

Construct roundabout

Intersection of Mangrove St and Emerald Dr

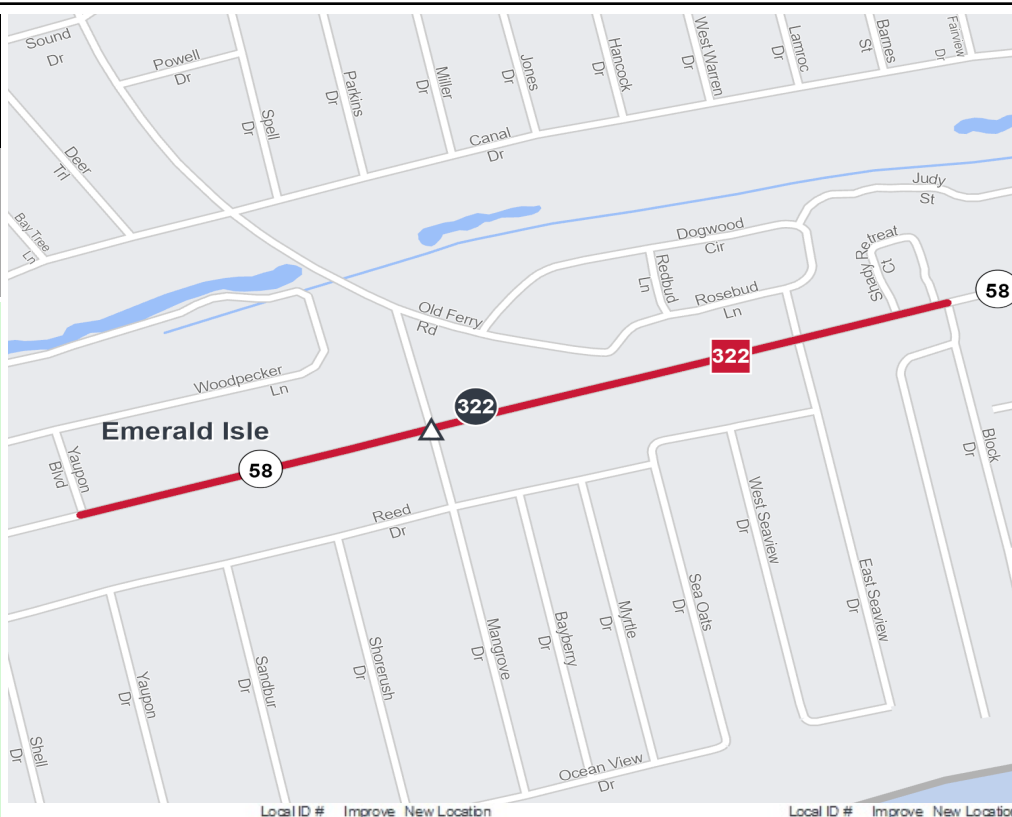
Local ID: R-5944

Purpose: **Mobility**Improvement: **Improve Existing****Identified Need**

NC 58 (Emerald Drive) is projected to be over capacity by year 2050. Improvements are needed to relieve congestion on the existing facility and accommodate projected traffic volumes such that a minimum of Level of Service (LOS) D can be achieved.

Recommendation

Project Number 322. R-5944 is to construct a roundabout at NC 58 (Emerald Drive) and Mangrove St. There is a multiuse path recommendation along NC 58.



Congestion / Mobility

Local ID # Improve New Location

Access Management / Operations

Modernization

Other

Local ID # Improve New Location

Interchange

Bridge / Overpass

Intersection

Proposal At A Glance

Highway Class	Congestion & Mobility
Facility Type	Major Thoroughfare 2-lane
Typical Section	02 B
Section Options	-
Length (miles)	0.53
Existing ROW (feet)	100-200
Safety Risk Score	-

Proposal Data: 2019 Base Year 2050 Future Year

Improved Route	Existing	Without Proposal	With Proposal
<i>Facility Type</i>	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane	Major Thoroughfare 2-lane
<i>Travel Lanes</i>	2	2	2
<i>Volume (vpd)</i>	17000	25000	17900
<i>Capacity (vpd)</i>	11100	11100	14500

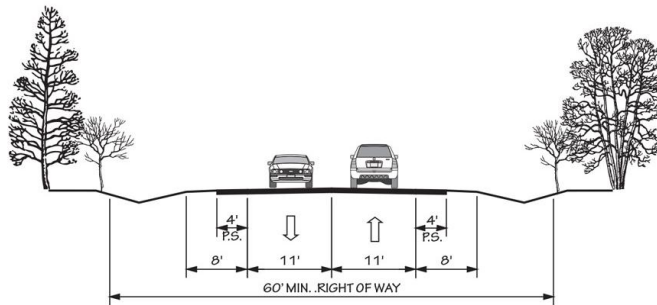
Capacity Data: Year

Facility will be Approaching Capacity (>80%)	-
Facility will be Over Capacity (>=100%)	-



Typical Section Options:

None

TYPICAL SECTION No. 2B**2 LANES UNDIVIDED WITH PAVED SHOULDERS**

POSTED SPEED 25-45 MPH

Project History/Linkage to Other Plans**Project History**

R-5944 is funded within the 2024-2033 STIP.

A single option was studied for this report which consisted of symmetrical widening of roadway to a 2-lane section with median divider islands for positive traffic separation. 12 ft lanes with 5 ft paved shoulders are provided on NC 58. Curb and gutter is utilized for channelization within the roundabout. Sidewalk is proposed in all 4 quadrants to replace that lost during construction and provide additional mobility for pedestrians. Minor revisions to the bike path south of the intersection will be required.

CTP Goal Analysis**Goals and Objectives Survey**

The vision for Carteret County is to have a safe, diverse, efficient, integrated, and environmentally sensitive and sustainable multi-modal transportation system for its residents, visitors, and businesses. The Carteret County CTP goals include: promoting a safer and more secure transportation network, creating a more efficient transportation system, providing an integrated and multimodal transportation network, supporting regional growth in the transportation network, preserving the social and environmental character of the region, extending the life of the transportation system by developing sustainable transportation solutions, and anticipating future needs of the area in terms of resiliency and flooding.

Public Comments

This Carteret County CTP survey was open from March 1st, 2023 to April 30th, 2023 and there was an English and Spanish version of the survey. There were a total of 439 participants and 1,387 comments as pins on the map were received. This project received 2 comments as pins during the online survey. The main concerns were congestion and transit.

Other Information**Land Use**

The project area is located within a commercial business area with residential homes located to the south. Additionally, a bike path parallels NC 58 on the south side of the roadway.

All environmental data in the database was considered. This Project is within 150 feet of:

- 2 Flood Hazard Area Feature(s)
- 1 Hazard Substance Disposal Site(s)
- 1 High Quality And Outstanding Resource Water Feature(s)
- 2 Natural Heritage Element Occurrence Feature(s)

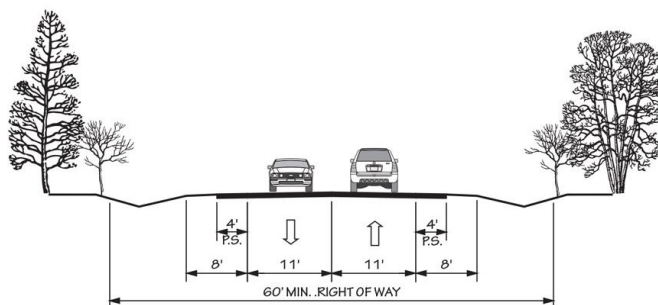
This recommendation passes through one or more Census Blocks with the following characteristics:

- Between 25% and 50% identify as 65+
- Between 0% and 25% identify as African American
- Between 0% and 5% identify as Asian
- 0% identify as Over 18 with Limited English Proficiency (LEP) - Asian and Pacific Islander
- 0% identify as Over 18 with Limited English Proficiency (LEP) - Indo-European
- 0% identify as Over 18 with Limited English Proficiency (LEP) - Other
- 0% identify as Over 18 with Limited English Proficiency (LEP) - Spanish
- Between 5% and 15% identify as Native American
- Between 1% and 5% identify as Two of More Races

Typical Section Options:
None

TYPICAL SECTION No. 2B

2 LANES UNDIVIDED WITH PAVED SHOULDERS



POSTED SPEED 25-45 MPH

- Between 1% and 5% identify as Below Poverty Line
- Between 0% and 15% identify as Households with No Car