WAR-22-2.00
CORRIDOR STUDY

Landen Drive to Old 3C Highway

January 19, 2024

REVIEW COMPLETE	
PM	
BRIDGES	
CONSTRUCT	
DRAINAGE	Tami Brehm, P.E. 02/09/2024
ENVIRON	
GEOTECH	
ITS	
MOT	
PAVEMENT	
ROADWAY	John Otis, P.E. 03/01/2024
R/W	
SURVEY	
TRAFFIC	Teri C. Scanlon, P.E. 02/01/2024
UTILITIES	
OTHER	
OTHER	Alex Genbauffe, P.E. 02/06/2024

GANNETT FLEMING

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EXECUTIVE SUMMARY

This study evaluates the overall operation of a 0.8 mile-long segment of U.S. Route 22 (U.S. 22) from Landen Drive to Old 3C Highway in Warren County, Ohio.

Photo 1 – Landen Drive Intersection looking east

The Ohio Department of Transportation (ODOT) is applying the Traffic Operations Assessment Systems Tool (TOAST) Program to narrow the focus of the corridor and evaluate cost effective operational improvements on this segment of congested U.S. 22. Previous studies with longer corridor limits resulted in solutions with high construction costs, making it challenging to fund.

AADT, Trucks and Directional Distribution can be revised per the TFMS report sent on 9/27/23

In addition to congestion, this segment of U.S. 22 continues to experience low speeds, high travel times and is currently ranked the #8 lowest performing urban non-freeway in District 8 with a TOAST score of 0.56 to 0.67.

U.S. 22 is an east-west principal urban arterial that approximately parallels Interstate 71 in southern Warren County. U.S. 22 has a posted speed limit of 45 miles per hour (mph), an approximate average daily traffic (ADT) volume of 23,700, with 3 percent trucks, and a 70/30 directional split, with the westbound movement being predominant in the a.m. peak hour and the eastbound movement during the p.m. peak hour.

U.S. 22 from Landen Drive to Old Mill Road is a five-lane section with two westbound lanes, two eastbound lanes, center two-way left turn lane, and full ten-foot shoulders. U.S. 22 narrows to a three-lane section approximately 300 feet east of Old Mill Road with one westbound lane, one eastbound lane, center two-way left turn lane, and full ten-foot shoulders. U.S. 22 narrows again approximately 1,000 feet east of Old 3C Highway to a two-lane section with one westbound lane, one eastbound lane, and 2–4-foot shoulders.

The alternatives considered and evaluated for this study were No-Build, 4 Lane, and 5 Lane alternatives on U.S. 22.

- No-Build Alternative – The No-Build alternative does not include any new construction or improvement.
- 4 Lane Alternative – This alternative would extend the second eastbound thru lane from just east of Old Mill Road to the Old 3C Highway.
- 5 Lane Alternative – This alternative would extend the five-lane section to Old 3C Highway with adding a westbound lane at Creek Woods Place intersection and drop an eastbound lane just after the Old 3C Highway intersection.

End as a right turn lane onto Old 3C?

Comparison of the existing 2023, open year 2030 and design year 2050 no-build analyses indicated that operations for the side roads and roadway segment were less than desirable. The low LOS is attributed to the lack of available gaps for left-turning vehicles and the roadway nearing capacity with many access points. The level of service results for both peak hour capacity analyses for the open and design years demonstrate that, overall, the 4 and 5 Lane Alternatives will primarily improve operations and capacity on U.S. 22 with minimal improvement to reducing delays on the side roads. To fully mitigate side road delay, intersection treatments that eliminate left turns would have to be constructed as stated in the previous studies.

The 4 Lane Alternative has the lowest cost at $2.5M due to the improvements planned are within the curb lines and the 5 Lane Alternative has a higher cost of $3.7M mainly due to widening for the new curb and gutter.

INTRODUCTION

Gannett Fleming was requested to perform a corridor study as part of ODOT's TSMO/TOAST Statewide Program. This study evaluates the overall operation of a 0.8 mile-long segment of U.S. 22 from Landen Drive to Old 3C Highway in Warren County, Ohio. This report provides an overview of existing conditions, future conditions (no-build alternative) and presents the operational benefits and construction costs of two build alternatives.

BACKGROUND AND PREVIOUS STUDIES

The Ohio, Kentucky & Indiana (OKI) Regional Council of Governments completed the Southwest Warren County Transportation Study in 2005 to improve mobility and safety in southwestern Warren County. OKI recommended the widening of U.S. 22 to provide a five-lane section between Columbia Road and S.R. 48, including widening the existing high-level bridge over the Little Miami River.

Based on the high cost of the OKI recommended improvement to widen U.S. 22, ODOT commissioned a feasibility study in 2018 to evaluate three alternatives to add capacity and implement improvements at key intersections to improve safety and reduce congestion along the U.S. 22 corridor from Landen Drive to West Road. Warren County has completed the final design of the recommended roundabout at Old 3C Highway, but the lack of funding has prevented the project from being constructed.

This segment of U.S. 22 continues to experience congestion and very low speeds compared to the posted speed limit resulting in very high travel times based on the congestion and speed scans utilizing Inrix Data as shown in Appendix A. The corridor is currently ranked the #8 lowest performing urban non-freeway in District 8 with a TOAST score of 0.56 to 0.67 as shown in Figure 1. In review of the TOAST score, on a scale of 0 to 10, with 0 being the lowest, this corridor has a ranking of 2 for volume per lane and 0 for travel time. Based on the District 8 2023 TOAST Map, it shows the eastbound direction of the corridor performs worse (Orange) compared to the westbound direction (Yellow).

These colors are difficult to discern. Can they be enhanced somehow?

Figure 1 – 2023 TOAST Map

PURPOSE AND SCOPE OF WORK

The purpose of the project is to improve traffic operations along U.S. 22 within the project limits.

The corridor study evaluates two future build alternatives. Each alternative will be compared against the future 2050 no-build condition. Safety analysis was not included in the scope of work.

STUDY AREA AND EXISTING CONDITIONS

The study area for the WAR-22-2.00 Corridor Study includes a 0.8-mile-long portion of U.S. 22 extending from Landen Drive to Old 3C Highway. U.S. 22 is an east-west principal urban arterial that approximately parallels Interstate 71 in southern Warren County. U.S. 22 has a posted speed limit of 45 miles per hour (mph), an approximate average daily traffic (ADT) volume of 23,700, with 3 percent trucks, and a 70/30 directional split, with the westbound movement being predominant in the a.m. peak hour and the eastbound movement during the p.m. peak hour.

U.S. 22 from Landen Drive to Old Mill Road is a five-lane section with two westbound lanes, two eastbound lanes, center two-way left turn lane, and full ten-foot shoulders. U.S. 22 narrows to a three-lane section approximately 300 feet east of Old Mill Road with one westbound lane, one eastbound lane, center two-way left turn lane, and full ten-foot shoulders. U.S. 22 narrows again approximately 1,000 feet east of Old 3C Highway to a two-lane section with one westbound lane, one eastbound lane, and 2–4-foot shoulders.

The intersections included in this study include Landen Drive, Old Mill Road, Southland Drive, Landen Deerfield Park Entrance Drive, Park Drive, and Old 3C Highway/Creek Woods Place. All roadways are functionally classified as local roadways that are 25 mph with the exception of Old 3C Highway that has a posted speed of 40 mph. All intersections are stop-controlled on the side road except Landen Drive which is signalized. The intersection of Old 3C Highway/ Creek Woods Place has flashers with a northbound left turn restriction during the peak hours. No turn lanes are located on the side roads except the right turn lanes on the Landen Drive southbound approach and Landen Deerfield Park Entrance Drive. The study area is illustrated on Figure 2 and existing condition figures are located in Appendix A.

Figure 2 – Study Area Map

ALTERNATIVES CONSIDERED

The scope of the project was to evaluate two build alternatives against the no build condition for improvements on U.S. 22 at the end of the five-lane section to the intersection of Old 3C Highway. These improvements will minimize cost and will not require any right-of-way as in contrast to the previous recommendations from the earlier studies. The side roads will maintain the stop-controlled intersection treatment with no improvements being made to the side roads. The alternatives considered were No-Build, 4 Lane, and 5 Lane alternatives. Appendix F includes a typical section and plan view figure of each alternative.

- No-Build Alternative – The No-Build alternative does not include any new construction or improvement.
- 4 Lane Alternative – This alternative would extend the second eastbound thru lane from just east of Old Mill Road and creates a drop lane at Old 3C Highway to eliminate widening required east of Old 3C Highway intersection. This improvement would alleviate some of the eastbound congestion shown to perform worse than westbound and requires no widening, however supplemental inlets would be needed to meet the spread requirements. Modifications to the traffic control devices and pavement markings would also be required.
- 5 Lane Alternative – This alternative would extend the five-lane section to Old 3C Highway by adding a westbound lane at Creek Woods Place intersection and dropping an eastbound lane just after the Old 3C Highway intersection. This improvement would provide additional capacity to mitigate some of the congestion along the corridor. This improvement would require the replacement of the existing curb with curb and gutter and additional inlets to meet the spread requirements. Also, a modification to the traffic control devices and pavement markings would be required.

Drop as a Right Turn Lane to 3C?

The two build alternatives will follow the below design guidelines.

Item 441 should be able to be used.

Roadway Design

The preliminary design of U.S. 22 was based on a design speed of 45 mph, which matches the posted speed. The minimum lane width required for this project is 11 feet with a minimum of one-foot paved shoulder. All design elements will follow applicable ODOT standards and are shown on the alternative figures. For the purposes of this study, it is assumed the roadway will be resurfaced for each alternative to the limits of the study area due to the change in lane locations and additions. The crown will need to be shifted in each alternative to a paint line. Each alternative will require a leveling course to shift the crown and flatten the existing shoulder slopes. The resurfacing buildup is as follows:

- 1.25" of Item 442 – Asphalt Concrete Surface Course, 9.5MM, Type A (449)
- 1.75" of Item 442 – Asphalt Concrete Intermediate Course, 19MM, Type A (449)
- Up to 2" varying leveling course of Item 442 – Asphalt Concrete Intermediate Course, 19MM, Type A (449)

In the five-lane alternative the grading from the back of curb and gutter to the existing sidewalk would be increased from four percent to eight percent. The 2.5 feet of widening on each side required to install the curb and gutter should not disturb any long line utility relocations as all utilities appear to be under or outside of the sidewalk. There are some locations where spot relocations or lowerings potentially would be required. No grading or utilities would be impacted with the 4-lane alternative.

Can widening be limited to one side, or is both sides required?

Drainage Design

The existing drainage system along U.S. 22 is a closed system that provides curb inlets to contain the spread within the existing ten-foot shoulder. The system outlets at various locations along to the corridor such as to the

pond located on the south side across from the Landen Deerfield Park, to the existing 6'x4' culvert at the Old 3C Highway intersection, and existing 36"x24" culvert at Riversedge Drive that all eventually flows south into the Little Miami River.

Photo 2 – Inlet at curb line

The proposed drainage improvements for each alternative will construct additional inlets to meet the spread requirements. The 4 Lane Alternative adds inlets due to narrowing the shoulder from 10 feet to 6 feet. The 5 Lane Alternative adds inlets due to replacing the shoulder with a standard Typer 2 curb and gutter. Based on a preliminary evaluation by ODOT, it is anticipated that an additional 10 inlets for the 4 Lane Alternative and 20 inlets for the 5 lane Alternative will be needed in addition to reconstructing/adjusting the existing 25 inlets located within the widening limits. Further hydraulic analysis will be required during detailed design for the improvement.

Maintenance of Traffic Concepts

Each alternative will have a similar maintenance of traffic concept that will require closing lanes in accordance with ODOT Standard Construction Drawings. The outside lanes would be closed to construct the curb and gutter and inlets. Additional lane closures will be required for pavement repairs, shifting the crown, and resurfacing.

TRAFFIC OPERATIONAL ANALYSIS

All the traffic analyses were conducted utilizing Highway Capacity Software (HCS). The analyses were conducted for the existing year, open year, and design year for the a.m. and p.m. design hour volumes utilizing Highway Capacity Manual (HCM) methodologies.

Traffic Volumes

Traffic counts were obtained as part of this study for the following intersections with U.S. 22: Landen Drive, Old Mill Road, Southland Drive, Landen Deerfield Park Entrance Drive, and Park Drive. 13-hour turning movement counts (TMC) were performed on Thursday, October 19, 2023. In addition, a 12-hour TMC was performed for Landen Deerfield Park Entrance Drive on Saturday, October 21, 2023. Counts were classified as passenger vehicles, trucks and buses. ODOT provided previous January 2023 traffic counts for Old 3C Highway. Counts were then processed to establish the average daily traffic (ADT), peak hourly volume, directional distribution and percentage of trucks and buses. Refer to Appendix B for the traffic counts performed for this study.

Analysis Years

For purposes of this study and at the direction of ODOT, the existing 2023 adjusted counts, open year of 2030, and design year of 2050 was utilized for the analyses.

Traffic Forecasting

ODOT provided the traffic growth rate for the study area. The ODOT forecast provided a calculated growth rate of 1.1% utilized for both passenger vehicles and trucks. The traffic volumes obtained for this study were seasonally adjusted, design-hour adjusted and forecasted utilizing the growth factor stated above to determine the future 2030 and 2050 a.m. and p.m. peak hours that were utilized for all analyses. See Appendix C for the ODOT Forecast and Appendix D for the planning level traffic plates utilized for the study.

Intersection Capacity Analysis

A capacity analysis is the primary method for evaluating the efficiency of an intersection as it relates to vehicular traffic. The Highway Capacity Manual (HCM), published by Transportation Research Board (TRB), outlines capacity analysis procedures and criteria for evaluating the operations of unsignalized and signalized intersections. The criteria for evaluating the operation of an intersection are measured in terms of level of service (LOS), a qualitive measure, and control delay per vehicle. There are six levels of service, designated by the letters A through F. LOS A represents the best operating conditions, and LOS F represents the worst operating conditions. LOS criteria are listed in Table 1.

Photo 3 – Looking west from Old 3C Hwy

Level of Service	Signalized Intersection Delay (Seconds)	Unsignalized Intersection and Roundabout Delay (Seconds)
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-60
F	> 80 or Volume-Capacity Ratio > 1.0	> 60 or Volume-Capacity Ratio > 1.0

Table 1 – Level of Service Criteria for Signalized and Unsignalized Intersections

2023 No Build Analysis

The existing 2023 no-build analyses are based on the existing conditions as shown in Appendix A, existing signal timing for Landen Drive, northbound peak hour turn restrictions at Old 3C Highway, and the 2023 traffic plates as shown in Appendix D. U.S. 22 in the eastbound and westbound directions at all of the stop-controlled intersections operate at a LOS A ranging in delay from 0.1 to 1.6 seconds. Capacity results for 2023 are summarized below and detailed capacity analyses are provided in Appendix E.

U.S. 22 and Landen Drive Intersection	2023 No Build LOS									
	EB Approach		WB Approach		NB Approach		SB Approach		Intersection	
AM Peak	16.4	B	49.3	D	25.2	C	26.7	C	40.2	D
PM Peak	23.5	C	21.2	C	26.1	C	129.2	F	47.4	D

Table 2 – Landen Drive No Build 2023 Level of Service

U.S. 22 Corridor 2023 No Build LOS	AM LOS				PM LOS			
	NB Approach		SB Approach		NB Approach		SB Approach	
Old Mill Road	32.1	D			97.0	F		
Southland Drive	45.8	E			144.3	F		
Landen Deerfield Park			57.6	F			288.5	F
Park Drive	43.7	E			128.5	F		
Old 3C Hwy	11.1	B	96.7	F	44.8	E	298.4	F
Landen Deerfield Park (SAT)			61.2	F			83.3	F

Table 3 – No Build 2023 Level of Service

As shown in Tables 2 and 3, the operations of the existing intersections are acceptable for U.S. 22 and less than desirable for the side roads. The issue is minimal to no gaps for left turning vehicles for the high demand on U.S. 22. The volumes on the side roads are so minimal it isn't recommended to address the delay. The 2023 no build capacity analyses can be found in Appendix E.

2030 and 2050 Analysis

Capacity analyses were conducted for the No Build, 4 Lane, and 5 Lane alternatives for the 2030 open year and 2050 design year a.m. and p.m. peak hour volumes. Projected traffic from Appendix D was utilized for the capacity analyses. Analyses were conducted assuming maintaining the existing traffic control, maintaining existing turn lane lengths, optimized signal timing at Landen Drive, maintaining the northbound turn restriction at Old 3C Highway and without side road capacity improvements. Signal warrant analyses were not part of the scope of work, however due to the extremely low side street volumes none of the unsignalized intersections would warrant a signal. U.S. 22 in the eastbound and westbound directions at all of the stop-controlled intersections operate at a LOS A ranging in delay from 0.0 to 2.5 seconds. Capacity results for each alternative are summarized below and detailed capacity analyses are provided in Appendix E.

U.S. 22 and Landen Drive Intersection	No Build LOS									
	EB Approach		WB Approach		NB Approach		SB Approach		Intersection	
2030 AM Peak	14.7	B	35.4	D	31.1	C	33.3	C	31.3	C
2030 PM Peak	50.3	D	36.5	D	20.1	C	56.7	E	47.7	D
2050 AM Peak	14.1	B	48.5	D	41.0	D	45.9	D	41.8	D
2050 PM Peak	54.5	D	32.5	C	16.0	B	68.9	E	50.0	D

Table 4 –Landen Drive No Build 2030 and 2050 Level of Service

Compared to Table 2 - how are these results better than 2023? Looks like the 2023/2030/2050 AM/PM all have different cycles. Use the exisitng timing and cycle lengths to compare all cases.

U.S. 22 Corridor 2030 No Build LOS	AM LOS				PM LOS			
	NB Approach		SB Approach		NB Approach		SB Approach	
Old Mill Road	38.2	E			153.1	F		
Southland Drive	59.1	F			223.9	F		
Landen Deerfield Park			72.5	F			367.6	F
Park Drive	55.0	F			197.6	F		
Old 3C Hwy	11.5	B	161.4	F	64.3	F	766.0	F
Landen Deerfield Park (SAT)			86.4	F			124.4	F

Table 5 – No Build 2030 Level of Service

U.S. 22 Corridor 2030 4 Lane Alt. LOS	AM LOS				PM LOS			
	NB Approach		SB Approach		NB Approach		SB Approach	
Southland Drive	77.7	F			295.6	F		
Landen Deerfield Park			66.4	F			96.8	F
Park Drive	71.5	F			255.9	F		
Old 3C Hwy	11.3	B	161.4	F	47.3	E	658.6	F
Landen Deerfield Park (SAT)			59.0	F			45.6	F

Table 6 – 4 Lane Alternative 2030 Level of Service

U.S. 22 Corridor 2030 5 Lane Alt. LOS	AM LOS				PM LOS			
	NB Approach		SB Approach		NB Approach		SB Approach	
Southland Drive	22.1	C			104.3	F		
Landen Deerfield Park			54.5	F			93.0	F
Park Drive	21.3	C			95.5	F		
Old 3C Hwy	10.0	A	141.9	F	22.6	C	89.1	F
Landen Deerfield Park (SAT)			42.7	E			41.6	E

Table 7 – 5 Lane Alternative 2030 Level of Service

I think a % Reduction in Delay for each side street compared to the No Build would be nice to see for both build alternatives. While LOS is still F for many side streets, there is an improvement.

Is there a typo or calculation error on this page? Assuming linear growth, the difference in delay between 2023-2030 and 2030-2050 does not make sense for a lot of these delay values. 2050 delay seems excessively high for 1% growth.

U.S. 22 Corridor 2050 No Build LOS	AM LOS				PM LOS			
	NB Approach		SB Approach		NB Approach		SB Approach	
Old Mill Road	100.8	F			664.7	F		
Southland Drive	121.9	F			892.7	F		
Landen Deerfield Park			189.5	F			1645.8	F
Park Drive	309.4	F			799.9	F		
Old 3C Hwy			681.5	F	231.1	F	21708.8	F
Landen Deerfield Park (SAT)			304.5	F			340.1	F

Table 8 – No Build 2050 Level of Service

U.S. 22 Corridor 2050 4 Lane Alt. LOS	AM LOS				PM LOS			
	NB Approach		SB Approach		NB Approach		SB Approach	
Southland Drive	193.4	F			1155.1	F		
Landen Deerfield Park			162.1	F			397.9	F
Park Drive	498.9	F			1141.0	F		
Old 3C Hwy			681.1	F	131.9	F	6356.6	F
Landen Deerfield Park (SAT)			196.1	F			96.3	F

Table 9 – 4 Lane Alternative 2050 Level of Service

I think a % Reduction in Delay for each side street compared to the No Build would be nice to see for both build alternatives. While LOS is still F for many side streets, there is an improvement.

U.S. 22 Corridor 2050 5 Lane Alt. LOS	AM LOS				PM LOS			
	NB Approach		SB Approach		NB Approach		SB Approach	
Southland Drive	26.1	D			321.4	F		
Landen Deerfield Park			134.8	F			391.3	F
Park Drive	43.3	E			336.0	F		
Old 3C Hwy			592.1	F	35.3	E	461.9	F
Landen Deerfield Park (SAT)			127.3	F			85.8	F

Table 10 – 5 Lane Alternative 2050 Level of Service

Intersection Results

Comparison of the open year 2030 and design year 2050 no-build analyses to the two alternatives indicated that overall intersection operations improved with U.S. 22 operating very well. The side road delay is still less than desirable, and it is attributed to the lack of available gaps for left turning vehicles. The 5 Lane Alternative operates

I'm not sure this is a true statement. The 4-lane alternative shows that Southland and Park get worse with the 4 lane alternative.

better than the 4 Lane Alternative however the side road delay is still less than desirable. Overall, both alternatives will improve operations and capacity on U.S. 22 and generally minimize the delay of the side roads within the study area.

Photo 4 – Congestion in AM Peak

Segment Capacity Analysis

As stated in the Intersection Capacity Analysis Section, capacity analyses per the HCM are the primary method for evaluating the efficiency of a roadway as it relates to vehicular traffic, outlines procedures, and provides criteria for evaluating the operations of an arterial roadway. The criteria for evaluating the operation of a roadway segment are measured in terms of LOS A through F with LOS A representing the best operating travel speed in mph, and LOS F represents the worst operating travel speed.

Capacity analyses were conducted for the 2023, 2030 open year, and 2050 design year for the No Build. In addition, the 4 Lane and 5 Lane alternatives were analyzed for the open and design years. All analyses performed utilized the a.m. and p.m. peak hour volumes as shown on the traffic plates from Appendix D. Capacity results are summarized below and detailed capacity analyses are provided in Appendix E.

U.S. 22 Roadway Segment Near Southland Drive	AM LOS				PM LOS			
	EB		WB		EB		WB	
2023 No Build	35.17	B	24.92	F	22.18	F	33.81	B
2030 No Build	34.83	B	24.75	F	21.91	F	34.20	B
2050 No Build	23.72	B	11.34	F	17.76	F	32.78	B
2030 4 Lane Alternative	36.61	B	24.75	F	31.81	C	33.42	B
2050 4 Lane Alternative	35.93	B	11.34	F	30.20	C	29.54	C
2030 5 Lane Alternative	36.61	B	33.70	B	31.81	C	34.87	B
2050 5 Lane Alternative	35.72	B	33.64	B	30.20	C	33.41	B

Table 11 – Segment Analysis

33.92

Assuming this is pc/ln/mi? Some of the values and corresponding LOS do not make sense.

Ex- 11 is an F. But 33 is a B?

List units for these numbers in a header

Segment Results

The segment analyses generally support the existing Inrix data and TOAST scores that the existing one lane of traffic in the peak direction is at capacity and soon will become overcapacity. Adding the additional lane in the build alternatives will create the needed capacity as shown Table 11. Contrary to the segment analysis, the TOAST scores indicate that eastbound is slightly more congested than westbound. This is likely the case as westbound benefits from an add lane developing at Old Mill Road while eastbound maintains one lane east of Old 3C Highway.

CONCEPTUAL OPINION OF PROBABLE CONSTRUCTION COST

A conceptual estimate of construction costs for the two alternatives was prepared. Estimated construction costs were developed using estimated quantities for items that would be needed or impacted to implement the required improvements.

The following assumptions were utilized in estimating construction costs:

- Unit prices were estimated based on ODOT's Summary of Contracts Awarded for 2022, Procedures for Budget Estimating, and prior ODOT bid tabs.
- A 30 percent contingency was selected based on the Procedures for Budget Estimating.
- The rate of inflation was calculated using the ODOT Office of Estimating Fiscal Year Business Plan Inflation Calculator. Based on a construction midpoint of July 2030, a 29.0 percent rate of inflation (midpoint of construction) was assumed.
- The performance bond cost was estimated to be 0.75 percent of the construction cost before adding the contingency.
- The cost for construction layout stakes was estimated to be 1.0 percent of the construction cost before adding the contingency.
- Maintenance of traffic costs were estimated to be 10 percent of the construction cost before adding the contingency.

The conceptual estimate of probable construction cost (with inflation) for each alternative is summarized below in Table 12 and included in Appendix G.

Will the 5 lane alternative avoid ROW from the Park?

Does this change if widening is done on one vs. both sides?

4 Lane Alternative

The 4 Lane Alternative has the lowest cost mainly due to the improvements planned are within the curb lines and requiring less inlets to meet spread due to this alternative providing a six-foot shoulder.

5 Lane Alternative

The 5 Lane Alternative has higher costs than the 4 Lane Alternative mainly due to the replacement of the existing curb and widening for the new curb and gutter. The widening impacts all driveways, curb returns, and sidewalks at the intersections within the limits and requires more inlets to meet the spread requirements due to the minimal shoulder width.

Does the widening for 5 lane section lead to rebuilding the entire sidewalk? or just at intersections?

Cost Categories	4 Lane Alternative	5 Lane Alterantive
Major Work Items	$1,150,000.00	$1,750,000.00
Erosion Control	$45,000.00	$80,000.00
Traffic Control	$38,000.00	$70,000.00
MOT	$123,000.00	$189,000.00
Incidentals	$152,000.00	$162,000.00
Contingency (30%)	$410,000.00	$630,000.00
Inflation (29.0%)	$560,000.00	$830,000.00
Sub-Total	**$2,478,000.00**	**$3,711,000.00**

Table 12 – Estimated Construction Costs

CONCLUSIONS

This segment of the U.S. 22 corridor continues to experience congestion, low speeds, high travel times and is currently ranked the #8 lowest performing urban non-freeway in District 8. Due to the high construction costs and right-of-way needs of the recommended countermeasures from previous studies, this corridor has not seen any major improvements. The existing 2023, open year 2030 and design year 2050 no-build analyses indicated that operations for the side roads and roadway segment were less than desirable. The low LOS is attributed to the lack of available gaps for left-turning vehicles and the roadway nearing capacity. The selected countermeasures add capacity while minimizing impacts. The evaluated alternatives were a 4 Lane option adding an additional eastbound lane and 5 Lane option adding an additional thru lane in both directions. The level of service results for both peak hour capacity analyses for the open and design years demonstrate that, overall, the 4 and 5 Lane Alternatives will improve operations and capacity on U.S. 22 and minimize the delay of the side roads within the study area but doesn't improve all deficiencies. The 4 Lane Alternative has the lower cost of $2.5M but offers less improvement to operations than the 5 Lane Alternative. The 5 Lane Alternative has a higher cost at $3.7M and offers the most improvement to operations without expanding the scope of the project.

This study documents how each of the 4 Lane and 5 Lane build alternatives will improve mobility along U.S. 22, minimally reduce delay on the side streets, minimize costs, and stay within existing right-of-way. To further improve operations and fully mitigate side road delay, intersection treatments that eliminate left turns would have to be constructed as stated in the previous studies.

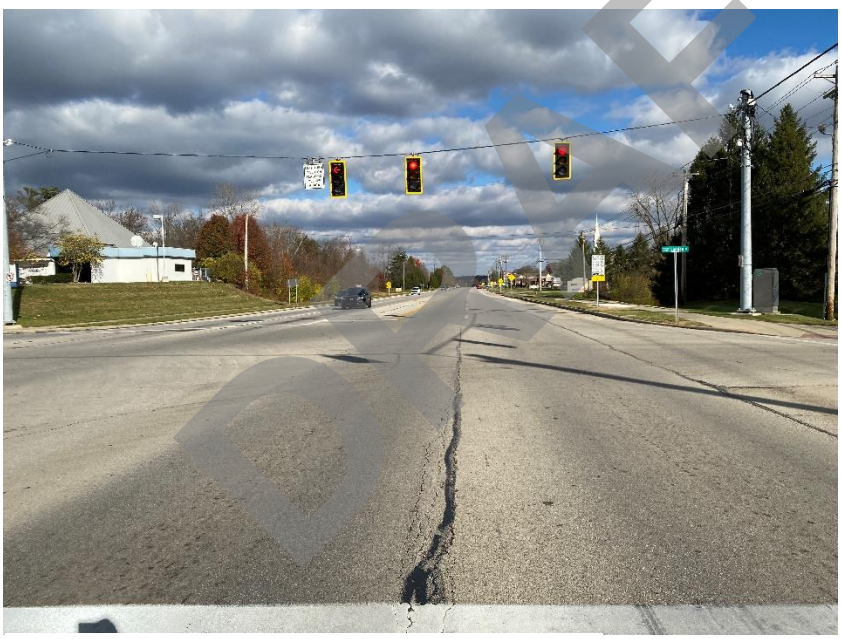


Photo 5 – Begin of the Project Looking East

The 5 lane alternative will not require ROW? Does this include temporary ROW- Even with rebuilding driveways, curb ramps, and sidewalks?

The drainage related items appear correct in the estimate. It is about twice as high for the 5 lane alternative, but it is a low dollar amount and not a driving factor.

There needs to be a comment regarding the BMP needs for each alternative. Hopefully no BMP for either option. If any were required, it would likely require a manufactured system, so it needs confirmed in the report.

I prefer the 5-lane alternative based on the LOS improvements at the stop controlled intersections and the segment improvement in MPH on US-22.

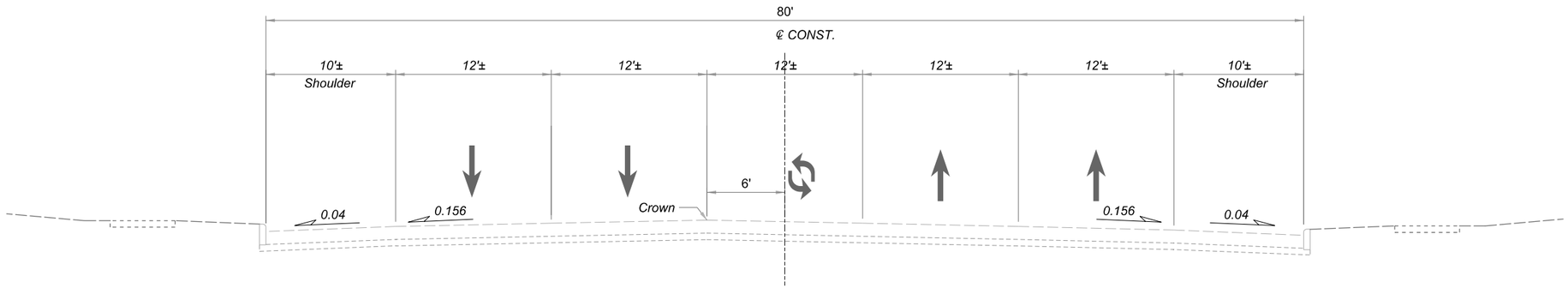
I agree. The additional improvements in delay seem to be worth the cost.

My thoughts without diving deeply into the data: I don't really have a preference over the 4 or 5-lane alternative. If the bridge ever gets widened, doing a 5-lane section now at today's cost could be beneficial. I think either alternative pushes the queuing/poor lane utilization issue further to the east. Not great - but moving it away from the signals at Columbia and Landen can hopefully allow those areas to operate better.

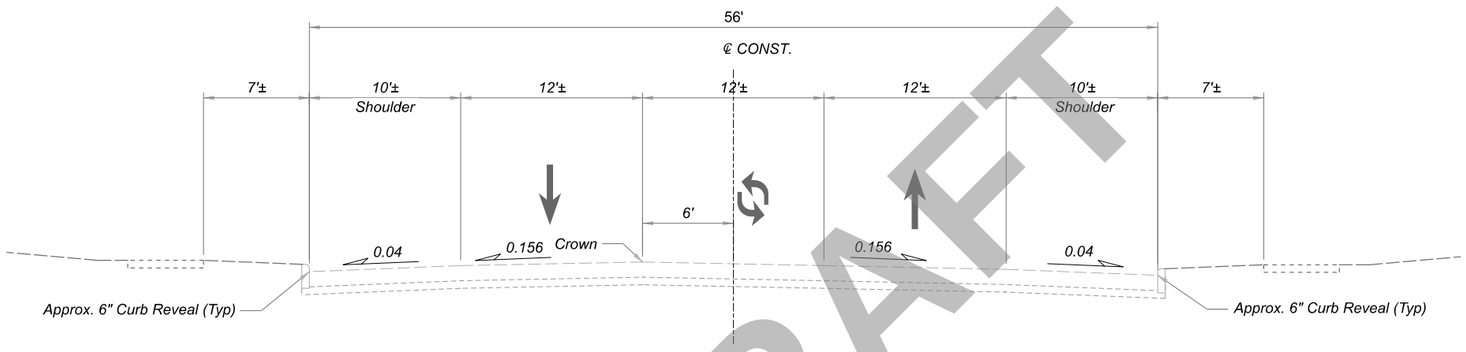
The intent is to get an extra EB lane to Old 3C where there is a heavy right turn volume in the PM peak.

APPENDIX A

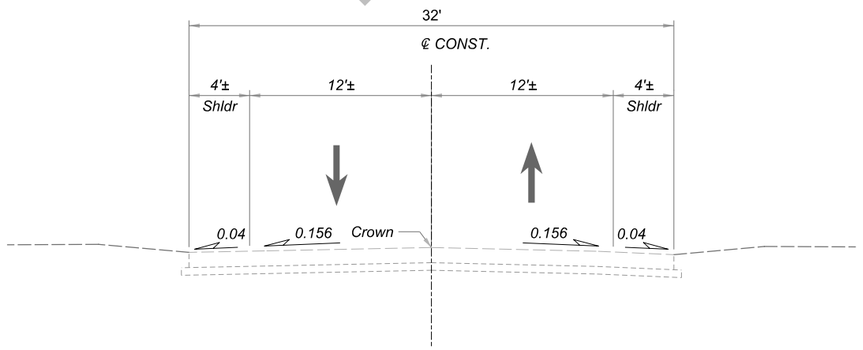
Existing Condition Figures



Existing 5 Lane Section
West of Old Mill Road



Existing 3 Lane Section
Between Old Mill Road to Old 3C Highway



Existing 2 Lane Section
East of Old 3C Highway

TYPICAL SECTIONS
EXISTING

WAR-22-2.00 Corridor Study

MODEL: Sheet_Survft PAPERSIZE: 17x11(in) DATE: 1/17/2024 TIME: 11:45:02 AM USER: djozity
C:\CONNECT\CustomConfig\WorkSpaces\OHDOT\WorkSets\Traffic\dgn\WAR-22 TypSht.dgn

DESIGN AGENCY
GANNETT FLEMING

DESIGNER
BRO

REVIEWER
DRJ 1/18/24

PROJECT ID
115913

SHEET 1 TOTAL 1

WAR-22-2.00 Corridor Study

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C:\CONNECT\CustomConfig\Workspaces\OHDOT\WorkSets\Traffic\dgn\WAR-22 - No Build Sht.dgn

Match Line Above

Match Line Sheet 2

Match Line Below

SHEET 1 / TOTAL 2	PROJECT ID 115913	DRJ #DATE	DESIGNER BRO	GANNETT FLEMING	DESIGN AGENCY

EXISTING NO BUILD CONDITION

HORIZONTAL SCALE IN FEET
0 50
25 100

WAR-22-2.00 Corridor Study

MODEL: Sheet_SurvFt - Copy-1 PAPERSIZE: 17x11 (in.) DATE: 1/17/2024 TIME: 11:45:09 AM USER: djozity
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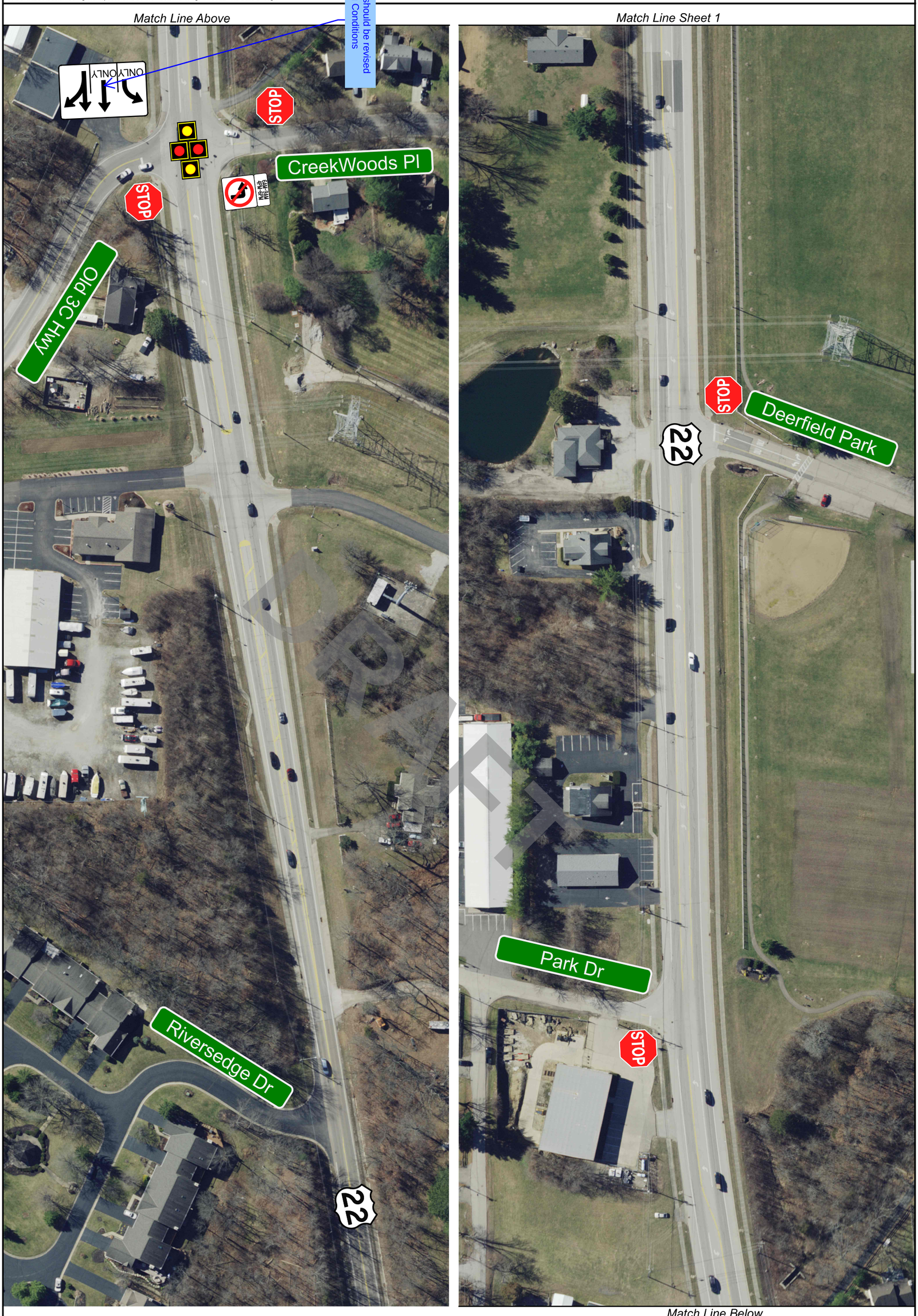


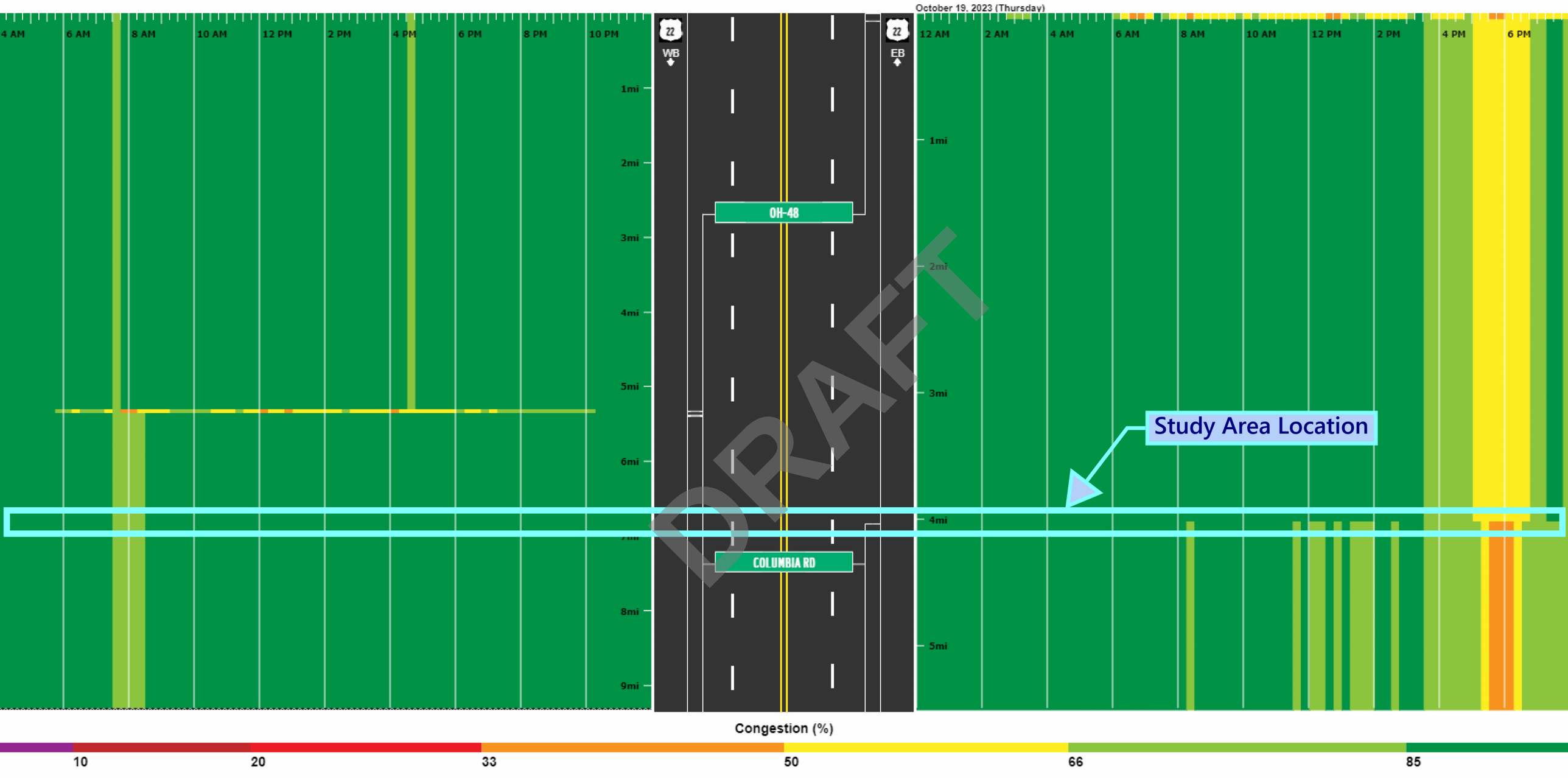
SHEET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
2	2	115913	DRJ #DATE	BRO	GANNETT FLEMING

EXISTING NO BUILD CONDITION

HORIZONTAL SCALE IN FEET
0 50
25 100

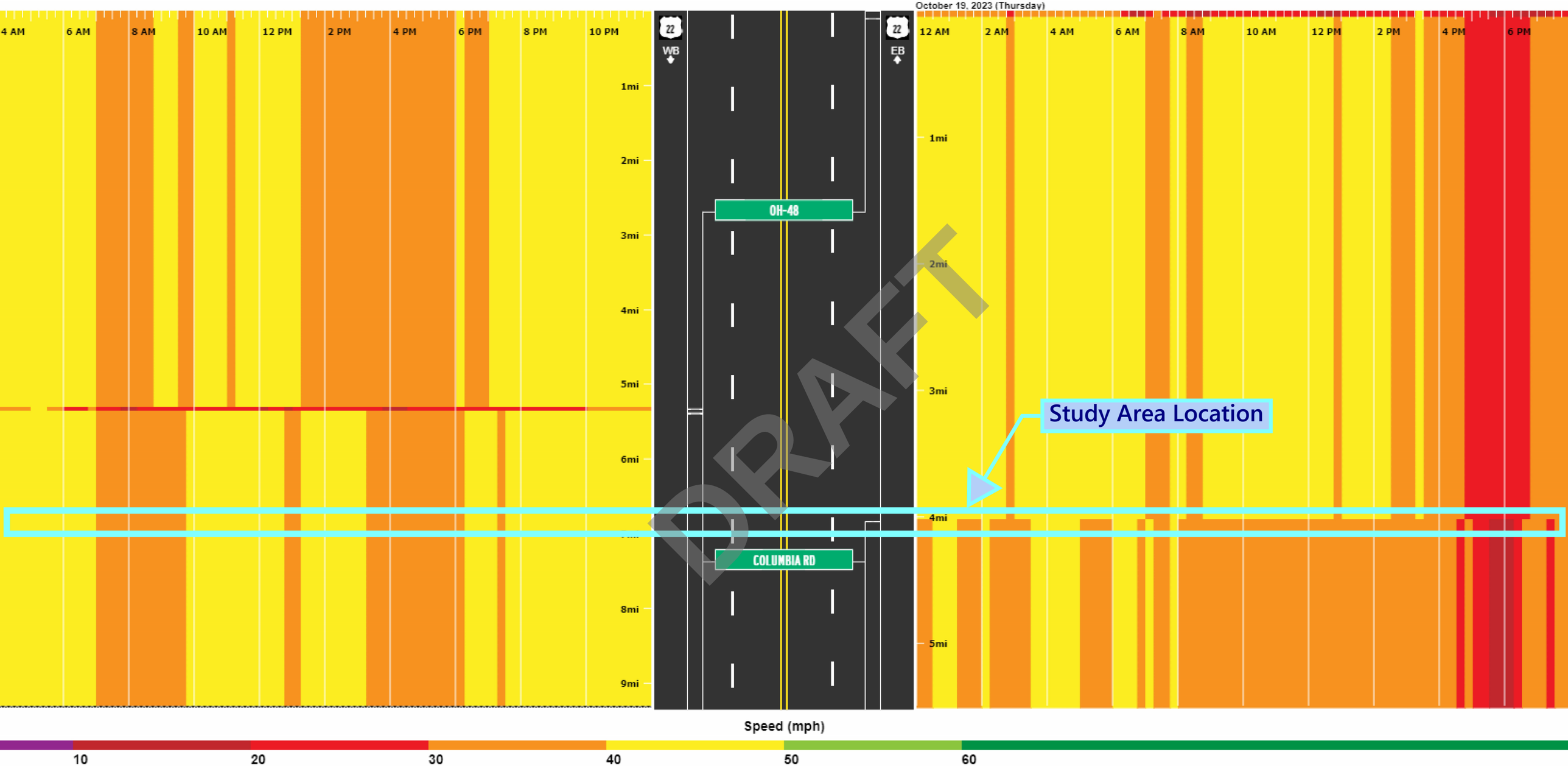
Congestion for US-22 between Columbia Rd and OH-48 using INRIX data

Averaged by 15 minutes for October 19, 2023



Speed for US-22 between Columbia Rd and OH-48 using INRIX data

Averaged by 15 minutes for October 19, 2023



Speed (mph)

10 20 30 40 50 60

APPENDIX B

Existing Traffic Counts

US 22 & Landen Dr. - TMC

Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

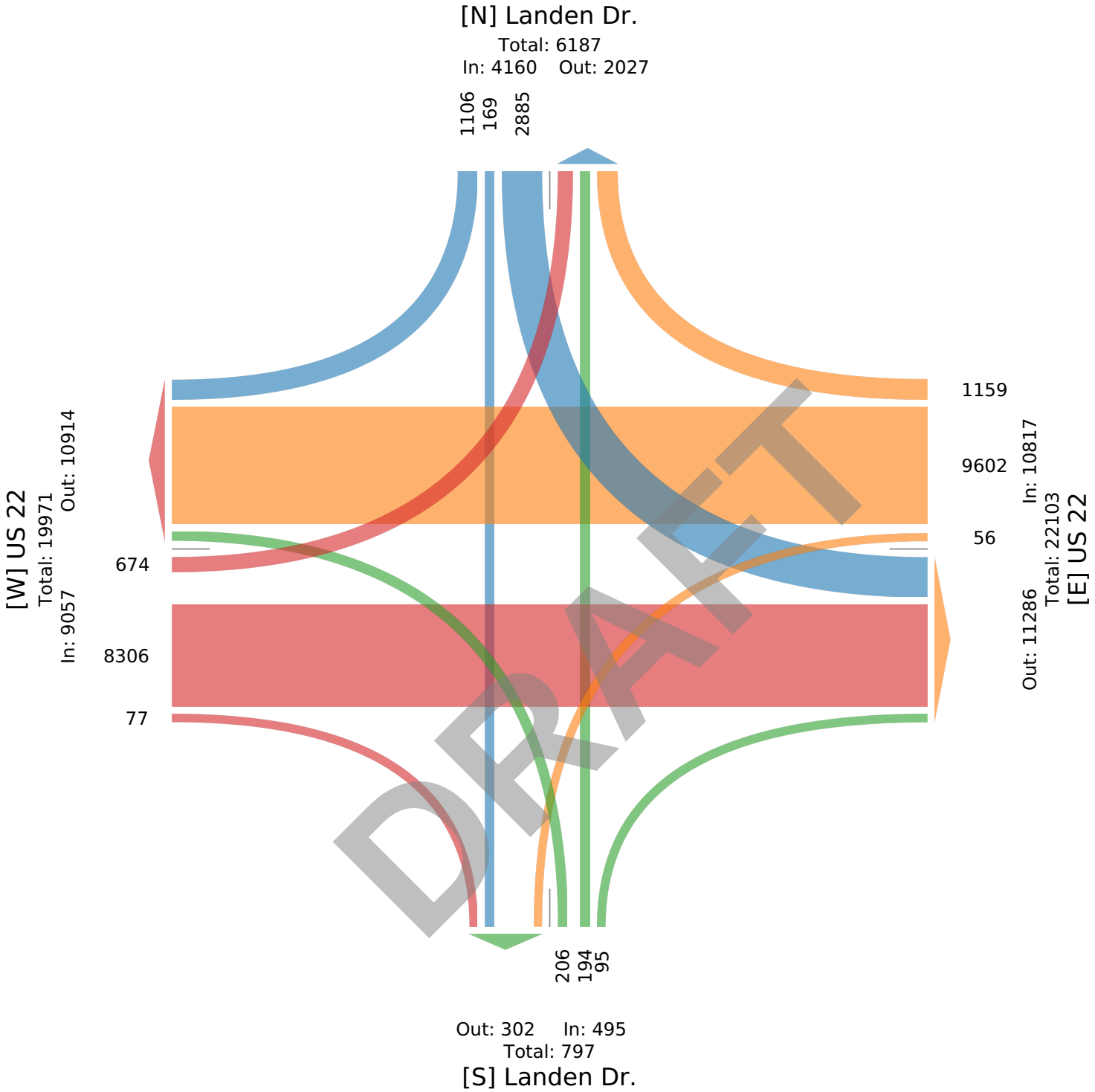
Leg	Landen Dr.					US 22					Landen Dr.					US 22					
Direction	Southbound					Westbound					Northbound					Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2023-10-19 6:00AM	6	0	3	0	**9**	10	133	0	0	**143**	0	0	1	0	**1**	0	32	2	0	**34**	**187**
6:15AM	10	0	8	0	**18**	12	179	0	0	**191**	0	2	1	0	**3**	0	30	1	0	**31**	**243**
6:30AM	20	0	15	0	**35**	14	180	1	0	**195**	2	3	1	0	**6**	0	57	2	0	**59**	**295**
6:45AM	20	1	11	0	**32**	21	260	0	0	**281**	1	6	4	0	**11**	0	55	6	0	**61**	**385**
Hourly Total	56	1	37	0	**94**	57	752	1	0	**810**	3	11	7	0	**21**	0	174	11	0	**185**	**1110**
7:00AM	11	1	15	0	**27**	26	272	0	0	**298**	0	9	4	0	**13**	1	66	8	0	**75**	**413**
7:15AM	29	2	17	0	**48**	25	341	1	0	**367**	2	5	4	0	**11**	0	61	3	0	**64**	**490**
7:30AM	36	2	25	0	**63**	22	323	2	0	**347**	1	2	8	0	**11**	0	64	10	0	**74**	**495**
7:45AM	41	2	26	0	**69**	33	264	0	0	**297**	2	5	6	0	**13**	0	100	14	0	**114**	**493**
Hourly Total	117	7	83	0	**207**	106	1200	3	0	**1309**	5	21	22	0	**48**	1	291	35	0	**327**	**1891**
8:00AM	34	2	27	0	**63**	26	284	1	0	**311**	1	10	10	0	**21**	2	85	7	0	**94**	**489**
8:15AM	22	1	20	0	**43**	47	296	0	0	**343**	1	1	10	0	**12**	3	71	13	0	**87**	**485**
8:30AM	15	0	27	0	**42**	24	277	1	0	**302**	1	2	5	0	**8**	1	86	12	0	**99**	**451**
8:45AM	23	3	33	0	**59**	27	243	2	0	**272**	1	5	7	0	**13**	2	96	22	0	**120**	**464**
Hourly Total	94	6	107	0	**207**	124	1100	4	0	**1228**	4	18	32	0	**54**	8	338	54	0	**400**	**1889**
9:00AM	25	2	33	0	**60**	23	209	2	0	**234**	1	0	3	0	**4**	1	109	13	0	**123**	**421**
9:15AM	16	2	36	0	**54**	24	203	1	0	**228**	5	4	3	0	**12**	1	106	7	0	**114**	**408**
9:30AM	13	1	22	0	**36**	26	199	1	0	**226**	0	4	3	0	**7**	3	108	11	0	**122**	**391**
9:45AM	16	5	24	0	**45**	28	189	0	0	**217**	2	2	1	0	**5**	1	104	6	0	**111**	**378**
Hourly Total	70	10	115	0	**195**	101	800	4	0	**905**	8	10	10	0	**28**	6	427	37	0	**470**	**1598**
10:00AM	20	1	24	0	**45**	25	165	1	0	**191**	4	3	1	0	**8**	1	114	6	0	**121**	**365**
10:15AM	10	1	35	0	**46**	23	161	0	0	**184**	1	5	3	0	**9**	0	112	10	0	**122**	**361**
10:30AM	18	0	36	0	**54**	11	153	0	0	**164**	2	4	4	0	**10**	0	122	10	0	**132**	**360**
10:45AM	24	2	30	0	**56**	22	178	0	0	**200**	0	1	2	0	**3**	1	119	15	0	**135**	**394**
Hourly Total	72	4	125	0	**201**	81	657	1	0	**739**	7	13	10	0	**30**	2	467	41	0	**510**	**1480**
11:00AM	24	2	29	0	**55**	20	164	2	0	**186**	3	2	2	0	**7**	2	124	11	0	**137**	**385**
11:15AM	20	4	30	0	**54**	18	185	0	0	**203**	1	1	3	0	**5**	2	155	12	0	**169**	**431**
11:30AM	23	2	52	0	**77**	24	164	1	0	**189**	0	2	4	0	**6**	1	146	14	0	**161**	**433**
11:45AM	19	3	56	0	**78**	21	146	3	0	**170**	1	5	4	0	**10**	1	171	19	0	**191**	**449**
Hourly Total	86	11	167	0	**264**	83	659	6	0	**748**	5	10	13	0	**28**	6	596	56	0	**658**	**1698**
12:00PM	21	2	51	0	**74**	26	162	0	0	**188**	5	6	2	0	**13**	2	167	11	0	**180**	**455**
12:15PM	25	3	50	0	**78**	29	172	1	0	**202**	1	3	3	0	**7**	1	165	13	0	**179**	**466**
12:30PM	24	7	45	0	**76**	25	162	1	0	**188**	0	1	5	0	**6**	3	192	16	0	**211**	**481**
12:45PM	22	1	52	0	**75**	22	157	1	0	**180**	5	5	2	0	**12**	1	174	19	0	**194**	**461**
Hourly Total	92	13	198	0	**303**	102	653	3	0	**758**	11	15	12	0	**38**	7	698	59	0	**764**	**1863**
1:00PM	22	5	52	0	**79**	17	128	0	0	**145**	0	6	1	0	**7**	0	183	20	0	**203**	**434**
1:15PM	12	4	37	0	**53**	26	141	1	0	**168**	3	2	1	0	**6**	2	188	18	0	**208**	**435**
1:30PM	11	2	48	0	**61**	19	144	2	0	**165**	0	4	1	0	**5**	2	185	9	0	**196**	**427**
1:45PM	20	2	58	0	**80**	27	165	1	0	**193**	1	2	3	0	**6**	2	183	13	0	**198**	**477**
Hourly Total	65	13	195	0	**273**	89	578	4	0	**671**	4	14	6	0	**24**	6	739	60	0	**805**	**1773**
2:00PM	19	3	58	0	**80**	19	134	3	0	**156**	2	0	1	0	**3**	2	189	16	0	**207**	**446**
2:15PM	23	3	46	0	**72**	18	144	1	0	**163**	1	2	2	0	**5**	1	212	17	0	**230**	**470**
2:30PM	26	6	64	0	**96**	20	159	1	0	**180**	4	3	3	0	**10**	2	212	17	0	**231**	**517**
2:45PM	23	6	65	0	**94**	25	182	1	0	**208**	2	9	4	0	**15**	1	232	19	0	**252**	**569**
Hourly Total	91	18	233	0	**342**	82	619	6	0	**707**	9	14	10	0	**33**	6	845	69	0	**920**	**2002**
3:00PM	21	6	70	0	**97**	23	151	4	0	**178**	1	1	4	0	**6**	3	271	16	0	**290**	**571**
3:15PM	14	3	99	0	**116**	23	146	1	0	**170**	1	3	4	0	**8**	5	232	18	0	**255**	**549**
3:30PM	17	5	108	0	**130**	20	162	0	0	**182**	2	3	2	0	**7**	3	249	20	0	**272**	**591**
3:45PM	27	4	107	0	**138**	24	146	2	0	**172**	2	7	3	0	**12**	0	266	16	0	**282**	**604**
Hourly Total	79	18	384	0	**481**	90	605	7	0	**702**	6	14	13	0	**33**	11	1018	70	0	**1099**	**2315**
4:00PM	21	6	92	0	**119**	28	142	1	0	**171**	0	2	7	0	**9**	5	273	26	0	**304**	**603**
4:15PM	21	10	123	0	**154**	24	132	2	0	**158**	3	4	7	0	**14**	3	231	18	0	**252**	**578**
4:30PM	17	3	115	0	**135**	21	170	4	0	**195**	2	5	1	0	**8**	1	240	14	0	**255**	**593**
4:45PM	28	4	88	0	**120**	19	178	0	0	**197**	5	5	13	0	**23**	1	197	8	0	**206**	**546**

Leg	Landen Dr.					US 22					Landen Dr.					US 22					
Direction	Southbound					Westbound					Northbound					Eastbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
Hourly Total	87	23	418	0	**528**	92	622	7	0	**721**	10	16	28	0	**54**	10	941	66	0	**1017**	**2320**
5:00PM	34	10	115	0	**159**	16	160	2	0	**178**	4	4	6	0	**14**	1	185	17	0	**203**	**554**
5:15PM	19	6	110	0	**135**	23	198	0	0	**221**	3	11	4	0	**18**	1	210	12	0	**223**	**597**
5:30PM	14	7	134	0	**155**	21	154	0	0	**175**	4	4	11	0	**19**	0	190	12	0	**202**	**551**
5:45PM	29	3	133	0	**165**	20	151	1	0	**172**	5	2	6	0	**13**	1	184	10	0	**195**	**545**
Hourly Total	96	26	492	0	**614**	80	663	3	0	**746**	16	21	27	0	**64**	3	769	51	0	**823**	**2247**
6:00PM	31	7	103	0	**141**	19	191	0	0	**210**	2	4	2	0	**8**	1	286	13	0	**300**	**659**
6:15PM	26	6	84	0	**116**	19	182	1	0	**202**	2	6	3	0	**11**	5	281	15	0	**301**	**630**
6:30PM	21	3	96	0	**120**	7	148	3	0	**158**	0	3	7	0	**10**	2	224	19	0	**245**	**533**
6:45PM	23	3	48	0	**74**	27	173	3	0	**203**	3	4	4	0	**11**	3	212	18	0	**233**	**521**
Hourly Total	101	19	331	0	**451**	72	694	7	0	**773**	7	17	16	0	**40**	11	1003	65	0	**1079**	**2343**
Total	1106	169	2885	0	**4160**	1159	9602	56	0	**10817**	95	194	206	0	**495**	77	8306	674	0	**9057**	**24529**
% Approach	26.6%	4.1%	69.4%	0%	**-**	10.7%	88.8%	0.5%	0%	**-**	19.2%	39.2%	41.6%	0%	**-**	0.9%	91.7%	7.4%	0%	**-**	-
% Total	4.5%	0.7%	11.8%	0%	**17.0%**	4.7%	39.1%	0.2%	0%	**44.1%**	0.4%	0.8%	0.8%	0%	**2.0%**	0.3%	33.9%	2.7%	0%	**36.9%**	-
Lights	1095	167	2860	0	**4122**	1133	9417	53	0	**10603**	88	187	199	0	**474**	77	8085	655	0	**8817**	24016
% Lights	99.0%	98.8%	99.1%	0%	**99.1%**	97.8%	98.1%	94.6%	0%	**98.0%**	92.6%	96.4%	96.6%	0%	**95.8%**	100%	97.3%	97.2%	0%	**97.4%**	97.9%
Articulated Trucks	1	0	1	0	**2**	1	22	0	0	**23**	0	0	0	0	**0**	0	33	1	0	**34**	59
% Articulated Trucks	0.1%	0%	0%	0%	**0%**	0.1%	0.2%	0%	0%	**0.2%**	0%	0%	0%	0%	**0%**	0%	0.4%	0.1%	0%	**0.4%**	0.2%
Buses and Single-Unit Trucks	10	2	24	0	**36**	25	163	3	0	**191**	7	7	7	0	**21**	0	188	18	0	**206**	454
% Buses and Single-Unit Trucks	0.9%	1.2%	0.8%	0%	**0.9%**	2.2%	1.7%	5.4%	0%	**1.8%**	7.4%	3.6%	3.4%	0%	**4.2%**	0%	2.3%	2.7%	0%	**2.3%**	1.9%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Landen Dr. - TMC
Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen Dr. - TMC

Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

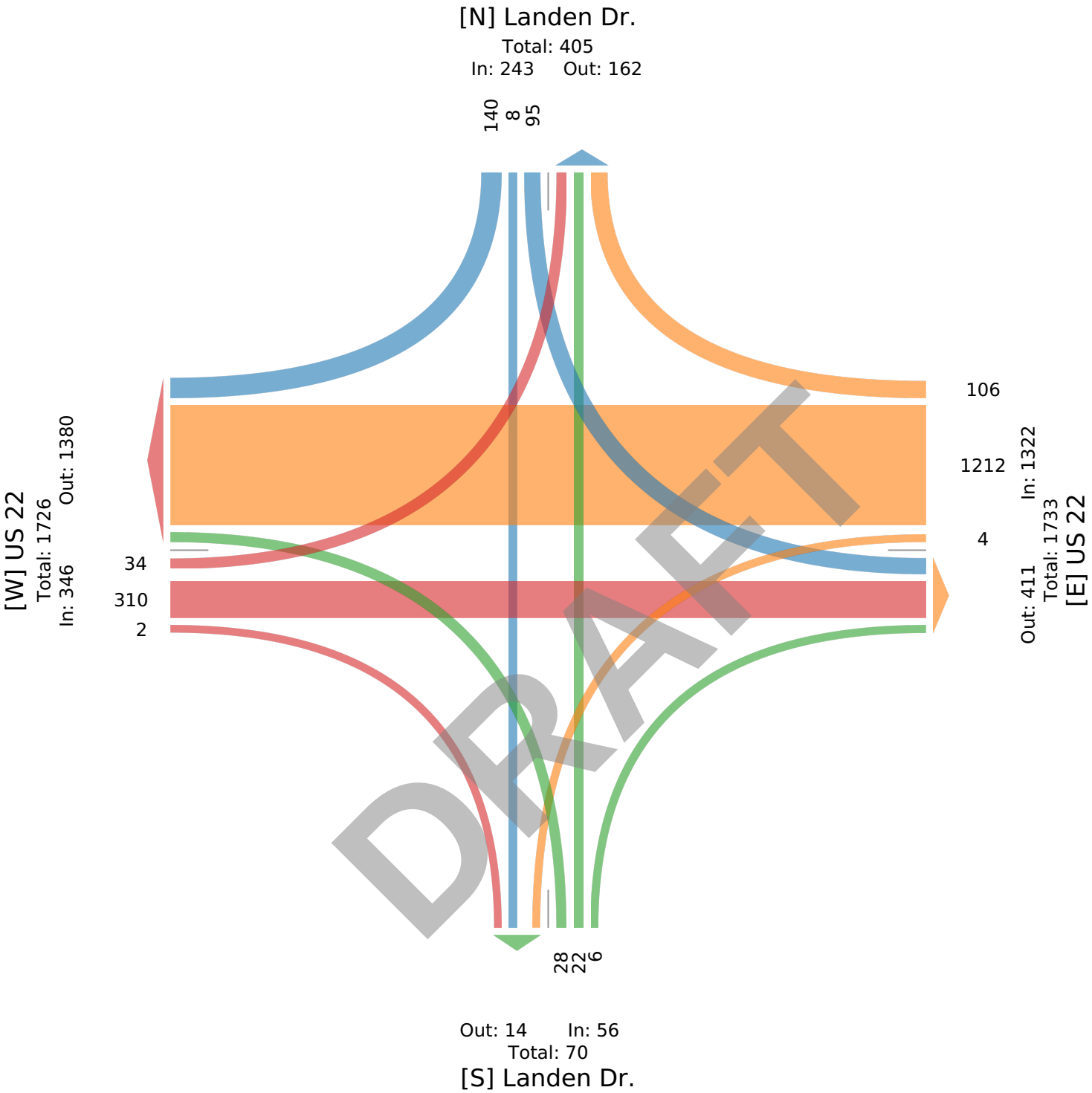
Leg	Landen Dr.					US 22					Landen Dr.					US 22					
Direction	Southbound					Westbound					Northbound					Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2023-10-19 7:15AM	29	2	17	0	**48**	25	341	1	0	**367**	2	5	4	0	**11**	0	61	3	0	**64**	**490**
7:30AM	36	2	25	0	**63**	22	323	2	0	**347**	1	2	8	0	**11**	0	64	10	0	**74**	**495**
7:45AM	41	2	26	0	**69**	33	264	0	0	**297**	2	5	6	0	**13**	0	100	14	0	**114**	**493**
8:00AM	34	2	27	0	**63**	26	284	1	0	**311**	1	10	10	0	**21**	2	85	7	0	**94**	**489**
Total	140	8	95	0	**243**	106	1212	4	0	**1322**	6	22	28	0	**56**	2	310	34	0	**346**	**1967**
% Approach	57.6%	3.3%	39.1%	0%	**-**	8.0%	91.7%	0.3%	0%	**-**	10.7%	39.3%	50.0%	0%	**-**	0.6%	89.6%	9.8%	0%	**-**	-
% Total	7.1%	0.4%	4.8%	0%	**12.4%**	5.4%	61.6%	0.2%	0%	**67.2%**	0.3%	1.1%	1.4%	0%	**2.8%**	0.1%	15.8%	1.7%	0%	**17.6%**	-
PHF	0.854	1.000	0.880	-	**0.880**	0.803	0.889	0.500	-	**0.901**	0.750	0.550	0.700	-	**0.667**	0.250	0.775	0.607	-	**0.759**	0.993
Lights	138	8	92	0	**238**	104	1193	4	0	**1301**	6	22	25	0	**53**	2	284	31	0	**317**	1909
% Lights	98.6%	100%	96.8%	0%	**97.9%**	98.1%	98.4%	100%	0%	**98.4%**	100%	100%	89.3%	0%	**94.6%**	100%	91.6%	91.2%	0%	**91.6%**	97.1%
Articulated Trucks	1	0	0	0	**1**	0	2	0	0	**2**	0	0	0	0	**0**	0	2	0	0	**2**	5
% Articulated Trucks	0.7%	0%	0%	0%	**0.4%**	0%	0.2%	0%	0%	**0.2%**	0%	0%	0%	0%	**0%**	0%	0.6%	0%	0%	**0.6%**	0.3%
Buses and Single-Unit Trucks	1	0	3	0	**4**	2	17	0	0	**19**	0	0	3	0	**3**	0	24	3	0	**27**	53
% Buses and Single-Unit Trucks	0.7%	0%	3.2%	0%	**1.6%**	1.9%	1.4%	0%	0%	**1.4%**	0%	0%	10.7%	0%	**5.4%**	0%	7.7%	8.8%	0%	**7.8%**	2.7%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Landen Dr. - TMC
Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen Dr. - TMC

Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

LOUKAS engineering
TRAFFIC DATA & CONSULTING

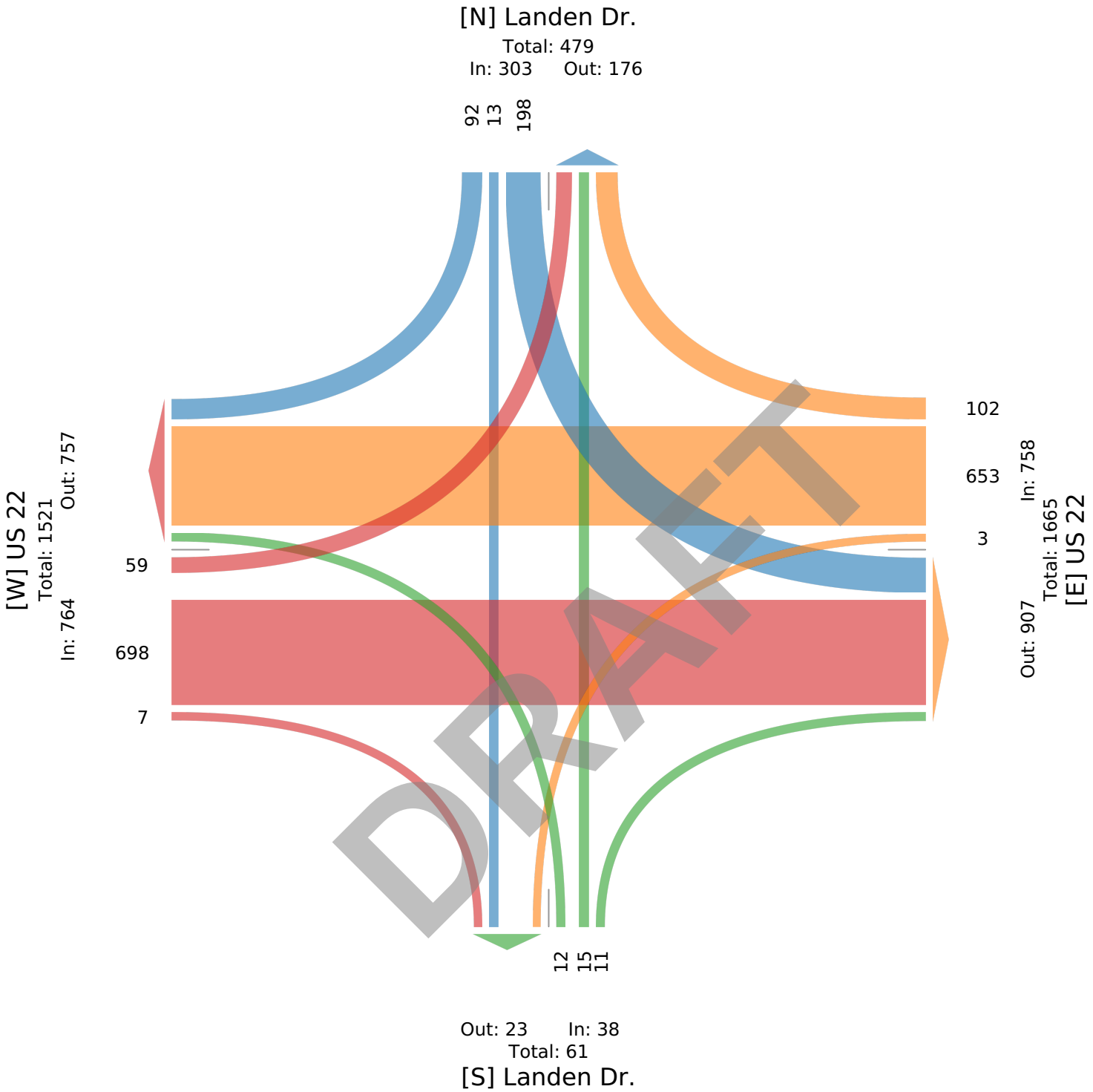
Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg / Direction	Landen Dr. Southbound					US 22 Westbound					Landen Dr. Northbound					US 22 Eastbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
2023-10-19 12:00PM	21	2	51	0	**74**	26	162	0	0	**188**	5	6	2	0	**13**	2	167	11	0	**180**	**455**
12:15PM	25	3	50	0	**78**	29	172	1	0	**202**	1	3	3	0	**7**	1	165	13	0	**179**	**466**
12:30PM	24	7	45	0	**76**	25	162	1	0	**188**	0	1	5	0	**6**	3	192	16	0	**211**	**481**
12:45PM	22	1	52	0	**75**	22	157	1	0	**180**	5	5	2	0	**12**	1	174	19	0	**194**	**461**
Total	92	13	198	0	**303**	102	653	3	0	**758**	11	15	12	0	**38**	7	698	59	0	**764**	**1863**
% Approach	30.4%	4.3%	65.3%	0%	**-**	13.5%	86.1%	0.4%	0%	**-**	28.9%	39.5%	31.6%	0%	**-**	0.9%	91.4%	7.7%	0%	**-**	-
% Total	4.9%	0.7%	10.6%	0%	**16.3%**	5.5%	35.1%	0.2%	0%	**40.7%**	0.6%	0.8%	0.6%	0%	**2.0%**	0.4%	37.5%	3.2%	0%	**41.0%**	-
PHF	0.920	0.464	0.952	-	**0.971**	0.879	0.949	0.750	-	**0.938**	0.550	0.625	0.600	-	**0.731**	0.583	0.909	0.776	-	**0.905**	0.968
Lights	92	13	195	0	**300**	101	633	3	0	**737**	11	15	12	0	**38**	7	674	58	0	**739**	1814
% Lights	100%	100%	98.5%	0%	**99.0%**	99.0%	96.9%	100%	0%	**97.2%**	100%	100%	100%	0%	**100%**	100%	96.6%	98.3%	0%	**96.7%**	97.4%
Articulated Trucks	0	0	0	0	**0**	0	3	0	0	**3**	0	0	0	0	**0**	0	3	0	0	**3**	6
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0.5%	0%	0%	**0.4%**	0%	0%	0%	0%	**0%**	0%	0.4%	0%	0%	**0.4%**	0.3%
Buses and Single-Unit Trucks	0	0	3	0	**3**	1	17	0	0	**18**	0	0	0	0	**0**	0	21	1	0	**22**	43
% Buses and Single-Unit Trucks	0%	0%	1.5%	0%	**1.0%**	1.0%	2.6%	0%	0%	**2.4%**	0%	0%	0%	0%	**0%**	0%	3.0%	1.7%	0%	**2.9%**	2.3%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Landen Dr. - TMC
Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen Dr. - TMC

Thu Oct 19, 2023
PM Peak (5:30 PM - 6:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

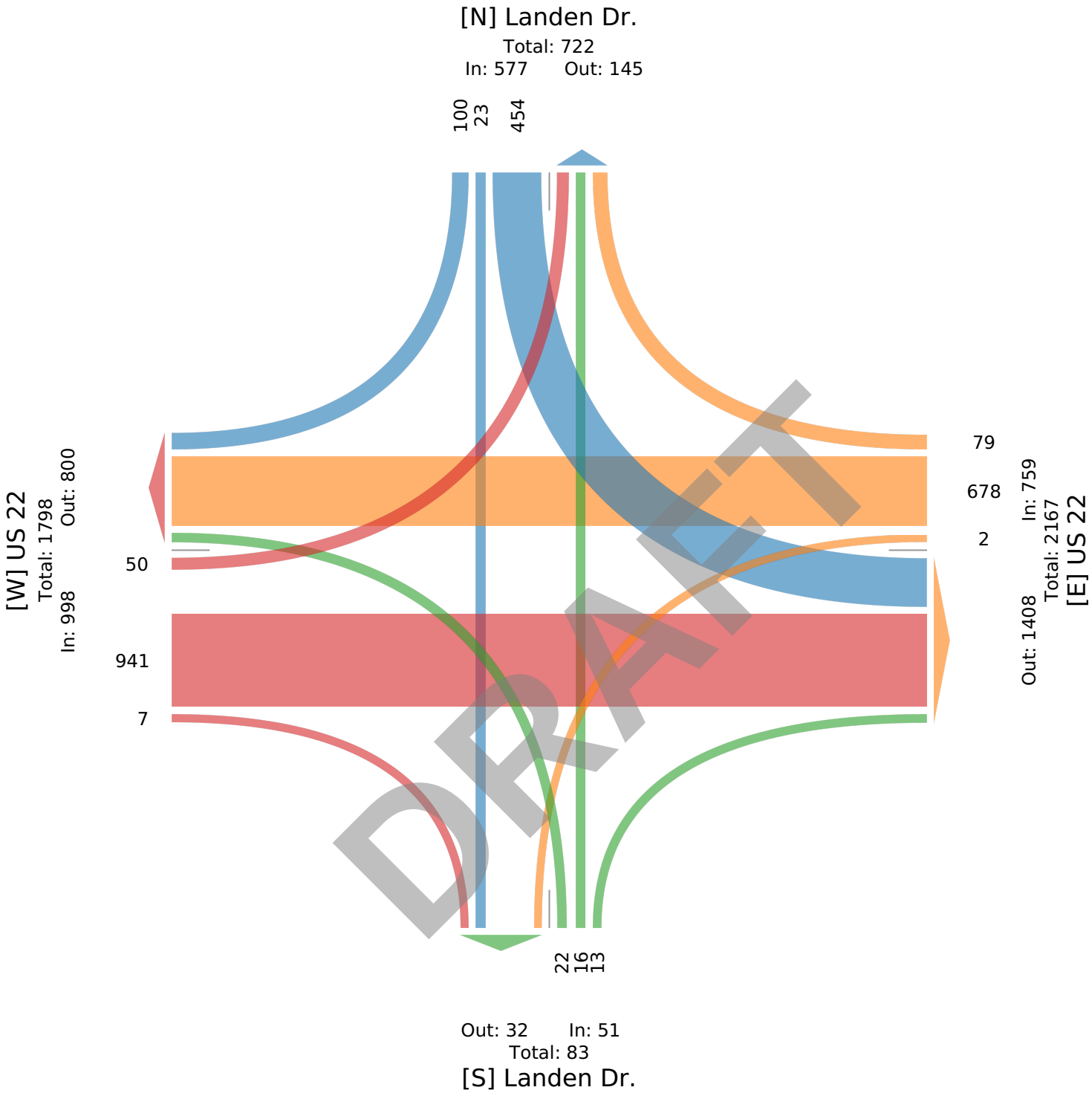
Leg / Direction	Landen Dr. Southbound					US 22 Westbound					Landen Dr. Northbound					US 22 Eastbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
2023-10-19 5:30PM	14	7	134	0	**155**	21	154	0	0	**175**	4	4	11	0	**19**	0	190	12	0	**202**	**551**
5:45PM	29	3	133	0	**165**	20	151	1	0	**172**	5	2	6	0	**13**	1	184	10	0	**195**	**545**
6:00PM	31	7	103	0	**141**	19	191	0	0	**210**	2	4	2	0	**8**	1	286	13	0	**300**	**659**
6:15PM	26	6	84	0	**116**	19	182	1	0	**202**	2	6	3	0	**11**	5	281	15	0	**301**	**630**
Total	100	23	454	0	**577**	79	678	2	0	**759**	13	16	22	0	**51**	7	941	50	0	**998**	**2385**
% Approach	17.3%	4.0%	78.7%	0%	**-**	10.4%	89.3%	0.3%	0%	**-**	25.5%	31.4%	43.1%	0%	**-**	0.7%	94.3%	5.0%	0%	**-**	-
% Total	4.2%	1.0%	19.0%	0%	**24.2%**	3.3%	28.4%	0.1%	0%	**31.8%**	0.5%	0.7%	0.9%	0%	**2.1%**	0.3%	39.5%	2.1%	0%	**41.8%**	-
PHF	0.806	0.821	0.847	-	**0.874**	0.940	0.887	0.500	-	**0.904**	0.650	0.667	0.500	-	**0.671**	0.350	0.823	0.833	-	**0.829**	0.905
Lights	100	23	453	0	**576**	79	671	2	0	**752**	13	16	22	0	**51**	7	936	50	0	**993**	2372
% Lights	100%	100%	99.8%	0%	**99.8%**	100%	99.0%	100%	0%	**99.1%**	100%	100%	100%	0%	**100%**	100%	99.5%	100%	0%	**99.5%**	99.5%
Articulated Trucks	0	0	1	0	**1**	0	1	0	0	**1**	0	0	0	0	**0**	0	1	0	0	**1**	3
% Articulated Trucks	0%	0%	0.2%	0%	**0.2%**	0%	0.1%	0%	0%	**0.1%**	0%	0%	0%	0%	**0%**	0%	0.1%	0%	0%	**0.1%**	0.1%
Buses and Single-Unit Trucks	0	0	0	0	**0**	0	6	0	0	**6**	0	0	0	0	**0**	0	4	0	0	**4**	10
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0.9%	0%	0%	**0.8%**	0%	0%	0%	0%	**0%**	0%	0.4%	0%	0%	**0.4%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Landen Dr. - TMC
Thu Oct 19, 2023
PM Peak (5:30 PM - 6:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124437, Location: 39.310105, -84.272689

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Old Mill Rd. - TMC

Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	US 22				Old Mill Rd.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 6:00AM	140	0	0	**140**	2	6	0	**8**	1	35	0	**36**	**184**
6:15AM	176	1	0	**177**	3	8	0	**11**	3	37	0	**40**	**228**
6:30AM	187	2	0	**189**	7	5	0	**12**	5	68	0	**73**	**274**
6:45AM	277	3	0	**280**	2	12	0	**14**	3	64	0	**67**	**361**
Hourly Total	780	6	0	**786**	14	31	0	**45**	12	204	0	**216**	**1047**
7:00AM	289	0	0	**289**	5	8	0	**13**	2	80	0	**82**	**384**
7:15AM	358	1	0	**359**	3	11	0	**14**	9	71	0	**80**	**453**
7:30AM	348	2	0	**350**	2	5	0	**7**	9	79	0	**88**	**445**
7:45AM	297	1	0	**298**	2	8	0	**10**	5	118	0	**123**	**431**
Hourly Total	1292	4	0	**1296**	12	32	0	**44**	25	348	0	**373**	**1713**
8:00AM	315	0	0	**315**	2	9	0	**11**	3	110	0	**113**	**439**
8:15AM	311	2	0	**313**	1	13	0	**14**	10	86	0	**96**	**423**
8:30AM	291	2	0	**293**	1	8	0	**9**	6	110	0	**116**	**418**
8:45AM	266	1	0	**267**	0	9	0	**9**	3	128	0	**131**	**407**
Hourly Total	1183	5	0	**1188**	4	39	0	**43**	22	434	0	**456**	**1687**
9:00AM	232	3	0	**235**	3	7	0	**10**	9	133	0	**142**	**387**
9:15AM	227	2	0	**229**	3	7	0	**10**	8	140	0	**148**	**387**
9:30AM	215	1	0	**216**	1	13	0	**14**	8	126	0	**134**	**364**
9:45AM	216	2	0	**218**	2	4	0	**6**	3	120	0	**123**	**347**
Hourly Total	890	8	0	**898**	9	31	0	**40**	28	519	0	**547**	**1485**
10:00AM	186	1	0	**187**	3	4	0	**7**	4	138	0	**142**	**336**
10:15AM	177	1	0	**178**	0	3	0	**3**	10	136	0	**146**	**327**
10:30AM	164	0	0	**164**	1	3	0	**4**	7	160	0	**167**	**335**
10:45AM	188	0	0	**188**	1	7	0	**8**	7	142	0	**149**	**345**
Hourly Total	715	2	0	**717**	5	17	0	**22**	28	576	0	**604**	**1343**
11:00AM	168	1	0	**169**	1	8	0	**9**	6	152	0	**158**	**336**
11:15AM	190	2	0	**192**	2	8	0	**10**	4	176	0	**180**	**382**
11:30AM	189	1	0	**190**	2	4	0	**6**	9	191	0	**200**	**396**
11:45AM	159	1	0	**160**	3	8	0	**11**	12	215	0	**227**	**398**
Hourly Total	706	5	0	**711**	8	28	0	**36**	31	734	0	**765**	**1512**
12:00PM	187	1	0	**188**	2	5	0	**7**	9	217	0	**226**	**421**
12:15PM	190	1	0	**191**	2	9	0	**11**	8	206	0	**214**	**416**
12:30PM	188	1	0	**189**	2	9	0	**11**	14	215	0	**229**	**429**
12:45PM	167	1	0	**168**	6	7	0	**13**	11	217	0	**228**	**409**
Hourly Total	732	4	0	**736**	12	30	0	**42**	42	855	0	**897**	**1675**
1:00PM	140	2	0	**142**	2	4	0	**6**	13	224	0	**237**	**385**
1:15PM	160	2	0	**162**	2	7	0	**9**	5	221	0	**226**	**397**
1:30PM	168	3	0	**171**	3	4	0	**7**	6	234	0	**240**	**418**
1:45PM	181	1	0	**182**	4	8	0	**12**	7	234	0	**241**	**435**
Hourly Total	649	8	0	**657**	11	23	0	**34**	31	913	0	**944**	**1635**
2:00PM	150	1	0	**151**	3	6	0	**9**	15	231	0	**246**	**406**
2:15PM	164	2	0	**166**	0	7	0	**7**	12	252	0	**264**	**437**
2:30PM	170	2	0	**172**	4	4	0	**8**	11	272	0	**283**	**463**
2:45PM	202	3	0	**205**	0	3	0	**3**	9	291	0	**300**	**508**
Hourly Total	686	8	0	**694**	7	20	0	**27**	47	1046	0	**1093**	**1814**
3:00PM	177	1	0	**178**	1	4	0	**5**	19	317	0	**336**	**519**
3:15PM	171	2	0	**173**	3	9	0	**12**	16	315	0	**331**	**516**
3:30PM	173	2	0	**175**	2	3	0	**5**	19	339	0	**358**	**538**
3:45PM	181	2	0	**183**	5	1	0	**6**	21	335	0	**356**	**545**
Hourly Total	702	7	0	**709**	11	17	0	**28**	75	1306	0	**1381**	**2118**
4:00PM	164	1	0	**165**	4	4	0	**8**	16	348	0	**364**	**537**
4:15PM	163	1	0	**164**	3	1	0	**4**	16	336	0	**352**	**520**
4:30PM	200	1	0	**201**	7	2	0	**9**	12	340	0	**352**	**562**
4:45PM	184	2	0	**186**	7	4	0	**11**	11	276	0	**287**	**484**

Leg	US 22				Old Mill Rd.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
Hourly Total	711	5	0	**716**	21	11	0	**32**	55	1300	0	**1355**	**2103**
5:00PM	189	7	0	**196**	4	4	0	**8**	16	286	0	**302**	**506**
5:15PM	208	6	0	**214**	9	1	0	**10**	19	306	0	**325**	**549**
5:30PM	170	2	0	**172**	11	5	0	**16**	10	317	0	**327**	**515**
5:45PM	174	2	0	**176**	14	2	0	**16**	12	317	0	**329**	**521**
Hourly Total	741	17	0	**758**	38	12	0	**50**	57	1226	0	**1283**	**2091**
6:00PM	202	0	0	**202**	2	4	0	**6**	17	362	0	**379**	**587**
6:15PM	192	1	0	**193**	6	5	0	**11**	13	347	0	**360**	**564**
6:30PM	163	0	0	**163**	5	5	0	**10**	11	338	0	**349**	**522**
6:45PM	189	6	0	**195**	5	6	0	**11**	14	248	0	**262**	**468**
Hourly Total	746	7	0	**753**	18	20	0	**38**	55	1295	0	**1350**	**2141**
Total	10533	86	0	**10619**	170	311	0	**481**	508	10756	0	**11264**	**22364**
% Approach	99.2%	0.8%	0%	**-**	35.3%	64.7%	0%	**-**	4.5%	95.5%	0%	**-**	-
% Total	47.1%	0.4%	0%	**47.5%**	0.8%	1.4%	0%	**2.2%**	2.3%	48.1%	0%	**50.4%**	-
Lights	10321	80	0	**10401**	159	303	0	**462**	493	10522	0	**11015**	21878
% Lights	98.0%	93.0%	0%	**97.9%**	93.5%	97.4%	0%	**96.0%**	97.0%	97.8%	0%	**97.8%**	97.8%
Articulated Trucks	30	0	0	**30**	0	0	0	**0**	0	30	0	**30**	60
% Articulated Trucks	0.3%	0%	0%	**0.3%**	0%	0%	0%	**0%**	0%	0.3%	0%	**0.3%**	0.3%
Buses and Single-Unit Trucks	182	6	0	**188**	11	8	0	**19**	15	204	0	**219**	426
% Buses and Single-Unit Trucks	1.7%	7.0%	0%	**1.8%**	6.5%	2.6%	0%	**4.0%**	3.0%	1.9%	0%	**1.9%**	1.9%

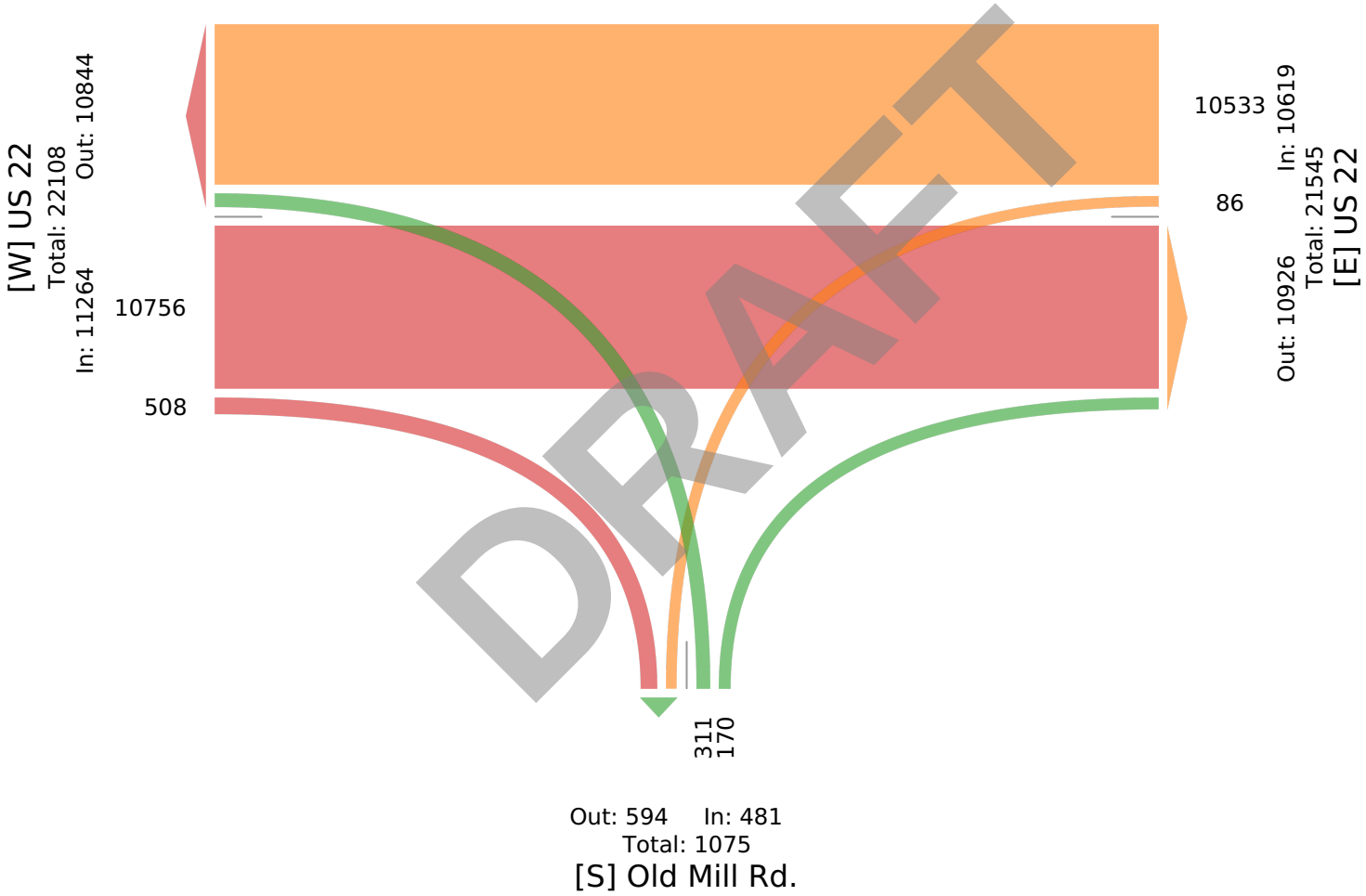
*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Old Mill Rd. - TMC

Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Old Mill Rd. - TMC

Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

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232 19th St. NW, Canton, OH, 44709, US

Leg / Direction	US 22 Westbound				Old Mill Rd. Northbound				US 22 Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 7:15AM	358	1	0	**359**	3	11	0	**14**	9	71	0	**80**	**453**
7:30AM	348	2	0	**350**	2	5	0	**7**	9	79	0	**88**	**445**
7:45AM	297	1	0	**298**	2	8	0	**10**	5	118	0	**123**	**431**
8:00AM	315	0	0	**315**	2	9	0	**11**	3	110	0	**113**	**439**
Total	1318	4	0	**1322**	9	33	0	**42**	26	378	0	**404**	**1768**
% Approach	99.7%	0.3%	0%	**-**	21.4%	78.6%	0%	**-**	6.4%	93.6%	0%	**-**	-
% Total	74.5%	0.2%	0%	**74.8%**	0.5%	1.9%	0%	**2.4%**	1.5%	21.4%	0%	**22.9%**	-
PHF	0.920	0.500	-	**0.921**	0.750	0.750	-	**0.750**	0.722	0.801	-	**0.821**	0.976
Lights	1291	3	0	**1294**	8	30	0	**38**	25	349	0	**374**	1706
% Lights	98.0%	75.0%	0%	**97.9%**	88.9%	90.9%	0%	**90.5%**	96.2%	92.3%	0%	**92.6%**	96.5%
Articulated Trucks	4	0	0	**4**	0	0	0	**0**	0	2	0	**2**	6
% Articulated Trucks	0.3%	0%	0%	**0.3%**	0%	0%	0%	**0%**	0%	0.5%	0%	**0.5%**	0.3%
Buses and Single-Unit Trucks	23	1	0	**24**	1	3	0	**4**	1	27	0	**28**	56
% Buses and Single-Unit Trucks	1.7%	25.0%	0%	**1.8%**	11.1%	9.1%	0%	**9.5%**	3.8%	7.1%	0%	**6.9%**	3.2%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Old Mill Rd. - TMC
Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

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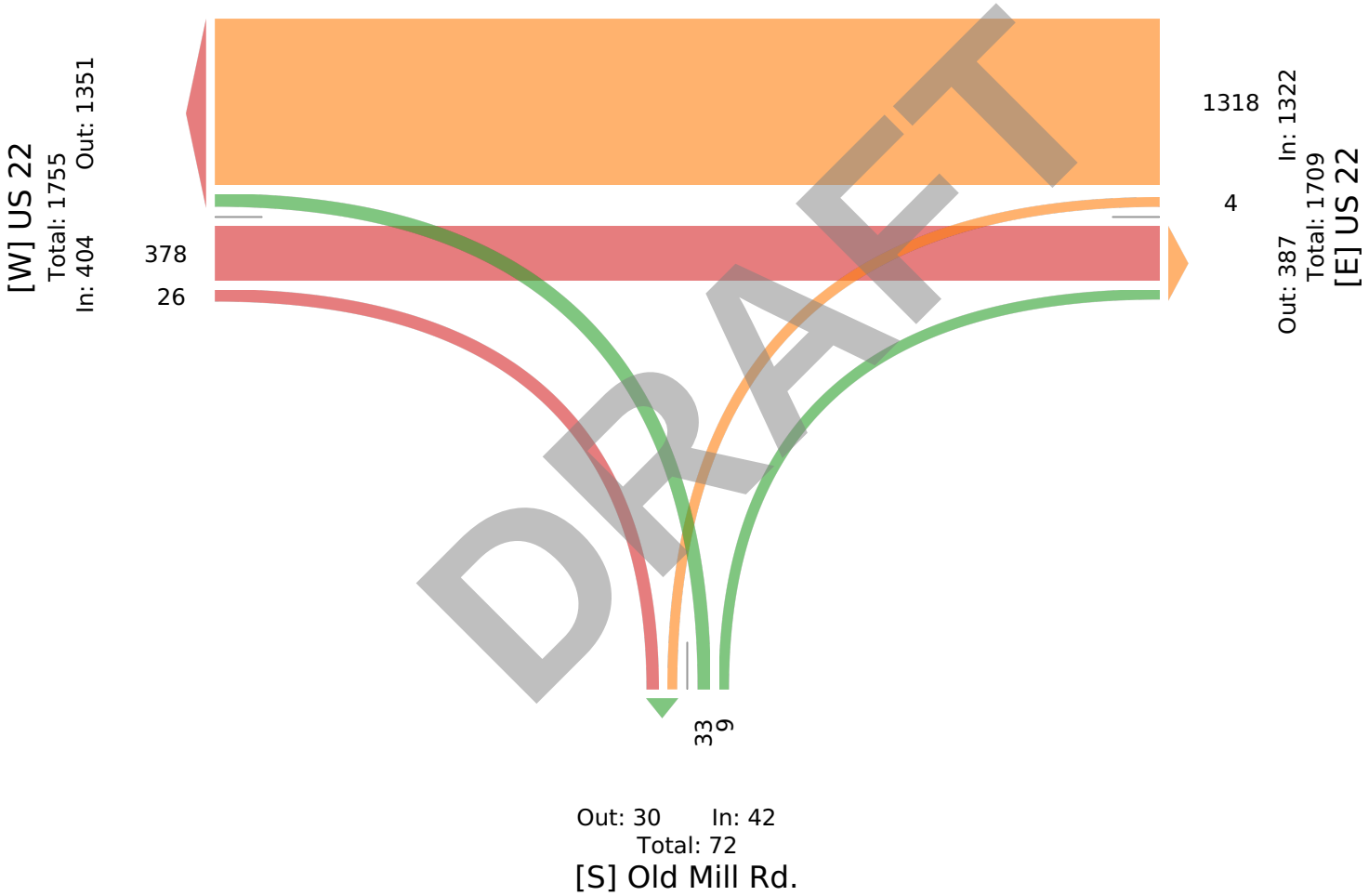


US 22 & Old Mill Rd. - TMC

Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

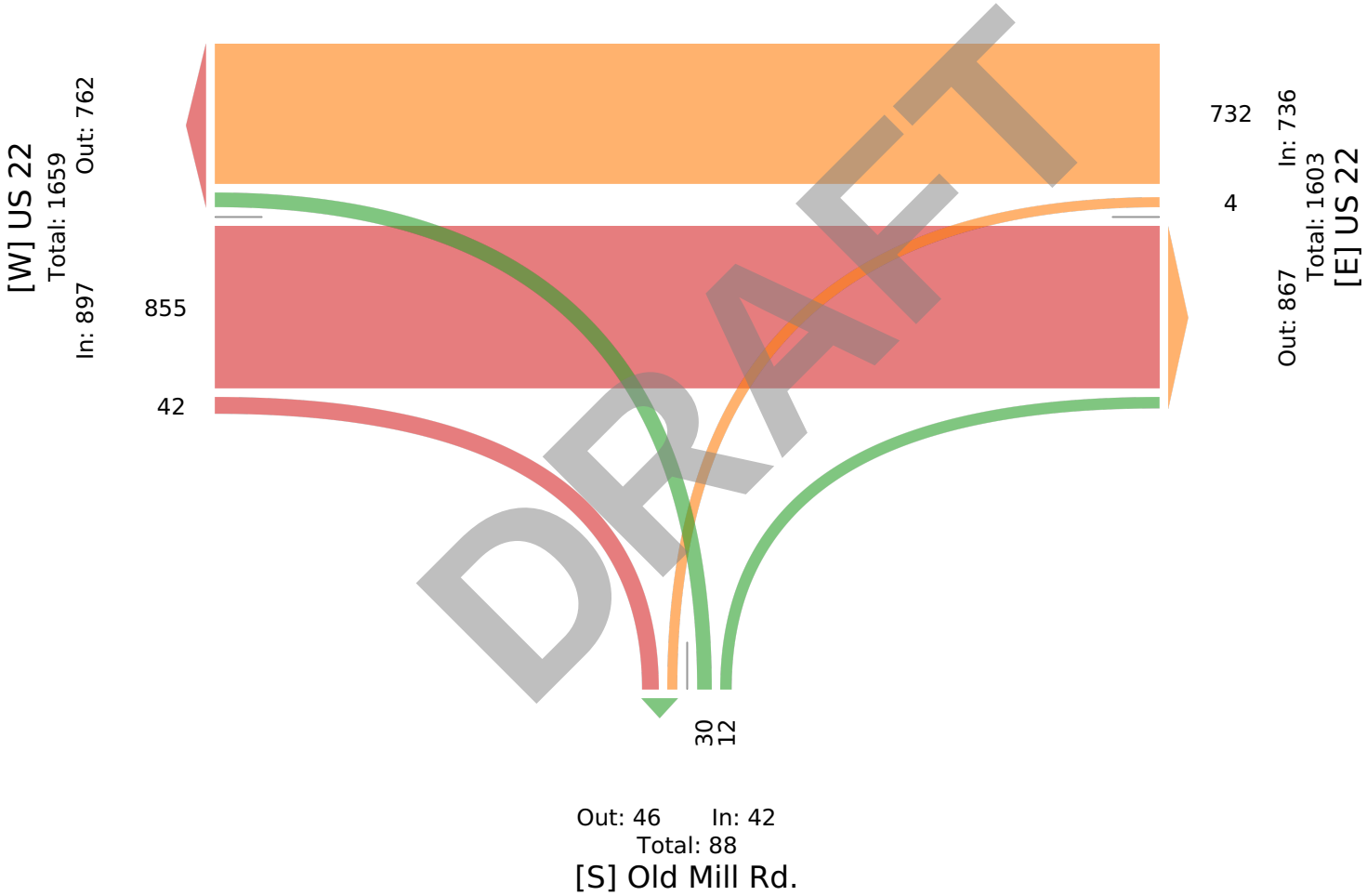
Leg	US 22				Old Mill Rd.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 12:00PM	187	1	0	**188**	2	5	0	**7**	9	217	0	**226**	**421**
12:15PM	190	1	0	**191**	2	9	0	**11**	8	206	0	**214**	**416**
12:30PM	188	1	0	**189**	2	9	0	**11**	14	215	0	**229**	**429**
12:45PM	167	1	0	**168**	6	7	0	**13**	11	217	0	**228**	**409**
Total	732	4	0	**736**	12	30	0	**42**	42	855	0	**897**	**1675**
% Approach	99.5%	0.5%	0%	**-**	28.6%	71.4%	0%	**-**	4.7%	95.3%	0%	**-**	-
% Total	43.7%	0.2%	0%	**43.9%**	0.7%	1.8%	0%	**2.5%**	2.5%	51.0%	0%	**53.6%**	-
PHF	0.963	1.000	-	**0.963**	0.500	0.833	-	**0.808**	0.750	0.985	-	**0.979**	0.976
Lights	713	3	0	**716**	12	30	0	**42**	41	826	0	**867**	1625
% Lights	97.4%	75.0%	0%	**97.3%**	100%	100%	0%	**100%**	97.6%	96.6%	0%	**96.7%**	97.0%
Articulated Trucks	3	0	0	**3**	0	0	0	**0**	0	4	0	**4**	7
% Articulated Trucks	0.4%	0%	0%	**0.4%**	0%	0%	0%	**0%**	0%	0.5%	0%	**0.4%**	0.4%
Buses and Single-Unit Trucks	16	1	0	**17**	0	0	0	**0**	1	25	0	**26**	43
% Buses and Single-Unit Trucks	2.2%	25.0%	0%	**2.3%**	0%	0%	0%	**0%**	2.4%	2.9%	0%	**2.9%**	2.6%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Old Mill Rd. - TMC
Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Old Mill Rd. - TMC

Thu Oct 19, 2023
PM Peak (5:45 PM - 6:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

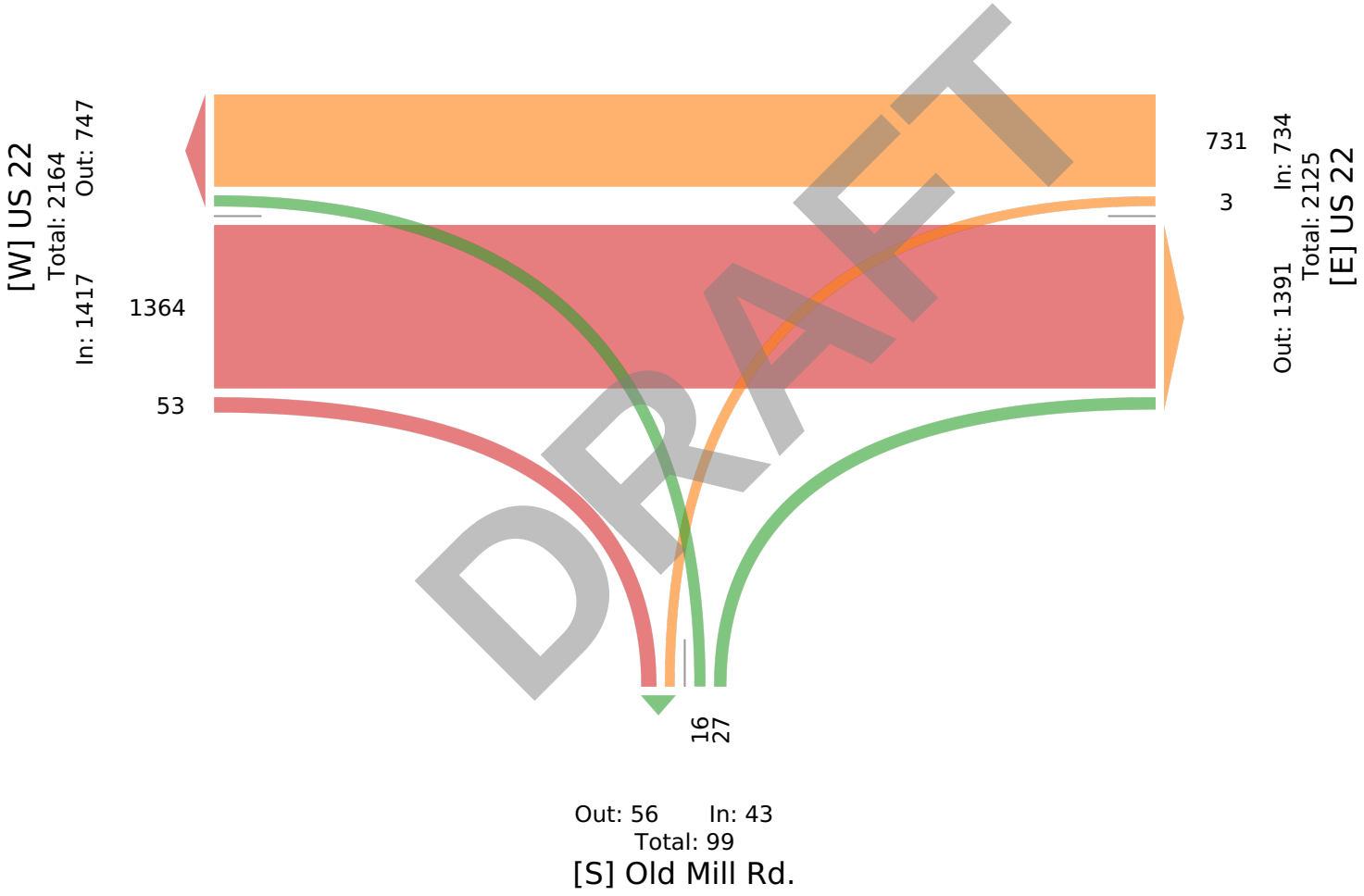
Leg	US 22				Old Mill Rd.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 5:45PM	174	2	0	**176**	14	2	0	**16**	12	317	0	**329**	**521**
6:00PM	202	0	0	**202**	2	4	0	**6**	17	362	0	**379**	**587**
6:15PM	192	1	0	**193**	6	5	0	**11**	13	347	0	**360**	**564**
6:30PM	163	0	0	**163**	5	5	0	**10**	11	338	0	**349**	**522**
Total	731	3	0	**734**	27	16	0	**43**	53	1364	0	**1417**	**2194**
% Approach	99.6%	0.4%	0%	**-**	62.8%	37.2%	0%	**-**	3.7%	96.3%	0%	**-**	-
% Total	33.3%	0.1%	0%	**33.5%**	1.2%	0.7%	0%	**2.0%**	2.4%	62.2%	0%	**64.6%**	-
PHF	0.905	0.375	-	**0.908**	0.482	0.800	-	**0.672**	0.779	0.942	-	**0.935**	0.934
Lights	723	3	0	**726**	27	16	0	**43**	53	1361	0	**1414**	2183
% Lights	98.9%	100%	0%	**98.9%**	100%	100%	0%	**100%**	100%	99.8%	0%	**99.8%**	99.5%
Articulated Trucks	1	0	0	**1**	0	0	0	**0**	0	2	0	**2**	3
% Articulated Trucks	0.1%	0%	0%	**0.1%**	0%	0%	0%	**0%**	0%	0.1%	0%	**0.1%**	0.1%
Buses and Single-Unit Trucks	7	0	0	**7**	0	0	0	**0**	0	1	0	**1**	8
% Buses and Single-Unit Trucks	1.0%	0%	0%	**1.0%**	0%	0%	0%	**0%**	0%	0.1%	0%	**0.1%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Old Mill Rd. - TMC
Thu Oct 19, 2023
PM Peak (5:45 PM - 6:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124438, Location: 39.311174, -84.269857

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Southland Dr. - TMC

Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	US 22				Southland Dr.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	App	R	L	U	App	R	T	U	App	Int
2023-10-19 6:00AM	152	1	0	**153**	0	0	0	**0**	0	37	0	**37**	**190**
6:15AM	183	0	0	**183**	2	1	0	**3**	1	40	0	**41**	**227**
6:30AM	186	0	0	**186**	1	0	0	**1**	0	76	0	**76**	**263**
6:45AM	285	0	0	**285**	2	1	0	**3**	0	69	0	**69**	**357**
Hourly Total	806	1	0	**807**	5	2	0	**7**	1	222	0	**223**	**1037**
7:00AM	281	0	0	**281**	1	2	0	**3**	0	84	0	**84**	**368**
7:15AM	358	0	0	**358**	0	0	0	**0**	0	71	0	**71**	**429**
7:30AM	339	0	0	**339**	0	0	0	**0**	0	79	0	**79**	**418**
7:45AM	314	0	0	**314**	0	0	0	**0**	2	115	0	**117**	**431**
Hourly Total	1292	0	0	**1292**	1	2	0	**3**	2	349	0	**351**	**1646**
8:00AM	313	0	0	**313**	0	0	0	**0**	0	110	0	**110**	**423**
8:15AM	310	2	0	**312**	0	0	0	**0**	1	88	0	**89**	**401**
8:30AM	290	0	0	**290**	0	2	0	**2**	3	112	0	**115**	**407**
8:45AM	272	1	0	**273**	1	0	0	**1**	0	123	0	**123**	**397**
Hourly Total	1185	3	0	**1188**	1	2	0	**3**	4	433	0	**437**	**1628**
9:00AM	236	0	0	**236**	0	0	0	**0**	0	136	0	**136**	**372**
9:15AM	227	0	0	**227**	0	0	0	**0**	0	136	0	**136**	**363**
9:30AM	217	3	0	**220**	3	1	0	**4**	0	127	0	**127**	**351**
9:45AM	211	0	0	**211**	0	1	0	**1**	1	122	0	**123**	**335**
Hourly Total	891	3	0	**894**	3	2	0	**5**	1	521	0	**522**	**1421**
10:00AM	190	0	0	**190**	0	0	0	**0**	0	152	0	**152**	**342**
10:15AM	183	1	0	**184**	0	1	0	**1**	0	135	0	**135**	**320**
10:30AM	169	0	0	**169**	0	0	0	**0**	1	166	0	**167**	**336**
10:45AM	182	0	0	**182**	0	0	0	**0**	0	141	0	**141**	**323**
Hourly Total	724	1	0	**725**	0	1	0	**1**	1	594	0	**595**	**1321**
11:00AM	177	0	0	**177**	2	0	0	**2**	1	151	0	**152**	**331**
11:15AM	188	0	0	**188**	1	0	0	**1**	0	178	0	**178**	**367**
11:30AM	190	1	0	**191**	0	0	0	**0**	2	192	0	**194**	**385**
11:45AM	159	1	0	**160**	0	1	0	**1**	1	210	0	**211**	**372**
Hourly Total	714	2	0	**716**	3	1	0	**4**	4	731	0	**735**	**1455**
12:00PM	190	1	0	**191**	0	1	0	**1**	1	226	0	**227**	**419**
12:15PM	180	1	0	**181**	1	1	0	**2**	1	198	0	**199**	**382**
12:30PM	183	0	0	**183**	0	0	0	**0**	1	220	0	**221**	**404**
12:45PM	171	0	0	**171**	0	0	0	**0**	2	229	0	**231**	**402**
Hourly Total	724	2	0	**726**	1	2	0	**3**	5	873	0	**878**	**1607**
1:00PM	133	1	0	**134**	1	1	0	**2**	0	230	0	**230**	**366**
1:15PM	160	2	0	**162**	1	1	0	**2**	0	226	0	**226**	**390**
1:30PM	171	1	0	**172**	1	0	0	**1**	0	235	0	**235**	**408**
1:45PM	181	0	0	**181**	0	0	0	**0**	0	240	0	**240**	**421**
Hourly Total	645	4	0	**649**	3	2	0	**5**	0	931	0	**931**	**1585**
2:00PM	149	0	0	**149**	1	0	0	**1**	1	230	0	**231**	**381**
2:15PM	159	1	0	**160**	0	1	0	**1**	1	257	0	**258**	**419**
2:30PM	170	1	0	**171**	0	0	0	**0**	0	274	0	**274**	**445**
2:45PM	200	4	0	**204**	0	0	0	**0**	0	282	0	**282**	**486**
Hourly Total	678	6	0	**684**	1	1	0	**2**	2	1043	0	**1045**	**1731**
3:00PM	176	1	0	**177**	0	0	0	**0**	0	311	0	**311**	**488**
3:15PM	166	1	0	**167**	1	0	0	**1**	0	329	0	**329**	**497**
3:30PM	173	0	0	**173**	0	0	0	**0**	0	329	0	**329**	**502**
3:45PM	178	1	0	**179**	0	1	0	**1**	0	353	0	**353**	**533**
Hourly Total	693	3	0	**696**	1	1	0	**2**	0	1322	0	**1322**	**2020**
4:00PM	166	0	0	**166**	0	0	0	**0**	1	351	0	**352**	**518**
4:15PM	163	2	0	**165**	1	0	0	**1**	0	345	0	**345**	**511**
4:30PM	198	1	0	**199**	0	0	0	**0**	0	344	0	**344**	**543**
4:45PM	191	0	0	**191**	0	0	0	**0**	0	291	0	**291**	**482**

Leg	US 22				Southland Dr.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
Hourly Total	718	3	0	**721**	1	0	0	**1**	1	1331	0	**1332**	**2054**
5:00PM	195	1	0	**196**	3	0	0	**3**	0	293	0	**293**	**492**
5:15PM	222	0	1	**223**	4	0	0	**4**	1	321	0	**322**	**549**
5:30PM	173	1	0	**174**	3	1	0	**4**	1	331	0	**332**	**510**
5:45PM	181	1	0	**182**	6	0	0	**6**	0	335	0	**335**	**523**
Hourly Total	771	3	1	**775**	16	1	0	**17**	2	1280	0	**1282**	**2074**
6:00PM	193	2	0	**195**	1	0	0	**1**	1	367	0	**368**	**564**
6:15PM	190	1	0	**191**	2	1	0	**3**	0	351	0	**351**	**545**
6:30PM	158	2	0	**160**	2	0	0	**2**	0	354	0	**354**	**516**
6:45PM	185	3	0	**188**	1	1	0	**2**	0	258	0	**258**	**448**
Hourly Total	726	8	0	**734**	6	2	0	**8**	1	1330	0	**1331**	**2073**
Total	10567	39	1	**10607**	42	19	0	**61**	24	10960	0	**10984**	**21652**
% Approach	99.6%	0.4%	0%	**-**	68.9%	31.1%	0%	**-**	0.2%	99.8%	0%	**-**	-
% Total	48.8%	0.2%	0%	**49.0%**	0.2%	0.1%	0%	**0.3%**	0.1%	50.6%	0%	**50.7%**	-
Lights	10361	39	1	**10401**	40	18	0	**58**	20	10721	0	**10741**	21200
% Lights	98.1%	100%	100%	**98.1%**	95.2%	94.7%	0%	**95.1%**	83.3%	97.8%	0%	**97.8%**	97.9%
Articulated Trucks	26	0	0	**26**	0	0	0	**0**	0	27	0	**27**	53
% Articulated Trucks	0.2%	0%	0%	**0.2%**	0%	0%	0%	**0%**	0%	0.2%	0%	**0.2%**	0.2%
Buses and Single-Unit Trucks	180	0	0	**180**	2	1	0	**3**	4	212	0	**216**	399
% Buses and Single-Unit Trucks	1.7%	0%	0%	**1.7%**	4.8%	5.3%	0%	**4.9%**	16.7%	1.9%	0%	**2.0%**	1.8%

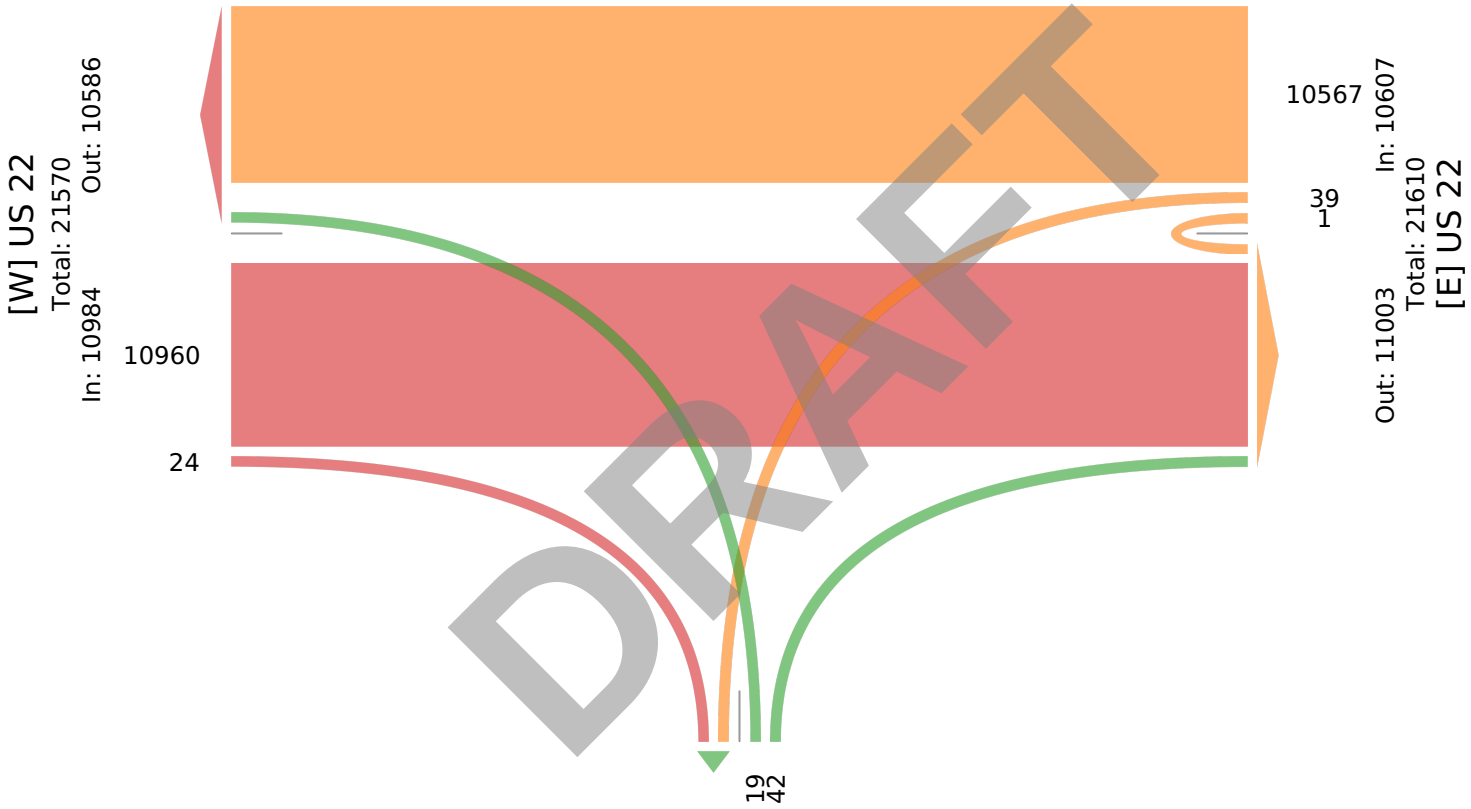
*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Southland Dr. - TMC

Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



Out: 63 In: 61
Total: 124
[S] Southland Dr.

US 22 & Southland Dr. - TMC

Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	US 22				Southland Dr.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 7:15AM	358	0	0	**358**	0	0	0	**0**	0	71	0	**71**	**429**
7:30AM	339	0	0	**339**	0	0	0	**0**	0	79	0	**79**	**418**
7:45AM	314	0	0	**314**	0	0	0	**0**	2	115	0	**117**	**431**
8:00AM	313	0	0	**313**	0	0	0	**0**	0	110	0	**110**	**423**
Total	1324	0	0	**1324**	0	0	0	**0**	2	375	0	**377**	**1701**
% Approach	100%	0%	0%	**-**	0%	0%	0%	**-**	0.5%	99.5%	0%	**-**	-
% Total	77.8%	0%	0%	**77.8%**	0%	0%	0%	**0%**	0.1%	22.0%	0%	**22.2%**	-
PHF	0.925	-	-	**0.925**	-	-	-	**-**	0.250	0.815	-	**0.806**	0.987
Lights	1301	0	0	**1301**	0	0	0	**0**	0	348	0	**348**	1649
% Lights	98.3%	0%	0%	**98.3%**	0%	0%	0%	**-**	0%	92.8%	0%	**92.3%**	96.9%
Articulated Trucks	2	0	0	**2**	0	0	0	**0**	0	1	0	**1**	3
% Articulated Trucks	0.2%	0%	0%	**0.2%**	0%	0%	0%	**-**	0%	0.3%	0%	**0.3%**	0.2%
Buses and Single-Unit Trucks	21	0	0	**21**	0	0	0	**0**	2	26	0	**28**	49
% Buses and Single-Unit Trucks	1.6%	0%	0%	**1.6%**	0%	0%	0%	**-**	100%	6.9%	0%	**7.4%**	2.9%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Southland Dr. - TMC
Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

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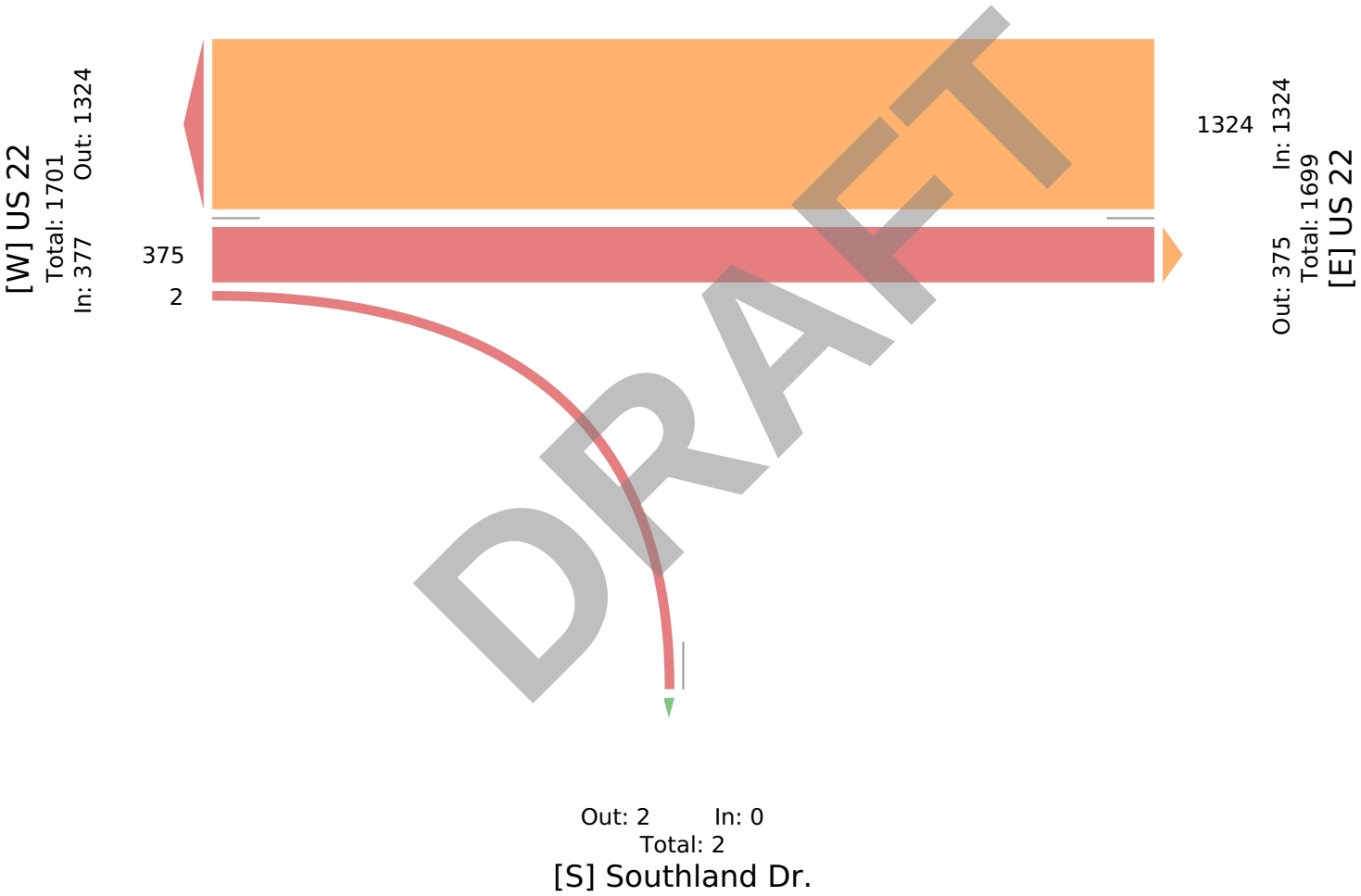


US 22 & Southland Dr. - TMC

Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

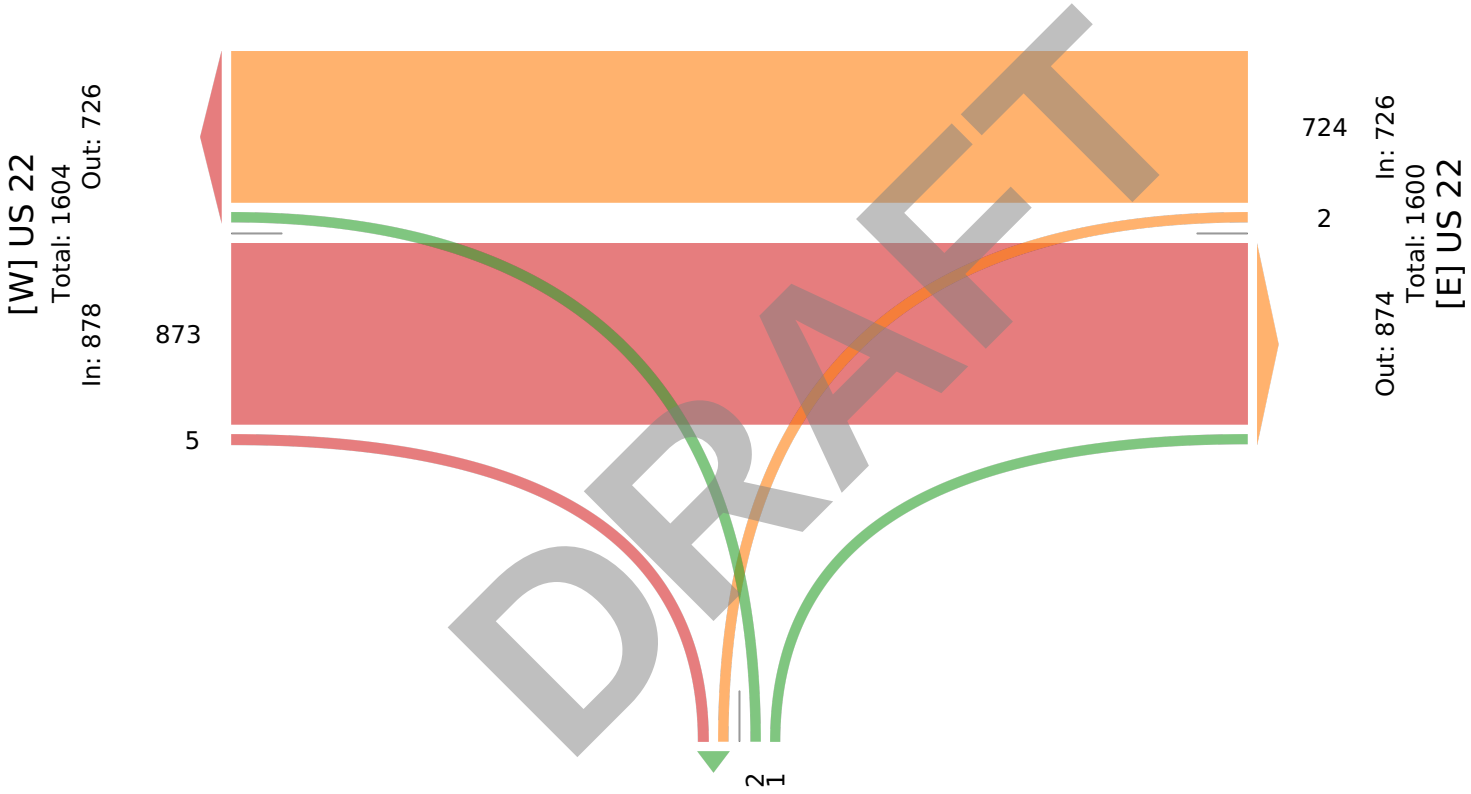
Leg / Direction	US 22 Westbound				Southland Dr. Northbound				US 22 Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 12:00PM	190	1	0	**191**	0	1	0	**1**	1	226	0	**227**	**419**
12:15PM	180	1	0	**181**	1	1	0	**2**	1	198	0	**199**	**382**
12:30PM	183	0	0	**183**	0	0	0	**0**	1	220	0	**221**	**404**
12:45PM	171	0	0	**171**	0	0	0	**0**	2	229	0	**231**	**402**
Total	724	2	0	**726**	1	2	0	**3**	5	873	0	**878**	**1607**
% Approach	99.7%	0.3%	0%	**-**	33.3%	66.7%	0%	**-**	0.6%	99.4%	0%	**-**	-
% Total	45.1%	0.1%	0%	**45.2%**	0.1%	0.1%	0%	**0.2%**	0.3%	54.3%	0%	**54.6%**	-
PHF	0.953	0.500	-	**0.950**	0.250	0.500	-	**0.375**	0.625	0.953	-	**0.950**	0.959
Lights	705	2	0	**707**	1	2	0	**3**	5	841	0	**846**	1556
% Lights	97.4%	100%	0%	**97.4%**	100%	100%	0%	**100%**	100%	96.3%	0%	**96.4%**	96.8%
Articulated Trucks	3	0	0	**3**	0	0	0	**0**	0	4	0	**4**	7
% Articulated Trucks	0.4%	0%	0%	**0.4%**	0%	0%	0%	**0%**	0%	0.5%	0%	**0.5%**	0.4%
Buses and Single-Unit Trucks	16	0	0	**16**	0	0	0	**0**	0	28	0	**28**	44
% Buses and Single-Unit Trucks	2.2%	0%	0%	**2.2%**	0%	0%	0%	**0%**	0%	3.2%	0%	**3.2%**	2.7%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Southland Dr. - TMC

Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Southland Dr. - TMC

Thu Oct 19, 2023
PM Peak (5:45 PM - 6:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	US 22				Southland Dr.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 5:45PM	181	1	0	**182**	6	0	0	**6**	0	335	0	**335**	**523**
6:00PM	193	2	0	**195**	1	0	0	**1**	1	367	0	**368**	**564**
6:15PM	190	1	0	**191**	2	1	0	**3**	0	351	0	**351**	**545**
6:30PM	158	2	0	**160**	2	0	0	**2**	0	354	0	**354**	**516**
Total	722	6	0	**728**	11	1	0	**12**	1	1407	0	**1408**	**2148**
% Approach	99.2%	0.8%	0%	**-**	91.7%	8.3%	0%	**-**	0.1%	99.9%	0%	**-**	-
% Total	33.6%	0.3%	0%	**33.9%**	0.5%	0%	0%	**0.6%**	0%	65.5%	0%	**65.5%**	-
PHF	0.935	0.750	-	**0.933**	0.458	0.250	-	**0.500**	0.250	0.958	-	**0.957**	0.952
Lights	716	6	0	**722**	11	1	0	**12**	1	1404	0	**1405**	2139
% Lights	99.2%	100%	0%	**99.2%**	100%	100%	0%	**100%**	100%	99.8%	0%	**99.8%**	99.6%
Articulated Trucks	1	0	0	**1**	0	0	0	**0**	0	2	0	**2**	3
% Articulated Trucks	0.1%	0%	0%	**0.1%**	0%	0%	0%	**0%**	0%	0.1%	0%	**0.1%**	0.1%
Buses and Single-Unit Trucks	5	0	0	**5**	0	0	0	**0**	0	1	0	**1**	6
% Buses and Single-Unit Trucks	0.7%	0%	0%	**0.7%**	0%	0%	0%	**0%**	0%	0.1%	0%	**0.1%**	0.3%

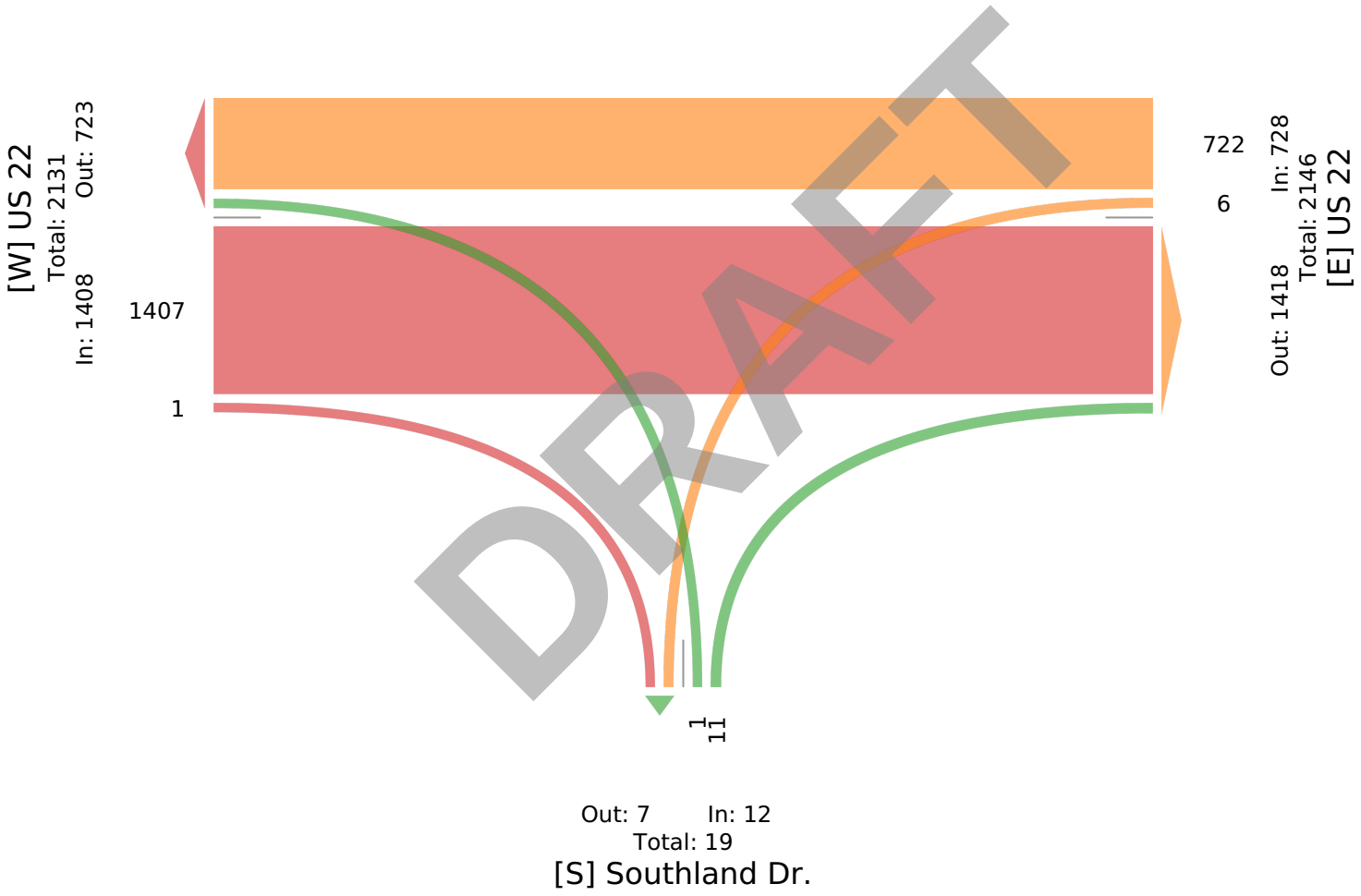
*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Southland Dr. - TMC

Thu Oct 19, 2023
PM Peak (5:45 PM - 6:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124441, Location: 39.313086, -84.264521

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen-Deerfield Park Ent. - TMC

Thu Oct 19, 2023
Full Length (6 AM-7 PM, 7 AM-7 PM (+1))
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

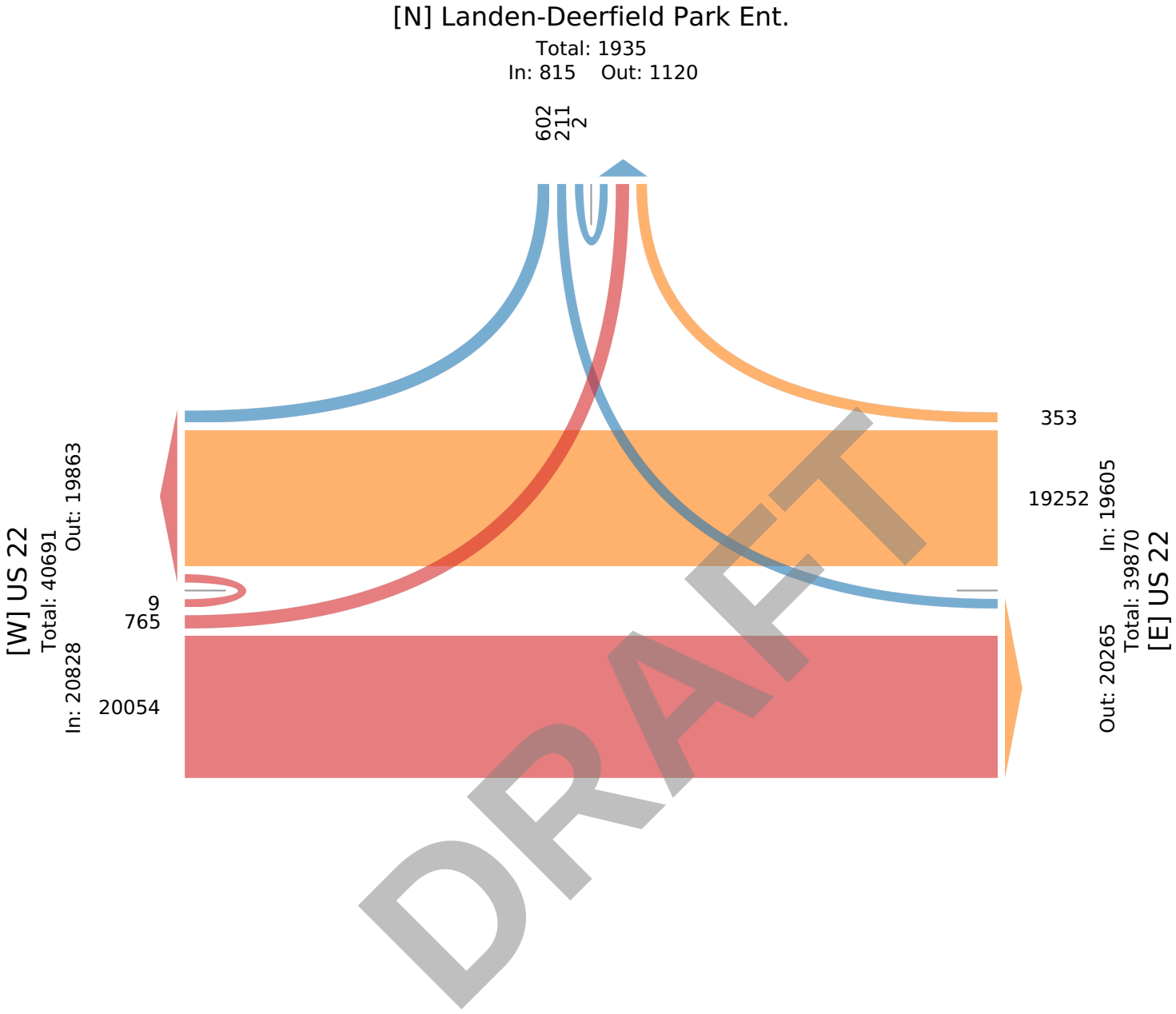
Leg	Landen-Deerfield Park Ent.				US 22				US 22				
Direction	Southbound				Westbound				Eastbound				
Time	R	L	U	App	R	T	U	App	T	L	U	App	Int
2023-10-19 6:00AM	0	0	0	**0**	0	155	0	**155**	37	0	0	**37**	**192**
6:15AM	0	0	0	**0**	0	182	0	**182**	38	1	0	**39**	**221**
6:30AM	0	0	0	**0**	0	192	0	**192**	79	0	0	**79**	**271**
6:45AM	1	0	0	**1**	3	283	0	**286**	68	1	0	**69**	**356**
Hourly Total	1	0	0	**1**	3	812	0	**815**	222	2	0	**224**	**1040**
7:00AM	0	0	0	**0**	0	286	0	**286**	83	1	0	**84**	**370**
7:15AM	1	0	0	**1**	2	356	0	**358**	68	1	0	**69**	**428**
7:30AM	1	0	0	**1**	0	341	0	**341**	78	1	0	**79**	**421**
7:45AM	0	1	0	**1**	2	317	0	**319**	112	0	0	**112**	**432**
Hourly Total	2	1	0	**3**	4	1300	0	**1304**	341	3	0	**344**	**1651**
8:00AM	1	0	0	**1**	0	311	0	**311**	115	1	0	**116**	**428**
8:15AM	0	0	0	**0**	0	316	0	**316**	86	3	0	**89**	**405**
8:30AM	0	1	0	**1**	0	290	0	**290**	115	1	0	**116**	**407**
8:45AM	2	3	0	**5**	1	266	0	**267**	119	3	0	**122**	**394**
Hourly Total	3	4	0	**7**	1	1183	0	**1184**	435	8	0	**443**	**1634**
9:00AM	1	0	0	**1**	0	239	0	**239**	131	1	0	**132**	**372**
9:15AM	0	1	0	**1**	1	232	0	**233**	133	2	0	**135**	**369**
9:30AM	3	0	0	**3**	1	219	0	**220**	128	1	0	**129**	**352**
9:45AM	2	1	0	**3**	1	212	0	**213**	121	2	0	**123**	**339**
Hourly Total	6	2	0	**8**	3	902	0	**905**	513	6	0	**519**	**1432**
10:00AM	4	0	0	**4**	2	184	0	**186**	149	2	0	**151**	**341**
10:15AM	1	0	0	**1**	1	182	0	**183**	136	0	0	**136**	**320**
10:30AM	1	1	0	**2**	0	165	0	**165**	162	2	0	**164**	**331**
10:45AM	0	1	0	**1**	0	177	0	**177**	139	2	0	**141**	**319**
Hourly Total	6	2	0	**8**	3	708	0	**711**	586	6	0	**592**	**1311**
11:00AM	1	0	0	**1**	1	175	0	**176**	149	4	0	**153**	**330**
11:15AM	0	0	0	**0**	3	188	0	**191**	169	4	0	**173**	**364**
11:30AM	1	3	0	**4**	3	191	0	**194**	191	4	0	**195**	**393**
11:45AM	2	2	0	**4**	2	158	0	**160**	205	3	0	**208**	**372**
Hourly Total	4	5	0	**9**	9	712	0	**721**	714	15	0	**729**	**1459**
12:00PM	5	3	0	**8**	2	185	0	**187**	221	3	0	**224**	**419**
12:15PM	5	3	0	**8**	3	176	0	**179**	198	0	0	**198**	**385**
12:30PM	1	1	0	**2**	0	187	0	**187**	213	1	0	**214**	**403**
12:45PM	3	0	0	**3**	0	170	0	**170**	222	5	0	**227**	**400**
Hourly Total	14	7	0	**21**	5	718	0	**723**	854	9	0	**863**	**1607**
1:00PM	1	1	0	**2**	1	131	0	**132**	227	3	0	**230**	**364**
1:15PM	2	1	0	**3**	0	158	0	**158**	228	2	0	**230**	**391**
1:30PM	1	1	0	**2**	1	171	0	**172**	236	0	0	**236**	**410**
1:45PM	1	1	0	**2**	0	179	0	**179**	236	3	1	**240**	**421**
Hourly Total	5	4	0	**9**	2	639	0	**641**	927	8	1	**936**	**1586**
2:00PM	3	0	0	**3**	1	145	0	**146**	227	3	0	**230**	**379**
2:15PM	1	3	0	**4**	2	162	0	**164**	249	5	0	**254**	**422**
2:30PM	3	0	0	**3**	0	164	0	**164**	269	2	0	**271**	**438**
2:45PM	1	0	0	**1**	0	204	0	**204**	275	1	0	**276**	**481**
Hourly Total	8	3	0	**11**	3	675	0	**678**	1020	11	0	**1031**	**1720**
3:00PM	0	0	0	**0**	1	176	0	**177**	313	1	0	**314**	**491**
3:15PM	1	0	0	**1**	1	169	0	**170**	329	6	0	**335**	**506**
3:30PM	5	5	0	**10**	2	170	0	**172**	335	1	0	**336**	**518**
3:45PM	1	1	0	**2**	1	178	0	**179**	366	3	0	**369**	**550**
Hourly Total	7	6	0	**13**	5	693	0	**698**	1343	11	0	**1354**	**2065**
4:00PM	5	0	0	**5**	1	158	0	**159**	352	0	0	**352**	**516**
4:15PM	0	0	0	**0**	0	169	0	**169**	347	0	0	**347**	**516**
4:30PM	1	0	0	**1**	4	197	0	**201**	348	1	1	**350**	**552**
4:45PM	0	0	0	**0**	0	185	0	**185**	287	4	1	**292**	**477**

Leg	Landen-Deerfield Park Ent.				US 22				US 22				
Direction	Southbound				Westbound				Eastbound				
Time	R	L	U	App	R	T	U	App	T	L	U	App	Int
Hourly Total	6	0	0	**6**	5	709	0	**714**	1334	5	2	**1341**	**2061**
5:00PM	4	2	0	**6**	3	191	0	**194**	294	6	0	**300**	**500**
5:15PM	6	3	0	**9**	12	211	0	**223**	309	19	0	**328**	**560**
5:30PM	2	5	0	**7**	25	173	0	**198**	306	23	0	**329**	**534**
5:45PM	9	5	0	**14**	31	174	0	**205**	302	43	0	**345**	**564**
Hourly Total	21	15	0	**36**	71	749	0	**820**	1211	91	0	**1302**	**2158**
6:00PM	5	3	0	**8**	4	188	0	**192**	359	20	0	**379**	**579**
6:15PM	5	2	0	**7**	1	186	0	**187**	342	9	0	**351**	**545**
6:30PM	0	0	0	**0**	3	162	0	**165**	347	12	0	**359**	**524**
6:45PM	7	2	0	**9**	2	181	0	**183**	253	12	0	**265**	**457**
Hourly Total	17	7	0	**24**	10	717	0	**727**	1301	53	0	**1354**	**2105**
2023-10-21 7:00AM	1	0	0	**1**	1	61	0	**62**	34	1	0	**35**	**98**
7:15AM	0	0	0	**0**	1	65	0	**66**	36	2	0	**38**	**104**
7:30AM	0	0	0	**0**	0	104	0	**104**	45	0	0	**45**	**149**
7:45AM	4	2	1	**7**	1	122	0	**123**	72	5	0	**77**	**207**
Hourly Total	5	2	1	**8**	3	352	0	**355**	187	8	0	**195**	**558**
8:00AM	0	4	1	**5**	2	118	0	**120**	49	2	0	**51**	**176**
8:15AM	11	4	0	**15**	7	135	0	**142**	59	23	0	**82**	**239**
8:30AM	3	0	0	**3**	9	162	0	**171**	95	17	0	**112**	**286**
8:45AM	4	1	0	**5**	10	190	0	**200**	99	33	0	**132**	**337**
Hourly Total	18	9	1	**28**	28	605	0	**633**	302	75	0	**377**	**1038**
9:00AM	3	0	0	**3**	4	187	0	**191**	91	8	0	**99**	**293**
9:15AM	2	1	0	**3**	2	210	0	**212**	129	4	0	**133**	**348**
9:30AM	5	0	0	**5**	15	213	0	**228**	131	29	0	**160**	**393**
9:45AM	28	4	0	**32**	29	251	0	**280**	133	54	0	**187**	**499**
Hourly Total	38	5	0	**43**	50	861	0	**911**	484	95	0	**579**	**1533**
10:00AM	31	6	0	**37**	7	239	0	**246**	144	34	0	**178**	**461**
10:15AM	15	5	0	**20**	3	229	0	**232**	142	20	0	**162**	**414**
10:30AM	8	2	0	**10**	10	232	0	**242**	203	18	1	**222**	**474**
10:45AM	18	1	0	**19**	26	232	0	**258**	216	31	0	**247**	**524**
Hourly Total	72	14	0	**86**	46	932	0	**978**	705	103	1	**809**	**1873**
11:00AM	35	7	0	**42**	13	229	0	**242**	226	39	0	**265**	**549**
11:15AM	41	15	0	**56**	8	210	0	**218**	217	17	0	**234**	**508**
11:30AM	13	4	0	**17**	10	220	0	**230**	224	18	0	**242**	**489**
11:45AM	28	13	0	**41**	6	223	0	**229**	233	12	0	**245**	**515**
Hourly Total	117	39	0	**156**	37	882	0	**919**	900	86	0	**986**	**2061**
12:00PM	6	1	0	**7**	3	197	0	**200**	260	9	0	**269**	**476**
12:15PM	16	6	0	**22**	10	197	0	**207**	241	14	0	**255**	**484**
12:30PM	41	6	0	**47**	4	202	0	**206**	231	16	1	**248**	**501**
12:45PM	39	8	0	**47**	6	194	0	**200**	257	14	0	**271**	**518**
Hourly Total	102	21	0	**123**	23	790	0	**813**	989	53	1	**1043**	**1979**
1:00PM	11	2	0	**13**	2	178	0	**180**	258	5	0	**263**	**456**
1:15PM	6	0	0	**6**	2	167	0	**169**	220	7	0	**227**	**402**
1:30PM	11	4	0	**15**	3	175	0	**178**	241	14	0	**255**	**448**
1:45PM	36	10	0	**46**	4	186	0	**190**	224	12	0	**236**	**472**
Hourly Total	64	16	0	**80**	11	706	0	**717**	943	38	0	**981**	**1778**
2:00PM	9	3	0	**12**	1	172	0	**173**	263	9	0	**272**	**457**
2:15PM	3	0	0	**3**	4	183	0	**187**	269	2	0	**271**	**461**
2:30PM	2	2	0	**4**	5	194	0	**199**	251	4	0	**255**	**458**
2:45PM	16	8	0	**24**	0	211	0	**211**	242	1	0	**243**	**478**
Hourly Total	30	13	0	**43**	10	760	0	**770**	1025	16	0	**1041**	**1854**
3:00PM	12	3	0	**15**	0	149	0	**149**	262	6	1	**269**	**433**
3:15PM	4	4	0	**8**	0	198	0	**198**	260	6	0	**266**	**472**
3:30PM	5	8	0	**13**	2	226	0	**228**	240	2	0	**242**	**483**
3:45PM	6	1	0	**7**	3	166	0	**169**	253	7	0	**260**	**436**
Hourly Total	27	16	0	**43**	5	739	0	**744**	1015	21	1	**1037**	**1824**
4:00PM	5	3	0	**8**	1	199	0	**200**	230	7	0	**237**	**445**
4:15PM	1	0	0	**1**	0	216	0	**216**	255	1	0	**256**	**473**
4:30PM	0	0	0	**0**	1	179	0	**180**	228	1	1	**230**	**410**
4:45PM	0	2	0	**2**	3	180	0	**183**	221	3	0	**224**	**409**

Leg Direction	Landen-Deerfield Park Ent. Southbound				US 22 Westbound				US 22 Eastbound				
Time	R	L	U	**App**	R	T	U	**App**	T	L	U	**App**	**Int**
Hourly Total	6	5	0	**11**	5	774	0	**779**	934	12	1	**947**	**1737**
5:00PM	0	0	0	**0**	3	193	0	**196**	251	1	0	**252**	**448**
5:15PM	4	4	0	**8**	1	196	0	**197**	218	6	0	**224**	**429**
5:30PM	3	1	0	**4**	0	165	0	**165**	252	7	0	**259**	**428**
5:45PM	5	2	0	**7**	3	158	0	**161**	231	2	0	**233**	**401**
Hourly Total	12	7	0	**19**	7	712	0	**719**	952	16	0	**968**	**1706**
6:00PM	2	2	0	**4**	0	173	0	**173**	192	3	0	**195**	**372**
6:15PM	2	3	0	**5**	2	159	0	**161**	228	7	0	**235**	**401**
6:30PM	3	1	0	**4**	2	125	0	**127**	224	3	2	**229**	**360**
6:45PM	4	2	0	**6**	0	165	0	**165**	173	1	0	**174**	**345**
Hourly Total	11	8	0	**19**	4	622	0	**626**	817	14	2	**833**	**1478**
Total	602	211	2	**815**	353	19252	0	**19605**	20054	765	9	**20828**	**41248**
% Approach	73.9%	25.9%	0.2%	**-**	1.8%	98.2%	0%	**-**	96.3%	3.7%	0%	**-**	-
% Total	1.5%	0.5%	0%	**2.0%**	0.9%	46.7%	0%	**47.5%**	48.6%	1.9%	0%	**50.5%**	-
Lights	601	211	2	**814**	353	18986	0	**19339**	19748	762	9	**20519**	40672
% Lights	99.8%	100%	100%	**99.9%**	100%	98.6%	0%	**98.6%**	98.5%	99.6%	100%	**98.5%**	98.6%
Articulated Trucks	1	0	0	**1**	0	32	0	**32**	46	2	0	**48**	81
% Articulated Trucks	0.2%	0%	0%	**0.1%**	0%	0.2%	0%	**0.2%**	0.2%	0.3%	0%	**0.2%**	0.2%
Buses and Single-Unit Trucks	0	0	0	**0**	0	234	0	**234**	260	1	0	**261**	495
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	0%	1.2%	0%	**1.2%**	1.3%	0.1%	0%	**1.3%**	1.2%

*L: Left, R: Right, T: Thru, U: U-Turn

LOUKAS engineering
TRAFFIC DATA & CONSULTING
Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen-Deerfield Park Ent. - TMC

Thu Oct 19, 2023
AM Peak (Oct 19 2023 7:15AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	Landen-Deerfield Park Ent.				US 22				US 22				
Direction	Southbound				Westbound				Eastbound				
Time	R	L	U	**App**	R	T	U	**App**	T	L	U	**App**	**Int**
2023-10-19 7:15AM	1	0	0	**1**	2	356	0	**358**	68	1	0	**69**	**428**
7:30AM	1	0	0	**1**	0	341	0	**341**	78	1	0	**79**	**421**
7:45AM	0	1	0	**1**	2	317	0	**319**	112	0	0	**112**	**432**
8:00AM	1	0	0	**1**	0	311	0	**311**	115	1	0	**116**	**428**
Total	3	1	0	**4**	4	1325	0	**1329**	373	3	0	**376**	**1709**
% Approach	75.0%	25.0%	0%	**-**	0.3%	99.7%	0%	**-**	99.2%	0.8%	0%	**-**	-
% Total	0.2%	0.1%	0%	**0.2%**	0.2%	77.5%	0%	**77.8%**	21.8%	0.2%	0%	**22.0%**	-
PHF	0.750	0.250	-	**1.000**	0.500	0.930	-	**0.928**	0.811	0.750	-	**0.810**	0.989
Lights	3	1	0	**4**	4	1302	0	**1306**	345	3	0	**348**	1658
% Lights	100%	100%	0%	**100%**	100%	98.3%	0%	**98.3%**	92.5%	100%	0%	**92.6%**	97.0%
Articulated Trucks	0	0	0	**0**	0	4	0	**4**	3	0	0	**3**	7
% Articulated Trucks	0%	0%	0%	**0%**	0%	0.3%	0%	**0.3%**	0.8%	0%	0%	**0.8%**	0.4%
Buses and Single-Unit Trucks	0	0	0	**0**	0	19	0	**19**	25	0	0	**25**	44
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	0%	1.4%	0%	**1.4%**	6.7%	0%	0%	**6.6%**	2.6%

*L: Left, R: Right, T: Thru, U: U-Turn

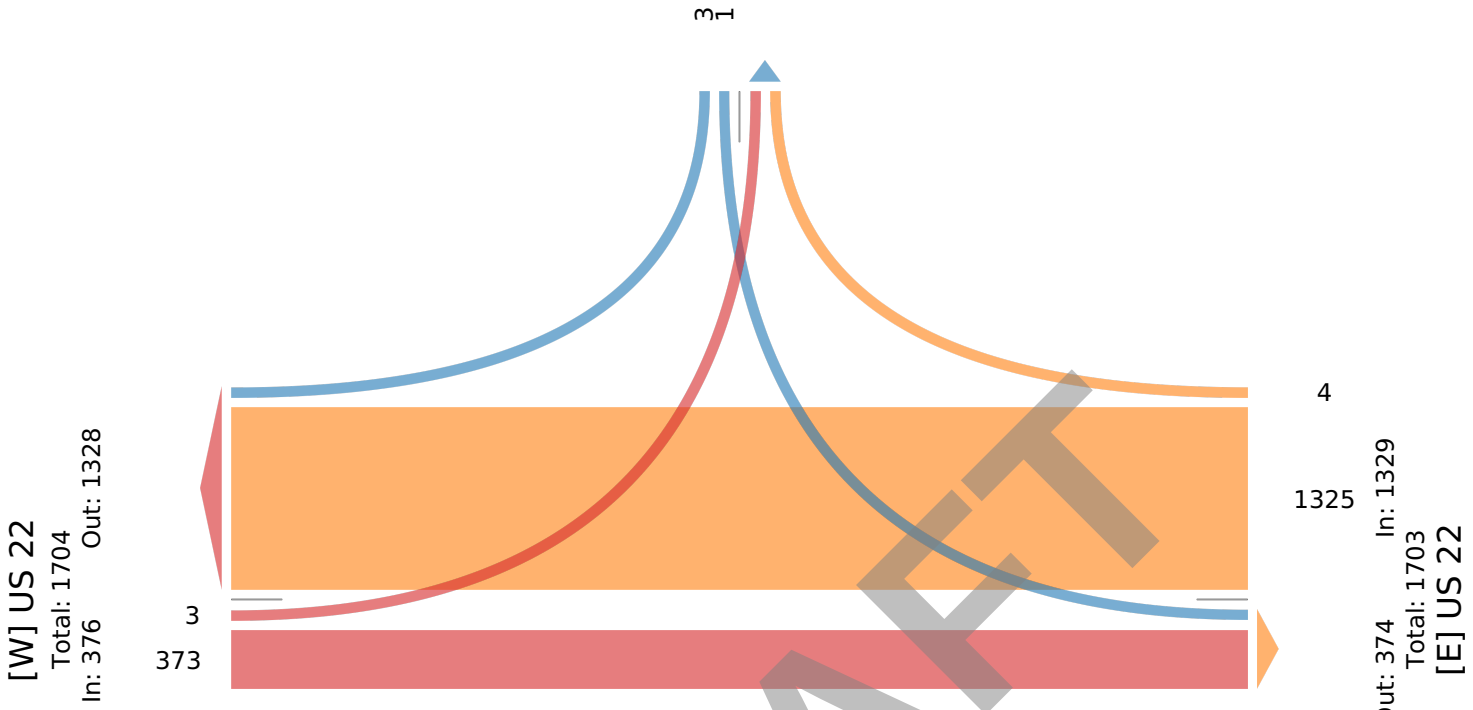
US 22 & Landen-Deerfield Park Ent. - TMC
Thu Oct 19, 2023
AM Peak (Oct 19 2023 7:15AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

[N] Landen-Deerfield Park Ent.

Total: 11
In: 4 Out: 7



US 22 & Landen-Deerfield Park Ent. - TMC

Thu Oct 19, 2023
Midday Peak (Oct 19 2023 12PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

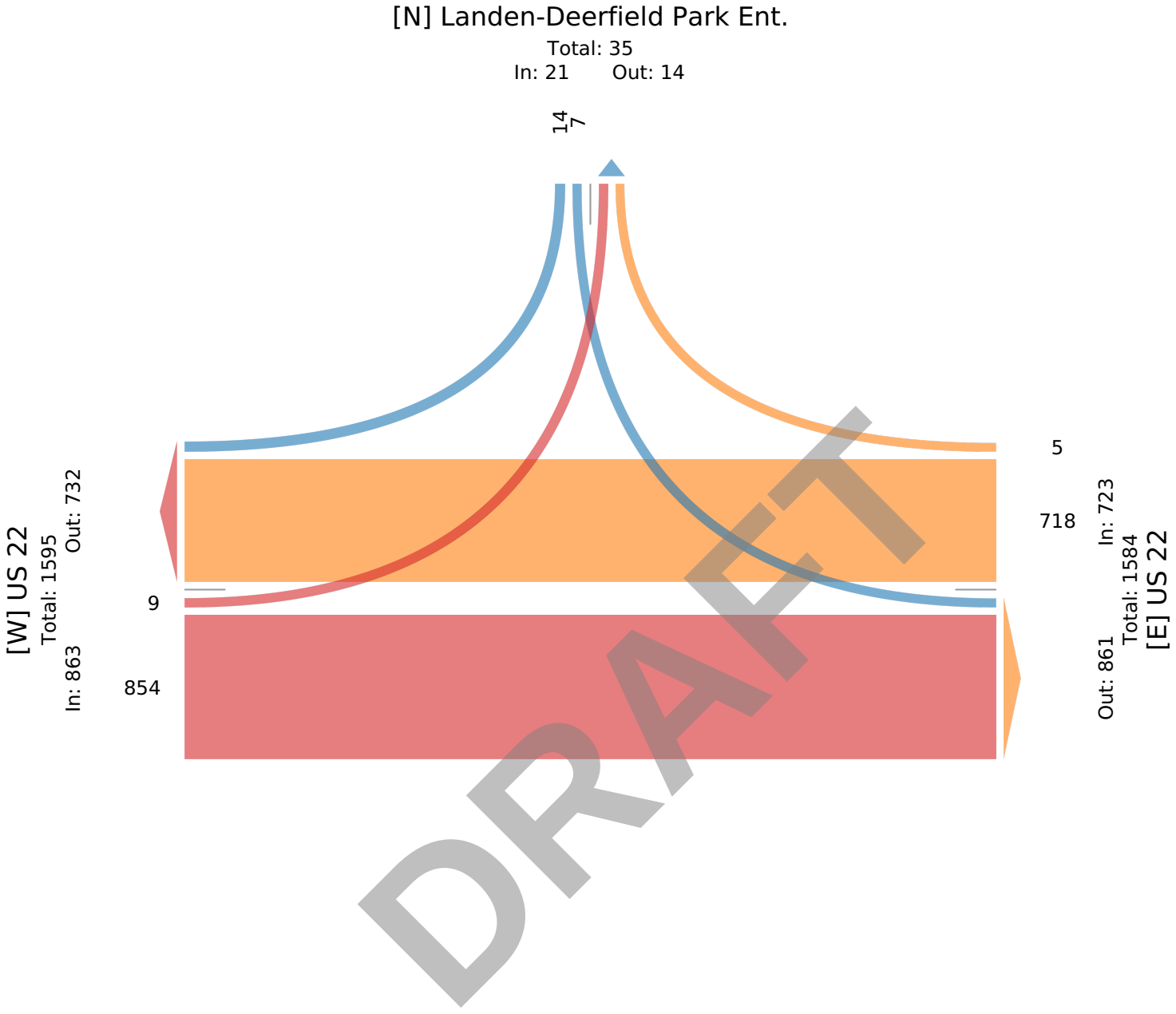
Leg Direction	Landen-Deerfield Park Ent. Southbound				US 22 Westbound				US 22 Eastbound				
Time	R	L	U	**App**	R	T	U	**App**	T	L	U	**App**	**Int**
2023-10-19 12:00PM	5	3	0	**8**	2	185	0	**187**	221	3	0	**224**	**419**
12:15PM	5	3	0	**8**	3	176	0	**179**	198	0	0	**198**	**385**
12:30PM	1	1	0	**2**	0	187	0	**187**	213	1	0	**214**	**403**
12:45PM	3	0	0	**3**	0	170	0	**170**	222	5	0	**227**	**400**
Total	14	7	0	**21**	5	718	0	**723**	854	9	0	**863**	**1607**
% Approach	66.7%	33.3%	0%	**-**	0.7%	99.3%	0%	**-**	99.0%	1.0%	0%	**-**	-
% Total	0.9%	0.4%	0%	**1.3%**	0.3%	44.7%	0%	**45.0%**	53.1%	0.6%	0%	**53.7%**	-
PHF	0.700	0.583	-	**0.656**	0.417	0.960	-	**0.967**	0.962	0.450	-	**0.950**	0.959
Lights	14	7	0	**21**	5	698	0	**703**	821	9	0	**830**	1554
% Lights	100%	100%	0%	**100%**	100%	97.2%	0%	**97.2%**	96.1%	100%	0%	**96.2%**	96.7%
Articulated Trucks	0	0	0	**0**	0	3	0	**3**	8	0	0	**8**	11
% Articulated Trucks	0%	0%	0%	**0%**	0%	0.4%	0%	**0.4%**	0.9%	0%	0%	**0.9%**	0.7%
Buses and Single-Unit Trucks	0	0	0	**0**	0	17	0	**17**	25	0	0	**25**	42
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	0%	2.4%	0%	**2.4%**	2.9%	0%	0%	**2.9%**	2.6%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Landen-Deerfield Park Ent. - TMC
Thu Oct 19, 2023
Midday Peak (Oct 19 2023 12PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen-Deerfield Park Ent. - TMC

Thu Oct 19, 2023
PM Peak (Oct 19 2023 5:15PM - 6:15 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

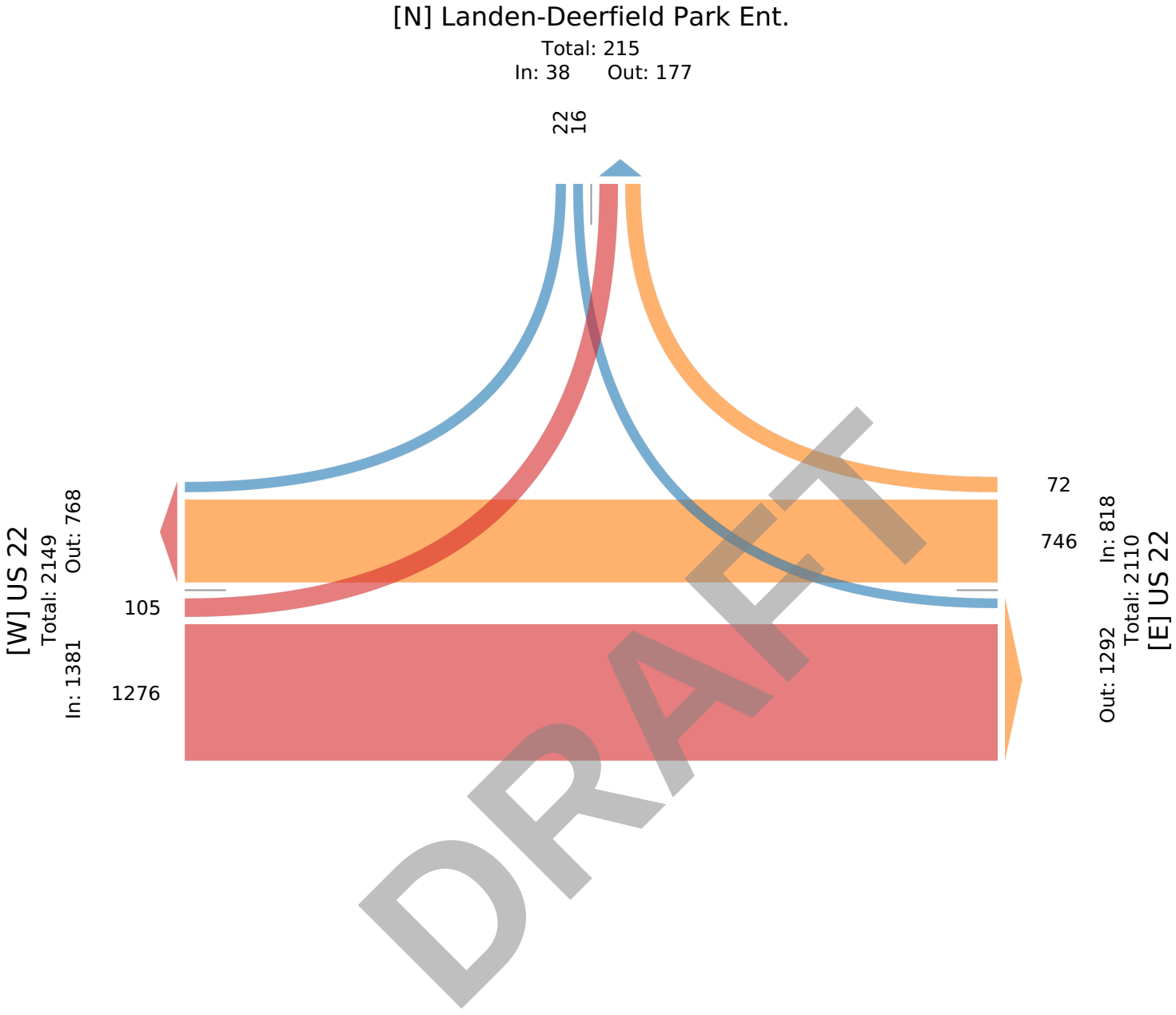
LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	Landen-Deerfield Park Ent.				US 22				US 22				
Direction	Southbound				Westbound				Eastbound				
Time	R	L	U	**App**	R	T	U	**App**	T	L	U	**App**	**Int**
2023-10-19 5:15PM	6	3	0	**9**	12	211	0	**223**	309	19	0	**328**	**560**
5:30PM	2	5	0	**7**	25	173	0	**198**	306	23	0	**329**	**534**
5:45PM	9	5	0	**14**	31	174	0	**205**	302	43	0	**345**	**564**
6:00PM	5	3	0	**8**	4	188	0	**192**	359	20	0	**379**	**579**
Total	22	16	0	**38**	72	746	0	**818**	1276	105	0	**1381**	**2237**
% Approach	57.9%	42.1%	0%	**-**	8.8%	91.2%	0%	**-**	92.4%	7.6%	0%	**-**	-
% Total	1.0%	0.7%	0%	**1.7%**	3.2%	33.3%	0%	**36.6%**	57.0%	4.7%	0%	**61.7%**	-
PHF	0.611	0.800	-	**0.679**	0.581	0.884	-	**0.917**	0.889	0.610	-	**0.911**	0.966
Lights	22	16	0	**38**	72	739	0	**811**	1272	105	0	**1377**	2226
% Lights	100%	100%	0%	**100%**	100%	99.1%	0%	**99.1%**	99.7%	100%	0%	**99.7%**	99.5%
Articulated Trucks	0	0	0	**0**	0	2	0	**2**	2	0	0	**2**	4
% Articulated Trucks	0%	0%	0%	**0%**	0%	0.3%	0%	**0.2%**	0.2%	0%	0%	**0.1%**	0.2%
Buses and Single-Unit Trucks	0	0	0	**0**	0	5	0	**5**	2	0	0	**2**	7
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	0%	0.7%	0%	**0.6%**	0.2%	0%	0%	**0.1%**	0.3%

*L: Left, R: Right, T: Thru, U: U-Turn

LOUKAS engineering
TRAFFIC DATA & CONSULTING
Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen-Deerfield Park Ent. - TMC

Sat Oct 21, 2023
AM Peak (WKND) (Oct 21 2023 10AM - 11 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

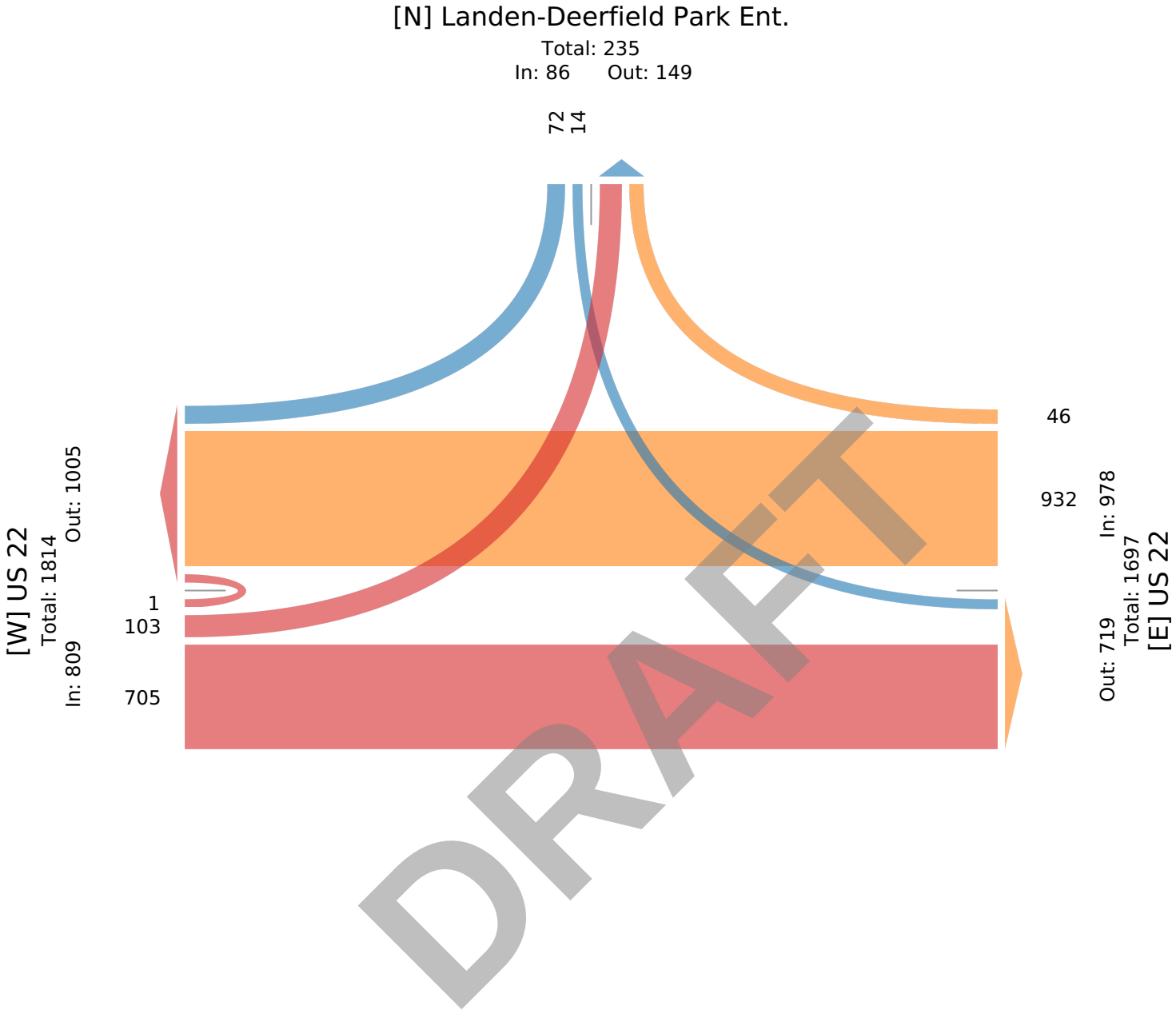
LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	Landen-Deerfield Park Ent.				US 22				US 22				
Direction	Southbound				Westbound				Eastbound				
Time	R	L	U	**App**	R	T	U	**App**	T	L	U	**App**	**Int**
2023-10-21 10:00AM	31	6	0	**37**	7	239	0	**246**	144	34	0	**178**	**461**
10:15AM	15	5	0	**20**	3	229	0	**232**	142	20	0	**162**	**414**
10:30AM	8	2	0	**10**	10	232	0	**242**	203	18	1	**222**	**474**
10:45AM	18	1	0	**19**	26	232	0	**258**	216	31	0	**247**	**524**
Total	72	14	0	**86**	46	932	0	**978**	705	103	1	**809**	**1873**
% Approach	83.7%	16.3%	0%	**-**	4.7%	95.3%	0%	**-**	87.1%	12.7%	0.1%	**-**	-
% Total	3.8%	0.7%	0%	**4.6%**	2.5%	49.8%	0%	**52.2%**	37.6%	5.5%	0.1%	**43.2%**	-
PHF	0.581	0.583	-	**0.581**	0.442	0.975	-	**0.948**	0.816	0.757	0.250	**0.819**	0.894
Lights	72	14	0	**86**	46	928	0	**974**	701	103	1	**805**	1865
% Lights	100%	100%	0%	**100%**	100%	99.6%	0%	**99.6%**	99.4%	100%	100%	**99.5%**	99.6%
Articulated Trucks	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0
% Articulated Trucks	0%	0%	0%	**0%**	0%	0%	0%	**0%**	0%	0%	0%	**0%**	0%
Buses and Single-Unit Trucks	0	0	0	**0**	0	4	0	**4**	4	0	0	**4**	8
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	0%	0.4%	0%	**0.4%**	0.6%	0%	0%	**0.5%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

LOUKAS engineering
TRAFFIC DATA & CONSULTING
Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen-Deerfield Park Ent. - TMC

Sat Oct 21, 2023
Midday Peak (WKND) (Oct 21 2023 11AM - 12 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

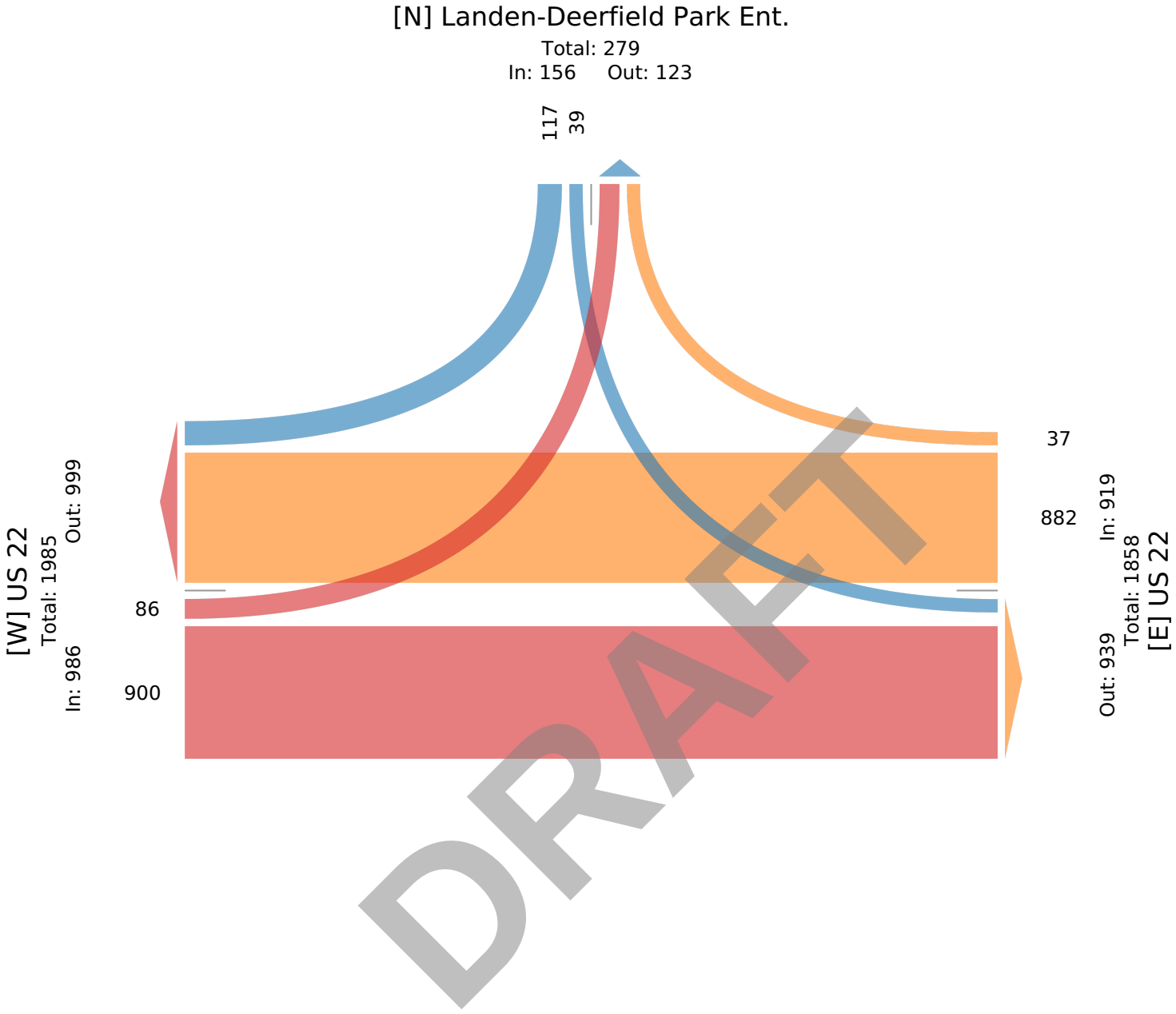
Leg	Landen-Deerfield Park Ent.				US 22				US 22				
Direction	Southbound				Westbound				Eastbound				
Time	R	L	U	**App**	R	T	U	**App**	T	L	U	**App**	**Int**
2023-10-21 11:00AM	35	7	0	**42**	13	229	0	**242**	226	39	0	**265**	**549**
11:15AM	41	15	0	**56**	8	210	0	**218**	217	17	0	**234**	**508**
11:30AM	13	4	0	**17**	10	220	0	**230**	224	18	0	**242**	**489**
11:45AM	28	13	0	**41**	6	223	0	**229**	233	12	0	**245**	**515**
Total	117	39	0	**156**	37	882	0	**919**	900	86	0	**986**	**2061**
% Approach	75.0%	25.0%	0%	**-**	4.0%	96.0%	0%	**-**	91.3%	8.7%	0%	**-**	-
% Total	5.7%	1.9%	0%	**7.6%**	1.8%	42.8%	0%	**44.6%**	43.7%	4.2%	0%	**47.8%**	-
PHF	0.713	0.650	-	**0.696**	0.712	0.963	-	**0.949**	0.966	0.551	-	**0.930**	0.939
Lights	117	39	0	**156**	37	878	0	**915**	895	86	0	**981**	2052
% Lights	100%	100%	0%	**100%**	100%	99.5%	0%	**99.6%**	99.4%	100%	0%	**99.5%**	99.6%
Articulated Trucks	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0
% Articulated Trucks	0%	0%	0%	**0%**	0%	0%	0%	**0%**	0%	0%	0%	**0%**	0%
Buses and Single-Unit Trucks	0	0	0	**0**	0	4	0	**4**	5	0	0	**5**	9
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	0%	0.5%	0%	**0.4%**	0.6%	0%	0%	**0.5%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Landen-Deerfield Park Ent. - TMC
Sat Oct 21, 2023
Midday Peak (WKND) (Oct 21 2023 11AM - 12 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Landen-Deerfield Park Ent. - TMC

Sat Oct 21, 2023
PM Peak (WKND) (Oct 21 2023 2:45PM - 3:45 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

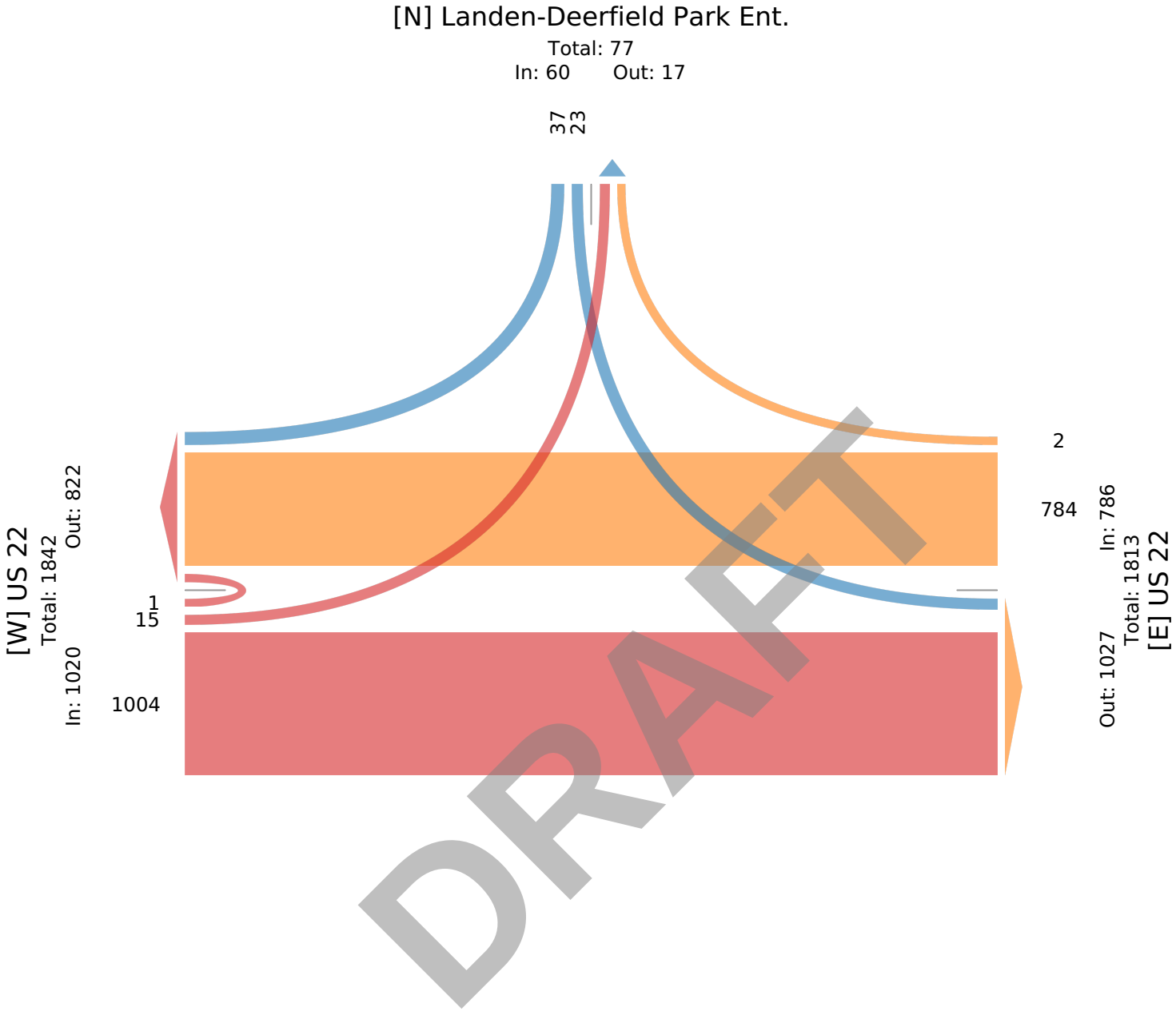
Leg Direction	Landen-Deerfield Park Ent. Southbound				US 22 Westbound				US 22 Eastbound				
Time	R	L	U	**App**	R	T	U	**App**	T	L	U	**App**	**Int**
2023-10-21 2:45PM	16	8	0	**24**	0	211	0	**211**	242	1	0	**243**	**478**
3:00PM	12	3	0	**15**	0	149	0	**149**	262	6	1	**269**	**433**
3:15PM	4	4	0	**8**	0	198	0	**198**	260	6	0	**266**	**472**
3:30PM	5	8	0	**13**	2	226	0	**228**	240	2	0	**242**	**483**
Total	37	23	0	**60**	2	784	0	**786**	1004	15	1	**1020**	**1866**
% Approach	61.7%	38.3%	0%	**-**	0.3%	99.7%	0%	**-**	98.4%	1.5%	0.1%	**-**	-
% Total	2.0%	1.2%	0%	**3.2%**	0.1%	42.0%	0%	**42.1%**	53.8%	0.8%	0.1%	**54.7%**	-
PHF	0.578	0.719	-	**0.625**	0.250	0.867	-	**0.862**	0.958	0.625	0.250	**0.948**	0.966
Lights	37	23	0	**60**	2	783	0	**785**	999	15	1	**1015**	1860
% Lights	100%	100%	0%	**100%**	100%	99.9%	0%	**99.9%**	99.5%	100%	100%	**99.5%**	99.7%
Articulated Trucks	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0
% Articulated Trucks	0%	0%	0%	**0%**	0%	0%	0%	**0%**	0%	0%	0%	**0%**	0%
Buses and Single-Unit Trucks	0	0	0	**0**	0	1	0	**1**	5	0	0	**5**	6
% Buses and Single-Unit Trucks	0%	0%	0%	**0%**	0%	0.1%	0%	**0.1%**	0.5%	0%	0%	**0.5%**	0.3%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Landen-Deerfield Park Ent. - TMC
Sat Oct 21, 2023
PM Peak (WKND) (Oct 21 2023 2:45PM - 3:45 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124444, Location: 39.313705, -84.262879

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Park Dr. - TMC

Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	US 22				Park Dr.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 6:00AM	154	0	0	**154**	1	1	0	**2**	0	36	0	**36**	**192**
6:15AM	181	0	0	**181**	0	0	0	**0**	0	39	0	**39**	**220**
6:30AM	192	1	0	**193**	1	0	0	**1**	1	76	0	**77**	**271**
6:45AM	281	1	0	**282**	4	1	0	**5**	2	65	0	**67**	**354**
Hourly Total	808	2	0	**810**	6	2	0	**8**	3	216	0	**219**	**1037**
7:00AM	280	0	0	**280**	3	4	0	**7**	1	82	0	**83**	**370**
7:15AM	359	1	0	**360**	2	1	0	**3**	1	66	0	**67**	**430**
7:30AM	336	1	0	**337**	1	3	0	**4**	4	76	0	**80**	**421**
7:45AM	307	3	0	**310**	2	3	0	**5**	1	108	0	**109**	**424**
Hourly Total	1282	5	0	**1287**	8	11	0	**19**	7	332	0	**339**	**1645**
8:00AM	303	1	0	**304**	0	5	0	**5**	3	111	0	**114**	**423**
8:15AM	310	2	0	**312**	1	6	0	**7**	2	83	0	**85**	**404**
8:30AM	291	1	0	**292**	0	1	0	**1**	3	112	0	**115**	**408**
8:45AM	270	0	0	**270**	4	3	0	**7**	2	122	0	**124**	**401**
Hourly Total	1174	4	0	**1178**	5	15	0	**20**	10	428	0	**438**	**1636**
9:00AM	228	0	0	**228**	2	6	0	**8**	3	129	0	**132**	**368**
9:15AM	224	0	0	**224**	1	1	0	**2**	2	132	0	**134**	**360**
9:30AM	213	1	0	**214**	2	2	0	**4**	2	129	0	**131**	**349**
9:45AM	207	4	0	**211**	1	2	0	**3**	1	120	0	**121**	**335**
Hourly Total	872	5	0	**877**	6	11	0	**17**	8	510	0	**518**	**1412**
10:00AM	183	0	0	**183**	1	3	0	**4**	2	143	0	**145**	**332**
10:15AM	181	2	0	**183**	0	0	0	**0**	1	134	0	**135**	**318**
10:30AM	166	2	0	**168**	0	1	0	**1**	1	162	0	**163**	**332**
10:45AM	180	3	0	**183**	0	2	0	**2**	2	136	0	**138**	**323**
Hourly Total	710	7	0	**717**	1	6	0	**7**	6	575	0	**581**	**1305**
11:00AM	172	0	0	**172**	2	2	0	**4**	0	144	0	**144**	**320**
11:15AM	185	0	0	**185**	0	1	0	**1**	1	165	0	**166**	**352**
11:30AM	188	0	0	**188**	1	1	0	**2**	2	191	0	**193**	**383**
11:45AM	156	0	0	**156**	3	2	0	**5**	1	206	0	**207**	**368**
Hourly Total	701	0	0	**701**	6	6	0	**12**	4	706	0	**710**	**1423**
12:00PM	186	2	0	**188**	1	0	0	**1**	4	225	0	**229**	**418**
12:15PM	179	1	0	**180**	2	0	0	**2**	1	200	0	**201**	**383**
12:30PM	183	1	0	**184**	1	2	0	**3**	2	219	0	**221**	**408**
12:45PM	167	1	0	**168**	0	2	0	**2**	3	222	0	**225**	**395**
Hourly Total	715	5	0	**720**	4	4	0	**8**	10	866	0	**876**	**1604**
1:00PM	134	1	0	**135**	4	2	0	**6**	3	222	0	**225**	**366**
1:15PM	151	1	0	**152**	0	1	0	**1**	1	226	0	**227**	**380**
1:30PM	169	1	0	**170**	1	4	0	**5**	3	236	0	**239**	**414**
1:45PM	177	1	0	**178**	0	0	0	**0**	0	233	0	**233**	**411**
Hourly Total	631	4	0	**635**	5	7	0	**12**	7	917	0	**924**	**1571**
2:00PM	140	0	0	**140**	1	3	0	**4**	1	222	0	**223**	**367**
2:15PM	165	2	0	**167**	0	0	0	**0**	3	250	0	**253**	**420**
2:30PM	159	0	0	**159**	3	3	0	**6**	7	261	0	**268**	**433**
2:45PM	200	0	0	**200**	1	4	0	**5**	2	283	0	**285**	**490**
Hourly Total	664	2	0	**666**	5	10	0	**15**	13	1016	0	**1029**	**1710**
3:00PM	176	0	0	**176**	1	0	0	**1**	4	302	0	**306**	**483**
3:15PM	168	1	0	**169**	2	0	0	**2**	6	319	0	**325**	**496**
3:30PM	169	0	0	**169**	3	1	0	**4**	0	333	0	**333**	**506**
3:45PM	175	0	0	**175**	0	2	0	**2**	1	349	0	**350**	**527**
Hourly Total	688	1	0	**689**	6	3	0	**9**	11	1303	0	**1314**	**2012**
4:00PM	159	2	0	**161**	2	0	0	**2**	3	346	0	**349**	**512**
4:15PM	163	3	0	**166**	1	2	0	**3**	5	342	0	**347**	**516**
4:30PM	198	2	0	**200**	2	2	0	**4**	3	341	0	**344**	**548**
4:45PM	184	0	0	**184**	1	2	0	**3**	1	284	0	**285**	**472**

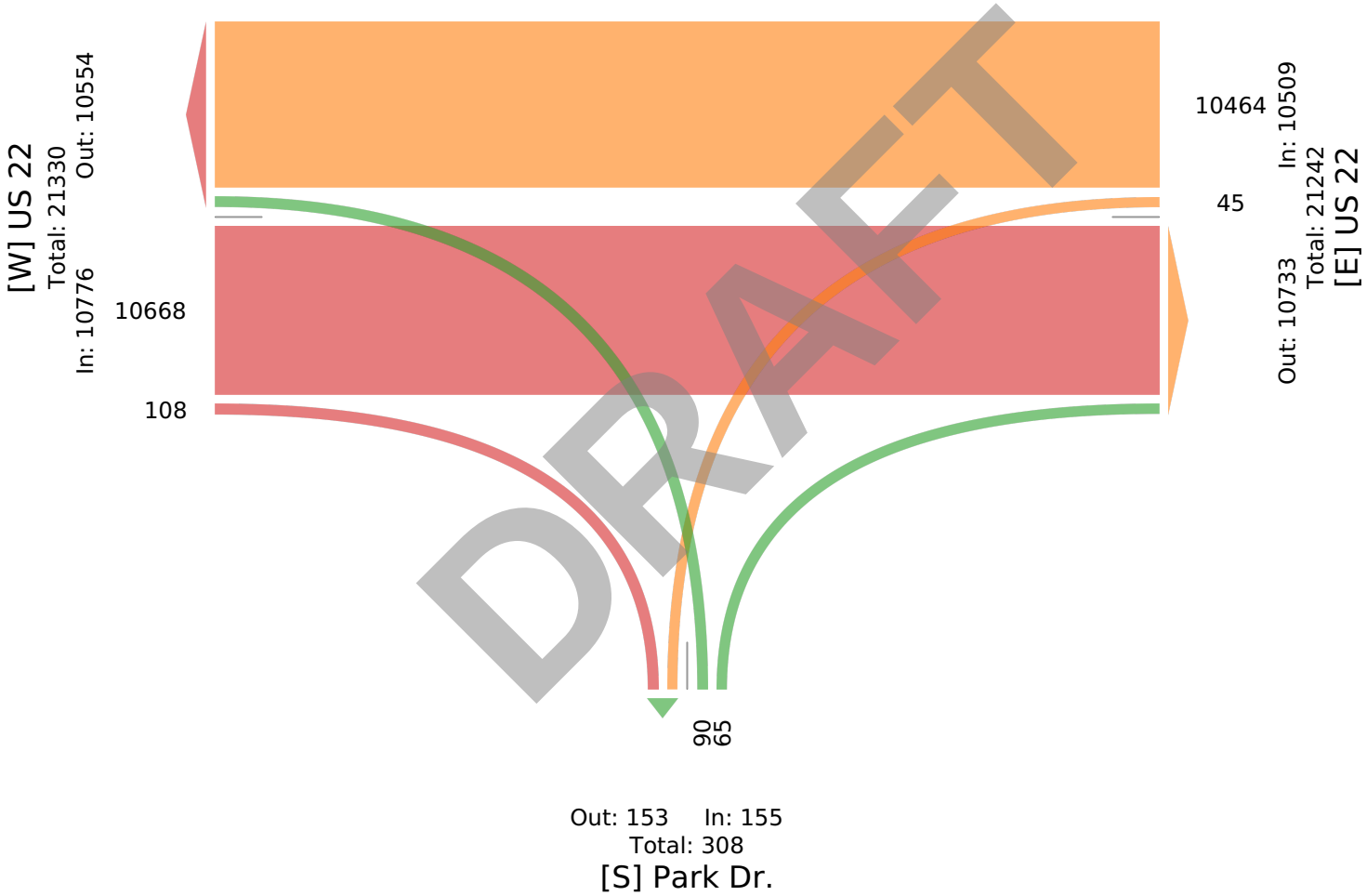
Leg Direction	US 22 Westbound				Park Dr. Northbound				US 22 Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
Hourly Total	704	7	0	**711**	6	6	0	**12**	12	1313	0	**1325**	**2048**
5:00PM	190	0	0	**190**	1	0	0	**1**	3	288	0	**291**	**482**
5:15PM	220	0	0	**220**	1	0	0	**1**	2	310	0	**312**	**533**
5:30PM	193	1	0	**194**	2	2	0	**4**	1	310	0	**311**	**509**
5:45PM	198	0	0	**198**	0	2	0	**2**	2	301	0	**303**	**503**
Hourly Total	801	1	0	**802**	4	4	0	**8**	8	1209	0	**1217**	**2027**
6:00PM	189	1	0	**190**	1	2	0	**3**	2	349	0	**351**	**544**
6:15PM	184	0	0	**184**	1	2	0	**3**	4	339	0	**343**	**530**
6:30PM	161	0	0	**161**	0	1	0	**1**	2	343	0	**345**	**507**
6:45PM	180	1	0	**181**	1	0	0	**1**	1	246	0	**247**	**429**
Hourly Total	714	2	0	**716**	3	5	0	**8**	9	1277	0	**1286**	**2010**
Total	10464	45	0	**10509**	65	90	0	**155**	108	10668	0	**10776**	**21440**
% Approach	99.6%	0.4%	0%	**-**	41.9%	58.1%	0%	**-**	1.0%	99.0%	0%	**-**	-
% Total	48.8%	0.2%	0%	**49.0%**	0.3%	0.4%	0%	**0.7%**	0.5%	49.8%	0%	**50.3%**	-
Lights	10252	42	0	**10294**	58	84	0	**142**	104	10443	0	**10547**	20983
% Lights	98.0%	93.3%	0%	**98.0%**	89.2%	93.3%	0%	**91.6%**	96.3%	97.9%	0%	**97.9%**	97.9%
Articulated Trucks	22	0	0	**22**	1	0	0	**1**	0	27	0	**27**	50
% Articulated Trucks	0.2%	0%	0%	**0.2%**	1.5%	0%	0%	**0.6%**	0%	0.3%	0%	**0.3%**	0.2%
Buses and Single-Unit Trucks	190	3	0	**193**	6	6	0	**12**	4	198	0	**202**	407
% Buses and Single-Unit Trucks	1.8%	6.7%	0%	**1.8%**	9.2%	6.7%	0%	**7.7%**	3.7%	1.9%	0%	**1.9%**	1.9%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Park Dr. - TMC
Thu Oct 19, 2023
Full Length (6 AM-7 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Park Dr. - TMC

Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

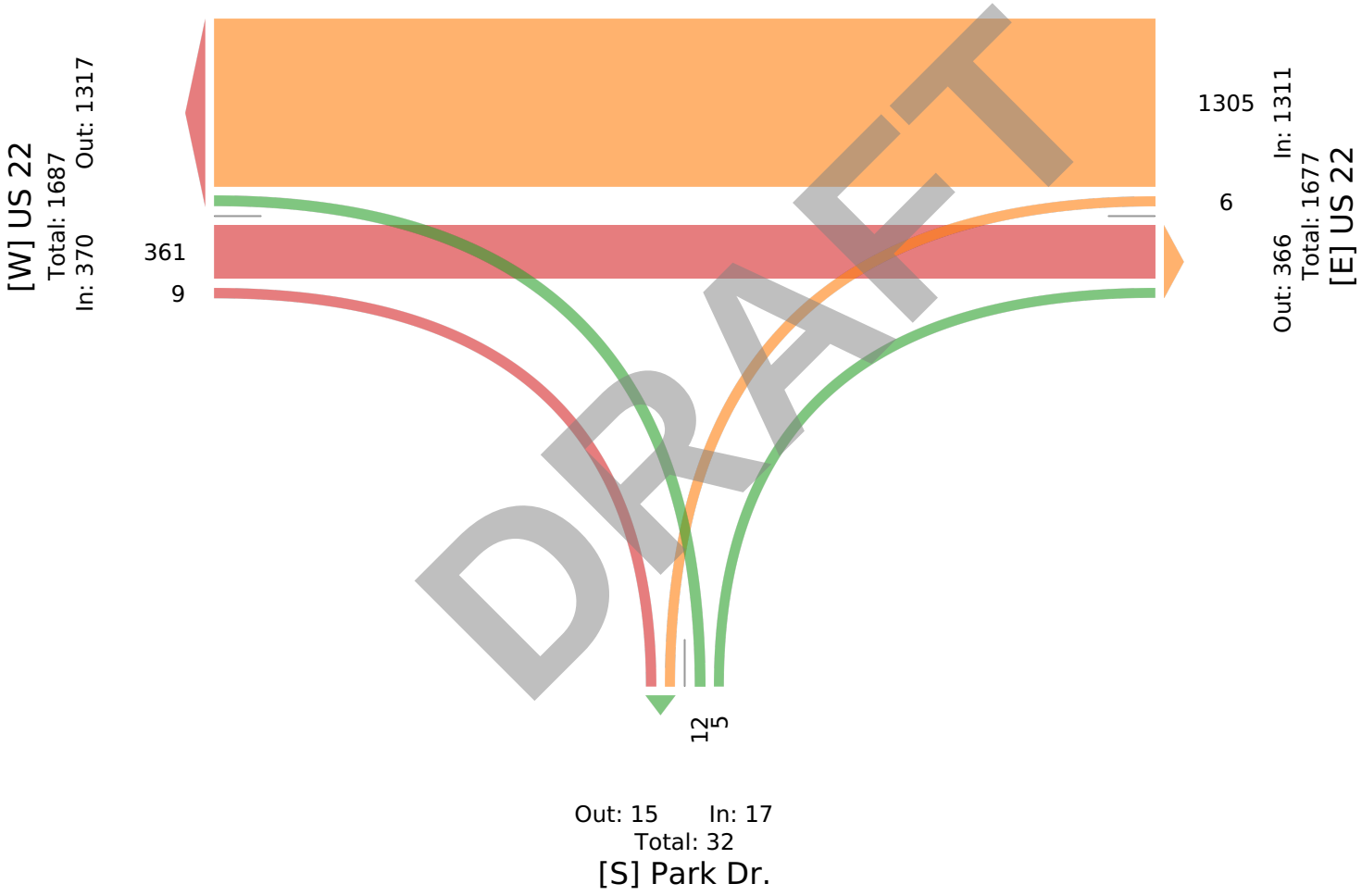
Leg / Direction	US 22 Westbound				Park Dr. Northbound				US 22 Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 7:15AM	359	1	0	**360**	2	1	0	**3**	1	66	0	**67**	**430**
7:30AM	336	1	0	**337**	1	3	0	**4**	4	76	0	**80**	**421**
7:45AM	307	3	0	**310**	2	3	0	**5**	1	108	0	**109**	**424**
8:00AM	303	1	0	**304**	0	5	0	**5**	3	111	0	**114**	**423**
Total	1305	6	0	**1311**	5	12	0	**17**	9	361	0	**370**	**1698**
% Approach	99.5%	0.5%	0%	**-**	29.4%	70.6%	0%	**-**	2.4%	97.6%	0%	**-**	-
% Total	76.9%	0.4%	0%	**77.2%**	0.3%	0.7%	0%	**1.0%**	0.5%	21.3%	0%	**21.8%**	-
PHF	0.909	0.500	-	**0.910**	0.625	0.600	-	**0.850**	0.563	0.813	-	**0.811**	0.987
Lights	1283	6	0	**1289**	4	11	0	**15**	8	337	0	**345**	1649
% Lights	98.3%	100%	0%	**98.3%**	80.0%	91.7%	0%	**88.2%**	88.9%	93.4%	0%	**93.2%**	97.1%
Articulated Trucks	2	0	0	**2**	0	0	0	**0**	0	3	0	**3**	5
% Articulated Trucks	0.2%	0%	0%	**0.2%**	0%	0%	0%	**0%**	0%	0.8%	0%	**0.8%**	0.3%
Buses and Single-Unit Trucks	20	0	0	**20**	1	1	0	**2**	1	21	0	**22**	44
% Buses and Single-Unit Trucks	1.5%	0%	0%	**1.5%**	20.0%	8.3%	0%	**11.8%**	11.1%	5.8%	0%	**5.9%**	2.6%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Park Dr. - TMC
Thu Oct 19, 2023
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Park Dr. - TMC

Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

LOUKAS engineering
TRAFFIC DATA & CONSULTING

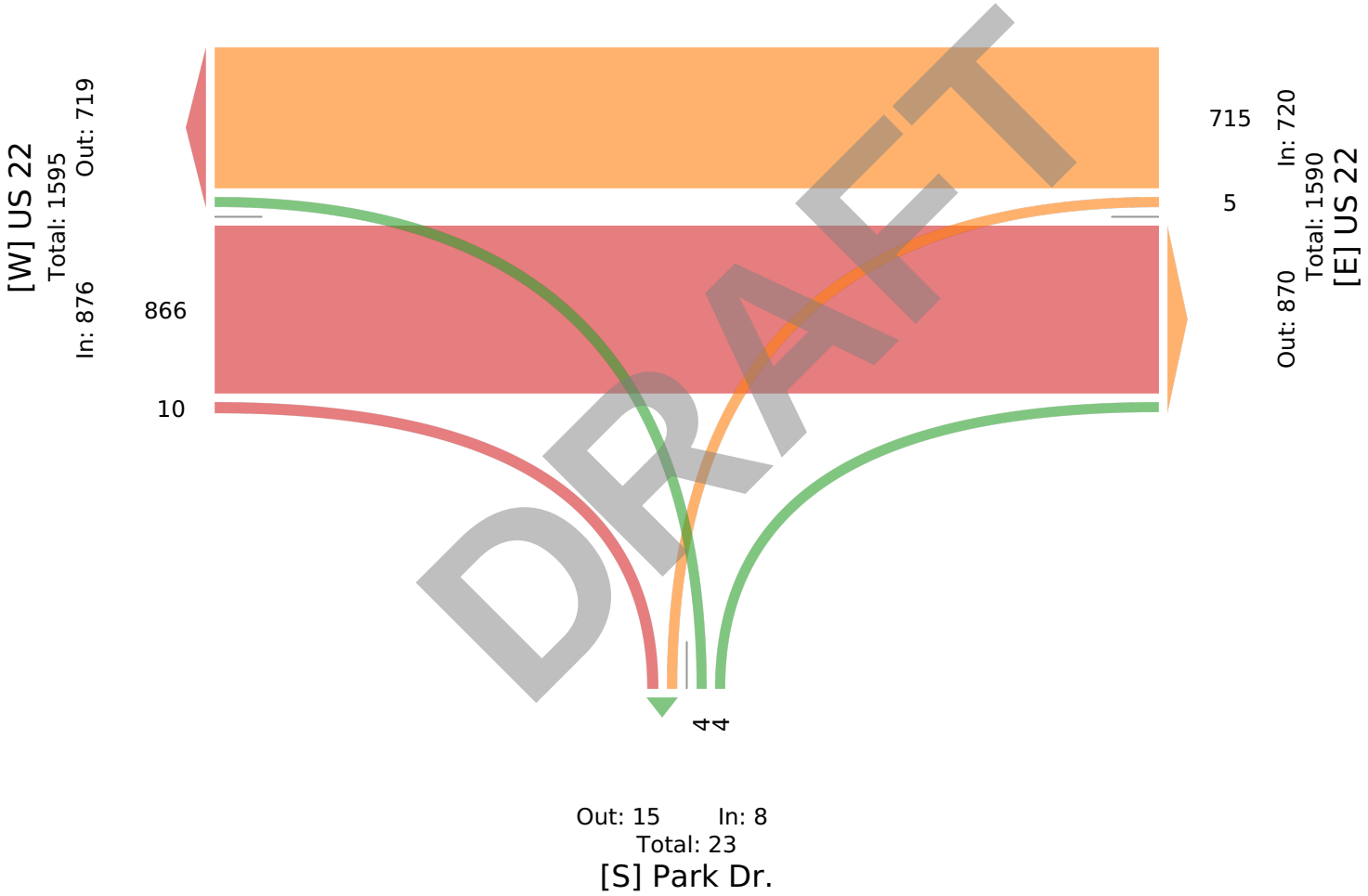
Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg / Direction	US 22 Westbound				Park Dr. Northbound				US 22 Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 12:00PM	186	2	0	**188**	1	0	0	**1**	4	225	0	**229**	**418**
12:15PM	179	1	0	**180**	2	0	0	**2**	1	200	0	**201**	**383**
12:30PM	183	1	0	**184**	1	2	0	**3**	2	219	0	**221**	**408**
12:45PM	167	1	0	**168**	0	2	0	**2**	3	222	0	**225**	**395**
Total	715	5	0	**720**	4	4	0	**8**	10	866	0	**876**	**1604**
% Approach	99.3%	0.7%	0%	**-**	50.0%	50.0%	0%	**-**	1.1%	98.9%	0%	**-**	-
% Total	44.6%	0.3%	0%	**44.9%**	0.2%	0.2%	0%	**0.5%**	0.6%	54.0%	0%	**54.6%**	-
PHF	0.961	0.625	-	**0.957**	0.500	0.500	-	**0.667**	0.625	0.962	-	**0.956**	0.959
Lights	696	4	0	**700**	2	4	0	**6**	10	839	0	**849**	1555
% Lights	97.3%	80.0%	0%	**97.2%**	50.0%	100%	0%	**75.0%**	100%	96.9%	0%	**96.9%**	96.9%
Articulated Trucks	2	0	0	**2**	1	0	0	**1**	0	3	0	**3**	6
% Articulated Trucks	0.3%	0%	0%	**0.3%**	25.0%	0%	0%	**12.5%**	0%	0.3%	0%	**0.3%**	0.4%
Buses and Single-Unit Trucks	17	1	0	**18**	1	0	0	**1**	0	24	0	**24**	43
% Buses and Single-Unit Trucks	2.4%	20.0%	0%	**2.5%**	25.0%	0%	0%	**12.5%**	0%	2.8%	0%	**2.7%**	2.7%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Park Dr. - TMC
Thu Oct 19, 2023
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Park Dr. - TMC

Thu Oct 19, 2023
PM Peak (3:45 PM - 4:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

LOUKAS engineering
TRAFFIC DATA & CONSULTING

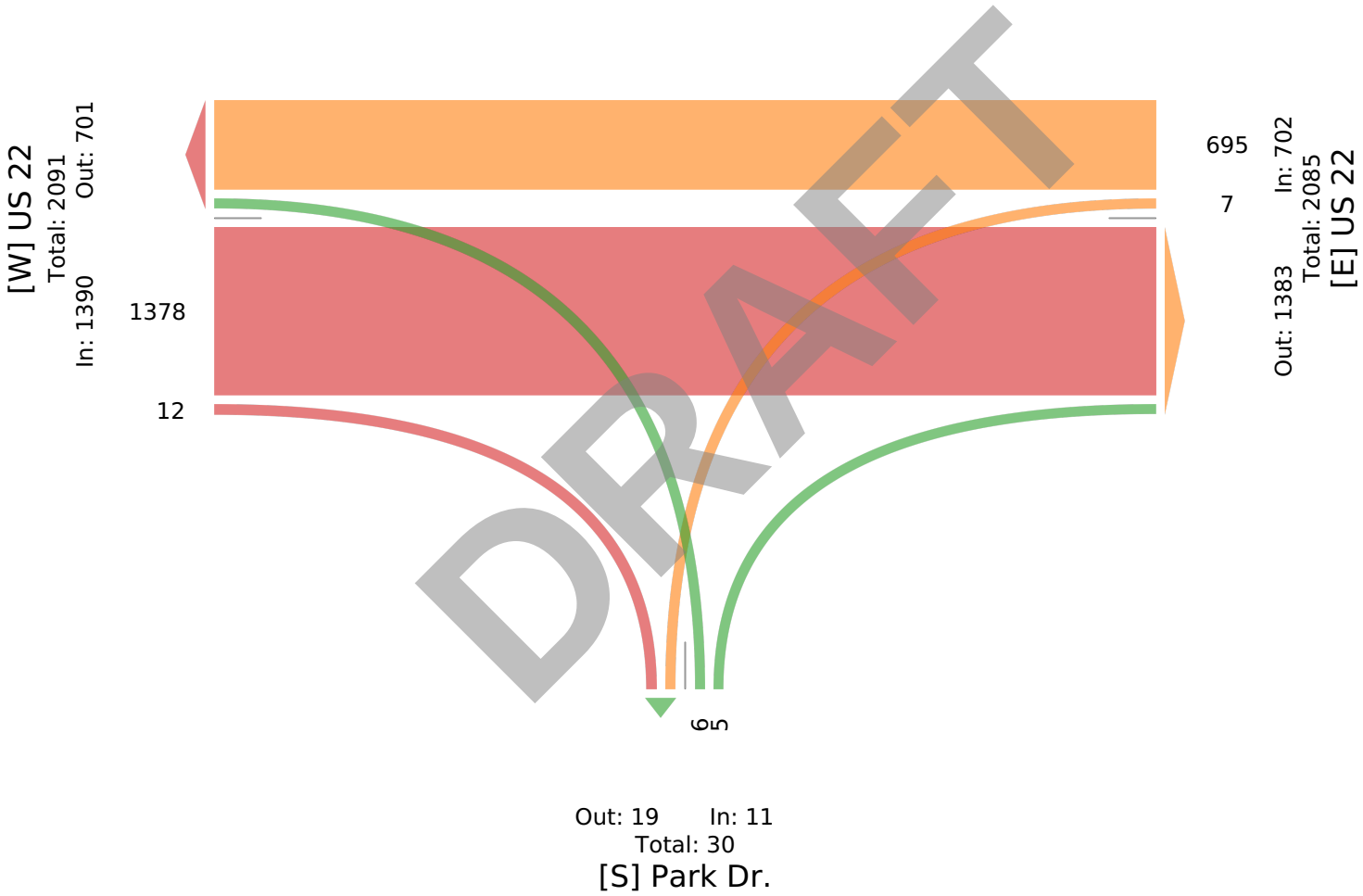
Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	US 22				Park Dr.				US 22				
Direction	Westbound				Northbound				Eastbound				
Time	T	L	U	**App**	R	L	U	**App**	R	T	U	**App**	**Int**
2023-10-19 3:45PM	175	0	0	**175**	0	2	0	**2**	1	349	0	**350**	**527**
4:00PM	159	2	0	**161**	2	0	0	**2**	3	346	0	**349**	**512**
4:15PM	163	3	0	**166**	1	2	0	**3**	5	342	0	**347**	**516**
4:30PM	198	2	0	**200**	2	2	0	**4**	3	341	0	**344**	**548**
Total	695	7	0	**702**	5	6	0	**11**	12	1378	0	**1390**	**2103**
% Approach	99.0%	1.0%	0%	**-**	45.5%	54.5%	0%	**-**	0.9%	99.1%	0%	**-**	-
% Total	33.0%	0.3%	0%	**33.4%**	0.2%	0.3%	0%	**0.5%**	0.6%	65.5%	0%	**66.1%**	-
PHF	0.878	0.583	-	**0.878**	0.625	0.750	-	**0.688**	0.600	0.987	-	**0.993**	0.959
Lights	682	7	0	**689**	5	6	0	**11**	11	1359	0	**1370**	2070
% Lights	98.1%	100%	0%	**98.1%**	100%	100%	0%	**100%**	91.7%	98.6%	0%	**98.6%**	98.4%
Articulated Trucks	3	0	0	**3**	0	0	0	**0**	0	0	0	**0**	3
% Articulated Trucks	0.4%	0%	0%	**0.4%**	0%	0%	0%	**0%**	0%	0%	0%	**0%**	0.1%
Buses and Single-Unit Trucks	10	0	0	**10**	0	0	0	**0**	1	19	0	**20**	30
% Buses and Single-Unit Trucks	1.4%	0%	0%	**1.4%**	0%	0%	0%	**0%**	8.3%	1.4%	0%	**1.4%**	1.4%

*L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Park Dr. - TMC
Thu Oct 19, 2023
PM Peak (3:45 PM - 4:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1124443, Location: 39.31454, -84.260763

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Creek Woods Pl./Old 3C Hwy. - TMC

Wed Jan 18, 2023
Full Length (12 AM-12 AM (+1))
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

Leg	Creek Woods Pl.						US 22						Old 3C Hwy.						US 22						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-01-18 12:00AM	0	0	0	0	**0**	0	0	4	0	0	**4**	0	0	0	0	0	**0**	0	0	14	0	0	**14**	0	**18**
12:15AM	0	0	0	0	**0**	0	0	4	0	0	**4**	0	0	0	0	0	**0**	0	0	8	0	0	**8**	0	**12**
12:30AM	0	0	0	0	**0**	0	0	4	0	0	**4**	0	0	0	0	0	**0**	0	0	3	0	0	**3**	0	**7**
12:45AM	0	0	0	0	**0**	0	0	1	0	0	**1**	0	0	0	1	0	**1**	0	0	8	0	0	**8**	0	**10**
Hourly Total	0	0	0	0	**0**	0	0	13	0	0	**13**	0	0	0	1	0	**1**	0	0	33	0	0	**33**	0	**47**
1:00AM	0	0	0	0	**0**	0	0	2	0	0	**2**	0	0	0	0	0	**0**	0	0	6	0	0	**6**	0	**8**
1:15AM	0	0	0	0	**0**	0	0	6	0	0	**6**	0	0	0	1	0	**1**	0	0	12	0	0	**12**	0	**19**
1:30AM	0	0	0	0	**0**	0	0	2	0	0	**2**	0	0	0	1	0	**1**	0	0	8	0	0	**8**	0	**11**
1:45AM	0	0	0	0	**0**	0	0	2	0	0	**2**	0	0	0	0	0	**0**	0	0	6	0	0	**6**	0	**8**
Hourly Total	0	0	0	0	**0**	0	0	12	0	0	**12**	0	0	0	2	0	**2**	0	0	32	0	0	**32**	0	**46**
2:00AM	0	0	0	0	**0**	0	0	4	0	0	**4**	0	0	0	0	0	**0**	0	1	5	0	0	**6**	0	**10**
2:15AM	0	0	0	0	**0**	0	0	1	0	0	**1**	0	0	0	0	0	**0**	0	0	3	0	0	**3**	0	**4**
2:30AM	0	0	1	0	**1**	0	0	3	0	0	**3**	0	0	0	0	0	**0**	0	0	1	0	0	**1**	0	**5**
2:45AM	0	0	0	0	**0**	0	0	7	0	0	**7**	0	0	0	0	0	**0**	0	0	8	0	0	**8**	0	**15**
Hourly Total	0	0	1	0	**1**	0	0	15	0	0	**15**	0	0	0	0	0	**0**	0	1	17	0	0	**18**	0	**34**
3:00AM	1	0	0	0	**1**	0	0	9	0	0	**9**	0	0	0	0	0	**0**	0	0	7	0	0	**7**	0	**17**
3:15AM	0	0	0	0	**0**	0	1	6	0	0	**7**	0	0	0	0	0	**0**	0	1	2	0	0	**3**	0	**10**
3:30AM	0	0	0	0	**0**	0	0	10	0	0	**10**	0	0	0	0	0	**0**	0	0	6	0	0	**6**	0	**16**
3:45AM	0	0	0	0	**0**	0	0	11	0	0	**11**	0	0	0	0	0	**0**	0	0	6	0	0	**6**	0	**17**
Hourly Total	1	0	0	0	**1**	0	1	36	0	0	**37**	0	0	0	0	0	**0**	0	1	21	0	0	**22**	0	**60**
4:00AM	0	0	0	0	**0**	0	0	16	0	0	**16**	0	0	0	2	0	**2**	0	1	1	0	0	**2**	0	**20**
4:15AM	0	0	0	0	**0**	0	0	27	1	0	**28**	0	0	0	3	0	**3**	0	0	4	0	0	**4**	0	**35**
4:30AM	0	0	0	0	**0**	0	0	44	0	0	**44**	0	0	0	2	0	**2**	0	1	8	1	0	**10**	0	**56**
4:45AM	3	0	0	0	**3**	0	0	39	0	0	**39**	0	0	0	2	0	**2**	0	4	6	0	0	**10**	0	**54**
Hourly Total	3	0	0	0	**3**	0	0	126	1	0	**127**	0	0	0	9	0	**9**	0	6	19	1	0	**26**	0	**165**
5:00AM	1	0	0	0	**1**	0	0	55	0	0	**55**	0	0	0	3	0	**3**	0	0	7	0	0	**7**	0	**66**
5:15AM	2	0	0	0	**2**	0	0	66	0	0	**66**	0	0	0	7	0	**7**	0	0	8	1	0	**9**	0	**84**
5:30AM	1	0	0	0	**1**	0	0	97	0	0	**97**	0	0	0	11	0	**11**	0	1	10	0	0	**11**	0	**120**
5:45AM	1	0	0	0	**1**	0	0	96	0	0	**96**	0	0	0	9	0	**9**	0	4	13	0	0	**17**	0	**123**
Hourly Total	5	0	0	0	**5**	0	0	314	0	0	**314**	0	0	0	30	0	**30**	0	5	38	1	0	**44**	0	**393**
6:00AM	6	1	0	0	**7**	0	0	123	1	0	**124**	0	0	0	2	0	**2**	0	2	26	1	0	**29**	0	**162**
6:15AM	7	0	0	0	**7**	0	0	189	0	0	**189**	0	0	0	3	0	**3**	0	7	31	4	0	**42**	0	**241**
6:30AM	8	0	0	0	**8**	0	0	209	0	0	**209**	0	0	0	3	0	**3**	0	3	54	1	0	**58**	0	**278**
6:45AM	8	0	2	0	**10**	0	1	242	2	0	**245**	0	0	0	1	0	**1**	0	4	53	0	0	**57**	0	**313**
Hourly Total	29	1	2	0	**32**	0	1	763	3	0	**767**	0	0	0	9	0	**9**	0	16	164	6	0	**186**	0	**994**
7:00AM	6	2	1	0	**9**	0	1	264	0	0	**265**	0	0	0	0	0	**0**	0	7	56	0	0	**63**	0	**337**
7:15AM	12	1	2	0	**15**	0	0	286	1	0	**287**	0	0	0	2	0	**2**	0	2	66	1	0	**69**	0	**373**
7:30AM	9	0	2	0	**11**	0	0	353	2	0	**355**	0	1	0	1	0	**2**	0	6	75	3	0	**84**	0	**452**
7:45AM	6	1	1	0	**8**	0	1	254	2	0	**257**	0	0	0	5	0	**5**	0	8	105	2	0	**115**	0	**385**
Hourly Total	33	4	6	0	**43**	0	2	1157	5	0	**1164**	0	1	0	8	0	**9**	0	23	302	6	0	**331**	0	**1547**
8:00AM	7	1	1	0	**9**	0	1	263	1	0	**265**	0	4	0	1	0	**5**	0	11	85	0	0	**96**	0	**375**
8:15AM	8	0	2	0	**10**	0	0	259	0	0	**259**	0	0	0	2	0	**2**	0	4	77	1	0	**82**	0	**353**
8:30AM	7	0	1	0	**8**	0	1	252	1	0	**254**	0	1	0	2	0	**3**	0	17	91	3	0	**111**	0	**376**
8:45AM	4	0	2	0	**6**	0	2	268	1	0	**271**	0	0	0	9	0	**9**	0	15	101	3	0	**119**	0	**405**
Hourly Total	26	1	6	0	**33**	0	4	1042	3	0	**1049**	0	5	0	14	0	**19**	0	47	354	7	0	**408**	0	**1509**
9:00AM	5	0	0	0	**5**	0	0	180	0	0	**180**	0	3	0	4	0	**7**	0	21	94	4	0	**119**	0	**311**
9:15AM	5	1	1	0	**7**	0	0	161	0	0	**161**	0	1	0	5	0	**6**	0	23	92	3	0	**118**	0	**292**
9:30AM	7	1	1	0	**9**	0	1	173	0	0	**174**	0	0	0	7	0	**7**	0	17	89	3	0	**109**	0	**299**
9:45AM	2	0	0	0	**2**	0	0	176	0	0	**176**	0	2	0	17	0	**19**	0	15	100	3	0	**118**	0	**315**
Hourly Total	19	2	2	0	**23**	0	1	690	0	0	**691**	0	6	0	33	0	**39**	0	76	375	13	0	**464**	0	**1217**
10:00AM	5	0	1	0	**6**	0	1	172	0	0	**173**	0	1	0	12	0	**13**	0	14	84	3	0	**101**	0	**293**
10:15AM	8	0	0	0	**8**	0	1	150	0	0	**151**	0	0	1	7	0	**8**	0	16	99	2	0	**117**	0	**284**
10:30AM	5	0	0	0	**5**	0	1	165	1	0	**167**	0	2	0	9	0	**11**	0	15	117	2	0	**134**	0	**317**

Leg	Creek Woods Pl.						US 22						Old 3C Hwy.						US 22						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
10:45AM	3	0	0	0	**3**	0	0	159	1	0	**160**	0	0	0	5	0	**5**	0	14	124	3	0	**141**	0	**309**
Hourly Total	21	0	1	0	**22**	0	3	646	2	0	**651**	0	3	1	33	0	**37**	0	59	424	10	0	**493**	0	**1203**
11:00AM	5	0	0	0	**5**	0	0	155	1	0	**156**	0	1	1	8	0	**10**	0	22	110	3	0	**135**	0	**306**
11:15AM	3	2	1	0	**6**	0	1	148	1	0	**150**	0	0	0	14	0	**14**	0	23	143	3	0	**169**	0	**339**
11:30AM	5	0	0	0	**5**	1	1	159	0	0	**160**	0	2	0	8	0	**10**	0	24	141	4	0	**169**	0	**344**
11:45AM	7	0	0	0	**7**	0	1	176	0	0	**177**	0	1	0	6	0	**7**	0	29	143	7	0	**179**	0	**370**
Hourly Total	20	2	1	0	**23**	1	3	638	2	0	**643**	0	4	1	36	0	**41**	0	98	537	17	0	**652**	0	**1359**
12:00PM	2	1	1	0	**4**	0	0	136	0	0	**136**	0	1	0	4	0	**5**	0	25	175	3	0	**203**	0	**348**
12:15PM	3	0	0	0	**3**	0	0	155	1	0	**156**	0	1	0	8	0	**9**	0	25	139	2	0	**166**	0	**334**
12:30PM	2	0	0	0	**2**	0	1	171	0	0	**172**	0	2	0	2	0	**4**	0	34	151	2	0	**187**	0	**365**
12:45PM	4	0	2	0	**6**	0	0	169	0	0	**169**	0	3	1	3	0	**7**	0	46	164	4	0	**214**	0	**396**
Hourly Total	11	1	3	0	**15**	0	1	631	1	0	**633**	0	7	1	17	0	**25**	0	130	629	11	0	**770**	0	**1443**
1:00PM	1	0	0	0	**1**	0	1	96	0	0	**97**	0	1	1	5	0	**7**	0	32	153	3	0	**188**	0	**293**
1:15PM	0	0	1	0	**1**	0	1	135	0	0	**136**	0	1	0	8	0	**9**	0	27	161	1	0	**189**	0	**335**
1:30PM	4	0	0	0	**4**	0	0	133	0	0	**133**	0	0	2	4	0	**6**	0	32	161	3	0	**196**	0	**339**
1:45PM	5	0	2	0	**7**	0	2	143	0	0	**145**	0	1	0	7	0	**8**	0	32	178	5	0	**215**	0	**375**
Hourly Total	10	0	3	0	**13**	0	4	507	0	0	**511**	0	3	3	24	0	**30**	0	123	653	12	0	**788**	0	**1342**
2:00PM	3	1	0	0	**4**	0	1	131	1	0	**133**	0	4	0	5	0	**9**	0	28	180	6	0	**214**	0	**360**
2:15PM	3	0	0	0	**3**	0	2	151	0	0	**153**	0	5	0	1	0	**6**	0	31	183	2	0	**216**	0	**378**
2:30PM	5	0	0	0	**5**	0	4	162	0	0	**166**	0	3	0	4	0	**7**	0	22	192	6	0	**220**	0	**398**
2:45PM	3	1	2	0	**6**	0	0	182	0	0	**182**	0	4	0	8	0	**12**	0	41	202	1	0	**244**	0	**444**
Hourly Total	14	2	2	0	**18**	0	7	626	1	0	**634**	0	16	0	18	0	**34**	0	122	757	15	0	**894**	0	**1580**
3:00PM	2	0	0	0	**2**	0	0	142	1	0	**143**	0	2	0	2	0	**4**	0	40	246	4	0	**290**	0	**439**
3:15PM	2	0	0	0	**2**	0	1	150	1	0	**152**	0	2	0	3	0	**5**	0	38	261	6	0	**305**	0	**464**
3:30PM	6	1	0	0	**7**	0	3	134	2	0	**139**	0	2	0	3	0	**5**	0	58	245	8	0	**311**	0	**462**
3:45PM	2	0	1	0	**3**	0	0	173	1	0	**174**	0	1	0	3	0	**4**	0	55	262	4	0	**321**	0	**502**
Hourly Total	12	1	1	0	**14**	0	4	599	5	0	**608**	0	7	0	11	0	**18**	0	191	1014	22	0	**1227**	0	**1867**
4:00PM	1	1	0	0	**2**	0	1	121	0	0	**122**	0	1	1	1	0	**3**	0	44	261	5	0	**310**	0	**437**
4:15PM	5	1	1	0	**7**	0	2	153	2	0	**157**	0	4	0	1	0	**5**	0	54	252	10	0	**316**	0	**485**
4:30PM	11	0	1	0	**12**	0	2	142	0	0	**144**	0	4	0	0	0	**4**	0	41	280	11	0	**332**	0	**492**
4:45PM	7	0	0	0	**7**	0	1	154	2	0	**157**	0	6	0	2	0	**8**	0	50	298	7	0	**355**	0	**527**
Hourly Total	24	2	2	0	**28**	0	6	570	4	0	**580**	0	15	1	4	0	**20**	0	189	1091	33	0	**1313**	0	**1941**
5:00PM	4	0	3	0	**7**	0	2	187	1	0	**190**	0	6	0	5	0	**11**	0	71	285	6	0	**362**	0	**570**
5:15PM	8	0	0	0	**8**	0	3	182	2	0	**187**	0	2	0	1	0	**3**	0	64	295	9	0	**368**	0	**566**
5:30PM	6	0	1	0	**7**	0	2	176	0	0	**178**	0	5	0	1	0	**6**	0	53	269	11	0	**333**	0	**524**
5:45PM	1	0	0	0	**1**	0	1	154	0	0	**155**	0	3	0	2	0	**5**	0	39	245	4	0	**288**	0	**449**
Hourly Total	19	0	4	0	**23**	0	8	699	3	0	**710**	0	16	0	9	0	**25**	0	227	1094	30	0	**1351**	0	**2109**
6:00PM	6	0	1	0	**7**	0	1	109	0	0	**110**	0	3	0	3	0	**6**	0	39	274	5	0	**318**	0	**441**
6:15PM	4	1	0	0	**5**	0	0	151	0	0	**151**	0	0	1	4	0	**5**	0	39	193	3	0	**235**	0	**396**
6:30PM	2	0	0	0	**2**	0	1	124	1	0	**126**	0	3	0	9	0	**12**	0	22	250	10	0	**282**	0	**422**
6:45PM	3	0	0	0	**3**	0	0	123	0	0	**123**	0	2	1	2	0	**5**	0	22	214	5	0	**241**	0	**372**
Hourly Total	15	1	1	0	**17**	0	2	507	1	0	**510**	0	8	2	18	0	**28**	0	122	931	23	0	**1076**	0	**1631**
7:00PM	2	0	0	0	**2**	0	3	101	0	0	**104**	0	1	0	3	0	**4**	0	21	185	4	0	**210**	0	**320**
7:15PM	3	0	1	0	**4**	0	2	67	0	0	**69**	0	1	0	3	0	**4**	0	18	173	5	0	**196**	0	**273**
7:30PM	3	0	0	0	**3**	0	1	71	0	0	**72**	0	1	0	3	0	**4**	0	19	160	7	0	**186**	0	**265**
7:45PM	1	0	0	0	**1**	0	1	67	1	0	**69**	0	1	0	0	0	**1**	0	17	142	3	0	**162**	0	**233**
Hourly Total	9	0	1	0	**10**	0	7	306	1	0	**314**	0	4	0	9	0	**13**	0	75	660	19	0	**754**	0	**1091**
8:00PM	2	0	0	0	**2**	0	0	56	0	0	**56**	0	1	0	2	0	**3**	0	21	160	4	0	**185**	0	**246**
8:15PM	0	0	0	0	**0**	0	0	39	0	0	**39**	0	1	0	2	0	**3**	0	10	164	5	0	**179**	0	**221**
8:30PM	2	0	1	0	**3**	0	1	44	0	0	**45**	0	3	0	4	0	**7**	0	12	113	2	0	**127**	0	**182**
8:45PM	2	0	1	0	**3**	0	1	47	0	0	**48**	0	0	0	4	0	**4**	0	9	108	3	0	**120**	0	**175**
Hourly Total	6	0	2	0	**8**	0	2	186	0	0	**188**	0	5	0	12	0	**17**	0	52	545	14	0	**611**	0	**824**
9:00PM	0	0	0	0	**0**	0	1	39	0	0	**40**	0	0	0	5	0	**5**	0	11	132	2	0	**145**	0	**190**
9:15PM	0	0	0	0	**0**	0	1	35	0	0	**36**	0	1	0	4	0	**5**	0	14	90	5	0	**109**	0	**150**
9:30PM	0	0	0	0	**0**	0	0	36	0	0	**36**	0	0	0	1	0	**1**	0	9	81	1	0	**91**	0	**128**
9:45PM	0	0	0	0	**0**	0	0	33	0	0	**33**	0	1	0	0	0	**1**	0	4	73	1	0	**78**	0	**112**
Hourly Total	0	0	0	0	**0**	0	2	143	0	0	**145**	0	2	0	10	0	**12**	0	38	376	9	0	**423**	0	**580**
10:00PM	1	0	0	0	**1**	0	0	24	0	0	**24**	0	1	0	2	0	**3**	0	4	44	1	0	**49**	0	**77**
10:15PM	0	0	0	0	**0**	0	0	19	0	0	**19**	0	1	0	1	0	**2**	0	2	44	2	0	**48**	0	**69**
10:30PM	0	0	0	0	**0**	0	0	21	0	0	**21**	0	0	0	4	0	**4**	0	2	33	0	0	**35**	0	**60**

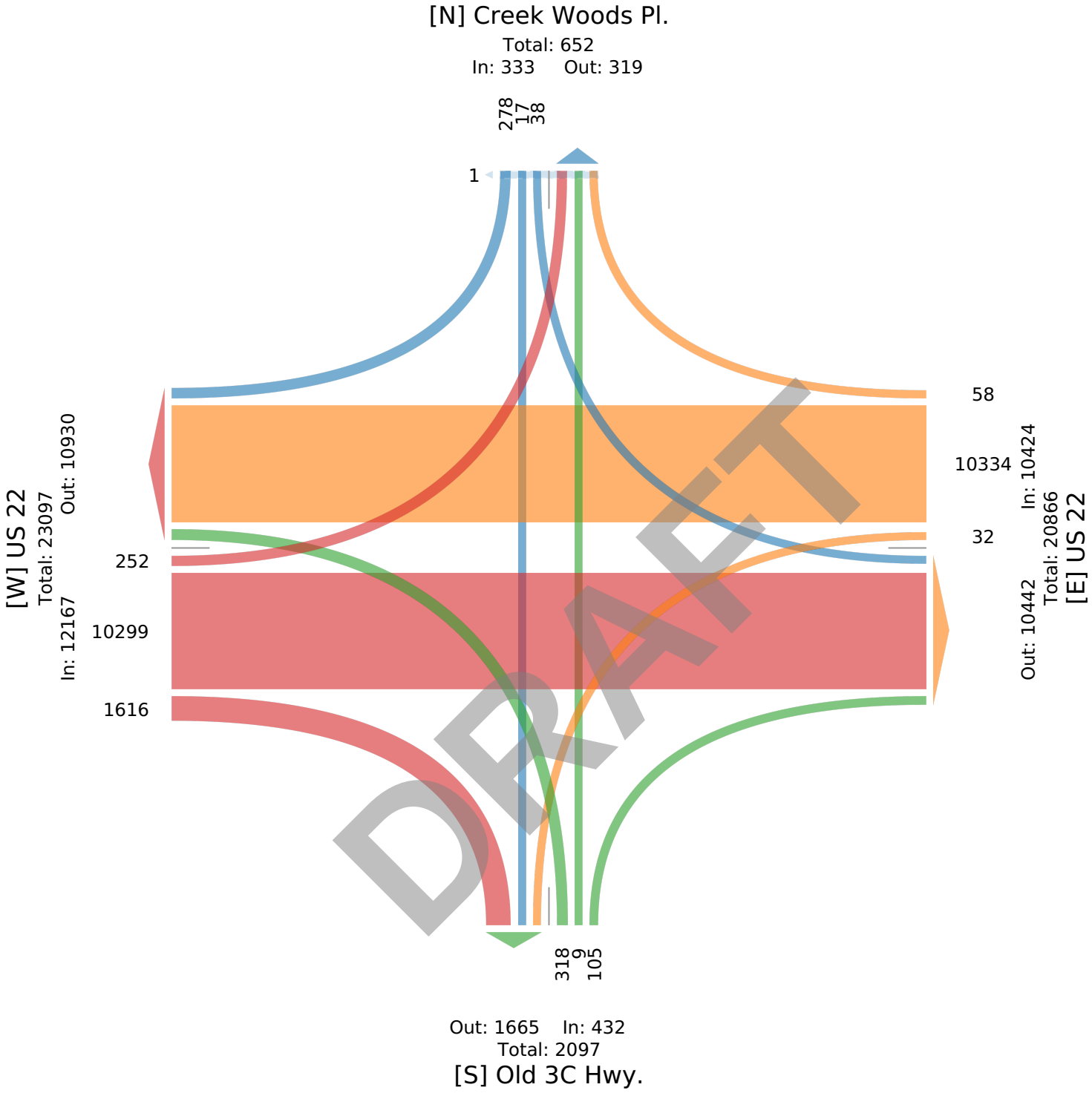
Leg	Creek Woods Pl.						US 22						Old 3C Hwy.						US 22						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
10:45PM	0	0	0	0	**0**	0	0	13	0	0	**13**	0	0	0	2	0	**2**	0	2	29	0	0	**31**	0	**46**
Hourly Total	1	0	0	0	**1**	0	0	77	0	0	**77**	0	2	0	9	0	**11**	0	10	150	3	0	**163**	0	**252**
11:00PM	0	0	0	0	**0**	0	0	7	0	0	**7**	0	1	0	1	0	**2**	0	1	21	0	0	**22**	0	**31**
11:15PM	0	0	0	0	**0**	0	0	12	0	0	**12**	0	0	0	0	0	**0**	0	1	20	0	0	**21**	0	**33**
11:30PM	0	0	0	0	**0**	0	0	8	0	0	**8**	0	0	0	0	0	**0**	0	0	21	0	0	**21**	0	**29**
11:45PM	0	0	0	0	**0**	0	0	4	0	0	**4**	0	0	0	1	0	**1**	0	3	21	0	0	**24**	0	**29**
Hourly Total	0	0	0	0	**0**	0	0	31	0	0	**31**	0	1	0	2	0	**3**	0	5	83	0	0	**88**	0	**122**
Total	278	17	38	0	**333**	1	58	10334	32	0	**10424**	0	105	9	318	0	**432**	0	1616	10299	252	0	**12167**	0	**23356**
% Approach	83.5%	5.1%	11.4%	0%	**-**	-	0.6%	99.1%	0.3%	0%	**-**	-	24.3%	2.1%	73.6%	0%	**-**	-	13.3%	84.6%	2.1%	0%	**-**	-	-
% Total	1.2%	0.1%	0.2%	0%	**1.4%**	-	0.2%	44.2%	0.1%	0%	**44.6%**	-	0.4%	0%	1.4%	0%	**1.8%**	-	6.9%	44.1%	1.1%	0%	**52.1%**	-	-
Lights	266	16	37	0	**319**	-	50	10213	32	0	**10295**	-	103	9	314	0	**426**	-	1603	10139	249	0	**11991**	-	23031
% Lights	95.7%	94.1%	97.4%	0%	**95.8%**	-	86.2%	98.8%	100%	0%	**98.8%**	-	98.1%	100%	98.7%	0%	**98.6%**	-	99.2%	98.4%	98.8%	0%	**98.6%**	-	98.6%
Articulated Trucks	0	0	0	0	**0**	-	0	22	0	0	**22**	-	0	0	0	0	**0**	-	1	35	0	0	**36**	-	58
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%	0.3%	0%	0%	**0.3%**	-	0.2%
Buses and Single-Unit Trucks	12	1	1	0	**14**	-	8	99	0	0	**107**	-	2	0	4	0	**6**	-	12	125	3	0	**140**	-	267
% Buses and Single-Unit Trucks	4.3%	5.9%	2.6%	0%	**4.2%**	-	13.8%	1.0%	0%	0%	**1.0%**	-	1.9%	0%	1.3%	0%	**1.4%**	-	0.7%	1.2%	1.2%	0%	**1.2%**	-	1.1%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Creek Woods Pl./Old 3C Hwy. - TMC
Wed Jan 18, 2023
Full Length (12 AM-12 AM (+1))
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Creek Woods Pl./Old 3C Hwy. - TMC

Wed Jan 18, 2023
AM Peak (Jan 18 2023 7:15AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

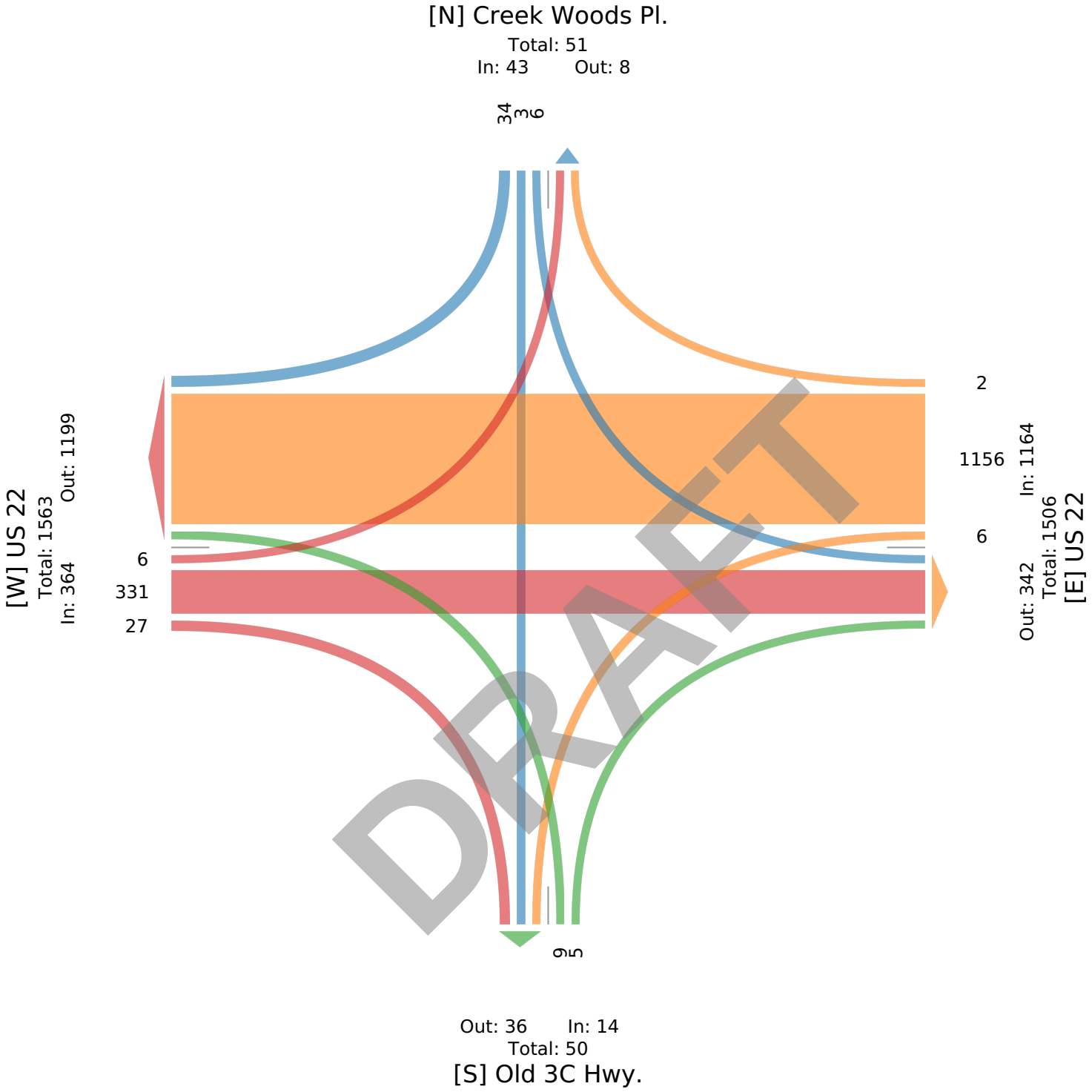
Leg	Creek Woods Pl.						US 22						Old 3C Hwy.						US 22						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-01-18 7:15AM	12	1	2	0	**15**	0	0	286	1	0	**287**	0	0	0	2	0	**2**	0	2	66	1	0	**69**	0	**373**
7:30AM	9	0	2	0	**11**	0	0	353	2	0	**355**	0	1	0	1	0	**2**	0	6	75	3	0	**84**	0	**452**
7:45AM	6	1	1	0	**8**	0	1	254	2	0	**257**	0	0	0	5	0	**5**	0	8	105	2	0	**115**	0	**385**
8:00AM	7	1	1	0	**9**	0	1	263	1	0	**265**	0	4	0	1	0	**5**	0	11	85	0	0	**96**	0	**375**
Total	34	3	6	0	**43**	0	2	1156	6	0	**1164**	0	5	0	9	0	**14**	0	27	331	6	0	**364**	0	**1585**
% Approach	79.1%	7.0%	14.0%	0%	**-**	-	0.2%	99.3%	0.5%	0%	**-**	-	35.7%	0%	64.3%	0%	**-**	-	7.4%	90.9%	1.6%	0%	**-**	-	-
% Total	2.1%	0.2%	0.4%	0%	**2.7%**	-	0.1%	72.9%	0.4%	0%	**73.4%**	-	0.3%	0%	0.6%	0%	**0.9%**	-	1.7%	20.9%	0.4%	0%	**23.0%**	-	-
PHF	0.708	0.750	0.750	-	**0.717**	-	0.500	0.819	0.750	-	**0.820**	-	0.313	-	0.450	-	**0.700**	-	0.614	0.788	0.500	-	**0.791**	-	0.877
Lights	32	3	6	0	**41**	-	0	1149	6	0	**1155**	-	5	0	9	0	**14**	-	27	317	6	0	**350**	-	1560
% Lights	94.1%	100%	100%	0%	**95.3%**	-	0%	99.4%	100%	0%	**99.2%**	-	100%	0%	100%	0%	**100%**	-	100%	95.8%	100%	0%	**96.2%**	-	98.4%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0.1%
Buses and Single-Unit Trucks	2	0	0	0	**2**	-	2	7	0	0	**9**	-	0	0	0	0	**0**	-	0	13	0	0	**13**	-	24
% Buses and Single-Unit Trucks	5.9%	0%	0%	0%	**4.7%**	-	100%	0.6%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0%	3.9%	0%	0%	**3.6%**	-	1.5%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Creek Woods Pl./Old 3C Hwy. - TMC
Wed Jan 18, 2023
AM Peak (Jan 18 2023 7:15AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Creek Woods Pl./Old 3C Hwy. - TMC

Wed Jan 18, 2023
Midday Peak (Jan 18 2023 12PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

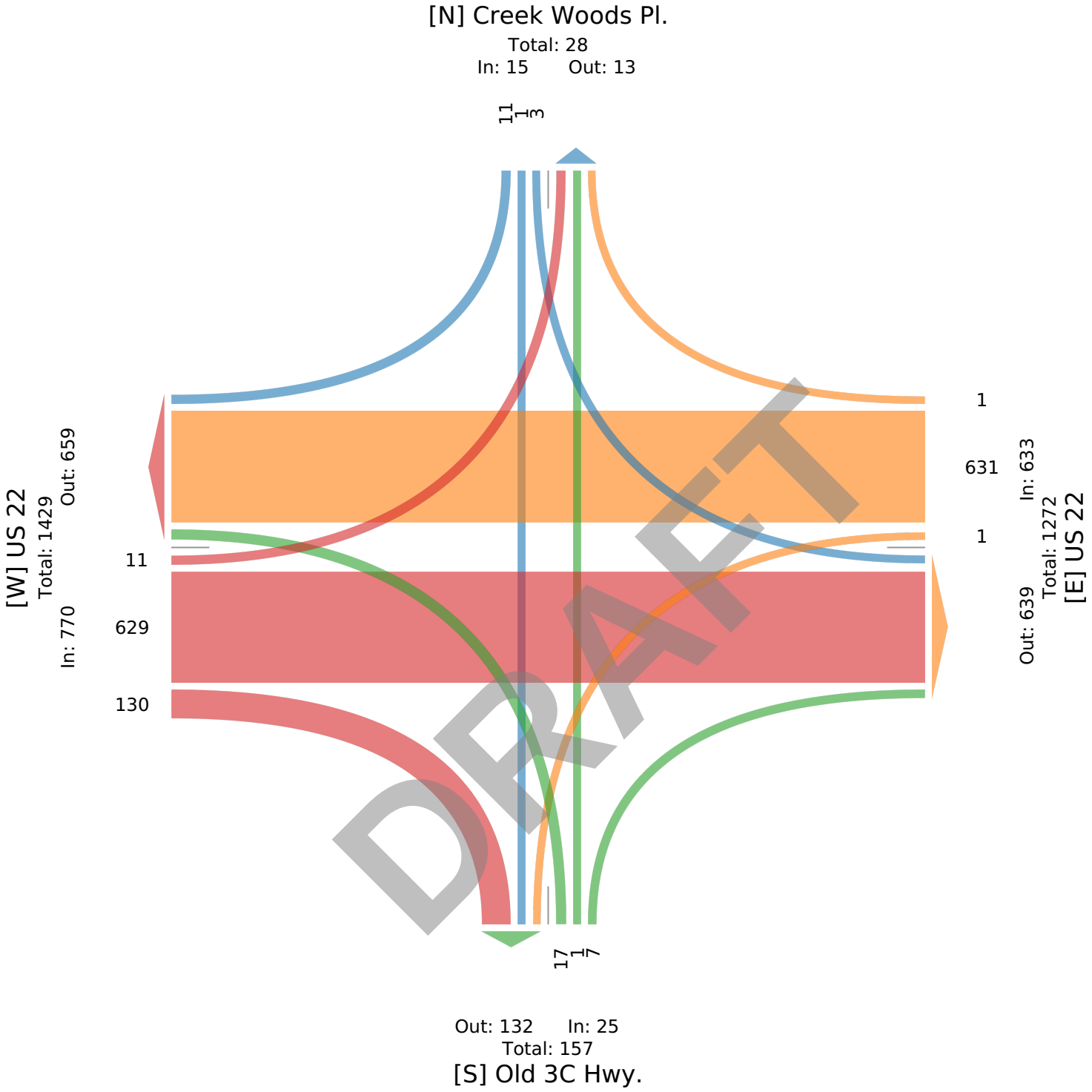
Leg	Creek Woods Pl.						US 22						Old 3C Hwy.						US 22						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2023-01-18 12:00PM	2	1	1	0	**4**	0	0	136	0	0	**136**	0	1	0	4	0	**5**	0	25	175	3	0	**203**	0	**348**
12:15PM	3	0	0	0	**3**	0	0	155	1	0	**156**	0	1	0	8	0	**9**	0	25	139	2	0	**166**	0	**334**
12:30PM	2	0	0	0	**2**	0	1	171	0	0	**172**	0	2	0	2	0	**4**	0	34	151	2	0	**187**	0	**365**
12:45PM	4	0	2	0	**6**	0	0	169	0	0	**169**	0	3	1	3	0	**7**	0	46	164	4	0	**214**	0	**396**
Total	11	1	3	0	**15**	0	1	631	1	0	**633**	0	7	1	17	0	**25**	0	130	629	11	0	**770**	0	**1443**
% Approach	73.3%	6.7%	20.0%	0%	**-**	-	0.2%	99.7%	0.2%	0%	**-**	-	28.0%	4.0%	68.0%	0%	**-**	-	16.9%	81.7%	1.4%	0%	**-**	-	-
% Total	0.8%	0.1%	0.2%	0%	**1.0%**	-	0.1%	43.7%	0.1%	0%	**43.9%**	-	0.5%	0.1%	1.2%	0%	**1.7%**	-	9.0%	43.6%	0.8%	0%	**53.4%**	-	-
PHF	0.688	0.250	0.375	-	**0.625**	-	0.250	0.923	0.250	-	**0.920**	-	0.583	0.250	0.531	-	**0.694**	-	0.707	0.899	0.688	-	**0.900**	-	0.911
Lights	11	1	3	0	**15**	-	1	623	1	0	**625**	-	7	1	17	0	**25**	-	130	616	11	0	**757**	-	1422
% Lights	100%	100%	100%	0%	**100%**	-	100%	98.7%	100%	0%	**98.7%**	-	100%	100%	100%	0%	**100%**	-	100%	97.9%	100%	0%	**98.3%**	-	98.5%
Articulated Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	6	0	0	**6**	-	7
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**0.8%**	-	0.5%
Buses and Single-Unit Trucks	0	0	0	0	**0**	-	0	7	0	0	**7**	-	0	0	0	0	**0**	-	0	7	0	0	**7**	-	14
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.1%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**0%**	-	0%	1.1%	0%	0%	**0.9%**	-	1.0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Creek Woods Pl./Old 3C Hwy. - TMC
Wed Jan 18, 2023
Midday Peak (Jan 18 2023 12PM - 1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



US 22 & Creek Woods Pl./Old 3C Hwy. - TMC

Wed Jan 18, 2023
PM Peak (Jan 18 2023 4:45PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US

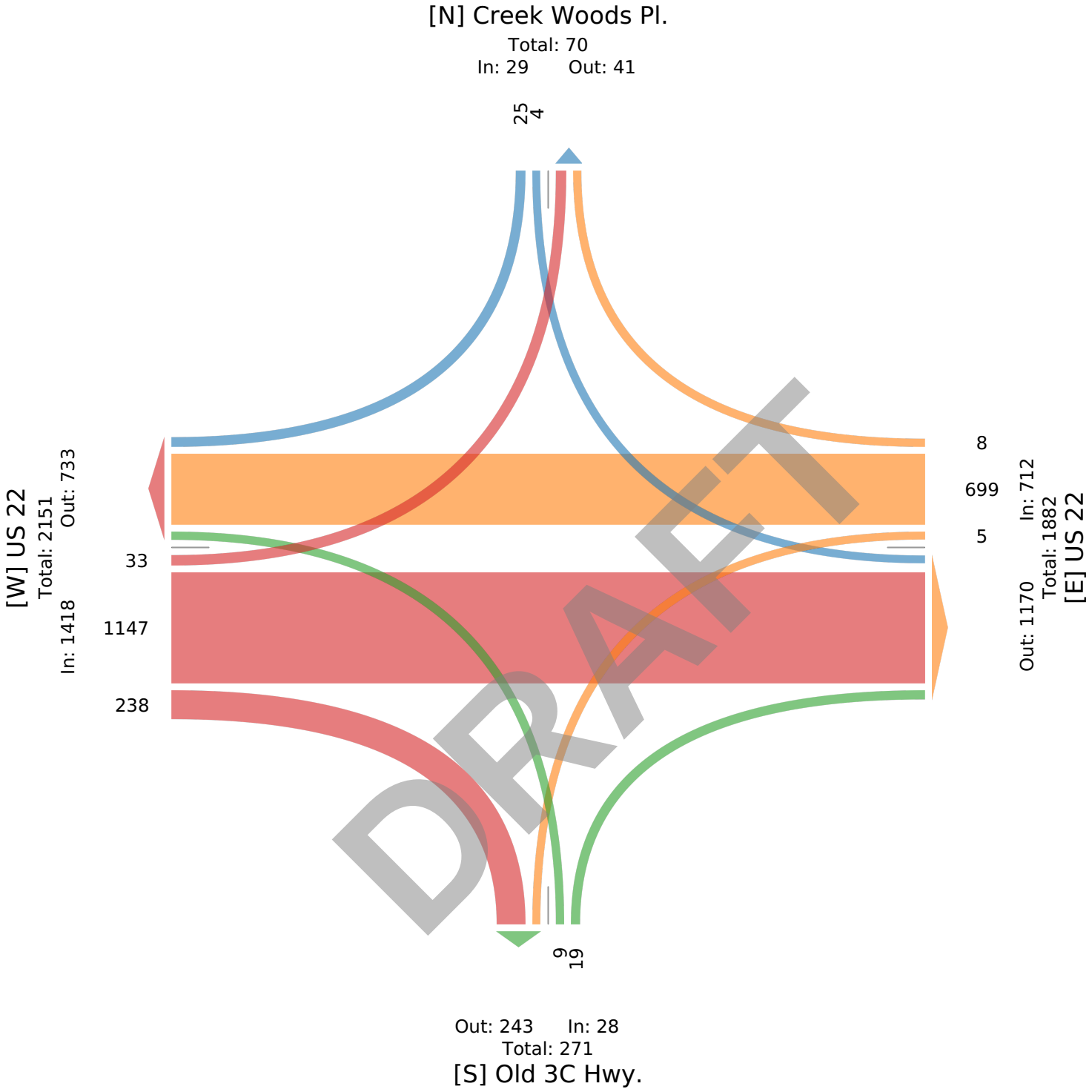
Leg	Creek Woods Pl.						US 22						Old 3C Hwy.						US 22						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2023-01-18 4:45PM	7	0	0	0	**7**	0	1	154	2	0	**157**	0	6	0	2	0	**8**	0	50	298	7	0	**355**	0	**527**
5:00PM	4	0	3	0	**7**	0	2	187	1	0	**190**	0	6	0	5	0	**11**	0	71	285	6	0	**362**	0	**570**
5:15PM	8	0	0	0	**8**	0	3	182	2	0	**187**	0	2	0	1	0	**3**	0	64	295	9	0	**368**	0	**566**
5:30PM	6	0	1	0	**7**	0	2	176	0	0	**178**	0	5	0	1	0	**6**	0	53	269	11	0	**333**	0	**524**
Total	25	0	4	0	**29**	0	8	699	5	0	**712**	0	19	0	9	0	**28**	0	238	1147	33	0	**1418**	0	**2187**
% Approach	86.2%	0%	13.8%	0%	**-**	-	1.1%	98.2%	0.7%	0%	**-**	-	67.9%	0%	32.1%	0%	**-**	-	16.8%	80.9%	2.3%	0%	**-**	-	**-**
% Total	1.1%	0%	0.2%	0%	**1.3%**	-	0.4%	32.0%	0.2%	0%	**32.6%**	-	0.9%	0%	0.4%	0%	**1.3%**	-	10.9%	52.4%	1.5%	0%	**64.8%**	-	**-**
PHF	0.781	-	0.333	-	**0.906**	-	0.667	0.934	0.625	-	**0.937**	-	0.792	-	0.450	-	**0.636**	-	0.838	0.962	0.750	-	**0.963**	-	0.959
Lights	25	0	4	0	**29**	-	8	698	5	0	**711**	-	19	0	8	0	**27**	-	238	1144	33	0	**1415**	-	2182
% Lights	100%	0%	100%	0%	**100%**	-	100%	99.9%	100%	0%	**99.9%**	-	100%	0%	88.9%	0%	**96.4%**	-	100%	99.7%	100%	0%	**99.8%**	-	99.8%
Articulated Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses and Single-Unit Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	0	3	0	0	**3**	-	4
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	11.1%	0%	**3.6%**	-	0%	0.3%	0%	0%	**0.2%**	-	0.2%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

US 22 & Creek Woods Pl./Old 3C Hwy. - TMC
Wed Jan 18, 2023
PM Peak (Jan 18 2023 4:45PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)
All Movements
ID: 1031495, Location: 39.315222, -84.259421

LOUKAS engineering
TRAFFIC DATA & CONSULTING

Provided by: Loukas Engineering
232 19th St. NW, Canton, OH, 44709, US



APPENDIX C

Traffic Forecast

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
115913	STW TSMO Task Order	2030	2050

Project Description

TSMO TOAST Studies Task Order

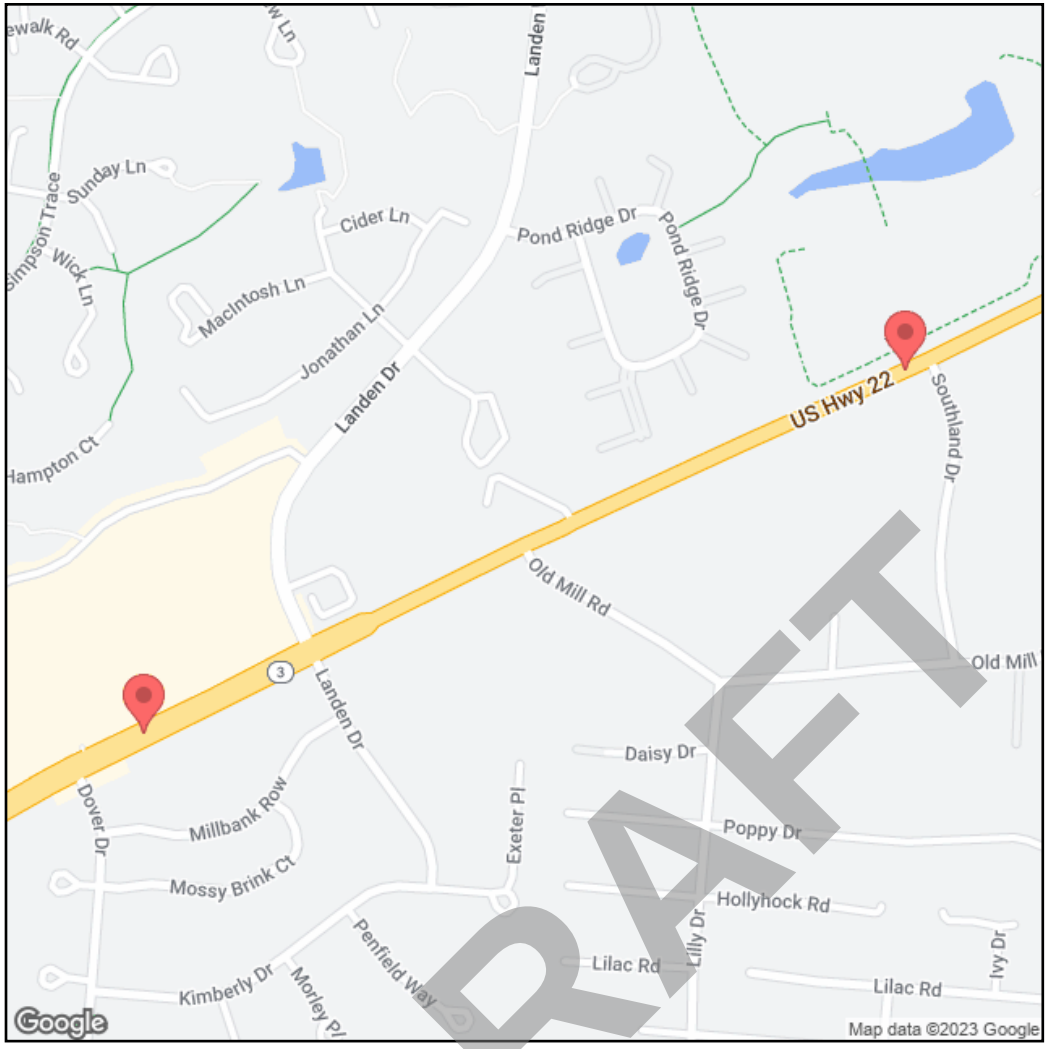
*Users of this data need to be aware that there are limitations to the forecasts generated by this product that make it suitable only for roadway design projects which are low risk.

Segment Information

Segment ID	LRS ID	BMP	EMP	Length	Latitude	Longitude
1868658	SWARUS00022**C	1.449	1.986	0.537	-84.2749052133821	39.3092487562046
1868659	SWARUS00022**C	1.986	2.645	0.659	-84.2648160906059	39.3129599148203

Forecast Information

Segment ID	2030 AADT	2050 AADT	DHV-30	K%	D%	T24%	TD%
1868658	25,500	30,000	3,500	11.7	64.5	2	2
1868659	25,500	30,500	3,600	11.7	64.5	2	2



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
1868658	SWARUS00022**C	1.449	1.986

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.7	3	29,000	Average	0.900	0.900
AADT	**D%**	**TD % (Existing)**	**BC AADT**	**BC Method**	**BC Growth Rate %**	**BC Calculated Rate %**
29,670	◆ 64.5	2	670	Model	● -0.800	0.000

● 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	34,075	1,321	35,396

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
24092	40404	87	3382	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	1.65	3.18	0	0	34,542	1,256	33,689	1,257
2	1.70	3.52	3	4	34,735	1,376	34,075	1,321
3	1.07	4.44	0	0	30,263	1,526	29,969	1,492
4	1.24	4.44	3	4	31,376	1,570	31,082	1,492
5	0.57	5.60	0	0	26,695	1,764	26,746	1,707
6	0.52	4.44	4	5	26,412	1,455	26,429	1,491

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	-7,409	24,857	155	535	0.19	-0.70
2	RAT	0.76	24,588	1.30	496	0.16	-0.91
3	MRAT	1.04	24,598	0.75	496	0.16	-0.91
4	RAF		24,727		516	0.18	-0.80

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Average	Average	0.200	-0.800

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
24092	24322	496	535	24588	24857

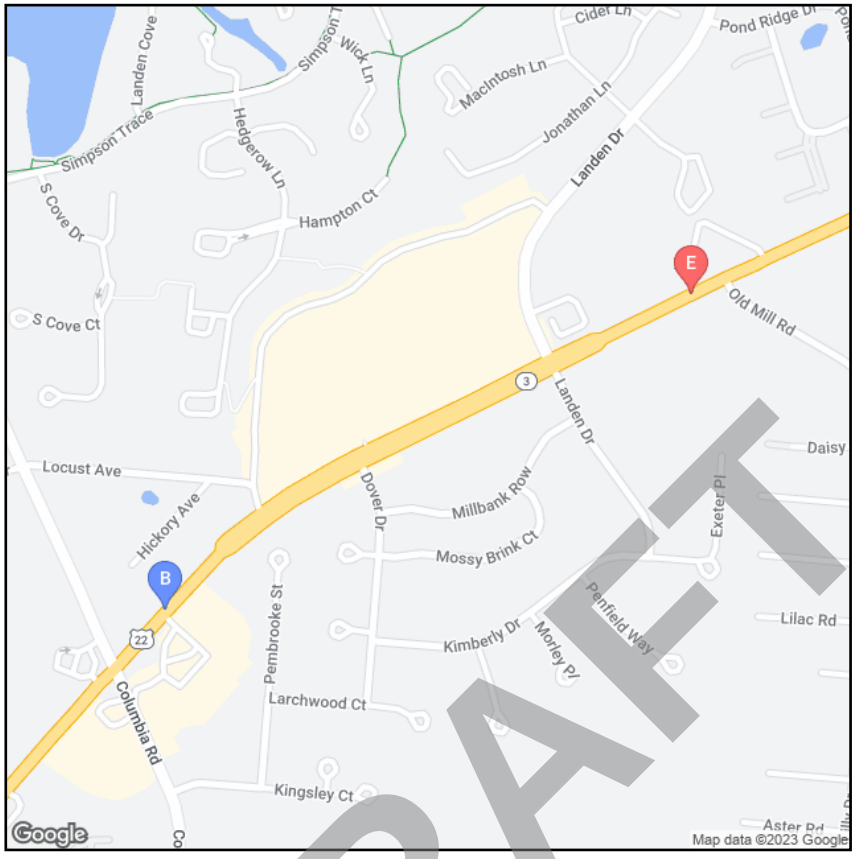
Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2006	17,050	16,650	400
2010	20,100	19,710	390
2013	22,410	21,975	435
2016	22,334	21,988	345
2019	23,434	22,662	772
* 2022	23,730	23,065	665

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2030 AADT	Yr 2050 AADT	DHV30	K %	D %	T24 %	TD %
1868658	SWARUS00022**C	1.449	1.986	0.537	25,500	30,000	3500	11.7	64.5	2	2

Forecast Segment ID	Route	BMP	EMP
1868659	SWARUS00022**C	1.986	2.645

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 11.7	3	30,000	Average	1.100	1.100
AADT	**D%**	**TD % (Existing)**	**BC AADT**	**BC Method**	**BC Growth Rate %**	**BC Calculated Rate %**
30,670	◆ 64.5	2	670	Model	● -0.800	0.000

● 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	34,075	1,321	35,396

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
24731	40404	87	3382	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	1.65	3.18	0	0	34,542	1,256	33,689	1,257
2	1.70	3.52	3	4	34,735	1,376	34,075	1,321
3	1.07	4.44	0	0	30,263	1,526	29,969	1,492
4	1.24	4.44	3	4	31,376	1,570	31,082	1,492
5	0.57	5.60	0	0	26,695	1,764	26,746	1,707
6	0.52	4.44	4	5	26,412	1,455	26,429	1,491

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	-3,845	26,271	206	542	0.41	-0.66
2	RAT	0.86	25,917	1.45	487	0.37	-0.96
3	MRAT	1.09	25,947	0.73	487	0.37	-0.96
4	RAF		26,109		514	0.39	-0.81

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Average	Average	0.400	-0.800

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
25430	25729	487	542	25917	26271

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

Comment: No Comment

Historical Count

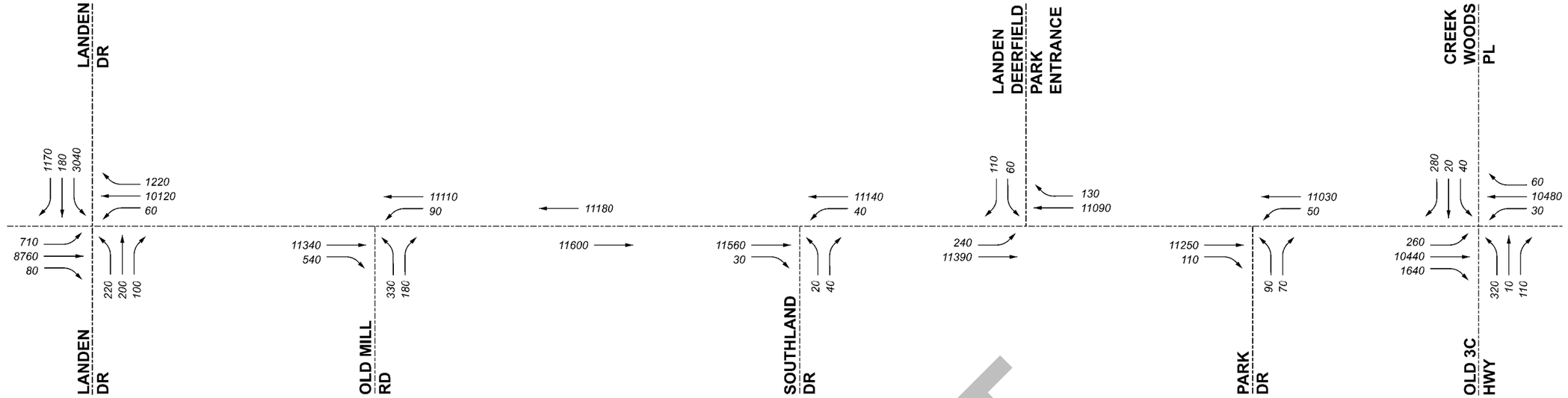
Year	All	Cars	Trucks
2006	17,050	16,650	400
2010	20,100	19,710	390
2013	22,410	21,975	435
2016	22,334	21,988	345
2019	23,434	22,662	772
* 2022	23,730	23,065	665

* Pivot Point

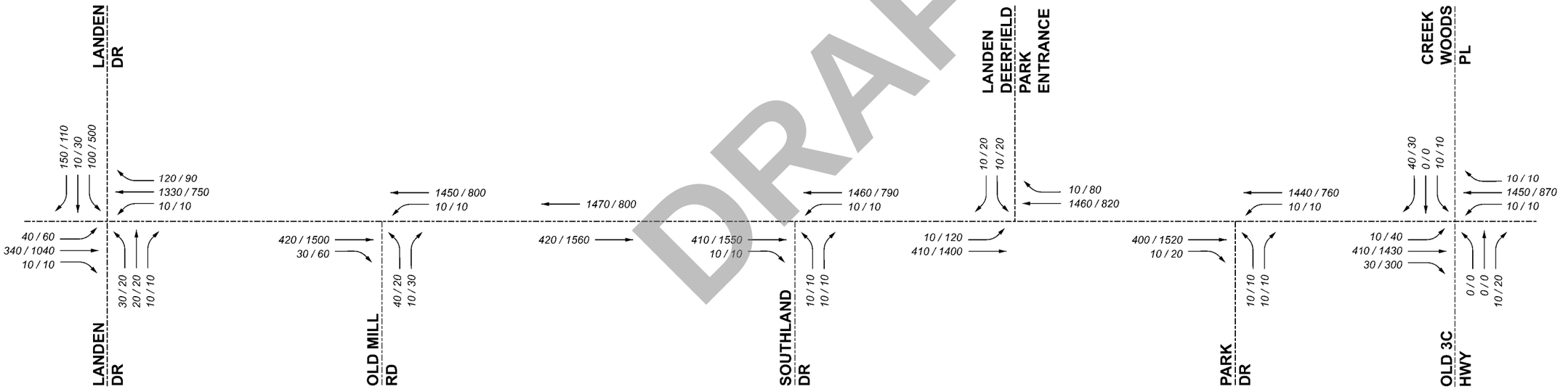
Segment ID	LRS ID	BMP	EMP	Length	Yr 2030 AADT	Yr 2050 AADT	DHV30	K %	D %	T24 %	TD %
1868659	SWARUS00022**C	1.986	2.645	0.659	25,500	30,500	3600	11.7	64.5	2	2

APPENDIX D

Traffic Projections



2023 ADT



2023 AM DHV / PM DHV

NOTES:
1) TRAFFIC COUNTS WERE PERFORMED IN OCTOBER 2023 FOR ALL INTERSECTIONS WITH THE EXCEPTION OF THE INTERSECTION WITH OLD 3C HWY THAT WAS PERFORMED IN JANUARY 2023. THESE COUNTS WERE USED TO DETERMINE THE AM AND PM PEAK HOURS.
2) THE PARTIAL COUNTS WERE SESONAL ADJUSTED AND GROWN TO OBTAIN AVERAGE DAILY TRAFFIC VOLUMES.
3) THE AM AND PM DESIGN HOUR VOLUME WAS CALCULATED BASED ON THE COUNT DAY AND THE ROADWAY FUNCTIONALLY CLASSIFIED AS A URBAN PRINCIPAL ARTERIAL.
4) THE VOLUMES WERE PROJECTED TO OPENING DAY 2030 AND THE DESIGN YEAR 2050 BASED ON THE PROVIDED ODOT FORECAST.
5) A MINIMUM OF 10 VEHICLES PER MOVEMENT WAS UTILIZED WITH THE EXCEPTION OF NORTHBOUND THRU AND LEFT MOVEMENTS AT THE OLD 3C INTERSECTION AS THOSE MOVEMENTS ARE CURRENTLY RESTRICTED DURING THE PEAK HOURS.

VOLUME MOVEMENT

DHV = DESIGN HOUR VOLUME

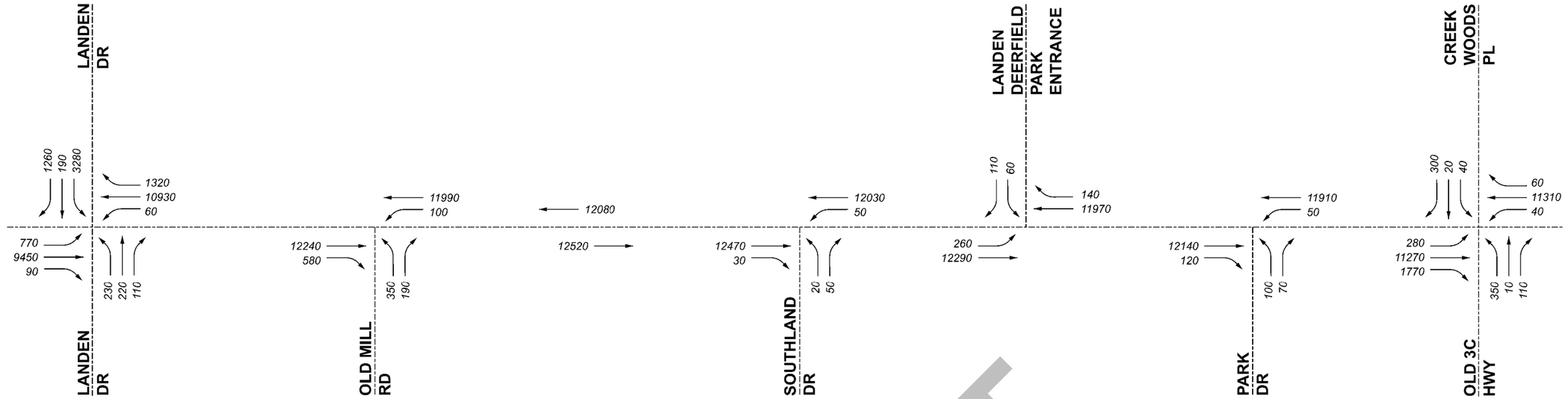
2023 ADJUSTED TRAFFIC COUNTS

WAR-22-2.00 CORRIDOR STUDY

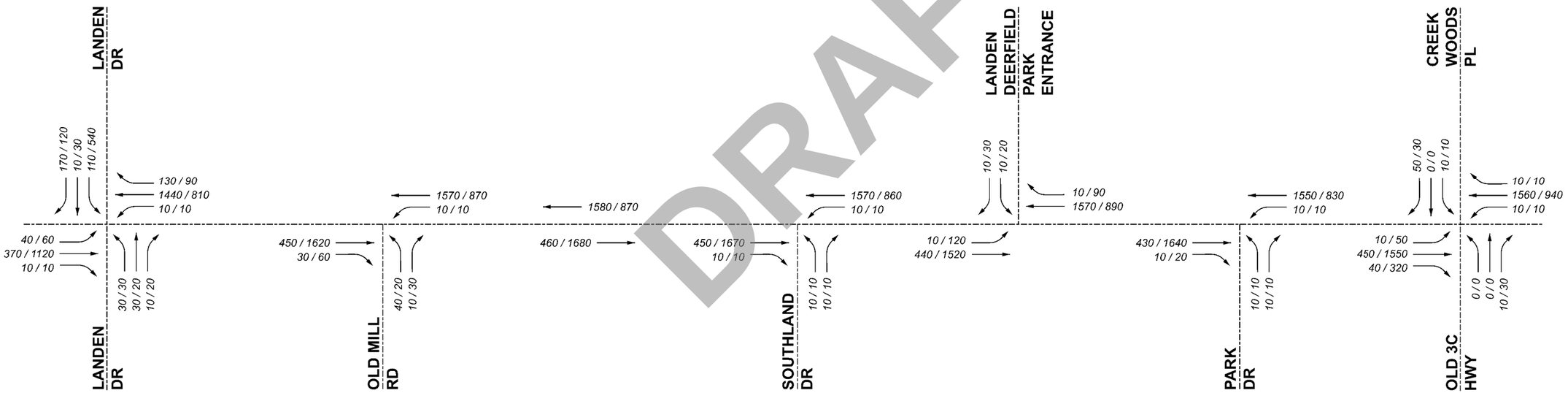
MODEL: Design PAPERSIZE: 17x11 (in.) DATE: 1/15/2024 TIME: 3:46:56 PM USER: djocity
C:\CONNECT\CustomConfig\Workspaces\OHDOT\WorkSets\Traffic\dgn\WAR-22 Traffic Projections.dgn

DESIGN AGENCY
GANNETT FLEMING

DESIGNER BRO
REVIEWER DRJ 11/20/2023
PROJECT ID 115913
SHEET 1 TOTAL 4



2030 ADT



2030 AM DHV / PM DHV

NOTES:
1) TRAFFIC COUNTS WERE PERFORMED IN OCTOBER 2023 FOR ALL INTERSECTIONS WITH THE EXCEPTION OF THE INTERSECTION WITH OLD 3C HWY THAT WAS PERFORMED IN JANUARY 2023. THESE COUNTS WERE USED TO DETERMINE THE AM AND PM PEAK HOURS.
2) THE PARTIAL COUNTS WERE SESONAL ADJUSTED AND GROWN TO OBTAIN AVERAGE DAILY TRAFFIC VOLUMES.
3) THE AM AND PM DESIGN HOUR VOLUME WAS CALCULATED BASED ON THE COUNT DAY AND THE ROADWAY FUNCTIONALLY CLASSIFIED AS A URBAN PRINCIPAL ARTERIAL.
4) THE VOLUMES WERE PROJECTED TO OPENING DAY 2030 AND THE DESIGN YEAR 2050 BASED ON THE PROVIDED ODOT FORECAST.
5) A MINIMUM OF 10 VEHICLES PER MOVEMENT WAS UTILIZED WITH THE EXCEPTION OF NORTHBOUND THRU AND LEFT MOVEMENTS AT THE OLD 3C INTERSECTION AS THOSE MOVEMENTS ARE CURRENTLY RESTRICTED DURING THE PEAK HOURS.

← VOLUME MOVEMENT

DHV = DESIGN HOUR VOLUME

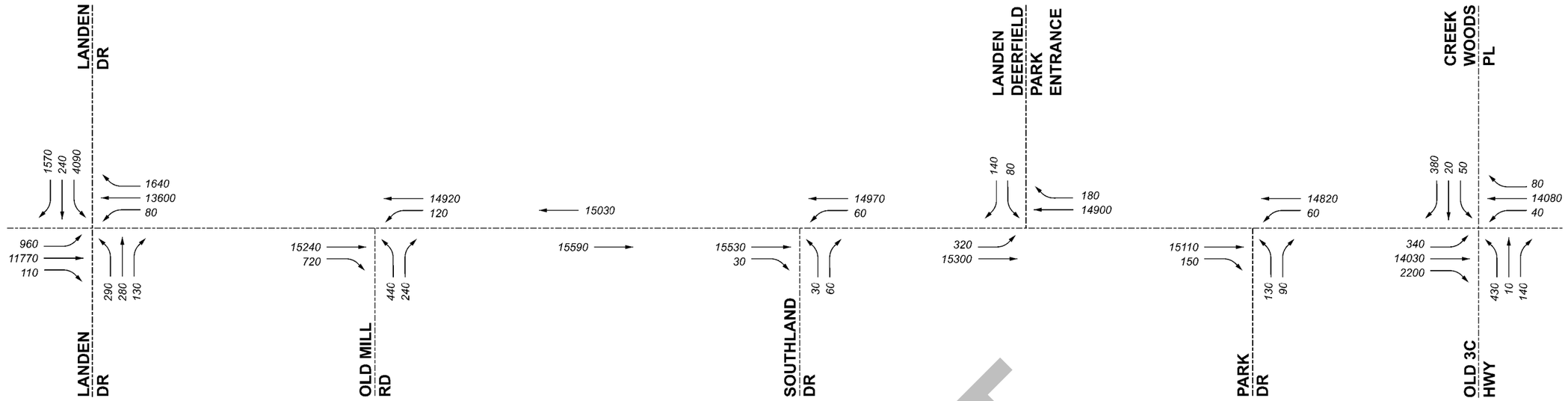
2030 OPENING DAY PROJECTED TRAFFIC

WAR-22-2.00 CORRIDOR STUDY

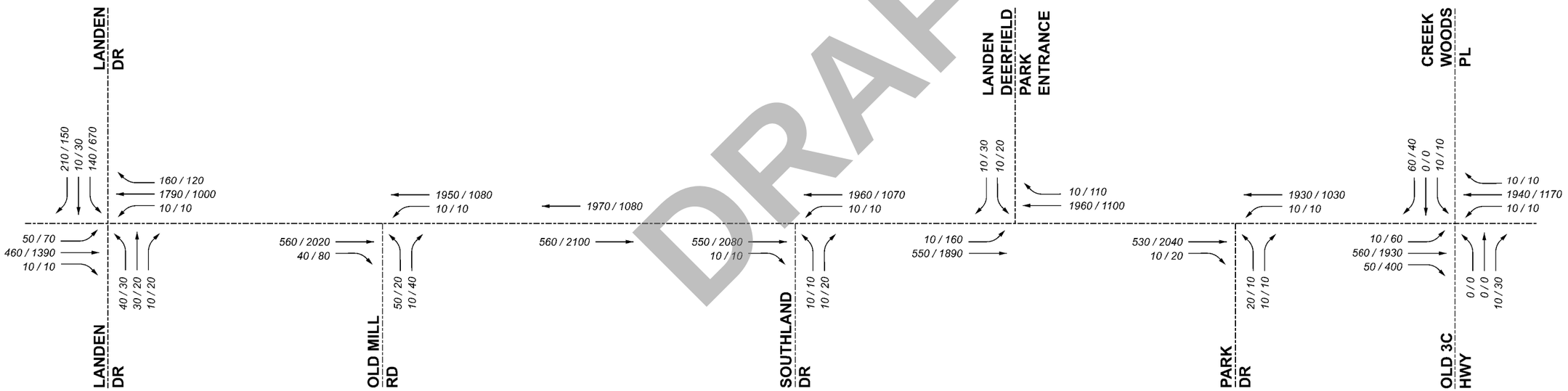
MODEL: Design PAPERSIZE: 17x11 (in.) DATE: 1/15/2024 TIME: 3:47:40 PM USER: djozity
C:\CONNECT\CustomConfig\Workspaces\OHDOT\WorkSets\Traffic\dgn\WAR-22 Traffic Projections.dgn

DESIGN AGENCY
GANNETT FLEMING

DESIGNER	BRO
REVIEWER	DRJ 11/20/2023
PROJECT ID	115913
SHEET	2
TOTAL	4



2050 ADT



2050 AM DHV / PM DHV

NOTES:

1) *TRAFFIC COUNTS WERE PERFORMED IN OCTOBER 2023 FOR ALL INTERSECTIONS WITH THE EXCEPTION OF THE INTERSECTION WITH OLD 3C HWY THAT WAS PERFORMED IN JANUARY 2023. THESE COUNTS WERE USED TO DETERMINE THE AM AND PM PEAK HOURS.*
2) *THE PARTIAL COUNTS WERE SESONAL ADJUSTED AND GROWN TO OBTAIN AVERAGE DAILY TRAFFIC VOLUMES.*
3) *THE AM AND PM DESIGN HOUR VOLUME WAS CALCULATED BASED ON THE COUNT DAY AND THE ROADWAY FUNCTIONALLY CLASSIFIED AS A URBAN PRINCIPAL ARTERIAL.*
4) *THE VOLUMES WERE PROJECTED TO OPENING DAY 2030 AND THE DESIGN YEAR 2050 BASED ON THE PROVIDED ODOT FORECAST.*
5) *A MINIMUM OF 10 VEHICLES PER MOVEMENT WAS UTILIZED WITH THE EXCEPTION OF NORTHBOUND THRU AND LEFT MOVEMENTS AT THE OLD 3C INTERSECTION AS THOSE MOVEMENTS ARE CURRENTLY RESTRICTED DURING THE PEAK HOURS.*

VOLUME MOVEMENT

DHV = DESIGN HOUR VOLUME

WAR-22-2.00 CORRIDOR STUDY

2050 DESIGN YEAR PROJECTED TRAFFIC

MODEL: Design PAPERSIZE: 17x11 (in.) DATE: 1/15/2024 TIME: 3:48:27 PM USER: djozity
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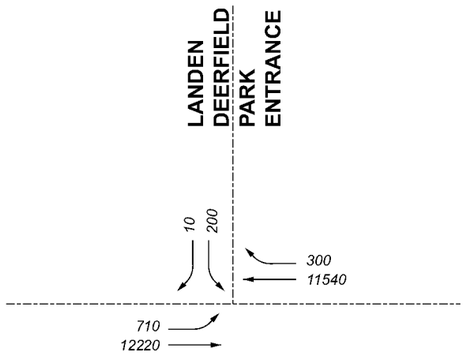
DESIGN AGENCY
GANNETT FLEMING

DESIGNER
BRO

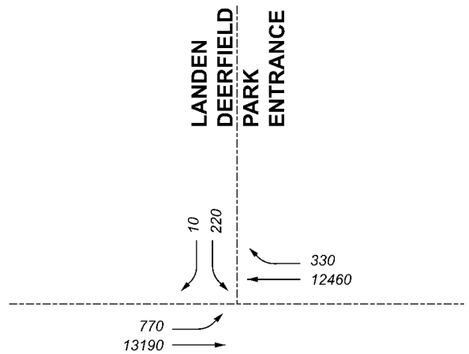
REVIEWER
DRJ 11/20/2023

PROJECT ID
115913

SHEET 3 TOTAL 4



2023



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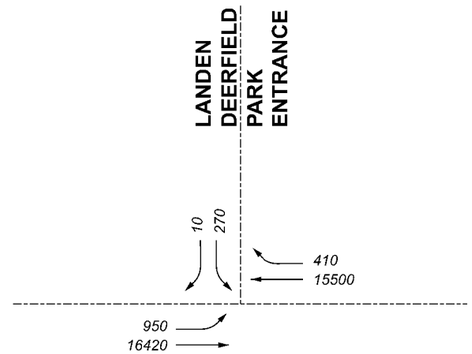
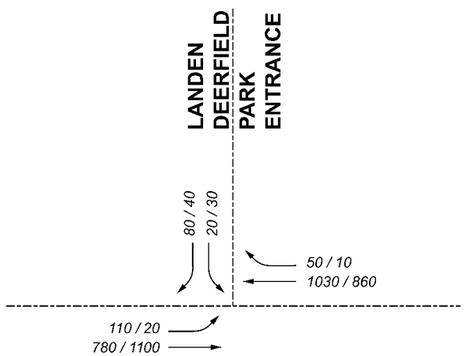


2050

SATURDAY ADT



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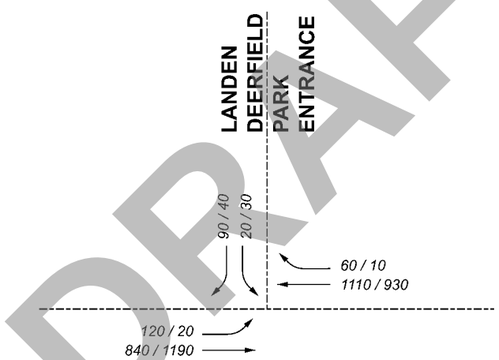
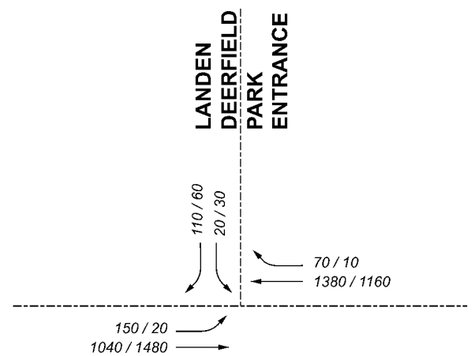


2030



2050

SATURDAY AM DHV / PM DHV

NOTES:

1) *TRAFFIC COUNTS WERE PERFORMED IN OCTOBER 2023 FOR ALL INTERSECTIONS WITH THE EXCEPTION OF THE INTERSECTION WITH OLD 3C HWY THAT WAS PERFORMED IN JANUARY 2023. THESE COUNTS WERE USED TO DETERMINE THE AM AND PM PEAK HOURS.*
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VOLUME MOVEMENT

DHV = DESIGN HOUR VOLUME

LANDEN DEERFIELD PARK ENTRANCE SATURDAY TRAFFIC PROJECTIONS

WAR-22-2.00 CORRIDOR STUDY

MODEL: Design PAPERSIZE: 17x11 (in.) DATE: 11/15/2023 TIME: 8:19:27 AM USER: djozity
C:\CONNECT\CustomConfig\Workspaces\OHDOT\WorkSets\Traffic\dgn\WAR-22 Traffic Projections.dgn

DESIGN AGENCY
GANNETT FLEMING

DESIGNER	BRO
REVIEWER	DRJ 11/20/2023
PROJECT ID	115913
SHEET	4
TOTAL	4

APPENDIX E

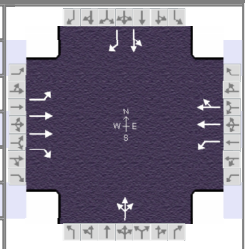
Capacity Analyses

INTERSECTION CAPACITY ANALYSIS

2023 NO BUILD

HCS Signalized Intersection Results Summary

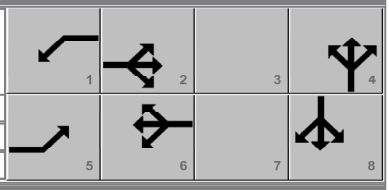
General Information				Intersection Information	
Agency	ODOT			Duration, h	0.250
Analyst	Gannett Fleming	Analysis Date	1/12/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	AM Peak	PHF	0.92
Urban Street	US 22	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Landen Drive	File Name	2023 AM Landen.xus		
Project Description	2023 AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	340	10	10	1330	120	30	20	10	100	10	150

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

Green	9.0	39.0	24.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



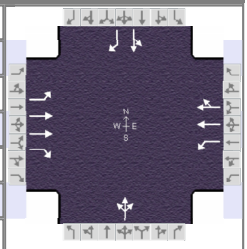
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		4		8
Case Number	1.1	3.0	1.1	4.0		8.0		7.0
Phase Duration, s	15.0	45.0	15.0	45.0		30.0		30.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	2.9	4.0	2.9		4.1		4.1
Queue Clearance Time (g_s), s	3.0	7.8	2.3	39.4		4.5		7.9
Green Extension Time (g_e), s	0.0	4.6	0.0	0.0		1.0		0.9
Phase Call Probability	1.00	1.00	1.00	1.00		1.00		1.00
Max Out Probability	0.08	0.01	0.01	1.00		0.00		0.00

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	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	43	370	11	11	795	781		65			120	130
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1900	1845		1616			1436	1610
Queue Service Time (g_s), s	1.0	5.8	0.3	0.3	36.7	37.4		0.0			3.5	5.8
Cycle Queue Clearance Time (g_c), s	1.0	5.8	0.3	0.3	36.7	37.4		2.5			5.9	5.8
Green Ratio (*g/C*)	0.53	0.43	0.43	0.53	0.43	0.43		0.27			0.27	0.27
Capacity (*c*), veh/h	261	1568	698	618	823	799		491			459	429
Volume-to-Capacity Ratio (*X*)	0.167	0.236	0.016	0.018	0.966	0.977		0.133			0.260	0.304
Back of Queue (*Q*), ft/ln (95 th percentile)												
Back of Queue (*Q*), veh/ln (95 th percentile)	0.7	3.9	0.2	0.2	27.1	27.5		1.8			3.5	3.9
Queue Storage Ratio (*RQ*) (95 th percentile)	0.04	0.00	0.02	0.02	0.00	0.00		0.00			0.00	0.96
Uniform Delay (d_1), s/veh	18.5	16.1	14.5	10.2	24.9	25.1		25.1			26.4	26.3
Incremental Delay (d_2), s/veh	0.3	0.0	0.0	0.0	23.1	26.0		0.1			0.3	0.4
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
Control Delay (*d*), s/veh	18.8	16.1	14.6	10.2	48.0	51.1		25.2			26.7	26.7
Level of Service (LOS)	B	B	B	B	D	D		C			C	C
Approach Delay, s/veh / LOS	16.4	B		49.3	D		25.2	C		26.7	C	
Intersection Delay, s/veh / LOS	40.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.95	B	2.28	B	2.44	B
Bicycle LOS Score / LOS	0.84	A	1.80	B	0.60	A	0.90	A

HCS Signalized Intersection Results Summary

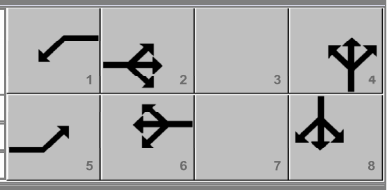
General Information				Intersection Information	
Agency	ODOT			Duration, h	0.250
Analyst	Gannett Fleming	Analysis Date	1/12/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	PM Peak	PHF	0.92
Urban Street	US 22	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Landen Drive	File Name	2023 PM Landen.xus		
Project Description	2023 PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	60	1040	10	10	750	90	20	20	10	500	30	110

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.0	44.0	29.0	0.0	0.0	0.0
Yellow	4.0	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	5	2	1	6		4		8
Case Number	1.1	3.0	1.1	4.0		8.0		7.0
Phase Duration, s	15.0	50.0	15.0	50.0		35.0		35.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	2.9	4.0	2.9		4.0		4.0
Queue Clearance Time (g_s), s	3.8	27.5	2.3	20.2		4.2		31.0
Green Extension Time (g_e), s	0.1	4.6	0.0	5.0		2.8		0.0
Phase Call Probability	1.00	1.00	1.00	1.00		1.00		1.00
Max Out Probability	0.24	0.11	0.01	0.04		0.00		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	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	65	1130	11	11	465	448		54			576	87
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1900	1828		1679			1419	1610
Queue Service Time (g_s), s	1.8	25.5	0.4	0.3	18.2	18.2		0.0			26.8	4.1
Cycle Queue Clearance Time (g_c), s	1.8	25.5	0.4	0.3	18.2	18.2		2.2			29.0	4.1
Green Ratio (*g/C*)	0.53	0.44	0.44	0.53	0.44	0.44		0.29			0.29	0.29
Capacity (*c*), veh/h	383	1592	708	319	836	804		537			482	467
Volume-to-Capacity Ratio (*X*)	0.170	0.710	0.015	0.034	0.557	0.557		0.101			1.196	0.186
Back of Queue (*Q*), ft/ln (95 th percentile)												
Back of Queue (*Q*), veh/ln (95 th percentile)	1.2	15.4	0.2	0.2	12.0	11.6		1.6			38.1	2.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.06	0.00	0.03	0.03	0.00	0.00		0.00			0.00	0.68
Uniform Delay (d_1), s/veh	13.7	22.8	15.8	15.0	20.8	20.8		26.0			37.6	26.6
Incremental Delay (d_2), s/veh	0.2	1.3	0.0	0.0	0.5	0.5		0.1			107.1	0.2
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
Control Delay (*d*), s/veh	13.9	24.1	15.8	15.0	21.3	21.3		26.1			144.7	26.8
Level of Service (LOS)	B	C	B	B	C	C		C			F	C
Approach Delay, s/veh / LOS	23.5	C		21.2	C		26.1	C		129.2	F	
Intersection Delay, s/veh / LOS	47.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.95	B	2.29	B	2.44	B
Bicycle LOS Score / LOS	1.48	A	1.25	A	0.58	A	1.58	B

HCS Two-Way Stop-Control Report

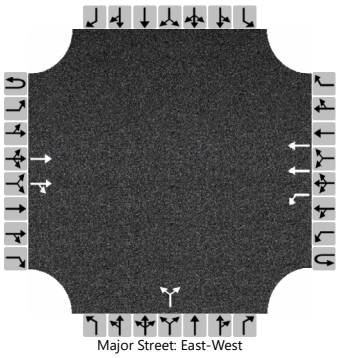
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old Mill Road
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old Mill Road
Peak Hour Factor	0.92
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)			420	30	0	10	1450			40		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					54					
Capacity, c (veh/h)						1063					186					
v/c Ratio						0.01					0.29					
95% Queue Length, Q_{95} (veh)						0.0					1.2					
Control Delay (s/veh)						8.4					32.1					
Level of Service (LOS)						A					D					
Approach Delay (s/veh)						0.1				32.1						
Approach LOS						A				D						

HCS Two-Way Stop-Control Report

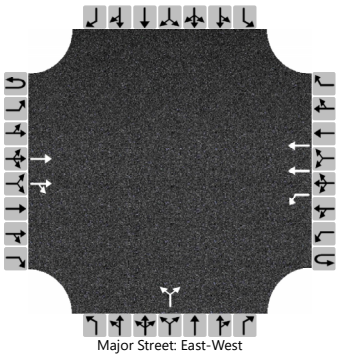
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old Mill Road
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old Mill Road
Peak Hour Factor	0.92
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)			1500	60	0	10	800			20		30				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					54					
Capacity, c (veh/h)						368					88					
v/c Ratio						0.03					0.62					
95% Queue Length, Q_{95} (veh)						0.1					2.9					
Control Delay (s/veh)						15.1					97.0					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				97.0						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

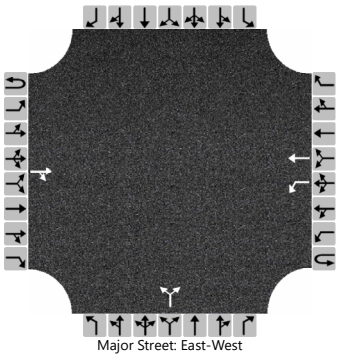
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			410	10		10	1460			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1099					110					
v/c Ratio						0.01					0.20					
95% Queue Length, Q_{95} (veh)						0.0					0.7					
Control Delay (s/veh)						8.3					45.8					
Level of Service (LOS)						A					E					
Approach Delay (s/veh)						0.1				45.8						
Approach LOS						A				E						

HCS Two-Way Stop-Control Report

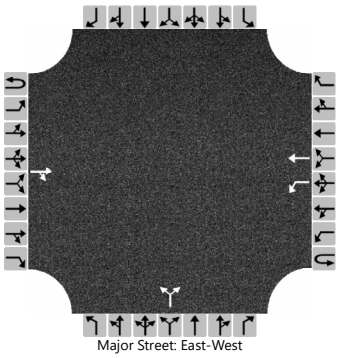
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			1550	10		10	790			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						373					45					
v/c Ratio						0.03					0.48					
95% Queue Length, Q_{95} (veh)						0.1					1.7					
Control Delay (s/veh)						14.9					144.3					
Level of Service (LOS)						B					F					
Approach Delay (s/veh)						0.2				144.3						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

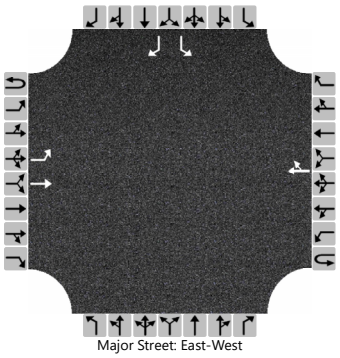
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		10	410				1460	10						10		10
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												11		11
Capacity, c (veh/h)		407												58		131
v/c Ratio		0.03												0.19		0.08
95% Queue Length, Q_{95} (veh)		0.1												0.6		0.3
Control Delay (s/veh)		14.1												80.3		34.9
Level of Service (LOS)		B												F		D
Approach Delay (s/veh)		0.3												57.6		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

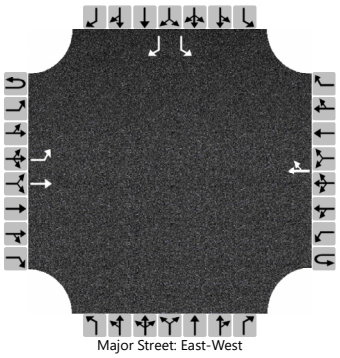
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		120	1400				820	80						20		20
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		130												22		22
Capacity, c (veh/h)		701												19		321
v/c Ratio		0.19												1.17		0.07
95% Queue Length, Q_{95} (veh)		0.7												3.1		0.2
Control Delay (s/veh)		11.3												560.0		17.0
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.9												288.5		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

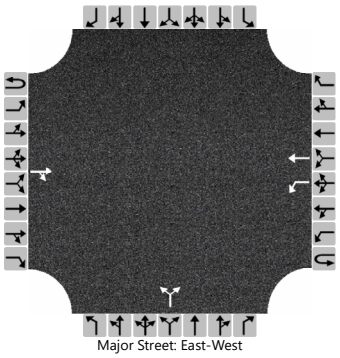
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			400	10		10	1440			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1109					114					
v/c Ratio						0.01					0.19					
95% Queue Length, Q_{95} (veh)						0.0					0.7					
Control Delay (s/veh)						8.3					43.7					
Level of Service (LOS)						A					E					
Approach Delay (s/veh)						0.1				43.7						
Approach LOS						A				E						

HCS Two-Way Stop-Control Report

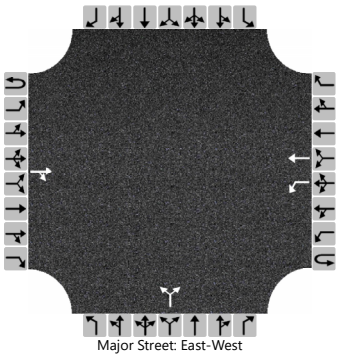
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			1520	20		10	760			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						380					49					
v/c Ratio						0.03					0.45					
95% Queue Length, Q_{95} (veh)						0.1					1.6					
Control Delay (s/veh)						14.7					128.5					
Level of Service (LOS)						B					F					
Approach Delay (s/veh)						0.2				128.5						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

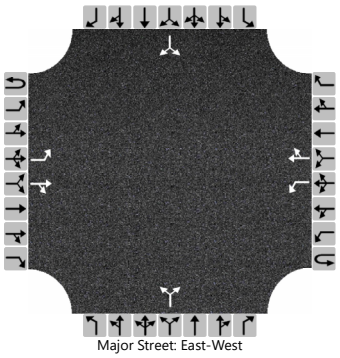
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LR				LR	
Volume (veh/h)		10	410	30		10	1450	10		0		10		10		40
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage																

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				11					11				54	
Capacity, c (veh/h)		411				1079					602				88	
v/c Ratio		0.03				0.01					0.02				0.62	
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.1				2.9	
Control Delay (s/veh)		14.0				8.4					11.1				96.7	
Level of Service (LOS)		B				A					B				F	
Approach Delay (s/veh)	0.3				0.1				11.1				96.7			
Approach LOS	A				A				B				F			

HCS Two-Way Stop-Control Report

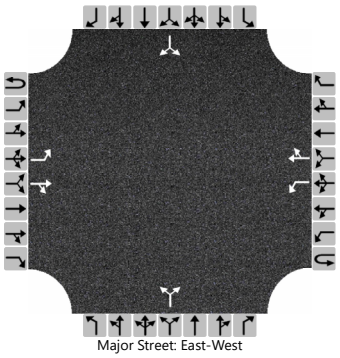
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LR				LR	
Volume (veh/h)		40	1430	300		10	870	10		0		20		10		30
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		43				11					22				43	
Capacity, c (veh/h)		715				316					112				42	
v/c Ratio		0.06				0.03					0.19				1.03	
95% Queue Length, Q_{95} (veh)		0.2				0.1					0.7				4.1	
Control Delay (s/veh)		10.4				16.8					44.8				298.4	
Level of Service (LOS)		B				C					E				F	
Approach Delay (s/veh)	0.2				0.2				44.8				298.4			
Approach LOS	A				A				E				F			

HCS Two-Way Stop-Control Report

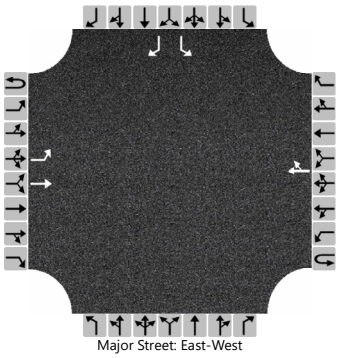
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 SAT AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		110	780				1030	50						20		80
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		120												22		87
Capacity, c (veh/h)		591												37		241
v/c Ratio		0.20												0.59		0.36
95% Queue Length, Q_{95} (veh)		0.8												2.1		1.6
Control Delay (s/veh)		12.6												193.6		28.1
Level of Service (LOS)		B												F		D
Approach Delay (s/veh)		1.6												61.2		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

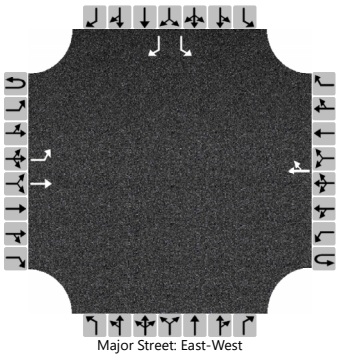
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2023
Time Analyzed	2023 SAT PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		20	1100				860	10						30		40
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

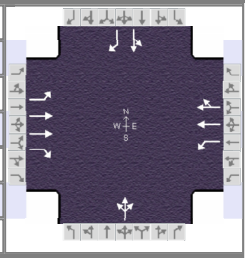
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22												33		43
Capacity, c (veh/h)		722												49		318
v/c Ratio		0.03												0.67		0.14
95% Queue Length, Q_{95} (veh)		0.1												2.6		0.5
Control Delay (s/veh)		10.1												170.2		18.1
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.2												83.3		
Approach LOS		A												F		

2030 NO BUILD

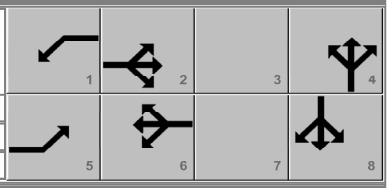
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	ODOT			Duration, h	0.250
Analyst	Gannett Fleming	Analysis Date	1/12/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	AM Peak	PHF	0.92
Urban Street	US 22	Analysis Year	2030	Analysis Period	1> 7:00
Intersection	Landen Drive	File Name	2030 AM Landen.xus		
Project Description	2030 AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	370	10	10	1440	130	30	30	10	110	10	170

Signal Information												
Cycle, s	100.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
				Green	9.0	50.0	23.0	0.0	0.0	0.0		
				Yellow	4.0	4.0	4.0	0.0	0.0	0.0		
				Red	2.0	2.0	2.0	0.0	0.0	0.0		



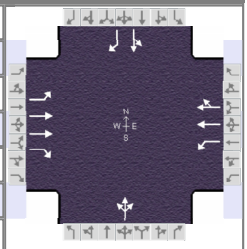
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		4		8
Case Number	1.1	3.0	1.1	4.0		8.0		7.0
Phase Duration, s	15.0	56.0	15.0	56.0		29.0		29.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	2.9	4.0	2.9		4.1		4.1
Queue Clearance Time (g_s), s	3.0	8.3	2.2	44.5		5.4		10.0
Green Extension Time (g_e), s	0.0	5.4	0.0	2.8		1.1		1.0
Phase Call Probability	1.00	1.00	1.00	1.00		1.00		1.00
Max Out Probability	0.07	0.01	0.01	0.71		0.00		0.01

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	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	43	402	11	11	859	848		76			130	152
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1900	1845		1661			1420	1610
Queue Service Time (g_s), s	1.0	6.3	0.3	0.2	41.2	42.5		0.0			4.4	8.0
Cycle Queue Clearance Time (g_c), s	1.0	6.3	0.3	0.2	41.2	42.5		3.4			7.7	8.0
Green Ratio (*g/C*)	0.59	0.50	0.50	0.59	0.50	0.50		0.23			0.23	0.23
Capacity (*c*), veh/h	251	1809	805	652	950	922		433			396	370
Volume-to-Capacity Ratio (*X*)	0.173	0.222	0.014	0.017	0.904	0.919		0.176			0.330	0.411
Back of Queue (*Q*), ft/ln (95 th percentile)												
Back of Queue (*Q*), veh/ln (95 th percentile)	0.8	4.2	0.2	0.2	26.4	27.0		2.6			4.7	5.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.04	0.00	0.02	0.02	0.00	0.00		0.00			0.00	1.38
Uniform Delay (d_1), s/veh	20.1	14.1	12.6	8.8	22.8	23.1		30.9			32.6	32.7
Incremental Delay (d_2), s/veh	0.3	0.0	0.0	0.0	11.6	13.7		0.2			0.5	0.7
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
Control Delay (*d*), s/veh	20.4	14.1	12.6	8.8	34.4	36.8		31.1			33.1	33.5
Level of Service (LOS)	C	B	B	A	C	D		C			C	C
Approach Delay, s/veh / LOS	14.7	B		35.4	D		31.1	C		33.3	C	
Intersection Delay, s/veh / LOS	31.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.67	B	1.94	B	2.29	B	2.45	B
Bicycle LOS Score / LOS	0.86	A	1.90	B	0.61	A	0.95	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	ODOT			Duration, h	0.250
Analyst	Gannett Fleming	Analysis Date	1/12/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	PM Peak	PHF	0.92
Urban Street	US 22	Analysis Year	2030	Analysis Period	1> 7:00
Intersection	Landen Drive	File Name	2030 PM Landen.xus		
Project Description	2030 PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	60	1120	10	10	810	90	30	20	20	540	30	120

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	9.0	38.0	45.0	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	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	5	2	1	6		4		8
Case Number	1.1	3.0	1.1	4.0		8.0		7.0
Phase Duration, s	15.0	44.0	15.0	44.0		51.0		51.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.0	2.9	3.0	2.9		4.0		4.0
Queue Clearance Time (g_s), s	4.4	38.5	2.4	27.6		4.9		47.0
Green Extension Time (g_e), s	0.0	0.0	0.0	4.3		3.3		0.0
Phase Call Probability	1.00	1.00	1.00	1.00		1.00		1.00
Max Out Probability	0.07	1.00	0.00	0.35		0.00		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	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	65	1217	11	11	498	480		76			620	98
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1610	1810	1900	1833		1656			1405	1610
Queue Service Time (g_s), s	2.4	36.5	0.5	0.4	25.6	25.6		0.0			42.1	4.2
Cycle Queue Clearance Time (g_c), s	2.4	36.5	0.5	0.4	25.6	25.6		2.9			45.0	4.2
Green Ratio (*g/C*)	0.43	0.35	0.35	0.43	0.35	0.35		0.41			0.41	0.41
Capacity (*c*), veh/h	269	1250	556	214	656	633		724			638	659
Volume-to-Capacity Ratio (*X*)	0.243	0.974	0.020	0.051	0.759	0.759		0.105			0.971	0.149
Back of Queue (*Q*), ft/ln (95 th percentile)												
Back of Queue (*Q*), veh/ln (95 th percentile)	1.7	25.5	0.3	0.3	17.6	17.1		2.1			28.6	2.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.09	0.00	0.04	0.04	0.00	0.00		0.00			0.00	0.69
Uniform Delay (d_1), s/veh	22.6	35.5	23.7	24.7	31.9	31.9		20.0			34.1	20.4
Incremental Delay (d_2), s/veh	0.2	19.4	0.0	0.0	4.6	4.8		0.1			28.3	0.1
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
Control Delay (*d*), s/veh	22.8	54.9	23.7	24.7	36.5	36.7		20.1			62.4	20.5
Level of Service (LOS)	C	D	C	C	D	D		C			E	C
Approach Delay, s/veh / LOS	53.0	D		36.5	D		20.1	C		56.7	E	
Intersection Delay, s/veh / LOS	47.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.97	B	2.28	B	2.43	B
Bicycle LOS Score / LOS	1.55	B	1.30	A	0.61	A	1.67	B

HCS Two-Way Stop-Control Report

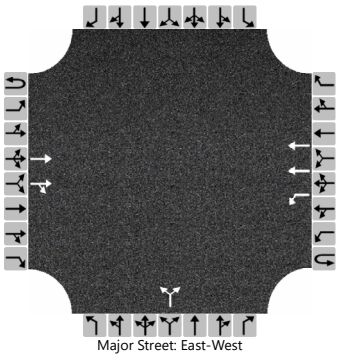
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old Mill Road
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old Mill Road
Peak Hour Factor	0.92
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)			450	30	0	10	1570			40		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					54					
Capacity, c (veh/h)						1034					161					
v/c Ratio						0.01					0.34					
95% Queue Length, Q_{95} (veh)						0.0					1.4					
Control Delay (s/veh)						8.5					38.2					
Level of Service (LOS)						A					E					
Approach Delay (s/veh)						0.1				38.2						
Approach LOS						A				E						

HCS Two-Way Stop-Control Report

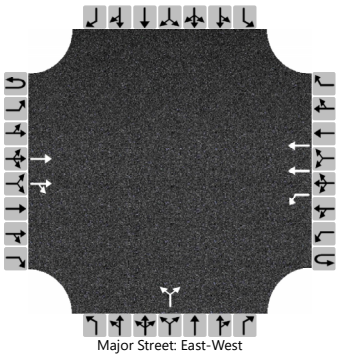
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old Mill Road
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old Mill Road
Peak Hour Factor	0.92
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)			1620	60	0	10	870			20		30				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					54					
Capacity, c (veh/h)						327					69					
v/c Ratio						0.03					0.79					
95% Queue Length, Q_{95} (veh)						0.1					3.7					
Control Delay (s/veh)						16.4					153.1					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				153.1						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

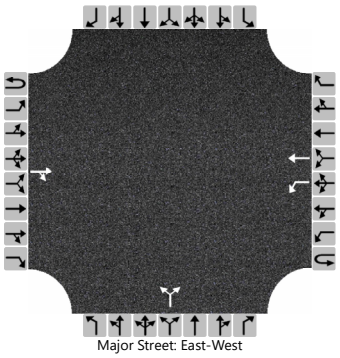
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			450	10		10	1570			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1059					88					
v/c Ratio						0.01					0.25					
95% Queue Length, Q_{95} (veh)						0.0					0.9					
Control Delay (s/veh)						8.4					59.1					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)						0.1				59.1						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

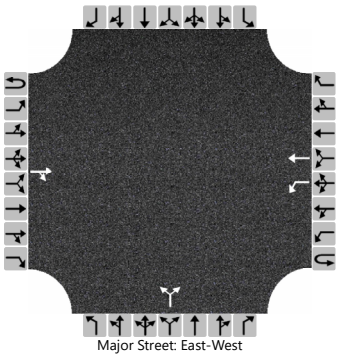
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			1670	10		10	860			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						332					34					
v/c Ratio						0.03					0.64					
95% Queue Length, Q_{95} (veh)						0.1					2.2					
Control Delay (s/veh)						16.2					223.9					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				223.9						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

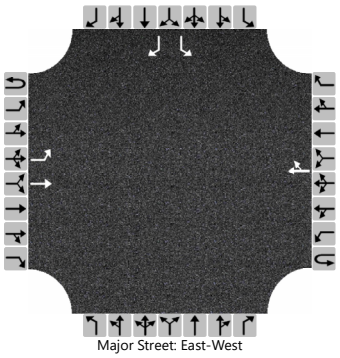
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		10	440				1570	10						10		10
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												11		11
Capacity, c (veh/h)		366												47		111
v/c Ratio		0.03												0.23		0.10
95% Queue Length, Q_{95} (veh)		0.1												0.8		0.3
Control Delay (s/veh)		15.1												104.3		40.8
Level of Service (LOS)		C												F		E
Approach Delay (s/veh)		0.3												72.5		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

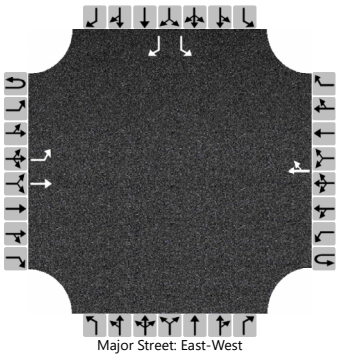
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		120	1520				890	90						20		30
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		130												22		33
Capacity, c (veh/h)		650												13		287
v/c Ratio		0.20												1.64		0.11
95% Queue Length, Q_{95} (veh)		0.7												3.4		0.4
Control Delay (s/veh)		11.9												890.3		19.1
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.9												367.6		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

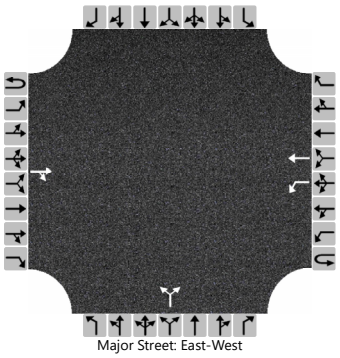
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			430	10		10	1550			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1079					93					
v/c Ratio						0.01					0.23					
95% Queue Length, Q_{95} (veh)						0.0					0.8					
Control Delay (s/veh)						8.4					55.0					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)						0.1				55.0						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

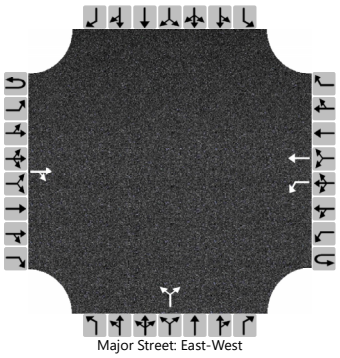
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			1640	20		10	830			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						339					37					
v/c Ratio						0.03					0.59					
95% Queue Length, Q_{95} (veh)						0.1					2.1					
Control Delay (s/veh)						16.0					197.6					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				197.6						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

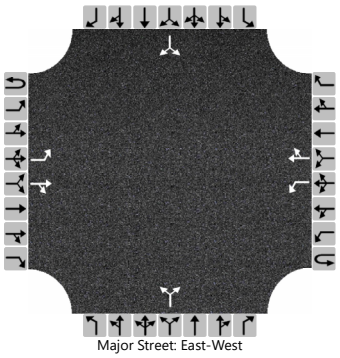
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LR				LR	
Volume (veh/h)		10	450	40		10	1560	10		0		10		10		50
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage																

Undivided

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				11					11				65	
Capacity, c (veh/h)		369				1030					565				76	
v/c Ratio		0.03				0.01					0.02				0.86	
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.1				4.3	
Control Delay (s/veh)		15.0				8.5					11.5				161.4	
Level of Service (LOS)		C				A					B				F	
Approach Delay (s/veh)	0.3				0.1				11.5				161.4			
Approach LOS	A				A				B				F			

HCS Two-Way Stop-Control Report

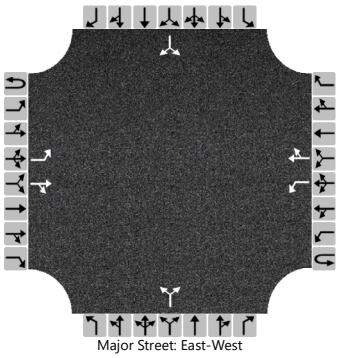
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LR				LR	
Volume (veh/h)		50	1550	320		10	940	10		0		30		10		30
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage																

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		54				11					33				43	
Capacity, c (veh/h)		669				276					92				23	
v/c Ratio		0.08				0.04					0.35				1.87	
95% Queue Length, Q_{95} (veh)		0.3				0.1					1.4				5.5	
Control Delay (s/veh)		10.9				18.6					64.3				766.0	
Level of Service (LOS)		B				C					F				F	
Approach Delay (s/veh)	0.3				0.2				64.3				766.0			
Approach LOS	A				A				F				F			

HCS Two-Way Stop-Control Report

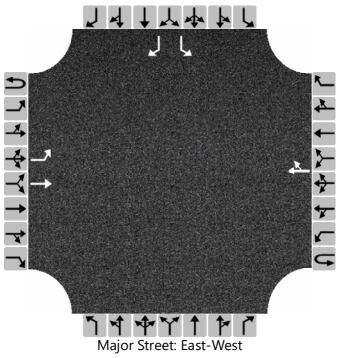
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 SAT AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		120	840				1110	60						20		90
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		130												22		98
Capacity, c (veh/h)		543												27		213
v/c Ratio		0.24												0.80		0.46
95% Queue Length, Q_{95} (veh)		0.9												2.5		2.2
Control Delay (s/veh)		13.7												315.3		35.5
Level of Service (LOS)		B												F		E
Approach Delay (s/veh)		1.7												86.4		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

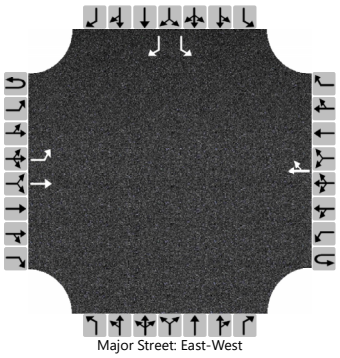
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 SAT PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		20	1190				930	10						30		40
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

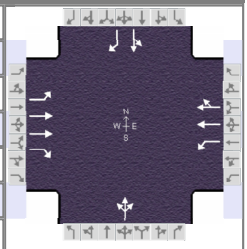
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22												33		43
Capacity, c (veh/h)		675												38		287
v/c Ratio		0.03												0.86		0.15
95% Queue Length, Q_{95} (veh)		0.1												3.2		0.5
Control Delay (s/veh)		10.5												263.9		19.7
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.2												124.4		
Approach LOS		A												F		

2050 NO BUILD

HCS Signalized Intersection Results Summary

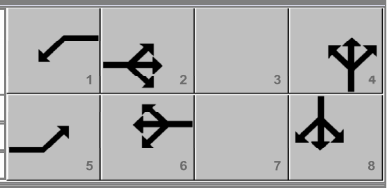
General Information				Intersection Information	
Agency	ODOT			Duration, h	0.250
Analyst	Gannett Fleming	Analysis Date	1/12/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	AM Peak	PHF	0.92
Urban Street	US 22	Analysis Year	2050	Analysis Period	1> 7:00
Intersection	Landen Drive	File Name	2050 AM Landen.xus		
Project Description	2050 AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	460	10	10	1790	160	40	30	20	140	10	210

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

Green	9.0	69.0	24.0	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



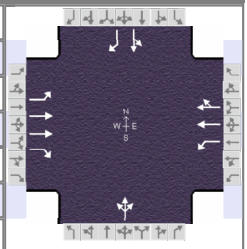
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		4		8
Case Number	1.1	3.0	1.1	4.0		8.0		7.0
Phase Duration, s	15.0	75.0	15.0	75.0		30.0		30.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	2.9	4.0	2.9		4.1		4.1
Queue Clearance Time (g_s), s	3.3	10.2	2.3	70.8		7.8		15.3
Green Extension Time (g_e), s	0.0	8.5	0.0	0.0		1.5		1.1
Phase Call Probability	1.00	1.00	1.00	1.00		1.00		1.00
Max Out Probability	0.13	0.01	0.01	1.00		0.01		0.14

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	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	54	500	11	11	1060	1060		98			163	196
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1809	1449	1810	1900	1845		1647			1397	1610
Queue Service Time (g_s), s	1.3	8.2	0.4	0.3	64.3	68.8		0.0			6.9	13.3
Cycle Queue Clearance Time (g_c), s	1.3	8.2	0.4	0.3	64.3	68.8		5.8			12.7	13.3
Green Ratio (*g/C*)	0.65	0.57	0.57	0.65	0.57	0.57		0.20			0.20	0.20
Capacity (*c*), veh/h	196	2080	833	643	1093	1061		373			337	322
Volume-to-Capacity Ratio (*X*)	0.278	0.240	0.013	0.017	0.970	0.999		0.262			0.483	0.608
Back of Queue (*Q*), ft/ln (95 th percentile)												
Back of Queue (*Q*), veh/ln (95 th percentile)	1.6	5.5	0.2	0.2	40.7	44.1		4.4			7.8	9.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.08	0.00	0.02	0.02	0.00	0.00		0.00			0.00	2.32
Uniform Delay (d_1), s/veh	27.4	12.6	10.9	7.8	24.5	25.5		40.6			43.5	43.7
Incremental Delay (d_2), s/veh	0.8	0.0	0.0	0.0	20.2	27.3		0.4			1.1	3.3
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
Control Delay (*d*), s/veh	28.2	12.6	10.9	7.8	44.7	52.7		41.0			44.5	47.0
Level of Service (LOS)	C	B	B	A	D	D		D			D	D
Approach Delay, s/veh / LOS	14.1	B		48.5	D		41.0	D		45.9	D	
Intersection Delay, s/veh / LOS	41.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.67	B	1.94	B	2.30	B	2.46	B
Bicycle LOS Score / LOS	0.95	A	2.25	B	0.65	A	1.08	A

HCS Signalized Intersection Results Summary

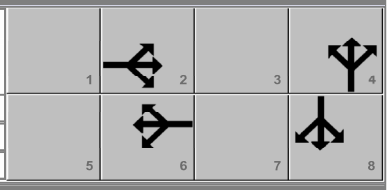
General Information				Intersection Information	
Agency	ODOT			Duration, h	0.250
Analyst	Gannett Fleming	Analysis Date	1/12/2024	Area Type	Other
Jurisdiction	ODOT	Time Period	PM Peak	PHF	0.92
Urban Street	US 22	Analysis Year	2050	Analysis Period	1> 7:00
Intersection	Landen Drive	File Name	2030 PM Landen.xus		
Project Description	2050 PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	70	1390	10	10	1000	120	30	20	20	670	30	150

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	46.0	52.0	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		4		8
Case Number		5.0		6.0		8.0		7.0
Phase Duration, s		52.0		52.0		58.0		58.0
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.1		3.1		4.1		4.1
Queue Clearance Time (g_s), s		48.0		48.0		4.5		54.0
Green Extension Time (g_e), s		0.0		0.0		4.4		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		1.00		1.00		0.00		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	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	76	1511	11	11	620	598		76			761	130
Adjusted Saturation Flow Rate (*s*), veh/h/ln	466	1809	1610	352	1900	1828		1655			1401	1610
Queue Service Time (g_s), s	14.9	45.9	0.4	0.1	31.0	31.1		0.0			49.5	5.1
Cycle Queue Clearance Time (g_c), s	46.0	45.9	0.4	46.0	31.0	31.1		2.5			52.0	5.1
Green Ratio (*g/C*)	0.42	0.42	0.42	0.42	0.42	0.42		0.47			0.47	0.47
Capacity (*c*), veh/h	129	1513	673	66	795	765		829			726	761
Volume-to-Capacity Ratio (*X*)	0.592	0.999	0.016	0.165	0.780	0.782		0.092			1.048	0.171
Back of Queue (*Q*), ft/ln (95 th percentile)												
Back of Queue (*Q*), veh/ln (95 th percentile)	4.0	31.1	0.3	0.5	20.2	19.7		1.8			38.4	3.2
Queue Storage Ratio (*RQ*) (95 th percentile)	0.21	0.00	0.03	0.08	0.00	0.00		0.00			0.00	0.81
Uniform Delay (d_1), s/veh	48.8	32.0	18.7	55.0	27.6	27.7		16.0			31.3	16.6
Incremental Delay (d_2), s/veh	4.9	22.8	0.0	0.4	4.6	4.8		0.0			46.6	0.1
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
Control Delay (*d*), s/veh	53.7	54.8	18.7	55.4	32.2	32.5		16.0			77.8	16.7
Level of Service (LOS)	D	D	B	E	C	C		B			F	B
Approach Delay, s/veh / LOS	54.5	D		32.5	C		16.0	B		68.9	E	
Intersection Delay, s/veh / LOS	50.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.96	B	2.27	B	2.42	B
Bicycle LOS Score / LOS	1.81	B	1.50	B	0.61	A	1.96	B

HCS Two-Way Stop-Control Report

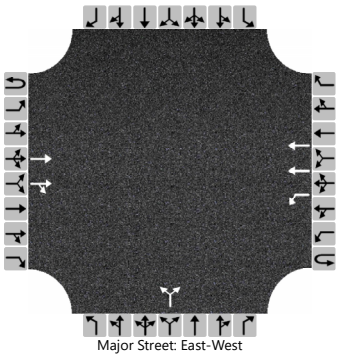
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old Mill Road
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old Mill Road
Peak Hour Factor	0.92
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)			560	40	0	10	1950			50		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					65					
Capacity, c (veh/h)						924					95					
v/c Ratio						0.01					0.68					
95% Queue Length, Q_{95} (veh)						0.0					3.4					
Control Delay (s/veh)						8.9					100.8					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)					0.0				100.8							
Approach LOS					A				F							

HCS Two-Way Stop-Control Report

General Information

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Agency/Co.	ODOT
Date Performed	11/22/2023
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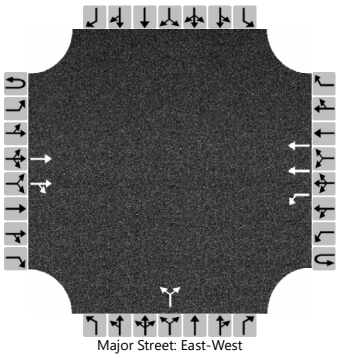
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old Mill Road
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old Mill Road
Peak Hour Factor	0.92
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)			2020	80	0	10	1080			20		40				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					65					
Capacity, c (veh/h)						216					35					
v/c Ratio						0.05					1.88					
95% Queue Length, Q_{95} (veh)						0.2					7.2					
Control Delay (s/veh)						22.6					664.7					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				664.7						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

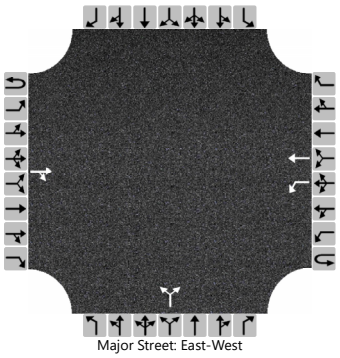
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			550	10		10	1960			10		20				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						965					60					
v/c Ratio						0.01					0.55					
95% Queue Length, Q_{95} (veh)						0.0					2.2					
Control Delay (s/veh)						8.8					121.9					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)						0.0				121.9						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

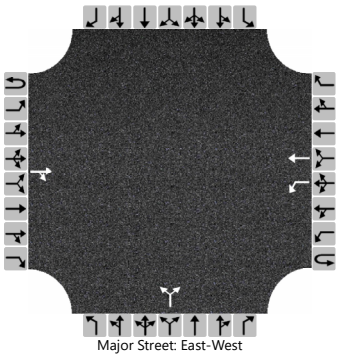
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			2080	10		10	1070			10		20				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						222					17					
v/c Ratio						0.05					1.91					
95% Queue Length, Q_{95} (veh)						0.2					4.6					
Control Delay (s/veh)						22.0					892.7					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				892.7						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

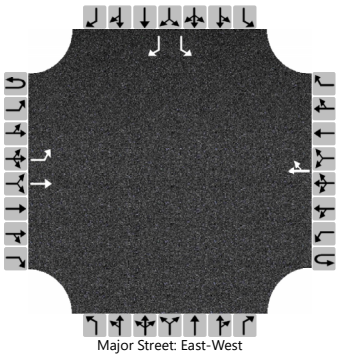
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		10	550				1960	10						10		10
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												11		11
Capacity, c (veh/h)		250												21		62
v/c Ratio		0.04												0.53		0.18
95% Queue Length, Q_{95} (veh)		0.1												1.5		0.6
Control Delay (s/veh)		20.0												303.4		75.6
Level of Service (LOS)		C												F		F
Approach Delay (s/veh)		0.4												189.5		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

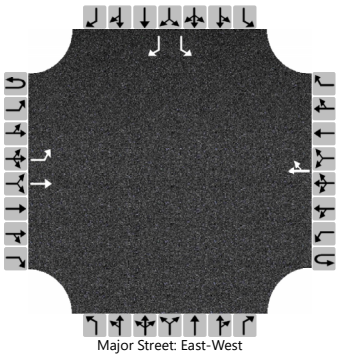
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		160	1890				1100	110						20		30
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		174												22		33
Capacity, c (veh/h)		522												4		208
v/c Ratio		0.33												5.95		0.16
95% Queue Length, Q_{95} (veh)		1.4												4.2		0.5
Control Delay (s/veh)		15.3												4076.4		25.5
Level of Service (LOS)		C												F		D
Approach Delay (s/veh)		1.2												1645.8		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

General Information

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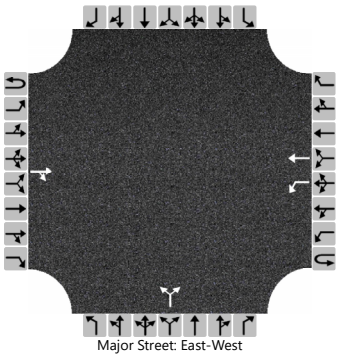
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			530	10		10	1930			20		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						983					34					
v/c Ratio						0.01					0.95					
95% Queue Length, Q_{95} (veh)						0.0					3.4					
Control Delay (s/veh)						8.7					309.4					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)						0.0				309.4						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

General Information

Analyst	Gannett Fleming
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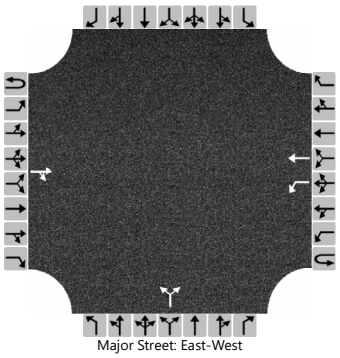
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			2040	20		10	1030			10		10				
Percent Heavy Vehicles (%)						3				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				7.1		6.2				
Critical Headway (sec)						4.13				6.41		6.21				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						229					14					
v/c Ratio						0.05					1.51					
95% Queue Length, Q_{95} (veh)						0.1					3.4					
Control Delay (s/veh)						21.5					799.9					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				799.9						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

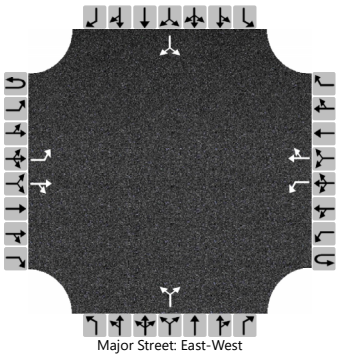
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LR				LR	
Volume (veh/h)		10	560	50		10	1940	10		0		10		10		60
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage																

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				11					11				76	
Capacity, c (veh/h)		255				921					0				38	
v/c Ratio		0.04				0.01									1.98	
95% Queue Length, Q_{95} (veh)		0.1				0.0									8.2	
Control Delay (s/veh)		19.7				9.0									681.5	
Level of Service (LOS)		C				A									F	
Approach Delay (s/veh)		0.3				0.0								681.5		
Approach LOS		A				A								F		

HCS Two-Way Stop-Control Report

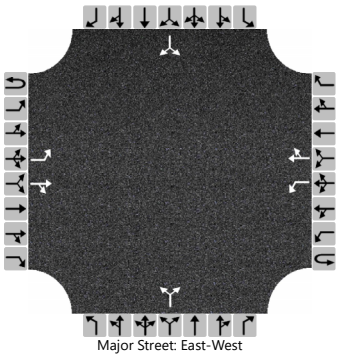
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LR				LR	
Volume (veh/h)		60	1930	400		10	1170	10		0		40		10		40
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		65				11					43				54	
Capacity, c (veh/h)		538				175					48				1	
v/c Ratio		0.12				0.06					0.90				38.45	
95% Queue Length, Q_{95} (veh)		0.4				0.2					3.7				8.9	
Control Delay (s/veh)		12.6				26.9					231.1				21704.8	
Level of Service (LOS)		B				D					F				F	
Approach Delay (s/veh)	0.3				0.2				231.1				21704.8			
Approach LOS	A				A				F				F			

HCS Two-Way Stop-Control Report

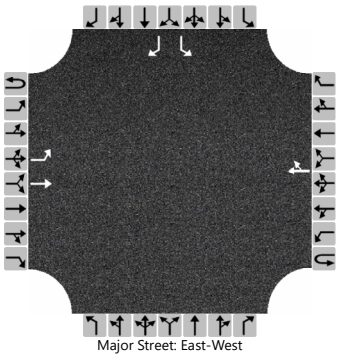
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 SAT AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		150	1040				1380	70						20		110
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		163												22		120
Capacity, c (veh/h)		415												9		142
v/c Ratio		0.39												2.38		0.84
95% Queue Length, Q_{95} (veh)		1.8												3.8		5.5
Control Delay (s/veh)		19.2												1430.7		99.8
Level of Service (LOS)		C												F		F
Approach Delay (s/veh)		2.4												304.5		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

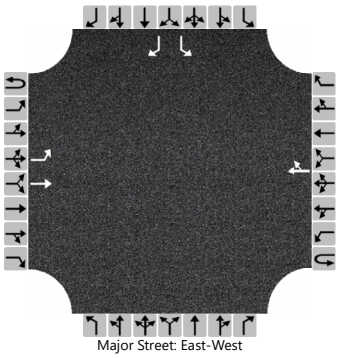
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 SAT PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0	0	0	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		20	1480				1160	10						30		60
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22												33		65
Capacity, c (veh/h)		543												16		205
v/c Ratio		0.04												2.01		0.32
95% Queue Length, Q_{95} (veh)		0.1												4.7		1.3
Control Delay (s/veh)		11.9												959.3		30.5
Level of Service (LOS)		B												F		D
Approach Delay (s/veh)		0.2												340.1		
Approach LOS		A												F		

2030 4 LANE ALTERNATIVE

HCS Two-Way Stop-Control Report

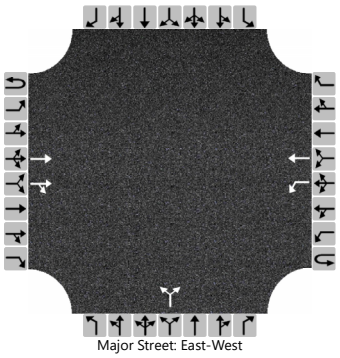
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			450	10	0	10	1570			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1053					70					
v/c Ratio						0.01					0.31					
95% Queue Length, Q_{95} (veh)						0.0					1.1					
Control Delay (s/veh)						8.5					77.7					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)					0.1				77.7							
Approach LOS					A				F							

HCS Two-Way Stop-Control Report

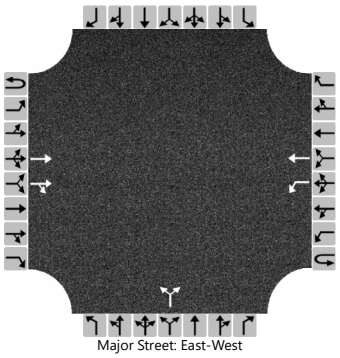
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			1670	10	0	10	860			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						327					28					
v/c Ratio						0.03					0.77					
95% Queue Length, Q_{95} (veh)						0.1					2.5					
Control Delay (s/veh)						16.4					295.6					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				295.6						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

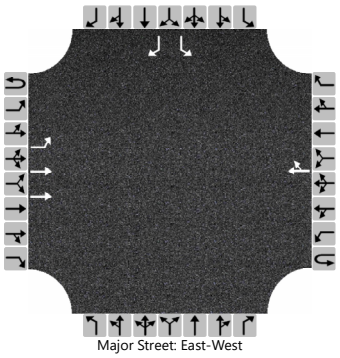
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		10	440				1570	10						10		10
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												11		11
Capacity, c (veh/h)		360												52		110
v/c Ratio		0.03												0.21		0.10
95% Queue Length, Q_{95} (veh)		0.1												0.7		0.3
Control Delay (s/veh)		15.3												91.4		41.4
Level of Service (LOS)		C												F		E
Approach Delay (s/veh)		0.3												66.4		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

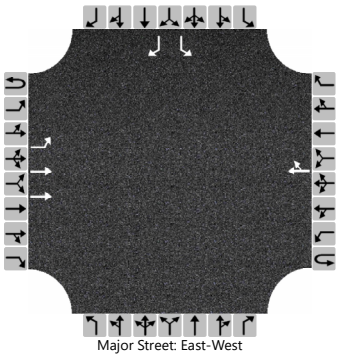
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		120	1520				890	90						20		30
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		130												22		33
Capacity, c (veh/h)		644												35		285
v/c Ratio		0.20												0.62		0.11
95% Queue Length, Q_{95} (veh)		0.8												2.1		0.4
Control Delay (s/veh)		12.0												213.2		19.3
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.9												96.8		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

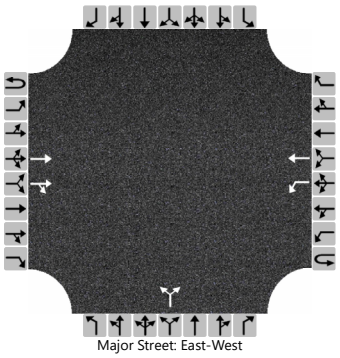
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			430	10	0	10	1550			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1073					75					
v/c Ratio						0.01					0.29					
95% Queue Length, Q_{95} (veh)						0.0					1.1					
Control Delay (s/veh)						8.4					71.5					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)						0.1				71.5						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

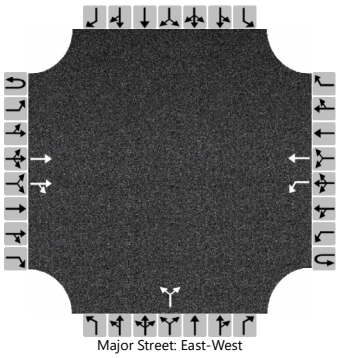
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			1640	20	0	10	830			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						333					31					
v/c Ratio						0.03					0.70					
95% Queue Length, Q_{95} (veh)						0.1					2.3					
Control Delay (s/veh)						16.2					255.9					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				255.9						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

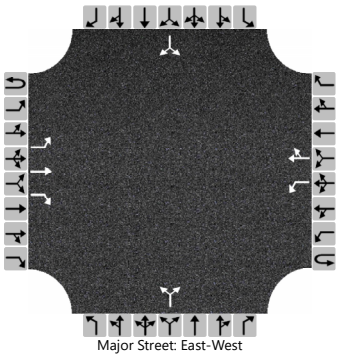
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	1	0	1	1	0		0	1	0		0	1	0
Configuration		L	T	R		L		TR			LR				LR	
Volume (veh/h)		10	450	40		10	1560	10		0		10		10		50
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				11					11				65	
Capacity, c (veh/h)		369				1030					581				76	
v/c Ratio		0.03				0.01					0.02				0.86	
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.1				4.3	
Control Delay (s/veh)		15.0				8.5					11.3				161.4	
Level of Service (LOS)		C				A					B				F	
Approach Delay (s/veh)		0.3				0.1				11.3				161.4		
Approach LOS		A				A				B				F		

HCS Two-Way Stop-Control Report

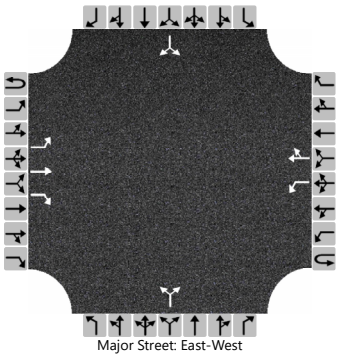
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	1	0	1	1	0		0	1	0		0	1	0
Configuration		L	T	R		L		TR			LR				LR	
Volume (veh/h)		50	1550	320		10	940	10		0		30		10		30
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		54				11					33				43	
Capacity, c (veh/h)		669				276					117				26	
v/c Ratio		0.08				0.04					0.28				1.69	
95% Queue Length, Q_{95} (veh)		0.3				0.1					1.1				5.3	
Control Delay (s/veh)		10.9				18.6					47.3				658.6	
Level of Service (LOS)		B				C					E				F	
Approach Delay (s/veh)		0.3				0.2				47.3				658.6		
Approach LOS		A				A				E				F		

HCS Two-Way Stop-Control Report

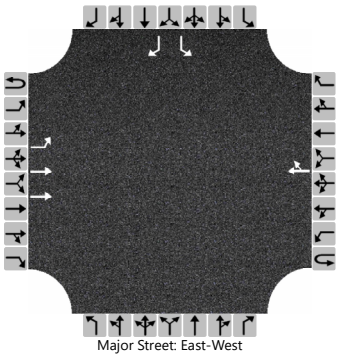
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 SAT AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		120	840				1110	60						20		90
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		130												22		98
Capacity, c (veh/h)		537												42		211
v/c Ratio		0.24												0.52		0.46
95% Queue Length, Q_{95} (veh)		0.9												1.9		2.2
Control Delay (s/veh)		13.8												162.0		36.1
Level of Service (LOS)		B												F		E
Approach Delay (s/veh)		1.7												59.0		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

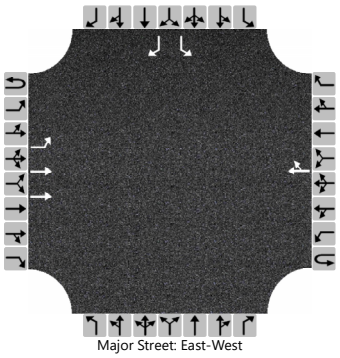
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 SAT PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		20	1190				930	10						30		40
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22												33		43
Capacity, c (veh/h)		669												79		285
v/c Ratio		0.03												0.41		0.15
95% Queue Length, Q_{95} (veh)		0.1												1.7		0.5
Control Delay (s/veh)		10.6												79.9		19.9
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.2												45.6		
Approach LOS		A												E		

2050 4 LANE ALTERNATIVE

HCS Two-Way Stop-Control Report

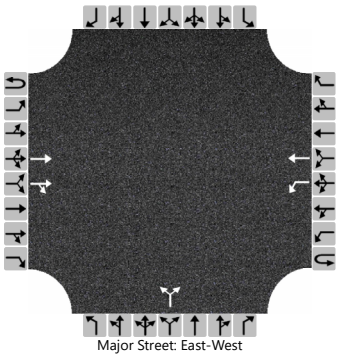
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			550	10	0	10	1960			10		20				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						959					45					
v/c Ratio						0.01					0.72					
95% Queue Length, Q_{95} (veh)						0.0					2.8					
Control Delay (s/veh)						8.8					193.4					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)						0.0				193.4						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

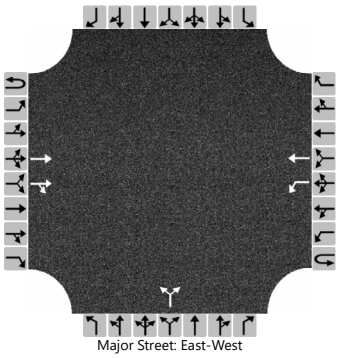
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			2080	10	0	10	1070			10		20				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						218					14					
v/c Ratio						0.05					2.32					
95% Queue Length, Q_{95} (veh)						0.2					4.8					
Control Delay (s/veh)						22.4					1155.1					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				1155.1						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

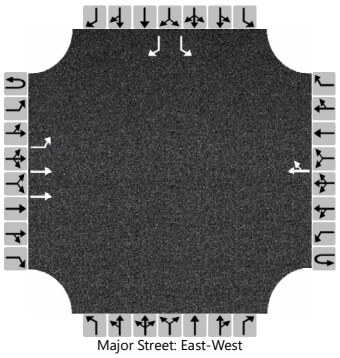
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		10	550				1960	10						10		10
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												11		11
Capacity, c (veh/h)		245												24		60
v/c Ratio		0.04												0.45		0.18
95% Queue Length, Q_{95} (veh)		0.1												1.4		0.6
Control Delay (s/veh)		20.3												247.0		77.2
Level of Service (LOS)		C												F		F
Approach Delay (s/veh)		0.4												162.1		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

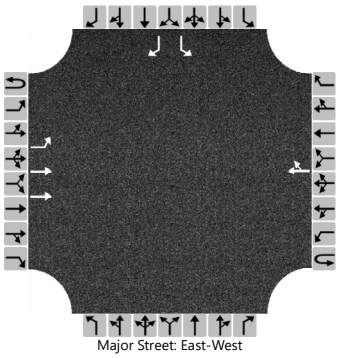
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		160	1890				1100	110						20		30
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		174												22		33
Capacity, c (veh/h)		516												13		206
v/c Ratio		0.34												1.73		0.16
95% Queue Length, Q_{95} (veh)		1.5												3.5		0.6
Control Delay (s/veh)		15.5												956.2		25.7
Level of Service (LOS)		C												F		D
Approach Delay (s/veh)		1.2												397.9		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

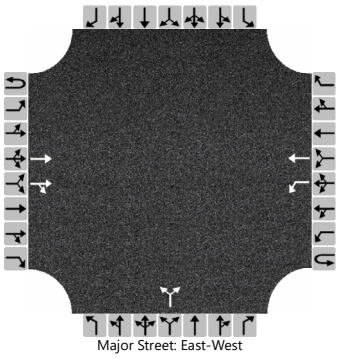
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			530	10	0	10	1930			20		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						977					26					
v/c Ratio						0.01					1.28					
95% Queue Length, Q_{95} (veh)						0.0					4.0					
Control Delay (s/veh)						8.7					498.9					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)						0.0				498.9						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

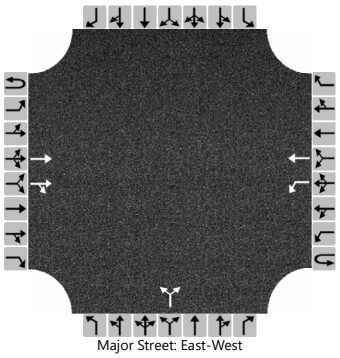
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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	1	0		0	1	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			2040	20	0	10	1030			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						224					11					
v/c Ratio						0.05					1.99					
95% Queue Length, Q_{95} (veh)						0.2					3.6					
Control Delay (s/veh)						21.9					1141.0					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				1141.0						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

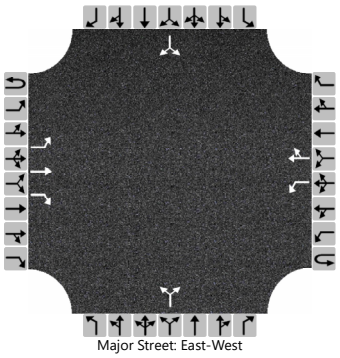
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	1	0	1	1	0		0	1	0		0	1	0
Configuration		L	T	R		L		TR			LR				LR	
Volume (veh/h)		10	560	50		10	1940	10		0		10		10		60
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				11					11				76	
Capacity, c (veh/h)		255				921					0				38	
v/c Ratio		0.04				0.01									1.98	
95% Queue Length, Q_{95} (veh)		0.1				0.0									8.2	
Control Delay (s/veh)		19.7				9.0									681.1	
Level of Service (LOS)		C				A									F	
Approach Delay (s/veh)		0.3				0.0								681.1		
Approach LOS		A				A								F		

HCS Two-Way Stop-Control Report

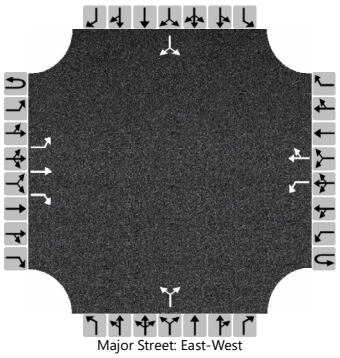
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	1	0	1	1	0		0	1	0		0	1	0
Configuration		L	T	R		L		TR			LR				LR	
Volume (veh/h)		60	1930	400		10	1170	10		0		40		10		40
Percent Heavy Vehicles (%)		3				3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.11		6.21		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		65				11					43				54	
Capacity, c (veh/h)		538				175					66				5	
v/c Ratio		0.12				0.06					0.66				11.75	
95% Queue Length, Q_{95} (veh)		0.4				0.2					2.9				8.6	
Control Delay (s/veh)		12.6				26.9					131.9				6356.6	
Level of Service (LOS)		B				D					F				F	
Approach Delay (s/veh)		0.3				0.2				131.9				6356.6		
Approach LOS		A				A				F				F		

HCS Two-Way Stop-Control Report

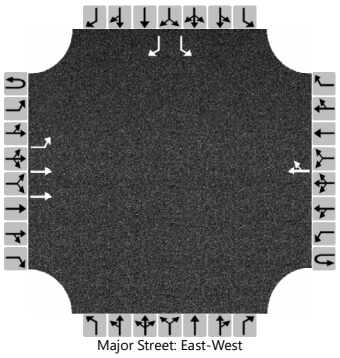
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 SAT AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		150	1040				1380	70						20		110
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		163												22		120
Capacity, c (veh/h)		409												16		140
v/c Ratio		0.40												1.38		0.86
95% Queue Length, Q_{95} (veh)		1.9												3.3		5.6
Control Delay (s/veh)		19.5												707.5		103.1
Level of Service (LOS)		C												F		F
Approach Delay (s/veh)		2.5												196.1		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

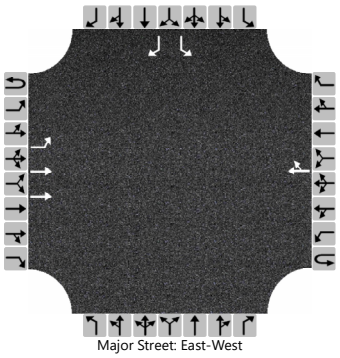
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 SAT PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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	1	0		0	0	0		1	0	1
Configuration		L	T					TR						L		R
Volume (veh/h)		20	1480				1160	10						30		60
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.2
Critical Headway (sec)		4.16												6.86		6.26
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22												33		65
Capacity, c (veh/h)		537												41		203
v/c Ratio		0.04												0.79		0.32
95% Queue Length, Q_{95} (veh)		0.1												3.0		1.3
Control Delay (s/veh)		12.0												227.0		30.9
Level of Service (LOS)		B												F		D
Approach Delay (s/veh)		0.2												96.3		
Approach LOS		A												F		

2030 5 LANE ALTERNATIVE

HCS Two-Way Stop-Control Report

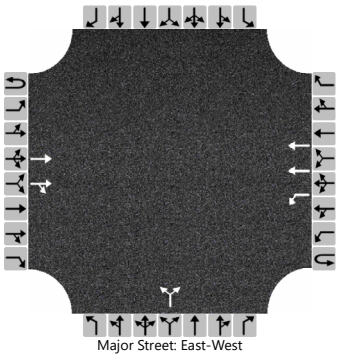
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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)			450	10	0	10	1570			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1053					232					
v/c Ratio						0.01					0.09					
95% Queue Length, Q_{95} (veh)						0.0					0.3					
Control Delay (s/veh)						8.5					22.1					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)						0.1				22.1						
Approach LOS						A				C						

HCS Two-Way Stop-Control Report

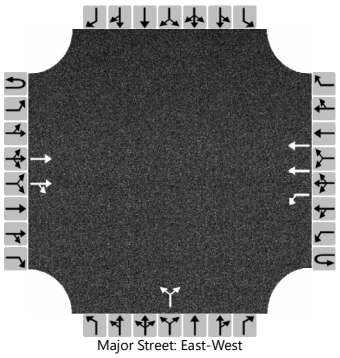
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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)			1670	10	0	10	860			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						327					56					
v/c Ratio						0.03					0.39					
95% Queue Length, Q_{95} (veh)						0.1					1.4					
Control Delay (s/veh)						16.4					104.3					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				104.3						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

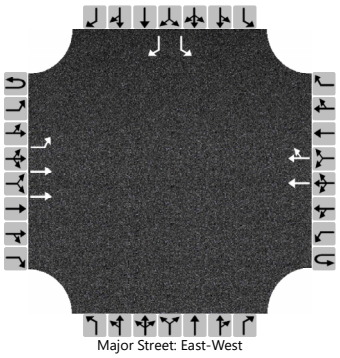
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	10	440				1570	10						10		10
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												11		11
Capacity, c (veh/h)		360												52		298
v/c Ratio		0.03												0.21		0.04
95% Queue Length, Q_{95} (veh)		0.1												0.7		0.1
Control Delay (s/veh)		15.3												91.4		17.5
Level of Service (LOS)		C												F		C
Approach Delay (s/veh)	0.3												54.5			
Approach LOS	A												F			

HCS Two-Way Stop-Control Report

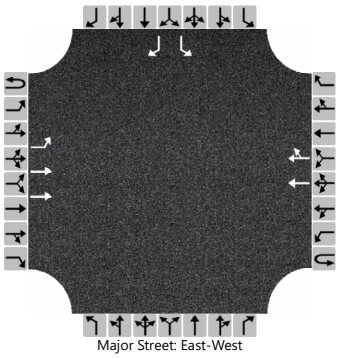
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	120	1520				890	90						20		30
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		130												22		33
Capacity, c (veh/h)		644												35		489
v/c Ratio		0.20												0.62		0.07
95% Queue Length, Q_{95} (veh)		0.8												2.1		0.2
Control Delay (s/veh)		12.0												213.2		12.9
Level of Service (LOS)		B												F		B
Approach Delay (s/veh)		0.9												93.0		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

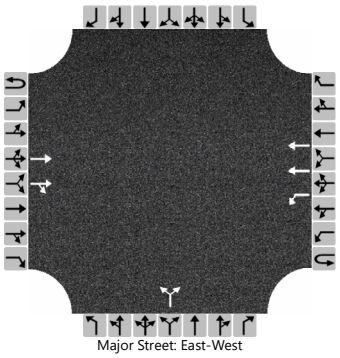
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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)			430	10	0	10	1550			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						1073					243					
v/c Ratio						0.01					0.09					
95% Queue Length, Q_{95} (veh)						0.0					0.3					
Control Delay (s/veh)						8.4					21.3					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)						0.1				21.3						
Approach LOS						A				C						

HCS Two-Way Stop-Control Report

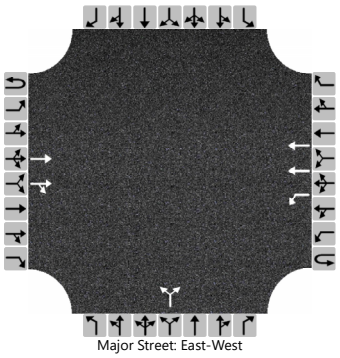
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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)			1640	20	0	10	830			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						333					60					
v/c Ratio						0.03					0.36					
95% Queue Length, Q_{95} (veh)						0.1					1.3					
Control Delay (s/veh)						16.2					95.5					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)						0.2				95.5						
Approach LOS						A				F						

HCS Two-Way Stop-Control Report

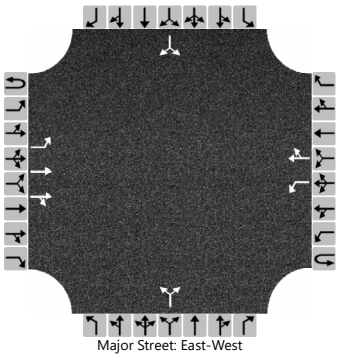
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	1	0		0	1	0		0	1	0
Configuration		L	T	TR		L		TR			LR				LR	
Volume (veh/h)		10	450	40	0	10	1560	10		0		10		10		50
Percent Heavy Vehicles (%)		3			3	3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage																
	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.2
Critical Headway (sec)		4.16				4.16				7.52		6.92		7.56		6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				11					11				65	
Capacity, c (veh/h)		364				1024					735				80	
v/c Ratio		0.03				0.01					0.01				0.81	
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.0				4.1	
Control Delay (s/veh)		15.2				8.6					10.0				141.9	
Level of Service (LOS)		C				A					A				F	
Approach Delay (s/veh)	0.3				0.1				10.0				141.9			
Approach LOS	A				A				A				F			

HCS Two-Way Stop-Control Report

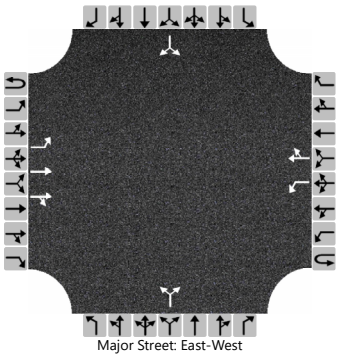
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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	1	1	0		0	1	0		0	1	0
Configuration		L	T	TR		L		TR			LR				LR	
Volume (veh/h)		50	1550	320	0	10	940	10		0		30		10		30
Percent Heavy Vehicles (%)		3			3	3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.2
Critical Headway (sec)		4.16				4.16				7.52		6.92		7.56		6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		54				11					33				43	
Capacity, c (veh/h)		663				271					237				83	
v/c Ratio		0.08				0.04					0.14				0.53	
95% Queue Length, Q_{95} (veh)		0.3				0.1					0.5				2.3	
Control Delay (s/veh)		10.9				18.8					22.6				89.1	
Level of Service (LOS)		B				C					C				F	
Approach Delay (s/veh)	0.3				0.2				22.6				89.1			
Approach LOS	A				A				C				F			

HCS Two-Way Stop-Control Report

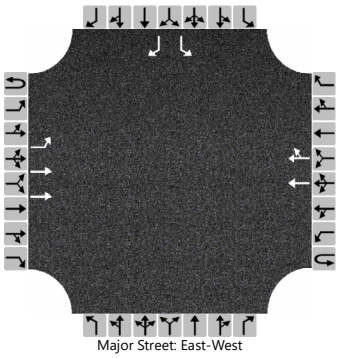
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 SAT AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	120	840				1110	60						20		90
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		130												22		98
Capacity, c (veh/h)		537												42		418
v/c Ratio		0.24												0.52		0.23
95% Queue Length, Q_{95} (veh)		0.9												1.9		0.9
Control Delay (s/veh)		13.8												162.0		16.2
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		1.7												42.7		
Approach LOS		A												E		

HCS Two-Way Stop-Control Report

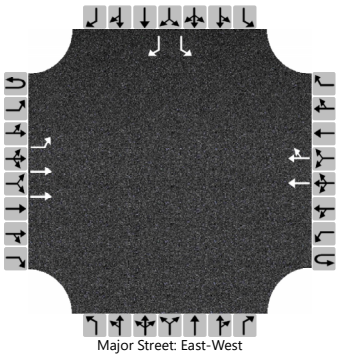
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2030
Time Analyzed	2030 SAT PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	20	1190				930	10						30		40
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22												33		43
Capacity, c (veh/h)		669												79		505
v/c Ratio		0.03												0.41		0.09
95% Queue Length, Q_{95} (veh)		0.1												1.7		0.3
Control Delay (s/veh)		10.6												79.9		12.8
Level of Service (LOS)		B												F		B
Approach Delay (s/veh)		0.2												41.6		
Approach LOS		A												E		

2050 5 LANE ALTERNATIVE

HCS Two-Way Stop-Control Report

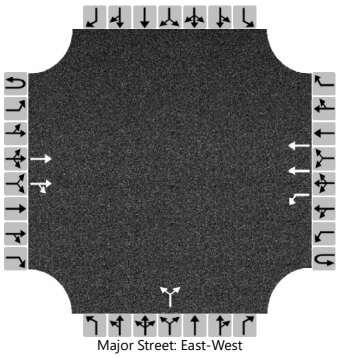
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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)			550	10	0	10	1960			10		20				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						959					203					
v/c Ratio						0.01					0.16					
95% Queue Length, Q_{95} (veh)						0.0					0.6					
Control Delay (s/veh)						8.8					26.1					
Level of Service (LOS)						A					D					
Approach Delay (s/veh)						0.0				26.1						
Approach LOS						A				D						

HCS Two-Way Stop-Control Report

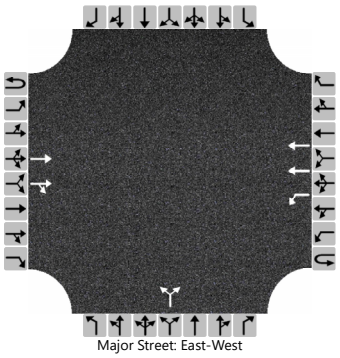
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Southland Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Southland Drive
Peak Hour Factor	0.92
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)			2080	10	0	10	1070			10		20				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						218					34					
v/c Ratio						0.05					0.97					
95% Queue Length, Q_{95} (veh)						0.2					3.4					
Control Delay (s/veh)						22.4					321.4					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)					0.2				321.4							
Approach LOS					A				F							

HCS Two-Way Stop-Control Report

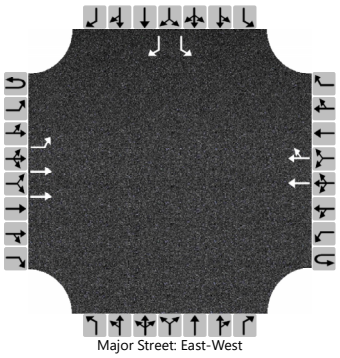
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	10	550				1960	10						10		10
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage																
					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												11		11
Capacity, c (veh/h)		245												24		215
v/c Ratio		0.04												0.45		0.05
95% Queue Length, Q_{95} (veh)		0.1												1.4		0.2
Control Delay (s/veh)		20.3												247.0		22.6
Level of Service (LOS)		C												F		C
Approach Delay (s/veh)		0.4												134.8		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

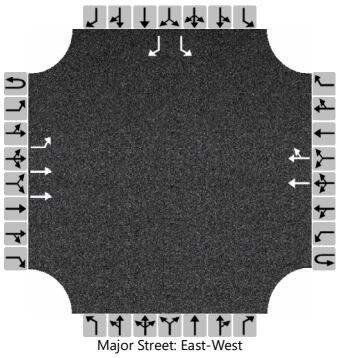
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	160	1890				1100	110						20		30
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		174												22		33
Capacity, c (veh/h)		516												13		405
v/c Ratio		0.34												1.73		0.08
95% Queue Length, Q_{95} (veh)		1.5												3.5		0.3
Control Delay (s/veh)		15.5												956.2		14.7
Level of Service (LOS)		C												F		B
Approach Delay (s/veh)		1.2												391.3		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

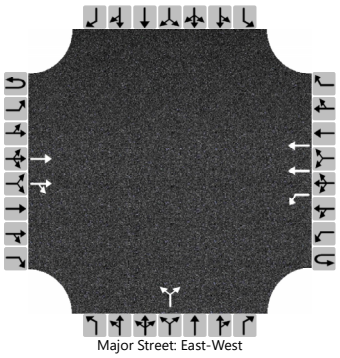
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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)			530	10	0	10	1930			20		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						977					126					
v/c Ratio						0.01					0.26					
95% Queue Length, Q_{95} (veh)						0.0					1.0					
Control Delay (s/veh)						8.7					43.3					
Level of Service (LOS)						A					E					
Approach Delay (s/veh)						0.0				43.3						
Approach LOS						A				E						

HCS Two-Way Stop-Control Report

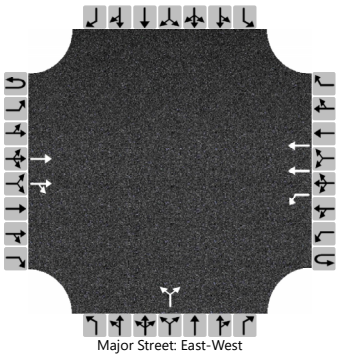
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Park Drive
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Park Drive
Peak Hour Factor	0.92
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)			2040	20	0	10	1030			10		10				
Percent Heavy Vehicles (%)					3	3				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)						4.16				6.82		6.92				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.51		3.31				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					22					
Capacity, c (veh/h)						224					26					
v/c Ratio						0.05					0.83					
95% Queue Length, Q_{95} (veh)						0.2					2.6					
Control Delay (s/veh)						21.9					336.0					
Level of Service (LOS)						C					F					
Approach Delay (s/veh)					0.2				336.0							
Approach LOS					A				F							

HCS Two-Way Stop-Control Report

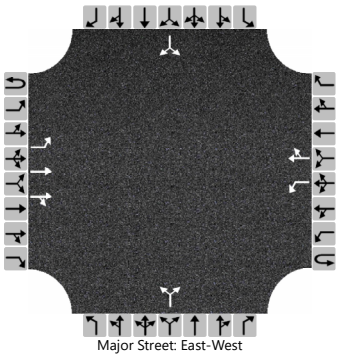
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	1	0		0	1	0		0	1	0
Configuration		L	T	TR		L		TR			LR				LR	
Volume (veh/h)		10	560	50	0	10	1940	10		0		10		10		60
Percent Heavy Vehicles (%)		3			3	3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage																

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.2
Critical Headway (sec)		4.16				4.16				7.52		6.92		7.56		6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				11					11				76	
Capacity, c (veh/h)		250				915					0				42	
v/c Ratio		0.04				0.01									1.81	
95% Queue Length, Q_{95} (veh)		0.1				0.0									7.9	
Control Delay (s/veh)		20.0				9.0									592.1	
Level of Service (LOS)		C				A									F	
Approach Delay (s/veh)	0.3				0.0								592.1			
Approach LOS	A				A								F			

HCS Two-Way Stop-Control Report

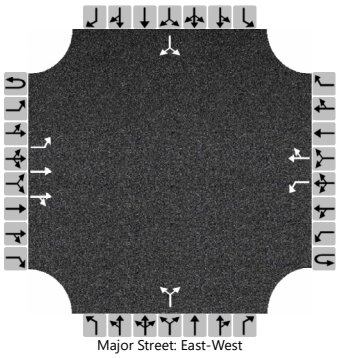
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Old 3C Hwy
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Old 3C Hwy
Peak Hour Factor	0.92
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	1	1	0		0	1	0		0	1	0
Configuration		L	T	TR		L		TR			LR				LR	
Volume (veh/h)		60	1930	400	0	10	1170	10		0		40		10		40
Percent Heavy Vehicles (%)		3			3	3				1		1		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage																

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.2
Critical Headway (sec)		4.16				4.16				7.52		6.92		7.56		6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.51		3.31		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		65				11					43				54	
Capacity, c (veh/h)		531				171					161				38	
v/c Ratio		0.12				0.06					0.27				1.43	
95% Queue Length, Q_{95} (veh)		0.4				0.2					1.0				5.7	
Control Delay (s/veh)		12.7				27.4					35.3				461.9	
Level of Service (LOS)		B				D					E				F	
Approach Delay (s/veh)	0.3				0.2				35.3				461.9			
Approach LOS	A				A				E				F			

HCS Two-Way Stop-Control Report

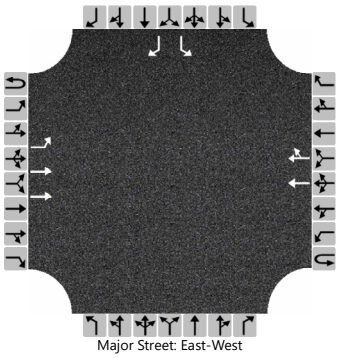
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 SAT AM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	150	1040				1380	70						20		110
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		163												22		120
Capacity, c (veh/h)		409												16		332
v/c Ratio		0.40												1.38		0.36
95% Queue Length, Q_{95} (veh)		1.9												3.3		1.6
Control Delay (s/veh)		19.5												707.5		21.8
Level of Service (LOS)		C												F		C
Approach Delay (s/veh)		2.5												127.3		
Approach LOS		A												F		

HCS Two-Way Stop-Control Report

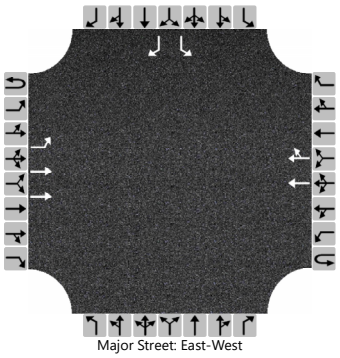
General Information

Analyst	Gannett Fleming
Agency/Co.	ODOT
Date Performed	11/22/2023
Analysis Year	2050
Time Analyzed	2050 SAT PM
Intersection Orientation	East-West
Project Description	WAR-22 Corridor Study

Site Information

Intersection	Landen Deerfield Park Entrance
Jurisdiction	ODOT
East/West Street	US 22
North/South Street	Landen Deerfield Park Entrance
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

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		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	20	1480				1160	10						30		60
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														Yes		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

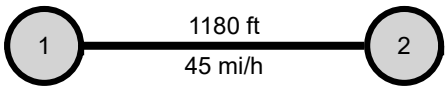
Flow Rate, v (veh/h)		22												33		65
Capacity, c (veh/h)		537												41		418
v/c Ratio		0.04												0.79		0.16
95% Queue Length, Q_{95} (veh)		0.1												3.0		0.5
Control Delay (s/veh)		12.0												227.0		15.2
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.2												85.8		
Approach LOS		A												F		

SEGMENT CAPACITY ANALYSIS

2023 NO BUILD

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	AM Peak	Number of Iterations	15
File Name	2023 AM Segment.xus	Analysis Year	2023	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 7:00
Project Description	2023 AM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	1	1	1180	1180	80	80	0	0	100	100	0.0	0.0

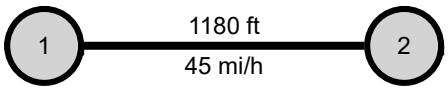
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		19.64			21.03	
1	Running Speed, mi/h		40.97			38.26	
1	Through Delay, s/veh		3.24			11.25	
1	Travel Time, s		22.87			32.28	
1	Travel Speed, mi/h		35.17			24.92	
1	Stop Rate, stops/veh		0.06			0.14	
1	Spatial Stop Rate, stops/mi		0.27			0.63	
1	Through vol/cap Ratio		0.32			1.00	
1	Percent of Base FFS		71.79			56.60	
1	Level of Service		B			F	
1	Auto Traveler Perception Score		2.28			2.34	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	22.87	32.28
Facility Travel Speed, mi/h	35.17	24.92
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	71.79	56.60
Facility Level of Service	B	F
Facility Auto Traveler Perception Score	2.28	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	PM Peak	Number of Iterations	15
File Name	2023 PM Segment.xus	Analysis Year	2023	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 17:00
Project Description	2023 PM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	1	1	1180	1180	80	80	0	0	100	100	0.0	0.0

		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		21.27			20.25	
1	Running Speed, mi/h		37.82			39.73	
1	Through Delay, s/veh		15.00			3.54	
1	Travel Time, s		36.28			23.80	
1	Travel Speed, mi/h		22.18			33.81	
1	Stop Rate, stops/veh		0.30			0.06	
1	Spatial Stop Rate, stops/mi		1.32			0.27	
1	Through vol/cap Ratio		1.00			0.49	
1	Percent of Base FFS		45.27			76.78	
1	Level of Service		F			B	
1	Auto Traveler Perception Score		2.45			2.28	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

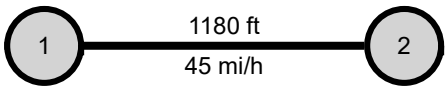
Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	36.28	23.80
Facility Travel Speed, mi/h	22.18	33.81
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	45.27	76.78
Facility Level of Service	F	B
Facility Auto Traveler Perception Score	2.45	2.28

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

2030 NO BUILD

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	AM Peak	Number of Iterations	15
File Name	2030 AM Segment.xus	Analysis Year	2030	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 7:00
Project Description	2030 AM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	1	1	1180	1180	80	80	0	0	100	100	0.0	0.0

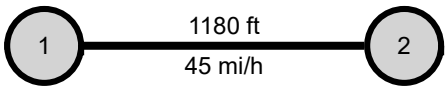
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		19.68			21.03	
1	Running Speed, mi/h		40.89			38.26	
1	Through Delay, s/veh		3.42			11.48	
1	Travel Time, s		23.10			32.51	
1	Travel Speed, mi/h		34.83			24.75	
1	Stop Rate, stops/veh		0.06			0.14	
1	Spatial Stop Rate, stops/mi		0.29			0.64	
1	Through vol/cap Ratio		0.35			1.00	
1	Percent of Base FFS		71.09			56.20	
1	Level of Service		B			F	
1	Auto Traveler Perception Score		2.28			2.34	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	23.10	32.51
Facility Travel Speed, mi/h	34.83	24.75
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	71.09	56.20
Facility Level of Service	B	F
Facility Auto Traveler Perception Score	2.28	2.34

Multimodal Results (Facility)		
Pedestrian Facility LOS Score / LOS		
Bicycle Facility LOS Score / LOS		
Transit Facility LOS Score / LOS		

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	PM Peak	Number of Iterations	15
File Name	2030 PM Segment.xus	Analysis Year	2030	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 17:00
Project Description	2030 PM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	1	1	1180	1180	80	80	0	0	100	100	0.0	0.0

		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		21.27			20.39	
1	Running Speed, mi/h		37.82			39.46	
1	Through Delay, s/veh		15.45			3.13	
1	Travel Time, s		36.73			23.52	
1	Travel Speed, mi/h		21.91			34.20	
1	Stop Rate, stops/veh		0.30			0.05	
1	Spatial Stop Rate, stops/mi		1.35			0.23	
1	Through vol/cap Ratio		1.00			0.54	
1	Percent of Base FFS		44.71			77.68	
1	Level of Service		F			B	
1	Auto Traveler Perception Score		2.45			2.28	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

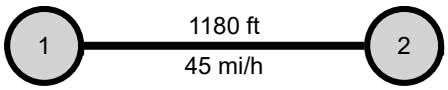
Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	36.73	23.52
Facility Travel Speed, mi/h	21.91	34.20
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	44.71	77.68
Facility Level of Service	F	B
Facility Auto Traveler Perception Score	2.45	2.28

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

2030 4 LANE ALTERNATIVE

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	AM Peak	Number of Iterations	15
File Name	2030 AM 4L Segment.xus	Analysis Year	2030	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 7:00
Project Description	2030 AM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	1	1180	1180	80	80	0	0	50	100	0.0	0.0

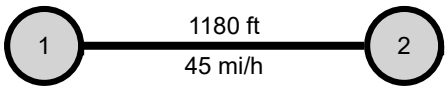
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		19.44			21.03	
1	Running Speed, mi/h		41.38			38.26	
1	Through Delay, s/veh		2.53			11.48	
1	Travel Time, s		21.98			32.51	
1	Travel Speed, mi/h		36.61			24.75	
1	Stop Rate, stops/veh		0.05			0.14	
1	Spatial Stop Rate, stops/mi		0.23			0.64	
1	Through vol/cap Ratio		0.18			1.00	
1	Percent of Base FFS		74.71			56.20	
1	Level of Service		B			F	
1	Auto Traveler Perception Score		2.28			2.34	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	21.98	32.51
Facility Travel Speed, mi/h	36.61	24.75
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	74.71	56.20
Facility Level of Service	B	F
Facility Auto Traveler Perception Score	2.28	2.34

Multimodal Results (Facility)		
Pedestrian Facility LOS Score / LOS		
Bicycle Facility LOS Score / LOS		
Transit Facility LOS Score / LOS		

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	PM Peak	Number of Iterations	15
File Name	2030 PM 4L Segment.xus	Analysis Year	2030	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 17:00
Project Description	2030 PM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	1	1180	1180	80	80	0	0	50	100	0.0	0.0

		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		20.14			20.39	
1	Running Speed, mi/h		39.94			39.46	
1	Through Delay, s/veh		5.15			3.68	
1	Travel Time, s		25.29			24.07	
1	Travel Speed, mi/h		31.81			33.42	
1	Stop Rate, stops/veh		0.09			0.06	
1	Spatial Stop Rate, stops/mi		0.38			0.27	
1	Through vol/cap Ratio		0.60			0.60	
1	Percent of Base FFS		64.92			75.91	
1	Level of Service		C			B	
1	Auto Traveler Perception Score		2.30			2.28	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

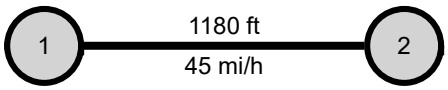
Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	25.29	24.07
Facility Travel Speed, mi/h	31.81	33.42
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	64.92	75.91
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.30	2.28

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

2030 5 LANE ALTERNATIVE

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	AM Peak	Number of Iterations	15
File Name	2030 AM 5L Segment.xus	Analysis Year	2030	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 7:00
Project Description	2030 AM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	2	1180	1180	80	80	0	0	50	100	0.0	0.0

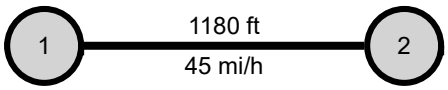
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			45.16	
1	Running Time, s		19.44			20.08	
1	Running Speed, mi/h		41.38			40.07	
1	Through Delay, s/veh		2.53			3.79	
1	Travel Time, s		21.98			23.87	
1	Travel Speed, mi/h		36.61			33.70	
1	Stop Rate, stops/veh		0.05			0.05	
1	Spatial Stop Rate, stops/mi		0.23			0.24	
1	Through vol/cap Ratio		0.18			0.62	
1	Percent of Base FFS		74.71			74.64	
1	Level of Service		B			B	
1	Auto Traveler Perception Score		2.28			2.28	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	21.98	23.87
Facility Travel Speed, mi/h	36.61	33.70
Facility Base Free Flow Speed, mi/h	49.00	45.16
Facility Percent of Base FFS	74.71	74.64
Facility Level of Service	B	B
Facility Auto Traveler Perception Score	2.28	2.28

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	PM Peak	Number of Iterations	15
File Name	2030 PM 5L Segment.xus	Analysis Year	2030	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 17:00
Project Description	2030 PM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	2	1180	1180	80	80	0	0	50	50	0.0	0.0

		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			45.39	
1	Running Time, s		20.14			19.70	
1	Running Speed, mi/h		39.94			40.84	
1	Through Delay, s/veh		5.15			3.37	
1	Travel Time, s		25.29			23.07	
1	Travel Speed, mi/h		31.81			34.87	
1	Stop Rate, stops/veh		0.09			0.05	
1	Spatial Stop Rate, stops/mi		0.38			0.23	
1	Through vol/cap Ratio		0.60			0.31	
1	Percent of Base FFS		64.92			76.83	
1	Level of Service		C			B	
1	Auto Traveler Perception Score		2.30			2.28	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

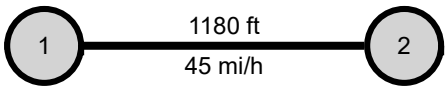
Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	25.29	23.07
Facility Travel Speed, mi/h	31.81	34.87
Facility Base Free Flow Speed, mi/h	49.00	45.39
Facility Percent of Base FFS	64.92	76.83
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.30	2.28

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

2050 NO BUILD

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	AM Peak	Number of Iterations	15
File Name	2050 AM Segment.xus	Analysis Year	2050	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 7:00
Project Description	2050 AM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	1	1	1180	1180	80	80	0	0	100	100	0.0	0.0

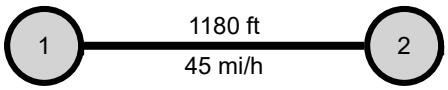
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		19.79			21.33	
1	Running Speed, mi/h		40.65			37.73	
1	Through Delay, s/veh		3.93			49.64	
1	Travel Time, s		23.72			70.96	
1	Travel Speed, mi/h		33.92			11.34	
1	Stop Rate, stops/veh		0.09			0.71	
1	Spatial Stop Rate, stops/mi		0.38			3.20	
1	Through vol/cap Ratio		0.39			1.10	
1	Percent of Base FFS		69.23			25.75	
1	Level of Service		B			F	
1	Auto Traveler Perception Score		2.30			2.76	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	23.72	70.96
Facility Travel Speed, mi/h	33.92	11.34
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	69.23	25.75
Facility Level of Service	B	F
Facility Auto Traveler Perception Score	2.30	2.76

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	PM Peak	Number of Iterations	15
File Name	2050 PM Segment.xus	Analysis Year	2050	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 17:00
Project Description	2050 PM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	1	1	1180	1180	80	80	0	0	100	100	0.0	0.0

		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		21.25			20.81	
1	Running Speed, mi/h		37.86			38.66	
1	Through Delay, s/veh		24.04			3.73	
1	Travel Time, s		45.29			24.54	
1	Travel Speed, mi/h		17.76			32.78	
1	Stop Rate, stops/veh		0.41			0.07	
1	Spatial Stop Rate, stops/mi		1.83			0.30	
1	Through vol/cap Ratio		1.03			0.68	
1	Percent of Base FFS		36.25			74.45	
1	Level of Service		F			B	
1	Auto Traveler Perception Score		2.53			2.29	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

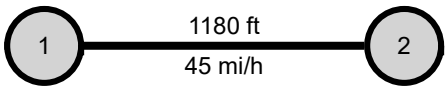
Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	45.29	24.54
Facility Travel Speed, mi/h	17.76	32.78
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	36.25	74.45
Facility Level of Service	F	B
Facility Auto Traveler Perception Score	2.53	2.29

Multimodal Results (Facility)		
Pedestrian Facility LOS Score / LOS		
Bicycle Facility LOS Score / LOS		
Transit Facility LOS Score / LOS		

2050 4 LANE ALTERNATIVE

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	AM Peak	Number of Iterations	15
File Name	2050 AM 4L Segment.xus	Analysis Year	2050	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 7:00
Project Description	2050 AM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	1	1180	1180	80	80	0	0	50	100	0.0	0.0

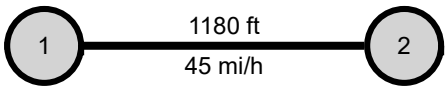
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.03	
1	Running Time, s		19.49			21.33	
1	Running Speed, mi/h		41.28			37.73	
1	Through Delay, s/veh		2.90			49.64	
1	Travel Time, s		22.39			70.96	
1	Travel Speed, mi/h		35.93			11.34	
1	Stop Rate, stops/veh		0.07			0.71	
1	Spatial Stop Rate, stops/mi		0.31			3.20	
1	Through vol/cap Ratio		0.20			1.10	
1	Percent of Base FFS		73.32			25.75	
1	Level of Service		B			F	
1	Auto Traveler Perception Score		2.29			2.76	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	22.39	70.96
Facility Travel Speed, mi/h	35.93	11.34
Facility Base Free Flow Speed, mi/h	49.00	44.03
Facility Percent of Base FFS	73.32	25.75
Facility Level of Service	B	F
Facility Auto Traveler Perception Score	2.29	2.76

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	PM Peak	Number of Iterations	15
File Name	2050 PM 4L Segment.xus	Analysis Year	2050	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 17:00
Project Description	2050 PM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	1	1180	1180	80	80	0	0	50	50	0.0	0.0

		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			44.27	
1	Running Time, s		20.46			20.81	
1	Running Speed, mi/h		39.32			38.66	
1	Through Delay, s/veh		6.18			6.42	
1	Travel Time, s		26.64			27.24	
1	Travel Speed, mi/h		30.20			29.54	
1	Stop Rate, stops/veh		0.10			0.12	
1	Spatial Stop Rate, stops/mi		0.44			0.53	
1	Through vol/cap Ratio		0.75			0.75	
1	Percent of Base FFS		61.64			66.73	
1	Level of Service		C			C	
1	Auto Traveler Perception Score		2.31			2.32	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

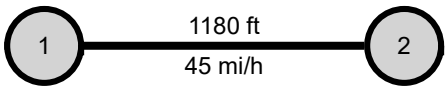
Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	26.64	27.24
Facility Travel Speed, mi/h	30.20	29.54
Facility Base Free Flow Speed, mi/h	49.00	44.27
Facility Percent of Base FFS	61.64	66.73
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.31	2.32

Multimodal Results (Facility)		
Pedestrian Facility LOS Score / LOS		
Bicycle Facility LOS Score / LOS		
Transit Facility LOS Score / LOS		

2050 5 LANE ALTERNATIVE

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	AM Peak	Number of Iterations	15
File Name	2050 AM 5L Segment.xus	Analysis Year	2050	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 7:00
Project Description	2050 AM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	2	1180	1180	80	80	0	0	50	50	0.0	0.0

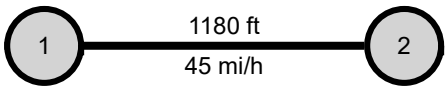
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			45.39	
1	Running Time, s		19.49			20.36	
1	Running Speed, mi/h		41.28			39.51	
1	Through Delay, s/veh		3.03			3.56	
1	Travel Time, s		22.52			23.92	
1	Travel Speed, mi/h		35.72			33.64	
1	Stop Rate, stops/veh		0.07			0.05	
1	Spatial Stop Rate, stops/mi		0.32			0.20	
1	Through vol/cap Ratio		0.22			0.78	
1	Percent of Base FFS		72.91			74.10	
1	Level of Service		B			B	
1	Auto Traveler Perception Score		2.29			2.27	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	22.52	23.92
Facility Travel Speed, mi/h	35.72	33.64
Facility Base Free Flow Speed, mi/h	49.00	45.39
Facility Percent of Base FFS	72.91	74.10
Facility Level of Service	B	B
Facility Auto Traveler Perception Score	2.29	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

HCS Urban Street Segment Report

General Information				Streets Information	
Agency	ODOT			Number of Intersections	2
Analyst	Gannett Fleming	Analysis Date	1/16/2024	Number of Segments	1
Jurisdiction	ODOT	Time Period	PM Peak	Number of Iterations	15
File Name	2050 PM 5L Segment.xus	Analysis Year	2050	System Cycle Length, s	60
Intersections	Southland Drive	Park Drive		Analysis Period	1> 17:00
Project Description	2050 PM Peak				



Basic Segment Information

Segment	Speed Limit mi/h		Through Lanes		Segment Length ft		Intersection Wid ft		Length of RM ft		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	45	45	2	2	1180	1180	80	80	0	0	50	50	0.0	0.0

		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mi/h		49.00			45.39	
1	Running Time, s		20.46			20.11	
1	Running Speed, mi/h		39.32			40.00	
1	Through Delay, s/veh		6.18			3.97	
1	Travel Time, s		26.64			24.08	
1	Travel Speed, mi/h		30.20			33.41	
1	Stop Rate, stops/veh		0.10			0.08	
1	Spatial Stop Rate, stops/mi		0.44			0.36	
1	Through vol/cap Ratio		0.75			0.39	
1	Percent of Base FFS		61.64			73.61	
1	Level of Service		C			B	
1	Auto Traveler Perception Score		2.31			2.30	
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS						
1	Bicycle Segment LOS Score / LOS						
1	Transit Segment LOS Score / LOS						

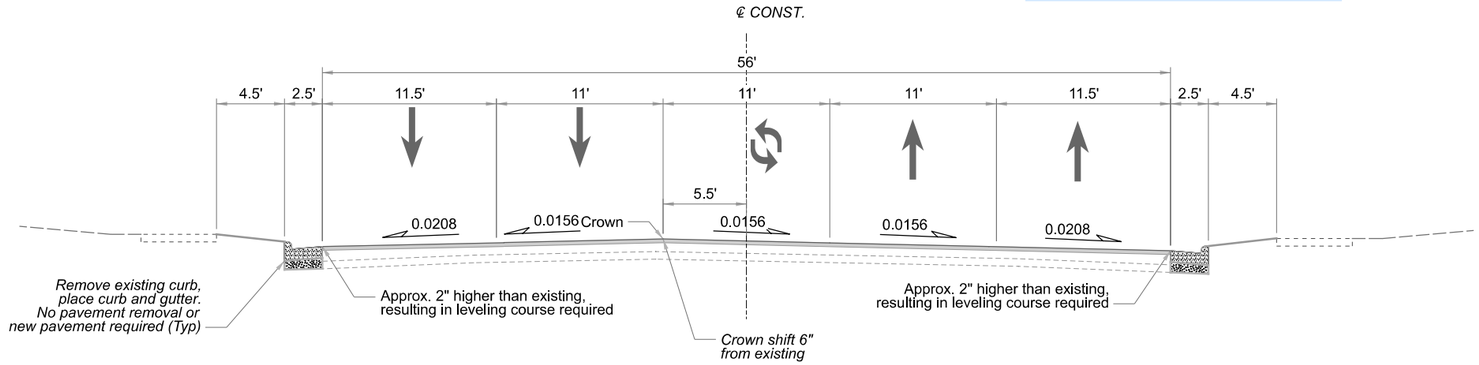
Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	26.64	24.08
Facility Travel Speed, mi/h	30.20	33.41
Facility Base Free Flow Speed, mi/h	49.00	45.39
Facility Percent of Base FFS	61.64	73.61
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.30

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS				
Bicycle Facility LOS Score / LOS				
Transit Facility LOS Score / LOS				

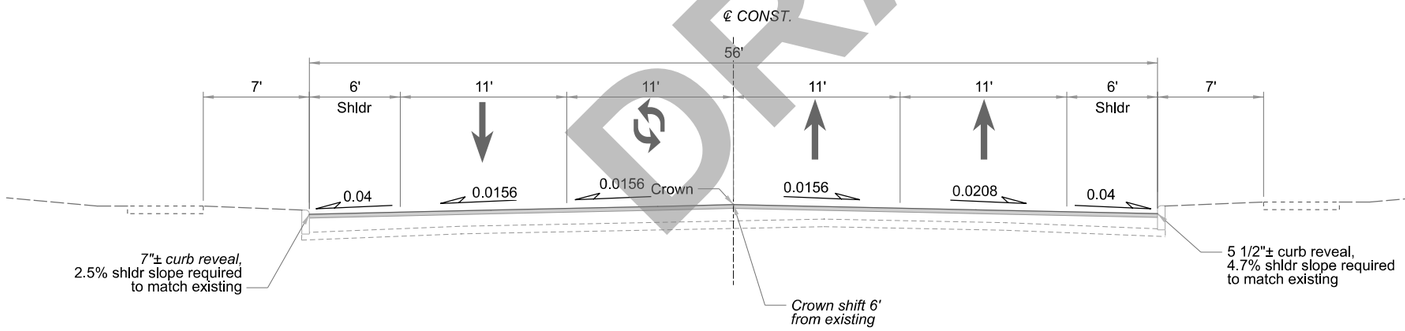
APPENDIX F

Alternative Figures

Will drainage spread into traveled lanes be a concern? Typical comment for both alternatives.



Proposed 5 Lane Section with Symmetrical Widening
45 MPH Design Speed
Between Old Mill Road to Old 3C Highway



Proposed 4 Lane Section
45 MPH Design Speed
Between Old Mill Road to Old 3C Highway

TYPICAL SECTIONS
PROPOSED ALTERNATIVES

WAR-22-2.00 Corridor Study

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DESIGN AGENCY
GANNETT FLEMING

DESIGNER
BRO

REVIEWER
DRJ 1/18/24

PROJECT ID
115913

SHEET 1 | TOTAL 1

WAR-22-2.00 Corridor Study

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Match Line Above

Match Line Sheet 2

Match Line Below

SHEET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
1 of 2	115913	DRJ #DATE	BRO	GANNETT FLEMING

PROPOSED FOUR LANE ALTERNATIVE

HORIZONTAL SCALE IN FEET
0 50
25 100

WAR-22-2.00 Corridor Study

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Match Line Above

Match Line Sheet 1

Match Line Below

SHEET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
2	2	115913	DRJ #DATE	BRO	GANNETT FLEMING

PROPOSED FOUR LANE ALTERNATIVE

HORIZONTAL SCALE IN FEET
0 50
25 100

WAR-22-2.00 Corridor Study

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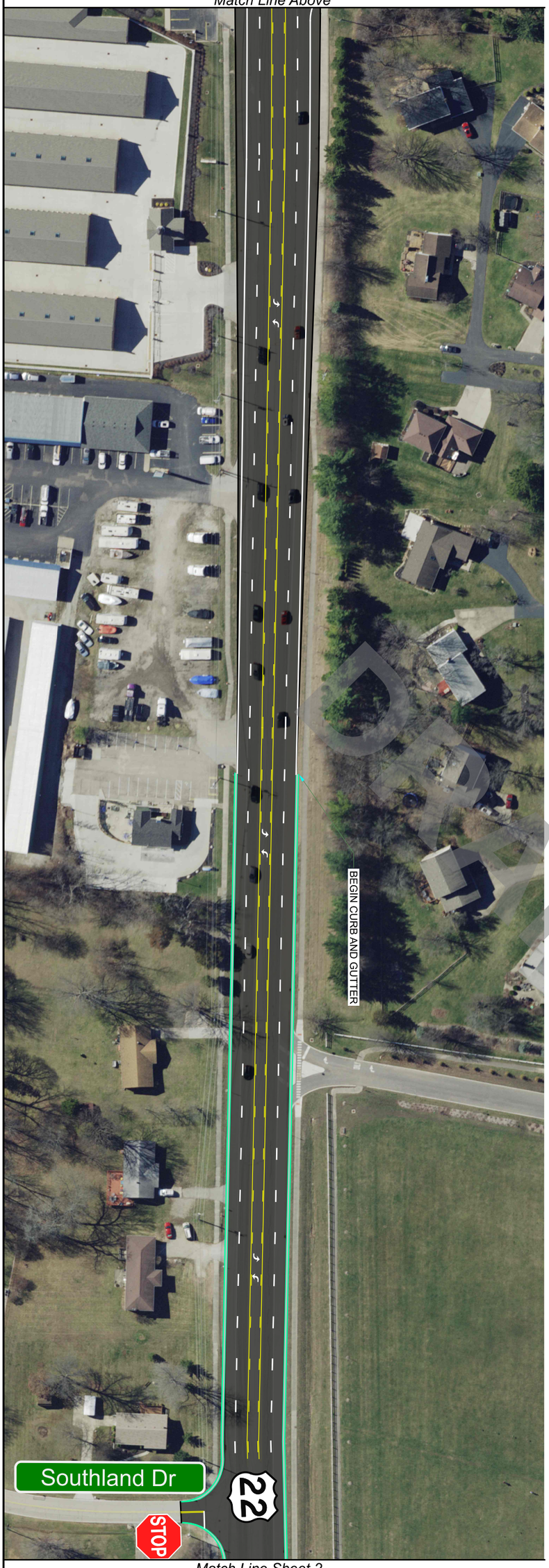

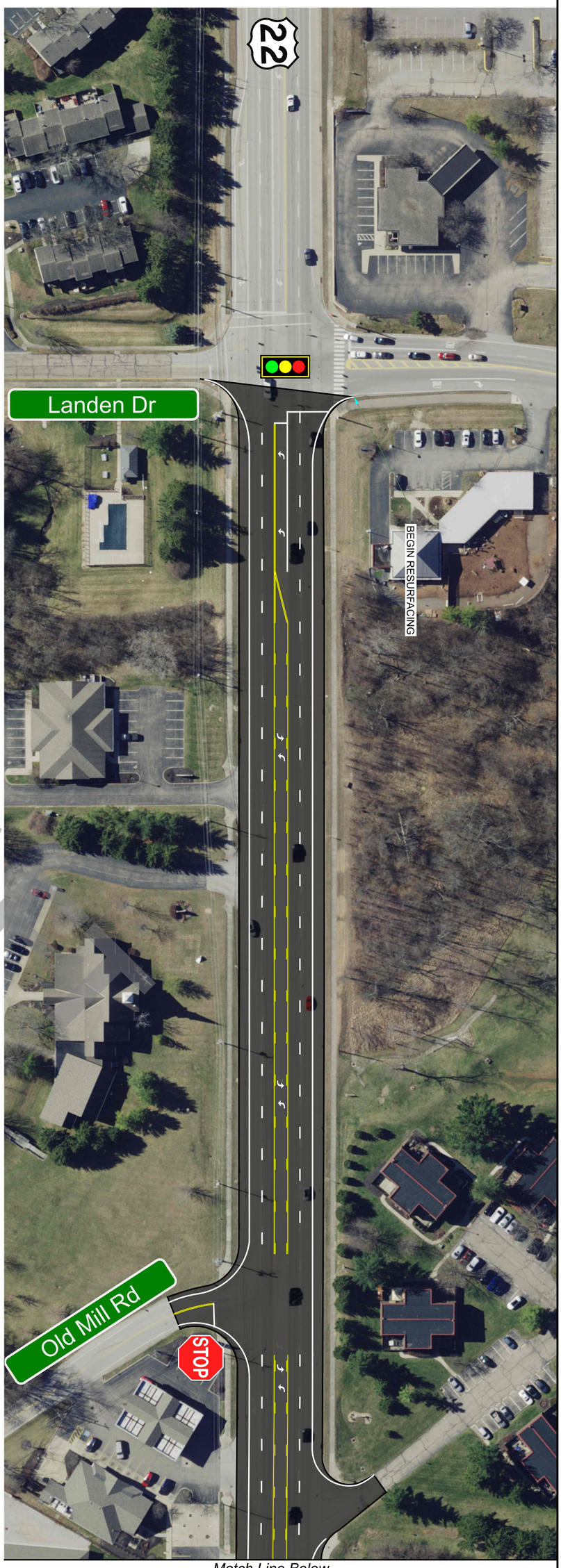

Match Line Sheet 2

Match Line Below

SHEET 1 | TOTAL 2
PROJECT ID 115913
DRJ REVIEWER #DATE
BRO DESIGNER
GANNETT FLEMING DESIGN AGENCY

PROPOSED FIVE LANE ALTERNATIVE

HORIZONTAL SCALE IN FEET
0 50
25 100

WAR-22-2.00 Corridor Study

MODEL: Sheet_SurvFt - Copy-1 PAPERSIZE: 17x11 (in.) DATE: 1/19/2024 TIME: 12:43:43 PM USER: djozity
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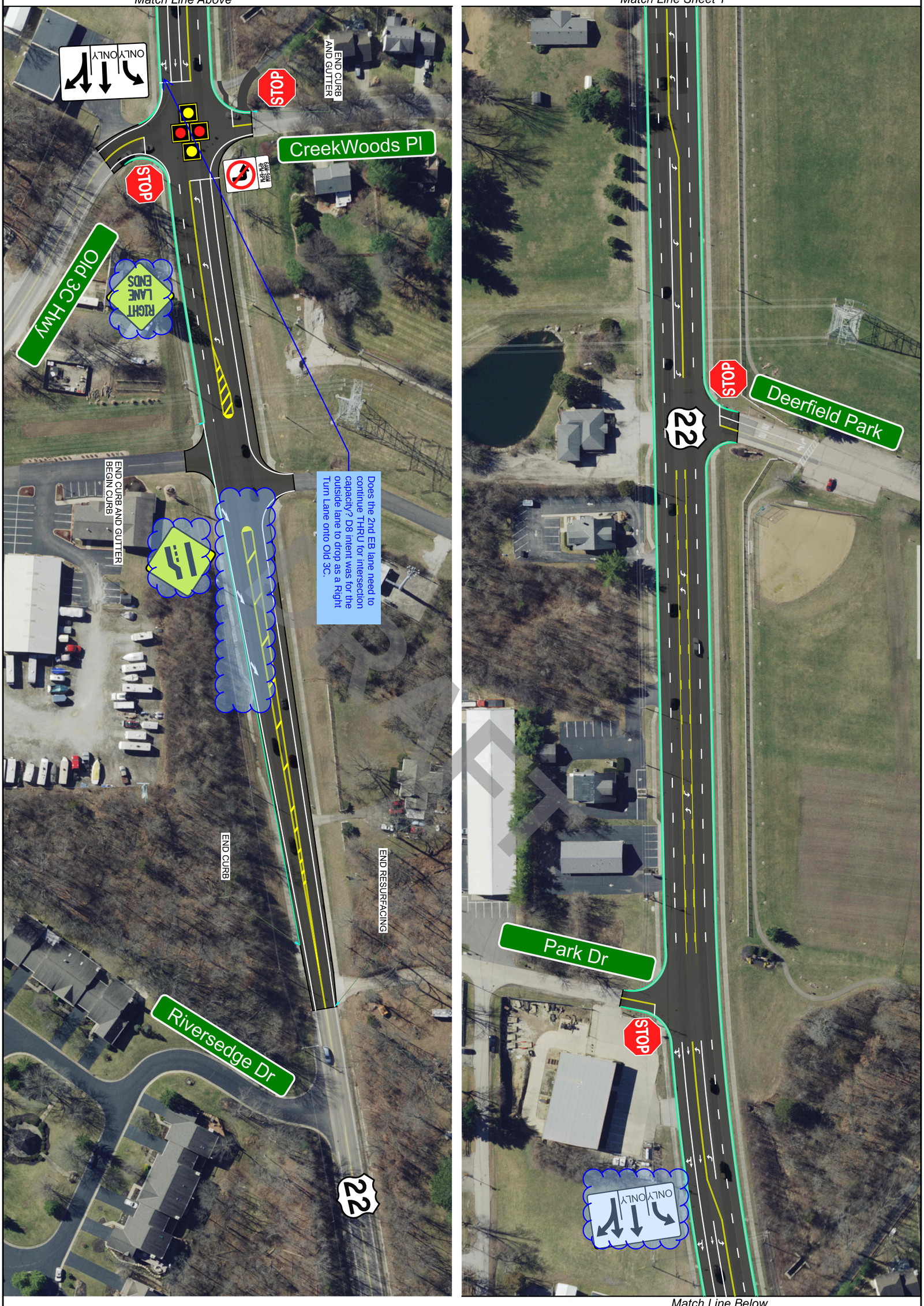

PROPOSED FIVE LANE ALTERNATIVE

HORIZONTAL SCALE IN FEET
0 50
25 100

DESIGN AGENCY	DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
GANNETT FLEMING	BRO	DRJ #DATE	115913	2	2

APPENDIX G

Cost Estimates

WAR-22-2.00 Corridor Study

4 Lane Alternative	
Major Work Items	$1,150,000.00
Erosion Control	$45,000.00
Traffic Control	$38,000.00
MOT	$123,000.00
Incidentals	$152,000.00
Contingency (30%)	$410,000.00
Inflation (29.0%) Middle of Project 2030	$560,000.00
Total	$2,478,000.00

5 Lane Alternative	
Major Work Items	$1,750,000.00
Erosion Control	$80,000.00
Traffic Control	$70,000.00
MOT	$189,000.00
Incidentals	$162,000.00
Contingency (30%)	$630,000.00
Inflation (29.0%) Middle of Project 2030	$830,000.00
Total	$3,711,000.00

The current project schedule has construction occurring in 2029, please update inflation accordingly. 8/1/29 can be the midpoint.

Reduce contingency to 25% on all alternatives

It appears that inflation was added on top of the subtotal + contingency. Please only apply inflation to the subtotal, and not the contingency.

4 Lane Alternative

Major Work Items	Depth (ft)	Unit	Assumed Qty	Unit Cost	Total Cost
1 1/2 " Asphalt Concrete Surface Course, 9.5MM, Type A (449)	0.125	CY	1563	$ 250.00	$ 390,750.00
1 3/4" Asphalt Concrete Intermediate Course, 19MM, Type A (449)	0.146	CY	1824	$ 225.00	$ 410,400.00
0.5"-2" Asphalt Concrete Intermediate Course, 19MM, Type A (449)	0.105	CY	268	$ 275.00	$ 73,700.00
6" Aggregate Base	0.500	CY	0	$ 70.00	$ -
Pavement Repair		SY	751	$ 125.00	$ 93,875.00
Curb and Gutter		FT	0	$ 35.00	$ -
Tack Coat (0.06 gal/yd^2)		GAL	5420	$ 5.00	$ 27,100.00
Pavement Removed, Driveways		SY	69	$ 15.00	$ 1,035.00
Curb Removed		FT	0	$ 8.00	$ -
Subgrade Compaction		SY	0	$ 3.00	$ -
Non-Reinforced Concrete Pavement, Driveway		SY	69	$ 85.00	$ 5,865.00
Sidewalk		SF	675	$ 10.00	$ 6,750.00
Curb Ramp		EA	1	$ 500.00	$ 500.00
Catch Basin		EA	10	$ 4,500.00	$ 45,000.00
12" Conduit		FT	500	$ 100.00	$ 50,000.00
6" Underdrain		FT	0	$ 15.00	$ -
Catch Basin Reconstructed to Grade		EA	0	$ 2,000.00	$ -
Catch Basin Adjusted to Grade		EA	41	$ 1,000.00	$ 41,000.00
Erosion Control		**Unit**	**Assumed Qty**	**Unit Cost**	**Total Cost**
Erosion Control		LS	1	$ 45,000.00	$ 45,000.00
2" Topsoil		CY	0	$ 80.00	$ -
Seeding and Mulching		SY	0	$ 5.00	$ -
Traffic Control		**Unit**	**Assumed Qty**	**Unit Cost**	**Total Cost**
Signing - 4 Lane (Minor)		LS	1	$ 13,000.00	$ 13,000.00
Signing - 5 Lane (Major)		LS	0	$ 50,000.00	$ -
Pavement Markings - 4 Lane		MILE	1	$ 25,000.00	$ 25,000.00
Pavement Markings - 5 Lane		MILE	0	$ 20,000.00	$ -
MOT					
10% of cost before incend.		LS	1	$ 123,000.00	$ 123,000.00
Incidentals		**Unit**	**Assumed Qty**	**Unit Cost**	**Total Cost**
Performace Bond		LUMP	1	$ 20,000.00	$ 20,000.00
Field Office, Type B		MONTH	6	$ 2,000.00	$ 12,000.00
Mobilization		LUMP	1	$ 100,000.00	$ 100,000.00
Construction Layout Stakes		LUMP	1	$ 20,000.00	$ 20,000.00
Contingency (30%)					
					$ 405,593.00
Inflation (29.0%) Middle of Project 2030					
					$ 553,775.00
Total					**$ 2,463,343.00**
Rounded Total					**$ 2,478,000.00**

5 Lane Alternative

Major Work Items	Depth (ft)	Unit	Assumed Qty	Unit Cost	Total Cost
1 1/2 " Asphalt Concrete Surface Course, 9.5MM, Type A (449)	0.125	CY	1565	$ 250.00	$ 391,250.00
1 3/4" Asphalt Concrete Intermediate Course, 19MM, Type A (449)	0.146	CY	1826	$ 225.00	$ 410,850.00
0.5"-2" Asphalt Concrete Intermediate Course, 19MM, Type A (449)	0.105	CY	325	$ 275.00	$ 89,375.00
6" Aggregate Base	0.500	CY	319	$ 70.00	$ 22,330.00
Pavement Repair		SY	752	$ 125.00	$ 94,000.00
Curb and Gutter		FT	5726	$ 35.00	$ 200,410.00
Tack Coat (0.06 gal/yd^2)		GAL	5620	$ 5.00	$ 28,100.00
Pavement Removed, Driveways		SY	569	$ 15.00	$ 8,535.00
Curb Removed		FT	5726	$ 8.00	$ 45,808.00
Subgrade Compaction		SY	1909	$ 3.00	$ 5,727.00
Non-Reinforced Concrete Pavement, Driveway		SY	569	$ 85.00	$ 48,365.00
Sidewalk		SF	5175	$ 10.00	$ 51,750.00
Curb Ramp		EA	9	$ 500.00	$ 4,500.00
Catch Basin, No. 3A		EA	20	$ 4,500.00	$ 90,000.00
12" Conduit, Type B		FT	1000	$ 100.00	$ 100,000.00
6" Underdrain		FT	5726	$ 15.00	$ 85,890.00
Catch Basin Reconstructed to Grade		EA	25	$ 2,000.00	$ 50,000.00
Catch Basin Adjusted to Grade		EA	16	$ 1,000.00	$ 16,000.00
Erosion Control		**Unit**	**Assumed Qty**	**Unit Cost**	**Total Cost**
Erosion Control		LS	1	$ 45,000.00	$ 45,000.00
2" Topsoil		CY	163	$ 80.00	$ 13,040.00
Seeding and Mulching		SY	2863	$ 5.00	$ 14,315.00
Traffic Control		**Unit**	**Assumed Qty**	**Unit Cost**	**Total Cost**
Signing - 4 Lane (Minor)		LS	0	$ 12,500.00	$ -
Signing - 5 Lane (Major)		LS	1	$ 50,000.00	$ 50,000.00
Pavement Markings - 4 Lane		MILE	0	$ 25,000.00	$ -
Pavement Markings - 5 Lane		MILE	1	$ 20,000.00	$ 20,000.00
MOT					
10% of cost before incend.		LS	1	$ 189,000.00	$ 189,000.00
Incidentals		**Unit**	**Assumed Qty**	**Unit Cost**	**Total Cost**
Performace Bond		LUMP	1	$ 20,000.00	$ 20,000.00
Field Office, Type B		MONTH	6	$ 2,000.00	$ 12,000.00
Mobilization		LUMP	1	$ 100,000.00	$ 100,000.00
Construction Layout Stakes		LUMP	1	$ 30,000.00	$ 30,000.00
Contingency (30%)					
					$ 622,274.00
Inflation (29.0%) Middle of Project 2030					
					$ 828,971.00
Total					**$ 3,687,490.00**
Rounded Total					**$ 3,711,000.00**