

# MID-CURRITUCK BRIDGE STUDY

## COMMUNITY IMPACT ASSESSMENT TECHNICAL REPORT

WBS Element: 34470.1.TA1  
STIP No. R-2576  
Currituck County  
Dare County

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**for**



**November 2011**

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## 1.0 Summary

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The Mid-Currituck Bridge project would involve transportation improvements to the eastern Currituck County peninsula and the Currituck County and northern Dare County Outer Banks. The following detailed study alternatives are under consideration for implementation:

- ER2;
- MCB2/C1 (MCB2 using bridge corridor C1);
- MCB2/C2 (MCB2 using bridge corridor C2);
- MCB4/C1 (MCB4 using bridge corridor C1);
- MCB4/C2 (MCB4 using bridge corridor C2); and
- Preferred Alternative.

The “ER” in ER2 stands for “Existing Roads.” A Mid-Currituck Bridge is not included in this alternative, but only widening existing roads. The “MCB” stands for Mid-Currituck Bridge. Alternatives MCB2 and MCB4 both include a Mid-Currituck Bridge and different amounts of improvements to existing roads. The bridge components of both MCB2 and MCB4 are evaluated with two bridge corridor alternatives (C1 and C2).

For all five DEIS alternatives, two hurricane evacuation options are under consideration, adding a third outbound lane to US 158 for evacuation use only and reversing the center turn lane on US 158 to create a third outbound lane during an evacuation. When a third outbound lane is needed on the Wright Memorial Bridge or Knapp (Intracoastal Waterway) Bridge, one existing inbound lane would be reversed. Reversing the center turn lane on US 158 on the mainland between the US 158/Mid-Currituck Bridge interchange and NC 168, as well as adding approximately 1,600 feet of third outbound lane to US 158 on the Outer Banks to the west of the NC 12/US 158 intersection (starting at the US 158/Cypress Knee Trail/Market Place Shopping Center intersection), is included in the Preferred Alternative.

For the originally proposed MCB2 and MCB4 alternatives, two design options are considered for the mainland approach to the bridge over Currituck Sound (between US 158 and Currituck Sound) – Option A and Option B. The two options vary by the location of the toll plaza, whether Maple Swamp is crossed by a bridge or fill, and whether drivers traveling between US 158 and the community of Aydlett would use existing Aydlett Road or the bridge approach road. No access to or from the Mid-Currituck Bridge would be provided at Aydlett with either option.

The Preferred Alternative is MCB4/C1 with Option A. It also includes several design refinements to reduce impacts, in response to public input and comments. These refinements include:

- Provision of a median acceleration lane at Waterlily Road. This safety feature would allow left turns to continue to be made at Waterlily Road and US 158. Bulb-outs for u-turning vehicles also would be provided at the re-aligned US 158/Aydlett Road intersection and the US 158/Worth Guard Road intersection to provide greater flexibility for local traffic in turning to and from existing side streets near the US 158/Mid-Currituck Bridge interchange.
- Reducing the amount of four-lane widening along NC 12 from that with MCB4/C1 from approximately 4 miles to approximately 2.1 miles, plus left turn lanes at two additional locations over approximately 0.5 mile. The 2.1 miles of NC 12 widening would be concentrated at three locations: the bridge terminus, the commercial area surrounding Albacore Street, and Currituck Clubhouse Drive.
- Constructing roundabouts on NC 12 instead of signalized intersections at the bridge terminus and Currituck Clubhouse Drive.
- Terminating the bridge in a roundabout at NC 12 also allowed the C1 bridge alignment to be adjusted to remove curves and thereby reduced its length across Currituck Sound by approximately 250 feet (from approximately 24,950 feet to 24,700 feet).
- Provision of marked pedestrian crossings along NC 12 where it would be widened. They would be placed at locations identified by Currituck County plans (Albacore Street, Orion's Way, and Currituck Clubhouse Drive), as well as at North Harbor View Drive and the bridge terminus (one across NC 12 and one across the bridge approach road).

For hurricane evacuation, the Preferred Alternative includes:

- On the mainland, reversing the center turn lane on US 158 between the US 158/Mid-Currituck Bridge interchange and NC 168.
- On the Outer Banks, adding approximately 1,600 feet of new third outbound lane to the west of the NC 12/US 158 intersection to provide additional road capacity during a hurricane evacuation.

The purpose of the proposed project is to reduce congestion on US 158 and NC 12, reduce travel times between the Currituck County mainland and the Outer Banks, and improve hurricane evacuation times. The State Transportation Improvement Program (STIP) lists the (Mid-Currituck) bridge improvement as 9.9 miles long (STIP No. R-2576).

The project area is in northeastern North Carolina and includes the Currituck County peninsula as far north as the NC 168/US 158 intersection just north of Barco, and the

Outer Banks between Corolla (Currituck County) on the north and Kitty Hawk (Dare County) on the south. The project area is substantially south of the Virginia Beach-Norfolk, Virginia, metropolitan area (Figure 1-1).

## 1.1 Key Community Characteristics

---

Currituck County is the most northeastern county in North Carolina. The mainland portion of the project area predominantly consists of a peninsula bounded on the west by the North River, on the south by Albemarle Sound, and on the east by Currituck Sound. Currituck County's northern beach strand, or Outer Banks, separates Currituck Sound from the Atlantic Ocean (see Figure 1-2). US 158 is the only means of north-south travel on the Currituck County peninsula. From its intersection with NC 168 near Barco, US 158 traverses the peninsula southward to the Wright-Memorial Bridge, which connects the mainland to the Outer Banks at Southern Shores/Kitty Hawk in Dare County.

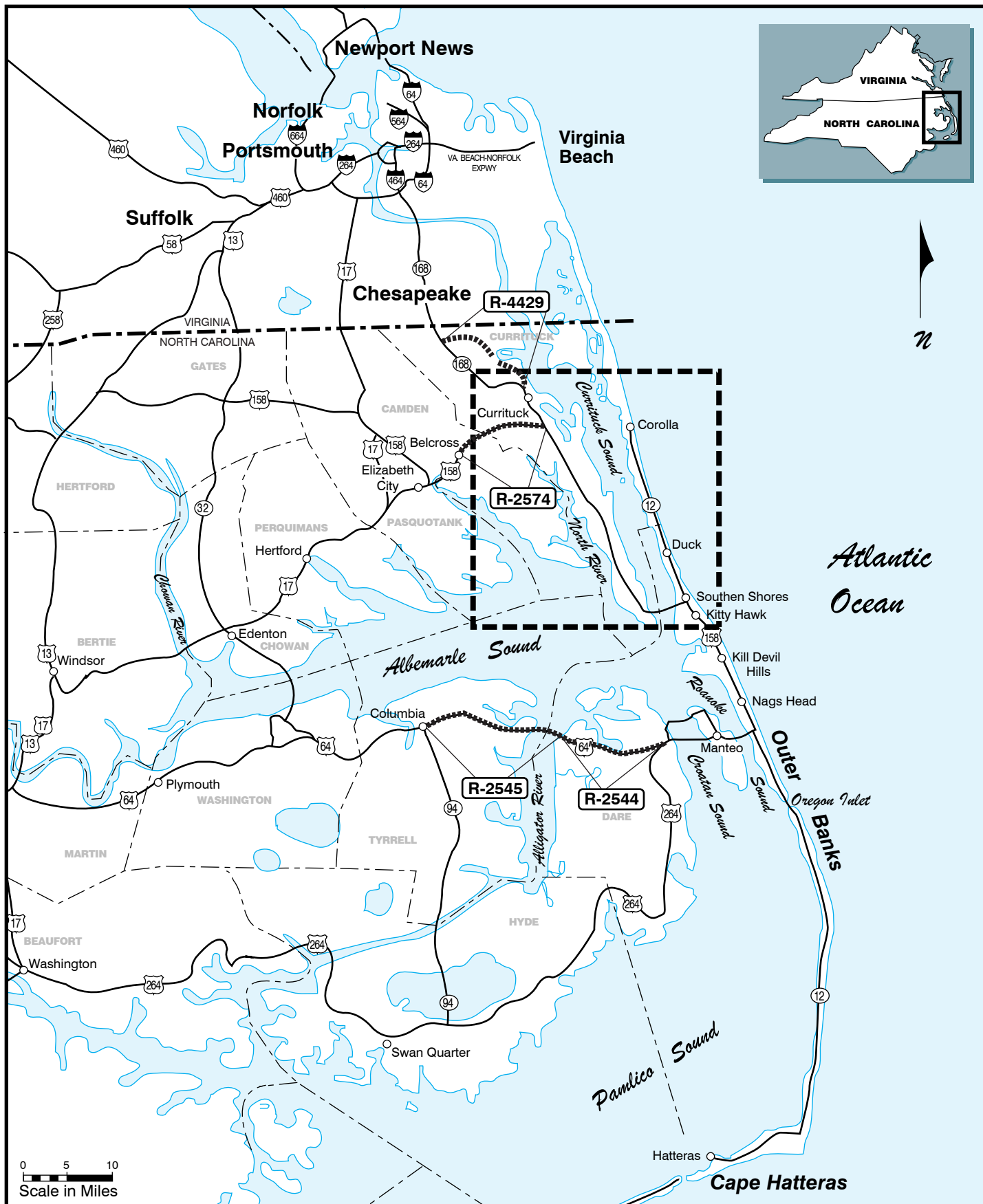
Along US 158 on the Currituck County mainland, land use is predominantly rural agrarian with scattered residences and service-oriented businesses. Although there are no municipalities in Currituck County, rural communities dot the Currituck County mainland in the project area. From north to south, they include: Barco, Coinjock, Poplar Branch, Grandy, Jarvisburg, Olds, Powells Point, Mamie, Spot, Harbinger, and Point Harbor.

On the mainland, Dare County is south of Currituck County, separated by Albemarle Sound, and is outside the project area. However, on the Outer Banks, the most northerly portion of Dare County is within the project area, primarily the incorporated towns of Kitty Hawk, Southern Shores, and Duck. Commercial uses line US 158 within the towns of Kitty Hawk and Southern Shores (US 158 separates Kitty Hawk and Southern Shores) between the Wright Memorial Bridge and NC 12. Land uses along the Dare County Outer Banks both north and south of the US 158/NC 12 intersection include a mix of single-family homes, hotels, and condominiums. Much of this area developed before similar development occurred to the north, on the Currituck County Outer Banks.

NC 12 is the primary north-south route along the Outer Banks, characterized by residential resort developments of single-family homes, town homes, and condominiums; commercial development comprised of small stand-alone shops and medium-sized shopping centers; and beaches that attract millions of vacationers each year.

The following are additional key characteristics of the project area:

- Land uses on the mainland peninsula in Currituck County are rural and agricultural, while on the Outer Banks they are low-density residential with scattered commercial development.



# LEGEND



Project Vicinity



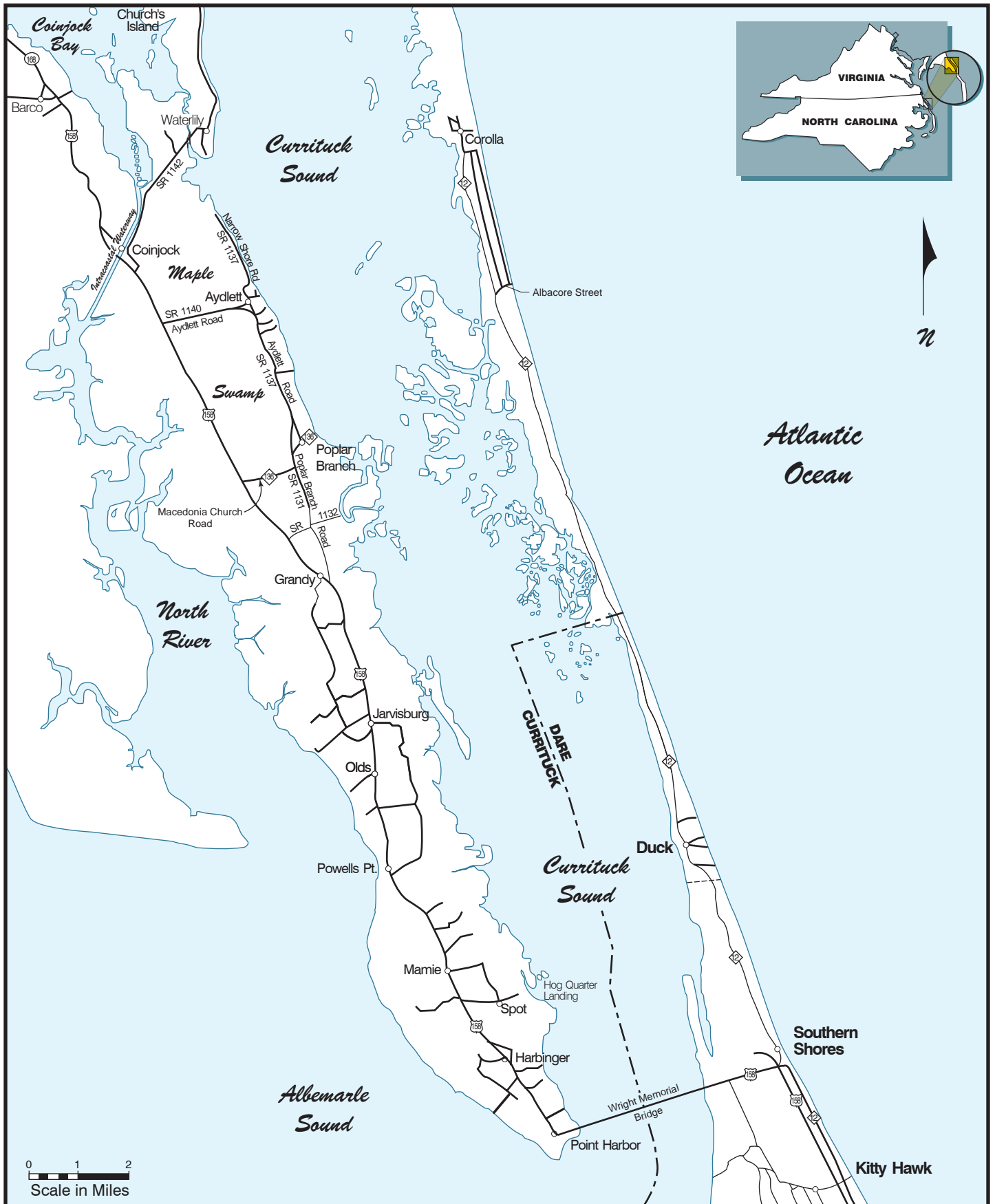
STIP projects included in No-Build Alternative

## Regional Project Map

Figure

1-1





# LEGEND

--- County Boundaries

## Project Area

Figure  
1-2

- The population in the project area on the Outer Banks is characterized as seasonal, and housing is mostly renter-occupied.
- A local, unnamed bicycle/pedestrian trail generally either parallels or is a part of the NC 12 shoulder from Southern Shores to the NC 12 northern terminus.
- The main themes for Currituck County's economic and land use development goals are to expand the economic base of Currituck County and to improve employment opportunities, while preserving the character and natural beauty of the county.
- The major themes of the *Dare County Land Use Plan* include natural resource preservation, residential development as the preferred principal land use, commercial development that reflects the historic architectural patterns of Dare County, and the recognition of the importance of tourism to the county economy.
- Most policies in the Southern Shores land use plan acknowledge the predominantly residential nature of Southern Shores, and the preference and desire to continue this character into the future.
- The Town of Duck plans to preserve its present physical appearance and form in order to maintain its unique character among coastal villages.
- 2000 and 2010 US Census data, 2005 to 2009 American Community Survey data, field observations, and public involvement opportunities did not reveal that any of the communities in the DCIA held concentrations of minorities or low income households. In addition, there are no concentrations in the DCIA of persons who are not proficient with the English language.

## 1.2 Public Involvement and Issues Raised

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Key public involvement opportunities associated with developing the Mid-Currituck Bridge Study *Draft Environmental Impact Statement* (DEIS) and this *Community Impact Assessment Technical Report* are listed in Table 1-1. Details of these meetings and their outcomes, as well as other public outreach tools used, are presented in the *Stakeholder Involvement for Draft Environmental Impact Statement Technical Report* (Parsons Brinckerhoff, 2009). Community issues also were raised during the public comment period for the DEIS. The times and dates of the DEIS public hearings also are presented in Table 1-1. Details of the public hearings, associated open houses, and DEIS public comments and North Carolina Turnpike Authority (NCTA) responses are presented in the *Stakeholder Involvement for Final Environmental Impact Statement Technical Report* (Parsons Brinckerhoff, 2011). Their outcomes are summarized in the paragraphs that follow.

**Table 1-1. Public Workshops/Meetings/Hearings and Request for Comments**

<b>Date</b>	<b>Topics of Discussion</b>
<b>Citizens Informational Workshops</b>	
July 15, 21, and 22, 2004	Study requirements, activities, and schedule; and Statement of Purpose and Need.
February 26, 27, and 28, 2008	Mid-Currituck Bridge Study process and components and project concerns and issues.
<b>Public Review of Statement of Purpose and Need and Alternatives Screening Report</b>	
April 2008	Comments requested on a draft Statement of Purpose and Need report and a draft Alternatives Screening Report.
<b>Small Group Meetings</b>	
March 27, 2002	Meeting with the Duck Civic Association to discuss the status of the project.
July 18, 2002	Meeting with citizens from the Town of Southern Shores to discuss the status of the project.
March 31, 2004	Meeting with the Build the Bridge – Preserve Our Roads organization to discuss the status of the project.
October 12, 2009	Meeting with representatives of the Aydlett community to provide information about the Option B Mid-Currituck Bridge mainland approach road alternative.
<b>Public Hearings</b>	
May 18, 2010	Open House and Public Hearing in Kill Devil Hills regarding the findings of the DEIS.
May 19, 2010	Open House and Public Hearing in Corolla regarding the findings of the DEIS.
May 20, 2010	Open House and Public Hearing in Barco regarding the findings of the DEIS.

### **1.2.1 July 2004 Workshops**

Three Citizens Informational Workshops were held on July 15, 21, and 22, 2004, to:

- Present and discuss study requirements, activities, and schedule; and
- Present and discuss a Statement of Purpose and Need.

At these meetings, 194 persons registered their presence. Comments were requested and received at all three workshops. Key issues raised by the citizens in their comments were:

- Traffic projections seemed to be based on simplistic assumptions;

- Concerns about property values, community cohesion, and quality of life within the Town of Southern Shores should NC 12 be widened;
- Support for the bridge for public safety reasons and as a hurricane evacuation route;
- Opposition to the widening of NC 12 through the Towns of Southern Shores and Duck and points northward;
- Opposition to the Mid-Currituck Bridge because of belief that it would accelerate growth and cause more traffic problems;
- Belief the bridge should be “decoupled” from the other highway improvements being considered and studied separately; and
- Concerns about the cost of the bridge.

## 1.2.2 February 2008 Workshops

In association with project’s concept and bridge corridor alternatives screenings, Citizens Informational Workshops were held at three locations on February 26, 27, and 28, 2008, respectively. These meetings provided the public an opportunity to learn more about the project and provide input on the project’s purpose and need and range of alternatives. Comments focused on the alternatives.

### 1.2.2.1 Project Concept Screening

The project’s concept screening focused primarily on two sets of alternatives: alternatives that improve existing roads without building a new bridge (ER1 and ER2) and alternatives that involve constructing a new Mid-Currituck Bridge in combination with improvements to existing roads (MCB1, MCB2, MCB3, and MCB4). The concept screening process also involved analysis of several other alternatives, including: shifting rental start times; transportation systems management (TSM); bus transit; and ferry service. These alternatives are described in the *Alternatives Screening Report* (Parsons Brinckerhoff, 2009).

Of the 292 comments received on project concepts during a comment period that ended March 28, 2008, 186 indicated they preferred the construction of a bridge, and 28 indicated they favored widening existing roads. Primary reasons for favoring a bridge were reduced future congestion, improved hurricane evacuation times, and potential positive economic impacts. Primary concerns related to a Mid-Currituck Bridge project were: natural resource impact, changes in views of Currituck Sound, increased day visitors, increased crime, community impacts (particularly in Aydlett), and that a bridge would not completely solve area traffic problems. Those who favored widening existing roads also felt that such an alternative would reduce congestion and facilitate hurricane evacuation. Primary concerns with widening existing roads included: changes in

community character, the safety of pedestrians that cross NC 12, negative economic impacts from loss of business parking, and health risks associated with traffic and emissions being closer to residences. Eleven respondents indicated that they favored the No-Build Alternative, primarily because the traffic problem in the project area is currently confined to summer weekends. A majority of comments regarding tolling were favorable about this financing tool. Some comments noted that improved pedestrian and bicycle access should be provided regardless of the alternative pursued. Local officials, both at local officials meetings held on February 27 and 28, 2008 and in resolutions, indicated that they favored the bridge project over widening existing roads.

No comments were received related to the other alternatives considered and rejected except the ferry alternative. The 10 comments regarding ferry service were equally split between proponents and opponents. Several expressed concern that ferry service had been tried and was unsuccessful. Others noted that the sound is too shallow and could not sustain ferry service. Some respondents noted that tourists might enjoy the novelty of a ferry and be inclined to use it.

#### **1.2.2.2 Bridge Corridor Screening**

The project's bridge corridor screening focused on six corridors, C1 to C6. These alternatives and other bridge corridors considered but dropped early in the study process are described in the *Alternatives Screening Report* (Parsons Brinckerhoff, 2009).

Public comments on the bridge corridors generally focused on concerns related to direct impacts associated with the bridge termini, including noise impacts at nearby homes in Aydlett, changes in views (including those of historic structures), a family cemetery displacement in the US 158 interchange area with C1 and C2, and impacts to the Corolla Bay subdivision by C1, C3, and C5 (proximity to bridge, change in sound views, and right-turn only access to residential and commercial components). Many of the comments on these alternatives came from persons who would be personally affected by a particular corridor, as well as people concerned about potential impacts on their community in general.

Several persons suggested that the bridge end on the mainland at the intersection of US 158 and NC 168. It was felt that such a corridor would reduce community impact and help hurricane evacuation by providing a second bridge across the Intracoastal Waterway and a direct route to NC 168. This concept was considered but eliminated for reasons described in the *Alternatives Screening Report* (Parsons Brinckerhoff, 2009).

Those who expressed an opinion on the Outer Banks termini overwhelmingly indicated a preference for ending the bridge south of TimBuck II (a shopping and entertainment center on the west side of NC 12 at Albacore Street) because it would affect the community and traffic circulation the least. This option was associated with C2, C4, and C6). Many opposed the northern terminus (C1, C3, and C5) because of concerns that it would increase traffic through the Whalehead Beach community.

### **1.2.3 Public Review of Statement of Purpose and Need and Alternatives Screening Report**

On April 7, 2008, NCTA released a draft Statement of Purpose and Need report and a draft Alternatives Screening Report for the Mid-Currituck Bridge Study. These documents were delivered to project area municipal offices in Currituck, Corolla, Kitty Hawk, Southern Shores, and Duck, and posted on the project web site. Stakeholders were notified of the release of these documents through a postcard mailing and via the project web site. Comments were requested.

A total of 65 comments were submitted to NCTA via email, conventional mail, telephone, as well as formal comment sheets distributed through the project web site. The Towns of Nags Head and Southern Shores, Currituck County, and the Albemarle Commission submitted official resolutions, the Town of Duck submitted a letter, and recommendations were made by a special interest group and a property owner's association. Governmental resolutions and letters supported the Mid-Currituck Bridge.

#### ***1.2.3.1 Statement of Purpose and Need-Related Comments***

Five citizens made comments that specifically referenced the draft Statement of Purpose and Need. Several of these comments included questions regarding the methodology used for numbers cited in the report. These comments included:

- Two comments that inquired about methodologies used for population statistics. These comments asked for clarification of who was included in population counts and how population was projected.
- Two comments that contested the stated traffic congestion problems. These comments argued that traffic congestion is infrequently experienced and does not constitute a need.

These commenters generally opposed construction of a Mid-Currituck Bridge. One comment was a general statement of approval for the draft Statement of Purpose and Need and the project. One comment disputed the right of communities outside of Currituck County to have input for this study and did not want a copy of the report to be available in those locations south of the county line.

#### ***1.2.3.2 Alternatives Screening Report-Related Comments***

Eight citizens made comments that specifically referenced the findings of the draft Alternatives Screening Report. These comments generally opposed construction of a Mid-Currituck Bridge. Comments included:

- One comment was a general statement of approval for the draft Alternatives Screening Report and the project.

- One respondent that felt that noise, visual, and community cohesion impacts to the Town of Aydlett were neglected in the draft Alternatives Screening Report. It was suggested that the environmental impacts be minimized by utilizing a corridor through a former shooting club (now “The Currituck Club,” a developing subdivision). The reasons why this alternative was not pursued is in the *Alternatives Screening Report* (Parsons Brinckerhoff, 2009).
- One respondent noted that billboards that she owned adjacent to US 158 near the proposed interchange with the bridge were not included in the assessment of business impacts in the draft Alternatives Screening Report.
- One respondent, a mainland Currituck resident who resides on the land where the proposed bridge interchange with US 158 would occur, felt that a trumpet interchange design would have less impact than the “Y” interchange design because the “Y” interchange could interfere with drainage.
- One respondent felt that traffic patterns support inclusion of widening existing roads alternatives because drivers that use the proposed bridge would still contribute to traffic in Southern Shores and Duck as they use NC 12 to access shopping and restaurants.
- One respondent misinterpreted the draft Alternatives Screening Report and thought that NCTA was recommending widening of NC 12 through Southern Shores and Duck. This respondent requested that NCTA reconsider that recommendation.

### **1.2.3.3 General Project Comments**

The majority of comments received (47) expressed a preference for and/or against various project alternatives. These comments included:

- Comments in favor of a bridge alternative noted that a bridge would improve accessibility and reduce traffic congestion, travel time, and fuel costs. Enhanced hurricane evacuation capacity also was a frequently cited benefit of a bridge.
- Several comments noted that the bridge would not actually completely solve the area’s traffic congestion problems.
- Several respondents expressed opposition to the bridge because of direct displacement of property.
- Some comments stated concern that habitat and wildlife would be threatened by the construction of a bridge and the resulting increase in automobile traffic.

- Some respondents noted concern that a bridge would encourage over-development and commercialization of the Outer Banks. They frequently cited the need for growth management.
- There were concerns that the bridge would affect neighborhoods and communities. Some of these comments referred to the direct impacts of bridge landings, while others referred to the indirect impacts of increased automobile traffic.
- There was concern that the bridge would provide easy access to criminals that would take advantage of empty houses on the Outer Banks during the off-season.
- There was concern that the bridge would cause a reduction in the visual and aesthetic quality of the area.
- There was considerable concern that widening roads would damage the distinctive community character.
- Several respondents noted that they felt widening the existing roads would have negative impacts on the economy of the area, as it would deter tourists from visiting the area.
- Some comments stated preference for improvement of existing roads. Several comments noted opposition to alternatives that included improvement of existing roads.
- Several comments were in favor of the No-Build Alternative and explained that traffic congestion was primarily a problem during summer weekends, and that this limited problem is an acceptable inconvenience considering the proposed alternatives.
- One comment requested that bicycles be included in the planning of a Mid-Currituck Bridge. This respondent cited a North Carolina Department of Transportation (NCDOT) study that found that investment in bicycle facilities on the Outer Banks resulted in positive economic impact. The respondent suggested that inclusion of bicycle facilities on a bridge would lure greater numbers of tourists to the Outer Banks.

#### **1.2.4 Small Group Meetings**

NCTA invites or is invited by community groups and other stakeholders to arrange small group meetings with the study team. This provides an opportunity for citizens to obtain additional information and provide comments on the project. Small group meetings have been conducted with several stakeholder groups, including the following: Duck Civic Association (March 27, 2002), citizens from the Town of Southern Shores (July 18, 2002), Build the Bridge – Preserve Our Roads, Inc. (March 31, 2004), and



the Aydlett community (October 12, 2009). In the case of the first three meetings, the citizen representatives invited the study team to brief them on the status of the project, answer their questions, and discuss their concerns about congestion on NC 12 and a Mid-Currituck Bridge as a solution. The meeting with representatives of the Aydlett community was initiated by NCTA. Representatives of the nearby Church's Island community and other persons interested in the project also chose to attend. The purpose of the meeting was to provide representatives of the Aydlett community with information about the Option B Mid-Currituck Bridge mainland approach road alternative and obtain comments on the alternative as it relates to its impact on the Aydlett community. Option A also was presented and discussed.

Most of the comments were directed to concerns about the impact of Option B on the Aydlett community, including potential impacts on their way-of-life and the potential for drivers to change their mind about using the bridge just before the toll plaza and use roads in the Aydlett community to return to 158. Citizens also felt that Option B contradicted previous promises that there would be no access between the bridge project and Aydlett.

Church's Island representatives expressed their opposition to the prohibition of left turns at the US 158/Waterlily Road intersection which, at the date of the meeting, was associated with Option A.

### **1.2.5 Public Hearings, Open Houses, and Public Review**

Many of the comments received during the DEIS public review period indicated a preference for one of the detailed study alternatives under consideration. A notable number of persons favored the No-Build Alternative and a notable number favored MCB4.

Those who preferred the No-Build Alternative were concerned that the project would not be effective in meeting the defined purpose and need, would cause substantial community and natural resource impacts, and with induced development on the Outer Banks, change its character and the sense of isolation preferred by its residents and visitors. Those favoring MCB4 did so because of:

- Improved traffic flow, reduced travel time, and hurricane evacuation benefits, as well as perceived greater safety and convenience for motorists, economic benefits, and access to public services.
- Community impacts associated with widening roads to obtain needed travel improvements.

General opposition to widening NC 12 came particularly from Dare County stakeholders because of potential community impacts. Preferences were divided

between the two Outer Banks termini alternatives, C1 and C2. Almost all commenters favored mainland approach design Option A because it would minimize impacts to the community of Aydlett. In terms of hurricane evacuation improvements, commenters favored reversing the center turn lane as a third outbound lane. Many of those who favored the No-Build Alternative also indicated that they did not think hurricane evacuation improvements were needed. A summary of the number of public comments for and against each DEIS detailed study alternative is provided in the *Stakeholder Involvement for Final Environmental Impact Statement Technical Report* (Parsons Brinckerhoff, 2011).

In addition to the comments received expressing preferences for a particular alternative, comments also were received expressing concerns on a broad range of topics related to the project and its potential direct community impacts. These comments included:

- The adequacy of the information in the DEIS related to the general land use and community features in the project area.
- Effects on neighborhood or community cohesion.
- Effects on quality of life.
- Grave site relocation.
- Potential for concentrations of low income, minority populations, or limited English proficiency populations to suffer disproportionate adverse health or environmental effects.
- Compatibility with local land use plans.
- Effects on the existing business community, including businesses whose access would change or that would be bypassed by bridge traffic.
- Changes in neighborhood and community access.
- Effects on community services, facilities, and recreation opportunities, including potential impacts on boating and duck blinds in Currituck Sound and potential increased beach driving.
- Effects on bicycle and pedestrian movement and provisions on the Outer Banks, and providing bicycle access on the bridge.
- Increased crime rates on the Outer Banks.

A detailed summary of all public comments received and NCTA's responses is presented in the *Stakeholder Involvement for Final Environmental Impact Statement Technical Report* (Parsons Brinckerhoff, 2011).

## 1.3 Key Potential Impacts

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Potential direct impacts differ among the detailed study alternatives (ER2, MCB2, MCB4, and the Preferred Alternative) and the No-Build Alternative (see Section 2.3 and Section 2.4 for a description of these alternatives). In addition, adverse or beneficial impacts also depend on the alternative with which the impact is associated. The impacts are addressed fully in Section 6.0 and summarized in Table 6-1. Key potential impacts would include:

- Visual
  - ER2 – Interchange introduced into views in Kitty Hawk; changes in views along NC 12 from US 158 to Albacore Street.
  - MCB2/C1 – Mid-Currituck Bridge and the associated toll plaza and approach road introduced into views along US 158 and in Aydlett (including views of Currituck Sound); changes in views in Aydlett that differ between Option A and Option B with Option A introducing a two-lane approach road on fill and Option B introducing a toll plaza (generally at the existing land elevation) and changes in the local road system to bring it over the toll plaza; adverse effects to views of Currituck Sound from the Corolla Bay and Monteray Shores subdivisions; interchange introduced into views in Kitty Hawk; changes in views along NC 12 from US 158 to bridge terminus.
  - MCB2/C2 – Mid-Currituck Bridge and the associated toll plaza and approach road introduced into views along US 158 and in Aydlett (including views of Currituck Sound); changes in views in Aydlett that differ between Option A and Option B with Option A introducing a two-lane approach road on fill and Option B introducing a toll plaza (generally at the existing land elevation) and changes in the local road system to bring it over the toll plaza; adverse effects to views from the outdoor recreation area at TimBuck II commercial area; interchange introduced into views in Kitty Hawk; changes in views along NC 12 from US 158 to bridge terminus.
  - MCB4/C1 – Mid-Currituck Bridge and the associated toll plaza and approach road introduced into views along US 158 and in Aydlett (including views of Currituck Sound); changes in views in Aydlett that differ between Option A and Option B with Option A introducing a two-lane approach road on fill and Option B introducing a toll plaza (generally at the existing land elevation) and changes in the local road system to bring it over the toll plaza; adverse effects to views of Currituck Sound from the Corolla Bay and Monteray Shores subdivisions; changes in views along NC 12 from Seashell Lane to bridge terminus.
  - MCB4/C2 – Mid-Currituck Bridge and the associated toll plaza and approach road introduced into views along US 158 and in Aydlett (including views of Currituck Sound); changes in views in Aydlett that differ between Option A and

Option B with Option A introducing a two-lane approach road on fill and Option B introducing a toll plaza (generally at the existing land elevation) and changes in the local road system to bring it over the toll plaza; adverse effects to views from the outdoor recreation area at TimBuck II commercial area; changes in views along NC 12 from Seashell Lane to bridge terminus.

- Preferred Alternative – Mid-Currituck Bridge and the associated toll plaza and approach road introduced into views along US 158 and in Aydlett (including views of Currituck Sound); a two-lane approach road on fill is introduced in Aydlett; adverse effects to views of Currituck Sound from the Corolla Bay and Monteray Shores subdivisions (although less than with MCB2/C1 and MCB4/C1 because of refined bridge location); changes in views along NC 12 in three areas where NC 12 is widened.

- Relocations

<u>ER2</u>	<u>MCB2 (C1 or C2)</u>	<u>MCB4 (C1 or C2)</u>	<u>Preferred Alternative</u>
Residential			
6 (1 without third outbound lane for hurricane evacuation), plus 10 vacation rental units	6 to 8 plus 10 vacation rental units on the Outer Banks	5 to 7	6 (including a likely vacation rental unit)
Businesses			
5 (2 without third outbound lane for hurricane evacuation)	7 to 8 (5 to 6 without third outbound lane for hurricane evacuation)	5 to 6 (3 to 4 without third outbound lane for hurricane evacuation)	3
Outdoor Advertising Signs			
29 (none without third outbound lane for hurricane evacuation)	6 to 16 (3 to 13 without third outbound lane for hurricane evacuation)	6 to 16 (3 to 13 without third outbound lane for hurricane evacuation)	3
Gravesites			
66 (none without third outbound lane for hurricane evacuation)	35 to 36 (19 to 20 without third outbound lane for hurricane evacuation)	35 to 36 (19 to 20 without third outbound lane for hurricane evacuation)	20

- Land Use Plans

- No-Build Alternative, ER2 – These would be inconsistent with the *Currituck County Land Use Plan*, *Town of Southern Shores Long Range Plan* and *Town of Duck Land Use Plan*, as all support construction of a Mid-Currituck Bridge.
- MCB2, MCB4, Preferred Alternative – These would be consistent with the *Currituck County Land Use Plan*, *Town of Southern Shores Long Range Plan* and *Town of Duck Land Use Plan*, from the perspective that all support construction of a Mid-Currituck Bridge.
- Mid-Currituck Bridge design Option B would not be consistent with the *Currituck County Land Use Plan* because it would provide a connection between the bridge approach road and the local Aydlett Street system.
- MCB2 would not be consistent with the *Town of Duck Land Use Plan*, which calls for NC 12 to remain in its existing configuration (mostly two lanes).

A formal plan consistency determination for the Preferred Alternative (assuming it is selected in the Record of Decision [ROD]) would be made by the North Carolina Department of Environment and Natural Resources Division of Coastal Management (NCDENR-DCM) during the permit process. According to NCDENR-DCM's June 4, 2010 letter commenting on the DEIS, *Currituck County Land Use Plan* policy consistency issues to be addressed by the Preferred Alternative design and mitigation features as part of the formal consistency determination relate to stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, relocation of utilities underground, and infrastructure for any potential day visitors. NCDENR-DCM's letter is contained in Appendix B of the *Stakeholder Involvement for Final Environmental Impact Statement Technical Report* (Parsons Brinckerhoff, 2011).

- Access

- US 158/Mid-Currituck Bridge interchange area

MCB2, MCB4 – With Option A, pavement marking on the Mid-Currituck Bridge ramp to US 158 would be designed to have traffic on the ramp completely merged into US 158 approximately 600 feet south of Waterlily Road. However, the additional pavement for the ramp would continue to the Waterlily Road intersection to serve as the right-turn lane, so there would be the potential for merging traffic to wait until just before the intersection to merge into US 158. This would increase the challenge of turning left into or out of Waterlily Road during peak travel periods. This would not be the case with Option B. With Option B, direct access from US 158 would be lost for customers of a gas station in the US 158/Mid-Currituck Bridge interchange area.

MCB2, MCB4 – With both Option A and Option B, a frontage road would be provided on the east side of US 158 and north of the interchange to serve properties fronting US 158;

MCB2, MCB4 – With Option B, a frontage road would be provided along the west side of US 158 adjacent to the interchange to provide access to properties in this area that currently have direct access to US 158. With Option A, these properties would be purchased, and no frontage road would be needed or provided.

Preferred Alternative – With this alternative, a median acceleration lane would be provided at Waterlily Road. This safety feature would allow left turns to continue to be made at Waterlily Road and US 158. Bulb-outs for u-turning vehicles also would be provided at the re-aligned US 158/Aydlett Road intersection and the US 158/Worth Guard Road intersection to provide greater flexibility for local traffic in turning to and from existing side streets near the US 158/Mid-Currituck Bridge interchange. A frontage road would be provided on the east side of US 158, north of the interchange, to serve properties fronting US 158. Properties on the west side of US 158 adjacent to the interchange would be purchased; no frontage road would be provided.

- Aydlett area

MCB2/A, MCB4/A, Preferred Alternative – Aydlett Road and Narrow Shore Road are unchanged. The bridge would pass over Narrow Shore Road. No access to and from the Mid-Currituck Bridge would be provided at Aydlett.

MCB2/B, MCB4/B – Existing Aydlett Road would be removed through Maple Swamp. Travel between US 158 and Aydlett would be provided via the Mid-Currituck Bridge approach road. Aydlett travelers would exit or enter the approach road such that they would not pass through the toll plaza placed in Aydlett. No access to and from the Mid-Currituck Bridge would be provided at Aydlett. Access between the southern and northern parts of Aydlett would be via a relocated Narrow Shore Road, which would take drivers over the toll plaza. Because Aydlett Road would be removed through Maple Swamp, the potential would exist during unusual traffic situations, such as a crash on the approach road or bridge, for emergency vehicles serving Aydlett to be slowed between US 158 and Aydlett.

- Street closures along NC 12

ER2, MCB2 – Widgeon Drive, Canvas Back Drive, and Old Squaw Road would be closed to through traffic but not to emergency vehicles. A second connection to NC 12 exists for the subdivisions served by these streets.

MCB2, MCB4 – With bridge corridor C1, the access road connecting NC 12 to north end of North Harbor View Drive would be closed. The intersection with NC 12 at the south end of North Harbor View Drive would be retained.

Preferred Alternative – The access road connecting NC 12 to the north end of North Harbor View Drive would be relocated. The intersection with NC 12 at the south end of North Harbor View Drive would be retained.

- US 158 super-street

ER2, MCB2 – Unrestricted left-turns across US 158 would be eliminated. The number of four-way intersections would be reduced. Direct access across the highway would be limited. Provisions would be made for U-turns for those wishing to turn left or cross US 158.

- US 158/NC 12 interchange

ER2, MCB2 – Some turning movements would be eliminated by the US 158/NC 12 interchange, including loss of direct access to US 158. Alternate access routes exist on local streets.

- Mid-Currituck Bridge

MCB2, MCB4, Preferred Alternative – Beneficial Impact. Access to commercial resources and services would be improved between the Outer Banks and mainland Currituck County.

- Parking – Potential or known loss of parking, depending on the alternative.
  - ER2 – Outer Banks – US 158 super-street would reduce parking at the Home Depot about 10 percent, resulting in non-conforming (does not meet current requirements) ratio of parking/retail space.
  - MCB2 – US 158 super-street would reduce parking at the Home Depot about 10 percent, resulting in non-conforming (does not meet current requirements) ratio of parking/retail space. With bridge corridor C2, the TimBuck II shopping center would lose some of its parking area. With bridge corridor C1, a total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monterey Drive.
  - MCB4 – With Mid-Currituck Bridge corridor C2, TimBuck II shopping center would lose some of its parking area. With corridor C1, a total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monterey Drive.

- Preferred Alternative – A total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monterey Drive.
- Public Safety
  - ER2, MCB2, MCB4 – Beneficial impact. Hurricane clearance time reduced to either 21.8 hours, nearly 4 hours over the North Carolina Standard of 18 hours in 2035 (14.5 hours less than the No-Build Alternative), or 27.4 hours, approximately 9.4 hours over the North Carolina Standard (8.9 hours less than the No-Build Alternative).
  - Preferred Alternative – Beneficial impact. Hurricane clearance time reduced to 27.4 hours in 2035, 8.9 hours less than the No-Build Alternative and approximately 9.4 hours over the North Carolina Standard.
  - No-Build Alternative – The anticipated hurricane clearance time is 36.3 hours in 2035, more than 18 hours over the North Carolina Standard of 18 hours.
- Bicycle Safety
  - ER2, MCB2, MCB4, Preferred Alternative – Beneficial impact. On the Outer Banks, local unnamed multi-use paths would be retained, replaced to NCDOT standards, or allowed for in project design. Space would be provided for a multi-use path for approximately 2 miles in Currituck County where such a path does not now exist.
- Bird Sanctuaries, Wildlife Refuges, and Kayaking Trails
  - ER2, MCB2, MCB4, and Preferred Alternative – No impacts to bird sanctuaries would occur.
  - MCB2, MCB4 – These alternatives would require a permanent drainage easement along the edge of the Pine Island Audubon Sanctuary where it abuts the NC 12 right-of-way.
  - MCB2/C2, MCB4/C2 – The dock from where the kayaks are launched for the Corolla Marshes from the TimBuck II trail would be removed. The remainder of the trail would not be affected.
  - Preferred Alternative – The Pine Island Audubon Sanctuary and the dock where the kayaks are launched for the Corolla Marshes from TimBuck II trail would not be affected.



## 1.4 Findings and Recommendations

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With any of the alternatives, various impacts, as well as benefits, would occur. Key potential impacts and benefits were listed in the previous section.

Key impacts relate to:

- Visual change;
- Relocations;
- Inconsistency with land use plans;
- Changes in access;
- Parking loss;
- Use of land from a bird sanctuary for a permanent drainage easement adjacent to the NC 12 right-of-way; and
- Removal of launch dock from Corolla Marshes from TimBuck II kayak trail.

Key benefits are:

- Improved access, improved traffic flow and reduced travel time between the Currituck County mainland and Outer Banks with MCB2, MCB4, and the Preferred Alternative;
- Reduced hurricane clearance times; and
- Provisions for a future multi-use path along NC 12 in Currituck County.

The detailed study alternatives would not have a disproportionately high and adverse impact on minority or low-income populations, or populations with limited English proficiency.

With the No-Build Alternative, there would be no community impacts. However, congestion and travel time in the project area would not be reduced, and the 2035 hurricane clearance time is predicted to increase to 36 hours. Also, the No-Build Alternative is inconsistent with numerous planning documents for the project area, including the *Currituck County Land Use Plan*, *Town of Southern Shores Long Range Plan*, *Town of Duck Land Use Plan*, *Thoroughfare Plan for Currituck County*, and the *North Carolina Strategic Highway Corridor and Intrastate System* maps.

Various measures would serve to mitigate key impacts of the detailed study alternatives or would be included as enhancement measures in the project design. Means to

minimize impacts would be pursued during final design of the Preferred Alternative. They would include:

- Visual Change
  - Much of the visual change associated with the project cannot be substantially mitigated. As a part of final design for the Preferred Alternative, a landscaping plan would be developed. Sensitivity to their context will be considered in bridge- and interchange-related structure designs.
- Relocations
  - It is the policy of NCDOT and NCTA to ensure that comparable replacement housing or business location is available prior to construction of state and federally-assisted projects. The Relocation Moving Payments Program provides for payment of actual relocation moving expenses.
- Inconsistency with Land Use Plans
  - Currituck County Land Use Plan policy consistency issues to be addressed by the Preferred Alternative design and mitigation features as part of the formal consistency determination by NCDENR-DCM relate to the protection of Maple Swamp, stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, relocation of utilities underground, and infrastructure for any potential day visitors.
- Changes in Access
  - Access would be retained to all properties or the property would be purchased. On roadways, provisions would be made to support U-turns at nearby intersections where left turns would be restricted. Provisions would be made for emergency vehicles. Improvements at the US 158/Waterlily Road intersection would include a median acceleration lane. This safety feature would allow left turns to continue to be made at Waterlily Road and US 158.
- Parking Loss
  - Opportunities to reduce further parking loss would be considered during final design.

- Multi-Use Paths

- New multi-use paths to replace existing (as shown on the preliminary design in locations with existing paths and all 10 feet wide) as follows:

Along west side of NC 12 from south of Ocean Forest Court to south of North Harbor View Drive (at the southern end of the northern section of NC 12 improvements).

Along west side of NC 12 from north of Dolphin Street (at the northern end of the middle section of NC 12 improvements) to north side of first business driveway north of Monteray Drive.

Along the north side of US 158 from west of Duck Woods Drive to Market Place Shopping Center driveway.

- Grading for future multi-use path to be provided by others (as shown on the preliminary engineering in locations without existing paths) as follows:

Along the west side of NC 12 from Devil's Bay Road (Corolla Bay subdivision entrance) to north of Ocean Forest Court.

Along the west side of NC 12 from south side of first business driveway north of Monteray Drive to Crown Point Road.

Along the east side of NC 12 from Sand Fiddler Trail to south of Currituck Clubhouse Drive (at point where widened southern section of NC 12 starts taper from four lanes to two lanes).

## 2.0 Project Description

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The Mid-Currituck Bridge project would involve transportation improvements to the eastern Currituck County peninsula and the Currituck County and northern Dare County Outer Banks. The detailed study alternatives are described in Section 2.3. Portions of the proposed project are included in NCDOT's *2009-2015 State Transportation Improvement Program* (STIP), as well as the 2012 to 2018 Draft STIP, as STIP Project No. R-2576. Portions of the project also are included in the North Carolina Intrastate System (NC General Statute 136-178), the *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004), and the *Thoroughfare Plan for Currituck County* (NCDOT, 1999).

### 2.1 Communities within the Project Area

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The project area is in northeastern North Carolina and includes the Currituck County peninsula on the mainland and its Outer Banks, as well as the Dare County Outer Banks north of Kitty Hawk (see). The project area is south of the Virginia Beach-Norfolk, Virginia (Hampton Roads), metropolitan area. The project area encompasses two thoroughfares, US 158 from NC 168 to NC 12 (including the Wright Memorial Bridge) and NC 12 north of its intersection with US 158 to its terminus in Currituck County. US 158 is the primary north-south route on the mainland. NC 12 is the primary north-south route on the Outer Banks. The Wright Memorial Bridge connects the mainland with the Outer Banks. Together, US 158 and NC 12 form the project area's existing thoroughfare network.

The project is within the Albemarle Rural Planning Organization (RPO). Although there are no municipalities in Currituck County, rural communities dot the county mainland in the project area. From north to south they include: Coinjock, Aydlott, Grandy, Jarvisburg, Powells Point, Mamie, Harbinger, and Point Harbor (see Figure 1-2).

On the mainland, the communities are rural and sparsely populated, with some providing services to vehicular traffic along US 158. On the Outer Banks, the communities are more urbanized. They are beach-oriented, with commercial shopping and dining amenities, and they depend on tourism as their main economic base. Because vacation rental cottages make up most of the housing stock, the Outer Banks population varies over the course of the year, increasing on weekends, holidays and during the summer.

On the Dare County portion of the Outer Banks, the three municipalities within the project area are the northern portion of Kitty Hawk and all of Southern Shores and Duck. There are no incorporated areas to the north within the Currituck County portion of the Outer Banks. Within the Outer Banks project area are subdivisions that include Pine Island, Currituck Club, Spindrift, Ocean Sands, Crown Point, Buck Island,

Monterey Shores, Corolla Shores, Corolla Bay, and the Villages of Ocean Hill. Further north, Corolla Light, the community of Corolla, and the Villages of Ocean Hill are outside of the Direct Community Impact Area (DCIA). (See Figure 5-2 and Figure 5-3 later in this report for the precise locations of these communities.)

## 2.2 Project Purpose and Need

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As stated in the adopted *Statement of Purpose and Need* (Parsons Brinckerhoff, October 2008), the proposed project responds to three project area needs:

- The need to substantially improve traffic flow on the project area's thoroughfares (US 158 and NC 12);
- The need to substantially reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks; and
- The need to reduce substantially evacuation times from the Outer Banks for residents and visitors who use US 158 and NC 168 as an evacuation route.

Given the needs described above, the purposes of the proposed project are:

- To substantially improve traffic flow on the project area's thoroughfares. Thoroughfares in the project area are NC 12 and US 158;
- To substantially reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks; and
- To reduce substantially hurricane clearance time for residents and visitors who use US 158 and NC 168 during a coastal evacuation.

An improvement is considered substantial as opposed to minor if the improvement is great enough to be largely noticeable to typical users of the transportation system and if the improvement offers some benefit across much of the network, as opposed to offering only a few localized benefits. Alternatives that provide only minor or no improvement, as opposed to substantial improvement, would not meet the above purposes.

## 2.3 Detailed Study Alternatives

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An alternatives screening study was conducted for the project. Its findings were discussed with federal and state environmental resource and regulatory agencies in a series of Turnpike Environmental Agency Coordination (TEAC) meetings in 2006, 2007, 2008, and 2009. A number of options were considered and included existing roads (ER) and the proposed Mid-Currituck Bridge (MCB) alternatives. Based on discussions at TEAC meetings, and written comments received from the agencies and public, the

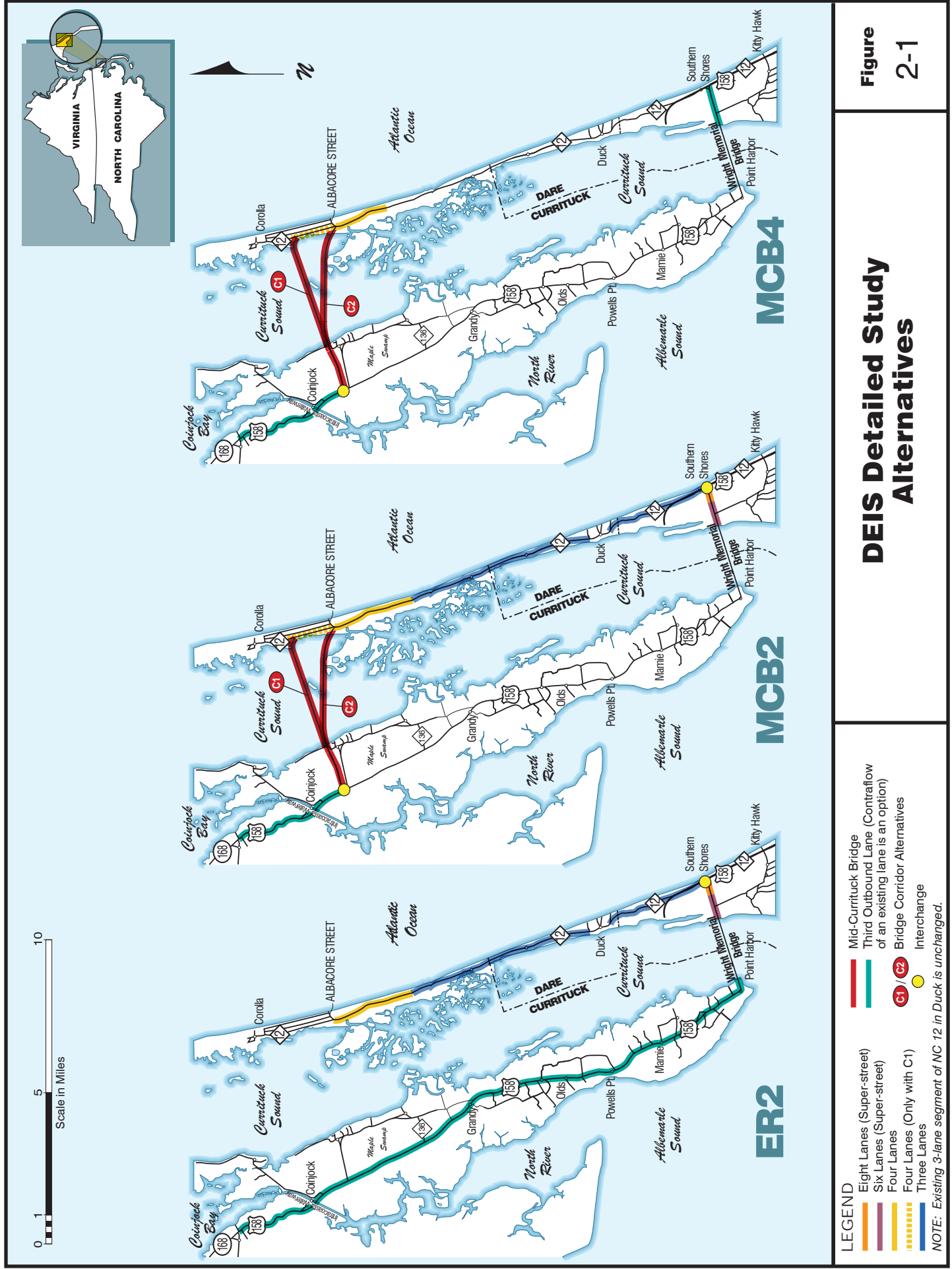
*Alternatives Screening Report* (Parsons Brinckerhoff, 2009) for the proposed project identified three alternatives to be carried forward for detailed study in the DEIS, plus the No-Build Alternative. The DEIS detailed study alternatives are ER2, MCB2, and MCB4. MCB2 and MCB4 also include two bridge corridor alternatives, C1 and C2. The three DEIS detailed study alternatives also are assessed in the FEIS, plus the No-Build Alternative and the Preferred Alternative, which is MCB4/C1 with design refinements to reduce potential impacts. These alternatives are shown on Figure 2-1 and Figure 2-2. The DEIS detailed study alternatives include the following characteristics:

- **ER2**

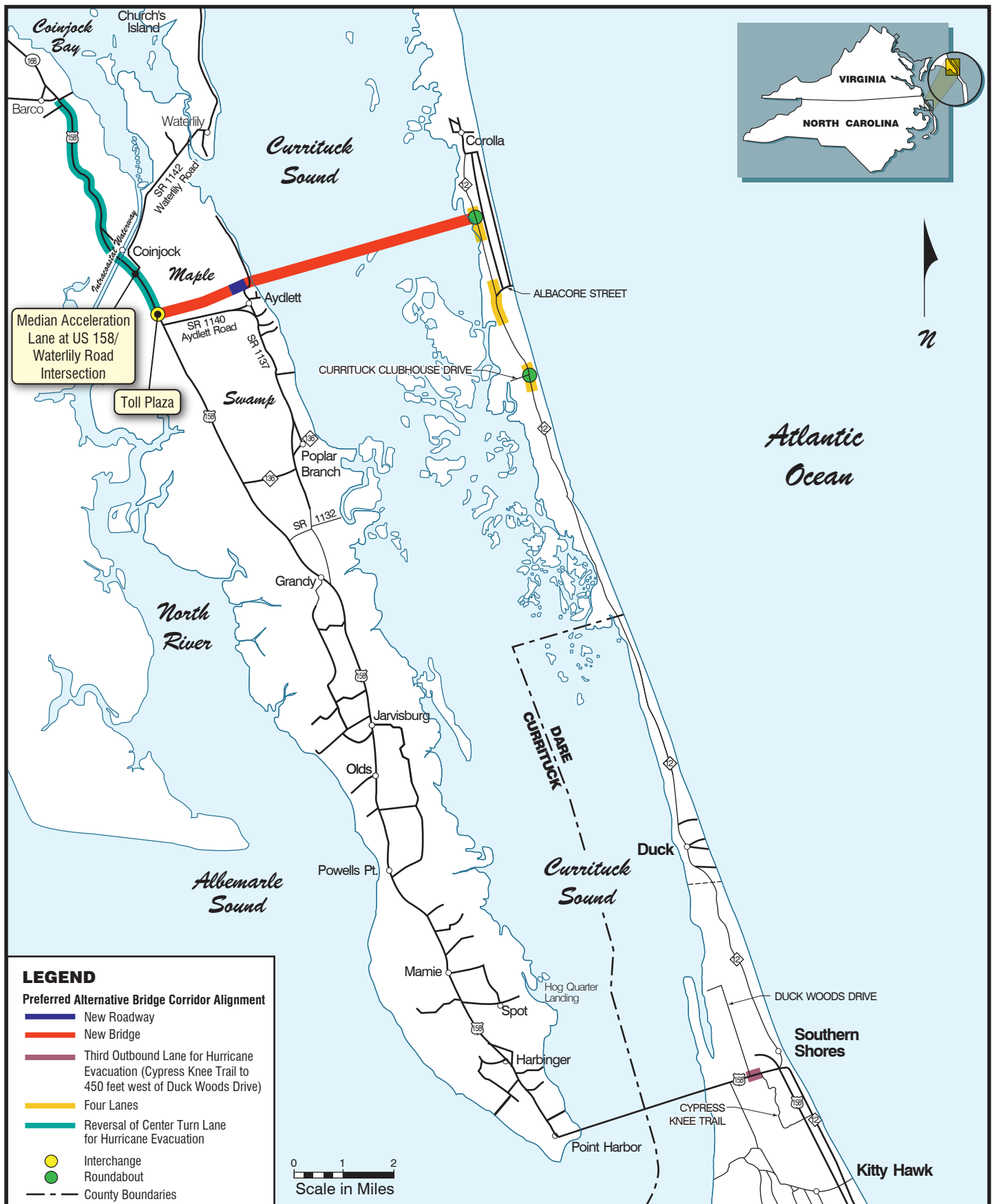
- Adding, for evacuation use only (closed to traffic during non-evacuation times by pavement markings), a third outbound evacuation lane on US 158 between NC 168 and the Wright Memorial Bridge as a hurricane evacuation improvement or using the existing center turn lane as a third outbound evacuation lane; in either case one inbound lane on the Wright Memorial Bridge and on the Knapp (Intracoastal Waterway) Bridge would be used as a third outbound evacuation lane;
- Widening US 158 to a six-lane super-street between the Wright Memorial Bridge and Cypress Knee Trail that widens to eight lanes between Cypress Knee Trail and the Home Depot driveway;
- Constructing an interchange at the current intersection of US 158, NC 12, and the Aycock Brown Welcome Center entrance, including six through lanes on US 158 starting at the Home Depot driveway and returning to four lanes just south of Grissom Street; and
- Widening NC 12 to three lanes between US 158 and a point just north of Hunt Club Drive in Currituck County (except where NC 12 is already three lanes in Duck) and to four lanes with a median from just north of Hunt Club Drive to Albacore Street.

- **MCB2**

- Constructing a two-lane toll bridge across Currituck Sound, as well as approach roads and/or bridges, and an interchange at US 158;
- Adding, for evacuation use only (closed to traffic during non-evacuation times by pavement markings), a third outbound evacuation lane on US 158 between NC 168 and the Mid-Currituck Bridge as a hurricane evacuation improvement or using the existing center turn lane as a third outbound evacuation lane; in either case one inbound lane on the Knapp (Intracoastal Waterway) Bridge would be used as a third outbound evacuation lane;



## Figure 2-1



**Preferred Alternative**

**Figure**  
**2-2**



- Widening US 158 to a six-lane super-street between the Wright Memorial Bridge and Cypress Knee Trail and an eight-lane super-street between Cypress Knee Trail and the Home Depot driveway;
  - Constructing an interchange at the intersection of US 158, NC 12, and the Aycock Brown Welcome Center entrance, including six through lanes on US 158 starting at the Home Depot driveway and returning to four lanes just south of Grissom Street; and
  - Widening NC 12 to three lanes between US 158 and a point just north of Hunt Club Drive in Currituck County (except where NC 12 is already three lanes in Duck) and to four lanes with a median from just north of Hunt Club Drive to NC 12's intersection with the Mid-Currituck Bridge.
- **MCB4**
    - Constructing a two-lane toll bridge across Currituck Sound, as well as approach roads and/or bridges and an interchange at US 158;
    - Adding for evacuation use only (closed to traffic during non-evacuation times by pavement markings), a third outbound evacuation lane on US 158 between NC 168 and the Mid-Currituck Bridge as a hurricane evacuation improvement or using the existing center turn lane as a third outbound evacuation lane; in either case one inbound lane on the Knapp (Intracoastal Waterway) Bridge would be used as a third outbound evacuation lane;
    - Adding for evacuation use only, a third outbound evacuation lane on US 158 between the Wright Memorial Bridge and NC 12 as a hurricane evacuation improvement or using the existing center turn lane as a third outbound evacuation lane; in either case one inbound lane on the Wright Memorial Bridge would be used as a third outbound evacuation lane; and
    - Widening NC 12 in Currituck County to four lanes with a median from Seashell Lane to NC 12's intersection with the Mid-Currituck Bridge.

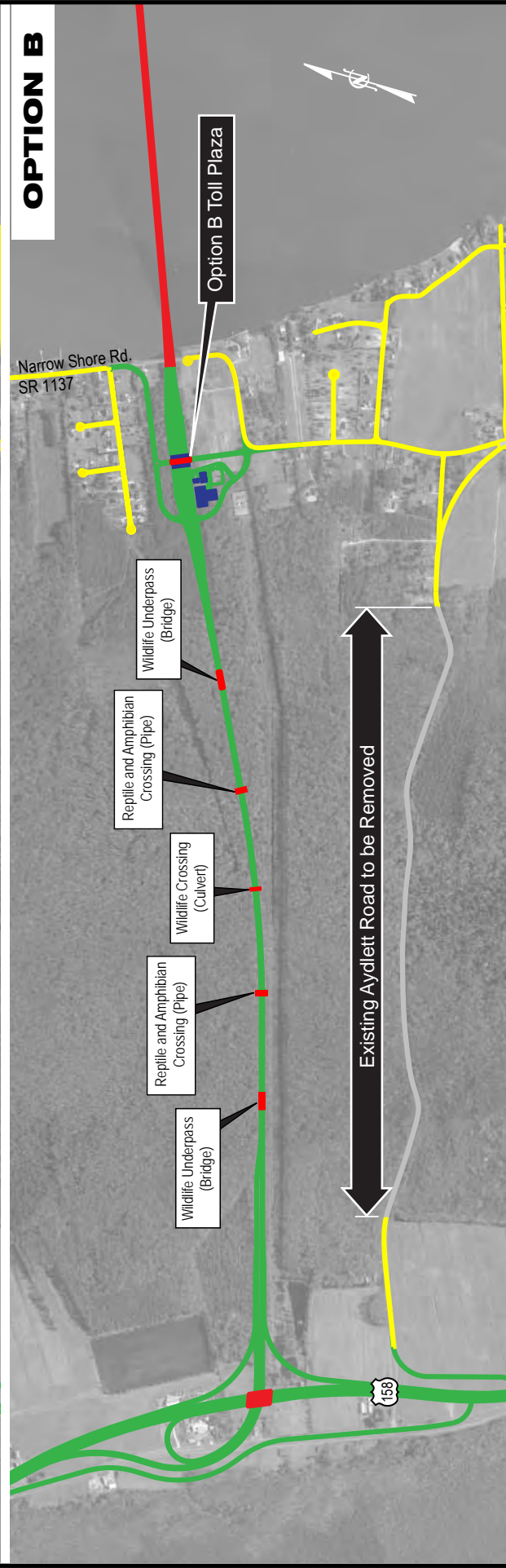
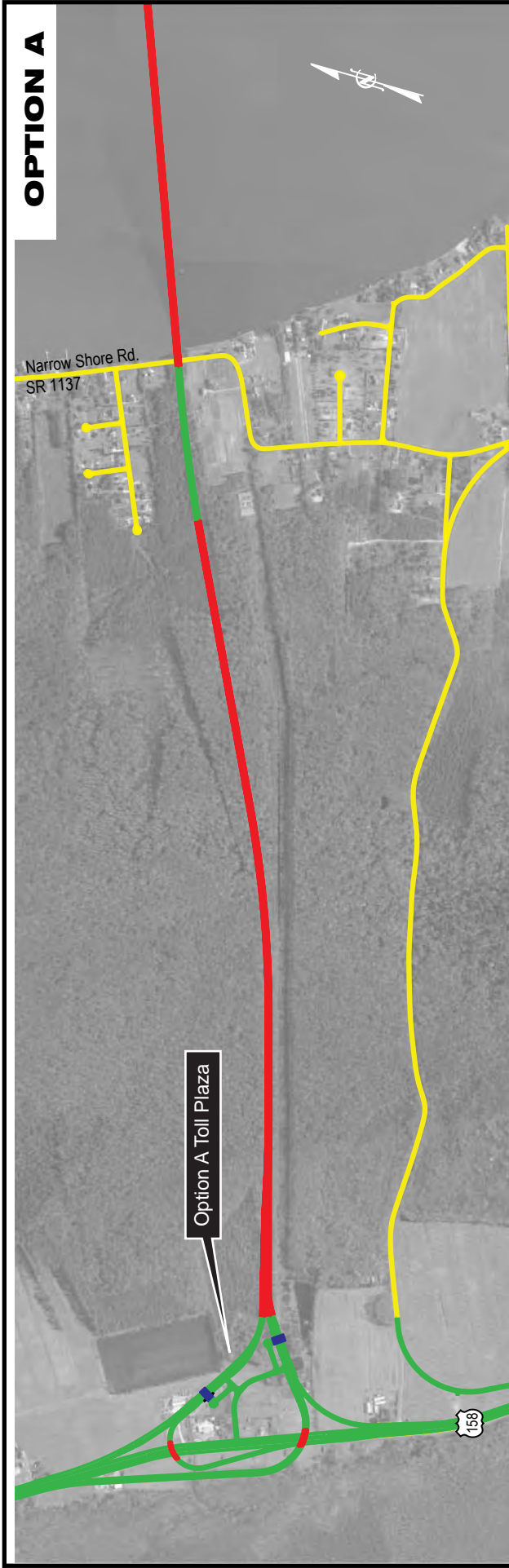
The unique characteristic of a super-street, included along US 158 east of the Wright Memorial Bridge with ER2 and MCB2, is the configuration of the intersections. Side-street traffic wishing to turn left or go straight must turn right onto the divided highway where it can make a U-turn through the median a short distance away from the intersection. After making the U-turn, drivers can then either go straight (having now accomplished the equivalent of an intended left turn) or make a right turn at their original intersection (having now accomplished the equivalent of an intention to drive straight through the intersection).

For MCB2 and MCB4, two design options are evaluated for the approach to the bridge over Currituck Sound, between US 158 and Currituck Sound (see Figure 2-3). Option A would place a toll plaza within the US 158 interchange. The mainland approach road to the bridge over Currituck Sound would include a bridge over Maple Swamp. With Option B, the approach to the bridge over Currituck Sound would be a road placed on fill within Maple Swamp. Aydlett Road would be removed and the roadbed restored as a wetland. Traffic traveling between US 158 and Aydlett would use the new bridge approach road. A local connection would be provided between the bridge approach road and the local Aydlett street system. The toll plaza would be placed in Aydlett east of that local connection so that Aydlett traffic would not pass through the toll plaza when traveling between US 158 and Aydlett. No access to and from the Mid-Currituck Bridge would be provided at Aydlett.

Also for MCB2 and MCB4, there are two variations of the proposed bridge corridor (see Figure 2-1) in terms of its terminus on the Outer Banks. Bridge corridor C1 would connect with NC 12 at an intersection approximately two miles north of the Albacore Street retail area (near the Corolla Bay development), whereas bridge corridor C2 would connect with NC 12 approximately one-half mile south of Albacore Street. The length of the proposed Mid-Currituck Bridge would be approximately 4.7 miles with bridge corridor C1, whereas it would be approximately 5.3 miles with bridge corridor C2.

The Preferred Alternative is MCB4/C1 with Option A (Figure 2-2) and primarily with reversing the center turn lane on US 158 to reduce hurricane evacuation clearance times. The Preferred Alternative also includes several design refinements to reduce impacts, in response to government agency and public input and comments. These refinements include:

- Provision of a median acceleration lane at Waterlily Road. This safety feature would allow left turns to continue to be made at Waterlily Road and US 158. Bulb-outs for u-turning vehicles also would be provided at the re-aligned US 158/Aydlett Road intersection and the US 158/Worth Guard Road intersection to provide greater flexibility for local traffic in turning to and from existing side streets near the US 158/Mid-Currituck Bridge interchange.
- Reducing the amount of four-lane widening along NC 12 from that with MCB4/C1 from approximately 4 miles to approximately 2.1 miles, plus additional left turn lanes at Driftwood Way and Seabird Way over approximately 0.5 mile. The NC 12 widening would be concentrated at three locations: the bridge terminus, the commercial area surrounding Albacore Street, and Currituck Clubhouse Drive.
- Constructing roundabouts on NC 12 instead of signalized intersections at the bridge terminus and Currituck Clubhouse Drive.
- Terminating the bridge in a roundabout at NC 12 also allowed the C1 bridge alignment to be adjusted to remove curves and thereby reduced its length across



**LEGEND**

- Existing Road
- Proposed and Improved Existing Road
- Proposed Toll Plaza and Buildings
- Proposed Bridges and Other Structures

**Mainland Approach Road  
Design Option A and Option B**

**Figure  
2-3**

Currituck Sound by approximately 250 feet (from approximately 24,950 feet [4.7 miles] to 24,700 feet).

- Provision of marked pedestrian crossings along NC 12 where it would be widened. They would be placed at locations identified by Currituck County plans (Albacore Street, Orion's Way, and Currituck Clubhouse Drive), as well as at North Harbor View Drive and the bridge terminus (one across NC 12 and one across the bridge approach road).

Hurricane clearance time reduction features include:

- On the mainland, reversing the center turn lane on US 158 between the US 158/Mid-Currituck Bridge interchange and NC 168 to provide additional road capacity during a hurricane evacuation and reduce clearance times.
- On the Outer Banks, adding approximately 1,600 feet of new third outbound lane to the west of the NC 12/US 158 intersection to provide additional road capacity during a hurricane evacuation. The additional lane would start at the US 158/Cypress Knee Trail/Market Place Shopping Center intersection and end approximately 450 feet west of the Duck Woods Drive intersection, a total distance of approximately 1,600 feet. From this point, the new lane would merge back into the existing US 158 westbound lanes over a distance of approximately 300 feet.

Where impacts differ for ER2, MCB2, and MCB4 between the mainland approach road design options (Option A and Option B) and/or the two bridge corridors (C1 and C2), the names of the alternatives are augmented with suffixes for the mainland approach road design option and/or the bridge corridor. For example, MCB2 with mainland design Option B and the C1 corridor is referred to as MCB2/B/C1. In situations where impacts differ between the bridge corridors but the design option on the mainland is not relevant to the comparison, only the corridor suffix is used (e.g., MCB2/C1). When differences are confined to the mainland design options, only the design option suffix may be used (e.g., MCB2/A). If no suffix is provided (e.g., MCB2), then the reader can assume that impacts would be identical irrespective of the mainland design option or corridor terminus alternative. Impacts related to the Preferred Alternative are identified separately.

## 2.4 No-Build Alternative

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The No-Build Alternative assumes that the proposed project would not be implemented. Reasonably foreseeable improvements contained in NCDOT's *2009 to 2015 State Transportation Improvement Program* (STIP) are expected to occur independent of the alternatives being assessed for the proposed project.

The planned improvements listed in the STIP for development within or near the project area that are included in the No-Build Alternative are:

- **Project No. R-2544**—Widen US 64 to multi-lanes east of the Alligator River to US 264;
- **Project No. R-2545**—Widen US 64 to multi-lanes east of Columbia to east of the Alligator River;
- **Project No. R-2574**—Widen US 158 to multi-lanes from NC 168 to east of NC 34 at Belcross in Camden County; and
- **Project No. R-4429**—Upgrade NC 168 to north of SR 1232 and from SR 1213 to SR 1216.

The locations of these projects are shown on Figure 1-1.

## 2.5 Project Schedule

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If the Preferred Alternative is affirmed as the Selected Alternative in a ROD, final design and construction would be expected to begin as soon as practicable after issuance of the ROD.

## 2.6 Functional Classifications

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Based on the functional classification maps for Currituck County and Dare County roads, the functional classifications listed below apply to roadways in the project area that would be affected by the project alternatives.

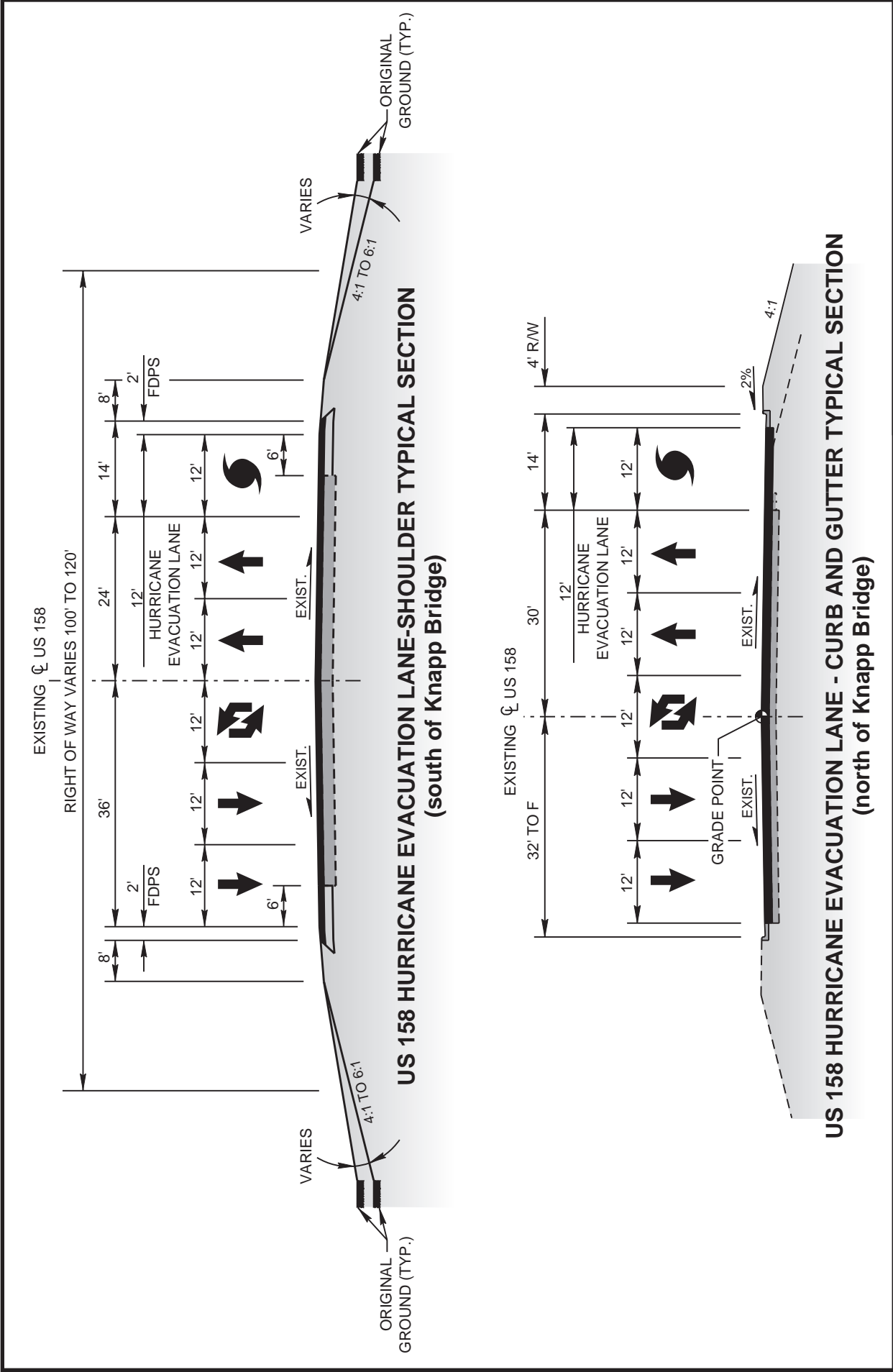
- Currituck County Rural Map
  - US 158 – Minor Arterial
  - NC 12 – Major Collector
- Dare County Map 2/2, Urban Cluster Map 1
  - Wright Memorial Bridge – Minor Arterial
  - US 158 on the Outer Banks – Principal Arterial
  - NC 12 south of Duck – Minor Arterial
  - NC 12 through Duck – Major Collector

- *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004) provides the following additional designations for the future:
  - US 158 – Boulevard
  - NC 12 – Thoroughfare

## 2.7 Typical Sections

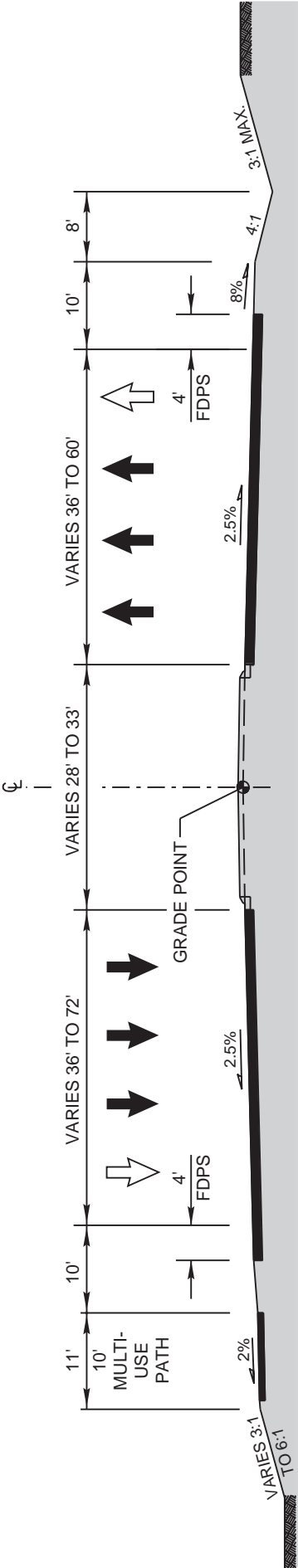
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Typical sections for the various roadway configurations are shown on Figure 2-4 through Figure 2-8. The application of each section would vary by alternative. Figure 2-4 shows sections for the US 158 hurricane evacuation lane which would occur with ER2, MCB2, and MCB4. Figure 2-5 shows sections for the US 158 super-street, applicable with ER2 and MCB2. Figure 2-6 shows the three-lane sections for NC 12 with ER2 and MCB2. Figure 2-7 shows the NC 12 four-lane sections with ER2, MCB2, MCB4, and the Preferred Alternative. Figure 2-8 shows the bridge typical section (the same typical section would be used for the Currituck Sound Bridge and the Maple Swamp Bridge), as well as the bridge approach road typical section, with MCB2, MCB4, and the Preferred Alternative.



<p><b>US 158 Hurricane Evacuation Lane Typical Sections</b></p>	<p><b>Figure 2-4</b></p>
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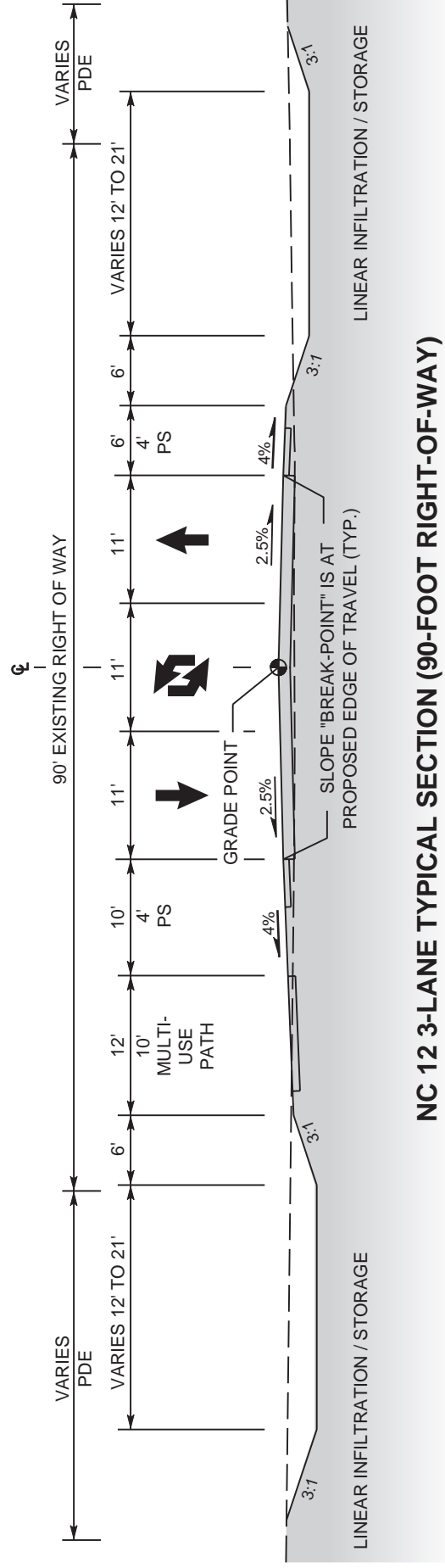
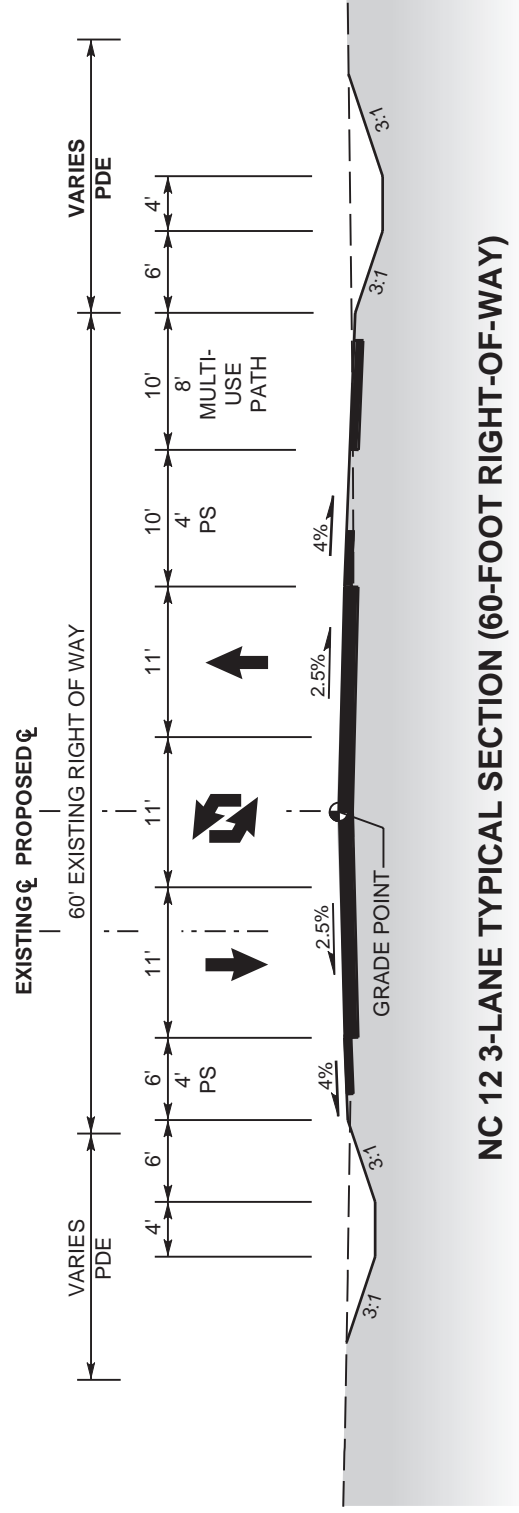
Wright Memorial Bridge to NC 12



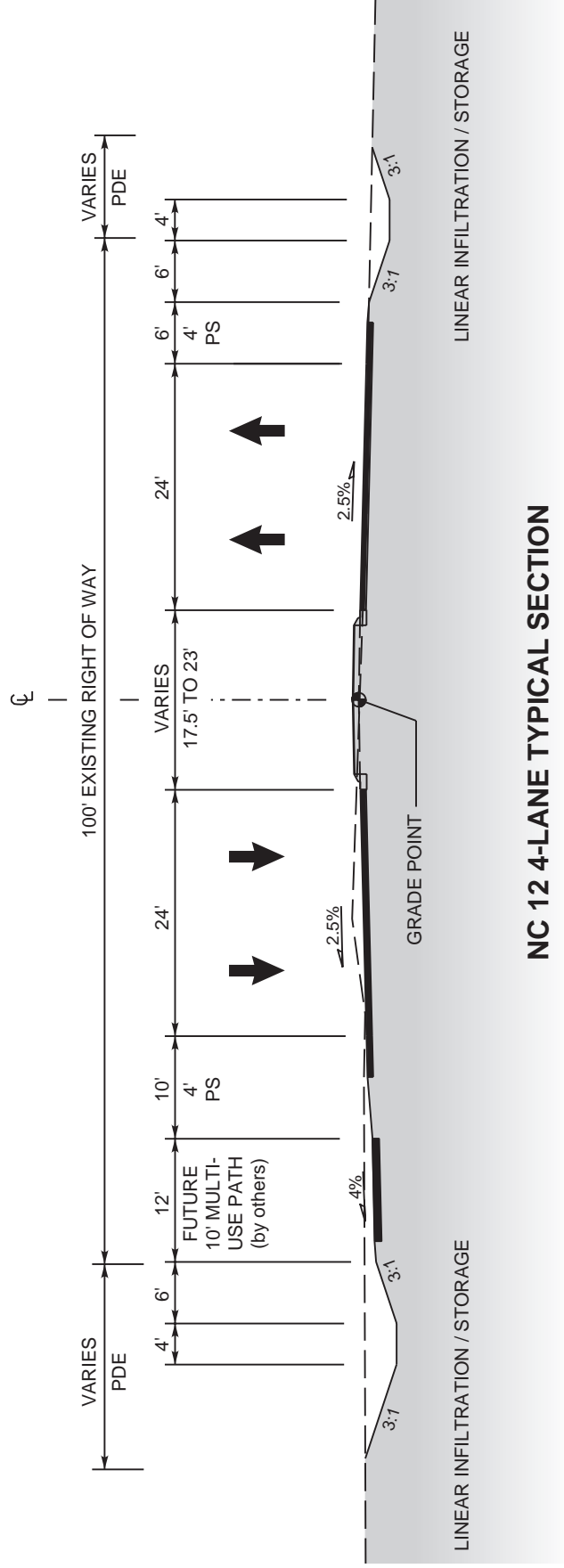
US 158 6- AND 8-LANE SUPER-STREET TYPICAL SECTION

	<div><p>US 158 6- and 8-Lane Super-Street Typical Section</p></div> <div><p>Figure 2-5</p></div>
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<p><b>NC 12 Typical 3-Lane Roadway Sections</b></p>	<p><b>Figure 2-6</b></p>
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**NC 12 Typical  
4-Lane Roadway  
Section**



## 3.0 Methodology

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This Community Impact Assessment (CIA) was prepared to describe the effect of the proposed Mid-Currituck Bridge project on persons living in the project vicinity. Information was collected to determine the affected environment and to assess direct community impacts as a result of the project. Information was acquired from numerous sources, including Currituck County, Dare County, the towns of Duck, Southern Shores, and Kitty Hawk, and state agencies, such as NCDOT, the North Carolina Employment Security Commission, and the North Carolina Department of Revenue.

Demographic information was collected mainly from the US Census. Field visits were conducted to inventory the existing environment. Interviews were conducted with community representatives during the field visits, and through telephone and email. The 1998 DEIS for the Mid-Currituck Sound Bridge was also reviewed for information applicable to this CIA.

The following techniques were used to understand the project area and the characteristics of its communities:

- Data gathering from secondary sources
  - US Census and American Community Survey (demographic data)
  - Geographic Information System (GIS) files from Currituck and Dare counties (e.g. community facilities, farmland soils, and land use)
  - North Carolina Department of Revenue (tax information)
  - North Carolina Employment Security Commission (employment data)
  - US Department of Agriculture, Natural Resource Conservation Service (farmland conversion impact rating and soil surveys)
  - Local government (land use and other plans, zoning and subdivision ordinances)
- Field trips to Currituck and Dare counties
  - April 2008
  - May 2008
  - August 2008
  - January 2009

- Interviews with local officials
  - Donna Creef, Senior Planner, Dare County, NC
  - Andy Garman, Director of Community Development, Duck, NC
  - Joe Heard, Director of Planning and Inspections, Kitty Hawk, NC
  - Ben Woody, Planning Director, Currituck County, NC
  - Merrie Smith, Assistant to the Town Manager, Southern Shores, NC
- Interviews with business owners and representatives along US 158 in mainland Currituck County.

The impact assessment was based on preliminary designs for the detailed study alternatives that were current at the time this report was completed.

## 4.0 Study Area Descriptions

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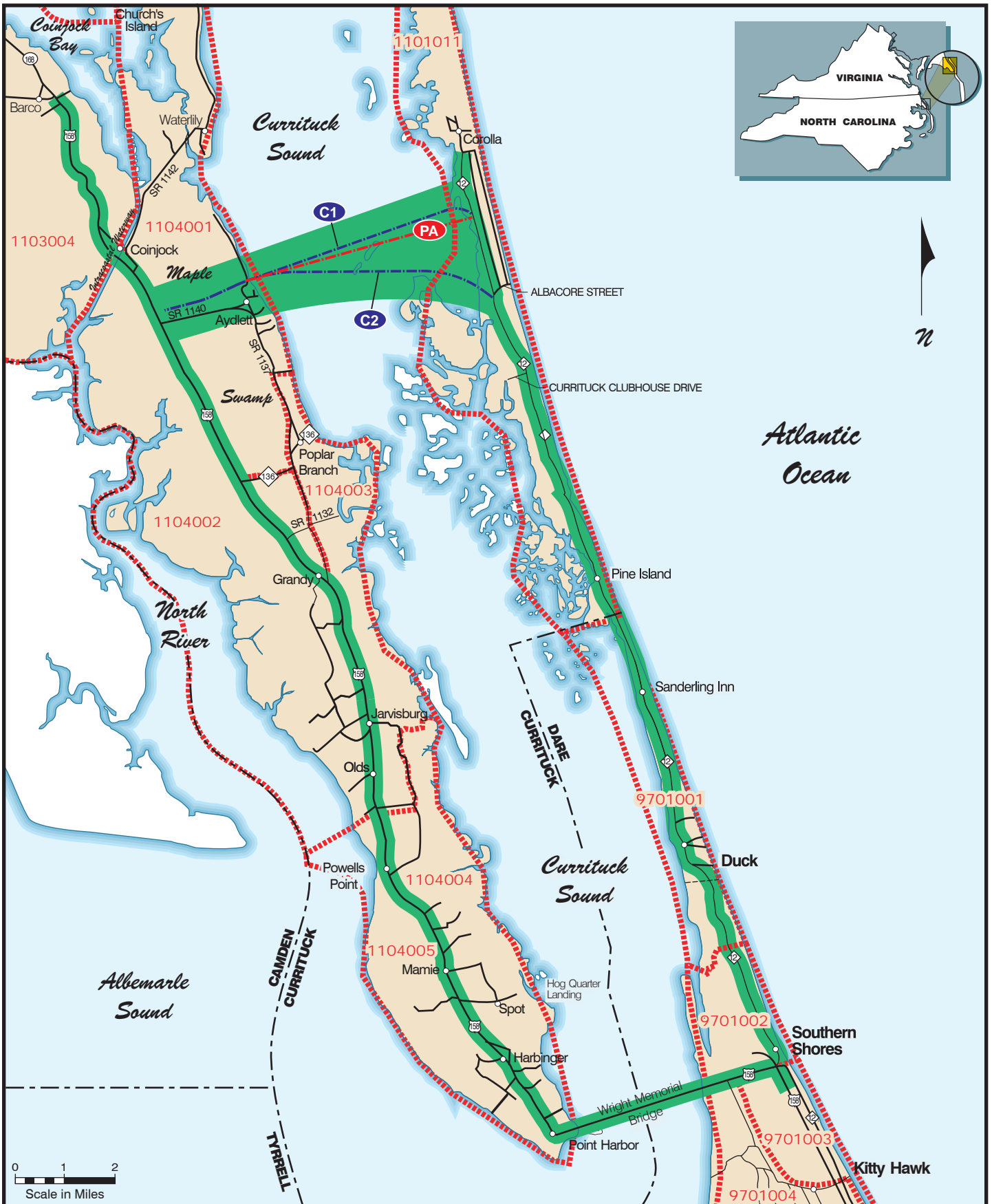
For the purposes of this Community Impact Assessment (CIA), and in accordance with North Carolina Department of Transportation (NCDOT) Guidelines, the project area is comprised of two distinct geographic areas with two different criteria to identify them. The Direct Community Impact Area (DCIA) encompasses the communities or neighborhoods that would be affected by the proposed project. The Demographic Area consists of the census block groups that encompass the DCIA, thereby illustrating the demographic trends of the DCIA.

### 4.1 Direct Community Impact Area

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The DCIA includes the communities and neighborhoods that would be directly affected by the proposed project and its detailed study alternatives. In determining the boundaries of the DCIA, factors such as distance from the project, topography, and access were considered. For this project, the DCIA is comprised of areas along the thoroughfares of US 158 and NC 12 on the Currituck County mainland and Outer Banks, and the Dare County Outer Banks north from Kitty Hawk to the Currituck County line (Figure 4-1). The DCIA also encompasses the mainland community of Aydlett, located along the western shore of Currituck Sound and associated with the Mid-Currituck Bridge corridor. The DCIA is described as follows:

1. Along US 158, the DCIA encompasses the area within 1,000 feet of the center line from NC 168 near Barco, south to the Wright Memorial Bridge. This area would include hurricane evacuation improvements associated with the detailed study alternatives, and the US 158 interchange associated with MCB2, MCB4, and the Preferred Alternative. Within this area, US 158 is projected to experience reductions in traffic volumes south of a Mid-Currituck Bridge.
2. The DCIA continues along US 158 east of the Wright Memorial Bridge to the US 158/NC 12 intersection, encompassing the area within 1,000 feet of the US 158 center line. This area would include road improvements (ER2, MCB2, and MCB4 [hurricane evacuation only]), and an interchange at the US 158/NC 12 intersection (ER2 and MCB2). The area would experience reductions in traffic if a Mid-Currituck Bridge were implemented with MCB2, MCB4, or the Preferred Alternative.
3. On the Dare County Outer Banks, the towns of Southern Shores and Duck are included in the DCIA, which encompasses the area within 1,000 feet of the center line of NC 12. In this area, NC 12 would be widened to three lanes with ER2 and MCB2 and see reductions in traffic if a Mid-Currituck Bridge were implemented with MCB2, MCB4, or the Preferred Alternative.



#### LEGEND

- DEIS Bridge Corridors
- Preferred Alternative Bridge Corridor
- County Boundaries



Direct Community Impact Area



Demographic Area (Census Block Group Boundaries)

1103004

Census Block Group Identification Numbers

## Direct Community Impact Area and Demographic Area

Figure  
4-1

4. The DCIA continues northward through the Dare County Outer Banks and the Currituck County Outer Banks to Corolla, encompassing the area within 1,000 feet of the center line of NC 12. This area would see NC 12 widened to three or four lanes in various locations depending on the alternative, plus termination of the Mid-Currituck Bridge (C1, C2, and the Preferred Alternative). Areas with four lanes would see the introduction of a median to NC 12, which would affect turning opportunities in some locations. Traffic volumes in this area would increase with the introduction of a Mid-Currituck Bridge (MCB2, MCB4, or the Preferred Alternative).
5. Also included in the DCIA is the area that encompasses:
  - The bridge corridor alternatives from US 158 to NC 12 and the area between the corridors;
  - The associated US 158 interchange area on the Currituck County mainland;
  - Aydlett Road (which closely parallels the bridge corridor on the mainland);
  - The community of Aydlett and its road network within 2,500 feet of the bridge corridor; and
  - The area within 2,500 feet of the bridge corridor intersection alternatives on the Outer Banks, including the developing Corolla Bay subdivision and currently undeveloped land immediately south of the TimBuck II commercial area (see Figure 4-1).

These boundaries for the DCIA were chosen to include communities that could be directly affected by noise, visual change, access change, traffic change, and direct use of lands.

## 4.2 Demographic Area

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For the purposes of formulating the Demographic Area, US Census block groups were used. The Census block groups are within Currituck and Dare counties. The Demographic Area is comprised of a total of 11 Census block groups on the Currituck County mainland and the Currituck and Dare County Outer Banks, as shown on Figure 4-1. These Census block groups are: 1103004, 1104001, 1104002, 1104003, 1104004, 1104005 in Currituck County (mainland) and 1101011, 9701001, 9701002, 9701003, and 9701004 on the Currituck County and Dare County Outer Banks.

The Demographic Area encompasses the entire DCIA as described above.



## 5.0 Community Characteristics

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### 5.1 Community Characteristics Overview

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The Direct Community Impact Area (DCIA) covers portions of mainland Currituck County, the northerly portion of the Dare County Outer Banks, and the Currituck County Outer Banks. There are several communities on the Currituck County peninsula, including Coinjock, Aydlett, Grandy, Jarvisburg, Powells Point, Mamie, Harbinger, and Point Harbor (see Figure 4-1).

On the Dare County Outer Banks, the DCIA includes the incorporated towns of Southern Shores, Duck, and the northern portion of Kitty Hawk. On the Currituck County Outer Banks, the neighborhoods/subdivisions include Pine Island, Currituck Club, Spindrift, Ocean Sands, Crown Point, Buck Island, Monteray Shores, Corolla Shores, and Corolla Bay. Further north, Corolla Light, Whalehead Beach, and the community of Corolla are outside of the DCIA. (See Figure 5-2 and Figure 5-3 later in this report for the locations of these communities.)

#### 5.1.1 Currituck County-Mainland

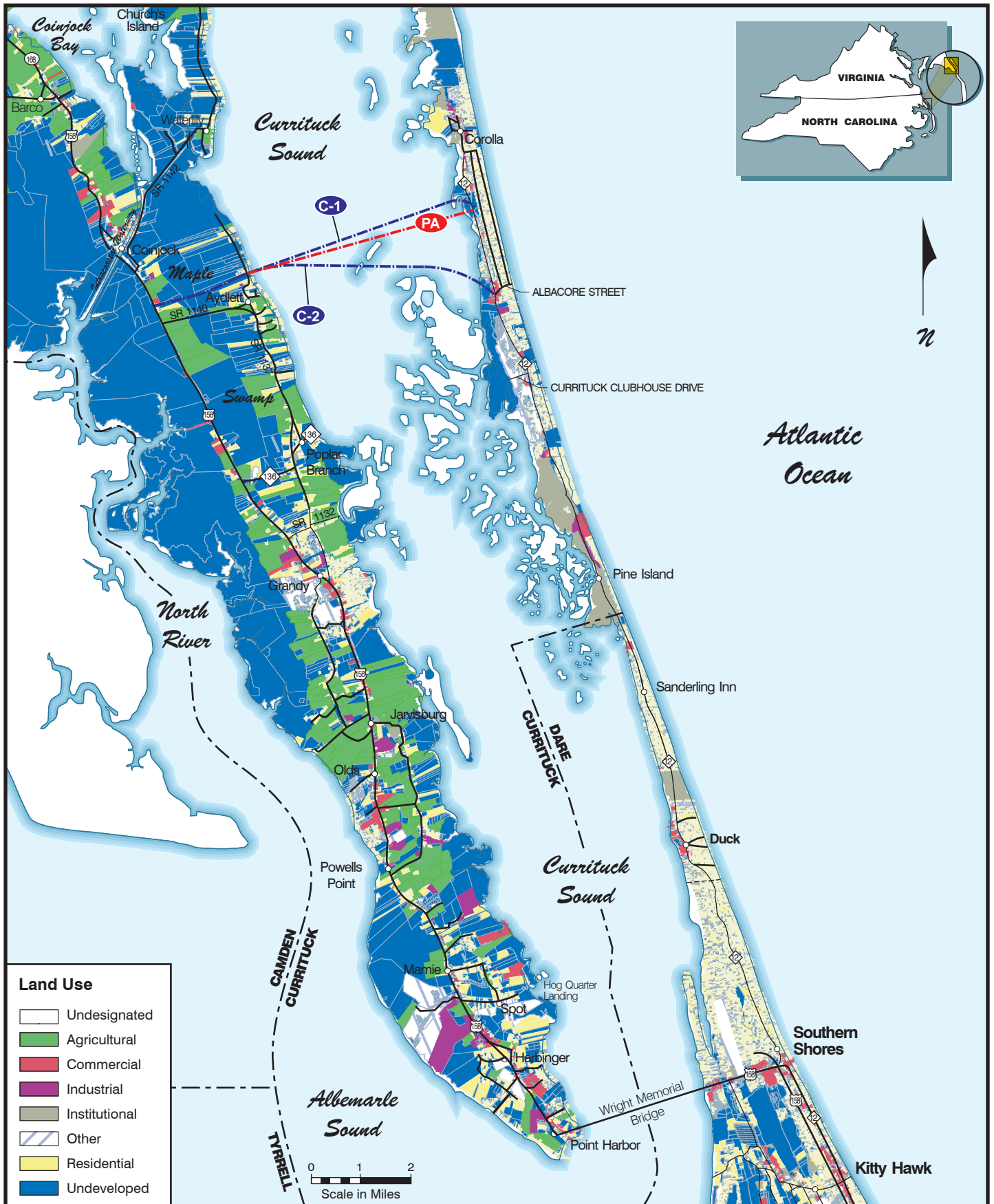
The DCIA on the mainland is a part of a peninsula bounded on the west by the North River, on the south by Albemarle Sound, and on the east by Currituck Sound.

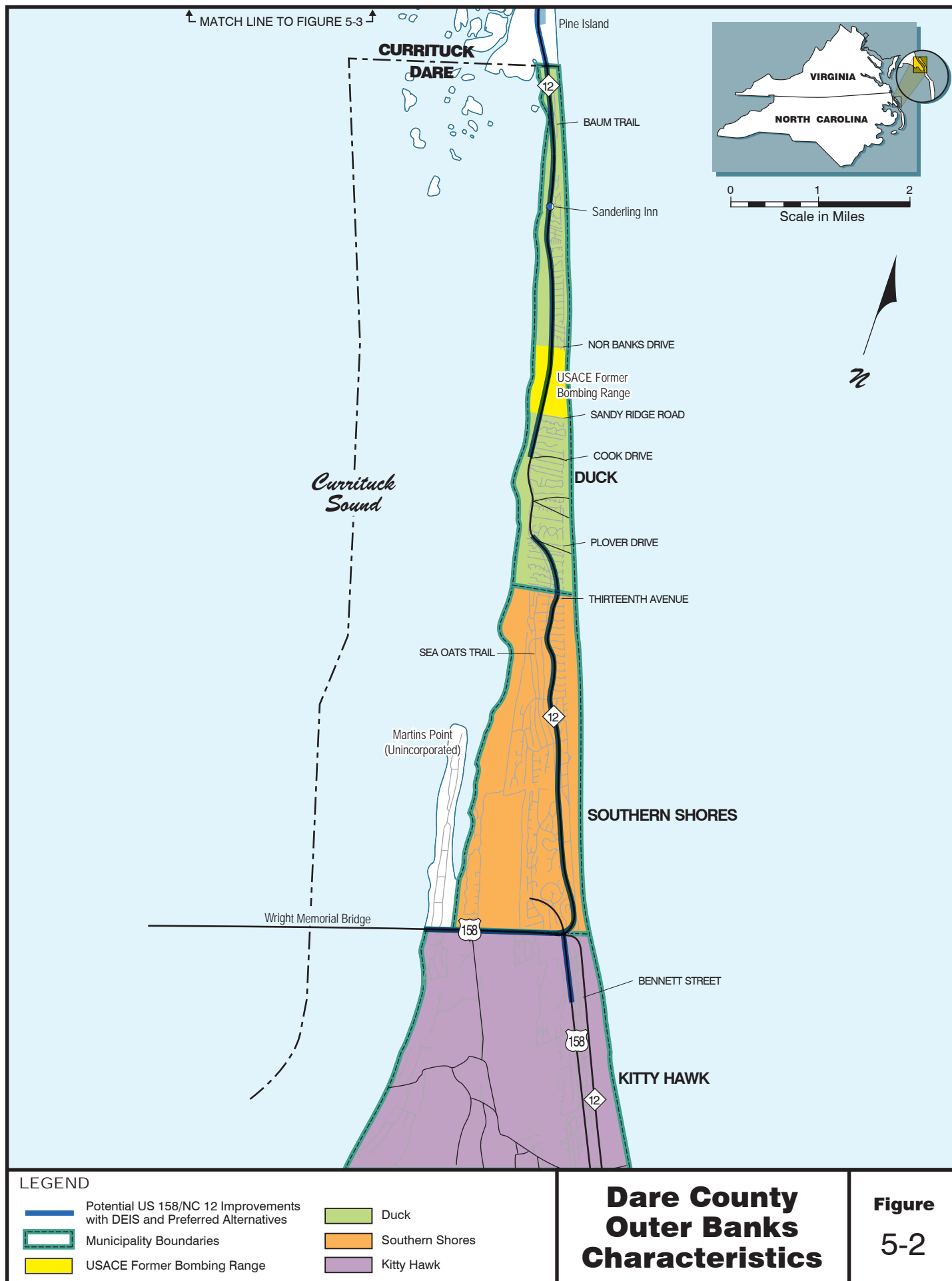
Land use on the mainland is predominantly rural agrarian, with scattered residences and service-oriented businesses (see Figure 5-1). The communities of Coinjock, Aydlett, Grandy, Jarvisburg, and Point Harbor are within the DCIA. There are no incorporated communities in Currituck County.

The community of Aydlett is a shoreline development along the Currituck Sound; a portion of the community is within the proposed right-of-way of the western approach to the Mid-Currituck Bridge. The area is changing from rural to rural residential, with older homes that front the sound and newer ones being built along roads that are perpendicular to the sound. Community facilities include a post office, community clubhouse and several cemeteries. Other community services are outside the DCIA, including schools, fire and police protection, emergency management services, a library and churches.

#### 5.1.2 Dare County Outer Banks

Within Dare County, the three municipalities within the DCIA are: Kitty Hawk, Southern Shores, and Duck. An unincorporated peninsula of land lies west of Southern Shores (see Figure 5-2).





Within the Dare County portion of the DCIA, commercial uses are concentrated along US 158, including a shopping center that includes a Wal-Mart and a Home Depot. Commercial uses also are concentrated around the US 158/NC 12 intersection, including a hotel, Hilton Garden Inn. A tourist-oriented commercial concentration also is found in Duck on NC 12. Vacation homes or subdivisions containing vacation homes line NC 12 through Southern Shores and Duck. Often, homes and businesses front NC 12 with direct driveway access.

### **5.1.3 Currituck County-Outer Banks**

Land uses on the Outer Banks of Currituck County are characterized by residential resort developments consisting of single-family homes, town homes, condominiums, a hotel, and commercial development comprised of small stand-alone shops and shopping centers that include grocery stores and small stores and restaurants to serve tourists. Residential development is generally oriented away from NC 12; some streets intersect NC 12 and serve entire subdivisions (Figure 5-3).

## **5.2 Population Characteristics**

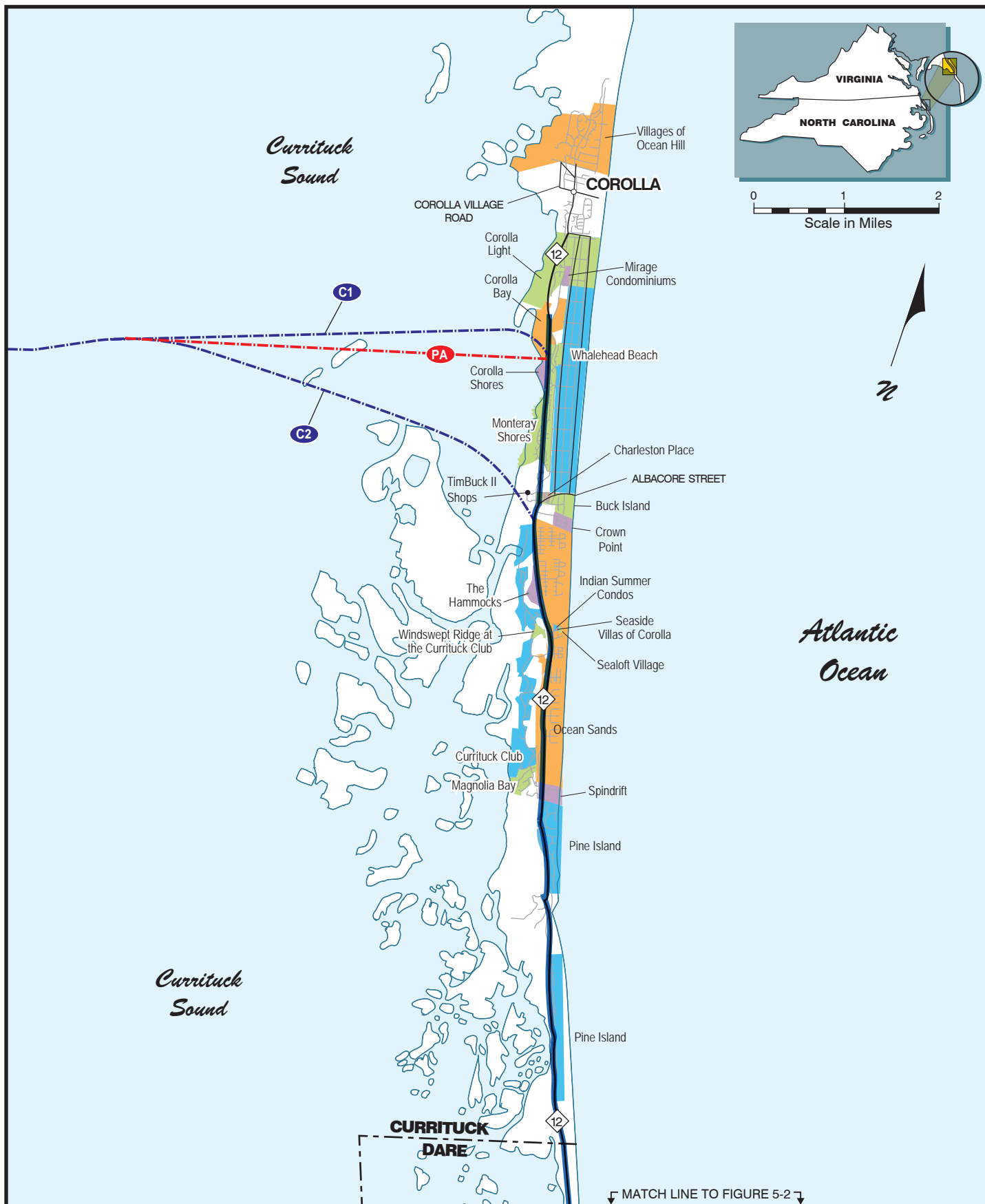
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The Demographic Area assessed for this CIA is comprised of eleven Census block groups for the mainland and the Outer Banks, as shown on Figure 4-1.

Table 5-1 shows the 1990 and 2000 US Census population by race and Hispanic origin for the Demographic Area, Dare and Currituck counties, and the State of North Carolina. Table 5-2 shows the percent of total population by race and Hispanic origin in 1990 and 2000 for the same locations. Table 5-2 shows the change in population from 1990 to 2000 for these groups, plus the percent change from 1990 to 2000 for total population, whites, total minority, and total Hispanic.

The total minority population percent of the Demographic Area in 2000 (7.8 percent) was within 3 percent of Currituck (10.5 percent) and Dare (6.5 percent) counties, but was less than the 29.8 percent minority population for the state. The total minority population of the Demographic Area decreased by less than one percent between 1990 and 2000, while the minority population of the state increased by almost five percent.

At the same time (1990 to 2000), the total Hispanic population nearly doubled, from 0.6 percent to 1.4 percent of total population. The 2000 minority (7.8 percent) and total Hispanic (1.4 percent) population percentages for the Demographic Area were similar to their respective percentages for Currituck County and Dare County, but less than the state percentages for these groups (21.6 percent for blacks and 4.7 percent for total Hispanics).



#### LEGEND

- DEIS Bridge Corridors
- Preferred Alternative Bridge Corridor
- Potential NC 12 Improvements with DEIS and Preferred Alternatives
- Subdivisions

## Currituck County Outer Banks Characteristics

Figure  
5-3

**Table 5-1. 1990 and 2000 Population by Race and Hispanic Origin**

	Demographic Area <sup>1</sup>		Currituck County		Dare County		North Carolina	
	1990	2000	1990	2000	1990	2000	1990	2000
<b>Total</b>	10,247	13,370	13,736	18,190	22,746	29,967	6,628,637	8,049,313
White	9,417	12,399	12,051	16,445	21,766	28,393	5,008,491	5,804,656
Black	713	679	1,545	1,318	811	797	1,456,323	1,737,545
American Indian	44	66	66	83	37	83	80,155	99,551
Asian/Pacific Islander	62	46	51	77	79	124	52,166	117,672
Other	11	153	23	267	53	570	31,502	289,889
<b>Total Minority</b>	885	1,044	1,771	1,903	1,120	1,939	1,657,510	2,402,158
Hispanic <sup>2</sup> White	55	100	86	158	140	365	37,364	157,501
Hispanic Black	0	1	3	4	4	4	7,181	14,244
Hispanic American Indian	0	10	1	9	0	7	1,225	4,218
Hispanic Asian/Pacific Islander	0	2	0	3	3	3	1,573	2,091
Hispanic Other	11	70	20	87	52	287	29,383	200,909
<b>Total Hispanic</b>	66	183	110	261	199	666	76,726	378,963

Source: US Bureau of the Census, 1990 and 2000.

<sup>1</sup> Demographic Area is defined as the combination of the 11 2000 US Census block groups for the mainland and the Outer Banks. That same area was used for 1990 and consisted of 14 US Census block groups.

<sup>2</sup> US Census definition of persons of Spanish origin refers primarily to those from Latin America and may be of any racial grouping. Thus the percent Hispanic should not be added to percentages for racial categories.

**Table 5-2. 1990 and 2000 Percent of Total Population by Race and Hispanic Origin**

	Demographic Area <sup>1</sup>		Currituck County		Dare County		North Carolina	
	1990	2000	1990	2000	1990	2000	1990	2000
<b>Total White</b>	91.9%	92.7%	87.7%	90.4%	95.7%	94.8%	75.6%	72.1%
Black	7.0%	5.1%	11.3%	7.3%	3.6%	2.7%	22.0%	21.6%
American Indian	0.4%	0.5%	0.5%	0.5%	0.2%	0.3%	1.2%	1.2%
Asian/Pacific Islander	0.6%	0.3%	0.4%	0.4%	0.4%	0.4%	0.8%	1.5%
Other	0.1%	1.1%	0.2%	1.5%	0.2%	1.9%	0.5%	3.6%
<b>Total Minority</b>	8.6%	7.8%	12.9%	10.5%	4.9%	6.5%	25.0%	29.8%
Hispanic <sup>2</sup> White	0.54%	0.75%	0.63%	0.87%	0.62%	1.22%	0.56%	1.96%
Hispanic Black	0.00%	0.01%	0.02%	0.02%	0.02%	0.01%	0.11%	0.18%
Hispanic American Indian	0.00%	0.08%	0.01%	0.05%	0.00%	0.02%	0.02%	0.05%
Hispanic Asian/Pacific Islander	0.00%	0.02%	0.00%	0.02%	0.01%	0.01%	0.02%	0.03%
Hispanic Other	0.11%	0.52%	0.15%	0.48%	0.23%	0.96%	0.44%	2.50%
<b>Total Hispanic</b>	0.64%	1.37%	0.80%	1.44%	0.88%	2.22%	1.16%	4.71%

Source: US Bureau of the Census, 1990 and 2000.

<sup>1</sup> Demographic Area is defined as the combination of the 11 2000 US Census block groups for the mainland and the Outer Banks. That same area was used for 1990 and consisted of 14 US Census block groups.

<sup>2</sup> US Census definition of persons of Spanish origin refers primarily to those from Latin America and may be of any racial grouping. Thus the percent Hispanic should not be added to percentages for racial categories.

Table 5-3 shows the 1990 and 2000 population by age group for the Demographic Area, for Dare and Currituck counties, and the State of North Carolina. In 2000, the Demographic Area had a higher percentage of elderly residents (17.3 percent) than Currituck County (12.0 percent), Dare County (13.8 percent), or the state (12.0 percent).

Table 5-4 shows that the percent of elderly population in the Demographic Area increased slightly between 1990 and 2000. There was little change in the population age distributions for Currituck County and the state between 1990 and 2000, but Dare County experienced a slight increase in the percentage of elderly population.

**Table 5-3. 1990 and 2000 Population by Age**

	Demographic Area <sup>1</sup>		Currituck County		Dare County		North Carolina	
	1990	2000	1990	2000	1990	2000	1990	2000
Total Population	10,247	13,370	13,736	18,190	22,746	29,967	6,628,637	8,049,313
0 to 18	2,411	3,122	3,691	4,826	5,306	6,712	1,710,196	2,073,849
19 to 64	6,226	8,586	8,336	11,178	14,599	19,131	4,114,100	5,006,416
65 or Above	1,610	2,310	1,709	2,186	2,841	4,124	804,341	969,048

Source: US Bureau of the Census, 1990 and 2000.

<sup>1</sup>Demographic Area is defined as the combination of the 11 2000 US Census block groups for the mainland and the Outer Banks. That same area was used for 1990 and consisted of 14 US Census block groups.

**Table 5-4. Growth in Population by Age**

	Demographic Area <sup>1</sup>		Currituck County		Dare County		North Carolina	
	2000	% Change 1990 to 2000	2000	% Change 1990 to 2000	2000	% Change 1990 to 2000	2000	% Change 1990 to 2000
Total Population	13,370	30.5%	18,190	32.4%	29,967	31.7%	8,049,313	21.4%
0 to 18	3,122	29.5%	4,826	30.8%	6,712	26.5%	2,073,849	21.3%
19 to 64	8,586	37.9%	11,178	34.1%	19,131	31.0%	5,006,416	21.7%
65 or Above	2,310	43.5%	2,186	27.9%	4,124	45.2%	969,048	20.5%

Source: US Bureau of the Census, 1990 and 2000.

<sup>1</sup>Demographic Area is defined as the combination of the 11 US Census block groups for the mainland and the Outer Banks.

Census data are not available for educational attainment by block group in 2000. Therefore, Census tracts were used to determine educational attainment for the Demographic Area. The mainland Currituck County Census tracts used are 1103 and 1104. The Outer Banks Census tracts used are 1101.1 and 9701.

Table 5-5 shows the 1990 and 2000 median household income, poverty data, and unemployment for the Demographic Area, Dare and Currituck counties, and the State of North Carolina. As shown, in 2000, the Demographic Area had a higher median household income than Currituck County, Dare County, or the state. However, based on the same Census information, the Outer Banks portion of the study area (consisting



**Table 5-5. 1990 and 2000 Income Measures and Persons Living Below Poverty Level**

	Demographic Area <sup>1</sup>		Currituck County		Dare County		North Carolina	
	1990	2000	1990	2000	1990	2000	1990	2000
Median Household Income	\$30,647	\$45,201	\$27,905	\$40,822	\$29,322	\$42,411	\$26,647	\$39,184
Persons below Poverty Level	1,042	1,248	1,353	1,922	1,861	2,381	829,858	958,667
Persons below Poverty Level as a Percent of Total Population <sup>2</sup>	10.4%	9.0%	10.1%	10.7%	8.3%	8.0%	13.0%	12.3%

Source: US Bureau of the Census, 1990, 2000.

<sup>1</sup>Demographic Area is defined as the combination of the US Census block groups for the mainland and the Outer Banks.

<sup>2</sup>Calculated based on total population for whom poverty status is determined.

of five block groups shown on Figure 4-1) had a substantially higher median household income (more than \$56,000) than any of the other areas analyzed, while the mainland portion of the Demographic Area had the lowest median household income (less than \$36,000). The Demographic Area also had a lower percentage of persons living below the poverty level (9.0 percent) in 2000 than Currituck County (10.7 percent) or the state (12.3 percent). The number of persons living below the poverty level was lowest in Dare County (8.0 percent). In 2000, the unemployment rate in the Demographic Area was lower than Currituck County, Dare County, or the state.

As shown in Table 5-5, the median household income in the Demographic Area in 2000 was higher than, but similar to, that of the county or the state. The same was true in 1990. Table 5-5 indicates that, in 2000, the percentage of persons living below the poverty level was less in the Demographic Area than in Currituck County and the state. Between 1990 and 2000, the percent of total population below the poverty level rose slightly. Slight changes up and down were seen in the two counties and the state.

Executive Order 13166 "Improving Access to Services for Persons with Limited English Proficiency" requires all recipients of federal funds to provide meaningful access to persons who are limited in their English proficiency (LEP). The US Department of Justice defines LEP individuals as those "who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English" (67 FR 41459). Data about LEP populations was gathered in the 2000 Census.

Table 5-6 shows the percentages of adults (18 years of age or older) who speak English less than "Very Well" by language category.

**Table 5-6. Primary Language Group of Persons That Speak English Less Than Very Well**

Demographic Areas Block Groups	Total Adult Population	Spanish		Other Indo-European		Asian/Pacific		Other		Total That Speak English Less Than Very Well	
		No.	%	No.	%	No.	%	No.	%	No.	%
Currituck County											
• 1103004	1,378	20	1.5%	0	0.0%	0	0.0%	0	0.0%	20	1.5%
• 1104001	864	6	0.7%	0	0.0%	20	2.3%	0	0.0%	26	3.0%
• 1104002	1,108	7	0.6%	0	0.0%	0	0.0%	0	0.0%	7	0.6%
• 1104003	1,357	17	1.3%	0	0.0%	8	0.6%	0	0.0%	25	1.8%
• 1104004	1,292	13	1.0%	19	1.5%	0	0.0%	0	0.0%	32	2.5%
• 1104005	886	11	1.2%	0	0.0%	6	0.7%	0	0.0%	17	1.9%
• 1101011	619	8	1.3%	0	0.0%	0	0.0%	0	0.0%	8	1.3%
Dare County											
• 9701001	859	0	0.0%	6	0.7%	0	0.0%	0	0.0%	6	0.7%
• 9701002	2,053	6	0.3%	8	0.4%	7	0.3%	0	0.0%	21	1.0%
• 9701003	1,566	13	0.8%	12	0.8%	0	0.0%	0	0.0%	25	1.6%
• 9701004	1,298	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
<b>Total Demographic Area</b>	13,280	101	0.8%	45	0.3%	41	0.3%	0	0.0%	187	1.4%
<b>Currituck County</b>	17,091	101	0.6%	29	0.2%	54	0.3%	0	0.0%	184	1.1%
<b>Dare County</b>	28,425	300	1.1%	83	0.3%	31	0.1%	0	0.0%	414	1.5%

Source: US Bureau of the Census, 2000.

The census data indicate there are no language groups within the demographic area in which more than 5 percent of the adult population or 1,000 persons speak English less than “Very Well.” Therefore, the demographic assessment does not indicate the presence of LEP language groups that exceed the Department of Justice’s Safe Harbor threshold. However, NCTA will include notice of Right of Language Access for future meetings for this project. Thus, the requirements of Executive Order 13166 appears to be satisfied.

### 5.3 Housing Characteristics

The permanent population numbers do not provide an accurate reflection of the building trends or seasonal populations on the Outer Banks. These are more accurately reflected in US Census data by the number of housing units. Table 5-7 shows the

number of housing units for both Dare and Currituck counties in 1990 and 2000 and the increase in the number of units. In addition, shows the number and increase in the number of housing units that were designated for seasonal, recreational, or occasional use for the same two years. In the two counties combined, the number of vacant units for rent decreased substantially from 1990 to 2000, while the number of seasonal units increased.

**Table 5-7. 1990 and 2000 Housing Units**

County	Total Housing Units			Vacant Units for Rent			Units for Seasonal, Recreational, or Occasional Use		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Dare	21,567	26,671	24%	3,726	277	-93%	6,415	13,355	108% <sup>1</sup>
Currituck	7,367	10,687	45%	849	96	-89%	1,096	3,297	201%
Total	28,934	37,358	29%	4,575	373	-92%	7,511	16,652	122%

Source: US Bureau of the Census, 1990 and 2000.

<sup>1</sup>The increase in the number of seasonal units in Dare County is greater than the increase in total housing units because of the conversion of existing units used by permanent residents to seasonal units.

Table 5-8 shows the 2000 US Census housing data for the Demographic Area, Dare and Currituck counties, and the State of North Carolina. In 2000, the median home value of \$157,240 in the Outer Banks portion of the Demographic Area was substantially higher than the other areas analyzed, with the Demographic Area being almost \$50,000 more than the state median home value of \$108,300. The median home value for Dare County also was well above the state average, while the value for Currituck County was only slightly above the state average. As would be expected, the areas with higher median home values were also the areas with higher median household incomes, as shown in Table 5-5, with the Demographic Area being the highest in both categories.

Table 5-8 also indicates that, at 69.4 percent, the 2000 home ownership rate for the state was lower than the other areas analyzed. Home ownership for the Demographic Area was 80.1 percent (with the Outer Banks portion at 83.9 percent and the mainland portion at 76.3 percent). Home ownership for Currituck County was 81.6 percent. Conversely, Table 5-8 shows that the 2000 rental rates for the areas analyzed were lower than the state rate of 30.6 percent; the areas with the highest home ownership rates had the lowest rental rates.

Table 5-8 also shows that the occupancy rates for the Demographic Area and Dare County were significantly lower than for Currituck County and the state. The occupancy rate for the Demographic Area in 2000 was 42.8 percent (although the Outer Banks portion of the Demographic Area was 29.4 percent). The Dare County occupancy

rate was 47.6 percent. These lower occupancy rates in the Demographic Area and Dare County are because the Outer Banks is a major tourist destination and, therefore, has a high seasonal and rental home development market.

**Table 5-8. 2000 Housing Characteristics**

	Demographic Area <sup>1</sup>		Currituck County		Dare County		North Carolina	
	No.	%	No.	%	No.	%	No.	%
Median Home Value	\$157,240	---	\$115,500	---	\$137,200	---	\$108,300	---
Home Ownership Rate <sup>2</sup>	4,619	80.1	5,630	81.6	9,460	74.5	2,172,355	69.4
Rental Rate <sup>3</sup>	1,147	19.9	1,272	18.4	3,230	25.5	959,658	30.6
Median Year Built	1984	---	1984	---	1986	---	1978	---
Occupancy Rate	5,766	42.8	6,902	64.6	12,690	47.6	3,132,013	88.9

Source: US Bureau of the Census, 2000.

<sup>1</sup>Demographic Area is defined as the combination of the US Census block groups for the mainland and the Outer Banks.

<sup>2</sup>Based only on occupied housing units (i.e., vacant homes are not included) to reflect the percentage of the permanent population that owns.

<sup>3</sup>Based only on occupied housing units (i.e., vacant homes are not included) to reflect the percentage of the permanent population that rents.

The home ownership and rental rates shown in Table 5-8 are based only on occupied housing units (i.e., vacant homes are not included) because these rates are intended to reflect the portion of the permanent population who own their homes versus the portion who rent. However, because of the residential resort development nature of the Outer Banks, there are actually many more vacation rental homes in that area that are considered vacant by the US Census. In 2000, there were 13,552 housing units in the Demographic Area. Of those, 7,736 were vacant, while 5,766 were occupied (both owner and renter occupied). If the vacation rental homes were included in the total number of housing units, the occupied housing units would actually be less than 50 percent of all the homes in the Demographic Area.

Table 5-9 shows the number of households in 1990 and 2000. The number of households grew nearly 60 percent in the Demographic Area from 1990 to 2000. This is a greater percentage increase than both Currituck and Dare counties and the state.

**Table 5-9. Households and Household Growth**

	<b>Demographic Area<sup>1</sup></b>	<b>Currituck County</b>	<b>Dare County</b>	<b>North Carolina</b>
1990 Households	3,608	5,038	9,349	2,517,026
2000 Households	5,766	6,902	12,690	3,132,013
Change (%)	2,158 (59.8%)	1,864 (37.0%)	3,341 (35.7%)	614,987 (24.4%)

Source: US Bureau of the Census, 1990 and 2000.

<sup>1</sup>Demographic Area is defined as the combination of the US Census block groups for the mainland and the Outer Banks.

## 5.4 Employment Characteristics

As shown in Table 5-10, employment characteristics in the Demographic Area are similar to the two counties and the state. Approximately one-half of the population is employed, and unemployment rates are generally in the 4- to 5-percent range.

**Table 5-10. 1990 and 2000 Employment**

	<b>Demographic Area<sup>1</sup></b>		<b>Currituck County</b>		<b>Dare County</b>		<b>North Carolina</b>	
	<b>1990</b>	<b>2000</b>	<b>1990</b>	<b>2000</b>	<b>1990</b>	<b>2000</b>	<b>1990</b>	<b>2000</b>
Total Population	10,247	13,370	13,736	18,190	22,746	29,967	6,628,637	8,049,313
Number in Labor Force:	5,067	7,098	6,862	9,065	12,879	16,601	3,519,927	4,130,579
• In Armed Forces	22	19	161	208	107	97	118,432	90,847
• Civilian:	5,045	7,079	6,701	8,857	12,772	16,504	3,401,495	4,039,732
o Number Employed	4,786	6,781	6,357	8,528	12,199	15,696	3,238,414	3,824,741
o Number Unemployed	259	298	344	329	573	808	163,081	214,991
Percent Unemployment	5.1%	4.2%	5.1%	3.7%	4.5%	4.9%	4.8%	5.3%

Source: US Bureau of the Census, 1990 and 2000.

<sup>1</sup>Demographic Area is defined as the combination of the 11 2000 US Census block groups for the mainland and the Outer Banks. That same area was used for 1990 and consisted of 14 Census block groups.

In general, the composition of employment within Currituck and Dare counties, shown in Table 5-11, is different from the state. In particular, both counties have had only nominal employment in manufacturing and a high proportion of trade sector employment (retail and wholesale trade). The proportions of different employment categories in Currituck and Dare counties reflect the recreational/resort emphasis of the Outer Banks.

**Table 5-11. Employment by Sector 1993 and 2004**

Industry	Currituck County		Dare County		North Carolina	
	1993	2004	1993	2004	1993	2004
Total <sup>1</sup>	2,503 100%	3,496 100%	12,269 100%	15,916 100%	3,207,179 100%	3,695,015 100%
Agriculture Forestry Fishing & Hunting	NA	65 1.9%	NA	9 0.1%	25,514 0.8%	25,922 0.7%
Mining	NA	NA	NA	NA	3,775 0.1%	3,485 0.1%
Utilities	NA	NA	100 0.8%	92 0.6%	26,425 0.8%	13,725 0.4%
Construction	217 8.7%	543 15.5%	683 5.6%	1,450 9.1%	156,885 4.9%	208,129 5.6%
Manufacturing	72 2.9%	102 2.9%	253 2.1%	656 4.1%	807,369 25.2%	577,612 15.6%
Wholesale Trade	111 4.4%	94 2.7%	275 2.2%	365 2.3%	140,051 4.4%	165,203 4.5%
Retail Trade	483 19.3%	923 26.4%	2,547 20.8%	2,919 18.3%	367,889 11.5%	424,750 11.5%
Transportation and Warehousing	10 0.4%	79 2.3%	113 0.9%	142 0.9%	94,170 2.9%	107,523 2.9%
Information	NA	25 0.7%	229 1.9%	257 1.6%	58,152 1.8%	73,214 2.0%
Finance and Insurance	33 1.3%	62 1.8%	229 1.9%	480 3.0%	105,265 3.3%	138,654 3.8%
Real Estate and Rental and Leasing	39 1.6%	517 14.8%	877 7.1%	1,370 8.6%	33,714 1.1%	45,752 1.2%
Professional and Technical Services	30 1.2%	94 2.7%	235 1.9%	572 3.6%	101,622 3.2%	152,305 4.1%
Management of Companies and Enterprises	NA	NA	NA	NA	37,926 1.2%	63,839 1.7%
Administrative and Waste Services	82 3.3%	109 3.1%	560 4.6%	552 3.5%	136,690 4.3%	203,141 5.5%
Educational Services	NA	NA	13 0.1%	17 0.1%	30,360 0.9%	48,306 1.3%
Health Care and Social Assistance	141 5.6%	196 5.6%	365 3.0%	697 4.4%	237,605 7.4%	369,486 10.0%
Arts Entertainment and Recreation	80 3.2%	185 5.3%	361 2.9%	354 2.2%	29,759 0.9%	39,783 1.1%
Accommodation and Food Services	249 9.9%	335 9.6%	3,108 25.3%	2,886 18.1%	223,095 7.0%	286,769 7.8%
Other Services	39 1.6%	125 3.6%	283 2.3%	381 2.4%	80,904 2.5%	94,811 2.6%
Unclassified	NA	30 0.9%	NA	67 0.4%	NA	11,550 0.3%
Government	841 33.6%	1,110 31.8%	2,030 16.5%	2,634 16.5%	509,399 15.9%	641,056 17.3%

Source: North Carolina Employment Security Commission, 2004.

<sup>1</sup>Percentages represent share of total employment.

As shown in Table 5-11, Currituck County's retail and wholesale trade sector employment grew substantially from 1993 to 2004. In 2004, the percentage of Currituck County employment in the trade sector was 13 percent higher than trade sector employment for the state. Currituck County employment in construction grew between 1993 and 2004, to 15.5 percent of all employment, compared to 8.7 percent in 1993. Employment in real estate and rental and leasing grew between 1993 and 2004 to 14.8 percent of total employment, compared to 1.6 percent in 1993. Overall, total employment in Currituck County increased 40 percent between 1993 and 2004, from 2,503 to 3,496.

As in Currituck County, the Dare County trade sector employment percentage is higher than the state, although between 1993 and 2004, employment in retail and wholesale trade declined from 23.0 percent to 20.6 percent. The service sector also makes up a large part of Dare County employment, particularly real estate and rental and leasing (8.6 percent), and accommodation and food services (18.1 percent). As a percent of total employment, construction increased substantially, to 9.1 percent in 2004. In Dare County, employment increased 30 percent between 1993 and 2004, from 12,269 to 15,916.

Table 5-12 lists employers in Currituck and Dare counties with more than 100 employees as of the end of the third quarter of 2006. As shown, the largest employers are the schools in both counties and county government in Dare County.

## 5.5 Community Resources – Facilities

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### 5.5.1 Educational Facilities

Four schools are within or adjacent to the DCIA in Currituck County (see Figure 5-4). Currituck County Middle and High Schools are on US 158 in Barco. Jarvisburg Elementary School, which opened in 2008, is east of US 158 on Jarvisburg Road. W.T. Griggs Elementary School is in Poplar Branch on Poplar Branch Road, just outside of the DCIA. No schools are in the Outer Banks portion of Currituck County.

Within Dare County, one school, Kitty Hawk Elementary School, is within the DCIA. Kitty Hawk Elementary School is on US 158, east of Wright Memorial Bridge.

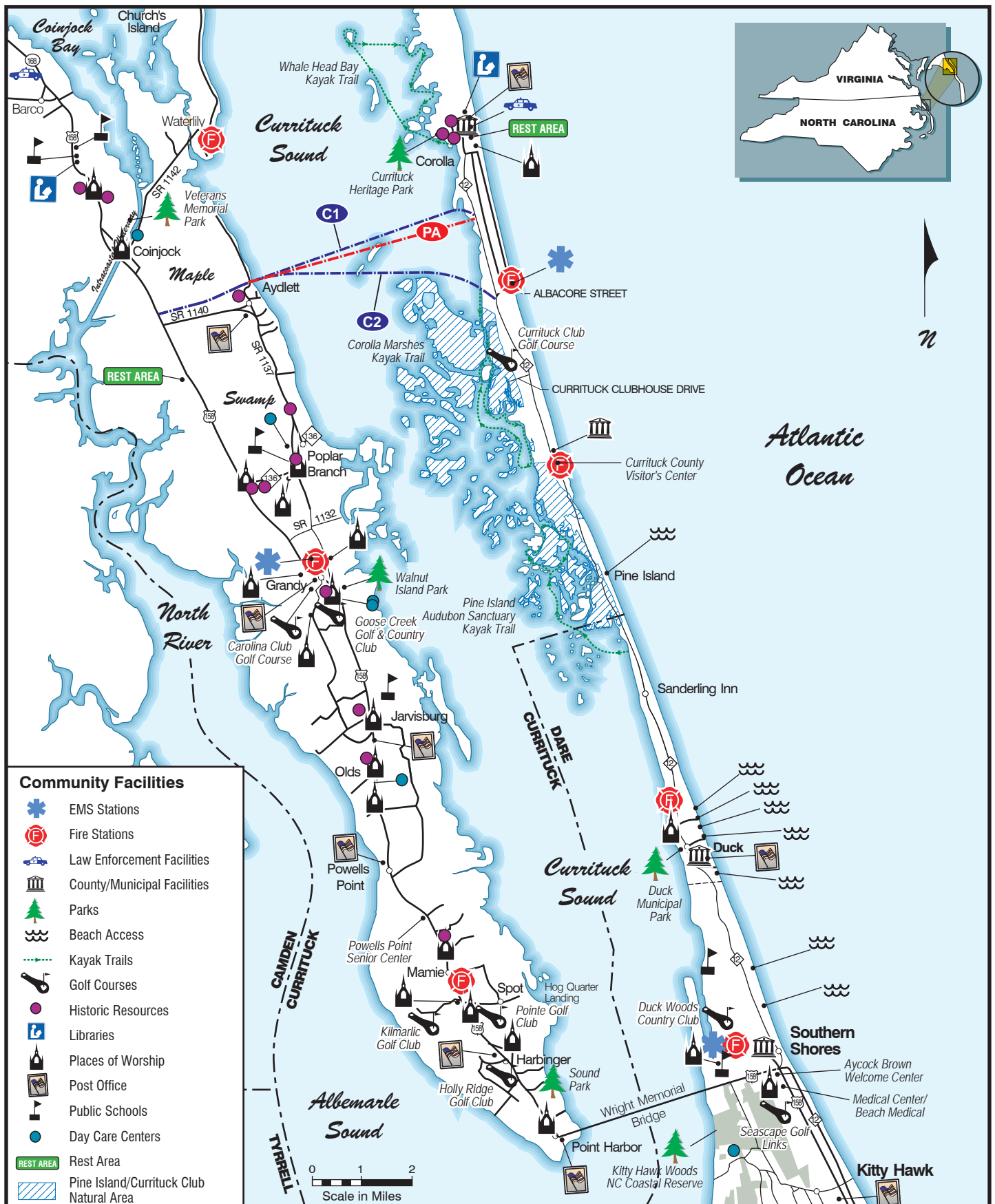
Six day care facilities are within or adjacent to the DCIA – five in Currituck County and one in Dare County. The five Currituck County day care facilities are on the mainland, either on US 158 or approximately 0.5 mile to 1 mile from US 158. The one Dare County day care facility near the DCIA is on the Outer Banks in Kitty Hawk, approximately 1.5 miles south of US 158.

**Table 5-12. Currituck and Dare County Employers with More than 100 Employees  
(End of Third Quarter, 2006)**

<b>Company Name</b>	<b>Industry</b>	<b>Employment Range</b>
<b>Currituck County</b>		
Currituck County Board of Education	Education and Health Services	500 – 999
Currituck County Finance Office	Public Administration	250 – 499
Brindley & Brindley Realty and Developers	Financial Activities	100 – 249
Food Lion, LLC	Trade, Transportation, and Utilities	100 – 249
Southland Trade Corporation	Trade, Transportation, and Utilities	100 – 249
C/O Sentara Health Center	Education and Health Services	100 – 249
Sun Realty Nags Head, Inc.	Financial Activities	100 – 249
Corolla Classic Vacations, LLC	Financial Activities	100 – 249
<b>Dare County</b>		
Dare County Schools	Education and Health Services	500 – 999
County of Dare	Public Administration	500 – 999
Food Lion, LLC	Trade, Transportation, and Utilities	250 – 499
Coastal Staffing Service, Inc.	Professional and Business Services	250 – 499
Village Realty & Management Service	Financial Activities	250 – 499
Sun Realty Nags Head, Inc.	Financial Activities	250 – 499
Carolina Designs Realty, Inc.	Financial Activities	250 – 499
East Carolina Health, Inc.	Education and Health Services	250 – 499
NC Department of Transportation	Public Administration	100 – 249
State of North Carolina	Public Administration	100 – 249
Spencer Yachts, Inc.	Manufacturing	100 – 249

Source: North Carolina Department of Commerce, Economic Development Information System, 2006.





**Figure**  
**5-4**

## 5.5.2 Parks and Recreation Facilities

Public recreation opportunities in the project area are primarily related to Currituck Sound and to the Outer Banks beach along the Atlantic Ocean. Should land from any public park or land used for public recreation be used for the project, Section 4(f) of the Department of Transportation Act of 1966 would apply. Section 4(f) requires that the proposed use of land from a publicly-owned park, recreation area, wildlife and/or waterfowl refuge, or any significant historic or archeological site by a transportation project is permissible only if there is no feasible and prudent alternative to the use.

The only parks and recreation facilities in the DCIA involving the use of funds provided under Section 6(f) of the Land and Water Conservation Fund Act are the tennis courts at Currituck County High School on US 158 between the Knapp (Intracoastal Waterway) Bridge and NC 168.

In the project area, the Currituck Sound is a shallow, grassy body of brackish water, about 3 to 8 miles wide and 3 to 9 feet deep. The sound supports a variety of shallow-water recreation opportunities, including fishing, kayaking, canoeing, windsurfing, and boating. Also, there is duck hunting from duck blinds that are built throughout the sound between the Virginia State line and the southern tip of the mainland Currituck County peninsula. Most of the duck blinds near the proposed bridge corridors are along the eastern shore of the sound and adjacent to the marsh islands to the south of the bridge corridors.

In the project area of the Outer Banks, land-based activities include bird-watching, hiking, biking, golf and tennis.

Most of the beachfront is lined with private homes, with pedestrian walkways at various locations to provide the public with access to the beach. Other recreation facilities are described in the following sections.

### 5.5.2.1 *Public Parks*

The following public parks and recreational facilities are in Currituck County in the DCIA and are shown on Figure 5-4:

- Veterans Memorial Park is east of US 158 on the Intracoastal Waterway.
- Walnut Island Park is in Grandy, east of US 158 in the Walnut Island Subdivision.
- Sound Park is in Point Harbor on the eastern shore of the Currituck County mainland and is accessible by US 158.
- The Aydlett community has a private community club house. There are no public facilities in Aydlett (Woody, 2009).

- Currituck Heritage Park is on NC 12 in Corolla and includes the following facilities: the Currituck Beach Lighthouse and Light Keeper's House; Whalehead Club; Outer Banks Center for Wildlife Education; a marina and picnic facilities. Admission to the park is free, but there are fees for tours of the Lighthouse and the Whalehead Club.

The following public parks and recreational facilities are in Dare County in the DCIA and shown on Figure 5-4:

- There are two ball fields at the Kitty Hawk Elementary School, which is adjacent to US 158. The ball fields are maintained by the Dare County Parks and Recreation Department and can be scheduled with the elementary school for public use (White, 2009). Section 4(f) would apply to the ball fields if affected.
- Duck Town Commons/Duck Municipal Park is off of NC 12 on the Currituck Sound. The park includes a parking area, walking trails, picnic shelter, gazebo/stage, water fountains, and a playground.
- The Town of Duck also has a boardwalk along the Currituck Sound, connecting to the town commons. Also, multi-use paths extend the full length of Duck. A canoe/kayak launch is accessible from the boardwalk.
- There is one Regional Beach Access on Black Pine Road in Pine Island. It has 30 parking spaces, bicycle racks, restrooms, and showers.
- There are seven access points to the beach in Southern Shores and Duck at the following locations: Barrier Island, Four Seasons, Plover Drive, Schooner Ridge Drive, Sprigtail Drive, Chickahawk Beach, and Hillcrest Beach.
- Kitty Hawk Woods is a 1,877-acre nature preserve within the Town of Kitty Hawk. It includes a diversity of wildlife and rare and delicate habitats and is open to the public during daylight hours. It is generally bordered on the north by Winsor Place Road, on the east by US 158, on the west by Currituck Sound, and on the south by SR 1208. A portion of Kitty Hawk Woods is in the DCIA; however, none of the access points or hiking trails for which Section 4(f) would apply are in the DCIA.

#### 5.5.2.2 *Golf Courses*

There are four public golf courses in Currituck County and one in Dare County within or near the DCIA:

- Carolina Club Golf Course (off of US 158 in Grandy);
- Pointe Golf Club (off of US 158 in Powells Point);
- Kilmarlic Golf Club (on West Side Lane in Powells Point, just outside the DCIA);

- Holly Ridge Golf Club (on US 158 in Harbinger); and
- Seascape Golf Links (partially within the DCIA near the US 158/NC 12 intersection).

There are three private or semi-private golf courses in the project area:

- Goose Creek Golf and Country Club (on US 158 in Grandy);
- Duck Woods Country Club (off US 158 in Kitty Hawk); and
- Currituck Club Golf Course (on NC 12 in Currituck County).

#### **5.5.2.3 Community Centers and Libraries**

Community centers and libraries in the project area also are shown on Figure 5-4. Two welcome centers are within or near the DCIA. The Aycock Brown Welcome Center is at the US 158/NC 12 intersection in Dare County. The Currituck Outer Banks Visitor's Center is on Hunt Club Drive in Corolla.

The Powells Point Senior Center is on US 158 north of Mamie on the Currituck County mainland.

There are two public rest areas in Currituck County within the DCIA. One rest area is on US 158 south of Aydlett Road and is maintained by NCDOT. It provides amenities including restrooms, drinking fountains, telephones, and picnic areas with cooking grills. A second rest area is at the Currituck Outer Banks Visitor's Center. This facility provides tourist information and restrooms. It is open from March through December.

There are two libraries in Currituck County within or near the DCIA. The Currituck County Public Library is on US 158 in Barco near the county high school and middle school. The Currituck County – Corolla Branch is at the Currituck County government's Outer Banks satellite offices.

#### **5.5.2.4 Bird Sanctuaries, Wildlife Refuges, and Kayaking Trails**

There is one bird sanctuary in the DCIA – the Pine Island Audubon Sanctuary. The bird sanctuary is also home to one of three kayaking trails in the area. There is also a nature preserve, Kitty Hawk Woods, at the southern end of the DCIA. They are both shown in Figure 5-4. There are no wildlife refuges in the DCIA. Three kayaking trails in the DCIA include Corolla Marshes from TimBuck II (7 miles), Pine Island Audubon Sanctuary from Sanderling (8.5 miles), and Whale Head Bay to Monkey Island (7 miles) (Trails.com, May 2009). They also are shown in Figure 5-4.

### **5.5.3 Post Offices**

There are seven post offices with or near the Currituck County portion of the DCIA (see Figure 5-4) in Aydlett, Grandy, Jarvisburg, Powells Point, Harbinger, Point Harbor, and Corolla. The Aydlett Post Office is on Aydlett Road just south of the proposed bridge corridor. The Corolla Post Office is at the northern edge of the DCIA in Corolla. The remaining post offices are along US 158.

Within Dare County, the Duck Post Office is on NC 12 in the town village. The Kitty Hawk/Southern Shores Post Office is on US 158, east of the Wright Memorial Bridge.

### **5.5.4 Places of Worship and Cemeteries**

There are 17 places of worship on the Currituck County mainland and one on the Outer Banks in Corolla. Fifteen of these are within the DCIA. In Dare County, three places of worship are in the DCIA (see Figure 5-4). The First Church of Christ Scientist is on US 158 in Kitty Hawk. All Saints Episcopal is in Southern Shores. Duck United Methodist Church is on NC 12 in Duck.

Numerous small cemeteries are found in the DCIA on the Currituck County mainland. The DCIA is rural and low-lying in nature; the existing roads are on the high points of the terrain. Because of the limited amount of high ground, there are numerous family cemeteries near or along the edge of the road. Some of the cemeteries may have been previously relocated when US 158 was widened from two lanes to five lanes in the mid-1980s. There are six small, family cemeteries known in the DCIA. One is a family cemetery in Aydlett on Waterlily Road where a husband and wife are buried.

No known cemeteries are within the DCIA on the Outer Banks.

### **5.5.5 Commercial Centers or Nodes**

In Currituck County, commercial uses are scattered along US 158, characterized by convenience stores, restaurants, tourism shops, and service businesses. Commercial development is concentrated in Coinjock, Grandy, Powells Point, and Point Harbor.

Commercial uses line US 158 within the towns of Kitty Hawk and Southern Shores (the east-west portion of US 158 is the municipal boundary between Kitty Hawk and Southern Shores) as it passes from the Wright Memorial Bridge to its intersection with NC 12. This development includes shopping centers; the most notable is just west of the US 158/NC 12 intersection that is anchored by a Wal-Mart. A Home Depot is adjacent to this center. This area includes retail, institutional, and recreational uses accessible to the surrounding residential areas.

Commercial development on NC 12 is generally comprised of stand-alone shops and small shopping centers with multiple small shops. Various restaurants and businesses

related to beach activities are also in the commercial centers. Larger concentrations (anchored by supermarkets) are at Currituck Clubhouse Drive and Albacore Street in Currituck County.

The Town of Duck commercial center on NC 12 includes the town's municipal offices. This is where most of the non-residential development on NC 12 in Dare County is located. The Waterfront Shops is a center that offers shopping, offices, and restaurants. The town's boardwalk on the Currituck Sound is accessible from this area.

### **5.5.6 Health Centers and Hospitals**

The Outer Banks Hospital in Nags Head is approximately 8 miles south of the DCIA and is the only healthcare facility on the Outer Banks with an emergency department that provides trauma care and is open year round, 24 hours a day, and seven days a week. Regional Medical Center, at Milepost 1.5 in Kitty Hawk, just south of the US 158/NC 12 intersection, is a community hospital affiliated with Albemarle Hospital in Elizabeth City. Regional Medical Center provides urgent care, surgery, radiology, and family medicine, but does not provide emergency trauma care. Nearby Beach Medical specializes in family practice.

In the project area, the Outer Banks has two helipads that can be used in the transport of persons to the mainland for medical care. One is at the Regional Medical Center in Kitty Hawk, and the other is at the Duck Fire Station along NC 12 at the USACE property.

### **5.5.7 Historic Resources**

Fourteen historic resources are listed on or eligible for inclusion in the National Register of Historic Places in the project area are described in the *Historic Architectural Resources Report: Mid-Currituck Bridge Project* (NCDOT, 2009) and are:

- On the Currituck County mainland (all eligible)
  - Coinjock Colored School (on US 158 north of the Intracoastal Waterway in DCIA);
  - Samuel McHorney House (on US 158 north of the Intracoastal Waterway in DCIA);
  - Daniel Saunders House (in Aydlett in DCIA);
  - Currituck Sound Rural Historic District (in Poplar Branch south and east of DCIA);
  - Dr. W. T. Griggs House (in Poplar Branch south and east of DCIA);

- Ellie and Blanton Saunders Decoy Workshop (in Poplar Branch south and east of DCIA);
- Christian Advocate Baptist Church (on US 158 near NC 136 in DCIA);
- (Former) Grandy School (on US 158 at Grandy in DCIA);
- C. W. Wright Store (on US 158 at Jarvisburg in DCIA);
- Jarvisburg Colored School (on US 158 near Jarvisburg in DCIA); and
- Dexter W. Snow House (on US 158 near Mamie in DCIA).
- On the Currituck County Outer Banks (north of DCIA)
  - Whalehead Club (listed);
  - Currituck Beach Light Station (listed); and
  - Corolla Historic District (eligible).

The location of these resources is shown on Figure 5-4.

## 5.6 Community Resources - Infrastructure

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### 5.6.1 Pedestrian Routes, Sidewalks, and Bicycle Routes

There are no sidewalks or bicycle trails along US 158 on the Currituck County mainland in the DCIA. Sidewalks, multi-use paths (for pedestrians and cyclists), and wide shoulders that could be used by pedestrians and cyclists exist at various locations on the Outer Banks in the DCIA. A multi-use path is on the north side of US 158 between Barlow Lane/Martins Point Road and the intersection of North Virginia Dare Trail/Ocean Boulevard/North Croatan Highway. In addition, the town of Kitty Hawk plans a new multi-use path on the south side of US 158, between Woods Road and the Wal-Mart.

Along NC 12, a multi-use path either parallels or is a part of the NC 12 shoulder for most of the distance from Sea Bass Circle in Southern Shores to the NC 12 northern terminus at Corolla. The trail is asphalt, 7- to 8-feet wide, and generally maintains a 6- to 10-foot separation from the edge of pavement along NC 12. Just south of the town of Duck at Dogwood Trail, the trail shifts to the east side of NC 12. From here it continues past Sea Oats Trail/13<sup>th</sup> Street to the area between Four Seasons Lane and Scarborough Lane. At this point NC 12 widens to three lanes, and a dedicated bicycle trail is designated by pavement markings on both sides of the road, continuing through the Duck business section. North of Barrier Island Station, the road narrows to two lanes, but the signed shoulder/bike lanes continue to Sandy Ridge Road. From here, a separate

asphalt path continues on the east side of NC 12 past the Dare/Currituck County line to Cadwall Road. This is the Pine Island area, where the continuous path ends and there are discontinuous paths that connect to secondary, residential streets parallel to NC 12. This path ends at Deep Neck Road, which parallels NC 12 toward the northern end of Pine Island. There is no multi-use path along NC 12 from this point until one begins at Dolphin Street (north of Albacore Street) on the west side of NC 12 and extends to Ocean Forest Court in Monteray Shores. From Pine Island to the Corolla Village subdivision, the shoulders of NC 12 are 3- to 4-feet wide and also serve as a path for bicycles and pedestrians.

Pedestrian travel along NC 12 is concentrated at the town of Southern Shores, the town of Duck, and the resort subdivisions of Sanderling, Monteray Shores, and Whalehead Beach. There are about 12 marked pedestrian crossings in Southern Shores and about eight in Duck, including two at the Sanderling Inn, which has facilities on both sides of NC 12.

### **5.6.2 Automobile Routes**

US 158 and NC 12 are the project area's two main thoroughfares (see Figure 1-2). US 158 is the primary means of north-south travel on the Currituck County mainland. Except on the Joseph P. Knapp Bridge over the Intracoastal Waterway at Coinjock, US 158 on the mainland is a five-lane road south from its intersection with NC 168 at Barco to the Wright Memorial Bridge. US 158 enters the Outer Banks over this bridge, which consists of two 2-lane bridges. It then continues south of the project area as a five-lane road, serving Kitty Hawk, Kill Devil Hills, and Nags Head. US 158 ends at the intersection of US 64 at Whalebone, in Dare County.

NC 12 is a two-lane road that runs the length of the Outer Banks from the southern end of Ocracoke Island in Dare County to just north of Corolla in Currituck County, including the DCIA. NC 12 is the primary Outer Banks north-south thoroughfare. The rest of the DCIA is accessible by local roads and private drives to residential areas.

Access to the Aydlett community on the Currituck County mainland is provided on three primary access roads (see Figure 1-2). Aydlett Road (SR 1140) is a two-lane roadway across Maple Swamp linking Aydlett with US 158 just south of the proposed Mid-Currituck Bridge corridor. In addition, local access is available to the south with SR 1137 (Aydlett Road) providing access to NC 136 (Macedonia Church Road) to reach US 158 near Poplar Branch and SR 1131 (Poplar Branch Road) to reach US 158 near Grandy. The primary north south road in the local Aydlett network is Narrow Shore Road (SR 1137) (see Figure 1-2), which intersects Aydlett Road just south of the proposed Mid-Currituck Bridge corridor and terminates with no outlet at the northernmost part of Aydlett. Narrow Shore Road is immediately adjacent to the western shoreline of Currituck Sound.



### 5.6.3 Rail, Transit, and Airports

Freight rail service in Currituck County is provided by the Chesapeake & Albemarle Railroad, an operating unit of Rail America, a short line and regional freight railroad operator. In addition to Currituck County, the Chesapeake & Albemarle provides freight service for the northeastern North Carolina counties of Camden, Pasquotank, Perquimans, and Chowan. There is no rail service in the DCIA.

There is no fixed route transit or intercity bus service in the DCIA. One public transportation system operates in the DCIA, the Inter-County Public Transportation Authority, which is a van shuttle service. It is based in Elizabeth City and serves the Currituck County area, but has limited service to the Outer Banks.

Several private transportation entities provide the remainder of the available service to the DCIA: a subdivision-specific private shuttle system (Corolla Light Shuttle), taxi services, for-hire limousines (Island Limousine), tour/charter service (Sandy Beach Tours), and a van service (The Connection) mainly to shuttle patrons between the Outer Banks and transportation hubs on the mainland, such as the Norfolk International Airport, Norfolk Bus Terminal, and Newport News Amtrak Station, all in Virginia.

The Currituck County Airport is a publicly owned general aviation airport on Airport Road (SR 1379) in the town of Maple, outside the DCIA but serving it. The airport is approximately 2 miles west of the junction of US 158 and NC 168 and serves small private planes and occasionally smaller “Citation” or corporate jets. There are no air tours or charter services operating out of Currituck County Airport. Future plans include construction of corporate hangars, additional T-hangars, and a terminal building. The aviation-integrated Maple Industrial Park and other properties zoned “Residential Airpark” are under development adjacent to the airport site. The *Airport Layout Plan Update* (Currituck County, 2000), calls for expansion of the existing 4,000-foot runway to 5,500 feet, a parallel taxiway, and other improvements. The improvements will allow the airport to handle larger “Citation” or corporate jets whose passengers would ideally utilize the adjacent business park.

Dare County Regional Airport is a publicly owned, general aviation airport on Airport Road in Manteo, North Carolina, outside the DCIA but serving it. It has two runways (4,400 feet and 3,300 feet) with radio-controlled lighting, a modern terminal building, hangars, and navigational equipment. The airport is capable of serving most regional jets. Uses of the airport include charter flights, corporate transit services, and air tours. Approximately three to four charter flights arrive daily at Dare County Regional Airport, and three companies fly charter services out of the airport. Corporate jets provide transit service for clients to the airport but maintain no set schedule or frequency. Air tours average at least 20 flights per day during summer months. Auto rental and taxi services are available at the airport.

Three publicly owned airstrips for private aircraft are on the Outer Banks. One is near the DCIA, the First Flight Airstrip next to the Wright Brothers Memorial in Kill Devil Hills. The other two are further south on Hatteras and Ocracoke islands in Dare County. These three airstrips are owned and managed by the National Park Service and operate during daylight hours only.

One privately owned airstrip, Pine Island Airport, is within the DCIA. Located in the Pine Island Community on the Currituck County Outer Banks, this airstrip serves private aircraft and is generally restricted to property owners and guests of the Pine Island community. From May to September, FlightGest offers air shuttles between Norfolk, Virginia, and Pine Island Airport with a single flight on Fridays, Saturdays, and Sundays.

#### **5.6.4 Water and Utilities**

The Currituck Shores Water System provides service on the Currituck County mainland. On the Outer Banks, two county-owned water systems in Currituck County along NC 12, the Southern Outer Banks Water System (SOBWS) and the Ocean Sands Water/Sewer District, provide water to the Outer Banks in Currituck County. The SOBWS serves the potable water needs of several communities on the Currituck Outer Banks. These communities are:

- Spindrift, Ocean Sands, The Villages at Ocean Hill;
- Ocean Hill Section 1; and
- Whalehead Beach and the Corolla Village area.

Private water systems serve the needs of Pine Island; The Currituck Club; Buck Island; Monteray Shores Phases 1 and 2; and Corolla Light.

The Ocean Sands subdivisions, sections D-Q, are served by Ocean Sands Water and Sewer District, which is part of the SOBWS (Weist, 2008). Three large surface sewerage treatment plants (Currituck Club Pine Island; Buck Island; and Monteray Shores) are in Currituck County within the project area.

Natural gas is distributed to Currituck County by Eastern North Carolina Natural Gas, a local distribution company. Natural gas lines are on the mainland along NC 34 from the Camden line to NC 168 where they branch northward to Moyock and southward to the intersection of US 158 at Barco. The transmission continues along US 158 to the Currituck Sound at Point Harbor.

Most of the electrical services for Currituck County are provided by Dominion North Carolina Power. However, a small portion of Currituck County's mainland is serviced by the Albemarle Electric Membership Corporation. There is an electrical substation in Aydlett on Narrow Shore Road, just south of the DCIA.

The Embarq Corporation provides telephone service to consumers within Currituck County. Sprint provides telephone service on the Outer Banks.

Water consumers in Dare County receive water from the town of Kill Devil Hills, the town of Nags Head, the Dare County Regional Water System, or from private wells.

Electricity for Outer Banks consumers in Dare County is provided by Dominion North Carolina Power. Natural gas is provided by Eastern North Carolina Natural Gas Company. Solid waste collection for both residential and commercial properties in Dare County is handled by the local governments. Dare County contracts to Kitty Hawk and Southern Shores for solid waste pick-up in these two towns. There is no solid waste collection in Currituck County.

## 5.7 Community Resources – Natural

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### 5.7.1 Farmland

The US Department of Agriculture, Natural Resource Conservation Service (NRCS), has identified three general categories of important farmland soils—prime, unique, and statewide and locally important. Prime farmlands consist of soils that are best suited for producing food, forage, fiber, and oilseed crops. Such soils have properties that are favorable for production of sustained high yields with minimal inputs of energy and resources. Farmland of statewide and local importance consists of soils that do not meet all of the requirements for prime farmland because of steepness of slope, permeability, susceptibility to erosion, low available water capacity, or some other soil property. Statewide and locally important farmland, however, is considered valuable in the production of crops when managed according to modern farming methods, including drainage to control excess water. Soils that have a special set of properties unique to producing certain high-value crops meet the requirements for unique farmland. There are no unique farmland soils in the project area. All of the farmland soils in the project area are on the mainland in Currituck County. According to Currituck County, much of the mainland is actively farmed (Woody, 2008). Farming occurs along US 158 in the DCIA.

About 10,362 acres, or nearly 6 percent, of Currituck County meets the soil requirements for prime farmland. These soils are Altavista fine sandy loam (0 to 2 percent slopes), Bojac loamy sand (0 to 3 percent slopes), Munden loamy sand, and State fine sandy loam (0 to 6 percent slopes). They are found primarily along the US 158 corridor in the DCIA.

State and locally important soils in Currituck County make up about 85,381 acres, nearly 49 percent of the county. These soils are Augusta fine sandy loam, Cape Fear loam, Conetoe loamy sand (0 to 3 percent slopes), Dragston loamy fine sand, Pasquotank silt loam, Ponzer muck, Portsmouth fine sandy loam, Roanoke fine sandy loam, and

Tomotley fine sandy loam (Soil Conservation Service, 1982). They are found throughout the county.

The DCIA consists of approximately 46,400 acres. Of that, only 27.0 acres are prime farmland soils; however, almost one-third of the DCIA, approximately 13,000 acres, are state and locally important soils.

There are no prime or unique farmland soils on the Outer Banks. There is one state and locally important soil type on the Outer Banks in Dare County; however, it is in a built-up area and is therefore not considered farmland (Soil Conservation Service, 1992).

In Chapter 106, Article 61 of the North Carolina General Statutes, the North Carolina General Assembly authorized counties to undertake a series of programs to encourage the preservation of farmland. As a result, counties throughout the state of North Carolina have begun to adopt Voluntary Agricultural District Ordinances (VAD) and Enhanced Voluntary Agricultural District Ordinances (EVAD) (North Carolina Department of Agriculture and Consumer Services, n.d.). The ordinances provide for the creation of an Agricultural Advisory Board to administer this program. The board reviews and approves applications for qualifying farmland as well as establishing the agricultural district (North Carolina Department of Agriculture and Consumer Services, n.d.). Dare County does not have any Voluntary Agricultural Districts. Currituck County adopted a Voluntary Agricultural Protection District Ordinance in 2001. However, the county does not have any designated Agricultural Districts (Ferrell, 2011).

### **5.7.2 Open Space**

Open space includes agriculture and undeveloped land uses. Within the DCIA, there are 10,261 and 1,364 acres of open space in Currituck and Dare counties, respectively.

Open space is concentrated on the mainland portion of the DCIA in the area of Aydlett (see Figure 5-1). Pockets of open space are along both the beach area of the Atlantic Ocean and Currituck Sound on the Outer Banks in Currituck County. Areas of open space are also on the south side of US 158 in Kitty Hawk on the Outer Banks in Dare County.

### **5.7.3 Water Supply Watershed Protection**

The 2006 Currituck County Land Use Plan states “there are no surface water supply watersheds in the county. Further, concerning groundwater resources in particular, there have been no wellhead protection plans submitted or approved for any of the three county-owned water supply systems in Currituck County: (1) Currituck Mainland Water Department in Maple, (2) Ocean Sands Water and Sewer District in Corolla, and (3) the Southern Outer Banks Water System, also in Corolla.” Additionally, interviews

with Currituck County (Doxey, 2008) and the Town of Duck planning director (Garman, 2008) revealed there are no water supply watersheds within the DCIA.

#### **5.7.4 Wild and Scenic Rivers/Water Bodies**

The “Wild and Scenic River Act” describes those river areas eligible to be included in a system afforded protection under the Act as free flowing and possessing “...outstandingly remarkable scenic, recreational, geologic, fish and wild life, historic, cultural, and other similar values.” There are no wild and scenic rivers in the DCIA. There are no 303(d) water bodies, outstanding resource waters, or high quality waters in the DCIA. Section 303(d) of the Clean Water Act (CWA) requires states to develop a list of waters not meeting water quality standards or which have impaired uses.

Water bodies in the area of the project include Currituck Sound, the Atlantic Ocean, and the Intracoastal Waterway. Currituck Sound separates the mainland and the Currituck County and northern Dare County Outer Banks. The Atlantic Ocean borders the Outer Banks to the east. The Intracoastal Waterway runs through the northern part of the DCIA in Currituck County. This is a toll-free waterway maintained by the US Army Corps of Engineers.

Surface waters of the project area are found primarily in association with the open waters of Currituck Sound. The Atlantic Intracoastal Waterway and Jean Guite Creek are the only major drainages within the project area. The Intracoastal Waterway runs through the northern part of the DCIA on the Currituck County mainland. In addition, five jurisdictional un-named drainages were identified within the project area and are addressed in detail in the *Natural Resources Technical Report* (CZR Incorporated, 2009) (NRTR). These include two canals that connect to Maple Swamp and drain into Great Swamp and Deep Creek (North River) along the mainland portion of US 158. Two modified natural streams along US 158 drain into Currituck Sound. The southern portion of the project boundary crosses Jean Guite Creek. Also, a small stream identified within the maritime swamp where bridge corridor C2 terminates on the Outer Banks drains into Currituck Sound. The location of each of these features and the physical characteristics of these streams are provided in the NRTR (CZR Incorporated, 2009).

Several small natural ponds and naturalized excavated ponds exist on both the mainland and the Outer Banks. A total of 20 jurisdictional ponds occur within the project area, one within Maple Swamp on the mainland, and the other 19 on the Outer Banks. Ten of these ponds have surface hydrologic connections (often through jurisdictional wetlands) to traditional navigable waterways. The other 10 were determined to be jurisdictional via sub-surface hydrologic connections created by porous sandy soils. None of the ponds in the project area is connected to jurisdictional stream features (CZR Incorporated, 2009).

### **5.7.5 Coastal Barrier Resources System**

The Coastal Barrier Resources Act (CBRA) of 1982 established the John H. Chafee Coastal Barrier Resources System (CBRS), comprised of undeveloped coastal barriers along the Atlantic, Gulf, and Great Lakes coasts. The law encourages conservation of hurricane prone, biologically rich coastal barriers by restricting federal expenditures that encourage development, including federal flood insurance through the National Flood Insurance Program. The CBRA is a free-market approach to conservation. These areas can be developed, but federal taxpayers do not underwrite the investments. The CBRA saves taxpayer dollars and encourages conservation at the same time. It is estimated that CBRA has saved over \$1 billion and will save millions more in the future. The US Fish and Wildlife Service (USFWS) maintains the repository for CBRA maps that depict the CBRS. USFWS also advises federal agencies, landowners, and Congress regarding whether properties are located within or outside of the CBRS and what kind of Federal expenditures are allowed.

Undeveloped coastal barriers were mapped by the Department of the Interior using specific criteria, and were then enacted by Congress as units of the CBRS. The affected areas are delineated on maps entitled "John H. Chafee Coastal Barrier Resources System." The CBRS currently includes 585 System units that comprise nearly 1.3 million acres of land and associated aquatic habitat. It also includes 271 "otherwise protected areas," a category of coastal barriers already held for conservation purposes that include an additional 1.8 million acres of land and associated aquatic habitat.

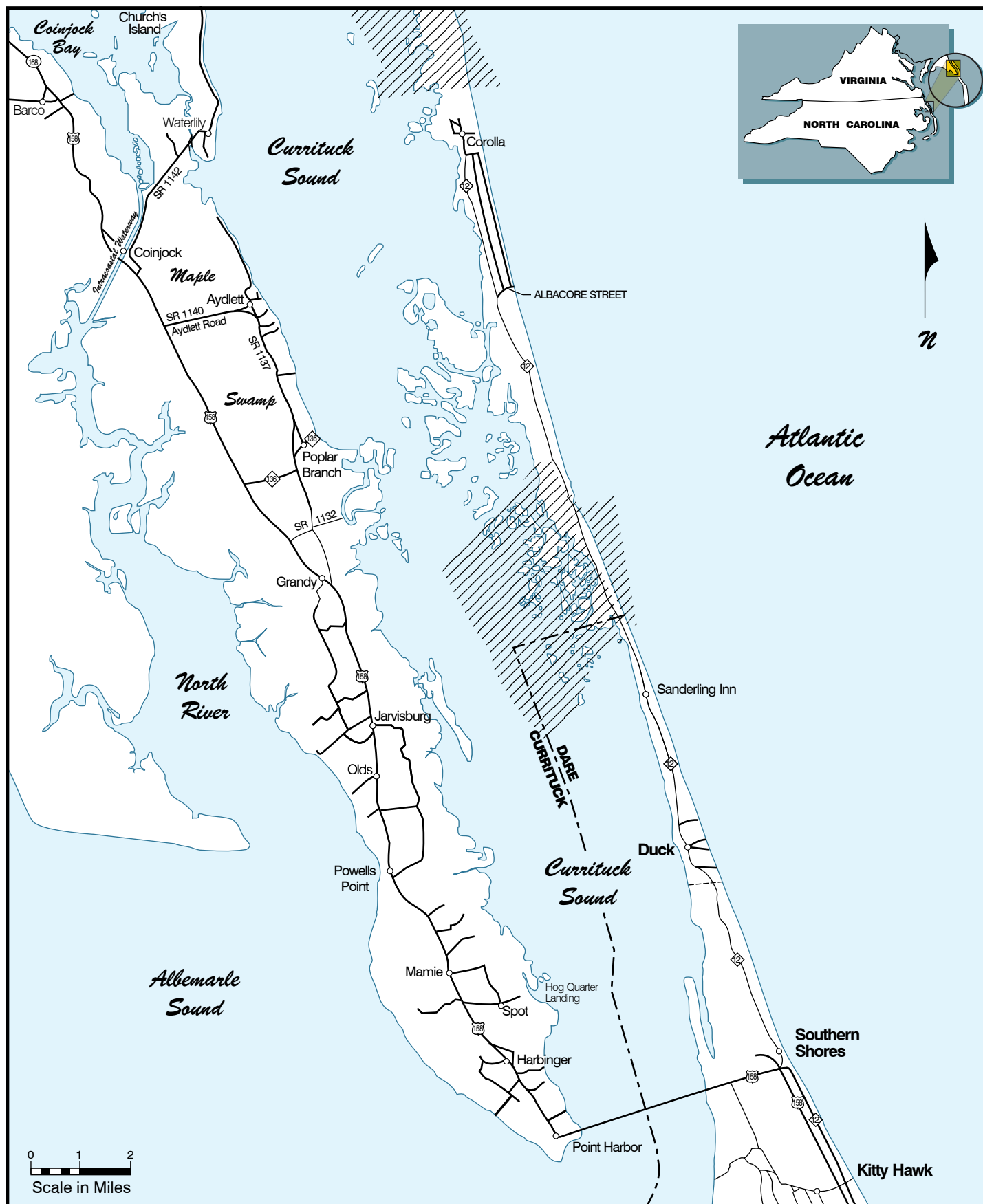
Figure 5-5 shows the limits of the CBRS in the project area. One of the two CBRS limits is in the DCIA. It is owned by the Audubon Society. The CBRS north of the DCIA includes two National Wildlife Refuges, the Currituck Estuarine Research Reserve, and lands in private ownership.

## **5.8 Crime, Safety and Emergency Services**

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### **5.8.1 Crime and Safety Issues**

Table 5-13 shows crime rates for Currituck and Dare counties compared to North Carolina from 1993 to 2007. As shown, crime rates in Dare County have decreased since 1993 and in Currituck County and the state since 1997. Crime rates for Currituck County are below those in both Dare County and the state for the period reported. In comparison, crime rates in Dare County have been above rates for Currituck County or the state for the period reported.



#### LEGEND

Coastal Barrier Resources System

County Boundaries

Source: USFWS dated May 31, 2007.

## Coastal Barrier Resources System

Figure

5-5

**Table 5-13. Crime Rates per 100,000 Population**

Year	Currituck County	Dare County	North Carolina
1993	3,337	9,385	5,792
1997	4,056	6,786	5,591
2002	3,047	6,703	4,771
2007	2,453	4,687	4,659

Source: North Carolina State Bureau of Investigation

Bicycle and pedestrian paths are generally along or adjacent to thoroughfares within the DCIA and are visible to motor vehicle traffic and/or are visible from homes. They are not lighted. There are no issues related to defensible space (space that creates an environment where an individual feels vulnerable or that facilitates the shielding of potential criminals from public view) in the DCIA.

### **5.8.2 Police and Fire**

The locations of police and fire facilities are shown on Figure 5-4. The Currituck County Sheriff's Department main office is on US 158 in the community of Maple, north of the DCIA. There is one law enforcement center near Barco on the Currituck County mainland. The Outer Banks satellite sheriff's office is in Corolla on NC 12, at the northern boundary of the DCIA. However, the office is not generally staffed.

The mainland Currituck County Volunteer Fire Department is on US 158 in Grandy. Other county volunteer fire departments are in Waterlily and Powells Point.

In Dare County, the Kitty Hawk Police Department (KHPD) and Fire Department (KHFD) are on Kitty Hawk Road south of the DCIA. The KHFD is a combination fire and ocean department with a full time staff - KHFD has part-time firefighters, who complement the full-time staff to provide 24-hour service. The KHFD does not have mapped response routes, but utilizes US 158 and nearby roadways, depending on the location of the call. The KHPD does not have formal patrol routes.

The Southern Shores Volunteer Fire Department, South Station, is across from the Kitty Hawk Elementary School on Dogwood Trail off US 158. The East Station is at the corner of Duck Road and East Dogwood. The fire department provides support service to the Dare County EMS.

The Police and Volunteer Fire Departments for the Town of Duck are at the Public Safety Building on NC 12. The fire department is made up of volunteers with a full-time chief and responds to calls involving emergency medical, fire, automobile crashes, and ocean rescue. There is a county-wide mutual aid agreement that includes the Currituck County Outer Banks.



### **5.8.3 Emergency Medical and Rescue Services**

#### **5.8.3.1 Medical Services**

The Currituck County Fire-Emergency Medical Services (EMS) provides pre-hospital Advanced Life Support emergency medical care and transportation for Currituck County. The department is staffed by Basic, Intermediate, and Paramedic Emergency Medical Technicians. As shown on Figure 5-4, the EMS office is on US 158. The county staffs eight ambulances 24/7. Emergency crews are also in Waterlily and Grandy in the DCIA area.

The Corolla Fire and Rescue Squad, Inc. (CFR), in partnership with Currituck County EMS, operates out of two locations: the Pine Island Station on Ocean Trail, and the Whalehead Station on Whalehead Drive. The CFR operates 24/7 and provides state-certified Advanced Life Support/Paramedic level of care throughout the Currituck County Outer Banks.

An EMS in Dare County in the DCIA is stationed in Southern Shores. The Dare County EMS provides emergency response to 911 calls anywhere in the county.

Two Fire-EMS stations are on the Currituck County Outer Banks in the DCIA. One is on NC 12 just north of the Dare/Currituck County line. The second station is on NC 12 in Corolla.

#### **5.8.3.2 Rescue Services**

Corolla Ocean Rescue (COR), a division of Corolla Fire and Rescue EMS, provides a minimum of 19 lifeguards during the summer months and peak visitor season. A surf rescue team is stationed at the Town of Duck at the Public Safety Building on NC 12. Five lifeguard stations are on the beachfront in the Town of Duck. In Dare County, Kitty Hawk ocean rescue facilities include three stations along the beach that serve as bases for regular beach patrols. Lifeguards are also stationed along the beach from Memorial Day through Labor Day.

## **5.9 Plans and Regulations**

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### **5.9.1 Coastal Area Management Act (CAMA)**

The US Coastal Zone Management Act (CZMA) was passed by Congress in 1972. This legislation relies on voluntary measures and incentives to encourage federal, state, and local partnerships for coastal protection. The program does not require that states develop a coastal protection program, but it provides two specific incentives to encourage participation. First, it provides financial assistance to establish coastal

management programs. Second, it assures states that federal actions in the coastal areas of participating states will be consistent with enforceable policies. Essentially, the CZMA vests considerable authority in the states to implement coastal management programs. If the federal government wishes to engage in actions that are not consistent with state policies, the President must determine that the actions are paramount to the interests of the United States.

As a result of the federal CZMA, the State of North Carolina passed the Coastal Area Management Act (CAMA) in 1974. CAMA established the North Carolina Coastal Resources Commission (NCCRC), which is responsible for adopting rules that implement CAMA. CAMA requires each of the 20 coastal counties in North Carolina to have a local land use plan that meets guidelines established by NCCRC. Further, municipalities within coastal counties may establish land use plans independent from their respective counties. CAMA provides financial assistance to support coastal communities in developing their land use plans. Once a land use plan is certified by NCCRC, NCDENR-DCM uses the plan when making CAMA permit decisions. Proposed development must be consistent with the local land use plan, or NCDENR-DCM will not permit a planned development to be implemented.

In addition to certifying local land use plans, NCCRC also designates areas of environmental concern (AECs) and adopts rules and policies for coastal development within those areas. These are environmentally fragile and important land and water areas. AECs are broadly defined as: the estuarine system, the ocean hazard system, public water supplies, and natural and cultural resources. AECs encompass less than 3 percent of the land covered by CAMA in North Carolina's 20 coastal counties. NCCRC, in cooperation with local governments, has developed a program of permit review and coordination for projects within these AECs. The intent of the regulatory program is to ensure the compatibility of development with the continued productivity and value of these critical land and water areas. These areas—including those under state and federal jurisdiction—are subject to special management controls and development permitting procedures. In addition, a proposed development must comply with the policies and land classifications of the local land use plans and with local zoning ordinances, subdivision regulations, and other local development regulations to receive a permit to build in CAMA areas. The DCIA for the project addressed in this CIA contains environmentally fragile areas that have been designated as AECs, as discussed in the *Natural Resources Technical Report* (CZR Incorporated, 2009).

## **5.9.2 Currituck County Plans**

### **5.9.2.1 Land Use Plan**

The *Currituck County Land Use Plan* (Currituck County, 2006) describes economic and land use development goals for the county. Much of the local economic activity in Currituck County is based on tourism and tourism-related industries, such as

construction and retail trade. Additionally, the development category of finance, insurance, real estate, accommodation, and food services has become a major employment sector. The main themes for Currituck County's economic and land use development goals are to expand the economic base of Currituck County and to improve employment opportunities, while preserving the character and natural beauty of the county.

The plan contains a number of Transportation Policies that apply specifically to the proposed project alternatives. These include the following:

- Policy TR1: Opportunities to enhance regional transportation connections between Currituck County and other parts of the state and region shall be supported.
- Policy TR13: A new mid-county bridge between the mainland and Corolla shall be supported to provide critical traffic relief to US 158, to improve emergency access to and evacuation from the Currituck Outer Banks, to promote economic development, and to provide better access to public and private services not readily available on the Outer Banks. To protect the character of communities near the bridge (e.g., Aydlett, Churches Island, Poplar Branch), the road leading to the bridge shall have no access points before its intersection with US 158.
- Policy TR14: Plans for improvements to NC 12 shall be an integral part of the planning for the management of traffic to and from the Currituck Outer Banks.

In August 2008, the Board of Commissioners approved an amendment to the Land Use Plan for the southern portion of the county. This amendment allows residential and commercial use on 40 upland acres in a development called Currituck Marina in Harbinger. Wetlands in the 120-acre site remain undeveloped. Plans are to build a marina with 240 housing units (Woody, 2008).

#### **5.9.2.2     *Economic Development Plan***

Consistent with the economic goals of the General Plan, Currituck County commissioned an economic development report from the University of North Carolina Center for Competitive Economies. This *Economic Development Strategy: "Vision Plan" for Currituck County, North Carolina* (Lane and Jolley, 2008) addresses a variety of economic potentials, including the Mid-Currituck Bridge. The plan states that the bridge should provide easier mainland access to Currituck County Outer Banks tourists and would likely capture a considerable amount of tourism spending that currently occurs in Dare County. It also states that, with the bridge, increases in mainland business development is expected, with tourists crossing the bridge mid-week to new retail, entertainment and hospitality establishments in the vicinity of the western bridge terminus at US 158. To support such business functioning, there would need to be changes to the infrastructure of the area, such as access to central water and sewer, garbage collection, effective stormwater management, internet, and the addition of access roads and sidewalks.

The vision plan includes 10 “strategic options” to improve the county’s economic development. Those that apply specifically to the proposed project alternatives are summarized below:

- Encourage mainland development resulting from the Mid-Currituck Bridge toward up-market retail, hospitality, and service businesses.
- Help develop Mid-Currituck Bridge tolls to encourage mid-week tourism traffic.

### **5.9.3 Dare County Plans**

The Dare County Board of Commissioners has adopted procedures and standards for the development of all land under the jurisdiction of Dare County. Within Dare County, the DCIA is in three municipalities: Kitty Hawk, Southern Shores and Duck, and an unincorporated peninsula of land west of Southern Shores. The relevant plans and ordinances for the planning jurisdictions within the DCIA are described in the following sections.

#### **5.9.3.1 Dare County Land Use Plan**

The most recent version of the *Dare County Land Use Plan Use* (March 2003) was certified by the North Carolina Coastal Resources Commission in July 2003. This land use plan applies to the unincorporated portions of Dare County. The major themes of the land use plan include natural resource preservation, residential development as the preferred principal land use, commercial development that reflects the historic architectural patterns of Dare County, and the recognition of the importance of tourism to the county economy.

Goals and objectives that are pertinent to the proposed project include:

- Maintaining the coastal village atmosphere with an emphasis on residential development and small, locally-owned commercial establishments;
- Preference for single-family detached homes as the preferred type of residential development;
- Commercial development that reflects the traditional “coastal village” architecture of the Outer Banks; and
- Development of the foundation for an alternative means of transportation for pedestrians and bicycles that provides a means of movement other than automobiles.

Each of the municipalities in the county adopts its own land use plan.

#### **5.9.3.2 Kitty Hawk Land Use Plan**

The *Kitty Hawk 2003-2004 CAMA Core Land Use Plan Update* was adopted by the local planning board on April 6, 2005. The Town of Kitty Hawk has jurisdiction over the portion of the DCIA in Dare County that is south of US 158. Almost all of that area is zoned for commercial land use. The general land use plan objectives contained in the *Kitty Hawk 2003-2004 CAMA Core Land Use Plan Update* (Kitty Hawk, April 2005) are:

- Preserve its character as a coastal village;
- Protect and preserve the natural environment, including protecting wetlands and managing stormwater;
- Provide adequate public facilities and services, including multi-use trails;
- Achieve support and consensus for town initiatives;
- Promote unity in its residential and commercial communities; and
- Make infrastructure improvements that compliment but do not duplicate existing systems.

#### **5.9.3.3 Southern Shores Land Use Plan**

The town of Southern Shores land use plan was updated in 1997 and adopted in 1998. The 1998 plan is still current; however, as of 2009, it is in the process of being updated. Most policies in the plan acknowledge the predominant residential nature of Southern Shores, and the preference and desire to continue this character into the future. Plan policies allow for future infilling on lots platted years ago. The plan indicates that the town does not have or want “commercial uses typically associated with the beach.” Commercial uses are to serve the town and its goal of remaining a low-density community of detached, single-family homes.

In 2005, the Town of Southern Shores updated its *Long Range Plan*, which was adopted in April 2006. It was the product of a committee of residents appointed by the Town Council. Many of the plan’s recommendations are oriented toward operational policy, but the following recommendations are relevant to the Mid-Currituck Bridge project:

- Develop plans and policies in coordination with local, state, and federal officials to alleviate the growing NC 12 traffic problems affecting Southern Shores citizens, particularly during the tourism season;
- Work closely with the “Build the Bridge and Preserve our Roads Committee” to quickly win necessary support and approval to authorize construction of a Mid-Currituck Bridge to reduce traffic congestion on US 158, the Wright Memorial Bridge, and NC 12; and

- Protect designated Areas of Environmental Concern and wetlands.

#### **5.9.3.4 Duck Land Use Plan**

The *Duck CAMA 2003-2004 Core Land Use Plan* was adopted by the local planning board on February 2, 2005. The town plans to preserve its present physical appearance and form in order to maintain its unique character among coastal villages.

The land use plan also states that “Duck remains committed to keeping NC 12 two-lanes in its present alignment and configuration but supports the construction of the Mid-Currituck County Bridge.”

Some of the relevant goals, policies, and objectives from the Land Use Plan include:

- Goal #26: Ensure a safe, efficient transportation system with NC 12 remaining a two-lane facility and the construction of a mid-Currituck County bridge.
- Policy #26a: Duck supports the construction of a mid-Currituck County bridge and maintenance of the existing two-lane configuration of NC 12 with the Duck Trail along NC 12 through Duck.
- Objective #26a: Lobby for the construction of a mid-Currituck County bridge.
- Objective #26b: Lobby for maintaining NC 12 as a two-lane facility in its present configuration through Duck.
- Objective #26d: Encourage the provision of a safe, efficient transportation system given state and local finances, topography, geography, and natural systems and surrounding land uses and development.

Other relevant policies and objectives include those related to stormwater drainage, multi-use trail enhancements, and relocation of utilities underground.

#### **5.9.4 Thoroughfare Plans**

Within the DCIA, the *Thoroughfare Plan for Currituck County* (NCDOT, 1999) recommends a new Mid-Currituck Bridge across Currituck Sound. The plan also recommends US 158 be widened to a seven-lane road from the US 158/NC 168 intersection, east to the proposed Mid-Currituck Bridge and that NC 12 be widened from the Dare County line, north to the proposed Mid-Currituck Bridge. The widened NC 12 would be four lanes with a raised 16-foot wide median. NCDOT began an update of the Currituck County Comprehensive Transportation Plan in July 2008.

The *Dare County Thoroughfare Plan* (NCDOT, 1988) recommended widening the Wright Memorial Bridge to four lanes and improving US 158 from the bridge east to the US 158/NC 12 intersection. These two projects were completed during the 1990s. From the

US 158/NC 12 intersection north to the Currituck County line, the plan also recommended widening NC 12 from two lanes to three lanes, with paved shoulders for pedestrians and bicycles. The center lane would be used for a left-turn lane. Although this aspect of the plan has since been dropped, it is part of the ER2 and MCB2 alternatives addressed in this CIA.

### **5.9.5 Other Proposed Road Improvements**

The Mid-Currituck Bridge Study is included as STIP Project No. R-2576 in NCDOT's 2009-2015 STIP. One other STIP project is within the DCIA, to convert the existing at-grade intersection of US 158 and NC 12 at Southern Shores to an interchange (STIP Project No. R-4457). This project, however, is not funded for either right-of-way acquisition or construction.

#### **5.9.5.1 North Carolina Strategic Highway Corridor System**

The North Carolina Board of Transportation has established a vision that includes a balanced system of roadways and bridges to protect and maximize the mobility and connectivity on a core set of highway corridors throughout North Carolina. The North Carolina Board of Transportation adopted a statewide *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004) pursuant to the North Carolina Strategic Highway Corridor (SHC) initiative. The vision plan includes an SHC from Hatteras to the Virginia line that includes the project area and classifies area major roads by their function and the minimum level of mobility they are to provide. Within the project area, the vision plan identifies NC 12 and US 158 as a thoroughfare and a boulevard, respectively. The proposed Mid-Currituck Bridge also is listed in the vision plan as a boulevard.

As part of the SHC initiative, NCDOT designated 55 corridors throughout the state. SHC number 55 runs from Hatteras to the Virginia line and includes NC 12, US 158, and NC 168. The corridor includes the "NC 12/Mid-Currituck Bridge" as a spur. Spurs connect parent corridors to activity centers or destinations. The Mid-Currituck Bridge component of the spur connects US 158, the strategic corridor on the mainland peninsula to NC 12, the primary road serving the Outer Banks portion of the project area. The corridor vision plan designates the Mid-Currituck Bridge as a boulevard. The corridor vision plan also designates US 158 (from NC 12 to NC 168) as boulevard and designates NC 12 (from the Hatteras Island Ferry terminal on Hatteras Island to the Mid-Currituck Bridge) as a thoroughfare.

#### **5.9.5.2 North Carolina Intrastate System**

The purpose of North Carolina's Intrastate System is to provide high-speed, safe travel service throughout the State. North Carolina General Statute § 136-178 designates a "New route from US 158 to NC 12, including a new toll bridge over the Currituck Sound in Currituck County" (this project) as part of the Intrastate System.

## 6.0 Community Impact Analysis

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This chapter describes potential direct impacts of the Mid-Currituck Bridge detailed study alternatives on the communities within the project area as they are expected to occur regarding community cohesion, community resources, relocations, land use, environmental justice, economics, safety, and travel patterns and access. ER2, MCB2, MCB4, and the Preferred Alternative are assessed separately. In addition, two potential corridors (C1 and C2) for a new bridge under MCB2 and MCB4 are addressed, as is the No-Build Alternative. Descriptions of the detailed study alternatives and the No-Build Alternative are provided in Section 2.0 of this CIA.

Indirect and cumulative impacts are addressed in the *Indirect and Cumulative Effects Technical Report* (East Carolina University and Parsons Brinckerhoff, 2011).

### 6.1 Community Impact Assessment Overview

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The project area is relatively large and includes many communities with a wide range of residential and commercial development types. Communities within the mainland portion of the project area are small, rural settlements scattered along US 158 on the Currituck County peninsula. They are geographically separated by large tracts of swamp land or agricultural areas.

In contrast, the Outer Banks portion of the project area, generally between Southern Shores and Corolla, is more concerned, through land use plans and development requirements, with the nature of development and what it means to the communities therein. Some factors that weigh on these concerns are: tourism, space limitations, visual character, and sense of community. The Outer Banks portion of the project area has a variety of organizations (i.e., Currituck County Chamber of Commerce, Outer Banks Preservation Association, and Coastal Conservation Association), indicating that residents are very interested in regulating change.

Based on the similarities and differences between the detailed study alternatives, impacts would occur in different geographic locations depending on the alternative. For ER2, impacts could occur along the approximately 25-mile corridor of US 158 on the Currituck County mainland between the NC 168/US 158 intersection and the Wright Memorial Bridge, on the Outer Banks along US 158 east of the Wright Memorial Bridge in Dare County, and then north along NC 12 to Albacore Street in Currituck County.

With MCB2, impacts would occur along only 5 miles of US 158 between the NC 168/US 158 intersection and the US 158/Mid-Currituck Bridge interchange. Additional impacts would be expected as a result of the US 158/Mid-Currituck Bridge interchange, as well as the western bridge approach between the interchange and the Currituck



Sound. On the Outer Banks, impacts along NC 12 and US 158 generally would be the same as with ER2, but also would include changes related to the eastern bridge terminus in the Corolla area and to NC 12 to accommodate bridge traffic.

With MCB4, impacts on the Currituck County mainland would be the same as with MCB2. Impacts on the Outer Banks would be along NC 12 from Seashell Lane to NC 12's intersection with the Mid-Currituck Bridge's eastern terminus.

With the Preferred Alternative, impacts on the Currituck County mainland would be similar to MCB4 with the C1 terminus. However, impacts on the Outer Banks along NC 12 would be confined to three locations (Currituck Clubhouse Drive area, Albacore Street area, and the bridge terminus area).

Under the No-Build Alternative, there would be no impact to existing conditions and ongoing trends in the project area, particularly related to high traffic volumes and congestion during the summer tourist season. Also, the No-Build Alternative would be inconsistent with the *Currituck County Land Use Plan* and the *Town of Southern Shores Long Range Plan*, as both recommend a Mid-Currituck Bridge. Because there would be no impact to existing conditions or ongoing trends, this alternative is not discussed further. Impacts of the three DEIS detailed study alternatives, the Preferred Alternative, and the No-Build Alternative are summarized in Table 6-1.

## 6.2 Physical, Social, and Psychological Aspects

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### 6.2.1 Community Stability and Neighborhood Cohesion

#### 6.2.1.1 ER2

##### Currituck County Mainland

With this alternative, adding a third, outbound lane for evacuation use along approximately 25 miles of the Currituck County mainland would occur within and/or adjacent to existing right-of-way. As a result, there would be no real change from the structure or location of the existing roadway and no effect on community cohesion. No new barriers would be introduced, so there would be no potential to isolate existing communities, which are scattered along US 158 over the length of the mainland.

The commercial developments listed in Section 5.5.5 have been planned and/or recently constructed in Currituck County. ER2 would not affect these developments, since little new road right-of-way would be required.

Table 6-1. Summary of Impacts

CIA Section	Section Title	Detailed Study Alternatives				No-Build	
		ER2	MCB2	MCB4	Preferred Alternative		
6.2		Physical, Social/Psychological Aspects					
6.2.1	Community Stability/ Neighborhood Cohesion		Additional lane along NC 12 perceived as interfering with neighborhood cohesion.				No impact.
		No impact related to bridge.	Bridge corridor C1 at the Outer Banks bridge terminus takes three lots and physically divides Phase I of the Corolla Bay subdivision in a subdivided but undeveloped portion. With Option B, potential effects on the way of life in Aydlett resulting from changes in the local road system and the presence of the toll plaza in Aydlett.	Outer Banks bridge terminus C1 would pass through the unimproved Phase II of the Corolla Bay subdivision. 1 lot taken and 7 lots reduced in size from undeveloped subdivision on North Harbor View Drive.			
		No impact related to bridge.	Interchange, toll plaza, bridge approach, and bridge would be notable visual changes into a rural area of Currituck County mainland. Views from homes with views of the Sound from the mainland and Outer Banks would be affected and is considered an adverse change. Impact on the Outer Banks would be less with the Preferred Alternative.				
6.2.2	Visual/Aesthetic Impacts	The super-street on US 158 east of the Wright Memorial Bridge and US 158/NC interchange would be a notable visual change.	No notable visual change on US 158 east of Wright Memorial Bridge.				No impact.
		Removing shielding vegetation along roadside to add lanes and multi-use paths along approximately 16 miles of NC 12 would open up some views along and across roadway.	Removing shielding vegetation along roadside to add lanes along approximately 2 (with C2) to 4 (with C1) miles of NC 12 would open up some views along and across roadway.	Removing shielding vegetation along roadside in three locations to add lanes along a total of approximately 2.1 miles of NC 12 would open up some views along and across roadway.			

Table 6-1 (continued). Summary of Impacts

CIA Section	Section Title	Detailed Study Alternatives				Preferred Alternative	No-Build
		ER2	MCB2	MCB4			
6.2.3	Relocations						
	• Residences	6 (1 without third outbound lane for hurricane evacuation) plus 10 vacation rental units	6 to 8 plus 10 vacation rental units	5 to 7	6 (including 1 likely vacation rental unit)	No impact.	
	• Businesses	5 (2 without third outbound lane for hurricane evacuation)	7 to 9 (5 to 7 without third outbound lane for hurricane evacuation)	5 to 7 (3 to 5 without third outbound lane for hurricane evacuation)	3		
	• Outdoor Advertising Signs	29 (none without third outbound lane for hurricane evacuation)	6 to 16 (3 to 13 without third outbound lane for hurricane evacuation)	6 to 16 (3 to 13 without third outbound lane for hurricane evacuation)	3		
	• Gravesites	66 (none without third outbound lane for hurricane evacuation)	35 to 36 (19 to 20 without third outbound lane for hurricane evacuation)	35 to 36 (19 to 20 without third outbound lane for hurricane evacuation)	20		

Table 6-1 (continued). Summary of Impacts

CIA Section	Section Title	Detailed Study Alternatives			
		ER2	MCB2	MCB4	Preferred Alternative
6.3	Consistency with Land Use Plans	Inconsistent with Southern Shores proposal for Mid-Currituck Bridge and Town of Duck policy and objective to maintain NC 12 at its existing configuration.	Design and mitigation features important to Currituck County Land Use Plan relate to protection of Maple Swamp, stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, relocation of utilities underground, and infrastructure for any potential day visitors. Option B inconsistent because it would provide direct access to Aydlett. Inconsistent with Town of Duck policy and objective to maintain NC 12 at its existing configuration.	Design and mitigation features important to Currituck County Land Use Plan relate to protection of Maple Swamp, stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, relocation of utilities underground, and infrastructure for any potential day visitors. Option B inconsistent because it would provide direct access to Aydlett.	Design and mitigation features important to Currituck County Land Use Plan relate to protection of Maple Swamp, stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, relocation of utilities underground, and infrastructure for any potential day visitors.
					Inconsistent with Currituck County Land Use Policy TR13, Town of Southern Shores Long Range Plan Goal 1.1, and Town of Duck Land Use Plan, as all support Mid-Currituck Bridge; and with Currituck Policy TR14 (manage traffic to/from Currituck Outer Banks).

Table 6-1 (continued). Summary of Impacts

CIA Section	Section Title	Detailed Study Alternatives			
		ER2	MCB2	MCB4	Preferred Alternative
6.4		Transportation Access			
6.4.1	Neighborhood Access				
	<ul style="list-style-type: none"> <li>Currituck County Mainland</li> </ul>	No impact.	Frontage roads used to maintain access to US 158 for properties in the US 158 interchange area. With Option B only, Ayldett Road across Maple Swamp closed, Ayldett traffic would use the Mid-Currituck Bridge approach road to travel to and from Ayldett, and Narrow Shore Road relocated to pass over a toll plaza. Also with Option B, direct access lost for gas station on west side of US 158. New frontage road provided for indirect access.	Frontage roads used to maintain access to US 158 for properties in the US 158 interchange area.	No impact.
	<ul style="list-style-type: none"> <li>US 158 on Dare County Outer Banks</li> </ul>	Super-street would reduce number of 4-way intersections and limit direct access across US 158.			No impact.
	<ul style="list-style-type: none"> <li>NC 12 on Dare County Outer Banks</li> </ul>	Four streets would be closed to through traffic but not emergency vehicles at their intersection with NC 12: Widgeon Drive, Wood Duck Drive, Canvas Back Drive, and Old Squaw Road. Alternate access exists.			No impact.
	<ul style="list-style-type: none"> <li>Currituck County Outer Banks</li> </ul>	Left turns limited at Crown Point and Orion's Way with provisions for U-turns.	Left turns limited at Crown Point and Orion's Way with provisions for U-turns. C1 only, access road that connects NC 12 to the north end of North Harbor View Drive would be closed.	Left turns limited at Orion's Way with provisions for U-turns. North access road to North Harbor View Drive relocated.	No impact.

Table 6-1 (continued). Summary of Impacts

CIA Section	Section Title	Detailed Study Alternatives			
		ER2	MCB2	MCB4	Preferred Alternative
6.4.2	Commercial Access, Parking	On US 158, super-street would reduce parking at Home Depot about 10 percent. Direct business access not permitted in NC 12/US 158 interchange area; right turns to south NC 12 (Virginia Dare Trail) prohibited.	US 158 super-street would reduce parking at the Home Depot about 10 percent. Direct business access not permitted in NC 12/US 158 interchange area; right turns to south NC 12 (Virginia Dare Trail) prohibited. With bridge corridor C2, the TimBuck II shops would lose some of their parking area. With C1, a total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monterey Drive.	With bridge corridor C2, TimBuck II shopping center would lose some of its parking area. With C1, a total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monterey Drive.	A total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monterey Drive.
		No impact.	With Option B, direct access from US 158 would be lost for customers of a gas station in the US 158/Mid-Currituck Bridge interchange area. With bridge corridor C2, TimBuck II would lose some of its parking area and left turns limited at one driveway. With bridge corridor C1, left turns limited for businesses between Albacore Street and Monterey Drive, as well as left turn limits at one TimBuck II driveway.	Left turns limited for businesses between Albacore Street and Monterey Drive, as well as left turn limits at one TimBuck II driveway.	No impact.
6.4.3	Pedestrian/Bicycle Access	No impact on Currituck County mainland.			
		Beneficial impact on Outer Banks, as multi-use paths along the affected sections of US 158 and NC 12 would be retained, replaced, or allowed for in project design.			

Table 6-1 (continued). Summary of Impacts

Detailed Study Alternatives						
	ER2	MCB2	MCB4	Preferred Alternative	No-Build	
6.4.4	The Americans with Disabilities Act	No impact.				
6.4.5	Public Transit	Not applicable.				
6.5	Consistency with Thoroughfare Plans	Inconsistent with <i>Thoroughfare Plan for Currituck County</i> , which recommends a Mid-Currituck Bridge.  Inconsistent with <i>North Carolina Strategic Highway Corridor and Intrastate System</i> , as this alternative does not improve system efficiency.	Consistent in that a Mid-Currituck Bridge is included and the alternatives would improve system efficiency.		Inconsistent with <i>Thoroughfare Plan for Currituck County</i> , which recommends a Mid-Currituck Bridge and includes four lanes on NC 12 northward from Dare/Currituck County line to Mid-Currituck Bridge.  Inconsistent with <i>North Carolina Strategic Highway Corridor and Intrastate System</i> , as this alternative does not improve system efficiency.	
		Consistent with <i>Thoroughfare Plan for Currituck County</i> , in areas where the project widens NC 12 to four lanes northward from Dare/Currituck County line to Mid-Currituck Bridge.				
6.6	Safety					
6.6.1	Pedestrian/Bicycle Safety	Beneficial impact. On Outer Banks, multi-use paths along US 158 and NC 12 either would be retained, replaced to NCDOT standards, or allowed for in project design. Crosswalks would be replaced and, as necessary, added at locations where multi-use paths cross NC 12 and for the Preferred Alternative where identified in Currituck County plans.				No impact.

Table 6-1 (continued). Summary of Impacts

CIA Section	Section Title	Detailed Study Alternatives			Preferred Alternative	No-Build
		ER2	MCB2	MCB4		
6.6.2	Emergency Response	Beneficial from additional maneuverability provided by additional lanes.	Beneficial from additional maneuverability provided by additional lanes. With Option B, emergency vehicles serving Aydlett could be slowed between US 158 and Aydlett as a result of unusual traffic congestion on the bridge, such as with a crash.		Beneficial from additional maneuverability provided by additional lanes.	No impact.
6.6.3	Public Safety	Beneficial impact. Addition of a hurricane evacuation lane within the existing right-of-way of US 158 or use of the center turn lane for outbound travel during a hurricane evacuation. Hurricane evacuation times in 2035 would be reduced to 21.8 hours or 27.4 hours, respectively, from 36.3 hours with the No-Build Alternative.			Beneficial impact with reversal of center turn lane on mainland US 158 (between Mid-Currituck Bridge and NC 168). Hurricane evacuation times in 2035 would be reduced to 27.4 hours from 36.3 hours with the No-Build Alternative.	No impact to projected 2035 hurricane clearance time of 36.3 hours, or twice the North Carolina standard.
6.7	Farmland Impacts	2.7 acres of farmland soil would be converted.	109.8 to 117.1 acres of farmland soil would be converted.	109.4 to 116.8 acres of farmland soil would be converted.	109.4 acres of farmland soil would be converted.	No impact.



Table 6-1 (concluded). Summary of Impacts

CIA Section	Section Title	Detailed Study Alternatives			
		ER2	MCB2	MCB4	No-Build
6.8	Impacts to Water Resources	No impact.	Maple Swamp bridge (with Option A) and Currituck Sound bridge would drain directly into the underlying swamp and sound. Stormwater management plan proposed for mitigation with Preferred Alternative.		No impact.
6.9	Environmental Justice				
6.9.1	Environmental Justice Regulations	No impact.			
6.9.2	Affected Populations	No impact.			
6.10	Recreation Opportunities and Resources	No impact.	Dock used as starting point for Corolla Marshes from TimBuck II kayak trail would be displaced with the C2 bridge corridor. It would not be affected with the C1 bridge corridor.		No impact.

### Outer Banks

On the Outer Banks, east of the Wright Memorial Bridge, US 158 is a major thoroughfare and provides the only direct access from the Currituck County mainland. US 158 also serves as a neighborhood boundary between the towns of Southern Shores and Kitty Hawk. As a result, widening US 158 to a six-lane super-street and constructing a single-point interchange would not affect community cohesion.

Widening NC 12 to three lanes from the interchange with US 158 to Hunt Club Drive, and then to four lanes between Hunt Club Drive and Albacore Street, could affect the cohesion of the existing Outer Banks community. Widening along NC 12 could result in increased traffic speeds during part of peak travel periods and make it less desirable for pedestrians to cross the roadway. For example, pedestrians originating on the west side of NC 12 use existing marked crosswalks at local street intersections to cross NC 12 to reach the beach. These existing crosswalks encourage pedestrians to cross NC 12 at specified locations by providing a measure of safety for foot traffic. However, a wider NC 12 could change the perceived safety of these crosswalks because of the additional lanes that would have to be crossed. As a result, this also could change the perceived cohesion of an area that can be accessed by crossing a two-lane road compared to crossing a three- or four-lane road (see Section 6.4.3), and thereby provide a degree of separation for communities on the two sides of the road. The concern related to pedestrian impacts is addressed in association with the Preferred Alternative (see Section 6.2.1.4).

#### **6.2.1.2 MCB2**

##### Currituck County Mainland

With this alternative, impacts along the approximately 5 miles of hurricane evacuation lane on US 158 between the NC 168/US 158 intersection and the US 158/Mid-Currituck Bridge interchange would be the same as described for ER2.

MCB2 includes the new Mid-Currituck Bridge. The western portion of the bridge approach, with either Option A or Option B (see Figure 2-3), would pass through the community of Aydlett, which lies along the Currituck Sound on the Currituck County mainland. Aydlett is generally comprised of single-family homes on large lots and farms and is a community of both proposed and existing residential development.

For MCB2/A, the US 158/Mid-Currituck Bridge interchange would be about 2 miles west of Aydlett and the toll plaza would be within the interchange (see Figure 2-3). Between the interchange and Aydlett would be the Mid-Currituck Bridge approach corridor, consisting of a 1.5-mile bridge over Maple Swamp, a 0.3-mile, 3-foot to 23-foot-high earthen embankment, and the western end of the bridge. These bridge approach structures would lie between the northern and southern portions of Aydlett and affect the community visually, which could affect the perceived cohesion of the community. However, the bridge approach would be north of Aydlett Road, and existing access

between US 158 and Aydlett would be maintained. Also, because the western end of the bridge would fly over the community and Narrow Shore Road (the only road connecting the two parts of the community), it would not affect existing access between different parts of the community. As a result, community cohesion would not be affected.

For MCB2/B, the US 158/Mid-Currituck Bridge interchange would be in the same location (approximately 2 miles west of Aydlett), but the toll plaza would be in Aydlett (see Figure 2-3). Between the interchange and Aydlett the approach to the bridge over Currituck Sound would be placed on fill within Maple Swamp. Aydlett Road would be removed and the roadbed restored as wetland. Traffic traveling between US 158 and Aydlett would use the new bridge approach road. A connection would be provided between the bridge approach road and the local Aydlett street system. Aydlett traffic would not pass through the toll plaza facility when traveling between US 158 and Aydlett. No access to and from the Mid-Currituck Bridge would be provided at Aydlett.

In order to accommodate the toll plaza, modifications would be required to the local street system in Aydlett with MCB2/B (see Figure 2-3). The toll plaza's highest elevation would be approximately 2 feet above existing ground. As a result, Narrow Shore Road would be relocated to pass over the toll plaza. The realigned portion of Narrow Shore Road to the south of homes on Lighthouse View would be on an earthen berm that would rise to as high as 21 feet above existing ground. The highest point on the relocated Narrow Shore Road would be where the new road crosses the toll plaza at 25.5 feet above the existing ground.

Like MCB2/A, MCB2/B would affect the community visually, removing trees and introducing the activity of the toll plaza and the new vertical element of the relocated Narrow Shore Road to the community. This visual change, like MCB2/A, could affect the perceived cohesion of the community. However, although access within the community would be changed, it would be maintained on relocated Narrow Shore Road. As a result, community cohesion in terms of people's ability to move conveniently between different parts of the community would not be affected.

At a meeting with representatives of the community of Aydlett and local officials on October 12, 2009 (see Section 1.2.4), attendees expressed concern about the potential impacts on their way of life from the presence of a toll plaza in Aydlett and the revised local road system of MCB2/B. Concerns included the potential for drivers to change their minds about using the bridge just before the toll plaza and use roads in the Aydlett community to return to US 158, particularly during periods of high traffic congestion, such as would occur with a crash on the approach road or the bridge. In this case, motorists would add traffic to the Aydlett street system and introduce strangers with no business in this rural residential community. The possibility was raised that people might knock on doors seeking to use family bathrooms. Concern also was expressed that, at times of high traffic congestion, emergency vehicles traveling between Waterlily

and Aydlett would be slowed. However, the preliminary design of the MCB2/B toll plaza has sufficient traffic capacity during normal peak conditions that queuing from the toll plaza would not block access to and from Aydlett. But this issue could be of concern during unusual traffic situations. In addition, night-time lighting for the toll plaza was an expressed concern, particularly for star-gazing hobbyists who recognize Aydlett as an uncommon dark sky location. Finally, citizens felt that MCB2/B contradicted previous promises that there would be no connection between the bridge project and Aydlett. Similar comments were received at the public hearing and during the public comment period for the DEIS.

### Outer Banks

On the Outer Banks, impacts of establishing US 158 as a super-street east of the Wright Memorial Bridge would be the same as with ER2. Impacts related to widening NC 12 between Southern Shores and Albacore Street also would be the same as with ER2 for bridge corridor C2, including the impacts related to pedestrians trying to cross NC 12. If bridge corridor C1 were chosen, the widening of NC 12 to accommodate bridge corridor C1 and the corresponding impacts would occur for an additional distance of approximately 2 miles to the north of Albacore Street. The concern related to pedestrian impacts is addressed in association with the Preferred Alternative (see Section 6.2.1.4).

Currituck Sound serves as a natural barrier between the Outer Banks and mainland Currituck County. The proposed Mid-Currituck Bridge would remove this barrier and create, instead, a connection between the mainland and Outer Banks. This could result in improving accessibility between the Currituck County mainland and the Outer Banks, as the bridge would provide a direct connection between two parts of the county that currently are separated by the sound.

With bridge corridor C1, the new bridge would enter the Outer Banks within an area proposed for residential uses in the Corolla Bay subdivision. Phase I has been planned as one lot deep on both sides of the road, and the development could be extended south as Phase II. However, bridge corridor C1 would affect the potential to develop Phase II, as it would traverse the community, thereby isolating one portion from the other and using six designated residential parcels. This would alter the planned organization and structure of the new community, affecting its cohesion even before it is completed. The new bridge also could create a psychological barrier, as the bridge would limit the ability of persons on one side of the community to have clear views of the other side.

The developer for Corolla Bay notes that views across the Currituck Sound are part of the advertising for the development. The appearance of the bridge along the C1 corridor would be an adverse change to those views and introduce a prominent man-made element into the existing natural view of the sound.

MCB2/C1 also would affect community cohesion in two ways for a portion of the Monterey Shores community. First, NC 12 would be widened to four lanes at the North

Harbor View Drive intersection. An existing subdivision of 34 lots (16 having existing structures as of 2008) along North Harbor View Drive to the east of NC 12 is a part of the Monterey Shores property owner's association and uses the association's recreational facilities on the west side of NC 12. The additional travel lanes and traffic associated with the C1 corridor would make crossing NC 12 more difficult for pedestrians trying to reach the recreational facilities. Second, this alternative assumes that the northern intersection of North Harbor View Drive and NC 12 would be closed. However, North Harbor View Drive is a private street and its northern and southern halves are maintained by two different property owner's associations (the northern half has 19 additional lots). The closure of the northern NC 12 intersection would force the traffic from the subdivision at the north end of North Harbor View Drive to use a street maintained by another group of property owners. Both of these concerns are addressed in association with the Preferred Alternative (see Section 6.2.1.4).

Bridge corridor C2 would reach NC 12 south of the TimBuck II commercial area near Albacore Street. North of this NC 12/Mid-Currituck Bridge intersection, NC 12 would be realigned and widened for a short distance from an undivided two-lane road to a divided four-lane road with designated left-turn lanes, before tapering back into the existing NC 12 two-lane cross-section just to the north of Albacore Street. No communities would be divided by this change to NC 12 to the north of the bridge corridor C2 intersection.

#### **6.2.1.3 MCB4**

##### **Currituck County Mainland**

With this alternative, adding a third, outbound, hurricane evacuation lane for approximately 5 miles of US 158 between the NC 168/US 158 intersection and the US 158/Mid-Currituck Bridge interchange would be the same as with MCB2. Impacts related to the Mid-Currituck Bridge also would be the same as with MCB2, both for MCB4/A and MCB4/B.

##### **Outer Banks**

On the Outer Banks, adding a third outbound evacuation lane on US 158 between the Wright Memorial Bridge and NC 12 would occur within existing right-of-way and so would not affect community cohesion.

Along the approximately 2- to 4-mile distance where NC 12 would be widened to four lanes in Currituck County north and south of bridge corridor C1 or C2, impacts would be the same as with MCB2, including the impacts related to pedestrians trying to cross NC 12. The concern related to pedestrian impacts is addressed in association with the Preferred Alternative (see Section 6.2.1.4). Also, the impact to residential development as a result of bridge corridor C1 or C2 would be the same as with MCB2. Other impacts along NC 12 south of Seashell Lane that would occur with ER2 and MCB2 would not occur with MCB4.

The potential for the Mid-Currituck Bridge to create cohesion for the two parts of Currituck County separated by the Currituck Sound would be the same as with MCB2.

#### **6.2.1.4 Preferred Alternative**

##### Currituck County Mainland

With the Preferred Alternative (Figure 2-2), no hurricane evacuation improvements would be made along US 158 on the Currituck County mainland. Impacts related to the Mid-Currituck Bridge also would be the same as with MCB2/A and MCB4/A. Aydlett Road would remain as an independent connection between US 158 and Narrow Shore Road. No connection with the Mid-Currituck Bridge would be provided at Aydlett.

##### Outer Banks

On the Outer Banks, approximately 1,600 feet of new third outbound lane would be added within the existing right-of-way to the west of the US 158/Cypress Knee Trail intersection in Kitty Hawk (ending approximately 450 feet west of the Duck Woods Drive intersection) to provide additional road capacity during a hurricane evacuation. Community cohesion would not be affected.

The new bridge would enter the Outer Banks within an area proposed for residential uses in the Corolla Bay subdivision. Phase I has been planned as one lot deep on both sides of the subdivision road (Cruz Bay Court), and the development could be extended south as Phase II. Phase I has been subdivided and streets, utilities, and two homes have been built. Phase II currently has no improvements, such as streets or utilities, and has not been legally subdivided. The Preferred Alternative would pass through Phase II and would not directly affect the improved Phase I. Thus, the Preferred Alternative would not affect the cohesion of this developing community. The developer for Corolla Bay notes that views across Currituck Sound are part of the advertising for the development. The appearance of the Preferred Alternative along the refined C1 bridge corridor would be an adverse change to those views and introduce a prominent man-made element into the existing natural view of the sound.

With the Preferred Alternative, the Mid-Currituck Bridge corridor would intersect NC 12 at a roundabout, and NC 12 would be widened to four lanes a short distance north to Devil's Bay Road and south to the southerly intersection of NC 12 and North Harbor View Drive. Thus, the Preferred Alternative also would affect community cohesion for the portion of the Monterey Shores community to the east of NC 12 along North Harbor View Drive. Left turn lanes would be placed at the NC 12/North Harbor View Drive intersection. NC 12, however, would remain two lanes at this intersection. With MCB2/C1 and MCB4/C1, NC 12 was proposed to be four lanes with left turn lanes at this intersection, so there are fewer proposed changes at this intersection with the Preferred Alternative. The Preferred Alternative also would increase the volume of traffic on NC 12 passing through this intersection. As described above, the existing subdivision along the southern half of North Harbor View Drive to the east of NC 12 is a

part of the Monterey Shores property owner's association and uses the association's recreational facilities on the west side of NC 12. The additional traffic associated with the C1 corridor would make crossing NC 12 more difficult for pedestrians trying to reach the recreational facilities. A signed and marked pedestrian crossing would be provided at North Harbor View Drive. Unlike MCB2/C1 and MCB4/C1, the northern intersection of North Harbor View Drive and NC 12 would be relocated to the south of the roundabout and not closed.

The roundabout and the relocation of the northern intersection of North Harbor View Drive and NC 12 would result in seven improved (local streets and utilities) lots out of a total of 19 lots being reduced in area in the currently undeveloped subdivision at the north end of North Harbor View Drive. One additional improved lot would be taken. If the reduction in area of the seven lots precludes their development, they would be purchased in their entirety.

NC 12 also would be widened at the commercial area near Albacore Street and in the Currituck Clubhouse Drive roundabout area. No communities would be divided by these changes. However, as discussed previously, widening along NC 12 could result in increased traffic speeds during part of peak travel periods and make it less desirable for pedestrians to cross the roadway. For example, pedestrians originating on the west side of NC 12 use existing marked crosswalks at local street intersections to cross NC 12 to reach the beach. These existing crosswalks encourage pedestrians to cross NC 12 at specified locations by providing a measure of safety for foot traffic. However, a wider NC 12 could change the perceived safety of these crosswalks because of the additional lanes that would have to be crossed. As a result, this also could change the perceived cohesion of an area that can be accessed by crossing a two-lane road compared to crossing a three- or four-lane road, and thereby provide a degree of separation for communities on the two sides of the road. As mitigation, in areas where NC 12 is widened with the Preferred Alternative, marked pedestrian crossings would be provided. They would be placed at locations identified by Currituck County plans (Albacore Street, Orion's Way, and Currituck Clubhouse Drive), as well as at North Harbor View Drive and the bridge terminus (one across NC 12 and one across the bridge approach road).

As with MCB2 and MCB4, the Preferred Alternative is expected to create cohesion for the two parts of Currituck County currently separated by the Currituck Sound.

### **6.2.2 Visual and Aesthetic Impacts**

A detailed discussion of visual and aesthetic impacts is presented in the revised *Other Physical Features Technical Memorandum* (Parsons Brinckerhoff, 2011).

### **6.2.2.1 ER2**

#### Currituck County Mainland

Wider pavement would be introduced along US 158 from NC 168 to the Wright Memorial Bridge (approximately 25 miles). Some roadside vegetation would be removed, thereby opening up some views of the road to residents along US 158 and to drivers on US 158. Although some utility lines would be moved, no new substantial vertical attributes, such as poles or barriers, are proposed. Thus, although a visual change would occur for residential or on-road viewers, it would not be adverse.

#### Outer Banks

With ER2, a super-street and an associated interchange east of the Wright Memorial Bridge would be introduced into the views of businesses along US 158, pedestrians and bicyclists on multi-use paths, and users of US 158. Principal viewers of the interchange would be users of the Aycock Brown Welcome Center, which would overlook the interchange; businesses near the interchange; a multi-story hotel; and users of US 158. The super-street would be the only street of its scale on the Outer Banks. The interchange would be the only interchange on the Outer Banks. Although they would serve a useful purpose in terms of serving travel demand in this area, neither is what one would expect to see in a beach vacation area like the Outer Banks, with its mostly low density development.

Wider pavement, an additional vehicle lane, and new drainage features would be introduced along NC 12. Roadside vegetation would be lost to provide for the drainage features. Although no high quality views would be lost, the overall character of the area along NC 12 would be changed by these changes. Some of the sense of intimacy and isolation associated with the altered section of NC 12 would be lost.

### **6.2.2.2 MCB2**

#### Currituck County Mainland

The loss of vegetation along US 158 (although only from NC 168 to the Mid-Currituck Bridge, approximately 5 miles) also would occur with MCB2. In addition, the existing landscape would be substantially changed with the introduction of the US 158/Mid-Currituck Bridge interchange. Existing features would be lost, and new man-made vertical elements would be introduced. Homes and businesses in this area would be relocated. One home close to Aydlett Road would remain and the US 158 interchange would be a notable presence and an adverse change at this home.

For MCB2/A, as the Maple Swamp bridge enters Aydlett from Maple Swamp, it would transition to an earthen berm (see proposed and improved existing road line on Figure 2-3). Along its alignment, the berm would replace existing woods and would be noticeable from homes to the south. If the forest is not logged, the berm would be



obscured by trees from homes to the north. The berm would be visible from locations and homes close to the shore of Currituck Sound.

For MCB2/B, the proposed Mid-Currituck Bridge approach corridor would enter Aydlett from Maple Swamp near the existing ground elevation. It would include a toll plaza and an elevated realignment of Narrow Shore Road to take it over the toll plaza (see Figure 2-3). These features would affect the community visually. Views to the south from homes along Lighthouse View would no longer be of the forest, but rather would be replaced by views of relocated Narrow Shore Road on top of an up to 21-foot-tall earthen berm. Drivers on the relocated Narrow Shore Road would have views of the back yards of homes along Lighthouse View. The toll plaza would be to the south of the berm, but views of the plaza from the homes along Lighthouse View mostly would be blocked by the berm. The toll plaza and elevated realigned Narrow Shore Road would be in view from homes to the south, replacing the existing forest view. The toll plaza would be lighted at night and those lights would be visible from homes to the south. As noted above, the night-time lighting of the toll plaza was expressed as a concern at an October 2009 meeting with citizens from Aydlett, particularly as it relates to star gazing hobbyists who recognize Aydlett as an uncommon dark sky location. Light control would be a consideration in developing the final design of a toll plaza in Aydlett. It is expected that within 10 years of the bridge opening that toll collection could be done electronically. At that time, the toll plaza would be narrowed to a two-lane road and lights removed.

For both MCB2/A and MCB2/B, the bridge crossing Currituck Sound would represent a notable change in high quality views of Currituck Sound for Aydlett residents. Essentially, the 180-degree panorama of Currituck Sound would be split, with the bridge becoming a new and substantial man-made element in half the view. This adverse change with MCB2 would be greatest at homes nearer the bridge, where it would be a more dominant presence.

#### Outer Banks

With the C1 bridge terminus, the bridge would be introduced into existing panoramic views of Currituck Sound at the planned subdivision of Corolla Bay and, to a lesser extent, the existing subdivision of Monteray Shores. The C1 bridge terminus would have the greatest adverse change to Corolla Bay, where it would be a huge physical and visual element within the subdivision, introducing new views of NC 12 while obscuring views of Currituck Sound. Removal of vegetation would introduce views of the bridge from both subdivisions.

With the C2 bridge terminus, a viewing platform in Currituck Sound associated with the TimBuck II commercial area would be displaced. As a result, views of the natural vegetation and the sound from a TimBuck II outdoor recreation area would be replaced by views of the bridge. This would be considered an adverse visual change.

### **6.2.2.3 MCB4**

#### Currituck County Mainland

Changes to the visual environment of the Currituck County mainland would be the same as with MCB2/A and MCB2/B.

#### Outer Banks

The impacts described for the C1 and C2 bridge corridor termini would be the same as would occur with MCB2.

### **6.2.2.4 Preferred Alternative**

#### Currituck County Mainland

Changes to the visual environment of the Currituck County mainland would be the same as with MCB2/A and MCB4/A.

#### Outer Banks

On the Outer Banks, visual impacts with the Preferred Alternative would be similar to, but not exactly the same as, MCB4/C1. The refined C1 bridge corridor would intersect the Outer Banks almost perpendicular to the shoreline (at an 80 degree angle towards Corolla Bay), as opposed to the original C1 bridge corridor which intersected the Outer Banks shoreline at a 45 degree angle towards Corolla Bay. The refined C1 bridge corridor also would intersect the Outer Banks in a forested area within the currently unimproved Phase II of the Corolla Bay subdivision. The nearest Corolla Bay lot would be 300 feet away from the bridge. The original C1 bridge corridor passed through Phase I of Corolla Bay. To the south of the bridge is Monteray Shores. The nearest home in that community would be approximately 500 feet away from the bridge. The original C1 bridge corridor intersected the Outer Banks approximately 900 feet away from the nearest Monteray Shores home. This would introduce views of the bridge from both subdivisions once the project is on land. The bridge over water also would be seen from homes along the shoreline and, as with the original C1 bridge corridor, the 180 degree panorama of Currituck Sound would be split, with the bridge becoming a new and substantial man-made element in half the view.

Impacts along the widened sections of NC 12 would be similar to those described for ER2.

## **6.2.3 Relocations**

Relocations of homes, businesses, outdoor advertising signs, and gravesites for the DEIS detailed study alternatives and the Preferred Alternative are presented in Table 6-2. Appendix A includes the Relocation Reports for the DEIS detailed study alternatives. The MCB4/A/C1 Relocation Report also applies to the Preferred Alternative with the exception of the addition of one home, which is likely a vacation rental unit.

**Table 6-2. Relocations**

Location and Alternative	Homes	Business	Outdoor Advertising Sign	Gravesite
<b>Currituck County Mainland</b>				
ER2	5 (0) <sup>1</sup>	3 (0)	29 (0)	66 (0)
MCB2/A and MCB4/A	5 (5)	5 (3)	6 (3)	36 (20)
MCB2/B and MCB4/B	7 (7)	5 (3)	16 (13)	35 (19)
Preferred Alternative	5	3	3	20
No-Build Alternative	0	0	0	0
<b>Outer Banks</b>				
ER2	1 plus 10 vacation rental units	2	0	0
MCB2/C1	1 plus 10 vacation rental units	2	0	0
MCB2/C2	1 plus 10 vacation rental units	4	0	0
MCB4/C1	0	0	0	0
MCB4/C2	0	2	0	0
Preferred Alternative	1 a likely vacation rental unit	0	0	0
No-Build Alternative	0	0	0	0

<sup>1</sup>The number in parentheses is the number of Currituck County mainland relocations that would occur if reversing the center turn lane on US 158 were implemented to reduce hurricane clearance times rather than constructing a third outbound lane for hurricane evacuation. For the Preferred Alternative, only one number is shown because it assumes reversing the center turn lane is implemented to reduce hurricane clearance times (i.e., adding a third outbound lane is not part of the Preferred Alternative).

### 6.2.3.1 ER2

As indicated in Table 6-2, assuming a third outbound lane is built to facilitate hurricane evacuation on the mainland, ER2 would result in the least business relocations on the mainland (three business relocations less than MCB2, MCB4, and the Preferred Alternative). Outdoor advertising and gravesite impacts, however, would be substantially greater with ER2. If the option of using the center turn lane for outbound travel to reduce hurricane evacuation times were used with ER2, the mainland relocations would not occur.

Home relocations on the Outer Banks would occur along NC 12, primarily associated with providing drainage detention basins along parts of NC 12 in Dare County. The two business displacements would be associated with the interchange at the intersection of US 158 and NC 12.

Vacation rental units are shown separately in Table 6-2; no permanent residents would be relocated as a result of taking these homes.

#### **6.2.3.2 MCB2**

Relocations indicated in Table 6-2 on the mainland generally would be along US 158. The five to seven residential, three of the businesses, three to 13 outdoor advertising signs, and 19 to 20 of the gravesite relocations would be associated with the mainland bridge approach road, including the interchange with US 158. The rest would be associated with the addition of the third outbound evacuation lane for 5 miles of US 158 between NC 168 and the Mid-Currituck Bridge. If the option of using the center turn lane for outbound travel during a hurricane evacuation were used with MCB2, the relocations resulting from the third outbound lane would not occur.

On the Outer Banks, relocations would be the same as with ER2 with two exceptions. The use of bridge corridor C2 would relocate two additional businesses, a water sports business that relies on the dock extending from TimBuck II and a restaurant. Bridge corridor C2 could require the dock to be displaced. The relocation of the restaurant is not reflected in the Relocation Reports in Appendix A. The relocation was identified during the public review process for the DEIS; however, the Relocation Reports were not revised because the restaurant would not be relocated with the Preferred Alternative.

#### **6.2.3.3 MCB4**

On the Currituck County mainland, relocations would be the same as with MCB2.

On the Outer Banks, there would only be two business relocations with MCB4/C2, the water sports business and restaurant discussed in Section 6.2.3.2.

#### **6.2.3.4 Preferred Alternative**

On the Currituck County mainland, relocations would be the same as with MCB2/A and MCB4/A. There would be one relocation on the Outer Banks. It is likely a vacation rental unit.

### **6.3 Consistency with Land Use Plans**

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The following consistency findings are primarily based on the observations of the DEIS and FEIS study team. A formal plan consistency determination for the Preferred Alternative would be made by NCDENR-DCM during the permit process. NCDENR-DCM's June 4, 2010 letter commenting on the DEIS included a partial provisional consistency determination. The observations presented in that letter also are included in the consistency findings below and so indicated. Overall the NCDENR-DCM letter indicated:

- Mid-Currituck Bridge design Option B with MCB2 and MCB4 would not be consistent with the Currituck County land use plan.

- ER2 and MCB2 would not be consistent with the Town of Duck land use plan.
- Additional information is needed concerning protection of Natural Heritage Areas in Currituck County, anticipated shoreline stabilization, use of vegetated buffers along shorelines, anticipated wetland mitigation within the Town of Kitty Hawk, handicapped accessibility of proposed public access facilities, use of vegetated roadside swales, and handling of stormwater drainage; proposed highway corridor, and multi-path/trail enhancements; relocation of utilities and; anticipated infrastructure and service needs for Currituck County. This listing applied to Currituck County, Town of Kitty Hawk, and Town of Duck land use plans.
- Additional information is needed to make a consistency determination for the Town of Kitty Hawk land use plan.
- The alternatives are consistent with the Town of Southern Shores land use plan.

NCDENR-DCM's letter is contained in Appendix B of the *Stakeholder Involvement for Final Environmental Impact Statement Technical Report* (Parsons Brinckerhoff, 2011). A written response providing additional information requested was sent by NCTA to NCDENR-DCM on January 12, 2011 (see Appendix C of this report). NCDENR-DCM indicated that the next provisional consistency determination will be provided after NCDENR-DCM receives the FEIS.

### **6.3.1 ER2**

#### **6.3.1.1 Currituck County Mainland**

With this alternative, the additional outbound lane and drainage features that would be constructed along US 158 would occur within or adjacent to existing right of way. Therefore, the project-related changes along US 158 would be compatible with existing Currituck County land use plans and, specifically, Policy TR1, which supports regional transportation connections. However, ER2 would be inconsistent with Policy TR13, which supports a bridge between the Currituck County mainland and Corolla.

#### **6.3.1.2 Outer Banks**

On the Outer Banks, the roadway widening and drainage features for the US 158 super-street and interchange would occur within or adjacent to existing right of way. Therefore, these project-related changes would be consistent with existing land use plans for Southern Shores and Kitty Hawk, the jurisdictions along the north and south sides of the roadway, respectively.

The proposed addition of a third lane along NC 12 northward from Southern Shores would be consistent with the Town of Southern Shores long range plan, Goal 1.2, to alleviate the growing NC 12 traffic problems, particularly during the tourist season.

However, the town has strongly objected to attempts to widen NC 12 in the past and has a preference for a Mid-Currituck Bridge as a solution to their traffic problems. Because this alternative does not include a Mid-Currituck Bridge, it would be inconsistent with the plan's Goal 1.1 that a Mid-Currituck Bridge be built. NCDENR-DCM indicated, however, that all the detailed study alternatives are consistent with the Town of Southern Shores land use plan.

With ER2, there would be no road widening or other project-related changes within the Town of Duck commercial area. However, with this alternative, widening would occur along portions of NC 12 that are north and south of the Duck commercial area and would be inconsistent with some provisions of the town's adopted land use plan related to widening NC 12 (Morrison, 2008), including Policy #26a and implementing Objective #26b, which call for maintaining the existing two-lane configuration of NC 12. This conclusion is affirmed in the June 4, 2010 provisional consistency determination of NCDENR-DCM provided in their DEIS comments.

The road widening along NC 12 would be consistent with Policy TR14 of the Currituck County land use plan, which supports measures along NC 12 for the management of traffic to and from the Currituck County Outer Banks.

### **6.3.2 MCB2**

#### **6.3.2.1 Currituck County Mainland**

With MCB2, changes related to the outbound hurricane evacuation lane would be consistent with Currituck County land use plans, the same as with ER2 since the type of improvement proposed is the same, although only along 5 miles of US 158 compared to 25 miles with ER2.

With MCB2, the western terminus of the Mid-Currituck Bridge and new US 158/Mid-Currituck Bridge interchange would be built on the Currituck County mainland. This aspect of the project could be inconsistent with the Currituck County land use plan because the bridge approach would pass through an existing "Conservation Area," Maple Swamp. Design Option A (included in the Preferred Alternative) would bridge Maple Swamp, minimizing potential impacts. It is impossible to build a Mid-Currituck Bridge without passing through Maple Swamp.

The US 158/Mid-Currituck Bridge interchange would be placed within an existing "Limited Service Area." However, the Currituck County land use plan states that its goals include expansion of the county's economic base. According to the *Economic Development Strategy Vision Plan for Currituck County*, Final Report (UNC, 2008), future development could include retail, restaurants, service businesses, and a hotel between US 158 and the Currituck Sound. The Currituck County land use plan identifies this area as Limited Service, to provide for primarily residential development at low

densities and conservation. In order to be consistent with the land use plan, the vision plan recommends that bridge-related development be clustered in the area of the US 158/Mid-Currituck Bridge interchange.

Currituck County Transportation Policy TR13 states that there is to be no access from the road leading to the bridge into the Aydlett community, thereby protecting the community from unwanted commercial development. The bridge component of MCB2/A would be consistent with this policy, as access to and from the bridge would occur only at the US 158/Mid-Currituck Bridge interchange. However, MCB2/B would be inconsistent with Policy TR13, as the location of the toll plaza at the bridge would enable direct vehicular access between the bridge road and Aydlett.

According to NCDENR-DCM's June 4, 2010 letter commenting on the DEIS, design and mitigation features important to consistency with the Currituck County land use plan on the mainland relate to protection of Maple Swamp, stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, and relocation of utilities underground.

#### **6.3.2.2    *Outer Banks***

MCB2 would be consistent with land use plans for the Outer Banks and US 158 in Dare County. It would be consistent with land use plans along US 158 in Southern Shores and Kitty Hawk, as it would not affect the existing mix of land uses since at these locations, MCB2 would involve only widening existing roads. This alternative also would be consistent with the Town of Southern Shores long range plan because the plan includes the Mid-Currituck Bridge project as a goal.

Widening NC 12 to four lanes, which would begin about 2 miles north of Pine Island to accommodate traffic to and from the Mid-Currituck Bridge, would be consistent with Currituck County Transportation (improvement) Policies TR1, TR13 and TR14 as contained in the county land use plan.

With MCB2, there would be no road widening or other project-related changes within the commercial area of the Town of Duck. However, the addition of a third turning lane would be inconsistent with Duck land use plan's Policy #26a and implementing Objective #26b, which call for maintaining the existing two-lane configuration of NC 12. This conclusion is affirmed in the June 4, 2010 provisional consistency determination of NCDENR-DCM provided in their DEIS comments.

### **6.3.3    MCB4**

#### **6.3.3.1    *Currituck County Mainland***

Impacts of MCB4/A and MCB4/B related to US 158, the US 158/Mid-Currituck Bridge interchange, and the bridge approach to Currituck Sound would be the same as with

MCB2/A and MCB2/B. The same design and mitigation features listed by NCDENR-DCM indicated for MCB2 as important to consistency with the Currituck County land use plan would apply to MCB4

#### **6.3.3.2 Outer Banks**

Impacts along US 158 east of the Wright Memorial Bridge would be the same as with MCB2 and would be consistent with the Southern Shores and Kitty Hawk land use plans, as explained above.

To the extent that the Mid-Currituck Bridge would alleviate traffic congestion on NC 12 by providing a second point of access to the Outer Banks, MCB4 would be consistent with the Town of Southern Shores long-range plan.

Impacts related to widening NC 12 to four lanes to accommodate traffic to and from the eastern terminus of the Mid-Currituck Bridge would be the same as with MCB2 because the same improvements are proposed. In this respect, MCB4 would be consistent with Currituck County Transportation Policy TR14.

The same design and mitigation features listed by NCDENR-DCM and indicated for MCB2 as important to consistency with the Currituck County land use plan would apply to MCB4.

### **6.3.4 Preferred Alternative**

#### **6.3.4.1 Currituck County Mainland**

As with MCB2 and MCB4, the western terminus of the Mid-Currituck Bridge and new US 158/Mid-Currituck Bridge interchange would be built on the Currituck County mainland with the Preferred Alternative. This aspect of the project could be inconsistent with the Currituck County land use plan because the bridge approach through Maple Swamp would pass through an existing "Conservation Area." The Preferred Alternative would bridge Maple Swamp, minimizing potential impacts. It is impossible to build a Mid-Currituck Bridge without passing through Maple Swamp.

The Mid-Currituck Bridge interchange would be placed within an existing "Limited Service Area." These areas are intended to consist primarily of low density residential development and conservation areas. However, the Currituck County land use plan also states that its goals include expansion of the county's economic base. In addition, according to the *Economic Development Strategy Vision Plan for Currituck County, Final Report* (UNC, 2008), future development between US 158 and Currituck Sound with the proposed project (i.e., within the existing Limited Service and Conservation Areas identified in the land use plan) could include retail, restaurants, service businesses, and hotels. However, to be consistent with the land use plan, the vision plan recommends



that bridge-related development be clustered in the area of the US 158/Mid-Currituck Bridge interchange.

Currituck County Transportation Policy TR13 states that there is to be no access from the road leading to the Mid-Currituck Bridge into the Aydlett community, thereby protecting the community from unwanted commercial development. The Preferred Alternative would be consistent with this policy, as access to and from the bridge would occur only at the US 158/Mid-Currituck Bridge interchange.

According to NCDENR-DCM's June 4, 2010 letter commenting on the DEIS, design and mitigation features important to consistency with the Currituck County land use plan on the mainland relate to protection of Maple Swamp, stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, and relocation of utilities underground.

#### **6.3.4.2 Outer Banks**

The addition of a third outbound lane for hurricane evacuation on US 158 between Cypress Knee Trail and Duck Woods Drive with the Preferred Alternative would be consistent with the Southern Shores and Kitty Hawk land use plans because the new lane would not affect the existing mix of land uses in the area.

To the extent that the Mid-Currituck Bridge would alleviate traffic congestion on NC 12 by providing a second point of access to the Outer Banks, the Preferred Alternative would be consistent with the Town of Southern Shores long range plan. The plan includes the Mid-Currituck Bridge project as a goal.

Widening NC 12 to four lanes at three locations in Currituck County to accommodate traffic to and from the Mid-Currituck Bridge would be consistent with Currituck County Transportation Policy TR14.

According to NCDENR-DCM's June 4, 2010 letter commenting on the DEIS, design and mitigation features important to consistency with the Currituck County Land Use Plan on the Outer Banks relate to stormwater management, any shoreline stabilization, use of vegetative buffers on the shoreline, relocation of utilities underground, and infrastructure for any potential day visitors.

## **6.4 Transportation Access**

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Changes in transportation access associated with the detailed study alternatives are shown in Table 6-3 and discussed for each alternative in the paragraphs that follow.

**Table 6-3. Changes in Access**

Description of Change	Applicable Alternative					
	ER2	MCB2/ C1	MCB2/ C2	MCB4/ C1	MCB4/ C2	Preferred Alternative
<p>Mainland, US 158 Frontage Roads:</p> <p>For one house and one business along the eastern side of US 158 just south of Waterlily Road, access to US 158 provided via a frontage road to Waterlily Road instead of direct driveway access to US 158. With Option B only, a frontage road is provided along the western side of US 158 adjacent to the US 158/Mid-Currituck Bridge interchange to provide access to properties in this area that currently have direct access to US 158. Direct access from US 158 would be lost for customers of a gas station near the end of the frontage road. With Option A (including the Preferred Alternative), no upland is available for a frontage road and thus properties west of US 158 that lose their access to US 158 would be purchased.</p>		X	X	X	X	X
<p>Mainland, US 158/Waterlily Road Intersection:</p> <p>With Option A, there would be the potential for merging traffic from the US 158 interchange to wait until just before the intersection to merge into US 158. This would increase the challenge of turning left into or out of Waterlily Road during peak travel periods. This would be mitigated with the Preferred Alternative with a median acceleration lane and other features. With Option B, the interchange ramp would end approximately 1,800 feet south of Waterlily Road, so there would be no impact to existing conditions at the Waterlily Road intersection.</p>		X	X	X	X	X
<p>Mainland in Aydlett:</p> <p>With Option B, existing Aydlett Road through Maple Swamp removed. Access between US 158 and Aydlett provided from the Mid-Currituck Bridge approach road. Narrow Shore Road altered to pass over the toll plaza, which would be in Aydlett with Option B only. With Option A (including the Preferred Alternative), no changes to Aydlett access or the local street system. No access in Aydlett to and from the Mid-Currituck Bridge with either option.</p>		X	X	X	X	
<p>Direct access to the Outer Banks (at NC 12) via Mid-Currituck Bridge.</p>		X	X	X	X	X

**Table 6-3 (continued). Changes in Access**

Description of Change	Applicable Alternative					
	ER2	MCB2/ C1	MCB2/ C2	MCB4/ C1	MCB4/ C2	Preferred Alternative
<p>Outer Banks, US 158 between Wright Memorial Bridge and NC 12:</p> <p>Left turners from Amandas Avenue, North Croatan Highway, South Dogwood Trail, Woods Road, Duck Woods Drive, Cypress Knee Trail, Juniper Trail, Wal-Mart Shopping Center, and the Market Place Shopping Center would need to turn right and make a U-turn at a signalized location.</p>	X	X	X			
<p>Outer Banks, US 158 South of NC 12 to Bennett Street:</p> <p>On the east side of US 158, the CVS pharmacy would only have access off NC 12. With ER2, drivers would have to access CVS via NC 12 south of US 158/NC 12 interchange. Driveway access for two other businesses and residential properties driveway access to US 158 would be closed, with access only from an alley behind the properties. On the west side of US 158, the Regional Medical Center main access would be closed, with full access being allowed at Grissom Street via Putnam Road.</p>	X	X	X			
<p>Outer Banks, NC 12 at US 158:</p> <p>With ER2, from the eastbound off ramp of US 158 to NC 12 northbound, right turns to NC 12 south (Virginia Dare Trail) would be prohibited. Drivers would reach this part of Virginia Dare Trail via NC 12 south of US 158/NC 12 interchange.</p>	X					
<p>Outer Banks, NC 12 in Dare County:</p> <p>Since subdivisions are served by more than one street, intersections with NC 12 would be closed at Widgeon Drive (SR 1479), Wood Duck Drive (SR 1477), Canvas Back Drive (SR 1476), and Old Squaw Drive (SR 1474) to facilitate NC 12 traffic flow.</p>	X	X	X			

**Table 6-3 (concluded). Changes in Access**

Description of Change	Applicable Alternative					Preferred Alternative
	ER2	MCB2/C1	MCB2/C2	MCB4/C1	MCB4/C2	
Outer Banks, NC 12 in Currituck County South of Albacore Street: No left turns to or from Crown Point except with Preferred Alternative. No left turn from southernmost entrance of TimBuck II to NC 12 with ER2, MCB2/C1, MCB4/C1, and Preferred Alternative; no left turns to or from southernmost entrance of TimBuck II with MCB2/C2 and MCB4/C2. No left turns from Orion's Way to NC 12. Provisions made for left turners to make U-turns at adjoining intersections.	X	X	X	X	X	X
Outer Banks, NC 12 in Currituck County between Albacore Street and Monterey Drive: Either no left turns from or no left turns to NC 12 from business driveways between Albacore Street and Monterey Drive. Provisions made for left turners to make U-turns at adjoining intersections.		X		X		X
Outer Banks, NC 12 in Currituck County between Monterey Drive and Devil's Bay Road: Corolla Bay subdivision divided with no direct access between the two parts. NC 12 would need to be used to travel between the two parts. The northern intersection of North Harbor View Drive with NC 12 closed. The southern intersection would remain open.		X		X		
Outer Banks, NC 12 in Currituck County between Monterey Drive and Devil's Bay Road: The northern intersection of North Harbor View Drive with NC 12 relocated.						X

Opportunities to mitigate access changes further would be considered during final design.

## **6.4.1 Neighborhood Access**

### **6.4.1.1 ER2**

#### Currituck County Mainland

With this alternative, the addition of a hurricane evacuation lane along US 158 on the Currituck County mainland would not affect neighborhood access. Because road construction would occur within existing right-of-way, neighborhood access either would be undisturbed or would be restored in the same location to accommodate both NCDOT vehicular requirements and the travel destination needs of the community.

#### Outer Banks

On the Outer Banks, where a US 158 super-street and interchange would be constructed east of the Wright Memorial Bridge, right-in/right-out and right-turn only access would be provided at specific locations (see Table 6-3). In some places, this would create the need for drivers to pass by the desired turning point and make a U-turn to get to the desired destination. The pavement would be widened (U-turn bulb) to allow most U-turns to be made in a single movement. Although this would be a change from existing travel patterns, its purpose would be to enhance traffic flow and capacity on US 158. As a result, access to the surrounding neighborhood resources would be changed but maintained.

With the new interchange at US 158 and NC 12, improvements to US 158 would extend southward to Bennett Street. As a result, existing access to the Regional Medical Center in Kitty Hawk would be closed, and traffic destined for the medical center would need to proceed south to Grissom Road to turn right, then turn right (north) on Putnam Road to access the medical center. Putnam Road would see additional traffic as well as emergency vehicles that may transport persons to the medical center for helicopter transport to a hospital on the mainland. Access also would be changed for two homes. At the US 158/NC 12 interchange, right turns to NC 12 south would be prohibited.

From north of the Duck town center, where a middle turn lane would be added to NC 12, the intersections of NC 12 and four residential streets would be closed to daily traffic: Widgeon Drive (SR 1479), Wood Duck Drive (SR 1477), Canvas Back Drive (SR 1476), and Old Squaw Drive (SR 1474). These closures would be implemented in areas where alternative daily public street access is available. Access for emergency vehicles at these locations would be maintained. In addition, alternative right-in/right-out and right-turn only access would be provided at other intersections northward along NC 12.

Along NC 12 between Hunt Club Drive/Spindrift Lane and Albacore Street, the road would be widened to four lanes, with a raised median. As a result of NCDOT design criteria for four lane divided roads, vehicle crossings would be limited to intervals of 1,200 feet. Thus, access would be altered at Orion's Way and Crown Point as indicated in Table 6-3. Also, with the presence of a four-lane road rather than the existing two-lane road, pedestrians would be expected to cross NC 12 at marked crosswalks.

#### **6.4.1.2 MCB2**

##### *Currituck County Mainland*

On the Currituck County mainland, a hurricane evacuation lane would be added along US 158 between the US 158/NC 168 intersection and the US 158/Mid-Currituck Bridge interchange, a distance of approximately 5 miles. Effects along US 158 would be the same as with ER2, but would occur over a shorter distance. Neighborhood access either would be undisturbed or restored in the same location to accommodate both NCDOT vehicular requirements and the travel destination needs of the community.

For MCB2/A, because the new US 158/Mid-Currituck Bridge interchange would eliminate access to US 158 for one house and one business along the east side of US 158 just south of Waterlily Road, a new frontage road would be built so that access for this home and business would be maintained. Also for MCB2/A, pavement marking on the Mid-Currituck Bridge ramp to US 158 would be designed to have traffic on the ramp completely merged into US 158 approximately 600 feet south of Waterlily Road. However, the additional pavement for the ramp would continue to the Waterlily Road intersection to serve as the right-turn lane, so there would be the potential for merging traffic to wait until just before the intersection to merge into US 158. This would increase the challenge of turning left into or out of Waterlily Road during peak travel periods because drivers would have to contend with three lanes of traffic attempting to merge into two lanes, as well as right-turning traffic at Waterlily Road, in making their turning decisions. Citizens at the October 12, 2009, community meeting in Aydlett stated that they often must turn left from Waterlily Road to US 158 in two stages, using the center turn lane on US 158 as a refuge until traffic clears to allow a merge into the southbound US 158 travel lanes. An approach for resolving this complication without restricting Waterlily Road turning movements is included in the Preferred Alternative (see Section 6.4.1.4).

MCB2/B's ramps would end approximately 1,800 feet south of Waterlily Road because the toll plaza would be in Aydlett. This would require ramp traffic to merge into US 158 before reaching Waterlily Road, so there would be no impact to existing conditions at the Waterlily Road intersection.

The approach road for the Mid-Currituck Bridge with MCB/2A would extend from the US 158/Mid-Currituck Bridge interchange, over Maple Swamp, to the community of Aydlett (see Figure 2-3). Because the bridge structure would extend over Narrow Shore

Road, neighborhood access would remain as it currently exists and would not be affected. The Maple Swamp bridge, earthen embankment, and western extension of the Mid-Currituck Bridge would be constructed north of Aydlett Road and would preserve this access between US 158 and Aydlett.

For MCB2/B, the new US 158/Mid-Currituck Bridge interchange would eliminate access to US 158 for the same house and business along the east side of US 158 as with MCB2/A, so again a new frontage road would be built. In addition, a frontage road would be provided along the west side of US 158 adjacent to the US 158/Mid-Currituck Bridge interchange to provide access to properties in this area that currently have direct access to US 158. With MCB2/A these properties would be purchased and no frontage road would be provided because there is no upland available upon which to place a frontage road.

With MCB2/B (see Figure 2-3) existing Aydlett Road through Maple Swamp would be removed. Access between US 158 and Aydlett would be provided instead from the Mid-Currituck Bridge approach road. Narrow Shore Road would be altered to pass over the toll plaza, which would be in Aydlett with MCB2/B. Travel patterns would be altered by these changes, but no access to properties would be lost and travel distances for those using Aydlett Road and Narrow Shore Road would be similar to what they are today.

There would be no access in Aydlett to and from the Mid-Currituck Bridge with either MCB2/A or MCB2/B.

On the west side of US 158 in the Option A interchange area and in Maple Swamp with either Option A or Option B, public road access would be lost to some properties. These properties would be purchased. In these cases, public road access could be retained only by building frontage roads in wetlands, a sensitive natural resource, and the purchase of the affected lands is considered a practicable alternative.

#### Outer Banks

With MCB2, a US 158 super-street and US 158/NC 12 interchange would be constructed east of the Wright Memorial Bridge. With this action, access to the surrounding neighborhood resources would be the same as described above for ER2 except that right turns to NC 12 south would not be prohibited.

Impacts related to roadway reconfiguration and closures along NC 12 would be the same as described with ER2.

Impacts related to neighborhood access at the eastern terminus of the Mid-Currituck Bridge would occur if corridor C1 were chosen. The bridge terminus and realignment of NC 12 would divide the planned Corolla Bay subdivision north of the Ocean Forest/NC 12 intersection. With bridge corridor C1, there would be no direct access between the southern and northern portions of the subdivision; access would be via

NC 12. In addition, with realignment of NC 12, the access road that connects NC 12 to an undeveloped area at the north end of North Harbor View Drive would be closed. The southern North Harbor View Drive/NC 12 intersection would remain open. However, as discussed in Section 6.2.1.2, North Harbor View Drive is a private street and its northern and southern halves are maintained by two different property owner's associations. The closure of the northern intersection with NC 12 would force traffic from one group of property owners to use a street maintained by another group of property owners.

As with ER2, access to NC 12 would be altered at Orion's Way and Crown Point as indicated in Table 6-3. Also, with the presence of a four-lane road rather than the existing two-lane road, pedestrians would be expected to cross NC 12 only at marked crosswalks, rather than the numerous locations where pedestrians currently cross the two-lane NC 12.

#### **6.4.1.3 MCB4**

##### Currituck County Mainland

With this alternative, impacts related to neighborhood access along US 158 would be the same as described for MCB2.

Access issues related to Waterlily Road, the Mid-Currituck Bridge interchange, and the bridge approach on the Currituck County mainland would be the same as described for MCB2.

##### Outer Banks

Neighborhood access along US 158 east of the Wright Memorial Bridge would not be affected. The only change to US 158 would be the addition of a third outbound lane within the existing right-of-way to provide additional road capacity during a hurricane evacuation.

Potential impacts related to the C1 and C2 bridge corridor intersections at NC 12 in Currituck County would generally be the same as those described for MCB2/C1 and MCB2/C2. With MCB4, there would be no NC 12 widening in Dare County and thus no associated changes in access.

#### **6.4.1.4 Preferred Alternative**

##### Currituck County Mainland

With the Preferred Alternative, changes in access would be focused in the US 158/Mid-Currituck Bridge interchange area. As with MCB4/A, because the new interchange would eliminate access to US 158 for one house and one business along the east side of US 158 just south of Waterlily Road, a new frontage road would be built so that access for this home and business would be maintained. Because the northbound exit ramp



would end near Waterlily Road, a median acceleration lane would be provided at Waterlily Road to allow left turns to be made more safely at Waterlily Road and US 158. Bulb-outs for u-turning vehicles also would be provided at the re-aligned US 158/Aydlett Road intersection and the US 158/Worth Guard Road intersection to provide greater flexibility for local traffic in turning to and from existing side streets near the US 158/Mid-Currituck Bridge interchange.

As with the other alternatives using the Option A mainland bridge approach design, the approach road for the Mid-Currituck Bridge would extend from the US 158/Mid-Currituck Bridge interchange, over Maple Swamp, to the community of Aydlett (see Figure 2-3). Because the bridge structure would extend over Narrow Shore Road, neighborhood access would remain as it currently exists and would not be affected. The Maple Swamp bridge, earthen embankment, and western extension of the Mid-Currituck Bridge would be constructed north of Aydlett Road and would preserve this access between US 158 and Aydlett. There would be no access in Aydlett to and from the Mid-Currituck Bridge.

On the west side of US 158 in the interchange area and in Maple Swamp, public road access would be lost to some properties. These properties would be purchased if no alternative access to a public road could be provided. In these cases, public road access could be retained only by building frontage roads in wetlands, a sensitive natural resource.

#### Outer Banks

Neighborhood access along US 158 east of the Wright Memorial Bridge would not be affected. The only change to US 158 would be the addition of approximately 1,600 feet of new third outbound lane within the existing right-of-way to the west of the US 158/Cypress Knee Trail intersection (ending approximately 450 feet west of the Duck Woods Drive intersection) to provide additional road capacity during a hurricane evacuation.

Potential access impacts on NC 12 in Currituck County would generally be the same as described above for MCB4 and as indicated in Table 6-3, and from the perspective of neighborhood access would consist of left turn restrictions at Orion's Way and Crown Point. However, the northern intersection of NC 12 and North Harbor View Drive would be relocated rather than closed as proposed with MCB2/C1 and MCB4/C1.

### **6.4.2 Commercial Access and Parking**

The changes in commercial access and parking associated with the detailed study alternatives are presented in Table 6-3. On-street parking does not exist anywhere along US 158 or NC 12 in the project area and thus would not be affected by any of the detailed study alternatives.

#### **6.4.2.1 ER2**

##### **Currituck County Mainland**

Small off-street parking areas are found along US 158 on the Currituck County mainland, primarily associated with churches and local businesses that front the highway. Portions of these off-street parking areas could be temporarily affected during construction of a third outbound evacuation lane if the parking is within a needed construction easement. These effects would not occur if using the center turn lane for outbound travel during a hurricane evacuation is selected.

##### **Outer Banks**

As indicated in Table 6-3, impacts to commercial access are anticipated with widening US 158 east of the Wright Memorial Bridge and construction of an interchange. Access to some properties would be altered, with the addition of right-in/right-out access only, and with left turns restricted and controlled by signalization. Of particular note is that the CVS pharmacy in the area would only have access to and from NC 12. With ER2, that access and the access for other businesses on NC 12 south (Virginia Dare Trail) would only be from the south since right turns onto Virginia Dare Trail would be prohibited. Also, direct access to US 158 would be removed for two businesses south of the US 158/NC 12 interchange. Remaining access would be from an alley behind the properties.

The right-of-way for the US 158/NC 12 interchange would extend into the Home Depot parking lot adjacent to the south of US 158. Based on the current parking configuration, approximately 40 parking spaces (about 10 percent of the total) would be taken, and traffic circulation within the parking lot would be affected. With fewer spaces available, parking availability could be affected during both peak and off-peak hours. In accordance with the Town of Kitty Hawk development standards, this Home Depot would remain a conforming use, but the ratio of parking to retail space would be non-conforming (does not meet current requirements) (Heard, 2009).

The only business access change along NC 12 would be where no left turns would be allowed from the southern-most entrance to TimBuck II near Albacore Street. No off-street business parking would be affected.

#### **6.4.2.2 MCB2**

##### **Currituck County Mainland**

Impacts along US 158 from MCB2 related to a third outbound lane for hurricane evacuation would be the same as with ER2, but would occur over a shorter distance – approximately 5 miles instead of 25 miles. With MCB2/A, commercial access would not be altered except for one business, where existing direct access to US 158 would be converted to access via a frontage road. This same impact also would occur with MCB2/B. In addition, MCB2/B would change access to a gas station on the west side of US 158 in the US 158/Mid-Currituck Bridge interchange area. It currently has direct

access to US 158. This alternative would place the gas station close to the end of a long frontage road (approximately 4,000 feet down the 5,000-foot-long frontage road) that connects to US 158 at a single point. This change would make it inconvenient for customers to reach the gas station, particularly drive-by customers who would not likely associate the frontage road intersection with the gas station access. The gas station would be displaced with MCB2/A.

With this alternative, access to commercial resources and services would be improved between the Outer Banks and mainland Currituck County with the presence of the Mid-Currituck Bridge across Currituck Sound. The bridge would reduce both miles and travel times between the mainland and the Outer Banks.

Although access to commercial areas between the Mid-Currituck Bridge and the Wright Memorial Bridge area would not be altered, the Mid-Currituck Bridge would divert traffic from this part of US 158. This could result in a loss of business as fewer people drive by. In 2006, the Average Annual Daily Traffic (AADT) along this section of US 158 ranged from 19,800 vehicles per day (vpd) to 39,600 vpd, depending on the segment of road considered. If the Mid-Currituck Bridge had opened in 2006, those numbers would have dropped approximately 15 to 18 percent to between 16,300 vpd and 33,800 vpd. By 2035 and with a Mid-Currituck Bridge, the AADT along this portion of US 158 would rise again to between 33,700 vpd and 67,700 vpd. Thus, reductions in traffic volumes (as compared with the existing volumes) on this part of US 158 would be short-term.

Based on an informal survey conducted in November 2010 of 25 businesses along US 158 south of Aydlett, as well as one on NC 12 in Duck, business managers and owners are evenly divided as to whether the proposed Mid-Currituck Bridge would have a positive or a negative impact on businesses along US 158 south of Aydlett. One-half of the businesses expect to see a decrease in customers, especially on summer weekends, and the other one-half expect to see an increase in customers, especially on summer weekends. However, none of those interviewed said they would go out of business as a result of a decrease in drive-by traffic resulting from the bridge. The potential for loss of business generally depends on the type of business. The results of the survey are found in Appendix D of this report.

If a business' customers include tourists bound for the Outer Banks, then the presence of a bridge that would divert 15 to 18 percent of traffic is seen as detrimental, as fewer drive-bys will mean fewer customers. If the business is not tourist-dependent, the bridge is seen as a potential benefit, as it will enable customers to reach the business all days of the week. For example, fast-food restaurants and stores that rely on drive-by customers generally believe less traffic would mean fewer customers and, therefore, less business. However, stores with an established base of customers and those that rely on permanent residents on the mainland and Outer Banks, such as auto sales, grocery, and motorcycle businesses, believe the bridge would be beneficial. Currently, traffic on US 158 is so heavy on summer weekends that much of the non-tourist population does not

drive on US 158. This has led businesses that do not primarily rely on the tourist traffic to close on summer weekends when the number of customers drops so substantially that it is not profitable for them to stay open. An additional benefit of the bridge mentioned by some is that, with the Mid-Currituck Bridge, it would be easier to deliver flowers and other such items to the Outer Banks from the mainland. Currently, traffic is so congested on summer weekends that deliveries are not possible.

#### Outer Banks

On the Outer Banks, impacts related to commercial access and parking along US 158 and NC 12 northward to the eastern terminus of the Mid-Currituck Bridge would be the same as those described for ER2 with one exception – left turns to southbound NC 12 (Virginia Dare Trail) would continue to be permitted.

To accommodate traffic to and from the Mid-Currituck Bridge with bridge corridor C2, NC 12 would be realigned to the west to create a new intersection with the bridge terminus. This would affect access to the TimBuck II commercial center. Impacts would be as described in Section 1.3. The signal at Albacore Street would not be affected.

The terminus for bridge corridor C1 or C2 would result in impacts to commercial access and parking. With corridor C2, the TimBuck II shopping center would lose some of its parking area. With corridor C1, a total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monteray Drive. With either bridge corridor, no left turns onto NC 12 would be allowed from the southern-most entrance to TimBuck II. The most notable business access impact would be associated with bridge corridor C1 between Albacore Street and Dolphin Avenue, where the road would be widened to four lanes with a center median. As a result, left turns across NC 12 from seven commercial driveways would be restricted; five would be right-in/right-out only, and two would be right-in/right-out and left-in. None of the driveways would maintain their current left-out turn. To turn left, motorists would first turn right onto NC 12, then make a U-turn at the next intersection. To promote traffic flow along NC 12, the new configuration would adhere to the general NCDOT standard of 1,200 feet between full intersections and would restrict left turns.

The proposed Mid-Currituck Bridge would shorten the travel distance and, therefore, improve access between the Outer Banks to schools on the Currituck County mainland, including Currituck County High School, Currituck County Middle School, Moyock Middle School, Knotts Island Elementary School, and Jarvisburg Elementary School.

#### **6.4.2.3 MCB4**

##### Currituck County Mainland

With the MCB4 alternative, impacts related to commercial access and parking along US 158 on the mainland would be the same as described for MCB2.

Impacts to the western bridge terminus and Mid-Currituck Bridge interchange also would be the same as described for MCB2/A and MCB2/B.

#### Outer Banks

With MCB4, US 158 between the Wright Memorial Bridge and NC 12 would be reconfigured with a third outbound evacuation lane or a contraflow lane. No change to commercial access or parking would occur.

Potential impacts related to the C1 and C2 bridge corridors would generally be the same as those described for MCB2. Improvements related to access to schools on the Currituck County mainland also would be the same as with MCB2.

#### **6.4.2.4 Preferred Alternative**

##### Currituck County Mainland

With the Preferred Alternative, the only impact related to commercial access and parking along US 158 on the mainland would involve one business, where existing direct access to US 158 would be converted to access via a frontage road. Also, although access to commercial areas between the Mid-Currituck Bridge and the Wright Memorial Bridge area would not be altered, the Mid-Currituck Bridge would divert traffic from this part of US 158. Therefore, as with MCB2 and MCB4, this could result in a loss of business at some businesses as fewer people drive by, but also could help other businesses by alleviating summer weekend traffic congestion.

#### Outer Banks

With the Preferred Alternative, impacts to commercial access and parking would be the same as with MCB4/C1. A total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monteray Drive. No left turns onto NC 12 would be allowed from the southern-most entrance to TimBuck II. Between Albacore Street and Dolphin Avenue, left turns across NC 12 from seven commercial driveways would be restricted; five would be right-in/right-out only and two would be right-in/right-out and left-in. None of the driveways would maintain their current left-out turn. To turn left, motorists would first turn right onto NC 12, and then make a U-turn at the next intersection.

The Preferred Alternative would shorten the travel distance and, therefore, improve access between the Outer Banks to schools on the Currituck County mainland, including Currituck County High School, Currituck County Middle School, Moyock Middle School, Knotts Island Elementary School, and Jarvisburg Elementary School.

### **6.4.3 Pedestrian and Bicycle Access**

#### **6.4.3.1 ER2**

##### Currituck County Mainland

No sidewalks or bicycle trails are present along US 158 or in the vicinity of Aydlett in the project area. Therefore, this alternative would not affect existing facilities.

##### Outer Banks

Existing pedestrian and bicycle access would be maintained east of the Wright Memorial Bridge along the US 158 super-street. The multi-use path on the north side of US 158 in Southern Shores would be replaced, consistent with NCDOT standards. Kitty Hawk plans to build a multi-use path on the south side of US 158. If this path has been built when this alternative is implemented, it also would be replaced, consistent with NCDOT standards. If no path exists at the time the project is implemented, the super-street would be designed so the planned multi-use path could be added at a later date. Many of the existing multi-use paths are less than 10 feet from travel lanes. When these are replaced, they would be 10 feet from travel lanes, where possible, in accordance with NCDOT standards.

From Southern Shores northward along NC 12, existing bicycle and pedestrian access could be temporarily disrupted by project construction. However, if existing multi-use paths were affected, they would be replaced, consistent with NCDOT standards.

Northward from Duck, the Sanderling Inn has extensive facilities on both sides of the road, and there is substantial related pedestrian movement across the road. Existing marked pedestrian crossings here and at other locations would be retained or replaced.

From approximately the northern end of Pine Island to TimBuck II, no multi-use path exists. The preliminary project design is such that a new path could be installed, should Currituck County determine to do so, either alone or by contributing to funding for the project.

#### **6.4.3.2 MCB2**

##### Currituck County Mainland

No sidewalks or bicycle trails are present along US 158 or near Aydlett. Therefore, none would be affected.

At the US 158/Mid-Currituck Bridge interchange, no special provision would be made for pedestrian or bicycle access. With MCB2, it was assumed that the Maple Swamp and Mid-Currituck bridges would have a 10-foot paved shoulder and a bicycle-safe rail. The shoulder could be used by bicyclists. No special provisions were proposed for inclusion on the bridge for bicyclists except the rail.

With MCB2/B, the realignment of Narrow Shore Road in the Aydlett community would alter existing bicycle and pedestrian access the same as local vehicular access. The opportunity for pedestrians and bicyclists to use the local road system to reach all points in Aydlett would be unchanged, but pedestrians and bicyclists would have to use the bridge over the toll plaza, which would rise to a height of 25.5 feet.

#### Outer Banks

With MCB2, impacts to bicycle and pedestrian access along US 158 and NC 12 would be the same as described for ER2.

### **6.4.3.3 MCB4**

#### Currituck County Mainland

Impacts related to pedestrian and bicycle access would be the same as described for MCB2.

#### Outer Banks

Along US 158 east of the Wright Memorial Bridge, the addition of a third outbound lane, or a contraflow lane, for hurricane evacuation would occur within existing right-of-way. It would not affect existing access for pedestrians and bicycles.

This alternative would not include any activities along NC 12 in Dare County. Therefore, no impacts related pedestrian and bicycle access would occur.

Potential impacts related to bridge corridors C1 and C2 would generally be the same as those described above for MCB2. The primary difference is that with bridge corridor C1, existing multi-use paths also would be replaced between Dolphin Street and the bridge terminus in the same manner as described for ER2 along NC 12. That path would not be affected with bridge corridor C2.

### **6.4.3.4 Preferred Alternative**

#### Currituck County Mainland

No sidewalks or bicycle trails are present along US 158 or near Aydlett. Therefore, none would be affected by the Preferred Alternative. At the US 158/Mid-Currituck Bridge interchange, no special provision would be made for pedestrian or bicycle access. The bridge over Currituck Sound would have a 10-foot paved shoulder and a bicycle-safe rail. The bridge shoulder could be used by bicyclists. On the mainland, bicyclists would enter and exit the bridge from Narrow Shore Road. Crossing the Maple Swamp Bridge and entering the toll plaza would not be allowed for safety reasons. No special provisions would be made for pedestrians.

### Outer Banks

Along US 158 east of the Wright Memorial Bridge, the addition of approximately 1,600 feet of new third outbound lane within the existing right-of-way to the west of the US 158/Cypress Knee Trail intersection (ending approximately 450 feet west of the Duck Woods Drive intersection) to provide additional road capacity during a hurricane evacuation would not change existing access related to pedestrians and bicycles.

The Preferred Alternative would replace existing multi-use paths along NC 12 that would be affected by widening NC 12. South of TimBuck II, there is no existing multi-use path; however, the preliminary project design in this area is such that a new path could be installed, should Currituck County determine to do so, either alone or by contributing to funding for the project. Where feasible, it would be placed on the west side of NC 12, as preferred by Currituck County. Where NC 12 is widened with the Preferred Alternative, marked pedestrian crossings would be provided at locations identified by Currituck County along NC 12 (Albacore Street and Currituck Clubhouse Drive) plus at North Harbor View Drive and the bridge terminus (one across NC 12 and one across the bridge approach road).

## **6.4.4 The Americans with Disabilities Act**

The Americans with Disabilities Act of 1990 (ADA) (42 USC section 12101 et seq.) was signed into law by President Bush on July 26, 1990. It has been described as the world's first comprehensive civil rights law for people with disabilities. The ADA prohibits discrimination in employment, public services, public accommodations, and telecommunications against people with physical and mental disabilities.

All aspects of the detailed study alternatives, including the Preferred Alternative, would be designed and constructed in accordance with ADA requirements. No adverse impacts would occur.

### **6.4.4.1 ER2**

With this alternative, the proposed hurricane evacuation lane along US 158 on the Currituck County mainland, the super-street and interchange on US 158 east of the Wright Memorial Bridge, and the center turn lane along NC 12 would be designed and constructed in compliance with ADA and the ADA Amendments Act of 2008 (ADAAA). Compliance would include, but not be limited to, roadway access, design, and signage. No curbs or gutters would be included in the project, and the proposed multi-use paths on the Outer Banks would be ADA/ADAAA-compliant. Also, reconstructed and new pedestrian crossings along NC 12 would be implemented in accordance with ADA and ADAAA requirements.



#### **6.4.4.2 MCB2**

This alternative would be implemented in compliance with ADA/ADAAA requirements as stated for ER2, above. Also, the toll booth system on the Mid-Currituck Bridge would be ADA/ADAAA-compliant.

#### **6.4.4.3 MCB4**

This alternative would be implemented in compliance with ADA/ADAAA requirements as stated for MCB2, above.

#### **6.4.4.4 Preferred Alternative**

This alternative would be implemented in compliance with ADA/ADAAA requirements as stated for ER2, above.

### **6.4.5 Public Transit**

There is no fixed-route transit system in the DCIA. Therefore, none of the detailed study alternatives would have an adverse impact to such a system.

## **6.5 Consistency with Thoroughfare Plans**

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The two thoroughfare plans that are applicable to the proposed project are the *Thoroughfare Plan for Currituck County* (NCDOT, 1999) and the *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004). Provisions in the *Dare County Thoroughfare Plan* (NCDOT, 1988) applicable to the project area either have been completed or were deleted from the plan and, therefore, no longer apply.

### **6.5.1 ER2**

#### **6.5.1.1 Currituck County Mainland**

This alternative is inconsistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), as it does not include the recommended Mid-Currituck Bridge across the Currituck Sound. This alternative also does not include the plan's recommendation that US 158 be widened to six lanes between the US 158/NC 168 intersection or the approach corridor for the new bridge. However, this improvement is not defined as part of the Mid-Currituck Bridge project in the STIP and could be built as part of a future project.

#### **6.5.1.2 Outer Banks**

On the Outer Banks, ER2 would reflect in part the portion of the *Thoroughfare Plan for Currituck County* (NCDOT, 1999) that recommends NC 12 be widened from the Dare County line north to the eastern terminus of the proposed Mid-Currituck Bridge. The recommendation is for NC 12 to be widened to four lanes with a raised 16-foot-wide

median. ER2 would differ from this recommendation in that the part of ER2 on the Currituck County Outer Banks is only three lanes wide so the improvement could remain within the existing 60-foot right-of-way. Where this alternative would widen NC 12 to four lanes between Hunt Club Drive/Spindrift Lane and Albacore Street, it would be consistent with the *Thoroughfare Plan for Currituck County*. ER2 would be inconsistent with the *Dare County Thoroughfare Plan* in that the plan does not include widening NC 12 or making improvements to US 158 in Dare County.

Overall, ER2 would be inconsistent with the *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004), as it would not improve the efficiency of the thoroughfare system. Although traffic would operate at an improved level of service, the annual millions of vehicle-miles traveled in the project area would not be reduced. Also, ER2 would not provide a new connection across Currituck Sound as specified in the *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004).

## **6.5.2 MCB2**

### **6.5.2.1 Currituck County Mainland**

This alternative is consistent with the portion of the *Thoroughfare Plan for Currituck County* (NCDOT, 1999) that recommends a new Mid-Currituck Bridge across Currituck Sound. However, this alternative does not contain the plan's recommendation that US 158 be widened to seven lanes between the NC 168/US 158 intersection and the approach corridor for the new bridge. Like ER2, however, this improvement is not defined as a part of the Mid-Currituck Bridge project in the STIP and could be built as a part of a future project.

Overall, MCB2 would improve system efficiency. It would provide a new link in the transportation system, which would provide a more direct route to and from the Currituck County Outer Banks, in accordance with the *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004). The increased efficiency of the project-area network would be reflected in a 13 percent reduction in the millions of vehicle-miles traveled in 2035 (from 663.9 million to 578.3 million).

### **6.5.2.2 Outer Banks**

MCB2 has the same consistency/inconsistency characteristics along NC 12 as ER2.

## **6.5.3 MCB4**

MCB4 has consistency/inconsistency characteristics on both the mainland and the Outer Banks similar to MCB2. The primary exception is that, consistent with the *Dare County Thoroughfare Plan*, MCB4 does not include improvements in Dare County along NC 12 and US 158. Like MCB2, MCB4 would improve system efficiency. It would provide a new link in the transportation system, which would provide a more direct route to and

from the Currituck County Outer Banks, in accordance with the *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004). The increased efficiency of the project-area network would be reflected in the same reduction in the millions of vehicle-miles traveled in 2035 as MCB2.

#### **6.5.4 Preferred Alternative**

The Preferred Alternative is consistent with the portion of the *Thoroughfare Plan for Currituck County* (NCDOT, 1999) that recommends a new Mid-Currituck Bridge across Currituck Sound. However, this alternative does not contain the plan's recommendation that US 158 be widened to seven lanes between the NC 168/US 158 intersection and the approach corridor for the new bridge. Like ER2, however, this improvement is not defined as a part of the Mid-Currituck Bridge project in the STIP and could be built as a part of a future project.

The plan also calls for widening NC 12 to four lanes, northward between the Dare/Currituck County line and Mid-Currituck Bridge. With the Preferred Alternative, widening to four lanes only would occur in three locations: the bridge terminus area, the Albacore Street area, and the Currituck Clubhouse Drive area. However, the improvement of NC 12 is not defined as part of the Mid-Currituck Bridge project in the STIP and additional widening could be built as part of a future project.

Overall, the Preferred Alternative would improve system efficiency. It would provide a new link in the transportation system, which would provide a more direct route to and from the Currituck County Outer Banks, in accordance with the *North Carolina Strategic Highway Corridors Vision Plan* (NCDOT, 2004). The increased efficiency of the project-area network would be reflected in a 13 percent reduction in the millions of vehicle-miles traveled in 2035 (from 663.9 million to 578.3 million).

## **6.6 Safety**

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### **6.6.1 Pedestrian and Bicycle Safety**

#### **6.6.1.1 ER2**

##### Currituck County Mainland

Consistent with existing conditions along US 158 in the project area, no specific accommodation would be made for pedestrian or bicycle traffic.

##### Outer Banks

On the Outer Banks, the US 158 super-street and interchange would not be designed for pedestrian or bicycle use. They would be constructed specifically for vehicular traffic, with no specific accommodation for bicycles or pedestrians. However, the multi-use

path on the north side of US 158 would be retained or replaced. Also, the planned multi-use path on the south side of US 158 would be retained, replaced, or provided with sufficient space for future development alongside the super-street.

Northward along NC 12 from Southern Shores to the project terminus (Albacore Street with ER2), the project would relocate existing multi-use paths and provide space for some new ones to be built by Currituck County. Existing paths would remain on the same side of NC 12 with the same connections to surrounding development. Where possible, the relocated paths would be 10 feet from travel lanes. At the least, they would be further from travel lanes than existing paths. New multi-use paths would be located and designed in accordance with NCDOT criteria. Overall, the new and relocated multi-use paths would maintain or improve pedestrian and bicycle safety over existing conditions.

Along NC 12, existing marked pedestrian crossings would be retained or replaced, and new ones would be established at locations where a new or replaced multi-use path would cross from one side of NC 12 to the other. The addition of a third, turning, lane along NC 12 would result in additional lanes of traffic for pedestrians to cross as they go to and from beaches and other recreation areas.

Overall, along the US 158 super-street and NC 12, the new and relocated multi-use paths would enhance pedestrian and bicycle safety; the new paths would be at least 10 feet from travel lanes where possible, and the relocated paths would be further from travel lanes than under existing conditions.

#### **6.6.1.2 MCB2**

##### Currituck County Mainland

From the US 158/Mid-Currituck Bridge interchange across the Mid-Currituck Bridge, road shoulders would be 10 feet wide and could be used by bicyclists. In addition, the bridge would be equipped with bicycle-safe rails. Consistent with existing conditions along US 158 in the project area, no specific accommodation would be made for pedestrian or bicycle traffic.

##### Outer Banks

MCB2 would have the same pedestrian and bicycle safety impacts and benefits along US 158 and NC 12 as ER2.

#### **6.6.1.3 MCB4**

##### Currituck County Mainland

On the Currituck County mainland and Mid-Currituck Bridge, impacts related to pedestrian and bicycle safety would be the same as with MCB2.

#### Outer Banks

In Dare County, pedestrian and bicycle safety provisions would not change along US 158 and NC 12 and in the southern part of Currituck County along NC 12 because no road improvements would occur in these areas. Where NC 12 would be widened to four lanes in Currituck County, the same pedestrian and bicycle safety impacts and benefits would occur as with MCB2.

#### **6.6.1.4 Preferred Alternative**

##### Currituck County Mainland

On the Currituck County mainland, impacts related to pedestrian and bicycle safety would be the same as with MCB4. With the Preferred Alternative, as with MCB2 and MCB4, from the US 158/Mid-Currituck Bridge interchange across the Mid-Currituck Bridge, road shoulders would be 10 feet wide and could be used by bicyclists. In addition, the bridge would be equipped with bicycle-safe rails. Consistent with existing conditions along US 158 in the project area, no specific accommodation would be made for pedestrian or bicycle traffic.

#### Outer Banks

In Dare County, pedestrian and bicycle safety provisions would not change on US 158 and NC 12 and in the southern part of Currituck County along NC 12 because no road improvements would occur in these areas. Where NC 12 would be widened to four lanes at Albacore Street and at the roundabouts at Currituck Clubhouse Drive and the bridge terminus, the pedestrian and bicycle safety impacts and benefits would be the same as with MCB2. Marked pedestrian crossings would be provided along NC 12 where it would be widened. They would be placed at locations identified by Currituck County plans (Albacore Street, Orion's Way, and Currituck Clubhouse Drive), as well as at North Harbor View Drive and the bridge terminus (one across NC 12 and one across the bridge approach road).

### **6.6.2 Emergency Response**

Impacts to emergency response are expected to be beneficial for all detailed study alternatives, including the Preferred Alternative. The No-Build Alternative would have no effect on emergency response.

#### **6.6.2.1 ER2**

##### Currituck County Mainland

Under ER2, the addition of 25 miles of a third outbound evacuation lane along US 158 on the Currituck County mainland would provide additional space for drivers to move out of the way of northbound emergency vehicles. This benefit would not occur if using the center turn lane for outbound travel during a hurricane evacuation were chosen as the means to improve hurricane clearance times.

### Outer Banks

The new super-street and interchange along US 158 on the Outer Banks would improve the safety of emergency response vehicles, as the number of vehicles turning across travel lanes would be reduced, and new through-lanes would be established, providing additional space for drivers to move out of the way of emergency vehicles. ER2 would change access to the Regional Medical Center in Kitty Hawk, which would no longer be accessible from US 158 (Croatan Highway). However, emergency vehicles could turn left or right from US 158 onto Grissom Road, then turn north on Putnam Road.

Emergency vehicles would use this route to access the helicopter pad at Regional Medical Center or transport persons via US 158 to the Outer Banks Hospital in Nags Head for emergency medical care.

Additional lanes on NC 12 would provide the opportunity for emergency vehicles to pass vehicles (three-lane section) or improve opportunities for drivers to move out of the way (four-lane section). At locations in Dare County where connecting streets would be closed to regular traffic, provisions would be made for emergency vehicles to use the connection. At locations where the median of the four-lane road would prevent left turns from NC 12, provisions would be made to enable emergency vehicles to cross the median.

### **6.6.2.2 MCB2**

#### Currituck County Mainland

Under MCB2, the Mid-Currituck Bridge would provide a second and faster route for back-up emergency services between the Currituck County mainland and the Currituck County Outer Banks. This would enable back-up police, fire, and other emergency responders quicker access to the Currituck County Outer Banks by reducing travel distance and time between the mainland and the Outer Banks. It also would allow a shorter response time from the Outer Banks to hospitals and other facilities on the mainland.

Under MCB2, the addition of 5 miles of a third outbound evacuation lane along US 158 between NC 168 and the Mid-Currituck Bridge interchange on the Currituck County mainland would provide additional space for drivers to move out of the way of northbound emergency vehicles.

For MCB2/B, concern was expressed at an October 12, 2009 citizens meeting that at times of high traffic congestion emergency vehicles coming from Waterlily to Aydlett and returning to the hospital would be slowed. However, the preliminary design of the MCB2/B toll plaza has adequate traffic capacity during normal peak conditions not to result in queuing from the toll plaza that would block the access to or from Aydlett. However, this issue could be of concern during unusual traffic situations that may occur, such as a crash on the approach road or the bridge. MCB2/A would leave local

Aydlett traffic on Aydlett Road, so emergency vehicles would not mix with thoroughfare traffic except on US 158.

#### Outer Banks

Effects related to emergency response on the Outer Banks would be the same as with ER2.

### **6.6.2.3 MCB4**

#### Currituck County Mainland

Under MCB4, impacts related to the proposed Mid-Currituck Bridge would be the same as those described above for MCB2. Also, the benefit of adding a hurricane evacuation lane along US 158 would be the same as with MCB2.

#### Outer Banks

Impacts and benefits with MCB4 would be confined to locations in Currituck County where NC 12 would be widened to four lanes. The additional lanes on NC 12 would improve opportunities for drivers to move out of the way of emergency vehicles. At locations where the median of the four-lane road would prevent left turns from NC 12, provisions would be made in the median's design for emergency vehicles to cross the median.

### **6.6.2.4 Preferred Alternative**

#### Currituck County Mainland

With the Preferred Alternative, the Mid-Currituck Bridge would provide a second and faster route for back-up emergency services between the Currituck County mainland and the Currituck County Outer Banks. This would enable back-up police, fire, and other emergency responders quicker access to the Currituck County Outer Banks by reducing travel distance and time between the mainland and the Outer Banks. It also would allow a shorter response time from the Outer Banks to hospitals and other facilities on the mainland.

#### Outer Banks

Impacts and benefits related to emergency response would be confined to the three locations where NC 12 in Currituck County would be widened: near the bridge terminus, in the Albacore Street area, and in the Currituck Clubhouse Drive area. At these locations, the additional lanes on NC 12 would improve opportunities for drivers to move out of the way of emergency vehicles. Where the median of the four-lane road would prevent left turns from NC 12, provisions would be made in the median's design for emergency vehicles to cross the median.

### 6.6.3 Public Safety

Impacts related to public safety, specifically improvements in hurricane evacuation times, would be beneficial for all of the detailed study alternatives, including the Preferred Alternative. As shown in Table 6-4, alternatives ER2, MCB2 and MCB4, in association with a third outbound evacuation lane along mainland US 158, would result in the same hurricane clearance time of 21.8 hours. This is 3.8 hours over the North Carolina standard of 18 hours (NC General Statute, paragraph 136-102.7, "Hurricane Evacuation Standard"). Based on hurricane evacuation studies documented in the *Statement of Purpose and Need* (Parsons Brinckerhoff, October 2008) and *Alternatives Screening Report* (Parsons Brinckerhoff, 2009), this would be the best clearance time that could be achieved through improvements in the project area. Further reductions would require capacity improvements to US 158 between Elizabeth City and NC 168. The statute setting the standard does not specify that the 18 hours must be achieved in a single project.

**Table 6-4. Hurricane Clearance Time in 2035**

	No-Build	ER2	MCB2	MCB4	Preferred Alternative
Third Outbound Evacuation Lane on US 158	36.3 hours	21.8 hours	21.8 hours	21.8 hours	N/A
Reverse Center Turn Lane on US 158	36.3 hours	27.4 hours	27.4 hours	27.4 hours	27.4 hours

As shown in Table 6-4, with the Preferred Alternative (or ER2, MCB2 or MCB4), use of the US 158 center turn lane for outbound travel during a hurricane evacuation to improve hurricane evacuation times would result in the 2035 clearance time being 27.4 hours, which is 9.4 hours over the North Carolina standard of 18 hours. Using the center turn lane for outbound traffic does not offer as great a benefit as adding a third outbound lane because traffic also would use the center lane for turns, reducing the ability of the lane to efficiently serve northbound evacuating traffic.

The decision to include in the Preferred Alternative reversing the center turn lane on US 158 on the mainland between the US 158/Mid-Currituck Bridge interchange and NC 168 to reduce hurricane clearance times was made in association with area emergency management officials at a meeting on August 19, 2010.

The No-Build Alternative would result in a hurricane clearance time of 36.3 hours in year 2035. This would be two times the North Carolina clearance time standard of 18 hours.



## 6.7 Farmland Impacts

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As indicated in Section 5.7.1, the US Department of Agriculture, Natural Resource Conservation Service (NRCS), has identified three general categories of important farmland soils – prime, unique, and state and locally important. No unique farmland soils occur in the project area. Also, most of the farmland soils in the project area are located on the mainland in Currituck County. There are no farmland soils of any type on the Outer Banks in Currituck County. Although state and locally important farmland soils are present on the Outer Banks in Dare County, these soil types are in built-up areas and thus are not considered farmland. Appendix B provides a copy of the Farmland Conversion Impact Rating form (Form CPA-106) for the proposed project. The findings for MCB4/C1 on page B-1 apply to the Preferred Alternative.

The primary location of impacts to farmland would be at the US 158/Mid-Currituck Bridge interchange with MCB2, MCB4, and the Preferred Alternative. On the mainland, the only alternative to using land with farmland soils are within either developed areas or jurisdictional wetlands, both of which are important to avoid. Therefore, there are no alternative routes or sites available that might reduce the loss of farmland with MCB2, MCB4, or the Preferred Alternative.

Dare County does not have any Voluntary Agricultural Districts. Currituck County adopted a Voluntary Agricultural Protection District Ordinance in 2001. However, the county does not have any designated Agricultural Districts (Ferrell, 2011).

### 6.7.1 ER2

The impact of ER2 to prime and state and locally important farmland soils would be minimal, as shown in Table 6-5. On the mainland portion of Currituck County, most of the project activities would occur within existing right-of-way. Only 1.5 acres of prime farmland soils and 1.2 acres of state and locally important farmland soils would be affected by ER2. Further, within the Outer Banks portion of the project area, there are no prime or unique farmland soils. Although Conetoe loamy sand, a state and locally important farmland soil type, is present on the Outer Banks portion of the project area in Dare County, it exists in a built-up area and, therefore, is not considered farmland.

Based upon aerial photography and Geographic Information System (GIS) data, it is estimated that less than 20 percent of the ER2 right-of-way is being farmed, and less than 10 percent of the ER2 right-of-way is currently zoned for agricultural use.

The average farm size in Currituck County is 447 acres. The largest parcel currently being farmed that would be affected by ER2 is approximately 113 acres. However, only approximately .005 acre of this parcel would be used by ER2.

## 6.7.2 MCB2

Table 6-5 shows that MCB2/A would affect approximately 37 acres of prime farmland soils and 72 acres of state and locally important farmland soils. MCB2/B would affect approximately 76 acres of prime farmland soils and 41 acres of state and locally important farmland soils. According to the NRCS, this is less than 0.01 percent of all farmland soils in Currituck County.

**Table 6-5. Farmland Conversion Impact Rating**

Criterion	ER2	MCB2/C1	MCB2/C2	MCB4/C1	MCB4/C2	Preferred Alternative
<b>Option A</b>						
<b>Total Acres Converted</b>	<b>127.9</b>	<b>261.7</b>	<b>254.9</b>	<b>158.9</b>	<b>152.1</b>	<b>158.9</b>
Total Acres of Farmland Soils Converted	2.7	109.8	109.8	109.4	109.4	109.4
Acres of Prime or Unique Farmland Soils	1.5	37.4	37.4	37.4	37.4	37.4
Acres of State and Locally Important Farmland Soils	1.2	72.4	72.4	72.0	72.0	72.0
Percentage of Farmland in County Converted	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Land Evaluation Rating by NRCS	2.8	30.2	31.0	49.7	51.9	49.7
Corridor Assessment Points	8	14	14	22	25	22
<b>Total Points<sup>1</sup></b>	<b>10.8</b>	<b>44.2</b>	<b>45.0</b>	<b>71.7</b>	<b>76.9</b>	<b>71.7</b>
<b>Option B</b>						
<b>Total Acres Converted</b>		296.7	290.0	193.8	187.1	
Total Acres of Farmland Soils Converted		117.1	117.1	116.8	116.8	
Acres of Prime or Unique Farmland Soils		76.2	76.2	76.2	76.2	
Acres of State and Locally Important Farmland Soils		40.9	40.9	40.6	40.6	
Percentage of Farmland in County Converted		<0.01	<0.01	<0.01	<0.01	
Land Evaluation Rating by NRCS		34.2	35.0	52.3	54.2	
Corridor Assessment Points		14	14	22	25	
<b>Total Points<sup>1</sup></b>		<b>48.2</b>	<b>54.0</b>	<b>93.7</b>	<b>79.2</b>	

<sup>1</sup>Total Points on the Farmland Impact Rating Form for corridor type projects (CPA-106). This is the sum of the relative value of the farmland to be converted (rated as such by the NRCS) and the corridor assessment points based on assigned criteria (see Appendix B).

The land needed to build the project would require the taking of private land, some of which is currently being farmed. The largest land requirement for this alternative would be at the interchange of US 158 and the proposed Mid-Currituck Bridge. This location also is where the largest farmland impact (to a farmed parcel of land) would occur. The greatest farmland single impact would be the taking of approximately 4.5

acres from a 5-acre farm (on an 83-acre parcel). There would be other, smaller farms affected in this same interchange area. These farms are much smaller than the average farm size (447 acres) in Currituck County.

Based upon aerial photography and GIS data, it is estimated that less than 20 percent of the MCB2 right-of-way is being farmed, and less than 15 percent of the MCB2 right-of-way is currently zoned for agricultural use.

### **6.7.3 MCB4**

As shown in Table 6-5, the total acres of farmland soils for MCB4 would be almost the same as MCB2 with either Option A or Option B. However, the amount of total land required for MCB4 would be approximately 100 acres less than that required for MCB2. Thus, the land evaluation rating by NRCS is higher for MCB4 than for MCB2, as shown in Table 6-5 (further detail is available in Form CPA-106 in Appendix B). Other aspects of this alternative would be the same as described for MCB2.

### **6.7.4 Preferred Alternative**

As shown in Table 6-5, the total acres of farmland soils for the Preferred Alternative would be the same as with MCB4/A. Other aspects of the Preferred Alternative also would be the same as described for MCB4/A.

## **6.8 Impacts to Water Resources**

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There is no water supply watershed, Wild and Scenic River, or High Quality Water in the project area. With MCB2/A, MCB4/A, and the Preferred Alternative, the Maple Swamp bridge and the Mid-Currituck Bridge would drain directly into Maple Swamp and Currituck Sound, with the associated introduction of motor vehicle pollutants into those locations. With MCB2/B and MCB4/B no bridge would be built over Maple Swamp, so only the Mid-Currituck Bridge would drain into water below.

MCB4/A is a part of the Preferred Alternative. NCTA would comply with NC Session Law 2008-211 (An Act to Provide for Improvements in the Management of Stormwater in the Coastal Counties in Order to Protect Water Quality) to the maximum extent practicable for the additional impervious surface area created by this project. A proposed stormwater management strategy is presented in Section 2.1.7 of this FEIS. A final stormwater management plan for minimizing the potential impact of roadway pollutants will be developed in association with the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Quality (DWQ) and other state and federal environmental resource and regulatory agencies during final design of the alternative selected for implementation and in the process of obtaining related permits. Water quality impacts and mitigation offered by the proposed

stormwater management plan are discussed in detail in the revised *Natural Resources Technical Memorandum* (CZR Incorporated, 2011).

## 6.9 Environmental Justice

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### 6.9.1 Environmental Justice Regulations

Executive Order 12898 requires federal agencies to identify and address, as appropriate, the potential for disproportionately high adverse human health or environmental effects of federal programs, policies, and activities on minority and low-income populations. For the proposed project, these requirements were met by analyzing environmental justice data in accordance with regulatory guidance from the Council on Environmental Quality (CEQ) (CEQ, 1997), US Environmental Protection Agency (USEPA) (USEPA, 1998), and US Department of Transportation (USDOT) guidelines for assessing environmental justice impacts (USDOT, 1997).

For impacts to minority and low-income communities to be considered disproportionately high and adverse, three criteria must be met: 1) there must be one or more of these populations within the region of comparison (ROC); 2) there must be adverse (or substantial) impacts from the proposed action; and 3) the impacts must affect the environmental justice populations notably more than the general population and/or have higher and more adverse effects on the environmental justice population than on the general population.

### 6.9.2 Potential Impact

*Minority* is defined as Black, American Indian, Alaskan Native, Hispanic, or Asian-American populations. *Low-income* is defined as a household income at or below the US Department of Health and Human Services poverty guidelines (Federal Highway Administration [FHWA], 1998). A minority population or low-income population is any readily identifiable group of minority or low-income persons who live in geographic proximity and (if circumstances warrant) geographically isolated persons who would be similarly affected by a proposed FHWA program, policy, or activity.

As shown in Table 6-6, minority populations made up approximately 8 percent of the total population in the Demographic Area in 2000. By 2010, that percentage had slightly changed to approximately 9 percent. 2010 Census Block data shows the Census Blocks that contain the Preferred Alternative include 5 percent minority, less than the demographic area. Minority concentrations of a greater percentage than this are not in the DCIA and would not be affected. The demographic area (and associated block groups) and the Census Blocks that contain the Preferred Alternative for the 2010 Census are shown in Figure 6-1.

**Table 6-6. 2000 and 2010 Racial and Poverty Characteristics**

	2010 Census Blocks Crossed by Preferred Alternative <sup>1</sup>		Demographic Area <sup>2</sup>		Currituck County		Dare County		North Carolina	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>2000</b>										
Total Population	NA	NA	14,018	100.0	18,190	100.0	29,967	100.0	8,049,313	100.0
White	NA	NA	13,030	93.0	16,445	90.4	28,393	94.7	5,804,656	72.1
Black	NA	NA	687	4.9	1,318	7.2	797	2.7	1,737,545	21.6
Other Racial Minorities	NA	NA	301	2.1	427	2.3	777	2.6	507,112	6.3
Total Minority <sup>3</sup>	NA	NA	1,089	7.8	1,903	10.5	1,939	6.5	2,402,158	29.8
Total Hispanic	NA	NA	187	1.3	261	1.4	666	2.2	378,963	4.7
Persons below Poverty Level	NA	NA	1,248	9.0 <sup>4</sup>	1,922	10.7 <sup>4</sup>	2,381	8.0 <sup>4</sup>	958,667	12.3 <sup>4</sup>
<b>2010</b>										
Total Population	2,264	100.0	16,306	100.0	23,547	100.0	33,920	100.0	9,535,483	100.0
White	2,192	96.8	15,139	92.8	21,268	90.3	31,313	92.3	6,528,950	68.5
Black	16	0.7	654	4.0	1,361	5.8	834	2.5	2,048,628	21.5
Other Racial Minorities	56	2.5	513	3.1	918	3.9	1,773	5.2	957,905	10.0
Total Minority <sup>3</sup>	121	5.3	1,424	8.7	2,671	11.3	3,859	11.4	3,311,488	34.7
Total Hispanic	57	2.5	433	2.7	704	3.0	2,210	6.5	800,120	8.4
Persons below Poverty Level (2005 to 2009)	NA	NA	1,337	7.7 <sup>4</sup>	3,185	9.5 <sup>4</sup>	21,692	14.1 <sup>4</sup>	1,320,816	15.1 <sup>4</sup>

Source: US Bureau of the Census, 2000, 2010; American Community Survey 2005-2009.

<sup>1</sup>Census Blocks that contain the Preferred Alternative consist of 34 Census Blocks (2010), The area they cover is shown in Figure 6-1

<sup>2</sup>Demographic Area is defined as the combination of the US Census block groups for the mainland and the Outer Banks, as shown on Figure 4-1 for 2000 and Figure 6-1 for 2010. Persons below poverty level data was only available at the Census tract level at the time this document was published. Three of four Census Tracts matched the block group boundaries used for the Demographic Area. For one Census Tract, persons below poverty was estimated based on a population ratio of the block group to the Census Tract.

<sup>3</sup>Total minority includes persons other than non-white Hispanic.

<sup>4</sup>Percent of Persons below Poverty Level was calculated using the total population for whom poverty status is determined.



**Figure**  
**6-1**

Field observations and public involvement opportunities did not reveal that any of the communities in the DCIA held concentrations of minorities. Ben Woody, Currituck County Planning Director, indicated in a phone conversation on September 7, 2011 that he was not aware of new concentrations of minorities moving into the area affected by the Preferred Alternative since the preparation of the DEIS.

Communities affected by the detailed study alternatives would benefit from the improvements to existing roads associated with ER2, MCB2, MCB4, and the Preferred Alternative, both in terms of reductions in summer congestion and reduced hurricane evacuation times. MCB2, MCB4, and the Preferred Alternative would introduce a new thoroughfare (the Mid-Currituck Bridge) into the community of Aydlett. Although Aydlett residents could use the bridge, they would not be among the primary beneficiaries of the bridge and, as such, the benefits may be disproportionately low compared to the impacts. However, field studies and public involvement opportunities did not reveal a concentration of minorities within the portion of Aydlett that would be affected. Also, no concentrations of minorities occur where changes in access are proposed.

As shown in Table 6-6, persons below the poverty level made up approximately 9 percent of the total population in the Demographic Area in 2000. In 2010, persons below the poverty level had decreased slightly to approximately 8 percent of the total population in the Demographic Area. Census block groups with persons below the poverty level greater than the Demographic Area average are on the mainland portion of the Demographic Area west of US 158. Like minorities, field observations and public involvement opportunities did not reveal that any of the communities in the DCIA, including Aydlett, held concentrations of low-income households. Ben Woody, Currituck County Planning Director, indicated in a phone conversation on September 7, 2011 that he was not aware of new concentrations of low income households moving into the area affected by the Preferred Alternative since the preparation of the DEIS. Thus, the same impact conclusions presented for minorities would apply to low income households.

Although no concentrations of low income households in the project area would be directly affected by construction of the detailed study alternatives, there are such persons who live in Currituck County. Businesses on the Outer Banks do employ service workers who could come from low-income households on the mainland. Persons from mainland low-income households also may choose to visit the Outer Banks for recreation. These persons currently use the Wright Memorial Bridge to reach the Outer Banks and could continue to do so with any detailed study alternative. Some Outer Banks service workers report for work at pick-up locations on the mainland and are taken in vans by their employers to their work sites.

MCB2, MCB4, and the Preferred Alternative would create a second means of reaching the Outer Banks from mainland Currituck County. It would be tolled. The new bridge

to the Outer Banks could bring service jobs closer to the homes of low income households, reducing travel time, travel distance, and the associated cost. The same would be true for recreational trips. From this perspective, MCB2, MCB4, and the Preferred Alternative would benefit persons from low income households. However, using the bridge would be an additional expense (possibly offsetting distance savings) and electronic toll collection does involve establishing an account and some potential low-income users may not be willing or able to establish an account. The specific payment options have not yet been determined. Persons from low-income households who cannot pay the toll could continue to use the Wright Memorial Bridge, the current route to the Outer Banks. Those that continue to use the Wright Memorial Bridge would benefit from less congestion and improved travel times on those roads because the bridge would divert traffic from those roads.

Thus, there would not be an impact that is disproportionately high and adverse to low income households with the detailed study alternatives. These households would not be directly affected by project construction, would receive project travel benefits and, with MCB2, MCB4, and the Preferred Alternative, could use the new bridge, although they may choose not to use it or to use it less frequently than the Wright Memorial Bridge because of the toll.

There would be no tolls with ER2 and all users would benefit without a direct out-of-pocket cost for their travel.

There are no concentrations in the DCIA of persons not proficient with English, as indicated in Section 5.2. Additionally, 2010 Census data shows that the Hispanic population in the Demographic Area has grown since 2000, but not by a substantial amount. The 2010 Census Blocks crossed by the Preferred Alternative has an Hispanic population of 57. The English proficiency of those 57 is not known. Ben Woody, Currituck County Planning Director, indicated in a phone conversation on September 7, 2011 that he was not aware of new concentrations of persons not proficient with English moving into the area affected by the Preferred Alternative since the preparation of the DEIS.

## 6.10 Recreation Opportunities and Resources

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### 6.10.1 ER2

#### 6.10.1.1 *Currituck County Mainland*

On the Currituck County mainland, there would be no effect to public recreation, including the tennis courts at Currituck County High School, the only Section 6(f) resource in the DCIA and the only recreational facility along US 158.



#### **6.10.1.2 Outer Banks**

On the Outer Banks, the proposed US 158 super-street would result in approximately 50 feet of property along the southern boundary of Kitty Hawk Elementary School being purchased for right of way. This property is between US 158 and the school baseball field. Access to and/or use of the ball field would not be affected. However, the existing septic field between the ball field and US 158 could be affected.

The US 158/NC 12 interchange would change access to the Aycock Brown Welcome Center at Milepost 1.5 on US 158 Bypass. The existing access road would be replaced with similar driveways in roughly the same location. Access to the welcome center would be maintained during project construction.

Potential effects to multi-use paths would be as described in Section 6.6.1.

### **6.10.2 MCB2**

#### **6.10.2.1 Currituck County Mainland**

On the Currituck County mainland, there would be no effect to public recreation, including the tennis courts at Currituck County High School, the only Section 6(f) resource in the DCIA and the only recreational facility along US 158 or the bridge corridor.

#### **6.10.2.2 Outer Banks**

On the Outer Banks, impacts related to the ball field at Kitty Hawk Elementary School would be the same as with ER2. Unlike ER2, however, MCB2 would not affect the access driveways to the Aycock Brown Welcome Center. The existing driveways would connect into the new US 158/NC 12 interchange at their current locations.

Potential effects to multi-use paths along NC 12 would be as described in Section 6.6.1.

With bridge corridor C1, private recreational piers and docks on the Outer Banks near the bridge would not be affected by bridge construction or operation. The nearest two piers and docks are more than 0.5 mile south of the bridge corridor and would not be affected. A pier and dock more than 1 mile north of the bridge is protected by land that juts into the sound between the bridge alignment and the pier. Three private duck blinds in the area would be within 0.25 mile of bridge corridor C1 and would not be able to remain safely in their current location because there would be a risk of accidentally shooting vehicles on the bridge. The Currituck Game Commission, which issues the duck blind permits, would notify the affected blind holders once construction of the bridge is set to begin. The Commission has a number of options in dealing with the affected duck blinds, including moving the blinds, licensing a new location for the blind holder, or, as a last resort, revoking the blind license. All decisions made by the Game Commission can be appealed to district court.

With bridge corridor C2, the bridge alignment would cross over a private pier and dock that contain several buildings. The pier and dock would be displaced. This is the dock where kayaks are launched for the Corolla Marshes from the TimBuck II kayak trail. The remainder of this trail would not be affected. The other two kayak trails in the DCIA would not be affected. Four private duck blinds in the area would be within 0.25 mile of bridge corridor C2 and would not be able to remain safely in their current location because there would be a risk of accidentally shooting vehicles on the bridge.

Except for the launching point for the Corolla Marshes from the TimBuck II trail, recreation activities on the sound are expected to be unaffected by the Mid-Currituck Bridge, which is assumed at this time to be the same height over water and provide the same span as the Wright Memorial Bridge to the south. During construction, however, access to recreation areas near construction sites would be limited to protect the public safety.

### **6.10.3 MCB4**

#### **6.10.3.1 *Currituck County Mainland***

On the Currituck County mainland, impacts would be the same as with MCB2.

#### **6.10.3.2 *Outer Banks***

On the Outer Banks, impacts related to the ball field at Kitty Hawk Elementary School would be similar to ER2. No changes would occur at the Aycock Brown Welcome Center or its access.

Potential effects to multi-use paths along NC 12 would be as described in Section 6.6.1. Impacts related to the Mid-Currituck Bridge and its termini (C1 and C2) would be the same as with MCB2.

### **6.10.4 Preferred Alternative**

#### **6.10.4.1 *Currituck County Mainland***

As with MCB2 and MCB4, on the Currituck County mainland, there would be no effect to public recreation, including the tennis courts at Currituck County High School, the only Section 6(f) resource in the DCIA, and the only recreational facility along US 158 or the bridge corridor.

#### **6.10.4.2 *Outer Banks***

On the Outer Banks, there would be no changes at the ball field for Kitty Hawk Elementary School. In addition, no changes would occur at the Aycock Brown Welcome Center or its access.

Potential effects to multi-use paths along NC 12 would be as described in Section 6.6.1. Recreation activities on the sound are expected to be unaffected by the Mid-Currituck Bridge, which is assumed at this time to be the same height over water and provide the same span as the Wright Memorial Bridge to the south. During construction, however, access to recreation areas near construction sites would be limited to protect public safety.

Three private duck blinds in the area would be within 0.25 mile of the bridge and would not be able to remain safely in their current location because there would be a risk of accidentally shooting vehicles on the bridge. The Currituck Game Commission, which issues the duck blind permits, would notify the affected blind holders once construction of the bridge is set to begin. The Commission has a number of options in dealing with the affected duck blinds, including moving the blinds, licensing a new location for the blind holder, or, as a last resort, revoking the blind license. All decisions made by the Game Commission can be appealed to district court.

## 7.0 CIA Conclusions

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The following conclusions are derived from the analyses conducted for this CIA. These conclusions are presented in a format that shows both the benefits and impacts of each alternative. As shown, there are both benefits and impacts associated with each detailed study alternative (ER2, MCB2, MCB4, and the Preferred Alternative). There would be no impacts, but no benefits to be derived from maintaining the status quo (No-Build Alternative).

### 7.1 ER2

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#### 7.1.1 Benefits

- On Outer Banks, multi-use paths along US 158 and NC 12 would be retained, replaced, or allowed for in project design.
- Crosswalks would be replaced and, as necessary, added at locations where multi-use paths cross from one side of NC 12 to the other.
- The year 2035 hurricane clearance time would be 21.8 hours (compared to 36.3 hours with the No-Build Alternative) with a third outbound evacuation lane and 27.4 hours with using the center turn lane for outbound travel during a hurricane evacuation. These times compare to the North Carolina Standard of 18 hours.

#### 7.1.2 Impacts

- Inconsistent with the *North Carolina Strategic Highway Corridor and Intrastate System*, as this alternative does not improve the system efficiency of the 41-mile transportation system evaluated.
- Inconsistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), which recommends:
  - Mid-Currituck Bridge and widening along US 158. However, the improvement of US 158 is not defined as a part of the Mid-Currituck Bridge project in the STIP and could be built as part of a future project.
  - Widening NC 12 to four lanes northward between the Dare/Currituck County line and Mid-Currituck Bridge. This is done where the existing right-of-way is 100 feet wide, but not in areas where the existing right-of-way is 60 feet wide. Where the existing right-of-way is 60 feet wide, widening to three lanes is proposed to reduce impacts to surrounding land uses.

- Inconsistent with Southern Shores proposal for Mid-Currituck Bridge.
- Inconsistent with the Town of Duck policy and objective to maintain NC 12 in its existing configuration.
- On the Outer Banks, the US 158 super-street could reduce parking at the Home Depot about 10 percent, resulting in a non-conforming (does not meet current requirements) ratio of parking/retail space.
- A super-street and associated interchange east of the Wright Memorial Bridge would be introduced into the views of businesses along US 158, pedestrians and bicyclists on multi-use paths, and users of US 158.
- Four streets would be closed to through traffic on NC 12: Widgeon Drive, Wood Duck Drive, Canvas Back Drive, and Old Squaw Road.

## 7.2 MCB2

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### 7.2.1 Benefits

- Consistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), which recommends a Mid-Currituck Bridge.
- On the Outer Banks, multi-use paths along US 158 and NC 12 would be retained, replaced to NCDOT standards, or allowed for in project design.
- Crosswalks would be replaced and, as necessary, added at locations where multi-use paths cross from one side of NC 12 to the other.
- The year 2035 hurricane clearance time would be 21.8 hours (compared to 36.3 hours with the No-Build Alternative) with a third outbound evacuation lane and 27.4 hours using the center turn lane for outbound travel during a hurricane evacuation. These times compare to the North Carolina Standard of 18 hours.

### 7.2.2 Impacts

- Inconsistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), which recommends:
  - Widening US 158 to six lanes between NC 168/US 158 and the bridge approach corridor. However, the improvement of US 158 is not defined as part of the Mid-Currituck Bridge project in the STIP and could be built as part of a future project.

- Widening NC 12 to four lanes northward between the Dare/Currituck County line and Mid-Currituck Bridge. This is done where the existing right-of-way is 100 feet wide, but not in areas where the existing right-of-way is 60 feet wide. Where the existing right-of-way is 60 feet wide, widening to three lanes is proposed to reduce impacts to surrounding land uses. However, the improvement of NC 12 is not defined as part of the Mid-Currituck Bridge project in the STIP and additional widening could be built as part of a future project.
- Inconsistent with the *Currituck County Land Use Plan*, as the western bridge approach would pass through a Conservation Area (Maple Swamp), and the US 158/Mid-Currituck Bridge interchange would be in a Limited Service Area.
- Inconsistent with the Town of Duck policy and objective to maintain NC 12 in its existing configuration.
- On the Currituck County mainland, the existing landscape would be substantially changed with the introduction of the US 158/Mid-Currituck Bridge interchange. Existing features would be lost, and new man-made vertical elements would be introduced. Homes and businesses in this area would be relocated. One home close to Aydlett Road would remain, and the US 158 interchange would be a notable presence and an adverse change at this home. Views from homes with views of the sound from the Currituck County mainland and Outer Banks would be affected. This adverse change would be greatest for homes near the bridge, which would be a dominant presence.
- With MCB2/B, a toll plaza would be built in Aydlett, and the local street network in Aydlett would be altered. (This would not be the case with MCB2/A.) Citizens in attendance at the October 2009 meeting with representatives of the Aydlett community expressed concern about the potential impacts of these changes on their way of life. Concerns included the presence of night-time lighting at the toll plaza and the possibility that drivers could change their minds about using the bridge just before the toll plaza, particularly during periods of high traffic congestion (such as from a crash on the approach road or the bridge), and use roads in the Aydlett community to return to US 158. In addition, there was concern that, with Option B, at times of high traffic congestion, emergency vehicles coming from Waterlily to Aydlett and returning to the hospital would be slowed.
- On the Outer Banks, the US 158 super-street could reduce parking at the Home Depot about 10 percent, resulting in a non-conforming (does not meet current requirements) ratio of parking/retail space.
- A super-street and associated interchange east of the Wright Memorial Bridge would be introduced into the views of businesses along US 158, pedestrians and bicyclists on multi-use paths, and users of US 158.

- Access to and from business properties and the Regional Medical Center would be changed. Direct access to and from US 158 would be removed in the US 158/NC 12 interchange area.
- Four streets would be closed to through traffic on NC 12: Widgeon Drive, Wood Duck Drive, Canvas Back Drive, and Old Squaw Road.
- Bridge corridor C1:
  - The bridge would take three residential lots and physically divide the Corolla Bay subdivision.
  - A total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monteray Drive.
  - The bridge would be introduced to panoramic views of Currituck Sound at the planned subdivision of Corolla Bay and at Monteray Shores, resulting in adverse visual changes.
  - Left turns across NC 12 from seven commercial driveways near Albacore Street would be restricted; five would be right-in/right-out only, and two would be right-in/right-out and left-in. None of the seven driveways would maintain their current left-out turns across NC 12.
  - NC 12 would be realigned, and the intersection that connects NC 12 to the north end of North Harbor View Drive would be closed.
- Bridge corridor C2:
  - The TimBuck II shops would lose some of their parking area.
  - There would be no left-turn across NC 12 from the TimBuck II driveways.
  - A viewing platform/dock with buildings on Currituck Sound associated with the TimBuck II commercial area would be displaced. Views of natural vegetation and the sound from a TimBuck II outdoor recreation area would be replaced by views of the bridge. These changes would result in an adverse visual change.
  - The displaced platform/dock is where the kayaks are launched for the Corolla Marshes from the TimBuck II kayak trail. The remainder of this trail would not be affected.

## 7.3 MCB4

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### 7.3.1 Benefits

- Consistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), which recommends a Mid-Currituck Bridge.
- On the Outer Banks, multi-use paths along US 158 and NC 12 either would be unaffected, retained, replaced to NCDOT standards, or allowed for in project design.
- The year 2035 hurricane clearance time would be 21.8 hours (compared to 36.3 hours with the No-Build Alternative) with a third outbound evacuation lane and 27.4 hours with using the center turn lane for outbound travel during a hurricane evacuation. These times compare to the North Carolina Standard of 18 hours.

### 7.3.2 Impacts

- Inconsistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), which recommends:
  - Widening US 158 to six lanes between NC 168/US 158 and the bridge approach corridor. However, the improvement of US 158 is not defined as part of the Mid-Currituck Bridge project in the STIP and could be built as part of a future project.
  - Widening NC 12 to four lanes northward between the Dare/Currituck County line and Mid-Currituck Bridge. This is done where the existing right-of-way is 100 feet wide, but not in areas where the existing right-of-way is 60 feet wide. Where the existing right-of-way is 60 feet wide, widening to three lanes is proposed to reduce impacts to surrounding land uses. However, the improvement of NC 12 is not defined as part of the Mid-Currituck Bridge project in the STIP and additional widening could be built as part of a future project.
- Inconsistent with the *Currituck County Land Use Plan*, as the western bridge approach would be in a Conservation Area (Maple Swamp), and the US 158/Mid-Currituck Bridge interchange would be in a Limited Service Area.
- On the Currituck County mainland, the existing landscape would be substantially changed with the introduction of the US 158/Mid-Currituck Bridge interchange. Existing features would be lost, and new man-made vertical elements would be introduced. Homes and businesses in this area would be relocated. One home close to Aydlott Road would remain, and the US 158 interchange would be a notable presence and an adverse change at this home. Views from homes with views of the sound from the Currituck County mainland and Outer Banks would be affected.



This adverse change would be greatest for homes near the bridge, which would be a dominant presence.

- With MCB4/B, a toll plaza would be built in Aydlett, and the local street network in Aydlett would be altered. (This would not be the case with MCB4/A). Citizens in attendance at the October 2009 meeting with representatives of the Aydlett community expressed concern about the potential impacts of these changes on their way of life. Concerns included the presence of night-time lighting at the toll plaza and the possibility that drivers could change their minds about using the bridge just before the toll plaza, particularly during periods of high traffic congestion (such as from a crash on the approach road or the bridge) and use roads in the Aydlett community to return to US 158. In addition, there was concern that, with Option B, at times of high traffic congestion, emergency vehicles coming from Waterlily to Aydlett and returning to the hospital would be slowed.
- Bridge corridor C1:
  - The bridge would take three residential lots and physically divide the Corolla Bay subdivision.
  - A total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monteray Drive.
  - The bridge would be introduced to panoramic views of Currituck Sound at the planned subdivision of Corolla Bay and at Monteray Shores, resulting in adverse visual changes.
  - Left turns across NC 12 from seven commercial driveways near Albacore Street would be restricted; five would be right-in/right-out only, and two would be right-in/right-out and left-in. None of the seven driveways would maintain the current left-out turns across NC 12.
  - NC 12 would be realigned, and the intersection that connects NC 12 to the north end of North Harbor View Drive would be closed.
- Bridge corridor C2:
  - The TimBuck II shops would lose some of their parking area.
  - There would be no left-turn across NC 12 from the TimBuck II driveways.
  - A viewing platform/dock, with buildings on Currituck Sound associated with the TimBuck II commercial area would be displaced. Views of the natural vegetation and the sound from a TimBuck II outdoor recreation area would be replaced by views of the bridge. These changes would result in an adverse visual change.

- The displaced platform/dock is where the kayaks are launched for the Corolla Marshes from the TimBuck II kayak trail. The remainder of this trail would not be affected.

## 7.4 Preferred Alternative

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### 7.4.1 Benefits

- Consistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), which recommends a Mid-Currituck Bridge.
- On the Outer Banks, multi-use paths along US 158 and NC 12 either would be unaffected, retained, replaced to NCDOT standards, or allowed for in project design.
- The year 2035 hurricane clearance time would be 27.4 hours (compared to 36.3 hours with the No-Build Alternative) with use of the US 158 center turn lane for outbound travel during a hurricane evacuation. This time compares to the North Carolina Standard of 18 hours.

### 7.4.2 Impacts

- The Preferred Alternative is inconsistent with the *Thoroughfare Plan for Currituck County* (NCDOT, 1999), as it does not include the following recommendations:
  - Widening US 158 to six lanes between NC 168/US 158 and the bridge approach corridor. However, the improvement of US 158 is not defined as part of the Mid-Currituck Bridge project in the STIP and could be built as part of a future project.
  - Widening NC 12 to four lanes, northward between the Dare/Currituck County line and Mid-Currituck Bridge. Widening to four lanes would occur in three locations: the bridge terminus area, the Albacore Street area, and the Currituck Clubhouse Drive area. However, the improvement of NC 12 is not defined as part of the Mid-Currituck Bridge project in the STIP and additional widening could be built as part of a future project.
- Inconsistent with the *Currituck County Land Use Plan*, as the western bridge approach would be in a Conservation Area (Maple Swamp). Design Option A (included in the Preferred Alternative) would bridge Maple Swamp, minimizing potential impacts. It is impossible to build a Mid-Currituck Bridge without passing through Maple Swamp.
- Inconsistent with the *Currituck County Land Use Plan*, that the US 158/Mid-Currituck Bridge interchange would be in a Limited Service Area. However, the Currituck County land use plan states that its goals include expansion of the county's

economic base. According to the *Economic Development Strategy Vision Plan for Currituck County*, Final Report (UNC, 2008), future development could include retail, restaurants, service businesses, and a hotel between US 158 and the Currituck Sound. The Currituck County land use plan identifies this area as Limited Service, to provide for primarily residential development at low densities and conservation. In order to be consistent with the land use plan, the vision plan recommends that bridge-related development be clustered in the area of the US 158/Mid-Currituck Bridge interchange.

- On the Currituck County mainland, the existing landscape would be substantially changed with the introduction of the US 158/Mid-Currituck Bridge interchange. Existing features (farmland and rural development) would be lost, and new man-made vertical elements would be introduced. Homes and businesses in this area would be relocated. One home close to Aydlett Road would remain, and the US 158 interchange would be a notable presence and an adverse change at this home. Views from homes with views of the sound from the Currituck County mainland and Outer Banks would be affected. This adverse change would be greatest for homes near the bridge, which would be a dominant presence.
- The bridge would be introduced to panoramic views of Currituck Sound from adjoining subdivisions, resulting in an adverse visual change.
- A total of 129 parking spaces would be displaced from six businesses between Albacore Street and Monteray Drive.
- One lot taken and seven lots reduced in size from an undeveloped subdivision on North Harbor View Drive. If the reduction in area of the seven lots precludes their development, they would be purchased in their entirety.
- Left turns across NC 12 from seven commercial driveways near Albacore Street would be restricted; five would be right-in/right-out only, and two would be right-in/right-out and left-in. None of the seven driveways would maintain the current left-out turns across NC 12.
- The access road that connects NC 12 to the north end of North Harbor View Drive would be relocated.

## 8.0 Mitigation, Enhancement, and Recommendations

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The following measures would serve to mitigate key impacts of the Preferred Alternative or would be included as enhancement measures in the project design. Not all impacts are included, only those for which mitigation is proposed. However, means to minimize impacts would be pursued during final design of the Preferred Alternative. Further, impacts can be perceived by some as beneficial consequences, while others can see the same impacts as detrimental. For example, with the Preferred Alternative, the US 158/Mid-Currituck Bridge interchange would alter the character of the interchange area from rural to commercial. Although this would be consistent with the Currituck County land use plan and seen by some as economic opportunity for the county, others would lament development within this rural area. As a result, not all impacts are considered key impacts, and not all impacts are addressed for mitigation. Mitigation measures for the Preferred Alternative would include:

- Visual
  - Much of the visual change associated with the Preferred Alternative cannot be substantially mitigated because the change is associated with the introduction of wider pavement, new drainage features, and bridge- and interchange-related structures and fills. Their presence and the associated visual changes cannot be hidden. As a part of final design for the Preferred Alternative, a landscaping plan would be developed. Sensitivity to visual context would be considered in structure design for the bridge, interchange, and approach road.
- Relocations
  - It is the policy of NCDOT and NCTA to ensure that comparable replacement housing or business location is available prior to the construction of state and federally-assisted projects. The three-part relocation program, which would be implemented for the Preferred Alternative, would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (Public Law 91-646) and the North Carolina Relocation Assistance Act (GS-133-5 through 133-18).
  - The Relocation Assistance Program provides information such as availability and prices of homes, apartments, or businesses for sale or rent and financing or other housing programs. The Relocation Moving Payments Program provides for payment of actual relocation moving expenses.
  - Where displacement requires an owner or tenant to purchase or rent property of higher cost or to lose a favorable financing arrangement, the Relocation

Replacement Housing Payments or Rent Supplement Program compensates up to \$22,500 to qualifying owners and up to \$5,250 to qualifying tenants.

These measures are described in greater detail in Section 6.2.3.

- Access
  - Access would be retained to all properties or they would be purchased from their owners. The latter would occur only on the mainland on the west side of US 158 and north of Aydlett Road with the Preferred Alternative.
  - At locations on NC 12 where the median of the four-lane road would prevent left turns from NC 12 to a street, provisions would be made in the median's design for emergency vehicles to cross the median. Therefore, emergency response time would not be affected as a result of the project on the Outer Banks.
- Parking Loss
  - Opportunities to reduce further parking loss would be considered during final design.

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# *Appendix A*

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## **Relocation Reports**

## **A. Relocation Reports**

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Relocation Report for ER2, MCB2 (with Option A), and MCB4 (with Option A) .....	A-2
Relocation Report for MCB2 and MCB4 Option B Mainland Approach Road.....	A-47

***Relocation***  
***Study***  
***Mid-Currituck Bridge Project***

**Prepared for:**



**Prepared by:**



**and**



**February 4, 2010**

## **SECTION 1        RELOCATION STUDY**

The Mid-Currituck Bridge Study provides five alternates for bridge and road construction, including ER2, MCB2 with C1, MCB2 with C2, MCB4 with C1, and MCB4 with C2. This report will discuss the existing conditions of the area impacted by this road and/or bridge construction as well as discussing the impacts and environmental consequences of each alternate. Each alternate was analyzed to determine how it would affect existing private and public properties, businesses, and persons residing in the project area. This includes impacts to outdoor advertising signs and gravesites.

All land necessary for transportation improvements must be purchased from existing property owners in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (URA). The URA contains specific requirements that govern the manner in which a governmental entity acquires property for public use. The purpose of the URA includes providing a uniform policy for fair and equitable treatment of persons and businesses displaced as a result of federal and federally assisted programs.

This study will be divided into the following eleven segments.

- A. US 158 6-lane – Dare County
- B. US 158 8-lane – Dare County
- C. NC 12 3-lane – Dare County
- D. NC 12 4-lane – Currituck County
- E. Outer Banks Bridge Approach and C2 Terminus South (Albacore Street) – Currituck County
- F. Outer Banks Bridge Approach and C1 Terminus North – Currituck County
- G. Mainland Bridge Approach, Interchange and Frontage Roads North (common for C1 and C2 Mid-Currituck Bridge corridors) – Currituck County
- H. Access frontage roads along US 158 – Currituck County
- I. US 158 Hurricane Lane (Wright Memorial Bridge to Mid-Currituck Bridge) – Currituck County
- J. US 158 Hurricane Lane (Mid-Currituck Bridge to NC 168) – Currituck County
- K. US 158 Hurricane Lane (NC 12 to Wright Memorial Bridge) – Dare County

Using a combination of these eleven segments, the total number of relocations for each of the five alternates will be provided.

### **1.1    Current Conditions**

The proposed alternates are located in Dare County as well as on both the mainland and Outer Banks of Currituck County. The largest of the alternatives, ER2, begins in Corolla on the Outer Banks. The project follows a southerly direction from Currituck County until it reaches the Dare County line. From there, the project continues in a southerly direction until reaching Kitty Hawk where it veers west ending at the Wright Memorial Bridge.

The mainland portion of the project begins at the Wright Memorial Bridge in Currituck County and continues in a northwestern direction, over the Mid-Currituck Bridge, concluding at NC 168.

There are two locations for the bridge options on the Outer Banks. Corridor C1 is located in the Albacore Street area while C2 is approximately two miles north of Albacore. Both C1 and C2 share a single approach corridor on the mainland, which parallels an existing power line easement north of Aydlett Road.

### **1.1.1 Affected Environment**

Existing land use in the project area includes a mix of residential, commercial, industrial, special use, and governmental. The Outer Banks project area is primarily residential, with the residences being large beach homes used for seasonal rentals. During the off-season, most of these homes are vacant. Most affected commercial properties on the Outer Banks are businesses associated with tourism.

The mainland portion has a wider variety of land uses. This area includes owner-occupied residences, tenant-occupied mobile home parks, and commercial properties ranging from kayak rentals to pool sales, numerous outdoor advertising signs, churches, and several gravesites.

### **1.1.2 Demographics**

The project area includes a large portion of Currituck County as well as Census Tract 9701 of Dare County. The demographic information in this report was obtained from the 2000 US Census Data website. This demographic study will include population, households, income, employment, and economics for the State of North Carolina, Currituck County, and Census Tract 9701 of Dare County.

#### **1.1.2.1 Population.**

While the growth rate throughout the state of North Carolina has increased steadily since 1990, Currituck County and the portion of Dare County affected by the project have both grown tremendously since 1990, with the populations increasing by 32.42% and 50.75% respectively. This far exceeds the growth of the State of North Carolina, which is only 21.43%.

**Table 1-1  
Population Comparison of 1990 & 2000 Census**

	<b>State of North Carolina</b>	<b>Currituck County</b>	<b>Dare County - Census Tract 9701</b>
Total Population – 1990 Census	6,628,637	13,736	4,023
Total Population – 2000 Census	8,049,313	18,190	6,065
Growth %	21.43%	32.42%	50.75%



Table 1-2 indicates that the racial composition of all groups is predominantly white, although the percentage of white population is much higher in both counties than the state of North Carolina as a whole.

**Table 1-2**  
**Population by Race and Gender**

State of North Carolina			Currituck County		Dare County – Census Tract 9701	
Race	Number	%	Number	%	Number	%
White	5,804,656	72.1	16,445	90.4	5,953	98.2
Black	1,737,545	21.6	1,318	7.2	27	0.4
Other	507,112	6.2	427	2.4	85	1.3
Gender	Number	%	Number	%	Number	%
Male	3,942,695	49	9,032	49.7	3,029	49.9
Female	4,106,618	51	9,158	50.3	3,036	50.1

Table 1-3 provides information on the age of the population. North Carolina and Currituck County are very similar with regards to age. Dare County, however, has a substantially older population, reflecting a larger concentration of retired persons.

**Table 1-3**  
**Age Breakdown and Median Age**

Under 5		5-19		20-64		65+		Median Age
	#	%	#	%	#	%	#	%
NC	539,509	6.7	1,653,851	20.5	4,886,905	60.8	969,048	12
Currituck	1,101	6.1	3,874	21.3	11,029	60.8	2,186	12
Dare (9701)	296	4.9	1,011	16.7	3,649	60.2	1,109	18.2

**1.1.2.2 Households.** The breakdown of housing units differs immensely from the State to Currituck and Dare Counties. This is consistent with the abundance of housing units available for short-term rent in both counties. Since Currituck County includes the mainland and the coastal area, its vacancies due to recreational and seasonal rentals consists of 87% of all vacancies. Dare County Census Tract 9701, on the other hand, is entirely on the Outer Banks and its vacancies due to recreational and season rentals are higher, consisting of 97% of all vacancies.

**Table 1-4  
Households**

	<b>State of North Carolina</b>		<b>Currituck County</b>		<b>Dare County – Census Tract 9701</b>	
	<b>Housing Units</b>	<b>%</b>	<b>Housing Units</b>	<b>%</b>	<b>Housing Units</b>	<b>%</b>
TOTAL	3,523,944	100	10,687	100	6,846	100
Occupied	3,132,013	88.9	6,902	64.6	2,590	37.8
Vacant	391,931	11.1	3,785	35.4	4,256	62.2
Recreational or Seasonal Rental or Use	134, 870	3.8	3,297	30.9	4,158	60.7
Owner Occupied	2,172,355	69.4	5,630	81.6	2,168	83.7
Renter Occupied	959,658	30.6	1,272	18.4	422	16.3

The median monthly mortgage and rental rates are higher for both Currituck County and Dare County Census Tract 9701, with the Census Tract having the highest rates.

**Table 1-5  
Median Mortgage and Rental Rates**

<b>Area</b>	<b>Median Monthly Mortgage Rate</b>	<b>Median Monthly Rental Rate</b>
State of North Carolina	\$985	\$548
Currituck County	\$1,028	\$590
Dare County (Census Tract 9701)	\$1,329	\$730

### **1.1.2.3 Income**

The median family income and families below poverty level are nearly identical between the State of North Carolina and Currituck County. Dare County, however, has a much higher median family income at \$59,583, and a much lower percentage of families living below poverty level, at 2.9%.

**Table 1-6  
Median Household Income and Poverty Levels**

<b>Area</b>	<b>Median Family Income in 1999</b>	<b>Families Below Poverty Level (%)</b>
State of North Carolina	\$46,355	9%
Currituck County	\$46,382	8.9%
Dare County (Census Tract 9701)	\$59,583	2.9%

#### 1.1.2.4 Employment

Construction makes up the highest percentage of the work force in both Currituck County and Dare County Census Tract 9701. This correlates with the increases in population in both areas. Retail trade, realty services and recreation/accommodation/food services also are major industries in the Currituck County and Dare County Census Tract 9701 areas. These four industries, all associated with tourism, encompass 45.6% of the industry in Currituck County and 54.5% of the industry in Dare County Census Tract 9701.

**Table 1-7**  
**Labor Force Percentages**

<b>Industry</b>	<b>State of North Carolina</b>	<b>Currituck County</b>	<b>Dare County - Census Tract 9701</b>
Agricultural/Forestry/Mining	1.6%	2.9%	1.8%
Construction	8.2%	16.7%	16.4%
Manufacturing	19.7%	6.8%	3.3%
Wholesale Trade	3.4%	4.1%	2%
Retail Trade	11.5%	13.9%	13.1%
Transportation/Warehousing	4.6%	4.7%	2.7%
Information	2.3%	1.9%	2.6%
Finance/Insurance/Realty	6.0%	6.0%	12.9%
Professional/Mgmt/Admin	7.7%	5.7%	10.4%
Educational/Health/Social	19.2%	14.8%	12.9%
Recreation/Food/Accommodation	6.9%	9.0%	12.1%
Other Services	4.6%	5.3%	4.7%
Public Administration	4.1%	8.2%	5.2%

## 1.2 Relocation Impacts

Potential relocation impacts will be required for many of the individual segments associated with the project as well as each of the alternatives. Relocation impacts include residential, business, outdoor advertising, and gravesites. Housing and commercial opportunities appear readily available within the vicinity of the proposed project.

Very few sites that provide services to the immediate neighborhood, such as convenience stores, banks, restaurants, gas stations, and shopping centers, would require relocation. Therefore, it can be assumed that the services necessary to support an existing neighborhood will remain available.

### 1.2.1 Relocations per Segment

To summarize the relocation effects, Table 1-8 identifies the number and type of displacements identified for each segment.

**Table 1-8  
Relocation by Segment**

Alternate	Property Type			
	Residential Relocations	Business Relocations	Outdoor Advertising Sign Relocation	Gravesite Relocations
US 158 6-Lane	0	0	0	0
US 158 8-Lane	0	2	0	0
NC 12 3-Lane	1	0	0	0
NC 12 4-Lane	0	0	0	0
Outer Banks C2 South	0	1	0	0
Outer Banks C1 North	0	0	0	0
Mainland C1 & C2	5	3	3	20
Frontage Roads US 158	0	0	0	0
US 158 Hurricane (Wright Mem Br to Mid-Curr Br)	5	1	26	50
US 158 Hurricane (Mid-Curr Br to NC 168	0	2	3	16
US 158 Hurricane (NC 12 to Wright Mem Br)	0	0	0	0

In addition to these potential relocation impacts, several secondary structures such as sheds and garages on properties are affected. In general, parcels where these structures are impacted are large enough to allow for relocating or rebuilding these structures elsewhere on the property.

There are also three properties impacted which will likely require the relocation of underground storage tanks.

Finally, there are several seasonal rental homes that are impacted. However, because they are currently vacant and appear to be rented on a weekly basis, they are not considered residential relocations in this report. These residences, along with the underground storage tanks, will be discussed in more detail in the applicable segment description below.

#### 1.2.1.1 US 158 8-Lane

This section of roadway is located in Dare County and is primarily commercial. Properties in this area include car dealerships, restaurants, strip shopping centers, and office spaces. There are two displaced businesses, one being a banner/flag retail sales shop and the other being a sports equipment sales shop. The business owners appear to

be leasing the space. Several comparable spaces for lease were noted within a 5-mile radius of the property. Local realty companies also had comparable spaces for sale or lease. Considering these factors, it appears that adequate replacement sites will be available to the tenant.

#### **1.2.1.2 NC 12 3-Lane**

This section of roadway is located on the Outer Banks in Dare County. Housing on this stretch of roadway includes consists of large and expensive short-term vacation rental properties. The residential relocation associated with this segment involves one of a few homes in the area leased to a long-term tenant. The home is smaller and older than most in the immediate vicinity. Long-term rentals in this area will be difficult to find and Last Resort Housing could potentially be required.

In addition to the occupied rental property, there are ten single family residences being acquired. Most are currently vacant, and all appear to be weekly seasonal rentals. Since they are currently unoccupied and will likely not be rented to a long-term tenant, they are considered personal property moves only.

#### **1.2.1.3 Outer Banks Bridge Approach & C2 Terminus**

This section of the project is the approach for the new bridge. This area is common for MCB2 C2 & MCB4 C2. The relocation involved with this section concerns a dock. The dock is related to a business located within the TimBuck 11 shopping area. The dock is used for water sport rentals, Kitty Hawk Water Sports. If this alternate is chosen, it would need to be decided if the dock could remain under the bridge or possibly relocated to another area. If the dock remains or can be relocated, then it would eliminate this as a relocation parcel. This will need to be studied further once the decision is made.

#### **1.2.1.4 Mainland Bridge Approach, Interchange and Frontage Roads North (common for C1 and C2 mid-Currituck Bridge Corridors)**

This section of road is located in the Coinjock community of Currituck County. Relocations in this segment include three businesses, one of which likely has an underground storage tank. Also displaced are five owner-occupied residences. There is another home being acquired, but it appears to be vacant and uninhabitable. There are also three outdoor advertising signs which will be displaced. Finally, there is a plot of approximately 20 graves that will be impacted by the acquisition.

Based on an intensive review of the area as well as conversations with several realtors, sufficient comparable housing and commercial properties are available to the displaced individuals.

#### **1.2.1.5 US 158 Hurricane Lane (Wright Memorial Bridge to Mid-Currituck Bridge)**

This section of roadway is located in Currituck County, encompassing the area from the Wright Memorial Bridge to the Mid-Currituck Bridge. The acquisition within this area involves temporary easements. The parcels identified as relocations were considered based on the location of the construction limits as shown on the plans provided.

There are 5 residential relocations in this segment, including 2 owner-occupied properties and 3 tenant-occupied properties.

Regarding the owner-occupied residences, there are numerous comparable houses for sale in the area and locating replacement housing should not be an issue.

One business is affected in this segment, a dentist office. Local realtors have comparable replacement facilities available and there should be no adverse conditions in locating a new facility for sale or rent.

There are approximately five cemeteries impacted on this segment. With the exception of the approximately 14 graves located at the Pleasant Branch Baptist Church, the remaining gravesites are located on individually-owned properties. Within the five cemetery plots, there are approximately 50 that appear to be impacted by the temporary easement.

Likewise, there are approximately 26 outdoor advertising signs located in the temporary easement area. Depending on the purpose of the easement, these may not be impacted.

#### **1.2.1.6 US 158 Hurricane Lane (Mid-Currituck Bridge to NC 168)**

There does not appear to be any residential relocation along this alternate. There are two businesses being impacted. One appears to be a retail outlet for the sale of fireworks. This may be a seasonal business. The second business is a small auto mechanic shop. There are potentially three outdoor advertising signs located in the permanent easement area. There are also three small cemeteries with a total of approximately sixteen gravesites which may be affected.

### **1.2.2 Relocations per Alternate**

The five potential Mid-Currituck Bridge Alternatives include ER2, MCB2 with C1, MCB2 with C2, MCB4 with C1, and MCB4 with C2. Each of these alternatives includes a combination of the above segments. The tables below provide total potential relocations for each of the options.

#### **1.2.2.1 Alternative ER2**

This alternative involves the greatest number of relocations, including approximately 50 gravesites. However, much of this portion of the project involves permanent easement and it is possible that some of the structures could remain in place, dependent upon the function of the easement.

The residential relocations on this alternative will likely require last resort housing. This assumption is made after a visual inspection revealed that many of the structures are old dwellings which appear to be poorly maintained. Additionally, income will likely be a factor in determining the rental supplement, also requiring the use of last resort housing.

**Table 1-9  
Alternative ER2  
Relocations**

Alternate	Property Type			
	Residential Relocations	Business Relocations	Outdoor Advertising Sign Relocation	Gravesite Relocations
US 158 6-Lane	0	0	0	0
US 158 8-Lane	0	2	0	0
NC 12 3-Lane	1	0	0	0
NC 12 4-Lane	0	0	0	0
US 158 Hurricane (Wright Mem Br to Mid-Curr Br)	5	1	26	50
US 158 Hurricane (Mid-Curr Br to NC 168)	0	2	3	16
TOTALS	6	5	29	66

#### **1.2.2.2 Alternative MCB2 with C1 Bridge Alternative**

This alternative involves the fewest number of total relocations, with only six residential relocations, seven business relocations, and six outdoor advertising signs. The major impacts involved with this alternative are the approximate 36 gravesites. Although the 16 listed in the US 158 Hurricane (Mid-Currituck Bridge to NC 168) are located within the temporary easement area, the 20 located in the Mainland C1 & C2 segment are on property acquired by fee simple. These are the only gravesites in any of the alternates acquired by fee simple rather than temporary easement.

There are additionally ten weekly rentals that are impacted with this alternative. Though they are not considered residential relocations, there would be personal property moving costs associated with these parcels.

**Table 1-10**  
**Alternative MCB2 with C1 Bridge Alternative**  
**Relocations**

Alternate	Property Type			
	Residential Relocations	Business Relocations	Outdoor Advertising Sign Relocation	Gravesite Relocations
US 158 6-Lane	0	0	0	0
US 158 8-Lane	0	2	0	0
NC 12 3-Lane	1	0	0	0
NC 12 4-Lane	0	0	0	0
Outer Banks C1 North	0	0	0	0
Mainland C1 & C2	5	3	3	20
Frontage Roads US 158	0	0	0	0
US 158 Hurricane (Mid-Curr Br to NC 168	0	2	3	16
TOTALS	6	7	6	36

### 1.2.2.3 Alternative MCB2 with C2 Bridge Alternative

The only variance to this alternative from the alternative discussed in 1.2.2.2 involves the bridge construction on the Outer Banks portion of the project, which includes one relocation.

**Table 1-11**  
**Alternative MCB2 with C2 Bridge Alternative**  
**Relocations**

Alternate	Property Type			
	Residential Relocations	Business Relocations	Outdoor Advertising Sign Relocation	Gravesite Relocations
US 158 6-Lane	0	0	0	0
US 158 8-Lane	0	2	0	0
NC 12 3-Lane	1	0	0	0
NC 12 4-Lane	0	0	0	0
Outer Banks C2 South	0	1	0	0
Mainland C1 & C2	5	3	3	20
Frontage Roads US 158	0	0	0	0
US 158 Hurricane (Mid-Curr Br to NC 168	0	2	3	16
TOTALS	6	8	6	36



#### 1.2.2.4 Alternative MCB4 with C1 Bridge Alternative

This alternate involves the fewest number of residential relocations. The affected properties are owner-occupied. Comparable housing is readily available. There are five business relocations in this alternative, one of which likely includes an underground storage tank. There are also numerous gravesites impacted by this alternative.

**Table 1-12**  
**Alternative MCB4 with C1 Bridge Alternative**  
**Relocations**

Alternate	Property Type			
	Residential Relocations	Business Relocations	Outdoor Advertising Sign Relocation	Gravesite Relocations
Outer Banks C1 North	0	0	0	0
Mainland C1 & C2	5	3	3	20
Frontage Roads US 158	0	0	0	0
US 158 Hurricane (Mid-Curr Br to NC 168	0	2	3	16
US 158 Hurricane (NC 12 to Wright Mem Br)	0	0	0	0
TOTALS	5	5	6	36

#### 1.2.2.5 Alternative MCB4 with C2 Bridge Alternative

The only variance to this alternative from the alternative discussed in 1.2.2.4 involves the bridge construction on the Outer Banks portion of the project, which includes one relocation.

**Table 1-13**  
**Alternative MCB4 with C2 Bridge Alternative**  
**Relocations**

Alternate	Property Type			
	Residential Relocations	Business Relocations	Outdoor Advertising Sign Relocation	Gravesite Relocations
Outer Banks C2 South	0	1	0	0
Mainland C1 & C2	5	3	3	20
Frontage Roads US 158	0	0	0	0
US 158 Hurricane (Mid-Curr Br to NC 168	0	2	3	16
US 158 Hurricane (NC 12 to Wright Mem Br)	0	0	0	0
TOTALS	5	6	6	36

### **1.2.2.6 Summary**

Alternative ER2 involves the greatest number of residential relocations with a high probability for the use of Last Resort Housing. It also has the highest number of business relocations as well as impacts to underground tanks. Finally, it has the largest number of outdoor advertising sign and gravesite relocations.

The other four options involve fewer relocations, with MCB4 with C1, having a total of 52 relocations, and MCB4 with C2 having a total of 53 relocations each of which includes 36 gravesites.

MCB2 with C1 has a total of 55 relocations and MCB2 with C2 has a total of 56 relocations, each of which includes 36 gravesites. Although these two options have the fewest relocations, they do have the personal property moves associated with the ten weekly rentals along the NC 12 3-lane segment.

## **1.3 Relocation Assistance**

A thorough review of the subject area has been completed to ensure adequate replacement housing is available for all potential residential relocations. In order to minimize the unavoidable effects of Right of Way acquisition and displacement of individuals and businesses, all relocation parcels will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). Relocation services and payments are provided without regard to race, color, religion, sex, or national origin.

Advance notification to owners of properties containing impending right of way acquisition is required. Before acquiring right of way, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights.

No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date. For residential relocations, this notice cannot be provided until a written offer to acquire the subject property has been presented, and at least one comparable replacement dwelling has been made available.

At least one relocation specialist is assigned to each highway project to carry out the relocation assistance and payments program. A relocation specialist will contact each person or business to be relocated to determine individual needs and desires, and to provide information, answer questions, and give assistance in finding replacement property.

Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement housing will be within the financial budget of the families and individuals displaced and will be reasonable accessible to their places of employment. The relocation specialist will also assist owners of displaced businesses, non-profit organizations, and farm operations in searching for and moving to replacement property.

# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

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WBS:		COUNTY	Dare	Segment A of 11 Segments						
I.D. NO.:		F.A. PROJECT								
DESCRIPTION OF PROJECT:		Segment A – US 158 (6-Lane)								
<b>ESTIMATED DISPLACEES</b>					<b>INCOME LEVEL</b>					
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP	
Residential	0	0	0	0						
Businesses	0	0	0	0	<b>VALUE OF DWELLING</b>		<b>DSS DWELLING AVAILABLE</b>			
Farms	0	0	0	0						
Non-Profit	0	0	0	0						
<b>ANSWER ALL QUESTIONS</b>										
Yes	No	<b>Explain all "YES" answers.</b>								
		1. Will special relocation services be necessary?			0-20M	0	\$ 0-150	0	0-20M	0
		2. Will schools or churches be affected by displacement?			20-40M	0	150-250	0	20-40M	0
		3. Will business services still be available after project?			40-70M	0	250-400	0	40-70M	0
		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.			70-100M	0	400-600	0	70-100M	0
		5. Will relocation cause a housing shortage?			100 UP	0	600 UP	0	100 UP	0
		6. Source for available housing (list).			<b>TOTAL</b>	<b>0</b>		<b>0</b>		<b>0</b>
		7. Will additional housing programs be needed?			<b>REMARKS (Respond by number)</b>					
		8. Should Last Resort Housing be considered?			<p>There was no business or residential relocation identified on this segment</p> <p>20 graves will be impacted by this alternate</p>					
		9. Are there large, disabled, elderly, etc. families?								
		10. Will public housing be needed for project?								
		11. Is public housing available?								
		12. Is it felt there will be adequate DSS housing available during relocation period?								
		13. Will there be a problem of housing within financial means?								
		14. Are suitable business sites available (list source).								
		15. Number months estimated to complete								
		RELOCATION?								
<div style="display: flex; justify-content: space-between;"> <div>   Janice G. Rogers Right of Way Agent </div> <div> 2/4/2010 Date </div> </div>					<div style="display: flex; justify-content: space-between;"> <div>Relocation Coordinator</div> <div>Date</div> </div>					

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# EIS RELOCATION REPORT

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RELOCATION ASSISTANCE PROGRAM

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WBS:		COUNTY	Dare	Segment B of 11 Segments
I.D. NO.:		F.A. PROJECT		
DESCRIPTION OF PROJECT:		Segment B- US 158 (8 Lane)		
ESTIMATED DISPLACEDS				
Type of Displacees	Owners	Tenants	Total	Minorities
Residential	0	0	0	0
Businesses	0	2	2	0
Farms	0	0	0	0
Non-Profit	0	0	0	0
INCOME LEVEL				
		0-15M	15-25M	25-35M
ANSWER ALL QUESTIONS				
Yes	No	Explain all "YES" answers.		
	X	1. Will special relocation services be necessary?		
	X	2. Will schools or churches be affected by displacement?		
X		3. Will business services still be available after project?		
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.		
	X	5. Will relocation cause a housing shortage?		
	X	6. Source for available housing (list).		
	X	7. Will additional housing programs be needed?		
	X	8. Should Last Resort Housing be considered?		
	X	9. Are there large, disabled, elderly, etc. families?		
	X	10. Will public housing be needed for project?		
X		11. Is public housing available?		
X		12. Is it felt there will be adequate DSS housing available during relocation period?		
	X	13. Will there be a problem of housing within financial means?		
X		14. Are suitable business sites available (list source).		
		15. Number months estimated to complete RELOCATION? <span style="float: right;">18 months</span>		
REMARKS (Respond by Number)				
<p>4. See attached spreadsheet.</p> <p>14. Sun Realty, Beath Realty &amp; Construction, Coldwell Banker Seaside Realty.</p> <p>NOTE: A difference in the number of displaced persons on the Relocation EIS Report and the Cost Estimate may be noted. This is due to proximity damage being a factor on the Cost Estimate Report (improvements not actually in the proposed take but damaged to the point of no value). The displaced persons shown on this report only include those actually located within the proposed right of way limits of this project.</p>				
Janice G. Rogers Right of Way Agent		2/4/2010 Date		
Relocation Coordinator		Date		

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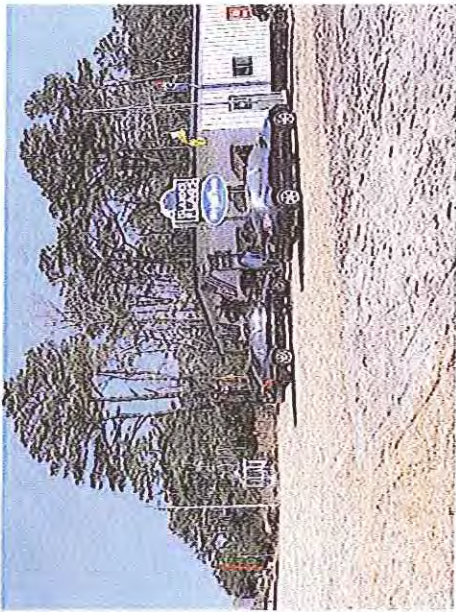
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**Business Relocations**  
**Mid-Currituck Bridge Alternatives**  
**Section B US 158 (3-June)**

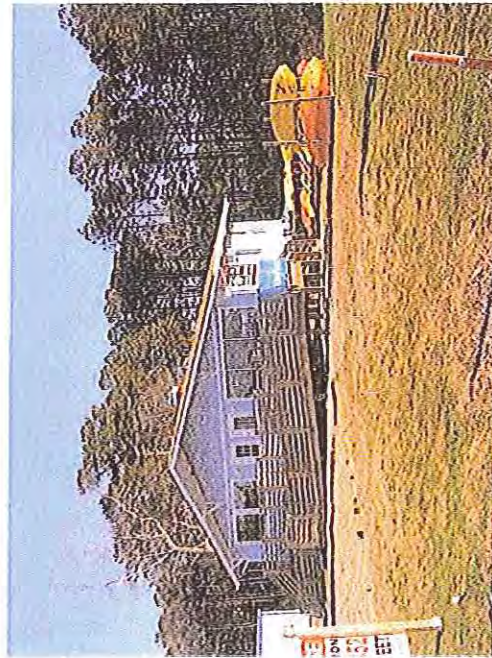
#	Parcel #	Owner	Address	City	Name of Business	Size (Square Feet)	Type Business	Est. # of Employees	Minorities
1	986606388903	Banks Land Co., LLC	6146 N. Croatan Hwy.	Kitty Hawk	Islander Flags	4,136	Banner Flags & Gifts	10	1
2	986606388903	Banks Land Co., LLC	6146 N. Croatan Hwy.	Kitty Hawk	Kitty Hawk Sports Shop		Sports Equipment & Canoes	6	1



**Business Relocations  
Mid-Currituck Bridge Alternatives  
Section B – US 158 (8-lane)**



Parcel 986606491077 – 6146 Croatan Hwy.




Parcel 986606491077 – 6146 Croatan Hwy.



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RELOCATION ASSISTANCE PROGRAM

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WBS:		COUNTY	Dare	Segment C of 11 Segments									
I.D. NO.:		F.A. PROJECT											
DESCRIPTION OF PROJECT:		Segment C – NC 12 (3-lane)											
<b>ESTIMATED DISPLACED</b>					<b>INCOME LEVEL</b>								
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP				
Residential	0	1	1	0	0	0	0	1	0				
Businesses	0	0	0	0	<b>VALUE OF DWELLING</b>				<b>DSS DWELLING AVAILABLE</b>				
Farms	0	0	0	0	<b>Owners</b>		<b>Tenants</b>		<b>For Sale</b>	<b>For Rent</b>			
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0	
					20-40M	0	150-250	0	20-40M	0	150-250	0	
					40-70M	0	250-400	0	40-70M	1	250-400	0	
					70-100M	0	400-600	0	70-100M	4	400-600	2	
					100 UP	0	600 UP	1	100 UP	>100	600 UP	>20	
					<b>TOTAL</b>	<b>0</b>		<b>1</b>		<b>&gt;105</b>		<b>&gt;22</b>	
<b>ANSWER ALL QUESTIONS</b>					<b>REMARKS (Respond by Number)</b>								
Yes	No	<b>Explain all "YES" answers.</b>				<p>6. Sun Realty, Beath Realty &amp; Construction, Coldwell Banker Seaside Realty.</p> <p>8. As necessary in accordance with State Law.</p> <p>11. HUD housing</p> <p>12. With sufficient lead time, DSS housing should be available to all displaced persons. Adequate lead time is 12 to 18 mo.</p> <p>NOTE: A difference in the number of displaced persons on the Relocation EIS Report and the Cost Estimate may be noted. This is due to proximity damage being a factor on the Cost Estimate Report (improvements not actually in the proposed take but damaged to the point of no value). The displaced persons shown on this report only include those actually located within the proposed right of way limits of this project.</p>							
	X	1. Will special relocation services be necessary?											
	X	2. Will schools or churches be affected by displacement?											
X		3. Will business services still be available after project?											
	X	4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.											
	X	5. Will relocation cause a housing shortage?											
		6. Source for available housing (list).											
	X	7. Will additional housing programs be needed?											
X		8. Should Last Resort Housing be considered?											
	X	9. Are there large, disabled, elderly, etc. families?											
	X	10. Will public housing be needed for project?											
X		11. Is public housing available?											
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?											
	X	13. Will there be a problem of housing within financial means?											
NA		14. Are suitable business sites available (list source).											
		15. Number months estimated to complete RELOCATION? <b>18 months</b>											
 Janice G. Rogers Right of Way Agent					2/4/2010 Date		Relocation Coordinator		Date				

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Residential Relocations  
Mid-Currituck Bridge Alternatives  
Section C - NC 12 3-Lane

#	Parcel #	Name	Address	City	# of Repos	Property Type
1	986805198058	Joseph Ferrant	352 Duck Road	Southern Shores	1	Rental (Year-Round)



**Residential Relocations  
Mid-Currituck Bridge Alternatives  
Section C – NC 12 (3-Lane)**




Parcel 986805198058 – 352 Duck Rd.

# EIS RELOCATION REPORT

North Carolina Department of Transportation  
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WBS:		COUNTY	Currituck	Segment	D	of	11	Segments				
I.D. NO.:		F.A. PROJECT										
DESCRIPTION OF PROJECT:		Segment D – NC 12 (4-Lane)										
ESTIMATED DISPLACED					INCOME LEVEL							
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	0	0	0	0								
Businesses	0	0	0	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE					
Farms	0	0	0	0	Owners	Tenants	For Sale	For Rent				
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
ANSWER ALL QUESTIONS					20-40M	0	150-250	0	20-40M	0	150-250	0
Yes	No	Explain all "YES" answers.			40-70M	0	250-400	0	40-70M	0	250-400	0
		1. Will special relocation services be necessary?			70-100M	0	400-600	0	70-100M	0	400-600	0
		2. Will schools or churches be affected by displacement?			100 UP	0	600 UP	0	100 UP	0	600 UP	0
		3. Will business services still be available after project?			TOTAL	0		0		0		0
		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.			REMARKS (Respond by Number)							
		5. Will relocation cause a housing shortage?			There was no business or residential relocation identified on this segment							
		6. Source for available housing (list).										
		7. Will additional housing programs be needed?										
		8. Should Last Resort Housing be considered?										
		9. Are there large, disabled, elderly, etc. families?										
		10. Will public housing be needed for project?										
		11. Is public housing available?										
		12. Is it felt there will be adequate DSS housing available during relocation period?										
		13. Will there be a problem of housing within financial means?										
		14. Are suitable business sites available (list source).										
		15. Number months estimated to complete RELOCATION?										
 Janice G. Rogers Right of Way Agent					2/4/2010 Date		Relocation Coordinator Date					

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WBS:		COUNTY	Currituck		Segment	E	of	11	Segments	
I.D. NO.:		F.A. PROJECT								
DESCRIPTION OF PROJECT:		Outer Banks Bridge Approach & C2 Terminus South (Albacore St.)								
ESTIMATED DISPLACEES					INCOME LEVEL					
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP	
Residential	0	0	0	0						
Businesses	1	0	0	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE			
Farms	0	0	0	0						
Non-Profit	0	0	0	0	Owners	Tenants	For Sale		For Rent	
					0-20M	0	\$ 0-150	0	0-20M	0
					20-40M	0	150-250	0	20-40M	0
					40-70M	0	250-400	0	40-70M	0
					70-100M	0	400-600	0	70-100M	0
					100 UP	0	600 UP	0	100 UP	0
					TOTAL	0		0		0
ANSWER ALL QUESTIONS					REMARKS (Respond by Number)					
Yes	No	Explain all "YES" answers.			<p>4. Business relocation involves the dock serving Kitty Hawk Water Sports, an owner-operated business in the TimBuck II complex. The dock may be acquired or relocated if this alternate is chosen in the final design. # of employees is 3</p>					
	X	1. Will special relocation services be necessary?								
	X	2. Will schools or churches be affected by displacement?								
X		3. Will business services still be available after project?								
x		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.								
	X	5. Will relocation cause a housing shortage?								
	X	6. Source for available housing (list).								
	X	7. Will additional housing programs be needed?								
	X	8. Should Last Resort Housing be considered?								
	X	9. Are there large, disabled, elderly, etc. families?								
	X	10. Will public housing be needed for project?								
	X	11. Is public housing available?								
	N/A	12. Is it felt there will be adequate DSS housing housing available during relocation period?								
	N/A	13. Will there be a problem of housing within financial means?								
X		14. Are suitable business sites available (list source).								
		15. Number months estimated to complete RELOCATION?								

*Janice G. Rogers*

Janice G. Rogers  
Right of Way Agent

2/4/2010

Date

Relocation Coordinator

Date

Business Relocations  
Mid-Currituck Bridge Alternatives  
Section E - Outer Banks Bridge Approach & C2 Terminus South  
(common for MCB4 & MCB2 C2 Mid-Currituck Bridge Corridors)


#	Parcel #	Owner	Address	City	Name of Business	Size (square feet)	Type Business	Est. # of Employees	Minorities
1	116D00000160000	Andrew D. Meredith, Jr.	798-K Sunset Blvd	Corolla	Kitty Hawk Water Sports This relocation involves the dock which is used in conjunction with the operation of Kitty Hawk Water Sports	400	Sales of Water Sports Equipment and Rentals of Water Sports Activities - boat charters, cruises, etc.	3	0



# EIS RELOCATION REPORT

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WBS:		COUNTY	Currituck	Segment	F	of	11	Segments				
I.D. NO.:		F.A. PROJECT										
DESCRIPTION OF PROJECT:		Outer Banks Bridge Approach & C1 Terminus North										
ESTIMATED DISPLACED					INCOME LEVEL							
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	0	0	0	0								
Businesses	0	0	0	0	VALUE OF DWELLING		DSS DWELLING AVAILABLE					
Farms	0	0	0	0	Owners		Tenants		For Sale	For Rent		
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
ANSWER ALL QUESTIONS					20-40M	0	150-250	0	20-40M	0	150-250	0
Yes	No	Explain all "YES" answers.			40-70M	0	250-400	0	40-70M	0	250-400	0
		1. Will special relocation services be necessary?			70-100M	0	400-600	0	70-100M	0	400-600	0
		2. Will schools or churches be affected by displacement?			100 UP	0	600 UP	0	100 UP	0	600 UP	0
		3. Will business services still be available after project?			TOTAL	0		0		0		0
		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.			REMARKS (Respond by Number)							
		5. Will relocation cause a housing shortage?			There was no business or residential relocation identified on this segment							
		6. Source for available housing (list).										
		7. Will additional housing programs be needed?										
		8. Should Last Resort Housing be considered?										
		9. Are there large, disabled, elderly, etc. families?										
		10. Will public housing be needed for project?										
		11. Is public housing available?										
		12. Is it felt there will be adequate DSS housing housing available during relocation period?										
		13. Will there be a problem of housing within financial means?										
		14. Are suitable business sites available (list source).										
		15. Number months estimated to complete RELOCATION?										
 Janice G. Rogers Right of Way Agent					2/4/2010 Date		Relocation Coordinator		Date			

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RELOCATION ASSISTANCE PROGRAM

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WBS:		COUNTY	Currituck	Segment	G	of	11	Segments
I.D. NO.:		F.A. PROJECT						
DESCRIPTION OF PROJECT:		Segment G – Mainland Bridge Approach, Interchange & Frontage Roads North (common for C1 & C2 Mid-Currituck Bridge corridors)						
ESTIMATED DISPLACED					INCOME LEVEL			
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M
Residential	4	1	5	0	0	0	0	2
Businesses	3	0	3	1	VALUE OF DWELLING			
Farms	0	0	0	0	DSS DWELLING AVAILABLE			
Non-Profit	0	0	0	0	Owners	Tenants	For Sale	For Rent
					0-20M	\$ 0-150	0-20M	\$ 0-150
					20-40M	150-250	20-40M	150-250
					40-70M	250-400	40-70M	250-400
					70-100M	400-600	70-100M	400-600
					100 UP	600 UP	100 UP	600 UP
					TOTAL	2	0	>105
ANSWER ALL QUESTIONS					REMARKS (Respond by Number)			
Yes	No	Explain all "YES" answers.						
	X	1. Will special relocation services be necessary?			4. See attached spreadsheet for list of businesses.			
	X	2. Will schools or churches be affected by displacement?			6. Sun Realty, Beath Realty & Construction, Coldwell Banker Seaside Realty.			
X		3. Will business services still be available after project?			8. As necessary in accordance with State Law.			
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.			11. HUD housing			
	X	5. Will relocation cause a housing shortage?			12. With sufficient lead time, DSS housing should be available to all displaced persons. Adequate lead time is 12 to 18 mo.			
	X	6. Source for available housing (list).			14. Suitable business sites will be available during the relocation period. Sources are the same as those listed in Item 6.			
X		7. Will additional housing programs be needed?			20 graves will be impacted by this alternate			
	X	8. Should Last Resort Housing be considered?			NOTE: A difference in the number of displaced persons on the Relocation EIS Report and the Cost Estimate may be noted. This is due to proximity damage being a factor on the Cost Estimate Report (improvements not actually in the proposed take but damaged to the point of no value). The displaced persons shown on this report only include those actually located within the proposed right of way limits of this project.			
	X	9. Are there large, disabled, elderly, etc. families?						
	X	10. Will public housing be needed for project?						
X		11. Is public housing available?						
X		12. Is it felt there will be adequate DSS housing available during relocation period?						
	X	13. Will there be a problem of housing within financial means?						
X		14. Are suitable business sites available (list source).						
		15. Number months estimated to complete RELOCATION?						
		18 months						
 Janice G. Rogers Right of Way Agent					2/4/2010 Date			
					Relocation Coordinator Date			

FRM15-E Revised 09-02

Original & 1 Copy: Relocation Coordinator  
2 Copy: Division Relocation File

**Residential Relocations**  
**Mid-Currituck Bridge Alternatives**  
**Section G - Mainland Bridge Approach, Interchange, and Frontage Roads North**  
**(common for C1 & C2 Mid-Currituck Bridge Corridors)**

#	Parcel #	Name	Address	City	# of Relocs	Property Type
1	008200000640000	Ruth B Crain	5023 Caratoke Hwy.	Coinjock	1	Owner Occupied
2	00820000083B0000	Rebecca L Walker	5013 Caratoke Hwy.	Coinjock	1	Owner Occupied
3	00820000085A0000	Richard & Julie Perkins	5039 Caratoke Hwy.	Coinjock	1	Owner Occupied
4	00820000085A0000	Richard & Julie Perkins	5031 Caratoke Hwy.	Coinjock	1	Owner Occupied
5	820000000820000	Clyde and Susie Spruill	5005 Caratoke Hwy.	Coinjock	1	Owner Occupied

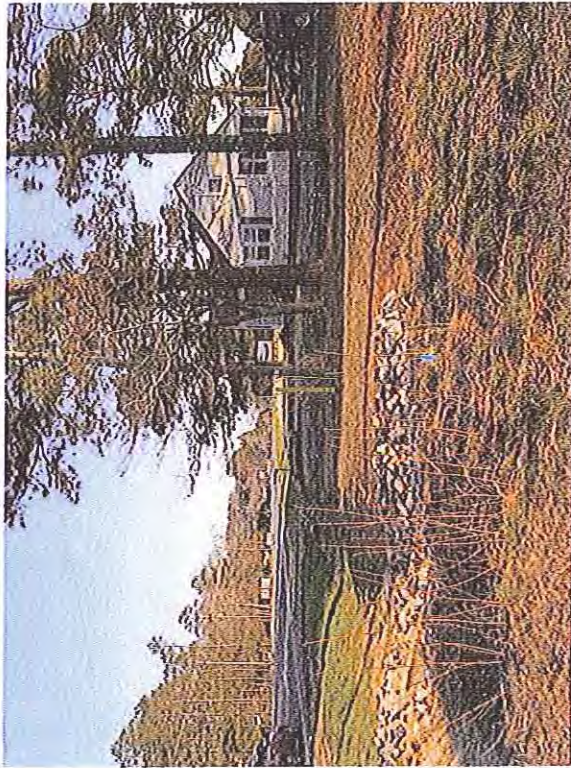


Residential Relocations  
Mid-Currituck Bridge Alternatives  
Section G  
Mainland Bridge Approach, Interchange and Frontage Roads North  
(Common for C1 & C2 Mid-Currituck Bridge Corridors)





**Residential Relocations**  
**Mid-Currituck Bridge Alternatives**  
**Section G**  
**Mainland Bridge Approach, Interchange and Frontage Roads North**  
**(Common for C1 & C2 Mid-Currituck Bridge Corridors)**



Business Relocations  
Mid-Currituck Bridge Alternatives  
Section G - Mainland Bridge Approach, Interchange, and Frontage Roads North  
(common for C1 & C2 Mid-Currituck Bridge Corridors)

#	Parcel #	Owner	Address	City	Name of Business	Size (Square Feet)	Type Business	Est. # of Employees (Min/Max)
1	0082000059D0000	Lynn Gagnon	4987 Caratoke Hwy.	Coinjock	Precision Auto	3,600	Auto/Boat Repair & Storage	10 - 2
2	008200000610000	David Baldwin	4995 Caratoke Hwy.	Coinjock	The Stuff Shop	4,000	Retail Shop	8 - 1
3	0071000060A0000	Banco & Cade	4952 Caratoke Hwy.	Coinjock		3,400	Convenience Store	12 - 2

**Business Relocations**  
**Mid-Currituck Bridge Alternatives**  
**Section G**  
**Mainland Bridge Approach, Interchange and Frontage Roads North**  
**(Common for C1 & C2 Mid-Currituck Bridge corridors)**



Parcel 0082000059D0000 – 4987 Caratoke Hwy.



Parcel 008200000610000 – 4995 Caratoke Hwy.



Parcel 0071000061A0000 – 4952 Caratoke Hwy.



**Grave Impacts**  
**Mid-Currituck Bridge Alternatives**  
**Section G - Mainland Bridge Approach, Interchange, and Frontage Roads North**  
**(common for C1 & C2 Mid-Currituck Bridge Corridors)**

#	Parcel #	Name	Address	City	Approx # of Affected Graves
1	0082000085A0000	Richard & Julie Perkins	5031 Caratoke Hwy.	Coinjock	20

# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S.      ☐ CORRIDOR      ☐ DESIGN

WBS:		COUNTY	Dare	Segment	H	of	11	Segments
I.D. NO.:		F.A. PROJECT						
DESCRIPTION OF PROJECT:		Segment H – Access Frontage Roads Along US 158						

ESTIMATED DISPLACED					INCOME LEVEL								
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP				
Residential	0	0	0	0									
Businesses	0	0	0	0	VALUE OF DWELLING				DSS DWELLING AVAILABLE				
Farms	0	0	0	0	Owners		Tenants		For Sale		For Rent		
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0	
					20-40M	0	150-250	0	20-40M	0	150-250	0	
					40-70M	0	250-400	0	40-70M	0	250-400	0	
					70-100M	0	400-600	0	70-100M	0	400-600	0	
					100 UP	0	600 UP	0	100 UP	0	600 UP	0	
					TOTAL	0		0		0		0	

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
		1. Will special relocation services be necessary?
		2. Will schools or churches be affected by displacement?
		3. Will business services still be available after project?
		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
		5. Will relocation cause a housing shortage?
		6. Source for available housing (list).
		7. Will additional housing programs be needed?
		8. Should Last Resort Housing be considered?
		9. Are there large, disabled, elderly, etc. families?
		10. Will public housing be needed for project?
		11. Is public housing available?
		12. Is it felt there will be adequate DSS housing housing available during relocation period?
		13. Will there be a problem of housing within financial means?
		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <span style="border: 1px solid black; padding: 0 20px;"> </span>

<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   Janice G. Rogers Right of Way Agent </div> <div style="text-align: center;"> 2/4/2010  Date </div> </div>	<div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 10px;">REMARKS (Respond by Number)</div> <p style="font-size: 1.2em;">There was no business or residential relocation identified on this segment</p>

FRM15-E Revised 09-02

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2 Copy Division Relocation File



# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

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WBS:		COUNTY	Currituck	Alternate	I	of	11	Alternate
I.D. NO.:		F.A. PROJECT						
DESCRIPTION OF PROJECT:		Segment I – US 158 Hurricane Lane (Wright Memorial Bridge to Mid-Currituck Bridge)						

ESTIMATED DISPLACEES					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	2	3	5	1					
Businesses	0	1	1	0					
Farms	0	0	0	0					
Non-Profit	0	0	0	0					

ANSWER ALL QUESTIONS					VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Yes	No	Explain all "YES" answers.			Owners		Tenants		For Sale		For Rent	
	X	1. Will special relocation services be necessary?			0-20M		\$ 0-150		0-20M		\$ 0-150	
	X	2. Will schools or churches be affected by displacement?			20-40M		150-250		20-40M		150-250	
		3. Will business services still be available after project?			40-70M		250-400		40-70M		250-400	
		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.			70-100M		400-600		70-100M		400-600	
		5. Will relocation cause a housing shortage?			100 UP		600 UP		100 UP		600 UP	
		6. Source for available housing (list).			TOTAL							
		7. Will additional housing programs be needed?										
		8. Should Last Resort Housing be considered?										
		9. Are there large, disabled, elderly, etc. families?										
		10. Will public housing be needed for project?										
		11. Is public housing available?										
		12. Is it felt there will be adequate DSS housing available during relocation period?										
		13. Will there be a problem of housing within financial means?										
		14. Are suitable business sites available (list source).										
		15. Number months estimated to complete RELOCATION?										

REMARKS (Respond by Number)				
3. Proposed project site has numerous businesses. Abundant business services will be available after project.				
4. Wright Clinic. Dental office, approx. 1,900 SF. Estimated Number of employees – 6 with 1 minority..				
6. Sun Realty, Beach Realth & Construction, Caldwell Banker & Seaside Realty.				
8. Last resort housing may be required, particularly for tenant-occupied properties.				
11. HUD housing is available				
12. A study of the available housing in the proposed project revealed several comparable listings, including rentals.				
14. Suitable business sites will be available during the relocation period. Sources are listed in Item 6.				
50 graves will be impacted by this alternate				

NOTE: RENTALS LISTED ON THIS REPORT DO NOT APPEAR TO BE SEASONAL RENTALS.

<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   <b>Janice G. Rogers</b>              Right of Way Agent         </div> <div style="text-align: center;">             2/4/2010              Date         </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">             Relocation Coordinator         </div> <div style="text-align: center;">             Date         </div> </div>
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Residential Relocations  
Mid-Currituck Bridge Alternatives  
Section I US 158 - Hurricane Lane  
Wright Memorial Bridge to Mid-Currituck Bridge

#	Parcel #	Name	Address	City	# of Relos	Property Type	PLANS LOCATION
1	010900000620000	Matthew & Gay Chappell	7197 Caratoke Hwy.	Jarvisburg	1	Owner Occupied	RIGHT OF 525+00
2	010800000170000	Ralph & Lenora Aydtlett	6637 Caratoke Hwy.	Grandy	1	Rental	RIGHT OF 665+00
3	009400001260000	Floyd Gilden, Jr.	6399 Caratoke Hwy.	Grandy	1	Rental	RIGHT OF 724+48
4	009400001270000	Floyd Gilden, Jr.	6395 Caratoke Hwy.	Grandy	1	Rental	RIGHT OF 725+50
5	0094000088A0000	Clifton Ayers	6150 Caratoke Hwy.	Poplar Branch	1	Owner Occupied	LEFT OF 786+58



**Residential Relocations  
Mid-Currituck Bridge Alternatives  
Section I US 158 – Hurricane Lane  
Wright Memorial Bridge to Mid-Currituck Bridge**



Parcel 010900000620000 – 7197 Caratoke Hwy.  
PLANS LOCATION RIGHT OF 525+00



Parcel 010800000170000 – 6637 Caratoke Hwy.  
PLANS LOCATION RIGHT OF 665+00



Parcel 009400001260000 – 6399 Caratoke Hwy.  
PLANS LOCATION RIGHT OF 724+48



Parcel 009400001270000 – 6395 Caratoke Hwy.  
PLANS LOCATION RIGHT OF 725+50



Parcel 0094000088A0000 – 6150 Caratoke Hwy.  
PLANS LOCATION LEFT OF 786+58



Business Relocations  
Mid-Currituck Bridge Alternatives  
Section I US 158 - Hurricane Lane  
Wright Memorial Bridge to Mid-Currituck Bridge

#	Parcel #	Owner	Address	City	Name of Business	Size (square feet)	Type Business	Est. # of Employees	Minorities
1	0109000121A0000	Pauline Wright, Trustee	7106 Caratoke Hwy.	Jarvisburg	Wright Clinic	1,892	Dentist	6	1

PLANS LOCATION - LEFT OF STATION 547+50

**Business Relocations**  
**Mid-Currituck Bridge Alternatives**  
**Section I US 158 – Hurricane Lane**  
**Wright Memorial Bridge to Mid-Currituck Bridge**



Parcel 0109000121A0000 – 7106 Caratoke Hwy.  
PLANS LOCATION LEFT OF 547+50

**Grave Impacts**  
**Mid-Currituck Bridge Alternatives**  
**Section I US 158 - Hurricane Lane**  
**Wright Memorial Bridge to Mid-Currituck Bridge**

#	Parcel #	Name	Address	City	Approx # of Affected Graves
1	012300000940000	Pleasant Branch Baptist	107 Foster Forbes Rd.	Powells Point	14
2	008400000070000	William Cuggle Owens Heirs	5665 Caratoke Hwy.	Poplar Branch	6
3	010800000300000	William Wright Sr.	6861 Caratoke Hwy.	Jarvisburg	6
4	011000000620000	Diana & Kirk Shaw	7387 Caratoke Hwy.	Jarvisburg	12
5*	Not Listed	Not Listed	Not Listed	Not Listed	4
6	0082000065B0000	Currituck County	Caratoke Hwy	Poplar Branch	8

**Total Relocations: 50**

\* Currituck County shows this location as a cemetery with global pin #9921-19-5983. It is located near 6590 Caratoke Hwy. between Pine Needle Dr. and Walnut Island Rd.



# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S.      ☐ CORRIDOR      ☐ DESIGN

WBS:		COUNTY	Dare	Segment J of 11 Segments
I.D. NO.:		F.A. PROJECT		
DESCRIPTION OF PROJECT:		US 158 Hurricane Lane (Mid-Currituck Bridge to NC 168)		

ESTIMATED DISPLACEES					INCOME LEVEL					
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP	
Residential	0	0	0	0						
Businesses	3	0	3	0	VALUE OF DWELLING				DSS DWELLING AVAILABLE	
Farms	0	0	0	0	Owners		Tenants		For Sale	
Non-Profit	0	0	0	0	0-20M		\$ 0-150		0-20M	
					20-40M		150-250		20-40M	
					40-70M		250-400		40-70M	
					70-100M		400-600		70-100M	
					100 UP		600 UP		100 UP	
					TOTAL		0		0	

ANSWER ALL QUESTIONS		
Yes	No	Explain all "YES" answers.
	X	1. Will special relocation services be necessary?
	X	2. Will schools or churches be affected by displacement?
X		3. Will business services still be available after project?
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.
	X	5. Will relocation cause a housing shortage?
	X	6. Source for available housing (list).
	X	7. Will additional housing programs be needed?
	X	8. Should Last Resort Housing be considered?
	X	9. Are there large, disabled, elderly, etc. families?
	X	10. Will public housing be needed for project?
X		11. Is public housing available?
X		12. Is it felt there will be adequate DSS housing available during relocation period?
	X	13. Will there be a problem of housing within financial means?
X		14. Are suitable business sites available (list source).
		15. Number months estimated to complete RELOCATION? <span style="border: 1px solid black; padding: 2px 20px;"></span>

REMARKS (Respond by Number)	
<p>Three businesses are being impacted by this segment (see Chart). No residential relocations were identified</p> <p>According to local realtors, numerous business sites are Available in this area.</p>	

 Janice G. Rogers Right of Way Agent	2/4/2010 Date	Relocation Coordinator Date
--	------------------	--------------------------------

Mid-Currituck Bridge Alternatives  
Section J US 158 - Hurricane Lane  
Mid-Currituck Bridge to NC-163

Parcel #	Owner	Address	City	Name of Business	Size (sq ft)	Type of Business	Est. # of Employees	Minorities
1	0070000034B0000	Earl Travis Morris	Caratoke Hwy.	Avis Sports & Fireworks	2,300	Sports Equip & Fireworks Sales	6	1
2	0070000033A0000	Cynthia Spruill	Caratoke Hwy.	Convenience Store	1,100	No gas pumps - Conv. Store	12	2
3	0070000031A0000	Currituck Realty Company	Caratoke Hwy	Currituck Realty Co.	300	Real Estate Sales	2	0
4								
5								
6								
7								
8								
9								
10								



Business Relocations  
Mid-Currituck Bridge Alternatives  
Section J  
US 158 Hurricane Lane  
Mid-Currituck Bridge to NC 168



Parcel 0070000034B0000 Caratoke Hwy, Barco



Parcel 00700000083A Caratoke Hwy, Barco



Parcel 00700000081A Caratoke Hwy, Barco

**Grave Impacts**  
**Mid-Currituck Bridge Alternatives**  
**Section J US 158 - Hurricane Lane**  
**Mid-Currituck Bridge to NC 168**

#	Parcel #	Name	Address	City	Approx # of Affected Graves
1	6900000007000.00	Cemetary		Crawford	12
2	0070000074C0000	Ronnie & Mabel Cooper	Caratoke Hwy.	Poplar Branch	4

Total Relocations: 16



# EIS RELOCATION REPORT

North Carolina Department of Transportation  
RELOCATION ASSISTANCE PROGRAM

☒ E.I.S.    ☐ CORRIDOR    ☐ DESIGN

WBS:		COUNTY	Dare	Segment	K	of	11	Segments
I.D. NO.:		F.A. PROJECT						
DESCRIPTION OF PROJECT:		Segment K – US 158 Hurricane Lane (NC 12 to Wright Memorial Bridge)						

ESTIMATED DISPLACED					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	0	0	0	0					
Businesses	0	1	1	1					
Farms	0	0	0	0					
Non-Profit	0	0	0	0					

ANSWER ALL QUESTIONS				
Yes	No	Explain all "YES" answers.		
	X	1. Will special relocation services be necessary?		
	X	2. Will schools or churches be affected by displacement?		
X		3. Will business services still be available after project?		
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.		
	X	5. Will relocation cause a housing shortage?		
	X	6. Source for available housing (list).		
	X	7. Will additional housing programs be needed?		
	X	8. Should Last Resort Housing be considered?		
	X	9. Are there large, disabled, elderly, etc. families?		
	X	10. Will public housing be needed for project?		
X		11. Is public housing available?		
X		12. Is it felt there will be adequate DSS housing available during relocation period?		
	X	13. Will there be a problem of housing within financial means?		
X		14. Are suitable business sites available (list source).		
		15. Number months estimated to complete RELOCATION? <b>18 months</b>		

REMARKS (Respond by Number)	
4. See attached spreadsheet.	
14. Sun Realty, Beath Realty & Construction, Coldwell Banker Seaside Realty.	
NOTE: A difference in the number of displaced persons on the Relocation EIS Report and the Cost Estimate may be noted. This is due to proximity damage being a factor on the Cost Estimate Report (improvements not actually in the proposed take but damaged to the point of no value). The displaced persons shown on this report only include those actually located within the proposed right of way limits of this project.	

<div style="display: flex; justify-content: space-between;"> <div> <i>Janice A. Rogers</i>  <div style="border-top: 1px solid black; width: 100%;"></div> Right of Way Agent </div> <div> 2/4/2010  <div style="border-top: 1px solid black; width: 100%;"></div> Date </div> </div>	<div style="display: flex; justify-content: space-between;"> <div> <div style="border-top: 1px solid black; width: 100%;"></div> Relocation Coordinator </div> <div> <div style="border-top: 1px solid black; width: 100%;"></div> Date </div> </div>
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Business Relocations  
Mid-Currituck Bridge Alternatives  
Section K - US 158 Hurricane Lane  
(NC 12 to Wright Memorial Bridge)

#	Parcel #	Owner	Address	City	Name of Business	Size (square feet)	Type Business	Est. # of Employees	Minorities
1	986606388903	Banks Land Co., LLC	6146 N. Croatan Hwy.	Kitty Hawk	Islander Flags	4,136	Banner Flags & Gifts	10	1

**Business Relocations**  
**Mid-Currituck Bridge Alternatives**  
**Section K – US 158 Hurricane Lane**  
**(NC 12 to Wright Memorial Bridge)**



Parcel 986606491077 – 6146 Croatan Hwy.

**MID-CURRITUCK BRIDGE PROJECT**

**ADDENDUM FOR THE RELOCATION STUDY**

**FOR OPTION B**

**Prepared for:**



**Prepared by:**



**FEBRUARY 4, 2010**

## Contents

### MID-CURRITUCK BRIDGE ADDENDUM TO THE RELOCATION STUDY FOR OPTION B

1) Relocation Study .....	2
<u>A</u> )Relocation Assessment: Alternative Option B .....	5
Appendices:.....	6
A EIS Relocation Report for Alternative Option B	
B Pictures of Houses to be Relocated with Alternative Option B	
C Pictures of Business to be Relocated with Alternative Option B	
D Maps Showing Alternative Option B Maps Provided by NCTA on 9/4/09	

# **MID-CURRITUCK BRIDGE**

## **RELOCATION STUDY**

### **ALTERNATIVE OPTION B**

## **SECTION 1 RELOCATION STUDY**

The Mid-Currituck Bridge Study provides two basic alternatives for bridge and road construction, including MCB2/C1 and C2 and MCB4/C1 and C2. A new study option, known as Option B, has been added to both alternatives. This report will discuss the existing conditions of the area impacted by this alternative. Alternative option B was analyzed to determine how it would affect existing private and public properties, businesses, and persons residing in the project area. This includes impacts to outdoor advertising signs and gravesites.

All land necessary for transportation improvements must be purchased from existing property owners in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (URA). The URA contains specific requirements that govern the manner in which a governmental entity acquires property for public use. The purpose of the URA includes providing a uniform policy for fair and equitable treatment of persons and businesses displaced as a result of federal and federally assisted programs.

### **1.1 Current Conditions**

Option B would be located on the mainland of Currituck County between US 158 and Currituck Sound. It would include the construction of an interchange at US 158, a bridge approach road on fill through Maple Swamp, removal of existing Aydlett Road and a toll plaza in the community of Aydlett.

#### **1.1.1 Affected Environment**

Alternative option B located on the mainland is mostly residential properties mixed with commercial properties.

This area includes owner-occupied residences, tenant-occupied residences, and commercial properties ranging from auto services and a flea market to numerous outdoor advertising signs and several gravesites.

## 1.2 Relocation Impacts

Potential relocation impacts would be required for this alternative. The impacts include residential, business, outdoor advertising, and gravesites. Housing and commercial opportunities appear readily available within the vicinity of the proposed project.

Very few sites that provide services to the immediate neighborhood, such as convenience stores, banks, restaurants, gas stations, and shopping centers, would require relocation. Therefore, it can be assumed that the services necessary to support an existing neighborhood will remain available.

### 1.2.1 Relocations per Alternative Option B

To summarize the relocation effects, Table 1 identifies the number and type of displacements identified for alternative option B.

**Table 1-8**

**Relocation For Alternative Option B**

Alternate	Property Type			
	Residential Relocations	Business Relocations	Outdoor Advertising Sign Relocation	Gravesite Relocations
Alternative Option B	7	3	13	19

In addition to these potential relocation impacts, several secondary structures such as sheds and garages on properties are affected. In general, a few of the parcels impacted are large enough to allow for relocating or rebuilding these structures elsewhere on the property.

#### 1.2.1.1 Mainland Bridge Approach, Interchange, Frontage Roads and Toll Plaza (common for MCB2 & MCB4 C1 and MCB2 & MCB4 C2 Mid-Currituck Bridge Corridors)-Alternative Option B

This section of road is located in the Coinjock community of Currituck County. Relocations in this segment include three businesses. Also displaced are six owner-occupied residences and one tenant occupied residence. There are also nine outdoor advertising signs and four on premise signs which would be displaced. Finally, there are two plots of approximately 19 graves that would be impacted by the acquisition.

#### **1.2.2.3 Summary**

Alternative Option B would have a total of 10 residential and business relocations.

### **1.3 Relocation Assistance**

A thorough review of the subject area has been completed to ensure adequate replacement housing is available for all potential residential relocations. In order to minimize the unavoidable effects of Right of Way acquisition and displacement of individuals and businesses, all relocation parcels will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). Relocation services and payments are provided without regard to race, color, religion, sex, or national origin.

Advance notification to owners of properties containing impending right of way acquisition is required. Before acquiring right of way, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights.

No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date. For residential relocations, this notice cannot be provided until a written offer to acquire the subject property has been presented, and at least one comparable replacement dwelling has been made available.

At least one relocation specialist is assigned to each highway project to carry out the relocation assistance and payments program. A relocation specialist will contact each person or business to be relocated to determine individual needs and desires, and to provide information, answer questions, and give assistance in finding replacement property.

Relocation of displaced persons will be offered in areas not generally less desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement housing will be within the financial budget of the families and individuals displaced and will be reasonably accessible to their places of employment. The relocation specialist will also assist owners of displaced businesses, non-profit organizations, and farm operations in searching for and moving to replacement property.

The general findings are as follows:

### **A) Relocation Assessment: Alternative Option B**

3 Business relocations	\$150,000
1 Residential tenant relocation	\$20,000
6 residential owner relocations	\$240,000
4 on premise signs	\$8,000
9 billboards	\$162,000
19 grave sites	\$66,500
<b>Total</b>	<b>\$646,500</b>

### **Appendices:**

**A. EIS Relocation Report for Alternative Option B**

**B. Pictures of Houses to be Relocated with Alternative Option B**

**C. Pictures of Businesses to be Relocated with Alternative Option B**

**D. Maps Showing Alternative Option B Maps Provided by NCTA on 9/4/09**



## Appendix A

### EIS Relocation Report For Alternative Option B

# EIS RELOCATION REPORT

## North Carolina Department of Transportation RELOCATION ASSISTANCE PROGRAM

☒ E.I.S.    ☐ CORRIDOR    ☐ DESIGN

WBS:		COUNTY		Currituck	
I.D. NO.:		F.A. PROJECT		MID-CURRITUCK BRIDGE: ALTERNATIVE OPTION B	
DESCRIPTION OF PROJECT:		Ramps off US 158 to Toll Booths at Sound-Aydlett Road Removal			

ESTIMATED DISPLACED					INCOME LEVEL				
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP
Residential	6	1	7	0				3	4
Businesses	1	2	3	0					
Farms	0	0	0	0					
Non-Profit	0	0	0	0					

ANSWER ALL QUESTIONS									
Yes	No	Explain all "YES" answers.							
	X	1. Will special relocation services be necessary?							
	X	2. Will schools or churches be affected by displacement?							
X		3. Will business services still be available after project?							
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.							
	X	5. Will relocation cause a housing shortage?							
	X	6. Source for available housing (list).							
X		7. Will additional housing programs be needed?							
	X	8. Should Last Resort Housing be considered?							
	X	9. Are there large, disabled, elderly, etc. families?							
	X	10. Will public housing be needed for project?							
X		11. Is public housing available?							
X		12. Is it felt there will be adequate DSS housing housing available during relocation period?							
	X	13. Will there be a problem of housing within financial means?							
X		14. Are suitable business sites available (list source).							
		15. Number months estimated to complete RELOCATION? <b>18 MONTHS</b>							


  

VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Owners		Tenants		For Sale		For Rent	
0-20M		\$ 0-150		0-20M		\$ 0-150	
20-40M		150-250		20-40M		150-250	
40-70M		250-400		40-70M	3	250-400	
70-100M	6	400-600	1	70-100M	18	400-600	5
100 UP		600 UP		100 UP	56	600 UP	6
TOTAL	6		1		77		17

REMARKS (Respond by number)	
<p>3. Proposed project site has numerous businesses. Abundant business services will be available after project.</p> <p>4. <b>The Stuff Store</b>, approx.4,000sf Estimated Number of employees – 4 with 1 minority- <b>Precision Automotive</b> approx. 3600sf-Estimated number of employees-6 with 2 minority <b>Coinjock Automotive</b>-approx. 3200sf-Estimated number of employees-4 with 2 minority</p> <p>6. Sun Realty, Beach Realty &amp; Construction, Caldwell Banker Seaside Realty.</p> <p>8. Although LRS may not be required, market changes dictate that LRS could be required at time of displacement.</p> <p>11. HUD housing is available.</p> <p>12. Discussions with local realtors determined that adequate housing will be available during the relocation period.</p> <p>14. Suitable business sites will be available during the relocation period. Sources are listed in Item 6.</p> <p>NOTE: RENTALS LISTED ON THIS REPORT DO NOT APPEAR TO BE SEASONAL RENTALS</p>	

 Right of Way Agent	10/8/2009 Date	Relocation Coordinator Date
--	-------------------	--------------------------------

## Appendix B

### Pictures of Houses to be Relocated with Alternative Option B

**Residential Relocations  
ALTERNATIVE OPTION B**



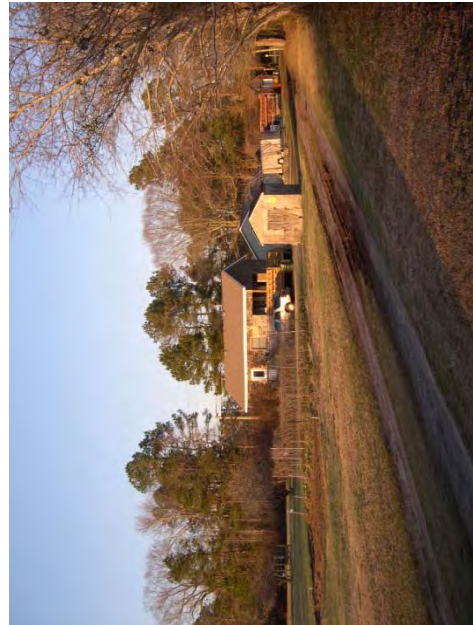
0082-000-0041-0000-Owner  
Occupied-Robert and Barbara  
Jordan-330 Narrow Shore Road

Photo 1



0082-000-0066-0000-Owner  
Occupied-Mildred T. Quidley,  
Trustee-5067 Caratoke Hwy.

Photo 2



0082-000-0065A-0000-Owner Occupied  
Richard & Julie Perkins -5031 Caratoke Hwy.  
Photo 3



0082-000-0065A-0000-Tenant Occupied  
Richard & Julie Perkins -5031 Caratoke Hwy.  
Photo 4 (This house is owned by Richard & Julie  
Perkins. The house is currently rented)

**Residential Relocations  
ALTERNATIVE OPTION B**



0082-000-0064-0000-Owner Occupied  
Ruth B. Crain-5023 Caratoke Hwy.  
Photo 5



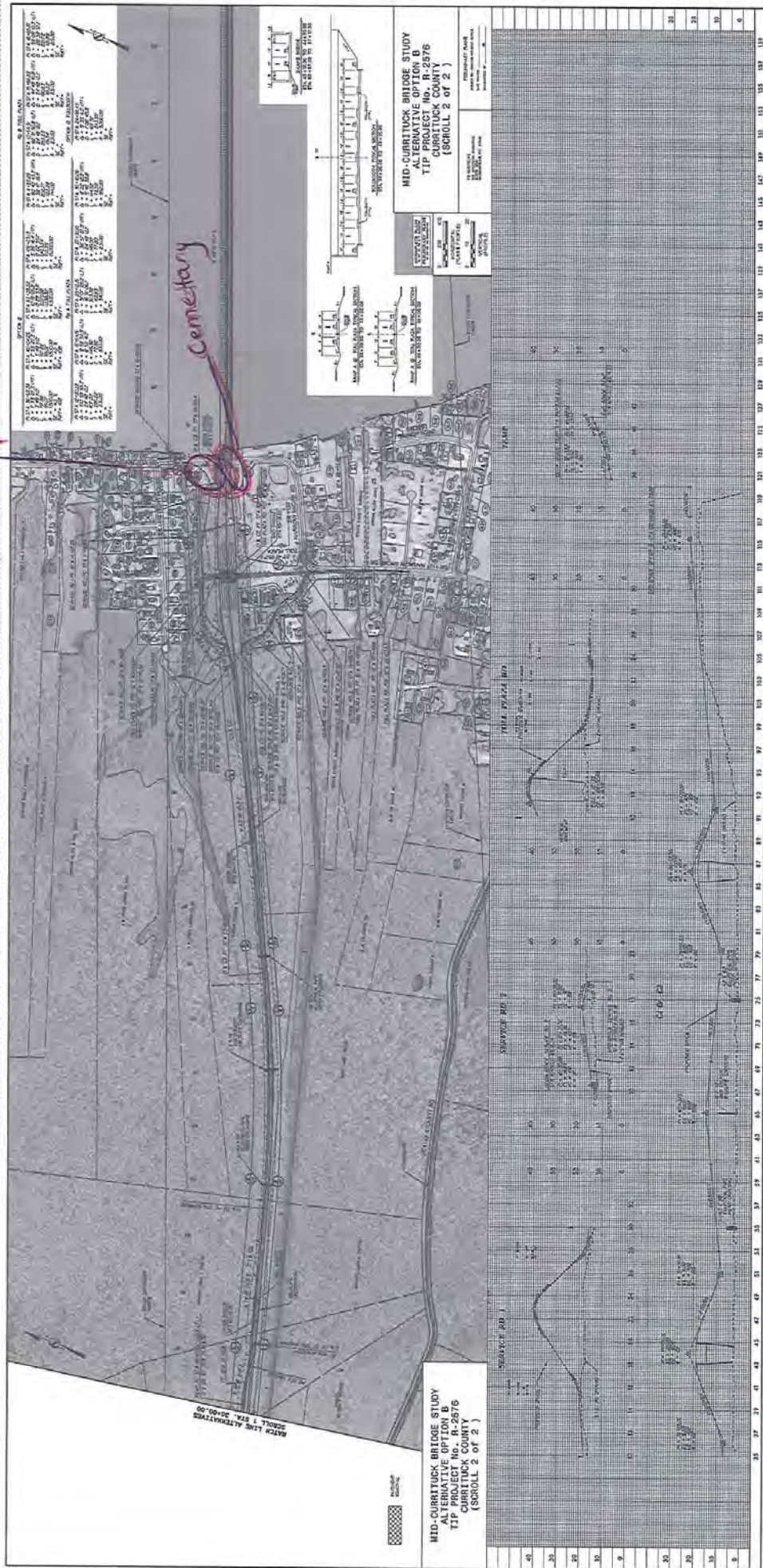
0082-000-0063B-0000-Owner Occupied  
Rebecca L. Walker-5013 Caratoke Hwy.  
Photo 6



0082-000-0060A-0000-Owner Occupied  
Mildred Markert-4929 Caratoke Hwy.  
Photo 7

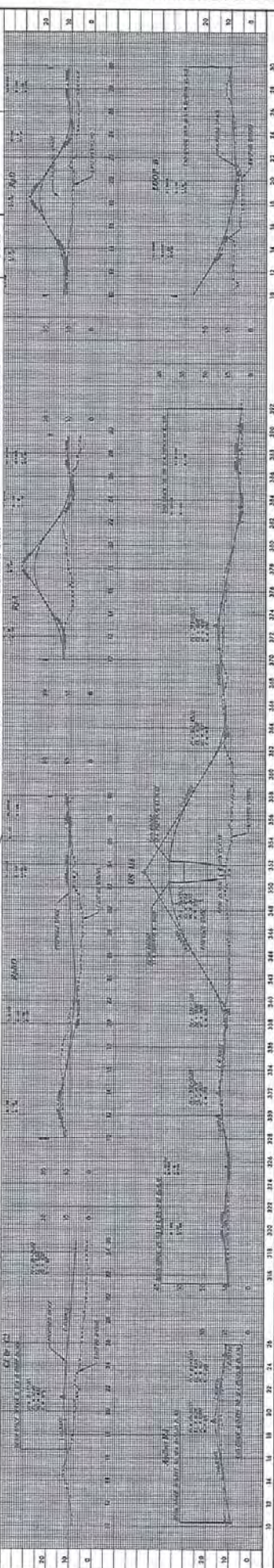
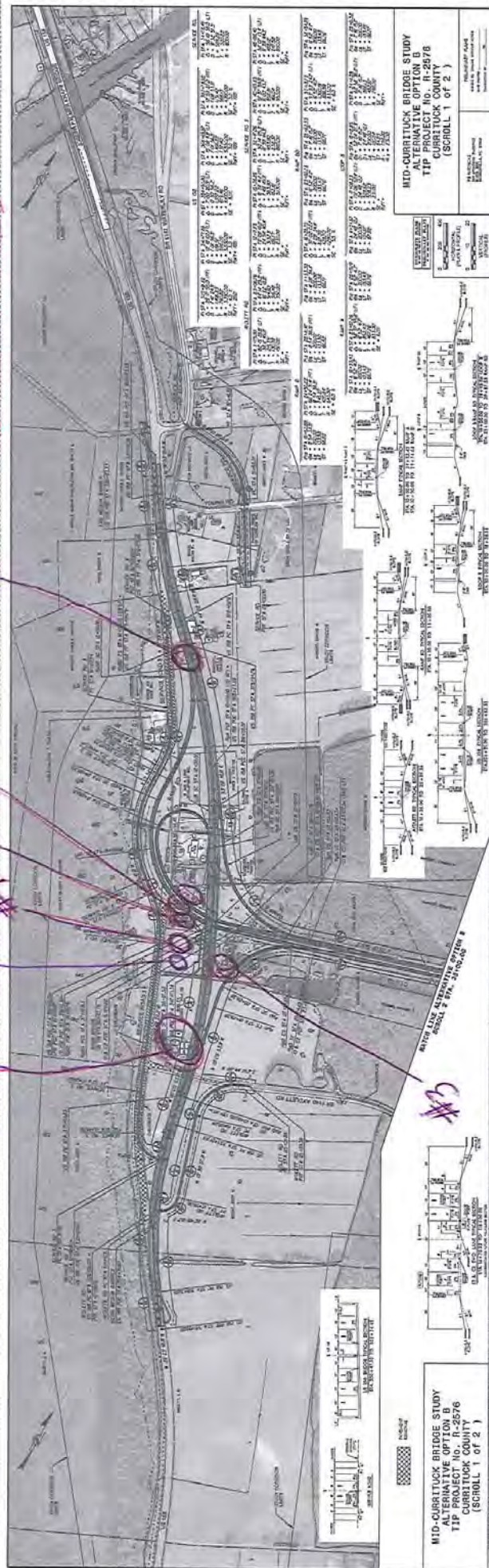


*Revised 1/20/01*





#2 Cemetery #5 #6 Residential Reloc



## Appendix C

### **Pictures of Businesses to be Relocated with Alternative Option B**



**Business Relocations  
ALTERNATIVE OPTION B**



The Stuff Store (Owner–Baldwin)  
Parcel 008200000610000-4995 Caratoke Hwy.  
Photo 1



Precision Automotive (Owner–Gagnon)  
Parcel 0082000059D0000 -4987 Caratoke Hwy  
Sign and Entrance  
Photo 2



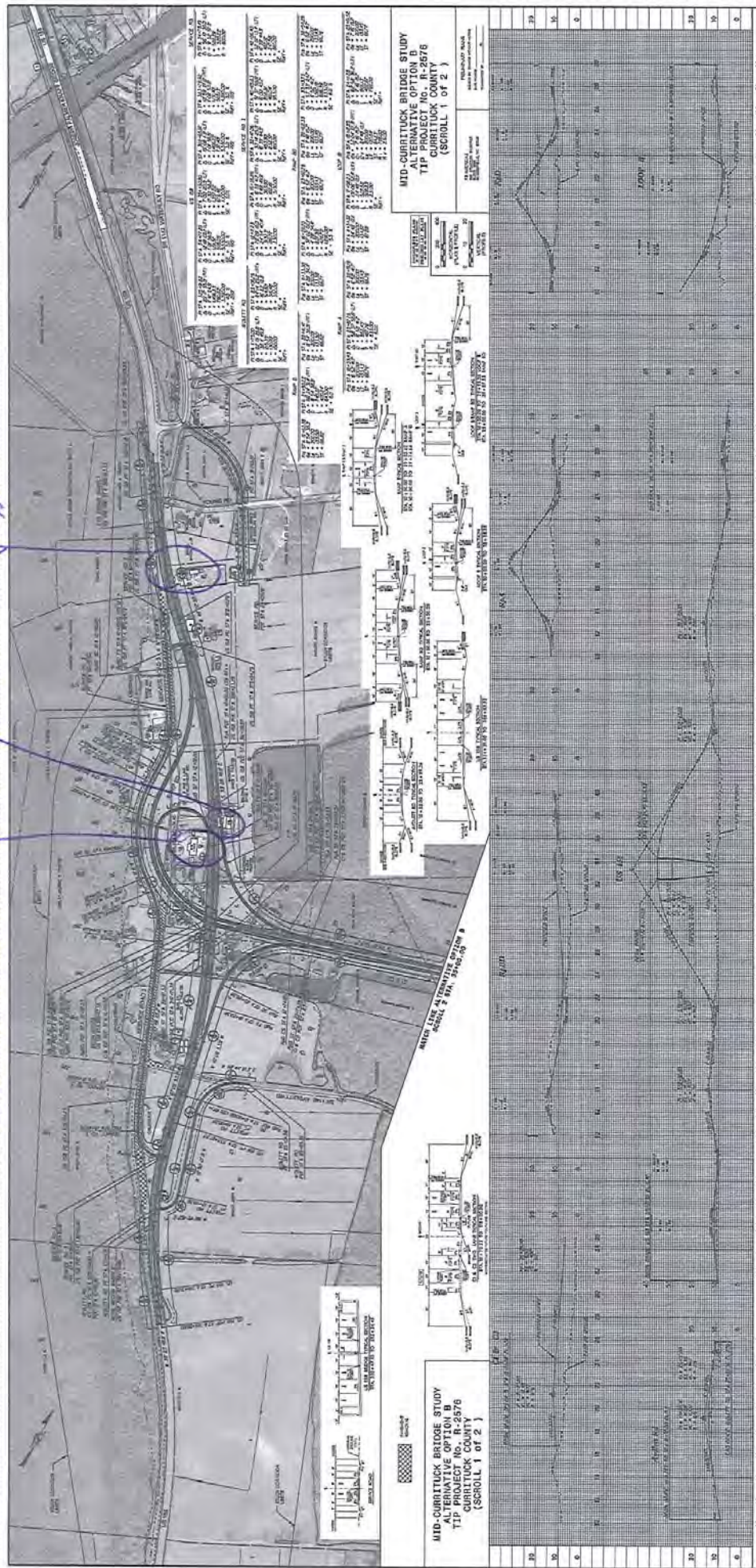
**Business Relocations  
ALTERNATIVE OPTION B**



Coinjock Automotive (Owner-Mason)  
Parcel 0071000074B0000-4901 Caratoke Hwy.  
Photo 3



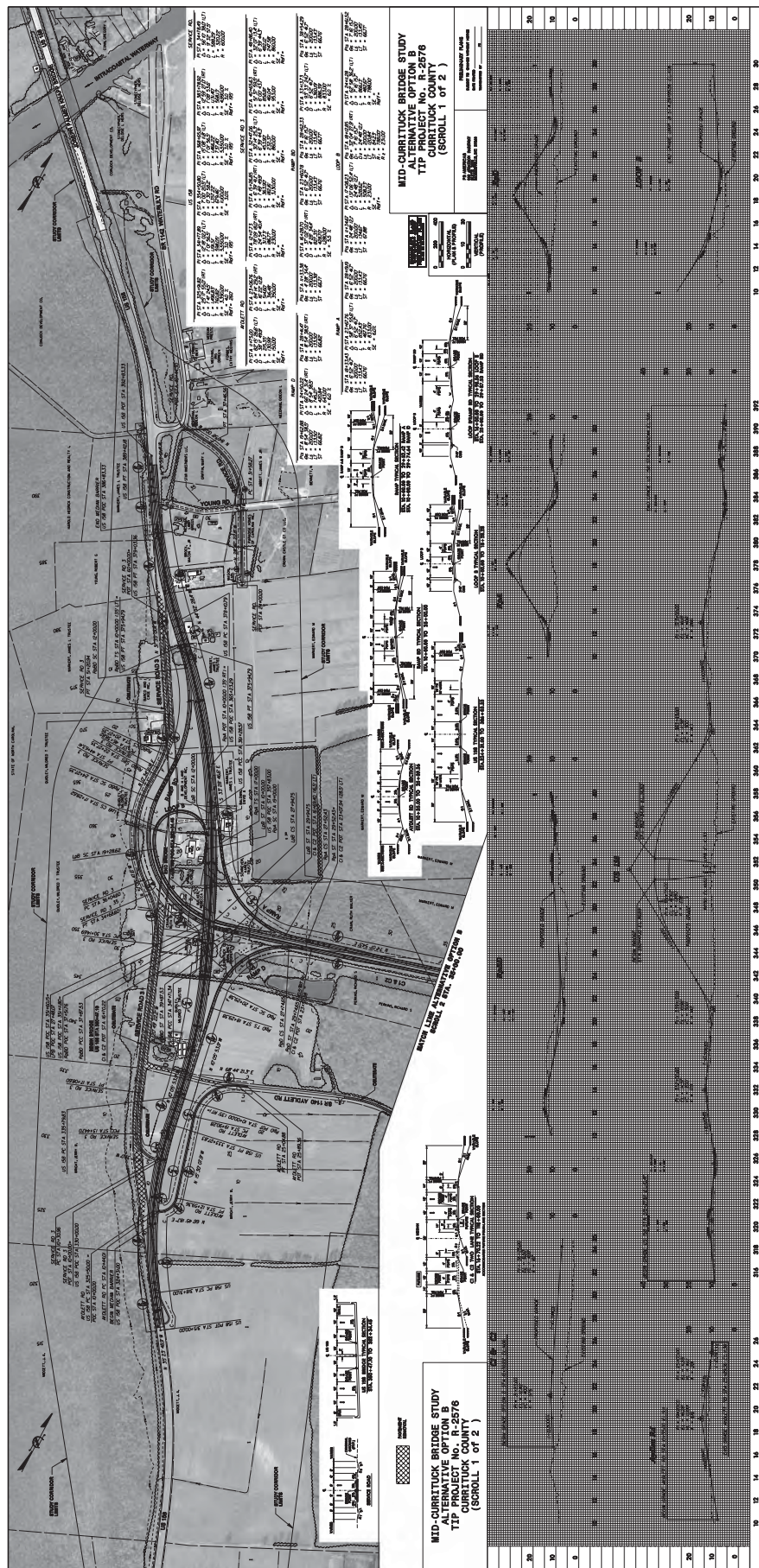
Business Relics  
 Photo #1  
 Photo #2  
 Photo #3



## Appendix D

### Maps Showing Alternative Option B Maps Provided by NCTA on 9/4/09









# *Appendix B*

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**Form CPA-106**

U.S. DEPARTMENT OF AGRICULTURE  
Natural Resources Conservation Service

NRCS-CPA-106

(Rev. 1-81)

FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request <b>2/10/09</b>		4. Sheet 1 of <b>2</b>	
1. Name of Project <b>Mid-Currituck Bridge Project</b>		5. Federal Agency Involved <b>Federal Highway Administration</b>			
2. Type of Project <b>Bridge and approach roads on new location</b>		6. County and State <b>Currituck and Dare, North Carolina</b>			
<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS <b>2-10-09</b>		2. Person Completing Form <b>John G. Gorman R.S.S.</b>	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply. Do not complete additional parts of this form.) YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated / Average Farm Size <b>NONE / 447</b>		5. Amount of Farmland As Defined in FPPA <b>Acres: 106 912 % 61</b>	
5. Major Crop(s) <b>CORN</b>		6. Farmable Land In Government Jurisdiction <b>Acres: 197 772 % 62</b>		7. Date Land Evaluation Returned by NRCS <b>2-27-09</b>	
8. Name Of Land Evaluation System Used <b>Currituck LE</b>		9. Name of Local Site Assessment System <b>NONE</b>			
<b>PART III (To be completed by Federal Agency)</b>		<b>Alternative Corridor For Segment</b>			
		ER2	MCB2C1	MCB2C2	MCB4C1
A. Total Acres To Be Converted Directly		128	262	255	159
B. Total Acres To Be Converted Indirectly, Or To Receive Services		128	262	255	159
C. Total Acres In Corridor		128	262	255	159
<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>					
A. Total Acres Prime And Unique Farmland		1.0	40.6	40.6	40.6
B. Total Acres Statewide And Local Important Farmland		6.8	20.8	20.8	20.5
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		4.01	4.01	4.01	4.01
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		61.2	61.2	61.2	61.2
<b>PART V (To be completed by NRCS) Land Evaluation Information Criteria Relative Value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>		2.8	30.2	31	49.7
<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>		Maximum Points			
1. Area in Nonurban Use		15	1	4	8
2. Perimeter in Nonurban Use		10	0	1	5
3. Percent Of Corridor Being Farmed		20	0	0	0
4. Protection Provided By State And Local Government		20	1	2	2
5. Size of Present Farm Unit Compared To Average		10	0	0	0
6. Creation Of Nonfarmable Farmland		25	0	0	0
7. Availability Of Farm Support Services		5	5	5	5
8. On-Farm Investments		20	1	2	2
9. Effects Of Conversion On Farm Support Services		25	0	0	0
10. Compatibility With Existing Agricultural Use		10	0	0	0
TOTAL CORRIDOR ASSESSMENT POINTS		160	8	14	22
<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)		100	2.8	30.2	49.7
Total Corridor Assessment (From Part VI above or a local site assessment)		160	8	14	22
TOTAL POINTS (Total of above 2 lines)		260	10.8	44.2	71.7
1. Corridor Selected:		2. Total Acres of Farmlands to be Converted by Project:		3. Date Of Selection:	
				4. Was A Local Site Assessment Used?	
				YES <input type="checkbox"/> NO <input type="checkbox"/>	
5. Reason For Selection:					

Signature of Person Completing this Part:

DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor



U.S. DEPARTMENT OF AGRICULTURE  
Natural Resources Conservation Service

NRCS-CPA-106  
(Rev. 1-91)

### FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request <b>2/10/09</b>		4. Sheet 2 of <b>2</b>	
1. Name of Project <b>Mid-Currituck Bridge Project</b>		5. Federal Agency Involved <b>Federal Highway Administration</b>			
2. Type of Project <b>Bridge and approach roads on new location</b>		6. County and State <b>Currituck and Dare, North Carolina</b>			
<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS		2. Person Completing Form	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply. Do not complete additional parts of this form). YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		4. Acres Irrigated		Average Farm Size	
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %			
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS			
<b>PART III (To be completed by Federal Agency)</b>		<b>Alternative Corridor For Segment</b>			
		<b>MCB4C2</b>			
A. Total Acres To Be Converted Directly		<b>152</b>			
B. Total Acres To Be Converted Indirectly, Or To Receive Services		<b>152</b>			
C. Total Acres In Corridor		<b>152</b>			
		<b>0 0 0</b>			
<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>					
A. Total Acres Prime And Unique Farmland		<b>40.6</b>			
B. Total Acres Statewide And Local Important Farmland		<b>20.5</b>			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		<b>2.01</b>			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		<b>61.9</b>			
<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative Value Of Farmland To Be Serviced or Converted (Scale of 0 - 100 Points)</b>		<b>51.9</b>			
<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>		<b>Maximum Points</b>			
1. Area In Nonurban Use	15	<b>10</b>			
2. Perimeter In Nonurban Use	10	<b>6</b>			
3. Percent Of Corridor Being Farmed	20	<b>0</b>			
4. Protection Provided By State And Local Government	20	<b>2</b>			
5. Size Of Present Farm Unit Compared To Averages	10	<b>0</b>			
6. Creation Of Nonfarmable Farmland	25	<b>0</b>			
7. Availability Of Farm Support Services	5	<b>5</b>			
8. On-Farm Investments	20	<b>2</b>			
9. Effects Of Conversion On Farm Support Services	25	<b>0</b>			
10. Compatibility With Existing Agricultural Use	10	<b>0</b>			
<b>TOTAL CORRIDOR ASSESSMENT POINTS</b>		<b>160 25 0 0 0</b>			
<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)		<b>100 51.9</b>			
Total Corridor Assessment (From Part VI above or a local site assessment)		<b>160 25 0 0 0</b>			
<b>TOTAL POINTS (Total of above 2 lines)</b>		<b>260 76.9 0 0 0</b>			
1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:		4. Was A Local Site Assessment Used?	
				YES <input type="checkbox"/> NO <input type="checkbox"/>	
5. Reason For Selection:					

Signature of Person Completing this Part:

DATE

**NOTE:** Complete a form for each segment with more than one Alternate Corridor

**FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS**

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request <b>2/10/09</b>		4. Sheet <b>3 of 3</b>	
1. Name of Project <b>Mid-Currituck Bridge Project</b>		5. Federal Agency Involved <b>Federal Highway Administration</b>			
2. Type of Project <b>Bridge and approach roads on new location</b>		6. County and State <b>Currituck and Dare, North Carolina</b>			
<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS <b>9-17-09</b>		2. Person Completing Form <b>John Gagnon</b>	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated <b>none</b>		Average Farm Size <b>447</b>	
5. Major Crop(s) <b>CORN</b>	6. Farmable Land in Government Jurisdiction Acres: <b>107,772</b> % <b>62</b>		7. Amount of Farmland As Defined in FPPA Acres: <b>106,912</b> % <b>61</b>		
8. Name Of Land Evaluation System Used <b>Currituck LE</b>	9. Name of Local Site Assessment System <b>NONE</b>		10. Date Land Evaluation Returned by NRCS <b>10-1-09</b>		
<b>PART III (To be completed by Federal Agency)</b>		Alternative Corridor For Segment <b>Option B</b>			
		MCB2/B/C1	MCB2/B/C2	MCB4/B/C1	MCB4/B/C2
A. Total Acres To Be Converted Directly		<b>296.7</b>	<b>290</b>	<b>193.8</b>	<b>187.1</b>
B. Total Acres To Be Converted Indirectly, Or To Receive Services		<b>0</b>	<b>0</b>		
C. Total Acres In Corridor		<b>296.7</b>	<b>290</b>	<b>193.8</b>	<b>187.1</b>
<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>					
A. Total Acres Prime And Unique Farmland		<b>76.2</b>	<b>76.2</b>	<b>76.2</b>	<b>76.2</b>
B. Total Acres Statewide And Local Important Farmland		<b>40.9</b>	<b>40.9</b>	<b>40.6</b>	<b>40.6</b>
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		<b>61.7</b>	<b>61.7</b>	<b>61.7</b>	<b>61.7</b>
<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>		<b>34.2</b>	<b>35.0</b>	<b>52.3</b>	<b>54.2</b>
<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>		Maximum Points			
1. Area in Nonurban Use		15	<b>4</b>	<b>4</b>	<b>8</b>
2. Perimeter in Nonurban Use		10	<b>1</b>	<b>1</b>	<b>5</b>
3. Percent Of Corridor Being Farmed		20	<b>0</b>	<b>0</b>	<b>0</b>
4. Protection Provided By State And Local Government		20	<b>2</b>	<b>2</b>	<b>2</b>
5. Size of Present Farm Unit Compared To Average		10	<b>0</b>	<b>0</b>	<b>0</b>
6. Creation Of Nonfarmable Farmland		25	<b>0</b>	<b>0</b>	<b>0</b>
7. Availability Of Farm Support Services		5	<b>5</b>	<b>5</b>	<b>5</b>
8. On-Farm Investments		20	<b>2</b>	<b>2</b>	<b>2</b>
9. Effects Of Conversion On Farm Support Services		25	<b>0</b>	<b>0</b>	<b>0</b>
10. Compatibility With Existing Agricultural Use		10	<b>0</b>	<b>0</b>	<b>0</b>
TOTAL CORRIDOR ASSESSMENT POINTS		160	<b>14</b>	<b>14</b>	<b>22</b>
<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)		100	<b>34.2</b>	<b>35.0</b>	<b>52.3</b>
Total Corridor Assessment (From Part VI above or a local site assessment)		160	<b>14</b>	<b>14</b>	<b>22</b>
<b>TOTAL POINTS (Total of above 2 lines)</b>		260	<b>48.2</b>	<b>49.0</b>	<b>74.3</b>
1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>		
5. Reason For Selection:					

Signature of Person Completing this Part:

DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

# *Appendix C*

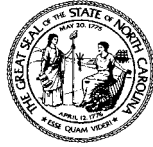
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## **Correspondence**

## C. Correspondence

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NCTA Response Letter to NCDENR-DCM Comments on CAMA Land Use Plan Provisional Consistency Determinations (January 12, 2011).....	C-2
NCDENR-DCM E-mail Responding to NCTA Response Letter (February 10, 2011) ..	C-15



STATE OF NORTH CAROLINA  
TURNPIKE AUTHORITY

BEVERLY E. PERDUE  
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER  
EXECUTIVE DIRECTOR

January 12, 2011

Ms. Charlan Owens, AICP  
NC DCM District Planner  
NCDENR-Division of Coastal Management  
1367 US 17 South  
Elizabeth City, North Carolina 27909

RE: Draft Environmental Impact Statement, Mid-Currituck Bridge Study (STIP Project No. R-2576), Currituck and Dare Counties, NCDENR-DCM Comments Related to Coastal Area Management Act (CAMA) Land Use Plan (LUP) Provisional Consistency Determinations

Dear Ms. Owens:

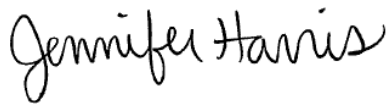
We are in receipt of NCDENR-DCM's June 4, 2010, comment letter (signed by Ms. Cathy Brittingham) on the Mid-Currituck Bridge Study Draft Environmental Impact Statement (DEIS). Those comments will be answered in the Final EIS. Also attached to the comment letter was a memorandum from you providing Provisional Consistency Determinations for some of the detailed study alternatives with respect to the CAMA LUPs in the project area (i.e., Currituck County, Town of Duck, Town of Southern Shores, and Town of Kitty Hawk). For example, the memorandum indicated that "the alternatives are consistent with the Town of Southern Shores 1997 LUP certified by the CRC on September 25, 1998." However, the memorandum also included requests for additional information before Provisional Consistency Determinations could be made for all of the detailed study alternatives.

Enclosed please find our responses to these requests for additional information. Each of your comments related to requests for additional information from the "Basis for Determination" sections of the memorandum for each LUP is listed separately, followed by a response that includes any relevant policy references.

Please note that although MCB4/C1 with mainland approach Option A is NCTA's recommended Preferred Alternative, we would like to have Provisional Consistency Determinations for all five of the detailed study alternatives analyzed in the DEIS. Please notify us if any additional information is needed beyond what we are providing in order to make these determinations. As indicated in your letter, we understand that a Formal Consistency Determination on the Preferred Alternative will not be made until a CAMA major permit application is submitted by NCTA and a formal NCDENR-DCM review is completed.

Thank you for your assistance in this matter. If you have any questions, please contact me at (919) 571-3000 or [jhharris1@ncdot.gov](mailto:jhharris1@ncdot.gov).

Sincerely,

A handwritten signature in black ink that reads "Jennifer Harris". The script is cursive and fluid, with the first name and last name clearly distinguishable.

Jennifer Harris  
Director of Planning & Environmental Studies

cc: Cathy Brittingham, NCDENR-DCM  
Tracy Roberts, HNTB/NCTA  
John Page, PB

# **Response to Comments and Questions Related to the Consistency of Mid-Currituck Bridge Detailed Study Alternatives with Project Area CAMA Land Use Plans**

January 12, 2011

## **I. CURRITUCK COUNTY 2006 LUP**

### **NCDENR-DCM Comments Related to Basis for Determination (Memorandum page 19 of 36):**

#### **Comment 1**

“Under Option B, traffic traveling between US 158 and Aydlett would use the bridge approach, with a local connection provided between the bridge approach road and the local Aydlett street system. The existing road connecting Aydlett to US 158 would be removed. Additionally, a lighted toll plaza would be placed in Aydlett. This proposal is in direct conflict with the Policy Emphasis for the "Intersection of Proposed Mid-County Bridge and US Highway 158" subarea designation on Page 11-7, the Policy Emphasis for "Aydlett and Waterlilly/Churches Island sub area designation on Page 11-8, and Policy TR 13 on Page 9-12. These policies address protection of the Aydlett community character with no access to be provided from the bridge road.”

#### Comment 1a:

“Additionally, a lighted toll plaza would be placed in Aydlett.”

#### Response 1a:

Agreed. The toll plaza would be lighted at night, and those lights would be seen by homes to the south. The nighttime lighting of the toll plaza was expressed as a concern by citizens from Aydlett, particularly as it relates to star gazing hobbyists who recognize Aydlett as an uncommon dark sky location. However, the decision has been made to not construct the toll plaza in the Aydlett community and to keep Aydlett Road open.

#### Comment 1b:

“This proposal is in direct conflict with the Policy Emphasis for the ‘Intersection of Proposed Mid-County Bridge and US Highway 158’ subarea designation on Page 11-7, the Policy Emphasis for ‘Aydlett and Waterlilly/Churches Island’ subarea designation on Page 11-8, and Policy TR 13 on Page 9-12. These policies address protection of the Aydlett community character with no access to be provided from the bridge road.”

#### Response 1b:

Agreed. Providing any access to the bridge other than at US 158 does conflict with the LUP. However, as stated above, the decision has been made to keep Aydlett Road open with no change in access (i.e., there will be no access to the bridge other than at US 158).

## **Comment 2**

“Additional information is needed concerning the protection of Natural Heritage Areas in Currituck County, specifically Maple Swamp. The bridge corridor passes through Maple Swamp. Under Option B, fill would be placed within the swamp, resulting in a significant encroachment into the floodplain and altering the watercourse. The bridge over Maple Swamp in Option A would drain directly into Maple Swamp. Clarify how the improvements are consistent with the ‘Conservation’ designation description, Policy ES 2 concerning swampland, Policy ES 8 concerning Natural Heritage Areas, Policy NH 3 concerning the mitigation of natural hazards, and Policy WQ 10 concerning water treatment discharges.”

### Comment 2a:

“Clarify how the improvements are consistent with the ‘Conservation’ designation description, Policy ES 2 concerning swampland [...]”

### Response 2a:

Policy ES 2, concerning swampland: *Non-coastal wetlands, including freshwater swamps, and inland, non-tidal wetlands, shall be conserved for the important role they play in absorbing floodwaters, filtering pollutants from stormwater runoff, recharging the ground water table, and providing critical habitat for many plant and animal species. Currituck County supports the efforts of the U.S. Army Corps of Engineers in protecting such wetlands through the Section 4042 permit program of the Clean Water Act, as well as Section 4013 water quality certifications by the State of North Carolina.*

The decision has been made to bridge Maple Swamp. The crossing will not affect surface water levels, storm surge levels, or the ground water.

### Comment 2b:

“Clarify how the improvements are consistent with the ‘Conservation’ designation description, [...] Policy ES 8 concerning Natural Heritage Areas [...]”

### Response 2b:

Policy ES 8, concerning Natural Heritage Areas: *Areas of the County identified for significant future growth shall avoid Natural Heritage Areas (e.g. Great Marsh on Knotts Island, Currituck Banks/Swan Island Natural Area, Currituck Banks Corolla Natural Area, Pine Island/Currituck Club Natural Area, Northwest River Marsh Game Land, and many other marsh areas on the mainland).*

The project does not fall within areas of the County identified for significant future growth that are also within Natural Heritage Areas. Also, the project is not anticipated to induce significant future growth in Natural Heritage Areas. Induced growth is expected to be confined to the proposed bridge’s interchange with US 158 on the mainland.



Comment 2c:

“Clarify how the improvements are consistent with the ‘Conservation’ designation description, [...] Policy NH 3 concerning the mitigation of natural hazards [...].”

Response 2c:

Policy NH 3, concerning the mitigation of natural hazards: *New public facilities and structures, as well as improvements to existing public facilities and structures, shall be located and designed to mitigate natural hazards. When placement in a natural hazard area is unavoidable, compliance with the National Flood Insurance Program and County Flood Damage Prevention Ordinance shall be required.*

The decision has been made to bridge Maple Swamp. The project will be designed to comply with the National Flood Insurance Program and the County Flood Damage Prevention Ordinance.

Comment 2d:

“Clarify how the improvements are consistent with the ‘Conservation’ designation description, [...] Policy WQ 10 concerning water treatment discharges.”

Response 2d:

Policy WQ 10, concerning water treatment discharges: *Sewage treatment discharges shall not be permitted into the waters of Currituck County. Water treatment discharges may be allowed if such discharge would not cause significant degradation of water quality (e.g. negatively affecting the fisheries resource).*

NCTA is working with NCDENR-DWQ to develop a stormwater management plan for the Mid-Currituck Bridge that will meet their requirements and not significantly degrade water quality.

**Comment 3**

“Additional information is also needed concerning anticipated shoreline stabilization to address Policy NH8, the use of vegetated buffers along shorelines to address Policy ES4 and Policy WQ6, handicapped accessibility of proposed public access facilities to address Policy PA2, use of vegetated roadside swales in handling of stormwater drainage to address Policy WQ7, proposed highway corridor improvements to address Policy CA1 and Policy CA2, relocation of utilities underground to address Policy CA6, including traffic signals in Lower Currituck to address the “Point Harbor” subarea description on Page 11-10, and the anticipated infrastructure for day visitors and service needs for Currituck County to address Action TR3.”

Comment 3a:

“Additional information is also needed concerning anticipated shoreline stabilization to address Policy NH8 [...].”

Response 3a:

Policy NH8, anticipated shoreline stabilization: *Currituck County encourages owners of properties along estuarine shorelines to employ the least hardened approach to shoreline stabilization (i.e. marsh grass favored over riprap favored over bulkheading, etc.), provided that reasonable access is available to install the technology available.*

Shoreline stabilization would not be needed with most of the construction methods that are being considered for the proposed Mid-Currituck Bridge; however, one approach that is being considered for bringing supplies to the proposed bridge and barges on the western shore of Currituck Sound would involve using temporary shoring to extend the existing north/south seawall/bulkhead from just south of the proposed bridge to just north of the proposed bridge. With the temporary shoring in place to stabilize the shoreline, a crane could be parked along the shoreline and used to load material on to waiting barges. If desired, this shoring could be left in place after construction is completed. These decisions would be made in consultation with NCDENR-DCM during the CAMA permitting process.

Comment 3b:

“Additional information is also needed concerning [...] the use of vegetated buffers to address Policy ES4 and Policy WQ6 [...].”

Response 3b:

Policy ES4, the use of vegetated buffers along shorelines: *Currituck County shall support the retention or creation of a vegetated buffer area along estuarine shorelines as a simple, effective and low-cost means of preventing pollutants from entering estuarine waters. Exceptions to this requirement may include developments involving pre-existing man-made features such as hardened shorelines, ditches, and canals. Farming and forestry operations that abide by appropriate “best management practices” are also exempt. The County also supports CAMA use standards for all coastal shorelines, whether estuarine or otherwise.*

Policy WQ6, the use of vegetated buffers along shorelines: *Currituck County supports the retention or preservation of vegetated buffers along the edge of drainage ways, streams and other components of the estuarine system as an effective, low cost means of protecting water quality.*

NCTA is currently working with NCDENR-DWQ on a stormwater management plan to minimize pollutants from entering estuarine waters. Current vegetated buffers will not be removed beyond the bridge approach footprint.

Comment 3c:

“Additional information is also needed concerning [...] handicapped accessibility of proposed public access facilities to address Policy PA2 [...].”

Response 3c:

Policy PA2, handicapped accessibility of proposed public access facilities: *The County supports many forms of 'access' to the water, including scenic outlooks and boardwalks, boat ramps, marinas and docks, fishing piers, canoe and kayak launches, and other means of access. Whenever possible, such facilities shall be designed to accommodate the needs of handicapped individuals.*

Pedestrian and bicycle provisions are now planned for the bridge, which, if feasible, would be constructed to meet requirements of the Americans with Disabilities Act, as applicable.

Comment 3d:

"Additional information is also needed concerning [...] use of vegetated roadside swales in handling of stormwater drainage to address Policy WQ7 [...]."

Response 3d:

Policy WQ7, use of vegetated roadside swales in handling of stormwater drainage: *The environmental benefits of properly designed, vegetated roadside drainage swales shall be recognized. Curb and gutter shall be reserved to developments that are urban in character (i.e. less than 10,000 square foot lot sizes) and that are served by adequate stormwater collection, retention and slow release facilities.*

In most areas, vegetated roadside drainage swales would be used on roadway components of the project. Curb and gutter is only planned for a short distance along the eastern side of NC 12 to the south of Albacore Street adjacent to the existing stormwater retention ponds across from the TimBuck II development. The curb and gutter is necessary in this portion of the NC 12 commercial area because of the close proximity of the existing ponds to the edge of NC 12.

Comment 3e:

"Additional information is also needed concerning [...] proposed highway corridor improvements to address Policy CA1 and Policy CA2 [...]."

Response 3e:

Policy CA1, proposed highway corridor improvements: *The important economic, tourism, and community image benefits of attractive, functional major highway corridors through Currituck County shall be recognized. Such highway corridors, beginning with US 158 and NC 168, shall receive priority attention for improved appearance and development standards, including driveway access, landscaping, buffering, signage, lighting and tree preservation.*

Policy CA2, proposed highway corridor improvements: *A canopy of street trees shall be encouraged along all major highways in the County. This canopy may be implemented through the preservation of existing trees or the planting of trees that will reach substantial size at maturity. The preservation or planting of such trees shall be encouraged in the area immediately adjoining the right of way.*

The project's appearance will be a consideration in finalizing the project's design. Trees will be preserved where possible. Landscaping decisions will be made during final design.

Comment 3f:

"Additional information is also needed concerning [...] relocation of utilities underground to address Policy CA6 [...]."

Response 3f:

Policy CA6, relocation of utilities underground: *To foster an improved community appearance, promote public safety, and help prevent service outages, the placement of utility wires underground shall be encouraged in all public and private developments.*

Above ground utilities are not planned for the project. The relocation of utilities would be included in final design plans. Decisions related to the manner of existing utility relocations along US 158 and NC 12 will be made by the utility companies. NCTA would coordinate construction activities with the appropriate officials to minimize damage or disruption of existing service.

Comment 3g:

"Additional information is also needed concerning [...] traffic signals in Lower Currituck to address the 'Point Harbor' subarea description on Page 11-10 [...]."

Response 3g:

With respect to traffic signals in the Lower Currituck "Point Harbor" subarea the Currituck County 2006 Land Use Plan states the following on page 11-10: *Coordinate with NCDOT for the strategic placement of traffic signals along US 158 in the Southern portion of the Mainland.*

No changes in traffic signal locations along US 158 in the southern portion of the mainland are anticipated with any of the detailed study alternatives.

Comment 3h:

"Additional information is also needed concerning [...] the anticipated infrastructure for day visitors and service needs for Currituck County to address Action TR3."

Response 3h:

Action TR3, the anticipated infrastructure for day visitors and service needs for Currituck County: *Establish a Task Force to look at the broad implications of a mid county bridge and its potential impacts, such as growth in the RO2 COBRA zone, beach access and other infrastructure needs of increased numbers of day visitors, changes in county services such as law enforcement, economic impacts on the Mainland and the Outer Banks, etc. The findings of such a task force should be made available well in advance of the construction of the bridge.*

The county is welcome to establish such a task force. The ICE analysis in the DEIS assesses the potential for day visitors mentioned in the action item. This could serve as a starting

point for such a task force. Ben Woody, Currituck County Planning Director, told representatives of NCTA in a December 13, 2010 telephone conversation that the county commissioners already have plans to appoint a task force, but they do not want to start this effort until they know for sure where the bridge termini will be located. They expect this effort will take approximately one year to complete.

## II. TOWN OF KITTY HAWK 2004 LUP

### **NCDENR-DCM Comments Related to Basis for Determination (Memorandum page 25 of 36):**

#### **Comment 1**

“Additional information is needed concerning anticipated shoreline stabilization to address Policy #6d, anticipated wetland mitigation to address Policy #12b, handling of stormwater drainage to address Policy #21a, Objective #21b, and Objective #23d, and proposed multi-use trail enhancement to address Objective #23i.”

##### Comment 1a:

“Additional information is needed concerning anticipated shoreline stabilization to address Policy #6d [...]”

##### Response 1a:

Policy #6d, anticipated shoreline stabilization: *Kitty Hawk supports the construction of properly permitted estuarine bulkheads. It is the policy of Kitty Hawk to support State rules regarding bulkheading. Alternative uses such as sills and marsh plantings and other more environmentally friendly erosion control measures will be welcomed and preferred to bulkheading when conditions are favorable to such use.*

No part of MCB4 is located in Kitty Hawk, and ER2 and MCB2 do not include components in estuarine areas in Kitty Hawk. The only portion of the project in Kitty Hawk is the US 158 improvements from the Wright Memorial Bridge to the NC 12 area on the south side of the road with ER2 and MCB2.

##### Comment 1b:

“Additional information is needed concerning [...] anticipated wetland mitigation to address Policy #12b [...]”

##### Response 1b:

Policy #12b, anticipated wetland mitigation: *Kitty Hawk supports CAMA regulations as applicable and also the U. S. Army Corps of Engineers in its enforcement of regulations pertaining to ‘404 Wetlands’ with the exception of Corps’ allowance of mitigation measures to be undertaken on sites outside of Town when filling is allowed within the Town.*

Minimal wetland impacts are expected in Kitty Hawk with any of the detailed study alternatives. All US Army Corps of Engineers requirements will be met with any alternative.

Comment 1c:

“Additional information is needed concerning [...] handling of stormwater drainage to address Policy #21a, Objective #21b, and Objective #23d [...]”

Response 1c:

Policy #21a, handling of stormwater drainage: *Kitty Hawk is committed to minimizing and mitigating the effects of storm water drainage and to implementing a comprehensive approach to storm water management. The Town supports the concept of ocean outfalls as a means to remove stormwater from low lying areas during emergency situations. Kitty Hawk supports the concept that all stormwater should be contained on the property where it was generated, except in circumstances where rainfall exceeds that of a five-year storm.*

Objectives #21b and #23d, handling of stormwater drainage: *Ensure that North Carolina Department of Transportation provides appropriate and timely levels of service with respect to storm water drainage issues within Kitty Hawk.*

There would not be any construction in Kitty Hawk with MCB4 because construction would be limited to the north side of US 158 on the Outer Banks (for the addition of a third outbound lane for hurricane evacuation between NC 12 and Cypress Knee Trail). With ER2 and MCB2, any roadside drainage along US 158 in Kitty Hawk would be accommodated by roadside drainage ditches.

Comment 1d:

“Additional information is needed concerning [...] proposed multi-use trail enhancement to address Objective #23i.”

Response 1d:

Objective #23i, proposed multi-use trail enhancements: *Maintain and enhance the multi-use trail system).*

Existing multi-use paths for bicyclists and pedestrians affected by any of the detailed study alternatives would be replaced in-kind along both US 158 and NC 12.

### **III. TOWN OF DUCK 2004 LUP**

#### **NCDENR-DCM Comments Related to Basis for Determination (Memorandum page 35 of 36):**

**Comment 1**

“Under no bridge alternative E2 and bridge alternative MCB2, the entire NC 12 roadway through the Town of Duck would be widened to a three-lane roadway. Currently, only the

Duck village area is a three-lane roadway. This is in direct conflict with Policy #26a, Page IX-26 and implementing Objective #26b, Page IX-26 to maintain the existing two-lane configuration of NC 12."

Response 1:

Policy #26a, Page IX-26: *Duck supports the construction of a mid-Currituck County bridge and maintenance of the existing two-lane configuration of NC 12 with the Duck Trail along NC 12 through Duck.*

Objective #26b, Page IX-26: *Lobby for maintaining NC 12 as a two-lane facility in its present configuration through Duck.*

Agreed. ER2 and MCB2 would be in direct conflict with Policy #26a and Objective #26b. MCB4 would not be in conflict with Policy #26a and Objective #26b.

**Comment 2**

"Additional information is also needed concerning handling of stormwater drainage to address Policy #13i and Objective #23b, proposed multi-use trail enhancements to address Policy #8a, Objectives #8b, #8e, #8f, #8g, #8h, #8j, and Objectives #17g and #17h, and relocation of utilities underground to address Policy #14a."

Comment 2a:

"Additional information is also needed concerning handling of stormwater drainage to address Policy #13i and Objective #23b [...]."

Response 2a:

Policy #13i: *Take steps locally and in conjunction with NCDOT and adjacent jurisdictions to improve traffic safety and drainage to mitigate the impact of localized flooding and seek alternative methods of hazard avoidance such as construction of the mid-Currituck (County) Bridge.*

Objective #23b: *Encourage the North Carolina Department of Transportation to provide appropriate and timely response to storm water drainage issues within Duck.*

The accommodation of drainage on NC 12 was a focus in developing the preliminary designs along NC 12, both because a wider NC 12 would generate more runoff and because existing road flooding would continue to occur on NC 12 during storm events without improvement.

The preliminary designs for NC 12 with the detailed study alternatives generally use infiltration strategies, along with a limited number of outfalls to Currituck Sound. Infiltration strategies involve locations for water to be absorbed into the ground rather than be transported to and released into a water body like Currituck Sound. The infiltration strategies would include infiltration basins and linear infiltration strips (roadside ditches).



Infiltration basins and linear infiltration strips would remain dry except during and after storms. These volume-based Best Management Practices (BMPs) would be sized to store temporarily the runoff from a 10-year storm. The infiltration strategies closely replicate existing drainage patterns, while improving storage capacity during the infiltration process. The specific approach to be taken varies along the roadway corridor for the NC 12 widening alternatives.

Comment 2b:

“Additional information is also needed concerning [...] proposed multi-use trail enhancements to address Policy #8a, Objectives #8b, #8e, #8f, #8g, #8h, #8j, and Objectives #17g and #17h [...].”

Response 2b:

Policy #8a: *Duck supports the continued maintenance of the Duck Trail and efforts to enhance, improve, and expand the facility to provide a safe setting for recreation and as an alternative transportation route.*

Objective #8a: *Seek ways to manage and support Duck Trail use.*

Objective #8e: *Seek ways to improve safety along Duck Trail, particularly at cross streets, cross walks, and parking area entrances and exits.*

Objective #8f: *Support the addition or incorporation of appropriate landscaping to better define Duck Trail and improve user safety.*

Objective #8g: *Support the placement of appropriate signage and marking(s) along Duck Trail and the installation of information kiosks to provide maps, safety and contact information, local events calendar(s), and information on the positive health and recreation benefits of biking and walking/jogging.*

Objective #8h: *Support the creation of way stations/rest areas, the installation of bicycle racks, and incorporate fitness stations as appropriate at various points along Duck Trail.*

Objective #8j: *Support efforts to enhance and improve the connectivity of Duck Trail facilities.*

Objective #17g: *Seek ways to minimize conflicts between pedestrians and vehicles and improve safety along Duck Trail, particularly at cross streets and parking area entrances and exits.*

Objective #17h: *Encourage the placement of appropriate signage and marking(s) along Duck Trail to improve safety.*

Existing multi-use paths for bicyclists and pedestrians affected by any of the detailed study alternatives would be replaced in-kind along both US 158 and NC 12. In addition, space

would be provided along widened sections of NC 12 with any of the detailed study alternatives to accommodate future installation of new multi-use paths by others in areas where there are no existing paths.

Comment 2c:

“Additional information is also needed concerning [...] relocation of utilities underground to address Policy #14a.”

Response 2c:

Policy #14a: *Duck supports the placement or replacement of utility lines underground.*

Above ground utilities are not planned for the project. The relocation of utilities would be included in final design plans. Decisions related to the manner of existing utility relocations along US 158 and NC 12 will be made by the utility companies. NCTA would coordinate construction activities with the appropriate officials to minimize damage or disruption of existing service.

**Norburn, Robert E.**

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**From:** Brittingham, Cathy [cathy.brittingham@ncdenr.gov]  
**Sent:** Thursday, February 10, 2011 4:37 PM  
**To:** Roberts, Tracy  
**Cc:** Harris, Jennifer; Page, John; Norburn, Robert E.; Owens, Charlan  
**Subject:** RE: Mid-Currituck Bridge DEIS

Hello Tracy,

Charlan and I discussed the e-mail from NCTA dated 1/12/11, along with the NCTA responses that were attached to that e-mail.

DCM appreciates the time and effort that NCTA has spent in addressing this issue. The information provided in the NCTA 1/12/11 response will be very helpful.

Based upon the currently available information, it does not appear as though the NCTA/FHWA preferred alternative is in conflict with the CAMA land use plans. However, at this time, it is premature for DCM to prepare a provisional consistency determination of the detailed study alternatives with respect to the CAMA LUP's in the project area. DCM will prepare a provisional consistency determination of the detailed study alternatives with respect to the CAMA LUP's in the project area after we receive the signed FEIS.

If you have any questions or concerns, please contact me by phone at (919) 733-2293 x238 or via e-mail and I will coordinate with Charlan.

Sincerely,

Cathy Brittingham

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**From:** Roberts, Tracy  
**Sent:** Wednesday, February 09, 2011 3:26 PM  
**To:** Owens, Charlan  
**Cc:** Brittingham, Cathy; Harris, Jennifer; pagej,; Norburn, Robert E.  
**Subject:** FW: Mid-Currituck Bridge DEIS

Ms. Owens,

I'm just checking in to see if you have any questions or need additional information from us. We'd like to include your updated provisional CAMA consistency determinations in our FEIS. As you know, NCTA now has a Preferred Alternative and we'd like a consistency call on that alternative also. The Preferred Alternative is very similar to MCB4/A/C1 except that we reduced considerably the NC 12 widening.

The consistency determinations are particularly important to us since DCM's 6/4/10 comments on the DEIS indicated that CAMA land use plan conformity could become an issue of concern (in the context of the Section 6002 Coordination Plan) if your comments are not adequately addressed during the environmental review process.

If possible, we'd like your (provisional) consistency determinations by Friday, February 18th. Please let me know if this date is agreeable to you.

Thanks  
Tracy

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**From:** Roberts, Tracy  
**Sent:** Wednesday, January 12, 2011 5:45 PM  
**To:** Owens, Charlan  
**Cc:** Brittingham, Cathy; Harris, Jennifer; pagej,; 'Norburn, Robert E.'  
**Subject:** Mid-Currituck Bridge DEIS

Ms. Owens,

We are in receipt of NCDENR-DCM's June 4, 2010, comment letter (signed by Ms. Cathy Brittingham) on the Mid-Currituck Bridge Study Draft Environmental Impact Statement (DEIS). Attached to the comment letter was a memorandum from you providing Provisional Consistency Determinations for some of the detailed study alternatives with respect to the CAMA LUPs in the project area. The memorandum also included requests for additional information before Provisional Consistency Determinations could be made for all of the detailed study alternatives.

Jennifer Harris asked that I forward to you the attached responses to your requests for additional information. The attachment is being sent via email only. If you need a hard copy mailed to you, please let me know.

Thanks  
Tracy

Please note the change in email address [teroberts1@ncdot.gov](mailto:teroberts1@ncdot.gov)

\*\*\*\*\*

Tracy Roberts, AICP  
Consultant  
North Carolina Turnpike Authority  
(919) 788-7147 office phone

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# *Appendix D*

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## **US 158 Business Survey Results**



**To:** John Page  
**From:** Carolyn Trindle  
**Date:** November 19, 2010  
**Subject:** Mid-Currituck Bridge CIA – Survey of US 158 Mainland Businesses Related to the Effects of the Mid-Currituck Bridge

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On November 16 and 17, 2010, a field visit was made to the Currituck County peninsula to solicit input from business owners or managers from businesses along US 158 concerning their opinion on the effect the Mid-Currituck Bridge might have on their business. Of the businesses queried, one-half indicated that the Mid-Currituck Bridge would adversely affect their business, while one-half indicated that the presence of the Mid-Currituck Bridge would not adversely affect their business.

Cold-calls were made on 26 businesses along US 158 south of Aydlett and on one business on NC 12 in Duck. PB business cards were presented to each and each was informed that PB is responsible for the environmental work for the proposed Mid-Currituck Bridge Project. It was explained that the bridge was projected to divert 20 to 25 percent of traffic from US 158. It was then explained that the Draft EIS had not considered how diversion of traffic, especially on summer weekends, might affect businesses along US 158. The interviewees were informed that these cold calls were to solicit their input by asking at this time how they thought traffic diversion would affect their businesses.

A standard questionnaire was used to ask the same questions to each business representative that was interviewed. The raw data with the business representatives responses to the questionnaire are attached (Attachment A). A table summarizing the responses for each person/business interviewed also is attached (Attachment B). Proposed text for the CIA is provided as Attachment C.

### **RESULTS SUMMARY**

Each business representative of the 26 businesses visited on November 16 and 17, 2010 was asked: Will the proposed Mid-Currituck Bridge adversely affect businesses along US 158 south of Aydlett?

For each of the 26 establishments that was visited, the owner or manager was asked to respond to the issue of how the proposed bridge would affect that particular business.

The responses varied, generally, by type of business. Businesses that are tourist-dependent generally felt that the presence of a bridge that would divert 20 to 25 percent of traffic would be detrimental. Businesses that are not tourist-dependent generally felt that the presence of a bridge would be a potential benefit.

For example, fast-food restaurants and stores that rely on drive-by customers (Dollar Store, Lammer's Stained Glass and Gifts, Beach Organics) believe less traffic will mean less business. Stores that sell to home owners and permanent residents generally believe a new bridge would be helpful. Of the 26 businesses surveyed, 13 believe the bridge will be detrimental to the extent that fewer drive-bys will mean fewer customers. The other 13 believe the bridge would be beneficial, as it would enable customers to access their stores any day of the week. Currently, traffic on summer weekends keeps much of the non-tourist population from driving on US 158. The decline in customer base on the weekends because of tourist traffic is such that some of the stores close on summer weekends; the number of customers drops so substantially that it is not profitable for them to remain open for business. None of those interviewed said they would go out of business as a result of a decrease in customers because of the bridge.

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**ATTACHMENT A**  
**QUESTIONNAIRES**  
**(EFFECT OF BRIDGE ON BUSINESSES ALONG US 158)**



## SURVEY INTRODUCTION AND QUESTIONS

Name, PB. Preparing Final EIS for Mid-Currituck Bridge project.

This survey is being conducted because, in the EIS, we did not consider how diversion of traffic, especially on summer weekends, might affect businesses along US 158.

The Turnpike Authority is currently working with environmental regulatory agencies to resolve key environmental concerns associated with a Mid-Currituck Bridge. Other design refinements are being made to the bridge project to address a variety of concerns raised during the comment period for the Draft Environmental Impact Statement (EIS). Once these issues are resolved, a Preferred Alternative will be announced. If a bridge project is selected, the Turnpike Authority will issue a Final Environmental Impact Statement, followed by a Record of Decision (sometime next year [2011]).

Name of Business \_\_\_\_\_

Address \_\_\_\_\_

Name/Position \_\_\_\_\_

1. Are you aware of the proposed Mid-Currituck Bridge project?
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business?
4. In what way?
  - During the summer tourist season
  - Other times of the year
5. On a year-round basis, what is your busiest time of year?
6. Are you closed in the off-peak season?
7. What is it like on weekends during the summer tourist season?

## SURVEY INTRODUCTION AND QUESTIONS

Just build it!  
Quit messing with  
my life! (1)

Name, PB. Preparing Final EIS for Mid-Currituck Bridge project.

This survey is being conducted because, in the EIS, we did not consider how diversion of traffic, especially on summer weekends, might affect businesses along US 158.

The Turnpike Authority is currently working with environmental regulatory agencies to resolve key environmental concerns associated with a Mid-Currituck Bridge. Other design refinements are being made to the bridge project to address a variety of concerns raised during the comment period for the Draft Environmental Impact Statement (EIS). Once these issues are resolved, a Preferred Alternative will be announced. If a bridge project is selected, the Turnpike Authority will issue a Final Environmental Impact Statement, followed by a Record of Decision (sometime next year [2011]).

Name of Business

Stuff-store

Address

4995 / 4987 Decatur Auto

Name/Position

Lynn Gagnon  
David Baldwin

Build it or don't.  
Make a decision.

Gone bc of interchange.  
Just build it!  
Hanging over his head.

1. Are you aware of the proposed Mid-Currituck Bridge project?

Yes / Yes

2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

yes will have to move

4. In what way?

Move - relocate after 20 yrs.

- During the summer tourist season
- Other times of the year

Tourists not a factor.  
not to see the flea  
market.

5. On a year-round basis, what is your busiest time of year?

off-peak

6. Are you closed in the off-peak season?

No

7. What is it like on weekends during the summer tourist season?

Couldn't  
get off the road  
Close weekends. 12 June  
in summer.

## SURVEY INTRODUCTION AND QUESTIONS

Name, PB. Preparing Final EIS for Mid-Currituck Bridge project.

This survey is being conducted because, in the EIS, we did not consider how diversion of traffic, especially on summer weekends, might affect businesses along US 158.

The Turnpike Authority is currently working with environmental regulatory agencies to resolve key environmental concerns associated with a Mid-Currituck Bridge. Other design refinements are being made to the bridge project to address a variety of concerns raised during the comment period for the Draft Environmental Impact Statement (EIS). Once these issues are resolved, a Preferred Alternative will be announced. If a bridge project is selected, the Turnpike Authority will issue a Final Environmental Impact Statement, followed by a Record of Decision (sometime next year [2011]).

Name of Business Coastal Accents  
Address 5705 Carotake Hwy  
Name/Position Mary Rose

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? Went be driving by store.
4. In what way?
  - During the summer tourist season
  - Other times of the yearYear Round.  
Many owners - enjoy off season
5. On a year-round basis, what is your busiest time of year? All year
6. Are you closed in the off-peak season? Not cannot driven
7. What is it like on weekends during the summer tourist season?

Year Round. Crowded Sit.

## SURVEY INTRODUCTION AND QUESTIONS

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Name of Business Digger's Dungeon  
Address 5750 Carafake Hwy  
Name/Position Salvino / Mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks. Good & bad - miss traffic coming past. Easier to return
3. Do you think that might affect your business? even to 158 - "pop over"
4. In what way?

- During the summer tourist season
- Other times of the year

5. On a year-round basis, what is your busiest time of year? Summer
6. Are you closed in the off-peak season? Jan Feb.
7. What is it like on weekends during the summer tourist season?

Tourists - some travel - nights or when shop closed  
from Orlando - Budget everywhere - just pop up



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Name of Business

OL W Racing Stable

Woody's 5

Address

6402 Caratoke Hwy

Name/Position

Dana Riddick

1. Are you aware of the proposed Mid-Currituck Bridge project? *Yes*
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? *Yes*
4. In what way?
  - During the summer tourist season
  - Other times of the year*Lose passing traffic. Tourists.*
5. On a year-round basis, what is your busiest time of year? *Summer*
6. Are you closed in the off-peak season? *No*
7. What is it like on weekends during the summer tourist season?

*Traffic stopped - sometimes to Banco -  
Some stop in to wait out traffic*

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Name of Business ABC LIQUOR  
Address 6420 Carotake Hwy  
Name/Position Grade / co-mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project? *no - does not live in this area*
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? *Not really bc so many local people.*
4. In what way?
  - During the summer tourist season *no bc most people going to Nags Head, Hatteras*
  - Other times of the year *∴ not so much from bridge*
5. On a year-round basis, what is your busiest time of year? *Summer, Saturday*
6. Are you closed in the off-peak season? *Sundays.*
7. What is it like on weekends during the summer tourist season?  
*Non-stop crazy accidents  
mess - can't pull out of 1 pks.  
Can't get to beach.*



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Name of Business Dollar General

Address 6431 Carafake

Name/Position Lester / Store Mgr.

Sat summers = in store

1. Are you aware of the proposed Mid-Currituck Bridge project? no
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business? Lose business

4. In what way?

- During the summer tourist season
- Other times of the year

5. On a year-round basis, what is your busiest time of year? Yes
6. Are you closed in the off-peak season? no - Christmas Day
7. What is it like on weekends during the summer tourist season? Steady, busy

Toll = crazy

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Name of Business McDonalds  
Address 6465 Caratoke  
Name/Position Jessica / Shift Mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? Yes, summer quite a bit.
4. In what way?
  - During the summer tourist season
  - Other times of the year
5. On a year-round basis, what is your busiest time of year? Summer
6. Are you closed in the off-peak season? No
7. What is it like on weekends during the summer tourist season? \$ Summer  
Broke all records for a Sat.  
Owner's 13 Mc'Ds

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Name of Business

Alway N' Bloom / Christian Bookstore

Address

6528 Carotake Grandy

Name/Position

Sharon Price / florist / Ben Baum Bookstore

1. Are you aware of the proposed Mid-Currituck Bridge project?

Yes

2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

Might help bc people could get off the road, could deliver flowers to Corolla!

4. In what way?

- During the summer tourist season
- Other times of the year

Valentine's Day / Mother's Day

5. On a year-round basis, what is your busiest time of year?

6. Are you closed in the off-peak season?

No

7. What is it like on weekends during the summer tourist season?

Christian Bookstore - No effect on business  
Business open all year.



If not going to bridge, bridge would be better.  
have not know when to go to proceed  
store on week/ends.

Lots alcohol probs, esp in summer.

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Name of Business

Subway

"leaf alley"

One Sat took 1 1/4 hr  
40 mins to get to work.

Address

Caratoke

Name/Position

Kathy

/mgr.

Bridge is needed, but will hurt a lot of people.

1. Are you aware of the proposed Mid-Currituck Bridge project?

Yes

2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

Definitely —  
lose business drastically  
Summer traffic "makes this area"

4. In what way?

- During the summer tourist season
- Other times of the year

2 April-Sept Busiest

5. On a year-round basis, what is your busiest time of year?

Bad all summer deep, esp summer.

6. Are you closed in the off-peak season?

Year-round

7. What is it like on weekends during the summer tourist season?

Traffic  
lumpy - bumpy - get northbound traffic.  
6:00 am - 7:00 pm - S bound can't  
cross

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Name of Business Brack Organics  
Address Caratoke  
Name/Position Lynn Zimmerman/Owner/Mgr

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? Absolutely
4. In what way? Customers away
  - During the summer tourist season Yes basnest
  - Other times of the year
5. On a year-round basis, what is your busiest time of year?
6. Are you closed in the off-peak season? No
7. What is it like on weekends during the summer tourist season?

Most people talked to are opposed to bridge.  
Environmental affect - unspoiled part.  
Even people in Corolla don't want it.



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Name of Business

Cotton Gin

Address

Name/Position

Thomas Wright / owner family

1. Are you aware of the proposed Mid-Currituck Bridge project?

Yes

2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

Yes - long term, no.

4. In what way?

- During the summer tourist season
- Other times of the year

On yes.  
holiday.

5. On a year-round basis, what is your busiest time of year?

8-12 wk.

6. Are you closed in the off-peak season?

7. What is it like on weekends during the summer tourist season?

Bridge improve business even more bc traffic.  
Mid week businesses improve bc of improved travel.

Toward Poplar Branch -  
Property being farmed.  
Haven't paid -  
Proposed development.  
Sof Aydlitt  
W of shore  
Rd.

Golf courses out of it  
during summer weekends

beauty  
dependent on  
beach.

Locals can't get out w/e.  
Tourists do not know that  
traffic ↓ during the wk.

Road so difficult  
Sat/Sun - by business  
people had to alter  
traffic patterns -  
10 yrs ↑

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Name of Business Lammer's Stained Glass, Gifts  
Address Caratoke Hwy and Currituck  
Name/Position Christin / Mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? Yes.
4. In what way?
  - During the summer tourist season
  - Other times of the year

Somewhere will be bottleneck - unless widen NC 12. Running higher income out.
5. On a year-round basis, what is your busiest time of year? Summer
6. Are you closed in the off-peak season? → January for inventory
7. What is it like on weekends during the summer tourist season? Lots of business from road.

IDEA - Ask people who are in traffic.

Traffic probs - bathrooms none.



## SURVEY INTRODUCTION AND QUESTIONS

2 hrs 158  
2 hrs Corolla

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Name of Business

Food Lion - Back from Hwy. not visible

Address

Caratoka

Name/Position

Charlene Shackelford / MGR.

Even locals don't come out on weekends bc of traffic.

1. Are you aware of the proposed Mid-Currituck Bridge project?

Yes

2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

Don't think so

4. In what way?

Lost business bc of traffic.

few stuck in traffic - get groceries

- During the summer tourist season

- Other times of the year

5. On a year-round basis, what is your busiest time of year?

Don't know

6. Are you closed in the off-peak season?

No

7. What is it like on weekends during the summer tourist season?

But good idea. Few know prices ↓ than beach for themselves & re: business.

In favor of bridge

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Name of Business North River Sales - Used Cars  
Address 8090 Carafake Grandy  
Name/Position Al Morris / Owner

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business?
4. In what way?
  - During the summer tourist season
  - Other times of the year
5. On a year-round basis, what is your busiest time of year?
6. Are you closed in the off-peak season? Varies
7. What is it like on weekends during the summer tourist season?

Godsend — Southern Shows  
Business — Weekends  
almost pks lot  
Saturday —  
no locals to  
car shop  
stay away from  
here.

Don't open  
on Sat during Summer.

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Name of Business Shops International  
Address PO Box 367 Grandy  
Name/Position George

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

4. In what way?

- During the summer tourist season
- Other times of the year

5. On a year-round basis, what is your busiest time of year?

6. Are you closed in the off-peak season?

7. What is it like on weekends during the summer tourist season?

No bus - Sat - 9-10 am  
4-5 pm



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Name of Business

~~Hank-Dee Hugo's Exxon~~  
~~Deborah - East Mgr.~~ across from  
Mc. D

Address

108 Forbes Loop, Grandy

Name/Position

Deborah / East Mgr

Gas station next door - south -  
closed.

1. Are you aware of the proposed Mid-Currituck Bridge project? *Yes*
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? *No. Still locals, people around bc of \$ toll - also people going south of 158 on O. Banks.*
4. In what way?
  - During the summer tourist season
  - Other times of the year
5. On a year-round basis, what is your busiest time of year?
6. Are you closed in the off-peak season? *No*
7. What is it like on weekends during the summer tourist season? *Hell. Station*

*Also much traffic*

*VERY busy*

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Name of Business East Coast Game Rooms  
Address 111 Fox Knoll  
Name/Position John / Mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? No
4. In what way?
  - During the summer tourist season
  - Other times of the year
5. On a year-round basis, what is your busiest time of year? Business mostly owners winter.
6. Are you closed in the off-peak season? No extend hours in winter.
7. What is it like on weekends during the summer tourist season?

Still back up in Corolla.

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Name of Business Exxon  
Address 158 Hwy, Harbinger NC  
Name/Position Debbie / Clerk

*already  
decreased*

1. Are you aware of the proposed Mid-Currituck Bridge project? *Yes*
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks. *Unemployment -*
3. Do you think that might affect your business? *Little business.*
4. In what way? *Summer business - tourists*
- During the summer tourist season
  - Other times of the year
5. On a year-round basis, what is your busiest time of year? *20% a lot for the small businesses Summer Season*
6. Are you closed in the off-peak season? *No - cut hours*
7. What is it like on weekends during the summer tourist season?



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Name of Business First Flight Motorcycles *Photo accessories, service* *Sat not*  
Address 8192 Canastota Hwy Powell's Pt *busiest day bc of*  
Name/Position Rod / Owner *27966*

- Mrs can't*  
*even get home*  
*Sat*
1. Are you aware of the proposed Mid-Currituck Bridge project? *Yes*
  2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
  3. Do you think that might affect your business? *Help*
  4. In what way?
    - During the summer tourist season
    - Other times of the year*might improve business - Traffic so heavy that beach folks won't come on Sat.*
  5. On a year-round basis, what is your busiest time of year?
  6. Are you closed in the off-peak season?
  7. What is it like on weekends during the summer tourist season?  
*Xmas - New Year's*  
*Sat - traffic backs up -* *most business from beach*



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Name of Business It's all Good - Gifts, etc  
Address 9142 Caratoke Hwy. Pt. Harbor  
Name/Position Emma / Owner

1. Are you aware of the proposed Mid-Currituck Bridge project? Kind of -
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.
3. Do you think that might affect your business? Yes
4. In what way? Sun/Sat Summer - not open. Can't get in.
  - During the summer tourist season
  - Other times of the year Close Monday -
5. On a year-round basis, what is your busiest time of year? 2 Sat winter -
6. Are you closed in the off-peak season? Friday Monday Summer
7. What is it like on weekends during the summer tourist season?

Busier in winter -  
Sell furniture

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Name of Business Hot Doggus  
Address 9040 Caratoke Harbinger NC  
Name/Position Kevin O'Brien / Mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business? Improve

4. In what way? allurate traffic - people more apt to stop a lot
- During the summer tourist season
  - Other times of the year

5. On a year-round basis, what is your busiest time of year? Summer

6. Are you closed in the off-peak season? no

7. What is it like on weekends during the summer tourist season?

Less bc of traffic - w/ less traff = 9<sup>th</sup> business

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The Turnpike Authority is currently working with environmental regulatory agencies to resolve key environmental concerns associated with a Mid-Currituck Bridge. Other design refinements are being made to the bridge project to address a variety of concerns raised during the comment period for the Draft Environmental Impact Statement (EIS). Once these issues are resolved, a Preferred Alternative will be announced. If a bridge project is selected, the Turnpike Authority will issue a Final Environmental Impact Statement, followed by a Record of Decision (sometime next year [2011]).

Name of Business

BP/ Subway

Address

8981 Can Pt. Harbor

Name/Position

Autumn / Mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project?

Yes

2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

4. In what way?

- During the summer tourist season
- Other times of the year

5. On a year-round basis, what is your busiest time of year?

Summer

6. Are you closed in the off-peak season?

No

7. What is it like on weekends during the summer tourist season?

Slow down —  
Traffic — backed up  
to Shandy —  
Can't get out of  
cars.

July 4 — Stopped  
@ Coonjock Bridge

Huge relief. Night  
business

Don't  
come out  
w/le.  
If live on  
beach  
Don't cross  
bridge on weekends.



## SURVEY INTRODUCTION AND QUESTIONS

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Name of Business Carolina Charm - Flowers, Lawn Ornaments  
Address 3333 Canatoka Hwy Pt. Harbor  
Name/Position Jane Brentwood / Owner

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business? Little -

4. In what way? must close on Saturdays

- During the summer tourist season yes
- Other times of the year

Tourists not the real customers.

5. On a year-round basis, what is your busiest time of year?

6. Are you closed in the off-peak season?

Closed Jan-Feb

7. What is it like on weekends during the summer tourist season?

Spring-June

## SURVEY INTRODUCTION AND QUESTIONS

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Name of Business

Harley-Davidson Motor Cycles *Local stay away on summer w/ends.*

Address

8739 Hwy 158 Harbinger

Name/Position

Tony Santisi / Asst Gen Mgr

1. Are you aware of the proposed Mid-Currituck Bridge project?

Yes

2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

No not that much

4. In what way?

business folks go to Harley on Sat.

Harley. Less bathroom use.

- During the summer tourist season

- Other times of the year

5. On a year-round basis, what is your busiest time of year?

Summer

6. Are you closed in the off-peak season?

↓ hours fall winter Feb 7

7. What is it like on weekends during the summer tourist season?

Wall to wall traffic  
↑ 7 hr. to get 10 miles

April bike week bus starts.

## SURVEY INTRODUCTION AND QUESTIONS

Name, PB. Preparing Final EIS for Mid-Currituck Bridge project.

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Name of Business Wine Warehouse  
Address 9138 Carafake Pt Harbor  
Name/Position Melissa Hyman ~~Owner~~

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business? Take away. Detrimental

4. In what way?

- During the summer tourist season - Mostly
- Other times of the year

5. On a year-round basis, what is your busiest time of year? Summer - 6 wks

6. Are you closed in the off-peak season? Christmas, Giving

7. What is it like on weekends during the summer tourist season? Lots of weekend business

Southern Shores resident -  
Wants to see bridge -  
↓ thru traffic

Different Person



Re: hurricane evac —  
People moved here w/out bridge — so move away.

## SURVEY INTRODUCTION AND QUESTIONS

Name, PB. Preparing Final EIS for Mid-Currituck Bridge project.

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Name of Business Bar EE  
Address 1140 Duck Road / Waterfront Shops  
Name/Position Caroline / Bar-EE Station / Mgr.

1. Are you aware of the proposed Mid-Currituck Bridge project? Yes
2. The bridge would divert traffic so that, on a summer weekend, fewer cars would pass by your business on their way to the Outer Banks.

3. Do you think that might affect your business?

4. In what way?

- During the summer tourist season

- Other times of the year

5. On a year-round basis, what is your busiest time of year?

6. Are you closed in the off-peak season?

7. What is it like on weekends during the summer tourist season?

Summer  
Sometimes & hrs in January.  
Slower bc  
Afternoon day - Sat/Sun. Tourists  
Bridge horrible idea - Have farm in Appleton 1  
Wants to preserve open space.





# ATTACHMENT B

## SUMMARY TABLE EFFECTS OF MID-CURRITUCK BRIDGE – SURVEY OF BUSINESSES ALONG US 158

Business Name/Person Interviewed	Type of Business	Address	Are You Aware of the Project?	Will the Bridge Affect Your Business?	Effect of Bridge on Business			Busiest Time of Year	Current Summer		Other
					Good Effect	Bad Effect	Other Effect		Condition	Weekend Result	
Stuff Store/ Owner	Second-hand store- flea market	4995 Caratoke Highway, Aydlett	Yes	Inter-change will take business and property.		Not knowing for sure if bridge will be built.	Business will have to relocate – after 20 years of being in current place.	Off-peak	So much traffic that people either cannot or will not get off the road.	Close store on summer weekends – after making \$12 on a summer Saturday.	
Dollar General Store/Manager	General store-type supplies	6431 Caratoke Hwy, Grandy	No	Yes		Will lose business.		Summer			
It's All Good – Gifts, etc./Owner	Gifts, flea market	9142 Caratoke Hwy, Point Harbor	Kind of aware	Yes	Yes			Saturdays in winter- Sell furniture then. Also Friday, Monday in summer.	Traffic blocks highway.	People cannot get to the store on Saturday. Closed summer Saturdays, Sundays.	Saturdays in winter; Friday, Monday in summer.
Always N' Bloom/Owner	Flowers and gifts	6528 Caratoke Hwy, Grandy	Yes	Yes	Might be beneficial; people could get off the road. Could deliver flowers to Corolla.			Valentine's Day and Mother's Day.			Currently turn down flower orders because can't deliver easily to Corolla, especially in summer.
Christian Bookstore/ Owner	Bookstore	6528 Caratoke Hwy, Grandy	Yes	No							
Carolina Charm/Owner	Flowers, lawn ornaments	8888 Caratoke Hwy, Point Harbor	Yes	A little			Tourists not the real customers.	Spring- June.	Traffic.	Must close summer Saturdays.	Closed January, February.

## ATTACHMENT B

**SUMMARY TABLE (continued)**  
**EFFECTS OF MID-CURRITUCK BRIDGE – SURVEY OF BUSINESSES ALONG US 158**

Business Name/Person Interviewed	Type of Business	Address	Are You Aware of the Project?	Will the Bridge Affect Your Business?	Effect of Bridge on Business			Busiest Time of Year	Current Summer		Other
					Good Effect	Bad Effect	Other Effect		Condition	Weekend Result	
Lammer's Stained Glass, Gifts and Antiques/ Manager	Crafts and gifts	7715 Caratoke Hwy, Powell's Point	Yes	Yes		Lots of business is from the road.		Summer			Close January for inventory.
Shops International/ Owner	Antiques, unique stuff	P.O. Box 367, Grandy	Yes	Yes	A huge benefit. The Saturday stop-and-go traffic ruins business.	None		Summer and Christmas.	Traffic so congested it stops.	Nobody can get into the store.	No business occurs on Summer Saturdays. Hurry up and build the bridge.
Cotton Gin/ Owner	Apparel, collectibles, books	8300 Caratoke Hwy, Jarvisburg	Yes	Yes-in the short term.	Fewer customers.				So much traffic on summer weekends that locals can't get out.	People have had to alter their driving habits and patterns. Local golf courses suffer, too.	Bridge could improve mid-week business. Tourists do not leave the beach; they think traffic always the same as Saturdays.
Coastal Accents/Owner	Upscale interiors and furnishings	5705 Caratoke Hwy, Grandy	Yes	Yes		Fewer persons will drive by the store and know it is here.		Year-round.			Not tourist-driven. Most clients are home-owners.
North River Sales/Owner	Used car business	8090 Caratoke Hwy, Grandy	Yes	Yes	Would be a "godsend." Locals could shop Saturdays.			Year-round.	Highway is almost a parking lot on summer Saturdays.	No locals shop for cars; they stay away.	

# ATTACHMENT B

**SUMMARY TABLE (continued)**  
**EFFECTS OF MID-CURRITUCK BRIDGE – SURVEY OF BUSINESSES ALONG US 158**

Business Name/Person Interviewed	Type of Business	Address	Are You Aware of the Project?	Will the Bridge Affect Your Business?	Effect of Bridge on Business			Busiest Time of Year	Current Summer		Other
					Good Effect	Bad Effect	Other Effect		Condition	Weekend Result	
Precision Auto/ Owner	Auto repair	4987 Caratoke Highway, Aydlett	Yes	Project will take business and property.		Not knowing for sure if the bridge will be built, if I will stay or be put out.	Business will have to relocate – after 20 years of being in current place.				Just build the bridge or don't. Quit messing with my life.
ABC Liquor/ Manager	Liquor store	6420 Caratoke Hwy, Grandy	No. Does not live in the area.	Not really.				Summer Saturdays.	Non-stop crazy. Accidents, a mess. People cannot pull out of parking lot, can't get to the beach.	Closed on Sundays.	Much business is from locals. Also, much of the traffic is going to Nags Head, Hatteras and points south and won't use the new bridge.
Wine Warehouse/ Manager	Wine and gifts	9138 Caratoke Hwy, Point Harbor	Yes	Yes		Detrimental to business, fewer people will drive by.		Summer-6 weeks-Lots of weekend business.			
OLW Racing Stable/Woody's 5/Manager	Bar and restaurant	6402 Caratoke Hwy, Grandy	Yes	Yes		Will lose business that now comes from passing traffic.		Summer	Traffic sometimes stopped all the way north to Barco.	Some people come into store to wait out the traffic.	
Hot Doggers/ Manager	Casual restaurant	9040 Caratoke Hwy, Harbinger	Yes	Yes	With less traffic, people will be more apt to stop and business will improve.			Summer			

# ATTACHMENT B

**SUMMARY TABLE (continued)**  
**EFFECTS OF MID-CURRITUCK BRIDGE – SURVEY OF BUSINESSES ALONG US 158**

Business Name/Person Interviewed	Type of Business	Address	Are You Aware of the Project?	Will the Bridge Affect Your Business?	Effect of Bridge on Business			Busiest Time of Year	Current Summer		Other
					Good Effect	Bad Effect	Other Effect		Condition	Weekend Result	
McDonald's/ Shift manager	Fast-food restaurant	6465 Caratoke Hwy, Grandy	Yes	Yes		Will lose quite a bit of summer business.		Summer	Very busy.	Last summer broke 13-store record for Saturday business.	
Subway/ Manager	Fast food restaurant	6460 Caratoke Hwy, Grandy	Yes	Yes		Will lose business "drastically."		April – September.	Bumper-to-bumper.	Business is from northbound traffic; southbound can't cross highway.	Summer traffic "makes this area."
BP Subway/ Manager	Gasoline station and fast-food restaurant	8981 Caratoke Hwy, Point Harbor	Yes	Yes	It will be a huge relief and might improve business.			Summer			
Han-Dee Hugo's/ Assistant Manager	Gasoline Station	108 Forbes Loop, Grandy	Yes	No					Lots of traffic.	Station is VERY busy.	Locals and those unwilling to pay toll will still patronize us. Also those headed south of US 158 on the Outer Banks.
Exxon/Clerk	Gasoline station	158 Caratoke Hwy, Harbinger	Yes	Yes		Station will have little business.		Summer		Station is VERY busy.	Station cuts hours in the off-season.
Beach Organics/ Owner	Groceries	6622 Caratoke Hwy, Grandy	Yes	Yes		Fewer customers with a bridge.		Summer tourist season.			Fall 2010 is beginning of the store's 2 <sup>nd</sup> year.

# ATTACHMENT B

**SUMMARY TABLE (concluded)**  
**EFFECTS OF MID-CURRITUCK BRIDGE – SURVEY OF BUSINESSES ALONG US 158**

Business Name/Person Interviewed	Type of Business	Address	Are You Aware of the Project?	Will the Bridge Affect Your Business?	Effect of Bridge on Business			Busiest Time of Year	Current Summer		Other
					Good Effect	Bad Effect	Other Effect		Condition	Weekend Result	
Food Lion/Manager	Large grocery store	123 Forbes Loop, Grandy (not visible from US 158)	Yes	Maybe			With less traffic, may change business pattern.	Steady year-round.	So much traffic that some people do not shop weekends.		May expose more people to the store. Many do not know prices are less than at the beach.
East Coast Game Rooms/Manager	Indoor billiards/pool, gaming store	111 Fox Knoll Drive, Powell's Point	Yes	No			Most business is home owners, not tourists.	Winter			Store extends its hours in the winter.
First Flight Motorcycles/Owner	Motorcycle parts, accessories, service	8192 Caratoke Hwy, Powell's Point	Yes	Yes	Bridge might improve business; store will be more accessible.			Summer	Traffic so heavy that beach people don't come on Saturdays.	Saturday not the busiest day of the week.	Closed Sunday and Monday. Most business from the beach.
Harley-Davidson Motorcycles/Assistant General Manager	Harley-Davidson motor-cycles and accessories	8739 Caratoke Hwy, Harbinger	Yes	No	More Saturday business, less tourist use of restrooms.		Harley is a brand recognition product. People make time to come to the store.	Summer, beginning in April.	Wall-to-wall traffic. Can take 1 hour to go 10 miles.	Locals stay away on summer weekends.	
Digger's Dungeon/Manager	Motorcycle clothing and accessories	5650 Caratoke Hwy, Poplar Branch	Yes	Yes	Yes. It will be easier for renters to return to store, even "pop over" from the Outer Banks.	Fewer people will see the store.		Summer			Closed Jan/Feb. So crowded summer Sat. that some travel at night or other times store is closed.
Bar-EE/Manager	Casual beach wear	1140 Duck Road/Water-front Shops, Duck	Yes	Yes		Detrimental; fewer people will drive by.		Summer	Rental turnover days are Sat/Sun.	Business slower on turnover days.	





**ATTACHMENT C**  
**SUGGESTED TEXT FOR THE CIA**  
**(EFFECT OF BRIDGE ON BUSINESSES ALONG US 158)**

Based on a survey of 26 businesses along US 158 south of Aydlett (including one on NC 12 in Duck) conducted in November 2010, business managers and owners think the proposed Mid-Currituck bridge would have either an adverse or beneficial effect on businesses along US 158 south of Aydlett. One-half of the businesses expect to see a decrease in customers, especially on summer weekends, and the other one-half expect to see an increase in customers, especially on summer weekends. None of those interviewed said they would go out of business as a result of a decrease in customers due to the bridge.

Whether the bridge would have a detrimental or beneficial effect generally depends on the type of business. If much of the business is dependent on tourists bound for the Outer Banks, then the presence of a bridge that would divert 20 to 25 percent of traffic is seen as detrimental, as fewer drive-bys will mean fewer customers. If the business is not tourist-dependent, the bridge is seen as a potential benefit, as it will enable customers to access the business all days of the week.

For example, fast-food restaurants and stores that rely on drive-by customers generally believe less traffic will mean fewer customers and, therefore, less business. Stores with an established base and those that rely on permanent residents on the mainland and Outer Banks, such as auto sales, grocery and motorcycle businesses, believe the bridge will be beneficial. For some of these businesses, the decline in customers has led them to close on summer weekends; the number of customers drops so substantially that it is not profitable for them to stay open. Currently, traffic on US 158 is so heavy on summer weekends that much of the non-tourist population does not drive on the highway. A benefit mentioned by some is that, with the Mid-Currituck Bridge, it would be easier to deliver flowers and other items to the Outer Banks. Currently, traffic is so congested on weekends that deliveries are not possible. During summers, some business is lost because deliveries are not possible on weekends. On other days of the week, the trip from US 158 to the Outer Banks is so far that multiple deliveries must be scheduled only one or two days a week.