

location

FEASIBILITY STUDY

NC 12
FROM US 158 IN SOUTHERN SHORES
TO COROLLA.

DARE AND CURRITUCK COUNTIES

R-2505

PREPARED BY:

DIVISION ONE
DIVISION OF HIGHWAYS
N.C. DEPARTMENT OF TRANSPORTATION

T. E. Brite

T. E. BRITE
RESIDENT ENGINEER

J. L. McDonald

J. L. McDONALD, P.E.
DIVISION CONSTRUCTION ENGINEER

C. O. White

C.O. WHITE, P.E.
DIVISION ENGINEER

7-6-90

DATE

NC 12
FROM US 158 IN SOUTHERN SHORES
TO COROLLA.

DARE AND CURRITUCK COUNTIES

R-2505

I. DESCRIPTION

This report covers a preliminary evaluation of upgrading the substandard sections of existing roadway along NC 12. The section under study is located, beginning at the intersection of US 158 and NC 12 in Southern Shores, Dare County, and ends at the end of State Maintenance in Corolla, Currituck County. General project location is shown in Figure 1 and 2.

II. PURPOSE OF PROJECT

Existing Route Characteristics

This portion of NC 12 is the only access to several resort areas along with many permanent local residents in northern Dare and Currituck Counties. It is classified as a Minor Arterial in the North Carolina Functional Classification System.

For purposes of this study, the project is divided into five sections (See Figure 1 & 2). Section 1 extends from the the intersection of US 158 and NC 12, a distance of 1.5 miles. Section 2 continues the next 8.4 miles to the Dare/Currituck County line. Section 3 is 3.8 miles long, extending from the Dare/Currituck County line to the Spindrifft Development. Section 4 runs from the Spindrifft Development to the Monteray Shores Development, a distance of 3.5 miles. Section 5 continues the remaining 3.9 miles to the end of State Maintenance.

Upgrading the substandard sections of roadway along NC 12 would be to accomodate and improve access for the existing and probable growth of traffic in this area during peak tourist season as well as off peak times of travel.

The existing 21.1 miles of roadway consist mainly of 18 to 26 feet of pavement with several 3-lane sections located throughout the town of Duck. The R/W varies from 60 to 100 feet. Much of the roadway in Dare County and several short

sections in Currituck County was widened and resurfaced during FY 88-89 and are in fair to good condition.

The remaining pavement section in Currituck and Dare Counties are in poor condition. Much is in need of a leveling course along with the required widening and resurfacing. None of these sections have been resurfaced in many years.

Traffic Volumes and Accident Record

During the peak tourist season the existing roadway is inadequate to maintain safety between vehicle and pedestrian traffic. In the 1989 calendar year alone this section of roadway was subject to 19 accidents. Seven accidents happened in Dare County and the remaining twelve occurred in Currituck County.

The 1989 Average Daily Traffic Counts are shown in Figure 1 and 2.

Need for Project

The widening of the NC 12 pavement, along with the provisions for a wider paved shoulder to accommodate bicycle and pedestrian traffic, will enhance the safety and driving comfort on the highway. The existing paved roadway has many blind curves, and the shoulders are too narrow for disabled vehicles to pull off on in the case of an emergency.

III. RECOMENDATIONS

SECTION 1: Recommended typical sections from the intersection of US 158 and NC 12 in Southern Shores to the intersection of NC 12 and Ocean Boulevard is a 59 foot section consisting of four-11 foot travel lanes and a 11 foot centered left turn lane. Two foot paved shoulders are recommended to accommodate the pedestrian and bicycle traffic. Additional R/W will need to be purchased along the first 1600 feet of the project. The R/W beyond this point is 90 feet and adequate. These additional lanes will greatly increase the efficiency of the roadway. It will also have an impact on the safety of the motorist during evacuation due to possible natural disasters.

SECTION 2: Recommended typical sections from the intersection of NC 12 and Ocean Boulevard to the Dare/Currituck County line is a 36 foot section consisting of two 11 foot travel lanes and a 10 foot turn lane with two foot paved shoulders. This section is 8.4 miles in length. The R/W throughout this section is 60 feet.

SECTION 3: Recommended typical section from the Dare/Currituck County line thru the section owned by the Audubon Society is 22 feet of pavement with eight feet shoulders. Two foot paved shoulders are recommended. This section is approximately 3.8 miles in length and ends at the Spindrifft development. The R/W thru this entire section is 60 feet.

SECTION 4: Recommended typical section from the Spindrifft development to the intersection located at the Monterey Shores development is a 36 foot section consisting of two 11 foot travel lanes and a 10 foot turn lane. Two foot paved shoulders are recommended. This section is 3.5 miles in length. The R/W thru this entire section is 60 feet.

SECTION 5: Recommended typical sections from the Monterey Shores development to the end of the project located at the end of State Maintenance is 22 feet of pavement with two foot paved shoulders. Several of the intersections located within this section will need to be widened to 36 feet of pavement to allow for left turn movement.

General Comments

Many parts of the roadway located in Currituck County, Sections 3 & 4, consist of rapidly deteriorating pavement due to a substandard subgrade. It is recommended that these areas should be removed and brought up to the required standard.

IV. ESTIMATED COSTS

Estimated costs of the recommended improvements are as follows:

HIGHWAY SECTION *****	LENGTH *****	CONSTRUCTION COSTS *****	R/W COSTS *****	SECTION COSTS *****
1	1.5	\$492,000.00	\$600,000.00	\$1,092,000.00
2	8.4	\$1,154,000.00	\$0.00	\$1,154,000.00
3	3.8	\$404,000.00	\$0.00	\$404,000.00
4	3.5	\$580,000.00	\$0.00	\$580,000.00
5	3.9	\$496,000.00	\$0.00	\$496,000.00
				----- \$3,726,000.00

The only costs, as noted above, estimated for the purchase of Right-of-Way is located at the beginning of the project. All other recommended sections should be able to be built within the existing right-of-way.

V. ALTERNATIVES

Four foot paved shoulders might be recommended wherever possible to enhance the safety and accommodate the large pedestrian and bicycle traffic which utilizes this highway. The following is a breakdown as to the possible costs incurred by adding another 2 feet to each side of the above recommended sections.

Estimated costs for the alternative improvements are as follows:

HIGHWAY SECTION *****	LENGTH *****	CONSTRUCTION COSTS *****	R/W COSTS *****	SECTION COSTS *****
1	1.5	\$23,000.00	\$0.00	\$23,000.00
2	8.4	\$126,000.00	\$0.00	\$126,000.00
3	3.8	\$59,000.00	\$0.00	\$59,000.00
4	3.5	\$53,000.00	\$0.00	\$53,000.00
5	3.9	\$61,000.00	\$0.00	\$61,000.00
				----- \$322,000.00

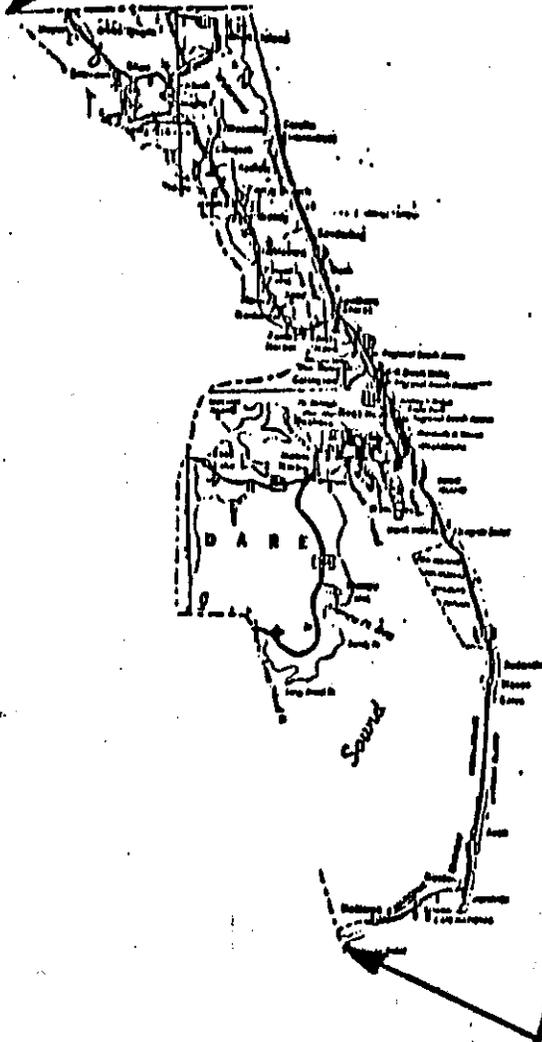
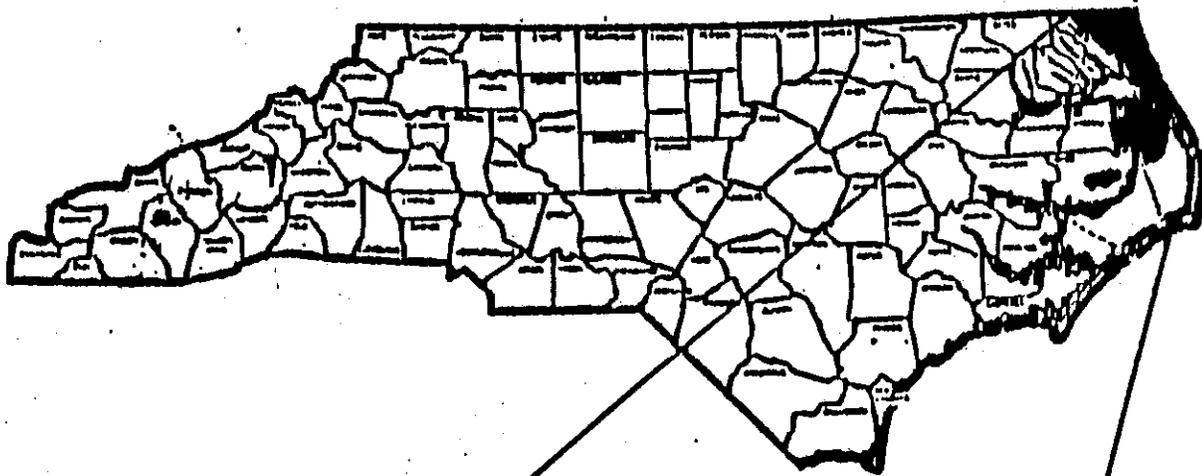
VI. ENVIRONMENTAL EFFECTS

The implementation of the proposed project is not expected to result in any significant impact on the environment. The construction of the project will not require the relocation of any residences or businesses. There are no wetlands, classified as such, along this section of highway that will be impacted by the construction of this project. However, the construction of the project should require agency consultation with the U. S. Fish and Wildlife Service, N. C. Coastal Area Management Agency and other interested federal and state agencies.

VII. OTHER COMMENTS

A new bridge located in Corolla, crossing the Currituck Sound is scheduled for construction in the 1989 Highway Bill. Therefore, it needs to be considered that the Average Daily Traffic will only increase from the 1989 AADT counts along this corridor.

The existing facility is inadequate to accommodate the current volume of traffic required, disregarding the potential growth in this area. This project will greatly increase the efficiency and safety of the traveling public.



NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION
DIVISION OF HIGHWAYS
DIVISION ONE

NC 12
FROM US 158 IN SOUTHERN SHORES
TO CURROLLA

DARE AND CURRITUCK COUNTIES

R-2505

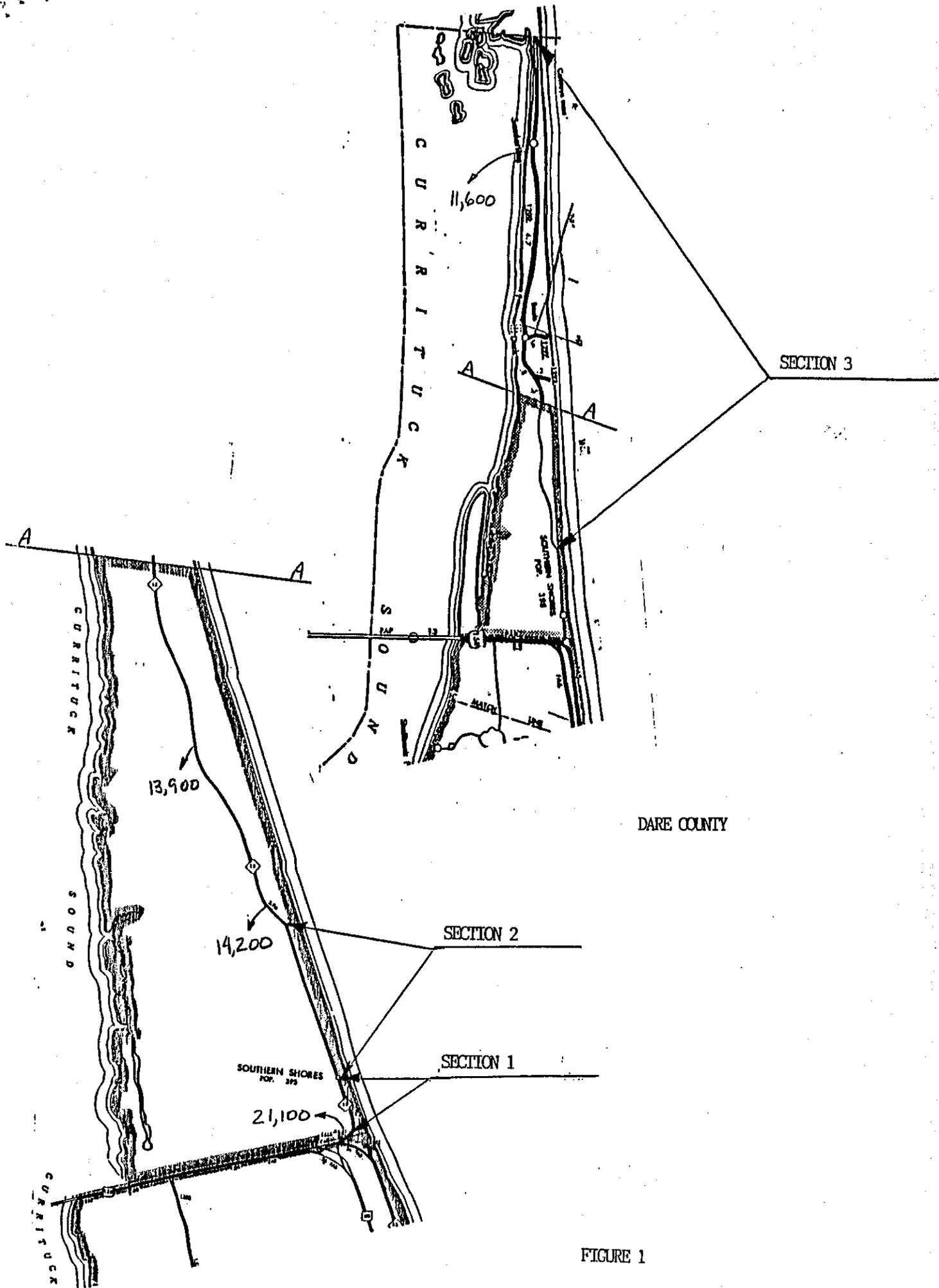


FIGURE 1

CURRITUCK COUNTY

*NOTE

NO ADT'S ARE AVAILABLE FOR THIS SECTION
OF CURRITUCK COUNTY

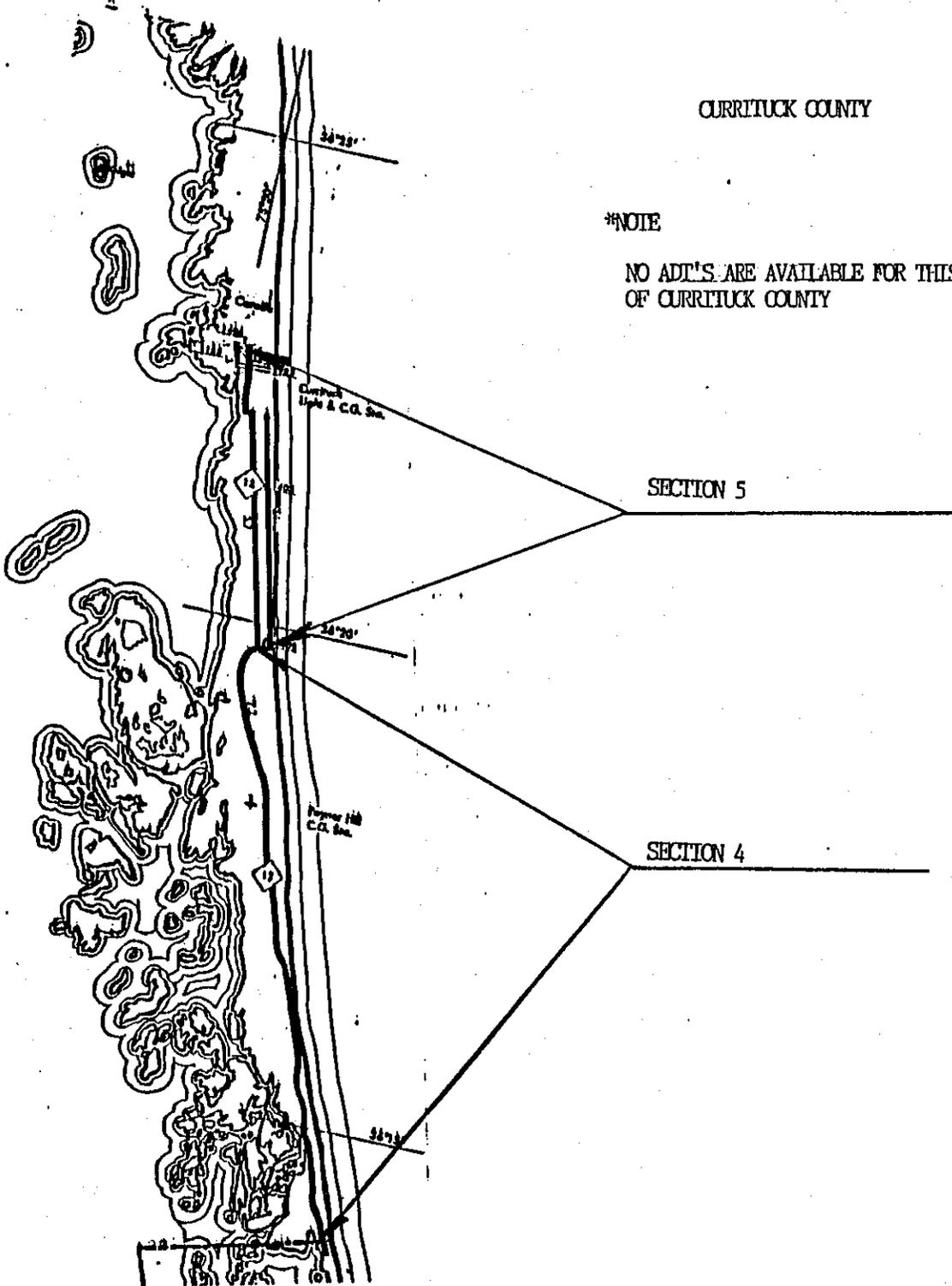


FIGURE 2