

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 1-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
C1-Natural, C2-Rural, C2T-Rural Town													
16300000 (7.27)	16180000 (5.94)	4	3.83	2.64						✓		✓	✓
09110000 (0.01)	09030000 (0.00)	4	3.14	2.06		✓						✓	✓
C3C-Suburban Commercial													
13160000 (2.54)	13000159 (2.94)	4	7.69	5.98		✓	✓					✓	
13010000 (1.73)	13000085 (0.00)	4	4.37	3.11			✓					✓	✓
17008000 (4.85)	17000047 (0.00)	4	3.93	2.43		✓		✓		✓	✓	✓	✓
C3R-Suburban Residential													
13010000 (4.25)	13162000 (0.00)	4	11.03	9.24		✓				✓		✓	✓
13162000 (1.76)	13160000 (0.00)	4	9.38	7.76				✓	✓			✓	✓
13010000 (2.55)	13000079 (0.00)	3	4.86	3.57		✓			✓		✓		
13010000 (3.77)	12000076 (1.24)	4	4.03	2.71						✓		✓	
13162000 (1.26)	13000068 (0.51)	4	3.81	2.64		✓				✓		✓	✓
13010000 (3.14)	13000091 (0.74)	4	3.67	2.13			✓					✓	
12020000 (18.24)	12005000 (26.23)	3	2.88	2.10			✓						

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 2-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type						Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle		
C3C-Suburban Commercial												
76010000 (26.55)	76060000 (0.00)	4	3.76	2.45						✓		
26050000 (6.02)	26005000 (9.69)	4	3.42	2.41					✓		✓	
26005000 (8.65)	26000034 (1.50)	4	2.85	2.18			✓			✓	✓	

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 3-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
C3C-Suburban Commercial													
57040000 (15.04)	57000021 (1.55)	4	5.06	3.77			✓	✓				✓	
48020000 (11.14)	48004000 (5.95)	4	3.91	2.43		✓						✓	
46010000 (14.37)	46590002 (0.90)	3	3.04	2.24			✓			✓			
46010000 (12.37)	46651000 (0.00)	4	2.87	2.19						✓	✓		
C4-Urban General													
48050000 (21.03)	48020000 (13.47)	4	3.03	2.03		✓						✓	✓

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 4-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
C3R-Suburban Residential													
86110000 (2.68)	86110052 (0.00)	3	5.19	3.44				✓	✓		✓	✓	
86100000 (19.53)	86000228 (2.25)	4	5.34	3.38							✓	✓	
93030000 (6.40)	93919000 (1.30)	4	3.44	2.50	✓	✓			✓			✓	
86100000 (17.65)	86000038 (0.57)	4	3.74	2.12	✓		✓	✓				✓	
86090000 (5.34)	86000160 (0.01)	4	3.72	2.12		✓			✓		✓	✓	
C4-Urban General													
93030000 (6.98)	93580501 (1.47)	4	9.01	7.26		✓						✓	
86220000 (10.34)	86006000 (0.00)	4	6.83	4.84		✓						✓	
93030000 (3.84)	93541000 (0.00)	4	5.58	4.66			✓				✓	✓	
86010000 (4.15)	86230000 (4.04)	4	5.54	4.17			✓		✓				
93070000 (21.17)	93507500 (0.00)	4	5.70	4.16		✓						✓	
93070000 (23.46)	93000040 (2.02)	4	4.91	3.41	✓	✓			✓			✓	
86220000 (12.33)	86110000 (0.00)	4	5.20	3.25		✓						✓	

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 4-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
86014000 (2.00)	86000047 (2.07)	4	5.30	3.15		✓						✓	
93150000 (2.01)	93280000 (5.55)	4	5.30	3.14	✓				✓		✓	✓	
86100000 (18.16)	86039000 (0.00)	4	5.31	3.13		✓		✓				✓	
93030000 (8.58)	93010101 (1.05)	4	3.72	3.08			✓		✓			✓	
89092000 (1.31)	89010000 (17.51)	4	4.15	2.65	✓		✓					✓	
86090000 (6.86)	86520000 (1.34)	4	4.30	2.55					✓			✓	
86170000 (0.37)	86024500 (0.84)	4	2.91	2.02						✓			
93010101 (2.05)	93000100 (1.52)	4	2.86	2.01					✓	✓		✓	
C5-Urban Center, C6-Urban Core													
86006000 (6.34)	86500000 (1.14)	4	3.20	2.19					✓			✓	

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 5-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
C3C-Suburban Commercial													
75270000 (6.11)	75230500 (5.12)	4	7.59	5.95			✓					✓	✓
75060000 (11.73)	75518000 (1.42)	4	7.51	5.20	✓	✓			✓			✓	
75200000 (8.43)	75000034 (1.25)	4	6.15	4.53		✓			✓			✓	
36030000 (0.54)	36110500 (0.36)	4	6.01	4.51		✓						✓	✓
75250000 (5.31)	75000086 (0.00)	4	5.08	3.77			✓					✓	✓
75060000 (10.74)	75000030 (1.71)	4	5.75	3.76			✓	✓			✓	✓	
75200000 (6.44)	75060000 (6.94)	4	5.80	3.73	✓	✓						✓	
75250000 (4.81)	75000161 (0.00)	4	4.70	3.11					✓			✓	✓
75200000 (2.73)	75012000 (2.63)	4	4.80	3.09		✓						✓	✓
79160000 (0.00)	76010000 (26.55)	4	4.96	3.03	✓	✓						✓	
75010000 (9.44)	75000139 (4.20)	3	4.38	2.83						✓			
36100000 (16.49)	36000003 (3.12)	4	3.79	2.45	✓	✓						✓	
75003000 (7.63)	75000033 (0.92)	4	3.73	2.45					✓			✓	
92030000 (3.35)	92512000 (0.00)	4	3.70	2.45					✓				
36100000 (17.67)	36525000 (0.59)	4	3.49	2.43	✓		✓					✓	✓

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 5-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
75060000 (16.54)	75100000 (0.00)	4	3.95	2.42		✓			✓			✓	✓
75060000 (14.29)	75000229 (4.89)	4	3.97	2.41		✓							
75010000 (2.70)	75000274 (0.01)	4	4.20	2.30		✓		✓			✓	✓	✓
75037000 (2.15)	75000001 (2.24)	4	4.21	2.29		✓						✓	
75060000 (8.94)	75000227 (4.11)	4	4.20	2.29	✓	✓			✓			✓	✓
75270000 (6.11)	75230500 (5.12)	4	4.27	2.23			✓					✓	✓
75040000 (10.72)	75516500 (1.58)	3	3.33	2.21	✓								
75050000 (14.87)	75190000 (3.22)	4	4.33	2.18					✓			✓	
C4-Urban General													
36010000 (24.44)	36004000 (1.23)	4	7.71	6.37	✓	✓	✓					✓	
75010000 (11.53)	75013000 (0.26)	4	4.80	3.43		✓						✓	
75010000 (12.67)	75026500 (0.25)	4	4.60	3.43			✓		✓			✓	
79060000 (19.61)	79190000 (8.20)	4	5.04	3.36						✓		✓	✓
79220000 (0.99)	79190000 (9.42)	4	4.01	2.70	✓			✓		✓		✓	
79060000 (20.39)	79000103 (1.02)	4	3.15	2.50					✓		✓	✓	✓

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 6-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
C1-Natural, C2-Rural, C2T-Rural Town													
87090000 (0.44)	87070000 (14.26)	3	3.41	2.27			✓			✓		✓	
C3C-Suburban Commercial													
87020000 (13.98)	87091000 (8.06)	4	2.96	2.23					✓			✓	
C3R-Suburban Residential													
87240000 (11.82)	87504504 (1.72)	4	3.47	2.13		✓			✓			✓	
C4-Urban General													
87281000 (8.19)	87080900 (34.94)	4	6.21	4.90					✓			✓	✓
87140000 (13.10)	87000625 (2.08)	4	4.52	3.41			✓					✓	
87038000 (7.18)	87028503 (1.52)	4	3.96	2.71						✓	✓		
87008000 (5.58)	87504504 (1.06)	4	3.63	2.69			✓	✓				✓	
87020000 (13.80)	87091000 (8.05)	4	4.15	2.65				✓	✓			✓	
87038000 (2.15)	87521500 (1.70)	4	4.27	2.58	✓				✓			✓	
87240000 (8.85)	87038000 (6.16)	4	4.27	2.57		✓							
87034000 (4.98)	87170000 (1.48)	4	4.33	2.53					✓			✓	
87030000 (6.52)	87000098 (0.78)	4	4.34	2.52				✓	✓	✓			
87001000 (3.14)	87000625 (2.08)	4	3.11	2.02			✓					✓	
87030000 (3.75)	87000121 (1.89)	4	3.09	2.02			✓						

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 6-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
87019000 (2.24)	87000274 (1.00)	4	2.95	2.02			✓					✓	
87037000 (0.89)	87000523 (0.08)	4	2.91	2.02					✓			✓	
C5-Urban Center, C6-Urban Core													
87055000 (6.79)	87030000 (2.43)	4	4.35	2.77					✓		✓	✓	✓

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 7-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
C1-Natural, C2-Rural, C2T-Rural Town													
14091000 (7.49)	14000145 (3.54)	4	4.13	3.08			✓						
C3C-Suburban Commercial													
14030000 (1.71)	14000164 (0.95)	4	10.07	8.21	✓	✓						✓	
14120000 (0.00)	14030000 (11.48)	4	8.72	6.76		✓			✓	✓		✓	
14030000 (2.51)	14000016 (1.54)	4	8.43	6.70		✓						✓	
14030000 (1.01)	14580000 (0.00)	4	8.12	6.00		✓			✓	✓		✓	
14120000 (2.52)	14000024 (4.07)	4	6.37	5.39			✓		✓			✓	
14120000 (2.01)	14000087 (3.94)	4	7.31	5.25		✓			✓			✓	
14030000 (13.85)	14000025 (2.44)	4	6.90	5.24						✓		✓	
10010000 (15.71)	10519000 (3.50)	4	6.27	4.53			✓			✓	✓	✓	
14030000 (9.73)	14000049 (9.32)	4	6.48	4.51		✓	✓					✓	
14030000 (16.15)	14000104 (0.00)	3	4.93	4.23			✓						
14572000 (0.42)	14000088 (3.81)	4	5.65	3.79		✓	✓					✓	
10120000 (6.07)	10010000 (5.70)	4	5.07	3.77			✓						
15040000 (4.44)	15150019 (0.50)	4	7.32	3.71					✓				
14030000 (14.83)	14000067 (0.00)	4	4.78	3.68		✓			✓			✓	
08040000 (4.59)	08505000 (0.01)	4	4.52	3.12		✓						✓	

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 7-----

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Main Roadway ID (MP)	Intersecting Roadway ID (MP)	Number of Legs	Expected KA Crashes	Excess Expected KA Crashes	Overrepresented Crash Type							Duplicate from Previous Years' List	Programmed Status
					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
14570000 (0.87)	14580000 (3.02)	4	4.42	3.11					✓			✓	
14120000 (3.03)	14507000 (0.00)	4	4.41	3.11			✓					✓	
14030000 (8.76)	14000054 (0.00)	4	4.79	3.09			✓					✓	
10060000 (17.22)	10523000 (0.00)	4	4.24	3.08			✓			✓	✓	✓	
14030000 (9.42)	14000055 (0.20)	4	3.81	2.45		✓						✓	
14030000 (10.00)	14000023 (0.00)	4	3.77	2.45	✓	✓						✓	
10290000 (1.52)	10240500 (2.23)	4	3.84	2.44					✓			✓	
15061000 (5.94)	15000403 (0.00)	4	3.54	2.43					✓			✓	
15120000 (11.14)	15030018 (0.58)	4	4.00	2.40		✓					✓	✓	
14610000 (1.00)	14091000 (3.72)	4	4.07	2.38	✓	✓							
14030000 (1.51)	14000050 (1.48)	4	4.24	2.27		✓						✓	
02050000 (13.55)	20000021 (0.00)	3	3.15	2.25			✓	✓				✓	
02030000 (16.48)	02000004 (0.00)	4	2.97	2.24			✓					✓	
02030000 (3.35)	20000018 (0.01)	3	2.89	2.21		✓						✓	
14090000 (18.31)	14000044 (1.50)	4	2.79	2.15			✓	✓				✓	
14090000 (1.78)	14000045 (1.54)	4	4.36	2.14		✓						✓	
14090000 (0.00)	14571000 (8.28)	4	4.44	2.04				✓			✓	✓	
14091000 (0.76)	14092000 (0.01)	4	4.43	2.04		✓						✓	

FLORIDA DEPARTMENT OF TRANSPORTATION
Traffic Engineering and Operations Office
2022 System Analysis and Forecast Evaluation (SAFE)
List of Candidate Signalized Intersections

-----District 7-----

Sorted by Context Class and Excess Expected Fatal and Serious Injury (KA) Crashes

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					Head-on	Rear-end	Angle	Sideswipe	Ped/Bike	Single Vehicle	Other Multi-vehicle		
C3R-Suburban Residential													
14010000 (11.32)	14120000 (12.43)	4	4.65	3.30			✓					✓	
10010000 (9.67)	10540000 (0.00)	4	3.52	2.90			✓				✓	✓	
C4-Urban General													
15090000 (4.42)	15000180 (2.29)	4	5.51	4.17			✓					✓	
14570000 (0.00)	14030000 (3.03)	4	5.16	3.29		✓					✓	✓	
10030000 (0.50)	10000116 (0.00)	4	3.83	2.72					✓			✓	
10040000 (2.16)	10340000 (3.31)	4	3.78	2.71					✓			✓	
10020000 (5.36)	10000129 (0.00)	4	4.00	2.70	✓			✓		✓		✓	
15230000 (4.65)	15504000 (0.00)	4	2.42	2.04		✓						✓	
15230000 (5.15)	15000106 (0.00)	4	3.08	2.02			✓						
15150000 (4.38)	15000210 (3.24)	4	2.80	2.00	✓	✓						✓	
C5-Urban Center, C6-Urban Core													
15090000 (5.39)	15000173 (2.00)	4	3.09	2.59			✓					✓	
10080000 (1.11)	10000049 (0.00)	4	3.01	2.19	✓		✓						

FLORIDA DEPARTMENT OF TRANSPORTATION

Traffic Engineering and Operations Office

2022 System Analysis and Forecast Evaluation (SAFE)

----- Appendix A: Safety Performance Functions (SPFs) -----

Context Class Group	Intersection Legs	Functional Form of SPF
C1-Natural, C2-Rural, and C2T-Rural Town	3	$KA_{Predicted} = \exp[-8.710 + 0.393 \times \ln(AADT_{Major}) + 0.504 \times \ln(AADT_{Minor})]$
C1-Natural, C2-Rural, and C2T-Rural Town	4	$KA_{Predicted} = \exp[-6.746 + 0.599 \times \ln(AADT_{Major}) + 0.068 \times \ln(AADT_{Minor})]$
C3R-Suburban Residential	3	$KA_{Predicted} = \exp[-9.815 + 0.884 \times \ln(AADT_{Major}) + 0.070 \times \ln(AADT_{Minor})]$
C3R-Suburban Residential	4	$KA_{Predicted} = \exp[-6.563 + 0.332 \times \ln(AADT_{Major}) + 0.350 \times \ln(AADT_{Minor})]$
C3C-Suburban Commercial	3	$KA_{Predicted} = \exp[-6.354 + 0.336 \times \ln(AADT_{Major}) + 0.296 \times \ln(AADT_{Minor})]$
C3C-Suburban Commercial	4	$KA_{Predicted} = \exp[-8.146 + 0.668 \times \ln(AADT_{Major}) + 0.150 \times \ln(AADT_{Minor})]$
C4-Urban General	4	$KA_{Predicted} = \exp[-7.485 + 0.421 \times \ln(AADT_{Major}) + 0.337 \times \ln(AADT_{Minor})]$
C5-Urban Center and C6-Urban Core	4	$KA_{Predicted} = \exp[-9.568 + 0.635 \times \ln(AADT_{Major}) + 0.277 \times \ln(AADT_{Minor})]$

$KA_{Predicted}$: Number of predicted fatal and serious injury (KA) crashes in three years per intersection

$AADT_{Major}$: Annual average daily traffic (three-year average) along major road (veh/day)

$AADT_{Minor}$: Annual average daily traffic (three-year average) along minor road (veh/day)

The relationship between predicted, expected, and excess expected crashes at an intersection is given by:

$$KA_{excess\ expected} = KA_{expected} - KA_{predicted}$$

$KA_{excess\ expected}$: Number of excess expected fatal and serious injury (KA) crashes at the intersection

$KA_{expected}$: Number of expected fatal and serious injury (KA) crashes at the intersection

$KA_{predicted}$: Number of predicted fatal and serious injury (KA) crashes at the intersection