

SAFETY APPLICATION CLI-22-2.62 (202503D08-02)

CLI US-22 2.62(SR-380/Creek Rd)

March 2025

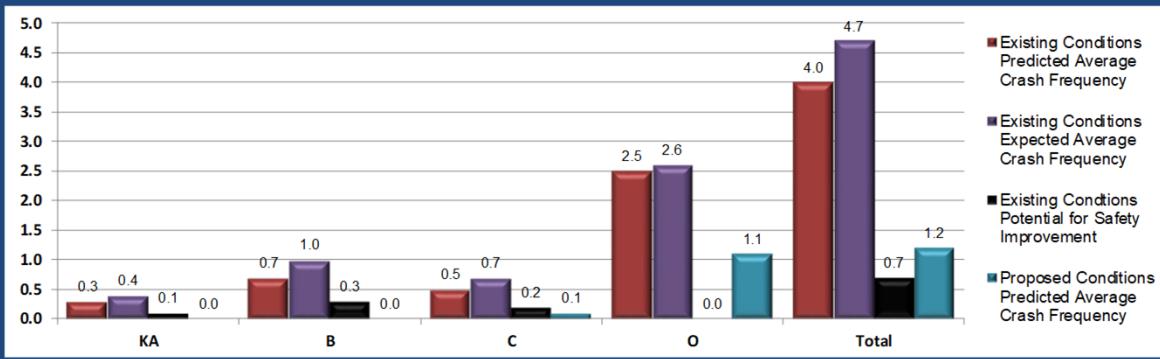


OHIO DEPARTMENT OF
TRANSPORTATION

Project Description: Install single lane roundabout at US-22 & SR-380/Creek Rd

- Rural, 4 leg, TWSC intersection (55mph)
- 60% injuries with 15/20 crashes being angle crashes
- Application scores 74/100
- SB and NB/EB angle crashes are majority followed by NB and SB/WB angles
- Low cost countermeasures have not reduced crashes or slowed operating speeds
- AADT: US22 5,30 / SR-380 2,392 / Creek Rd 749

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Funding

Project Phase	FY	Safety Funds
PE – ENV	2026	\$400,000
PE - DD	2028	\$125,000
ROW	2028	\$200,000
CC	2029	\$2,750,000
Total		\$3,475,000





PROJECT OVERVIEW

ODOT D8 has worked with the Office of Roadway Engineering to layout a single lane roundabout at the intersection of US-22 and SR-380/Creek Rd in Clinton County. The intersection is heavily skewed and has a bridge constraint to the east of the intersection.



PROJECT NEED

The purpose of the project is to improve safety at the intersection. The intersection is ranked #123 on the 2025 HSIP rural intersection list. Crash data from 2022-2024 at the intersection shows a total of 20 crashes with an average of 6.67 crashes per year and a 60% injury rate. There were 15 angle crashes, of which 1 was a serious injury, 7 minor injuries, 1 injury possible and 6 PDO. There were also 2 rear end crashes (1 minor injury, 1 PDO), 1 PDO sideswipe passing crash, 1 minor injury fixed object crash and 1 minor injury head on crash. The majority of angle crashes involved SB SR-380 vehicles pulling out in front of NB/EB US-22 vehicles (7 crashes with 4 injuries). There were also 5 angle crashes involving NB Creek Rd vehicles pulling out in front of SB/WB US-22 vehicles, with 2 resulting in injury.

EXISTING CONDITIONS



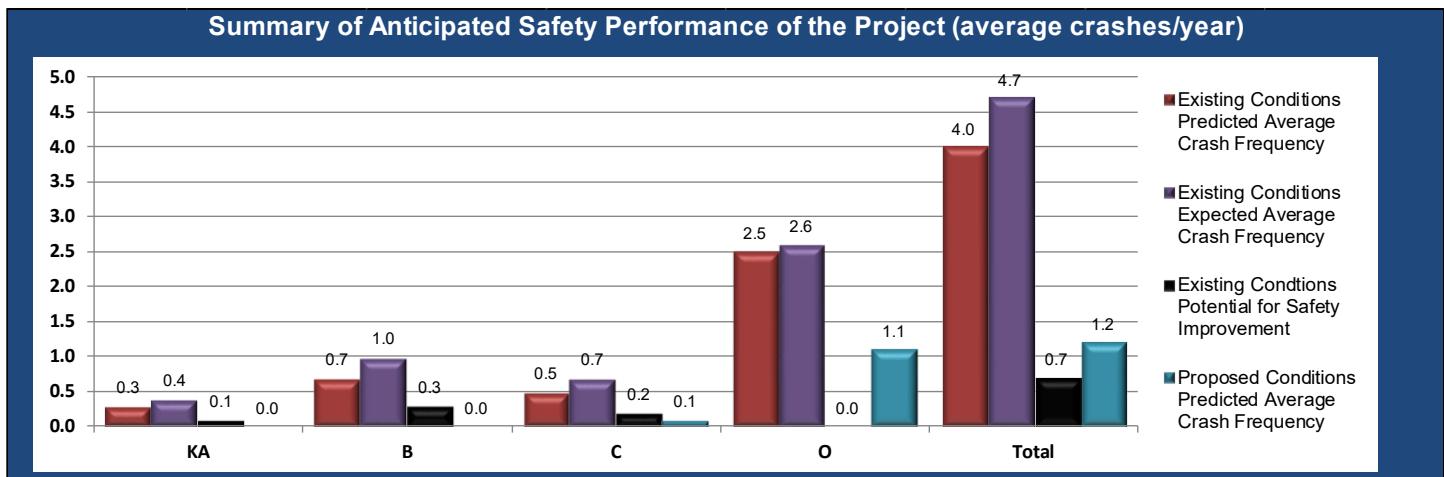
US-22 is a single lane in both directions with no turn lanes. SR-380 is a stop condition on the north side of the intersection with no turn lanes. Creek Rd is a stop condition on the south side of the intersection with no turn lanes. Both US-22 and SR-380 are classified as "Major Collector" in ODOT's Functional Classification System. Creek Rd is classified as a local road. The speed limit on all legs of the intersection is 55mph. US-22 west of the intersection has an AADT of 2925 and east of the intersection is 5030. SR-380 has an AADT of 2392 and Creek Rd is 749. The TOAST score on US-22 is 0.878. The TOAST score on SR-380 is 0.733.

In 2023, ODOT D8 implemented an innovative striping condition at the intersection that has been studied by FHWA whereas the through lanes on the major route at a TWSC are narrowed by widening out the centerline with striping and rumble strips. This effectively slows down vehicles on the free flow movement allowing the side street drivers better ability to judge gaps and oncoming travel speeds. Studies showed a speed reduction of about 3-4mph. After studies for our location did not show a decrease in travel speeds or a reduction in crashes.



ECAT

Based on the existing conditions and AADT of this intersection, the ECAT existing conditions report has a predicted average crash frequency of 4.0 crashes per year and an expected average crash frequency of 4.7 crashes per year. This means there is a 0.7 crashes per year potential for safety improvement. The proposed conditions of a roundabout results in a predicted average crash frequency of 1.2 crashes per year, a reduction of 2.8 crashes per year over the predicted. This has a net present value of safety benefits of \$3,186,789, resulting in a benefit cost ratio of 0.92.



This project scores 74/100 on the HSIP scoring tool, receiving the greatest amount of points for ratio of observed fatal and serious injuries to observed total crashes, relative severity index and equivalent property damage only index.

ESTIMATE

ORE developed a preliminary design and cost estimate for this work. D8 inflated it more and increased the contingency to account for some design changes we would like to see once a consultant is selected. The construction cost estimate for this project is \$2,750,000. This project can be constructed in FY29. D8 is also requesting \$400,000 for PE in FY26, \$125,000 for DD in FY28, and \$200,000 for right of way in FY28. The District would request this project to be designed and constructed with the WAR-22 roundabout project on the January 2026 programmatic.

ATTACHMENTS

1. HSIP Scoring Tool
2. DSRT Sign Off
3. Crash Analysis
4. Crash Diagram
5. Preliminary Design/Geometric Layout
6. Estimate
7. ECAT Files
8. Misc Files

Highway Safety Improvement Program Formal Funding Application

General Project Information

Project Sponsoring Agency	ODOT D8
Project Name	CLI US 22 @ SR-380/Creek Rd
PID	TBD
Applicant Name	Bree Hetzel
Contact Phone	513-933-6624
Contact Email	brianne.hetzel@dot.ohio.gov

Location Information

ODOT District	8	County	CLI
Route Number	US-22R	Road Name	US-22
Begin Logpoint	2.570	End Logpoint	2.670
Begin Latitude	39.436	Begin Longitude	-83.946
End Latitude	39.436	End Longitude	-83.944

Project Description

Summary of Crash Patterns

Crash data from 2022-2024 at the intersection of CLI US-22 and SR-380/Creek Rd shows 20 total crashes with an average of 6.67 crashes per year and a 60% injury rate. There were 15 angle crashes, of which 1 was serious injury, 7 minor injury, 1 injury possible and 6 PDO. There were also 2 rear end crashes (1 minor injury, 1 PDO), 1 PDO sideswipe passing crash, 1 minor injury fixed object crash and 1 minor injury head on crash. The majority of the angle crashes involved SB SR-380 vehicles pulling out in front of NB/EB US-22 vehicles (7 crashes with 4 injury). There were also 5 angle crashes involving NB Creek Rd vehicles pulling out in front of SB/WB US-22 vehicles, with 2 resulting in injury.

Summary of Recommended Countermeasures

Based on the history of angle crashes, a single lane modern roundabout is being recommended.

Project Priority Information

This intersection is ranked #123 on the 2024 HSIP Rural intersection ranking list. This intersection does not appear on the current SIP map.

Highway Safety Improvement Program Formal Funding Application

Crash Data

Crash Totals (average per year)	Fatal & Serious Injury (KA)	Visible Injury (B)	Non-Visible (C)	Property Damage Only (O)	Total
Existing Conditions: Predicted Crash Frequency	0.2930	0.7104	0.4731	2.5422	4.02
Existing Conditions: Expected Crash Frequency	0.4242	1.0278	0.6847	2.5896	4.73
Potential for Safety Improvement	0.1312	0.3174	0.2116	0.0474	0.71
Proposed Conditions: Expected Crash Frequency	0.0050	0.0415	0.0514	1.0942	1.19
Observed Crashes	0.3333	3.3333	0.3333	2.6667	6.67

Observed People Injury Totals

	Fatal Injury (K)	Serious Injury (A)	Visible Injury (B)	Non-Visible (C)	Total
Observed People Injury Totals	0.0000	0.6667	4.6667	1.0000	6.33

Application Scoring

Category	Scoring Value	Points Awarded	Points Possible
Ratio of Observed Fatal and Serious Injuries to Observed Total Crashes	0.10	20	30
Percentage of the Potential for Safety Improvement to Total Expected Crashes	15.01%	12	20
Relative Severity Index	53,781.94	20	20
Equivalent Property Damage Only Index	6.71	20	20
Location Equity Measure	10.34%	2	10
	Total	74	100

Safety Key Metrics

Functional Class	5 - Major Collector Roadway	Active Transportation Need	1
Major Route AADT	5,030	Active Transportation Demand	1
Maximum Posted Speed Limit	55	Bicycle Level of traffic stress (if available)	
		TOAST Score (if available)	0.88

Strategic Highway Safety Plan

Ohio Emphasis Area	Serious Crash Types
Ohio Emphasis Area Subcategory	Intersection
FHWA Emphasis Area	Improving the design and operation of highway intersections
FHWA Improvement Category	Intersection traffic control
FHWA Improvement Subcategory	Modify control - two-way stop to roundabout

Work Locations

NLFID	Begin Logpoint	End Logpoint	Begin Latitude	Begin Longitude	Location Termini (i.e. from Street 1 to Street 2)
SCLIUS00022**C	2.570	2.670	39.436	-83.9460	US-22 @ SR-380/Creek Rd

Highway Safety Improvement Program Formal Funding Application

Project Funding							
Project Phase	Safety Study	Interchange Mod. Study	PE - Environmental	PE - Detailed Design	Right of Way /Utilities	Construction	Total
Fiscal Year			2026	2028	2028	2029	
Project Phase Completed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A	
Previous Safety							\$0.00
New Safety			\$400,000.00	\$125,000.00	\$200,000.00	\$2,750,000.00	\$3,475,000.00
Sponsor Funding							\$0.00
Total	\$0.00	\$0.00	\$400,000.00	\$125,000.00	\$200,000.00	\$2,750,000.00	\$3,475,000.00

Additional Funding Detail
District requesting funding to be combined with the WAR-22 RAB application to be designed and constructed together on the January 2026 programmatic

Safety Economic Analysis Results			
Net Present Value of Project	\$3,475,000.00	Net Benefit	-\$288,210.87
Net Present Value of Safety Benefits	\$3,186,789.13	Benefit / Total Project Cost Ratio	0.92
		Benefit / Safety Funding Request Ratio	0.92

Project Development		
Project Phase	Completed by	Completion Date
Safety Study	ODOT D8	3/12/2025

Applicant Information		
Name	Title	Phone Number
Brianne Hetzel	D8 Traffic Studies Engineer	513-933-6624
Signature		Date
		March 21, 2025

Version: 20230523

The following information should be included in submission of the safety project application:

1. An electronic copy of the Safety Engineering Study
2. All Excel Analysis Files
May include Crash Analysis Module (CAM) Tool, Economic Crash Analysis Tool (ECAT), HSIP Application and Scoring Tool.
3. Benefit-Cost Results (Economic Analysis)
4. DSRT approval signatures

District Safety Review Team Signatures

Name	Title	Approve	Disapprove
	Planning & Engineering Administrator	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Signature		Date	
<i>Suzanne Enders</i>		3/12/25	

Comments: Check stop bar location, check if tree's need to be removed for sight distance, evaluate SB approach, evaluate increased signage, evaluate lighting in current configuration.

Name	Title	Approve	Disapprove
<i>Walk RSM</i>	Highway Management Administrator	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Signature		Date	
		3/12/25	

Comments:

Name	Title	Approve	Disapprove
<i>Charles Rowe</i>	Design Engineer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Signature		Date	
<i>CR</i>		3/12/25	

Comments: Further review for speed mitigation at 22 approach.

Name	Title	Approve	Disapprove
<i>Scott Brown</i>	Planning Manager	<input type="checkbox"/>	<input type="checkbox"/>
Signature		Date	
<i>Scott Brown</i>		3/12/25	

Comments:

Name	Title	Approve	Disapprove
<i>Marc Grace</i>	Traffic Engineer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Signature		Date	
<i>Marc Grace</i>		3/12/25	

Comments:

Name	Title	Approve	Disapprove
<i>Brianne Hetzer</i>	Other DSRT Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Signature		Date	
<i>Brianne Hetzer</i>		3/12/25	

Comments:

CLI US 22 2.62 (SR-380/Creek Rd)

Crash Summary Sheet

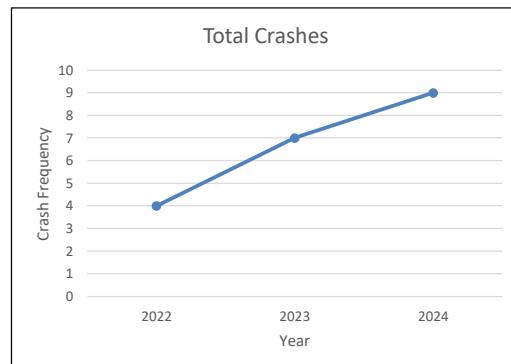
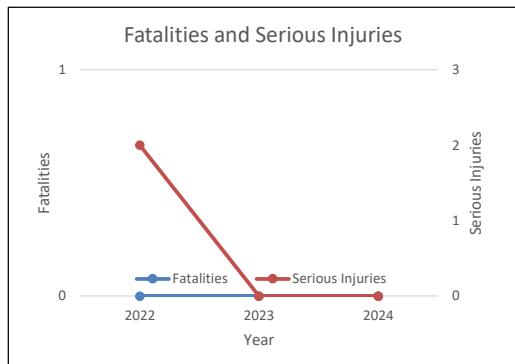
Crashes Per Year

6.67 Percent Injury

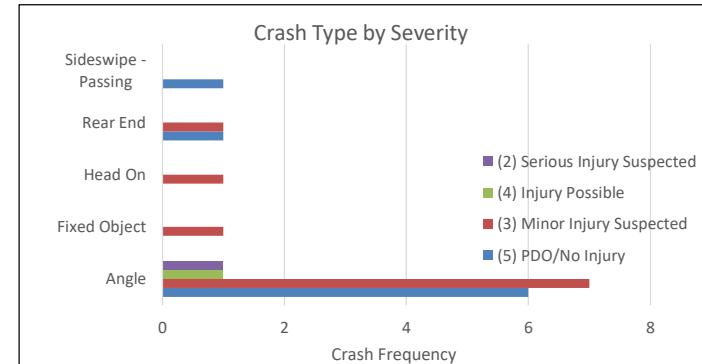
60.0% EPDO

6.18

Year	Total Crashes	Fatalities	Serious Injuries
2022	4	0	2
2023	7	0	0
2024	9	0	0
Grand Total	20	0	2



Crash Type	Injury Level					Grand Total
	(2) Serious Inj	(3) Minor Injury	(4) Injury Possi	(5) PDO/No Inj		
Angle	1	7	1	6	15	
Rear End	0	1	0	1	2	
Sideswipe - Passing	0	0	0	1	1	
Fixed Object	0	1	0	0	1	
Head On	0	1	0	0	1	
Grand Total	1	10	1	8	20	



CLI US 22 2.62 (SR-380/Creek Rd)

Crash Summary Sheet

Crashes Per Year

6.67 Percent Injury

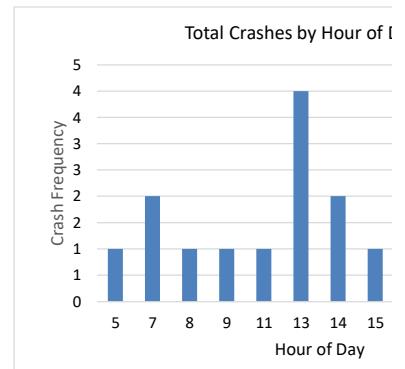
60.0% EPDO

6.18

Road Condition	Total Crashes	Fatalities	Serious Injuries
Dry	16	0	0
Wet	4	0	2
Grand Total	20	0	2

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

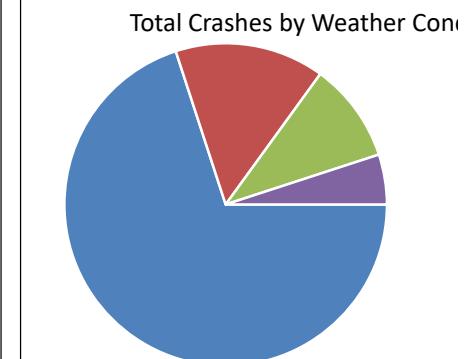
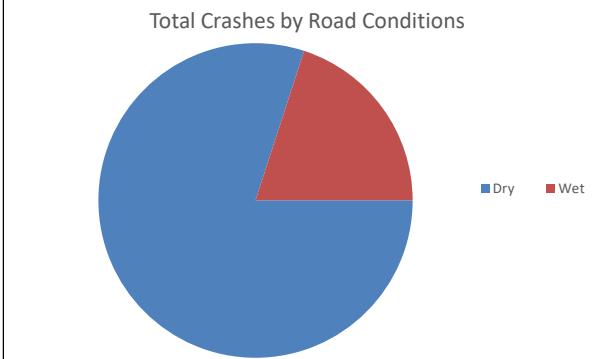
Month	Total Crashes
January	4
February	1
March	2
April	2
May	1
June	1
September	3
October	5
December	1
Grand Total	20



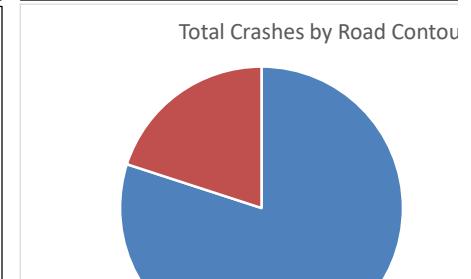
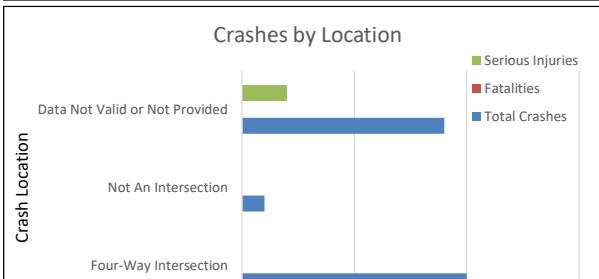
Weather	Total Crashes	Fatalities	Serious Injuries
Clear	14	0	0
Cloudy	3	0	0
Rain	2	0	0
Snow	1	0	2
Grand Total	20	0	2

Day in Week	Total Crashes
(1) Sunday	3
(2) Monday	5
(3) Tuesday	3
(5) Thursday	2
(6) Friday	5
(7) Saturday	2
Grand Total	20

Crash Location	Total Crashes	Fatalities	Serious Injuries
Four-Way Intersection	10	0	0
Not An Intersection	1	0	0
Data Not Valid or Not Provided	9	0	2
Grand Total	20	0	2



Roadway Contour	Total Crashes	Fatalities	Serious Injuries
Straight Level	16	0	2
Straight Grade	4	0	0
Grand Total	20	0	2



CLI US 22 @ SR-380/Creek Rd
SLM 2.62
Crash Data 2022-2024
March 2025 Formal Safety
Application



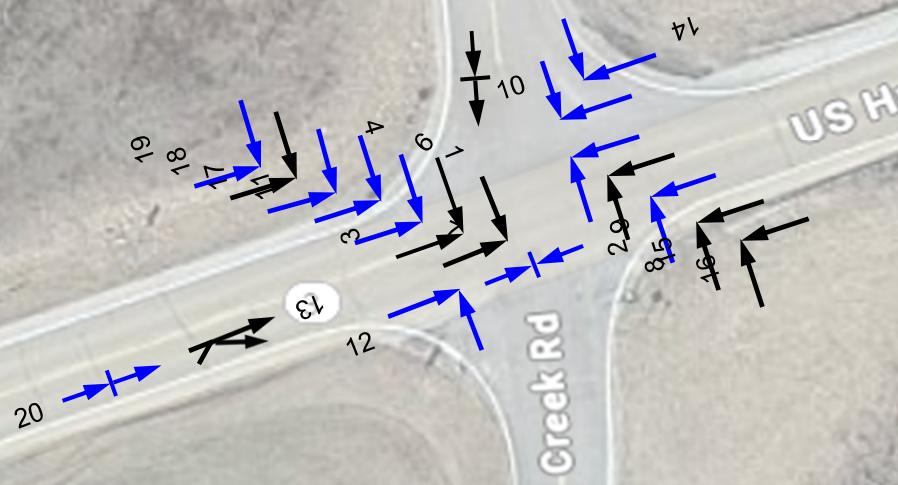
380

380

22

US Hwy 22

Todd Fork



Crashes Per Year	6.67
Fatal and All Injury Crashes	12
Percent Injury	60.0%
Equivalent PDO Index Value	6.18

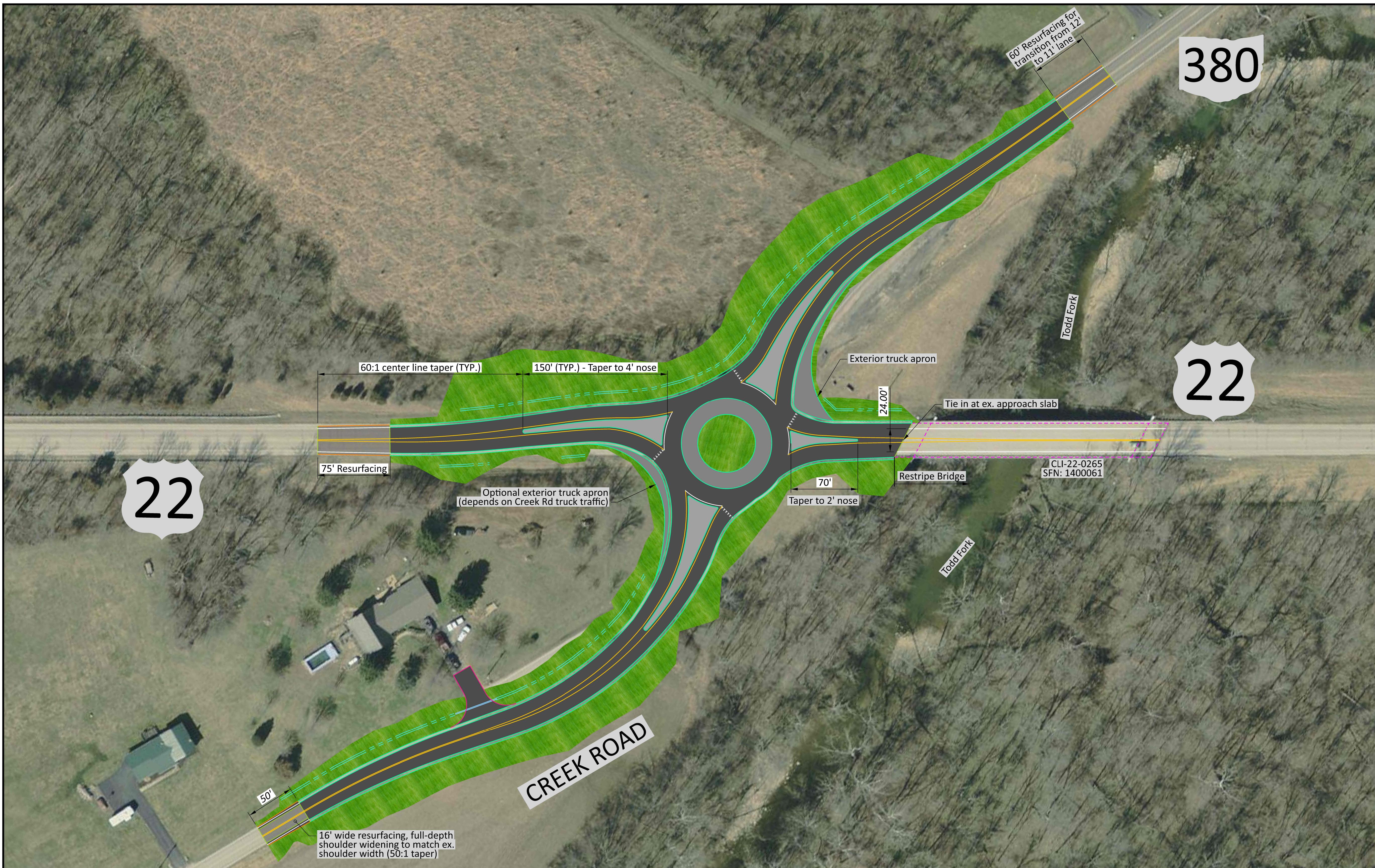
Crash Type	Injury Level ↑					Grand Total
	(2) Serious Inju	(3) Minor Injury	(4) Injury Possi	(5) PDO/No Inju		
Angle	1	7	1	6	15	
Rear End	0	1	0	1	2	
Sideswipe - Passing	0	0	0	1	1	
Fixed Object	0	1	0	0	1	
Head On	0	1	0	0	1	
Grand Total	1	10	1	8	20	

Google

US-22/SR-380/CREEK ROAD - PRELIMINARY EXHIBIT



HORIZONTAL
SCALE IN FEET
0 50
25 100



US-22/SR-380/CREEK ROAD - GEOMETRIC LAYOUT



HORIZONTAL
SCALE IN FEET

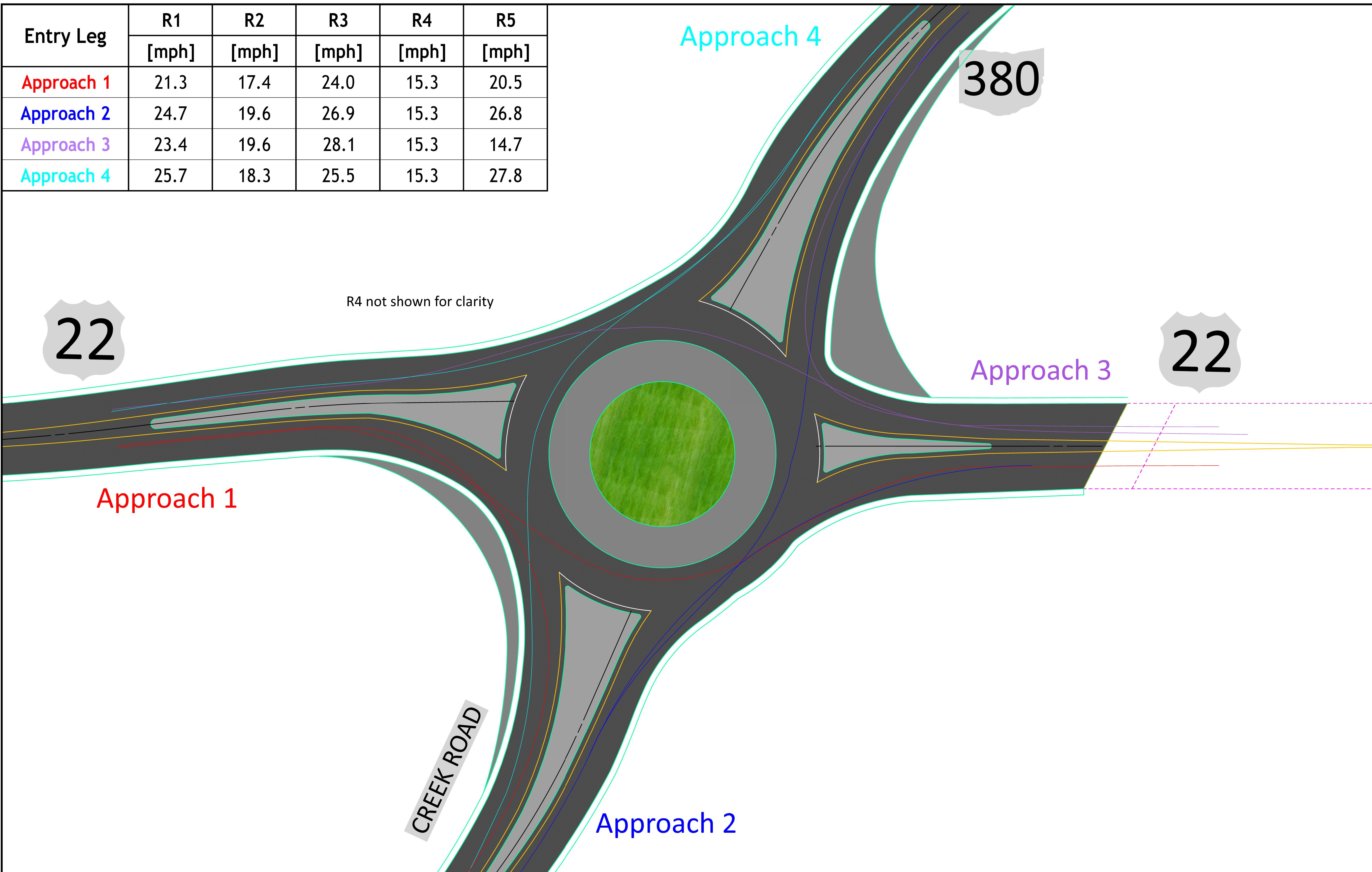


US-22/SR-380/CREEK RD ROUNDABOUT (FASTEST PATH)



HORIZONTAL
SCALE IN FEET
0 20
10 40

Entry Leg	R1	R2	R3	R4	R5
	[mph]	[mph]	[mph]	[mph]	[mph]
Approach 1	21.3	17.4	24.0	15.3	20.5
Approach 2	24.7	19.6	26.9	15.3	26.8
Approach 3	23.4	19.6	28.1	15.3	14.7
Approach 4	25.7	18.3	25.5	15.3	27.8



US-22/SR-380/CREEK RD ROUNDABOUT (LEFTS #1)



HORIZONTAL
SCALE IN FEET
0 20
10 40



US-22/SR-380/CREEK RD ROUNDABOUT (LEFTS #2)



HORIZONTAL
SCALE IN FEET
0 20
10 40



US-22/SR-380/CREEK RD ROUNDABOUT (RIGHTS)



HORIZONTAL
SCALE IN FEET



US-22/SR-380/CREEK RD ROUNDABOUT (THRUS)



HORIZONTAL
SCALE IN FEET
0 20
10 40



Preliminary Construction Estimate

CLI-22/380 Roundabout

#	Category	Item	Quantity	Unit	Unit Cost	Total Cost
1	Roadway Pavement	9" Concrete Pavement	762	Sq. Yds.	\$135.00	\$102,870
		Asphalt Surface	270	Cu. Yds.	\$315.00	\$85,050
		Asphalt Intermediate	336	Cu. Yds.	\$282.00	\$94,752
		Asphalt Base	1153	Cu. Yds.	\$180.00	\$207,540
		Aggregate Base	1391	Cu. Yds.	\$74.00	\$102,934
		Pavement Planing	528	Sq. Yds.	\$14.30	\$7,550
2		Pavement Removed	4998	Sq. Yds.	\$13.60	\$67,973
3	Earthwork	Excavation	10137	Cu. Yds.	\$17.50	\$177,398
4		Embankment	2266	Cu. Yds.	\$23.00	\$52,118
5	Curb		1603	Ft.	\$23.90	\$38,312
6	Curb and Gutter		3087	Ft.	\$32.50	\$100,328
7	Guardrail		375	Ft.	\$23.20	\$8,700
8	Concrete Median		536	Sq. Yds.	\$107.00	\$57,352
9	Seeding and Mulching		8307	Sq. Yds.	\$1.50	\$12,461
				SUBTOTAL		\$1,115,336
10	Erosion Control			See Quantities Sheet		\$70,617
11	Drainage			See Quantities Sheet		\$132,758
12	Traffic Control			See Quantities Sheet		\$36,776
13	Maintenance of Traffic			≈ 8% Construction Cost		\$130,439
14	Lighting			\$155,000/RAB		\$155,000
15	Incidentals			See Quantities Sheet		\$120,000
				SUBTOTAL		\$645,590
		TOTAL ROADWAY COSTS				\$1,760,926
15	Contingency		% of Items 1-15	30.0%		\$528,000
16	Inflation (Assuming 2029 construction)			19.3%		\$441,763
		TOTAL CONSTRUCTION COST				\$2,730,689

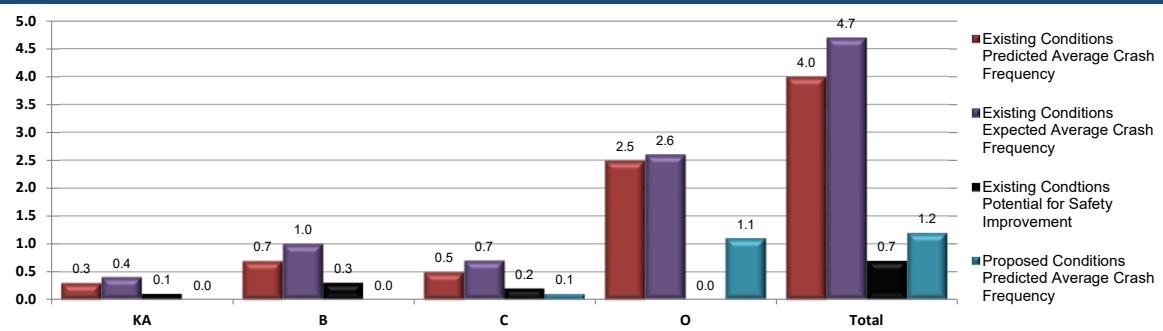
Date: March 21, 2025

Project Safety Performance Report

General Information

Project Name	CLI US 22 @ SR-380/Creek Rd	Contact Email	brianne.hetzel@dot.ohio.gov
Project Description	Single lane roundabout	Contact Phone	513-933-6624
Reference Number		Date Performed	3/6/2025
Analyst	Bree Hetzel	Analysis Year	2025
Agency/Company	ODOT D8		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.2930	0.7104	0.4731	2.5422	4.0187
$N_{expected}$ - Existing Conditions	0.4242	1.0278	0.6847	2.5896	4.7263
$N_{potential for improvement}$ - Existing Conditions	0.1312	0.3174	0.2116	0.0474	0.7076
$N_{predicted}$ - Proposed Conditions	0.0050	0.0415	0.0514	1.0942	1.1921

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				Total
		KA	B	C	O	
US22; 2.62	US-22 @ SR-380/Creek	0.293	0.7104	0.4731	2.5422	4.0187

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				Total
		KA	B	C	O	
US22; 2.62	US-22 @ SR-380/Creek	0.4242	1.0278	0.6847	2.5896	4.7263

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				Total
		KA	B	C	O	
US22; 2.62	US-22 @ SR-380/Creek	0.1312	0.3174	0.2116	0.0474	0.7076

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				Total
		KA	B	C	O	
US22; 2.62	US-22 @ SR-380/Creek Rd	0.005	0.0415	0.0514	1.0942	1.1921

Summary by Crash Type

Crash Type	Existing		Proposed	
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0186	0.0200	0.0014	0.0341
Head On	0.0406	0.0501	0.0095	0.0010
Rear End	1.0095	1.0988	0.0893	0.1813
Backing	0.1900	0.1856	-0.0044	0.0111
Sideswipe - Meeting	0.1373	0.1548	0.0175	0.0000
Sideswipe - Passing	0.2136	0.2249	0.0113	0.3744
Angle	1.8025	2.0962	0.2937	0.3362
Parked Vehicle	0.1681	0.1683	0.0002	0.0000
Pedestrian	0.0230	0.0302	0.0072	0.0010
Animal	0.0000	0.0000	0.0000	0.0121
Train	0.0008	0.0010	0.0002	0.0000
Pedalcycles	0.0174	0.0221	0.0047	0.0010
Other Non-Vehicle	0.0003	0.0005	0.0002	0.0000
Fixed Object	0.7924	0.8539	0.0615	0.1204
Other Object	0.0276	0.0277	0.0001	0.0000
Overtaking	0.0478	0.0584	0.0106	0.0010
Other Non-Collision	0.0626	0.0642	0.0016	0.0231
Left Turn	0.1716	0.1985	0.0269	0.0261
Right Turn	0.0000	0.0000	0.0000	0.0814



Safety Benefit - Cost Analysis

General Information

Project Name	CLI US 22 @ SR-380/Creek Rd	Contact Email	brianne.hetzel@dot.ohio.gov
Project Description	Single lane roundabout	Contact Phone	513-933-6624
Reference Number		Date Performed	3/6/2025
Analyst	Bree Hetzel	Analysis Year	2025
Agency/Company	ODOT D8		

Comments:

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
Single Lane Modern Roundabout	20	\$3,475,000.00			\$3,475,000.00	\$3,475,000.00	-2.827	\$3,186,789
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
		\$0.00			\$0.00	\$0.00		
Totals		\$3,475,000.00	\$0.00	\$0.00	\$3,475,000.00	\$3,475,000.00	-2.827	\$3,186,789

Safety Benefit - Cost Analysis

General Information

Project Name	CLI US 22 @ SR-380/Creek Rd	Contact Email	brianne.hetzel@dot.ohio.gov
Project Description	Single lane roundabout	Contact Phone	513-933-6624
Reference Number		Date Performed	3/6/2025
Analyst	Bree Hetzel	Analysis Year	2025
Agency/Company	ODOT D8		

Benefit - Cost Calculator	Expected Annual Crash Adjustment	Comments:
<p>Net Present Value of Project \$3,475,000.00</p> <p>Net Present Value of Safety Benefits \$3,186,789.13</p> <p>Net Benefit (\$288,210.87)</p> <p>Benefit / Cost Ratio 0.92</p>	<p>Number of Fatal & Incapacitating Injury Crashes -0.288</p> <p>Number of Injury Crashes -1.379</p> <p>Number of Total Crashes -2.827</p>	

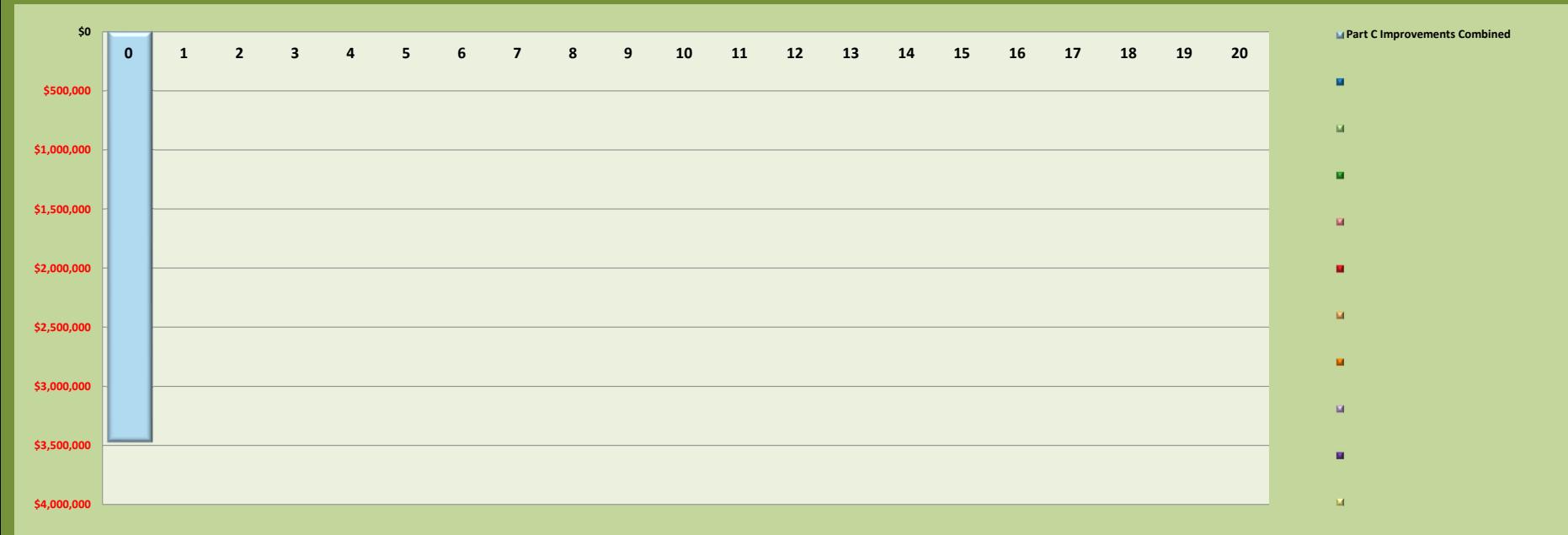


Safety Benefit - Cost Analysis

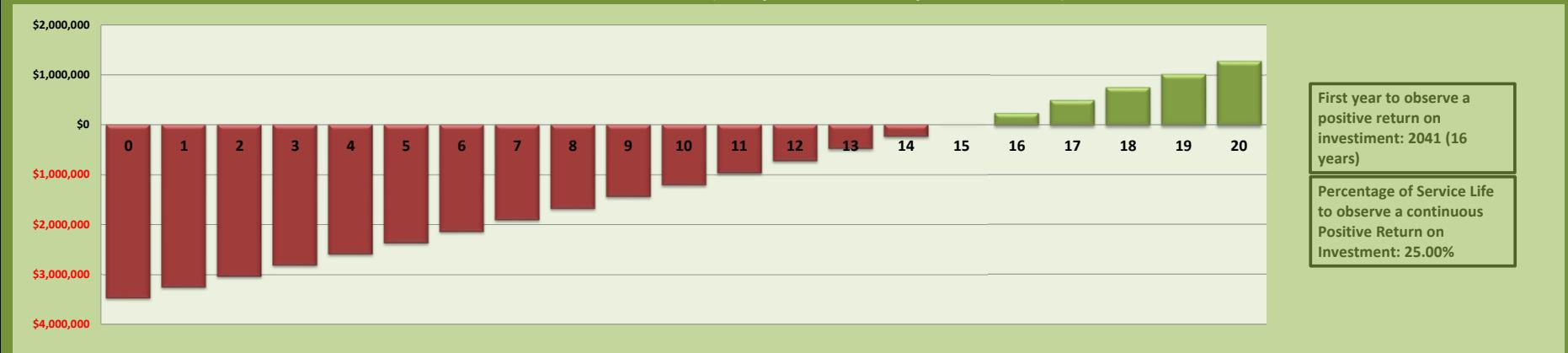
General Information

Project Name	CLI US 22 @ SR-380/Creek Rd	Contact Email	brianne.hetzel@dot.ohio.gov
Project Description	Single lane roundabout	Contact Phone	513-933-6624
Reference Number		Date Performed	3/6/2025
Analyst	Bree Hetzel	Analysis Year	2025
Agency/Company	ODOT D8		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



TFMS - Segment Forecast Report

Username	Email	Script Import Date	Script Version	Model Version
Bhetzel	brianne.hetzel@dot.ohio.gov	4/14/2020 5:30:19 PM	2020.001	2024.1900

Forecast Summary

Project ID	Project Name	Opening Year	Design Year
		2029	2049

Project Description

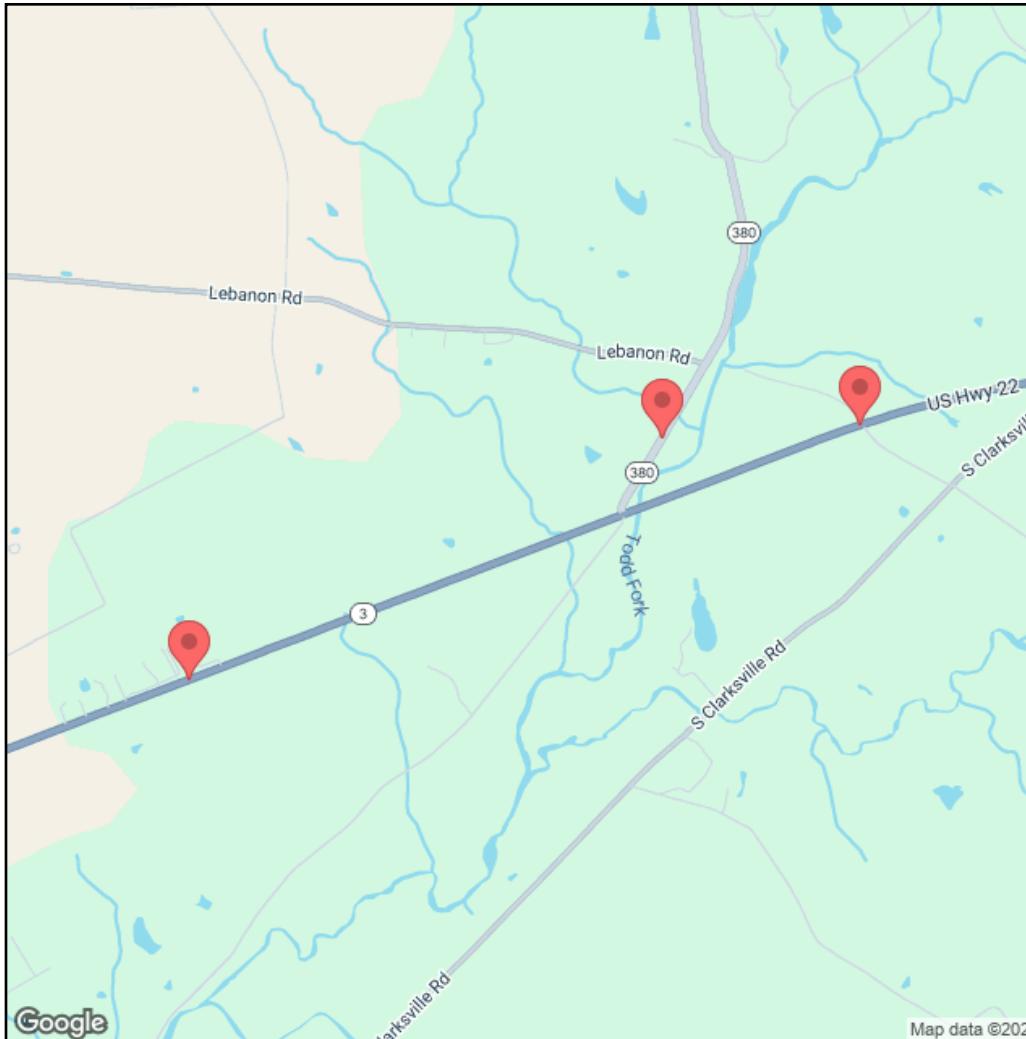
*Users of this data need to be aware that there are limitations to the forecasts generated by this product that make it suitable only for roadway design projects which are low risk.

Segment Information

Segment ID	LRS ID	BMP	EMP	Length	Latitude	Longitude
1916833	SCLISR00380**C	0.000	0.489	0.489	-83.9431270974568	39.4388298716519
1916893	SCLIUS00022**C	0.000	2.623	2.623	-83.9681251971917	39.4289952506713
1916895	SCLIUS00022**C	2.623	4.065	1.442	-83.9325861718646	39.439402154298

Forecast Information

Segment ID	2029 AADT	2049 AADT	DHV-30	K%	D%	T24%	TD%
1916833	2,400	2,600	450	16.5	64.4	9	10
1916893	3,000	3,100	450	14.1	60.1	6	6
1916895	5,000	5,100	700	14.0	54.1	5	5



Definitions:

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

Forecast Segment ID	Route	BMP	EMP
1916833	SCLISR00380**C	0.000	0.489

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 16.5	8	2,400	Average	0.300	0.300
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
2,620	◆ 64.4	9	220	Model	0.800	0.800

◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
2	2,332	61	2,393

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
881	2662	-264	959	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.80	1.51	0	0	1,633	182	1,735	256
2	0.20	-2.46	1	6	2,324	-78	2,332	61
3	0.20	5.58	0	0	2,324	413	2,332	456
4	0.20	1.00	4	6	2,330	111	2,328	231
5	0.12	7.39	0	0	2,271	511	2,284	545
6	0.02	8.53	4	5	2,218	591	2,224	601

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	265	2,614	106	222	0.31	0.81
2	RAT	1.12	2,642	2.38	278	0.26	1.95
3	MRAT	1.10	2,639	1.53	259	0.28	1.57
4	RAF		2,627		241	0.29	1.20

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Average	Difference	0.300	0.800

Method 1 - 4 Volume

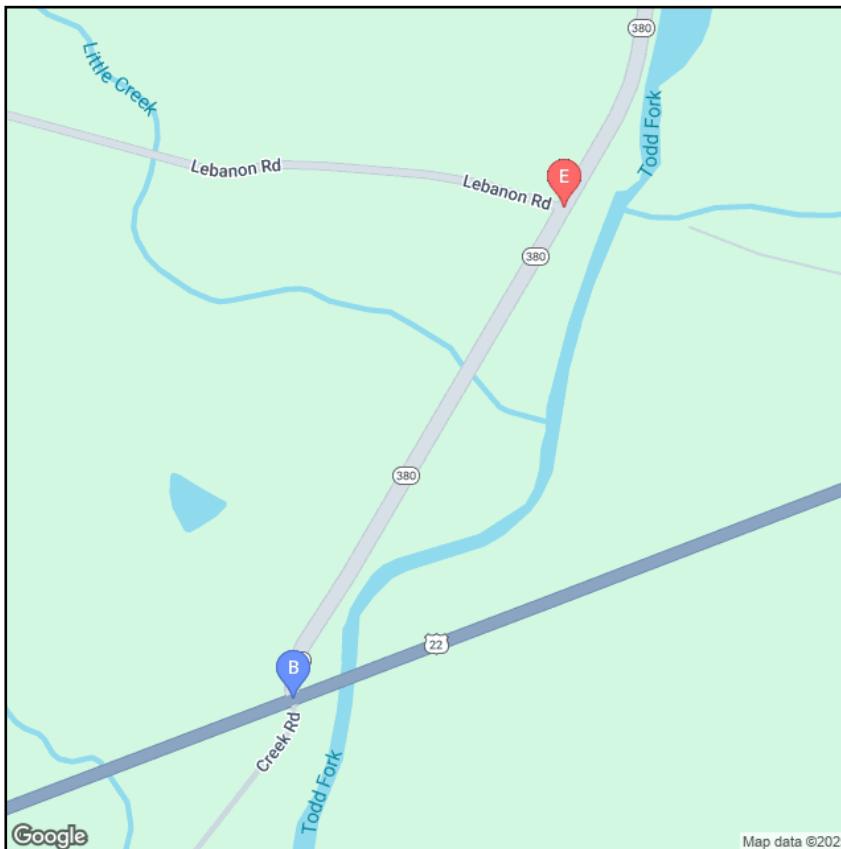
PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
2364	2404	222	278	2586	2682

Process Flag:	Adjusted model to counts with process per ODOT 255 spreadsheet
Comment:	No Comment

Historical Count

Year	All	Cars	Trucks
2007	2,680	2,560	120
2012	2,190	2,140	50
2014	2,254	2,202	52
2017	2,185	2,134	51
2020	2,258	2,193	65
* 2023	2,392	2,210	182

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2029 AADT	Yr 2049 AADT	DHV30	K %	D %	T24 %	TD %
1916833	SCLISR00380**C	0.000	0.489	0.489	2,400	2,600	450	16.5	64.4	9	10

Forecast Segment ID	Route	BMP	EMP
1916893	SCLIUS00022**C	0.000	2.623

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 14.1	6	2,900	Model	0.200	0.200
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
3,090	◆ 60.1	6	190	Model	0.500	0.500

◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
2	3,118	219	3,337

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-657	5063	-353	625	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	0.06	-0.02	0	0	2,659	135	2,801	168
2	0.49	1.10	5	5	3,137	212	3,118	219
3	-0.73	-1.29	0	0	1,982	68	2,216	110
4	-0.21	0.13	5	5	2,529	160	2,600	175
5	-0.59	-0.39	0	0	2,091	113	2,315	151
6	-0.11	0.92	5	5	2,611	200	2,675	211

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	653	3,106	30	191	0.21	0.48
2	RAT	1.29	3,158	1.21	195	0.28	0.57
3	MRAT	1.08	3,154	1.15	195	0.27	0.57
4	RAF		3,130		193	0.24	0.53

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Average	Average	0.200	0.500

Method 1 - 4 Volume

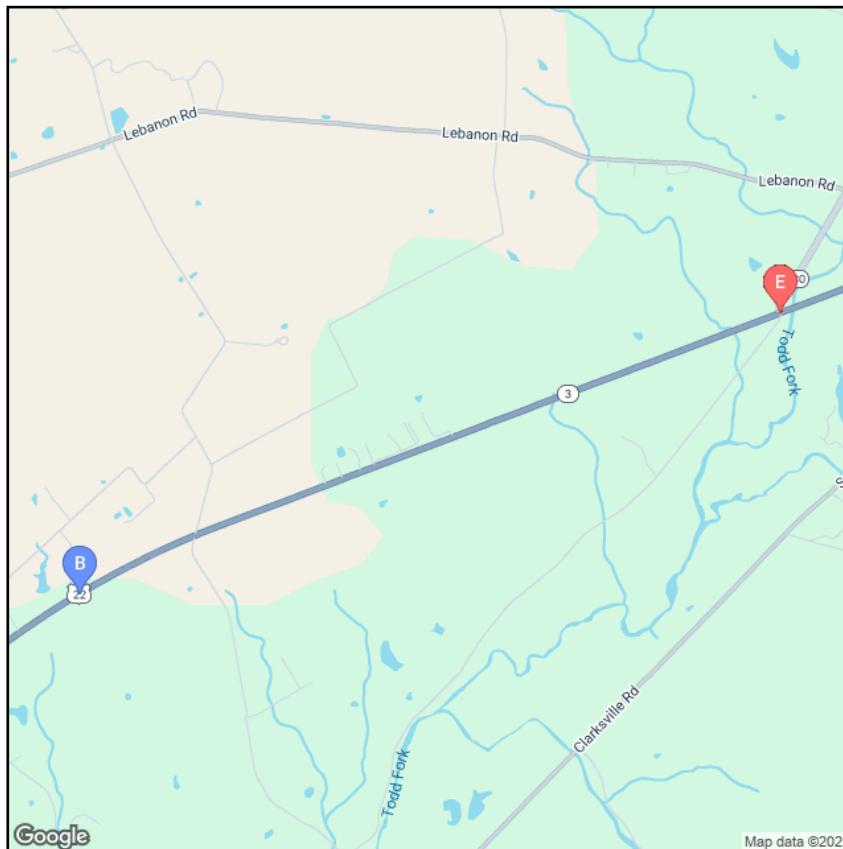
PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
2915	2963	191	195	3106	3158

Process Flag:	Adjusted model to counts with process per ODOT 255 spreadsheet
Comment:	No Comment

Historical Count

Year	All	Cars	Trucks
2007	2,540	2,420	120
2012	2,928	2,767	161
2014	3,013	2,847	166
2017	2,635	2,518	115
2020	2,387	2,301	86
* 2023	2,925	2,756	169

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2029 AADT	Yr 2049 AADT	DHV30	K %	D %	T24 %	TD %
1916893	SCLIUS00022**C	0.000	2.623	2.623	3,000	3,100	450	14.1	60.1	6	6

Forecast Segment ID	Route	BMP	EMP
1916895	SCLIUS00022**C	2.623	4.065

Forecast

Year	K%	T24 % (Existing)	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	◆ 14.0	5	4,800	Model	0.000	0.000
AADT	D%	TD % (Existing)	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
5,070	◆ 54.1	5	270	Model	0.200	0.200

◆ K/D factors from TCDS were used.

Regression

Method Number	PA AADT	BC AADT	AADT
2	4,876	575	5,451

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-2790	14154	-672	1933	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.49	2.88	0	0	3,769	414	4,133	466
2	0.08	4.42	4	4	4,826	569	4,876	575
3	-0.49	3.63	0	0	3,772	472	4,136	519
4	0.05	5.07	4	4	4,779	619	4,833	621
5	0.80	5.47	0	0	5,562	612	5,802	649
6	-999999.00	-999999.00	0	0				

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	3,745	5,088	149	275	0.03	0.18
2	RAT	3.91	5,255	2.31	291	0.15	0.41
3	MRAT	1.04	5,248	1.11	289	0.15	0.38
4	RAF		5,168		282	0.09	0.28

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Difference	Difference	0.000	0.200

Method 1 - 4 Volume

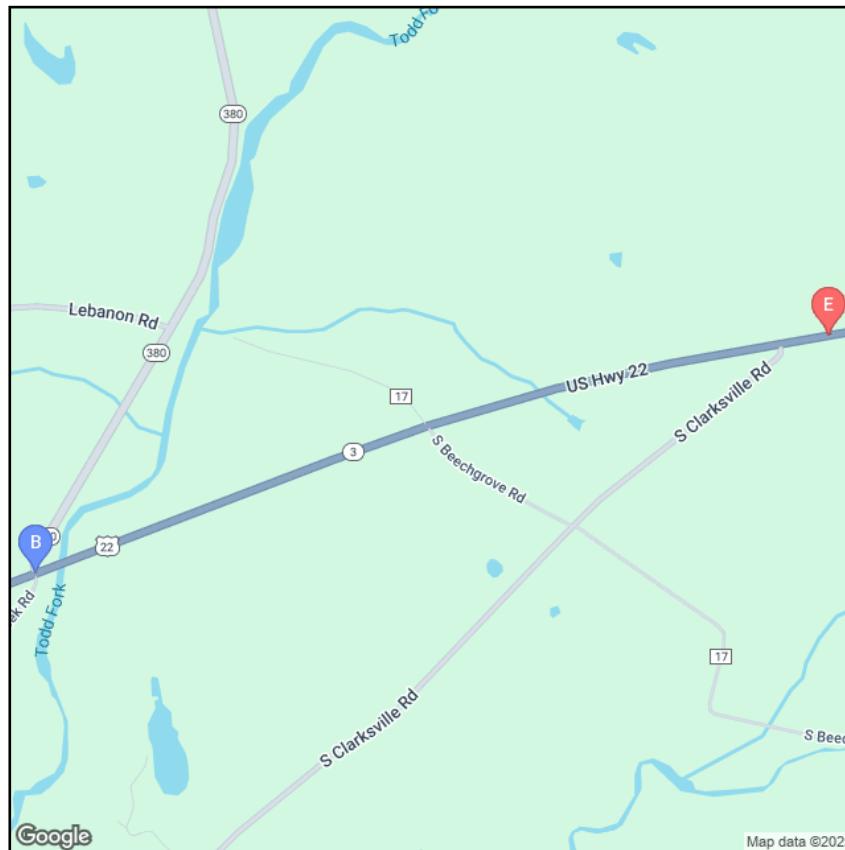
PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
4813	4964	275	291	5088	5255

Process Flag:	Adjusted model to counts with process per ODOT 255 spreadsheet
Comment:	No Comment

Historical Count

Year	All	Cars	Trucks
2012	4,803	4,663	140
2014	4,944	4,800	144
2017	4,717	4,538	176
2020	4,040	3,932	108
* 2023	5,030	4,768	262

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2029 AADT	Yr 2049 AADT	DHV30	K %	D %	T24 %	TD %
1916895	SCLIUS00022**C	2.623	4.065	1.442	5,000	5,100	700	14.0	54.1	5	5

CY 2025-2029 Business Plan Inflation Calculator:

[Not sure if you have the latest calculator? Click here.](#)

Last Modified: 1/27/2025

Today's Date:
March 5, 2025

Please Enter Values in the Yellow Areas Only:

Estimation Start Date:

Less than or Equal to Today's Date
(mm/dd/yyyy)

3/5/2025

Start Date:

Enter Construction Mid-Point Date:

(cannot exceed 03/05/2050)
(mm/dd/yyyy)

8/15/2029

Construction Mid-Point Date:

Present-Day Estimated Cost:

\$1.00

Estimated Dollar Amount:

Estimate Start Date to Construction Mid-Point Date:

53 Months

Inflation - Start to Mid-Point of Construction:

(compounded growth rate)

Inflated Dollar Amount:

Business Plan

19.3%

\$1.19

Estimator's Name:**County - Route - Section:**

CLI US 22 2.62 (SR-380/Creek Rd)

PID:

March 2025 HSIP Formal Safety Application

Estimator's Notes:

Preliminary Schedule: Construction in CY2029