215**	**16567**	**0**	**0**	**0**	**265**	**251**	**163**	**1**	**0**	**0**	**58**	**1236**	**192**	**5**	**3**

Traffic Count Data
SR-125/White Oak Road/Lewis Road

Total

		Southbound						Westbound						Northbound						Eastbound					
Date	Time	U Turns	Left Turns	Straight Through	Right Turns	EB Ped Crossings	WB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	NB Ped Crossings	SB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	EB Ped Crossings	WB Ped Crossings	U Turns	Left Turns	Straight Through	Right Turns	NB Ped Crossings	SB Ped Crossings
05/8/2024	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00	0	48	1	0	0	0	0	0	1	280	0	0	0	1	2	0	0	0	0	0	5	1	0	0
	6:15	0	55	1	1	0	0	0	0	8	314	0	0	0	2	9	4	0	0	0	1	6	2	0	0
	6:30	0	80	0	0	0	0	0	0	6	373	0	0	0	3	5	1	0	0	0	0	16	1	0	0
	6:45	0	96	4	0	0	0	0	0	10	381	0	0	0	4	8	2	0	0	0	0	17	1	0	0
	7:00	0	119	4	0	0	0	0	1	24	412	0	0	0	7	7	2	0	0	0	0	16	2	0	0
	7:15	0	137	10	2	0	0	0	0	19	410	0	0	0	7	7	4	0	0	0	0	15	0	0	0
	7:30	0	155	11	2	0	0	0	0	18	398	0	0	0	9	6	5	0	0	0	0	18	0	0	0
	7:45	0	152	5	0	0	0	0	1	15	286	0	0	0	7	10	5	0	0	0	0	17	7	0	0
	8:00	0	151	5	2	0	0	0	4	17	277	0	0	0	2	5	2	1	0	0	0	15	0	1	1
	8:15	0	154	6	1	0	0	0	1	14	279	0	0	0	7	5	0	0	0	0	0	14	3	1	0
	8:30	0	134	6	2	0	0	0	3	17	331	0	0	0	4	4	2	0	0	0	1	19	0	0	0
	8:45	0	149	4	1	0	0	0	4	8	266	0	0	0	7	7	5	0	0	0	2	19	1	0	0
	9:00	0	175	2	3	0	0	0	1	15	263	0	0	0	4	2	4	0	0	0	0	16	1	0	0
	9:15	0	166	4	5	0	0	0	0	21	273	0	0	0	1	6	3	0	0	0	0	28	3	0	0
	9:30	0	167	5	3	0	0	0	2	16	276	0	0	0	2	3	1	0	0	0	1	21	1	0	0
	9:45	1	159	5	4	0	0	0	1	16	221	0	0	0	4	4	2	0	0	0	2	18	0	0	0
	10:00	0	189	2	7	0	0	0	2	18	230	0	0	0	2	3	5	0	0	0	0	20	1	0	0
	10:15	0	208	5	1	0	0	0	2	20	258	0	0	0	5	3	4	0	0	0	2	18	1	0	0
	10:30	0	186	4	2	0	0	0	2	9	264	0	0	0	4	5	2	0	0	0	1	16	3	0	0
	10:45	0	221	3	2	0	0	0	2	8	265	0	0	0	3	5	1	0	0	0	1	24	2	0	0
	11:00	0	218	5	2	0	0	0	2	19	256	0	0	0	2	2	4	0	0	0	2	11	0	0	0
	11:15	0	222	8	1	0	0	0	2	14	264	0	0	0	4	9	2	0	0	0	1	21	2	0	0
	11:30	0	245	6	0	0	0	0	1	18	238	0	0	0	1	8	2	0	0	0	1	14	2	0	0
	11:45	0	226	9	5	0	0	0	1	19	234	0	0	0	2	5	3	0	0	0	2	15	2	0	0
	12:00	0	232	6	1	0	0	0	1	23	276	0	0	0	3	5	0	0	0	0	2	14	2	0	0
	12:15	0	263	11	2	0	0	0	4	16	298	0	0	0	5	6	2	0	0	0	1	15	4	0	0
	12:30	0	282	10	3	0	0	0	1	16	279	0	0	0	1	6	1	0	0	0	0	14	6	0	0
	12:45	0	262	11	4	0	0	0	3	13	264	0	0	0	4	7	3	0	0	0	0	17	1	0	0
	13:00	0	261	14	2	0	0	0	1	14	252	0	0	0	3	2	3	0	0	0	1	15	1	1	0
	13:15	0	249	10	2	0	0	0	2	14	263	0	0	0	2	7	4	0	0	0	1	21	5	0	0
	13:30	0	262	4	3	0	0	0	2	12	233	0	0	0	2	3	4	0	0	0	1	22	4	0	0
	13:45	0	293	3	2	0	0	0	1	18	272	0	0	0	2	2	1	0	0	0	1	19	3	0	0
	14:00	0	290	9	1	0	0	0	1	20	240	0	0	0	4	2	6	0	0	0	1	26	1	0	0
	14:15	0	312	9	1	0	0	0	1	20	256	0	0	0	5	3	4	0	0	0	1	19	3	0	0
	14:30	0	281	15	3	0	0	0	3	20	273	0	0	0	6	6	2	0	0	0	0	17	5	1	0
	14:45	0	358	16	4	0	0	0	7	18	229	0	0	0	2	1	1	0	0	0	6	18	3	0	0
	15:00	0	356	21	5	0	0	0	5	20	279	0	0	0	11	1	7	0	0	0	2	32	5	0	0
	15:15	0	345	15	2	0	0	0	5	24	294	0	0	0	3	1	3	0	0	0	1	22	3	0	0
	15:30	0	360	11	5	0	0	0	3	29	282	0	0	0	7	1	4	0	0	0	1	29	3	0	0
	15:45	0	393	22	8	0	0	0	2	23	275	0	0	0	7	0	1	0	0	0	0	26	11	0	0
	16:00	0	371	17	6	0	0	0	7	30	221	0	0	0	5	3	0	0	0	0	0	39	6	0	0
	16:15	0	433	28	5	0	0	0	1	28	260	0	0	0	7	2	5	0	0	0	0	27	7	0	0
	16:30	0	419	23	6	0	0	0	3	33	283	0	0	0	9	0	4	0	0	0	0	31	5	0	0
	16:45	0	306	23	17	0	0	0	1	36	264	0	0	0	9	3	2	0	0	0	1	29	6	0	0
	17:00	0	360	14	9	0	0	0	2	30	275	0	0	0	6	3	2	0	0	0	2	30	6	0	1
	17:15	0	329	13	2	0	0	0	0	19	265	0	0	0	5	1	5	0	0	0	0	24	4	0	0
	17:30	0	320	18	11	0	0	0	4	30	277	0	0	0	7	4	5	0	0	0	6	27	6	0	0
	17:45	0	387	19	5	0	0	0	3	22	297	0	0	0	2	4	4	0	0	0	2	32	6	0	0
	18:00	0	336	10	2	0	0	0	1	36	271	0	0	0	10	2	1	0	0	0	0	29	4	0	0
	18:15	0	328	12	8	0	0	0	1	34	293	0	0	0	4	2	2	0	0	0	1	22	6	0	0
	18:30	0	332	10	4	0	0	0	4	17	241	0	0	0	7	2	2	0	0	0	2	16	5	0	0
	18:45	0	279	9	6	0	0	0	7	12	231	0	0	0	5	3	2	0	0	0	0	24	5	0	0
	19:00	0	276	7	6	0	0	0	2	25	231	0	0	0	5	2	1	0	0	0	0	21	4	0	0
	19:15	0	277	15	5	0	0	0	5	33	182	0	0	0	2	3	3	0	0	0	2	20	5	0	0
	19:30	0	247	5	4	0	0	0	2	15	178	0	0	0	2	2	0	0	0	0	3	22	1	0	0
	19:45	0	255	4	10	0	0	0	1	24	162	0	0	0	3	6	3	0	0	0	0	10	2	0	0
	20:00	0	266	11	7	0	0	0	1	36	195	0	0	0	4	4	0	0	0	0	0	11	6	0	0
	20:15	0	235	13	4	0	0	0	5	13	181	0	0	0	2	4	0	0	0	0	0	15	5	0	0
	20:30	0	220	14	5	0	0	0	2	22	165	0	0	0	2	1	1	0	0	0	0	15	1	0	0
	20:45	0	207	10	4	0	0	0	4	11	114	0	0	0	1	3	1	0	0	0	1	12	0	0	0
	21:00	0	187	14	8	0	0	0	2	16	108	0	0	0	1	1	2	0	0	0	1	8	1	0	0
	21:15	0	152	5	2	0	0	0	1	10	91	0	0	0	2	2	1	0	0	0	0	8	0	0	0
	21:30	0	146	6	0	0	0	0	0	3	88	0	0	0	1	4	1	0	0	0	0	10	1	1	0
	21:45	0	117	1	0	0	0	0	1	7	68	0	0	0	3	0	0	0	0	0	0	9	3	0	0
	22:00	0	121	6	0	0	0	0	3	9	66	0	0	0	0	1	3	0	0	0	1	3	0	0	0
	22:15	0	102	2	0	0	0	0	0	1	55	0	0	0	0	1	0	0	0	0	0	5	1	0	0
	22:30	0	72	3	0	0	0	0	0	4	45	0	0	0	0	0	0	0	0	0	0	4	0	0	0
	22:45	0	72	3	2	0	0	0	1	2	39	0	0	0	0	0	2	0	0	0	0	2	0	0	0
	23:00	0	67	0	0	0	0	0	0	4	33	0	0	0	0	2	0	0	0	0	0	4	0	0	0
	23:15	0	34	2	0	0	0	0	0	1	33	0	0	0	0	1	0	0	0	0	0	1	0	0	0
	23:30	0	37	0	0	0	0	0	0	1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	23:45	0	21	2	0	0	0	0	0	1	17	0	0	0	0	2	0	0	0	0	0	1	0	0	0
	Totals	**1**	**15922**	**621**	**232**	**0**	**0**	**0**	**138**	**1215**	**16567**	**0**	**0**	**0**	**265**	**251**	**163**	**1**	**0**	**0**	**58**	**1236**	**192**	**5**	**3**

Traffic Count Data
SR-125/White Oak Road/Lewis Road

4 LEGS, marked
0 0
Wednesday, May 8, 2024

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossines	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
12:00 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
12:15 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
12:30 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
12:45 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
Hourly Total	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
1:00 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
1:15 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
1:30 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
1:45 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
Hourly Total	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
2:00 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
2:15 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
2:30 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
2:45 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
Hourly Total	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
3:00 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
3:15 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
3:30 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
3:45 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
Hourly Total	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
4:00 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
4:15 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
4:30 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
4:45 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
Hourly Total	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
5:00 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
5:15 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
5:30 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
5:45 AM	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
Hourly Total	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	0	0	0	0	0	*0*	**0**
6:00 AM	0	48	1	0	0	*49*	0	0	1	280	0	*281*	0	1	2	0	0	*3*	0	0	5	1	0	*6*	**339**
6:15 AM	0	55	1	1	0	*57*	0	0	8	314	0	*322*	0	2	9	4	0	*15*	0	1	6	2	0	*9*	**403**
6:30 AM	0	80	0	0	0	*80*	0	0	6	373	0	*379*	0	3	5	1	0	*9*	0	0	16	1	0	*17*	**485**
6:45 AM	0	96	4	0	0	*100*	0	0	10	381	0	*391*	0	4	8	2	0	*14*	0	0	17	1	0	*18*	**523**
Hourly Total	0	279	6	1	0	*286*	0	0	25	1348	0	*1373*	0	10	24	7	0	*41*	0	1	44	5	0	*50*	**1750**
7:00 AM	0	119	4	0	0	*123*	0	1	24	412	0	*437*	0	7	7	2	0	*16*	0	0	16	2	0	*18*	**594**
7:15 AM	0	137	10	2	0	*149*	0	0	19	410	0	*429*	0	7	7	4	0	*18*	0	0	15	0	0	*15*	**611**
7:30 AM	0	155	11	2	0	*168*	0	0	18	398	0	*416*	0	9	6	5	0	*20*	0	0	18	0	0	*18*	**622**
7:45 AM	0	152	5	0	0	*157*	0	1	15	286	0	*302*	0	7	10	5	0	*22*	0	0	17	7	0	*24*	**505**
Hourly Total	0	563	30	4	0	*597*	0	2	76	1506	0	*1584*	0	30	30	16	0	*76*	0	0	66	9	0	*75*	**2332**

4 LEGS, marked
0 0
Wednesday, May 8, 2024

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossines	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
8:00 AM	0	151	5	2	0	*158*	0	4	17	277	0	*298*	0	2	5	2	1	*9*	0	0	15	0	2	*15*	**480**
8:15 AM	0	154	6	1	0	*161*	0	1	14	279	0	*294*	0	7	5	0	0	*12*	0	0	14	3	1	*17*	**484**
8:30 AM	0	134	6	2	0	*142*	0	3	17	331	0	*351*	0	4	4	2	0	*10*	0	1	19	0	0	*20*	**523**
8:45 AM	0	149	4	1	0	*154*	0	4	8	266	0	*278*	0	7	7	5	0	*19*	0	2	19	1	0	*22*	**473**
Hourly Total	0	588	21	6	0	*615*	0	12	56	1153	0	*1221*	0	20	21	9	1	*50*	0	3	67	4	3	*74*	**1960**
9:00 AM	0	175	2	3	0	*180*	0	1	15	263	0	*279*	0	4	2	4	0	*10*	0	0	16	1	0	*17*	**486**
9:15 AM	0	166	4	5	0	*175*	0	0	21	273	0	*294*	0	1	6	3	0	*10*	0	0	28	3	0	*31*	**510**
9:30 AM	0	167	5	3	0	*175*	0	2	16	276	0	*294*	0	2	3	1	0	*6*	0	1	21	1	0	*23*	**498**
9:45 AM	1	159	5	4	0	*169*	0	1	16	221	0	*238*	0	4	4	2	0	*10*	0	2	18	0	0	*20*	**437**
Hourly Total	1	667	16	15	0	*699*	0	4	68	1033	0	*1105*	0	11	15	10	0	*36*	0	3	83	5	0	*91*	**1931**
10:00 AM	0	189	2	7	0	*198*	0	2	18	230	0	*250*	0	2	3	5	0	*10*	0	0	20	1	0	*21*	**479**
10:15 AM	0	208	5	1	0	*214*	0	2	20	258	0	*280*	0	5	3	4	0	*12*	0	2	18	1	0	*21*	**527**
10:30 AM	0	186	4	2	0	*192*	0	2	9	264	0	*275*	0	4	5	2	0	*11*	0	1	16	3	0	*20*	**498**
10:45 AM	0	221	3	2	0	*226*	0	2	8	265	0	*275*	0	3	5	1	0	*9*	0	1	24	2	0	*27*	**537**
Hourly Total	0	804	14	12	0	*830*	0	8	55	1017	0	*1080*	0	14	16	12	0	*42*	0	4	78	7	0	*89*	**2041**
11:00 AM	0	218	5	2	0	*225*	0	2	19	256	0	*277*	0	2	2	4	0	*8*	0	2	11	0	0	*13*	**523**
11:15 AM	0	222	8	1	0	*231*	0	2	14	264	0	*280*	0	4	9	2	0	*15*	0	1	21	2	0	*24*	**550**
11:30 AM	0	245	6	0	0	*251*	0	1	18	238	0	*257*	0	1	8	2	0	*11*	0	1	14	2	0	*17*	**536**
11:45 AM	0	226	9	5	0	*240*	0	1	19	234	0	*254*	0	2	5	3	0	*10*	0	2	15	2	0	*19*	**523**
Hourly Total	0	911	28	8	0	*947*	0	6	70	992	0	*1068*	0	9	24	11	0	*44*	0	6	61	6	0	*73*	**2132**
12:00 PM	0	232	6	1	0	*239*	0	1	23	276	0	*300*	0	3	5	0	0	*8*	0	2	14	2	0	*18*	**565**
12:15 PM	0	263	11	2	0	*276*	0	4	16	298	0	*318*	0	5	6	2	0	*13*	0	1	15	4	0	*20*	**627**
12:30 PM	0	282	10	3	0	*295*	0	1	16	279	0	*296*	0	1	6	1	0	*8*	0	0	14	6	0	*20*	**619**
12:45 PM	0	262	11	4	0	*277*	0	3	13	264	0	*280*	0	4	7	3	0	*14*	0	0	17	1	0	*18*	**589**
Hourly Total	0	1039	38	10	0	*1087*	0	9	68	1117	0	*1194*	0	13	24	6	0	*43*	0	3	60	13	0	*76*	**2400**
1:00 PM	0	261	14	2	0	*277*	0	1	14	252	0	*267*	0	3	2	3	0	*8*	0	1	15	1	1	*17*	**569**
1:15 PM	0	249	10	2	0	*261*	0	2	14	263	0	*279*	0	2	7	4	0	*13*	0	1	21	5	0	*27*	**580**
1:30 PM	0	262	4	3	0	*269*	0	2	12	233	0	*247*	0	2	3	4	0	*9*	0	1	22	4	0	*27*	**552**
1:45 PM	0	293	3	2	0	*298*	0	1	18	272	0	*291*	0	2	2	1	0	*5*	0	1	19	3	0	*23*	**617**
Hourly Total	0	1065	31	9	0	*1105*	0	6	58	1020	0	*1084*	0	9	14	12	0	*35*	0	4	77	13	1	*94*	**2318**
2:00 PM	0	290	9	1	0	*300*	0	1	20	240	0	*261*	0	4	2	6	0	*12*	0	1	26	1	0	*28*	**601**
2:15 PM	0	312	9	1	0	*322*	0	1	20	256	0	*277*	0	5	3	4	0	*12*	0	1	19	3	0	*23*	**634**
2:30 PM	0	281	15	3	0	*299*	0	3	20	273	0	*296*	0	6	6	2	0	*14*	0	0	17	5	1	*22*	**631**
2:45 PM	0	358	16	4	0	*378*	0	7	18	229	0	*254*	0	2	1	1	0	*4*	0	6	18	3	0	*27*	**663**
Hourly Total	0	1241	49	9	0	*1299*	0	12	78	998	0	*1088*	0	17	12	13	0	*42*	0	8	80	12	1	*100*	**2529**
3:00 PM	0	356	21	5	0	*382*	0	5	20	279	0	*304*	0	11	1	7	0	*19*	0	2	32	5	0	*39*	**744**
3:15 PM	0	345	15	2	0	*362*	0	5	24	294	0	*323*	0	3	1	3	0	*7*	0	1	22	3	0	*26*	**718**
3:30 PM	0	360	11	5	0	*376*	0	3	29	282	0	*314*	0	7	1	4	0	*12*	0	1	29	3	0	*33*	**735**
3:45 PM	0	393	22	8	0	*423*	0	2	23	275	0	*300*	0	7	0	1	0	*8*	0	0	26	11	0	*37*	**768**
Hourly Total	0	1454	69	20	0	*1543*	0	15	96	1130	0	*1241*	0	28	3	15	0	*46*	0	4	109	22	0	*135*	**2965**

4 LEGS, marked
0 0
Wednesday, May 8, 2024

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossines	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	
4:00 PM	0	371	17	6	0	*394*	0	7	30	221	0	*258*	0	5	3	0	0	*8*	0	0	39	6	0	*45*	**705**
4:15 PM	0	433	28	5	0	*466*	0	1	28	260	0	*289*	0	7	2	5	0	*14*	0	0	27	7	0	*34*	**803**
4:30 PM	0	419	23	6	0	*448*	0	3	33	283	0	*319*	0	9	0	4	0	*13*	0	0	31	5	0	*36*	**816**
4:45 PM	0	306	23	17	0	*346*	0	1	36	264	0	*301*	0	9	3	2	0	*14*	0	1	29	6	0	*36*	**697**
Hourly Total	0	1529	91	34	0	*1654*	0	12	127	1028	0	*1167*	0	30	8	11	0	*49*	0	1	126	24	0	*151*	**3021**

Traffic Count Data
SR-125/White Oak Road/Lewis Road

5:00 PM	0	360	14	9	0	*383*	0	2	30	275	0	*307*	0	6	3	2	0	*11*	0	2	30	6	1	*38*	**739**
5:15 PM	0	329	13	2	0	*344*	0	0	19	265	0	*284*	0	5	1	5	0	*11*	0	0	24	4	0	*28*	**667**
5:30 PM	0	320	18	11	0	*349*	0	4	30	277	0	*311*	0	7	4	5	0	*16*	0	6	27	6	0	*39*	**715**
5:45 PM	0	387	19	5	0	*411*	0	3	22	297	0	*322*	0	2	4	4	0	*10*	0	2	32	6	0	*40*	**783**
Hourly Total	0	1396	64	27	0	*1487*	0	9	101	1114	0	*1224*	0	20	12	16	0	*48*	0	10	113	22	1	*145*	**2904**
6:00 PM	0	336	10	2	0	*348*	0	1	36	271	0	*308*	0	10	2	1	0	*13*	0	0	29	4	0	*33*	**702**
6:15 PM	0	328	12	8	0	*348*	0	1	34	293	0	*328*	0	4	2	2	0	*8*	0	1	22	6	0	*29*	**713**
6:30 PM	0	332	10	4	0	*346*	0	4	17	241	0	*262*	0	7	2	2	0	*11*	0	2	16	5	0	*23*	**642**
6:45 PM	0	279	9	6	0	*294*	0	7	12	231	0	*250*	0	5	3	2	0	*10*	0	0	24	5	0	*29*	**583**
Hourly Total	0	1275	41	20	0	*1336*	0	13	99	1036	0	*1148*	0	26	9	7	0	*42*	0	3	91	20	0	*114*	**2640**
7:00 PM	0	276	7	6	0	*289*	0	2	25	231	0	*258*	0	5	2	1	0	*8*	0	0	21	4	0	*25*	**580**
7:15 PM	0	*277*	15	5	0	*297*	0	5	33	182	0	*220*	0	2	3	3	0	*8*	0	2	20	5	0	*27*	**552**
7:30 PM	0	247	5	4	0	*256*	0	2	15	178	0	*195*	0	2	2	0	0	*4*	0	3	22	1	0	*26*	**481**
7:45 PM	0	255	4	10	0	*269*	0	1	24	162	0	*187*	0	3	6	3	0	*12*	0	0	10	2	0	*12*	**480**
Hourly Total	0	1055	31	25	0	*1111*	0	10	97	753	0	*860*	0	12	13	7	0	*32*	0	5	73	12	0	*90*	**2093**
8:00 PM	0	266	11	7	0	*284*	0	1	36	195	0	*232*	0	4	4	0	0	*8*	0	0	11	6	0	*17*	**541**
8:15 PM	0	235	13	4	0	*252*	0	5	13	181	0	*199*	0	2	4	0	0	*6*	0	0	15	5	0	*20*	**477**
8:30 PM	0	220	14	5	0	*239*	0	2	22	165	0	*189*	0	2	1	1	0	*4*	0	0	15	1	0	*16*	**448**
8:45 PM	0	*207*	10	4	0	*221*	0	4	11	114	0	*129*	0	1	3	1	0	*5*	0	1	12	0	0	*13*	**368**
Hourly Total	0	928	48	20	0	*996*	0	12	82	655	0	*749*	0	9	12	2	0	*23*	0	1	53	12	0	*66*	**1834**
9:00 PM	0	187	14	8	0	*209*	0	2	16	108	0	*126*	0	1	1	2	0	*4*	0	1	8	1	0	*10*	**349**
9:15 PM	0	152	5	2	0	*159*	0	1	10	91	0	*102*	0	2	2	1	0	*5*	0	0	8	0	0	*8*	**274**
9:30 PM	0	146	6	0	0	*152*	0	0	3	88	0	*91*	0	1	4	1	0	*6*	0	0	10	1	1	*11*	**260**
9:45 PM	0	117	1	0	0	*118*	0	1	7	68	0	*76*	0	3	0	0	0	*3*	0	0	9	3	0	*12*	**209**
Hourly Total	0	602	26	10	0	*638*	0	4	36	355	0	*395*	0	7	7	4	0	*18*	0	1	35	5	1	*41*	**1092**
10:00 PM	0	121	6	0	0	*127*	0	3	9	66	0	*78*	0	0	1	3	0	*4*	0	1	3	0	0	*4*	**213**
10:15 PM	0	102	2	0	0	*104*	0	0	1	55	0	*56*	0	0	1	0	0	*1*	0	0	5	1	0	*6*	**167**
10:30 PM	0	72	3	0	0	*75*	0	0	4	45	0	*49*	0	0	0	0	0	*0*	0	0	4	0	0	*4*	**128**
10:45 PM	0	72	3	2	0	*77*	0	1	2	39	0	*42*	0	0	0	2	0	*2*	0	0	2	0	0	*2*	**123**
Hourly Total	0	367	14	2	0	*383*	0	4	16	205	0	*225*	0	0	2	5	0	*7*	0	1	14	1	0	*16*	**631**
11:00 PM	0	67	0	0	0	*67*	0	0	4	33	0	*37*	0	0	2	0	0	*2*	0	0	4	0	0	*4*	**110**
11:15 PM	0	34	2	0	0	*36*	0	0	1	33	0	*34*	0	0	1	0	0	*1*	0	0	1	0	0	*1*	**72**
11:30 PM	0	37	0	0	0	*37*	0	0	1	24	0	*25*	0	0	0	0	0	*0*	0	0	0	0	1	*0*	**62**
11:45 PM	0	21	2	0	0	*23*	0	0	1	17	0	*18*	0	0	2	0	0	*2*	0	0	1	0	0	*1*	**44**
Hourly Total	0	159	4	0	0	*163*	0	0	7	107	0	*114*	0	0	5	0	0	*5*	0	0	6	0	1	*6*	**288**
DAILY TOTAL	**1**	**15922**	**621**	**232**	**0**	***16776***	**0**	**138**	**1215**	**16567**	**0**	***17920***	**0**	**265**	**251**	**163**	**1**	***679***	**0**	**58**	**1236**	**192**	**8**	***1486***	**36861**
Cars	1	15922	621	232	0	*16776*	0	138	1215	16567	0	*17920*	0	265	251	163	1	*679*	0	58	1236	192	8	*1486*	**36861**
Heavy Vehicles	1	15922	621	232	0	*16776*	0	138	1215	16567	0	*17920*	0	265	251	163	1	*679*	0	58	1236	192	8	*1486*	**36861**
Heavy Vehicle %	100.00%	100.00%	100.00%	100.00%	0.00%	*100.00%*	0.00%	100.00%	100.00%	100.00%	0.00%	*100.00%*	0.00%	100.00%	100.00%	100.00%	100.00%	*100.00%*	0.00%	100.00%	100.00%	100.00%	100.00%	*100.00%*	**100.00%**

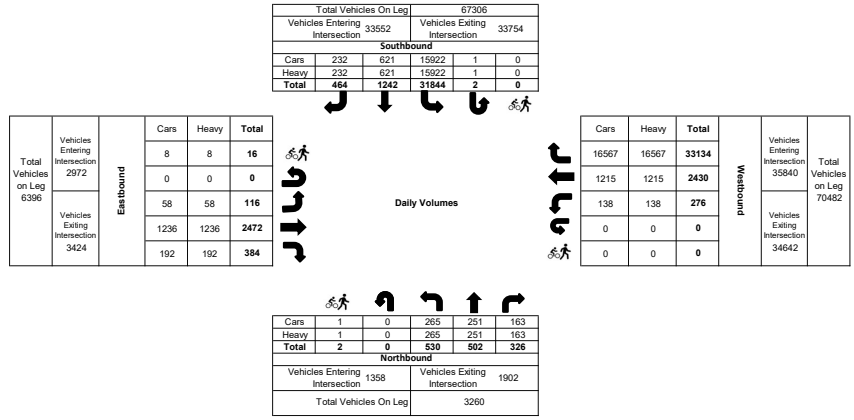
4 LEGS, marked
0 0
Wednesday, May 8, 2024

AM Peak Hour

Time	Southbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossines	*Vehicle Approach Total*	Westbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	Northbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	Eastbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	VEHICLE TOTAL
6:45 AM	0	96	4	0	0	*100*	0	0	10	381	0	*391*	0	4	8	2	0	*14*	0	0	17	1	0	*18*	**523**
7:00 AM	0	119	4	0	0	*123*	0	1	24	412	0	*437*	0	7	7	2	0	*16*	0	0	16	2	0	*18*	**594**
7:15 AM	0	137	10	2	0	*149*	0	0	19	410	0	*429*	0	7	7	4	0	*18*	0	0	15	0	0	*15*	**611**
7:30 AM	0	155	11	2	0	*168*	0	0	18	398	0	*416*	0	9	6	5	0	*20*	0	0	18	0	0	*18*	**622**
Peak Hour Total	0	507	29	4	0	*540*	0	1	71	1601	0	*1673*	0	27	28	13	0	*68*	0	0	66	3	0	*69*	**2350**
PHF	0.000	0.818	0.659	0.500	0.000	*0.804*	0.000	0.250	0.740	0.971	0.000	*0.957*	0.000	0.750	0.875	0.650	0.000	*0.850*	0.000	0.000	0.917	0.375	0.000	*0.958*	**0.945**

PM Peak Hour

Time	Southbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossines	*Vehicle Approach Total*	Westbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	Northbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	Eastbound U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	*Vehicle Approach Total*	VEHICLE TOTAL
3:45 PM	0	393	22	8	0	*423*	0	2	23	275	0	*300*	0	7	0	1	0	*8*	0	0	26	11	0	*37*	**768**
4:00 PM	0	371	17	6	0	*394*	0	7	30	221	0	*258*	0	5	3	0	0	*8*	0	0	39	6	0	*45*	**705**
4:15 PM	0	433	28	5	0	*466*	0	1	28	260	0	*289*	0	7	2	5	0	*14*	0	0	27	7	0	*34*	**803**
4:30 PM	0	419	23	6	0	*448*	0	3	33	283	0	*319*	0	9	0	4	0	*13*	0	0	31	5	0	*36*	**816**
Peak Hour Total	0	1616	90	25	0	*1731*	0	13	114	1039	0	*1166*	0	28	5	10	0	*43*	0	0	123	29	0	*152*	**3092**
PHF	0.000	0.933	0.804	0.781	0.000	*0.929*	0.000	0.464	0.864	0.918	0.000	*0.914*	0.000	0.778	0.417	0.500	0.000	*0.768*	0.000	0.000	0.788	0.659	0.000	*0.844*	**0.947**



Traffic Count Data
SR-125/Bristol Lake Drive

Study Name **CLE-125-4.73 (5-8-24)**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-4.73**
Type **Road**
Classification **Lights**

	Bristol Lake Drive Southwestbound				SR-125 West Northwestbound				N/A Northeastbound				SR-125 East Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	16		0	0	2	283		0						47	1	0
6:15 AM	10		0	0	0	330		0						63	1	0
6:30 AM	9		1	0	0	370		0						77	2	0
6:45 AM	13		0	0	0	390		0						103	0	0
7:00 AM	23		1	0	0	405		0						120	4	0
7:15 AM	23		1	0	0	420		0						144	1	0
7:30 AM	14		6	0	3	394		0						162	5	0
7:45 AM	18		0	0	1	291		0						169	4	0
8:00 AM	14		1	0	4	246		0						145	4	0
8:15 AM	17		2	0	3	273		0						160	3	0
8:30 AM	18		5	0	9	330		0						141	6	0
8:45 AM	10		4	0	1	254		0						157	2	0
9:00 AM	13		1	0	4	258		0						183	3	0
9:15 AM	14		0	0	2	272		0						167	7	0
9:30 AM	5		0	0	0	273		0						171	2	0
9:45 AM	17		0	0	3	217		0						167	3	0
10:00 AM	6		2	0	2	232		0						194	5	0
10:15 AM	6		2	0	1	242		0						199	2	0
10:30 AM	8		1	0	4	259		0						190	3	0
10:45 AM	12		0	0	0	256		0						227	4	0
11:00 AM	8		1	0	6	248		0						216	8	0
11:15 AM	10		1	0	3	262		0						230	3	0
11:30 AM	13		2	0	4	251		0						243	3	0
11:45 AM	7		2	0	3	231		0						234	5	0
12:00 PM	5		1	0	3	272		0						235	11	0
12:15 PM	9		1	0	3	287		0						297	4	0
12:30 PM	5		0	0	3	294		0						274	10	0
12:45 PM	9		1	0	0	263		0						286	8	0
1:00 PM	7		1	0	2	245		0						262	4	0
1:15 PM	6		3	0	3	253		0						266	4	0
1:30 PM	9		4	0	1	234		0						266	8	0
1:45 PM	9		2	0	5	258		0						298	10	0
2:00 PM	10		2	0	0	244		0						300	7	0
2:15 PM	11		1	0	0	250		0						300	9	0
2:30 PM	13		4	0	3	257		0						298	8	0
2:45 PM	8		2	0	1	216		0						367	4	0
3:00 PM	5		0	0	4	286		0						377	7	0
3:15 PM	12		1	0	2	259		0						366	11	0
3:30 PM	10		1	0	4	281		0						371	7	0
3:45 PM	10		1	0	2	253		0						440	6	0
4:00 PM	9		3	0	2	166		0						402	12	0
4:15 PM	5		1	0	1	217		0						459	12	0
4:30 PM	11		2	0	2	182		0						437	16	0
4:45 PM	13		3	0	5	203		0						408	12	0
5:00 PM	13		2	0	6	265		0						383	13	0
5:15 PM	13		4	0	5	264		0						420	14	0
5:30 PM	20		2	0	4	290		0						384	8	0
5:45 PM	9		3	0	7	270		0						393	15	0

Traffic Count Data
SR-125/Bristol Lake Drive

6:00 PM	9		2	0	2	268		0						344	4	0
6:15 PM	8		2	0	3	291		0						351	10	0
6:30 PM	10		2	0	5	228		0						334	12	0
6:45 PM	5		5	0	4	232		0						300	12	0
7:00 PM	12		2	0	1	212		0						301	5	0
7:15 PM	7		2	0	3	172		0						277	12	0
7:30 PM	5		1	0	1	175		0						272	7	0
7:45 PM	7		2	0	2	163		0						277	9	0
8:00 PM	9		3	0	0	182		0						270	7	0
8:15 PM	1		2	0	1	174		0						257	12	0
8:30 PM	6		2	0	0	152		0						227	5	0
8:45 PM	2		0	0	0	111		0						218	7	0
9:00 PM	4		2	0	1	97		0						212	3	0
9:15 PM	9		1	0	2	79		0						166	8	0
9:30 PM	6		1	0	1	84		0						144	3	0
9:45 PM	4		0	0	1	67		0						135	7	0
10:00 PM	3		2	0	0	60		0						120	1	0
10:15 PM	2		0	0	0	55		0						104	4	0
10:30 PM	2		1	0	0	44		0						79	5	0
10:45 PM	0		0	0	0	35		0						75	1	0
11:00 PM	1		0	0	2	31		0						68	3	0
11:15 PM	2		0	0	2	29		0						41	0	0
11:30 PM	0		0	0	0	22		0						44	2	0
11:45 PM	2		0	0	1	16		0						43	0	0
Total	651	0	110	0	155	15975	0	0	0	0	0	0	0	16857	440	0
12:00 AM	0		0	0	1	12		0						39	0	0
12:15 AM	0		0	0	0	12		0						34	1	0
12:30 AM	0		0	0	0	7		0						30	0	0
12:45 AM	0		0	0	0	11		0						19	0	0
1:00 AM	0		0	0	0	5		0						28	0	0
1:15 AM	1		0	0	0	13		0						12	1	0
1:30 AM	0		0	0	0	11		0						15	0	0
1:45 AM	0		0	0	1	6		0						12	0	0
2:00 AM	0		0	0	0	11		0						8	0	0
2:15 AM	0		0	0	0	9		0						10	0	0
2:30 AM	0		0	0	0	13		0						25	1	0
2:45 AM	1		0	0	1	11		0						11	0	0
3:00 AM	2		0	0	0	15		0						8	0	0
3:15 AM	0		0	0	0	22		0						7	0	0
3:30 AM	1		0	0	0	27		0						13	0	0
3:45 AM	0		0	0	0	31		0						11	1	0
4:00 AM	2		0	0	0	40		0						8	0	0
4:15 AM	2		0	0	0	65		0						10	0	0
4:30 AM	1		0	0	1	93		0						18	0	0
4:45 AM	3		0	0	0	101		0						20	0	0
5:00 AM	6		1	0	2	133		0						10	0	0
5:15 AM	4		0	0	0	190		0						16	0	0
5:30 AM	11		0	0	1	193		0						35	1	0
5:45 AM	17		0	0	4	215		0						47	2	0

Traffic Count Data
SR-125/Bristol Lake Drive

Study Name **CLE-125-4.73 (5-8-24)**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-4.73**
Type **Road**
Classification **Other Vehicles**

	Bristol Lake Drive Southwestbound				SR-125 West Northwestbound				N/A Northeastbound				SR-125 East Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	0		0	0	0	4		0						15	0	0
6:15 AM	0		0	0	1	4		0						6	1	0
6:30 AM	0		0	0	0	10		0						6	0	0
6:45 AM	0		0	0	0	9		0						6	0	0
7:00 AM	2		0	0	0	4		0						4	0	0
7:15 AM	0		0	0	0	4		0						10	0	0
7:30 AM	0		0	0	0	10		0						9	0	0
7:45 AM	0		0	0	0	8		0						9	0	0
8:00 AM	0		0	0	0	11		0						10	0	0
8:15 AM	0		1	0	1	5		0						17	0	0
8:30 AM	0		0	0	0	11		0						9	0	0
8:45 AM	1		0	0	0	7		0						10	0	0
9:00 AM	1		0	0	0	12		0						4	0	0
9:15 AM	0		0	0	0	11		0						6	0	0
9:30 AM	0		0	0	0	8		0						14	0	0
9:45 AM	0		0	0	0	10		0						9	0	0
10:00 AM	1		1	0	0	8		0						9	0	0
10:15 AM	0		0	0	0	8		0						11	0	0
10:30 AM	0		0	0	0	6		0						8	0	0
10:45 AM	0		0	0	0	6		0						12	0	0
11:00 AM	0		0	0	0	8		0						12	0	0
11:15 AM	0		0	0	0	9		0						6	0	0
11:30 AM	0		0	0	0	7		0						8	0	0
11:45 AM	0		0	0	0	7		0						5	0	0
12:00 PM	0		0	0	0	8		0						8	0	0
12:15 PM	0		0	0	0	8		0						5	0	0
12:30 PM	0		0	0	0	5		0						6	0	0
12:45 PM	0		0	0	0	8		0						9	0	0
1:00 PM	0		0	0	0	6		0						12	0	0
1:15 PM	0		0	0	0	8		0						9	1	0
1:30 PM	0		0	0	0	7		0						4	0	0
1:45 PM	0		0	0	0	5		0						14	0	0
2:00 PM	0		1	0	0	5		0						8	0	0
2:15 PM	0		0	0	0	8		0						7	0	0
2:30 PM	2		1	0	0	5		0						7	0	0
2:45 PM	0		0	0	0	7		0						9	0	0
3:00 PM	0		0	0	0	4		0						8	0	0
3:15 PM	1		0	0	0	10		0						5	0	0
3:30 PM	0		0	0	0	7		0						8	0	0
3:45 PM	1		0	0	1	7		0						5	0	0
4:00 PM	0		0	0	0	4		0						11	1	0
4:15 PM	1		0	0	0	8		0						7	0	0
4:30 PM	1		0	0	0	10		0						6	0	0
4:45 PM	0		0	0	0	7		0						5	0	0
5:00 PM	0		0	0	0	3		0						5	0	0
5:15 PM	0		0	0	0	5		0						4	0	0
5:30 PM	0		0	0	0	6		0						3	0	0
5:45 PM	0		0	0	0	1		0						4	0	0

Traffic Count Data
SR-125/Bristol Lake Drive

6:00 PM	0		0	0	0	2		0						3	0	0
6:15 PM	0		0	0	0	1		0						5	0	0
6:30 PM	0		0	0	0	1		0						5	0	0
6:45 PM	0		0	0	0	2		0						1	0	0
7:00 PM	0		0	0	0	2		0						3	0	0
7:15 PM	0		0	0	0	3		0						2	0	0
7:30 PM	0		0	0	0	0		0						0	0	0
7:45 PM	0		0	0	0	1		0						1	0	0
8:00 PM	0		0	0	0	0		0						1	0	0
8:15 PM	0		0	0	0	2		0						2	0	0
8:30 PM	0		0	0	0	3		0						3	0	0
8:45 PM	0		0	0	0	2		0						1	0	0
9:00 PM	0		0	0	0	1		0						1	0	0
9:15 PM	0		0	0	0	0		0						1	0	0
9:30 PM	0		0	0	0	0		0						1	0	0
9:45 PM	0		0	0	0	1		0						1	0	0
10:00 PM	0		0	0	0	1		0						2	0	0
10:15 PM	0		0	0	0	0		0						2	0	0
10:30 PM	0		0	0	0	0		0						0	0	0
10:45 PM	0		0	0	0	3		0						1	0	0
11:00 PM	0		0	0	0	2		0						2	0	0
11:15 PM	0		0	0	0	1		0						2	0	0
11:30 PM	0		0	0	0	0		0						1	0	0
11:45 PM	0		0	0	0	0		0						1	0	0
Total	11	0	4	0	3	367	0	0	0	0	0	0	0	426	3	0
12:00 AM	0		0	0	0	2		0						1	0	0
12:15 AM	0		0	0	0	0		0						1	0	0
12:30 AM	0		0	0	0	0		0						1	0	0
12:45 AM	0		0	0	0	2		0						1	0	0
1:00 AM	0		0	0	0	0		0						0	0	0
1:15 AM	0		0	0	0	0		0						0	0	0
1:30 AM	0		0	0	0	0		0						1	0	0
1:45 AM	0		0	0	0	0		0						0	0	0
2:00 AM	0		0	0	0	0		0						1	0	0
2:15 AM	0		0	0	0	0		0						0	0	0
2:30 AM	0		0	0	0	0		0						1	0	0
2:45 AM	0		0	0	0	1		0						2	0	0
3:00 AM	0		0	0	0	0		0						1	0	0
3:15 AM	0		0	0	0	0		0						0	0	0
3:30 AM	0		0	0	0	4		0						1	0	0
3:45 AM	0		0	0	1	3		0						0	0	0
4:00 AM	0		0	0	0	3		0						2	0	0
4:15 AM	0		0	0	0	3		0						2	0	0
4:30 AM	0		0	0	0	1		0						1	0	0
4:45 AM	0		0	0	1	1		0						1	0	0
5:00 AM	0		0	0	0	0		0						0	0	0
5:15 AM	0		0	0	0	0		0						0	0	0
5:30 AM	0		1	0	0	2		0						3	0	0
5:45 AM	2		0	0	0	1		0						6	0	0

Traffic Count Data
SR-125/Bristol Lake Drive

Study Name **CLE-125-4.73 (5-8-24)**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-4.73**
Type **Road**
Classification **Totals**

	Bristol Lake Drive Southwestbound				SR-125 West Northwestbound				N/A Northeastbound				SR-125 East Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	16		0	0	2	287		0						62	1	0
6:15 AM	10		0	0	1	334		0						69	2	0
6:30 AM	9		1	0	0	380		0						83	2	0
6:45 AM	13		0	0	0	399		0						109	0	0
7:00 AM	25		1	0	0	409		0						124	4	0
7:15 AM	23		1	0	0	424		0						154	1	0
7:30 AM	14		6	0	3	404		0						171	5	0
7:45 AM	18		0	0	1	299		0						178	4	0
8:00 AM	14		1	0	4	257		0						155	4	0
8:15 AM	17		3	0	4	278		0						177	3	0
8:30 AM	18		5	0	9	341		0						150	6	0
8:45 AM	11		4	0	1	261		0						167	2	0
9:00 AM	14		1	0	4	270		0						187	3	0
9:15 AM	14		0	0	2	283		0						173	7	0
9:30 AM	5		0	0	0	281		0						185	2	0
9:45 AM	17		0	0	3	227		0						176	3	0
10:00 AM	7		3	0	2	240		0						203	5	0
10:15 AM	6		2	0	1	250		0						210	2	0
10:30 AM	8		1	0	4	265		0						198	3	0
10:45 AM	12		0	0	0	262		0						239	4	0
11:00 AM	8		1	0	6	256		0						228	8	0
11:15 AM	10		1	0	3	271		0						236	3	0
11:30 AM	13		2	0	4	258		0						251	3	0
11:45 AM	7		2	0	3	238		0						239	5	0
12:00 PM	5		1	0	3	280		0						243	11	0
12:15 PM	9		1	0	3	295		0						302	4	0
12:30 PM	5		0	0	3	299		0						280	10	0
12:45 PM	9		1	0	0	271		0						295	8	0
1:00 PM	7		1	0	2	251		0						274	4	0
1:15 PM	6		3	0	3	261		0						275	5	0
1:30 PM	9		4	0	1	241		0						270	8	0
1:45 PM	9		2	0	5	263		0						312	10	0
2:00 PM	10		3	0	0	249		0						308	7	0
2:15 PM	11		1	0	0	258		0						307	9	0
2:30 PM	15		5	0	3	262		0						305	8	0
2:45 PM	8		2	0	1	223		0						376	4	0
3:00 PM	5		0	0	4	290		0						385	7	0
3:15 PM	13		1	0	2	269		0						371	11	0
3:30 PM	10		1	0	4	288		0						379	7	0
3:45 PM	11		1	0	3	260		0						445	6	0
4:00 PM	9		3	0	2	170		0						413	13	0
4:15 PM	6		1	0	1	225		0						466	12	0
4:30 PM	12		2	0	2	192		0						443	16	0
4:45 PM	13		3	0	5	210		0						413	12	0
5:00 PM	13		2	0	6	268		0						388	13	0
5:15 PM	13		4	0	5	269		0						424	14	0
5:30 PM	20		2	0	4	296		0						387	8	0
5:45 PM	9		3	0	7	271		0						397	15	0

Traffic Count Data
SR-125/Bristol Lake Drive

6:00 PM	9		2	0	2	270		0						347	4	0
6:15 PM	8		2	0	3	292		0						356	10	0
6:30 PM	10		2	0	5	229		0						339	12	0
6:45 PM	5		5	0	4	234		0						301	12	0
7:00 PM	12		2	0	1	214		0						304	5	0
7:15 PM	7		2	0	3	175		0						279	12	0
7:30 PM	5		1	0	1	175		0						272	7	0
7:45 PM	7		2	0	2	164		0						278	9	0
8:00 PM	9		3	0	0	182		0						271	7	0
8:15 PM	1		2	0	1	176		0						259	12	0
8:30 PM	6		2	0	0	155		0						230	5	0
8:45 PM	2		0	0	0	113		0						219	7	0
9:00 PM	4		2	0	1	98		0						213	3	0
9:15 PM	9		1	0	2	79		0						167	8	0
9:30 PM	6		1	0	1	84		0						145	3	0
9:45 PM	4		0	0	1	68		0						136	7	0
10:00 PM	3		2	0	0	61		0						122	1	0
10:15 PM	2		0	0	0	55		0						106	4	0
10:30 PM	2		1	0	0	44		0						79	5	0
10:45 PM	0		0	0	0	38		0						76	1	0
11:00 PM	1		0	0	2	33		0						70	3	0
11:15 PM	2		0	0	2	30		0						43	0	0
11:30 PM	0		0	0	0	22		0						45	2	0
11:45 PM	2		0	0	1	16		0						44	0	0
Total	662	0	114	0	158	16342	0	0	0	0	0	0	0	17283	443	0
12:00 AM	0		0	0	1	14		0						40	0	0
12:15 AM	0		0	0	0	12		0						35	1	0
12:30 AM	0		0	0	0	7		0						31	0	0
12:45 AM	0		0	0	0	13		0						20	0	0
1:00 AM	0		0	0	0	5		0						28	0	0
1:15 AM	1		0	0	0	13		0						12	1	0
1:30 AM	0		0	0	0	11		0						16	0	0
1:45 AM	0		0	0	1	6		0						12	0	0
2:00 AM	0		0	0	0	11		0						9	0	0
2:15 AM	0		0	0	0	9		0						10	0	0
2:30 AM	0		0	0	0	13		0						26	1	0
2:45 AM	1		0	0	1	12		0						13	0	0
3:00 AM	2		0	0	0	15		0						9	0	0
3:15 AM	0		0	0	0	22		0						7	0	0
3:30 AM	1		0	0	0	31		0						14	0	0
3:45 AM	0		0	0	1	34		0						11	1	0
4:00 AM	2		0	0	0	43		0						10	0	0
4:15 AM	2		0	0	0	68		0						12	0	0
4:30 AM	1		0	0	1	94		0						19	0	0
4:45 AM	3		0	0	1	102		0						21	0	0
5:00 AM	6		1	0	2	133		0						10	0	0
5:15 AM	4		0	0	0	190		0						16	0	0
5:30 AM	11		1	0	1	195		0						38	1	0
5:45 AM	19		0	0	4	216		0						53	2	0

Traffic Count Data
SR-125/Amelia-Olive Branch Road

Study Name **CLE-125-5.09**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-5.09**
Type **Road**
Classification **Lights**

	AOB Southwestbound				SR-125 West Northwestbound				AOB Northeastbound				SR-125 East Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	39	1	7	0	12	235	0	0	0	2	11	0	10	39	8	0
6:15 AM	44	9	6	0	13	283	0	0	1	2	7	0	2	48	16	0
6:30 AM	55	2	10	0	31	291	2	0	0	6	11	0	7	61	23	0
6:45 AM	63	4	21	0	39	319	1	0	0	3	12	0	8	73	26	0
7:00 AM	83	5	32	0	28	313	1	0	3	8	17	0	10	96	25	0
7:15 AM	62	8	15	0	29	328	0	0	1	4	22	0	13	109	31	0
7:30 AM	49	10	35	0	28	327	0	0	4	10	26	0	16	127	30	0
7:45 AM	51	7	28	0	13	229	1	0	1	5	14	0	14	134	27	0
8:00 AM	45	11	16	0	20	225	3	0	0	8	10	0	23	107	25	0
8:15 AM	41	12	24	0	18	245	1	0	2	14	9	0	26	117	25	0
8:30 AM	42	6	24	0	25	269	3	0	3	6	25	0	15	100	27	0
8:45 AM	40	19	23	0	26	189	6	0	1	13	17	0	19	122	23	0
9:00 AM	49	10	18	0	22	208	5	0	3	6	25	0	36	121	19	0
9:15 AM	32	12	23	0	17	218	7	0	7	16	32	0	35	117	37	0
9:30 AM	36	13	21	0	28	214	4	0	3	16	34	0	28	121	39	0
9:45 AM	42	13	27	0	18	146	7	0	7	11	25	0	39	124	19	0
10:00 AM	24	12	32	0	19	189	3	0	6	12	25	0	37	134	22	0
10:15 AM	28	12	23	0	25	209	5	0	6	13	27	0	43	149	32	0
10:30 AM	34	14	24	0	27	201	2	0	10	14	35	0	33	138	18	0
10:45 AM	27	15	22	0	25	187	4	0	13	13	51	0	35	169	27	0
11:00 AM	35	9	28	0	15	210	5	0	10	19	30	0	37	163	19	0
11:15 AM	37	11	24	0	22	195	6	0	6	12	35	0	42	163	36	0
11:30 AM	30	18	16	0	20	203	3	0	9	12	37	0	48	169	27	0
11:45 AM	34	22	28	0	14	182	7	0	8	25	35	0	39	170	22	0
12:00 PM	37	17	21	0	19	218	10	0	8	17	42	0	50	163	33	0
12:15 PM	46	21	20	0	7	213	4	0	11	29	38	0	47	183	43	0
12:30 PM	56	14	36	0	14	214	5	0	17	14	39	0	54	187	35	0
12:45 PM	24	18	26	0	9	226	6	0	18	19	33	0	59	179	42	0
1:00 PM	29	10	33	0	16	195	5	0	19	20	35	0	39	196	39	0
1:15 PM	41	14	32	0	21	176	4	0	4	23	34	0	50	194	31	0
1:30 PM	25	21	25	0	19	127	1	0	10	19	37	0	63	177	31	0
1:45 PM	36	13	23	0	17	145	1	0	13	25	52	0	50	199	22	0
2:00 PM	29	20	34	0	22	206	5	0	8	21	30	0	61	216	36	0
2:15 PM	41	20	45	0	24	195	5	0	7	22	30	0	53	244	43	0
2:30 PM	53	27	52	0	19	196	2	0	11	19	38	0	54	202	27	0
2:45 PM	42	22	43	0	27	166	4	0	9	20	42	0	53	256	32	0
3:00 PM	40	22	51	0	37	223	6	0	14	23	49	0	71	291	39	0
3:15 PM	40	22	44	0	27	223	2	0	17	28	43	0	63	261	43	0
3:30 PM	48	14	38	0	18	230	4	0	17	28	50	0	60	285	52	0
3:45 PM	47	16	49	0	32	205	9	0	21	23	38	0	85	265	64	0
4:00 PM	34	17	46	0	31	166	7	0	27	27	36	0	64	276	65	0
4:15 PM	41	24	45	0	33	216	10	0	19	19	39	0	102	307	50	0
4:30 PM	45	29	52	0	25	212	5	0	21	37	52	0	78	299	64	0
4:45 PM	51	25	55	0	32	210	5	0	17	31	40	0	68	302	52	0
5:00 PM	55	28	53	0	36	199	7	0	27	30	56	0	64	272	64	0
5:15 PM	46	23	48	0	35	229	7	0	19	32	48	0	60	271	57	0
5:30 PM	55	30	63	0	44	273	8	0	22	34	41	0	66	281	58	0
5:45 PM	59	20	44	0	35	232	3	0	24	28	51	0	65	288	62	0

Traffic Count Data
SR-125/Amelia-Olive Branch Road

6:00 PM	55	25	36	0	26	222	6	0	15	25	42	0	49	259	48	0
6:15 PM	44	21	49	0	29	248	5	0	17	26	46	0	60	224	58	0
6:30 PM	36	23	40	0	22	180	3	0	7	29	37	0	57	241	50	0
6:45 PM	33	17	25	0	31	173	3	0	11	26	47	0	57	226	32	0
7:00 PM	41	14	23	0	15	159	2	0	14	11	39	0	38	192	41	0
7:15 PM	42	18	30	0	19	126	2	0	8	21	46	0	40	204	48	0
7:30 PM	22	30	34	0	19	150	4	0	6	19	24	0	53	206	36	0
7:45 PM	28	14	34	0	6	129	3	0	10	19	33	0	35	197	38	0
8:00 PM	21	10	23	0	17	152	5	0	4	18	52	0	28	192	41	0
8:15 PM	32	12	24	0	23	144	3	0	2	15	22	0	24	190	30	0
8:30 PM	24	6	21	0	16	132	5	0	2	11	27	0	19	175	30	0
8:45 PM	18	10	24	0	15	90	1	0	0	11	18	0	20	155	38	0
9:00 PM	18	10	22	0	14	76	1	0	3	18	25	0	24	141	31	0
9:15 PM	12	8	15	0	18	73	2	0	2	16	12	0	22	118	22	0
9:30 PM	9	5	13	0	8	68	1	0	0	13	10	0	15	109	32	0
9:45 PM	12	3	7	0	11	55	1	0	2	6	13	0	10	105	20	0
10:00 PM	11	7	4	0	9	44	1	0	0	4	20	0	16	90	25	0
10:15 PM	7	4	6	0	3	43	0	0	0	13	7	0	7	83	21	0
10:30 PM	9	5	7	0	10	37	0	0	0	5	2	0	8	53	15	0
10:45 PM	5	3	8	0	2	26	1	0	0	10	9	0	10	58	8	0
11:00 PM	6	1	4	0	4	19	2	0	0	6	10	0	3	53	12	0
11:15 PM	6	0	9	0	2	23	0	0	1	0	1	0	0	34	9	0
11:30 PM	5	1	4	0	2	18	0	0	0	2	0	0	1	41	6	0
11:45 PM	2	0	3	0	3	15	0	0	0	1	2	0	0	32	10	0
Total	2540	989	1970	0	1457	12912	252	0	588	1163	2109	0	2690	12043	2388	0
12:00 AM	1	0	3	0	2	9	0	0	0	0	1	0	1	33	9	0
12:15 AM	3	1	3	0	1	10	0	0	0	0	0	0	0	28	6	0
12:30 AM	1	0	1	0	3	7	0	0	0	1	0	0	0	26	5	0
12:45 AM	2	1	0	0	2	10	1	0	0	0	0	0	0	19	0	0
1:00 AM	1	0	2	0	1	4	0	0	0	0	1	0	0	23	3	0
1:15 AM	1	0	1	0	1	12	0	0	0	0	0	0	0	11	2	0
1:30 AM	2	0	1	0	0	8	0	0	0	0	0	0	0	14	2	0
1:45 AM	1	0	2	0	1	8	1	0	0	0	0	0	1	9	2	0
2:00 AM	0	0	1	0	1	12	0	0	0	0	0	0	0	7	0	0
2:15 AM	0	0	2	0	1	9	0	0	0	0	0	0	1	6	1	0
2:30 AM	0	0	2	0	0	13	0	0	0	0	0	0	2	16	3	0
2:45 AM	2	0	1	0	0	12	0	0	0	0	0	0	2	12	2	0
3:00 AM	1	0	0	0	1	16	0	0	0	0	1	0	0	10	0	0
3:15 AM	1	0	2	0	2	18	0	0	0	0	0	0	0	4	1	0
3:30 AM	1	0	0	0	2	28	0	0	0	0	0	0	0	12	1	0
3:45 AM	4	3	2	0	2	31	0	0	0	1	0	0	3	10	1	0
4:00 AM	5	0	0	0	4	39	1	0	0	1	0	0	0	5	1	0
4:15 AM	8	0	1	0	1	65	1	0	0	0	1	0	0	9	3	0
4:30 AM	10	0	0	0	2	87	0	0	1	0	0	0	0	14	3	0
4:45 AM	11	0	0	0	4	97	0	0	0	1	2	0	5	13	2	0
5:00 AM	16	1	2	0	3	124	0	0	0	1	2	0	3	10	6	0
5:15 AM	25	2	3	0	6	170	0	0	0	3	1	0	0	15	6	0
5:30 AM	23	2	2	0	14	183	2	0	0	0	3	0	3	25	9	0
5:45 AM	21	4	5	0	14	217	0	0	1	1	2	0	4	33	5	0

Traffic Count Data
SR-125/Amelia-Olive Branch Road

Study Name CLE-125-5.09
Start Date 05/08/2024
Start Time 6:00 AM
Site Code
Project District 08: CLE-125-5.09
Type Road
Classification Other Vehicles

	AOB Southwestbound				SR-125 West Northwestbound				AOB Northeastbound				SR-125 East Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	0	0	0	0	1	4	0	0	0	0	0	0	1	13	0	0
6:15 AM	0	0	0	0	3	5	0	0	1	0	0	0	0	7	0	0
6:30 AM	0	0	0	0	7	9	0	0	0	0	0	0	0	3	4	0
6:45 AM	0	2	3	0	0	12	0	0	0	0	0	0	2	3	0	0
7:00 AM	0	3	6	0	2	5	0	0	0	0	0	0	1	1	0	0
7:15 AM	1	1	4	0	4	7	0	0	0	0	0	0	0	5	2	0
7:30 AM	1	0	3	0	1	6	0	0	0	2	2	0	1	8	3	0
7:45 AM	1	0	1	0	0	9	0	0	1	0	0	0	0	9	1	0
8:00 AM	0	0	1	0	1	12	0	0	0	0	0	0	1	2	2	0
8:15 AM	0	0	0	0	1	7	0	0	1	0	0	0	0	13	0	0
8:30 AM	2	0	0	0	3	9	0	0	0	0	3	0	0	7	1	0
8:45 AM	1	0	2	0	0	8	0	0	0	1	0	0	0	6	2	0
9:00 AM	4	0	2	0	1	8	0	0	0	0	1	0	0	5	2	0
9:15 AM	1	1	0	0	2	10	0	0	0	0	1	0	2	5	1	0
9:30 AM	1	1	2	0	1	7	0	0	0	0	0	0	0	14	1	0
9:45 AM	2	0	1	0	0	9	0	0	0	0	1	0	1	5	3	0
10:00 AM	1	0	0	0	0	10	0	0	1	0	2	0	1	9	1	0
10:15 AM	2	0	2	0	1	5	0	0	0	1	1	0	1	6	2	0
10:30 AM	3	0	0	0	0	4	0	0	0	0	0	0	0	7	2	0
10:45 AM	2	0	1	0	0	3	0	0	0	0	1	0	0	9	0	0
11:00 AM	0	0	0	0	2	5	0	0	0	0	1	0	1	9	1	0
11:15 AM	0	0	0	0	0	11	0	0	0	0	0	0	0	4	1	0
11:30 AM	1	0	1	0	0	6	0	0	0	0	0	0	0	5	1	0
11:45 AM	3	0	0	0	2	5	0	0	0	0	1	0	1	3	2	0
12:00 PM	0	0	0	0	0	7	0	0	0	0	0	0	2	5	1	0
12:15 PM	1	0	0	0	0	5	0	0	0	0	1	0	1	4	0	0
12:30 PM	0	0	0	0	1	3	0	0	1	0	0	0	0	5	1	0
12:45 PM	0	0	1	0	0	4	0	0	0	0	0	0	0	7	0	0
1:00 PM	0	0	0	0	0	4	0	0	0	0	1	0	0	7	1	0
1:15 PM	0	0	2	0	0	1	0	0	0	0	1	0	1	6	1	0
1:30 PM	1	0	0	0	0	3	0	0	0	1	0	0	1	1	1	0
1:45 PM	0	0	0	0	0	1	0	0	0	0	2	0	0	10	2	0
2:00 PM	1	0	2	0	1	5	0	0	0	0	0	0	1	7	0	0
2:15 PM	1	0	3	0	2	5	0	0	0	0	0	0	1	4	2	0
2:30 PM	2	0	7	0	3	3	0	0	1	0	0	0	0	11	3	0
2:45 PM	1	0	2	0	0	8	0	0	0	0	0	0	0	10	1	0
3:00 PM	2	0	1	0	2	5	0	0	0	0	0	0	1	5	0	0
3:15 PM	3	0	1	0	2	11	0	0	1	0	0	0	0	4	0	0
3:30 PM	1	0	0	0	1	7	0	0	0	0	0	0	0	7	1	0
3:45 PM	0	0	0	0	1	5	0	0	0	0	0	0	0	3	4	0
4:00 PM	1	0	0	0	0	6	0	0	0	1	0	0	1	5	2	0
4:15 PM	1	0	0	0	1	7	1	0	2	1	0	0	0	4	0	0
4:30 PM	2	0	0	0	0	11	0	0	0	0	0	0	0	2	0	0
4:45 PM	0	1	0	0	2	5	0	0	0	0	0	0	1	5	2	0

Traffic Count Data
SR-125/Amelia-Olive Branch Road

5:00 PM	0	0	0	0	0	2	0	0	0	1	0	0	1	3	1	0
5:15 PM	0	0	0	0	0	5	0	0	0	0	1	0	0	1	0	0
5:30 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0
6:00 PM	1	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0
6:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0
6:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0
7:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0
7:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0
7:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0
8:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
8:15 PM	1	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0
8:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0
8:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0
9:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
9:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
10:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
10:45 PM	1	0	0	0	0	2	0	0	0	0	1	0	1	0	0	0
11:00 PM	0	0	0	0	0	1	0	0	0	0	1	0	1	1	0	0
11:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Total	46	10	50	0	50	321	1	0	9	10	24	0	30	305	56	0
12:00 AM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
12:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
2:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0
3:45 AM	0	0	2	0	1	4	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	1	1	0	0
4:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0
4:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	3	0	0	0	0	0	0	1	5	0	0
5:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	1	5	0	0

Traffic Count Data
SR-125/Amelia-Olive Branch Road

Study Name **CLE-125-5.09**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-5.09**
Type **Road**
Classification **Totals**

	AOB Southwestbound				SR-125 West Northwestbound				AOB Northeastbound				SR-125 East Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	39	1	7	0	13	239	0	0	0	2	11	0	11	52	8	0
6:15 AM	44	9	6	0	16	288	0	0	2	2	7	0	2	55	16	0
6:30 AM	55	2	10	0	38	300	2	0	0	6	11	0	7	64	27	0
6:45 AM	63	6	24	0	39	331	1	0	0	3	12	0	10	76	26	0
7:00 AM	83	8	38	0	30	318	1	0	3	8	17	0	11	97	25	0
7:15 AM	63	9	19	0	33	335	0	0	1	4	22	0	13	114	33	0
7:30 AM	50	10	38	0	29	333	0	0	4	12	28	0	17	135	33	0
7:45 AM	52	7	29	0	13	238	1	0	2	5	14	0	14	143	28	0
8:00 AM	45	11	17	0	21	237	3	0	0	8	10	0	24	109	27	0
8:15 AM	41	12	24	0	19	252	1	0	3	14	9	0	26	130	25	0
8:30 AM	44	6	24	0	28	278	3	0	3	6	28	0	15	107	28	0
8:45 AM	41	19	25	0	26	197	6	0	1	14	17	0	19	128	25	0
9:00 AM	53	10	20	0	23	216	5	0	3	6	26	0	36	126	21	0
9:15 AM	33	13	23	0	19	228	7	0	7	16	33	0	37	122	38	0
9:30 AM	37	14	23	0	29	221	4	0	3	16	34	0	28	135	40	0
9:45 AM	44	13	28	0	18	155	7	0	7	11	26	0	40	129	22	0
10:00 AM	25	12	32	0	19	199	3	0	7	12	27	0	38	143	23	0
10:15 AM	30	12	25	0	26	214	5	0	6	14	28	0	44	155	34	0
10:30 AM	37	14	24	0	27	205	2	0	10	14	35	0	33	145	20	0
10:45 AM	29	15	23	0	25	190	4	0	13	13	52	0	35	178	27	0
11:00 AM	35	9	28	0	17	215	5	0	10	19	31	0	38	172	20	0
11:15 AM	37	11	24	0	22	206	6	0	6	12	35	0	42	167	37	0
11:30 AM	31	18	17	0	20	209	3	0	9	12	37	0	48	174	28	0
11:45 AM	37	22	28	0	16	187	7	0	8	25	36	0	40	173	24	0
12:00 PM	37	17	21	0	19	225	10	0	8	17	42	0	52	168	34	0
12:15 PM	47	21	20	0	7	218	4	0	11	29	39	0	48	187	43	0
12:30 PM	56	14	36	0	15	217	5	0	18	14	39	0	54	192	36	0
12:45 PM	24	18	27	0	9	230	6	0	18	19	33	0	59	186	42	0
1:00 PM	29	10	33	0	16	199	5	0	19	20	36	0	39	203	40	0
1:15 PM	41	14	34	0	21	177	4	0	4	23	35	0	51	200	32	0
1:30 PM	26	21	25	0	19	130	1	0	10	20	37	0	64	178	32	0
1:45 PM	36	13	23	0	17	146	1	0	13	25	54	0	50	209	24	0
2:00 PM	30	20	36	0	23	211	5	0	8	21	30	0	62	223	36	0
2:15 PM	42	20	48	0	26	200	5	0	7	22	30	0	54	248	45	0
2:30 PM	55	27	59	0	22	199	2	0	12	19	38	0	54	213	30	0
2:45 PM	43	22	45	0	27	174	4	0	9	20	42	0	53	266	33	0
3:00 PM	42	22	52	0	39	228	6	0	14	23	49	0	72	296	39	0
3:15 PM	43	22	45	0	29	234	2	0	18	28	43	0	63	265	43	0
3:30 PM	49	14	38	0	19	237	4	0	17	28	50	0	60	292	53	0
3:45 PM	47	16	49	0	33	210	9	0	21	23	38	0	85	268	68	0
4:00 PM	35	17	46	0	31	172	7	0	27	28	36	0	65	281	67	0
4:15 PM	42	24	45	0	34	223	11	0	21	20	39	0	102	311	50	0
4:30 PM	47	29	52	0	25	223	5	0	21	37	52	0	78	301	64	0
4:45 PM	51	26	55	0	34	215	5	0	17	31	40	0	69	307	54	0

Traffic Count Data
SR-125/Amelia-Olive Branch Road

5:00 PM	55	28	53	0	36	201	7	0	27	31	56	0	65	275	65	0
5:15 PM	46	23	48	0	35	234	7	0	19	32	49	0	60	272	57	0
5:30 PM	55	30	63	0	44	280	8	0	22	34	41	0	66	281	58	0
5:45 PM	59	20	44	0	36	233	3	0	24	28	51	0	65	290	62	0
6:00 PM	56	25	36	0	26	224	6	0	15	25	42	0	49	262	48	0
6:15 PM	44	21	49	0	29	248	5	0	17	26	46	0	61	228	58	0
6:30 PM	36	23	40	0	22	181	3	0	7	29	37	0	57	243	51	0
6:45 PM	33	17	25	0	31	175	3	0	11	26	47	0	57	227	32	0
7:00 PM	41	14	23	0	15	161	2	0	14	11	39	0	38	195	41	0
7:15 PM	42	18	30	0	19	127	2	0	8	21	47	0	40	205	48	0
7:30 PM	22	30	35	0	19	150	4	0	6	19	24	0	53	206	36	0
7:45 PM	28	14	35	0	6	130	3	0	10	19	33	0	35	198	38	0
8:00 PM	21	10	23	0	17	154	5	0	4	18	52	0	28	192	41	0
8:15 PM	33	12	24	0	24	145	3	0	2	15	22	0	24	191	30	0
8:30 PM	24	6	21	0	16	134	5	0	2	11	27	0	19	176	30	0
8:45 PM	18	10	24	0	15	92	1	0	0	11	18	0	20	157	38	0
9:00 PM	18	10	22	0	14	78	1	0	3	18	25	0	24	141	31	0
9:15 PM	12	8	15	0	18	73	2	0	2	17	12	0	22	118	22	0
9:30 PM	9	5	13	0	8	68	1	0	0	13	10	0	16	109	32	0
9:45 PM	12	3	7	0	11	56	1	0	2	6	13	0	10	106	20	0
10:00 PM	11	7	4	0	9	44	1	0	0	4	21	0	17	91	25	0
10:15 PM	7	4	6	0	3	43	0	0	0	13	7	0	8	85	21	0
10:30 PM	9	6	7	0	10	37	0	0	0	5	2	0	8	54	15	0
10:45 PM	6	3	8	0	2	28	1	0	0	10	10	0	11	58	8	0
11:00 PM	6	1	4	0	4	20	2	0	0	6	11	0	4	54	12	0
11:15 PM	6	0	9	0	2	25	0	0	1	0	1	0	0	35	9	0
11:30 PM	5	1	4	0	2	18	0	0	0	3	0	0	1	43	6	0
11:45 PM	2	0	3	0	3	15	0	0	0	1	2	0	0	33	10	0
Total	2586	999	2020	0	1507	13233	253	0	597	1173	2133	0	2720	12348	2444	0
12:00 AM	1	0	3	0	2	10	0	0	0	0	3	0	1	33	9	0
12:15 AM	3	1	3	0	1	10	0	0	0	0	0	0	1	28	6	0
12:30 AM	1	0	1	0	3	7	0	0	0	1	0	0	1	27	5	0
12:45 AM	2	1	0	0	2	12	1	0	0	0	0	0	0	20	0	0
1:00 AM	1	0	2	0	1	4	0	0	0	0	1	0	0	23	3	0
1:15 AM	1	0	1	0	1	12	0	0	0	0	0	0	0	11	2	0
1:30 AM	2	0	1	0	0	8	0	0	0	0	0	0	0	15	2	0
1:45 AM	1	0	2	0	1	8	1	0	0	0	0	0	1	9	2	0
2:00 AM	0	0	1	0	1	12	0	0	0	0	0	0	0	8	0	0
2:15 AM	0	0	2	0	1	9	0	0	0	0	0	0	1	6	1	0
2:30 AM	0	0	2	0	0	13	1	0	0	0	0	0	2	17	3	0
2:45 AM	2	0	2	0	0	13	0	0	0	0	0	0	2	13	3	0
3:00 AM	1	1	0	0	1	16	0	0	0	0	1	0	0	11	0	0
3:15 AM	1	0	2	0	2	19	0	0	0	0	0	0	0	4	1	0
3:30 AM	1	0	0	0	2	32	0	0	0	0	0	0	0	13	1	0
3:45 AM	4	3	4	0	3	35	0	0	0	1	0	0	3	10	1	0
4:00 AM	5	0	0	0	4	42	1	0	0	1	0	0	1	6	1	0
4:15 AM	8	0	1	0	1	69	1	0	0	0	1	0	0	10	3	0
4:30 AM	10	0	0	0	2	88	0	0	1	0	0	0	0	14	3	0
4:45 AM	11	0	0	0	4	98	0	0	0	1	3	0	5	13	2	0
5:00 AM	16	1	2	0	3	124	0	0	0	1	2	0	3	10	6	0
5:15 AM	25	2	3	0	6	170	0	0	0	3	1	0	0	15	6	0
5:30 AM	23	2	2	0	14	186	2	0	0	0	3	0	4	30	9	0
5:45 AM	21	4	5	0	14	219	0	0	1	1	2	0	5	38	5	0

Traffic Count Data
Amelia-Olive Branch Road/Amelia Court

Study Name **CLE-125-5.09 (local live oaks intersection nearby)**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-5.09**
Type **Road**
Classification **Lights**

	AOB Southwestbound				Amelia Court Northwestbound				Live Oak Dr Northeastbound				Hicks Place Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	0	7	5	0	12	0	0	0	0	3	0	0	0	0	0	0
6:15 AM	2	5	3	0	9	0	0	0	0	0	0	0	0	0	2	0
6:30 AM	2	6	3	0	11	0	0	0	0	3	0	0	0	0	3	0
6:45 AM	1	7	6	0	9	0	0	0	0	4	0	0	0	0	1	0
7:00 AM	2	8	8	0	21	1	0	0	0	8	0	0	0	2	4	0
7:15 AM	1	16	8	0	19	1	0	0	0	6	1	0	0	1	3	0
7:30 AM	1	16	11	0	23	1	0	0	0	14	1	0	0	0	2	0
7:45 AM	1	9	11	0	13	4	0	0	0	6	0	0	1	4	1	0
8:00 AM	5	18	17	0	14	1	0	0	0	7	1	0	0	0	1	0
8:15 AM	4	15	16	0	14	0	0	0	1	8	1	0	0	3	3	0
8:30 AM	3	15	8	0	21	0	0	0	0	10	0	0	0	0	5	0
8:45 AM	6	17	20	0	17	2	2	0	0	14	0	0	0	0	2	0
9:00 AM	1	28	23	0	19	0	1	0	0	16	0	0	1	1	5	0
9:15 AM	5	27	28	0	28	0	2	0	1	17	1	0	0	0	7	0
9:30 AM	1	23	16	0	32	2	3	0	0	19	1	0	0	1	5	0
9:45 AM	5	24	30	1	13	0	0	0	0	20	0	0	1	1	3	0
10:00 AM	2	30	23	0	26	1	0	0	1	18	1	0	0	0	5	0
10:15 AM	8	32	24	0	21	1	0	0	0	25	0	0	0	1	6	0
10:30 AM	3	25	22	0	17	0	0	0	1	31	0	0	1	4	11	0
10:45 AM	4	29	23	0	26	2	1	0	0	35	1	0	0	0	12	0
11:00 AM	3	30	20	0	28	0	0	0	0	23	0	0	0	1	3	0
11:15 AM	2	32	25	0	31	0	0	0	1	22	1	0	2	3	3	0
11:30 AM	1	34	31	0	35	0	0	0	3	17	1	0	1	3	8	0
11:45 AM	6	36	29	0	34	1	0	0	1	27	1	0	2	1	3	0
12:00 PM	5	41	31	0	38	3	1	0	2	31	0	0	0	1	2	0
12:15 PM	6	33	33	0	35	0	0	0	2	32	1	0	1	2	10	0
12:30 PM	5	38	32	1	25	1	1	0	0	32	0	0	0	1	8	0
12:45 PM	3	37	38	0	24	0	0	0	2	40	2	0	1	2	11	0
1:00 PM	2	29	26	0	27	1	3	0	1	28	3	0	1	1	13	0
1:15 PM	5	39	29	0	36	1	1	0	2	23	0	0	0	2	9	0
1:30 PM	0	47	38	0	39	2	1	0	5	23	0	0	1	4	6	0
1:45 PM	1	41	35	0	37	0	0	0	0	37	0	0	0	0	6	0
2:00 PM	2	49	35	0	28	0	2	0	2	30	0	0	1	1	2	0
2:15 PM	3	41	30	0	37	0	0	0	2	24	1	0	0	0	5	0
2:30 PM	4	54	33	0	39	2	1	0	4	27	0	0	2	1	5	0
2:45 PM	3	48	33	0	27	0	1	0	3	37	2	0	1	1	3	0
3:00 PM	2	55	38	0	42	0	2	0	2	33	0	0	1	1	5	0
3:15 PM	4	49	32	0	42	0	2	0	1	31	0	0	1	1	8	0
3:30 PM	2	46	35	0	43	0	1	0	1	52	0	0	0	2	5	0
3:45 PM	2	51	53	0	37	0	1	0	0	37	0	0	1	2	2	0
4:00 PM	3	45	44	0	45	1	1	0	0	37	2	0	0	0	6	0
4:15 PM	2	74	61	0	40	0	0	0	2	38	0	0	0	0	5	0
4:30 PM	5	58	49	0	53	3	1	0	3	50	0	0	1	0	3	0
4:45 PM	4	56	39	1	51	1	0	0	4	41	1	1	1	2	8	0
5:00 PM	3	56	37	0	51	0	1	0	1	37	1	0	2	6	9	0
5:15 PM	7	61	38	0	52	1	1	0	3	38	0	0	0	2	6	0
5:30 PM	7	60	39	1	40	0	1	0	1	31	2	0	2	0	11	0
5:45 PM	4	47	45	0	44	1	0	0	0	50	0	0	1	1	5	0

Traffic Count Data
Amelia-Olive Branch Road/Amelia Court

6:00 PM	6	39	42	0	43	0	1	0	3	37	0	0	0	1	8	0
6:15 PM	1	39	47	0	45	0	0	0	2	33	1	0	0	2	6	0
6:30 PM	4	52	30	0	34	1	1	0	2	31	0	0	1	0	3	0
6:45 PM	5	41	30	0	41	0	1	0	1	40	1	0	1	0	4	0
7:00 PM	3	34	27	0	36	1	0	0	2	27	1	0	2	1	5	0
7:15 PM	1	34	30	0	36	0	2	0	1	32	0	0	0	0	4	0
7:30 PM	4	38	47	0	23	0	0	0	0	24	0	0	0	0	4	0
7:45 PM	3	22	25	0	41	2	0	0	2	20	0	0	1	2	2	0
8:00 PM	3	28	17	0	47	4	0	0	0	20	1	0	2	2	2	0
8:15 PM	3	20	20	1	22	2	0	0	1	15	0	0	0	2	2	0
8:30 PM	1	11	19	0	27	1	0	0	0	9	1	0	0	0	4	0
8:45 PM	3	18	16	0	18	2	0	0	1	12	0	0	0	2	2	0
9:00 PM	1	12	22	0	36	0	0	0	0	10	0	0	0	0	1	0
9:15 PM	1	10	19	1	22	0	0	0	1	3	0	0	1	0	3	0
9:30 PM	1	12	9	1	19	0	0	0	0	5	0	0	0	0	1	0
9:45 PM	2	8	7	0	16	1	1	0	0	6	1	0	0	0	0	0
10:00 PM	2	14	7	0	12	0	0	0	0	8	0	0	0	0	1	0
10:15 PM	1	6	4	0	14	0	0	0	0	7	0	0	0	0	0	0
10:30 PM	1	7	6	0	5	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	5	8	0	15	0	0	0	0	2	0	0	0	0	2	0
11:00 PM	0	1	5	0	11	0	0	0	0	4	0	0	0	0	0	0
11:15 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
11:30 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0
11:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0
Total	199	2096	1751	7	1992	48	37	0	68	1538	32	1	35	71	307	0
12:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
12:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
2:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	2	4	0	1	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	1	0	0	0	2	0	0	0	1	0	0	1	0	0
4:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4:45 AM	1	1	3	0	2	0	1	0	0	1	0	0	0	0	1	0
5:00 AM	0	1	3	0	1	0	0	0	0	0	0	0	0	0	1	0
5:15 AM	1	0	2	0	3	0	0	0	0	0	1	0	0	0	1	0
5:30 AM	0	1	4	0	4	0	0	0	0	1	0	0	0	0	0	0
5:45 AM	0	5	4	0	1	0	1	0	0	0	0	0	0	0	0	0

Traffic Count Data
Amelia-Olive Branch Road/Amelia Court

Study Name **CLE-125-5.09 (local live oaks intersection nearby)**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-5.09**
Type **Road**
Classification **Other Vehicles**

	AOB Southwestbound				Amelia Court Northwestbound				Live Oak Dr Northeastbound				Hicks Place Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	1	0	0	0	0	3	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0
10:00 AM	0	0	1	0	2	0	0	0	0	1	0	0	0	0	0	0
10:15 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0
11:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0
12:15 PM	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
1:15 PM	1	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0
1:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
1:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
2:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0
5:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Traffic Count Data
Amelia-Olive Branch Road/Amelia Court

6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	27	16	0	13	0	1	0	0	20	0	0	0	3	15	0
12:00 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
12:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0

Traffic Count Data
Amelia-Olive Branch Road/Amelia Court

Study Name **CLE-125-5.09 (local live oaks intersection nearby)**
Start Date **05/08/2024**
Start Time **6:00 AM**
Site Code
Project **District 08: CLE-125-5.09**
Type **Road**
Classification **Totals**

	AOB Southwestbound				Amelia Court Northwestbound				Live Oak Dr Northeastbound				Hicks Place Southeastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:00 AM	0	8	5	0	12	0	0	0	0	3	0	0	0	0	0	0
6:15 AM	2	5	3	0	9	0	0	0	0	0	0	0	0	0	3	0
6:30 AM	2	6	3	0	11	0	0	0	0	3	0	0	0	0	3	0
6:45 AM	1	12	7	0	9	0	0	0	0	4	0	0	0	0	1	0
7:00 AM	2	10	10	0	21	1	0	0	0	8	0	0	0	2	4	0
7:15 AM	1	16	8	0	19	1	0	0	0	6	1	0	0	1	3	0
7:30 AM	1	17	11	0	24	1	0	0	0	17	1	0	0	0	2	0
7:45 AM	1	9	11	0	13	4	0	0	0	7	0	0	1	4	1	0
8:00 AM	5	18	17	0	14	1	0	0	0	7	1	0	0	0	1	0
8:15 AM	4	15	16	0	14	0	0	0	1	8	1	0	0	3	4	0
8:30 AM	3	15	8	0	21	0	0	0	0	13	0	0	0	0	5	0
8:45 AM	6	17	20	0	17	2	2	0	0	14	0	0	0	0	3	0
9:00 AM	1	28	23	0	20	0	1	0	0	16	0	0	1	1	5	0
9:15 AM	5	30	29	0	29	0	2	0	1	17	1	0	0	0	7	0
9:30 AM	1	23	17	0	32	2	3	0	0	19	1	0	0	1	5	0
9:45 AM	5	25	30	1	14	0	0	0	0	21	0	0	1	1	3	0
10:00 AM	2	30	24	0	28	1	0	0	1	19	1	0	0	0	5	0
10:15 AM	8	32	25	0	23	1	0	0	0	25	0	0	0	1	6	0
10:30 AM	3	25	22	0	17	0	0	0	1	31	0	0	1	4	11	0
10:45 AM	4	29	23	0	27	2	1	0	0	35	1	0	0	0	12	0
11:00 AM	4	30	20	0	28	0	0	0	0	23	0	0	0	1	4	0
11:15 AM	2	32	25	0	31	0	0	0	1	22	1	0	2	3	3	0
11:30 AM	1	34	32	0	36	0	0	0	3	17	1	0	1	3	9	0
11:45 AM	6	37	29	0	34	1	0	0	1	27	1	0	2	1	3	0
12:00 PM	5	42	32	0	38	3	1	0	2	31	0	0	0	2	2	0
12:15 PM	6	33	34	0	36	0	0	0	2	33	1	0	1	2	10	0
12:30 PM	5	38	32	1	25	1	1	0	0	32	0	0	0	1	9	0
12:45 PM	3	37	38	0	24	0	0	0	2	40	2	0	1	3	11	0
1:00 PM	2	29	26	0	27	1	3	0	1	29	3	0	1	1	13	0
1:15 PM	6	39	30	0	36	1	2	0	2	23	0	0	0	2	10	0
1:30 PM	0	47	39	0	39	2	1	0	5	23	0	0	1	4	7	0
1:45 PM	1	41	35	0	37	0	0	0	0	39	0	0	0	0	6	0
2:00 PM	3	49	36	0	28	0	2	0	2	30	0	0	1	1	2	0
2:15 PM	3	41	30	0	37	0	0	0	2	24	1	0	0	0	5	0
2:30 PM	4	54	33	0	39	2	1	0	4	27	0	0	2	1	6	0
2:45 PM	3	48	33	0	27	0	1	0	3	37	2	0	1	1	3	0
3:00 PM	2	56	38	0	42	0	2	0	2	33	0	0	1	1	5	0
3:15 PM	4	49	32	0	42	0	2	0	1	32	0	0	1	1	8	0
3:30 PM	2	47	35	0	43	0	1	0	1	52	0	0	0	2	5	0
3:45 PM	2	51	53	0	37	0	1	0	0	37	0	0	1	2	2	0
4:00 PM	4	45	45	0	45	1	1	0	0	37	2	0	0	0	7	0
4:15 PM	3	74	61	0	40	0	0	0	2	38	0	0	0	0	8	0
4:30 PM	5	58	49	0	53	3	1	0	3	50	0	0	1	0	3	0
4:45 PM	4	58	39	1	51	1	0	0	4	41	1	1	1	2	8	0
5:00 PM	3	57	37	0	52	0	1	0	1	37	1	0	2	7	9	0
5:15 PM	7	61	39	0	52	1	1	0	3	39	0	0	0	2	7	0
5:30 PM	7	60	39	1	40	0	1	0	1	31	2	0	2	0	12	0
5:45 PM	4	47	45	0	44	1	0	0	0	50	0	0	1	1	5	0

Traffic Count Data
Amelia-Olive Branch Road/Amelia Court

6:00 PM	6	39	42	0	43	0	1	0	3	37	0	0	0	1	8	0
6:15 PM	1	40	47	0	45	0	0	0	2	33	1	0	0	2	6	0
6:30 PM	4	52	30	0	34	1	1	0	2	31	0	0	1	0	3	0
6:45 PM	5	41	30	0	41	0	1	0	1	40	1	0	1	0	4	0
7:00 PM	3	34	27	0	36	1	0	0	2	27	1	0	2	1	5	0
7:15 PM	1	34	30	0	36	0	2	0	1	33	0	0	0	0	4	0
7:30 PM	4	38	47	0	23	0	0	0	0	24	0	0	0	0	4	0
7:45 PM	3	22	25	0	41	2	0	0	2	20	0	0	1	2	2	0
8:00 PM	3	28	17	0	47	4	0	0	0	20	1	0	2	2	2	0
8:15 PM	3	20	20	1	22	2	0	0	1	15	0	0	0	2	2	0
8:30 PM	1	11	19	0	27	1	0	0	0	9	1	0	0	0	4	0
8:45 PM	3	18	16	0	18	2	0	0	1	12	0	0	0	2	2	0
9:00 PM	1	12	23	0	36	0	0	0	0	10	0	0	0	0	1	0
9:15 PM	1	10	19	1	23	0	0	0	1	3	0	0	1	0	3	0
9:30 PM	1	13	9	1	19	0	0	0	0	5	0	0	0	0	1	0
9:45 PM	2	8	7	0	16	1	1	0	0	6	1	0	0	0	0	0
10:00 PM	2	15	7	0	12	0	0	0	0	9	0	0	0	0	1	0
10:15 PM	1	8	4	0	14	0	0	0	0	7	0	0	0	0	0	0
10:30 PM	1	7	6	0	5	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	6	8	0	15	0	0	0	0	3	0	0	0	0	2	0
11:00 PM	0	2	5	0	11	0	0	0	0	5	0	0	0	0	0	0
11:15 PM	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0
11:30 PM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0
11:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	2	4	0	1	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	1	1	0	0	0	2	0	0	0	1	0	0	1	0	0
4:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4:30 AM	1	1	3	0	3	0	1	0	0	1	0	0	0	0	1	0
4:45 AM	0	1	3	0	1	0	0	0	0	0	0	0	0	0	1	0
5:00 AM	1	0	2	0	3	0	0	0	0	0	1	0	0	0	1	0
5:15 AM	0	2	4	0	4	0	0	0	0	1	0	0	0	0	0	0
5:30 AM	0	6	4	0	1	0	1	0	0	1	0	0	0	0	0	0
5:45 AM	0	5	4	0	1	0	1	0	0	0	0	0	0	0	0	0

Intersection totals	SR-125 & Bristol Lake	SR-125 & White Oak	SR-125 & AOB	Entering Totals	Hourly Totals	
6:00AM	368	355	383	1106	-	
6:15AM	416	411	447	1274	-	
6:30AM	475	500	522	1497	-	
6:45AM	521	539	591	1651	5528	
7:00AM	563	602	639	1804	6226	
7:15AM	603	625	646	1874	6826	
7:30AM	603	642	689	1934	**7263**	6:45 - 7:45 AM
7:45AM	500	522	546	1568	7180	
8:00 AM	435	495	512	1442	6818	
8:15 AM	482	502	556	1540	6484	
8:30 AM	529	542	570	1641	6191	
8:45 AM	446	492	518	1456	6079	
9:00 AM	479	501	545	1525	6162	
9:15 AM	479	522	576	1577	6199	
9:30 AM	473	517	584	1574	6132	
9:45 AM	426	454	500	1380	6056	
10:00 AM	460	493	540	1493	6024	
10:15 AM	471	539	593	1603	6050	
10:30 AM	479	511	566	1556	6032	
10:45 AM	517	554	604	1675	6327	
11:00 AM	507	539	599	1645	6479	
11:15 AM	524	559	605	1688	6564	
11:30 AM	531	546	606	1683	6691	
11:45 AM	494	533	603	1630	6646	
12:00 PM	543	578	650	1771	6772	
12:15 PM	614	637	674	1925	7009	
12:30 PM	597	626	696	1919	7245	
12:45 PM	584	598	671	1853	7468	
1:00 PM	539	583	649	1771	7468	
1:15 PM	553	593	636	1782	7325	
1:30 PM	533	561	563	1657	7063	
1:45 PM	601	623	611	1835	7045	
2:00 PM	577	607	705	1889	7163	
2:15 PM	586	643	747	1976	7357	
2:30 PM	598	643	730	1971	7671	
2:45 PM	614	677	738	2029	7865	
3:00 PM	691	754	882	2327	8303	
3:15 PM	667	737	835	2239	8566	
3:30 PM	689	745	861	2295	8890	
3:45 PM	726	776	867	2369	9230	
4:00 PM	610	719	812	2141	9044	
4:15 PM	711	812	922	2445	9250	
4:30 PM	667	830	934	2431	9386	
4:45 PM	656	706	904	2266	9283	
5:00 PM	690	742	899	2331	**9473**	4:15 - 5:15 PM
5:15 PM	729	673	882	2284	9312	
5:30 PM	717	721	982	2420	9301	
5:45 PM	702	786	915	2403	9438	
6:00 PM	634	706	814	2154	9261	
6:15 PM	671	715	832	2218	9195	
6:30 PM	597	645	729	1971	8746	
6:45 PM	561	585	684	1830	8173	
7:00 PM	538	584	594	1716	7735	
7:15 PM	478	555	607	1640	7157	
7:30 PM	461	481	604	1546	6732	
7:45 PM	462	482	549	1493	6395	
8:00 PM	472	541	565	1578	6257	
8:15 PM	451	477	525	1453	6070	
8:30 PM	398	450	471	1319	5843	
8:45 PM	341	369	404	1114	5464	
9:00 PM	321	349	385	1055	4941	
9:15 PM	266	274	321	861	4349	
9:30 PM	240	261	284	785	3815	
9:45 PM	216	210	247	673	3374	
10:00 PM	189	215	234	638	2957	
10:15 PM	167	169	197	533	2629	
10:30 PM	131	128	153	412	2256	
10:45 PM	115	125	145	385	1968	
11:00 PM	109	111	124	344	1674	
11:15 PM	77	74	88	239	1380	
11:30 PM	69	63	83	215	1183	
11:45 PM	63	44	69	176	974	
12:00 AM	55	0	62	117	747	
12:15 AM	48	0	53	101	609	
12:30 AM	38	0	46	84	478	
12:45 AM	33	0	38	71	373	
1:00 AM	33	0	35	68	324	
1:15 AM	27	0	28	55	278	
1:30 AM	27	0	28	55	249	
1:45 AM	19	0	25	44	222	
2:00 AM	20	0	22	42	196	
2:15 AM	19	0	20	39	180	
2:30 AM	40	0	38	78	203	
2:45 AM	27	0	35	62	221	
3:00 AM	26	0	31	57	236	
3:15 AM	29	0	29	58	255	
3:30 AM	46	0	49	95	272	
3:45 AM	47	0	64	111	321	
4:00 AM	55	0	61	116	380	
4:15 AM	82	0	94	176	498	
4:30 AM	115	0	118	233	636	
4:45 AM	127	0	137	264	789	
5:00 AM	152	0	168	320	993	
5:15 AM	210	0	231	441	1258	
5:30 AM	247	0	275	522	1547	
5:45 AM	294	0	315	609	1892	

Peak Hour Factor Calculations

SR-125/Bristol Lake

	Southwestbound					Northwestbound					Northeastbound					Southeastbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
6:45 AM	0		13	0	**13**		399	0	0	**399**						0	109		0	**109**	**521**
7:00 AM	1		25	0	**26**		409	0	0	**409**						4	124		0	**128**	**563**
7:15 AM	1		23	0	**24**		424	0	0	**424**						1	154		0	**155**	**603**
7:30 AM	6		14	0	**20**		404	3	0	**407**						5	171		0	**176**	**603**
Total	8	0	75	0	**83**	0	1636	3	0	**1639**						10	558		0	**568**	**2290**
App %	10%	0%	90%	-	**4%**	0%	100%	0%	-	**72%**						2%	98%	0%	-	**25%**	**1**
PHF	0.33	-	0.75	-	**0.80**	-	0.96	0.25	-	**0.97**						0.50	0.82	-	-	**0.81**	**0.95**

	Southwestbound					Northwestbound					Northeastbound					Southeastbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
4:15 PM	1		6	0	**7**		225	1	0	**226**						12	466		0	**478**	**711**
4:30 PM	2		12	0	**14**		192	2	0	**194**						16	443		0	**459**	**667**
4:45 PM	3		13	0	**16**		210	5	0	**215**						12	413		0	**425**	**656**
5:00 PM	2		13	0	**15**		268	6	0	**274**						13	388		0	**401**	**690**
Total	8	0	44	0	**52**	0	895	14	0	**909**						53	1710	0	0	**1763**	**2724**
App %	15%	0%	85%	-	**2%**	0%	98%	2%	-	**33%**						3%	97%	0%	-	**65%**	**1**
PHF	0.67	-	0.85	-	**0.81**	-	0.83	0.58	-	**0.83**						0.83	0.92	-	-	**0.92**	**0.96**

SR-125/White Oak/Lewis Rd

	Westbound					Northbound					Eastbound					Southbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
6:45 AM	0	11	389	0	**400**	4	8	2	0	**14**	0	17	1	0	**18**	101	6	0	0	**107**	**539**
7:00 AM	1	25	416	0	**442**	8	7	2	0	**17**	0	16	2	0	**18**	121	4	0	0	**125**	**602**
7:15 AM	0	20	414	0	**434**	8	7	4	0	**19**	0	15	0	0	**15**	145	10	2	0	**157**	**625**
7:30 AM	0	18	407	0	**425**	9	6	5	0	**20**	0	19	0	0	**19**	164	12	2	0	**178**	**642**
Total	1	74	1626	0	**1701**	29	28	13	0	**70**	0	67	3	0	**70**	531	32	4	0	**567**	**2408**
App %	0%	4%	96%	-	**71%**	0%	40%	19%	-	**3%**	0%	96%	4%	-	**0.029**	94%	6%	1%	-	**24%**	**1**
PHF	0.25	0.74	0.98	-	**0.96**	0.81	0.88	0.65	-	**0.88**	-	0.88	0.38	-	**0.92**	0.81	0.67	0.50	-	**0.80**	**0.94**

	Westbound					Northbound					Eastbound					Southbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
4:15 PM	1	28	263	0	**292**	7	2	5	0	**14**	0	27	8	0	**35**	438	28	5	0	**471**	**812**
4:30 PM	3	33	293	0	**329**	9	0	4	0	**13**	0	31	5	0	**36**	423	23	6	0	**452**	**830**
4:45 PM	1	36	269	0	**306**	9	3	2	0	**14**	1	30	6	0	**37**	309	23	17	0	**349**	**706**
5:00 PM	2	30	276	0	**308**	6	3	2	0	**11**	2	30	6	0	**38**	362	14	9	0	**385**	**742**
Total	7	127	1101	0	**1235**	31	8	13	0	**52**	3	118	25	0	**146**	1532	88	37	0	**1657**	**3090**
App %	1%	10%	89%	-	**40%**	0%	15%	25%	-	**2%**	2%	81%	17%	-	**0.047**	92%	5%	2%	-	**54%**	**1**
PHF	0.58	0.88	0.94	-	**0.94**	0.86	0.67	0.65	-	**0.93**	0.38	0.95	0.78	-	**0.96**	0.87	0.79	0.54	-	**0.88**	**0.93**

SR-125/Amelia-Olive Branch Rd

	Southwestbound					Northwestbound					Northeastbound					Southeastbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
6:45 AM	24	6	63	0	**93**	1	331	39	0	**371**	12	3	0	0	**15**	26	76	10	0	**112**	**591**
7:00 AM	38	8	83	0	**129**	1	318	30	0	**349**	17	8	3	0	**28**	25	97	11	0	**133**	**639**
7:15 AM	19	9	63	0	**91**	0	335	33	0	**368**	22	4	1	0	**27**	33	114	13	0	**160**	**646**
7:30 AM	38	10	50	0	**98**	0	333	29	0	**362**	28	12	4	0	**44**	33	135	17	0	**185**	**689**
Total	119	33	259	0	**411**	2	1317	131	0	**1450**	79	27	8	0	**114**	117	422	51	0	**590**	**2565**
App %	29%	8%	63%	-	**16%**	0%	91%	9%	-	**57%**	69%	24%	7%	-	**0.044**	20%	72%	9%	-	**23%**	**1**
PHF	0.78	0.83	0.78	-	**0.80**	0.50	0.98	0.84	-	**0.98**	0.71	0.56	0.50	-	**0.65**	0.89	0.78	0.75	-	**0.80**	**0.93**

	Southwestbound					Northwestbound					Northeastbound					Southeastbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
4:15 PM	45	24	42	0	**111**	11	223	34	0	**268**	39	20	21	0	**80**	50	311	102	0	**463**	**922**
4:30 PM	52	29	47	0	**128**	5	223	25	0	**253**	52	37	21	0	**110**	64	301	78	0	**443**	**934**
4:45 PM	55	26	51	0	**132**	5	215	34	0	**254**	40	31	17	0	**88**	54	307	69	0	**430**	**904**
5:00 PM	53	28	55	0	**136**	7	201	36	0	**244**	56	31	27	0	**114**	65	275	65	0	**405**	**899**
Total	205	107	195	0	**507**	28	862	129	0	**1019**	187	119	86	0	**392**	233	1194	314	0	**1741**	**3659**
App %	40%	21%	38%	-	**14%**	3%	85%	13%	-	**28%**	48%	30%	22%	-	**0.107**	13%	69%	18%	-	**48%**	**1**
PHF	0.93	0.92	0.89	-	**0.93**	0.64	0.97	0.90	-	**0.95**	0.83	0.80	0.80	-	**0.86**	0.90	0.96	0.77	-	**0.94**	**0.98**

AOB/Amelia Court

	Southwestbound					Northwestbound					Northeastbound					Southeastbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
6:45 AM	7	12	1	0	**20**	0	0	9	0	**9**	0	4	0	0	**4**	1	0	0	0	**1**	**34**
7:00 AM	10	10	2	0	**22**	0	1	21	0	**22**	0	8	0	0	**8**	4	2	0	0	**6**	**58**
7:15 AM	8	16	1	0	**25**	0	1	19	0	**20**	1	6	0	0	**7**	3	1	0	0	**4**	**56**
7:30 AM	11	17	1	0	**29**	0	1	24	0	**25**	1	17	0	0	**18**	2	0	0	0	**2**	**74**
Total	36	55	5	0	**96**	0	3	73	0	**76**	2	35	0	0	**37**	10	3	0	0	**13**	**222**
App %	38%	57%	5%	-	**43%**	0%	4%	96%	-	**34%**	5%	95%	0%	-	**0.167**	77%	23%	0%	-	**6%**	**1**
PHF	0.82	0.81	0.63	-	**0.83**	-	0.75	0.76	-	**0.76**	0.50	0.51	-	-	**0.51**	0.63	0.38	-	-	**0.54**	**0.75**

	Southwestbound					Northwestbound					Northeastbound					Southeastbound					Int. Total
Start Time	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	Left	Thru	Right	Ped	Total	
4:15 PM	61	74	3	0	**138**	0	0	40	0	**40**	0	38	2	0	**40**	8	0	0	0	**8**	**226**
4:30 PM	49	58	5	0	**112**	1	3	53	0	**57**	0	50	3	0	**53**	3	0	1	0	**4**	**226**
4:45 PM	39	58	4	0	**101**	0	1	51	0	**52**	1	41	4	0	**46**	8	2	1	0	**11**	**210**
5:00 PM	37	57	3	0	**97**	1	0	52	0	**53**	1	37	1	0	**39**	9	7	2	0	**18**	**207**
Total	186	247	15	0	**448**	2	4	196	0	**202**	2	166	10	0	**178**	28	9	4	0	**41**	**869**
App %	42%	55%	3%	-	**52%**	1%	2%	97%	-	**23%**	1%	93%	6%	-	**0.205**	68%	22%	10%	-	**5%**	**1**
PHF	0.76	0.83	0.75	-	**0.81**	0.50	0.33	0.92	-	**0.89**	0.50	0.83	0.63	-	**0.84**	0.78	0.32	0.50	-	**0.57**	**0.96**

Heavy Vehicle Percent Calculations

SR-125/Bristol Lake

Wednesday, May 8, 2024	"East" Leg Bristal Lake Dr Southwestbound				"South" Leg SR-125 West Northwestbound				"West" Leg n/a Northeastbound				"North" Leg SR-125 East Southeastbound				Intersection Total
Start Time	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	
6:45 AM	0	0	13	13	0	399	0	399					0	109	0	109	521
7:00 AM	1	0	25	26	0	409	0	409					4	124	0	128	563
7:15 AM	1	0	23	24	0	424	0	424					1	154	0	155	603
7:30 AM	6	0	14	20	0	404	3	407					5	171	0	176	603
Total for AM peak hour	*8*	*0*	*75*	83	*0*	*1636*	*3*	*1639*					*10*	*558*	*0*	*568*	*2290*
Total HV	0	0	2	**2**	0	27	0	**27**					0	29	0	**29**	*58*
%HV	0%	0%	3%	2%	0%	2%	0%	2%					0%	5%	0%	5%	**3%**
4:15 PM	1	0	6	*7*	0	225	1	226					12	466	0	478	*711*
4:30 PM	2	0	12	14	0	192	2	194					16	443	0	459	*667*
4:45 PM	3	0	13	16	0	210	*5*	215					12	413	0	425	*656*
5:00 PM	2	0	13	15	0	268	6	*274*					13	388	0	401	*690*
Total for PM peak hour	*8*	*0*	*44*	*52*	*0*	*895*	*14*	*909*					*53*	*1710*	*0*	*1763*	*2724*
Total HV	0	0	2	**2**	0	28	0	**28**					0	23	0	**23**	*53*
%HV	0%	0%	5%	4%	0%	3%	0%	3%					0%	1%	0%	1%	**2%**

SR-125/White Oak/Lewis Rd

Wednesday, May 8, 2024	"East" Leg SR-125 West Westbound				"South" Leg Lewis Road Northbound				"West" Leg White Oak Road Eastbound				"North" Leg SR-125 East Southbound				Intersection Total
Start Time	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	
6:45 AM	0	11	389	400	*4*	8	2	14	0	17	1	18	101	6	0	107	539
7:00 AM	1	25	416	442	8	*7*	2	17	0	16	2	18	121	*4*	0	125	602
7:15 AM	0	20	414	434	8	*7*	4	19	0	15	0	15	145	10	2	157	625
7:30 AM	0	18	407	425	9	6	5	20	0	19	0	19	164	12	2	178	642
Total for AM peak hour	*1*	*74*	*1626*	1701	*29*	*28*	*13*	*70*	*0*	*67*	3	*70*	*531*	32	*4*	*567*	*2408*
Total HV	0	3	25	**28**	2	0	0	**2**	0	1	0	**1**	24	3	0	**27**	*58*
%HV	0%	4%	2%	2%	7%	0%	0%	3%	0%	1%	0%	1%	5%	9%	0%	5%	**2%**
4:15 PM	1	28	263	292	*7*	2	5	14	0	*27*	8	35	438	28	5	471	812
4:30 PM	3	33	293	329	9	0	4	13	0	31	5	36	*423*	23	6	452	830
4:45 PM	1	36	269	306	9	3	2	14	1	30	6	37	309	23	17	349	706
5:00 PM	2	30	276	308	6	3	2	11	2	30	6	38	362	14	9	385	*742*
Total for PM peak hour	*7*	*127*	*1101*	*1235*	*31*	*8*	*13*	*52*	3	*118*	*25*	*146*	*1532*	*88*	*37*	*1657*	*3090*
Total HV	0	0	19	**19**	0	0	0	**0**	0	1	1	**2**	14	0	0	**14**	*35*
%HV	0%	0%	2%	2%	0%	0%	0%	0%	0%	1%	4%	1%	1%	0%	0%	1%	**1%**

SR-125/Amelia-Olive Branch Rd

Wednesday, May 8, 2024	"East" Leg Amelia-Olive Branch Road Southwestbound				"South" Leg SR-125 West Northwestbound				"West" Leg Amelia-Olive Branch Road Northeastbound				"North" Leg SR-125 East Southeastbound				Intersection Total
Start Time	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	
6:45 AM	24	6	63	93	1	331	39	371	12	3	0	15	26	76	10	112	591
7:00 AM	38	8	83	129	1	318	30	349	17	8	3	28	25	97	11	133	639
7:15 AM	19	9	63	91	0	335	33	368	22	*4*	1	*27*	33	114	13	160	646
7:30 AM	38	10	50	98	0	333	29	362	28	12	*4*	44	33	135	17	185	689
Total for AM peak hour	*119*	*33*	*259*	411	*2*	*1317*	*131*	*1450*	*79*	*27*	*8*	*114*	*117*	*422*	*51*	*590*	*2565*
Total HV	16	6	2	**24**	0	30	*7*	**37**	2	2	0	**4**	*5*	17	4	**26**	*91*
%HV	13%	0%	1%	6%	0%	2%	5%	3%	0%	7%	0%	4%	4%	4%	0%	4%	**4%**
4:15 PM	45	24	42	111	11	223	34	268	39	20	21	80	50	311	102	463	922
4:30 PM	52	29	*47*	128	*5*	223	25	253	52	37	21	110	64	301	78	443	934
4:45 PM	*55*	26	51	132	*5*	215	34	254	40	31	17	88	54	307	69	430	904
5:00 PM	53	28	*55*	136	*7*	201	36	244	56	31	*27*	114	65	275	65	405	899
Total for PM peak hour	*205*	*107*	*195*	*507*	*28*	*862*	*129*	*1019*	*187*	*119*	*86*	*392*	*233*	*1194*	*314*	*1741*	*3659*
Total HV	0	1	3	**4**	1	25	3	**29**	0	2	2	**4**	3	14	2	**19**	*56*
%HV	0%	1%	2%	1%	0%	3%	2%	3%	0%	2%	2%	1%	1%	1%	0%	1%	**2%**

AOB/Amelia Court

Wednesday, May 8, 2024	"East" Leg Amelia-Olive Branch Road Southwestbound				"South" Leg Hicks Place Northwestbound				"West" Leg Live Oak Drive Northeastbound				"North" Leg Amelia Court Southeastbound				Intersection Total
Start Time	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	**Left**	**Thru**	**Right**	**Total**	
6:45 AM	*7*	12	1	20	0	0	9	9	0	4	0	4	1	0	0	1	34
7:00 AM	10	10	2	22	0	1	21	22	0	8	0	8	4	2	0	6	58
7:15 AM	8	16	1	25	0	1	19	20	1	6	0	*7*	3	1	0	*4*	*56*
7:30 AM	11	17	1	29	0	1	24	25	1	17	0	18	2	0	0	2	*74*
Total for AM peak hour	*36*	*55*	*5*	96	*0*	*3*	*73*	*76*	*2*	*35*	*0*	*37*	*10*	*3*	*0*	*13*	*222*
Total HV	3	8	0	**11**	0	0	1	**1**	0	3	0	**3**	0	0	0	**0**	*15*
%HV	8%	0%	0%	11%	0%	0%	1%	1%	0%	9%	0%	8%	0%	0%	0%	0%	**7%**
4:15 PM	61	*74*	3	138	0	0	40	40	0	38	2	40	8	0	0	8	226
4:30 PM	49	58	5	112	1	3	53	*57*	0	50	3	53	3	0	1	4	226
4:45 PM	39	58	*4*	101	0	1	51	52	1	41	*4*	46	8	2	1	11	210
5:00 PM	*37*	*57*	3	*97*	1	0	52	53	1	*37*	1	39	9	*7*	2	18	207
Total for PM peak hour	*186*	*247*	*15*	*448*	*2*	*4*	*196*	*202*	2	*166*	*10*	*178*	*28*	*9*	*4*	*41*	*869*
Total HV	0	3	1	4	0	0	1	1	0	0	0	0	3	1	0	4	*9*
%HV	0%	1%	*7%*	1%	0%	0%	1%	0%	0%	0%	0%	0%	11%	11%	0%	10%	**1%**

SR125 at Bristol Lake Dr.
2024 ADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 5/8/2024 4 Wednesday May

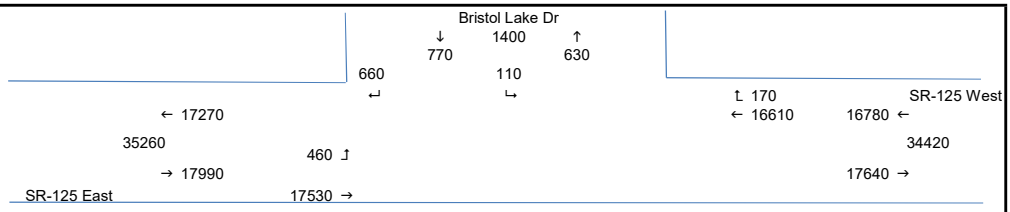
PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG		FC =		northbound			APROACH	DEPART						
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT				0	0	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR				0	0	0	0	0	0	0	0		0	0
SEASONAL FACTOR				0	0	0	0	0	***0***	***0***	***0***		***0***	***0***
WEST LEG	SR-125 Eas	FC =	U03	eastbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	440	16857		17297	16626	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	457.6	17531.3	0	17988.9	17277.4	460	17530	0		17990	17270
SEASONAL FACTOR	1.000	1.000	1.000	457.6	17531.3	0	17988.9	17277.4	***460***	***17530***	***0***		***17990***	***17270***
NORTH LEG	Bristol Lake	FC =	U07	southbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	110		651	761	605	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.019	1.019	1.019	112.09	0	663.369	775.459	629.2	110	0	660		770	630
SEASONAL FACTOR	1.000	1.000	1.000	112.09	0	663.369	775.459	629.2	***110***	***0***	***660***		***770***	***630***
EAST LEG	SR-125 We	FC =	U03	westbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT		15975	165	16140	16967	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	0	16614	171.6	16785.6	17643.4	0	16610	170		16780	17640
SEASONAL FACTOR	1.000	1.000	1.000	0	16614	171.6	16785.6	17643.4	***0***	***16610***	***170***		***16780***	***17640***

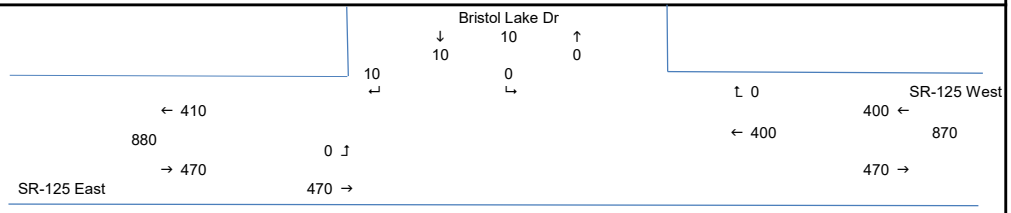
PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG		FC =		northbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT				0	0	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR				0	0	0	0	0	0	0	0		0	0
SEASONAL FACTOR				0	0	0	0	0	***0***	***0***	***0***		***0***	***0***
WEST LEG	SR-125 Eas	FC =	U03	eastbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	3	426		429	378	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	3.279	465.618	0	468.897	412.461	0	470	0		470	410
SEASONAL FACTOR	1.000	1.000	1.000	3.279	465.618	0	468.897	412.461	***0***	***470***	***0***		***470***	***410***
NORTH LEG	Bristol Lake	FC =	U07	southbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	4		11	15	6	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.030	1.030	1.030	4.12	0	11.33	15.45	6.558	0	0	10		10	0
SEASONAL FACTOR	1.000	1.000	1.000	4.12	0	11.33	15.45	6.558	***0***	***0***	***10***		***10***	***0***
EAST LEG	SR-125 We	FC =	U03	westbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT		367	3	370	430	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	0	401.131	3.279	404.41	469.738	0	400	0		400	470
SEASONAL FACTOR	1.000	1.000	1.000	0	401.131	3.279	404.41	469.738	***0***	***400***	***0***		***400***	***470***

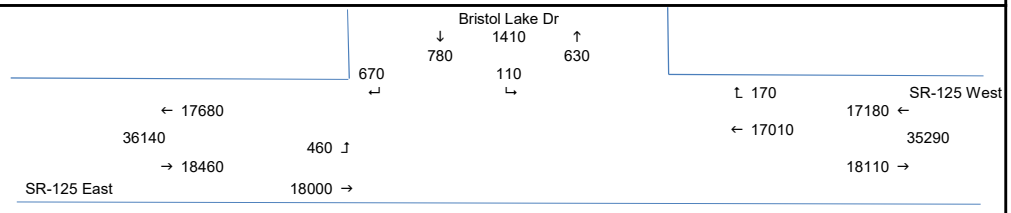
P&A 24 HR



B&C 24 HR



TOTAL AADT



SR125 at White Oak Rd./Lewis Rd.

2024 ADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

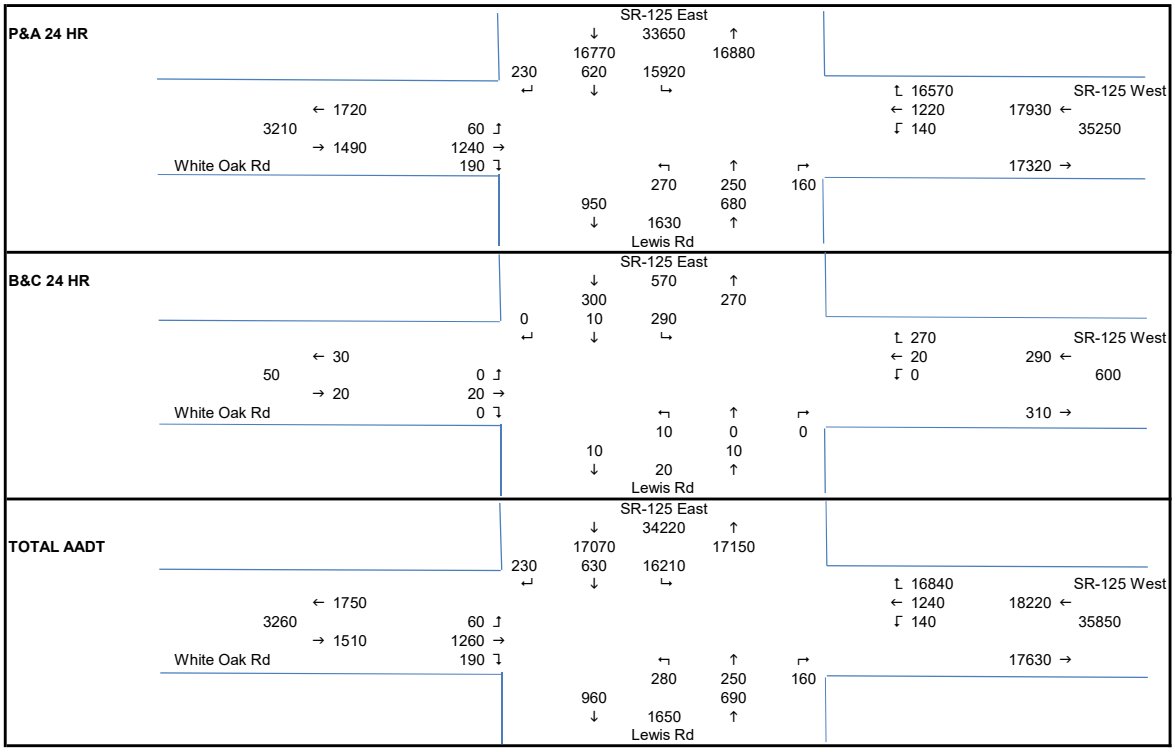
Date of Count: 5/8/2024 4 Wednesday May

PART 1: INPUT PARTIAL DAY P&A VEHICLES ROUTE SR-125
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

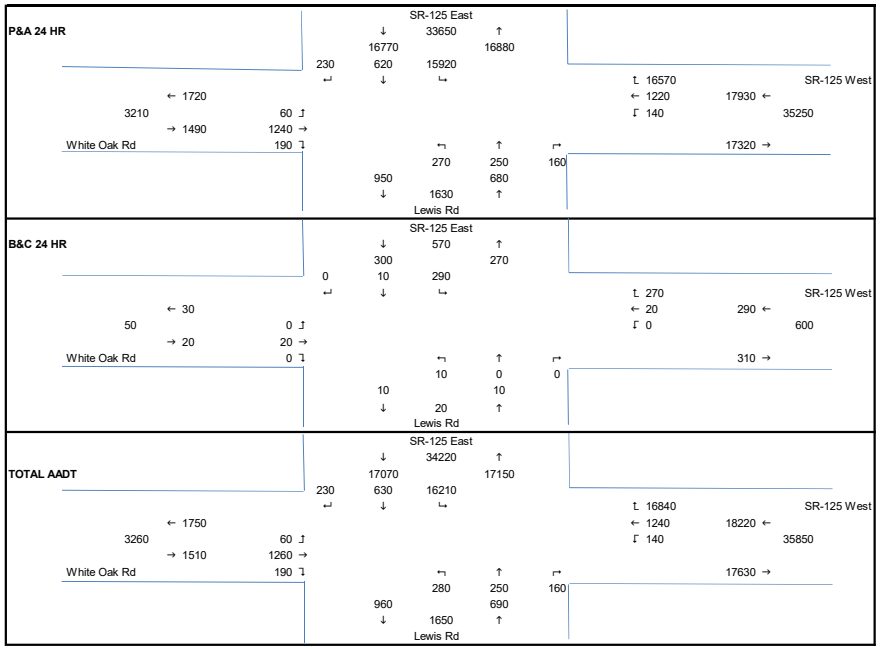
SOUTH LEG	Lewis Rd	*FC* =	U07		northbound		APROACH	DEPART							
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	265	251	163	679	951	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.000	1.000	1.000	265	251	163	679	951	270	250	160		680	950
SEASONAL FACTOR	1.000	1.000	1.000	265	251	163	679	951	***270***	***250***	***160***		***680***	***950***
WEST LEG	White Oak R	FC =	U07		eastbound		APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	58	1236	192	1486	1712	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.000	1.000	1.000	58	1236	192	1486	1712	60	1240	190		1490	1720
SEASONAL FACTOR	1.000	1.000	1.000	58	1236	192	1486	1712	***60***	***1240***	***190***		***1490***	***1720***
NORTH LEG	SR-125 Eas	FC =	U03		southbound		APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	15922	621	232	16775	16876	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.000	1.000	1.000	15922	621	232	16775	16876	15920	620	230		16770	16880
SEASONAL FACTOR	1.000	1.000	1.000	15922	621	232	16775	16876	***15920***	***620***	***230***		***16770***	***16880***
EAST LEG	SR-125 Wes	FC =	U03		westbound		APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	138	1215	16567	17920	17321	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.000	1.000	1.000	138	1215	16567	17920	17321	140	1220	16570		17930	17320
SEASONAL FACTOR	1.000	1.000	1.000	138	1215	16567	17920	17321	***140***	***1220***	***16570***		***17930***	***17320***

PART 2: INPUT PARTIAL DAY B&C VEHICLES ROUTE SR-125
PARTIAL COUNT * FACTOR = 24 HR B&C

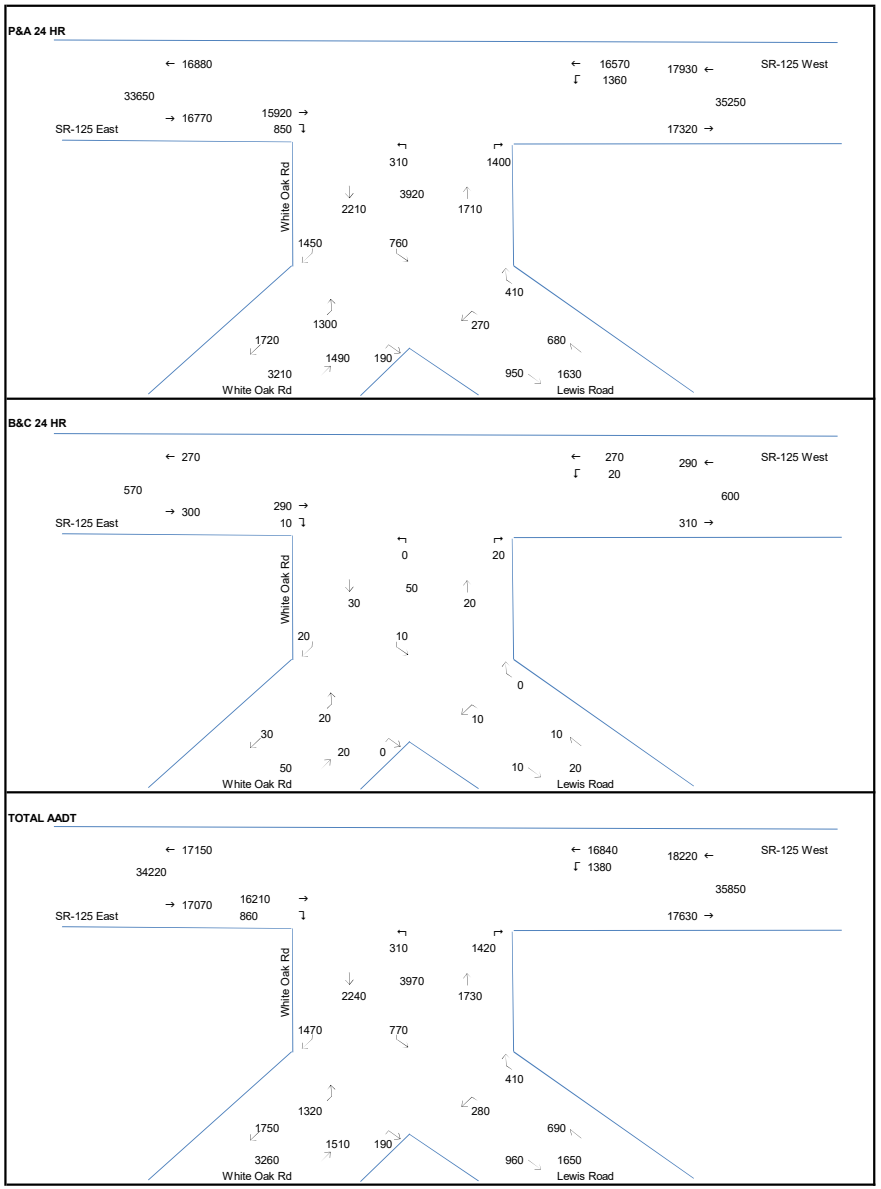
SOUTH LEG	Lewis Rd	*FC* =	U07		northbound		APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	6	0	4	10	9	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.000	1.000	1.000	6	0	4	10	9	10	0	0		10	10
SEASONAL FACTOR	1.000	1.000	1.000	6	0	4	10	9	***10***	***0***	***0***		***10***	***10***
WEST LEG	White Oak R	FC =	U07		eastbound		APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	0	17	2	19	29	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.000	1.000	1.000	0	17	2	19	29	0	20	0		20	30
SEASONAL FACTOR	1.000	1.000	1.000	0	17	2	19	23	***0***	***20***	***0***		***20***	***30***
NORTH LEG	SR-125 Eas	FC =	U03		southbound		APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	291	6	3	300	267	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.000	1.000	1.000	291	6	3	300	267	290	10	0		300	270
SEASONAL FACTOR	1.000	1.000	1.000	291	6	3	300	267	***290***	***10***	***0***		***300***	***270***
EAST LEG	SR-125 Wes	FC =	U03		westbound		APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	1	20	267	288	312	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.000	1.000	1.000	1	20	267	288	312	0	20	270		290	310
SEASONAL FACTOR	1.000	1.000	1.000	1	20	267	288	312	***0***	***20***	***270***		***290***	***310***



SR125 at White Oak Rd./Lewis Rd.
2024 ADT







SR125 at Amelia Olive Branch Rd.
2024 ADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

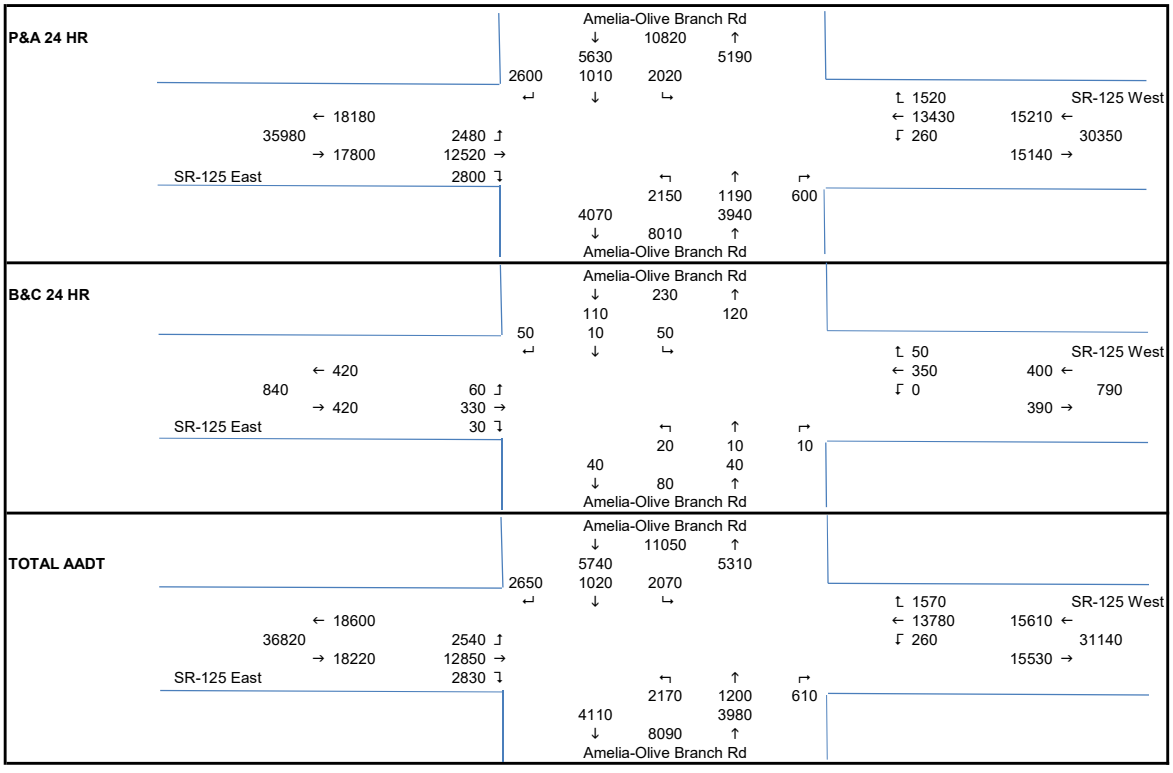
Date of Count: 5/8/2024 4 Wednesday May

PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	Amelia-Olive	*FC* =	U07		northbound		APROACH	DEPART		**SOUTH LEG**		**APROACH**	**DEPART**
				LT	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	2109	1163	588	3860	3931	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.019	1.019	1.019	2149.07	1185.1	599.172	3933.34	4072.42	2150	1190	600	3940	4070
SEASONAL FACTOR	1.000	1.000	1.000	2149.07	1185.1	599.172	3933.34	4072.42	***2150***	***1190***	***600***	***3940***	***4070***
WEST LEG	SR-125 Eas	FC =	U03		eastbound		APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	2388	12043	2690	17121	17561	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	2483.52	12524.7	2797.6	17805.8	18178.5	2480	12520	2800	17800	18180
SEASONAL FACTOR	1.000	1.000	1.000	2483.52	12524.7	2797.6	17805.8	18178.5	***2480***	***12520***	***2800***	***17800***	***18180***
NORTH LEG	Amelia-Olive	FC =	U05		southbound		APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	1970	989	2540	5499	5008	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.024	1.024	1.024	2017.28	1012.74	2600.96	5630.98	5183.9	2020	1010	2600	5630	5190
SEASONAL FACTOR	1.000	1.000	1.000	2017.28	1012.74	2600.96	5630.98	5183.9	***2020***	***1010***	***2600***	***5630***	***5190***
EAST LEG	SR-125 Wes	FC =	U03		westbound		APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	252	12912	1457	14621	14601	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	262.08	13428.5	1515.28	15205.8	15141.2	260	13430	1520	15210	15140
SEASONAL FACTOR	1.000	1.000	1.000	262.08	13428.5	1515.28	15205.8	15141.2	***260***	***13430***	***1520***	***15210***	***15140***

PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG	Amelia-Olive	*FC* =	U07		northbound		APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	24	10	9	43	41	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.030	1.030	1.030	24.72	10.3	9.27	44.29	44.363	20	10	10	40	40
SEASONAL FACTOR	1.000	1.000	1.000	24.72	10.3	9.27	44.29	44.363	***20***	***10***	***10***	***40***	***40***
WEST LEG	SR-125 Eas	FC =	U03		eastbound		APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	56	305	30	391	391	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	61.208	333.365	32.79	427.363	423.781	60	330	30	420	420
SEASONAL FACTOR	1.000	1.000	1.000	61.208	333.365	32.79	427.363	399.061	***60***	***330***	***30***	***420***	***420***
NORTH LEG	Amelia-Olive	FC =	U05		southbound		APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	50	10	46	106	116	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.048	1.048	1.048	52.4	10.48	48.208	111.088	126.158	50	10	50	110	120
SEASONAL FACTOR	1.000	1.000	1.000	52.4	10.48	48.208	111.088	126.158	***50***	***10***	***50***	***110***	***120***
EAST LEG	SR-125 Wes	FC =	U03		westbound		APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	1	321	50	372	364	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	1.093	350.853	54.65	406.596	395.035	0	350	50	400	390
SEASONAL FACTOR	1.000	1.000	1.000	1.093	350.853	54.65	406.596	395.035	***0***	***350***	***50***	***400***	***390***



Amelia Olive Branch Rd. at Amelia Court Apartments
2024 ADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 5/8/2024 4 Wednesd May

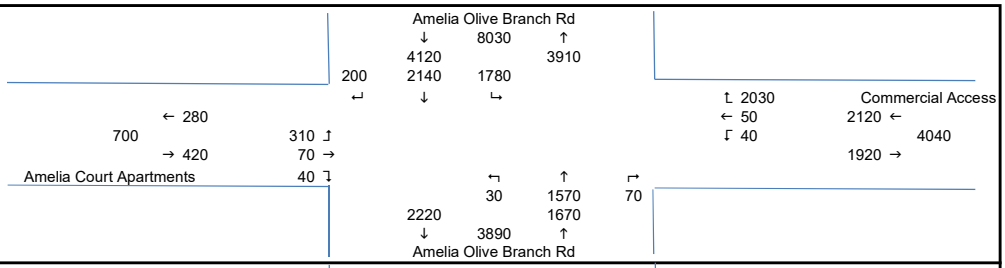
PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE: Amelia Olive Branch Rd
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	Amelia Olive	FC =	U07		northbound		APROACH	DEPART					APROACH	DEPART
				LT	THRU	RT	TOTAL	TOTAL		SOUTH LEG			TOTAL	TOTAL
	LT	THRU	RT	32	1538	68	1638	2168	LT	THRU	RT			
P&A FACTOR	1.019	1.019	1.019	32.608	1567.22	69.292	1669.12	2209.19	30	1570	70		1670	2220
SEASONAL FACTOR	1.000	1.000	1.000	32.608	1567.22	69.292	1669.12	2209.19	***30***	***1570***	***70***		***1670***	***2220***
WEST LEG	Amelia Cour	FC =	U07		eastbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			LT	THRU	RT	TOTAL	TOTAL		WEST LEG			TOTAL	TOTAL
	LT	THRU	RT	307	71	35	413	279	LT	THRU	RT			
P&A FACTOR	1.019	1.019	1.019	312.833	72.349	35.665	420.847	284.301	310	70	40		420	280
SEASONAL FACTOR	1.000	1.000	1.000	312.833	72.349	35.665	420.847	284.301	***310***	***70***	***40***		***420***	***280***
NORTH LEG	Amelia Olive	FC =	U07		southbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			LT	THRU	RT	TOTAL	TOTAL		NORTH LEG			TOTAL	TOTAL
	LT	THRU	RT	1751	2096	199	4046	3837	LT	THRU	RT			
P&A FACTOR	1.019	1.019	1.019	1784.27	2135.82	202.781	4122.87	3909.9	1780	2140	200		4120	3910
SEASONAL FACTOR	1.000	1.000	1.000	1784.27	2135.82	202.781	4122.87	3909.9	***1780***	***2140***	***200***		***4120***	***3910***
EAST LEG	Commercial	FC =	U07		westbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			LT	THRU	RT	TOTAL	TOTAL		EAST LEG			TOTAL	TOTAL
	LT	THRU	RT	37	48	1992	2077	1890	LT	THRU	RT			
P&A FACTOR	1.019	1.019	1.019	37.703	48.912	2029.85	2116.46	1925.91	40	50	2030		2120	1920
SEASONAL FACTOR	1.000	1.000	1.000	37.703	48.912	2029.85	2116.46	1925.91	***40***	***50***	***2030***		***2120***	***1920***

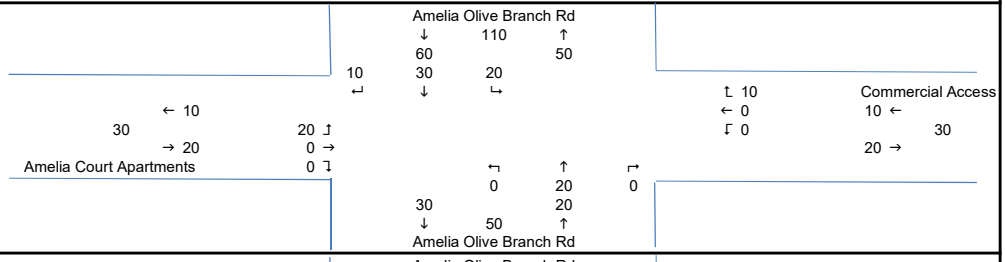
PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE: Amelia Olive Branch Rd
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG	Amelia Olive	FC =	U07		northbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			LT	THRU	RT	TOTAL	TOTAL		SOUTH LEG			TOTAL	TOTAL
	LT	THRU	RT	0	20	0	20	28	LT	THRU	RT			
B&C FACTOR	1.030	1.030	1.030	0	20.6	0	20.6	28.84	0	20	0		20	30
SEASONAL FACTOR	1.000	1.000	1.000	0	20.6	0	20.6	28.84	***0***	***20***	***0***		***20***	***30***
WEST LEG	Amelia Cour	FC =	U07		eastbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			LT	THRU	RT	TOTAL	TOTAL		WEST LEG			TOTAL	TOTAL
	LT	THRU	RT	15	3	0	18	5	LT	THRU	RT			
B&C FACTOR	1.030	1.030	1.030	15.45	3.09	0	18.54	5.15	20	0	0		20	10
SEASONAL FACTOR	1.000	1.000	1.000	15.45	3.09	0	18.54	5.15	***20***	***0***	***0***		***20***	***10***
NORTH LEG	Amelia Olive	FC =	U07		southbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			LT	THRU	RT	TOTAL	TOTAL		NORTH LEG			TOTAL	TOTAL
	LT	THRU	RT	16	27	5	48	48	LT	THRU	RT			
B&C FACTOR	1.030	1.030	1.030	16.48	27.81	5.15	49.44	49.44	20	30	10		60	50
SEASONAL FACTOR	1.000	1.000	1.000	16.48	27.81	5.15	49.44	49.44	***20***	***30***	***10***		***60***	***50***
EAST LEG	Commercial	FC =	U07		westbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			LT	THRU	RT	TOTAL	TOTAL		EAST LEG			TOTAL	TOTAL
	LT	THRU	RT	1	0	13	14	19	LT	THRU	RT			
B&C FACTOR	1.030	1.030	1.030	1.03	0	13.39	14.42	19.57	0	0	10		10	20
SEASONAL FACTOR	1.000	1.000	1.000	1.03	0	13.39	14.42	19.57	***0***	***0***	***10***		***10***	***20***

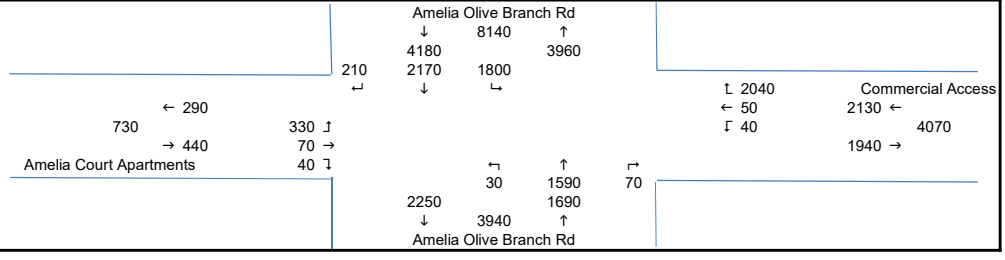
P&A 24 HR



B&C 24 HR



TOTAL AADT



SR125 at Bristol Lake Dr.
2024 Calculated AADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 5/8/2024 4 Wednesday May

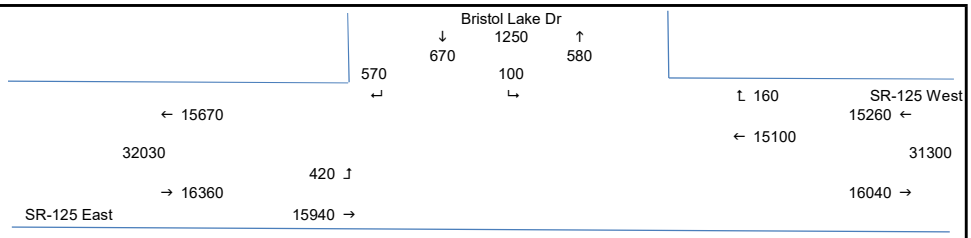
PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG		FC =		northbound			APROACH	DEPART							
				LT	**THRU**	**RT**	**TOTAL**	**TOTAL**		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT										**TOTAL**	**TOTAL**
P&A FACTOR				0	0	0	0	0	0	0	0		0	0
SEASONAL FACTOR				0	0	0	0	0	***0***	***0***	***0***		***0***	***0***
WEST LEG	SR-125 Eas	FC =	U03	eastbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	440	16857		17297	16626	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	457.6	17531.3	0	17988.9	17277.4	460	17530	0		17990	17270
SEASONAL FACTOR	0.909	0.909	0.909	415.958	15935.9	0	16351.9	15670	***420***	***15940***	***0***		***16360***	***15670***
NORTH LEG	Bristol Lake	FC =	U07	southbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	110		651	761	605	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.019	1.019	1.019	112.09	0	663.369	775.459	629.2	110	0	660		770	630
SEASONAL FACTOR	0.856	0.856	0.856	95.949	0	567.844	663.793	571.943	***100***	***0***	***570***		***670***	***580***
EAST LEG	SR-125 We	FC =	U03	westbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT		15975	165	16140	16967	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	0	16614	171.6	16785.6	17643.4	0	16610	170		16780	17640
SEASONAL FACTOR	0.909	0.909	0.909	0	15102.1	155.984	15258.1	16031.9	***0***	***15100***	***160***		***15260***	***16040***

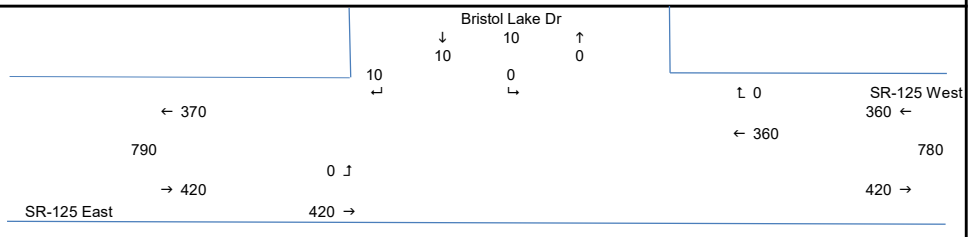
PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG		FC =		northbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT				0	0	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR				0	0	0	0	0	0	0	0		0	0
SEASONAL FACTOR				0	0	0	0	0	***0***	***0***	***0***		***0***	***0***
WEST LEG	SR-125 Eas	FC =	U03	eastbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	3	426		429	378	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	3.279	465.618	0	468.897	412.461	0	470	0		470	410
SEASONAL FACTOR	0.909	0.909	0.909	2.98061	423.247	0	426.227	374.327	***0***	***420***	***0***		***420***	***370***
NORTH LEG	Bristol Lake	FC =	U07	southbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	4		11	15	6	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.030	1.030	1.030	4.12	0	11.33	15.45	6.558	0	0	10		10	0
SEASONAL FACTOR	0.856	0.856	0.856	3.52672	0	9.69848	13.2252	5.96122	***0***	***0***	***10***		***10***	***0***
EAST LEG	SR-125 We	FC =	U03	westbound			APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT		367	3	370	430	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	0	401.131	3.279	404.41	469.738	0	400	0		400	470
SEASONAL FACTOR	0.909	0.909	0.909	0	364.628	2.98061	367.609	426.773	***0***	***360***	***0***		***360***	***420***

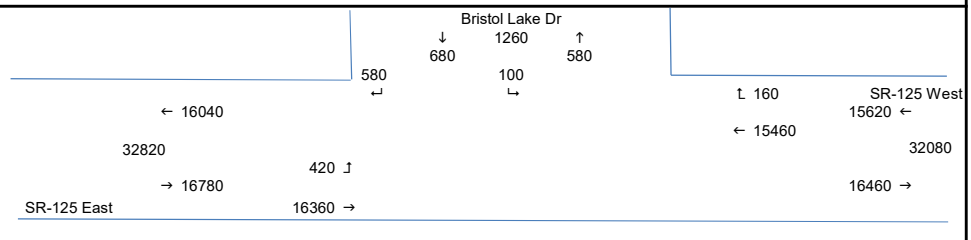
P&A 24 HR



B&C 24 HR



TOTAL AADT



SR 125 at White Oak Rd./Lewis Rd.
2024 Calculated AADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 5/8/2024 4 Wednesday May

PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	Lewis Rd	*FC* =	U07	northbound			APROACH	DEPART		SOUTH LEG		APROACH	DEPART
				LT	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	265	251	163	679	951	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.019	1.019	1.019	270.035	255.769	166.097	691.901	985.008	270	260	170	700	990
SEASONAL FACTOR	0.856	0.856	0.856	231.15	218.938	142.179	592.267	885.003	***230***	***220***	***140***	***590***	***890***

WEST LEG	White Oak R	FC =	U07	eastbound			APROACH	DEPART		WEST LEG		APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	58	1236	192	1486	1712	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.019	1.019	1.019	59.102	1259.48	195.648	1514.23	1774.92	60	1260	200	1520	1770
SEASONAL FACTOR	0.856	0.856	0.856	50.5913	1078.12	167.475	1296.18	1599.09	***50***	***1080***	***170***	***1300***	***1600***

NORTH LEG	SR-125 Eas	FC =	U03	southbound			APROACH	DEPART		NORTH LEG		APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	15922	621	232	16775	16876	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	16558.9	645.84	241.28	17446	17544.6	16560	650	240	17450	17550
SEASONAL FACTOR	0.909	0.909	0.909	15052	587.069	219.324	15858.4	15931.3	***15050***	***590***	***220***	***15860***	***15930***

EAST LEG	SR-125 Wes	FC =	U03	westbound			APROACH	DEPART		EAST LEG		APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	138	1215	16567	17920	17321	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	143.52	1263.6	17229.7	18636.8	17984.5	140	1260	17230	18630	17990
SEASONAL FACTOR	0.909	0.909	0.909	130.46	1148.61	15661.8	16940.9	16272.3	***130***	***1150***	***15660***	***16940***	***16270***

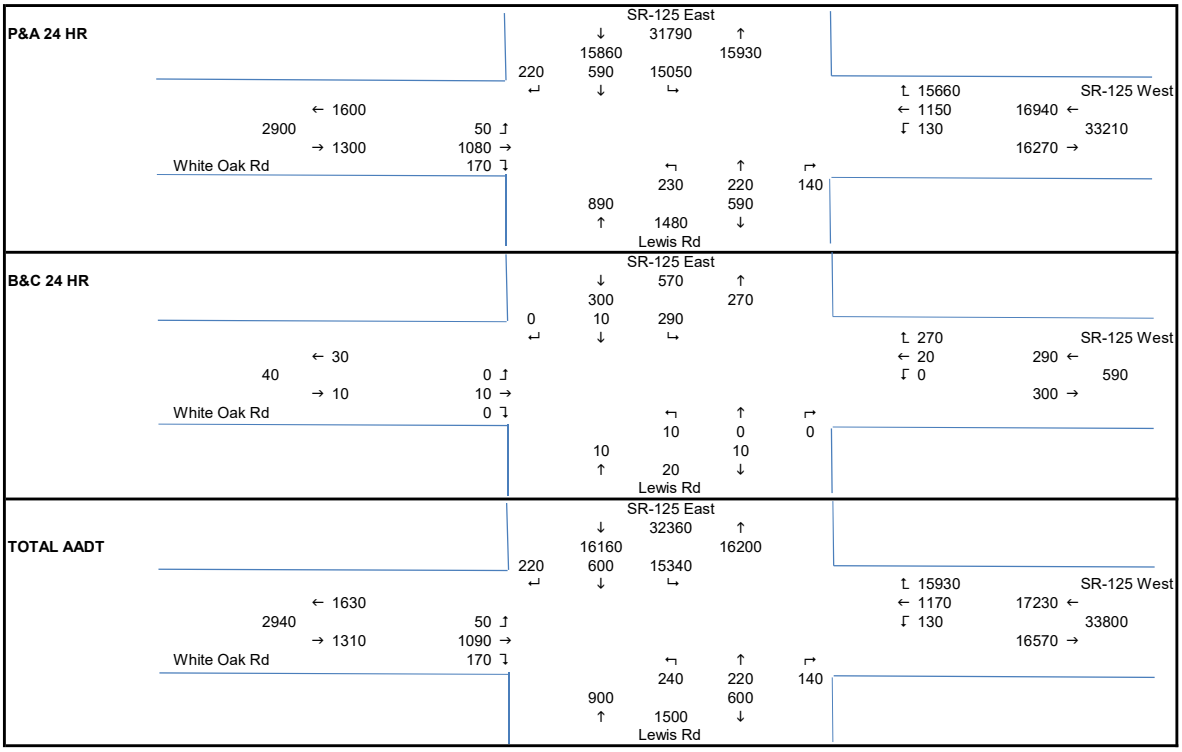
PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG	Lewis Rd	*FC* =	U07	northbound			APROACH	DEPART		SOUTH LEG		APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	6	0	4	10	9	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.030	1.030	1.030	6.18	0	4.12	10.3	9.711	10	0	0	10	10
SEASONAL FACTOR	0.856	0.856	0.856	5.29008	0	3.52672	8.8168	8.71812	***10***	***0***	***0***	***10***	***10***

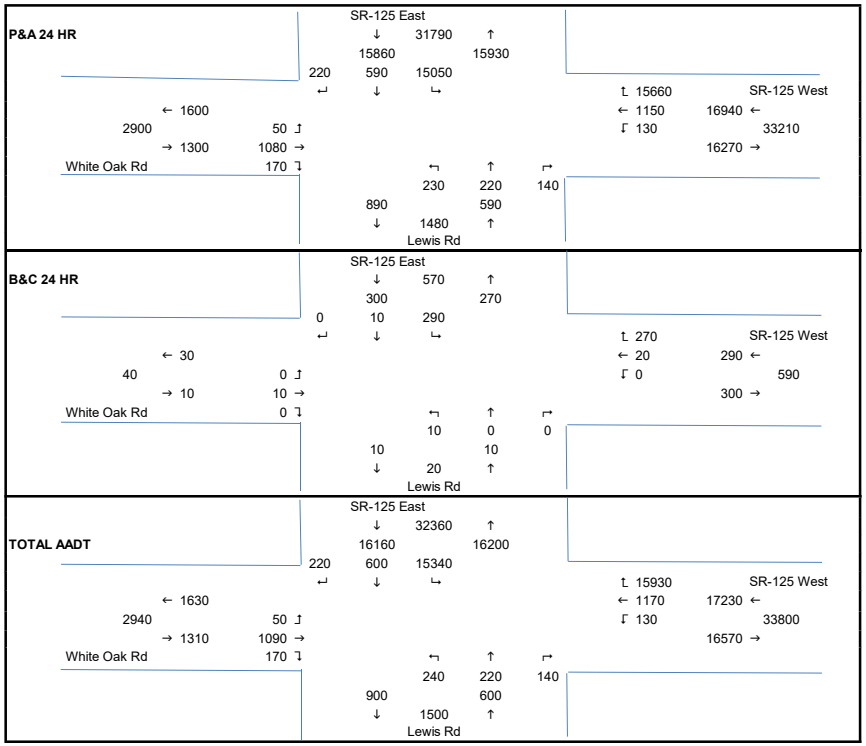
WEST LEG	White Oak R	FC =	U07	eastbound			APROACH	DEPART		WEST LEG		APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	0	17	2	19	29	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.030	1.030	1.030	0	17.51	2.06	19.57	31.319	0	20	0	20	30
SEASONAL FACTOR	0.856	0.856	0.856	0	14.9886	1.76336	16.7519	22.8514	***0***	***10***	***0***	***10***	***30***

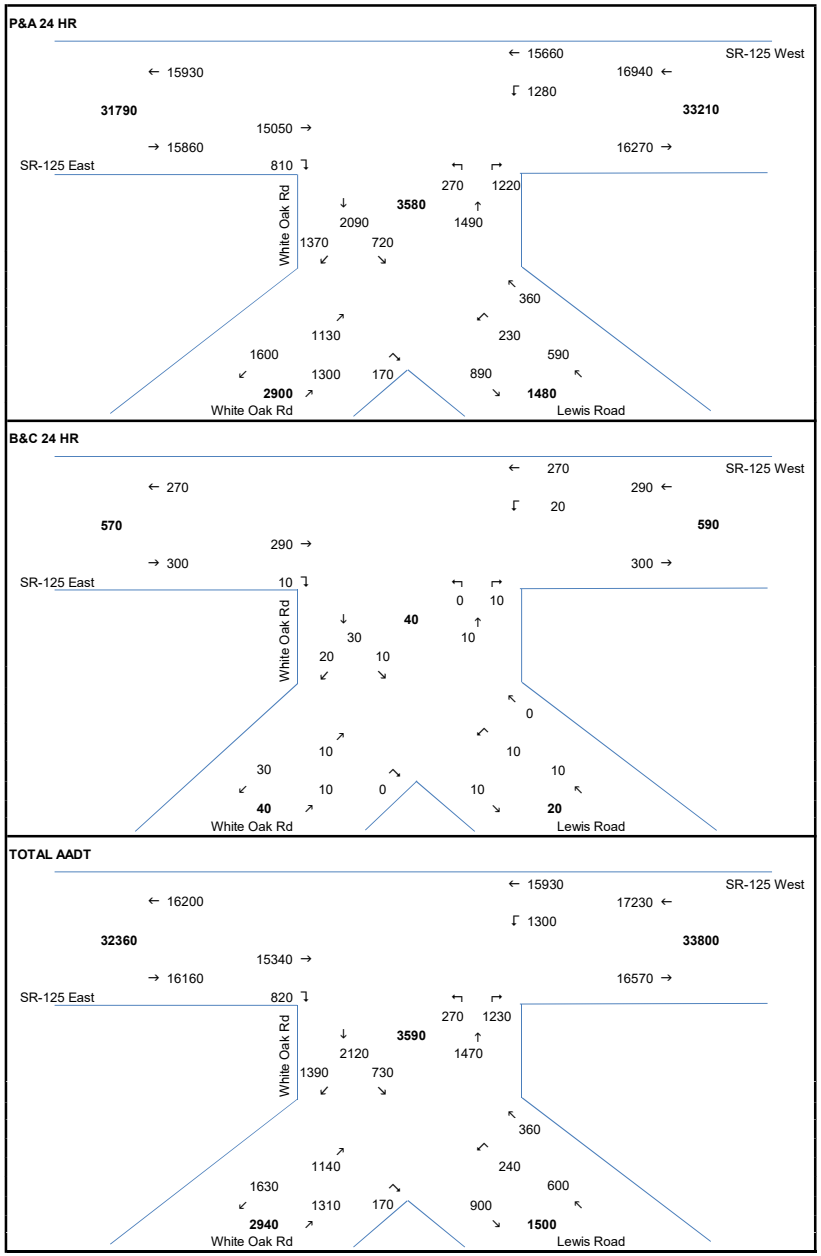
NORTH LEG	SR-125 Eas	FC =	U03	southbound			APROACH	DEPART		NORTH LEG		APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	291	6	3	300	267	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	318.063	6.558	3.279	327.9	291.831	320	10	0	330	290
SEASONAL FACTOR	0.909	0.909	0.909	289.119	5.96122	2.98061	298.061	265.274	***290***	***10***	***0***	***300***	***270***

EAST LEG	SR-125 Wes	FC =	U03	westbound			APROACH	DEPART		EAST LEG		APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL					
	LT	THRU	RT	1	20	267	288	312	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	1.093	21.86	291.831	314.784	339.693	0	20	290	310	340
SEASONAL FACTOR	0.909	0.909	0.909	0.99354	19.8707	265.274	286.139	307.635	***0***	***20***	***270***	***290***	***300***



SR 125 at White Oak Rd./Lewis Rd.
2024 Calculated AADT





SR125 at Amelia-Olive Branch Rd.
2024 Calculated AADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 5/8/2024 4 Wednesday May

PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	Amelia-Olive	*FC* =	U07	northbound			APROACH	DEPART					
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	2109	1163	588	3860	3931	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.019	1.019	1.019	2149.07	1185.1	599.172	3933.34	4072.42	2150	1190	600	3940	4070
SEASONAL FACTOR	0.856	0.856	0.856	1839.6	1014.44	512.891	3366.94	3648.15	***1840***	***1010***	***510***	***3360***	***3650***

WEST LEG	SR-125 Eas	FC =	U03	eastbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	2388	12043	2690	17121	17561	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	2483.52	12524.7	2797.6	17805.8	18178.5	2480	12520	2800	17800	18180
SEASONAL FACTOR	0.909	0.909	0.909	2257.52	11385	2543.02	16185.5	16272.5	***2260***	***11380***	***2540***	***16180***	***16280***

NORTH LEG	Amelia-Olive	FC =	U05	southbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	1970	989	2540	5499	5008	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.024	1.024	1.024	2017.28	1012.74	2600.96	5630.98	5183.9	2020	1010	2600	5630	5190
SEASONAL FACTOR	0.856	0.856	0.856	1726.79	866.902	2226.42	4820.12	4649.35	***1730***	***870***	***2230***	***4830***	***4650***

EAST LEG	SR-125 We	FC =	U03	westbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	252	12912	1457	14621	14601	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.040	1.040	1.040	262.08	13428.5	1515.28	15205.8	15141.2	260	13430	1520	15210	15140
SEASONAL FACTOR	0.909	0.909	0.909	238.231	12206.5	1377.39	13822.1	13624.7	***240***	***12210***	***1380***	***13830***	***13620***

PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE SR-125
PARTIAL COUNT * FACTOR = 24 HR B&C

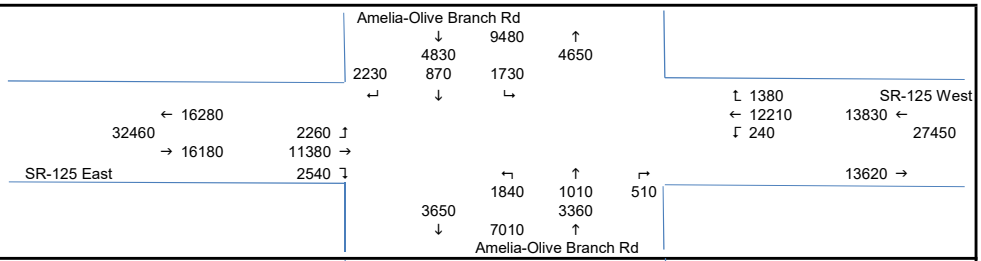
SOUTH LEG	Amelia-Olive	*FC* =	U07	northbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	24	10	9	43	41	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.030	1.030	1.030	24.72	10.3	9.27	44.29	44.363	20	10	10	40	40
SEASONAL FACTOR	0.856	0.856	0.856	21.1603	8.8168	7.93512	37.9122	39.7705	***20***	***10***	***10***	***40***	***40***

WEST LEG	SR-125 Eas	FC =	U03	eastbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	56	305	30	391	391	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	61.208	333.365	32.79	427.363	423.781	60	330	30	420	420
SEASONAL FACTOR	0.909	0.909	0.909	55.6381	303.029	29.8061	388.473	360.191	***60***	***300***	***30***	***390***	***380***

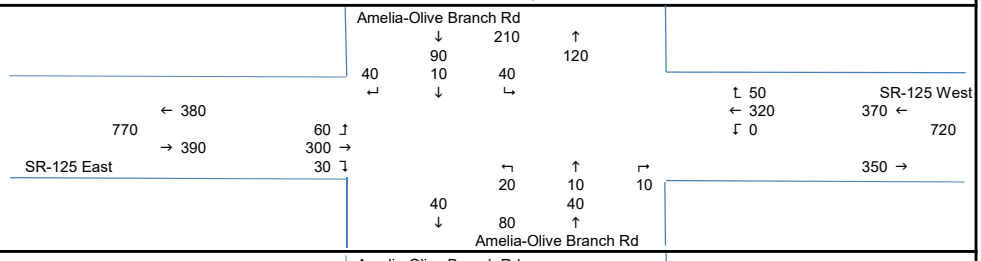
NORTH LEG	Amelia-Olive	FC =	U05	southbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	50	10	46	106	116	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.048	1.048	1.048	52.4	10.48	48.208	111.088	126.158	50	10	50	110	120
SEASONAL FACTOR	0.856	0.856	0.856	44.8544	8.97088	41.266	95.0913	114.132	***40***	***10***	***40***	***90***	***120***

EAST LEG	SR-125 We	FC =	U03	westbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	1	321	50	372	364	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.093	1.093	1.093	1.093	350.853	54.65	406.596	395.035	0	350	50	400	390
SEASONAL FACTOR	0.909	0.909	0.909	0.99354	318.925	49.6769	369.596	355.818	***0***	***320***	***50***	***370***	***350***

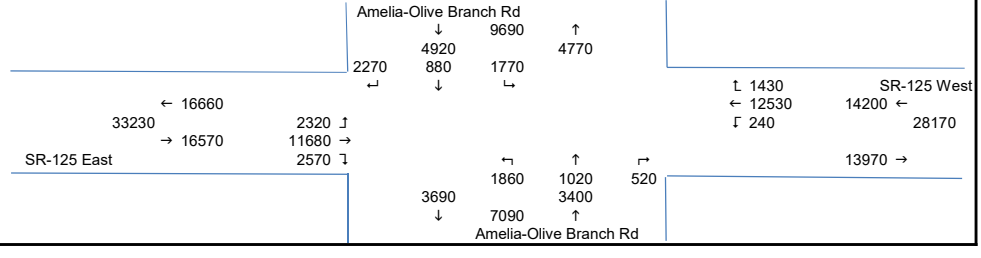
P&A 24 HR



B&C 24 HR



TOTAL AADT



Amelia Olive Branch Rd. at Amelia Court Apartments
2024 Calculated AADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 5/8/2024 4 Wednesday May

PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE: Amelia-Olive Branch Rd.
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG — Amelia Olive — FC = U07 — northbound

	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	SOUTH LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
P&A FACTOR	1.019	1.019	1.019	32.608	1567.22	69.292	1669.12	2209.19	30	1570	70	1670	2220
SEASONAL FACTOR	0.856	0.856	0.856	27.9124	1341.54	59.314	1428.77	1891.07	***30***	***1340***	***60***	***1430***	***1890***

WEST LEG — Amelia Cour — FC = U07 — eastbound

FACTOR	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	WEST LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
P&A FACTOR	1.019	1.019	1.019	312.833	72.349	35.665	420.847	284.301	310	70	40	420	280
SEASONAL FACTOR	0.856	0.856	0.856	267.785	61.9307	30.5292	360.245	243.362	***270***	***60***	***30***	***360***	***240***

NORTH LEG — Amelia Olive — FC = U07 — southbound

FACTOR	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	NORTH LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
P&A FACTOR	1.019	1.019	1.019	1784.27	2135.82	202.781	4122.87	3909.9	1780	2140	200	4120	3910
SEASONAL FACTOR	0.856	0.856	0.856	1527.33	1828.27	173.581	3529.18	3346.88	***1530***	***1830***	***170***	***3530***	***3350***

EAST LEG — Commercial — FC = U07 — westbound

FACTOR	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	EAST LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
P&A FACTOR	1.019	1.019	1.019	37.703	48.912	2029.85	2116.46	1925.91	40	50	2030	2120	1920
SEASONAL FACTOR	0.856	0.856	0.856	32.2738	41.8687	1737.55	1811.69	1648.58	***30***	***40***	***1740***	***1810***	***1650***

PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE: Amelia-Olive Branch Rd.
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG — Amelia Olive — FC = U07 — northbound

FACTOR	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	SOUTH LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
B&C FACTOR	1.030	1.030	1.030	0	20.6	0	20.6	28.84	0	20	0	20	30
SEASONAL FACTOR	0.856	0.856	0.856	0	17.6336	0	17.6336	24.687	***0***	***20***	***0***	***20***	***20***

WEST LEG — Amelia Cour — FC = U07 — eastbound

FACTOR	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	WEST LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
B&C FACTOR	1.030	1.030	1.030	15.45	3.09	0	18.54	5.15	20	0	0	20	10
SEASONAL FACTOR	0.856	0.856	0.856	13.2252	2.64504	0	15.8702	4.4084	***10***	***0***	***0***	***10***	***0***

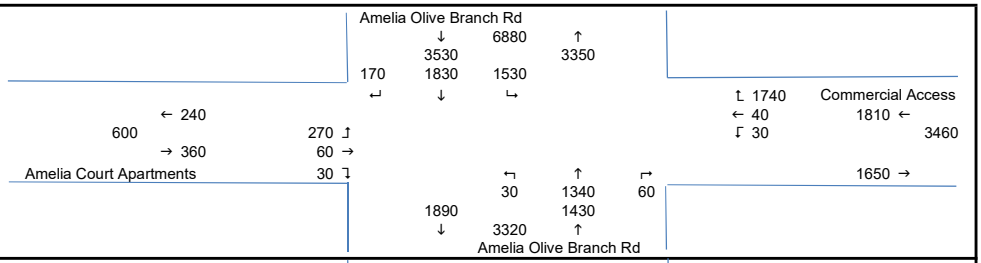
NORTH LEG — Amelia Olive — FC = U07 — southbound

FACTOR	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	NORTH LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
B&C FACTOR	1.030	1.030	1.030	16.48	27.81	5.15	49.44	49.44	20	30	10	60	50
SEASONAL FACTOR	0.856	0.856	0.856	14.1069	23.8054	4.4084	42.3206	42.3206	***10***	***20***	***0***	***30***	***40***

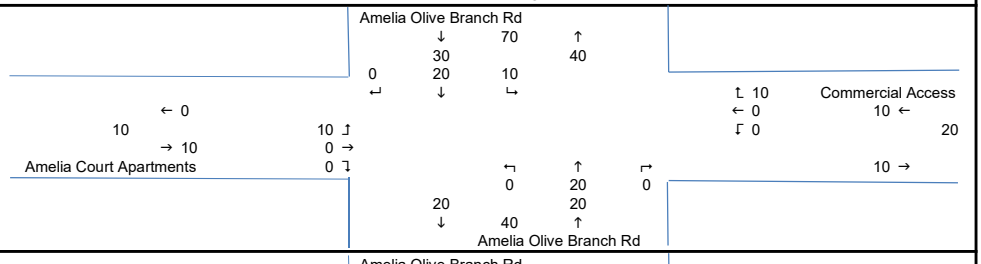
EAST LEG — Commercial — FC = U07 — westbound

FACTOR	LT	THRU	RT	LT	THRU	RT	APROACH TOTAL	DEPART TOTAL	LT	EAST LEG THRU	RT	APROACH TOTAL	DEPART TOTAL
B&C FACTOR	1.030	1.030	1.030	1.03	0	13.39	14.42	19.57	0	0	10	10	20
SEASONAL FACTOR	0.856	0.856	0.856	0.88168	0	11.4618	12.3435	16.7519	***0***	***0***	***10***	***10***	***10***

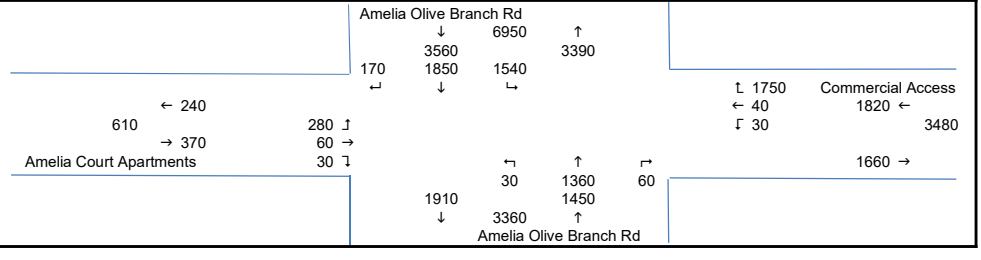
P&A 24 HR



B&C 24 HR



TOTAL AADT



Hourly Percent By Vehicle Type

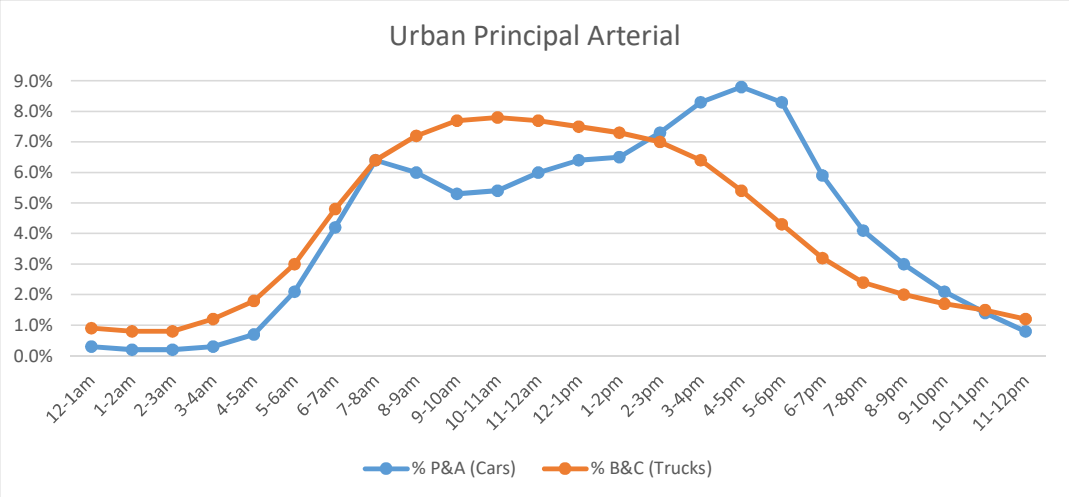
Urban Principal Arterial

Hour	Hour of Day	P&A (Cars)	% P&A (Cars)	B&C (Trucks)	% B&C (Trucks)	Total	% Total
0	12-1am	322,657	**0.3%**	30,867	**0.9%**	353,524	**0.4%**
1	1-2am	185,712	**0.2%**	26,022	**0.8%**	211,734	**0.2%**
2	2-3am	170,725	**0.2%**	27,991	**0.8%**	198,716	**0.2%**
3	3-4am	259,501	**0.3%**	39,607	**1.2%**	299,108	**0.3%**
4	4-5am	669,469	**0.7%**	59,732	**1.8%**	729,201	**0.7%**
5	5-6am	1,955,939	**2.1%**	103,021	**3.0%**	2,058,960	**2.1%**
6	6-7am	4,042,879	**4.2%**	160,898	**4.8%**	4,203,777	**4.3%**
7	7-8am	6,079,303	**6.4%**	216,928	**6.4%**	6,296,231	**6.4%**
8	8-9am	5,708,179	**6.0%**	243,017	**7.2%**	5,951,196	**6.0%**
9	9-10am	5,069,365	**5.3%**	258,993	**7.7%**	5,328,358	**5.4%**
10	10-11am	5,149,770	**5.4%**	262,677	**7.8%**	5,412,447	**5.5%**
11	11-12am	5,690,975	**6.0%**	261,917	**7.7%**	5,952,892	**6.0%**
12	12-1pm	6,124,931	**6.4%**	253,390	**7.5%**	6,378,321	**6.5%**
13	1-2pm	6,209,321	**6.5%**	248,483	**7.3%**	6,457,804	**6.6%**
14	2-3pm	6,913,138	**7.3%**	238,273	**7.0%**	7,151,411	**7.3%**
15	3-4pm	7,891,732	**8.3%**	215,666	**6.4%**	8,107,398	**8.2%**
16	4-5pm	8,336,165	**8.8%**	181,473	**5.4%**	8,517,638	**8.6%**
17	5-6pm	7,861,161	**8.3%**	145,289	**4.3%**	8,006,450	**8.1%**
18	6-7pm	5,597,635	**5.9%**	108,035	**3.2%**	5,705,670	**5.8%**
19	7-8pm	3,916,106	**4.1%**	81,086	**2.4%**	3,997,192	**4.1%**
20	8-9pm	2,883,489	**3.0%**	69,194	**2.0%**	2,952,683	**3.0%**
21	9-10pm	2,008,679	**2.1%**	58,962	**1.7%**	2,067,641	**2.1%**
22	10-11pm	1,291,567	**1.4%**	49,972	**1.5%**	1,341,539	**1.4%**
23	11-12pm	788,344	**0.8%**	39,989	**1.2%**	828,333	**0.8%**
	Total	95,126,742	**100%**	3,381,482	**100%**	98,508,224	**100%**

Partial Count Factor

Counted Hour	1.040 PA	1.093 BC	1.041 Total
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0.042	0.048	0.043
1	0.064	0.064	0.064
1	0.06	0.072	0.06
1	0.053	0.077	0.054
1	0.054	0.078	0.055
1	0.06	0.077	0.06
1	0.064	0.075	0.065
1	0.065	0.073	0.066
1	0.073	0.07	0.073
1	0.083	0.064	0.082
1	0.088	0.054	0.086
1	0.083	0.043	0.081
1	0.059	0.032	0.058
1	0.041	0.024	0.041
1	0.03	0.02	0.03
1	0.021	0.017	0.021
1	0.014	0.015	0.014
1	0.008	0.012	0.008
	0.962	0.915	0.961

Sample of 4445 permanent ATR's and portable counts taken in 2021, Monday to Friday counts only.



SR 125

Hourly Percent By Vehicle Type

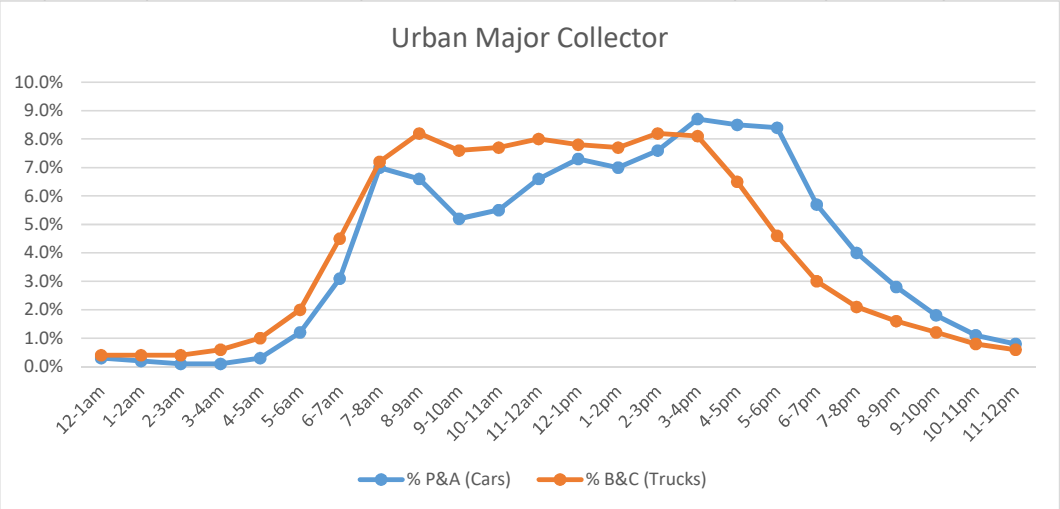
Urban Major Collector

Hour	Hour of Day	P&A (Cars)	% P&A (Cars)	B&C (Trucks)	% B&C (Trucks)	Total	% Total
0	12-1am	24,249	**0.3%**	1,005	**0.4%**	25,254	**0.3%**
1	1-2am	15,458	**0.2%**	892	**0.4%**	16,350	**0.2%**
2	2-3am	11,037	**0.1%**	889	**0.4%**	11,926	**0.1%**
3	3-4am	9,366	**0.1%**	1,324	**0.6%**	10,690	**0.1%**
4	4-5am	29,678	**0.3%**	2,264	**1.0%**	31,942	**0.3%**
5	5-6am	108,016	**1.2%**	4,737	**2.0%**	112,753	**1.2%**
6	6-7am	285,092	**3.1%**	10,465	**4.5%**	295,557	**3.1%**
7	7-8am	642,183	**7.0%**	16,566	**7.2%**	658,749	**7.0%**
8	8-9am	610,510	**6.6%**	18,929	**8.2%**	629,439	**6.7%**
9	9-10am	478,159	**5.2%**	17,620	**7.6%**	495,779	**5.2%**
10	10-11am	512,131	**5.5%**	17,868	**7.7%**	529,999	**5.6%**
11	11-12am	613,661	**6.6%**	18,430	**8.0%**	632,091	**6.7%**
12	12-1pm	669,949	**7.3%**	18,154	**7.8%**	688,103	**7.3%**
13	1-2pm	649,945	**7.0%**	17,776	**7.7%**	667,721	**7.1%**
14	2-3pm	702,143	**7.6%**	18,893	**8.2%**	721,036	**7.6%**
15	3-4pm	805,507	**8.7%**	18,777	**8.1%**	824,284	**8.7%**
16	4-5pm	787,764	**8.5%**	14,992	**6.5%**	802,756	**8.5%**
17	5-6pm	774,482	**8.4%**	10,550	**4.6%**	785,032	**8.3%**
18	6-7pm	528,113	**5.7%**	6,852	**3.0%**	534,965	**5.7%**
19	7-8pm	367,188	**4.0%**	4,882	**2.1%**	372,070	**3.9%**
20	8-9pm	263,066	**2.8%**	3,623	**1.6%**	266,689	**2.8%**
21	9-10pm	169,527	**1.8%**	2,703	**1.2%**	172,230	**1.8%**
22	10-11pm	103,889	**1.1%**	1,884	**0.8%**	105,773	**1.1%**
23	11-12pm	72,362	**0.8%**	1,431	**0.6%**	73,793	**0.8%**
	Total	9,233,475	**100%**	231,506	**100%**	9,464,981	**100%**

Sample of 523 permanent ATR's and portable counts taken in 2021, Monday to Friday counts only.

Partial Count Factor

Counted Hour	1.024 PA	1.048 BC	1.021 Total
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0.031	0.045	0.031
1	0.07	0.072	0.07
1	0.066	0.082	0.067
1	0.052	0.076	0.052
1	0.055	0.077	0.056
1	0.066	0.08	0.067
1	0.073	0.078	0.073
1	0.07	0.077	0.071
1	0.076	0.082	0.076
1	0.087	0.081	0.087
1	0.085	0.065	0.085
1	0.084	0.046	0.083
1	0.057	0.03	0.057
1	0.04	0.021	0.039
1	0.028	0.016	0.028
1	0.018	0.012	0.018
1	0.011	0.008	0.011
1	0.008	0.006	0.008
	0.977	0.954	0.979



Amelia-Olive Branch Road

Hourly Percent By Vehicle Type

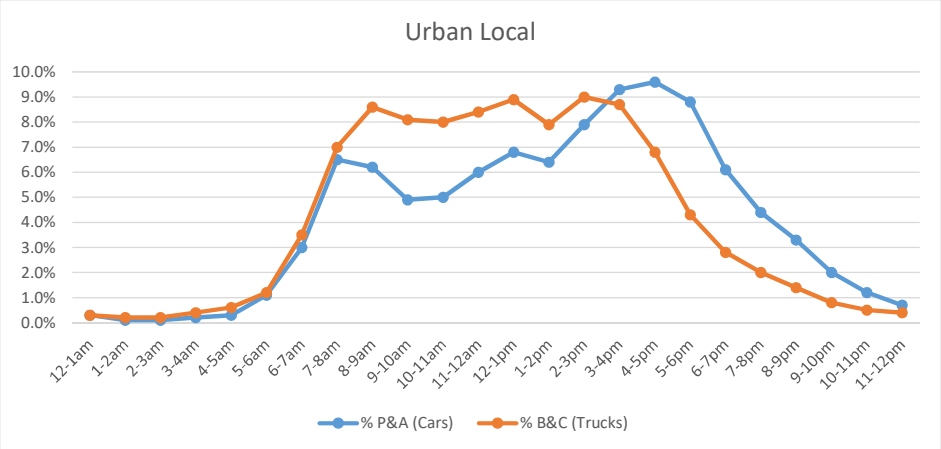
Urban Local

Hour	Hour of Day	P&A (Cars)	% P&A (Cars)	B&C (Trucks)	% B&C (Trucks)	Total	% Total
0	12-1am	1,506	**0.3%**	60	**0.3%**	1,566	**0.3%**
1	1-2am	595	**0.1%**	35	**0.2%**	630	**0.1%**
2	2-3am	602	**0.1%**	45	**0.2%**	647	**0.1%**
3	3-4am	787	**0.2%**	70	**0.4%**	857	**0.2%**
4	4-5am	1,453	**0.3%**	114	**0.6%**	1,567	**0.3%**
5	5-6am	4,889	**1.1%**	216	**1.2%**	5,105	**1.1%**
6	6-7am	13,693	**3.0%**	646	**3.5%**	14,339	**3.1%**
7	7-8am	29,368	**6.5%**	1,281	**7.0%**	30,649	**6.5%**
8	8-9am	27,789	**6.2%**	1,559	**8.6%**	29,348	**6.3%**
9	9-10am	22,072	**4.9%**	1,468	**8.1%**	23,540	**5.0%**
10	10-11am	22,427	**5.0%**	1,450	**8.0%**	23,877	**5.1%**
11	11-12am	27,075	**6.0%**	1,531	**8.4%**	28,606	**6.1%**
12	12-1pm	30,680	**6.8%**	1,625	**8.9%**	32,305	**6.9%**
13	1-2pm	28,682	**6.4%**	1,446	**7.9%**	30,128	**6.4%**
14	2-3pm	35,543	**7.9%**	1,639	**9.0%**	37,182	**7.9%**
15	3-4pm	41,731	**9.3%**	1,578	**8.7%**	43,309	**9.2%**
16	4-5pm	43,168	**9.6%**	1,238	**6.8%**	44,406	**9.5%**
17	5-6pm	39,789	**8.8%**	790	**4.3%**	40,579	**8.6%**
18	6-7pm	27,599	**6.1%**	505	**2.8%**	28,104	**6.0%**
19	7-8pm	19,626	**4.4%**	356	**2.0%**	19,982	**4.3%**
20	8-9pm	14,772	**3.3%**	250	**1.4%**	15,022	**3.2%**
21	9-10pm	8,960	**2.0%**	142	**0.8%**	9,102	**1.9%**
22	10-11pm	5,194	**1.2%**	95	**0.5%**	5,289	**1.1%**
23	11-12pm	3,072	**0.7%**	71	**0.4%**	3,143	**0.7%**
	Total	451,072	**100%**	18,210	**100%**	469,282	**100%**

Partial Count Factor

Counted Hour	1.019 PA	1.030 BC	1.022 Total
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0.03	0.035	0.031
1	0.065	0.07	0.065
1	0.062	0.086	0.063
1	0.049	0.081	0.05
1	0.05	0.08	0.051
1	0.06	0.084	0.061
1	0.068	0.089	0.069
1	0.064	0.079	0.064
1	0.079	0.09	0.079
1	0.093	0.087	0.092
1	0.096	0.068	0.095
1	0.088	0.043	0.086
1	0.061	0.028	0.06
1	0.044	0.02	0.043
1	0.033	0.014	0.032
1	0.02	0.008	0.019
1	0.012	0.005	0.011
1	0.007	0.004	0.007
	0.981	0.971	0.978

Sample of 121 permanent ATR's and portable counts taken in 2021, Monday to Friday counts only.



Bristol Lake Dr
White Oak Road
Lewis Road
Live Oak Drive
Hicks Place

2023 Rural Seasonal Adjustment Factors
(All Vehicles)

Group	RURAL INTERSTATE (R01)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.449	1.194	1.166	1.171	1.139	1.049	1.277
Feb	1.335	1.148	1.130	1.128	1.081	0.981	1.227
Mar	1.157	1.108	1.088	1.053	0.987	0.922	1.142
Apr	1.087	1.035	1.049	1.020	0.935	0.873	1.070
May	1.040	1.025	1.013	0.973	0.902	0.810	1.003
Jun	0.986	0.959	0.978	0.934	0.876	0.782	0.943
Jul	0.934	0.944	0.960	0.927	0.874	0.787	0.936
Aug	0.967	0.984	0.975	0.944	0.886	0.788	0.942
Sep	1.048	1.002	1.018	0.991	0.925	0.807	0.999
Oct	1.027	1.014	1.021	0.966	0.910	0.808	1.022
Nov	1.109	1.030	1.014	1.035	0.972	0.864	1.071
Dec	1.290	1.127	1.084	1.024	0.968	0.912	1.129

Group	RURAL FREEWAY EXPRESSWAY (R02)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.564	1.143	1.083	1.066	1.050	1.005	1.302
Feb	1.456	1.106	1.053	1.057	1.023	0.972	1.250
Mar	1.274	1.070	1.028	0.987	0.942	0.916	1.154
Apr	1.229	1.013	0.994	0.970	0.910	0.878	1.121
May	1.172	1.006	0.978	0.937	0.880	0.813	1.049
Jun	1.094	0.964	0.952	0.912	0.863	0.793	0.985
Jul	1.057	0.947	0.935	0.907	0.872	0.794	0.980
Aug	1.085	0.985	0.941	0.917	0.868	0.810	1.002
Sep	1.159	0.991	0.976	0.942	0.902	0.812	1.026
Oct	1.152	1.005	0.973	0.933	0.893	0.819	1.067
Nov	1.260	0.999	0.962	0.977	0.931	0.865	1.121
Dec	1.380	1.065	1.003	0.962	0.924	0.892	1.134

Group	RURAL OTHER PRINCIPAL ARTERIAL (R03)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.558	1.108	1.075	1.102	1.066	1.002	1.295
Feb	1.441	1.074	1.024	1.029	1.018	0.942	1.213
Mar	1.312	1.043	1.010	0.980	0.949	0.931	1.182
Apr	1.249	0.986	0.965	0.950	0.898	0.870	1.093
May	1.160	0.972	0.954	0.922	0.874	0.816	1.036
Jun	1.157	0.961	0.948	0.912	0.878	0.822	1.018
Jul	1.124	0.941	0.931	0.912	0.886	0.824	1.042
Aug	1.137	0.966	0.933	0.911	0.880	0.814	1.012
Sep	1.172	0.953	0.944	0.925	0.895	0.807	1.028
Oct	1.183	0.968	0.957	0.919	0.894	0.822	1.078
Nov	1.285	0.994	0.967	0.966	0.931	0.861	1.140
Dec	1.417	1.039	1.002	0.969	0.936	0.905	1.139

Group	RURAL MINOR ARTERIAL (R04)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.597	1.121	1.058	1.106	1.047	0.998	1.291
Feb	1.501	1.079	1.014	1.032	1.018	0.964	1.189
Mar	1.420	1.047	1.005	0.984	0.965	0.975	1.193
Apr	1.349	0.993	0.943	0.936	0.886	0.886	1.082
May	1.207	0.974	0.949	0.917	0.877	0.814	0.985
Jun	1.209	0.981	0.956	0.913	0.889	0.837	0.964
Jul	1.180	0.941	0.910	0.903	0.898	0.828	1.017
Aug	1.205	0.972	0.917	0.904	0.886	0.839	0.992
Sep	1.206	0.939	0.915	0.908	0.883	0.803	0.954
Oct	1.244	0.966	0.919	0.894	0.876	0.822	1.003
Nov	1.380	0.993	0.975	0.942	0.920	0.874	1.120
Dec	1.497	1.038	0.998	0.968	0.939	0.909	1.115

2023 Rural Seasonal Adjustment Factors
(All Vehicles)

Group		RURAL MAJOR COLLECTOR,MINOR COLLECTOR,LOCAL (R05, 06, 07)					
From Year:		2023	To Year:		2023		
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.613	1.119	1.035	1.074	1.016	0.978	1.258
Feb	1.477	1.057	0.975	0.991	0.980	0.965	1.213
Mar	1.406	1.000	0.972	0.944	0.934	0.967	1.226
Apr	1.363	0.959	0.906	0.895	0.861	0.884	1.101
May	1.198	0.927	0.894	0.865	0.836	0.808	1.007
Jun	1.275	0.994	0.946	0.924	0.904	0.885	1.009
Jul	1.233	0.956	0.926	0.911	0.928	0.887	1.093
Aug	1.201	0.956	0.898	0.888	0.883	0.842	1.016
Sep	1.281	0.920	0.889	0.883	0.867	0.803	1.000
Oct	1.295	0.952	0.903	0.881	0.872	0.834	1.080
Nov	1.399	0.974	0.958	0.923	0.904	0.884	1.119
Dec	1.485	1.010	0.962	0.941	0.927	0.919	1.126

2023 Urban Seasonal Adjustment Factors
(All Vehicles)

SR-125

White Oak Rd; Lewis rd; Bristol Lake Dr; Amelia Olive Branch Rd; Hicks Pl

Group	URBAN INTERSTATE (U01)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.557	1.092	1.032	1.031	1.021	0.984	1.253
Feb	1.447	1.056	0.995	1.002	0.984	0.943	1.197
Mar	1.339	1.031	0.985	0.958	0.933	0.937	1.162
Apr	1.294	0.988	0.949	0.937	0.893	0.890	1.123
May	1.214	0.971	0.932	0.901	0.874	0.843	1.064
Jun	1.214	0.957	0.922	0.891	0.865	0.838	1.052
Jul	1.183	0.938	0.907	0.898	0.877	0.840	1.075
Aug	1.188	0.962	0.909	0.895	0.876	0.836	1.050
Sep	1.239	0.957	0.934	0.911	0.887	0.839	1.068
Oct	1.249	0.971	0.933	0.903	0.885	0.844	1.096
Nov	1.314	0.975	0.950	0.937	0.908	0.878	1.128
Dec	1.397	1.020	0.966	0.925	0.902	0.893	1.133

Group	URBAN FREEWAY EXPRESSWAY (U02)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.645	1.062	0.994	1.009	0.978	0.962	1.286
Feb	1.521	1.024	0.953	0.958	0.947	0.934	1.227
Mar	1.451	0.996	0.952	0.927	0.917	0.938	1.218
Apr	1.412	0.965	0.914	0.903	0.874	0.887	1.160
May	1.299	0.942	0.903	0.877	0.857	0.842	1.102
Jun	1.295	0.953	0.901	0.876	0.860	0.849	1.079
Jul	1.289	0.928	0.886	0.886	0.876	0.850	1.123
Aug	1.271	0.941	0.887	0.878	0.864	0.841	1.094
Sep	1.324	0.934	0.903	0.885	0.871	0.837	1.095
Oct	1.367	0.953	0.902	0.879	0.867	0.848	1.154
Nov	1.425	0.960	0.932	0.914	0.888	0.883	1.176
Dec	1.490	0.990	0.937	0.913	0.898	0.893	1.162

Group	URBAN OTHER PRINCIPAL ARTERIAL (U03)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.517	1.092	1.030	1.048	1.011	0.957	1.174
Feb	1.370	1.040	0.978	0.987	0.972	0.913	1.111
Mar	1.322	1.023	0.983	0.954	0.935	0.922	1.112
Apr	1.310	0.982	0.948	0.930	0.893	0.871	1.076
May	1.244	0.963	0.939	0.909	0.879	0.838	1.046
Jun	1.273	0.993	0.954	0.925	0.897	0.863	1.060
Jul	1.273	0.961	0.936	0.929	0.912	0.870	1.100
Aug	1.239	0.978	0.927	0.923	0.899	0.854	1.070
Sep	1.280	0.957	0.943	0.923	0.896	0.834	1.039
Oct	1.299	0.972	0.937	0.913	0.894	0.847	1.092
Nov	1.309	0.965	0.948	0.936	0.909	0.856	1.074
Dec	1.374	0.984	0.945	0.916	0.898	0.862	1.070

Group	URBAN MINOR ARTERIAL, COLLECTORS, LOCAL (U04,05,06,07)						
From Year:	2023		To Year:	2023			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jan	1.595	1.039	0.998	0.982	0.963	0.927	1.287
Feb	1.460	0.991	0.924	0.922	0.918	0.904	1.237
Mar	1.369	0.933	0.916	0.896	0.896	0.923	1.208
Apr	1.378	0.926	0.884	0.880	0.855	0.867	1.136
May	1.259	0.905	0.881	0.856	0.835	0.820	1.071
Jun	1.335	0.959	0.925	0.891	0.879	0.869	1.088
Jul	1.324	0.945	0.919	0.913	0.910	0.876	1.179
Aug	1.291	0.938	0.886	0.888	0.881	0.849	1.127
Sep	1.401	0.930	0.912	0.900	0.884	0.842	1.124
Oct	1.419	0.959	0.907	0.899	0.887	0.865	1.183
Nov	1.446	0.965	0.941	0.921	0.906	0.884	1.200
Dec	1.522	0.981	0.965	0.926	0.911	0.894	1.206

TFMS - Segment Forecast Report

Username	Email	Script Import Date	Script Version	Model Version
Alexander.Genbauffe	Alexander.Genbauffe@dot.ohio.gov	4/14/2020 5:30:19 PM	2020.001	2023.1900

Forecast Summary

Project ID	Project Name	Opening Year	Design Year
		2030	2050

Project Description

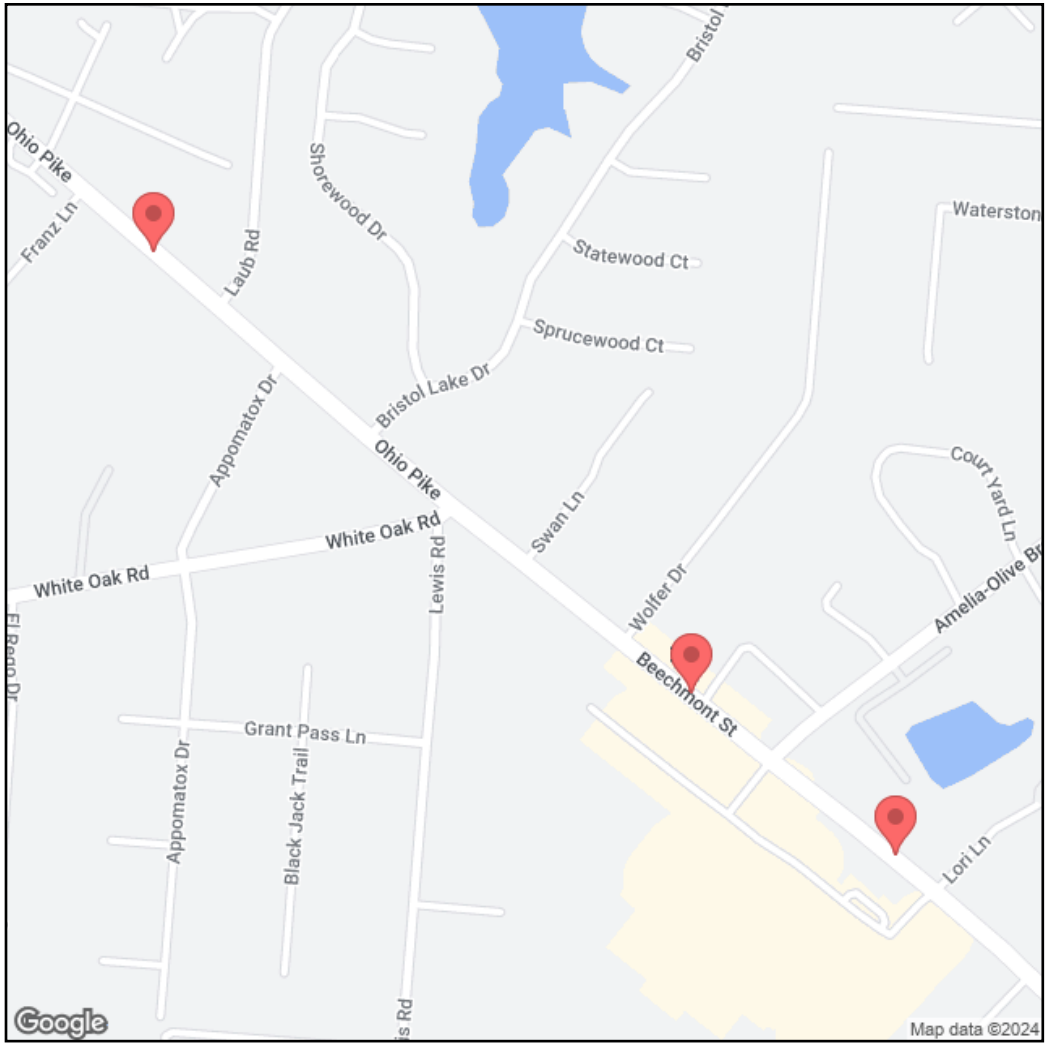
*Users of this data need to be aware that there are limitations to the forecasts generated by this product that make it suitable only for roadway design projects which are low risk.

Segment Information

Segment ID	LRS ID	BMP	EMP	Length	Latitude	Longitude
1827458	SCLESR00125**C	4.110	4.950	0.840	-84.2401088627696	39.0433170234745
1827459	SCLESR00125**C	4.950	5.090	0.140	-84.2330037143716	39.0387757355852
1827460	SCLESR00125**C	5.090	5.320	0.230	-84.2303007535907	39.0371156583283

Forecast Information

Segment ID	2030 AADT	2050 AADT	DHV-30	K%	D%	T24%	TD%
1827458	30,000	32,000	3,600	11.2	59.4	3	2
1827459	29,500	30,000	3,400	11.2	59.4	4	3
1827460	28,500	28,500	3,000	10.7	57.8	3	4



Definitions:

- AADT – Annual Average Daily Traffic
- DHV30 – Design Hour Volume for 30th highest hour of the year
- DHV30 – K * AADT
- K % – Design Hour Factor
- D % – Peak Direction Factor
- T24 % – Percent Daily Trucks
- TD % – Percent Design Hour Trucks

Forecast Segment ID	Route	BMP	EMP
1827458	SCLESR00125**C	4.110	4.950

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.2	2	31,000	Average	0.300	0.300
AADT	**D%**	**TD % (Existing)**	**BC AADT**	**BC Method**	**BC Growth Rate %**	**BC Calculated Rate %**
32,100	◆ 59.4	1	1,100	Average	■ 4.100	4.000

■ Warning: The truck growth rate was exceeded the maximum and was capped at 4.100%

◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
2	28,770	1,598	30,368

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-2746	58302	-6282	5665	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.10	-5.16	0	0	25,968	444	27,857	-224
2	0.01	7.73	4	6	27,724	2,845	28,770	1,598
3	-0.41	-21.78	0	0	23,113	-2,264	25,379	-2,574
4	-0.45	-24.99	4	5	23,556	-2,904	25,103	-3,029
5	0.12	-27.36	0	0	27,773	-3,132	29,620	-3,364
6	-0.32	-30.32	4	5	24,664	-3,729	26,138	-3,782

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-6,108	33,680	229	551	0.55	0.33
2	RAT	0.83	32,905	1.83	589	0.45	0.59
3	MRAT	1.13	32,992	1.17	583	0.46	0.55
4	RAF		33,336		567	0.51	0.44

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Average	Average	0.500	0.400

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total Max Volume
32316	33129	551	589	32867	33718

Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2006	27,540	26,600	940
2011	30,610	28,780	1,830
2013	30,738	28,780	1,830
2016	25,675	24,039	1,636
2019	26,750	25,285	1,465
* 2022	29,200	28,695	505

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2030 AADT	Yr 2050 AADT	DHV30	K %	D %	T24 %	TD %
1827458	SCLESR00125**C	4.110	4.950	0.840	30,000	32,000	3600	11.2	59.4	3	2

Forecast Segment ID	Route	BMP	EMP
1827459	SCLESR00125**C	4.950	5.090

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.2	2	29,000	Average	● -0.100	0.000
AADT	**D%**	**TD % (Existing)**	**BC AADT**	**BC Method**	**BC Growth Rate %**	**BC Calculated Rate %**
30,100	◆ 59.4	1	1,100	Average	■ 4.100	4.000

● Warning: The growth rate was negative and was capped.

■ Warning: The truck growth rate was exceeded the maximum and was capped at 4.100%

◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
2	28,770	1,598	30,368

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-2746	58302	-6282	5665	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.10	-5.16	0	0	25,968	444	27,857	-224
2	0.01	7.73	4	6	27,724	2,845	28,770	1,598
3	-0.41	-21.78	0	0	23,113	-2,264	25,379	-2,574
4	-0.45	-24.99	4	5	23,556	-2,904	25,103	-3,029
5	0.12	-27.36	0	0	27,773	-3,132	29,620	-3,364
6	-0.32	-30.32	4	5	24,664	-3,729	26,138	-3,782

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	5,836	28,034	229	549	-0.15	0.31
2	RAT	1.25	27,743	1.83	585	-0.19	0.57
3	MRAT	0.95	27,743	1.16	580	-0.19	0.53
4	RAF		27,889		565	-0.17	0.42

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Average	Average	-0.200	0.400

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total Max Volume
27158	27485	549	585	27707	28070

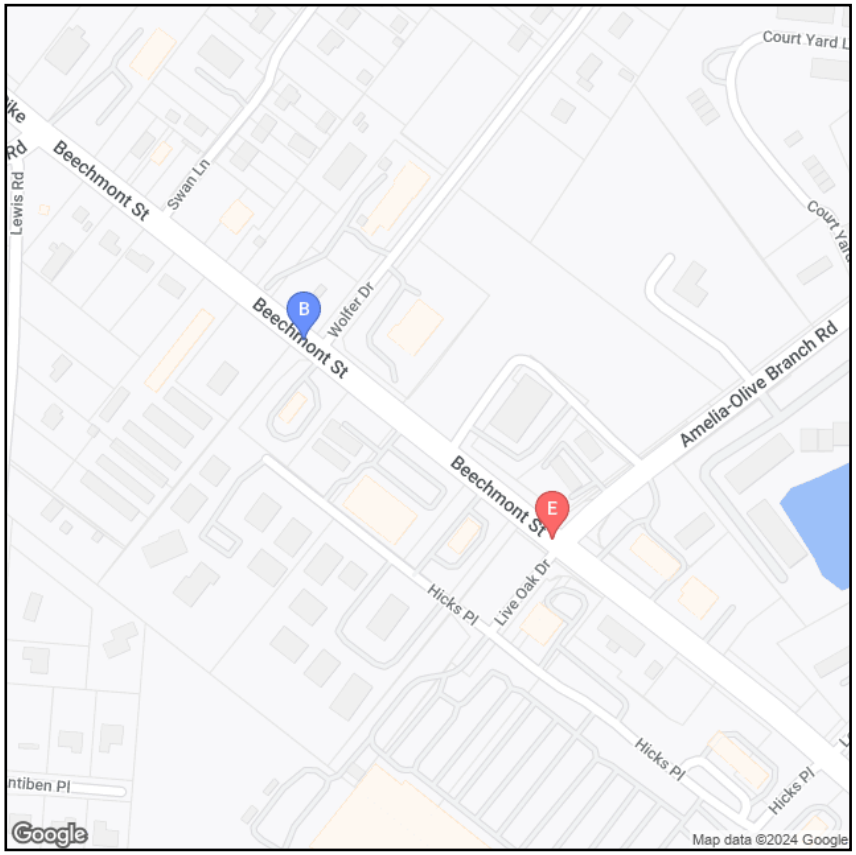
Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2006	27,540	26,600	940
2011	30,610	28,780	1,830
2013	30,738	28,780	1,830
2016	25,675	24,039	1,636
2019	26,750	25,285	1,465
* 2022	29,200	28,695	505

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2030 AADT	Yr 2050 AADT	DHV30	K %	D %	T24 %	TD %
1827459	SCLESR00125**C	4.950	5.090	0.140	29,500	30,000	3400	11.2	59.4	4	3

Forecast Segment ID	Route	BMP	EMP
1827460	SCLESR00125**C	5.090	5.320

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 10.7	3	27,000	Average	● -0.400	0.000
AADT	**D%**	**TD % (Existing)**	**BC AADT**	**BC Method**	**BC Growth Rate %**	**BC Calculated Rate %**
27,930	◆ 57.8	4	930	Model	0.200	0.200

● Warning: The growth rate was negative and was capped.

◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
2	22,592	2,081	24,673

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
7709	36833	-4575	5118	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.56	-0.90	0	0	22,839	1,168	23,117	661
2	-0.63	4.85	4	6	21,827	2,992	22,592	2,081
3	-0.41	-7.58	0	0	24,145	-736	24,251	-992
4	-0.39	-9.83	4	5	23,892	-1,519	24,408	-1,548
5	-0.65	-9.14	0	0	22,127	-1,159	22,415	-1,377
6	-0.38	-11.23	4	5	23,983	-1,898	24,493	-1,894

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-4,788	27,454	559	929	-0.12	0.19
2	RAT	0.86	27,579	2.72	1,008	-0.11	0.51
3	MRAT	0.97	27,579	1.14	998	-0.11	0.47
4	RAF		27,517		963	-0.11	0.32

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Ratio	Difference	-0.100	0.200

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total Max Volume
26525	26650	929	1008	27454	27658

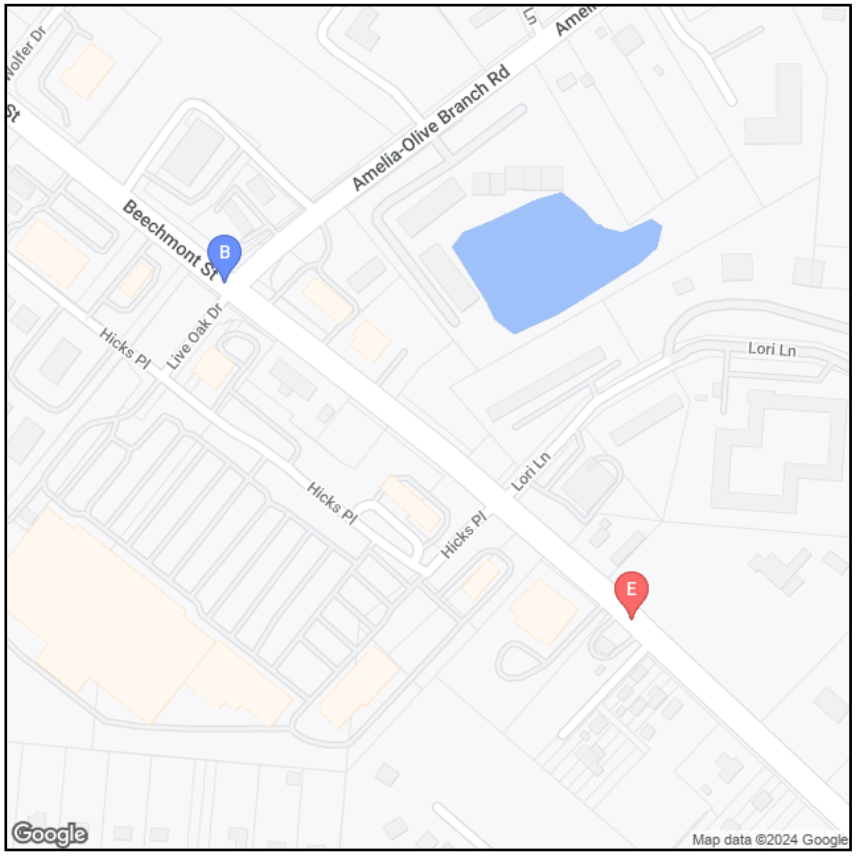
Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2006	30,990	29,930	1,060
2011	29,900	28,120	1,780
2013	30,025	28,120	1,780
2016	31,239	29,777	1,461
2019	28,201	26,470	1,731
* 2022	28,314	27,431	883

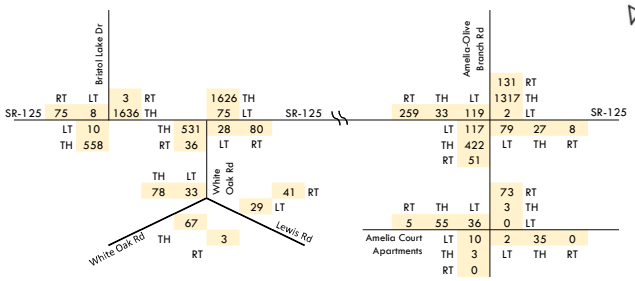
* Pivot Point



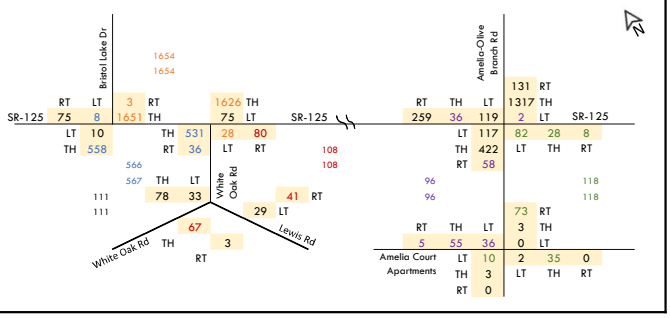
Segment ID	LRS ID	BMP	EMP	Length	Yr 2030 AADT	Yr 2050 AADT	DHV30	K %	D %	T24 %	TD %
1827460	SCLESR00125**C	5.090	5.320	0.230	28,500	28,500	3000	10.7	57.8	3	4

CLE-125 at White Oak/Lewis Road
Design Hour Volumes

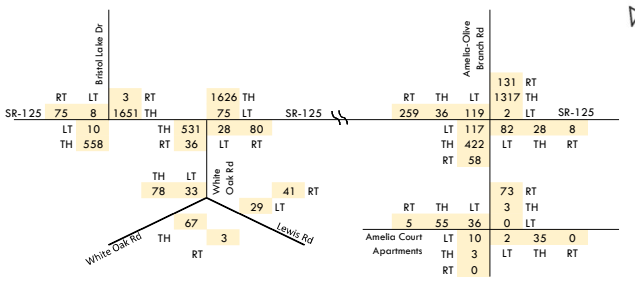
Raw Count Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1A**



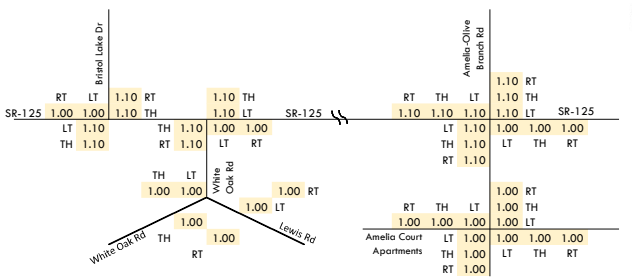
Balancing calculations — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1B**



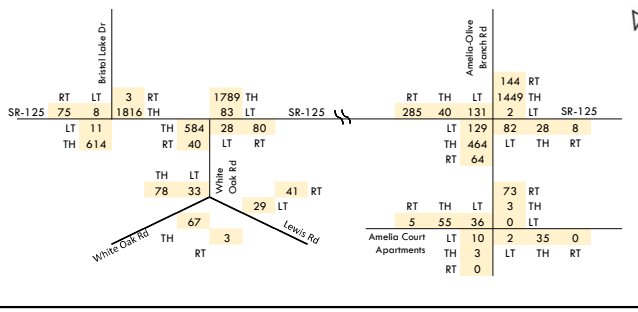
Balanced Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 2**



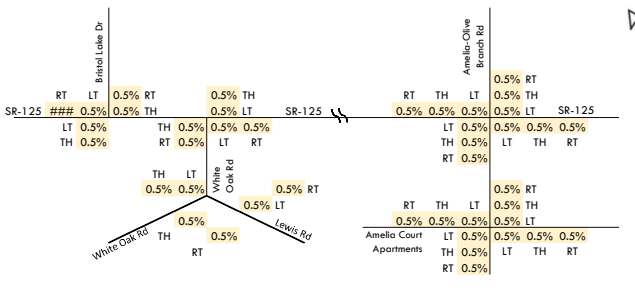
Design Hour Factors — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 3**



Count Year (2024) Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 4 = P2*P3**

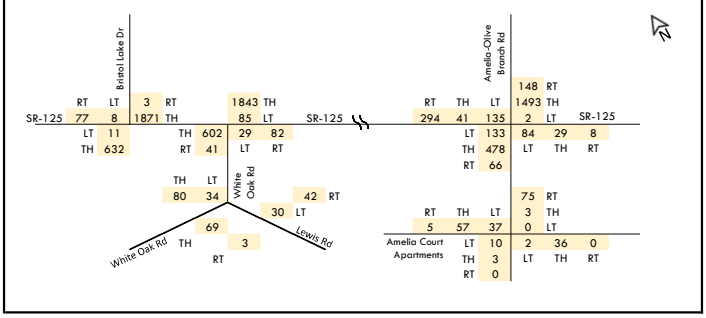


Growth Rates — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 5**

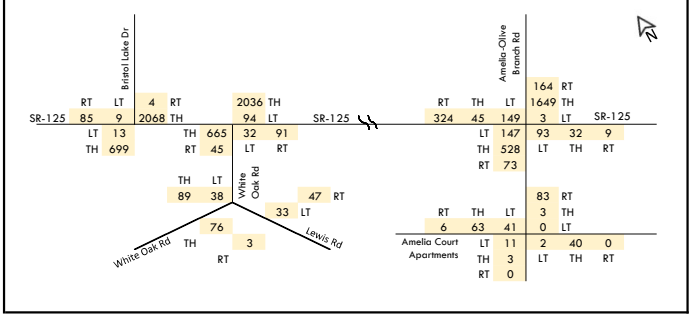


CLE-125 at White Oak/Lewis Road
Design Hour Volumes

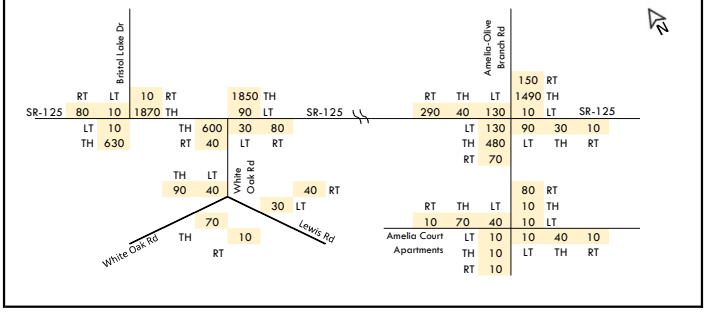
2030 Design Hour Volumes | **AM Peak Hour**
6:45 - 7:45 AM | **Plate 6A=P4*P5[6yrs]**



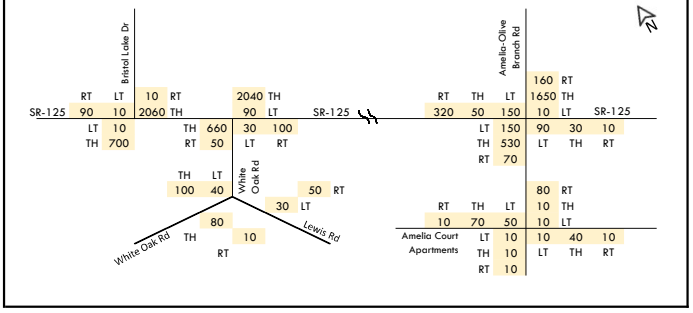
2050 Design Hour Volumes | **AM Peak Hour**
6:45 - 7:45 AM | **Plate 6B=P4*P5[26yrs]**



2030 Balanced and Rounded Design Hour Volumes | **AM Peak Hour**
6:45 - 7:45 AM | **Plate 7A= P6A Rounded**

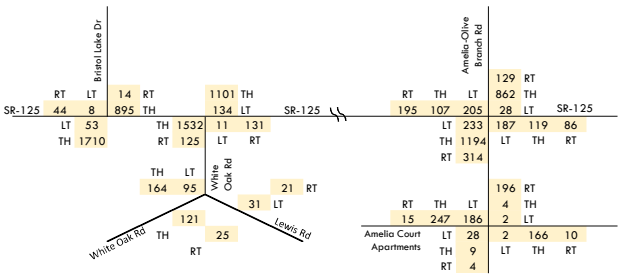


2050 Balanced and Rounded Design Hour Volumes | **AM Peak Hour**
6:45 - 7:45 AM | **Plate 7B= P6B Rounded**

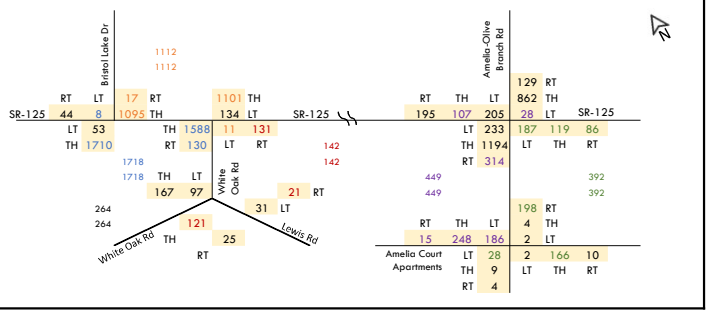


CLE-125 at White Oak/Lewis Road
Design Hour Volumes

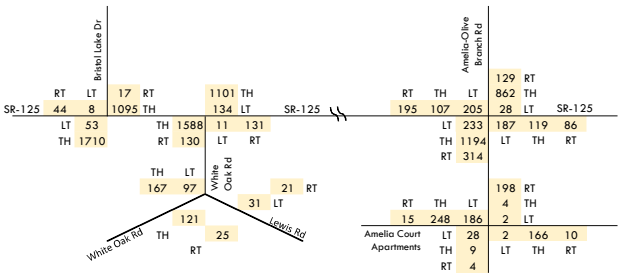
Raw Count Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 1A**



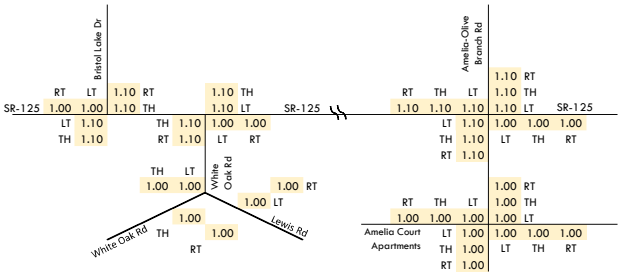
Balancing calculations — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 1B**



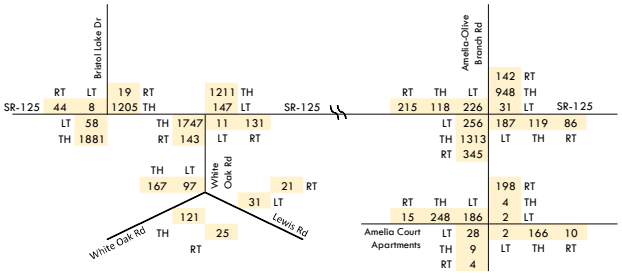
Balanced Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 2**



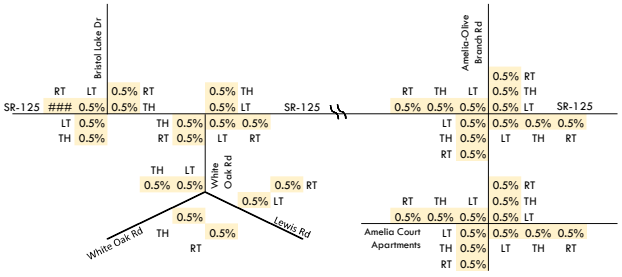
Design Hour Factors — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 3**



Count Year (2024) Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 4 = P2*P3**

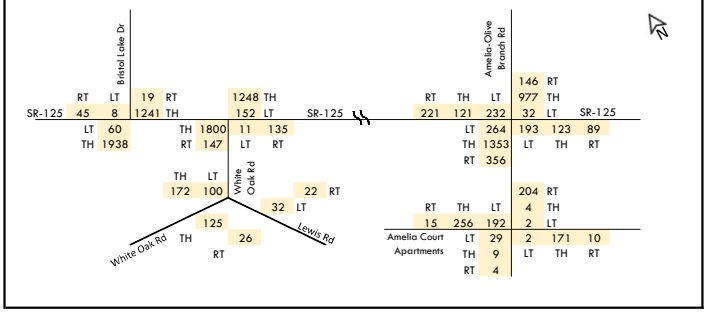


Growth Rates — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 5**

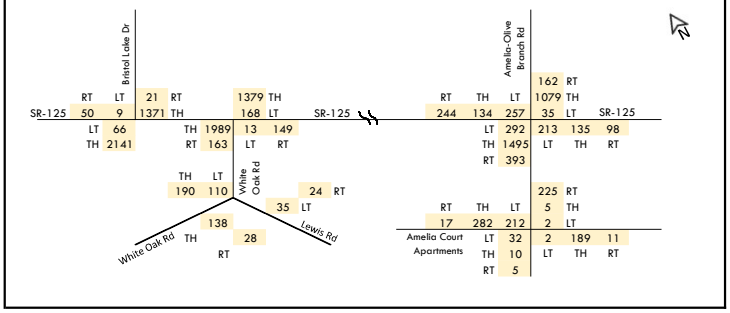


CLE-125 at White Oak/Lewis Road
Design Hour Volumes

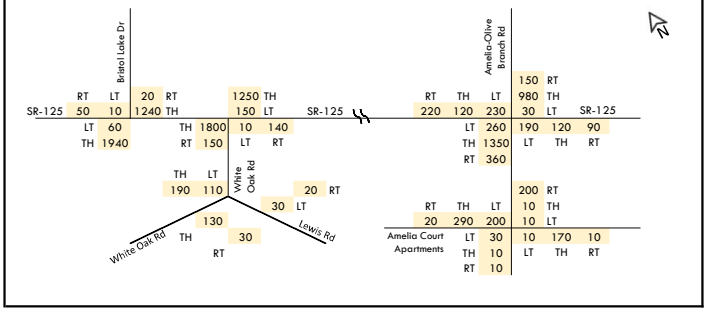
2030 Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 6A=P4*P5^6yrs**



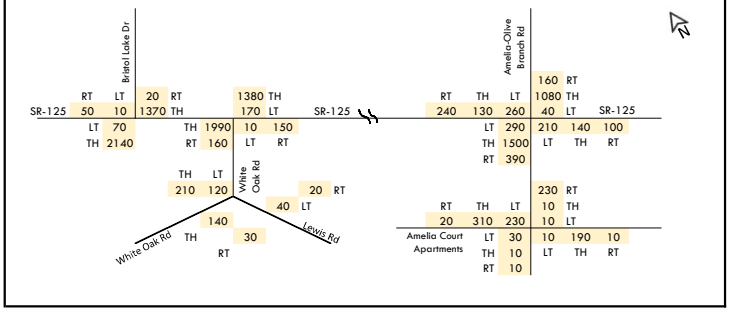
2050 Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 6B=P4*P5^26yrs**



2030 Balanced and Rounded Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 7A= P6A Rounded**



2050 Balanced and Rounded Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 7B= P6B Rounded**



PEAK HOUR to DESIGN HOUR FACTORS

FUNCTIONAL CLASSIFICATION = 03, 04, 05u

(Urban Principal Arterial, Urban Minor Arterial, & Urban Minor Collector)

Day / Month	Monthly Average by Day-of-Week							
	WEEKDAY MON-THUR	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
January	1.25	1.81	1.27	1.25	1.25	1.23	1.18	1.61
February	1.23	1.78	1.26	1.23	1.23	1.19	1.17	1.58
March	1.18	1.63	1.20	1.18	1.17	1.17	1.12	1.47
April	1.13	1.57	1.15	1.14	1.12	1.11	1.08	1.42
May	1.10	1.47	1.12	1.10	1.10	1.07	1.06	1.35
June	1.14	1.51	1.16	1.14	1.14	1.11	1.10	1.40
July	1.14	1.54	1.16	1.14	1.13	1.14	1.11	1.45
August	1.12	1.49	1.14	1.14	1.12	1.10	1.06	1.41
September	1.12	1.53	1.15	1.13	1.13	1.09	1.05	1.42
October	1.12	1.54	1.15	1.12	1.11	1.10	1.05	1.42
November	1.16	1.63	1.17	1.15	1.15	1.15	1.08	1.52
December	1.16	1.61	1.18	1.16	1.16	1.13	1.10	1.50

peak hour volume * factor = design hour volume

SR 125|Amelia Olive Branch Road

source: year 2018,2019,2021 Automatic Traffic Recorders (ATR) Data

ATR Stations:

2018: 15 Stations
2019: 21 Stations
2021: 22 Stations

Ohio Department of Transportation
Modeling & Forecasting Section
Nov 2022

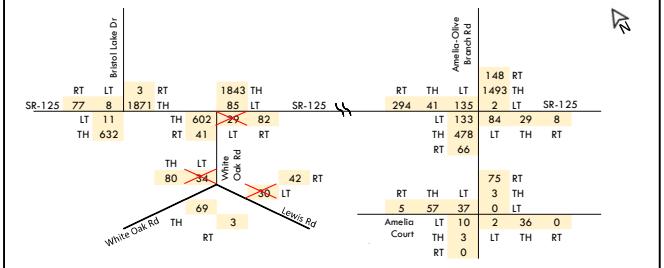
NOTE: These are NOT seasonal adjustment factors!!!

Note: Insufficient data exists to produce factors for functional classes 06 and 07 Urban.

Bristol Lake|White Oak Rd.|Lewis Rd.|Live Oak Dr.|Hicks Pl

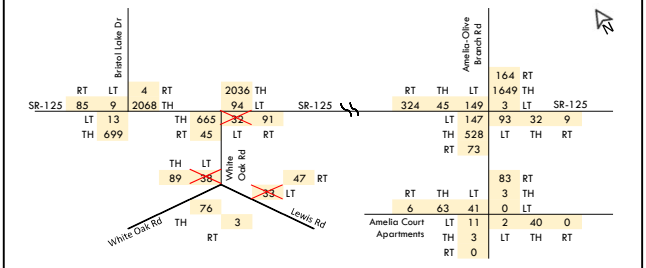
Alternative: 1 LIRIRO at SR125/White oak & RIRO at Lewis

2030 "No Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1A**



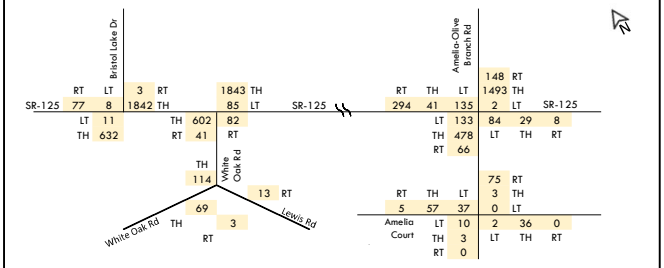
* LT volumes shifted to downstream White Oak Road/Appomatox Drive

2050 "No Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1B**

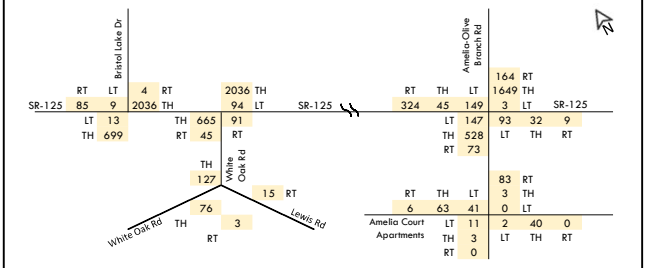


* LT volumes shifted to downstream White Oak Road/Appomatox Drive

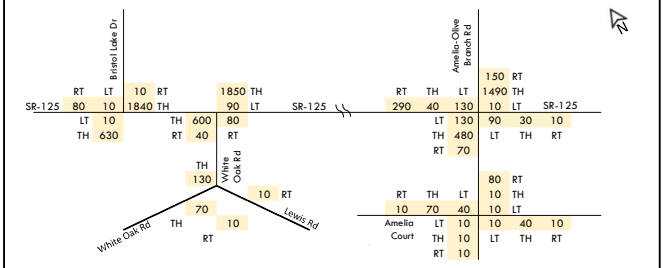
2030 Alt. 1 "Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 2A**



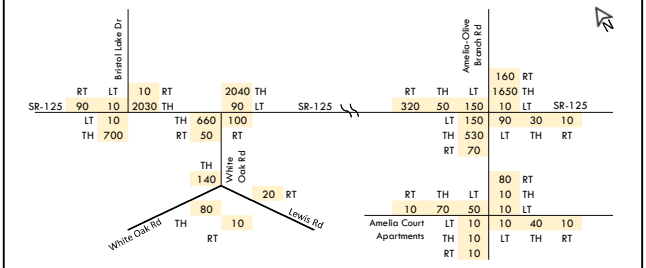
2050 Alt. 1 "Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 2B**



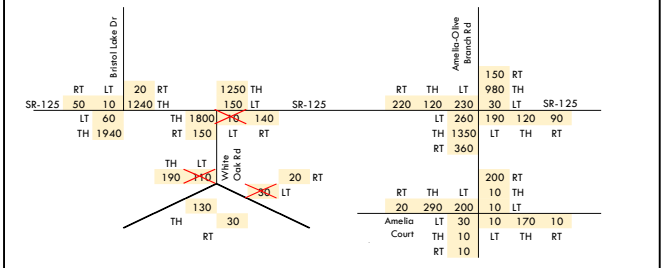
2030 Alt. 1 "Build" Balanced and Rounded Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 3A= P2A Rounded**



2050 Alt. 1 "Build" Balanced and Rounded Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 3B= P2B Rounded**

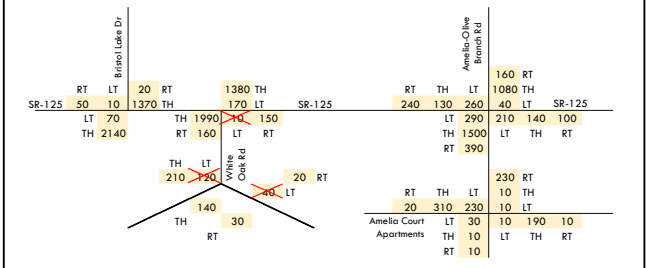


2030 "No Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 4A**



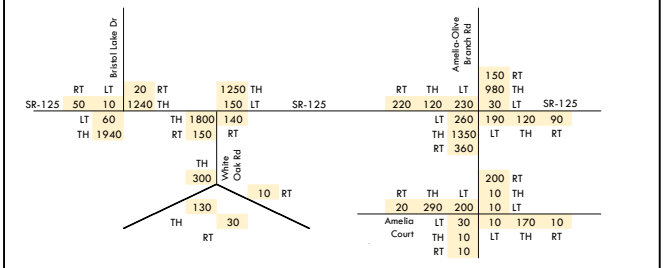
* LT volumes shifted to downstream White Oak Road/Appomatox Drive

2050 "No Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 4B**

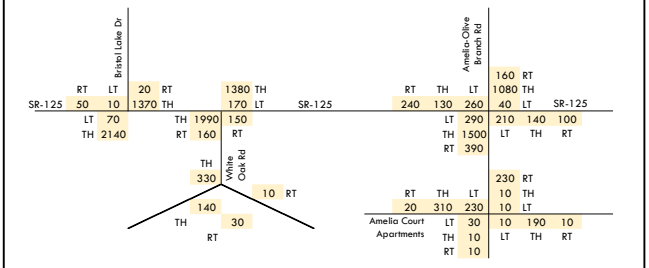


* LT volumes shifted to downstream White Oak Road/Appomatox Drive

2030 Alt. 1 "Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 5A**

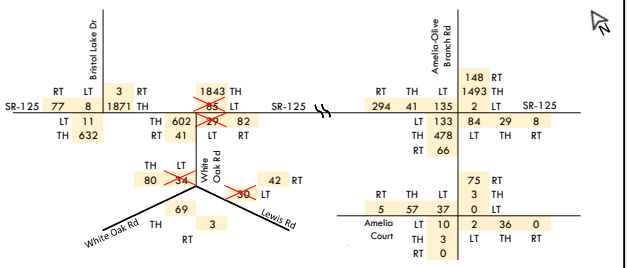


2050 Alt. 1 "Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 5B**

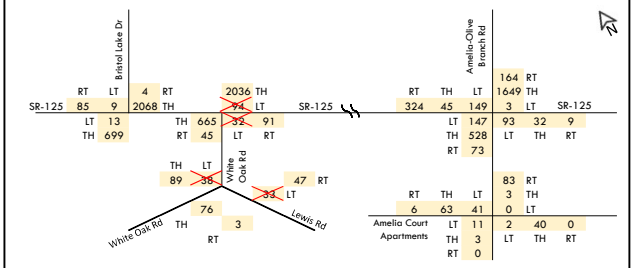


Alternative 2: RIRO at SR125/White Oak & RIRO at Lewis

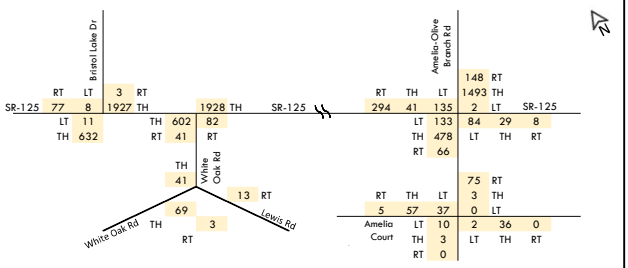
2030 "No Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1A**



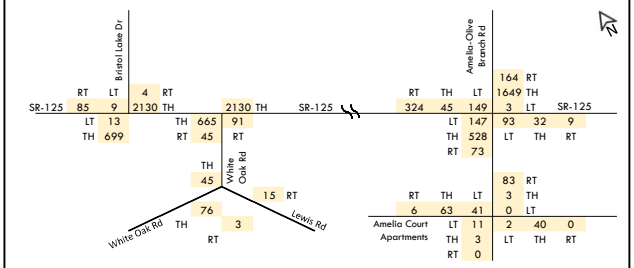
2050 "No Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1B**



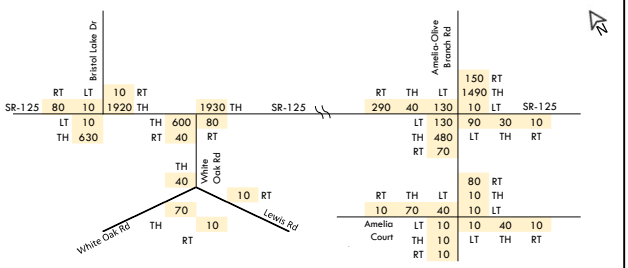
2030 Alt. 2 "Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 2A**



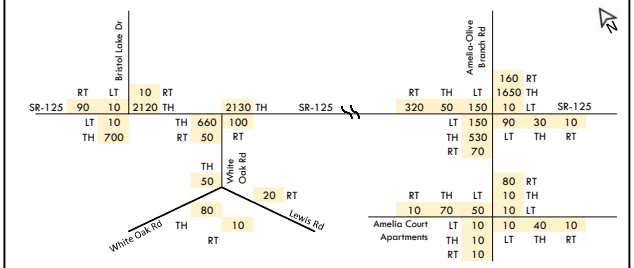
2050 Alt. 2 "Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 2B**



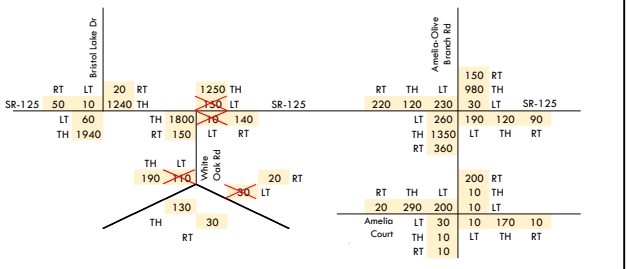
2030 Alt. 2 "Build" Balanced and Rounded Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 3A= P2A Rounded**



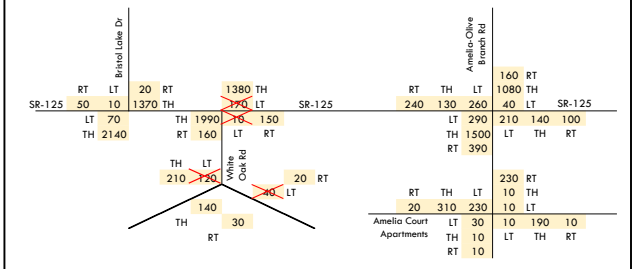
2050 Alt. 2 "Build" Balanced and Rounded Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 3B= P2B Rounded**



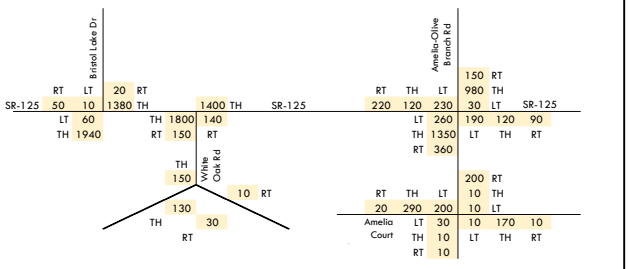
2030 "No Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 4A**



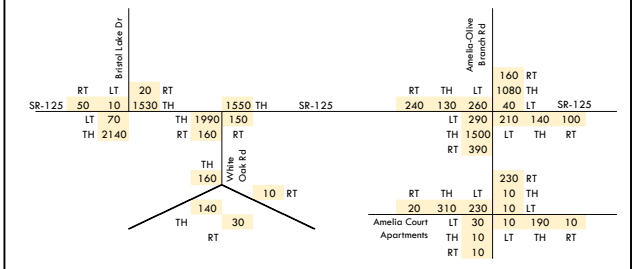
2050 "No Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 4B**



2030 Alt. 2 "Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 5A**

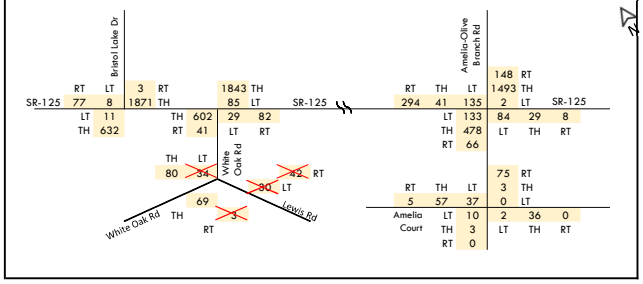


2050 Alt. 2 "Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 5B**

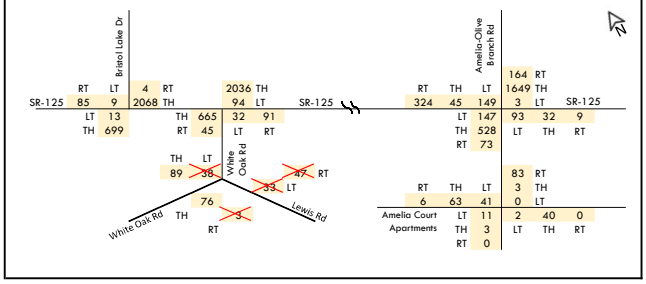


Signal at SR125/White Oak & Dead End at Lewis

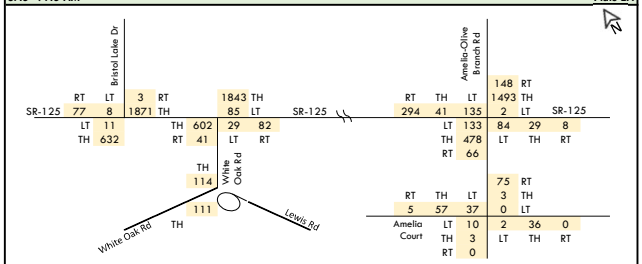
2030 "No Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1A**



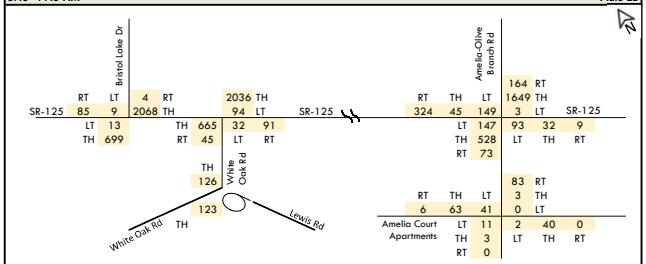
2050 "No Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 1B**



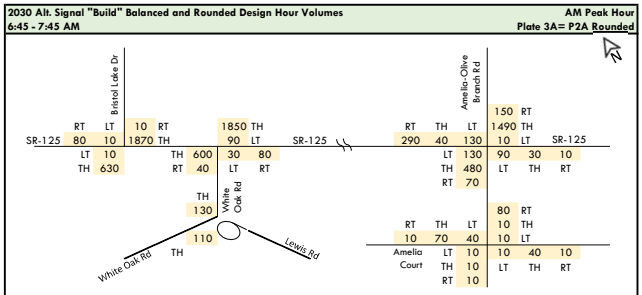
2030 Alt. Signal "Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 2A**



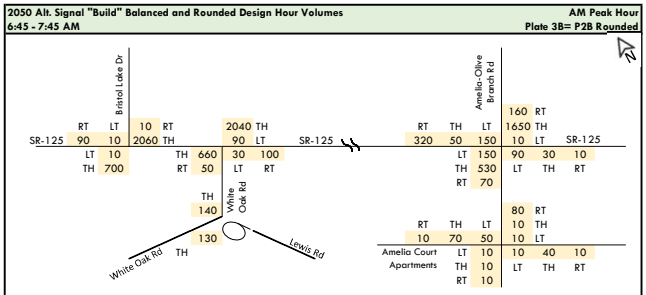
2050 Alt. Signal "Build" Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 2B**



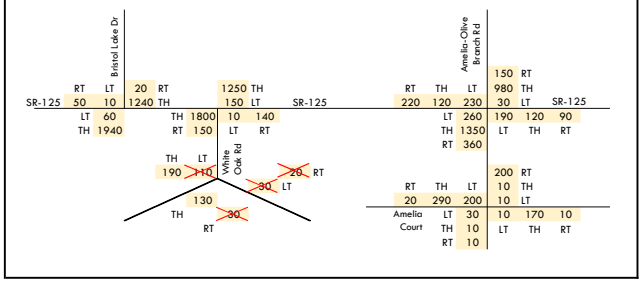
2030 Alt. Signal "Build" Balanced and Rounded Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 3A= P2A Rounded**



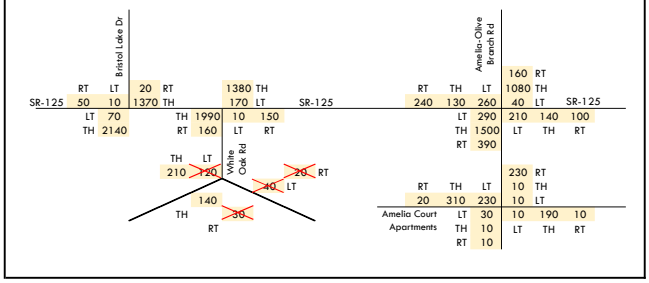
2050 Alt. Signal "Build" Balanced and Rounded Design Hour Volumes — **AM Peak Hour**
6:45 - 7:45 AM — **Plate 3B= P2B Rounded**



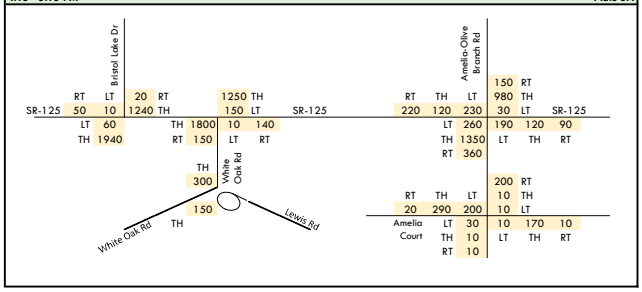
2030 "No Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 4A**



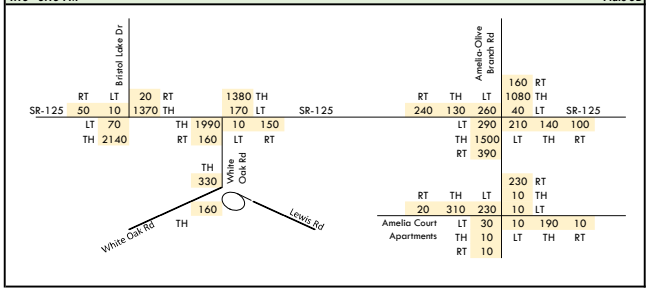
2050 "No Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 4B**



2030 Alt. Signal "Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 5A**



2050 Alt. Signal "Build" Design Hour Volumes — **PM Peak Hour**
4:15 - 5:15 PM — **Plate 5B**



EMH&T

Engineers, Surveyors, Planners, Scientists

APPENDIX B

Collision Diagram &

CAM Tool Data Analysis

CAM Tool
Crash Analysis Module Tool

version: 20240731

CRASH ANALYSIS MODULE - CAM Tool
GCAT / GQL

White Oak/Lewis Rd at SR 125, intersection related crashes for ECAT

Macros Must Be Enabled to Run the CAM Tool

Click to go to help on enabling Macros on Excel 2007

DO NOT INSERT OR HIDE COLUMNS IN THE CAM TOOL!

THE TOOL WILL NOT RUN PROPERLY.

Click any of the image boxes below to access the desired link

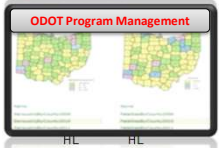
GCAT Resources



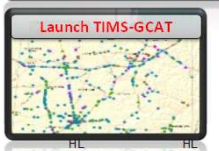
TIMS-GCAT 'How to' Recording



ODOT Program Management



Launch TIMS-GCAT



Handlog Information

Handlog Instructions

ODOT Internal

AutoCAM Tool



| | | |

White Oak/Lewis Rd at SR 125, intersection related crashes for ECAT

Crash Summary Sheet

Fatalities	0
Serious Injuries	0
Other Injuries	20

Crashes Per Year	5.17
Fatal and All Injury Crashes	15
Percent Injury	48.4%
Equivalent PDO Index Value	3.48

Crash Severity	Crashes	%
(3) Minor Injury Suspected	12	38.71%
(4) Injury Possible	3	9.68%
(5) PDO/No Injury	16	51.61%
Grand Total	31	100.00%

Year	Crashes	%
2018	6	19.35%
2019	5	16.13%
2020	8	25.81%
2021	5	16.13%
2022	2	6.45%
2023	5	16.13%
Grand Total	31	100.00%

Day of Week	Crashes	%
(1) Sunday	1	3.23%
(2) Monday	7	22.58%
(3) Tuesday	2	6.45%
(4) Wednesday	8	25.81%
(5) Thursday	7	22.58%
(6) Friday	6	19.35%
Grand Total	31	100.00%

Crash Type	Crashes	%
Angle	15	48.39%
Rear End	7	22.58%
Left Turn	5	16.13%
Sideswipe - Passing	2	6.45%
Fixed Object	1	3.23%
Right Turn	1	3.23%
Grand Total	31	100.00%

Hour of Day	Crashes	%
5	1	3.23%
7	3	9.68%
8	1	3.23%
9	1	3.23%
10	1	3.23%
11	2	6.45%
12	1	3.23%
13	3	9.68%
14	1	3.23%
15	4	12.90%
16	3	9.68%
17	3	9.68%
18	3	9.68%
19	3	9.68%
20	1	3.23%
Grand Total	31	100.00%

Month	Crashes	%
1	5	16.13%
2	3	9.68%
4	1	3.23%
5	1	3.23%
6	2	6.45%
7	2	6.45%
8	6	19.35%
9	2	6.45%
10	3	9.68%
11	4	12.90%
12	2	6.45%
Grand Total	31	100.00%

Weather Condition	Crashes	%
Clear	21	67.74%
Cloudy	9	29.03%
Rain	1	3.23%
Grand Total	31	100.00%

Road Condition	Crashes	%
Dry	28	90.32%
Wet	3	9.68%
Grand Total	31	100.00%

Light Condition	Crashes	%
Daylight	26	83.87%
Dawn/Dusk	3	9.68%
Dark - Lighted Roadway	1	3.23%
Dark - Roadway Not Lighted	1	3.23%
Grand Total	31	100.00%

Number of Units	Crashes	%
2	27	87.10%
3	2	6.45%
4	1	3.23%
1	1	3.23%
Grand Total	31	100.00%

ODOT Location	Crashes	%
T-Intersection	22	70.97%
Y-Intersection	9	29.03%
Grand Total	31	100.00%

Work Zone Related	Crashes	%
No	30	96.77%
Yes	1	3.23%
Grand Total	31	100.00%

Contour	Crashes	%
Curve Level	1	3.23%
Straight Grade	4	12.90%
Straight Level	26	83.87%
Grand Total	31	100.00%

Alcohol Related	Crashes	%
No	31	100.00%
Grand Total	31	100.00%

White Oak/Lewis Rd at SR 125, intersection related crashes for ECAT

Crash Summary Sheet

Roadway Departure	Crashes	%
No	29	93.55%
Yes	2	6.45%
Grand Total	31	100.00%

Intersection Related	Crashes	%
Yes	24	77.42%
No	7	22.58%
Grand Total	31	100.00%

Speed Related	Crashes	%
No	28	90.32%
Yes	3	9.68%
Grand Total	31	100.00%

Drug Related (Inc. Marijuana)	Crashes	%
No	31	100.00%
Grand Total	31	100.00%

Marijuana Related	Crashes	%
No	31	100.00%
Grand Total	31	100.00%

Older Driver (65+)	Crashes	%
No	20	64.52%
Yes	11	35.48%
Grand Total	31	100.00%

Young Driver (15-25)	Crashes	%
No	21	67.74%
Yes	10	32.26%
Grand Total	31	100.00%

Motorcycle Involved	Crashes	%
No	30	96.77%
Yes	1	3.23%
Grand Total	31	100.00%

White Oak/Lewis Rd at SR 125, intersection related crashes for ECAT

Crash Summary Sheet

Unit 1 Summary

Unit 1 Pre-Crash Action	Crashes	%
Making Left Turn	12	38.71%
Straight Ahead	11	35.48%
Changing Lanes	2	6.45%
Entering Traffic Lane	2	6.45%
Making Right Turn	2	6.45%
Negotiating a Curve	1	3.23%
Slowing or Stopped In Traffic	1	3.23%
Grand Total	31	100.00%

Unit 1 Contributing Factor	Crashes	%
Failure to Yield	16	51.61%
Following Too Closely/ACDA	8	25.81%
Ran Stop Sign	2	6.45%
Improper Lane Change	2	6.45%
Drove off Road	1	3.23%
Not Discernible	1	3.23%
None	1	3.23%
Grand Total	31	100.00%

Unit 1 Object Struck	Crashes	%
Nothing Struck	29	93.55%
Utility Pole	1	3.23%
Other Post, Pole Or Support	1	3.23%
Grand Total	31	100.00%

Unit 1 Traffic Control	Crashes	%
No Control	16	51.61%
Stop Sign	15	48.39%
Grand Total	31	100.00%

Unit 1 Direction From	Crashes	%
East	9	29.03%
Southwest	7	22.58%
South	7	22.58%
Northwest	3	9.68%
West	2	6.45%
Southeast	2	6.45%
Northeast	1	3.23%
Grand Total	31	100.00%

Unit 1 Posted Speed	Crashes	%
35	4	12.90%
40	4	12.90%
45	22	70.97%
50	1	3.23%
Grand Total	31	100.00%

Unit 1 Type	Crashes	%
Passenger Car	16	51.61%
Pick up	6	19.35%
Sport Utility Vehicle	6	19.35%
Passenger Van (minivan)	2	6.45%
Motorcycle 2 Wheeled	1	3.23%
Grand Total	31	100.00%

Unit 1 Direction To	Crashes	%
West	9	29.03%
South	6	19.35%
Northeast	6	19.35%
Southeast	3	9.68%
East	3	9.68%
Northwest	2	6.45%
North	1	3.23%
Southwest	1	3.23%
Grand Total	31	100.00%

Unit 1 Special Function	Crashes	%
None	31	100.00%
Grand Total	31	100.00%

Unit 2 Summary

Unit 2 Pre-Crash Action	Crashes	%
Straight Ahead	20	64.52%
Slowing or Stopped In Traffic	8	25.81%
Making Right Turn	2	6.45%
	1	3.23%
Grand Total	31	100.00%

Unit 2 Contributing Factor	Crashes	%
None	28	90.32%
	1	3.23%
Ran Stop Sign	1	3.23%
Not Discernible	1	3.23%
Grand Total	31	100.00%

Unit 2 Direction From	Crashes	%
	1	3.23%
East	4	12.90%
North	3	9.68%
Northwest	5	16.13%
South	1	3.23%
Southeast	1	3.23%
Southwest	1	3.23%
West	15	48.39%
Grand Total	31	100.00%

Unit 2 Direction To	Crashes	%
	1	3.23%
East	13	41.94%
North	1	3.23%
Northeast	1	3.23%
Northwest	1	3.23%
South	2	6.45%
Southeast	8	25.81%
West	4	12.90%
Grand Total	31	100.00%

Unit 2 Type	Crashes	%
Passenger Car	18	58.06%
Sport Utility Vehicle	8	25.81%
Pick up	3	9.68%
Bus (16+ Passengers)	1	3.23%
	1	3.23%
Grand Total	31	100.00%

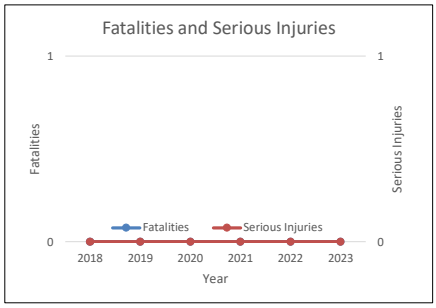
Unit 2 Special Function	Crashes	%
None	29	93.55%
	1	3.23%
Bus – Transit/Commuter	1	3.23%
Grand Total	31	100.00%

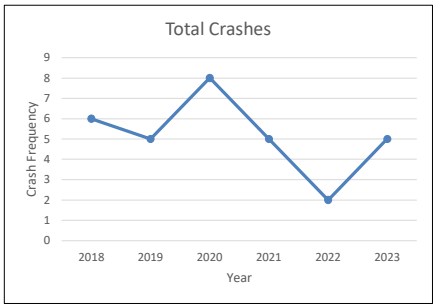
White Oak/Lewis Rd at SR 125, intersection related crashes for ECAT

Crash Summary Sheet

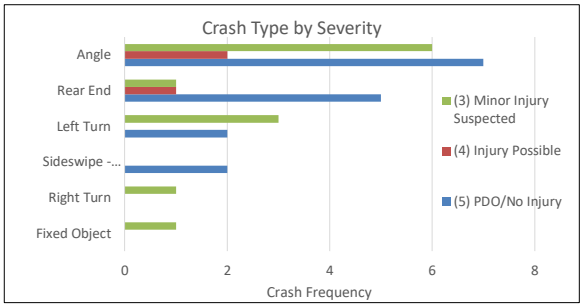
Crashes Per Year	5.17	Percent Injury	48.4%	EPDO	3.48

Year	Total Crashes	Fatalities	Serious Injuries
2018	6	0	0
2019	5	0	0
2020	8	0	0
2021	5	0	0
2022	2	0	0
2023	5	0	0
Grand Total	31	0	0





Total Crashes	Injury Level			
Crash Type	(3) Minor Injury	(4) Injury Possil	(5) PDO/No Inj	Grand Total
Angle	6	2	7	15
Rear End	1	1	5	7
Left Turn	3	0	2	5
Sideswipe - Passing	0	0	2	2
Fixed Object	1	0	0	1
Right Turn	1	0	0	1
Grand Total	12	3	16	31



Road Condition	Total Crashes	Fatalities	Serious Injuries
Dry	28	0	0
Wet	3	0	0
Grand Total	31	0	0

Weather	Total Crashes	Fatalities	Serious Injuries
Clear	21	0	0
Cloudy	9	0	0
Rain	1	0	0
Grand Total	31	0	0

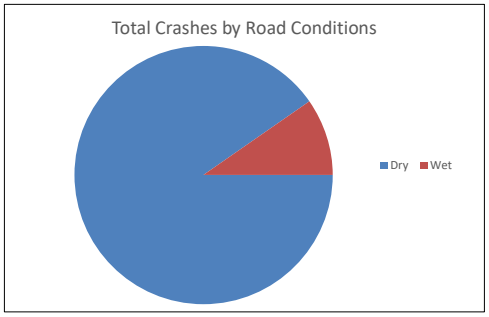
Crash Location	Total Crashes	Fatalities	Serious Injuries
T-Intersection	22	0	0
Y-Intersection	9	0	0
Grand Total	31	0	0

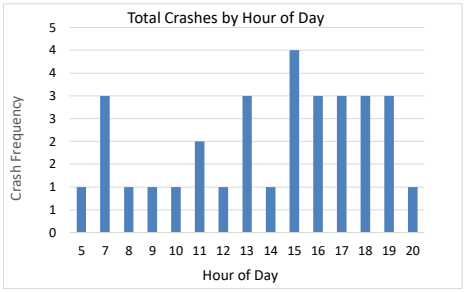
Roadway Contour	Total Crashes	Fatalities	Serious Injuries
Straight Level	26	0	0
Straight Grade	4	0	0
Curve Level	1	0	0
Grand Total	31	0	0

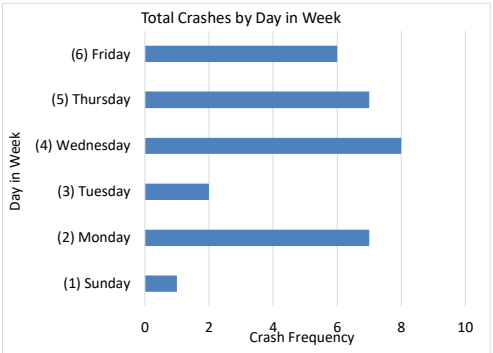
Hour of Day	Total Crashes
5	1
7	3
8	1
9	1
10	1
11	2
12	1
13	3
14	1
15	4
16	3
17	3
18	3
19	3
20	1
Grand Total	31

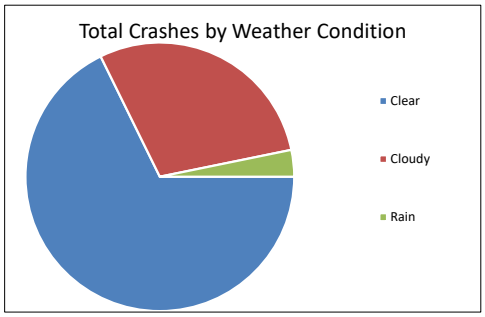
Month	Total Crashes
January	5
February	3
April	1
May	1
June	2
July	2
August	6
September	2
October	3
November	4
December	2
Grand Total	31

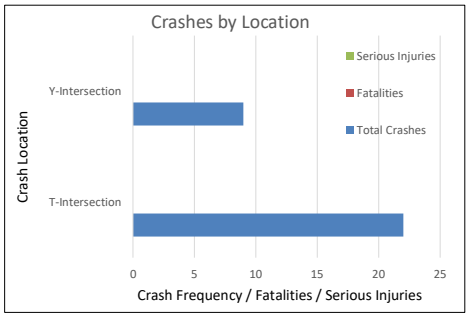
Day in Week	Total Crashes
(1) Sunday	1
(2) Monday	7
(3) Tuesday	2
(4) Wednesday	8
(5) Thursday	7
(6) Friday	6
Grand Total	31

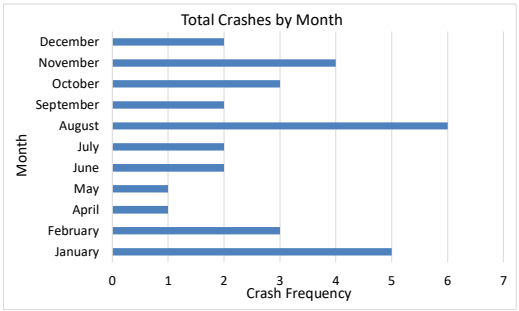








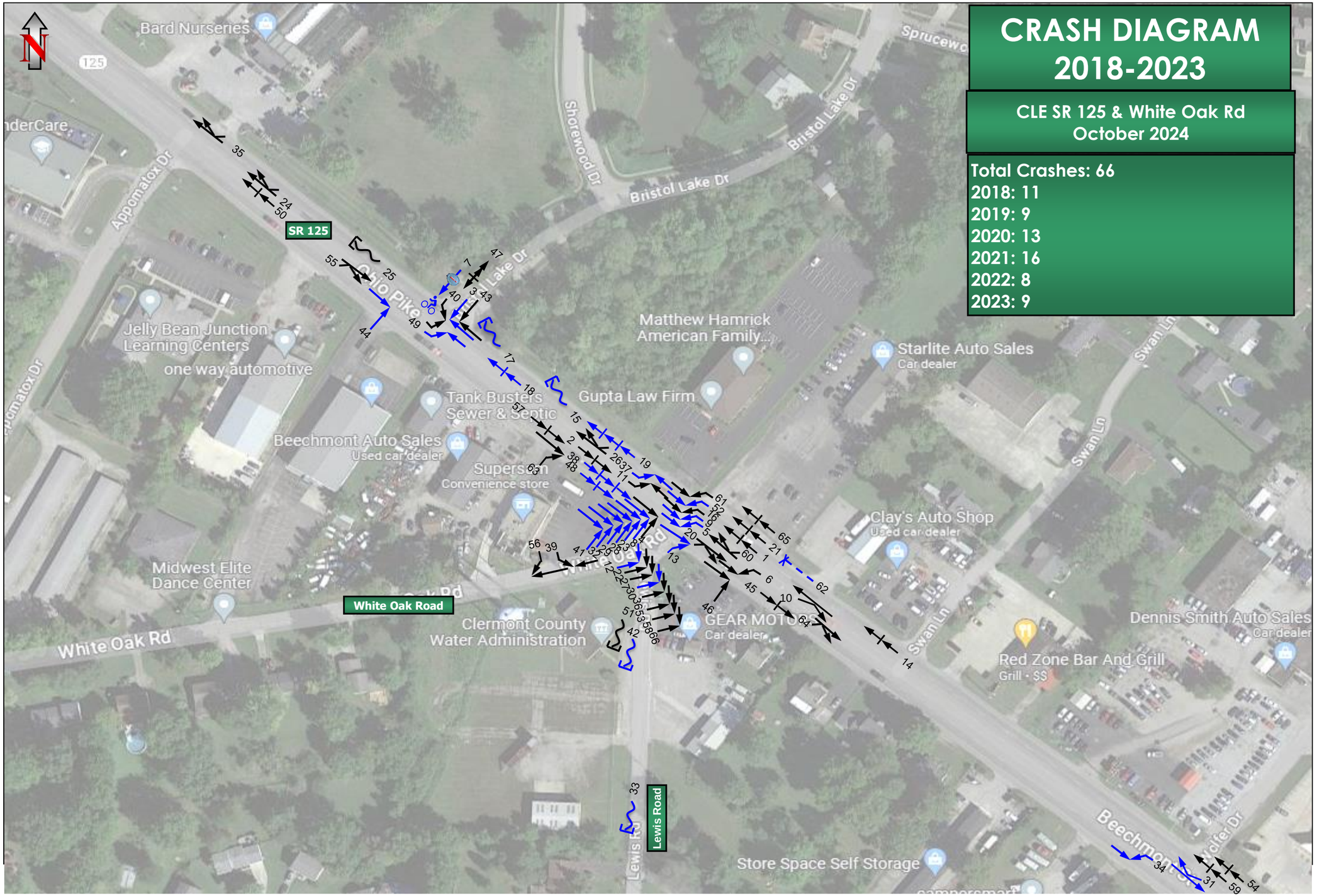




CRASH DIAGRAM 2018-2023

CLE SR 125 & White Oak Rd
October 2024

Total Crashes: 66
2018: 11
2019: 9
2020: 13
2021: 16
2022: 8
2023: 9



CAM Tool
Crash Analysis Module Tool

CRASH ANALYSIS MODULE - CAM Tool
GCAT / GQL

version: 20230523

SR 125 From Bristol Lake to White Oak Rd

Macros Must Be Enabled to Run the CAM Tool

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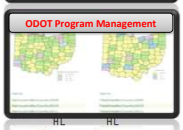
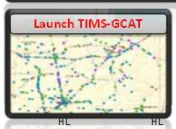
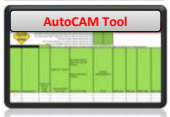




Handlog Information

Handlog Instructions

ODOT Internal



| | | |

SR 125 From Bristol Lake to White Oak Rd

Crash Summary Sheet

Fatalities	0
Serious Injuries	0
Other Injuries	39

Crashes Per Year	11.00
Fatal and All Injury Crashes	28
Percent Injury	42.4%
Equivalent PDO Index Value	3.10

Crash Severity	Crashes	%
(3) Minor Injury Suspected	20	30.30%
(4) Injury Possible	8	12.12%
(5) PDO/No Injury	38	57.58%
Grand Total	66	100.00%

Year	Crashes	%
2018	11	16.67%
2019	9	13.64%
2020	13	19.70%
2021	16	24.24%
2022	8	12.12%
2023	9	13.64%
Grand Total	66	100.00%

Day of Week	Crashes	%
(1) Sunday	3	4.55%
(2) Monday	14	21.21%
(3) Tuesday	6	9.09%
(4) Wednesday	17	25.76%
(5) Thursday	13	19.70%
(6) Friday	11	16.67%
(7) Saturday	2	3.03%
Grand Total	66	100.00%

Crash Type	Crashes	%
Angle	21	31.82%
Rear End	14	21.21%
Left Turn	11	16.67%
Sideswipe - Passing	8	12.12%
Fixed Object	5	7.58%
Right Turn	3	4.55%
Sideswipe - Meeting	1	1.52%
Pedestrian	1	1.52%
Backing	1	1.52%
Pedalcycles	1	1.52%
Grand Total	66	100.00%

Hour of Day	Crashes	%
5	1	1.52%
7	6	9.09%
8	2	3.03%
9	1	1.52%
10	4	6.06%
11	4	6.06%
12	2	3.03%
13	6	9.09%
14	5	7.58%
15	6	9.09%
16	7	10.61%
17	6	9.09%
18	6	9.09%
19	6	9.09%
20	2	3.03%
22	1	1.52%
23	1	1.52%
Grand Total	66	100.00%

Month	Crashes	%
1	7	10.61%
2	4	6.06%
3	2	3.03%
4	2	3.03%
5	6	9.09%
6	3	4.55%
7	7	10.61%
8	10	15.15%
9	5	7.58%
10	5	7.58%
11	8	12.12%
12	7	10.61%
Grand Total	66	100.00%

Weather Condition	Crashes	%
Clear	38	57.58%
Cloudy	19	28.79%
Rain	9	13.64%
Grand Total	66	100.00%

Road Condition	Crashes	%
Dry	52	78.79%
Wet	14	21.21%
Grand Total	66	100.00%

Light Condition	Crashes	%
Daylight	54	81.82%
Dawn/Dusk	5	7.58%
Dark - Lighted Roadway	4	6.06%
Dark - Roadway Not Lighted	3	4.55%
Grand Total	66	100.00%

Number of Units	Crashes	%
2	56	84.85%
1	5	7.58%
3	4	6.06%
4	1	1.52%
Grand Total	66	100.00%

ODOT Location	Crashes	%
T-Intersection	24	36.36%
Not An Intersection	22	33.33%
Driveway/Alley Access	10	15.15%
Y-Intersection	9	13.64%
Four-Way Intersection	1	1.52%
Grand Total	66	100.00%

Work Zone Related	Crashes	%
No	65	98.48%
Yes	1	1.52%
Grand Total	66	100.00%

SR 125 From Bristol Lake to White Oak Rd

Crash Summary Sheet

Contour	Crashes	%
Curve Level	1	1.52%
Straight Grade	8	12.12%
Straight Level	57	86.36%
Grand Total	66	100.00%

Roadway Departure	Crashes	%
No	57	86.36%
Yes	9	13.64%
Grand Total	66	100.00%

Intersection Related	Crashes	%
Yes	34	51.52%
No	32	48.48%
Grand Total	66	100.00%

Speed Related	Crashes	%
No	59	89.39%
Yes	7	10.61%
Grand Total	66	100.00%

Alcohol Related	Crashes	%
No	66	100.00%
Grand Total	66	100.00%

Drug Related (Inc. Marijuana)	Crashes	%
No	66	100.00%
Grand Total	66	100.00%

Marijuana Related	Crashes	%
No	66	100.00%
Grand Total	66	100.00%

Older Driver (65+)	Crashes	%
No	46	69.70%
Yes	20	30.30%
Grand Total	66	100.00%

Young Driver (15-25)	Crashes	%
No	38	57.58%
Yes	28	42.42%
Grand Total	66	100.00%

Motorcycle Involved	Crashes	%
No	65	98.48%
Yes	1	1.52%
Grand Total	66	100.00%

SR 125 From Bristol Lake to White Oak Rd

Crash Summary Sheet

Unit 1 Summary

Unit 1 Pre-Crash Action	Crashes	%
Making Left Turn	25	37.88%
Straight Ahead	21	31.82%
Changing Lanes	7	10.61%
Making Right Turn	5	7.58%
Slowing or Stopped In Traffic	3	4.55%
Entering Traffic Lane	2	3.03%
Walking, Running, Jogging, Playing	1	1.52%
Negotiating a Curve	1	1.52%
Backing	1	1.52%
Grand Total	66	100.00%

Unit 1 Object Struck	Crashes	%
Nothing Struck	59	89.39%
Utility Pole	3	4.55%
Other Post, Pole Or Support	1	1.52%
Tree	1	1.52%
Building	1	1.52%
Other Fixed Object	1	1.52%
Grand Total	66	100.00%

Unit 1 Direction From	Crashes	%
East	16	24.24%
South	12	18.18%
North	9	13.64%
Southwest	8	12.12%
West	7	10.61%
Southeast	6	9.09%
Northwest	6	9.09%
Northeast	2	3.03%
Grand Total	66	100.00%

Unit 1 Type	Crashes	%
Passenger Car	34	51.52%
Sport Utility Vehicle	14	21.21%
Pick up	10	15.15%
Passenger Van (minivan)	5	7.58%
Pedestrian/Skater	1	1.52%
Cargo Van	1	1.52%
Motorcycle 2 Wheeled	1	1.52%
Grand Total	66	100.00%

Unit 1 Contributing Factor	Crashes	%
Failure to Yield	32	48.48%
Following Too Closely/ACDA	14	21.21%
Improper Lane Change	7	10.61%
Drove off Road	4	6.06%
None	2	3.03%
Ran Stop Sign	2	3.03%
Not Discernible	2	3.03%
Unsafe Speed	1	1.52%
Improper Backing	1	1.52%
Left of Center	1	1.52%
Grand Total	66	100.00%

Unit 1 Traffic Control	Crashes	%
No Control	47	71.21%
Stop Sign	18	27.27%
Signal	1	1.52%
Grand Total	66	100.00%

Unit 1 Posted Speed	Crashes	%
25	2	3.03%
35	6	9.09%
40	9	13.64%
45	45	68.18%
50	1	1.52%
55	3	4.55%
Grand Total	66	100.00%

Unit 1 Direction To	Crashes	%
West	21	31.82%
South	11	16.67%
East	9	13.64%
Southeast	7	10.61%
Northeast	7	10.61%
Northwest	6	9.09%
North	4	6.06%
Southwest	1	1.52%
Grand Total	66	100.00%

Unit 1 Special Function	Crashes	%
None	65	98.48%
Other / Unknown	1	1.52%
Grand Total	66	100.00%

SR 125 From Bristol Lake to White Oak Rd

Crash Summary Sheet

Unit 2 Summary

Unit 2 Pre-Crash Action	Crashes	%
Straight Ahead	39	59.09%
Slowing or Stopped In Traffic	16	24.24%
	5	7.58%
Making Right Turn	3	4.55%
Making Left Turn	1	1.52%
Walking, Running, Jogging, Playing	1	1.52%
Changing Lanes	1	1.52%
Grand Total	66	100.00%

Unit 2 Contributing Factor	Crashes	%
None	55	83.33%
	5	7.58%
Not Discernible	2	3.03%
Ran Stop Sign	1	1.52%
Swerving to Avoid	1	1.52%
Improper Lane Change	1	1.52%
Other Improper Action	1	1.52%
Grand Total	66	100.00%

Unit 2 Direction From	Crashes	%
	5	7.58%
East	16	24.24%
North	4	6.06%
Northeast	1	1.52%
Northwest	10	15.15%
South	2	3.03%
Southeast	6	9.09%
Southwest	2	3.03%
West	20	30.30%
Grand Total	66	100.00%

Unit 2 Direction To	Crashes	%
	5	7.58%
East	18	27.27%
North	2	3.03%
Northeast	1	1.52%
Northwest	7	10.61%
South	2	3.03%
Southeast	13	19.70%
Southwest	1	1.52%
West	17	25.76%
Grand Total	66	100.00%

Unit 2 Type	Crashes	%
Passenger Car	32	48.48%
Sport Utility Vehicle	18	27.27%
Pick up	7	10.61%
	5	7.58%
Bus (16+ Passengers)	1	1.52%
Bicycle	1	1.52%
Passenger Van (minivan)	1	1.52%
Cargo Van	1	1.52%
Grand Total	66	100.00%

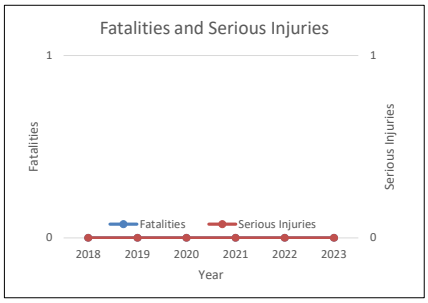
Unit 2 Special Function	Crashes	%
None	59	89.39%
	5	7.58%
Mail Carrier	1	1.52%
Bus – Transit/Commuter	1	1.52%
Grand Total	66	100.00%

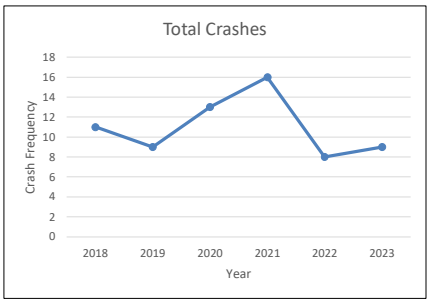
SR 125 From Bristol Lake to White Oak Rd

Crash Summary Sheet

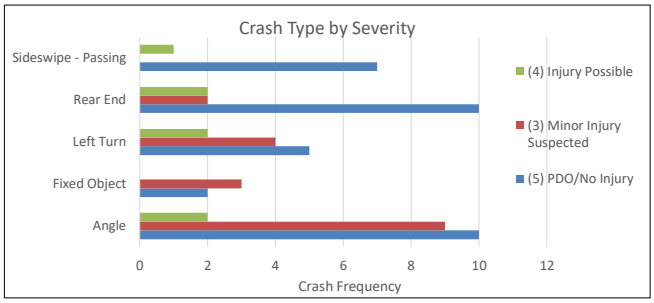
Crashes Per Year	11.00	Percent Injury	42.4%	EPDO	3.10

Year	Total Crashes	Fatalities	Serious Injuries
2018	11	0	0
2019	9	0	0
2020	13	0	0
2021	16	0	0
2022	8	0	0
2023	9	0	0
Grand Total	66	0	0





Total Crashes / Crash Type	Injury Level (3) Minor Injury	(4) Injury Possi	(5) PDO/No Inj	Grand Total
Angle	9	2	10	21
Rear End	2	2	10	14
Left Turn	4	2	5	11
Sideswipe - Passing	0	1	7	8
Fixed Object	3	0	2	5
Right Turn	1	0	2	3
Sideswipe - Meeting	0	0	1	1
Pedestrian	1	0	0	1
Backing	0	0	1	1
Pedalcycles	0	1	0	1
Grand Total	20	8	38	66



Road Condition	Total Crashes	Fatalities	Serious Injuries
Dry	52	0	0
Wet	14	0	0
Grand Total	66	0	0

Weather	Total Crashes	Fatalities	Serious Injuries
Clear	38	0	0
Cloudy	19	0	0
Rain	9	0	0
Grand Total	66	0	0

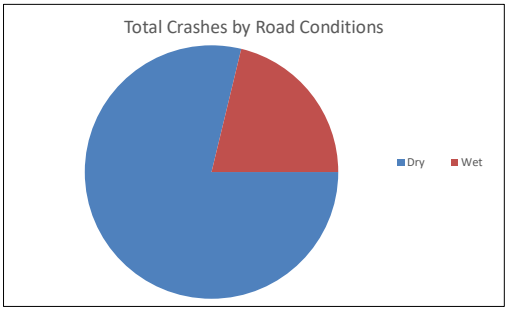
Crash Location	Total Crashes	Fatalities	Serious Injuries
Driveway/Alley Access	10	0	0
Four-Way Intersection	1	0	0
Not An Intersection	22	0	0
T-Intersection	24	0	0
Y-Intersection	9	0	0
Grand Total	66	0	0

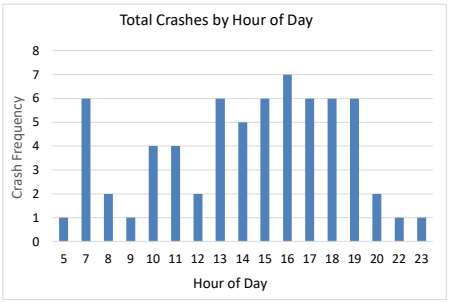
Roadway Contour	Total Crashes	Fatalities	Serious Injuries
Straight Level	57	0	0
Straight Grade	8	0	0
Curve Level	1	0	0
Grand Total	66	0	0

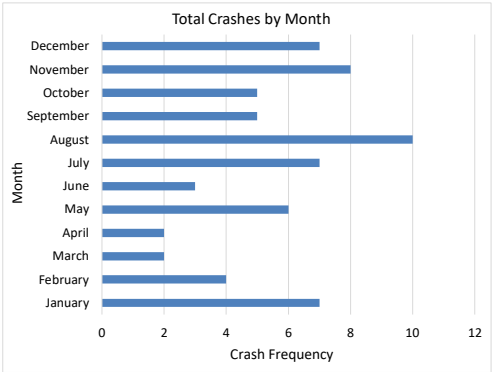
Hour of Day	Total Crashes
5	1
7	6
8	2
9	1
10	4
11	4
12	2
13	6
14	5
15	6
16	7
17	6
18	6
19	6
20	2
22	1
23	1
Grand Total	66

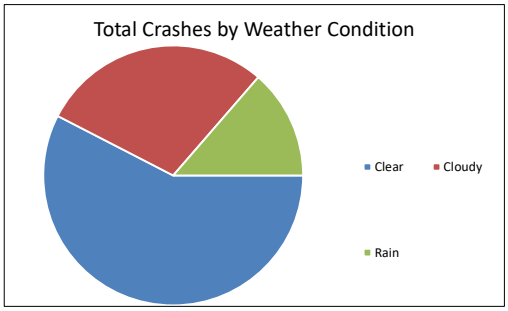
Month	Total Crashes
January	7
February	4
March	2
April	2
May	6
June	3
July	7
August	10
September	5
October	5
November	8
December	7
Grand Total	66

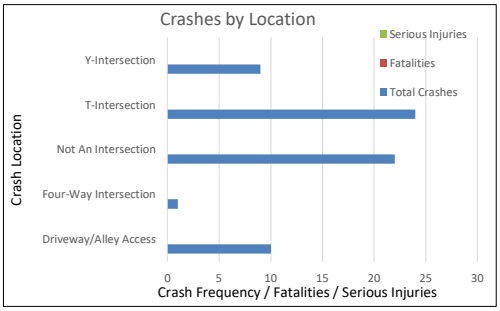
Day in Week	Total Crashes
(1) Sunday	3
(2) Monday	14
(3) Tuesday	6
(4) Wednesday	17
(5) Thursday	13
(6) Friday	11
(7) Saturday	2
Grand Total	66

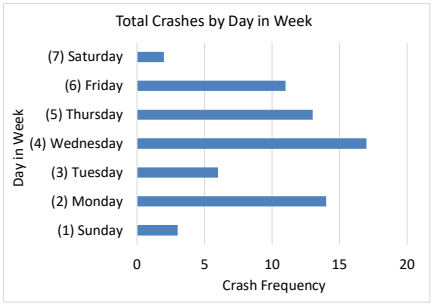












CRASH DIAGRAM

SR-125 & Amelia-Olive Branch Dr.
Date: 2019-2023

Crashes By Year
2019: 30
2020: 15
2021: 18
2022: 21
2023: 16

N

SR-125

Amelia-Olive Branch Rd.

CAM Tool
Crash Analysis Module Tool

CRASH ANALYSIS MODULE - CAM Tool
GCAT / GQL

version: 20240731

SR-125 & Amelia-Olive Branch 2019-2023

Macros Must Be Enabled to Run the CAM Tool

Click to go to help on enabling Macros on Excel 2007

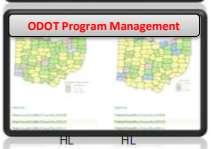
DO NOT INSERT OR HIDE COLUMNS IN THE CAM TOOL!

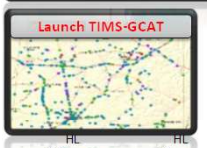
THE TOOL WILL NOT RUN PROPERLY.

Click any of the image boxes below to access the desired link









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SR-125 & Amelia-Olive Branch 2019-2023

Crash Summary Sheet

Fatalities	0
Serious Injuries	0
Other Injuries	56

Crashes Per Year	20.00
Fatal and All Injury Crashes	35
Percent Injury	35.0%
Equivalent PDO Index Value	2.65

Crash Severity	Crashes	%
(3) Minor Injury Suspected	21	21.00%
(4) Injury Possible	14	14.00%
(5) PDO/No Injury	65	65.00%
Grand Total	100	100.00%

Year	Crashes	%
2019	30	30.00%
2020	15	15.00%
2021	18	18.00%
2022	21	21.00%
2023	16	16.00%
Grand Total	100	100.00%

Day of Week	Crashes	%
(1) Sunday	9	9.00%
(2) Monday	17	17.00%
(3) Tuesday	18	18.00%
(4) Wednesday	13	13.00%
(5) Thursday	13	13.00%
(6) Friday	17	17.00%
(7) Saturday	13	13.00%
Grand Total	100	100.00%

Crash Type	Crashes	%
Rear End	52	52.00%
Left Turn	12	12.00%
Angle	12	12.00%
Sideswipe - Passing	9	9.00%
Sideswipe - meeting	5	5.00%
Right Turn	5	5.00%
Pedestrian	2	2.00%
Pedalcycles	1	1.00%
Other	1	1.00%
Backing	1	1.00%
Grand Total	100	100.00%

Hour of Day	Crashes	%
6	4	4.00%
7	2	2.00%
8	1	1.00%
9	10	10.00%
10	6	6.00%
11	5	5.00%
12	4	4.00%
13	4	4.00%
14	4	4.00%
15	15	15.00%
16	9	9.00%
17	8	8.00%
18	12	12.00%
19	7	7.00%
20	6	6.00%
21	2	2.00%
22	1	1.00%
Grand Total	100	100.00%

Month	Crashes	%
1	11	11.00%
2	12	12.00%
3	6	6.00%
4	6	6.00%
5	6	6.00%
6	11	11.00%
7	5	5.00%
8	6	6.00%
9	8	8.00%
10	7	7.00%
11	11	11.00%
12	11	11.00%
Grand Total	100	100.00%

Weather Condition	Crashes	%
Clear	61	61.00%
Cloudy	26	26.00%
Rain	13	13.00%
Grand Total	100	100.00%

Road Condition	Crashes	%
Dry	80	80.00%
Wet	19	19.00%
Slush	1	1.00%
Grand Total	100	100.00%

Light Condition	Crashes	%
Daylight	74	74.00%
Dark - Roadway Not Lighted	11	11.00%
Dark - Lighted Roadway	10	10.00%
Dawn/Dusk	5	5.00%
Grand Total	100	100.00%

Number of Units	Crashes	%
2	89	89.00%
3	10	10.00%
4	1	1.00%
Grand Total	100	100.00%

SR-125 & Amelia-Olive Branch 2019-2023

Crash Summary Sheet

ODOT Location	Crashes	%
Four-Way Intersection	58	58.00%
Not An Intersection	25	25.00%
Private Driveway	17	17.00%
Grand Total	100	100.00%

Contour	Crashes	%
Straight Grade	6	6.00%
Straight Level	94	94.00%
Grand Total	100	100.00%

Roadway Departure	Crashes	%
No	96	96.00%
Yes	4	4.00%
Grand Total	100	100.00%

Intersection Related	Crashes	%
Yes	72	72.00%
No	28	28.00%
Grand Total	100	100.00%

Speed Related	Crashes	%
No	96	96.00%
Yes	4	4.00%
Grand Total	100	100.00%

Work Zone Related	Crashes	%
No	99	99.00%
Yes	1	1.00%
Grand Total	100	100.00%

Alcohol Related	Crashes	%
No	97	97.00%
Yes	3	3.00%
Grand Total	100	100.00%

Drug Related (Inc. Marijuana)	Crashes	%
No	99	99.00%
Yes	1	1.00%
Grand Total	100	100.00%

Marijuana Related	Crashes	%
No	100	100.00%
Grand Total	100	100.00%

Older Driver (65+)	Crashes	%
No	72	72.00%
Yes	28	28.00%
Grand Total	100	100.00%

Young Driver (15-25)	Crashes	%
No	60	60.00%
Yes	40	40.00%
Grand Total	100	100.00%

Motorcycle Involved	Crashes	%
No	100	100.00%
Grand Total	100	100.00%

SR-125 & Amelia-Olive Branch 2019-2023

Crash Summary Sheet

Unit 1 Summary

Unit 1 Pre-Crash Action	Crashes	%
Straight Ahead	55	55.00%
Making Left Turn	22	22.00%
Changing Lanes	7	7.00%
Slowing or Stopped In Traffic	6	6.00%
Making Right Turn	5	5.00%
Entering Traffic Lane	3	3.00%
Walking, Running, Jogging, Playing	1	1.00%
Backing	1	1.00%
Grand Total	100	100.00%

Unit 1 Object Struck	Crashes	%
Nothing Struck	99	99.00%
Curb	1	1.00%
Grand Total	100	100.00%

Unit 1 Direction From	Crashes	%
East	27	27.00%
West	20	20.00%
Southeast	13	13.00%
Northwest	13	13.00%
North	12	12.00%
Southwest	6	6.00%
South	6	6.00%
Northeast	3	3.00%
Grand Total	100	100.00%

Unit 1 Type	Crashes	%
Passenger Car	59	59.00%
Sport Utility Vehicle	22	22.00%
Pick up	14	14.00%
Passenger Van (minivan)	2	2.00%
Pedestrian/Skater	1	1.00%
Bicycle	1	1.00%
Cargo Van	1	1.00%
Grand Total	100	100.00%

Unit 1 Contributing Factor	Crashes	%
Following Too Closely/ACDA	47	47.00%
Failure to Yield	25	25.00%
Improper Lane Change	7	7.00%
None	4	4.00%
Ran Red Light	4	4.00%
Improper Start From a Parked Position	3	3.00%
Left of Center	3	3.00%
Unsafe Speed	2	2.00%
Improper Crossing	2	2.00%
Not Discernible	1	1.00%
Operating Defective Equipment	1	1.00%
Improper Backing	1	1.00%
Grand Total	100	100.00%

Unit 1 Traffic Control	Crashes	%
Signal	55	55.00%
No Control	44	44.00%
Roundabout	1	1.00%
Grand Total	100	100.00%

Unit 1 Posted Speed	Crashes	%
0	2	2.00%
25	1	1.00%
35	43	43.00%
40	5	5.00%
45	49	49.00%
Grand Total	100	100.00%

Unit 1 Direction To	Crashes	%
West	26	26.00%
South	14	14.00%
Northwest	13	13.00%
East	12	12.00%
North	12	12.00%
Northeast	11	11.00%
Southwest	6	6.00%
Southeast	6	6.00%
Grand Total	100	100.00%

Unit 1 Special Function	Crashes	%
None	100	100.00%
Grand Total	100	100.00%

SR-125 & Amelia-Olive Branch 2019-2023
Crash Summary Sheet

Unit 2 Summary

Unit 2 Pre-Crash Action	Crashes	%
Slowing or Stopped In Traffic	56	56.00%
Straight Ahead	37	37.00%
Making Left Turn	5	5.00%
Walking, Running, Jogging, Playing	1	1.00%
Making Right Turn	1	1.00%
Grand Total	100	100.00%

Unit 2 Contributing Factor	Crashes	%
None	94	94.00%
Following Too Closely/ACDA	3	3.00%
Failure to Yield	2	2.00%
Not Discernible	1	1.00%
Grand Total	100	100.00%

Unit 2 Direction From	Crashes	%
	1	1.00%
East	26	26.00%
North	15	15.00%
Northeast	14	14.00%
Northwest	10	10.00%
South	7	7.00%
Southeast	13	13.00%
West	14	14.00%
Grand Total	100	100.00%

Unit 2 Direction To	Crashes	%
	1	1.00%
East	12	12.00%
North	8	8.00%
Northwest	13	13.00%
South	15	15.00%
Southeast	10	10.00%
Southwest	14	14.00%
West	27	27.00%
Grand Total	100	100.00%

Unit 2 Type	Crashes	%
Passenger Car	54	54.00%
Sport Utility Vehicle	34	34.00%
Pick up	5	5.00%
Passenger Van (minivan)	3	3.00%
Single Unit Truck	1	1.00%
Unknown or Hit/Skip	1	1.00%
Cargo Van	1	1.00%
Pedestrian/Skater	1	1.00%
Grand Total	100	100.00%

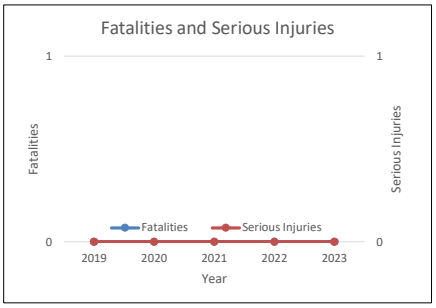
Unit 2 Special Function	Crashes	%
None	98	98.00%
Public Utility	1	1.00%
	1	1.00%
Grand Total	100	100.00%

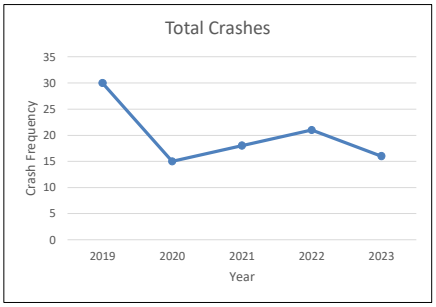
SR-125 & Amelia-Olive Branch 2019-2023

Crash Summary Sheet

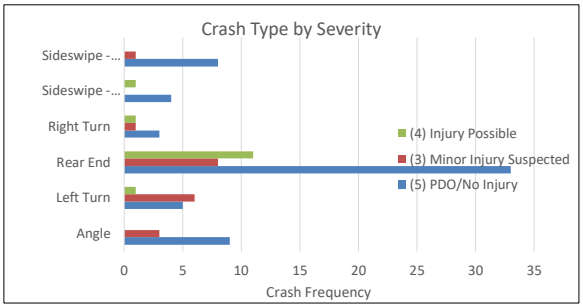
Crashes Per Year	20.00	Percent Injury	35.0%	EPDO	2.65

Year	Total Crashes	Fatalities	Serious Injuries
2019	30	0	0
2020	15	0	0
2021	18	0	0
2022	21	0	0
2023	16	0	0
Grand Total	100	0	0





Total Crashes Crash Type	Injury Level (3) Minor Injury	(4) Injury Possil	(5) PDO/No Inj	Grand Total
Rear End	8	11	33	52
Left Turn	6	1	5	12
Angle	3	0	9	12
Sideswipe - Passing	1	0	8	9
Sideswipe - meeting	0	1	4	5
Right Turn	1	1	3	5
Pedestrian	2	0	0	2
Pedalcycles	0	0	1	1
Other	0	0	1	1
Backing	0	0	1	1
Grand Total	21	14	65	100



Road Condition	Total Crashes	Fatalities	Serious Injuries
Dry	80	0	0
Slush	1	0	0
Wet	19	0	0
Grand Total	100	0	0

Weather	Total Crashes	Fatalities	Serious Injuries
Clear	61	0	0
Cloudy	26	0	0
Rain	13	0	0
Grand Total	100	0	0

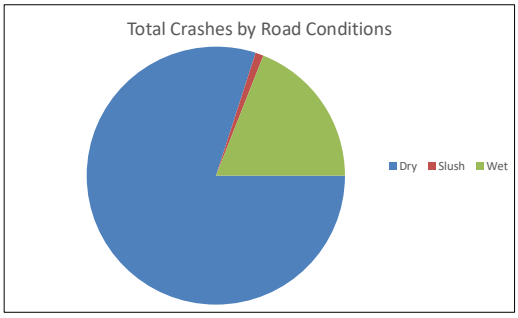
Crash Location	Total Crashes	Fatalities	Serious Injuries
Four-Way Intersection	58	0	0
Not An Intersection	25	0	0
Private Driveway	17	0	0
Grand Total	100	0	0

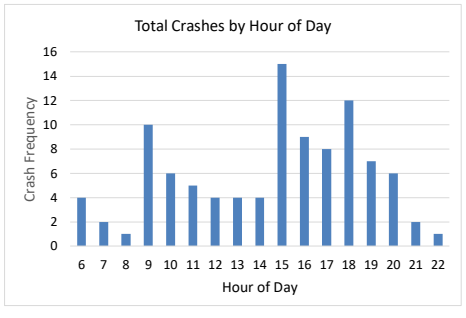
Roadway Contour	Total Crashes	Fatalities	Serious Injuries
Straight Level	94	0	0
Straight Grade	6	0	0
Grand Total	100	0	0

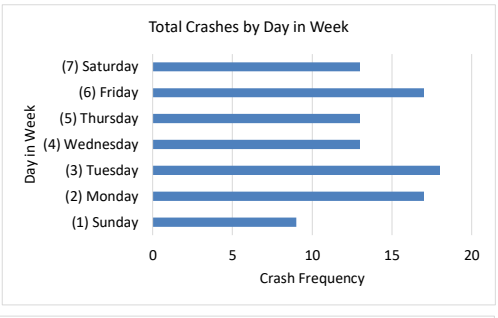
Hour of Day	Total Crashes
6	4
7	2
8	1
9	10
10	6
11	5
12	4
13	4
14	4
15	15
16	9
17	8
18	12
19	7
20	6
21	2
22	1
Grand Total	100

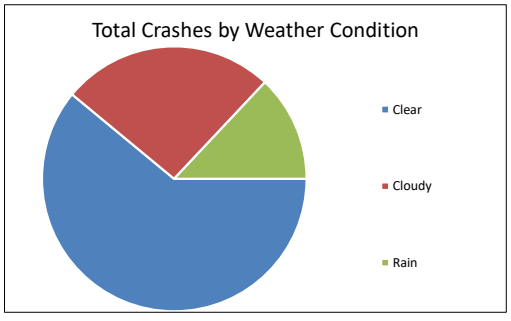
Month	Total Crashes
January	11
February	12
March	6
April	6
May	6
June	11
July	5
August	6
September	8
October	7
November	11
December	11
Grand Total	100

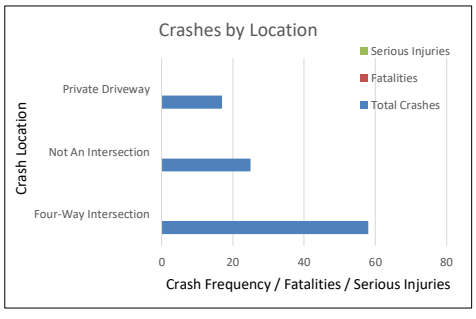
Day in Week	Total Crashes
(1) Sunday	9
(2) Monday	17
(3) Tuesday	18
(4) Wednesday	13
(5) Thursday	13
(6) Friday	17
(7) Saturday	13
Grand Total	100

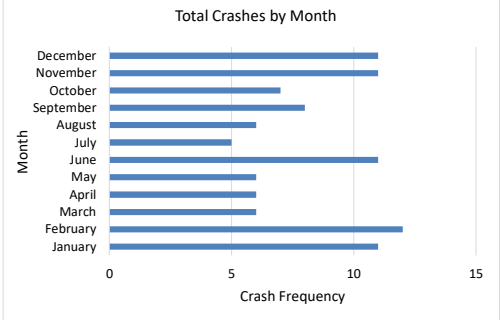












EMH&T

Engineers, Surveyors, Planners, Scientists

APPENDIX C

Capacity Analysis

HCS Two-Way Stop-Control Report

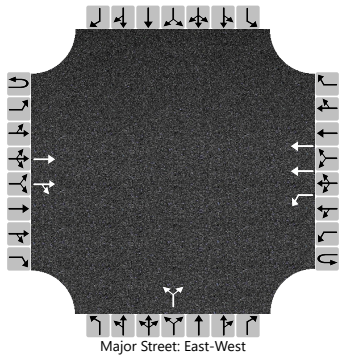
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	No Build AM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			600	40	0	90	1850			30		80				
Percent Heavy Vehicles (%)					0	2				1		1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						96					117					
Capacity, c (veh/h)						908					222					
v/c Ratio						0.11					0.53					
95% Queue Length, Q_{95} (veh)						0.4					2.8					
95% Queue Length, Q_{95} (ft)						10.2					70.6					
Control Delay (s/veh)						9.4					37.9					
Level of Service (LOS)						A					E					
Approach Delay (s/veh)					0.4				37.9							
Approach LOS					A				E							

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HCS Two-Way Stop-Control Report

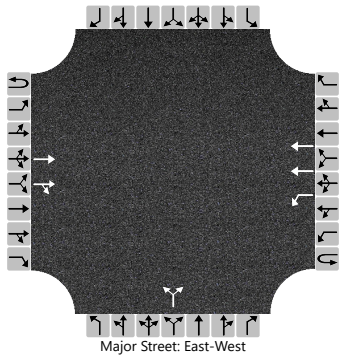
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	No Build PM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			1800	150	0	150	1250			10		140				
Percent Heavy Vehicles (%)					2	2				1		1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						161					161					
Capacity, c (veh/h)						259					60					
v/c Ratio						0.62					2.70					
95% Queue Length, Q_{95} (veh)						3.8					16.4					
95% Queue Length, Q_{95} (ft)						96.5					413.3					
Control Delay (s/veh)						39.3					915.7					
Level of Service (LOS)						E					F					
Approach Delay (s/veh)					4.2				915.7							
Approach LOS					A				F							

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HCS Two-Way Stop-Control Report

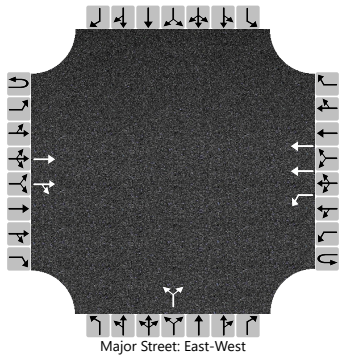
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	No Build AM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			660	50	0	90	2040			30		100				
Percent Heavy Vehicles (%)					2	2				1		1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						96					138					
Capacity, c (veh/h)						851					200					
v/c Ratio						0.11					0.69					
95% Queue Length, Q_{95} (veh)						0.4					4.3					
95% Queue Length, Q_{95} (ft)						10.2					108.4					
Control Delay (s/veh)						9.8					55.6					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)					0.4				55.6							
Approach LOS					A				F							

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HCS Two-Way Stop-Control Report

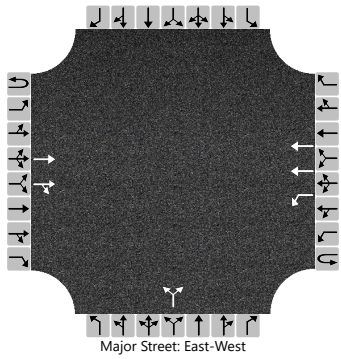
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	NoBuild PM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			1990	160	0	170	1380			10		150				
Percent Heavy Vehicles (%)					2	2				1		1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						183					172					
Capacity, c (veh/h)						213					14					
v/c Ratio						0.86					12.03					
95% Queue Length, Q_{95} (veh)						6.6					22.6					
95% Queue Length, Q_{95} (ft)						167.6					569.5					
Control Delay (s/veh)						76.7					5480.2					
Level of Service (LOS)						F					F					
Approach Delay (s/veh)					8.4				5480.2							
Approach LOS					A				F							

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HCS Two-Way Stop-Control Report

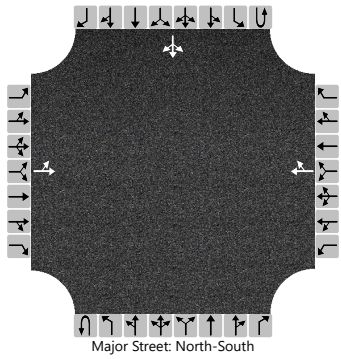
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	No Build AM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	White Oak Rd (NB) & Lewis Rd
North/South Street	White Oak Rd (SB)
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	0	0	0	0	1	0
Configuration		LT						TR							LTR	
Volume (veh/h)		70	10				30	40						40	0	90
Percent Heavy Vehicles (%)		1	1				3	3						1		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5				6.5	7.1						5.3		
Critical Headway (sec)		7.11	6.51				6.53	7.13						5.31		
Base Follow-Up Headway (sec)		3.5	4.0				4.0	3.9						3.1		
Follow-Up Headway (sec)		3.51	4.01				4.03	3.93						3.11		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		85						74						43		
Capacity, c (veh/h)		720						800						1158		
v/c Ratio		0.12						0.09						0.04		
95% Queue Length, Q_{95} (veh)		0.4						0.3						0.1		
95% Queue Length, Q_{95} (ft)		10.1						7.7								
Control Delay (s/veh)		10.7						10.0						8.2	0.3	0.3
Level of Service (LOS)		B						A						A	A	A
Approach Delay (s/veh)	10.7				10.0								2.8			
Approach LOS	B				A								A			

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HCS Two-Way Stop-Control Report

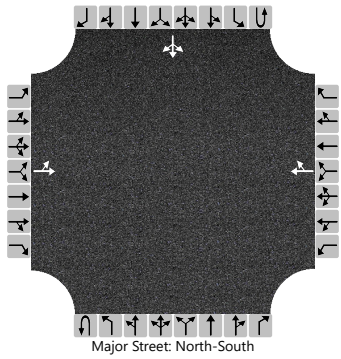
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	No Build PM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	White Oak Rd (NB) & Lewis Rd
North/South Street	White Oak Rd (SB)
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	0	0	0	0	1	0
Configuration		LT						TR							LTR	
Volume (veh/h)		130	30				30	20						110	0	190
Percent Heavy Vehicles (%)		1	1				0	0						1		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5				6.5	7.1						5.3		
Critical Headway (sec)		7.11	6.51				6.50	7.10						5.31		
Base Follow-Up Headway (sec)		3.5	4.0				4.0	3.9						3.1		
Follow-Up Headway (sec)		3.51	4.01				4.00	3.90						3.11		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		172						54						118		
Capacity, c (veh/h)		491						569						1158		
v/c Ratio		0.35						0.09						0.10		
95% Queue Length, Q_{95} (veh)		1.6						0.3						0.3		
95% Queue Length, Q_{95} (ft)		40.3						7.5								
Control Delay (s/veh)		16.2						12.0						8.5	1.0	1.0
Level of Service (LOS)		C						B						A	A	A
Approach Delay (s/veh)	16.2				12.0								3.7			
Approach LOS	C				B								A			

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HCS Two-Way Stop-Control Report

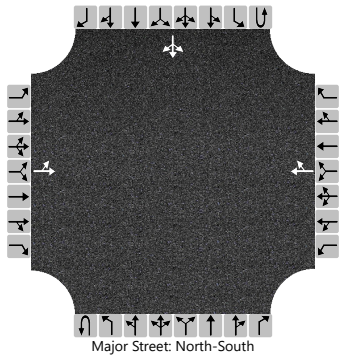
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	No Build AM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	White Oak Rd (NB) & Lewis Rd
North/South Street	White Oak Rd (SB)
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	0	0	0	0	1	0
Configuration		LT						TR							LTR	
Volume (veh/h)		80	10				30	50						40	0	100
Percent Heavy Vehicles (%)		1	1				3	3						1		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5				6.5	7.1						5.3		
Critical Headway (sec)		7.11	6.51				6.53	7.13						5.31		
Base Follow-Up Headway (sec)		3.5	4.0				4.0	3.9						3.1		
Follow-Up Headway (sec)		3.51	4.01				4.03	3.93						3.11		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		96						85						43		
Capacity, c (veh/h)		706						808						1158		
v/c Ratio		0.14						0.11						0.04		
95% Queue Length, Q_{95} (veh)		0.5						0.4						0.1		
95% Queue Length, Q_{95} (ft)		12.6						10.2								
Control Delay (s/veh)		10.9						10.0						8.2	0.3	0.3
Level of Service (LOS)		B						A						A	A	A
Approach Delay (s/veh)	10.9				10.0								2.6			
Approach LOS	B				A								A			

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HCS Two-Way Stop-Control Report

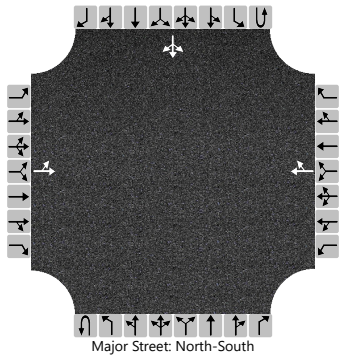
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	No Build PM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	White Oak Rd (NB) & Lewis Rd
North/South Street	White Oak Rd (SB)
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	0	0	0	0	1	0
Configuration		LT						TR							LTR	
Volume (veh/h)		140	30				40	20						120	0	210
Percent Heavy Vehicles (%)		1	1				0	0						1		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5				6.5	7.1						5.3		
Critical Headway (sec)		7.11	6.51				6.50	7.10						5.31		
Base Follow-Up Headway (sec)		3.5	4.0				4.0	3.9						3.1		
Follow-Up Headway (sec)		3.51	4.01				4.00	3.90						3.11		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		183						65						129		
Capacity, c (veh/h)		447						515						1158		
v/c Ratio		0.41						0.13						0.11		
95% Queue Length, Q_{95} (veh)		2.0						0.4						0.4		
95% Queue Length, Q_{95} (ft)		50.4						10.0								
Control Delay (s/veh)		18.5						13.0						8.5	1.1	1.1
Level of Service (LOS)		C						B						A	A	A
Approach Delay (s/veh)	18.5				13.0								3.8			
Approach LOS	C				B								A			

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HCS Two-Way Stop-Control Report

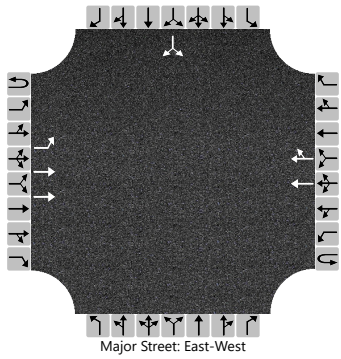
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	AM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & Bristol Lake Dr
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	Bristol Lake Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	10	630				1870	10						10		80
Percent Heavy Vehicles (%)	0	5												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.20												6.84		6.94
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.25												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11													95	
Capacity, c (veh/h)		277													137	
v/c Ratio		0.04													0.69	
95% Queue Length, Q_{95} (veh)		0.1													3.9	
95% Queue Length, Q_{95} (ft)		2.6													99.1	
Control Delay (s/veh)		18.5													76.4	
Level of Service (LOS)		C													F	
Approach Delay (s/veh)	0.3												76.4			
Approach LOS	A												F			

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HCS Two-Way Stop-Control Report

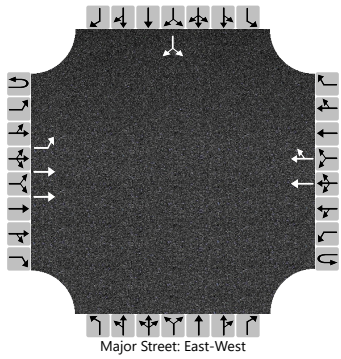
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	No Build PM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & Bristol Lake Dr
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	Bristol Lake Dr
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	60	1940				1240	20						10		50
Percent Heavy Vehicles (%)	0	1												4		4
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.12												6.88		6.98
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.54		3.34

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		63													63	
Capacity, c (veh/h)		528													105	
v/c Ratio		0.12													0.59	
95% Queue Length, Q_{95} (veh)		0.4													2.9	
95% Queue Length, Q_{95} (ft)		10.1													74.8	
Control Delay (s/veh)		12.7													80.1	
Level of Service (LOS)		B													F	
Approach Delay (s/veh)	0.4												80.1			
Approach LOS	A												F			

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HCS Two-Way Stop-Control Report

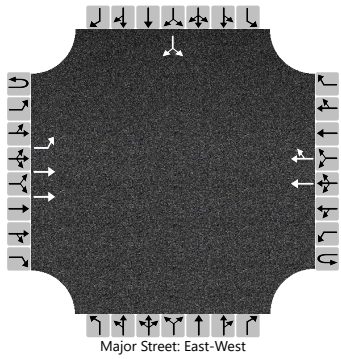
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	No Build AM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & Bristol Lake Dr
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	Bristol Lake Dr
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	10	700				2060	10						10		90
Percent Heavy Vehicles (%)	0	5												2		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.20												6.84		6.94
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.25												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11													105	
Capacity, c (veh/h)		231													109	
v/c Ratio		0.05													0.97	
95% Queue Length, Q_{95} (veh)		0.1													6.1	
95% Queue Length, Q_{95} (ft)		2.6													154.9	
Control Delay (s/veh)		21.4													150.2	
Level of Service (LOS)		C													F	
Approach Delay (s/veh)	0.3												150.2			
Approach LOS	A												F			

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HCS Two-Way Stop-Control Report

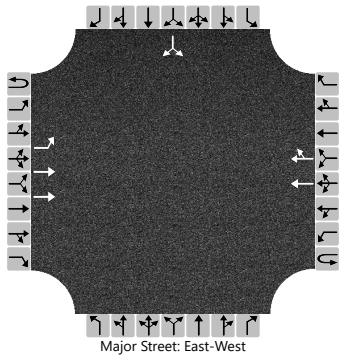
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	No Build PM DHV
Intersection Orientation	East-West
Project Description	CLE-125

Site Information

Intersection	SR 125 & Bristol Lake Dr
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	Bristol Lake Dr
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	70	2140				1370	20						10		50
Percent Heavy Vehicles (%)	0	1												4		4
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.12												6.88		6.98
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.54		3.34

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		73													63	
Capacity, c (veh/h)		469													71	
v/c Ratio		0.16													0.88	
95% Queue Length, Q_{95} (veh)		0.5													4.3	
95% Queue Length, Q_{95} (ft)		12.6													110.9	
Control Delay (s/veh)		14.1													173.1	
Level of Service (LOS)		B													F	
Approach Delay (s/veh)	0.4												173.1			
Approach LOS	A												F			

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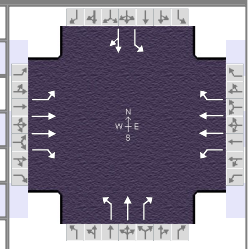
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	EMH&T			Duration, h	0.250
Analyst	C.Anderson	Analysis Date	9/27/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	AM Peak	PHF	0.93
Urban Street	SR 125	Analysis Year	2030	Analysis Period	1> 7:00
Intersection	Amelia-Olive Branch Rd	File Name	2030 AM_SR 125 & AOB.xus		
Project Description	2030 AM				

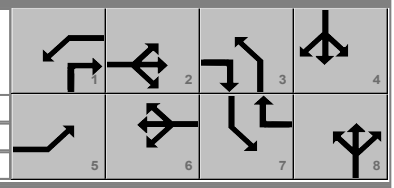


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	130	480	70	10	1490	150	90	30	10	130	40	290

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.0	42.0	7.0	11.0	0.0	0.0
Yellow	3.0	5.0	3.0	4.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	12.0	49.0	12.0	49.0	12.0	17.0	12.0	17.0
Change Period, ($Y+R_c$), s	5.0	7.0	5.0	7.0	5.0	6.0	5.0	6.0
Max Allow Headway (*MAH*), s	4.0	3.0	4.0	3.0	4.1	4.3	4.1	4.3
Queue Clearance Time (g_s), s	5.6	10.3	2.3	41.8	6.2	3.4	8.3	13.0
Green Extension Time (g_e), s	0.1	7.4	0.0	0.1	0.0	1.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	1.00	0.03	0.25	1.00	1.00	0.25	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	140	516	75	11	1602	161	97	32	11	140	355	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1752	1560	1767	1766	1572	1753	1841	1560	1725	1564	
Queue Service Time (g_s), s	3.6	8.3	2.1	0.3	39.8	4.7	4.2	1.4	0.5	6.3	11.0	
Cycle Queue Clearance Time (g_c), s	3.6	8.3	2.1	0.3	39.8	4.7	4.2	1.4	0.5	6.3	11.0	
Green Ratio (*g/C*)	0.54	0.47	0.54	0.54	0.47	0.54	0.20	0.12	0.20	0.20	0.12	
Capacity (*c*), veh/h	217	1636	849	527	1649	856	216	225	312	327	191	
Volume-to-Capacity Ratio (*X*)	0.644	0.316	0.089	0.020	0.972	0.188	0.447	0.143	0.034	0.428	1.856	
Back of Queue (*Q*), ft/ln (95 th percentile)	73	138	29	4	638	65	84	30	9	125	1074	
Back of Queue (*Q*), veh/ln (95 th percentile)	2.8	5.3	1.1	0.2	24.9	2.5	3.3	1.1	0.3	4.8	41.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.13	0.09	0.13	0.02	0.95	0.19	0.58	0.20	0.06	0.32	0.98	
Uniform Delay (d_1), s/veh	19.9	15.0	9.8	10.0	23.4	10.4	31.2	35.3	29.0	31.4	39.5	
Incremental Delay (d_2), s/veh	6.4	0.0	0.0	0.0	15.8	0.0	1.4	0.3	0.0	0.9	404.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	26.3	15.1	9.8	10.0	39.3	10.4	32.6	35.6	29.0	32.3	444.4	
Level of Service (LOS)	C	B	A	B	D	B	C	D	C	C	F	
Approach Delay, s/veh / LOS	16.7	B		36.5	D		33.0	C		327.9	F	
Intersection Delay, s/veh / LOS	77.6						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

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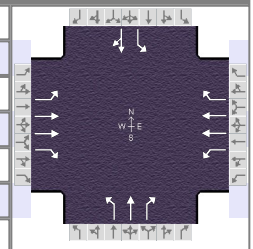
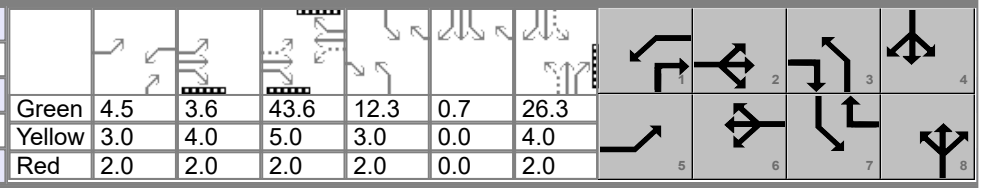
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	EMH&T			Duration, h	0.250
Analyst	C.Anderson	Analysis Date	9/27/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	PM Peak	PHF	0.98
Urban Street	SR 125	Analysis Year	2030	Analysis Period	1> 7:00
Intersection	Amelia-Olive Branch Rd	File Name	2030 PM_SR 125 & AOB.xus		
Project Description	2030 PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	260	1350	360	30	980	150	190	120	90	230	120	220

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	4.5	3.6	43.6	12.3	0.7	26.3	
Yellow	3.0	4.0	5.0	3.0	0.0	4.0	
Red	2.0	2.0	2.0	2.0	0.0	2.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	19.1	60.2	9.5	50.6	17.3	32.3	18.0	33.0
Change Period, ($Y+R_c$), s	6.0	7.0	5.0	7.0	5.0	6.0	5.0	6.0
Max Allow Headway (*MAH*), s	4.0	3.0	4.0	3.0	4.1	4.2	4.1	4.2
Queue Clearance Time (g_s), s	12.6	43.6	3.3	32.2	11.9	8.5	14.2	26.1
Green Extension Time (g_e), s	0.5	9.6	0.0	9.4	0.4	2.2	0.0	0.9
Phase Call Probability	1.00	1.00	0.64	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.23	0.11	1.00	0.13	0.03	0.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	265	1378	367	31	1000	153	194	122	92	235	347	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1795	1598	1767	1766	1572	1795	1885	1598	1795	1689	
Queue Service Time (g_s), s	10.6	41.6	16.3	1.3	30.2	6.8	9.9	6.5	5.4	12.2	24.1	
Cycle Queue Clearance Time (g_c), s	10.6	41.6	16.3	1.3	30.2	6.8	9.9	6.5	5.4	12.2	24.1	
Green Ratio (*g/C*)	0.49	0.44	0.55	0.40	0.36	0.47	0.32	0.22	0.26	0.33	0.23	
Capacity (*c*), veh/h	320	1593	872	157	1284	742	252	413	410	466	380	
Volume-to-Capacity Ratio (*X*)	0.829	0.865	0.421	0.194	0.779	0.206	0.770	0.296	0.224	0.504	0.913	
Back of Queue (*Q*), ft/ln (95 th percentile)	224	607	237	25	468	110	204	138	97	229	456	
Back of Queue (*Q*), veh/ln (95 th percentile)	8.9	24.1	9.4	1.0	18.3	4.3	8.1	5.5	3.9	9.1	18.1	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.40	0.42	1.10	0.11	0.70	0.33	1.41	0.95	0.67	0.60	0.41	
Uniform Delay (d_1), s/veh	25.4	30.2	16.1	27.2	33.9	18.6	33.9	39.2	35.2	31.5	45.4	
Incremental Delay (d_2), s/veh	10.8	2.2	0.1	0.6	1.0	0.1	5.2	0.4	0.3	0.9	22.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	36.3	32.4	16.2	27.8	34.9	18.6	39.1	39.6	35.5	32.3	68.1	
Level of Service (LOS)	D	C	B	C	C	B	D	D	D	C	E	
Approach Delay, s/veh / LOS	30.0	C		32.6	C		38.4	D		53.7	D	
Intersection Delay, s/veh / LOS	34.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

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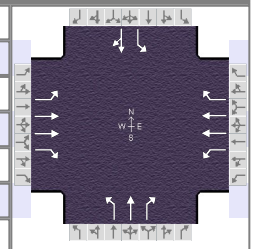
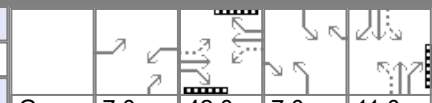
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	EMH&T			Duration, h	0.250
Analyst	C.Anderson	Analysis Date	9/27/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	AM Peak	PHF	0.93
Urban Street	SR 125	Analysis Year	2050	Analysis Period	1> 7:00
Intersection	Amelia-Olive Branch Rd	File Name	2050 AM_SR 125 & AOB.xus		
Project Description	2050 AM				

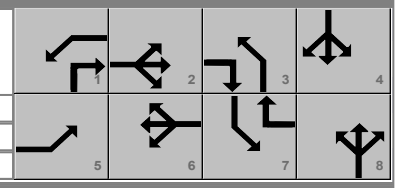


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	150	530	70	10	1650	160	90	30	10	150	50	320

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.0	42.0	7.0	11.0	0.0	0.0
Yellow	3.0	5.0	3.0	4.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	12.0	49.0	12.0	49.0	12.0	17.0	12.0	17.0
Change Period, (*Y+R c*), s	5.0	7.0	5.0	7.0	5.0	6.0	5.0	6.0
Max Allow Headway (*MAH*), s	4.0	3.0	4.0	3.0	4.1	4.3	4.1	4.3
Queue Clearance Time (*g s*), s	6.2	11.3	2.3	44.0	6.2	3.4	9.0	13.0
Green Extension Time (*g e*), s	0.0	8.7	0.0	0.0	0.0	1.1	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Max Out Probability	1.00	0.06	0.25	1.00	1.00	0.27	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	161	570	75	11	1774	172	97	32	11	161	398	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1752	1560	1767	1766	1572	1753	1841	1560	1725	1567	
Queue Service Time (*g s*), s	4.2	9.3	2.1	0.3	42.0	5.0	4.2	1.4	0.5	7.0	11.0	
Cycle Queue Clearance Time (*g c*), s	4.2	9.3	2.1	0.3	42.0	5.0	4.2	1.4	0.5	7.0	11.0	
Green Ratio (*g/C*)	0.54	0.47	0.54	0.54	0.47	0.54	0.20	0.12	0.20	0.20	0.12	
Capacity (*c*), veh/h	216	1636	849	502	1649	856	216	225	312	327	192	
Volume-to-Capacity Ratio (*X*)	0.746	0.348	0.089	0.021	1.076	0.201	0.447	0.143	0.034	0.494	2.077	
Back of Queue (*Q*), ft/ln (95 th percentile)	101	154	29	4	916	70	84	30	9	146	1287	
Back of Queue (*Q*), veh/ln (95 th percentile)	3.9	6.0	1.1	0.2	35.8	2.7	3.3	1.1	0.3	5.6	49.1	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.18	0.11	0.13	0.02	1.37	0.21	0.58	0.20	0.06	0.38	1.17	
Uniform Delay (*d 1*), s/veh	20.1	15.3	9.8	10.1	24.0	10.5	31.2	35.3	29.0	32.0	39.5	
Incremental Delay (*d 2*), s/veh	13.1	0.0	0.0	0.0	45.8	0.0	1.4	0.3	0.0	1.2	502.2	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	33.2	15.3	9.8	10.1	69.8	10.5	32.6	35.6	29.0	33.2	541.7	
Level of Service (LOS)	C	B	A	B	F	B	C	D	C	C	F	
Approach Delay, s/veh / LOS	18.4	B		64.3	E		33.0	C		395.0	F	
Intersection Delay, s/veh / LOS	105.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

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HCS Two-Way Stop-Control Report

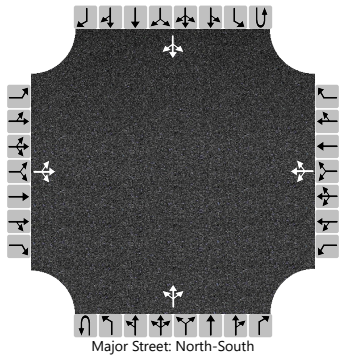
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	No Build AM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	Amelia Olive Branch Rd & Amelia Court Apar...
Jurisdiction	ODOT District 8
East/West Street	Amelia Court Apartments
North/South Street	Amelia-Olive Branch Rd
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		10	10	10		10	10	80		10	40	10		40	70	10
Percent Heavy Vehicles (%)		0	0	0		1	1	1		8				11		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.11	6.51	6.21		4.18				4.21		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.51	4.01	3.31		2.27				2.30		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			40				133			13				53		
Capacity, c (veh/h)			634				883			1448				1480		
v/c Ratio			0.06				0.15			0.01				0.04		
95% Queue Length, Q_{95} (veh)			0.2				0.5			0.0				0.1		
95% Queue Length, Q_{95} (ft)			5.0				12.6									
Control Delay (s/veh)			11.1				9.8			7.5	0.1	0.1		7.5	0.3	0.3
Level of Service (LOS)			B				A			A	A	A		A	A	A
Approach Delay (s/veh)	11.1				9.8				1.3				2.7			
Approach LOS	B				A				A				A			

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HCS Two-Way Stop-Control Report

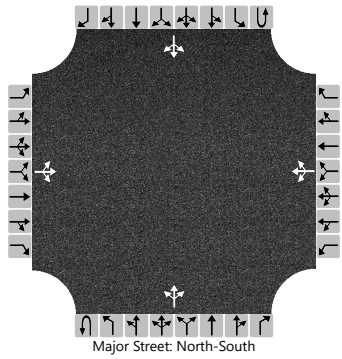
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	No Build PM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	Amelia Olive Branch Rd & Amelia Court Apar...
Jurisdiction	ODOT District 8
East/West Street	Amelia Court Apartments
North/South Street	Amelia-Olive Branch Rd
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		30	10	10		10	10	200		10	170	10		200	290	20
Percent Heavy Vehicles (%)		10	10	10		0	0	0		0				1		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.20	6.60	6.30		7.10	6.50	6.20		4.10				4.11		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.59	4.09	3.39		3.50	4.00	3.30		2.20				2.21		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			52				229			10				208		
Capacity, c (veh/h)			159				664			1248				1393		
v/c Ratio			0.33				0.34			0.01				0.15		
95% Queue Length, Q_{95} (veh)			1.3				1.5			0.0				0.5		
95% Queue Length, Q_{95} (ft)			35.1				37.5									
Control Delay (s/veh)			38.4				13.2			7.9	0.1	0.1		8.0	1.5	1.5
Level of Service (LOS)			E				B			A	A	A		A	A	A
Approach Delay (s/veh)	38.4				13.2				0.5				4.0			
Approach LOS	E				B				A				A			

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HCS Two-Way Stop-Control Report

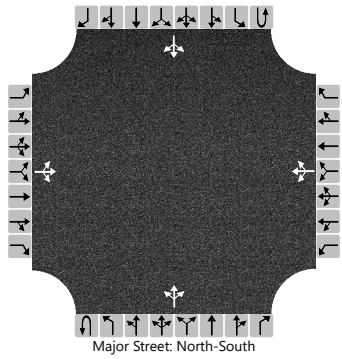
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	No Build AM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	Amelia Olive Branch Rd & Amelia Court Apar...
Jurisdiction	ODOT District 8
East/West Street	Amelia Court Apartments
North/South Street	Amelia-Olive Branch Rd
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		10	10	10		10	10	80		10	40	10		50	70	10
Percent Heavy Vehicles (%)		0	0	0		1	1	1		8				11		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.11	6.51	6.21		4.18				4.21		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.51	4.01	3.31		2.27				2.30		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			40				133			13				67		
Capacity, c (veh/h)			611				870			1448				1480		
v/c Ratio			0.07				0.15			0.01				0.05		
95% Queue Length, Q_{95} (veh)			0.2				0.5			0.0				0.1		
95% Queue Length, Q_{95} (ft)			5.0				12.6									
Control Delay (s/veh)			11.3				9.9			7.5	0.1	0.1		7.5	0.4	0.4
Level of Service (LOS)			B				A			A	A	A		A	A	A
Approach Delay (s/veh)	11.3				9.9				1.3				3.1			
Approach LOS	B				A				A				A			

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HCS Two-Way Stop-Control Report

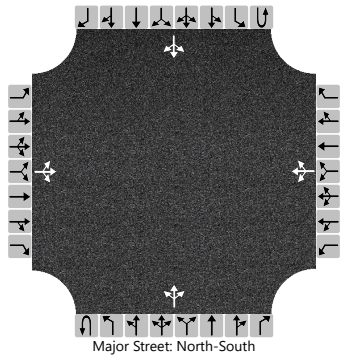
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	No Build PM DHV
Intersection Orientation	North-South
Project Description	CLE-125

Site Information

Intersection	Amelia Olive Branch Rd & Amelia Court Apar...
Jurisdiction	ODOT District 8
East/West Street	Amelia Court Apartments
North/South Street	Amelia-Olive Branch Rd
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		30	10	10		10	10	230		10	190	10		230	310	20
Percent Heavy Vehicles (%)		10	10	10		0	0	0		0				1		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.20	6.60	6.30		7.10	6.50	6.20		4.10				4.11		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.59	4.09	3.39		3.50	4.00	3.30		2.20				2.21		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			52				260			10				240		
Capacity, c (veh/h)			121				633			1227				1369		
v/c Ratio			0.43				0.41			0.01				0.18		
95% Queue Length, Q_{95} (veh)			1.9				2.0			0.0				0.6		
95% Queue Length, Q_{95} (ft)			51.3				50.0									
Control Delay (s/veh)			55.7				14.6			8.0	0.1	0.1		8.2	1.8	1.8
Level of Service (LOS)			F				B			A	A	A		A	A	A
Approach Delay (s/veh)	55.7				14.6				0.5				4.4			
Approach LOS	F				B				A				A			

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UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED AT EACH PROJECT INTERSECTION WITHIN THE CONSTRUCTION LIMITS WITH THEIR RESPECTIVE OWNERS:

CLE-125-5.09 - SR-125 & AMELIA OLIVE BRANCH RD.

ELECTRIC:
DUKE ENERGY - DISTRIBUTION
2010 DANA AVENUE
CINCINNATI, OHIO 45207
ATTN: CHRIS TEPE
PHONE: (513) 458-3855

TELECOM:
CINCINNATI BELL (AERIAL)
209 WEST 7TH STREET
BLDG. 121-900
CINCINNATI, OH 45202
ATTN: ROBERT STROCHINSKY
PHONE: (513) 565-6014

GAS:
DUKE ENERGY
139 EAST 4TH STREET
ROOM 460A
CINCINNATI, OHIO 45202
ATTN: DENISE GROSS
PHONE: (513) 287-2532
ATTN: MARK BRANSCUM
PHONE: (513) 287-2517

TELECOM:
MCI
120 RAVINE STREET
AKRON, OH 44303
ATTN: AL GUEST
PHONE: (330) 253-8267

TELECOM:
CINCINNATI BELL (UNDERGROUND)
221 EAST 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
ATTN: DERRICK BROWN
PHONE: (513) 566-3154

TELECOM:
CHARTER COMMUNICATION/SPECTRUM
10920 KENWOOD ROAD
BLUE ASH, OHIO 45242
E-MAIL: DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM

WATER:
CLERMONT COUNTY WATER RESOURCES DEPARTMENT
4400 HASKELL LANE
BATAVIA, OH 45103
ATTN: TIM CHERRY
PHONE: (513) 479-4031

HAM-27-7.11 - COLERAIN AVE. (US-27) & VIRGINIA AVE.

ELECTRIC:
DUKE ENERGY - DISTRIBUTION
2010 DANA AVENUE
CINCINNATI, OHIO 45207
ATTN: AARON WRIGHT
PHONE: (513) 458-3856

GAS:
DUKE ENERGY
139 EAST 4TH STREET
ROOM 460A
CINCINNATI, OHIO 45202
ATTN: DENISE GROSS
PHONE: (513) 287-2532
ATTN: MARK BRANSCUM
PHONE: (513) 287-2517

TELECOM:
MCI
120 RAVINE STREET
AKRON, OH 44303
ATTN: AL GUEST
PHONE: (330) 253-8267

TELECOM:
CINCINNATI BELL (AERIAL)
209 WEST 7TH STREET
BLDG. 121-900
CINCINNATI, OH 45202
ATTN: ROBERT STROCHINSKY
PHONE: (513) 565-6014

TELECOM:
CINCINNATI BELL (UNDERGROUND)
221 EAST 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
ATTN: DERRICK BROWN
PHONE: (513) 566-3154

TELECOM:
LIGHTOWER FIBER NETWORKS
10188 INTERNATIONAL BOULEVARD
CINCINNATI, OH 45246
ATTN: CRAIG WHEELER
PHONE: (614) 506-2846
E-MAIL: CWHEELER@LIGHTOWER.COM

TELECOM:
CHARTER COMMUNICATION/SPECTRUM
10920 KENWOOD ROAD
BLUE ASH, OHIO 45242
E-MAIL: DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM

WATER:
GREATER CINCINNATI WATER WORKS
4747 SPRING GROVE AVENUE
CINCINNATI, OH 45232
ATTN: JON HUNSEDER
PHONE: (513) 591-5056

SANITARY SEWER:
METROPOLITAN SEWER DISTRICT
1600 GEST STREET
CINCINNATI, OH 45204
ATTN: ROB FRANKLIN
PHONE: (513) 557-7188
INSPECTIONS
ATTN: ALICE OLIVER
PHONE: (513) 244-1369
E-MAIL: ALICE.OLIVER@CINCINNATI-OH.GOV
EMERGENCY REPAIRS (24 HOUR)
MSD COLLECTIONS
PHONE: (513) 352-4900

STORM SEWER:
CINCINNATI STORMWATER MANAGEMENT UTILITY
4747 SPRING GROVE AVENUE
CINCINNATI, OH 45232
ATTN: ROBERT GOODPASTER
PHONE: (513) 591-7746

TRAFFIC SIGNALS:
CITY OF CINCINNATI TRAFFIC ENGINEERING
801 PLUM STREET, ROOM 320
CINCINNATI, OH 45202
ATTN: LINDA KISER
PHONE: (513) 352-3730

HAM-27-12.97 - COLERAIN AVE. (US-27) & ROUND TOP RD.

ELECTRIC:
DUKE ENERGY - DISTRIBUTION
2010 DANA AVENUE
CINCINNATI, OHIO 45207
ATTN: AARON WRIGHT
PHONE: (513) 458-3856

GAS:
DUKE ENERGY
139 EAST 4TH STREET
ROOM 460A
CINCINNATI, OHIO 45202
ATTN: DENISE GROSS
PHONE: (513) 287-2532
ATTN: MARK BRANSCUM
PHONE: (513) 287-2517

TELECOM:
CHARTER COMMUNICATION/SPECTRUM
10920 KENWOOD ROAD
BLUE ASH, OHIO 45242
E-MAIL: DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM

TELECOM:
CINCINNATI BELL (AERIAL)
209 WEST 7TH STREET
BLDG. 121-900
CINCINNATI, OH 45202
ATTN: ROBERT STROCHINSKY
PHONE: (513) 565-6014

TELECOM:
CINCINNATI BELL (UNDERGROUND)
221 EAST 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
ATTN: DERRICK BROWN
PHONE: (513) 566-3154

WATER:
GREATER CINCINNATI WATER WORKS
4747 SPRING GROVE AVENUE
CINCINNATI, OH 45232
ATTN: JON HUNSEDER
PHONE: (513) 591-5056

SANITARY SEWER:
METROPOLITAN SEWER DISTRICT
1600 GEST STREET
CINCINNATI, OH 45204
ATTN: ROB FRANKLIN
PHONE: (513) 557-7188
INSPECTIONS
ATTN: ALICE OLIVER
PHONE: (513) 244-1369
E-MAIL: ALICE.OLIVER@CINCINNATI-OH.GOV
EMERGENCY REPAIRS (24 HOUR)
MSD COLLECTIONS
PHONE: (513) 352-4900

STORM SEWER:
CINCINNATI STORMWATER MANAGEMENT UTILITY
4747 SPRING GROVE AVENUE
CINCINNATI, OH 45232
ATTN: ROBERT GOODPASTER
PHONE: (513) 591-7746

BUT-4-7.07 - ERIE BLVD. (SR-4) & GRAND BLVD.

UTILITIES ENGINEERING:
CITY OF HAMILTON
345 HIGH STREET, SUITE 450
HAMILTON, OHIO 45011
ATTN: RICH ENGLE
PHONE: (513) 785-7280

ELECTRIC:
CITY OF HAMILTON
345 HIGH STREET, SUITE 450
HAMILTON, OHIO 45011
ATTN: JIM MARSHALL
PHONE: (513) 785-7221

ELECTRIC:
DUKE ENERGY - TRANSMISSION
139 EAST 4TH STREET
ROOM 552A
CINCINNATI, OHIO 45202
ATTN: MICHAEL ELLIS
PHONE: (513) 287-3733

TELECOM:
CINCINNATI BELL (AERIAL)
209 WEST 7TH STREET
BLDG. 121-900
CINCINNATI, OH 45202
ATTN: ROBERT STROCHINSKY
PHONE: (513) 565-6014

TELECOM:
CHARTER COMMUNICATION/SPECTRUM
10920 KENWOOD ROAD
BLUE ASH, OHIO 45242
E-MAIL: DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM

GAS, WATER, SANITARY:
CITY OF HAMILTON
345 HIGH STREET, SUITE 450
HAMILTON, OHIO 45011
ATTN: JOY RODENBURGH
PHONE: (513) 785-7280

STORM:
CITY OF HAMILTON
345 HIGH STREET, SUITE 450
HAMILTON, OHIO 45011
ATTN: ALLEN MESSER
PHONE: (513) 785-7280

TELECOM:
LIGHTOWER FIBER NETWORKS
10188 INTERNATIONAL BOULEVARD
CINCINNATI, OH 45246
ATTN: CRAIG WHEELER
PHONE: (614) 506-2846
E-MAIL: CWHEELER@LIGHTOWER.COM

TELECOM:
CINCINNATI BELL (UNDERGROUND)
221 EAST 4TH STREET
BLDG. 121-900
CINCINNATI, OH 45201
ATTN: DERRICK BROWN
PHONE: (513) 566-3154

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

DUKE ENERGY OVERHEAD ELECTRIC

THE CONTRACTOR SHALL COMPLY WITH OSHA REQUIREMENTS WHEN WORKING AROUND OVERHEAD ELECTRIC LINES AND EQUIPMENT. AT NO TIME SHOULD WORKERS VIOLATE THE CLEARANCE DISTANCE ESTABLISHED BY OSHA OR THEIR OWN COMPANY'S SAFETY STANDARDS REGARDING DUKE'S ELECTRIC LINES AND SAFE WORKING DISTANCE. FOR THE 13KV ENERGIZED ELECTRICAL LINES, A 2' VERTICAL CLEARANCE BETWEEN EFFECTIVELY GROUNDED NEUTRALS AND 5.5' OF VERTICAL CLEARANCE BETWEEN PHASE TO THE PROPOSED SIGNAL POLES (NATIONAL ELECTRIC SAFETY CODE, RULE 324, TABLE 234-1). THE METHOD OF INSTALLATION OR REMOVAL OF THE TRAFFIC SIGNAL POLES SHALL BE IN COMPLIANCE WITH OSHA REQUIREMENTS AND IT WILL NEED TO BE PERFORMED BY A QUALIFIED LINEMAN WHO CAN WORK UP TO 13KV WHILE UTILIZING AN INSULATED BOOM TRUCK OR CRANE WITH THE PROPER PPE.

ANY COVER UP REQUIRED FROM DUKE ELECTRIC IS GOOD FOR VISUAL IDENTIFICATION ONLY AND NOT TO BE USED FOR INSULATION PURPOSES. TO REQUEST COVER UP, THE CONTRACTOR MUST CALL 1-800-544-6900 AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF NEEDING THIS SERVICE. PROCEED WITH CAUTION WHEN WORKING NEAR ELECTRIC OVERHEAD AND/OR UNDERGROUND FACILITIES.

CALCULATED GRS
CHECKED NAU

GENERAL NOTES

D08-HSIP-SIGNALS

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GREATER MIAMI SOLE SOURCE AQUIFER

THIS PROJECT IS LOCATED IN OR NEAR THE GREATER MIAMI SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL NOT PERFORM PROJECT RELATED REFUELING AND VEHICLE MAINTENANCE ACTIVITIES AT THE INTERSECTION OF BUT-4 & GRAND BOULEVARD. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT HAMILTON FIRE STATION 27 (513-785-7501) OR THE OHIO EPA'S SPILLS HOTLINE (1-800-282-9378) FOR CLEAN-UP OF THE SPILL.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD:	ODOT VRS
MONUMENT TYPE:	IRON PIN SET W/ CAP

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID 12B

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83 (2011)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR:	N/A (ON GRID)
ORIGIN OF COORDINATE SYSTEM:	0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

ITEM 202, REMOVAL MISC.: BOLLARD

THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIALS REQUIRED TO REMOVE A BOLLARD. ALL WORK, LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 202, REMOVAL MISC.: BOLLARD.

ITEM SPECIAL, BOLLARD

THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIALS REQUIRED TO REPLACE A BOLLARD SIMILAR TO THE ONE REMOVED. ALL WORK, LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM SPECIAL, BOLLARD.

ITEM 202, CURB AND GUTTER REMOVED, AS PER PLAN
ITEM 202, CURB REMOVED, AS PER PLAN

THE INTENT OF THESE ITEMS IS TO REMOVE CURB AND GUTTER OR CURB WHERE INDICATED IN THIS SET OF PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE EXISTING CURBS IN A MANNER THAT DOES NOT DAMAGE OTHER EXISTING ITEMS MEANT TO REMAIN IN PLACE. INCLUDED IN THIS ITEM OF WORK, IF DEEMED NECESSARY, THE CONTRACTOR SHALL BE PERMITTED TO REMOVE A PORTION OF THE EXISTING ASPHALT PAVEMENT NECESSARY TO PREPARE THE AREA FOR THE PROPOSED WORK. ALL EXTRA REMOVAL MUST BE APPROVED BY THE ENGINEER. ALL WORK, LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR ITEM 202, CURB AND GUTTER REMOVED, AS PER PLAN / ITEM 202 CURB REMOVED, AS PER PLAN.

ITEM 609, COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN
ITEM 609, CURB, TYPE 6, AS PER PLAN

THE INTENT OF THESE ITEMS IS TO INSTALL CURB AND GUTTER, TYPE 2, AS PER PLAN OR CURB, TYPE 6, AS PER PLAN WHERE INDICATED IN THIS SET OF PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING THE PROPOSED CURBS IN ACCORDANCE WITH CURRENT STANDARDS AND THE 2019 C&MS. INCLUDED WORK SHALL BE THE RESTORATION TO THE EXISTING PAVEMENT IN AREAS WHERE PORTIONS OF THE EXISTING PAVEMENT WERE REMOVED DURING CURB REMOVAL PROCESS. RESTORATION SHALL BE TO THE ELEVATION OF THE PROPOSED SURFACE COURSE. ALL WORK, LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR ITEM 609, COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN AND ITEM 609, CURB, TYPE 6, AS PER PLAN.

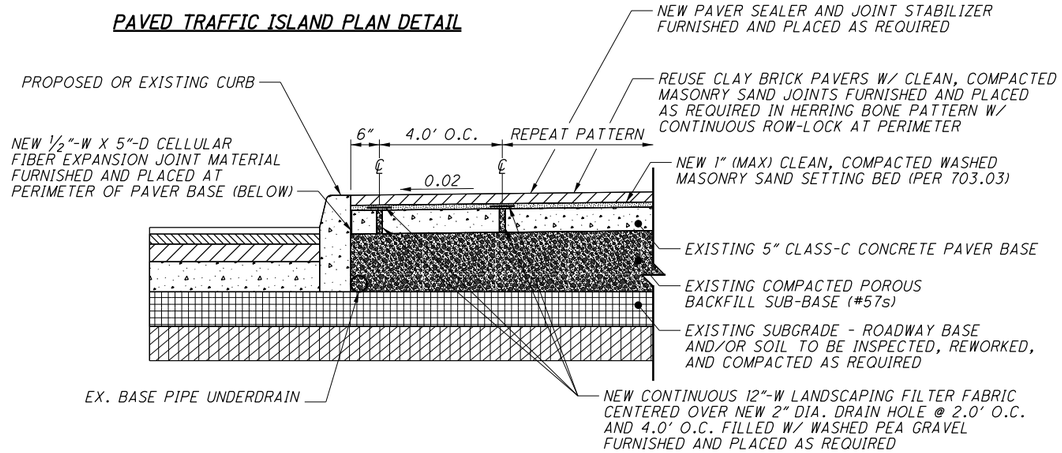
ITEM 608, CURB RAMP, AS PER PLAN

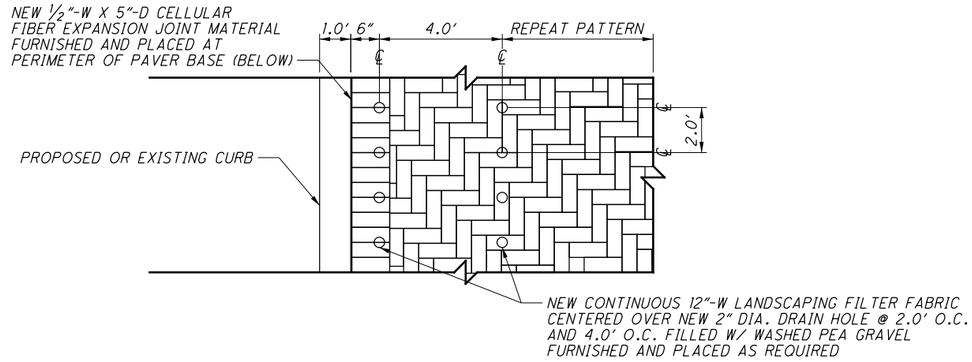
THE INTENT OF THIS ITEM IS TO INSTALL ADA CURB RAMPS WHERE INDICATED IN THIS SET OF PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE EXISTING WALK AND OR CURB AND GUTTER IN A MANNER THAT DOES NOT DAMAGE OTHER AREAS MEANT TO REMAIN IN PLACE (SEE CURRENT STANDARD DRAWING BP-7.1). AS THESE INSTALLATIONS ARE BEING MADE TO FIT EXISTING CONDITIONS, VARIATIONS FROM STANDARD MAY OCCUR. ANY DEVIATIONS FROM DETAIL IN THESE PLANS MUST FIRST BE APPROVED BY THE ENGINEER. RESTORATION TO EXISTING PAVEMENT AREAS IN FRONT OF THE PROPOSED CURB RAMPS SHALL BE INCLUDED IN THIS ITEM OF WORK. RESTORATION SHALL BE MADE UP TO AND INCLUDE THE SURFACE COURSE. ALL WORK, LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 608, CURB RAMP, AS PER PLAN.

ITEM 609, 6" CONCRETE TRAFFIC ISLAND, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THE ITEM IN PLACE, INCLUDING, BUT NOT LIMITED TO, CURB SAW CUTTING, REMOVAL AND RE-USE OF BRICK, SEALER, MASONRY SAND, AND EXPANSION JOINT MATERIAL. ALL WORK, LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 609, 6" CONCRETE TRAFFIC ISLAND, AS PER PLAN.

PAVED TRAFFIC ISLAND PLAN DETAIL





CENTERLINE CONSTRUCTION REFERENCES AND BENCHMARKS - CLE-125-5.09

			GRID			
STATION	OFFSET (FT)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
284+00.00	0.00	℄	382915.89	1476467.72		POT
285+08.19	39.11	LT.	382878.08	1476576.37	893.46	IP W/ PLASTIC CAP
285+13.69	63.54	RT.	382794.91	1476515.95	892.89	IP W/ PLASTIC CAP
287+00.00	0.00	℄	382726.83	1476700.65		POT
PROJECT SCALE FACTOR: ON GRID						

CENTERLINE CONSTRUCTION REFERENCES AND BENCHMARKS - HAM-27-7.11

			GRID			
STATION	OFFSET (FT)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
206+33.99	105.32	RT.	430412.92	1386764.75	506.90	IP W/ PLASTIC CAP
208+00.00	0.00	℄	430515.90	1386624.74		POT
208+57.03	119.92	RT.	430583.23	1386739.19	507.35	IP W/ PLASTIC CAP
211+00.00	0.00	℄	430814.74	1386598.40		POT
PROJECT SCALE FACTOR: ON GRID						

CENTERLINE CONSTRUCTION REFERENCES AND BENCHMARKS - HAM-27-12.97

			GRID			
STATION	OFFSET (FT)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
655+00.00	0.00	℄	458282.97	1375659.86		POT
656+60.52	65.99	RT.	458455.09	1375682.14	872.06	MAG NAIL SET
656+64.00	85.25	LT.	458419.37	1375535.14	875.37	MAG NAIL SET
658+00.00	0.00	℄	458572.78	1375582.36		POT
PROJECT SCALE FACTOR: ON GRID						

CENTERLINE CONSTRUCTION REFERENCES AND BENCHMARKS - BUT-4-7.07

			GRID			
STATION	OFFSET (FT)	SIDE	NORTHING	EASTING	ELEVATION	DESCRIPTION
10080+00.00	0.00	℄	510073.62	1389208.41		POT
10080+79.63	101.79	LT.	509981.48	1389299.02	606.30	IP W/ PLASTIC CAP
10082+17.15	3.29	RT.	509858.73	1389177.00	605.92	IP W/ PLASTIC CAP
10083+00.00	0.00	℄	509776.15	1389169.53		POT
PROJECT SCALE FACTOR: ON GRID						

CALCULATED GRS CHECKED NAU

GENERAL NOTES

D08-HSIP-SIGNALS

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POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM DUKE ENERGY AT THE LOCATIONS INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC.). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF HIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 120 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY.

EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, CABINET, UNINTERRUPTIBLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION/INTERCONNECT EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NON-INTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL ENSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDONED, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

ITEM 632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES OR MAST ARM SUPPORTS WITH FOUNDATIONS (REMOVED TO 12" BELOW GRADE), CONTROLLER WITH CABINET, CONTROLLER CABINET FOUNDATION AND WORK PAD, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. AS INDICATED ON THE TRAFFIC SIGNAL REMOVAL CHART, REMOVED ITEMS SHALL BE REMOVED FOR SALVAGE, REUSE, OR DISPOSED OF BY THE CONTRACTOR. FOR ITEMS TO BE DELIVERED TO LOCAL AGENCIES, CONTACT THE MAINTAINING AGENCY LISTED TO MAKE MUTUALLY AGREEABLE ARRANGEMENTS.

ODOT DISTRICT 8: JIM JUDD (513-933-6692)

CITY OF HAMILTON: SCOTT HOOVER (513-785-7294)

CITY OF CINCINNATI: TRAFFIC SERVICES BUREAU SUPERVISOR (513-591-6092)

IN THE EVENT THE SALVAGED ITEMS ARE NOT ACCEPTED BY THE LOCAL AGENCY, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL REMAINING ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

THE FOLLOWING CITY OF CINCINNATI GENERAL NOTES APPLY TO THE COLERAIN AVE (US-27) & VIRGINIA AVE (HAM-27-7.11) INTERSECTION

EQUIPMENT QUALITY

ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND OF FIRST QUALITY AS PER SPECIFICATION 1303.

CONSTRUCTION NOTIFICATION

TEN BUSINESS DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING THE PROJECT ENGINEER WILL NOTIFY THE CITY OF CINCINNATI LPA COORDINATOR OF THE PRECONSTRUCTION MEETING'S DATE, TIME, AND LOCATION. CONTACT CITY OF CINCINNATI, DEPARTMENT OF TRANSPORTATION AND ENGINEERING, DIRECTOR'S OFFICE, AT (513) 352-2366, ATTENTION: CHRIS KELLY AT (513) 352-3721 OR BY EMAIL AT CHRIS.KELLY@CINCINNATI-OH.GOV.

THE CITY OF CINCINNATI'S CITIZENS AND BUSINESSES HOST MANY MAJOR EVENTS THAT MAY AFFECT TRANSPORTATION ASSETS WITHIN THE PROJECT LIMITS. CITY ISSUED PERMITS MAY REQUIRE MAJOR EVENT WORK RESTRICTIONS ON THE CONTRACTOR'S ACTIVITIES. THE CITY MAINTAINS A LIST OF KNOWN MAJOR EVENTS AT THE FOLLOWING WEBSITE:

HTTP://CINCINNATI-OH.GOV/POLICE/SPECIAL-EVENTS-REGULATIONS-AUCTIONS/EVENT-PERMITS/

PERMITS

A CITY OF CINCINNATI DEPARTMENT OF TRANSPORTATION AND ENGINEERING (DOTE) PERMIT IS REQUIRED PRIOR TO THE ODOT CONTRACTOR COMMENCING WORK IN THE CITY OF CINCINNATI'S PUBLIC RIGHT-OF-WAY. PERMIT APPLICATIONS FOR STREET USE, STREET BARRICADE, STREET OPENING, ETC. MAY BE MADE AT (513) 352-3463 OR AT ROOM 425, CITY HALL, 801 PLUM STREET CINCINNATI, OHIO 45202.

THE CITY OF CINCINNATI RESTRICTS NIGHTTIME CONSTRUCTION WORK BETWEEN THE HOURS OF 11:00 P.M. AND 7:00 A.M. CITY ISSUED PERMITS WILL REQUIRE THE CONTRACTOR TO SECURE THE CITY ENGINEER'S APPROVAL FOR NIGHTTIME WORK.

ITEM 625, CONDUIT, CONCRETE ENCASED, AS PER PLAN, 2"

ITEM 625, CONDUIT, CONCRETE ENCASED, AS PER PLAN, 3"

THIS ITEM SHALL BE AS PER C&MS 625 AND 725 WITH THE FOLLOWING EXCEPTIONS.

CONDUIT SHALL BE POLYVINYL CHLORIDE (PVC) SCHEDULE 40, TYPE II, WITH CDF ENCASEMENT. SIZE AS SPECIFIED IN THE PLANS.

CONDUIT SHALL BE INSTALLED AS PER CITY OF CINCINNATI STANDARD DRAWING ES-2-1.

ALL LABOR, MATERIAL, AND EQUIPMENT TO PERFORM THE WORK SHALL BE PAID FOR UNDER ITEM 625, CONDUIT, CONCRETE ENCASED, AS PER PLAN, 2" AND ITEM 625, CONDUIT, CONCRETE ENCASED, AS PER PLAN, 3".

TEST HOLE PERFORMED

IT IS ANTICIPATED THAT THE CONTRACTOR WILL ENCOUNTER UNDERGROUND UTILITIES WHILE EXCAVATING FOR SIGNAL SUPPORT FOUNDATIONS OR SIMILAR FOUNDATIONS. AFTER ACCURATELY IDENTIFYING THE PROPOSED LOCATION OF THE FOUNDATION, AS SHOWN IN THE PLANS AND AFTER MODIFYING THAT LOCATION, IF NECESSARY, BASED ON THE FIELD MARKING OF UNDERGROUND UTILITY LOCATION, THE CONTRACTOR DISCOVERS A UTILITY CONFLICT DURING THE EXCAVATION OPERATION, THE CONTRACTOR WILL BE COMPENSATED FOR EACH PARTIAL FOUNDATION EXCAVATION ACCORDING TO THE BID PRICE.

BEFORE THE CONTRACTOR BEGINS THE EXCAVATION AT THE MODIFIED LOCATION, THE CONTRACTOR SHALL VERIFY THAT THERE WILL BE NO OVERHEAD UTILITY CONFLICTS RESULTING FROM THE NEW SIGNAL SUPPORT LOCATION. NEW SUPPORT LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.

THE WORK WILL INCLUDE BACKFILLING, COMPACTING, AND RESTORATION OF THE EXCAVATION TO THE SITE'S ORIGINAL CONDITION.

EXCAVATIONS SHALL NOT BE LEFT OPEN OVERNIGHT.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER EACH ITEM 632 TEST HOLE PERFORMED TO BE USED AT THE DIRECTION OF THE ENGINEER.

ITEM 632, TEST HOLE PERFORMED 16 EACH

ITEM 625, PULL BOX MISC.: TYPE B (CINCINNATI)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A TYPE B CONCRETE PULL BOX AS PER CITY OF CINCINNATI SUPPLEMENTAL SPECIFICATION 1322 AND STANDARD DRAWING ES-2-1.

PULL BOXES MAY BE CAST-IN-PLACE OR PRECAST. PRECAST PULL BOXES SHALL HAVE REINFORCING INCLUDED. REFER TO THE STANDARD DRAWING ES-2-1. ALL PULL BOXES IN SIDEWALK OR STREET AREAS SHALL HAVE THE FRAME AND LID CAST INTEGRAL WITH FINAL SIDEWALK OR PAVING. PRECAST PULL BOXES WITH INTEGRAL FRAMES AND LIDS SHALL NOT BE PERMITTED IN SIDEWALK/PAVEMENT AREAS.

PAYMENT FOR ITEM 625, PULL BOX, MISC.: TYPE B (CINCINNATI) SHALL BE MADE AT THE UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM 625, PULL BOX REMOVED, AS PER PLAN

THIS ITEM SHALL BE AS PER C&MS 625, WITH THE ADDITION THAT ANY PULL BOXES REMOVED IN SIDEWALK AREAS SHALL HAVE 4" CONCRETE WALK, AS PER ITEM 608, PLACED OVER THE DISTURBED AREA.

ITEM 630, SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

ITEM 630, SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 630 AND 730, THE HANGER ASSEMBLIES AND SUPPORT ASSEMBLIES SHALL BE PAINTED TO MATCH TO THE SIGNAL AND SIGN SUPPORTS. ALL LABOR, MATERIAL, AND EQUIPMENT TO PERFORM THE WORK SHALL BE PAID FOR UNDER ITEM 630, SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN OR ITEM 630, SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

CALCULATED GRS CHECKED NAU

GENERAL NOTES

D08-HSIP-SIGNALS

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ITEM 632, VEHICULAR SIGNAL HEAD, (LED), BY SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN,

THIS ITEM INCLUDES FURNISHING AND INSTALLING VEHICULAR SIGNAL HEADS AND ALL ASSOCIATED MOUNTING HARDWARE, INCLUDING DROP PIPES AS PER CITY OF CINCINNATI SUPPLEMENTAL SPECIFICATION 1327 AND STANDARD CONSTRUCTION DRAWING ES-3-2. HARDWARE FOR MOUNTING FLAT SHEET SIGNS ON THE BACK OF SIGNAL HEADS AS PER ES-3-11 SHALL ALSO BE INCLUDED.

ALL LABOR, MATERIAL, AND EQUIPMENT TO PERFORM THE WORK SHALL BE PAID FOR UNDER ITEM 632, VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN OR ITEM 632, VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN.

ITEM 632, VEHICULAR SIGNAL HEAD, MISC.: (LED), BY SECTION, 12" LENS, 1-WAY, POLYCARBONATE

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

SIGNAL HEADS SHALL HAVE A BLACK VISOR, YELLOW DOOR, YELLOW BODY, AND BACK PLATES WITH A YELLOW REFLECTIVE BORDER.

PAYMENT FOR ITEM 632, VEHICULAR SIGNAL HEAD, MISC.: (LED), BY SECTION, 12" LENS, 1-WAY, POLYCARBONATE SHALL BE MADE AT THE UNIT PRICE BID PER EACH AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM 632, SIGNAL SUPPORT FOUNDATION

PRIOR TO ORDERING THE SIGNAL SUPPORTS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD THEN MEET WITH THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATION TO ENSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORT POLES.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

ITEM 630, GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN

THIS ITEM SHALL BE AS PER C&MS 630, EXCEPT THE GROUND MOUNTED POST SUPPORT SHALL BE A SQUARE POST (TYPE S) AS DETAILED IN SCD TC-41.20.

ITEM 630, SIGNING MISC.: SOLAR POWERED LED ENHANCED (W3-3-36, 36" X 36")

THIS SPECIFICATION DESCRIBES THE MINIMUM ACCEPTABLE DESIGN AND PERFORMANCE REQUIREMENTS FOR LED ENHANCED [SIGNAL AHEAD (W3-3) SIGN. THE SIGN SHALL BE SELF-POWERED BY SOLAR PANELS AND BATTERIES WITH NO EXTERNAL ELECTRICAL POWER INSTALLATION. THE LED ENHANCED SIGN SHALL BE MUTCD COMPLIANT. THE FOLLOWING CRITERIA SHALL BE MET:

1. THE NEW UNIT SHALL ATTACH SECURELY TO THE PROPOSED SIGN SUPPORT USING A TAMPER RESISTANT FASTENING SYSTEM. SPECIAL TOOLS NEEDED FOR THE TAMPER RESISTANT FASTENING SYSTEM SHALL BE SUPPLIED WITH EACH SIGN.

2. EACH SIGN UNIT SHALL BE IDENTIFIED WITH THE MANUFACTURER'S NAME, DATE OF MANUFACTURE, AND SERIAL NUMBER ON THE BACK SIDE.

3. THE SIGN UNIT SHALL BE VISIBLE AT A MINIMUM OF 1/4 MI. DURING ALL CONDITIONS.

4. THE SIGN UNIT SHALL INCORPORATE CIRCUITRY AND A PHOTOCELL TO ENSURE THAT IS HAS BRIGHTNESS ADJUSTMENT DURING DAY, DUSK, AND AT NIGHT.

5. THE LENS OF THE LED UNIT SHALL BE CAPABLE OF WITHSTANDING ULTRAVIOLET LIGHT (DIRECT SUNLIGHT) EXPOSURE FOR A MINIMUM TIME PERIOD OF FIVE YEARS WITHOUT EXHIBITING EVIDENCE OF DETERIORATION.

6. THE LENSES SHALL WITHSTAND A 3 FOOT DROP TEST ONTO A HARD SURFACE AND SHALL BE A MINIMUM OF * INCH THICK AND FREE OF BUBBLES AND IMPERFECTIONS. THE LENSES SHALL BE SMOOTH ON THE OUTSIDE, WITH NO EXTERNAL FACETS TO PREVENT DIRT AND DEBRIS BUILD-UP.

7. IF LENSES ARE TINTED, THEY SHALL MATCH THE WAVELENGTH (CHROMATICITY) OF THE LED.

8. THE INDIVIDUAL LED LIGHT SOURCES SHALL BE WIRED SO THAT A CATASTROPHIC FAILURE OF ONE LED LIGHT SOURCE WILL NOT RESULT IN THE LOSS OF MORE THAN ONE LED LIGHT SOURCE IN THE SIGN UNIT.

9. LED UNITS AND ASSOCIATED ON-BOARD CIRCUITRY SHALL CONFORM TO THE REQUIREMENTS IN FEDERAL COMMUNICATIONS COMMISSION (FCC) TITLE 47, SUB PART B, SECTION 15 REGULATIONS CONCERNING THE EMISSION OF ELECTRONIC NOISE.

10. LEDS SHALL BE RATED FOR USE IN THE AMBIENT OPERATING TEMPERATURE RANGE OF -400 F TO +1660 F. (=-400 C TO +740 C)

11. THE LEDS WIRING SHALL BE SEALED WATERTIGHT TO ELIMINATE DIRT CONTAMINATION AND ALLOW FOR SAFE HANDLING IN ALL WEATHER CONDITIONS. THE LEDS SHALL BE SEALED AGAINST DUST AND MOISTURE INTRUSION AS PER THE REQUIREMENTS OF NEMA STANDARD 250-1991 FOR TYPE 4 ENCLOSURES AND TO PROTECT ALL INTERNAL LED AND ELECTRICAL COMPONENTS.

12. THE SIGN LEDS SHALL DISPLAY A MINIMUM OF 500,000 MCD FOR DAYTIME VISIBILITY.

SOLAR REQUIREMENTS: SEE "GENERAL ELECTRICAL REQUIREMENTS FOR SOLAR-POWERED DEVICES".

REQUIRED DOCUMENTATION:

EACH SIGN UNIT SHALL BE PROVIDED WITH THE FOLLOWING DOCUMENTATION EITHER IN HARD COPY OR AS A PDF.

1. ONE SCHEMATIC DIAGRAM SHALL BE PROVIDED FOR THE SIGN UNIT ALONG WITH ANY NECESSARY INSTALLATION INSTRUCTIONS.

2. THE LED MANUFACTURERS NAME, BRAND, AND MODEL NUMBER.

WARRANTY

1. THE LED ENHANCED SIGNAL AHEAD SIGN UNIT SHALL BE REPAIRED OR REPLACED BY THE MANUFACTURER IF IT EXHIBITS A FAILURE DUE TO WORKMANSHIP OR MATERIAL DEFECTS WITHIN 2 YEARS OF FIELD OPERATION.

2. THE MANUFACTURER SHALL PROVIDE A WRITTEN WARRANTY AGAINST DEFECTS IN MATERIALS, WORKMANSHIP, AND LUMINOUS INTENSITY FOR THE LED ENHANCED SIGN UNIT FOR A PERIOD OF 2 YEARS AFTER INSTALLATION. A REPLACEMENT LED ENHANCED SIGN UNIT SHALL BE PROVIDED WITHIN 10 DAYS AFTER RECEIPT OF FAILED UNIT AT NO COST, EXCEPT THE COST OF SHIPPING THE FAILED UNIT.

PAYMENT FOR ITEM 630, SIGNING MISC.: SOLAR POWERED LED ENHANCED (W3-3-36, 36" X 36") SHALL BE MADE AT THE CONTRACT BID PRICE, EACH, COMPLETELY INSTALLED IN PLACE AND FULLY FUNCTIONAL INCLUDING ALL MATERIAL, LABOR, AND EQUIPMENT REQUIRED TO FURNISH THE SIGN WITH SOLAR POWERED LEDS AND MOUNT THE SOLAR UNIT TO THE SIGN SUPPORT AS PER THE LED ENHANCED SIGN DETAIL.

ITEM 632, PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.

2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.

4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.

5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED

6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEADS FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 632, PEDESTRIAN PUSHBUTTON, AS PER PLAN

THE CONTRACTOR SHALL FURNISH AND INSTALL PUSHBUTTONS AND INSTALL SIGNS PER CITY OF CINCINNATI SUPPLEMENTAL SPECIFICATION 1328.

CONNECT PUSHBUTTONS TO PEDESTRIAN SIGNAL HEADS WITH 2/C LOOP LEAD-IN CABLE. ROUTE THE CABLE FROM THE PUSHBUTTON TO THE TERMINAL BLOCK IN THE PEDESTRIAN SIGNAL HEAD. INCLUDE THE MATERIAL AND LABOR COSTS TO FURNISH AND INSTALL THE CABLE IN THE COSTS FOR ITEM 1328, PEDESTRIAN PUSHBUTTON WITH ASSOCIATED SIGN.

ALL PEDESTRIAN PUSHBUTTON ASSOCIATED SIGNS WILL BE SUPPLIED BY THE CITY OF CINCINNATI SIGN SHOP. THE CONTRACTOR SHALL CONTACT THE CITY A MINIMUM OF TEN (10) WORKING DAYS TO ARRANGE TO PICK UP THE SIGNS TO BE INSTALLED.

PUSHBUTTON SIGNS SHALL BE INSTALLED AS PER CITY STANDARD DRAWING ES-3-6.

PUSHBUTTONS INSTALLED ON UTILITY POLES SHALL BE AS PER CITY STANDARD DRAWING ES-3-6. FURNISH AND INSTALL ALL NECESSARY CONDUIT AND MISCELLANEOUS HARDWARE REQUIRED TO CONNECT THE PUSHBUTTON TO THE PEDESTRIAN SIGNAL HEAD AS PER THE REFERENCED STANDARD DRAWING.

IF ANY SIGNS ARE NOT INSTALLED THEY ARE TO BE RETURNED THE SIGN SHOP.

PAYMENT FOR ITEM 632, PEDESTRIAN PUSHBUTTON, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE PUSHBUTTONS FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 632, STRAIN POLE, TYPE TC-81.11 INSTALLATION ONLY
ITEM 632 STRAIN POLE, MISC.: COMBINATION STRAIN POLE, TYPE TC-81.11, INSTALLATION ONLY

ALL SIGNAL SUPPORT ITEMS REQUIRED BY THE C&MS ITEM 632.15 SHALL BE INCLUDED AS PART OF THIS SUPPORT. THE FOLLOWING ITEMS SHALL APPLY TO THE MATERIAL AND INSTALLATION OF SUPPLEMENT EQUIPMENT IN ADDITION TO THE INSTALLATION OF THE SIGNAL SUPPORT AND FOUNDATION:

THE CONTRACTOR IS TO PICKUP THE STRAIN POLE AND ANCHOR BOLTS FROM THE FOLLOWING LOCATION:

ODOT DISTRICT 8
505 SOUTH STATE ROUTE 741
LEBANON, OHIO 45026

THE CONTRACTOR IS TO CONTACT JOSH BRADFORD AT 513.267.0780 OR AT JOSHUA.BRADFORD@DOT.OHIO.GOV. THE STRAIN POLES WILL BE AVAILABLE FOR PICKUP ON MAY 1, 2022.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR INSTALLATION OF ITEM 632 STRAIN POLE, TYPE TC-81.11, INSTALLATION ONLY AND ITEM 632 STRAIN POLE, MISC.: COMBINATION STRAIN POLE, TYPE TC-81.11, INSTALLATION ONLY.

ITEM 625, BRACKET ARM, MISC.: BY LENGTH, INSTALLATION ONLY

THE CONTRACTOR IS TO PICKUP THE BRACKET ARMS FROM THE FOLLOWING LOCATION:

ODOT DISTRICT 8
505 SOUTH STATE ROUTE 741
LEBANON, OHIO 45026

THE CONTRACTOR IS TO CONTACT JOSH BRADFORD AT 513.267.0780 OR AT JOSHUA.BRADFORD@DOT.OHIO.GOV. THE BRACKET ARMS WILL BE AVAILABLE FOR PICKUP ON MAY 1, 2022.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR INSTALLATION OF ITEM 625 BRACKET ARM, MISC.: BY LENGTH, INSTALLATION ONLY.

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GENERAL NOTES

D08-HSIP-SIGNALS

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ITEM 632, POWER SERVICE, AS PER PLAN

THIS POWER SERVICE NOTE SHALL APPLY TO FOLLOWING LOCATIONS:

- CLE-125-5.09
- HAM-27-12.87
- BUT-4-7.07

POWER SERVICE SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. ALL POWER SERVICES SHALL BE METERED EXCEPT FOR THE BUT-4-7.07 INTERSECTION. THE METER SHALL HAVE A LEVER OPERATED BYPASS.

2. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.

3. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.

4. THE POWER SERVICE BLIND HALF COUPLING SHALL BE TWENTY-SEVEN [27] INCHES ABOVE THE BOTTOM OF THE STRAIN POLE BASE PLATE AND SHALL BE WELDED TO THE STRAIN POLE.

5. CONDUIT FROM THE BOTTOM OF THE DISCONNECT SWITCH ENCLOSURE INTO THE BOTTOM OF THE CONTROLLER CABINET WILL NOT BE PERMITTED. POWER SERVICE WIRES FROM THE DISCONNECT SWITCH ENCLOSURE TO THE CONTROLLER CABINET SHALL BE ROUTED THROUGH THE STRAIN POLE.

6. IF INTERSECTION LIGHTING IS SPECIFIED THEN SEPARATE DISCONNECT SWITCHES SHALL BE INSTALLED AND LABELED "LIGHTING" AND "TRAFFIC SIGNAL" WITH A WEATHER PROOF STICKER. MARKER ON THE OUTSIDE OF THE ENCLOSURE IS NOT ACCEPTABLE.

DISCONNECT SWITCH ENCLOSURES FURNISHED SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE AND/OR DISCONNECT SWITCH INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL CONTACT ODOT DISTRICT 8 TRAFFIC OPERATIONS TO ACQUIRE THE ADDRESS TO BE USED ON THE INSPECTION FORMS. ONCE THE SERVICE HAS PASSED INSPECTION, THE CONTRACTOR SHALL ONCE AGAIN NOTIFY ODOT DISTRICT 8 TRAFFIC OPERATIONS WHO WILL THEN MAKE APPLICATION FOR POWER WITH THE UTILITY COMPANY. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120/240 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES.

THE CONTRACTOR SHALL FURNISH AND INSTALL AN ADDRESS STICKER WITH 4-INCH LETTERING TO THE CABINET. ADDRESS MUST BE VISIBLE FROM THE STREET. THE ENGINEER WILL PROVIDE THE ADDRESS TO CONTRACTOR FOR EACH INSTALLATION.

THE DEPARTMENT WILL MEASURE ITEM 632, POWER SERVICE, AS PER PLAN, BY THE NUMBER OF COMPLETE UNITS AND WILL INCLUDE: WEATHERHEAD, CONDUIT, FITTINGS, CLAMPS, AND OTHER NECESSARY HARDWARE, INSTALLATIONS OF THE METER BASE, GROUND WIRE CONNECTIONS, DISCONNECT SWITCH WITH ENCLOSURE, AND COORDINATION WORK WITH UTILITIES.

ITEM 632, SIGNALIZATION, MISC.: POWER SERVICE (HAM-27-7.11)

THIS POWER SERVICE NOTE SHALL APPLY TO FOLLOWING LOCATIONS:

- HAM-27-7.11

COORDINATE WITH DUKE ENERGY FOR POWER SERVICE. CONTACT ANDY CARTER, CITY OF CINCINNATI TRAFFIC ENGINEERING, AT 513-378-6190 FOR ACTUAL REQUEST FOR SERVICE CONNECTION TO THE PROPOSED SERVICE POINT. CONTRACTOR SHALL NOT MAKE CONNECTIONS TO PROPOSED SERVICE POINT AT ANY TIME.

ELECTRIC SERVICE REQUIREMENTS:
FOR TRAFFIC SIGNALS, 120 VOLTS, 60 AMPERE.

THE CONTRACTOR SHALL PROVIDE ALL SERVICE EQUIPMENT NECESSARY TO CONNECT THE TRAFFIC SIGNALS TO THE POWER SOURCE AS PER CONTRACT PLANS, DETAILS AND STANDARD DRAWING ES-2-2 & ES-7-1.

SAFETY SWITCH FOR TRAFFIC SIGNALS SHALL BE 60 AMP W/40 AMP UL CLASS RK-1, 250V FUSE.

THE DEPARTMENT WILL MEASURE ITEM 632, POWER SERVICE, AS PER PLAN, BY THE NUMBER OF COMPLETE UNITS AND WILL INCLUDE: WEATHERHEAD, CONDUIT, FITTINGS, CLAMPS, AND OTHER NECESSARY HARDWARE, DISCONNECT SWITCH WITH ENCLOSURE, AND COORDINATION WORK WITH UTILITIES.

ITEM 632, COMBINATION SIGNAL SUPPORT, MISC.: TYPE TC-81.22, INSTALLATION ONLY
ITEM 632 SIGNAL SUPPORT, MISC.: TYPE TC-81.22, INSTALLATION ONLY

ALL SIGNAL SUPPORT ITEMS REQUIRED BY THE CMS ITEM 632.15 SHALL BE INCLUDED AS PART OF THIS SUPPORT. THE FOLOWING ITEMS SHALL APPLY TO THE MATERIAL AND INSTALLATION OF SUPPLEMENT EQUIPMENT IN ADDITION TO THE INSTALLATION OF THE SIGNAL SUPPORT AND FOUNDATION:

THE CONTRACTOR IS TO PICKUP THE SIGNAL POLES FROM THE FOLLOWING LOCATION:

ODOT DISTRICT 8
505 SOUTH STATE ROUTE 741
LEBANON, OHIO 45026

THE CONTRACTOR IS TO CONTACT JOSH BRADFORD AT 513.267.0780 OR AT JOSHUA.BRADFORD@DOT.OHIO.GOV. THE SIGNAL SUPPORTS WILL BE AVAILABLE FOR PICKUP ON MAY 1, 2022.

AN APPROVED DAMPER DEVICE SHOULD BE FURNISHED BY THE CONTRACTOR AND INSTALLED WITHIN 24 HOURS OF INSTALLATION PER THE REQUIREMENTS OF CMS 632.15. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMEDY ANY OBSERVED STRUCTURE GALLOPING JUDGED BY THE ENGINEER TO BE EXCESSIVE.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR INSTALLATION OF ITEM 632 COMBINATION SIGNAL SUPPORT, MISC.: TYPE TC-81.22, INSTALLATION ONLY AND ITEM 632 SIGNAL SUPPORT, MISC.: TYPE TC-81.22, INSTALLATION ONLY.

ITEM 632, PEDESTAL, MISC.: 10', 1045 (CINCINNATI)

THIS ITEM SHALL INCLUDE FURNISHING AND INTSALLING A STEEL PEDESTAL POLE PER CITY OF CINCINNATI SUPPLEMENTAL SPECIFICATION 1318 AND STANDARD DRAWING ES-3-6. THE PEDESTAL SHALL HAVE A HEIGHT OF 10' AND BE TYPE 1045.

PAYTEM FOR ITEM 632, PEDESTAL, MISC.: 10', 1045 (CINCINNATI) SHALL BE MADE AT THE UNIT PRICE BID PER EACH SUPPORT AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM 632, PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632 AND 732 AND STANDARD CONSTRUCTION DRAWING TC-81.21, THE SIGNAL SUPPORTS SHALL BE PAINTED. THE FINISH SHALL CONSIST OF BLACK SEMI GLOSS POLYESTER, ANTI GASSING, POWDER COAT FINISH (FEDERAL COLOR #27038) APPLIED DIRECTLY OVER HOT DIPPED GALVANIZING THAT CONFORMS TO ODOT C&MS 711.02 AND SUPPLEMENTAL SPECIFICATION 916.

PAYTEM FOR ITEM 632, PEDESTAL, MISC.: 10', 1045 (CINCINNATI) SHALL BE MADE AT THE UNIT PRICE BID PER EACH SUPPORT AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM 632, PEDESTAL FOUNDATION, AS PER PLAN

THIS ITEM SHALL BE AS PER C&MS 632 EXCEPT THE PEDESTAL FOUNDATIONS SHALL BE CONSTRUCTED AS PER CITY OF CINCINNATI STANDARD DRAWING ES-1-2 IN ORDER TO BE COMPATIBLE WITH THE 1045 PEDESTAL POLE.

ALL LABOR, MATERIAL, AND EQUIPMENT TO PERFORM THE WORK SHALL BE PAID FOR UNDER ITEM 632, PEDESTAL FOUNDATION, AS PER PLAN.

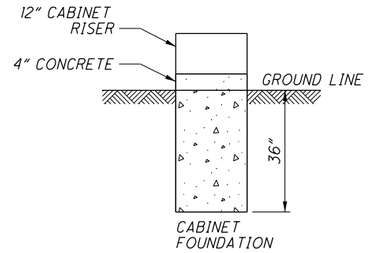
ITEM 633, CABINET FOUNDATION, AS PER PLAN
ITEM 633, CONTROLLER WORK PAD, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING A MODIFIED CONTROLLER CABINET FOUNDATION AND WORK PAD IN ACCORDANCE WITH ODOT STANDARD CONSTRUCTION DRAWING TC-83.20 AND ODOT CONSTRUCTION MATERIAL SPECIFICATIONS 633.10, 499, AND 511, EXCEPT THE FOUNDATION AND WORK PAD SHALL ACCOMMODATE EITHER A TS-2 OR 332 TYPE CABINET. THE WORK PAD SHALL ALSO ACCOMMODATE THE BATTERY BACKUP CABINET AS SHOWN IN THE DETAILS BELOW.

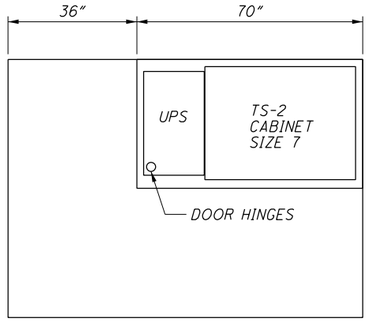
THIS ITEM SHALL INCLUDE PROVIDING A CONCRETE WORK PAD FOR THE POLE MOUNTED CONTROLLER AT COLERAIN AVENUE (US 27) AND VIRGINIA AVE (HAM-27-7.11). THIS WORK PAD SHALL BE AS PER CITY OF CINCINNATI STANDARD DRAWING ES-3-1.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 633, CONTROLLER FOUNDATION, AS PER PLAN" AND "ITEM 633, CONTROLLER WORK PAD, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

TS-2 SIZE 6/7 CABINET DETAIL (TYP.)

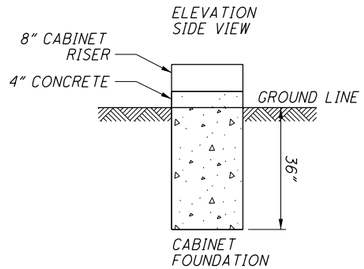


ELEVATION SIDE VIEW

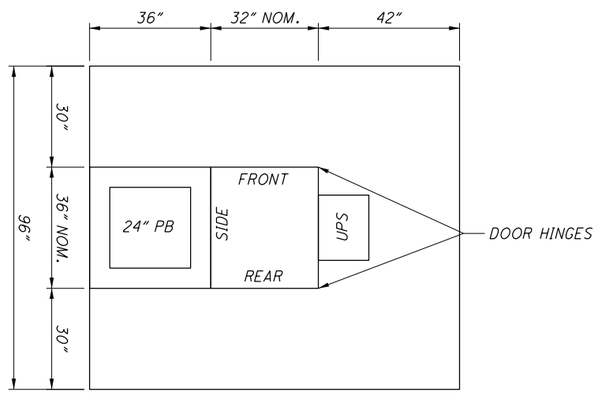


PLAN VIEW

MODEL 332 CABINET DETAIL (TYP.)



ELEVATION SIDE VIEW



PLAN VIEW

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GENERAL NOTES

D08-HSIP-SIGNALS

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ITEM 633, CABINET, TYPE 332, AS PER PLAN

THE CABINET SHALL BE FURNISHED AND INSTALLED ACCORDING TO CMS 633 AND 733 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS LIST (TAP).

THE CABINET SHALL BE FURNISHED WITH AN EDI MONITOR AS ALLOWED ON THE TAP/APPROVED PRODUCTS LIST.

THE CONTRACTOR SHALL NOT REASSIGN THE CABINET DETECTOR INPUTS IN ORDER TO REDUCE THE NUMBER OF 2-CHANNEL DETECTOR UNITS SUPPLIED AND SHALL USE THE STANDARD CALTRANS INPUT FILE DESIGNATIONSFOLLOWING PLAN INSERT SHEET 203324. THE CABINET SHALL ALSO INCLUDE AN AUXILIARY INPUT FILE.

PAYMENT FOR ITEM 633 CABINET, TYPE 332, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 633, UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, POLE ATTACHMENT HARDWARE WILL BE INCLUDED FOR POLE-MOUNTED CABINETS, AND A CABINET RISER (8 INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE DISTRICT TRAFFIC ENGINEER AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSES OVER THE POWER CORD.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FEET MINIMUM. THE ENCLOSURE AND LED MODULE SHALL BE PLACED ON THE SIDE OF THE UPS CABINET FACING TRAFFIC AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY," WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

633 CONTROLLER ITEM, MISC.: POLE MTD. CONTROLLER CABINET, TYPE 330 CIN, 170 CONTROLLER

THIS ITEM INCLUDES SUPPLYING AND INSTALLATION OF THE SIGNAL CONTROL EQUIPMENT INCLUDING SIGNAL CONTROLLER, DETECTOR AMPLIFIERS, AND CONTROL CABINET PER ITEM 1324 IN THE CURRENT EDITION OF THE CITY SUPPLEMENT TO THE ODOT C&MS.

CONTRACTOR TO SUPPLY NEW 170 TYPE CONTROLLER UNIT, 330 CIN CABINET, LOOP DETECTOR AMPLIFIERS AND ALL ASSOCIATED EQUIPMENT TO MAKE SIGNAL OPERATIONAL AND COMPLETE. CONTRACTOR TO NOTIFY THE CITY AND ARRANGE DELIVERY OF THE NEW CONTROLLER UNIT TO THE DEPARTMENT OF PUBLIC SERVICES 30 DAY PRIOR TO THE DATE THE UNIT IS NEED FOR INSTALLATION. CITY FORCES WILL PROGRAM THE CONTROLLER WITH THE PROPOSED TIMING FOR THE SIGNAL. CONTRACTOR TO PICK UP THE CONTROLLER FROM PUBLIC SERVICE AND INSTALL POLE MOUNTED TRAFFIC SIGNAL CONTROLLER ON POLE AT LOCATION AND REFERENCE ANGLE IDENTIFIED ON THE PLAN SHEETS.

PAYMENT FOR ITEM 633, CONTROLLER ITEM, MISC.: POLE MTD. CONTROLLER CABINET, TYPE 330 CIN, 170 CONTROLLER SHALL BE MADE AT THE UNIT PRICE BID PER EACH AND SHALL INCLUDE ALL LABOR, MATERIALS, MOUNTING HARDWARE, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ITEM 633, CABINET, TYPE TS-2, AS PER PLAN

THE CABINET SHALL BE FURNISHED AND INSTALLED ACCORDING TO C&MS 633 AND 733 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS LIST (TAP).

THE GROUND-MOUNTED CABINET SHALL BE A NEMA TS-2, TYPE 1, CABINET SIZE 7 WITH 16 LOAD SWITCH BAYS, LED UNDER-SHELF LIGHTING, POWER HARNESSES FOR BOTH TS2 TYPE 1 AND TYPE 2 CONTROLLERS AND SHALL HAVE A MINIMUM OF THREE SHELVES.

EACH CABINET SHALL COME EQUIPPED WITH TWO 16-CHANNEL CABINET DETECTOR RACKS (CDR) INCLUDING BUS INTERFACE UNITS (BIU). THE LOOP DETECTOR TERMINATION PANEL FOR THE SECOND DETECTOR RACK SHALL BE OMITTED.

THE CABINET SHALL BE FURNISHED WITH AN EDI MMU AS ALLOWED ON THE TAP/APPROVED PRODUCTS LIST.

PAYMENT FOR ITEM 633, CABINET, TYPE TS-2, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 632, CONDUIT RISER, 1" DIAMETER, AS PER PLAN

THIS ITEM SHALL BE AS PER C&MS 632 AND 732 WITH THE FOLLOWING ADDITIONS:

CONDUIT RISER SHALL BE POLYVINYL CHLORIDE (PVC) SCHEDULE 40.

A WEATHERHEAD SHALL BE PROVIDED AT THE TOP OF THE RISER AS SHOWN IN CITY OF CINCINNATI STANDARD DRAWING ES-3-2.

CONDUIT RISER SHALL BE ATTACHED TO THE PEDESTRIAN SIGNAL HEAD ATTACHMENT HARDWARE AS PER CITY OF CINCINNATI STANDARD DRAWING ES-3-6.

ALL LABOR, MATERIAL, MISCELLANEOUS HARDWARE, EQUIPMENT, AND INCIDENTALS REQUIRED TO PERFORM THE WORK SHALL BE PAID FOR UNDER ITEM 632, CONDUIT RISER, 1" DIAMETER, AS PER PLAN.

ITEM 809, ATC V6.24 CONTROLLER, AS PER PLAN

THE CONTROLLER UNIT SHALL BE FURNISHED AND INSTALLED PER SS 809 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST.

THE CONTROLLER SHALL BE AN ECONOLITE COBALT AT THE INTERSECTIONS OF COLERAIN AVE. & ROUND TOP RD. AND ERIE BLVD. & GRAND BLVD.

AT THE INTERSECTION OF SR-125 & AMELIA-OLIVE BRANCH RD. THE CONTROLLER SHALL BE AN ECONOLITE COBALT RACKMOUNT. THIS CONTROLLER WILL BE THE MASTER CONTROLLER FOR COORDINATION WITH THE SR-125 & LORI LANE INTERSECTION.

THESE CONTROLLERS SHALL BE COMPATIBLE WITH THE CABINET TYPE BEING INSTALLED.

ITEM 809, STOP-LINE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.

2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.

6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).

7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.

9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT RICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING RACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

ITEM 809, ADVANCE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR ADVANCE DETECTION UNIT (MODEL SS-200E). THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.

2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.

6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).

7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.

9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.

PAYMENT FOR ITEM 809 ADVANCE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT, CONNECTIONS TESTED AND ACCEPTED, AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

CALCULATED GRS CHECKED NAU

GENERAL NOTES

D08-HSIP-SIGNALS

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GENERAL ELECTRICAL REQUIREMENTS FOR SOLAR-POWERED DEVICES

RUN REQUIREMENTS OF THIS DEVICE ARE 24 HOURS PER DAY, 7 DAYS PER WEEK.

UTILIZE ENVIRONMENTALLY-SEALED, HIGH-EFFICIENCY LED LIGHT SOURCES FOR THIS SOLAR-POWERED APPLICATION.

HOUSE THE SOLAR POWER SUPPLY CONTROLLER AND BATTERY IN ONE OR TWO STAINLESS STEEL OR ALUMINUM ENCLOSURES WITH A MINIMUM NEMA 3 OR 3X RATING.

IF THE EXTERIOR SIZE OF THE ENCLOSURE NECESSARY TO MEET THE REQUIREMENTS BELOW IS LESS THAN 1000 CUBIC INCHES, A SINGLE POLYMER ENCLOSURE RATED NEMA 4 AND LISTED AS SUNLIGHT-RESISTANT MAY BE INSTALLED, WITH APPROVAL OF THE ENGINEER.

SEAL ENCLOSURE CONDUIT ENTRIES TO PREVENT INSECT AND/OR RODENT ENTRY. PROVIDE METAL ENCLOSURES WITH AN EXTERIOR OF BARE OR POWDER-COATED ALUMINUM, OR STAINLESS STEEL.

PROVIDE A LOCKING ENCLOSURE USING EITHER AN INTEGRATED LOCKING MECHANISM OR A PADLOCK PER C&MS 631.06.

SMALL ENCLOSURES OF 300 CUBIC INCHES OR LESS (EXTERIOR) MAY BE PROVIDED WITH SECURITY FASTENERS IN LIEU OF A LOCKING MECHANISM OR PADLOCK.

SEPARATE THE CONTROL ELECTRONICS AND BATTERY, IF CONTAINED WITHIN A SINGLE ENCLOSURE, TO PREVENT DAMAGE TO THE CONTROL ELECTRONICS IF THE BATTERY ENVELOPE IS COMPROMISED.

PROVIDE SEALED GEL-CELL OR AGM (ABSORBED GLASS MAT) LEAD-ACID BATTERIES FOR ALL INSTALLATIONS WITH INSTANTANEOUS LOAD REQUIREMENTS OF 4 WATTS OR ABOVE, REGARDLESS OF DUTY CYCLE.

FOR INSTALLATIONS WITH INSTANTANEOUS LOAD REQUIREMENTS OF LESS THAN 4 WATTS, RECHARGEABLE NICD, LI-ION, OR NIMH BATTERIES MAY BE USED INSTEAD OF AGM OR GEL-CELL, IF APPROVED BY THE ENGINEER.

PROVIDE SIGNED COPIES FROM THE SOLAR PANEL AND/OR CONTROLLER MANUFACTURER OF ALL CALCULATIONS USED TO SIZE THE SOLAR PANEL AND BATTERIES.

INCLUDE IN THESE CALCULATIONS THE INSOLATION VALUE USED AND ITS REFERENCE SOURCE, THE SOLAR PANEL EFFICIENCY, CHARGER/CONTROLLER EFFICIENCY, INVERTER EFFICIENCY, PROPOSED LED LAMP AND/OR EQUIPMENT LOAD, AND A FIGURE REPRESENTING ANTICIPATED MISCELLANEOUS LOSSES.

SHOW CALCULATIONS DOCUMENTING A RESERVE CAPACITY OF TWO WEEKS OPERATION UNDER CONTINUOUS WORST-CASE (MINIMUM) INSOLATION FIGURES (USUALLY DECEMBER) FOR THE PROPOSED GEOGRAPHIC LOCATION, USING A PANEL ELEVATION ANGLE APPROPRIATE TO THE SITE, AT A SUSTAINED TEMPERATURE OF 25 DEGREES FAHRENHEIT (-4 DEGREES CELSIUS).

DELIVER A COPY OF THE CALCULATIONS TO THE ENGINEER AND ANOTHER COPY TO THE OFFICE OF ROADWAY ENGINEERING FOR APPROVAL.

PROVIDE DOCUMENTATION SHOWING THAT THE SOLAR PANEL MANUFACTURER TESTED THE PANEL ACCORDING TO IEC61215 OR EQUIVALENT APPROVED STANDARD.

PROVIDE DOCUMENTATION SHOWING THAT SOLAR PANEL MOUNTING IS RATED FOR 90 MPH DESIGN WIND AND DESIGNED TO RESIST VANDALISM.

ENSURE NEC GROUNDING AND BONDING REQUIREMENTS ARE MET IF VOLTAGES OVER 50V AC OR DC ARE PRESENT.

PROVIDE A TIMER (IF REQUIRED) THAT SATISFIES THE REQUIREMENTS OF C&MS 731.10 AND IS LISTED ON THE ODOT QUALIFIED PRODUCTS LIST.

PROVIDE COMPLETE PHOTO-CONTROLLER SPECIFICATIONS, INCLUDING ON/OFF PHOTOMETRIC SWITCH POINTS (TYPICALLY GIVEN IN FOOT-CANDLES), IF A PHOTO-CONTROLLER IS UTILIZED

ITEM 632, REUSE OF TRAFFIC SIGNAL CONTROL ITEM, VARIOUS SIGNAL COMPONENTS

THIS ITEM SHALL COVER THE REUSE OF SIGNAL COMPONENTS, SUCH AS RADIO INTERCONNECT, EMERGENCY VEHICLE PREEMPTION, GPS EQUIPMENT, AND MODEMS. THE CONTRACTOR SHALL BE REQUIRED TO STORE THE ITEM AS PART OF THE REMOVAL OF TRAFFIC SIGNAL INSTALLATION PAY ITEM. THE CONTRCATOR SHALL BE COMPENSATED UNDER THIS PAY ITEM TO INSTALL THE COMPONENT ON THE PROPOSED SIGNAL AND PERFORM THE NECESSARY WORK TO RESTORE THE INTENDED OPERATION OF THE COMPONENT. ANY DAMAGE CAUSED TO THE ITEM DURING THE REMOVAL AND STORAGE OF THE ITEM WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR SHALL ENSURE THE ANTENNAS FOR THE WIRELESS INTERCONNECT ARE ORIENTED IN A WAY THAT OPTIMIZES COMMUNICATION TO THE ADJACENT SIGNALS.

THE DEPARTMENT WILL MEASURE ITEM 632, SIGNALIZATION, MISC.: REUSE OF TRAFFIC SIGNAL CONTROL ITEM, VARIOUS SIGNAL COMPONENTS, BY THE NUMBER OF EACH COMPONENT REINSTALLED ON THE PROPOSED TRAFFIC SIGNAL AND WILL INCLUDE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE ITEM OF WORK.

ITEM 632, SIGNALIZATION, MISC.: CABINET INTERFACE DEVICE

THIS ITEM SHALL CONSIST OF FURNISHING A WAVETRONIX CLICK 656 CABINET INTERFACE DEVICE FOR CONNECTIVITY AND COMMUNICATION BETWEEN WAVETRONIX RADAR DETECTORS AND THE SIGNAL CONTROLLER. PAYMENT WILL BE PER EACH UNIT AND WILL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A FULLY FUNCTIONAL INSTALLATION IN THE SIGNAL CABINET.

ITEM 690, SPECIAL - MISC.: RELOCATE DUKE ENERGY POLE

THIS WORK IS TO BE PAID BY THIRD PARTY BILLING PER C&MS 109.05. THIS WORK INCLUDES RELOCATION OF DUKE POLE ON THE NORTHWEST CORNER OF COLERAIN AVENUE (US 27) AND VIRGINIA AVENUE INTERSECTION AS SHOWN IN THE PLANS.

ITEM 690, SPECIAL-MISC.: RELOCATE DUKE ENERGY POLE	20,650 EACH

GROUNDING AND BONDING

THE FOLLOWING APPLIES TO ALL INTERSECTIONS EXCEPT FOR COLERAIN AVE (US-27) AND VIRGINIA AVE, THE GOUNDING AND BONDING AT THIS INTERSECTION SHALL BE AS PER CITY OF CINCINNATI STANDARD DRAWINGS.

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
   - A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   - B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
   - C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
   - D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
   - E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
   - F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.
   - A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
   - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   - C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   - D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.
   - A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
     - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
     - II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
     - III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
     - IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
   - B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.
   - A. A ¾ INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
   - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.
   - A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UN-SPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
   - B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
     - I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
     - II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

CALCULATED GRS CHECKED NAU

GENERAL NOTES

D08-HSIP-SIGNALS

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PARTICIPATION	SHEET	STATE ROUTE	REF NO.	INTERSECTION	CORNER	202 WALK REMOVED SF	202 CURB REMOVED, AS PER PLAN FT	202 CURB AND GUTTER REMOVED, AS PER PLAN FT	202 REMOVAL MISC.: BOLLARD EACH	608 4" CONCRETE WALK SF	608 CURB RAMP, AS PER PLAN SF	609 CURB, TYPE 6, AS PER PLAN FT	609 COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN FT	609 6" CONCRETE TRAFFIC ISLAND, AS PER PLAN SY	SPECIAL BOLLARD EACH
1	16	S.R. 125	CR1	S.R. 125 AND AMELIA-OLIVE BRANCH RD.	SW	131		13			169				
1	16	S.R. 125	CR1	S.R. 125 AND AMELIA-OLIVE BRANCH RD.	NW			6			68				
1	16	S.R. 125	CR3	S.R. 125 AND AMELIA-OLIVE BRANCH RD.	NE	80		16			121				
1	16	S.R. 125	CR4	S.R. 125 AND AMELIA-OLIVE BRANCH RD.	SE	64		20			111		6		
1	17	U.S. 27	CR5	U.S. 27 AND WEST FORK RD.	SW	136	26				145				
1	17	U.S. 27	CR6	U.S. 27 AND WEST FORK RD.	NW	268	32		2		273				2
1	17	U.S. 27	CR7	U.S. 27 AND VIRGINIA AVE.	NE	136	17				111	11			
1	17	U.S. 27	CR8	U.S. 27 AND VIRGINIA AVE.	SE		78				307	33		139	
1	17	U.S. 27	CR9	U.S. 27 AND VIRGINIA AVE.	SE	158	17				142	10			
1	18	U.S. 27	CR10	U.S. 27 AND ROUNDTOP RD.	SW	116	17				132				
1	18	U.S. 27	CR11	U.S. 27 AND ROUNDTOP RD.	NW	110	15				117				
1	18	U.S. 27	CR12	U.S. 27 AND ROUNDTOP RD.	NE	125	39				147				
1	18	U.S. 27	CR13	U.S. 27 AND ROUNDTOP RD.	SE	153	25				169				
1	19	S.R. 4	CR 14	S.R. 4 AND GRAND BLVD.	SW	58				60					
TOTALS CARRIED TO GENERAL SUMMARY						1535	266	55	2	60	2012	54	6	139	2

CALCULATED KDW
CHECKED TWG

ESTIMATED QUANTITIES

D08-HSIP-SIGNALS

15
50

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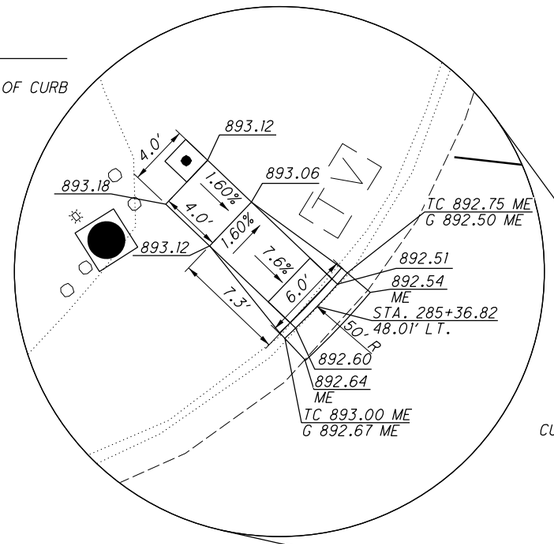
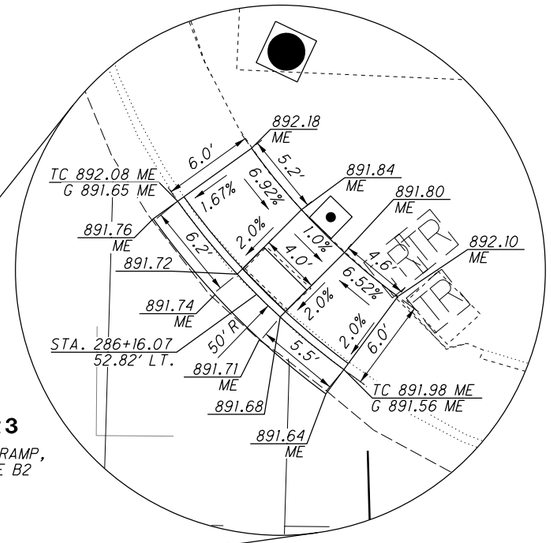
LEGEND

TC	TOP OF CURB
G	GUTTER/BOTTOM OF CURB
ME	MATCH EXISTING



CR2
CURB RAMP, TYPE A2



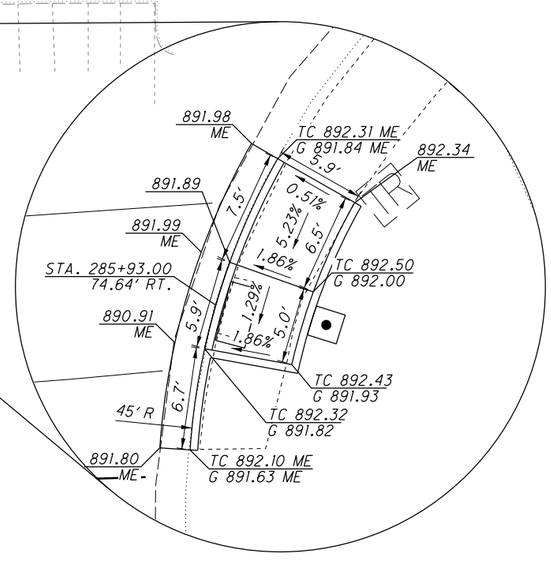
CR3
CURB RAMP, TYPE B2

℄ R/W & CONST. AMELIA-OLIVE BRANCH RD./LIVE OAK DR.

STA. 285+60.78 ℄ R/W & CONSTRUCTION S.R. 125 =
STA. 50+03.30 ℄ R/W & CONSTRUCTION
AMELIA-OLIVE BRANCH RD./LIVE OAK DR.

℄ R/W & CONST. S.R. 125

CR1
CURB RAMP, TYPE B3



CR4
CURB RAMP, TYPE B1

NOTE

FOR ESTIMATED QUANTITIES, SEE SHEET 15.

INTERSECTION DETAIL - CLE-125-5.09
SR-125 & AMELIA-OLIVE BRANCH RD.

D08-HSIP-SIGNALS

16
50

CALCULATED DMG
CHECKED TWG

HORIZONTAL SCALE IN FEET
0 10 20 40

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REF. NO.	SHEET NO.	LOCATION	STATION	CODE	SIZE		SIDE	630														644		
					WIDTH (INCHES)	HEIGHT (INCHES)		GROUND MOUNTED SUPPORT, NO. 3 POST	GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN HANGER ASSEMBLY, MAST ARM	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	SIGN, FLAT SHEET	SIGN, DOUBLE FACED, STREET NAME	SIGN, STREET NAME	SIGN ERECTED, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	SIGNING MISC.: SOLAR POWERED LED ENHANCED (M3-3-36, 36" X 36")	STOP LINE	CROSSWALK LINE	REMOVAL OF PAVEMENT MARKING
								FT	FT	EACH	EACH	EACH	EACH	EACH	SF	EACH	EACH	SF	EACH	EACH	EACH	EACH	FT	FT	FT
SR-125 & AMELIA-OLIVE BRANCH RD. (CLE-125-5.09)																									
R-1	28	SR-125	285+23±	-	-	-	LT.														1				
R-2	28	SR-125	285+23±	-	-	-	LT.														1				
R-3	28	SR-125	285+25±	-	-	-	RT.												1	1					
R-4	28	LORI LN.	**	-	-	-													1	1					
S-1	28	SR-125	285+31	R3-5L	30	36	RT.			1					7.50										
S-2	28	SR-125	285+58	R3-5L	30	36	RT.			1					7.50										
S-3	28	SR-125	286+03	R3-5L	30	36	RT.			1					7.50										
S-4	28	SR-125	285+66	R3-5L	30	36	LT.			1					7.50										
S-5	28	SR-125	285+30	R3-5R	30	36	RT.			1					7.50										
S-6	28	SR-125	285+83	R3-5R	30	36	RT.			1					7.50										
S-7	28	SR-125	286+03	R3-5R	30	36	LT.			1					7.50										
S-8	28	SR-125	285+31	R10-12	30	36	RT.			*					7.50										
S-9	28	SR-125	285+52	R10-12	30	36	RT.			1					7.50										
S-10	28	SR-125	286+03	R10-12	30	36	RT.			*					7.50										
S-11	28	SR-125	285+60	R10-12	30	36	LT.			1					7.50										
S-12	28	SR-125	285+23	R9-3	18	18	LT.						1		2.25										
S-13	28	SR-125	285+09	R9-3	18	18	RT.						1		2.25										
S-14	28	SR-125	285+23	D3-1	78	24	LT.						1			1									
S-15	28	SR-125	286+10	D3-1	78	24	RT.						1			1									
S-16	28	SR-125	285+23	D3-1	42	18	LT.						1			1									
S-17	28	SR-125	286+10	D3-1	42	18	RT.						1			1									
S-18	28	SR-125	286+10	D3-1	60	18	RT.						1			1									
S-19	28	LORI LN.	**	R3-H8BH	36	30		13.0							7.50										
SL	28	AMELIA-OLIVE BRANCH RD.	50+64				LT./RT.																26		
XW	28	SR-125	285+69				LT.																	142	
-	28	AMELIA-OLIVE BRANCH RD.	-				LT./RT.																		35
COLERAIN AVE. (US-27) & VIRGINIA AVE. (HAM-27-7.11)																									
S-1	33	COLERAIN AVE. (US-27)	209+38	R3-5L	30	36	LT.			1					7.50										
S-2	33	COLERAIN AVE. (US-27)	208+99	R3-5L	30	36	RT.			1					7.50										
S-3	33	COLERAIN AVE. (US-27)	209+38	R3-5L	30	36	RT.			1					7.50										
S-4	33	COLERAIN AVE. (US-27)	209+52	R3-5L	30	36	RT.								7.50										
S-5	33	COLERAIN AVE. (US-27)	209+70	R3-5L	30	36	RT.								7.50										
S-6	33	COLERAIN AVE. (US-27)	209+06	R3-5R	30	36	LT.			1					7.50										
S-7	33	COLERAIN AVE. (US-27)	209+56	R10-10L	30	36	RT.			1					7.50										
S-8	33	COLERAIN AVE. (US-27)	209+16	R10-10L	30	36	LT.			1					7.50										
S-9	33	COLERAIN AVE. (US-27)	208+92	M4-5	24	12	LT.	15.0							2.00										
				M1-1	24	24									4.00										
				M6-1R	21	15									2.19										
S-10	33	COLERAIN AVE. (US-27)	208+98	M1-4	24	24	RT.						1		4.00										
				M6-4	21	15							1		2.19										
S-11	33	COLERAIN AVE. (US-27)	208+74	D3-1	60	12	LT.						1			1									
S-12	33	COLERAIN AVE. (US-27)	208+74	D3-1	54	12	LT.						1			1									
S-13	33	COLERAIN AVE. (US-27)	209+96	D3-1	54	12	RT.						1			1									
S-14	33	COLERAIN AVE. (US-27)	209+96	D3-1	54	12	RT.						1			1									
S-15	33	COLERAIN AVE. (US-27)	212+86	W3-3	36	36	LT.		14.5													1			
*BACK-TO-BACK MOUNTED SIGN. HANGER ASSEMBLY INCLUDED WITH OTHER SIGN.																									
**SEE SHEET 28 FOR SIGN LOCATION																									
TOTALS CARRIED TO SHEET 21								28.0	14.5	15			13		168.88	9			2	2	2	1	26	142	35

CALCULATED GRS
CHECKED NAU

TRAFFIC CONTROL SUBSUMMARY

D08-HSIP-SIGNALS

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SHEET NO.	FROM	TO	625 BRACKET ARM, MISC.:15', INSTALLATION ONLY EACH	625 BRACKET ARM, MISC.: 30', INSTALLATION ONLY EACH	625 CONDUIT, 2", 725.04 FT	625 CONDUIT, 3", 725.04 FT	625 CONDUIT, 4", 725.04 FT	625 CONDUIT, CONCRETE ENCASED, AS PER PLAN, 2" FT	625 CONDUIT, CONCRETE ENCASED, AS PER PLAN, 3" FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 4" FT	625 TRENCH FT	625 TRENCH IN PAVED AREA FT	625 PULL BOX, 725.06, SIZE 4 EACH	625 PULL BOX, 725.06, SIZE 7 EACH	625 PULL BOX, 725.08, 18" EACH	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX REMOVED, AS PER PLAN EACH	625 PULL BOX, MISC.: TYPE B (CINCINNATI) EACH	625 GROUND ROD EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	625 VEHICULAR SIGNAL HEAD, MISC.: (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE FT	625 VEHICULAR SIGNAL HEAD, MISC.: (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE FT	632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK EACH	632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN EACH	632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK EACH
28	SR-125 & AMELIA-OLIVE BRANCH RD. (CLE-125-5.09)																										
28	PS-3	PB 3			9							9							6								
28	PB 3	SP-3			7								7			1					1	9					
28	SP-3	BULLRING C																			1	7					
28	BULLRING C	BULLRING A																									2
28	PS-1	PB 1			4							4									1	4					
28	PB 1	SP-1			5							5				1						5					
28	SP-1	BULLRING A																			1						
28	BULLRING A	BULLRING B																							1		2
28	BULLRING C	BULLRING D																							1		2
28	PS-4	PB 4			17							13	4								1	17					
28	PB 4	SP-4			8								8			1						8					
28	SP-4	BULLRING D		1																	1						
28	BULLRING D	BULLRING B																							1		1
28	BULLRING B	SP-2																									
28	SP-2	PB 2					20						10								1	10					
28	PS-2	PB 2			13							13									1	13					
28	PB 2	CONTROLLER					38					10	9				1					19					
28	CONTROLLER	POWER SOURCE			33							10	23				1				2	33					
33	COLERAIN AVE. (US-27) & VIRGINIA AVE. (HAM-27-7.11)																		7								
33	PB 5	PB 4						48				48								1							
33	PS-2	PB 4							9				9								1						
33	PB 4	SP-3							17			10	7							1							
33	SP-3	BULLRING C																			1						
33	BULLRING C	BULLRING D																								2	
33	PB 7	PB 6						27				27								1							
33	PS-3	PB 6							7			7									1						
33	PB 6	SP-4							10			10								1							
33	SP-4	BULLRING D																			1						
33	BULLRING D	BULLRING B																								2	
33	BULLRING C	BULLRING A																								1	
33	PS-1	PB 1							14			14									1						
33	PB 1	SP-1							10			10								1							
33	SP-1	BULLRING A																			1						
33	BULLRING A	BULLRING B																								4	
33	BULLRING B	SP-2																									
33	PB 2	PB-3						69				21	48							1							
33	PB 3	SP-2						10				5								1							
33	SP-2	CONTROLLER																			1						
33	CONTROLLER	POWER SOURCE						26					26														
33	EX. PB	PB 3							26																		
TOTALS CARRIED TO SHEET 25				1	96		58	180	93			216	151			3	2	13	7	17	125			3	9	7	

CALCULATED GRS
CHECKED NAU

TRAFFIC SIGNAL SUBSUMMARY

D08-HSIP-SIGNALS

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SHEET NO.	FROM	TO	632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	632 COVERING OF VEHICULAR SIGNAL HEAD	632 COVERING OF PEDESTRIAN SIGNAL HEAD	632 PEDESTRIAN PUSHBUTTON	632 PEDESTRIAN PUSHBUTTON, AS PER PLAN	632 DETECTOR LOOP	632 MESSENGER WIRE, 7 STRAND, 1/2" DIAMETER WITH ACCESSORIES	632 TETHER WIRE, WITH ACCESSORIES	632 SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	632 SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	632 SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	632 SIGNAL SUPPORT FOUNDATION	632 PEDESTAL FOUNDATION	632 PEDESTAL FOUNDATION, AS PER PLAN	632 LOOP DETECTOR LEAD-IN CABLE	632 POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	632 SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	632 POWER SERVICE, AS PER PLAN	632 CONDUIT RISER, 1" DIAMETER, AS PER PLAN	632 CONDUIT RISER, 2" DIAMETER	632 SIGNAL SUPPORT, MISC.: TYPE TC-81.22, INSTALLATION ONLY	632 COMBINATION SIGNAL SUPPORT, MISC.: TYPE TC-81.22, INSTALLATION ONLY	632 STRAIN POLE, MISC.: COMBINATION STRAIN POLE, TYPE TC-81.11, INSTALLATION ONLY
			EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH
28	SR-125 & AMELIA-OLIVE BRANCH RD. (CLE-125-5.09)																									
28	PS-3	PB 3		2		2	2						48			1		40								
28	PB 3	SP-3											24					24								
28	SP-3	BULLRING C								34	34		136		1			136								
28	BULLRING C	BULLRING A			2					71	71		142	87				142								
28	PS-1	PB 1		1		1	1						19			1		15								
28	PB 1	SP-1											10					10								
28	SP-1	BULLRING A								17	17		49		1			49								
28	BULLRING A	BULLRING B			3					90	90		270	337				270								
28	BULLRING C	BULLRING D			3					89	89			89												
28	PS-4	PB 4		1		1	1						32			1		28								
28	PB 4	SP-4											13					13								
28	SP-4	BULLRING D		1		1	1			11	11		79		1			83								1
28	BULLRING D	BULLRING B			2					74	74		148	183				148								
28	BULLRING B	SP-2								26	26		130	208				130								
28	SP-2	PB 2											215	344	1			215								
28	PS-2	PB 2		1		1	1						28					24								
28	PB 2	CONTROLLER											204	272				204								
28	CONTROLLER	POWER SOURCE																	81	120	1					
33	COLERAIN AVE. (US-27) & VIRGINIA AVE. (HAM-27-7.11)																									
33	PB 5	PB 4							3									159								
33	PS-2	PB 4		2		2		1						48			1	20								
33	PB 4	SP-3												44				88								
33	SP-3	BULLRING C								28	28			120	1			240								
33	BULLRING C	BULLRING D	1		3					69	69			225				304								
33	PB 7	PB 6							1									32								
33	PS-3	PB 6		1		1		1						22			1	18								
33	PB 6	SP-4												15				30								
33	SP-4	BULLRING D		1		1				7	7			71	1			76								
33	BULLRING D	BULLRING B			2					72	72			471				432								
33	BULLRING C	BULLRING A	1		2					74	74			60												
33	PS-1	PB 1		1		1								29			1									
33	PB 1	SP-1												15				15								
33	SP-1	BULLRING A		1		1		1		19	19			92				41				1	1			
33	BULLRING A	BULLRING B			4					66	66			310				66								
33	BULLRING B	SP-2								27	27			324				189								
33	PB 2	PB-3							3									222								
33	PB 3	SP-2																60								
33	SP-2	CONTROLLER		2		2		1						450	1			286								
33	CONTROLLER	POWER SOURCE																	78							
33	EX. PB	PB 3																								
TOTALS CARRIED TO SHEET 26			2	14	21	14	6	4	7	774	774		1547	3816	7	3	3	3809	159	120	1	1	1			1

CALCULATED GRS
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TRAFFIC SIGNAL SUBSUMMARY

D08-HSIP-SIGNALS

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SHEET NO.	FROM	TO	632 STRAIN POLE, TYPE TC-81.11, INSTALLATION ONLY (EACH)	632 PEDESTAL, 8', TRANSFORMER BASE (EACH)	632 PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN (EACH)	632 PEDESTAL, MISC.: 10', 1045 (CINCINNATI) (EACH)	632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN (EACH)	632 REUSE OF TRAFFIC CONTROL ITEM: WIRELESS ANTENNA (EACH)	632 REUSE OF TRAFFIC CONTROL ITEM: MODEM (EACH)	632 REUSE OF TRAFFIC CONTROL ITEM: GPS PREEMPT EQUIPMENT, ANTENNA (EACH)	632 SIGNALIZATION, MISC.: POWER SERVICE (EACH)	632 SIGNALIZATION, MISC.: CABINET INTERFACE DEVICE (EACH)	633 CABINET, TYPE TS-2, AS PER PLAN (EACH)	633 CABINET, TYPE 332, AS PER PLAN (EACH)	633 CABINET FOUNDATION, AS PER PLAN (EACH)	633 CONTROLLER WORK PAD, AS PER PLAN (EACH)	633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN (EACH)	633 CONTROLLER ITEM, MISC.: POLE MTD. CONTROLLER CABINET, TYPE 330 CIN, ITC CONTROLLER (EACH)	809 CCTV IP-CAMERA SYSTEM, DOME-TYPE (EACH)	809 ADVANCE RADAR DETECTION, AS PER PLAN (EACH)	809 STOP LINE RADAR DETECTION, AS PER PLAN (EACH)	809 ATC V6.24 CONTROLLER, AS PER PLAN (EACH)	816 VIDEO DETECTION SYSTEM (EACH)	816 TRAINING FOR VIDEO DETECTION SYSTEM (LUMP)		
28	SR-125 & AMELIA-OLIVE BRANCH RD. (CLE-125-5.09)																									
							1																			
28	PS-3	PB 3		1																						
28	PB 3	SP-3																								
28	SP-3	BULLRING C	1																		1					
28	BULLRING C	BULLRING A																								
28	PS-1	PB 1		1																						
28	PB 1	SP-1																								
28	SP-1	BULLRING A	1																		1					
28	BULLRING A	BULLRING B																								
28	BULLRING C	BULLRING D																								
28	PS-4	PB 4		1																						
28	PB 4	SP-4																								
28	SP-4	BULLRING D																				2	1			
28	BULLRING D	BULLRING B																								
28	BULLRING B	SP-2																								
28	SP-2	PB 2	1																	1			1			
28	PS-2	PB 2		1																						
28	PB 2	CONTROLLER																								
28	CONTROLLER	POWER SOURCE						1	1			1		1	1	1	1							1		
33	COLERAIN AVE. (US-27) & VIRGINIA AVE. (HAM-27-7.11)																									
							1																			
33	PB 5	PB 4																								
33	PS-2	PB 4				1																				
33	PB 4	SP-3																								
33	SP-3	BULLRING C	1																							
33	BULLRING C	BULLRING D																								
33	PB 7	PB 6																								
33	PS-3	PB 6				1																				
33	PB 6	SP-4																								
33	SP-4	BULLRING D	1																							
33	BULLRING D	BULLRING B																								
33	BULLRING C	BULLRING A																								
33	PS-1	PB 1				1																				
33	PB 1	SP-1																								
33	SP-1	BULLRING A	1																							
33	BULLRING A	BULLRING B																								
33	BULLRING B	SP-2																								
33	PB 2	PB-3																								
33	PB 3	SP-2																								
33	SP-2	CONTROLLER																								
33	CONTROLLER	POWER SOURCE									1					1		1								
33	EX. PB	PB 3																								
TOTALS CARRIED TO SHEET 27			6	4		3	2	1	1		1	1		1	1	2	1	1	1	2	4	1				

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TRAFFIC SIGNAL SUBSUMMARY

D08-HSIP-SIGNALS

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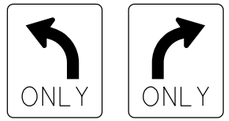
LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	●→	○-▷
TRAFFIC SIGNAL, 5 UNIT HEAD, 12" W/ ARROWS	●→	○-▷
PEDESTRIAN SIGNAL HEAD	┌	
PEDESTRIAN PUSHBUTTON	—	
SIGNAL SUPPORT POLE	◉	◎
PEDESTAL SUPPORT POLE	▫	▫
CONTROLLER CABINET AND WORK PAD (332)	▭	▭
TRAFFIC PULL BOX	TR	TR
CCTV CAMERA		
STOP LINE RADAR UNIT	S	
ADVANCE RADAR UNIT	D	
DETECTION ZONE	▨	
TRAFFIC PULL BOX REMOVED		R
WIRELESS ANTENNA		⊣⊢
ITEM 644 - STOP LINE	SL	
ITEM 644 - CROSSWALK LINE	XW	
PAVEMENT MARKING REMOVAL	XXXXX	

PULL BOX CHART

PULL BOX NUMBER	FUNCTION	STA.	OFFSET
PB1	TRAFFIC	285+24.2	56.9' LT.
PB2	TRAFFIC	285+12.2	76.9' RT.
PB3	TRAFFIC	286+13.6	63.1' LT.
PB4	TRAFFIC	286+03.0	63.9' RT.
PB5	TRAFFIC	285+24.2	91.3' RT.

SPAN MTD. SIGNS



R3-5L-30 (S1) (S2) (S3) (S4)

R3-5R-30 (S5) (S6) (S7)



R10-12-30 (S8) (S9) (S10) (S11)

POLE MTD. SIGNS



R9-3-18 (POLE MTD.) (S12) (S13)



D3-1 (78" X 24") DOUBLE SIDED (S14) (S15)

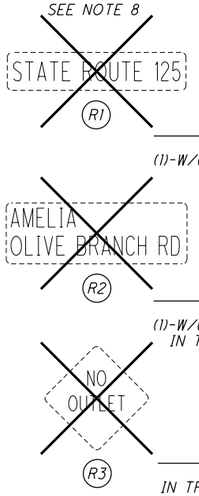


D3-1 (42" X 18") DOUBLE SIDED (S16) (S17)



D3-1 (60" X 18") DOUBLE SIDED (S18)

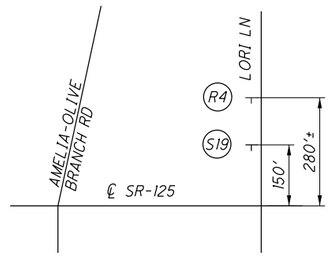
EXISTING SIGNS TO BE REMOVED



PUSHBUTTON SIGNS



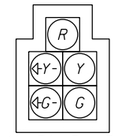
R10-3E-9
3 - LEFT ARROWS
3 - RIGHT ARROWS



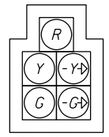
SIGNING DETAIL

SIGNAL HEADS

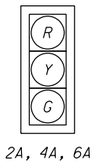
ALL SIGNAL HEADS: BLACK WITH 12" LED VEHICULAR LENSES AND BACKPLATES



1A, 3A, 5A, 7A



2B, 6B, 8A



2A, 4A, 6A



PEDESTRIAN HEADS
(LED, COUNTDOWN, TYPE D2)
2P, 6P, 8P

NOTES:

1. ALL STATIONING AND OFFSETS FROM ℄ R/W SR-125 UNLESS OTHERWISE NOTED.
2. ALL SIGNAL CABLE SHALL BE #14 AWG UNLESS OTHERWISE NOTED.
3. CABLE ABBREVIATIONS:
   - RDC = RADAR DETECTION CABLE
   - TVC = CCTV CAMERA CABLE
   - ANT = WIRELESS RADIO ANTENNA
4. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES BEFORE PLACING PROPOSED SIGNAL ITEMS.
5. EXISTING STRAIN POLE FOUNDATIONS SHALL BE REMOVED TO 12" BELOW GRADE.
6. INSTALLATION METHODS USED BY THE CONTRACTOR SHALL FOLLOW ALL OSHA CLEARANCE GUIDELINES.
7. IF THE CONTRACTOR NEEDS TO ENCROACH CLOSER THAN 20' OF THE OVERHEAD ELECTRIC LINES, THEY SHALL CONTACT DUKE ENERGY TO HAVE A CRANE FORM APPROVED AND SIGNED.
8. REMOVAL OF EX. STREET NAME SIGNS MOUNTED ON SIGNAL POLES IS INCLUDED WITH ITEM 632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN.
9. THE CONTRACTOR SHALL REMOVE AND REINSTALL ANY RADIOS OR MODEMS. THE CONTRACTOR SHALL ENSURE THE CORRECT ORIENTATION OF THE RADIO TO ALLOW FOR OPTIMAL COMMUNICATION BETWEEN SIGNALS.
10. THE CONTRACTOR SHALL VACCUUM EXCAVATE POLE FOUNDATIONS TO AVOID CONFLICT WITH THE ADJACENT GAS LINES. A DUKE ENERGY INSPECTOR WILL NEED TO BE ON SITE WHILE EXCAVATION TAKES PLACE.

HORIZONTAL SCALE IN FEET
0 10 20 40

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CHECKED NAU

TRAFFIC SIGNAL PLAN - CLE-125-5.09
SR-125 & AMELIA-OLIVE BRANCH RD.

D08-HSIP-SIGNALS

28
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SIGNAL TIMING CHART

INTERSECTION: SR-125 & AMELIA-OLIVE BRANCH RD.
MAINTAINING AGENCY: OHIO DEPARTMENT OF TRANSPORTATION

START UP
START IN: FLASH
TIME FOR FLASH OR ALL RED: 10 SEC.
FIRST PHASE(S): 2 & 6
COLOR DISPLAYED: GREEN

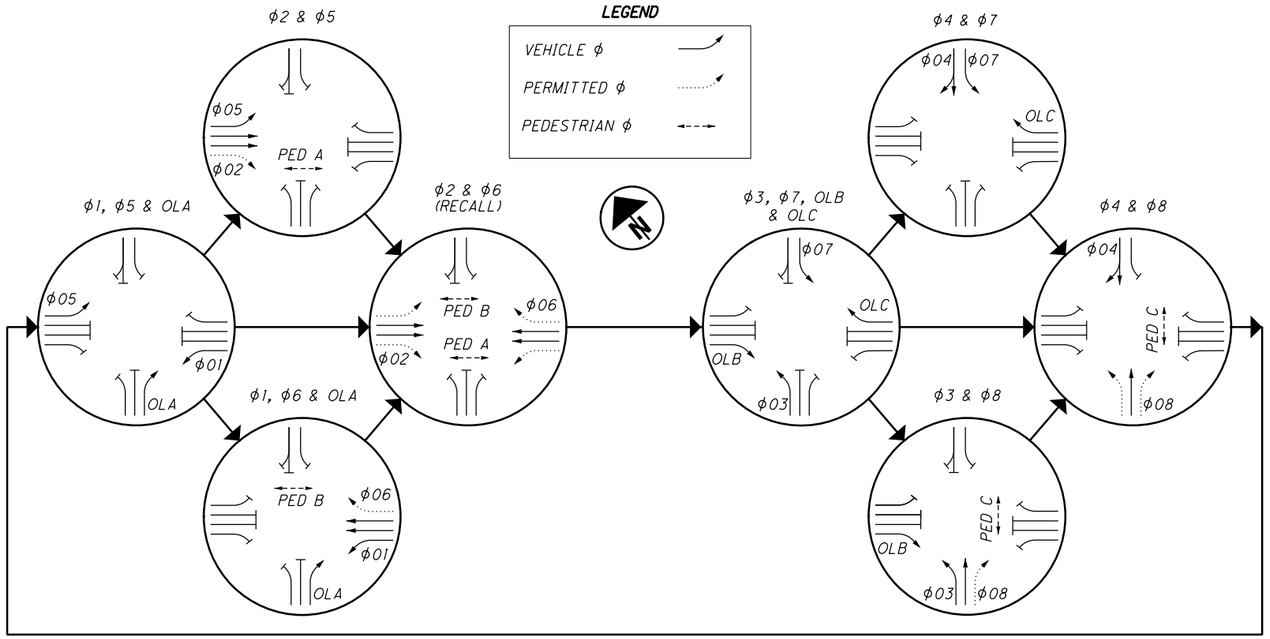
DUAL ENTRY: YES | PHASES: 2&6, 4&8
REST IN RED: RING 1 - | RING 2 -

OVERLAP			A	B	C	D
PHASES			ϕ1	ϕ3	ϕ7	-

INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		WBLT	EB	NBLT	SB	EBLT	WB	SBLT	NB
MINIMUM GREEN (INITIAL)	(SEC.)	7	20	7	10	7	20	7	10
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	3	2	3	3	3	2	3	3
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	7	43	7	11	7	42	7	11
MAXIMUM GREEN II	(SEC.)	7	73	21	27	19	60	13	35
YELLOW CHANGE	(SEC.)	3.0	5.0	3.0	4.0	4.0	5.0	3.0	4.0
ALL RED CLEARANCE	(SEC.)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
WALK	(SEC.)	-	9	-	-	-	9	-	12
PEDESTRIAN CLEARANCE	(SEC.)	-	20	-	-	-	20	-	26
RECALL	MAXIMUM (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	MINIMUM (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	PEDESTRIAN (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



RADAR DETECTOR CHART

DETECTION ZONE	MOVEMENT	WIDTH	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DETECTOR NUMBER	PURPOSE	DETECTION ZONE LENGTH (FT)
RDZ1A	WBLT	6'	-	-	D6A	STOP LINE	35
RDZ2A	EB	6'	-	-	D2A	STOP LINE	35
RDZ2B	EB	6'	-	-	D2A	STOP LINE	35
RDZ2C	EB	6'	8	-	D2A	STOP LINE	35
RDZ2D	EB	VARIES	-	-	D2B	ADVANCE	850
RDZ3A	NBLT	6'	-	-	D8A	STOP LINE	35
RDZ4A	SB	6'	-	-	D4A	STOP LINE	35
RDZ5A	EBLT	6'	-	-	D2A	STOP LINE	35
RDZ6A	WB	6'	-	-	D6A	STOP LINE	35
RDZ6B	WB	6'	-	-	D6A	STOP LINE	35
RDZ6C	WB	6'	8	-	D6A	STOP LINE	35
RDZ6D	WB	VARIES	-	-	D6B	ADVANCE	850
RDZ7A	SBLT	6'	-	-	D4A	STOP LINE	35
RDZ8A	NB	6'	-	-	D8A	STOP LINE	35
RDZ8B	NB	6'	8	-	D8A	STOP LINE	35

NOTES:
1. DILEMMA ZONE SPEED THRESHOLD >30 MPH
2. DILEMMA ZONE DETECTION UNITS SHALL PLACE A CONSTANT CALL TO THE CONTROLLER WHEN VEHICLE TRAVEL TIMES TO THE STOP LINE ARE BETWEEN 2.5 AND 6 SECONDS
3. RADAR SHALL HAVE QUEUE DETECTION CONFIGURED AND A ZONE PLACED AT 100-200 FEET FROM STOP BAR FOR SLOW MOVING VEHICLE EXTENSIONS. SPEED TRIGGER SHALL BE SET AT 1-35 MPH.
4. ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1A (WBLT)	R	ϕ6 R	R
	Y	ϕ6 Y	
	G	ϕ6 G	
	~~Y~~	ϕ1 Y	
	~~G~~	ϕ1 G	
2A (EB)	R	ϕ2 R	R
	Y	ϕ2 Y	
	G	ϕ2 G	
2B (EB)	R	ϕ2 R	R
	Y	ϕ2 Y	
	G	ϕ2 G	
	~~Y~~	OLB Y	
	~~G~~	OLB G	
3A (NBLT)	R	ϕ8 R	R
	Y	ϕ8 Y	
	G	ϕ8 G	
	~~Y~~	ϕ3 Y	
	~~G~~	ϕ3 G	
4A (SB)	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
5A (EBLT)	R	ϕ2 R	R
	Y	ϕ2 Y	
	G	ϕ2 G	
	~~Y~~	ϕ5 Y	
	~~G~~	ϕ5 G	

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
6A (WB)	R	ϕ6 R	R
	Y	ϕ6 Y	
	G	ϕ6 G	
6B (WB)	R	ϕ6 R	R
	Y	ϕ6 Y	
	G	ϕ6 G	
	~~Y~~	OLC Y	
	~~G~~	OLC G	
7A (SBLT)	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
	~~Y~~	ϕ7 Y	
	~~G~~	ϕ7 G	
8A (NB)	R	ϕ8 R	R
	Y	ϕ8 Y	
	G	ϕ8 G	
	~~Y~~	OLA Y	
	~~G~~	OLA G	

PEDESTRIAN MOVEMENTS

PED A	W	ϕ2 PED G	OUT
	DW	ϕ2 PED R	
PED B	W	ϕ6 PED G	OUT
	DW	ϕ6 PED R	
PED C	W	ϕ8 PED G	OUT
	DW	ϕ8 PED R	

OLA - LS 13
OLB - LS 14
OLC - LS 15

ITEM 632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

QTY.	REMOVED ITEM DESCRIPTION	DISPOSED OF BY CONTRACTOR	DELIVERED TO ODOT	REMOVED AND REINSTALLED
4	STRAIN POLES	X		
LUMP	SIGNAL CABLE	X		
9	SPAN MOUNTED SIGNS	X		
1	CONTROLLER W/ CABINET & UPS		X	
10	VEHICULAR SIGNAL HEADS	X		
4	STRAIN POLE FOUNDATIONS	X		
1	EX. RADAR DETECTION UNIT		X	
2	PEDESTALS	X		
1	PEDESTAL FOUNDATIONS	X		
4	PEDESTRIAN PUSHBUTTONS W/ SIGNS	X		
4	PEDESTRIAN SIGNAL HEADS	X		
4	POLE MTD. SIGNS	X		
1	WIRELESS ANTENNA			X
1	MODEM			X

CALCULATED GRS
CHECKED NAU

TRAFFIC SIGNAL DETAILS - CLE-125-5.09
SR-125 & AMELIA-OLIVE BRANCH RD.

D08-HSIP-SIGNALS

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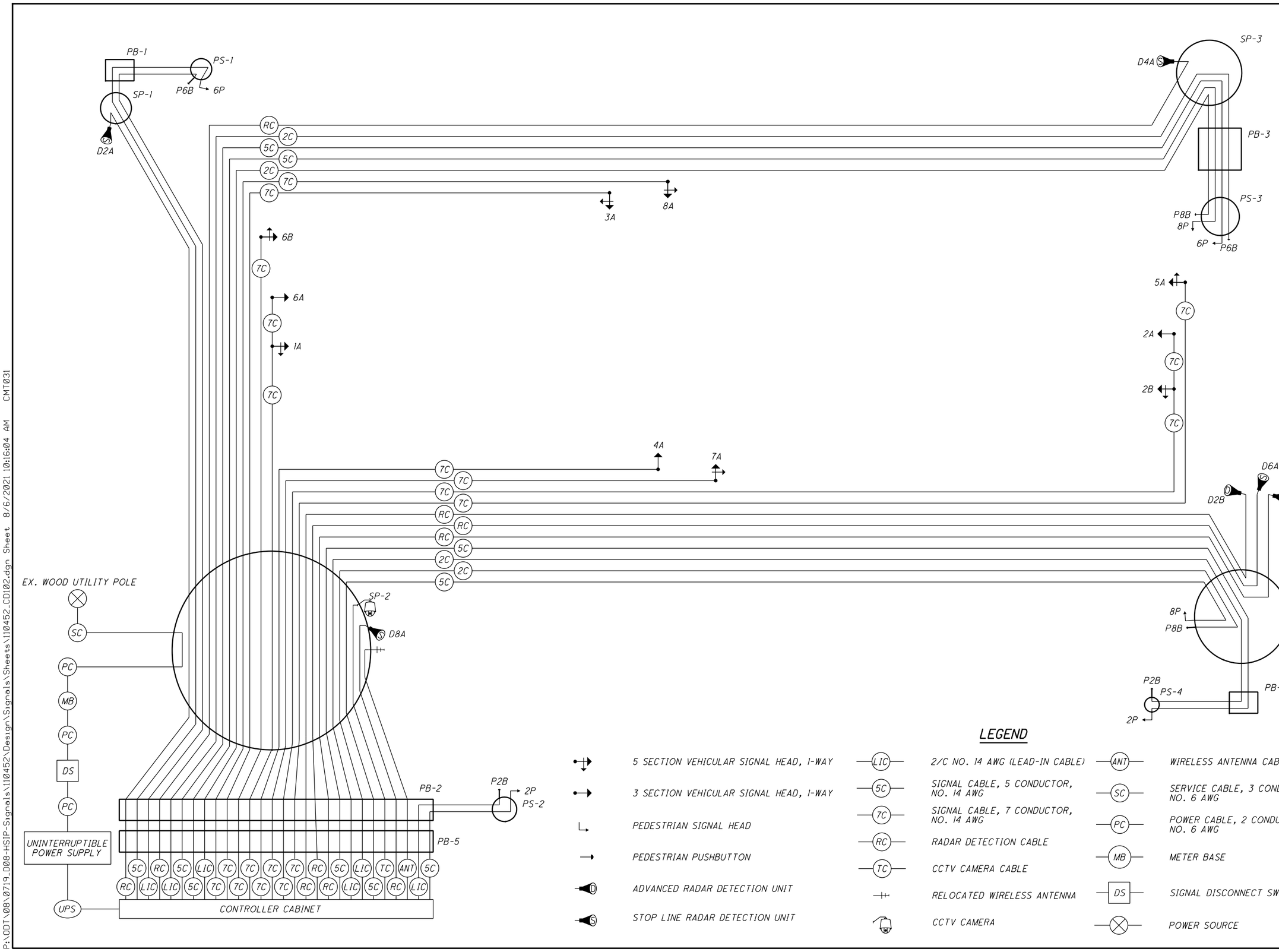

LEGEND

	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY	LIC	2/C NO. 14 AWG (LEAD-IN CABLE)	ANT	WIRELESS ANTENNA CABLE
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY	5C	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	SC	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
	PEDESTRIAN SIGNAL HEAD	7C	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	PC	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG
	PEDESTRIAN PUSHBUTTON	RC	RADAR DETECTION CABLE	MB	METER BASE
D	ADVANCED RADAR DETECTION UNIT	TC	CCTV CAMERA CABLE	DS	SIGNAL DISCONNECT SWITCH
S	STOP LINE RADAR DETECTION UNIT		RELOCATED WIRELESS ANTENNA		POWER SOURCE
			CCTV CAMERA		

CALCULATED GRS
CHECKED NAU

TRAFFIC SIGNAL DETAILS - CLE-125-5.09
SR-125 & AMELIA-OLIVE BRANCH RD.

D08-HSIP-SIGNALS

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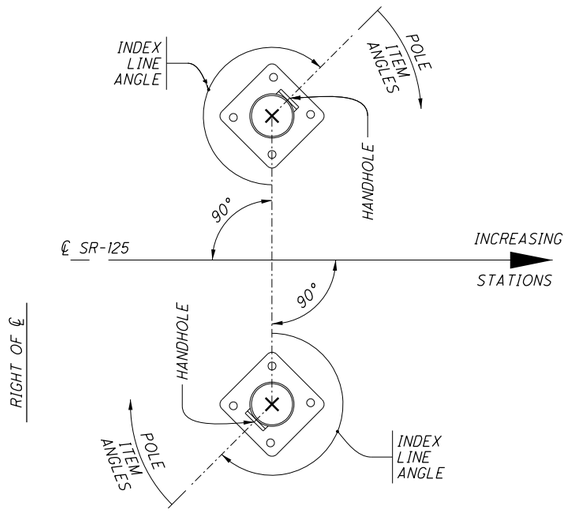
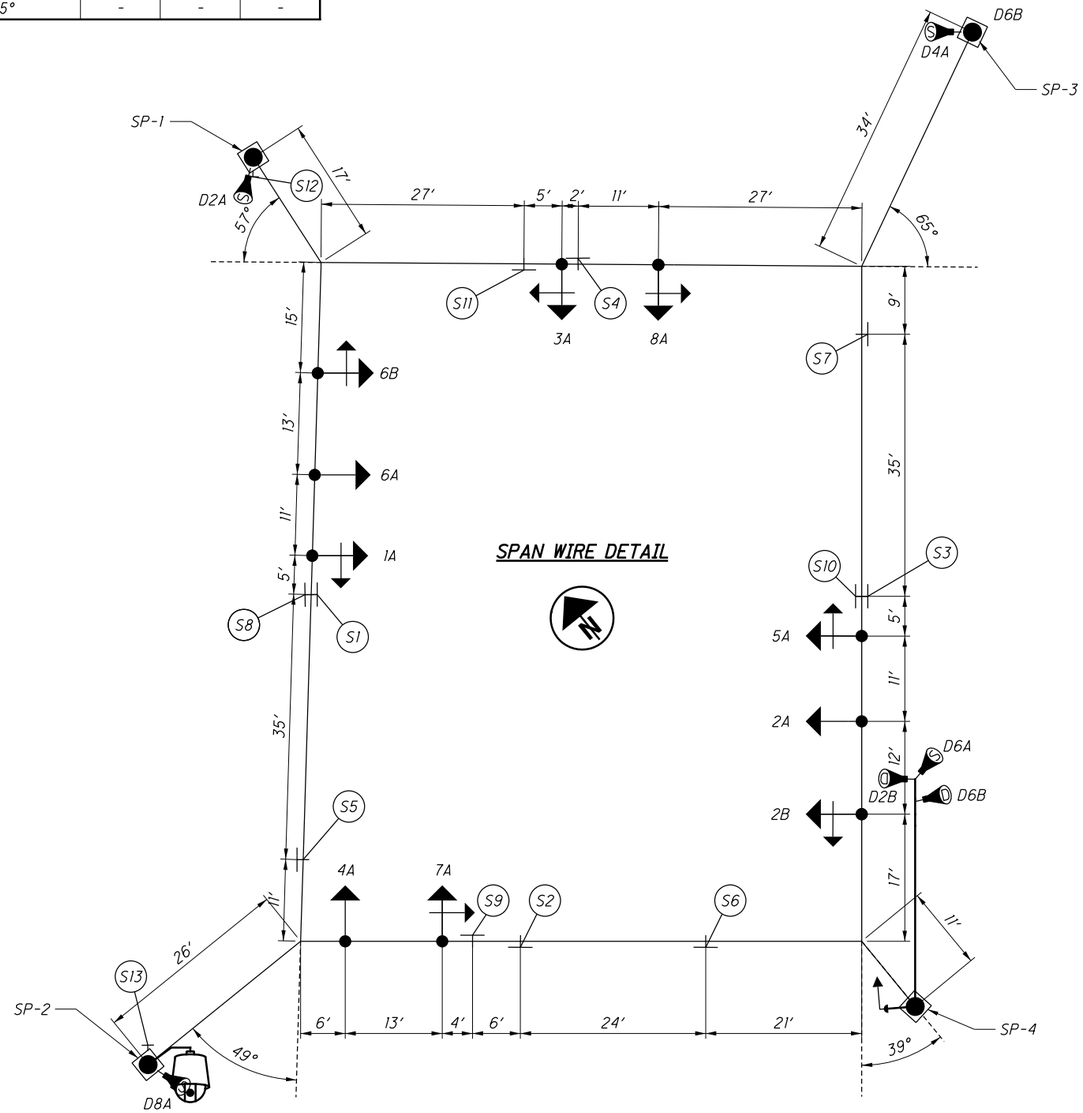
REFERENCE SHEET NO.	STATION	OFFSET	POLE NO.	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV.	SPAN WIRE ATTACHED HEIGHT	CABLE ENTRANCE DISTANCE FROM TOP (IN.)	INDEX LINE ANGLE (DEG.)	ANGLES (DEG.) FROM INDEX LINE				
										PEDESTRIAN SIGNALS	PEDESTRIAN PUSH BUTTONS	POWER SERVICE	BRACKET ARM	CABLE ENTRANCE
28	285+22.9	52.4' LT.	SP-1	13	32.0'	893.75	29.0'	12"	147°	-	-	-	-	180°
28	285+09.0	67.4' RT.	SP-2	13	36.0'	892.72	30.5'	12"	231°	-	-	219°	-	180°
28	286+17.9	68.9' LT.	SP-3	13	34.0'	892.20	32.0'	12"	205°	-	-	-	-	180°
28	286+10.3	59.7' RT.	SP-4	13	36.0'	892.33	28.5'	48"	141°	125°	125°	-	219°	180°
28	285+28.2	57.6' LT.	PS-1	PEDESTAL	8'	893.12	-	-	134°	226°	222°	-	-	-
28	285+21.3	85.8' RT.	PS-2	PEDESTAL	8'	891.50	-	-	180°	180°	180°	-	-	-
28	286+20.8	58.0' LT.	PS-3	PEDESTAL	8'	891.84	-	-	224°	132° (6P), 227° (8P)	132° (6P), 227° (8P)	-	-	-
28	285+97.2	79.9' RT.	PS-4	PEDESTAL	8'	892.43	-	-	100°	260°	255°	-	-	-



NOTES:

- ALL ANGLES ARE MEASURED CLOCKWISE.
- THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.

POLE ORIENTATION



SPAN WIRE DETAIL

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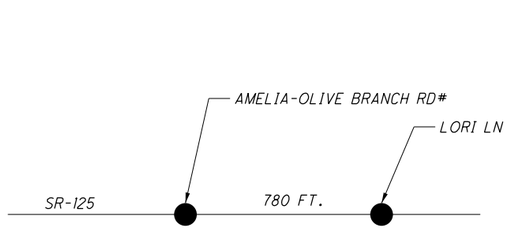
COORDINATION TIMING CHART

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	NWLT	SE	NELT	SW	SELT	NW	SWLT	NE		
PLAN NO./C/S/O	SR-125 & AMELIA-OLIVE BRANCH RD									
OFF PEAK	12.5	41.0	13.0	43.5	13.0	40.5	12.5	44.0	110	0
AM PEAK	12.5	41.5	12.0	44.0	13.0	41.0	12.0	44.0	110	0
PM PEAK	12.5	51.5	20.0	36.0	19.0	45.0	12.0	44.0	120	0
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	NWLT	SE	-	SW	SELT	NW	-	NE		
PLAN NO./C/S/O	SR-125 & LORI LN									
OFF PEAK	18.0	59.0	-	33.0	12.0	65.0	-	33.0	110	9
AM PEAK	14.0	78.0	-	18.0	14.0	78.0	-	18.0	110	97
PM PEAK	19.0	57.0	-	44.0	12.0	64.0	-	44.0	120	12
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

CORRIDOR LAYOUT



- MASTER INTERSECTION
* - CITY/COUNTY MAINTAINED

COORDINATION TIMING PLANS

DAY(S) OF WEEK	PLAN NAME	HOURS	PLAN NO. OR C/S/O	CYCLE LENGTH (SEC)
SAT-SUN	FREE	0:00-6:00	-	-
SAT-SUN	OFF PEAK	6:00-20:00	-	110
SAT-SUN	FREE	20:00-24:00	-	-
MON-FRI	FREE	0:00-6:15	-	-
MON-FRI	AM PEAK	6:15-9:00	-	110
MON-FRI	OFF PEAK	9:00-15:00	-	110
MON-FRI	PM PEAK	15:00-19:00	-	120
MON-FRI	OFF PEAK	19:00-21:30	-	110
MON-FRI	FREE	21:30-24:00	-	-

NOTES:

- OFFSETS ARE MEASURED FROM BEGIN OF GREEN OF REFERENCE PHASE(S) NUMBERED 2+6 FOR ALL INTERSECTIONS.
- MASTER INTERSECTION OFFSET REFERENCE IS ALWAYS EQUAL TO ZERO.
- $\Sigma\phi 1+\phi 2 = \Sigma\phi 5+\phi 6$ AND $\Sigma\phi 3+\phi 4 = \Sigma\phi 7+\phi 8$

ECONOLITE COORD SETTINGS	
MANUAL PATTERN	AUTO
SYSTEM SOURCE	SYS
SPLITS IN	SECONDS
TRANSITION	SMOOTH
DWELL/ADD TIME	0
OFFSET REFERENCE	YELLOW
PED RECALL	NO
CAL ZERO OVERIDE	NO
RE-SYNC COUNT	0
ECPI COORD	YES
SYSTEM FORMAT	STD
OFFSET IN	SECONDS
MAX SELECT	MAXINH
FORCE OFF	FLOAT
USE PED TIME	YES
PED RESERVICE	NO
FO ADD INI GRN	NO
MULTISYNC	NO

COORDINATION SETTINGS WERE TAKEN FROM THE EXINSTING CONTROLLER PROGRAMMING

CALCULATED GRS
CHECKED NAU

TRAFFIC SIGNAL COORDINATION PLAN - CLE-125-5.09
SR-125 & AMELIA-OLIVE BRANCH RD.

D08-HSIP-SIGNALS

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HCS Two-Way Stop-Control Report

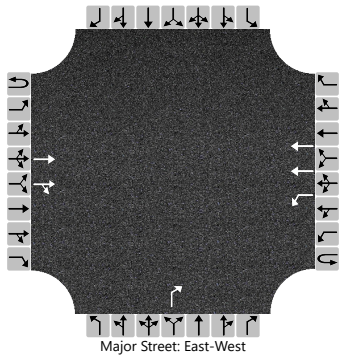
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	Build AM
Intersection Orientation	East-West
Project Description	CLE-125; Alt. 1&3 LIRIRO on White Oak

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	1		0	0	0
Configuration			T	TR		L	T					R				
Volume (veh/h)			600	40	0	90	1850					80				
Percent Heavy Vehicles (%)					0	2						1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1						6.9				
Critical Headway (sec)						4.14						6.92				
Base Follow-Up Headway (sec)						2.2						3.3				
Follow-Up Headway (sec)						2.22						3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						96						85				
Capacity, c (veh/h)						908						658				
v/c Ratio						0.11						0.13				
95% Queue Length, Q_{95} (veh)						0.4						0.4				
95% Queue Length, Q_{95} (ft)						10.2						10.1				
Control Delay (s/veh)						9.4						11.3				
Level of Service (LOS)						A						B				
Approach Delay (s/veh)						0.4				11.3						
Approach LOS						A				B						

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HCS Two-Way Stop-Control Report

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Site Information

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East/West Street	SR 125
North/South Street	White Oak Rd
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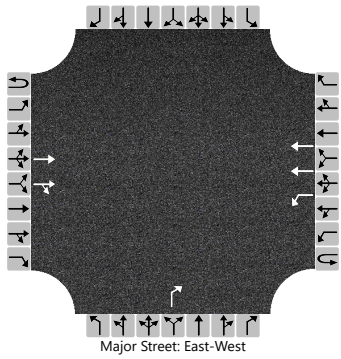
Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	1		0	0	0
Configuration			T	TR		L	T					R				
Volume (veh/h)			1800	150	0	150	1250					140				
Percent Heavy Vehicles (%)					0	2						1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage			Left Only							1						

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1						6.9				
Critical Headway (sec)						4.14						6.92				
Base Follow-Up Headway (sec)						2.2						3.3				
Follow-Up Headway (sec)						2.22						3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						161						151				
Capacity, c (veh/h)						259						226				
v/c Ratio						0.62						0.67				
95% Queue Length, Q_{95} (veh)						3.8						4.2				
95% Queue Length, Q_{95} (ft)						96.5						105.8				
Control Delay (s/veh)						39.3						47.9				
Level of Service (LOS)						E						E				
Approach Delay (s/veh)						4.2				47.9						
Approach LOS						A				E						

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HCS Two-Way Stop-Control Report

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Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	Build AM
Intersection Orientation	East-West
Project Description	CLE-125; Alt. 1&3 LIRIRO on White Oak

Site Information

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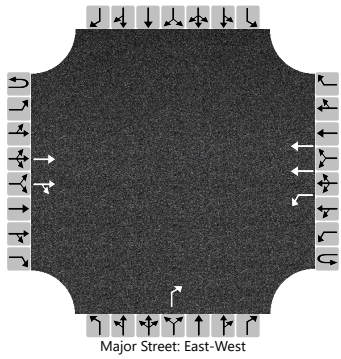
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	1		0	0	0
Configuration			T	TR		L	T					R				
Volume (veh/h)			660	50	0	90	2040					100				
Percent Heavy Vehicles (%)					0	2						1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1						6.9				
Critical Headway (sec)						4.14						6.92				
Base Follow-Up Headway (sec)						2.2						3.3				
Follow-Up Headway (sec)						2.22						3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						96						106				
Capacity, c (veh/h)						851						623				
v/c Ratio						0.11						0.17				
95% Queue Length, Q_{95} (veh)						0.4						0.6				
95% Queue Length, Q_{95} (ft)						10.2						15.1				
Control Delay (s/veh)						9.8						12.0				
Level of Service (LOS)						A						B				
Approach Delay (s/veh)					0.4				12.0							
Approach LOS					A				B							

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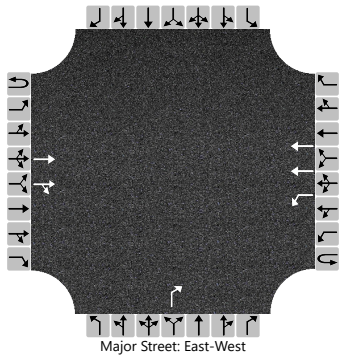
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	1		0	0	0
Configuration			T	TR		L	T					R				
Volume (veh/h)			1990	160	0	170	1380					150				
Percent Heavy Vehicles (%)					0	2						1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1						6.9				
Critical Headway (sec)						4.14						6.92				
Base Follow-Up Headway (sec)						2.2						3.3				
Follow-Up Headway (sec)						2.22						3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						183						161				
Capacity, c (veh/h)						213						191				
v/c Ratio						0.86						0.84				
95% Queue Length, Q_{95} (veh)						6.6						6.1				
95% Queue Length, Q_{95} (ft)						167.6						153.7				
Control Delay (s/veh)						76.7						79.9				
Level of Service (LOS)						F						F				
Approach Delay (s/veh)						8.4				79.9						
Approach LOS						A				F						

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HCS Two-Way Stop-Control Report

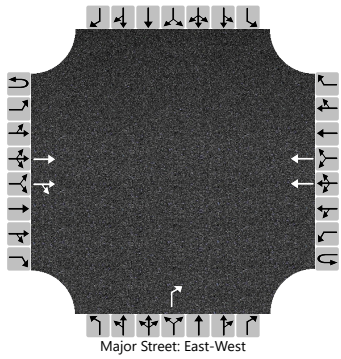
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	Build AM
Intersection Orientation	East-West
Project Description	CLE-125; RIRO on White Oak

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	1		0	0	0
Configuration			T	TR			T					R				
Volume (veh/h)			600	40			1930					80				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.92				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												85				
Capacity, c (veh/h)												658				
v/c Ratio												0.13				
95% Queue Length, Q_{95} (veh)												0.4				
95% Queue Length, Q_{95} (ft)												10.1				
Control Delay (s/veh)												11.3				
Level of Service (LOS)												B				
Approach Delay (s/veh)										11.3						
Approach LOS										B						

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HCS Two-Way Stop-Control Report

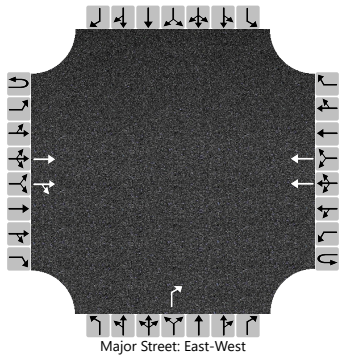
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	Build PM
Intersection Orientation	East-West
Project Description	CLE-125; RIRO on White Oak

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	1		0	0	0
Configuration			T	TR			T					R				
Volume (veh/h)			1800	150			1400					140				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.92				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												151				
Capacity, c (veh/h)												226				
v/c Ratio												0.67				
95% Queue Length, Q_{95} (veh)												4.2				
95% Queue Length, Q_{95} (ft)												105.8				
Control Delay (s/veh)												47.9				
Level of Service (LOS)												E				
Approach Delay (s/veh)										47.9						
Approach LOS										E						

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HCS Two-Way Stop-Control Report

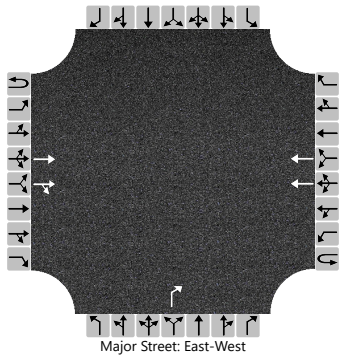
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	Build AM
Intersection Orientation	East-West
Project Description	CLE-125; RIRO on White Oak

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	1		0	0	0
Configuration			T	TR			T					R				
Volume (veh/h)			660	50			2130					100				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.92				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												106				
Capacity, c (veh/h)												623				
v/c Ratio												0.17				
95% Queue Length, Q_{95} (veh)												0.6				
95% Queue Length, Q_{95} (ft)												15.1				
Control Delay (s/veh)												12.0				
Level of Service (LOS)												B				
Approach Delay (s/veh)										12.0						
Approach LOS										B						

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HCS Two-Way Stop-Control Report

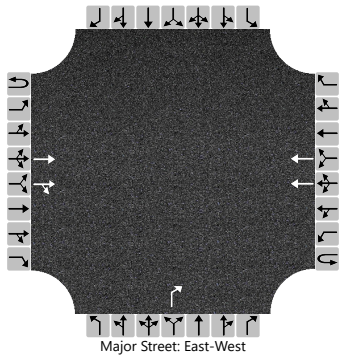
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	Build PM
Intersection Orientation	East-West
Project Description	CLE-125; RIRO on White Oak

Site Information

Intersection	SR 125 & White Oak Rd
Jurisdiction	ODOT District 8
East/West Street	SR 125
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	1		0	0	0
Configuration			T	TR			T					R				
Volume (veh/h)			1990	160			1550					150				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.92				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												161				
Capacity, c (veh/h)												191				
v/c Ratio												0.84				
95% Queue Length, Q_{95} (veh)												6.1				
95% Queue Length, Q_{95} (ft)												153.7				
Control Delay (s/veh)												79.9				
Level of Service (LOS)												F				
Approach Delay (s/veh)										79.9						
Approach LOS										F						

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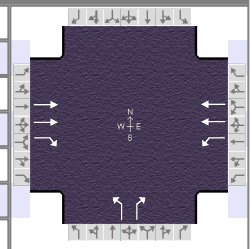
HCS Signalized Intersection Results Summary

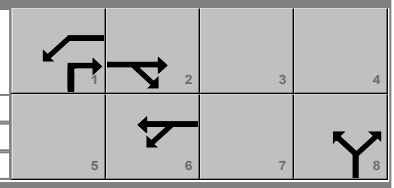
General Information				Intersection Information	
Agency	EMH&T			Duration, h	0.250
Analyst	C.Anderson	Analysis Date	10/17/2024	Area Type	Other
Jurisdiction	ODOT District 8	Time Period	AM Peak	PHF	0.94
Urban Street	SR 125	Analysis Year	2030	Analysis Period	1> 7:00
Intersection	White Oak Rd	File Name	4.0_signal SR125 & White Oak_2030 AM.xus		
Project Description	Signal Alternative				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		600	40	90	1850		30		80			

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	45	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	53.0	12.0	0.0	0.0	0.0	
Yellow	3.0	5.0	4.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		60.0	12.0	72.0		18.0		
Change Period, ($Y+R_c$), s		7.0	5.0	7.0		6.0		
Max Allow Headway (*MAH*), s		3.9	4.0	3.9		4.2		
Queue Clearance Time (g_s), s		10.3	3.6	32.9		6.0		
Green Extension Time (g_e), s		21.2	0.1	13.6		0.2		
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.26	1.00	0.57		0.22		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (*v*), veh/h		638	43	96	1968		32		85			
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1738	1547	1781	1781		1795		1598			
Queue Service Time (g_s), s		8.3	1.0	1.6	30.9		1.4		4.0			
Cycle Queue Clearance Time (g_c), s		8.3	1.0	1.6	30.9		1.4		4.0			
Green Ratio (*g/C*)		0.59	0.59	0.69	0.72		0.13		0.21			
Capacity (*c*), veh/h		2047	911	611	2572		239		337			
Volume-to-Capacity Ratio (*X*)		0.312	0.047	0.157	0.765		0.133		0.252			
Back of Queue (*Q*), ft/ln (95 th percentile)		124	14	20	320		28		68			
Back of Queue (*Q*), veh/ln (95 th percentile)		4.8	0.5	0.8	12.6		1.1		2.7			
Queue Storage Ratio (*RQ*) (95 th percentile)		0.16	0.07	0.10	0.42		0.03		0.07			
Uniform Delay (d_1), s/veh		9.3	7.8	5.3	7.8		34.4		29.6			
Incremental Delay (d_2), s/veh		0.1	0.0	0.1	1.4		0.2		0.4			
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (*d*), s/veh		9.4	7.8	5.4	9.2		34.7		30.0			
Level of Service (LOS)		A	A	A	A		C		C			
Approach Delay, s/veh / LOS	9.3	A		9.0	A		31.2	C		0.0		
Intersection Delay, s/veh / LOS	10.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	0.65	A	2.31	B	2.31	B
Bicycle LOS Score / LOS	1.05	A	2.19	B		F		

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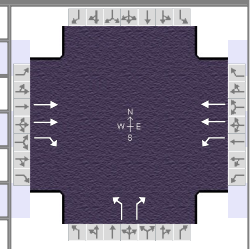
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	EMH&T			Duration, h	0.250
Analyst	C.Anderson	Analysis Date	10/17/2024	Area Type	Other
Jurisdiction	ODOT District 8	Time Period	PM Peak	PHF	0.93
Urban Street	SR 125	Analysis Year	2030	Analysis Period	1> 7:00
Intersection	White Oak Rd	File Name	4.0_signal SR125 & White Oak_2030 PM.xus		
Project Description	Signal Alternative				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1800	150	150	1250		10		140			

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	7.0	55.0	10.0	0.0	0.0	0.0						
Yellow	3.0	5.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		62.0	12.0	74.0		16.0		
Change Period, ($Y+R_c$), s		7.0	5.0	7.0		6.0		
Max Allow Headway (*MAH*), s		3.9	4.0	3.9		4.2		
Queue Clearance Time (g_s), s		43.0	4.6	15.9		9.6		
Green Extension Time (g_e), s		10.6	0.1	27.7		0.0		
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.88	1.00	0.58		1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (*v*), veh/h		1935	161	161	1344		11		151			
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1795	1598	1781	1781		1795		1598			
Queue Service Time (g_s), s		41.0	3.9	2.6	13.9		0.5		7.6			
Cycle Queue Clearance Time (g_c), s		41.0	3.9	2.6	13.9		0.5		7.6			
Green Ratio (*g/C*)		0.61	0.61	0.71	0.74		0.11		0.19			
Capacity (*c*), veh/h		2194	976	254	2651		199		302			
Volume-to-Capacity Ratio (*X*)		0.882	0.165	0.634	0.507		0.054		0.499			
Back of Queue (*Q*), ft/ln (95 th percentile)		518	51	107	144		9		131			
Back of Queue (*Q*), veh/ln (95 th percentile)		20.5	2.0	4.2	5.6		0.4		5.2			
Queue Storage Ratio (*RQ*) (95 th percentile)		0.69	0.25	0.53	0.19		0.09		0.13			
Uniform Delay (d_1), s/veh		14.8	7.6	20.6	4.7		35.8		32.7			
Incremental Delay (d_2), s/veh		4.6	0.1	5.1	0.2		0.1		1.3			
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (*d*), s/veh		19.4	7.6	25.7	4.9		35.9		34.0			
Level of Service (LOS)		B	A	C	A		D		C			
Approach Delay, s/veh / LOS	18.5	B		7.1	A		34.1	C		0.0		
Intersection Delay, s/veh / LOS	14.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.87	B	0.64	A	2.31	B	2.31	B
Bicycle LOS Score / LOS	2.22	B	1.73	B		F		

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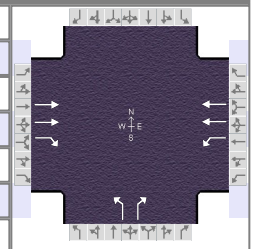
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	EMH&T			Duration, h	0.250
Analyst	C.Anderson	Analysis Date	10/17/2024	Area Type	Other
Jurisdiction	ODOT District 8	Time Period	AM Peak	PHF	0.94
Urban Street	SR 125	Analysis Year	2050	Analysis Period	1> 7:00
Intersection	White Oak Rd	File Name	4.0_signal SR125 & White Oak_2050 AM.xus		
Project Description	Signal Alternative				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		660	50	90	2040		30		100			

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	7.0		53.0	12.0	0.0	0.0	0.0					
Yellow	3.0		5.0	4.0	0.0	0.0	0.0					
Red	2.0		2.0	2.0	0.0	0.0	0.0	5	6	7	8	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		60.0	12.0	72.0		18.0		
Change Period, ($Y+R_c$), s		7.0	5.0	7.0		6.0		
Max Allow Headway (*MAH*), s		3.9	4.0	3.9		4.3		
Queue Clearance Time (g_s), s		11.4	3.6	41.0		7.1		
Green Extension Time (g_e), s		24.7	0.1	9.9		0.2		
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.39	1.00	0.82		0.58		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (*v*), veh/h		702	53	96	2170		32		106			
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1738	1547	1781	1781		1795		1598			
Queue Service Time (g_s), s		9.4	1.3	1.6	39.0		1.4		5.1			
Cycle Queue Clearance Time (g_c), s		9.4	1.3	1.6	39.0		1.4		5.1			
Green Ratio (*g/C*)		0.59	0.59	0.69	0.72		0.13		0.21			
Capacity (*c*), veh/h		2047	911	580	2572		239		337			
Volume-to-Capacity Ratio (*X*)		0.343	0.058	0.165	0.844		0.133		0.315			
Back of Queue (*Q*), ft/ln (95 th percentile)		139	18	20	399		28		87			
Back of Queue (*Q*), veh/ln (95 th percentile)		5.4	0.7	0.8	15.7		1.1		3.5			
Queue Storage Ratio (*RQ*) (95 th percentile)		0.18	0.09	0.10	0.53		0.28		0.09			
Uniform Delay (d_1), s/veh		9.5	7.9	5.4	8.9		34.4		30.0			
Incremental Delay (d_2), s/veh		0.1	0.0	0.1	2.7		0.2		0.5			
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (*d*), s/veh		9.6	7.9	5.6	11.6		34.7		30.5			
Level of Service (LOS)		A	A	A	B		C		C			
Approach Delay, s/veh / LOS	9.5	A		11.4	B		31.5	C		0.0		
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	0.65	A	2.31	B	2.31	B
Bicycle LOS Score / LOS	1.11	A	2.36	B		F		

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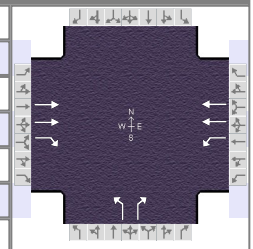
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	EMH&T			Duration, h	0.250
Analyst	C.Anderson	Analysis Date	10/17/2024	Area Type	Other
Jurisdiction	ODOT District 8	Time Period	PM Peak	PHF	0.93
Urban Street	SR 125	Analysis Year	2030	Analysis Period	1> 7:00
Intersection	White Oak Rd	File Name	4.0_signal SR125 & White Oak_2050 PM.xus		
Project Description	Signal Alternative				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1990	160	170	1380		10		150			

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	7.0	55.0	11.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.0	4.0	4.0	0.0	0.0	0.0				
Red	2.0	2.0	2.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		61.0	12.0	73.0		17.0		
Change Period, ($Y+R_c$), s		6.0	5.0	6.0		6.0		
Max Allow Headway (*MAH*), s		3.9	4.0	3.9		4.2		
Queue Clearance Time (g_s), s		53.7	6.6	18.4		10.9		
Green Extension Time (g_e), s		1.3	0.0	29.4		0.0		
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		1.00	1.00	0.72		1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (*v*), veh/h		2140	172	183	1484		11		161			
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1795	1598	1781	1781		1795		1598			
Queue Service Time (g_s), s		51.7	4.2	4.6	16.4		0.5		8.9			
Cycle Queue Clearance Time (g_c), s		51.7	4.2	4.6	16.4		0.5		8.9			
Green Ratio (*g/C*)		0.61	0.61	0.71	0.74		0.12		0.12			
Capacity (*c*), veh/h		2194	976	225	2651		219		195			
Volume-to-Capacity Ratio (*X*)		0.976	0.176	0.811	0.560		0.049		0.826			
Back of Queue (*Q*), ft/ln (95 th percentile)		704	55	218	169		9		205			
Back of Queue (*Q*), veh/ln (95 th percentile)		27.9	2.2	8.6	6.7		0.4		8.1			
Queue Storage Ratio (*RQ*) (95 th percentile)		0.93	0.27	1.09	0.22		0.09		0.21			
Uniform Delay (d_1), s/veh		16.9	7.6	26.9	5.0		34.9		38.6			
Incremental Delay (d_2), s/veh		13.9	0.1	19.5	0.3		0.1		24.3			
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (*d*), s/veh		30.8	7.7	46.4	5.3		35.0		62.9			
Level of Service (LOS)		C	A	D	A		C		E			
Approach Delay, s/veh / LOS	29.0	C		9.8	A		61.1	E		0.0		
Intersection Delay, s/veh / LOS	22.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.87	B	0.64	A	2.31	B	2.31	B
Bicycle LOS Score / LOS	2.39	B	1.86	B		F		

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HCS Two-Way Stop-Control Report

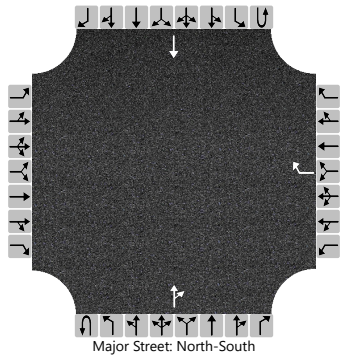
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	11/19/2024
Analysis Year	2030
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	CLE-125; RIRO Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	1	0	0	0	1	0
Configuration								R				TR			T	
Volume (veh/h)								10			70	10			40	
Percent Heavy Vehicles (%)								3								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)								6.2								
Critical Headway (sec)								6.23								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.33								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								11								
Capacity, c (veh/h)								978								
v/c Ratio								0.01								
95% Queue Length, Q_{95} (veh)								0.0								
95% Queue Length, Q_{95} (ft)								0.0								
Control Delay (s/veh)								8.7								
Level of Service (LOS)								A								
Approach Delay (s/veh)						8.7										
Approach LOS						A										

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HCS Two-Way Stop-Control Report

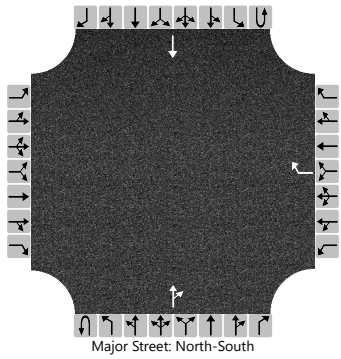
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2030
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	CLE-125; RIRO Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	1	0	0	0	1	0
Configuration								R				TR			T	
Volume (veh/h)								10			130	30			150	
Percent Heavy Vehicles (%)								0								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)								6.2								
Critical Headway (sec)								6.20								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.30								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								11								
Capacity, c (veh/h)								895								
v/c Ratio								0.01								
95% Queue Length, Q_{95} (veh)								0.0								
95% Queue Length, Q_{95} (ft)								0.0								
Control Delay (s/veh)								9.1								
Level of Service (LOS)								A								
Approach Delay (s/veh)						9.1										
Approach LOS						A										

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HCS Two-Way Stop-Control Report

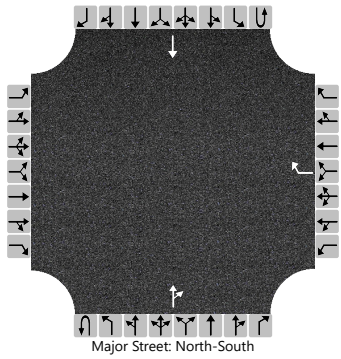
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	11/19/2024
Analysis Year	2050
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	CLE-125; RIRO Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	1	0	0	0	1	0
Configuration								R				TR			T	
Volume (veh/h)								20			80	10			50	
Percent Heavy Vehicles (%)								3								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)								6.2								
Critical Headway (sec)								6.23								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.33								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								21								
Capacity, c (veh/h)								965								
v/c Ratio								0.02								
95% Queue Length, Q_{95} (veh)								0.1								
95% Queue Length, Q_{95} (ft)								2.6								
Control Delay (s/veh)								8.8								
Level of Service (LOS)								A								
Approach Delay (s/veh)						8.8										
Approach LOS						A										

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HCS Two-Way Stop-Control Report

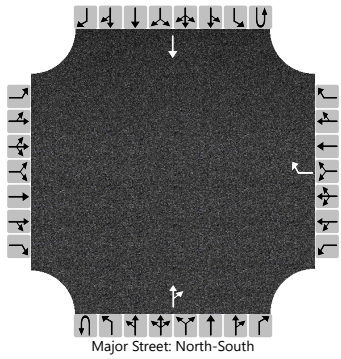
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	9/27/2024
Analysis Year	2050
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	CLE-125; RIRO Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	1	0	0	0	1	0
Configuration								R				TR			T	
Volume (veh/h)								10			140	30			160	
Percent Heavy Vehicles (%)								0								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)								6.2								
Critical Headway (sec)								6.20								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.30								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								11								
Capacity, c (veh/h)								883								
v/c Ratio								0.01								
95% Queue Length, Q_{95} (veh)								0.0								
95% Queue Length, Q_{95} (ft)								0.0								
Control Delay (s/veh)								9.1								
Level of Service (LOS)								A								
Approach Delay (s/veh)						9.1										
Approach LOS						A										

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HCS Two-Way Stop-Control Report

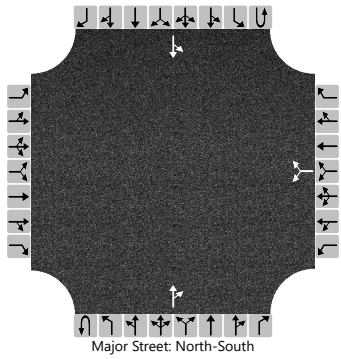
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	11/19/2024
Analysis Year	2030
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	CLE-125; Alt. 3 realign Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						30		40			70	10		40	90	
Percent Heavy Vehicles (%)						3		3						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							74							43		
Capacity, c (veh/h)							838							1524		
v/c Ratio							0.09							0.03		
95% Queue Length, Q_{95} (veh)							0.3							0.1		
95% Queue Length, Q_{95} (ft)							7.7							2.5		
Control Delay (s/veh)							9.7							7.4	0.2	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.7								2.4		
Approach LOS						A								A		

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HCS Two-Way Stop-Control Report

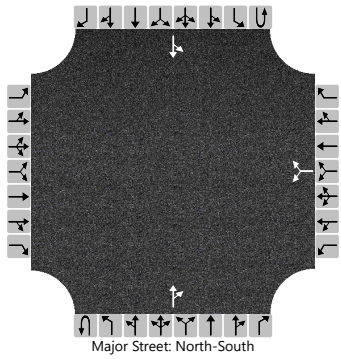
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	11/19/2024
Analysis Year	2030
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	CLE-125; Alt. 3 realign Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						30		20			130	30		110	190	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							54							118		
Capacity, c (veh/h)							538							1417		
v/c Ratio							0.10							0.08		
95% Queue Length, Q_{95} (veh)							0.3							0.3		
95% Queue Length, Q_{95} (ft)							7.5							7.5		
Control Delay (s/veh)							12.4							7.8	0.7	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						12.4								3.3		
Approach LOS						B								A		

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HCS Two-Way Stop-Control Report

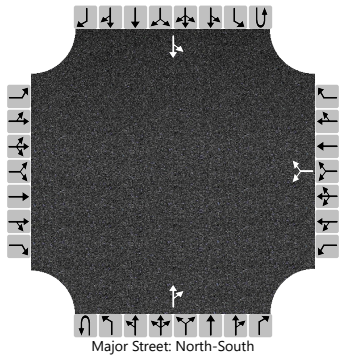
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	11/19/2024
Analysis Year	2050
Time Analyzed	Build AM
Intersection Orientation	North-South
Project Description	CLE-125; Alt. 3 realign Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						30		50			80	10		40	100	
Percent Heavy Vehicles (%)						3		3						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							85							43		
Capacity, c (veh/h)							836							1511		
v/c Ratio							0.10							0.03		
95% Queue Length, Q_{95} (veh)							0.3							0.1		
95% Queue Length, Q_{95} (ft)							7.7							2.5		
Control Delay (s/veh)							9.8							7.5	0.2	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.8								2.3		
Approach LOS						A								A		

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HCS Two-Way Stop-Control Report

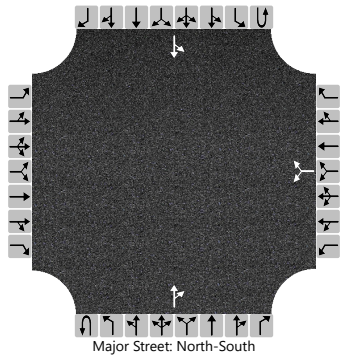
General Information

Analyst	C.Anderson
Agency/Co.	EMH&T
Date Performed	11/19/2024
Analysis Year	2050
Time Analyzed	Build PM
Intersection Orientation	North-South
Project Description	CLE-125; Alt. 3 realign Lewis

Site Information

Intersection	White Oak Rd & Lewis
Jurisdiction	ODOT District 8
East/West Street	Lewis Rd
North/South Street	White Oak Rd
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						40		20			140	30		120	210	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							65							129		
Capacity, c (veh/h)							480							1404		
v/c Ratio							0.13							0.09		
95% Queue Length, Q_{95} (veh)							0.5							0.3		
95% Queue Length, Q_{95} (ft)							12.5							7.5		
Control Delay (s/veh)							13.7							7.8	0.8	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						13.7								3.4		
Approach LOS						B								A		

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Engineers, Surveyors, Planners, Scientists

APPENDIX D

Realignment Conceptual Designs

WHITE OAK ROAD

STATE ROUTE 125

PROPOSED R/W

0.558 ACRES

0.905 ACRES

LEWIS ROAD RELOCATION
ALTERNATIVE #1

PROPOSED R/W

0.237 ACRES

LEWIS ROAD

WHITE OAK ROAD

STATE ROUTE 125

0.047 ACRES

0.514 ACRES

PROPOSED R/W

PROPOSED R/W

LEWIS ROAD RELOCATION
ALTERNATIVE #2

0.1.332 ACRES

LEWIS ROAD


WHITE OAK ROAD
STATE ROUTE 125
0.764 ACRES
1.250 ACRES
PROPOSED R/W
PROPOSED R/W
LEWIS ROAD RELOCATION
ALTERNATIVE #3
LEWIS ROAD


WHITE OAK ROAD
STATE ROUTE 125
0.542 ACRES
1.208 ACRES
PROPOSED R/W
PROPOSED R/W
LEWIS ROAD RELOCATION
ALTERNATIVE #4
LEWIS ROAD

PROPOSED R/W

WHITE OAK ROAD

PROPOSED R/W

PROPOSED R/W

LEWIS ROAD

STATE ROUTE 125

0.561 ACRES

1.177ACRES

LEWIS ROAD RELOCATION
ALTERNATIVE #5


PROPOSED R/W
WHITE OAK ROAD
PROPOSED R/W
PROPOSED R/W
STATE ROUTE 125
0.693 ACRES
1.172ACRES
LEWIS ROAD RELOCATION
ALTERNATIVE #6
LEWIS ROAD

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APPENDIX E

Signal Warrant Analysis

STUDY AND ANALYSIS INFORMATION

Municipality:	Pierce Township Batavia Township	**Traffic Volumes Obtained By:**	ODOT
County:	Clermont	**Analysis Date:**	9/26/2024
ODOT Engineering District:	8	**Agency/ Company Name Performing Warrant Analysis:**	EMH&T
Google map link:	Map		

Analysis Information

Data Collection Date: 5/8/2024

Day of the Week: Wednesday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Existing Traffic Signal at intersection: No

Total Number of Approaches at Intersection: 3

Major Street Information

Major Street Name and Route Number: Ohio Pike (SR 125)

Major Street Approach Direction: E-Bound / W-Bound

Number of Thru Lanes on Each Major Street Approach: 2 **LANE(S)**

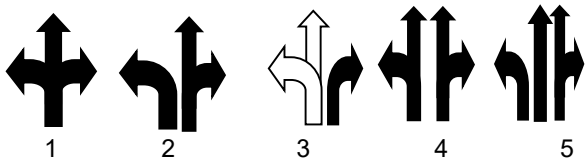
Speed Limit or 85th Percentile Speed on the Major Street*: 45 **MPH**

*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: White Oak Rd (CR 128)

Minor Street Approach Configuration: 1 N-Bound / S-Bound



1 2 3 4 5

Number of Thru Lanes on Each Minor Street Approach: 1 **LANE(S)**

Apply Right Turn Lane Reduction*: Yes

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	100% Warrant Satisfied?	Notes and Comments: *Known error: if Speed Limit < 45mph, it may not state that it passes at 70%.	
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	Condition B (70%) was met.	
Warrant 2, Four-Hour Vehicular Volume	Yes	**No**	Figure 4C-2 (70% Factor)	
Warrant 3, Peak Hour	Yes	**No**	Signals installed under Warrant 3 should be traffic actuated.	**Peak Hour** 5:00 PM 6:00 PM
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)				
Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.	**Peak Hour** 11:00 AM 12:00 PM
Warrant 5, School Crossing	No		N/A	
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 7, Crash Experience	Yes	**No**	If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.	
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9	
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion: Do Not Install New Traffic Signal

Notes:

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM						0						0						0						0	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM						0						0						0						0	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM						0						0						0						0	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM						0						0						0						0	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM						0						0						0						0	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM						0						0						0						0	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM						0		283	1			284	5		2			7	1	61				62	
6:15 AM						0		315	8			323	10		10			20	2	62				64	
6:30 AM						0		381	6			387	17		5			22	0	87				87	
6:45 AM						0		389	11			400	19		8			27	6	101				107	
Hourly Total	0	0	0	0	0	0	0	1368	26	0	0	1394	51	0	25	0	0	76	9	311	0	0	0	320	
7:00 AM						0		416	26			442	18		7			25	4	121				125	
7:15 AM						0		414	20			434	19		7			26	12	145				157	
7:30 AM						0		407	18			425	24		6			30	14	164				178	
7:45 AM						0		293	17			310	23		10			33	5	160				165	
Hourly Total	0	0	0	0	0	0	0	1530	81	0	0	1611	84	0	30	0	0	114	35	590	0	0	0	625	
8:00 AM						0		285	22			307	17		5			22	8	156				164	
8:15 AM						0		282	17			299	16		5			21	7	165				172	
8:30 AM						0		342	21			363	21		5			26	8	141				149	
8:45 AM						0		273	13			286	25		9			34	7	157				164	
Hourly Total	0	0	0	0	0	0	0	1182	73	0	0	1255	79	0	24	0	0	103	30	619	0	0	0	649	
9:00 AM						0		273	16			289	20		2			22	5	179				184	
9:15 AM						0		281	21			302	33		6			39	9	168				177	
9:30 AM						0		284	18			302	22		4			26	8	178				186	
9:45 AM						0		229	18			247	20		6			26	9	167				176	
Hourly Total	0	0	0	0	0	0	0	1067	73	0	0	1140	95	0	18	0	0	113	31	692	0	0	0	723	
10:00 AM						0		236	20			256	26		3			29	9	196				205	
10:15 AM						0		261	23			284	24		5			29	6	214				220	
10:30 AM						0		269	13			282	18		6			24	6	191				197	
10:45 AM						0		271	10			281	25		6			31	5	231				236	
Hourly Total	0	0	0	0	0	0	0	1037	66	0	0	1103	93	0	20	0	0	113	26	832	0	0	0	858	
11:00 AM						0		264	21			285	15		4			19	7	226				233	
11:15 AM						0		270	16			286	23		10			33	9	225				234	
11:30 AM						0		243	19			262	17		9			26	6	249				255	
11:45 AM						0		241	20			261	18		7			25	14	229				243	
Hourly Total	0	0	0	0	0	0	0	1018	76	0	0	1094	73	0	30	0	0	103	36	929	0	0	0	965	
12:00 PM						0		281	25			306	14		7			21	7	239				246	
12:15 PM						0		301	22			323	17		7			24	13	268				281	
12:30 PM						0		281	17			298	16		6			22	13	286				299	
12:45 PM						0		266	16			282	20		7			27	15	269				284	
Hourly Total	0	0	0	0	0	0	0	1129	80	0	0	1209	67	0	27	0	0	94	48	1062	0	0	0	1110	
1:00 PM						0		256	16			272	19		3			22	16	269				285	
1:15 PM						0		268	16			284	25		8			33	12	257				269	
1:30 PM						0		238	14			252	27		4			31	7	265				272	
1:45 PM						0		275	19			294	20		3			23	5	296				301	
Hourly Total	0	0	0	0	0	0	0	1037	65	0	0	1102	91	0	18	0	0	109	40	1087	0	0	0	1127	
2:00 PM						0		241	21			262	32		3			35	10	295				305	
2:15 PM						0		260	21			281	25		4			29	10	315				325	
2:30 PM						0		278	23			301	21		6			27	18	286				304	
2:45 PM						0		234	26			260	19		7			26	20	366				386	
Hourly Total	0	0	0	0	0	0	0	1013	91	0	0	1104	97	0	20	0	0	117	58	1262	0	0	0	1320	
3:00 PM						0		283	25			308	39		3			42	26	361				387	
3:15 PM						0		305	30			335	26		2			28	18	349				367	
3:30 PM						0		285	33			318	33		2			35	17	365				382	
3:45 PM						0		280	25			305	28		0			28	30	395				425	
Hourly Total	0	0	0	0	0	0	0	1153	113	0	0	1266	126	0	7	0	0	133	91	1470	0	0	0	1561	
4:00 PM						0		226	38			264	39		3			42	23	379				402	
4:15 PM						0		263	29			292	32		2			34	33	438				471	
4:30 PM						0		293	36			329	35		0			35	29	423				452	
4:45 PM						0		269	37			306	32		4			36	40	309				349	
Hourly Total	0	0	0	0	0	0	0	1051	140	0	0	1191	138	0	9	0	0	147	125	1549	0	0	0	1674	
5:00 PM						0		276	32			308	32		5			37	23	362				385	
5:15 PM						0		269	19			288	29		1			30	15	331				346	
5:30 PM						0		280	34			314	32		10			42	30	322				352	
5:45 PM						0		298	25			323	36		6			42	24	389				413	
Hourly Total	0	0	0	0	0	0	0	1123	110	0	0	1233	129	0	22	0	0	151	92	1404	0	0	0	1496	
6:00 PM						0		272	37			309	30		2			32	12	339				351	
6:15 PM						0		293	35			328	24		3			27	20	330				350	
6:30 PM						0		242	21			263	18		4			22	14	334				348	
6:45 PM						0		232	19			251	26		3			29	15	280				295	
Hourly Total	0	0	0	0	0	0	0	1039	112	0	0	1151	98	0	12	0	0	110	61	1283	0	0	0	1344	
7:00 PM						0		233	27			260	22		2			24	13	278				291	
7:15 PM						0		184	38			222	23		5			28	20	278				298	
7:30 PM						0		178	17			195	22		5			27	9	247				256	
7:45 PM						0		163	25			188	13		6			19	14	256				270	
Hourly Total	0	0	0	0	0	0	0	758	107	0	0	865	80	0	18	0	0	98	56	1059	0	0	0	1115	
8:00 PM						0		195	37			232	11		4			15	18	266				284	
8:15 PM						0		181	18			199	15		4			19	17	235				252	
8:30 PM						0		166	24			190	16		1			17	19	221				240	
8:45 PM						0		115	15			130	13		4			17	14	207				221	
Hourly Total	0	0	0	0	0	0	0	657	94	0	0	751	55	0	13	0	0	68	68	929	0	0	0	997	
9:00 PM						0		108	18			126	10		2			12	22	187				209	
9:15 PM						0		91	11			102	9		2			11	7	152				159	
9:30 PM						0		88	3			91	11		4			15	6	147				153	
9:45 PM						0		68	8			76	9		0			9	1	118				119	
Hourly Total	0	0	0	0	0	0	0	355	40	0	0	395	39	0	8	0	0	47	36	604	0	0	0	640	
10:00 PM						0		67	12			79	6		2			8	6	122				128	
10:15 PM						0		55	1			56	5		1			6	2	104				106	
10:30 PM						0		45	4			49	4		0			4	3	72				75	
10:45 PM						0		40	3			43	4		0			4	5	73				78	
Hourly Total	0	0	0	0	0	0	0	207	20	0	0	227	19	0	3	0	0	22	16	371	0	0	0	387	
11:00 PM						0		34	4			38	4		2			6	0	67				67	
11:15 PM						0		35	1			36	1		1			2	2	34				36	
11:30 PM						0		24	1			25	0		0			0	0	38				38	
11:45 PM						0		17	1			18	1		2			3	2	21				23	
Hourly Total	0	0	0	0	0	0	0	110	7	0	0	117	6	0	5	0	0	11	4	160	0	0	0	164	

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1			500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1	X		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
1:15 AM	0	0																
1:30 AM	0	0																
1:45 AM	0	0																
2:00 AM	0	0																
2:15 AM	0	0																
2:30 AM	0	0																
2:45 AM	0	0																
3:00 AM	0	0																
3:15 AM	0	0																
3:30 AM	0	0																
3:45 AM	0	0																
4:00 AM	0	0																
4:15 AM	0	0																
4:30 AM	0	0																
4:45 AM	0	0																
5:00 AM	0	0																
5:15 AM	346	4													1			
5:30 AM	733	21	1		1				1		1		1				1	
5:45 AM	1207	37					1											
6:00 AM	1714	56																
6:15 AM	1935	69													1			
6:30 AM	2139	57	1		1				1	1	1		1				1	1
6:45 AM	2268	60					1											
7:00 AM	2236	64																
7:15 AM	2140	62													1			
7:30 AM	2020	58	1		1				1	1	1		1				1	1
7:45 AM	1929	56					1											
8:00 AM	1904	56																
8:15 AM	1906	54													1			
8:30 AM	1914	62	1		1				1	1	1		1	1			1	1
8:45 AM	1890	61					1											
9:00 AM	1863	56																
9:15 AM	1851	60													1			
9:30 AM	1876	55	1		1				1	1	1		1				1	1
9:45 AM	1867	56					1											
10:00 AM	1961	62																
10:15 AM	2018	58													1			
10:30 AM	2034	63	1		1				1	1	1		1	1			1	1
10:45 AM	2072	65					1											
11:00 AM	2059	63																
11:15 AM	2093	80													1			
11:30 AM	2177	73	1		1				1	1	1		1	1			1	1
11:45 AM	2257	60					1											
12:00 PM	2319	61																
12:15 PM	2324	59													1			
12:30 PM	2273	64	1		1				1	1	1		1	1			1	1
12:45 PM	2200	68					1											
1:00 PM	2229	64																
1:15 PM	2239	70													1			
1:30 PM	2292	66	1		1				1	1	1		1	1			1	1
1:45 PM	2373	65					1											
2:00 PM	2424	74																
2:15 PM	2552	78													1			
2:30 PM	2648	76	1		1				1	1	1		1	1			1	1
2:45 PM	2743	85					1	1										
3:00 PM	2827	83																
3:15 PM	2798	83													1			
3:30 PM	2859	87	1		1				1	1	1		1	1			1	1

3:45 PM	2940	93					1	1										
4:00 PM	2865	92																
4:15 PM	2892	90													1	1		
4:30 PM	2763	87	1		1				1	1	1		1	1			1	1
4:45 PM	2648	89					1	1										
5:00 PM	2729	100																
5:15 PM	2696	89													1	1		
5:30 PM	2740	89	1		1				1	1	1		1	1			1	1
5:45 PM	2685	75					1	1										
6:00 PM	2495	66																
6:15 PM	2386	62													1			
6:30 PM	2228	59	1		1				1	1	1		1				1	1
6:45 PM	2068	62					1											
7:00 PM	1980	58																
7:15 PM	1945	55													1			
7:30 PM	1876	50	1		1				1		1		1				1	1
7:45 PM	1855	40					1											
8:00 PM	1748	38																
8:15 PM	1567	36													1			
8:30 PM	1377	29	1		1				1		1		1				1	
8:45 PM	1191	30					1											
9:00 PM	1035	24																
9:15 PM	907	22													1			
9:30 PM	808	20	1		1				1		1		1				1	
9:45 PM	688	13																
10:00 PM	614	11																
10:15 PM	512	10													1			
10:30 PM	422	9			1													
10:45 PM	361	7																
11:00 PM	281	9																
11:15 PM	176	5																
11:30 PM	104	3																
11:45 PM	41	3																
HOURS MET			**17**	**0**	**18**	**0**	**16**	**4**	**17**	**13**	**17**	**0**	**17**	**9**	**18**	**2**	**17**	**14**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**YES**		**NO**				**NO**			

Warrant Met: **No**

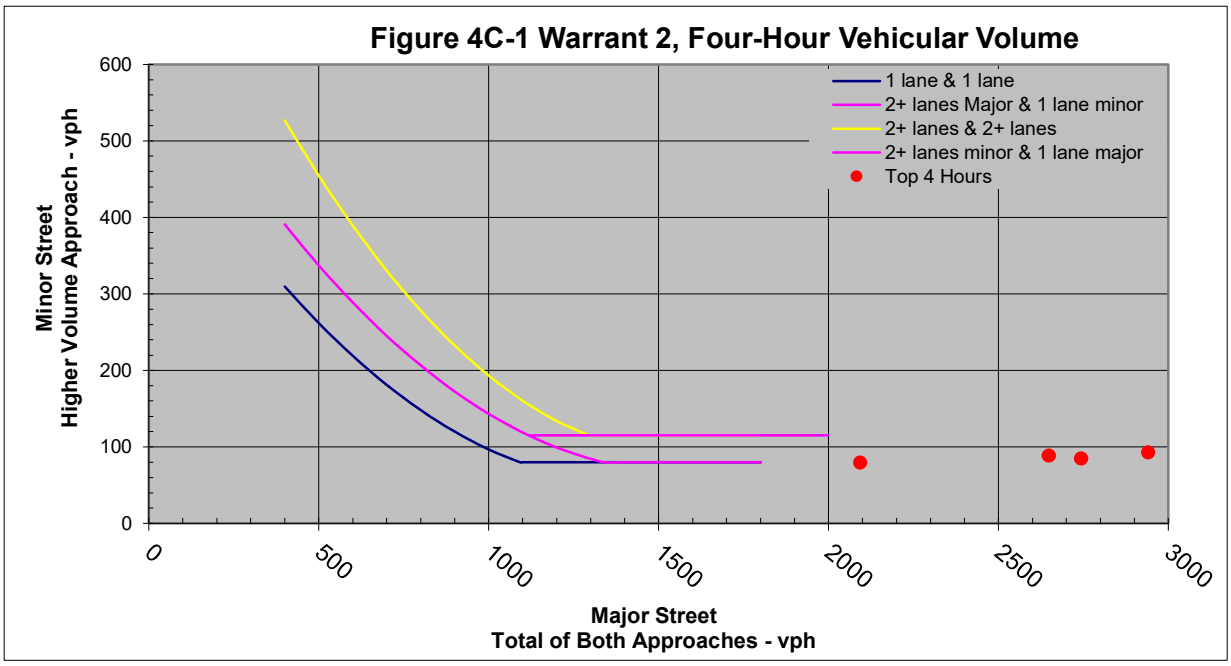
Notes: Condition B (70%) was met.

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	3
Major street:	2 or More Lanes	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	12
Minor Street:	1 Lane		
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?			Yes

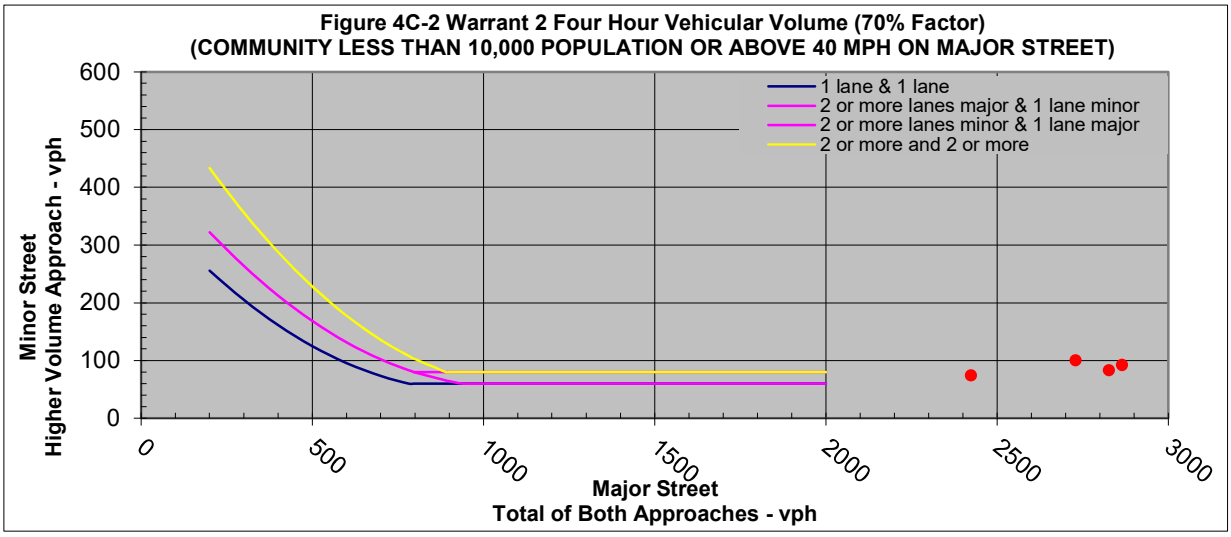
Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Required Minimum Minor Street For 4C-1	Required Minimum Minor Street For 4C-2	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - White Oak Rd (CR 128)		Major - Ohio Pike (SR 125)							
	N-Bound	S-Bound	W-Bound	E-Bound						
12:00 AM	0	0	0	0	0	652	461	0		
12:15 AM	0	0	0	0	0	652	461	0		
12:30 AM	0	0	0	0	0	652	461	0		
12:45 AM	0	0	0	0	0	652	461	0		
1:00 AM	0	0	0	0	0	652	461	0		
1:15 AM	0	0	0	0	0	652	461	0		
1:30 AM	0	0	0	0	0	652	461	0		
1:45 AM	0	0	0	0	0	652	461	0		
2:00 AM	0	0	0	0	0	652	461	0		
2:15 AM	0	0	0	0	0	652	461	0		
2:30 AM	0	0	0	0	0	652	461	0		
2:45 AM	0	0	0	0	0	652	461	0		
3:00 AM	0	0	0	0	0	652	461	0		
3:15 AM	0	0	0	0	0	652	461	0		
3:30 AM	0	0	0	0	0	652	461	0		
3:45 AM	0	0	0	0	0	652	461	0		
4:00 AM	0	0	0	0	0	652	461	0		
4:15 AM	0	0	0	0	0	652	461	0		
4:30 AM	0	0	0	0	0	652	461	0		
4:45 AM	0	0	0	0	0	652	461	0		
5:00 AM	0	0	0	0	0	652	461	0		
5:15 AM	4	0	284	62	346	421	239	4		
5:30 AM	21	0	607	126	733	232	94	21		
5:45 AM	37	0	994	213	1207	98	60	37		
6:00 AM	56	0	1394	320	1714	80	60	56		
6:15 AM	69	0	1552	383	1935	80	60	69		Met
6:30 AM	57	0	1663	476	2139	80	60	57		
6:45 AM	60	0	1701	567	2268	80	60	60		
7:00 AM	64	0	1611	625	2236	80	60	64		
7:15 AM	62	0	1476	664	2140	80	60	62		Met
7:30 AM	58	0	1341	679	2020	80	60	58		
7:45 AM	56	0	1279	650	1929	80	60	56		
8:00 AM	56	0	1255	649	1904	80	60	56		
8:15 AM	54	0	1237	669	1906	80	60	54		
8:30 AM	62	0	1240	674	1914	80	60	62		Met
8:45 AM	61	0	1179	711	1890	80	60	61		
9:00 AM	56	0	1140	723	1863	80	60	56		
9:15 AM	60	0	1107	744	1851	80	60	60		
9:30 AM	55	0	1089	787	1876	80	60	55		
9:45 AM	56	0	1069	798	1867	80	60	56		
10:00 AM	62	0	1103	858	1961	80	60	62		Met
10:15 AM	58	0	1132	886	2018	80	60	58		
10:30 AM	63	0	1134	900	2034	80	60	63		
10:45 AM	65	0	1114	958	2072	80	60	65		
11:00 AM	63	0	1094	965	2059	80	60	63		Met
11:15 AM	80	0	1115	978	2093	80	60	80		
11:30 AM	73	0	1152	1025	2177	80	60	73		
11:45 AM	60	0	1188	1069	2257	80	60	60		

12:00 PM	61	0	1209	1110	2319	80	60	61		Met
12:15 PM	59	0	1175	1149	2324	80	60	59		
12:30 PM	64	0	1136	1137	2273	80	60	64		
12:45 PM	68	0	1090	1110	2200	80	60	68		
1:00 PM	64	0	1102	1127	2229	80	60	64		Met
1:15 PM	70	0	1092	1147	2239	80	60	70		
1:30 PM	66	0	1089	1203	2292	80	60	66		
1:45 PM	65	0	1138	1235	2373	80	60	65		
2:00 PM	74	0	1104	1320	2424	80	60	74		Met
2:15 PM	78	0	1150	1402	2552	80	60	78		
2:30 PM	76	0	1204	1444	2648	80	60	76		
2:45 PM	85	0	1221	1522	2743	80	60	85	Met	
3:00 PM	83	0	1266	1561	2827	80	60	83		Met
3:15 PM	83	0	1222	1576	2798	80	60	83		
3:30 PM	87	0	1179	1680	2859	80	60	87		
3:45 PM	93	0	1190	1750	2940	80	60	93	Met	
4:00 PM	92	0	1191	1674	2865	80	60	92		Met
4:15 PM	90	0	1235	1657	2892	80	60	90		
4:30 PM	87	0	1231	1532	2763	80	60	87		
4:45 PM	89	0	1216	1432	2648	80	60	89	Met	
5:00 PM	100	0	1233	1496	2729	80	60	100		Met
5:15 PM	89	0	1234	1462	2696	80	60	89		
5:30 PM	89	0	1274	1466	2740	80	60	89		
5:45 PM	75	0	1223	1462	2685	80	60	75		
6:00 PM	66	0	1151	1344	2495	80	60	66		Met
6:15 PM	62	0	1102	1284	2386	80	60	62		
6:30 PM	59	0	996	1232	2228	80	60	59		
6:45 PM	62	0	928	1140	2068	80	60	62		
7:00 PM	58	0	865	1115	1980	80	60	58		
7:15 PM	55	0	837	1108	1945	80	60	55		
7:30 PM	50	0	814	1062	1876	80	60	50		
7:45 PM	40	0	809	1046	1855	80	60	40		
8:00 PM	38	0	751	997	1748	80	60	38		
8:15 PM	36	0	645	922	1567	80	60	36		
8:30 PM	29	0	548	829	1377	80	60	29		
8:45 PM	30	0	449	742	1191	101	60	30		
9:00 PM	24	0	395	640	1035	134	60	24		
9:15 PM	22	0	348	559	907	170	63	22		
9:30 PM	20	0	302	506	808	204	78	20		
9:45 PM	13	0	260	428	688	250	105	13		
10:00 PM	**11**	**0**	**227**	**387**	614	283	127	11		
10:15 PM	**10**	**0**	**186**	**326**	512	331	164	10		
10:30 PM	**9**	**0**	**166**	**256**	422	378	202	9		
10:45 PM	**7**	**0**	**142**	**219**	361	413	232	7		
11:00 PM	**9**	**0**	**117**	**164**	281	460	274	9		
11:15 PM	**5**	**0**	**79**	**97**	176	527	337	5		
11:30 PM	**3**	**0**	**43**	**61**	104	576	385	3		
11:45 PM	**3**	**0**	**18**	**23**	41	621	430	3		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	3:45 PM	4:45 PM	2940	93
2nd Highest Hour	4:45 PM	5:45 PM	2648	89
3rd Highest Hour	2:45 PM	3:45 PM	2743	85
4th Highest Hour	11:15 AM	12:15 PM	2093	80

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	5:00 PM	6:00 PM	2729	100
2nd Highest Hour	4:00 PM	5:00 PM	2865	92
3rd Highest Hour	3:00 PM	4:00 PM	2827	83
4th Highest Hour	2:00 PM	3:00 PM	2424	74



Are the requirements for Warrant 2 met?: No

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	5:00 PM
Major Street:	2 or More Lanes	Peak Hour End Time	6:00 PM
Minor Street:	1 Lane		

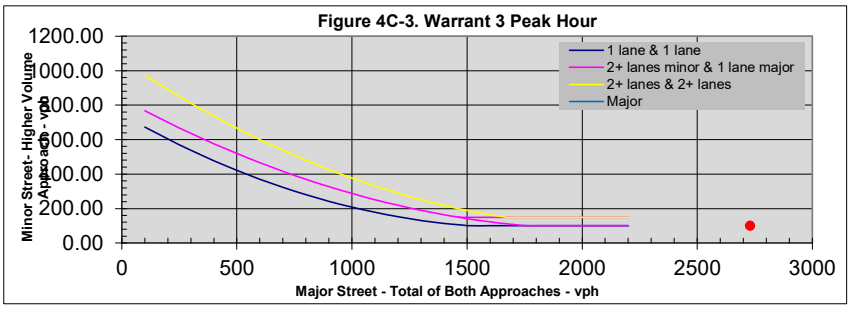
Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
2729	100	100	75

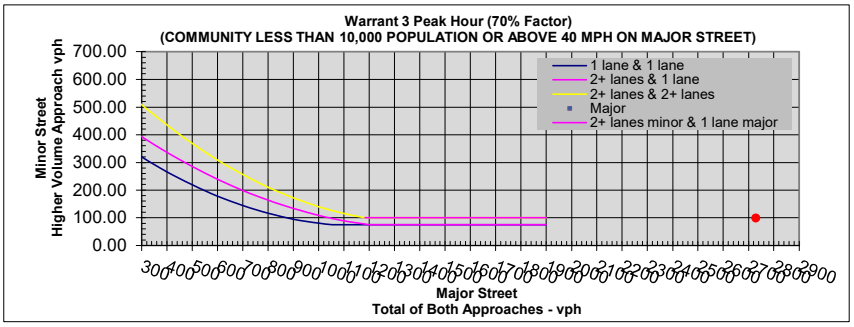
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*	
Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	No
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	No
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes
If applicable, attach all supporting calculations and documentation.	

Are the requirements for Warrant 3 met?: No





OMUTCD WARRANT 7, CRASH EXPERIENCE

Built-up Isolated Community With Less Than 10,000 Population or Above 40 mph on Major Street?: Yes

Number of Lanes for Moving Traffic on Each Approach
Major Street: 2 or More Lanes
Minor Street: 1 Lane

Has adequate trial of alternative with satisfactory observance and enforcement failed to reduce the crash frequency? No

Five or more reportable and/ or non-reportable crashes, of types susceptible to correction by a traffic control signal have occurred within a 12-month period during the most recent 3 years of available crash data.* No
**If applicable attach a summary of the crash data analysis used for this criterion*

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition A in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, if in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. No

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, if in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. Yes

The volume of pedestrian traffic is 80% or more of the requirements specified in Warrant 4, the Pedestrian Volume warrant.* No
**If applicable, attach all supporting calculations and documentation*

Are the requirements for Warrant 7 met?: No

OMUTCD WARRANT 8, ROADWAY NETWORK*

Does the intersection have a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3, during the average weekday?

Does the intersection have a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday)?

Is the major street part of the street or highway system that serves as the principal roadway network for through traffic flow?

Does the major street include rural or suburban highways outside, entering, or traversing a city?

Does the major street appear as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study?

**Refer to Section 4.3 of ODOT Publication 46 (Traffic Engineering Manual) for additional Department documentation requirements to justify the installation of a signal under Warrant 8. Attach all supplementary documentation and calculations, especially those relating to traffic volume projections and subsequent Warrant analyses.*

Are the requirements for Warrant 8 met?: No

STUDY AND ANALYSIS INFORMATION

Municipality:	Batavia/Pierce Twnship	**Traffic Volumes Obtained By:**	ODOT
County:	Clermont	**Analysis Date:**	9/30/2024
ODOT Engineering District:	8	**Agency/ Company Name Performing Warrant Analysis:**	EMH&T
Google map link:	Map		

Analysis Information

Data Collection Date: 5/8/2024

Day of the Week: Wednesday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Existing Traffic Signal at intersection: No

Total Number of Approaches at Intersection: 3

Major Street Information

Major Street Name and Route Number: SR 125

Major Street Approach Direction: E-Bound / W-Bound

Number of Thru Lanes on Each Major Street Approach: 2 **LANE(S)**

Speed Limit or 85th Percentile Speed on the Major Street*: 45 **MPH**

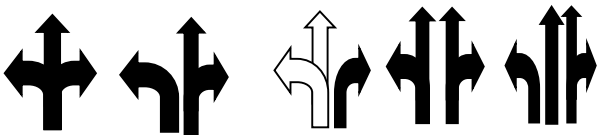
*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: Bristol Lake Dr

Minor Street Approach Configuration:

	N-Bound
1	S-Bound



1 2 3 4 5

Number of Thru Lanes on Each Minor Street Approach: 1 **LANE(S)**

Apply Right Turn Lane Reduction*: Yes

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:	
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**		
Warrant 2, Four-Hour Vehicular Volume	Yes	**No**		
Warrant 3, Peak Hour	Yes	**No**	Signals installed under Warrant 3 should be traffic actuated.	**Peak Hour** 6:45 AM 7:45 AM
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)				
Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.	**Peak Hour** 11:15 AM 12:15 PM
Warrant 5, School Crossing	No		N/A	
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.	
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9	
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion: Do Not Install New Traffic Signal

Notes:

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM						0						0						0						0	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM						0						0						0						0	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM						0						0						0						0	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM						0						0						0						0	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM						0						0						0						0	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM						0						0						0						0	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM	16		0			16	2	287				289						0		62	1			63	
6:15 AM	10		0			10	1	334				335						0		69	2			71	
6:30 AM	9		1			10	0	380				380						0		83	2			85	
6:45 AM	13		0			13	0	399				399						0		109	0			109	
Hourly Total	48	0	1	0	0	49	3	1400	0	0	0	1403	0	0	0	0	0	0	0	323	5	0	0	328	
7:00 AM	25		1			26	0	409				409						0		124	4			128	
7:15 AM	23		1			24	0	424				424						0		154	1			155	
7:30 AM	14		6			20	3	404				407						0		171	5			176	
7:45 AM	18		0			18	1	299				300						0		178	4			182	
Hourly Total	80	0	8	0	0	88	4	1536	0	0	0	1540	0	0	0	0	0	0	0	627	14	0	0	641	
8:00 AM	14		1			15	4	257				261						0		155	4			159	
8:15 AM	17		3			20	4	278				282						0		177	3			180	
8:30 AM	18		5			23	9	341				350						0		150	6			156	
8:45 AM	11		4			15	1	261				262						0		167	2			169	
Hourly Total	60	0	13	0	0	73	18	1137	0	0	0	1155	0	0	0	0	0	0	0	649	15	0	0	664	
9:00 AM	14		1			15	4	270				274						0		187	3			190	
9:15 AM	14		0			14	2	283				285						0		173	7			180	
9:30 AM	5		0			5	0	281				281						0		185	2			187	
9:45 AM	17		0			17	3	227				230						0		176	3			179	
Hourly Total	50	0	1	0	0	51	9	1061	0	0	0	1070	0	0	0	0	0	0	0	721	15	0	0	736	
10:00 AM	7		3			10	2	240				242						0		203	5			208	
10:15 AM	6		2			8	1	250				251						0		210	2			212	
10:30 AM	8		1			9	4	265				269						0		198	3			201	
10:45 AM	12		0			12	0	262				262						0		239	4			243	
Hourly Total	33	0	6	0	0	39	7	1017	0	0	0	1024	0	0	0	0	0	0	0	850	14	0	0	864	
11:00 AM	8		1			9	6	256				262						0		228	8			236	
11:15 AM	10		1			11	3	271				274						0		236	3			239	
11:30 AM	13		2			15	4	258				262						0		251	3			254	
11:45 AM	7		2			9	3	238				241						0		239	5			244	
Hourly Total	38	0	6	0	0	44	16	1023	0	0	0	1039	0	0	0	0	0	0	0	954	19	0	0	973	
12:00 PM	5		1			6	3	280				283						0		243	11			254	
12:15 PM	9		1			10	3	295				298						0		302	4			306	
12:30 PM	5		0			5	3	299				302						0		280	10			290	
12:45 PM	9		1			10	0	271				271						0		295	8			303	
Hourly Total	28	0	3	0	0	31	9	1145	0	0	0	1154	0	0	0	0	0	0	0	1120	33	0	0	1153	
1:00 PM	7		1			8	2	251				253						0		274	4			278	
1:15 PM	6		3			9	3	261				264						0		275	5			280	
1:30 PM	9		4			13	1	241				242						0		270	8			278	
1:45 PM	9		2			11	5	263				268						0		312	10			322	
Hourly Total	31	0	10	0	0	41	11	1016	0	0	0	1027	0	0	0	0	0	0	0	1131	27	0	0	1158	
2:00 PM	10		3			13	0	249				249						0		308	7			315	
2:15 PM	11		1			12	0	258				258						0		307	9			316	
2:30 PM	15		5			20	3	262				265						0		305	8			313	
2:45 PM	8		2			10	1	223				224						0		376	4			380	
Hourly Total	44	0	11	0	0	55	4	992	0	0	0	996	0	0	0	0	0	0	0	1296	28	0	0	1324	
3:00 PM	5		0			5	4	290				294						0		385	7			392	
3:15 PM	13		1			14	2	269				271						0		371	11			382	
3:30 PM	10		1			11	4	288				292						0		379	7			386	
3:45 PM	11		1			12	3	260				263						0		445	6			451	
Hourly Total	39	0	3	0	0	42	13	1107	0	0	0	1120	0	0	0	0	0	0	0	1580	31	0	0	1611	
4:00 PM	9		3			12	2	170				172						0		413	13			426	
4:15 PM	6		1			7	1	225				226						0		466	12			478	
4:30 PM	12		2			14	2	192				194						0		443	16			459	
4:45 PM	13		3			16	5	210				215						0		413	12			425	
Hourly Total	40	0	9	0	0	49	10	797	0	0	0	807	0	0	0	0	0	0	0	1735	53	0	0	1788	
5:00 PM	13		2			15	6	268				274						0		388	13			401	
5:15 PM	13		4			17	5	269				274						0		424	14			438	
5:30 PM	20		2			22	4	296				300						0		387	8			395	
5:45 PM	9		3			12	7	271				278						0		397	15			412	
Hourly Total	55	0	11	0	0	66	22	1104	0	0	0	1126	0	0	0	0	0	0	0	1596	50	0	0	1646	
6:00 PM	9		2			11	2	270				272						0		347	4			351	
6:15 PM	8		2			10	3	292				295						0		356	10			366	
6:30 PM	10		2			12	5	229				234						0		339	12			351	
6:45 PM	5		5			10	4	234				238						0		301	12			313	
Hourly Total	32	0	11	0	0	43	14	1025	0	0	0	1039	0	0	0	0	0	0	0	1343	38	0	0	1381	
7:00 PM	12		2			14	1	214				215						0		304	5			309	
7:15 PM	7		2			9	3	175				178						0		279	12			291	
7:30 PM	5		1			6	1	175				176						0		272	7			279	
7:45 PM	7		2			9	2	164				166						0		278	9			287	
Hourly Total	31	0	7	0	0	38	7	728	0	0	0	735	0	0	0	0	0	0	0	1133	33	0	0	1166	
8:00 PM	9		3			12	0	182				182						0		271	7			278	
8:15 PM	1		2			3	1	176				177						0		259	12			271	
8:30 PM	6		2			8	0	155				155						0		230	5			235	
8:45 PM	2		0			2	0	113				113						0		219	7			226	
Hourly Total	18	0	7	0	0	25	1	626	0	0	0	627	0	0	0	0	0	0	0	979	31	0	0	1010	
9:00 PM						0						0						0						0	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM						0						0						0						0	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM						0						0						0						0	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1			500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1	X		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
1:15 AM	0	0																
1:30 AM	0	0																
1:45 AM	0	0																
2:00 AM	0	0																
2:15 AM	0	0																
2:30 AM	0	0																
2:45 AM	0	0																
3:00 AM	0	0																
3:15 AM	0	0																
3:30 AM	0	0																
3:45 AM	0	0																
4:00 AM	0	0																
4:15 AM	0	0																
4:30 AM	0	0																
4:45 AM	0	0																
5:00 AM	0	0																
5:15 AM	352	7													1			
5:30 AM	758	11	1		1				1		1		1				1	
5:45 AM	1223	19					1											
6:00 AM	1731	30																
6:15 AM	1916	37													1			
6:30 AM	2089	49	1		1				1		1		1				1	1
6:45 AM	2207	57					1											
7:00 AM	2181	56																
7:15 AM	2064	46													1			
7:30 AM	1947	45	1		1				1		1		1				1	1
7:45 AM	1870	43					1											
8:00 AM	1819	43																
8:15 AM	1863	43													1			
8:30 AM	1866	39	1		1				1		1		1				1	
8:45 AM	1828	27					1											
9:00 AM	1806	26																

9:15 AM	1792	25													1			
9:30 AM	1790	21	1		1				1		1		1				1	
9:45 AM	1792	24					1											
10:00 AM	1888	23																
10:15 AM	1936	21													1			
10:30 AM	1986	22	1		1				1		1		1				1	
10:45 AM	2032	26					1											
11:00 AM	2012	25																
11:15 AM	2051	24													1			
11:30 AM	2142	23	1		1				1		1		1				1	
11:45 AM	2218	17					1											
12:00 PM	2307	17																
12:15 PM	2301	18													1			
12:30 PM	2241	19	1		1				1		1		1				1	
12:45 PM	2169	25					1											
1:00 PM	2185	26																
1:15 PM	2218	29													1			
1:30 PM	2248	30	1		1				1		1		1				1	
1:45 PM	2306	34					1											
2:00 PM	2320	31																
2:15 PM	2442	28													1			
2:30 PM	2521	29	1		1				1		1		1				1	
2:45 PM	2621	22					1											
3:00 PM	2731	23																
3:15 PM	2643	26													1			
3:30 PM	2694	23	1		1				1		1		1				1	
3:45 PM	2669	25					1											
4:00 PM	2595	25																
4:15 PM	2672	28													1			
4:30 PM	2680	34	1		1				1		1		1				1	
4:45 PM	2722	41					1											
5:00 PM	2772	39																
5:15 PM	2720	37													1			
5:30 PM	2669	32	1		1				1		1		1				1	
5:45 PM	2559	27					1											
6:00 PM	2420	27																
6:15 PM	2321	27													1			
6:30 PM	2129	27	1		1				1		1		1				1	
6:45 PM	1999	22					1											
7:00 PM	1901	20																
7:15 PM	1837	20													1			
7:30 PM	1816	17	1		1				1		1		1				1	
7:45 PM	1751	19					1											
8:00 PM	1637	15																
8:15 PM	1177	10													1			
8:30 PM	729	6	1		1				1		1		1				1	
8:45 PM	339	1																
9:00 PM	0	0																
9:15 PM	0	0																
9:30 PM	0	0																
9:45 PM	0	0																
HOURS MET			**16**	**0**	**16**	**0**	**15**	**0**	**16**	**0**	**16**	**0**	**16**	**0**	**16**	**0**	**16**	**2**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**NO**		**NO**				**NO**			

Warrant Met: **No**

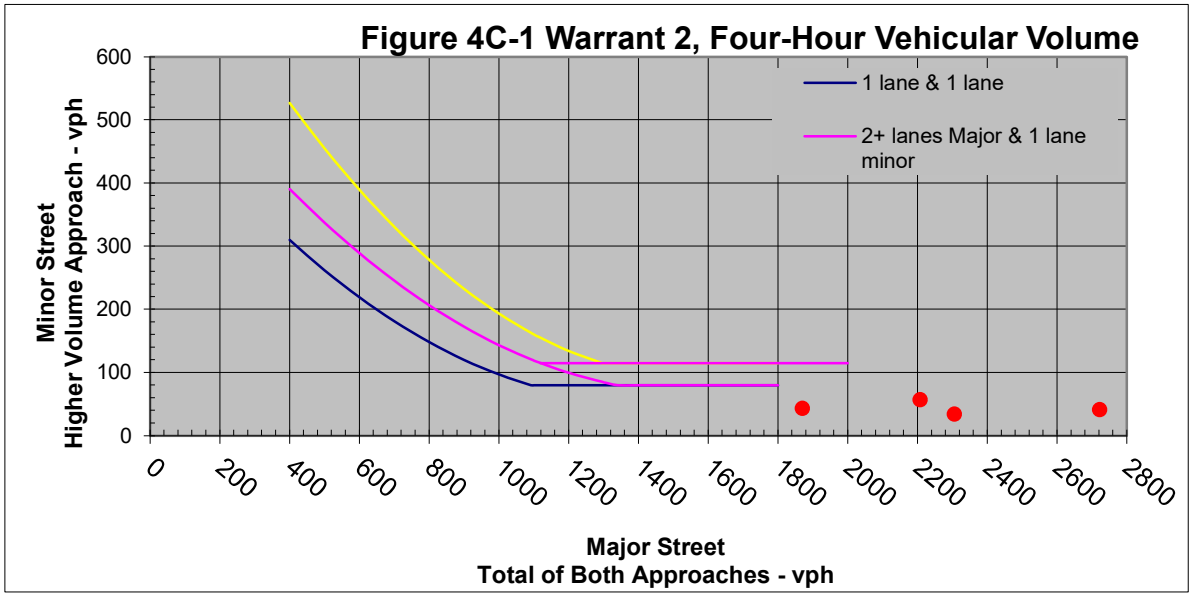
Notes:

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	0
Major street:	2 or More Lanes	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	0
Minor Street:	1 Lane		

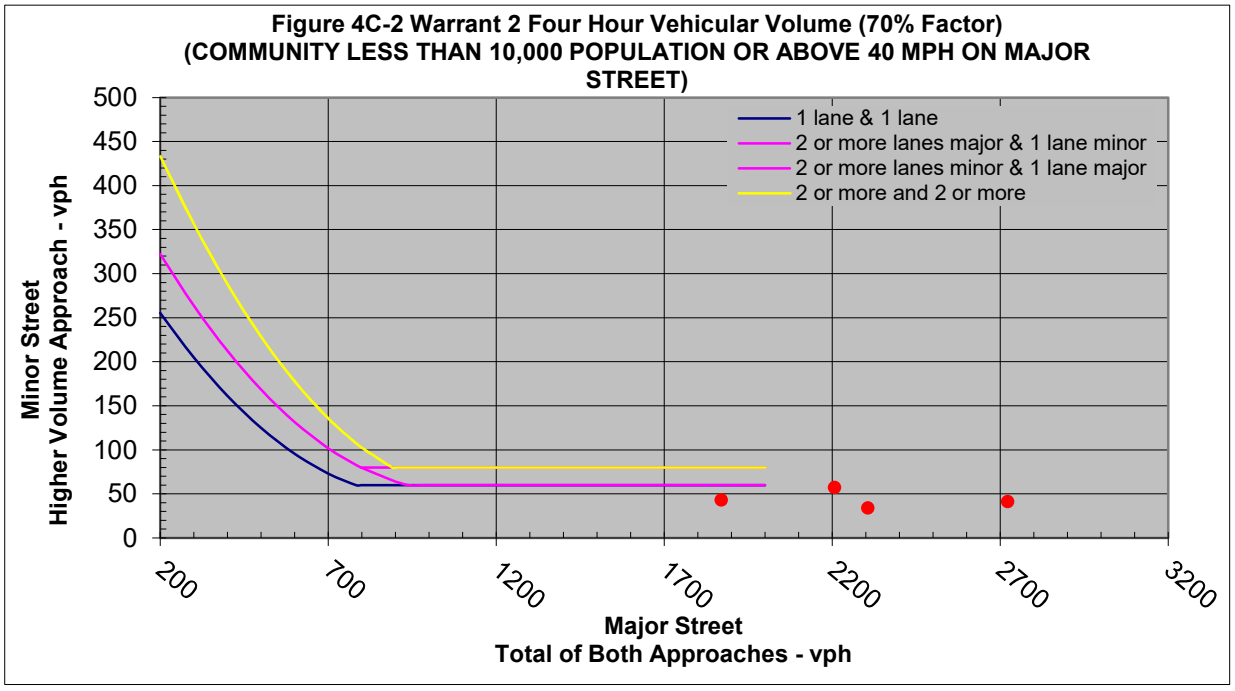
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Bristol Lake Dr		Major - SR 125					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	0	30	1403	328	1731	30		
6:15 AM	0	37	1523	393	1916	37		
6:30 AM	0	49	1612	477	2089	49		
6:45 AM	0	57	1639	568	2207	57		
7:00 AM	0	56	1540	641	2181	56		
7:15 AM	0	46	1392	672	2064	46		
7:30 AM	0	45	1250	697	1947	45		
7:45 AM	0	43	1193	677	1870	43		
8:00 AM	0	43	1155	664	1819	43		
8:15 AM	0	43	1168	695	1863	43		
8:30 AM	0	39	1171	695	1866	39		
8:45 AM	0	27	1102	726	1828	27		
9:00 AM	0	26	1070	736	1806	26		
9:15 AM	0	25	1038	754	1792	25		
9:30 AM	0	21	1004	786	1790	21		
9:45 AM	0	24	992	800	1792	24		
10:00 AM	0	23	1024	864	1888	23		
10:15 AM	0	21	1044	892	1936	21		
10:30 AM	0	22	1067	919	1986	22		
10:45 AM	0	26	1060	972	2032	26		
11:00 AM	0	25	1039	973	2012	25		
11:15 AM	0	24	1060	991	2051	24		
11:30 AM	0	23	1084	1058	2142	23		
11:45 AM	0	17	1124	1094	2218	17		
12:00 PM	0	17	1154	1153	2307	17		
12:15 PM	0	18	1124	1177	2301	18		
12:30 PM	0	19	1090	1151	2241	19		
12:45 PM	0	25	1030	1139	2169	25		
1:00 PM	0	26	1027	1158	2185	26		
1:15 PM	0	29	1023	1195	2218	29		
1:30 PM	0	30	1017	1231	2248	30		
1:45 PM	0	34	1040	1266	2306	34		
2:00 PM	0	31	996	1324	2320	31		
2:15 PM	0	28	1041	1401	2442	28		
2:30 PM	0	29	1054	1467	2521	29		
2:45 PM	0	22	1081	1540	2621	22		
3:00 PM	0	23	1120	1611	2731	23		
3:15 PM	0	26	998	1645	2643	26		
3:30 PM	0	23	953	1741	2694	23		
3:45 PM	0	25	855	1814	2669	25		
4:00 PM	0	25	807	1788	2595	25		
4:15 PM	0	28	909	1763	2672	28		
4:30 PM	0	34	957	1723	2680	34		
4:45 PM	0	41	1063	1659	2722	41		
5:00 PM	0	39	1126	1646	2772	39		
5:15 PM	0	37	1124	1596	2720	37		
5:30 PM	0	32	1145	1524	2669	32		
5:45 PM	0	27	1079	1480	2559	27		
6:00 PM	0	27	1039	1381	2420	27		
6:15 PM	0	27	982	1339	2321	27		
6:30 PM	0	27	865	1264	2129	27		
6:45 PM	0	22	807	1192	1999	22		
7:00 PM	0	20	735	1166	1901	20		
7:15 PM	0	20	702	1135	1837	20		
7:30 PM	0	17	701	1115	1816	17		
7:45 PM	0	19	680	1071	1751	19		
8:00 PM	0	15	627	1010	1637	15		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	6:45 AM	7:45 AM	2207	57
2nd Highest Hour	7:45 AM	8:45 AM	1870	43
3rd Highest Hour	4:45 PM	5:45 PM	2722	41
4th Highest Hour	1:45 PM	2:45 PM	2306	34

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	6:45 AM	7:45 AM	2207	57
2nd Highest Hour	7:45 AM	8:45 AM	1870	43
3rd Highest Hour	4:45 PM	5:45 PM	2722	41
4th Highest Hour	1:45 PM	2:45 PM	2306	34



Are the requirements for Warrant 2 met?: No

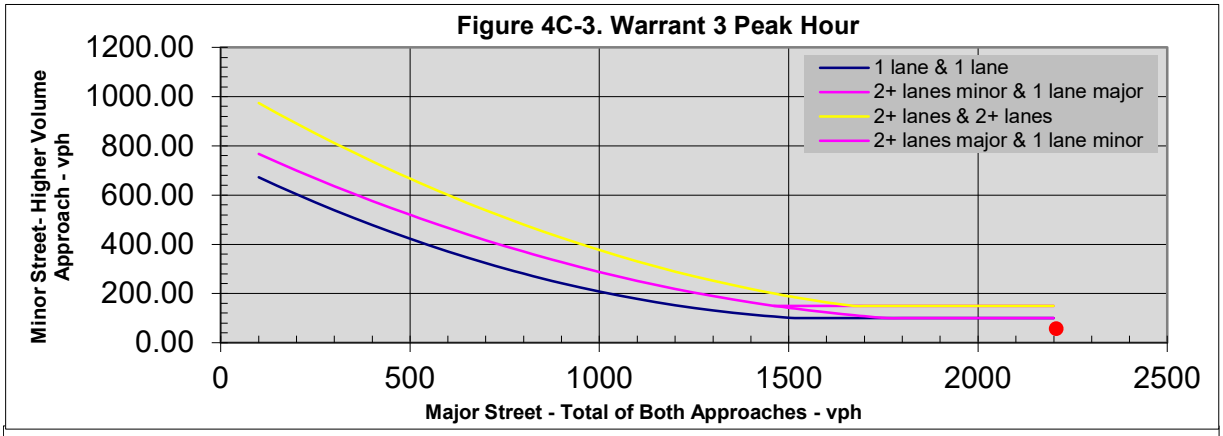
OMUTCD WARRANT 3, PEAK HOUR

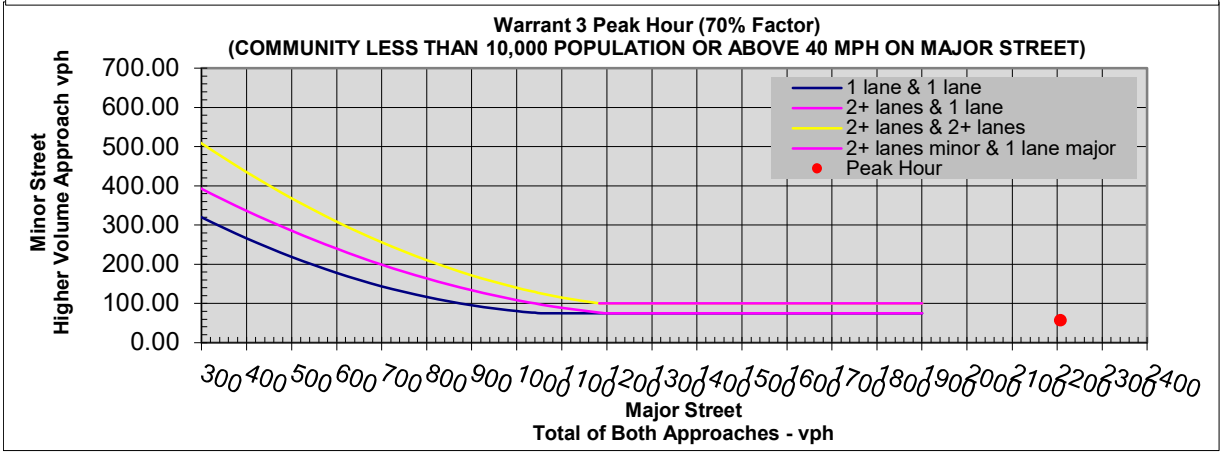
Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	6:45 AM
Major Street:	2 or More Lanes	Peak Hour End Time	7:45 AM
Minor Street:	1 Lane		

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*	
Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	No
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	No
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes
**If applicable, attach all supporting calculations and documentation.*	
Are the requirements for Warrant 3 met?:	**No**





Hour Vehicular Volume				
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
6:00 AM	1731	30	1761	1761
6:15 AM	1916	37	1953	1953
6:30 AM	2089	49	2138	2138
6:45 AM	2207	57	2264	2264
7:00 AM	2181	56	2237	2237
7:15 AM	2064	46	2110	2110
7:30 AM	1947	45	1992	1992
7:45 AM	1870	43	1913	1913
8:00 AM	1819	43	1862	1862
8:15 AM	1863	43	1906	1906
8:30 AM	1866	39	1905	1905
8:45 AM	1828	27	1855	1855
9:00 AM	1806	26	1832	1832
9:15 AM	1792	25	1817	1817
9:30 AM	1790	21	1811	1811
9:45 AM	1792	24	1816	1816
10:00 AM	1888	23	1911	1911
10:15 AM	1936	21	1957	1957
10:30 AM	1986	22	2008	2008
10:45 AM	2032	26	2058	2058
11:00 AM	2012	25	2037	2037
11:15 AM	2051	24	2075	2075
11:30 AM	2142	23	2165	2165
11:45 AM	2218	17	2235	2235
12:00 PM	2307	17	2324	2324
12:15 PM	2301	18	2319	2319
12:30 PM	2241	19	2260	2260
12:45 PM	2169	25	2194	2194
1:00 PM	2185	26	2211	2211
1:15 PM	2218	29	2247	2247
1:30 PM	2248	30	2278	2278
1:45 PM	2306	34	2340	2340
2:00 PM	2320	31	2351	2351
2:15 PM	2442	28	2470	2470
2:30 PM	2521	29	2550	2550
2:45 PM	2621	22	2643	2643
3:00 PM	2731	23	2754	2754
3:15 PM	2643	26	2669	2669
3:30 PM	2694	23	2717	2717
3:45 PM	2669	25	2694	2694
4:00 PM	2595	25	2620	2620
4:15 PM	2672	28	2700	2700
4:30 PM	2680	34	2714	2714
4:45 PM	2722	41	2763	2763
5:00 PM	2772	39	2811	2811
5:15 PM	2720	37	2757	2757
5:30 PM	2669	32	2701	2701
5:45 PM	2559	27	2586	2586
6:00 PM	2420	27	2447	2447
6:15 PM	2321	27	2348	2348
6:30 PM	2129	27	2156	2156
6:45 PM	1999	22	2021	2021
7:00 PM	1901	20	1921	1921
7:15 PM	1837	20	1857	1857
7:30 PM	1816	17	1833	1833
7:45 PM	1751	19	1770	1770
8:00 PM	1637	15	1652	1652

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
2207	57	100	75

STUDY AND ANALYSIS INFORMATION

Municipality:	Batavia/Pierce Twnship	**Traffic Volumes Obtained By:**	ODOT
County:	Clermont	**Analysis Date:**	9/30/2024
ODOT Engineering District:	8	**Agency/ Company Name Performing Warrant Analysis:**	EMH&T
Google map link:	Map		

Analysis Information

Data Collection Date: 5/8/2024

Day of the Week: Wednesday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Existing Traffic Signal at intersection: No

Total Number of Approaches at Intersection: 4

Major Street Information

Major Street Name and Route Number: SR 125

Major Street Approach Direction: E-Bound / W-Bound

Number of Thru Lanes on Each Major Street Approach: 2 **LANE(S)**

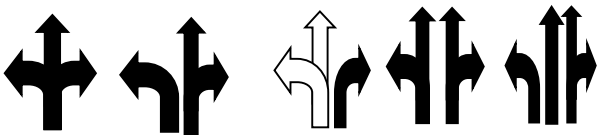
Speed Limit or 85th Percentile Speed on the Major Street*: 45 **MPH**

*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: Bristol Lake Dr

Minor Street Approach Configuration: 1 N-Bound / 1 S-Bound



1 2 3 4 5

Number of Thru Lanes on Each Minor Street Approach: 1 **LANE(S)**

Apply Right Turn Lane Reduction*: Yes

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:	
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	Condition B (70%) was met.	
Warrant 2, Four-Hour Vehicular Volume	Yes	**Yes**	Figure 4C-1 (100%)	
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated.	**Peak Hour** 5:00 PM 6:00 PM
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)				
Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.	**Peak Hour** 11:00 AM 12:00 PM
Warrant 5, School Crossing	No		N/A	
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.	
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9	
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:
1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion: Install New Traffic Signal

Notes: If White Oak Road is realigned to create 4-Leg intersection with Bristol Lake Drive, Signalization is warranted.

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM						0						0						0						0	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM						0						0						0						0	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM						0						0						0						0	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM						0						0						0						0	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM						0						0						0						0	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM						0						0						0						0	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM	16		0			16	2	285	1			288	5		2			7	1	61	1			63	
6:15 AM	10		0			10	1	324	8			333	10		10			20	2	67	2			71	
6:30 AM	9		1			10	0	375	6			381	17		5			22	0	83	2			85	
6:45 AM	13		0			13	0	391	11			402	19		8			27	6	103	0			109	
Hourly Total	48	0	1	0	0	49	3	1375	26	0	0	1404	51	0	25	0	0	76	9	314	5	0	0	328	
7:00 AM	25		1			26	0	402	26			428	18		7			25	4	120	4			128	
7:15 AM	23		1			24	0	417	20			437	19		7			26	12	142	1			155	
7:30 AM	14		6			20	3	398	18			419	24		6			30	14	157	5			176	
7:45 AM	18		0			18	1	289	17			307	23		10			33	5	173	4			182	
Hourly Total	80	0	8	0	0	88	4	1506	81	0	0	1591	84	0	30	0	0	114	35	592	14	0	0	641	
8:00 AM	14		1			15	4	252	22			278	17		5			22	8	147	4			159	
8:15 AM	17		3			20	4	273	17			294	16		5			21	7	170	3			180	
8:30 AM	18		5			23	9	336	21			366	21		5			26	8	142	6			156	
8:45 AM	11		4			15	1	252	13			266	25		9			34	7	160	2			169	
Hourly Total	60	0	13	0	0	73	18	1113	73	0	0	1204	79	0	24	0	0	103	30	619	15	0	0	664	
9:00 AM	14		1			15	4	268	16			288	20		2			22	5	182	3			190	
9:15 AM	14		0			14	2	277	21			300	33		6			39	9	164	7			180	
9:30 AM	5		0			5	0	277	18			295	22		4			26	8	177	2			187	
9:45 AM	17		0			17	3	221	18			242	20		6			26	9	167	3			179	
Hourly Total	50	0	1	0	0	51	9	1043	73	0	0	1125	95	0	18	0	0	113	31	690	15	0	0	736	
10:00 AM	7		3			10	2	237	20			259	26		3			29	9	194	5			208	
10:15 AM	6		2			8	1	245	23			269	24		5			29	6	204	2			212	
10:30 AM	8		1			9	4	259	13			276	18		6			24	6	192	3			201	
10:45 AM	12		0			12	0	256	10			266	25		6			31	5	234	4			243	
Hourly Total	33	0	6	0	0	39	7	997	66	0	0	1070	93	0	20	0	0	113	26	824	14	0	0	864	
11:00 AM	8		1			9	6	252	21			279	15		4			19	7	221	8			236	
11:15 AM	10		1			11	3	261	16			280	23		10			33	9	227	3			239	
11:30 AM	13		2			15	4	249	19			272	17		9			26	6	245	3			254	
11:45 AM	7		2			9	3	231	20			254	18		7			25	14	225	5			244	
Hourly Total	38	0	6	0	0	44	16	993	76	0	0	1085	73	0	30	0	0	103	36	918	19	0	0	973	
12:00 PM	5		1			6	3	273	25			301	14		7			21	7	236	11			254	
12:15 PM	9		1			10	3	288	22			313	17		7			24	13	289	4			306	
12:30 PM	5		0			5	3	293	17			313	16		6			22	13	267	10			290	
12:45 PM	9		1			10	0	264	16			280	20		7			27	15	280	8			303	
Hourly Total	28	0	3	0	0	31	9	1118	80	0	0	1207	67	0	27	0	0	94	48	1072	33	0	0	1153	
1:00 PM	7		1			8	2	248	16			266	19		3			22	16	258	4			278	
1:15 PM	6		3			9	3	253	16			272	25		8			33	12	263	5			280	
1:30 PM	9		4			13	1	237	14			252	27		4			31	7	263	8			278	
1:45 PM	9		2			11	5	260	19			284	20		3			23	5	307	10			322	
Hourly Total	31	0	10	0	0	41	11	998	65	0	0	1074	91	0	18	0	0	109	40	1091	27	0	0	1158	
2:00 PM	10		3			13	0	246	21			267	32		3			35	10	298	7			315	
2:15 PM	11		1			12	0	254	21			275	25		4			29	10	297	9			316	
2:30 PM	15		5			20	3	256	23			282	21		6			27	18	287	8			313	
2:45 PM	8		2			10	1	216	26			243	19		7			26	20	356	4			380	
Hourly Total	44	0	11	0	0	55	4	972	91	0	0	1067	97	0	20	0	0	117	58	1238	28	0	0	1324	
3:00 PM	5		0			5	4	287	25			316	39		3			42	26	359	7			392	
3:15 PM	13		1			14	2	267	30			299	26		2			28	18	353	11			382	
3:30 PM	10		1			11	4	286	33			323	33		2			35	17	362	7			386	
3:45 PM	11		1			12	3	260	25			288	28		0			28	30	415	6			451	
Hourly Total	39	0	3	0	0	42	13	1100	113	0	0	1226	126	0	7	0	0	133	91	1489	31	0	0	1611	
4:00 PM	9		3			12	2	167	38			207	39		3			42	23	390	13			426	
4:15 PM	6		1			7	1	223	29			253	32		2			34	33	433	12			478	
4:30 PM	12		2			14	2	192	36			230	35		0			35	29	414	16			459	
4:45 PM	13		3			16	5	206	37			248	32		4			36	40	373	12			425	
Hourly Total	40	0	9	0	0	49	10	788	140	0	0	938	138	0	9	0	0	147	125	1610	53	0	0	1788	
5:00 PM	13		2			15	6	263	32			301	32		5			37	23	365	13			401	
5:15 PM	13		4			17	5	268	19			292	29		1			30	15	409	14			438	
5:30 PM	20		2			22	4	286	34			324	32		10			42	30	357	8			395	
5:45 PM	9		3			12	7	265	25			297	36		6			42	24	373	15			412	
Hourly Total	55	0	11	0	0	66	22	1082	110	0	0	1214	129	0	22	0	0	151	92	1504	50	0	0	1646	
6:00 PM	9		2			11	2	268	37			307	30		2			32	12	335	4			351	
6:15 PM	8		2			10	3	289	35			327	24		3			27	20	336	10			366	
6:30 PM	10		2			12	5	225	21			251	18		4			22	14	325	12			351	
6:45 PM	5		5			10	4	231	19			254	26		3			29	15	286	12			313	
Hourly Total	32	0	11	0	0	43	14	1013	112	0	0	1139	98	0	12	0	0	110	61	1282	38	0	0	1381	
7:00 PM	12		2			14	1	212	27			240	22		2			24	13	291	5			309	
7:15 PM	7		2			9	3	170	38			211	23		5			28	20	259	12			291	
7:30 PM	5		1			6	1	170	17			188	22		5			27	9	263	7			279	
7:45 PM	7		2			9	2	158	25			185	13		6			19	14	264	9			287	
Hourly Total	31	0	7	0	0	38	7	710	107	0	0	824	80	0	18	0	0	98	56	1077	33	0	0	1166	
8:00 PM	9		3			12	0	178	37			215	11		4			15	18	253	7			278	
8:15 PM	1		2			3	1	172	18			191	15		4			19	17	242	12			271	
8:30 PM	6		2			8	0	154	24			178	16		1			17	19	211	5			235	
8:45 PM	2		0			2	0	109	15			124	13		4			17	14	205	7			226	
Hourly Total	18	0	7	0	0	25	1	613	94	0	0	708	55	0	13	0	0	68	68	911	31	0	0	1010	
9:00 PM						0						0						0						0	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM						0						0						0						0	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM						0						0						0						0	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1			500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1	X		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
1:15 AM	0	0																
1:30 AM	0	0																
1:45 AM	0	0																
2:00 AM	0	0																
2:15 AM	0	0																
2:30 AM	0	0																
2:45 AM	0	0																
3:00 AM	0	0																
3:15 AM	0	0																
3:30 AM	0	0																
3:45 AM	0	0																
4:00 AM	0	0																
4:15 AM	0	0																
4:30 AM	0	0																
4:45 AM	0	0																
5:00 AM	0	0																
5:15 AM	351	7													1			
5:30 AM	755	21	1		1				1		1		1				1	
5:45 AM	1221	37					1											
6:00 AM	1732	56																
6:15 AM	1937	69													1			
6:30 AM	2125	57	1		1				1	1	1		1				1	1
6:45 AM	2254	60					1											
7:00 AM	2232	64																
7:15 AM	2113	62													1			
7:30 AM	1995	58	1		1				1	1	1		1				1	1
7:45 AM	1922	56					1											
8:00 AM	1868	56																
8:15 AM	1909	54													1			
8:30 AM	1915	62	1		1				1	1	1		1	1			1	1
8:45 AM	1875	61					1											
9:00 AM	1861	56																
9:15 AM	1850	60													1			
9:30 AM	1851	55	1		1				1	1	1		1				1	1
9:45 AM	1846	56					1											

10:00 AM	1934	62																
10:15 AM	1982	58													1			
10:30 AM	2020	63	1		1				1	1	1		1	1			1	1
10:45 AM	2069	65					1											
11:00 AM	2058	63																
11:15 AM	2098	80													1			
11:30 AM	2198	77	1		1				1	1	1		1	1			1	1
11:45 AM	2275	60					1											
12:00 PM	2360	61																
12:15 PM	2349	59													1			
12:30 PM	2282	64	1		1				1	1	1		1	1			1	1
12:45 PM	2209	68					1											
1:00 PM	2232	64																
1:15 PM	2270	70													1			
1:30 PM	2309	72	1		1				1	1	1		1	1			1	1
1:45 PM	2374	70					1											
2:00 PM	2391	74																
2:15 PM	2517	78													1			
2:30 PM	2607	81	1		1				1	1	1		1	1			1	1
2:45 PM	2721	85					1	1										
3:00 PM	2837	83																
3:15 PM	2762	83													1			
3:30 PM	2812	93	1		1				1	1	1		1	1			1	1
3:45 PM	2792	93					1	1										
4:00 PM	2726	99																
4:15 PM	2795	97													1	1		
4:30 PM	2794	94	1		1				1	1	1		1	1			1	1
4:45 PM	2824	95					1	1										
5:00 PM	2860	106																
5:15 PM	2816	96													1	1		
5:30 PM	2779	95	1		1				1	1	1		1	1			1	1
5:45 PM	2662	80					1	1										
6:00 PM	2520	66																
6:15 PM	2411	62													1			
6:30 PM	2220	63	1		1				1	1	1		1	1			1	1
6:45 PM	2085	62					1											
7:00 PM	1990	58																
7:15 PM	1934	55													1			
7:30 PM	1894	50	1		1				1		1		1				1	1
7:45 PM	1840	43					1											
8:00 PM	1718	38																
8:15 PM	1225	27													1			
8:30 PM	763	17	1		1				1		1		1				1	
8:45 PM	350	10																
9:00 PM	0	0																
9:15 PM	0	0																
9:30 PM	0	0																
9:45 PM	0	0																
HOURS MET			**16**	**0**	**16**	**0**	**15**	**4**	**16**	**13**	**16**	**0**	**16**	**10**	**16**	**2**	**16**	**14**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**YES**		**NO**				**NO**			

Warrant Met: **No**

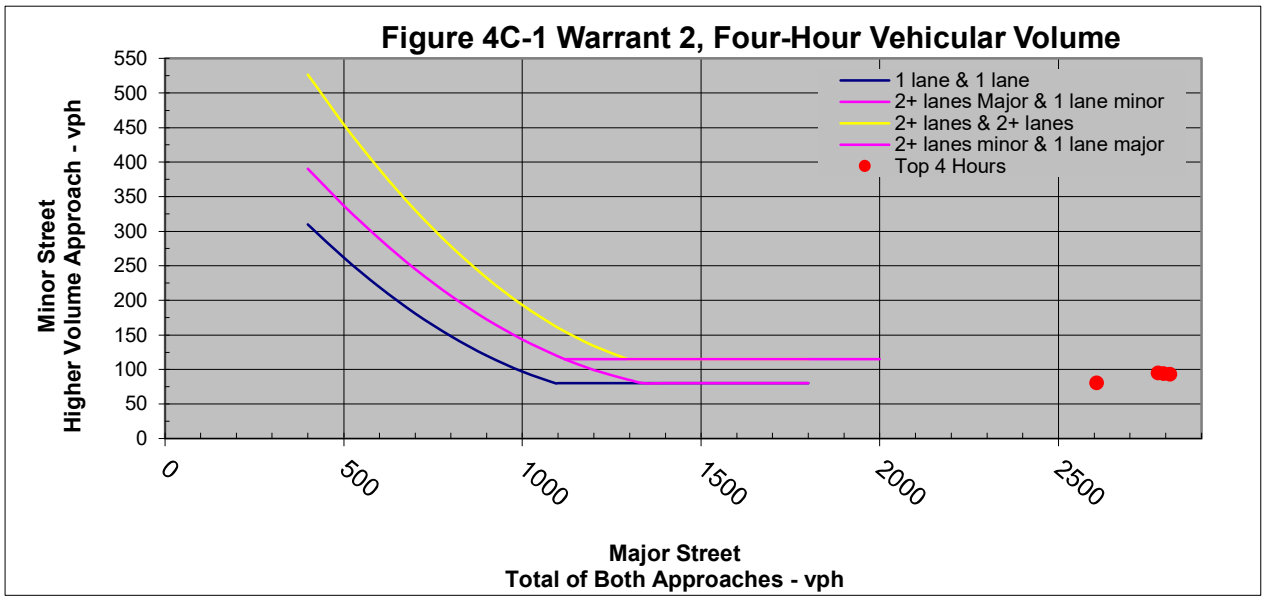
Notes: Condition B (70%) was met.

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	4
Major street:	2 or More Lanes	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	12
Minor Street:	1 Lane		

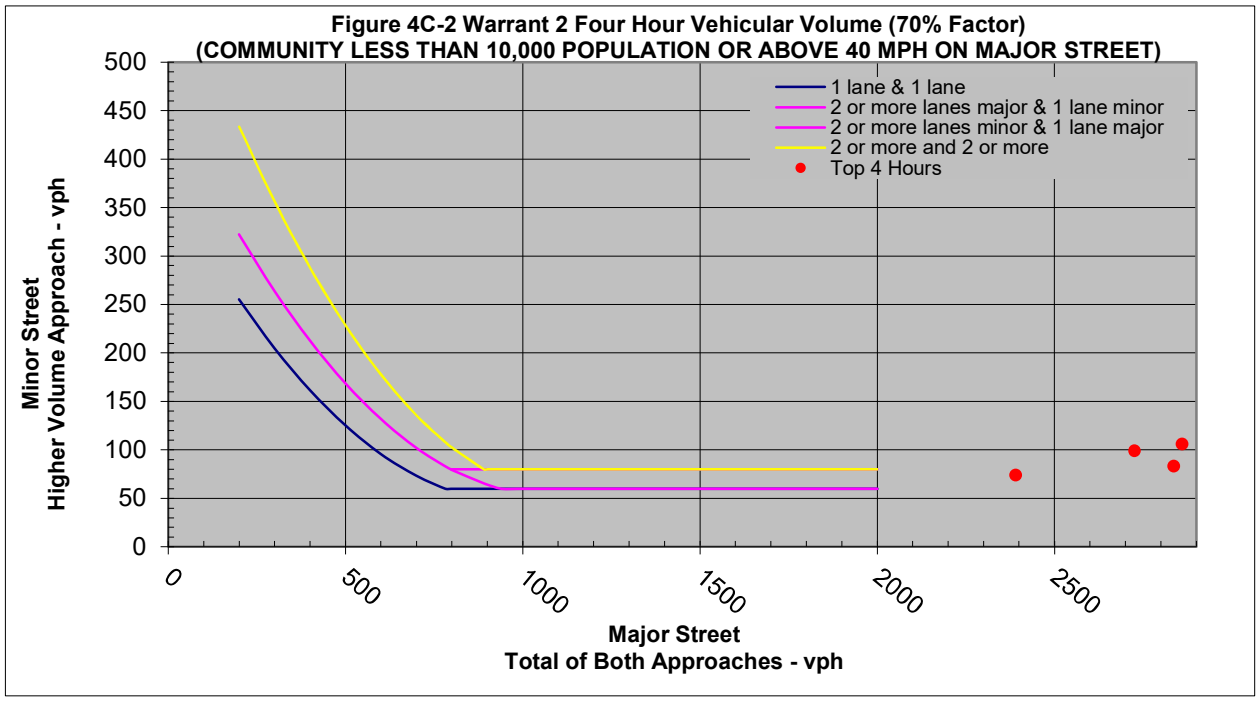
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Bristol Lake Dr		Major - SR 125					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	56	30	1404	328	1732	56		
6:15 AM	69	37	1544	393	1937	69		Met
6:30 AM	57	49	1648	477	2125	57		
6:45 AM	60	57	1686	568	2254	60		
7:00 AM	64	60	1591	641	2232	64		
7:15 AM	62	50	1441	672	2113	62		Met
7:30 AM	58	45	1298	697	1995	58		
7:45 AM	56	46	1245	677	1922	56		
8:00 AM	56	46	1204	664	1868	56		
8:15 AM	54	46	1214	695	1909	54		
8:30 AM	62	42	1220	695	1915	62		Met
8:45 AM	61	30	1149	726	1875	61		
9:00 AM	56	26	1125	736	1861	56		
9:15 AM	60	25	1096	754	1850	60		
9:30 AM	55	23	1065	786	1851	55		
9:45 AM	56	25	1046	800	1846	56		
10:00 AM	62	23	1070	864	1934	62		Met
10:15 AM	58	21	1090	892	1982	58		
10:30 AM	63	22	1101	919	2020	63		
10:45 AM	65	26	1097	972	2069	65		
11:00 AM	63	25	1085	973	2058	63		Met
11:15 AM	80	24	1107	991	2098	80		
11:30 AM	77	25	1140	1058	2198	77		
11:45 AM	60	19	1181	1094	2275	60		
12:00 PM	61	19	1207	1153	2360	61		Met
12:15 PM	59	20	1172	1177	2349	59		
12:30 PM	64	19	1131	1151	2282	64		
12:45 PM	68	25	1070	1139	2209	68		
1:00 PM	64	26	1074	1158	2232	64		Met
1:15 PM	70	29	1075	1195	2270	70		
1:30 PM	72	30	1078	1231	2309	72		
1:45 PM	70	34	1108	1266	2374	70		
2:00 PM	74	33	1067	1324	2391	74		Met
2:15 PM	78	30	1116	1401	2517	78		
2:30 PM	81	31	1140	1467	2607	81	Met	
2:45 PM	85	24	1181	1540	2721	85		
3:00 PM	83	25	1226	1611	2837	83		Met
3:15 PM	83	30	1117	1645	2762	83		
3:30 PM	93	24	1071	1741	2812	93	Met	
3:45 PM	93	26	978	1814	2792	93		
4:00 PM	99	29	938	1788	2726	99		Met
4:15 PM	97	30	1032	1763	2795	97		
4:30 PM	94	37	1071	1723	2794	94	Met	
4:45 PM	95	44	1165	1659	2824	95		
5:00 PM	106	42	1214	1646	2860	106		Met
5:15 PM	96	40	1220	1596	2816	96		
5:30 PM	95	35	1255	1524	2779	95	Met	
5:45 PM	80	29	1182	1480	2662	80		
6:00 PM	66	29	1139	1381	2520	66		Met
6:15 PM	62	29	1072	1339	2411	62		
6:30 PM	63	28	956	1264	2220	63		
6:45 PM	62	24	893	1192	2085	62		
7:00 PM	58	21	824	1166	1990	58		
7:15 PM	55	21	799	1135	1934	55		
7:30 PM	50	18	779	1115	1894	50		
7:45 PM	43	20	769	1071	1840	43		
8:00 PM	38	16	708	1010	1718	38		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	5:30 PM	6:30 PM	2779	95
2nd Highest Hour	4:30 PM	5:30 PM	2794	94
3rd Highest Hour	3:30 PM	4:30 PM	2812	93
4th Highest Hour	2:30 PM	3:30 PM	2607	81

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	5:00 PM	6:00 PM	2860	106
2nd Highest Hour	4:00 PM	5:00 PM	2726	99
3rd Highest Hour	3:00 PM	4:00 PM	2837	83
4th Highest Hour	2:00 PM	3:00 PM	2391	74



Are the requirements for Warrant 2 met?: Yes

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	5:00 PM
Major Street:	2 or More Lanes	Peak Hour End Time	6:00 PM
Minor Street:	1 Lane		

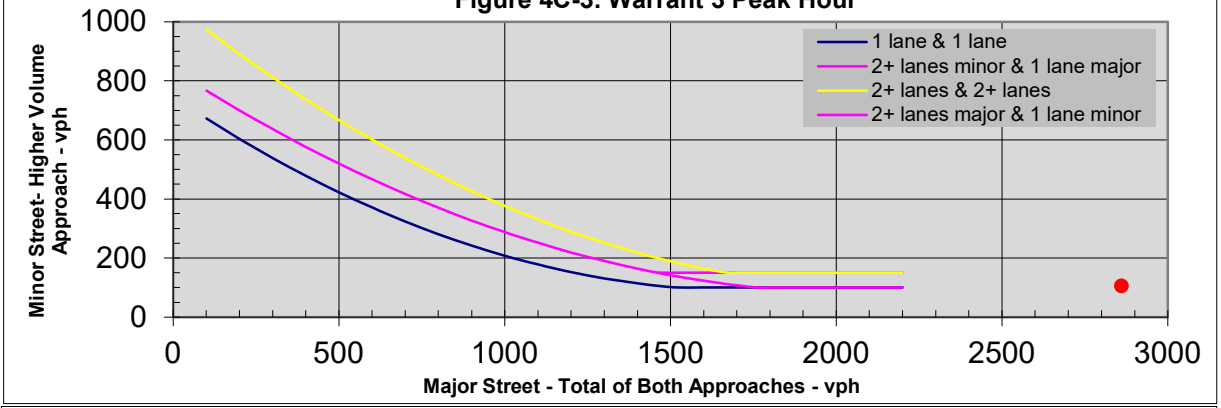
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

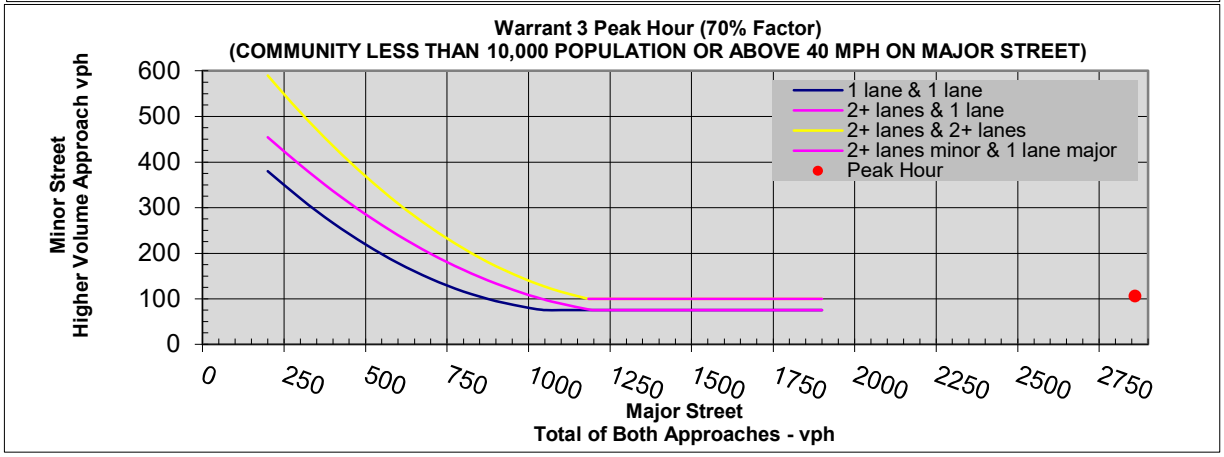
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*	
Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	No
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes
**If applicable, attach all supporting calculations and documentation.*	

Are the requirements for Warrant 3 met?: Yes

Figure 4C-3. Warrant 3 Peak Hour





Hour Vehicular Volume				
Hour Interval Beginning At	**Major Street Combined Vehicles Per Hour (VPH)**	**Highest Minor Street Approach Vehicles Per Hour (VPH)**	**Sum of Major Street and Highest Minor Street**	**Sum of Major Street and Combined Minor Street**
6:00 AM	1732	56	1788	1818
6:15 AM	1937	69	2006	2043
6:30 AM	2125	57	2182	2231
6:45 AM	2254	60	2314	2371
7:00 AM	2232	64	2296	2356
7:15 AM	2113	62	2175	2225
7:30 AM	1995	58	2053	2098
7:45 AM	1922	56	1978	2024
8:00 AM	1868	56	1924	1970
8:15 AM	1909	54	1963	2009
8:30 AM	1915	62	1977	2019
8:45 AM	1875	61	1936	1966
9:00 AM	1861	56	1917	1943
9:15 AM	1850	60	1910	1935
9:30 AM	1851	55	1906	1929
9:45 AM	1846	56	1902	1927
10:00 AM	1934	62	1996	2019
10:15 AM	1982	58	2040	2061
10:30 AM	2020	63	2083	2105
10:45 AM	2069	65	2134	2160
11:00 AM	2058	63	2121	2146
11:15 AM	2098	80	2178	2202
11:30 AM	2198	77	2275	2300
11:45 AM	2275	60	2335	2354
12:00 PM	2360	61	2421	2440
12:15 PM	2349	59	2408	2428
12:30 PM	2282	64	2346	2365
12:45 PM	2209	68	2277	2302
1:00 PM	2232	64	2296	2322
1:15 PM	2270	70	2340	2369
1:30 PM	2309	72	2381	2411
1:45 PM	2374	70	2444	2478
2:00 PM	2391	74	2465	2498
2:15 PM	2517	78	2595	2625
2:30 PM	2607	81	2688	2719
2:45 PM	2721	85	2806	2830
3:00 PM	2837	83	2920	2945
3:15 PM	2762	83	2845	2875
3:30 PM	2812	93	2905	2929
3:45 PM	2792	93	2885	2911
4:00 PM	2726	99	2825	2854
4:15 PM	2795	97	2892	2922
4:30 PM	2794	94	2888	2925
4:45 PM	2824	95	2919	2963
5:00 PM	2860	106	2966	3008
5:15 PM	2816	96	2912	2952
5:30 PM	2779	95	2874	2909
5:45 PM	2662	80	2742	2771
6:00 PM	2520	66	2586	2615
6:15 PM	2411	62	2473	2502
6:30 PM	2220	63	2283	2311
6:45 PM	2085	62	2147	2171
7:00 PM	1990	58	2048	2069
7:15 PM	1934	55	1989	2010
7:30 PM	1894	50	1944	1962
7:45 PM	1840	43	1883	1903
8:00 PM	1718	38	1756	1772

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
2860	106	100	75

EMH&T

Engineers, Surveyors, Planners, Scientists

APPENDIX F

ECAT Analysis &

Benefit-Cost Analysis

Project Information

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 1 - LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		
Perform Benefit Cost Analysis?	Yes		

Do the proposed improvements fundamentally change the conditions of the base safety performance function (SPF), Or is crash data unavailable for the analysis condition, Or is only predicted (and not expected) analysis needed for the existing or proposed condition?	**Yes**

(Examples: unsignalized to signalized, undivided to divided, increase or decrease in the number of lanes, change the number of approaches to an intersection, significant realignment of the roadway)

If Yes, are you analyzing the existing or proposed conditions?	**Proposed**

Project Elements Description Table

Project Element ID (Must be Unique)	Site Type	Intersection Control Type	Location Information					
			NLFID	Begin Logpoint/ Intersection Midpoint	End Logpoint *(Leave blank for Intersection)*	Length (mi) OR Intersection Radius Buffer (mi)	Cross Route NLFID(s)	Common Name
CR128; 2.17	Urban & Suburban Arterial Intersection	Unsignalized	CCLECR00128**C	2.17		0.05	TCLETR0017	Lewis Rd & White Oak Rd
SR125; 4.83	Urban & Suburban Arterial Intersection	Unsignalized	SCLESR00125**C	4.83		0.05	CCLECR0012	SR 125 and White Oak Rd

Traffic Volume Growth Rate Calculation For Benefit Cost Analysis

	Year	AADT	
Present ADT (PADT)			veh / day
Future ADT (FADT)			veh / day
Annual Linear Growth Rate		0.0050	

Select Other Non-Site Characteristic Based Countermeasures For Entire Project

CMF Nbr	Countermeasure	CMF KA Value	CMF B Value	CMF C Value	CMF O Value	CMF Valid for the Following Site Types
CMF 1	Install right-in-right-out (RIRO) operations at stop-controlled intersections	0.55	0.55	0.55	0.55	7
CMF 2	LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	By Crash Type	By Crash Type	By Crash Type	By Crash Type	7
CMF 3						
CMF 4						
CMF 5						
CMF 6						
CMF 7						
CMF 8						
CMF 9						
CMF 10						

Project Safety Performance Report

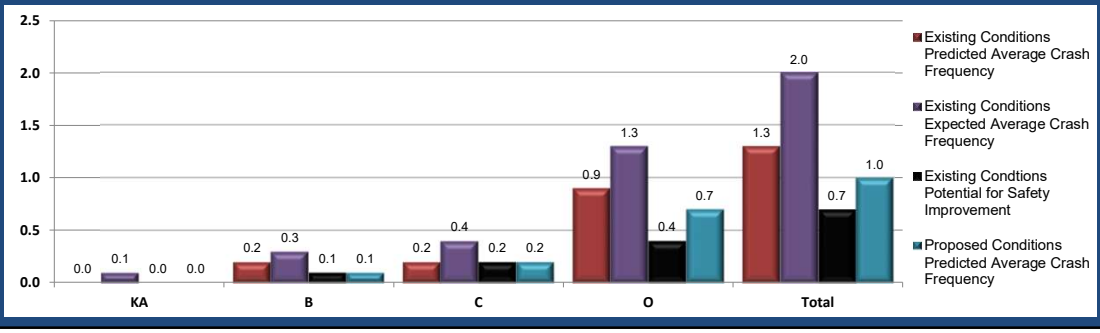
ECAT Economic Crash Analysis Tool

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 1 - LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Project and Site Conditions Information

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.0381	0.1574	0.2112	0.8816	1.2883
$N_{expected}$ - Existing Conditions	0.0627	0.2731	0.3774	1.2704	1.9836
$N_{potential\ for\ improvement}$ - Existing Conditions	0.0246	0.1157	0.1662	0.3888	0.6953
$N_{expected}$ - Proposed Conditions	0.0272	0.1111	0.1551	0.6820	0.9754

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0072	0.0266	0.0331	0.1209	0.1878
SR125; 4.83	SR 125 and White Oak Rd	0.0309	0.1308	0.1781	0.7607	1.1005

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0083	0.0312	0.0391	0.1742	0.2528
SR125; 4.83	SR 125 and White Oak Rd	0.0544	0.2419	0.3383	1.0962	1.7308

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0011	0.0046	0.006	0.0533	0.065
SR125; 4.83	SR 125 and White Oak Rd	0.0235	0.1111	0.1602	0.3355	0.6303

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.004	0.0146	0.0182	0.0665	0.1033
SR125; 4.83	SR 125 and White Oak Rd	0.0232	0.0965	0.1369	0.6155	0.8721

Summary by Crash Type

Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0010	0.0010	0.0000	0.0008
Head On	0.0276	0.0473	0.0197	0.0261
Rear End	0.4856	0.7815	0.2959	0.4610
Backing	0.0492	0.0744	0.0252	0.0469
Sideswipe - Meeting	0.0019	0.0032	0.0013	0.0018
Sideswipe - Passing	0.1719	0.2665	0.0946	0.1635
Angle	0.2605	0.4242	0.1637	0.0187
Parked Vehicle	0.0217	0.0211	-0.0006	0.0169
Pedestrian	0.0146	0.0146	0.0000	0.0136
Animal	0.0000	0.0000	0.0000	0.0000
Train	0.0002	0.0001	0.0000	0.0001
Pedalcycles	0.0085	0.0085	0.0000	0.0079
Other Non-Vehicle	0.0000	0.0000	0.0000	0.0000
Fixed Object	0.0788	0.0782	-0.0006	0.0612
Other Object	0.0021	0.0020	-0.0001	0.0016
Overturning	0.0023	0.0024	0.0001	0.0018
Other Non-Collision	0.0048	0.0048	-0.0001	0.0038
Left Turn	0.0983	0.1611	0.0627	0.0932
Right Turn	0.0593	0.0928	0.0335	0.0564

Project Cost Estimate

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 1 - LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Engineering Design %	10%
Contingency %	25%

Countermeasures	Construction Costs	Right of Way Costs	Engineering Design Costs	Contingency Amount	Total Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections	$303,000.00		$30,300.00	$75,750.00	**$409,050.00**		
CMF 2 - LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	$0.00		$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
Totals	**$303,000.00**	**$0.00**	**$30,300.00**	**$75,750.00**	**$409,050.00**	**$0.00**	**$0.00**

Inflation %	

Final Costruction Cost:	**$409,050.00**

*Final construction cost should match the Project Cost Estimate

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 1 - LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Comments:

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	$409,050.00			$409,050.00	$409,050.00	-0.085	$45,575
CMF 2 - LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	20	$0.00			$0.00	$0.00	-0.228	$118,948
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
Totals		**$409,050.00**	**$0.00**	**$0.00**	**$409,050.00**	**$409,050.00**	**-0.313**	**$164,522**

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 1 - LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Benefit - Cost Calculator

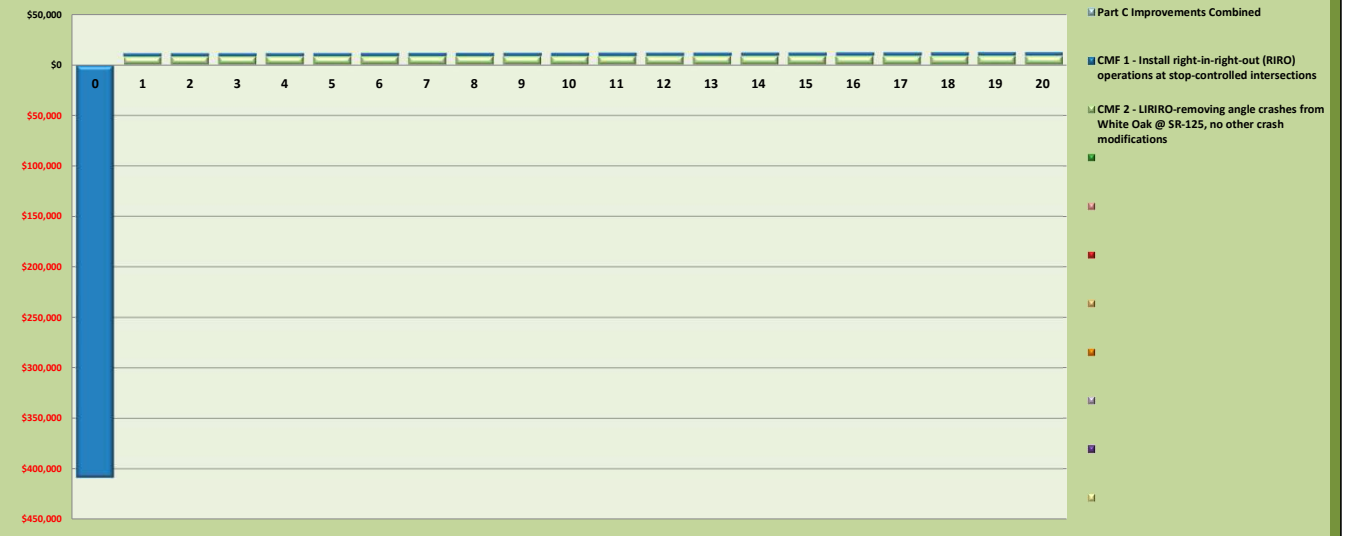
Net Present Value of Project	$409,050.00
Net Present Value of Safety Benefits	$164,522.37
Net Benefit	($244,527.63)
Benefit / Cost Ratio	0.40

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	-0.011
Number of Injury Crashes	-0.113
Number of Total Crashes	-0.313

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year

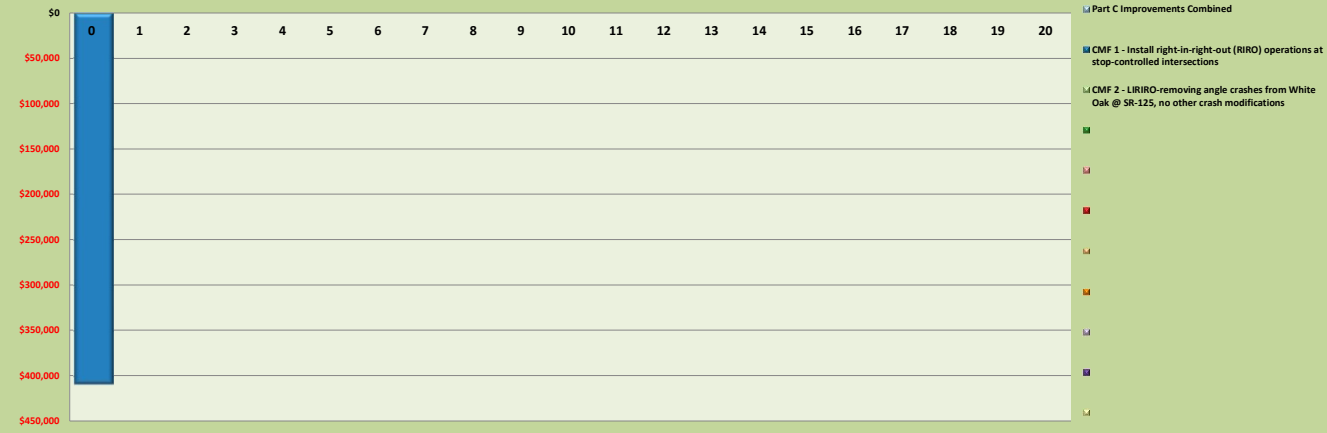


Safety Benefit - Cost Analysis

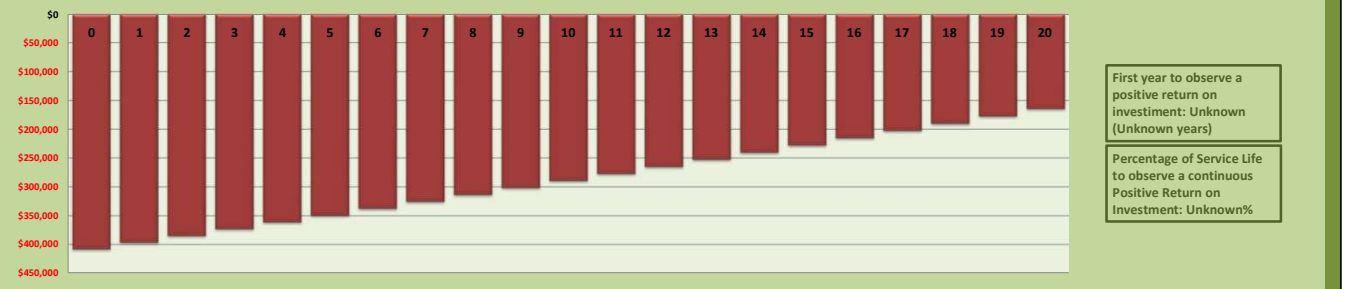
General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 1 - LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



First year to observe a positive return on investiment: Unknown (Unknown years)

Percentage of Service Life to observe a continuous Positive Return on Investment: Unknown%

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	CR128
Agency or Company	EMH&T	Logpoint	2.17
Date Performed	11/20/24	Common Name	Lewis Rd & White Oak Rd
Intersection	CR128; 2.17	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	3,430	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	600	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				0	0
Number of major-road approaches with right-turn lanes				0	0
					--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes					0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				Local System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF COMB*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.0000	1.0000	1.0000	1.0000	0.9669	1.0000	0.9669

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	0.18	1.00	0.18	1.000	0.18	0.97	0.76	0.13
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	0.07	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.426	0.08	0.97	0.62	0.05
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	0.10	1.00	0.10	$(5)_{TOTAL}-(5)_{FI}$ 0.574	0.10	0.97	0.82	0.08

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.106	1.00	0.11	1.000	0.106	0.97	0.54	0.06
Fatal and Injury (FI)	--	--	--	--	0.033	1.00	0.03	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.352	0.037	0.97	0.47	0.02
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.060	1.00	0.06	$(5)_{TOTAL}-(5)_{FI}$ 0.648	0.069	0.97	0.57	0.04

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{pedi}	Calibration factor, C_i	Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.010	1.11	0.002
Fatal and injury (FI)	--	--	--	--	1.11	0.002

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{bikei}	Calibration factor, C_i	Predicted N_{bikei}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.0057	1.16	0.001
Fatal and injury (FI)	--	--	--	--	1.16	0.001

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	SR125
Agency or Company	EMH&T	Logpoint	4.83
Date Performed	11/20/24	Common Name	SR 125 and White Oak Rd
Intersection	SR125; 4.83	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	32,060	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	1,470	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				2	0
Number of major-road approaches with right-turn lanes				0	0
				[redacted]	--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes				[redacted]	0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				State System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF_{COMB}*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.4500	1.0000	1.0000	1.0000	0.9669	1.0000	0.4351

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	3.15	1.00	3.15	1.000	3.15	0.44	0.76	1.04
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	1.24	1.00	1.24	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.360	1.13	0.44	0.62	0.31
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	2.20	1.00	2.20	$(5)_{TOTAL}-(5)_{FI}$ 0.640	2.02	0.44	0.82	0.72

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bisv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.239	1.00	0.24	1.000	0.239	0.44	0.54	0.06
Fatal and Injury (FI)	--	--	--	--	0.074	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.072	0.44	0.47	0.01
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.173	1.00	0.17	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.167	0.44	0.57	0.04

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{pedi} from Table 12-16	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
Total	1.041	0.056	1.097	0.010	1.11	0.012
Fatal and injury (FI)	--	--	--	--	1.11	0.012

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	(1)*(2)*(3)
from Table 12-28	from Table 12-29	from Table 12-30	
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{bikei} from Table 12-17	Calibration factor, C_i	Predicted N_{bikei} (4)*(5)*(6)
Total	1.041	0.056	1.097	0.0057	1.16	0.007
Fatal and injury (FI)	--	--	--	--	1.16	0.007

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Countermeasure Modification (CMF) Factors

Information obtained from the Highway Safety Manual & the CMF Clearinghouse
Additional CMFs can be obtained by clicking the logo to the left.
Last Upds 3/8/2012

CMF ID	Study Title	Countermeasure Category	Rural Two-Lane Two-Way Segments	Rural Two-Lane Two-Way Intersections	Rural Multilane Undivided Segments	Rural Multilane Divided Segments	Rural Multilane Intersections	Urban & Suburban Arterial Segments	Urban & Suburban Arterial Intersections	Freeway Segments	Ramp Segments	Ramp Terminal Intersections	Countermeasure	Suggested Service Life	Intersection Related (Y/N)	Wet Pavement Related	Night Related	Publication Year	Star Quality Rating	CMF by Crash Type	All	KA	B	C	O	Night	Wet	Ran off road	Left Turn	Right Turn	Angle
40	Handbook of Road Safety Mea	Roadside	X		X	X		X					Change barrier along embankment to less rigid type	20	No			2004	3	Yes								0.59				
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of signalized intersection into single- or multi-lane roundabout	20	Yes			2012	4	No	0.74	0.29	0.29	0.29	0.74						
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of stop-controlled intersection into multi-lane roundabout	20	Yes			2012	4	No	0.95	0.95	0.95	0.95	0.95						
XX	Highway Safety Manual Part D	On-street parking						X					Convert free to regulated parking																0.94	0.94	0.94
227	NCHRP Report 572: Applying	Intersection traffic control		X								X	Convert intersection with minor-road stop control to modern roundabout (Rural)	20	Yes			2007	5	No	0.29	0.13	0.13	0.13	0.29						
229	NCHRP Report 572: Applying	Intersection traffic control							X			X	Convert intersection with minor-road stop control to modern roundabout (Urban)	20	Yes			2007	4	No	0.71	0.22	0.22	0.22	0.71						
315	Evaluation of the Conversion	Intersection traffic control		X			X		X			X	Convert minor-road stop control to all-way stop control	10	Yes			2010	5	Yes	0.319	0.23	0.23	0.23	0.319				0.23	0.23	0.23
721	Development of Crash Reduct	Alignment	X										Flatten crest vertical curve	30				2005	3	No	0.8	0.49	0.49	0.49	0.8						
XX	Highway Safety Manual Part D	On-street parking						X					Implement time-limited parking restrictions																0.89	0.89	0.89
XX	Highway Safety Manual Part D	Intersection geometry		X			X					X	Increase intersection median width by 3-ft increments - Rural																0.96	0.96	0.96
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, signalized																1.03	1.03	1.03
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, unsignalized																1.05	1.05	1.05
307	Handbook of Road Safety Mea	Intersection geometry		X			X		X			X	Increase triangle sight distance	10	Yes			2004	3	No		0.53	0.53	0.53	0.89						
194	Crash Reduction Factors for T	Roadway	X		X	X		X					Increased pavement friction	10		Yes		2008	5	No	0.43	0.43	0.43	0.43	0.43		0.43				
XX	Highway Safety Manual Part D	Railroad grade crossings											Install automatic gates at rail crossing that previously had flashing lights and sound signals																		
XX	Highway Safety Manual Part D	Railroad grade crossings	X		X	X		X					Install automatic gates at rail crossing that previously had passive traffic control																		
1965	Safety Impact of Cable Barrier	Roadway delineation				X							Install cable median barrier (low or high tension)	20	No			2009	5	Yes									1.83	0.86	1.83
3341	NCHRP Report 641: Guidance	Roadway	X		X								Install centerline rumble strips (Rural)	15	No			2009	5	Yes	0.89	0.78	0.78	0.78	0.89				0.78	0.78	0.78
3341	NCHRP Report 641: Guidance	Roadway						X					Install centerline rumble strips (Urban)	15	No			2009	5	Yes	1.02	0.91	0.91	0.91	1.02				0.91	0.91	0.91
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable crash ahead warning signs	5	No			2004	4	No	0.56	0.56	0.56	0.56	0.56						
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable speed warning signs for individual drivers	5	No			2004	4	No	0.54	0.54	0.54	0.54	0.54						
XX	Highway Safety Manual Part D	Signs	X		X	X		X					Install changeable speed warning signs for individual drivers																0.54	0.54	0.54
2436	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install chevron signs on horizontal curves	5	No		Yes	2009	4	Yes	0.96	0.84	0.84	0.84	0.96				0.84	0.84	0.84
XX	Highway Safety Manual Part D	Signs											Install combination horizontal alignment/advisory speed signs																0.87	0.87	0.87
XX	Highway Safety Manual Part D	Roadway delineation				X							Install continuous milled-in shoulder rumble strips																0.83	0.83	0.83
55	Handbook of Road Safety Mea	Roadside	X		X	X		X					Install crash cushions at fixed roadside features	20	No			2004	4	Yes	0.54	0.31	0.31	0.31	0.54				0.31	0.31	0.31
XX	Highway Safety Manual Part D	Roadside	X		X	X							Install crash cushions at fixed roadside features																		
3388	NCHRP Report 641: Guidance	Roadway	X		X								Install edgeline rumble strips - Undivided	15	No			2009	4	Yes								0.61			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (curves) - Rural	5	No			2009	3	No	0.74	0.74	0.74	0.74	0.74						
104	Driver Performance and Safet	Roadway delineation						X					Install edgelines (curves) - Urban	5	No			2009	3	Yes								0.89			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (tangents and curves)	5	No			2009	3	Yes	0.92	0.92	0.92	0.92	0.92			0.89	0.92	0.92	0.92
XX	Highway Safety Manual Part D	Roadway delineation	X		X								Install edgelines, centerlines, and PMDs (Where none previously existed)																0.55	0.55	0.55
482	Handbook of Road Safety Mea	Railroad grade crossings	X		X	X		X					Install flashing lights and sound signals	5				2004	5	Yes	0.5	0.5	0.5	0.5	0.5				0.5	0.5	0.5
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X		X					Install flashing lights and sound signals at a rail crossing																		
2431	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install new fluorescent curve signs or upgrade existing curve signs to fluorescent sheeting	5	No		Yes	2009	4	Yes	0.82	0.75	0.75	0.75	0.82				0.75	0.75	0.75
XX	Highway Safety Manual Part D	Roadway delineation	X										Install PMDs																1.04	1.04	1.04
2911	Safety Effectiveness of the HA	Pedestrians and bicyclists							X			X	Installation of a High intensity Activated crossWalK (HAWK) pedestrian-activated beacon at an intersection	10				2010	4	Yes											
493	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Installing gates at crossings with signs	20				2005	5	No	0.07	0.07	0.07	0.07	0.07						
583	Safety Evaluation of Installing	Roadway	X										Introduce TWLTL (two-way left turn lanes) on rural two lane roads	20	No			2008	5	Yes	0.64	0.65	0.65	0.65	0.64				0.65	0.65	0.65
276	Right-Angle Crash Occurance	Intersection geometry							X			X	Introducing zero or positive offset left-turn lane on crossing roadway (Signalized Only)	20	Yes			2007	3	Yes									0.74		0.74
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Modify change plus clearance interval to ITE 1985 Proposed Recommended Practice (4-leg signalized)							Yes									0.91	0.91	1.06
38	Handbook of Road Safety Mea	Roadside	X		X	X		X					New guardrail along embankment	20	No			2004	5	Yes	0.93	0.56	0.53	0.53	0.93				0.56	0.56	0.56
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Permit right-turn-on-red at signalized intersections							Yes									1.07	1.6	1.07
87	Handbook of Road Safety Mea	Roadway delineation											Place centerline markings	5	No			2004	3	No		0.99	0.99	0.99	1.01						
XX	Highway Safety Manual Part D	Roadway delineation	X										Place centerline markings (Where none previously existed)																0.99	0.99	0.99
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X							Place edgeline and centerline markings (Where none previously existed)																0.76	0.76	0.76
XX	Highway Safety Manual Part D	Roadway delineation	X										Place standard edgeline markings (Where none previously existed)																0.97	0.97	0.97
XX	Highway Safety Manual Part D	Roadway delineation	X										Place wide edgeline markings (Where none previously existed)																1.05	1.05	1.05
446	Safety Evaluation of Flashing	Intersection traffic control		X			X		X			X	Provide flashing beacons at stop controlled intersections	10	Yes			2008	3	Yes	0.95	0.9	0.9	0.9	0.95				0.9	0.9	0.87
73	Handbook of Road Safety Mea	Roadway signs and traffic control	X			X		X					Provide static combination horizontal alignment / advisory speed signs	5	No			2004	3	No		0.87	0.87	0.87	0.71						
2333	Evaluation of the Safety Effec	Intersection traffic control		X			X		X			X	Replace 8-inch red signal heads with 12-inch	10	Yes			2008	4	Yes	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.58
XX	Highway Safety Manual Part D	Intersection geometry		X			X		X			X	Replace direct left-turn with right-turn/U-turn							Yes									0.64	0.64	0.64
388	Accident Modification Factors	Intersection traffic control							X			X	Replace Night-Time Flash with Steady Operation	5	Yes		Yes	2008	3	No	0.65	0.65	0.65	0.65	0.65	0.65					
2975	Safety Evaluation of Multilane	Roadway	X		X	X		X					Resurface pavement	20	No			2009	4	Yes	1.01	0.95	0.95	0.95	1.01				0.95	0.95	0.95
487	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Upgrade signs to flashing lights	5				2005	5	No	0.23	0.23	0.23	0.23	0.23						
494	Collision Frequency Analysis	Railroad grade crossings						X					Upgrade signs to flashing lights	20				2005	5	No	0.23	0.23	0.23	0.23	0.23						
9821	Safety Effects of Turning Mov	Access Management							X				Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	Yes	No	No	2018	3	No	0.55	0.55	0.55	0.55	0.55						
9999	N/A	Access Management							X				LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	20	yes	no	no	2024	0	Yes											0.01

Project Information

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 2 RIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		
Perform Benefit Cost Analysis?	Yes		

Do the proposed improvements fundamentally change the conditions of the base safety performance function (SPF), Or is crash data unavailable for the analysis condition, Or is only predicted (and not expected) analysis needed for the existing or proposed condition?	**Yes**

(Examples: unsignalized to signalized, undivided to divided, increase or decrease in the number of lanes, change the number of approaches to an intersection, significant realignment of the roadway)

If Yes, are you analyzing the existing or proposed conditions?	**Proposed**

Project Elements Description Table

Project Element ID (Must be Unique)	Site Type	Intersection Control Type	Location Information					
			NLFID	Begin Logpoint/ Intersection Midpoint	End Logpoint *(Leave blank for Intersection)*	Length (mi) OR Intersection Radius Buffer (mi)	Cross Route NLFID(s)	Common Name
CR128; 2.17	Urban & Suburban Arterial Intersection	Unsignalized	CCLECR00128**C	2.17		0.05	TCLETR0017	Lewis Rd & White Oak Rd
SR125; 4.83	Urban & Suburban Arterial Intersection	Unsignalized	SCLESR00125**C	4.83		0.05	CCLECR0012	SR 125 and White Oak Rd

Traffic Volume Growth Rate Calculation For Benefit Cost Analysis

	Year	AADT	
Present ADT (PADT)			veh / day
Future ADT (FADT)			veh / day
Annual Linear Growth Rate		0.0050	

Select Other Non-Site Characteristic Based Countermeasures For Entire Project

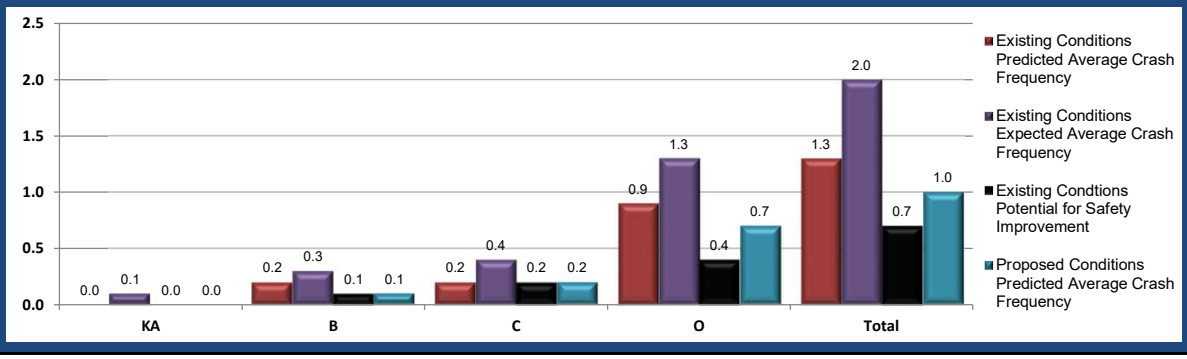
CMF Nbr	Countermeasure	CMF KA Value	CMF B Value	CMF C Value	CMF O Value	CMF Valid for the Following Site Types
CMF 1	Install right-in-right-out (RIRO) operations at stop-controlled intersections	0.55	0.55	0.55	0.55	7
CMF 2						
CMF 3						
CMF 4						
CMF 5						
CMF 6						
CMF 7						
CMF 8						
CMF 9						
CMF 10						

Project Safety Performance Report

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 2 RIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.0381	0.1574	0.2112	0.8816	1.2883
$N_{expected}$ - Existing Conditions	0.0627	0.2731	0.3774	1.2704	1.9836
$N_{potential\ for\ improvement}$ - Existing Conditions	**0.0246**	**0.1157**	**0.1662**	**0.3888**	**0.6953**
$N_{expected}$ - Proposed Conditions	0.0294	0.1218	0.1641	0.6894	1.0047

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0072	0.0266	0.0331	0.1209	0.1878
SR125; 4.83	SR 125 and White Oak Rd	0.0309	0.1308	0.1781	0.7607	1.1005

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0083	0.0312	0.0391	0.1742	0.2528
SR125; 4.83	SR 125 and White Oak Rd	0.0544	0.2419	0.3383	1.0962	1.7308

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	**0.0011**	**0.0046**	**0.006**	**0.0533**	**0.065**
SR125; 4.83	SR 125 and White Oak Rd	**0.0235**	**0.1111**	**0.1602**	**0.3355**	**0.6303**

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.004	0.0146	0.0182	0.0665	0.1033
SR125; 4.83	SR 125 and White Oak Rd	0.0254	0.1072	0.1459	0.6229	0.9014

Summary by Crash Type

Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0010	0.0010	0.0000	0.0007
Head On	0.0276	0.0473	**0.0197**	0.0217
Rear End	0.4856	0.7815	**0.2959**	0.3829
Backing	0.0492	0.0744	**0.0252**	0.0389
Sideswipe - Meeting	0.0019	0.0032	**0.0013**	0.0015
Sideswipe - Passing	0.1719	0.2665	**0.0946**	0.1358
Angle	0.2605	0.4242	**0.1637**	0.2053
Parked Vehicle	0.0217	0.0211	-0.0006	0.0149
Pedestrian	0.0146	0.0146	0.0000	0.0114
Animal	0.0000	0.0000	0.0000	0.0000
Train	0.0002	0.0001	0.0000	0.0001
Pedalcycles	0.0085	0.0085	0.0000	0.0066
Other Non-Vehicle	0.0000	0.0000	0.0000	0.0000
Fixed Object	0.0788	0.0782	-0.0006	0.0540
Other Object	0.0021	0.0020	-0.0001	0.0014
Overturning	0.0023	0.0024	**0.0001**	0.0016
Other Non-Collision	0.0048	0.0048	-0.0001	0.0033
Left Turn	0.0983	0.1611	**0.0627**	0.0775
Right Turn	0.0593	0.0928	**0.0335**	0.0468

Project Cost Estimate

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 2 RIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Engineering Design %	10%
Contingency %	25%

Countermeasures	Construction Costs	Right of Way Costs	Engineering Design Costs	Contingency Amount	Total Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value
(Left turn lane removed for SR-125 West, all costs reflected under CMF 1)			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections	$316,500.00		$31,650.00	$79,125.00	**$427,275.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
Totals	**$316,500.00**	**$0.00**	**$31,650.00**	**$79,125.00**	**$427,275.00**	**$0.00**	**$0.00**

Inflation %	

Final Costruction Cost:	**$427,275.00**

*Final construction cost should match the Project Cost Estimate

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 2 RIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Comments:

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
(Left turn lane removed for SR-125 West, all costs reflected under CMF 1)		$0.00			$0.00	$0.00	0.538	($235,013)
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	$427,275.00			$427,275.00	$427,275.00	-0.822	$366,554
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
Totals		**$427,275.00**	**$0.00**	**$0.00**	**$427,275.00**	**$427,275.00**	**-0.284**	**$131,541**

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 2 RIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Benefit - Cost Calculator

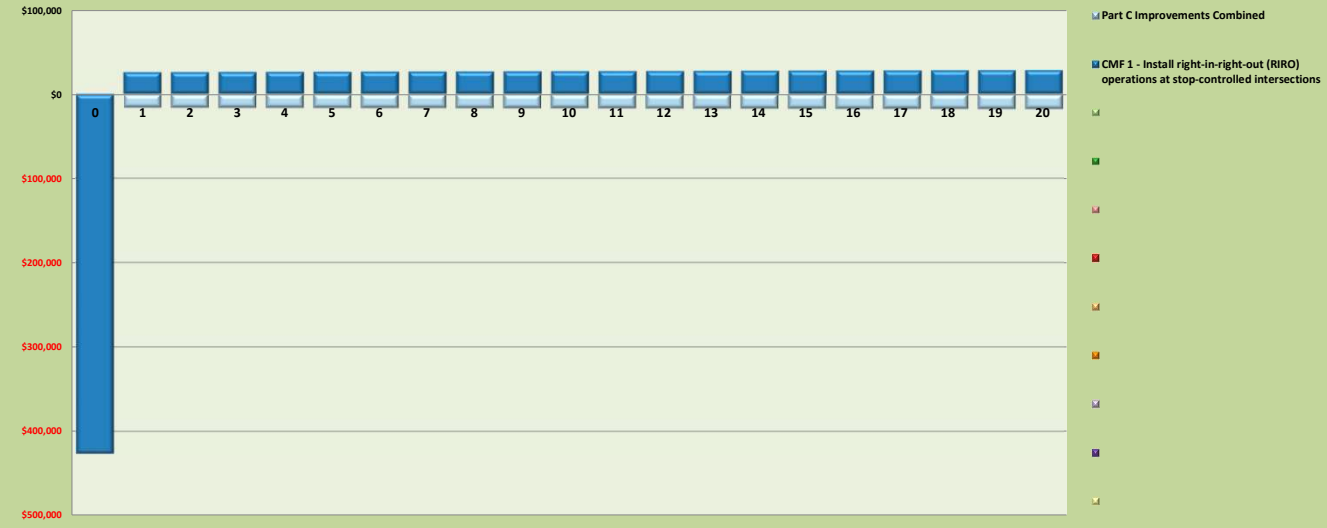
Net Present Value of Project	$427,275.00
Net Present Value of Safety Benefits	$131,541.14
Net Benefit	($295,733.86)
Benefit / Cost Ratio	0.31

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	-0.009
Number of Injury Crashes	-0.091
Number of Total Crashes	-0.284

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year

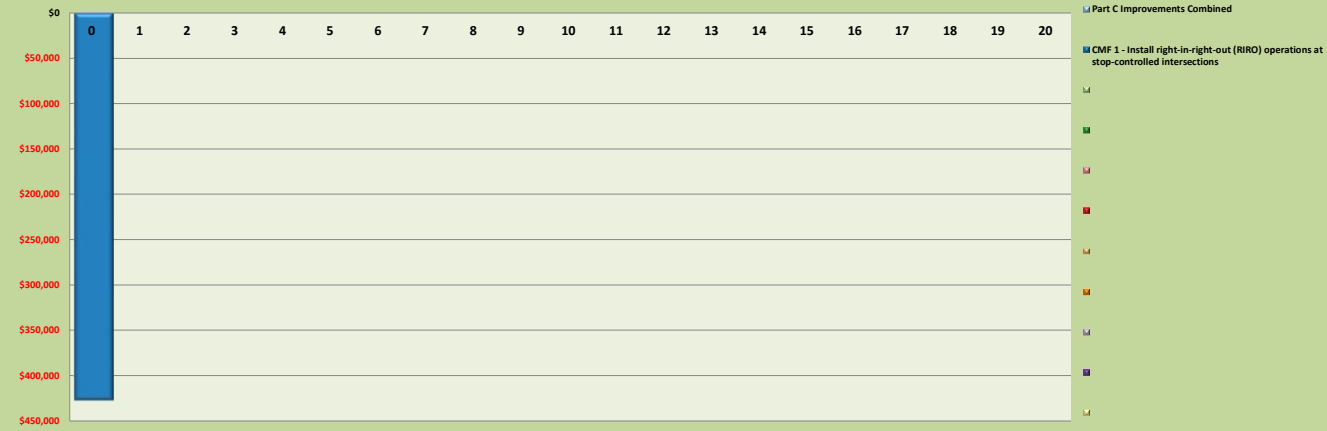


Safety Benefit - Cost Analysis

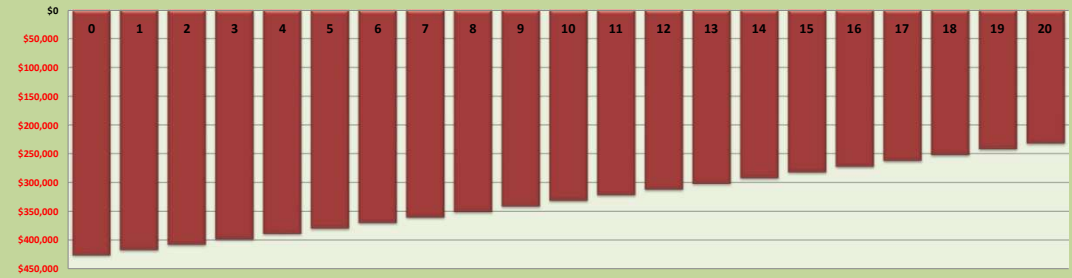
General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 2 RIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



First year to observe a positive return on investiment: Unknown (Unknown years)

Percentage of Service Life to observe a continuous Positive Return on Investment: Unknown%

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	CR128
Agency or Company	EMH&T	Logpoint	2.17
Date Performed	10/07/24	Common Name	Lewis Rd & White Oak Rd
Intersection	CR128; 2.17	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	3,430	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	600	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				0	0
Number of major-road approaches with right-turn lanes				0	0
				[redacted]	--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes				[redacted]	0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				Local System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF COMB*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.0000	1.0000	1.0000	1.0000	0.9669	1.0000	0.9669

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	0.18	1.00	0.18	1.000	0.18	0.97	0.76	0.13
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	0.07	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.426	0.08	0.97	0.62	0.05
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	0.10	1.00	0.10	$(5)_{TOTAL}-(5)_{FI}$ 0.574	0.10	0.97	0.82	0.08

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.106	1.00	0.11	1.000	0.106	0.97	0.54	0.06
Fatal and Injury (FI)	--	--	--	--	0.033	1.00	0.03	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.352	0.037	0.97	0.47	0.02
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.060	1.00	0.06	$(5)_{TOTAL}-(5)_{FI}$ 0.648	0.069	0.97	0.57	0.04

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{pedi}	Calibration factor, C_i	Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.010	1.11	0.002
Fatal and injury (FI)	--	--	--	--	1.11	0.002

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{bikei}	Calibration factor, C_i	Predicted N_{bikei}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.0057	1.16	0.001
Fatal and injury (FI)	--	--	--	--	1.16	0.001

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	SR125
Agency or Company	EMH&T	Logpoint	4.83
Date Performed	10/07/24	Common Name	SR 125 and White Oak Rd
Intersection	SR125; 4.83	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	32,060	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	1,470	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				1	0
Number of major-road approaches with right-turn lanes				0	0
				[redacted]	--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes				[redacted]	0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				State System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	CMF_{COMB}
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.6700	1.0000	1.0000	1.0000	0.9669	1.0000	0.6478

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	3.15	1.00	3.15	1.000	3.15	0.65	0.76	1.55
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	1.24	1.00	1.24	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.360	1.13	0.65	0.62	0.45
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	2.20	1.00	2.20	$(5)_{TOTAL}-(5)_{FI}$ 0.640	2.02	0.65	0.82	1.07

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bisv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.239	1.00	0.24	1.000	0.239	0.65	0.54	0.08
Fatal and Injury (FI)	--	--	--	--	0.074	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.072	0.65	0.47	0.02
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.173	1.00	0.17	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.167	0.65	0.57	0.06

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{pedi}	Calibration factor, C_i	Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	1.550	0.084	1.634	0.010	1.11	0.018
Fatal and injury (FI)	--	--	--	--	1.11	0.018

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi}
	a	b	c	d	e					(4)*(5)*(6)
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{bikei}	Calibration factor, C_i	Predicted N_{bikei}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	1.550	0.084	1.634	0.0057	1.16	0.011
Fatal and injury (FI)	--	--	--	--	1.16	0.011

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Countermeasure Modification (CMF) Factors

Information obtained from the Highway Safety Manual & the CMF Clearinghouse
Additional CMFs can be obtained by clicking the logo to the left.
Last Upds 3/8/2012

CMF ID	Study Title	Countermeasure Category	Rural Two-Lane Two-Way Segments	Rural Two-Lane Two-Way Intersections	Rural Multilane Undivided Segments	Rural Multilane Divided Segments	Rural Multilane Intersections	Urban & Suburban Arterial Segments	Urban & Suburban Arterial Intersections	Freeway Segments	Ramp Segments	Ramp Terminal Intersections	Countermeasure	Suggested Service Life	Intersection Related (Y/N)	Wet Pavement Related	Night Related	Publication Year	Star Quality Rating	CMF by Crash Type	All	KA	B	C	O	Night	Wet	Ran off road	Left Turn	Right Turn	Angle
40	Handbook of Road Safety Mea	Roadside	X		X	X		X					Change barrier along embankment to less rigid type	20	No			2004	3	Yes								0.59				
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of signalized intersection into single- or multi-lane roundabout	20	Yes			2012	4	No	0.74	0.29	0.29	0.29	0.74						
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of stop-controlled intersection into multi-lane roundabout	20	Yes			2012	4	No	0.95	0.95	0.95	0.95	0.95						
XX	Highway Safety Manual Part D	On-street parking						X					Convert free to regulated parking																0.94	0.94	0.94
227	NCHRP Report 572: Applying	Intersection traffic control		X								X	Convert intersection with minor-road stop control to modern roundabout (Rural)	20	Yes			2007	5	No	0.29	0.13	0.13	0.13	0.29						
229	NCHRP Report 572: Applying	Intersection traffic control							X			X	Convert intersection with minor-road stop control to modern roundabout (Urban)	20	Yes			2007	4	No	0.71	0.22	0.22	0.22	0.71						
315	Evaluation of the Conversion	Intersection traffic control		X			X		X			X	Convert minor-road stop control to all-way stop control	10	Yes			2010	5	Yes	0.319	0.23	0.23	0.23	0.319				0.23	0.23	0.23
721	Development of Crash Reduct	Alignment	X										Flatten crest vertical curve	30				2005	3	No	0.8	0.49	0.49	0.49	0.8						
XX	Highway Safety Manual Part D	On-street parking						X					Implement time-limited parking restrictions																0.89	0.89	0.89
XX	Highway Safety Manual Part D	Intersection geometry		X			X					X	Increase intersection median width by 3-ft increments - Rural																0.96	0.96	0.96
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, signalized																1.03	1.03	1.03
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, unsignalized																1.05	1.05	1.05
307	Handbook of Road Safety Mea	Intersection geometry		X			X		X			X	Increase triangle sight distance	10	Yes			2004	3	No		0.53	0.53	0.53	0.89						
194	Crash Reduction Factors for T	Roadway	X		X	X		X					Increased pavement friction	10		Yes		2008	5	No	0.43	0.43	0.43	0.43	0.43		0.43				
XX	Highway Safety Manual Part D	Railroad grade crossings											Install automatic gates at rail crossing that previously had flashing lights and sound signals																		
XX	Highway Safety Manual Part D	Railroad grade crossings	X		X	X		X					Install automatic gates at rail crossing that previously had passive traffic control																		
1965	Safety Impact of Cable Barrier	Roadway delineation				X							Install cable median barrier (low or high tension)	20	No			2009	5	Yes									1.83	0.86	1.83
3341	NCHRP Report 641: Guidance	Roadway	X		X								Install centerline rumble strips (Rural)	15	No			2009	5	Yes	0.89	0.78	0.78	0.78	0.89				0.78	0.78	0.78
3341	NCHRP Report 641: Guidance	Roadway						X					Install centerline rumble strips (Urban)	15	No			2009	5	Yes	1.02	0.91	0.91	0.91	1.02				0.91	0.91	0.91
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable crash ahead warning signs	5	No			2004	4	No	0.56	0.56	0.56	0.56	0.56						
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable speed warning signs for individual drivers	5	No			2004	4	No	0.54	0.54	0.54	0.54	0.54						
XX	Highway Safety Manual Part D	Signs	X		X	X		X					Install changeable speed warning signs for individual drivers																0.54	0.54	0.54
2436	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install chevron signs on horizontal curves	5	No		Yes	2009	4	Yes	0.96	0.84	0.84	0.84	0.96				0.84	0.84	0.84
XX	Highway Safety Manual Part D	Signs											Install combination horizontal alignment/advisory speed signs																0.87	0.87	0.87
XX	Highway Safety Manual Part D	Roadway delineation				X							Install continuous milled-in shoulder rumble strips																0.83	0.83	0.83
55	Handbook of Road Safety Mea	Roadside	X		X	X		X					Install crash cushions at fixed roadside features	20	No			2004	4	Yes	0.54	0.31	0.31	0.31	0.54				0.31	0.31	0.31
XX	Highway Safety Manual Part D	Roadside	X		X	X							Install crash cushions at fixed roadside features																		
3388	NCHRP Report 641: Guidance	Roadway	X		X								Install edgeline rumble strips - Undivided	15	No			2009	4	Yes								0.61			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (curves) - Rural	5	No			2009	3	No	0.74	0.74	0.74	0.74	0.74						
104	Driver Performance and Safet	Roadway delineation						X					Install edgelines (curves) - Urban	5	No			2009	3	Yes								0.89			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (tangents and curves)	5	No			2009	3	Yes	0.92	0.92	0.92	0.92	0.92			0.89	0.92	0.92	0.92
XX	Highway Safety Manual Part D	Roadway delineation	X		X								Install edgelines, centerlines, and PMDs (Where none previously existed)																0.55	0.55	0.55
482	Handbook of Road Safety Mea	Railroad grade crossings	X		X	X		X					Install flashing lights and sound signals	5				2004	5	Yes	0.5	0.5	0.5	0.5	0.5				0.5	0.5	0.5
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X		X					Install flashing lights and sound signals at a rail crossing																		
2431	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install new fluorescent curve signs or upgrade existing curve signs to fluorescent sheeting	5	No		Yes	2009	4	Yes	0.82	0.75	0.75	0.75	0.82				0.75	0.75	0.75
XX	Highway Safety Manual Part D	Roadway delineation	X										Install PMDs																1.04	1.04	1.04
2911	Safety Effectiveness of the HA	Pedestrians and bicyclists							X			X	Installation of a High intensity Activated crossWalK (HAWK) pedestrian-activated beacon at an intersection	10				2010	4	Yes											
493	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Installing gates at crossings with signs	20				2005	5	No	0.07	0.07	0.07	0.07	0.07						
583	Safety Evaluation of Installing	Roadway	X										Introduce TWLTL (two-way left turn lanes) on rural two lane roads	20	No			2008	5	Yes	0.64	0.65	0.65	0.65	0.64				0.65	0.65	0.65
276	Right-Angle Crash Occurance	Intersection geometry							X			X	Introducing zero or positive offset left-turn lane on crossing roadway (Signalized Only)	20	Yes			2007	3	Yes									0.74		0.74
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Modify change plus clearance interval to ITE 1985 Proposed Recommended Practice (4-leg signalized)							Yes									0.91	0.91	1.06
38	Handbook of Road Safety Mea	Roadside	X		X	X		X					New guardrail along embankment	20	No			2004	5	Yes	0.93	0.56	0.53	0.53	0.93				0.56	0.56	0.56
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Permit right-turn-on-red at signalized intersections							Yes									1.07	1.6	1.07
87	Handbook of Road Safety Mea	Roadway delineation											Place centerline markings	5	No			2004	3	No		0.99	0.99	0.99	1.01						
XX	Highway Safety Manual Part D	Roadway delineation	X										Place centerline markings (Where none previously existed)																0.99	0.99	0.99
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X							Place edgeline and centerline markings (Where none previously existed)																0.76	0.76	0.76
XX	Highway Safety Manual Part D	Roadway delineation	X										Place standard edgeline markings (Where none previously existed)																0.97	0.97	0.97
XX	Highway Safety Manual Part D	Roadway delineation	X										Place wide edgeline markings (Where none previously existed)																1.05	1.05	1.05
446	Safety Evaluation of Flashing	Intersection traffic control		X			X		X			X	Provide flashing beacons at stop controlled intersections	10	Yes			2008	3	Yes	0.95	0.9	0.9	0.9	0.95				0.9	0.9	0.87
73	Handbook of Road Safety Mea	Roadway signs and traffic control	X			X		X					Provide static combination horizontal alignment / advisory speed signs	5	No			2004	3	No		0.87	0.87	0.87	0.71						
2333	Evaluation of the Safety Effec	Intersection traffic control		X			X		X			X	Replace 8-inch red signal heads with 12-inch	10	Yes			2008	4	Yes	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.58
XX	Highway Safety Manual Part D	Intersection geometry		X			X		X			X	Replace direct left-turn with right-turn/U-turn							Yes									0.64	0.64	0.64
388	Accident Modification Factors	Intersection traffic control							X			X	Replace Night-Time Flash with Steady Operation	5	Yes		Yes	2008	3	No	0.65	0.65	0.65	0.65	0.65	0.65					
2975	Safety Evaluation of Multilane	Roadway	X		X	X		X					Resurface pavement	20	No			2009	4	Yes	1.01	0.95	0.95	0.95	1.01				0.95	0.95	0.95
487	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Upgrade signs to flashing lights	5				2005	5	No	0.23	0.23	0.23	0.23	0.23						
494	Collision Frequency Analysis	Railroad grade crossings						X					Upgrade signs to flashing lights	20				2005	5	No	0.23	0.23	0.23	0.23	0.23						
9821	Safety Effects of Turning Mov	Access Management							X				Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	Yes	No	No	2018	3	No	0.55	0.55	0.55	0.55	0.55						

Project Information

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 3 - LIRIRO White Oak Realign Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		
Perform Benefit Cost Analysis?	Yes		

Do the proposed improvements fundamentally change the conditions of the base safety performance function (SPF), Or is crash data unavailable for the analysis condition, Or is only predicted (and not expected) analysis needed for the existing or proposed condition?	**Yes**

(Examples: unsignalized to signalized, undivided to divided, increase or decrease in the number of lanes, change the number of approaches to an intersection, significant realignment of the roadway)

If Yes, are you analyzing the existing or proposed conditions?	**Proposed**

Project Elements Description Table

Project Element ID (Must be Unique)	Site Type	Intersection Control Type	Location Information					
			NLFID	Begin Logpoint/ Intersection Midpoint	End Logpoint *(Leave blank for Intersection)*	Length (mi) OR Intersection Radius Buffer (mi)	Cross Route NLFID(s)	Common Name
CR128; 2.17	Urban & Suburban Arterial Intersection	Unsignalized	CCLECR00128**C	2.17		0.05	TCLETR0017	Lewis Rd & White Oak Rd
SR125; 4.83	Urban & Suburban Arterial Intersection	Unsignalized	SCLESR00125**C	4.83		0.05	CCLECR0012	SR 125 and White Oak Rd

Traffic Volume Growth Rate Calculation For Benefit Cost Analysis

	Year	AADT	
Present ADT (PADT)			veh / day
Future ADT (FADT)			veh / day
Annual Linear Growth Rate		0.0050	

Select Other Non-Site Characteristic Based Countermeasures For Entire Project

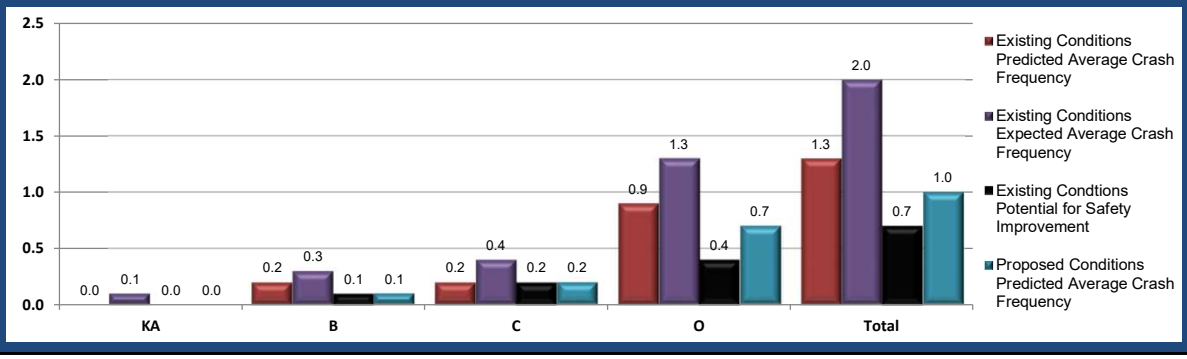
CMF Nbr	Countermeasure	CMF KA Value	CMF B Value	CMF C Value	CMF O Value	CMF Valid for the Following Site Types
CMF 1	Install right-in-right-out (RIRO) operations at stop-controlled intersections	0.55	0.55	0.55	0.55	7
CMF 2	LIRIRO	By Crash Type	By Crash Type	By Crash Type	By Crash Type	7
CMF 3	Increase triangle sight distance	0.53	0.53	0.53	0.89	2 / 5 / 7 / 10
CMF 4						
CMF 5						
CMF 6						
CMF 7						
CMF 8						
CMF 9						
CMF 10						

Project Safety Performance Report

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 3 - LIRIRO White Oak Realign Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.0381	0.1574	0.2112	0.8816	1.2883
$N_{expected}$ - Existing Conditions	0.0627	0.2731	0.3774	1.2704	1.9836
$N_{potential\ for\ improvement}$ - Existing Conditions	**0.0246**	**0.1157**	**0.1662**	**0.3888**	**0.6953**
$N_{expected}$ - Proposed Conditions	0.0270	0.1106	0.1544	0.7231	1.0151

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0072	0.0266	0.0331	0.1209	0.1878
SR125; 4.83	SR 125 and White Oak Rd	0.0309	0.1308	0.1781	0.7607	1.1005

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0083	0.0312	0.0391	0.1742	0.2528
SR125; 4.83	SR 125 and White Oak Rd	0.0544	0.2419	0.3383	1.0962	1.7308

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	**0.0011**	**0.0046**	**0.006**	**0.0533**	**0.065**
SR125; 4.83	SR 125 and White Oak Rd	**0.0235**	**0.1111**	**0.1602**	**0.3355**	**0.6303**

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0038	0.0141	0.0175	0.1076	0.143
SR125; 4.83	SR 125 and White Oak Rd	0.0232	0.0965	0.1369	0.6155	0.8721

Summary by Crash Type

Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0010	0.0010	0.0000	0.0010
Head On	0.0276	0.0473	**0.0197**	0.0264
Rear End	0.4856	0.7815	**0.2959**	0.4722
Backing	0.0492	0.0744	**0.0252**	0.0485
Sideswipe - Meeting	0.0019	0.0032	**0.0013**	0.0019
Sideswipe - Passing	0.1719	0.2665	**0.0946**	0.1685
Angle	0.2605	0.4242	**0.1637**	0.0242
Parked Vehicle	0.0217	0.0211	-0.0006	0.0199
Pedestrian	0.0146	0.0146	0.0000	0.0136
Animal	0.0000	0.0000	0.0000	0.0000
Train	0.0002	0.0001	0.0000	0.0001
Pedalcycles	0.0085	0.0085	0.0000	0.0079
Other Non-Vehicle	0.0000	0.0000	0.0000	0.0000
Fixed Object	0.0788	0.0782	-0.0006	0.0697
Other Object	0.0021	0.0020	-0.0001	0.0019
Overturning	0.0023	0.0024	**0.0001**	0.0019
Other Non-Collision	0.0048	0.0048	-0.0001	0.0043
Left Turn	0.0983	0.1611	**0.0627**	0.0952
Right Turn	0.0593	0.0928	**0.0335**	0.0580

Project Cost Estimate

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 3 - LIRIRO White Oak Realign Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Engineering Design %	10%
Contingency %	25%

Countermeasures	Construction Costs	Right of Way Costs	Engineering Design Costs	Contingency Amount	Total Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections			$0.00	$0.00	**$0.00**		
CMF 2 - LIRIRO	$0.00		$0.00	$0.00	**$0.00**		
CMF 3 - Increase triangle sight distance	$947,600.00		$94,760.00	$236,900.00	**$1,279,260.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
Totals	**$947,600.00**	**$0.00**	**$94,760.00**	**$236,900.00**	**$1,279,260.00**	**$0.00**	**$0.00**

Inflation %	

Final Costruction Cost:	**$1,279,260.00**

*Final construction cost should match the Project Cost Estimate

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 3 - LIRIRO White Oak Realign Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Comments:

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	$0.00			$0.00	$0.00	0.000	$0
CMF 2 - LIRIRO	20	$0.00			$0.00	$0.00	-0.228	$118,948
CMF 3 - Increase triangle sight distance	20	$1,279,260.00			$1,279,260.00	$1,279,260.00	-0.045	$48,006
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
Totals		**$1,279,260.00**	**$0.00**	**$0.00**	**$1,279,260.00**	**$1,279,260.00**	**-0.273**	**$166,954**

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 3 - LIRIRO White Oak Realign Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Benefit - Cost Calculator

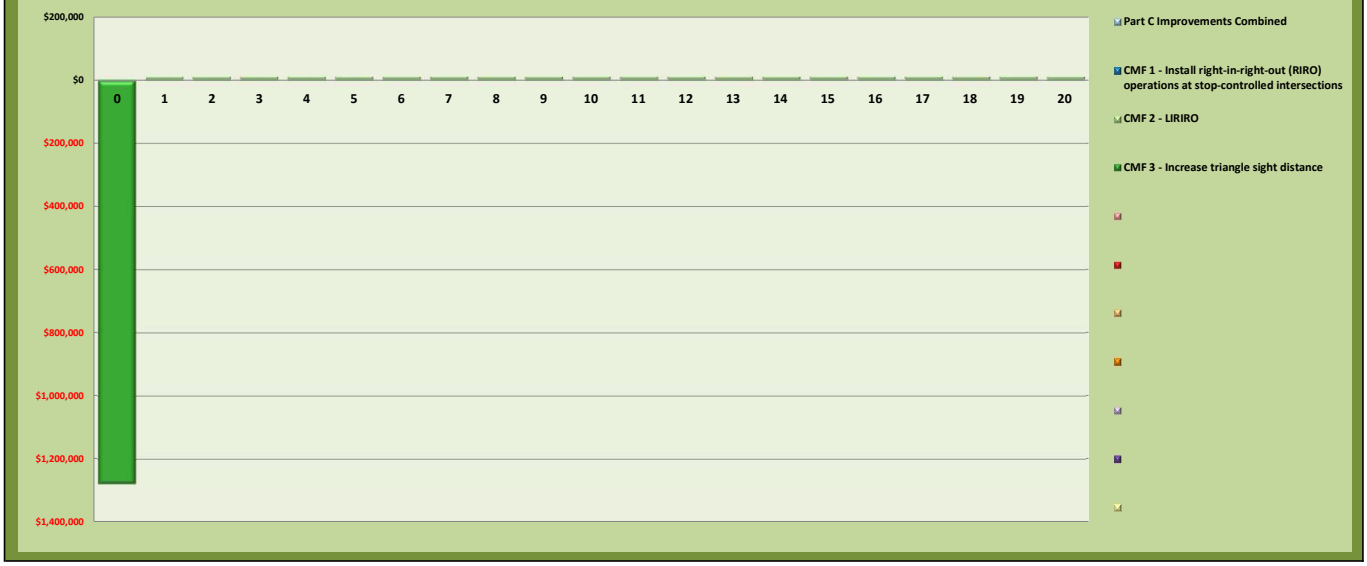
Net Present Value of Project	$1,279,260.00
Net Present Value of Safety Benefits	$166,953.52
Net Benefit	($1,112,306.48)
Benefit / Cost Ratio	0.13

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	-0.011
Number of Injury Crashes	-0.115
Number of Total Crashes	-0.273

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year



Safety Benefit - Cost Analysis

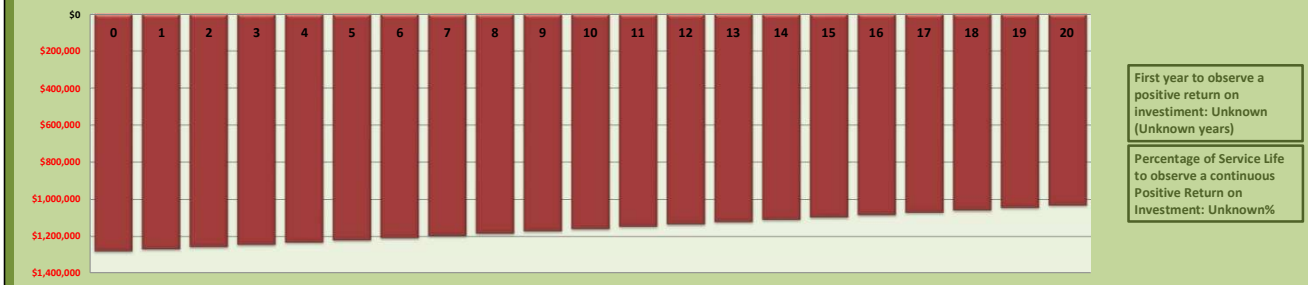
General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Alt. 3 - LIRIRO White Oak Realign Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



First year to observe a positive return on investiment: Unknown (Unknown years)

Percentage of Service Life to observe a continuous Positive Return on Investment: Unknown%

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	CR128
Agency or Company	EMH&T	Logpoint	2.17
Date Performed	11/20/24	Common Name	Lewis Rd & White Oak Rd
Intersection	CR128; 2.17	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	3,430	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	600	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				0	0
Number of major-road approaches with right-turn lanes				0	0
					--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes					0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				Local System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF COMB*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.0000	1.0000	1.0000	1.0000	0.9669	1.0000	0.9669

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	0.18	1.00	0.18	1.000	0.18	0.97	0.76	0.13
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	0.07	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.426	0.08	0.97	0.62	0.05
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	0.10	1.00	0.10	$(5)_{TOTAL}-(5)_{FI}$ 0.574	0.10	0.97	0.82	0.08

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.106	1.00	0.11	1.000	0.106	0.97	0.54	0.06
Fatal and Injury (FI)	--	--	--	--	0.033	1.00	0.03	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.352	0.037	0.97	0.47	0.02
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.060	1.00	0.06	$(5)_{TOTAL}-(5)_{FI}$ 0.648	0.069	0.97	0.57	0.04

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{pedi}	Calibration factor, C_i	Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.010	1.11	0.002
Fatal and injury (FI)	--	--	--	--	1.11	0.002

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{bikei}	Calibration factor, C_i	Predicted N_{bikei}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.0057	1.16	0.001
Fatal and injury (FI)	--	--	--	--	1.16	0.001

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	SR125
Agency or Company	EMH&T	Logpoint	4.83
Date Performed	11/20/24	Common Name	SR 125 and White Oak Rd
Intersection	SR125; 4.83	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	32,060	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	1,470	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				2	0
Number of major-road approaches with right-turn lanes				0	0
				[redacted]	--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes				[redacted]	0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				State System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF_{COMB}*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.4500	1.0000	1.0000	1.0000	0.9669	1.0000	0.4351

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	3.15	1.00	3.15	1.000	3.15	0.44	0.76	1.04
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	1.24	1.00	1.24	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.360	1.13	0.44	0.62	0.31
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	2.20	1.00	2.20	$(5)_{TOTAL}-(5)_{FI}$ 0.640	2.02	0.44	0.82	0.72

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bisv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.239	1.00	0.24	1.000	0.239	0.44	0.54	0.06
Fatal and Injury (FI)	--	--	--	--	0.074	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.072	0.44	0.47	0.01
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.173	1.00	0.17	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.167	0.44	0.57	0.04

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{pedi} from Table 12-16	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
Total	1.041	0.056	1.097	0.010	1.11	0.012
Fatal and injury (FI)	--	--	--	--	1.11	0.012

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	(1)*(2)*(3)
from Table 12-28	from Table 12-29	from Table 12-30	
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{bikei} from Table 12-17	Calibration factor, C_i	Predicted N_{bikei} (4)*(5)*(6)
Total	1.041	0.056	1.097	0.0057	1.16	0.007
Fatal and injury (FI)	--	--	--	--	1.16	0.007

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Countermeasure Modification (CMF) Factors

Information obtained from the Highway Safety Manual & the CMF Clearinghouse
Additional CMFs can be obtained by clicking the logo to the left.
Last Upds 3/8/2012

CMF ID	Study Title	Countermeasure Category	Rural Two-Lane Two-Way Segments	Rural Two-Lane Two-Way Intersections	Rural Multilane Undivided Segments	Rural Multilane Divided Segments	Rural Multilane Intersections	Urban & Suburban Arterial Segments	Urban & Suburban Arterial Intersections	Freeway Segments	Ramp Segments	Ramp Terminal Intersections	Countermeasure	Suggested Service Life	Intersection Related (Y/N)	Wet Pavement Related	Night Related	Publication Year	Star Quality Rating	CMF by Crash Type	All	KA	B	C	O	Night	Wet	Ran off road	Left Turn	Right Turn	Angle
40	Handbook of Road Safety Mea	Roadside	X		X	X		X					Change barrier along embankment to less rigid type	20	No			2004	3	Yes								0.59				
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of signalized intersection into single- or multi-lane roundabout	20	Yes			2012	4	No	0.74	0.29	0.29	0.29	0.74						
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of stop-controlled intersection into multi-lane roundabout	20	Yes			2012	4	No	0.95	0.95	0.95	0.95	0.95						
XX	Highway Safety Manual Part D	On-street parking						X					Convert free to regulated parking																0.94	0.94	0.94
227	NCHRP Report 572: Applying	Intersection traffic control		X								X	Convert intersection with minor-road stop control to modern roundabout (Rural)	20	Yes			2007	5	No	0.29	0.13	0.13	0.13	0.29						
229	NCHRP Report 572: Applying	Intersection traffic control							X			X	Convert intersection with minor-road stop control to modern roundabout (Urban)	20	Yes			2007	4	No	0.71	0.22	0.22	0.22	0.71						
315	Evaluation of the Conversion	Intersection traffic control		X			X		X			X	Convert minor-road stop control to all-way stop control	10	Yes			2010	5	Yes	0.319	0.23	0.23	0.23	0.319				0.23	0.23	0.23
721	Development of Crash Reduct	Alignment	X										Flatten crest vertical curve	30				2005	3	No	0.8	0.49	0.49	0.49	0.8						
XX	Highway Safety Manual Part D	On-street parking						X					Implement time-limited parking restrictions																0.89	0.89	0.89
XX	Highway Safety Manual Part D	Intersection geometry		X			X					X	Increase intersection median width by 3-ft increments - Rural																0.96	0.96	0.96
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, signalized																1.03	1.03	1.03
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, unsignalized																1.05	1.05	1.05
307	Handbook of Road Safety Mea	Intersection geometry		X			X		X			X	Increase triangle sight distance	10	Yes			2004	3	No		0.53	0.53	0.53	0.89						
194	Crash Reduction Factors for T	Roadway	X		X	X		X					Increased pavement friction	10		Yes		2008	5	No	0.43	0.43	0.43	0.43	0.43		0.43				
XX	Highway Safety Manual Part D	Railroad grade crossings											Install automatic gates at rail crossing that previously had flashing lights and sound signals																		
XX	Highway Safety Manual Part D	Railroad grade crossings	X		X	X		X					Install automatic gates at rail crossing that previously had passive traffic control																		
1965	Safety Impact of Cable Barrier	Roadway delineation				X							Install cable median barrier (low or high tension)	20	No			2009	5	Yes									1.83	0.86	1.83
3341	NCHRP Report 641: Guidance	Roadway	X		X								Install centerline rumble strips (Rural)	15	No			2009	5	Yes	0.89	0.78	0.78	0.78	0.89				0.78	0.78	0.78
3341	NCHRP Report 641: Guidance	Roadway						X					Install centerline rumble strips (Urban)	15	No			2009	5	Yes	1.02	0.91	0.91	0.91	1.02				0.91	0.91	0.91
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable crash ahead warning signs	5	No			2004	4	No	0.56	0.56	0.56	0.56	0.56						
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable speed warning signs for individual drivers	5	No			2004	4	No	0.54	0.54	0.54	0.54	0.54						
XX	Highway Safety Manual Part D	Signs	X		X	X		X					Install changeable speed warning signs for individual drivers																0.54	0.54	0.54
2436	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install chevron signs on horizontal curves	5	No		Yes	2009	4	Yes	0.96	0.84	0.84	0.84	0.96				0.84	0.84	0.84
XX	Highway Safety Manual Part D	Signs											Install combination horizontal alignment/advisory speed signs																0.87	0.87	0.87
XX	Highway Safety Manual Part D	Roadway delineation				X							Install continuous milled-in shoulder rumble strips																0.83	0.83	0.83
55	Handbook of Road Safety Mea	Roadside	X		X	X		X					Install crash cushions at fixed roadside features	20	No			2004	4	Yes	0.54	0.31	0.31	0.31	0.54				0.31	0.31	0.31
XX	Highway Safety Manual Part D	Roadside	X		X	X							Install crash cushions at fixed roadside features																		
3388	NCHRP Report 641: Guidance	Roadway	X		X								Install edgeline rumble strips - Undivided	15	No			2009	4	Yes								0.61			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (curves) - Rural	5	No			2009	3	No	0.74	0.74	0.74	0.74	0.74						
104	Driver Performance and Safet	Roadway delineation						X					Install edgelines (curves) - Urban	5	No			2009	3	Yes								0.89			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (tangents and curves)	5	No			2009	3	Yes	0.92	0.92	0.92	0.92	0.92			0.89	0.92	0.92	0.92
XX	Highway Safety Manual Part D	Roadway delineation	X		X								Install edgelines, centerlines, and PMDs (Where none previously existed)																0.55	0.55	0.55
482	Handbook of Road Safety Mea	Railroad grade crossings	X		X	X		X					Install flashing lights and sound signals	5				2004	5	Yes	0.5	0.5	0.5	0.5	0.5				0.5	0.5	0.5
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X		X					Install flashing lights and sound signals at a rail crossing																		
2431	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install new fluorescent curve signs or upgrade existing curve signs to fluorescent sheeting	5	No		Yes	2009	4	Yes	0.82	0.75	0.75	0.75	0.82				0.75	0.75	0.75
XX	Highway Safety Manual Part D	Roadway delineation	X										Install PMDs																1.04	1.04	1.04
2911	Safety Effectiveness of the HA	Pedestrians and bicyclists							X			X	Installation of a High intensity Activated crossWalK (HAWK) pedestrian-activated beacon at an intersection	10				2010	4	Yes											
493	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Installing gates at crossings with signs	20				2005	5	No	0.07	0.07	0.07	0.07	0.07						
583	Safety Evaluation of Installing	Roadway	X										Introduce TWLTL (two-way left turn lanes) on rural two lane roads	20	No			2008	5	Yes	0.64	0.65	0.65	0.65	0.64				0.65	0.65	0.65
276	Right-Angle Crash Occurance	Intersection geometry							X			X	Introducing zero or positive offset left-turn lane on crossing roadway (Signalized Only)	20	Yes			2007	3	Yes									0.74		0.74
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Modify change plus clearance interval to ITE 1985 Proposed Recommended Practice (4-leg signalized)							Yes									0.91	0.91	1.06
38	Handbook of Road Safety Mea	Roadside	X		X	X		X					New guardrail along embankment	20	No			2004	5	Yes	0.93	0.56	0.53	0.53	0.93				0.56	0.56	0.56
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Permit right-turn-on-red at signalized intersections							Yes									1.07	1.6	1.07
87	Handbook of Road Safety Mea	Roadway delineation											Place centerline markings	5	No			2004	3	No		0.99	0.99	0.99	1.01						
XX	Highway Safety Manual Part D	Roadway delineation	X										Place centerline markings (Where none previously existed)																0.99	0.99	0.99
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X							Place edgeline and centerline markings (Where none previously existed)																0.76	0.76	0.76
XX	Highway Safety Manual Part D	Roadway delineation	X										Place standard edgeline markings (Where none previously existed)																0.97	0.97	0.97
XX	Highway Safety Manual Part D	Roadway delineation	X										Place wide edgeline markings (Where none previously existed)																1.05	1.05	1.05
446	Safety Evaluation of Flashing	Intersection traffic control		X			X		X			X	Provide flashing beacons at stop controlled intersections	10	Yes			2008	3	Yes	0.95	0.9	0.9	0.9	0.95				0.9	0.9	0.87
73	Handbook of Road Safety Mea	Roadway signs and traffic control	X			X		X					Provide static combination horizontal alignment / advisory speed signs	5	No			2004	3	No		0.87	0.87	0.87	0.71						
2333	Evaluation of the Safety Effec	Intersection traffic control		X			X		X			X	Replace 8-inch red signal heads with 12-inch	10	Yes			2008	4	Yes	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.58
XX	Highway Safety Manual Part D	Intersection geometry		X			X		X			X	Replace direct left-turn with right-turn/U-turn							Yes									0.64	0.64	0.64
388	Accident Modification Factors	Intersection traffic control							X			X	Replace Night-Time Flash with Steady Operation	5	Yes		Yes	2008	3	No	0.65	0.65	0.65	0.65	0.65	0.65					
2975	Safety Evaluation of Multilane	Roadway	X		X	X		X					Resurface pavement	20	No			2009	4	Yes	1.01	0.95	0.95	0.95	1.01				0.95	0.95	0.95
487	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Upgrade signs to flashing lights	5				2005	5	No	0.23	0.23	0.23	0.23	0.23						
494	Collision Frequency Analysis	Railroad grade crossings						X					Upgrade signs to flashing lights	20				2005	5	No	0.23	0.23	0.23	0.23	0.23						
9821	Safety Effects of Turning Mov	Access Management							X				Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	Yes	No	No	2018	3	No	0.55	0.55	0.55	0.55	0.55						
9999	NA	Access Management							X				LIRIRO	20	yes	no	no	2024		Yes											**0.01**

Project Information

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Signal & Culdesac	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		
Perform Benefit Cost Analysis?	Yes		

Do the proposed improvements fundamentally change the conditions of the base safety performance function (SPF), Or is crash data unavailable for the analysis condition, Or is only predicted (and not expected) analysis needed for the existing or proposed condition?	**Yes**

(Examples: unsignalized to signalized, undivided to divided, increase or decrease in the number of lanes, change the number of approaches to an intersection, significant realignment of the roadway)

If Yes, are you analyzing the existing or proposed conditions?	**Proposed**

Project Elements Description Table

Project Element ID (Must be Unique)	Site Type	Intersection Control Type	Location Information					
			NLFID	Begin Logpoint/ Intersection Midpoint	End Logpoint *(Leave blank for Intersection)*	Length (mi) OR Intersection Radius Buffer (mi)	Cross Route NLFID(s)	Common Name
SR125; 4.83	Urban & Suburban Arterial Intersection	Signalized	SCLESR00125**C	4.83		0.05	CCLECR0012	SR 125 and White Oak Rd

Traffic Volume Growth Rate Calculation For Benefit Cost Analysis

	Year	AADT	
Present ADT (PADT)			veh / day
Future ADT (FADT)			veh / day
Annual Linear Growth Rate		0.0050	

Select Other Non-Site Characteristic Based Countermeasures For Entire Project

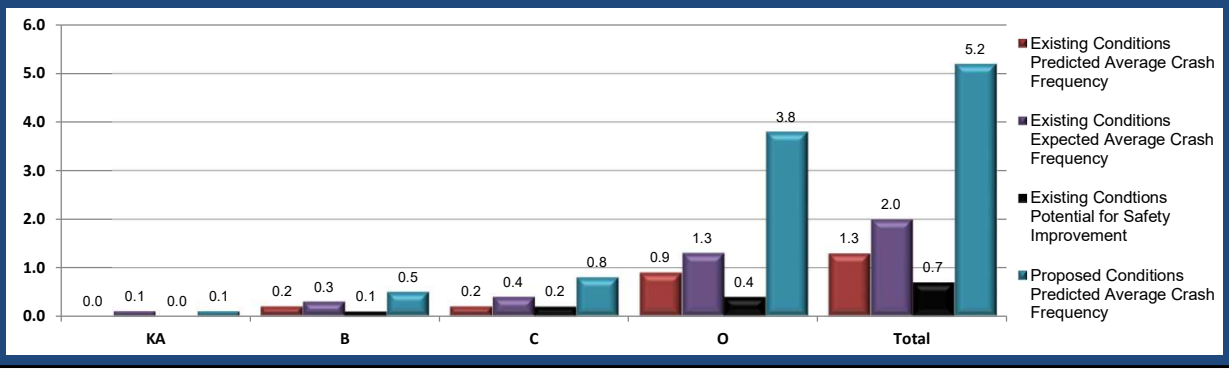
CMF Nbr	Countermeasure	CMF KA Value	CMF B Value	CMF C Value	CMF O Value	CMF Valid for the Following Site Types
CMF 1						
CMF 2						
CMF 3						
CMF 4						
CMF 5						
CMF 6						
CMF 7						
CMF 8						
CMF 9						
CMF 10						

Project Safety Performance Report

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Signal & Culdesac	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.0379	0.1565	0.2100	0.8770	1.2814
$N_{expected}$ - Existing Conditions	0.0625	0.2721	0.3761	1.2637	1.9744
$N_{potential\ for\ improvement}$ - Existing Conditions	**0.0246**	**0.1156**	**0.1661**	**0.3867**	**0.6930**
$N_{expected}$ - Proposed Conditions	0.0967	0.5189	0.7814	3.8412	5.2382

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
SR125; 4.83	Lewis Rd & White Oak Rd	0.007	0.0257	0.0319	0.1163	0.1809

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
SR125; 4.83	Lewis Rd & White Oak Rd	0.0081	0.0302	0.0378	0.1675	0.2436

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
SR125; 4.83	Lewis Rd & White Oak Rd	**0.0011**	**0.0045**	**0.0059**	**0.0512**	**0.0627**

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
SR125; 4.83	SR 125 and White Oak Rd	0.0967	0.5189	0.7814	3.8412	5.2382

Summary by Crash Type

Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0026	0.0025	-0.0001	0.0026
Head On	0.0809	0.0758	-0.0051	0.0809
Rear End	2.2454	1.8085	-0.4369	2.2454
Backing	0.1542	0.1090	-0.0453	0.1542
Sideswipe - Meeting	0.0035	0.0032	-0.0003	0.0035
Sideswipe - Passing	0.8255	0.6111	-0.2144	0.8255
Angle	0.9083	0.7744	-0.1339	0.9083
Parked Vehicle	0.0385	0.0364	-0.0020	0.0385
Pedestrian	0.0045	0.0045	0.0000	0.0045
Animal	0.0000	0.0000	0.0000	0.0000
Train	0.0002	0.0002	0.0000	0.0002
Pedalcycles	0.1618	0.1618	0.0000	0.1618
Other Non-Vehicle	0.0000	0.0000	0.0000	0.0000
Fixed Object	0.1037	0.0991	-0.0045	0.1037
Other Object	0.0029	0.0028	-0.0002	0.0029
Overturning	0.0021	0.0021	-0.0001	0.0021
Other Non-Collision	0.0074	0.0070	-0.0003	0.0074
Left Turn	0.4409	0.3745	-0.0665	0.4409
Right Turn	0.2555	0.1924	-0.0631	0.2555

Project Cost Estimate

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Signal & Culdesac	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Engineering Design %	
Contingency %	

Countermeasures	Construction Costs	Right of Way Costs	Engineering Design Costs	Contingency Amount	Total Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value
Install Signal at Sr125 & Whiteoak					$0.00		
Culdesac Lewis					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
					$0.00		
Totals	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Inflation %	

Final Costruction Cost:	**$0.00**

*Final construction cost should match the Project Cost Estimate

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Signal & Culdesac	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Comments:

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
Install Signal at Sr125 & Whiteoak	20	$0.00			$0.00	$0.00	3.957	($1,189,951)
Culdesac Lewis	20	$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
Totals		**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**3.957**	**($1,189,951)**

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Signal & Culdesac	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Benefit - Cost Calculator

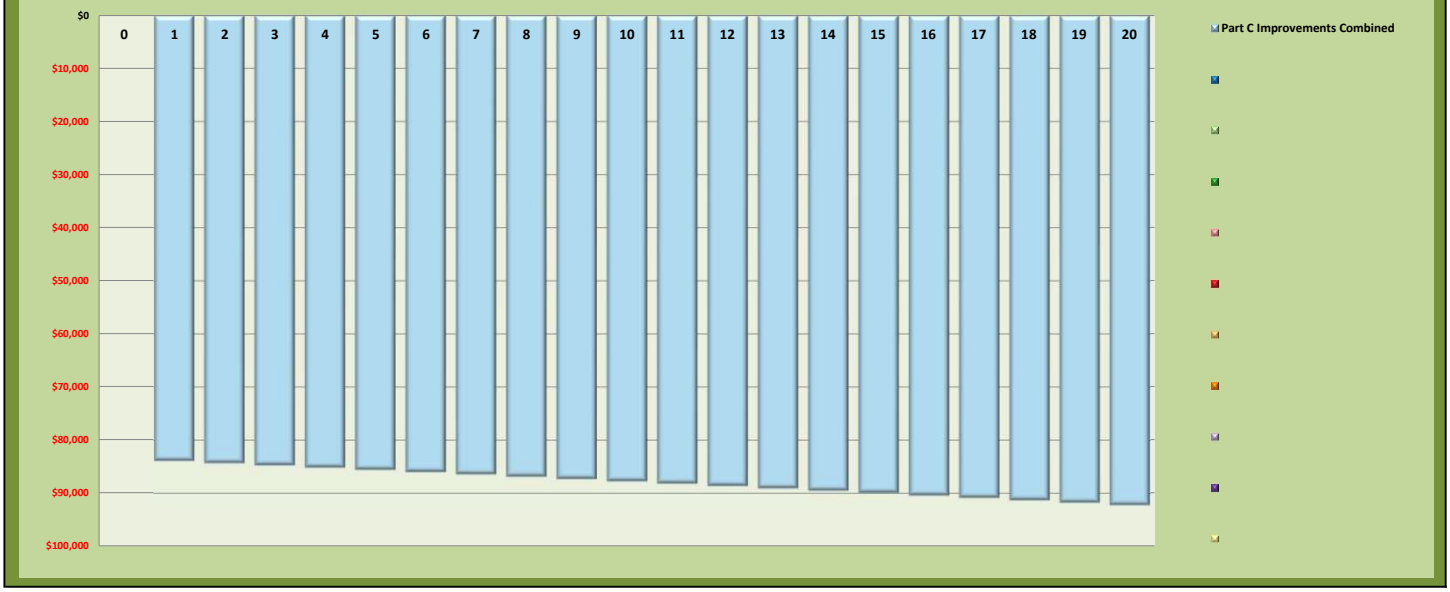
Net Present Value of Project	$0.00
Net Present Value of Safety Benefits	($1,189,950.86)
Net Benefit	($1,189,950.86)
Benefit / Cost Ratio	Unable to Calculate

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	0.059
Number of Injury Crashes	0.993
Number of Total Crashes	3.957

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year

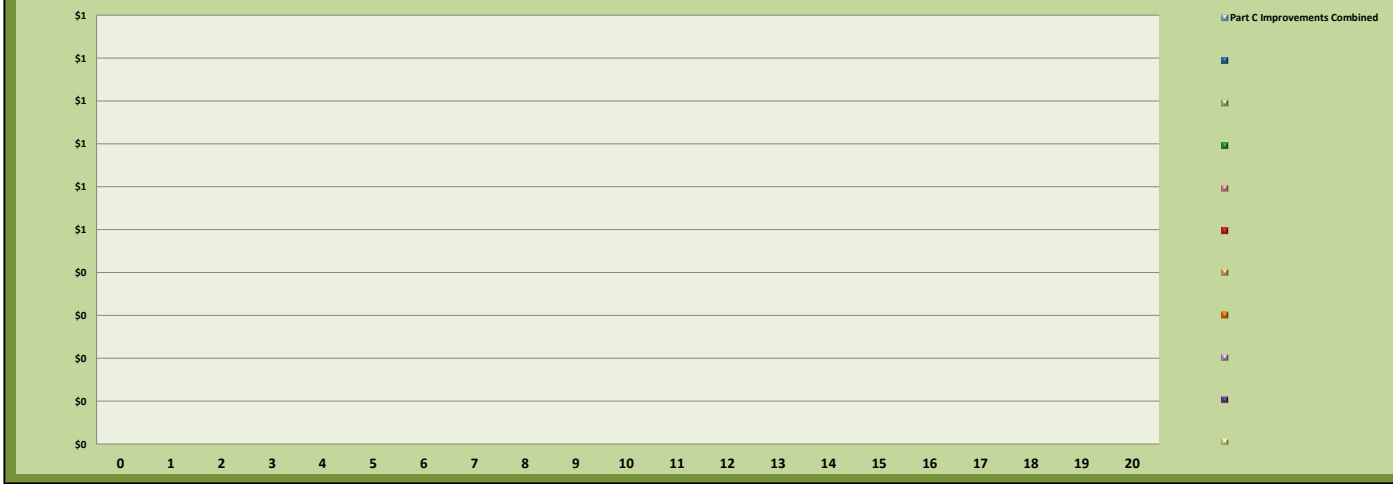


Safety Benefit - Cost Analysis

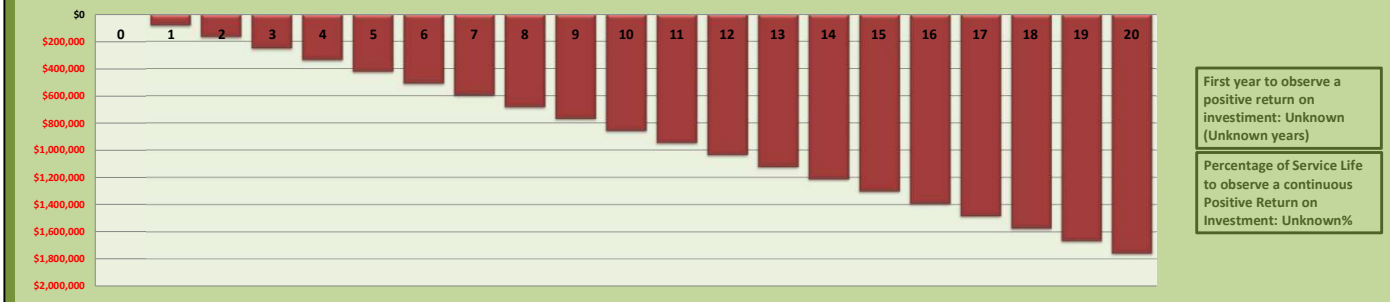
General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Signal & Culdesac	Contact Phone	
Reference Number	20221149	Date Performed	10/7/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



First year to observe a positive return on investiment: Unknown (Unknown years)

Percentage of Service Life to observe a continuous Positive Return on Investment: Unknown%

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	SR125
Agency or Company	EMH&T	Logpoint	4.83
Date Performed	10/07/24	Common Name	SR 125 and White Oak Rd
Intersection	SR125; 4.83	Analysis Year	2024
Signalized/Unsignalized	Signalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3SG	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	58,100	(veh/day)	32,060	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	16,400	(veh/day)	1,470	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				[redacted]	0
Number of major-road approaches with right-turn lanes					0
					--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes				3	0
Number of approaches with right-turn lanes				2	0
Number of approaches with left-turn signal phasing				3	--
Type of left-turn signal phasing for Leg #1				Protected	Permissive
Type of left-turn signal phasing for Leg #2				Protected	--
Type of left-turn signal phasing for Leg #3				Protected	--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited				0	0
Intersection red light cameras (present/not present)				Not Present	Not Present
Sum of all pedestrian crossing volumes (PedVol)				20	--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})				5	--
Number of bus stops within 300 m (1,000 ft) of the intersection				0	0
Schools within 300 m (1,000 ft) of the intersection (present/not present)				Not Present	Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection				1 to 8	0
Locality:				State System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	CMF_{COMB}
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.8000	0.8306	0.9200	1.0000	1.0000	1.0000	0.6113

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-12.13	1.11	0.26	--	0.33	3.61	1.00	3.61	1.000	3.61	0.61	2.25	4.96
Fatal and Injury (FI)	-11.58	1.02	0.17	--	0.30	1.27	1.00	1.27	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.370	1.33	0.61	1.46	1.19
Property Damage Only (PDO)	-13.24	1.14	0.30	--	0.36	2.17	1.00	2.17	$(5)_{TOTAL}-(5)_{FI}$ 0.630	2.27	0.61	2.68	3.72

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bisv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-9.02	0.42	0.40	0.36	0.175	1.00	0.17	1.000	0.175	0.61	1.49	0.16
Fatal and Injury (FI)	-9.75	0.27	0.51	0.24	0.040	1.00	0.04	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.227	0.040	0.61	1.66	0.04
Property Damage Only (PDO)	-9.08	0.45	0.33	0.53	0.135	1.00	0.13	$(5)_{TOTAL}-(5)_{FI}$ 0.773	0.135	0.61	1.42	0.12

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{pedi} from Table 12-16	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
Total	--	--	--	--	--	--
Fatal and injury (FI)	--	--	--	--	--	--

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
1.00	1.00	1.12	1.12

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	-6.60	0.05	0.24	0.41	0.09	0.52	0.006	1.12	0.69	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	0.69	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{bikei} from Table 12-17	Calibration factor, C_i	Predicted N_{bikei} (4)*(5)*(6)
Total	4.961	0.159	5.120	0.0079	4.00	0.162
Fatal and injury (FI)	--	--	--	--	4.00	0.162

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Project Information

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Short-term alternative- LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		
Perform Benefit Cost Analysis?	Yes		

Do the proposed improvements fundamentally change the conditions of the base safety performance function (SPF), Or is crash data unavailable for the analysis condition, Or is only predicted (and not expected) analysis needed for the existing or proposed condition?	**Yes**

(Examples: unsignalized to signalized, undivided to divided, increase or decrease in the number of lanes, change the number of approaches to an intersection, significant realignment of the roadway)

If Yes, are you analyzing the existing or proposed conditions?	**Proposed**

Project Elements Description Table

Project Element ID (Must be Unique)	Site Type	Intersection Control Type	Location Information					
			NLFID	Begin Logpoint/ Intersection Midpoint	End Logpoint *(Leave blank for Intersection)*	Length (mi) OR Intersection Radius Buffer (mi)	Cross Route NLFID(s)	Common Name
CR128; 2.17	Urban & Suburban Arterial Intersection	Unsignalized	CCLECR00128**C	2.17		0.05	TCLETR0017	Lewis Rd & White Oak Rd
SR125; 4.83	Urban & Suburban Arterial Intersection	Unsignalized	SCLESR00125**C	4.83		0.05	CCLECR0012	SR 125 and White Oak Rd

Traffic Volume Growth Rate Calculation For Benefit Cost Analysis

	Year	AADT	
Present ADT (PADT)			veh / day
Future ADT (FADT)			veh / day
Annual Linear Growth Rate		0.0050	

Select Other Non-Site Characteristic Based Countermeasures For Entire Project

CMF Nbr	Countermeasure	CMF KA Value	CMF B Value	CMF C Value	CMF O Value	CMF Valid for the Following Site Types
CMF 1	Install right-in-right-out (RIRO) operations at stop-controlled intersections	0.55	0.55	0.55	0.55	7
CMF 2	LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	By Crash Type	By Crash Type	By Crash Type	By Crash Type	7
CMF 3						
CMF 4						
CMF 5						
CMF 6						
CMF 7						
CMF 8						
CMF 9						
CMF 10						

Project Safety Performance Report

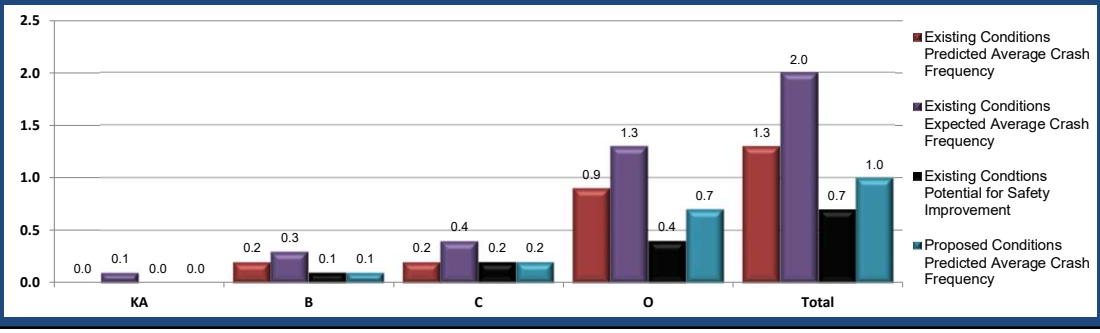
ECAT Economic Crash Analysis Tool

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Short-term alternative-LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Project and Site Conditions Information

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.0381	0.1574	0.2112	0.8816	1.2883
$N_{expected}$ - Existing Conditions	0.0627	0.2731	0.3774	1.2704	1.9836
$N_{potential\ for\ improvement}$ - Existing Conditions	0.0246	0.1157	0.1662	0.3888	0.6953
$N_{expected}$ - Proposed Conditions	0.0272	0.1111	0.1551	0.6820	0.9754

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0072	0.0266	0.0331	0.1209	0.1878
SR125; 4.83	SR 125 and White Oak Rd	0.0309	0.1308	0.1781	0.7607	1.1005

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0083	0.0312	0.0391	0.1742	0.2528
SR125; 4.83	SR 125 and White Oak Rd	0.0544	0.2419	0.3383	1.0962	1.7308

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.0011	0.0046	0.006	0.0533	0.065
SR125; 4.83	SR 125 and White Oak Rd	0.0235	0.1111	0.1602	0.3355	0.6303

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
CR128; 2.17	Lewis Rd & White Oak Rd	0.004	0.0146	0.0182	0.0665	0.1033
SR125; 4.83	SR 125 and White Oak Rd	0.0232	0.0965	0.1369	0.6155	0.8721

Summary by Crash Type

Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0010	0.0010	0.0000	0.0008
Head On	0.0276	0.0473	0.0197	0.0261
Rear End	0.4856	0.7815	0.2959	0.4610
Backing	0.0492	0.0744	0.0252	0.0469
Sideswipe - Meeting	0.0019	0.0032	0.0013	0.0018
Sideswipe - Passing	0.1719	0.2665	0.0946	0.1635
Angle	0.2605	0.4242	0.1637	0.0187
Parked Vehicle	0.0217	0.0211	-0.0006	0.0169
Pedestrian	0.0146	0.0146	0.0000	0.0136
Animal	0.0000	0.0000	0.0000	0.0000
Train	0.0002	0.0001	0.0000	0.0001
Pedalcycles	0.0085	0.0085	0.0000	0.0079
Other Non-Vehicle	0.0000	0.0000	0.0000	0.0000
Fixed Object	0.0788	0.0782	-0.0006	0.0612
Other Object	0.0021	0.0020	-0.0001	0.0016
Overturning	0.0023	0.0024	0.0001	0.0018
Other Non-Collision	0.0048	0.0048	-0.0001	0.0038
Left Turn	0.0983	0.1611	0.0627	0.0932
Right Turn	0.0593	0.0928	0.0335	0.0564

Project Cost Estimate

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Short-term alternative- LIRIRO White Oak	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Engineering Design %	10%
Contingency %	30%

Countermeasures	Construction Costs	Right of Way Costs	Engineering Design Costs	Contingency Amount	Total Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections	$59,600.00		$5,960.00	$17,880.00	**$83,440.00**		
CMF 2 - LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	$0.00		$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
			$0.00	$0.00	**$0.00**		
Totals	**$59,600.00**	**$0.00**	**$5,960.00**	**$17,880.00**	**$83,440.00**	**$0.00**	**$0.00**

Inflation %	

Final Costruction Cost:	**$83,440.00**

*Final construction cost should match the Project Cost Estimate

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Short-term alternative- LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Comments:

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
		$0.00			$0.00	$0.00		
CMF 1 - Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	$83,440.00			$83,440.00	$83,440.00	-0.085	$45,575
CMF 2 - LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	20	$0.00			$0.00	$0.00	-0.228	$118,948
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
Totals		**$83,440.00**	**$0.00**	**$0.00**	**$83,440.00**	**$83,440.00**	**-0.313**	**$164,522**

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Short-term alternative- LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Benefit - Cost Calculator

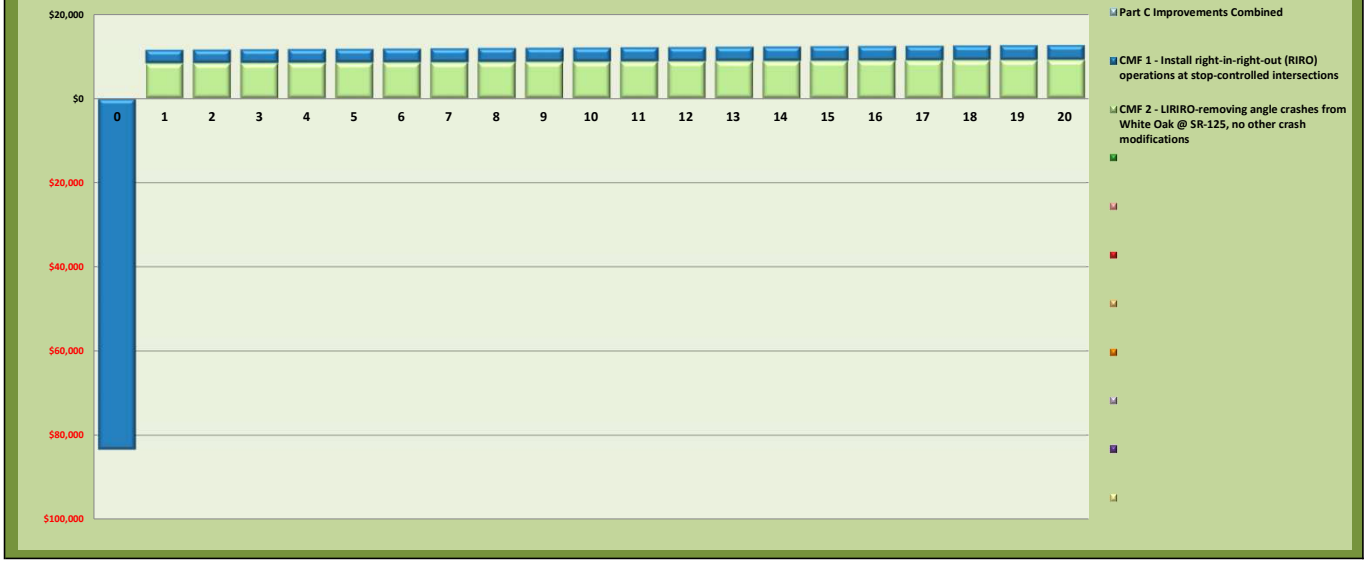
Net Present Value of Project	$83,440.00
Net Present Value of Safety Benefits	$164,522.37
Net Benefit	$81,082.37
Benefit / Cost Ratio	1.97

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	-0.011
Number of Injury Crashes	-0.113
Number of Total Crashes	-0.313

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year

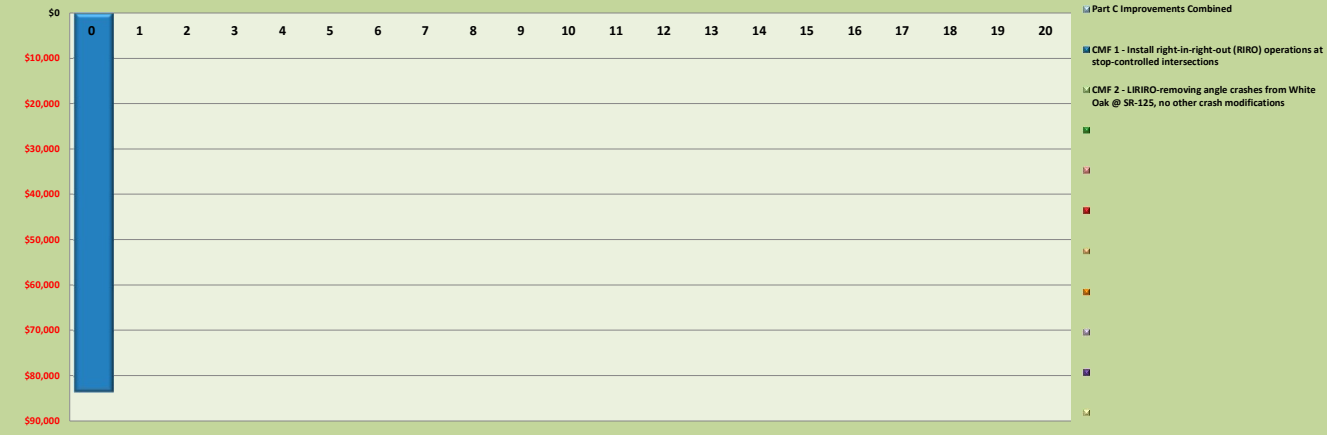


Safety Benefit - Cost Analysis

General Information

Project Name	CLE-125 at White Oak/Lewis Rd	Contact Email	canderson@emht.com
Project Description	Build Conditions; Short-term alternative- LIRIRO White Oak RIRO Lewis	Contact Phone	
Reference Number	20221149	Date Performed	11/20/2024
Analyst	C.Anderson	Analysis Year	2024
Agency/Company	EMH&T		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



First year to observe a positive return on investiment: 2032 (8 years)

Percentage of Service Life to observe a continuous Positive Return on Investment: 65.00%

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	CR128
Agency or Company	EMH&T	Logpoint	2.17
Date Performed	11/20/24	Common Name	Lewis Rd & White Oak Rd
Intersection	CR128; 2.17	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	3,430	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	600	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				0	0
Number of major-road approaches with right-turn lanes				0	0
					--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes					0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				Local System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF COMB*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
1.0000	1.0000	1.0000	1.0000	0.9669	1.0000	0.9669

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	0.18	1.00	0.18	1.000	0.18	0.97	0.76	0.13
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	0.07	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.426	0.08	0.97	0.62	0.05
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	0.10	1.00	0.10	$(5)_{TOTAL}-(5)_{FI}$ 0.574	0.10	0.97	0.82	0.08

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.106	1.00	0.11	1.000	0.106	0.97	0.54	0.06
Fatal and Injury (FI)	--	--	--	--	0.033	1.00	0.03	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.352	0.037	0.97	0.47	0.02
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.060	1.00	0.06	$(5)_{TOTAL}-(5)_{FI}$ 0.648	0.069	0.97	0.57	0.04

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{pedi}	Calibration factor, C_i	Predicted N_{pedi}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-16		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.010	1.11	0.002
Fatal and injury (FI)	--	--	--	--	1.11	0.002

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	
from Table 12-28	from Table 12-29	from Table 12-30	(1)*(2)*(3)
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv}	Predicted N_{bisv}	Predicted N_{bi}	f_{bikei}	Calibration factor, C_i	Predicted N_{bikei}
	(9) from Worksheet 2C	(9) from Worksheet 2E	(2) + (3)	from Table 12-17		(4)*(5)*(6)
Total	0.134	0.055	0.189	0.0057	1.16	0.001
Fatal and injury (FI)	--	--	--	--	1.16	0.001

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Proposed Conditions: General Information and Data for Urban And Suburban Arterial Intersection

General Information		Location Information	
Analyst	C.Anderson	Route	SR125
Agency or Company	EMH&T	Logpoint	4.83
Date Performed	11/20/24	Common Name	SR 125 and White Oak Rd
Intersection	SR125; 4.83	Analysis Year	2024
Signalized/Unsignalized	Unsignalized		

Input Data				Proposed Conditions	HSM Base Conditions
Intersection type (3ST, 3SG, 4ST, 4SG, 3STT, 3aST, 4aST, 3ST (HS), 3SG (HS), 4ST (HS), 4SG (HS), 5SG)				3ST	--
AADT major (veh/day) (total entering on major approaches)	$AADT_{MAX}$ =	45,700	(veh/day)	32,060	--
AADT minor (veh/day) (total entering on minor approaches)	$AADT_{MAX}$ =	9,300	(veh/day)	1,470	--
	$AADT_{MAX}$ =	N/A	(veh/day)		--
Intersection lighting (present/not present)				Present	Not Present
Calibration factor, C_i				Varies, See Below	1.00
Data for unsignalized intersections only:					
Number of major-road approaches with left-turn lanes				2	0
Number of major-road approaches with right-turn lanes				0	0
				[redacted]	--
					--
Data for signalized intersections only:					
Number of approaches with left-turn lanes				[redacted]	0
Number of approaches with right-turn lanes					0
Number of approaches with left-turn signal phasing					--
Type of left-turn signal phasing for Leg #1					Permissive
Type of left-turn signal phasing for Leg #2					--
Type of left-turn signal phasing for Leg #3					--
Not Applicable					--
Number of approaches with right-turn-on-red prohibited					0
Intersection red light cameras (present/not present)					Not Present
Sum of all pedestrian crossing volumes (PedVol)					--
Maximum number of lanes crossed by a pedestrian (n_{lanesx})					--
Number of bus stops within 300 m (1,000 ft) of the intersection					0
Schools within 300 m (1,000 ft) of the intersection (present/not present)					Not Present
Number of alcohol sales establishments within 300 m (1,000 ft) of the intersection					0
Locality:				State System	

Proposed Conditions: Crash Modification Factors (CMFs) for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CMF for Left-Turn Lanes	CMF for Left-Turn Signal Phasing	CMF for Right-Turn Lanes	CMF for Right Turn on Red	CMF for Lighting	CMF for Red Light Cameras	Combined CMF
CMF 1i	*CMF 2i*	*CMF 3i*	*CMF 4i*	*CMF 5i*	*CMF 6i*	*CMF_{COMB}*
from Table 12-24	from Table 12-25	from Table 12-26	from Equation 12-35	from Equation 12-36	from Equation 12-37	(1)*(2)*(3)*(4)*(5)*(6)
0.4500	1.0000	1.0000	1.0000	0.9669	1.0000	0.4351

Proposed Conditions: Multiple-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)				(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients				Over-dispersion Parameter, k	Initial N_{bimv} from Equation 12-21	Curve CMF (3STT only)	Initial N_{bimv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bimv}
	a	b	c	d									
Total	-13.36	1.11	0.41	--	0.80	3.15	1.00	3.15	1.000	3.15	0.44	0.76	1.04
Fatal and Injury (FI)	-14.01	1.16	0.30	--	0.69	1.24	1.00	1.24	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.360	1.13	0.44	0.62	0.31
Property Damage Only (PDO)	-15.38	1.20	0.51	--	0.77	2.20	1.00	2.20	$(5)_{TOTAL}-(5)_{FI}$ 0.640	2.02	0.44	0.82	0.72

Proposed Conditions: Single-Vehicle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)			(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(8)*(9)*(10)
Crash Severity Level	SPF Coefficients			Over-dispersion Parameter, k	Initial N_{bisv} from Eqn. 12-24; (FI) from Eqn. 12-24 or 12-27	Curve CMF (3STT only)	Initial N_{bisv} Adj for Curve	Proportion of Total Crashes	Adjusted N_{bimv} $(4)_{TOTAL}$*(5)	Combined CMFs (7) from Worksheet 2B	Calibration Factor, C_i	Predicted N_{bisv}
	a	b	c									
Total	-6.81	0.16	0.51	1.14	0.239	1.00	0.24	1.000	0.239	0.44	0.54	0.06
Fatal and Injury (FI)	--	--	--	--	0.074	1.00	0.07	$(4)_{FI}/((4)_{FI}+(4)_{PDO})$ 0.300	0.072	0.44	0.47	0.01
Property Damage Only (PDO)	-8.36	0.25	0.55	1.29	0.173	1.00	0.17	$(5)_{TOTAL}-(5)_{FI}$ 0.700	0.167	0.44	0.57	0.04

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Intersections (3ST, 3ST (HS), 3aST, 3STT, 3SG (HS), 4ST, 4ST (HS), 4aST, 4SG (HS), and 5SG)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{pedi} from Table 12-16	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
Total	1.041	0.056	1.097	0.010	1.11	0.012
Fatal and injury (FI)	--	--	--	--	1.11	0.012

Proposed Conditions: CMFs for Vehicle-Pedestrian Crash Summary for Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)	(3)	(4)
CMF for Bus Stops	CMF for Schools	CMF for Alcohol Sales Establishments	Combined CMF
CMF_{1p}	CMF_{2p}	CMF_{3p}	(1)*(2)*(3)
from Table 12-28	from Table 12-29	from Table 12-30	
--	--	--	--

Proposed Conditions: Vehicle-Pedestrian Crash Summary at Urban And Suburban Arterial Signalized Intersections (3SG and 4SG)

(1)	(2)					(3)	(4)	(5)	(6)	(7)
Crash Severity Level	SPF Coefficients from Table 12-14					Overdispersion Parameter, k	$N_{pedbase}$ from Equation 12-29	Combined CMF (4) from Worksheet 2H	Calibration factor, C_i	Predicted N_{pedi} (4)*(5)*(6)
	a	b	c	d	e					
Total	--	--	--	--	--	--	--	--	--	0.00
Fatal and Injury (FI)	--	--	--	--	--	--	--	--	--	0.00

Proposed Conditions: Vehicle-Bicycle Crash Summary for Urban And Suburban Arterial Intersection

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Crash Severity Level	Predicted N_{bimv} (9) from Worksheet 2C	Predicted N_{bisv} (9) from Worksheet 2E	Predicted N_{bi} (2) + (3)	f_{bikei} from Table 12-17	Calibration factor, C_i	Predicted N_{bikei} (4)*(5)*(6)
Total	1.041	0.056	1.097	0.0057	1.16	0.007
Fatal and injury (FI)	--	--	--	--	1.16	0.007

Federal law 23 USC § 409 prohibits the discovery or admission into evidence of "reports, surveys, schedules, lists, or data" compiled or collected for the purpose of highway safety improvement projects that might qualify for federal safety improvement funding.

Countermeasure Modification (CMF) Factors

Information obtained from the Highway Safety Manual & the CMF Clearinghouse
Additional CMFs can be obtained by clicking the logo to the left.
Last Upds 3/8/2012

CMF ID	Study Title	Countermeasure Category	Rural Two-Lane Two-Way Segments	Rural Two-Lane Two-Way Intersections	Rural Multilane Undivided Segments	Rural Multilane Divided Segments	Rural Multilane Intersections	Urban & Suburban Arterial Segments	Urban & Suburban Arterial Intersections	Freeway Segments	Ramp Segments	Ramp Terminal Intersections	Countermeasure	Suggested Service Life	Intersection Related (Y/N)	Wet Pavement Related	Night Related	Publication Year	Star Quality Rating	CMF by Crash Type	All	KA	B	C	O	Night	Wet	Ran off road	Left Turn	Right Turn	Angle
40	Handbook of Road Safety Mea	Roadside	X		X	X		X					Change barrier along embankment to less rigid type	20	No			2004	3	Yes								0.59				
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of signalized intersection into single- or multi-lane roundabout	20	Yes			2012	4	No	0.74	0.29	0.29	0.29	0.74						
286	Safety Effectiveness of Conve	Intersection traffic control							X			X	Conversion of stop-controlled intersection into multi-lane roundabout	20	Yes			2012	4	No	0.95	0.95	0.95	0.95	0.95						
XX	Highway Safety Manual Part D	On-street parking						X					Convert free to regulated parking																0.94	0.94	0.94
227	NCHRP Report 572: Applying	Intersection traffic control		X								X	Convert intersection with minor-road stop control to modern roundabout (Rural)	20	Yes			2007	5	No	0.29	0.13	0.13	0.13	0.29						
229	NCHRP Report 572: Applying	Intersection traffic control							X			X	Convert intersection with minor-road stop control to modern roundabout (Urban)	20	Yes			2007	4	No	0.71	0.22	0.22	0.22	0.71						
315	Evaluation of the Conversion	Intersection traffic control		X			X		X			X	Convert minor-road stop control to all-way stop control	10	Yes			2010	5	Yes	0.319	0.23	0.23	0.23	0.319				0.23	0.23	0.23
721	Development of Crash Reduct	Alignment	X										Flatten crest vertical curve	30				2005	3	No	0.8	0.49	0.49	0.49	0.8						
XX	Highway Safety Manual Part D	On-street parking						X					Implement time-limited parking restrictions																0.89	0.89	0.89
XX	Highway Safety Manual Part D	Intersection geometry		X			X					X	Increase intersection median width by 3-ft increments - Rural																0.96	0.96	0.96
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, signalized																1.03	1.03	1.03
XX	Highway Safety Manual Part D	Intersection geometry							X			X	Increase intersection median width by 3-ft increments - Urban, unsignalized																1.05	1.05	1.05
307	Handbook of Road Safety Mea	Intersection geometry		X			X		X			X	Increase triangle sight distance	10	Yes			2004	3	No		0.53	0.53	0.53	0.89						
194	Crash Reduction Factors for T	Roadway	X		X	X		X					Increased pavement friction	10		Yes		2008	5	No	0.43	0.43	0.43	0.43	0.43		0.43				
XX	Highway Safety Manual Part D	Railroad grade crossings											Install automatic gates at rail crossing that previously had flashing lights and sound signals																		
XX	Highway Safety Manual Part D	Railroad grade crossings	X		X	X		X					Install automatic gates at rail crossing that previously had passive traffic control																		
1965	Safety Impact of Cable Barrier	Roadway delineation				X							Install cable median barrier (low or high tension)	20	No			2009	5	Yes									1.83	0.86	1.83
3341	NCHRP Report 641: Guidance	Roadway	X		X								Install centerline rumble strips (Rural)	15	No			2009	5	Yes	0.89	0.78	0.78	0.78	0.89				0.78	0.78	0.78
3341	NCHRP Report 641: Guidance	Roadway						X					Install centerline rumble strips (Urban)	15	No			2009	5	Yes	1.02	0.91	0.91	0.91	1.02				0.91	0.91	0.91
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable crash ahead warning signs	5	No			2004	4	No	0.56	0.56	0.56	0.56	0.56						
78	Handbook of Road Safety Mea	Advanced technology and ITS	X		X	X		X					Install changeable speed warning signs for individual drivers	5	No			2004	4	No	0.54	0.54	0.54	0.54	0.54						
XX	Highway Safety Manual Part D	Signs	X		X	X		X					Install changeable speed warning signs for individual drivers																0.54	0.54	0.54
2436	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install chevron signs on horizontal curves	5	No		Yes	2009	4	Yes	0.96	0.84	0.84	0.84	0.96				0.84	0.84	0.84
XX	Highway Safety Manual Part D	Signs											Install combination horizontal alignment/advisory speed signs																0.87	0.87	0.87
XX	Highway Safety Manual Part D	Roadway delineation				X							Install continuous milled-in shoulder rumble strips																0.83	0.83	0.83
55	Handbook of Road Safety Mea	Roadside	X		X	X		X					Install crash cushions at fixed roadside features	20	No			2004	4	Yes	0.54	0.31	0.31	0.31	0.54				0.31	0.31	0.31
XX	Highway Safety Manual Part D	Roadside	X		X	X							Install crash cushions at fixed roadside features																		
3388	NCHRP Report 641: Guidance	Roadway	X		X								Install edgeline rumble strips - Undivided	15	No			2009	4	Yes								0.61			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (curves) - Rural	5	No			2009	3	No	0.74	0.74	0.74	0.74	0.74						
104	Driver Performance and Safet	Roadway delineation						X					Install edgelines (curves) - Urban	5	No			2009	3	Yes								0.89			
104	Driver Performance and Safet	Roadway delineation	X										Install edgelines (tangents and curves)	5	No			2009	3	Yes	0.92	0.92	0.92	0.92	0.92			0.89	0.92	0.92	0.92
XX	Highway Safety Manual Part D	Roadway delineation	X		X								Install edgelines, centerlines, and PMDs (Where none previously existed)																0.55	0.55	0.55
482	Handbook of Road Safety Mea	Railroad grade crossings	X		X	X		X					Install flashing lights and sound signals	5				2004	5	Yes	0.5	0.5	0.5	0.5	0.5				0.5	0.5	0.5
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X		X					Install flashing lights and sound signals at a rail crossing																		
2431	Safety Evaluation of Improved	Roadway signs and traffic control	X			X							Install new fluorescent curve signs or upgrade existing curve signs to fluorescent sheeting	5	No		Yes	2009	4	Yes	0.82	0.75	0.75	0.75	0.82				0.75	0.75	0.75
XX	Highway Safety Manual Part D	Roadway delineation	X										Install PMDs																1.04	1.04	1.04
2911	Safety Effectiveness of the HA	Pedestrians and bicyclists							X			X	Installation of a High intensity Activated crossWalK (HAWK) pedestrian-activated beacon at an intersection	10				2010	4	Yes											
493	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Installing gates at crossings with signs	20				2005	5	No	0.07	0.07	0.07	0.07	0.07						
583	Safety Evaluation of Installing	Roadway	X										Introduce TWLTL (two-way left turn lanes) on rural two lane roads	20	No			2008	5	Yes	0.64	0.65	0.65	0.65	0.64				0.65	0.65	0.65
276	Right-Angle Crash Occurance	Intersection geometry							X			X	Introducing zero or positive offset left-turn lane on crossing roadway (Signalized Only)	20	Yes			2007	3	Yes									0.74		0.74
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Modify change plus clearance interval to ITE 1985 Proposed Recommended Practice (4-leg signalized)							Yes									0.91	0.91	1.06
38	Handbook of Road Safety Mea	Roadside	X		X	X		X					New guardrail along embankment	20	No			2004	5	Yes	0.93	0.56	0.53	0.53	0.93				0.56	0.56	0.56
XX	Highway Safety Manual Part D	Intersection traffic control		X			X		X			X	Permit right-turn-on-red at signalized intersections							Yes									1.07	1.6	1.07
87	Handbook of Road Safety Mea	Roadway delineation											Place centerline markings	5	No			2004	3	No		0.99	0.99	0.99	1.01						
XX	Highway Safety Manual Part D	Roadway delineation	X										Place centerline markings (Where none previously existed)																0.99	0.99	0.99
XX	Highway Safety Manual Part D	Roadway delineation	X		X	X							Place edgeline and centerline markings (Where none previously existed)																0.76	0.76	0.76
XX	Highway Safety Manual Part D	Roadway delineation	X										Place standard edgeline markings (Where none previously existed)																0.97	0.97	0.97
XX	Highway Safety Manual Part D	Roadway delineation	X										Place wide edgeline markings (Where none previously existed)																1.05	1.05	1.05
446	Safety Evaluation of Flashing	Intersection traffic control		X			X		X			X	Provide flashing beacons at stop controlled intersections	10	Yes			2008	3	Yes	0.95	0.9	0.9	0.9	0.95				0.9	0.9	0.87
73	Handbook of Road Safety Mea	Roadway signs and traffic control	X			X		X					Provide static combination horizontal alignment / advisory speed signs	5	No			2004	3	No		0.87	0.87	0.87	0.71						
2333	Evaluation of the Safety Effec	Intersection traffic control		X			X		X			X	Replace 8-inch red signal heads with 12-inch	10	Yes			2008	4	Yes	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.58
XX	Highway Safety Manual Part D	Intersection geometry		X			X		X			X	Replace direct left-turn with right-turn/U-turn							Yes									0.64	0.64	0.64
388	Accident Modification Factors	Intersection traffic control							X			X	Replace Night-Time Flash with Steady Operation	5	Yes		Yes	2008	3	No	0.65	0.65	0.65	0.65	0.65	0.65					
2975	Safety Evaluation of Multilane	Roadway	X		X	X		X					Resurface pavement	20	No			2009	4	Yes	1.01	0.95	0.95	0.95	1.01				0.95	0.95	0.95
487	Collision Frequency Analysis	Railroad grade crossings	X		X	X		X					Upgrade signs to flashing lights	5				2005	5	No	0.23	0.23	0.23	0.23	0.23						
494	Collision Frequency Analysis	Railroad grade crossings						X					Upgrade signs to flashing lights	20				2005	5	No	0.23	0.23	0.23	0.23	0.23						
9821	Safety Effects of Turning Mov	Access Management							X				Install right-in-right-out (RIRO) operations at stop-controlled intersections	20	Yes	No	No	2018	3	No	0.55	0.55	0.55	0.55	0.55						
9999	N/A	Access Management							X				LIRIRO-removing angle crashes from White Oak @ SR-125, no other crash modifications	20	yes	no	no	2024	0	Yes											0.01

CMF / CRF Details

CMF ID: 9821

CMF Name: Install right-in-right-out (RIRO) operations at stop-controlled interse

Description:

Prior Condition: No Prior Condition(s)

Category: Access management

Study ID: *Safety Effects of Turning Movement Restrictions at Stop-Controlled Intersections*, Le et al. 2018

Star Quality Rating	
Star Quality Rating:	3 Stars

Crash Modification Factor (CMF)	
Value:	0.55
Adjusted Standard Error:	
Unadjusted Standard Error:	0.09

Crash Reduction Factor	
Value:	45
Adjusted Standard Error:	
Unadjusted Standard Error:	9

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Minimum Number of Lanes:	4
Maximum Number of Lanes:	6
Number of Lanes Direction:	
Number of Lanes Comment:	4 and 6 Lanes
Road Division Type:	Divided by Median
Minimum Speed Limit:	
Maximum Speed Limit:	
Speed Unit:	
Speed Limit Comment:	
Area Type:	Urban
Traffic Volume:	
Average Traffic Volume:	
Time of Day:	All
If countermeasure is intersection-based.	
Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	3-leg
Traffic Control:	Stop-controlled
Major Road Traffic Volume:	Minimum of 13433 to Maximum of 75000 Annual Average Daily Traffic (AADT)
Minor Road Traffic Volume:	Minimum of 51 to Maximum of 2600 Annual Average Daily Traffic (AADT)

Average Major Road Volume:	38724 Annual Average Daily Traffic (AADT)
Average Minor Road Volume:	519 Annual Average Daily Traffic (AADT)

Development Details

Date Range of Data Used:	
Municipality:	
State:	CA
Country:	USA
Type of Methodology Used:	Regression cross-section
Sample Size (crashes):	483 crashes
Sample Size (sites):	138 sites

Other Details

Included in HSM:	No
Date Added to Clearinghouse:	Oct 27, 2018
Comments:	This CMF compares urban, three-legged, stop-controlled intersections with RIRO operation to full movement. This CMF looks at Total crashes. Total crashes are defined as all crashes within 100 ft of intersection (all types and severities combined)

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

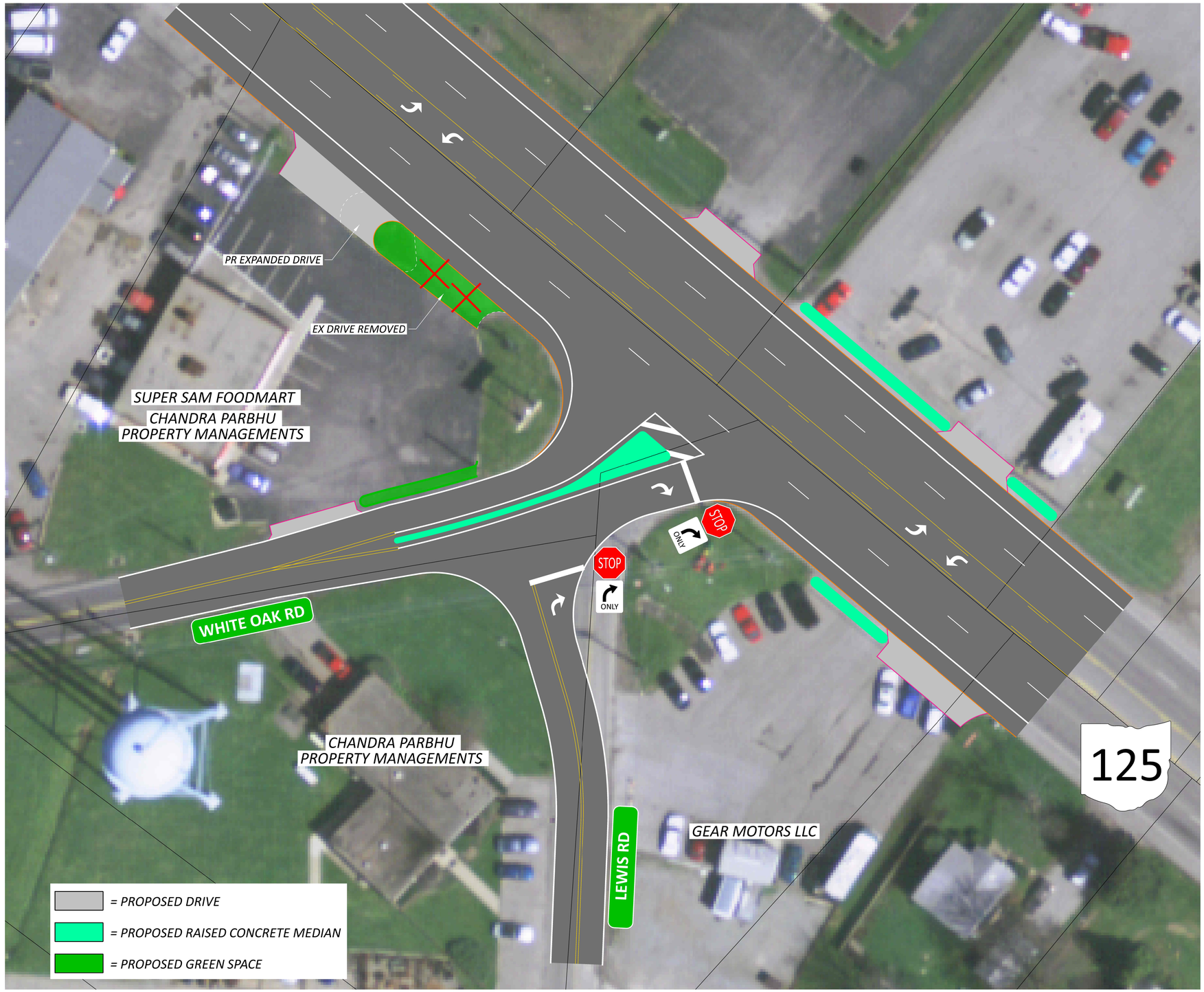
The information contained in the Crash Modification Factors (CMF) Clearinghouse is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in the CMF Clearinghouse. The information contained in the CMF Clearinghouse does not constitute a standard, specification, or regulation, nor is it a substitute for sound engineering judgment.

EMH&T

Engineers, Surveyors, Planners, Scientists

APPENDIX G

Build Alternative Exhibits



HORIZONTAL SCALE IN FEET
0 10 20 40

SR 125 & WHTIE OAK/LEWIS ROAD INTERSECTION
ALTERNATE 1

DESIGN AGENCY
EMH&T

DESIGNER
XXX

REVIEWER
XXX MM-DD-YY

PROJECT ID
121906

SHEET P.0 | TOTAL 0

CLE-125

Alternative 1

Preliminary Opinion of Construction Cost

July 7, 2025

Summary of Project Costs	Alternative 1
Roadway Subtotal	$ 27,600
Sedimentation & Erosion Control Subtotal	$ 9,100
Drainage Subtotal	$ 21,900
Pavement Subtotal	$ 219,400
Maintenance of Traffic Subtotal	$ 6,000
Water Works Subtotal	$ 1,000
Traffic Control Subtotal	$ 3,000
Miscellaneous Subtotal	$ 15,000
2025 Preliminary Opinion of Construction Cost Total	$303,000
Contingency (25%)	$76,000
Inflation from 2025 to 2030 (21.3%)	$81,000
2025 Preliminary Opinion of Construction Cost including Contingency	**$460,000**

Notes & Clarifications

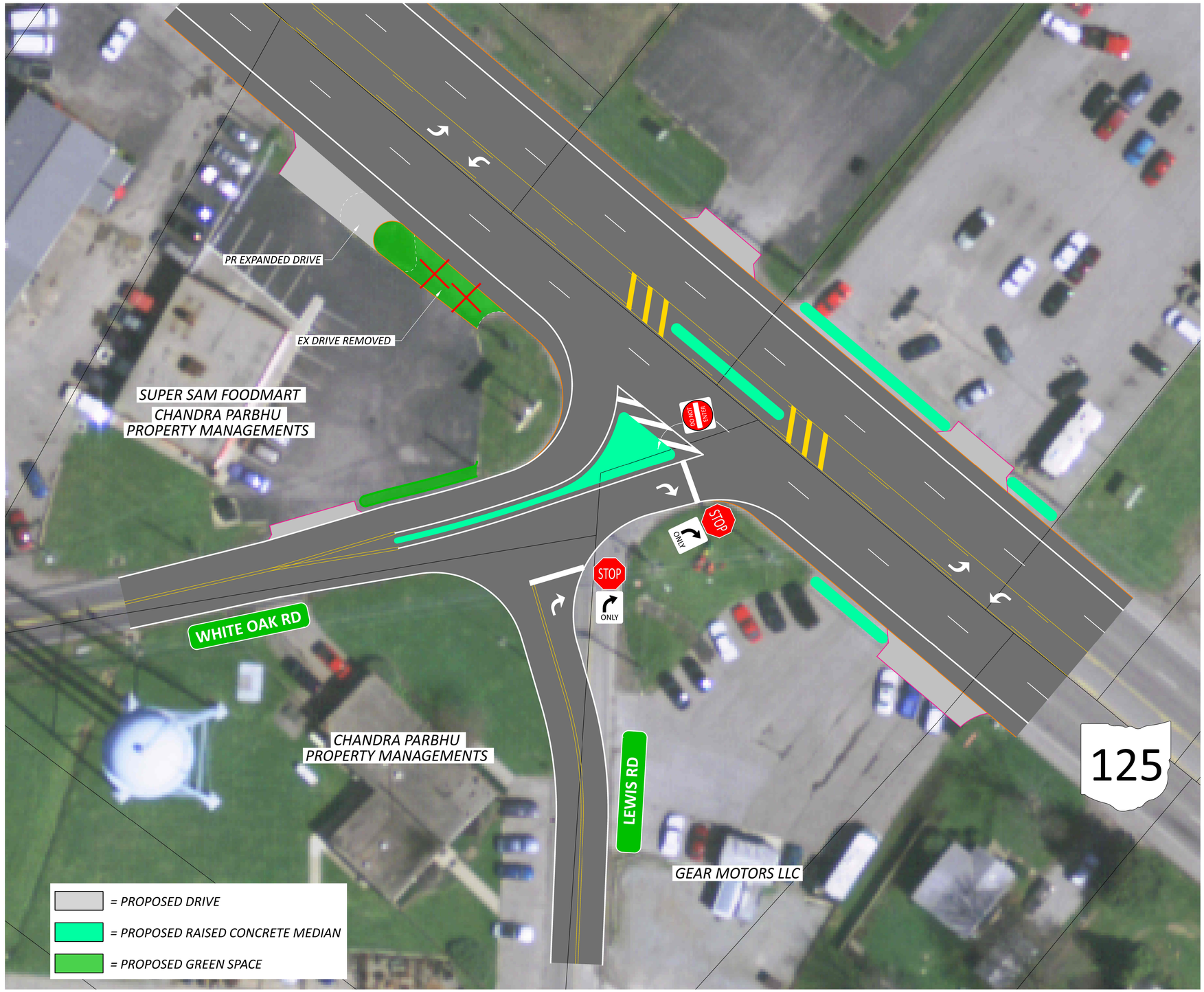
Estimate does not include Right-of-Way, Reimbursement to Private Utilities, Design, and Construction Engineering.
Inflation is estimated based upon ODOT's Business Plan Inflation Calculator

Pricing reflects probable construction costs obtainable in the project locality on the date of this opinion. Unit rates have been obtained from historical records and/or discussion with contractors. The unit rates reflect current bid costs in the area. This is an opinion of fair market value for the construction of this project. It is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all subcontractors and general contractors. Experience indicates that a fewer number of bidders may result in higher bids, conversely an increased number of bidders may result in more competitive bids.

Since EMH&T has no control over the cost of labor, material, equipment, or over the contractor's method of determining prices, or over the competitive bidding or market conditions at the time of bid, the cost opinon is based on industry practice, professional experience and qualifications, and represents EMH&T's best judgment as a consultant familiar with the construction industry. EMH&T does not guarantee that the proposals, bids, or the construction cost will not vary from opinions of probable cost prepared by them.

ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	ENGINEER'S ESTIMATE	
				UNIT COST	TOTAL EXTENDED PRICE
			Roadway		
201	1	L. Sum	Clearing and Grubbing	$ 5,000.00	$ *5,000.00*
202	299	Sq Yd	Pavement Removed	$ 20.00	$ *5,971.00*
202	1	Each	Catch Basin Removed	$ 600.00	$ *600.00*
202	100	Ft	Pipe Removed	$ 27.00	$ *2,700.00*
203	200	Cu Yd	Excavation	$ 35.00	$ *7,000.00*
203	100	Cu Yd	Embankment	$ 30.00	$ *3,000.00*
204	400	Sq Yd	Subgrade Compaction	$ 4.50	$ *1,800.00*
204	1	Hour	Proof Rolling	$ 166.85	$ *167.00*
SPEC	1	L. Sum	Roadway Miscellaneous	$ 1,350.00	$ *1,350.00*
			Roadway Subtotal		***$ 27,600.00***
			Sediment & Erosion Control		
207	2	Each	Construction Seeding and Mulching	$ 2.00	$ *4.00*
659	120	Cu Yd	Topsoil	$ 45.00	$ *5,400.00*
659	1,000	Sq Yd	Seeding and Mulching	$ 2.85	$ *2,850.00*
659	48	Sq Yd	Repair Seeding and Mulching	$ 2.14	$ *103.00*
659	0.10	Ton	Commercial Fertilizer	$ 1,000.00	$ *100.00*
659	0.20	Acre	Lime	$ 307.00	$ *62.00*
659	10	M Gal	Water	$ 5.00	$ *50.00*
SPEC	1	L. Sum	Sediment & Erosion Control Miscellaneous	$ 450.00	$ *450.00*
			Sediment & Erosion Control Subtotal		***$ 9,100.00***
			Drainage		
611	1	Each	Catch Basin, 2-2B	$ 2,700.00	$ *2,700.00*
605	200	Ft	4" Pipe Underdrain	$ 20.00	$ *4,000.00*
611	20	Ft	6" Conduit, Type F for Underdrain Outlet	$ 36.00	$ *720.00*
611	100	Ft	12" Conduit, Type B	$ 119.00	$ *11,900.00*
611	*5*	Ft	15" Conduit, Type B	$ 143.00	$ *715.00*
611	*5*	Ft	18" Conduit, Type B	$ 161.00	$ *805.00*
SPEC	1	L. Sum	Drainage Miscellaneous	$ 1,050.00	$ *1,050.00*
			Drainage Subtotal		***$ 21,900.00***

ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	ENGINEER'S ESTIMATE	
				UNIT COST	TOTAL EXTENDED PRICE
			Pavement		
301	60	Cu Yd	Asphalt Concrete Base (T=6")	$ 350.00	$ *21,000.00*
304	60	Cu Yd	Aggregate Base (T=6")	$ 105.00	$ *6,300.00*
407	40	Gal	Non-Tracking Tack Coat (0.055 Gal/SY) (For Full-Depth)	$ 4.00	$ *160.00*
	70	Gal	Non-Tracking Tack Coat (0.09 Gal/SY) (For Resurfacing)	$ 5.00	$ *350.00*
441	20	Cu Yd	Asphalt Concrete Intermediate Course, Type 1, (448) (T=1.75")	$ 400.00	$ *8,000.00*
441	330	Cu Yd	Asphalt Concrete Surface Course, Type 1, (448), PG64-22 (T=1.5")	$ 450.00	$ *148,500.00*
452	80	Sq Yd	Non-Reinforced Concrete Pavement (T=8") (R-12)(Commercial Driveway	$ 134.00	$ *10,720*
609	217	Ft	Curb, Type 6	$ 29.00	$ *6,293.00*
609	111	Sq Yd	4" Concrete Traffic Island	$ 68.00	$ *7,532.00*
SPEC	1	L. Sum	Pavement Miscellaneous	$ 10,450.00	$ *10,450.00*
			Pavement Subtotal		***$ 219,400.00***
			Maintenance of Traffic		
SPEC	1	L. Sum	Maintenance of Traffic Miscellaneous	$ 6,000.00	$ *6,000.00*
			Maintenance of Traffic Subtotal		***$ 6,000.00***
			Water Works		
	1	Each	Fire Hydrant Relocated	$ 1,000.00	$ *1,000.00*
			Water Works Subtotal		***$ 1,000.00***
			Traffic Control		
SPEC	1	L. Sum	Traffic Control Miscellaneous	$ 3,000.00	$ *3,000.00*
			Traffic Control Subtotal		***$ 3,000.00***
			Miscellaneous		
619	2	Month	Field Office, Type A	$ 1,000.00	$ *2,000.00*
623	1	L.Sum	Construction Layout Stakes, As Per Plan	$ 3,000.00	$ *3,000.00*
624	1	L.Sum	Mobilization, As Per Plan	$ 10,000.00	$ *10,000.00*
			Miscellaneous Subtotal		***$ 15,000.00***
* Denotes Contingency Quantity to be Used as Directed.					



HORIZONTAL SCALE IN FEET
0 10 20 40

SR 125 & WHITE OAK/LEWIS ROAD INTERSECTION
ALTERNATE 2

DESIGN AGENCY
EMH&T

DESIGNER
XXX

REVIEWER
XXX MM-DD-YY

PROJECT ID
121906

SHEET P.0 | TOTAL 0

CLE-125

Alternative 2

Preliminary Opinion of Construction Cost

July 7, 2025

Summary of Project Costs		Alternative 2
Roadway Subtotal	$	27,600
Sedimentation & Erosion Control Subtotal	$	9,100
Drainage Subtotal	$	21,900
Pavement Subtotal	$	231,900
Maintenance of Traffic Subtotal	$	6,000
Water Works Subtotal	$	1,000
Traffic Control Subtotal	$	3,000
Miscellaneous Subtotal	$	16,000
2025 Preliminary Opinion of Construction Cost Total		$316,500
Contingency (25%)		$80,000
Inflation from 2025 to 2030 (21.3%)		$85,000
2025 Preliminary Opinion of Construction Cost including Contingency		**$481,500**

Notes & Clarifications

Estimate does not include Right-of-Way, Reimbursement to Private Utilities, Design, and Construction Engineering.
Inflation is estimated based upon ODOT's Business Plan Inflation Calculator

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ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	ENGINEER'S ESTIMATE	
				UNIT COST	TOTAL EXTENDED PRICE
			Roadway		
201	1	L. Sum	Clearing and Grubbing	$ 5,000.00	$ *5,000.00*
202	299	Sq Yd	Pavement Removed	$ 20.00	$ *5,971.00*
202	1	Each	Catch Basin Removed	$ 600.00	$ *600.00*
202	100	Ft	Pipe Removed	$ 27.00	$ *2,700.00*
203	200	Cu Yd	Excavation	$ 35.00	$ *7,000.00*
203	100	Cu Yd	Embankment	$ 30.00	$ *3,000.00*
204	400	Sq Yd	Subgrade Compaction	$ 4.50	$ *1,800.00*
204	1	Hour	Proof Rolling	$ 166.85	$ *167.00*
SPEC	1	L. Sum	Roadway Miscellaneous	$ 1,350.00	$ *1,350.00*
			Roadway Subtotal		***$ 27,600.00***
			Sediment & Erosion Control		
207	2	Each	Construction Seeding and Mulching	$ 2.00	$ *4.00*
659	120	Cu Yd	Topsoil	$ 45.00	$ *5,400.00*
659	1,000	Sq Yd	Seeding and Mulching	$ 2.85	$ *2,850.00*
659	48	Sq Yd	Repair Seeding and Mulching	$ 2.14	$ *103.00*
659	0.10	Ton	Commercial Fertilizer	$ 1,000.00	$ *100.00*
659	0.20	Acre	Lime	$ 307.00	$ *62.00*
659	10	M Gal	Water	$ 5.00	$ *50.00*
SPEC	1	L. Sum	Sediment & Erosion Control Miscellaneous	$ 450.00	$ *450.00*
			Sediment & Erosion Control Subtotal		***$ 9,100.00***
			Drainage		
611	1	Each	Catch Basin, 2-2B	$ 2,700.00	$ *2,700.00*
605	200	Ft	4" Pipe Underdrain	$ 20.00	$ *4,000.00*
611	20	Ft	6" Conduit, Type F for Underdrain Outlet	$ 36.00	$ *720.00*
611	100	Ft	12" Conduit, Type B	$ 119.00	$ *11,900.00*
611	*5*	Ft	15" Conduit, Type B	$ 143.00	$ *715.00*
611	*5*	Ft	18" Conduit, Type B	$ 161.00	$ *805.00*
SPEC	1	L. Sum	Drainage Miscellaneous	$ 1,050.00	$ *1,050.00*
			Drainage Subtotal		***$ 21,900.00***

ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	ENGINEER'S ESTIMATE	
				UNIT COST	TOTAL EXTENDED PRICE
			Pavement		
301	60	Cu Yd	Asphalt Concrete Base (T=5")	$ 350.00	$ *21,000.00*
304	60	Cu Yd	Aggregate Base (T=6")	$ 105.00	$ *6,300.00*
407	40	Gal	Non-Tracking Tack Coat (0.055 Gal/SY) (For Full-Depth)	$ 4.00	$ *160.00*
	100	Gal	Non-Tracking Tack Coat (0.09 Gal/SY) (For Resurfacing)	$ 5.00	$ *500.00*
441	20	Cu Yd	Asphalt Concrete Intermediate Course, Type 1, (448) (T=1.75")	$ 400.00	$ *8,000.00*
441	350	Cu Yd	Asphalt Concrete Surface Course, Type 1, (448), PG64-22 (T=1.25")	$ 450.00	$ *157,500.00*
452	80	Sq Yd	Non-Reinforced Concrete Pavement (T=8")	$ 134.00	$ *10,720*
609	217	Ft	Curb, Type 6	$ 29.00	$ *6,293.00*
609	152	Sq Yd	4" Concrete Traffic Island	$ 68.00	$ *10,349.00*
SPEC	1	L. Sum	Pavement Miscellaneous	$ 11,050.00	$ *11,050.00*
			Pavement Subtotal		***$ 231,900.00***
			Maintenance of Traffic		
SPEC	1	L. Sum	Maintenance of Traffic Miscellaneous	$ 6,000.00	$ *6,000.00*
			Maintenance of Traffic Subtotal		***$ 6,000.00***
			Water Works		
	1	Each	Fire Hydrant Relocated	$ 1,000.00	$ *1,000.00*
			Water Works Subtotal		***$ 1,000.00***
			Traffic Control		
SPEC	1	L. Sum	Traffic Control Miscellaneous		$ *3,000.00*
			Traffic Control Subtotal		***$ 3,000.00***
			Miscellaneous		
619	2	Month	Field Office, Type A	$ 1,000.00	$ *2,000.00*
623	1	L.Sum	Construction Layout Stakes, As Per Plan	$ 4,000.00	$ *4,000.00*
624	1	L.Sum	Mobilization, As Per Plan	$ 10,000.00	$ *10,000.00*
			Miscellaneous Subtotal		***$ 16,000.00***
* Denotes Contingency Quantity to be Used as Directed.					



HORIZONTAL SCALE IN FEET
0 15 30 60

SR 125 & WHITE OAK/LEWIS ROAD INTERSECTION
ALTERNATE 3

DESIGN AGENCY
EMH&T

DESIGNER
XXX

REVIEWER
XXX MM-DD-YY

PROJECT ID
121906

SHEET P.0 | TOTAL 0

CLE-125

Alternative 3

Preliminary Opinion of Construction Cost

July 7, 2025

Summary of Project Costs	Alternative 3
Roadway Subtotal	$ 89,300
Sedimentation & Erosion Control Subtotal	$ 42,200
Drainage Subtotal	$ 107,100
Pavement Subtotal	$ 629,400
Maintenance of Traffic Subtotal	$ 8,000
Water Works Subtotal	$ 1,000
Traffic Control Subtotal	$ 6,000
Miscellaneous Subtotal	$ 64,600
2025 Preliminary Opinion of Construction Cost Total	$947,600
Contingency (25%)	$237,000
Inflation from 2025 to 2030 (21.3%)	$253,000
2025 Preliminary Opinion of Construction Cost including Contingency	**$1,437,600**

Notes & Clarifications

Estimate does not include Right-of-Way, Reimbursement to Private Utilities, Design, and Construction Engineering.
Inflation is estimated based upon ODOT's Business Plan Inflation Calculator

Pricing reflects probable construction costs obtainable in the project locality on the date of this opinion. Unit rates have been obtained from historical records and/or discussion with contractors. The unit rates reflect current bid costs in the area. This is an opinion of fair market value for the construction of this project. It is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all subcontractors and general contractors. Experience indicates that a fewer number of bidders may result in higher bids, conversely an increased number of bidders may result in more competitive bids.

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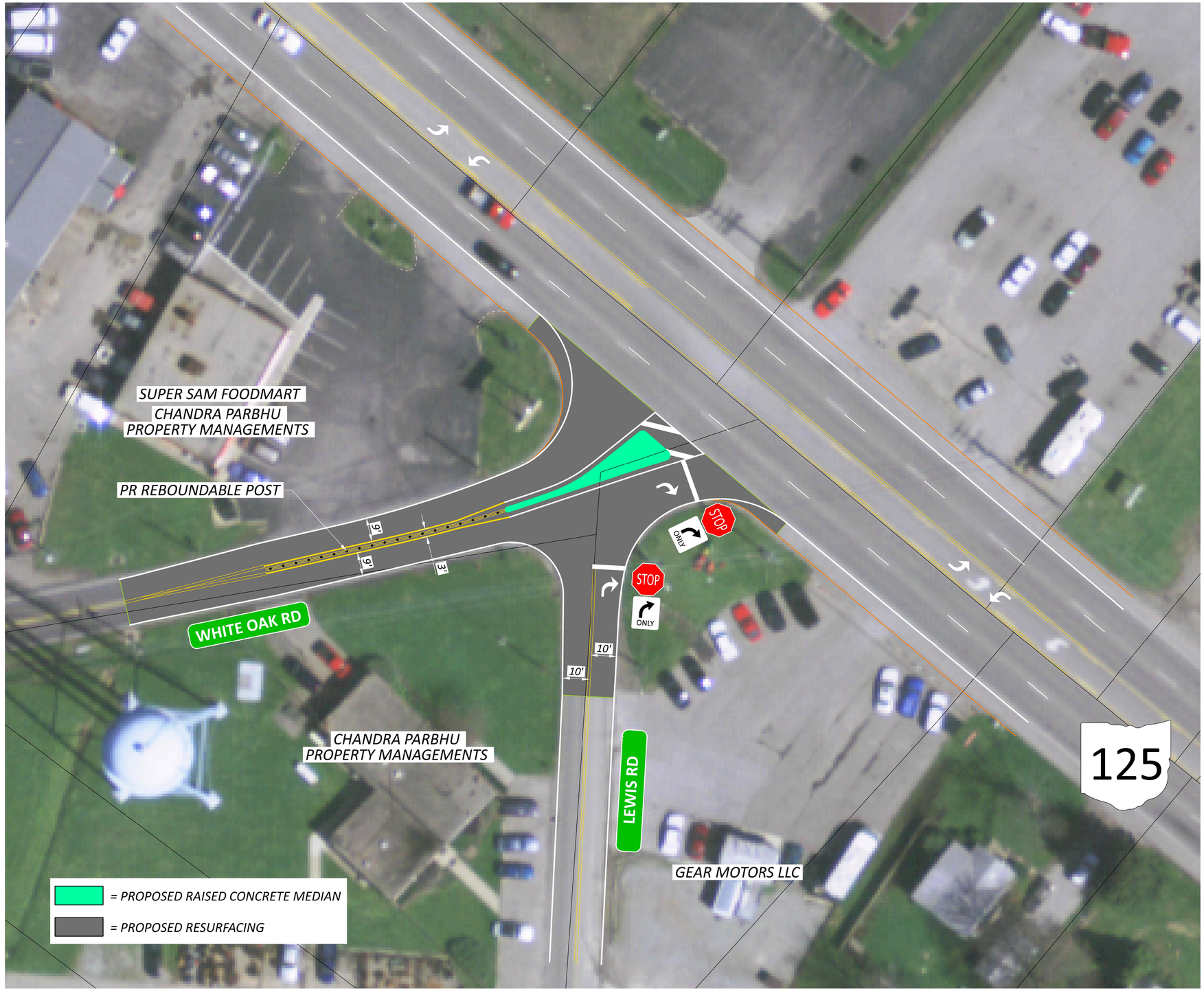
ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	ENGINEER'S ESTIMATE	
				UNIT COST	TOTAL EXTENDED PRICE
			Roadway		
201	1	L. Sum	Clearing and Grubbing	$ 10,000.00	$ *10,000.00*
202	600	Sq Yd	Pavement Removed	$ 18.67	$ *11,198.00*
202	3	Each	Catch Basin Removed	$ 600.00	$ *1,800.00*
202	250	Ft	Pipe Removed	$ 27.00	$ *6,750.00*
203	1,000	Cu Yd	Excavation	$ 35.00	$ *35,000.00*
203	500	Cu Yd	Embankment	$ 30.00	$ *15,000.00*
204	1,130	Sq Yd	Subgrade Compaction	$ 4.50	$ *5,085.00*
204	1	Hour	Proof Rolling	$ 166.85	$ *167.00*
SPEC	1	L. Sum	Roadway Miscellaneous	$ 4,250.00	$ *4,250.00*
				Roadway Subtotal	***$ 89,300.00***
			Sediment & Erosion Control		
207	2	Each	Construction Seeding and Mulching	$ 2.00	$ *4.00*
659	340	Cu Yd	Topsoil	$ 45.00	$ *15,300.00*
659	3,000	Sq Yd	Seeding and Mulching	$ 3.00	$ *9,000.00*
659	152	Sq Yd	Repair Seeding and Mulching	$ 2.25	$ *342.00*
659	0.40	Ton	Commercial Fertilizer	$ 1,000.00	$ *400.00*
659	0.63	Acre	Lime	$ 307.00	$ *194.00*
659	20	M Gal	Water	$ 5.00	$ *100.00*
832	4,568	Each	Erosion Control	$ 1.00	$ *4,568.00*
832	1	Each	Storm Water Pollution Prevention Plan	$ 2,500.00	$ *2,500.00*
832	1	Each	Storm Water Pollution Prevention Plan Inspections	$ 2,000.00	$ *2,000.00*
832	1	Each	Storm Water Pollution Prevention Plan Inspection Software	$ 2,000.00	$ *2,000.00*
SPEC	1,300	SY	Ditch Erosion Protection	$ 3.00	$ *3,900.00*
SPEC	1	L. Sum	Sediment & Erosion Control Miscellaneous	$ 1,850.00	$ *1,850.00*
				Sediment & Erosion Control Subtotal	***$ 42,200.00***
			Drainage		
611	2	Each	Catch Basin, 2-2B	$ 2,700.00	$ *5,400.00*
611	3	Each	Catch Basin, 2-3	$ 3,100.00	$ *9,300.00*
611	1	Each	Manhole, Type 3	$ 6,100.00	$ *6,100.00*
605	600	Ft	4" Pipe Underdrain	$ 20.00	$ *12,000.00*
611	60	Ft	6" Conduit, Type F for Underdrain Outlet	$ 36.00	$ *2,160.00*
602	1	Cu Yd	Concrete Masonary	$ 3,100.00	$ *3,100.00*
611	200	Ft	12" Conduit, Type B	$ 119.00	$ *23,800.00*
611	225	Ft	24" Conduit, Type B	$ 178.00	$ *40,050.00*
SPEC	1	L. Sum	Drainage Miscellaneous	$ 5,100.00	$ *5,100.00*
				Drainage Subtotal	***$ 107,100.00***

ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	ENGINEER'S ESTIMATE	
				UNIT COST	TOTAL EXTENDED PRICE
			Pavement		
301	180	Cu Yd	Asphalt Concrete Base (T=6")	$ 350.00	$ *63,000.00*
304	180	Cu Yd	Aggregate Base (T=6")	$ 105.00	$ *18,900.00*
407	70	Gal	Non-Tracking Tack Coat (0.055 Gal/SY) (For Full-Depth)	$ 4.00	$ *280.00*
408	120	Gal	Non-Tracking Tack Coat (0.09 Gal/SY) (For Resurfacing)	$ 5.00	$ *600.00*
441	60	Cu Yd	Asphalt Concrete Intermediate Course, Type 1, (448) (T=1.75")	$ 400.00	$ *24,000.00*
441	1,040	Cu Yd	Asphalt Concrete Surface Course, Type 1, (448), PG64-22 (T=1.25")	$ 450.00	$ *468,000.00*
452	80	Sq Yd	Non-Reinforced Concrete Pavement (T=8")	$ 134.00	$ *10,720*
609	217	Ft	Curb, Type 6	$ 29.00	$ *6,293.00*
609	111	Sq Yd	4" Concrete Traffic Island	$ 68.00	$ *7,532.00*
SPEC	1	L. Sum	Pavement Miscellaneous	$ 30,000.00	$ *30,000.00*
			Pavement Subtotal		***$ 629,400.00***
			Maintenance of Traffic		
SPEC	1	L. Sum	Maintenance of Traffic Miscellaneous	$ 8,000.00	$ *8,000.00*
			Maintenance of Traffic Subtotal		***$ 8,000.00***
			Water Works		
	1	Each	Manhole Adjusted to Grade, Sanitary	$ 1,000.00	$ *1,000.00*
			Water Works Subtotal		***$ 1,000.00***
			Traffic Control		
SPEC	1	L. Sum	Traffic Control Miscellaneous		$ *6,000.00*
			Traffic Control Subtotal		***$ 6,000.00***
			Miscellaneous		
619	2	Month	Field Office, Type B	$ 2,300.00	$ *4,600.00*
623	1	L.Sum	Construction Layout Stakes, As Per Plan	$ 10,000.00	$ *10,000.00*
624	1	L.Sum	Mobilization, As Per Plan	$ 50,000.00	$ *50,000.00*
			Miscellaneous Subtotal		***$ 64,600.00***
* Denotes Contingency Quantity to be Used as Directed.					



HORIZONTAL SCALE IN FEET
0 10 20 40

SR 125 & WHITE OAK/LEWIS ROAD INTERSECTION
SHORT TERM (NO R/W OPTION)

DESIGN AGENCY
EMH&T

DESIGNER
XXX

REVIEWER
XXX MM-DD-YY

PROJECT ID
121906

SHEET P.0 | TOTAL 0

CLE-125

Short Term (No R/W Option)

Preliminary Opinion of Construction Cost

July 7, 2025

Summary of Project Costs	Short Term (No R/W Option)
Roadway Subtotal	$ 700
Drainage Subtotal	$ 2,800
Pavement Subtotal	$ 33,100
Maintenance of Traffic Subtotal	$ 6,000
Traffic Control Subtotal	$ 11,600
Miscellaneous Subtotal	$ 5,400
2025 Preliminary Opinion of Construction Cost Total	$59,600
Contingency (30%)	$18,000
Inflation from 2025 to 2027 (9.2%)	$8,000
2025 Preliminary Opinion of Construction Cost including Contingency	**$85,600**

Estimate does not include Right-of-Way, Reimbursement to Private Utilities, Design, and Construction Engineering.
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ITEM NO.	EXT.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	ENGINEER'S ESTIMATE	
					UNIT COST	TOTAL EXTENDED PRICE
				Roadway		
202		16	Sq Yd	Traffic Island Removed	$ 40.00	$ *648.00*
SPEC		1	L. Sum	Roadway Miscellaneous	$ 50.00	$ *50.00*
				Roadway Subtotal		***$ 700.00***
				Drainage		
611		1	Each	Catch Basin, Adjusted To Grade	$ 1,400.00	$ *1,400.00*
605		1	Each	Manhole, Adjusted To Grade	$ 1,200.00	$ *1,200.00*
SPEC		1	L. Sum	Drainage Miscellaneous	$ 150.00	$ *150.00*
				Drainage Subtotal		***$ 2,800.00***
				Pavement		
254		913	Sq Yd	Pavement Planing, Asphalt Concrete (T=1.5")	$ 10.32	$ *9,420.00*
407		90	Gal	Non-Tracking Tack Coat (0.09 Gal/SY) (For Resurfacing)	$ 8.00	$ *720.00*
441		39	Cu Yd	Asphalt Concrete Surface Course, Type 1, (448), PG64-22 (T=1.5")	$ 435.00	$ *16,965.00*
609		42	Sq Yd	4" Concrete Median	$ 103.00	$ *4,332.00*
SPEC		1	L. Sum	Pavement Miscellaneous	$ 1,600.00	$ *1,600.00*
				Pavement Subtotal		***$ 33,100.00***
				Maintenance of Traffic		
SPEC		1	L. Sum	Maintenance of Traffic Miscellaneous	$ 6,000.00	$ *6,000.00*
				Maintenance of Traffic Subtotal		***$ 6,000.00***
				Traffic Control		
620		19	Each	Delineator, Post Ground Mounted	$ 450.00	$ *8,550.00*
SPEC		1	L. Sum	Traffic Control Miscellaneous	$ 3,000.00	$ *3,000.00*
				Traffic Control Subtotal		***$ 11,600.00***
				Miscellaneous		
619		1	Month	Field Office, Type A	$ 1,000.00	$ *1,000.00*
623		1	L.Sum	Construction Layout Stakes, As Per Plan	$ 800.00	$ *800.00*
624		1	L.Sum	Mobilization, As Per Plan	$ 3,600.00	$ *3,600.00*
				Miscellaneous Subtotal		***$ 5,400.00***

* Denotes Contingency Quantity to be Used as Directed.