



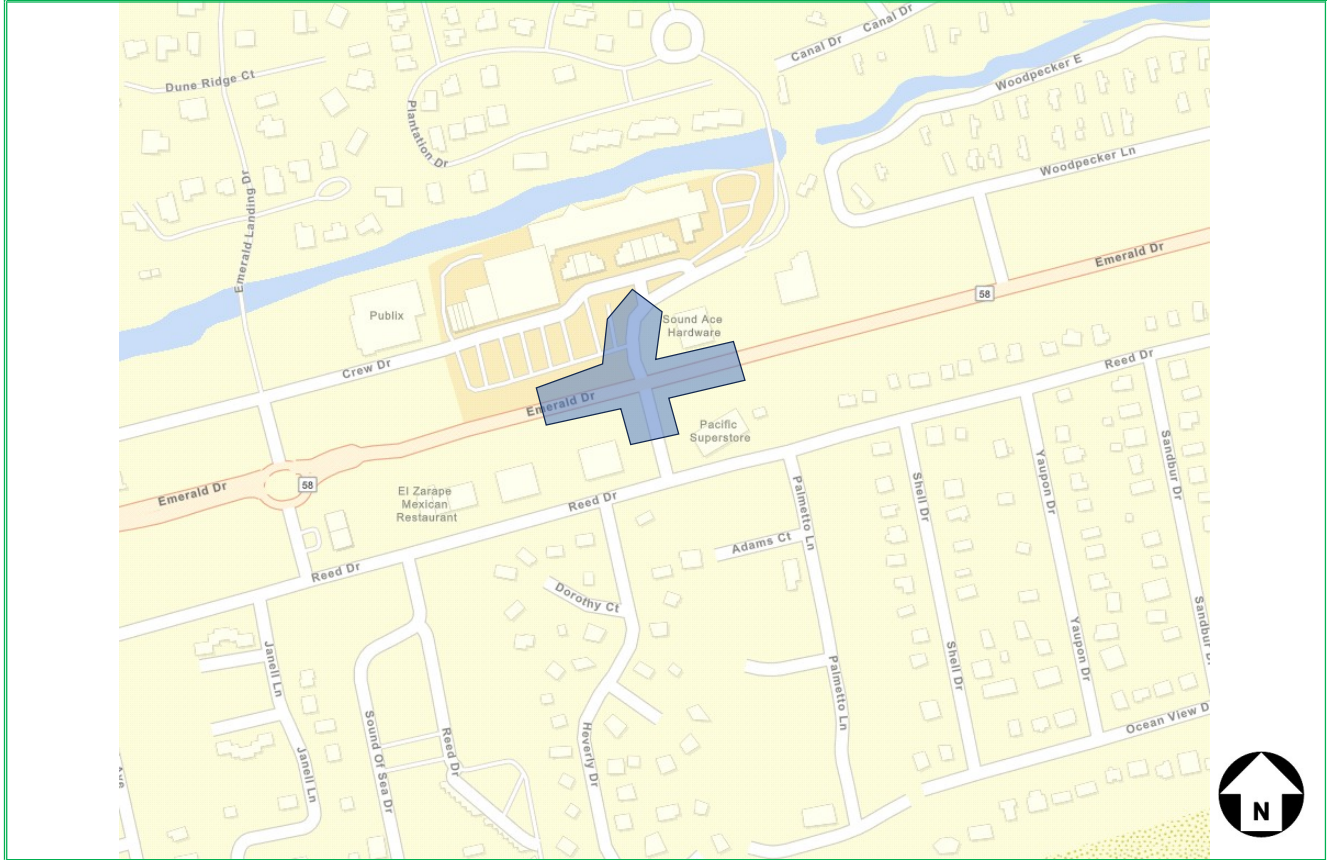
Preliminary – Do Not Use for Construction



SPOT Travel Time Savings Report

NC 58 (EMERALD DRIVE) - LOON STREET 10-Improve Intersection

STIP No. **R-5884** SPOT ID: **H250717** WBS No. **34263.1.1** Carteret DIVISION: **2**
 12/17/2025 LJB



ID	Road Name	External	2025 AADT	2035 AADT
01N	Emerald Plantation Rd	Yes	3,600	4,000
01E	NC 58 (Emerald Dr)	Yes	14,700	15,100
01S	Loon St	Yes	900	1,000
01W	NC 58 (Emerald Dr)	Yes	14,500	14,900

2025 AM Peak Travel Time Saving	1
2025 PM Peak Travel Time Saving	2
2025 Total Daily Vehicles	16,850
2025 Daily Travel Time Savings	5.8
2035 AM Peak Travel Time Saving	1
2035 PM Peak Travel Time Saving	2
2035 Total Daily Vehicles	17,500
2035 Daily Travel Time Savings	8.3
Days per Year	260
Travel Time Savings Duration	10 Years

Existing Congestion Level	Non-Congested
Daily Savings Conversion Factor	2.25

10-year Travel Time Savings			
18,000 hours			
Travel Time Savings Per Vehicle			
2025	1 sec/veh	2035	2 sec/veh

Description of Proposed Design

Construct 2x1 roundabout



Figure 1

Existing Conditions

SHEET 2 OF 2

LEGEND

TIP: R-5884

WBS: 34263.1.1

COUNTY: Carteret

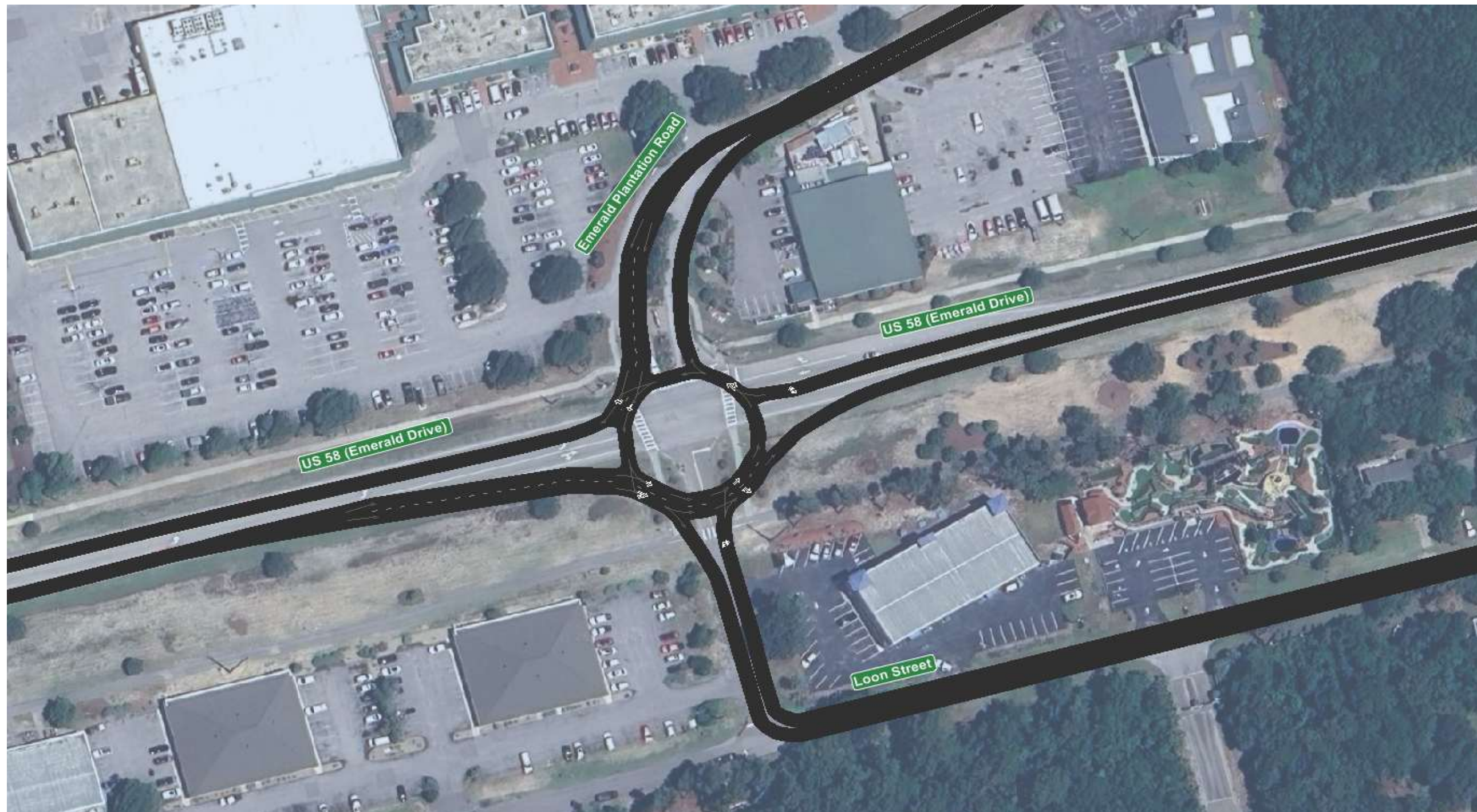
DIVISION: 2

DATE: December 17, 2025

PREPARED BY: LJB

LOCATION: NC 58 (EMERALD DRIVE) - LOON STREET

PROJECT: 10-Improve Intersection



Construct 2x1 Roundabout

Figure 2

Proposed Design

SHEET 3 OF 3

LEGEND

TIP: R-5884

WBS: 34263.1.1

COUNTY: Carteret

DIVISION: 2

DATE: December 17, 2025

PREPARED BY: LJB

LOCATION: NC 58 (EMERALD DRIVE) - LOON STREET

PROJECT: 10-Improve Intersection



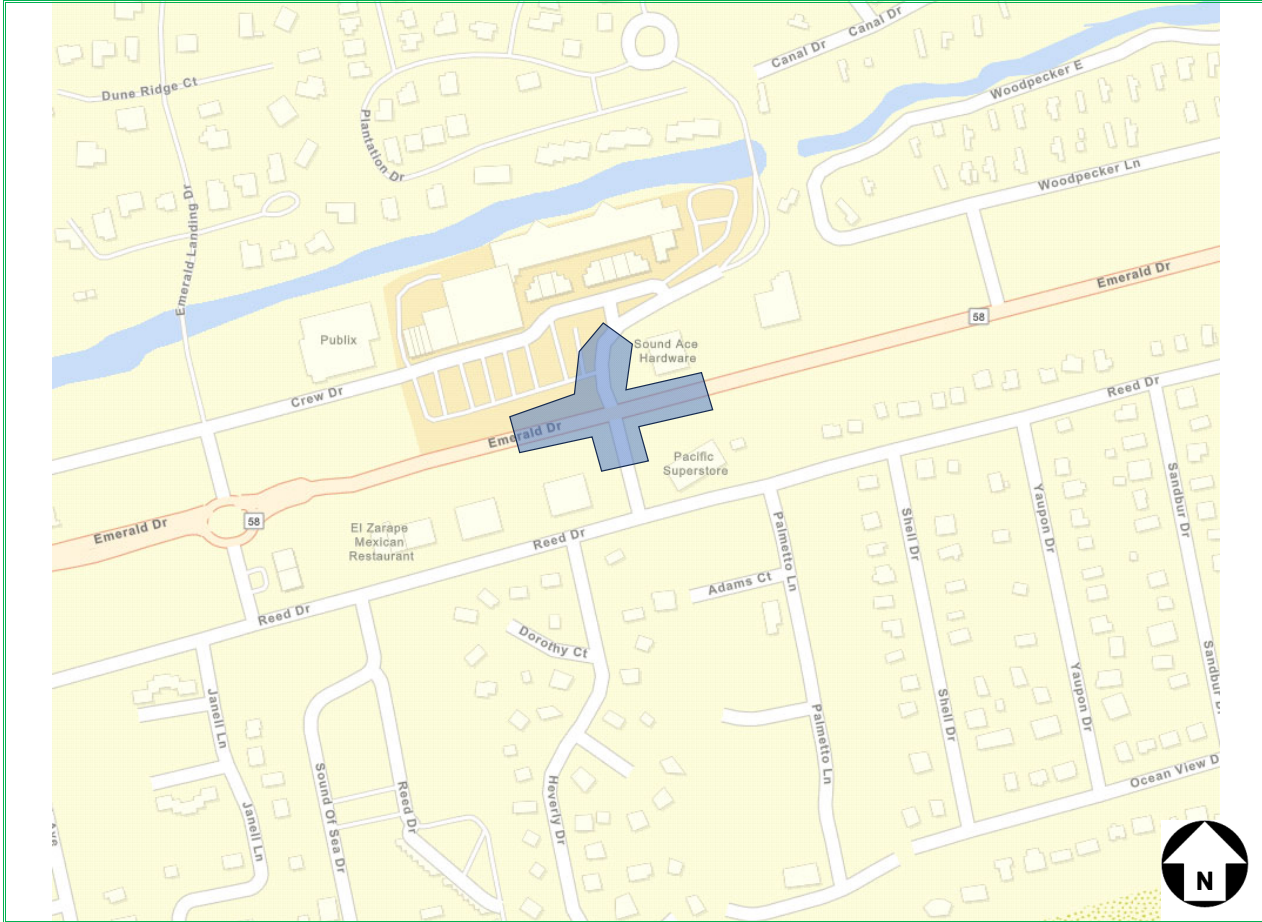


SPOT Volume Report



NC 58 (EMERALD DRIVE) - LOON STREET 10-Improve Intersection

STIP No. R-5884 SPOT ID: H250717 WBS No. 34263.1.1
Carteret DIVISION: 2



PROJECT STUDY AREA

PREPARED BY: LJB

12/15/2025

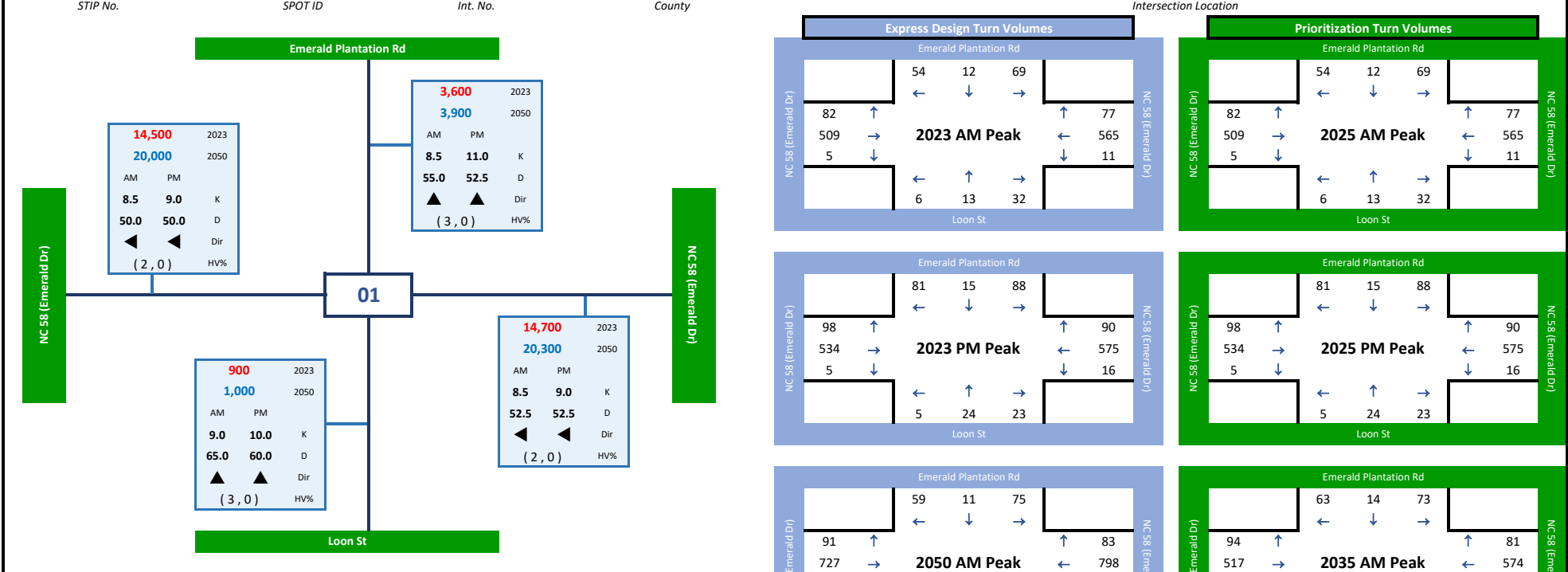


Committed Projects in Study Area

STIP Project and Description: 2026-2035 NCDOT STIP	N/A
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Int ID	Count ID	Count Date	Intersection	AADT Source	2023 NCDOT AADT Web Map	Version
1	19377	11/13/2025	NC 58 (Emerald Dr) @ Emerald Plantation Rd / Loon St			Gen 4.5P8
				Travel Demand Model Utilized		
				BASE YEAR	2025	
				FUTURE YEAR	2035	
				REPORT STATUS	Final	
				CORRIDOR PROJECT	No	

R-5884	H250717	01	Carteret	NC 58 (Emerald Dr) @ Emerald Plantation Rd / Loon St
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Approach	Road Name	Route Type	No. of Lanes	Facility Type	Functional Class	Capacity	2023 V/C Ratio
North	Emerald Plantation Rd	Local	2	Arterial	Local	15,843	0.23
East	NC 58 (Emerald Dr)	NC	2	Arterial	Arterial	15,843	0.93
South	Loon St	Local	2	Arterial	Local	15,843	0.06
West	NC 58 (Emerald Dr)	NC	2	Arterial	Arterial	15,843	0.92

Approach	Road Name	Express Design Traffic Volumes			Prioritization Traffic Volumes		
		2023 AADT	2023-2050 CAGR	2050 AADT	2025 AADT	2025-2035 CAGR	2035 AADT
North	Emerald Plantation Rd	3,600	0.3%	3,900	3,600	1.0%	4,000
East	NC 58 (Emerald Dr)	14,700	1.2%	20,300	14,700	0.2%	15,100
South	Loon St	900	0.4%	1,000	900	1.0%	1,000
West	NC 58 (Emerald Dr)	14,500	1.2%	20,000	14,500	0.2%	14,900

Express Design Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
82	↑	54	12	69	↑
509	→	←	↓	→	77
5	↓	←	↓	→	11
		←	↑	→	
		6	13	32	

Prioritization Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
82	↑	54	12	69	↑
509	→	←	↓	→	77
5	↓	←	↓	→	11
		←	↑	→	
		6	13	32	

Express Design Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
98	↑	81	15	88	↑
534	→	←	↓	→	90
5	↓	←	↓	→	16
		←	↑	→	
		5	24	23	

Prioritization Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
98	↑	81	15	88	↑
534	→	←	↓	→	90
5	↓	←	↓	→	16
		←	↑	→	
		5	24	23	

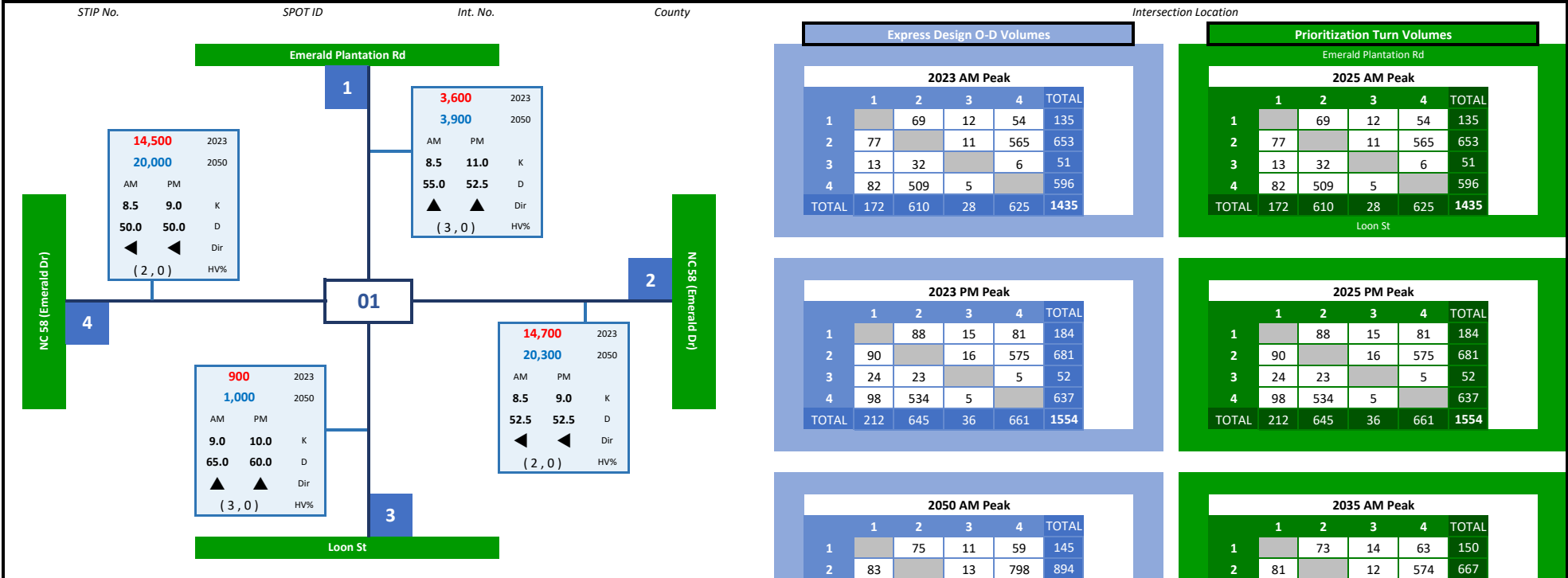
Express Design Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
91	↑	59	11	75	↑
727	→	←	↓	→	83
7	↓	←	↓	→	13
		←	↑	→	
		7	12	37	

Prioritization Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
94	↑	63	14	73	↑
517	→	←	↓	→	81
6	↓	←	↓	→	12
		←	↑	→	
		7	16	34	

Express Design Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
109	↑	89	15	96	↑
763	→	←	↓	→	99
7	↓	←	↓	→	20
		←	↑	→	
		7	23	29	

Prioritization Turn Volumes		Emerald Plantation Rd		NC 58 (Emerald Dr)	
110	↑	92	18	96	↑
539	→	←	↓	→	98
6	↓	←	↓	→	18
		←	↑	→	
		6	28	24	

R-5884	H250717	01	Carteret	NC 58 (Emerald Dr) @ Emerald Plantation Rd / Loon St
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North	Emerald Plantation Rd	Local	2	Arterial	Local	15,843	0.23
East	NC 58 (Emerald Dr)	NC	2	Arterial	Arterial	15,843	0.93
South	Loon St	Local	2	Arterial	Local	15,843	0.06
West	NC 58 (Emerald Dr)	NC	2	Arterial	Arterial	15,843	0.92

Approach	Road Name	Express Design Traffic Volumes			Prioritization Traffic Volumes		
		2023 AADT	2023-2050 CAGR	2050 AADT	2025 AADT	2025-2035 CAGR	2035 AADT
North	Emerald Plantation Rd	3,600	0.3%	3,900	3,600	1.0%	4,000
East	NC 58 (Emerald Dr)	14,700	1.2%	20,300	14,700	0.2%	15,100
South	Loon St	900	0.4%	1,000	900	1.0%	1,000
West	NC 58 (Emerald Dr)	14,500	1.2%	20,000	14,500	0.2%	14,900

Express Design O-D Volumes

2023 AM Peak

	1	2	3	4	TOTAL
1		69	12	54	135
2	77		11	565	653
3	13	32		6	51
4	82	509	5		596
TOTAL	172	610	28	625	1435

Prioritization Turn Volumes

Emerald Plantation Rd

2025 AM Peak

	1	2	3	4	TOTAL
1		69	12	54	135
2	77		11	565	653
3	13	32		6	51
4	82	509	5		596
TOTAL	172	610	28	625	1435

Loon St

2023 PM Peak

	1	2	3	4	TOTAL
1		88	15	81	184
2	90		16	575	681
3	24	23		5	52
4	98	534	5		637
TOTAL	212	645	36	661	1554

2025 PM Peak

	1	2	3	4	TOTAL
1		88	15	81	184
2	90		16	575	681
3	24	23		5	52
4	98	534	5		637
TOTAL	212	645	36	661	1554

2050 AM Peak

	1	2	3	4	TOTAL
1		75	11	59	145
2	83		13	798	894
3	12	37		7	56
4	91	727	7		825
TOTAL	186	839	31	864	1920

2035 AM Peak

	1	2	3	4	TOTAL
1		73	14	63	150
2	81		12	574	667
3	16	34		7	57
4	94	517	6		617
TOTAL	191	624	32	644	1491

2050 PM Peak

	1	2	3	4	TOTAL
1		96	15	89	200
2	99		20	823	942
3	23	29		7	59
4	109	763	7		879
TOTAL	231	888	42	919	2080

2035 PM Peak

	1	2	3	4	TOTAL
1		96	18	92	206
2	98		18	586	702
3	28	24		6	58
4	110	539	6		655
TOTAL	236	659	42	684	1621