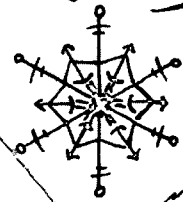
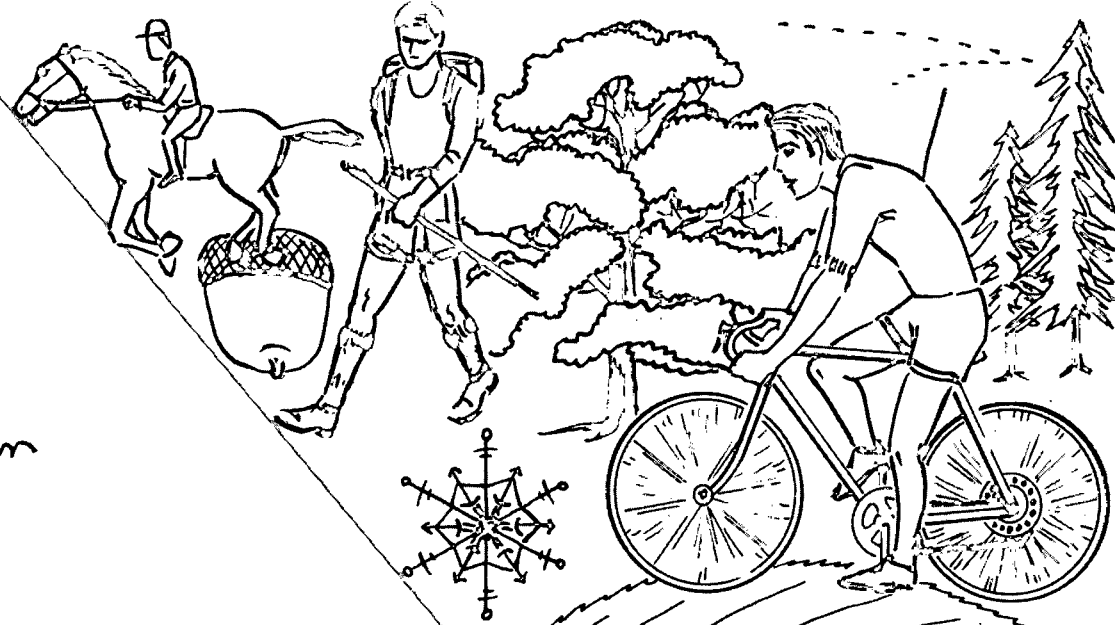
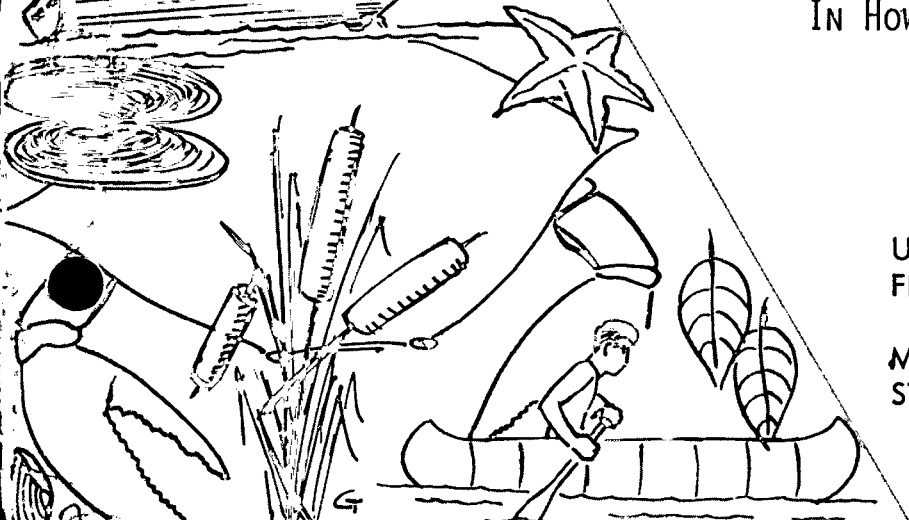
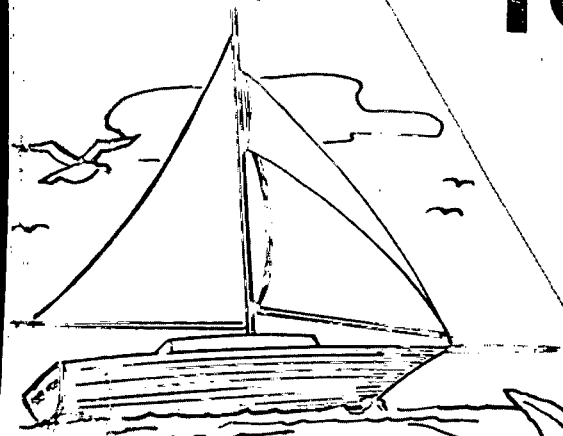
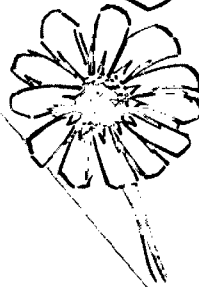
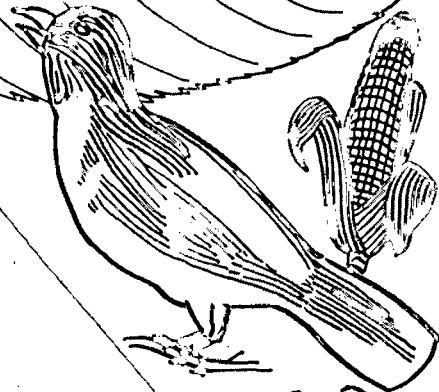


Env. Eval. Section



# Environmental Assessment for



CONTRACT No. HO 306-000-771  
MARYLAND ROUTE 216  
FROM U.S. ROUTE 29 TO INTERSTATE 95  
IN HOWARD COUNTY, MARYLAND

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

- 3) Contrary to suggestions from the County Executive and the County staff, we are not recommending inclusion of a grade separated interchange at Leishear Road and a grade separation at Mercator Drive.
- 4) We suggest that the State Highway Administration's pursuit of location approval for this project be contingent on Howard County accepting certain logical road transfers, and instituting appropriate traffic control measures as a disincentive to the continued use of the Gorman Road route (which will continue to be a direct path of access to Route 29, particularly for heavy traffic movements oriented to the Applied Physics Lab and to Columbia). A letter to Howard County regarding these issues has been drafted for your signature.
- 5) Included in the proposal is a park and ride facility which we recommend be advanced ahead of the overall project.

A transcript of the Public Hearing, the Environmental Assessment, and back-up information are also available from the Project Manager, Mr. Donald G. Honeywell, Marcom 222-7109.

It is requested that those receiving copies of this memorandum or their designated representatives be present at this meeting.

HK:bh  
Enclosures (2)

cc: Mr. William K. Lee, III	(w/attach.)
Mr. William F. Lins, Jr.	" "
Mr. Irvin C. Hughes	" "
Mr. Paul A. Milash	" "
Mr. Calvin W. Reese	" "
Mr. Carl E. Raith	" "
Mr. Charles R. Anderson	" "
Mr. Jerry L. White	" "
Mr. Thomas Hicks	" "
Mr. Paul S. Jaworski	" "
Mr. Bernard L. Stewart	" "
Mr. Wm. F. Schneider, Jr.	" "
Mr. Richard S. Krolak	" "
Mr. Robert J. Houst	" "
Mr. Edward A. Terry	" "
Mr. John R. Usaitis	" "

I. BACKGROUND

A. The Problem and Purpose of the Project

Maryland Route 216 between U.S. Route 29 and I-95 is geometrically deficient and discontinuous, utilizing a short segment of a County road known as Leishear Road. This configuration is partly responsible for diversion of approximately 5 percent of study corridor traffic volumes to Gorman Road, a parallel County road to the north which traverses a residential area. These roadways have inadequate capacity to safely accommodate design year (2006) traffic volumes. It is desirable to provide an interchange at U.S. Route 29 to achieve an acceptable level of service and in recognition of long standing SHA goals to elevate the facility to expressway status. Selection of a mainline build alternate and the interchange at this time would finalize current assumptions for orderly development in the study area. The project would provide continuous adequate arterial highway capacity between the project termini.

B. Project History

Improvements to Maryland Route 216 between U.S. Route 29 and the City of Laurel have been under study since the 1950's. Original studies were performed by the consulting engineering firm of Michael Baker, Jr., Inc. Design of the U.S. Route 29 - Md. Rte. 216 interchange was completed during 1969 by Buchart Horn. Studies of Md. Rte. 216 since December, 1968 utilized the services of Berger Associates of Harrisburg, Pennsylvania.

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Design of Interstate Route 95 between the Baltimore Beltway and the Capital Beltway, including a crossing of Md. Rte. 216, began during the 1960's. During March, 1968, this Administration and the FHWA reached an understanding whereby reasonable connections were to be provided into the I-95/Md. 216 interchange as justification for the scale and capacity of the interchange. In mid 1971, the I-95/Md. 216 interchange was opened to traffic including a short dualized segment of Md. Rte. 216 terminating 1/2 mile west of the interchange with a "temporary" T intersection at Leishear Road, a minor County road. From time to time, the FHWA has inquired into the status of the 1968 understanding intimating that certain Interstate funds may require refunding by this Administration. This project is an important element of the 1968 understanding.

During 1976, after observance of traffic volume increases on Md. Rte. 216, the Mayor and City Council of Laurel requested dualization of Md. Rte. 216 not be extended to the dual bridges over the Patuxent River at the City limits. In response, the segment of the proposed improvement east of I-95 was deleted from the Consolidated Transportation Program (CTP).

The Project Planning study began during November, 1977 as an Extra Work Order to consultant's survey/design agreement. An Alternates Public Meeting was conducted at the Hammond Middle School the evening of October 5, 1978, and the Location Public Hearing was conducted the evening of June 26, 1980 at the Hammond High School. Except for those persons

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directly impacted the community is perceived as generally supportive of the relocation alternates.

Improvements to Md. Rte. 216 have appeared continuously in the CTP since formation of the Maryland Department of Transportation in 1971. The project has historically been supported by the County Executive, the County Council, the Legislative Delegation, and the State Senator representing Howard County. The project has continuously appeared in the Twenty Year Highway Needs Study since 1968.

The Project Planning phase is expected to be completed during January, 1981. The CTP, 1980-1985, proposes Project Engineering (Design) funding during fiscal years 1982 through 1984. No other development phases are funded during the program period. The draft CTP, 1981-1986, proposes Project Engineering during fiscal years 1983 through 1985; right of way and construction are not included in this program.

The Project Planning phase did not utilize Federal-aid funding. It is anticipated, however, that the project will be eligible for 75% Federal-aid funding for subsequent development phases.

## II. ALTERNATES

### A. Description

Four (4) alternates have been studied during the Project Planning phase:

Alternate 1 - No-Build

Alternate 2 - Expansion of existing roadways (dropped)

Alternate 3 - Four lane divided controlled access arterial highway on new location with a partial cloverleaf interchange at U.S. Route 29.

Alternate 3CC - Four lane divided controlled access arterial highway with full cloverleaf interchange at U.S. Route 29.

These alternates and their probable impacts are discussed in the attached brochure circulated in advance of the Alternates Public Hearing. The brochure reveals that Alternate 2 was dropped from consideration following the Alternates Public Meeting due to anticipated traffic related impacts upon contiguous residential development. Special projects type of improvements were found to be not applicable. Alternates 1, 3, and 3CC were presented at the Public Hearing.

Both build alternates would contain a small fringe parking lot adjacent to the southwest quadrant of the U.S. Route 29 interchange. The lot would be located on land presently owned by SHA and would be accessed by proposed Service Road No. 1.

The estimated cost of the build alternates are summarized in the enclosed brochure, page 5.

B. Service Characteristics

Motorists traveling between U.S. Route 29 in the vicinity of Scaggsville and Interstate Route 95 presently have the option of two routes. One choice is Route 216, a narrow, discontinuous route with minimal safety features, combined with a portion of Leishear Road, having steep grades and restricted width. Residential development is nearly

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continuous along this route. Motorists negotiating this trip in a westerly direction encounter two stop signs enroute and a traffic signal at U.S. Route 29. This roadway, which now handles over 5,000 vehicles per day, is expected to handle twice that amount by the design year 2006.

The other option is via Gorman Road, a parallel County roadway to the north surrounded by residential developments, which also connects with Leishear Road. This route is used for access between I-95 and the employment centers to the south of Columbia, including the Johns-Hopkins Applied Physics Laboratory. By the design year, the number of motorists using the Gorman Road route is expected to increase by 69 percent if Md. Rte. 216 is not significantly improved.

There are no severe capacity or safety problems along Md. Rte. 216 at this time. Both optional routes between U.S. Route 29 and I-95 traverse developing residential areas which are impacted by increasing traffic volumes including trucks. Residents of these areas complain of the traffic problems and request implementation of build alternates to relieve their traffic related impacts. Projected traffic volumes portend a worsening of traffic impacts to residential areas if a build alternate is not implemented.

The following table summarizes existing and projected traffic volumes for the alternates under consideration together with the resulting levels of service:

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	Year 1979		Year 2006			
	Volume (ADT)	L/S	Alternate 1 No-Build Volume (ADT)	L/S	Alternate 3 & Alternate 3CC Volume (ADT)	L/S
Existing Rte. 216 (2 lanes)	5,200	D	10,300	E	2,850	C
Golden Road	5,950	E	9,900	E	6,550	E
Golden Road (North)	6,350	E	10,600	E	7,350	E
Golden Road (South)	6,000	E	11,000	E	5,450	E
Relocated Rte. 216	-	-	-	-	20,800	C
Relocated Rte. 216 East of Golden Road	10,050	C	17,950	D	22,150	D
Relocated Rte. 29, Rte. 216 to Golden Road	22,400	C	63,250	D	65,750	D

Route 216 is expected to reach its capacity of 1,960 vehicles per hour at Level of Service E by 1998.

Golden Road will not reach its capacity of 1,588 vehicles per hour at Level of Service E by the design year 2006.

As summarized on page 2 of the enclosed brochure, accidents occur along Md. Rte. 216 at approximately the Statewide rate for similar type highways. Selection of the No-Build alternate could possibly result in an increase of accidents and number of accidents. Because the build alternates are both controlled access arterial highways, implementation of either is expected to result in a significant reduction in study corridor accident rates. This probable reduction is illustrated by the following table:

(Reported collisions per 100 Million Vehicle Miles of Travel)

	<u>Actual</u>	<u>Statewide Rate</u>	<u>Difference</u>
Md. 216 Corridor	353.	330.	+ 7%
Alternate 3 (Corridor)		226.	- 46%
Relocated Md. Rte. 216		219.6	- 48%



The at-grade intersection of U.S. Route 29 and Md. Rte. 216 was designated a High Accident Intersection for 1976. The No-Build alternate would continue the at-grade intersection at this location. Either build alternate would replace the at-grade intersection with a grade separated interchange. This is expected to significantly reduce accident rates at this location.

Gorman Road experiences accidents at rates approximately twice the Statewide average of similar design State highways. Adoption of the No-Build alternate would result in a 69 percent increase in traffic volumes approaching capacity by the design year with the possibility of increased accident rates. Implementation of a build alternate is expected to result in only a 10 percent increase in traffic volumes with retention of present accident rates.

C. Environmental Consequences

Our studies indicate that the build alternates would result in no significant impacts on the human environment. The probable consequences of implementing the build alternates are summarized on pages 3 through 6 of the attached brochure. More detailed information is contained in the Environmental Assessment which was placed on public display May 22, 1980 and distributed to appropriate agencies.

Implementation of a build alternate would entail the requirement that certain environmentally sensitive areas must receive consideration during subsequent developmental phases. These are:

- 1) Landscape plantings are to be considered at three noise sensitive areas (7, 14, and 15). Barriers have been determined impractical at these locations because of right of way restrictions, aesthetic inappropriateness and cost ineffectiveness.
- 2) Longitudinal encroachment on the Hammond Branch floodplain. This encroachment would intermittently occur from the Leishear Knolls Subdivision to Leishear Road, a distance of approximately 2600 linear feet. A short channel relocation is required at the Leishear Knolls Subdivision. This encroachment requires careful consideration during the design and construction phases to minimize sedimentation impacts to Hammond Branch. A waterway construction permit will be required.

### III. POSITIONS TAKEN

#### A. Elected Officials

Following the Location Public Hearing, County Executive J. Hugh Nichols, by letter dated July 9, 1980, transmitted his concurrence with the County staff recommendation and comments. These recommendations were:

- 1) Alternate 3CC;
- 2) Grade separated interchange at Leishear Road;
- 3) Grade separation at proposed Mercator Road; and
- 4) Preservation of the option of a parallel service road north of relocated Md. Rte. 216.

These recommendations were discussed in detail during the Project Planning Team meeting to formulate a project recommendation on July 21, 1980. A letter response dated August 13, 1980 was furnished to Mr. Nichols indicating that the Project Planning Team had decided to the contrary on the County's first three (3) recommendations; the rationale of the decision was contained in the response.

By letter dated August 11, 1980, County Councilman Thomas Yeager furnished his comments on the project. Councilman Yeager recommended:

- 1) Alternate 3 with a signalized at-grade intersection at U.S. Route 29;
- 2) questioned the need for a 58 foot wide median; and
- 3) questioned the possibility of accelerating construction into the current CTP.

In our response to Councilman Yeager dated September 3, 1980, the need for an interchange at U.S. Route 29 was defended based on traffic projections, the contribution of wide medians as a safety feature was mentioned, and the scheduling of the project was to be reviewed during the annual Fall tour.

At this writing, no written correspondence has been received from the County Council although discussions have been held with Council staff. These discussions reveal that a letter is being prepared by the Council that will concur with this Administration's views as expressed in our letter dated August 13, 1980 to County Executive Nichols.

B. Citizens and Associations

Testimony was offered by three citizens organizations at the Location Public Hearing. The Hammond Village Citizens Association favored the build alternates to relieve traffic volumes along Gorman Road. The Saybrook Citizens Association recommended relocating the build alternates north of Hammond Branch to minimize traffic impacts to the Saybrook community. The Emmanuel Methodist Church endorsed Alternate 3.

Of the nine (9) citizen testimonies at the public hearing, one questioned needs for improvements, one endorsed the No-Build Alternate, and three (3) endorsed Alternate 3.

Correspondence was received from one (1) corporation, seventeen (17) citizens, and one (1) citizen's attorney representative during the public hearing period. Of these commentary was overwhelmingly in favor of the build alternates including five (5) endorsements of Alternate 3 and four (4) endorsements of Alternate 3CC. Those favoring Alternate 3CC believed that the partial interchange at U.S. Route 29 under Alternate 3 may require ultimate recon-

struction to a full cloverleaf. Three (3) persons favored the No-Build Alternate.

The comments should be considered an extension of remarks submitted in response to the Alternates Public Meeting of October 5, 1978. Public comment at that time was overwhelmingly in favor of the present build alternates on new location along Hammond Branch.

C. Agencies

The only agencies to comment on the project during the public hearing period were Howard County's Office of Planning and Zoning and the Department of Public Works. These comments were submitted by County Executive J. Hugh Nichols and were discussed under section III.A.

IV. RECOMMENDATION

The Project Planning Team recommends Alternate 3, a four lane divided controlled access arterial highway on new location, with a partial cloverleaf interchange at U.S. Route 29, an at-grade intersection not farther west than the previously planned location of Mercator Road, and an at-grade intersection with Leishear Road as described in the attached brochure. In addition, the Team recommends a fringe parking lot in the southwest quadrant of the U.S. Route 29 interchange and consideration of a high capacity intersection at Leishear Road.

This recommendation is consistent with local, regional, and State plans. It is believed that this recommendation will be acceptable to Howard County.

A. Elements of the Recommendation

The major elements of this recommendation are:

- 1) Alignment. The project begins 0.85 mile west of U.S. Route 29 along existing Md. Rte. 216 and blends into the historic (1969) design alignment at U.S. Route 29. The alignment then follows the historic design alignment to the Saybrook Subdivision where a

slight southerly shift occurs. From east of U.S. Route 29 to Leishear Road, the alignment is located between the south side of Hammond Branch (with some floodplain encroachment) and three (3) residential subdivisions. The alignment fully utilizes reservations for highway purposes along the Leishear Knolls and Saybrook Subdivisions as well as a designated area through the proposed Hammond Hills Subdivision. The alignment terminates with the dualized roadway on the west side of the I-95 interchange. The alignment has been refined to an optimum location which minimizes both floodplain and residential impacts.

- 2) Typical Section. As illustrated in the brochure, the recommended typical section consists of dual 24 foot roadways separated by a 58 foot median and containing safety grading adjacent to the outer shoulders. Councilman Yeager questioned the need for a median as wide as 58 feet. Previous planning was based on the recommended typical section which provides nearly the equivalent of 30 foot safety grading along the roadway median edges. This width seems appropriate in this still partially rural area. The recommended median width was constructed through the I-95 interchange and appears on the 1969 construction drawings for the proposed U.S. Route 29 interchange (HO 314-50-771). Reduction of the

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median width would not substantially reduce any impacts.

- 3) Partial Interchange at U.S. Route 29. The recommended interchange is essentially that whose design was completed during 1969. Although characterized as a partial cloverleaf interchange, all movements are provided and ramps occur in all four quadrants. Two (2) left-hand turns are required within the interchange along Md. Rte. 216. The design hourly turning volumes for the project design year are from east to south, 327; and from west to north 110. The east to south movement may require signalization. Even so, this interchange is expected to operate smoothly during the design year. Approximately 80 percent of the right of way for the 1969 interchange has been acquired.

The ramp geometry should be reviewed during the Project Engineering phase to improve design needs.

The County Executive and the Howard County staff recommended Alternate 3CC, a full cloverleaf interchange, at this location. The Team did not concur with the County recommendation because the partial interchange provides an adequate degree of safety and service through the design year, reduces by 5 the number of residential relocations, reduces right of way requirements by 39 acres, and costs \$5.3 million less than the full cloverleaf interchange.

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- 4) . Fringe Parking Lot. It is proposed that a 50 space fringe parking lot be constructed along Service Road No. 1 in the southwest quadrant of the U.S. Route 29 interchange. The lot, estimated to cost \$50,000, would be constructed on land presently owned by this Administration. This lot will probably be constructed prior to the Md. Rte. 216 project.
  - 5) At-grade Intersection at Proposed Mercator Road. The County Executive and Howard County staff recommended a grade separation at this location. The Project Planning Team recommends an at-grade intersection at this location, or at a location somewhat farther east, as appropriate to the highway functional classification and necessary to provide access to local land uses.
  - \* 6) At-grade Intersection at Leishear Road. The County Executive and the Howard County staff recommended a grade separated interchange at this location predicated on a transportation network that includes the continuous extension of Leishear Road to Broken Land Parkway by the design year. The Project Planning Team found no warrant for an interchange at this environmentally sensitive location. The Team recommends that a high capacity at-grade intersection be considered at Leishear Road during the Project Engineering phase to accommodate additional traffic volumes that could be realized due to extension of the County highway network.



7) Road Transfers. It is recommended that during the Project Engineering phase, an agreement be drawn between this Administration and Howard County transferring the following roads to the County soon after final acceptance of construction (see attached map):

- a) All service roads and local streets contained in the construction contract;
- b) That part of the old Scaggsville Road accessing the Scaggsville Special Education School;
- c) Md. Rte. 986, Old Columbia Road from approximately 2000 feet north of Md. Rte. 216 to north of Johns Hopkins Road;
- d) Md. Rte. 986, Crest Drive, and the intersecting road east of U.S. Route 29 and north of Md. Rte. 216;
- e) That segment of Leishear Road north and south of Md. Rte. 216;
- f) Md. Rte. 216, Scaggsville Road, from east of U.S. Route 29 to Leishear Road; and
- g) Md. Rte. 983, Scaggsville Road, from Leishear Road to end of road west of I-95.

Previous discussions have been held with Howard County relative to transfer of items c, d, and g above. These segments and item b could be transferred prior to construction of Md. Rte. 216.

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B. Staging

If and when future construction on this project would begin, it is possible that staging of construction would be appropriate due to funding constraints. Two (2) possible methods of staging have been identified.

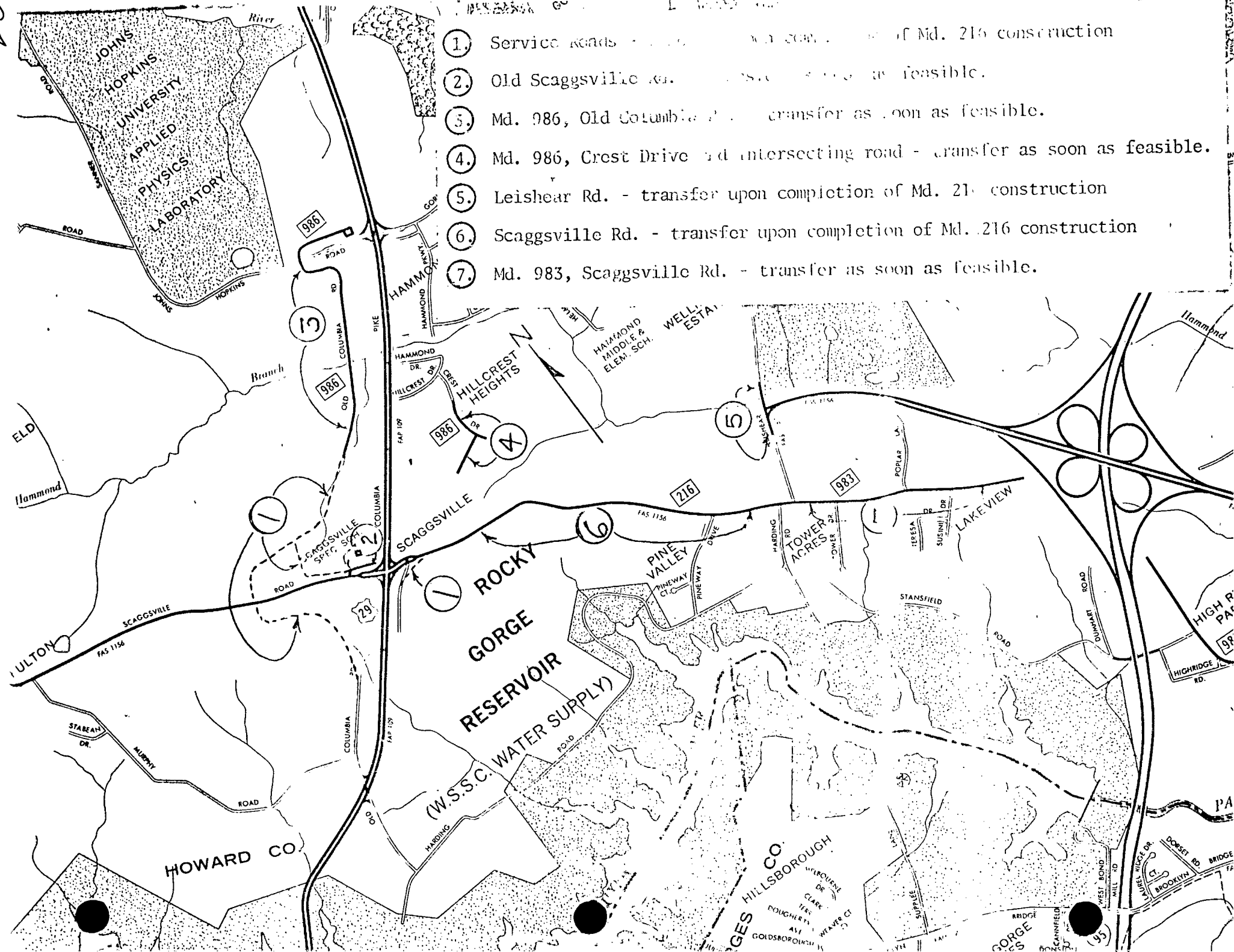
These two (2) possible methods are:

- 1) The 1980-1985 CTP and the draft 1981-1986 program both describe the project as "2 lane construct" plus the U.S. Route 29 interchange. This method of staging would result in savings of approximately 30 percent in construction costs when compared to the complete four (4) lane dual facility. There would be no right of way savings. This method would result in undesirable traffic operations with capacity conditions predicted at the Mercator Road and Level of Service 'F' at the Leishear Road intersection by the design year. The Leishear Road intersection, with Md. Rte. 216 locally widened to four (4) lanes, would be expected to reach capacity conditions during 2005. These conditions are anticipated to be very similar to present operational conditions on Md. Rte. 175 between U.S. Route 29 and Snowden River Parkway six (6) miles to the north of the study area.
- 2) A second method of construction staging has been verbally suggested by Howard County officials. This method consists of providing the four lane dual facility with service roads connecting U.S. Route 29 and I-95 with an at-grade intersection at U.S. Route

29. This method would result in savings of approximately 55 percent in comparison to the complete facility. Some initial right of way savings could be realized. Assuming U.S. Route 29 widened to six (6) lanes, the U.S. Route 29 intersection would be expected to reach capacity operating conditions during 1996, ten years prior to the design year. Very severe congestion (Level of Service 'F') would occur at the U.S. Route 29 intersection by the design year. The anticipated congestion would be even more severe than present conditions at the U.S. Route 29-Md. Rte. 108 intersection seven (7) miles to the north of the study area.

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- ① Service roads - transfer upon completion of Md. 216 construction
- ② Old Scaggsville rd. - transfer as soon as feasible.
- ③ Md. 986, Old Columbia Pike - transfer as soon as feasible.
- ④ Md. 986, Crest Drive and intersecting road - transfer as soon as feasible.
- ⑤ Leishear Rd. - transfer upon completion of Md. 216 construction
- ⑥ Scaggsville Rd. - transfer upon completion of Md. 216 construction
- ⑦ Md. 983, Scaggsville Rd. - transfer as soon as feasible.



11572



**Maryland Department of Transportation**

State Highway Administration

James J. O'Donnell  
Secretary

M. S. Caltrider  
Administrator

May 12, 1980

CONTRACT NO. HO 306-000-771  
MARYLAND ROUTE 216  
FROM U.S. ROUTE 29 TO INTERSTATE 95  
ENVIRONMENTAL ASSESSMENT

Transmitted for your review and comment is one (1) copy of the subject document. The document has been prepared in accordance with the CEQ Regulations, DOT Order 5060.1C and the pending Federal-Aid Highway Program Manual, Volume 7, Chapter 7, Section 2.

You are requested to provide comments on or before June 30, 1980 to:

Mr. Eugene T. Camponeschi, Chief  
Bureau of Project Planning  
State Highway Administration (Room 404)  
300 West Preston Street  
Baltimore, Maryland 21201

All responses will be considered in preparing the facility's ultimate design and in developing a decision as will be described in the final environmental document.

A Public Hearing is scheduled for June 26, 1980 at 7:30 p.m. in the Hammonds High School, at 8800 Route 32, Columbia, Maryland.

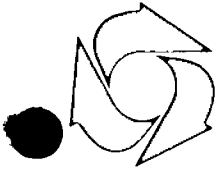
Very truly yours,

Hal Kassoff, Director  
Office of Planning and  
Preliminary Engineering

HK:mcr  
Attachments

cc: Mr. Eugene T. Camponeschi  
Mr. Donald Honeywell

My telephone number is 383-4267



**Maryland Department of Transportation**

State Highway Administration

22

James J. O'Donnell  
Secretary

M. S. Caltrider  
Administrator

May 19 , 1980

RE: Contract No. HO 306-000-771  
Maryland Route 216  
U.S. Route 29 to I-95  
Environmental Assessment

TO: DISTRIBUTION LIST

On May 12, 1980, the Environmental Assessment for the referenced project was transmitted to you for review and comment. The following revisions should be incorporated into your copy of the document as described below:

- 1) Page 42, 1st full paragraph. The elevation 323 referenced on the last line should be 327.
- 2) Page 42, 2nd full paragraph. The following sentence should be added after the 2nd sentence in this paragraph. "This encroachment would be non-significant and would not increase the floodplain for the 100 Year storm frequency so as to over top Leishear Road".

You are reminded that all comments on the Environmental Assessment are due on or before June 30, 1980.

Very truly yours,

A handwritten signature in black ink, appearing to read "Hal Kassoff".

Hal Kassoff, Director  
Office of Planning and  
Preliminary Engineering

HK:mcr  
Enclosure

cc: Mr. Emil Elinsky  
Mr. Eugene T. Camponeschi  
Mr. Donald G. Honeywell

My telephone number is 383-4267

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RE: Contract No. HO 306-000-771  
Maryland Route 216  
U.S. Route 29 to I-95

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REPORT NUMBER: FHWA-MD-EA-80-01-D

Region III

Maryland Route 216  
U.S. 29 to I-95  
Howard County, Maryland

ADMINISTRATIVE ACTION

Environmental Assessment

U. S. Department of Transportation  
Federal Highway Administration

and

State of Maryland  
Department of Transportation  
State Highway Administration

Submitted pursuant to 42 U.S.C. 4332 (2)(C), 23 U.S.C. 128 (a)  
CEQ Regulations (40 CFR 1500 et seg.)

March, 1980

I. PROJECT LOCATION AND DESCRIPTION

A. PROJECT LOCATION

The project area is located in southern Howard County, extending from west of U.S. 29 at Scaggsville to the I-95 interchange, about 1.5 miles northwest of Laurel, a distance of approximately three miles (See Plate No. 1). At present, the area is rural in character, comprised of pastures, farmlands and wooded area intermixed with individual residences. However, low density residential development is rapidly changing the character of the area; more than 300 additional single family dwellings will eventually have access to existing Maryland Route 216 when five separate but closely spaced residential developments along the road are completed.

Terrain in the study area varies from nearly level to steeply sloping (30%) and ranges in elevation from approximately 300 to 473 feet above mean sea level. The Hammond Branch of the Patuxent River is parallel to and about 1/4 mile north of existing Route 216. Rocky Gorge Reservoir, a water impoundment area on the Patuxent River, is located about one mile to the south of Route 216 (See Plate No. 2).

B. PROJECT DESCRIPTION

Maryland Route 216 is an east-west arterial link in a road system connecting U.S. Route 29 and I-95, providing access from residential areas to shopping and employment centers, as well as to service, educational, cultural, recreational and religious facilities. The route is the major connector between the City of Laurel and places west of the project area such as Columbia and Highland.

Route 216 has a number of deficiencies of width and geometry, such as right angle turns, substandard sight distances, narrow roadway and shoulders, steep grades, etc., which cause motorists to use Gorman Road, a parallel county road north of Route 216 as an alternative. Accident rates are high on both roads and will continue to increase in number and frequency with anticipated increases in traffic volumes.

In order to improve capacity and safety, a four lane divided controlled access arterial highway is proposed on new location, with an interchange at U.S. Route 29.

MARYLAND ROUTE 216  
Howard County, Maryland

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SUMMARY

1. Region III Federal Highway Administration

( ) Environmental Impact Statement

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

2. Individuals who can be contacted for additional information

concerning the proposed project and this document:

Mr. Eugene T. Camponeschi, Chief  
Bureau of Project Planning  
Maryland State Highway Administration  
Room 404  
300 West Preston Street  
Baltimore, Maryland 21201

Phone: (301) 383-4327  
8:15 A.M. to 4:15 P.M.

Mr. Edward A. Terry, District Engineer  
Federal Highway Administration  
The Rotunda - Suite 220  
711 West 40th Street  
Baltimore, Maryland 21211

Phone: (301) 962-4011  
7:45 A.M. to 4:15 P.M.

3. Description of Action

The proposed action, located in southeastern Howard County, consists of improving capacity, efficiency and safety on Maryland Route 216 between U.S. Route 29 and I-95. The project begins about midway between Fulton and Scaggsville on Route 216 and ends just east of Leishear Road at the existing I-95 Interchange, a distance of approximately 3 miles. Proposed improvements are a 4 lane divided controlled access arterial highway on new location with an interchange at U.S. Route 29.

Alternatives Considered

Improvement of the highway network in the project area is the only alternative being considered because there are no other modes of transportation which can satisfy the needs of the area.

Three alternates were initially considered in addressing transportation needs:

Alternate 1 is a No-Build option.

Alternate 2 would Improve the Existing Facility.

Alternate 3 is the Construction of a New Facility.

Alternate 2 was dropped from further consideration because of environmental impact discussed in this document (See Page 5).



4. Summary of Environmental Impacts

Existing residential and undeveloped land would be affected only minimally by the acquisition of right of way for highway purposes. Construction of new facilities (Alternate 3) would require relocation of seven families. No historical or archeological sites were found within the site limits; no existing parks or recreation areas are affected by anticipated right of way acquisition.

Noise levels can be expected to increase in areas on new location, where there is presently no traffic noise, as well as along the existing route in some locations. Positive impacts (a decrease from ambient noise levels) will occur on new location when the noise source is moved away from sensitive areas and along the existing route in those areas where slower travel speeds are anticipated.

Air quality analyses revealed no violations of Federal Ambient Air Quality Standards are predicted to occur under either alternate.

Natural habitats should not be impacted significantly; there are no rare or endangered species which could be affected. Alternate 3 will encroach upon the flood plain of the Hammond Branch but neither the water quality of the stream nor its flood plain should be altered significantly. No wetlands are affected by this action.

5. Technical Reports

This Environmental Assessment was prepared, in part, from information developed for Technical Reports, each of which addresses a specific area of concern. The reports provide detailed data which were reviewed by and coordinated among the respective agencies charged with the responsibilities in each of the disciplines involved.

Technical reports were prepared for:

Air Quality

Terrestrial Ecosystems

Noise

Water Quality

Socio-Economics

The reports are on file at the Maryland State Highway Administration office listed previously.

The plans and related information, used to prepare the three alternates presented to the public on October 5, 1978 as well as for this report, are on file at the same S.H.A. office.

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

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

ENVIRONMENTAL ASSESSMENT FORM

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
A. Land Use Considerations			
1. Will the action be within the 100 year flood plain?	<u>X</u>	<u>      </u>	<u>p. 42</u>
2. Will the action require a permit for construction or alteration within the 50 year flood plain?	<u>X</u>	<u>      </u>	<u>p. 42</u>
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?	<u>      </u>	<u>X</u>	<u>--</u>
4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?	<u>      </u>	<u>X</u>	<u>--</u>
5. Will the action occur on slopes exceeding 15%?	<u>X</u>	<u>      </u>	<u>p. 36</u>
6. Will the action require a grading plan or a sediment control permit?	<u>X</u>	<u>      </u>	<u>p. 63</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>p. 42, 54</u>

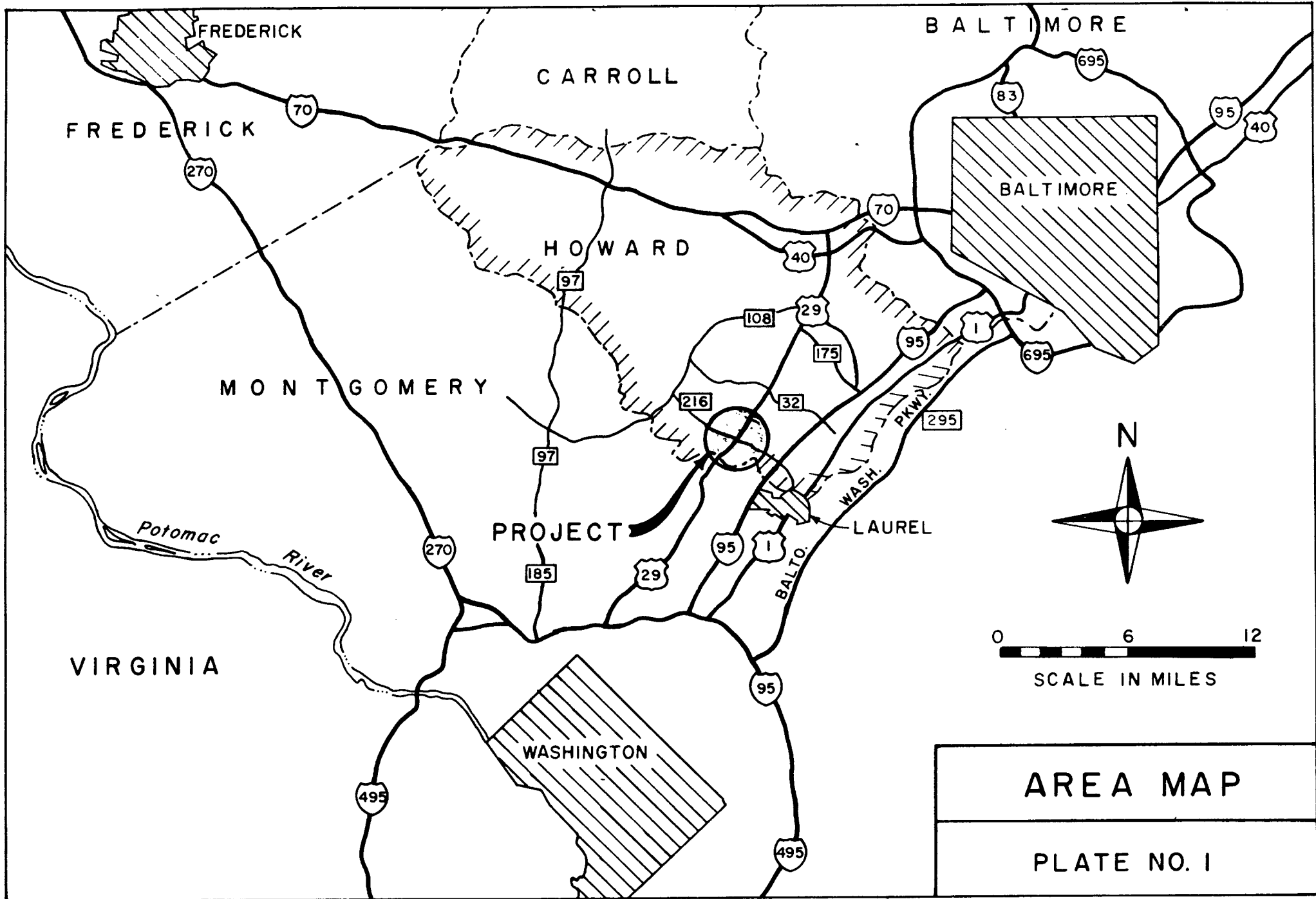
	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
12. Will the action affect the use of any natural or man-made features that are unique to the county, state, or nation?	<u>      </u>	<u>  X  </u>	<u>  --  </u>
13. Will the action affect the use of an archeological or historical site or structure?	<u>      </u>	<u>  X  </u>	<u>p. 25, 52</u>
<b>B. Water Use Considerations</b>			
14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water?	<u>  X  </u>	<u>      </u>	<u>p. 66</u>
15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction?	<u>      </u>	<u>  X  </u>	<u>  --  </u>
16. Will the action change the overland flow of storm water or reduce the absorption capacity of the ground?	<u>  X  </u>	<u>      </u>	<u>p. 64, 66</u>
17. Will the action require a permit for the drilling of a water well?	<u>      </u>	<u>  X  </u>	<u>  --  </u>
18. Will the action require a permit for water appropriation?	<u>      </u>	<u>  X  </u>	<u>  --  </u>
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?	<u>      </u>	<u>  X  </u>	<u>  --  </u>
20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives?	<u>      </u>	<u>  X  </u>	<u>  --  </u>

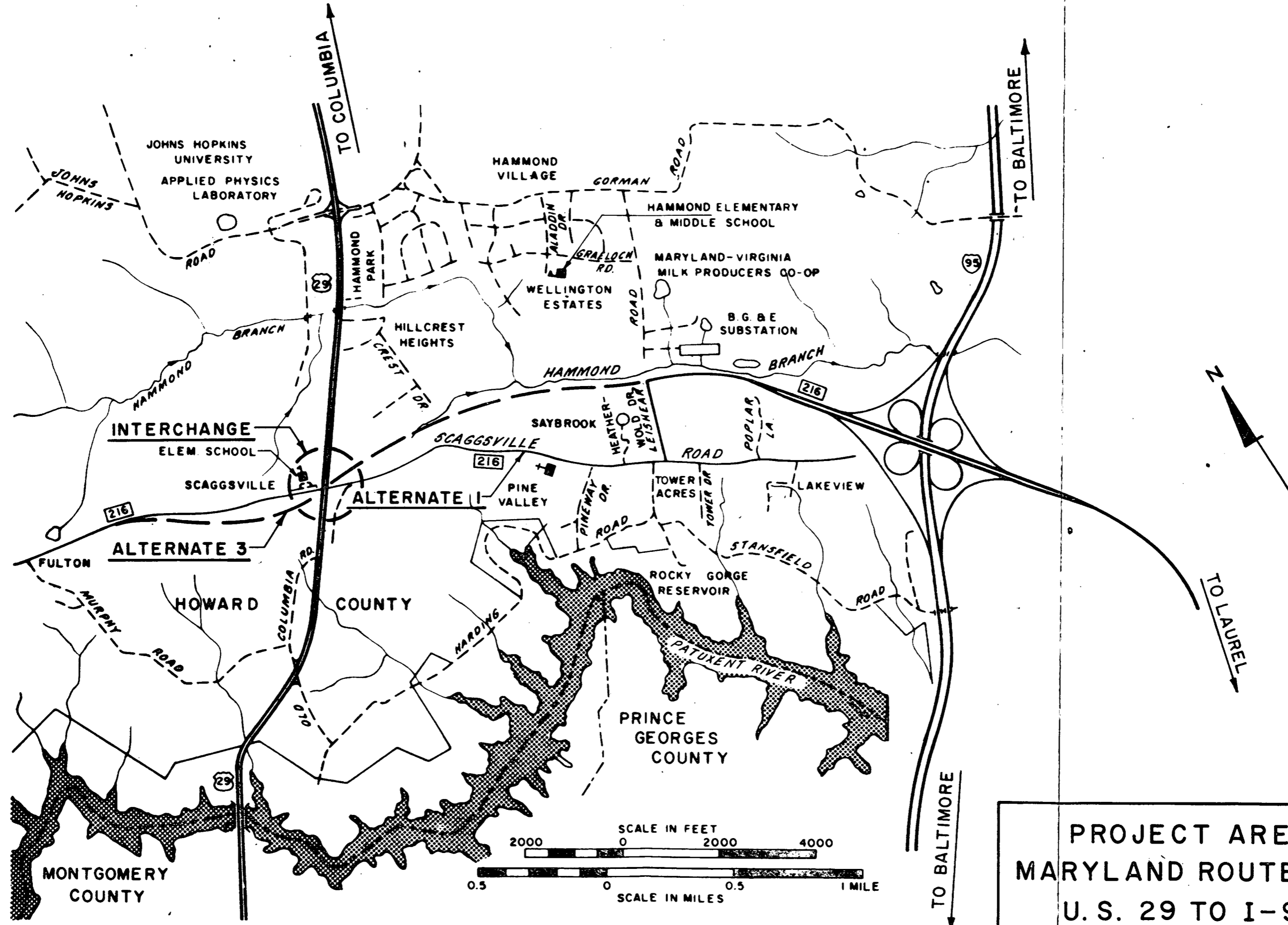
	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
21. Will the action result in any discharge into surface or sub-surface water?	<u>X</u>	<u>      </u>	<u>p. 66</u>
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	<u>      </u>	<u>X</u>	<u>p. 63, 64</u>
<b>C. Air Use Considerations</b>			
23. Will the action result in any discharge into the air?	<u>X</u>	<u>      </u>	<u>p. 60, 61 et al</u>
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?	<u>      </u>	<u>X</u>	<u>p. 60, etc.</u>
25. Will the action generate additional noise which differs in character or level from present conditions?	<u>X</u>	<u>      </u>	<u>p. 69-72</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>
<b>D. Plants and Animals</b>			
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>p. 68</u>
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?	<u>      </u>	<u>X</u>	<u>p. 63, 66</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>

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</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>p. 47-51</u>
32. Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	<u>  X  </u>	<u>      </u>	<u>p. 56</u>
33. Will the action alter land values?	<u>  X  </u>	<u>      </u>	<u>p. 48, 51</u>
34. Will the action affect traffic flow and volume?	<u>  X  </u>	<u>      </u>	<u>p. 9-12</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>p. 7, 8, 31, 50, 51</u>
38. Will the action affect the employment opportunities for persons in the area?	<u>  X  </u>	<u>      </u>	<u>p. 48, 50</u>
39. Will the action affect the ability of the area to attract new sources of tax revenue?	<u>  X  </u>	<u>      </u>	<u>p. 48-51</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>p. 48, 49, 50</u>

	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
41. Will the action affect the ability of the area to attract tourism?	<u>X</u>	<u>      </u>	<u>p. 24, 54</u>
F. Other Considerations			
42. Could the action endanger the public health, safety or welfare?	<u>      </u>	<u>X</u>	<u>p. 53</u>
43. Could the action be eliminated without deleterious affects to the public health, safety, welfare or the natural environment?	<u>      </u>	<u>X</u>	<u>p. 46</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>
47. This agency will develop a complete environmental effects report on the proposed action.	<u>      </u>	<u>X</u>	<u>Environmental Assessment Prepared</u>







PROJECT AREA  
 MARYLAND ROUTE 216  
 U. S. 29 TO I-95

PLATE NO. 2

II. PROJECT NEED

A. PURPOSE

The purpose of this project is to provide a safe, economical and effective means of satisfying the arterial highway needs of this portion of southern Howard County, primarily between the area of Scaggsville and the town of Laurel, including the major north-south arterials of U.S. 29 and Interstate Route 95, consistent with the social and environmental needs of the area served. The needs addressed by this study are those predicted to occur by the design year 2006.

As explained in succeeding chapters, the project area is somewhat rural in character with considerable low density residential development occurring. Schools, employment, services, religious facilities, recreation, marketing and cultural facilities are located outside the project corridor. With no other modes of transportation available to serve their needs, residents of the area must depend almost exclusively upon the motor vehicle to provide for their needs and pleasure. A good highway network is vital to provide safe, economical and effective transportation.

B. ACCIDENT RATES AND HAZARDS

The present accident rate on Maryland Route 216 approximates the statewide average for similar types of highways. Gorman Road, a parallel

County road, has an accident rate nearly double the statewide average for similar roads.

The signalized intersection of U.S. 29 with Maryland Route 216 has been designated a High Accident Intersection Location by the Maryland State Highway Administration. A flashing warning signal and roadway illumination installed at the "T" intersection of Leishear Road with Route 216, is intended to provide improvement to traffic operations at this location. However, as traffic increases, the operating deficiencies at the intersection will be compounded unless the intersection is improved.

Traffic is expected to increase significantly (see page 9) by the turn of the century with accompanying demands on the arterial highway system. Route 216, Gorman Road and Leishear Road, with geometry and roadway sections unsuitable for the anticipated traffic demands, are expected to experience severe stressing of their ability to handle such demands. Consequently the number and severity of accidents should continue to increase.

Residential development along existing Route 216, such as that which is now taking place, will place additional stress on the ability of the route to handle traffic due to increased marginal friction and conflict. At-grade intersections, providing access to these developments, increase accident potential further due to turning conflicts.

C. ALTERNATES CONSIDERED

Three alternates were considered in addressing the transportation needs of the area:

1. Alternate 1 is a "No-Build" Alternate which would perpetuate the existing geometry of Route 216. Except for normal highway maintenance, including resurfacing, no improvements would be made to measurably affect the ability of the highway to handle the anticipated increase in traffic volumes.
  
2. Alternate 2, considered improving the existing route to provide a four lane, undivided urban street, 50 feet between curbs, and an interchange with U.S. Route 29. It followed the existing alignment on somewhat widened right-of-way, without substantially improving alignment or grades in an effort to minimize damage to abutting properties. Two 90° turns remained at the Leishear Road intersections with Scaggsville Road and with MD 216 north.

As a result of public opposition expressed at the Alternates Public Meeting held for this project on October 5, 1978 at the Hammond Elementary and Middle School, just north of the project (See Plate No. 2), Alternate 2 was dropped from further consideration. The main reason was perceived environmental impacts to residential properties abutting Scaggsville Road and Leishear Road.

Among the impacts about which local residents expressed concern were:

- a. The additional right-of-way acquisition required along the existing route.
- b. Anticipated increased in noise levels.
- c. Fear of degradation of air quality.
- d. Anxiety for the safety of school children transported on the existing route and those living adjacent to it.
- e. Overall diminishment of the quality of life attributable to increased traffic.

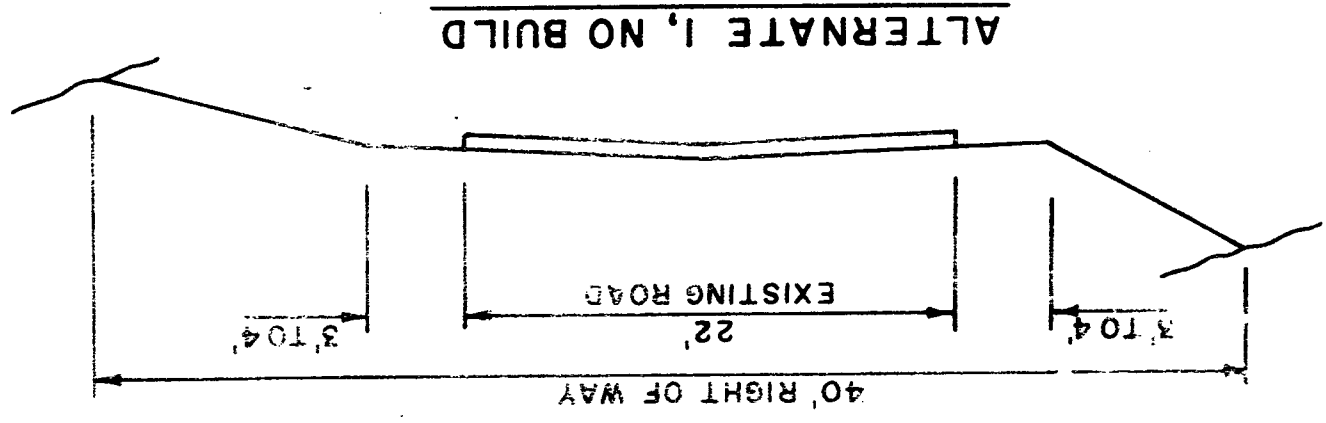
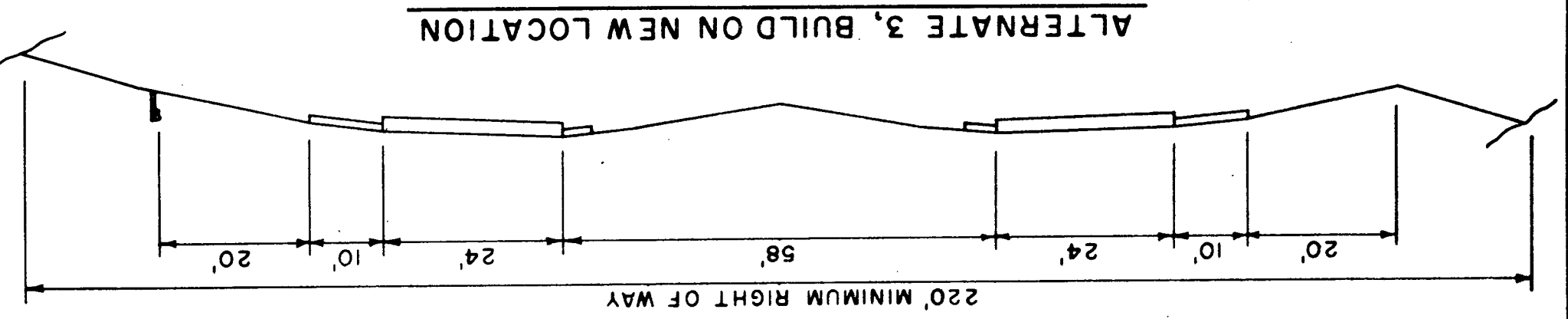
Only Alternates 1 and 3 are further discussed in this document.

- 3. Alternate 3 is a four lane rural type divided controlled access arterial highway, on new alignment, having a 58 foot grass median separating two 24 foot directional roadways and having paved shoulders on each side of these roadways (See Plate No. 3). The minimum right-of-way for this alternate is 220 feet.

Access is completely limited except at three locations: At the proposed interchange with U.S. 29 at Scaggsville, at an at-grade intersection with proposed Mercator Road (see Plate No. 4) and at an at-grade intersection with Leishear Road. The 58 foot median is extended eastward to match corresponding

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

### TYPICAL SECTIONS



widths in the existing I-95 interchange. Access to Route 29 from existing Route 216 would be severed by the interchange for Alternate 3, making Route 216 a discontinuous local road.

D. CRITERIA FOR DETERMINING NEW ALIGNMENT

Existing cultural features depicted on Plate No. 4 were used as guidelines in the selection of the alignment on new location for Alternate 3. The location of the Scaggsville School and the proposed Cherry-tree Farms shoppers mall, discussed in later chapters, were carefully considered in selecting alternative configurations of the proposed interchange at Route 29. Schematics of two interchanges studied are contained on Plates No. 5 and 6. The school function is being transferred elsewhere (see Chapter III.A.7.) thus reducing adverse consequences of a full interchange.

The horizontal and vertical locations of Alternate 3 were positioned to minimize impacts upon the adjacent residential development(s) while at the same time restricting the encroachment upon the Hammond Branch flood plain as much as possible.

The neighborhood park planned by Howard County near Leishear Road is not affected by the highway right-of-way. The creek separates the anticipated park land from Alternate 3; the two are not adjacent to each other.



The at-grade intersection with Leishear Road allows the new fire-house proposed by Howard County in the southeast quadrant quick access to Alternate 3. Right-of-way encroachment upon the north side of its planned site has been minimized to the extent possible.

The Alternate 3 alignment was also predicated upon three additional major planning items:

(1) The location of the I-95 interchange.

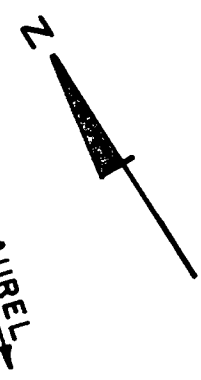
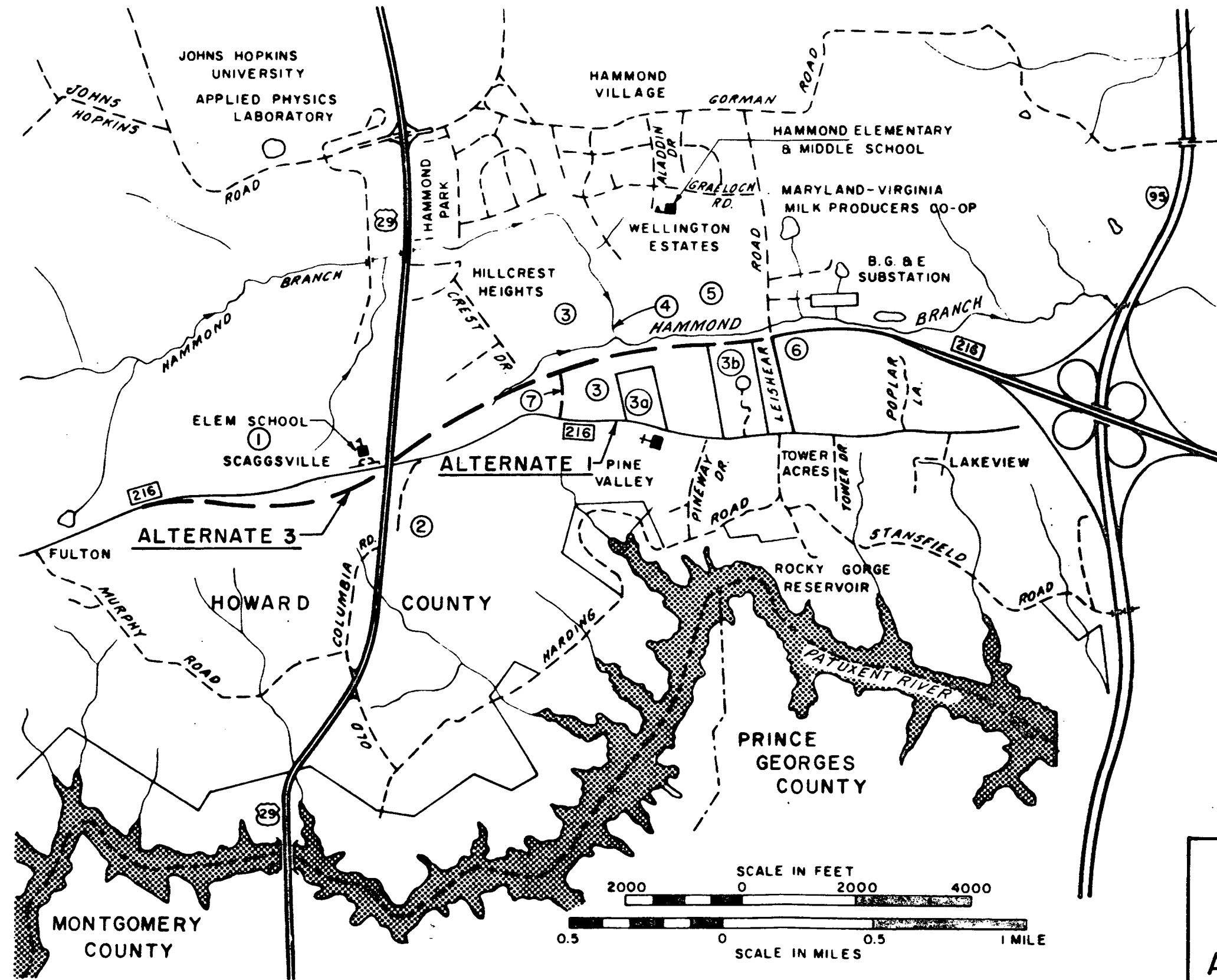
(2) Implementation of the Howard County General Plan of 1971.

Alternate 3 fulfills the intent of this Plan in its general location and access. It allows the County to provide its interior Service Road systems between existing Route 216 and Gorman Road.

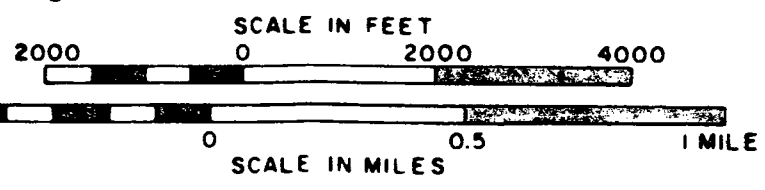
(3) Coordination with the planning for U.S. Route 29 which began in 1960 and calls for eventually providing a completely limited access facility by the addition of traffic lanes (ultimate six lane) and interchanges at major crossings such as Route 216 and Gorman Road. A great many of its elements have been constructed. Some facilities such as MD 108, MD 198 and MD 32 are under development or are being implemented, others have been identified in the 20 year Needs Study. Funding in the Consolidated Transportation program is an indication of priority.

LEGEND

- 1 SCAGGSVILLE SCHOOL
- 2 CHERRYTREE FARMS
- 3 RESIDENTIAL DEVELOPMENTS
- 4 HAMMOND BRANCH
- 5 PROPOSED NEIGHBORHOOD PARK
- 6 PROPOSED FIREHOUSE
- 7 PROPOSED MERCATOR ROAD
- 3a LEISHEAR KNOLLS SUBDIVISION
- 3b SAYBROOK

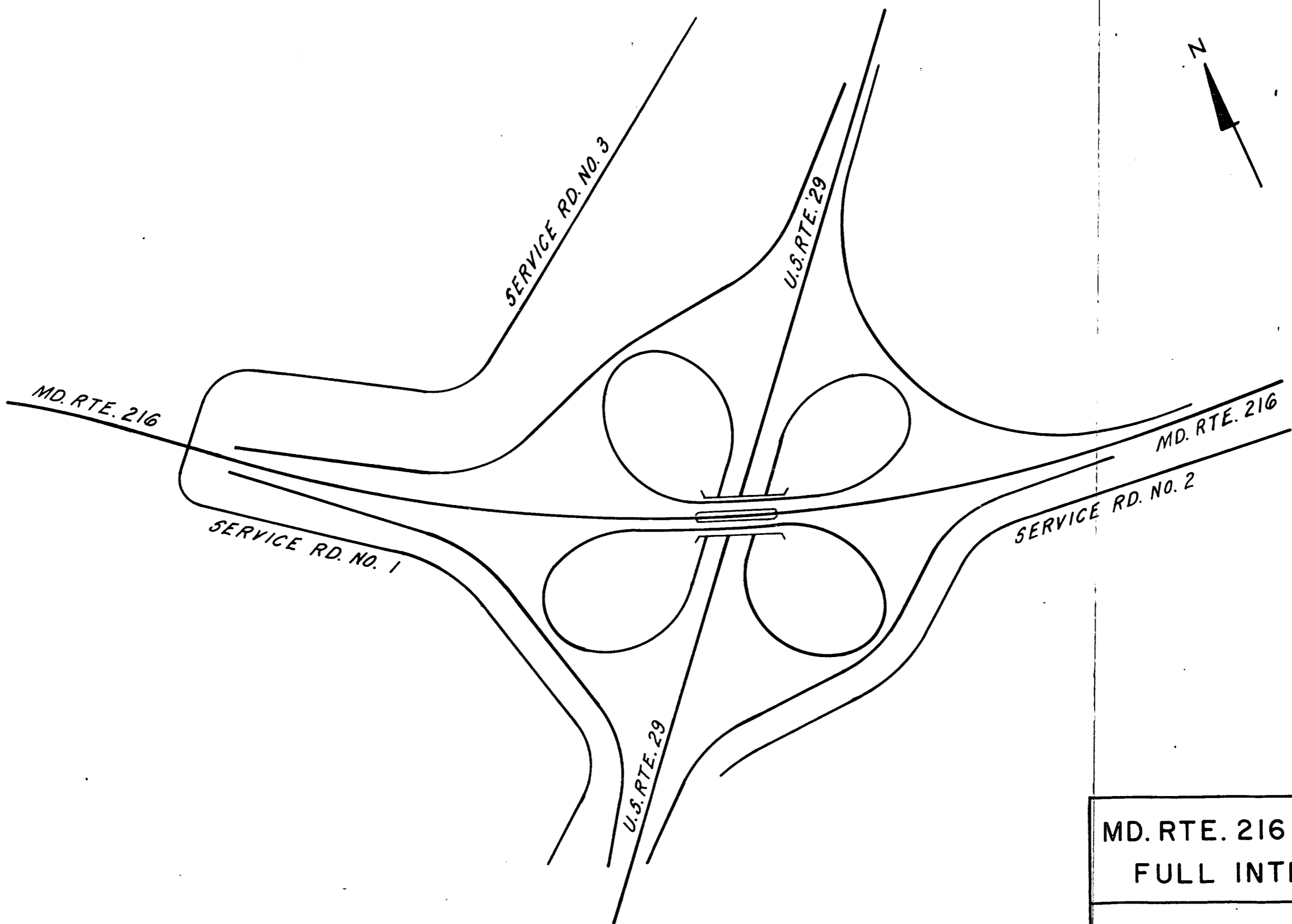
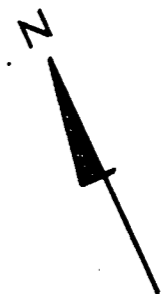


TO LAUREL



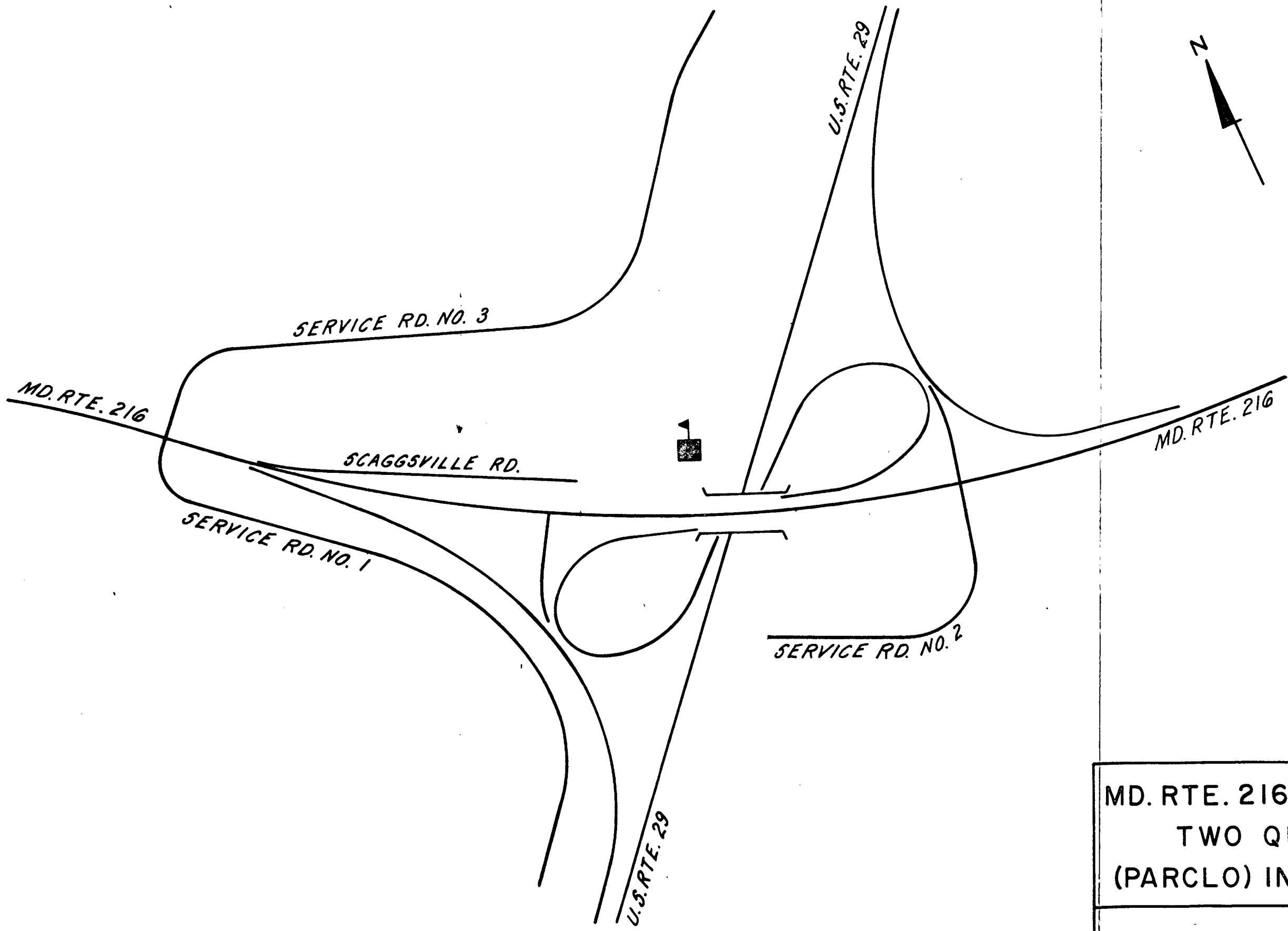
CULTURAL FEATURES  
INFLUENCING  
ALIGNMENT SELECTION

51.



MD. RTE. 216 U.S. RTE. 29  
FULL INTERCHANGE

PLATE NO. 5



MD. RTE. 216/U. S. RTE. 29  
TWO QUADRANT  
(PARCLO) INTERCHANGE

PLATE NO. 6

E. TRAFFICAlternate 1 - No Build

Of the 11,150 vehicles (Average Daily Traffic) presently using the east-west corridor between U.S. Route 29 and I-95, approximately 5,900 vehicles per day (v.p.d.) or 53% use Gorman Road and 5,200 v.p.d. or 47% used existing Route 216.

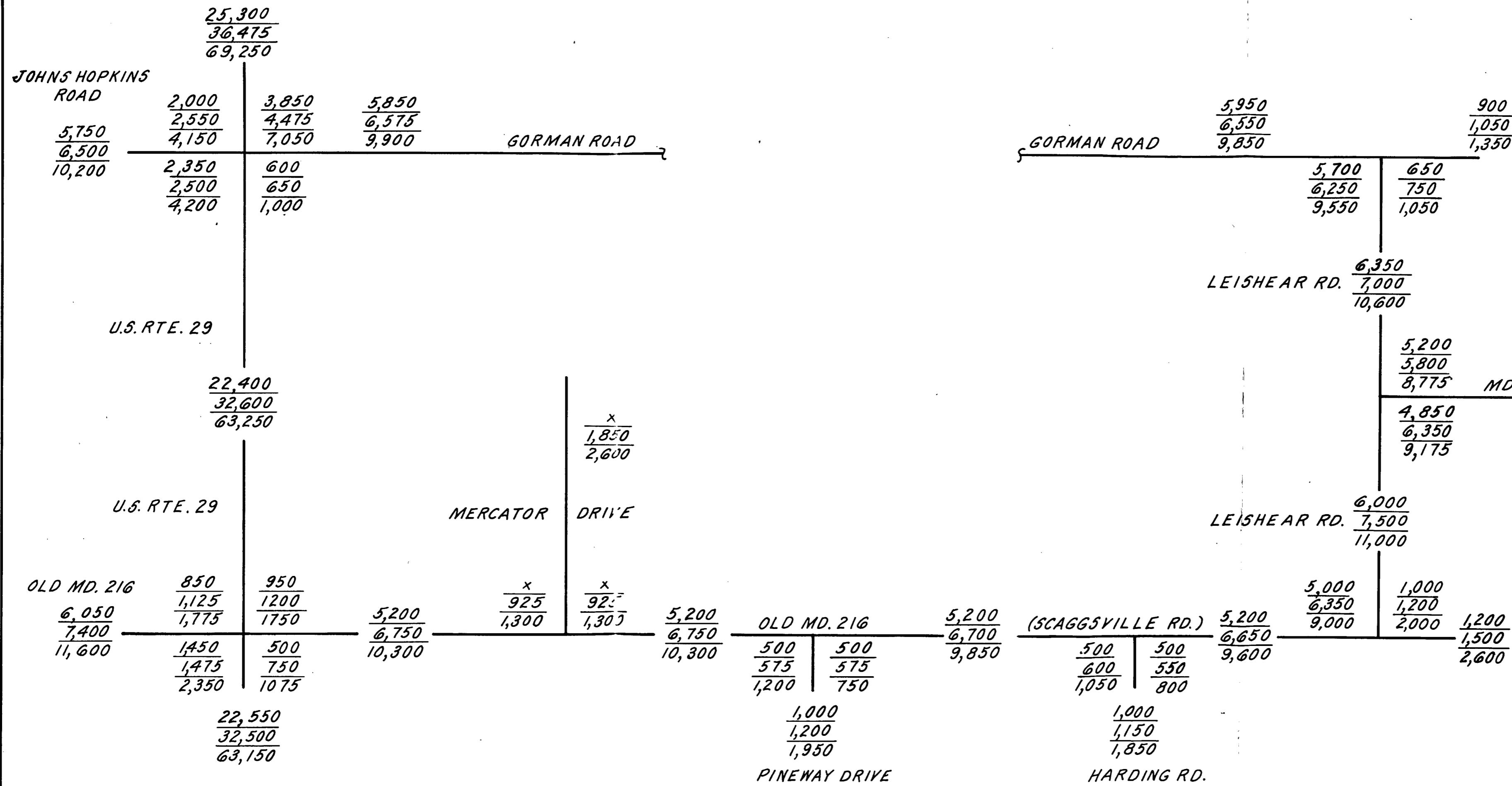
By the year 2006, existing Route 216 is expected to carry an A.D.T. of 10,300 v.p.d., an increase of 98%. Gorman Road, by the same year, is expected to carry an A.D.T. of 9,900 v.p.d., an increase of 68% (See Plate No. 7). Leishear Road traffic is expected to increase as much as 83% by the design year to approximately 11,000 v.p.d.

Capacity analyses indicate that existing Route 216, at Level of Service E, will reach its capacity of 1,960 vehicles per hour by the year 1998, eight years prior to the design year. Level of Service E is characterized by operating speeds below 30 miles per hour, accompanied by unstable flow and stoppages of short duration.

Alternate 3 - Construct New Facility

Traffic projections for Alternate 3, in the year 2006, depicted on Plate No. 8, indicate that construction of a new four lane controlled access arterial highway will divert traffic off local roads onto the higher type facility. The combined total Average Daily Traffic (ADT) for Gorman Road, Alternate 3 and the severed old Route 216 is 27,900 v.p.d. adjacent to Leishear Road, with the new facility carrying 18,500 v.p.d. or 66% of the flow. Of significant importance, Gorman Road would expect only a minimal increase (10%) in Average Daily Traffic from present day volumes of 5,950 to 6,550 v.p.d. The existing Route 216, severed near Route 29 by Alternate 3, would become a local road carrying a maximum of 2,850 v.p.d. as compared to present day volumes of 5,200 v.p.d., a decrease of 45%.

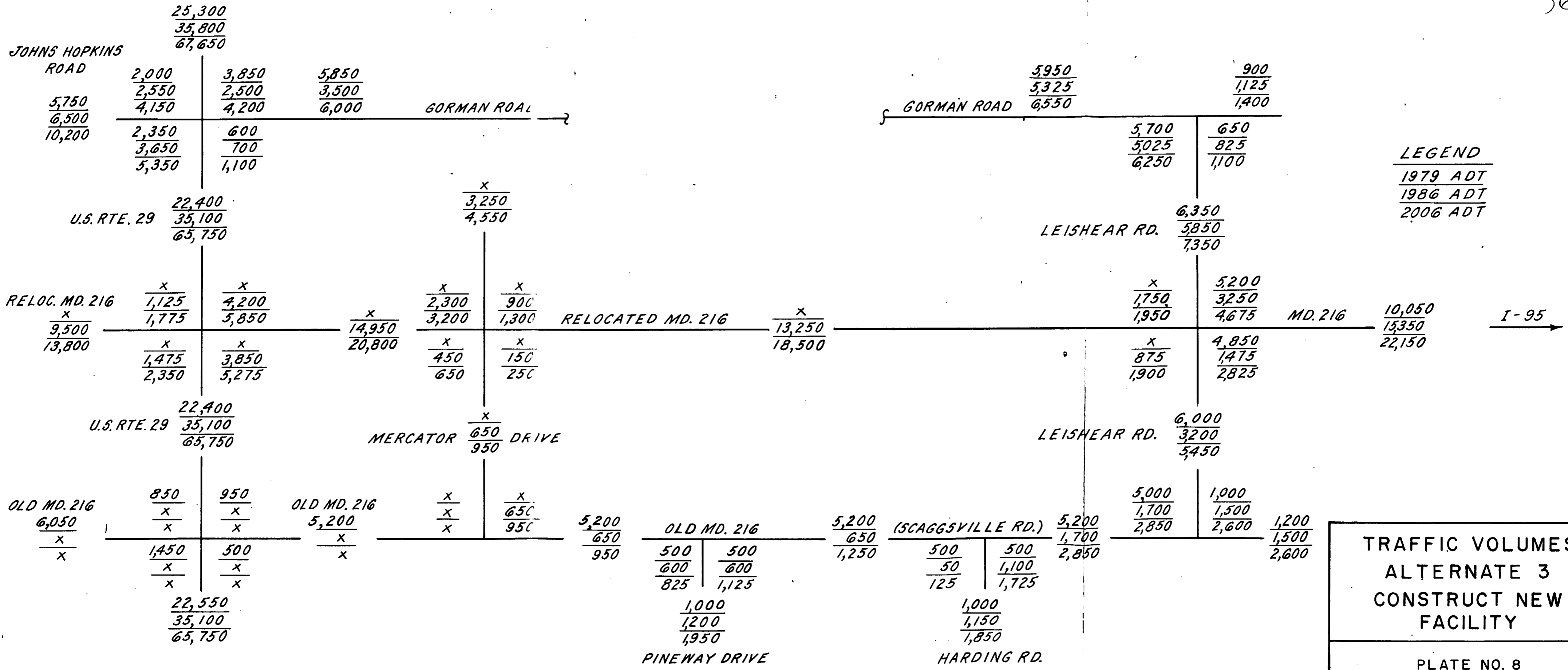
This contrasts sharply with the projected increases under Alternate 1, No-Build, depicted on Plate No. 7, wherein existing routes would be expected to handle 20,200 v.p.d., 9,900 of which would use Gorman Road and 10,300 using existing Route 216, each of which is two lanes wide, with previously described deficiencies.



**LEGEND**  
 1979 ADT  
 1986 ADT  
 2006 ADT

**TRAFFIC VOLUMES  
 ALTERNATE I  
 NO-BUILD**

PLATE NO. 7



**LEGEND**  
 1979 ADT  
 1986 ADT  
 2006 ADT

**TRAFFIC VOLUMES  
 ALTERNATE 3  
 CONSTRUCT NEW  
 FACILITY**



G. SUMMARY OF ALTERNATES AND COSTS

Number of Displacements

<u>Alternate</u>	<u>Residences</u>	<u>Business</u>	<u>Public Land</u>	<u>Hist. Sites</u>
1	0	0	0	0
3	7	1	1*	0

Right-of-Way Requirements (Acres)

<u>Alternate</u>	<u>Residential</u>	<u>Commercial</u>	<u>Agricultural</u>	<u>Woodland</u>
1	0	0	0	0
3	69	10	0	0

Estimated Costs

<u>Alternate</u>	<u>Length</u>	<u>Right-of-Way</u>	<u>Construction</u>	<u>Total</u>
1	3.11 miles	0	0	0
3	2.76 miles	\$4,350,000	\$20,000,000**	\$24,350,000***

\*Property is the Scaggsville school facility whose function will be transferred to another location for reasons other than highway construction.

\*\*Alternate 3 costs include four lane construction with a full clover-leaf interchange at U.S. Route 29.

\*\*\*The present Highway Program (1980-1985) contains \$2,030,000 for Right-of-Way and \$12,096,000 for two lane construction, including the U.S. 29 Interchange.

III. EXISTING SOCIAL, ECONOMIC AND ENVIRONMENTAL CONDITIONS

A. SOCIO-ECONOMIC ENVIRONMENT

1. Population

Statistical data indicate that the population of the southern portion of Howard County is increasing at a rapid rate. Although the growth rate is expected to slow, by the turn of the century the study area will be the most heavily populated segment of the county (See Table 1 on the following page).

The boundaries of the project area, for statistical analyses, extend from east of the village of Fulton to the I-95 interchange, about 4 miles, and from the Montgomery County line at Rocky George Reservoir to the Little Patuxent River, south of Columbia, a distance of about 3 miles. Columbia to the north and Laurel to the southeast are influential major population centers. The study area occupies portions of Census Tracts 6051 and 6062 and parts of Election Districts No. 5 and 6 (See Exhibit 1).

F. TRAVEL SPEEDS

Overall travel speeds were prepared for worst case conditions, using procedures prescribed by the Highway Capacity Manual. Speeds listed are averages, in miles per hour.

Alternate 1 - No-Build

	<u>1978</u>	<u>1986</u>	<u>2006</u>
Existing Route 216 (Scaggsville Road)			
East of Leishear Road (two lane)	26	20	15
West of Leishear Road	48	40	30
Leishear Road			
North of Route 216	29	25	15
South of Route 216	17	15	15
Gorman Road	30	30	30

Alternate 3 - New Facility

	<u>1978</u>	<u>1986</u>	<u>2006</u>
New Route 216	-	50	45
Old Route 216 (Scaggsville Road)	-	40	40
Leishear Road			
North of New 216	-	27	25
South of New 216	-	15	15
Gorman Road	-	30	30

600

As can be seen from the preceeding table, Leishear Road and the two lane portion of existing Route 216 immediately east of Leishear Road would experience very low overall travel speeds (15 mph) in either alternate. This segment of Route 216 presently has a posted speed of 40 m.p.h.

Leishear Road, because of its narrow road section and grades exceeding 10% south of Route 216, restricts truck speeds with resultant reduction of highway capacity under either alternate. The section north of Route 216 does not have as severe restriction, which accounts for the speed/volume relationship between these two links.

TABLE NO. 1

POPULATION ESTIMATES AND PROJECTIONS  
FOR HOWARD COUNTY, MARYLAND  
1960 - 2000

<u>Population by Election District</u>	<u>1960</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
1	7,262	9,613	8,987	9,827	15,637	24,999
2	9,575	17,445	25,090	31,131	43,917	57,974
3	2,721	3,667	4,470	5,570	7,908	10,757
4	3,309	4,250	5,531	7,196	9,050	11,550
5	4,119	13,536	26,079	32,608	63,624	73,496
6	9,166	13,400	38,034	54,469	77,635	87,035
<hr/>						
Total County Population	36,152	61,911	108,191	140,801	217,771	265,811

Source: Office of Planning and Zoning on December 2, 1975  
Corrected December 15, 1976

Estimates prepared as of July, 1975 show that the median age of the population residing in Election Districts 5 and 6 is the lowest in the county. District 5 with a population of 26,079 has a median age of 25.1 years, and District 6 has a population of 38,034 and median age of 25.6 years.

Neighborhoods are defined in the County Plan as the service area of an elementary school. The neighborhoods in the project area are illustrated on Exhibit 2. Hammond Elementary and Middle School includes neighborhoods 71A and 71B. The remaining three neighborhoods are immediately adjacent.

These neighborhoods are growing at rates which are not consistent throughout the area, varying with the location, influences and restrictions (See Table 2, p. 17).

Table No. 2 shows that the projected year 2000 population for the study area will be more than four times the 1975 population. County-wide population growth is projected to be 2.5 times greater for the same period.

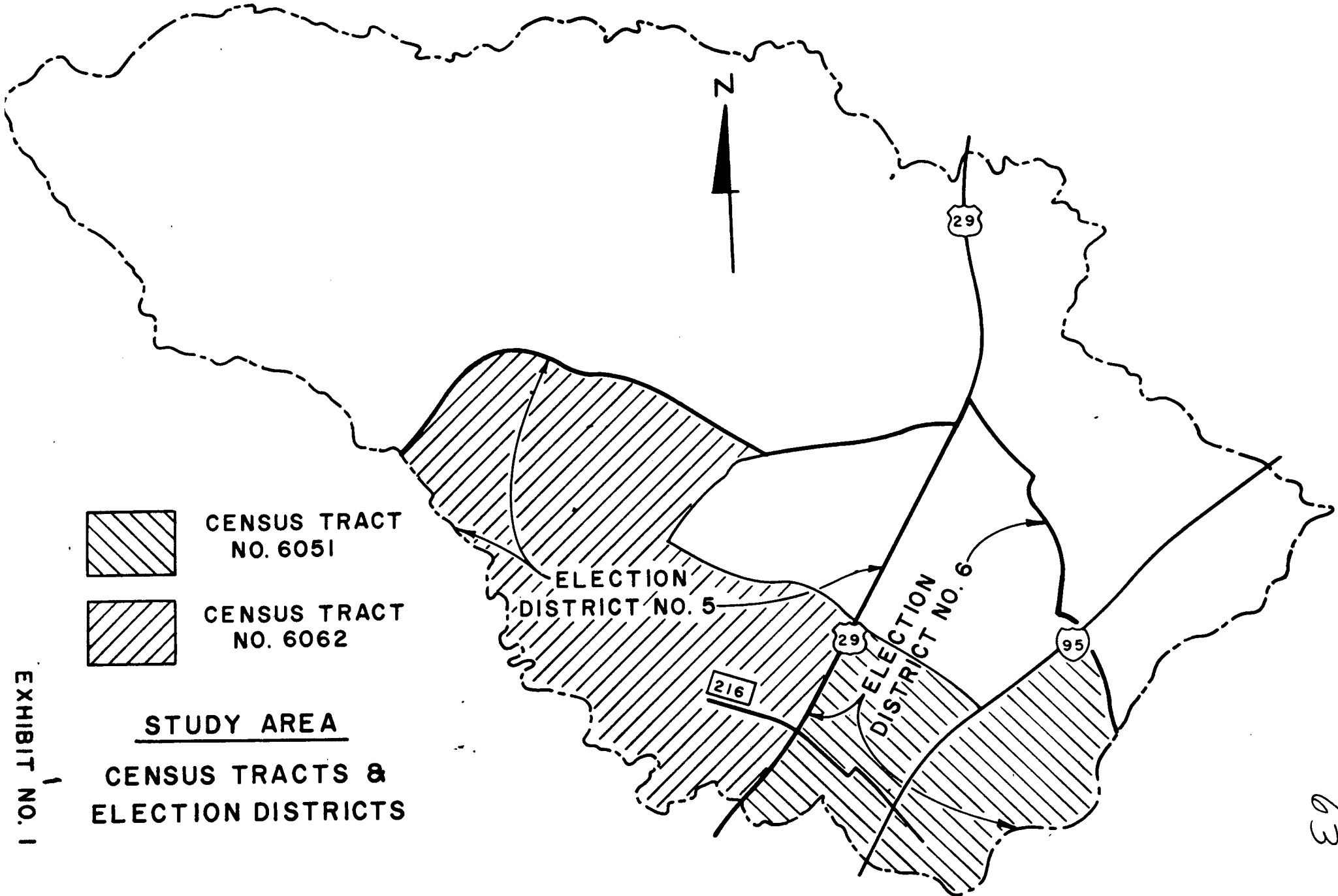


EXHIBIT NO. 1

63

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TABLE NO. 2

POPULATION PROJECTIONS BY NEIGHBORHOOD  
STUDY AREA  
1975-2000

<u>Neighborhoods/ Election District</u>	<u>1975</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>
70 /5	380	530	970	1,396
71 A/6	954	1,048	3,000	3,600
71 B/6	681	739	2,000	3,000
73 /6	112	150	2,000	3,000
77 /6	1,060	1,249	2,300	2,800
TOTAL STUDY AREA	3,187	3,716	10,270	13,796

Source: Howard County Office of Planning and Zoning  
December 19, 1975

Household size is fairly uniform throughout the county, averaging about 3.7 persons per household in 1970. By 1980, the number of persons per household is projected to average less than 3.0 for the county overall. Although future household size suggests a reduction in school age population due to a declining birth rate, the in-migration to the planned developments in the study area will increase the number of families with resultant increase in school enrollments.



Plate No. 9 depicts present land use for the study area derived from the County Plan, Plate No. 10 illustrates future land use.

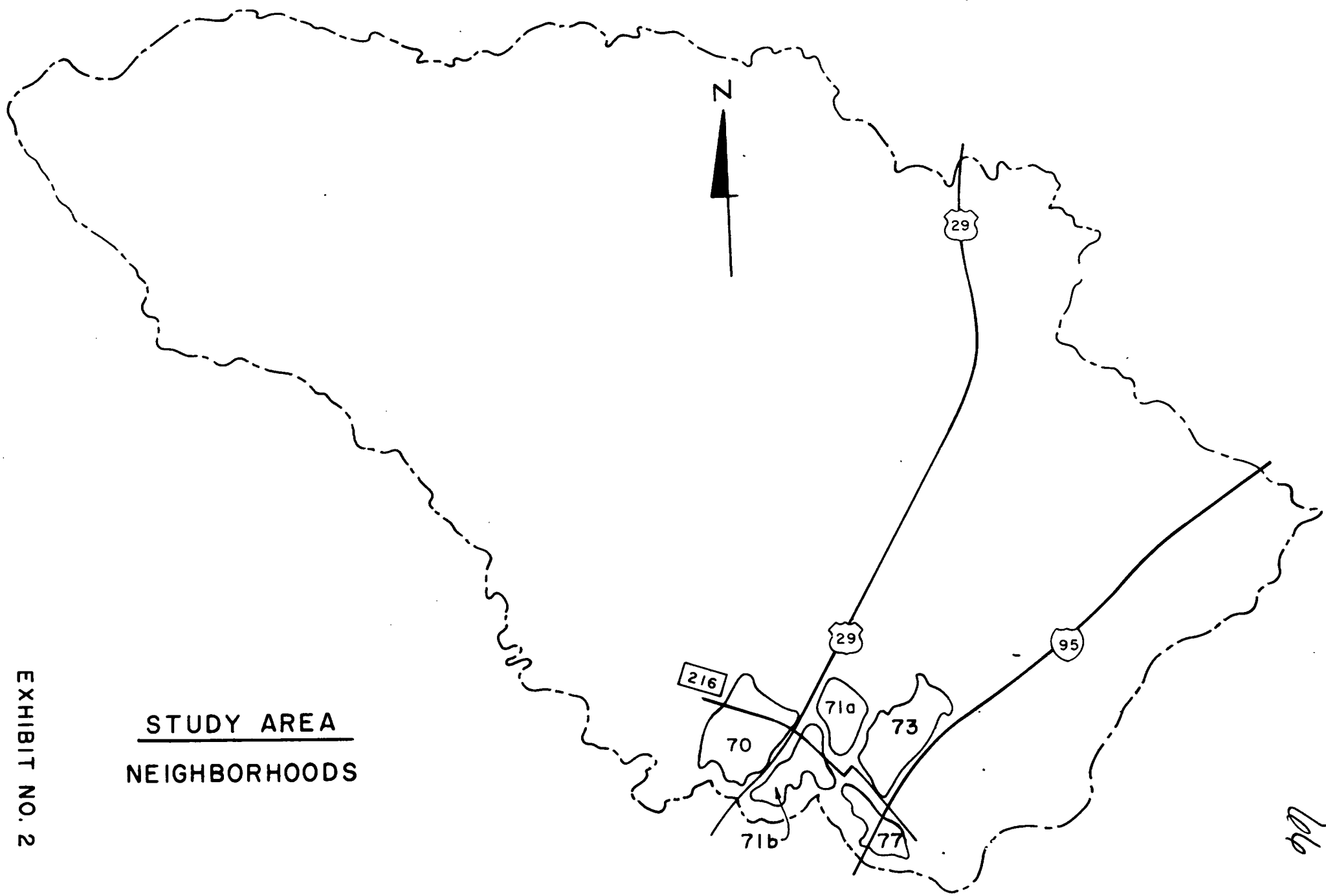
It can be seen that Route 29 is the demarcation line between a conservation area on the west and an area which has been designated as suitable for growth by the County Plan. The plan is intended to guide development to areas where public utilities and community facilities can accommodate increases in population. Conversely, it discourages development in those areas where services are not available, thereby preserving valuable agricultural lands.

This accounts, in part, for the variance in the neighborhood growth rates shown in the preceding Table 2.

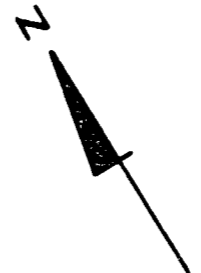
Improvement of Maryland Route 216, considered in the County Plan, is one of the factors which will act as a catalyst to accelerate neighborhood growth rates by providing improved access for all activities from employment through recreation.


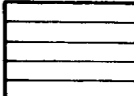



EXHIBIT NO. 2

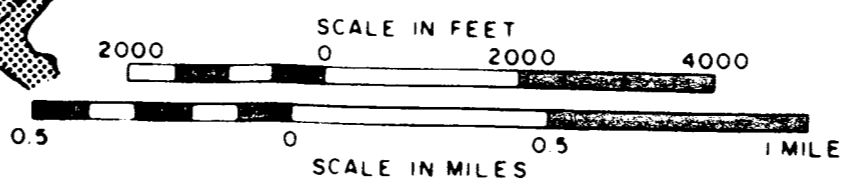
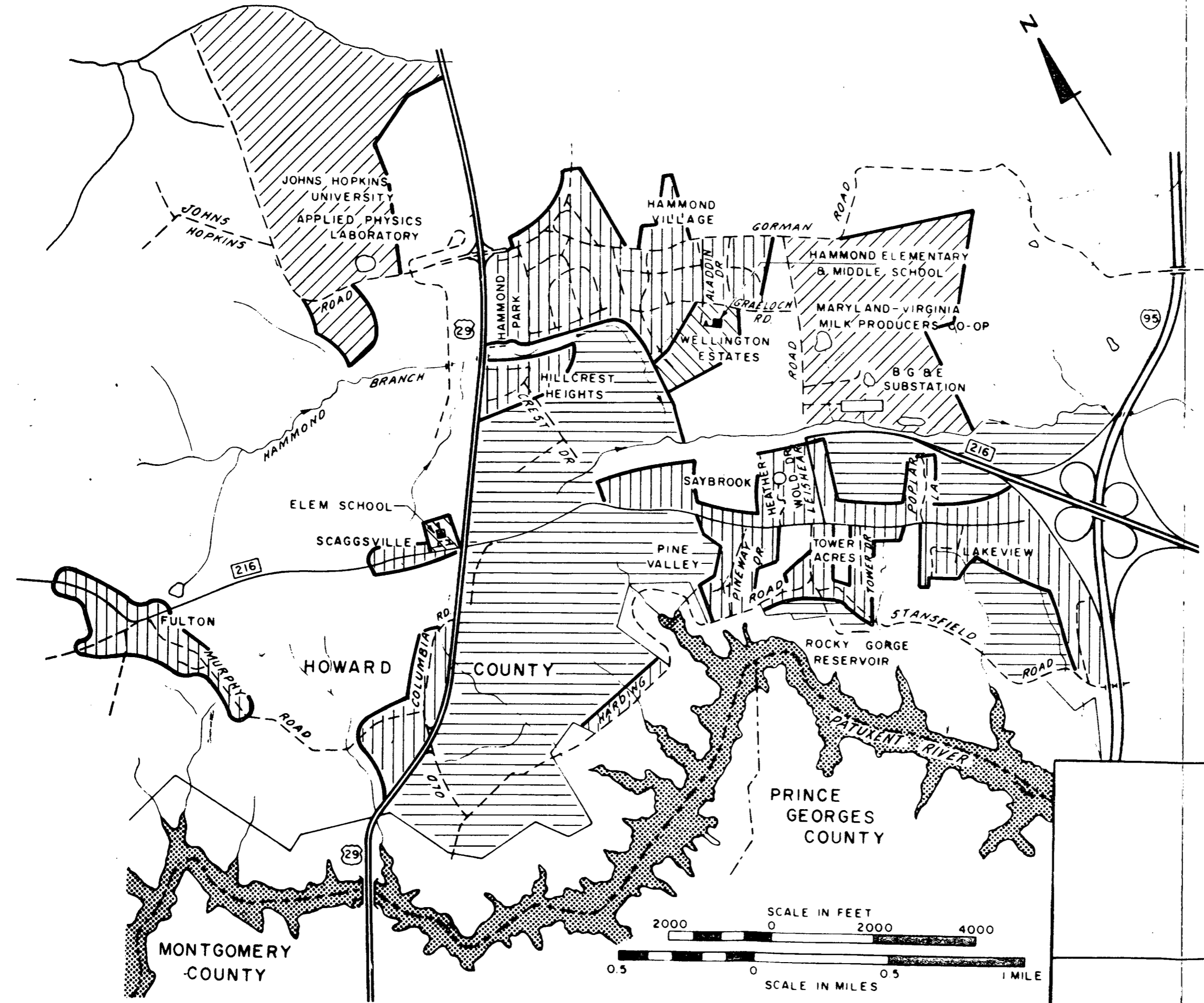
STUDY AREA  
NEIGHBORHOODS



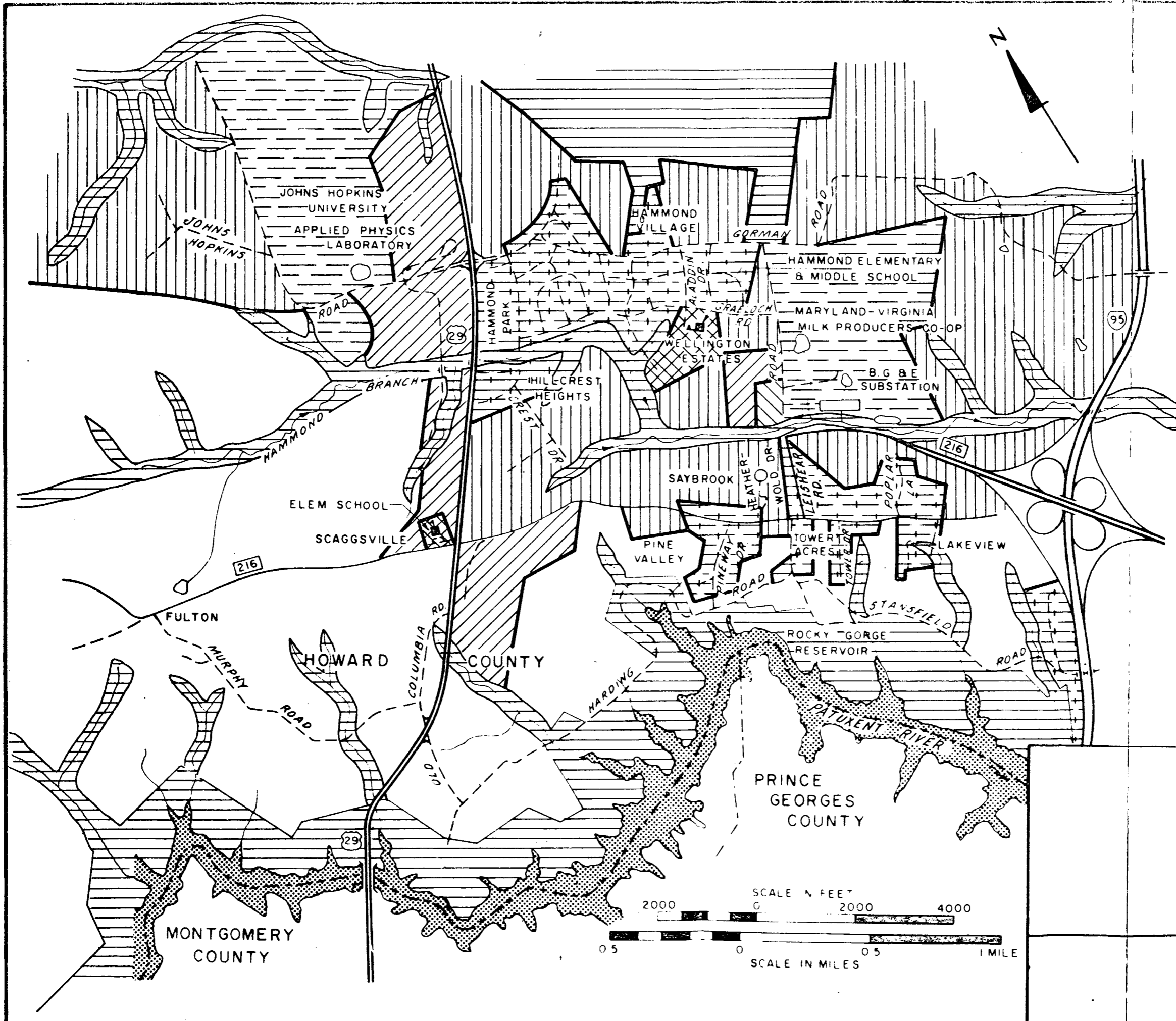
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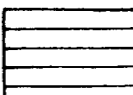

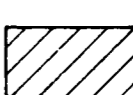
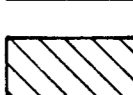
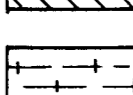
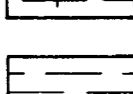
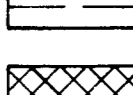


-  AGRICULTURE
-  UNDERDEVELOPED
-  RESIDENTIAL
-  INDUSTRIAL
-  PUBLIC

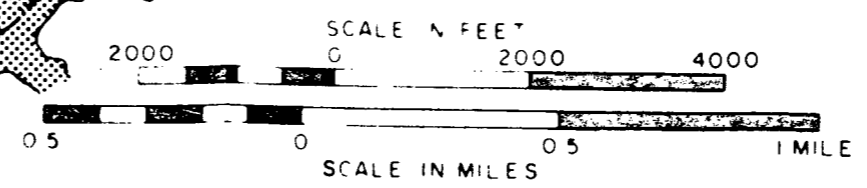


PRESENT LAND USE



-  CONSERVATION RURAL
-  CONSERVATION PROTECTION
-  DEVELOPMENT LOW DENSITY
-  DEVELOPMENT MEDIUM DENSITY
-  DEVELOPMENT HIGH DENSITY
-  STABLE RESIDENTIAL
-  STABLE INDUSTRIAL
-  STABLE PUBLIC

FUTURE LAND USE  
FROM GENERAL PLAN FOR  
HOWARD COUNTY - 1971



It is the policy of the Maryland State Highway Administration to insure compliance with the provisions of Title VI of the Civil Rights Act of 1964 and related civil rights laws and regulations which prohibit discrimination on the grounds of race, color, religion, national origin, physical or mental handicap in all State Highway program areas funded in whole or in part by the Federal Highway Administration. This policy has been incorporated into all Project Design operations and supportive activities.

2. Economic Characteristics

The Maryland-Virginia Milk Producers Association processing plant and the Hammond Elementary and Middle Schools are the only major employment centers in the immediate project area. Residents of the area, as a result, are dependent on other adjacent and more distant locations for jobs. These include the Johns Hopkins Research Laboratory, Westvaco Corporation Research Laboratory and the communities of Columbia and Laurel. The metropolitan areas of Washington and Baltimore are also relatively accessible to the residents of the area.

The election districts 5 and 6 in the study area have the highest employment in the county mainly in manufacturing and

service industries (See Table 3 on the following page). There is an increasing tendency to locate major distribution facilities midway in the Baltimore-Washington corridor. Similarly, the corridor area has one of the nation's most significant concentrations of research and development entities.

The growth of new single family residential housing that is expected to occur in District 6 during the 1980's, as it did during the late 1970's, will have the tendency to increase incomes of that district relative to the others. Housing and population growth is not anticipated to occur as early in the other districts.

There are no multi-family housing units in the project area, although multi-family units are available nearby - east of I-95 in the Whiskey Bottom area and also at Columbia.

Prices for existing homes range from \$35,000 to \$60,000 and upwards. The estimated cost of houses in the new developments are substantially higher.

At the present time the only proposed commercial or industrial development for the project area is the possible construction of the Cherrytree Farms Shopping Mall, to be located in the vicinity of the U.S. 29 - Maryland Route 216 Interchange (Plate No. 4).

TABLE 3

EMPLOYMENT IN HOWARD COUNTY  
TYPE AND ELECTION DISTRICTS  
1974

<u>Election District</u>	<u>Retail</u>	<u>Services</u>	<u>Public Institution</u>	<u>Manufacturing</u>	<u>Other</u>	<u>Total</u>
1	360	320	270	1,130	1,585	3,665
2	1,910	3,150	1,850	620	2,015	9,545
3	50	125	155	35	315	680
4	70	70	180	-	275	595
5	2,060	4,780	1,510	705	2,420	11,485
6	1,350	355	1,140	5,800	4,210	12,855
TOTAL COUNTY	5,800	8,800	6,115	8,290	10,820	39,825

Source: Adapted from Regional Planning Council, January, 1977

With a population increase from 54,000 in 1968 to 120,000 in 1977, the character of the county has changed from rural to suburban/urban. Land uses have changed from predominantly agricultural to residential, commercial and industrial, particularly in the eastern half of the county. Demand for greatly expanded public services such as trash collection, police, and fire protection and school services has risen accordingly causing an increase in the county budget from \$9.6 million in 1968 to \$60.5 million in 1978.

3. Planning/Land Use

a. Present Land Use

The project area presently is devoted to four uses which are depicted on Plate 9: (1) Residential, (2) Agricultural, (3) Industrial, and (4) Public Lands. Stable residential areas are generally located along the highway network which is the basic transportation mode in the project area. With the advent of planned subdivision development, the project area is experiencing rapid transformation from a sparsely settled agricultural region to a suburban type atmosphere.

Some of the areas destined for ultimate development are presently used for agricultural purposes such as



producing crops or for grazing. Others are under-developed large tracts of land.

The only industrial land in the project area is the Maryland-Virginia Milk Producers Co-op (See Plate 9). Public lands are occupied by the Scaggsville School and the Hammond Elementary and Middle Schools which are discussed in later sections of this report.

b. Future Land Use

The General Plan for Howard County (1971), which prescribes future land use, was conceived to act as a guideline to: (1) Direct land development to those areas of the county where public utilities and community facilities have been developed to provide for expected levels of development. (2) Minimize development in areas beyond the limits of the service areas. (3) Preserve agricultural land from premature and haphazard growth. (4) Encourage orderly development in responsive to needs and anticipated trends.

The General Plan is organized on two levels: (a) The development level, which includes that portion of the county included within a 10-year (1970-1980) public and community facility program area, and (b) the conservation level, which is what portion of the county where utilities will not be developed before the turn of the century, a 30 year plan.

The county considers input from all public and private agencies which have programs concerned with, but not limited to, land use, public utilities and community facilities, conservation, highways and public transportation. In turn, Howard County provides input and coordinates with the Baltimore Regional Planning Commission. As a result, the RPC General Development Plan, adopted in December 1972, has incorporated the desires set forth in the Howard County General Plan.

The future land use, as shown on Plate 10, is classified into three major categories: (1) Stable areas of residential, industrial and public land use; (2) Development areas slated for low, medium and high density concentrations; and (3) Conservation areas, where development is limited either because the utilities are not available or is permanently restricted to protect stream valleys, steep slopes or valuable ecological and scenic resources.

In addition to the approximately 300 additional single family dwelling units which will be located in five separate developments in the project area, new commercial, recreational and public safety facilities, as discussed in this chapter, are also contemplated for the project area. Provision of a transportation network,

adequate to serve the projected needs, has been incorporated into the County plan for future development (See Transportation, Page 30).

4. Historical/Archaeological

According to the Maryland Historical Trust there are no historic properties, of statewide significance or eligible for the National Register, in the study area (See letter in Appendix).

According to the Maryland Geological Survey, Division of Archaeology, no known sites of archaeological interest will be directly affected by any proposed construction.

5. Cultural/Religious

The Emmanuel United Methodist Church, the only religious facility in the study area, is located on the south side of Scaggsville Road about 4,000 feet west of Leishear Road. In addition to regular Sunday services, the church serves as a meeting facility for several other activities during the week days and evenings. Practically all users of the church facilities arrive by auto.

Except for schools (See item 7a, Educational facilities) there are no public buildings in the study area. All governmental facilities of the county are generally located in Ellicott City.

The county library system has two branches, at Ellicott City and at Wilde Lake, Village Green in Columbia. There are no library facilities in the project study area.

6. Recreation

The Howard County Department of Recreation and Parks has 1,700 acres of parkland and is acquiring additional land for further park development. It has plans to acquire and develop a 50-acre tract located adjacent to Hammond Elementary and Middle School, north of the Hammond Branch to provide a centrally located recreational facility for this rapidly expanding area of the county. Acquisition of the site is planned for 1981 and completion is slated for 1986.

Other parks planned within a few miles of the project area are certain to be traffic generators of at least minimal significance.

Hammond Elementary and Middle Schools have four ball fields and several paved play areas which are utilized by the neighborhood children. Hammond Park Recreation, Inc., a privately owned enterprise, operates a swimming club located adjacent to the elementary and middle schools. Numerous other recreational facilities located in Laurel, Columbia, at Patapsco State Park and at Rocky George Reservoir, include golfing, tennis, swimming, boating and fishing, among others.

The Laurel Race Track, which conducts 75 days of flat racing, and the Laurel Harness Raceway, which has 60 night racing dates, are both located in Laurel about 3 miles east of the project area.

7. Community Facilities

a. Educational

Three schools are located within the project study area. Hammond Elementary School and Hammond Middle School share the same building complex which is located at Aladdin Drive and Graeloch Road, about 2,500 feet north of the proposed project, see Plate 2. Of the total enrollment of 956 students at this complex, 205 are walkers and the remainder are transported by 12 busses.

Scaggsville School, a former elementary school which served the immediate area, is temporarily being used as a special education facility. The Howard County Department of Education expects to transfer this facility to a more central location in the county by 1981 for reasons unrelated to highway planning. The county government has no foreseeable use for this structure and it will not be necessary to amend highway proposals to avoid this facility.

Interchange configurations were based upon the structure being vacated (full interchange, Plate 5) versus the present use (partial cloverleaf, Plate 6).

The study area is served by two high schools, Atholton High School on the south fringe of Columbia, and Hammond High School on Maryland Route 32. Students are bussed from and through the study area.

School enrollment is expected to increase principally due to new residential development and inflow of new families to the area. Anticipated enrollment growth will add to the number of bus runs presently being made through the area. Leishear and Gorman Roads, as well as the existing Route 216 are major bus routes beginning at approximately 8:00 A.M. and ending at approximately 4 P.M. These roads also serve as major arteries for commuters traveling to employment centers as well as to other services.

Howard Community College and the Maryland Center of Antioch College, both located in Columbia, offer undergraduate studies. Evening classes for candidates for advanced degrees are also offered at the Applied Physics Laboratory of Johns Hopkins University, located adjacent to the project area.

b. Health Services

There are no hospitals or nursing homes located within the project study area. Columbia Medical Center is located about 5 miles north of Route 216. The County Fire Department provides emergency medical services in the project area.

c. Public Safety

Police protection for the project study area is provided by the county Police Department, based in Ellicott City. The area is patrolled periodically.

A central alarm system, based in the control center at Ellicott City provides complete two-way radio communications with every public safety agency in the county on a 24 hour basis.

The county Fire Department, which has a dual purpose of fire suppression and emergency medical service, serves the project area. Under an inter-county cooperative system major emergencies would be responded to by the Laurel Fire Company and also by the Montgomery County equipment based at Burtonsville, about three miles south of the study area.

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As part of an overall effort to provide functional improvement to county wide fire protection, Howard County intends to construct a new fire station within the study area, on a site south of Route 216 and east of Leishear Road. A station at this location would considerably reduce response time to any emergencies in the study area, enabling nearby residents to receive more adequate service.

8. Transportation

a. Highways

Travel between U.S. Route 29, a proposed freeway, and Interstate Route 95 is presently negotiated via Maryland Route 216, a narrow discontinuous route with marginal safety features, and Leishear Road, a county road with steep grades and restricted width. Gorman Road, a county road paralleling Route 216 to the north, is heavily used as an alternative to Route 216, partly because of the poor geometry of the latter roadway. Its attractiveness is enhanced because of its more direct access to employment centers such as the Johns-Hopkins University Applied Physics Laboratory west of U.S. Route 29 and the Maryland-Virginia Milk Producers Cooperative, on Leishear Road.



S

Existing Maryland Route 216 is a twenty-two foot wide, two lane highway from U.S. Route 29 to Leishear Road. Its shoulders, which exist only in some areas, are from 3 to 4 feet in width. Leishear Road, which connects segments of Route 216, is a twenty foot county road with steep grades and virtually no shoulders. East of Leishear Road, Route 216, as it approaches the I-95 interchange, tapers from a two lane, twenty-four foot roadway to a four lane divided highway with a 58 foot median.

As a part of its Major Thoroughfare Plan, the General Plan of Highways for Howard County (1971) has included a recommendation for improvements of Route 216 from Leishear Road to Route 29. This is also consistent with the Regional Planning Commission's suggested General Development Plan. The State Highway Administration has placed planning and engineering for this project in the State Secondary Highway Improvement Program for 1979-1983.

To the north of the project area, Maryland Routes 100/108, 175 and 32 (Patuxent Freeway) also serve as important east-west links. All three of these highways connect the Baltimore-Washington Parkway (Anne Arundel County) with U.S. Route 29 (Howard County). Future improvements are planned for these routes. Portions of Route 32 are under construction.

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b. Other Modes of Transportation

There are no commercial airfields in the project area. The Suburban Airport at Laurel is located in Anne Arundel County about five miles east of the project area. The Baltimore-Washington International Airport is less than ten miles from the area.

No taxicab service is based in the immediate study area. The nearest cab service is Bob's Cab, based in Laurel.

The Chessie System offers freight service along its main line track which follows the Howard-Anne Arundel County Lines about three miles east of Route I-95. Several spur lines serve the industrial area between I-95 and U.S. Route 1. Passenger service between Washington and Baltimore is provided by Amtrack and the Chessie System (Baltimore and Ohio Railroad).

No scheduled buses serve the project area. The Trailways and Greyhound stations in Laurel service the heavily populated Baltimore-Washington corridor in a north-south direction.

None of these other modes of transportation will satisfy the total needs of the area. These modes of transit satisfy long distance travel but the private motor vehicle must be used for all other needs including accessibility to air, rail and bus travel.

9. Utilities

The study area is served by the following utilities:

- 1. Telephone - Chesapeake and Potomac Telephone Company;
- 2. Electric - Baltimore Gas and Electric Company;
- 3. Natural gas - Baltimore Gas and Electric Company;
- 4. Water - Washington Suburban Sanitary Commission and Howard County Department of Public Works;
- 5. Sanitary and storm sewers - Howard County D.P.W.
- 6. Sewerage - Savage Treatment Plant of the Howard County Department of Public Works.

Colonial Pipeline has a 6" fluid petroleum pipeline which traverses the study area south to north about 1/2 mile east of Scaggsville.

American Telephone and Telegraph Company's coaxial cable lies just east and parallel with Route 29. The Chesapeake and Potomac Telephone Company maintains a repeater station on this cable line just north of Route 216.

Potomac Electric Power Company (PEPCO) has filed an application for Certificate of Public Convenience to construct a 500 KV overhead transmission line from the Brighton substation in Montgomery County to the vicinity of Baltimore Gas and Electric (BG & E) Company's High Ridge substation at Leishear Road and Route 216. A portion of this line parallels Alternate 3 along the south edge of the proposed Hammond Park. The Hearing Examiner of the Public Service Commission of Maryland ruled in this action (Case No. 7004), that it was in the public interest to construct the transmission facility and ordered that the requested certificate be issued. The Order was to become final on May 7, 1979, pending satisfaction of appeals which are now before the full Public Service Commission.

10. Community Organization and Cohesion

The life style of the area is definitely oriented toward the private motor vehicle. Virtually nothing can be reached by walking. All services, employment and recreation are outside the project area. Public transportation is not available

because of the lack of demand partially attributable to light density population and largely due to the widely scattered destination desires.

Major shopping centers are located in Columbia and Laurel. Employment centers such as Johns Hopkins Applied Research Laboratory (2,500 persons), Westvaco (70 persons), W. R. Grace and Company (700 persons) located about 3 miles from the project are reached by automobile almost exclusively.

Sidewalks within individual housing developments provide access internally only, they do not interconnect subdivisions.

B. NATURAL ENVIRONMENT

1. Topography

The Maryland 216 corridor lies in the rolling hills and valleys of the Piedmont Plateau Physiographic Province. The Piedmont Plateau is a very old upland dissected by many small streams and drainage-ways.

The topography of the project area is characterized by rolling hills with slopes ranging from nearly flat to steep. The elevation of Rocky George Reservoir is 280 feet above

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mean sea level with the Hammond Branch ranging from 400 feet above mean sea level north of Fulton to 270 feet around I-95.

2. Geology and Soils

In this part of southern Howard County, the bedrock consists of schists which weather very easily. Bedrock is not exposed at any place in the project area.

The soils in the project area consist of loams, sandy loams and gravelly loams. The soil stability is poor to fair in the floodplains, footslopes and upland depressions, and fair to good in the uplands. The erosion potential is moderate in level areas and high in sloping areas.

Hammond Branch is located in the Hatboro silt loam in the area adjacent to the proposed project. Alternate 3 would be constructed adjacent to the stream on the sloping areas of Glenelg, Manor and Chester soils, and in some places through the Hatboro silt. Slopes along the Hammond Branch exceed 15% in some areas.

3. Climate and Air Quality

The climate of the project area is typical of the Middle Atlantic seaboard. Summers are humid but not intensively hot; winters are short and mild. Average January temperatures are 36° Fahrenheit, with an average daily high of 44°F and an average daily low of 28°F. The average July temperature is 77°F with an average daily high of 87°F and an average daily low of 68°F. The annual average is 55°F.

Average annual precipitation is approximately 40 inches with no month exceeding 4.5 inches nor less than 2.6 inches. Average annual snowfall is 17 inches.

Howard County is located within the Metropolitan Baltimore Intrastate Air Quality Control Region, a non-attainment area for carbon monoxide and oxidants.

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4. Water Resources

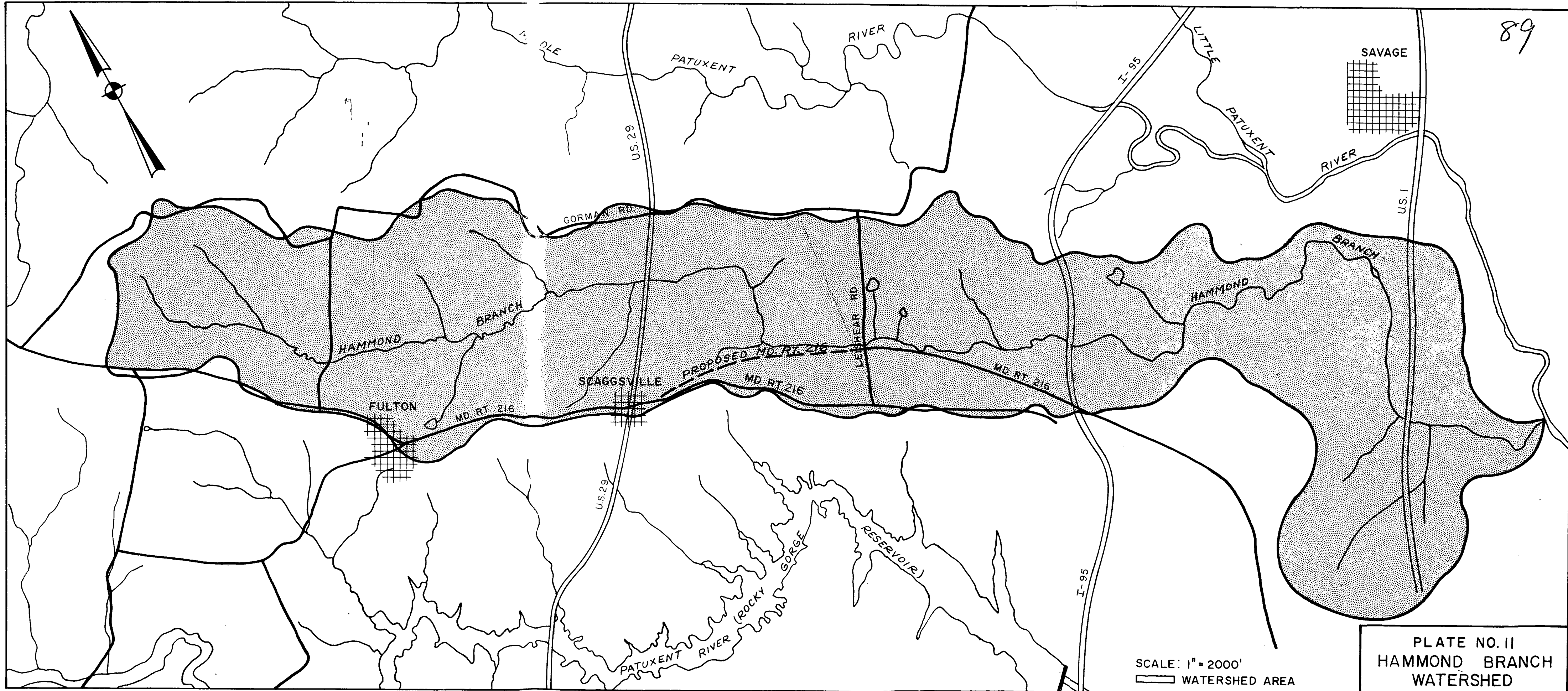
Most of the project area lies within the Hammond Branch Watershed, a small tributary of the Little Patuxent River (Plate No. 11). The Hammond Branch rises within the Piedmont Plateau Physiographic Province and flows southeasterly through the transitional zone (fall line) between the Piedmont Plateau and the low lying Coastal Plain Physiographic Province. The stream enters the Little Patuxent then flows southeast for another 14 miles to its confluence with the Patuxent River (Plate No. 12).

Some sections of the existing Maryland Route 216 between Leishear Road and Fulton lie in the Patuxent River Watershed, with the existing highway running along its northern border.

Information from local well records shows that the quantity of ground water in the Hammond Branch and adjacent watersheds is of adequate capacity. Ground water quality is also good with low concentrations of metals and other substances.

The quality of water in the Hammond Branch is generally considered to be good, with some minor pollution problems. As the stream flows through agricultural areas, particularly pasturelands, the stream becomes contaminated with fecal matter from





SCALE: 1" = 2000'  
 [Symbol] WATERSHED AREA

PLATE NO. II  
 HAMMOND BRANCH  
 WATERSHED

grazing cattle and from fertilizers. Soil from the pastures is eroded in several locations; the sediments which pass into the stream degrade the water quality. The Maryland-Virginia Milk Producers Co-op discharges treated wastewater into the stream 4,500 feet downstream from Leishear Road. The water quality seriously deteriorates at this point, as is evidenced by high concentrations of ammonia, nitrogen and phosphate. The Hammond Branch recovers as it flows toward the Little Patuxent River.

The Milk Co-op also draws its primary water supply from the stream by means of two pumps located immediately downstream from Leishear Road. This water is filtered and treated for use as process and cooling water. Four wells were recently (1978) completed for use at those times when the Hammond Branch is muddied from sediment following rain storms. They also supply about 30% of the total volume use under normal conditions. No public water is used.

For most of its length, from source to mouth, the Hammond Branch flows through wooded areas and open fields. Because of this, the stream is relatively clean and free of debris and domestic and industrial discharges (with a few exceptions) which deteriorate a stream in a more heavily populated area. Through these long wooded stretches, the stream is lined with many species of deciduous trees which tend to shade the stream

and reduce the amount of sunlight reaching the surface, thus lowering water temperatures. The decreased temperature provides cold spots which are attractive to fish.

The deciduous trees also introduce organic material such as leaves and insects into the Hammond Branch, important as food for fish in the stream, and also to fish in the Little Patuxent which depend on small feeder streams for food to drift downstream.

The Hammond Branch has a wide variety of habitat types, including riffles, straight runs, undercut banks and a few deeper pools. Each of these habitats is very important in providing shelter for a variety of organisms.

In the project study area there is a good diversity of benthic or bottom-dwelling organisms at most locations. The stream is the healthiest between U.S. 29 and Leishear Road. In this area no one species is completely dominant and most of the organisms are intolerant to pollution. Downstream of the Milk Co-op the balance of organisms becomes unbalanced and there are large populations of pollution tolerant organisms.

Despite the fact of the deterioration of the Hammond Branch as it flows from its headwaters down past Leishear Road, it remains a very important stream. The Little Patuxent

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River is dependent upon the Hammond Branch and others like it for several reasons. Clean small tributaries provide the Little Patuxent with good quality, well-oxygenated water. Additionally, the Hammond Branch serves as a breeding ground for small foragefish. The fish community in the Little Patuxent is composed primarily of small minnows, dace, darters and chubs. Some of the larger species include Northern rock-bass, sunfish, bluegill, and American eel.

Information is not available on the fish populations in the Hammond Branch, but it is assumed from the size of the stream, the habitat types, and the availability of a diverse benthic community upstream from Leishear Road, that a diverse community of minnows, darters and other small foragefish live in the stream.

There are no threatened or endangered species present in the Hammond Branch, nor are there any unique aquatic habitats present.

The 100 year flood plain of the Hammond Branch is located on Plate 13 and delineated on Plate No. 14. Its limits have been determined from calculations submitted by the private developers of subdivisions abutting the stream's south slopes because no HUD flood plain mapping has been performed in this

area. These calculations have been reviewed for compliance with Rules and Regulations of the Water Resources Administration, Department of Natural Resources, at Annapolis and approved for planning purposes (See letter in Appendix).

Surface elevations for the 100 year flood plain vary from approximate elevation 315 near Leishear Road to approximate elevation 323 at the limits depicted on Plate 14.

*correct*

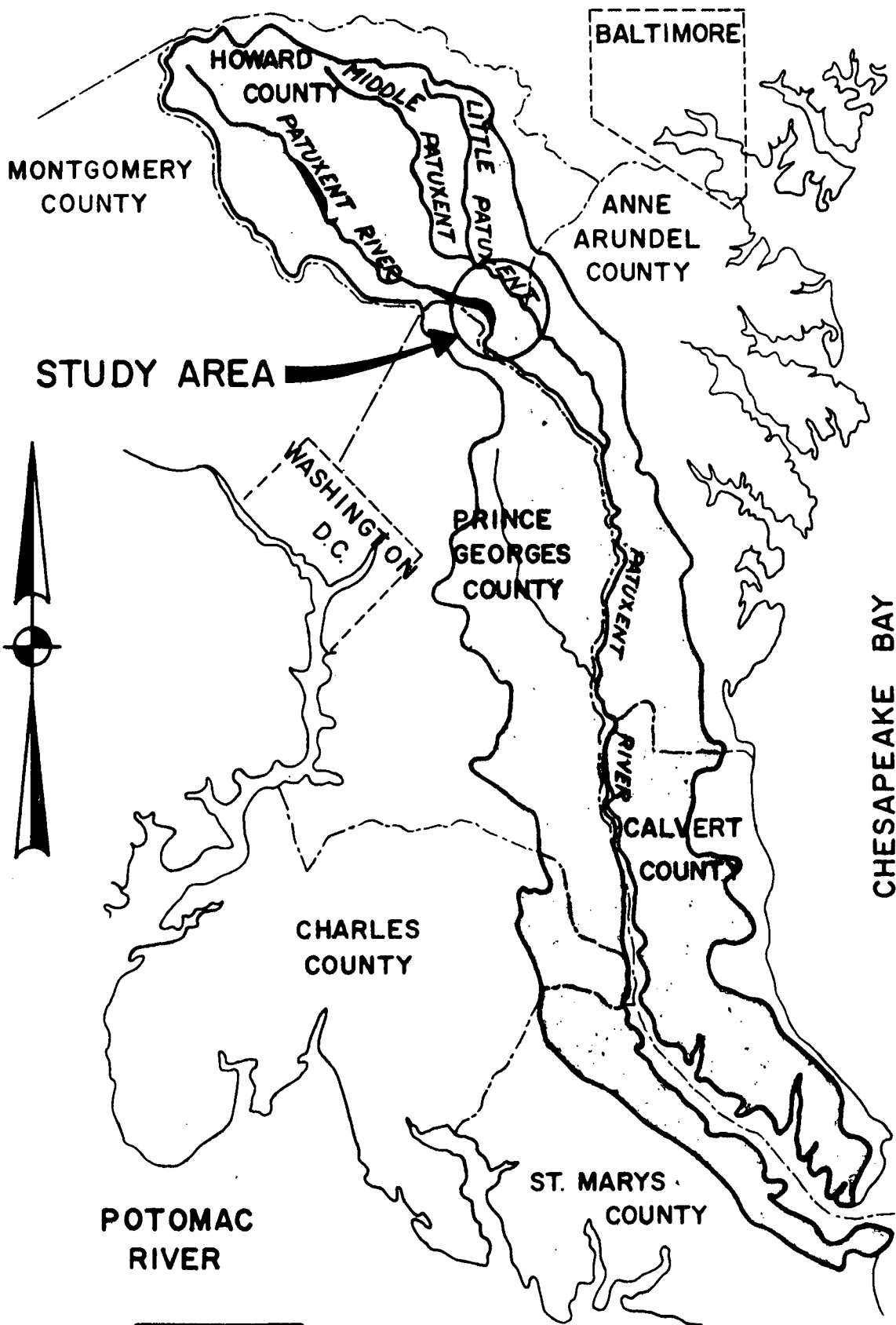
*elevation = 327 on plate 14*

*also, add a sentence stating that after the non-significant longitudinal encroachment on the flood plain is built, the water will not overlap Leishear Rd.*

Alternate 3, located along the south slopes of Hammond Branch, is sandwiched between the flood plain and the back of several subdivisions. In order to achieve a balance between these two entities, it is necessary to encroach somewhat upon the 100 year flood plain. This location is consistent with County plans for development of the area. No other feasible location is available for construction of the proposed facility on new location. There are no identified wetlands within the study area.

5. Terrestrial Ecosystem

The study area for the terrestrial ecosystem is somewhat larger than the project itself, extending from just west of Fulton to I-95, and from Gorman Road southward to Rocky Gorge Reservoir, narrowing at its east and west limits.



POTOMAC RIVER



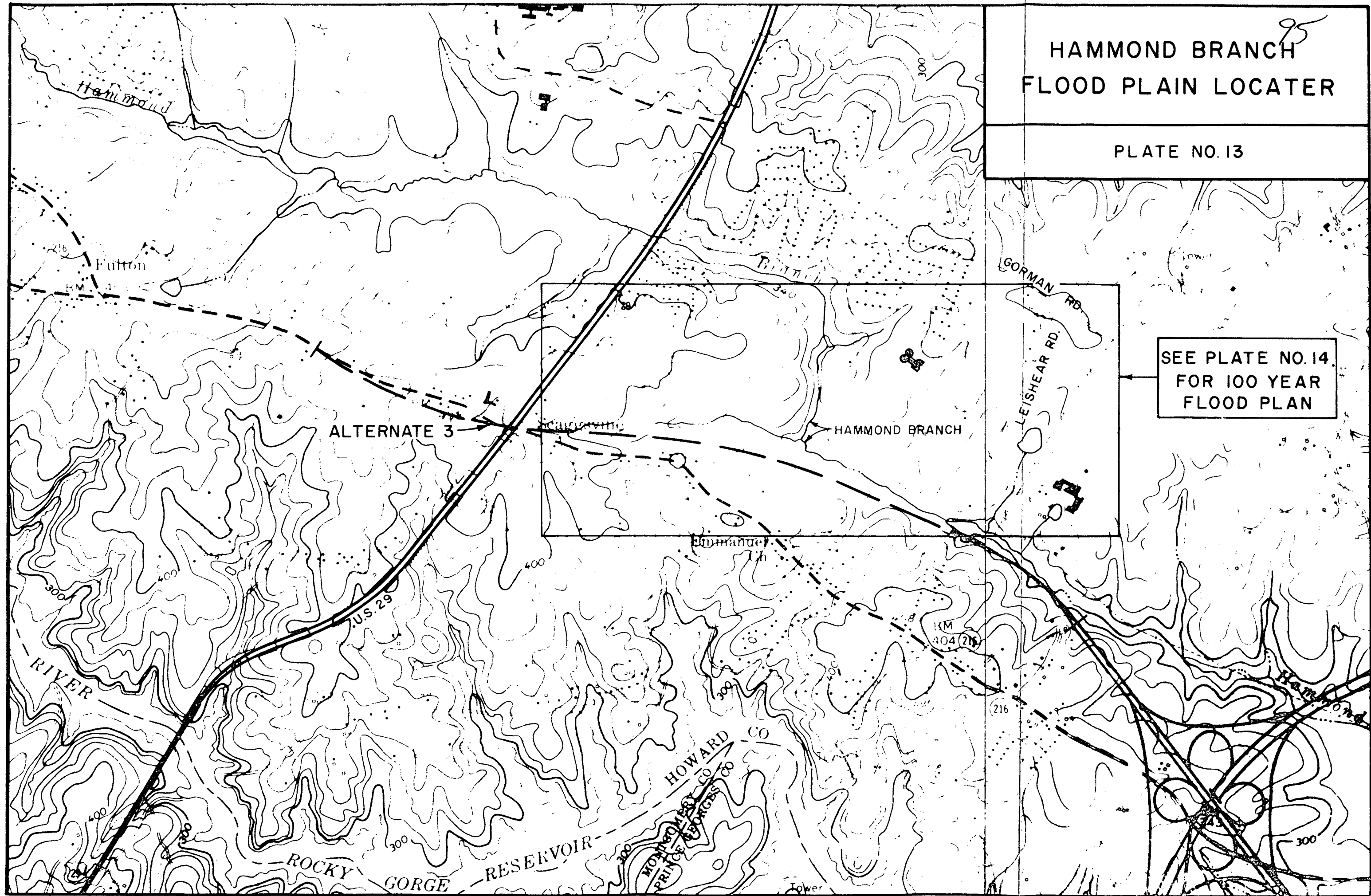
 WATERSHED AREA  
 COUNTY LINES

PLATE NO. 12  
 PATUXENT RIVER  
 WATERSHED

95  
HAMMOND BRANCH  
FLOOD PLAIN LOCATER

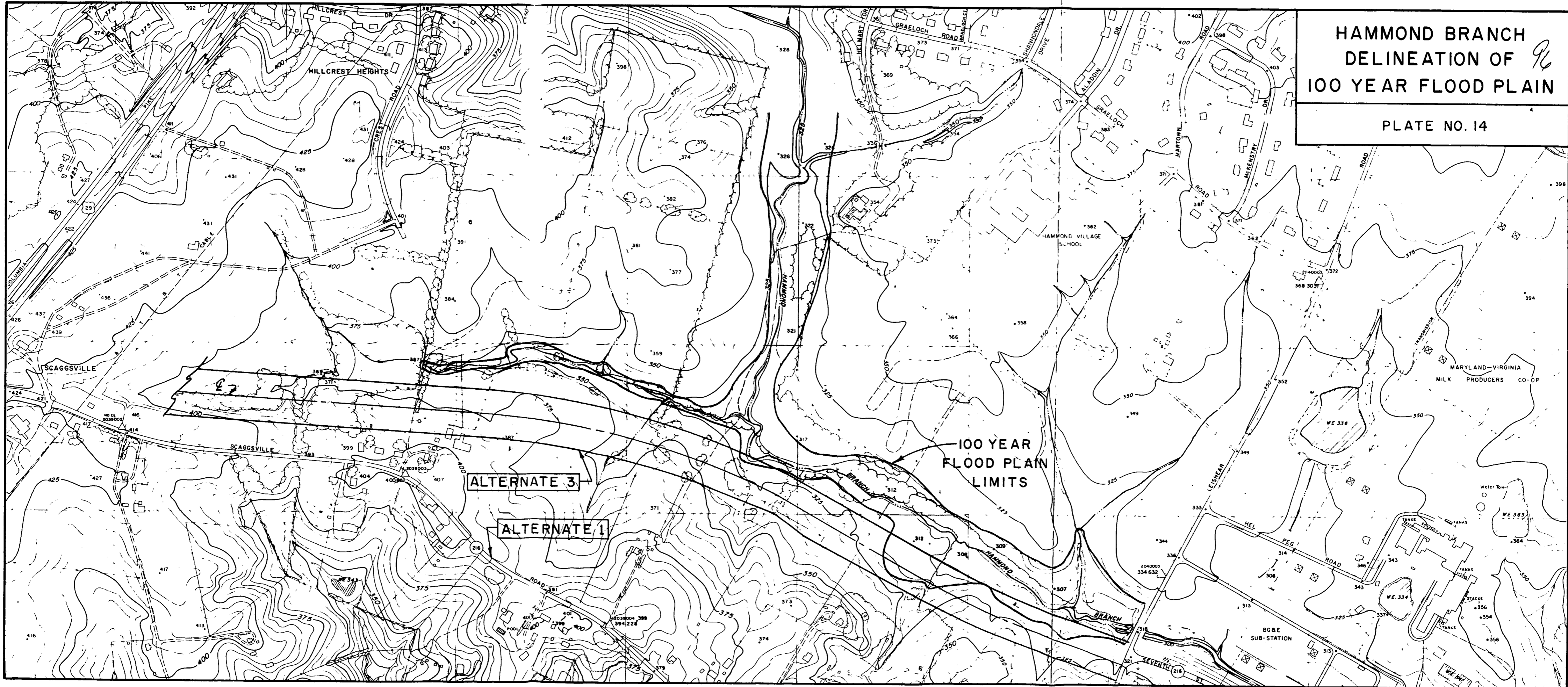
PLATE NO. 13

SEE PLATE NO. 14  
FOR 100 YEAR  
FLOOD PLAN



HAMMOND BRANCH  
DELINEATION OF 100 YEAR FLOOD PLAIN

PLATE NO. 14





Of the 2,985 acres within this ecosystem area, approximately 25% of the land is in woodland, 10% in brushlands, 26% in open fields and 16% is in croplands. The remaining 23% is developed land, including commercial/industrial sites, housing developments or isolated residences. Most of the developed sites have lawns with native or ornamental shrubs and trees.

Future land use (Plate No. 10) indicates that most of the study area, particularly east of U.S. Route 29 is destined for some form of development which will change the composition, described above, drastically.

The woodlands of the study area are dominated by red oak, white oak, chestnut oak and yellow-poplar in the upper canopy, and shagbark hickory (Carya ovata), red maple (Acer rubrum), and flowering dogwood (Cornus florida). Occasionally other species such as black oak (Quercus velutina), scarlet oak (Quercus coccinea), Norway maple (Acer platanoides) and Virginia pine (Pinus virginiana) are present. There are also a few areas where mountain laurel (Kalmia latifolia) is found under mature stands of oak and yellow poplar. Black willow (Salix nigra), yellow-poplar and red maple dominate the lowland areas along streams.

The brushlands are dominated by black locust (Robinia pseudoacacia), quaking aspen (Populus tremuloides), staghorn

sumac (Rhus typhina) and red maple, and at least 20 other species. They range in size from less than 1" in diameter to 8" or 10" in the more highly developed areas.

The open fields are composed primarily of grasses, clovers, plantain, goldenrod, wild strawberry, Virginia creeper and others.

Croplands cover 490 acres of the project area. Most of the cropland is located west of U.S. 29 and there are also some fields (1) north of the Unnamed Tributary of the Hammond Branch, (2) south of Maryland Route 216 and east of U.S. 29, (3) in the area north of Maryland Route 216, east of Leishear Road and west of I-95. Corn is the most widely grown crop, but wheat and oats are also present. A few of the fields were fallow in 1978.

Small populations of white-tailed deer (Odocoileus virginiana) are scattered around the area as well as larger numbers of woodchuck (Marmota monax), cottontail rabbit (Sylvilagus floridanus), white-footed mouse (Peromyscus leucopus), common skunk (Mephitis mephitis), Eastern gray squirrel (Sciurus carolinensis), racoon (Procyon lotor) and muskrat (Ondatra zibethicus). Bird populations are high with over 50 species present in the summer months.

There are no threatened or endangered species or rare or unique ecological communities present in the project study area.

6. Noise

The project area, as previously described in this document, is primarily devoted to rural residential and agricultural. In addition to scattered single homes, two small single unit subdivisions, are located in the study area (see Plate 4). The remainder of the study corridor is undeveloped land consisting of rolling pastures and farm fields with scattered mature trees.

A total of twenty noise sensitive areas were identified along both Alternatives as shown on the accompanying Maps (Figures I, IIa, IIb and IIc). Field measurements were obtained at these locations to determine ambient noise levels in order to establish a basis for impact analysis. Calculations were performed using the Federal Highway Administration's Highway Traffic Noise Prediction Model to predict anticipated noise levels at the twenty noise areas selected. Traffic as represented on Plates No. 7 and 8 and the travel speeds contained on page 11 of this document, were used as the basis for these calculations.

Comparisons of present and predicted noise levels are presented in the following chapter.

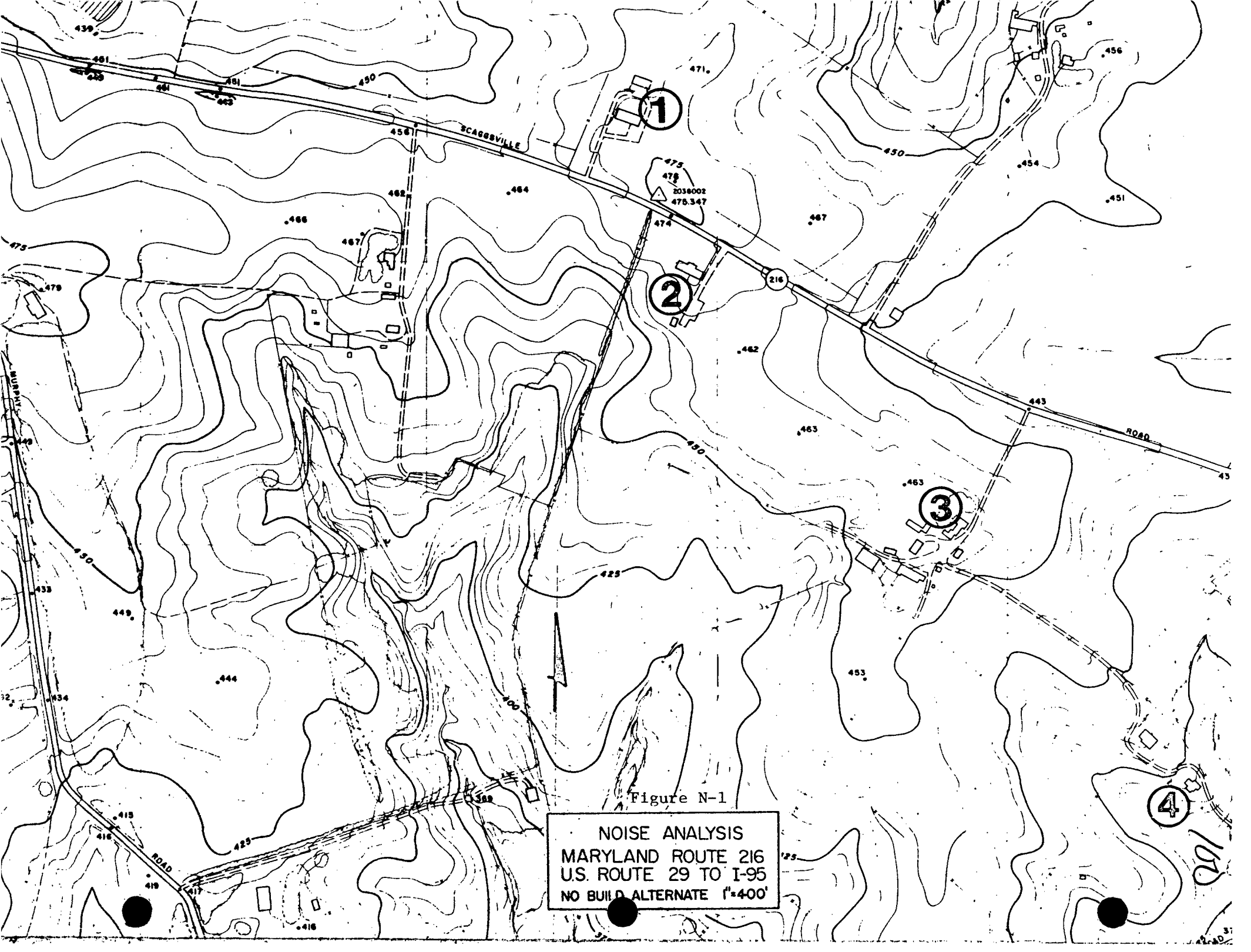
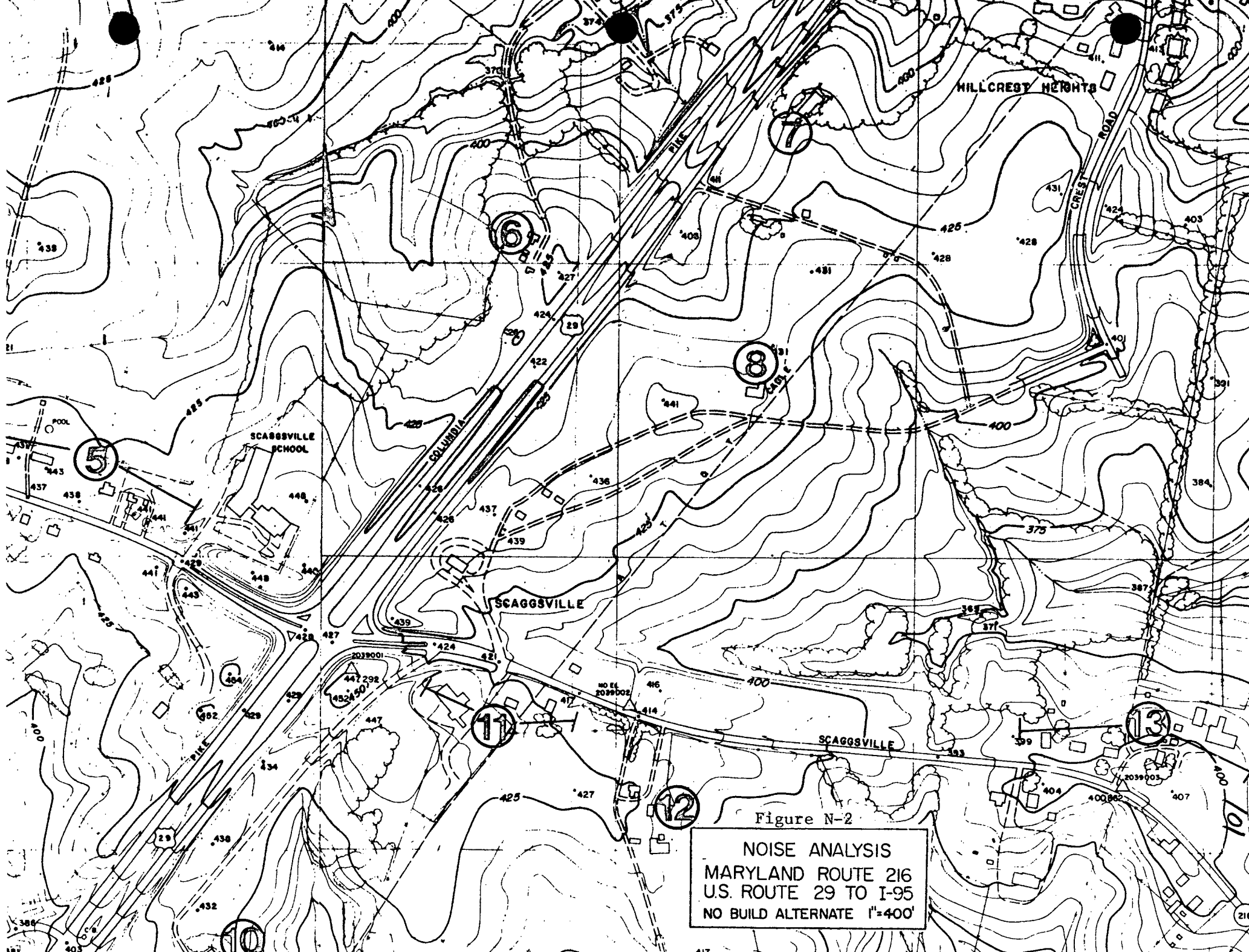


Figure N-1

**NOISE ANALYSIS**  
**MARYLAND ROUTE 216**  
**U.S. ROUTE 29 TO I-95**  
**NO BUILD ALTERNATE 1"=400'**

100'



HILLCREST HEIGHTS

SCAGGSVILLE SCHOOL

SCAGGSVILLE

SCAGGSVILLE

Figure N-2

NOISE ANALYSIS  
MARYLAND ROUTE 216  
U.S. ROUTE 29 TO I-95  
NO BUILD ALTERNATE 1"=400'

5

6

8

11

12

13

10

216

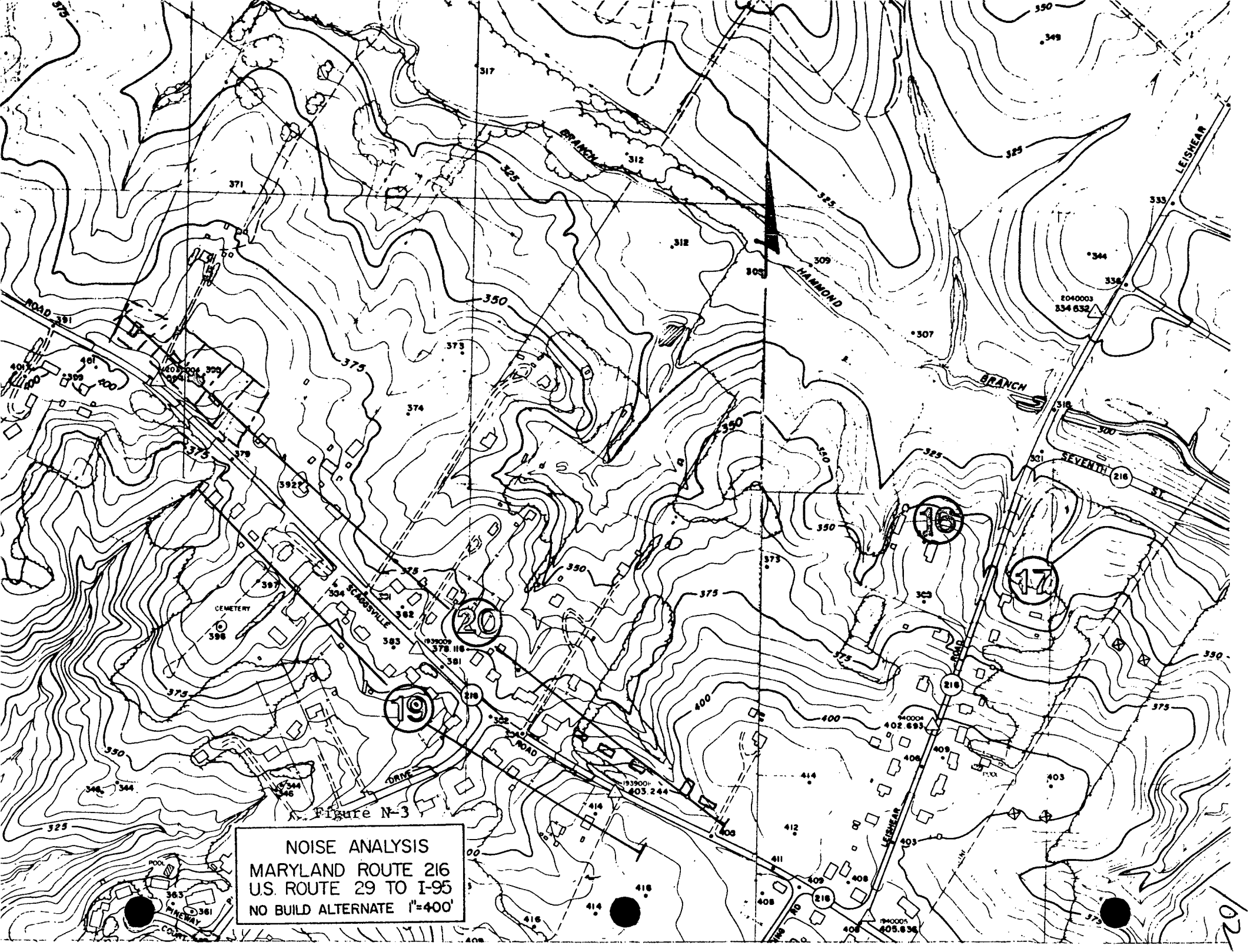


Figure N-3

NOISE ANALYSIS  
 MARYLAND ROUTE 216  
 U.S. ROUTE 29 TO I-95  
 NO BUILD ALTERNATE 1"=400'

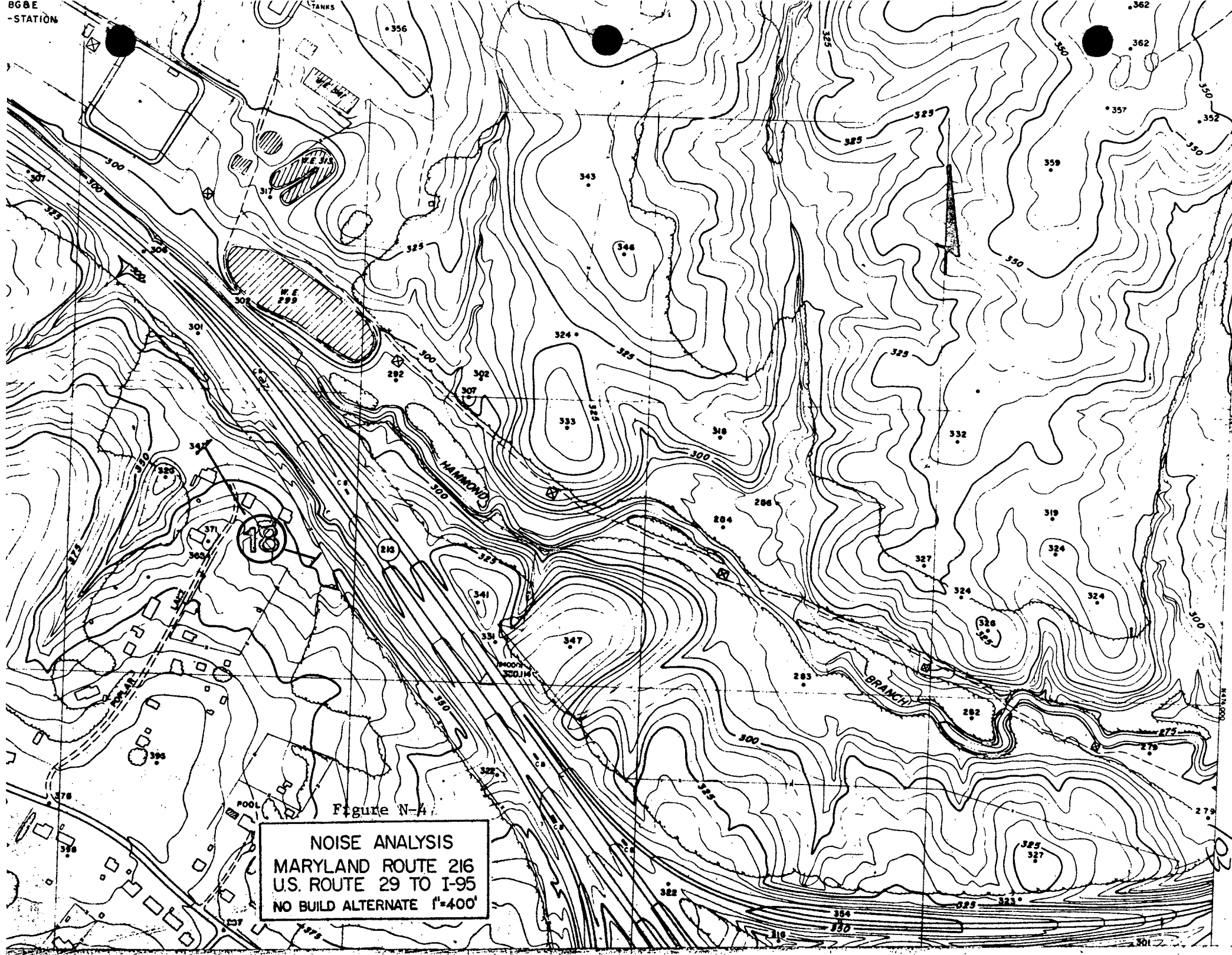
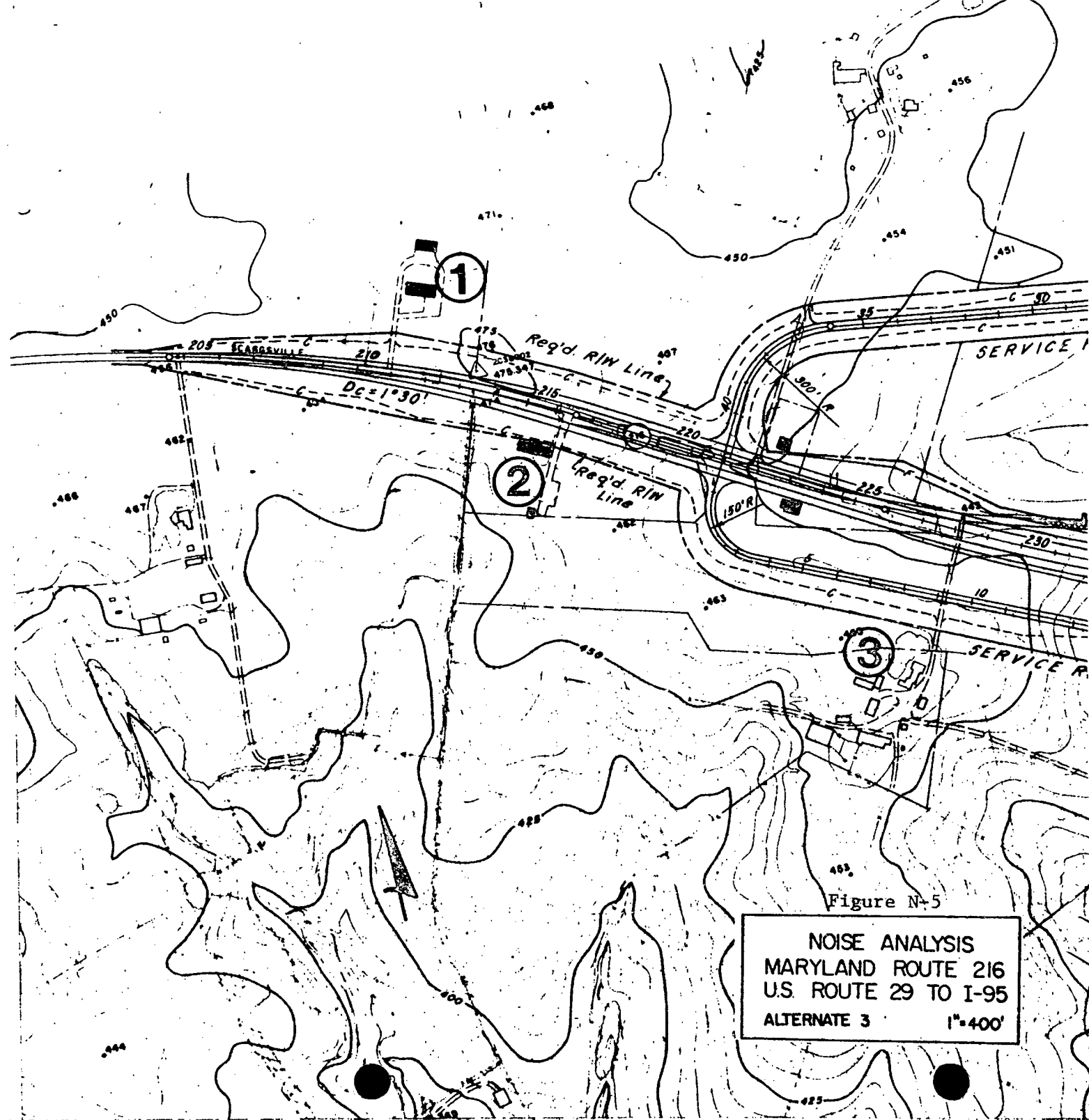


Figure N-4  
**NOISE ANALYSIS**  
MARYLAND ROUTE 216  
U.S. ROUTE 29 TO I-95  
NO BUILD ALTERNATE 1"=400"





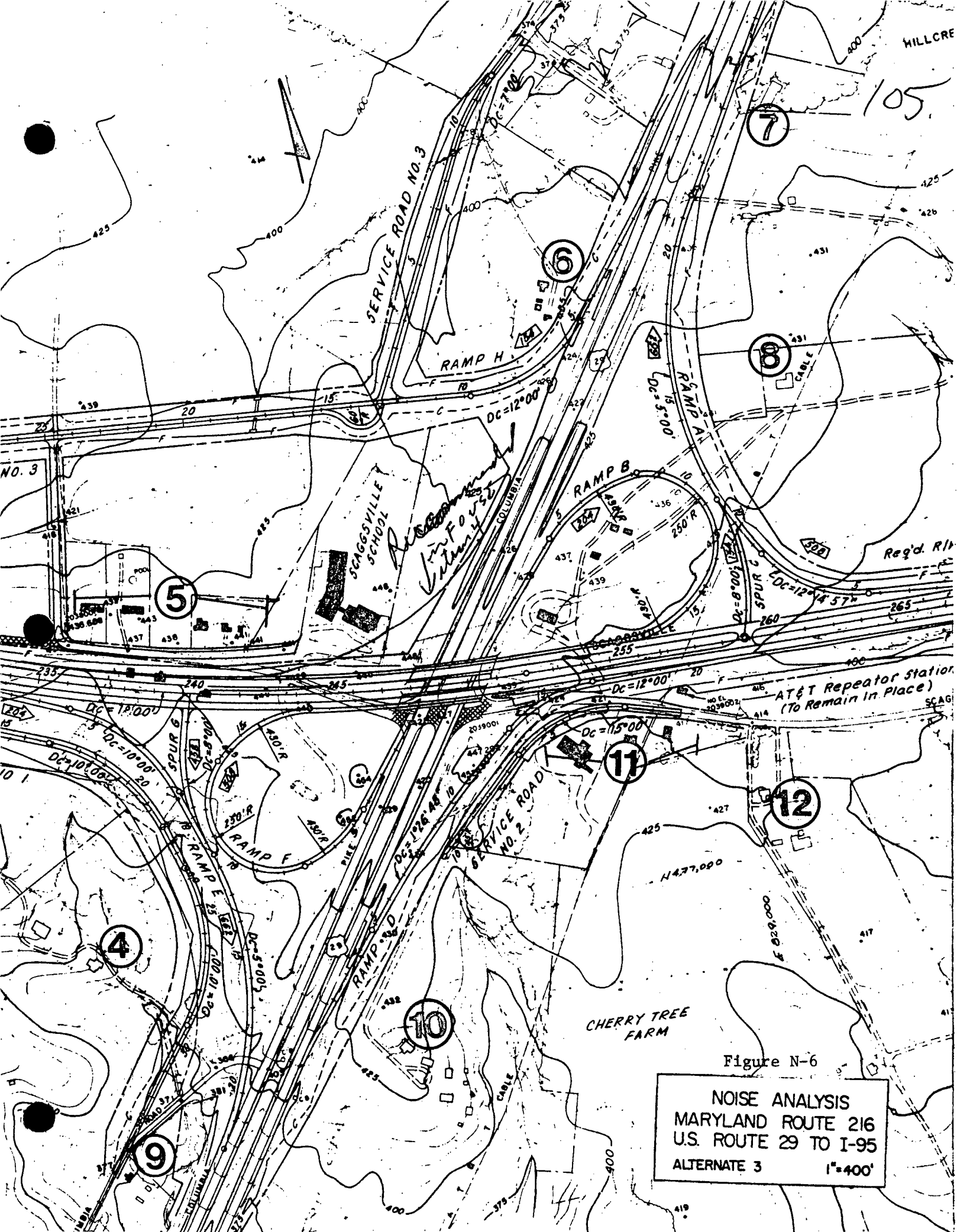
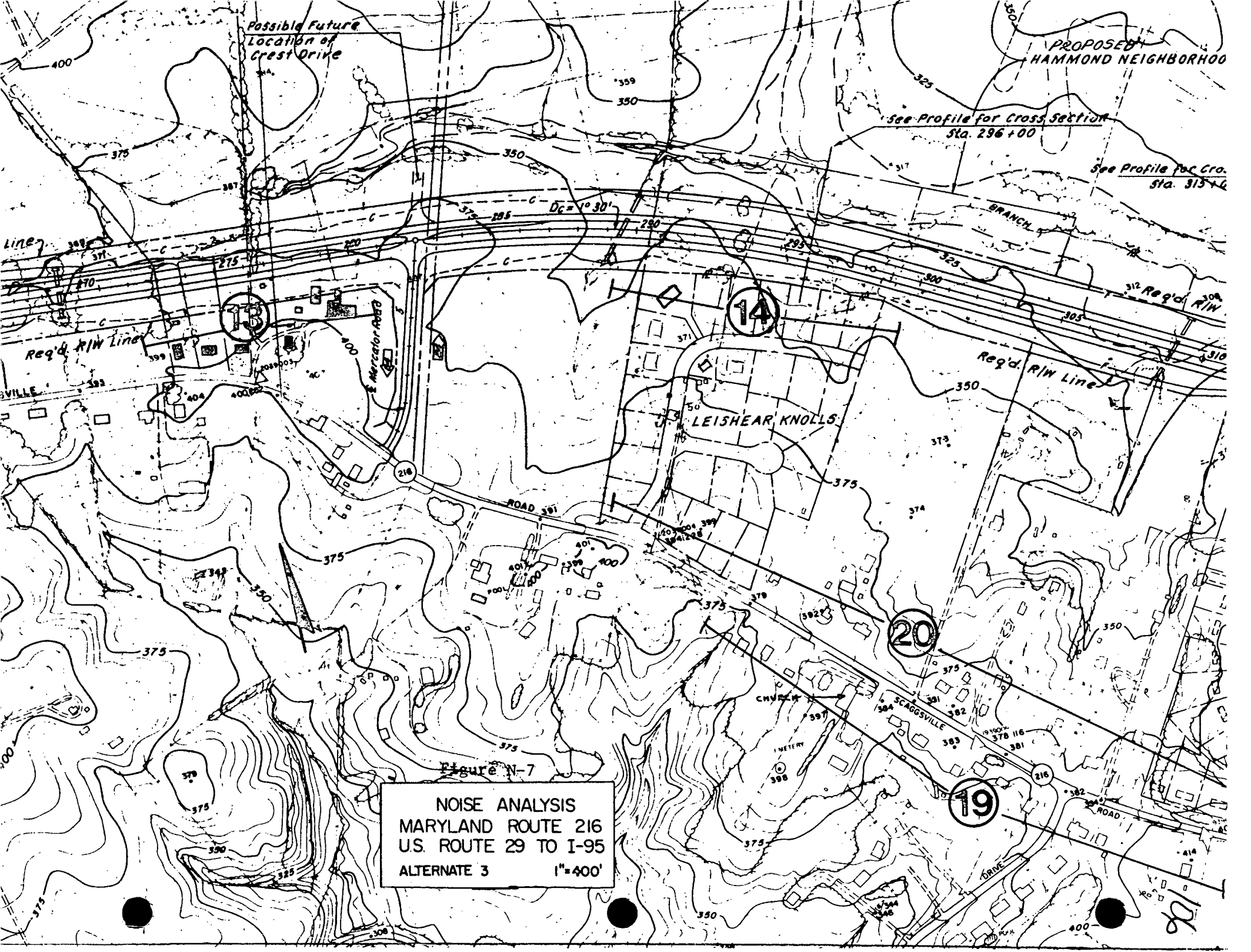


Figure N-6

NOISE ANALYSIS  
 MARYLAND ROUTE 216  
 U.S. ROUTE 29 TO I-95  
 ALTERNATE 3 1"=400'



Possible Future Location of Crest Drive

PROPOSED HAMMOND NEIGHBORHOOD

See Profile for Cross Section Sta. 296+00

See Profile for Cro. Sta. 313+00

$D_c = 10' 30"$

13

14

20

19

LEISHEAR KNOLLS

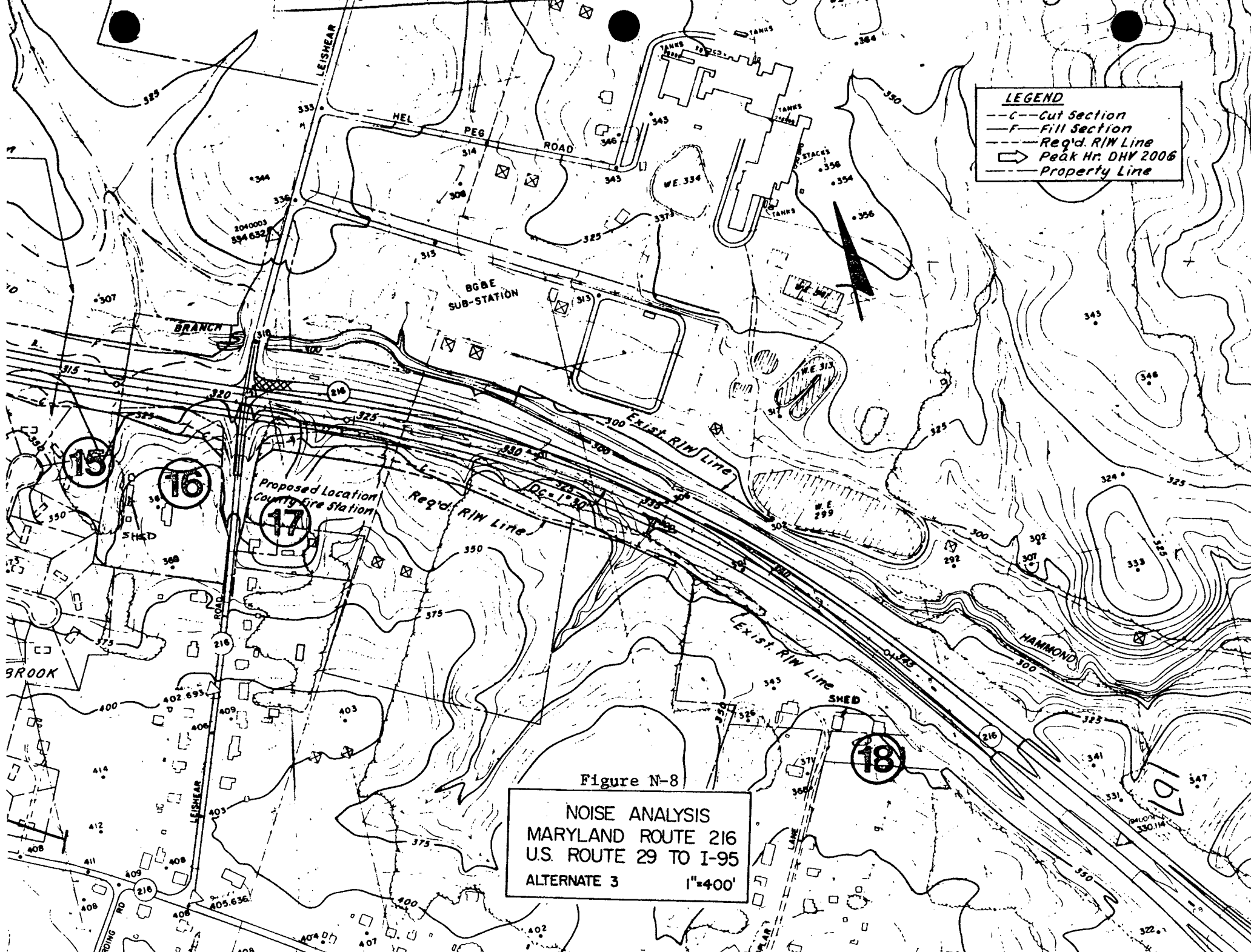
CHURCH

MINISTRY

SCAGSVILLE

Figure N-7

NOISE ANALYSIS  
MARYLAND ROUTE 216  
U.S. ROUTE 29 TO I-95  
ALTERNATE 3 1"=400'



**LEGEND**

- C- Cut Section
- F- Fill Section
- - - Reg'd RIN Line
- Peak Hr. DHV 2006
- - - Property Line

Figure N-8  
**NOISE ANALYSIS**  
 MARYLAND ROUTE 216  
 U.S. ROUTE 29 TO I-95  
 ALTERNATE 3      1"=400'

Proposed Location  
 County Fire Station

15

16

17

18

19

BROOK

HAMMOND

BG&E  
 SUB-STATION

300 Exist RIN Line

Reg'd RIN Line

EXIST. RIN LINE

BRANCH

ROAD

LEISHEAR

SHED

SHED

BRING RD

LEISHEAR

LEISHEAR

BRIDGE

7

7

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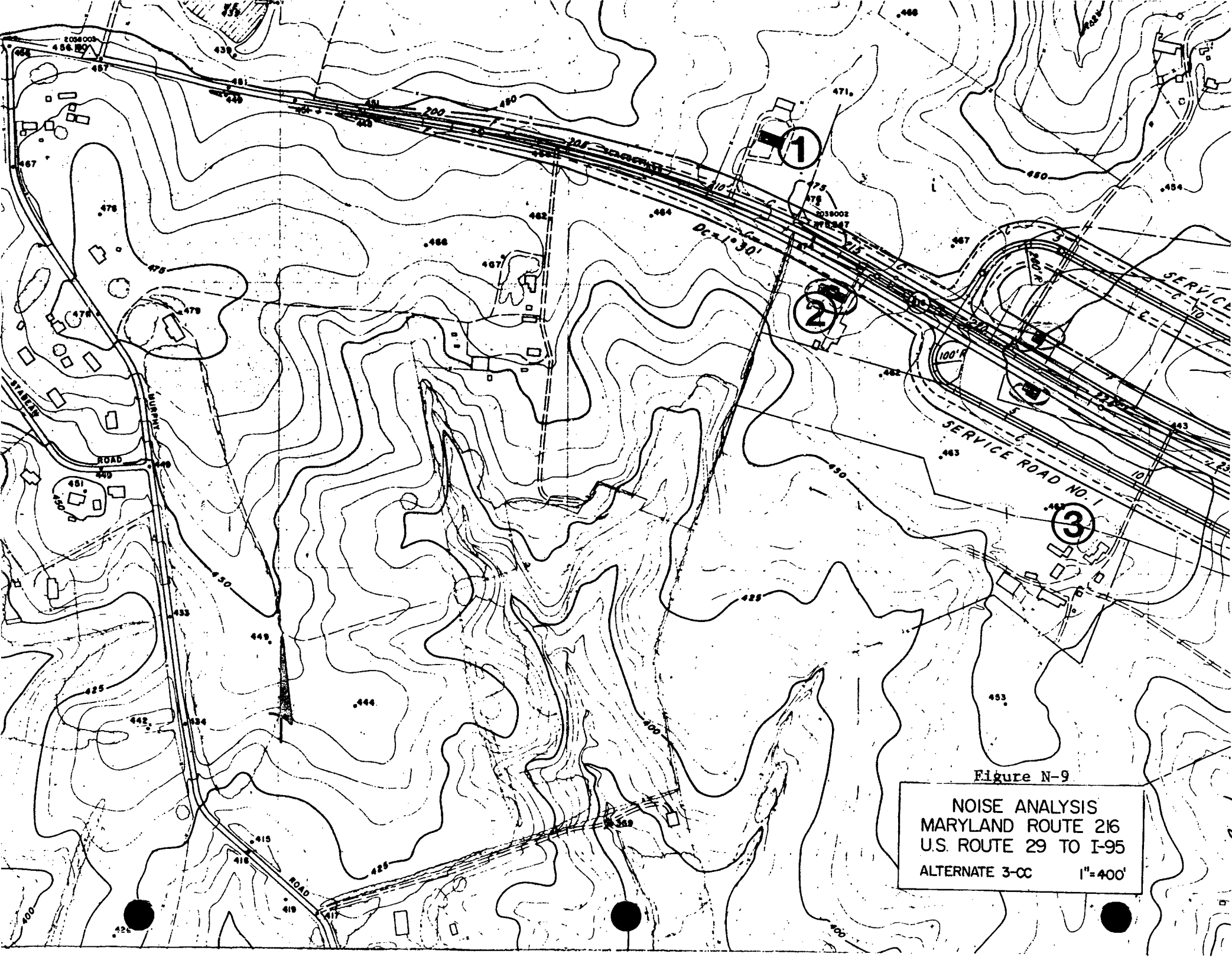


Figure N-9

NOISE ANALYSIS  
MARYLAND ROUTE 216  
U.S. ROUTE 29 TO I-95  
ALTERNATE 3-CC 1"=400'

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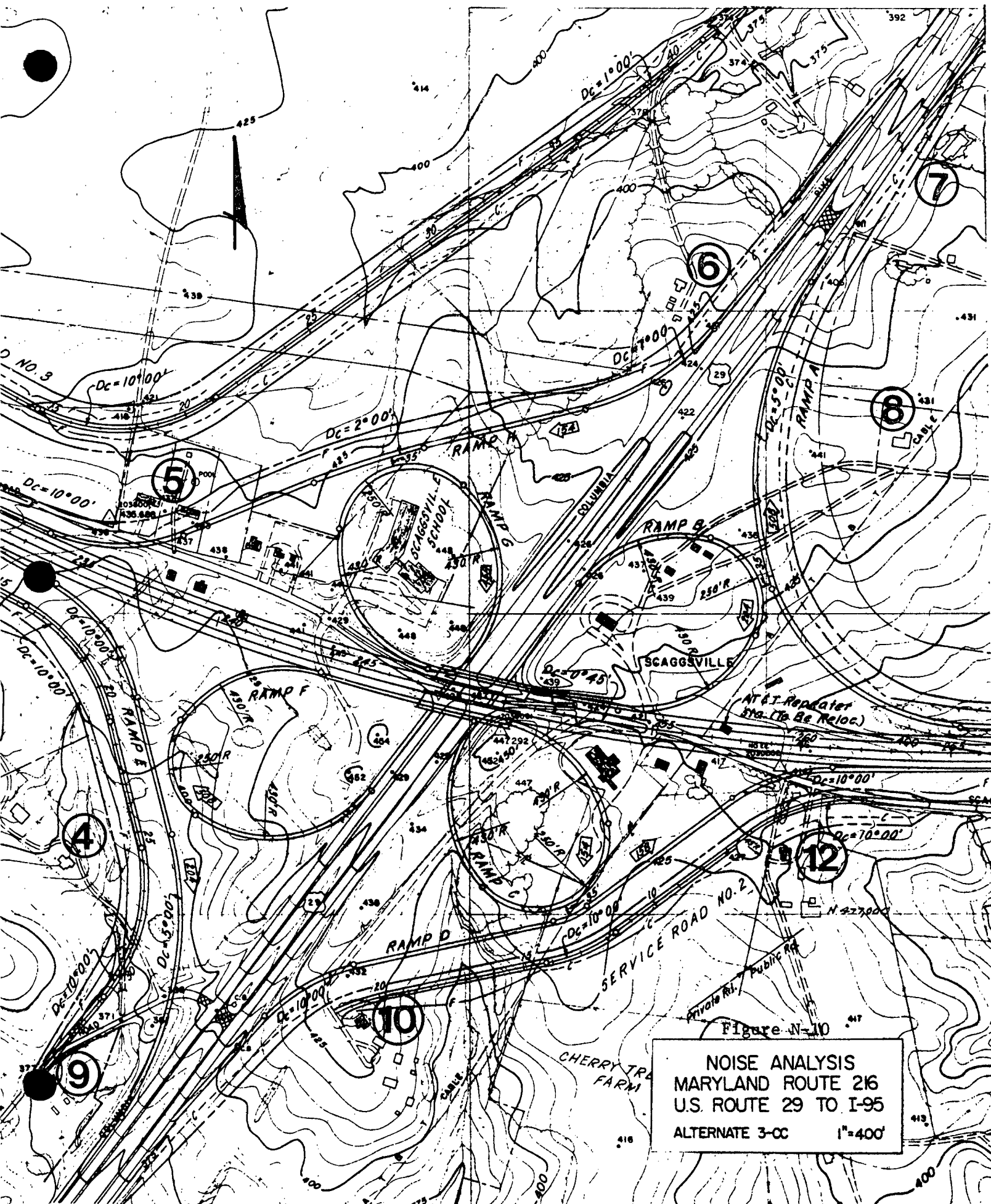


Figure N-10  
NOISE ANALYSIS  
MARYLAND ROUTE 216  
U.S. ROUTE 29 TO I-95  
ALTERNATE 3-0C 1"=400'

IV. ENVIRONMENTAL IMPACTS

A. SOCIO-ECONOMIC AND LAND USE

In general, construction and maintenance of highway facilities will result in alterations to the existing social and economic communities within the immediate project. The Maryland 216 project area is greatly dependent on surrounding communities for its very existence. Not even the most basic needs are available within the immediate area. Consequently, the growing community is greatly dependent upon automobile transportation to meet its needs, from services through recreation. A good road network is essential in providing for safety, comfort and reasonable driving speeds.

This is best accomplished by reducing the number of opposing turning movements, frequent access to and from main routes, slowdowns from trucks or other vehicles negotiating narrow roadways or steep grades, stoppages by school busses making pickups or discharges, especially during hours when schedules conflict with traffic commuting to or from work. Such conflicts become critical if a breakdown occurs and a vehicle responding to an emergency call cannot gain vitally needed access.

The present highway network does not fully satisfy needs, it is geometrically inadequate to do so. With the increases anticipated in traffic volumes due to planned growth of the area, the situation will

///

worsen drastically with severe impacts stemming from more conflicts, more accidents, difficulty of access, slower travel speeds, increased noise and poorer air quality. All of these contribute to a general degradation in life style and make the area less desirable as a community.

The choices which remain are the alternates considered in this report; Alternate 1 (No-Build) and Alternate 3 (construct a new facility). New construction provides four additional lanes of limited access highway with higher operating speeds and less potential for accidents. In addition to providing additional lanes to handle anticipated traffic, it allows for Gorman Road and existing Route 216 to become secondary roads, thereby separating local traffic with slower speeds from fast moving commuter or through traffic.

Other impacts associated with the two choices of action (Build versus No-Build) follow:

1. Population

Construction of a new facility would have the initial impact of displacing some families and businesses as described in Section B, Relocations. However, this temporary loss would be quickly overcome since the provision of a new facility is part of the County Plan whose implementation allows for planned development.

Properties along existing Route 216 and Gorman Road would become more desirable as a result of better access and improvement of traffic related factors. Inducement of truck traffic from existing local roads would alleviate one of the major complaints of respondents at the Alternates Public Meeting.

A No-Build decision, would not require any displacement of property occupants directly. However, the general degradation of life quality which would occur along existing routes would diminish the desirability of living in the area, causing voluntary out-movement and lower property values than could be expected with more desirable conditions.

2. Economy

Construction of a new facility would provide jobs and income for those employed on its construction. Materials and supplies could be purchased locally adding further to the area economy. By facilitating the movement of men and materials, the new facility would be a stimulant to economic development within the general area. Commercial establishments adjacent to the interchanges would, in particular, be encouraged to develop in accordance with county plans. This development would enhance property values and tax receipts. The increased values would more than offset the tax loss to the county through right-of-way acquisition.



The community growth that could be expected would offer further employment and income opportunities. County income tax receipts, as a result, would be additionally increased.

Approximately ten acres of the planned Mercantile area for the proposed 118 acre Cherrytree Farms Shopping Center (See Plate No. 4) would be converted to right of way required for highway improvements to Alternate 3. Access to Cherrytree would be indirect, being available via the proposed Mercator Road about 1/2 mile east of U.S. Route 29, thereby discouraging some potential customers. However, the overall improvement to the highway network coupled with anticipated increases in residential population would increase the marketing potential for Cherrytree Farms.

The Curio Shop at the intersection of Scaggsville and Leishear Roads, the gas station/convenience store on the south side of Route 216 and the nearby transmission repair shop may benefit from construction of a new highway facility. Heavy traffic along Route 216, including trucks, makes access to off-road sites difficult at times. Road users are, as a result, discouraged from using these services. Following construction, access for local traffic will be greatly improved and these businesses would also benefit from the increase in population within the project area.

If the project were not built there would be no gain of employment and income opportunities derived from construction activities. A no-build alternate would impede the achievement of complete residential development with potential property value and tax dollar increases lost. Traffic congestion and the increased number of accidents would cause further economic losses. There are no apparent positive net economic impacts that could be expected to result from the no-build option.

3. Planning and Land Use

The project area is largely designated to be developed as medium and low density residential use with limited commercial sites. The county has extended sanitary sewer service to the east of Route 29 and across Route 29 to the properties immediately adjacent in accordance with the County's 10 year plan. Accordingly, residential development has been greatly facilitated and is moving forward at a rapid rate with highway relocation considered as an element of the county development plan. Developers have designed their subdivisions in accordance with sewer improvements and the expected highway relocation.

If a no-build highway alternate is adopted, the remaining undeveloped land area in the project area will be less desirable for development because of congestion and other traffic related impacts which would result from an overloaded local highway

network. While it is not possible to definitively declare that development would be completely halted under the no-build condition, it is clear that residential development would proceed at a markedly slower pace. The no-build alternate, therefore, is not consistent with Howard County's General Plan for development.

The new facility conforms to planned development of the area. The rural and agricultural character of the community is designed to be converted, in time, to one of residential character.

Approximately 30 acres of land presently used for agricultural purposes, including grazing, will be required for highway use, mostly at the proposed interchange with U.S. Route 29. This land is designated, in the County Plan, for low density development. The new facility is only one of the development elements that is intended to achieve this land use and character transformation. Residential development would continue with or without the new facility as a part of the comprehensive development features, however, the new facility would perform a critical function in satisfying the community's and the region's need for safe and convenient transportation and act as a catalyst to speed its growth.

4. Historical/Archeological

There are no known sites of historical, cultural or archeological significance within the project area. Therefore, there would be no impacts associated with either alternate.

The State Highway Administration maintains a policy of halting excavation whenever a previously unknown site is discovered. Construction is permitted to proceed after all appropriate salvage and/or data collection has been completed.

5. Cultural/Religious

Adoption of Alternate 1 would greatly impede reasonable access to the project area's educational and religious facilities and the public offices located outside the area as anticipated future traffic volumes increase. School bus transfers of local students are interspersed with morning and evening commuter traffic as well as with trucks, causing a serious safety condition. Gorman Road, in particular, has an accident experience well in excess of its intended use. Future increases in local and through traffic would adversely affect the safe use of The Emmanuel United Methodist Church for services and other activities. The project area acts as a regional highway link between the residents outside of the area and community facilities also located outside of the

area. Future increases in traffic along the Maryland 216/  
Gorman Road highway grid would make travel more difficult and  
diminish interest in visiting these facilities.

6. Community Facilities and Services

The proposed new highway facility removes through traffic  
from existing Route 216 and Gorman Road. Access to the  
internal community facilities - schools and churches - would  
be enhanced and the safety of the participants would be sub-  
stantially improved. There would be no adverse impacts on  
community services and facilities resulting from the new  
facility.

Since all health and public safety facilities are located  
outside of the immediate area, residents, and those living  
outside but using the existing area highways, would find it  
increasingly more difficult to travel to these facilities if a  
new highway were not constructed. Swift response time is  
particularly critical in emergency situations.

A new facility would expedite the movement of traffic to  
the health related facilities, thus improving response in  
emergency situations. There would be no adverse impacts on  
health facilities from the construction of the new facility.  
Implementation of this project would result in a vastly

improved ability for police and fire departments to react to any emergencies. The proposed fire station at Leishear Road would be ideally located for fast response in any direction.

7. Recreation

Right-of-way required for the new facility would not affect any existing recreational facilities. The proposed Hammond Neighborhood Park, which is separated from the new facility by the Hammond Branch, will not be adversely impacted by highway noise (See noise impacts).

A deterioration of safe and convenient access to recreational sites and facilities would be an adverse impact associated with the no-build alternate. The county recreation plans form a part of the overall county development plan. Therefore, any impedence to the use of these existing or planned facilities violates the development desires of the residents.

By removing through traffic from existing roadways, access to recreational sites will be safer and more convenient.

8. Utilities

Under the No-Build Alternate, none of the existing facilities would be affected.

Alternate 3 would require a number of adjustments or relocations to be made:

Chesapeake and Potomac Telephone Company's transmission cable east of U.S. Route 29 and Colonial Pipeline Company's fluid line would require adjustments and protection, both are underground lines. The C and P Telephone repeater station on Route 216 near U.S. Route 29 will require relocation.

9. Community Cohesion and Relationships

A new facility would enhance travel in and through the project area by separating local from through traffic. It would further allow for the County to eventually complete a service road system paralleling major routes such as U.S. 29. These service roads would serve to connect facilities such as Gorman Road with existing Route 216, providing for better interior circulation and access without using major routes such as U.S. 29 intended for high speed, heavy volume flows.

The location of Alternate 3 would not create a barrier because of its location along the south slopes of Hammond Branch, which is a natural deterrant to residential development. At-grade crossings are planned at Mercator Road (part of the service road system) and at Leishear Road.

Good access would facilitate increased participation between the developing areas and established communities of Laurel and Columbia.

B. RELOCATIONS

Construction of Alternate 3, with a full interchange at U.S. Route 29, would cause an initial impact upon the local area by displacement of a number of families and businesses as shown in Table 4, following. It requires acquisition of 7 dwellings (involving 28 persons), the vacant Green Spring Dairy Milk Plant and Offices and the Scaggsville School (scheduled for phase out by Howard County). The school should be vacant by the time acquisition would be required. No active businesses, farms or non-profit organizations appear to be affected.

Alternate 3 does not appear to affect any minority, handicapped or elderly groups. The project area, in general, appears to be in the moderate income category.

References to the Howard County Multiple Listing Service (Greater Baltimore) and field surveys of the area, indicate that there appears to be comparable decent, safe and sanitary housing into which the displaced families could relocate. There is every indication that housing will be available when displacement occurs.

The No-Build Alternate does not require any right-of-way acquisition or displacement of people.



TABLE 4  
DISPLACEMENT CHARACTERISTICS  
ALTERNATIVE 3

<u>Type</u>	<u>Number</u>	<u>Purchase Value</u>	<u>Number of Persons</u>
Dwelling Units	7	4 @ \$ 70,000 1 @ \$ 55,000 2 @ \$ 50,000	28
Public (school)*	1	\$100,000	N/A
Commercial	1	\$ 85,000	N/A
Outbuildings	-	\$ 20,000	N/A
Relocation Assistance**		\$140,000	28
Proximity, shrubbery, fencing		\$ 25,000	-

\*Assessed on value of building, not as a school. County plans to abandon site in 1982.

\*\*A Summary of the Relocation Assistance Program is contained in the Appendix.

Source: Bureau of Relocation Assistance, State Highway Administration.

C. AESTHETICS

The introduction of general construction site activities are temporary aesthetic disturbances. Intrusion of the highway facility into the natural setting is softened by early planning to provide the least obtrusive location. Landscaping and screening with trees, shrubs

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and similar plantings would be of further aid in providing a facility which is well blended with its surroundings.

If a new facility is not constructed, the area along the Hammond Branch would retain most of its present natural character. Elsewhere, development has already altered the aesthetic character of the community and the no-build would neither reverse this trend nor markedly improve upon it.

D. AIR QUALITY

In order to predict the microscale carbon dioxide impact of the proposed project, a cross section analysis was performed at two representative sections of the existing Maryland Route 216, Alternate 1, and the proposed relocation Alternate 3, as well as at the intersection of Route 216 with U.S. Route 29 in each Alternate. The years studied were the estimated completion year (1986) and the design year (2006).

Results of the microscale carbon dioxide analysis are presented on the following pages accompanied by maps depicting locations of receptors contained in the tables.

Consistency With the State Implementation Plan

The subject project is located within the Air Quality Control Region. Consistency with the State Implementation Plan has been evaluated considering (1) relationship to regional air quality goals, (2) microscale carbon monoxide levels and (3) construction impacts.

1. Relationship to regional air quality goals

The air quality consistency of this project on a regional level is assured in the following ways. First, a National Memorandum of Understanding between U.S. DOT and EPA dated June 14, 1978, formally integrates the transportation and air quality planning processes for transportation projects receiving federal aid highway funds. This Agreement recognizes that the "reduction of air pollution is an important national goal and must be among the highest priorities of the transportation planning process in areas not meeting primary Air Quality Standards." It also provides for extensive input from local and State transportation and air quality agencies and the public. In addition, it calls for the joint administration of the air quality aspects of the urban transportation planning process between U.S. DOT and EPA. This includes the joint review of the following documents and activities to ensure that air quality considerations are adequately addressed:

- 1) the Transportation Plan for the urbanized area,
- 2) the Transportation Improvement Program which identifies projects for implementation,
- 3) the State Implementation Plan/Transportation Control Plan for addressing

attainment with Air Quality Standards, and 4) the review process which "certifies" that adequate transportation and air quality planning is being conducted in these urbanized areas.

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

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

A burden analysis was prepared as a part of the project air quality analysis to allow the comparison of facility-related pollutant emissions of each alternate. This analysis does not address region wide pollutant burden, only that portion of the region encompassing the study area. Alternate 3 would result in slightly higher burden than the no-build, due primarily to higher corridor traffic. This difference is not significant in terms of regional air quality.

Regional consistency is addressed in the first part of this consistency determination.

2. Microscale Carbon Monoxide Levels

The project Air Quality Analysis assessed the microscale carbon monoxide impact of the facility. This analysis determined that no violations of the one and eight-hour Ambient Air Quality Standards for carbon monoxide will occur with the project alternates.

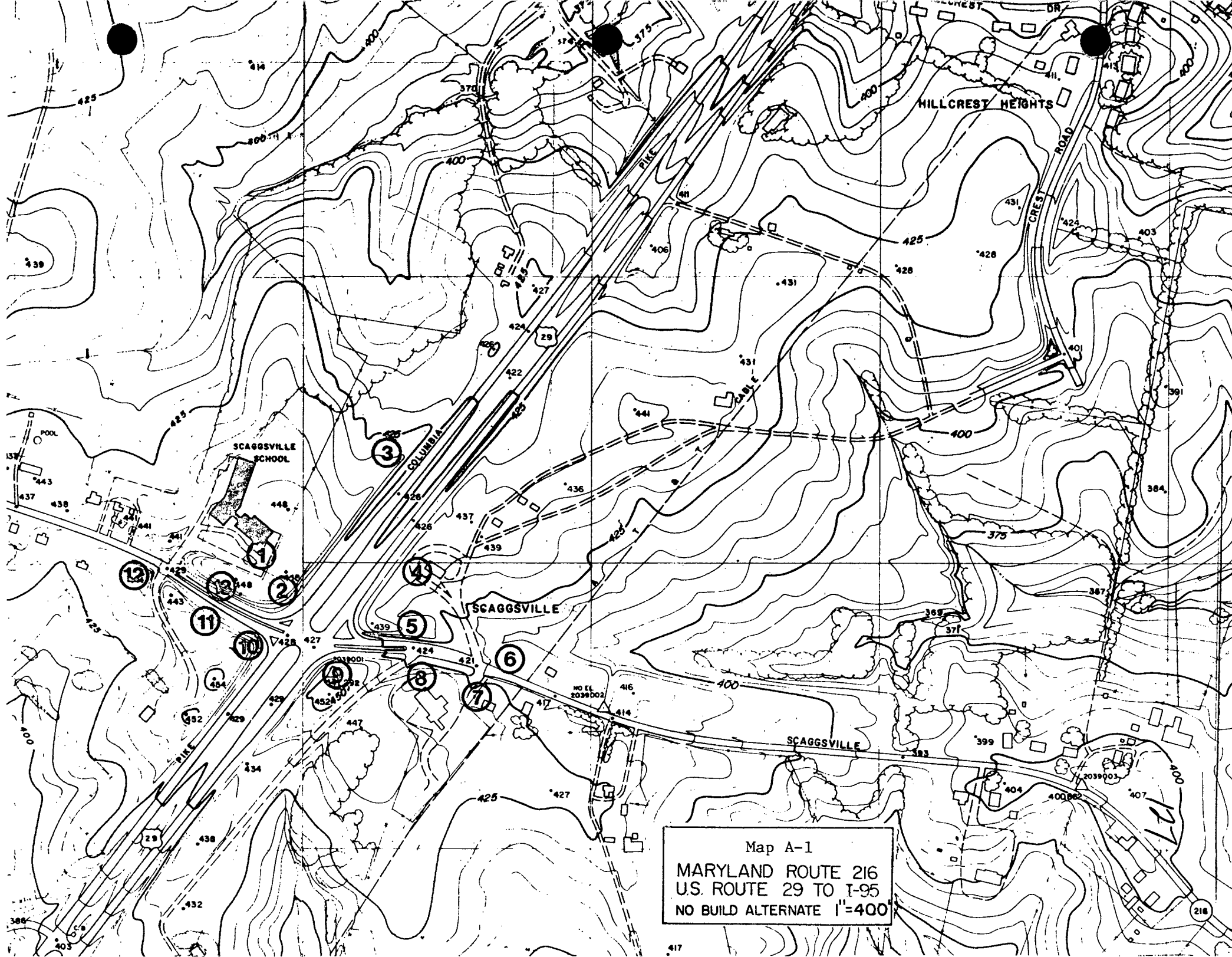
3. Construction Impacts

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

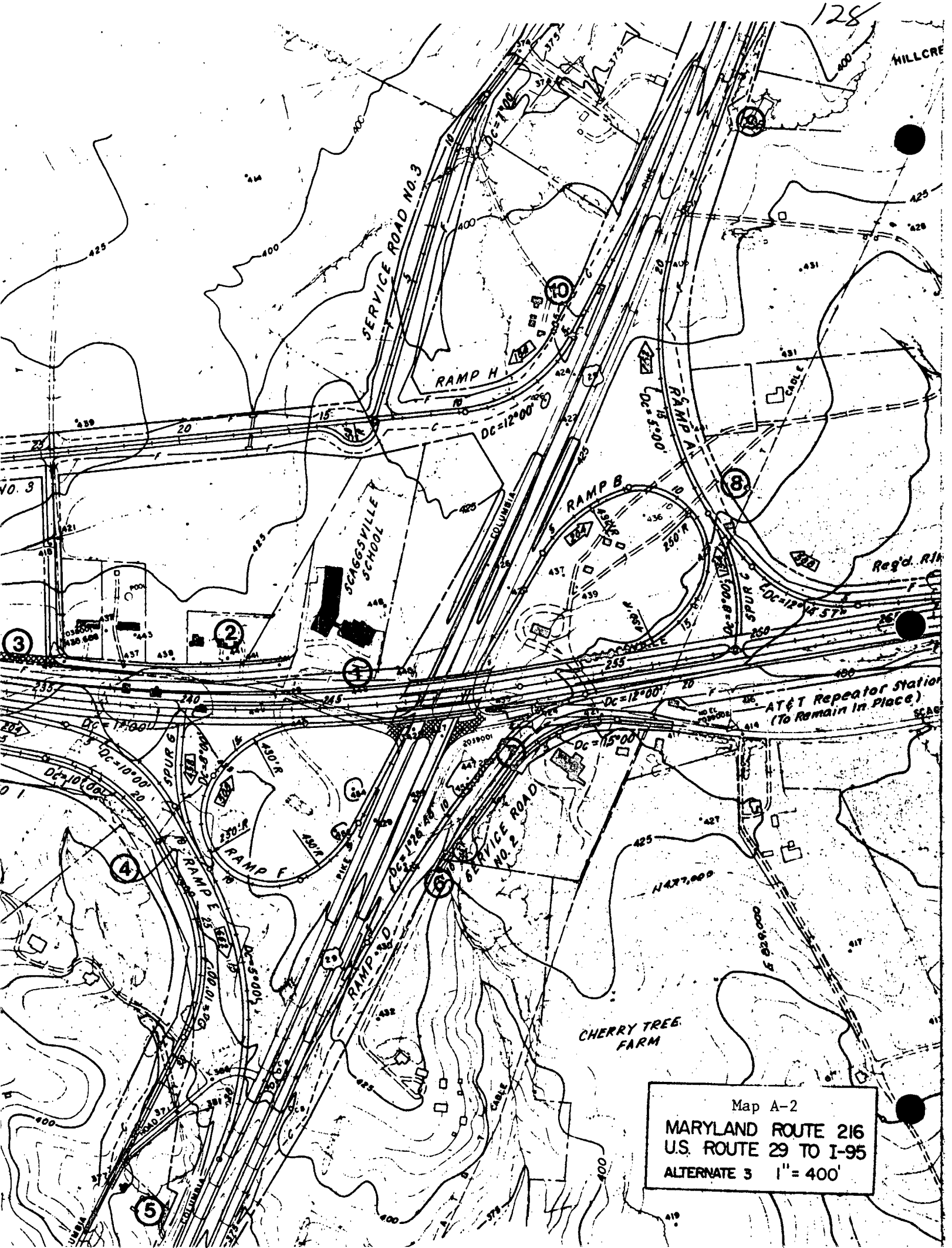
The Maryland Bureau of Air Quality Control was consulted to determine the adequacy of the Specifications in terms of satisfying the requirements of the Regulations Governing the Control of Air Pollution in the State of Maryland. The Maryland Bureau of Air Quality Control found that the specifications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

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

Each of the aforementioned elements of project consistency with State Implementation Plan have been evaluated as noted and through this evaluation the determination has been made that this project is consistent with the State Implementation Plan for Air Quality.



Map A-1  
MARYLAND ROUTE 216  
U.S. ROUTE 29 TO I-95  
NO BUILD ALTERNATE 1"=400'



Map A-2  
MARYLAND ROUTE 216  
U.S. ROUTE 29 TO I-95  
ALTERNATE 3 1" = 400'





TABLE 1  
Carbon Monoxide  
mg/m<sup>3</sup>  
Build

Maryland Route 216 (I-95 to Leishear Road)

Distance From Pavement	1986		2006	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
35m ROW	3.1	1.4	2.9	1.3
40m	3.0	1.3	2.7	1.2
45m	2.9	1.3	2.6	1.1
50m	2.7	1.2	2.5	1.0
100m	1.7	0.6	1.7	0.6

Relocated Maryland Route 216 (U.S. Route 29 to Crest Drive)

Distance From Pavement	1986		2006	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
35m ROW	3.1	1.4	2.8	1.2
40m	3.0	1.3	2.7	1.2
45m	2.8	1.2	2.6	1.1
50m	2.7	1.2	2.5	1.0
100m	1.7	0.6	1.7	0.6

NOTE: Concentrations Include Background Levels

National Ambient Air Quality Standards for CO, which are not to be exceeded more than once a year, are:

40 mg/m<sup>3</sup> - 8 hour  
10 mg/m<sup>3</sup> - 1 hour

TABLE 2  
Carbon Monoxide  
mg/m<sup>3</sup>  
No-Build

Maryland Route 216 (I-95 to Leishear Road)

Distance From Pavement	1986		2006	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
3.4m ROW	8.6	4.7	6.1	4.2
5.0m	8.2	4.5	5.8	4.0
10.0m	7.0	3.7	4.8	3.4
20.0m	5.7	3.0	3.6	2.7
50.0m	3.9	1.9	2.1	1.8

Maryland Route 216 (U.S. Route 29 to Crest Drive)

Distance From Pavement	1986		2006	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
3.4m ROW	3.6	1.7	3.8	2.8
5.0m	3.5	1.6	3.7	2.7
10.0m	3.2	1.5	3.3	1.5
20.0m	2.8	1.2	2.9	1.3
50.0m	2.3	0.9	2.3	0.9

NOTE: Concentrations Include Background Levels

TABLE 3  
Carbon Monoxide  
mg/m<sup>3</sup>

Maryland Route 216 and Route 29 Intersection  
No-Build

Receptor	1986		2006	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
1	8.3	4.5	6.9	3.7
2	12.1	6.8	10.1	5.6
3	5.3	2.7	5.1	2.6
4	8.1	4.4	8.2	4.5
5	10.4	5.8	10.5	5.8
6	5.2	2.7	7.0	3.7
7	5.3	2.7	4.7	2.4
8	5.4	2.8	5.3	2.7
9	14.6	8.3	12.1	6.8
10	14.3	8.1	12.9	7.3
11	8.6	4.7	6.9	3.7
12	4.1	2.0	4.7	2.4
13	11.8	6.6	14.3	8.1

NOTE: Concentrations Include Background Levels  
: Receptor locations correspond to those shown on Maps 1, 2, and 3.

TABLE 4  
Carbon Monoxide  
mg/m<sup>3</sup>

Build  
Alternate 3

Receptor	1986		2006	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
1	5.8	3.0	5.3	2.7
2	3.8	1.8	3.5	1.6
3	3.5	1.6	3.2	1.5
4	3.7	1.8	3.4	1.6
5	5.4	2.8	5.3	2.7
6	4.6	2.3	4.5	2.2
7	4.5	2.2	4.2	2.1
8	3.7	1.8	3.5	1.6
9	5.1	2.6	5.0	2.5
10	5.4	2.8	5.3	2.7

Build  
Alternate 3C (U.S. 29 Interchange)

Receptor	1986		2006	
	One-Hour	Eight-Hour	One-Hour	Eight-Hour
1	5.7	3.0	5.7	3.0
2	3.2	1.5	3.2	1.5
3	3.3	1.5	3.2	1.4
4	6.6	3.5	6.6	3.5
5	5.8	3.0	5.8	3.0
6	3.1	1.4	3.1	1.4
7	4.5	2.2	4.1	2.0
8	3.6	1.7	3.5	1.7
9	6.4	3.4	6.4	3.4

NOTE: Concentrations Include Background Levels  
: Receptor locations correspond to those shown on Maps 1, 2, and 3.

TABLE 5

Pollutant Burden Analysis  
kg/Day

No-Build

	1986	2006
Total Hydrocarbons	82.0	74.0
Carbon Monoxide	792.0	740.0
Nitrogen Oxides	199.0	248.0

Build

	1986	2006
Total Hydrocarbons	89.0	71.0
Carbon Monoxide	865.0	745.0
Nitrogen Oxides	257.0	295.0

E. WATER RESOURCES

There would be no impacts on the water resources of the project area associated with the No-Build Alternate.

If Alternate 3 were constructed, no adverse impacts would occur to the Patuxent River or any of its tributaries.

No significant or permanent impacts upon the Hammond Branch are expected if Alternate 3 were constructed. The highway would parallel Hammond Branch and the Unnamed Tributary between U.S. Route 29 and Leishear Road as shown on Plates No. 2 and No. 14.

Streams carry sediment under natural conditions as part of the perpetual erosion process. Thus, the natural sedimentation process can not be considered an adverse impact. Soils in the project area are susceptible to erosion, especially those of the Hatboro silt. The proposed Alternate 3 would be constructed in this silt along the Hammond Branch.

In order to protect against the potential which exists for physically contaminating the streams with siltation, protective measures would be taken to prevent soil from washing into the stream in accordance with the Maryland guideline "Standards and Specification for Soil Erosion and Sediment Control in Developing Areas" and the State Highway Administration's "Specifications for Materials, Highways, Bridges and Incidental Structures" along with supplements thereto.

Some of the most effective measures to prevent sedimentation are:

1. Design of slopes consistent with soil limitations.
2. Proper staging of construction activities to permanently stabilize ditches at the top of cuts and/or the toe of slopes prior to commencement of excavation or placement of embankment.
3. Reduction of the area and duration of unprotected soil exposure.
4. Immediate and permanent stabilization of disturbed areas and slopes by seeding and mulching.
5. Well timed placement of sediment traps, runoff retardation works, temporary slope drains, etc.

Less serious problems are introduced by runoff of dust control oils and salts and washing-out of concrete trucks in the stream. Since no appreciable amount of chlorides exists in the Hammond Branch at present, concentrations would not be raised to harmful levels by such runoff. However, they should be discouraged through good housekeeping practices.

The Maryland-Virginia Milk Producers Cooperative, use the Hammond Branch as a source of process and cooling water, drawing water through two intake pumps located just east of Leishear Road. Four wells provide substitute water for those periods when the stream is muddied from storm runoff. Therefore, siltation of the Hammond Branch is not critical to the Co-op's water supply as long as it is not sustained for long periods of time.



Alternate 3 is located along the south side of the stream, paralleling the slopes. It encroaches on the 100 year flood plain as depicted on Plate No. 14. The location of Alternate 3 is the only feasible corridor for relocating existing Maryland Route 216. This very narrow corridor is tightly controlled by the position of the proposed interchange with U.S. Route 29 and the existing I-95 interchange as well as by the influences of numerous cultural features previously discussed in Section II.D. of this document.

Although longitudinal encroachment upon the 100 year flood plain cannot be avoided, careful geometric positioning has been employed to control the extent of lateral encroachment in order to minimize displacement of the flood plain while simultaneously protecting against adverse impacts to those properties south of Alternate 3. The broad but flat area on the south side of Hammond Branch, preempted by Alternate 3, can easily be accommodated on the north side of the stream where the banks are steeper and the displacement area will be minimal and non-disruptive to planned facilities.

Sliding the alignment of Alternate 3 southward to further minimize flood plain encroachment would involve acquisition of at least a portion (some buildings) on 20 homesites: 10 in proposed Hammond Hills subdivision, 7 in Leishear Knolls and 3 in Saybrook. In order to totally avoid encroachment on the flood plain an additional 6 existing residential properties would be affected by acquisition in Leishear Knolls and 3 additional homesites in the proposed Hammond Hills subdivision, thereby completely disrupting these developments.

As a result of preliminary conceptual design studies, it has been determined that the encroachment of Alternate 3 upon the Hammond Branch flood plain is not significant. It would not entail risks to human activity, would not support base flood plain development and would not have adverse impacts on flood plain values.

Highway construction would act as a barrier to the overland flow of drainage to the Hammond Branch. However, this flow would be intercepted by swales and ditches and piped at controlled rates to the stream.

A waterway construction permit will be required for Alternate 3 because of the filling for road slopes necessary within the flood plain of the Hammond Branch.

Alternate 3 would have no significant adverse impacts on either the quality or quantity of ground water in the project study area.

F. TERRESTRIAL ECOSYSTEM

These would be no impacts on the terrestrial ecosystem of the project area if Alternate 1, "No-Build", were adopted.

Direct removal of vegetation would occur along the highway corridor if Alternate 3 were constructed. In the areas from U.S. 29 westward and Leishear Road eastward the removal of vegetation would be minimal. But in the section from U.S. 29 to Leishear Road, 45 acres of land would be affected, including 26 acres of agricultural land. The total amount of vegetation removal by community type for the entire project under Alternate 3 is listed below.

Woodland	14 acres
Brushland	40
Open Field	76
Cropland	<u>10</u>

TOTAL 140 Acres

Construction of Alternate 3 would require substantial embankment material, not available within the project limits, to be obtained from other sites beyond the project area. Material is usually obtained from areas where the removal of vegetation would be minimal; borrowing soil from open fields and brushlands with small trees, as opposed to woodlands and brushlands with more mature growth. Consequently, large areas of open fields and brushlands may be cleared as a result of the construction of Alternate 3. The impacts to terrestrial plant communities and wildlife could range from minimal to very significant depending upon the types of communities affected and their sizes. However, this displacement would last only until the revegetation occurs.

The impacts on wildlife and other fauna from the construction of the proposed Alternate 3 would be temporary. Presence of suitable habitat adjacent to the proposed alignment should partially mitigate the loss of food and cover. Displaced animals would seek out adjacent habitats. There would be no adverse effects on the stability of various plant communities on an area-wide scale. It is expected that there would be no harm to animal migration patterns or breeding in the study area.

There are no threatened or endangered species nor any unique ecosystems, habitat types, or scientifically rare communities in the study area. Therefore, there would be no impacts.

G. NOISE

Noise impacts are quantified by the relationship between ambient noise levels, design noise levels and predicted noise levels and are expressed in terms of an L<sub>10</sub> noise level, which is a noise level exceeded 10% of a given time period. It is expressed in decibels, or dBA. Impact assessment is also based on the amount of change in the L<sub>10</sub> noise levels from ambient levels. The amount of change is assessed as follows:

<u>L<sub>10</sub> Change over Ambient</u>	<u>Degree of Impact</u>
Decrease from Ambient	Positive
0-5 dBA Increase	Negligible
6-10 dBA Increase	Minor
11-15 dBA Increase	Significant
More than 15 dBA Increase	Severe

When L<sub>10</sub> noise levels exceed design criteria or increase by 10 dBA or more, noise abatement measures are considered to minimize impacts.

Table I summarizes noise impacts for Alternate 1 (No-build) and Alternate 3, construction on new location, and compares effects the interchanges depicted on Plates 5 and 6 of this document.

Table II presents the design noise levels established by Federal-Aid Highway Program Manual 7-7-3 for various land use activities.

Table III compares predicted noise levels against ambient levels at the exteriors of the 20 noise sensitive areas depicted in the previous chapter.

TABLE I  
SUMMARY OF NOISE IMPACTS

ALTERNATE	No Build	3	3-cc
NO. OF NOISE SENSITIVE AREAS	18	20	20
Section 4f Areas	Residences	54	34 (includes 6 undeveloped properties)
	Schools	None	None
	Churches	1	0
	Other (commercial)	2	2
	Historic	None	None
	Parks	None	None
	NO. OF VIOLATIONS OF DESIGN NOISE LEVELS	1	1
NO. OF SIGNIFICANT NOISE LEVEL INCREASES (11-15dBA)	3	4	4
NO. OF SEVERE NOISE LEVEL INCREASES (>15dBA)	0	2	2
TYPE OF ALTERNATE ACCESS CONTROL	Uncontrolled	Partially Controlled	Partially Controlled

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TABLE II

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Design Noise Level/Activity Relationship  
(from FHFM 7.7.3)

Design Noise Levels - dBA

<u>Leq (h)</u> <sup>1</sup>	<u>L10(h)</u> <sup>2</sup>	<u>Description of Activity Category</u>
57 (Exterior)	60 (Exterior)	Tracts of land in 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. Such areas could include amphitheaters, particular parks or portions of parks, open spaces, or historic districts which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, and parks which are not included in Category A and residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.
72 (Exterior)	75 (Exterior)	Developed lands, properties or activities not included in Categories A or B above.
---	---	For requirements on undeveloped lands see paragraphs 11a and c. <sup>3</sup>
52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

<sup>1</sup>Leq(h) - The equivalent steady state sound level which would contain the same acoustic energy as the time-varying sound level for a period of one hour.

<sup>2</sup>L<sub>10</sub>(h) - The sound level that is exceeded 10 percent of a one hour period.

<sup>3</sup>FHFM 7.7.3, Section II

NOISE ABATEMENT MEASURES FOR LANDS WHICH ARE UNDEVELOPED ON THE DATE OF PUBLIC KNOWLEDGE OF THE PROPOSED HIGHWAY PROJECT.

- a. Noise abatement measures are not required for lands which are undeveloped on the date of public knowledge of the proposed highway project (except as provided in paragraph 11b).
- b. For lands which are undeveloped on the date of public knowledge of the highway project, the highway agency should treat the activity or land use as developed land in the following situations:
  - (1) the development was planned, designed, and programmed before the highway studies and there is firm evidence that the development has been only temporarily delayed, or
  - (2) the development is planned, designed, and programmed during the highway project planning and design; there is a very high probability of the development being constructed; and the developer has considered the noise impacts to the extent reasonable and practicable.
- c. A highway agency may request Federal-aid participation in the cost of providing noise abatement measures for undeveloped lands along Type IA and IB projects when the noise analysis demonstrates a need in the following situations:
  - (1) development occurs between the date of public knowledge of the proposed highway project and the actual construction of the project, or
  - (2) the probability of development occurring within a few years is very high and a strong case can be made in favor of providing noise abatement measures as part of the highway project based on consideration of need, expected long term benefits to the public interest, and the difficulty and increased cost of later incorporating abatement measures into either the highway or the development.

PROJECT NOISE LEVELS

Maryland Route 216

NSA	DESCRIPTION	AMBIENT L <sub>10</sub>	DESIGN YEAR (2006) L <sub>10</sub>			
			No Build Alt.	Alternate 3	Alternate 3-cc	
1	Residential	49 dBA	56 dBA	60 dBA	60 dBA	significant
2	Residential	56 dBA	60 dBA	65 dBA	65 dBA	minor
3	Residential	50 dBA	51 dBA	56 dBA	56 dBA	minor
4	Residential	53 dBA	61 dBA	63 dBA	63 dBA	minor
5	Residential	61 dBA	60 dBA	60 dBA	59 dBA	+
6	Residential	61 dBA	68 dBA	69 dBA	69 dBA	minor
7	Residential	64 dBA	71 dBA*	71 dBA*	71 dBA*	over
8	Residential	48 dBA	63 dBA	63 dBA	63 dBA	significant
9	Residential	57 dBA	69 dBA	68 dBA	68 dBA	significant
10	Residential	53 dBA	67 dBA	68 dBA	68 dBA	limit.
11	Resid./Comm.	64 dBA	63 dBA	61 dBA	--	+
12	Residential	52 dBA	55 dBA	57 dBA	59 dBA	minor
13	Residential	63 dBA	62 dBA	62 dBA	63 dBA	+
14	Residential	46 dBA	--	62 dBA	62 dBA	sever
15	Residential	46 dBA	--	63 dBA	63 dBA	sever
16	Residential	60 dBA	51 dBA	59 dBA	59 dBA	+
17	Residential	67 dBA	57 dBA	58 dBA	58 dBA	+
18	Residential	61 dBA	62 dBA	64 dBA	64 dBA	negli.
19	Resid./Relig.	66 dBA	62 dBA	55 dBA	55 dBA	+
20	Residential	66 dBA	62 dBA	55 dBA	55 dBA	+

\*Design criteria exceeded (see Table II).



Impacts, both positive and negative would be realized under either of the alternates from traffic generated noise. Positive impacts (projected noise levels lower than ambient), predicted for Alternate 3, will result from the relocation of the traffic source away from the sensitive area. Under alternate 1 (No-build), design year travel speeds would be reduced from present levels, resulting in reduced overall noise levels.

In Alternate 1, three sites (8, 9 and 10) are predicted to experience significant increases (11-15 dBA) over present  $L_{10}$  noise levels with one violation of design criteria (exceeding acceptable levels) occurring at site 7. At these four sites as well as at sites 4 and 6, the dominant traffic noise is from U.S. Route 29, where traffic is expected to triple by the design year without decreases in travel speed. Therefore, increases over present noise levels are predicted as shown in Table II.

Noise abatement measures would not be considered under a no-build alternate.

Positive impacts would occur at seven locations under Alternate 1.

Under Alternate 3, four sites (1, 8, 9 and 10) would experience significant increases over present noise levels with two additional sites (14 and 15) expected to experience severe increases (more than 15 dBA). Predicted noise levels at site 7 would violate design criteria (above acceptable levels). At sites 6 through 10, the dominant noise source is from U.S. Route 29 traffic. Noise from interchange ramps or Route 216 would have no effect on the overall levels in these areas.

Although severe increases in noise levels are predicted at site 14, adjacent to Leishear Knolls, and at site 15, adjacent to Saybrook, neither site will violate design criteria. Mitigating measures at these two locations are limited because of right-of-way restrictions. Use of an earth berm is not feasible for this reason. A wall would not be aesthetically suitable in the rural atmosphere. Landscape plantings, therefore will be considered at these locations and at other sites where barriers are considered impractical (single sites, cost effectiveness, etc.).

Positive impacts occur at seven locations by relocation of the facility farther away from the sensitive noise areas and because of the reduction of total traffic volume as well as truck traffic on Scaggsville and Leishear Road.

Undeveloped Lands

There is a substantial amount of undeveloped land in the study area. The following L<sub>10</sub> noise levels are predicted to occur at the listed distances from the roadway edge. The noise levels ranges reflect changes in traffic speeds and volumes over the length of the alternate.

<u>Distance from Roadway Edge</u>	<u>L<sub>10</sub> (dBA)</u>	
	<u>Alternate 1</u>	<u>Alternate 3</u>
50'	63-70	69-71
100'	59-66	65-67
200'	55-62	61-63
400'	51-58	57-59

It can be seen from the above that the proposed Hammond Neighborhood park would not be impacted by predicted noise levels nor would there be violations of acceptable noise levels.

Coordination

Copies of the complete technical noise report have been sent to the Howard County Office of Zoning and Planning and the Community Development Commission, both of which are located in Ellicott City, to aid in land use planning and development.

H. CONSTRUCTION

There would obviously be no impacts from a No-Build Alternate since no construction would be involved. Only normal maintenance activities are associated with this alternate.

Short term impacts will occur from activities associated with construction of Alternate 3 - noise of construction equipment, dust, visual intrusion, etc. All of these are temporary and sometimes sporadic. Existing Federal and State regulations govern the acceptable levels of noise and fugitive air emissions. Guidelines for mitigating various construction activities including erosion and sedimentation have been issued at all governmental levels. Some examples of mitigating activities have been discussed in the preceding Section E. Others include the proper maintenance of construction equipment, use of muffling devices, etc.

Traffic delays due to construction activities can be expected at the connections with U.S. Route 29 and existing Route 216 west as well as at Leishear Road intersection near the I-95 Interchange. However, these should be of short duration and can be mitigated by judicious scheduling of work activities in off-peak hours. A traffic management plan will be developed during the final design phase addressing detour schemes, scheduling of contractor's proposed work plan phases, traffic control devices, etc. The remainder of the Alternate 3 alignment is on new location where no interference will be caused to existing traffic patterns or flows.

SUMMARY OF IMPACTS

Based on information derived from technical studies for socio-economics, air quality, noise, water resources, terrestrial ecosystems, and upon historical/archaeological factors, it has been determined that the construction of a new facility for Maryland Route 216 would not have a significant impact on the quality of the human or natural environments.

The project would neither divide nor disrupt any established community. Although 7 families are displaced, there is suitable available housing in the area for relocation purposes. The project would have no impact on any minority communities.

Results of the air quality analysis indicate that no violations of the Federal Ambient Air Quality Standards are predicted to occur with either Alternate.

Some significant increases (greater than 10 dBA) in noise levels will be experienced whether a new facility is constructed or a no-build alternate is adopted. However, these will be mitigated somewhat by use of landscape plantings as part of any new construction. Some positive impacts (lowering of noise levels) will also occur under both alternates.

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Construction of Alternate 3 will permanently displace a portion of the Hammond Branch watershed and flood plain. The Maryland State Highway Administration has determined that the encroachment upon the flood plain is not significant. No wetlands are impacted by this project.

The project would result in some loss of wildlife habitat, but the effects would be minimal. No rare or endangered species inhabit the project area.

No known historic sites or archaeological sites would be impacted by the project.

V. COORDINATION

As part of the transportation planning process mandated by the Maryland Action Plan, the public has been kept informed of progress through news releases, a public meeting and issuance of a status report. In December 1977, a public notice announced the initiation of the project planning study. Contacts were made with appropriate Federal, State and Local agencies for their input. Non-governmental contacts were also made at employment centers, chambers of commerce and utility companies, among others, to obtain input to the planning process.

On October 5, 1978, the Alternates Public Meeting was held at the Hammond Elementary and Middle School, 8110 Aladdin Drive, adjacent to the project area, in which a full presentation of three alternates was made to the public. As a result of the opposition expressed at this meeting to Alternate 2, Improvement of the Existing Facility, this alternate was dropped from further consideration.

Coordination will continue through the State Clearinghouse, annual capital program reviews with local elected officials and other similar activities.

A P P E N D I X





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
6TH AND WALNUT STREETS  
PHILADELPHIA, PENNSYLVANIA 19106

AUG 2 1973

Mr. Charles Anderson, Chief  
Bureau of Landscape Architecture  
Maryland State Highway Administration  
2323 West Joppa Road  
Brooklandville, Maryland 21022

Re: Air Quality Analysis, Maryland Route 216, U.S. Route 29 to I-95

Dear Mr. Anderson:

We have reviewed the air quality analysis referenced above, and have several questions concerning that study. Of particular concern to us are the results of the Pollutant Burden Analysis, which indicate that the build alternative will increase total hydrocarbons and nitrogen oxides in 1986, and nitrogen oxides in 2006. Since the proposed project is within a non-attainment area for hydrocarbons and nitrogen oxides, the air quality analysis should include a discussion of the project's impact on Vehicle Miles Travelled, and its consistency with the State Implementation Plan.

In the microscale analysis, we believe that the assumption that all vehicles would be in the hot-stabilized mode requires further explanation.

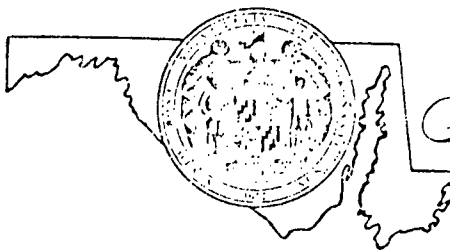
Thank you for the opportunity to review this document before it was included in the EIS for this project. We are more than willing to review any other preliminary sections of the EIS, and believe that early project coordination between EPA and Md DOT would be very helpful. If you have any questions concerning our comments, or if we can be of further assistance, please contact Mr. Eric Johnson of my staff at (215) 597-4388.

Sincerely yours,

*John R. Pomponio*

John R. Pomponio, Chief  
EIS & Wetlands Review Section

154  
State of Maryland



DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
ENVIRONMENTAL HEALTH ADMINISTRATION

P.O. BOX 13387-

201 WEST PRESTON STREET  
BALTIMORE, MARYLAND 21203  
PHONE • 301-383-3245

CHARLES R. BUCK, JR., Sc.D.  
SECRETARY

Max Eisenberg, Ph. D.  
Acting Director

July 16, 1979

Mr. Andy Brooks  
Bureau of Landscape Architecture  
2323 West Joppa Road  
Brooklandville, Maryland 21022

Dear Andy,

RE: Draft Air Analysis, Md. Route 216

We have reviewed the Air Quality Analysis prepared for the above subject project and have found that it is consistent with the Programs' plans and objectives.

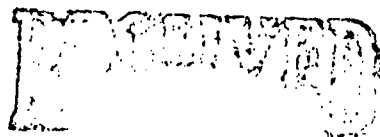
Thank you for the opportunity to review this analysis.

Sincerely yours,

*Bill*

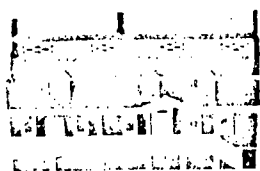
William K. Bonta, Chief  
Division of Program Planning & Analysis  
Air Quality Programs

WKB:bab



JUL 16 1979

G. R. ANDERSON



Maryland Historical Trust

March 17, 1978

20 APR 9 58

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

Re: Maryland Route 216  
U.S. Route 29 to I-95  
HO 306-009-771

Dear Mr. Camponeschi:

As a result of your letter of January 31, 1978, I am sending a map showing the location of the Philip W. Howes House. Our records do not show property historically associated with the farm. Without further research, I would consider it to be their present property lines. After viewing the property from Maryland Route 216, it does not appear that the farm would be eligible for the National Register.

Sincerely,

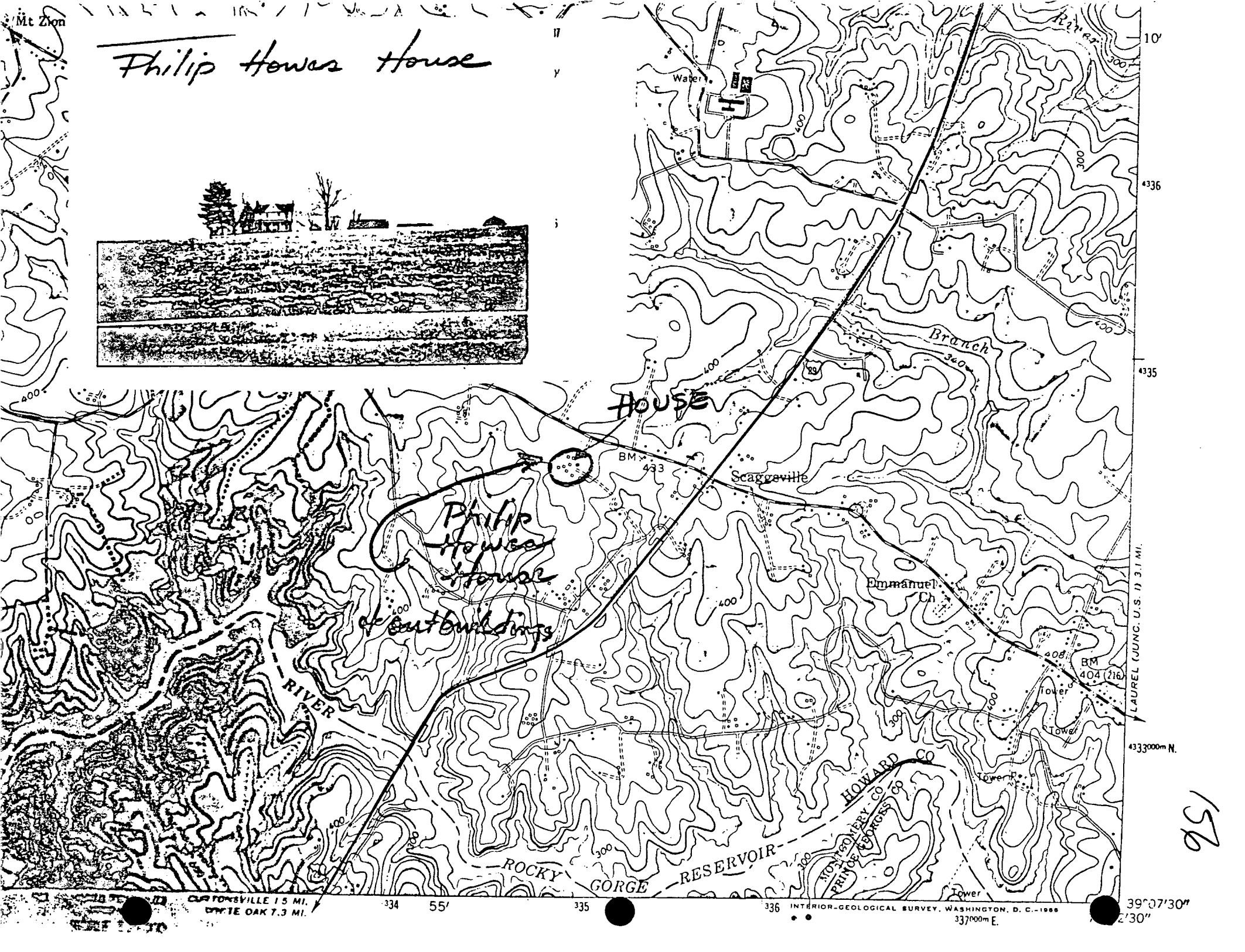
*George J. Andreve*  
George J. Andreve  
Architectural Historian

Enclosure

GJA:do

Mt Zion

# Philip Howes House



CATONSVILLE 15 MI.  
WHITE OAK 7.3 MI.

334 355

335

336

INTERIOR GEOLOGICAL SURVEY, WASHINGTON, D. C., 1966  
337000m E.

39°07'30"  
2'30"

LAUREL (JUNC. U.S.) 3.1 MI.  
433000m N.

156



10 3 51 4 12

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

PROJECT PLANNING

(301) 269-2265

October 3, 1978

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

Re: Contract Ho 306-009-771 MD 216 - US  
Rte 29 to I-95

Attn: Donald G. Honeywell  
Project Manager

Dear Mr. Honeywell:

I would like to acknowledge the receipt of the 100 year floodplain computations for Hammond Branch in the vicinity of the above referenced project.

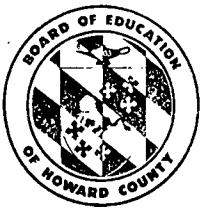
These computations have been reviewed for compliance with the Rules and Regulations of the Administration and meet with our approval. You should be aware, however, this approval is granted for planning purposes only and may be subject to revision. This revision might occur if the Federal Insurance Administration's Flood Insurance Study was updated prior to the building of a new highway facility.

In any event, I trust the tentative approval is satisfactory for your needs at this time. Should you have any questions or require additional information, please do not hesitate to call me.

Very truly yours,

C. Kirk Cover  
Project Engineer

CKC :ls



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THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM

8045 Route 32

~~Columbia~~, Maryland 21044

(301) 531-5744

July 11, 1978

Mr. Edward J. Prall  
Environmental Specialist  
Berger Associates  
101 Erford Road  
Camp Hill, PA 17105

Re: Intersection of MD Route 216 and US Route 29--Scaggsville School

Dear Mr. Prall:

This is to acknowledge your correspondence of June 5, 1978, regarding the referenced matter and conversations we had prior to that time regarding your interest in ascertaining the disposition of the Scaggsville School facility after a new Special Education Center is provided. Our conversations were related to possibilities of use of the facility by agencies other than the Department of Education in that it has been determined that no educational uses of that facility would be envisioned after the Center is completed, probably 1981. The determination of such uses, of course, would enable consideration of design for the interchange to be planned and constructed near or about the school.

This is to advise that we have determined that the County government has no foreseeable use for the Scaggsville School when it is vacated. We have not sought to determine whether or not State agencies might have interests in the facility. It is known, however, that the State law provides for means of disposing of school facilities no longer needed for direct or support functions for the educational program in the County. In view of the fact that it is now known that no County agency has foreseeable uses for this structure, I believe your studies of design considerations for the referenced interchange can properly presume that the structure and site could be obtained by the Department of Transportation, State Highways Administration. To the extent this can be contemplated, the price established for transfer of properties to D.O.T. would presumably be established through appraisals of value satisfactory to the Board of Education of Howard County and D.O.T.

I trust the foregoing will be of value to you at this juncture in the study effort.

Yours truly,

Donald J. Begeny  
Director of Planning and  
New School Facilities

DJB:sas

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HOWARD COUNTY  
DEPARTMENT of RECREATION & PARKS

GEORGE HOWARD BUILDING  
3430 COURT HOUSE DRIVE  
ELLICOTT CITY, MARYLAND 21043  
(301) 992-2480

William M. Mitchell  
Director

July 19, 1978

Mr. Edward J. Prall  
Berger Associates  
101 Erford Road  
Camp Hill, PA

Dear Sir:

In regards to your June 5, 1978 letter concerning Hammond Neighborhood Park, N-2-3024, we are enclosing a budget sheet for FY78-79. At the present time, the department is contemplating acquisition for FY81-82, however, this timetable is flexible and can be moved up if necessary. The development of this park will have two main thrusts. One, it will function as a preservation tool for the Hammond Branch and its flood plains. Secondly, it will provide a centrally located recreation facility to a rapidly expanding area of the County.

As the acquisition process closes, the County will prepare its development plans for the area.

If you have any questions, please contact me at 992-2480.

Sincerely,

Ed Shull  
Parks Planner

ES: bkd  
Enclosures  
cc: Mr. William M. Mitchell

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THOMAS J. REGAN, JR.  
DIRECTOR  
992-2400



- Bureau of Engineering  
William O. Filbert, Chief
- Bureau of Environmental Services  
Richard E. Freudenberger, Chief
- Bureau of Facilities  
John Zitnyar, Chief
- Bureau of Highways  
Granville W. Wehland, Chief
- Bureau of Inspections, Licenses and Permits  
M. Robert Gemmill, Chief
- Bureau of Utilities  
James L. Gleig, Chief
- Administrative Services Division  
Guy W. Haer, Chief

DEPARTMENT OF PUBLIC WORKS OF HOWARD COUNTY  
3430 COURT HOUSE DRIVE, ELLICOTT CITY, MARYLAND 21043

June 9, 1978

Mr. Edward J. Prall  
Berger Associates  
P. O. Box 1943  
Harrisburg, PA 17105

Dear Mr. Prall:

SUBJECT: Drawings  
Contracts 529-S and 531-S

Transmitted herewith please find two (2) sets of sewer drawings for Contracts 529-S and 531-S as requested. We are also including a facilities document used in planning a site for a proposed overhead water storage tank within the 216 study area. Site "A" is presently the preferred choice. This map also shows existing water lines in the area.

In addition, a tax map copy is being forwarded showing the proposed location for a fire station, and a very preliminary site layout is shown for any detailed level of intersection analysis you may be looking into.

If the Department can be of any further assistance in this matter, please contact this office.

Very truly yours,

Richard E. Freudenberger  
Director

REF:hnc

cc: Thomas C. O'Connor

Enclosures





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

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

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

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

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

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

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

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

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

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

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

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

In order to determine the amount of the "in lieu of" moving expenses payment, the average annual net 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, with approval of the Federal Highway Administration, may use another two-year period that would be more representative. Average annual net earnings include any compensation paid by the business to the owner, his spouse, or his dependents during the period. Should a business be in operation less than two years, but for twelve consecutive months during the two taxable years prior to the taxable year in which it is required to relocate, the owner of the business is eligible to receive the "in lieu of" payment. In all cases, the owner of the business must provide information to support its net earnings, such as income tax returns, for the tax years in question.

For displaced farms and non-profit organizations, actual reasonable moving costs generally up to 50 miles, actual direct losses of tangible personal property, and searching costs are paid. The "in lieu of" actual moving cost payments provide that the State may determine that a displaced farm may be paid a minimum of \$2,500 to a maximum of \$10,000 based upon the net income of the farm, provided that the farm has been 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.

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

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

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

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

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