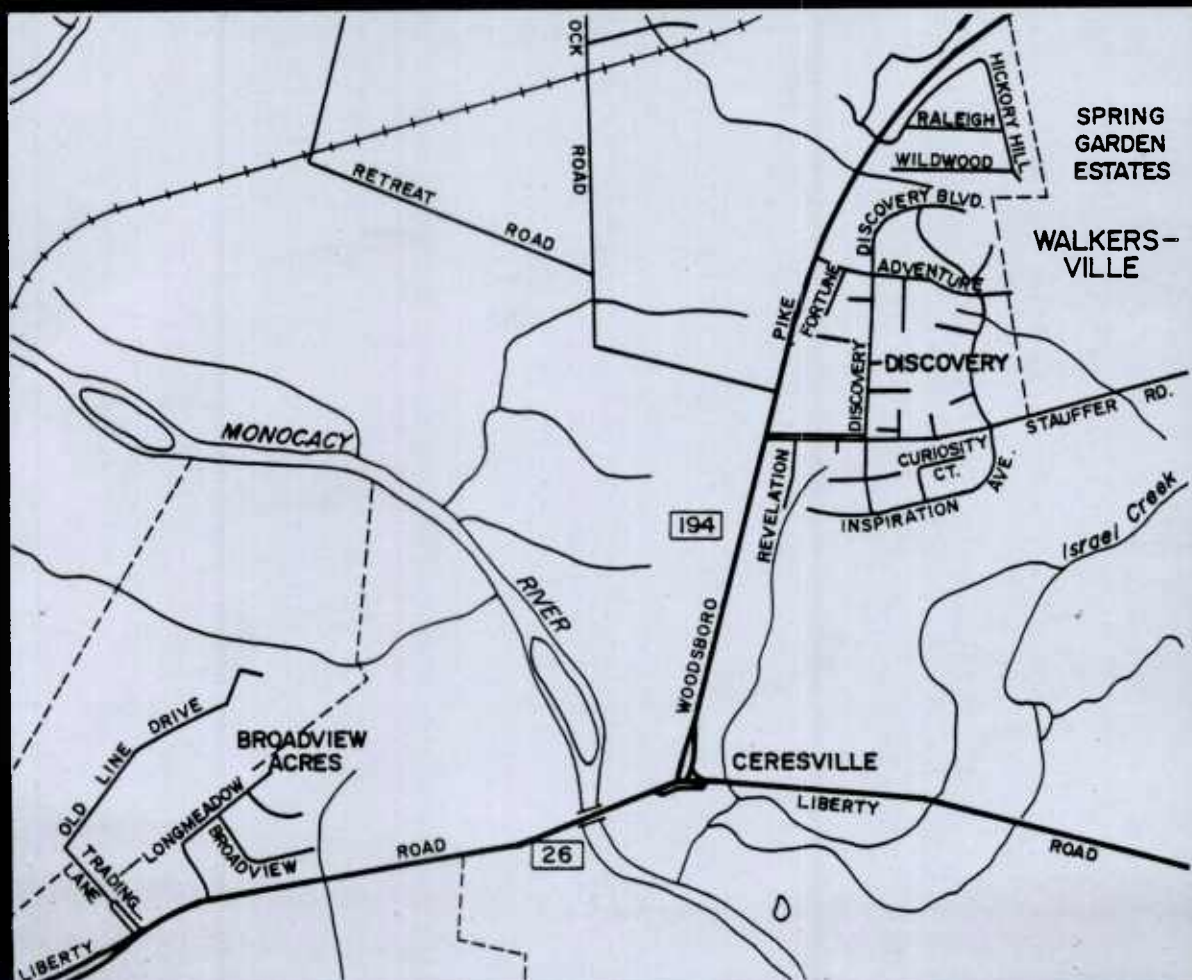


ENVIRONMENTAL ASSESSMENT SECTION/4(f) EVALUATION

Contract No. F-174-101-771

MARYLAND ROUTE 26 TO THE SOUTH
END OF THE WALKERSVILLE BYPASS
FREDERICK COUNTY, MARYLAND



prepared by
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

and
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

FHWA-MD-EA-88-05-D

Region III

Maryland Routes 26 and 194 Dualization
from Trading Lane at Maryland 26 to the
Southern end of the Walkersville Bypass along Maryland Route 194

ENVIRONMENTAL ASSESSMENT

and

SECTION 4(f) EVALUATION

U.S. Department of Transportation

Federal Highway Administration

and

Maryland Department of Transportation

State Highway Administration

SUBMITTED PURSUANT TO: 42 U.S.C. 4332(2) (C) and 49 U.S.C. 303 (c)

CEQ REGULATIONS (40 CFR 1500 et seq)

Date

10/5/88

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

Date

10/24/88

Herman Rodriguez
FOR Federal Highway Administration
Division Administrator



**Maryland Department of Transportation
State Highway Administration**

Richard H. Trainor
Secretary
Hal Kassoff
Administrator

October 31, 1988

Contract F 174-101-771
MD 26/194 from
end of MD 26 divided to MD 194 at
the Walkersville Bypass
PDMS No. 103155

Environmental Assessment/Section 4(f) Evaluation

Transmitted for your review and comment is a copy of the subject document. The document has been prepared in accordance with the CEQ Regulations, DOT Order 5610.1c, and 23 CFR 771.

You are requested to provide comment on or before December 6, 1988 to:

Mr. Louis H. Ege, Jr., Deputy Director
Project Development Division (Room 506)
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202

All responses will be considered in developing the final document.

Very truly yours,

Neil J Pedersen

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

NJP:vw
Attachments

cc: Mr. Louis H. Ege, Jr.
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4

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Frederick, Maryland 21701

The Honorable Orley Bourland, Jr.
Burgess of Walkersville
Frederick County
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Walkersville, Maryland 21793

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Summary

SUMMARY

1. Administrative Action

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

2. Additional Information

Additional information concerning the proposed project may be obtained from:

Mr. Louis H. Ege, Jr.,
 Deputy Director
 Project Development Division
 State Highway Administration
 Room 310
 707 North Calvert Street
 Baltimore, Maryland 21202
 Phone: (301) 333-1130
 Hours: 8:15 AM to 4:15 PM

Mr. Herman Rodrigo
 Planning, Research, Environmental
 and Safety Engineer
 Federal Highway Administration
 The Rotunda-Suite 220
 711 West 40th Street
 Baltimore, Maryland 21211
 Phone: (301) 962-4132
 Hours: 7:30 AM to 4:00 PM

3. Description of Action

The proposed project consists of upgrading and widening existing MD Route 26 and MD Route 194 from the end of divided highway on MD Route 26 to MD Route 194 at the southern end of the Walkersville Bypass in Frederick County, Maryland. A parallel bridge would also be constructed over the Monocacy River.

4. Summary of Alternates

Alternate 1 (No-Build)

Under the No-Build Alternate, the MD Route 26/MD Route 194 corridor would basically remain as it is today. Normal maintenance and safety improvements would be performed as they become necessary. This alternate would not offer any improvements in traffic operation safety or capacity. No long range improvements would be done and the current congestion problems would be expected to increase. The No-Build Alternate is not considered to be a reasonable solution to traffic congestion.

Alternate 2

Alternate 2 would consist of a four lane divided highway with a 34 foot median and shoulders. Existing MD Route 26 would be used as the westbound lanes of the dualization while the eastbound lanes would be built on new alignment. Existing MD Route 194 would be used as the southbound lanes of the dualization with the northbound roadway on new alignment. No access to MD Route 26 and MD Route 194 would be permitted except at designated public roadways. Access to the properties along the highways would be provided by way of existing local

streets and service roads. Additional right-of-way would be required on the north side of MD Route 26 and the west side of MD Route 194 to provide safety grading, to improve vertical geometry and to provide service roads.

Alternate 3

Alternate 3 would consist of a four lane divided highway with a 58 foot median. Existing MD Route 26 would be used as the westbound lanes of the dualization and existing MD Route 194 would be used as the southbound lanes of the dualization. No access to MD Route 26 and MD Route 194 would be permitted except at designated public roadways. Access to the properties along the highways would remain as it is today except where unsafe conditions exist or be provided via service roads. Additional right-of-way is required for the construction of service roads.

Impact Summary

An evaluation of the study area was conducted to identify environmentally sensitive areas. The proposed alternates have been evaluated to determine their potential environmental effects. A summary of these potential environmental impacts has been divided into two major categories: socioeconomic and natural environment.

Socioeconomic

The existing land use in the study area is predominately agricultural with a concentration of residential, institutional and minor commercial uses.

The proposed improvements would require the displacement of two businesses, a gasoline station and the office of a general contractor.

The Maryland Historical Trust and State Archeologist have been consulted to identify any historic or archeological resources affected by the project. Alternates 2 and 3 would affect historic sites. Coordination with the Trust to determine the effects of each alternate on historic resources has been completed.

A Section 4(f) Evaluation for Dearbought, Houck-Lynch House, Pikes View and the N. Cramer House is included as part of this report.

Natural Environment

There are no known populations of threatened or endangered species in the study area. Floodplain impacts would be minor. In addition, Alternate 2 would impact .5 acre of floodplain and Alternate 3 would impact .6 acre of floodplain.

Wetland impacts associated with either Build Alternate total .47 acre.

Alternate 2 and 3 would affect 20.98 acres and 23.47 acres of Prime Farmland respectively. Air quality would not be affected by the proposed Build Alternates. Noise quality would be affected by the proposed Build Alternates. Thirteen sensitive receptors were selected for monitoring and analysis. Impacts to air and noise quality are discussed in Section IV.

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Thirteen sensitive receptors were selected for monitoring and analysis. Impacts to air and noise quality are discussed in Section IV.

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.

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ENVIRONMENTAL ASSESSMENT FORM (EAF)

| | <u>YES</u> | <u>NO</u> | <u>COMMENTS</u> |
|---|---------------|---------------|-----------------------|
| A. Land Use Considerations | | | |
| 1. Will the action be within the 100 year flood plain? | <u>X</u> | <u> </u> | <u>Section IV.E.2</u> |
| 2. Will the action require a permit for construction or alteration within the 50 year flood plain? | <u> </u> | <u>X</u> | <u> </u> |
| 3. Will the action require a permit for dredging, filling, draining, or alternation of a wetland? | <u>X</u> | <u> </u> | <u>Section IV.4.b</u> |
| 4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil? | <u> </u> | <u>X</u> | <u> </u> |
| 5. Will the action occur on slopes exceeding 15%? | <u> </u> | <u>X</u> | <u> </u> |
| 6. Will the action require a grading plan or a sediment control permit? | <u>X</u> | <u> </u> | <u>Section IV.2</u> |
| 7. Will the action require a mining permit for deep or surface mining? | <u> </u> | <u>X</u> | <u> </u> |
| 8. Will the action require a permit for drilling a gas or oil well? | <u> </u> | <u>X</u> | <u> </u> |
| 9. Will the action require a permit for airport construction? | <u> </u> | <u>X</u> | <u> </u> |
| 10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices? | <u> </u> | <u>X</u> | <u> </u> |
| 11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland? | <u> </u> | <u>X</u> | <u> </u> |
| 12. Will the action affect the use of any natural or man-made features that are unique to the County, State, or Nation? | <u> </u> | <u>X</u> | <u> </u> |

| | <u>YES</u> | <u>NO</u> | <u>COMMENTS</u> |
|---|------------|-----------|---|
| 13. Will the action affect the use of an archeological or historical site or structure? | <u>X</u> | _____ | <u>Section IV.D</u> <u>Section IV.H.</u> |
| B. Water Use Considerations | | | |
| 14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water? | _____ | <u>X</u> | _____ |
| 15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction? | _____ | <u>X</u> | _____ |
| 16. Will the action change the overland flow of storm water or reduce the absorption capacity of the ground? | <u>X</u> | _____ | <u>Section IV.F.3</u> |
| 17. Will the action require a permit for the drilling of a water well? | _____ | <u>X</u> | _____ |
| 18. Will the action require a permit for water appropriation? | _____ | <u>X</u> | _____ |
| 19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water? | _____ | <u>X</u> | _____ |
| 20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives? | _____ | <u>X</u> | _____ |
| 21. Will the action result in any discharge into surface or sub-surface water? | <u>X</u> | _____ | <u>Section IV.E.3</u> |
| 22. If so, will the discharge affect ambient water quality limits or require a discharge permit? | _____ | <u>X</u> | _____ |

| | <u>YES</u> | <u>NO</u> | <u>COMMENTS</u> |
|---|-------------|-------------|-----------------------------|
| C. Air Use Considerations | | | |
| 23. Will the action result in any discharge into the air? | <u>X</u> | <u> </u> | <u>Section IV.F.1</u> |
| 24. If so, will the discharge affect ambient air quality limits or produce a disagreeable odor? | <u> </u> | <u>X</u> | <u> </u> |
| 25. Will the action generate additional noise which differs in character or level from present conditions? | <u>X</u> | <u> </u> | <u>Section IV.G</u> |
| 26. Will the action preclude future use of related air space? | <u> </u> | <u>X</u> | <u> </u> |
| 27. Will the action generate any radiological, electrical, magnetic, or light influences? | <u> </u> | <u>X</u> | <u> </u> |
| D. Plants and Animals | | | |
| 28. Will the action cause the disturbance, reduction, or loss of any rare, unique or valuable plant or animal? | <u> </u> | <u>X</u> | <u> </u> |
| 29. Will the action result in the significant reduction or loss of any fish or wildlife habitats? | <u> </u> | <u>X</u> | <u> </u> |
| 30. Will the action require a permit for the use of pesticides, herbicides or other biological, chemical, or radiological control agents? | <u> </u> | <u>X</u> | <u> </u> |
| E. Socio-Economic | | | |
| 31. Will the action result in a pre-emption or division of properties or impair their economic use? | <u> </u> | <u>X</u> | <u> </u> |
| 32. Will the action cause relocation of activities or structures, or result in a change in the population density of distribution? | <u>X</u> | <u> </u> | <u>Section IV.A.1</u> |

| | <u>YES</u> | <u>NO</u> | <u>COMMENTS</u> |
|--|---------------|---------------|---------------------|
| 33. Will the action alter land values? | <u> </u> | <u> X </u> | <u> </u> |
| 34. Will the action affect traffic flow and volume? | <u> X </u> | <u> </u> | <u>Section II.B</u> |
| 35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource? | <u> </u> | <u> X </u> | <u> </u> |
| 36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products? | <u> </u> | <u> X </u> | <u> </u> |
| 37. Is the action in accord with federal, state, regional and local comprehensive or functional plans-including zoning? | <u> X </u> | <u> </u> | <u>Section II.A</u> |
| 38. Will the action affect the employment opportunities for persons in the area? | <u> </u> | <u> X </u> | <u> </u> |
| 39. Will the action affect the ability of the area to attract new sources of tax revenue? | <u> X </u> | <u> </u> | <u>Section IV B</u> |
| 40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere? | <u> </u> | <u> X </u> | <u> </u> |
| 41. Will the action affect the ability of the area to attract tourism? | <u> </u> | <u> X </u> | <u> </u> |

F. Other Considerations

| | | | |
|--|---------------|--------------|---------------|
| 42. Could the action endanger the public health, safety, or welfare? | <u> </u> | <u> X </u> | <u> </u> |
|--|---------------|--------------|---------------|

| | <u>YES</u> | <u>NO</u> | <u>COMMENTS</u> |
|--|---------------|----------------------|---------------------|
| 43. Could the action be eliminated without deleterious affects to the public health, safety, welfare, or the natural environment? | <u>X</u> | <u> </u> | <u>Section II.C</u> |
| 44. Will the action be of statewide significance? | <u> </u> | <u>X</u> | <u> </u> |
| 45. Are there any other plans or actions (Federal, State, County or Private) that, in conjunction with the subject action, could result in a cumulative or synergistic impact on the public health, safety, welfare, or environment? | <u> </u> | <u>X</u> | <u> </u> |
| 46. Will the action require additional power generation or transmission capacity? | <u> </u> | <u>X</u> | <u> </u> |
| G. Conclusion | | | |
| 47. This agency will develop a complete environmental effects report on the proposed action. | <u> </u> | <u>X^a</u> | <u> </u> |

^aThis Environmental Assessment satisfies the requirements of both the National Environmental Policy Act and the Maryland Environmental Policy Act.

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COMPARISON OF ALTERNATES

| Analysis Item | Alternate 1 No-Build | Alternate 2 | Alternate 3 |
|---|-------------------------|-------------|-------------|
| <u>Social Economic</u> | | | |
| 1. Relocation | | | |
| a. Residence | 0 | 0 | 0 |
| b. Business | 0 | 2 | 2 |
| c. Farm | 0 | 0 | 0 |
| 2. Minorities | 0 | 0 | 0 |
| 3. Parkland or recreation area affected | 0 | 0 | 0 |
| 4. Consistent with area land use plans | No | Yes | Yes |
| 5. Historic Sites affected | No | 4 | 3 |
| <u>Natural Environment</u> | | | |
| 1. Number of stream relocations | 0 | 0 | 0 |
| 2. Number of stream crossings | 0 | 1 | 1 |
| 3. Affected threatened or endangered species | 0 | 0 | 0 |
| 4. Acres of prime farmland affected | | 21 | 23.5 |
| 5. 100-year Floodplain impacted | | .5 ac | .6 ac |
| 6. Wetlands affected | 0 | .47 | .47 |
| <u>Noise</u> | | | |
| 1. Number NSA's exceeding abatement criteria or increasing 10 dBA or more over ambient | 0 | * -- | 12 |
| <u>Air Quality</u> | | | |
| 1. CO violations of 1-hour or 8-hour standards | 0 | 0 | 0 |

*The noise analysis was completed for Alternate 3. Alternate 3 represents the worst case improvements.

Section I

**Description of
Proposed Action**

I. DESCRIPTION OF PROPOSED ACTION

A. PROJECT LOCATION

The project limits extend from Trading Lane and MD Route 26 to the south end of the Walkersville Bypass along MD Route 194. Existing MD Route 26 and MD Route 194 are located in Frederick County, Maryland (see Figure 1). MD Route 26 extends from MD Route 15 in Frederick to MD Route 140 in Baltimore. MD Route 194 extends from MD Route 26 in Frederick to Route 94 in Pennsylvania.

B. PROJECT DESCRIPTION

The proposed project consists of upgrading and widening existing MD Route 26 to a four lane divided highway from the end of the dualization of MD Route 26 to MD Route 194; and north along MD Route 194 to the south end of the Walkersville Bypass (see Figure 2). The construction of a parallel bridge over the Monocacy River is also proposed. Access will remain as it exists today except where unsafe conditions warrant service roads. Additional right-of-way would be required.

C. DESCRIPTION OF EXISTING ENVIRONMENT

1. Social Environment

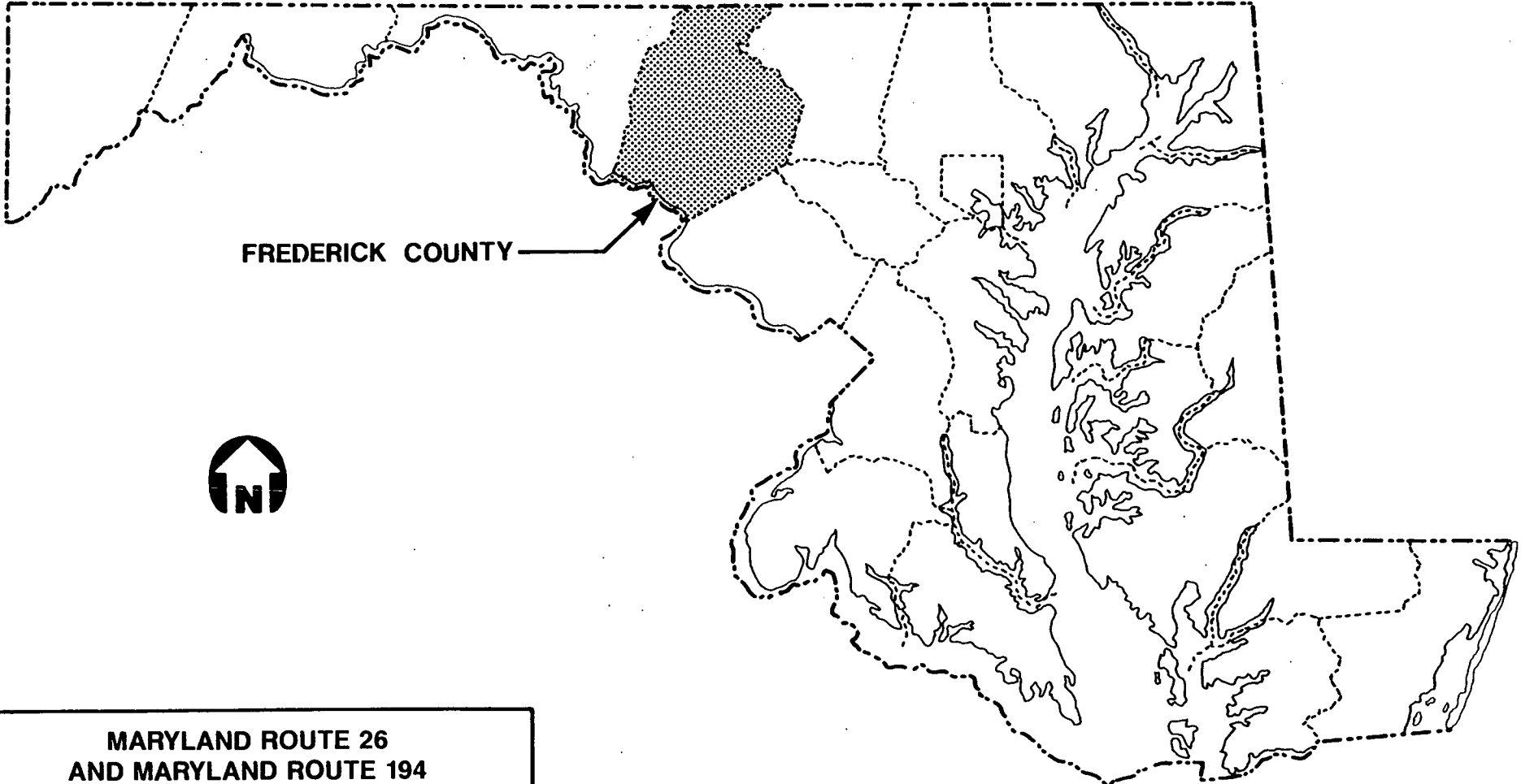
a. Population

According to the U.S. Bureau of the Census, the population of Frederick County increased approximately 35 percent in the period from 1970 to 1980 (from 84,927 to 114,263) and is expected to increase to 149,800 (31 percent) by 1995. This influx was attributable more to in-migration than to natural population increases due to the county's proximity to the Baltimore-Washington employment areas. During this period, Frederick was one of Maryland's fastest growing counties with a rate of population increase nearly five times greater than that of Maryland as a whole. Frederick County's population was ranked seventh among all Maryland counties in 1980.

The Frederick County Planning Commission has designated Walkersville and Frederick as Regional Areas for major development (see Figure 3). The majority of the study area lies within the Walkersville Planning Region, which is located northeast of Frederick City bounded by the Monocacy River to the west and north, the Carroll County line to the north and east, and Linganore Creek to the south.

Prior to 1977, the development in the Walkersville Region was concentrated near the Town of Walkersville. While the total number of housing units increased by 51 percent county-wide between 1970 and 1980, the Walkersville Region experienced a 73 percent increase, expanding the towns of Woodsboro, Libertytown, Unionville and others.

A small portion of the study area lies within the Frederick Planning Region, centrally located in the county. It is bounded on the north by Little

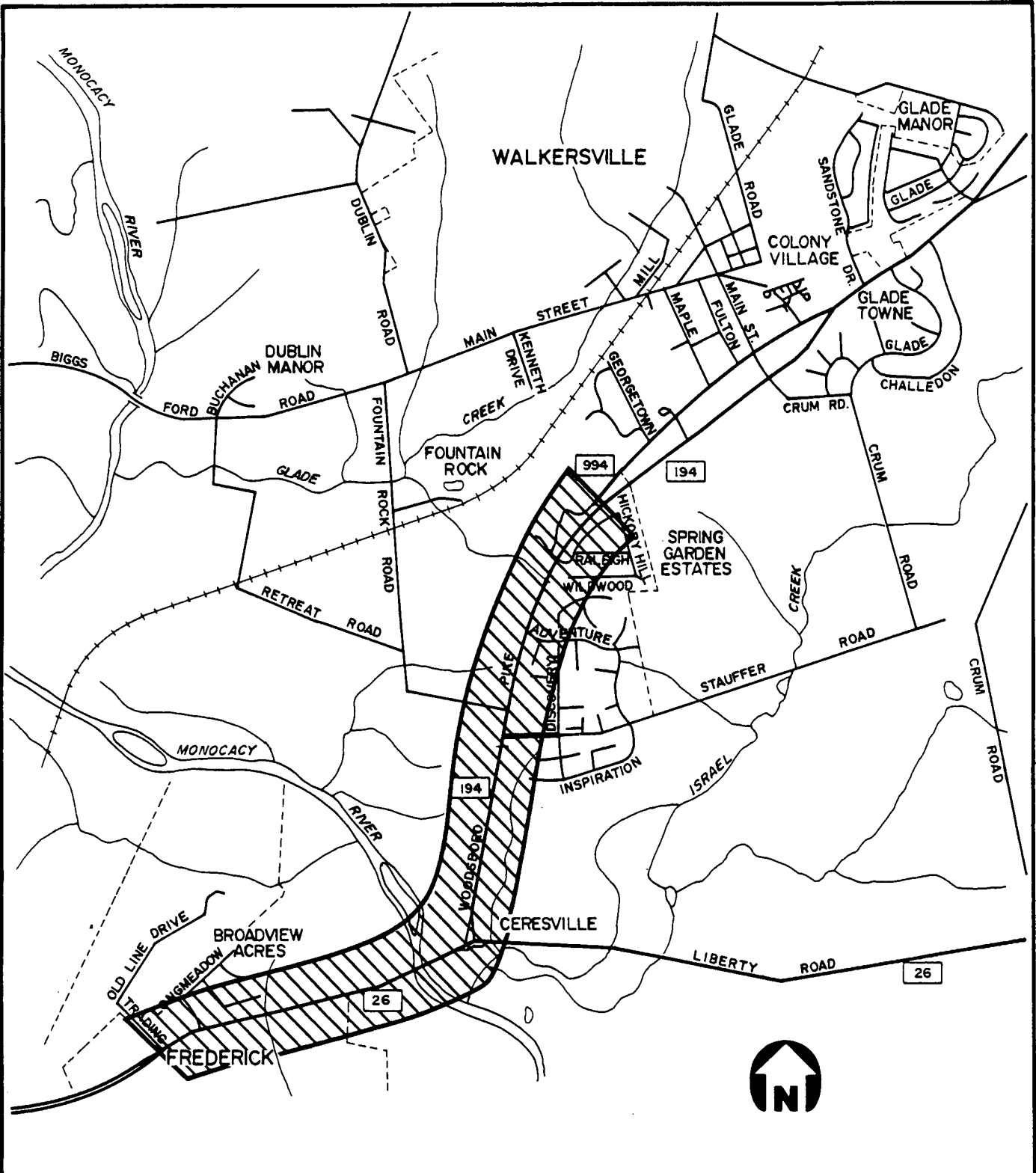


MARYLAND ROUTE 26
AND MARYLAND ROUTE 194

PROJECT LOCATION MAP

NOT TO SCALE

FIGURE 1



LEGEND

 **STUDY AREA**

**MARYLAND ROUTE 26
AND MARYLAND ROUTE 194
AT WALKERSVILLE**

STUDY AREA MAP

0 $\frac{1}{4}$ $\frac{1}{2}$

SCALE IN MILES

FIGURE 2

Hunting Creek, on the east by the Monocacy River, on the south by Ballenger Creek, and on the west by the ridge of the Catoctin Mountain range. The Region comprises over 60,260 acres and had a population of 44,626 in 1980.

The Frederick Planning Region contains 40 percent of the County's total population with Frederick City making up approximately 60 percent of this Region's 44,689 residents. Most of the City's population border the City limits to the north and west. Development planned to the south of the city is expected to be the focus of future growth outside the City.

More specifically, the study area is located within Election District 26 (Walkersville) and Election District 2 (Frederick). (See Figure 4.) District 2 is far more urban and has a much larger population than District 26 (see Table 1). However, Election District 26 has undergone a more rapid change by extensive residential and commercial development around the town of Walkersville. Although Election District 26 is agricultural in character, the current trend is to establish a sense of community associated with the established town of Walkersville.

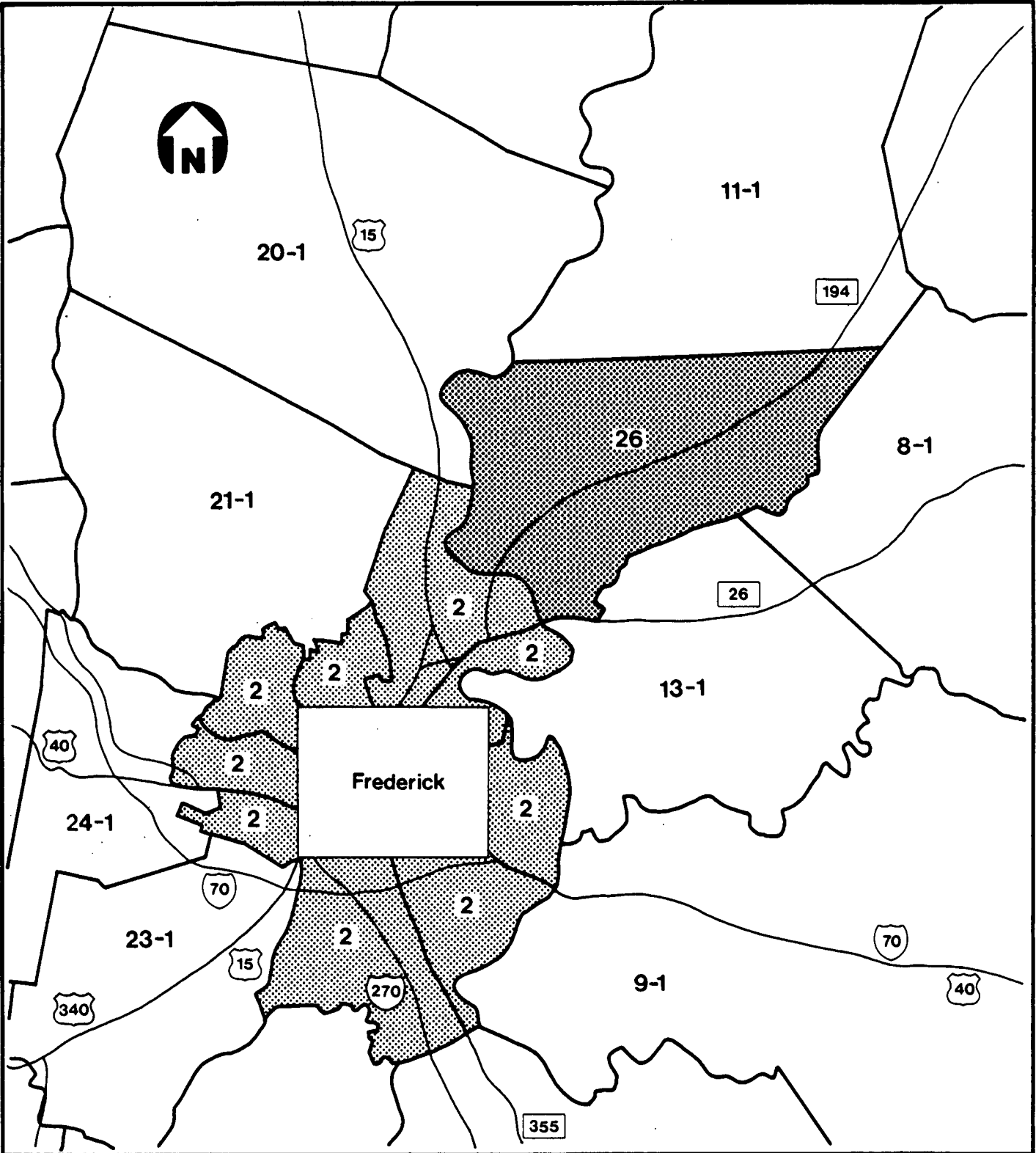
TABLE 1
1970 - 1980 Population in Study Area

| | 1970 | 1980 | Percent Change |
|--|--------|---------|----------------|
| Frederick County | 84,927 | 114,263 | 35.2 |
| Walkersville Region | 9,187 | 15,019 | 63 |
| Election District 26 (Walkersville) | 2,096 | 5,892 | 181 |
| Frederick Region | 36,255 | 44,626 | 23.3 |
| Election District 2 (Frederick) | 25,908 | 29,847 | 15.2 |



b. Community Facilities and Services (Figure 5)

Walkersville, a regional community, provides numerous services for its residents. Schools located within the town of Walkersville on MD Route 194 are Walkersville Primary School, Walkersville Middle School, Walkersville Intermediate School and Walkersville High School. Two churches, Calvary Assembly and Fredericktown Baptist are located south of the town of Walkersville on MD Route 194.

Fire and ambulance services are provided by the Walkersville Volunteer Fire Company and the Walkersville Community Ambulance Service. Police



LEGEND

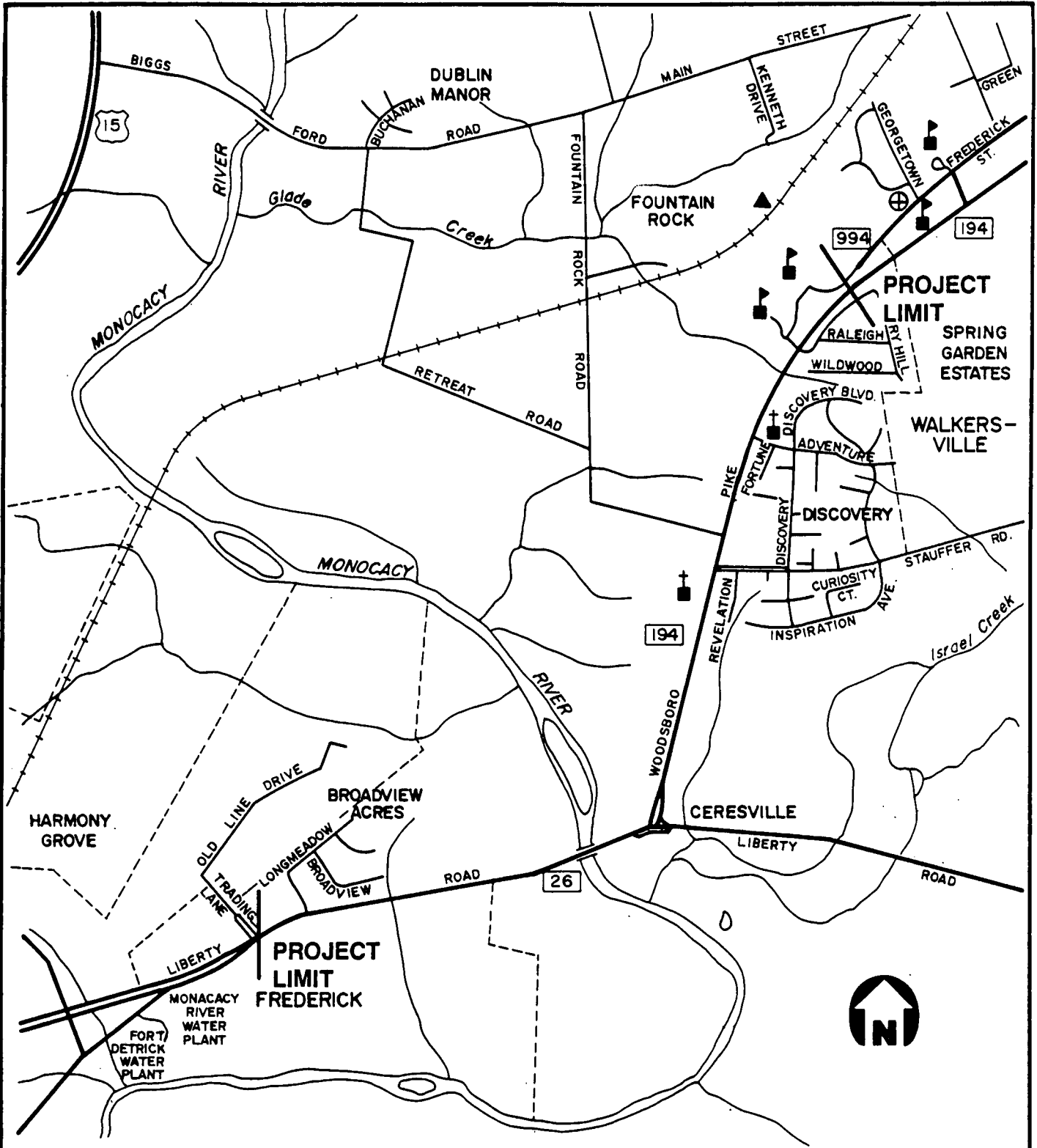
-  ELECTION DISTRICT 2
-  ELECTION DISTRICT 26

**MARYLAND ROUTE 26
AND MARYLAND ROUTE 194
AT WALKERSVILLE**

ELECTION DISTRICTS

NOT TO SCALE

FIGURE 4



LEGEND

- † CHURCH
- ▧ SCHOOL
- ⊕ AMBULANCE SERVICE
- ▲ PARK

**MARYLAND ROUTE 26
AND MARYLAND ROUTE 194
AT WALKERSVILLE**

COMMUNITY FACILITIES

0 1000 2000
SCALE IN FEET

FIGURE 5

31

protection is provided by the Frederick County Sheriff's Department and the Maryland State Police barracks in Frederick.

The nearest hospital is Frederick Memorial in Frederick. Emergency medical services are also provided at a medical center located in the Walkers Village Shopping Center on MD Route 194.

The United States Post Office, Walkersville, is located on Frederick Street in Walkersville.

The Town of Walkersville has its own public water. The sewer system of Walkersville is provided by Frederick County.

c. Parks and Recreation Areas

The Walkersville Community Park is located north of the study area on MD Route 194 and is owned by the Town of Walkersville. Facilities in the park include a ball field, picnic facilities, playground and shelters. This park will not be impacted by the proposed improvements. Additional recreational facilities are provided at the Walkersville Carnival Grounds, owned by the Walkersville Volunteer Fire Company.

2. Economic Environment

Because the County has an abundance of fertile soil and topography suitable for farming, the major industry has been agriculture with a primary focus on dairy farming.

The County's economy has become increasingly dominated by expanding federal government related and research oriented businesses, as well as expanding service and trade industries.

An analysis of the 1980 Census data indicates that a majority of those living in Election District 2 and Election District 26 were employed in services, wholesale and retail trade, manufacturing, public administration and construction. In 1980, approximately 2% of the employed labor force in Election District 2 were employed in agriculture, whereas in Election District 26, 5% were employed in agriculture. Currently, there is a trend toward employment in new high technology electronic and instrument manufacturing rather than traditional manufacturing.

Major employers in the Walkersville area include Whittaker MA Bio Products, Digital Systems, Data Card and Fedders. Walkers Village Shopping Center, north of Walkersville on MD Route 194, provides retail employment.

Frederick City is the retail activity center for almost all of Frederick County. Because of the large population in and around the city, it is the center of extensive retail and wholesale operations.

The city also continues to be the center of most of the County's service activities including professional, financial, insurance, real estate and communication activities.

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In 1980, 33% of all Frederick County residents commuted outside of the County to work. This represents a 22% increase since 1970. The Maryland Department of State Planning projects a 20% increase in the number of jobs within the County in 1990.

D. LAND USE

1. Existing Land Use

Land use in the study area is predominantly agricultural with a concentration of residential, institutional, and minor commercial uses comprising the town of Walkersville to the north (see Figure 6). Northeast of the project area are numerous recreational land uses including a community park, carnival grounds, and several school recreational areas.

The southwestern portion of the study area is predominantly agricultural with some recent medium density residential development. Minor industrial land use exists west of the project limits along MD Route 26 toward the City of Frederick.

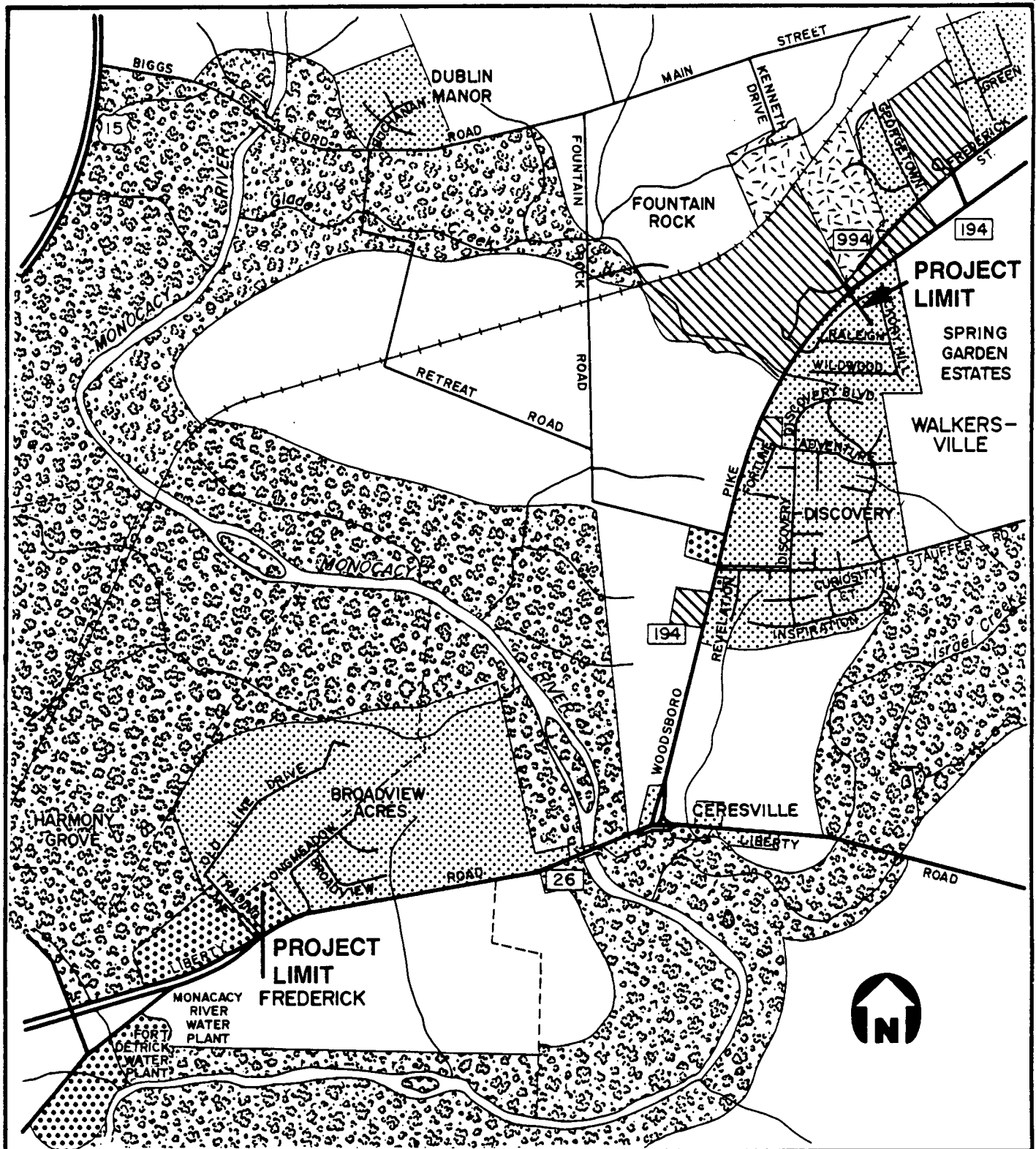
2. Future Land Use

The Frederick County Comprehensive Plan (1984) recommends that residential, commercial and industrial development be directed into planned, designated compact growth areas (see Figure 7). Regional and secondary growth centers focus future development activities, with the nature of development more extensive with Regional Centers.







Consistent with the delineation of eight planned regions within the County, the Walkersville and the Frederick areas have been identified as Regional Centers. Although these growth areas will all serve the role of regional centers for residential and commercial uses, the actual scale of development planned for each Regional Community differs. Future land use and community facility proposals for the Walkersville Area call for only a moderate expansion of development with much of the growth area being annexed by the Town. This indicates the Town's desire to determine the growth patterns in its immediate vicinity while the surrounding agricultural countryside is expected to remain rural in character. No significant expansion of suburban residential subdivisions within the Agricultural/Rural areas is planned. One area west of Walkersville has been designated for industrial use.

Growth within the Frederick Area is planned to be quite extensive. As the County seat of government and major urban center, development in the Frederick area is planned to be served by a full range of public facilities and services. Outside the Frederick growth area, the majority of the Region is planned for only low intensity uses being designated for Conservation and Agricultural/Rural uses.

The Dearbought property (approximately 296 acres of farmland) on MD Route 26 was recently annexed by the City of Frederick and zoned for residential development. Development plans proposed a maximum of 685 housing units for this property while leaving the historic structure intact. Approximately 25 acres to



LEGEND

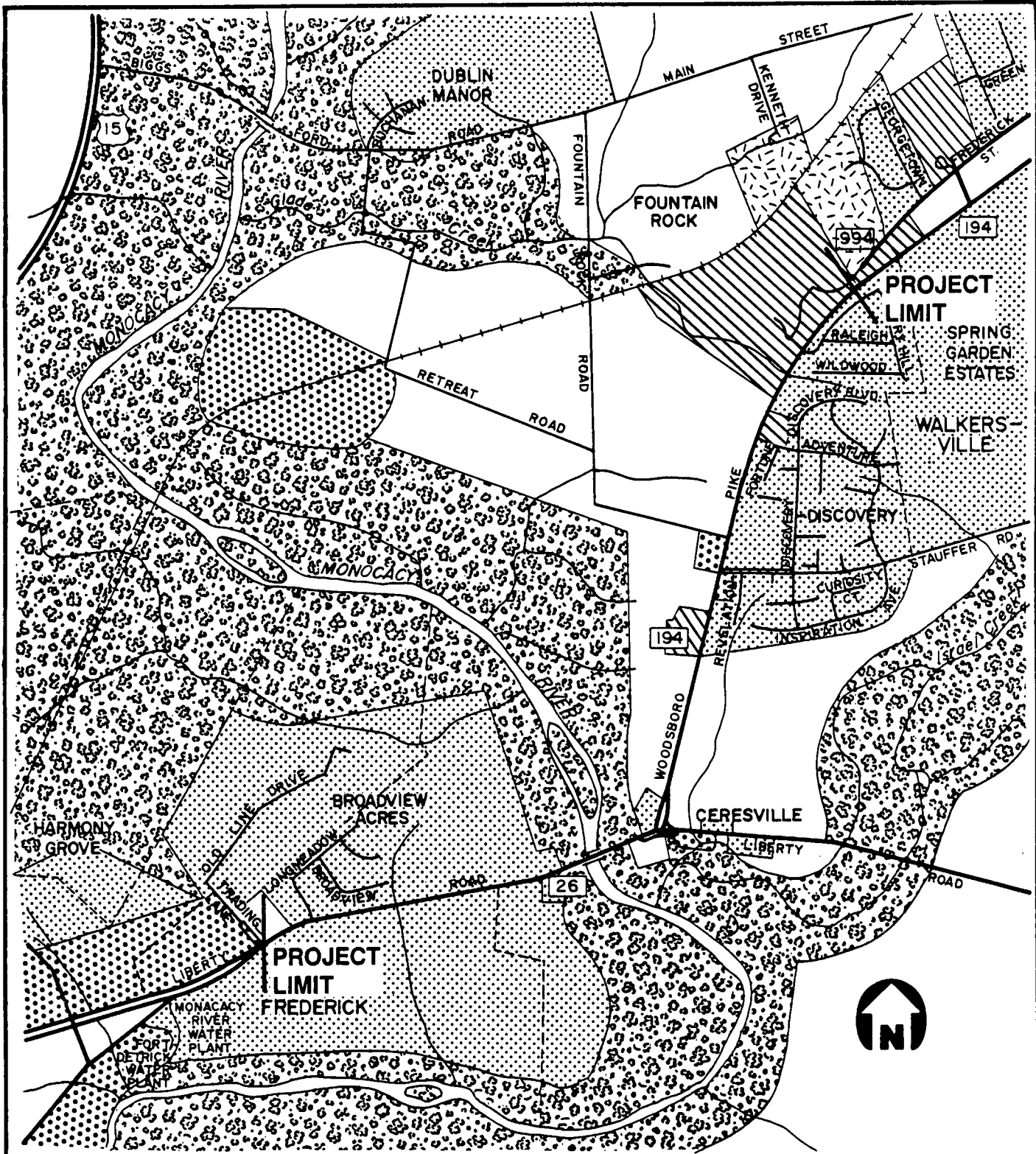
-  RESIDENTIAL
-  INSTITUTIONAL
-  AGRICULTURAL
-  COMMERCIAL/INDUSTRIAL
-  PARK/RECREATIONAL
-  WOODED

**MARYLAND ROUTE 26
AND MARYLAND ROUTE 194
AT WALKERSVILLE**







EXISTING LAND USE

0 1000 2000
SCALE IN FEET

FIGURE 6



LEGEND

-  RESIDENTIAL
-  INSTITUTIONAL
-  AGRICULTURAL
-  COMMERCIAL/INDUSTRIAL
-  PARK/RECREATIONAL
-  WOODED

**MARYLAND ROUTE 26
AND MARYLAND ROUTE 194
AT WALKERSVILLE**

FUTURE LAND USE

0 1000 2000
SCALE IN FEET

FIGURE 7

35

the south side of MD Route 26 across from Trading Lane may be rezoned to B-C for possible development of a shopping center.

Also, 586 acres of the J. O'Neil Jenkins property located south of the Monocacy River behind the Dearbought property is proposed for industrial development. Much of this area lies within the 100-year floodplain.

The County granted waivers of zoning consistency to each of these properties (Dearbought and Jenkins) at the time they were annexed into the City of Frederick.

E. CULTURAL RESOURCES

1. Historic Sites

Thirteen historic sites have been identified in the project corridor. These are:

1. Houck-Lynch Residence: 8032 MD Route 26
2. Hahn Residence (Abandoned): 8410 MD Route 26
3. Dearbought (F-3-16): 8427 MD Route 26
4. Houck-Hahn House: 8410 MD Route 26
5. Hahn Farm: 9314 Liberty Road
6. Shriner (Reid) House: 8526 MD Route 26
7. Pike's View (F-8-38): P.O. Box 335
8. Ceresville Flour Mill (F-8-42): P.O. Box 309
9. Joseph B. Zimmerman Farm: 8444 Fountain Rock Road
10. Tollhouse (F-8-1): 610 Francis Scott Key Highway
11. Cover-Cramer (Hemp) House: 8516 Woodsboro Pike
12. Abandoned Brick Dwelling: 8726 Liberty Road
13. N. Cramer (Stauffers) House: 8701 Antietam

Only the Tollhouse (10) is currently listed on the National Register of Historic Places. Additional sites (Figures 12, and 13) are considered eligible for the Register by the State Historic Preservation officer (see January 13, 1988 letter in Comments and Coordination section). These sites are:

Houck-Lynch House (1)

This large, brick residence was reputedly built by John Houck in 1880 as a country residence. It exhibits many characteristics typical of a rural residence: an ell shaped plan, 5 bay entrance facade, 2 1/2 story height and large cross gable breaking the roof line in the center of the entrance facade. Elegant refinements of this basic formula are exhibited in the bay window, bracketed porch supports, exceptionally wide cross gable and brick jackarches. Around the house are clustered outbuildings such as the original summer kitchen and well house. The stable has been altered and expanded and is currently utilized as the Glade Valley Animal Farm.

The house is significant as a large and well preserved country dwelling of the late nineteenth century.

Dearbought (3)

Dearbought is the approximately 296 acre family farm of the Derr family, which has owned and resided on the land for over 230 years. At least one building is extant from the establishment of the farm: a now derelict, 2 1/2 story stone and log farmhouse, which was built in 1755 by Sebastian Derr, a German immigrant. An old log outbuilding is located in close proximity to the house.

A residence, located on the south side of MD Route 26, was reputedly built by Derr's son in 1775. This large ell shaped, 2 1/2 story residence is surrounded by some period outbuildings.

This farm is significant architecturally for its numerous buildings, some of which show German influence. It is also a family farm, in agricultural use for over 200 years, of a prominent Frederick County family which makes it highly significant in Frederick County history.

Houck-Hahn House (4)

Houck-Hahn House is significant architecturally as a fine brick, mansarded brick mansion which is usually elegant for a rural setting. It is also important for its association with the Houck family, which were early settlers of the area.

Hahn Farm (5)

The Hahn Farm, inhabited by Samuel Hoke in the 19th century, is significant for its sizeable, 19th century, two part manor house and the well preserved outbuildings which surround it. In addition, it is significant historically for its association with the Hahn family, who were prominent in Frederick County.

Shriner (Reid) House (6)

This large residence is significant historically and architecturally as a particularly elegant rural residence reputedly constructed for the owner of Ceresville Mills in the 19th century. Its highly visible location and impressive design are indicative of the prosperity and social prominence of the Mill owner.

Pike's View (7)

Pike's View, named for its highly visible location at the side of the Woodsboro and Frederick Turnpike, is significant for its association with the early history of Frederick County, especially the Ceresville area. It is also significant architecturally as a good example of a rural farmstead which retains considerable integrity.

Ceresville Flour Mill (8)

This stone grain mill, retaining considerable integrity, is significant as one of the oldest grain mills in continuous use in Frederick County, having been built in 1813. It constitutes an important link with agrarian history of Frederick County and the importance of the mills in the local economy.

Tollhouse (10)

This is significant as one of the few original tollhouses which remain in the state. It is an important reminder of Maryland's turnpike era and has been carefully adapted for commercial use by its current owners.

Cover-Cramer House (11)

This nineteenth century brick dwelling, now stuccoed and painted, has a typical ell plan and a five bay entrance facade with a transomed central doorway and a bracketed three bay porch. Some original farm buildings, including a brick meathouse, are located among the mostly twentieth century farm structures which are clustered around the house.

The house is significant as a well preserved nineteenth century Frederick County farmhouse.

N. Cramer House (Stouffers) (13)

This is a typical rural Maryland farmhouse in its ell shaped, two story, double pile design, with full width one story porch across the five bay entrance facade. This handsome porch with a dentilled cornice is carried on short square plinths. There are no extant period outbuildings, and the surrounding farmland was sold for contemporary subdivision housing. The house is significant as a particularly well preserved, typical Maryland farmhouse of the mid-nineteenth century.

2. Archeological Sites

A Phase I reconnaissance of the project area for archeological resources has been completed. Four historic and prehistoric sites were investigated. One area of moderate potential for historic and prehistoric archeological resources will be surveyed prior to the completion of the final document. Three sites, Dearbought (18 FR 632), Pike's View (18 FR 631) and the Shriner Site (18 FR 633) require Phase II studies to evaluate their eligibility to the National Register.

F. NATURAL ENVIRONMENT

1. Topography/Physiography

The proposed widening of MD Route 26/MD Route 194 is located entirely within the western division of the Piedmont Plateau Province. The study area consists of low undulating hills which have an average elevation of 300 feet, with Walkersville at an elevation of 320 feet.

2. Geology

The rocks in the western division of the Piedmont province are less metamorphosed and less deformed than those of the eastern division. The oldest rocks in the western division appear to be the Wokefield marble and a sequence of partially metamorphosed volcanic rocks that overlie it.

The Glade Valley consists predominantly of Grove limestone (a thick bedded, fine grained, light to dark gray limestone) with a lesser presence of Frederick limestone (a thin bedded, dark blue limestone with dark irregular clay partings).

The predominant formation in the study area, Grove limestone, produces relative shallow fertile soils and the bedrock is extremely stable and solid. Frederick limestone which produces deeper soils and bedrock stability is not as well assured because of a greater possibility of cavities occurring within the bedrock.

Both the Grove limestone and the Frederick limestone contain major aquifers in Frederick County. Well yields range from less than 1 to about 580 gpm (gallons per minute). There is about a 20% chance of a well yielding greater than 50 gpm (Maryland State Planning Department, 1969). The Piedmont groundwater usually exists under water table conditions and the depth to water averages about 30 feet below land surface.

3. Soils

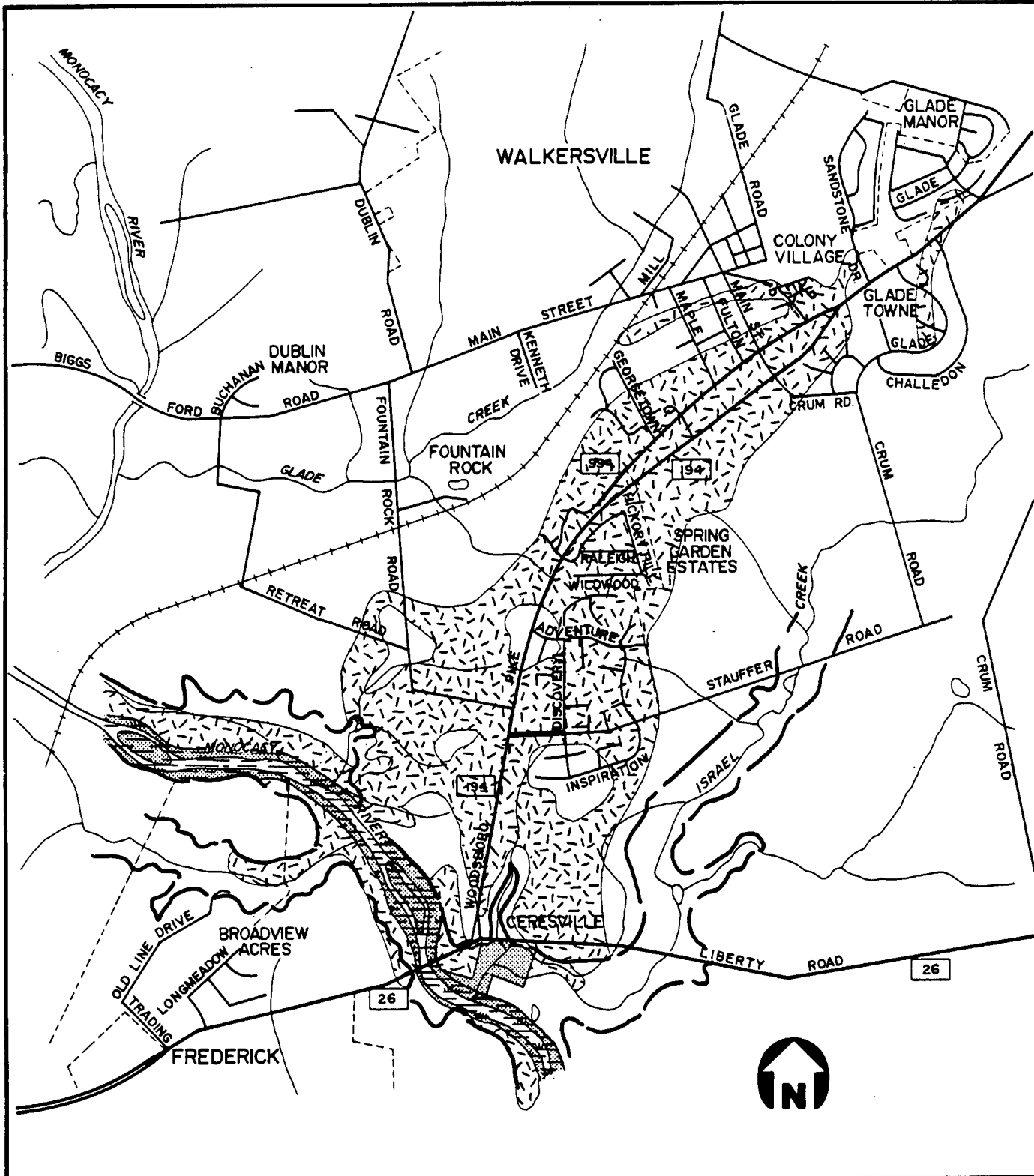
The soils in the study area belong to two major soil associations, the Hagerstown silt loam and the Duffield/Frankstown silt loam. The Hagerstown silt loam is found primarily east of the Monocacy River along MD Route 194 and consists of gently sloping (3 to 8 percent), moderately eroded soils formed in material weathered from pure sand limestone (see Figure 8). The Duffield/Frankstown silt loam occurs along MD Route 26 in the area of the Monocacy River. These are gently sloping, moderately eroded soils that developed from impure limestones. There are no unique farmland or soils of statewide importance in the study area. The U.S. Department of Agriculture, Soil Conservation Service has evaluated the project area to determine the presence of prime farmland soils in the study area. There are no statewide important farm soils in the study area.





4. Surface Water

The proposed improvements are located in the Monocacy River watershed. The primary surface streams in the area are the Monocacy River and Israel Creek (a tributary of the Monocacy). Streambanks are not steep and water is relatively slow flowing over the flat land.

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

- Class I - Water Contact Recreation, Aquatic Life and Water Supply
- Class II - Shellfish Harvesting Waters



| | | |
|---|--|--|
| <p>LEGEND</p> | <p>MARYLAND ROUTE 26 AND MARYLAND ROUTE 194 AT WALKERSVILLE</p> | |
| <ul style="list-style-type: none">  PRIME FARMLANDS SOILS  100-YEAR FLOODPLAIN  WOODLANDS  WETLANDS | <p style="text-align: center;">ENVIRONMENTAL FEATURES</p> <p style="text-align: center;">0 1/4 1/2 SCALE IN MILES</p> <p style="text-align: right;">FIGURE 8</p> | |

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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. All waters in the study area are designated as Class IV - Recreational Trout Waters.

5. Floodplains

The 100-year floodplain associated with the Monocacy River and Israel Creek is shown on the Alternates mapping. This floodplain is based on the Federal Emergency Management Agency Flood Insurance Rate Map (F.I.R.M.). It should be noted that Frederick County recognizes the 250-year floodplain for the Monocacy River and reflects those floodplain limits in the Comprehensive Development Plan as a conservation zone. The County has adopted the high water mark associated with Hurricane Agnes 1972 as the limits of the 250-year floodplain.

6. Ecology

a. Terrestrial

The study area consists of a remnant tulip poplar association. Very few of the native forest trees remain. Edge species with black cherry, black locust, red maple, flowering dogwood and elm dominate. Ornamental plantings border the subdivisions along the study corridor.

The area supports the smaller species of mammals such as squirrels, rabbits, and voles. Raccoons and possums may be found along the streams. There is limited cover within the study area to support larger mammals.

The predominance of field and edge habitat supports such bird species as the mocking birds, robins, blue jays, black birds, crows, sparrows, eastern king birds, whippoorwills, barred owls, common screech owls, black capped chickadee, grey catbird, eastern blue bird, gold finch and purple finch.

b. Aquatic Habitat

The wetlands within the study area have been identified by using the U.S. Department of the Interior National Wetlands Inventory Maps and by field inspection with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Maryland DNR/Tidewater Administration/Coastal Resource Administration. Minutes of the field meeting are in Section V (Comments and Coordination). The wetlands are shown on the Alternates Mapping in Section III. Finfish are known to inhabit the Monocacy River, see Comments and Coordination Section.

Wetlands

Riverine wetlands (non-tidal) are located along the Monocacy River and Palustrine forested wetlands on the islands within the stream. The wetlands identified in the vicinity of the proposed Build Alternates are Palustrine forested wetlands along the banks with black willow as the dominant vegetation. A broad leaf deciduous area was identified on the island. The major functions

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of the affected wetlands include habitat for aquatic wildlife and fisheries; food chain support; and sediment trapping, short and long term.

7. Endangered Species

Correspondence with the U.S. Fish and Wildlife Service, Maryland DNR and Forest, Park and Wildlife Administration indicates that there are no known populations of threatened or endangered species in the study area. (See letter dated May 27, 1988 in the Comments and Coordination section.)

8. Existing Air Quality

The MD Route 26/MD Route 194 project is within the Central Maryland Interstate Air Quality Control Region. The Environmental Protection Agency's carbon monoxide attainment status designation for this region is classified as "cannot be classified or better than the national standards."

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.

9. Existing Noise Conditions

Thirteen (13) noise sensitive areas (NSAs) have been identified in the MD Route 26/MD Route 194 study area (Figures 12 and 13). Descriptions of these noise sensitive areas are provided in Table 2. In addition, the locations of the NSAs are shown on the Alternates Mapping. A copy of the Technical 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 a 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 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 771, noise abatement criteria for various land uses. These criteria, along with the associated activity category, are presented in Table 3. The activity category used for this project is Category B.

The noise levels in this analysis are expressed in terms of an L_{eq} noise level, which is the energy-averaged noise level for a given time period. All ambient and predicted noise levels in this report are L_{eq} exterior noise levels unless otherwise noted.

In a noise analysis, measurement of ambient noise levels is intended to establish the basis for impact analysis. The ambient noise levels, as recorded,

TABLE 3
Noise Sensitive Areas

| NSA | Category | Description |
|-----|----------|--|
| 1 | B | Houck-Lynch House, (2) story brick residence located by MD Route 26, east of Trading Lane (Historic) |
| 2 | B | One (1) story brick residence at 8115 Broadview Drive |
| 3 | B | Two (2) story townhouses located at MD Route 26, west of Waterside Drive |
| 4 | B | Houck-Hahn House. Three (3) story brick residence at 8410 Liberty Road (Historic) |
| 5 | B | Dearbought House. Three (3) story stone residence at 8427 Liberty Road (Historic) |
| 6 | B | Reid House. Three (3) story brick residence at 8429 Liberty Road (Historic) |
| 7 | B | Pike's View. 8010 Woodsboro Pike (MD Route 194) (Historic) |
| 8 | B | Church. Located west side of MD Route 194 |
| 9 | B | Two (2) story townhouses located at 8364 Revelation Avenue |
| 10 | B | Two (2) story townhouse located at 8520 Fortune Place |
| 11 | B | Tollhouse (National Register Historic Site) 8505 Woodsboro Pike |
| 12 | B | Two (2) story residence at 8800 Innovation Ct. |
| 13 | B | One (1) story brick residence at 8707 Antietam Drive |

represent a generalized view of present noise levels. Variations in total traffic volume, truck traffic volumes, speed, etc. may cause fluctuations in ambient noise levels of several decibels. However, for the purposes of impact assessment, these fluctuations are usually not sufficient to significantly affect the assessment.

It was determined that for most of the noise sensitive areas, 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.

An on-site monitoring program was conducted June, 1988. Measurements were made for 20-minute intervals at each of the 13 NSA's. Ambient noise levels ranged from 58 dBA to 74 dBA for these sites. The ambient noise levels monitored for noise sensitive areas 1-6 were influenced primarily by the presence of a high volume of heavy trucks. Therefore, this truck traffic volume could contribute 3-6 dBA to the "Typical" monitored level at these NSA's.

The results of the ambient monitoring are shown in Table 7 in Section IV.

A noise monitoring calibration was performed for this project. Noise monitoring and traffic counts were performed at 2 receptors for a period of one hour each. The field monitoring phase of the calibration was performed on October 5, 1988, at Noise Sensitive Area 2 on MD Route 26 and Noise Sensitive Area 8 on MD Route 194. Traffic on MD Route 26 for the 1-hour period beginning at 12:40 pm consisted of 1,143 total vehicles (89% cars, 5.4% medium trucks, 5.6% heavy trucks). A total of 813 vehicles (91.6% cars, 5.8% medium trucks, 2.6% heavy trucks) were counted during monitoring on MD Route 194 from 2:05 to 3:05 pm.

Calibration of the STAMINA 2.0/OPTIMA noise prediction model was performed utilizing the simultaneous traffic data collected during the 1-hour monitoring periods. One site NSA 2 was located adjacent to MD Route 26 and the other, NSA 8 to MD Route 194. The modeled hourly L_{eq} noise levels generated at the two sites as a result of this calibration exercise differ from there actual ambient noise levels by 2.5 and 0.2 dBA for MD Routes 26/194, respectively. These fluctuations in noise levels, which can be attributed to extraneous noise sources pertinent to the individual sites, (e.g., no aircraft flyovers) as well as each site specific location, topographical features, and natural and man-made components (i.e., buildings, groundcover, etc.) are within the range of normal modeling calibration (± 3 dBA).

TABLE 3

Noise Abatement Criteria and Land Use Relationships
Specified in 23 CFR, 771

| 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 sports 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 |

Section II
**Purpose
and Need**

II. PURPOSE AND NEED FOR THE PROJECT

A. PROJECT BACKGROUND

The MD Routes 26 and 194 corridor from the City of Frederick to Walkersville has been identified by the County as a major arterial highway link every since its inclusion in the Frederick County Highway Master Plan of 1959. The importance of this corridor is directly associated with the Frederick County Comprehensive Plan promotion of concentrating development within the Town of Walkersville and expanding industrial employment along MD route 194.

The reconstruction of MD Routes 26 and 194 as divided highways was first listed in the 1968-1988 Twenty Year Highway Needs Study and currently appears in the 1986 Revised Highway Needs Inventory, Frederick County, Secondary Highway System.

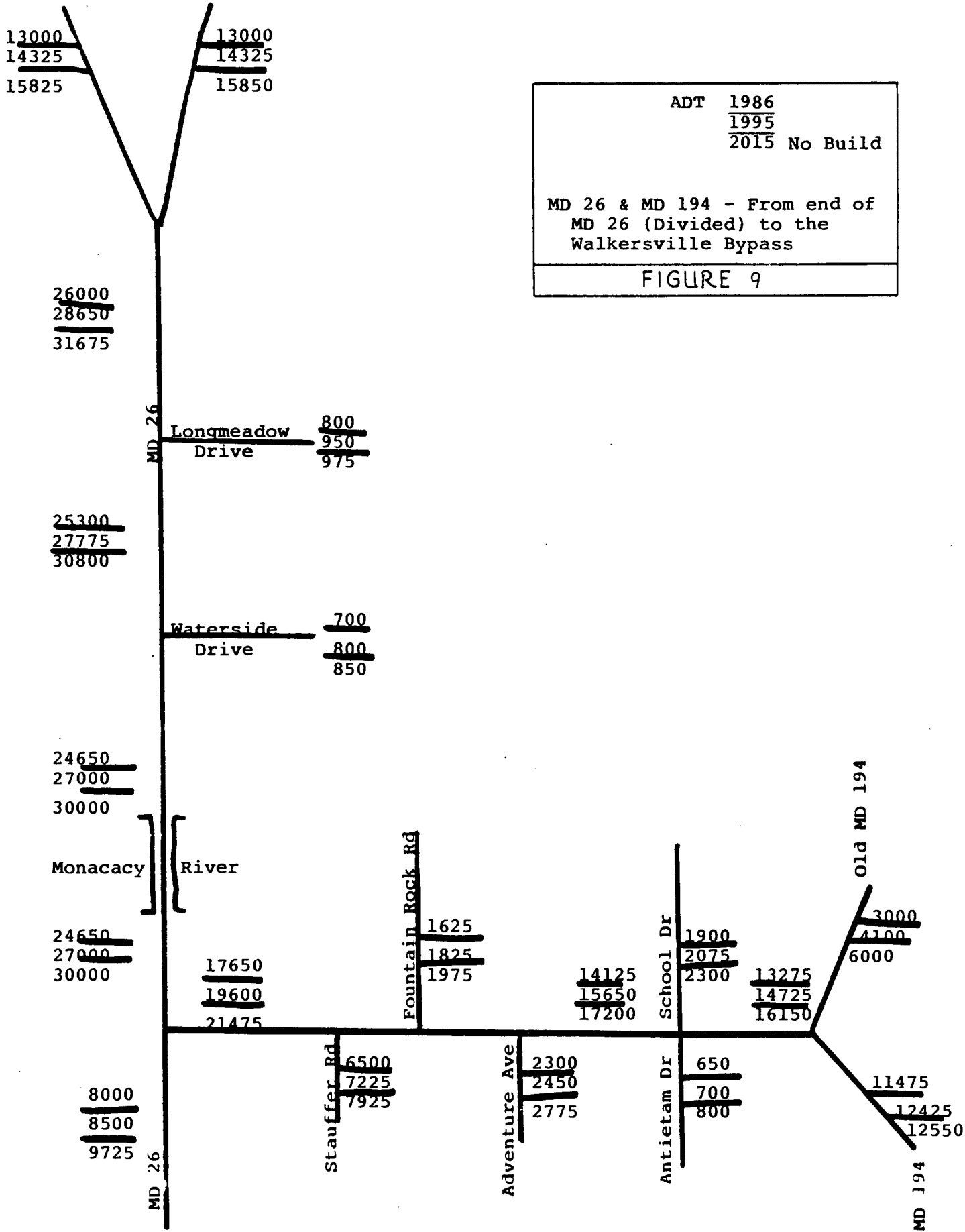
In July, 1986, the elected officials of Frederick County identified the divided highway reconstruction of MD Routes 26 and 194 as their highest priority for improvement to State secondary highways. Subsequently, the project was added to the Development and Evaluation Program in the 1987-1992 CTP. The project advanced to the Construction Program in the 1988-1993 CTP, and funding for final engineering, right-of-way and construction phases for the section of MD Route 26 from the end of dualization of MD Route 194 were added.

B. TRAFFIC OPERATIONS

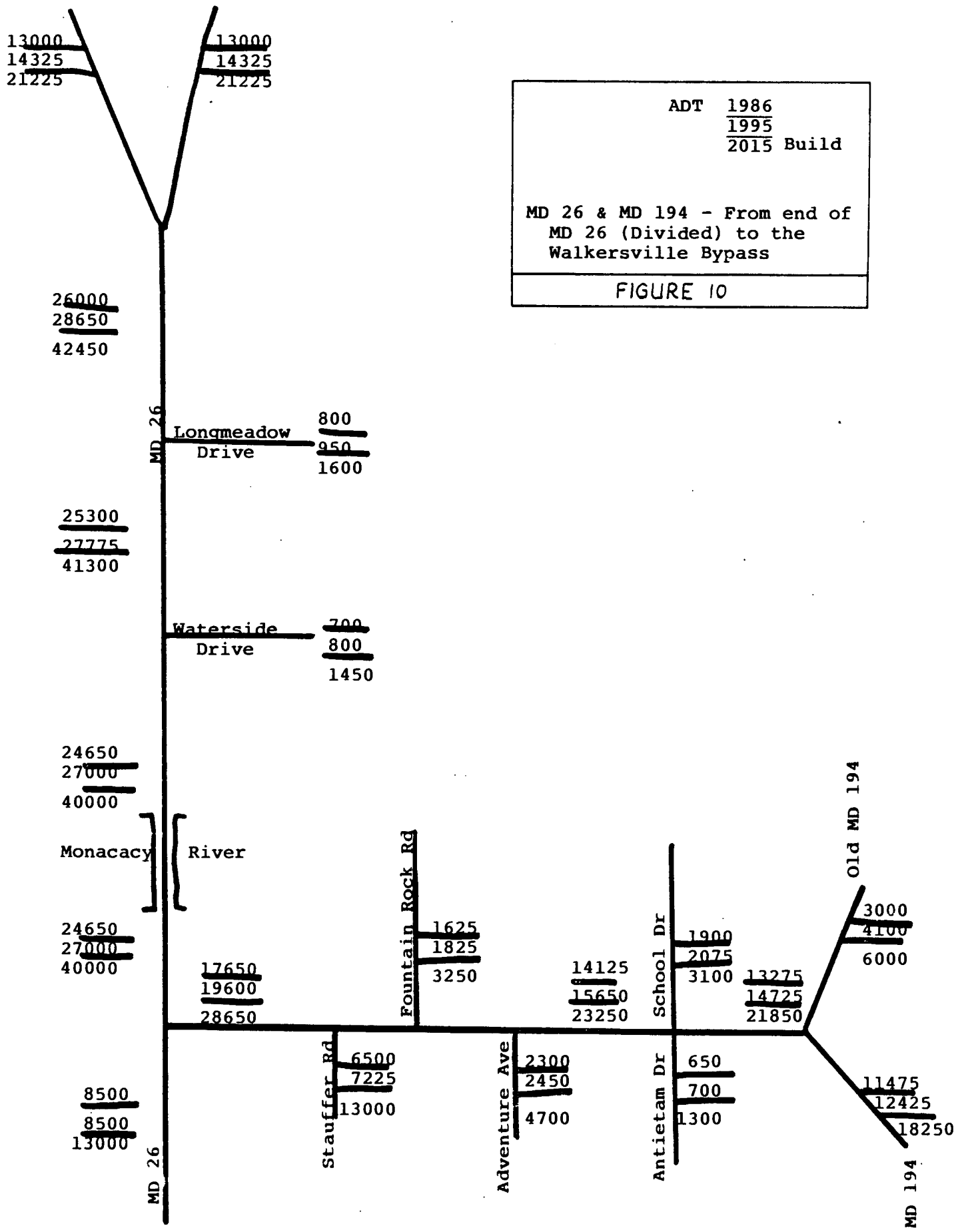
The present two lane roadways experience daily periods of congestion and are incapable of handling peak hour traffic volumes. The congestion is expected to increase due to the current and planned residential and commercial developments.

The MD Route 26/MD Route 194 corridor serves one of the most rapidly growing residential corridors in the Frederick area. It has a current average daily traffic (ADT) of 25,000 along MD Route 26 and in excess of 17,000 on MD Route 194 (See Figure 9). In spite of recent improvements made at the MD Route 26/MD Route 194 intersection, the roadway is currently operating at capacity. The two-lane bridge across the Monocacy is a severe bottleneck and operates at level of service (LOS) "F" in the peak hours.

Projected future residential growth in the corridor would result in approximately 10% increase in traffic by 1995 without any improvements. With the recent annexation of property (the 586 acres Jenkins Farm) situated on the north side of Gas House Pike and east and south of the Monocacy River and an expected long term increase in sewerage capacity in this area, the long term traffic is expected to reach 41,000 ADT on MD Route 26 by 2015 (see Figure 10). Traffic is also estimated to exceed 28,000 ADT on MD Route 194 by the 2015 design year. The design hour is 8 percent with a 70/30 directional distribution. The percent of traffic going up MD Route 194 at the MD Route 26/194 split is 70% on MD Route 194. Trucks are 10% of the average daily traffic and 2% of the design hour.



| | |
|---|---------------|
| ADT | 1986 |
| | 1995 |
| | 2015 No Build |
| MD 26 & MD 194 - From end of MD 26 (Divided) to the Walkersville Bypass | |
| FIGURE 9 | |



C. ACCIDENT EXPERIENCE

In the three-year study period (1985-1987) MD Route 26 from the end of the divided highway to Walkersville Bypass experienced a total of 39 accidents.

These accidents resulted in a rate of approximately 350 accidents per every 100 hundred million vehicle miles of travel (ACC/100mvm). This rate is significantly higher than the 1986 statewide average rate of 221/acc/100mvm for all non-divided, two lane, rural roads now under state maintenance. These accidents resulted in an accident cost of approximately \$4.7 million/100mvm as compared to \$2.5 million/100mvm for all similar type facilities. These accidents are listed in Table 4 by year, severity and rate. The 1986 statewide average rate is also listed for comparison purposes.

TABLE 4

| | 1985 | 1986 | 1987 | Total | Rate/ 100mvm | 1986 Statewide Average |
|----------------------|------|------|------|-------|-----------------|------------------------------|
| Fatal Accidents | 0 | 0 | 1 | 1 | 89 | 4.13 |
| #Killed | 0 | 0 | 1 | 1 | | |
| Injury Accidents | 5 | 7 | 5 | 17 | 152.9 | 113.20 |
| #Injured | 10 | 10 | 8 | 28 | | |
| Property Damage Only | 6 | 9 | 6 | 21 | 188.8 | 103.4 |
| Total Accidents | 11 | 16 | 12 | 39 | 350.8 | 220.7 |

There was one fatal accident. This accident occurred on the Monocacy River Bridge and was reported as an opposite direction type collision.

Listed in Table 5 is the accident experience by type of collision and rate. Also listed is the statewide average rate for comparison purposes.

TABLE 5

| Collision Type | Accidents | Rate/100mvm | 1986 Statewide Average |
|--------------------|-----------|-------------|---------------------------|
| Angle | 1 | 8.9 | 27.3 |
| Rear End | 25 | 224.8* | 34.4 |
| Fixed Object | 1 | 8.9 | 66.8 |
| Opposite Direction | 3 | 26.9 | 14.6 |
| Sideswipe | 5 | 44.9* | 12.1 |
| Left Turn | 3 | 26.9 | 10.7 |
| Pedestrian | 1 | 8.9 | 3.1 |

*Significantly higher than statewide average.

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The collision types that significantly exceeded our statewide average are the rear end and sideswipe (same direction) type collisions. Opposite direction and left turn types were higher than the statewide average but not at a significant level.

The intersection of MD Route 26 and MD Route 194 qualified as a High Accident Intersection during all three years of the study period. This location experienced 8 accidents in 1985, 9 accidents in 1986 and 6 accidents in 1987. There were no sections of highway meeting the criteria for a High Accident Section.

Under a "No-Build" alternate, we anticipate the already significant levels of rear and sideswipe accidents to continue. Many of these accidents are the result of vehicles stopping to make a turning maneuver and being struck by vehicles going straight.

With the proposed upgrading of the existing highway to a 4-lane, divided facility, we anticipate significant reductions in the rate of rear end and sideswipe accidents as a result of an additional lane in each direction. By providing a median and left turn storage area, where necessary, we also anticipate significant reductions in the opposite direction and left turn accidents. This alternate would experience an accident rate of approximately 142 acc/100mvm and result in an accident cost of approximately \$1.3 million/100mvm of travel. This alternate would bring about a societal cost savings of approximately \$3.4 million/100mvm over the existing conditions.

Section III

**Alternates
Considered**

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III. ALTERNATES CONSIDERED

A. ALTERNATES PRESENTED AT THE ALTERNATES MEETING

Alternate 2 Option "A" and Alternate 3 Option "A" are the same as the Alternates retained for detailed study with the exception of no access to MD Route 26 and MD Route 194 except at designated public roadways. Access to properties along the State Highways would be provided via local streets and service roads. Additional right-of-way is required for the construction of service roads.

B. ALTERNATES RETAINED FOR DETAILED STUDY

This project includes the study of MD Route 26 and MD Route 194 from dualized MD Route 26 to the south end of Walkersville Bypass on MD Route 194. Three alternates are being studied.

1. Alternate 1 - No-Build Alternate

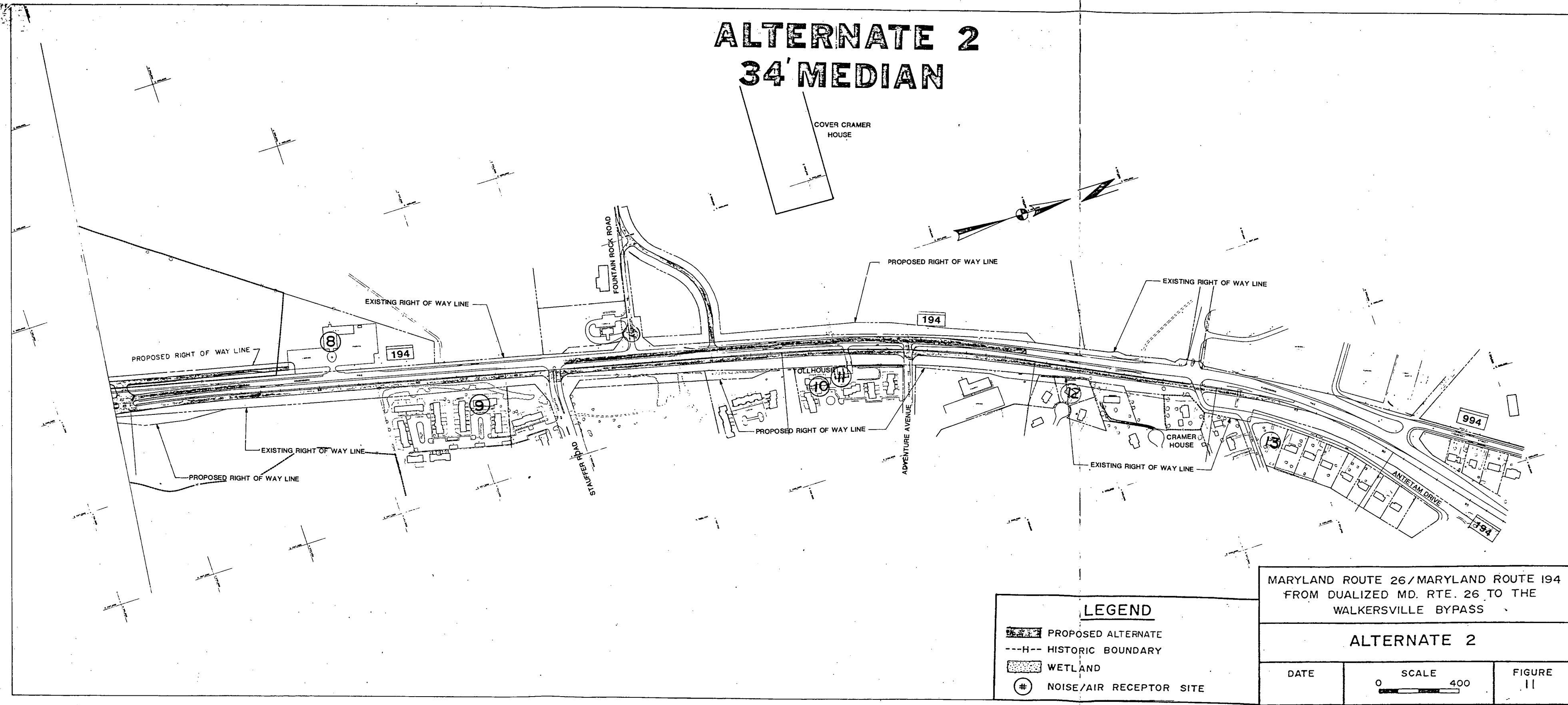
Under this alternate, the MD Route 26/MD Route 194 corridor would basically remain as it is today. Normal maintenance and safety improvements would be performed as they become necessary. This alternate would not offer any improvements in traffic operation safety or capacity. No long range improvements would be done, and the current congestion problems would be expected to increase. The No-Build Alternate is not considered to be a reasonable solution to traffic congestion.

2. Alternate 2 (See Figure 11)

Alternate 2 would consist of a four-lane, divided highway with a 34 foot median and shoulders (See Figure 11). Existing MD Route 26 would be used as the westbound lanes of dualized MD Route 26, and existing MD Route 194 would be used as the southbound lanes of dualized MD Route 194 with the following exceptions: Approximately 400 feet west of Longmeadow Road, on existing MD Route 26, a short crest vertical curve creates a situation where the westbound lanes would be significantly higher than the eastbound lanes. To construct the eastbound lanes with a design speed of 60 mph, the westbound lanes would be lowered approximately four feet for approximately 1,000 feet. Also, on MD Route 26, approximately 600 feet west of the Monocacy River, the alignment would be shifted northward to avoid the house on the Dearbought Farm. This shift would reconstruct approximately 900 feet of the westbound lanes on the north side of MD Route 26. Fountain Rock Road would be relocated approximately 400 feet north of its existing intersection with MD Route 194. Median openings would be provided at the future Trading Lane, Long Meadow Road, Waterside Drive, approximately 1,400 feet north of the MD Route 26/MD Route 194 intersection at Stauffers Road, Adventure Avenue and Antietam Avenue. A new bridge over the Monocacy River would be constructed for the eastbound lanes parallel to the existing structure.

The intersection of MD Route 26 and MD Route 194 would be reconstructed to provide a through movement for the MD Route 26/MD Route 194 corridor; and MD Route 26, to the east, would be relocated to form a perpendicular intersection.

ALTERNATE 2 34' MEDIAN



LEGEND

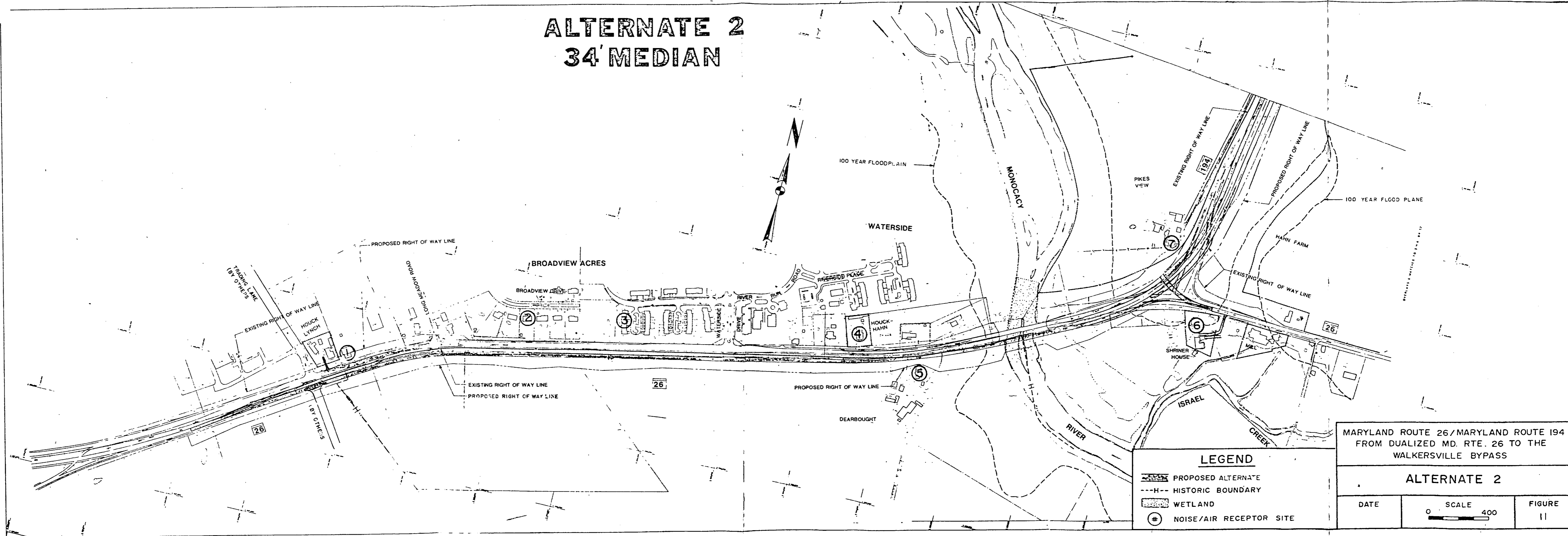
- PROPOSED ALTERNATE
- HISTORIC BOUNDARY
- WETLAND
- NOISE/AIR RECEPTOR SITE

MARYLAND ROUTE 26/MARYLAND ROUTE 194
FROM DUALIZED MD. RTE. 26 TO THE
WALKERSVILLE BYPASS

ALTERNATE 2

| | | |
|------|----------------|--------------|
| DATE | SCALE 0 400 | FIGURE 11 |
|------|----------------|--------------|

ALTERNATE 2 34' MEDIAN



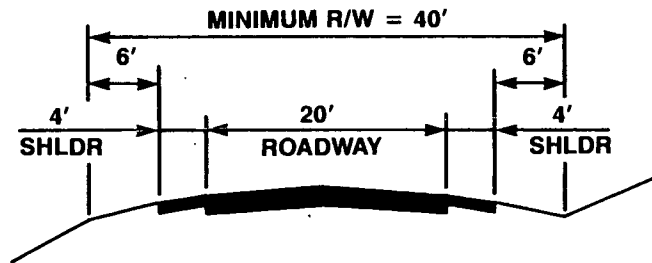
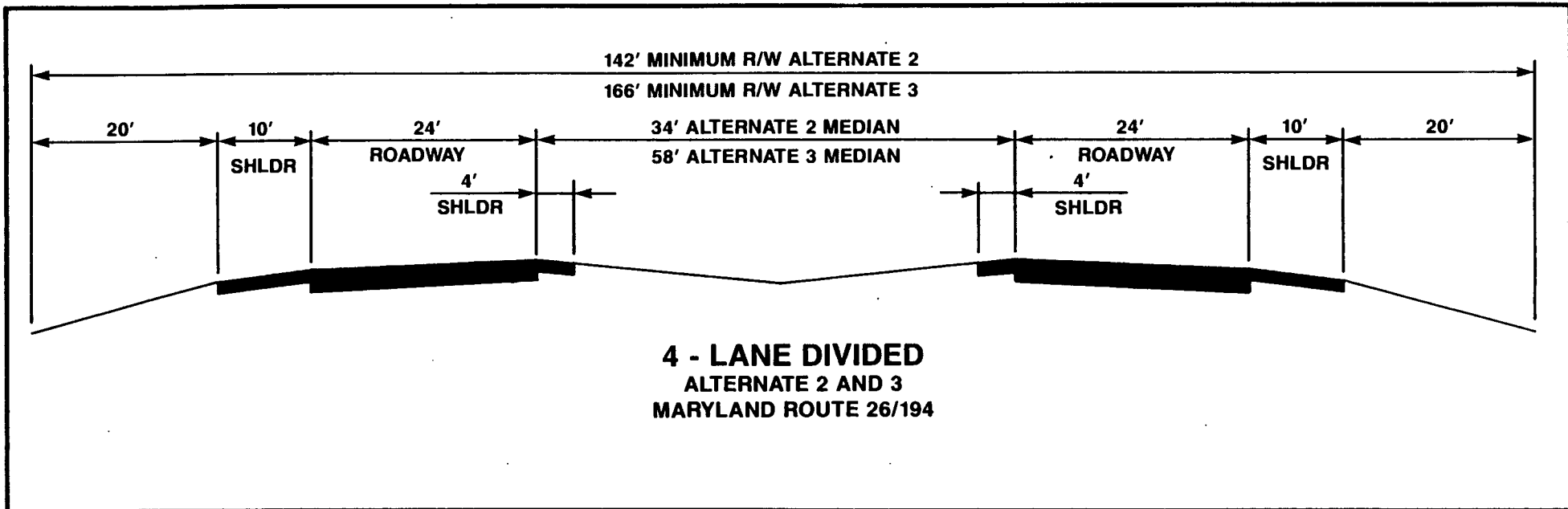
LEGEND

- PROPOSED ALTERNATE
- HISTORIC BOUNDARY
- WETLAND
- NOISE/AIR RECEPTOR SITE

MARYLAND ROUTE 26/MARYLAND ROUTE 194
FROM DUALIZED MD. RTE. 26 TO THE
WALKERSVILLE BYPASS

ALTERNATE 2

| | | |
|------|----------------|--------------|
| DATE | SCALE 0 400 | FIGURE 11 |
|------|----------------|--------------|



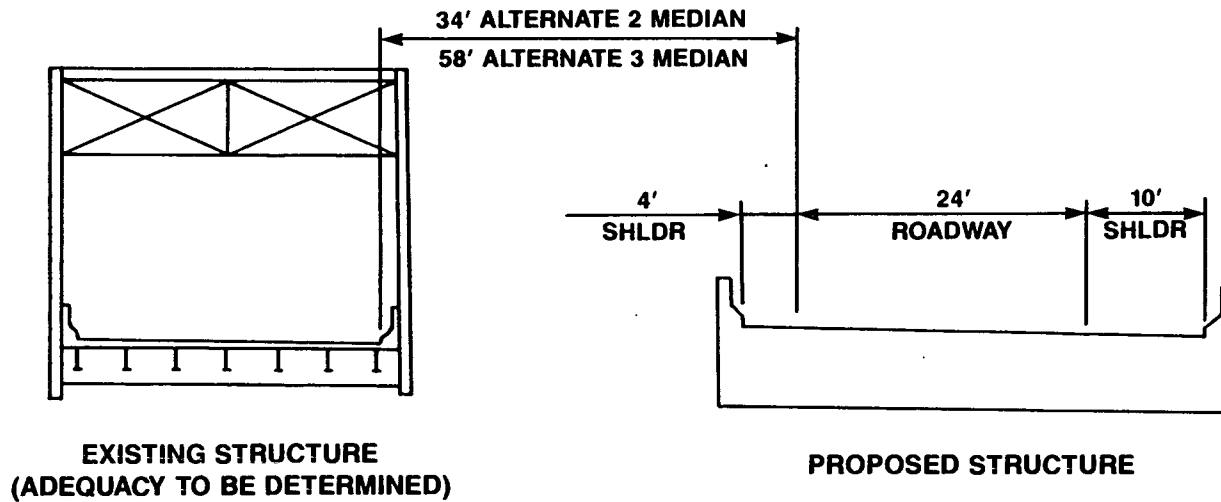
**2 - LANE SERVICE ROAD
 ALTERNATE 2 AND 3 - OPTION 'A'**

**MARYLAND ROUTE 26
 AND MARYLAND ROUTE 194
 AT WALKERSVILLE**

TYPICAL SECTIONS

FIGURE 11A

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



BRIDGE OVER MONOCACY RIVER

| | |
|---|-------------------|
| MARYLAND ROUTE 26 AND MARYLAND ROUTE 194 AT WALKERSVILLE | |
| TYPICAL SECTIONS | |
| | FIGURE 11B |

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

gle

Existing MD Route 194 from Stauffer Road to 600 feet north of Adventure Avenue has short vertical curves. The reconstruction of approximately 2,300 feet of existing MD Route 194 (the future southbound lanes) to provide a 60 mph design speed for the northbound lanes would be required to improve the vertical geometry in the area.

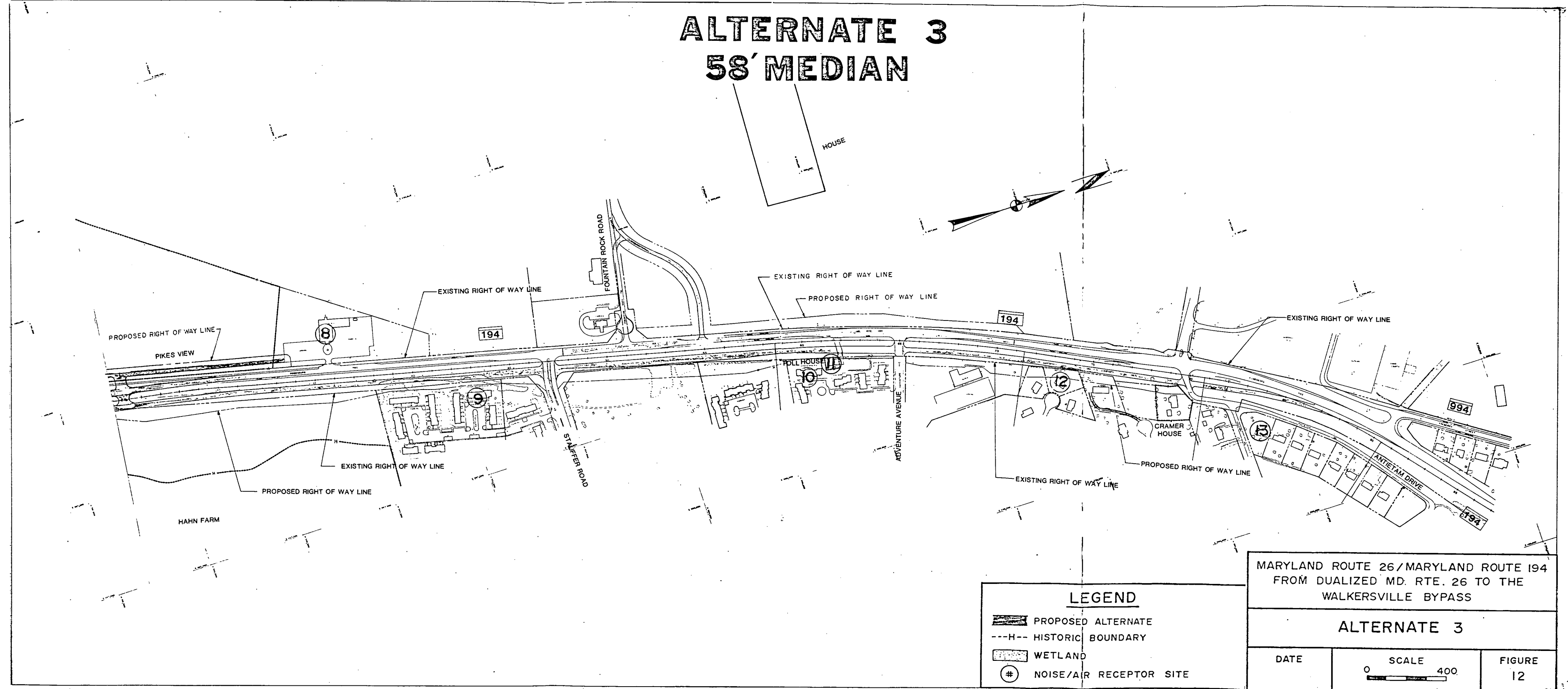
Ultimately, access would be controlled throughout the corridor if land usage were to change. No access would be permitted to MD Route 26 and MD Route 194 except at designated public roadways. The existing entrances along the corridor will be evaluated and, where feasible, will be denied and new service roads provided. The entrance to the Shriner (Reid) House, on the south side of MD Route 26 and east of the intersection, would be relocated in order to provide a safe access away from the intersection.

3. Alternative 3 (See Figure 12)

Alternate 3 would consist of a four-lane divided highway with a 58 foot median and shoulders. Existing MD Route 26 would be used as the westbound lanes of dualized MD Route 26, and existing MD Route 194 would be used as the southbound lanes of dualized MD Route 194. The exceptions to this would be west of the Monocacy River on MD Route 26 and at the intersection of MD Route 26 and MD Route 194. The MD Route 26 alignment, west of the Monocacy River, would be shifted to the north to avoid the house on the Dearbought Farm. This shift would reconstruct approximately 900 feet of the westbound lanes and require a retaining wall. A new bridge over the Monocacy River would be constructed for the eastbound lanes parallel to the existing structure. Fountain Rock Road would be relocated approximately 400 feet north of its existing intersection with MD Route 194. Median openings would be the same as proposed for Alternate 2.

The intersection of MD Route 26 and MD Route 194 would be reconstructed to provide a through movement of the MD Route 26/MD Route 194 corridor; and MD Route 26 to the east, would be relocated to form a perpendicular intersection. The new roadway has been engineered to avoid property acquisition from the Hahn Farm, the Shriner Reid House and the Ceresville Flour Mill. The access control proposals for the corridor in Alternate 3 would be the same as those for Alternate 2.

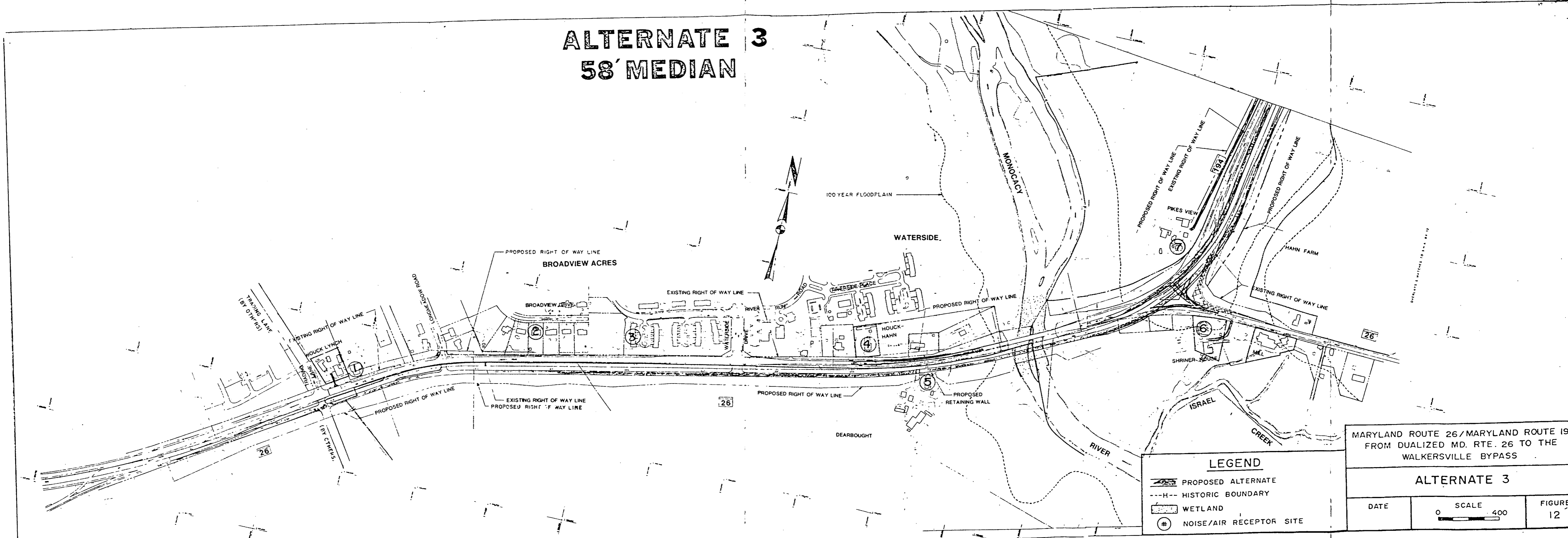
ALTERNATE 3 58' MEDIAN



| LEGEND | |
|--------|-------------------------|
| | PROPOSED ALTERNATE |
| | HISTORIC BOUNDARY |
| | WETLAND |
| | NOISE/AIR RECEPTOR SITE |

| | | |
|---|----------------|--------------|
| MARYLAND ROUTE 26/MARYLAND ROUTE 194 FROM DUALIZED MD. RTE. 26 TO THE WALKERSVILLE BYPASS | | |
| ALTERNATE 3 | | |
| DATE | SCALE 0 400 | FIGURE 12 |

ALTERNATE 3 58' MEDIAN



LEGEND

- PROPOSED ALTERNATE
- HISTORIC BOUNDARY
- WETLAND
- NOISE/AIR RECEPTOR SITE

MARYLAND ROUTE 26/MARYLAND ROUTE 194
FROM DUALIZED MD. RTE. 26 TO THE
WALKERSVILLE BYPASS

ALTERNATE 3

| | | |
|------|----------------|--------------|
| DATE | SCALE 0 400 | FIGURE 12 |
|------|----------------|--------------|

Section IV
**Environmental
Impacts**

IV. ENVIRONMENTAL IMPACTS

A. SOCIAL IMPACTS

1. Residential and Commercial Displacements

No minorities, elderly or handicapped persons will be affected by either of the proposed Build Alternates. No farms will be severely impacted by right-of-way aquisition or change in access.

Alternate 2 would require the displacement of two tenant businesses and no residential displacements. A gasoline station and offices of a general contractor currently renting are the only affected improvement which would require relocation assistance, in accordance with the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970." (See Appendix).

Alternate 3 will not require the displacement of either businesses or residents.

2. 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 constructions, 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 discrimina-tory actions should be addressed to the Equal Opportunity Section of the Maryland Highway Administration for investigation.

3. Access to Community Facilities and Services

Under the No-Build Alternate, traffic congestion and safety problems are expected to increase as the project area expands in residential and commercial development.

The No-Build Alternate would not adequately provide the necessary roadway or bridge capacity needed for access to facilities and services located in Walkersville and the City of Frederick.

Either of the Build Alternates would allow the necessary roadway capacity and traffic operation safety needed for this growing region.

Access to community facilities and services particularly the numerous schools and other facilities in the Walkersville area, as well as the City of Frederick, would become safer by the proposed dualization. Access to and from

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the Calvary Church located north of the Pike's View property would be provided by a service road and a new median opening situated approximately 1,400 feet north of the MD Route 26/MD Route 194 intersection.

Emergency response time would improve throughout the corridor. Travel time would be shortened as fewer delays would be experienced, especially during peak hour periods.

B. ECONOMIC IMPACTS

The No-Build Alternate would not provide the necessary roadway capacity and safety for transporting goods and services. In addition, the increasing number of residents within the study area would experience delays commuting to areas of employment and commerce.

Under Alternate 2 or Alternate 3 access to local business and industry would be improved. Local commuters destined to various areas of employment such as the City of Frederick, Washington, D.C. or Baltimore would benefit from the proposed improvements which would facilitate travel time and avoid costly delays. Goods and services would be more readily transported to commercial and industrial centers beyond the project limits.

Improvements to MD Route 26 and MD Route 194 would encourage and accommodate the planned residential/commercial expansion for this area and would have a positive impact on the County's tax base and tax revenues.

C. LAND USE IMPACTS

The proposed improvements are consistent with the Frederick County Comprehensive Plan (1984) which designated MD Route 26 and MD Route 194 as major arterials to accommodate future land use plans for the Walkersville and Frederick Regional Areas.

The focus on the Highway Plan for the Walkersville Region is upon the network of arterials provided chiefly by secondary state routes to accommodate the limited cross regional movements. These routes primarily serve the towns of Walkersville, Woodsboro and Libertytown by providing connections to major thoroughfares and adjacent regional centers.

The proposed improvements are also consistent with the land use plans for the Frederick Region. Relatively centrally located within the County and situated at the hub of the highway network, the Frederick environs are expected to experience significant growth activity. The improved access to and from this region would be in part provided by the proposed widening of MD Route 26 and MD Route 194.

D. CULTURAL RESOURCES

1. Historic Sites Impacts

The following historic site impacts are associated with either Build Alternate.

Site

Impacts

Houck Lynch House (MD Route 26)

Alternates 2 and 3 would require approximately .07 acre of this property. Access would be restricted to right-in and right-out movements because of the proposed median along MD Route 26. The entrance would be reconstructed. This site will be located approximately 60 feet from the edge of the proposed roadway, and the existing grade will be lowered approximately 3 feet. No violations of the S/NAAQS are expected to occur. The FHWA noise abatement criteria of 67dBa is exceeded by 7dBa at this site. Unable to provide abatement due to the need to maintain residential access. A no adverse effect determination was received from the SHPO conditioned on providing landscaping to shield the buildings from the roadway.

Dearbought (MD Route 26)

Alternates 2 and 3 would require 11.7 acres and 14.2 acres, respectively. Access would remain as it is today with the exception of right turning movements into and out of this site. Alternate 3 includes a retaining wall costing \$17,000 which will result in a right-of-way savings of .1 acre and will avoid the aquisition of a secondary stone house associated with this historic site. The fill for the new roadway would be approximately 2' higher than the existing ground elevation at the Dearbought House. Under Alternate 3, this site is located approximately 17 feet from the edge of the proposed roadway. An adverse effect determination was received from the SHPO due to ground disturbance caused by road construction and heavy traffic traveling closer to the structure causing damage to the structural integrity of the building.

Under Alternate 2 this site is located approximately 40 feet from

the edge of the proposed roadway. The existing roadway elevation will be lowered approximately 2 feet with this alternate. No violations of the S/NAAQS are predicted to occur. This noise sensitive area (NSA) would have a projected 2015 noise level 9dBa above the FHWA noise abatement criteria of 67dBa. Abatement of projected noise levels at this noise sensitive area would not be physically feasible due to the need to maintain residential and drive access and is not recommended for further consideration.

Houck-Hahn House (MD Route 26)

No property required, existing access along MD Route 26 will remain as it is today except for right-in and right-out movements because of the proposed median. A no adverse effect determination has been received for the site. There is no change is the distance from the existing edge of roadway to the proposed edge of roadway at this site. The grade of the existing roadway will remain the same with all build alternates. No violations of the S/NAAQS are predicted to occur. This noise sensitive area would have a projected 2015 noise level 5dBa above the FHWA noise abatement criteria of 67dBa. A noise barrier 1,089 feet in length with an average height of 15 feet at a cost of \$449,200 was investigated. This barrier would provide protection for at least seven residences at a cost of \$64,200 per residence. This mitigation would not be reasonable. No landscaping is proposed at this site.

Shriner (Reid) House (MD Route 26)

No property required, however existing access to this site would be modified to permit access further east along MD Route 26. A no adverse effect has been received from the SHPO for both alternates. Alternate 2 and 3 would cause the proposed edge of roadway to be

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located approximately 240 feet from this site. Existing ground elevation will remain as it is today. No violation of the S/NAAQS are predicted to occur. The FHWA noise abatement criteria of 67dBa will not be exceeded at this site.

Ceresville Flour Mill (MD Route 26)

No acreage required. A no effect was received from the SHPO. Alternates 2 and 3 would cause the proposed edge of roadway to be located approximately 550 feet from this site. The proposed ground elevation will approximate the existing ground elevation. No violations of the S/NAAQS are expected to occur at this site. This is based on the premise that no violations are predicted to occur at Receptor 6 which is adjacent to the Ceresville Flour Mill. The FHWA noise abatement criteria of 67dBa will not be exceeded at this site.

Pike's View (MD Route 194)

Alternates 2 and 3 would require approximately 2.3 acres from this site. This right-of-way is required to provide access via the service road which is located adjacent to the proposed southbound lanes of MD Route 194. The strip right-of-way requirements will not affect farm operations or the continued use of the historic farm residence. A no adverse effect determination was received conditioned on landscaping the northside of the site for Alternates 2 and 3. Under Alternates 2 and 3, this site will be located approximately 90 feet from the edge of the proposed roadway. Existing ground elevation will remain the same under either alternate. No violations of the S/NAAQS are expected to occur. This site will experience a projected 2015 noise level 5dBa above the FHWA noise abatement criteria of 67dBa. The required noise barrier would cost \$93,600 per residence. This barrier is not considered reasonable

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due to excessive cost per residence. A no adverse effect determination was recommended to the SHPO provided that landscaping is provided on the northside of the nucleus of buildings in order to screen the site.

Hahn Farm (MD Route 194)

No acreage required. A no effect determination was received from the SHPO for Alternates 2 and 3.

Tollhouse (MD Route 194)

No property required, however access would be modified to provide right-in and right-out access only under Alternates 2 and 3. The service road shown on the figure is no longer being considered. An adverse effects determination has been received from the SHPO due to ground disturbance caused by road construction and heavy traffic traveling closer to the structure causing damage to the structural integrity of the building. Alternate 2 would cause the proposed edge of roadway to be located approximately 65 feet from this site. The existing ground elevation will remain the same. Alternate 3 would cause the proposed edge of roadway to be located approximately 25 feet from this site. The existing ground elevation will remain the same. No violations of the S/NAAQS are predicted to occur. This NSA would have a projected 2015 noise level 9dBA above the FHWA noise abatement criteria of 67dBA. Abatement of projected noise levels at this noise sensitive area would not be physically feasible due to the need to maintain residential and drive access and is not recommended for further consideration.

N. Cramer (Stauffers) House
(MD Route 194)

Alternates 2 and 3 would require approximately .07 and .12 acres, respectively. The additional right-of-way would require the removal of the walkway in front of the house. Under Alternate 2, this site is located approximately 80 feet from the edge of the proposed roadway.

The proposed roadway elevation will be one foot lower under this alternate. Under Alternate 3, this site is located approximately 55 feet from the edge of the proposed roadway. The proposed roadway elevation will be lowered one foot with this alternate. A no adverse effect determination was received from SHPO conditioned on providing landscaping to screen the buildings from the road.

No violations of the S/NAAQS are predicted to occur. This is based on this site's proximity to Receptor 12. This noise sensitive area would have a projected 2015 noise level of 5dBa above the FHWA noise abatement criteria of 67dBa. Abatement of projected noise levels at this noise sensitive area would be approximately \$75,800 per resident; therefore, this mitigation would not be reasonable due to excessive cost.

Cover-Cramer (Hemp) House
(MD Route 194)

No acreage required with Alternates 2 or 3. A no effect determination was received from the SHPO for this site. Under Alternates 2 and 3, the proposed edge of roadway will be located approximately 650 feet from this site. No violation of S/NAAQS are predicted to occur. Because of proximity to proposed roadway, noise levels are not expected to exceed the FHWA noise abatement criteria of 67dBa.

2. Archeological Sites Impacts

A Phase I Archeological reconnaissance was completed for the proposed project. Two historic archeological sites, Dearbought (18 FR 632) and the Shriner site (18 FR 633), and one historic farmstead and prehistoric camp, Pike's View (18 FR 631), would be impacted by the proposed dualization. Phase II studies will be undertaken to ascertain their eligibility to the National Register. See the letter from the Division of Archeology in the Comments and Coordination Section.

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E. NATURAL ENVIRONMENT IMPACTS

1. Prime Farmland Soils

The U.S. Department of Agriculture, Soil Conservation Service has evaluated the project area in accordance with the Farmland Policy Protection Act to determine the presence of Prime Farmland and farmland of statewide importance in the study area (See Comment and Coordination section).

Agricultural (rural) and rural communities zoning classification are the dominate classifications within the study area. The widening of MD Route 26/MD Route 194, as proposed in Alternates 2 and 3, would require additional right-of-way from property currently being used for agricultural purposes. Alternate 2 is estimated to affect 20.98 acres and Alternate 3 may affected 23.47 acres of agricultural land. Development pressures within the study area are increasing and several requests for rezoning agricultural lands to residential are pending. To date no development plans have been filed for the Dearbought or Jenkins properties previously discussed in Section II.

There are no unique farmland soils or soils of statewide importance present within the study area.

2. Floodplains

The proposed Build Alternates for the MD Route 26/MD Route 194 project require a second crossing of the Monocacy River paralleling the existing structure. The exact location of the bridge abutments and pier will be determined during final design. Final design will also include an evaluation of the structure in accordance with the requirements of FHPM 6-7-3-2 and Executive Order 11988 to determine the significance of the encroachment and whether a floodplain finding will be required. A significant encroachment would involve one of the following.

- o A significant potential for interruption or termination of a transportation facility needed for emergency vehicles or which provides a community's only evacuation route;
- o A significant risk; or
- o A significant adverse impact on natural and beneficial floodplain values.

It is anticipated that the use of standard hydraulic design techniques for all waterway openings would incorporate structures to limit upstream flood level increases and approximate existing downstream flow rates. Use of state-of-the-art sediment and erosion control techniques and stormwater management controls should also ensure that none of the encroachments would result in risks or impacts to the beneficial floodplain values or provide direct or indirect support to further development within the floodplain. However, the final determination of significance of the encroachment will be made during final design. Current design plans indicate Alternate 2 and Alternate 3 would encroach on approximately .5 and .6 acre of floodplain respectively.

3. Surface Water

The proposed Build Alternates for the MD Route 26/MD Route 194 project require a second crossing of the Monocacy River. The abutments and pier for the proposed structure would parallel the existing structure and a pier may be located within the River. The Monocacy River is designated as Class IV -Recreational Trout Waters. In the vicinity of the proposed project, the Monocacy River ranges from 2 1/2 to 4 feet in depth. The Monocacy River is a non-tidal waterway and drains in a southerly direction into the Potomac River. The Monocacy River is not used for boating and is not considered navigable waters. Instream construction of any kind may be prohibited from March 1 to May 31. The project is being coordinated with the Department of Natural Resources, and a waterway construction permit will be required.

The increase of impervious surface resulting from the proposed improvements would produce a proportionate increase in the amount of roadway runoff carrying vehicle generated pollutants (i.e., oil, coolants, brake lining, rubber, etc.). Stormwater runoff would be managed under the Department of the Environment 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; and
- 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, sediment and erosion control, and stormwater management, in accordance with State and Federal laws and regulations. The plans will require review and approval by the Maryland Department of Environment and the Department of Health and Mental Hygiene, Office of Environmental Programs.

4. Habitat

a. Terrestrial

Alternate 2 would affect 0.40 acre of wooded area. Alternate 3 would affect 0.50 acre of wooded area. This impact can not be totally avoided as the wooded areas impacted are associated with the proposed bridge crossing the Monocacy River. There would be no impacts to the habitat of any threatened or endangered or state rare species.

b. Aquatic

Approximately 0.47 acre of wetland would be impacted under each of the Build Alternates. The affected wetlands are associated with the bridge required for the Monocacy River crossing. These wetlands extend in a north-south direction along the Monocacy, thus a shift in either direction would not substantially reduce wetland impacts or avoid wetland impacts. A U.S. Army Corps of Engineers permit will be required. Avoidance of wetlands is not feasible because of the necessity for a second crossing of the Monocacy River.

F. AIR QUALITY IMPACTS

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: 35PPM (parts per million) for the maximum 1-hour period and 9PPM 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 the Build Alternates for the design year (2015) and the estimated year of completion (1995).

a. Analysis Input

A summary of analysis inputs is given below. More detailed information concerning these inputs is contained in the MD Route 26/Md Route 194 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 concentration 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. Because the project is within an air quality attainment area and there is a lack of ambient air quality monitoring stations in the area, the background concentration resulting from area-wide emissions from both mobile and stationary sources was assumed to be the following:

| | CO, PPM | |
|------|---------------|---------------|
| | <u>1-hour</u> | <u>8-hour</u> |
| 1995 | 2.0 | 1.0 |
| 2015 | 2.0 | 1.0 |

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Traffic Data, Emission Factors, and Speeds

The appropriate traffic data were supplied by the Maryland State Highway Administration.

The composite emission factors used in the analysis were derived from the Environmental Protection Agency (EPA) User's Guide to Mobile 3 (Mobile Source Emissions Model) - June, 1984, and were calculated using the EPA MOBILE 3 computer program. An ambient air temperature of 20°F was assumed in calculating the emission factor for the 1-hour analysis, and 35°F was used for the 8-hour analysis in order to approximate worst-case results for each analysis case. No 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 15 mph to 45 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 and 2 meter/second wind speed and a combination of stability classes D and F were used for the 8 hour calculations.

The wind directions utilized as part of the analysis were rotated to maximize CO concentrations at each receptor location. Wind direction 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 was made on the basis of proximity to the roadway, type of adjacent land use, and changes in traffic patterns on the roadway network. Thirteen (13) receptor sites were chosen for this analysis consisting of twelve (12) residences and a church. The receptor site locations were verified during study area visits by the analysis team. The receptor sites are shown on Figures 11 and 12.

| <u>Site</u> | <u>Description/Location</u> |
|-------------|--|
| 1 | Residence, 2 story brick, Houck-Lynch (Historic Site) MD Route 26 East of Trading Lane |
| 2 | Residence, 1 story brick, Broadview Drive |
| 3 | Residence, 2 story townhouse, MD Route 26 west of Waterside Dr. |

- 4 Residence, 3 story brick,
Houck-Hahn House (Historic Site)
Liberty Road (MD Route 26)
- 5 Residence, 3 story stone,
Dearbought Home (Historic Site)
Liberty Road (MD Route 26)
- 6 Residence, 3 story brick
Reid Shriner (Historic Site)
Liberty Road (MD Route 194)
- 7 Pike's View (Historic Site)
Woodsboro Pike (MD Route 194)
- 8 Calvary Assembly Church
West of MD Route 194
- 9 Residence, 2 story townhouses
Revelation Avenue
- 10 Residence, 2 story townhouses
Fortune Place
- 11 Tollgate
National Register Historic Site,
Woodsboro Pike (MD Route 194)
- 12 Residence, 2 story
Innovation Court
- 13 Residence, 1 story brick
Antietam Drive

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 on Table 6. The values shown consist of predicted CO concentrations attributable to traffic on various roadways links plus projected background levels. A comparison of the values in Table 5 with the S/NAAQS shows that no violations would occur for the No-Build or Build Alternates in 1995 or 2015 for the 1-hour or 8-hour concentrations of CO. The projected CO concentrations vary among alternates depending on receptor locations as a function of the roadway locations and traffic patterns associated with each alternate.

TABLE 6

CO Concentrations* At Each Air Quality Receptor Site, ppm

| Receptors | No-Build | | | | Build Alternates | | | |
|-----------|----------|-----|------|-----|------------------|-----|------|-----|
| | 1995 | | 2015 | | 1995 | | 2015 | |
| 1 | 10.7 | 2.2 | 10.4 | 2.2 | 3.1 | 1.2 | 3.5 | 1.3 |
| 2 | 7.9 | 1.8 | 7.7 | 1.8 | 3.4 | 1.3 | 3.9 | 1.4 |
| 3 | 6.2 | 1.6 | 6.1 | 1.6 | 3.5 | 1.3 | 4.0 | 1.3 |
| 4 | 9.0 | 2.0 | 8.9 | 2.0 | 3.0 | 1.2 | 3.3 | 1.3 |
| 5 | 9.5 | 1.6 | 9.3 | 1.6 | 5.1 | 1.4 | 6.0 | 1.6 |
| 6 | 7.1 | 1.7 | 7.0 | 1.7 | 3.1 | 1.2 | 3.4 | 1.3 |
| 7 | 7.3 | 1.5 | 7.0 | 1.5 | 3.1 | 1.1 | 3.3 | 1.2 |
| 8 | 6.2 | 1.3 | 6.1 | 1.3 | 2.8 | 1.1 | 3.1 | 1.1 |
| 9 | 5.8 | 1.3 | 5.7 | 1.3 | 3.1 | 1.1 | 3.5 | 1.2 |
| 10 | 5.8 | 1.3 | 5.6 | 1.3 | 2.9 | 1.2 | 3.2 | 1.2 |
| 11 | 6.5 | 1.4 | 6.3 | 1.4 | 3.8 | 1.4 | 4.3 | 1.4 |
| 12 | 5.0 | 1.3 | 4.9 | 1.3 | 2.7 | 1.1 | 2.9 | 1.2 |
| 13 | 6.6 | 1.4 | 6.4 | 1.4 | 2.8 | 1.1 | 3.0 | 1.2 |

*Including Background Concentrations

The S/NAAQS for CO: 1-hour maximum = 35 ppm
8-hour maximum = 9 ppm

The No-Build Alternate would result in highest CO concentrations in 1995 and 2015 for all receptors. The concentrations would remain well below the S/NAAQS for all alternates under consideration.

In conclusion, the No-Build Alternate and Build Alternates would not result in violations of the 1-hour or 8-hour S/NAAQS in 1995 or 2015.

2. Construction Impacts

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

The Maryland Air Management Administration 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 Air Management Administration found that the specifications are consistent with the requirements of these regulations. Therefore, during the

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construction period, all appropriate measures (Code of Maryland Regulations 10.18.06.03D) would 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 area where the State Implementation Plan does not contain any transportation control measures. Therefore, with the exception of the construction procedures, the conformity requirements of 23 CFR 770 do not apply to this project.

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.

G. NOISE IMPACTS

The method used to predict the future noise levels from the proposed MD Route 26/MD Route 194 improvements was developed by the Federal Highway Administration (FHWA) of the U.S. Department of Transportation. The FHWA Highway Traffic Noise Prediction Model (FHWA Model) incorporates data pertaining to normal traffic volume increases over time, utilizes an experimentally and statistically determined reference sound level for three classes of vehicles (auto, medium duty trucks, and heavy duty trucks), and applies a series of adjustments to each reference level to arrive at the predicted sound level. The adjustments include: 1) traffic flow corrections, taking into account the number of vehicles, average vehicle speed, and a specified time period of consideration; 2) distance adjustment comparing a reference distance and actual distance between receiver and roadway, including roadway width and number of traffic lanes; and 3) adjustments for various types of physical barriers that would reduce noise transmission from source (roadway) to receiver.

The prediction calculations were performed utilizing a computer program adaption of the FHWA Model, STAMINA 2.0/OPTIMA.

The determination of environmental noise impacts is based on the relationship between the predicted noise levels, the established noise abatement criteria, and the ambient noise levels in the project area. The applicable standard is the Federal Highway Administration's noise abatement criteria/activity relationship, 23 CFR, 771 (see Table 4 in Section I).

The evaluation was completed in accordance with the State Highway Administration's Type I noise program. The Type I program provides evaluation of noise mitigation for major construction or reconstruction highway projects. Noise mitigation is considered under this program when Federal Highway Administration Noise Abatement Criteria are approached or exceeded or when predicted noise levels exceed the existing levels by 10 dBA or more. The Noise Abatement Criteria for residential areas is 67 decibels. The land use adjacent to the study section of MD Route 26/MD Route 194 is primarily residential.

The following items were considered in determining potential noise impacts:

- 1) Identification of existing land use
- 2) Existing noise levels
- 3) Prediction of future design year noise levels
- 4) Potential traffic increases.

When design year L_{eq} noise levels are projected to exceed the abatement criteria (Table 4) or increase ambient conditions by 10 dBA or more, noise abatement measures (in general, noise barriers) are considered to minimize impacts. 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.

The factors which will be considered when determining whether mitigation is required and whether the mitigation will be considered reasonable and feasible will be:

- o Whether Federal Highway Administration Noise Abatement Criteria are approached or exceeded - 67 dBA for residential areas;
- o Whether a substantial (10 dBA or more) increase over ambient levels would occur;
- o Whether a substantial noise increase would result from highway project - minimum of 5-dBA increase - of Build over No-Build levels in the design year of the project;
- o Whether a feasible method is available to reduce the noise;
- o Whether the noise mitigation is cost effective for those receptors that are impacted - approximately \$40,000 per residence;
- o Whether the mitigation is acceptable to affected property owners.

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 7-10 dBA reduction in the noise level, as a preliminary design goal. However, any impacted noise receptor which will receive a 5 decibel reduction is considered when determining the cost effectiveness of a barrier.

Cost effectiveness is determined by dividing the total number of impacted sensitive sites, in a specified noise sensitive area that will receive at least a 5 dBA reduction in noise levels, into the total cost of the noise mitigation. For the purpose of the comparison, a total cost of \$27 per square foot is assumed to estimate total barrier cost. This cost figure is based upon current costs experienced by Maryland State Highway Administration and includes the cost of panels, footings, drainage, landscaping, and overhead. The State Highway Administration has established approximately \$40,000 per residence protected as being the maximum cost for a barrier that is considered reasonable.

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1. No-Build Alternate

Under the No-Build Alternate, two of the noise sensitive areas would exceed the noise abatement criteria of 67 dBA, L_{eq} . The speeds observed in the field while performing model calibrations were higher than the proposed speeds. Under the No-Build, the speeds would not be as high as they exist today. Again, as previously discussed, the ambient levels were influenced primarily by the presence of heavy truck traffic volume during the monitoring period.

The following differences contribute to the discrepancy in the No-Build noise levels modeled to the ambient noise levels monitored at each site. The speeds observed in the field while performing model calibration were 40-45 mph for MD Route 194, and 50-55 mph for MD Route 26.

The traffic volume used for No-Build predicted levels was 508 total vehicles, both directions. Volumes, in 10 minute intervals, observed while monitoring ranged from 1,104 - 1,212 vehicle per hour (vph) for MD Route 26 and 636 - 906 vph for MD Route 194. Actual hourly volumes observed were 1,143 vph for MD Route 26 and 813 vph for MD Route 194.

It should be noted that the doubling of traffic (source) would increase the noise level at a site approximately 3 dBA.

2. Build Alternate 3 (58' median)

Under The Build Alternate, the 58' median was chosen for detailed noise analysis because it would represent the "worst-case" scenario. The FHWA Noise Abatement Criteria would be exceeded at all NSAs with the exception of Noise Sensitive Area 6. Therefore, abatement was considered for these twelve (12) noise sensitive areas and is discussed below and shown in Table 6.

NSAs 1, 4, 5, 8 and 11

Abatement of projected noise levels at these noise sensitive areas would not be physically feasible due to the need to maintain residential and driveway access for these areas. The driveway access would degrade the reduction potential of a noise barrier system and, at best, a segmented barrier would only reduce projected levels \pm 1 dBA. Therefore, noise abatement would not be physically effective or feasible and is not recommended for further consideration.

NSA 2

This noise sensitive area would have a projected 2015 noise level 3 dBA above the FHWA noise abatement criteria of 67 dBA. The difference between the projected Build and No-Build noise levels is 10 dBA. A noise barrier 1089' in length with an average height of 15', at a total cost of \$449,200 was investigated. This barrier would provide at least a 5 dBA reduction to seven (7) residences with projected levels above 67 dBA, at a cost per residence of \$64,200. This mitigation would not be reasonable.

TABLE 7

Noise Abatement Analysis Summary

| Noise Sensitive Area | Number of Impacted Residences ¹ | Project Noise Levels, Leq | | | | Barriers | | | | |
|----------------------|--|---------------------------|-----------------|--------------|--------------------|-------------|---------------------|-----------------|--------------------|-------------|
| | | Ambient | No-Build (2015) | Build (2015) | Build with Barrier | Length (Ft) | Average Height (Ft) | Total Cost (\$) | Cost Per Residence | Earth Berms |
| 1 | ---2 | 72 | 72 | 74 | --- | ---- | ---- | ---- | ---- | ---- |
| 2 | 7 | 70 | 67 | 70 | 62 | 1089' | 15.3' | 449,200 | 64,200 | ----3 |
| 3 | 10 | 74 | 65 | 71 | 62 | 885' | 15.6' | 371,800 | 37,200 | ----3 |
| 4 | ---2 | 74 | 69 | 72 | --- | ---- | ---- | ---- | ---- | ---- |
| 5 | ---2 | 71 | 66 | 76 | --- | ---- | ---- | ---- | ---- | ---- |
| 6 | ---2 | 68 | 66 | 66 | --- | ---- | ---- | ---- | ---- | ---- |
| 7 | 1 | 66 | 63 | 72 | 62 | 289' | 12.0' | 93,600 | 93,600 | ----3 |
| 8 | ---2 | 67 | 63 | 68 | --- | ---- | ---- | ---- | ---- | ---- |
| 9 | 17 | 60 | 62 | 72 | 62 | 689' | 15.4' | 287,100 | 16,900 | ----3 |
| 10 | 10 | 62 | 62 | 72 | 64 | 681' | 16.7' | 307,200 | 30,700 | ----3 |
| 11 | --- | 62 | 63 | 76 | --- | ---- | ---- | ---- | ---- | ---- |
| 12 | 2 | 66 | 62 | 72 | 62 | 446' | 12.8' | 153,600 | 75,800 | ----3 |
| 13 | 6 | 58 | 60 | 69 | 60 | 894' | 16.4' | 397,000 | 66,200 | ----3 |

Notes:

1. Equals the numbers of homes with projected levels of 67 dBA or greater and receiving a 5 dBA reduction from abatement measure.
2. Unable to provide abatement due to the need to maintain residential access (see text).
3. A final determination of earth berm feasibility will be made during final design.

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NSA 3

Noise sensitive area 3 would have a projected 2015 noise level 4 dBA above the FHWA noise abatement criteria of 67 dBA. A 10 dBA exists between the projected Build and No-Build noise levels. A noise barrier 885' in length with an average height of 15.5', at a total cost of \$371,800 was analyzed. This barrier would provide at least a 5 dBA reduction to 10 residences with projected levels above 67 dBA, at a cost per residence of \$37,200. This noise barrier will be considered during final design.

NSA 7

Noise sensitive area 7 would have a projected 2015 noise level 5 dBA above the FHWA noise abatement criteria of 67 dBA. The projected Build and No-Build noise level differs by 13 dBA. A noise barrier 289 feet in length with a height of 12 feet, at a total cost of \$93,600 was investigated. This barrier would provide 10 dBA reduction for the single residence at the cost of \$93,600 per residence. This barrier is not considered reasonable due to excessive cost-per-residence.

NSA 9

Noise sensitive area 9 would have a projected 2015 noise level 5 dBA above the FHWA noise abatement criteria of 67 dBA. A barrier 689' in length with an average height of 15' at a total cost of \$287,100 was investigated. This noise barrier would provide at least a 5 dBA reduction to 17 residences with projected levels above 67 dBA, at a cost per residence of \$16,900. This barrier will be considered further during the design phase of this project.

NSA 10

This noise sensitive area would have a projected 2015 noise level 5 dBA above the FHWA noise abatement criteria of 67 dBA. A noise barrier 681' in length with an average height of 16.7' at a total cost of \$307,200 was analyzed. This noise barrier would provide at least a 5 dBA reduction to 10 residences at a cost per residence of \$30,700. This barrier will be considered during project design.

NSA 12

Noise sensitive area 12 would have a projected 2015 noise level 5 dBA above the FHWA noise abatement criteria of 67 dBA. A noise barrier 446' in length with an average height of 12.8' at a total cost of \$153,600 was analyzed. This noise barrier would provide at least a 5 dBA reduction to two residences at a cost per residence of \$75,800. Therefore, this mitigation would not be reasonable due to excessive cost.

NSA 13

NSA 13 would have a projected 2015 noise level 2 dBA above the FHWA noise abatement criteria of 67 dBA. A noise barrier 894' in length with an average height of 16' at a total cost of \$397,000 was analyzed. This barrier

would provide at least a 5 dBA reduction to six residences at a cost per residence of \$66,200. This mitigation measure would not be reasonable due to excessive cost.

3. Other Mitigation Measures

In addition to noise walls, other abatement measures were considered as outlined in the Federal-Aid Highway Program Manual 7-7-3. These include:

1. Traffic Management Measures

Traffic management measures would include traffic control devices and signing for prohibition of certain vehicles (heavy trucks), time use restrictions for certain types of vehicles, modified speed limits and exclusion lane designations.

However, it is not possible to restrict or prohibit heavy trucks from this type of facility.

2. Alterations of Horizontal and Vertical Alignment

This may be feasible and will be investigated during the design phase of the project.

3. Acquisition of Real Property or Property Rights to Establish Buffer Zones or Install Earth Berms

Existing residential development immediately adjacent to the roadway makes it infeasible to acquire significant amounts of property for buffer areas.

It is not likely that earth berms will be feasible, however, they will be investigated prior to completion of the final environmental document.

4. Construction Impacts

As with any major construction project, areas around the construction site are likely to experience varied periods and degrees of noise impact. This type of project would probably employ the following pieces of equipment that would be likely sources of construction noise:

- o Bulldozers and earth movers
- o Graders
- o Front end loaders
- o Dump and other diesel trucks
- o Compressors.

Generally, construction activity would occur during normal working hours on weekdays. Therefore, noise intrusion from construction activities probably would not occur during critical sleep or outdoor recreating periods.

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

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5. Summary

Based on the noise analysis study completed to date, the SHA will consider the installation of noise abatement measures in the form of barriers at NSA's 3, 9, and 10. If during final design, the height, length, noise reduction, and cost of the noise barrier substantially change, the abatement measures might not be provided. A final decision on the installation of abatement measures will be made upon completion of the project design and public involvement process.

H. SECTION 4(f) EVALUATION

1. Introduction

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C 303 [c]) requires that the proposed use of any land from a significant publicly owned park or recreation area, wildlife refuge, or historic site that is on or considered eligible for the National Register of Historic Places be given particular attention. Final action requiring the taking of such land must document that there are no feasible and prudent alternates to its use. Additionally, a full evaluation of measures to minimize harm to that resource must be made and documented.

This Section 4(f) Evaluation has been prepared to describe the property within the project area that is listed on or eligible for the National Register, which affords the property Section 4(f) protection.

2. Proposed Action

The proposed improvement consists of dualizing MD Route 26 from Trading Lane, east over the Monocacy River and north along MD Route 194 to the southern end of the Walkersville Bypass (see Section III - Alternates Considered). The proposed action would require the acquisition of property from four historic sites which are eligible for the National Register of Historic Places. These sites are the Dearbought (F-3-16), Houck-Lynch House, Pike's View (F-8-38), and the N. Cramer House. Access to the Shriner-Reid House would be modified. Also, the entrance to the Houck-Lynch House.

3. Description of 4(f) Resources

Site 3 - the Dearbought (F-3-16) is the approximately 296 acre family farm of the Derr family which has owned and resided on the land for over 230 years. At least one building is extant from the establishment of the farm, a now derelict, 2 1/2 story stone and log farmhouse, which was built in 1755 by Sebastian Derr a German immigrant. An old log outbuilding is located in close proximity to the house.

A second residence, located on the south side of MD Route 26, was reputedly build by his son in 1775. This large ell-shaped, 2 1/2 story residence is surrounded by some period outbuildings.

This farm is not only significant architecturally for its numerous buildings, some of which show German influence, but also as the family farm, in agricultural use for over 200 years.

It is highly significant in Frederick County history.

Site 1 - Houck Lynch House - This large, brick residence was reputedly built by John Houck in 1880 as a country residence. It exhibits many characteristics typical of a rural residence: an ell shaped plan, 5 bay entrance facade, 2 1/2 story height and large cross gable breaking the roof line in the center of the

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entrance facade. Elegant refinements of this basic formula are exhibited in the bay window, bracketed porch supports, exceptionally wide cross gable and brick jackarches. Around the house are clustered outbuildings such as the original summer kitchen and well house. The stable has been altered and expanded and is currently utilized as the Glade Valley Animal Farm. The house is significant as a large and well preserved country dwelling of the late nineteenth century.

Site 7 - Pike's View (F-8-38), named for its highly visible location at the side of the Woodsboro and Frederick Turnpike, is significant for its association with the early history of Frederick County, especially the Ceresville area. It is also significant architecturally as a good example for a rural farmstead which retains considerable integrity.

Site 13 - N. Cramer House - This is a typical rural Maryland farmhouse in its ell shaped, two story, double pile design, with full width one story porch across the five bay entrance facade. This handsome porch with a dentilled cornice is carried on short square plinths. There are no extant period outbuildings, and the surrounding farmland was sold for contemporary subdivision housing. The house is significant as a particularly well preserved, Maryland farmhouse of the mid-nineteenth century.

Site 6 - Shriner Reid House - This large residence is significant historically and architecturally as a rural residence reputedly constructed for the owner of Ceresville Mills in the 19th century. Its highly visible location and impressive design are indicative of the prosperity and social prominence of the Mill owner.

4. Impacts to Resources

Dearbought - Alternates 2 and 3 dualization of MD Route 26/MD Route 194 will require property from this historic site. Alternate 2 requires 11.65 acres and Alternate 3 requires 14.2 acres. A retaining wall would be needed with Alternate 3 to avoid the acquisition of a secondary building on the Dearbought Farm. In both cases, the impact is a longitudinal encroachment as the boundary of the site runs along the existing roadway. The proposed taking is shown on the alternates mapping. The total acreage of the historically significant site is 296 acres. The existing roadway elevation will be lowered approximately 2 feet with this alternate. The current entrance would remain with only right turning movements onto and from MD Route 26. To date, no site plans are available showing proposed development; although the potential developers of the site have indicated concerns regarding the project. (See Comments and Coordination Section).

We have received an adverse effect determination for Alternates 2 and 3 due to ground disturbance caused by road construction and heavy traffic traveling closer to the structure causing damage to the structural integrity of the building.

Houck-Lynch House - Alternates 2 and 3 would impact this site. Approximately .07 acre of property would be required for the proposed widening. Access will remain as it is today with right turning movements only into and out of this site because of the proposed median. A no adverse effect determination

was received from the SHPO conditioned on providing landscaping to shield the building from the road.

N. Cramer House - Alternates 2 and 3 would require property from this historic site. Alternate 2 requires approximately .07 acre and Alternate 3 requires approximately .12 acre. The boundary of this site abuts the existing right-of-way. Any widening along MD Route 194 requiring additional right-of-way would require property from this site. A no adverse effect determination was received from the SHPO conditioned on providing landscaping to screen the buildings from the road.

Pike's View - Alternates 2 and 3 would require property from this historic site. Alternate 2 requires 2.3 acres and Alternate 3 requires 2.3 acres. Existing access to this site would be changed and new access provided via a service road which requires the use of property from this site. The proposed service road runs north along the proposed southbound lanes of MD Route 194. Given the length of the service road, we believe the site will not be adversely affected. A no adverse effect determination was received from the SHPO provided that landscaping is provided on the north side of the nucleus of buildings in order to screen the site.

Shriner Reid House - No right-of-way will be required from within the historic boundary (see Alternates Mapping); however, access would be established by means of a new driveway to the east of the site. Temporary easement would be required for construction of the relocated entrance drive to MD Route 26. A no adverse effects determination has been received from the SHPO for both Alternates.

5. Avoidance Alternate

Under the No-Build avoidance alternate, MD Route 26 and MD Route 194 would receive normal maintenance and safety improvements. No long range improvements would be done and the current congestion and safety problem would continue to exist.

Current accident rates experienced on MD Route 26 are significantly higher than the 1986 statewide average. It is expected that future accidents would become more frequent and more injurious to human life if the proposed improvements were not implemented.

Dearbought - Shifting the alignment to the north side of MD Route 26 to further minimize or avoid impacting this site would result in increased impacts to Houck Lynch and Houck-Hahn historic sites. Further, several townhouses may have to be acquired. Two residences located on the east and west side of Long Meadow Road would be relocated. Addition right-of-way would be required from six other residences in Broadview Acres located along Broadview Drive.

Houck-Lynch House - Shifting the alignment to the south side of MD Route 26 to avoid impacts to this historic site would require additional right-of-way from Dearbought. A shift to the north would result in the relocation of residences in Broadview Acres, more floodplain impacts, the construction of a longer structure over the Monocacy and require more acreage from Pike's View.

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To avoid property impacts to this site, a retaining wall and safety grade reduction will be investigated.

N. Cramer House - To avoid impacts to this historic site, the alignment must be shifted to the west side of MD Route 194. Shifting the alignment to the west side of MD Route 194 would require right-of-way from the baseball field of the Walkersville Senior High School. This shift would also require realignment of MD Route 994, and modification of the entrance to the school. Under Alternate 2, a retaining wall or reduction in safety grading may eliminate the need to impact this property. Both Options will be evaluated prior to selection of an Alternate. With Alternate 3, property impacts can not be avoided.

Pike's View - Shifting MD Routes 26/194 intersection in a southeasterly direction to allow the existing drive access to remain and eliminate the need for service road access would impact two historic sites located on the south side of MD Route 26, the Shriner House and Ceresville Flour Mill.

Shriner Reid House - Only the No-Build Alternate avoids impacts to the Shriner Reid House. There is no feasible and prudent alternative to relocating the entrance drive due to safety problems associated with permitting an entrance drive in close proximity to an intersection.

6. Mitigation

Dearbought - Alternates 2 and 3 have been shifted to the north just west of Monocacy River, to avoid any structures associated with the Dearbought Historic Site. In addition to the northern shift, Alternate 3 proposes a retaining wall to avoid impacting any structures.

Houch Lynch House - The westbound lanes along MD Route 26 would be lowered for approximately 3 feet which creates a slope at this site. A landscaping plan could be developed to vegetate the slope and coordinated with the State Historic Preservation Officer (SHPO) to reduce the visual effect of the proposed roadway.

Pike's View - The existing access to this site is too close to the intersection of MD Routes 26/194 to permit safe access. The proposed service road has been located close to the existing roadway (proposed southbound lane of MD Route 194) and will minimize right-of-way required and avoid economic loss of farmland.

N. Cramer - A landscaping plan is proposed to screen the buildings from the roadway.

7. Coordination

Coordination has been initiated with the State Historic Preservation Officer to identify historic sites and for a determination of potential effects. Coordination will continue after an alternate has been selected to mitigate and minimize impacts as much as possible. The owners of the National Register eligible historic sites received copies of letters sent to the SHPO.

Copies of this document will be circulated to the Department of Interior (DOI) and other appropriate agencies.

Section V
**Comments
and
Coordination**

MARYLAND
HISTORICAL



TRUST

PROJECT
DEVELOPMENT
OFFICE

JUN 23 2 15 PM '88

William Donald Schaefer
Governor

Jacqueline H. Rogers
Secretary, DHCD

June 24, 1988

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

RE: Contract No. F 174-101-771
MD 26/194 from end of MD 26 to
Walkersville Bypass (MD 194 Relocated)
PDMS No. 103155

Dear Ms. Simpson:

Thank you for your letters of May 17 and June 16, 1988 concerning boundaries for the historic properties involved with the subject project. Our office concurs with your proposed boundaries for the following:

- 1 - Houck-Lynch House
- 3 - Dearbought (Tax Parcel)
- 4 - Houck-Hahn
- 5 - Hahn House
- 6 - Reid House
- 7 - Pikes View
- 8 - Ceresville Mill
- 10 - Tollgate
- 13 - Stouffer House

The only boundary we cannot concur with at this time is the Hemp Residence (#11), which appears too restricted. We request further consultation between Rita Suffness and Al Luckenbach concerning this boundary.

Maryland

Department of Housing and Community Development
Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 974-4450, 757-9000
Temporary Address: Arnold Village Professional Center, 1517 Ritchie Highway, Arnold, Maryland 21012

Ms. Cynthia Simpson
June 24, 1988
Page 2

As always, your cooperation is appreciated.

Sincerely,



Mark R. Edwards
Deputy Director -
Deputy State Historic
Preservation Officer

MRE/AL/lm

- cc: Mrs. Glenn Michel
- Mr. Raymond Compton
- Mr. G. Bernard Callan
- Ms. Rita Suffness
- Mr. Paul Wettlaufer

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U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

| | | | |
|--|--|---|--|
| PART I (To be completed by Federal Agency) | | Date Of Land Evaluation Request 6/22/88 | |
| Name Of Project MD Rte 26 and 194 Improvements | | Federal Agency Involved State Highway Administration | |
| Proposed Land Use Industrial, commercial, low density, residential, | | County And State Frederick County, MD | |
| PART II (To be completed by SCS) | | Date Request Received By SCS JUNE 24, 1988 | |

| | | | | | |
|--|--|--|-----------------------------|--|--------------------------|
| Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply - do not complete additional parts of this form). | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Acres Irrigated NONE | Average Farm Size 167 |
| Major Crop(s) CORN, SMALL GRAIN, HAY | Farmable Land In Govt. Jurisdiction Acres: 275,400 % 64.5 | Amount Of Farmland As Defined in FPPA Acres: 225,400 % 52.8 | | Date Land Evaluation Returned By SCS August 1, 1988 | |
| Name Of Land Evaluation System Used FREDERICK CO. LAND EVALUATION | Name Of Local Site Assessment System USE FPPA | | | | |

| PART III (To be completed by Federal Agency) | Alternative Site Rating | | | |
|--|-------------------------|-----------|----------|-----------|
| | Site # 2 | Site # 2A | Site # 3 | Site # 3A |
| A. Total Acres To Be Converted Directly | 19.98 | 20.98 | 22.47 | 23.47 |
| B. Total Acres To Be Converted Indirectly | 0 | 0 | 0 | 0 |
| C. Total Acres In Site | 19.98 | 20.98 | 22.47 | 23.47 |

| PART IV (To be completed by SCS) Land Evaluation Information | Site # 2 | Site # 2A | Site # 3 | Site # 3A |
|--|----------|-----------|----------|-----------|
| A. Total Acres Prime And Unique Farmland | 15.40 | 16.40 | 16.57 | 17.57 |
| B. Total Acres Statewide And Local Important Farmland | 4.58 | 4.56 | 5.90 | 5.90 |
| C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted | .006 | .006 | .009 | .010 |
| D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value | 25 | 25 | 25 | 25 |

| PART V (To be completed by SCS) Land Evaluation Criterion | Site # 2 | Site # 2A | Site # 3 | Site # 3A |
|---|----------|-----------|----------|-----------|
| Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points) | 92 | 92 | 92 | 92 |

| PART VI (To be completed by Federal Agency) | Maximum Points | Site # 2 | Site # 2A | Site # 3 | Site # 3A |
|---|----------------|-----------|-----------|-----------|-----------|
| Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b)) | | | | | |
| 1. Area In Nonurban Use | 15 | 9 | 9 | 9 | 9 |
| 2. Perimeter In Nonurban Use | 10 | 6 | 6 | 6 | 6 |
| 3. Percent Of Site Being Farmed | 20 | 3 | 3 | 4 | 4 |
| 4. Protection Provided By State And Local Government | 20 | 0 | 0 | 0 | 0 |
| 5. Distance From Urban Buildup Area | 0 | 0 | 0 | 0 | 0 |
| 6. Distance To Urban Support Services | 0 | 0 | 0 | 0 | 0 |
| 7. Size Of Present Farm Unit Compared To Average | 10 | 10 | 10 | 10 | 10 |
| 8. Creation Of Nonfarmable Farmland | 25 | 0 | 0 | 0 | 0 |
| 9. Availability Of Farm Support Services | 5 | 5 | 5 | 5 | 5 |
| 10. On-Farm Investments | 20 | 20 | 20 | 20 | 20 |
| 11. Effects Of Conversion On Farm Support Services | 25 | 0 | 0 | 0 | 0 |
| 12. Compatibility With Existing Agricultural Use | 10 | 10 | 10 | 10 | 10 |
| TOTAL SITE ASSESSMENT POINTS | 160 | 63 | 63 | 64 | 64 |

| PART VII (To be completed by Federal Agency) | Site # 2 | Site # 2A | Site # 3 | Site # 3A |
|---|------------|------------|------------|------------|
| Relative Value Of Farmland (From Part V) | 100 | 92 | 92 | 92 |
| Total Site Assessment (From Part VI above or a local site assessment) | 160 | 63 | 63 | 64 |
| TOTAL POINTS (Total of above 2 lines) | 260 | 155 | 155 | 156 |

| | | |
|----------------|--------------------|--|
| Site Selected: | Date Of Selection: | Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|----------------|--------------------|--|

Reason For Selection:

MARYLAND
HISTORICAL



TRUST

William Donald Schaefer
Governor

Jacqueline H. Rogers
Secretary, DHCD

May 25, 1988

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

RE: Contract No. F 174-101-771
Maryland Routes 26/194 from end
of Maryland Route 26 (divided)
to the Walkersville Bypass
(Maryland Route 194 Relocated)
PDMS No. 103155

Dear Ms. ^{Cynthia}Simpson:

In response to your letter of April 6, 1988 concerning the subject project, I forwarded the information you provided to Ron Andrews, our National Register Administrator. As you can see from his enclosed reply, he still feels the three properties in question are possibly NR-eligible. If you wish to pursue this matter, it may now be appropriate to seek the opinion of the Keeper of the Register.

Please let me know if I can be of any further assistance.

Sincerely,

Al Luckenbach
Assistant Administrator
Office of Preservation Services

AL/lm

enclosure

cc: Ms. Rita Suffness
Mr. Paul Wettlaufer
Mr. Ron Andrews

Maryland

Department of Housing and Community Development
Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 974-4450, 757-9000
Temporary Address: Arnold Village Professional Center, 1517 Ritchie Highway, Arnold, Maryland 21012

MARYLAND
HISTORICAL



TRUST

William Donald Schaefer
Governor

Jacqueline H. Rogers
Secretary, DHCD

January 13, 1988

JAN 20 3 24 PM '88
PROJECT
DEVELOPMENT
DIVISION

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

RE: Contract No. F 174-101-771
Maryland Routes 26 and 194 from
end of divided highway on
Maryland Route 26 to Maryland
Route 194 (Walkersville Bypass)
PDMS No. 103155

Dear Ms. Simpson:

Thank you for your letter concerning the subject project. Our office concurs with the following proposed levels of significance:

- | | | |
|---------------------|----------|----------|
| 2. Hahn Residence | | M.I. |
| 3. Dearbought | (F-3-16) | P.N.R.E. |
| 4. Houck-Hahn House | | P.N.R.E. |
| 5. Hahn Farm | | P.N.R.E. |
| 6. Reid House | | P.N.R.E. |
| 7. Pikes View | (F-8-38) | P.N.R.E. |
| 8. Ceresville Mill | (F-8-42) | P.N.R.E. |
| 9. Zimmerman Farm | | M.I. |
| 10. Tollgate | (F-8-1) | N.R. |
| 12. Brick Dwelling | | M.I. |

Our office disagrees, however, with the proposed levels of significance for the following properties:

1. Houck-Lynch Residence
11. Hemp Residence
13. Stouffer Residence

Maryland

Department of Housing and Community Development
Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 974-4450, 757-9000
Temporary Address: Arnold Village Professional Center, 1517 Ritchie Highway, Arnold, Maryland 21012

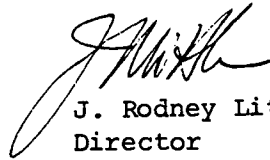
91

Ms. Cynthia Simpson, Chief
Environmental Management
January 13, 1988
Page 2

Based upon the information currently available, Mr. Ron Andrews, Administrator of our National Register program, believes each of these may be NR-eligible as well preserved examples of large mid-19th century farmhouses. As SHPO, I support this position.

Thank you for your cooperation. If you have any questions or comments, please contact Al Luckenbach at 974-4450.

Sincerely,



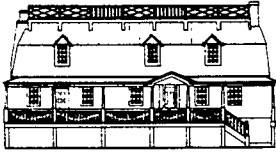
J. Rodney Little
Director
State Historic
Preservation Officer

JRL/AHL/eib

cc: Mrs. Glenn Michel
Mr. Raymond L. Compton
Mr. G. Bernard Callan
Ms. Rita Suffness
Mr. Paul Wettlaufer

92

MARYLAND
HISTORICAL



TRUST

PROJECT
DEVELOPMENT
DIVISION

William Donald Schaefer
Governor

Jacqueline H. Rogers
Secretary, DHCD

SEP 16 3 28 PM '88

September 13, 1988

Ms. Cynthia D. Simpson, Chief
Environmental Management
Maryland Department of Transportation
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21203-0717

Re: Contract No. F 174-101-771
MD 26 and 194 from end of
Divided Highway on MD 26 to
MD 194 (Walkersville Bypass)
PDMS No. 103155

Dear Ms. Simpson:

Thank you for your letter of July 26, 1988 concerning the boundaries for the Cover - Cramer House, #11 (Hemp Residence). This office concurs with the currently proposed boundaries.

Should you have any questions, please contact Michael Day at 974-5000.

Sincerely,

George J. Andreve
Project Review and
Compliance Administrator
Office of Preservation Services

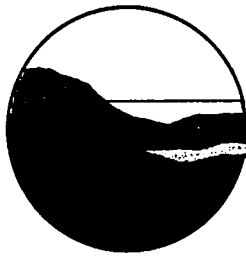
GJA:MKD:lcb

cc: Ms. Rita Suffness
Mrs. Glen Michel
Mr. Raymond Compton
Mr. G. Bernard Callan



Department of Housing and Community Development
Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 974-5000

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Maryland Department of Natural Resources

Maryland Geological Survey
2300 St. Paul Street
Baltimore, Maryland 21218
Telephone: _____

William Donald Schaefer
Governor

SEP 28 1 45 PM '88
PROJECT DEVELOPMENT DIVISION
Torrey C. Brown, M.D.
Secretary
Kenneth S. Weaver
Director
Emery T. Cleaves
Deputy Director

Division of Archeology
(301) 554-5530

26 September 1988

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

RE: Phase I archeological investigation of Maryland Route 26 and Maryland Route 194 from dualized Maryland Route 26 to the south end of the Walkersville Bypass.
Contract No. F 152-201-771.

Dear Mr. Ege:

The Division of Archeology performed a Phase I archeological reconnaissance along Maryland Routes 26 and 194 in Frederick County from 7-9, 14-16 and 23 September 1988. The survey was carried out in response to the proposed dualization of Maryland Routes 26 and 194 and resulted in the investigation of four historic and prehistoric archeological sites. Two historic sites, and one prehistoric and historic site are considered potentially significant and will require further investigation to evaluate their eligibility to the National Register of Historic Places.

Those archeological sites considered potentially significant and requiring further investigation are: Dearbought (18FR632), an historic farmstead; Pike's View (18FR631), a historic farmstead and prehistoric camp; and the historic Shriner site (18FR633). The archeological site that was considered not significant, and thus requires no additional investigation was: the historic Discovery site 18FR634. A project map of the survey area detailing the location of these sites is enclosed.

Permission to conduct archeological survey in Parcel N (Fountain Rock Road Intersection) of the project area was refused by the wife of Mr. Joseph C. Hemp of 8516 Woodsboro

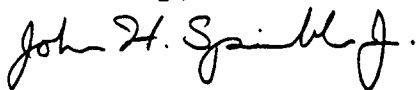
94

Pike in Walkersville, Maryland. Parcel N is located on the enclosed map and is considered to have moderate potential for both historic and prehistoric archeological resources. Once permission to survey is granted, this parcel will be investigated for archeological resources.

An executive summary will not be sent to your office for the above-mentioned project. A draft file report containing the technical details of the project will be sent to your office once the project is completed.

Please contact me at 554-5577 if you have any questions about this project or if I can be of further assistance.

Sincerely,



John H. Sprinkle, Jr.
Archeologist

Enclosure

cc:Cynthia Simpson
Rita Suffness



**Maryland Department of Transportation
State Highway Administration**

Richard H. Trainor
Secretary
Hal Kassoff
Administrator

99

March 15, 1988

MEMORANDUM

TO: Mr. Louis H. Ege, Jr.
Deputy Director
Project Development Division

FROM: Cynthia D. Simpson, Chief
Environmental Management *CD*

SUBJECT: Contract No. F 174-101-771
Maryland Route 26 and Maryland Route 194
from Dualized Maryland Route 26 to the
south end of the Walkersville Bypass

On Tuesday, January 5, 1988, a wetland field review was held for the subject project. In attendance were:

| | |
|--------------------|------------------------------------|
| Mr. Howard Johnson | SHA |
| Ms. Mary Dircks | Army Corps of Engineers |
| Mr. Q. Taherian | DNR Water Resources Administration |
| Mr. Rob Kelsey | U.S. Fish and Wildlife Service |
| Mr. Mike Shaw | DNR Tidewater |
| Ms. Susan Jacobs | Highway Design |
| Mr. Eric Eckhardt | " " " |
| Ms. Lynn Rothman | EPA |
| Mr. Frank DeSantis | SHA (Project Manager) |
| Mr. Harry Stephens | Hurst Rosche - Consultant |

Wetland boundaries were agreed to by Ms. Mary Dircks of the Corps of Engineers and the other state agencies. Wetland impacts associated with Alternate 2 and Alternate 2-Option A, totaled .47 acres and wetland impacts associated with Alternate 3 and Alternate 3-Option A, totaled .47 acres.

One comment made by Mr. Q. Taherian of DNR was that the new bridge over the Monocacy River span the entire 100 year floodplain.

Should you require additional information please contact Mr. Howard Johnson at 333-1179.

CDS:cd
Attachment
cc: Mr. Charlie Adams (w/attach)
Mr. Ed Stein (w/attach)
Mr. Steve Sharar (w/attach)
Attendees

My telephone number is (301) 333-1177

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Maryland Route 26 and 194

| <u>Wetland #</u> | <u>Location</u> | <u>Classification</u> | <u>Dominant Vegetation</u> | <u>Approximate Acreage Impacted</u> |
|------------------|----------------------------------|---|----------------------------|--|
| 1 | Monocacy River Crossing | Riverine wetland with Palustrine Forested wetland. Along banks also a Palustrine Forested Broad Leaved Deciduous Area (within Island) | Black Willow | .47 |
| | Monocacy River Crossing (Island) | | Temporary | Acreage Computed included in wetland 1 acreage (above) |

RELATIVE WETLAND QUALITY BASED ON WETLAND FUNCTIONS

CHECKLIST

MONOCACY RIVER

A. OCCURRENCE

Potential functions ranked in descending order of probable occurrence specific to wetlands found throughout Maryland.

- 1. Passive Recreation and Natural Heritage Value ** (occurs often).
- 2. Habitat for Aquatic Wildlife or Fisheries
- 3. Sediment Trapping (short-term)
- 4. Flood Desynchronization
- 5. Nutrient Retention (short-term)
- 6. Food Chain Support (nutrient export)
- 7. Dissipation of Erosive Forces
- 8. Active Recreation
- 9. Groundwater Discharge
- 10. Nutrient Retention/Removal (long-term)
- 11. Sediment Trapping (long-term)
- 12. Groundwater Recharge (Few occurrences)

Riverine
PF01A

Block Wetland

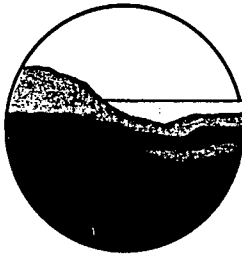
B. VALUE

| <u>Rating</u> | <u>Value</u> |
|--|--------------|
| Any combination of functions including 2 and 6. | High |
| Any combination of 3 functions from the functions list, excluding 2 and 6. | Medium |
| Less than 3 functions total. | Low |

C. TYPE OF WETLANDS

- Tidal
- Non-tidal

** Threatened or Endangered Species habitat or Areas of State Critical Concern are always "high" valued wetlands regardless of function, size or location.



Maryland Department of Natural Resources

PROJECT DEVELOPMENT

Forest, Park and Wildlife Service
Tawes State Office Building
Annapolis, Maryland 21401

JUN 1 12 04 PM '88

William Donald Schaefer
Governor

Torrey C. Brown, M.D.
Secretary

May 27, 1988

Donald E. MacLauchlan
Director

RE: Route 26 and Maryland Route 194

Louis H. Ege, Jr.
Maryland Department of Transportation
State Highway Administration
707 North Calvert St.
Baltimore, MD 21203-0717

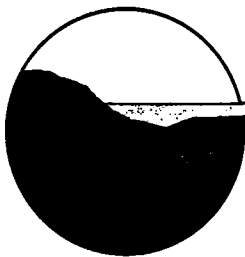
This is in response to your request of 5-3-88 for information regarding the above referenced project. There are no known Federal or State threatened or endangered plant or wildlife species present at this project site.

If you have any questions regarding this matter please feel free to call me.

Sincerely,

J. Burtis, Jr.
Jim Burtis, Jr.
Assistant Director

99



Maryland Department of Natural Resources

Tidewater Administration

Tawes State Office Building
580 Taylor Avenue
Annapolis, Maryland 21401

William Donald Schaefer
Governor

Torrey C. Brown, M.D.
Secretary

May 25, 1988

Ms. Cynthia D. Simpson, Chief
Environmental Management
Maryland Dept. of Transportation
State Highway Administration
707 North Calvert St.
Baltimore, MD 21203-0717

MAY 31 9 05 AM '88
PROJECT DEVELOPMENT DIVISION

Re: Contract No. F-174-771 MD
Route 26 and MD Route 194
widening over the Monocacy
River. From dualized MD
Route 26 to the South end
of the Walkerville Bypass.

Dear Ms. Simpson:

In response to the request from the State Highway Administration for information on the presence of anadromous fish or other fish in the project area (F-174-771) I am providing you with some information that I think may be of some help.

Sincerely,

W.R. Carter, III
Biologist

WRC:swp

Attachment

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screening out light necessary for productivity; trapping bacteria and decomposing organic wastes on bottom promoting oxygen depletion; reducing the recreational value of the water (McKee, 1963).

Aquatic Invertebrates

A total of 34 species of macroinvertebrates were identified from the Monocacy River during 1979 (Table 2). The majority of the macroinvertebrates collected belonged to insect orders, comprising from 99 to 100% of faunal composition at each station. Based upon all calculations from each station, Tricoptera were the most numerous, accounting for 39.8% of the macroinvertebrates collected followed closely by Diptera (38.4%) and by Ephemeroptera (17.3%). There was considerable variation in mean number of species between stations (Table 3). A wide range in all values occurred from date to date.

The mean number of species varied from 18 (range 13 - 25) at Stations 2, 5, and 6 to 22 (range 19 - 27) at Stations 3 and 4. Mean number of individuals/ft squared ranged from 64 (range 37 - 90) at Station 4 to 238 (range 58 - 514) at Station 1. Diversity values ranged from a mean of 2.74 (range 1.98 - 3.50) at Station 5 to 3.54 (range 3.44 - 3.64) at Station 4 (Table 4).

In the Monocacy River diversity was highest at Station 4 and lowest at Station 5. Standing crop was highest at Station 5 and lowest at Station 4. At Station 5, where standing crop were highest, Diptera accounted for 58.0% of faunal composition, whereas at Station 4 with the highest diversity, Diptera accounted for 38% of the faunal composition.

During 1979 the Monocacy River was supporting a diverse macroinvertebrate fauna with a medium to high standing crop.

Fish Population

A total of 43 fish species were collected from the Monocacy River during the period 1976 - 1983 (Table 6 and 8). Spotfin shiners were the most abundant fish species. Smallmouth bass were the most common sport fish while redbreast sunfish were the most abundant panfish.

Upper Monocacy River (Pennsylvania State Line to Big Pipe Creek)

Largemouth bass were the most abundant sport fish in this area, especially above Starner's Dam. Largemouth in the electrofishing collection ranged from 10.7 to 43.2 cm in total length. The portional stock density (PSD%) for a daylight collection in 1983 was 41 which is within the desirable range (30 - 70%) for a predator species (Weithman, 1979). The electrofishing catch rate was 0.19 stock fish per minute which hints at somewhat low density. The relative weight of largemouth bass varied from 88 to 103% of standard weight; mean relative weight was 95%, indicating that these bass were in good condition (Wege, 1978).

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Other sport fish in relative order of abundance were smallmouth bass, black crappie, and white crappie. Bluegill and pumpkinseed sunfish were abundant, redbreast sunfish were common, and green sunfish were relatively scarce. Channel catfish, brown bullhead, and yellow bullhead were common, and of about equal abundance, while margined madtoms were scarce in the collections. Adult eels were common. Carp dominated the rough fish population, followed closely by white suckers. Hog suckers and golden redhorse were relatively scarce. Shorthead redhorse were absent from the collection. Forage fish species abundant in this section included common shiners, rosyface shiners, spotfin shiners, bluntnose minnows, and spottail shiners (Table 7). Comely shiners were common; golden shiners were common above Starner's Dam.

Middle Monocacy River (Below Big Pipe Creek to Carroll Creek)

Smallmouth bass were the most abundant sport fish in this area. Smallmouth in electrofishing collections ranged from 7.4 to 39.3 cm in total length. The PSD for a daylight collection in 1983 was 60 and the catch rate for stock size fish was 0.11 fish/min. The PSD ratio of quality sized (30.0 + cm) to stock size (20.0 + cm) fish was good however the catch rate was low. Largemouth bass and black crappie approached being common, while white crappie were scarce. Redbreast sunfish were the most abundant panfish. Bluegill, pumpkinseed, and green sunfish approached being common. Members of the catfish family were also common and listed in relative order of abundance were channel catfish, yellow bullhead, brown bullhead, and margined madtom. Adult eels were common. Shorthead redhorse were the most abundant rough fish followed by white sucker, hog sucker, carp, and golden redhorse. Forage fish species in relative order of abundance were spotfin shiner, bluntnose minnow, spottail shiner, tessellated darter, and rosyface shiner (Table 7). Common shiners and longnose face were common.

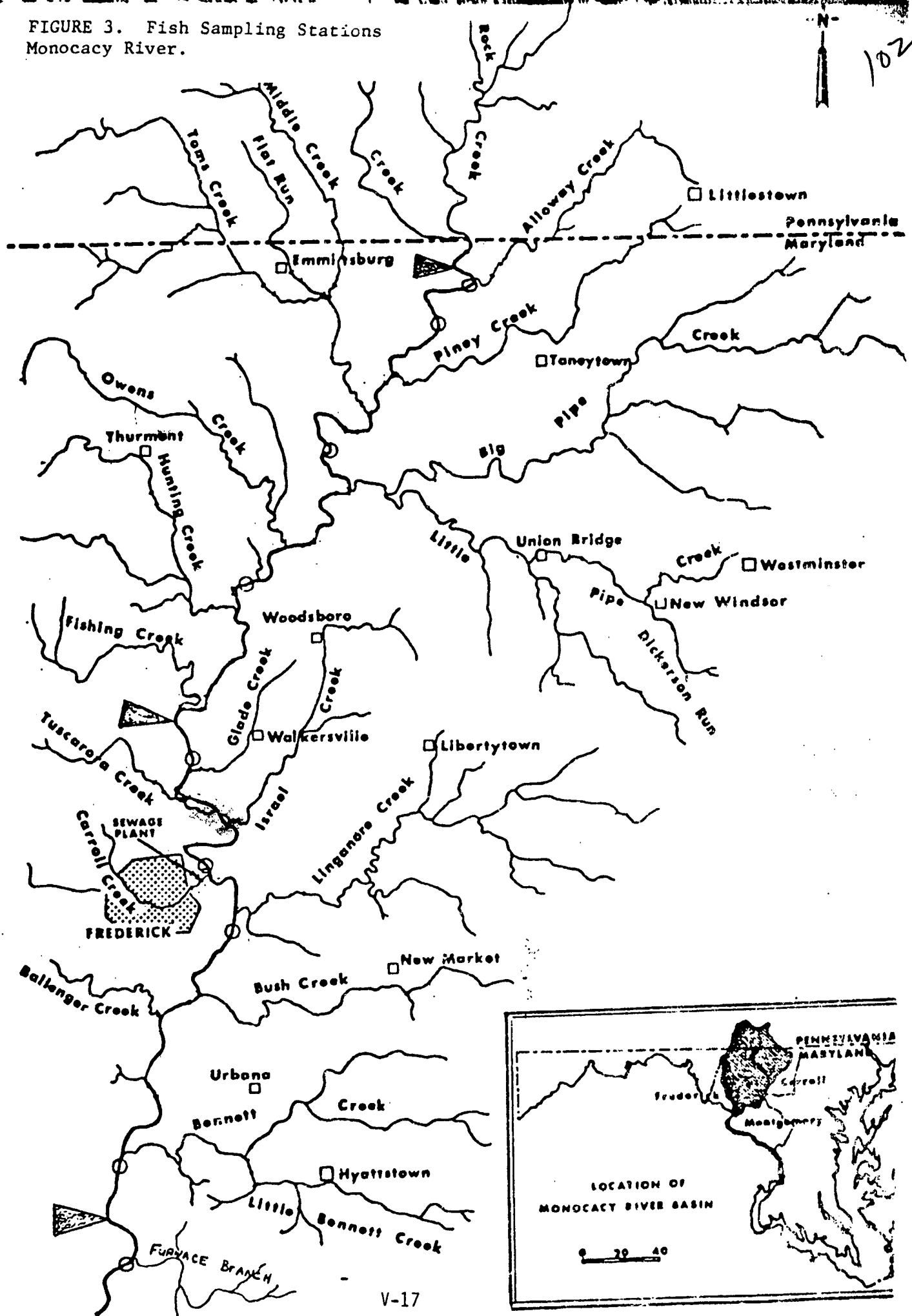
Lower Monocacy River (Below Carroll Creek to Junction with the Potomac River)

Smallmouth bass were the most numerous sport fish in this area and might be described as being common. Smallmouth in electrofishing collections ranged from 11.9 to 30.5 cm in total length. No quality sized smallmouth bass were collected in 1983 which resulted in a PSD of zero. Catch rates of smallmouth bass by electrofishing were low in 1983, 1979, and 1978; being 0.05, 0.07, and 0.07 stock fish per minute respectively. Largemouth bass and black crappie were relatively scarce; one adult brown trout was collected in this section of the Monocacy during the fall of 1983. Redbreast sunfish were common, followed in relative abundance by bluegill, pumpkinseed sunfish, green sunfish, and longear sunfish. Channel catfish approached being common, followed by yellow and brown bullhead. Eels approached being common. Shorthead redhorse were the most abundant rough fish. Carp, white suckers, golden redhorse, and hog sucker followed in relative order of abundance. Spottail shiners were the most abundant forage fish followed by spotfin shiner and bluntnose minnow. The only specimen of silvery minnow found in the Monocacy was collected in this section during 1983.

Reproduction and Growth Rates

Evidence of natural reproduction was documented for all fish species listed in Table 6 with the exception of the American eel, brown trout, goldfish,

FIGURE 3. Fish Sampling Stations
Monocacy River.



LEGEND
 ○ Sampling Stations (sewage); ▲ Sampling Station (Enderbushing)

Scale of miles

102

163

Table 6. Fish Species Collected In The Monocacy River. 1976-1983

| Scientific Name | Common Name |
|---------------------------------|---------------------|
| <i>Anguilla rostrata</i> | American Eel |
| <i>Salmo trutta</i> | Brown trout |
| <i>Campostoma anomalum</i> | Stoneroller |
| <i>Carassius auratus</i> | Goldfish |
| <i>Cyprinus carpio</i> | Carp |
| <i>Ericymba buccata</i> | Silverjaw |
| <i>Exoglossum maxillingua</i> | Cutlips Minnow |
| <i>Hybognathis nuchalis</i> | Silvery Minnow |
| <i>Nocomis micropogon</i> | River Chub |
| <i>Notemigonus crysoleucas</i> | Golden Shiner |
| <i>Notropis amoenus</i> | Comely Shiner |
| <i>Notropis cornutus</i> | Common Shiner |
| <i>Notropis hudsonius</i> | Spottail Shiner |
| <i>Notropis proce</i> | Swallowtail Shiner |
| <i>Notropis rubellus</i> | Rosyface Shiner |
| <i>Notropis spilopterus</i> | Spotfin Shiner |
| <i>Pimephales notatus</i> | Bluntnose Minnow |
| <i>Rhinichthys atratulus</i> | Blacknose Dace |
| <i>Rhinichthys cataractae</i> | Longnose Dace |
| <i>Semotilus atromaculatus</i> | Creek Chub |
| <i>Semotilus corporalis</i> | Fallfish |
| <i>Catostomus commersoni</i> | White Sucker |
| <i>Hypentelium nigricans</i> | Northern Hogsucker |
| <i>Moxostoma erthrurum</i> | Golden Redhorse |
| <i>Moxostoma macrolepidotum</i> | Shorthead Redhorse |
| <i>Ictalurus natalis</i> | Yellow Bullhead |
| <i>Ictalurus nebulosus</i> | Brown Bullhead |
| <i>Ictalurus punctatus</i> | Channel Catfish |
| <i>Noturus insignis</i> | Margined Madtom |
| <i>Fundulus diaphanus</i> | Banded Killifish |
| <i>Ambloplites rupestris</i> | Rock Bass |
| <i>Lepomis auritus</i> | Redbreast Sunfish |
| <i>Lepomis cyanellus</i> | Green Sunfish |
| <i>Lepomis gibbosus</i> | Pumpkinseed Sunfish |
| <i>Lepomis macrochirus</i> | Bluegill |
| <i>Lepomis megalotis</i> | Longear Sunfish |
| <i>Micropterus dolomieu</i> | Smallmouth Bass |
| <i>Micropterus salmoides</i> | Largemouth Bass |
| <i>Pomoxis annularis</i> | White Crappie |
| <i>Pomoxis nigromaculatus</i> | Black Crappie |
| <i>Etheostoma blenniodes</i> | Greenside Darter |
| <i>Etheostoma flabellare</i> | Fantail Darter |
| <i>Etheostoma olmsteidi</i> | Tessellated Darter |

Table 7. Mean Number of Individuals, by Species, Collected Annually by Seining
in the Monocacy River(Upper, Middle,& Lower Sections),1976-1978,1980-1981

| Common Name | Upper Section | Middle Section | Lower Section |
|---------------------|---------------|----------------|---------------|
| Stoneroller | 2 | 1 | 9 |
| Carp | 0 | <1 | 0 |
| Silverjaw | 0 | 1 | 2 |
| Cutlips Minnow | 2 | <1 | 0 |
| River Chub | 5 | 4 | 2 |
| Golden Shiner | 1 | 0 | 1 |
| Comely Shiner | 15 | 1 | 0 |
| Common Shiner | 138 | 23 | 15 |
| Spottail Shiner | 45 | 58 | 97 |
| Swallowtail Shiner | 3 | 7 | 9 |
| Rosyface Shiner | 56 | 43 | 4 |
| Spotfin Shiner | 54 | 123 | 109 |
| Bluntnose Minnow | 45 | 97 | 56 |
| Blacknose Dace | 2 | 3 | 2 |
| Longnose Dace | 1 | 15 | 19 |
| Creek Chub | 1 | 1 | 3 |
| Fallfish | 2 | 2 | 0 |
| White Sucker | 1 | 13 | 8 |
| Northern Hogsucker | <1 | 2 | 2 |
| Golden Redhorse | 0 | 0 | 1 |
| Yellow Bullhead | <1 | 0 | 0 |
| Channel Catfish | 0 | 0 | <1 |
| Banded Killifish | 2 | 3 | 1 |
| Rock Bass | 1 | <1 | 0 |
| Redbreast Sunfish | 4 | 5 | 6 |
| Green Sunfish | <1 | 0 | 1 |
| Pumpkinseed Sunfish | <1 | 1 | 1 |
| Bluegill | 6 | 3 | 8 |
| Longear Sunfish | 0 | 0 | 2 |
| Smallmouth Bass | 13 | 11 | 7 |
| Largemouth Bass | 1 | 2 | 1 |
| Greenside Darter | 8 | 4 | 3 |
| Fantail Darter | 0 | 0 | 1 |
| Tessellated Darter | 6 | 50 | 14 |

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MAERK LIMITED

REAL ESTATE DEVELOPERS

MEMORANDUM

TO: Rodney Little
Louis H. Ege, Jr.
~~Cynthia D. Simpson~~

FROM: Mike Milliner *MSM*

SUBJ: Road Widening At Dearbought

DATE: September 19, 1988

I am in a receipt of a letter dated September 7, 1988, from Louis H. Ege, Jr. to Rodney Little. The letter refers to the impact of two alternates under consideration for the widening of Route 26 in the vicinity of the Dearbought project. Because we are the general partner in a joint venture development agreement with the representatives of the Derr estate, I am sending you this letter to express a couple of concerns.

We have had a number of meetings with representatives from the State Highway Administration over a period of the last several months. Although the letter dated September 7th indicates a retaining wall, and perhaps other design features have been coordinated with the owner, we do not feel at this time that we have a clear understanding of what is to be done. In fact, we are deeply concerned about the design and the possible impact on the stone house and its front yard.

We understand that some level of archeological research is being done along Route 26 at this time and that several interesting artifacts have been discovered. In addition, we are in the process of pursuing a highly detailed investigation of the archeological and historical features throughout the project. We would be very concerned about the impact of the road widening on any of these significant features.

In all prior to discussions with representatives of SHA, it has been apparent that the ultimate plan will be for a six lane highway designed for potential speeds of up to 55 mph. This is in stark contrast to what appears to be urban nature of the stretch of road in front of Dearbought. We have indicated on many occasions that a closed section, four-lane road with a minimum median would be more in keeping with the real flavor of this area. Ideally, it would be pleasantly landscaped and the appropriate stop lights would be installed to insure proper safety standards are met.

We are very anxious to see a good design that satisfies everyone's needs in terms of this road widening. However, it is an overstatement that things have been coordinated with the property owner to his satisfaction. We remain anxious to meet and discuss these things at any time.

We are currently preparing a followup letter on our thoughts in this regard. It will be forthcoming in the very near future.

MARYLAND
HISTORICAL



TRUST

William Donald Schafer
Governor 106

Jacqueline H. Rogers
Secretary, DHCD

October 25, 1988

Ms. Cynthia D. Simpson, Chief
Environmental Management
Maryland Department of Transportation
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21203-0717

Re: Contract No. F 174-101-771
MD 26 and MD 194 from end of
MD 26 divided to MD 194 at the
Walkersville Bypass
PDMS No. 103155

Dear Ms. Simpson:

This letter corrects our previous correspondence, dated October 14, 1988, concerning the above referenced project. We concur with your determination of effect as follows:

| | <u>Alternate 2</u> | <u>Alternate 3</u> |
|----------------------------|--------------------|--------------------|
| Houck-Lynch House | C.N.A.E. | C.N.A.E. |
| Houck-Hahn House | N.A.E. | N.A.E. |
| Hahn House | N.E. | N.E. |
| Shriner (Reid) House | N.A.E. | N.A.E. |
| Pikes View | C.N.A.E. | C.N.A.E. |
| Ceresville Mill | N.E. | N.E. |
| Cover-Cramer (Hemp) House | N.E. | N.E. |
| N. Cramer (Stouffer) House | C.N.A.E. | C.N.A.E. |

NE = no effect
NAE = no adverse effect
CNAE = conditional no adverse effect

We disagree with your conditional no adverse effect determination for Dearbought. We feel that construction of the road that close to the existing stone and frame dwelling as well as the taking of property inside the historic boundary would constitute an adverse effect. We would suggest that the new road be held as far away from the historic boundary as possible and that landscaping be used to further buffer this property from the effects of increased traffic. We also suggest that the owner of Dearbought be involved in negotiations concerning the mitigation of this adverse effect determination.

Ms. Cynthia D. Simpson
October 25, 1988
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Additionally, we disagree with your determination of no effect for the Tollhouse. It is our opinion that bringing the road 50 feet closer to this property would constitute an adverse effect. Ground disturbance due to road construction and heavy traffic that close, could cause damage to the structural integrity of this building. We therefore request that the new road come no closer to the Tollhouse than currently exists.

Should you have any questions concerning this review, please contact Michael Day at 974-5000.

Sincerely,

Mark R. Edwards for

J. Rodney Little
Director

JRL:MKD:lcb

cc: Ms. Rita Suffness
Mr. Howard Johnson
Mr. Mike Milliner
Mrs. Glenn Michel
Mr. Raymond Compton
Mr. G. Bernard Callan

Section VI

Appendix

Attachment for Environmental
Impact Documents
Revised: February 1, 1988
Bureau of Relocation Assistance

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

All State Highway Administration projects must comply with the provisions of the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646 and amendments as published in CFR Vol. 51, No. 39 on February 27, 1986) and/or the Annotated Code of Maryland, Real Property, Title 12, Subtitle 2, Sections 12-201 thru 12-212. The Maryland Department of Transportation, State Highway Administration, Bureau of Relocation Assistance, administers the Relocation Assistance Program in the State of Maryland.

The provisions of the Federal and State Law require the State Highway Administration to provide payments and services to persons displaced by a public project. The payments that are provided include replacement housing payments and/or moving costs. The maximum limits of the replacement housing payments are \$15,000 for owner-occupants and \$4,000 for tenant-occupants. Certain payments may also be made for increased mortgage interest costs and/or incidental expenses, provided that the total of all housing benefits does not exceed the above mentioned limits. In order to receive these payments, the displaced person must occupy decent, safe and sanitary replacement housing. In addition to the replacement housing payments described above, there are also moving cost payments to persons, businesses, farms and non-profit organizations. Actual moving costs for residences include actual moving costs up to 50 miles or a schedule moving cost payment, including a dislocation allowance, up to \$500.

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

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Generally, payments for the actual reasonable expenses are limited to a 50 mile radius. The expenses claimed for actual cost commercial moves must be supported by receipted bills. An inventory of the items to be moved must be prepared in all cases. In self-moves, the State will negotiate an amount for payment, not to exceed the lowest acceptable bid obtained. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business' own vehicles or equipment, wages paid to persons who physically participate in the move, the cost of actual supervision of the move, replacement insurance for the personal property moved, costs of licenses or permits required, and other related expenses.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses. If the business is to be reestablished, and the personal property is not moved but is replaced at the new location, the payment would be the lesser of the replacement cost minus the net proceeds of sale (or trade-in value) or the estimated cost of moving the item. If the business is being discontinued or the item is not to be replaced in the reestablished business, the payment will be the lesser of the difference between the value of the item for continued use in place and the net proceeds of the sale or the estimated cost of moving the item. When personal property is abandoned without an effort by the owner to dispose of the property for sale, unless permitted by the State, the owner will not be entitled to moving expenses, or losses for the item involved.

The owner of a displaced business may be reimbursed for the actual reasonable expenses in searching for a replacement business up to \$1,000. All expenses must be supported by receipted bills. Time spent in the actual search may be reimbursed on an hourly basis, within the maximum limit.

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

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

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

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

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

In the event comparable replacement housing is not available to rehouse persons displaced by public projects or that available replacement housing is beyond their financial means, replacement "housing as a last resort" will be utilized to accomplish the rehousing. Detailed studies must be completed by the State Highway Administration before "housing as a last resort" can be utilized.

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