

Construct roundabout

Intersection of Coast Guard Rd and Emerald Dr

Local ID: R-5886

Purpose: **Mobility**

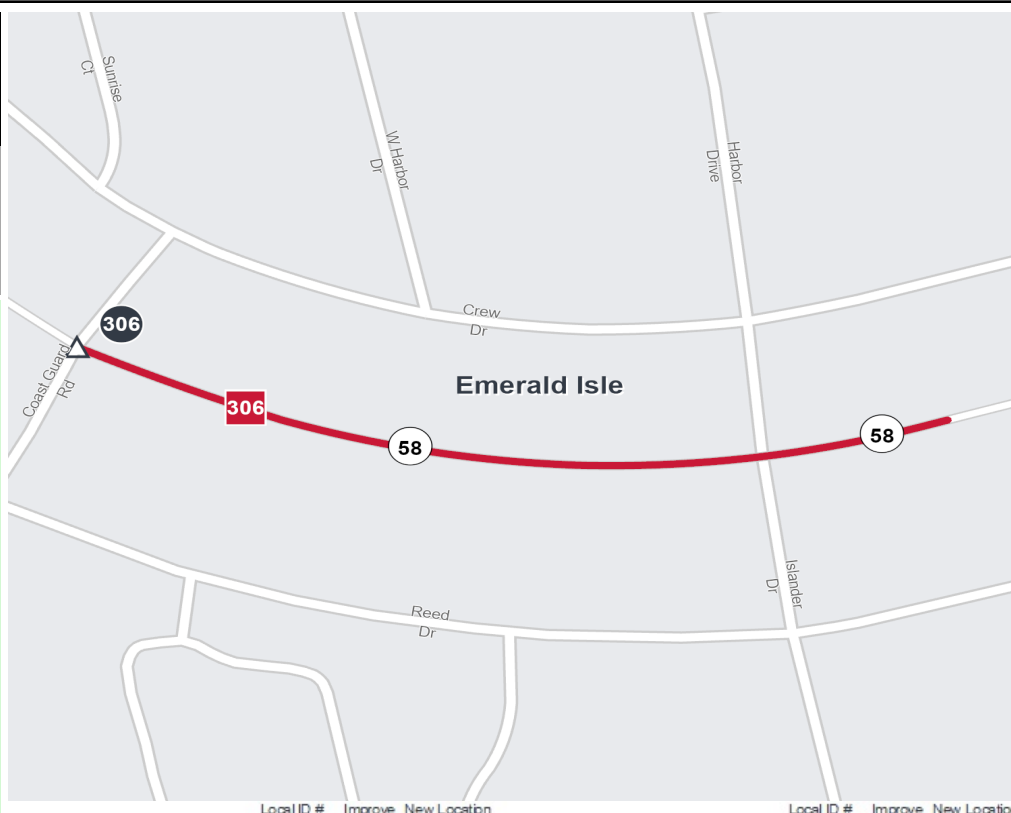
Improvement: **Improve Existing**

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 306. R-5886 is to construct a roundabout at NC 58 (Emerald Drive) and Coast Guard Road in Emerald Isle. There is a multiuse path recommendation along NC 58.



Congestion / Mobility



Interchange



Access Management / Operations



Bridge / Overpass



Modernization



Intersection



Other

**Proposal At A Glance**

Highway Class	Congestion & Mobility
Facility Type	Major Thoroughfare Multi-lane
Typical Section	04 F
Section Options	-
Length (miles)	0.26
Existing ROW (feet)	100-200
Safety Risk Score	78

Proposal Data: 2019 Base Year 2050 Future Year

Improved Route	Existing	Without Proposal	With Proposal
<i>Facility Type</i>	Major Thoroughfare Multi-lane	Major Thoroughfare Multi-lane	Major Thoroughfare Multi-lane
<i>Travel Lanes</i>	2	4	4
<i>Volume (vpd)</i>	17000	29500	20700
<i>Capacity (vpd)</i>	14500	14500	26700

Capacity Data: Year

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

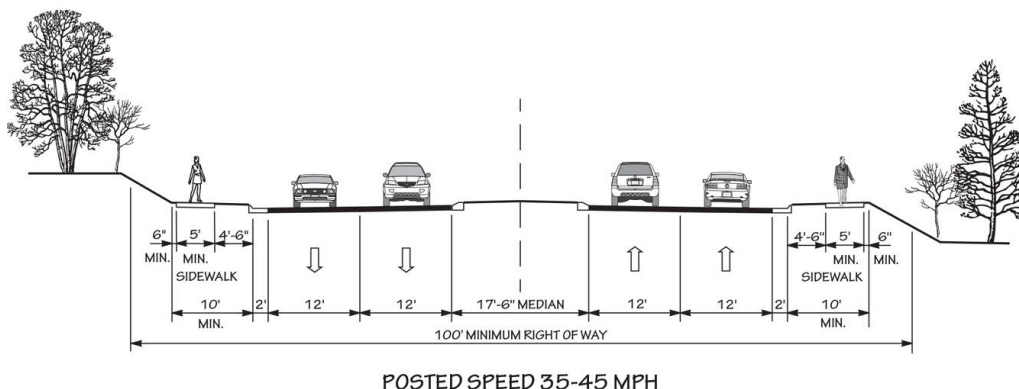


Typical Section Options:

None

TYPICAL SECTION No. 4F

4 LANE DIVIDED (17'-6" RAISED MEDIAN)
WITH CURB & GUTTER, AND SIDEWALKS

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

NC 58 (Emerald Dr.) between Coast Guard Rd. in Emerald Isle and Pepper Lane in Atlantic Beach is included in the 2014 Carteret County Comprehensive Transportation Plan (CTP) as a roadway that needs improvement. Proposed improvements are identified access management, intersection improvement, multi-lane widening, adding a median, adding turn lanes, and adding 2-ft shoulders. NC 58 is also recommended for public transportation and portions of NC 58 within the study area are recommended for multi-use paths.

R-5886 is not funded within the 2024-2033 STIP.

This project was listed with an ID of H150820 in the SPOT recommendations.

In March 2023 two options were studied for this project during Express Design Traffic Analysis (EDTA):

Concept 1: Single lane roundabout with 2-lane approaches on NC 58 & Coast Guard Rd. with 8 ft wide shoulders (5 ft full-depth paved with remaining to be turf). Exclusive right turn with slip lane from eastbound NC 58 onto southbound Coast Guard. Exclusive right turn lane with slip lane from northbound Coast Guard Rd onto eastbound NC 58. Curb and gutter with 10 ft wide berms and sidewalks in vicinity of roundabout. Tie-ins provided for existing multi-use path and sidewalks.

Concept 2: 2-lane roundabout with 4-lane approaches on NC 58 & 2-lane approaches on Coast Guard Rd. All 4 legs have 8 ft wide shoulders (4 ft full-depth paved with remaining to be turf). Roundabout provides for dual eastbound and westbound NC 58 through movements. No exclusive right turns or slip lanes provided. Curb and gutter with 10 ft wide berms and sidewalks in vicinity of roundabout. Tie-ins provided for existing multi-use path and sidewalks. Based on the findings of this Express

Design Feasibility Study it is recommended that Concept 2 is constructed.

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 12 comments as pins during the online survey. The main concerns were congestion and multimodal needs.

Other Public Comments

During Express Design stakeholder coordination, the Town of Emerald Isle expressed desire and preference for adding lanes at this location rather than installing a roundabout.

Other Information**Land Use**

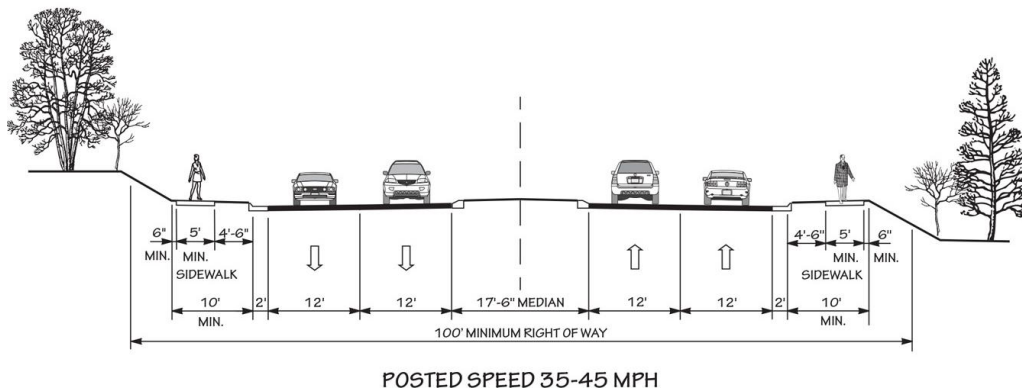
The project area is located within a commercial business district, with residential homes to the north and south. An existing bike path parallels the east side of Coast

Typical Section Options:

None

TYPICAL SECTION No. 4F

4 LANE DIVIDED (17'-6" RAISED MEDIAN)
WITH CURB & GUTTER, AND SIDEWALKS



Guard Rd and the south side of NC 58 (east of the intersection). There is existing sidewalk on the east side of Coast Guard Rd and the north side of NC 58 (east of the intersection).

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

- 1 Flood Hazard Area Feature(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
- Between 1% and 5% identify as Below Poverty Line
- Between 0% and 15% identify as Households with No Car