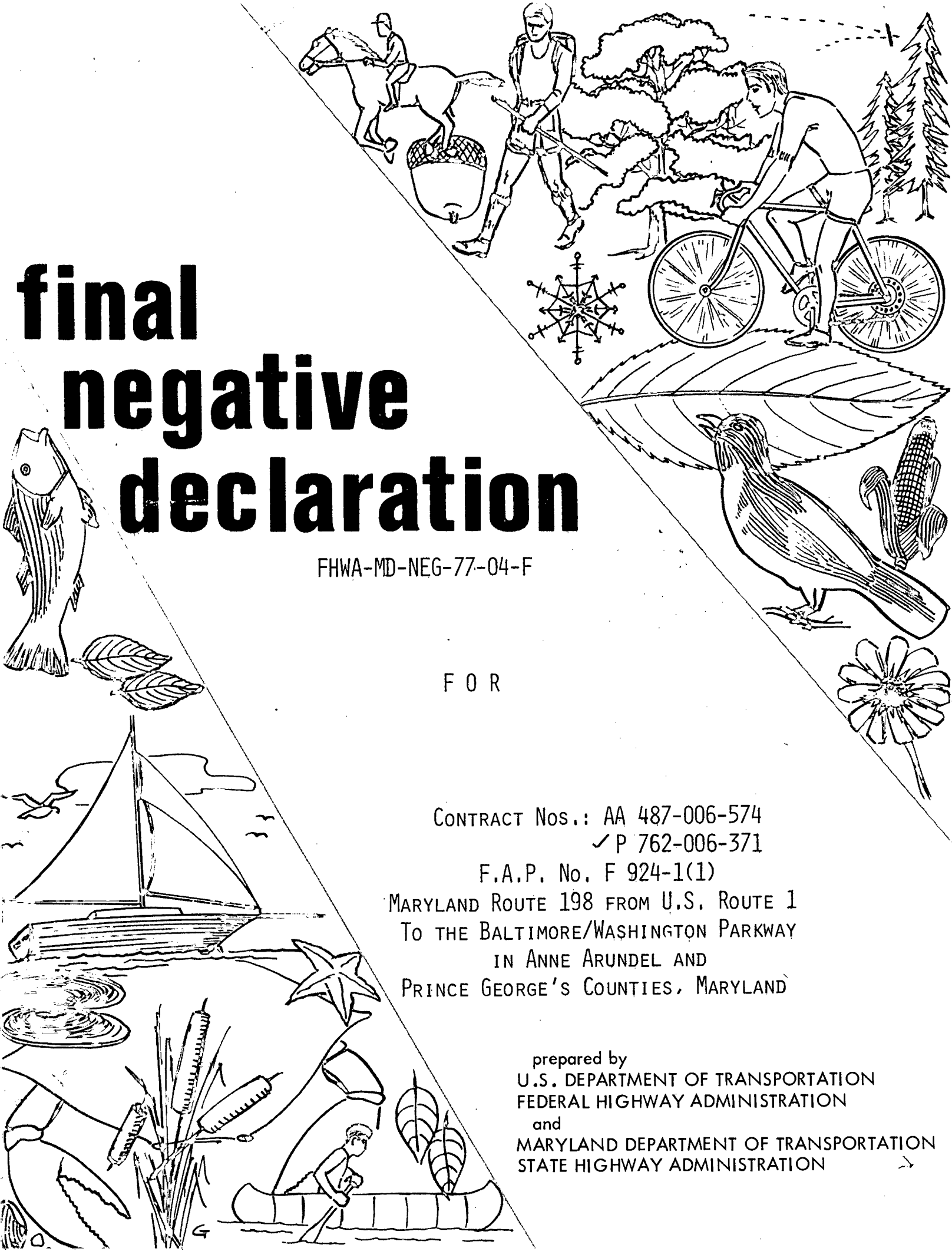

final negative declaration

FHWA-MD-NEG-77-04-F

F O R

CONTRACT NOS.: AA 487-006-574
✓P 762-006-371
F.A.P. No. F 924-1(1)
MARYLAND ROUTE 198 FROM U.S. ROUTE 1
TO THE BALTIMORE/WASHINGTON PARKWAY
IN ANNE ARUNDEL AND
PRINCE GEORGE'S COUNTIES, MARYLAND

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

Report Number: FHWA-MD-NEG-77-04-F

FEDERAL HIGHWAY ADMINISTRATION
REGION III

Maryland Route 198
U.S. Route 1 to the Baltimore/Washington
Parkway in Anne Arundel and
Prince George's Counties

ADMINISTRATIVE ACTION

FINAL NEGATIVE DECLARATION

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 U.S. C. 128 (a)

M. S. Caltrider
State Highway Administrator

8/21/78
Date

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

8-23-78
Date

by: For
Federal Highway Administration
Division Federal Highway
Administrator

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I. SUMMARY OF ENVIRONMENTAL IMPACTS AND BASIS FOR NEGATIVE DECLARATION

This environmental assessment considers the impact of the addition of a two lane roadway parallel to an existing four lane undivided roadway and the reduction of the existing four lane roadway to two lanes, thereby creating a four lane divided highway. The assessment is concerned with the dualization of that portion of Maryland Route 198 from U.S. Route 1 in the town of Laurel, in Prince George's County to the Baltimore/Washington Parkway, in Anne Arundel County, Maryland a distance of 2.79 miles. See Figure I. The proposed dualization with the selected Alternate II-B will occur within a partially reserved right-of-way (see bottom of page II-19) adjacent to the existing roadway. Two new structures will be required, to cross the B&O Railroad tracks in Laurel and to cross the Patuxent River which serves as the boundary between Anne Arundel and Prince George's County, Maryland.

Although the proposed action is judged to be major due to the planning, time and expenditures required for implementation, the resulting impacts of the action are judged as not significant due to several factors. This is based upon the following summary of environmental impacts.

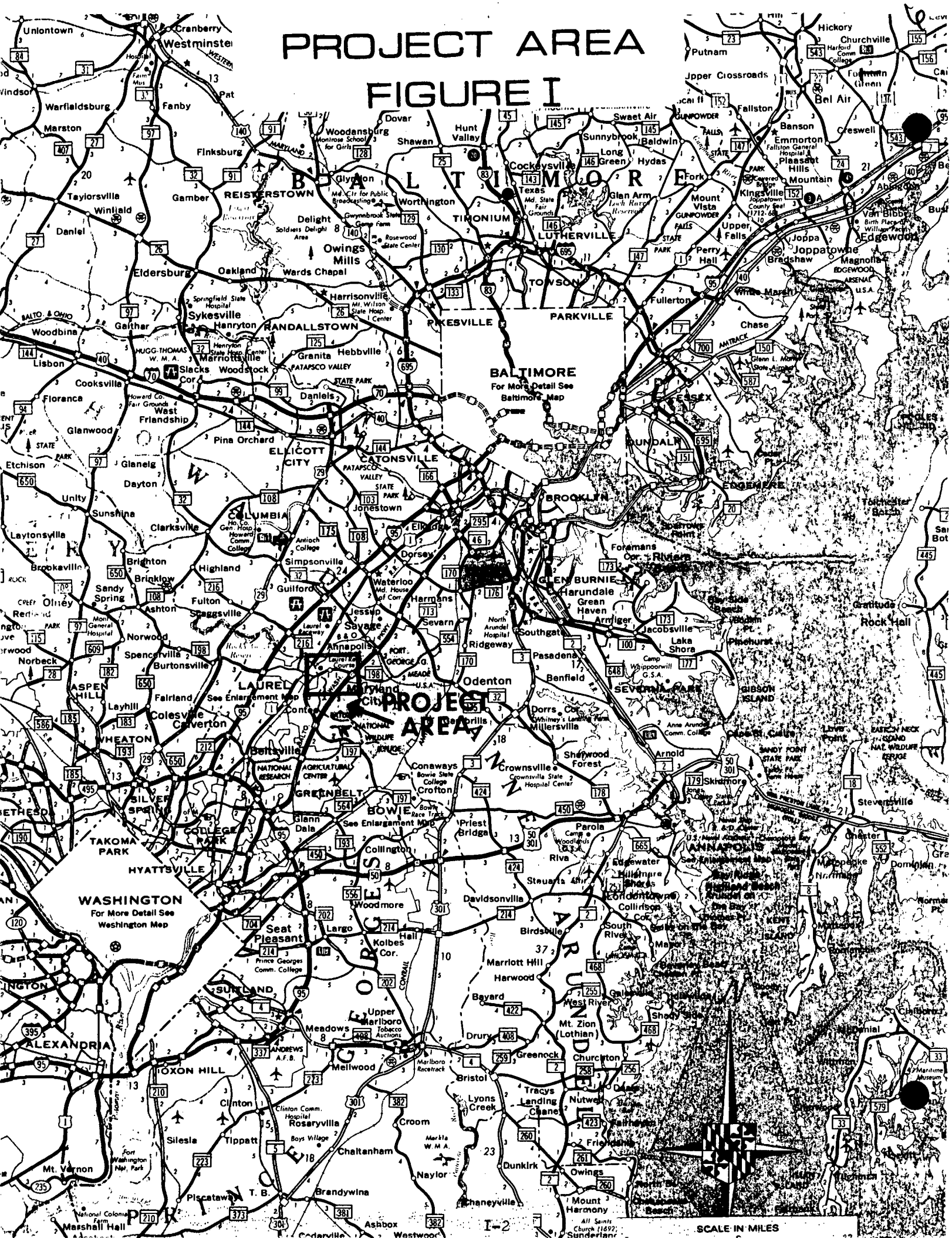
The crossing of the Patuxent River will require the spanning of the flood plain and fill in the non-tidal wetlands areas for the bridge approaches. A wetlands evaluation conducted by the Maryland Department of Natural Resources has indicated that the subject wetlands are of low value, while those downstream are of greater value. The Department has stated that the City of Laurel Landfill and commercial expansion have adversely impacted the wetlands and flood plain adjoining the project. They have further indicated that a bridge crossing to the north of the existing structure can be adequately constructed without substantial adverse impact on the adjoining wetlands. The wetlands evaluation performed for this project meets the requirements expressed in Federal Executive Order 11990. Based on this order, it has been determined that 1) there is no practicable alternative to the proposed construction in the wetland area, and 2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

The proposed action is designed to reduce the present flooding conditions on the existing facility and provide adequate design capacity for the 25 year storm on both bridge structures and approach roadways. A flood study indicates that this can be accomplished without altering the flood plain upstream and downstream of the river crossing. The total flow of the river passed by the bridge and approach roadways will not be altered.

Construction of the proposed facility would result in the loss of some wetland and upland habitat for wildlife species in the project corridor. No rare or endangered species of flora and fauna inhabit the area nor will any be impacted. The project will involve some short term impacts on water quality due to construction necessary for the river crossing. Measures will be incorporated into the construction procedures to minimize these impacts. The project would have no long term adverse impacts on water quality.

PROJECT AREA

FIGURE I



The results of the air quality analysis indicate that National Ambient Air Quality Standards for carbon monoxide will not be exceeded for the proposed facility.

Nine noise sensitive areas have been identified along the proposed right-of-way and all sensitive areas will experience design year (1998) noise levels equal to or above the established design noise levels. However, these levels are not significantly higher than those resulting from the projected "No-Build" conditions for the facility. Barriers are impractical and ineffective due to the non-controlled access nature of this project.

Although the MD 198 corridor can be characterized as one of intensive development, the proposed improvement will occur within a partially reserved right-of-way, thus no relocation of businesses or residences are anticipated. Thirty-three strip takings will be necessary for right-of-way. The action is consistent with local and regional plans. No historic or archeological sites will be affected by the proposed action.

In view of the above summary of environmental impacts, the evaluation contained in this document and in accordance with Volume 7, Chapter 7, Section 2, paragraph 12 of the FHPM, this project will not have a significant impact upon the quality of the human environment and therefore is being processed as a Negative Declaration.

II. LOCATION, NEED AND PROJECT DESCRIPTION

Brief Historical Resume

In the late 1950's the Maryland State Roads Commission, now the State Highway Administration, realized that with the growth of the Laurel area and the new Baltimore/Washington Parkway that the existing two lane MD 198 would not be able to accommodate future traffic volumes anticipated. At that time, plans for the ultimate dualization were developed and a proposed right-of-way line for the project established. Since that time, Prince George's and Anne Arundel Counties have cooperated with the State in having developers observe a setback for structural improvements beyond the right-of-way.

In 1961 and again in 1969, the existing MD 198 was temporarily improved through widening and paving the two lane highway's shoulders. This gave the area an undivided four lane facility which temporarily relieved the traffic demand. Recognizing that this was only a short term solution, MD 198 as a divided four lane facility was included in the 1978 Twenty Year Highway Needs Study, the 1978 Consolidated Transportation Program, and the 1977 Long Range Transportation Element of the Baltimore Region, General Development Plan.

The interagency coordination on the subject project was initiated in April of 1971 from the Baltimore/Washington Parkway to the Patuxent River. Shortly thereafter the project was extended 0.79 miles from the Patuxent River to U.S. Route 1 in the City of Laurel.

Transportation System

Maryland 198, from U.S. Route 1 on the west to the Baltimore/Washington Parkway on the east, is located in a transportation corridor which contains three major north-south roadways connecting the major metropolitan areas of Baltimore and Washington. See Figure II. Interstate I-95 passes less than two miles west of the center of Laurel. This freeway is part of a multi state route which will connect Maine with Florida. The eastern termini of the project is the Baltimore/Washington Parkway, which is a limited access facility connecting Baltimore with Washington. U.S. Route 1 is the third major route from Baltimore to Washington which passes through Laurel and acts as the Western termini of the proposed project. With I-95 and the proposed improvements to the Baltimore/Washington Parkway, U.S. Route 1 has become a regional rather than an interstate highway with its 66 foot right-of-way developed with commercial uses in many places which does not permit widening over any continuous distance. I-95 and the Baltimore/Washington Parkway function as the major north-south interstate routes through the region.

MD Route 198 with its east-west orientation through Laurel functions as a major cross link between the Baltimore/Washington Parkway and I-95, connecting Western Anne Arundel County to Laurel as well as connecting the Laurel area with eastern Montgomery County. The roadway serves to connect major employment, recreational, and residential centers of Fort George Meade, the National Security Agency, Laurel Race Track, and Maryland City in Anne Arundel County with the City of Laurel in Prince George's County.

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BALTIMORE-WASHINGTON CORRIDOR

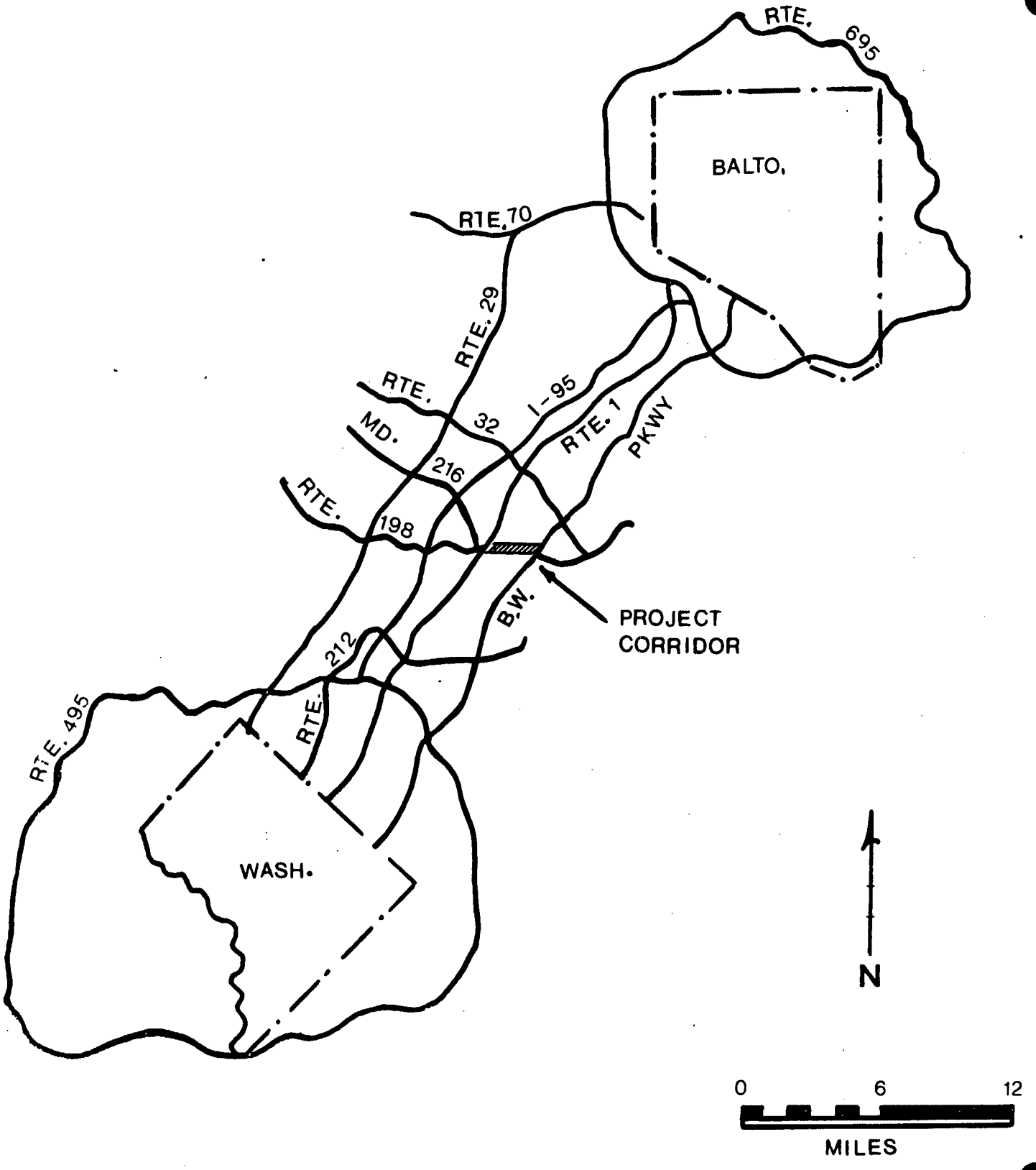


FIGURE II

Existing Facility and Use

Maryland Route 198, also known as the Laurel-Fort Meade Road, is 9.86 miles in length. (See Figure III.) The existing route extends from Fort Meade Road in Anne Arundel County, through the town of Laurel to Maryland Route 650 in eastern Montgomery County. Maryland Route 198 with an east-west orientation bisects the Baltimore/Washington corridor crossing the Baltimore/Washington Parkway, U.S. Route 1 and I-95. This project is concerned with the reconstruction of that portion of MD 198 from U.S. Route 1 to the Parkway, a segment of 2.79 miles in length.

The subject portion of MD 198 was originally constructed in 1946 as a two lane at grade facility with uncontrolled access and shoulders. It was then known as Maryland Route 602. In 1961 and again in 1969 it was temporarily improved through the widening and paving of the two lane highway's shoulders. This gave the area a four lane undivided facility with a total lane width of 48 feet. The existing crossing of the Patuxent River is by a 219 foot two lane bridge utilizing a solid fill causeway. The bridge is supported by four piers in the river bed which are not in the river flow under base flow conditions. The current use of the two lane bridge causes the two outside lanes to merge with the inside lanes prior to crossing the bridge, thus resulting in a constriction to traffic. The Patuxent River structure meets minimum structural criteria but needs improvements. The existing bridge deck needs to be replaced with a wider deck including a sidewalk. The bridge structure needs to be lengthened to 300 feet as discussed in the bridge alternatives section.

The existing crossing of the Baltimore and Ohio Railroad tracks in Laurel is accomplished by means of a three lane single span bridge. Based upon a structural inventory, this structure is listed as high priority for repair. The bridge deck needs to be replaced with a wider roadway surface and sidewalks.

Maryland Route 198 is classified as an intermediate arterial highway presently operating at near capacity, with a level of service "E". (Level of service is a term used to describe the ability of a roadway to carry traffic.) Level of service E is described as a roadway operating with traffic volumes at or near the capacity of the roadway. At capacity, speeds are typically, but not always, in the neighborhood of 30 mph. Levels of service range from "A", free unobstructed flows with no restrictions on maneuvering or operating speed, to "F" with a forced flow, low operating speeds and traffic volumes above capacity.

Currently, the highway is operating at its functional capacity with an average annual daily traffic (ADT) volume of 26,300 vehicles and a P.M. peak hour volume of 2,300 vehicles, trucks comprising about four percent of the average daily traffic. Projected future ADT traffic demand, assuming the proposed improvements are implemented, indicates that 33,700 vehicles are anticipated in 1980, 46,100 in 1990 and 58,450 by the year 2000. However, if the proposal is not implemented, the theoretical capacity of the roadway, 29,500 vehicles per day, can be expected to be reached by 1980 and increase to 31,200 by 1990 and 33,150 by the year 2000, with a service level "F". See Figure IV.

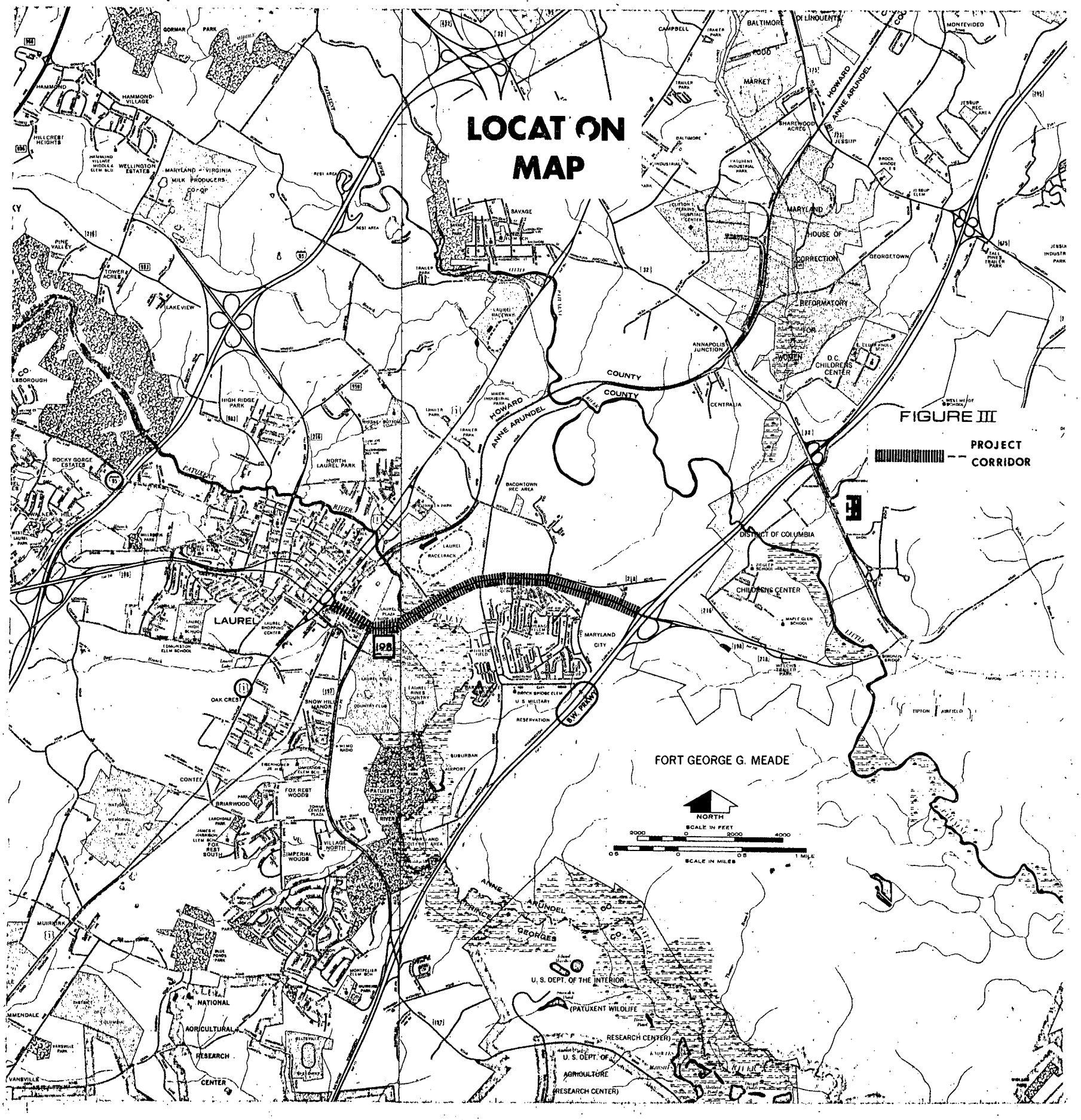
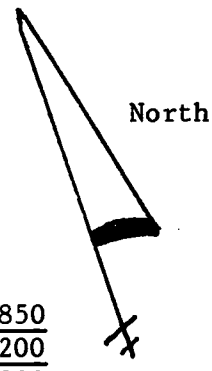

LOCATION MAP
FIGURE III
PROJECT CORRIDOR
FORT GEORGE G. MEADE
NORTH
SCALE IN FEET
SCALE IN MILES
LAUREL
BALTIMORE
WASHINGTON
ANNAPOLIS JUNCTION
MARYLAND CITY
DISTRICT OF COLUMBIA
U. S. DEPT. OF THE INTERIOR
(PATUXENT WILDLIFE RESEARCH CENTER)
U. S. DEPT. OF AGRICULTURE (RESEARCH CENTER)
NATIONAL AGRICULTURAL RESEARCH CENTER
HOWARD
ANNE ARUNDEL
PRINCE GEORGES
COUNTY
PATUXENT RIVER
BW PKWY
198
32
295

FIGURE IV

AVERAGE DAILY TRAFFIC



28000
30300
31900
38100
45800

3850
4200
4300
4850
5500

U.S. 1
North & South Bound

Irving Street

1025 1525
1100 1650
1150 1700
1300 1950
1500 2250

20000
21600
22700
27200
32700

MD 198

25050
32700
35300
45200
57200

24250
31600
34000
43800
55950

MD 198

10375 9075
13450 11800
14500 12650
18600 16550
23750 21750

MD 197

29200
37300
33200
39700
47800

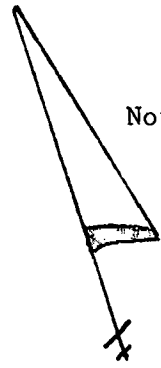
20750
26700
28600
36750
46650

Maryland State Highway Administration
Bureau of Highway Statistics
Traffic Forecasting Section
October, 1977

1977 ADT
1980 ADT
1982 ADT
1990 ADT
2000 ADT

FIGURE IV (Continued)

AVERAGE DAILY TRAFFIC



5700
6100
6300
7000
7900

Laurel Race Track Road

1850 3850
2000 4100
2050 4250
2350 4650
2700 5200

MD 198

26250
33700
36200
46100
58450

2350
3050
3350
4400
5700

Brock Bridge Road

1075 375
1400 450
1525 500
2000 650
2600 850

850 1450
1050 1700
1125 1750
1450 2000
1800 2450

Brock Bridge Road

3200
3950
4200
5200
6500

26150
33400
35800
45300
57350

"Maryland City"

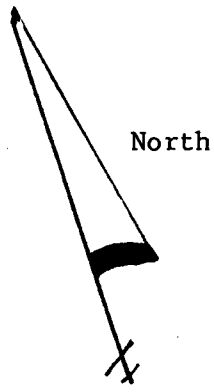
23450
30000
32150
40800
51600

"Maryland City"

MD 198

FIGURE IV (Continued)

AVERAGE DAILY TRAFFIC



2600
2800
2950
3300
3600

Whisky Bottom Road

925 1625
1025 1750
1075 1800
20450 1250 2000 20150
1400 2200

MD 198 — 26650 — 26100 — MD 198

28700 1575 575 28050
36900 1875 600 35900
47300 2000 625 45900
2450 700
3000 800

MD 198

4125 1125
4600 1250
4750 1300
5400 1500
6100 1800

Old Line Road

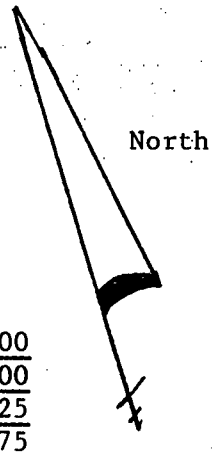
5250
5850
6050
6900
7900

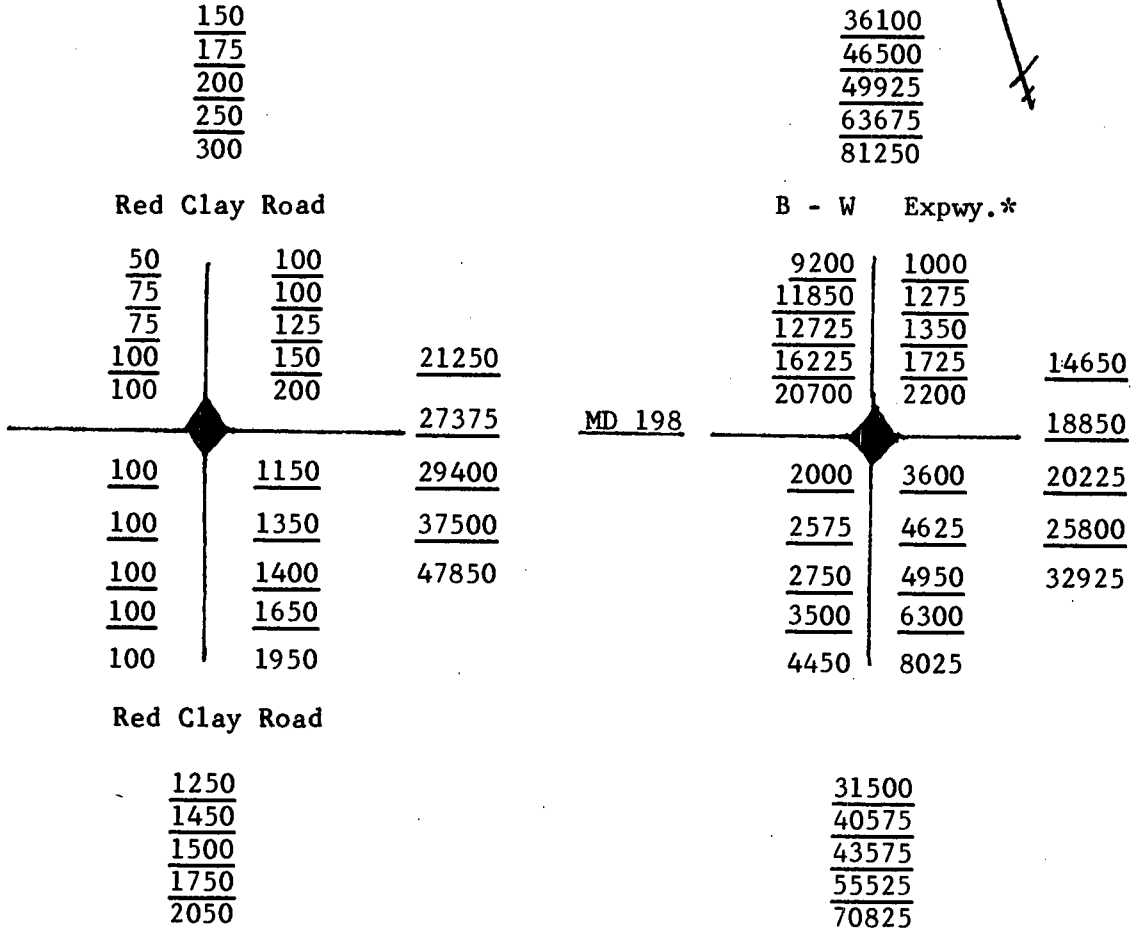
Old Annapolis Road

2200
2500
2700
3200
3800

FIGURE IV (Continued)

AVERAGE DAILY TRAFFIC





*Traffic projections are from Alternate I of the Baltimore-Washington Parkway Study (in progress).

Deficiencies of the Existing Facility

The current Maryland 198 is a four lane undivided highway, operating near capacity, utilizing a two lane bridge to cross the Patuxent River. This condition creates a hazardous constriction that reduces and impedes the flow of traffic at the bridge approaches. Deficiencies in the existing bridge structures have been previously described under Existing Facility and Use.

Additionaly, the temporarily paved shoulders, currently providing the additional two lanes, will not support traffic for an extended period of time, since the roadway base does not have the bearing capacity for the current volume of vehicles. Without extensive rehabilitation of the shoulder lanes, they will fail thereby reducing the facility to two lanes, with traffic demands for four lanes.

The continued development of Fort George G. Meade, and the nearby National Security Agency, and the Laurel Race Track, in addition to MD 198 serving as a cross county connector, have generated increased traffic volumes during the past ten years. With the existing roadway operating near capacity, no additional roadway space exists for the additional traffic volumes anticipated.

Further, a portion of the existing roadway is subject to periodic flooding. The westbound MD 198 approach to the Patuxent River Bridge between Race Track Road and the bridge is subject to flooding conditions during storms which have approximately a five year recurrance interval. During Hurricane Agnes (1972), and again during Hurricane Eloise (1975), the existing solid fill causeway was flooded and the roadway closed to traffic. This condition is created by the low elevation of the approach roadway in relation to the flood plain associated with the Patuxent River.

Accident Experience

Associated with the use of any roadway are traffic accidents. The accident data in Table I covers a five year period (1971-1974) and approximately ten months of 1975 for the subject portion of MD 198. Additionally, accidents for selected intersections are indicated with these numbers being included in the route totals.

Analysis by the State Highway Administration, Bureau of Accident Studies, found that the recorded accidents were approximately 3.5 times higher than the statewide average for uncontrolled access, four-lane divided highways over the past year. The portion of MD 198 from the Baltimore/Washington Parkway to U.S. Route 1 is presently designated as a high accident location.

Proposed Facility

In order to correct the deficiencies in the existing roadway the creation of a four lane divided highway is proposed. The proposed facility consists of the construction of a new two lane highway within the present and reserved right-of-way of the existing MD 198 beginning at U.S. Route 1 and extending westerly for approximately 2.79 miles to the Baltimore/Washington Parkway. In addition, the existing four lane undivided facility will be converted to a two lane facility. Separating the two roadways will be an approximately 50 foot median. Thus, a four lane divided highway will be created.

TABLE I - TRAFFIC ACCIDENTS - MD 198

Md. 198 from U.S. 1 to Baltimore/Washington Expressway

CO. P.G. - 3.61 to 4.47 CO. A.A. - 0.00 to 1.92	1971	1972	1973	1974	(9 Mos.) 1975
Fatal Accidents - # Killed	0	1 (1)	3 (3)	2 (2)	0
Injury Accidents - # Injured	57 (77)	67 (105)	42 (65)	66 (109)	53 (113)
Property Damage	107	133	112	125	82
Total	164	201	157	193	135

Md. 198 @ Md. 197

CO. P.G.					
Fatal Accidents - # Killed	0	0	0	0	0
Injury Accidents - # Injured	3 (3)	6 (10)	8 (9)	12 (23)	11 (32)
Property Damage	12	18	14	22	15
Total	15	24	22	34	26

Md. 198 @ Laurel Race Track Road

CO. A.A.	Data Not Available				
Fatal Accidents - # Killed	"	0	0	0	0
Injury Accidents - # Injured	"	4 (6)	2 (4)	3 (6)	1 (8)
Property Damage	"	9	2	5	2
Total	"	13	4	8	3

Md. 198 @ Brockbridge Road

CO. A.A.					
Fatal Accidents - # Killed	"	0	0	0	0
Injury Accidents - # Injured	"	6 (8)	6 (8)	8 (11)	7 (12)
Property Damage	"	10	18	27	6
Total	"	16	24	35	13

Md. 198 @ Old Line Road

CO. A.A.					
Fatal Accidents - # Killed	"	0	0	0	0
Injury Accidents - # Injured	"	1 (1)	2 (3)	4 (4)	2 (3)
Property Damage	"	11	2	6	4
Total	"	12	4	10	6

Source: Maryland State Highway Administration
Bureau of Accident Studies

The proposed facility will be at-grade and non-controlled access with several intersecting minor arterial roads. The project will utilize right-of-way adjacent to the existing highway.

The parallel two lane roadway will be twenty-four feet wide and paved with bituminous concrete. The two roadways will be separated by a variable median with a minimum width of fifty feet. The outside of each roadway will have a ten to thirteen foot outside stabilized shoulder and a four foot inside shoulder. The new roadway will be designed using a design speed of 60 mph.

The feasibility of a bikeway along the proposed facility has been considered during preliminary engineering. Due to the existing design of interchanges at the Baltimore/Washington Parkway and U.S. Route 1, it has been determined that MD 198 would be hazardous as a bikeway route. The paved auxiliary lanes on MD 198 will provide for bicycle travel, but will not be designated as a bike route for safety reasons.

The proposed project will require a new bridge over the Patuxent River to carry the westbound roadway in addition to modification to the existing bridge structure. A new structure over the B&O Railroad tracks to carry the eastbound roadway, and some modification to the existing structures is required. The highway between the proposed structures will be located within the existing and reserved right-of-way.

The proposed bridge structure over the Patuxent River would consist of an earth fill causeway across the flood plain and a new bridge span over the river parallel to the existing bridge. The new structure over the B&O Railroad tracks will be a two lane bridge of sufficient height to maintain a safety clearance over the high voltage electric lines associated with the railroad tracks.

Natural Resource Factors

Topography

The topography of the project corridor can be described as relatively level and bisected by the Patuxent River. Generally, within the right-of-way slopes vary between 0 to 4 percent. The undeveloped area south of MD 198 and adjacent to the Baltimore/Washington Parkway has a slope between ten and twenty percent, while the flood plain associated with the Patuxent River ranges from zero to three percent. The elevation at the existing Patuxent River Bridge is approximately 140 feet, and the elevation at the B&O Railroad bridge is 180 feet.

Geology - Soils

The project corridor is located within the upper coastal plain province with three geologic formations present: the Patapsco, the Arundel and the Wicomico. The Patapsco and Arundel formations are composed chiefly of clay with minor amounts of sand, while the Wicomico formation is found chiefly in the flood plain and is mainly gravel capped with several feet of silt. The flood plain soils are predominately loamy alluvium, while throughout the remainder of the corridor, soils are loamy sand, silt loam and clay. The soils are considered highly erodable.

Vegetation

Vegetation within the corridor consists primarily of mixed deciduous trees. Trees associated with wet soils such as the River Birch and Sycamore are found along the Patuxent and its flood plain, while a mixture of poplar and pine are found in the open spaces within the corridor. No unique or unusual vegetation have been identified within the study area. Wetland vegetation is described under the discussion of the Patuxent River.

Patuxent River

The Patuxent River is the longest intrastate river in Maryland. Its origin is on Parrs Ridge at the junction of Howard, Montgomery, Frederick and Carroll Counties and flows in a south-southeasterly direction for 110 miles to its confluence with the Chesapeake Bay at Solomon's Island, Maryland.

The river, in the reach from the confluence with the Little Patuxent to the headwaters, is narrow and shallow with a sluggish flow. Although this reach is a highly valued fish propagation area, the reduced flow of the main stem below T. Howard Duckett Reservoir and the waste water effluents that are treated and discharged in the reach are presently reducing its value. Anadromous fish species have not been observed recently in the main stem of the river above Bowie.

The Patuxent River waters in the proposed project area include small tributaries which drain the Laurel area and the surrounding rural areas, including the Fort Meade Military Reservation. Wastewater discharges in this reach of the river include municipal wastewater treatment plants at Laurel and Maryland City.

The waters of the project reach are zoned Class I for water contact recreation and aquatic life uses by the Maryland Department of Natural Resources. However, some localized bacterial and enrichment problems from septic sources and runoff have been experienced. See Figure V for the general location of the Patuxent River flood plain and wetlands in the project area.

Wetlands

Non-tidal wetlands are present along the Prince George's and Anne Arundel County shores of the Patuxent River. The wetlands are principally composed of the wooded swamp type with a small portion being of the inland open fresh water type. The wooded swamp typically has water logged soils often covered with one foot of water and trees such as willows and sycamores. The inland open fresh water wetland is generally covered with less than ten feet of water and is fringed by submerged and emergent vegetation such as cattails and cut weeds. The largest and most valuable wetlands occur downstream of the MD 198 bridge while there are limited, less valuable wetlands in terms of wildlife habitat, upriver from the bridge.

Patuxent River 100 Yr' Flood Boundary & Wetlands Map

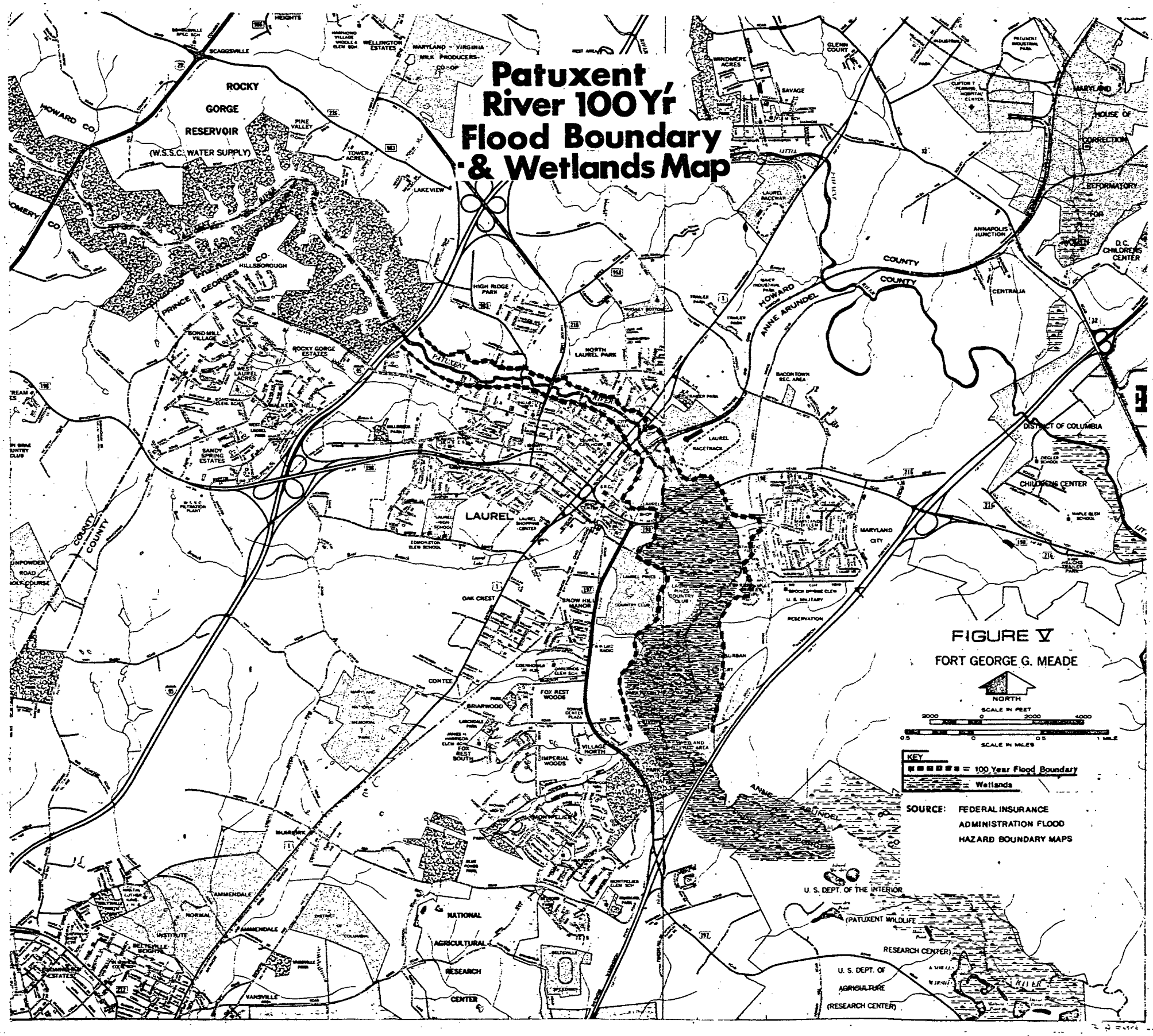


FIGURE V

FORT GEORGE G. MEADE

NORTH

SCALE IN FEET

2000 0 2000 4000

0.5 0 0.5 1 MILE

SCALE IN MILES

KEY

= 100 Year Flood Boundary

= Wetlands

SOURCE: FEDERAL INSURANCE ADMINISTRATION FLOOD HAZARD BOUNDARY MAPS

The wetlands immediately south of the 198 bridge on the Prince George's County sides have largely been destroyed by a seven acre fill for commercial development and the City of Laurel Landfill. The remaining wetlands area, 180 acres south to Brock Bridge Road, remains undisturbed, while on the Anne Arundel County side south to Brock Bridge Road, approximately 250 acres of wetlands remain undisturbed.

The wetlands in the immediate vicinity of the MD 198 bridge contain various types of plant vegetation including cattails, sedges, cut grass, smart weed and pond weeds as an understory, with black willow, sycamore, hickory and sweet gum trees predominating in the overstory. The primary values of the wetlands in the bridge area are attributed to sediment entrapment, ground water recharge and flood buffering.

The undisturbed wetlands areas south of the MD 198 bridge provide a habitat for a wide range of wildlife. Migratory waterfowl residing in the wetlands include: puddle ducks, diving ducks and occasional Canadian geese along with mourning doves and woodcocks. A wide variety of resident song birds are also present. Fur bearing animals present include the raccoon, opossum, mink and muskrat along with the whitetail deer. Upland game animals inhabiting the wetland include the rabbit, squirrel and bobwhite quail. Finfish presently include the largemouth bass, bluegill sunfish, pickerel, carp and fallfish. No anadromous or semi-anadromous fish are known to spawn within the project area. See Figure V-A.

Flood Plain

Associated with the river is an extensive flood plain. The width of the flood plain at the existing MD 198 bridge is approximately 3,700 feet according to maps under the Federal Flood Insurance Program.

North of the bridge, the flood plain extends from Brock Bridge Road to several hundred feet west of the Laurel Plaza Shopping Center on the opposite side of the river. South of the bridge the flood plain extends from 750 feet west of Brock Bridge Road to 500 feet east of Maryland 197 in Laurel, a distance of approximately 4,000 feet. Further north of the bridge, the flood plain widens to approximately 1,500 feet, while to the south it expands to approximately 5,000 feet in width. The U.S. Department of Housing and Urban Development, Federal Insurance Administration, has designated the Laurel Area as a special flood hazard area.

Upstream from the proposed project, the Washington Suburban Sanitary Commission (WSSC) owns and operates two large water supply reservoirs (Triadelphia Lane and T. Howard Duckett Reservoir) on the main branch of the Patuxent River. Due to the effects of urbanization and its subsequent encroachment on the flood plain in addition to the generation of stormwater runoff, the WSSC has entered into a reservoir operation plan. This plan is a flood control measure whereby maximum reservoir levels are maintained during irregular river flows and discharge rates controlled. This is intended to alleviate flood damage downstream from the reservoirs in the Laurel area. Although this program is presently in operation, flooding of the eastern approach roadway to the present bridge is still a problem. See Figure V and V-A.

Limited Wetland Area of Low Wildlife Habitat Value

Extensive Wetland Area of High Wildlife Habitat Value

FIGURE V-A

DETAILED FLOOD BOUNDARY AND WETLANDS MAP

FORT GEORGE G. MEADE

NORTH

SCALE IN FEET

2000 0 2000 4000

0.5 0 0.5 1 MILE

SCALE IN MILES

KEY

= 100 Year Flood Boundary

= Wetlands

SOURCE: FEDERAL INSURANCE ADMINISTRATION FLOOD HAZARD BOUNDARY MAPS

Scenic River Legislation

Two pieces of state legislation affect the use of the Patuxent River, its flood plain and wetlands. The Wild and Scenic Rivers Act of 1971 established a detailed framework for State and local preservation of designated State rivers which included the Patuxent. The Act states in part:

> "Many of the rivers of Maryland or portions of them and related adjacent land areas possess outstanding scenic, fish, wildlife, and other recreation values of present and potential benefit to the citizen of the State. The policy of the State is to protect the water quality of these rivers and fulfill vital conservation purposes by wise use of resources within this scenic and wild river system. Development of a scenic and wild rivers system is essential to fulfill these purposes."

The act further states:

> "Before specific plans for use and development of water and related land resources are approved, including constructing improvements, diversions, roadways, crossings, channelizations, locks, canals, or other uses which change the character of a river or waterway or destroy its scenic value, full consideration and evaluation of the river as a scenic and wild resource shall be given."

The Patuxent River Watershed Act of 1961 proclaimed "... flood prevention, conservation, sediment and erosion protection and the preservation of urban development within the watershed is a public benefit and conducive to the public health, safety and welfare." Under the terms of the Act, a Patuxent River Watershed Park will be acquired jointly by the State and the counties bordering the river. The park concept proposed is for land protection along the river which would be used principally for environmental enhancement, including flood plain preservation, and active recreation at appropriate points.

A Section 4(f) statement will not be required for this project. The Patuxent River is designated as a State Scenic River under conservation oriented legislation intended to protect and enhance various multi-use qualities of portions of this River. The area of the River potentially affected by the proposed improvements to Maryland Route 198 is not being specifically designated for significant park, wildlife or recreational usage. The scenic values associated with the River will be carefully considered during the design of the project. The Maryland Department of Natural Resources has been consulted to insure this consideration. At the present time, the Department of Natural Resources has indicated a preference for a structure located north of the existing structure to minimize impact to the river's character. This coordination is discussed further under Impacts on the Natural, Ecological, Cultural and Scenic Resources.

Historic and Archeological Resources

The Maryland Historical Trust has been contacted concerning historic sites in the study area. A recent survey of information from both Prince George's and Anne Arundel Counties indicates that there are no historical buildings or sites near the proposed dualization of MD 198.

The Division of Archeology of the Maryland Geological Survey has conducted an archeological reconnaissance of the Route MD 198 corridor. The reconnaissance found no archeological sites during the survey and concluded that no known impact on archeological sites would occur from the proposed actions. If, during the construction of the project, sites are discovered, salvage procedures will be employed in accordance with the applicable federal directives.

Socio-Economic Characteristics

The Greater Laurel Area - Several communities are located in the Laurel vicinity that identify with and function as a part of the City of Laurel. The Greater Laurel Area includes the City of Laurel, West Laurel and South Laurel in Prince George's County, North Laurel in Howard County and Maryland City in Anne Arundel County. Municipal services, commercial and recreational activities emanate from the City to serve this entire area. Laurel provides services to surrounding communities, but there is no legal governing body for the Greater Laurel Area.

City of Laurel - The City of Laurel is an older city where relatively few changes have occurred over recent years. During the last decade, Laurel had the smallest population increase of all portions of the Area. Laurel's population lives in older single family residences or new smaller multi-family units. The City is characterized by a working class population, a substantial number of poverty level families and small households. Many military families also live within Laurel.

West Laurel - Is a family-centered suburban community. It is composed almost entirely of middle-income families with children. West Laurel has a population employed heavily in blue collar positions and has a high owner occupancy ratio.

South Laurel - Is most like the City of Laurel, although the population is generally younger than in the City and there are more families. However, the housing stock consists largely of small multi-family units. The South Laurel population is also somewhat better educated and has a higher median income than the City.

North Laurel - Is a semi-rural community. This area is inhabited by older middle-income families with few school aged children. Large land holdings and large lot developments are characterictic of this area.

Maryland City - Is a small, predominantly residential community that is surrounded by institutional and commercial uses. It boasts of a structurally heterogeneous population with families of varying sizes and income levels.

The Greater Laurel Area has captured a significant amount of the multi-family housing as well as the total household increase in Prince George's County over the last decade. Currently, more than 54 percent of Greater Laurel's housing stock is in multi-family units. An even greater increase in households and multi-family residences is anticipated during the next twenty years.

In terms of socio-economic characteristics, two areas of concentrated residential population exist within the project corridor, Maryland City and the Town of Laurel. Maryland City is an unincorporated subdivision, with a total 1970 population of 7,102, of which 203 are nonwhite. Maryland City was begun in 1961 and today is approximately 95% developed. Approximately 60% of residents in the labor force are employed in professional, technical, administrative, or sales occupations. The 1970 median income of the area is $12,400 with 5% of the families having incomes below $4,000.

The Town of Laurel had a 1970 population of 31,590 persons with 4% being nonwhite. Approximately 70% of the population in the labor force are employed in professional, technical, administrative or sale occupations. The median income of the Laurel area is $11,900 with 6% of the families having incomes below $4,000.

Since before 1945, the Study Area has been dominated by federal government employment. The early focus of at-place employment activity was Fort George Meade and the National Security Agency, which are located in Anne Arundel County. Although federal employment increased at a declining growth rate in the later 1960's it is still the dominant industry. Expansion during the 1960's at federal establishments in addition to Fort Meade and NSA include the Department of Agriculture's Research Center in Beltsville and the National Aeronautics and Space Administration's Goddard Space Flight Center near Greenbelt. The residents of the Study Area do not all necessarily find employment in firms of governments agencies located near their residences. In many dual employee families, at least one adult commutes to either the Baltimore or Washington area for employment.

Land Use Characteristics

The MD 198 Corridor between the Baltimore/Washington Parkway and U.S. Route 1 can be characterized as a developed urban area, divided by the Patuxent River which provides open space. To the east of the river in Anne Arundel County, the corridor is characterized by small and moderate sized commercial establishments having access to MD 198, with the exception of three areas. The first is a large undeveloped wooded tract on the south side of MD 198 between Red Clay Road and the Baltimore/Washington Parkway.

The second area is the Laurel Race Track Complex which is adjacent to the Patuxent River and north of MD 198. The complex consists of the race track, grandstands, clubhouse and paddock surrounded by a large parking area. The complex is served by Race Track Road, which connects to MD 198.

Between Red Clay Road and Old Line Road, south of MD 198 is the subdivision of Maryland City. The Maryland City subdivision is currently a residential use, with the area immediately north of the existing Maryland City planned as a medium density residential area and 725 acres planned for low density residential. The developed area of Maryland City is already served with sewer and water services, while forty percent of the remainder of the site (north of MD 198) is not within the ten-year plan for water and all of the remainder of the site is scheduled to be served by sewer within ten years.

The west side of the Patuxent River is dominated by the City of Laurel. The Laurel area is currently planned for medium and high density residential and commercial uses. The 1974 Comprehensive Plan for the City of Laurel envisions a new core area of office and civic uses south of the existing Laurel Shopping Center on U.S. Route 1 and the expansion of the shopping center to a regional shopping area. Surrounding the commercial/civic core area the medium and high density residential areas will be maintained. To the south and west of the core area, neighborhood planned development areas have been designated.

Future land use adjacent to MD 198 will be a continuation of existing uses. See Figure VI. The commercial area at the juncture of U.S. Route 1 and MD 198 will be maintained, as will the multi-family residential area south of MD 198 between the B&O Railroad and MD 197. North of the multi-family area will be maintained as a light industrial employment area. Further to the east, the Laurel Shopping Plaza shopping center will be maintained and the Patuxent River flood plain maintained as open space.

The Laurel Comprehensive Plan recognizes the dualization of MD 198 as necessary to the future circulation patterns to and within Laurel. In addition, the plan proposes a circumferential roadway system to carry traffic around the existing city and at the same time provide access to the city. The circumferential system includes the extension of MD 197 from MD 198 north and then parallel to the Patuxent River to U.S. Route 1. Additional local land use planning in the project corridor is carried out by Prince George's County, Anne Arundel County and Maryland City. Land use plans within the corridor are in various stages of development but all are consistent with the proposed upgrading of MD 198 as detailed under Alternative II.

When plans for the dualization of MD 198 were developed in the late 1950's, a proposed right-of-way line for the project was established. In accordance with good land use planning principles, Prince George's and Anne Arundel Counties have cooperated with the State in having developers observe a set back for structural improvements beyond the right-of-way. These actions have prevented the encroachment of development into the right-of-way, thus preserving the proposed alignment for the proposed project. This action has also prevented the need for relocating any residences or commercial establishments. Although there will be no relocations involved, the project will affect thirty-three properties due to strip-takings necessary for right-of-way.

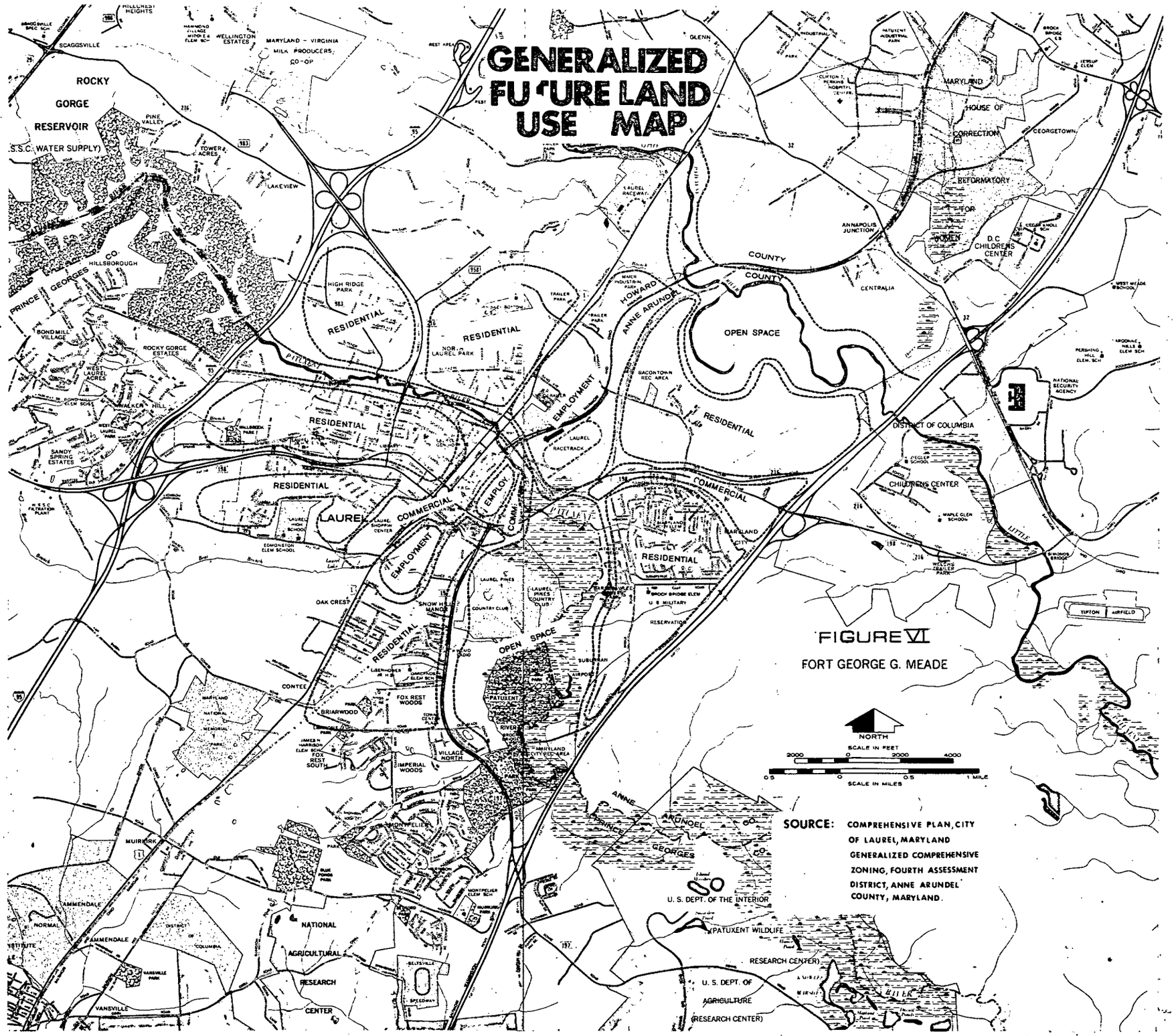

GENERALIZED FUTURE LAND USE MAP
ROCKY GORGE RESERVOIR (S.S.C. WATER SUPPLY)
RESIDENTIAL
OPEN SPACE
COMMERCIAL
EMPLOYMENT
LAUREL
MARYLAND HOUSE OF CORRECTION
REFORMATORY FOR WOMEN
D.C. CHILDRENS CENTER
ANNAPOLIS JUNCTION
CENTRALIA
DISTRICT OF COLUMBIA
NATIONAL SECURITY AGENCY
CHILDRENS CENTER
FORT GEORGE G. MEADE
NATIONAL AGRICULTURAL RESEARCH CENTER
U. S. DEPT. OF THE INTERIOR
PATUXENT WILDLIFE RESEARCH CENTER)
U. S. DEPT. OF AGRICULTURE (RESEARCH CENTER)
NORTH
SCALE IN FEET
2000 0 2000 4000
SCALE IN MILES
0.5 0 0.5 1 MILE
SOURCE: COMPREHENSIVE PLAN, CITY OF LAUREL, MARYLAND GENERALIZED COMPREHENSIVE ZONING, FOURTH ASSESSMENT DISTRICT, ANNE ARUNDEL COUNTY, MARYLAND.

FIGURE VI

III. PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

Air Quality Impact

In order to determine the air quality impact of the proposed action, the Administration has conducted a microscale carbon monoxide analysis and a pollutant burden analysis of the "Build" and "No-Build" alternates. The microscale analysis determined that there will be no violations of the State or Federal Ambient Air Quality Standards for carbon monoxide with the "Build" alternate in the completion year (1980) or the design year (2000) while slight violations of the AAQS will occur in 1980 with the "No-Build" alternate due to lower operating speeds (Table II). The burden analysis determined that the quantity of carbon monoxide and hydrocarbons will be greater with the "No-Build" alternate in 1980 and greater with the "Build" alternate in 2000; this being due to the lower speed associated with the "No-Build" alternate and the higher volumes associated with the "Build" alternate (Table III). All levels will decrease from 1980 to 2000 due to the FMVCP.

The inputs and assumptions used in the analysis are as follows:

A. Traffic Volumes (ADT):

	1980	2000
Build	33,700	59,000
No-Build	29,500	33,150

B. Traffic Speeds:

		Peak	Off-Peak
Build:	1980	35	45
	2000	30	45
No-Build:	1980	15	25
	2000	15	25

C. Emission Factors:

The emission factors used in this analysis are based on the most recent (March, 1978) version of AP-42 Supplement V and derived utilizing the U.S. Environmental Protection Agency Mobile 1 computer program. The program was modified to include the light-duty vehicle age distribution and mileage accrual specific to the project area while national default values were used for the remaining vehicle types.

The assumptions used in deriving these factors are as follows:

1. The Federal Motor Vehicle Control Program will proceed as specified in the Clean Air Act Amendments of August, 1977.

2. Speeds used are those indicated in the traffic data.

3. It was assumed Inspection-Maintenance would not be in effect.

4. The January and February mean temperature at Baltimore-Washington International Airport ($35^{o}F$) was used to determine temperature correction.

5. Assumptions regarding use of catalyst, control of truck emissions and deterioration are those inherent in the Mobile 1 program.

D. Worst-Case Meteorology

One-Hour

1. Wind Speed = 1m/sec

2. Stability Class - F

3. Wind Direction = that which will produce maximum concentration at receptor of concern.

4. Mixing Ht. 350 m (from Holzworth, 1972)

Eight-Hour

1. Wind Speed = 2m/sec before 17:00
   1m/sec after 17:00

2. Stability Class - D before 17:00
   F after 17:00

3. Wind Direction - Same as one-hour

4. Mixing Ht. - Same as one-hour

E. Dispersion Model:

The U.S. Environmental Protection Agency HIWAY Line Source Model was utilized to predict microscale carbon monoxide concentrations.

Table II

Carbon Monoxide

mg/m^3

"Build"

Receptor Distance	1980		2000	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
12.5m-R.O.W.	18.5	7.3	10.0	4.0
15.0m	17.5	6.9	9.6	3.8
20.0m	16.1	6.3	8.8	3.5
30.0m	13.8	5.4	7.6	3.0
40.0m	12.1	4.7	6.7	2.6
50.0m	10.5	4.1	5.9	2.3

"No-Build"

Receptor Distance	1980		2000	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
10.0m-R.O.W.	40.5	13.8	12.2	4.2
15.0m	34.9	11.9	10.7	3.7
20.0m	31.1	10.6	9.7	3.4
30.0m	25.8	8.8	8.2	2.8
40.0m	22.3	7.6	7.3	2.5
50.0m	19.3	6.5	6.5	2.3

Note: Concentrations include background

Table III

Pollutant Burden

Kg/Day

"Build"

	Carbon Monoxide	Hydrocarbons	Nitrogen Oxides
1980	1914	235	281
2000	948	109	230

"No-Build"

	Carbon Monoxide	Hydrocarbons	Nitrogen Oxides
1980	2950	304	201
2000	829	101	112

The subject project is located in the National Capital Interstate Air Quality Control Region. Three characteristics of the proposed facility were evaluated to determine consistency with the State Implementation Plan: micro-scale carbon monoxide levels, regional emissions and construction impact.

The project Air Quality Analysis assessed the micro-scale carbon monoxide impact of the facility. The analysis determined that no violation of State or Federal Ambient Air Quality Standards would occur adjacent to the project during the completion and design years. The project is consistent with this aspect of the State Implementation Plan.

The impact of the project on regional emissions was evaluated due to the effect the project could have on the ambient air quality of the total region and the fact that the Transportation Control Plan for the region contains VMT reduction measures. Control strategies in the State Implementation Plan compensate for normal growth of VMT, however, do not allow for the VMT increase which would accompany an additional major highway corridor. The subject project is minor in relationship to the regional network and is consistent with the State Implementation Plan.

The consistency of the project in relation to construction activities was addressed through consultation with the Maryland Bureau of Air Quality and Noise Control. The State Highway Administration has established Specifications for Materials, Highways, Bridges, and Incidental Structures which specify procedures to be followed by contractors involved in State work. The Maryland Bureau of Air Quality and Noise Control has reviewed these Specifications and has found them consistent with the Regulations Governing the Control of Air Pollution in the State of Maryland.

Noise Impact

The impact of increases in noise levels, caused by increased traffic volumes, above those existing before the project is constructed were analyzed. Areas which are sensitive to increases in noise levels due to their use; schools, hospitals, etc. or to their close proximity to the highway were identified and the expected noise increases examined. The new noise levels at the sensitive receptors and the surrounding land uses along the MD 198 corridor were compared to the Federal Highway Administration design noise levels for differing land uses. A Noise Report has been prepared for the subject project and is available for review through the State Highway Administration.

Ambient, existing noise levels were measured with a Bruell & Kajaer Precision Sound Level Meter and Nagra Sterio Tape Recorder. Field recordings were analyzed to obtain L_{10} values, L_{10} noise levels being a statistical noise level that is exceeded ten percent a given time period, using a Bruell & Kajear Graphic Level Recorder and Statistical Distribution Analyzer. Route 198 in the project corridor is an existing four lane highway and all of the noise sensitive areas currently experience some degree of traffic generated noise.

Nine (9) residential and commercial noise sensitive areas were identified and are typical of similar areas throughout the project area. See Figure VII.

Design year, 1998, noise levels were predicted, utilizing the Maryland State Highway Administration's Traffic Prediction Model based upon a prediction method presented in National Cooperative Highway Research Program Report #117.

All of the noise sensitive areas identified for this project will experience design year (1998) noise levels equal to or above the design noise level established by the Federal Highway Administration. Three (3) areas currently experience noise levels in excess of the design noise level. These levels will not increase by more than 5dBA for the design year. Of the remaining six (6) areas one (1) will experience an increase of 5dBA while the other five (5) areas will be in the 6-9 dBA range in the design year.

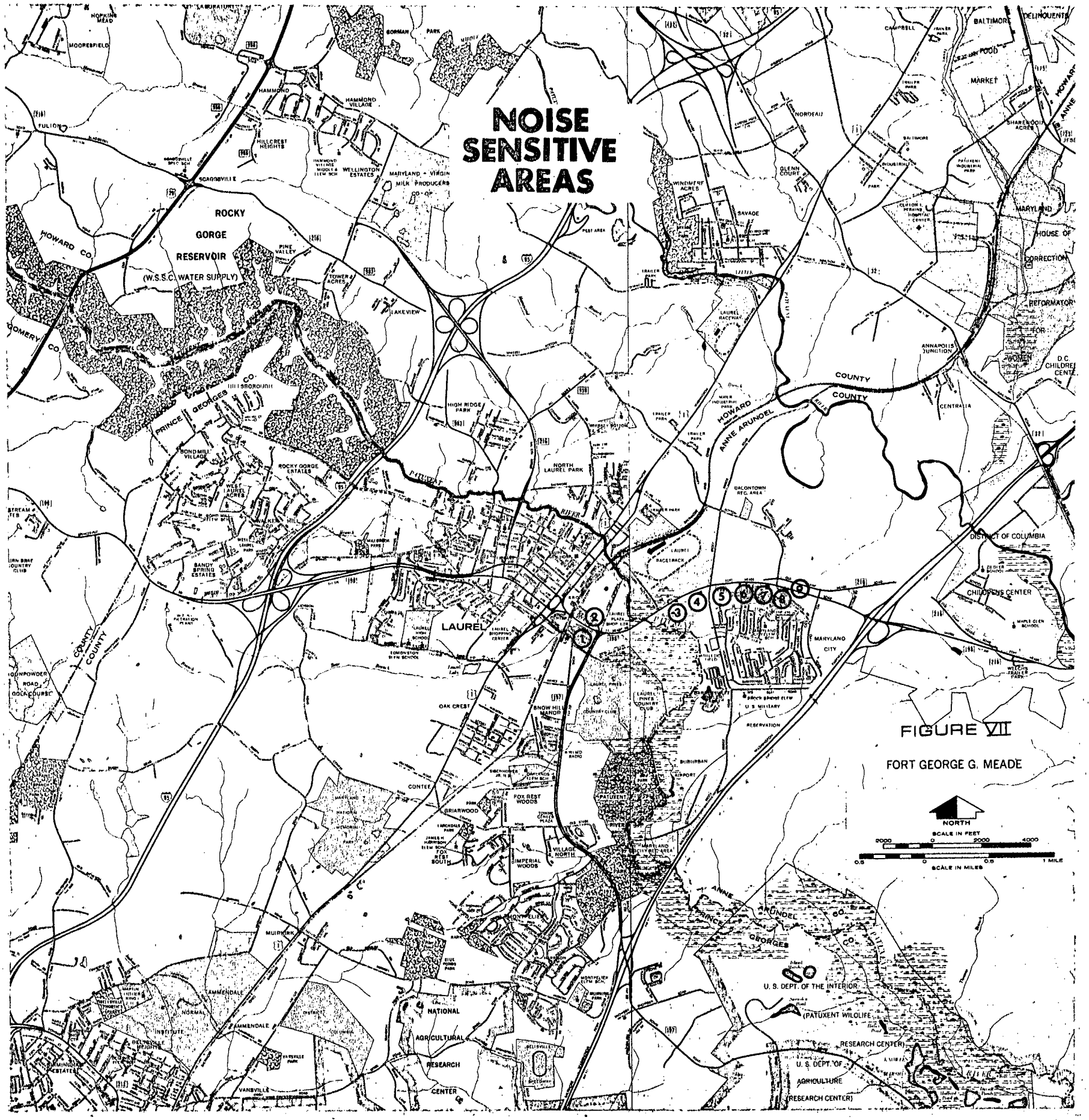


FIGURE VII

FORT GEORGE G. MEADE

In general, the more a new noise level exceeds the previous ambient, the more unacceptable it will be judged. Generally, increased noise results in a lowering of the quality of living; the degree of which is dependent upon the increase over existing noise levels. Based on this, a condition where the increase will be 5dB or less is considered to be negligible. An increase 6-10dB is considered to be a minor impact, while an increase of 11-15dB would represent a significant impact and an increase greater than 15dB a severe impact. See Table IV.

For this project five (5) of the noise sensitive areas will experience increase in the 6-10dB range, indicating minor impact. It is not feasible to provide noise reduction measures in these areas for a combination of reasons. To be effective, a barrier must be of sufficient length to prevent noise from coming around its ends, generally a distance of eight times the distance from the noise sensitive area to the highway. Also, the presence of entrance driveways further break the continuity of roadside frontage, making it impossible to construct acoustic barriers of sufficient length.

Traffic noise follows a direct path to the receiver who can see the traffic. A person able to see the roadway from a third story apartment would be able to hear the noise generated by traffic moving below him. In order for a noise barrier to be effective it must be at least as high as the observer. Therefore, a barrier to be effective for a three story apartment building, it must be a minimum of thirty feet high and of sufficient length not to allow noise to come around the ends. A noise barrier of these dimensions is impractical for the above stated reasons.

No educational or religious facilities will be impacted by this project. There will be no adverse impact upon any commercial or industrial areas as a result of this project.

The 1998 design year maximum noise levels for undeveloped areas are listed below with corresponding distances:

100' -- 73dBA
200' -- 71dBA
500' -- 65dBA

An analysis of the effect of the introduction of noise attenuating (reducing) devices was conducted with the following conclusions. The attenuation which could be achieved utilizing the limited space available for barrier construction is extremely limited. Noise sensitive area (1) cannot be protected by an acoustic barrier due to the presence of the MD 198/MD 197 intersection. Noise generated from traffic travelling on MD 197 would negate the positive effect of a barrier along MD 198. A study conducted for the reconstruction of MD 197 presently underway showed that a barrier to protect this area could not be constructed. In order to attain a meaningful attenuation, this barrier would have to be constructed. Without it, a barrier along MD 198 is not warranted.

TABLE IV

ACOUSTIC ANALYSIS

NSA*	LAND USE	AMBIENT L_{50}	AMBIENT L_{10}	DESIGN YEAR L_{50}	DESIGN YEAR L_{10}	DESIGN NOISE LEVEL	L_{10} ABOVE AMBIENT	EXCEEDS LEVEL	BARRIER RECOMM'D
1	Resid.	63	69	70	76	70	+7	+6	No
2	Resid.	63	69	71	74	70	+5	+4	No
3	Resid.	63	73	75	78	70	+5	+8	No
4	Resid.	66	72	74	77	77	+5	+7	No
5	Resid.	58	63	66	70	70	+7	equals	No
6	Resid.	64	71	72	75	70	+4	+5	No
7	Resid.	60	66	72	75	70	+9	+5	No
8	Resid.	60	65	69	74	70	+9	+4	No
9	Commer. Motel	62	68	71	74	70	+6	+4	No
				DO NOTHING ALTERNATE					
1	Resid.		69	68	70	70			
2	Resid.		69	69	71	70			
3	Resid.		72	69	72	70			
4	Resid.		71	68	71	70			
5	Resid.		63	60	65	70			
6	Resid.		71	68	71	70			
7	Resid.		66	66	68	70			
8	Resid.		65	62	64	70			
9	Commer. Motel		68	67	70	70			

*NOISE SENSITIVE AREA
All values represent dBA

A noise barrier at the remaining seven (7) noise sensitive areas would result in marginal alteration as indicated below:

Noise Sensitive Area	Attenuation
3	4dBA
4	3
5	2
6	2
7	5
8	2
9	4

The listed attenuation represents the maximum which can be expected and are based upon a barrier that would break the line of sight by six feet. The total barrier height would have to be 12-15 feet high. Three of the noise sensitive areas would experience noise reductions of 4-5dBA. However, these reductions would only occur directly behind the barrier. Where a noise sensitive area is more than 50 feet to the rear of the barrier, the attenuation from the barrier would be less than 2dBA. Therefore, it has been concluded it is not feasible to construct effective acoustic barriers.

If the dualization of MD 198 does not occur it can be anticipated that the present highway will reach the theoretical capacity by 1980, at which time periods of interrupted traffic flow are likely to occur, adding up to 5dBA to the anticipated noise levels. Design year, 1998, noise levels are expected to be approximately as follows for each of the nine (9) noise sensitive areas.

1. L_{10} - 70dBA
2. L_{10} - 71dBA
3. L_{10} - 72dBA
4. L_{10} - 71dBA
5. L_{10} - 65dBA
6. L_{10} - 71dBA
7. L_{10} - 68dBA
8. L_{10} - 64dBA
9. L_{10} - 70dBA

For the undeveloped areas the following noise levels can be anticipated.

Distance from centerline of near lane of traffic	L_{10} Level
100'	69dBA
200'	64dBA
300'	59dBA

While noise barriers cannot be employed as an effective noise alternating device, other statewide measures have been taken to reduce noise levels. The Maryland Environmental Noise Act of 1974 requires that all levels of State Government incorporate public protection from noise pollution in their plans and programs and comply with noise control regulations. The Act provides for the establishing of objective noise limits for all motor vehicles operated in Maryland. The noise limits recently established by the Motor Vehicle Administration provide a maximum acceptable noise level for new and used vehicles. In addition the Federal Department of Transportation is establishing maximum noise levels for motorcycles and for trucks used in interstate commerce.

Construction Noise

During the construction phases of this project, noise generated by construction equipment will impact noise sensitive areas previously discussed. Information regarding noise levels from construction such as bulldozers, earthmovers, scrapers, etc., is available but techniques for predicting decibel levels are not. This increase will be short term resulting in unavoidable periods of annoyance for the duration of the construction of this project. Measures will be considered to minimize noise levels.

Water Resources Impacts

Water Quality

Sediment and erosion can be greatly reduced by the use of certain techniques. The State Highway Administration established practices of using sediment control procedures such as sediment traps, slope drains and early seeding and mulching which can minimize the impact of this project on the environment. These control practices will be prepared in the form of an erosion and sediment control plan, to be reviewed and approved by the Department of Natural Resources; Water Resources Administration.

Another water quality consideration is the use of deicing chemicals during the winter months to keep the roadway free of ice and snow. These chemicals, mainly in the form of sodium chloride, after application, are washed from the roadway by rain and melting snow and eventually disperse into the surrounding soil and waterways. Sodium chloride concentrations present in major rivers are not influenced significantly by the application of salt to highways. The salt concentrations are kept to an acceptable level because of the dilution effect of the river volume and the dispersion factor mentioned above.

The use of this highway by automobile and truck traffic will undoubtedly produce a certain amount of contaminants in the form of grease and oil drips which may enter the Patuxent River as a result of the stormwater. However, the amount of contaminants will be miniscule. Given these considerations and the urban character of the project corridor, this project will not have an adverse affect on the Patuxent River's water quality.

Hydrology*

The proposed project involves the crossing of the Patuxent River and its flood plain. The current highway crosses the Patuxent River on a 219 foot bridge at an elevation of 142' with solid fill causeway approaches traversing the river's flood plain. The design of the eastern approach to the bridge has resulted in a low elevation of 133 feet in the roadway, 1200 feet northeast of the bridge. Due to the existing conditions of the facility and the river's drainage basin characteristics (developing urban area), flooding is an ever present problem at the Patuxent River crossing. Due to the inadequate bridge

* This section based upon a Flood Study of the Patuxent River Area in the vicinity of the existing crossing of MD 198 completed in December, 1976 by Kennedy-Bode Engineering, Inc., for the Maryland State Highway Administration, Maryland Department of Transportation.

openings, whenever there is a storm which causes the river flow to exceed the bridge opening's capacity flood waters will begin to store upstream of the highway which acts like a dam. When the storage capacity of the river channel is exceeded, the flood waters will overflow the flood plain which will store the excess storm water. Floodwaters in the Patuxent River and its flood plain will continue to rise until the flood waters reach a level equal to or exceeding that of the roadway. When this happens, water will begin to flow across the highway at the low point, thus necessitating the closing of the facility until the flood waters have receded.

At the present time, flooding occurs on MD 198 during a storm with a frequency of between 5 and 10 years, depending upon the flood control capacities of the two upriver reservoirs. Frequency refers to the rate of recurrence of a storm with a storm with a particular intensity. Thus a 5 year storm would mean that the chances of a storm with a particular magnitude occurring in any one year are 1 in 5. Due to the relatively high frequency of recurrence and the existing condition of MD 198 at the Patuxent River crossing, flooding has been and continues to be a major problem in the project area.

To determine the best approach to correcting this problem in connection with the planned improvements to MD 198 a Flood Study was initiated by the Maryland State Highway Administration. The objective of this study was to establish relationships between flows on the Patuxent River, maximum stages (height) they will reach, and the areas flooded in the immediate vicinity of the facility and to evaluate the impacts of alternatives for crossing the Patuxent River in connection with the proposed dualization of the facility. In addition, the alternatives investigated should tend to minimize flooding at the highway and to prevent any additional damages caused by flooding within the river's flood plain both upstream and downstream. The basic hydraulic data input for this study was taken from the Corps of Engineers Report, February 1975, on Flood Studies of the Patuxent River and Tributaries, Maryland, Section A - Laurel Flood Control Study.

The following alternatives were investigated:

1. Build the new westbound structure the same length as the existing bridge,

2. Extend the existing bridge to accommodate a twenty-five (25) year storm (9,200 c.f.s.) and construct the westbound roadway to the same hydraulic capacity and length,

3. Extend the existing bridge to accommodate a fifty (50) year storm (14,600 c.f.s.) and construct the westbound roadway to the same hydraulic capacity and length,

4. Extend the existing bridge to accommodate a one-hundred year storm (21,800 c.f.s.) and construct the westbound roadway to the same hydraulic capacity and length.

Based upon the initial analysis, it was determined that three design alternatives were feasible. These are as follows:

1. Build the new structure to the same length as the existing bridge,

2. Extend the old bridge opening to approximately 300' in length and build the new bridge to the same specifications in addition to raising the roadway east of the Patuxent River Bridge to an elevation of 135.00 feet.

3. Extend the old bridge opening to approximately 350' in length and build the new bridge to the same specifications in addition to raising the roadway east of the Patuxent River Bridge to an elevation of 135.00 feet.

These alternatives were evaluated in terms of the impacts of flooding on the highway facility and in terms of the impact of the facility on contributing to flooding conditions upstream and downstream of the project.

The results of the study showed that lengthening the bridge on MD 198 to 300 feet or 350 feet without raising the approach roadway will not significantly help the present flooding problem. Since the elevation of the existing bridge is 142', the flood water will crest over the roadway whose lowest point in the flood plain is 133', instead of going under the bridge. The study does show that by raising the westbound approach roadway elevation to 135', more water is forced to go through the bridge opening by raising the headwater elevation. By raising both the approach roadway at the low point and lengthening the bridge opening, a significantly larger quality of water is forced to pass under the bridge.

The study indicates that under the no-build alternative flooding of MD 198 will continue to occur during storms with a frequency between 5 to 10 years or greater. By raising the westbound approach roadway east of the Patuxent River Bridge to an elevation of 135' and extending the existing bridge opening 300', the MD 198 facility will not be subject to flooding during a 25 year storm (9,200 c.f.s.) or less. Raising the roadway and forcing the water through the bridge opening will not change the limits of the flood plain upstream or downstream, nor will it increase or decrease the backwater or the amount of water flowing past MD 198 for any storm. For a storm of 50 year frequency, flood waters will go across MD 198 east of the Patuxent River Bridge at a depth of approximately one (1) foot and for a 100 year frequency to a depth of two and three tenths (2.3) feet. This flooding situation will thus occur under the present conditions and for each of the alternatives proposed. Although the fifty and one hundred year storms would crest over the roadway, they would be much less damaging and would take place for a shorter period of time than occurs presently.

Based upon the above hydraulic study, the proposal to build a new bridge with an opening of 300' and modify the existing bridge to the same specifications with the westbound approach roadway to an elevation of 135', appears to provide the best alternative and will not alter the flood plain nor will it contribute to flooding upstream and downstream. It would also provide an improvement to the existing flooding problems on MD 198 and provide protection for the 25 year storm.

Since there will continue to be flooding for storms exceeding the 25 year design storm, the bridges and appraoches will be flood proofed for the 100 year flood and the area will be posted for flooding. This will help to reduce any damages that might occur during those storm events exceeding the design storm. By improving the existing facility, the disruption and re-routing of traffic due to the closing of MD 198 during times of flooding caused by minor storm events, could be avoided.

Impact on Natural, Ecologic, Cultural and Scenic Resources

The proposed project will not have a significant impact on the area's natural ecology due to the urbanized character of the Greater Laurel Area. Some natural vegetation will be removed within the R-O-W and some grading will be required during construction. A sediment control plan will be prepared and incorporated into the project. Stormwater management techniques approved by DNR will be used to protect water resources in the project area.

The scenic and ecological value of the Patuxent River has been considered in locating the new bridge crossing. The Maryland Department of Natural Resources has been contacted concerning this project and has indicated that the non-tidal wetlands upriver from the project area of a limited nature and value. The more extensive wetlands downriver have substantially higher wildlife values. The primary values attributable to the wetlands at the proposed bridge crossing are sediment entrapment, ground water recharge, and flood buffering. The most significant wetland area of impact concerning this project has been identified as those east of the river bed.

The existing City of Laurel Landfill and commercial expansion adjacent to MD 198 have adversely impacted on the adjoining wetlands and flood plain. Considering the present problem associated with the heavy use of the existing two lane bridge, there would be considerable public benefit by providing an additional bridge crossing. The Department of Natural Resources has indicated that this bridge structure could be constructed without substantial adverse impact on the adjoining wetlands according to the following recommendations:

1. Minimize or eliminate the median strip.

2. Meet, or preferably exceed, the flow space provided by the existing bridge.

3. Construct the new bridge immediately upriver from the existing bridge.

By incorporating the above recommendations into the project design impact to the wetlands in the project area will be minimized. Adequate bridge design and construction safeguards will be taken to minimize the impacts of the Patuxent River Bridge and flood plain crossing. Wetland habitat to be lost due to construction will be minimal while the most valuable wetlands to the south of the proposed action will remain untouched. Approximately five (5) acres of wetlands will be lost due to fill necessary for the approach roadways. The exact acreage to be lost will be minimized through bridge and approach design, and further consultation with the Maryland Department of Natural Resources. It has

been determined that due to the existing landfill and commercial expansion in the river's flood plain and wetland areas, the proposed action will not have an adverse impact on the functioning of the untouched wetland areas.

The U.S. Army Corps of Engineers has been contacted concerning this project. The Draft Negative Declaration was submitted to the Corps for their review and comment, however, no comments were received. The Coast Guard also has an interest in the project due to the bridge crossing. There are no anticipated problems in obtaining the necessary Coast Guard permits due to the fact that 1) the existing vertical clearance will be maintained in both the existing and proposed structure and 2) the length of both existing and new structures will be designed to maintain existing river flows and improve existing flooding problems. The Coast Guard and Corps of Engineers will be contacted during project design to secure the necessary permits for this project.

Concern for the preservation and conservation of wetlands has been an integral part of the planning carried out for the proposed project. Based on Executive Order 11990 projects involving federal funding must demonstrate that if wetlands are involved, an evaluation of relevant wetland factors must be conducted as part of the environmental assessment. It is the finding of this evaluation that 1) there is no practicable alternative to such construction, and 2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. The alternatives investigated are presented in this section and Section IV Alternatives.

The increased flow through the proposed bridge structures will be accommodated by the extensive wetland areas and wide flood plain to the south of MD 198. Although the structures will be allowing for an increased flow, the total river flow will remain the same. The natural flood buffering function of the wetlands will continue to act to slow the river's flow and store the water within the flood plain area. The increased flow through the structures will have a minimal affect on erosion due to the low lying topography of the area. Delineation of the area to the south as open space and the prevention of flood plain encroachment will further minimize this impact. Total peak flows will be well below those previously encountered under natural conditions and before the use of the upstream reservoirs for flood control purposes.

No rare or endangered species of flora and fauna have been identified in the project area. No historic, archaeological, or cultural sites of national, state, or local significane exist within the area which would be adversely affected.

Since the proposed improvements to MD 198 involves the creation of a four lane divided highway within a partially reserved right-of-way adjacent to the existing roadway, there will be no significant impact upon the cultural resources within the project area. The improvement is consistent with local land use plans and will provide for increased safety and efficiency in the use of the facility. No relocations of residential, commerical, or industrial uses are anticipated due to the project.

Based upon previous cases where a dual highway has been constructed, the property values in the immediate project corridor have a strong tendency to increase and thereby generate more income to the local jurisdictions in terms of property taxes. This would tend to have a positive economic impact by improving existing conditions in this project corridor.

The air and noise impacts affecting the cultural resources in the project area have previously been described.

IV. ALTERNATIVES

The choice of alternative locations for the dualization of MD 198 was governed by a number of considerations: (1) the additional roadway should connect the existing MD 198 in Laurel with the existing interchange at the Baltimore/Washington Parkway, (2) the additional roadway should reduce the congestion on the existing roadway by increasing capacity or providing an alternative route, (3) major impacts to the natural and man-made environments should be avoided, (4) the partially reserved right-of-way along existing MD 198 should be utilized to the greatest extent practicable, and (5) cost of the facility was to be considered.

Among the alternatives first considered was the creation of a new roadway on a new location. Several corridors north and south of existing MD 198 were examined for potential alignments. Alignments south of MD 198 were eliminated as feasible alternatives due to the presence of Maryland City, which would require extensive relocation of residents, and the extensive valuable wetlands that would have to be crossed and the Laurel Pines Country Club and Brock Bridge Park as recreational areas.

North of MD 198, a new alignment from (the B/W Parkway to U.S. Route 1) MD 198 interchange would be possible, but would not meet the above stated criteria. Any alignment to the north would have to avoid the Laurel Race Track complex, thereby forcing the alignment further to the north where it would intersect U.S. Route 1 north of Laurel. The new alignment to the north would not be required to cross the Patuxent River, but would be required to cross the B&O right-of-way. Approximately 36 acres would be required for the roadway right-of-way, some of which would be improved properties.

The chief disadvantage of an alignment to the north would be its inability to connect with existing MD 198 in Laurel. A new roadway on a new location would cause considerable misdirection of traffic while not discouraging the use of existing MD 198 as the most direct connection from Laurel to the Baltimore/Washington Parkway. In addition, the new roadway would introduce additional air pollutants and increase noise levels in the area.

As a result of a new location not being a feasible alternative, several other alternatives were considered. Alternative I considers the rehabilitation of the existing MD198 roadway, Alternative II considers the addition of a new two lane roadway adjacent to the existing MD 198 to create a four lane divided facility and Alternative III considers not altering the present situation (no-build). For a comparison of the Alternatives see Table VI.

Alternative I - Rehabilitation

Existing MD 198 is a four lane undivided highway which was created when the shoulders of MD 602 were temporarily paved in 1961 and again in 1969. This alternative would upgrade the two temporary lanes to permanent lanes without changing the existing classification, four lane undivided highway, of the facility. This would be accomplished by removing the substandard lanes, providing a suitable base course and repaving to provide the original four lanes.

If the existing facility were to be rehabilitated within the paved area only, the highway would continue to have the unsafe design features that are inherent in the existing undivided four lane highway. MD 198 has no median or median barrier to divide opposing roadways; also, the existing highway has no storage lanes to protect motorists waiting to execute a left turn.

In addition, maintaining the existing roadway configuration will not provide additional capacity needed for the anticipated increase in traffic volumes. Not providing additional capacity will create slower moving traffic, as more vehicles compete for the same space, which will create a short term increase in air pollutants and noise levels generated.

Rehabilitation of the roadway would not include the addition of a bridge structure over the Patuxent River. The condition of forcing four lanes of traffic to use a two lane bridge would be maintained.

The advantages to be derived from this action would be a low cost as a result of no additional right-of-way being required, the connection between Laurel and the Baltimore/Washington Parkway being maintained.

Alternative II - The Addition of a New Two Lane Roadway

This alternative considers the addition of a new two lane roadway along the existing MD 198 to form a four lane divided highway. The new two lanes would be located in the partially reserved right-of-way adjacent to existing MD 198 which Prince George's and Anne Arundel Counties have reserved for the MD 198 dualization. The parallel two lane roadway would be twenty-four feet wide and would be separated by a variable median with a minimum width of fifty feet.

The new roadway would be located south of existing MD 198 from the B/W Parkway to Whiskey Bottom Road, where the existing roadway would be abandoned and four new lanes constructed to Old Line Road. The new roadway would then be added to the north of the existing roadway to the Patuxent River, where an additional two lane bridge structure will carry it across the river. West of the Patuxent River between the entrance to the Laurel Plaza Shopping Center and MD 197, the existing roadway would again be abandoned and two new roadways constructed on either side of it. West of MD 197, the existing roadway will be used for the eastbound and the new roadway will be used as the westbound. A new two lane structure over the B&O Railroad will be constructed.

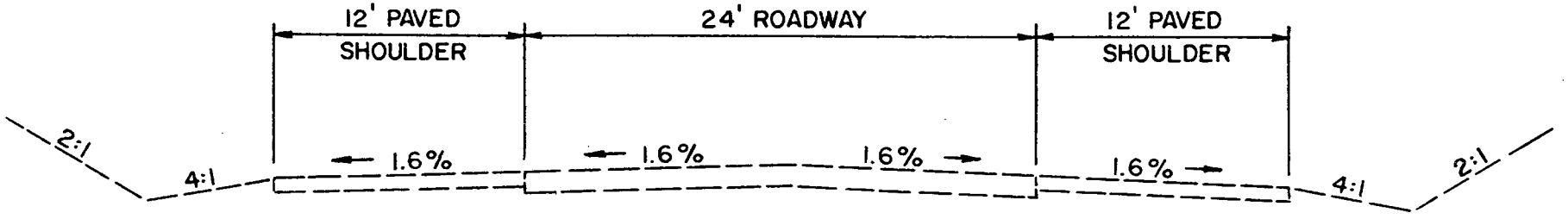
All intersections with Red Clay Road, Whiskey Bottom Road, Brock Bridge Road, Laurel Race Track Road, Old Line Road, Old Annapolis Road and Portland Road and MD 197 will be at-grade. Storage and turn lanes will be provided at all major intersections. In addition, an emergency cross-over will be provided for the Maryland City Firehouse on the north side of MD 198, 800 feet west of the intersection with Whiskey Bottom Road. All commercial and residential entrances along existing MD 198 will be maintained on the dualized MD 198.

TABLE V

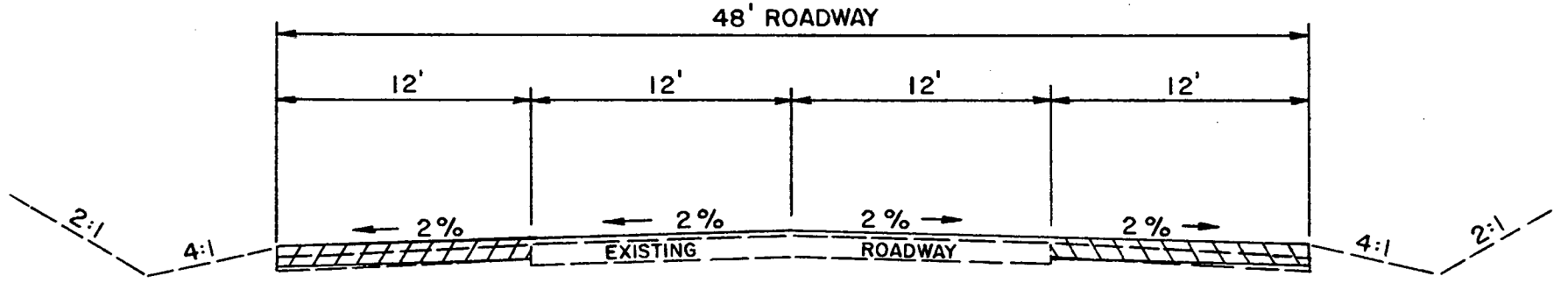
COMPARISON OF ALTERNATIVES

ALTERNATIVE	CONNECT WITH LAUREL AND B/W PARKWAY	REDUCE CONGESTION & ADD CAPACITY	COST ESTIMATED ($000)	USE OF RESERVED R-O-W	ACRES REQUIRED	NUMBER OF STRUCTURES EXCEEDING DESIGN NOISE LEVELS	AIR QUALITY STANDARDS EXCEEDED	NEW RIVER CROSSING	RELO-CATION REQUIRE
I REHABILI-TATION*	YES	NO	1,152	NO	0	4	NO	0	0
II NEW TWO LANE ROADWAY (DUALIZATION) **	YES	YES	11,950	YES	39	8	NO	1	0
III NO-BUILD	YES	NO	--	NO	0	4	NO	0	0

* - includes bridge repairs
** - includes bridge repairs and new bridge construction



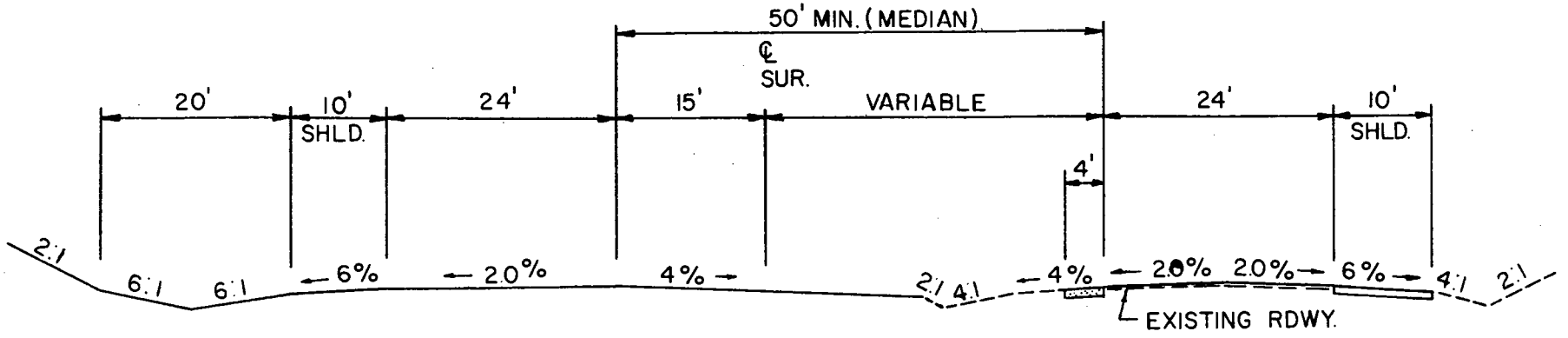
EXISTING SECTION
NO BUILD



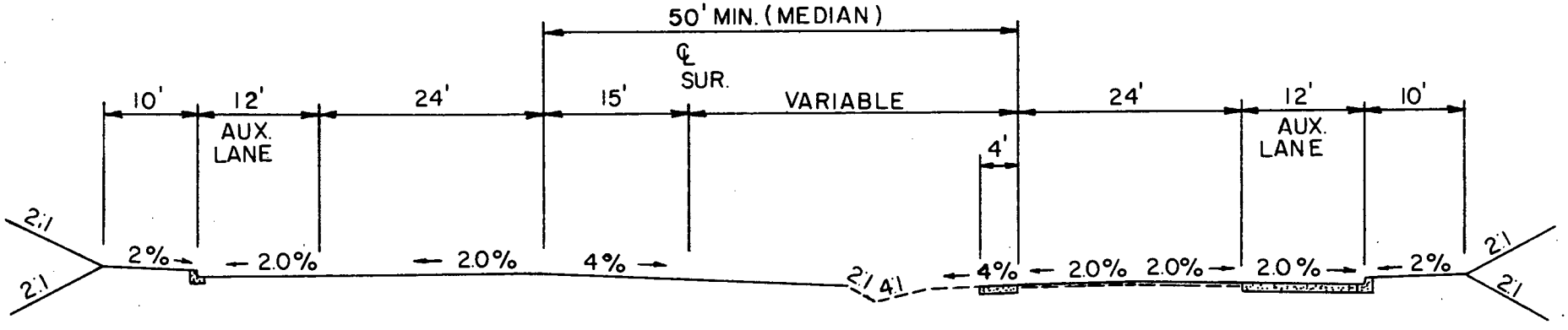
EXISTING SECTION TO BE RESURFACED
ALTERNATIVE I

TYPICAL HIGHWAY CROSS SECTIONS

Figure VIII



OPEN SECTION



CLOSED SECTION

TYPICAL PROPOSED HWY. CROSS SECTIONS

ALTERNATIVE II

Figure IX

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The new roadway would meet all of the stated criteria by utilizing the right-of-way which has been reserved. Utilizing the partially reserved right-of-way would provide a direct connection between MD 198 in Laurel and the B/W Parkway. In addition, the new four lane configuration would increase the existing capacity and avoid major impacts by not requiring relocation of existing residential or commercial establishments.

The disadvantages of this alternative are the substantial cost involved and the construction of a new bridge structure across the Patuxent River and the B&O Railroad.

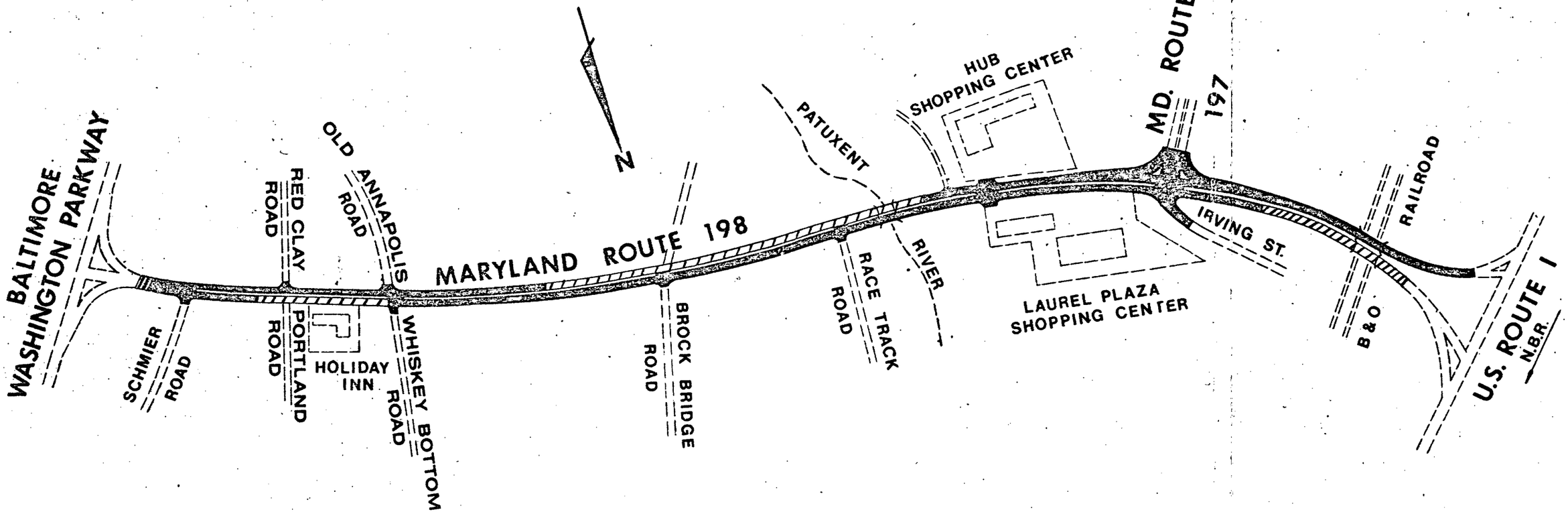
Patuxent River Bridge Alternatives

In conjunction with the construction of a new two lane roadway, a new bridge crossing of the Patuxent River will be required. The Maryland Department of Natural Resources has suggested that a new bridge could be constructed without adversely impacting the adjoining wetlands if the median strip were minimized or eliminated, the water flow space provided by the existing bridge were met or exceeded and the new bridge constructed immediately upriver from the existing bridge. In considering these suggestions, three alternative bridge designs have been developed taking into consideration the location of the new roadway, the hydraulic requirements, the flood plain and the existing bridge structure. The three alternative designs are: (a) build a second roadway structure adjacent to the existing bridge and to the same hydraulic capacity as the existing bridge; (b) modify the existing structure and approaches to accommodate a 25 year storm and construct the second roadway to the same hydraulic capacity and, (c) modify the existing structure and approaches to accommodate a 50 year storm and construct the second roadway bridge to the same hydraulic capacity.

Alternative (A) - The existing structure over the Patuxent River is capable of passing 7,600 c.f.s. when the backwater is at elevation 136. Also, when the water surface elevation reaches 136', water will flow over MD 198 in the vicinity of Race Track Road, since the elevation at that point is approximately 133'.

Neither bridge, at current capacity, will be capable of passing greater than a five year storm; thereby the flooding of the approach roads would continue. Raising the grade of the approach, while maintaining the same hydraulic opening, will increase flooding upstream in proportion to the increase in the roadway elevation. Increasing the elevation of the approach roadway, will cause the roadway to act as a dam.

Alternative (B) - Should the hydraulic opening in both bridges be designed for a storm recurrence interval of 25 years, 9,200 c.f.s. of water could be passed. Passing a 25 year storm would require that both bridge structures be 300 feet in length and western approach roadway raised to an elevation of 135'. With these improvements, MD 198 would be capable of passing all storms with 25 year recurrence interval. By allowing this design the upstream and downstream flood plain would not be affected or changed. This alternative meets the State's 25 year storm design standard. The elevation of the approach roadways will require additional fill to be added to that already existing in the flood plain.



EXISTING ROADWAY TO REMAIN

PROPOSED ROADWAY

FIGURE X - ALTERNATE II

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

MARYLAND ROUTE 198 FROM BALTIMORE WASHINGTON PARKWAY TO U.S. ROUTE NO. 1

The approach roadways and bridges will be flood proofed and flood hazard warning signal posted. The flood proofing would provide slope protection and bridge support protection based on 100 year storm.

In order to construct the new bridges it may become necessary to temporarily place some clean rock fill in the flood plain in order to gain access to the pier sites. The anticipated construction for the piers would be such that any disturbance to the area would be minimal.

Alternative (C) - The design of the bridge opening to accommodate a 50 year storm (14,600 c.f.s.) or 100 year storm (21,800 c.f.s.) would require a bridge of greater length and approach roads at a higher elevation. A bridge design to accommodate the 50 or 100 year storm would require a viaduct type structure to span the river and flood plain. This would involve considerable construction costs. With the state's storm design standard being the 25 year storm, it appears that it is both unrealistic and uneconomical to design for the 50 and 100 year storm. To achieve the passage of the 50 or 100 year flow would require considerable work with unknown benefits or consequences due to the topography and existing environmental conditions.

Alternative III - No-Build

This alternative considers not taking any action, in effect maintaining the status quo of the existing roadway. Taking no action will allow the traffic volumes to increase until the roadway reaches its capacity in three years. When a facility is operating at capacity, it becomes over-burdened with more vehicles than it can accommodate during peak flows or adverse weather conditions. Along with capacity traffic comes increased accident ratios and greatly reduced operating speeds. A percent of the capacity traffic will seek alternative routes, where the alternative routes are either now operating at capacity or would become over-burdened with the additional vehicles. In addition, traffic seeking to enter and exit from the roadway from the commercial and residential establishments will have increased difficulty.

In addition, the existing two lane bridge over the Patuxent River will continue to increase the restriction on the traffic flow by forcing four lanes of traffic onto a two lane bridge, thereby causing backups and delays in each direction.

While the no-build alternative will meet most of the stated criteria, it fails to provide the additional capacity need for the anticipated growth in traffic volumes.

Based on the evaluation performed and comments received for the proposed project, Alternate II has been selected for further design work. Alternative B for the Patuxent River Bridge will be incorporated into Alternative II.

V. COMMENTS AND COORDINATION

The project planning phase of this project has been coordinated with interested local, county, state and federal agencies. Relevant documentation describing this coordination is included in this section. Further documentation describing coordination for this project is on file with the Maryland Department of Transportation, State Highway Administration, 300 West Preston Street, Baltimore, Maryland 21201.

In order to inform the public and solicit their comments concerning this project two public meetings were held. A combined location and design informational meeting was held on November 29, 1977 to inform the public on the details of the project. A combined location and design public hearing was held on December 15, 1977 to review the proposed project and to officially record public comments. Both meetings were held in the multi-purpose room of the Laurel Senior High School in Laurel, Maryland.

The hearing was attended by business and private citizens of which eight (8) individuals made presentations. Two written comments were received concerning the project. All public hearing and written comments favored the proposed dualization of Maryland 198. Although the project was favored, several questions were raised concerning various aspects of the project. These questions are summarized below with responses.

1. Why is the Baltimore/Washington Parkway interchange not included as part of this project?

The entire Baltimore/Washington Parkway is presently under a separate project planning study for complete reconstruction including all of the interchanges. The public hearing for that should be within the next year and it is possible that construction of both projects may take place about the same time. In addition, by including the interchanges as part of the B/W Parkway reconstruction, the Department is able to receive 100% Federal participation, while reconstruction of Maryland 198 is eligible for only 70% Federal participation.

2. When will the project be constructed?

The project is presently in the Department's Five Year Program for design and some right-of-way acquisition. Construction does not presently appear in the program at this time. Should the project be programmed for construction it would be approximately four years at the earliest before actual construction could begin.

3. Will drainage be provided for the swampy area noth of the present westbound roadway from Race Track Road to the river?

The detailed hydraulic design work for the project has not begun at this time. The need for drainage beneath the highway will be considered. However, a flood plain and wetlands evaluation has been made and the Department will incorporate measures into the project design to minimize infringement on the flood plain and to minimize alteration to wetlands as explained in the body of

the negative declaration. Prior alterations that have occurred in the Patuxent River flood plain outside the MD 198 right-of-way are not within the jurisdiction of the State Highway Administration. However, the present project will be designed to minimize the periodic flooding problem currently experienced on Maryland 198.

4. Will the project allow for the safe travel of pedestrians and bicyclists between Maryland City and the City of Laurel?

The original design scheme did not provide for a paved area behind the curb line for pedestrian and bicycle travel. However, as indicated on the preliminary design maps available at the public hearing, a wide paved area behind the curb line has been incorporated in to the project for safe pedestrian and bicycle travel.

5. Why is a fifty-foot median necessary?

The median width is necessary for several reasons, including a safety factor for clearances and aid in turning movements and making U-turns. The median will allow for the provision of additional lanes mainly for left turn storage lanes which presently do not exist, thus adding to the roadway's capacity. Existing intersections will be maintained with cross-overs provided for U-turns.

The Maryland Historical Trust
Shaw House, 21 State Circle, Annapolis, Maryland 21401
301: 267-1212 or 301: 267-1438

October 22, 1975

Mr. Paul R. Farragut, Manager
Environmental Group
Division of Systems Planning
and Development
State Highway Administration
P.O. Box 8755
Baltimore Washington International
Airport
Baltimore, Maryland 21240

Dear Mr. Farragut:

Thank you for your letter of September 15, 1975, inquiring about historic sites near Md. Rt. 198 from U.S. Rt. 1 to the Baltimore-Washington Parkway.

Recent survey information from both Prince Georges and Anne Arundel Counties indicates that there are no historic buildings or sites near the proposed dualization of Md. Rt. 198. This is the portion shown in red on the attached map, from U.S. Rt. 1 to the Baltimore-Washington Parkway.

If there is a possibility of work on this route west of Rt. 1 (through Laurel), please let us know.

Sincerely,

George J. Andreae

George J. Andreae
Architectural Historian

GJA:sh
Enclosure
cc: Mr. Michael Dwyer

State of Maryland

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
ENVIRONMENTAL HEALTH ADMINISTRATION
201 WEST PRESTON STREET
BALTIMORE 21201
PHONE • 301 383-3245

[illegible], M.D., M.P.H.
SECRETARY

DONALD H. HOWEN
DIRECTOR

October 29, 1975

Mr. Charles R. Anderson, Chief
Bureau of Landscape Architecture
State Highway Administration
Poppa and Falls Roads
Brooklandville, Maryland 21022

Dear Mr. Anderson:

RE: Air Quality Analysis for Maryland Route 198 from U.S. Route 1 to Baltimore/Washington Parkway

The Bureau of Air Quality and Noise Control has completed its review of the air quality analysis for the above project and we have the following comments.

The consultant, in preparing this report, calculated emission factors with and without the assumption that the National Capital Transportation Control Plan was in effect. Carbon monoxide concentrations were estimated from both sets of emission factors. This approach was taken because of the uncertainty as to whether certain elements of the Plan would be implemented.

Some of this uncertainty, at least, has been resolved due to the September 19, 1975 decision of the Fourth Circuit U.S. Court of Appeals in State of Maryland vs. EPA and other related cases. The issues were raised with respect to the Metropolitan Baltimore Transportation Control Plan but the results are equally applicable to the National Capital Transportation Control Plan.

The Court set aside as contrary to law the inspection/maintenance program, the vacuum spark advance disconnect retrofit program, the light and heavy duty air/fuel control retrofit programs and the bikeways program. EPA has already withdrawn the mass transit incentive surcharge and oxidation catalyst retrofit program regulations. With the elimination of these elements, the Plan is reduced to some stationary source controls and a transportation package which includes expansion of bus lanes and the bus transit system. In view of these developments, the concentrations which were derived from emission factors which assumed existence of the entire Plan are unrealistic and should be disregarded.

NOV 10 [illegible]

C. R. ANDERSON

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The concentrations which were calculated from the alternate set of emission factors are better but these are still probably low. Since this report was prepared, the EPA has published new emission factors which are based on more recent emission data. The factors also include ambient temperature correction factors. Use of these new emission factors for worst case calculations usually results in significantly higher emissions and, therefore, higher concentrations than were obtained previously.

These considerations mean that the concentrations reported in the analysis are probably underestimated. Any evaluation based on them should recognize this fact.

Thank you for this opportunity to offer our comments.

Sincerely yours,

William K. Bonta, Chief
Division of Program Planning & Evaluation
Bureau of Air Quality and Noise Control

WKB:AMD:pac

cc: Anne Arundel County Health Department
Prince George's County Health Department

Comment: The air quality analysis has been updated using Supplement 5 emission factors in accordance with FHWA guidelines. The revised calculations still indicate that the project will generate emissions below the established standards.

HERBERT M. SACHS
DIRECTOR

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STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES ADMINISTRATION
TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401

September 11, 1975

MEMORANDUM

TO: Paul Farragut, Manager
Environmental Group
Div. of Systems Planning & Development
Md. Department of Transportation

FROM: Harold M. Cassell
Biologist
Wetlands Permit Section

SUBJ: Maryland 198 - Stream Crossing at Patuxent River

The enclosed wetland inventory data, especially that for Prince George's Wetland Unit No. 1, is applicable and reasonably accurate in describing non-tidal wetlands at the project site. There are only limited wetlands upriver from the project area. Prince George's Wetland Unit No. 2 and Anne Arundel Wetland Unit No. 4, which lie downriver, have substantially higher wildlife values.

The primary values attributable to wetlands at the proposed bridge crossing are sediment entrapment, groundwater recharge, and flood buffering. The most significant wetland area of impact would be east of the riverbed. Cattails, sedges, cutgrass, smartweeds and pondweeds are the understory with black willow and sweet gum predominating in the overstory.

Adjacent landfills and commercial expansion have adversely impacted on the adjoining wetlands and floodplain. With the heavy use of the existing two lane roadway, considerable public benefit would be provided by an additional bridge crossing. This can be adequately constructed without substantial adverse impact on adjoining wetlands according to the following recommendations:

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1) Minimize or eliminate the median strip.

2) Meet, or preferably exceed, the flow space provided by the existing bridge.

3) Construct the new bridge immediately upriver from the existing bridge.

HMC:mw
Encls: Cited Wetland Inventory Data

HERBERT M. SACHS
DIRECTOR

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DEPARTMENT OF NATURAL RESOURCES
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TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401

October 27, 1977

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning
State Highway Administration
P.O. Box 717
300 West Preston Street
Baltimore, Maryland 21203

Re: Contract No. AA 587-006-574
P 762-006-371; F.A.P. No. F 924-1(1
Md. Rte. 198 from U.S. Rte. 1
to the Balto/Wash Prkwy.
in AA & PG Co's., Md.

Dear Mr. Camponeschi:

We offer the following comments on the Draft Negative Declaration for the above referenced project:

1. Question 2 of the EAF concerning the requirements of a waterway construction was answered incorrectly. This project will require a permit from WRA since there will be a new crossing of the Patuxent River. Question 14 of this statement should also be amended to reflect the same.

2. Of the three (3) crossing schemes analyzed by the Negative Declaration, we would not discourage application for the required waterway construction permit for the alternative selected.

Thank you for the alternative to comment.

Very truly yours,

Michael A. Ports

Michael A. Ports, Chief
Watershed Permit Section

MAP/CKC:jb

Appendix A

Assessment of Significant Environmental Effects

	Yes	No	Comments Attached
A. Land Use Considerations			
1. Will the action be within the 100 year flood plain?	X		II-14
2. Will the action require a permit for construction or alteration within the 50 year flood plain?	X		III-14
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?	X		III-13
4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?		X	
5. Will the action occur on slopes exceeding 15%?		X	
6. Will the action require a grading plan or a sediment control permit?	X		III-13
7. Will the action require a mining permit for deep or surface mining?		X	
8. Will the action require a permit for drilling a gas or oil well?		X	
9. Will the action require a permit for airport construction?		X	
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?		X	
11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland?	X		II-16
12. Will the action affect the use of any natural or man-made features that are unique to the county, state or nation?		X	
13. Will the action affect the use of an archaeological or historical site or structure?		X	

	Yes	No	Comments Attached
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?	X		III-10
15. Will the action require the construction, alteration or removal of a dam, reservoir or waterway obstruction?	X		III-10
16. Will the action change the overland flow of storm water or reduce the absorption capacity of the ground?	X		III-10
17. Will the action require a permit for the drilling of a water well?		X	
18. Will the action require a permit for water appropriation?		X	
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?		X	
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?		X	
21. Will the action result in any discharge into surface or subsurface water?	X		III-10
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	X		III-10
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X		III-1
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?	X		III-1
25. Will the action generate additional noise which differs in character or level from present conditions?	X		III-3

	Yes	No	Attached
26. Will the action preclude future use of related air space?	X		III-13
27. Will the action generate any radiological, electrical, magnetic, or light influences?		X	
D. Plants and Animals			
28. Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?		X	III-13
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?		X	III-13
30. Will the action require a permit for the use of pesticides, herbicides or other biological, chemical or radiological control agents?		X	
E. Socio-Economic			
31. Will the action result in a preemption or division of properties or impair their economic use?		X	II-18; III-13
32. Will the action cause relocation of activities, structures or result in a change in the population density or distribution?		X	II-18; III-13
33. Will the action alter land values?	X		III-14
34. Will the action affect traffic flow and volume?	X		II-3; IV-1
35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource?		X	
36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?		X	

	Yes	No	Attachments Attached
37. Is the action in accord with federal, state, regional and local comprehensive or functional plans -- including zoning?	X		II-18
38. Will the action affect the employment opportunities for persons in the area?		X	
39. Will the action affect the ability of the area to attract new sources of tax revenue?		X	
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?		X	
41. Will the action affect the ability of the area to attract tourism?		X	
F. Other Considerations			
42. Could the action endanger the public health, safety or welfare?		X	
43. Could the action be eliminated without deleterious effects to the public health, safety, welfare or the natural environment?		X	
44. Will the action be of statewide significance?		X	
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?		X	
46. Will the action require additional power generation or transmission capacity?		X	
G. Conclusion			
47. This agency will develop a complete environmental effects report on the proposed action.		X	Negative Declaration