ATKINS

Road Safety Audit: Telegraph Road (US-24) from Newport to SR 40/King Avenue

From I-95 SB/May Creek Street to Middle School Road

Kingsland, GA (Camden County)

Report Finalized: March 11th, 2025

GDOT
Georgia Department of Transportation

RSA

Executive Summary

The Georgia Department of Transportation (GDOT) identified the State Route (SR) 40/King Avenue corridor from I-95 SB/May Creek Street to Middle School Road as a corridor to be examined for a Road Safety Audit (RSA). The Federal Highway Administration defines an RSA as a formal safety performance evaluation of an existing or future road or intersection by an independent audit team. The team is multidisciplinary and considers all road users during the safety audit. **Table 1** shows the details of the RSA and **Table 2** lists the top recommendations that resulted from the RSA. **Table 3** provides an Analysis Matrix to identify the definition of terms used in the top recommendations list.

Table 1. RSA Details

Item	Details
Project limits	SR 40/King Avenue corridor from I-95 SB/May Creek Street to Middle School Road
Project location	Camden County
Project environment	Urban
Project owner	GDOT
Date of the RSA	April 20th, 2023
RSA team	The RSA team included the following staff: • Michael Turpeau (Atkins) – RSA Team Lead • Max Malloy (Atkins) – RSA Secretary • Travis Brewer (Atkins) • Ronald Knezevich (GDOT TMC) • Keli Roberts (GDOT TMC) • Andy Westberry (GDOT D5) • Joseph Capello (GDOT D5) • Jason Mobley (GDOT Utilities) • Greg Morris (FHWA) • Jim Tolson (Arcadis) • Donnie Boyd (GDOT D5) • Katie Proctor (GDOT D5) • Kiara Ahmed (GDOT D5) • John Devine (Georgia Bikes) • Jonathan Martinez (GDOT D5) • Justin Bristol (Georgia Bikes) • Samantha Swartz (Kinglsand PD) • Edlin Regis (GDOT Utilities) • Patti Sistrunk (Safe Routes to School)

Table 2. Top Recommendations

#	Recommendations	Safety Benefit	Timeframe	Cost/Effort	Responsible Agency
1	Install a Raised Concrete Median along the corridor from JSJ Road to Middle School Road	High	Long	High	OTO Safety
2	Perform a Road Diet (2 EB Lanes, 2 WB Lanes) from east of Truss Plant Road to BP Gas Station Entrance	High	Long	High	OTO Safety
3	Convert Gross Rd / Haddock Rd, I-95 NB / Boone St, and I-95 SB / May Creek St from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day.	High	Low	Low	D5 Maintenance

Table 3. Analysis Matrix

Safety Benefit	Timeframe	Cost/Effort
Low	**Short Term**	**Low**
Minimal safety impact for roadway users	4 to 6 months	$0 to $20,000; Expected to be completed by GDOT maintenance crews or local agencies
Moderate	**Intermediate**	**Moderate**
Some impact on safety for roadway users	7 to 24 months	$20,000 to $200,000; Likely to be utilized as a Quick Response Project by GDOT District office
High	**Long Term**	**High**
Offers great potential to improve safety for roadway users	Longer than 24 months	Above $200,000; Requires GDOT programmed project with full Plan Development Process

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1. Introduction

On April 20, 2023, a field review of the SR 40/King Avenue corridor from I-95 SB/May Creek Street to Middle School Road by Atkins traffic engineers, GDOT and Camden County staff. Meetings were then held on preceding and proceeding dates of April 17, 2023, and April 24, 2023, to discuss pre-existing concerns in the Pre-RSA meeting and findings in the Post-RSA meeting. For a complete list of participants, refer to **Appendix A**. The goal of the field review was to complete an RSA of the SR 40/King Avenue corridor and proactively address findings along the corridor within the study limits. This report will cover the existing conditions of the corridor, findings/observations from the field review, and recommendations for improvements along the corridor.

1.1. What is a Road Safety Audit?

An RSA is a formal safety performance evaluation of an existing or future road or intersection by an independent and multidisciplinary team. RSAs provide GDOT with an innovative approach to analyze safety concerns and collaboratively develop cost-effective solutions. Specifically, RSAs identify, and address safety concerns related to emphasis areas that include intersections, roadway departure, and non-motorized road users. Significant reductions in fatal and serious injury crashes can be achieved by addressing safety concerns related to these emphasis areas and implementing proven safety countermeasures. **Figure 1** displays the typical eight-step process associated with an RSA.

Figure 1. The 8-Step RSA Process

SR 40/King Avenue was identified as a location for an RSA due to the crash history and use as a principal arterial within Camden County. The corridor is approximately 1.49 miles long. The roadway transitions from being a six-lane roadway with a raised median at the western limits to a five-lane roadway including a Two-Way Left Turn Lane (TWLTL) at the eastern limits. Within the study limits of the corridor, there are five signalized intersections and seven unsignalized minor streets along with multiple driveways. South of the corridor has a railroad line that runs parallel next to it which limits the number of crossing locations to roadways on the other side, and due to the railroad, this Road Safety Audit potentially impacting intersections on the opposite sides of the railroad crossings, this study will also analyze five unsignalized intersections on Boone Street which runs parallel with the railroad line and SR 40/King Avenue. The corridor serves between 19,237 vehicles to 30,454 vehicles per day according to traffic counts obtained in March of 2023 as part of this study. Within the study limits, an average of 114.86 crashes per year were reported between 2013 through February of 2023 per the Georgia Electronic Accident Reporting System (GEARS) and Numetric.

An RSA team requires an independent group of qualified professionals and local citizens. GDOT selected Atkins to lead the RSA team in identifying practices and preparing recommendations to improve conditions along SR 40/King Avenue. The formal daytime inspection was performed by all attending parties on April 20, 2023, and a debriefing meeting was held on April 24, 2023, to discuss all findings and proposed recommendations. A nighttime inspection was performed by Atkins on April 19, 2023, to identify any field observations that may be present during low-light conditions. This report has been prepared to present these findings and recommendations so the maintaining agencies can develop projects to improve conditions along the identified section of the SR 40/King Avenue.

2. Study Area

2.1. Background

SR 40/King Avenue is a state route located in Camden County, Georgia. The study limits of SR 40/King Avenue begin at I-95 SB/May Creek Street and then continues east to end at Middle School Road. The roadway is under the jurisdiction of GDOT and it is a hurricane evacuation corridor. **Figure 2** depicts an aerial map of the corridor.

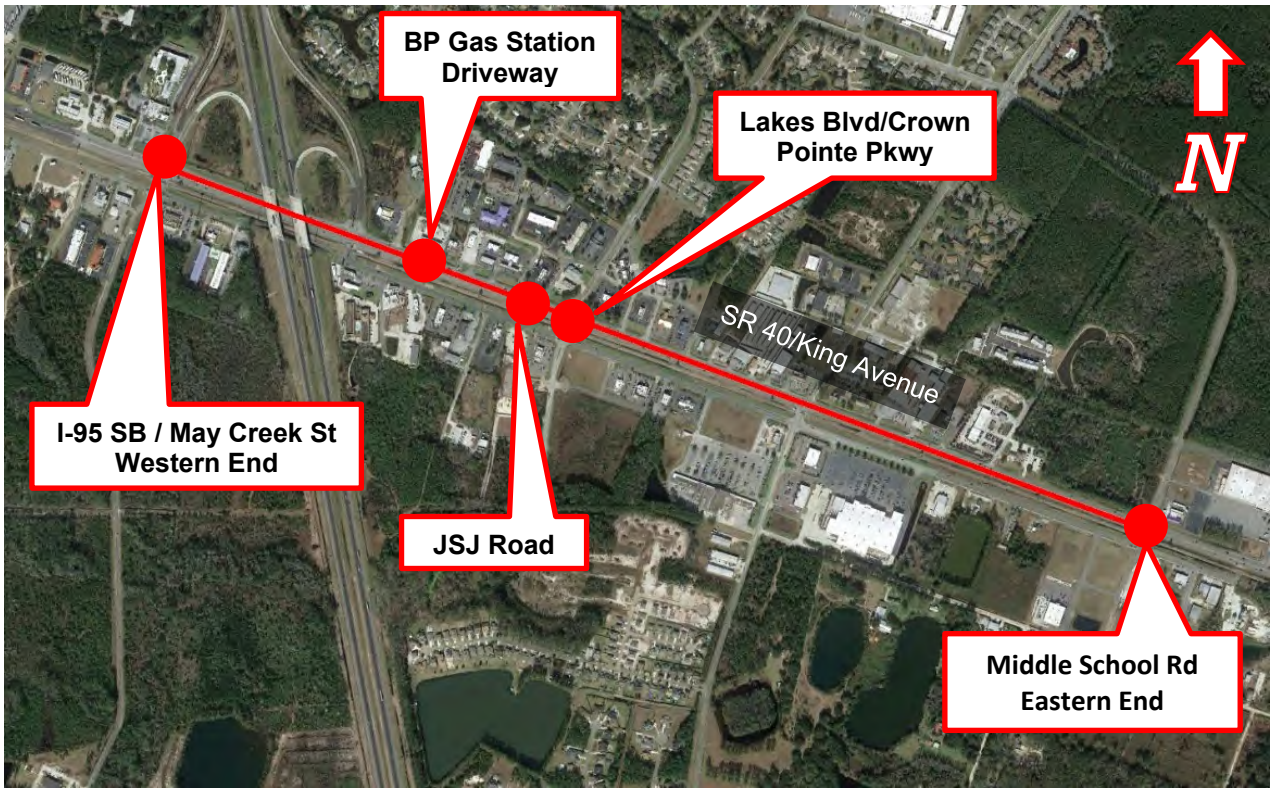


Figure 2. Aerial Map of SR 40/King Avenue RSA Corridor

The SR 40/King Avenue corridor is a principal arterial route. The study limits are east of the downtown area of Kingsland and can be used to travel west further into the city or east towards St Marys and the Kings Bay Base. Within the study limits the corridor connects with I-95 where this interchange is the second north of the Florida state line. Between the I-95 SB Ramps/May Creek Street and the BP Gas Station Driveway, the corridor is a six-lane roadway with a raised concrete median. At the BP Gas Station Driveway, the outside eastbound lane merges in to make the roadway two lanes eastbound and three lanes westbound with the raised concrete median until JSJ Road. East of JSJ Road the median ends have a Two-Way Left Turn Lane (TWLTL) or dedicated left turn lanes instead. Then at the intersection of Lakes Boulevard/Crown Pointe Parkway, the roadway transitions to only have two westbound lanes making it a five-lane roadway with a TWLTL which it maintains through the remainder of the study limits. SR 40/King Avenue is relatively flat and straight throughout the study limits. The posted speed limit throughout the corridor is 45 Miles Per Hour (MPH). The primary road users for the study limits are passenger vehicles with trucks making up approximately 2.0 % of the corridor's traffic according to the 48-hour counts obtained as part of this study. Pedestrians were noted along the corridor and recorded traveling the corridor within the traffic counts obtained as a part of this study as well as reflected in the crash data.

The roadways of SR 40/King Avenue and Boone Street run parallel with each other approximately 110 feet apart with an active railroad line directly in between. SR 40/King Avenue is a higher volume road than Boone Street in part due to its connectivity to I-95 at the interchange. Because of the railroad both roadways have no developments or businesses on their respective railroad side and have limited access points connecting them with May Creek Street as the study western limit being the westernmost connecting intersection and Middle School Road as the study eastern limit being the easternmost connecting intersection. In total, there are five roadways that connect SR 40/King Avenue and Boone Street at intersections which are signalized for SR 40/King Avenue and stop controlled on all approaches except for the southbound approach (the approach coming off the railroad tracks) for Boone Street. Due to developing space on the southern side of SR 40/King Avenue being limited by the railroad, multiple developments are also along the southern side of Boone Street with travel between those locations needing to use the limited access locations. **Figure 3** depicts an aerial map of the Right of Way of the corridor.

Figure 3. Right Of Way of SR 40/King Avenue RSA Corridor

2.2. GDOT Programmed Projects

The current programmed projects pulled from the GDOT GeoPI website are listed in **Table 4**.

Table 4. SR 40 Programmed Projects

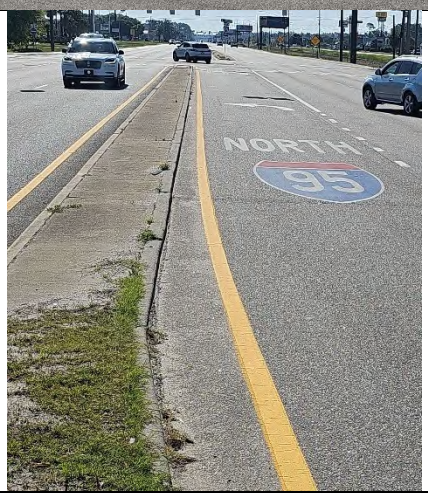
Project ID	Program Year	Project Location	Project Description
M004900	2016*	SR 40 from East of Henrietta St to Kings Bay Rd	Resurfacing
0015396	2024	Boone Street; May Creek Dr & Keith Dixon Way @ 3 Locations	Ped/Bike Facilities

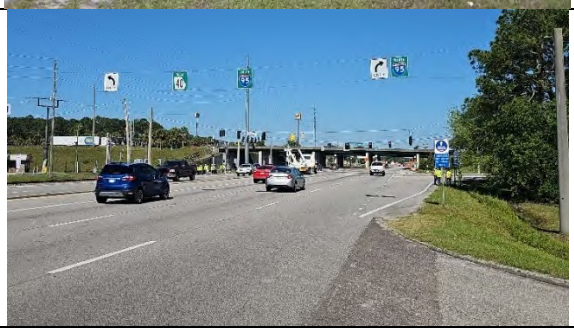
**Work Completed 04/17/2017*

2.3. Existing Safety Features

GDOT and local agencies have already implemented several measures to improve safety on this corridor. These measures, described in **Table 5**, have effectively addressed potential safety concerns.

Table 5. Existing Safety Features

Description	Benefits	Details
Railroad Safety Arms and Flashers	Alerts drivers and physically prevents vehicles from crossing the roadway when the railroad crossing is in use by a train.	
Railroad Illuminated Message Box	Sign that illuminates message to prevent specific maneuvers when adjacent railway crossing is active	
Raised Concrete / Grass Median	Physically separates two sides of a roadway limiting the number of conflict points at intersections/driveways as well as providing refuge for pedestrian midblock crossings.	

Description	Benefits	Details
Guardrail	Structures alongside the road to physically prevent vehicles from departing the roadway and hitting roadside hazards.	
Grade Crossing and Intersection Advance Warning (W10-2) Sign	Indicated intersection ahead with active adjacent railroad crossing.	
Overhead Guide Signage	Gives advanced indication to the usage of specific lanes and directions for specific routes.	

3. Crash Analysis

3.1. Summary of Crashes

To perform a comprehensive safety analysis, historical traffic crash data for the most recent period from January 1, 2013, through February 28, 2023, were collected from GEARS. Crash data were mapped spatially based upon the geographic information system coordinates associated with each record, and each crash was ultimately allocated to the appropriate segment or intersection along the corridor based upon location. **Table 6** summarizes the breakdown of the crashes into either the corridor's segments or intersections as well as the corridor's total crashes in terms of Fatal crashes (K), Severe Injury crashes (A), Visible Injury crashes (B), Complaint of Injury crashes (C), and Property Damage Only crashes (O).

Table 6. SR 40 Segment & Intersection Crash Breakdown

Location	Traffic Crashes					
	K	A	B	C	O	Total
Intersections	1	0	3	8	48	60
Segments	6	21	76	203	801	1,107
Total	**7**	**21**	**79**	**211**	**849**	**1,167**
Intersection Crash Rate (26,676 AADT)	0.062	0.216	0.781	2.085	8.227	11.369

Table 7 and **Table 8** summarize crash data specific to each segment and intersection along the study corridor, including the approximate traffic crash rates. AADTs were applied to each segment and entering vehicles were assigned to each intersection based upon traffic counts collected as a part of this study. Further details regarding the distribution of crash severity, type, time, pavement condition, and Manner of Collision can be found in **Appendix B**. A map depicting the intersections and segments is represented in **Figure 4** below.

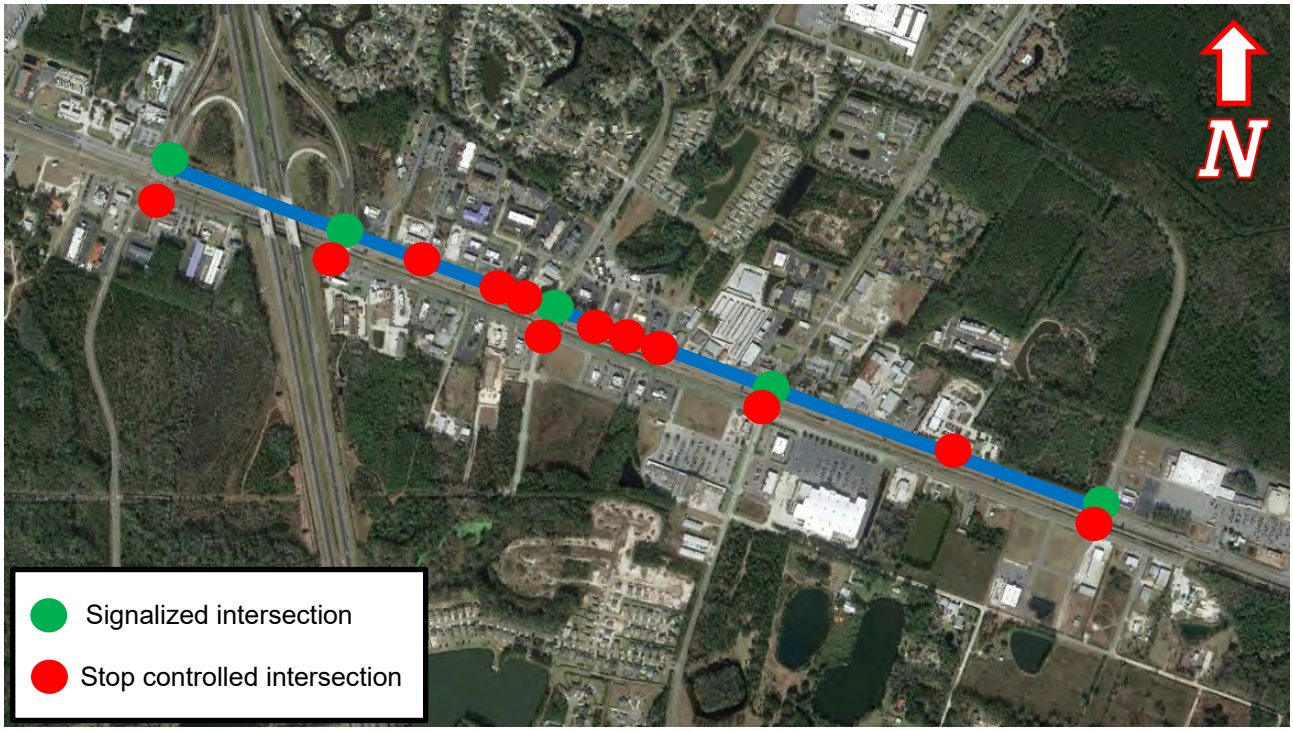


Figure 4. Summary of Intersections and Segments

Table 7. Summary of SR 40 Corridor Segment Traffic Crash Data (2013 – February 2023)

Segment Description				Crashes or Rates	Traffic Crashes Traffic Crash Rate*					
From	To	Length	AADT		K	A	B	C	O	Total
I-95 SB / May Creek St	I-95 NB / Boone St	0.28	26,174	Crashes	0	0	0	0	10	10
				Rates	0.0	0.0	0.0	0.0	36.8	36.8
I-95 NB / Boone St	BP Gas Station Driveway	0.13	28,150	Crashes	0	0	0	0	5	5
				Rates	0.0	0.0	0.0	0.0	36.8	36.8
BP Gas Station Driveway	JSJ Rd	0.12	27,920	Crashes	0	0	2	2	14	18
				Rates	0.0	0.0	16.1	16.1	112.6	144.8
JSJ Rd	Gardenia Blossom Rd	0.04	27,058	Crashes	0	0	0	0	0	0
				Rates	0.0	0.0	0.0	0.0	0.0	0.0
Gardenia Blossom Rd	Lakes Blvd / Crown Pointe Pkwy	0.05	27,058	Crashes	0	0	0	0	1	1
				Rates	0.0	0.0	0.0	0.0	19.9	19.9
Lakes Blvd / Crown Pointe Pkwy	Queen St	0.07	25,813	Crashes	0	0	0	0	1	1
				Rates	0.0	0.0	0.0	0.0	14.9	14.9
Queen St	Tiffany St	0.04	26,208	Crashes	0	0	0	0	0	0
				Rates	0.0	0.0	0.0	0.0	0.0	0.0
Tiffany St	Victoriana Rd	0.06	26,376	Crashes	0	0	0	0	0	0
				Rates	0.0	0.0	0.0	0.0	0.0	0.0
Victoriana Rd	Gross Rd / Haddock Rd	0.19	26,390	Crashes	1	0	1	1	8	11
				Rates	5.4	0.0	5.4	5.4	43.0	59.1
Gross Rd / Haddock Rd	J Nolan Wells	0.28	26,444	Crashes	0	0	0	2	4	6
				Rates	0.0	0.0	0.0	7.3	14.6	21.8
J Nolan Wells	Middle School Rd	0.24	25,847	Crashes	0	0	0	3	5	8
				Rates	0.0	0.0	0.0	13.0	21.7	34.8
All Corridor Segments		1.50	26,676	Crashes	1	0	3	8	48	60
				Total Rate	0.7	0.0	2.0	5.4	32.3	40.4

**Traffic crash rates in crashes per 100M vehicle miles traveled*

Within the segment from Victoriana Road and Gross Road/Haddock Road, there was a fatal crash which involved a southbound vehicle that stopped at the stop sign of a driveway but still entered the roadway in the path of a westbound motorcycle. The motorcycle attempted to stop but, in the process, overturned and ejected the rider who impacted the side of the southbound vehicle resulting in the rider's fatality.

Table 8. Summary of SR 40 Corridor Intersection Traffic Crash Data (2013 – February 2023)

	Intersection Description		Traffic Volume		Crashes or Rates	Traffic Crashes Traffic Crash Rate*					
	Minor	Signal	Major	Minor		K	A	B	C	O	Total
SR 40 / King Avenue	I-95 SB / May Creek St	Yes	22,433	7,979	Crashes	3	2	16	30	138	189
					Rates	0.027	0.018	0.142	0.266	1.223	1.675
	I-95 NB / Boone St	Yes	28,187	5,422	Crashes	0	6	19	37	151	213
					Rates	0.0	0.048	0.152	0.297	1.211	1.708
	BP Gas Station Driveway	No	28,319	988	Crashes	0	0	0	7	22	29
					Rates	0.0	0.0	0.0	0.064	0.202	0.267
	JSJ Rd	No	27,846	612	Crashes	0	2	3	4	22	31
					Rates	0.0	0.019	0.028	0.038	0.208	0.294
	Gardenia Blossom Rd	No	27,846	345	Crashes	0	1	0	1	3	5
					Rates	0.0	0.010	0.0	0.010	0.029	0.048
	Lakes Blvd / Crown Pointe Pkwy	Yes	25,594	7,528	Crashes	0	1	8	26	89	124
					Rates	0.0	0.008	0.065	0.211	0.724	1.001
	Queen St	No	25,927	590	Crashes	0	0	1	3	8	12
					Rates	0.0	0.0	0.010	0.030	0.081	0.122
	Tiffany St	No	26,210	248	Crashes	0	0	1	1	3	5
					Rates	0.0	0.0	0.010	0.010	0.030	0.051
	Victoriana Rd	No	26,578	931	Crashes	0	0	1	3	9	13
					Rates	0.0	0.0	0.010	0.030	0.088	0.127
	Gross Rd / Haddock Rd	Yes	26,289	7,795	Crashes	2	6	10	44	155	217
					Rates	0.016	0.047	0.079	0.348	1.225	1.716
	J Nolan Wells	No	25,964	612	Crashes	0	0	0	3	9	12
					Rates	0.0	0.0	0.0	0.030	0.091	0.122
	Middle School Rd	Yes	27,614	5,818	Crashes	0	1	7	23	87	118
					Rates	0.0	0.008	0.056	0.185	0.701	0.951
Boone Street	May Creek St	No	4,688	5,116	Crashes	0	0	2	2	23	27
					Rates	0.0	0.0	0.055	0.055	0.632	0.742
	Boone St (I-95 NB)	No	4,628	2,506	Crashes	0	0	0	3	9	12
					Rates	0.0	0.0	0.0	0.113	0.340	0.453
	Crown Pointe Pkwy	No	6,434	3,079	Crashes	0	0	1	8	22	31
					Rates	0.0	0.0	0.028	0.227	0.623	0.878
	Haddock Rd	No	3,470	8,576	Crashes	1	2	7	7	48	65
					Rates	0.022	0.045	0.157	0.157	1.073	1.454
	Middle School Rd	No	3,063	2,383	Crashes	0	0	0	1	3	4
					Rates	0.0	0.0	0.0	0.049	0.148	0.198
All Corridor Intersections					Crashes	6	21	76	203	801	1,107
					Total Rate	0.062	0.216	0.781	2.085	8.227	11.369

**Traffic crash rates in crashes per 1M entering vehicles*

Table 9. Georgia Summary of Urban Principle Arterial Crash Rates (2013-2021)

Crash Severity	Crashes or Rates	Year									Average
		2013	2014	2015	2016	2017	2018	2019	2020	2021	
Fatal	Crashes	134	150	167	200	177	210	205	232	250	191.7
	Rates	1.18	1.15	1.24	1.47	1.24	1.46	1.41	1.7	1.84	1.41
Injury	Crashes	16,014	17,544	18,610	19,782	21,195	20,248	19,931	16,131	19,876	18,815
	Rates	141	134	138	145	149	141	137	118	146	138.8
PDO	Crashes	53,025	59,303	59,620	65,358	66,298	63,027	61,201	47,603	53,633	58,785
	Rates	466	454	444	482	465	439	421	349	394	435
Total	Crashes	69,173	76,997	78,397	85,340	87,670	83,485	81,337	63,966	73,759	77,792
	Rates	608	589	583	628	615	581	559	469	542	574.9

The first of the three fatal crashes to occur at SR 40/King Avenue and the I-95 SB Ramps/May Creek Street involved a westbound heavy vehicle that was traveling straight through the intersection after the light had changed to red. At this time an eastbound vehicle was turning left under a protected phase and was hit by the westbound vehicle. The collision resulted in the fatality of one individual in the eastbound vehicle as well as the severe injury of a second occupant of the eastbound vehicle.

The second fatal crash at SR 40/King Avenue and the I-95 SB Ramps/May Creek Street involved a westbound vehicle turning left on a permissive phase in front of an eastbound through moving vehicle. The eastbound vehicle struck the westbound vehicle on its passenger side door which resulted in the fatality of the person riding in the passenger seat of the westbound vehicle as well as the visible injury of the westbound driver.

The third fatal crash at SR 40/King Avenue and the I-95 SB Ramps/May Creek Street was a pedestrian crash where two pedestrians in dark conditions were crossing the east leg of the intersection in the crosswalk. The pedestrians had entered into the crosswalk out of phase, but it was determined that the pedestrian signal equipment was not functioning at the time. As the pedestrians were in the intersection an eastbound vehicle with a green light failed to observe the two pedestrians striking them both resulting in the fatality of one of them and the severe injury of the other.

The first fatal crash at the intersection of Gross Road/Haddock Road with SR 40/King Avenue involved a westbound vehicle that turned left on a permissive phase in front of an eastbound vehicle. The eastbound vehicle hit the westbound vehicle on its passenger side door which results in the fatality of the elderly individual riding in the westbound passenger seat as well as complaint of injuries from the eastbound driver as well as westbound driver.

The second fatal crash at the same intersection occurred when a westbound vehicle misjudged the gap in front of an eastbound through moving motorcycle. The motorcyclist had to lay down their motorcycle in an attempt to stop which ejected the rider and resulted in their fatality.

The final fatal crash occurred at the intersection of Boone Street and Haddock Road involving an eastbound vehicle that failed to stop or slow for the stop sign hitting a northbound vehicle causing both vehicles to depart the roadway and the eastbound vehicle to overturn which resulted in the fatality of a passenger in the eastbound vehicle.

Traffic crashes along the corridor were primarily intersection-based, primarily at the five signalized intersection making up 73.78 % (861 of the 1,167) of the corridor's total crashes. Table 10 below lists the breakdown of corridor's crashes by their crash types with respective severities and what percentage of the total each crash type amounts to.

Table 9 above shows crash rate per 100 million Vehicle Miles which when compared to Table 8's 1 million Vehicle Miles shows that the fatality rate on this corridor is notably higher than the states average.

Table 10. Corridor Crashes by Manner of Collision (2013 – February 2023)

Crash Type	K	A	B	C	O	Total	Percentage
Single Vehicle	0	0	4	4	19	27	2.3%
Left Turn – Angle	4	12	36	60	112	224	19.2%
Angle	2	5	19	34	157	217	18.6%
Sideswipe – Same Direction	0	1	3	10	116	130	11.1%
Sideswipe – Opposite Direction	0	0	0	0	2	2	0.2%
Rear End	0	2	14	103	437	556	47.6%
Head On	0	0	2	0	4	6	0.5%
Pedestrian	1	0	1	0	0	2	0.2%
Bicycle	0	1	0	0	1	2	0.2%
Animal	0	0	0	0	1	1	0.1%
Total	**7**	**21**	**79**	**211**	**849**	**1167**	**100%**

As can be seen within the table above, the primary crash type is rear end collisions making up 47.6% (556 of 1,167) of the corridor's crashes with the second most common crash type being left turn – angle crashes making up 19.2% (224 of the 1,167). It also deserves noting that the left turn – angle crashes accounted for 57.1% (4 of the 7) of the corridor's fatal crashes and 57.1% (12 of the 21) of the corridor's severe injury (A) crashes.

The seven fatal crashes along the corridor have been covered above but will be readdressed in their respective segment or intersection crash tables. The twenty-one severe injury crashes (A) within the study limits will be addressed in the same manner along with each of the pedestrian and bicycle crashes that are not covered within the fatal or severe injury crashes.

Figure 5 below represents a summary of the segment crashes compared with the driveway density in the respective segment. Prior studies have shown that when the driveway density increases the number of crashes will as well due to the compounding of conflict points created from the driveways. The results below follow the trend of increased segment crashes in the segments with increased driveway density. The deviations from the trend are due in part to the adjacent signalized intersection such as in the segment between the two I-95 ramp intersections, the presence of a median separating the two sides of the roadway like in the segment between the I-95 NB ramps, and the BP Gas Station Driveway, and the draw that some businesses have causing increased movements into and out of specific driveways as opposed to others.

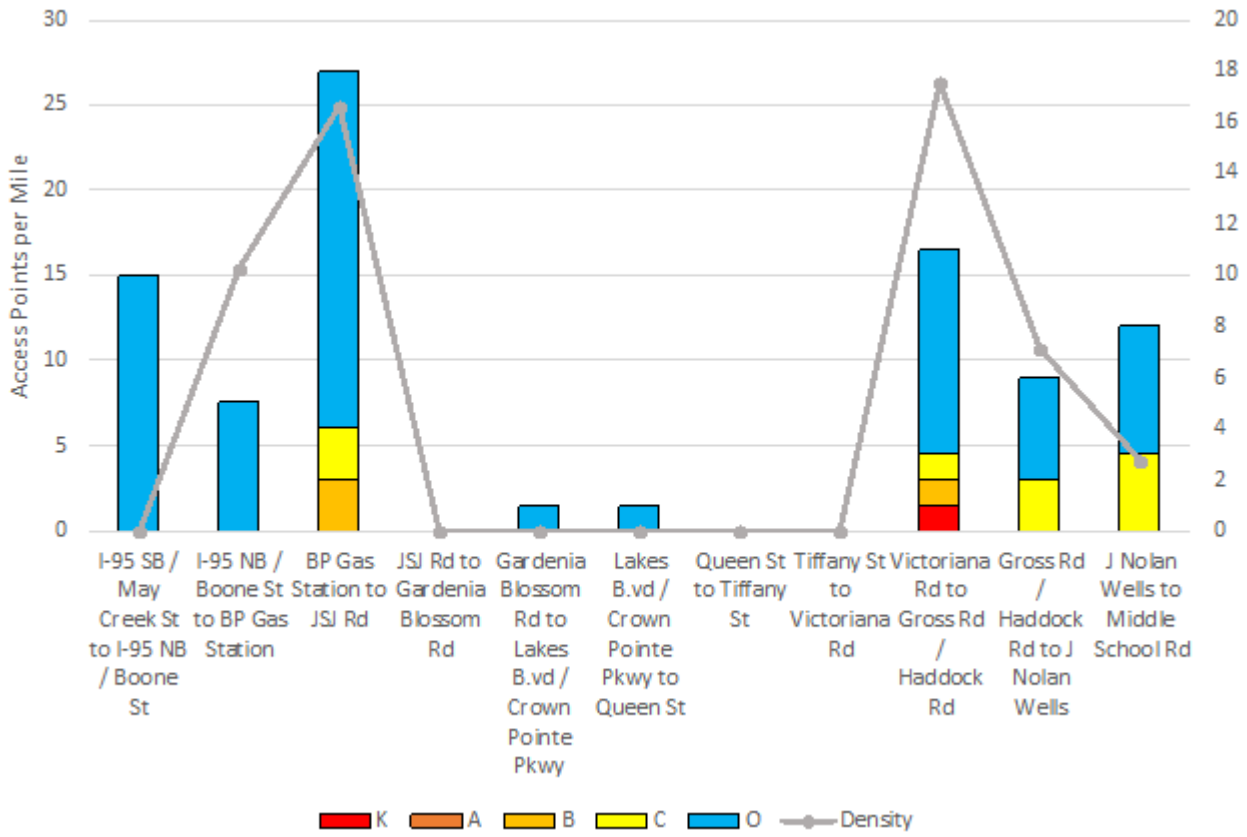


Figure 5. Corridor Segment Crashes vs Driveway Density

3.2. Notable Locations of Crashes

3.2.1. I-95 SB / May Creek Street

Table 11. SR 40/King Avenue at I-95 SB/May Creek Street Intersection Crashes (Jan 1, 2013 – Feb 28, 2023)

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	SB					1	1
	EB			1		1	2
	WB			1			1
Left Turn – Angle	SB LT x NB					1	1
	EB LT x WB	1	2	10	15	23	51
	WB LT x EB	1		1	1	10	13
Angle	NB x EB					3	3
	SB x EB				2	4	6
	SB x WB					6	6
Sideswipe-Same Direction	NB					4	4
	SB				1	2	3
	EB				1	9	10
	WB			1		4	5
Rear End	NB				2	10	12
	SB				1	27	28
	EB				4	21	25
	WB				3	12	15
Head On - Left Turn	EB x WB			2			2
Pedestrian		1					1
Total		**3**	**2**	**16**	**30**	**138**	**189**

The first severe injury crash at this intersection involved an eastbound vehicle turning left on a permissive phase into the path of a westbound through moving motorcycle. The westbound motorcycle struck the eastbound vehicle which ejected the two riders resulting in their severe injuries.

The second severe injury crash occurred when an eastbound vehicle failed to observe a westbound through moving vehicle before turning in front of it. The two vehicles struck each other resulting in a visible injury to the eastbound driver and a severe injury to the westbound elderly driver.

As mentioned previously, the first fatal crash involved a westbound heavy vehicle was traveling straight through the intersection after the light had changed to red. At this time an eastbound vehicle was turning left under a protected phase and was hit by the westbound vehicle. The collision resulted in the fatality of one individual in the eastbound vehicle as well as the severe injury of a second occupant of the eastbound vehicle.

The second fatal crash involved a westbound vehicle turning left on a permissive phase in front of an eastbound through moving vehicle. The eastbound vehicle struck the westbound vehicle on its passenger side door which resulted in the fatality of the person riding in the passenger seat of the westbound vehicle as well as the visible injury of the westbound driver.

The third fatal and only pedestrian crash at the intersection was a pedestrian crash where two pedestrians in dark conditions were crossing the east leg of the intersection in the crosswalk. The pedestrians had entered the crosswalk out of phase, but it was determined that the pedestrian signal equipment was not functioning at the time. As the pedestrians were in the intersection an eastbound vehicle with a green light failed to observe the two pedestrians striking them both resulting in the fatality of one of them and the severe injury of the other.

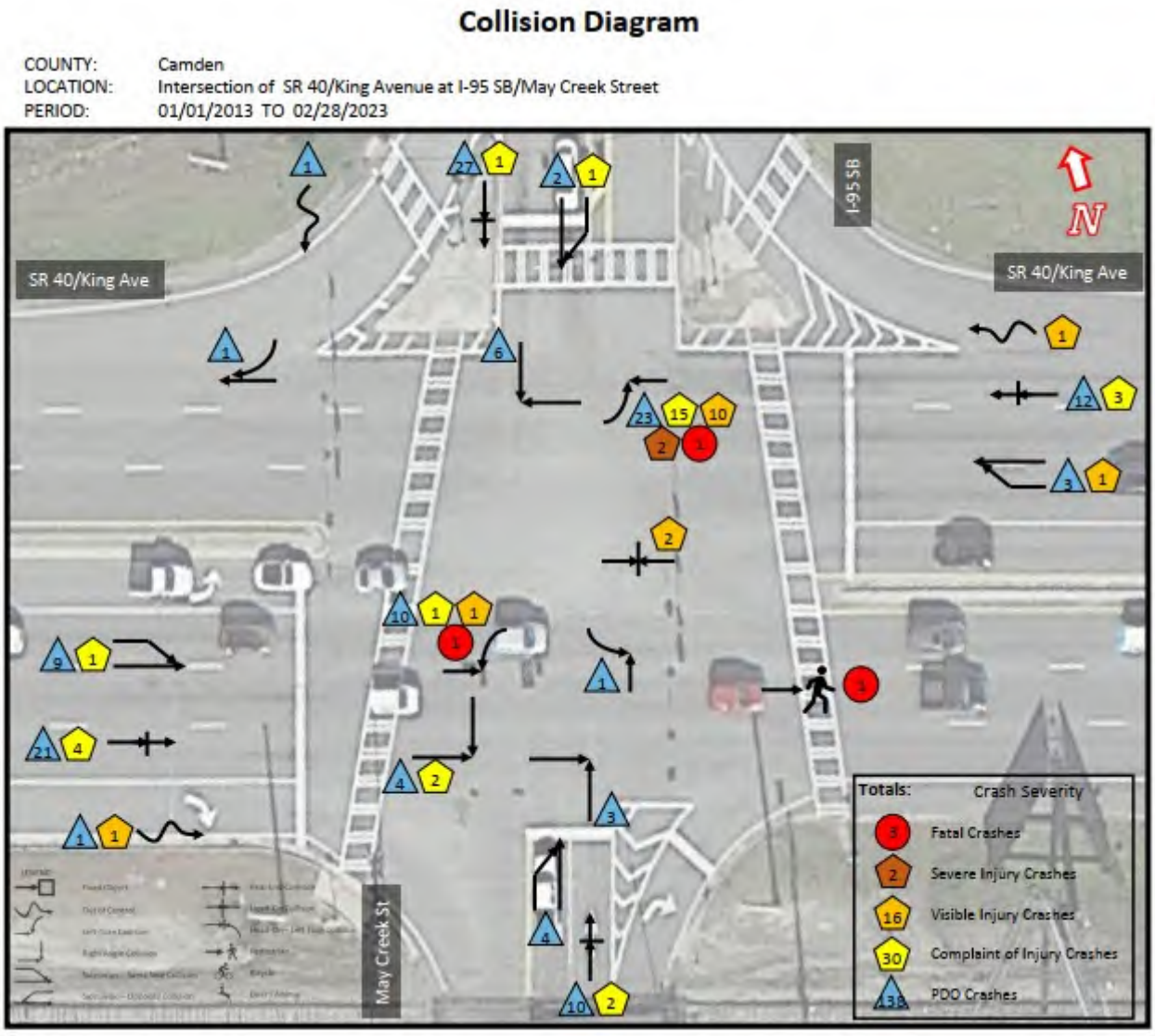


Figure 6. SR 40 at I-95 SB/May Creek Street Collision Diagram

3.2.2. I-95 SB / May Creek Street to I-95 NB / Boone Street

Table 12. SR 40 from May Creek Street to I-95 NB / Boone Street Segment Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Sideswipe-Same Direction	EB					6	6
	WB					3	3
Rear End	WB					1	1
Total						**10**	**10**

Figure 7. SR 40 from I-95 SB/May Creek St to I-95 NB/Boone St Segment

3.2.3. I-95 NB / Boone Street

Table 13. SR 40 at I-95 NB/Boone St Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	NB					2	2
	SB					1	1
	WB					2	2
Left Turn – Angle	NB LT x SB					2	2
	EB LT x WB		3	10	19	21	53
	WB LT x EB		2	5	3	6	16
Angle	NB x EB		1			2	3
	SB x EB					2	2
	SB x WB				1	3	4
Sideswipe-Same Direction	NB					5	5
	SB				1	6	7
	EB				1	8	9
	WB			1		8	9
Sideswipe-Opposite Direction	NB x SB					1	1
Rear End	NB					8	8
	SB			3	2	28	33
	EB				3	20	23
	WB				7	24	31
Head On	NB x SB					1	1
Bicycle						1	1
Total			**6**	**19**	**37**	**151**	**213**

The first severe injury crash at this intersection occurred when a westbound vehicle ran the red light hitting an eastbound vehicle turning left on a protected phase. The westbound vehicle struck the rear passenger side of the eastbound vehicle causing severe injury to the individual sitting in the rear passenger seat.

The second severe injury crash involved an eastbound vehicle turning left on a permissive phase striking a westbound vehicle on its driver-side door which caused severe injury to the westbound driver.

The third severe injury crash occurred when an eastbound motorcycle in the eastbound left turn lane changed lanes into the leftmost through lane to pass the vehicle in front of it and ultimately turn left from the through lane on a permissive phase. At this time a westbound motorcycle was traveling straight through the intersection and collided with the eastbound left turning motorcycle. The collision ejected the westbound rider resulting in severe injury.

The fourth severe injury crash occurred when a westbound vehicle turned left on a permissive phase into the path of an eastbound vehicle. The two vehicles struck each other head on resulting in severe injuries for one of the westbound vehicle's passengers and the eastbound vehicle's driver.

The fifth severe injury crash involved a westbound vehicle whose driver reported having their line of sight to the eastbound through lanes obstructed by the queue of eastbound left turning vehicle. The westbound vehicle turned left on the permissive phase as an eastbound vehicle was traveling through the intersection causing the collision which resulted in a visible injury to the eastbound driver and severe injury to the westbound driver.

The sixth severe injury crash occurred when an eastbound vehicle ran a red light for unknown reasons striking a northbound vehicle on its driver side door resulting in visible injury to both drivers and a severe injury to the northbound vehicle's passenger.

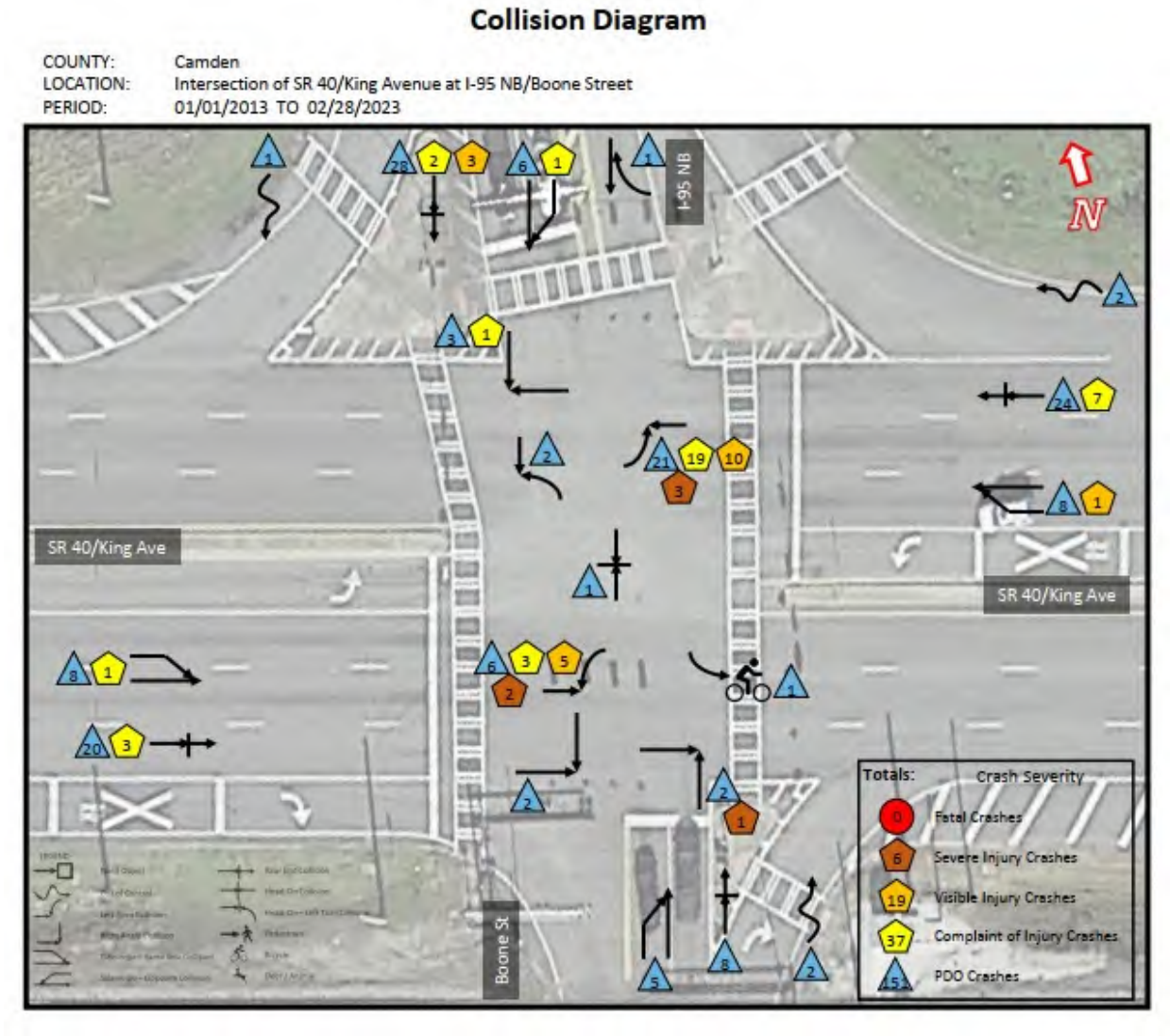


Figure 8. SR 40 at I-95 NB / Boone Street Collision Diagram

3.2.4. I-95 NB / Boone Street to BP Gas Station Driveway

Table 14. SR 40 from I-95 NB / Boone St to BP Gas Station Driveway Segment Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Angle	SB x WB					3	3
Sideswipe-Same Direction	WB					1	1
Rear End	EB					1	1
Total						**5**	**5**

Figure 9. SR 40 from I-95 NB / Boone St to BP Gas Station Driveway Segment

3.2.5. BP Gas Station Driveway

Table 15. SR 40 at BP Gas Station Driveway Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	SB					1	1
	EB					1	1
	WB				1		1
Left Turn – Angle	EB LT x WB				1	1	2
Angle	NB x EB					6	6
	SB x WB				3	5	8
Sideswipe-Same Direction	EB					2	2
	WB				2	3	5
Rear End	EB					2	2
	WB					1	1
Total					**7**	**22**	**29**

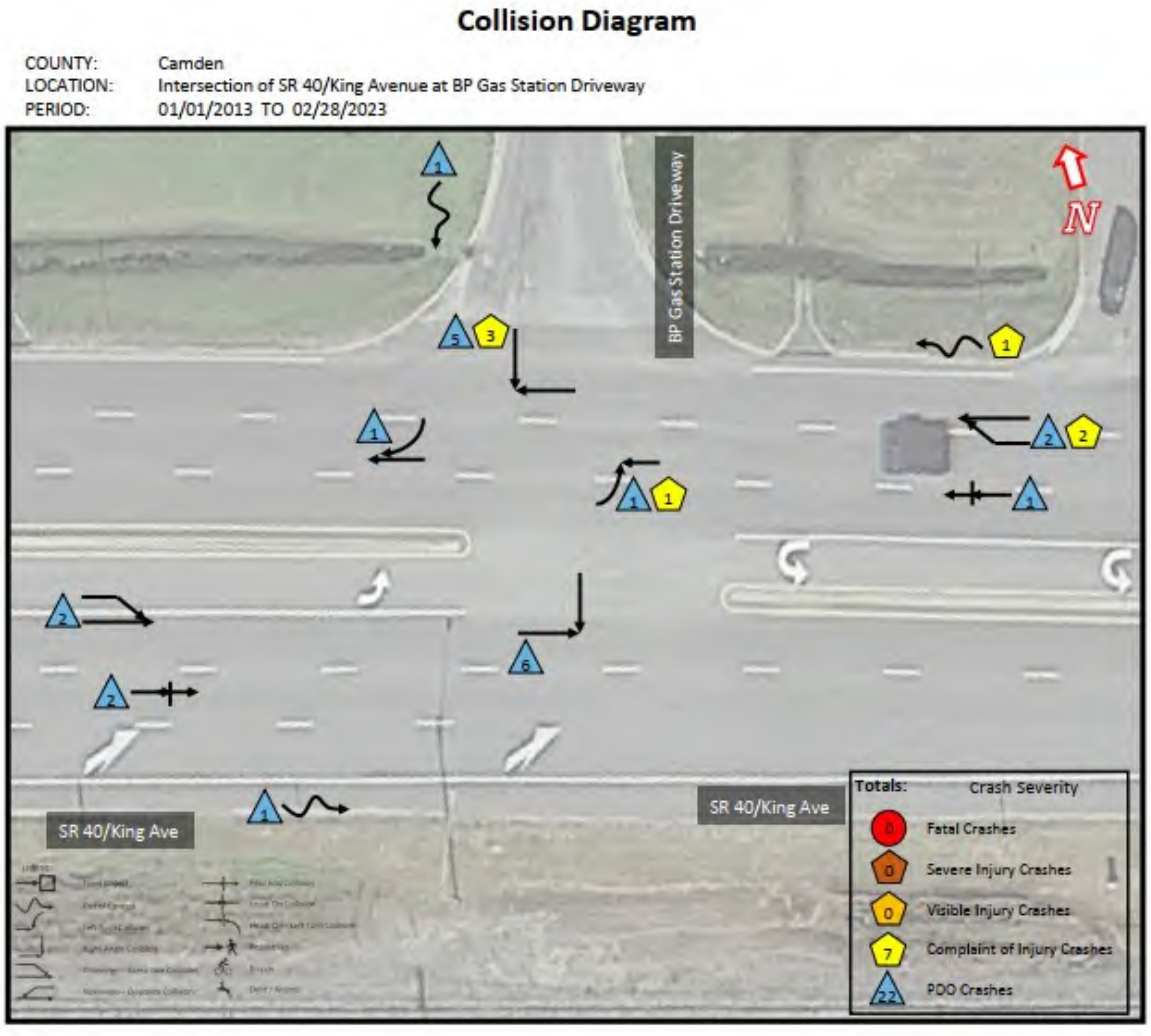


Figure 10. SR 40 at BP Gas Station Driveway Collision Diagram

3.2.6. BP Gas Station Driveway to JSJ Road

Table 16. SR 40 from BP Gas Station Driveway to JSJ Road Segment Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	EB			1			1
	WB					1	1
Angle	SB x WB			1	1	4	6
Sideswipe-Same Direction	EB					2	2
	WB					4	4
Rear End	SB					1	1
	WB				1	2	3
Total				**2**	**2**	**14**	**18**

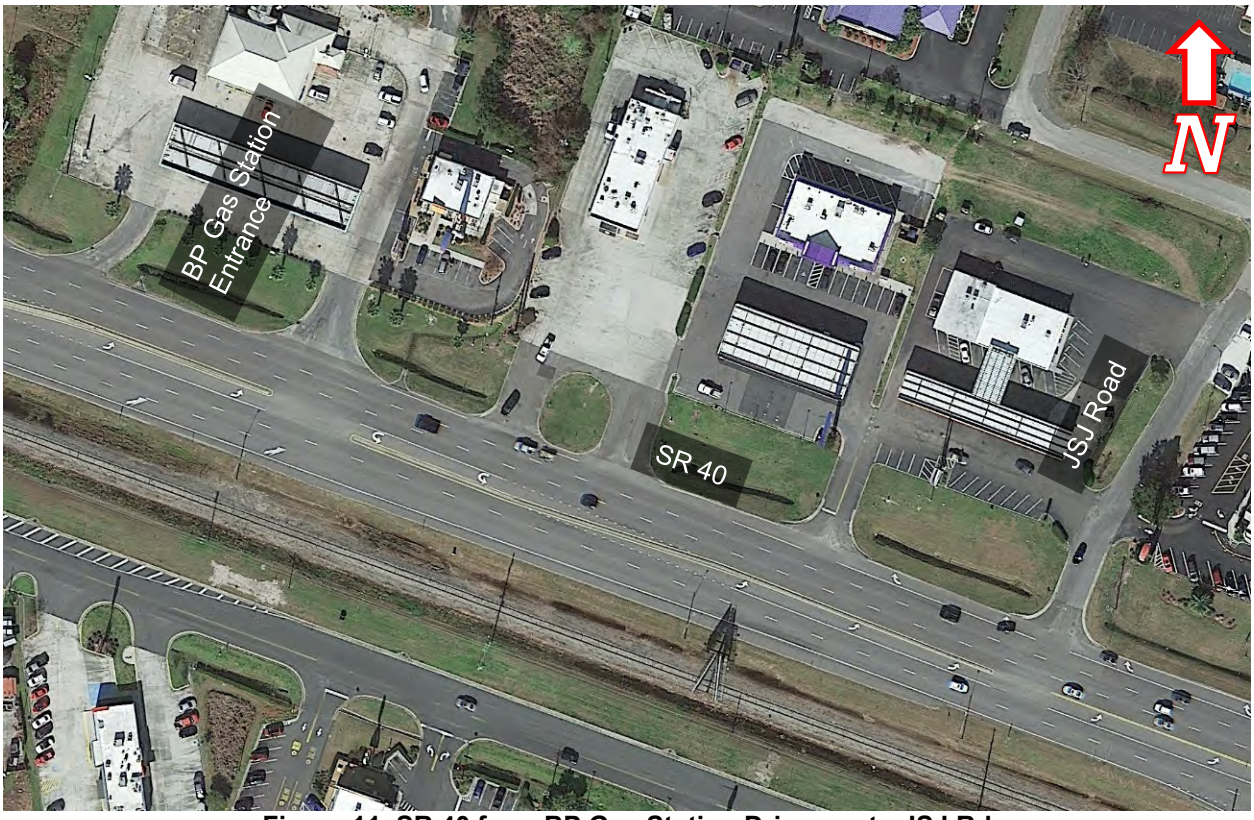


Figure 11. SR 40 from BP Gas Station Driveway to JSJ Rd

3.2.7. JSJ Road

Table 17. SR 40 at JSJ Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Left Turn – Angle	EB LT x WB		1	1	2	2	6
Angle	NB x EB					2	2
	SB x WB		1	2	2	9	14
Sideswipe-Same Direction	EB					2	2
	WB					3	3
Rear End	SB					1	1
	EB					3	3
Total			**2**	**3**	**4**	**22**	**31**

The first severe injury crash involved an eastbound vehicle that turned left into a westbound motorcycle with the resulting collision causing the rider to be ejected and suffer severe injuries.

The second severe injury crash that occurred at this intersection involved a southbound vehicle that was intending to turn right into the outside westbound lane. As the southbound vehicle began its movement the outside lane was open but at this same time a westbound vehicle in the middle lane changed lanes in the intersection into the outside lane causing the southbound vehicle to strike the westbound vehicle with the force of the impact causing the westbound vehicle to cross over the center median and enter the eastbound lanes resulting in the severe injury of the westbound driver.

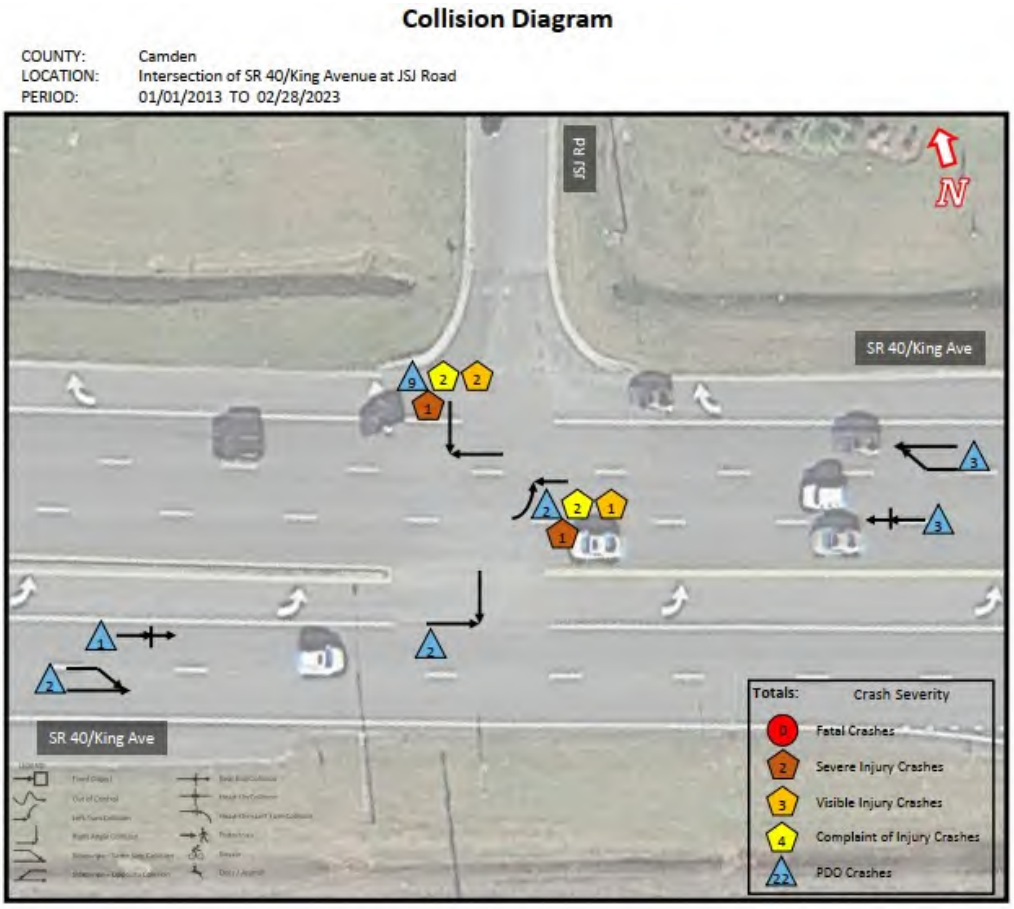


Figure 12. SR 40 at JSJ Road Collision Diagram

3.2.8. Gardenia Blossom Road

Table 18. SR 40 at Gardenia Blossom Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	WB					1	1
Left Turn – Angle	EB LT x WB		1				1
Angle	SB x WB				1		1
Sideswipe-Same Direction	WB					1	1
Rear End	SB					1	1
Total			**1**		**1**	**3**	**5**

The one severe injury to occur at this intersection was similar to a crash at the previous intersection where an eastbound vehicle turned left striking a westbound motorcycle causing the rider to be ejected and suffer severe injuries.

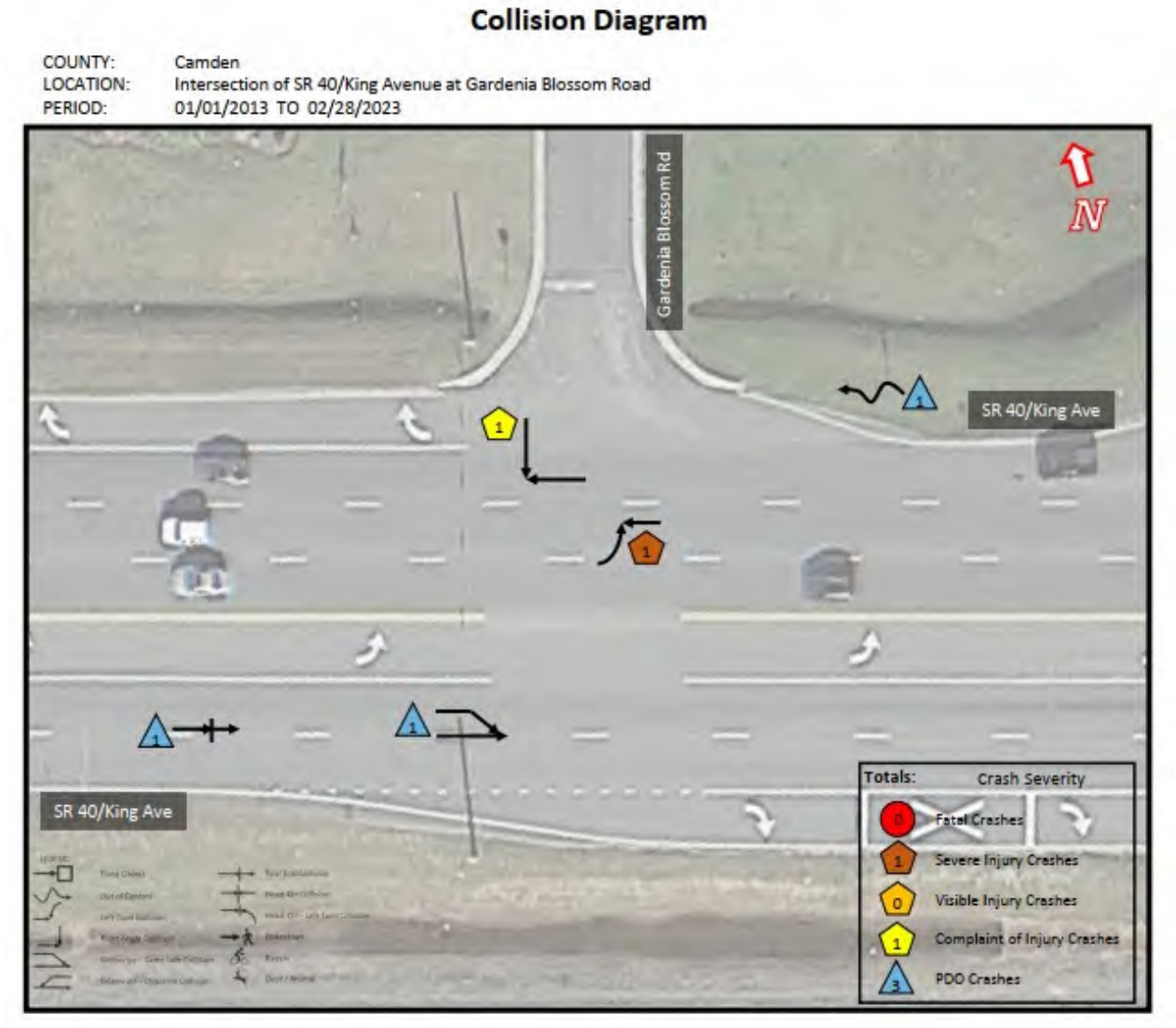


Figure 13. SR 40 at Gardenia Blossom Road Collision Diagram

3.2.9. Gardenia Blossom Road to Lakes Boulevard/Crown Pointe Parkway

Table 19. SR 40 from Gardenia Blossom Road to Lakes Boulevard/Crown Pointe Parkway Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Rear End	WB					1	1
Total						**1**	**1**

Figure 14. SR 40 from Gardenia Blossom Road to Lakes Boulevard/Crown Pointe Parkway

3.2.10. Lakes Boulevard/Crown Pointe Parkway

Table 20. SR 40 at Lakes Boulevard/Crown Pointe Parkway Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	EB				1	1	2
Left Turn – Angle	NB LT x SB					1	1
	SB LT x NB					1	1
	EB LT x WB			1	3	6	10
	WB LT x EB			2	1	5	8
Angle	NB x EB		1	1	2	5	9
	SB x EB				1	1	2
	SB x WB				1	3	4
Sideswipe-Same Direction	NB					3	3
	EB					5	5
	WB					3	3
Rear End	SB			1	3	18	22
	EB			1	8	18	27
	WB			2	6	18	26
Head On	NB x SB					1	1
Total			**1**	**8**	**26**	**89**	**124**

The one severe injury crash at this intersection was caused by an eastbound vehicle that failed to stop at a red light striking a northbound right turning vehicle with the collision resulting in severe injuries to both drivers.

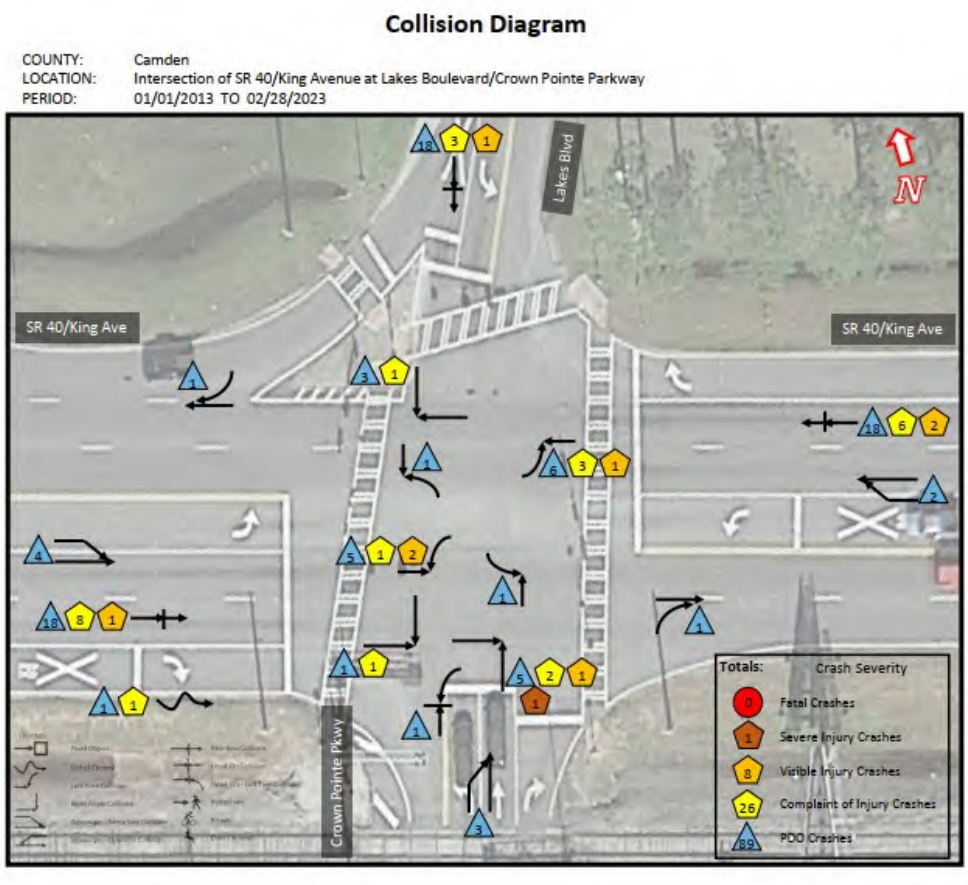


Figure 15. SR 40 at Lakes Boulevard/Crown Pointe Parkway Collision Diagram

3.2.11. Lakes Boulevard/Crown Pointe Parkway to Queen Street

Table 21. SR 40 from Lakes Boulevard/Crown Pointe Parkway to Queen Street Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Sideswipe-Same Direction	EB					1	1
Total						**1**	**1**

Figure 16. SR 40 from Lakes Boulevard/Crown Pointe Parkway to Queen Street

3.2.12. Queen Street

Table 22. SR 40 at Queen Street Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Left Turn – Angle	EB LT x WB	0	0	0	0	1	1
Angle	SB x WB	0	0	1	3	3	7
Sideswipe-Same Direction	EB	0	0	0	0	1	1
	WB	0	0	0	0	1	1
Rear End	SB	0	0	0	0	1	1
	WB	0	0	0	0	1	1
Total		0	0	1	3	8	12

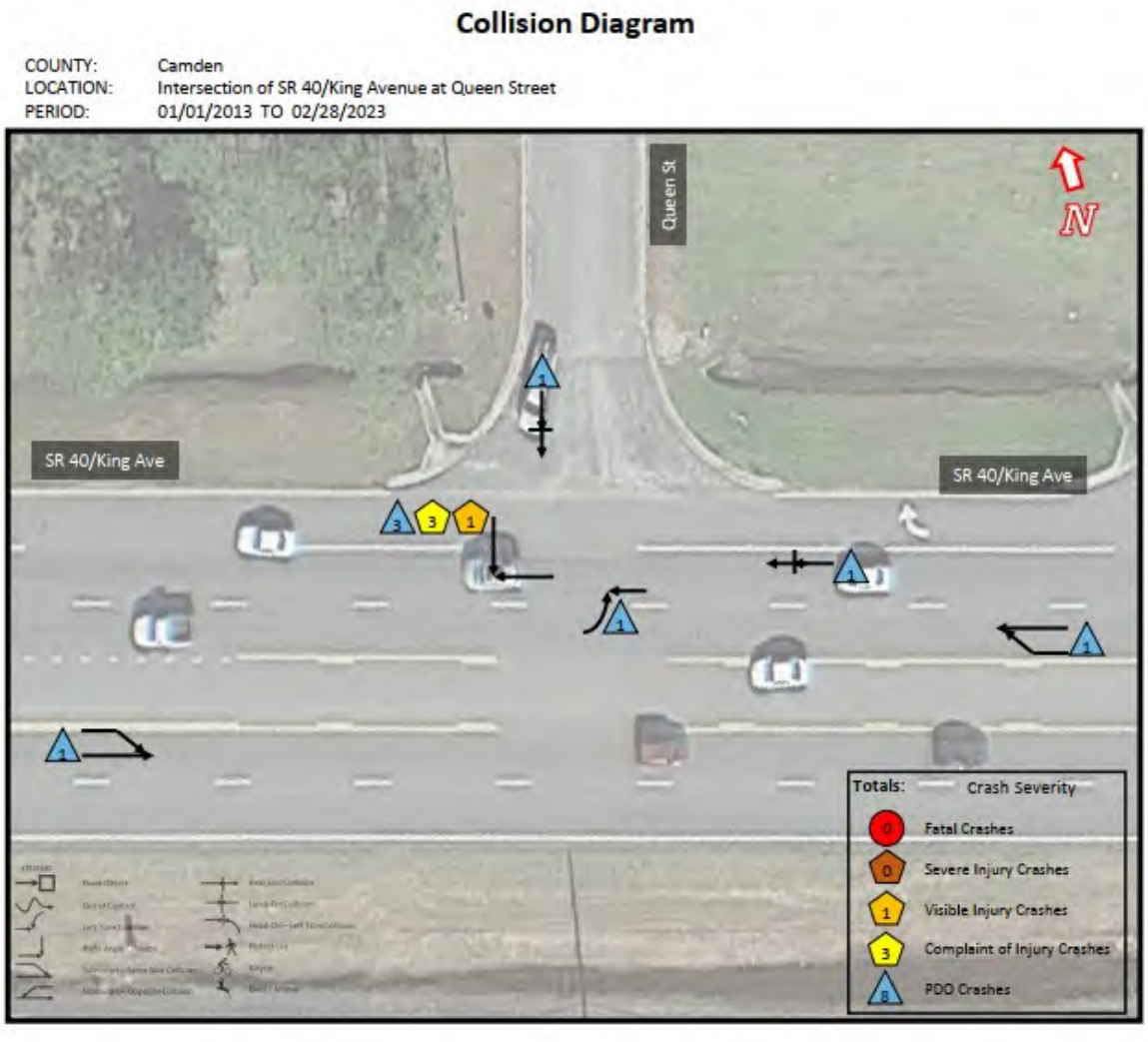


Figure 17. SR 40 at Queen Street Collision Diagram

3.2.13. Tiffany Street

Table 23. SR 40 at Tiffany Street Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Left Turn – Angle	SB LT x NB			1	1	1	3
Angle	NB x EB					1	1
	SB x WB					1	1
Total				**1**	**1**	**3**	**5**

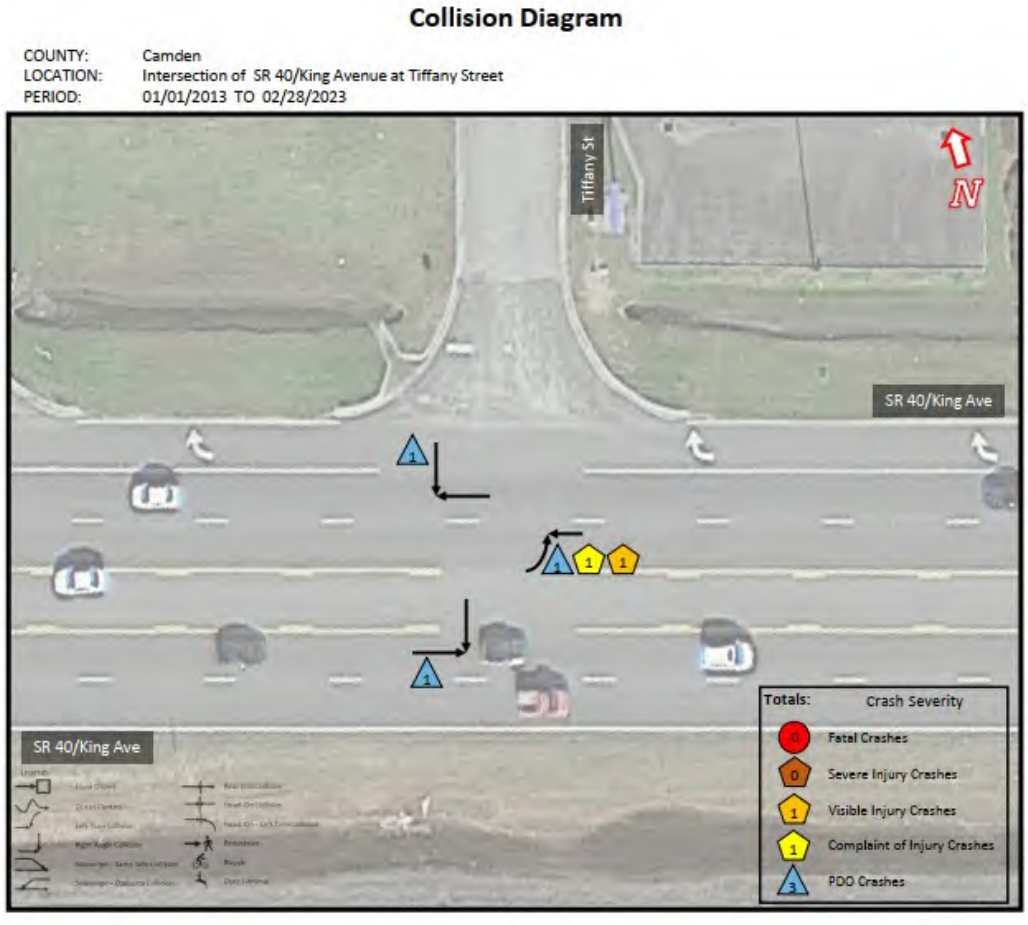


Figure 18. SR 40 at Tiffany Street Collision Diagram

3.2.14. Victoriana Road

Table 24. SR 40 at Victoriana Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Left Turn – Angle	EB LT x WB					1	1
Angle	NB x EB			1	1		2
	SB x WB					3	3
Sideswipe-Same Direction	EB					1	1
	WB				1		1
Rear End	SB					2	2
	EB				1		1
	WB					2	2
Total				**1**	**3**	**9**	**13**

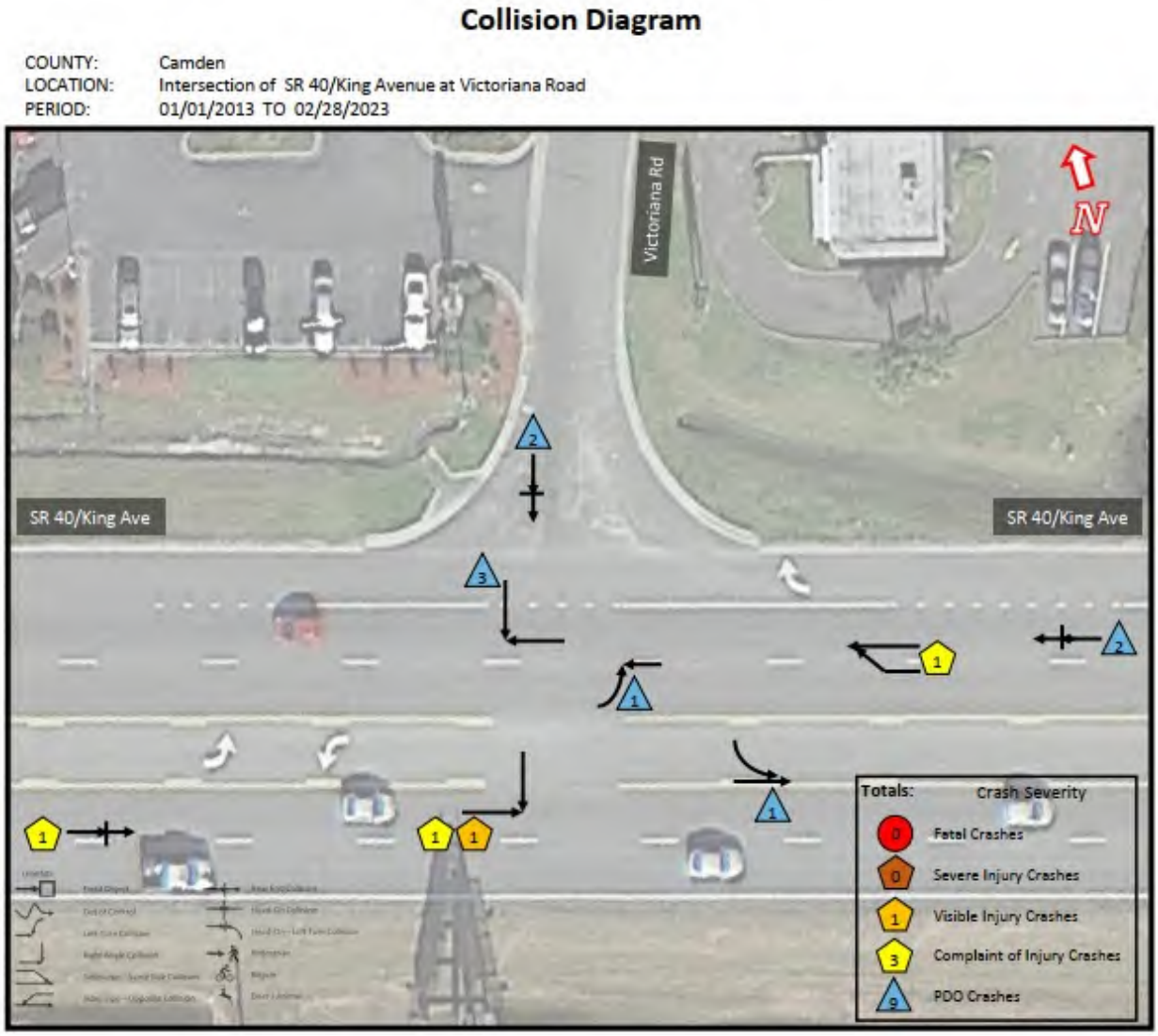


Figure 19. SR 40 at Victoriana Road Collision Diagram

3.2.15. Victoriana Road to Gross Road/Haddock Road

Table 25. SR 40 from Victoriana Road to Gross Road/Haddock Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Angle	SB x WB	1				2	3
Sideswipe-Same Direction	EB					1	1
	WB					1	1
Rear End	EB			1		3	4
	WB				1	1	2
Total		**1**		**1**	**1**	**8**	**11**

Within the segment from Victoriana Road and Gross Road/Haddock Road, there was a fatal crash which involved a southbound vehicle that stopped at the stop sign of a driveway but still entered the roadway in the path of a westbound motorcycle. The motorcycle attempted to stop but, in the process, overturned and ejected the rider who impacted the side of the southbound vehicle resulting in the rider's fatality.

Figure 20. SR 40 from Victoriana Road to Gross Road/Haddock Road

3.2.16. Gross Road/Haddock Road

Table 26. SR 40 at Gross Road/Haddock Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Left Turn – Angle	NB LT x SB					2	2
	SB LT x NB				1		1
	EB LT x WB		1	1	2	5	9
	WB LT x EB	2	1	2	4	8	17
Angle	NB x EB					1	1
	NB x WB			2	1	5	8
	SB x EB			2		2	4
	SB x WB		1			6	7
Sideswipe-Same Direction	SB			1	1	1	3
	EB					5	5
	WB		1			6	7
Rear End	NB				2	4	6
	SB				5	20	25
	EB		1		9	24	34
	WB		1	1	19	65	86
Head On	EB x WB					1	1
Pedestrian				1			1
Total		**2**	**6**	**10**	**44**	**155**	**217**

The first severe injury crash at this intersection involved an eastbound vehicle misjudging the gap and turning left on a permissive phase in front of a westbound vehicle. The two vehicles collided and the westbound driver who was not wearing a seatbelt at the time of the crash suffered a severe injury from impacting the windshield.

The second severe injury crash occurred when a westbound vehicle misjudged the gap turning left on a permissive phase in front of an eastbound vehicle. The eastbound and westbound vehicles struck each other head on after which a second eastbound vehicle following the first also struck the westbound vehicle. The crashes resulted in multiple injuries including severe injuries to the westbound driver and passenger.

The first fatal crash at the intersection involved a westbound vehicle that turned left on a permissive phase in front of an eastbound vehicle. The eastbound vehicle hit the westbound vehicle on its passenger side door which results in the fatality of the elderly individual riding in the westbound passenger seat as well as complaint of injuries from the eastbound driver as well as the westbound driver.

The second fatal crash occurred when a westbound vehicle misjudged the gap in front of an eastbound motorcycle. The motorcyclist had to lay down their motorcycle in an attempt to stop which ejected the rider and resulted in their fatality.

The third severe injury crash involved a southbound vehicle with a red light that failed to yield while turning right and struck a westbound vehicle with the collision resulting in severe injuries to the southbound driver and passenger.

The fourth severe injury crash occurred when a westbound vehicle traveling at a high rate of speed and about to run a red light sideswiped another westbound vehicle that was stopped at the red light. The collision and aftermath resulted in the severe injury of the speeding driver and a complaint of injury from a passenger in the stopped vehicle.

The fifth severe injury crash involved two eastbound vehicles. The leading vehicle had come to traffic stopped at the light and had come to a full stop. The tailing vehicle for unknown reasons did not attempt to stop or slow but struck the stopped vehicle at full speed. The collision resulted in the severe injury of the tailing driver.

The sixth and final severe injury crash involved two westbound vehicles and similarly to before, the leading vehicle had come to a stop but the tailing vehicle failed to observe the stopped traffic. The tailing vehicle struck the stopped leading vehicle at full speed resulting in injuries to both drivers including the severe injury of the leading driver.

There was one pedestrian crash that occurred at the intersection when an eastbound vehicle turned left on a permissive phase just as a pedestrian entered the crosswalk on the north leg with a “Walk” indication. The vehicle struck the pedestrian resulting in their visible injury.

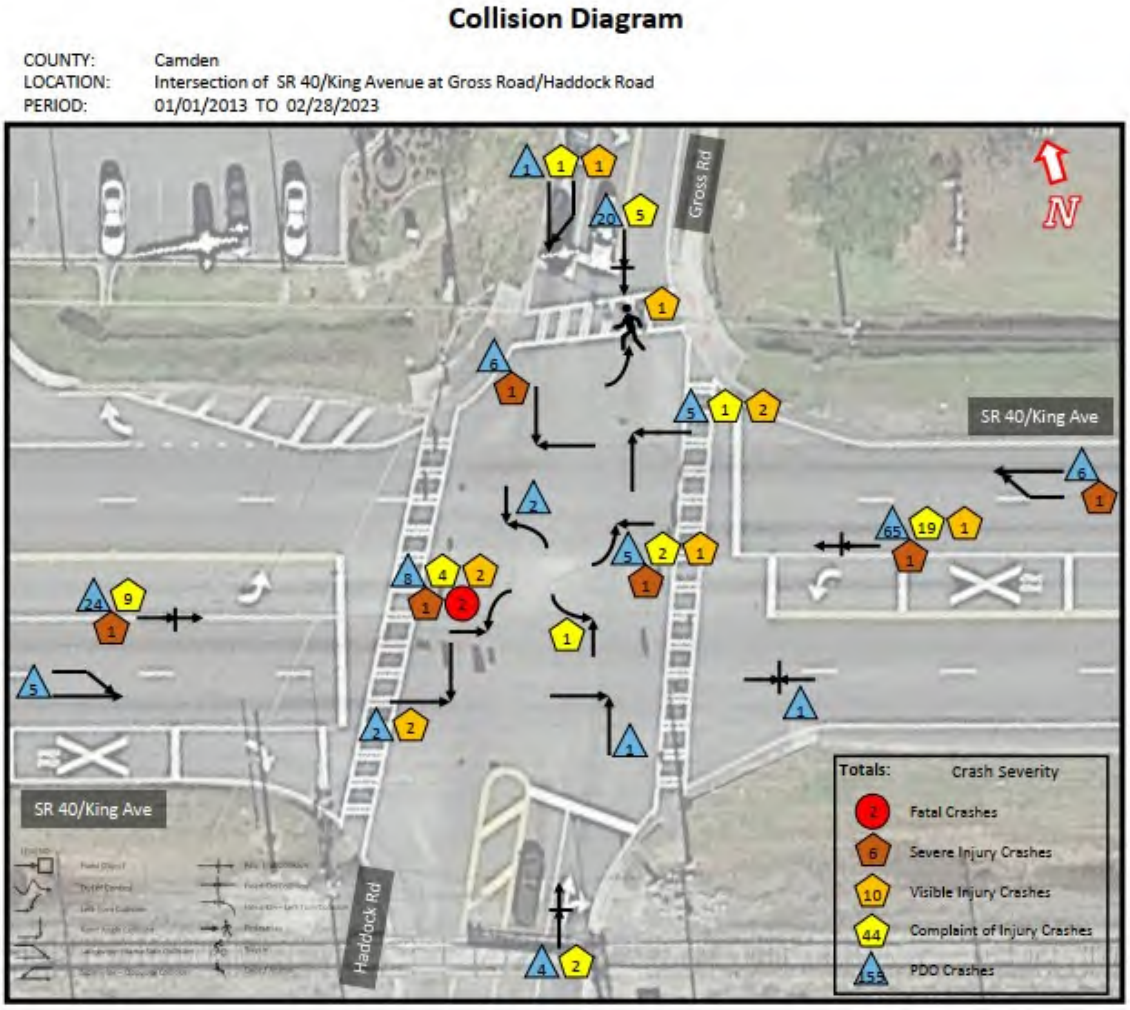


Figure 21. SR 40 at Gross Road/Haddock Road Collision Diagram

3.2.17. Gross Road/Haddock Road to J Nolan Wells

Table 27. SR 40 from Gross Road/Haddock Road to J Nolan Wells

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Rear End	EB				1		1
	WB				1	3	4
Head On	EB x WB					1	1
Total					**2**	**4**	**6**

Figure 22. SR 40 from Gross Road/Haddock Road to J Nolan Wells

3.2.18. J Nolan Wells

Table 28. SR 40 at J Nolan Wells Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	EB				1		1
Angle	SB x WB					2	2
Rear End	SB					2	2
	WB				2	5	7
Total					**3**	**9**	**12**

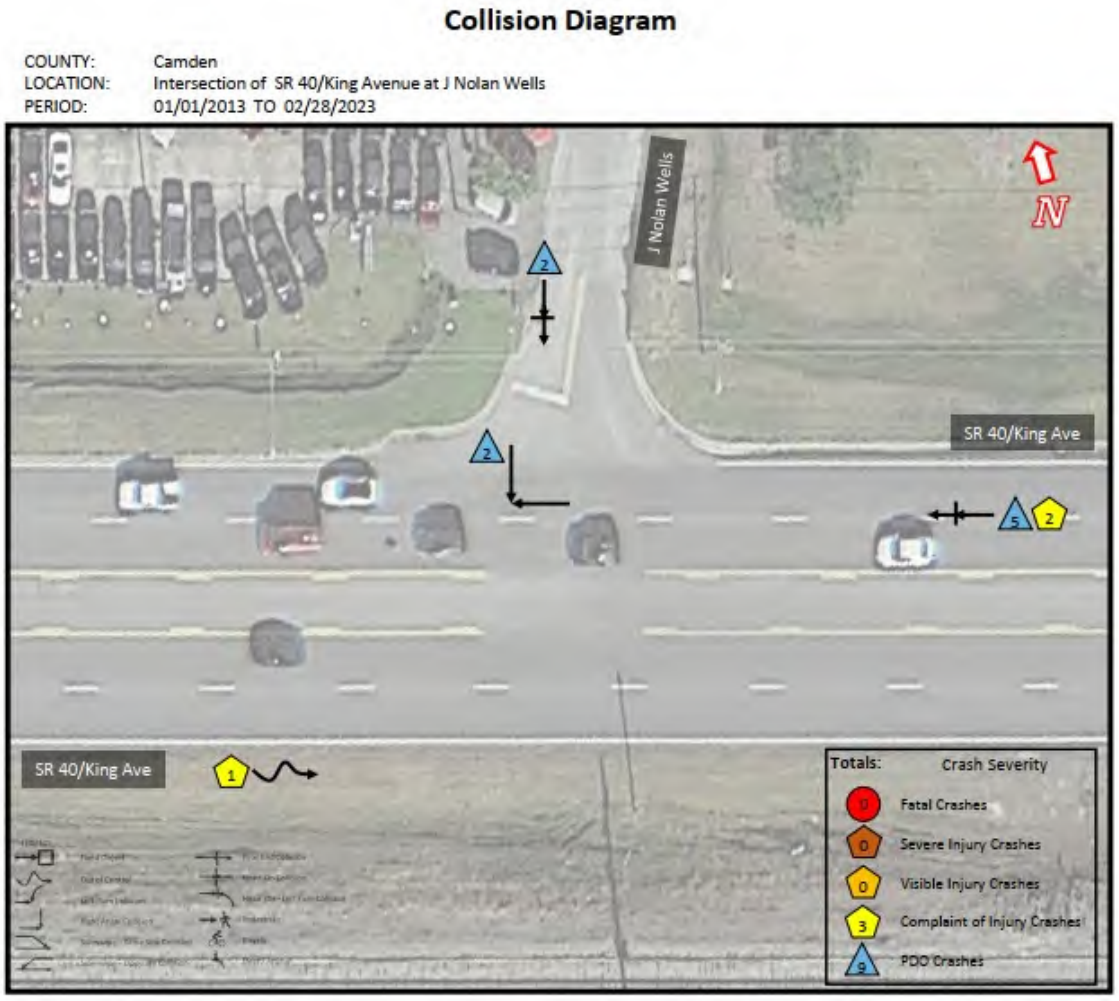


Figure 23. SR 40 at J Nolan Wells Collision Diagram

3.2.19. J Nolan Wells to Middle School Road

Table 29. SR 40 from J Nolan Wells to Middle School Road Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	EB				1		1
Sideswipe-Same Direction	WB					1	1
Rear End	EB				1		1
	WB				1	4	5
Total					**3**	**5**	**8**

Figure 24. SR 40 from J Nolan Wells to Middle School Road

3.2.20. Middle School Road

Table 30. SR 40 at Middle School Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	SB					1	1
	WB					3	3
Left Turn – Angle	SB LT x NB			1		3	4
	EB LT x WB			1	2	4	7
	WB LT x EB		1		3	1	5
Angle	NB x EB					2	2
	NB x WB					1	1
	SB x EB				1		1
	SB x WB					5	5
Sideswipe-Same Direction	NB					1	1
	EB					3	3
	WB				2	6	8
Rear End	NB					1	1
	SB					2	2
	EB			2	9	26	37
	WB			3	6	27	36
Animal						1	1
Total			**1**	**7**	**23**	**87**	**118**

One severe injury crash occurred at this intersection when a westbound vehicle turned left on a permissive phase striking an eastbound vehicle. The collision sent the eastbound vehicle off the roadway where it impacted nearby railroad equipment all resulting in the severe injuries of the eastbound driver and passenger.

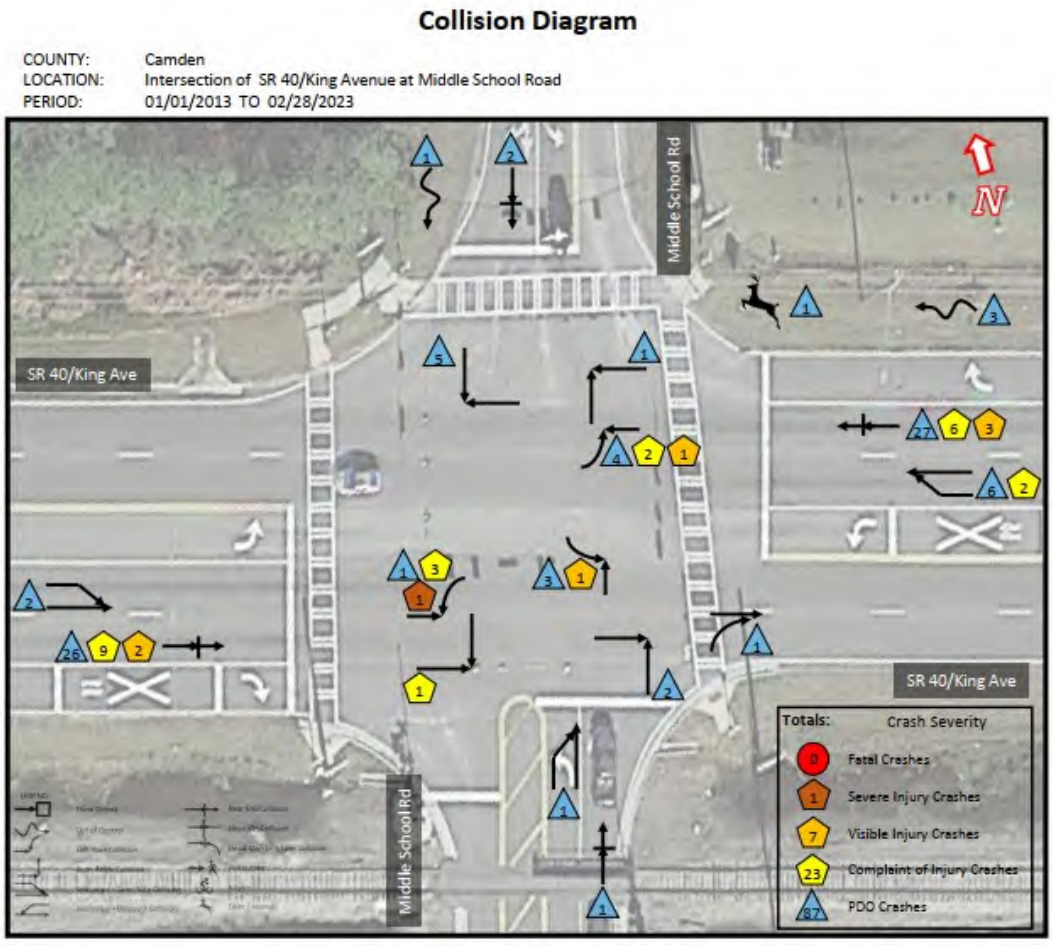


Figure 25. SR 40 at Middle School Road Collision Diagram

3.2.21. Boone Street at May Creek Street

Table 31. Boone Street at May Creek Street Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	NB			1			1
	SB					1	1
	WB					1	1
Left Turn – Angle	EB LT x WB					2	2
	WB LT x EB					1	1
Angle	NB x EB					1	1
	NB x WB					4	4
	SB x EB				1	3	4
	SB x WB			1	1	1	3
Sideswipe-Same Direction	NB					1	1
Sideswipe-Opposite Direction	NB x SB					1	1
Rear End	NB					1	1
	EB					3	3
	WB					3	3
Total				**2**	**2**	**23**	**27**

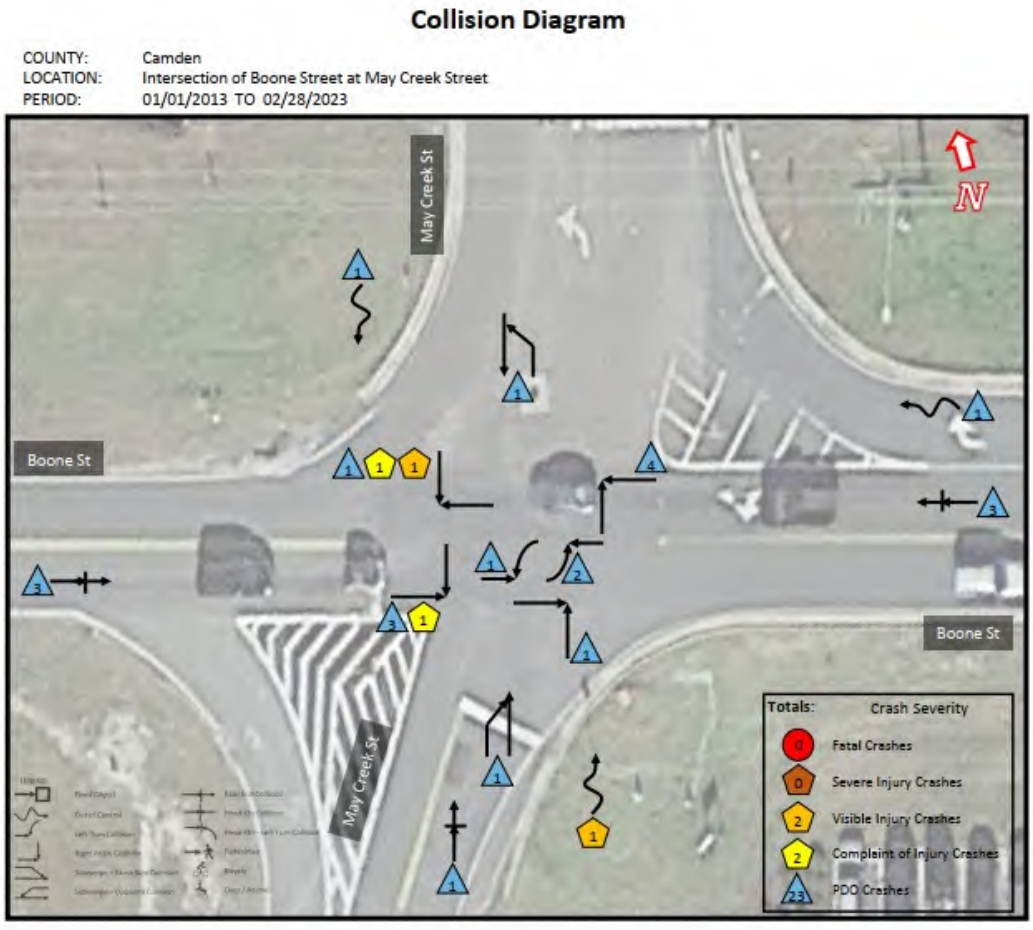


Figure 26. Boone Street at May Creek Street Collision Diagram

3.2.22. Boone Street at Boone Street (I-95 NB)

Table 32. Boone Street at Boone Street (I-95 NB) Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Angle	NB x EB				1	2	3
	NB x WB					2	2
	SB x EB				1	1	2
	SB x WB				1	1	2
Rear End	NB					1	1
	EB					1	1
	WB					1	1
Total					**3**	**9**	**12**

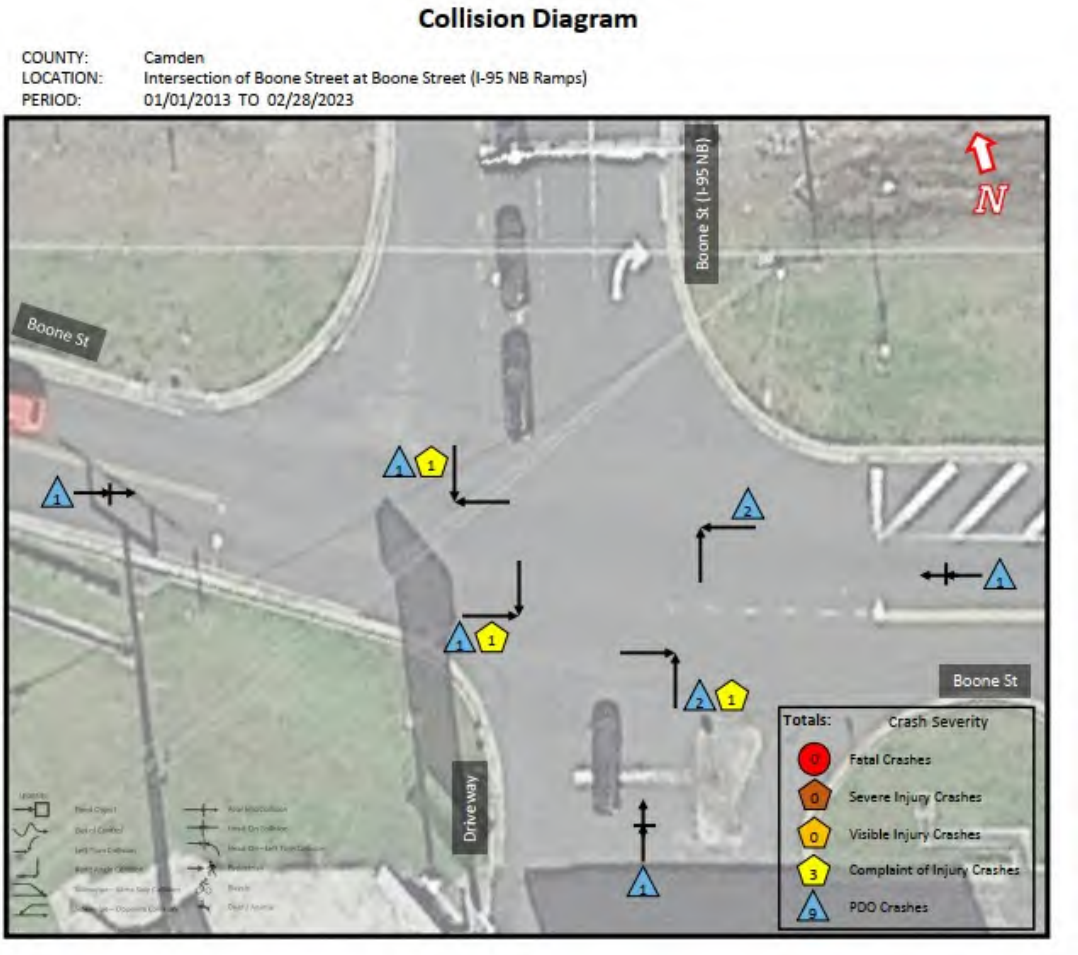


Figure 27. Boone Street at Boone Street (I-95 NB) Collision Diagram

3.2.23. Boone Street at Crown Pointe Parkway

Table 33. Boone Street at Crown Pointe Parkway Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Left Turn – Angle	NB LT x SB				1		1
	SB LT x NB					1	1
	WB LT x EB					1	1
Angle	NB x EB				1		1
	NB x WB				1	6	7
	SB x WB			1	3	10	14
Sideswipe-Same Direction	SB					1	1
Total				**1**	**8**	**22**	**31**

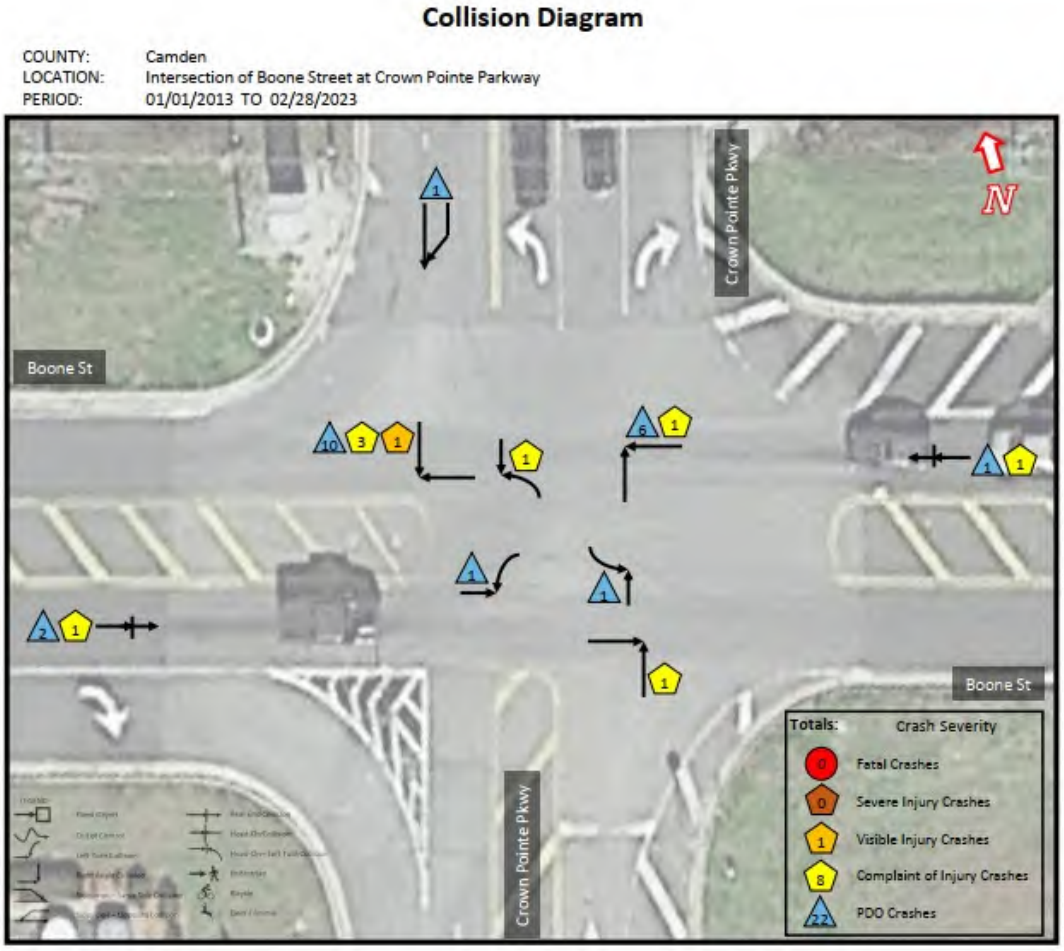


Figure 28. Boone Street at Crown Pointe Parkway Collision Diagram

3.2.24. Boone Street at Haddock Road

Table 34. Boone Street at Haddock Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Single Vehicle	SB					1	1
Left Turn – Angle	NB LT x SB				1	1	2
	SB LT x NB					1	1
Angle	NB x EB	1		1		2	4
	NB x WB					3	3
	SB x EB				1	6	7
	SB x WB		1	6	3	23	33
Sideswipe-Same Direction	NB					1	1
Rear End	NB				2	7	9
	EB					3	3
Bicycle			1				1
Total		**1**	**2**	**7**	**7**	**48**	**65**

The fatal crash at this intersection occurred when an eastbound vehicle that failed to stop or slow for the stop sign hitting a northbound vehicle causing both vehicles to depart the roadway and the eastbound vehicle to overturn which resulted in the fatality of a passenger in the eastbound vehicle.

The first severe injury crash at the intersection involved a westbound vehicle that came to a stop but did not appropriately yield to a southbound vehicle. The westbound vehicle struck the southbound vehicle on its driver side door resulting in the severe injury of the southbound driver.

The second severe injury crash occurred when an eastbound came to a stop at the intersection awaiting their turn to go. When it came the turn of the eastbound vehicle to go, the driver failed to notice a northbound bicyclist in the west leg crosswalk. The eastbound vehicle pulled forward striking the bicyclist knocking them to the ground where the rider's head hit the pavement resulting in their severe injury.

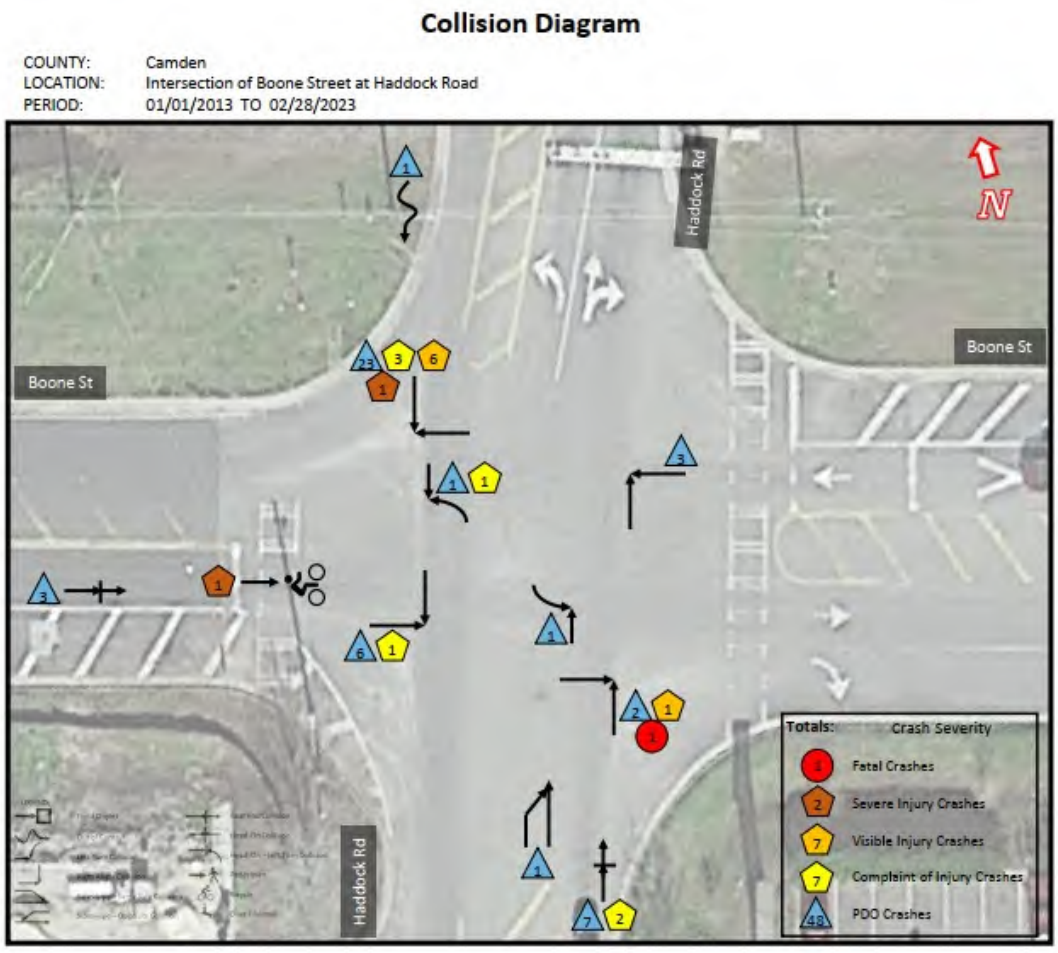


Figure 29. Boone Street at Haddock Road Collision Diagram

3.2.25. Boone Street at Middle School Road

Table 35. Boone Street at Middle School Road Intersection Crashes

Crash Type	Direction(s)	Crash Severity					Total
		K	A	B	C	O	
Rear End	EB				1	2	3
	WB					1	1
Total					**1**	**3**	**4**

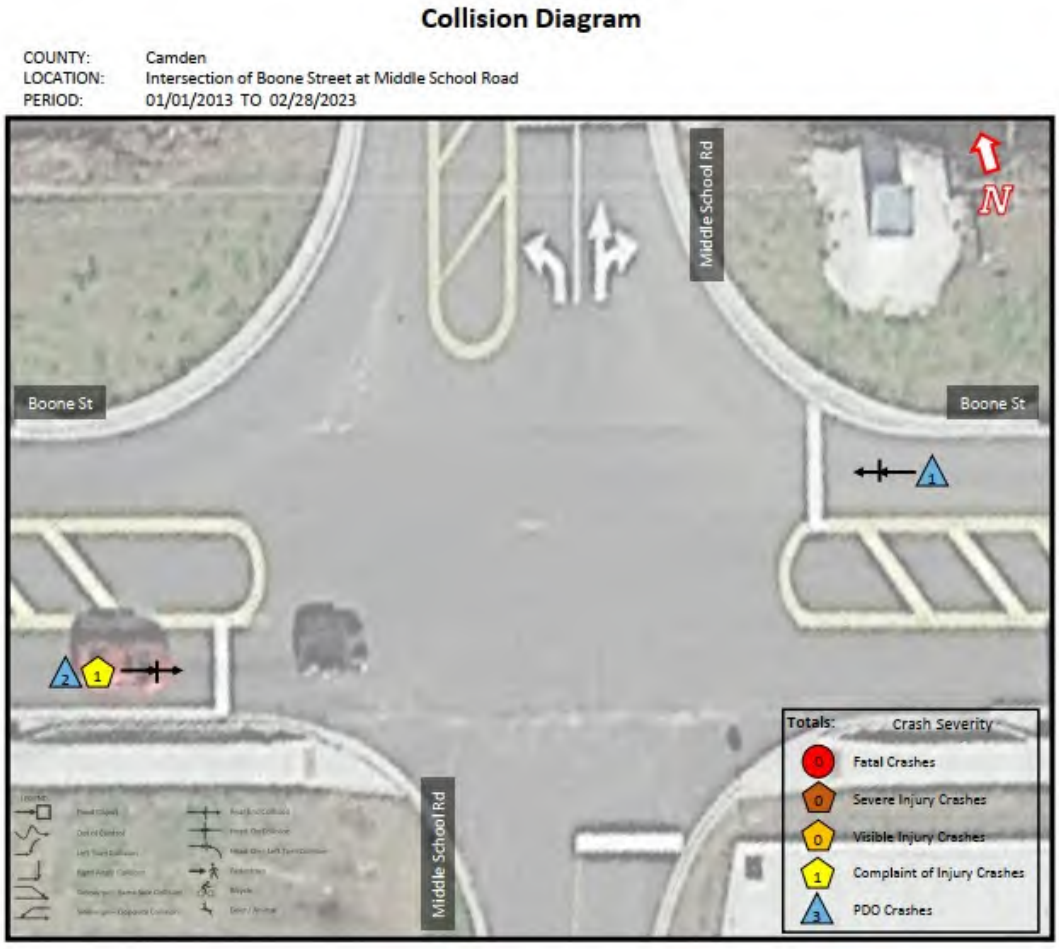


Figure 30. Boone Street at Middle School Road Collision Diagram

4. Field Observations/Recommendations

To provide a comprehensive safety analysis of the SR 40 / King Avenue corridor, it was divided between its primary intersections. Findings and recommendations present across the entire length of the study corridor, and not specific to any one location, were also analyzed as the overall corridor. **Figure 31** depicts the breakdown of the locations for this analysis as follows:

1. Overall Corridor
2. I-95 SB / May Creek St
3. I-95 NB / Boone St
4. BP Gas Station
5. JSJ Rd
6. Gardenia Blossom Rd
7. Lakes Blvd / Crown Pointe Pkwy
8. Queen St
9. Tiffany St
10. Victoriana Rd
11. Gross Rd / Haddock Rd
12. J Nolan Wells
13. Middle School Rd
14. Boone St at May Creek St
15. Boone St at Boone St (I-95 NB)
16. Boone St at Crown Pointe Pkwy
17. Boone St at Haddock Rd
18. Boone St at Middle School Rd

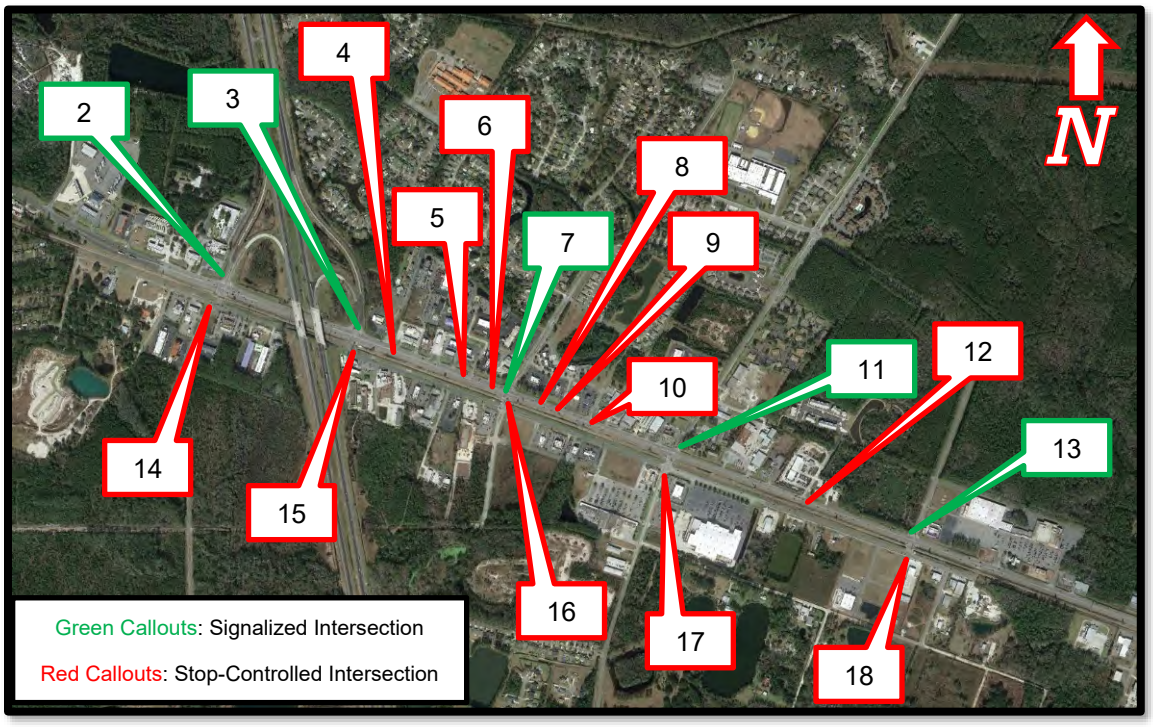


Figure 31. Primary Intersections of SR 40 / King Avenue

Field Observations observed during the RSA will be listed for each intersection and segment. Safety recommendations will be provided for each intersection and segment as well.

4.1. Overall Corridor

Figure 32. Overall Corridor of SR 40/King Avenue

This section focuses on concerns predominant throughout the whole study corridor and are not specific to an individual intersection.

4.1.1. Field Observations

Table 36. Overall Corridor Field Observations/Comments

#	Location	Field Observation/Comment
1	Overall Corridor	There is a Raised Concrete Median along the SR 40 corridor from I-95/May Creek St to JSJ Road but not from JSJ Road to Middle School Road
2	Overall Corridor	There are no retroreflective backplates and supplemental signal heads at the signalized intersections except for 1inch retroreflective backplates at Middle School Road
3	Overall Corridor	There are 3 lanes in each direction from I-95/May Creek St to Lakes Blvd/Crown Pointe Pkwy and only 2 lanes in each direction from Lakes Blvd/Crown Pointe Pkwy to Middle School Road
4	Overall Corridor	Multiple faded pavement markings along mainline and side streets from Gross Rd/Haddock Rd to JSJ Rd (crosswalks, stop bars, lane lines, etc.)
5	Overall Corridor	There are multiple locations along the corridor that are dark at night
6	Overall Corridor	There is a long undivided series of right turning lanes from Gross Rd/Haddock Rd to JSJ Rd

Figure 33. Near Middle School Road Where the Corridor is Dark at Night

Figure 34. The Existing Signal Heads at Lakes Crown Blvd Missing Backplates

4.1.2. Safety Recommendations

Table 37. Overall Corridor Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
1	Install a Raised Concrete Median along the corridor from JSJ Road to Middle School Road	High	Long	$750,000	OTO Safety	1
2	Install retroreflective backplates and supplemental signal heads (Near side right and far side left) at all signalized intersections	Moderate	Intermediate	$250,000	D5 Traffic Ops	2
3	Reconfigure Lanes (reduce to 2 EB Lanes, 2 WB Lanes) from east of Truss Plant Road to BP Gas Station Entrance	Moderate	Intermediate	$200,000	OTO Safety	3
4	Refresh faded pavement markings along mainline and side streets (crosswalks, stop bars, lane lines, etc.)	Moderate	Short	Low	D5 Maintenance	4
5	Install Lighting along the corridor	Moderate	Intermediate	High	OTO Safety	5
6	Stripe out right turning lanes from JSJ Rd to Gross Rd/Haddock Rd	Moderate	Short	Low	D5 Maintenance	6
7	Convert all major approaches at Signalized intersections from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day	Moderate	Short	Low	D5 Maintenance	-

4.2. I-95 SB / May Creek St

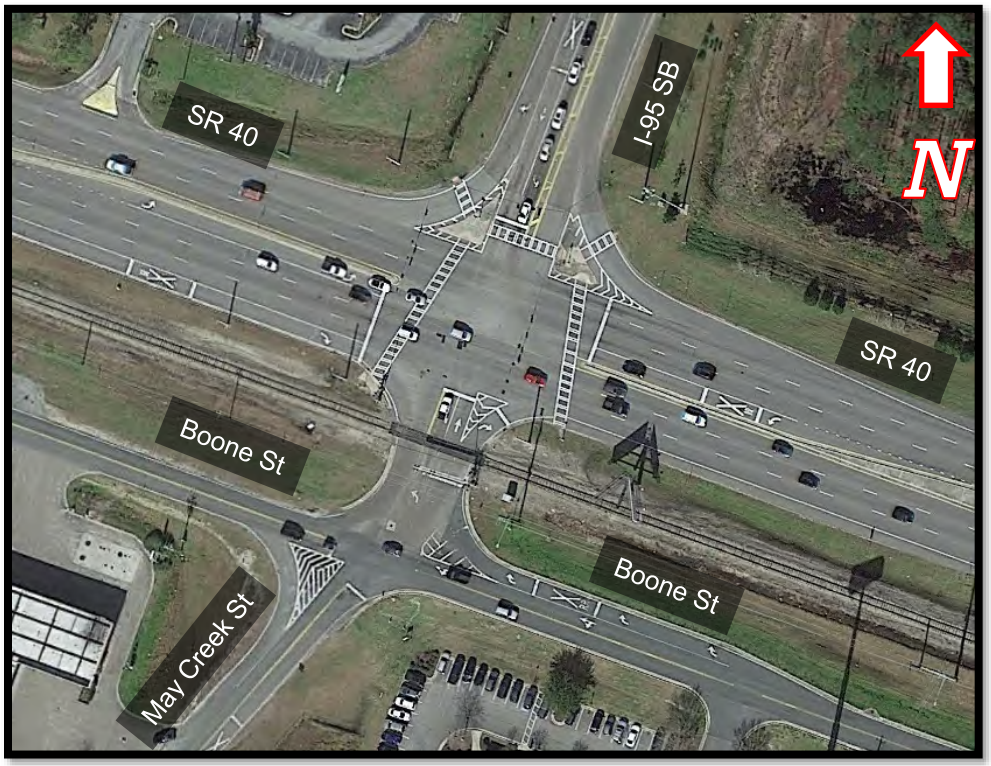


Figure 35. SR 40 at I-95 SB / May Creek St Intersection

This section refers to the intersection of SR 40 at I-95 SB / May Creek St.

4.2.1. Field Observations

Table 38. I-95 SB / May Creek St Field Observations/Comments

#	Location	Field Observation/Comment
7	I-95 SB / May Creek St	There are multiple overlapping existing signs on the north leg of the intersection
8	I-95 SB / May Creek St	There is a downed "I-95 South" Sign in the concrete pedestrian island in the northeast quadrant
9	I-95 SB / May Creek St	The northbound right turning striped island is too small to be a concrete island and is currently stop controlled
10	I-95 SB / May Creek St	Broken ADA ramp in NW quadrant
11	I-95 SB / May Creek St	The intersection has 5-section signal heads

The signalized intersection of SR 40 at I-95 SB/May Creek Street experienced 189 total crashes in the ten-year two-month study period. The primary crash type was rear end collisions making up 42% (80 of the 189) of the intersection's total crashes. Of the 80 rear end collisions, 35% (28 of the 80) occurred on the southbound approach, 31% (25 of the 80) occurred on the eastbound approach, 19% (15 of the 80) occurred on the westbound approach, and 15% (12 of the 80) occurred on the northbound approach. The second most common crash type was left turn angle crashes making up 34% (65 of the 189) of the intersection's total crashes. Of the 65 left turn angle crashes, 78% (51 of the 65) involved vehicles from the eastbound left turning

and westbound approach, 20% (13 of the 65) involved vehicles from the westbound left turning and eastbound approach, and 2% (1 of the 65) involved vehicles from the southbound left turning and northbound approach.

Figure 36. Signage from I-95 Southbound Facing Southbound at the Intersection

Figure 37. Damaged ADA Ramp

4.2.2. Safety Recommendations

Table 39. I-95 SB / May Creek St Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency	Field Observation Addressed
7	Remove/space out existing signage on the north leg to prevent clutter and overlap	Low	Short	Low	D5 Maintenance	7
8	Remove "I-95 South" Sign from concrete pedestrian island and install the sign in the concrete pedestrian island to the east of the pedestrian pushbuttons to prevent the sign from being hit by eastbound left turning trucks in the northeast quadrant	Low	Short	Low	D5 Maintenance	8
9	Remove northbound right turning striped island and install type C striping in the radius of the northbound approach for right turning vehicles	Low	Intermediate	Low	D5 Maintenance	9
10	Repair broken ADA ramp in NW quadrant	Low	Short	Low	D5 Maintenance	10
11	Perform full signal upgrade including updated mast arms, FYAs, signal heads, cabinet, etc.	High	Long	$950,000.00	OTO Safety	11
12	Extend westbound right turn lane on SR 40/King Ave	Moderate	Intermediate	$172,000.00	OTO Safety	-
13	Convert both major approaches from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day from at least 12:00 to 22:00	Moderate	Short	Low	D5 Maintenance	-

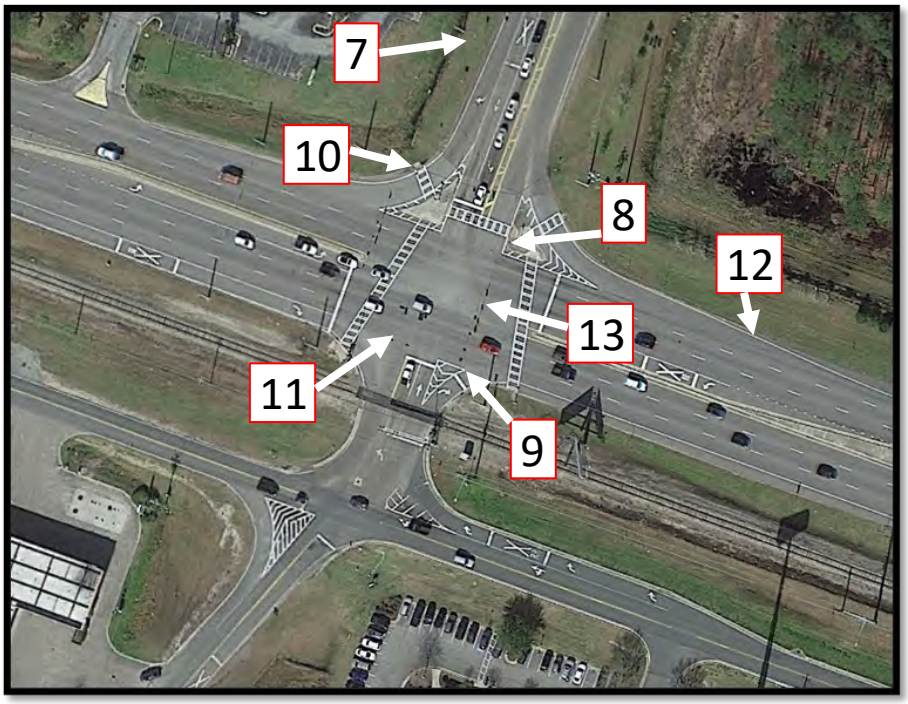


Figure 38. I-95 SB / May Creek St's Recommendations

4.3. I-95 SB / May Creek St to I-95 NB / Boone St Segment

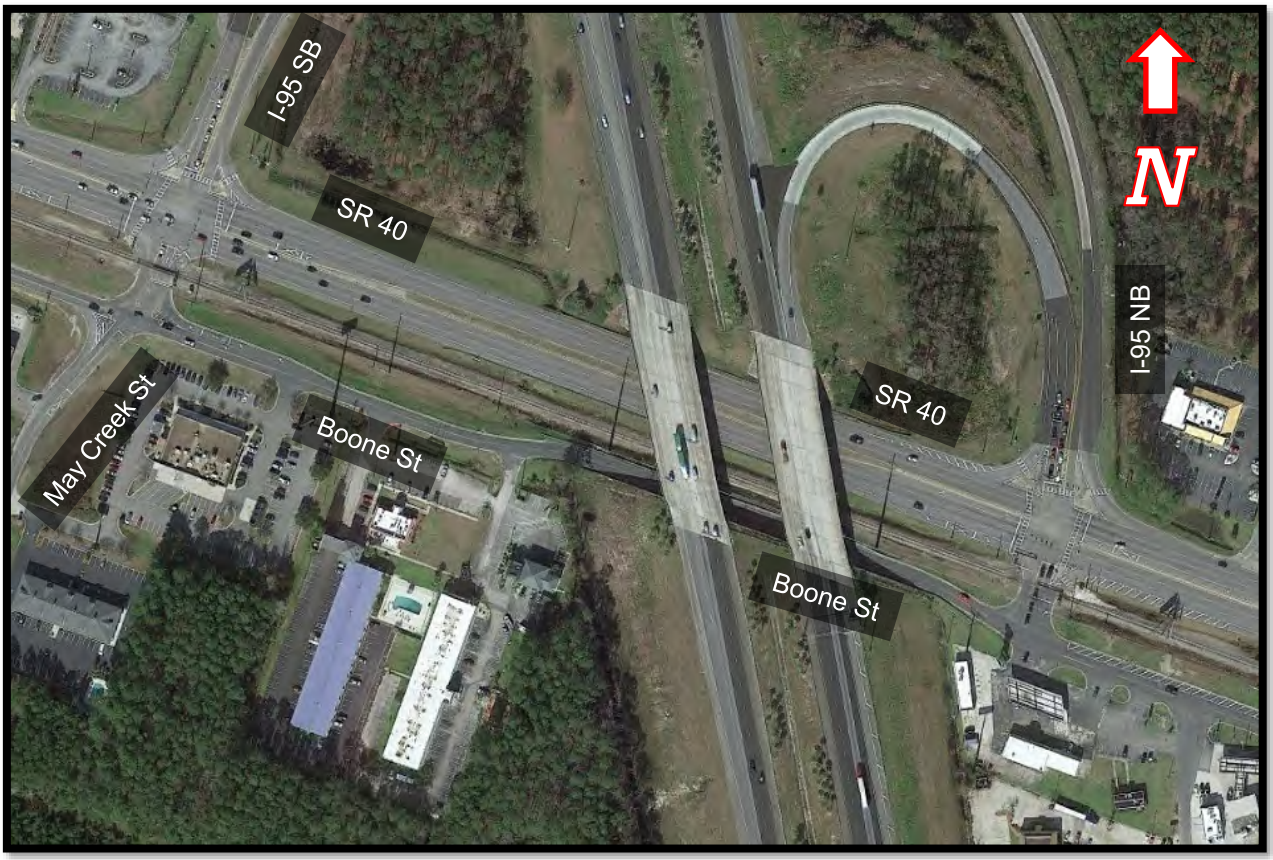


Figure 39. SR 40 from I-95 SB / May Creek St to I-95 NB / Boone St Segment

This section refers to the segment of SR 40 from I-95 SB / May Creek St to I-95 NB / Boone St.

4.3.1. Field Observations

Table 40. I-95 SB / May Creek St to I-95 NB / Boone St Field Observations/Comments

#	Location	Field Observation/Comment
12	I-95 SB / May Creek St to I-95 NB / Boone St	There are multiple existing signs that overlap

The segment of SR 40 from I-95 SB / May Creek St to I-95 NB / Boone St experienced 10 total crashes in the ten-year two-month study period. The primary crash type was sideswipe same collisions making up 90% (9 of the 10) of the segment's total crashes. Of the 9 sideswipe same vehicle crashes, 67% (6 of the 9) occurred with eastbound vehicles and 33% (3 of the 9) occurred with westbound vehicles. The second most prevalent crash type along the segment was rear end collisions making up 10% (1 of the 10) of the intersection's total crashes. The one rear end collision involved westbound vehicles.

4.3.2. Safety Recommendations

Table 41. I-95 SB / May Creek St to I-95 NB / Boone St Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency	Field Observation Addressed
14	Remove/space out existing signage to prevent clutter and overlap	Short	Short	Short	D5 Maintenance	12

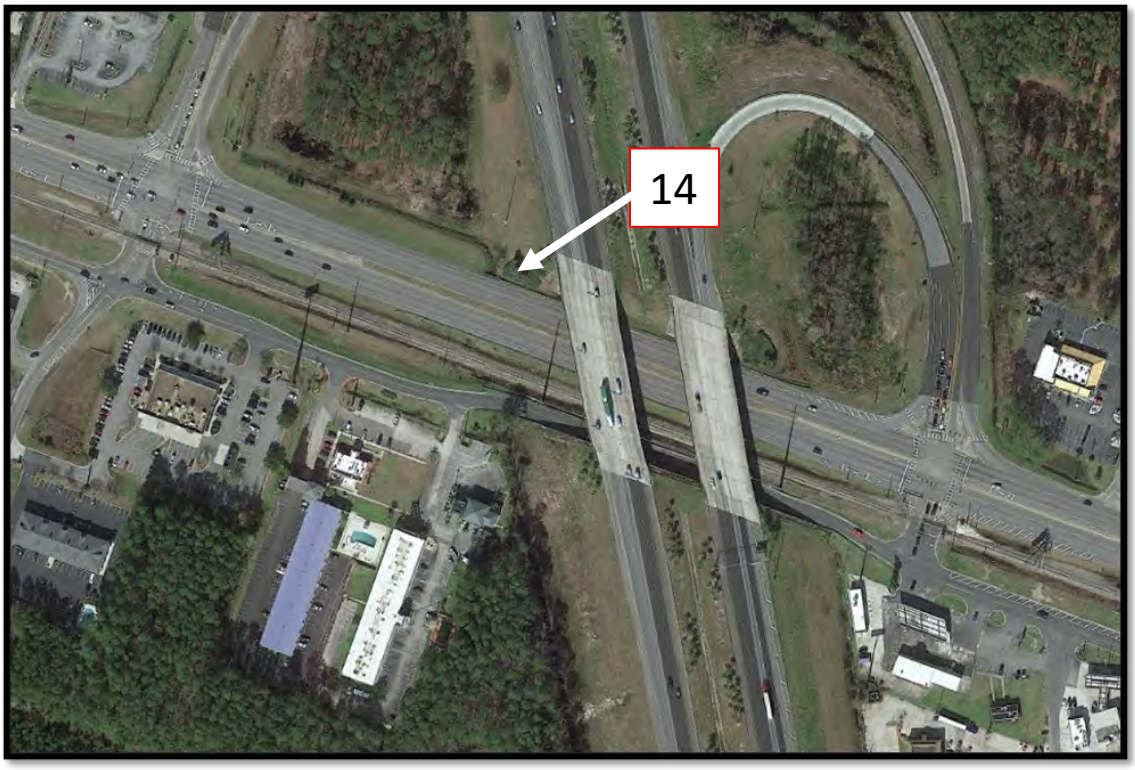


Figure 40. I-95 SB / May Creek St to I-95 NB / Boone St's Recommendations

4.4. I-95 NB / Boone Street

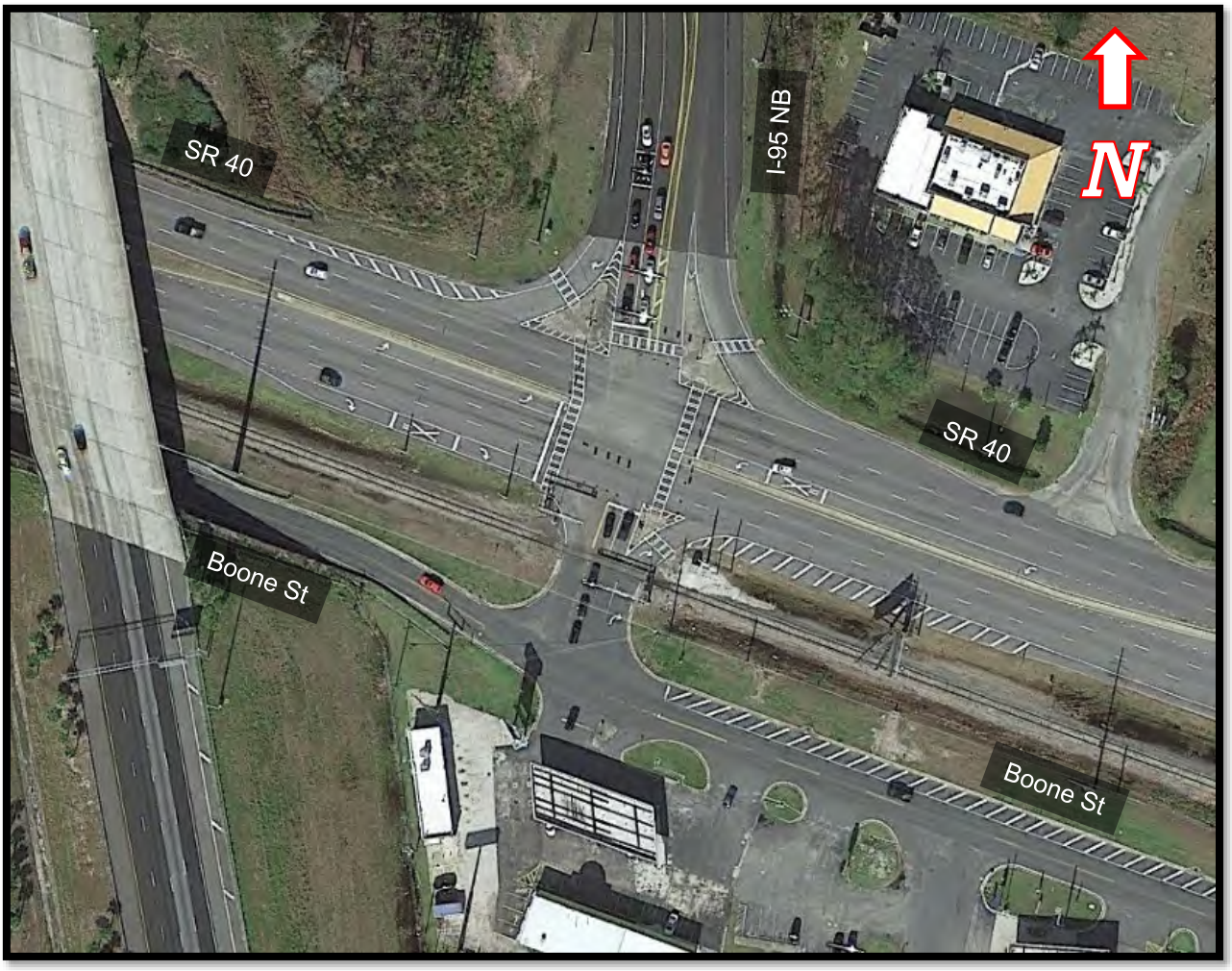


Figure 41. SR 40 from I-95 NB / Boone St

This section refers to the intersection of SR 40 at I-95 NB / Boone St.

4.4.1. Field Observations

Table 42. I-95 NB / Boone St Field Observations/Comments

#	Location	Field Observation/Comment
13	I-95 NB / Boone St	There is backward hatching in the NW quadrant
14	I-95 NB / Boone St	The intersection has 5-section signal heads
15	I-95 NB / Boone St	The pedestrian crosswalk bends at the median nose and is not a straight line from one ADA Ramp to the other
16	I-95 NB / Boone St	There is existing I-95 NB signage on east leg median past I-95 NB

The signalized intersection of SR 40 at I-95 NB / Boone St experienced 213 total crashes in the ten-year two-month study period. The primary crash type was rear end collisions making up 45% (95 of the 213) of the

intersection's total crashes. Of the 95 rear end crashes, 35% (33 of the 95) occurred with southbound vehicles, 33% (31 of the 95) occurred with westbound vehicles, 24% (23 of the 95) occurred with eastbound vehicles, and 8% (8 of the 95) occurred with northbound vehicles. The second most prevalent crash type at the intersection was left turn angle collisions making up 33% (71 of the 213) of the intersection's total crashes. Of the 71 left turn angle crashes, 75% (53 of the 71) occurred with eastbound left turning and westbound vehicles, 23% (16 of the 71) occurred with westbound left turning and eastbound vehicles, and 3% (2 of the 71) occurred with northbound left turning and southbound vehicles.

Figure 42. Southbound View of the Bending Crosswalk

4.4.2. Safety Recommendations

Table 43. I-95 NB / Boone St Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency	Field Observation Addressed
15	Restripe backwards hatching in the NW quadrant	Low	Short	Low	D5 Maintenance	13
16	Install FYA Signal Heads	Low	Short	$50,000	D5 Traffic Ops	14
17	Move median nose and stop bar on the west leg back and straighten the pedestrian crosswalk	Moderate	Short	Medium	D5 Maintenance	15
18	Remove existing I-95 NB signage on east leg median	Low	Short	Low	D5 Maintenance	16
19	Extend westbound right turn lane on SR 40/King Ave in tandem with Lane Reconfiguration	Moderate	Intermediate	Medium	OTO Safety	-
20	Convert both major approaches from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day from at least 6:00 to 19:00	Moderate	Short	Low	D5 Maintenance	-

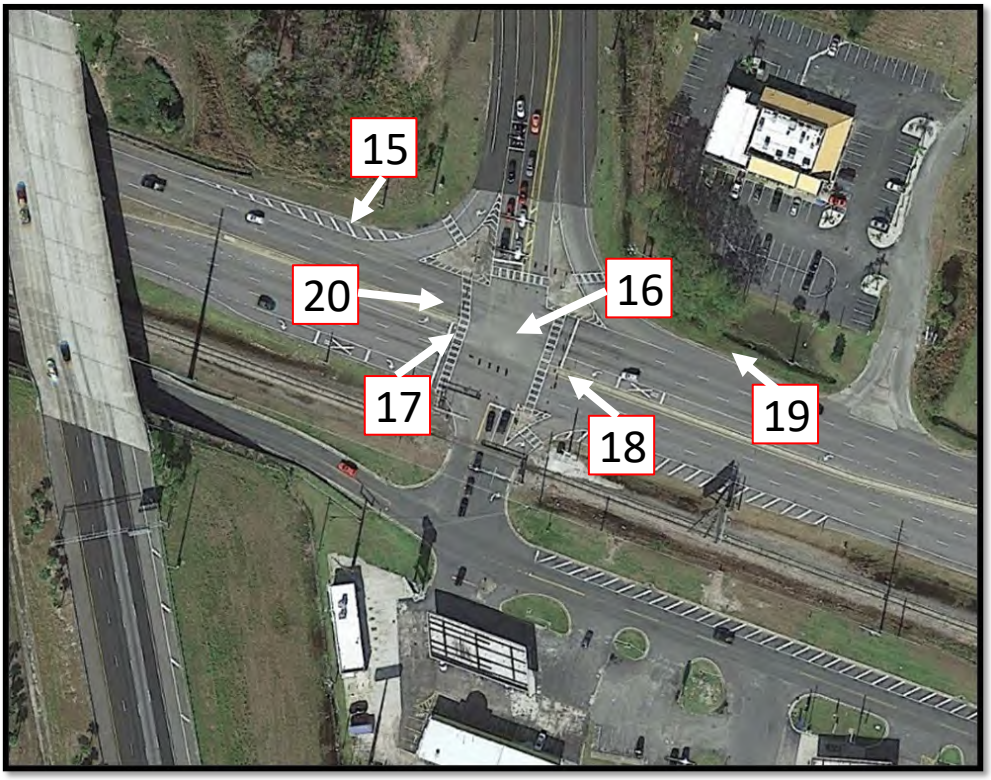


Figure 43. I-95 NB / Boone Street's Recommendations

4.5. I-95 NB / Boone St to BP Gas Station Driveway

Figure 44. SR 40 from I-95 NB / Boone St to BP Gas Station Driveway Segment

This section refers to the segment of SR 40 from I-95 NB / Boone St to BP Gas Station Driveway.

4.5.1. Field Observations

The segment of SR 40 from Bradwell Institute Driveway to Olive Street experienced 5 total crashes in the ten-year two-month study period.

There are individual recommendations for this location, however they are a part of the overall corridor recommendations.

4.6. BP Gas Station Driveway

Figure 45. SR 40 at BP Gas Station Driveway Intersection

This section refers to the intersection of BP Gas Station Driveway at SR 40.

4.6.1. Field Observations

Table 44. BP Gas Station Driveway Field Observations/Comments

#	Location	Field Observation/Comment
17	BP Gas Station Driveway	Vehicles are turning right into right out lane of the BP exit
18	BP Gas Station Driveway	The eastbound merge lane across from the BP Gas Station Entrance is notably short

The unsignalized, minor stop-controlled intersection of BP Gas Station Driveway at SR 40 experienced 29 crashes during the ten-year two-month study period. The primary crash type was angle collisions making up 48% (14 of the 29) of the intersection's total crashes. Of the 14 angle crashes, 57% (8 of the 14) occurred with southbound and westbound vehicles, and 43% (6 of the 14) occurred with southbound and eastbound vehicles. The second most prevalent crash type at the intersection was sideswipe same collisions making up 24% (7 of the 29) of the intersection's total crashes. Of the 7 sideswipe same crashes, 71% (5 of the 7) occurred with westbound vehicles and29% (2 of the 7) occurred with eastbound vehicles.

4.6.2. Safety Recommendations

Table 45. BP Gas Station Driveway Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency	Field Observation Addressed
21	Make the right turn out lane of the BP exit smaller to reduce driver desire to enter the exit and install "Do Not Enter" signage as well as "No Left Turn" signage at the same exit	Moderate	Short	Low	D5 Maintenance	17
22	Convert the intersection into a Reduced Conflict U-Turn (RCUT)	Moderate	Intermediate	$175,000	OTO Safety	18

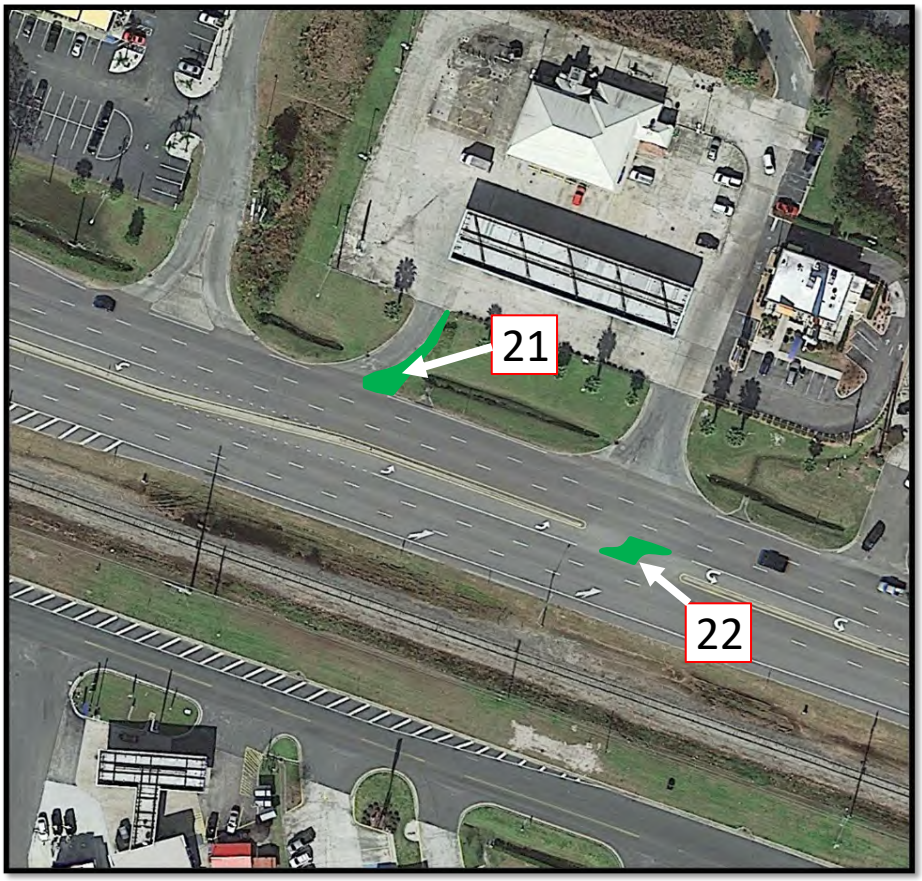


Figure 46. BP Gas Station Driveway's Recommendations

4.7. BP Gas Station Driveway to JSJ Rd

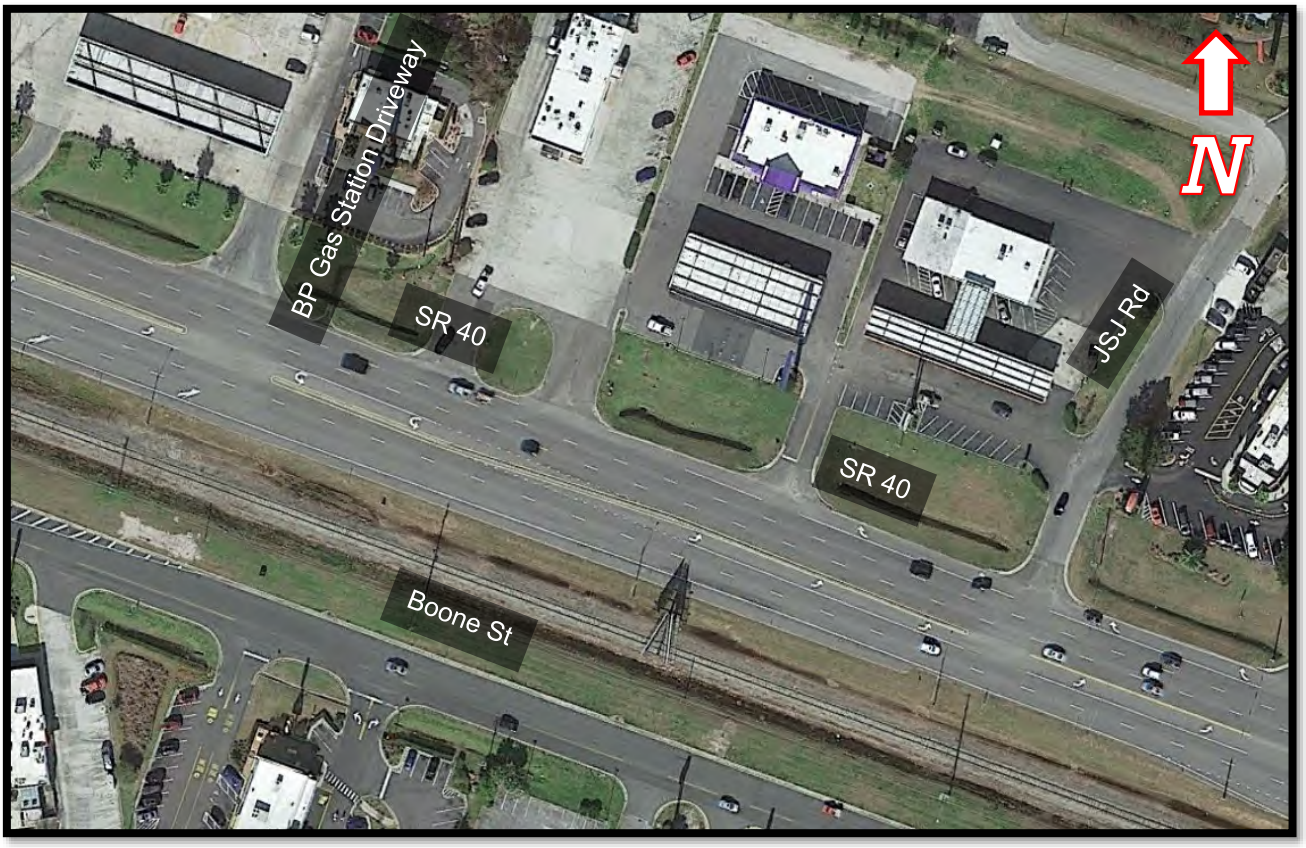


Figure 47. BP Gas Station Driveway to JSJ Rd Segment

This section refers to the segment of BP Gas Station Driveway to JSJ Rd at SR 40.

4.7.1. Field Observations

Table 46. BP Gas Station Driveway to JSJ Rd Observations/Comments

#	Location	Field Observation/Comment
19	BP Gas Station Driveway to JSJ Rd	There is a substandard acceleration lane on the westbound section of SR 40 leaving the Shell Gas Station

The segment of SR 40 from BP Gas Station Driveway to JSJ Rd experienced 18 total crashes in the ten-year two-month study period. The primary crash type was tied between angle collisions and sideswipe same direction collisions making up 33% (6 of the 18) of the intersection's total crashes. Of the 6 angle crashes, 57% (8 of the 6) occurred with southbound and westbound vehicles, and 43% (6 of the 14) occurred with southbound and eastbound vehicles.

4.7.2. Safety Recommendations

Table 47. BP Gas Station Driveway to JSJ Rd Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency	Field Observation Addressed
23	Stripe out short acceleration lane on the north quadrant of the segment	Low	Short	Low	D5 Maintenance	19

Figure 48. BP Gas Station Driveway to JSJ Rd's Recommendations

4.8. JSJ Road

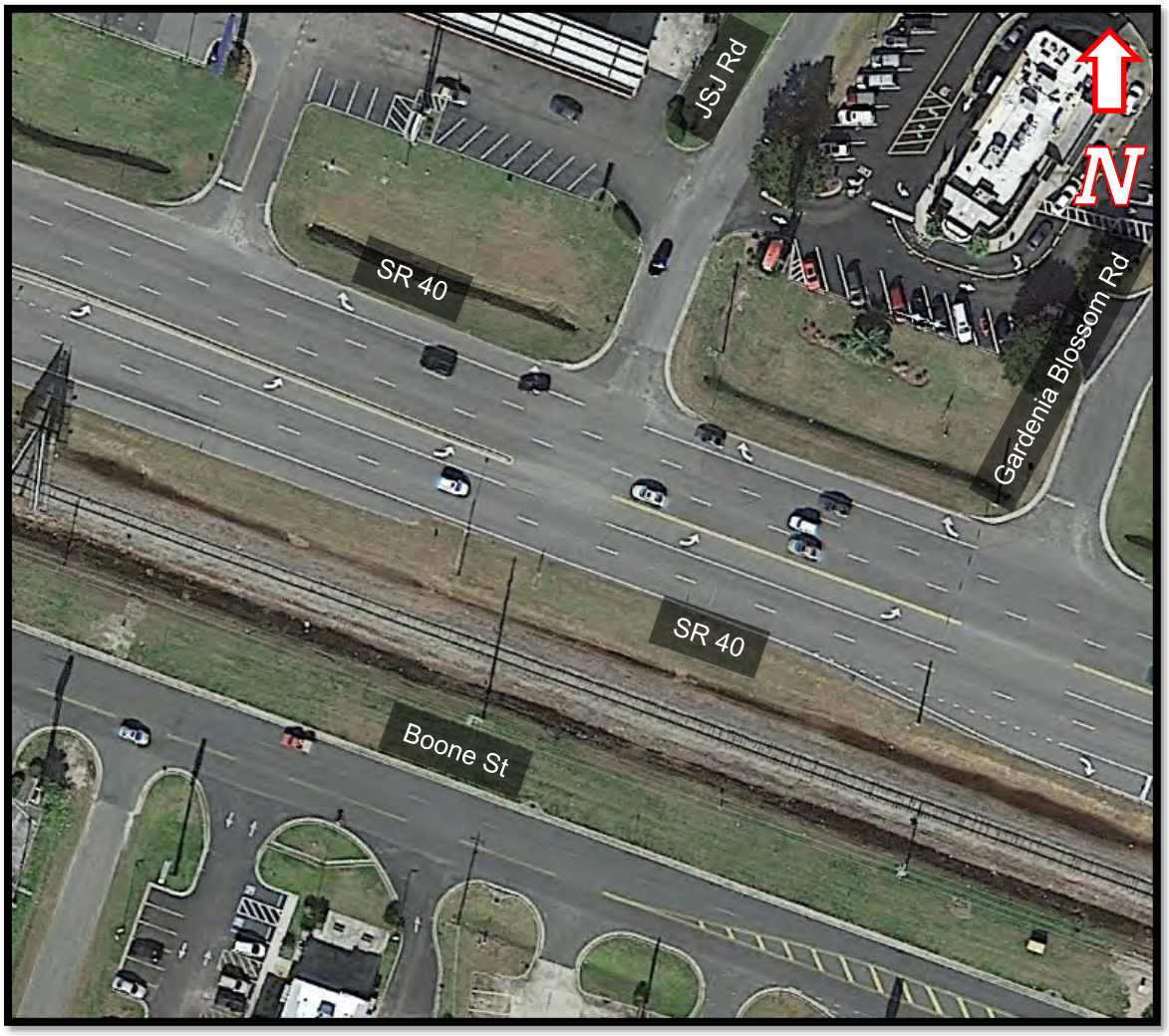


Figure 49. SR 40 at JSJ Road Intersection

This section refers to the SR 40 at JSJ Road intersection.

4.8.1. Field Observations

Table 48. JSJ Road Field Observations/Comments

#	Location	Field Observation/Comment
20	JSJ Rd	The stop sign at JSJ Road is below standard height

The unsignalized, minor stop-controlled intersection of JSJ Road at SR 40 experienced 31 crashes during the ten-year two-month study period. The primary crash type was angle collisions making up 52% (16 of the 31) of the intersection's total crashes. Of the 16 angle crashes, 88% (14 of the 16) occurred with southbound and westbound vehicles, and 12% (2 of the 16) occurred with southbound and eastbound vehicles. The second most prevalent crash type at the intersection was left turn angle collisions making up 19% (6 of the 31) of the intersection's total crashes. Of the 6 left turn angle crashes, all 6 occurred with eastbound left turning and westbound vehicles.

4.8.2. Safety Recommendations

Table 49. JSJ Road Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency	Field Observation Addressed
24	Replace existing stop sign to be at the appropriate height	Low	Short	Low	D5 Maintenance	20
25	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Moderate	Intermediate	$100,000.00	OTO Safety	-

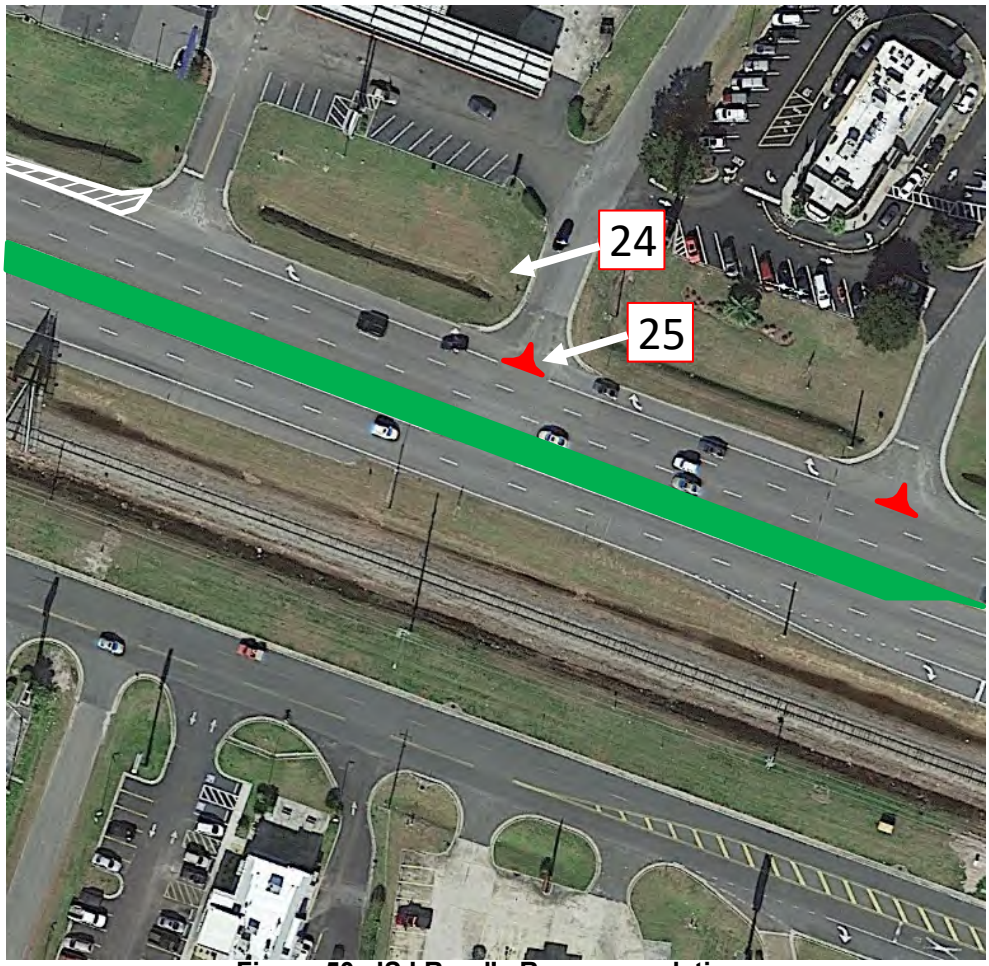


Figure 50. JSJ Road's Recommendations

4.9. Gardenia Blossom Road

Figure 51. SR 40 at Gardenia Blossom Road

This section refers to the intersection of SR 40 at Gardenia Blossom Road.

4.9.1. Field Observations

Table 50. Gardenia Blossom Road Field Observations/Comments

#	Location	Field Observation/Comment
21	Gardenia Blossom Road	The Gardenia Blossom Road is approximately 250 feet from the center of the Crown Pointe Parkway intersection

The unsignalized, minor stop-controlled intersection of SR 40 at Gardenia Blossom Rd experienced 5 total crashes in the ten-year two-month study period.

Figure 52. Minor Approach of Gardenia Blossom Road

4.9.2. Safety Recommendations

Table 51. Gardenia Blossom Road Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
26	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Low	Intermediate	$100,000	D5 Maintenance	21

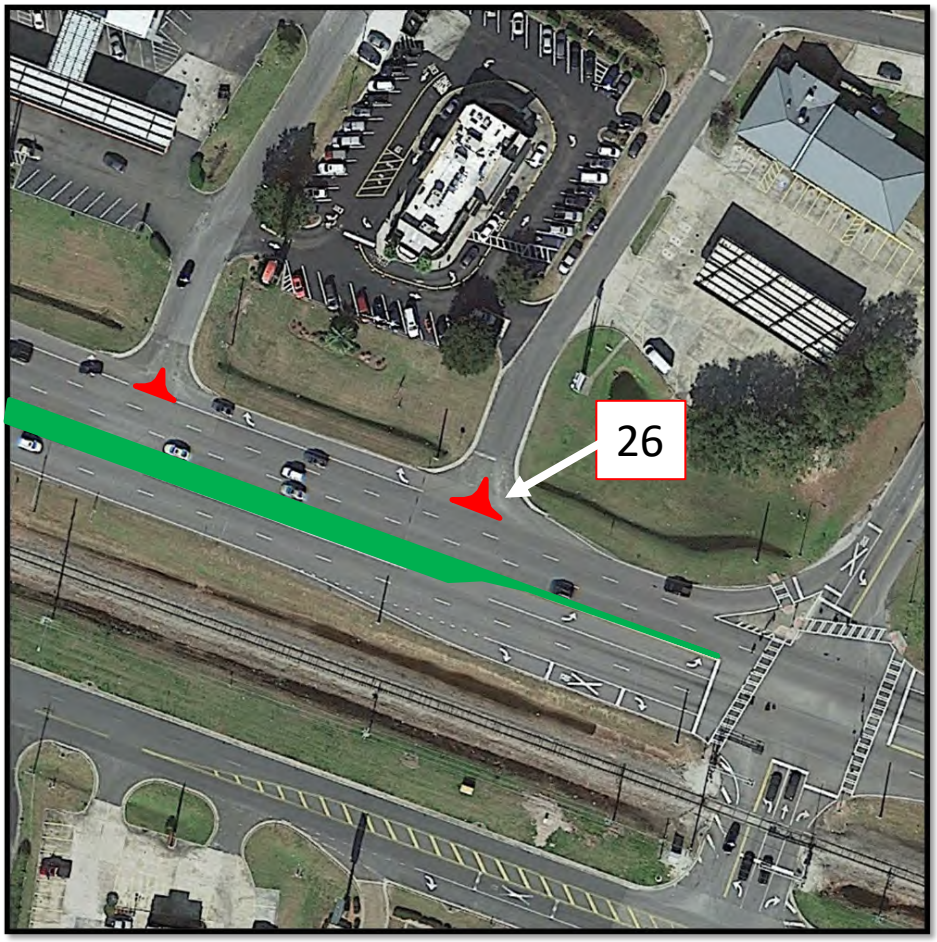


Figure 53. Gardenia Blossom Road's Recommendations

4.10. Lakes Boulevard / Crown Pointe Parkway

Figure 54. SR 40 at Lakes Boulevard / Crown Pointe Parkway

This section refers to the intersection of SR 40 at Lakes Boulevard / Crown Pointe Parkway

4.10.1. Field Observations

Table 52. Lakes Boulevard / Crown Pointe Parkway Field Observations/Comments

#	Location	Field Observation/Comment
22	Lakes Boulevard / Crown Pointe Parkway	On the southbound right turn lane there is an existing stop bar and yield sign
23	Lakes Boulevard / Crown Pointe Parkway	The countdown pedestrian head in the southeast quadrant is not counting down
24	Lakes Boulevard / Crown Pointe Parkway	Existing intersection has 5-section signal heads

The signalized intersection of Lakes Boulevard / Crown Pointe Parkway at SR 40 experienced 124 total crashes during the ten-year two-month study period. The primary crash type was Rear End collisions making up 60.5% (75 of the 124 total) of the intersection's crashes. Of the 75 rear end crashes, 36% (27 of the 75) were eastbound crashes, 35% (26 of the 75) were westbound crashes, and 29% (22 of the 75) were southbound crashes. The second most frequent crash type was left turn angle crashes making up 16.1% (20 of the 124) of the intersection's crashes. Of the 20 left turn angle crashes, 50% (10 of the 20) were with eastbound left turning and westbound vehicles, 40% (8 of the 20) were with westbound left turning and eastbound vehicles, 5% (1 of the 20) were with northbound left turning and southbound vehicles, and 5% (1 of the 20) were with westbound left turning and eastbound vehicles.

Figure 55. Southbound Right Turn Lane from Observation 22

4.10.2. Safety Recommendations

Table 53. Lakes Boulevard / Crown Pointe Parkway Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
27	Remove Southbound right turn stop bar	Low	Short	Low	D5 Maintenance	22
28	Repair existing countdown pedestrian head in the southeast quadrant	Low	Short	Low	D5 Maintenance	23

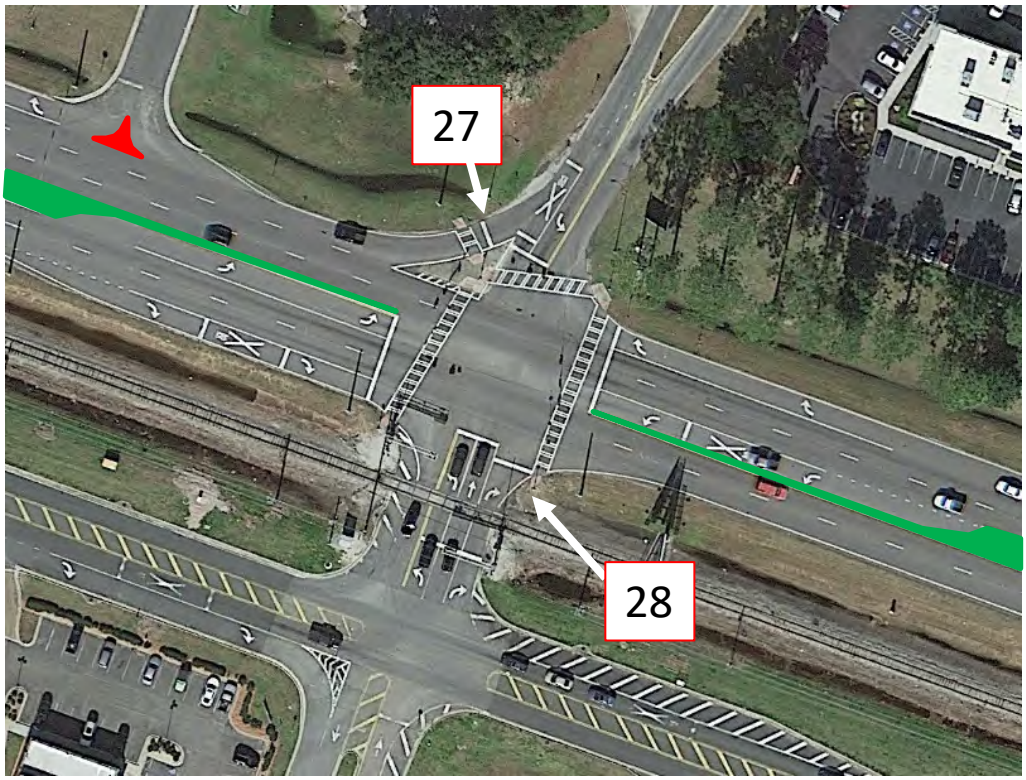


Figure 56. Lakes Boulevard / Crown Pointe Parkway's Recommendations

4.11. Queen Street

Figure 57. Queen Street at SR 40 Intersection

This section refers to the intersection of Queen Street at SR 40.

4.11.1. Field Observations

Table 54. Queen Street Field Observations/Comments

#	Location	Field Observation/Comment
24	Queen Street	The intersection is close to the Tiffany Street opening and has interconnectivity on Hospitality Ave

The minor stop-controlled intersection of Queen Street and SR 40 experienced 12 total crashes in the ten-year two-month study period. At this intersection, the primary crash type was angle collisions making up 58.3% (7 of the 12 total) of the intersection's crashes. Of the 7 angle crashes, all of the crashes involved southbound and westbound vehicles. The second most frequent crash type was tied with sideswipe same crashes and rear end crashes each making up 16.7% (2 of the 12) of the intersection's crashes.

4.11.2. Safety Recommendations

Table 55. Queen Street Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
29	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Low	Intermediate	$100,000	D5 Maintenance	

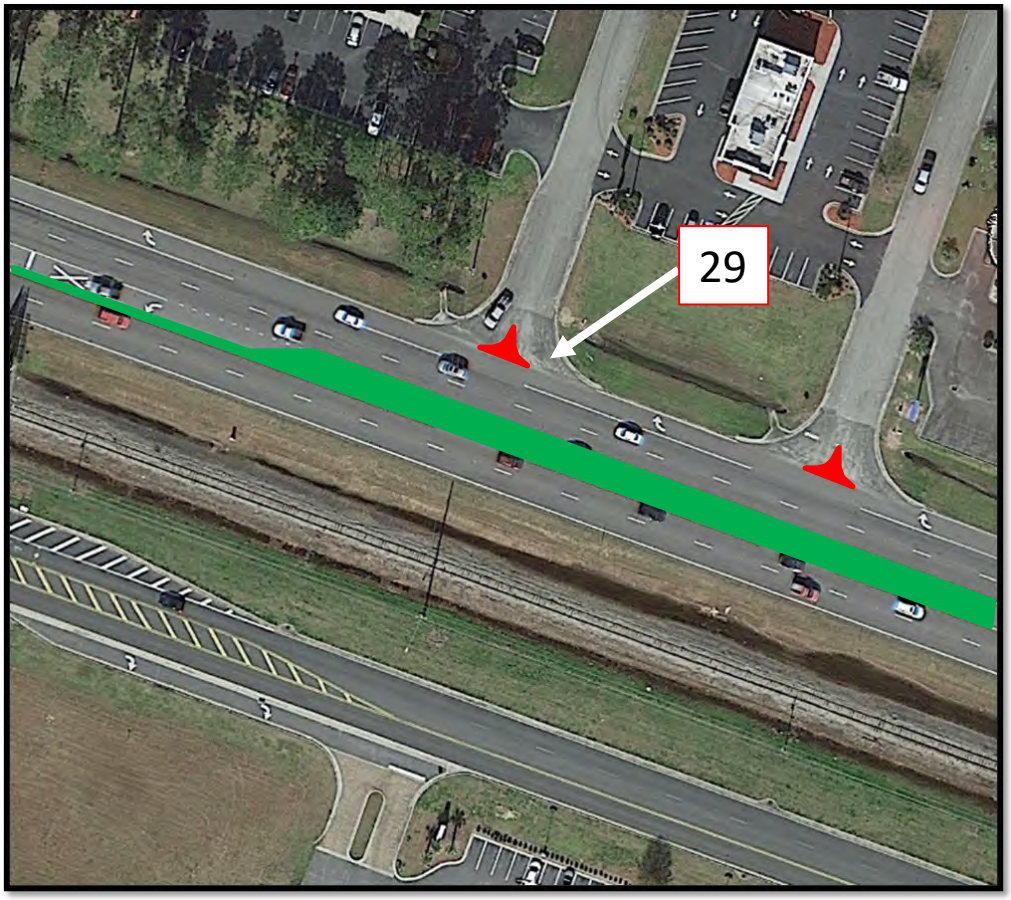


Figure 58. Queen Street's Recommendations

4.12. Tiffany Street

Figure 59. Tiffany Street at SR 40 Intersection

This section refers to the intersection of Tiffany Street at SR 40.

4.12.1. Field Observations

Table 56. Tiffany Street Field Observations/Comments

#	Location	Field Observation/Comment
25	Tiffany Street	The intersection is close to the Queen Street opening and has interconnectivity on Hospitality Ave

The minor stop-controlled intersection of Tiffany Street and SR 40 experienced 5 crashes during the ten-year two-month study period.

4.12.2. Safety Recommendations

Table 57. Tiffany Street Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
30	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Low	Intermediate	$100,000	D5 Maintenance	-

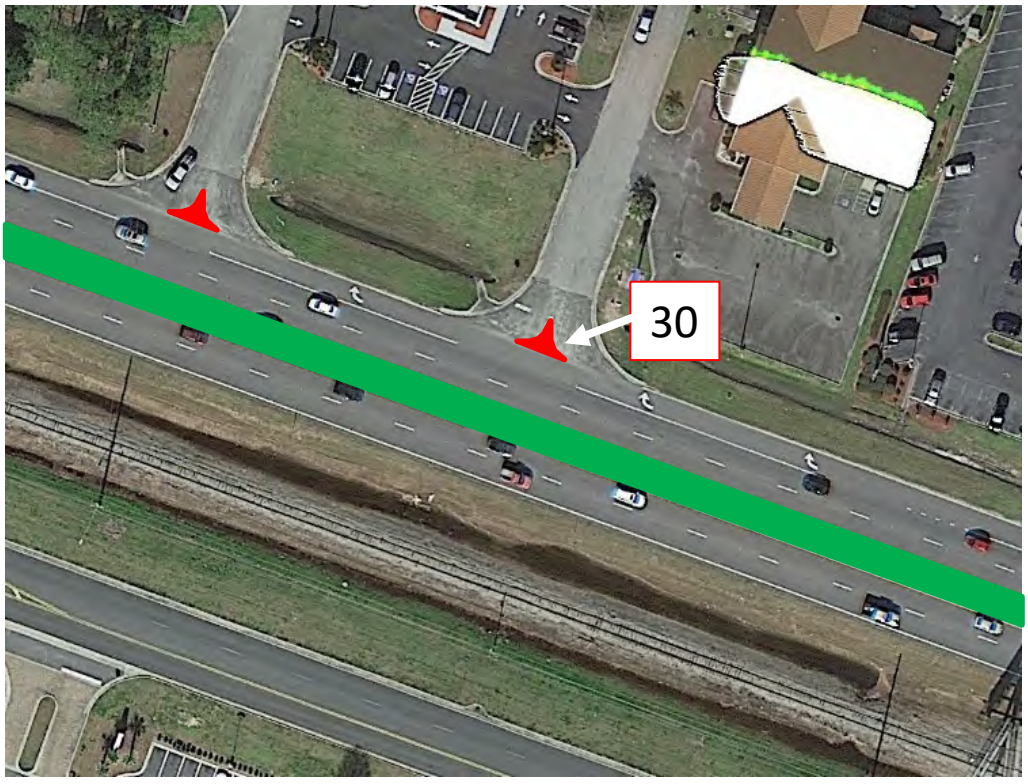


Figure 60. Tiffany Street's Recommendations

4.13. Victoriana Road

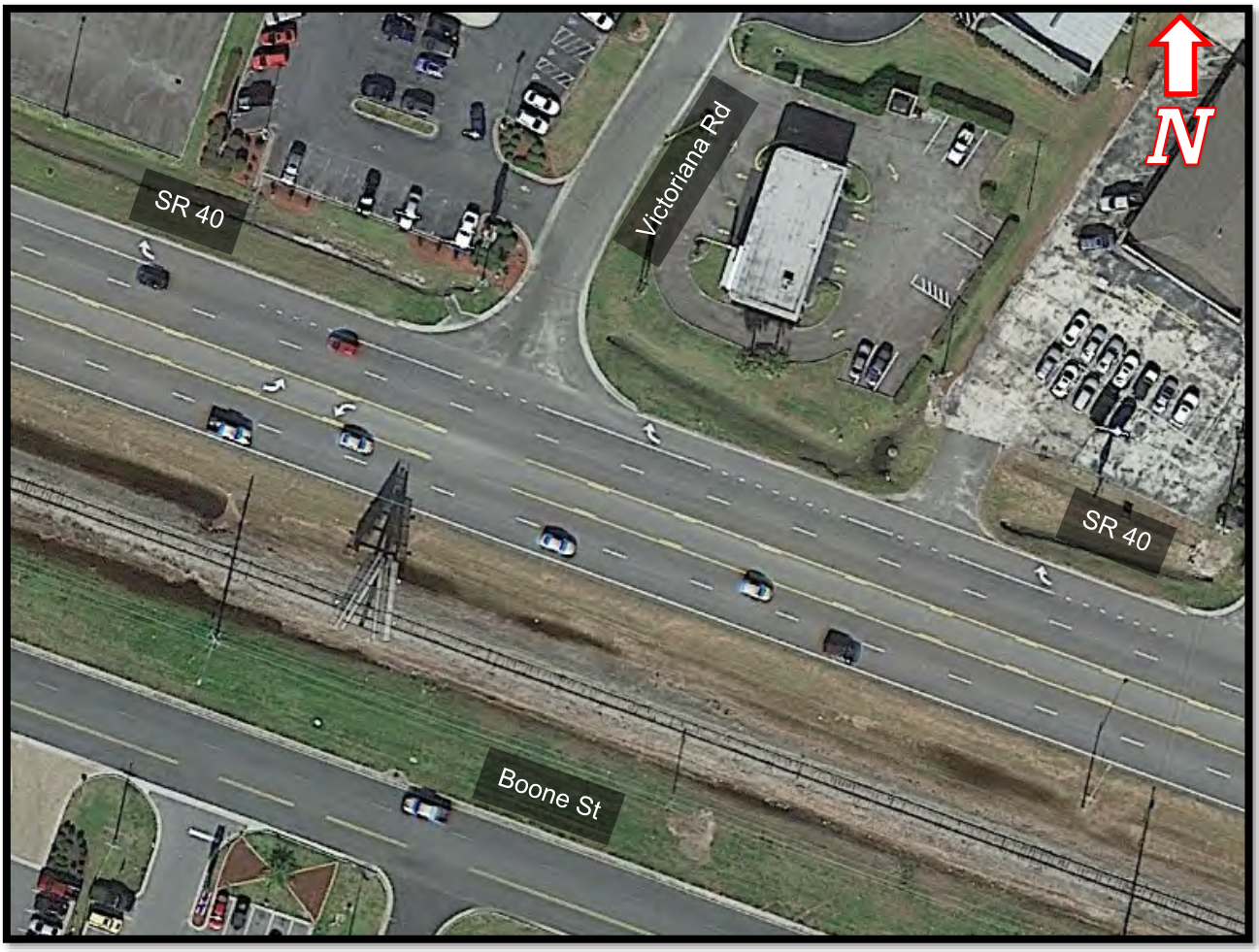


Figure 61. Victoriana Road at SR 40 Intersection

This section refers to the SR 40 at Victoriana Road intersection.

4.13.1. Field Observations

Table 58. Victoriana Road Field Observations/Comments

#	Location	Field Observation/Comment
26	Victoriana Road	There is a long continuous westbound right turn lane that includes Victoriana Road

The minor stop-controlled intersection of Victoriana Road at SR 40 experienced 13 crashes during the ten-year two-month study period. The primary crash type was tied between angle crashes and rear end each making up 38.5% (5 of the 13 total) of the intersection's crashes. Of the 5 angle crashes, 60% (3 of the 5) southbound and westbound crashes and 40% (2 of the 5) were southbound and eastbound crashes. Of the 5 rear end crashes, 40% (2 of the 5) were with westbound vehicles, 40% (2 of the 5) were with southbound vehicles, and 20% were with eastbound vehicles.

4.13.2. Safety Recommendations

Table 59. Victoriana Road Intersection Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
31	Convert the intersection into a Reduced Conflict U-Turn (RCUT)	Low	Intermediate	$175,000	D5 Maintenance	-

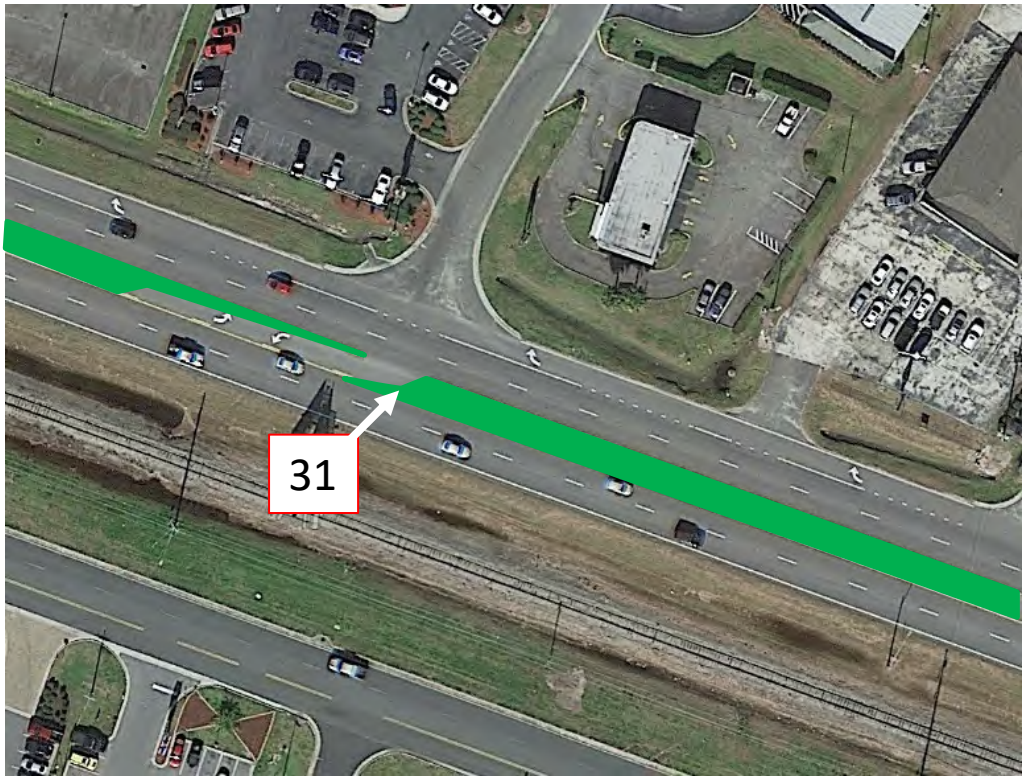


Figure 62. Victoriana Road's Recommendations

4.14. Gross Road / Haddock Road

Figure 63. Gross Rd / Haddock Rd at SR 40 Intersection

This section refers to the intersection of Gross Rd / Haddock Rd at SR 40.

4.14.1. Field Observations

Table 60. Gross Rd / Haddock Rd Field Observations/Comments

#	Location	Field Observation/Comment
27	Gross Rd / Haddock Rd	The southern ADA curb ramps point at the center of the intersection
28	Gross Rd / Haddock Rd	There is only an existing dedicated right turn lane for eastbound traffic
29	Gross Rd / Haddock Rd	The intersection has 5-section signal heads
30	Gross Rd / Haddock Rd	The countdown pedestrian head in the southeast quadrant is not counting down

The signalized intersection of Gross Rd / Haddock Rd at SR 40 experienced 217 total crashes in the ten-year two-month study period. At this intersection, the primary crash type was rear end crashes making up 69.6% (151 of the 217) of the intersection's crashes. Of the 151 rear end crashes, 4.0% (6 of the 151) were with northbound vehicles, 16.6% (25 of the 151) were with southbound vehicles, 22.5% (34 of the 151) were with eastbound vehicles, and 57.0% (86 of the 151) were with westbound vehicles. The second most frequent crash type was left turning angle collisions making up 13.4% (29 of the 217 total) of the intersection's crashes. Of the 29 left turning angle crashes, 58.6% (17 of the 29) were left turning westbound and eastbound crashes, 3.4% (1 of the 29) were left turning southbound and northbound crashes, 6.9% (2 of the 29) were left turning

northbound and southbound crashes, and 31.0% (9 of the 29) were left turning eastbound and westbound crashes.

Figure 64. Pedestrian Signal Head at the Intersection Without Countdown

4.14.2. Safety Recommendations

Table 61. Gross Rd / Haddock Rd Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
32	Realign existing southern ADA curb ramps to point at the crosswalk instead of the center of the intersection	Low	Short	Low	D5 Maintenance	27
33	Install westbound right turn lane	Moderate	Intermediate	$172,000	OTO Safety	28
34	Perform full signal upgrade including updated mast arms, FYAs, signal heads, cabinet, etc	Low	Long	$950,000	OTO Safety	29
35	Repair existing countdown pedestrian head in the southeast quadrant	Low	Short	Low	D5 Traffic Ops	30
36	Convert both major approaches from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day from at least 16:00 to 21:00. The WB approach meets GDOT Policy 6785-2	Moderate	Short	Low	D5 Maintenance	-

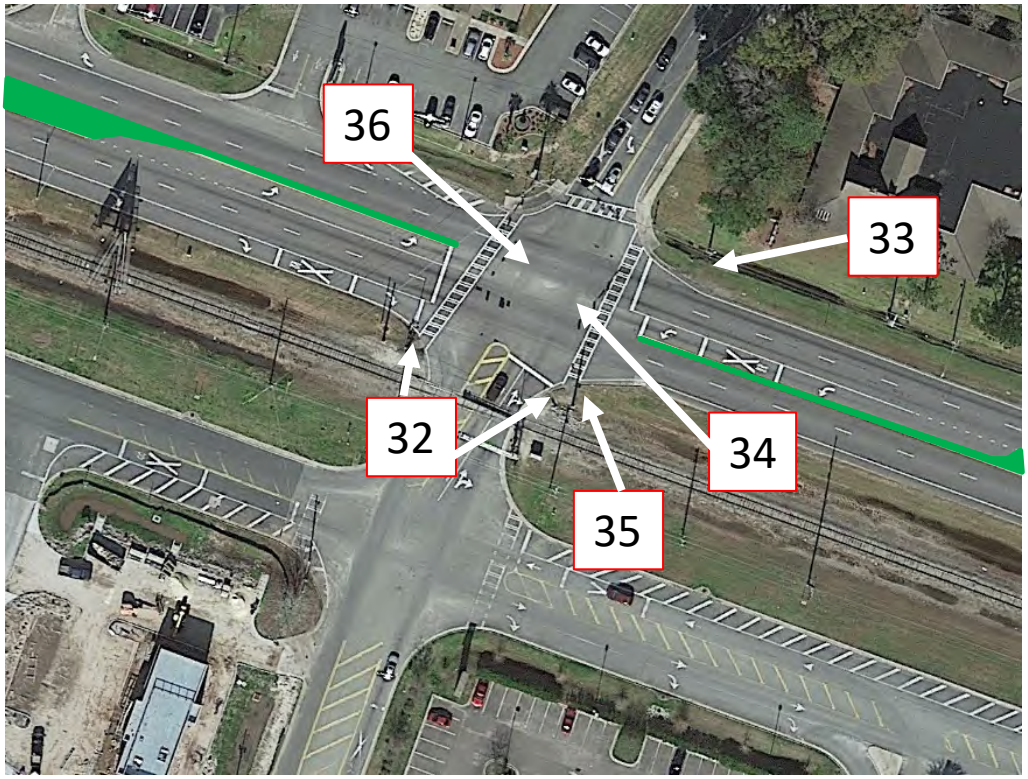


Figure 65. Gross Rd / Haddock Rd's Recommendations

4.15. J Nolan Wells

Figure 66. J Nolan Wells at SR 40 Intersection

This section refers to the SR 40 at J Nolan Wells Intersection.

4.15.1. Field Observations

Table 62. J Nolan Wells Field Observations/Comments

#	Location	Field Observation/Comment
31	J Nolan Wells	The intersection has faded striping

The minor stop-controlled intersection of J Nolan Wells at SR 40 experienced 12 crashes during the ten-year two-month study period. The primary crash type was rear end collisions making up 75.0% (9 of the 12 total) of the intersection's crashes. Of the 9 rear end crashes, 77.8% (7 of the 9) were westbound crashes and 22.2% (2 of the 9) were southbound crashes. The second most frequent crash type was angle crashes making up 16.7% (2 of the 12) of the intersection's crashes. Both angle crashes were with southbound and westbound vehicles.

4.15.2. Safety Recommendations

Table 63. J Nolan Wells Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
37	No Recommendation due to low number of crashes	-	-	-	-	-

4.16. Middle School Road

Figure 67. Middle School Road at SR 40 Intersection

This section refers to the SR 40 at J Nolan Wells Intersection.

4.16.1. Field Observations

Table 64. Middle School Road Field Observations/Comments

#	Location	Field Observation/Comment
32	Middle School Road	There is existing 1-inch retroreflective backplate striping on signal heads
33	Middle School Road	The intersection has 5-section signal heads

The signalized intersection of Middle School Road at SR 40 experienced 118 crashes during the ten-year two-month study period. The primary crash type was rear end collisions making up 64.4% (76 of the 118 total) of the intersection's crashes. Of the 76 rear end crashes, 1.3% (1 of the 76) were northbound crashes, 2.6% (2 of the 76) were southbound crashes, 48.7% (37 of the 76) were eastbound crashes, and 47.4% (36 of the 76) were westbound crashes. The second most frequent crash type was left turn angle crashes making up 13.6% (16 of the 118) of the intersection's crashes. Of the 16 angle crashes, 25% (4 of the 16) were with left turning southbound and northbound vehicles, 43.8% (7 of the 16) were with left turning eastbound and westbound vehicles, 31.3% (5 of the 16) were with left turning westbound and eastbound vehicles.

4.16.2. Safety Recommendations

Table 65. Middle School Road Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
38	Replace existing 1-inch retroreflective backplate striping with standard 2-inch retroreflective backplate striping	Low	Short	Low	D5 Maintenance	32
39	Install eastbound FYA signal head	Low	Short	Low	D5 Traffic Ops	33

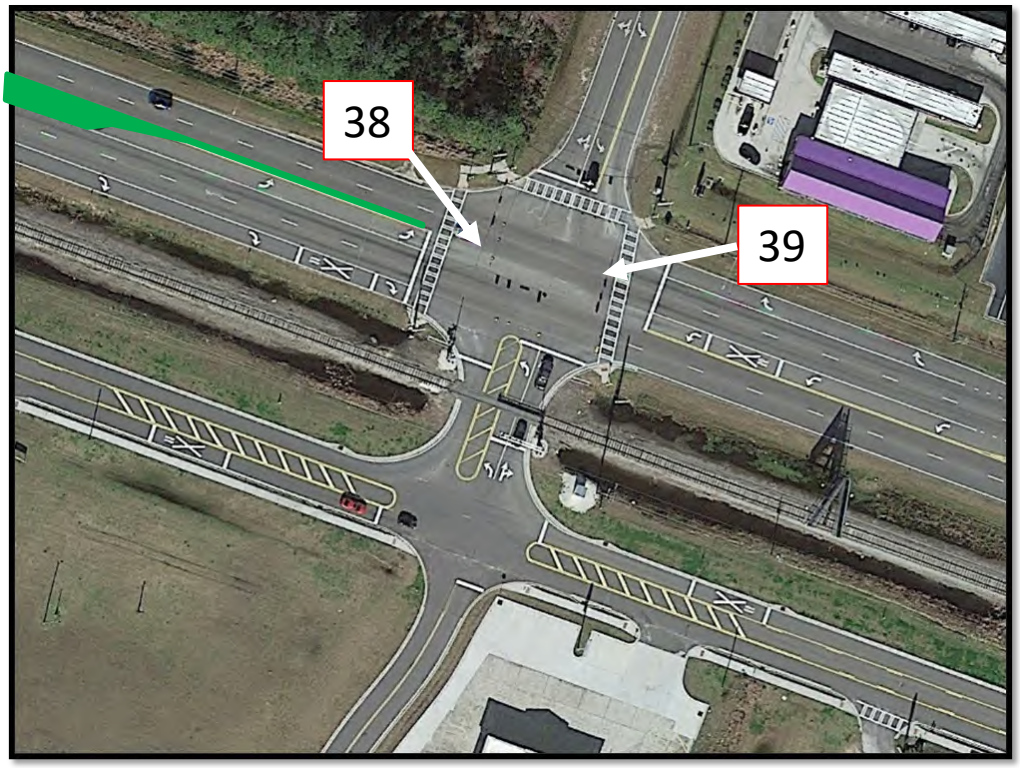


Figure 68. Middle School Rd's Recommendations

4.17. Boone Street at May Creek Street

Figure 69. Boone Street at May Creek Street Intersection

This section refers to the intersection of Boone Street at May Creek Street.

4.17.1. Field Observations

Table 66. Boone Street at May Creek Street Field Observations/Comments

#	Location	Field Observation/Comment
34	Boone Street at May Creek Street	Vehicles queue in the intersection blocking other vehicles

The minor stop-controlled intersection of May Creek Street at Boone Street experienced 27 crashes during the ten-year two-month study period. The primary crash type was angle collisions making up 44% (12 of the 27 total) of the intersection's crashes. Of the 12 angle crashes, 8.3% (1 of the 12) were northbound and eastbound crashes, 33.3% (4 of the 12) were northbound and westbound crashes, 33.3% (4 of the 12) were southbound and eastbound crashes, and 25% (3 of the 12) were southbound and westbound crashes. The second most frequent crash type was rear end crashes making up 25.9% (7 of the 27 total). Of the 7 rear end crashes, 42.9% (3 of the 7) were eastbound crashes, 42.9% (3 of the 7) were westbound crashes, and 14.3% (1 of the 7) were northbound crashes.

4.17.2. Safety Recommendations

Table 67. Boone Street at May Creek Street Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
40	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local	34

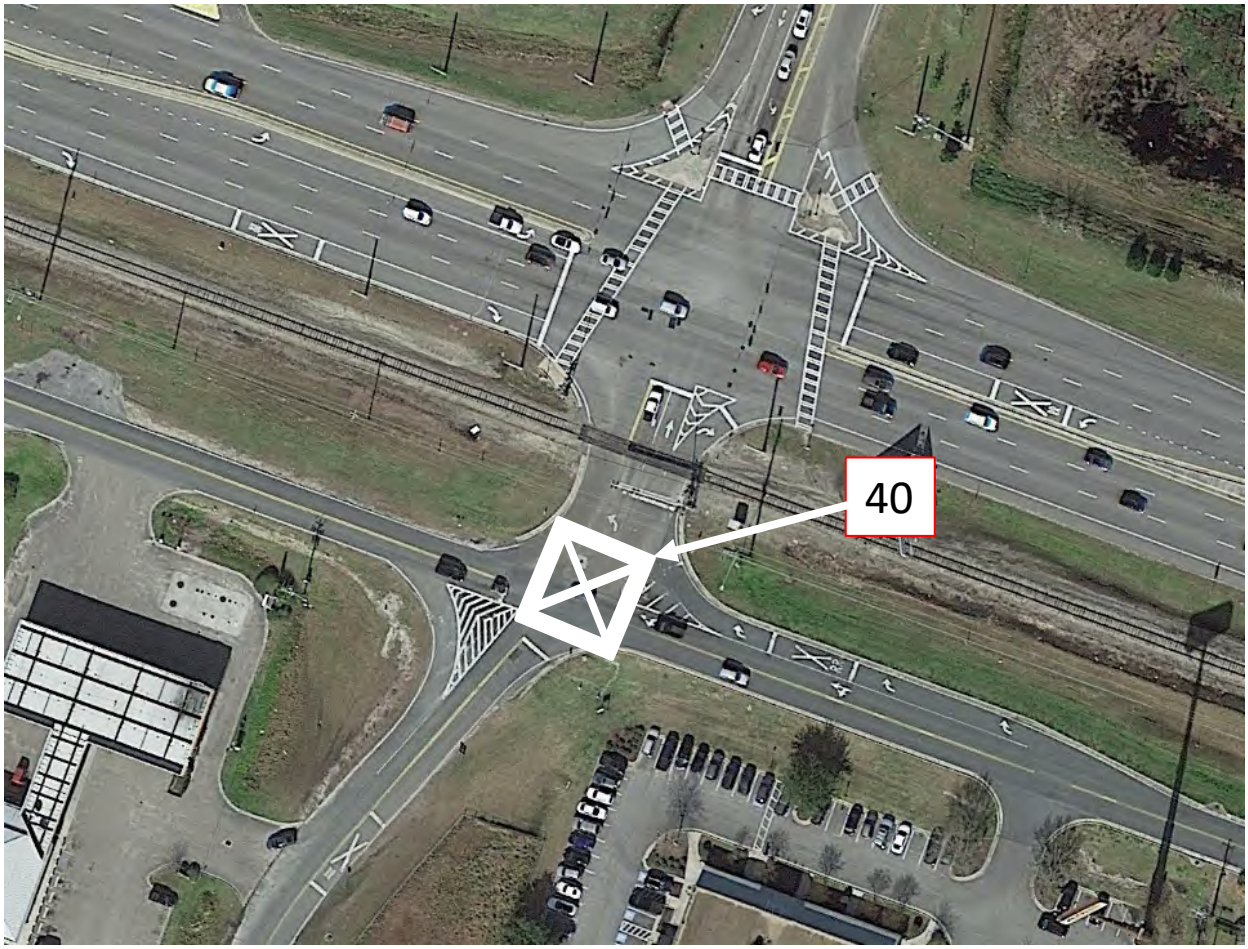


Figure 70. Boone Street at May Creek Street's Recommendations

4.18. Boone Street at I-95 NB

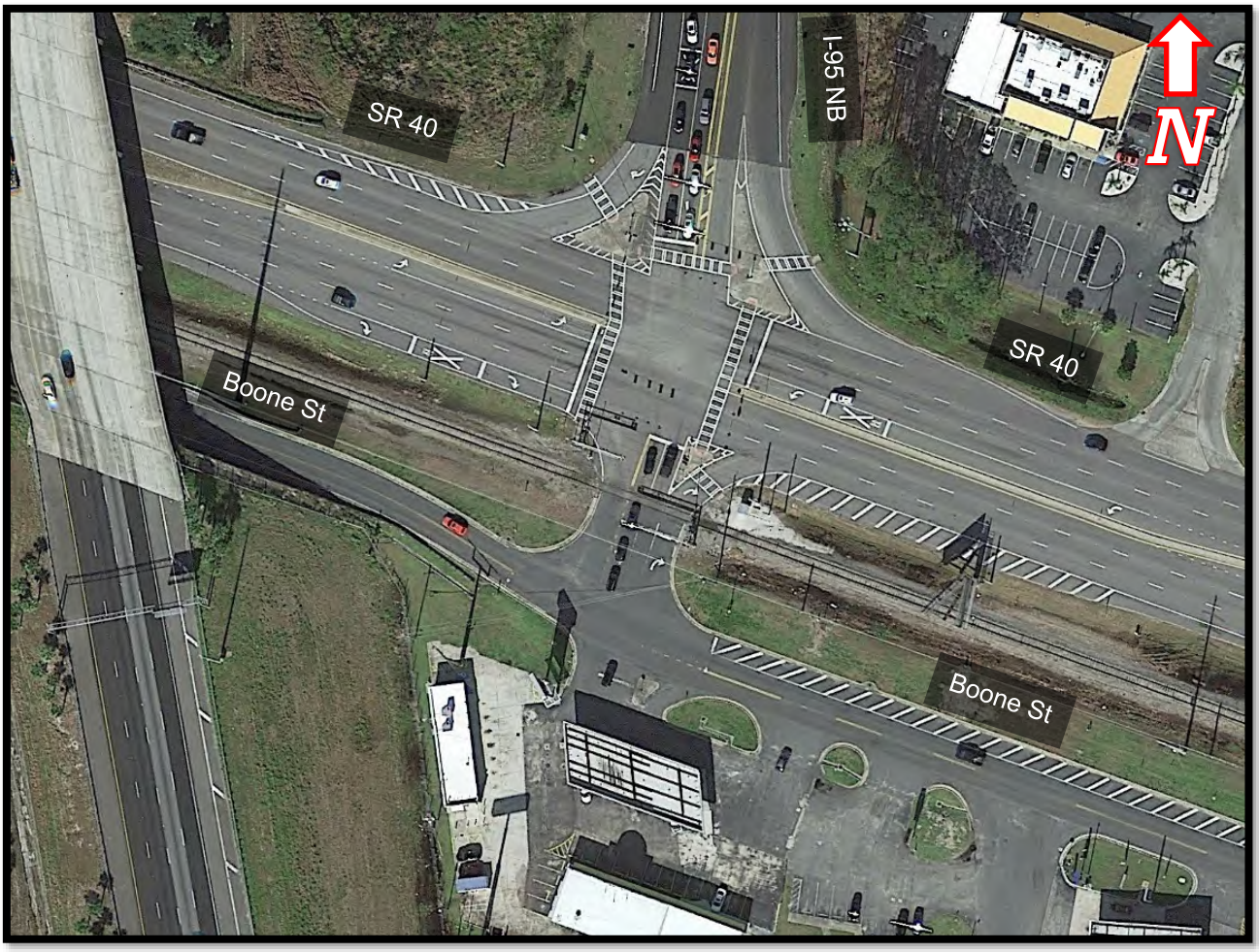


Figure 71. Boone Street at I-95 NB Intersection

This section refers to the intersection of Boone Street at I-95 NB.

4.18.1. Field Observations

Table 68. Boone Street at I-95 NB Field Observations/Comments

#	Location	Field Observation/Comment
35	Boone Street at I-95 NB	The intersection has far back stop bars for eastbound and westbound approaches
36	Boone Street at I-95 NB	The Gas Station on the south leg of the intersection has 5 driveways
37	Boone Street at I-95 NB	Vehicles queue in the intersection blocking other vehicles

The minor stop-controlled intersection of I-95 NB at Boone Street experienced 12 crashes during the ten-year two-month study period. The primary crash type was angle collisions making up 75% (9 of the 12 total) of the intersection's crashes. Of the 9 angle crashes, 33.3% (3 of the 9) were northbound and eastbound crashes, 22.2% (2 of the 9) were northbound and westbound crashes, 22.2% (2 of the 9) were southbound and westbound crashes, and 22.2% (2 of the 9) were northbound and eastbound crashes. The second most frequent crash type was rear end crashes making up 25% (3 of the 12) of the intersection's crashes. Of the

three rear end crashes, 33.3% (1 of the 3) were with northbound vehicles, 33.3% (1 of the 3) were with eastbound vehicles, and 33.3% (1 of the 3) were with westbound vehicles.

Figure 72. The Set Back Eastern Stop Bar

4.18.2. Safety Recommendations

Table 69. Boone Street at I-95 NB Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
41	Restripe East and West Legs to have the stop bars to be closer to the center of the intersection	Low	Short	Low	Local	35
42	Close Northbound exiting Right Out from the Gas Station	Moderate	Intermediate	Low	Local	36
43	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local	37

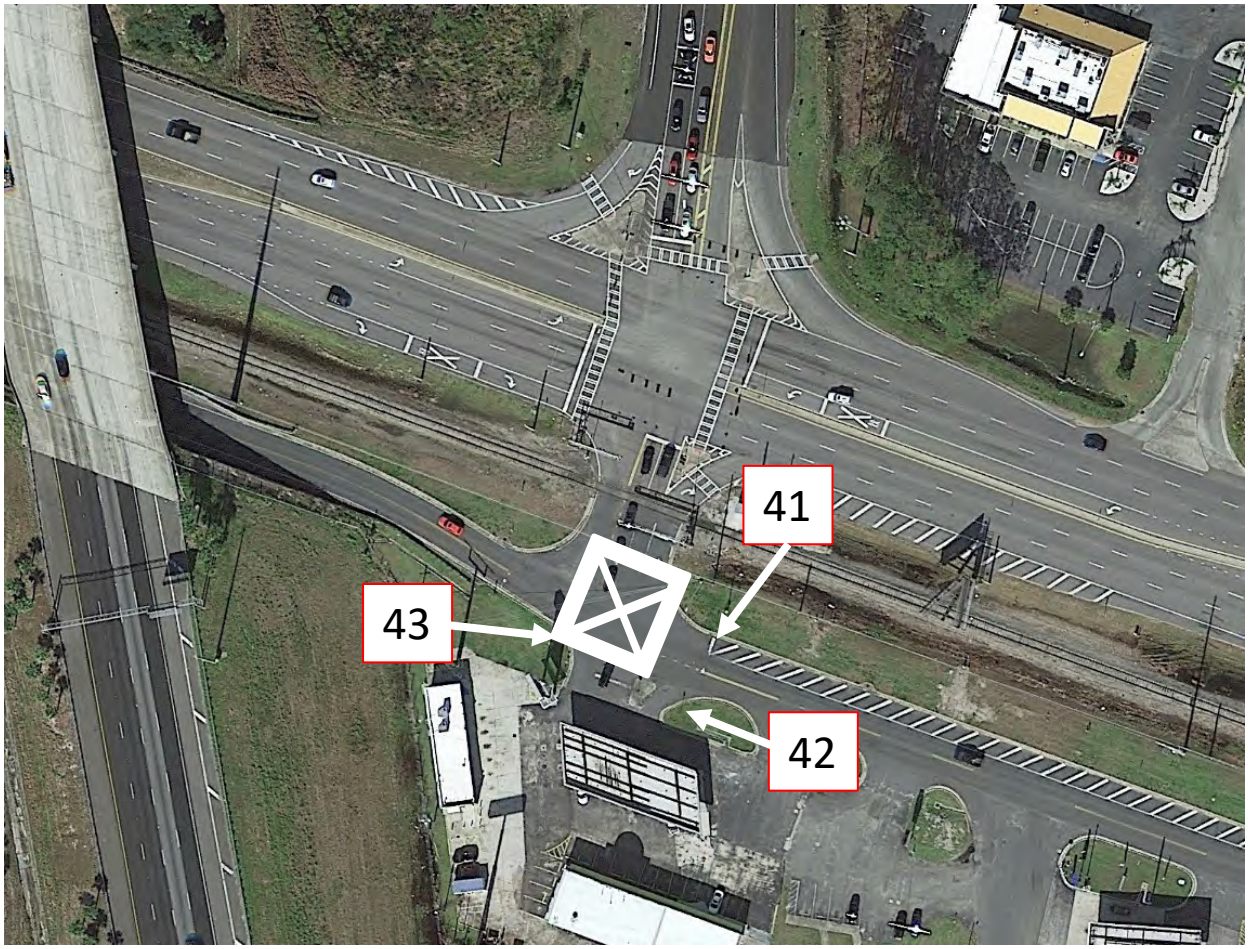


Figure 73. Boone Street at I-95 NB's Recommendations

4.19. Boone Street at Crown Pointe Parkway

Figure 74. Boone Street at Crown Pointe Parkway Intersection

This section refers to the intersection of Boone Street at Crown Pointe Parkway.

4.19.1. Field Observations

Table 70. Boone Street at Crown Pointe Parkway Field Observations/Comments

#	Location	Field Observation/Comment
38	Boone Street at Crown Pointe Parkway	Vehicles queue in the intersection blocking other vehicles

The minor stop-controlled intersection of Crown Pointe Parkway at Boone Street experienced 31 crashes during the ten-year two-month study period. The primary crash type was angle collisions making up 71.0% (22 of the 31 total) of the intersection's crashes. Of the 22 angle crashes, 63.6% (14 of the 22) were southbound and westbound crashes, 31.8% (7 of the 22) were northbound and westbound crashes, and 4.5% (1 of the 22) were northbound and eastbound crashes. The second most frequent crash type was rear end crashes making up 16.1% (5 of the 31) of the intersection's crashes. Of the 5 rear end crashes, 60% (3 of the 5) were with eastbound vehicles and 40% (2 of the 5) were with westbound vehicles.

Figure 75. Fading Striping on the South Leg of the Intersection

4.19.2. Safety Recommendations

Table 71. Boone Street at Crown Pointe Parkway Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
44	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local	38

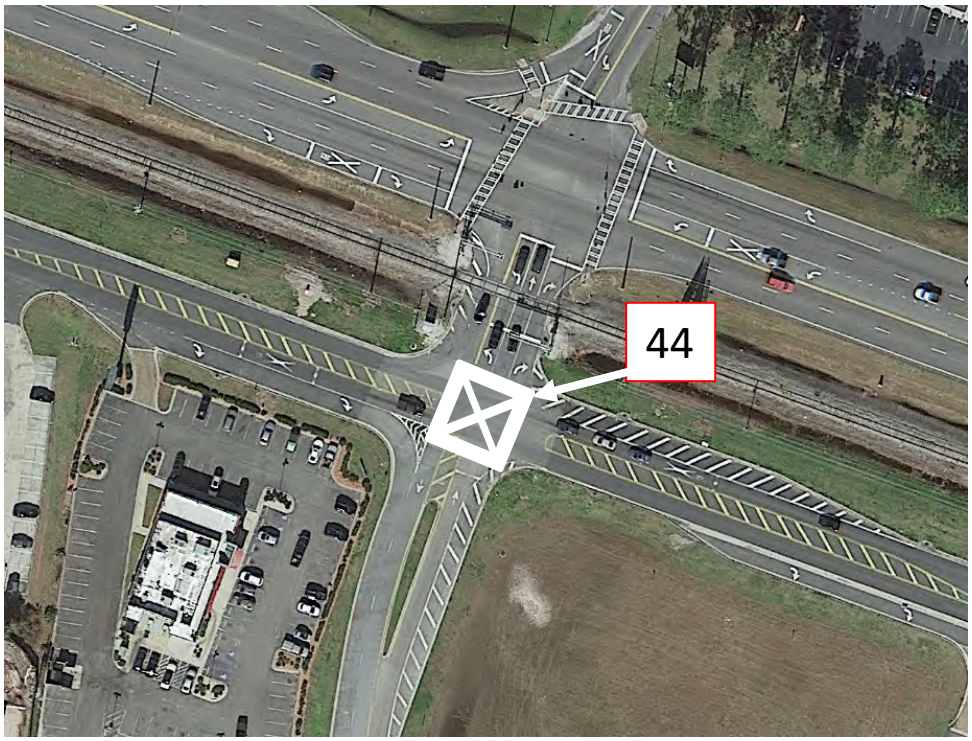


Figure 76. Boone Street at Crown Pointe Parkway's Recommendations

4.20. Boone Street at Haddock Road

Figure 77. Boone Street at Haddock Road Intersection

This section refers to the Boone Street at Haddock Road intersection.

4.20.1. Field Observations

Table 72. Boone Street at Haddock Road Field Observations/Comments

#	Location	Field Observation/Comment
39	Boone Street at Haddock Road	The intersection has crosswalks but not ADA compliant pedestrian landing pads
40	Boone Street at Haddock Road	The intersection is large and the northbound and eastbound stop bars are far from the center of the intersection
41	Boone Street at Haddock Road	The stop sign on the east leg of the intersection is on painted hatching on the road
42	Boone Street at Haddock Road	Vehicles queue in the intersection blocking other vehicles

The minor stop-controlled intersection of Haddock Road at Boone Street experienced 65 crashes during the ten-year two-month study period. The primary crash type was angle collisions making up 72.3% (47 of the 65 total) of the intersection's crashes. Of the 47 angle crashes, 70.2% (33 of the 47) were southbound and westbound crashes, 6.4% (3 of the 47) were northbound and westbound crashes, 14.9% (7 of the 47) were southbound and eastbound crashes, and 8.5% (4 of the 47) were northbound and eastbound crashes. The second most frequent crash type was rear end crashes making up 18.5% (12 of the 65) of the intersection's crashes. Of the 5 rear end crashes, 75% (9 of the 12) were with northbound vehicles and 25% (3 of the 12) were with eastbound vehicles.

Table 73. Boone Street at Haddock Road Intersection Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency	Field Observation Addressed
45	Install ADA compliant pedestrian landing pads at the ends of crosswalks	Low	Short	Low	Local	39
46	Restripe West Leg and South Leg to have the stop bars to be closer to the center of the intersection	Low	Short	Low	Local	40
47	Remove and reinstall stop sign on the east leg out of the striped road	Low	Short	Low	Local	41
48	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local	42

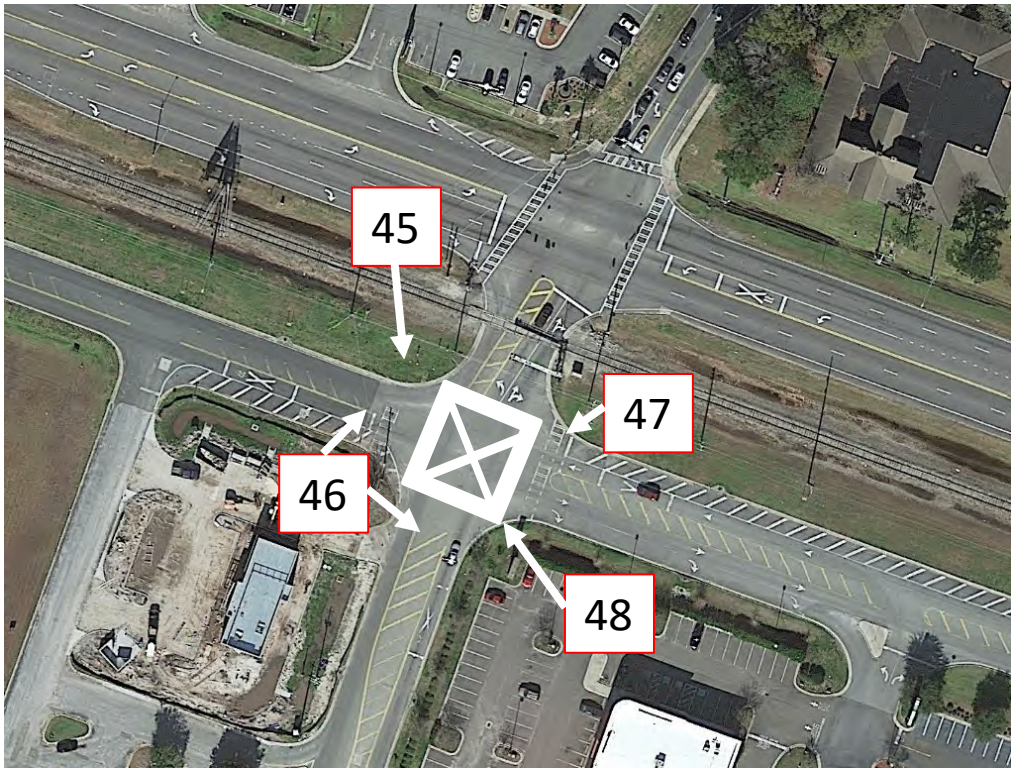


Figure 78. Boone Street at Haddock Road's Recommendations

4.21. Boone Street at Middle School Road

Figure 79. Boone Street at Middle School Road Intersection

This section refers to the intersection of Boone Street at Middle School Road.

4.21.1. Field Observations

Table 74. Boone Street at Middle School Road Field Observations/Comments

#	Location	Field Observation/Comment
43	Boone Street at Middle School Road	Vehicles queue in the intersection blocking other vehicles
44	Boone Street at Middle School Road	The southbound lane does not line up with the southbound receiving lane

The minor stop-controlled intersection of Middle School Road at Boone Street experienced 4 crashes during the ten-year two-month study period. All 4 crashes were rear end collisions. Of the 4 rear end crashes, 75% (3 of the 4) were with eastbound vehicles, and 25% (1 of the 4) were with westbound vehicles.

Figure 80. Southbound view from the Northwest Quadrant

4.21.2. Safety Recommendations

Table 75. Boone Street at Middle School Road Recommendations

#	Recommendations	Safety Benefit	Time Frame	Cost/ Effort	Responsible Agency	Field Observation Addressed
49	Install Skip Striping from the southbound lane to the southbound receiving lane	Low	Short	Low	Local	-
50	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local	44

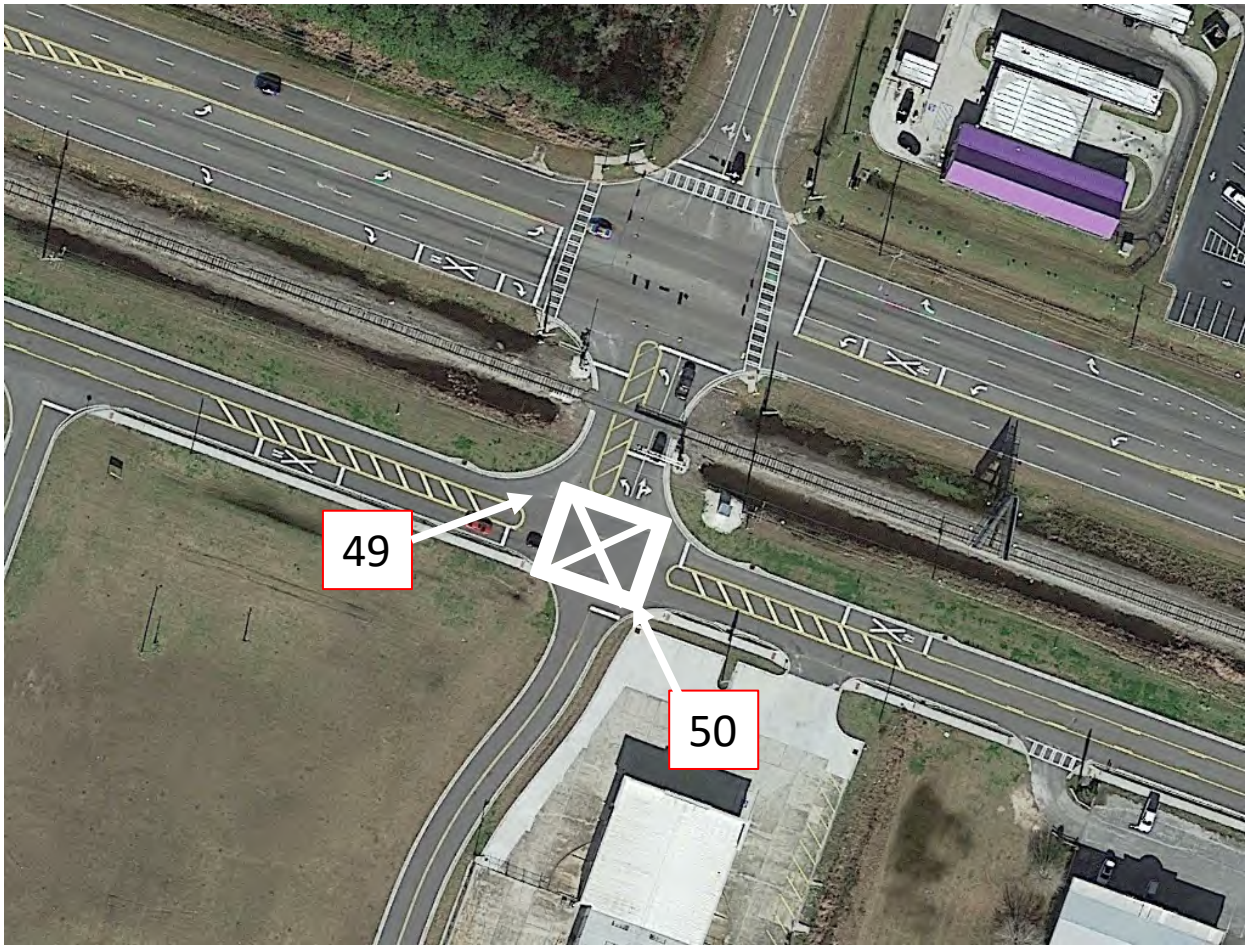


Figure 81. Boone Street at Middle School Road's Recommendations

5. Conclusions

According to the results from the RSA, the SR 40 corridor needs improved intersection control and accommodations for all roadway users including heavy vehicles and pedestrians. A complete list of recommendations is provided in **Appendix E**.

Short-term recommendations include:

- Replacing, upgrading, or installing new signage
- Restriping locations where faded
- Closing the specified driveway to prohibit entering or exiting
- Repairing/Replacing/Installing ADA Ramps
- Striping out long turn lanes

Intermediate recommendations include:

- Installing retroreflective backplates and supplemental signal heads at all signalized intersections
- Convert minor street approaches or driveways to RIROs where specified
- Convert minor street approaches or driveways to RCUTs where specified
- Installing turning lanes at specific locations
- Installing lighting along the corridor
- Restriping specific locations
- Traffic signal upgrades
- Signalizing the Boone St at Haddock Rd intersection

Long-term recommendations include:

- Installing a raised concrete median along the corridor from JSJ Road to Middle School Road
- Reconfiguring lanes from before the corridor at Truss Plant Road to BP Gas Station Entrance

The audit team suggests that the recommendations stated in this report be implemented as resources become available. The responsible agency(s) should document any decisions to modify or eliminate recommendations based on engineering judgement or lack of feasibility.

Appendices

Appendix A. RSA Attendees
Appendix B. Crash Data
Appendix C. RSA Map
Appendix D: ICEs
Appendix E. RSA Recommendations List
Appendix F. RSA Proposed Layout

Appendix A. RSA Attendees

Name	Agency	Email
Michael Turpeau	Atkins	Michael.Turpeaujr@atkinsglobal.com
Max Malloy	Atkins	Max.Malloy@atkinsglobal.com
Travis Brewer	Atkins	Travis.Brewer@atkinsglobal.com
Ronald Knezevich	GDOT Traffic Ops	Rknezevich@dot.ga.gov
Kelli Roberts	GDOT Traffic Ops	KeRoberts@dot.ga.gov
Andy Westberry	GDOT D5	awestberry@dot.ga.gov
Joseph Capello	GDOT D5	Jcapello@dot.ga.gov
Jason Mobley	GDOT Utilities	Jmobley@dot.ga.gov
Greg Morris	FHWA	greg.morris@dot.ga.gov
Jim Tolson	Arcadis	jim.tolson@arcadis.com
Donnie Boyd	GDOT D5	dboyd@dot.ga.gov
Katie Proctor	GDOT D5	kproctor@dot.ga.gov
Kiara Ahmed	GDOT D5	kahmed@dot.ga.gov
John Devine	Georgia Bikes	jd@georgiabikes.org
Jonathan Martinez	GDOT D5	JoMartinez@dot.ga.gov
Justin Bristol	Georgia Bikes	justin@gabikes.onmicrosoft.com
Samantha Swartz	Kingsland PD	swartz@kingslandga.gov
Edlin Regis	GDOT Utilities	eregis@dot.ga.gov
Patti Sistrunk	Safe Routes to School	Patti.sistrunk@aecom.com

Appendix B. Crash Data

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at I-95 SB/May Creek Street
PERIOD: 01/01/2013 TO 02/28/2023

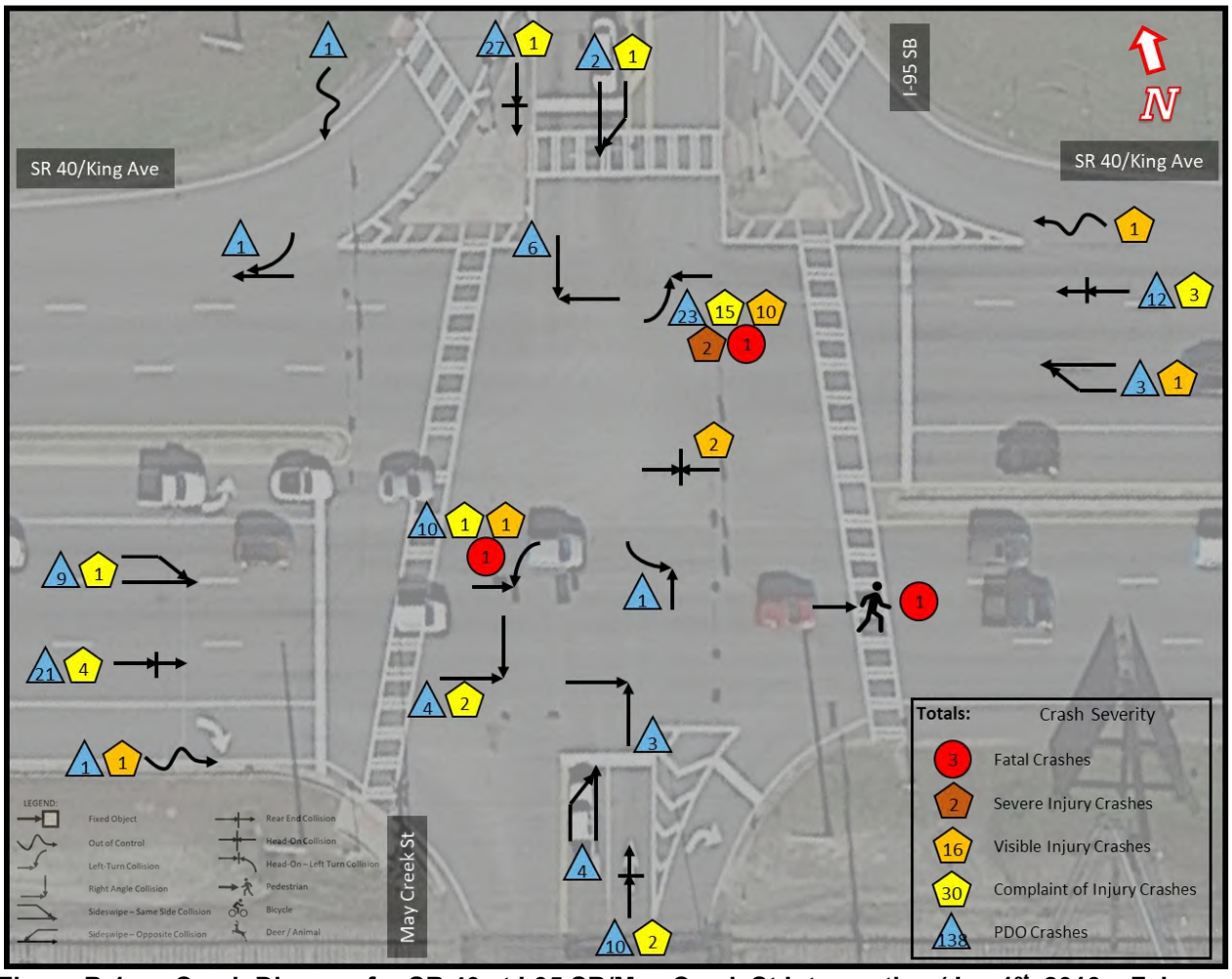


Figure B-1 Crash Diagram for SR 40 at I-95 SB/May Creek St Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-1 Distribution of SR 40 at I-95 SB/May Creek St by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle SB LT x NB	K													1	0.53%
	A														
	B														
	C														
	O									1			1		
Left Turn - Angle EB LT x WB	K										1		1	51	26.98%
	A			1							1		2		
	B	3	2	2				2			1		10		
	C	1	1	2	1	1		2	1	3	3		15		
	O	1	1	2	5	1	1	2	3	4	2	1	23		
Left Turn - Angle WB LT x EB	K					1							1	13	6.88%
	A														
	B					1							1		
	C								1				1		
	O		1		2		1		3		3		10		
Left Turn - Angle Total	K					1					1		2	65	34.39%
	A			1							1		2		
	B	3	2	2		1		2			1		11		
	C	1	1	2	1	1		2	2	3	3		16		
	O	1	2	2	7	1	2	2	6	5	5	1	34		
Angle NB x EB	K													3	1.59%
	A														
	B														
	C														
	O	1	1		1								3		
Angle SB x EB	K													6	3.17%
	A														
	B														
	C							1	1				2		
	O	1						1	1	1			4		
Angle SB x WB	K													6	3.17%
	A														
	B														
	C														
	O		1		1				1	1	2		6		
Angle Total	K													15	7.94%
	A														
	B														
	C							1	1				2		
	O	2	2		2			1	2	2	2		13		
Sideswipe - Same Direction NB	K													4	2.12%
	A														
	B														
	C														
	O				1	1	1	1					4		
Sideswipe - Same Direction SB	K													3	1.59%
	A														
	B														
	C								1				1		
	O	1				1							2		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Sideswipe - Same Direction EB	K													10	5.29%
	A														
	B														
	C									1			1		
	O	2	2	1		1	1		1			1	9		
Sideswipe - Same Direction WB	K													5	2.65%
	A														
	B				1								1		
	C														
	O	1									3		4		
Sideswipe - Same Direction Total	K													22	11.64%
	A														
	B				1								1		
	C								1	1			2		
	O	4	2	1	1	3	2	1	1		3	1	19		
Rear End NB	K													12	6.35%
	A														
	B														
	C								1		1		2		
	O	1		2	1	2		1	1		2		10		
Rear End SB	K													28	14.81%
	A														
	B														
	C						1						1		
	O	6	4	1	9	2		2	1	1	1		27		
Rear End EB	K													25	13.23%
	A														
	B														
	C	1			1					1	1		4		
	O	1	3	3	3	2	2	2	3	1		1	21		
Rear End WB	K													15	7.94%
	A														
	B														
	C			2						1			3		
	O	3	1	1	1	2	2		2				12		
Rear End Total	K													80	42.33%
	A														
	B														
	C	1		2	1		1		1	2	2		10		
	O	11	8	7	14	8	4	5	7	2	3	1	70		
Head On EB x WB	K													2	1.06%
	A														
	B			1						1			2		
	C														
	O														
Head On Total	K													2	1.06%
	A														
	B			1						1			2		
	C														
	O														

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Pedestrian	K						1						1	1	0.53%
	A														
	B														
	C														
	O														
Single Vehicle SB	K													1	0.53%
	A														
	B														
	C														
	O							1					1		
Single Vehicle EB	K													2	1.06%
	A														
	B	1											1		
	C														
	O				1								1		
Single Vehicle WB	K													1	0.53%
	A														
	B				1								1		
	C														
	O														
Single Vehicle Total	K													4	2.12%
	A														
	B	1			1								2		
	C														
	O				1			1					2		
Total	K					1	1				1		3	189	100%
	A			1							1		2		
	B	4	2	3	2	1		2		1	1		16		
	C	2	1	4	2	1	1	3	5	6	5		30		
	O	18	14	10	25	12	8	10	16	9	13	3	138		
	All	24	17	18	29	15	10	15	21	16	21	3	189		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at I-95 NB/Boone Street
PERIOD: 01/01/2013 TO 02/28/2023

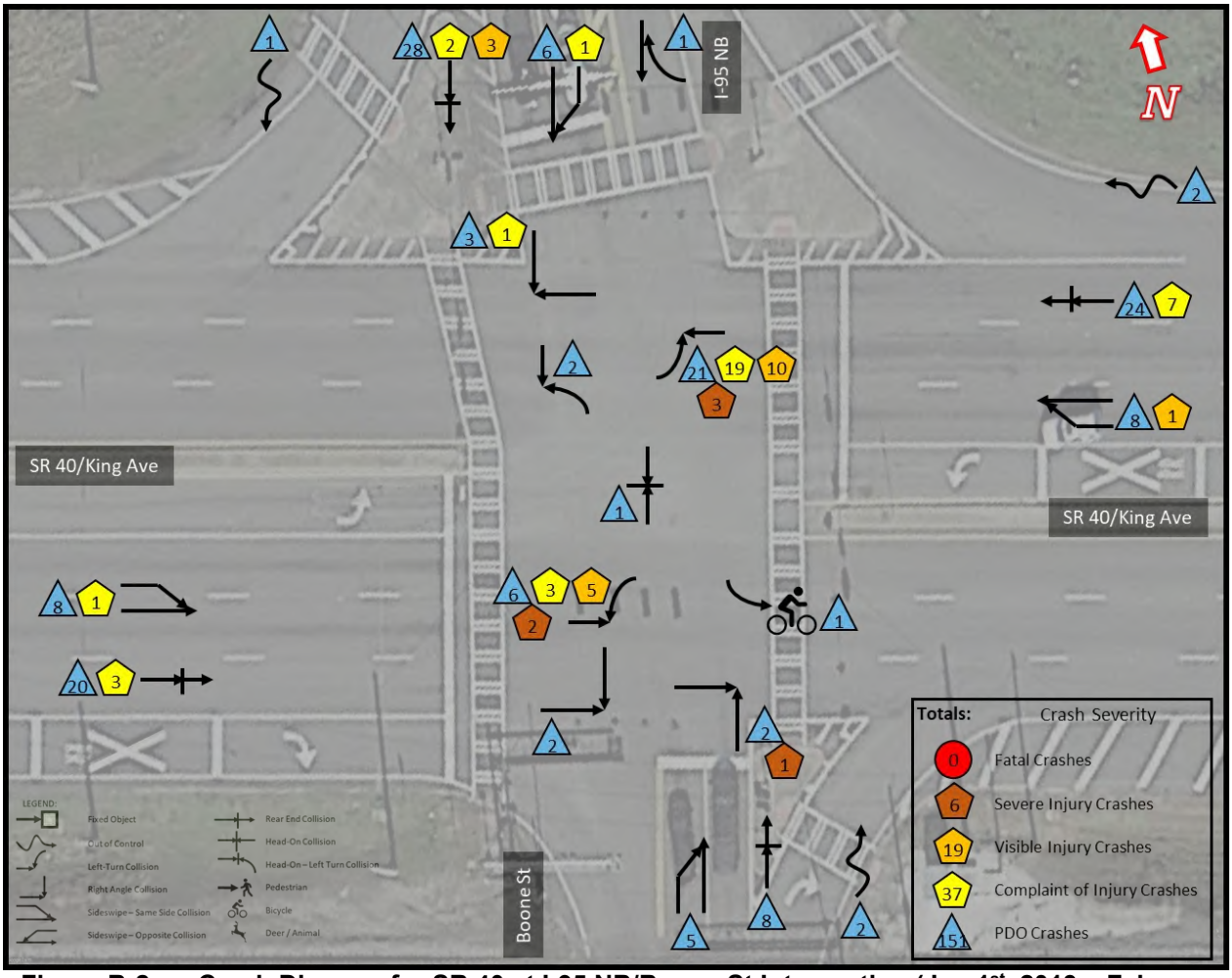


Figure B-2 Crash Diagram for SR 40 at I-95 NB/Boone St Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-2 Distribution of SR 40 at I-95 NB/Boone Street by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle NB LT x SB	K													2	0.94%
	A														
	B														
	C														
	O		1							1			2		
Left Turn - Angle EB LT x WB	K													53	24.88%
	A									1	1	1	3		
	B	2	1		1	1		2	3				10		
	C	1		2	1	3	1	1	5	2	2	1	19		
	O	5	2	3	2		1	3	1	1	2	1	21		
Left Turn - Angle WB LT x EB	K													16	7.51%
	A					1	1						2		
	B	1	1						2		1		5		
	C		1						1	1			3		
	O	1		1			1			2	1		6		
Left Turn - Angle Total	K													71	33.33%
	A					1	1			1	1	1	5		
	B	3	2		1	1		2	5		1		15		
	C	1	1	2	1	3	1	1	6	3	2	1	22		
	O	6	3	4	2		2	3	1	4	3	1	29		
Angle NB x EB	K													3	1.41%
	A								1				1		
	B														
	C														
	O					1		1					2		
Angle SB x EB	K													2	0.94%
	A														
	B														
	C														
	O	1					1						2		
Angle SB x WB	K													4	1.88%
	A														
	B														
	C		1										1		
	O			1	1	1							3		
Angle Total	K													9	4.23%
	A								1				1		
	B														
	C		1										1		
	O	1		1	1	2	1	1					7		
Sideswipe - Same Direction NB	K													5	2.35%
	A														
	B														
	C														
	O			1				1		1	2		5		
Sideswipe - Same Direction SB	K													7	3.29%
	A														
	B														
	C			1									1		
	O	2	1		1				2				6		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Sideswipe - Same Direction EB	K													9	4.23%
	A														
	B														
	C			1									1		
	O	1	1	1			2		1	1		1	8		
Sideswipe - Same Direction WB	K													9	4.23%
	A														
	B	1											1		
	C														
	O	1			1	2	2	1	1				8		
Sideswipe - Same Direction Total	K													30	14.08%
	A														
	B	1											1		
	C			2									2		
	O	4	2	2	2	2	4	2	4	2	2	1	27		
Sideswipe - Opposite Direction NB x SB	K													1	0.47%
	A														
	B														
	C														
	O											1	1		
Sideswipe - Opposite Direction Total	K													1	0.47%
	A														
	B														
	C														
	O											1	1		
Rear End NB	K													8	3.76%
	A														
	B														
	C														
	O	1	1	2				3		1			8		
Rear End SB	K													33	15.49%
	A														
	B		1				1		1				3		
	C	1								1			2		
	O	5	3		1	1	4	2	3	3	5	1	28		
Rear End EB	K													23	10.80%
	A														
	B														
	C	1	1			1							3		
	O	2	3	6	3		1	1		2	2		20		
Rear End WB	K													31	14.55%
	A														
	B														
	C	1			1		1	2	2				7		
	O	4	1	1	5	5	3	3	1		1		24		
Rear End Total	K													95	44.60%
	A														
	B		1				1		1				3		
	C	3	1		1	1	1	2	2	1			12		
	O	11	8	7	14	8	4	5	7	2	3	1	70		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Head On NB x SB	K													1	0.47%
	A														
	B														
	C														
	O			1									1		
Head On Total	K													1	0.47%
	A														
	B														
	C														
	O			1									1		
Bicycle	K													1	0.47%
	A														
	B														
	C														
	O			1									1		
Single Vehicle NB	K													2	0.94%
	A														
	B														
	C														
	O		1								1		2		
Single Vehicle SB	K													1	0.47%
	A														
	B														
	C														
	O		1										1		
Single Vehicle WB	K													2	0.94%
	A														
	B														
	C														
	O			2									2		
Single Vehicle Total	K													5	2.35%
	A														
	B														
	C														
	O		2	2							1		5		
Total	K													213	100%
	A					1	1		1	1	1	1	6		
	B	4	3		1	1	1	2	6		1		19		
	C	4	3	4	2	4	2	3	8	4	2	1	37		
	O	23	15	19	14	10	15	15	9	12	15	4	151		
	All	31	21	23	17	16	19	20	24	17	19	6	213		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at BP Gas Station Driveway
PERIOD: 01/01/2013 TO 02/28/2023

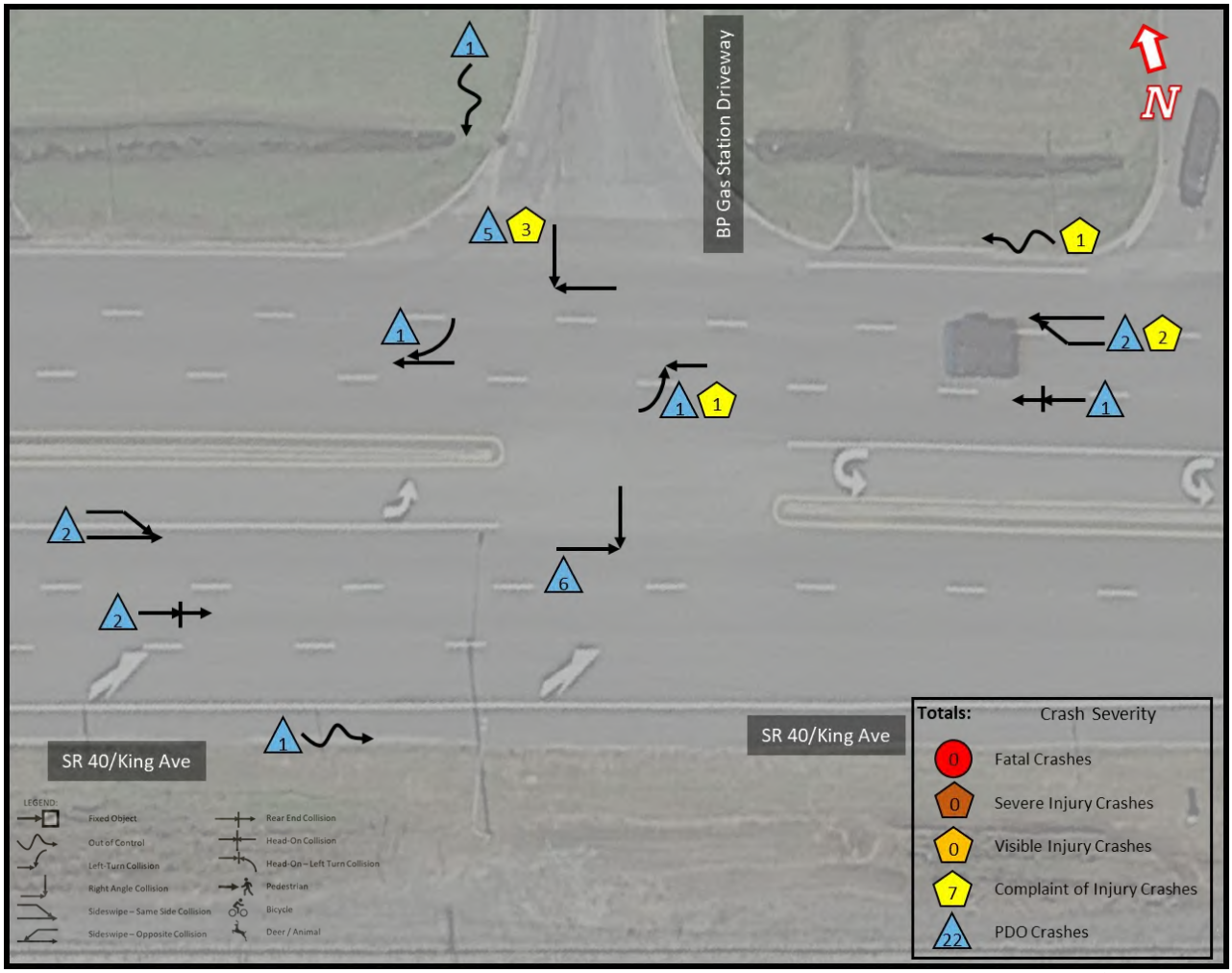


Figure B-3 Crash Diagram for SR 40 at BP Gas Station Driveway Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-3 Distribution of SR 40 at BP Gas Station by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle EB LT x WB	K													2	6.90%
	A														
	B														
	C							1					1		
	O	1											1		
Left Turn - Angle Total	K													2	6.90%
	A												5		
	B												15		
	C							1					22		
	O	1											29		
Angle SB x EB	K													6	20.69%
	A														
	B														
	C														
	O	1							2	2	1		6		
Angle SB x WB	K													8	27.59%
	A														
	B														
	C			1				1		1			3		
	O	1		1		1				1	1		5		
Angle Total	K													14	48.28%
	A														
	B														
	C			1				1		1			3		
	O	2		1		1			2	3	2		11		
Sideswipe - Same Direction EB	K													2	6.90%
	A														
	B														
	C														
	O						2						2		
Sideswipe - Same Direction WB	K													5	17.24%
	A														
	B														
	C									1	1		2		
	O							1	1		1		3		
Sideswipe - Same Direction Total	K													7	24.14%
	A														
	B														
	C									1	1		2		
	O						2	1	1		1		5		
Rear End EB	K													2	6.90%
	A														
	B														
	C														
	O					1					1		2		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Rear End WB	K													1	3.45%
	A														
	B														
	C														
	O								1				1		
Rear End Total	K													3	10.34%
	A														
	B														
	C														
	O					1			1		1		3		
Single Vehicle SB	K													1	3.45%
	A														
	B														
	C														
	O								1				1		
Single Vehicle EB	K													1	3.45%
	A														
	B														
	C														
	O								1				1		
Single Vehicle WB	K													1	3.45%
	A														
	B														
	C									1			1		
	O														
Single Vehicle Total	K													3	10.34%
	A														
	B														
	C									1			1		
	O								2				2		
Total	K													29	100%
	A														
	B														
	C			1				2		3	1		7		
	O	3		1		2	2	1	6	3	4		22		
	All	3		2		2	2	3	6	6	5		29		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at JSJ Road
PERIOD: 01/01/2013 TO 02/28/2023

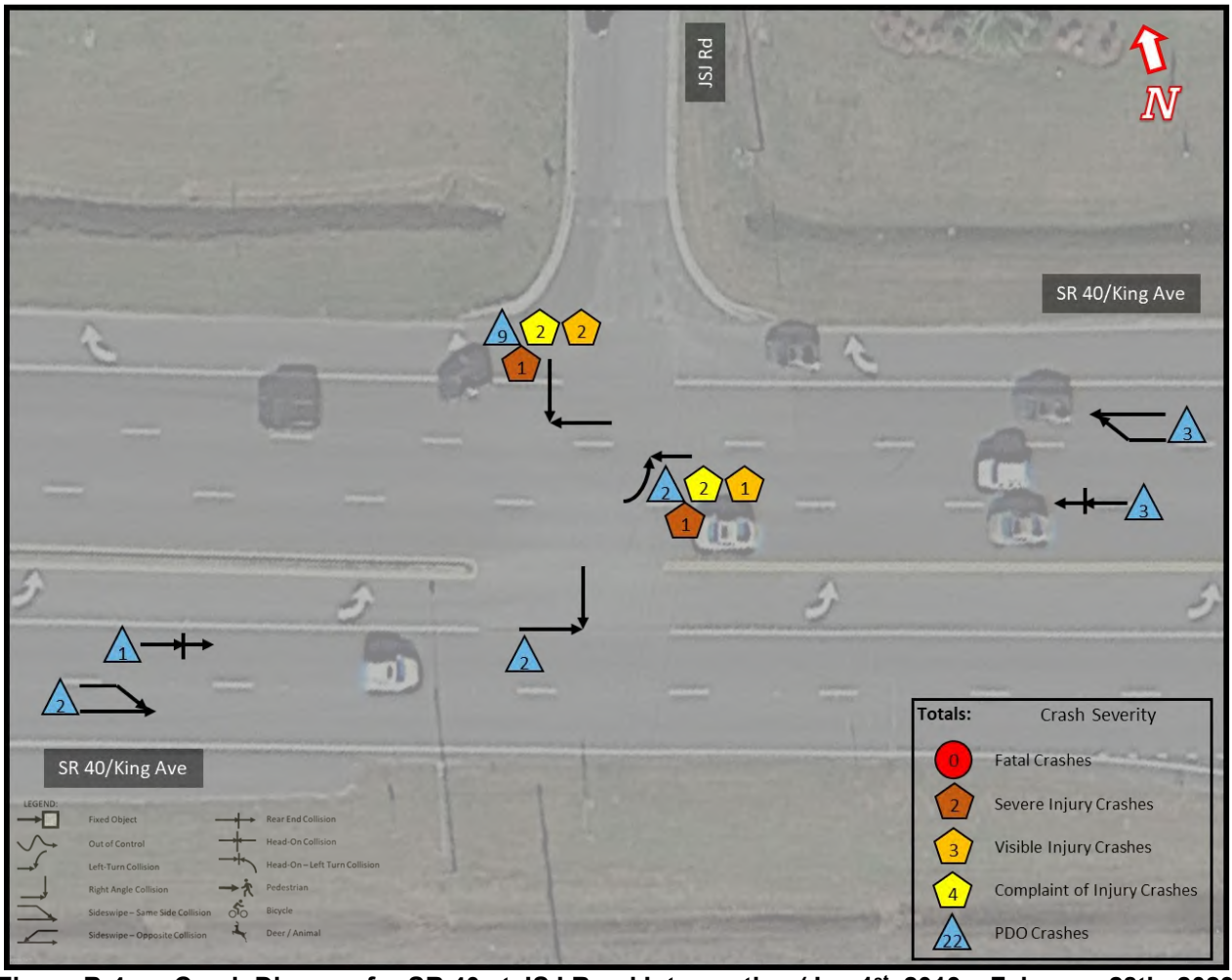


Figure B-4 Crash Diagram for SR 40 at JSJ Road Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-4 Distribution of SR 40 at JSJ Road by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle EB LT x WB	K														
	A										1		1		
	B										1		1	6	19.35%
	C					1		1					2		
	O	1	1										2		
Left Turn - Angle Total	K														
	A										1		1		
	B										1		1	6	19.35%
	C					1		1					2		
	O	1	1										2		
Angle SB x EB	K														
	A														
	B													2	6.45%
	C														
	O		1						1				2		
Angle SB x WB	K														
	A								1				1		
	B				1						1		2	14	45.16%
	C		1						1				2		
	O		2			3		1		2	1		9		
Angle Total	K														
	A								1				1		
	B				1						1		2	16	51.61%
	C		1						1				2		
	O		3			3		1	1	2	1		11		
Sideswipe - Same Direction EB	K														
	A														
	B													2	6.45%
	C														
	O				1		1						2		
Sideswipe - Same Direction WB	K														
	A														
	B													3	9.68%
	C														
	O		1	1					1				3		
Sideswipe - Same Direction Total	K														
	A														
	B													5	16.13%
	C														
	O		1	1	1		1		1				5		
Rear End SB	K														
	A														
	B													1	3.23%
	C														
	O					1							1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Rear End EB	K													3	9.68%
	A														
	B														
	C														
	O		1							1	1		3		
Rear End Total	K													4	12.90%
	A														
	B														
	C														
	O		1			1				1	1		4		
Total	K													31	100%
	A								1		1		2		
	B				1						2		3		
	C		1			1		1	1				4		
	O	1	6	1	1	4	1	1	2	3	2		22		
	All	1	7	1	2	5	1	2	4	3	5		31		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at Gardenia Blossom Road
PERIOD: 01/01/2013 TO 02/28/2023

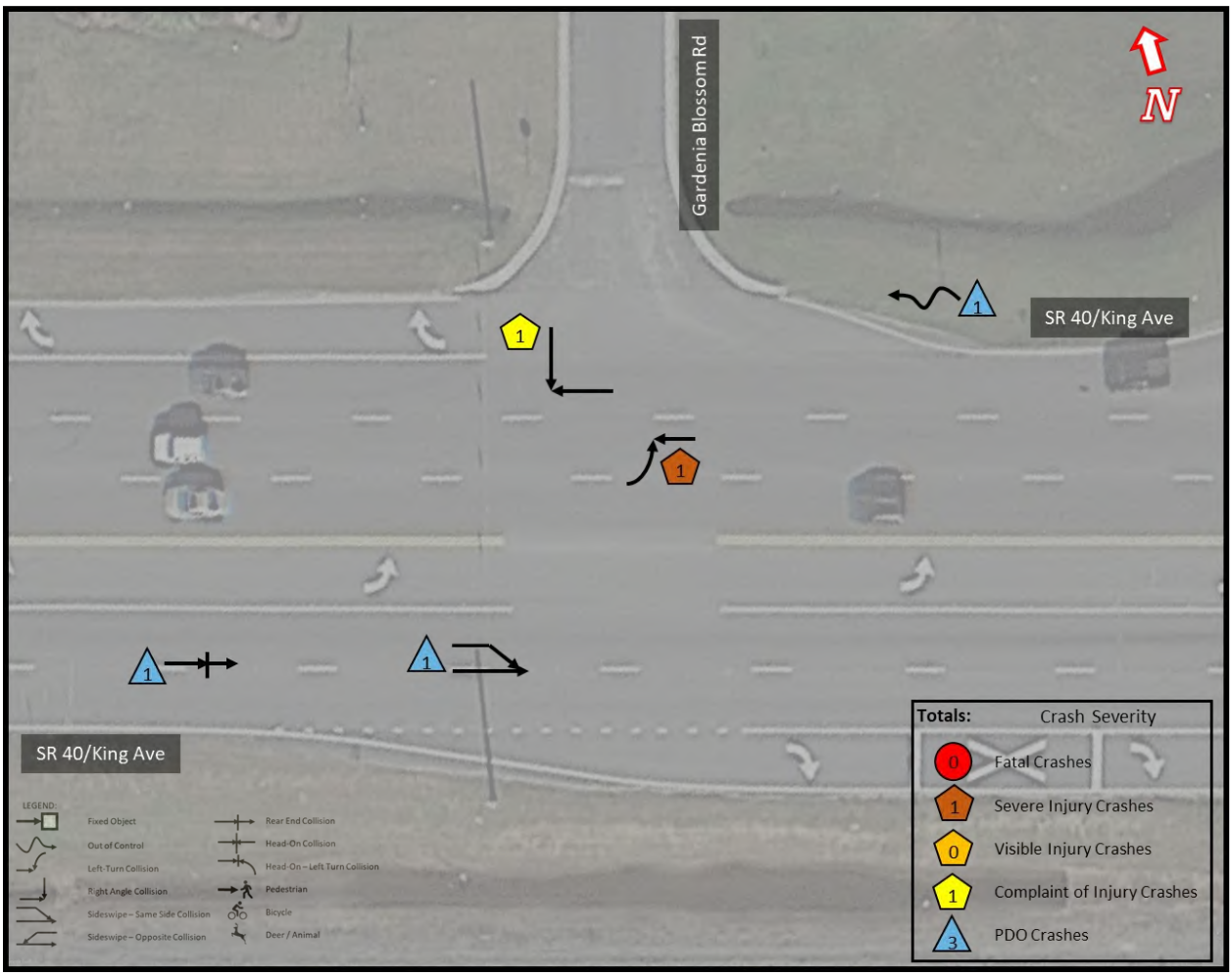


Figure B-5 Crash Diagram for SR 40 at Gardenia Blossom Road Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-5 Distribution of SR 40 at Gardenia Blossom Rd by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle EB LT x WB	K													1	20%
	A				1								1		
	B														
	C														
	O														
Left Turn - Angle Total	K													1	20%
	A				1								1		
	B														
	C														
	O														
Angle SB x EB	K													1	20%
	A														
	B														
	C	1											1		
	O														
Angle Total	K													1	20%
	A														
	B														
	C	1											1		
	O														
Sideswipe - Same Direction WB	K													1	20%
	A														
	B														
	C														
	O					1							1		
Sideswipe - Same Direction Total	K													1	20%
	A														
	B														
	C														
	O					1							1		
Rear End SB	K													1	20%
	A														
	B														
	C														
	O	1											1		
Rear End Total	K													1	20%
	A														
	B														
	C														
	O	1											1		
Single Vehicle WB	K													1	20%
	A														
	B														
	C														
	O					1							1		
Single Vehicle Total	K													1	20%
	A														
	B														
	C														
	O					1							1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Total	K													5	100%
	A				1								1		
	B														
	C	1											1		
	O	1				2							3		
	All	2			1	2							5		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at Lakes Boulevard/Crown Pointe Parkway
PERIOD: 01/01/2013 TO 02/28/2023

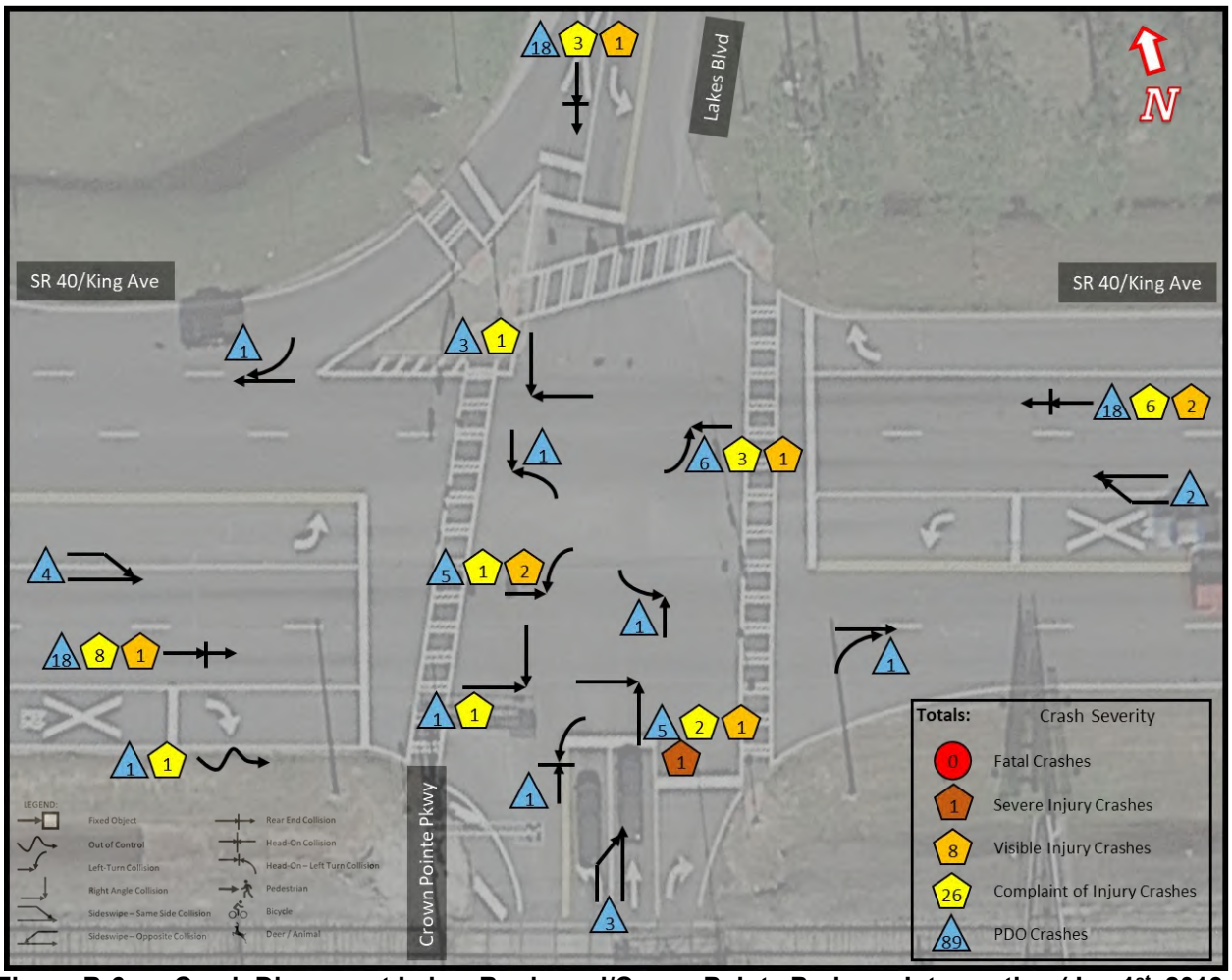


Figure B-6 Crash Diagram at Lakes Boulevard/Crown Pointe Parkway Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-6 Distribution of SR 40 at Lakes Blvd/Crown Pointe Pkwy by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle NB LT x SB	K													1	0.81%
	A														
	B														
	C														
	O										1		1		
Left Turn - Angle SB LT x NB	K													1	0.81%
	A														
	B														
	C														
	O							1					1		
Left Turn - Angle EB LT x WB	K													10	8.06%
	A														
	B								1				1		
	C	1		1						1			3		
	O	2		1	1			2					6		
Left Turn - Angle WB LT x EB	K													8	6.45%
	A														
	B							1	1				2		
	C										1		1		
	O			2			1	1		1			5		
Left Turn - Angle Total	K													20	16.13%
	A														
	B							1	2				3		
	C	1		1						1	1		4		
	O	2		3	1		1	4		1	1		13		
Angle NB x EB	K													9	7.26%
	A					1							1		
	B							1					1		
	C		1					1					2		
	O	1	1			1				1	1		5		
Angle SB x EB	K													2	1.61%
	A														
	B														
	C					1							1		
	O										1		1		
Angle SB x WB	K													4	3.23%
	A														
	B														
	C						1						1		
	O						1	2					3		
Angle Total	K													15	12.10%
	A					1							1		
	B							1					1		
	C		1			1	1	1					4		
	O	1	1			1	1	2		1	2		9		
Sideswipe - Same Direction NB	K													3	2.42%
	A														
	B														
	C														
	O		1	1						1			3		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Sideswipe - Same Direction EB	K													5	4.03%
	A														
	B														
	C														
	O	1				2				1	1		5		
Sideswipe - Same Direction WB	K													3	2.42%
	A														
	B														
	C														
	O					1			1	1			3		
Sideswipe - Same Direction Total	K													11	8.87%
	A														
	B														
	C														
	O	1	1	1		3			1	3	1		11		
Sideswipe - Opposite Direction NB x SB	K													1	0.47%
	A														
	B														
	C														
	O											1	1		
Sideswipe - Opposite Direction Total	K													1	0.47%
	A														
	B														
	C														
	O											1	1		
Rear End SB	K													22	17.74%
	A														
	B				1								1		
	C	1		1			1						3		
	O	4	1	1		2	1		2	4	1	2	18		
Rear End EB	K													27	21.77%
	A														
	B							1					1		
	C	1	1	2	1		1			1	1		8		
	O	3		1	2	1	2		1	3	2	3	18		
Rear End WB	K													26	20.97%
	A														
	B				1				1				2		
	C	1		1				1		1	1	1	6		
	O	4	2	3				2		1	4	2	18		
Rear End Total	K													75	60.48%
	A														
	B				2			1	1				4		
	C	3	1	4	1		2	1		2	2	1	17		
	O	11	3	5	2	3	3	2	3	8	7	7	54		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Head On EB x WB	K													1	0.81%
	A														
	B														
	C														
	O											1	1		
Head On Total	K													1	0.81%
	A														
	B														
	C														
	O											1	1		
Single Vehicle EB	K													2	1.61%
	A														
	B														
	C								1				1		
	O	1											1		
Single Vehicle Total	K													2	1.61%
	A														
	B														
	C								1				1		
	O	1											1		
Total	K													124	100%
	A					1							1		
	B				2			3	3				8		
	C	4	2	5	1	1	3	2	1	3	3	1	26		
	O	16	5	9	3	7	5	8	4	13	11	8	89		
	All	20	7	14	6	9	8	13	8	16	14	9	124		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at Queen Street
PERIOD: 01/01/2013 TO 02/28/2023

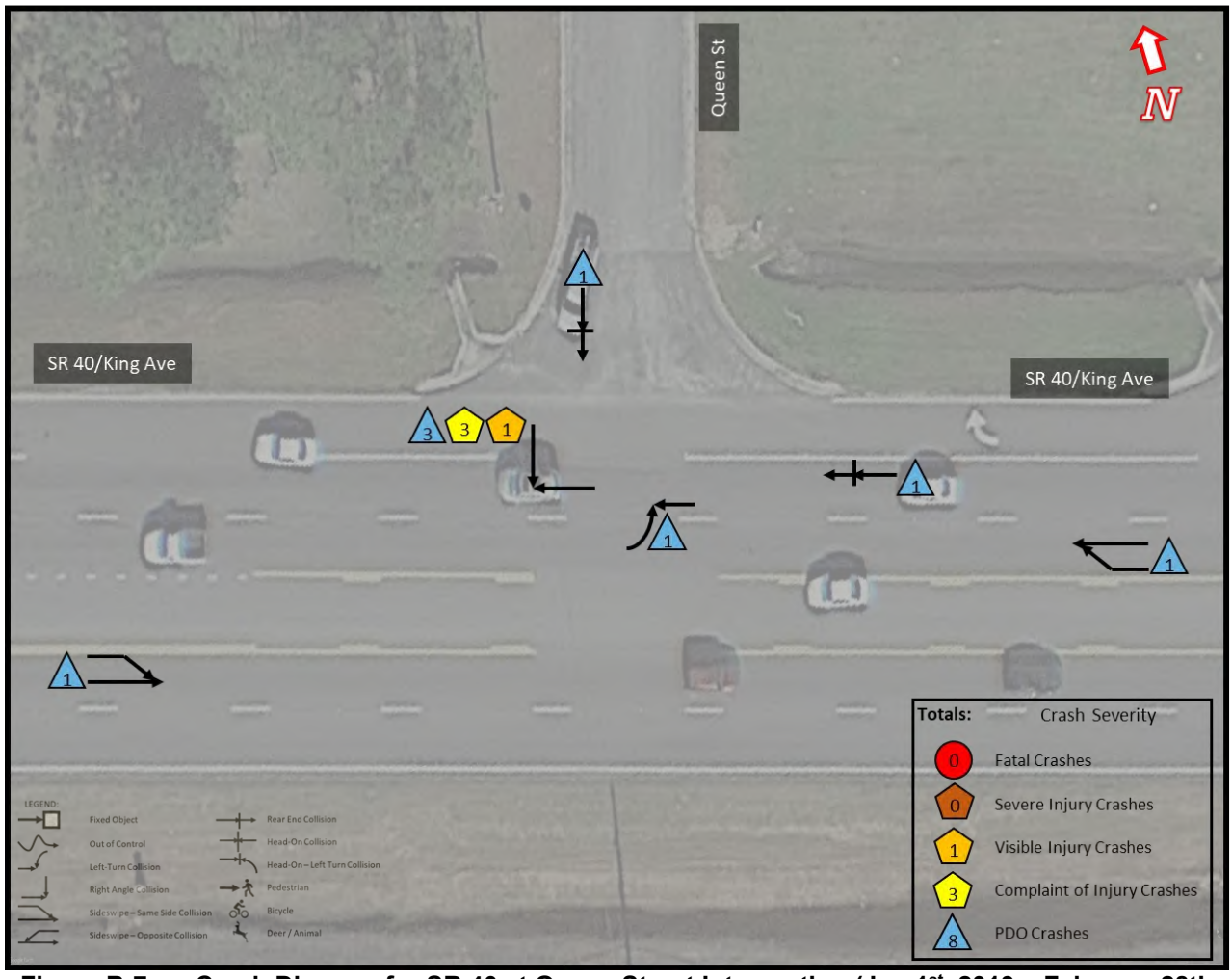


Figure B-7 Crash Diagram for SR 40 at Queen Street Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-7 Distribution of SR 40 at Queen Street by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle EB LT x WB	K													1	8.33%
	A														
	B														
	C														
	O									1			1		
Left Turn - Angle Total	K													1	8.33%
	A														
	B														
	C														
	O									1			1		
Angle SB x WB	K													7	58.33%
	A														
	B	1											1		
	C	1		1							1		3		
	O	1		1	1								3		
Angle Total	K													7	58.33%
	A														
	B	1											1		
	C	1		1							1		3		
	O	1		1	1								3		
Sideswipe - Same Direction EB	K													9	4.23%
	A								1				1		
	B														
	C		1										1		
	O	1		1	1	2	1	1					7		
Sideswipe - Same Direction WB	K													1	8.33%
	A														
	B														
	C														
	O									1			1		
Sideswipe - Same Direction Total	K													1	8.33%
	A														
	B														
	C														
	O			1									1		
Rear End SB	K													1	8.33%
	A														
	B														
	C														
	O				1								1		
Rear End WB	K													1	8.33%
	A														
	B														
	C														
	O				1								1		
Rear End Total	K													2	16.67%
	A														
	B														
	C														
	O				2								2		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Total	K													12	100%
	A														
	B	1											1		
	C	1		1							1		3		
	O	1		2	3					2			8		
	All	3		3	3					2	1		12		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at Tiffany Street
PERIOD: 01/01/2013 TO 02/28/2023

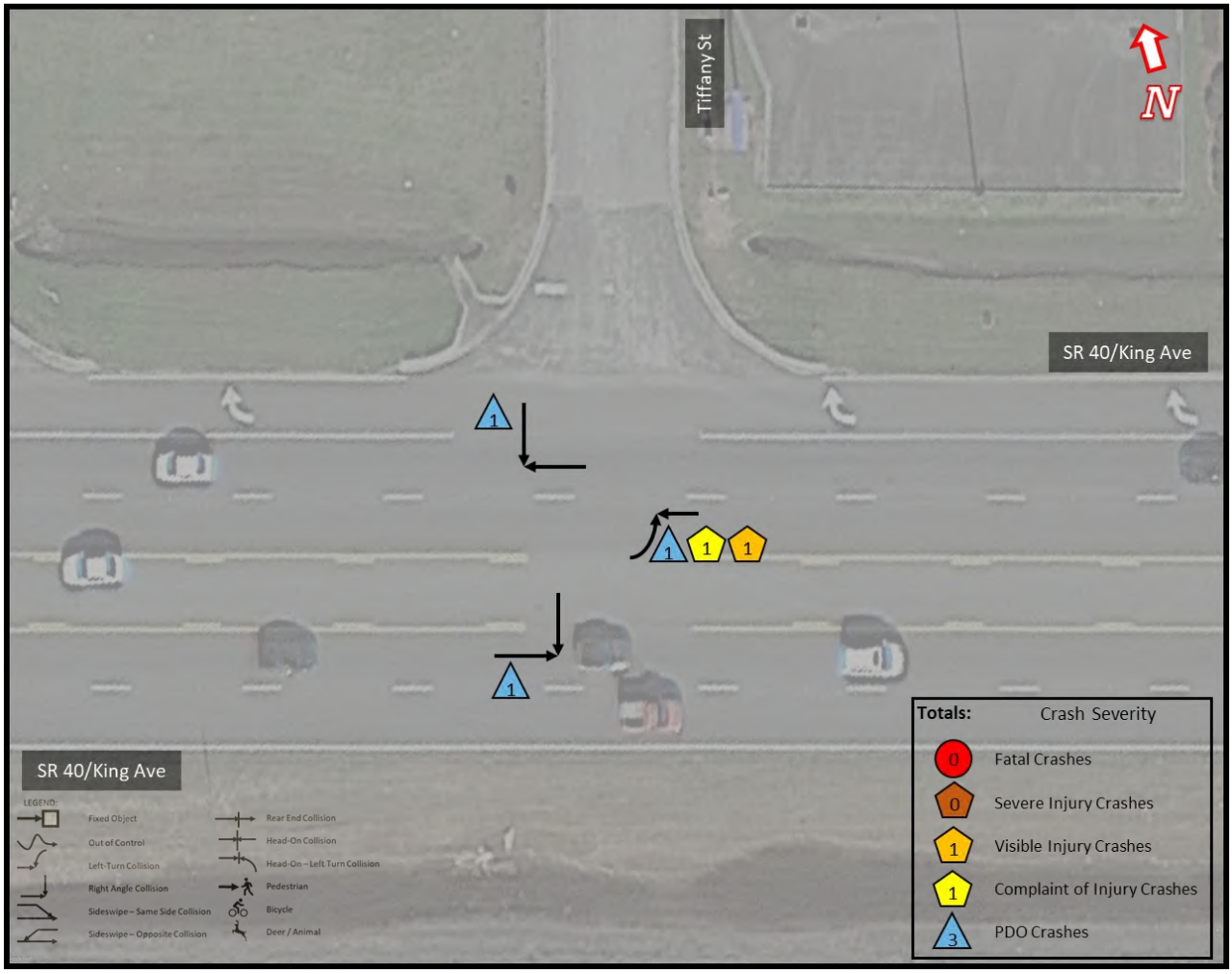


Figure B-8 Crash Diagram for SR 40 at Tiffany Street Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-8 Distribution of SR 40 at Tiffany Street by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle NB LT x SB	K													3	60%
	A														
	B						1						1		
	C					1							1		
	O											1	1		
Left Turn - Angle Total	K													3	60%
	A														
	B						1						1		
	C					1							1		
	O											1	1		
Angle SB x EB	K													1	20%
	A														
	B														
	C														
	O										1		1		
Angle SB x WB	K													1	20%
	A														
	B														
	C														
	O										1		1		
Angle Total	K													2	40%
	A														
	B														
	C														
	O										2		2		
Total	K													5	100%
	A														
	B						1						1		
	C					1							1		
	O										2	1	3		
	All					1	1				2	1	5		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at Victoriana Road
PERIOD: 01/01/2013 TO 02/28/2023

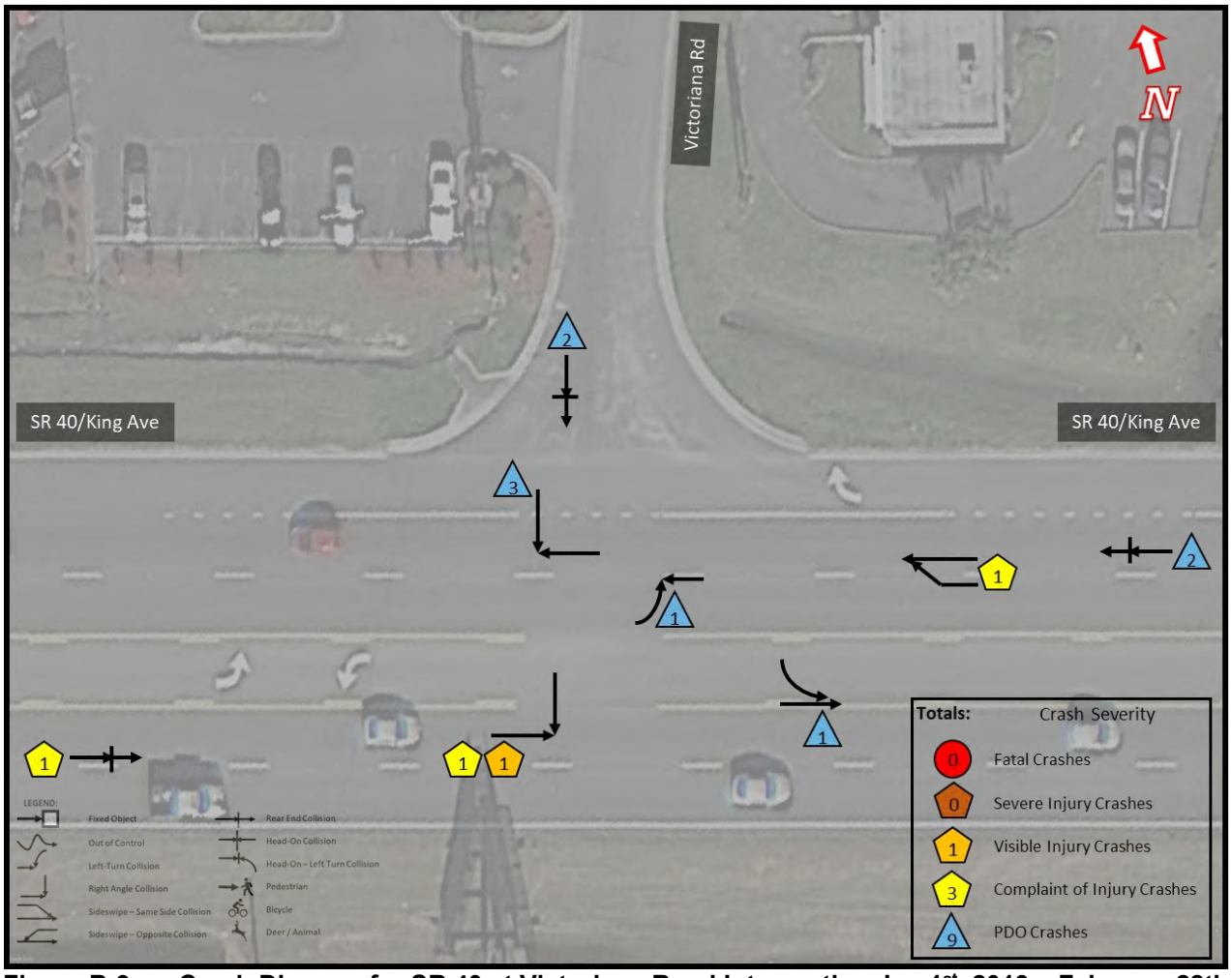


Figure B-9 Crash Diagram for SR 40 at Victoriana Road Intersection Jan 1st, 2013 – February 28th, 2023)

Table B-9 Distribution of SR 40 at Victoriana Road by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle EB LT x WB	K													1	7.69%
	A														
	B														
	C														
	O	1											1		
Left Turn - Angle Total	K													1	7.69%
	A														
	B														
	C														
	O	1											1		
Angle SB x EB	K													2	15.38%
	A														
	B										1		1		
	C											1	1		
	O														
Angle SB x WB	K													3	23.08%
	A														
	B														
	C														
	O			1						1	1		3		
Angle Total	K													5	38.46%
	A														
	B										1		1		
	C											1	1		
	O			1						1	1		3		
Sideswipe - Same Direction EB	K													1	7.69%
	A														
	B														
	C														
	O									1			1		
Sideswipe - Same Direction WB	K													1	7.69%
	A														
	B														
	C					1							1		
	O														
Sideswipe - Same Direction Total	K													2	15.38%
	A														
	B														
	C					1							1		
	O									1			1		
Rear End SB	K													2	15.38%
	A														
	B														
	C														
	O		1								1		2		
Rear End EB	K													1	7.69%
	A														
	B														
	C	1											1		
	O														

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Rear End WB	K													2	15.38%
	A														
	B														
	C														
	O	2											2		
Rear End Total	K													5	38.46%
	A														
	B														
	C	1											1		
	O	2	1								1		4		
Total	K													13	100%
	A														
	B										1		1		
	C	1				1						1	3		
	O	3	1	1						2	2		9		
	All	4	1	1		1				2	3	1	13		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at Gross Road/Haddock Road
PERIOD: 01/01/2013 TO 02/28/2023

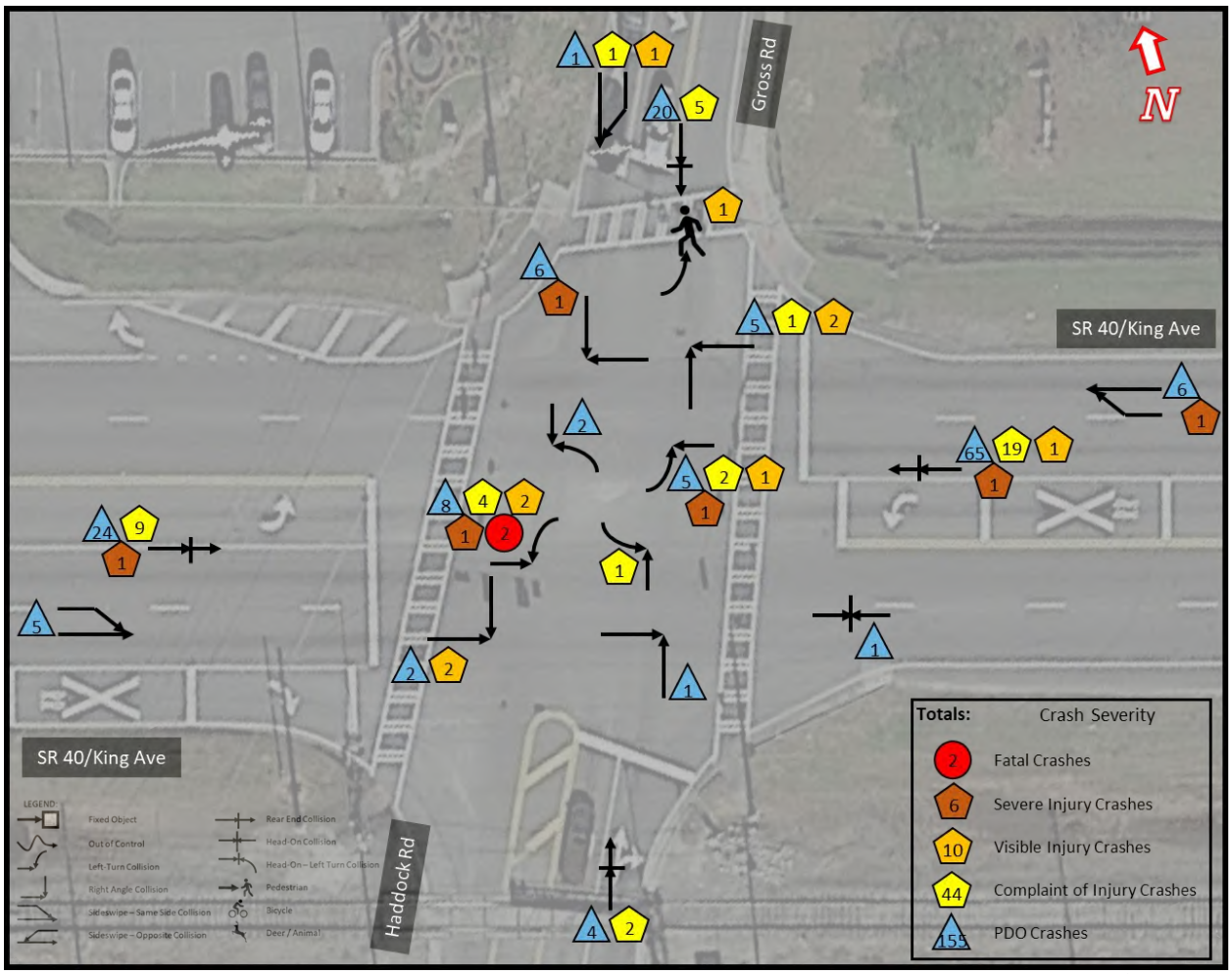


Figure B-10 Crash Diagram for SR 40 at Gross Road/Haddock Road Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-10 Distribution of SR 40 at Gross Road/Haddock Road by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle NB LT x SB	K													2	0.92%
	A														
	B														
	C														
	O		1		1								2		
Left Turn - Angle SB LT x NB	K													1	0.46%
	A														
	B														
	C		1										1		
	O														
Left Turn - Angle EB LT x WB	K													9	4.15%
	A										1		1		
	B								1				1		
	C		1								1		2		
	O		1			2				1	1		5		
Left Turn - Angle WB LT x EB	K				1						1		2	17	7.83%
	A									1			1		
	B	1									1		2		
	C	2			2								4		
	O		1	1		2			1		1	2	8		
Left Turn - Angle Total	K				1						1		2	29	13.36%
	A									1	1		2		
	B	1							1		1		3		
	C	2	2		2						1		7		
	O		3	1	1	4			1	1	2	2	15		
Angle NB x EB	K													1	0.46%
	A														
	B														
	C														
	O		1										1		
Angle NB x WB	K													8	3.69%
	A														
	B			1						1			2		
	C							1					1		
	O			1	1					2	1		5		
Angle SB x WB	K													4	1.84%
	A														
	B							1		1			2		
	C														
	O				1				1				2		
Angle SB x EB	K													7	3.23%
	A				1								1		
	B														
	C														
	O	1				1				1	3		6		
Angle Total	K													20	9.22%
	A				1								1		
	B			1				1		2			4		
	C							1					1		
	O	1	1	1	2	1			1	3	4		14		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Sideswipe - Same Direction SB	K													3	1.38%
	A														
	B							1					1		
	C	1											1		
	O			1									1		
Sideswipe - Same Direction EB	K													5	2.30%
	A														
	B														
	C														
	O				3				1		1		5		
Sideswipe - Same Direction WB	K													7	3.23%
	A		1										1		
	B														
	C														
	O	2				1		1		2			6		
Sideswipe - Same Direction Total	K													15	6.91%
	A		1										1		
	B							1					1		
	C	1											1		
	O	2		1	3	1		1	1	2	1		12		
Rear End NB	K													6	2.76%
	A														
	B														
	C							1		1			2		
	O	1	1	1							1		4		
Rear End SB	K													25	11.52%
	A														
	B														
	C	2	1		1	1							5		
	O	5	4	2	4	1	2	1	1				20		
Rear End EB	K													34	15.67%
	A										1		1		
	B														
	C	1	3	1	1			1		1	1		9		
	O	4	6	2	2	1	1	1	1	3	2	1	24		
Rear End WB	K													86	39.63%
	A							1					1		
	B			1									1		
	C	3	4	2	2	1			2	4		1	19		
	O	14	8	8	3	4	5	1	5	8	7	2	65		
Rear End Total	K													151	69.59%
	A							1			1		2		
	B			1									1		
	C	6	8	3	4	2		2	2	6	1	1	35		
	O	24	19	13	9	6	8	3	7	11	10	3	113		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Head On EB x WB	K													1	0.46%
	A														
	B														
	C														
	O				1								1		
Head On Total	K													1	0.46%
	A														
	B														
	C														
	O				1								1		
Pedestrian	K													1	0.46%
	A														
	B	1											1		
	C														
	O														
Total	K				1						1		2	217	100%
	A		1		1			1		1	2		6		
	B	2		2				2	1	2	1		10		
	C	9	10	3	6	2		3	2	6	2	1	44		
	O	27	23	16	16	12	8	4	10	17	17	5	155		
	All	38	34	21	24	14	8	10	13	26	23	6	217		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at J Nolan Wells
PERIOD: 01/01/2013 TO 02/28/2023

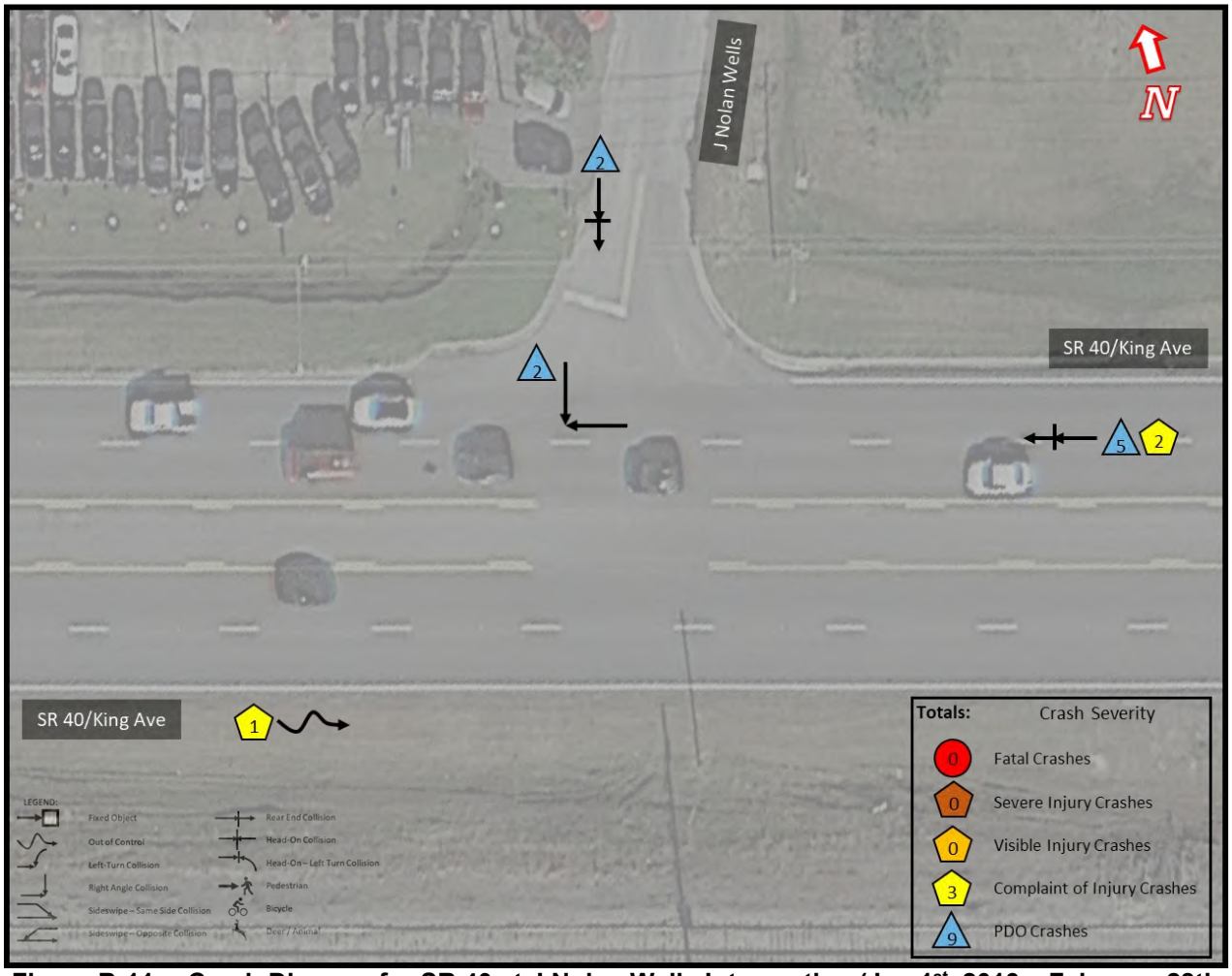


Figure B-11 Crash Diagram for SR 40 at J Nolan Wells Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-11 Distribution of SR 40 at J Nolan Wells by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Angle SB x WB	K													2	16.67%
	A														
	B														
	C														
	O							1			1		2		
Angle Total	K													2	16.67%
	A														
	B														
	C														
	O							1			1		2		
Rear End SB	K													2	16.67%
	A														
	B														
	C														
	O								1	1			2		
Rear End WB	K													7	58.33%
	A														
	B														
	C			1								1	2		
	O		1	2		1	1						5		
Rear End Total	K													9	75.00%
	A														
	B														
	C			1								1	2		
	O		1	2		1	1		1	1			7		
Single Vehicle SB	K													1	8.33%
	A														
	B														
	C									1			1		
	O														
Single Vehicle Total	K													1	8.33%
	A														
	B														
	C									1			1		
	O														
Total	K													12	100%
	A														
	B														
	C			1						1		1	3		
	O		1	2		1	1	1	1	1	1		9		
	All		1	3		1	1	1	1	2	1	1	12		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of SR 40/King Avenue at Middle School Road
PERIOD: 01/01/2013 TO 02/28/2023

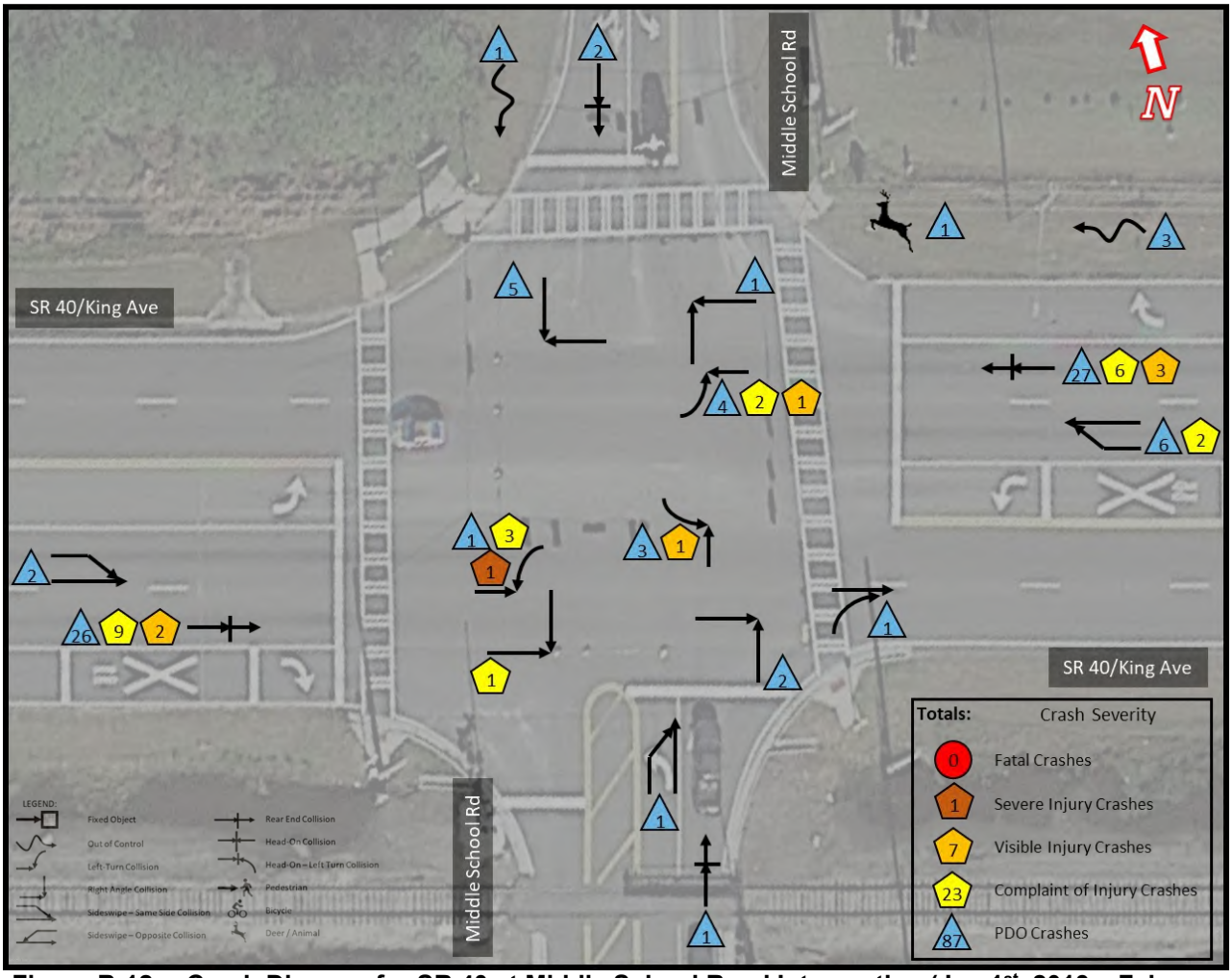


Figure B-12 Crash Diagram for SR 40 at Middle School Road Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-12 Distribution of SR 40 at Middle School Road by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle SB LT x NB	K													4	3.39%
	A														
	B									1			1		
	C														
	O								1	1	1		3		
Left Turn - Angle EB LT x WB	K													7	5.93%
	A														
	B				1								1		
	C							2					2		
	O				1					2		1	4		
Left Turn - Angle WB LT x EB	K													5	4.24%
	A											1	1		
	B														
	C								1	2			3		
	O										1		1		
Left Turn - Angle Total	K													16	13.56%
	A											1	1		
	B				1					1			2		
	C							2	1	2			5		
	O				1				1	3	2	1	8		
Angle NB x EB	K													2	1.69%
	A														
	B														
	C														
	O						1			1			2		
Angle NB x WB	K													1	0.85%
	A														
	B														
	C														
	O									1			1		
Angle SB x EB	K													1	0.85%
	A														
	B														
	C										1		1		
	O														
Angle SB x WB	K													5	4.24%
	A														
	B														
	C														
	O	1				2				1	1		5		
Angle Total	K													9	7.63%
	A														
	B														
	C										1		1		
	O	1				2	1			3	1		8		
Sideswipe - Same Direction NB	K													1	0.85%
	A														
	B														
	C														
	O											1	1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Sideswipe - Same Direction EB	K													3	2.54%
	A														
	B														
	C														
	O				1		1			1			3		
Sideswipe - Same Direction WB	K													8	6.78%
	A														
	B														
	C								1	1			2		
	O		1	1		1		1	1		1		6		
Sideswipe - Same Direction Total	K													12	10.17%
	A														
	B														
	C								1	1			2		
	O		1	1	1	1	1	1	1	1	1	1	10		
Rear End NB	K													1	0.85%
	A														
	B														
	C														
	O									1			1		
Rear End SB	K													2	1.69%
	A														
	B														
	C														
	O				1						1		2		
Rear End EB	K													37	31.36%
	A														
	B			1	1								2		
	C			1	3		1	2	1	1			9		
	O		2	3	3	5	1	2	5	3	2		26		
Rear End WB	K													36	30.51%
	A														
	B		1						1	1			3		
	C		1	2	1					2			6		
	O	1	1	2	8	2	1	3	5	1	2	1	27		
Rear End Total	K													76	64.41%
	A														
	B		1	1	1				1	1			5		
	C		1	3	4		1	2	1	3			15		
	O	1	3	5	12	7	2	5	10	5	5	1	56		
Animal	K													1	0.85%
	A														
	B														
	C														
	O		1										1		
Head On Total	K													1	0.47%
	A														
	B														
	C														
	O			1									1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Bicycle	K													1	0.47%
	A														
	B														
	C														
	O			1									1		
Single Vehicle SB	K													1	0.85%
	A														
	B														
	C														
	O	1											1		
Single Vehicle Total	K													1	0.85%
	A														
	B														
	C														
	O	1											1		
Total	K													118	100%
	A											1	1		
	B		1	1	2				1	2			7		
	C		1	3	4		1	4	3	6	1		23		
	O	3	5	6	15	10	4	7	12	13	9	3	87		
	All	3	7	10	21	10	5	11	16	21	10	4	118		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of Boone Street at May Creek Street
PERIOD: 01/01/2013 TO 02/28/2023

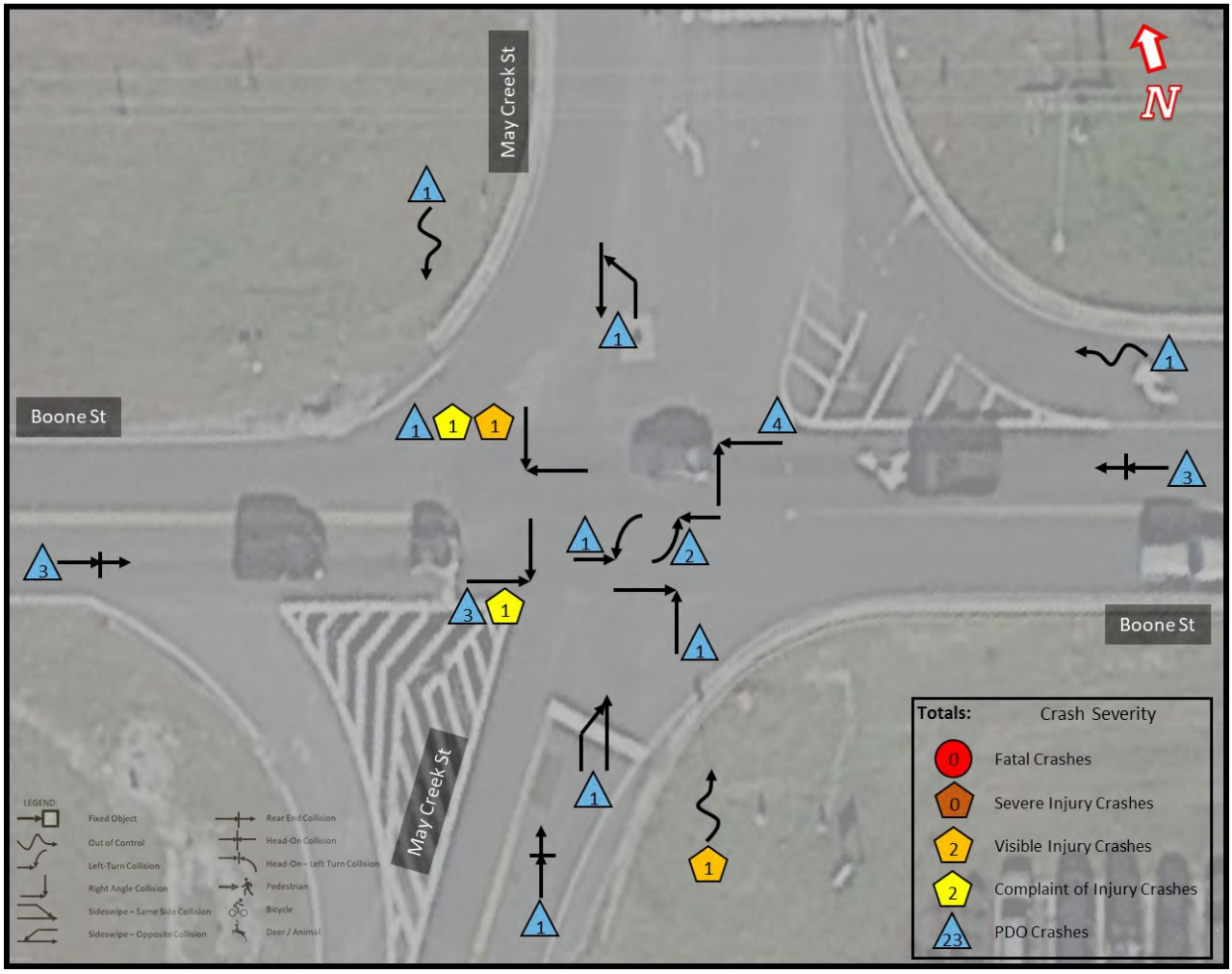


Figure B-13 Crash Diagram for Boone Street at May Creek Street Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-13 Distribution of Boone Street at May Creek Street by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle EB LT x WB	K													2	7.41%
	A														
	B														
	C														
	O					1				1			2		
Left Turn - Angle WB LT x EB	K													1	3.70%
	A														
	B														
	C														
	O								1				1		
Left Turn - Angle Total	K													3	11.11%
	A														
	B														
	C														
	O					1			1	1			3		
Angle NB x EB	K													1	3.70%
	A														
	B														
	C														
	O									1			1		
Angle NB x WB	K													4	14.81%
	A														
	B														
	C														
	O		1	1		1			1				4		
Angle SB x EB	K													4	14.81%
	A														
	B														
	C										1		1		
	O		1			1		1					3		
Angle SB x WB	K													3	11.11%
	A														
	B		1										1		
	C										1		1		
	O			1									1		
Angle Total	K													12	44.44%
	A														
	B		1										1		
	C										2		2		
	O		2	2		2		1	1	1			9		
Sideswipe - Same Direction NB	K													1	3.70%
	A														
	B														
	C														
	O			1									1		
Sideswipe - Same Direction Total	K													1	3.70%
	A														
	B														
	C														
	O			1									1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Sideswipe - Opposite Direction NB x SB	K													1	3.70%
	A														
	B														
	C														
	O		1										1		
Sideswipe - Opposite Direction Total	K													1	3.70%
	A														
	B														
	C														
	O		1										1		
Rear End NB	K													1	3.70%
	A														
	B														
	C														
	O				1								1		
Rear End EB	K													3	11.11%
	A														
	B														
	C														
	O		1	1							1		3		
Rear End WB	K													3	11.11%
	A														
	B														
	C														
	O	1						1		1			3		
Rear End Total	K													7	25.93%
	A														
	B														
	C														
	O	1	1	1	1			1		1	1		7		
Single Vehicle NB	K													1	3.70%
	A														
	B			1									1		
	C														
	O														
Single Vehicle SB	K													1	3.70%
	A														
	B														
	C														
	O			1									1		
Single Vehicle WB	K													1	3.70%
	A														
	B														
	C														
	O									1			1		
Single Vehicle Total	K													3	11.11%
	A														
	B			1									1		
	C														
	O			1						1			2		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Total	K													27	100%
	A														
	B		1	1									2		
	C										2		2		
	O	1	4	5	1	3		2	2	4	1		23		
	All	1	5	6	1	3		2	2	4	3		27		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of Boone Street at Boone Street (I-95 NB Ramps)
PERIOD: 01/01/2013 TO 02/28/2023

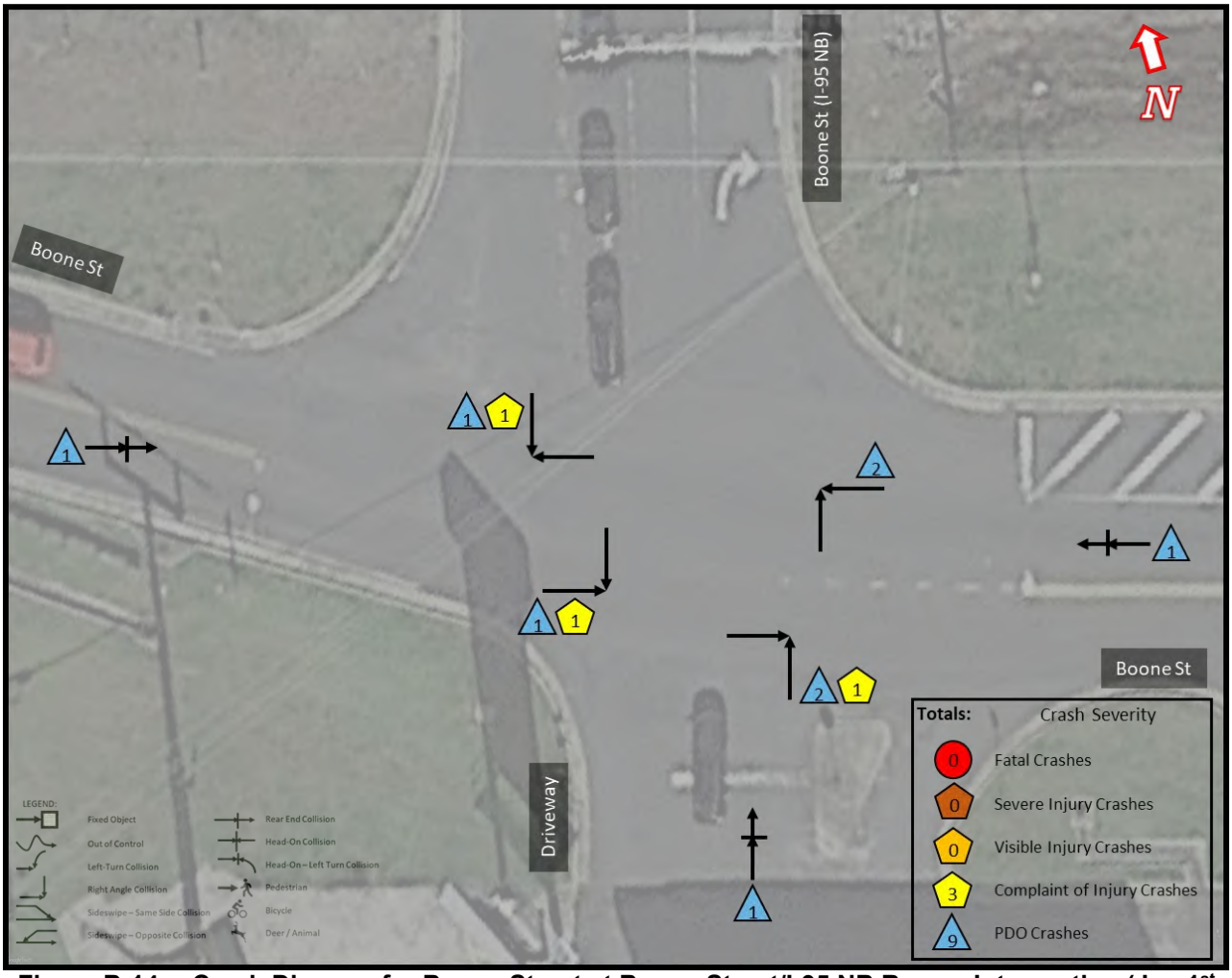


Figure B-14 Crash Diagram for Boone Street at Boone Street/I-95 NB Ramps Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-14 Distribution of Boone Street at Boone Street/I-95 NB Ramps by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Angle NB x EB	K													3	25.00%
	A														
	B														
	C							1					1		
	O							1			1		2		
Angle NB x WB	K													2	16.67%
	A														
	B														
	C														
	O									2			2		
Angle SB x EB	K													2	16.67%
	A														
	B														
	C							1					1		
	O			1									1		
Angle SB x WB	K													2	16.67%
	A														
	B														
	C							1					1		
	O										1		1		
Angle Total	K													9	75.00%
	A														
	B														
	C							3					3		
	O			1				1		2	2		6		
Rear End NB	K													1	8.33%
	A														
	B														
	C														
	O						1						1		
Rear End EB	K													1	8.33%
	A														
	B														
	C														
	O							1					1		
Rear End WB	K													1	8.33%
	A														
	B														
	C														
	O	1											1		
Rear End Total	K													3	25.00%
	A														
	B														
	C														
	O	1					1	1					3		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Total	K													12	100%
	A														
	B														
	C							3					3		
	O	1		1			1	2		2	2		9		
	All	1		1			1	5		2	2		12		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of Boone Street at Crown Pointe Parkway
PERIOD: 01/01/2013 TO 02/28/2023

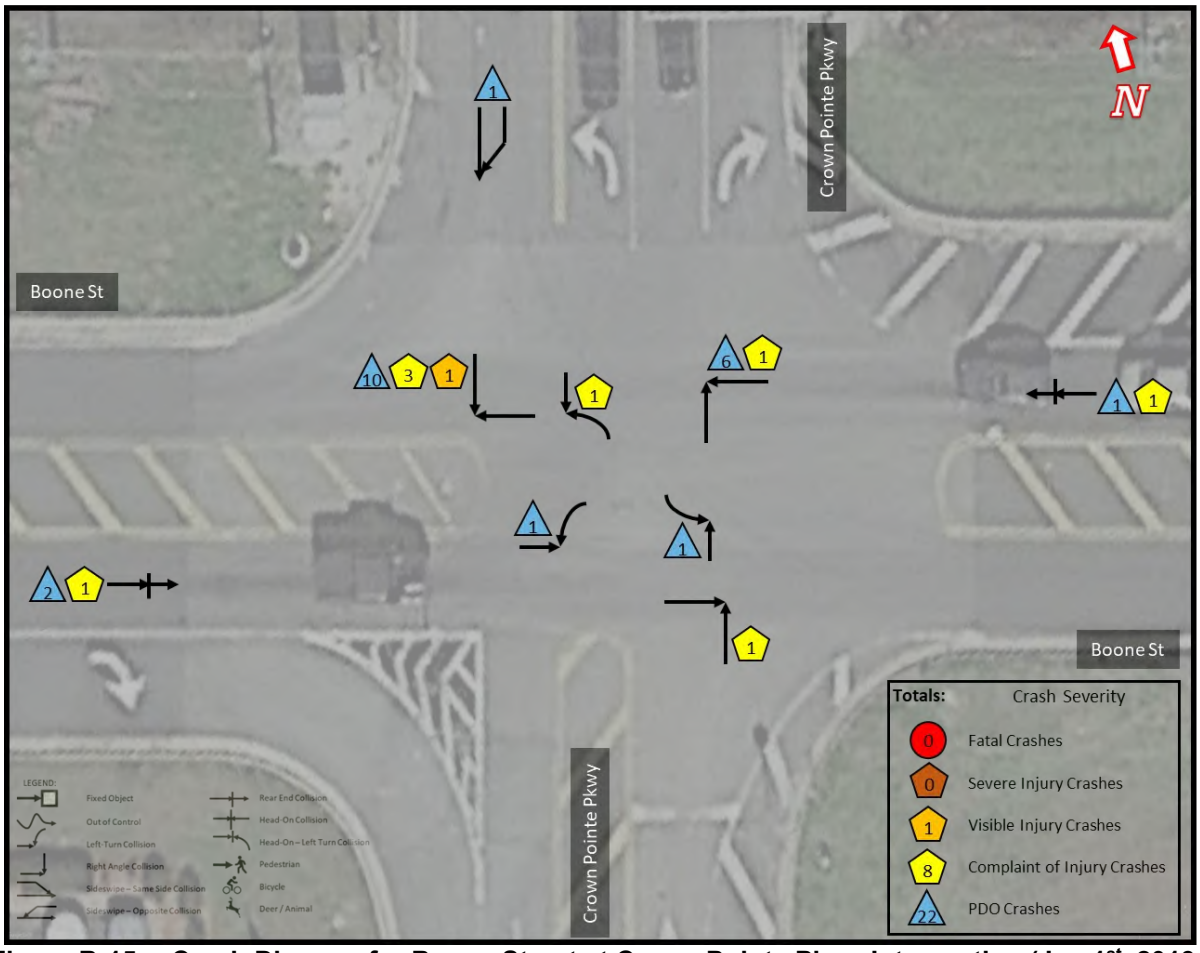


Figure B-15 Crash Diagram for Boone Street at Crown Pointe Pkwy Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-15 Distribution of Boone St at Crown Pointe Pkwy by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle NB LT x SB	K													1	3.23%
	A														
	B														
	C									1			1		
	O														
Left Turn - Angle SB LT x NB	K													1	3.23%
	A														
	B														
	C														
	O									1			1		
Left Turn - Angle WB LT x EB	K													1	3.23%
	A														
	B														
	C														
	O			1									1		
Left Turn - Angle Total	K													3	9.68%
	A														
	B														
	C									1			1		
	O			1						1			2		
Angle NB x EB	K													1	3.23%
	A														
	B														
	C									1			1		
	O														
Angle NB x WB	K													7	22.58%
	A														
	B														
	C								1				1		
	O					1				1	3	1	6		
Angle SB x WB	K													14	45.16%
	A														
	B											1	1		
	C	1	1						1				3		
	O	1	1	1					2	1	4		10		
Angle Total	K													22	70.97%
	A														
	B											1	1		
	C	1	1						2	1			5		
	O	1	1	1		1			2	2	7	1	16		
Sideswipe - Same Direction SB	K													1	3.23%
	A														
	B														
	C														
	O										1		1		
Sideswipe - Same Direction Total	K													1	3.23%
	A														
	B														
	C														
	O										1		1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Rear End EB	K													3	9.68%
	A														
	B														
	C				1								1		
	O			1		1							2		
Rear End WB	K													2	6.45%
	A														
	B														
	C										1		1		
	O							1					1		
Rear End Total	K													5	16.13%
	A														
	B														
	C				1						1		2		
	O			1		1		1					3		
Total	K													31	100%
	A														
	B											1	1		
	C	1	1		1				2	2	1		8		
	O	1	1	3		2		1	2	3	8	1	22		
	All	2	2	3	1	2		1	4	5	9	2	31		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of Boone Street at Haddock Road
PERIOD: 01/01/2013 TO 02/28/2023

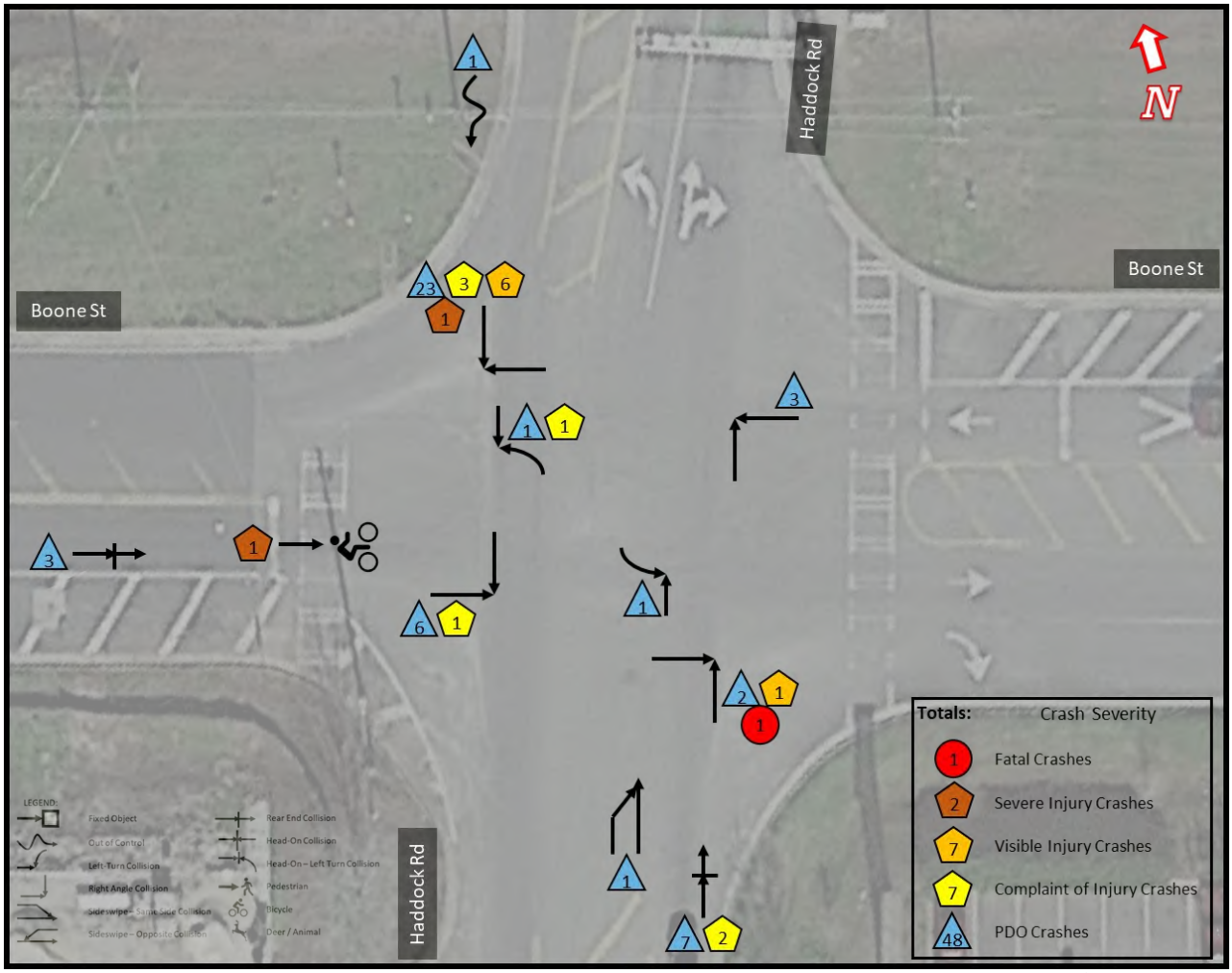


Figure B-16 Crash Diagram for Boone Street at Haddock Road Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-16 Distribution of Boone Street at Haddock Road by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Left Turn - Angle NB LT x SB	K													2	3.08%
	A														
	B														
	C										1		1		
	O								1				1		
Left Turn - Angle EB LT x WB	K													1	1.54%
	A														
	B														
	C														
	O					1							1		
Left Turn - Angle Total	K													3	4.62%
	A														
	B														
	C										1		1		
	O					1			1				2		
Angle NB x EB	K					1							1	4	6.15%
	A														
	B							1					1		
	C														
	O								1	1			2		
Angle NB x WB	K													3	4.62%
	A														
	B														
	C														
	O			1						1	1		3		
Angle SB x EB	K													7	10.77%
	A														
	B														
	C										1		1		
	O				1			1		2	2		6		
Angle SB x WB	K													33	50.77%
	A						1						1		
	B		2				1	1		1	1		6		
	C						1			1	1		3		
	O		1		2	2	3		6	4	4	1	23		
Angle Total	K					1							1	47	72.31%
	A						1						1		
	B		2				1	2		1	1		7		
	C						1			1	2		4		
	O		1	1	3	2	3	1	7	8	7	1	34		
Sideswipe - Same Direction NB	K													1	1.54%
	A														
	B														
	C														
	O									1			1		
Sideswipe - Same Direction SB	K													1	1.54%
	A														
	B														
	C														
	O									1			1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Sideswipe - Same Direction Total	K													1	1.54%
	A														
	B														
	C														
	O									1			1		
Rear End NB	K													9	13.85%
	A														
	B														
	C			1		1							2		
	O	2		1	2	2							7		
Rear End EB	K													3	4.62%
	A														
	B														
	C														
	O	1							2				3		
Rear End Total	K													12	18.46%
	A														
	B														
	C			1		1							2		
	O	3		1	2	2			2				10		
Bicycle	K													1	1.54%
	A									1			1		
	B														
	C														
	O														
Single Vehicle SB	K													1	1.54%
	A														
	B														
	C														
	O									1			1		
Single Vehicle Total	K													1	1.54%
	A														
	B														
	C														
	O									1			1		
Total	K					1							1	65	100%
	A						1			1			2		
	B		2				1	2		1	1		7		
	C			1		1	1			1	3		7		
	O	3	1	2	5	5	3	1	10	10	7	1	48		
	All	3	3	3	5	7	6	3	10	13	11	1	65		

Collision Diagram

COUNTY: Camden
LOCATION: Intersection of Boone Street at Middle School Road
PERIOD: 01/01/2013 TO 02/28/2023

Figure B-17 Crash Diagram for Boone Street at Middle School Road Intersection (Jan 1st, 2013 – February 28th, 2023)

Table B-17 Distribution of Boone Street at Middle School Road by Manner of Collision and by Year

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total %		
Rear End EB	K													3	75.00%
	A														
	B														
	C										1		1		
	O									2			2		
Rear End WB	K													1	25.00%
	A														
	B														
	C														
	O							1					1		
Rear End Total	K													4	100%
	A														
	B														
	C										1		1		
	O							1		2			3		
Total	K													4	100%
	A														
	B														
	C										1		1		
	O							1		2			3		
	All							1		2	1		4		

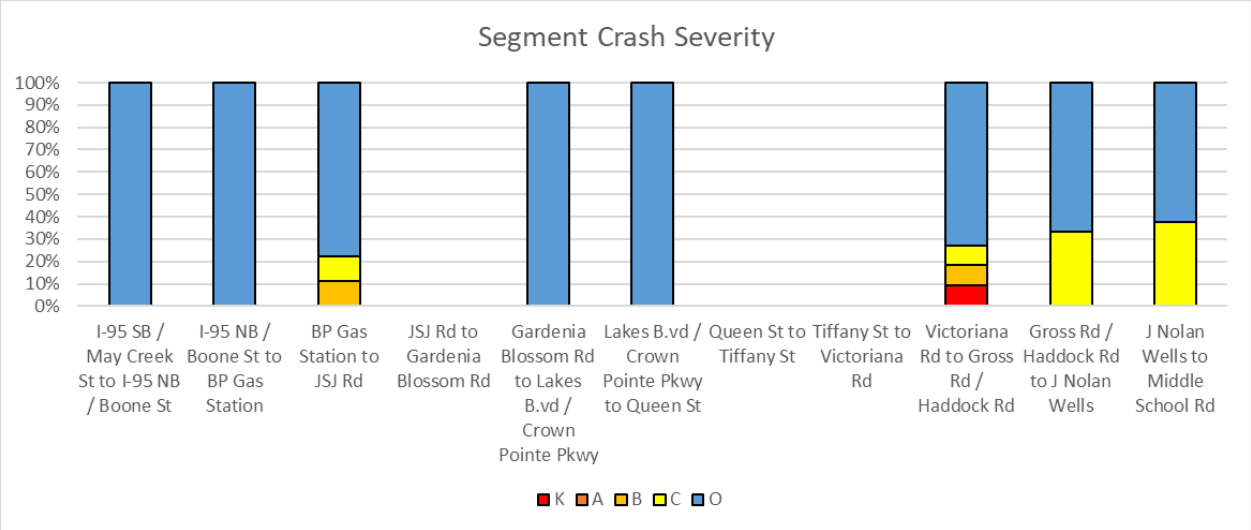


Figure B-15 Distribution of Segment Crashes by Severity

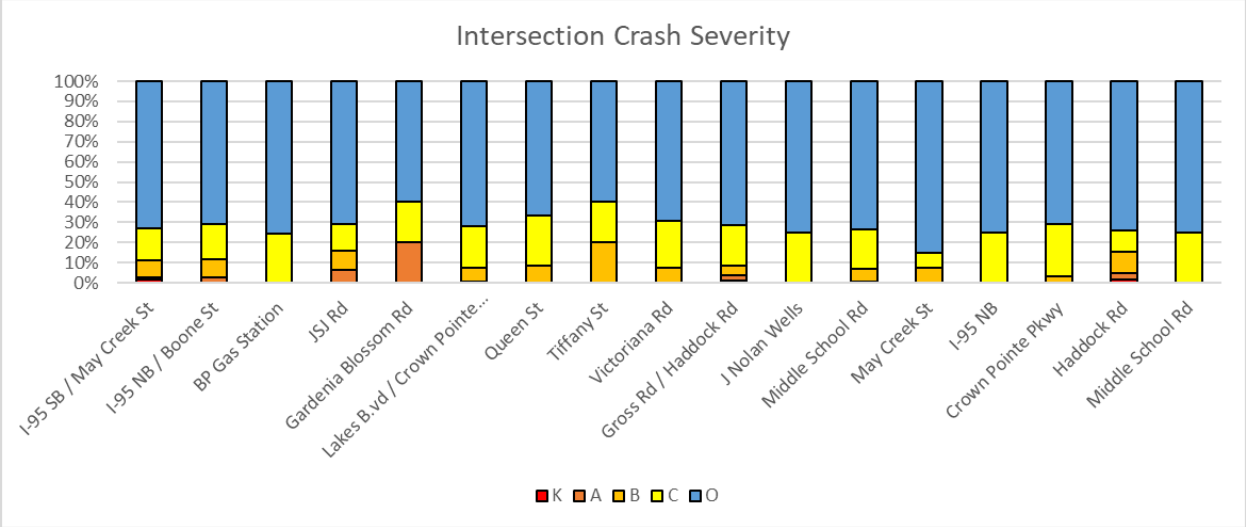


Figure B-16 Distribution of Intersection Crashes by Severity

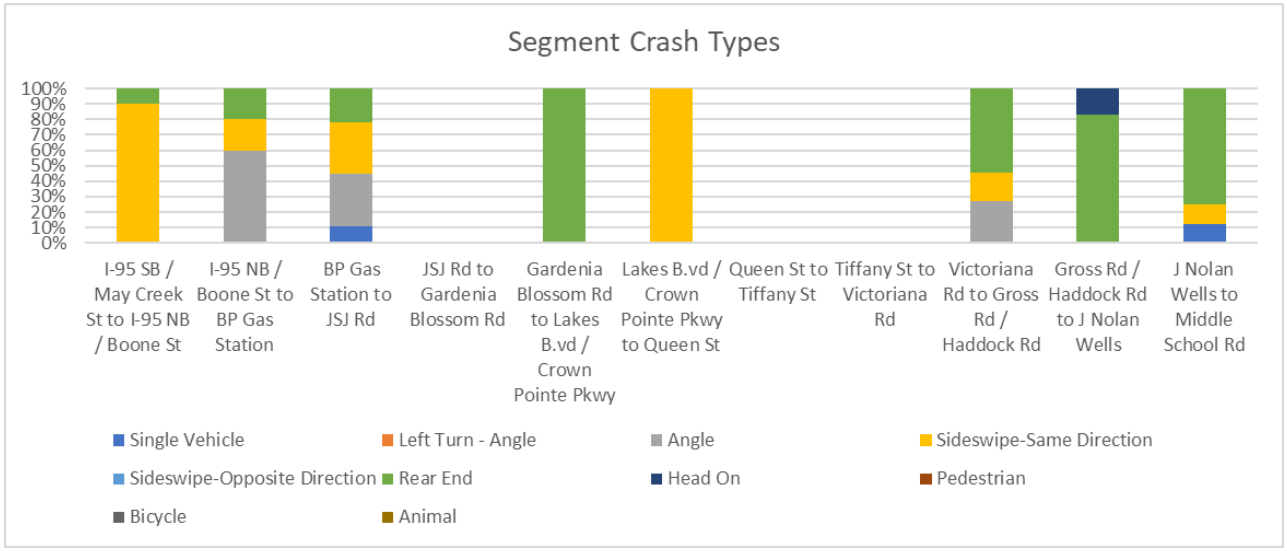


Figure B-17 Distribution of Segment Crashes by Type

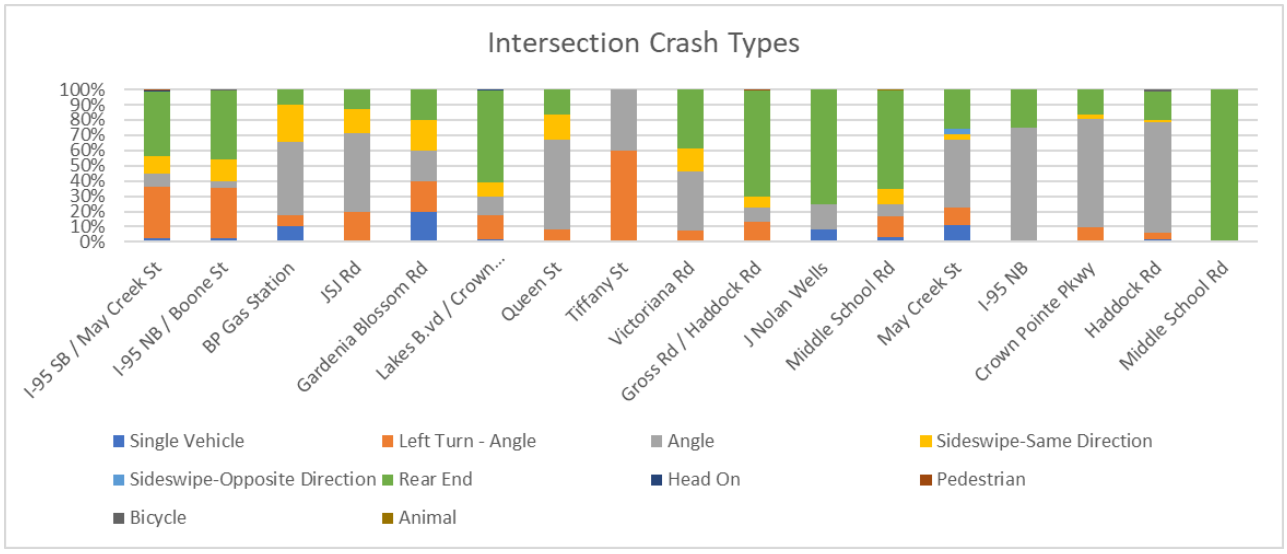


Figure B-18 Distribution of Intersection Crashes by Type

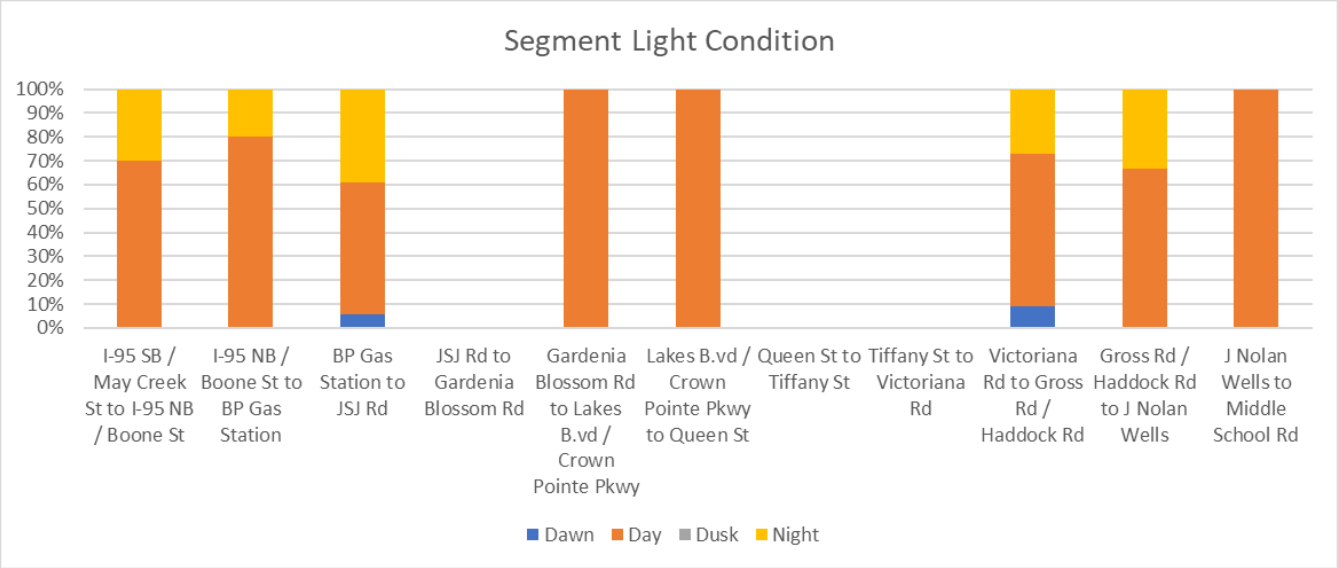


Figure B-19 Distribution of Segment Crashes by Light Condition

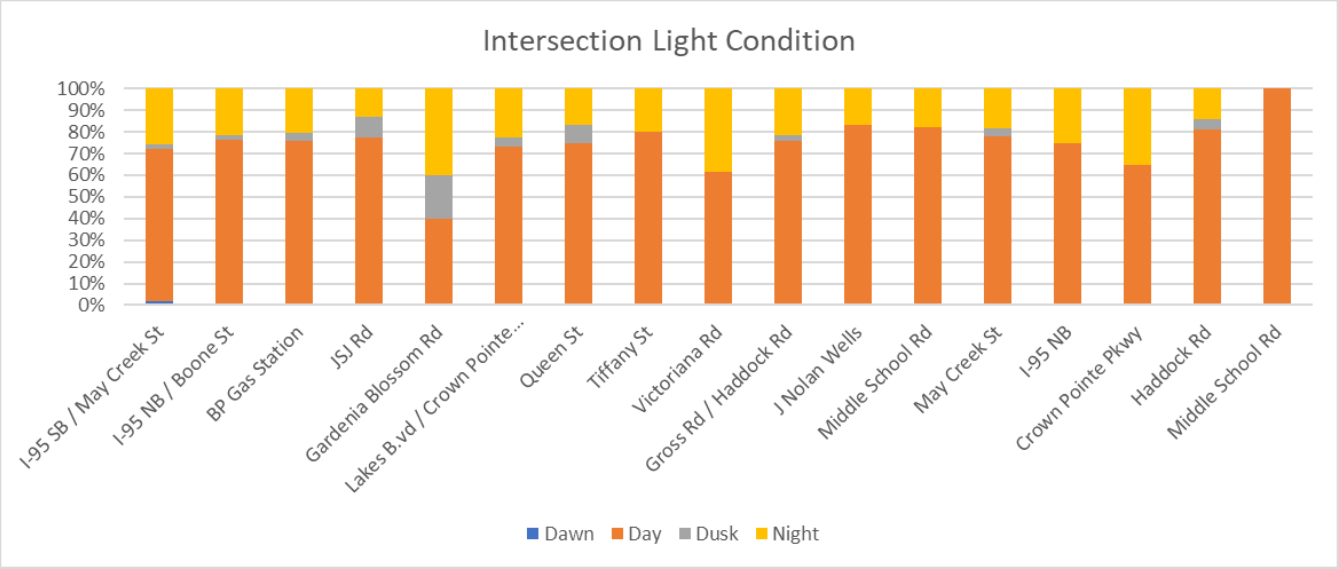


Figure B-20 Distribution of Intersection Crashes by Light Condition

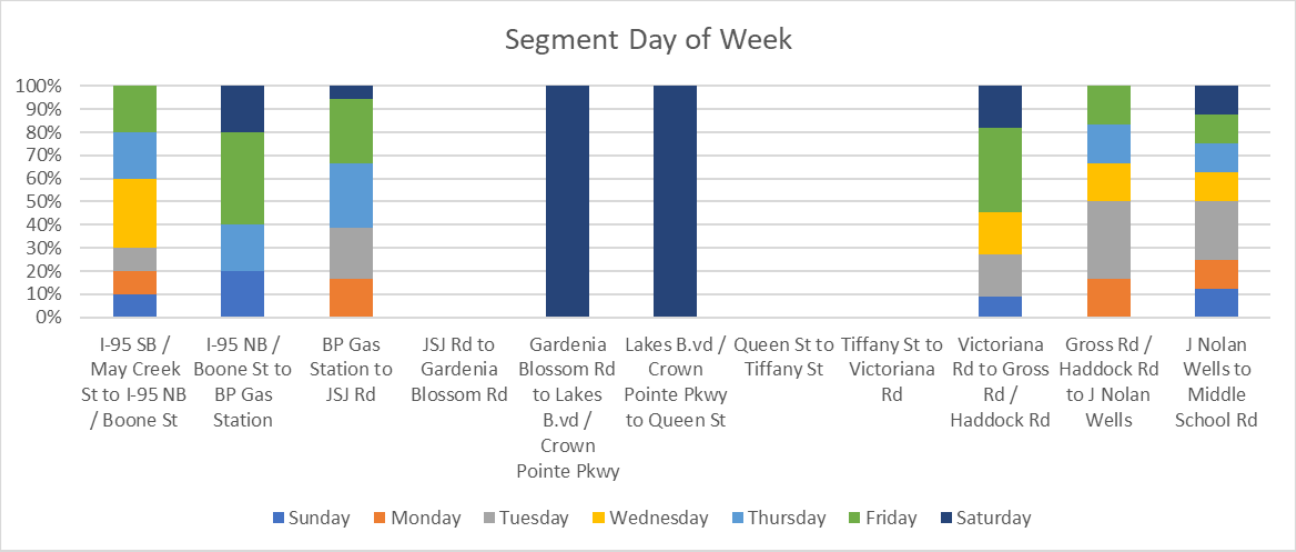


Figure B-21 Distribution of Segment Crashes by Day of Week

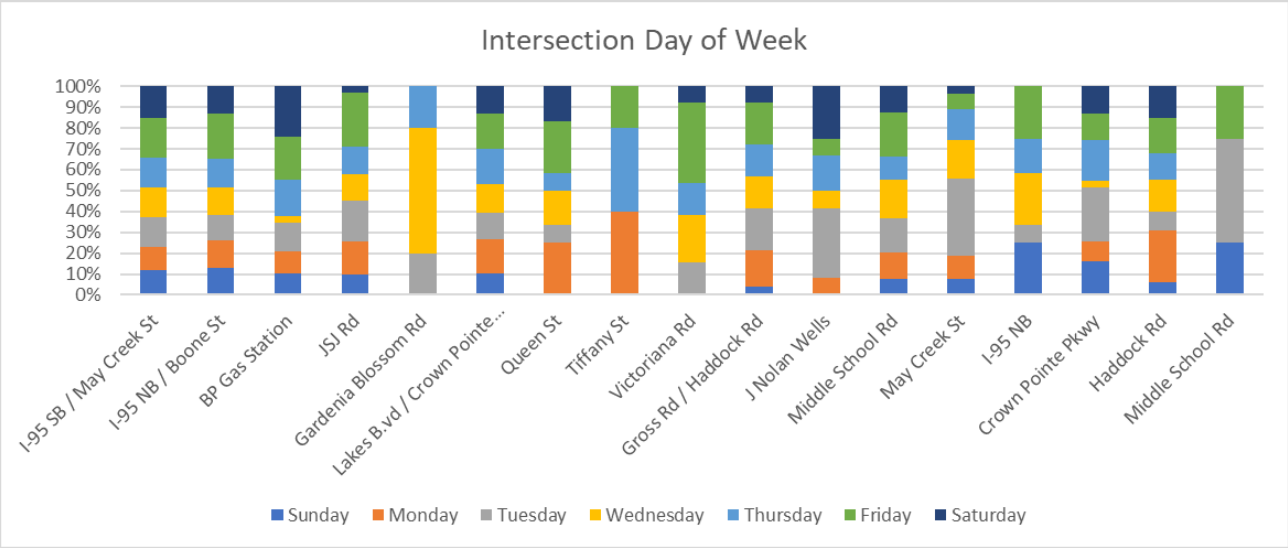


Figure B-22 Distribution of Intersection Crashes by Day of Week

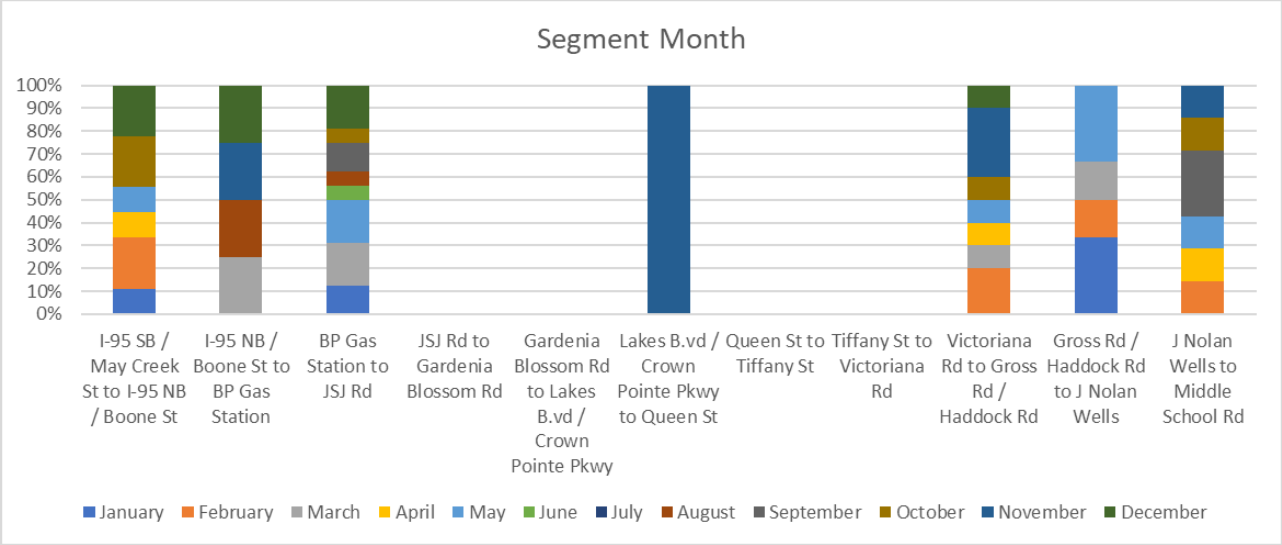


Figure B-23 Distribution of Segment Crashes by Month

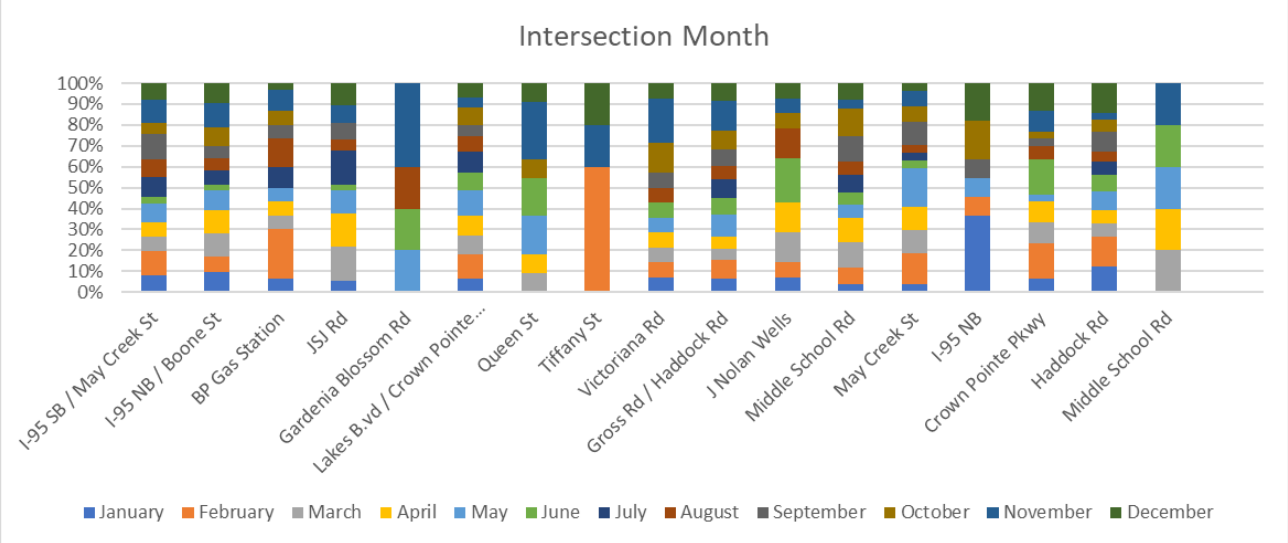


Figure B-24 Distribution of Intersection Crashes by Month

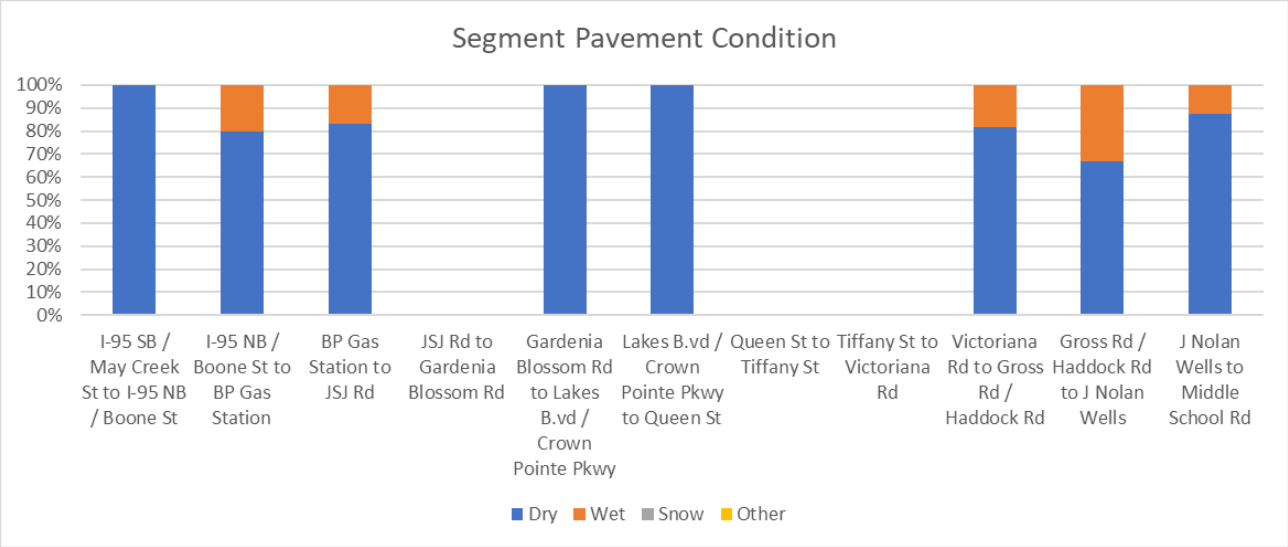


Figure B-25 Distribution of Segment Crashes by Pavement Condition

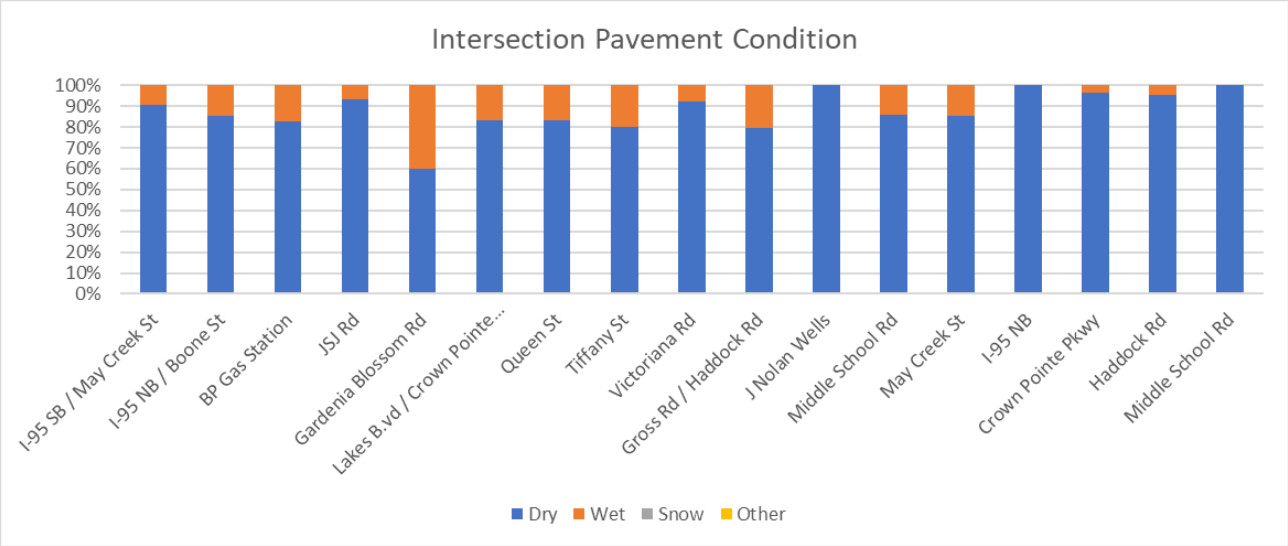


Figure B-26 Distribution of Intersection Crashes by Pavement Condition

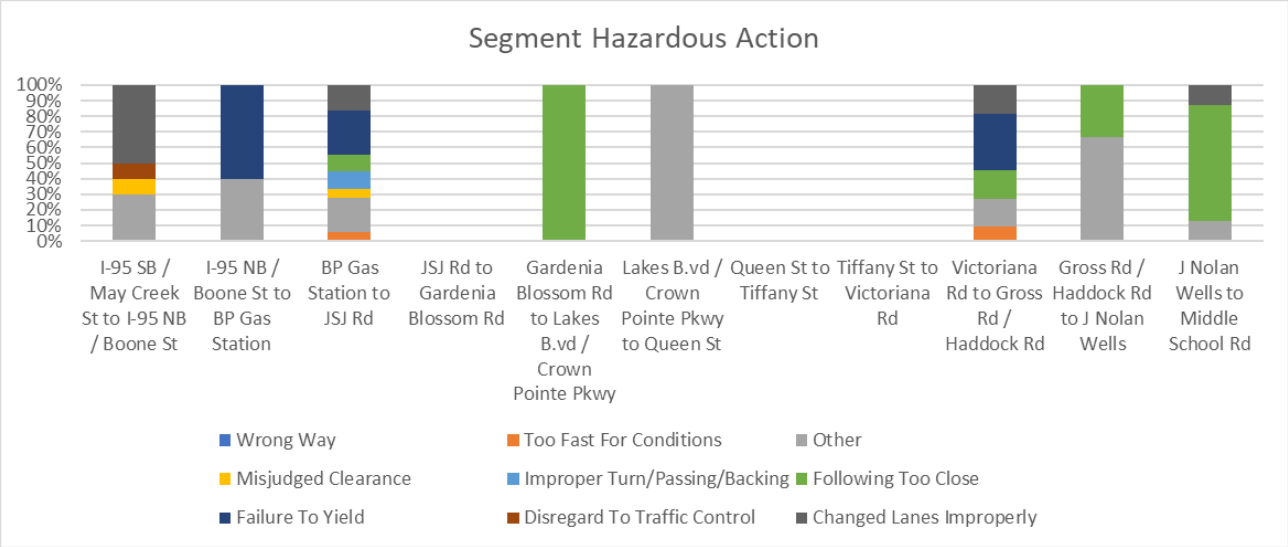


Figure B-27 Distribution of Segment Crashes by Manner of Collision

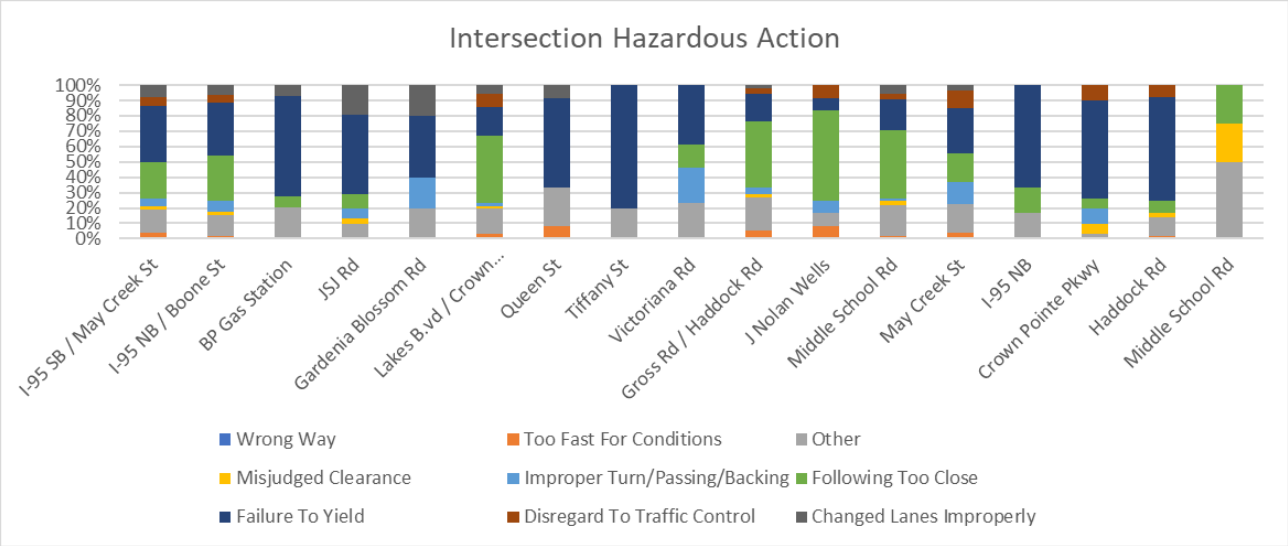


Figure B-28 Distribution of Intersection Crashes by Manner of Collision

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total %		
Left Turn - Angle	K													
	A													
	B												8	1%
NB LT x SB	C									1	1	2		
	O		2		1				1	1	1	6		
Left Turn - Angle	K													
	A													
	B									1		1	9	1%
SB LT x NB	C		1									1		
	O					1		1	1	3	1	7		
Left Turn - Angle	K										1	1		
	A			1	1					1	4	7		
	B	5	3	2	2	1	1	4	5		2	25	140	12%
EB LT x WB	C	3	2	5	2	6	1	7	6	6	6	44		
	O	11	5	6	9	4	2	7	4	10	5	63		
Left Turn - Angle	K				1	1					1	3		
	A					1	1			1		3		
	B	2	1			1		1	3		2	10	58	5%
WB LT x EB	C	2	1		2				3	3	1	12		
	O	1	2	5	2	2	3	1	5	3	6	30		
Left Turn - Angle	K				1	1					2	4		
	A			1	1	1	1			2	4	10		
	B	7	4	2	2	2	1	5	8	1	4	36	215	19%
Total	C	5	4	5	4	6	1	7	9	10	8	59		
	O	12	9	11	12	7	5	9	11	17	13	106		
Angle	K					1						1		
	A					1			1			2		
	B							2				2	27	2%
NB x EB	C		1					2		1		4		
	O	2	3		1	2	1	2	1	4	2	18		
Angle	K													
	A													
	B			1						1		2	24	2%
NB x WB	C							1	1			2		
	O		1	3	1	2			1	7	5	20		
Angle	K													
	A													
	B							1		1	1	3	38	3%
SB x EB	C					1		2	1		3	7		
	O	3	2	1	2	1	1	3	5	5	5	28		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total %		
Angle	K							1				1	124	11%
	A				1		1		1			3		
	B	1	3		1		1	1		2	2	11		
SB x WB	C	3	3	2			3	2	2	2	3	20		
	O	5	6	7	8	10	4	5	10	13	21	89		
Angle	K					1		1				2	213	19%
	A				1	1	1		2			5		
	B	1	3	1	1		1	4		4	3	18		
Total	C	3	4	2		1	3	7	4	3	6	33		
	O	10	12	11	12	15	6	10	17	29	33	155		
Sideswipe - Same Direction	K												14	1%
	A													
	B													
	C													
NB	O		1	3	1	1	1	2		3	2	14		
Sideswipe - Same Direction	K												14	1%
	A													
	B							1				1		
	C	1		1					1			3		
SB	O	3	1	1	1	1			2		1	10		
Sideswipe - Same Direction	K												43	4%
	A													
	B													
	C			1						1		2		
EB	O	5	3	3	7	2	8	1	4	3	5	41		
Sideswipe - Same Direction	K												49	4%
	A		1									1		
	B	1			1							2		
	C					1			1	2	1	5		
WB	O	3	2	3	2	8	2	5	8	3	5	41		
Sideswipe - Same Direction	K												120	11%
	A		1									1		
	B	1			1			1				3		
	C	1		2		1			2	3	1	10		
Total	O	11	7	10	11	12	11	8	14	9	13	106		
Sideswipe - Opposite Direction	K												1	0%
	A													
	B													
	C													
NB x SB	O		1									1		

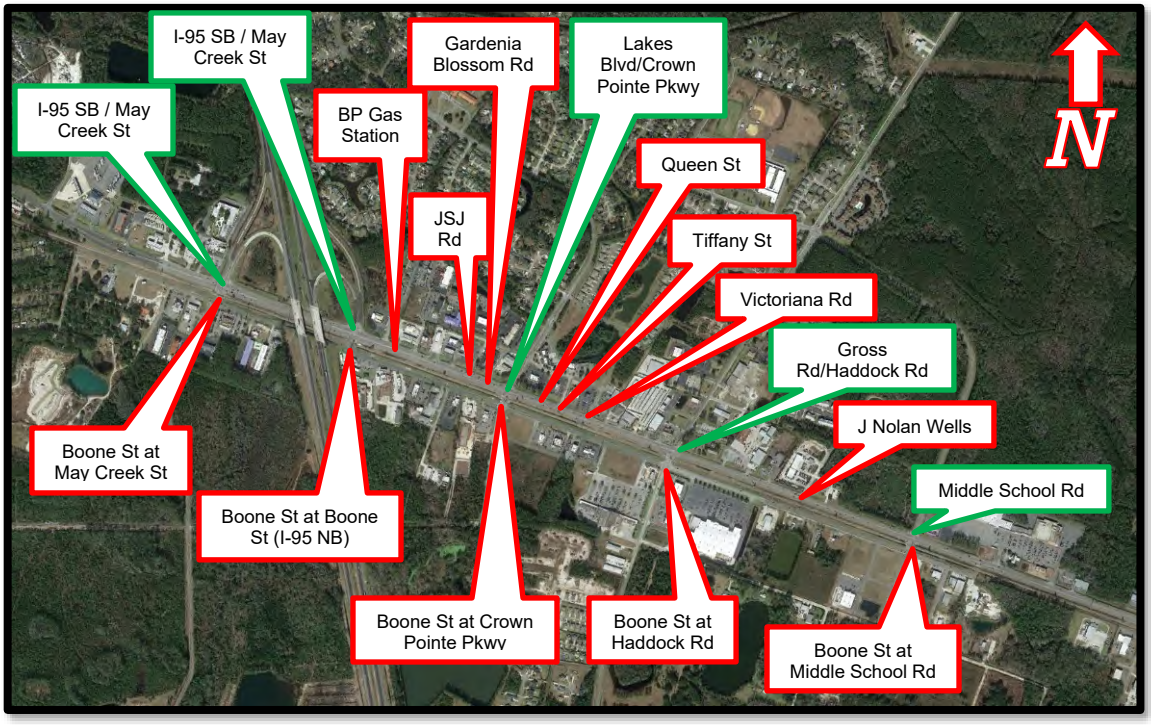
Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total %		
Sideswipe - Opposite Direction	K													
	A													
	B													
	C													
EB x WB	O													
Sideswipe - Opposite Direction	K												1	0%
	A													
	B													
	C													
Total	O		1									1		
Rear End	K												38	3%
	A													
	B													
NB	C			1		1		1	1	1	1	6		
	O	5	2	6	4	4	1	4	1	2	3	32		
Rear End	K												115	10%
	A													
	B		1		1		1		1			4		
SB	C	4	1	1	1	1	2			1		11		
	O	21	13	4	16	7	7	5	9	9	9	100		
Rear End	K												166	15%
	A										1	1		
	B			1	1			1	1			4		
EB	C	5	5	4	7	1	2	3	1	4	5	37		
	O	11	16	17	14	12	7	8	13	15	11	124		
Rear End	K												220	19%
	A							1				1		
	B		1	1	1				2	1		6		
WB	C	5	5	8	4	2	2	3	4	9	3	45		
	O	33	14	17	18	16	14	12	15	13	16	168		
Rear End	K												539	48%
	A							1			1	2		
	B		2	2	3		1	1	4	1		14		
Total	C	14	11	14	12	5	6	7	6	15	9	99		
	O	70	45	44	52	39	29	29	38	39	39	424		
Head On	K												1	0%
	A													
	B													
NB x SB	C													
	O			1								1		

Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total %		
Head On EB x WB	K												3	0%
	A													
	B			1						1		2		
	C													
	O				1							1		
Head On Total	K												4	0%
	A													
	B			1						1		2		
	C													
	O			1	1							2		
Pedestrian	K						1					1	2	0%
	A													
	B	1										1		
	C													
	O													
Bicycle	K												2	0%
	A									1		1		
	B													
	C													
	O										1	1		
Animal	K												1	0%
	A													
	B													
	C													
	O		1									1		
Single Vehicle NB	K												3	0%
	A													
	B			1								1		
	C													
	O		1								1	2		
Single Vehicle SB	K												6	1%
	A													
	B													
	C													
	O	1	1	1				1	1	1		6		
Single Vehicle EB	K												8	1%
	A													
	B	1					1					2		
	C		1						1	1		3		
	O	1			1				1			3		

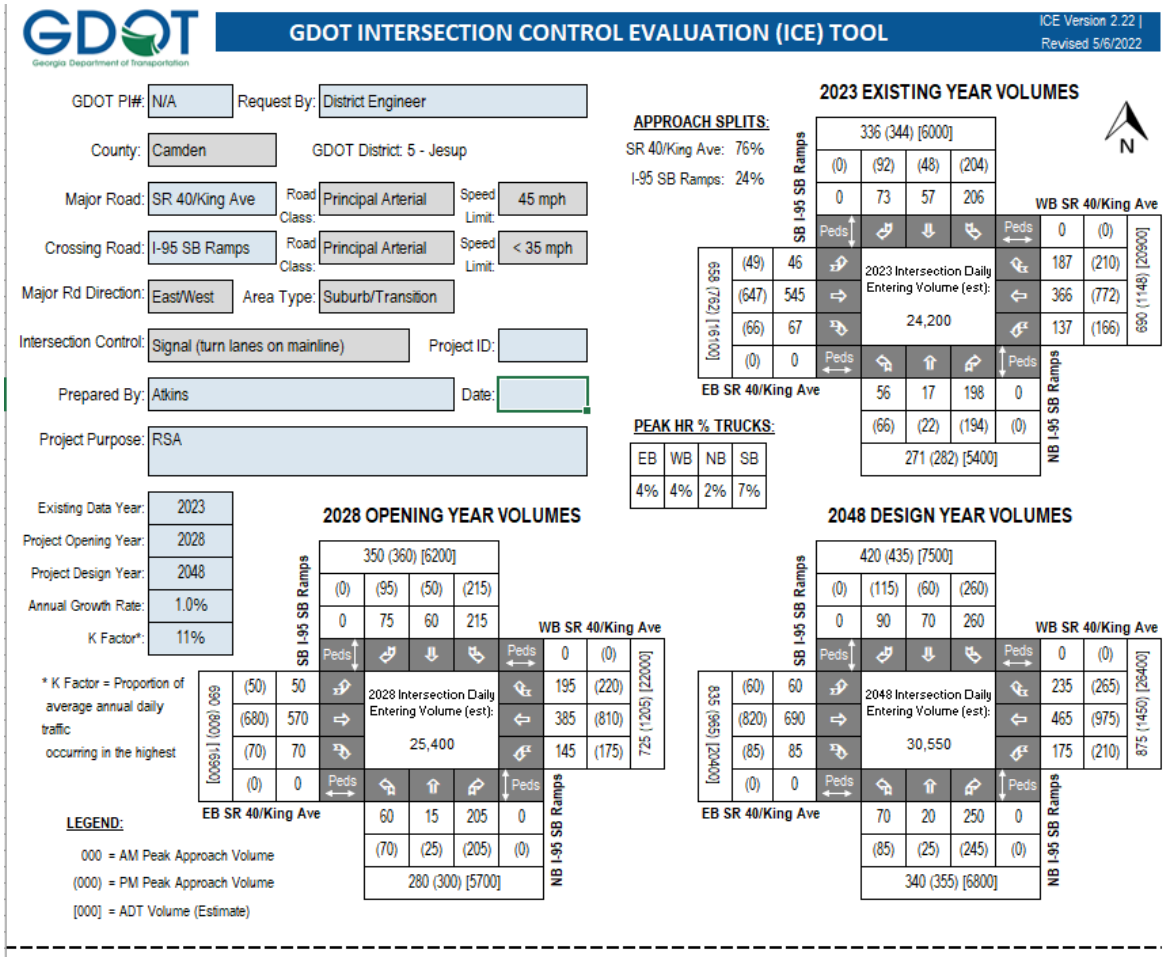
Manner of Collision	Crash Severity	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total %		
Single Vehicle WB	K												10	1%
	A													
	B				1							1		
	C									1		1		
	O			2	1	1		1		2	1	8		
Single Vehicle Total	K												27	2%
	A													
	B	1		1	1		1					4		
	C		1						1	2		4		
	O	2	2	3	2	1		2	2	3	2	19		
Total	K				1	2	1	1			2	7	1132	100%
	A		1	1	2	2	2	1	2	3	5	19		
	B	11	9	7	8	2	4	11	12	7	7	78		
	C	23	20	23	16	13	10	21	22	33	24	205		
	O	106	77	80	90	75	51	58	82	101	103	823		
	All	140	107	111	117	94	68	92	118	144	141	1132		
Dark Lighted		31	17	20	17	17	9	13	25	24	27	200	17.67%	
Dark Not Lighted		4	1	2	2	2	1	4	3	8	8	35	3.09%	
Dawn				1			1	1	2	2	1	8	0.71%	
Daylight		99	85	78	88	64	55	73	84	104	104	834	73.67%	
Dusk		5	4	4		3	1	1	4	6	1	29	2.56%	

Table B-15 Distribution of All Crashes by Manner of Collision by Year and Lighting Conditions

Appendix C. RSA Map



Appendix D. ICE



GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL

ICE Version 2.22 | Revised 5/6/2022

GDOT PI#: N/A | Request By: District Engineer

County: Camden | GDOT District: 5 - Jesup

Major Road: SR 40/King Ave | Road Class: Principal Arterial | Speed Limit: 45 mph

Crossing Road: I-95 SB Ramps | Road Class: Principal Arterial | Speed Limit: < 35 mph

Major Rd Direction: East/West | Area Type: Suburb/Transition

Intersection Control: Signal (turn lanes on mainline) | Project ID:

Prepared By: Atkins | Date:

Project Purpose: RSA

Existing Data Year: 2023

Project Opening Year: 2028

Project Design Year: 2048

Annual Growth Rate: 1.0%

K Factor*: 11%

* K Factor = Proportion of average annual daily traffic occurring in the highest

APPROACH SPLITS:

SR 40/King Ave: 76%

I-95 SB Ramps: 24%

PEAK HR % TRUCKS:

EB	WB	NB	SB
4%	4%	2%	7%

2023 EXISTING YEAR VOLUMES

SB I-95 SB Ramps: 336 (344) [6000] | (0) (92) (48) (204) | 0 73 57 206

WB SR 40/King Ave: 0 (0) | 187 (210) | 366 (772) | 137 (166) | 690 (1148) [20900]

EB SR 40/King Ave: (49) 46 | (647) 545 | (66) 67 | (0) 0 | 658 (762) [16100]

2023 Intersection Daily Entering Volume (est): 24,200

NB I-95 SB Ramps: 56 17 198 0 | (66) (22) (194) (0) | 271 (282) [5400]

2028 OPENING YEAR VOLUMES

SB I-95 SB Ramps: 350 (360) [6200] | (0) (95) (50) (215) | 0 75 60 215

WB SR 40/King Ave: 0 (0) | 195 (220) | 385 (810) | 145 (175) | 725 (1205) [22000]

EB SR 40/King Ave: (50) 50 | (680) 570 | (70) 70 | (0) 0 | 690 (980) [16900]

2028 Intersection Daily Entering Volume (est): 25,400

NB I-95 SB Ramps: 60 15 205 0 | (70) (25) (205) (0) | 280 (300) [5700]

2048 DESIGN YEAR VOLUMES

SB I-95 SB Ramps: 420 (435) [7500] | (0) (115) (60) (260) | 0 90 70 260

WB SR 40/King Ave: 0 (0) | 235 (265) | 465 (975) | 175 (210) | 875 (1450) [26400]

EB SR 40/King Ave: (60) 60 | (820) 690 | (85) 85 | (0) 0 | 835 (965) [23400]

2048 Intersection Daily Entering Volume (est): 30,550

NB I-95 SB Ramps: 70 20 250 0 | (85) (25) (245) (0) | 340 (355) [6800]

LEGEND:

000 = AM Peak Approach Volume

(000) = PM Peak Approach Volume

[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ I-95 SB Ramps
Existing Control:	Signal (turn lanes on mainline)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Multilane Roadway
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RCUT (stop control)	No	Yes	Yes	No	No	No	No	Volumes and Context Not to Scale
	RIRO w/down stream U-Turn	No	Yes	Yes	No	No	No	No	Volumes and Context Not to Scale
	High-T (unsignalized)	No	No	No	No	No	No	No	Negatively Impacts Limited Crossing over Railroad
	Offset-T Intersections	No	No	No	No	No	No	No	Negatively Impacts Limited Crossing over Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	Yes	Yes	No	No	No	No	Evaluated in Other Alternative
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other unsignalized (provide description):	No	No	No	No	No	No	No	N/A
Signalized Intersections	Traffic Signal	No	No	No	No	No	No	No	Existing Traffic Control
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Context Not to Scale
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Context Not to Scale
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Railroad
	Continuous Green-T	No	No	No	No	No	No	No	Context Not to Scale
	Jughandle	No	No	No	No	No	No	No	Context Not to Scale
	Quadrant Roadway	No	No	No	No	No	No	No	Context Not to Scale
	Diamond Interch (Signal Control)	No	Yes	Yes	Yes	No	No	No	Existing Traffic Control
	Diverging Diamond	No	Yes	Yes	Yes	No	No	No	Context Not to Scale
	Single Point Interchange	No	Yes	Yes	Yes	No	No	No	Context Not to Scale
	No LT Lane Improvements Add one RT Lane on SR 40/King Ave	Yes	Yes	No	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Signal Upgrades w/ Road Diet	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: SR 40/King Ave @ I-95 SB Ramps
Existing Intersection Control: Signal (turn lanes on mainline)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitic

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	20.5 sec	20.6 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.47	0.61
2048 Design Yr No-Build Peak Hr Intersection Delay	21.9 sec	22.3 sec
2048 Design Yr No-Build Peak Hr Intersection V/C	0.62	0.71

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Type (Crash Data: Enter most recent 10.1603729029344 years of crash data)	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	3	2	11	18	47	43%
Head-On	0	0	2	0	0	1%
Rear End	0	0	0	10	70	42%
Sideswipe - same	0	0	1	2	19	12%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	2	0	2	2%
TOTALS:	3	2	16	30	138	189

* Number of crashes resulting in injuries / fatalities, not number of persons

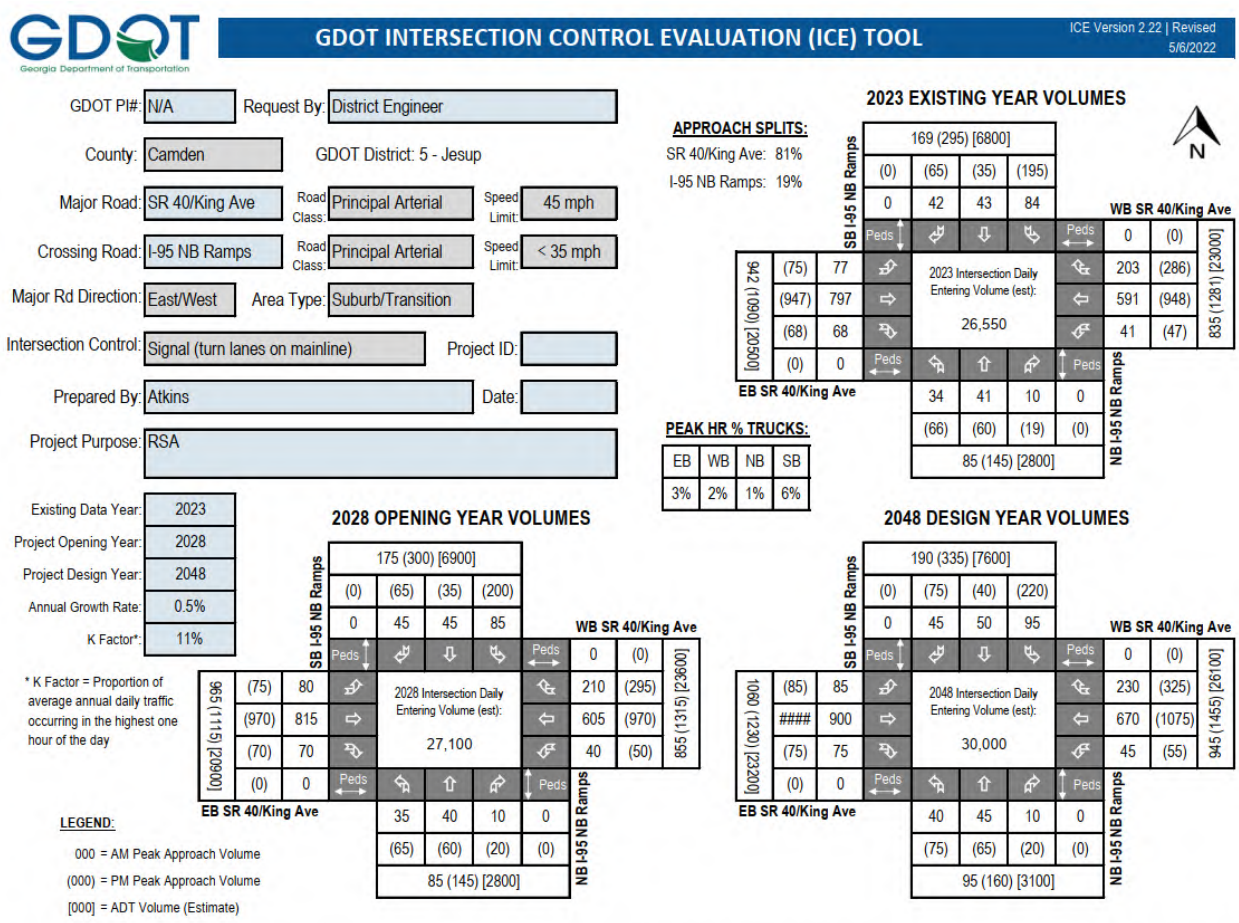
Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Multilane Roundabout	Add Right Turn Lanes	Signal Upgrades	N/A	N/A
Project Cost: (From CostEst Worksheet)	Additional description here	Additional description here	Additional description here	Additional description here	Additional description here
Construction Cost	$2,171,000	$130,000	$650,000		
ROW Cost	$439,000	$0	$0		
Environmental Cost	$0	$0	$50,000		
Reimbursable Utility Cost	$25,000	$1,000	$100,000		
Design & Contingency Cost	$787,000	$41,000	$150,000		
Cost Adjustment (justification req'd)	0%	0%	0%		
Total Cost	$3,422,000	$172,000	$950,000		
Traffic Operations:			User Cost Override		
Traffic Analysis Software Used	Sidra	Synchro	Synchro		
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr		
2048 Design Yr Build Intersection Delay	12.3 sec / 26.9 sec	22.1 sec / 24.0 sec	23.3 sec / 30.1 sec		
2048 Design Yr Build Intersection V/C	0.71 / 1.02	0.63 / 0.79	0.66 / 0.91		
Safety Analysis:					
Predefined CRF: PDO	26%	7%	0%		
Predefined CRF: Fatal/Inj	71%	4%	0%		
Predefined CRF Source:	FHWA Clearinghouse #s 4196 / 4195	FHWA Clearinghouse #s 285 / 288	CRF unavailable; provide user defined CRF below		
User Defined CRF: PDO			46%		
User Defined CRF: Fatal/Inj			67%		
User Defined CRF Source (write in if applicable):			CMF IDs: 1410, 7696, 7697, 4576, 8496, 8497, & Atkins Study		
Environmental Impacts:[1]					
Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	None	None		
Wetland	None	None	None		
Stakeholder Posture:	Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet				
Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Unknown	Unknown	Unknown		
Final ICE Stage 2 Score:	5.8	4.8	7.4		
Rank of Control Type Alternatives:	2	3	1		
Final Intersection Control Selection:	1 - Signal Upgrades				

[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Signal Upgrade alternative includes: converting the NB, SB, & WB left turn signal heads to Protected Permissive FYAs, converting the EB left turn phase to protected only, replacing the backplates with those that have retroreflective borders, improving the viewing angle from the channelized right turn lanes, and installing supplemental signal heads (nearside right and far side left) on all approaches.


GDOT
Georgia Department of Transportation
GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: I-95 NB Ramps
Road Class: Principal Arterial
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Signal (turn lanes on mainline)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)
APPROACH SPLITS:
SR 40/King Ave: 81%
I-95 NB Ramps: 19%
PEAK HR % TRUCKS:
EB WB NB SB
3% 2% 1% 6%
2023 EXISTING YEAR VOLUMES
2028 OPENING YEAR VOLUMES
2048 DESIGN YEAR VOLUMES
SB I-95 NB Ramps
WB SR 40/King Ave
EB SR 40/King Ave
NB I-95 NB Ramps
Peds
2023 Intersection Daily Entering Volume (est): 26,550
2028 Intersection Daily Entering Volume (est): 27,100
2048 Intersection Daily Entering Volume (est): 30,000
169 (295) [6800]
942 (1090) [20500]
835 (1281) [23000]
85 (145) [2800]
175 (300) [6900]
965 (1115) [20600]
855 (1315) [23600]
190 (335) [7600]
1060 (1230) [23200]
945 (1455) [26100]
95 (160) [3100]
N

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ I-95 NB Ramps
Existing Control:	Signal (turn lanes on mainline)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Multilane Roadway
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate
	RCUT (stop control)	No	**Yes**	**Yes**	No	No	No	No	Volumes and Context Not to Scale
	RIRO w/down stream U-Turn	No	**Yes**	**Yes**	No	No	No	No	Volumes and Context Not to Scale
	High-T (unsignalized)	No	No	No	No	No	No	No	Negatively Impacts Limited Crossing over Railroad
	Offset-T Intersections	No	No	No	No	No	No	No	Negatively Impacts Limited Crossing over Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Evaluated in Other Alternative
	No LT Lane Improvements Add one RT Lane on I-95 SB Ramps	No	No	No	No	No	No	No	N/A
	Other unsignalized (provide description):	No	No	No	No	No	No	No	N/A
Signalized Intersections	Traffic Signal	No	No	No	No	No	No	No	Existing Traffic Control
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Context Not to Scale
	RCUT (signalized)	No	**Yes**	**Yes**	No	No	No	No	Context Not to Scale
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Railroad
	Continuous Green-T	No	No	No	No	No	No	No	Context Not to Scale
	Jughandle	No	No	No	No	No	No	No	Context Not to Scale
	Quadrant Roadway	No	No	No	No	No	No	No	Context Not to Scale
	Diamond Interch (Signal Control)	No	**Yes**	**Yes**	**Yes**	No	No	No	Existing Traffic Control
	Diverging Diamond	No	**Yes**	**Yes**	**Yes**	No	No	No	Context Not to Scale
	Single Point Interchange	No	**Yes**	**Yes**	**Yes**	No	No	No	Context Not to Scale
	No LT Lane Improvements Add one RT Lane on SR 40/King Ave	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate
	Signal Upgrades w/ Road Diet	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

Project Location: SR 40/King Ave @ I-95 NB Ramps
Existing Intersection Control: Signal (turn lanes on mainline)
Type of Analysis: --select one--

District: 5 - Jesup
County: Camden
Area: Suburb/Transitic

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	29.7 sec	37.4 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.70	0.94
2048 Design Yr No-Build Peak Hr Intersection Delay	31.7 sec	38.4 sec
2048 Design Yr No-Build Peak Hr Intersection V/C	0.77	0.89

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	6	15	23	36	38%
Head-On	0	0	0	0	1	0%
Rear End	0	0	3	12	80	45%
Sideswipe - same	0	0	1	2	27	14%
Sideswipe - opposite	0	0	0	0	1	0%
Not Collision w/Motor Veh	0	0	0	0	6	3%
TOTALS:	0	6	19	37	151	213

* Number of crashes resulting in injuries / fatalities, not number of persons

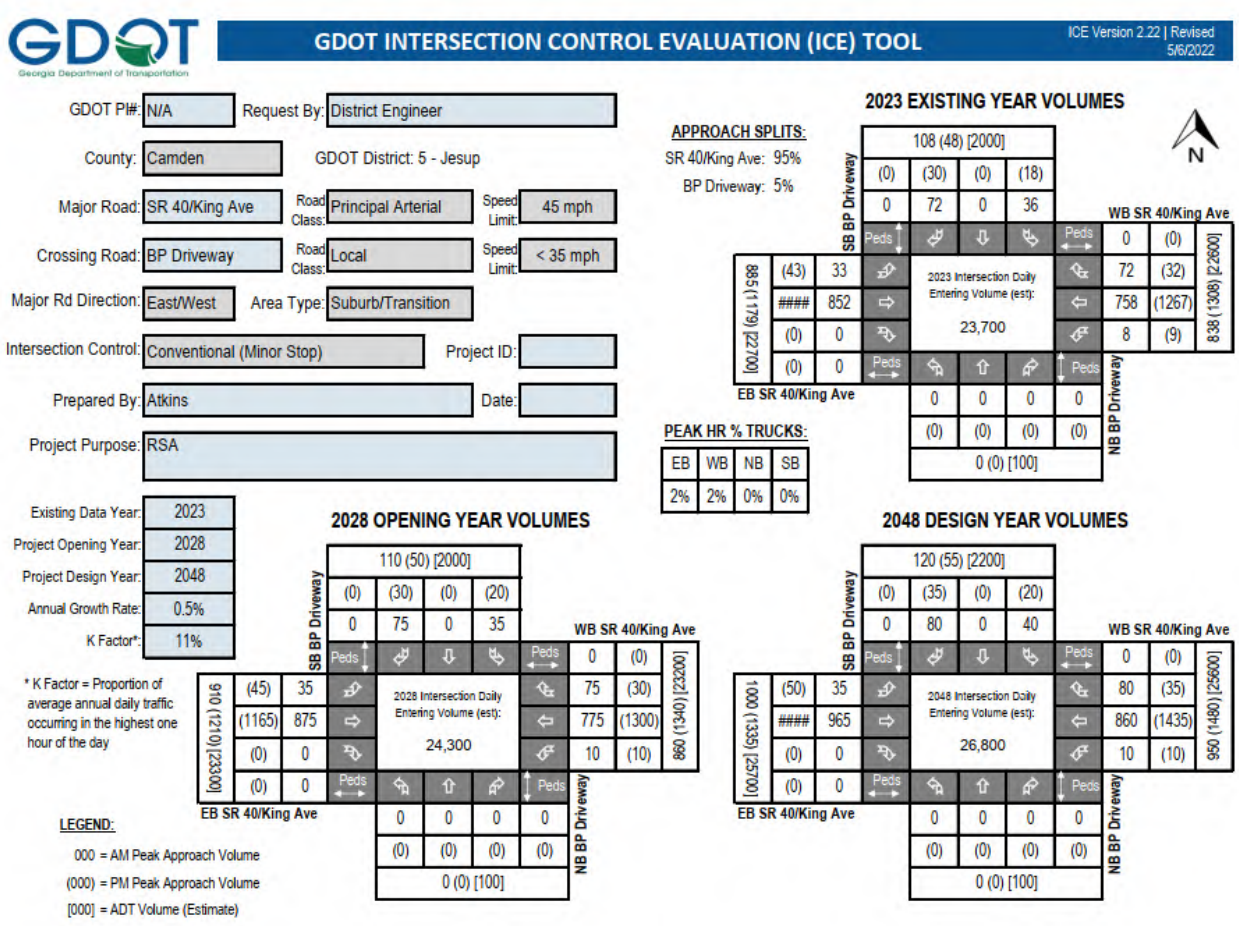
Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Multilane Roundabout	Add Right Turn Lanes	Signal Upgrades	N/A	N/A
Project Cost: (From CostEst Worksheet)	Additional description here	Additional description here	Additional description here	Additional description here	Additional description here
Construction Cost	$2,171,000	$130,000	$650,000		
ROW Cost	$435,000	$0	$0		
Environmental Cost	$0	$0	$50,000		
Reimbursable Utility Cost	$25,000	$1,000	$100,000		
Design & Contingency Cost	$787,000	$41,000	$150,000		
Cost Adjustment (justification req'd)	0%	0%	0%		
Total Cost	$3,418,000	$172,000	$950,000		
Traffic Operations:		#N/A	User Cost Override		
Traffic Analysis Software Used	Sidra	Synchro	Synchro		
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr		
2048 Design Yr Build Intersection Delay	7.7 sec / 17.2 sec	24.3 sec / 37.7 sec	25.8 sec / 34.0 sec		
2048 Design Yr Build Intersection V/C	0.47 / 0.92	0.74 / 0.92	0.74 / 0.80		
Safety Analysis:					
Predefined CRF: PDO	26%	0%	0%		
Predefined CRF: Fatal/Inj	71%	0%	0%		
Predefined CRF Source:	FHWA Clearinghouse #s 4196 / 4195	N/A	CRF unavailable; provide user defined CRF below		
User Defined CRF: PDO		7%	48%		
User Defined CRF: Fatal/Inj		4%	79%		
User Defined CRF Source (write in if applicable):		CMF ID: 285 & 288	CMF IDs: 1410, 4576, 8496, 8497, & Atkins Study		
Environmental Impacts:[1]					
Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	None	None		
Wetland	None	None	None		
Stakeholder Posture:	Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet				
Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Unknown	Unknown	Unknown		
Final ICE Stage 2 Score:	6.0	4.7	7.6		
Rank of Control Type Alternatives:	2	3	1		
Final Intersection Control Selection:	1 - Signal Upgrades				

[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Signal Upgrade alternative includes: converting the EB & WB left turn phases to protected only, upgrading the signal head backplates with those with retroreflective borders, improving the line of sight from the NB, SB, & WB channelized right turn lanes, and installing supplemental signal heads (nearside right and far side left) on all approaches.


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: BP Driveway
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Conventional (Minor Stop)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
APPROACH SPLITS:
SR 40/King Ave: 95%
BP Driveway: 5%
PEAK HR % TRUCKS:
EB 2%
WB 2%
NB 0%
SB 0%
2023 EXISTING YEAR VOLUMES
2023 Intersection Daily Entering Volume (est): 23,700
2028 OPENING YEAR VOLUMES
2028 Intersection Daily Entering Volume (est): 24,300
2048 DESIGN YEAR VOLUMES
2048 Intersection Daily Entering Volume (est): 26,800
SB BP Driveway
WB SR 40/King Ave
EB SR 40/King Ave
NB BP Driveway
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ BP Driveway
Existing Control:	Conventional (Minor Stop)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Existing Intersection
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does Not Meet AWSC Requirements
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (stop control)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RIRO w/down stream U-Turn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	High-T (unsignalized)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Offset-T Intersections	No	Yes	Yes	No	No	No	No	Already T-Intersection
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements Add one RT Lane on SR 40/King Ave	Yes	Yes	No	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Signing & Marking Improvements	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Continuous Green-T	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Jughandle	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Quadrant Roadway	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: SR 40/King Ave @ BP Driveway
Existing Intersection Control: Conventional (Minor Stop)
Type of Analysis: Safety Funded Project
District: 5 - Jesup
County: Camden
Area: Suburb/Transitic
GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	23.6 sec	31.1 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.48	0.43
2048 Design Yr No-Build Peak Hr Intersection Delay	32.2 sec	47.1 sec
2048 Design Yr No-Build Peak Hr Intersection V/C	0.61	0.62

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	0	4	12	55%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	3	10%
Sideswipe - same	0	0	0	2	5	24%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	1	2	10%
TOTALS:	0	0	0	7	22	29

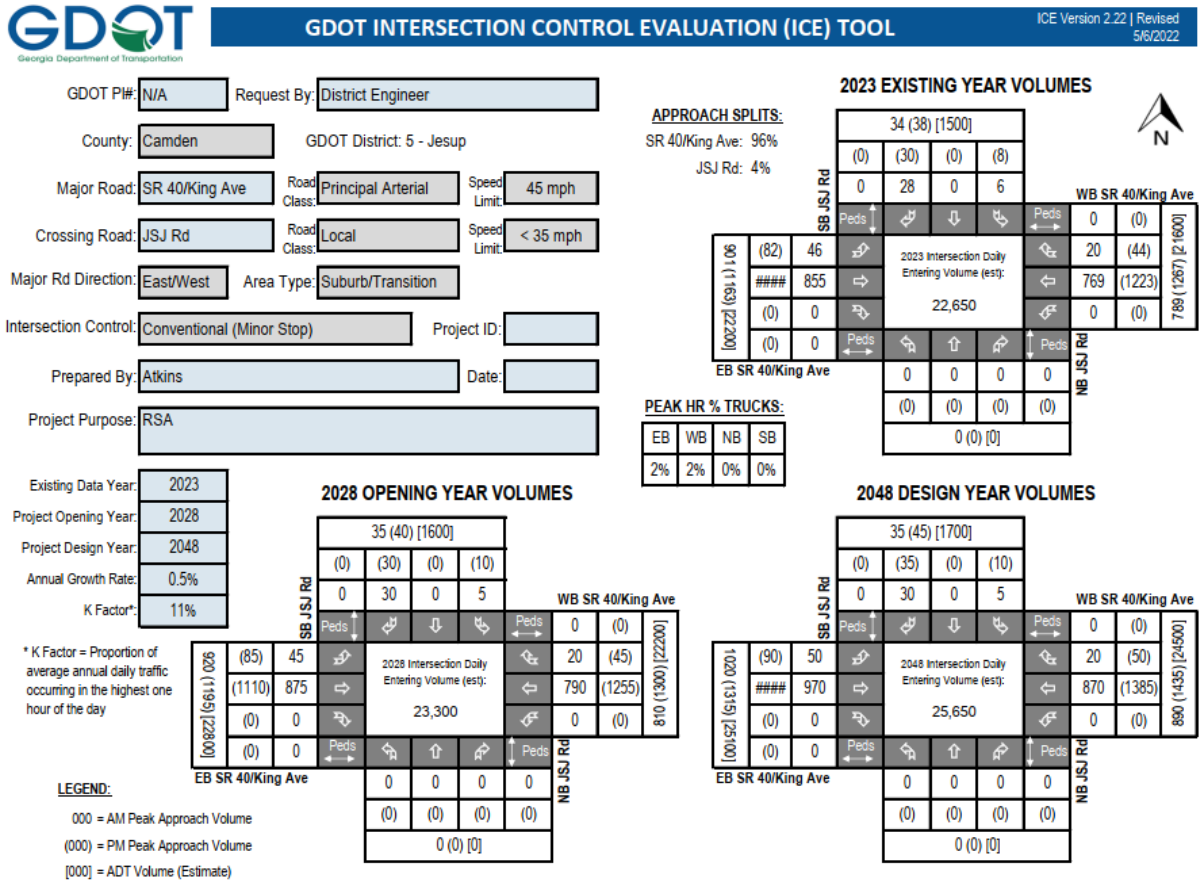
* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	RCUT (stop control)	RIRO w/down stream U-Turn	High-T (unsignalized)	Add Right Turn Lanes	Signing & Marking Improvements
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$150,000	$175,000	$230,000	$142,000	$25,000
ROW Cost	$0	$0	$0	$0	$0
Environmental Cost	$0	$0	$0	$0	$0
Reimbursable Utility Cost	$0	$0	$3,000	$2,000	$0
Design & Contingency Cost	$25,000	$25,000	$74,000	$45,000	$0
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$175,000	$200,000	$307,000	$189,000	$25,000
Traffic Operations:	*User Cost Override*	*User Cost Override*			*User Cost Override*
Traffic Analysis Software Used	Synchro	Synchro	Synchro	Synchro	Synchro
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr
2048 Design Yr Build Intersection Delay	24.4 sec / 27.4 sec	30.4 sec / 44.3 sec	21.5 sec / 26.8 sec	29.2 sec / 12.7 sec	32.2 sec / 47.1 sec
2048 Design Yr Build Intersection V/C	0.35 / 0.24	0.35 / 0.34	0.43 / 0.32	0.58 / 0.60	0.61 / 0.62
Safety Analysis:					
Predefined CRF: PDO	31%	35%	23%	7%	0%
Predefined CRF: Fatal/Inj	53%	54%	45%	4%	0%
Predefined CRF Source:	NCHRP Table 4-7	FHWA Clearinghouse #s 5555 / 5556	FHWA Clearinghouse #s 2753 / 2755	FHWA Clearinghouse #s 285 / 288	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO					8%
User Defined CRF: Fatal/Inj					10%
User Defined CRF Source (write in if applicable):					CMF ID: 8866 & 8867
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown
Final ICE Stage 2 Score:	7.1	6.7	5.7	4.3	5.0
Rank of Control Type Alternatives:	1	2	3	5	4
Final Intersection Control Selection:	1 - RCUT (stop control)				

[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept*

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The Signing & Marking alternative includes: installing dual (left & right) oversized stop signs on all stop controlled approaches, installing dual (left & right) stop ahead warning signs on all stop controlled approaches, installing intersection ahead warning signs on the major approaches, refreshing all striping at the intersection, and adding retroreflective sheathing to the sign posts.


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: JSJ Rd
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Conventional (Minor Stop)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
APPROACH SPLITS:
SR 40/King Ave: 96%
JSJ Rd: 4%
PEAK HR % TRUCKS:
EB WB NB SB
2% 2% 0% 0%
2023 EXISTING YEAR VOLUMES
2023 Intersection Daily Entering Volume (est): 22,650
2028 OPENING YEAR VOLUMES
2028 Intersection Daily Entering Volume (est): 23,300
2048 DESIGN YEAR VOLUMES
2048 Intersection Daily Entering Volume (est): 25,650
SB JSJ Rd
NB JSJ Rd
EB SR 40/King Ave
WB SR 40/King Ave
Peds
N
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ JSJ Rd
Existing Control:	Conventional (Minor Stop)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Existing Intersection
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does Not Meet AWSC Requirements
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (stop control)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RIRO w/down stream U-Turn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	High-T (unsignalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Traffic Signal
	Offset-T Intersections	No	No	No	No	No	No	No	Already T-Intersection
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Add LT Lanes on SR 22 No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Improvements	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Continuous Green-T	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Jughandle	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Quadrant Roadway	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

Project Location: SR 40/King Ave @ JSJ Rd
Existing Intersection Control: Conventional (Minor Stop)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	13.4 sec	27.9 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.12	0.48
2048 Design Yr No-Build Peak Hr Intersection Delay	15.8 sec	48.9 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.16	0.75

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Type (Crash data: Enter most recent 10.1603729029344 years of crash data)	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	2	3	4	13	71%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	4	13%
Sideswipe - same	0	0	0	0	5	16%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	0	0%
TOTALS:	0	2	3	4	22	31

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	RCUT (stop control)	RIRO w/down stream U-Turn	Signing & Marking Improvements	N/A	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*No Down Stream U-Turn*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$150,000	$175,000	$25,000		
ROW Cost	$0	$0	$0		
Environmental Cost	$0	$0	$0		
Reimbursable Utility Cost	$0	$0	$0		
Design & Contingency Cost	$25,000	$25,000	$0		
Cost Adjustment (justification req'd)	0%	0%	0%		
Total Cost	$175,000	$200,000	$25,000		
	User Cost Override	*User Cost Override*	*User Cost Override*		
Traffic Operations:					
Traffic Analysis Software Used	Synchro	Synchro	Synchro		
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr		
2048 Design Yr Build Intersection Delay	16.3 sec / 30.0 sec	26.4 sec / 58.0 sec	15.8 sec / 48.9 sec		
2048 Design Yr Build Intersection V/C	0.13 / 0.43	0.17 / 0.62	0.16 / 0.75		
Safety Analysis:					
Predefined CRF: PDO	31%	35%	0%		
Predefined CRF: Fatal/Inj	53%	54%	0%		
Predefined CRF Source:	NCMO Table 4-7	FHWA Clearinghouse #s 5555 / 5556	CRF unavailable; provide user defined CRF below		
User Defined CRF: PDO			8%		
User Defined CRF: Fatal/Inj			10%		
User Defined CRF Source (write in if applicable):			CMF ID: 8866 & 8867		
Environmental Impacts:[1]					
Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	None	None		
Wetland	None	None	None		
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
	[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report				
Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Unknown	Unknown	Unknown		
Final ICE Stage 2 Score:	6.7	6.0	5.4		
Rank of Control Type Alternatives:	1	2	3		
Final Intersection Control Selection:	2 - RIRO w/down stream U-Turn				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The Signing & Marking alternative includes: installing dual (left & right) oversized stop signs on all stop controlled approaches, installing dual (left & right) stop ahead warning signs on all stop controlled approaches, installing intersection ahead warning signs on the major approaches, refreshing all striping at the intersection, and adding retroreflective sheathing to the sign posts.

Project Information:

Location: SR 40/King Ave @ JSJ Rd
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: Conventional (Minor Stop)

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: GDOT PDP Project

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	21,150	
Existing Minor Street Avg Daily Traffic (ADT):	1,500	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	13.4 sec	27.9 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.12	0.48
2048 Design Yr Peak Hour Intersection Delay:	15.8 sec	48.9 sec
2048 Design Yr Peak Hour Intersection V/C:	0.16	0.75

Crash Data (Required):[3]

Crash Type	Crash Data: Enter most recent 10 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
	Angle	0	2	3	4	13	71%
	Head-On	0	0	0	0	0	0%
	Rear End	0	0	0	0	4	13%
	Sideswipe - same	0	0	0	0	5	16%
	Sideswipe - opposite	0	0	0	0	0	0%
	Not Collision w/Motor Veh	0	0	0	0	0	0%
	TOTALS:	0	2	3	4	22	31

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): Not the Rank 1 alternative

Proposed Intersection Control: RIRO w/down stream U-Turn

REQUESTED BY: _____ Date: _____

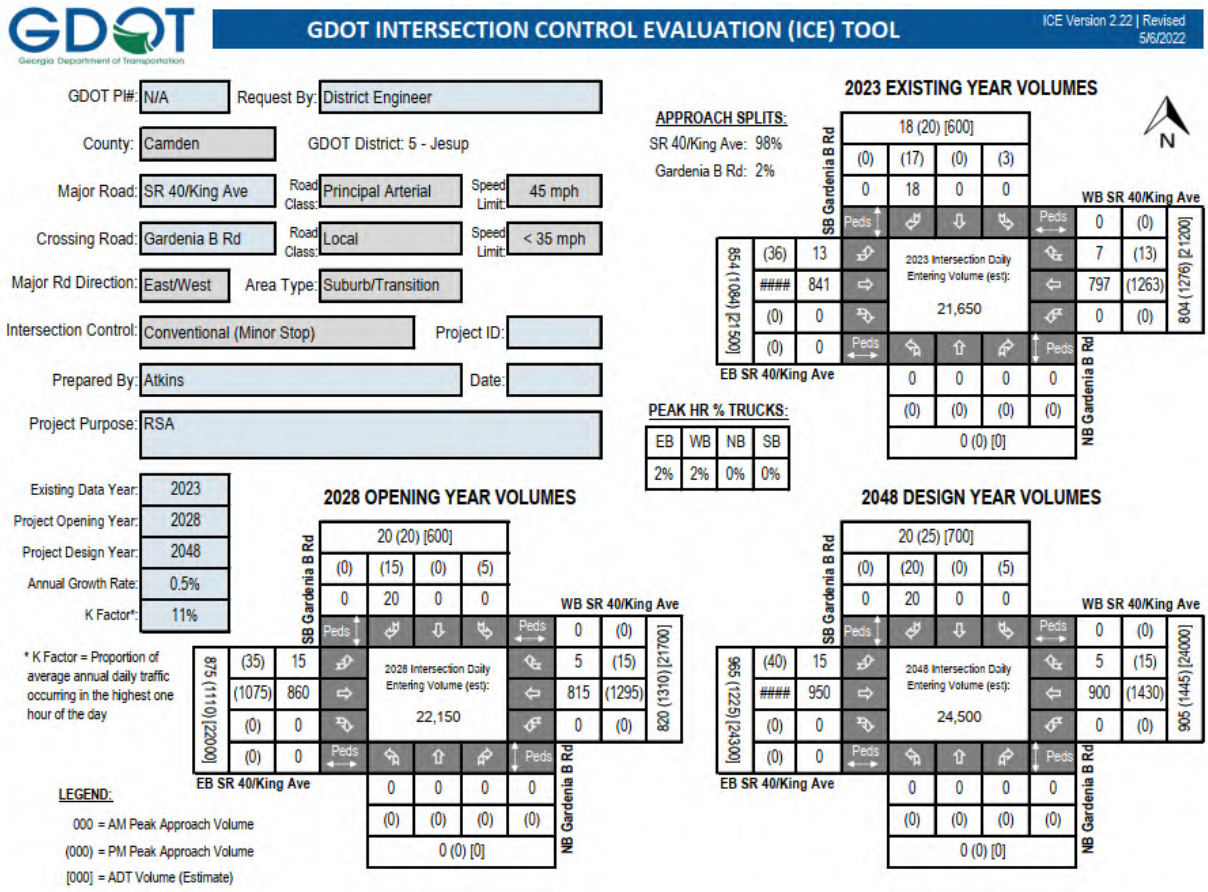
Title: .....

APPROVED BY: _____ Date: _____

Name: .....

Chief Engineer or (Approved Delegate)

[1] *Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2*
[2] *ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.*
[3] *Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)*


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: Gardenia B Rd
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Conventional (Minor Stop)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
APPROACH SPLITS:
SR 40/King Ave: 98%
Gardenia B Rd: 2%
PEAK HR % TRUCKS:
EB WB NB SB
2% 2% 0% 0%
2023 EXISTING YEAR VOLUMES
2023 Intersection Daily Entering Volume (est): 21,650
2028 OPENING YEAR VOLUMES
2028 Intersection Daily Entering Volume (est): 22,150
2048 DESIGN YEAR VOLUMES
2048 Intersection Daily Entering Volume (est): 24,500
SB Gardenia B Rd
WB SR 40/King Ave
EB SR 40/King Ave
NB Gardenia B Rd
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ Gardenia B Rd
Existing Control:	Conventional (Minor Stop)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Existing Intersection
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does Not Meet AWSC Requirements
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (stop control)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RIRO w/down stream U-Turn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	High-T (unsignalized)	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Traffic Signal
	Offset-T Intersections	No	No	No	No	No	No	No	Already T-Intersection
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Add LT Lanes on SR 22 No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Improvements	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Median U-Turn (Indirect Left)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Continuous Green-T	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Jughandle	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Quadrant Roadway	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: SR 40/King Ave @ Gardenia B Rd
Existing Intersection Control: Conventional (Minor Stop)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	11.3 sec	14.5 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.04	0.09
2048 Design Yr No-Build Peak Hr Intersection Delay	11.9 sec	16.0 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.05	0.11

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	1	0	1	0	40%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	1	20%
Sideswipe - same	0	0	0	0	1	20%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	1	20%
TOTALS:	0	1	0	1	3	5

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	RCUT (stop control)	RIRO w/down stream U-Turn	Signing & Marking Improvements	N/A	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*No Down Stream U-Turn*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$150,000	$175,000	$25,000		
ROW Cost	$0	$0	$0		
Environmental Cost	$0	$0	$0		
Reimbursable Utility Cost	$0	$0	$0		
Design & Contingency Cost	$25,000	$25,000	$0		
Cost Adjustment (justification req'd)	0%	0%	0%		
Total Cost	$175,000	$200,000	$25,000		
Traffic Operations:	*User Cost Override*	*User Cost Override*	*User Cost Override*		
Traffic Analysis Software Used	Synchro	Synchro	Synchro		
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr		
2048 Design Yr Build Intersection Delay	14.2 sec / 25.1 sec	18.4 sec / 37.4 sec	11.9 sec / 16.0 sec		
2048 Design Yr Build Intersection V/C	0.06 / 0.20	0.06 / 0.28	0.05 / 0.11		
Safety Analysis:					
Predefined CRF: PDO	31%	35%	0%		
Predefined CRF: Fatal/Inj	53%	54%	0%		
Predefined CRF Source:	NCMO Table 4-7	FHWA Clearinghouse #s 5555 / 5556	CRF unavailable; provide user defined CRF below		
User Defined CRF: PDO			8%		
User Defined CRF: Fatal/Inj			10%		
User Defined CRF Source (write in if applicable):			CMF ID: 8866 & 8867		
Environmental Impacts:[1]					
Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	None	None		
Wetland	None	None	None		
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
	[1] Environmental Impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report				
Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Unknown	Unknown	Unknown		
Final ICE Stage 2 Score:	7.0	6.6	6.3		
Rank of Control Type Alternatives:	1	2	3		
Final Intersection Control Selection:	2 - RIRO w/down stream U-Turn				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The Signing & Marking alternative includes: installing dual (left & right) oversized stop signs on all stop controlled approaches, installing dual (left & right) stop ahead warning signs on all stop controlled approaches, installing intersection ahead warning signs on the major approaches, refreshing all striping at the intersection, and adding retroreflective sheathing to the sign posts.

Project Information:

Location: SR 40/King Ave @ Gardenia B Rd
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: Conventional (Minor Stop)

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: GDOT PDP Project

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	21,050	
Existing Minor Street Avg Daily Traffic (ADT):	600	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	11.3 sec	14.5 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.04	0.09
2048 Design Yr Peak Hour Intersection Delay:	11.9 sec	16.0 sec
2048 Design Yr Peak Hour Intersection V/C:	0.05	0.11

Crash Data (Required):[3]

Crash Type	Crash Data: Enter most recent 10 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
	Angle	0	1	0	1	0	40%
	Head-On	0	0	0	0	0	0%
	Rear End	0	0	0	0	1	20%
	Sideswipe - same	0	0	0	0	1	20%
	Sideswipe - opposite	0	0	0	0	0	0%
	Not Collision w/Motor Veh	0	0	0	0	1	20%
	TOTALS:	0	1	0	1	3	5

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): Not the Rank 1 Alternative

Proposed Intersection Control: RIRO w/down stream U-Turn

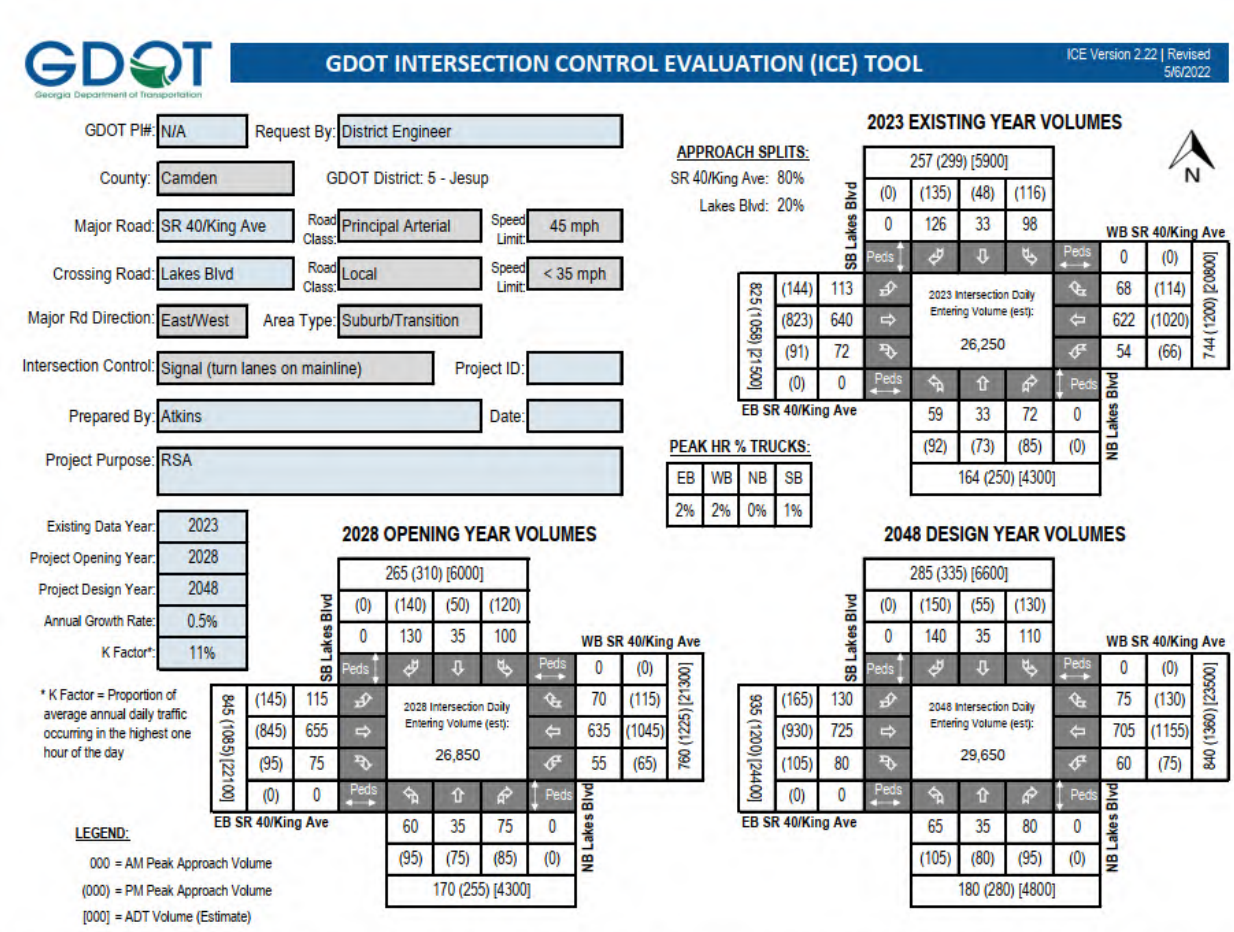
REQUESTED BY: _____ Date: _____

Title: .....

APPROVED BY: _____ Date: _____

Name: .....

Chief Engineer or (Approved Delegate)


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: Lakes Blvd
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Signal (turn lanes on mainline)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
APPROACH SPLITS:
SR 40/King Ave: 80%
Lakes Blvd: 20%
PEAK HR % TRUCKS:
EB WB NB SB
2% 2% 0% 1%
2023 EXISTING YEAR VOLUMES
257 (299) [5900]
SB Lakes Blvd
WB SR 40/King Ave
EB SR 40/King Ave
NB Lakes Blvd
2023 Intersection Daily Entering Volume (est):
26,250
164 (250) [4300]
2028 OPENING YEAR VOLUMES
265 (310) [6000]
2028 Intersection Daily Entering Volume (est):
26,850
170 (255) [4300]
2048 DESIGN YEAR VOLUMES
285 (335) [6600]
2048 Intersection Daily Entering Volume (est):
29,650
180 (280) [4800]
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ Lakes Blvd
Existing Control:	Signal (turn lanes on mainline)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Multilane Roadway
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate
	RCUT (stop control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	High-T (unsignalized)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Offset-T Intersections	No	No	No	No	No	No	No	Negatively Impacts Limited Crossing over Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Evaluated in Other Alternative
	No LT Lane Improvements Add one RT Lane on I-95 SB Ramps	No	No	No	No	No	No	No	N/A
	Other unsignalized (provide description):	No	No	No	No	No	No	No	N/A
Signalized Intersections	Traffic Signal	No	No	No	No	No	No	No	Existing Traffic Control
	Median U-Turn (Indirect Left)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	Potential Alternative to Evaluate
	RCUT (signalized)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	Potential Alternative to Evaluate
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Railroad
	Continuous Green-T	**Yes**	**Yes**	No	**Yes**	**Yes**	No	No	Significant Minor Street Thru Movement
	Jughandle	No	No	No	No	No	No	No	Context Not to Scale
	Quadrant Roadway	No	No	No	No	No	No	No	Context Not to Scale
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Existing Traffic Control
	Diverging Diamond	No	No	No	No	No	No	No	Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signal Upgrades	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

Project Location: SR 40/King Ave @ Lakes Blvd
Existing Intersection Control: Signal (turn lanes on mainline)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	27.4 sec	34.6 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.72	0.94
2048 Design Yr No-Build Peak Hr Intersection Delay	26.4 sec	27.1 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.78	0.91

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	1	4	8	22	28%
Head-On	0	0	0	0	1	1%
Rear End	0	0	4	17	54	60%
Sideswipe - same	0	0	0	0	11	9%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	1	1	2%
TOTALS:	0	1	8	26	89	124

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Multilane Roundabout	Median U-Turn (Indirect Left)	RCUT (signalized)	Signal Upgrades	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$2,171,000	$639,000	$729,000	$650,000	
ROW Cost	$450,000	$227,000	$227,000	$0	
Environmental Cost	$0	$0	$0	$50,000	
Reimbursable Utility Cost	$25,000	$9,000	$10,000	$100,000	
Design & Contingency Cost	$787,000	$205,000	$234,000	$150,000	
Cost Adjustment (justification req'd)	0%	0%	0%	0%	
Total Cost	$3,433,000	$1,080,000	$1,200,000	$950,000	
				User Cost Override	
Traffic Operations:					
Traffic Analysis Software Used	Sidra	Synchro	Synchro	Synchro	
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	
2048 Design Yr Build Intersection Delay	8.3 sec / 16.4 sec	17.0 sec / 21.5 sec	11.3 sec / 27.9 sec	26.4 sec / 27.1 sec	
2048 Design Yr Build Intersection V/C	0.51 / 0.83	0.65 / 0.93	0.55 / 1.35	0.78 / 0.91	
Safety Analysis:					
Predefined CRF: PDO	26%	9%	15%	0%	
Predefined CRF: Fatal/Inj	71%	30%	22%	0%	
Predefined CRF Source:	FHWA Clearinghouse #s 4196 / 4195	FHWA-HRT-07-033	FHWA-HRT-17-083	CRF unavailable; provide user defined CRF below	
User Defined CRF: PDO				34%	
User Defined CRF: Fatal/Inj				29%	
User Defined CRF Source (write in if applicable):				CMF IDs: 1410, 7696, 7697, 8496, 8497, and Atkins Study	
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	
Archaeology Resources	None	None	None	None	
Graveyard	None	None	None	None	
Stream	None	None	None	None	
Underground Tank/Hazmat	None	None	None	None	
Park Land	None	None	None	None	
EJ Community	None	None	None	None	
Wooded Area	None	None	None	None	
Wetland	None	None	None	None	
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	
GDOT Support	Unknown	Unknown	Unknown	Unknown	
Final ICE Stage 2 Score:	6.2	5.8	5.0	5.6	
Rank of Control Type Alternatives:	1	2	4	3	
Final Intersection Control Selection:	3 - Signal Upgrades				

[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report*

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Signal Upgrade alternative includes: upgrading the signal head backplates with those with retroreflective borders, upgrading the left turn signal heads to Protected-Permissive FYAs, improving the line of sight from the SB channelized right turn lane, and installing supplemental signal heads (nearside right and far side left) on all approaches.

Project Information:

Location: SR 40/King Ave @ Lakes Blvd
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: Signal (turn lanes on mainline)

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: New or Revised Signal Permit

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	21,150	
Existing Minor Street Avg Daily Traffic (ADT):	5,100	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	27.4 sec	34.6 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.72	0.94
2048 Design Yr Peak Hour Intersection Delay:	26.4 sec	27.1 sec
2048 Design Yr Peak Hour Intersection V/C:	0.78	0.91

Crash Data (Required):[3]

Crash Type	Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
	Angle	0	1	4	8	22	28%
	Head-On	0	0	0	0	1	1%
	Rear End	0	0	4	17	54	60%
	Sideswipe - same	0	0	0	0	11	9%
	Sideswipe - opposite	0	0	0	0	0	0%
	Not Collision w/Motor Veh	0	0	0	1	1	2%
	TOTALS:	0	1	8	26	89	124

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): Signal Upgrades, most notably Left Turn Protected Only by time of day phasing. Multilane Roundabout is currently rank 1 on Stage 2 but a lower cost and higher B/C alternative is desired.

Proposed Intersection Control: Traffic Signal

REQUESTED BY: _____ Date: _____

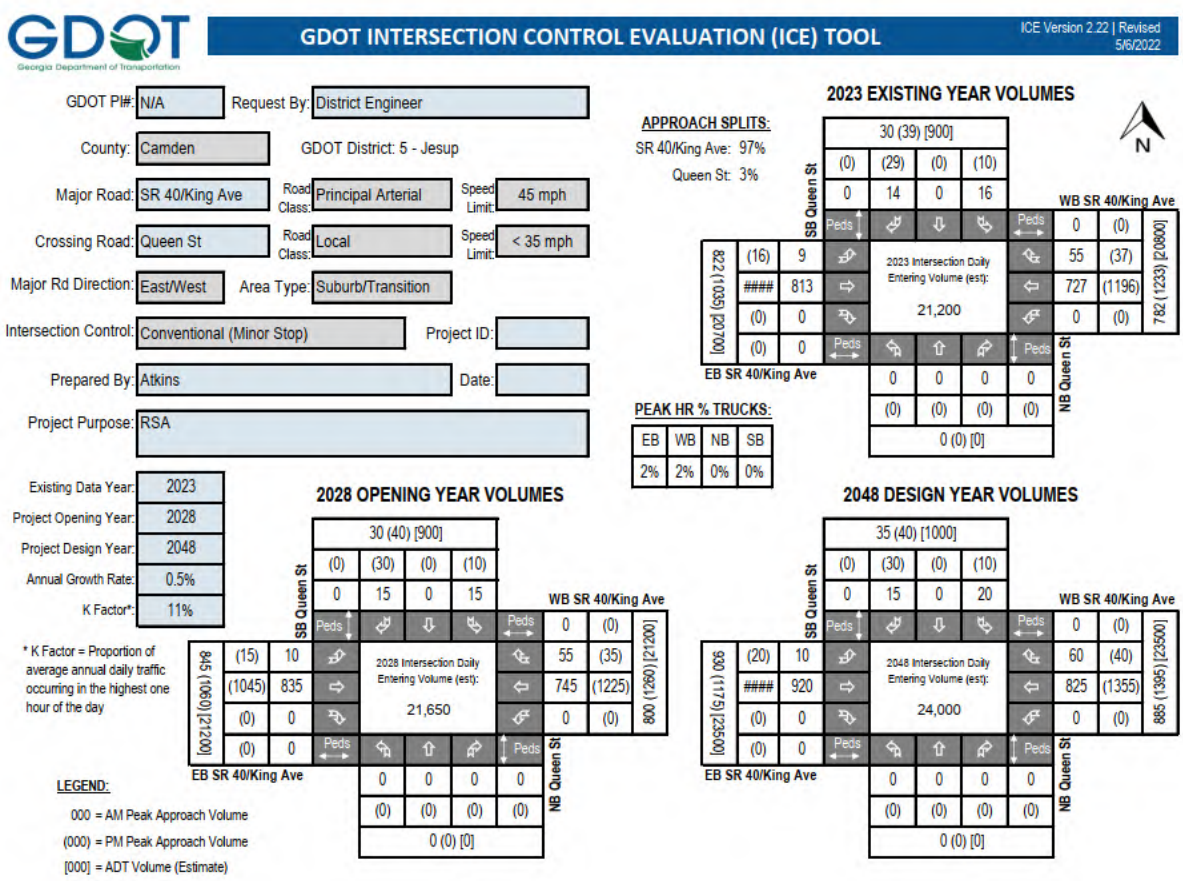
Title: .....

APPROVED BY: _____ Date: _____

Name: .....

Chief Engineer or (Approved Delegate)

[1] *Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2*
[2] *ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.*
[3] *Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)*



GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL

ICE Version 2.22 | Revised 5/6/2022

GDOT PI#:	N/A	Request By:	District Engineer		
County:	Camden	GDOT District: 5 - Jesup			
Major Road:	SR 40/King Ave	Road Class:	Principal Arterial	Speed Limit:	45 mph
Crossing Road:	Queen St	Road Class:	Local	Speed Limit:	< 35 mph
Major Rd Direction:	East/West	Area Type:	Suburb/Transition		
Intersection Control:	Conventional (Minor Stop)			Project ID:	
Prepared By:	Atkins			Date:	
Project Purpose:	RSA				

Existing Data Year:	2023
Project Opening Year:	2028
Project Design Year:	2048
Annual Growth Rate:	0.5%
K Factor*:	11%

* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day

APPROACH SPLITS:
SR 40/King Ave: 97%
Queen St: 3%

PEAK HR % TRUCKS:

EB	WB	NB	SB
2%	2%	0%	0%

2023 EXISTING YEAR VOLUMES

30 (39) [900]
(0) (29) (0) (10)
0 14 0 16
SB Queen St
WB SR 40/King Ave
822 (1035) [20700]
(16) 9
813
(0) 0
(0) 0
2023 Intersection Daily Entering Volume (est): 21,200
0 55 (37)
727 (1196)
0 (0)
782 (1233) [20800]
EB SR 40/King Ave
NB Queen St
0 0 0 0
(0) (0) (0) (0)
0 (0) [0]

2028 OPENING YEAR VOLUMES

30 (40) [900]
(0) (30) (0) (10)
0 15 0 15
SB Queen St
WB SR 40/King Ave
845 (1060) [21200]
(15) 10
(1045) 835
(0) 0
(0) 0
2028 Intersection Daily Entering Volume (est): 21,650
0 55 (35)
745 (1225)
0 (0)
800 (1260) [21200]
EB SR 40/King Ave
NB Queen St
0 0 0 0
(0) (0) (0) (0)
0 (0) [0]

2048 DESIGN YEAR VOLUMES

35 (40) [1000]
(0) (30) (0) (10)
0 15 0 20
SB Queen St
WB SR 40/King Ave
930 (1175) [23500]
(20) 10
920
(0) 0
(0) 0
2048 Intersection Daily Entering Volume (est): 24,000
0 60 (40)
825 (1355)
0 (0)
885 (1395) [23500]
EB SR 40/King Ave
NB Queen St
0 0 0 0
(0) (0) (0) (0)
0 (0) [0]

LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ Queen St
Existing Control:	Conventional (Minor Stop)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Existing Intersection
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does Not Meet AWSC Requirements
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (stop control)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RIRO w/down stream U-Turn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	High-T (unsignalized)	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Traffic Signal
	Offset-T Intersections	No	No	No	No	No	No	No	Already T-Intersection
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Add LT Lanes on SR 22 No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Improvements	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Median U-Turn (Indirect Left)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Continuous Green-T	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Jughandle	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Quadrant Roadway	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: SR 40/King Ave @ Queen St
Existing Intersection Control: Conventional (Minor Stop)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

	Meets Signal Warrants	
Intersection meets signal/AWS warrants?		
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	14.4 sec	18.1 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.12	0.17
2048 Design Yr No-Build Peak Hr Intersection Delay	15.8 sec	20.8 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.15	0.22

Complete Streets Warrants Met?

- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	1	3	4	67%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	2	17%
Sideswipe - same	0	0	0	0	2	17%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	0	0%
TOTALS:	0	0	1	3	8	12

Crash Type

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	RCUT (stop control)	RIRO w/down stream U-Turn	Signing & Marking Improvements	N/A	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*No Down Stream U-Turn*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$150,000	$175,000	$25,000		
ROW Cost	$181,000	$181,000	$0		
Environmental Cost	$0	$0	$0		
Reimbursable Utility Cost	$10,000	$8,000	$0		
Design & Contingency Cost	$25,000	$25,000	$0		
Cost Adjustment (justification req'd)	0%	0%	0%		
Total Cost	$366,000	$389,000	$25,000		
Traffic Operations:	*User Cost Override*	*User Cost Override*	*User Cost Override*		
Traffic Analysis Software Used	Synchro	Synchro	Synchro		
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr		
2048 Design Yr Build Intersection Delay	23.2 sec / 22.0 sec	25.9 sec / 29.3 sec	15.8 sec / 20.8 sec		
2048 Design Yr Build Intersection V/C	0.09 / 0.15	0.09 / 0.15	0.15 / 0.22		
Safety Analysis:					
Predefined CRF: PDO	31%	35%	0%		
Predefined CRF: Fatal/Inj	53%	54%	0%		
Predefined CRF Source:	NCHRP Table 4-7	FHWA Clearinghouse #s 5555 / 5556	CRF unavailable; provide user defined CRF below		
User Defined CRF: PDO			8%		
User Defined CRF: Fatal/Inj			10%		
User Defined CRF Source (write in if applicable):			CMF ID: 8866 & 8867		
Environmental Impacts:[1]					
Historic District/Property	None	None	None		
Archaeology Resources	None	None	None		
Graveyard	None	None	None		
Stream	None	None	None		
Underground Tank/Hazmat	None	None	None		
Park Land	None	None	None		
EJ Community	None	None	None		
Wooded Area	None	None	None		
Wetland	None	None	None		
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
	[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report				
Local Community Support	Unknown	Unknown	Unknown		
GDOT Support	Unknown	Unknown	Unknown		
Final ICE Stage 2 Score:	6.9	6.7	6.0		
Rank of Control Type Alternatives:	1	2	3		
Final Intersection Control Selection:	2 - RIRO w/down stream U-Turn				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The Signing & Marking alternative includes: installing dual (left & right) oversized stop signs on all stop controlled approaches, installing dual (left & right) stop ahead warning signs on all stop controlled approaches, installing intersection ahead warning signs on the major approaches, refreshing all striping at the intersection, and adding retroreflective sheathing to the sign posts.

Project Information:

Location: SR 40/King Ave @ Queen St
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: Conventional (Minor Stop)

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: GDOT PDP Project

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	20,300	
Existing Minor Street Avg Daily Traffic (ADT):	900	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	14.4 sec	18.1 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.12	0.17
2048 Design Yr Peak Hour Intersection Delay:	15.8 sec	20.8 sec
2048 Design Yr Peak Hour Intersection V/C:	0.15	0.22

Crash Data (Required):[3]

Crash Type	Crash Data: Enter most recent 10 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
	Angle	0	0	1	3	4	67%
	Head-On	0	0	0	0	0	0%
	Rear End	0	0	0	0	2	17%
	Sideswipe - same	0	0	0	0	2	17%
	Sideswipe - opposite	0	0	0	0	0	0%
	Not Collision w/Motor Veh	0	0	0	0	0	0%
	TOTALS:	0	0	1	3	8	12

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): RIRO was not the Rank 1 Alternative

Proposed Intersection Control: RIRO w/down stream U-Turn

REQUESTED BY: _____ Date: _____

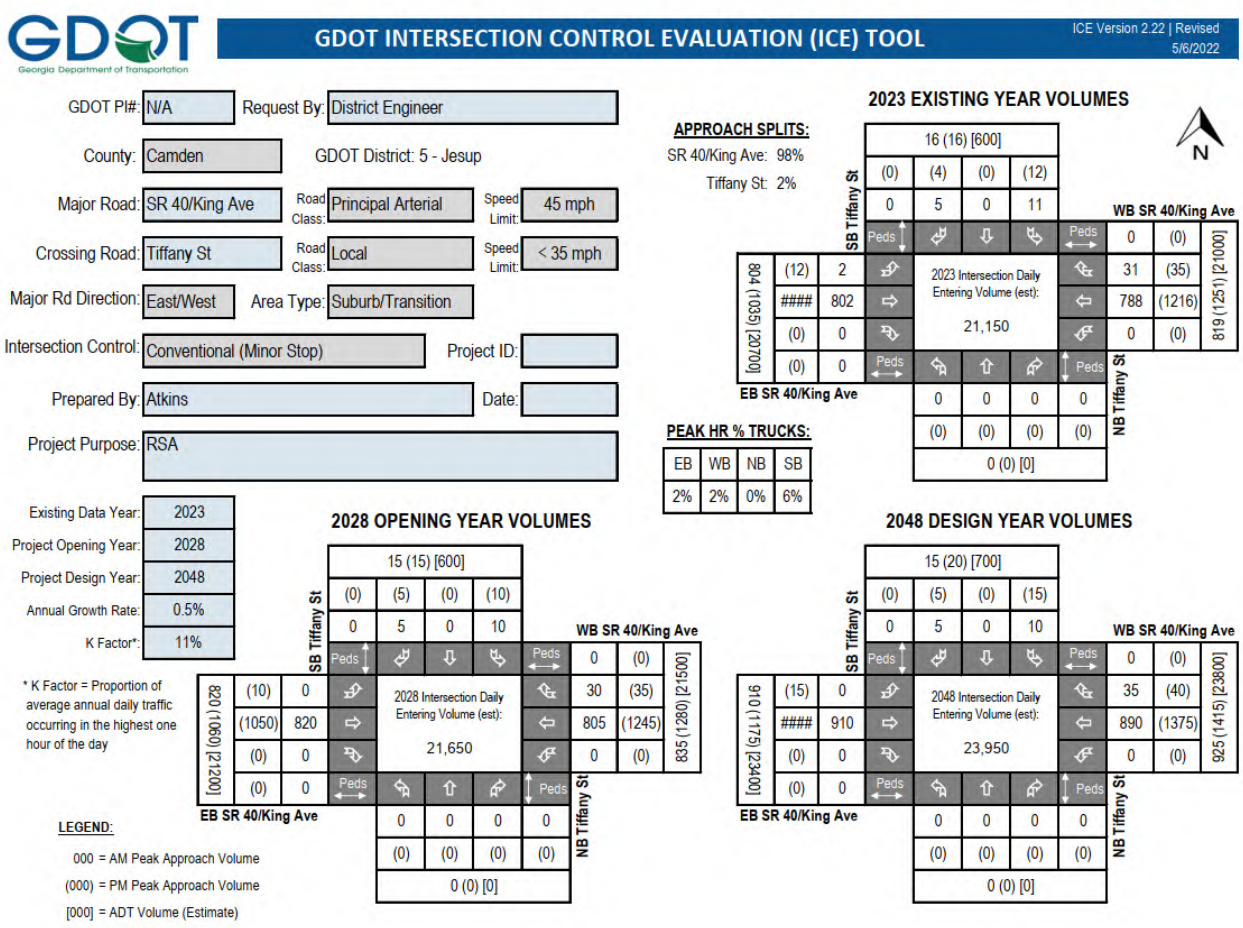
Title: .....

APPROVED BY: _____ Date: _____

Name: .....

Chief Engineer or (Approved Delegate)

[1] *Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2*
[2] *ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.*
[3] *Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)*


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: Tiffany St
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Conventional (Minor Stop)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)
2023 EXISTING YEAR VOLUMES
APPROACH SPLITS:
SR 40/King Ave: 98%
Tiffany St: 2%
PEAK HR % TRUCKS:
EB WB NB SB
2% 2% 0% 6%
16 (16) [600]
SB Tiffany St
WB SR 40/King Ave
804 (1035) [20700]
EB SR 40/King Ave
819 (1251) [21000]
NB Tiffany St
2023 Intersection Daily Entering Volume (est):
21,150
0 (0) [0]
2028 OPENING YEAR VOLUMES
15 (15) [600]
820 (1060) [21200]
2028 Intersection Daily Entering Volume (est):
21,650
835 (1280) [21500]
2048 DESIGN YEAR VOLUMES
15 (20) [700]
910 (1175) [23400]
2048 Intersection Daily Entering Volume (est):
23,950
925 (1415) [23800]

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ Tiffany St
Existing Control:	Conventional (Minor Stop)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Existing Intersection
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does Not Meet AWSC Requirements
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (stop control)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RIRO w/down stream U-Turn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	High-T (unsignalized)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Offset-T Intersections	No	No	No	No	No	No	No	Already T-Intersection
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Add LT Lanes on SR 22 No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Improvements	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Median U-Turn (Indirect Left)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Continuous Green-T	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Jughandle	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Quadrant Roadway	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 3.22 | Revised 6/6/2022

Project Location: SR 40/King Ave @ Tiffany St
Existing Intersection Control: Conventional (Minor Stop)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	15.8 sec	22.7 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.06	0.21
2048 Design Yr No-Build Peak Hr Intersection Delay	17.0 sec	27.6 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.07	0.29

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	1	0	1	0	40%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	1	20%
Sideswipe - same	0	0	0	0	1	20%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	1	20%
TOTALS:	0	1	0	1	3	5

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	RCUT (stop control)	RIRO w/down stream U-Turn	High-T (unsignalized)	Signing & Marking Improvements	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*No Down Stream U-Turn*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$150,000	$175,000	$230,000	$25,000	
ROW Cost	$243,000	$243,000	$0	$0	
Environmental Cost	$0	$0	$0	$0	
Reimbursable Utility Cost	$10,000	$8,000	$3,000	$0	
Design & Contingency Cost	$25,000	$25,000	$74,000	$0	
Cost Adjustment (justification req'd)	0%	0%	0%	0%	
Total Cost	$428,000	$451,000	$307,000	$25,000	
	User Cost Override	User Cost Override		User Cost Override	
Traffic Operations:					
Traffic Analysis Software Used	Synchro	Synchro	Synchro	Synchro	
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	
2048 Design Yr Build Intersection Delay	32.4 sec / 34.9 sec	33.9 sec / 46.2 sec	17.1 sec / 41.1 sec	17.0 sec / 27.6 sec	
2048 Design Yr Build Intersection V/C	0.05 / 0.17	0.05 / 0.17	0.07 / 0.30	0.07 / 0.29	
Safety Analysis:					
Predefined CRF: PDO	31%	35%	23%	0%	
Predefined CRF: Fatal/Inj	53%	54%	45%	0%	
Predefined CRF Source:	NCHRP Table 4-7	FHWA Clearinghouse #s 5555 / 5556	FHWA Clearinghouse #s 2753 / 2755	CRF unavailable; provide user defined CRF below	
User Defined CRF: PDO				8%	
User Defined CRF: Fatal/Inj				10%	
User Defined CRF Source (write in if applicable):				CMF ID: 8866 & 8867	
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	
Archaeology Resources	None	None	None	None	
Graveyard	None	None	None	None	
Stream	None	None	None	None	
Underground Tank/Hazmat	None	None	None	None	
Park Land	None	None	None	None	
EJ Community	None	None	None	None	
Wooded Area	None	None	None	None	
Wetland	None	None	None	None	
Stakeholder Posture:	*Note: if environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	
GDOT Support	Unknown	Unknown	Unknown	Unknown	
Final ICE Stage 2 Score:	6.7	6.6	6.8	6.0	
Rank of Control Type Alternatives:	2	3	1	4	
Final Intersection Control Selection:	3 - RIRO w/down stream U-Turn				

[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The Signing & Marking alternative includes: installing dual (left & right) oversized stop signs on all stop controlled approaches, installing dual (left & right) stop ahead warning signs on all stop controlled approaches, installing intersection ahead warning signs on the major approaches, refreshing all striping at the intersection, and adding retroreflective sheathing to the sign posts.

Project Information:

Location: SR 40/King Ave @ Tiffany St
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: Conventional (Minor Stop)

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: GDOT PDP Project

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	20,850	
Existing Minor Street Avg Daily Traffic (ADT):	300	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	15.8 sec	22.7 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.06	0.21
2048 Design Yr Peak Hour Intersection Delay:	17.0 sec	27.6 sec
2048 Design Yr Peak Hour Intersection V/C:	0.07	0.29

Crash Data (Required):[3]

Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Crash Type: Angle	0	1	0	1	0	40%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	1	20%
Sideswipe - same	0	0	0	0	1	20%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	1	20%
TOTALS:	0	1	0	1	3	5

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): High-T is the highest ranking alternative but a cheaper, Higher B/C alternative is desired.

Proposed Intersection Control: RIRO w/down stream U-Turn

REQUESTED BY: _____ Date: _____

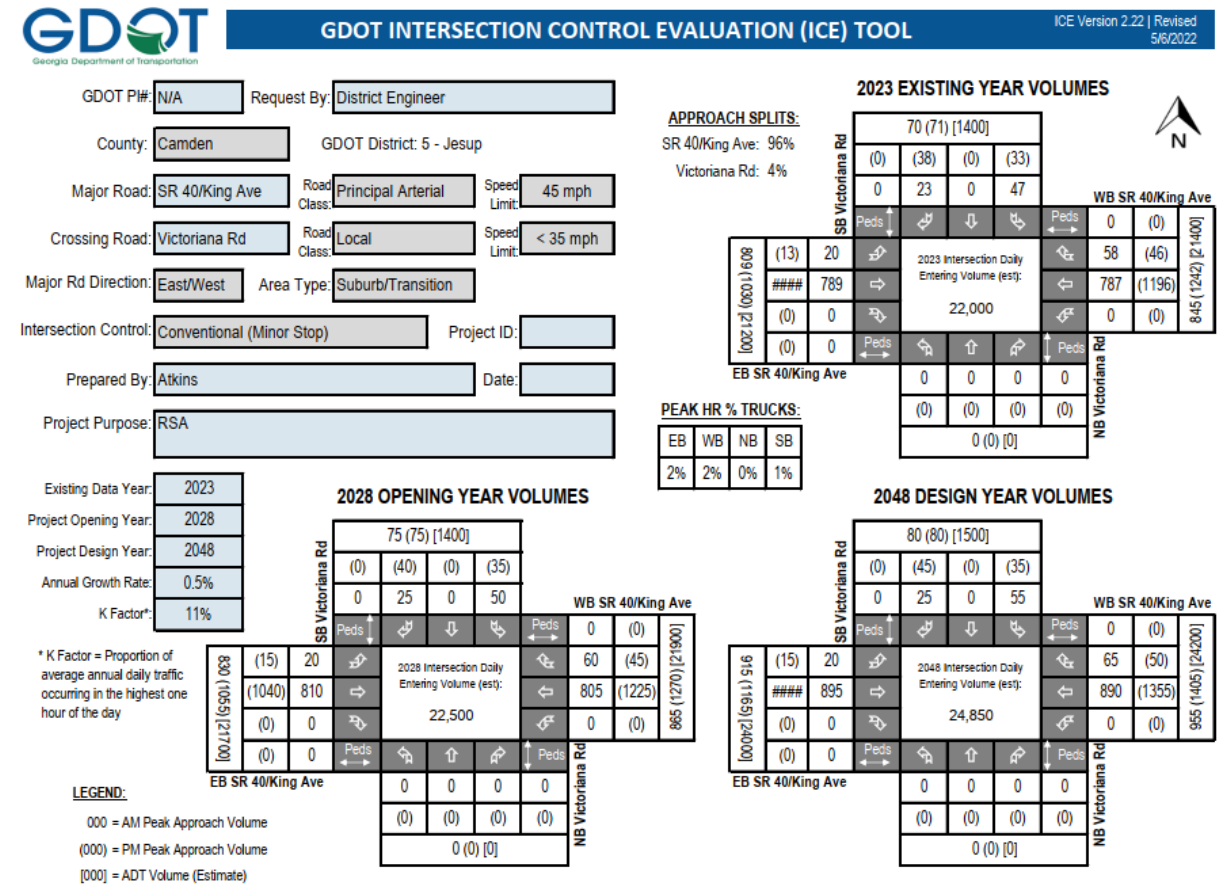
Title: .....

APPROVED BY: _____ Date: _____

Name: .....

Chief Engineer or (Approved Delegate)

[1] *Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2*
[2] *ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.*
[3] *Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)*


GDOT
Georgia Department of Transportation
GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: Victoriana Rd
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Conventional (Minor Stop)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)
APPROACH SPLITS:
SR 40/King Ave: 96%
Victoriana Rd: 4%
PEAK HR % TRUCKS:
EB WB NB SB
2% 2% 0% 1%
2023 EXISTING YEAR VOLUMES
2023 Intersection Daily Entering Volume (est): 22,000
2028 OPENING YEAR VOLUMES
2028 Intersection Daily Entering Volume (est): 22,500
2048 DESIGN YEAR VOLUMES
2048 Intersection Daily Entering Volume (est): 24,850
SB Victoriana Rd
NB Victoriana Rd
WB SR 40/King Ave
EB SR 40/King Ave
N

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ Victoriana Rd
Existing Control:	Conventional (Minor Stop)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Existing Intersection
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does Not Meet AWSC Requirements
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (stop control)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RIRO w/down stream U-Turn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	High-T (unsignalized)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Offset-T Intersections	No	Yes	Yes	No	No	No	No	Already T-Intersection
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Add LT Lanes on SR 22 No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Improvements	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Median U-Turn (Indirect Left)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Continuous Green-T	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Jughandle	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Quadrant Roadway	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.2.1 | Revised 6/6/2022

Project Location: SR 40/King Ave @ Victoriana Rd
Existing Intersection Control: Conventional (Minor Stop)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitic

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	20.0 sec	25.5 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.36	0.38
2048 Design Yr No-Build Peak Hr Intersection Delay	24.0 sec	32.5 sec
2048 Design Yr No-Build Peak Hr Intersection V/C	0.45	0.48

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	1	1	4	46%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	1	4	38%
Sideswipe - same	0	0	0	1	1	15%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	0	0%
TOTALS:	0	0	1	3	9	13

Crash Type

* Number of crashes resulting in injuries / fatalities, not number of persons

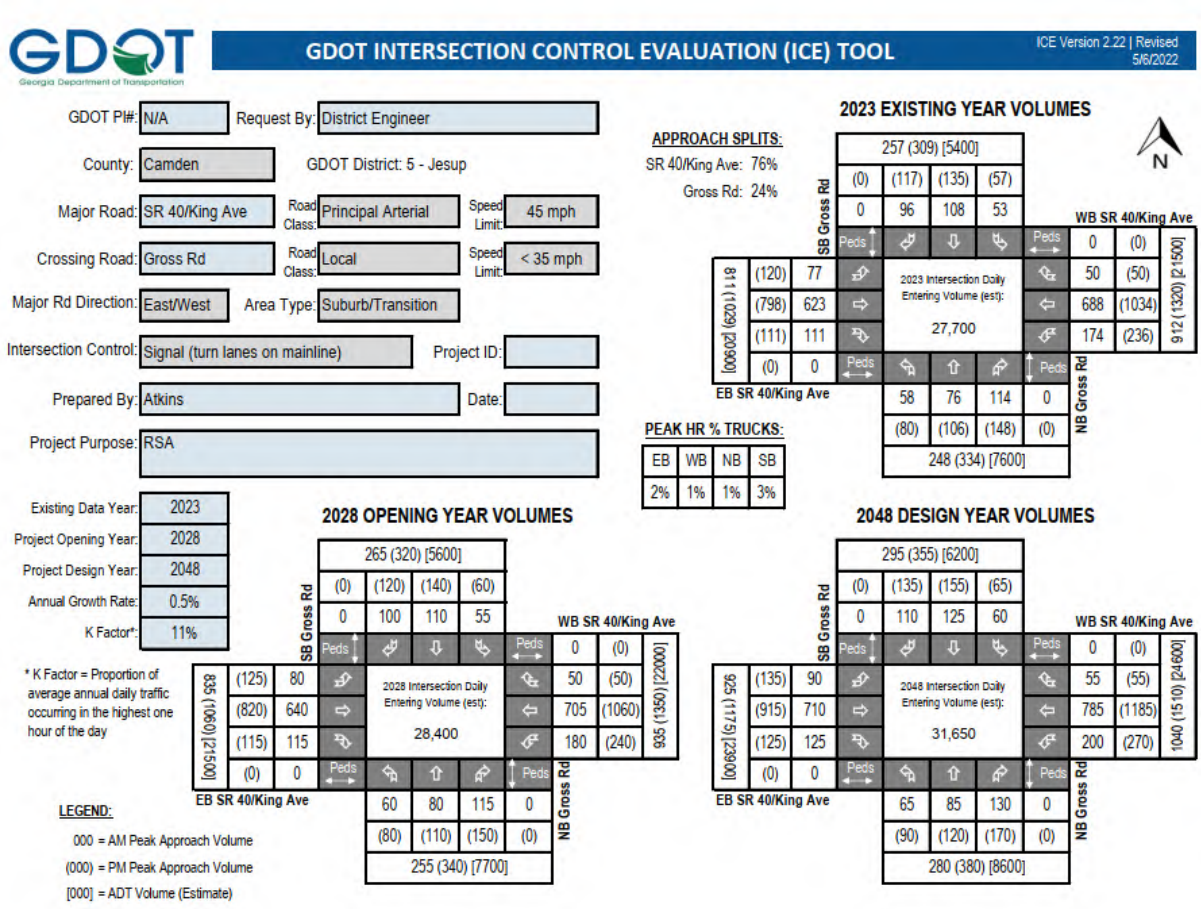
Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	RCUT (stop control)	RIRO w/down stream U-Turn	High-T (unsignalized)	Signing & Marking Improvements	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$150,000	$175,000	$229,000	$25,000	
ROW Cost	$0	$0	$0	$0	
Environmental Cost	$0	$0	$0	$0	
Reimbursable Utility Cost	$0	$0	$3,000	$0	
Design & Contingency Cost	$25,000	$25,000	$73,000	$0	
Cost Adjustment (justification req'd)	0%	0%	0%	0%	
Total Cost	$175,000	$200,000	$305,000	$25,000	
Traffic Operations:	User Cost Override	User Cost Override		User Cost Override	
Traffic Analysis Software Used	Synchro	Synchro	Synchro	Synchro	
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	
2048 Design Yr Build Intersection Delay	38.2 sec / 38.3 sec	42.1 sec / 42.4 sec	24.3 sec / 37.0 sec	24.0 sec / 32.5 sec	
2048 Design Yr Build Intersection V/C	0.27 / 0.26	0.27 / 0.26	0.41 / 0.49	0.45 / 0.48	
Safety Analysis:					
Predefined CRF: PDO	31%	35%	23%	0%	
Predefined CRF: Fatal/Inj	53%	54%	45%	0%	
Predefined CRF Source:	NCMO Table 4-7	FHWA Clearinghouse #s 5555 / 5556	FHWA Clearinghouse #s 2753 / 2755	CRF unavailable; provide user defined CRF below	
User Defined CRF: PDO				8%	
User Defined CRF: Fatal/Inj				10%	
User Defined CRF Source (write in if applicable):				CMF ID: 8866 & 8867	
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	
Archaeology Resources	None	None	None	None	
Graveyard	None	None	None	None	
Stream	None	None	None	None	
Underground Tank/Hazmat	None	None	None	None	
Park Land	None	None	None	None	
EJ Community	None	None	None	None	
Wooded Area	None	None	None	None	
Wetland	None	None	None	None	
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	
GDOT Support	Unknown	Unknown	Unknown	Unknown	
Final ICE Stage 2 Score:	6.9	6.7	5.4	5.4	
Rank of Control Type Alternatives:	1	2	4	3	
Final Intersection Control Selection:	1 - RCUT (stop control)				

[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept*

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The Signing & Marking alternative includes: installing dual (left & right) oversized stop signs on all stop controlled approaches, installing dual (left & right) stop ahead warning signs on all stop controlled approaches, installing intersection ahead warning signs on the major approaches, refreshing all striping at the intersection, and adding retroreflective sheathing to the sign posts.


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: Gross Rd
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Signal (turn lanes on mainline)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)
2023 EXISTING YEAR VOLUMES
APPROACH SPLITS:
SR 40/King Ave: 76%
Gross Rd: 24%
PEAK HR % TRUCKS:
EB WB NB SB
2% 1% 1% 3%
2023 Intersection Daily Entering Volume (est): 27,700
2028 OPENING YEAR VOLUMES
2028 Intersection Daily Entering Volume (est): 28,400
2048 DESIGN YEAR VOLUMES
2048 Intersection Daily Entering Volume (est): 31,650
SB Gross Rd
NB Gross Rd
EB SR 40/King Ave
WB SR 40/King Ave
N

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ Gross Rd
Existing Control:	Signal (turn lanes on mainline)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Multilane Roadway
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate
	RCUT (stop control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	High-T (unsignalized)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Offset-T Intersections	No	No	No	No	No	No	No	Negatively Impacts Limited Crossing over Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Evaluated in Other Alternative
	No LT Lane Improvements Add one RT Lane on I-95 SB Ramps	No	No	No	No	No	No	No	N/A
	Other unsignalized (provide description):	No	No	No	No	No	No	No	N/A
Signalized Intersections	Traffic Signal	No	No	No	No	No	No	No	Existing Traffic Control
	Median U-Turn (Indirect Left)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	Potential Alternative to Evaluate
	RCUT (signalized)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	Potential Alternative to Evaluate
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Railroad
	Continuous Green-T	**Yes**	**Yes**	No	**Yes**	**Yes**	No	No	Significant Minor Street Thru Movement
	Jughandle	No	No	No	No	No	No	No	Context Not to Scale
	Quadrant Roadway	No	No	No	No	No	No	No	Context Not to Scale
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Existing Traffic Control
	Diverging Diamond	No	No	No	No	No	No	No	Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Context Not to Scale
	No LT Lane Improvements Add one RT Lane on SR 40/King Ave	**Yes**	**No**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate
	Signal Upgrades	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 [Revised 6/6/2022

Project Location: SR 40/King Ave @ Gross Rd
Existing Intersection Control: Signal (turn lanes on mainline)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitic

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	31.3 sec	36.8 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.80	0.94
2048 Design Yr No-Build Peak Hr Intersection Delay	31.4 sec	37.0 sec
2048 Design Yr No-Build Peak Hr Intersection V/C	0.85	0.92

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	2	3	7	8	29	23%
Head-On	0	0	0	0	1	0%
Rear End	0	2	1	35	113	70%
Sideswipe - same	0	1	1	1	12	7%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	1	0	0	0%
TOTALS:	2	6	10	44	155	217

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Multilane Roundabout	Median U-Turn (Indirect Left)	RCUT (signalized)	Add Right Turn Lanes	Signal Upgrades
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$2,171,000	$636,000	$726,000	$130,000	$650,000
ROW Cost	$478,000	$278,000	$278,000	$0	$0
Environmental Cost	$0	$0	$0	$0	$50,000
Reimbursable Utility Cost	$25,000	$9,000	$10,000	$1,000	$100,000
Design & Contingency Cost	$787,000	$204,000	$233,000	$41,000	$150,000
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$3,461,000	$1,127,000	$1,247,000	$172,000	$950,000
				#N/A	User Cost Override
Traffic Operations:					
Traffic Analysis Software Used	Sidra	Synchro	Synchro	Synchro	Synchro
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr
2048 Design Yr Build Intersection Delay	10.2 sec / 26.3 sec	28.8 sec / 51.9 sec	14.2 sec / 46.7 sec	26.8 sec / 33.0 sec	31.1 sec / 39.6 sec
2048 Design Yr Build Intersection V/C	0.59 / 1.05	0.75 / 1.30	0.77 / 1.87	0.85 / 0.89	0.87 / 0.89
Safety Analysis:					
Predefined CRF: PDO	26%	9%	15%	0%	0%
Predefined CRF: Fatal/Inj	71%	30%	22%	0%	0%
Predefined CRF Source:	FHWA Clearinghouse #s 4196 / 4195	FHWA-HRT-07-033	FHWA-HRT-17-083	N/A	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO				7%	35%
User Defined CRF: Fatal/Inj				4%	37%
User Defined CRF Source (write in if applicable):				CMF ID 285 & 288	CMF IDs: 1410, 7696, 7697, 4576, & Atkins Study
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
	[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown
Final ICE Stage 2 Score:	5.9	4.8	4.1	4.4	5.6
Rank of Control Type Alternatives:	1	3	5	4	2
Final Intersection Control Selection:	1 - Multilane Roundabout				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Signal Upgrade alternative includes: upgrading the signal head backplates with those with retroreflective borders, upgrading the left turn signal heads to Protected-Permissive FYAs on the NB, SB, and EB approaches, upgrading the WB left turn phasing to Protected Only, and installing supplemental signal heads (nearside right and far side left) on all approaches.

GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL

ICE Version 2.22 | Revised 5/6/2022

GDOT PI#:	N/A	Request By:	District Engineer		
County:	Camden	GDOT District:	5 - Jesup		
Major Road:	SR 40/King Ave	Road Class:	Principal Arterial	Speed Limit:	45 mph
Crossing Road:	J Nolan Wells	Road Class:	Local	Speed Limit:	< 35 mph
Major Rd Direction:	East/West	Area Type:	Suburb/Transition		
Intersection Control:	Conventional (Minor Stop)	Project ID:			
Prepared By:	Atkins	Date:			
Project Purpose:	RSA				

Existing Data Year:	2023
Project Opening Year:	2028
Project Design Year:	2048
Annual Growth Rate:	1.1%
K Factor*:	11%

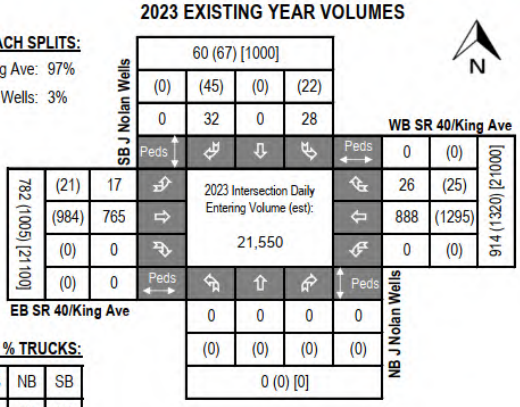
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day

2023 EXISTING YEAR VOLUMES

APPROACH SPLITS:

SR 40/King Ave: 97%

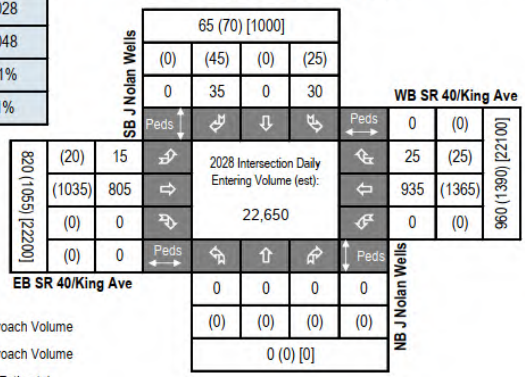
J Nolan Wells: 3%



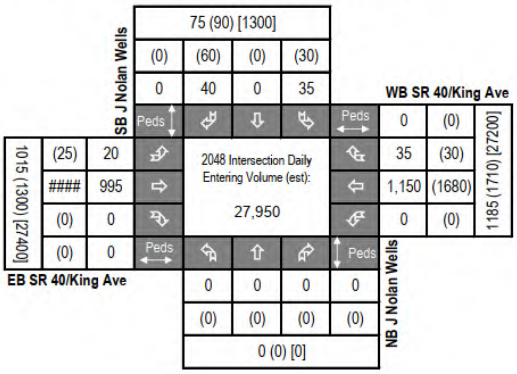
PEAK HR % TRUCKS:

EB	WB	NB	SB
3%	1%	1%	1%

2028 OPENING YEAR VOLUMES



2048 DESIGN YEAR VOLUMES



LEGEND:

000 = AM Peak Approach Volume

(000) = PM Peak Approach Volume

[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ J Nolan Wells
Existing Control:	Conventional (Minor Stop)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Existing Intersection
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does Not Meet AWSC Requirements
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	No	Yes	Yes	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (stop control)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	RIRO w/down stream U-Turn	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	High-T (unsignalized)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Offset-T Intersections	No	No	No	No	No	No	No	Already T-Intersection
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Add LT Lanes on SR 22 No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Improvements	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Median U-Turn (Indirect Left)	No	Yes	Yes	Yes	No	No	No	Does Not Meet Signal Warrants
	RCUT (signalized)	No	Yes	Yes	No	No	No	No	Does Not Meet Signal Warrants
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Continuous Green-T	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Jughandle	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Quadrant Roadway	No	No	No	No	No	No	No	Does Not Meet Signal Warrants
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: SR 40/King Ave @ J Nolan Wells
Existing Intersection Control: Conventional (Minor Stop)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitic

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	17.9 sec	27.1 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.25	0.37
2048 Design Yr No-Build Peak Hr Intersection Delay	25.1 sec	57.6 sec
2048 Design Yr No-Build Peak Hr Intersection V/C	0.40	0.68

Complete Streets Warrants Met?
- ☑ PEDESTRIANS
- ☑ BICYCLES
- ☐ TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	0	0	2	17%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	2	7	75%
Sideswipe - same	0	0	0	0	0	0%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	1	0	8%
TOTALS:	0	0	0	3	9	12

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

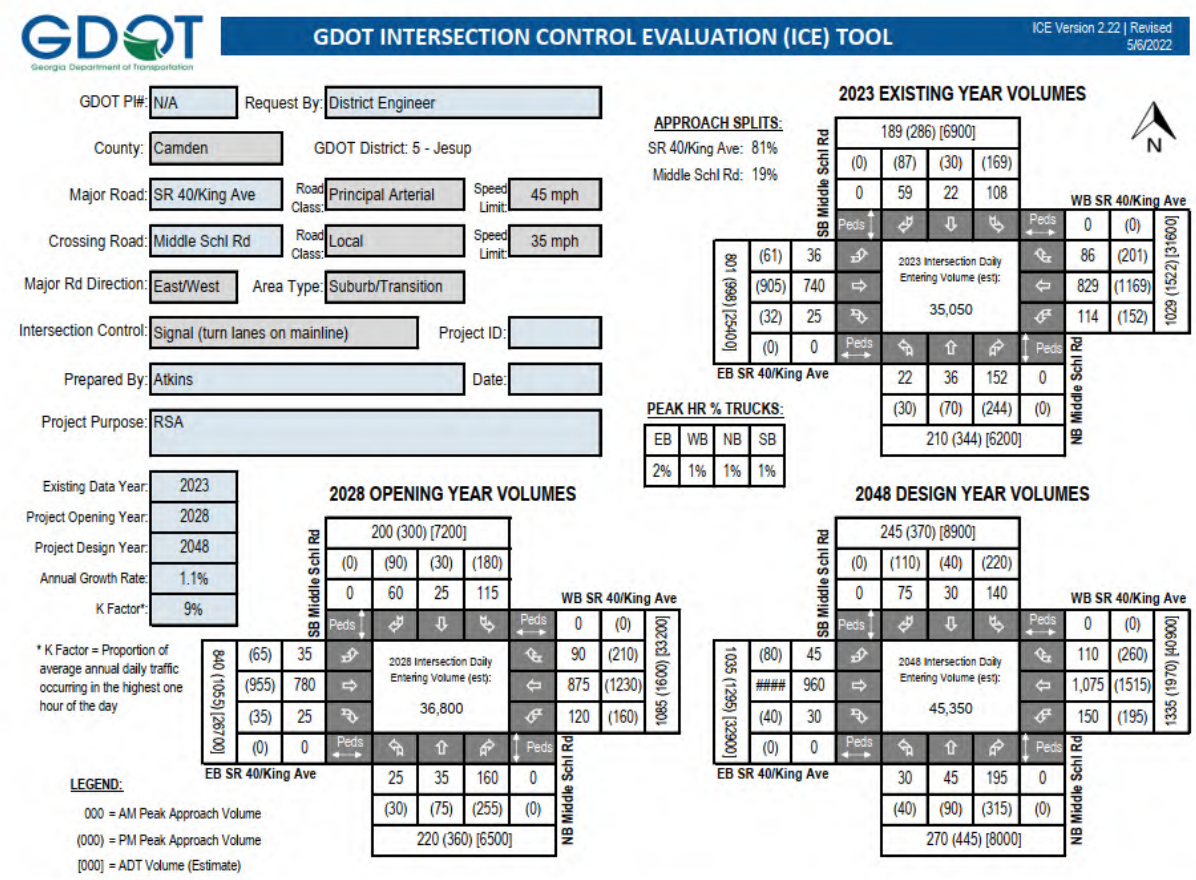
	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	RCUT (stop control)	RIRO w/down stream U-Turn	High-T (unsignalized)	Signing & Marking Improvements	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*
Construction Cost	$720,000	$599,000	$229,000	$25,000	
ROW Cost	$296,000	$296,000	$0	$0	
Environmental Cost	$0	$0	$0	$0	
Reimbursable Utility Cost	$10,000	$8,000	$3,000	$0	
Design & Contingency Cost	$231,000	$192,000	$73,000	$0	
Cost Adjustment (justification req'd)	0%	0%	0%	0%	
Total Cost	$1,257,000	$1,095,000	$305,000	$25,000	
				User Cost Override	
Traffic Operations:					
Traffic Analysis Software Used	Synchro	Synchro	Synchro	Synchro	
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	
2048 Design Yr Build Intersection Delay	29.6 sec / 37.1 sec	36.3 sec / 53.1 sec	28.6 sec / 91.6 sec	25.1 sec / 57.6 sec	
2048 Design Yr Build Intersection V/C	0.23 / 0.38	0.24 / 0.39	0.40 / 0.77	0.40 / 0.68	
Safety Analysis:					
Predefined CRF: PDO	31%	35%	23%	0%	
Predefined CRF: Fatal/Inj	53%	54%	45%	0%	
Predefined CRF Source:	NCMO Table 4-7	FHWA Clearinghouse #s 5555 / 5556	FHWA Clearinghouse #s 2753 / 2755	CRF unavailable; provide user defined CRF below	
User Defined CRF: PDO				8%	
User Defined CRF: Fatal/Inj				10%	
User Defined CRF Source (write in if applicable):				CMF ID: 8866 & 8867	
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	
Archaeology Resources	None	None	None	None	
Graveyard	None	None	None	None	
Stream	None	None	None	None	
Underground Tank/Hazmat	None	None	None	None	
Park Land	None	None	None	None	
EJ Community	None	None	None	None	
Wooded Area	None	None	None	None	
Wetland	None	None	None	None	

Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet
[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept

Stakeholder Posture:					
Local Community Support	Unknown	Unknown	Unknown	Unknown	
GDOT Support	Unknown	Unknown	Unknown	Unknown	
Final ICE Stage 2 Score:	5.8	6.0	6.4	5.1	
Rank of Control Type Alternatives:	3	2	1	4	
Final Intersection Control Selection:	1 - High-T (unsignalized)				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): The Signing & Marking alternative includes: installing dual (left & right) oversized stop signs on all stop controlled approaches, installing dual (left & right) stop ahead warning signs on all stop controlled approaches, installing intersection ahead warning signs on the major approaches, refreshing all striping at the intersection, and adding retroreflective sheathing to the sign posts.


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: SR 40/King Ave
Road Class: Principal Arterial
Speed Limit: 45 mph
Crossing Road: Middle Schl Rd
Road Class: Local
Speed Limit: 35 mph
Major Rd Direction: East/West
Area Type: Suburb/Transition
Intersection Control: Signal (turn lanes on mainline)
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 1.1%
K Factor*: 9%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
APPROACH SPLITS:
SR 40/King Ave: 81%
Middle Schl Rd: 19%
PEAK HR % TRUCKS:
EB WB NB SB
2% 1% 1% 1%
2023 EXISTING YEAR VOLUMES
2023 Intersection Daily Entering Volume (est): 35,050
2028 OPENING YEAR VOLUMES
2028 Intersection Daily Entering Volume (est): 36,800
2048 DESIGN YEAR VOLUMES
2048 Intersection Daily Entering Volume (est): 45,350
SB Middle Schl Rd
NB Middle Schl Rd
EB SR 40/King Ave
WB SR 40/King Ave
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	SR 40/King Ave @ Middle Schl Rd
Existing Control:	Signal (turn lanes on mainline)
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Multilane Roadway
	Mini Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Single Lane Roundabout	No	No	No	No	No	No	No	Multilane Roadway
	Multilane Roundabout	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate
	RCUT (stop control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	High-T (unsignalized)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Offset-T Intersections	No	No	No	No	No	No	No	Negatively Impacts Limited Crossing over Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Evaluated in Other Alternative
	No LT Lane Improvements Add one RT Lane on I-95 SB Ramps	No	No	No	No	No	No	No	N/A
	Other unsignalized (provide description):	No	No	No	No	No	No	No	N/A
Signalized Intersections	Traffic Signal	No	No	No	No	No	No	No	Existing Traffic Control
	Median U-Turn (Indirect Left)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	Potential Alternative to Evaluate
	RCUT (signalized)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	Potential Alternative to Evaluate
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Railroad
	Continuous Green-T	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	Potential Alternative to Evaluate
	Jughandle	No	No	No	No	No	No	No	Context Not to Scale
	Quadrant Roadway	No	No	No	No	No	No	No	Context Not to Scale
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Existing Traffic Control
	Diverging Diamond	No	No	No	No	No	No	No	Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signal Upgrades	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Potential Alternative to Evaluate

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: SR 40/King Ave @ Middle Schl Rd
Existing Intersection Control: Signal (turn lanes on mainline)
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	24.4 sec	28.8 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.85	0.96
2048 Design Yr No-Build Peak Hr Intersection Delay	29.1 sec	53.5 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.93	1.39

Complete Streets Warrants Met?
- [x] PEDESTRIANS
- [x] BICYCLES
- [ ] TRANSIT

Crash Type: Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	1	2	6	16	21%
Head-On	0	0	0	0	0	0%
Rear End	0	0	5	15	56	64%
Sideswipe - same	0	0	0	2	10	10%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	5	4%
TOTALS:	0	1	7	23	87	118

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Multilane Roundabout	Median U-Turn (Indirect Left)	RCUT (signalized)	Continuous Green-T	Signal Upgrades
	Additional description here	Additional description here	Additional description here	Additional description here	Additional description here
Project Cost: (From CostEst Worksheet)					
Construction Cost	$2,171,000	$638,000	$728,000	$244,000	$650,000
ROW Cost	$478,000	$260,000	$260,000	$0	$0
Environmental Cost	$0	$0	$0	$0	$50,000
Reimbursable Utility Cost	$25,000	$9,000	$10,000	$3,000	$100,000
Design & Contingency Cost	$787,000	$205,000	$234,000	$78,000	$150,000
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$3,461,000	$1,112,000	$1,232,000	$325,000	$950,000
					User Cost Override
Traffic Operations:					
Traffic Analysis Software Used	Sidra	Synchro	Synchro	Synchro	Synchro
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr
2048 Design Yr Build Intersection Delay	8.6 sec / 18.7 sec	30.0 sec / 68.7 sec	11.7 sec / 89.5 sec	56.3 sec / 315.6 sec	29.1 sec / 53.5 sec
2048 Design Yr Build Intersection V/C	0.55 / 0.82	0.92 / 1.35	0.70 / 2.40	1.34 / 2.88	0.93 / 1.39
Safety Analysis:					
Predefined CRF: PDO	26%	9%	15%	1%	0%
Predefined CRF: Fatal/Inj	71%	30%	22%	15%	0%
Predefined CRF Source:	FHWA Clearinghouse #s 4196 / 4195	FHWA-HRT-07-033	FHWA-HRT-17-083	FHWA Clearinghouse #s 8655 / 8656	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO					32%
User Defined CRF: Fatal/Inj					35%
User Defined CRF Source (write in if applicable):					CMF IDs: 7700, 7701, & Atkins Study
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None
	Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet				
Stakeholder Posture:	[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report				
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown
Final ICE Stage 2 Score:	6.2	4.6	3.6	1.8	5.1
Rank of Control Type Alternatives:	1	3	4	5	2
Final Intersection Control Selection:	2 - Signal Upgrades				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Signal Upgrade alternative includes: installing a permissive only FYA for the eastbound approach, and installing supplemental signal heads (nearside right and far side left) on all approaches.

Project Information:

Location: SR 40/King Ave @ Middle Schl Rd
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: Signal (turn lanes on mainline)

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: New or Revised Signal Permit

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	29,900	
Existing Minor Street Avg Daily Traffic (ADT):	6,550	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	24.4 sec	28.8 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.85	0.96
2048 Design Yr Peak Hour Intersection Delay:	29.1 sec	53.5 sec
2048 Design Yr Peak Hour Intersection V/C:	0.93	1.39

Crash Data (Required):[3]

Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity					Years:
Crash Type	K*	A*	B*	C*	O	10
Angle	0	1	2	6	16	21%
Head-On	0	0	0	0	0	0%
Rear End	0	0	5	15	56	64%
Sideswipe - same	0	0	0	2	10	10%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	5	4%
TOTALS:	0	1	7	23	87	118

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): Multilane Roundabout is the Rank 1 alternative but Signal Upgrades is the preferred alternative due to the lower cost and higher B/C

Proposed Intersection Control: Other Signalized

REQUESTED BY: _____ Date: _____

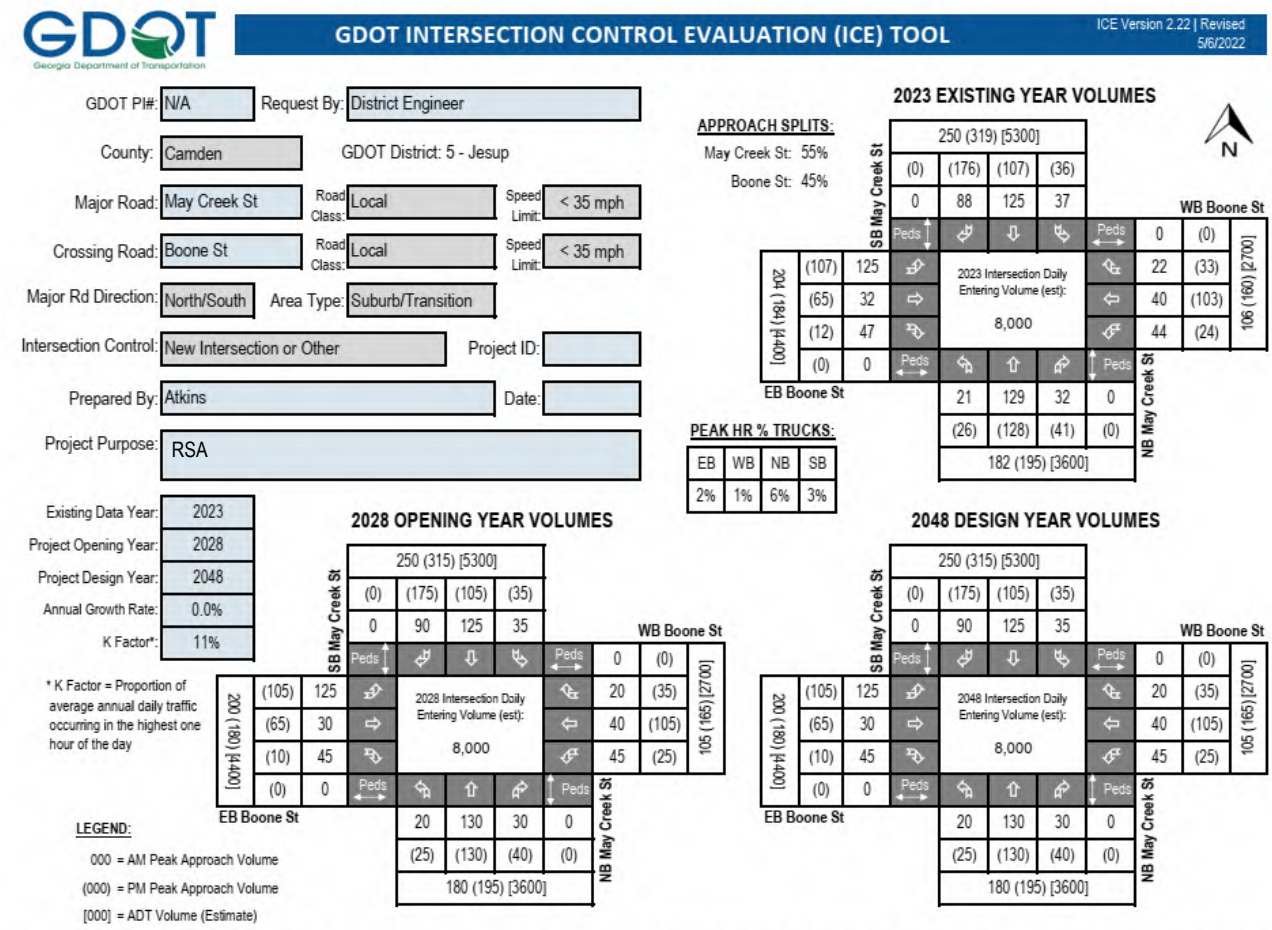
Title: .....

APPROVED BY: _____ Date: _____

Name: .....

Chief Engineer or (Approved Delegate)

[1] *Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2*
[2] *ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.*
[3] *Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)*


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: May Creek St
Road Class: Local
Speed Limit: < 35 mph
Crossing Road: Boone St
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: North/South
Area Type: Suburb/Transition
Intersection Control: New Intersection or Other
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.0%
K Factor*: 11%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)
2023 EXISTING YEAR VOLUMES
APPROACH SPLITS:
May Creek St: 55%
Boone St: 45%
PEAK HR % TRUCKS:
EB WB NB SB
2% 1% 6% 3%
2023 Intersection Daily Entering Volume (est): 8,000
2028 OPENING YEAR VOLUMES
2028 Intersection Daily Entering Volume (est): 8,000
2048 DESIGN YEAR VOLUMES
2048 Intersection Daily Entering Volume (est): 8,000
SB May Creek St
NB May Creek St
EB Boone St
WB Boone St
Peds
N

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	May Creek St @ Boone St
Existing Control:	New Intersection or Other
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Conventional (All-Way Stop)	Yes	Yes	Yes	No	Yes	No	Yes	Potential Alternative to Evaluate
	Mini Roundabout	No	No	No	No	No	No	No	Covered in Other Alternative
	Single Lane Roundabout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Multilane Roundabout	No	No	No	No	No	No	No	Single Lane Sufficient
	RCUT (stop control)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	High-T (unsignalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Offset-T Intersections	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Upgrade	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (signalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Continuous Green-T	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Jughandle	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Quadrant Roadway	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: May Creek St @ Boone St
Existing Intersection Control: New Intersection or Other
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitic

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	13.5 sec	14.2 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.53	0.66
2048 Design Yr No-Build Peak Hr Intersection Delay	20.1 sec	23.2 sec
2048 Design Yr No-Build Peak Hr Intersection V/C	0.73	0.95

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	1	2	12	56%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	7	26%
Sideswipe - same	0	0	0	0	1	4%
Sideswipe - opposite	0	0	0	0	1	4%
Not Collision w/Motor Veh	0	0	1	0	2	11%
TOTALS:	0	0	2	2	23	27

Crash Type

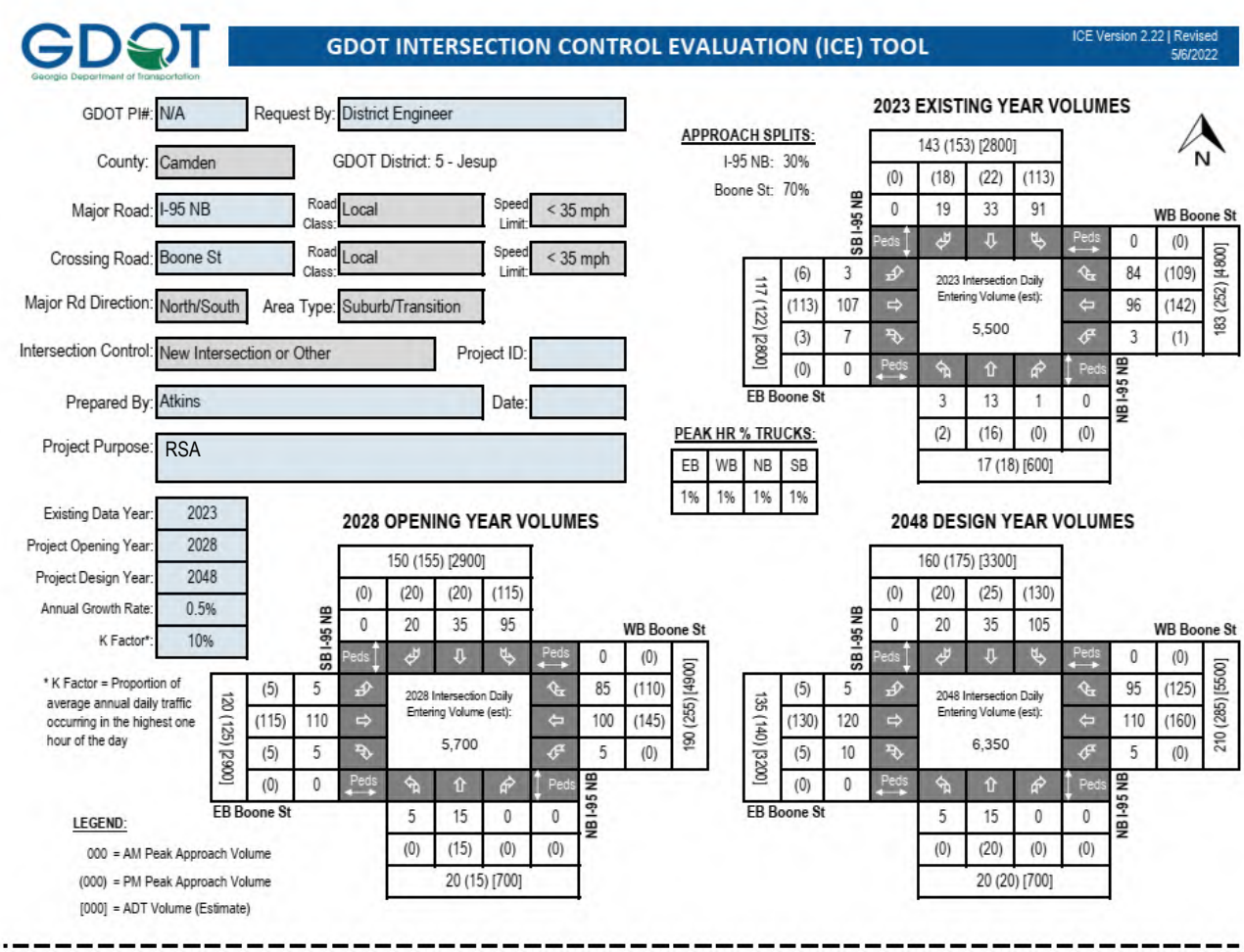
* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Conventional (Minor Stop)	Conventional (All-Way Stop)	Single Lane Roundabout	Signing & Marking Upgrade	Traffic Signal
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Add LT bays all approaches*
Construction Cost	$25,000	$35,000	$1,255,000	$25,000	$353,000
ROW Cost	$0	$0	$264,000	$0	$0
Environmental Cost	$0	$0	$0	$0	$0
Reimbursable Utility Cost	$0	$0	$14,000	$0	$7,000
Design & Contingency Cost	$5,000	$5,000	$455,000	$0	$158,000
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$30,000	$40,000	$1,988,000	$25,000	$518,000
Traffic Operations:	User Cost Override	User Cost Override		User Cost Override	
Traffic Analysis Software Used	Synchro	Synchro	Sidra	Synchro	Synchro
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr
2048 Design Yr Build Intersection Delay	456.8 sec / 207.7 sec	21.7 sec / 32.5 sec	7.3 sec / 7.5 sec	20.1 sec / 23.2 sec	16.6 sec / 17.5 sec
2048 Design Yr Build Intersection V/C	2.49 / 1.78	0.72 / 0.93	0.40 / 0.47	0.73 / 0.95	0.69 / 0.76
Safety Analysis:					
Predefined CRF: PDO	0%	0%	0%	0%	0%
Predefined CRF: Fatal/Inj	0%	0%	0%	0%	0%
Predefined CRF Source:	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO	8%	68%	39%	8%	39%
User Defined CRF: Fatal/Inj	10%	77%	78%	10%	40%
User Defined CRF Source (write in if applicable):	CMF ID: 8866 & 8867	CMF ID: 3127 & 3128	CMF ID: 233 & 234	CMF ID: 8866 & 8867	CMF ID: 7982 & 7984
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None
	Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet				
Stakeholder Posture:	[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown
Final ICE Stage 2 Score:	0.3	8.0	7.0	4.9	5.9
Rank of Control Type Alternatives:	5	1	2	4	3
Final Intersection Control Selection:	2 - Single Lane Roundabout				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Due to the intersection configuration not meeting a defined traffic control type, the alternatives for AWSC, Single Lane Roundabout, and Traffic Signal had the CMFs used from conversion from Minor Stop Controlled. Similarly, due to no CMF being available for conversion to Conventional Minor Stop Controlled, the CMF for Signing & Marking Improvements was used. The Signing & Marking alternative includes:


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: I-95 NB
Road Class: Local
Speed Limit: < 35 mph
Crossing Road: Boone St
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: North/South
Area Type: Suburb/Transition
Intersection Control: New Intersection or Other
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 10%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)
APPROACH SPLITS:
I-95 NB: 30%
Boone St: 70%
PEAK HR % TRUCKS:
EB WB NB SB
1% 1% 1% 1%
2023 EXISTING YEAR VOLUMES
143 (153) [2800]
(0) (18) (22) (113)
0 19 33 91
SB I-95 NB
WB Boone St
117 (122) [2800]
(6) 3
(113) 107
(3) 7
(0) 0
2023 Intersection Daily Entering Volume (est):
5,500
0 (0)
84 (109)
96 (142)
3 (1)
183 (252) [4800]
EB Boone St
3 13 1 0
(2) (16) (0) (0)
NB I-95 NB
17 (18) [600]
2028 OPENING YEAR VOLUMES
150 (155) [2900]
(0) (20) (20) (115)
0 20 35 95
SB I-95 NB
WB Boone St
120 (125) [2900]
(5) 5
(115) 110
(5) 5
(0) 0
2028 Intersection Daily Entering Volume (est):
5,700
0 (0)
85 (110)
100 (145)
5 (0)
190 (255) [4900]
EB Boone St
5 15 0 0
(0) (15) (0) (0)
NB I-95 NB
20 (15) [700]
2048 DESIGN YEAR VOLUMES
160 (175) [3300]
(0) (20) (25) (130)
0 20 35 105
SB I-95 NB
WB Boone St
135 (140) [3200]
(5) 5
(130) 120
(5) 10
(0) 0
2048 Intersection Daily Entering Volume (est):
6,350
0 (0)
95 (125)
110 (160)
5 (0)
210 (285) [5500]
EB Boone St
5 15 0 0
(0) (20) (0) (0)
NB I-95 NB
20 (20) [700]

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	I-95 NB @ Boone St
Existing Control:	New Intersection or Other
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Conventional (All-Way Stop)	Yes	Yes	Yes	No	Yes	No	Yes	Potential Alternative to Evaluate
	Mini Roundabout	No	No	No	No	No	No	No	Covered in Other Alternative
	Single Lane Roundabout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Multilane Roundabout	No	No	No	No	No	No	No	Single Lane Sufficient
	RCUT (stop control)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	High-T (unsignalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Offset-T Intersections	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Upgrade	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (signalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Continuous Green-T	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Jughandle	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Quadrant Roadway	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: May Creek St @ Boone St
Existing Intersection Control: New Intersection or Other
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	13.5 sec	14.2 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.53	0.66
2048 Design Yr No-Build Peak Hr Intersection Delay	20.1 sec	23.2 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.73	0.95

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	1	2	12	56%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	7	26%
Sideswipe - same	0	0	0	0	1	4%
Sideswipe - opposite	0	0	0	0	1	4%
Not Collision w/Motor Veh	0	0	1	0	2	11%
TOTALS:	0	0	2	2	23	27

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Conventional (Minor Stop)	Conventional (All-Way Stop)	Single Lane Roundabout	Signing & Marking Upgrade	Traffic Signal
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Add LT bays all approaches*
Construction Cost	$25,000	$35,000	$1,255,000	$25,000	$353,000
ROW Cost	$0	$0	$264,000	$0	$0
Environmental Cost	$0	$0	$0	$0	$0
Reimbursable Utility Cost	$0	$0	$14,000	$0	$7,000
Design & Contingency Cost	$5,000	$5,000	$455,000	$0	$158,000
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$30,000	$40,000	$1,988,000	$25,000	$518,000
Traffic Operations:	User Cost Override	User Cost Override		User Cost Override	
Traffic Analysis Software Used	Synchro	Synchro	Sidra	Synchro	Synchro
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr
2048 Design Yr Build Intersection Delay	456.8 sec / 207.7 sec	21.7 sec / 32.5 sec	7.3 sec / 7.5 sec	20.1 sec / 23.2 sec	16.6 sec / 17.5 sec
2048 Design Yr Build Intersection V/C	2.49 / 1.78	0.72 / 0.93	0.40 / 0.47	0.73 / 0.95	0.69 / 0.76
Safety Analysis:					
Predefined CRF: PDO	0%	0%	0%	0%	0%
Predefined CRF: Fatal/Inj	0%	0%	0%	0%	0%
Predefined CRF Source:	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO	8%	68%	39%	8%	39%
User Defined CRF: Fatal/Inj	10%	77%	78%	10%	40%
User Defined CRF Source (write in if applicable):	CMF ID: 8866 & 8867	CMF ID: 3127 & 3128	CMF ID: 233 & 234	CMF ID: 8866 & 8867	CMF ID: 7982 & 7984
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None
	Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet				
Stakeholder Posture:	[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown
Final ICE Stage 2 Score:	0.3	8.0	7.0	4.9	5.9
Rank of Control Type Alternatives:	5	1	2	4	3
Final Intersection Control Selection:	4 - Signing & Marking Upgrade				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Due to the intersection configuration not meeting a defined traffic control type, the alternatives for AWSC, Single Lane Roundabout, and Traffic Signal had the CMFs used from conversion from Minor Stop Controlled. Similarly, due to no CMF being available for conversion to Conventional Minor Stop Controlled, the CMF for Signing & Marking Improvements was used. The Signing & Marking alternative includes: Installing dual (left &

Project Information:

Location: May Creek St @ Boone St
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: New Intersection or Other

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: Maintenance Work Only

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	3,550	
Existing Minor Street Avg Daily Traffic (ADT):	4,450	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	13.5 sec	14.2 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.53	0.66
2048 Design Yr Peak Hour Intersection Delay:	20.1 sec	23.2 sec
2048 Design Yr Peak Hour Intersection V/C:	0.73	0.95

Crash Data (Required):[3]

Crash Data: Enter most recent 10 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	1	2	12	56%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	7	26%
Sideswipe - same	0	0	0	0	1	4%
Sideswipe - opposite	0	0	0	0	1	4%
Not Collision w/Motor Veh	0	0	1	0	2	11%
TOTALS:	0	0	2	2	23	27

Crash Type

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required):	Marking upgrades/updates as this is a local road and does not have high B/Cs
Proposed Intersection Control:	Other Unsignalized

REQUESTED BY: _____ Date: _____

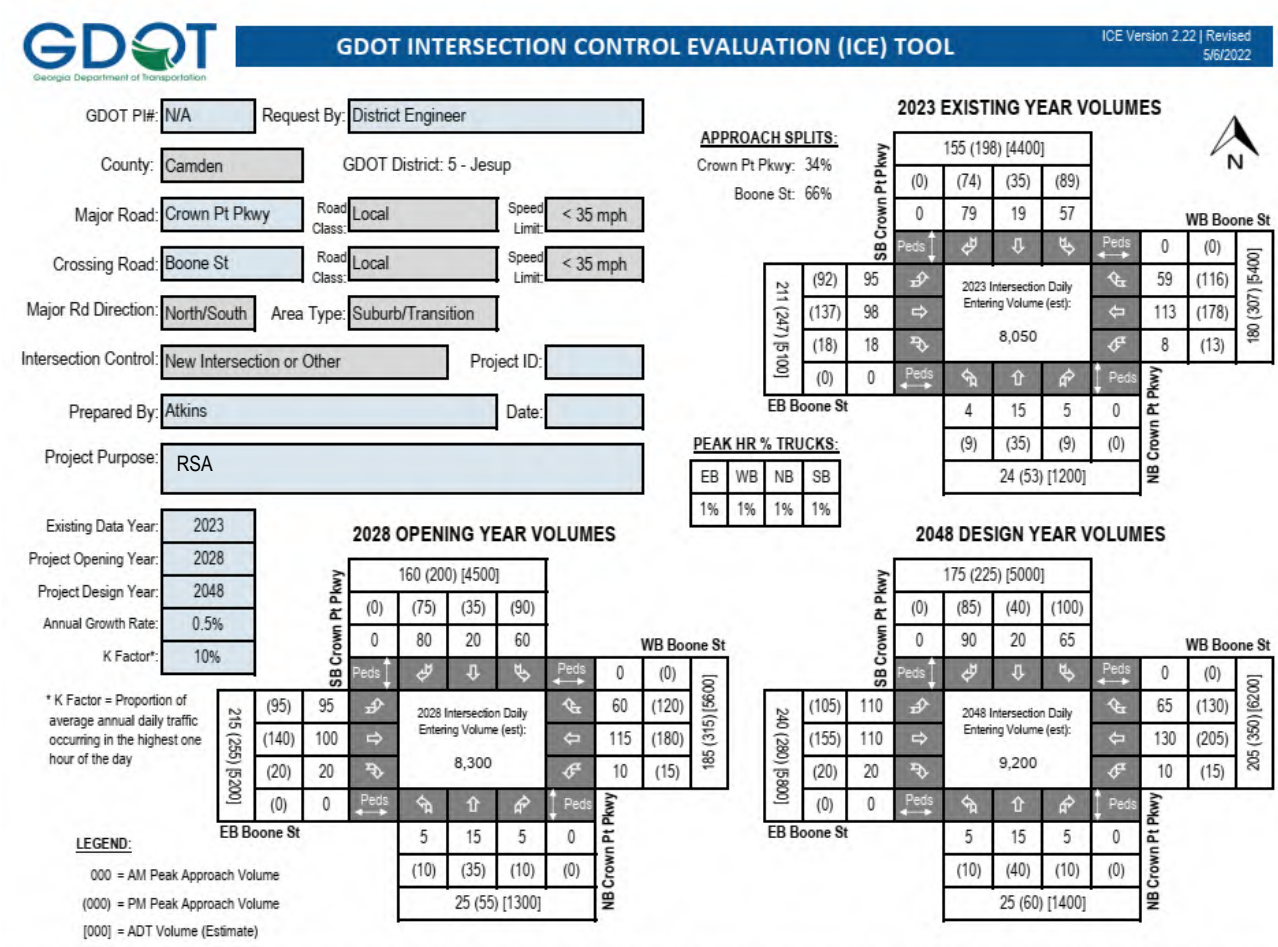
Title: _____

APPROVED BY: _____ Date: _____

Name: _____

District Engineer or (Approved Delegate)

[1] Analysis data input on this worksheet is for proposed control / configuration on form, not the As-Built data shown on the top of Sheet 2


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: Crown Pt Pkwy
Road Class: Local
Speed Limit: < 35 mph
Crossing Road: Boone St
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: North/South
Area Type: Suburb/Transition
Intersection Control: New Intersection or Other
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 10%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
APPROACH SPLITS:
Crown Pt Pkwy: 34%
Boone St: 66%
PEAK HR % TRUCKS:
EB WB NB SB
1% 1% 1% 1%
2023 EXISTING YEAR VOLUMES
155 (198) [4400]
2023 Intersection Daily Entering Volume (est): 8,050
211 (247) [5100]
180 (307) [5400]
24 (53) [1200]
SB Crown Pt Pkwy
WB Boone St
EB Boone St
NB Crown Pt Pkwy
2028 OPENING YEAR VOLUMES
160 (200) [4500]
2028 Intersection Daily Entering Volume (est): 8,300
215 (255) [5200]
185 (315) [5600]
25 (55) [1300]
2048 DESIGN YEAR VOLUMES
175 (225) [5000]
2048 Intersection Daily Entering Volume (est): 9,200
240 (280) [5800]
205 (350) [6200]
25 (60) [1400]
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	Crown Pt Pkwy @ Boone St
Existing Control:	New Intersection or Other
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Conventional (All-Way Stop)	Yes	Yes	Yes	No	Yes	No	Yes	Potential Alternative to Evaluate
	Mini Roundabout	No	No	No	No	No	No	No	Covered in Other Alternative
	Single Lane Roundabout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Multilane Roundabout	No	No	No	No	No	No	No	Single Lane Sufficient
	RCUT (stop control)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	High-T (unsignalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Offset-T Intersections	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Upgrade	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (signalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Continuous Green-T	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Jughandle	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Quadrant Roadway	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

Project Location: I-95 NB @ Boone St
Existing Intersection Control: New Intersection or Other
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	8.9 sec	9.8 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.27	0.38
2048 Design Yr No-Build Peak Hr Intersection Delay	9.2 sec	10.5 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.30	0.43

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	0	3	6	75%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	0	3	25%
Sideswipe - same	0	0	0	0	0	0%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	0	0%
TOTALS:	0	0	0	3	9	12

* Number of crashes resulting in injuries / fatalities, not number of persons

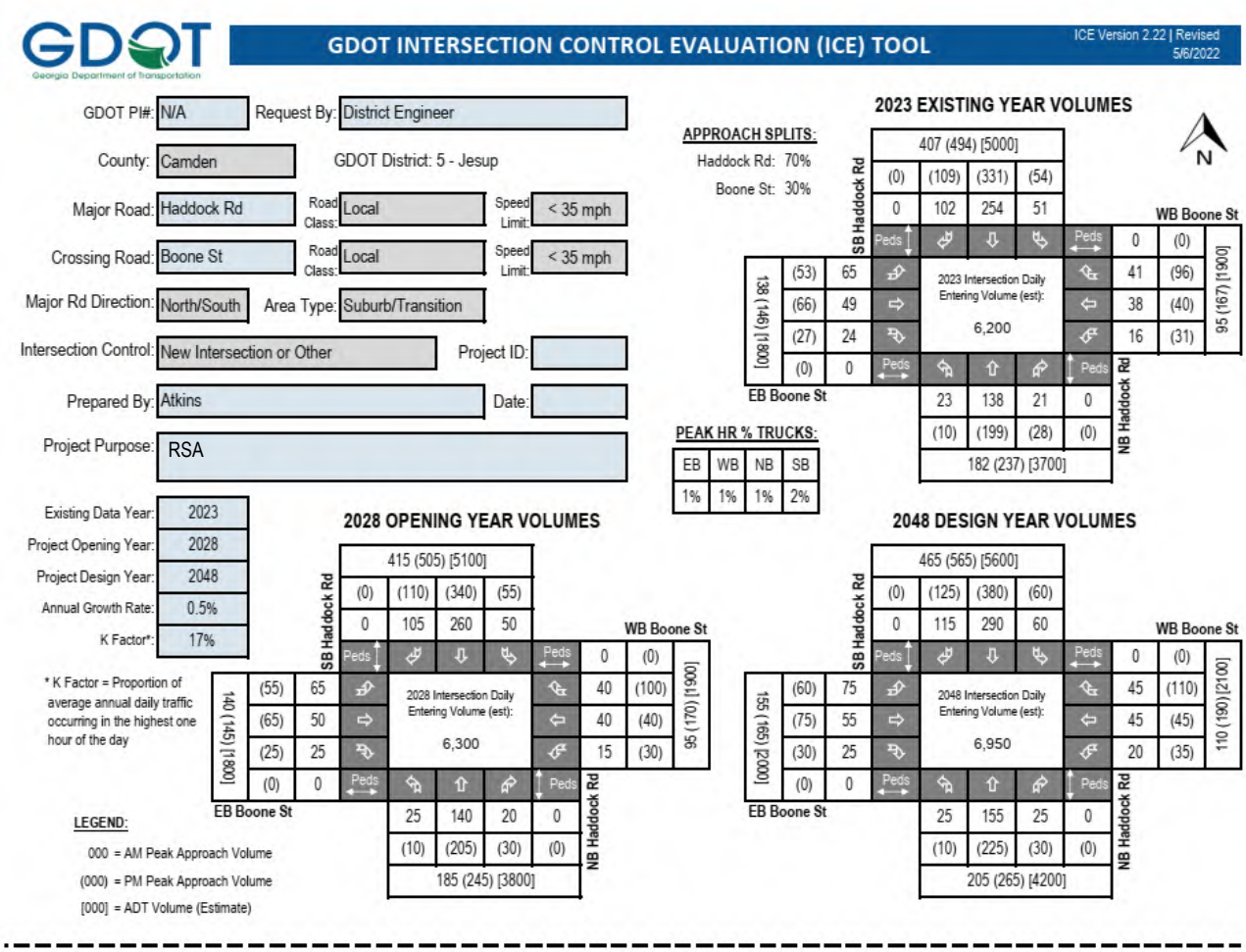
Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Conventional (Minor Stop)	Conventional (All-Way Stop)	Single Lane Roundabout	Signing & Marking Upgrade	Traffic Signal
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Add LT bays all approaches*
Construction Cost	$25,000	$35,000	$1,255,000	$25,000	$353,000
ROW Cost	$0	$0	$272,000	$0	$0
Environmental Cost	$0	$0	$0	$0	$0
Reimbursable Utility Cost	$0	$0	$14,000	$0	$7,000
Design & Contingency Cost	$5,000	$5,000	$455,000	$0	$158,000
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$30,000	$40,000	$1,996,000	$25,000	$518,000
Traffic Operations:	User Cost Override	User Cost Override		User Cost Override	
Traffic Analysis Software Used	Synchro	Synchro	Sidra	Synchro	Synchro
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr
2048 Design Yr Build Intersection Delay	12.1 sec / 13.6 sec	9.4 sec / 9.8 sec	4.3 sec / 4.5 sec	9.2 sec / 10.5 sec	13.4 sec / 16.1 sec
2048 Design Yr Build Intersection V/C	0.36 / 0.47	0.30 / 0.37	0.19 / 0.23	0.30 / 0.43	0.39 / 0.57
Safety Analysis:					
Predefined CRF: PDO	0%	0%	0%	0%	0%
Predefined CRF: Fatal/Inj	0%	0%	0%	0%	0%
Predefined CRF Source:	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO	8%	68%	39%	8%	39%
User Defined CRF: Fatal/Inj	10%	77%	78%	10%	40%
User Defined CRF Source (write in if applicable):	CMF ID: 8866 & 8867	CMF ID: 3127 & 3128	CMF ID: 233 & 234	CMF ID: 8866 & 8867	CMF ID: 7982 & 7984
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None
Stakeholder Posture:	*Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown
Final ICE Stage 2 Score:	5.8	9.1	7.4	5.9	6.4
Rank of Control Type Alternatives:	5	1	2	4	3
Final Intersection Control Selection:	4 - Signing & Marking Upgrade				

[1] Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Due to the intersection configuration not meeting a defined traffic control type, the alternatives for AWSC, Single Lane Roundabout, and Traffic Signal had the CMFs used from conversion from Minor Stop Controlled. Similarly, due to no CMF being available for conversion to Conventional Minor Stop Controlled, the CMF for Signing & Marking Improvements was used. The Signing & Marking alternative includes: Installing dual (left &


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: Haddock Rd
Road Class: Local
Speed Limit: < 35 mph
Crossing Road: Boone St
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: North/South
Area Type: Suburb/Transition
Intersection Control: New Intersection or Other
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 0.5%
K Factor*: 17%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)
APPROACH SPLITS:
Haddock Rd: 70%
Boone St: 30%
PEAK HR % TRUCKS:
EB WB NB SB
1% 1% 1% 2%
2023 EXISTING YEAR VOLUMES
407 (494) [5000]
(0) (109) (331) (54)
0 102 254 51
SB Haddock Rd
WB Boone St
138 (146) [1800]
(53) 65
(66) 49
(27) 24
(0) 0
2023 Intersection Daily Entering Volume (est):
6,200
0 (0)
41 (96)
38 (40)
16 (31)
95 (167) [1900]
EB Boone St
23 138 21 0
(10) (199) (28) (0)
182 (237) [3700]
NB Haddock Rd
2028 OPENING YEAR VOLUMES
415 (505) [5100]
(0) (110) (340) (55)
0 105 260 50
SB Haddock Rd
WB Boone St
140 (145) [1800]
(55) 65
(65) 50
(25) 25
(0) 0
2028 Intersection Daily Entering Volume (est):
6,300
0 (0)
40 (100)
40 (40)
15 (30)
95 (170) [1900]
EB Boone St
25 140 20 0
(10) (205) (30) (0)
185 (245) [3800]
NB Haddock Rd
2048 DESIGN YEAR VOLUMES
465 (565) [5600]
(0) (125) (380) (60)
0 115 290 60
SB Haddock Rd
WB Boone St
155 (165) [2000]
(60) 75
(75) 55
(30) 25
(0) 0
2048 Intersection Daily Entering Volume (est):
6,950
0 (0)
45 (110)
45 (45)
20 (35)
110 (190) [2100]
EB Boone St
25 155 25 0
(10) (225) (30) (0)
205 (265) [4200]
NB Haddock Rd

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	Haddock Rd @ Boone St
Existing Control:	New Intersection or Other
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Conventional (All-Way Stop)	Yes	Yes	Yes	No	Yes	No	Yes	Potential Alternative to Evaluate
	Mini Roundabout	No	No	No	No	No	No	No	Covered in Other Alternative
	Single Lane Roundabout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Multilane Roundabout	No	No	No	No	No	No	No	Single Lane Sufficient
	RCUT (stop control)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	High-T (unsignalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Offset-T Intersections	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Upgrade	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (signalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Continuous Green-T	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Jughandle	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Quadrant Roadway	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: Haddock Rd @ Boone St
Existing Intersection Control: New Intersection or Other
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	10.5 sec	16.7 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.62	0.96
2048 Design Yr No-Build Peak Hr Intersection Delay	11.4 sec	19.9 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.72	1.14

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Crash Type: Angle	1	2	7	5	36	78%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	2	10	18%
Sideswipe - same	0	0	0	0	1	2%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	1	2%
TOTALS:	1	2	7	7	48	65

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Conventional (Minor Stop)	Conventional (All-Way Stop)	Single Lane Roundabout	Signing & Marking Upgrade	Traffic Signal
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Add LT bays all approaches*
Construction Cost	$25,000	$35,000	$1,255,000	$25,000	$353,000
ROW Cost	$0	$0	$287,000	$0	$0
Environmental Cost	$0	$0	$0	$0	$0
Reimbursable Utility Cost	$0	$0	$14,000	$0	$7,000
Design & Contingency Cost	$5,000	$5,000	$455,000	$0	$158,000
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$30,000	$40,000	$2,011,000	$25,000	$518,000
Traffic Operations:	*User Cost Override*	*User Cost Override*		*User Cost Override*	

	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Alternative 5	
Traffic Analysis Software Used	Synchro		Synchro		Sidra		Synchro		Synchro	
Analysis Period	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr
2048 Design Yr Build Intersection Delay	23.2 sec	95.0 sec	15.6 sec	57.5 sec	6.1 sec	7.7 sec	11.4 sec	19.9 sec	11.2 sec	79.0 sec
2048 Design Yr Build Intersection V/C	0.60	1.11	0.71	1.13	0.41	0.54	0.72	1.14	0.63	1.64

Safety Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Predefined CRF: PDO	0%	0%	0%	0%	0%
Predefined CRF: Fatal/Inj	0%	0%	0%	0%	0%
Predefined CRF Source:	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO	8%	68%	39%	8%	39%
User Defined CRF: Fatal/Inj	10%	77%	78%	10%	40%
User Defined CRF Source (write in if applicable):	CMF ID: 8866 & 8867	CMF ID: 3127 & 3128	CMF ID: 233 & 234	CMF ID: 8866 & 8867	CMF ID: 7982 & 7984

Environmental Impacts:[1]

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None

Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet
[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report*

Stakeholder Posture:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Final ICE Stage 2 Score:	4.3	7.7	6.9	4.8	4.9
Rank of Control Type Alternatives:	5	1	2	4	3

Final Intersection Control Selection: **3 - Traffic Signal**

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Due to the intersection configuration not meeting a defined traffic control type, the alternatives for AWSC, Single Lane Roundabout, and Traffic Signal had the CMFs used from conversion from Minor Stop Controlled. Similarly, due to no CMF being available for conversion to Conventional Minor Stop Controlled, the CMF for Signing & Marking Improvements was used. The Signing & Marking alternative includes: installing dual (left &

Project Information:

Location: Haddock Rd @ Boone St
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: New Intersection or Other

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: New or Revised Signal Permit

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	0	
Existing Minor Street Avg Daily Traffic (ADT):	0	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	10.5 sec	16.7 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.62	0.96
2048 Design Yr Peak Hour Intersection Delay:	11.4 sec	19.9 sec
2048 Design Yr Peak Hour Intersection V/C:	0.72	1.14

Crash Data (Required):[3]

Crash Data: Enter most recent 10.1603729029344 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
Crash Type: Angle	1	2	7	5	36	78%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	2	10	18%
Sideswipe - same	0	0	0	0	1	2%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	1	2%
TOTALS:	1	2	7	7	48	65

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): Conventional All Way Stop control was the rank 1 alternative however due to the location of the Railroad could make this alternative more dangerous than the normal CMF conditions would be calculated with. The recommendation is instead to tie in a new Traffic signal with the existing traffic signal across the railroad and the railroad signal

Proposed Intersection Control: Traffic Signal

REQUESTED BY: _____ Date: _____

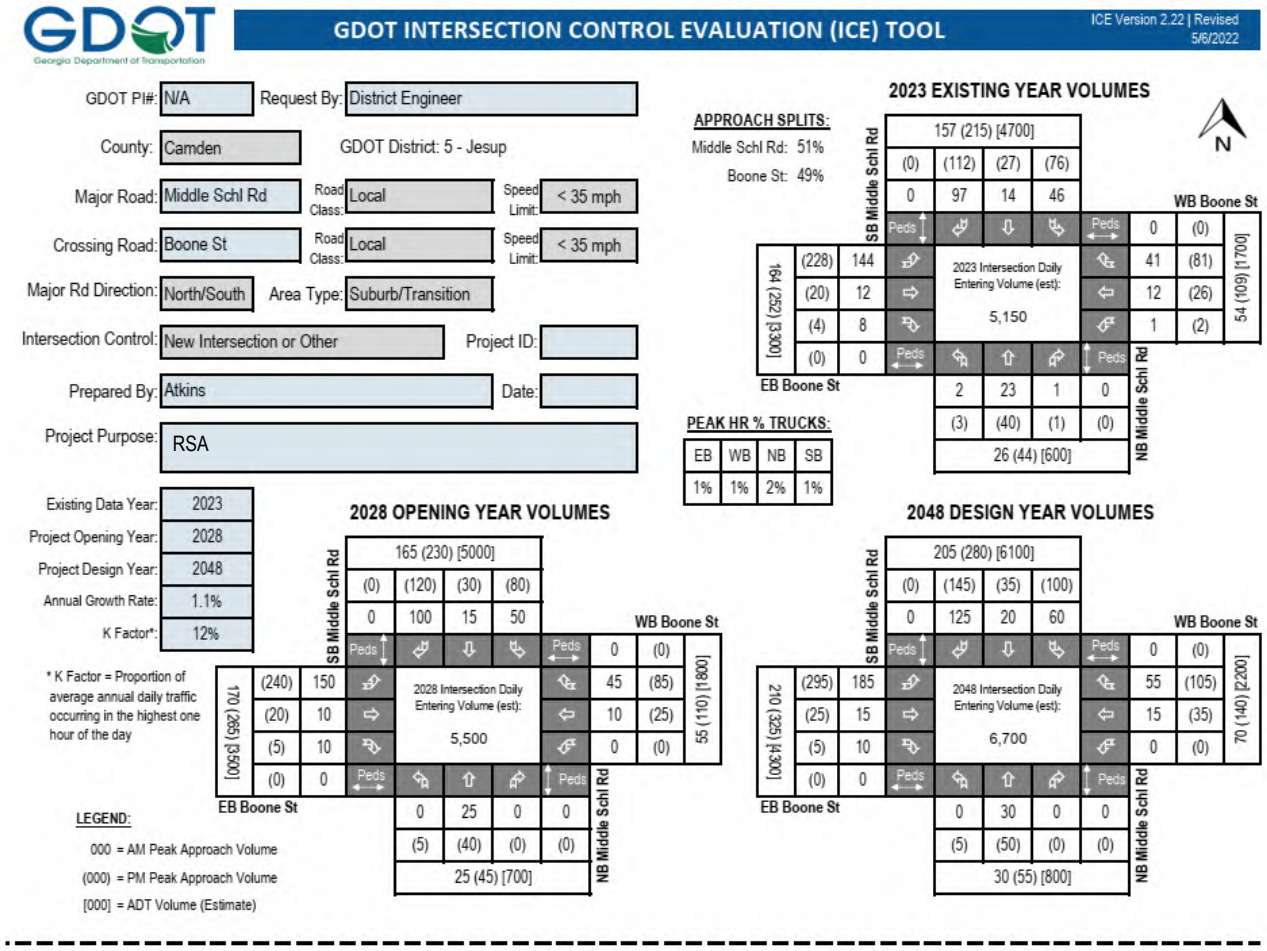
Title: .....

APPROVED BY: _____ Date: _____

Name: .....

Chief Engineer or (Approved Delegate)

[1] *Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2*
[2] *ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.*
[3] *Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)*


GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL
ICE Version 2.22 | Revised 5/6/2022
GDOT PI#: N/A
Request By: District Engineer
County: Camden
GDOT District: 5 - Jesup
Major Road: Middle Schl Rd
Road Class: Local
Speed Limit: < 35 mph
Crossing Road: Boone St
Road Class: Local
Speed Limit: < 35 mph
Major Rd Direction: North/South
Area Type: Suburb/Transition
Intersection Control: New Intersection or Other
Project ID:
Prepared By: Atkins
Date:
Project Purpose: RSA
Existing Data Year: 2023
Project Opening Year: 2028
Project Design Year: 2048
Annual Growth Rate: 1.1%
K Factor*: 12%
* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day
APPROACH SPLITS:
Middle Schl Rd: 51%
Boone St: 49%
PEAK HR % TRUCKS:
EB WB NB SB
1% 1% 2% 1%
2023 EXISTING YEAR VOLUMES
157 (215) [4700]
SB Middle Schl Rd
WB Boone St
164 (252) [3300]
EB Boone St
NB Middle Schl Rd
54 (109) [1700]
2023 Intersection Daily Entering Volume (est):
5,150
26 (44) [600]
2028 OPENING YEAR VOLUMES
165 (230) [5000]
170 (265) [3500]
55 (110) [1800]
2028 Intersection Daily Entering Volume (est):
5,500
25 (45) [700]
2048 DESIGN YEAR VOLUMES
205 (280) [6100]
210 (325) [4300]
70 (140) [2200]
2048 Intersection Daily Entering Volume (est):
6,700
30 (55) [800]
LEGEND:
000 = AM Peak Approach Volume
(000) = PM Peak Approach Volume
[000] = ADT Volume (Estimate)

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.22 | Revised 5/6/2022

GDOT PI #	N/A
Project Location:	Middle Schl Rd @ Boone St
Existing Control:	New Intersection or Other
Prepared by:	Atkins
Date:	

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	Screening Decision Justification:
Unsignalized Intersections	Conventional (Minor Stop)	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Conventional (All-Way Stop)	Yes	Yes	Yes	No	Yes	No	Yes	Potential Alternative to Evaluate
	Mini Roundabout	No	No	No	No	No	No	No	Covered in Other Alternative
	Single Lane Roundabout	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Potential Alternative to Evaluate
	Multilane Roundabout	No	No	No	No	No	No	No	Single Lane Sufficient
	RCUT (stop control)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	High-T (unsignalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Offset-T Intersections	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Signing & Marking Upgrade	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
Signalized Intersections	Traffic Signal	Yes	Yes	Yes	No	Yes	Yes	Yes	Potential Alternative to Evaluate
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	RCUT (signalized)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Continuous Green-T	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Jughandle	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Quadrant Roadway	No	No	No	No	No	No	No	Conflicts with Adjacent Railroad
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Diverging Diamond	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	Single Point Interchange	No	No	No	No	No	No	No	Volumes and Context Not to Scale
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.22 | Revised 6/6/2022

Project Location: Middle Schl Rd @ Boone St
Existing Intersection Control: New Intersection or Other
Type of Analysis: Safety Funded Project

District: 5 - Jesup
County: Camden
Area: Suburb/Transitio

GDOT PI #: N/A
Prepared by: Atkins
Date:

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2028 Opening Yr No-Build Peak Hr Intersection Delay	8.6 sec	11.6 sec
2028 Opening Yr No-Build Peak Hr Intersection V/C	0.25	0.47
2048 Design Yr No-Build Peak Hr Intersection Delay	9.4 sec	15.2 sec
2048 Design Yr No-Build Peak Hr Intersection V/C ratio	0.31	0.63

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Data: Error most recent 10.1603729029344 years of crash data

Crash Type	Crash Severity K*	A*	B*	C*	O	Years: 10
Angle	0	0	0	0	0	0%
Head-On	0	0	0	0	0	0%
Rear End	0	0	0	1	3	100%
Sideswipe - same	0	0	0	0	0	0%
Sideswipe - opposite	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	0	0	0	0%
TOTALS:	0	0	0	1	3	4

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Conventional (Minor Stop)	Conventional (All-Way Stop)	Single Lane Roundabout	Signing & Marking Upgrade	Traffic Signal
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Additional description here*	*Add LT bays all approaches*
Construction Cost	$25,000	$35,000	$1,255,000	$25,000	$353,000
ROW Cost	$0	$0	$288,000	$0	$0
Environmental Cost	$0	$0	$0	$0	$0
Reimbursable Utility Cost	$0	$0	$14,000	$0	$7,000
Design & Contingency Cost	$5,000	$5,000	$455,000	$0	$158,000
Cost Adjustment (justification req'd)	0%	0%	0%	0%	0%
Total Cost	$30,000	$40,000	$2,012,000	$25,000	$518,000
	User Cost Override	*User Cost Override*		*User Cost Override*	
Traffic Operations:					
Traffic Analysis Software Used	Synchro	Synchro	Sidra	Synchro	Synchro
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr
2048 Design Yr Build Intersection Delay	13.5 sec / 100.7 sec	9.3 sec / 14.9 sec	4.2 sec / 5.8 sec	9.4 sec / 15.2 sec	12.5 sec / 31.9 sec
2048 Design Yr Build Intersection V/C	0.39 / 1.25	0.31 / 0.63	0.19 / 0.34	0.31 / 0.63	0.40 / 0.98
Safety Analysis:					
Predefined CRF: PDO	0%	0%	0%	0%	0%
Predefined CRF: Fatal/Inj	0%	0%	0%	0%	0%
Predefined CRF Source:	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below	CRF unavailable; provide user defined CRF below
User Defined CRF: PDO	8%	68%	39%	8%	39%
User Defined CRF: Fatal/Inj	10%	77%	78%	10%	40%
User Defined CRF Source (write in if applicable):	CMF ID: 8866 & 8867	CMF ID: 3127 & 3128	CMF ID: 233 & 234	CMF ID: 8866 & 8867	CMF ID: 7982 & 7984
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	None
Archaeology Resources	None	None	None	None	None
Graveyard	None	None	None	None	None
Stream	None	None	None	None	None
Underground Tank/Hazmat	None	None	None	None	None
Park Land	None	None	None	None	None
EJ Community	None	None	None	None	None
Wooded Area	None	None	None	None	None
Wetland	None	None	None	None	None
	Note: If environmental impact is significant (RED), provide justification impact won't jeopardize project delivery using "Env" worksheet				
Stakeholder Posture:	[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report*				
Local Community Support	Unknown	Unknown	Unknown	Unknown	Unknown
GDOT Support	Unknown	Unknown	Unknown	Unknown	Unknown
Final ICE Stage 2 Score:	4.4	8.8	7.3	5.7	5.9
Rank of Control Type Alternatives:	5	1	2	4	3
Final Intersection Control Selection:	4 - Signing & Marking Upgrade				

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Due to the intersection configuration not meeting a defined traffic control type, the alternatives for AWSC, Single Lane Roundabout, and Traffic Signal had the CMFs used from conversion from Minor Stop Controlled. Similarly, due to no CMF being available for conversion to Conventional Minor Stop Controlled, the CMF for Signing & Marking Improvements was used. The Signing & Marking alternative includes: Installing dual (left &

Project Information:

Location: Middle Schl Rd @ Boone St
County: Camden
GDOT District: 5 - Jesup
Area Type: Suburb/Transition
Existing Intersection Control: New Intersection or Other

GDOT PI # (or N/A): N/A
Requested By: District Engineer
Prepared By: Atkins
Date: 1/0/1900
Waiver Request Type: Maintenance Work Only

Traffic and Operations Data:[1,2]

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	2,500	
Existing Minor Street Avg Daily Traffic (ADT):	2,650	
Analysis Period:	AM Peak	PM Peak
2028 Opening Yr Peak Hour Intersection Delay:	8.6 sec	11.6 sec
2028 Opening Yr Peak Hour Intersection V/C:	0.25	0.47
2048 Design Yr Peak Hour Intersection Delay:	9.4 sec	15.2 sec
2048 Design Yr Peak Hour Intersection V/C:	0.31	0.63

Crash Data (Required):[3]

Crash Type	Crash Data: Enter most recent 10 years of crash data	Crash Severity K*	A*	B*	C*	O	Years: 10
	Angle	0	0	0	0	0	0%
	Head-On	0	0	0	0	0	0%
	Rear End	0	0	0	1	3	100%
	Sideswipe - same	0	0	0	0	0	0%
	Sideswipe - opposite	0	0	0	0	0	0%
	Not Collision w/Motor Veh	0	0	0	0	0	0%
	TOTALS:	0	0	0	1	3	4

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required): Marking upgrades/updates as this is a local road and does not have high B/Cs

Proposed Intersection Control: Other Unsignalized

REQUESTED BY: _____ Date: _____

Title: _____

APPROVED BY: _____ Date: _____

Name: _____

District Engineer or (Approved Delegate)

[1] *Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2*
[2] *ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.*
[3] *Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)*

Appendix E. RSA Recommendations List

Location	#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency
Overall Corridor	1	Install a Raised Concrete Median along the corridor from JSJ Road to Middle School Road	High	Long	$500,000	OTO Safety
	2	Install retroreflective backplates and supplemental signal heads (Near side right and far side left) at all signalized intersections	Moderate	Intermediate	$250,000	D5 Traffic Ops
	3	Reconfigure Lanes (reduce to 2 EB Lanes, 2 WB Lanes) from before the corridor at Truss Plant Road to BP Gas Station Entrance	Moderate	Intermediate	$200,000	OTO Safety
	4	Refresh faded pavement markings along mainline and side streets (crosswalks, stop bars, lane lines, etc.)	Low	Intermediate	Low	D5 Maintenance
	5	Install Lighting along the corridor	Low	Intermediate	Intermediate	OTO Safety
	6	Stripe out right turning lanes from JSJ Rd to Gross Rd/Haddock Rd	Low	Intermediate	$500,000	D5 Maintenance
I-95 SB / May Creek St	7	Remove/space out existing signage on the north leg to prevent clutter and overlap	Low	Short	Low	D5 Maintenance
	8	Remove "I-95 South" Sign from concrete pedestrian island and install the sign in the concrete pedestrian island to the east of the pedestrian pushbuttons to prevent the sign from being hit by eastbound left turning trucks in the northeast quadrant	Low	Short	Low	D5 Maintenance
	9	Remove northbound right turning striped island and install type C striping in the radius of the northbound approach for right turning vehicles	Low	Short	Low	D5 Maintenance
	10	Repair broken ADA ramp in NW quadrant	Low	Short	Low	D5 Maintenance
	11	Perform full signal upgrade including updated mast arms, FYAs, signal heads, cabinet, etc	Moderate	Long	$950,000.00	OTO Safety

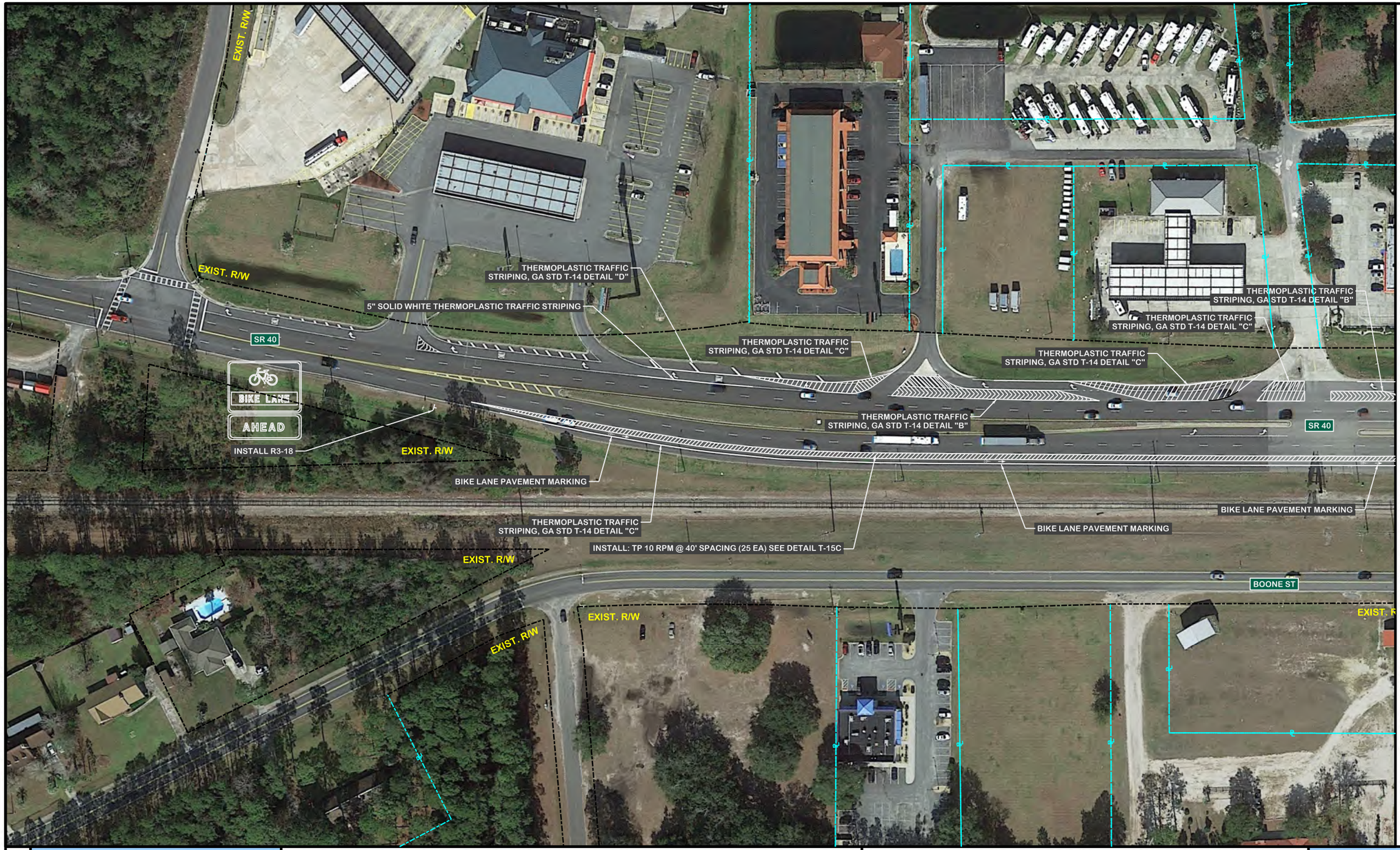
Location	#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency
	12	Extend westbound right turn lane on SR 40/King Ave	Low	Intermediate	$172,000.00	OTO Safety
	13	Convert both major approaches from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day from at least 12:00 to 22:00	Moderate	Intermediate	Low	D5 Maintenance
I-95 SB / May Creek St to I-95 NB /	14	Remove/space out existing signage to prevent clutter and overlap	Low	Short	Low	D5 Maintenance
I-95 NB / Boone St	15	Restripe backwards hatching in the NW quadrant	Low	Short	Low	D5 Maintenance
	16	Install FYA Signal Heads	Moderate	Short	$50,000	D5 Traffic Ops
	17	Move median nose and stop bar on the west leg back and straighten the pedestrian crosswalk	Low	Intermediate	Medium	D5 Maintenance
	18	Remove existing I-95 NB signage on east leg median	Low	Short	Low	D5 Maintenance
	19	Extend westbound right turn lane on SR 40/King Ave in tandem with Lane Reconfiguration	Low	Intermediate	Medium	OTO Safety
	20	Convert both major approaches from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day from at least 6:00 to 19:00	Moderate	Intermediate	Low	D5 Maintenance
BP Gas Station	21	Extend Merge Lane on Eastbound Lanes to be longer with additional signage if Alternative #3 is not pursued	Low	Intermediate	Medium	OTO Safety
	22	Make the right turn out lane of the BP exit smaller to reduce driver desire to enter the exit and install "Do Not Enter" signage as well as "No Left Turn" signage at the same exit	Low	Intermediate	Low	D5 Maintenance
BP Gas Station	23	Convert the intersection into an Reduced Conflict U-Turn (RCUT)	Moderate	Intermediate		OTO Safety
BP Gas Station to JSJ Rd	24	Stripe out short acceleration lane on the north quadrant of the segment	Low	Short	Low	D5 Maintenance

Location	#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency
JSJ Rd	25	Replace existing stop sign to be at the appropriate height	Low	Short	Low	D5 Maintenance
	26	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Moderate	Intermediate	$100,000.00	OTO Safety
Gardenia Blossom Rd	27	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Moderate	Short	$100,000.00	D5 Maintenance
Lakes Blvd / Crown Pointe Pkwy	28	Remove Southbound right turn stop bar	Low	Short	Low	D5 Maintenance
	29	repair existing countdown pedestrian head in the southeast quadrant	Low	Short	Low	D5 Maintenance
Queen St	30	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Moderate	Short	$100,000.00	D5 Maintenance
Tiffany St	31	Convert the intersection into a Right In Right Out (RIRO) either as a standalone project or in tandem with installation of a median	Moderate	Short	$100,000.00	D5 Maintenance
Victoriana Rd	32	Convert the intersection into a Reduced Conflict U-Turn (RCUT)	High	Short	$175,000.00	D5 Maintenance
Gross Rd / Haddock Rd	33	Realign existing southern ADA curb ramps to point at the crosswalk instead of the center of the intersection	Low	Short	Medium	D5 Maintenance
	34	Install westbound right turn lane	Moderate	Intermediate	$172,000	OTO Safety
	35	Perform full signal upgrade including updated mast arms, FYAs, signal heads, cabinet, etc	Moderate	Short	$950,000	OTO Safety
	36	Repair existing countdown pedestrian head in the southeast quadrant	Low	Short	Low	D5 Traffic Ops
	37	Convert both major approaches from Protected Permissive Left Turns to Protected Only Left Turns by Time of Day from at least 16:00 to 21:00	Moderate	Intermediate	Low	D5 Maintenance

Location	#	Recommendations	Safety Benefit	Time Frame	Cost/Effort	Responsible Agency
J Nolan Wells	38	No Recommendation due to low number of crashes				
Middle School Rd	39	Replace existing 1 inch retroreflective backplate striping with standard 2 inch retroreflective backplate striping	Low	Short	Low	D5 Maintenance
	40	Install eastbound FYA signal head	Moderate	Short	Low	D5 Traffic Ops
Boone St at May Creek St	41	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local
Boone St at I-95 NB	42	Restripe East and West Legs to have the stop bars to be closer to the center of the intersection	Low	Short	Low	Local
	43	Close Northbound exiting Right Out from the Gas Station	Low	Intermediate	Medium	Local
	44	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local
Boone St at Crown Pointe	45	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local
Boone St at Haddock Rd	46	Install ADA compliant pedestrian landing pads at the ends of crosswalks	Low	Short	Low	Local
	47	Restripe West Leg and South Leg to have the stop bars to be closer to the center of the intersection	Low	Short	Low	Local
	48	Remove and reinstall stop sign on the east leg out of the striped road	Low	Short	Low	Local
	49	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local
Boone St at Middle School Rd	50	Install Skip Striping from the southbound lane to the southbound receiving lane	Low	Short	Low	Local
	51	Install "Do Not Block The Box" Striping and signage	Low	Short	Low	Local

Appendix F. RSA Proposed Layout

See attached 11” x 17” Plan Sheets



LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
- REMOVE EXISTING PAVEMENT & GRADE TO DRAIN
- PROPERTY AND EXISTING R/W LINE
- REQUIRED R/W LINE
- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description	Cost	B/C
Corridor (Truss Plant Rd To BP Gas Station Entrance)	Reconfigure Lanes (Reduce to 2 EB Lanes and 2 WB Lanes)	$ 200,000.00	160.84
Corridor (JSJ Road to Middle School Road)	Install a Raised Concrete Median	$ 750,000.00	14.08
All Signalized Intersections	Install Retroreflective Backplates and Supplemental Signal Heads (Near Side Right and Far Side Left)	$ 250,000.00	109.82
Entire Corridor	Install Lighting along the corridor	$ 175,000.00	31.68
BP Gas Station Entrance	Convert to RCUT	$ 175,000.00	4.32

	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
SR 40	45 MPH	PRINCIPAL ARTERIAL

NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS FROM CLIENT INPUT AND TECHNICAL REVIEW.

SCALE IN FEET
0 60 120 240

SHEET 1 OF 7

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

ATKINS
Member of the SNC-Lavalin Group
Atkins North America, Inc.
1600 RiverEdge Parkway NW, Ste. 700
Atlanta, GA 30328
Tel: (770)933-0280
Certificate of Authorization #PEF000902
Expiration date 06/30/2024

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MATCH LINE SHEET 1

MATCH LINE SHEET 3

N

5/2/2025

DATE

EXIST. R/W

I-95

REPAIR BROKEN ADA RAMP

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C"

EXIST. R/W

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "B"

TRAFFIC SIGNAL TO BE UPGRADED

THERMO PLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C"

SR 40/E King Ave

SR 40/E King Ave

BIKE LANE PAVEMENT MARKING

INSTALL: R4-4

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C"

BEGIN RIGHT TURN LANE YIELD TO BIKES

BIKE LANE PAVEMENT MARKING

BIKE LANE PAVEMENT MARKING

BIKE LANE PAVEMENT MARKING

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C"

LUMINAIRE ARM TO BE ATTACHED TO EXISTING POLE

BOONE ST

BOONE ST

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
- REMOVE EXISTING PAVEMENT & GRADE TO DRAIN
- PROPERTY AND EXISTING R/W LINE
- REQUIRED R/W LINE
- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description	Cost	B/C
Corridor (Truss Plant Rd To BP Gas Station Entrance)	Reconfigure Lanes (Reduce to 2 EB Lanes and 2 WB Lanes)	$ 200,000.00	160.84
Corridor (JSJ Road to Middle School Road)	Install a Raised Concrete Median	$ 750,000.00	14.08
All Signalized Intersections	Install Retroreflective Backplates and Supplemental Signal Heads (Near Side Right and Far Side Left)	$ 250,000.00	109.82
Entire Corridor	Install Lighting along the corridor	$ 175,000.00	31.68
BP Gas Station Entrance	Convert to RCUT	$ 175,000.00	4.32

	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
SR 40	45 MPH	PRINCIPAL ARTERIAL

NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS FROM CLIENT INPUT AND TECHNICAL REVIEW.

SCALE IN FEET

0 60 120 240

SHEET 2 OF 7

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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Expiration date 06/30/2024

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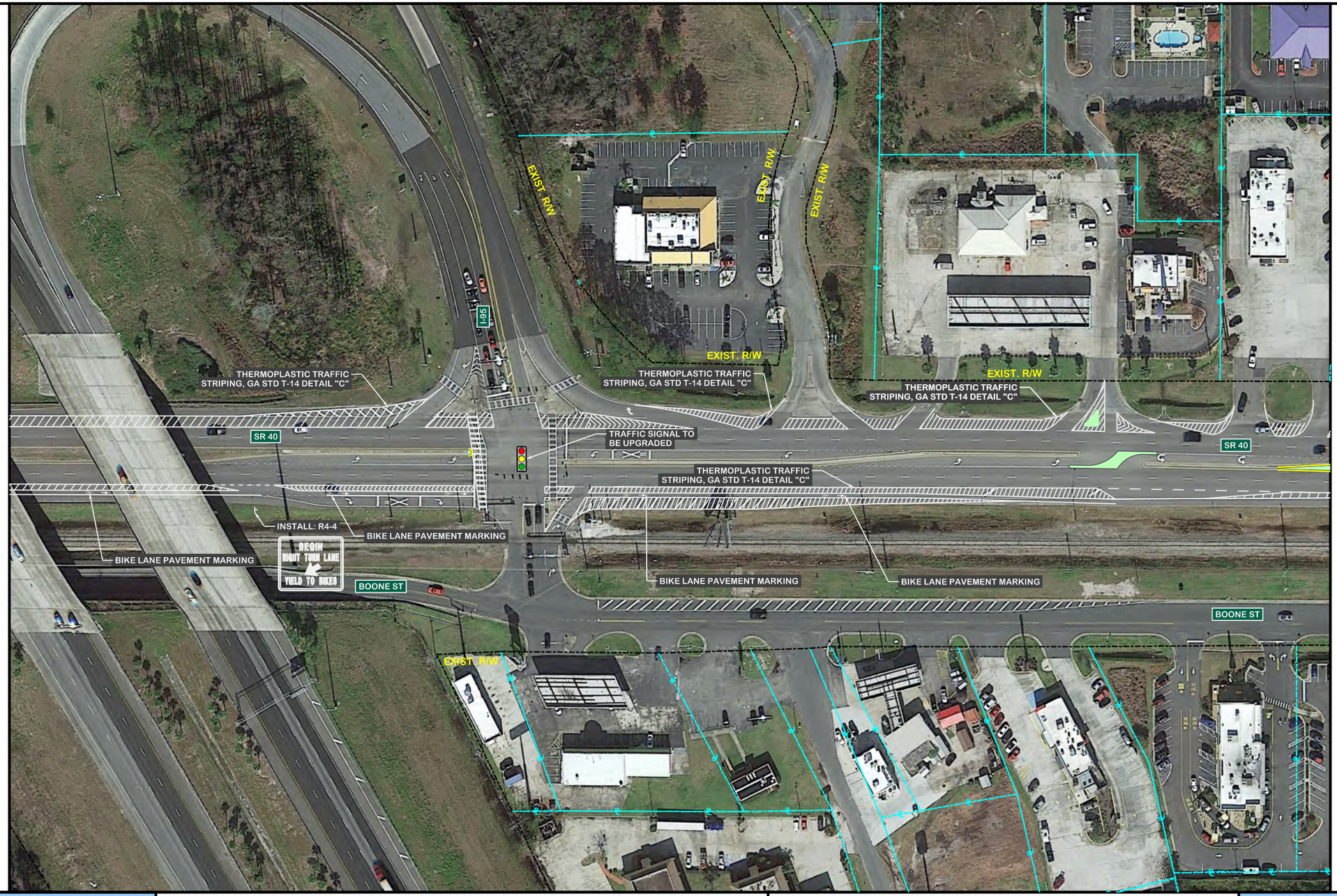
MATCH LINE SHEET 2

MATCH LINE SHEET 4



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DATE: 5/2/2025

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
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- REQUIRED R/W LINE
- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description	Cost	B/C
Corridor (Truss Plant Rd To BP Gas Station Entrance)	Reconfigure Lanes (Reduce to 2 EB Lanes and 2 WB Lanes)	$ 200,000.00	160.84
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SCALE IN FEET

0 60 120 240

SHEET 3 OF 7

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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MATCH LINE SHEET 3

MATCH LINE SHEET 5

EXIST. R/W

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C"

SR 40

5" SKIP WHITE (2' SEG., 6' GAP)

TRAFFIC SIGNAL TO BE UPGRADED

ONE WAY

R6-1R

R3-2

BOONE ST

5" SOLID WHITE

TP 2 RPM @ 40' SPACING (9 EA) SEE DETAIL T-15C

CROWN POINTE PKWY

INSTALL: R4-7

LUMINAIRE ARM TO BE ATTACHED TO EXISTING POLE

N

DATE: 5/2/2025

H:\GDOT\Safety Projects 6\1000831\71 MOSD TO 2\RSAs\SR 40 (I-95 to Middle School Road)\Cad\DGN\SHT 04.dgn

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
- REMOVE EXISTING PAVEMENT & GRADE TO DRAIN
- PROPERTY AND EXISTING R/W LINE
- REQUIRED R/W LINE
- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description	Cost	B/C
Corridor (Truss Plant Rd To BP Gas Station Entrance)	Reconfigure Lanes (Reduce to 2 EB Lanes and 2 WB Lanes)	$ 200,000.00	160.84
Corridor (JSJ Road to Middle School Road)	Install a Raised Concrete Median	$ 750,000.00	14.08
All Signalized Intersections	Install Retroreflective Backplates and Supplemental Signal Heads (Near Side Right and Far Side Left)	$ 250,000.00	109.82
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SR 40	45 MPH	PRINCIPAL ARTERIAL

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SCALE IN FEET

0 60 120 240

SHEET 4 OF 7

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

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GDOT DISTRICT: 5

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Certificate of Authorization #PEF000902
Expiration date 06/30/2024

MATCH LINE SHEET 4

MATCH LINE SHEET 6

N

DATE: 5/2/2025

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

EXIST. R/W

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C"

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C"

INSTALL: R4-7

INSTALL: R4-7

GROSS RD

SR 40

SR 40

5" SKIP WHITE (2' SEG., 6' GAP)

5" SOLID WHITE TP 2 RPM @ 40' SPACING (6 EA) SEE DETAIL T-15C

LUMINAIRE ARM TO BE ATTACHED TO EXISTING POLE

REPLACE EXISTING ADA RAMPS TO POINT AT THE EXISTING CROSSWALKS

TRAFFIC SIGNAL TO BE UPGRADED

LUMINAIRE ARM TO BE ATTACHED TO EXISTING POLE

REPLACE EXISTING ADA RAMPS TO POINT AT THE EXISTING CROSSWALKS

BOONE ST

BOONE ST

EXIST. R/W

EXIST. R/W

HADDOCK ROAD

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
- REMOVE EXISTING PAVEMENT & GRADE TO DRAIN
- PROPERTY AND EXISTING R/W LINE
- REQUIRED R/W LINE
- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description	Cost	B/C
Corridor (Truss Plant Rd To BP Gas Station Entrance)	Reconfigure Lanes (Reduce to 2 EB Lanes and 2 WB Lanes)	$ 200,000.00	160.84
Corridor (JSJ Road to Middle School Road)	Install a Raised Concrete Median	$ 750,000.00	14.08
All Signalized Intersections	Install Retroreflective Backplates and Supplemental Signal Heads (Near Side Right and Far Side Left)	$ 250,000.00	109.82
Entire Corridor	Install Lighting along the corridor	$ 175,000.00	31.68
BP Gas Station Entrance	Convert to RCUT	$ 175,000.00	4.32

	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
SR 40	45 MPH	PRINCIPAL ARTERIAL

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PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS FROM CLIENT INPUT AND TECHNICAL REVIEW.

SCALE IN FEET

0 60 120 240

SHEET 5 OF 7

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

ATKINS
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MATCH LINE SHEET 5

MATCH LINE SHEET 7

N

DATE: 5/2/2025

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
- REMOVE EXISTING PAVEMENT & GRADE TO DRAIN
- PROPERTY AND EXISTING R/W LINE
- REQUIRED R/W LINE
- PROPOSED CONSTRUCTION C/L

NOTES:

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	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
SR 40	45 MPH	PRINCIPAL ARTERIAL

NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS FROM CLIENT INPUT AND TECHNICAL REVIEW.

SCALE IN FEET

0 60 120 240

SHEET 6 OF 7

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

ATKINS
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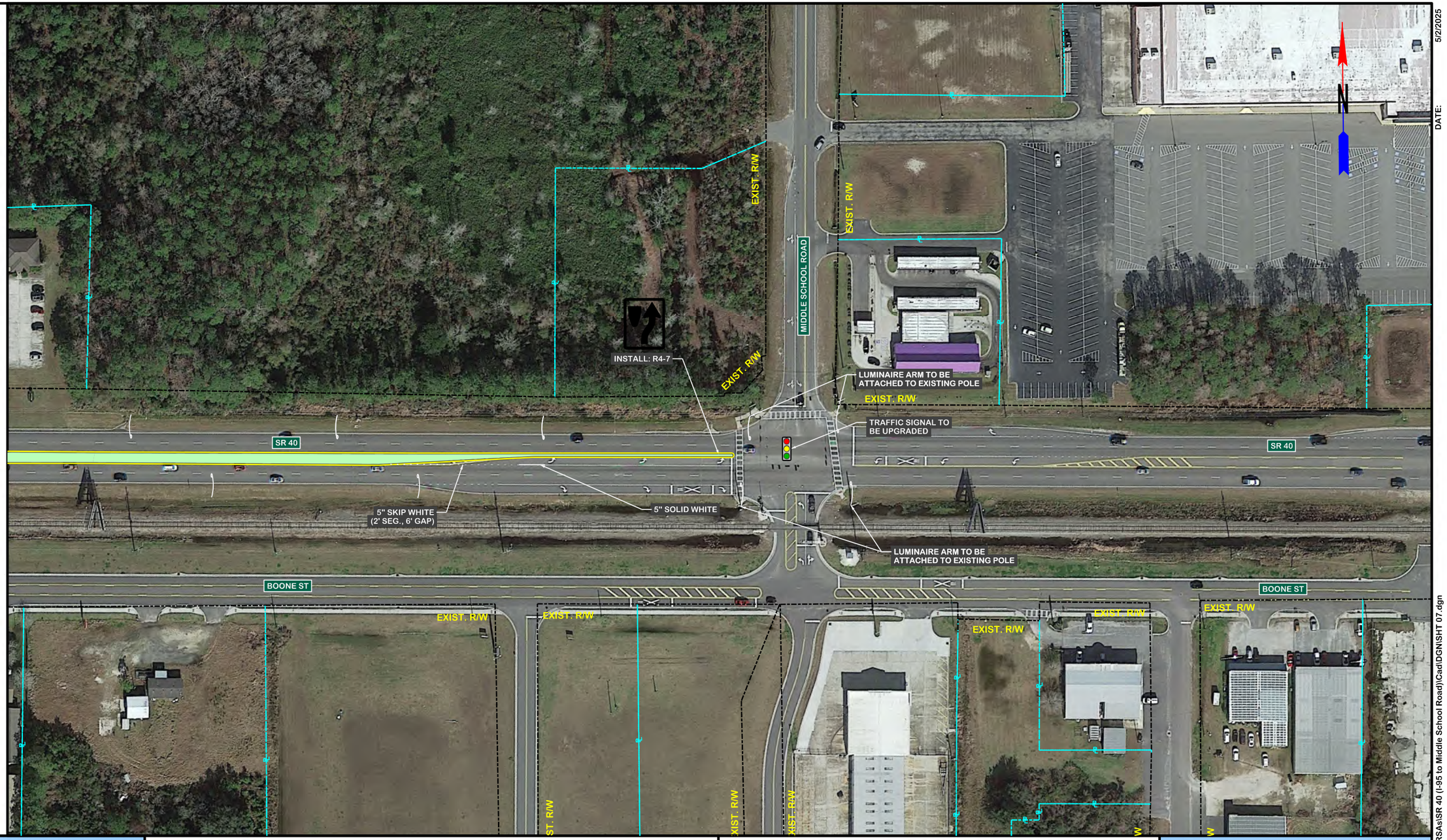
Tel: (770)933-0280

Certificate of Authorization #PEF000902
Expiration date 06/30/2024

H:\GDOT\Safety Projects 6\100083171 MOSD TO 2\RSAs\SR 40 (I-95 to Middle School Road)\Cad\DGN\SHT 06.dgn

MATCH LINE SHEET 6



LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
- REMOVE EXISTING PAVEMENT & GRADE TO DRAIN
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NOTES:

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Corridor (JSJ Road to Middle School Road)	Install a Raised Concrete Median	$ 750,000.00	14.08
All Signalized Intersections	Install Retroreflective Backplates and Supplemental Signal Heads (Near Side Right and Far Side Left)	$ 250,000.00	109.82
Entire Corridor	Install Lighting along the corridor	$ 175,000.00	31.68
BP Gas Station Entrance	Convert to RCUT	$ 175,000.00	4.32

	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
SR 40	45 MPH	PRINCIPAL ARTERIAL

NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS FROM CLIENT INPUT AND TECHNICAL REVIEW.

SCALE IN FEET
0 60 120 240

SHEET 7 OF 7

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

ATKINS
Member of the SNC-Lavalin Group

Atkins North America, Inc.
1600 RiverEdge Parkway NW, Ste. 700
Atlanta, GA 30328
Tel: (770)933-0280

Certificate of Authorization #PEF000902
Expiration date 06/30/2024

DATE: 5/2/2025

H:\GDOT\Safety Projects 6\100083171 MOSD TO CIRS\As\SR 40 (I-95 to Middle School Road)\Cad\DGN\SHT 07.dgn

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
- PROPOSED MOUNTABLE MEDIAN
- PROPOSED LANDSCAPING/GRASS
- ANTICIPATED DISPLACEMENT
- REMOVE EXISTING PAVEMENT & GRADE TO DRAIN
- PROPERTY AND EXISTING R/W LINE
- REQUIRED R/W LINE
- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description
Entire Corridor	Refresh faded pavement markings along mainline and side streets
Corridor (JSJ Road to Gross Road/Haddock Road)	Stripe out right turn lanes
Entire Corridor	Multiple signage improvements

	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
SR 40	45 MPH	PRINCIPAL ARTERIAL

NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS FROM CLIENT INPUT AND TECHNICAL REVIEW.

SCALE IN FEET
0 60 120 240

SHEET 1 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

DATE: 5/2/2025

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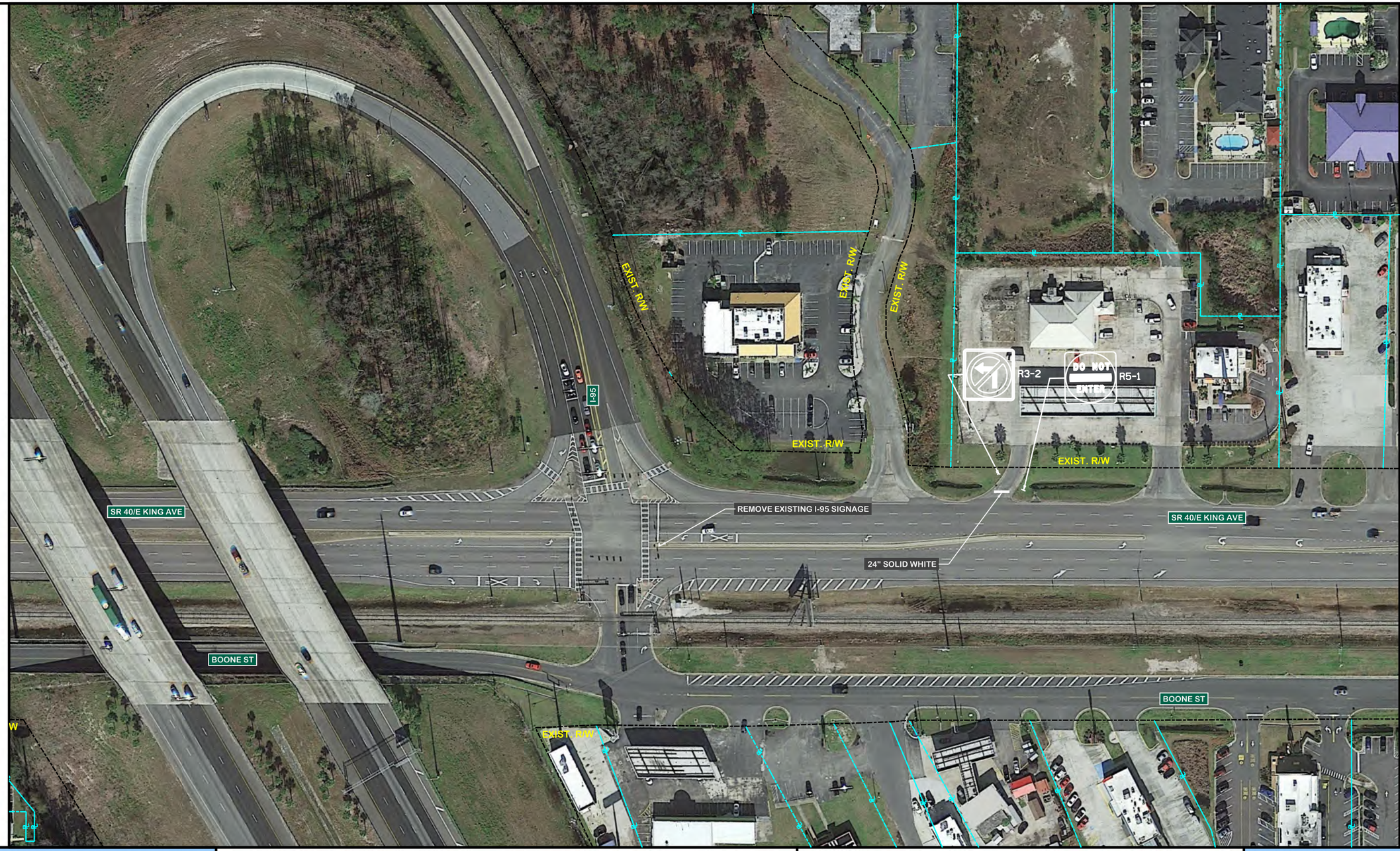
MATCH LINE SHEET 1

MATCH LINE SHEET 3



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DATE: 5/2/2025

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LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
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SCALE IN FEET

0 60 120 240

SHEET 2 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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MATCH LINE SHEET 2

MATCH LINE SHEET 4

N

REPLACE EXISTING STOP SIGN (R1-1)

5" SOLID DOUBLE YELLOW (TYP)

6" SOLID DOUBLE YELLOW (TYP)

REMOVE EXISTING STOP BAR

CROWN POINTE PKWY

SR 40/E KING AVE

6" SKIP WHITE (TYP) (2' SEG., 6' GAP)

24" SOLID WHITE (TYP)

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C" (TYP)

REPAIR EXISTING COUNTDOWN PEDESTRIAN HEAD

BOONE ST

EXIST. R/W

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
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SHEET 3 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

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GDOT DISTRICT: 5

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MATCH LINE SHEET 3

MATCH LINE SHEET 5

N

DATE: 5/2/2025

EXIST. R/W

EXIST. R/W

EXIST. R/W

24" SOLID WHITE

6" DOUBLE SOLID YELLOW (TYP)

EXIST. R/W

SR 40/E KING AVE

THERMOPLASTIC TRAFFIC STRIPING, GA STD T-14 DETAIL "C" (TYP)

BOONE STREET

EXIST. R/W

GROSS ROAD

EXIST. R/W

EXIST. R/W

SR 40/E KING AVE

BOONE STREET

EXIST. R/W

HADDOCK ROAD

EXIST. R/W

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
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SCALE IN FEET

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SHEET 4 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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MATCH LINE SHEET 4

MATCH LINE SHEET 6

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DATE: 5/2/2025

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LEGEND

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- PROPOSED CLASS B PAVEMENT
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- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
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SCALE IN FEET

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SHEET 5 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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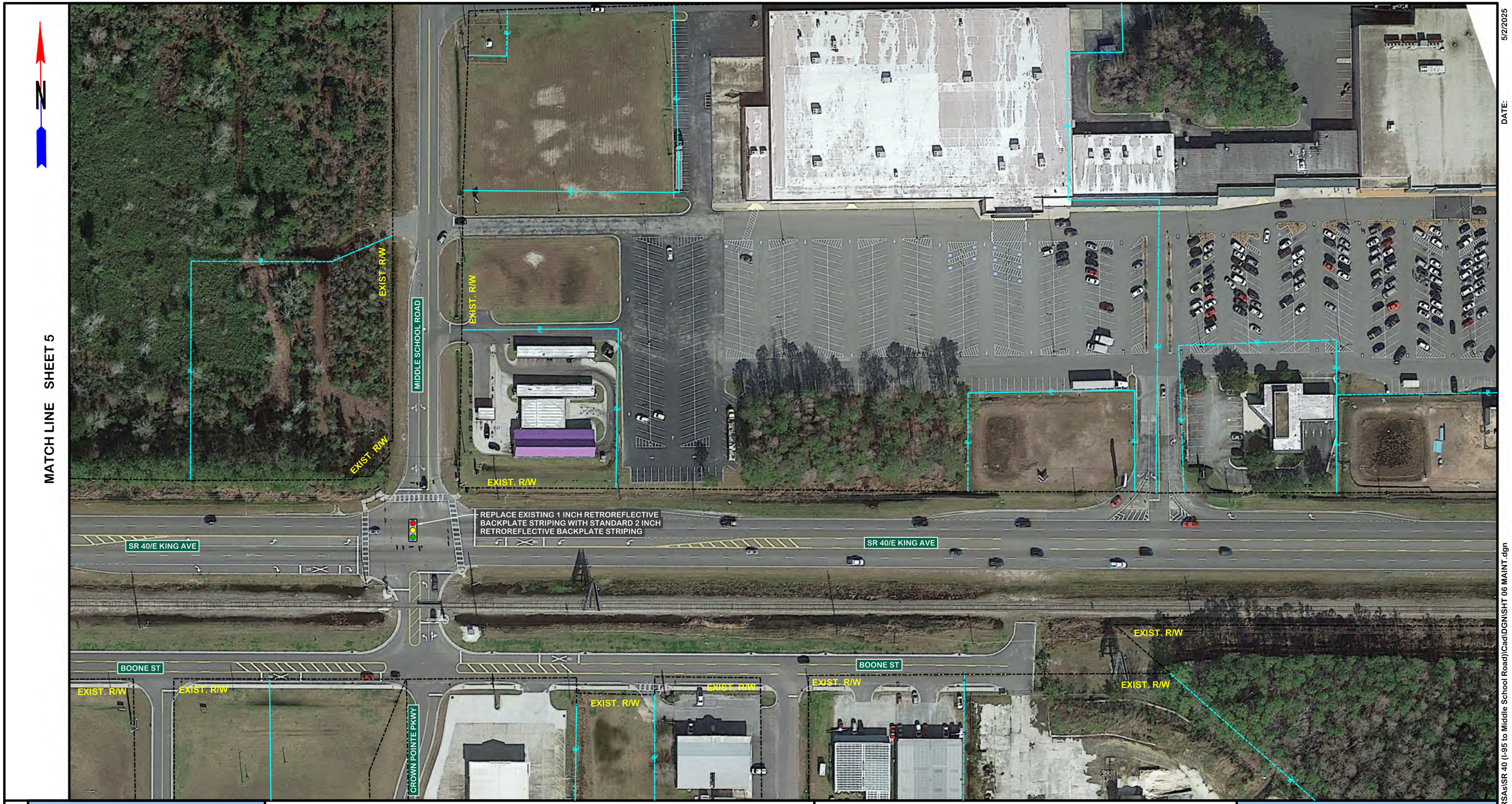

LEGEND

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- PROPOSED MILL/OVERLAY CONSTR.
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SHEET 6 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

DATE: 5/2/2025

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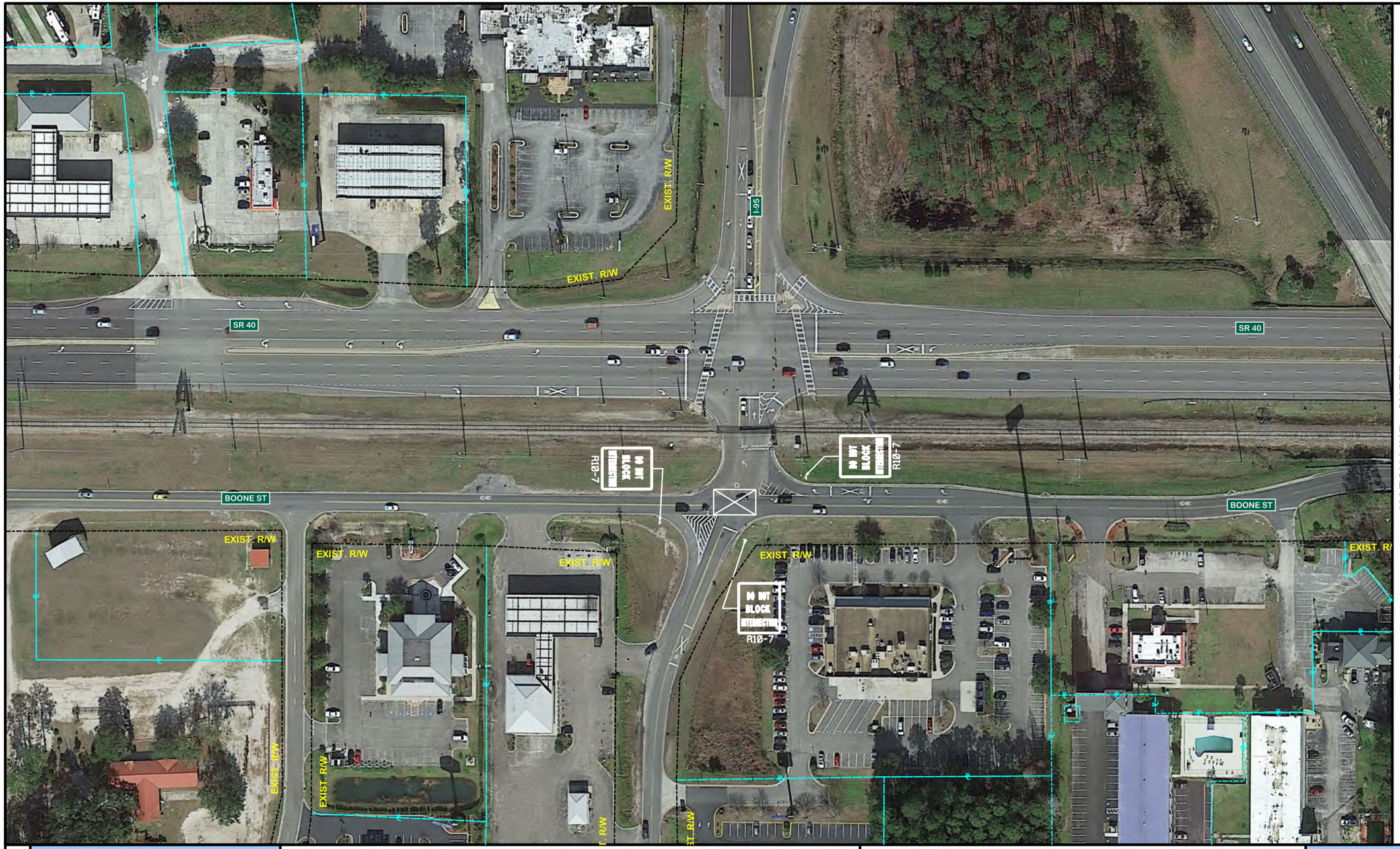

MATCH LINE SHEET 2

N

DATE: 5/16/2024

LEGEND

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- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
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- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description
All Intersections	Install "Do Not Block the Box" Striping and Signage
Boone Street at I-95 NB	Close Northbound exiting Right Out from the Gas Station

	DESIGN SPEED	FUNCTIONAL CLASSIFICATION
SR 40	45 MPH	PRINCIPAL ARTERIAL

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SCALE IN FEET

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SHEET 1 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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MATCH LINE SHEET 1

MATCH LINE SHEET 3

N

DATE: 5/16/2024

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
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NOTES:

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SHEET 2 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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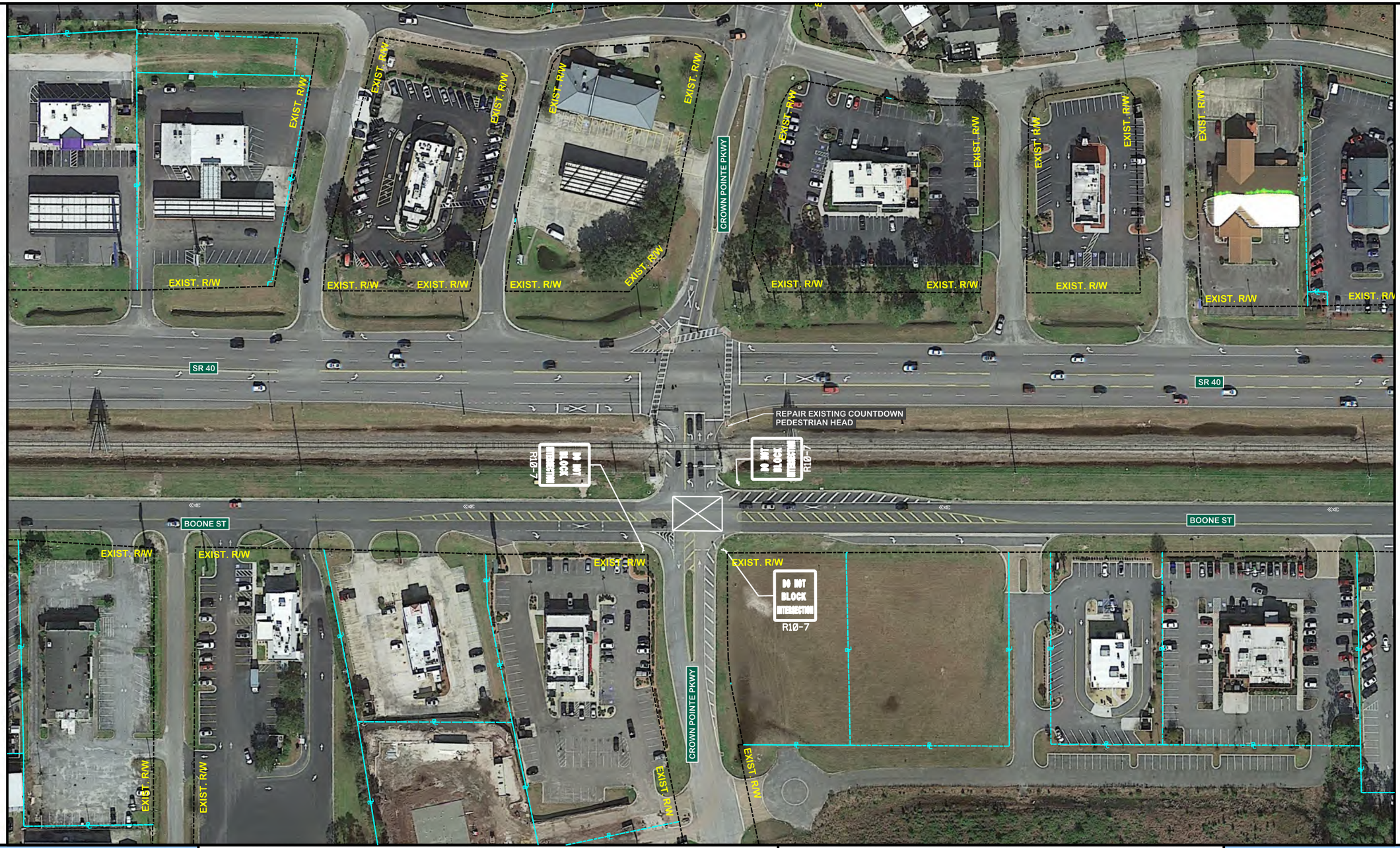
MATCH LINE SHEET 2

MATCH LINE SHEET 4



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NOTES:

Location	Description
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SCALE IN FEET

0 60 120 240

SHEET 3 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

DATE: 5/16/2024

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MATCH LINE SHEET 3

MATCH LINE SHEET 5

N

DATE: 5/16/2024

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
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- PROPOSED CONSTRUCTION C/L

NOTES:

Location	Description
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SHEET 4 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

COUNTY: CAMDEN
GDOT DISTRICT: 5

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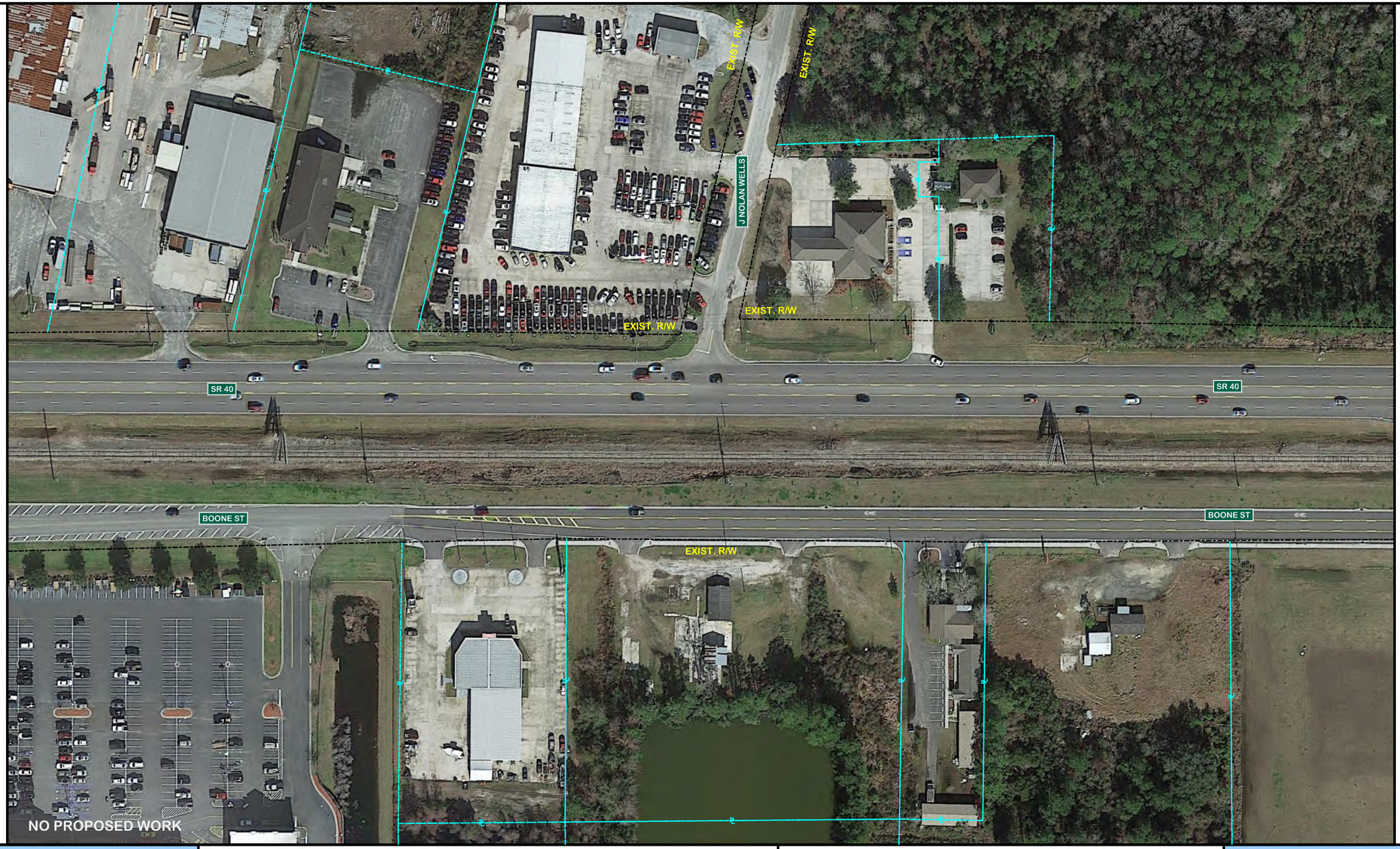
MATCH LINE SHEET 4



MATCH LINE SHEET 6

N

DATE: 5/16/2024

LEGEND

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- PROPOSED CLASS B PAVEMENT
- PROPOSED MILL/OVERLAY CONSTR.
- PROPOSED SIDEWALK
- PROPOSED MEDIAN / C&G
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SHEET 5 OF 6

SR 40 (I-95 TO MIDDLE SCHOOL ROAD) ALTERNATIVE SKETCH

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MATCH LINE SHEET 5

LEGEND

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- PROPOSED CLASS B PAVEMENT
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SHEET 6 OF 6

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