

Environmental Assessment for

CONTRACT No. AA 390-101-151
MARYLAND ROUTE 173
(FORT SMALLWOOD ROAD)
FROM TICK NECK ROAD
TO NORTH OF THE STONY CREEK BRIDGE
ANNE ARUNDEL COUNTY

prepared by
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
and
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

2

REPORT NUMBER: FHWA-MD-EA-80-07-(D)

FEDERAL HIGHWAY ADMINISTRATION
REGION III

Maryland Route 173
(Fort Smallwood Road)
From Tick Neck Road
to North of Stony Creek Bridge
Anne Arundel County, Maryland

ADMINISTRATIVE ACTION
ENVIRONMENTAL ASSESSMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AND

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

SUBMITTED PURSUANT TO 42 U.S.C. 4332 (2)(C) and 23 U.S.C. 128(a),
CEQ REGULATIONS (40 CFR 1500 et seg)

M. S. Caltrider
State Highway Administrator

12/4/80
Date

by: Hal Kassoff
Hal Kassoff, Director
Office of Planning and
Preliminary Engineering

12/9/80
Date

by: Emil Elishy
Federal Highway Administration
Division Federal Highway
Administrator

SUMMARY

1. Administrative Action

- () Environmental Impact Statement
- (X) Environmental Assessment
- () Finding of No Significant Impact

2. Individuals who can be contacted for additional information concerning the proposed project and this document.

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3. Description of Action

This action proposes to improve the road capacity and safety of Maryland Route 173 and replace or improve the substandard bridge at Maryland Route 173/Stoney Creek (See Figure 1a and 1b page 19). The proposed project would provide for the construction of an additional two (2) lane moveable bridge parallel to the existing two (2) lane moveable structure or a new four (4) lane high level fixed span on Maryland Route 173 across Stony Creek, and widening existing Maryland Route 173 south to Tick Neck Road to four (4) travel lanes with a continuous left turn center lane. This project is intended as part of an overall upgrading of Maryland Route 173 between Baltimore City and the vicinity of Riviera Beach. Land use in the proposed project area is primarily commercial with some residential development.

4. Summary of Impacts

The reconstruction of Maryland Route 173 from Tick Neck Road to north of Stony Creek and the reconstruction or replacement of the existing bridge over Stony Creek would have no significant impact on the quality of the human or natural environments. There would be no additional impact to the Stony Creek floodplains. Permits from the following agencies would be required: (1) Army Corps of Engineers; (2) Coast Guard; (3) Department of Natural Resources.

Technical reports indicate no violations of National Ambient Air Quality Standards. The predicted noise levels at two noise sensitive areas would exceed the design noise levels. Because there is no control of access proposed for this project, mitigation would not be feasible. A maximum of five (5) families (twenty (20) persons) and two (2) businesses employing a total of eight (8) persons and one (1) sewage pumping section would be displaced depending on the alternate selected. A study conducted by the Maryland State Highway Administration indicates there would be suitable replacement facilities available to all persons displaced. A summary of the relocation assistance program is in Appendix A.

5. Alternates Considered

The "build" alternates have been separated into two (2) parts. Section 1 addresses the improvement of the bridge over Stony Creek and the bridge approaches (approximately .55 miles). Section 2 considers improvements to Maryland Route 173 from Stony Creek to 1400 feet south of the intersection of Maryland Route 173 and Tick Neck Road (approximately 1.65 miles). A

5

no-build alternate is also being considered.

Section 1

Low Level Bridge

This alternate proposes a low level parallel draw span to be constructed immediately adjacent to the existing bridge. The completed bridge would incorporate the existing bridge and be a 64' wide, four lane roadway with a flush painted median with a five (5) foot sidewalk and a four (4) foot bikeway on each side. A service road would be required at the northern end of the project from Greenland Beach Road to reconstructed Maryland Route 173.

High Level Bridge

This alternate proposes a high level fixed span bridge. For study purposes a bridge with a 50' vertical clearance has been considered. This high level fixed span bridge alternate would also be a 64' wide four lane roadway with a painted flush median with a five foot (5') sidewalk and a four (4) foot bikeway on each side. This alternate would require the removal of the existing bridge. This bridge alternate requires the construction of a retaining wall at the southern approach to prevent the supporting slopes from encroaching on the wetland area of Stony Creek. This bridge alternate would require a service road to tie Maryland Route 173 into Greenland Beach Road and the closing of Granada Road.

Section 2

Alternate 1 (Roadway Section)

This alternate would result in Fort Smallwood Road being

6

improved to a four-lane facility from 1400 feet south of Tick Neck Road north to Stony Creek.

The lanes would be eleven feet wide with a twelve foot continuous turning lane separating the northbound lanes from the southbound lanes. There would also be four-foot wide bikelanes. Sidewalks in both north and southbound directions would also be provided.

Alternate 2 (Roadway Section)

This alternate would also result in a four-lane facility between Tick Neck Road to Stony Creek.

The lanes would be twelve feet wide and the north and southbound roadways would be separated by a thirty-foot grass median from Tick Neck Road to Appian Way. The remainder of the study area, from Appian Way to Stony Creek, would be constructed as described for Build Alternate 1, above. The bikeways proposed would be the same as indicated in Alternate 1.

No-Build Alternate

This alternate would result in Route 173 and the bridge over Stony Creek remaining as a two-lane facility. Except for possible minor capacity and safety improvements, no additional highway construction by State or Federal Governments is envisioned, and no funds would be expended for construction or right of way purchase.

6. Consistency with President's Urban Policy

The consistency of this project with the five U.S. Department of Transportation policy objectives, developed in response to

7

the President's Urban Policy goals, is summarized as follows:

A. Urban Impacts

The implementation of the proposed improvement to Maryland Route 173 will have positive local impacts. Benefits accruing to the area by virtue of the implementation of this project include the increased access it will provide to Riviera Beach and residential areas to the south as well as the Marley Neck peninsula, a rapidly developing industrial area in North Anne Arundel County. An improved roadway will provide relief to the congested conditions, operational problems, and structural deficiencies now being experienced along the route as well as contribute to a lessening in the number of traffic accidents.

Alternates under consideration for this project will have negligible effects on the social and economic viability of the Baltimore central business district. This project will not incur costs to the city for its construction, operation, or maintenance.

The implementation of this project has been actively pursued by State and local agencies and officials. The project is consistent with State Highway Administration plans as well as local land use and transportation plans. (See Section III, page 41).

B. Energy Conservation - Overall, traffic speeds will increase, congestion and queuing will decrease; therefore, long term savings in fuel consumption will be realized by the implementation of this project.

8

C. Transportation Systems Management

Under consideration for inclusion in this project are pedestrian sidewalks and a continuous bicycle lane. As a separate and distinct alternate, however, these strategies would not bring about the required increases in capacity nor would they offer any solution to the existing structural deficiencies of the roadway and bridge. (See Page 48 for comments regarding TSM strategies).

D. Minority and Neighborhood Effects

Implementation of any of the "Build" alternates being considered for this project would required the relocation of from one to seven families involving four to twenty persons. Relocation and compensation will be made available to those affected. None of those affected are of a minority group. There is no known disruption to existing communities anticipated as a result of the selection of a "Build" alternate. (See page 59).

E. Improvements to Existing System

Proposed improvements to Maryland Route 173 give full consideration to use of existing facilities including the No-Build option and an alternate consisting of TSM strategies. This practice is in conformance with Maryland Department of Transportation Policy which states that, where practical, transportation needs should be met by improving existing facilities rather than constructing new ones.

Determination of the need to reconstruct this facility was based on analyses of present and future traffic volumes, land use, the population served, and the existing structural deficiencies of the highway. With increased capacity available

9

on the existing facility, the need for additional highway facilities on new locations in the corridor will be precluded for the foreseeable future.

COST EFFECTIVE ANALYSIS OF ALTERNATIVES

SECTION I			SECTION II		
NUMBER OF DISPLACEMENTS	LOW LEVEL BRIDGE	HIGH LEVEL BRIDGE	ALTERNATE NO. 1	ALTERNATE NO. 2	NO-BUILD
Residences	1	5	0	0	0
Businesses	0	1	0	1	0
Public Land	0	0	0	0	0
Historic Sites	0	0	0	0	0
Sewage Pumping Station*	1	1	0	0	0
Total No. of Displacements	2	7	0	1	0
RIGHT OF WAY REQUIRED (ACRES)					
Residential	1.8	12.8	3.8	5.8	0
Commercial	0	0	2.2	2.6	0
Agricultural	0	0	0	0	0
Wetland	0	0	0	0	0
Total Acres	1.8	12.8	6.0	8.4	0
ESTIMATED COSTS (\$1,000)**					
Length (Miles)	.55	.55	1.65	1.65	2.20
Right of Way	618	1,703	734	1,097	0
Construction	7,946	12,771	4,275	4,373	0
Total Costs	8,564	14,474***	5,009	5,450	0

* Relocation can take place with no disruption of service.

** The High Level or Low Level Bridge Alternate should be combined with roadway Alternates 1 or 2 for total project costs.

*** Bridge costs are based on a 50 foot high level bridge. A lower bridge would cost less and require less right of way.

11

The following Environmental Assessment Form is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. Its use is in keeping with the provisions of 1500.4(k) and 1506.2 and .6 of the Council of Environmental Quality Regulations, effective July 31, 1979, which recommend that duplication of Federal, State, and Local procedures be integrated into a single process.

The checklist identifies specific areas of the natural and social-economic environment which have been considered while preparing this environmental assessment. The reviewer can refer to the appropriate sections of the document, as indicated in the "Comment" column of the form, for a description of specific characteristics of the natural or social-economic environment within the proposed project area. It will also highlight any potential impacts, beneficial or adverse, that the action may incur. The "No" column indicates that during the scoping and early coordination processes, that specific area of the environment was not identified to be within the project area or would not be impacted by the proposed action.

ENVIRONMENTAL ASSESSMENT FORM

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
A. Land Use Considerations			
1. Will the action be within the 100 year flood plain?	<u>X</u>	<u> </u>	<u>Pg 72</u>
2. Will the action require a permit for construction or alteration within the 50 year flood plain?	<u>X</u>	<u> </u>	<u> </u>
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?	<u>X</u>	<u> </u>	<u> </u>
4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?	<u> </u>	<u>X</u>	<u> </u>
5. Will the action occur on slopes exceeding 15%?	<u> </u>	<u>X</u>	<u> </u>
6. Will the action require a grading plan or a sediment control permit?	<u>X</u>	<u> </u>	<u>Pg. 73 & 74</u>
7. Will the action require a mining permit for deep or surface mining?	<u> </u>	<u>X</u>	<u> </u>
8. Will the action require a permit for drilling a gas or oil well?	<u> </u>	<u>X</u>	<u> </u>
9. Will the action require a permit for airport construction?	<u> </u>	<u>X</u>	<u> </u>
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?	<u> </u>	<u>X</u>	<u> </u>
11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland?	<u> </u>	<u>X</u>	<u>Pg. 61</u>

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
12. Will the action affect the use of any natural or man-made features that are unique to the county, state, or nation?	<u> </u>	<u> X </u>	<u> </u>
13. Will the action affect the use of an archeological or historical site or structure?	<u> </u>	<u> X </u>	<u>Pg. 31 & 61</u>
B. Water Use Considerations			
14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water?	<u> X </u>	<u> </u>	<u> Pg. 61</u>
15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction?	<u> </u>	<u> X </u>	<u> </u>
16. Will the action change the overland flow of storm water or reduce the absorption capacity of the ground?	<u> X </u>	<u> </u>	<u> Pg. 72 & 74</u>
17. Will the action require a permit for the drilling of a water well?	<u> </u>	<u> X </u>	<u> </u>
18. Will the action require a permit for water appropriation?	<u> </u>	<u> X </u>	<u> </u>
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?	<u> </u>	<u> X </u>	<u> </u>
20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives?	<u> </u>	<u> X </u>	<u> Pg. 58</u>

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
21. Will the action result in any discharge into surface or sub-surface water?	<u>X</u>	<u> </u>	<u>Pg. 73</u>
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	<u> </u>	<u>X</u>	<u>Pg. 73 & 74</u>
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	<u>X</u>	<u> </u>	<u>Pg. 64</u>
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?	<u> </u>	<u>X</u>	<u> </u>
25. Will the action generate additional noise which differs in character or level from present conditions?	<u>X</u>	<u> </u>	<u>Pg. 61</u>
26. Will the action preclude future use of related air space?	<u> </u>	<u>X</u>	<u> </u>
27. Will the action generate any radiological, electrical, magnetic, or light influences?	<u> </u>	<u>X</u>	<u> </u>
D. Plants and Animals			
28. Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?	<u> </u>	<u>X</u>	<u> </u>
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?	<u> </u>	<u>X</u>	<u> </u>
30. Will the action require a permit for the use of pesticides, herbicides or other biological, chemical or radiological control agents?	<u> </u>	<u>X</u>	<u> </u>

E. Socio-Economic

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
31. Will the action result in a pre-emption or division of properties or impair their economic use?	<u>X</u>	<u> </u>	<u>Pg. 58</u>
32. Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	<u>X</u>	<u> </u>	<u>Pg. 58</u>
33. Will the action alter land values?	<u> </u>	<u>X</u>	<u> </u>
34. Will the action affect traffic flow and volume?	<u>X</u>	<u> </u>	<u>Pg. 36</u>
35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource?	<u> </u>	<u>X</u>	<u> </u>
36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?	<u> </u>	<u>X</u>	<u> </u>
37. Is the action in accord with federal, state, regional and local comprehensive or functional plans--including zoning?	<u>X</u>	<u> </u>	<u>Pg. 41</u>
38. Will the action affect the employment opportunities for persons in the area?	<u> </u>	<u>X</u>	<u>Pg. 60</u>
39. Will the action affect the ability of the area to attract new sources of tax revenue?	<u> </u>	<u>X</u>	<u>Pg. 21</u>
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?	<u> </u>	<u>X</u>	<u> </u>

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
41. Will the action affect the ability of the area to attract tourism?	<u> </u>	<u> X </u>	<u> </u>
F. Other Considerations			
42. Could the action endanger the public health, safety or welfare?	<u> </u>	<u> X </u>	<u> </u>
43. Could the action be eliminated without deleterious affects to the public health, safety, welfare or the natural environment?	<u> </u>	<u> X </u>	<u> </u>
44. Will the action be of statewide significance?	<u> </u>	<u> X </u>	<u> </u>
45. Are there any other plans or actions (federal, state, county or private) that, in conjunction with the subject action could result in a cumulative or synergistic impact on the public health, safety, welfare, or environment?	<u> X </u>	<u> </u>	<u> Pg. 44 </u>
46. Will the action require additional power generation or transmission capacity?	<u> </u>	<u> X </u>	<u> </u>
47. This agency will develop a complete environmental effects report on the proposed action.	<u> </u>	<u> X </u>	<u> Pg. 10 </u>

17

TABLE OF CONTENTS

	<u>PAGE</u>
Summary	2
Environmental Assessment Form	10
I. Description of Proposed Action	18
A. Project Location	18
B. Project Description	18
C. Description of Existing Environment	21
1. Socio-Economic	21
2. Natural	25
3. Historical/Archeological	29
4. Existing Roadway System	31
II. Need for the Project	32
A. Purpose	32
B. Accident Statistics	32
C. Capacity Analysis and Traffic Projections	36
D. Energy Conservation	40
III. Alternates Considered	41
A. Project History	41
B. Alternates now under consideration	44
IV. Environmental Impacts	58
A. Social	58
B. Economic	60
C. Historical/Cultural	61
D. Noise	61
E. Air Quality	64
F. Natural Environment	72
G. Construction	74
V. Comments and Coordination	77
Appendix A	86
Appendix B	91
Appendix C	96

LIST OF FIGURES

FIGURES		PAGE
1 a,b	Project Location	19
2 a,b	Land Use	23
3	Wetland	28
4	Historical	30
5 abc	Traffic	37
6 abcd	Typical Section	50
7 abcd	Alternates Location	54
8	Air Receptor Site	67

LIST OF TABLES

TABLE		PAGE
I	Population	22
II	Median Income	22
III	Collision Comparison	33
IV	Project Noise Levels	63
V	CO concentrations	69
VI	Construction Equipment Noise Ranges	76

I. DESCRIPTION OF PROPOSED ACTION

A. Project Location

The project area includes the area of northeastern Anne Arundel County between Rock Creek to the south and Stony Creek to the North (See Figure 1a and 1b). The project also includes the Stony Creek Bridge as well as approaches. The total length of the project is 2.20 miles extending northerly from the Maryland Route 173 intersection at Tick Neck Road to the northern approach of the Stony Creek bridge. The project study has been separated into two parts. The first part addresses the improvement of the bridge over Stony Creek and its approaches. The second part considers the improvements of Maryland Route 173 from 1400 feet south of Tick Neck Road to the southern approach of Stony Creek Bridge (See Figure 1).

B. Project Description

The alternates under consideration are:

-Alternate No. 1 - a 64' curbed street section with a continuous turning lane from Tick Neck Road to the south end of the Stony Creek Bridge.

-Alternate No. 2 - a 30' open median section with two 26' roadways from Tick Neck Road to Appian Way and a 64' curbed street section from Appian Way to the south end of the Stony Creek Bridge.

-The No-Build Alternate - minor spot improvements and maintenance within the existing right of way.

-Bridge Alternates will consider a low level movable span as

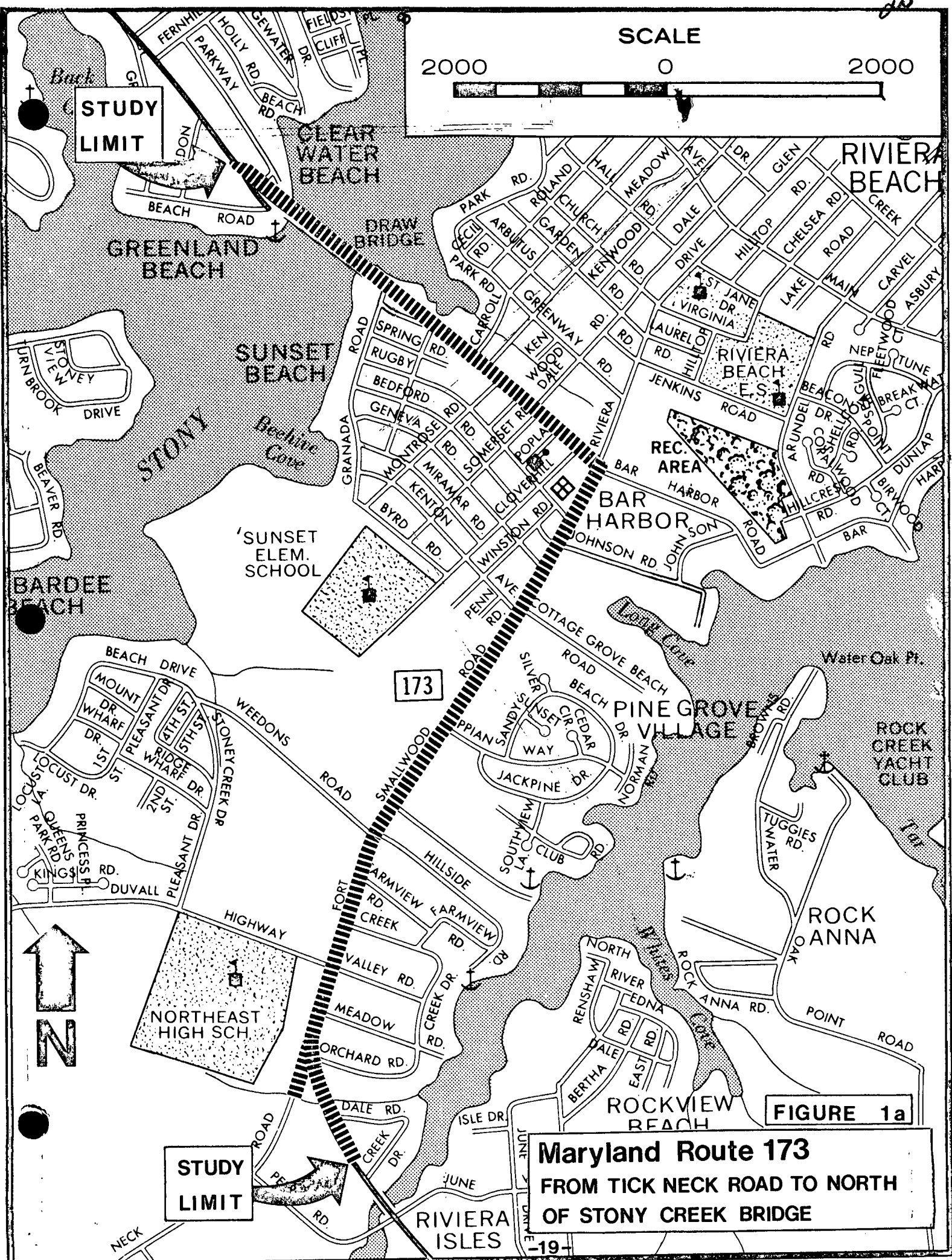
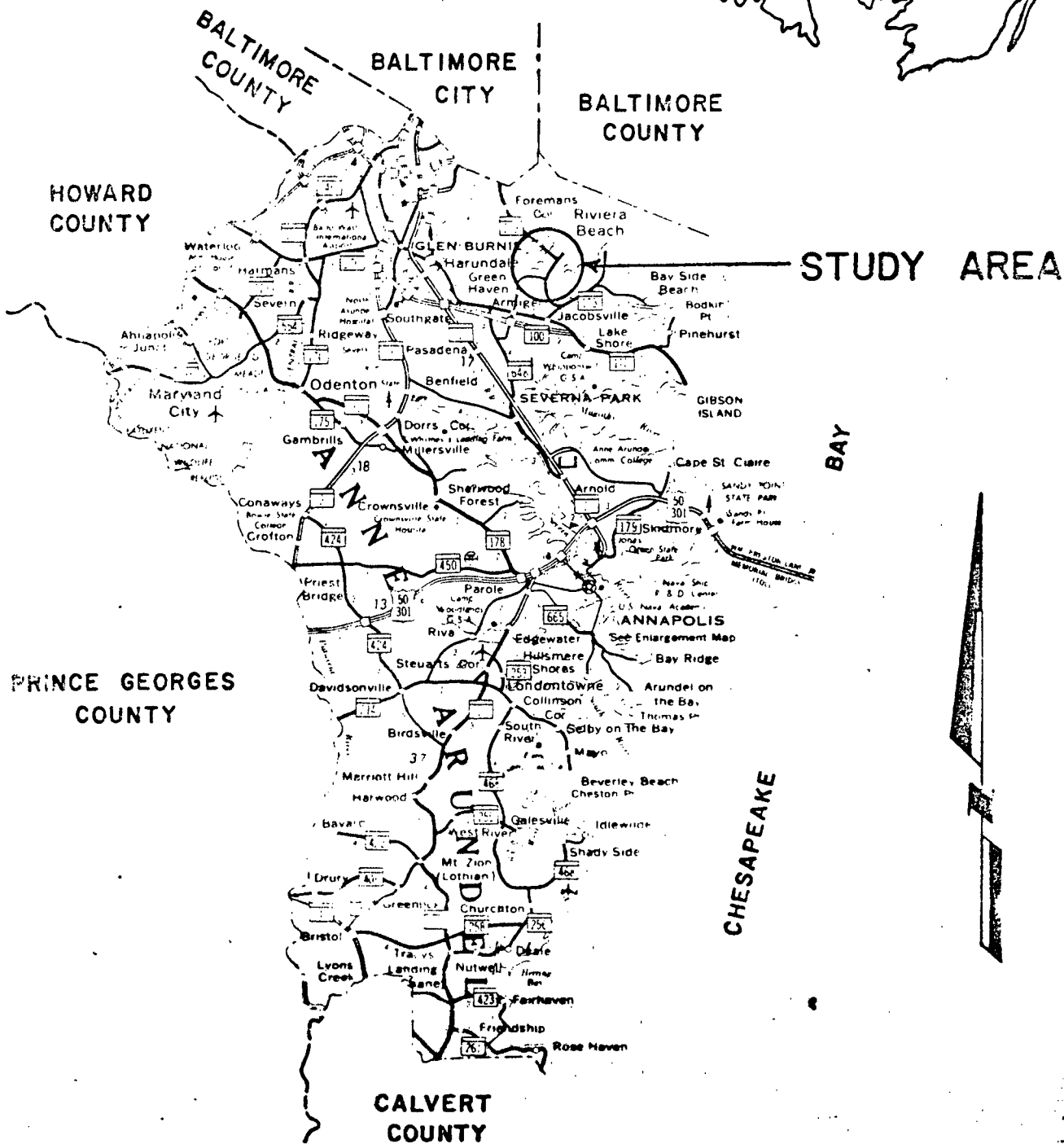


FIGURE 1a

**Maryland Route 173
FROM TICK NECK ROAD TO NORTH
OF STONY CREEK BRIDGE**

ANNE ARUNDEL COUNTY
(SEE ENLARGEMENT MAP BELOW)



LOCATION MAP
SCALE : 1" = 6 MILES FIGURE 1b

22

well as a 40', 45' and 50' high level fixed spans. The bridge cross section would in all cases feature a 64' wide roadway.

At present traffic signals exist at the Maryland 173/Riviera Drive Intersection and the Maryland 173/Duvall Highway intersection. Anne Arundel County proposes a relocation of Tick Neck Road, moving the existing intersection to a point between Orchard Road and Dale Road. No signal exists at the present intersection.

All of these alternates are discussed in detail in Section III of this document.

C. Description of Existing Environment

1) SOCIO-ECONOMIC

The entire study area for this project is zoned either medium residential or commercial (See Figure 2a and b). The actual land usage is highly developed, including several public and commercial establishments. Schools in the area include: Northeast High School, Sunset Elementary School, and Riviera Beach Elementary. The Anne Arundel County Public Library fronts on Duvall Highway and the Riviera Beach Volunteer Fire Department is on Maryland Route 173 near Bar Harbor Road. There are two shopping centers in the project area. Also, the Community United Methodist Church fronts on Maryland 173.

Numerous communities are located within the study area. These include: Clear Water Beach, Greenland Beach, Sunset Beach, Riviera Beach, Bar Harbor, Queens Park, and Pine Grove Village. In addition to these, two new subdivisions are under

construction, Elizabeth's Landing and Oriole Homes. No minority communities have been identified in the study area. The population of the study area is 10.14% non-white. Proposed land use for the area is essentially the same as present land use with the area at Riviera Drive classified as a community center (see figure 2).

The study area includes Election District 3 and consists of two (2) census tracts, 7301 and 7313.01 which has 1970 populations of 3,163 and 11,294 respectively (See Table below).

TABLE I
POPULATION

	1970	1975	1980	1990	2000
7301	3,163	3,289	4,080	N/A	N/A
7313.01	10,915	11,294	12,614	N/A	N/A
County	300,030	342,700	395,663	500,756	591,209

Sources: Population estimates for 1970 and 1975, U.S. Bureau of the Census. Population projection by Maryland Department of State Planning, Maryland Projection Series, Population and Employment, 1975-1990, Preliminary (May 1977, revisions). This is the most recent population data available.

The northern section of the County is characterized by high industrial employment and population growth higher than that of the rest of the County.

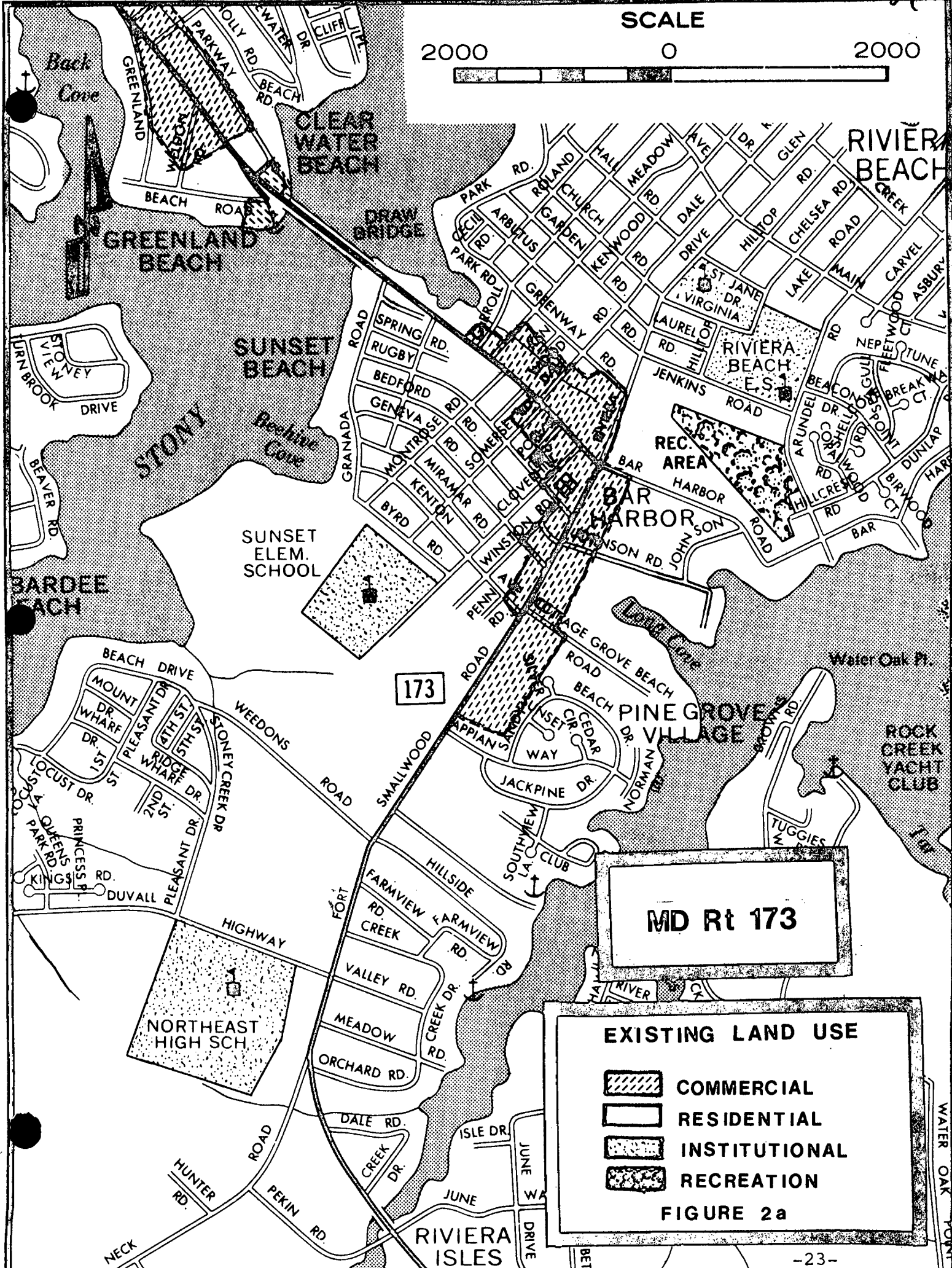
The Anne Arundel County unemployment rate for April, 1979 was 5.0% as compared with 6.1% for Maryland. Median Family Income in 1975 for census tracts 7301 and 7313.01 are \$15,842 and \$16,716 respectively which compares favorably with Anne Arundel County's Median Income of 17,777. (See Table below).

TABLE II
MEDIAN FAMILY INCOME

Census Tract	1970	1975
7301	\$10,457	\$15,842
7303.01	11,045	16,716
County's	11,478	17,777

214

SCALE



173

MD Rt 173

EXISTING LAND USE





-  COMMERCIAL
-  RESIDENTIAL
-  INSTITUTIONAL
-  RECREATION

FIGURE 2a

Population of Census Tracts
Map of 1970 Tracts

25

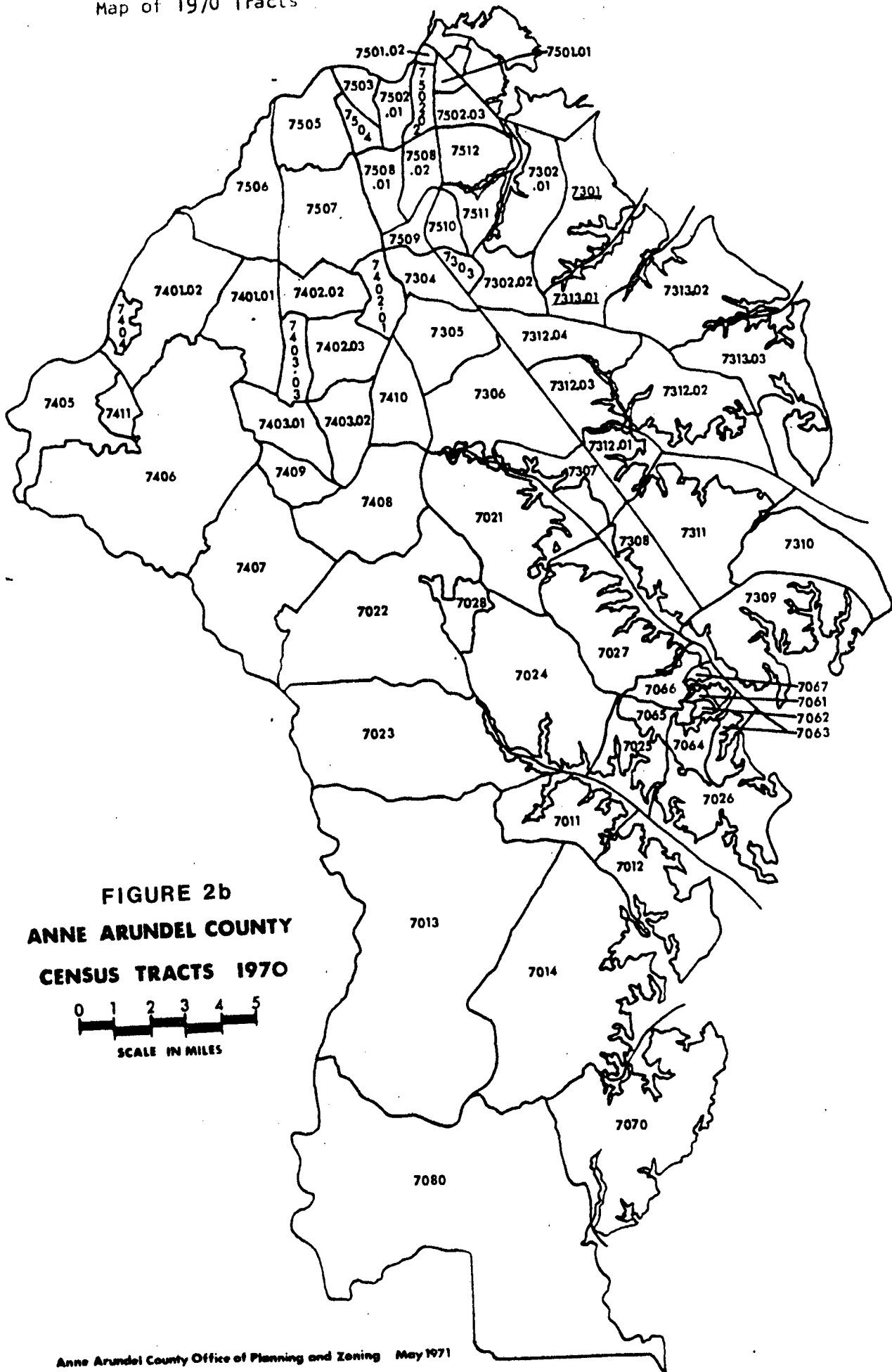
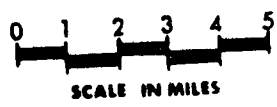


FIGURE 2b
ANNE ARUNDEL COUNTY
CENSUS TRACTS 1970



26

2) NATURAL

a. Overview of the Study Area

Because of extensive human development the natural study area is divided into four distinct physical/natural settings. These areas are relatively small with reduced buffer between habitat and the roadway. These areas are concentrated near the Stony Creek Bridge and are as follows:

1. The shoreline of a small unnamed creek on the eastern flank of the southern terminus of Fort Smallwood Road bridge and its opposite slope.

2. Approximately 40 feet of the slope on either side adjacent to the northern terminus of the bridge.

3. A section of woodland on either side of Johnson Road and an open field area between Johnson Road and Cottage Grove Beach Road.

4. Stony Creek.

b. Unique and/or Sensitive Natural Areas

A literature review revealed no unique natural settings in the study area. However, approximately 1.5 acre of wetland is located within the study area and is addressed under aquatic ecosystems.

c. Terrestrial Ecosystems

Vegetation

The major portion of the area under study contains many hardy shrubs, vines and shrublike trees and some climax hardwoods. The vegetational makeup of the slopes of the northern terminus of the bridge is comprised of landscape grasses, golden

rod, and small locust trees, with an understory of creeper vines, (having tendrils) honeysuckle and sumac. The slopes of the southern terminus on the marsh side have several 50 to 60 foot Chestnut Oak and Southern Red Oak trees with a mixture of Black Cherry, Locust and Sassafras trees of medium height making up the understudy. The shrub layer includes several golden road varieties including Canada Golden Rod, also briars, Creeper vines, sumac of the genus Rhus, and milkweed, which are typical hardy roadside types. On the opposite side of the terminus the same upland constituents are present with stronger field type characteristics.

Southwest from Fort Smallwood Road, the roadside vegetation consisting of varieties of sumac, honeysuckle and briar transforms to mixtures of shrublike trees and medium sized trees such as locust and black cherry. Southwest of Cottage Beach Road, 30 feet from the roadway, the remnants of a high marsh vegetation (common reeds) is still present although the previous wetland's characteristics have long since been superseded by upland vegetation.

Wildlife

Because existing cover is patchy and so close to human activity, very few active wildlife species are found in this area. Water fowl such as dabbling ducks (Mallards, Greater Scaup) were observed. These birds will use the shoreline as wintering sites. Laughing and Herring Gulls and an American Coot were also seen in the waters of the study area. Other transients that would take advantage of the low buffer area would be

26

perching birds (Passeriformes), small rodents, raccoons that venture into the marsh area to feed, and rabbits foraging in the woodland and fields adjacent to Cottage Avenue. The Office of Endangered Species of the Maryland Department of Natural Resources and the U.S. Department of Interior, U.S. Fish and Wildlife Service confirmed that along with limited wildlife there are no threatened or endangered species in the study area (See letter dated August 29, 1980 comment and coordination section).

d. Aquatic Ecosystems

Wetlands

The most productive and diverse setting in the study area, the wetlands section, hosts several varieties of wetland schemes. (See Figure 3).

The most northern wetlands area is composed of a brackish high marsh category. Marsh Elder, (*Baccharis Halimifolia* #42) is dominant with tufted beach grasses on the beach head. Heading towards the toe of the slope the wetlands vegetation begins to intermix with certain thorny creepers and shrubs such as canada golden rod, swamp rose mallow, and sumac. A wetland grass (*Spartina Alterniflora*) is maintaining a coexisting profile in this section of the marsh. This vegetational scheme constitutes approximately .6 acre of marsh land.

Further on towards the headwaters of this unnamed creek, there is a predominance almost to the point of homogeneity of a common marsh reed (*Phragmites australis*). This area is .4 acres of the total 1.5 acre of wetlands in this study. On the

STONY
CREEK

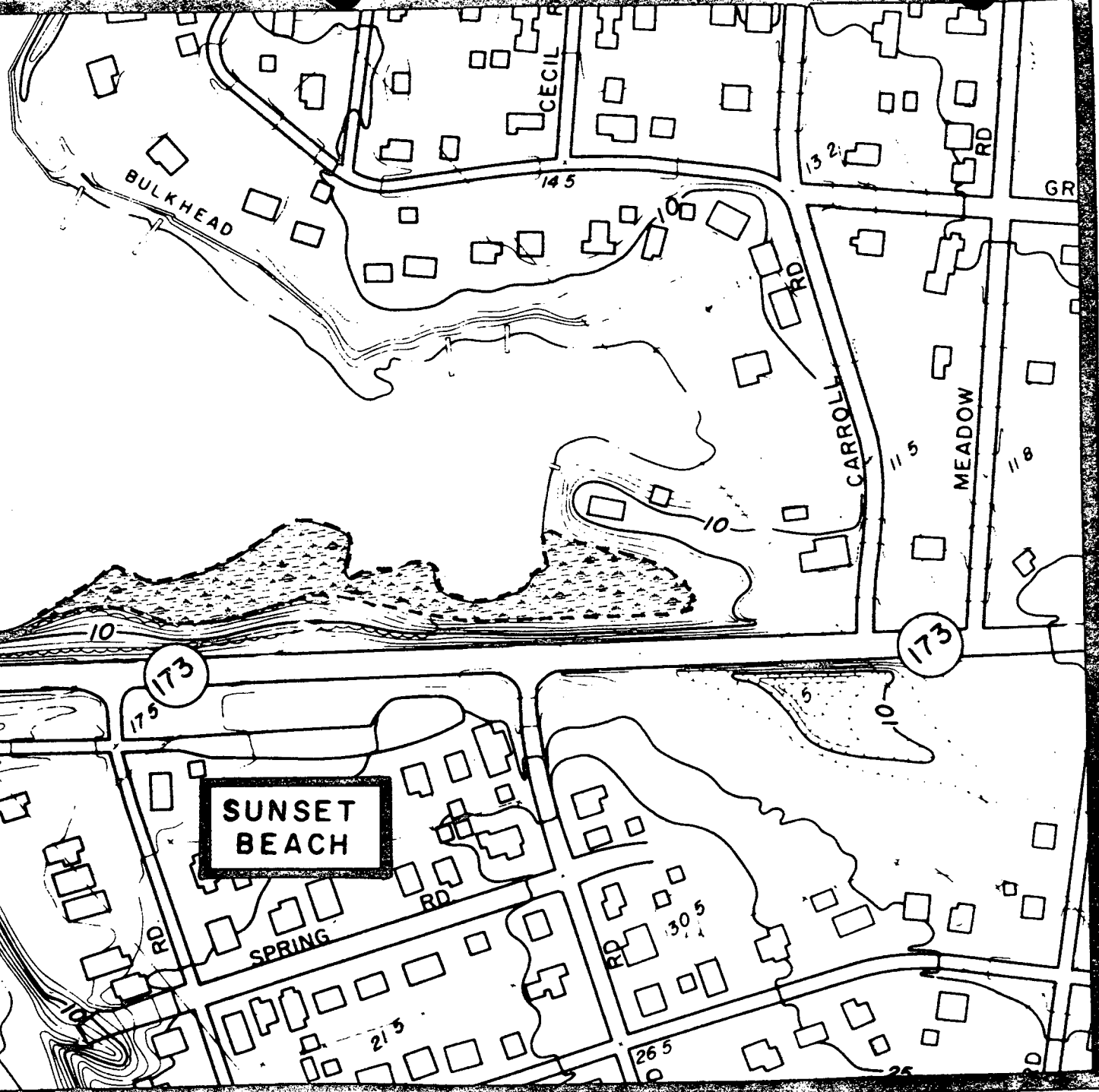
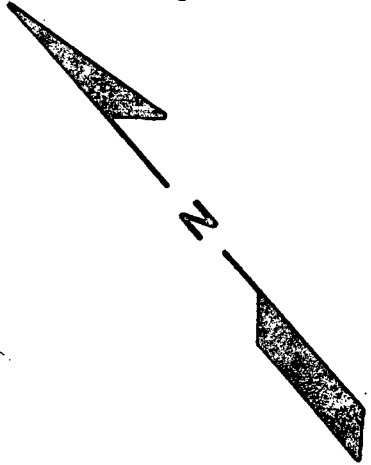


FIGURE 3
SCALE 1in= 200ft

 WETLAND

18

30

periphery are some 'stable mast producing tree types. On the slopes nearest Fort Smallwood Road are small trees.

Estaurine Biota

Stony Creek lies in a zone deemed semi-healthy and its waters host spawning activity for bay anchovy, white perch, alewife and blueback herring. These waters are a nursery or feeding ground for as many as 26 different species of fish with white perch being the dominant population.

The harbor waters have a history of fairly active open waters with the exclusion of filter feeders on the creek bottom. The reason for this situation is high levels of decayed organic matter that is dropping to the bottom of the creek from sewage input and accelerated algal activity.

e. Endangered Species

3) HISTORICAL/ARCHEOLOGICAL

Four historic sites of state inventory quality are located in the Route 173 study area and are indicated on Figure 4. These properties in the Riviera Beach environs are:

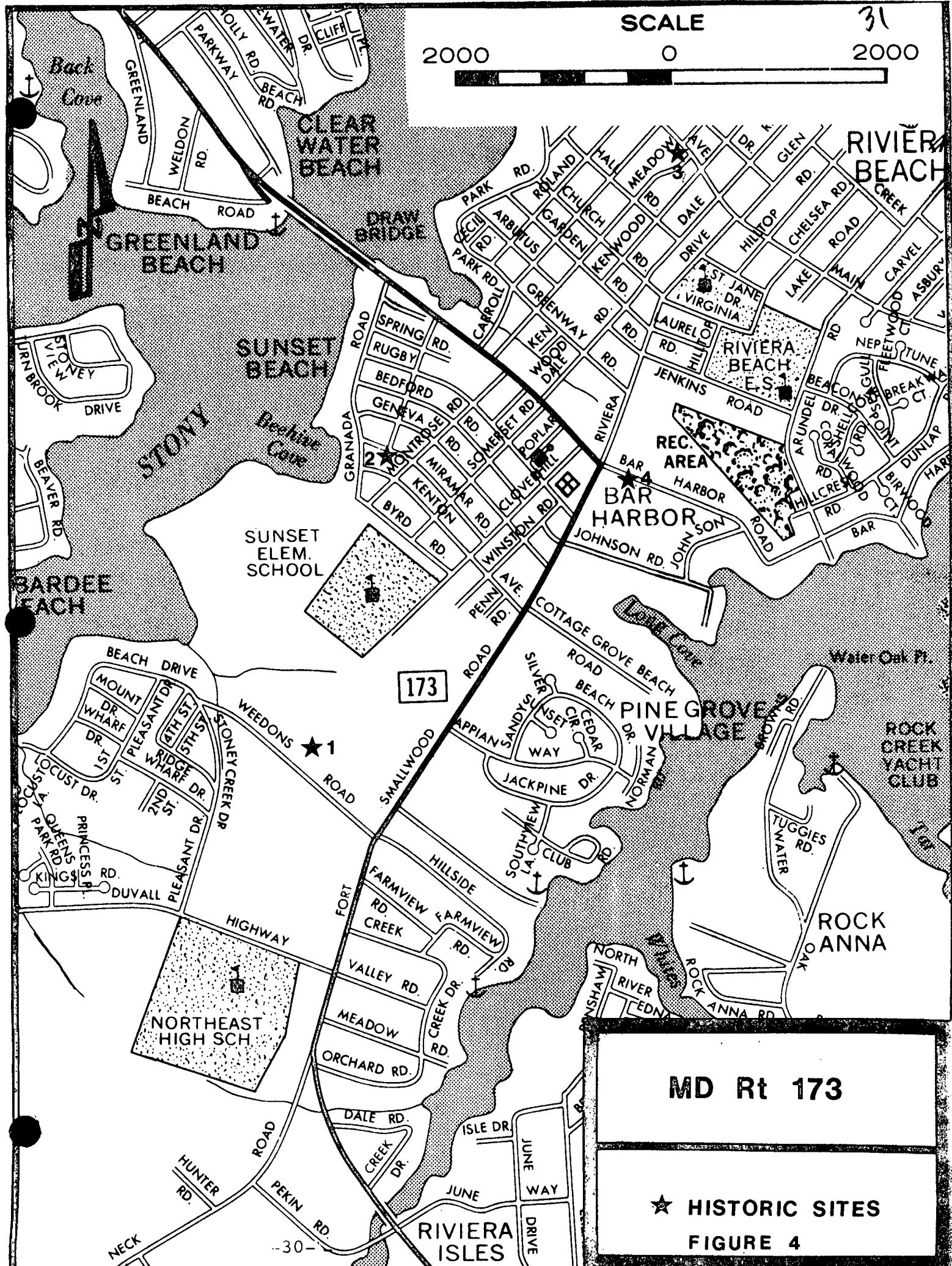
-Farmhouse, NW side of Ft. Smallwood Road, south of elementary school and Appian Way. (#1)

-House, 8426 Miramar Road at Homeland Road. (#2)

-Locust Lodge, 184 Meadow Road at Main Avenue. (#3)

-A victorian-style house just south of junction of Fort Smallwood and Bar Harbor Roads, on east side, identified as #4 is of negligible architectural or historic value.

An archeological reconnaissance revealed no effect on this cultural aspect of the project area. See the letter in



SCALE

31

2000

0

2000

173

MD Rt 173

★ HISTORIC SITES

FIGURE 4

correspondence section from Maryland Historical Trust dated August 20, 1979.

4) EXISTING ROADWAY SYSTEM

Maryland Route 173 is classified as a secondary state highway. The existing roadway is a black top road varying in width from twenty four feet (24') to sixty five feet (65'). There is generally a rolling terrain in this urban area where the Stony Creek Bridge and the south approach are both rated as inadequate due to existing congestion and safety conditions.

In response to citizen request for improved traffic flow in the area, an interim improvement is scheduled for construction in the fall of 1980, and to be completed in the summer of 1981.

This improvement will consist of a four (4) lane roadway (without shoulders) from Stoney Creek to Bar Harbor Road. From Bar Harbor Road to Tick Neck Road the interim improvement will be a three (3) lane roadway with three (3) foot shoulders on each side. At the intersection of Duvall Highway, Maryland Route 173 will be widened to five (5) lanes.

While these improvements will offer some relief to the present safety and congestion problems, they do not address the overall problem of the Stoney Creek Bridge and projected increase in volume of traffic.

II. NEED FOR THE PROJECT

A. Purpose

Continuous development of Riviera Beach and vicinity combined with increasing industrial development has generated traffic volumes which will soon exceed existing road capacities. This situation is particularly evident during peak periods.

The Stony Creek Bridge and existing facility to the south of the bridge are both rated as inadequate. This inadequacy is a result of poor roadway surface, insufficient travel width, no left turn provisions and severe capacity limitations. The bascule or drawspan part of the structure is in good condition and requires only minor maintenance. The approach span concrete bridge deck has recently had major temporary maintenance and can only be maintained until 1984. If one of the proposed spans is not built in the next five (5) years, partial rehabilitation and resurfacing will be necessary to maintain the bridge properly.

B. Accident Statistics

Maryland Route 173 accident statistics are based on the four (4) year period 1975 through 1978. The accident rate is also prorated to one hundred million vehicle miles of travel (100 MVM).

Maryland Route 173, from Tick Neck Road to Stony Creek experienced an average accident rate of seven hundred fifty three (753) accidents for every 100 MVM for this four (4) year period. This accident rate is presently higher than our weighted statewide average accident rate/100MVM of six hundred thirty four (634) for all similar design highways now under state maintenance.

Within the study limits, there are three consecutive 1/2 mile sections of roadway that have been identified as High Accident Locations (HAL) during 1978. These locations are:

1. Maryland 173, from .01 miles south of Orchard Road to .15 miles south of Appian Way - 25 accidents.
2. Maryland 173, from .15 miles south of Appian Way to .01 miles north of Geneva Road - 28 accidents.
3. Maryland 173, from .01 miles north of Geneva Road to .03 miles north of Carroll Road - 42 accidents.

Also, within the study limits there are two intersections that have been considered High Accident Intersection Location (HAI) during the four (4) year study period. These intersections are listed below indicating the year in which they qualified and the number of accidents.

1. Maryland 173 at Duvall Highway and Valley Road - 1976-18 accidents.
2. Maryland 173 at Riviera Drive - 1978 - 15 accidents.

The existing collision types experienced on Maryland 173 in comparison to statewide averages for this design roadway are listed below.

Table III
Collision Comparison

<u>Collision Types</u>	<u>Percent Study Section</u>	<u>Percent Statewide Urban</u>
Angle	16.72	18.85
Rear End	39.23	28.26
Fixed Object	7.72	14.64
Opposite Direction	5.47	5.77
Sideswipe	5.75	10.65
Left Turn	5.14	5.98
Pedestrian	4.82	2.53
Other Collision	14.15	12.61

35

The general nature of collisions through this area indicates that 39% are rear-end collisions. In addition, 50% occurred during darkness hours, while it was noted that 18% of the accidents involved drivers under the influence of alcohol. These figures do exceed our statewide expectations. Taking into consideration this combination of conditions under which many accidents are occurring, the potential for severe injury or fatal accidents is greatly enhanced.

The proposed upgrading of the existing facility as outlined in Alternate 1 would provide a five lane highway with exclusive center left turn lane from Tick Neck Road to the south end of the Stony Creek Bridge, and a four lane roadway for the Stony Creek Bridge. This design roadway will remove from the through lanes those vehicles attempting to turn left at the numerous driveways or county roads. Segregating these vehicles will increase traffic capacity while reducing the possibility of rear-end collisions. Our studies of the five lane, non-divided highways document that although the center lane does not afford the protection of a median, this design highway does provide a certain amount of maneuverability for any vehicle that has to avoid left and/or right turning vehicles. Our studies indicate that the proposed highway described under Alternate 1 should experience an accident rate of approximately 726 acc./100MVM based on statewide figures, and bring about an accident cost of \$2 million/100MVM and the existing accident cost of \$2.1

million/100MVM of travel, there would be an anticipated savings of \$100,000/100MVM to the motorists. Alternate 2 differs slightly from Alternate 1 in that from Tick Neck Road to Appian Way, Alternate 2 proposes a four lane divided highway. The remaining section of the study limit will continue in the same manner as Alternate 1. As discussed in Alternate 1, the five lane section does institute some improvement while increasing capacity; however, the four lane divided highway will provide a safer type highway by the elimination of opposite direction accidents. This type highway would also be adequate in handling the anticipated vehicular volume increases, while physically separating vehicles traveling in opposite directions, therefore being more advantageous. Our studies indicate that Alternate 2 should experience an accident rate of approximately 687 acc./100MVM based on statewide figures, and bring about an accident cost of \$1.9 million/100MVM of travel. In comparison to the existing accident rate of 753 acc./100MVM and the existing accident cost of \$2.1 million/100MVM of travel, there would be an anticipated societal savings of \$200,000/100MVM resulting from Alternate 2.

In summary, the existing accident rate slightly exceeds the estimated rate for both Alternates 1 and 2. Realistically, we would expect the proposed improvements to further reduce the accident rate to a degree lower than previously stated since the latest design standards will be incorporated. By widening and upgrading the existing highway as proposed, the traffic flow would not be inhibited, thereby alleviating the delays currently

experienced by the motorist now using this highway. There are three schools and a public library in the study area (see page 21). The proposed continuous left turn lane and bicycle lanes would create safe condition for school buses and the children using these facilities.

The accident cost indicated, includes present worth of future earnings of those persons killed and permanently disabled, as well as monetary losses resulting from injury and property damage accidents. The unit costs utilized in the above computations were based upon actual cost values obtained from three independent cost studies conducted in Washington, D. C., Illinois, and by the California Division of Highways, and were updated to 1978 prices.

C. Capacity Analysis and Traffic Projections

The average daily traffic (ADT) on Maryland Route 173 was 17,200 in 1978 and is projected to increase to 29,200 by the year 2005, for either build alternate or the No-Build Alternate (See Figure 5 abc).

The capacity analysis for the existing road is as follows: The capacity at level of service "E" is 17,000 ADT, indicating low operating speeds, volumes near or at capacity and unstable flow.

In the year 2005, the existing road (No-Build Alternate) will function at a level of service "F", i.e. forced flow operation at very low speeds where volumes are exceeding capacity, with stoppages occurring for short and/or long periods. With either build alternate Maryland Route 173, this road would operate at a

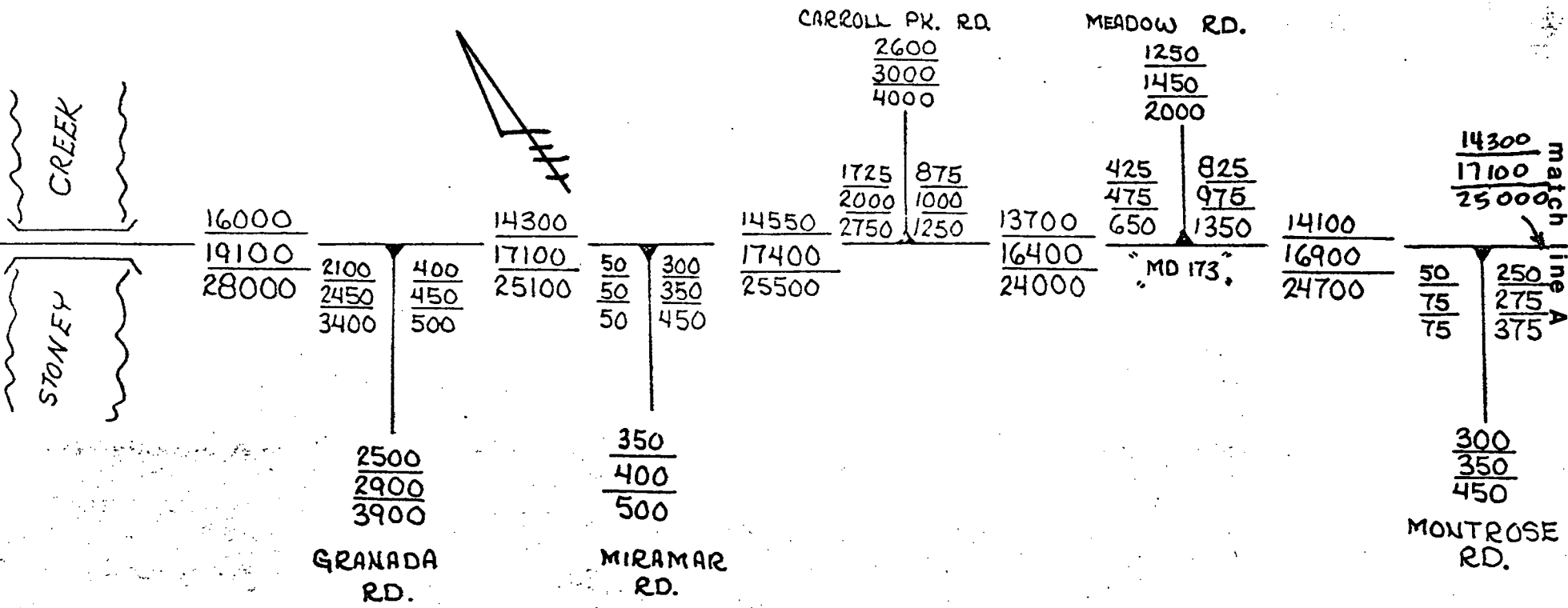


FIGURE 5a
BUILD/NO-BUILD
TRAFFIC

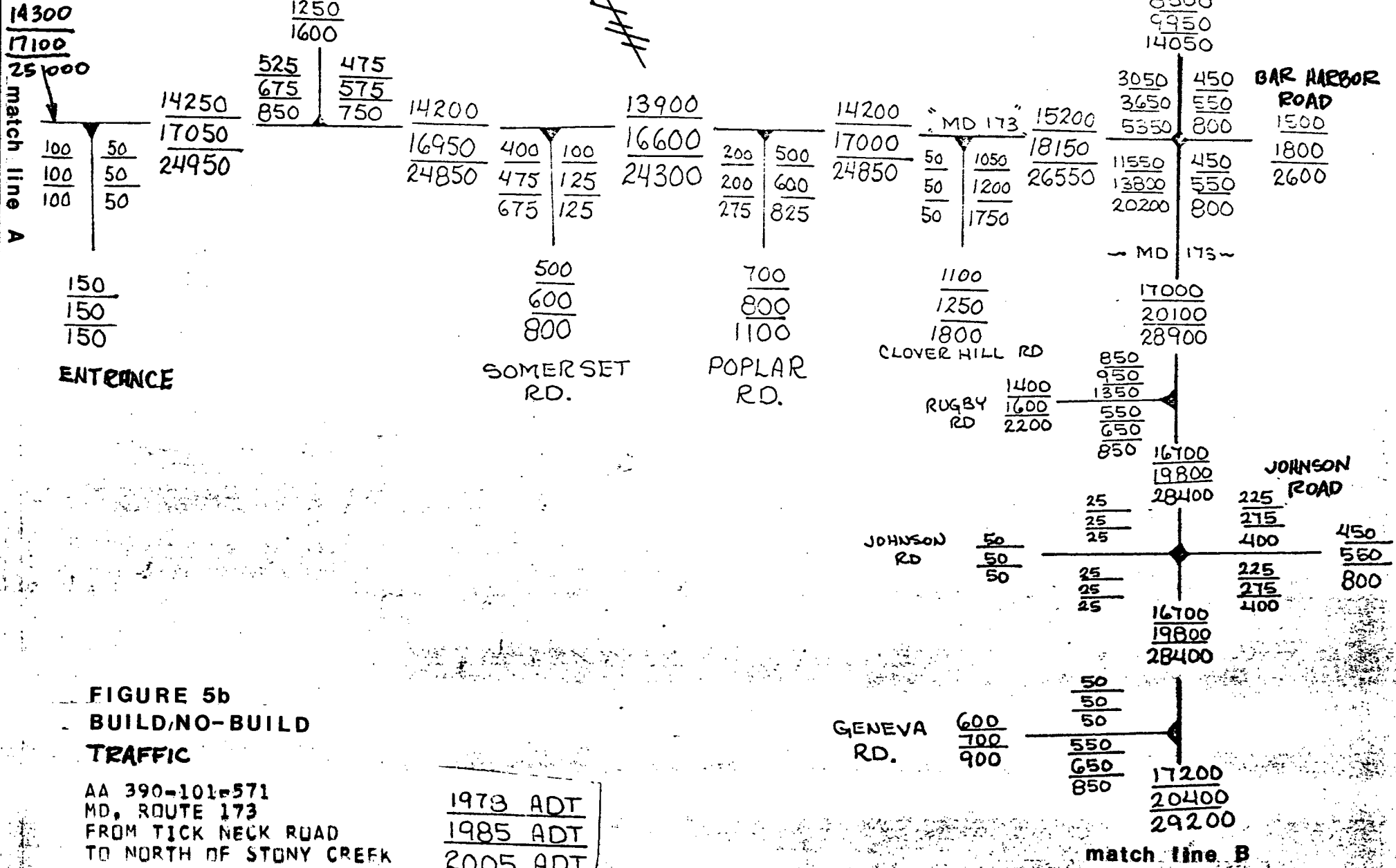
1978 ADT
1985 ADT
2005 ADT

AA 390-101-571
 MD, ROUTE 173
 FROM TICK NECK ROAD
 TO NORTH OF STONY CREEK

df

DALE RD.

RIVIERA DR.



ENTRANCE

SOMERSET RD.

POPLAR RD.

CLOVER HILL RD

RUGBY RD

JOHNSON RD

GENEVA RD.

BAR HARBOR ROAD

JOHNSON ROAD

FIGURE 5b
BUILD/NO-BUILD
TRAFFIC

AA 390-101-571
MD, ROUTE 173
FROM TICK NECK ROAD
TO NORTH OF STONY CREEK

1973 ADT
1985 ADT
2005 ADT

match line B

match line B

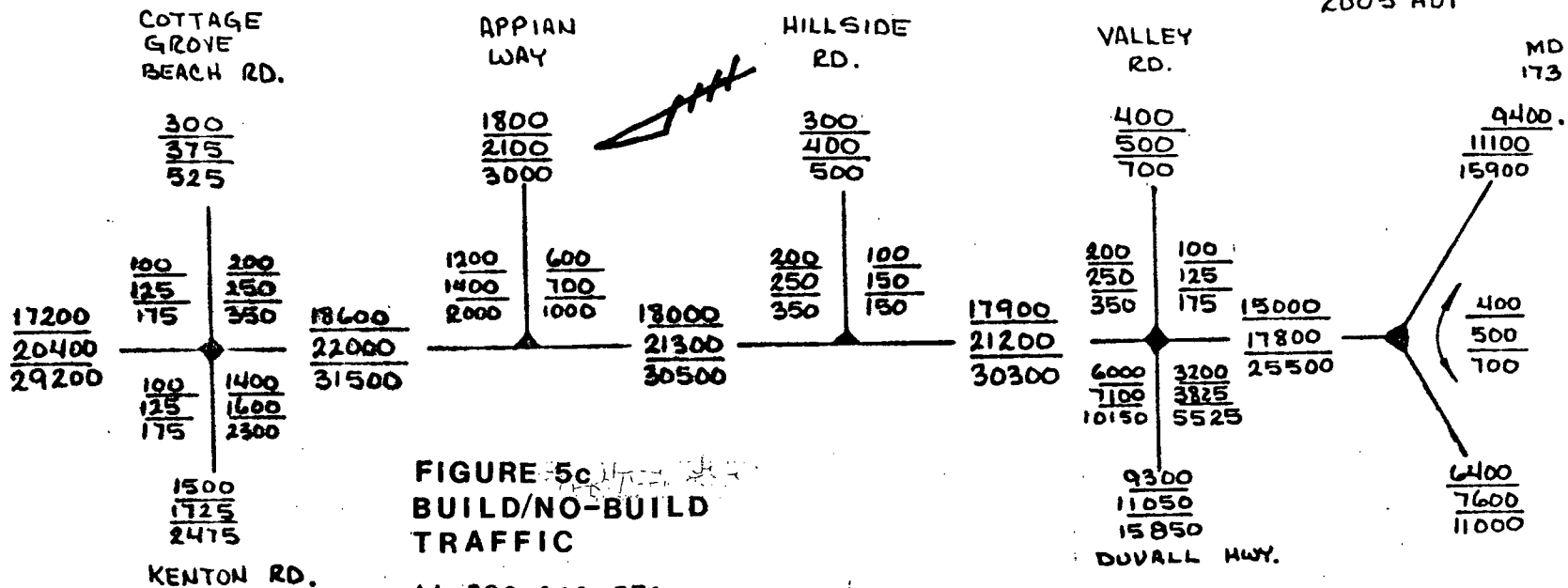


FIGURE 5c
BUILD/NO-BUILD
TRAFFIC

AA 390-101-571
MD, ROUTE 173
FROM TICK NECK ROAD
TO NORTH OF STONY CREEK

1978 ADT
1985 ADT
2005 ADT

47

level of service "D" in the year 1985, and this level of service "D" would then be maintained through the design year 2005.

D. Energy Conservation

Inasmuch as land use projections for the corridor show a steady growth in future years, traffic demands on the existing roadway can only be expected to increase as well. As the existing roadway drops to lower levels of service, it can be expected that resultant low speeds, stop and start conditions, lack of maneuverability, and poor access will contribute to inefficient fuel use and unsafe conditions.

Since traffic forecasts for the design year are independent of any alternate under consideration, energy consumption will depend, to a great deal, on capacity and geometric aspects of the roadway such as vertical and horizontal alignments, surface condition, lane width, and lateral clearance. The alternates under consideration for this project propose an increased typical section width which would provide a comparatively greater level of service for design hour traffic volumes. The combination of decreased travel times and the improvement to flow conditions should result in a net decrease in energy consumption.

III. ALTERNATES CONSIDERED

A. Project History

Introduction

The proposed project is in accord with federal, state, regional and local comprehensive plans and land use. (See Regional Planning Council letters Page 84). The first Twenty Year Highway Needs Study (1964) included improvement to Maryland Route 173 from the Baltimore City Line to Maryland Route 607. It suggested a four lane reconstruction.

Improvement to the Stony Creek Bridge and south approach was first programmed in the 1975-1979 Secondary Highway Improvement Program. The Systems Planning Report was prepared and approved in November of 1975 for the bridge and southern approach. The project was subsequently extended to the Riviera Drive as the logical termini for Federal Highway Administration approval. Following completion of the Systems Planning Process, the project was deferred from June 1976 until the beginning of fiscal year 1979 (July 1978).

When the project was reactivated the project limits were extended to Cottage Grove Beach Road in order to include an improvement to the sharp right turn at Riviera Drive within the project limits.

A Project Initiation Notice notifying the public of the project start was sent to the project mailing list on May 10, 1978 and appeared in newspapers on May 10 and 11, 1978. (See page 77).

On November 1, 1978, members of the project management

team met with the Sunset Beach Improvement Association to discuss the project. As a result of this meeting and a subsequent discussion with area elected officials the project limits were extended to Tick Neck Road because of the traffic split at that location and bulk of the commercial activity is between the bridge and Tick Neck Road.

Because this additional project extension would add 6 months to the Project Planning Study, an interim resurfacing project was initiated. This interim project will resurface and mark Maryland Route 173 for 3 lanes, thus providing a more immediate relief to the traffic problems in the area.

As a result of the project extension to Tick Neck Road the following preliminary alternates were studied and presented at the Alternates Public Meeting of October 25, 1979:

Roadway Alternate 1 was presented as 62' urban street section from the south end of the Stony Creek Bridge to the vicinity of Tick Neck Road. This alternate consisted of two (2) travel lanes in each direction plus a continuous left turn lane. The travel lanes were curbed on the outside with a five (5) foot sidewalk on each side. Access was provided at all intersecting street, driveway, and business entrances. An 80' minimum right of way was required.

Roadway Alternate 2. From the south end of the bridge to Appian Way, Roadway Alternate 2 was presented as the same as Alternate 1. From Appian Way to Tick Neck Road, the roadway would be widened to two 26' roadways with a raised median, curbs and sidewalks. Median crossovers were limited to

144

Hillside Avenue, Duvall Highway, and Tick Neck Road. This roadway alternate required a minimum of 80' of right of way for the portion that is the same as Alternate 1 and a minimum of 90' of right of way for the portion of the project from Appian Way to Tick Neck Road.

The Low Level Bridge Alternate proposed a low level parallel moveable span to be constructed immediately adjacent to the existing bridge. The completed bridge would be a 64' wide, four lane roadway with a flush painted median. There was a five (5) foot sidewalk on each side. A service road was required at the northern end of the project to the Greenland Beach Road into Maryland Route 173.

The High Level Bridge Alternate proposed a high level fixed span bridge. For study purposes and cost estimates a 50' high span was considered. This high level fixed span also proposed a 64' wide four(4) lane roadway with a painted flush median and sidewalks. This alternate would require the removal of the existing span. This bridge alternate would require the construction of a retaining wall on the southern approach adjacent to the northbound roadway to prevent the supporting slope from encroaching on the wetland area.

The high level bridge alternate also required the service road on the north end of the bridge and a service road at the southern bridge approach to provide access to the homes along Old Fort Smallwood Road.

As a result of the comments from the October 25, 1979 Alternates Meeting, the typical section of Alternate 1 was

45

expanded to include a bike lane on each side. The typical section of Roadway Alternate 2 was also expanded to provide bikeways as well as a wider median to increase safety. The typical section of both the low and high level bridge alternate was also expanded to include bikelanes. (These changes are described under "Alternates Now Under Consideration".

B. Alternates Now Under Consideration

Two roadway alternates and two bridge alternates are currently under consideration.

Roadway Alternate No. 1

The proposed roadway typical section for roadway alternate 1 is a sixty-four (64) foot curbed section consisting of four (4) eleven foot (11') lanes, a twelve foot (12') continuous median turning lane, two (2) four foot (4') bike lanes and two (2) five foot (5') sidewalks contained within a minimum of eighty feet (80') of right of way. Access will be provided at all existing intersecting streets, driveways, and business entrances.

This alternate begins approximately one thousand four hundred feet (1400') south of existing Tick Neck Road and will be coordinated with Anne Arundel County's proposed improvement and relocation of Tick Neck Road which moves the existing intersection to a point approximately eighty feet (80') north of Dale Road. Under the County's current schedule the relocation could be constructed prior to this Maryland Route 173 project. If the Maryland Route 173 project is constructed prior to the county project for Tick Neck Road then the proposed Tick Neck Road tie in will be constructed with this project.

42

With this relocation of Tick Neck Road, Dale Road would be terminated at Maryland Route 173.

Roadway Alternate 1 continues northward following the existing roadway until it reaches Stony Creek. With either the high or low level bridge (described further in the text) the alternate will follow the existing span alignment with the expansion to the south/west for a wider structure. From the north side of the bridge the roadway tapers from sixty-four feet (64') to fifty-six feet (56') in a distance of approximately six hundred feet (600') to match the existing roadway section which is four eleven foot travel lanes and a 12 foot continuous turning lane.

The horizontal and vertical alignment of this alternate generally follows the existing road with the maximum horizontal curve being four degrees (4°) and a maximum vertical grade of six percent (6%) if the high level bridge alternate is selected.

Roadway Alternate 2

Roadway alternate 2 has the same vertical and horizontal alignment as roadway Alternate 1. Roadway Alternate 2 begins at the same point as Alternate 1; fourteen hundred feet (1400') south of Tick Neck Road. From that point to Appian Way the typical section for Alternate 2 is an 86' curbed section consisting of four (4) 12' lanes, two (2) four foot (4') bikelanes, a 30' grass median (including two four foot shoulders), and two five foot sidewalks. This typical section would be contained within a minimum of 102' of right of way.

With roadway alternate 2, median crossovers will only be provided at Relocated Tick Neck Road, Duvall Highway, Valley Road, Farmview Road, and the Relocated Pasadena Yacht Club Road/Elizabeth's Landing Way intersection. Dale Road would also be terminated with this alternate.

As part of this Alternate the entrance to the Pasadena Yacht Club would be relocated 110' north to line up directly with the new Elizabeth's Landing entrance. This realignment is necessary to maintain proper median crossover spacing.

Alternate 2 then continues northward with a 30' median to Appian Way. Beginning at Appian Way it tapers down to the 64' curbed section as in Alternate 1. From this point to the northern project limit the typical section, vertical alignment, and horizontal alignment is the same as Alternate 1.

Roadway alternate 1 and 2 will incorporate a closed drainage system in the design of the selected alternate. The outfalls of this system will generally be Stony Creek on the north end of the project and Rock Creek on the southern end of the project.

Low Level Bridge Alternate (Bascule Span)

The proposed low level parallel moveable span would be constructed immediately adjacent to the south side of the existing draw span. This bridge would be constructed so that traffic would be maintained at all times.

The completed bridge would incorporate the existing bridge and would be a 64' four lane roadway with a flush painted median and bikeways. There would be a five foot (5') sidewalk on each

side. This bridge alternate would require the construction of a service road at the northern project limit to tie Greenland Beach Road into reconstructed Maryland Route 173. This bridge alternate would follow the same vertical alignment as the existing bridge.

High Level Bridge Alternate (Fixed Span)

The high level bridge alternate proposes a four lane high level fixed span to replace the existing low level draw span. The typical section for this span will be the same as with the low level draw span alternate. A 40', 45', and 50' vertical clearance have been studied. The right of way requirements and costs are based on a 50' high span. Any height selected will be subject to Coast Guard Approval.

The high level bridge alternate would also require the service road to tie Maryland Route 173 into Greenland Beach Road. On the southern end of the bridge a service road would be required to provide access to the dwellings along Old Fort Smallwood Road.

The high level bridge will provide drainage to avoid any drainage problem to the adjacent property owners.

Transportation Systems Management

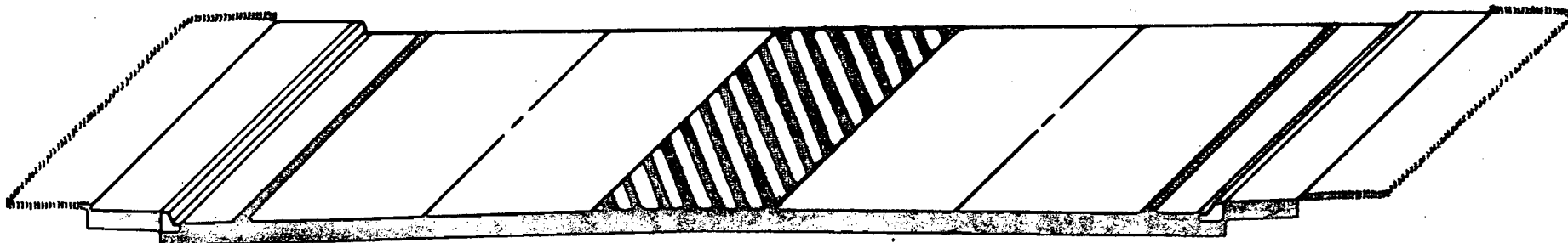
Transportation System Management (TSM) strategies under consideration for this project include sidewalks for pedestrians, marked bicycle lanes and fringe parking lots. The anticipated result from effective use of these strategies is the attainment of better levels of service on existing roadways as commuters use their cars less in favor of these alternative modes of travel.

In the case of the Maryland Route 173 improvement, the combined effect of these strategies on reducing capacity needs is minimal. There is very little employment base within the corridor, except for retail sales and service, which indicates continuous heavy commuter usage. Due to the relatively long distances from the Riviera Beach area to employment centers, walking and bicycling become impractical to the vast majority of residents for the purpose of commuting. Ridesharing, while fuel efficient and cost effective, is not expected to effect a large enough reduction in traffic volume on this segment of highway to substitute for additional lanes.

Other than capacity related problems, additional issues compounding the inadequacy of Maryland Route 173 are structural deficiencies and safety problems. TSM strategies will not overcome these physical problems. Unless reconstruction of the roadway is undertaken, the high accident locations and the bridge deficiencies will remain. (See page 33).

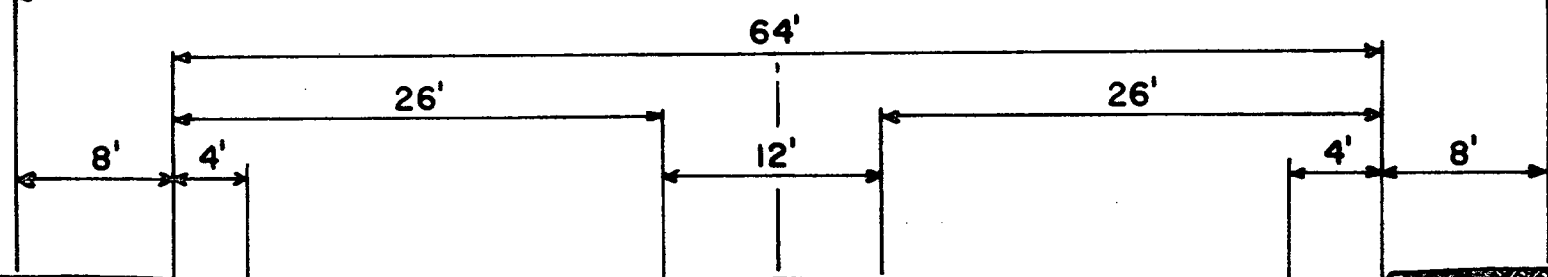
No-Build Alternate

With the No-Build alternate, no major improvement to this portion of Maryland Route 173 would be made, other than the interim improvement currently under construction. The existing drainage problems and delays caused by the bridge would still exist. Spot safety improvements, and normal maintenance within the existing right of way will continue. Rehabilitation to the existing two lane draw bridge will also be considered.



MINIMUM 80' RIGHT OF WAY

MINIMUM 80' RIGHT OF WAY



5' SDWK.

BIKE LANE

RDWY.

CONTINUOUS LEFT TURNING LANE

RDWY.

BIKE LANE

5' SDWK.

ALTERNATE 1

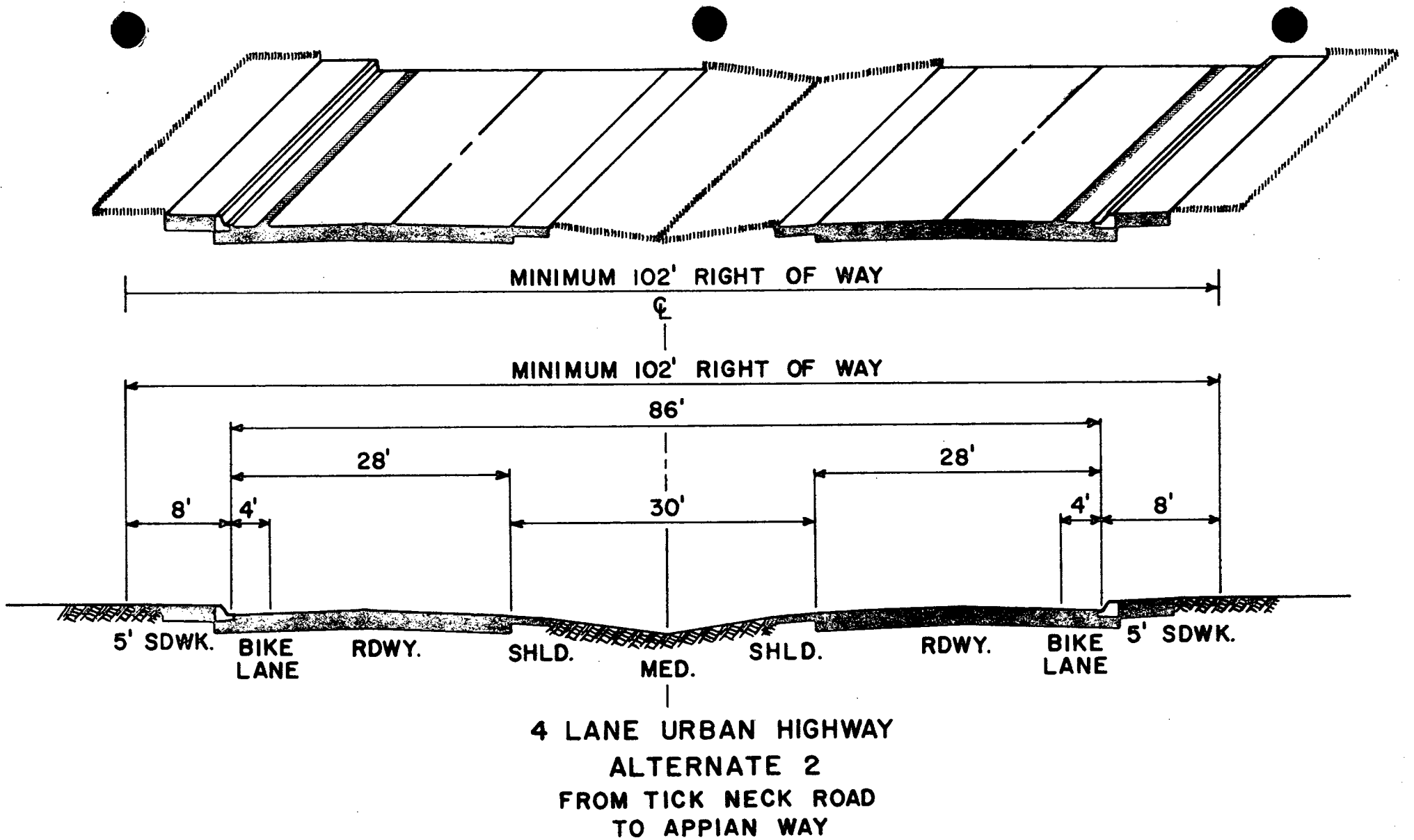
4 LANE URBAN HIGHWAY WITH CONTINUOUS LEFT TURNING LANE

ALTERNATE 2 FROM APPIAN WAY TO STONY CREEK

NOTE : THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

PROPOSED TYPICAL ROADWAY SECTION	
STATE HIGHWAY ADMINISTRATION	
MARYLAND ROUTE 173	
TICK NECK ROAD TO STONY CREEK	
NOT TO SCALE	FIGURE 6a

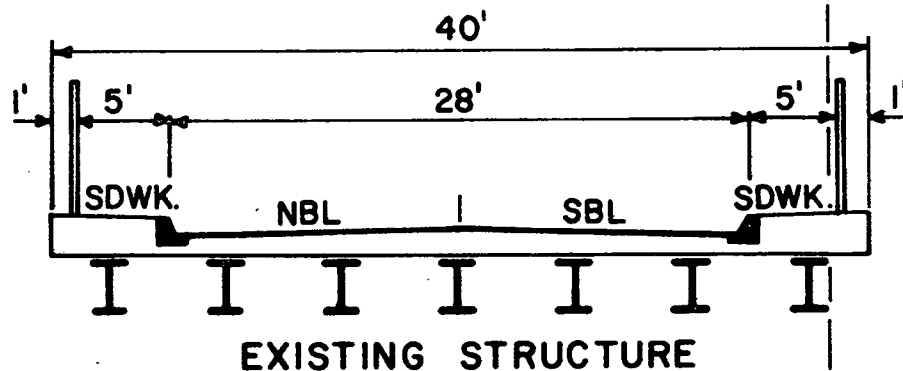
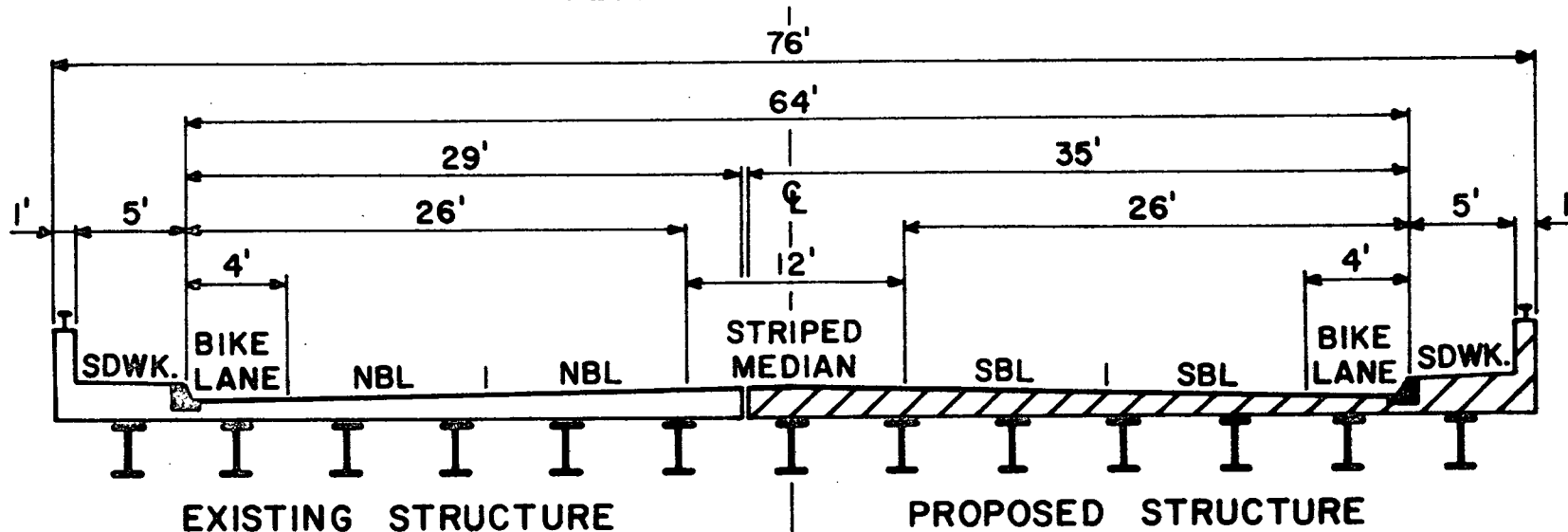
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NOTE : THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.


PROPOSED TYPICAL ROADWAY SECTION
STATE HIGHWAY ADMINISTRATION
MARYLAND ROUTE 173
TICK NECK ROAD TO STONY CREEK
NOT TO SCALE

ULTIMATE STRUCTURE



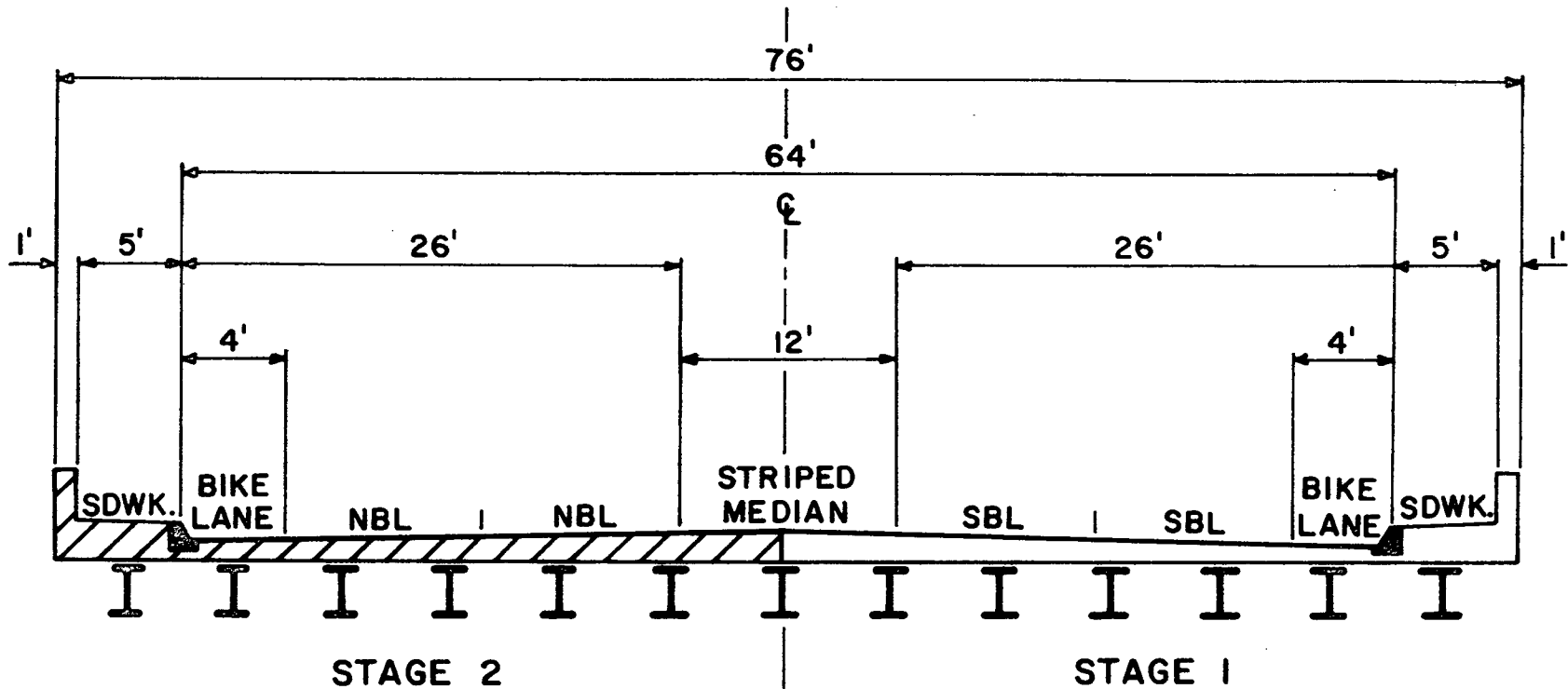
MOVABLE SPAN (LOW LEVEL)

NOTE : THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

PROPOSED TYPICAL BRIDGE SECTION	
STATE HIGHWAY ADMINISTRATION	
MARYLAND ROUTE 173	
TICK NECK ROAD TO STONY CREEK	
NOT TO SCALE	 FIGURE 6c

52

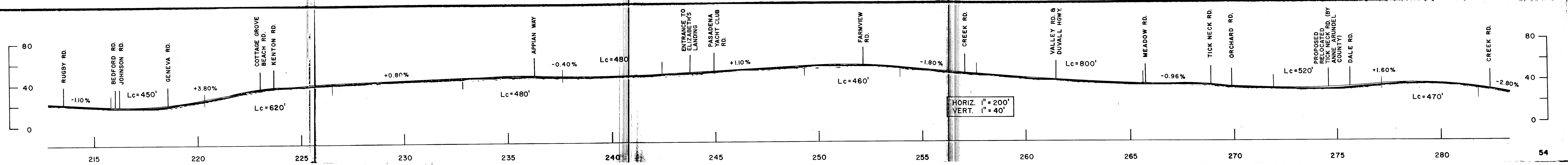
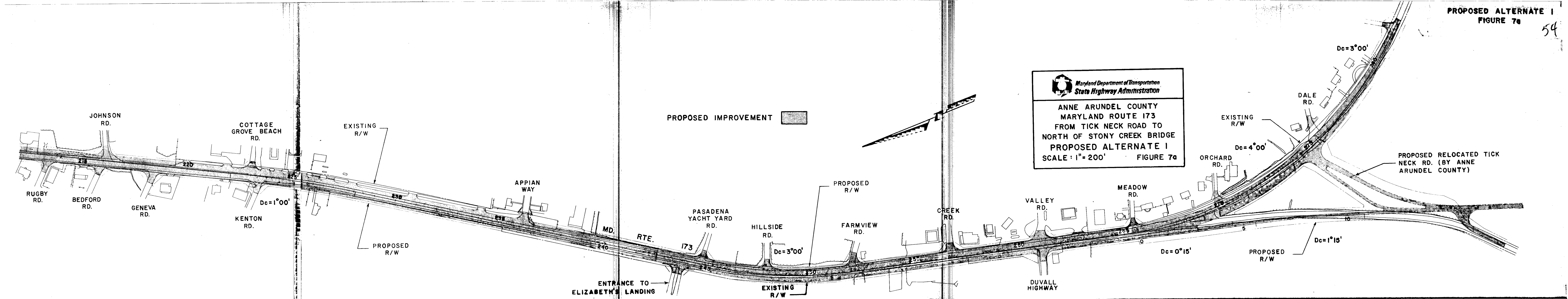
ULTIMATE STRUCTURE



FIXED SPAN (HIGH LEVEL)

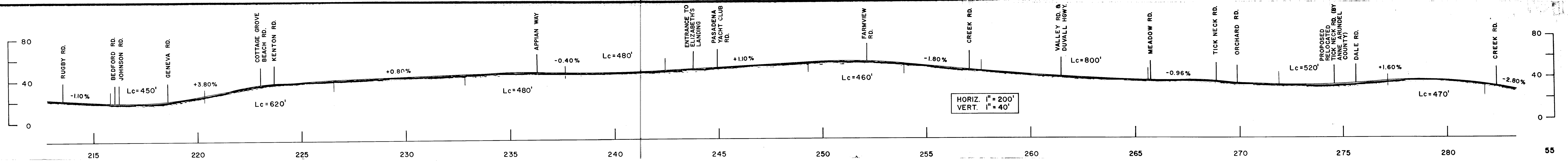
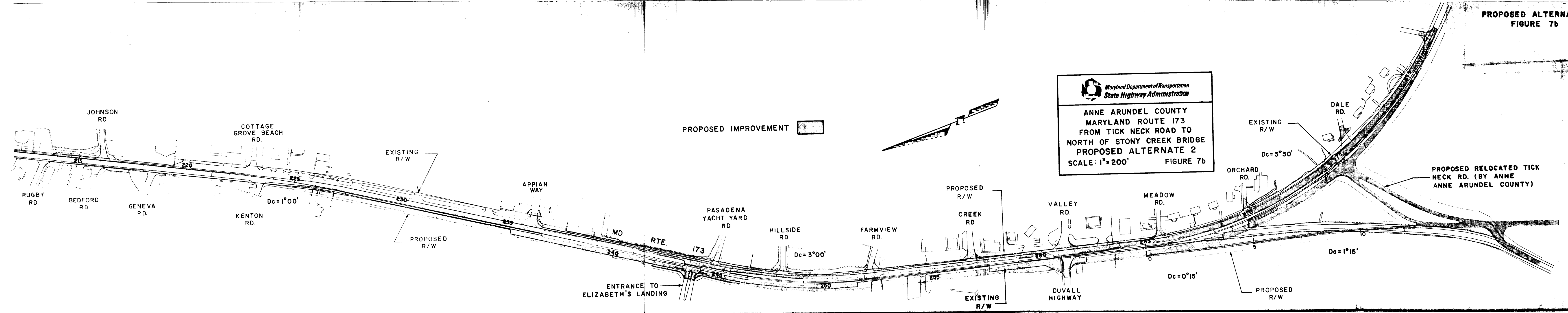
NOTE : THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

PROPOSED TYPICAL BRIDGE SECTION	
STATE HIGHWAY ADMINISTRATION	
MARYLAND ROUTE 173	
TICK NECK ROAD TO STONY CREEK	
NOT TO SCALE	53 FIGURE 6d

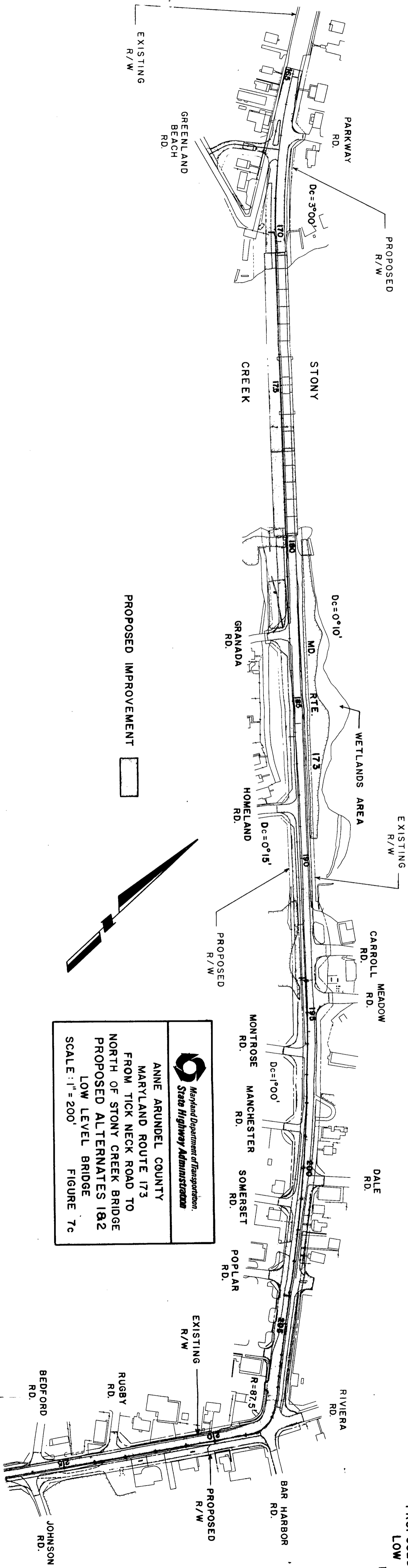


Maryland Department of Transportation
State Highway Administration

ANNE ARUNDEL COUNTY
MARYLAND ROUTE 173
FROM TICK NECK ROAD TO
NORTH OF STONY CREEK BRIDGE
PROPOSED ALTERNATE 2
SCALE: 1" = 200' FIGURE 7b

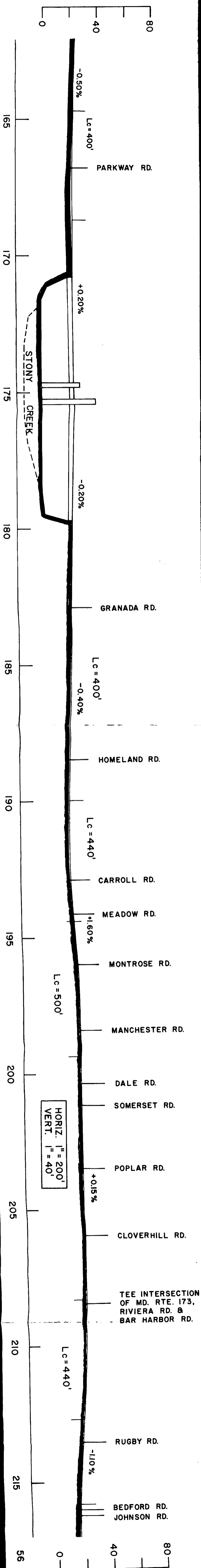


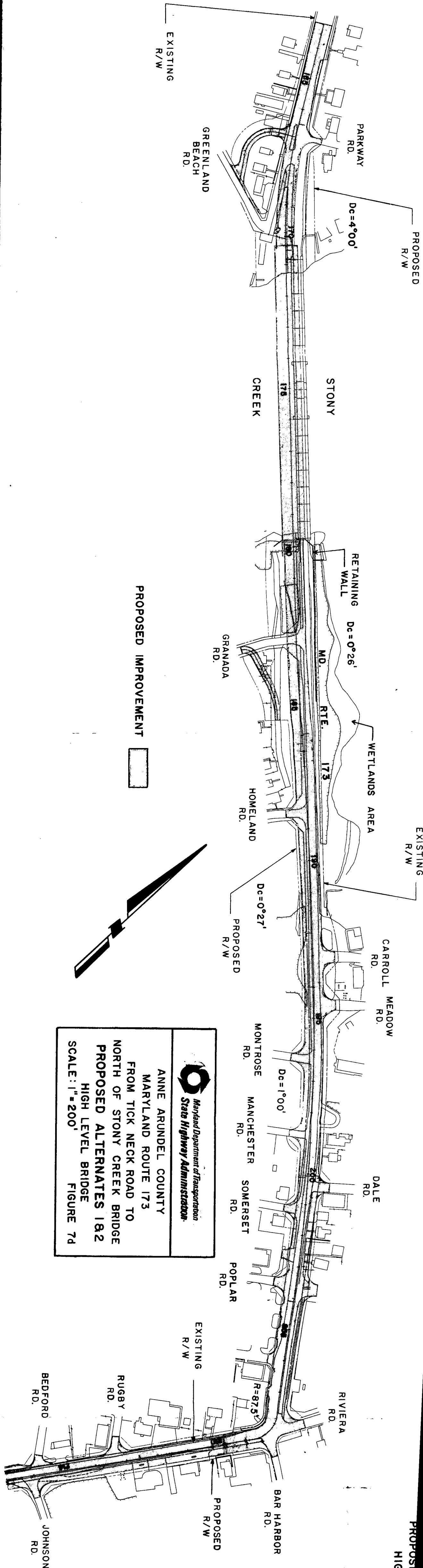
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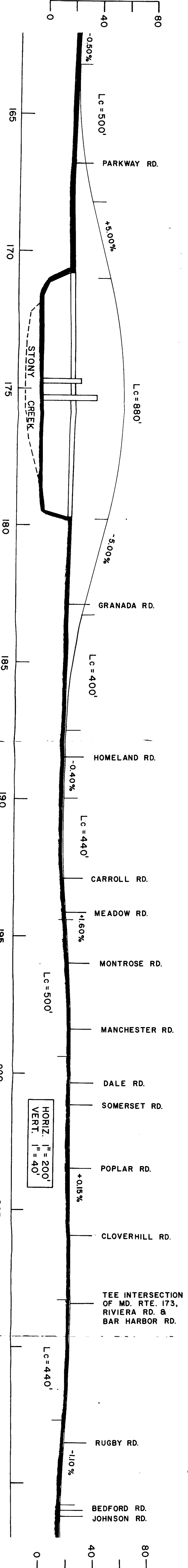
Maryland Department of Transportation
 State Highway Administration

ANNE ARUNDEL COUNTY
 MARYLAND ROUTE 173
 FROM TICK NECK ROAD TO
 NORTH OF STONY CREEK BRIDGE
 PROPOSED ALTERNATES 182
 LOW LEVEL BRIDGE
 SCALE: 1" = 200'
 FIGURE 7c






Maryland Department of Transportation
State Highway Administration
 ANNE ARUNDEL COUNTY
 MARYLAND ROUTE 173
 FROM TICK NECK ROAD TO
 NORTH OF STONY CREEK BRIDGE
PROPOSED ALTERNATES 1&2
 HIGH LEVEL BRIDGE
 SCALE: 1" = 200'
 FIGURE 7d



IV. ENVIRONMENTAL IMPACTS

A. Social Impacts

1. Relocation

The study area includes residential, residential-commercial, and mixed commercial land use. The primary social impact of this project is the acquisition of occupied dwellings and the relocation of residential families. The No-Build Alternate and Alternate no. 1 would displace no dwellings. All other build alternates require the acquisition of homes.

Alternate 1 would require 3.8 acres of residential property for strip right of way.

Alternate 2 would require 5.8 acres of residential property. Also, the taking of a combination residential-commercial building would require the relocation of estimated four persons of a one tenant family.

The low level bridge alternate would require strip right of way totaling 1.8 acres. There would be a one owner occupied family, estimated to be comprised of four persons, displaced by this proposed alternate.

The high level bridge would create the greatest social impact. This alternate would require 12.8 acres of residential property. There would be approximately 7 families consisting of an estimated 28 persons displaced by this alternate. Of these seven families it is estimated five are owner occupants, and two are considered as tenants.

Both the high level and low level bridge alternate would require the relocation of a sewage pumping station. Service

would not be interrupted as a result of this relocation.

The 50' high level bridge would service 92% of all boats with moorings and or docked up stream from the bridge. A recent survey, taken from June 1, 1980 to September 30, 1980 determined that a 50' high level bridge would service 84.3% of all boats using the water way. The lower fixed bridge heights would offer less service to those vessels using the water way. Appendix C provides the survey data.

The high level bridge would offer the advantage of no disruption of Motor Vehicle traffic for bridge openings while the low level moveable bridge would service all boats presently using the water way.

No farms, non-profit organizations or public buildings would be displaced by any of the alternates.

A survey of comparable replacement housing has been conducted by Maryland State Highway Administration for the study area. At the time of this study, there was decent, safe, and sanitary replacement housing available in the study area and within the means of all the families displaced. There are no known outside programs that will affect the supply and demand for replacement housing. Community cohesion is not affected by any alternate.

There would be no minorities effected by any of the alternates. See Appendix A for standard State Highway Administration relocation procedures.

60

TITLE VI STATEMENT

"It is the policy of the Maryland State Highway Administration to insure compliance with the provisions of Title VI of the Civil Rights Act of 1964 and related civil rights laws and regulations which prohibit discrimination on the grounds of race, color, religion, national origin, sex, age, physical or mental handicap in all State Highway program projects funded in whole or in part by the Federal Highway Administration. The State Highway Administration will not discriminate in highway planning, highway design, highway construction, the acquisition of right of way, or the provision of relocation advisory assistance. This policy has been incorporated into all levels of the highway planning process in order that proper consideration be given to the social, economic, and environmental effects of all highway projects. Alleged discrimination actions should be addressed to the Equal Opportunity Section of the State Highway Administration for investigation".

B. Economic Impacts

The No-Build Alternate, Roadway Alternate 1, and the Low Level Bridge Alternate would not require any commercial buildings.

Alternate 1 would require commercial strip right of way totaling 2.2 acres. Alternate 2 would require commercial strip right of way totaling 2.6 acres and one small business, an electronics shop. The high level bridge would require one small business, a carry out restaurant. These two businesses employ a total of eight (8) people. A recent survey of comparable

61

replacement business sites indicates there would be satisfactory replacement commercial sites within the means of the displaced businesses in the study area.

C. Historical/Cultural Impact

Four historic sites of local inventory value were identified in the study area. None of these sites are on or considered eligible for the National Register of Historic Places. There would be no impact to any of these sites. See the letter in the correspondence section from the Maryland Historical Trust dated March 29, 1979.

There would be no impact to any school, church, public buildings, park, recreation area, or unique natural or man-made feature by any of the alternates.

D. Noise Impact

A detailed noise analysis has been completed for the proposed action. The Technical Noise Report (dated May, 1980) summarized below, is available for review at the Maryland Department of Transportation, State Highway Administration, 300 West Preston Street, Baltimore, Maryland 21201.

As shown on Table IV the predicted noise levels at two noise sensitive areas (NSA's) for the Build Alternate would exceed the Federal Highway noise level criteria for that particular land use (residential). No NSA would experience noise levels in excess of the design noise levels under the No-Build Alternate. (See Appendix B for noise sensitive areas).

The noise levels predicted for the Build Alternates would create a maximum increase of 5.5dBA over the ambient noise levels

62

due to the increased travel speeds along the roadway and the increased traffic volumes expected by the design year. Also, in some cases, due to widening, the Build Alternate pavements are closer to the receptors than the existing roadway. This increase would constitute a negligible to minor impact on the existing noise environment. The differences in the predicted noise levels between Alternate 1 and Alternate 2 are insignificant (0 to 0.6 dBA).

The predicted noise levels for the No-Build Alternate are generally less than for the Build Alternates due to the lower traffic volumes accommodated by the existing roadway under level of service "E". These noise levels represent a maximum increase over ambient level of 3.9 dBA which is considered a negligible impact. In some cases the predicted noise levels are shown to be less than the ambient levels measured. Variation with time of traffic volumes, truck percentages and speeds can cause fluctuations in ambient noise levels of several decibels. These variations can account for the results showing ambient levels to be more than predicted.

In any case the impact of the project on the existing noise environment would be negligible to minor. The specific data obtained for each site are shown on Table IV.

Since there is no control of access proposed for this project, mitigation measures are not feasible for the two cases where the design levels would be exceeded by the predicted noise levels.

The Federal Highway Administration has established thorough

TABLE IV
PROJECT NOISE LEVELS

MD. 173
(From North of Stoney Creek Bridge to Tick Neck Rd.)

	NOISE SENSITIVE AREA	DESIGN* NOISE LEVEL	AMBIENT LEVEL	NO BUILD	ALTERNATE 1	ALTERNATE 2	INCREASE OVER AMBIENT			INCREASE OVER DESIGN NOISE LEVEL		
							NO BUILD	ALT. 1	ALT. 2	NO BUILD	ALT. 1	ALT. 2
SECTION 1	**1	70 (75)	69	67.4	70.6		-1.6	+1.6		0	.6	
	2	70	71	66.4	67.6		-4.6	-3.4			-	
	3	70	70	66.7	66.3		-3.3	-3.7			-	
	4	70	62	61.3	65.8		-0.7	+3.8			-	
	5	70	65	63.0	66.1		-2.0	+1.1			-	
	6	75	65	65.6	67.2		+0.6	+2.2			-	
SECTION 2	**7	70 (75)	71	69.6	71.5		-1.4	+0.5			1.5	
	8	70	61	61.0	63.5		0	+2.5			0	
	9	75	69	69.0	70.9		0	+1.9				
	10	70	63	62.4	64.5		-0.6	+2.1				
	11	75	67	68.2	70.2		+1.2	+3.2				
	12	75	71	69.6	70.9		-1.4	-0.1				
	13	70	61	60.8	63.0		-0.2	+2.0				
	14	75	68	68.9	70.6		+0.9	+2.6				
	15	70	65	65.6	68.7	69.2	+0.6	+3.7	+4.2			0
	16	70	65	66.8	69.2	68.7	+1.8	+4.2	+3.7			
SECTION 3	17	70	59	58.3	60.9	61.2	-0.7	+1.9	+2.2			
	18	70	57	58.5	57.8	57.7	+1.5	+0.8	+0.7			
	19	70	62	61.2	62.6	62.6	-0.8	+0.6	+0.6			
	20	70	63	59.1	61.7	62.3	-3.9	-1.3	-0.7			
	21	70	67	66.7	68.5	68.2	-0.3	+1.5	+1.2			
	22	70	62	62.6	63.7	63.9	+0.6	+1.7	+1.9			
	23	70	56	59.9	61.2	61.5	+3.9	+5.2	+5.5			
	24	70	66	66.0	65.5	65.8	0	-0.5	-0.2	↓	↓	↓
	25	70	66	67.0	65.9	64.0	+1.0	-0.1	-2.0	0	0	0

* The levels shown in parentheses reflect existing zoning rather than land use.

**Design Noise Levels Exceeded.

NOTE: All noise levels are L₁₀ levels expressed in dBA.

63

64

FHPM 7.7.3, noise levels for various land uses. These levels are expressed in terms of an L₁₀ noise level, which describes a noise level that is exceeded for 10% of a given time period.

All ambient and predicted levels in this report are L₁₀ exterior noise levels unless otherwise noted.

Effective and compatible land use planning and development should consider potential adverse impacts from highway traffic noise. To aid in this process, a copy of this report will be sent to the following agencies.

Anne Arundel County Office of Planning and Zoning
Arundel Center
Calvert NW Street
Annapolis, Maryland 21401

Anne Arundel County Housing Authority
P.O. Box 6652
Shelly Road
Glen Burnie, Maryland 21061

In addition, a copy of "The Audible Landscape: A Manual of Highway Noise and Land Use", has been sent to the aforementioned agencies.

E. Air Quality Impacts

An air quality analysis has been completed for the proposed action. The Technical Air Quality Report (dated April, 1980) summarized below, is available for review at the Maryland Department of Transportation, State Highway Administration, 300 West Preston Street, Baltimore, Maryland 21201.

Since regional pollutants such as hydrocarbons and oxides of nitrogen, precursors of photochemical oxidants (smog) are addressed through this regional planning process only carbon monoxide emissions, a more localized pollutant, are being

65
addressed quantitatively in this analysis.

1. Microscale Analysis

The objective is to compare the carbon monoxide (CO) concentrations estimated to result from the traffic configurations and volumes of each alternative with the State and National Ambient Air Quality Standards (S/NAAQS). The NAAQS and SAAQS are identical for CO: one-hour maximum = 40 mg/m³, eight-hour consecutive average = 10 mg/m³.

A microscale CO pollutant diffusion simulation analysis, based on free-flow traffic conditions and an estimate of worst-case CO emissions at selected signalized intersections, was conducted. This analysis consisted of calculating one and eight-hour CO concentrations resulting from automobile emissions at various receptor sites. All calculations were performed for 1985 (year of completion) and 2005 (year of design). The emission factors were obtained from the EPA program MOBILE 1, which is based on the latest version of Supplement 5 of EPA document Compilation of Air Pollution Emission Factors (AP-42). Line source CO dispersion estimates were calculated using the EPA program HIWAY (a Gaussian dispersion-statistics model). CO emissions generated by vehicles idling at intersection traffic signals were also factored into results where required. The appropriate traffic data was utilized with the assumption of an I/M (Inspection/Maintenance of emission controls) program in effect during both years of the analysis. Mechanic training and a 30 percent stringency level were also assumed under the conditions of I/M. The stringency parameter reflects how

66

rigorously the inspection program is carried out (a higher stringency factor means lower emissions).

Six receptor sites were chosen for this analysis and are described below. Figure 8 shows the locations of the sites.

Site 1 is a two-story frame dwelling at 8430 Fort Smallwood Road. It is 12 feet above road grade and location 70 feet southwest of the roadway.

Site 2 is the two-story frame residence of J.A. Matusky at 7 Fort Smallwood Road. It is located 12 feet east of the roadway.

Site 3 is a one-story block residential/commercial building at 8543 Fort Smallwood Road. It is located 20 feet west of the roadway.

Site 4 is a one and one-half story dwelling at 1 Appian Way. It is located 75 feet east of Fort Smallwood Road and 70 feet south of Appian Way.

Site 5 is a one-story frame dwelling at 1202 Farmview Road. It is located 30 feet east of Fort Smallwood Road and 35 feet south of Farmview Road.

Site 6 is a two-story frame dwelling at 8721 Fort Smallwood Road. It is located 70 feet east of the roadway.

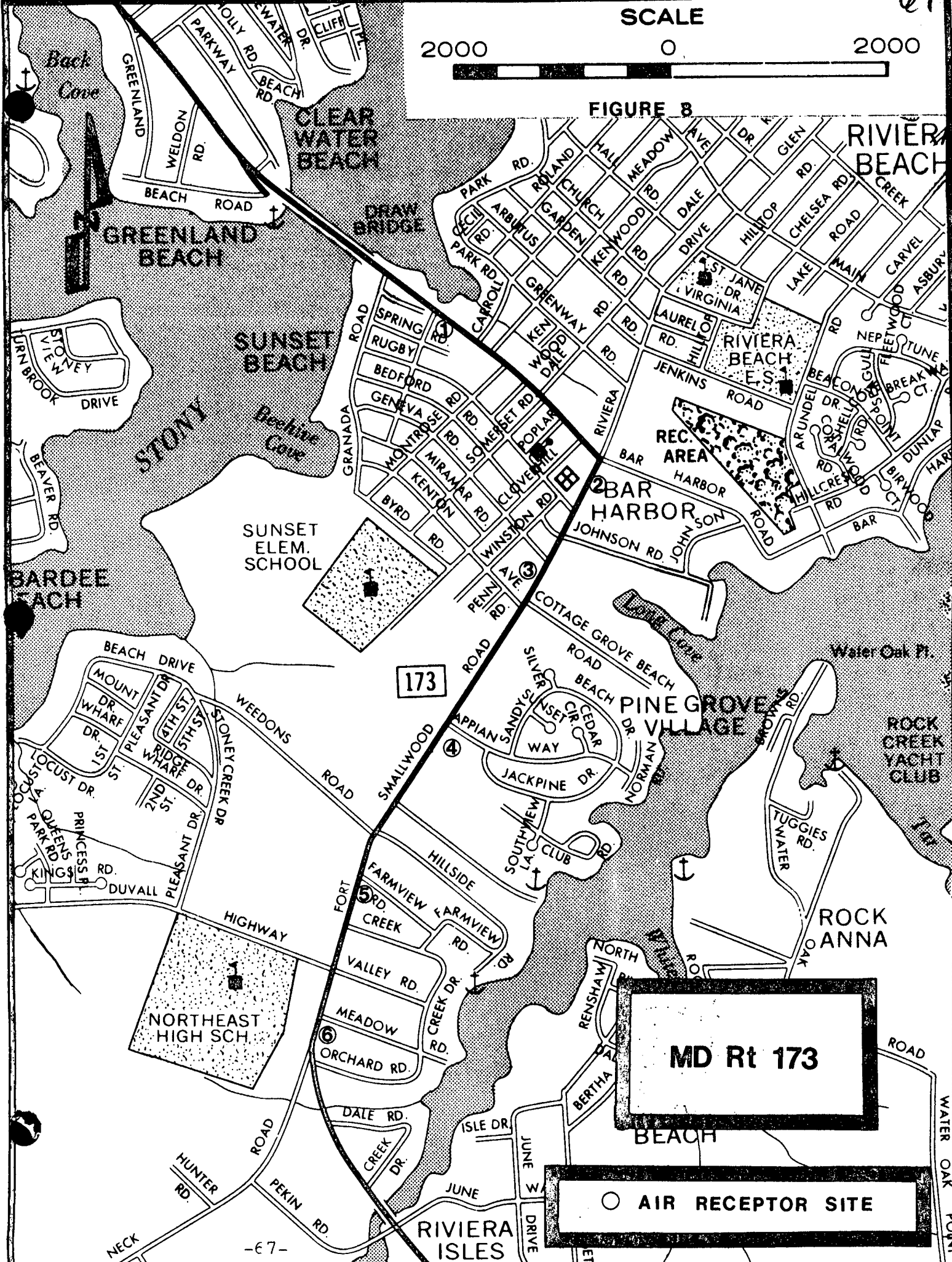
Predicted concentrations were added to predicted background CO levels to arrive at total levels. Background CO levels were projected based upon historical monitoring conducted at the nearby Riviera Beach monitoring station, located northeast of the study area.

Traffic Data was developed by the Maryland Department of

SCALE

2000 0 2000

FIGURE 8



MD Rt 173

○ AIR RECEPTOR SITE

68

Transportation. CO levels from the Maryland Department of Health and Mental Hygiene's 1978 Yearly Air Quality Data Report was "rolled back" to obtain 1985 and 2005 levels.

	CO, mg/m ³ <u>one hour</u>	<u>eight hour</u>
1985	11.0	5.5
2005	7.9	3.9

The total predicted CO concentrations (including background) are listed in Table V. The results indicate no potential violations of the one or eight-hour CO air quality standards due to the implementation of any of the three alternates in either 1985 or 2005. CO levels produced by the No-Build Alternate are elevated with respect to either Build Alternate in both 1985 and 2005, with one exception. The CO levels for both one and eight hour concentrations resulting from the Build Alternates are higher than the No-Build Alternate for receptor 2 in 1985. As a result of widening Route 173 in the Build Alternate the emission sources will be closer to the receptor. In 2005 this geometry is countered by shorter queue lengths and slightly higher running speeds in the Build Alternates relative to No-Build.

Copies of the draft air quality analysis were forwarded to the U.S. EPA and the Maryland Department of Health and Mental Hygiene for review and comment. See letters dated May 9, 1980 and May 8, 1980 in the Correspondence Section.

2. Consistency with the State Implementation Plan

The subject project is located within the Metropolitan Baltimore Intrastate Air Quality Control Region. Consistency

✓ 69

TABLE V
CO CONCENTRATIONS AT EACH RECEPTOR SITE, mg/m³
MD ROUTE 173

1985

Receptor	Peak One-Hour			Maximum Eight-Hour		
	No-Build	Alt 1	Alt 2	No-Build	Alt 1	Alt 2
1	14.3	3.9	3.9	6.7	5.9	5.9
2	22.0	26.2	26.2	3.5	4.6	4.6
3	12.9	8.6	8.7	8.3	7.7	6.8
4	10.0	7.6	7.2	7.4	7.1	6.5
5	12.4	8.4	7.4	8.8	7.9	6.9
6	6.8	5.4	5.7	7.0	6.5	6.2

2005

Receptor	Peak One-Hour			Maximum Eight-Hour		
	No-Build	Alt 1	Alt 2	No-Build	Alt 1	Alt 2
1	10.3	9.6	9.6	4.6	4.5	4.5
2	11.3	10.1	10.1	2.0	1.9	1.9
3	12.4	10.6	10.7	5.7	5.0	4.6
4	10.1	9.4	9.3	4.9	4.6	4.3
5	12.2	10.5	10.0	5.9	5.1	4.6
6	9.6	9.0	9.1	4.8	4.4	4.3

The S/NAAQS for CO are: one-hour maximum = 40 mg/m³
eight-hour maximum = 10 mg/m³

with the State Implementation Plan has been evaluated considering 1) relationship to regional air quality goals, 2) microscale carbon monoxide levels, and 3) construction impacts.

Relationship to Air Quality Goals

The air quality consistency of this project on a regional level is assured in the following ways. First, a National Memorandum of Understanding between U.S. DOT and EPA dated June 14, 1978 formally integrates the transportation and air quality planning processes for transportation projects receiving Federal aid highway funds. This Agreement recognizes that the "reduction of air pollution is an important national goal and must be among the highest priorities of the transportation planning process in areas not meeting primary Air Quality Standards". It also provides for extensive input from local and state transportation and air quality agencies and the public. In addition, it calls for the joint administration of the air quality aspects of the urban transportation planning process between U.S. DOT and EPA. This includes the joint review of the following documents and activities to ensure that air quality considerations are adequately addressed: 1) the Transportation Plan for the urbanized area, 2) the Transportation Improvement Program which identifies projects for implementation, 3) the State Implementation Plan/Transportation Control Plan for addressing attainment with Air Quality Standards, and 4) the review process which "certifies" that adequate transportation and air quality planning is being conducted in these urbanized areas.

Secondly, through the urban transportation planning

requirements of Title 23, United States Code, Section 134, as implemented by the Regional Planning Council (or TPB/COG) forum, the same state and local agencies that are responsible for planning transportation projects in the urbanized area are also responsible - - from a transportation control plan perspective--for assuring attainment of Air Quality Standards.

Thirdly, this project is included in the regional transportation plan and Transportation Improvement Program for the urbanized area and is programmed for federal aid highway funding. Thus, it is included in this federal review and project development process. Therefore, the regional consistency of this project is addressed prior to undertaking the final project planning studies presented in this environmental document.

Construction Impacts

The construction phase of the proposed project has the potential of impacting the ambient air quality through such means as fugitive dust from grading operations, materials, handling, and through the possible burning of land clearing debris. The State Highway Administration has addressed this possibility by establishing Specifications for Materials, Highways, Bridges, and Incidental Structures which specifies procedures to be followed by contractors involved in State work.

The Maryland Bureau of Air Quality Control was consulted to determine the adequacy of the specifications in terms of satisfying the requirements of the Regulations governing the Control of Air Pollution in the State of Maryland. The Maryland Bureau of Air Quality Control found that the specifications are

72

consistent with the requirements of these regulations.

Therefore, during the construction period, all appropriate measures will be taken to minimize the impact of the air quality of the area.

F. Natural Environment Impacts

The original natural environment of the study area has been almost completely changed by urban development. There is a small wetland area on the East Side of Maryland 173 (approximately 1.5 acres) and adjacent to the southern bridge approach. All construction for Alternate 1, Alternate 2, and the low level bridge in the area of the wetlands will take place on the west side of Maryland 173 and within existing right of way. During construction, standard erosion and sedimentation control technology will be practiced.

The required approach fills for the high level bridge would have a potential impact upon the adjacent wetland area. To reduce any adverse impact or encroachment upon the wetland, mitigation would include a retaining wall as well as standard erosion and sedimentation control procedures. The wall would be approximately 500 feet long varying in height from 19 ft at the bridge to 1 ft. at the southern termini. In addition to the wall, there would be 8 feet of backing for support of the wall. The retaining wall and backing would be constructed within existing right of way.

The proposed project would require the crossing of the Stony Creek Floodplain. The area of the existing and proposed bridge has been designated as a special flood hazard by HUD Federal

Insurance Administration. It is anticipated that the low level bridge will be approximately the same length as the existing bridge (905 feet) and the piles and piers will be placed in Stony Creek at the same general locations as the existing bridges piles and piers. Therefore, there would be no significant changes in the channel, course, current or cross section from the existing conditions; however, appropriate Department of Natural Resources Coast Guard and Army Corps of Engineers permits would be obtained.

The high level bridge would be approximately 945 feet in length and could require additional piles and pier, however, there would be no placement in the existing channel and there would be no significant changes in the channel, course, current, or cross section from the existing conditions. Construction related erosion and sedimentation would occur during placement of the fill and construction of the bridge piers. These impacts would be controlled through the use of standard sediment and erosion control technology. None of the proposed alternates will have a significant encroachment on the floodplain resulting in any risks or impacts to the beneficial floodplain values or provide direct or indirect support to further development within the floodplain.

Drainage and storm water control would be part of the project for any build alternate. Minimal increase in run-off could result from this project, however, there would be an insignificant impact on ambient water quality parameters.

There are no known unique, rare, threatened, or endangered

plant or animal species in the study area. See letter from DNR and U.S. FWS in Comments and Coordination Section. Stony Creek is a class I water area and has been identified as an anadromous fish spawning stream. If a build alternate is selected, in stream construction will be coordinated with the Department of Natural Resources.

This project is consistent with Coastal Zone Management Objectives.

G. Construction Impacts

If either of the "Build Alternates" are selected, the immediate project area would experience temporary inconveniences due to construction activities. These inconveniences would result from slowing of traffic through construction zones possible temporary closing of access to marinas, noise, dirt, and visual impacts of construction activities in relatively close proximity to adjacent improved properties.

Care would be taken during construction to prevent significant siltation or other blockage of local drainage ditches, pipes, culverts, etc. Sediment traps would be utilized to trap sediment-laden water before it leaves the construction site. A grading or sediment control plan must be prepared to alleviate any erosion problems. This plan should be filed with the Water Resources Administration of the Department of Natural Resources.

As with all major construction projects, areas around the construction site are likely to experience varied periods and degrees of impact from noise. This type of project will probably

employ the following pieces of equipment which will likely be sources of construction noise:

- Pile Drivers
- Bulldozers and Earthmovers
- Graders
- Frontend Loaders
- Dump and other heavy trucks
- Compressors

Generally, construction activity would not occur at night or on weekends. Religious events (NSA 20) or evening outdoor residential activities would not experience adverse impacts because construction will not be ongoing at that time. School activities would not be disrupted.

Maintenance of construction equipment will be regular and thorough to minimize noise emissions caused by inefficiently tuned engines, poorly lubricated moving parts, poor or ineffective muffling systems, etc.

The construction phase of the proposed project has the potential of impacting the ambient air quality through such means as fugitive dust from grading operations, and materials handling. The State Highway Administration has addressed this possibility by establishing Specifications for Materials, Highways, Bridges, and Incidental Structures which specifies procedures to be followed by contractors involved in State work.

TABLE VI

76

CONSTRUCTION EQUIPMENT
NOISE RANGES

		NOISE LEVEL (dBA) @ 50'					
		60	70	80	90	100	110
EQUIPMENT POWERED BY INTERNAL COMBUSTION	EARTH MOVING	COMPACTORS (ROLLERS)		—			
		FRONT END LOADERS		—	—		
		BACKHOES		—	—	—	
		TRACTORS		—	—	—	
		SCRAPERS, GRADERS			—	—	
		PAVERS				—	
		TRUCKS				—	—
EQUIPMENT POWERED BY INTERNAL COMBUSTION	MATERIALS HANDLING	CONCRETE MIXERS		—	—		
		CONCRETE PUMPS			—		
		CRANES (MOVEABLE)		—	—		
		CRANES (DERRICK)				—	
EQUIPMENT POWERED BY INTERNAL COMBUSTION	STATIONARY	PUMPS	—				
		GENERATORS		—	—		
		COMPRESSORS		—	—		
IMPACT EQUIPMENT	PNEUMATIC WRENCHES			—			
	JACK HAMMERS AND ROCK DRILLS			—	—		
	PILE DRIVERS (PEAKS)					—	
OTHER	VIBRATOR		—	—			
	SAW		—	—			

Note: Based on Limited Available Data.

Reference: Highway Noise Report For U.S. Department of Transportation, Federal Highway Administration and Maryland Department of Transportation, State Highway Administration for Arundel Expressway, Md. Rte. 648 to Md. Rte. 100 and Alternate Connections to Md. Rte. 2, Regnar Associates, Inc. 1975

11

V. COMMENTS AND COORDINATION

Comments received from all sources have been thoroughly reviewed and assessed. Recommendations by various commenting entities have been incorporated into the body of the Environmental Assessment.

The first public notification of Project Planning activities was May 10, 1978. The public notice appeared in the Morning Sun, News-American, and the Maryland Gazette on May 10 and 11, 1978. An Alternates Public Meeting was conducted in the cafeteria of the Northeast High School, Duvall Highway and Fort Smallwood Road, 7:30 p.m., October 25, 1979.

Early coordination with responsible agencies was initiated through the State Clearinghouse. Continuing coordination is a result of the mailing list maintained by the State Highway Administration. The Eighth Coast Guard District has been included in this process along with other pertinent agencies.

Correspondence resulting from coordination efforts by the State Highway Administration with Federal, State, and Local agencies are reproduced in this section. All remaining correspondence related to this project and memoranda of the Alternates Public Meeting are available for inspection at the State Highway Administration, Bureau of Project Planning, 300 West Preston Street, Baltimore, Maryland 21201.



18

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
1825E Virginia Street
Annapolis, MD 21401

August 29, 1980

Mr. Richard S. Krolak, Chief
Environmental Evaluation Section
Bureau of Project Planning (Room 404)
State Highway Administration
300 West Preston Street
Baltimore, MD 21201

Dear Mr. Krolak:

This refers to your request of August 8, 1980 as to the presence of endangered species in the project area of Stoney Creek, Anne Arundel County, Maryland.

Federally listed species which may be seen passing through the area are the bald eagle (Haliaeetus leucocephalus) and the peregrine falcon (Falco peregrinus tundrius). Although neither species is known to nest or use the area, migrating individuals may be observed.

Enclosed for your information is a list of plant species which may inhabit the project area. These species have no legal protection under the Endangered Species Act of 1973. Many are rare or disappearing due to rapid habitat alteration in Anne Arundel County. However, these plants may qualify at a future date for federal listing.

This information is provided as technical assistance only. It is not submitted under the provisions of Section 7 of the Endangered Species Act Amendments of 1978. It also applies only to endangered species information and does not preclude this Service from commenting under other applicable laws.

Thank you for your interest in endangered species. If we can be of further assistance, please do not hesitate to contact this office.

Sincerely yours,

for Glenn Kinser
Supervisor
Annapolis Field Office

Enclosure



79
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

MAY 9 1980


Mr. Charles R. Anderson
Maryland State Highway Administration
2323 W. Joppa Road
Brooklandville, MD 21022

Re: Maryland Route 173 - Stoney Creek to Tick Neck Rd., Anne Arundel, MD
Maryland Route 175 - Snowden River Parkway to U.S. Rte 29, Howard Co., MD

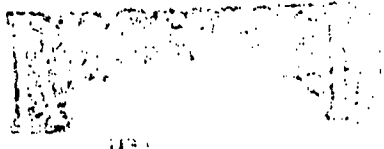
Dear Mr. Anderson:

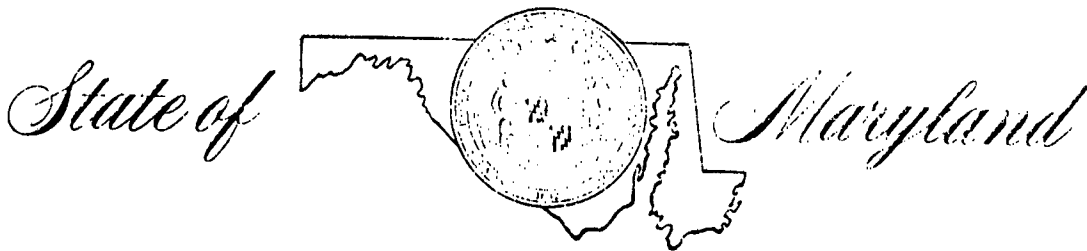
We have reviewed the Draft Air Quality Analyses for the above referenced projects. Based upon this review, we have no objections to either project from an air quality standpoint. If you have any questions, or if we can be of further assistance, feel free to contact us.

Sincerely yours,


John R. Pomponio
Chief
EIS & Wetlands Review Section

-79-


MAY 10 1980
C. R. ANDERSON



ENVIRONMENTAL HEALTH ADMINISTRATION
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
201 WEST PRESTON STREET • BALTIMORE, MARYLAND 21201 • Area Code 301 • 333-3245

Harry Hughes, Governor

Charles R. Buck, Jr., Sc.D. Secretary

May 8, 1980

Mr. Charles R. Anderson, Chief
Bureau of Landscape Architecture
Joppa & Falls Roads
Brooklandville, Maryland 21022

Dear Mr. Anderson:

RE: Contract No. AA 390-101-571
Maryland Route 173--Stoney
Creek to Tick Neck Road

We have reviewed the Air Quality Analysis for the above subject project and have found that it is not inconsistent with the Programs' plans and objectives.

Thank you for the opportunity to review this analysis.

Sincerely yours,

William K. Bonta, Chief
Division of Program Planning & Analysis
Air Quality Programs

WKB:bab

RECEIVED

MAY 13 1980

C. R. ANDERSON



41

Maryland Historical Trust

August 20, 1979

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning
State Highway Administration
P. O. Box 717
300 West Preston Street
Baltimore, Maryland 21201

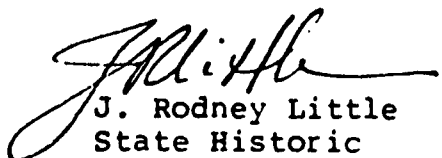
Subject: Contract No. AA 390-101-571, Maryland Route 173,
Archeological Survey

Dear Mr. Camponeschi:

Dennis Curry's consideration of historic maps in his 9 July 1979 letter is sufficient to conclude that significant historical archeological sites will not be affected by the subject project. Additional investigations are not recommended.

Thank you for your consideration of the historical archeological resources.

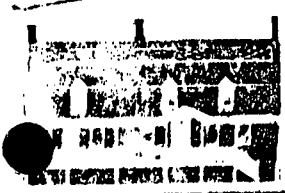
Sincerely,


J. Rodney Little
State Historic
Preservation Officer

JRL/WEC/van

cc: ✓ D. Curry
R. Krolak
R. Suffness

82



Maryland Historical Trust

APR 6 10 0 40 March 29, 1979

ADMINISTRATION
PROJECT PLANNING

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21203

Re: Md. 173 from Tick Neck Road
to Stony Creek Bridge
AA 390-101-571

Dear Mr. Camponeschi:

Three historic sites of state inventory quality are located in the Route 173 study area and are indicated on the enclosed map. These properties in the Riviera Beach environs are:

Farmhouse, NW side of Ft. Smallwood Road, south of elementary school and Appian Way (identified as #3 on enclosed map and the map included in correspondence from John Pearce, SHPO at MHT, of June 22, 1976).

House, 8426 Miramar Road at Homeland Road (#7 on enclosed map).

Locust Lodge, 184 Meadow Road at Main Avenue (#8 on enclosed map).

A Victorian-style house just south of junction of Fort Smallwood and Bar Harbor Roads, on east side, identified as #4 in the correspondence of John Pearce cited above, is of negligible architectural or historic value.

This list results from a preliminary reconnaissance just concluded in the study area. The boundaries may be considered equivalent to the present tax parcels.

I hope that this provides the initial information you require, and I will be happy to provide additional information at your request.

Sincerely,

Rita Suffness
Architectural Historian
Historic Sites Survey Team

RS/van
Enclosure

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301)269-2212, 269-2438
Department of Economic and Community Development

83



January 10, 1979

Mr. Curtis McCarthy
State Highway Administration
Bureau of Landscape Architecture
Joppa & Falls Roads
Brooklandville, Maryland 21022

Dear Mr. McCarthy:

There are no known populations of threatened or endangered species within the Fort Smallwood Bridge Study Area as described in your letter of 4 January 1979.

Sincerely,

Gary J. Taylor
NonGame and Endangered Species
Program Manager

GJT:dec

cc: C. Brunori

RECEIVED

JAN 16 1979

C. R. ANDERSON



84

REGIONAL PLANNING COUNCIL

Date: May 21, 1976

MICHAEL MILLER
EXECUTIVE DIRECTOR

RECEIVED

MAY 26 1976

DIRECTOR, OFFICE OF PLANNING & PRELIMINARY ENGINEERING

Robert J. Hajzyk, Director
Office of Planning and
Preliminary Engineering
Md. Department of Transportation
P.O. Box 717 / 300 W. Preston St.
Baltimore, MD 21203

Re: Metropolitan Clearinghouse Review and
Referral Memorandum, Project: 76-255

Md. Rt. 173 - Stoney Creek Bridge and
Roadway Approach

Dear Mr. Hajzyk:

Attached to this transmittal letter is a memorandum which presents the Metropolitan Clearinghouse comments and includes a certification of Council action. You should now complete and file your formal application. A copy of this memorandum and certification must be attached to your application. If the application reviewed is not the final application, please forward a copy to the Metropolitan Clearinghouse upon final submission. Please make sure, if it is needed, that State Clearinghouse review comments are also included with your application.

Comments on this application were requested from: Anne Arundel County and Baltimore City.

Comments from the following jurisdictions are included with the Clearinghouse review:

If you have any questions, please contact us at 383-5840.

- cc; F. J. Gottemoeller
- J. E. Aaro
- E. T. Camponeschi
- J. L. White
- L. J. Sabon
- C. Herring
- K. Berger

Sincerely yours,

Nadine S. Jones
Metty Bylaska, Coordinator
Metropolitan Clearinghouse

Applicant - 4 copies
Referral Coordinator - 1 copy
State Clearinghouse - 1 copy

85

REGIONAL PLANNING COUNCIL
701 St. Paul Street
Baltimore, Maryland 21202

R & R File No. 76-255
B & P Committee May 7, 1976

REVIEW AND REFERRAL MEMORANDUM

PROJECT IDENTIFICATION

Jurisdiction: Anne Arundel County
Project Name: Md. Rt. 173 - Stoney Creek Bridge and Roadway Approach
Applicant: Maryland Department of Transportation/State Highway Administration
Cost: \$ 330,000 total, \$ 231,000 federal, \$ 99,000 state, \$ _____ local
Grant Program: 20.205 Highway Research, Planning and Construction

COMMENTS

This project has been reviewed and found to be not inconsistent with local and metropolitan plans, policies and programs. No intergovernmental issues have been raised.

May 21, 1976

Date

Authorized Representative of
Clearinghouse

Robert N. Young
Executive Director

He

APPENDIX A

"SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE
STATE HIGHWAY ADMINISTRATION OF MARYLAND"

All State Highway Administration projects must comply with the provisions of the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646) and/or the Annotated Code of Maryland, Article 21, Sections 12-201 thru 12-209. The Maryland Department of Transportation, State Highway Administration, Bureau of Relocation Assistance, administers the Relocation Assistance Program in the State of Maryland.

The provisions of the Federal and State Law require the State Highway Administration to provide payments and services to persons displaced by a public project. The payments that are provided include replacement housing payments and/or moving costs. The maximum limits of the replacement housing payments are \$15,000 for owner-occupants and \$4,000 for tenant-occupants. In addition, but within the above limits, certain payments may be made for increased mortgage interest costs and/or incidental expenses. In order to receive these payments, the displaced person must occupy decent, safe and sanitary replacement housing. In addition to the replacement housing payments described above, there are also moving cost payments to persons, businesses, farms and non-profit organizations. Actual moving costs for residences include actual moving costs up to 50 miles or a schedule moving cost payment, including a dislocation allowance, up to \$500.

The moving cost payments to businesses are broken down into several categories, which include actual moving expenses and payments "in lieu of" actual moving expenses. The owner of a displaced business is entitled to receive a payment for actual reasonable moving and related expenses in moving his business, or personal property; actual direct losses of tangible personal property; and actual reasonable expenses for searching for a replacement site.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Generally, payments for the actual reasonable moving expenses are limited

88

to a 50 mile radius. In both cases, the expenses must be supported by receipted bills. An inventory of the items to be moved must be prepared, and estimates of the cost may be obtained. The owner may be paid an amount equal to the low bid or estimate. In some circumstances, the State may negotiate an amount not to exceed the lower of the two bids. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business's vehicles or equipment, wages paid to persons who physically participate in the move, and the cost of the actual supervision of the move.

When personal property of a displaced business is of low value and high bulk, and the estimated cost of moving would be disproportionate in relation to the value, the State may negotiate for an amount not to exceed the difference between the cost of replacement and the amount that could be realized from the sale of the personal property.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses. If the business is to be reestablished, and personal property is not moved but is replaced at the new location, the payment would be the lesser of the replacement costs minus the net proceeds of the sale or the estimated cost of moving the item. If the business is being discontinued or the item is not to be replaced in the reestablished business, the payment will be the lesser of the difference between the value of the item for continued use in place and the net proceeds of the sale or the estimated cost of moving the item.

If no offer is received for the personal property and the property is abandoned, the owner is entitled to receive the lesser of the value for continued use of the item in place or the estimated cost of moving the item and the reasonable expenses of the sale. When personal property is abandoned without an effort by the owner to dispose of the property by sale, the owner will not be entitled to moving expenses, or losses for the item involved.

The owner of a displaced business may be reimbursed for the actual reasonable expenses in searching for a replacement business up to \$500. All expenses must be supported by receipted bills. Time spent in the actual search may be reimbursed on an hourly basis, but such rate may not exceed \$10 per hour.

49

In lieu of the payments described above, the State may determine that the owner of a displaced business is eligible to receive a payment equal to the average annual net earnings of the business. Such payment shall not be less than \$2,500 nor more than \$10,000. In order to be entitled to this payment, the State must determine that the business cannot be relocated without a substantial loss of its existing patronage, the business is not part of a commercial enterprise having at least one other establishment in the same or similar business that is not being acquired, and the business contributes materially to the income of a displaced owner.

Considerations in the State's determination of loss of existing patronage are the type of business conducted by the displaced business and the nature of the clientele. The relative importance of the present and proposed locations to the displaced business, and the availability of suitable replacement sites are also factors.

In order to determine the amount of the "in lieu of" moving expenses payment, the average annual net earning of the business is considered to be one-half of the net earnings before taxes, during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State, with approval of the Federal Highway Administration, may use another two-year period that would be more representative. Average annual net earnings include any compensation paid by the business to the owner, his spouse, or his dependents during the period. Should a business be in operation less than two years, but for twelve consecutive months during the two taxable years prior to the taxable year in which it is required to relocate, the owner of the business is eligible to receive the "in lieu of" payment. In all cases, the owner of the business must provide information to support its net earnings, such as income tax returns, for the tax years in question.

The relocation assistance officer located in each district office maintains a listing of local, State, and Federal programs which may benefit displaced businesses.

For displaced farms and non-profit organizations, actual reasonable moving costs generally up to 50 miles, actual direct losses of tangible personal property, and searching costs are paid. The "in lieu of" actual moving cost payments provide that the State may determine that a displaced farm may be paid a minimum of \$2,500 to a maximum of \$10,000 based upon the net income of the farm, provided that the farm has been discounted or relocated. In some cases, payments "in lieu of" actual moving costs may be made to farm operations that are affected by a partial acquisition. A non-profit organization is eligible to receive "in lieu of" actual moving cost payments, in the amount of \$2,500.

90

A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms, and non-profit organizations is available in Relocation Brochures that will be distributed at the public hearings for this project and will also be given to displaced persons individually in the future.

In the event comparable replacement housing is not available to rehouse persons displaced by public projects or that available replacement housing is beyond their financial means, replacement "housing as a last resort" will be utilized to accomplish the rehousing. Detailed studies will be completed by the State Highway Administration and approved by the Federal Highway Administration before "housing as a last resort" could be utilized. "Housing as a last resort" could be provided to displaced persons in several different ways although not limited to the following:

1. An improved property can be purchased or leased.
2. Dwelling units can be rehabilitated and purchased or leased.
3. New dwelling units can be constructed.
4. State acquired dwellings can be relocated, rehabilitated, and purchased or leased.

Any of these methods could be utilized by the State Highway Administration and such housing would be made available to displaced persons. In addition to the above procedure, individual replacement housing payments can be increased beyond the statutory limits in order to allow a displaced person to purchase or rent a dwelling unit that is within his financial means.

The "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" requires that the State Highway Administration shall not proceed with any phase of any project which will cause the relocation of any person, or proceed with any construction project until it has furnished satisfactory assurances that the above payments will be provided and that all displaced persons will be satisfactorily relocated to comparable decent, safe and sanitary housing within their financial means or that such housing is in place and has been made available to the displaced person.

APPENDIX B

92

Noise Sensitive Area

Description

- 1 Residential area on the west side of Ft. Smallwood Road (Md. 173) north of Stony Creek consisting of five one and one-half story dwellings and one commercial building. The offset from the existing roadway to these dwellings averages about 40 to 50 feet. The structure used for monitoring and predictions was a 1 1/2 story frame dwelling north of the medical center and drug store.
- 2 Residential area on the east side of Md. 173 north of Parkway Road opposite NSA 1. This area consists of four dwellings and a beauty shop. The average offset is 60 feet from the existing roadway. The one story brick dwelling nearest the roadway was used for monitoring.
- 3 One story brick dwelling in a residential area between Parkway Road and Stony Creek on the east side of Md. 173 consisting of about 5 dwellings.
- 4 Two and one-half story frame dwelling in the residential area on the west side of Md. 173 at the south end of the Stony Creek bridge north of Granada Road.
- 5 Residential area between Granada Road and Homeland Road on the west side of Md. 173, consisting of single family dwellings and a one and one-half story apartment building which was used as the receptor.
- 6 The building containing the Village Cleaners in the commercial area from 100 feet north of Carroll Road to 250 feet south of Meadow Road on the north side of Md. 173.
- 7 Commercial area from 250 feet south of Meadow Road to Riviera Drive on the east side of Md. 173. A shopping center is located in this area. The one and one-half story frame dwelling closest to the roadway was used as the receptor.
- 8 The closest dwelling to Md. 173 in the residential area on Manchester Road.

93

Noise Sensitive Areas

Description

- 9 McDonald's restaurant in the commercial area from Manchester Road to Riviera Drive on the west side of Md. 173. This area includes a bank and fast food restaurants.
- 10 Two story frame dwelling on the east side of Riviera Drive in the residential area in the northeast quadrant of the intersection of Riviera Drive and Md. 173.
- 11 Two and one-half story frame building in a commercial area between Bar Harbor Road and Johnson Road on the east side of Md. 173.
- 12 One story frame building used as a shop in a commercial area between Bar Harbor Road and Rugby Road on the west side of Md. 173.
- 13 One story frame dwelling on Bedford Road in residential area.
- 14 One story frame store in a commercial area between Geneva Road and Kenton Road on the west side of Md. 173.
- 15 One and one-half story frame dwelling in a residential area south of Kenton Road on the west side of Md. 173.
- 16 Two story frame dwelling in residential area on Appian Way.
- 17 New townhouse development on the west side of Md. 173 near Hillside Road.
- 18 One story frame dwelling in a residential area on Hillside Road.
- 19 New one story dwelling in residential area on Farmview Road.
- 20 Community United Methodist Church located in a residential area on the west side of Md. 173 north of Duvall Highway.
- 21 Two story dwelling on the east side of Md. 173 between Valley and Creek Roads in a commercial area.

Noise Sensitive Areas

Description

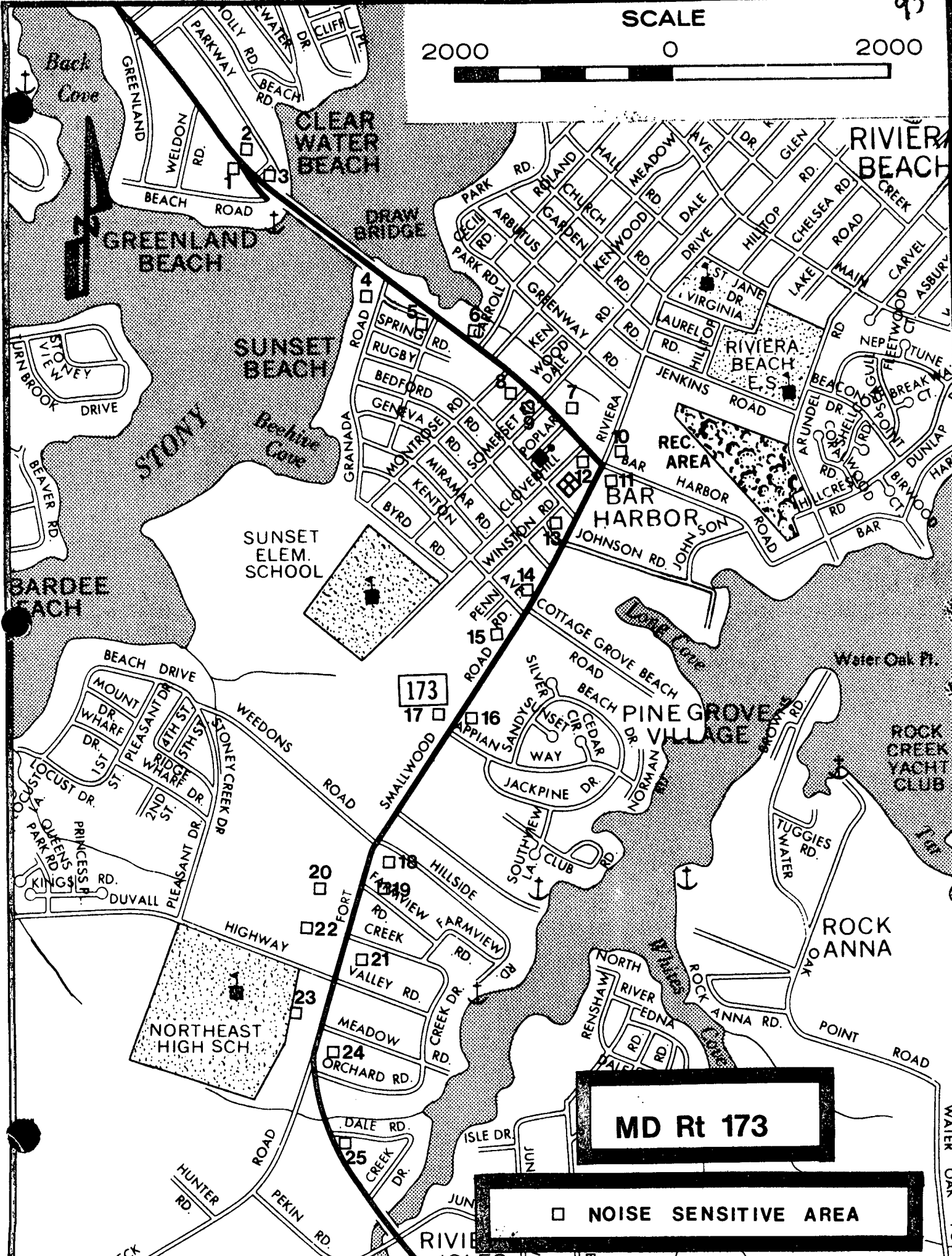
- 22 Public Library on Duvall Highway in a residential area.
- 23 Tennis courts of Northeast High School on Duvall Highway.
- 24 One story brick, frame dwelling on east side of Md. 173 between Meadow Road and Orchard Road in a residential area.
- 25 One story brick and frame dwelling on the east side of Md. 173 just south of Dale Road in a residential area.

SCALE

2000

0

2000



MD Rt 173

□ NOISE SENSITIVE AREA

96

APPENDIX C

97

SUMMARY
 BOAT MAST SURVEY
 STONEY CREEK/MARYLAND ROUTE 173 BRIDGE

HEIGHT OF MAST		% BY TRIPS		% BY BOATS	
		INDIVIDUAL	CUMULATIVE	INDIVIDUAL	CUMULATIVE
$h \leq 40'$	Nos. %	657 63.6%	657 63.6%	160 54.6%	160 54.6%
$40' < h \leq 45'$	Nos. %	143 13.8%	800 77.4%	54 18.4%	214 73.0%
$45' < h \leq 50'$	Nos. %	71 6.9%	871 84.3%	35 12.0%	249 85.0%
$50' < h \leq 55'$	Nos. %	18 1.7%	889 86.0%	11 3.8%	260 88.8%
$55' < h \leq 60'$	Nos. %	50 4.9%	939 90.9%	20 6.8%	280 95.6%
$h > 60'$	Nos. %	94 9.1%	1033 100.0%	13 4.4%	293 100.0%
TOTAL	--	1,033	----	293	----