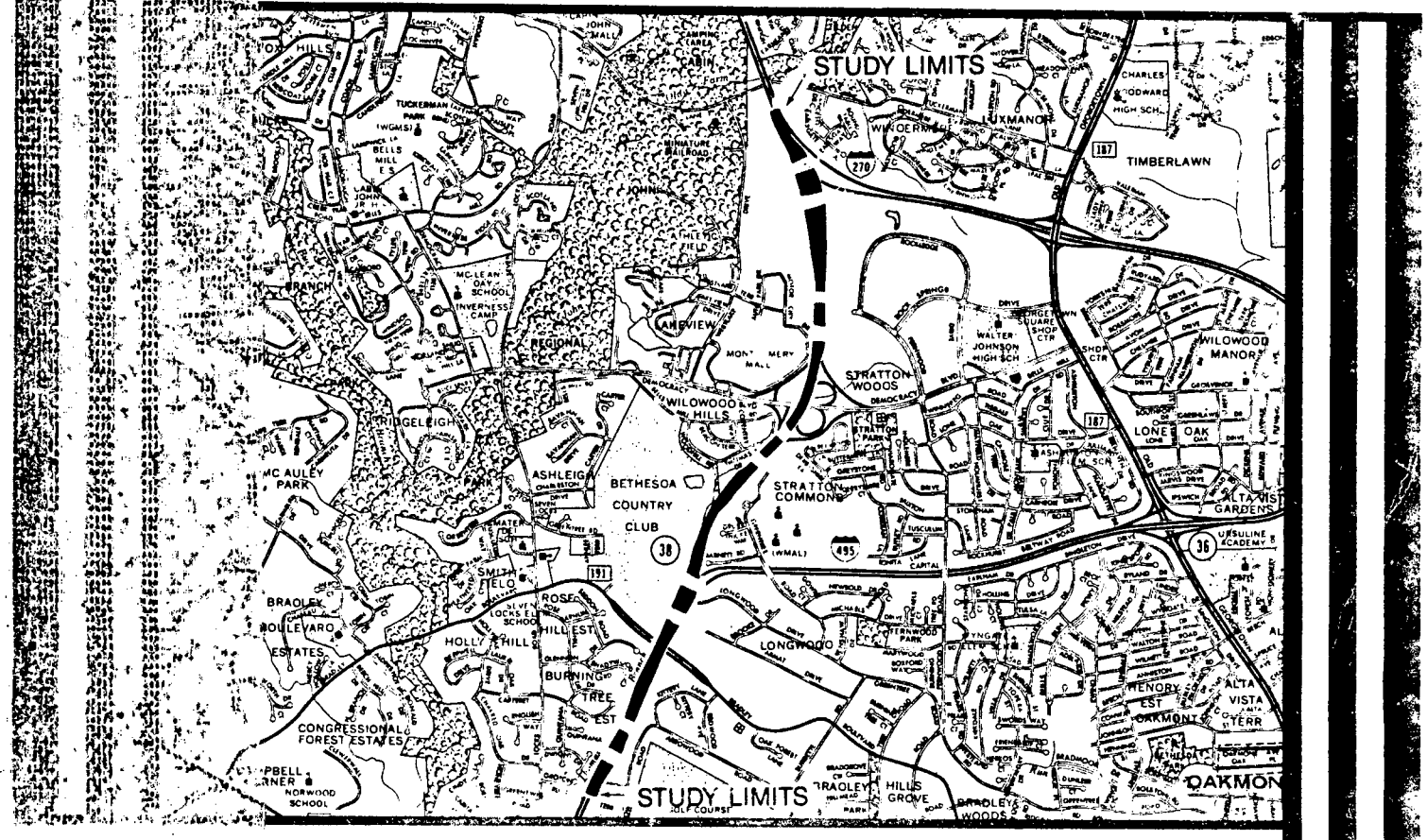
NVIRONMENTAL
SSESSMENT

for

NTRACT NO. M 401-153-372

TERSTATE ROUTE 270 WEST SPUR

FROM THE Y-SPLIT TO INTERSTATE ROUTE 495
CLUDING I-495 TO NORTH OF MARYLAND ROUTE 190
NTGOMERY COUNTY, MARYLAND



PREPARED BY
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

and

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

2

REPORT NUMBER: FHWA MD-EA-87-02-D

FEDERAL HIGHWAY ADMINISTRATION

REGION III

Interstate Route 270
West Spur from the Y-Split to I-495
Including I-495 to North of Maryland Route 190
Montgomery County, Maryland

Administrative Action

ENVIRONMENTAL ASSESSMENT

U.S. Department of Transportation
Federal Highway Administration

and

State of Maryland
Department of Transportation
State Highway Administration

Submitted pursuant to 42 U.S.C. 4332 (s) (C), 23 U.S.C. 128 (a), 49 U.S.C. 303 (c), and CEQ Regulations (40 CFR 1500 et seq.)

HAL KASSOFF
ADMINISTRATOR

8/11/87
Date

by: Neil J. Pedersen
Neil J. Pedersen, Director
Office of Planning and
Preliminary Engineering

8/14/87
Date

by: Emil Elinsky
Federal Highway Administration
Division Administrator

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1. Administrative Action

( ) Environmental Impact Statement
(X) Environmental Assessment
( ) Finding of No Significant Impact
( ) Section 4(f) Evaluation

2. Additional Information

Additional information concerning this project may be obtained by contacting:

Mr. Louis H. Ege, Jr.
Deputy Director
Project Development Division
Room 310
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202
PHONE: (301) 333-1130
HOURS: 8:15 a.m. - 4:15 p.m.

Mr. Edward Terry
District Engineer
Federal Highway Administration
The Rotunda - Suite 220
711 West 40th Street
Baltimore, Maryland 21211
PHONE: (301) 962-4010
HOURS: 7:45 a.m. - 4:15 p.m.

3. Description of Proposed Action

The proposed project consists of widening the west spur of I-270 (between the Y-split and I-495) to six lanes and I-495, between the west spur of I-270 and north of Maryland Route 190 to ten lanes. An additional lane would be constructed in each direction along I-270 and I-495, generally within the median. Some outside widening would be required along I-495, but it would be within the existing right-of-way. The length of the project is approximately 2.4 miles. These improvements would increase capacity, reduce congestion, improve safety, and accommodate traffic volumes projected for the design year 2010.

4. Alternates Description

Two alternates are being studied: Alternate 1 ("No-build") and Alternate 2 (Inside/Outside Widening or "Build"). Alternate 1 consists of routine maintenance and safety improvements to be performed as warranted. Roadway capacity would not increase. With Alternate 2, a 12-foot wide through travel lane and 14-foot wide shoulder would be added for the most part within the median in each direction. Some outside widening would be required at the I-270/I-495 merge and south of Maryland Route 191 (Bradley Boulevard) along northbound I-495 to

maintain desired shoulder widths and allow for a concrete barrier in the median. The existing roadway within the study limits would be resurfaced. One bridge in the study area would be reconstructed to accommodate the additional lanes and full shoulders and to correct substandard geometric design. This could involve the reconstruction of the approach roadways and possibly the realignment of I-495 southbound.

5. Summary of Impacts

The proposed combination inside/outside widening would occur within existing right-of-way. It may be determined during the final design stage that some minor right-of-way is needed to accommodate stormwater management areas; however, no business or residential displacements would be required. No minority, elderly, or handicapped persons would be affected by the proposed improvements.

No historic or archaeological sites on or eligible for the National Register of Historic Places would be affected. Public parks and recreational facilities would likewise not be impacted.

The proposed project is consistent with the Master Plan for the Bethesda-Chevy Chase Planning Area, 1970; the North Bethesda-Garrett Park Planning Area Master Plan, 1970 (amended in 1979); and the Master Plan for the Potomac Subregion, 1980 (amended in 1984).

The proposed widening would not impact the 100-year floodplain of Thomas Branch, which crosses under and flows parallel to I-270. Approximately 0.3 acre of palustrine, forested wetlands associated with this stream would be affected by retaining wall construction and stream relocation in the vicinity of the I-270/I-495 junction. There are no federally listed threatened or endangered plant or animal species in the study area and there would be no significant loss of natural habitat. Sediment and erosion control measures and stormwater management plans, approved by the Department of Natural Resources, would be implemented to minimize water quality impacts.

The State and National Ambient Air Quality Standards for carbon monoxide would not be exceeded under either the Build or No-build Alternates.

The Federal Highway Administration's Noise Abatement Criteria (67 dBA) would be exceeded at all eight noise sensitive areas under both the Build and No-build Alternates in the design year 2010. Determinations of the reasonability of noise mitigation will be discussed in the final environmental document.

A comparison of impacts resulting from both alternates can be found in Table 1 on the following page.

TABLE 1

Comparison of Alternates

Analysis Item	Alternate 1	Alternate 2 Option A	Alternate 2 Option B
Socio-economic Impacts			
1. Residential Displacements	0	0	0
2. Minorities Relocated	0	0	0
3. Business Displacements	0	0	0
4. Total Properties Affected	0	0	0
5. Historic Sites Affected	0	0	0
6. Archaeological Sites Affected	0	0	0
7. Public Recreational Lands Affected	0	0	0
8. Effect on Residential Access	Not Improved	Improved	Improved
9. Consistency with Land Use Plans	No	Yes	Yes
Natural Environment Impacts			
1. Loss of Natural Habitat (woodland acres)	0	0	0
2. Effect on Wildlife Populations	0	0	0
3. Effect on Threatened or Endangered Species	0	0	0
4. Stream Crossings	0	0	0
5. Wetland Areas Affected (acreage)	0	0.3	0
6. 100-year Floodplains Affected (acreage)	0	0	0
7. Prime Farmland Soils Affected (acreage)	0	0	0
8. Air Quality Impacts (sites exceeding S/NAAQS)	0	0	0
9. Noise Sensitive Areas (NSAs exceeding Federal Noise Abatement Criteria or Experiencing a 10 dBA or greater increase)	8	8	8
Costs (1986 dollars in thousands)			
TOTAL	0 (minimal)	$12,400	$17,100

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

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

ENVIRONMENTAL ASSESSMENT FORM

	YES	NO	COMMENTS
A. Land Use Considerations			
1. Will the action be within the 100-year floodplain?	___	X	___
2. Will the action require a permit for construction or alteration within the 50-year floodplain?	___	X	___
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?	___	X	___
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 percent?	___	X	___
6. Will the action require a grading plan or a sediment control permit?	X	___	Section IV-E
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	___

	YES	NO	COMMENTS
12. Will the action affect the use of any natural or manmade 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	___
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	___
15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction?	___	X	___
16. Will the action change the overland flow of stormwater or reduce the absorption capacity of the ground?	X	___	Section IV-E
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 sub-surface water?	X	___	Section IV-E

22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	___	X	_____
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X	___	Section IV-G
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?	___	X	_____
25. Will the action generate additional noise which differs in character or level from present conditions?	X	___	Section IV-F
26. Will the action preclude future use of related air space?	___	X	_____
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	_____
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?	___	X	_____
30. Will the action require a permit for the use of pesticides, herbicides, or other biological, chemical, or radiological control agents?	___	X	_____
E. Socioeconomic			
31. Will the action result in a pre-emption or division of properties or impair their economic use?	___	X	_____

	YES	NO	COMMENTS
32. Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	___	X	___
33. Will the action alter land values?	___	X	___
34. Will the action affect traffic flow and volume?	X	___	Sections II-A,C
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	___
37. Is the action in accord with Federal, State, regional, and local comprehensive or functional plans - including zoning?	X	___	Section IV-C
38. Will the action affect the employment opportunities for persons in the area?	X	___	Sections IV-B,C
39. Will the action affect the ability of the area to attract new sources of tax revenue?	X	___	Section IV-B
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	___

	YES	NO	COMMENTS
43. Could the action be eliminated without deleterious affects to the public health, safety, welfare, or the natural environment?	___	X	Section II-A
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	___
47. This agency will develop a complete environmental effects report on the proposed action.	X	___	See Note Below

Note: This environmental assessment has been prepared in accordance with the National Environmental Policy Act, U.S. Department of Transportation Order 5610.1c, and 23 CFR, Part 771.

I. Description of Proposed Action

A. Project Location

The west spur of Interstate Route 270 (I-270) is one segment of I-270 which extends in a north-south direction from the City of Frederick to northwest of Washington, DC. It and the portion of Interstate Route 495 (I-495) to the south of the I-495/I-270 junction included in this study are situated in southwest Montgomery County (see Figure 1).

B. Project Description

The west spur of I-270 and I-495 serve heavy volumes of local commuter and interstate traffic passing through the region (see Figure 2). The study area is part of one of the fastest growing corridors in Maryland in terms of residential, commercial, and industrial development and has been designated a growth area in Montgomery County area master plans. The project limits extend on I-270 from south of Tuckerman Lane (at the Y-split) to its junction with I-495 and include I-495 between this point and north of Maryland Route 190, a total distance of approximately 2.4 miles.

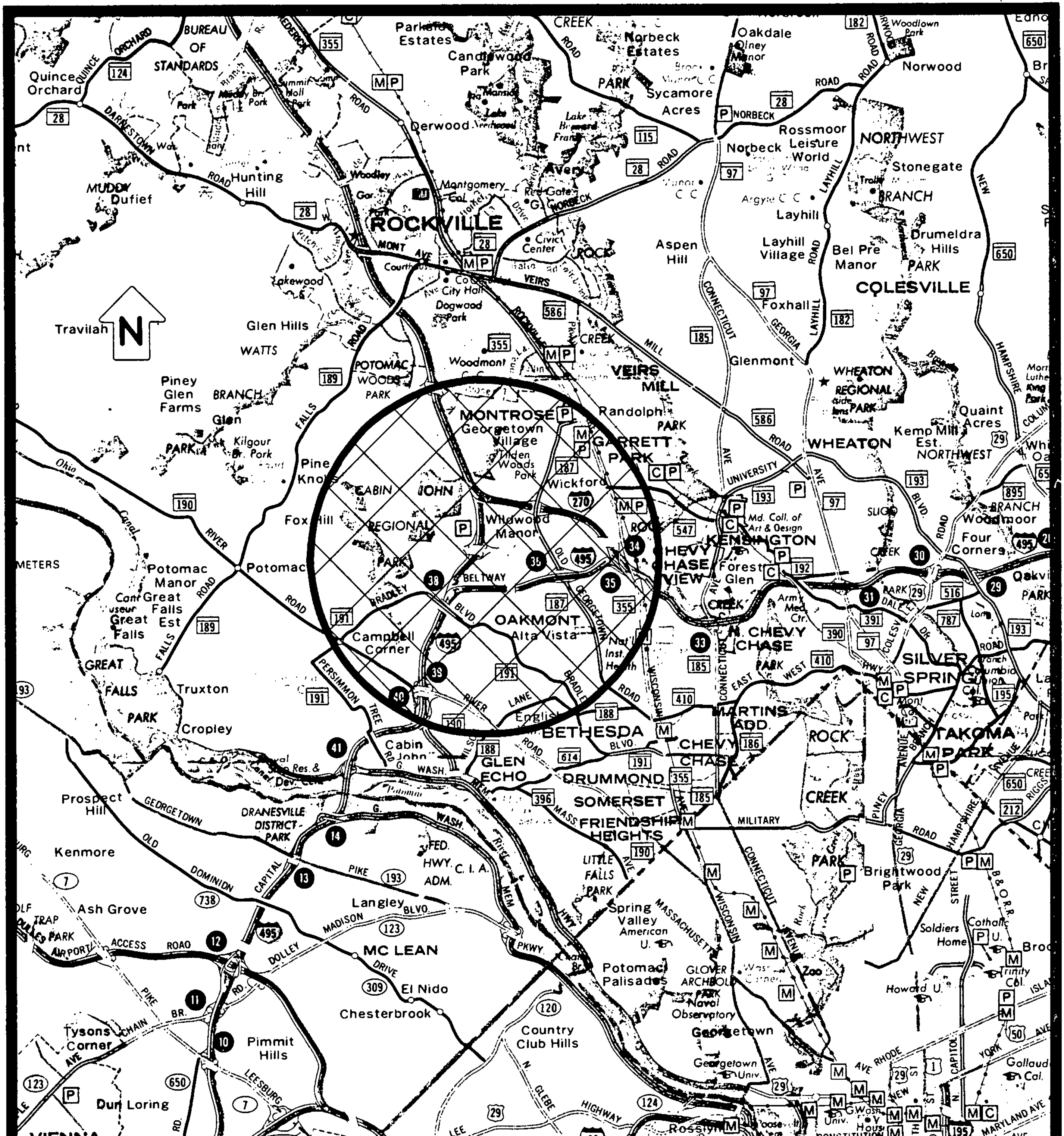
C. Description of Existing Environment

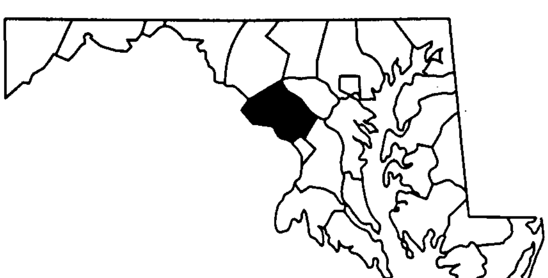
1. Social Environment

a. Population

The study area is situated in Montgomery County, Maryland, northwest of Washington, DC. It includes the southern end of the I-270 corridor and the western portion of I-495. Major business and industrial concentrations, as well as significant amounts of residential development, are located along these corridors.

Montgomery County is Maryland's fourth most populous jurisdiction. According to the 1980 U.S. Census, the county's population increased by nearly 11 percent (522,809 to 579,053 people) in the period from 1970-1980. Estimates by the Department of State Planning in 1985 put the County population at 620,000; an additional increase of 7 percent. The Department of State Planning predicts that Montgomery County's population will grow by nearly 24 percent to 766,000 people between the years 1985 and 2005.





INTERSTATE ROUTE 270 WEST SPUR

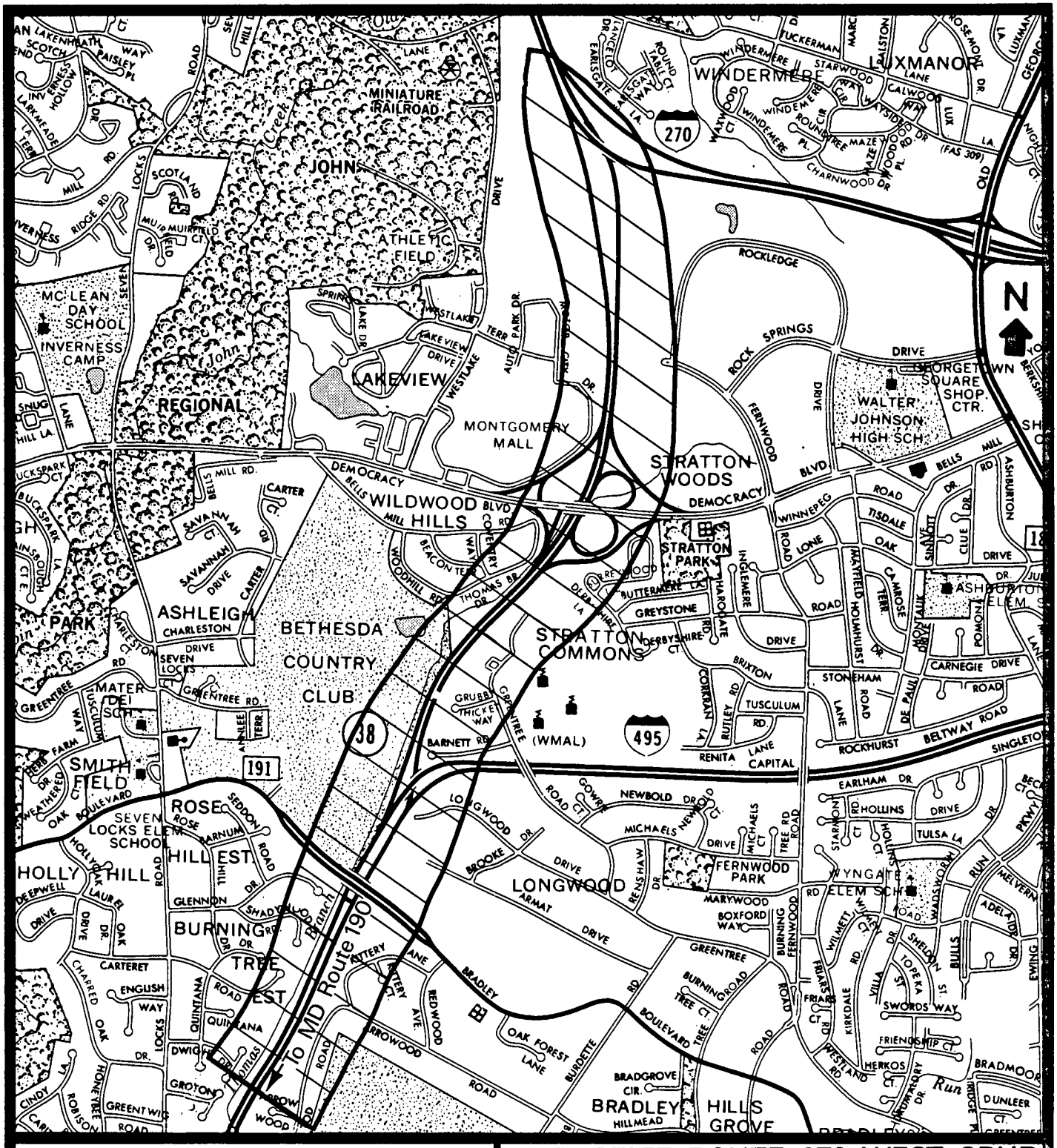
Y-Split to Interstate Route 495

Including I-495 to North of MD. RTE. 190

PROJECT LOCATION

Scale: 0 1 2 3 Miles

FIGURE 1



LEGEND

STUDY AREA CORRIDOR

INTERSTATE ROUTE 270 WEST SPUR

Y-Split to Interstate Route 495
Including I-495 to North of MD. RTE. 190

STUDY AREA

Scale
0 Feet 2000

FIGURE 2

The study area includes portions of Census Tracts 7012.05, 7045.01, 7045.02, 7059.01, and 7060.04* (see Figure 3). Between 1970 and 1980, the total population in the area defined by these census tracts increased over 15 percent and largely due to population growth in the areas west of the I-270 West Spur (Census Tracts 7060.03, 7060.04, and 7060.05). Population in these census tracts increased nearly 58 percent. The other census tracts actually experienced a net decline in their populations due in part to a reduction in household sizes and low housing growth (see Table 2). In 1980, the total population in the study area census tracts numbered 21,658, with the largest proportion and number residing in Census Tract 7012.05.

An analysis of 1980 census data indicates that 92 percent of the population in the five 1980 Census Tracts was white, 2.5 percent was black, 5 percent was of Oriental origin, and 0.5 percent was classified as "other". The largest proportion of minorities (8.7 percent) appears in Census Tract 7045.01. Those age 60 and older comprise nearly 12 percent of the population in the five study area census tracts, with the largest proportion in Census Tract 7060.04 (16 percent). No concentrations of elderly, handicapped, or minority individuals have been identified in the study area.

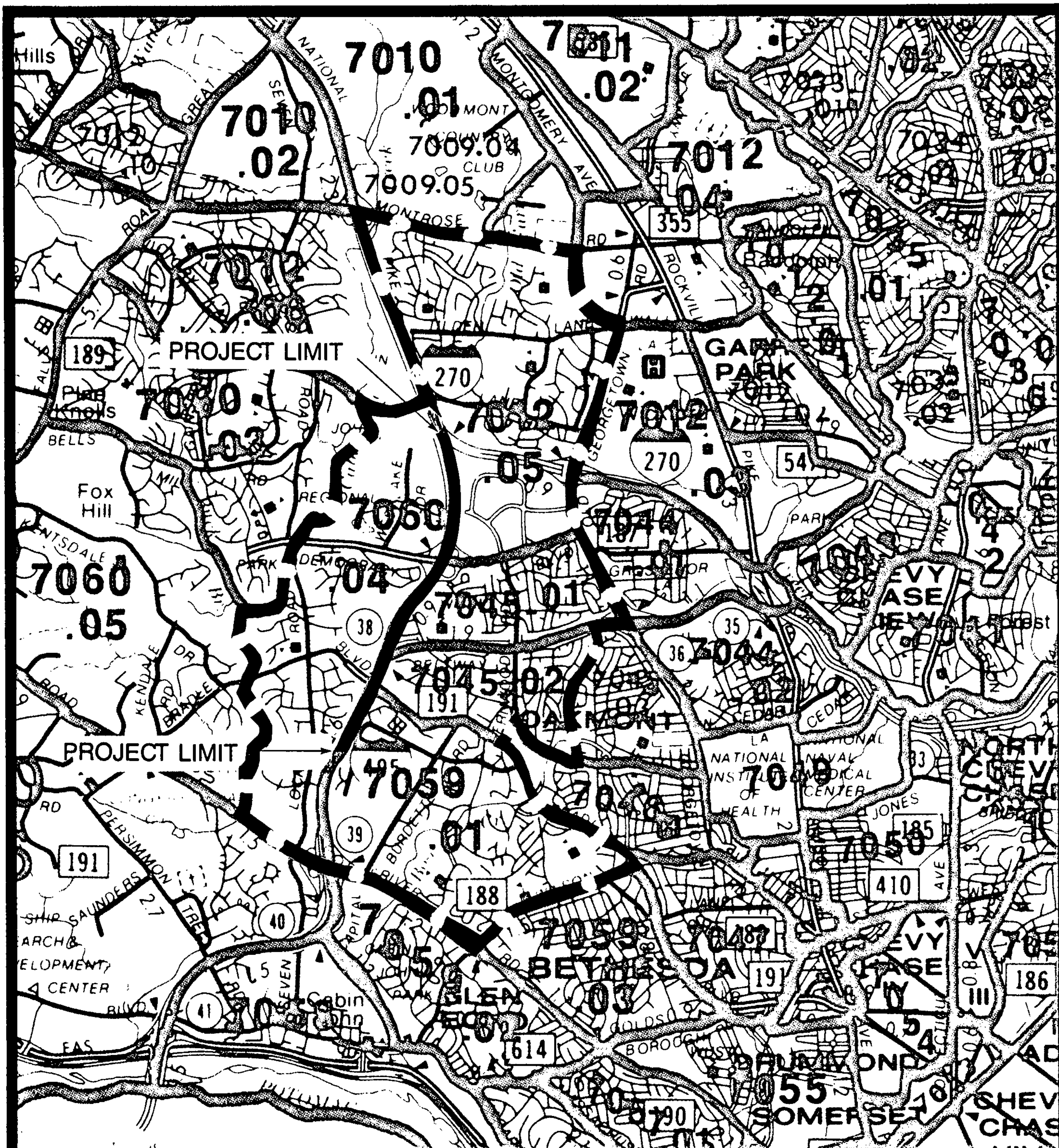
b: Community Facilities and Services (Figure 4)

Contained or provided in the study area are the following services and facilities:

Schools -
- Mater Dei
- Seven Locks Elementary
- McLean, Inverness Campus
- Wyngate Elementary
- Walter Johnson High
- Ashburton Elementary

Churches and Synagogues-
- Sts. Peter and Paul Antiochian Orthodox Christian
- Bethesda United Church of Christ
- Scotland AME Zion
- Bethesda Jewish Congregation
- St. George Greek Orthodox

*For accurate population comparisons between 1970 and 1980, Census Tract 7060.04 must be combined with Census Tracts 7060.03 and 7060.05 to comprise an area equivalent to 1970 Census Tract 7060.01. This tract was subdivided after 1970.



INTERSTATE ROUTE 270 WEST SPUR

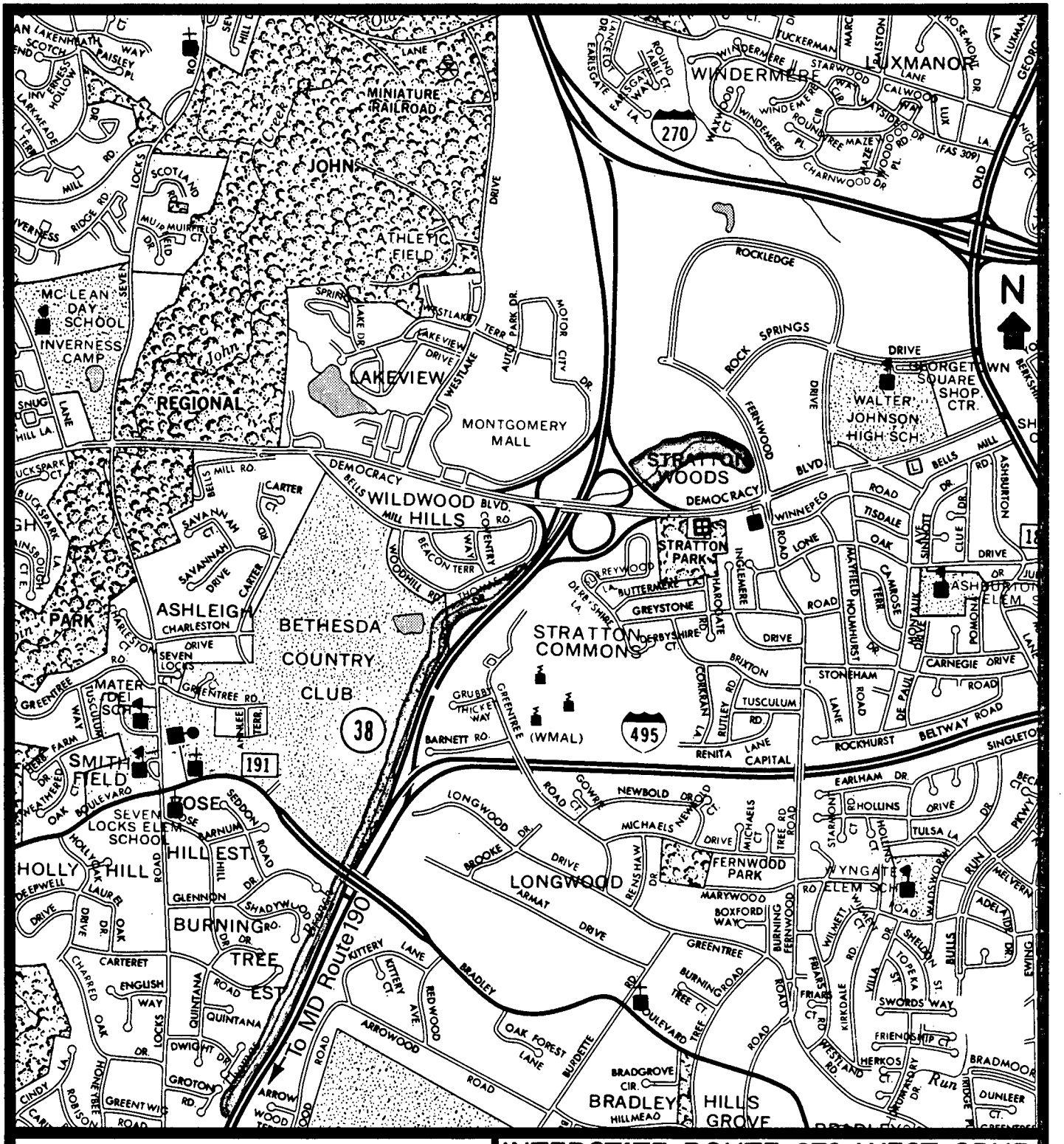
Y-Split to Interstate Route 495

Including I-495 to North of MD. RTE. 190

N

CENSUS TRACTS

Scale 1″ = 1 Mile	FIGURE 3



LEGEND

- School
- Post Office
- Church/ Synagogue
- 100-year Floodplain
- Firehouse
- Parks
- Library
- Recreation

INTERSTATE ROUTE 270 WEST SPUR

Y-Split to Interstate Route 495
Including I-495 to North of MD. RTE. 190

COMMUNITY FACILITIES and ENVIRONMENTAL FEATURES

Scale
0 Feet 2000

FIGURE 4

TABLE 2

Population and Growth in the Study Area

Area	1970	1980	Percentage Change
Montgomery County	522,809	579,053	+10.8
7012.05	6,162	5,981	-2.9
7045.01	4,436	3,912	-11.8
7045.02	2,963	2,614	-2.0
7059.01	4,787	3,734	-15.9
7060.03[a]			
7060.04[a]	10,269[b]	16,171	+57.5
7060.05[a]			
TOTAL	28,617	32,994	+15.3
7060.04 (1980)	--	4,835	--

[a]Area equivalent to Census Tract 7060.01 in 1970

[b]Population in Census Tract 7060.01

Source: 1980 United States Census of Population and Housing

Parks - Cabin John Regional
Stratton Local
Fernwood
Wyngate Woods
Scotland Neighborhood

Libraries - Montgomery County Public Library, Davis Branch
Davis Information Center for People with Special Needs

U.S. Post Office, West Bethesda Branch

Fire and Police Services - Bethesda Fire Department, Inc.
Montgomery County Police Department
Maryland State Police

Health Facilities - Shady Grove Adventist Hospital in Rockville
Suburban Hospital in Bethesda
Bethesda Naval Hospital

Public Transportation-Washington Metropolitan Area Transit Authority (regional bus service and Metrorail)
Montgomery County Department of Transportation Ride-On Service

Public Water and Sewer Service

2. Economic Environment

Areas along the I-270 West Spur north of Democracy Boulevard are devoted both to light industrial/office development, oriented toward high technology, research, and administration as well as retail trade businesses concentrated in and around the Montgomery Mall. These areas represent major sources of area employment, economic activity, and tax revenues for the County. Major businesses and industrial concentrations are located along the I-270 corridor north of the study area. Scattered commercial uses are situated throughout the study area, mainly at major intersections, and also include the WMAL radio and television tower complex north of I-495 and east of I-270.

Some future increase in area employment is anticipated as light industrial/office uses expand to fill vacant areas adjacent to existing industrial developments east of the I-270 West Spur and north of Democracy Boulevard (Davis Tract). An analysis of 1980 census data reveals that a majority of the working population in the subject census tracts were employed in public administration, retail and wholesale trade, and other professional services (i.e., health, education, finance, real estate, insurance, etc.).

The commuting patterns of the study area population reflect the county's evolution into a major employment center and the location of employment in the I-270 corridor. Nearly 55 percent of those employed and living in the study area commute to jobs within the county. Over 40 percent of these individuals work in the District of Columbia and Virginia suburbs and utilize I-270 and I-495 as their major routes.

The 1979 median household income averaged for the five census tracts was $47,601, which was significantly higher than the county-wide median income of $28,994. This county-wide figure has increased to $41,853, according to a 1985 update by the Department of State Planning. The median income figure for Census Tract 7059.01 ($57,613) was the highest among this grouping.

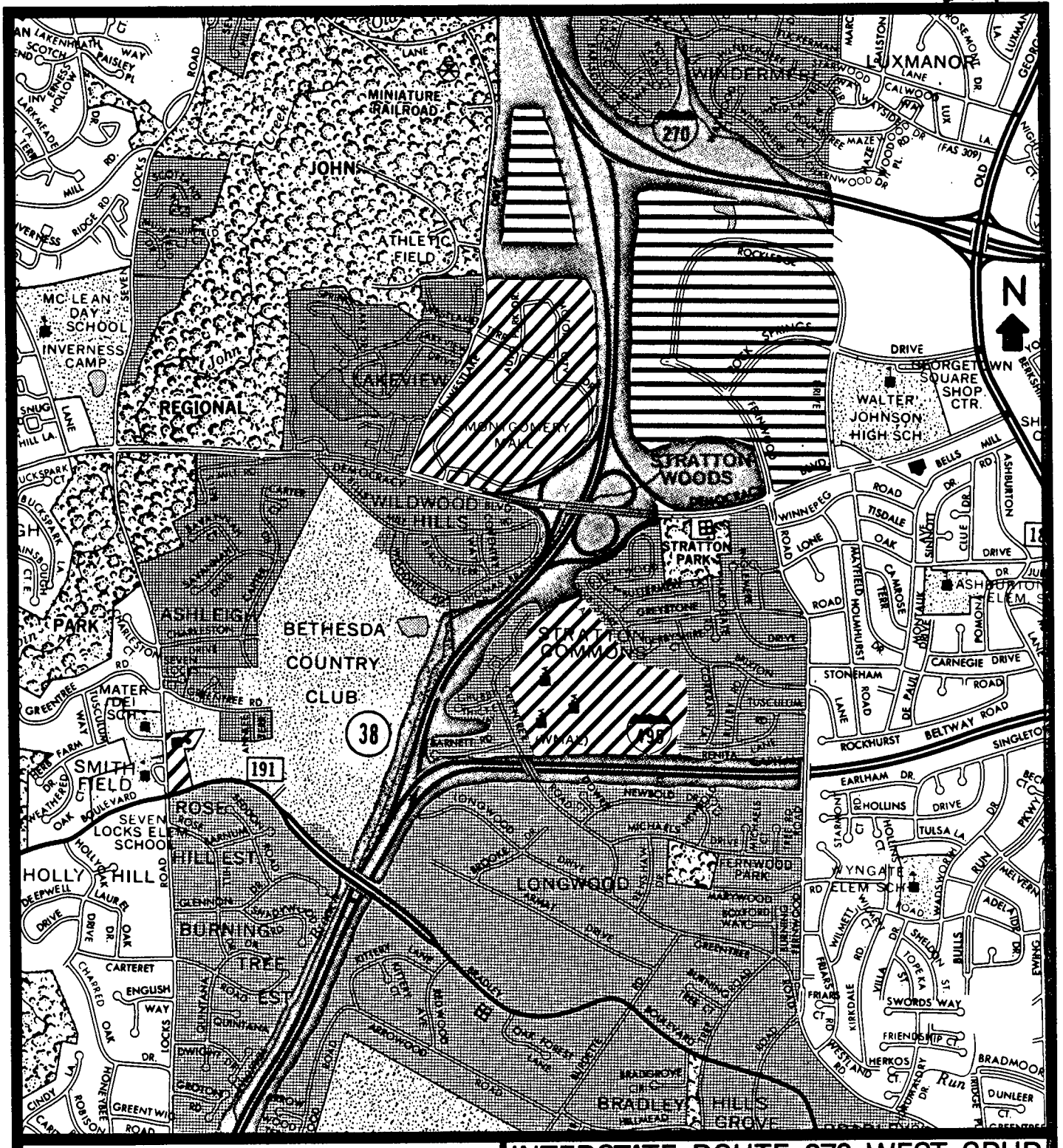
3. Land Use

a. Existing (Figure 5)

The predominant land use in the study area is characterized by medium- to high-density residential development (typically single-family detached dwellings and townhouses). These developments are located throughout the I-270 and I-495 corridors. Some are located adjacent to the interstates and major arterial roads. Wooded tracts provide some buffer between developments and from other adjacent uses (i.e., highways, commercial). Most housing stock was constructed in the last 30-40 years.

Private and public recreational areas constitute another major land use in the study area. A large, private country club borders I-270. Cabin John Regional Park is situated west of the I-270 West Spur. Several other public parks and recreational areas associated with schools are located throughout the study area.

Commercial and light industrial/office land uses predominate on both sides of the I-270 West Spur north of Democracy Boulevard. Montgomery Mall and other commercial uses are located in the northwest quadrant of these intersecting



LEGEND

- Residential
- Commercial
- Light Industrial/ Office
- Private and Public Recreation
- Wooded/Vacant/Brush

INTERSTATE ROUTE 270 WEST SPUR

Y-Split to Interstate Route 495
Including I-495 to North of MD. RTE. 190

EXISTING LAND USE

Scale
0 Feet 2000

FIGURE 5

roads, while light industrial/office/research development, consisting of major employers and large facilities (i.e., IBM, Martin-Marietta, Sovran Bank-Maryland, Marriott Corporation) is concentrated in the northeast quadrant.

No land is devoted to agriculture and very little land is not developed for some use.

b. Future (Figure 6)

The majority of the land in the study area corridor is either already developed or committed to public use, such as roadways and parks. Any further development will be minor in nature and fill in smaller vacant areas adjacent to existing development. These new land uses will generally be consistent with that now existing in surrounding properties. The present character of the study area would remain essentially unchanged. These uses are consistent with that indicated in the Master Plans for the North Bethesda-Garrett Park Planning Area (1970, as amended in 1979), Potomac Subregion (1980, as amended in 1984), and Bethesda-Chevy Chase Planning Area (1970).

4. Historic and Archeological Sites

The project would occur entirely within state-owned right-of-way. An historic sites survey of the study area revealed that there were no sites on or eligible for the National Register of Historic Places. No archaeological sites would be affected by the proposed widening.

5. Natural Environment

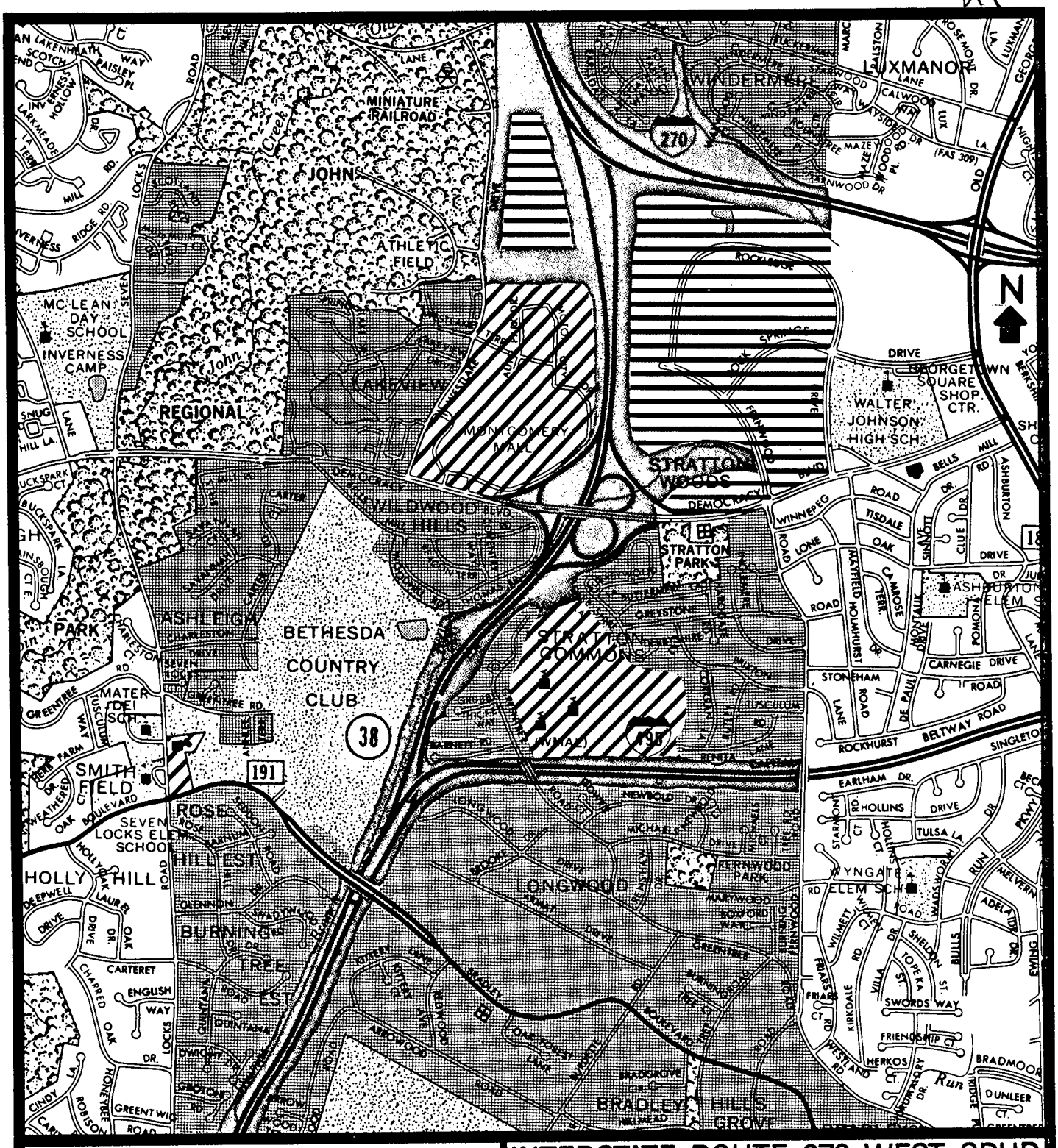
a. Topography/Physiography

Terrain in the study area varies from gentle to moderate slopes of 8 percent to 25 percent; the average elevation is 300 feet above mean sea level. The study area lies within the Piedmont Physiographic Province and is composed of hard, crystalline igneous and metamorphic rocks of Precambrian origin.

b. Geology

Bedrock in the eastern part of the Piedmont Province consist of schist, gneiss, gabbro, and other highly metamorphosed rock of probable volcanic origin.

The ancient crystalline rocks of the Piedmont Province have yielded varied mineral products, such as slate, granite, gneiss, serpentine, and marble. Non-metals include flint (quartz), feldspars, kaolin, talc, asbestos, and mica.



LEGEND

- Residential
- Commercial
- Light Industrial/Office
- Private and Public Recreation
- Wooded/Vacant/Brush

INTERSTATE ROUTE 270 WEST SPUR

Y-Split to Interstate Route 495
Including I-495 to North of MD. RTE. 190

FUTURE LAND USE

Scale
0 Feet 2000

FIGURE 6

c. Soils

According to the Soil Survey of Montgomery County, published by the U.S. Department of Agriculture, Soil Conservation Service, soils in the study area belong to the Glenelg-Manor-Chester Association and are well-drained, strongly sloping, and micaceous in nature.

The Manor Series is the dominant soil type within the study area consisting of rather shallow, somewhat excessively drained soils that have a weakly developed subsoil; depth to bedrock is six to twelve feet.

Being shallow and well drained, the Manor soils are not highly productive, but can be used for common crops or pasture land.

There are no Prime Farmland soils (farmland which is unique or of statewide importance) within this highly developed and urbanized area of Montgomery County.

d. Groundwater

The crystalline rocks of the eastern Piedmont Province have very low primary porosity restricting the movement of groundwater. However, large subsurface fractures in the rocks store large amounts of water 30 feet below the surface and most wells are less than 200 feet deep.

The Wissahickon Formation, composed of schists and quartzites of Hydrologic Units II and III, contain some of the poorest aquifers in the Piedmont Province. The Wissahickon Formation provides small to moderate supplies of groundwater available throughout this region. Well yields range from 1 to 320 gallons per minute.

e. Surface Water

Thomas Branch, flowing generally parallel to the I-270 West Spur, is the only stream in the study area. It is a tributary of the Washington Metropolitan Area sub-basin associated with the Cabin John Creek Watershed. This stream is 6 feet wide with an average depth of 6 inches. Thomas Branch has clear water quality flowing over rubble, stone, and sandy substrates. The drainage area is 2.32 square miles.

Thomas Branch flows under the I-270/Democracy Boulevard interchange via a 3-foot concrete box culvert. Also, stormwater drains form the surrounding developments and flows to Thomas Branch. Thomas Branch is located approximately 25 feet from the I-270 West Spur roadway at the bottom of steep grassy slopes (see Figure 4).

The Maryland Department of Natural Resources, Water Resources Administration, has classified all surface waters of the State into four categories, according to their desired use. These categories are:

Class I	-	Water Contact Recreation, Aquatic Life and Water Supply
Class II	-	Shellfish Harvesting
Class III	-	Natural Trout Waters
Class IV	-	Recreational Trout Waters

All waters of the State are Class I, with additional protection provided by higher classifications. Stream waters in the study area are Class I.

f. Floodplains

According to the Federal Emergency Management Agency, the 100-year floodplain associated with Thomas Branch lies outside of the I-270 roadway corridor and would not be affected by the proposed project (see Figure 4).

g. Ecology

1) Terrestrial

Some woodlots still remain on the highway periphery (the median is partially wooded) and have been identified as the Tulip-Poplar Association. Characterized by the presence of the dominant tree species tulip-poplar (Liriodendron tulipifera); other common associated species include: Virginia pine, American sycamore, smooth sumac, black walnut, red cedar, pin oak, red maple, black willow, green ash, eastern white pine, mockernut hickory, and black locust. Herbaceous plants found within the right-of-way are: bull thistle, spotted Joe-pye-weed, Queen Anne's lace, common mullein, poison ivy, and Christmas fern.

Because the median is bounded on both sides with roadways, its value as wildlife habitat is minimal. A few bird species and mammals, such as mice, moles, opossum, and woodchuck, may be found in the area.

2) Aquatic

Thomas Branch in the study area has very low base flows and supports a limited fin-fish community of mostly Cyprinidae fish. The blacknose dace (Rhinichthys atratulis) was observed during field surveys. This species is an indication of fair water quality in streams with warm shallow water.

According to the National Wetlands Inventory mapping, there are no wetlands located in the study area. However, field surveys have been completed. Non-tidal forested wetlands associated with Thomas Branch and its tributaries have been identified (see Alternates Mapping). The U.S. Fish and Wildlife Service classifies these types of wetlands as Palustrine broad-leaved, deciduous forested wetlands that are temporarily flooded. The dominant plants inhabiting these wetlands are: black willow, red maple, sycamore, sedges, sensitive fern, and Joe-pye-weed. The soils of the Thomas Branch floodplain consist of the Wehadkee silt loam series, which is a known hydric soil.

These wetlands are of moderate wildlife value but several other functions, including sediment and nutrient trapping, flood dissipation, groundwater discharge, and aquatic wildlife habitat, are associated with them.

These wetlands are located along the periphery of the roadway at the base of slopes.

h. Threatened or Endangered Species

Coordination with the U.S. Fish and Wildlife Service and the Maryland Department of Natural Resources indicates that no federally listed threatened or endangered species are known to inhabit the study area.

6. Existing Noise Conditions

Eight noise sensitive areas (NSAs) have been identified in the I-270 West Spur study area. Descriptions of these noise sensitive areas are provided in Table 3. The location of the NSAs are shown on the Alternates Mapping. A copy of the technical analysis report is available at the State Highway Administration, 707 North Calvert Street, Baltimore, Maryland 21202.

Highway traffic noise is usually measured on the "A" weighted decibel scale, "dBA", which is the scale that has frequency range closest to that of the human ear. In order to give a sense of perspective, a quiet rural night would register about 25 dBA, a quiet suburban night would register about 60 dBA, and a very noisy urban daytime about 80 dBA. Under typical field conditions, noise level changes of 2-3 dBA can barely be detected, with a 5 dBA change readily noticeable. A 10 dBA increase is judged by most people to be a doubling of sound loudness. (This information is presented in the "Fundamentals and Abatement of Highway Traffic Noise," by Bolt, Beranek & Newman, Inc., for FHWA, 1980.)

The Federal Highway Administration has established, through 23 CFR, Part 772, noise abatement criteria for various land uses (see Table 4).

TABLE 3

Noise Sensitive Area Descriptions

Noise Sensitive Areas	Activity Category	Description
1	B	7107 Thomas Branch Drive
2	B	7504 Glennen Avenue
3	B	7415 Bradley Boulevard
4	B	7221 Longwood Drive
5	B	7224 Grubby Thicket Dr.
6	B	7314 Greentree Road
7	B	9928 Derbyshire Lane
8	B	7501 Bradley Boulevard

TABLE 4

Noise Abatement Criteria and Land Use Relationships
Specified in 23 CFR, Part 772

Activity Category	$L_{eq\ (h)}$	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

The noise levels are expressed in terms of an L_{eq} noise level or equivalent levels on an hourly basis. The L_{eq} noise level is the energy-averaged level for a given period of time.

All ambient and predicted levels in this report are L_{eq} exterior levels unless otherwise noted.

Measurement of ambient noise levels is intended to establish the basis for impact analysis. The ambient noise level as recorded represents a generalized view of present noise levels. Variations with time of total traffic volume, truck traffic volumes, speed, etc., may cause fluctuations in ambient noise levels of several decibels. However, for the purpose of impact assessment, these fluctuations are not sufficient to significantly affect the assessment. Ambient noise levels were also predicted using computer modeling to ensure the accuracy of measured noise conditions.

It was determined for all the noise sensitive areas that the most typical noise conditions occur during the non-rush hour period (9:00 a.m. - 4:00 p.m.). During this time the highest noise levels are experienced for the greatest length of time.

Ambient levels ranged from 63 dBA to 72 dBA.

Calibration of the STAMINA 2.0/OPTIMA noise prediction model was performed utilizing simultaneous traffic data collected at three representative noise monitoring sites (NSAs 2, 3, and 8) along Interstate Route 270. These sites are in closest proximity to the interstates. Traffic counts taken during the 15-minute monitoring periods were adjusted to represent hourly traffic flows and were input into the computer model accordingly. The predicted L_{eq} noise levels generated at the three sites as a result of this calibration exercise differed from their actual ambient noise levels by 1-2 dBA. These fluctuations in noise levels can be attributed to extraneous noise sources pertinent to the modeled site (i.e., low aircraft flyovers) as well as the site's specific location, topographical features, and natural and man-made components (i.e., buildings, ground cover, etc.) and are within the range of normal modeling calibration (± 3 dBA).

Measurements were made on August 6, 1986, for 20-minute periods at seven individual sites, representative of the seven noise sensitive areas with starting/finishing times being 7:47 a.m. and 12:25 p.m., respectively. Existing noise levels measured during this time ranged from 63 dBA to 72 dBA. The on-

site monitoring for noise sensitive area eight was conducted on February 10, 1987 using a Metrosonics db-308 Sound Level Dosimeter/Analyzer. The measurement was made for 20 minutes starting at 10:40 a.m. and finishing at 11:00 a.m. The existing level at this site was 72 dBA.

The monitored and predicted ambient noise levels are included in Table 5; also see Figures 7a-7c for NSA receptor locations. The discussion in Section IV-F summarizes the results of the technical noise analysis.

7. Existing Air Quality

The I-270 West Spur project is within the National Capital Intrastate Air Quality Control Region. The region does not meet the primary standards for carbon monoxide (CO) and is subject to transportation control measures such as the Vehicle Emissions Inspections Program.

A detailed microscale air quality analysis has been performed to determine the CO impact of the proposed project, which is described in further detail in Section IV-G.

TABLE 5

Ambient Noise Levels

August 6, 1986

I-270 West Spur Widening

NSA	Description	Measured Ambient[1] Leq	Predicted Ambient[1] L_{eq}
1	Residential	64	---
2	Residential	71*	72*
3	Residential	72*	74*
4	Residential	70*	---
5	Residential	69*	---
6	Residential	63	---
7	Residential	65	---
8[2]	Residential	72*	73*

* Exceeds Federal Highway Administration Noise Abatement Criteria

1 In dBA

2 Additional site added. Monitored on February 10, 1987.

II. Need for the Project

A. Purpose

The purpose of the proposed action is to widen the west spur of I-270 and the portion of I-495 north of Maryland Route 190 by an additional lane in each direction. The existing roadway is subject to frequent congestion; traffic capacity and safety problems are anticipated through the design year 2010 as traffic volumes increase, due in large part to regional growth planned along the I-270 corridor. The proposed widening would provide a connection that is adequate to accommodate the additional capacity required on I-270 to the north and I-495 to the south.

Traffic service and safety problems related to inadequate capacity and congestion are especially critical during morning and afternoon peak hour periods. The proposed action will result in reduced congestion, shorter delays, and improved overall traffic operations.

B. Project Background

The west spur of I-270 was originally constructed in 1962-1963 as a four-lane freeway and opened to traffic in the fall of 1963. It was designated as I-270. The highway was redesignated as I-470 in 1974 and as the I-270 West Spur in 1976. No major capacity improvements to this segment of I-270 have taken place. The portion of I-495 between the I-270 West Spur and Maryland Route 190 was also constructed in 1962-1963 and opened to traffic in the fall of 1963.

The widening of the I-270 West Spur to six lanes and a portion of I-495 between the West Spur and north of Maryland Route 190 to ten lanes were initially included in the 1975-1994 Twenty Year Highway Needs Study and retained in all subsequent updates of the document.

The proposed project was initially added to the Development and Evaluation portion of the 1985-1990 Consolidated Transportation Program (CTP) together with the widening of the I-270 East Segment. The I-270 West Spur and East Segment were separated into individual projects in the 1986-1991 CTP. This project is currently funded in the Development and Evaluation portion of the 1987-1992 CTP for planning and engineering through Fiscal Year 1990. Following location and design approvals, the project will be eligible for inclusion in future programs of the CTP for construction funding.

This project is consistent with the improvements under construction on the I-270 mainline (from the Y-split north to Maryland Route 121) and on I-495 (from

west of the I-270 East Segment to Maryland Route 97), as well as the improvements being planned and/or designed for the East Segment of I-270, I-495 (from north of Maryland Route 190 south to Virginia Route 193), and the I-270/Democracy Boulevard and Maryland Route 187 interchanges. It is also consistent with the Adopted and Approved Master Plans for the North Bethesda-Garrett Park Planning Area (1970, as amended in 1979), Potomac Subregion (1980, as amended in 1984), and Bethesda-Chevy Chase Planning Area (1970).

C. Existing and Projected Traffic Conditions

Quality of traffic flow along a roadway is measured in terms of levels of service (LOS). This measure is dependent on traffic characteristics and roadway geometry. It ranges from LOS "A" (best or free-flow, high speeds) to LOS "C" (minimum desirable) to LOS "E" (capacity, low speeds, temporary delays) and LOS "F" (worst or forced flow, frequent delays).

The LOS on the I-270 West Spur is currently "D" and is characterized by heavy traffic volumes and decreasing vehicle speeds. Under the No-build condition the capacity of the existing roadway will be exceeded. The LOS will worsen to "F" by the design year 2010 along the entire roadway as traffic volumes increase. By widening this segment of I-270 as proposed, the additional capacity combined with further traffic volume increases will result in LOS "D/E". Thus, traffic will approach, but not exceed, the capacity of the roadway by the year 2010, where LOS "E" is at capacity. The LOS will be somewhat worse at the Democracy Boulevard interchange. The problems at this interchange will be addressed under a separate study.

The LOS on I-495 between the I-270 West Spur and north of Maryland Route 190 is currently "E" and is projected to be "D/E" in the year 2010 if the roadway is widened. Under the No-build condition, the LOS on this segment of roadway will also worsen to "F".

The I-270 West Spur carries an average daily traffic (ADT) of 82,000 vehicles, 7 percent of which are trucks. The ADT is predicted to increase to between 113,000 and 121,000 vehicles by the year 2010. Interstate 495 north of Maryland Route 190 has an existing ADT of 148,000 vehicles (7 percent trucks). This figure is projected to increase to 197,000 vehicles. Adding these traffic volumes without adding capacity would result in a worsening of the LOS, congestion of larger durations, and more erratic traffic flow.

D. Existing and Projected Safety Conditions

The I-270 West Spur experienced an average accident rate of 27 accidents per 100 million vehicle miles of travel (100 mvm) for the four year period from 1981-1984. This rate is lower than the statewide average accident rate of 71 accidents per 100 mvm of travel on highways of similar design. A total of 59 accidents (including two fatal accidents) was reported on this section of roadway during the study period. Nearly 46 percent of these total accidents were attributed to those involving a fixed object. The bulk of the remaining collision types were attributed to vehicle sideswipes (19 percent) and rear end collisions (14 percent). All of the collision types are lower than their respective statewide average rates.

Accident statistics for I-495 have been evaluated for the section between the I-270 East Segment/Maryland Route 355 interchange and north of Maryland Route 190. The average accident rate for all collision types on this roadway section (112 accidents/100 mvm) is significantly higher than their the respective statewide average rate of 71 accidents/100 mvm. In addition, the number of accidents (473) was significantly higher than the statewide average, especially those involving rear end collisions and collisions with fixed objects. Many accidents are associated with the bridge carrying I-495 over the I-270 West Spur, which was identified as a high-accident highway section.

Rear end collisions are mainly associated with congestion; collisions with fixed objects are mainly associated with weaving at interchanges, erratic traffic flow associated with congestion, and geometric deficiencies at the I-270 West Spur/I-495 interchange; and vehicle sideswipes are associated with weaving and congestion.

The reconstruction of this bridge and realignment of I-495 that are being studied would reduce the potential for accidents in this high-accident area.

III. Alternates Considered

A. Alternate 1: No-build

This alternate would provide no major improvements or construction to the existing roadway that would measurably affect the ability of the highway to accommodate increased traffic volumes predicted for the design year 2010. Normal maintenance, such as shoulder modifications, signing, resurfacing, and safety improvements, would be completed as warranted but capacity would not be increased.

The No-build Alternate is not a feasible solution to present and anticipated traffic capacity problems. As traffic volumes grow, the frequency and duration of congested periods will likely increase. In turn, this congestion would increase the potential for accidents and delays for travelers through the area.

B. Alternate 2: Inside Widening (Preferred Alternate)

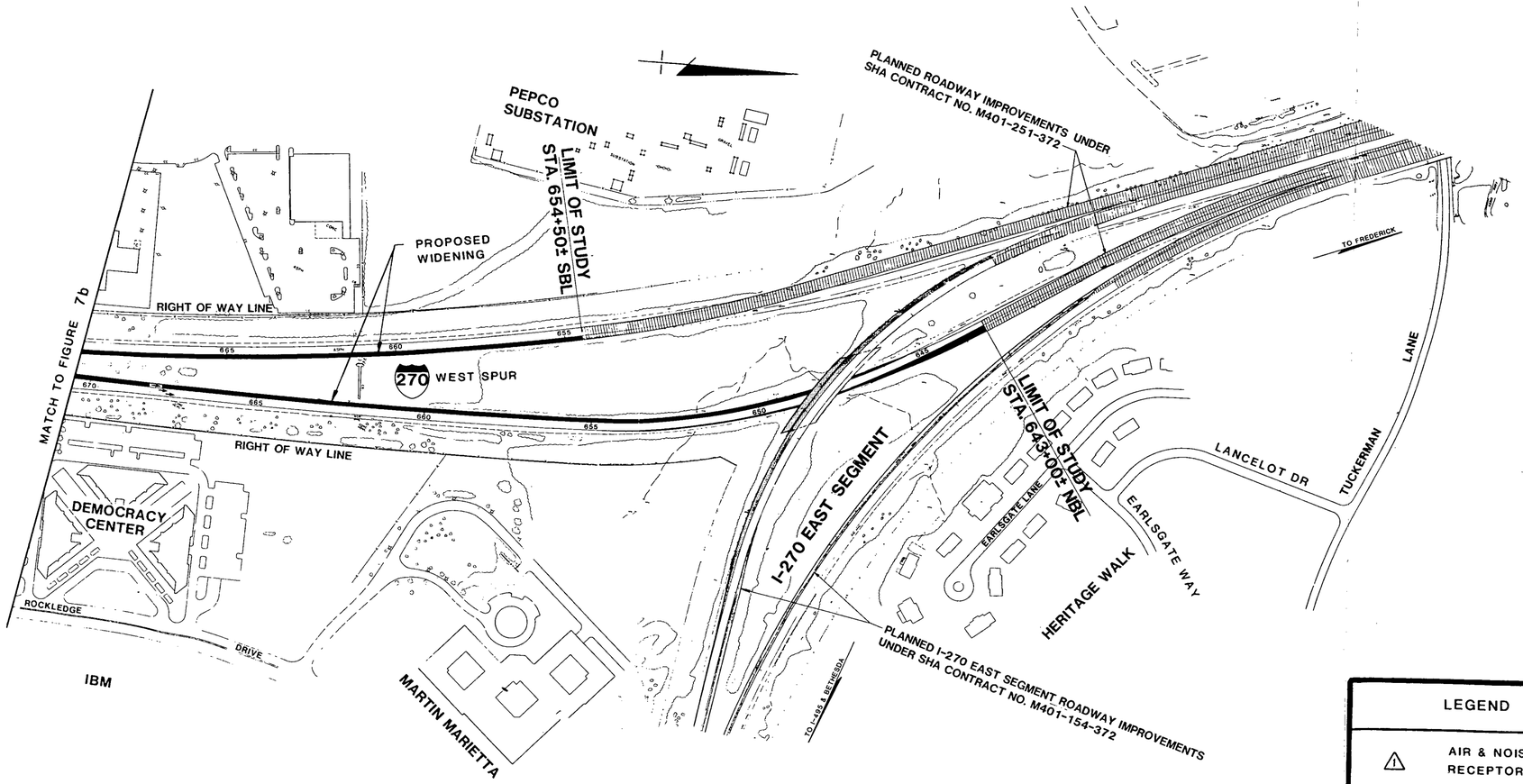
This alternate proposes the addition of one 12-foot wide lane in each direction to the existing four-lane roadway from the Y-split to the I-270/I-495 junction. This alternate also proposes the addition of one 12-foot wide lane in each direction to the existing eight-lane I-495 roadway from the I-270/I-495 junction to south of Bradley Boulevard (see Figures 7a-7c). The additional two lanes would be constructed generally in the existing median and would be separatd by a continuous jersey-type concrete median barrier. Fourteen-foot wide paved shoulders are proposed between the additional lanes and the median barrier (see Figure 8). The existing roadway within the study limits would be resurfaced.

No improvements are contemplated for the interchange at I-270 West Spur/Democracy Boulevard as part of this project. A separate study will address safety and capacity problems at this interchange.

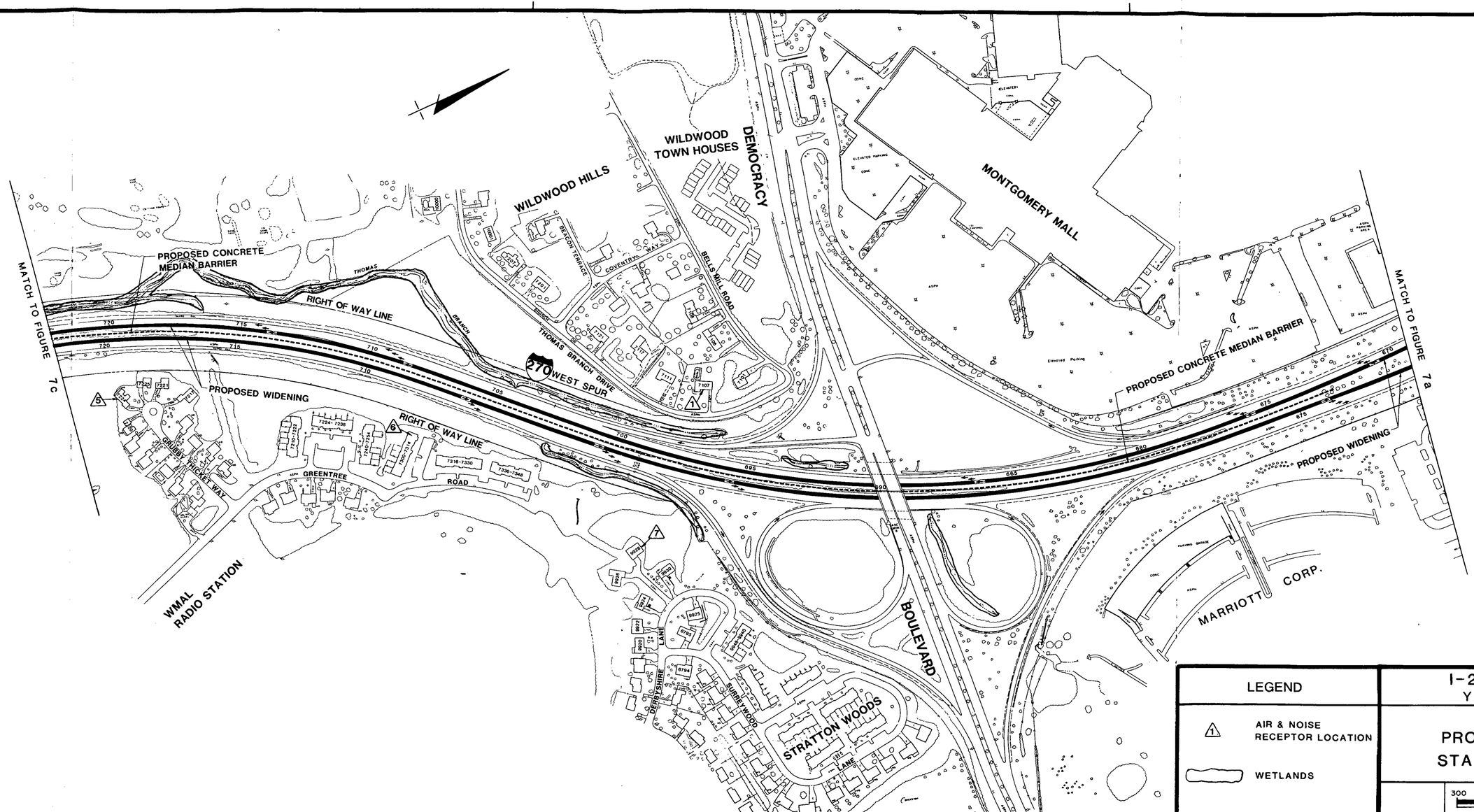
Inside widening is being proposed rather than outside widening wherever possible within the study area because of the availability of existing right-of-way, lower overall costs, and fewer environmental impacts. Where outside widening is necessary, retaining walls will be used to avoid right-of-way acquisition.

The improvements would be consistent with the existing geometrics and would use criteria for a 55 mph design speed. A design exception will be requested from the Federal Highway Administration for this design.

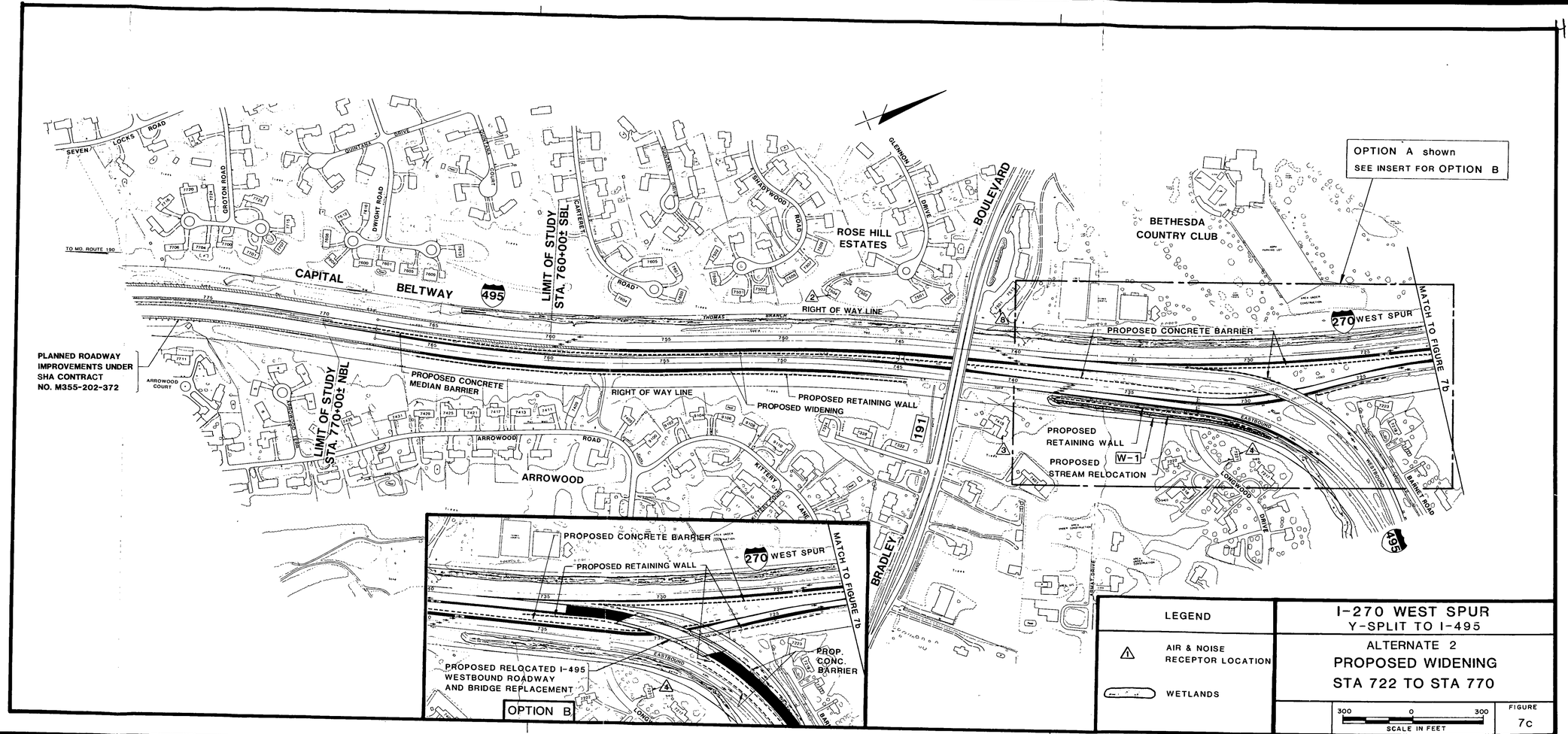
In general, the existing cross slopes will be held to extend the additional widening. The emergency vehicle turnaround on I-495 below Maryland Route 191 would be closed as a result of the widening. Alternative proposals for providing

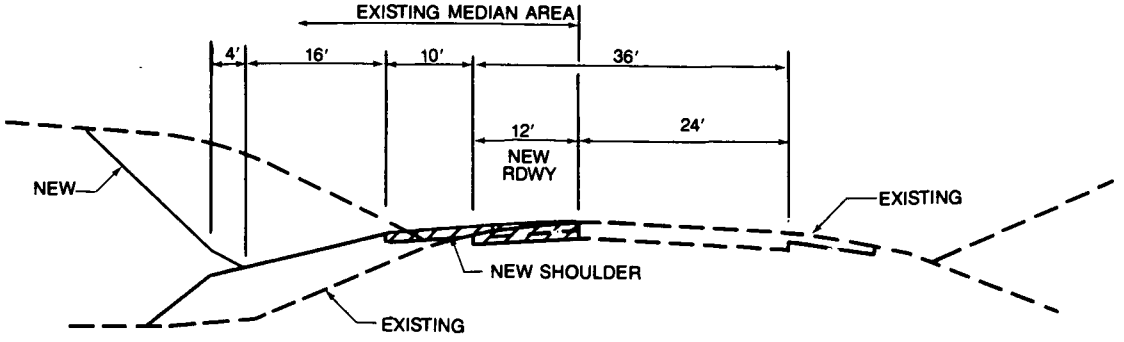


LEGEND	I-270 WEST SPUR Y-SPLIT TO I-495
⚠ AIR & NOISE RECEPTOR LOCATION	ALTERNATE 2 PROPOSED WIDENING STA 643 TO STA 669
WETLANDS	300 0 300 SCALE IN FEET FIGURE 7a

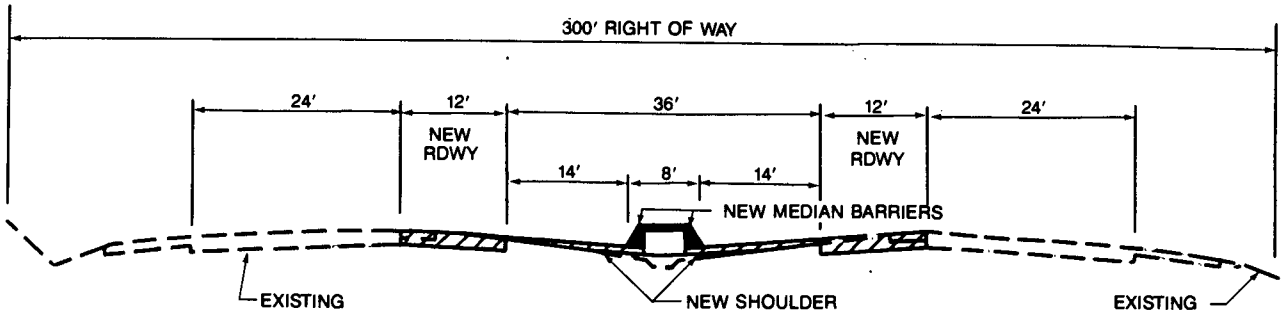


LEGEND	I-270 WEST SPUR Y-SPLIT TO I-495
1 AIR & NOISE RECEPTOR LOCATION	ALTERNATE 2 PROPOSED WIDENING STA 669 TO STA 722
WETLANDS	300 0 300 SCALE IN FEET FIGURE 7b

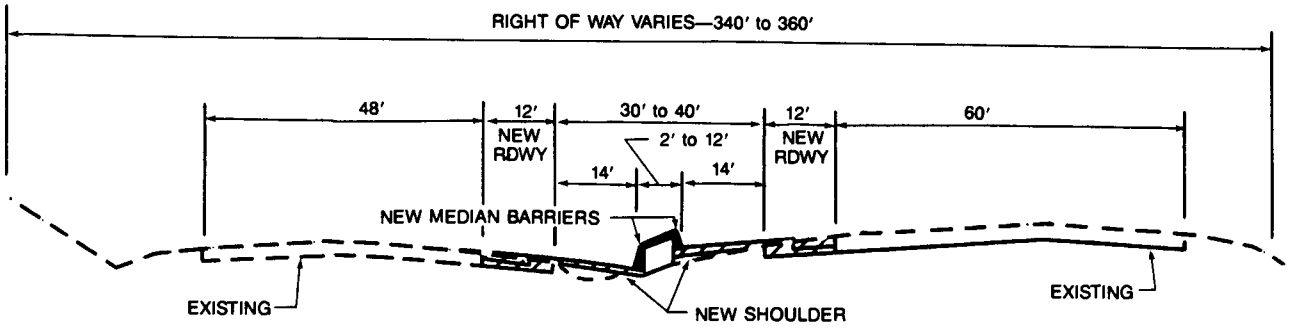

OPTION A shown
SEE INSERT FOR OPTION B
PLANNED ROADWAY IMPROVEMENTS UNDER SHA CONTRACT NO. M355-202-372
LIMIT OF STUDY STA. 760+00± SBL
LIMIT OF STUDY STA. 770+00± NBL
CAPITAL BELTWAY
495
TO MD. ROUTE 190
SEVEN LOCKS ROAD
GROTON ROAD
QUINTANA DRIVE
DWIGHT ROAD
CARTERET ROAD
SHADYWOOD ROAD
ROSE HILL ESTATES
GLENNON DRIVE
BOULEVARD
BETHESDA COUNTRY CLUB
ARROWOOD COURT
ARROWOOD ROAD
ARROWOOD
KITTERY LANE
PROPOSED CONCRETE MEDIAN BARRIER
RIGHT OF WAY LINE
PROPOSED RETAINING WALL
PROPOSED WIDENING
PROPOSED CONCRETE BARRIER
270 WEST SPUR
MATCH TO FIGURE 7b
PROPOSED RETAINING WALL
W-1
PROPOSED STREAM RELOCATION
EASTBOUND
WESTBOUND
LONGWOOD DRIVE
BARNET ROAD
BRADLEY
191
PROPOSED RELOCATED I-495 WESTBOUND ROADWAY AND BRIDGE REPLACEMENT
PROP. CONC. BARRIER
OPTION B
LEGEND
AIR & NOISE RECEPTOR LOCATION
WETLANDS
I-270 WEST SPUR
Y-SPLIT TO I-495
ALTERNATE 2
PROPOSED WIDENING
STA 722 TO STA 770
300 0 300
SCALE IN FEET
FIGURE
7c



I-270 SPUR—NORTHBOUND AND SOUTHBOUND ROADWAYS
NORTH OF DEMOCRACY BLVD. INTERCHANGE



I-270 SPUR—FROM DEMOCRACY BLVD.
INTERCHANGE TO I-270/I-495 JUNCTION



I-495 MAINLINE—FROM SOUTH OF
I-270 JUNCTION TO SOUTH OF BRADLEY BLVD.

The dimensions shown are for the purpose of determining cost estimates and environment impact, and are subject to change during the final design phase.

INTERSTATE ROUTE 270 WEST SPUR

Y-Split to Interstate Route 495
Including I-495 to North of MD. RTE. 190

I-270 WEST SPUR TYPICAL SECTIONS

FIGURE 8

improved emergency vehicle access to the Interstate will be investigated (see Section IV-A).

Some outside widening will be required to meet the proposed design criteria for sight distance and shoulder widths. This will occur at the Y-split where the project will gradually transition to outside widening and meet the roadway proposed for the I-270 mainline project. Some outside widening would be required along the northbound roadway of I-495 south of Maryland Route 191 and a retaining wall will be required on the outside of the roadway.

The amount and location of outside widening at the I-495/I-270 junction depends upon the option selected.

I-270 West Spur Junction at I-495

In conjunction with the Alternate 2 (Inside Widening) studies, options have been developed to determine the feasibility of safety improvements in the vicinity of the bridge carrying the I-495 westbound roadway over the I-270 West Spur northbound roadway. Due to underpass width and sight distance constraints imposed by the bridge, full inside widening along the northbound roadway through the existing underpass would not satisfy the 55 mph design criteria.

Option A - No Bridge Replacement

Option A proposes the addition of one through lane to the northbound I-270 roadway without alteration of the existing I-495 bridge over I-270. To provide the additional lane through the underpass and meet the design criteria, some realignment and outside widening of the I-270 northbound roadway and I-495 eastbound roadway would be required. The outside widening would necessitate the construction of a retaining wall on the outside edge of the eastbound I-495 roadway and a stream relocation here. Two retaining walls would also be required in the median of southbound I-270 and westbound I-495 in the vicinity of the bridge. All improvements would take place within the existing right-of-way.

Option B - Bridge Replacement

Option B allows a 60 mph design speed to be achieved for both the I-270 and I-495 roadways. Therefore, this would significantly improve the high accident section of I-495 that currently exists and provide an improved design for I-270 over that proposed in Option A. A design exception would not be required for this option.

Option B proposes the reconstruction of the bridge carrying I-495 over I-270 on the south side of the existing bridge and the realignment of a portion of

the I-495 westbound roadway. Retaining walls would be required in the median to avoid impacting the eastbound roadway.

The widening of I-270 with this option would take place in the median except for a small amount north of the bridge. Retaining walls would be required in the median of I-270 in the area of the bridge. No stream relocation would be required and all improvements would take place within the existing right-of-way.

IV. Environmental Impacts

A. Social

The proposed widening under Alternate 2 would be constructed within the existing right-of-way. It may be determined during the design phase that minor additional right-of-way may be required for stormwater management facilities. No residential or business displacements would be required. No minority, elderly, or handicapped persons would be affected.

The No-build Alternate does not address the existing or projected traffic congestion problems on the I-270 West Spur and portion of I-495. Anticipated traffic volumes would exceed the Interstates' capacities by the design year. Consequently, access to services, facilities, and goods for local and through traffic would become increasingly difficult and time consuming. Congestion and worsening traffic operations would further jeopardize traffic safety and increase the potential for accidents. Travel times and costs, as well as distances traveled, would increase as motorists either experience delays or seek alternative routes to avoid the severe congestion.

Alternate 2 would increase roadway capacity and in turn, provide relief from congestion and improve traffic service. Safety and access to services and facilities would also be improved throughout the corridor. Travel times would be shortened as fewer delays are experienced, especially during peak-hour periods. These improvements would also reduce the impacts of traffic on local and state roads in the corridor that are now being used by those seeking alternatives to the traffic problems on I-270 and I-495. Local arterials that could be expected to benefit include Democracy Boulevard, Fernwood Road, Seven Locks Road, and Bradley Boulevard.

Neither alternate would impact the social integrity and cohesion of nearby residential developments and communities.

No parks or recreational areas would be affected by the proposed improvements or used for stormwater management.

The provision of emergency services to surrounding communities would not be affected by the proposed project. The emergency vehicle turnaround on I-495 south of Maryland Route 191 would be closed if the roadway is widened. Safe turning movements cannot be guaranteed with a narrower median area. Alternative means of providing existing or improved emergency vehicle access to the interstates would be investigated. Viable options at present include switching

service areas between fire stations or adding turnarounds to the median areas north of the I-270/I-495 junction or near the Y-split.

Title VI Statement

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

B. Economic

Alternate 1 (No-build) would have adverse consequences on and undermine the growth of the local and regional economy. The west spur of I-270 and a portion of I-495 to the south are vital links in the corridor connecting market areas and industries to the north with the Metropolitan Washington and Northern Virginia market areas and employment centers to the south. Decisions not to alleviate congestion and improve traffic service and safety would result in delays of the exchange of goods and services, as well as make the area a less attractive place to work or locate businesses. This could lead to reductions in the amount of future assessable tax base.

Alternate 2 (Build) reduces all these impacts and traffic problems, at least through the design year 2010. The provision of additional lanes would be an important step in addressing the transportation needs of this growing metropolitan area, especially along I-270 and the Capital Beltway. This alternate would have no adverse effects on the local and regional economies.

C. Land Use

Alternate 2 (Build) is consistent with the future land use plans for the area. These proposed improvements would help accommodate existing and planned development in the corridor. The land use plans indicate that the study area is to retain its current character and existing types of development. Any additional

growth in vacant areas would be consistent with surrounding uses. This alternate would reinforce the master plans' goals for providing an adequate transportation network to support planned development.

The No-build Alternate is not consistent with area land use plans.

D. Historic and Cultural

The Maryland State Historic Preservation Officer has determined that there are no significant historic sites in the study area. He has also determined that neither Alternates 1 or 2 would affect any archaeological resources in the study area. (See letters in the Comments and Coordination section of this document.)

E. Natural Environment

1. Topography/Geology

There will be no significant impacts to the geomorphological features of the landscape from the proposed construction. Most of the widening of the roadway would occur within existing right-of-way in a sodded and partially wooded median strip, generally at the existing grade. Some cutting of the fill slopes along northbound I-495 south of Maryland Route 191 will be required to accommodate the additional lane and maintain consistent width shoulders and a continuous median barrier. The fill slope will remain, however, and a retaining wall would be constructed to retain the remaining earth.

2. Soils

The proposed widening will not affect any prime or unique farmland soils or farmland of statewide importance. The study area soils are currently zoned for either residential or industrial development.

Any exposed soils will be planted to minimize soil erosion.

3. Terrestrial Ecology

The proposed Alternate 2 would have no significant impact on the terrestrial ecosystem. The sodded and partially wooded median strip supplies relatively little food and cover areas for wildlife species. The songbirds and small mammals that inhabit the median area will disperse to areas along the periphery of the roadway.

4. Wetlands

With Alternate 2, Option A, approximately 0.3 acre of palustrine, forested wetlands would be affected by retaining wall construction and stream relocation in the vicinity of the I-270/I-495 junction. Black willow, sycamore, and red

maple comprise the dominant vegetation of the affected wetland. Wetland functions include stormwater management, flood dissipation, and sediment trapping. No other wetland impacts would occur under Alternate 2, Option A.

No wetland impacts are associated with the proposed inside/outside widening designated as Alternate 2, Option B.

The affected wetland is designated as W1 on Figure 7c. All efforts will be made during the design phase of this project to minimize, to the extent practicable, any impacts to this wetland. Appropriate permits would be obtained from the U.S. Army Corps of Engineers and Maryland Department of Natural Resources and a mitigation plan (i.e., replacement on a one-to-one basis) would be developed for the affected acreage under Option A.

5. Surface Water

The Alternate 2 widening will cross several tributaries of Thomas Branch. However, these streams are channeled through standard culverts and pipes under the existing roadway. Roadway reconstruction and construction of a retaining wall at the I-270/I-495 junction (Alternate 2, Option A) will require approximately 1,100 feet of stream relocation, 5-15 feet east of its existing flow in the southeast quadrant of this interchange. The relocation and new channel would require a Waterway Construction Permit from the Maryland Department of Natural Resources, Water Resources Administration. The location of this retaining wall is shown on Figure 7c.

Although some modification of existing hydraulic structures may be required, strict adherence to a sedimentation and erosion control plan approved by the Maryland Department of Natural Resources will minimize any water quality impacts. The existing roadway would prevent most sediment from escaping the construction site in the median. Sediment traps, silt fences, interceptor dikes and ditches, and other erosion control measures would be included. The water quality and aquatic ecosystems will not be substantially affected by the proposed project.

Stormwater runoff would be managed in accordance with the Department of Natural Resources' Stormwater Management Regulations. These regulations will require stormwater management practices in the following order of preference:

- o On-site infiltration.
- o Flow attenuation by open vegetated swales and natural depressions.
- o Stormwater retention structures.
- o Stormwater detention structures.

It has been demonstrated that these measures can significantly reduce pollutant loads and control runoff.

Final design for the proposed improvements will include plans for grading, erosion and sediment control, and stormwater management, in accordance with State and Federal laws and regulations. They will require review and approval by the Maryland Department of Natural Resources - Water Resources Administration (WRA) and the Department of Health and Mental Hygiene - Office of Environmental Programs (OEP). The stormwater management regulations require that existing runoff rates be maintained after construction of the project.

6. Floodplains

According to the Federal Emergency Management Agency (FEMA), the 100-year floodplain of Thomas Branch is adjacent to the Democracy Boulevard interchange and runs parallel to the west side of I-270. No construction is proposed within the 100-year floodplain of Thomas Branch. The project action will not result in risks or impacts to the beneficial floodplain values or provide direct or indirect support to further development within a floodplain.

7. Endangered Species

According to the U.S. Fish and Wildlife Service and the Maryland Department of Natural Resources Forest, Park, and Wildlife Service, no Federally listed or State rare, threatened, or endangered species will be impacted by the proposed project.

F. Noise

1. Analysis of Impacts of Alternates

The anticipated noise impacts of the proposed improvements modeled under the Build Alternate were generally based upon two criteria, which involve the relationship of the predicted noise levels to ambient levels. Abatement considerations are justified if:

- The predicted noise levels exceed the noise abatement criterion of 67 dBA as maintained by the Federal Highway Administration; or
- The FHWA's noise abatement criteria is not exceeded but ambient levels receive an increase in L_{eq} noise levels of more than 10 dBA.

For the proposed project, the abatement analysis employed the first of the two criteria since over 90 percent of the modeled noise sensitive areas will experience L_{eq}'s greater than 67 dBA and no sites modeled under future-year conditions received an increase of 10 dBA or more over ambient levels.

Consideration is based on the size of the impacted area (number of structures, spatial distribution of structures, etc.), the predominant activities carried on within the area, the visual impact of the control measure, practicality of construction, feasibility, and reasonableness. A reasonableness determination includes consideration of the effects on noise levels of the Build Alternate compared to the No-build Alternate, the cost-per-residence, and community desires.

An effective barrier should, in general, extend in both directions to four times the distance between receiver and roadway (source). In addition, an effective barrier should provide a 7 to 10 dBA reduction in the noise level as a primary design goal. For the purpose of comparison, a total cost of $27 per square foot of barrier is assumed. This figure is based upon current costs experienced by Maryland State Highway Administration, and includes the costs of panels, footings, drainage, landscaping, and overhead. Generally, noise barriers are considered cost-effective if the cost-per-residence is less than $35,000 to $40,000.

All eight noise-sensitive areas, which were predicted to experience peak-hour L_{eq} noise levels in excess of 67 dBA under the Build Alternate, were considered for noise abatement measures (i.e., noise barriers).

a. No-build Alternate

Under the No-build Alternate, all eight noise-sensitive areas (NSAs) will experience design year (2010) L_{eq}s above the FHWA's noise abatement criteria; five of the eight sites are already above the 67 dBA level (see Table 6). None of the eight sites' future levels exceed the ambient levels by 10 dBA.

Evaluation of the No-build Alternate was performed to serve as a base from which to assess the specific noise level increases resulting from the proposed improvements. The No-build Alternate assumes that no highway improvements, other than normal maintenance, will occur within the project area.

The results of the modeling indicate that all eight noise-sensitive areas will receive an increase in design year (2010) noise levels over ambient levels by as much as 6 dBA. The predicted L_{eq}s in the design year under the No-build Alternate ranged from a low of 68 dBA to a high of 76 dBA.

b. Build Alternate

A barrier system investigated for the Build Alternate consists of five separate structures. The following subsections describe the individual barrier heights relative to existing ground elevations, modeling results both with and

TABLE 6

I-270 WEST LEG

PROJECT NOISE LEVELS

Noise Areas	Noise Sensitive Areas	No. of Homes w/ greater than 5 dBA reduction & greater than 67 dBA	Noise Levels Range (L_{eq})				Barriers			
			Ambient	No Build (Design Year)	Build (Design Year)	Build w/ Barrier (Design Year)	Length (ft.)	Height (ft.) (avg.)	Cost (x $1,000)	Cost per Residence ($)
A	5,6,7	65	63-69	68-72	71-74	63-65	4,344	16	1,876	28,871
B	1	9	64	70	72	63	1,794	16.6	802	89,142
C	3,4	16	70-72	75-76	75-77	61-67	2,154	24	1,395	87,237
D*	2	44	61-74	66-76	67-79	66-69	6,493	17	3,257	74,023
E	8	6	72	73	74	67	564	20	304	50,792

*Although the project limits extend south to the vicinity of Carteret Road, a logical barrier length would extend south from Bradley Boulevard to River Road. For purposes of this study, information from a supplemental noise barrier analysis completed in December 1986 for southbound I-495 between River Road and Bradley Boulevard has been included with this project's barrier analysis for Noise Area D (between Bradley Boulevard and Carteret Road).

5

without the barrier, and the NSAs that could be protected by each barrier. Differences in the projected design year Build and No-build noise levels ranged from 0-3 dBA. A determination of noise barrier reasonableness will be discussed in the final environmental document.

The Build Alternate would yield an increase in traffic volumes as a result of the increased capacity of the additional travel lanes. As was the case with the No-build Alternate, each of the eight NSAs will exceed the FHWA's noise abatement criteria for Category B activities and exceed ambient levels from 2 to 8 dBA (see Table 6). Design year L_{eq}s will range between 71 dBA and 79 dBA.

Barrier A

Barrier A is located to the east of I-270 and south of Democracy Boulevard. This barrier will provide protection for the residences in the communities of Stratton Commons (NSAs 5 and 6) and Stratton Woods (NSA 7). See Figure 9 for the corresponding noise area evaluated in this barrier analysis.

Barrier A begins approximately 40 feet north of the westbound lanes of I-495 and approximately five feet inside the right-of-way line parallel to the northbound roadway until it reaches the nose of the I-270 northbound exit ramp to eastbound Democracy Boulevard. At this point, the barrier transitions from its location near the right-of-way line to near the edge of the previously mentioned ramp. The barrier maintains a position of five feet outside the shoulder of this ramp before terminating some 80 feet east of the ramp's connection to Democracy Boulevard.

The total length of the barrier is 4,344 feet, with an average wall height of 16 feet. It should be noted that two sections along I-270 totaling approximately 700 feet will require a significant amount of fill necessary to maintain a continuous top of wall elevation. One of these areas is roughly located between Barnett Road and Grubby Thicket Way, while the other is situated between the northernmost point of Greentree Road and Derbyshire Lane. Other areas will also require fill, but not as extensive as is required for the two sections described above.

Using a $27 per square foot estimated cost, Barrier A would cost approximately $1,876,608 to construct. Sixty-five residences with projected levels above 67 dBA will receive 5 dBA attenuation from this barrier, 38 of which can be considered "first-row" houses at a cost-per-residence value of approximately $28,871. There is only a two to three dBA increase between the

projected Build and No-build noise levels. The results of the modeling analysis for Barrier A are contained in Table 6.

Barrier B

Barrier B is located to the west of I-270 just south of Democracy Boulevard. This barrier will provide protection for the community of Wildwood Hills (NSA 1) or, more specifically, the residences adjacent to Bells Mill Road, Coventry Way and Thomas Branch Drive. Also see Figure 9 for the corresponding noise area evaluated in this barrier analysis.

Barrier B begins 30 feet behind the shoulder at the beginning of the on-ramp connecting eastbound Democracy Boulevard to southbound I-270. It continues southward at this distance for approximately 200 feet and parallels the right-of-way line at an offset of 10 feet. The barrier remains at this distance from the right-of-way line for about 1,600 feet before terminating.

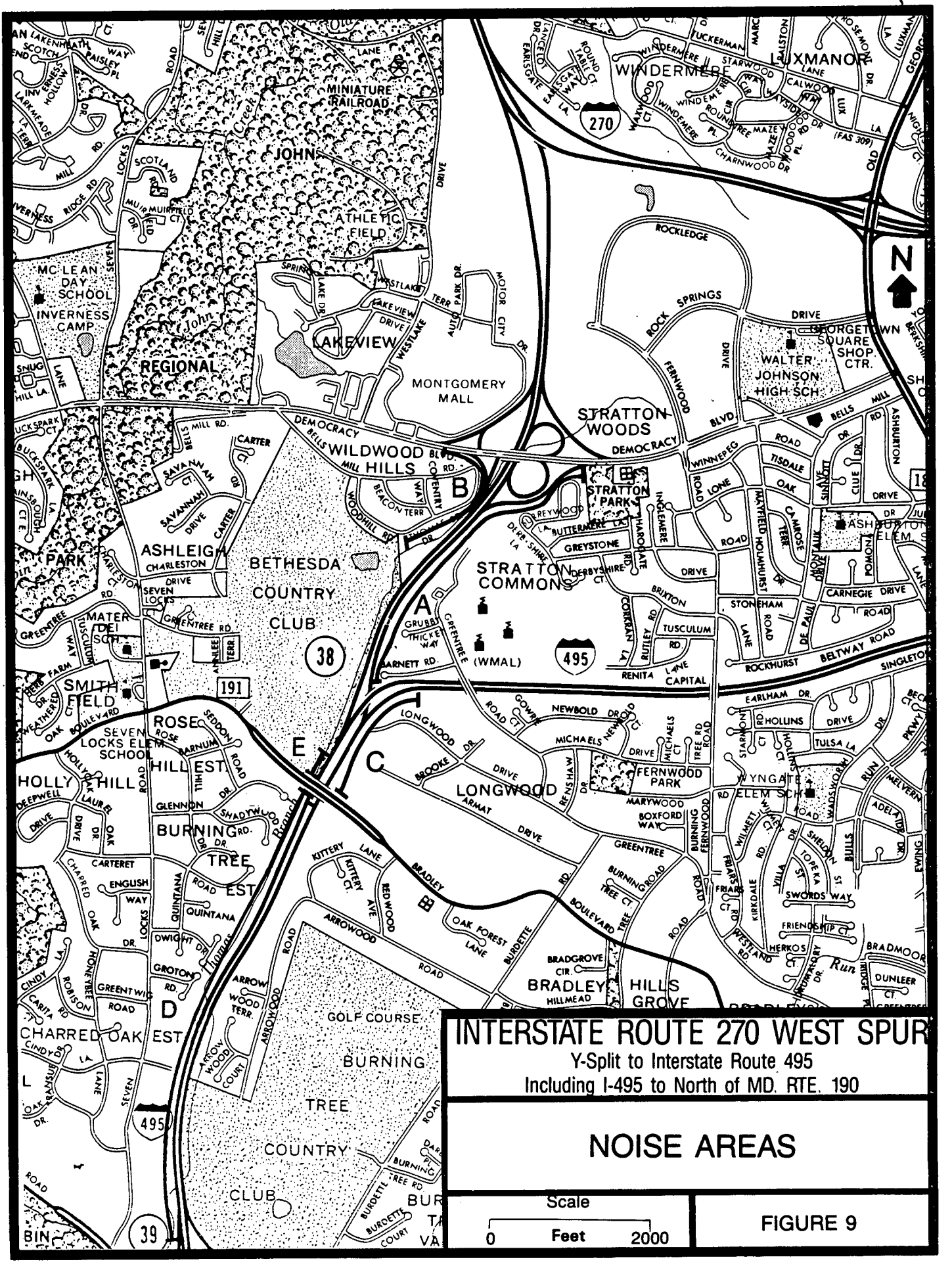
The total length of Barrier B is 1,794 feet with an average height of 16.6 feet. This barrier would cost approximately $802,278 to construct. Nine residences with projected levels above 67 dBA will receive a 5 dBA attenuation from this barrier at a cost-per-residence of $89,142. Of these nine residences, eight are considered "first row" houses. There is only a 2 dBA increase between the projected Build and No-build noise levels. The modeling results for Barrier B which include future-year L_{eq}s both with and without the barrier as well as associated insertion losses (IL) are contained in Table 6. Decisions on barrier reasonability will be made at a future date.

Barrier C

Barrier C is located immediately northeast of Bradley Boulevard and southeast of the Y-split created between I-270 and I-495. This barrier will provide protection for the community of Longwood (NSA 4), including those residences lying just north of Bradley Boulevard and east of I-270 (NSA 3). Also see Figure 9 for the corresponding noise area evaluated in this barrier analysis.

Barrier C's point of origin is adjacent to the westbound lanes of Bradley Boulevard approximately 168 feet east of the structure carrying this particular roadway over I-270. The barrier heads westward before making a 90 degree turn at the I-270 right-of-way line and heading in a northerly direction for 1,986 feet at a distance of five feet from the right-of-way line.

For this barrier to bring the design year noise levels below the 67 dBA criteria, the height of the barrier would have to be 24 feet above the existing


INTERSTATE ROUTE 270 WEST SPUR
Y-Split to Interstate Route 495
Including I-495 to North of MD. RTE. 190
NOISE AREAS
Scale
0 Feet 2000
FIGURE 9
N
A
B
C
D
E
270
495
191
38
39
WINDERMERE
LUXMANOR
MINIATURE RAILROAD
ATHLETIC FIELD
JOHN
MC LEAN DAY SCHOOL
INVERNESS CAMP
REGIONAL
LAKEVIEW
MONTGOMERY MALL
STRATTON WOODS
WALTER JOHNSON HIGH SCH
GEORGETOWN SQUARE SHOP. CTR.
WILDWOOD MILL HILLS
STRATTON PARK
STRATTON COMMONS
ASHLEIGH
BETHESDA COUNTRY CLUB
PARK
MATER DEI SCH.
SMITH FIELD
SEVEN LOCKS ELEM. SCHOOL
HOLLY HILL ESTATES
BURNING TREE ESTATES
CHARRED OAK ESTATES
FERNWOOD PARK
LONGWOOD
WYNGATE ELEM SCH
BRADLEY HILLS
GOLF COURSE
BURNING TREE COUNTRY CLUB
(WMAL)
DEMOCRACY BLVD.
BELTWAY ROAD
ROCKVILLE PIKE
ROCKLEDGE
ROCK SPRINGS DRIVE
FERNWOOD DRIVE
BELLS MILL ROAD
ASHBURTON ELEM SCH
SEVEN LOCKS ROAD
TUCKERMAN LANE
WINDEMERE
STARWOOD LANE
CALWOOD WAY
WAYSIDE ROAD
CHARNWOOD DR
OLD GEORGETOWN ROAD
MOTOR CITY DR
AUTO PARK DR
WESTLAKE TERR
LAKEVIEW DRIVE
SPRINGLAKE DR
MILL ROAD
CARTER ROAD
SAVANNAH DRIVE
BEACON TERR
WOODHILL RD
GREENTREE ROAD
CHARLESTON DRIVE
ASHLEE TERR
TUSCULUM WAY
GREENTREE RD
BARNETT RD
GRUBB
THICKET WAY
GREENTREE ROAD
BUTTERMERE CT
GREYSTONE
HAROLD TERR
INGLEMERE
DERBYSHIRE CT
DERBYSHIRE RD
DRIVE
BRIXTON
RUTLEY RD
CORRAN LA
TUSCULUM RD
RENITA LANE
CAPITAL
STONEHAM ROAD
DE PAUL DRIVE
MAYFIELD HOLMHURST
CAMROSE TERR
POMONA DRIVE
CARNEGIE DRIVE
ROCKHURST ROAD
SINGLETON
NEWBOLD DR
GOWRIE ROAD CT
MICHAELS DRIVE
TREE RD
LONGWOOD DR
BROOKE DRIVE
RENSHAW DR
MARYWOOD
BOXFORD WAY
ARMAT DRIVE
GREENTREE
BURNING TREE ROAD
BRADLEY BOULEVARD
KITTERY LANE
REDWOOD AVE
OAK FOREST LANE
BURDETTE ROAD
ARROWOOD ROAD
ARROWOOD TERR
ARROWOOD COURT
BRADGROVE CIR.
HILLMEAD
EARLHAM DR
RHOLLINS DRIVE
TULSA LA
WILMETT RD
TOPEKA ST
SHERIDAN ST
SWORDS WAY
FRIENDSHIP CT
HERKOS CT
BRADMOOR
DUNLEER CT
FRIARS RD
KIRKDALE
WESTLAND RD
ADELAIDE DR
BULLS RUN
MELVERN
EWING
SEVEN LOCKS ROAD
SCOTLAND RD
MUIRFIELD CT
MUIRFIELD DR
RIDGE RD
MILL LA
SNUG HILL LA
BUCKSPARK CT
SAVANNAH CT
CARLETON RD
FARM DR
FEATHERED OAK CT
OAK BOULEVARD
SEDDON ROAD
ROSE
BARNUM ROAD
HOLLYOAK ROAD
DEEPWELL DR
LAUREL DRIVE
GLENNON DR
SHADYWOOD DR
BURNING TREE DR
CARTERET
ENGLISH WAY
QUINTANA ROAD
DWIGHT DR
GROTON RD
GREENWICH ROAD
CINDY LA
ROBISON
CARITA RD
OAK RAMSUR DR
SEVEN LOCKS
LANE
BIN
ROAD

ground level. With the total barrier length being 2,154 feet, the cost of construction would be approximately $1,395,792. This wall would provide at least 5 dBA protection to a total of 16 residences with projected levels about 67 dBA, six of which are "first row" houses at a cost-per-residence of approximately $87,237. There is only a 0 to 1 dBA increase between the projected Build and No-build noise levels. Table 6 contains the modeling results for the NSAs protected by Barrier C. Decisions on noise barrier reasonability will be made at a future date.

Barrier D

Barrier D is located immediately west of I-495 between Bradley Boulevard and River Road. This barrier will provide protection for the residences in the communities of Rose Hill Estates, Burning Tree Estates, and Charred Oak Estates (including NSA 2). This barrier extends south to River Road past the project limits, because this constitutes logical barrier termini. Information from a supplemental noise barrier analysis for I-495 (December 1986) has been incorporated into the barrier analysis done for this project for noise area D. Also see Figure 9 for the corresponding noise area evaluated in this barrier analysis.

Barrier D is 6,493 feet in total length. The barrier begins 370 feet west of I-495 and runs parallel to the eastbound lanes of Bradley Boulevard before turning 90 degrees to the south. The barrier follows along the I-495 southbound lanes, five feet from the edge of the shoulder, for the remaining length. This barrier would not result in any disturbances to Thomas Branch.

For this barrier to decrease future noise levels generated under the Build Alternate below FHWA criteria, the segment along the mainline would average 17 feet in height. With this average height of 17 feet, Barrier D would cost approximately $3,257,000 to construct. Forty-four residences with projected levels above 67 dBA would receive at least a 5 dBA reduction, with the cost-per-residence being approximately $74,030. There is a 1-3 decibel increase between the projected Build and No-Build noise levels. The results of Barrier D's modeling analysis are contained in Table 6. Decisions on the reasonability of noise mitigation will be made at a future date.

Barrier E

Barrier E is located immediately west of I-270/I-495 and north of Bradley Boulevard. This barrier will provide protection for the residences along Bradley Boulevard in the Bethesda Cresent Townhouses (NSA 8). Also see Figure 9

for the corresponding noise area evaluated in the barrier analysis.

Barrier E is 564 feet in total length. The barrier begins 40 to 50 feet west of I-270 and runs eastward, paralleling the westbound lanes of Bradley Boulevard before turning north. The barrier then follows along the I-270 southbound lanes along the shoulder for the remaining 524 feet.

For this barrier to bring design year noise levels below FHWA criteria, the entire barrier would need to be 20 feet in height and cost approximately $304,749 to construct.

Six residences, one of which is "first row" with projected levels about 67 dBA would receive at least a 5 dBA reduction, with the cost-per-residence being approximately $50,792. Also, there is only an increase of 0 to 1 dBA between the Build and No-build noise levels at five of the six residences. The results of Barrier E's modeling analysis are contained in Table 6. Decisions on noise barrier reasonability would be made at a future date.

2. Construction Impacts

An increase in project area noise levels would occur during the construction of the Alternate 2 widening. Construction noise differs significantly from that generated by normal traffic due to its unusual spectral and temporal nature. The actual level of noise impact during this period will be a function of the number and types of equipment being used, as well as the overall construction procedure. Controls on construction noise will comply with Montgomery County regulations.

G. Air Quality

1. Analysis Objectives, Methodology, and Results

The objective of the air quality analysis is to compare the carbon monoxide (CO) concentrations estimated to result from traffic configurations and volumes of each alternate with the State and National Ambient Air Quality Standards (S/NAAQS). The NAAQS and SAAQS are identical for CO: 35 ppm (parts per million) for the maximum 1 hr. period and 9 ppm for the maximum consecutive 8-hour period.

A microscale CO pollution diffusion analysis was conducted using the third generation California Line Source Dispersion Model, CALINE 3. This microscale analysis consisted of projections of 1-hour and 8-hour CO concentrations at sensitive receptor sites under worst case meteorological conditions for the No-build and Build Alternates for the design year (2010) and the estimated year of

completion (1990).

a. Analysis Inputs

A summary of analysis inputs is given below. More detailed information concerning these inputs is contained in the I-270 West Spur Air Quality Analysis which is available for review at the Maryland State Highway Administration, 707 North Calvert Street, Baltimore, Maryland 21202.

Background CO Concentrations

In order to calculate the total concentrations of CO which occurs at a particular receptor site during worst case meteorological conditions, the background CO concentrations are considered in addition to the levels directly attributable to the facility under consideration. The background concentrations were derived from the application of rollback methodology to background grid system CO concentrations calculated by the Metropolitan Washington Council of Governments as part of their air quality planning efforts.

The resulting background concentrations are as follows:

	CO, ppm	
	1 Hr.	8 Hr.
1990	1.6	1.0
2010	1.6	1.0

Traffic Data, Emission Factors, and Speeds

The appropriate traffic data was utilized as supplied by the Bureau of Highway Statistics (October 1986) of the Maryland State Highway Administration.

The composite emission factors used in the analysis were derived from the Environmental Protection Agency (EPA) Mobile Source Emission Factors and were calculated using the EPA MOBILE 3 computer program. An ambient air temperature of 20 degrees F was assumed in calculating the emission factors for the 1-hour, and 35 degrees F for the 8-hour analysis. Credit for a vehicle inspection maintenance (I/M) emission control program was included in the emission factor calculations.

Average vehicle operating speeds used in calculating emission factors were based on the capacity of each roadway link considered, the applicable speed limit, and external influences on speed through the link from immediately adjacent links. Average operating speeds ranged from 25 mph to 55 mph depending upon the roadways and alternate under consideration.

Meteorological Data

Worst case meteorological conditions of 1 meter/second for wind speed and atmospheric stability Class F were assumed for the 1-hour calculations. For the 8-hour analysis, a combination of 1 meter/second and 2 meter/second and Class D and F stability classes was utilized as appropriate. In addition, as stated above, worse-case temperatures of 20 degrees F and 35 degrees F, respectively, were assumed.

The wind directions utilized as part of the analysis were rotated to maximize CO concentrations at each receptor location. Wind directions varied for each receptor and were selected through a systematic scan of CO concentrations associated with different wind angles.

b. Sensitive Receptors

Site selection of sensitive receptors were made on the basis of proximity to the roadway, type of adjacent land use, and changes in traffic patterns on the roadway network. Eight receptor sites were chosen for this analysis, all of which are residences. The receptor site locations were verified during study area visits by the analysis team. The receptor sites are shown on Figures 7a through 7c and listed in Table 7.

c. Results of Microscale Analysis

The results of the calculations of CO concentrations at each of the sensitive receptor sites for the No-build and Build Alternates are shown in Table 8. The values shown consist of predicted CO concentration attributable to traffic on various roadway links plus projected background levels. A comparison of the values in Table 8 with the S/NAAQS shows that no violations will occur for the No-build or Build Alternates in 1990 or 2010 for the 1-hour or 8-hour concentrations of CO. The projected CO concentrations vary between alternates depending on receptor locations as a function of the roadway locations and traffic patterns associated with each alternate.

The No-build Alternate results in the highest CO concentrations in 1990 and 2010. The concentrations remain well below the S/NAAQS for all alternates under consideration.

In conclusion, the No-build Alternate and Build Alternate will not result in violations of the 1-hour or 8-hour S/NAAQS in 1990 or 2010. The concentrations remain well below the S/NAAQS for both alternates under consideration.

TABLE 7

AIR RECEPTOR SITES

RECEPTOR SITE NO.	DESCRIPTION
1	Thomas Branch Drive
2	Glennen Avenue
3	Bradley Boulevard
4	Longwood Drive
5	Grubby Thicket Drive
6	Greentree Road
7	Derbyshire Lane
8	Bradley Boulevard

TABLE 8

CO CONCENTRATIONS * AT EACH RECEPTOR SITE, PPM

	1990				2010			
	NO-BUILD		BUILD		NO-BUILD		BUILD	
RECEPTOR #	1-HR.	8 HR.	1-HR.	8-HR.	1-HR.	8-HR.	1-HR.	8-HR.
1	3.2	1.3	2.5	1.4	3.9	1.5	3.9	1.5
2	4.7	2.0	3.5	2.1	8.3	2.2	5.6	2.4
3	4.9	1.7	3.2	1.7	7.4	2.1	5.1	2.0
4	5.0	1.7	3.3	1.7	8.4	2.0	5.5	1.9
5	4.7	1.4	2.9	1.3	6.3	1.5	5.2	1.5
6	4.4	1.3	3.0	1.3	5.7	1.3	5.2	1.5
7	3.3	1.3	2.4	1.3	4.0	1.4	3.7	1.4
8	4.8	1.6	3.1	1.7	8.0	1.9	5.4	2.0

*Including Background Concentrations: 1-HR. = 1.6 PPM 1990, 2010
8-HR. = 1.0 PPM 1990, 2010

The SAAQS/NAAQS for CO: 1 HR. = 35 PPM
8 HR. = 9 PPM

2. Construction Impacts

The construction phase of Alternate 2 has the potential of impacting the ambient air quality through such means as fugitive dust from grading operations and materials handling. The State Highway Administration has addressed this possibility by establishing Specifications for Materials, Highways, Bridges and Incidental Structures which specifies procedures to be followed by contractors involved in state work.

The Maryland Bureau of Air Quality Control was consulted to determine the adequacy of the Specifications in terms of satisfying the requirements of the Regulations Governing the Control of Air Pollution in the State of Maryland. The Maryland Bureau of Air Quality Control found that the Specifications are consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland Regulations 10.18.06.03D) will be taken to minimize the impact on the air quality of the area.

3. Conformity with Regional Air Quality Planning

The project is in an air quality nonattainment area which has transportation control measures in the State Implementation Plan (SIP). This project conforms with the SIP since it originates from a conforming transportation improvement program.

4. Agency Coordination

Copies of the technical Air Quality Analysis are being circulated to the U.S. Environmental Protection Agency and the Maryland Air Management Administration for review and comment.

V. Comments and Coordination

Coordination has been undertaken and is ongoing with the appropriate resource agencies, including the Maryland Historical Trust, Maryland Geological Survey, Maryland Department of Natural Resources, and the U.S. Fish and Wildlife Service.

Maryland Historical Trust

April 4, 1986

Ms. Cynthia D. Simpson, Chief
Environmental Management
MDOT-SHA
707 N. Calvert Street
P. O. Box 717
Baltimore, MD 21203

RE: Interstate Route 270
Y-Split to I-495
Contract M 401-154-372

Dear Ms. Simpson:

Thank you for your letter of Oct. 25, 1985 concerning the above-referenced project.

This office concurs with the opinion that both the Davis Farm (M 30/19) and Wild Acres, the Grosvenor Estate (M 30/15) are inventory quality properties, not eligible for National Register inclusion.

We appreciate your cooperation.

Sincerely,

George J. Andreve

George J. Andreve
Environmental Review Administrator

GA/AL/mc
CC: Ms. Mary Ann Kephart
Ms. Roberta Hahn
Mr. Mark Walston

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 269-2212, 269-2438, 269-2850
Department of Economic and Community Development Admin. S & P TPS

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BUREAU OF
PROJECT PLANNING

JAN 17 9 28 AM '86

TORREY C. BROWN, M.D.
SECRETARY

JOHN R. GRIFFIN
DEPUTY SECRETARY

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
MARYLAND GEOLOGICAL SURVEY
THE ROTUNDA
711 W. 40TH STREET, SUITE 440
BALTIMORE, MARYLAND 21211

KENNETH N. WEAVER
DIRECTOR
MARYLAND GEOLOGICAL SURVEY

EMERY T. CLEAVES
DEPUTY DIRECTOR

Division of Archeology
338-7236

16 January 1986

Mr. Louis H. Ege, Jr.
Bureau of Project Planning
State Highway Administration
P.O. Box 717/707 North Calvert Street
Baltimore, Maryland 21203-0717

RE: I-270 - Montgomery County

Dear Mr. Ege:

I have reviewed the subject project relative to archeological resources. There is one reported site near the project area as depicted on the attached map. Site 18M063 is represented by five Late Archaic/Early Woodland quartz projectile points collected from the site by a previous owner.

Three transects surveyed during the MDOT study include portions of the present study area. All three (Transects #12-005, 12-010, 12-011) failed to locate any archeological resources. In general, the archeological potential of this area is considered moderate. However, extensive land-disturbing operations (road and housing construction, primarily) have effectively diminished the potential for intact sites in most of the project area.

If I can be of further assistance on this matter, please let me know.

Sincerely yours,

Dennis C. Curry

Dennis C. Curry
Archeologist

DCC:lw

cc: Cynthia Simpson
Rita Suffness

Attachment

TELEPHONE: 301-338-7066

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Maryland Historical Trust

January 16, 1987

Mr. Louis H. Ege, Jr.
Deputy Director
Project Development Division
State Highway Administration
P O Box 717
707 North Calvert Street
Baltimore, Maryland 21203-0717

RE: Contract No. M401-154-372
I-270 West Segment from the Y-Split to I-495
PDMS No. 151104
Montgomery County, Maryland

Dear Mr. Ege:

Construction of the above-referenced project will have no effect upon significant archeological resources.

Sincerely,

Richard B. Hughes

Richard B. Hughes
State Administrator of Archeology

RBH/BCB/mmc
cc: Mr. Tyler Bastian
Ms. Rita Suffness
Ms. Mary Ann Kephart
Ms. Roberta Hahn

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 269-2212, 269-2438, 269-2850
Department of Economic and Community Development Admin. S & P TPS

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TORREY C. BROWN, M.D.
SECRETARY
JOHN R. GRIFFIN
DEPUTY SECRETARY

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

FRED L. ESKEW
ASSISTANT SECRETARY
FOR CAPITAL PROGRAMS

February 20, 1986

Mr. Louis H. Ege, Jr.
Maryland Dept. of Transportation
State Highway Administration
P.O. Box 717
707 North Calvert Street
Baltimore, MD 21203-0717

Dear Mr. Ege:

The Heritage Program's data base indicates that no rare species, unusual community, or other significant natural feature has been reported from the site of planned highway expansion on I-270 as delineated in your letter of January 31, 1986.

Species and habitats of special concern to the State are listed and discussed in the following 1984 Department of Natural Resources publication: Threatened and Endangered Plants and Animals of Maryland, available through this office. A site evaluation should include a consideration of these species and their habitats.

Sincerely,

Jonathan A. McKnight
Maryland Natural Heritage Program

JAM:mcs

TELEPHONE: (301) 269-3656
TTY FOR DEAF-BALTIMORE 269-2609. WASHINGTON METRO 565-0450

DEPARTMENT OF NATURAL RESOURCES
Maryland Forest, Park & Wildlife Service
TAWES OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401

TORREY C. BROWN, M.D.
SECRETARY

DONALD E. MacLAUCHLAN
DIRECTOR

February 20, 1986

BUREAU OF
PROJECT PLANNING
FEB 24 9 49 AM '86

Ms. Cynthia D. Simpson, Chief
Environmental Management
Department of Transportation
P.O. Box 717
707 North Calvert Street
Baltimore, Maryland 21203-0717

RE: Contract No. M401-102-372
I-270 West Segment from Y-Split
to South of Maryland Route 191
and I-495 between I-270 east and
west Segments in Montgomery Co.
P.D.M.S. NO. 151104

Dear Ms. Simpson:

Your request for any information we may have concerning threatened or endangered species was reviewed by Gary J. Taylor.

There are no known populations of threatened or endangered species within the area of project influence in Montgomery County.

Sincerely,

James Burtis, Jr.
Assistant Director

JB:emp

cc: G. Taylor
C. Brunori

Telephone 269-3776
TTY FOR DEAF: STATEWIDE 1-800-492-5062; BALTIMORE 269-2609

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United States Department of the Interior

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PROJECT PLANNING
FEB 19 7 38 AM '86

FISH AND WILDLIFE SERVICE
DIVISION OF ECOLOGICAL SERVICES
1825B VIRGINIA STREET
ANNAPOLIS, MARYLAND 21401

February 13, 1986

Ms. Cynthia D. Simpson, Chief
Environmental Management
Maryland Department of Transportation
P.O. Box 717
707 North Calvert Street
Baltimore, Maryland 21203-0717

Dear Ms. Simpson:

This responds to your February 3, 1986 request for information on the presence of Federally listed endangered or threatened species within the area of the proposed improvements to I-270 and I-495, Montgomery County, Maryland (P.D.M.S. No. 151104).

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species are known to exist in the project impact area. Therefore, no Biological Assessment or further Section 7 Consultation is required with the Fish and Wildlife Service (FWS). Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to endangered species under our jurisdiction. It does not address other FWS concerns under the Fish and Wildlife Coordination Act or other legislation.

Thank you for your interest in endangered species. If you have any questions or need further assistance, please contact Judy Jacobs of our Endangered Species staff at (301) 269-6324.

Sincerely yours,

G. A. Moore

for Glenn Kinser
Supervisor
Annapolis Field Office

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