

REPORT NUMBER: FHWA-MD-EIS-79-04-F
Region III
Maryland Route 410 Extended From vicinity of $\mathrm{B} / \mathrm{W}$ Parkway to Penney Drive including U.S. Route 50

Interchange in
Prince George's County, Maryland

## ADMINISTRATIVE ACTION

FINAL ENVIRONMENTAL IMPACT STATEMENT
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. 129 (a)
M. S. Caltrider

State Highway Administrator
$\overline{D e}$
$\overline{D A}$


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


Director, Office of Environmental Programs Federal Highway Administration

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Mr. W. K. Lee, III<br>Mr. P. H. Dionne<br>Mr. E. T. Camponeschi

## RECEIVED

Mr. H. Kassoff-For your guidance and follow-through 1982 cation
The Rotunda - Suite 220
711 West 40 th street. OF HWY. DEVLPMT. Baltimore, Maryland 21211-2187

Mr. G. E. Daily-
Mr. I. C. Hughes
Mr. E. S. Freedman-

Mr. M. S. Caltrider
State Highway Administrator State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202
Dear Mr. Caltrider:
On April 30, 1982; our Regional Office approved the Final Environmental Impact Statement for this project. Susequently, notice of the publication and availability of the Final EIS was placed in the Federal Register. The thirty (30) day waiting period established in the Federal Register is now over Review of the many comments received did not reveal any significant changes in the proposed action or environmental
" conditions, as they appeared in the FEIS, which would cause us to rescind our concurrence in that document. Therefore, having fulfilled all location requirements, we hereby grant location approval of Alternate 2 Modified in accordance with approved Certification Acceptance procedures.

Please provide us with a copy of the "Environmental Compliance Checklist" for this project.


JUL 121982


Sincerely yours,
E, ELINSKY

Emil Elinsky Division Administrator

Hal Kissoff, Director Office of Planning and Preliminary Engineering Maryland State Highway Administration P.O. Box 717/707 North Calvert Street Baltimore, Maryland 21203-0717

RE: Maryland Route 115, Montgomery Village Avenue to Norbeck, Montgomery CO., MD
Maryland Route 410 Extended, B/W Parkway to Pennsy Drive, Prince Georges County, MD

## Dear Mr. Kassoff:

We reviewed the final Environmental Impact Statements prepared for the projects referenced above. Based upon these reviews, and upon your responses to our August 2, 1979 and January 3, 1979 comments on the draft statements respectively, we have no objection to further development of the projects as described. We would however, appreciate the opportunity to discuss the proposed stream relocation at one of the future project coorciiaacion meetings which are held regularly with your staff. This may facilitate the acquisition of any required Section 404 permits.

We hope that this letter will assist you in meeting your NEPA responsibilities. If you have any questions, or if we can be of further assistance, please contact us at any time.
j
Sincerely yours,

M. S. Caltrlder

Administrator

July 9, 1982

## MEMORANDUM

TO: Mr. Wm. F. Schneider, Jr., Chief Bureau of Project Planning

ATTN: Mr. Charles G. Walsh
FROM: Louis H. Ege, Jr., Chief Environmental Management


SUBJECT: Environmental Compliance/Considerations Checklists
Contract No. P 891-025-371
Maryland Route 410 Extended

Attached are the completed Environmental Compliance and Considerations Checklists for the subject project. Key environmental points noted in the Final Environmental Impact Statement are summarized in these forms. Location approval was received from the Federal Highway Administration on July 6, 1982.

To ensure follow-through on project commitments, the checklists should be attached to the formal transmittal memorandum conveying the project from Project Planning to Design activities. Emphasize that commitments indicated on the environmental compliance checklist are conditions of project location approval. Should any changes be contemplated, an environmental reevaluation should be requested.

LHE: CDS:mcr
Attachment

cc: Mr. Emil Elinsky (w/attach. - Compliance Checklist oniygh immature,
Mr. Charles Anderson (w/attach.)
Ms. Cynthia Simpson (w/attach.)

CONTRACT NO. P 891-025-371 PROJECT: Maryland 410 Extended
MANAGER: Charles G. Walsh
ALTERNATE (S): $1,2,2$ Modified, 3, 4
PROGRAM STATUS: $\qquad$

DEIS/FEIS APPROVED: 10/30/79-4/30/82

EA/FONSI APPROVED: $\qquad$
D4(f)/F4(f) APPROVED: $\qquad$
LOCATION APPROVAL: 7/6/82

REEVALUATION DATE: $\qquad$




ENVIRONMENTAL COMPLIANCE* CHECKLIST
CONTRACT
NO. P 891-025-371
FESS APPROVED: 4/30/82

PROJECT: Md. 410 Extended

TERMIN: B/W Pkwy to Pansy Drive including USS. 50 Interchanges.

FONSI APPROVED:
LOCATION APPROVAL: $\quad$ 7/6/82

"compliance with a commitment is a condition of project approval. changes are not in order except under extraordinary, unforeseen circumstances. if changes are contemplated for any reason, the chief of the environmental evaluation section should be notified IMMEDIATELY.
BUREAU OF PROJECT PLANNING
ENVIRONMENTAL COMPLIANCE CHECKLIST

| ENVIRONMENTAL FACTOR | MITIGATION COMMITMENT | SOURCE OF COMMITM'T | WHEN SCHEDULED | $\begin{aligned} & \text { BUREAU TO } \\ & \text { CONTACT/ } \\ & \text { PHONE \# } \end{aligned}$ | DATE <br> IMPLEM TED | COMANENTS** |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |




ENVIRONMENTAL COMPLIANCE CHECKLIST


BUR DF Lnapochere. "lecture

Contract No. P 891-025-371 Maryland Route 410 Extended From the vicinity of the Baltimore/Washington Parkway To Peńnsy Drive

## FEDERAL AGENCIES

Mr. Bruce Blanchard, Director
Office of Environmental Project Review
U.S. Department of the Interior lith and C. Streets, N.W. Washington, D. C. 2, 0242

Environmental Protection Agency
Environmental Impact Statement Coordinator
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Sixth and walnut streets
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Corps of Engineers
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Baltimore, Maryland 2.1201
ATTN: NABOP-F

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Upper Level - Courts of Appeal Building
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Director
Division of Public Affairs
Maryland Department of Transportation
Mr. Clyde E. Pyers, Director
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Riverdale, Maryland ..... 20840
Parkway Estates Citizens Association
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Hyattsville, Maryland ..... 20784
Wildercroft Citizens Association 6709 3rd Street
Riverdale, Maryland 20840
Ardwick Industrial District Association Lanham Building

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Lanham, Maryland 20801
Ascension Lutheran Church and School
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Landover Hills
Hyattsville, Maryland ..... 20784
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New Carrollton, Maryland ..... 20784
ATTN: Jordon L. Hardin, Mayor
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Town of Bladensburg
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Bladensburg, Maryland ..... 20710

INDIVIDUALS AND ORGANIZATIONS (cont'd.)
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Peoples National Bank Building
Greenbelt Road and Kenilworth Avenue
Greenbelt, Maryland 20770
ATTN: John C. Moore, President
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Landover, Maryland 20785
West Lanham Estates Citizens Association
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Hyattsville, Maryland 20784
Giant Food, Inc.
P.O. Box 1804

Washington, D. C. 20013
ATTN: Stephen L. Oseroff
Mr. James C. Moore, II
Law Offices, Moore \& Foster, P.C.
1625 K. Street, N.W.
Washington, D. C. 20006

## STATE CLEARINGHOUSE

Local Governments
Department of State Planning
Department of Natural Resources
Department of Budget and Fiscal Planning
Department of General Services
Department of Economic and Community Development
Department of Education
Department of Health and Mental Hygiene
Interagency Committee for School Construction
Maryland Environmental Trust
Maryland Geological Survey
Department of Public Safety and Correctional Services

Maryland Department of Transportation
Lowall K. Bridweil Secretary

State Highway Administration
M. S. Caltrider Administrator
May 14, 1982
Contract No. p 891-025-371
Maryland Route 410 Extended
From the vicinity of the Baltimore/Washington Parkway
To Pennsy Drive
FINAL ENVIRONMENTAL IMPACT STATEMENT

Enclosed for your information and files is the approved Final Environmental Impact Statement for the referenced project. The document has been prepared in accordance with the Federal-Aid Highway Program Manual 107, Volume 7, Chapter 7, Section 2, dated December 30, 1974 concerning implementation of Section 102 (a) (c) of the National Environmental Policy Act of 1969.

The selected alternate is the construction of Maryland Route 410 Extended in Prince George's County, Maryland, beginning from the intersection of Riverdale Road and 67 th Avenue (approximately 0.17 miles east of the Baltimore/Washington Parkway) to Pennsy Drive, for a distance of approximately 2.6 miles. The selected alternate consists of a signalized at-grade intersection at Riverdale Road, a signalized at-grade intersection with Maryland Route 450 (Annapolis Road), two interchange configurations on U.S. Route 50 that provides access to the Metro East Triangle area, and the Ardwick Industrial Park area and are connected with a collector-distributor road system, and a "T" tvpe intersection at Pennsy Drive.

Distribution of the Final Environmental Impact Statement is made on behalf of the Federal Highway Administration in accordance with 23 CFR 771.


Hal Kassoff, Director Office of Pl anning and Preliminary Engineering
HK:mcr
Enclosure
cc: Mr. Wm. K. Lee, III
Mr. Wm. F. Schneider, Jr.
Mr. Louis H. Ege, Jr.
Mr. Charles G. Walsh


BUtar. OF LAMDSCHPE ARCHTECTURE

Two typical sections that have raised medians ranging in width from 16 to 30 feet have been evaluated and will be considered for the selected alternate during the final design phase. These two sections, when utilized, will reduce construelion impacts to those properties along the mainline between Riverdale Road and U.S. Route 50, reduce right-of-way acquisilion, and avoid the $4(f)$ involvement discussed in the Draft Environmental Impact Statement. These typical sections will be addressed in more detail in later chapters.

## 1.D Summary of Environmental Impacts

The selected alternate will require right-of-way acquisitin of between 67 to 97 acres of land depending upon which typical section is designed, and the displacement of four (4) businesses and nine (9) homes, relocating an estimated thirty (30) residents. Fifteen (15) of those who would be displaced are of a minority group. One (1) family is projected to need housing as a last resort.

The selected alternate will require five new crossings of Brier Ditch and tributary wales. Some short-term pollution can be expected during construction. The same is true for the two new crossings of Beaverdam Creek and its tributary swale. However, the overall effect would result in no significant impact on the floodplain.

The selected alternate will not impact the habitat of any known rare or endangered species.

No sites of historical or archaeological significance

## 1. SUMMARY

## 1.A Administrative Action

## Federal Highway Administration

( ) Draft (X) Final
(X) Environmental Statement ( ) Negative Declaration
( ) Section 4(f) Involvement

## 1.B Contacts

Roy D. Gingrich, District Engineer Federal Highway Administrator
The Rotunda, 'Suite 220
711 W. 40th Street
Baltimore, Maryland (21211) (301) 962-4011 7:45 A.M. - 4:15 P.M.

William F. Schneider, Jr., Chief
Bureau of Project Planning State Highway Administration 707 North Calvert Street Baltimore, Maryland (21201) (301) 659-1130

8:15 A.M. - $4: 15$ P.M.

## 1.C Brief Description of Selected Alternate

The selected alternate is the construction of Maryland Route 410 Extended in Prince George's County, Maryland, beginning from the intersection of Riverdale Road and 67th Avenue (approximately 0.17 miles east of the Baltimore/Washington Parkway) to Pansy Drive, for a distance of approximately 2.6 miles. The selected alternate consists of a signalized at-grade intersection at Riverdale Road, a signalized at-grade intersection with Maryland Route: 450 (Annapolis Road), two interchange configurations on U.S. Route 50 that provides access to the Metro East Triangle area and the Ardwick Industrial Park area and are connected with a collector-distributor road system, and a " T " type intersection at Pennsy Drive.
have been identified within the Maryland Route 410 corridor.

There are no prime agricultural lands within the Maryland Route 410 corridor.

Air analyses were made for 1985 and the design year (2005). No violations of the one hour or eight hour State and National Air Quality Standards are predicted to occur in either study year.

Twenty noise sensitive areas have been identified within the Maryland Route 410 corridor. One noise sensitive area would exceed noise level criteria with implementation of the selected alternate.

## 1.E Summary of Alternates Considered

The Master Plan approved December 1980 for the BladensburgDefense Heights area, Planning Area 69, and the adopted and . approved Master Plan dated September 1973 for the 'Model Neighborhood Area', Planning Area 72A, established a corridor through the two planning areas for future construction of this portion of Maryland Route 410 Extended. A portion of the required right-of-way in Planning Area 69 has been acquired or placed in reservation by the County.

As a result of this earlier planning and right-of-way reservation, only one centerline location was studied. Four alternate typical sections for the mainline were evaluated, as well as alternate interchanges and/or intersections. The intersections and/or interchanges, as well as the roadway be-
tween intersections, are to be fully access controlled.
The following alternates have been considerec:

1. The No-Build Alternate
2. Three (3) at-grade channelized "T" intersections at Riverdale Road.
3. Two (2) at-grade intersections with double left-turn lanes, as well as a "Diamond" type interchange with Maryland Route 450:
4. Three (3) alternate interchange configurations combining the U.S. Route 50/Maryland Route 410 Interchange with the New Carrollton Metro Access Interchange utilizing a collector-distributor road system
5. "T" type intersection with Pennsy Drive
6. Transportation Systems Management (TSM) Alternate
7. Two (2) alternate typical sections, "Open" or "Closed" type with a median of 54 feet in width
8. Two (2) alternate typical sections, "Open" and "Closed" type with a raised median ranging in width from 16 to 30 feet

## 1.F Selected Alternates

After circulation of the Draft Environmental Impact Statement on November 6, 1979 and the combined Location/Design Public Hearing that was held on December 4, 1979, the Project Planning Team for the Maryland Route 410 Extended project presented its recommendation of alternates to the State Highway Administrator. On September 23, 1980 and February 10, 1981, the following alternates were selected:

1. Alternate 2 for the intersection of Riverdale Road and Maryland Route 410 Extended
2. Alternate l, signalized at-grade intersection, for the juncture of Maryland Route 410 Extended and

Maryland Route 450.
3. Combined interchange Alternate 2 Modified for the U.S. Route 50 segment of the corridor.
4. Consideration of utilizing either the "Open" or "Closed" type typical roadway sections (Alternates 1 or 2 ) with the raised median to reduce construction impacts on those properties adjacent to the mainline between Riverdale Road and U.S. Route 50.

## 1.G Summary of the President's Urban Policy Relative to the Construction of Maryland Route 410 Extended

## A. Urban Impacts

The implementation of this project will be beneficial to the urban environment of the Washington Metropolitan Area in that traffic whose origins or destinations are at the extremeties of the study corridor will be diverted from the local roadway network. This diversion will alleviate congestion and conflicts between through traffic and local circulation. As a result, a reduction in accident occurrences on the local roadway system is anticipated. The Central City will not incur costs for the construction, operation or maintenance of the project. Route 410 Extended will provide improved access to the Ardwick Industrial District, the Metro system, the Amtrak system, and the developing employment areas within the Metro East Triangle.

## B. Energy Conservation

A savings in operating costs and fuel consumption will be realized by the implementation of this project by virtue of the fact that Maryland Route 410 Extended will offer a shorter route between the Ardmore-Ardwick industrial areas and Maryland Route 450 and the Baltimore/Washington Parkway than is presently
available on existing routes, and by the expected reduction of congested conditions on several existing still area routes. See page 3-3.
C. Minority and Neighborhood Effects

Implementation of the selected alternate for this project will require the displacement of four businesses and nine (9) homes relocating an estimated thirty residents. Fifteen of those who would be displaced are of a minority group. Disruption to existing neighborhoods will be minimized to the greatest extent possible. See page 5-2.

## D. Improvements to Existing System

Maryland Route 410 will involve construction on a new location. This project presents a situation where it is not feasible to improve the existing facilities to provide the same degree of service or function as the construction of Maryland Route 410 Extended. Maryland Route 410 Extended will fulfill a distinct and necessary travel desire by offering a connection between the developing U.S. Route 50 industrial area and other radial roadways such as Maryland Route 450 and the Baltimore/Washington Parkway branching out from the city. Most of the development that has occurred during the past two decades was predicated on the construction of Maryland Route 410 Extended as described in the Master Plans for Bladensburg-Defense Heights, Planning Area 69, and the Model Neighborhood Area, Planning Area 72A.

## E. Transportation Systems Management (TSM) Alternate

The Transportation Systems Management (TSN) Alternates considered for this project included the evaluation of an upgrading of bus service and/or improvements to the local streets, such as: widening streets to improve capacity, extending streets to complete a network of local streets, and construction of new streets. In addition to these improvements, the economic, engineering, social and environmental impacts were also evaluated. See page 6-69.

The implementation of such TSM strategies might improve the levels of service on existing highway segments adjacent to Maryland Route 410 Extended. However, they cannot be considered an adequate substitute for the Maryland Route 410 Extended project in that they will not address the need for providing arterial access to the major radial routes now available only through a circuitous network of secondary roads. One feature of the Maryland Route 410 Extended project is that access to the rapid rail stations at New Carrollton and Landover Mall will be substantially improved, thus making the transfers from auto and bus to rail more attractive.
1.H List of Federal, State and Local Agencies and Other Organizations From Which Comments Were Requested

* Denotes comments received. These comments can be found in Appendix A.
* Environmental Protection Agency Environmental Impact Statement Coordinator Curtis Building, 6th Floor Sixth and Walnut Streets Philadelphia, Pennsylvania 19106
Mr. Bruce Blanchard, Director
Office of Environmental Project Review
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Washington, D.C. 20242
* Corps of Engineers
District Engineer
Baltimore District
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Attention: NABOP-F
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Director
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Washington, D.C. 20545
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Department of Agriculture
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Office of the Secretary
Director, Office of Environment and Safety
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The Honorable Lawrence J. Hogan
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Mr. Norman Saunders, President
Board of Education
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Mr. Vaughn E. Barkdoll
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Mr. Matthew Plat
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Local Governments

* Department of State Planning
* Department of Natural Resources
* Department of Budget and Fiscal Planning
* Department of General Services
* Department of Economic \& Community Development
* Department of Education
* Department of Health \& Mental Hygiene
* Interagency Committee for School Construction

Maryland Environmental Trust

* Maryland Historical Trust

Maryland Geological Survey

* Department of Public Safety \& Correctional Services

1. The Draft Environmental Impact Statement was forwarded to the Environmental Protection Agency on October 31, 1979.
2. Areas of Controversy:

Ramps ' $A$ ' and ' $B$ ' in the northwest and northeast quadrants of the Maryland Route 410/U.S. Route 50 Interchange.

- Every effort has been made to reduce the impacts to those homes along Parkwood Street in the Bellmeade Subdivision and to those homes along Ardmore-Ardwick Road. Any modification to the alignment of these ramps would affect the overall operation of both the westbound Collector-Distributor Road and the mainline of Maryland Route 410 Extended. This subject is further addressed in Chapter 6, Section 6.B.4. Also reference letter dated February 5, 1980 on page A-36.

3. Technical Reports used in the preparation of the Document:
a. Preliminary Archaeological Survey dated March 30, 1976
b. Final Air Quality Analysis: Maryland Route 410 Extended dated November 1979
c. Noise Analysis: Maryland Route 410 Extended - Baltimore/ Washington Parkway to Pennsy Drive dated December 16, 1980

These reports are available for inspection at:<br>Maryland State Highway Administration<br>Bureau of Project Planning<br>707 North Calvert Street<br>Room 310<br>Baltimore, Maryland 21202

## 2. INMRODUCTION

## 2.A Project Description

The study area is located in Prince George's.County, approximately 3.5 miles northeast of Washington, D.C. (Plate l). The project begins at the intersection of Riverdale Road and 67 th Avenue, approximately 0.17 miles east of the Baltimore/ Washington Parkway (Plate 2). After leaving Riverdale Road the project occupies a corridor roughly parallel to the northeastern boundary of Washington, D.C., crossing Annapolis Road (Maryland Route 450), John Hanson Highway (U.S. Route 50), and terminating at Pennsy Drive for a distance of approximately 2.6 miles.

The project appears in local plans such as the Bladens-burg-Defense Heights Master Plan approved in December 1980 and the Model Neighborhood Area Master Plan adopted in 1973.

This project, from the Baltimore/Washington Parkway to Pennsy Drive, is the remaining portion of Maryland Route 410 in the Bladensburg-Defense Heights Master Plan to be designed. A portion of the right-of-way required for this project has been acquired or reserved.

The section of Maryland Route 410 crossing under the Baltimore/Washington Parkway and extending from 6lst Place to 67 th Avenue has been improved by the County and is included in the Maryland Department of Transportation's 1981-1986 Consolidation Transportation Program and the Development and Evalua-



The Federal Highway Functional Classification lists
this project, Maryland Route 410 Extended, as an Urban Principal Arterial. The State Highway Administration's functional classifications are Intermediate Arterial and Minor Collector.

The Maryland Route 410 Extended Project with the exception of the U.S. Route 50 interchanges at Metro East Triangle and at Route 410 Extended is not currently funded in the Maryland Department of Transportation 1981-1986 Consolidated $\operatorname{Tr}$ ansportation Program. However, this project is included in the M.D.O.T. Development and Evaluation Program. As such, it is the intent of the M.D.O.T. to proceed with the development of additional stages of this project in the future based upon the availability of funds. The Maryland Route 410 Extended project is also listed in the 1980 Maryland State Highway Needs Inventory.

## 2.B Need

This project will provide a facility for circumferential movements in an area with inadequate circumferential capacity (Plates $3 \& 3 \mathrm{~A}$ ). On the Baltimore/Washington Parkway, the nearest circumferential highways lie approximately two (2) miles north or south of Maryland Route 410. This project would also provide access to the Ardwick Industrial area via Maryland Route 410/U.S. Route 50 Interchange. Access is now currently possible only through a series of local streets (egg. Riverdale Road, Finns Lane, Annapolis Road, Ardwick-Ardmore Road, Jefferson Avenue and Pansy Drive). The imposition of generated traffic would


not only increase considerably the truck travel on these streets, but it would also create extreme air, noise and safety problems.

Since 1968, when Prince George's County and WMATA approved the Metrorail Adopted Regional System, it was noted that access to the Metro East Triangle was circuitous and inefficient. Since that time, the State of Maryland, Prince George's County and WMATA have devoted considerable attention to improving access to the New Carrollton Station. This project would significantly increase accessibility for both buses and autos to Metro's New Carrollton Station and the Metro East business community. The impact of Maryland Route 410 Extended would not be the increased access and the reduced travel time Metro East Triangle users receive, although that would be significant. The major beneficiaries of the extension would be the businesses and residents located on or using the local streets now being used to access the Metro East Triangle. The attraction of the Triangle is such that traffic will still travel there if the extension is not built. The extension is proposed to eliminate the severe congestion and safety problems that will occur as a result of the traffic.

This project would also provide the Defense Heights-Landover Hills communities a more convenient and safer access route to the Baltimore/Washington Parkway and U.S. Route 50 (John Henson Highway), provide citizens east of U.S. Route 1 greatly impproved access to Metro East Triangle and the large employment center expanding along the U.S. Route 50 corridor, and remove
short arterial trips from the Beltway and the local street system.

Construction of Maryland Route 410 Extended. will tend to support the concentration of development rather than contibuting to its dispersal. Access to existing employment and industrial centers will be improved thereby sustaining their competitive advantage in terms of time/distance over other suburban fringe locations.

An additional benefit from the project is increased safety. Listed below is the accident history by severity on the existing system comprised of Riverdale Road, Finns Lane, Maryland Route 450 and Ardwick-Ardmore Road.

|  | $\underline{1974}$ | $\underline{1975}$ | $\underline{1976}$ | $\underline{1977}$ | 1978 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Fatal Accidents | 0 | 1 | 1 | 0 | 1 |
| Injury Accidents | 66 | 104 | 82 | 101 | 111 |
| Property Damage <br> Accidents | 145 | 190 | 149 | 179 | 170 |
| Total Accidents | 211 | 295 | 232 | 280 | 282 |

During the years from 1974 through 1978 , the motorists in the study area who could be expected to utilize the facility experienced 1,300 accidents.

To estimate the magnitude of the accident reduction to be brought about by this project, we utilized an accident rate ratio that compares the number of accidents versus the traffic volumes expressed in vehicle miles of travel. This accident rate is expressed in accidents per 100 million vehicles miles (100 MVM).

For the study section, the 1974-1978 accident ratio was
$881 \mathrm{acc} / 100 \mathrm{MVM}$. This exceeds the statewide rate of $664 \mathrm{acc} / 100$ MVM for similar design urban highways.

The accident cost to the motorist for these accidents is estimated at $\$ 2,698,000 / 100 \mathrm{MVM}$. If no improvements are made to existing roadways, we can expect an increase in the absolute number of accidents resulting from normal traffic growth even if the rate does not increase.

According to statewide studies, the Maryland Route 410 Extended highway should reduce the accident rate to approximately $370 \mathrm{acc} / 100 \mathrm{MVM}$ of travel and based on the different types of accidents, also reduce the accident cost to $52 \%$, or $\$ 1,284,000 /$ 100 MVM brought about by an anticipated reduction in the rate of accident occurrence. Furthermore, reduction in accidents from 881 to $370 \mathrm{acc} / 100 \mathrm{MVM}$ will be realized by construction of the facility. (The unit cost value was obtained from three independent accident cost studies conducted in Washington, D.C., Illinois and the California Division of Highways, and was updated to the 1979 Consumer Price Index.)

## 2.C Historical Background/Current Status

In April 1960, the Bladensburg-Defense Heights Master Plan (then Planning Area XIV) was adopted. Maryland Route 410 was proposed to extend from it's then present terminus at Queens Chapel Road to the John Hanson Highway (U.S. Route 50). At this time, the corridor utilized for the Maryland Route 410 Study was established and reservation of property for highway construction encouraged. Since that date, the section of Maryland Route 410 from

Queens Chapel Road to a point approximately 1000 feet east of Maryland Route 201 has been constructed as a f(ur-lane highway. From this point to 6lst Place, Maryland Route 410 has been constructed as a six-lane highway. The segment from 6lst Place to to 67 th Avenue is included in the Maryland Department of Transportation 1981-1986 Consolidated Transportation Program and the Development and Evaluation Program. This segment cannot handle the projected volumes if capacity is not increased.

In September of 1973, the Model Neighborhood Area Master Plan was approved. Included in this master plan was an extension of Maryland Route 410 from John Hanson Highway (U.S. Route 50) to Pennsy Drive.

As a result of the approval of the above cited Master Plans, development in the vicinity of the corridor was limited only to those areas adjacent to the proposed roadway alignment. For instance, commerical development along Maryland Route 450, west of the proposed West Lanham Hills Recreation Center, has been permitted with the exception of the area that is to be utilized for the crossing of Maryland Route 410 Extended. West of the centerline alignment (opposite the proposed West Lanham Hills Recreation Center) are the Lanham Terrace Apartments. Any shift in the centerline alignment of Maryland Route 410 Extended would result in considerable adverse impact to these apartments and the Recreation Center. As a result of this and other development adjacent to the study corridor, no alternate location for the centerline of Maryland Route 410 was considered.

This project has been included in all comprehensive and
transportation plans for this portion of Prince George's County for many years, including:

1. Maryland Preliminary Transportation Plan (1978)
2. Twenty Year Highway Needs Study (1978-1998)
3. Long Range Transportation Plan for the National Capital Region (1976)
4. Prince George's County Master Plan for Highways (1969)

The State Highway Administration on June 26, 1973 initiated studies for the design of Maryland Route 410 from the intersection of Riverdale Road and 67th Avenue to Pennsy Drive, a distance of approximately 2.6 miles.

On May 7, 1974, the initial Public Meeting for this project was held at Glenridge Junior High School, in accordance with the State of Maryland Action Plan. The primary purpose of this meeting was to convey all pertinent data available on the proposed project and to initiate the involvement process. The basic corridor was presented, along with generalized comments concerning the various types of interchanges and/or intersections under study.

On December 16, 1976, an Alternates Public Meeting for the captioned project was held in the Glenridge Junior High School. The purpose of the meeting was to acquaint the public with planning activities associated with the project to date, to solicit their comments and recommendations, and to outline the remaining steps in the study process.

On October 31, 1977, the Metro Access Interchange was included in the study.

On November 24, 1979, a Public Informational Meeting for the project was held in the Glenridge Junior High School. The purpose
of the meeting was to reacquaint the public with the study process and to inform the public of the process and find ngs of the Project Planning Study since the Alternates Meeting of December 16 , 1976.

On December 4, 1979, a combined Location/Design Public Hearing for the project was held in the Glenridge Junior High School. The purpose of the hearing was to receive testimony regarding the location and design of the project and the environmental consequences of implementing the alternates considered. The "No-Build" and "Build" Altiernates together with the engineering, economic, social and environmental consequences expected to result from those alternates were presented to the public for their consideration. (See Appendix A.)

On February 26, 1980, a Community Meeting was held at the West Lanham Elementary School. The purpose of this meeting was to allow the State Highway Administration to clarify issues which were raised at the Project Public Hearing and writtem comments received subsequent to the Public Hearing.

On March 18, 1980, a Community Meeting was held at the Ascension Lutheran Church. At this meeting the Combined Citizens Coalition presented a proposal to the State Highway Administrator. This proposal (along with an accompanying report) can be found in Appen$\operatorname{dix} A$ of this document.

On April 8, 1980, representatives of the State Highway Administration met with members of the New Carrollton City Council and approximately ten citizens. The purpose of this meeting was to answer questions regarding traffic, justification,
for the project, condemnation procedures, the status of the Citizens Alternate (note preceeding paragraph), residential impacts, and the project's relationship to the segment of Riverdale Road from 6lst Place to 67 th Avenue.

On August 12, 1980, the Project Planning Team presented its recommendations for the Maryland Route 410 Extended project to Mr. M.S. Caltrider, State Highway Administrator. Specific comments of the recommendations were:

1. Alternate 2 (signalized "T" intersection) for the intersection of Riverdale Road and Maryland Route 410 Extended
2. Diamond interchange Alternate 3 at the juncture of Maryland Route 450 and Maryland Route 410 Extended
3. Combined interchange Alternate 2 Modified for the U.S. Route 50 segment of the study corridor
4. An Ardmore-Ardwick Road structure over Maryland Route 410 Extended
5. A roadway section that provides full access controls for the mainline of Maryland Route 410 Extended from Riverdale Road to the structure over U.S. Route 50
6. A closed roadway section for the mainline of Maryland Route 410 Extended from U.S. Route 50 to Pennsy Drive
7. Consideration in the project design phase of utilizing a typical roadway section that has a raised median ranging in width from 16 to 30 feet. Design phase activities will also determine whether to use an "Open" or "Closed" type roadway section.
8. Consideration of staged construction for the combined interchanges of U.S. Route 50

In September 1980, additional studies determined that 4 (f)
involvement could be avoided by reducing the median width and modifying the centerline of Maryland Route 410 Extended.

On October 30, 1980, a Community Meeting was held at the Woodridge Elementary School to discuss with those citizens the possible mitigation measures to reduce the impacts of the proposed U.S. Route 50/Maryland Route 410 Extended Interchange on adjacent communities.

On February 10, 1981, a meeting was held at the State Highway Administration building to discuss a prior decision (see Item 2 above) regarding the continued feasibility of the damon interchange at Maryland Route 410/Maryland Route 450. To reduce right-of-way acquisition within this area, along with construction costs and impacts to the Glenridge Shopping Center, the State Highway Administration decided to implement Alternate 1: an at-grade signalized intersection with a raised concrete median on Maryland Route 450.

## 3. SELECTED ACTION

## 3.A Alternate Selected

## 3.A.1 Description of Alignment

The selected alternate is the construction of Maryland Route 410 from the intersection of 67 th Avenue and Riverdale Road, southeast to Pennsy Drive.

Since 1960, various parcels of land have been reserved or acquired for the project. Because of this and the development adjacent to the acknowledged corridor, only one horizontal alignment for the mainline roadway has been considered, with various alternates occurring at the intersecting roads. Deviadion from this alignment would result in substantial relocation impacts and would be inconsistent with Maryland National Capital Park and Planning Commission Plans.

The selected alternate begins at the intersection of Riverdale Road and 67 th Avenue. Riverdale Road will become Maryland Route 410 to a point approximately 800 feet east of the 67 th Avenue intersection.

Leaving Riverdale Road, Maryland Route 410 passes to the south of Wildercroft and Auburn Manor Apartments through a vacant area adjacent to Kidmore Park (see Plate 2). It will then pass to the southwest of Lanham Woods and West Lanham Estates, and to the north of Glenridge Junior High School. At Maryland Route 450, the Maryland Route 410 corridor is situated to the north and east of the Glenridge Shopping Center. A
large amount of anticipated right-of-way has been reserved through this portion of the corridor. In addition, an area utilized by the Glenridge Shopping Center as a parking lot is owned by the State Highway Administration.

Leaving Maryland Route 450, Maryland Route 410 then passes through an undeveloped area to the west of the Ford Motor Company dealership, West Lanham Hills, and to the east of the Lanham Terrace Apartments.

Approaching U.S. Route 50, Maryland Route 410 will not sever Ardwick-Ardmore Road. Access to the residential development east of the corridor will be provided via a structure over Maryland Route 410. A portion of the anticipated right-of-way requirements have also been set aside via reservation plats through this area.

Maryland Route 410 Extended will cross U.S. Route 50 via an overpass, which will also cross Beaverdam Creek and its floodplain, the Amtrak railroad tracks, and the elevated Washington Metropolitan Area Transit Authority (WMATA) rail facility south of U.S. Route 50. It will then pass through the Ardwick Industrial Park, just east of the Hechinger Company, and terminate at Pennsy Drive.

Maryland Route 410 will transition from a roadway section that has a raised median to a 56-foot closed section approaching Pennsy Drive. A "T" type intersection is proposed at the southern terminus at Pennsy Drive.

## 3.A. 2 Traffic Characteristics

Traffic data for this project was developed by the Traffic Forecasting Section, Maryland State Highway Administration. This data is displayed in Table l, and Plates 4, $4 A, 5$, and 5A.

## TABLE 1

TRAFFIC DATA

|  | 1985 | 2005 |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | See Plate $4 \& 4 \mathrm{~A}$ | See Plate $5 \& 5 \mathrm{~A}$ |  |
| Average Daily Traffic | $10 \%$ | $10 \%$ |  |
| Design Hourly Volume | $55 \%$ | $55 \%$ |  |
| Directional Distribution |  |  |  |
| Percentage of Trucks | $9 \%$ | $9 \%$ |  |
| Average Daily Volume | $7 \%$ | $7 \%$ |  |
| Design Hourly Volume | See Plate $4 \& 4 \mathrm{~A}$ | See Plate $5 \& 5 \mathrm{~A}$ |  |

The construction of Maryland Route 410 Extended will contribute to energy conservation by providing a shorter, more direct connection to the Baltimore/Washington Parkway, Maryland Route 450 (Annapolis Road), U.S. Route 50 (John Hanson Highway) and the Metro East Triangle on a higher function facility, affording smoother traffic flow and better levels of service. From the standpoint of distance alone, approximately one mile of travel will be saved between the Baltimore/Washington Parkway and U.S. Route 50 by using Maryland Route 410 Extended. Trip distances via Maryland Route 410 Extended amounts to 1.8 miles. Making use of such existing routes as Riverdale Road, Finns Lane, Maryland Route 450 and Ardmore-Ardwick Road yields a trip length of approximately 2.8 miles.

56
-



* 11,400 ON MAINLINE U.S. ROUTE 50

| TRAFFIC |  |
| :---: | :---: |
| MAATA -1985 ADT |  |
| RIVERDAND ROUTE 410 EXTENDED |  |
| INCLUDING ROAD TO PENNSY DRIVE |  |
| CONTRAET ROUTE 5OINTERCHANGES | NO. |
| SCALE: $891-025-371$ |  |
| SONE | PLATE 4 4 |





* 13,600 ON MAINLINE U.S. RTE. 50


3-11

In traveling the 1.8 miles at an average speed of 41 miles per hour, the year 2005 passenger vehicle would consume approximately 0.045 gallons of fuel. By contrast, fuel consumption of passenger vehicles via the existing local road network traveling at a speed of 20 miles per hour would consume nearly 0.077 gallons. $1 /$

Should Maryland Route 410 Extended be constructed, maximum ADT on the route is estimated at 27,000 vehicles. Assuming the above fuel consumption per vehicle, approximately 1,215 gallons of fuel would be used per day.

If the "No-Build" Alternate is adopted, the 27,000 vehicles would be making the same trip via existing routes. Total fuel consumption in this situation is estimated at 2,079 gallons per day. Therefore, fuel saved by implementing Maryland Route 410 Extended could amount to 864 gallons per day, or approximately 315,000 gallons per year.

I/ J.S. Apostolos, W.R. Shoemaker, E.C. Shirley, Energy and Transportation Systems, NCHRP Project 20-7, Task 8, California Department of Transportation, December 1978.

## 3.A. 3 Design Criteria

Maryland Route 410 will be a fully controlled access fourlane highway between Riverdale Road and U.S. Route 50.

The minimum design speed established by the Maryland State Highway Administration for Maryland Route 410 is 50 mph . The design speed is 30 mph minimum for the ramps. The posted speed would be less than the design speed.

The design criteria used in this project are in accordance with the State Highway Administration, the Federal Highway Administration, Standards set forth in "A Policy On Geometric Design of Rural Highways", and "A Policy On Design of Urban Highways and Arterial Streets" (American Association of State Highway and Transportation Officials, 1973).

The 50 mph design speed limits the maximum horizontal curvature to 7 degrees and the maximum grade to 6 percent. The minimum stopping sight distance allowable on vertical curves is 350 feet. The minimum provided is 370 feet.

The design speed of 50 mph was instituted as an impact avoidance action. The necessary clearances of crossing transportation facilities (Amtrak, U.S. Route 50, etc.) at a design speed of 55 mph would require longer, flatter vertical and horizontal curves. This would result in higher fill sections with wider right-of-way takings. The reduction in criteria, while minimally affecting the travel times of vehicles, has resulted in a reduction in the number of residences taken, and an overall general visual impact.

Two alternate types of roadway sections are proposed for Maryland Route 410 between Riverdale Road and U.S. Route 50: an 'Open' section and a 'Closed' section (see Exhibit 5). The open section consists of two 24 -foot wide roadways that are separated by a raised median varying from 16 to 30 feet wide, two $12-$ foot wide graded shoulders on the outside (10-foot of which is paved), drainage ditches and 30 -feet of safety grading, Guard rail will be provided in areas where fill heights exceed 15 feet. The closed section is similar to the open section except that curb and gutter has been added along the outside edge of the 10 -foot wide paved shoulders. The advantage of utilizing the closed section is that less rightof -way is required because the curb and gutter replaces the drainage ditches and safety grading in the open section.

From U.S. Route 50 to Pennsy Drive the roadway section will transition to a 56-foot wide closed section (see Exhibit 5) that has two 24 -foot wide roadways separated by a 4-foot wide monolithic concrete median, excluding any ramp tapers, etc.

The project final design phase will determine which roadway section will be utilizied north of U.S. Route 50.

## 3.B Existing Environment

## 3.B.1 Topography

The entire study area falls within the Western Shore Division of the Coastal Plains Province. Topography varies
from level to steeply sloping, with natural ground slopes genrally within a range of $0 \%$ to $20 \%$. Some slopes may be as steep as $40 \%$.

## 3.B. 2 Geology

The geology in the corridor consists of unconsolidated sedimentary materials - predominantly sands with clay and gravel. Depths to rock within the Coastal Plains Physiographic Province are undetermined, but are generally substantial.

The Geologic Map of Prince George's County and the District of Columbia (Maryland Department of Geology, Mines and Water Resources, 1951) shows the corridor is contained within one geologic formation, "Patapsco Formation and Arundel Clay". This is characterized as a dark-gray massive clay, containing lignitized wood and saurian bones overlain by massive maroon clay and vari-colored sand and clay. It is probably an outwash deposit and is about 300 feet thick.

## 3.B. 3 Soils

A soil survey of Prince George's County which was grepared by the United States Department of Agriculture Soil Conservation Service and the Maryland Agricultural Experiment Station was issued in 1967.

According to the General Soil Map contained in the soil survey, the corridor lies in the lies in the Christiana-Sunny-side-Beltsville soil association. The soils here are comprised of deep, level to steep, well-drained sandy and clayey soils and level to sloping, moderately well-drained soils that have
a compact sub-soil.
"Because this association lies between Washington, D.C. and Baltimore, Maryland, much of it has been used for residential and industrial development. This development is limited on the Sunnyside soils only in those areas where slopes are strong and or steep. Residential uses are also severly limited on the Christian soils by their clay subsoil. The Christian soils, as well as the minor Muirkirk soils and silty and clayey lands, are unstable when they are saturated, especially if their soil material has been graded, or otherwise disturbed. These soils tend to cave, slump and flow when they are wet or are under the load of buildings, roads or other structures. Upon drying the soil material may shrink away from footings and foundations. Onsite engineering surveys and studies should be made where heavy permanent installations are proposed on the soils of this association." 2/

Since this assessment concerns the proposed highway construction of Maryland Route 410 Extended, the soils lying in the corridor were evaluated for their use in highway construction.
a. Soil Stability: Generally unsuitable to poor
throughout the corridor. From Riverdale Road to
Maryland Route 450 soils are generally unsuitable
to poor. From Maryland Route 450 to U.S. Route 50
soils range from unsuitable to fair. From U.S.
Route 50 to Pennsy Drive the soils are generally
fair to poor.
b. Susceptibility to Frost Action: High in swamps, floodplains, footslopes, depressions, drainage heads

2/ Soil Survey - Prince George's County, Maryland, April 1967, U.S. Government Printing Office
and certain upland areas (where drainage is poor), low to moderate in remaining upland are a.
c. Seasonally High Ground Water Table: Found at depths of 3-feet to 26-feet in upland areas, and 0-feet to 4-feet in floodplains, usually occurring in early Spring
d. Water Erosion Hazard: Potential throughout corridor varies from low to high. In disturbed (graded) areas, potential is very high.
e. Drainage: Surface drainage is generally good to poor in the upland area, and fair to very poor in lowlands (floodplains). Subsurface drainage ranges from good to poor in the uplands, and poor to very poor in the floodplains.
f. Soil Stability As Fill: Soils in the corridor are generally not suitable as road fill material.

During the final design of this project, a detailed soil survey will be conducted to locate the areas of potentially unsuitable material. If the soils cannot be made usable for construction by drying, rehandling, etc., the unsuitable material will be removed from the site and replaced with suitable material.

## 3.B. 4 Metrology

Prince George's County has a humid, temperate, semicontinental climate. Winters are generally mild, and summers
are warm and moist with temperatures ranging between $34^{\circ} \mathrm{F}$ and $76^{\circ} \mathrm{F}$.

Climate in the County varies considerably, and local variations in topography greatly influence the variations in temperature. The hottest period of the yevris the latter half of July; the coldest period of the year is the latter part of January and the early part of February.

The annual precipitation in the County averages 45 inches, but extreme years range from less than 18 inches to more than 60 inches. In general, precipitation is fairly evenly distributed throughout the year. Drought may occur in any month, but a serious drought is most likely to occur in the summer.

The average annual snowfall is 19 to 20 inches, but snowfall varies considerably from year to year. The greatest single snowfall, which occurred on January 28 and 29, 1922, ranged from 22 to 28 inches throughout the County. A snowfall of this depth is rare, but 10 inches of snow or more accumulates once every 5 or 6 years. Thunderstorms occur on an average of 30 to 35 days each year, while tornados are infrequent. 3/ 3.B. 5 Hydrology

Maryland Route 450 is constructed along a ridge line which essentially divides the corridor into two drainage basins.

To the north and west of Maryland Route 450, a small intermittent branch of Brier Ditch passes through the corridor.

3/ Prince George's County Department of Community Development, Community Renewal Program, 1970, County In Transition.

The average depth is approximately four inches, with the average width being four to five feet. Drainage is tc the northwest into the northeast branch of the Anacostia River.

The area to the south and east of Maryland Route 450 is drained by Beaverdam Creek and its tributaries. Beaverdam Creek flows in a southwesterly direction draining into the Anacostia River, northeast branch. The creek in the vicinity of Maryland Route 410 Extended is approximately eight to ten feet wide with an average depth of six to twelve inches. Water quality is severely degraded with debris and litter lining the creek bottom and banks. Beaverdam Creek, like Brier Ditch, is biologically unproductive and supports no significant freshwater or anadromous fish species.

Development of the area over the years has led to complications within the Beaverdam Creek floodplain, leading to frequent flooding of the Amtrak railroad tracks in the vicinity of the Maryland Route 410 corridor.

Both Brier Ditch and Beaverdam Creek are classified as Class 1 Streams by the Maryland Department of Natural Resources, pursuant to the provisions of Title 8 of the Natural Resources Article, Annotated Code of Maryland (1974 Volume), water poilution control regulations 08.04.01-05.04.12, inclusive, as adopted and effective September 1, 1974. The Prince George's County Department of Environmental Health monitors three Beaverdam Creek sampling stations located as shown on Plate 6. The resulting data is presented in a

separate report and documents the polluted condition of the creek. The Maryland Route 410 improvement will net impact any wetlands.

## 3.B. 6 Vegetation

No unique, rare or endangered habitats or plant associations have been found in the corridor. The plants found are characteristic of those found in the Piedmont and Coastal Plain areas of central Maryland. Most of the woodlands within the corridor are second growth resulting from previous logging operations. The overstory or canopy vegetation is comprised primarily of white oak, red oak, tulip, poplar and sweet gum.

Two specific areas escaped previous logging operations and are comprised of mature trees. One of these is Bellmeade Park and the other is a wooded area to the north of Ardwick Road, near the Hanson Oaks townhouses.

Woodlands in Bellmeade Park are dominated by White Oak up to 4 feet in diameter with occasional mature specimens of Pin Oak up to 2 feet in diameter, Virginia Pine up to 2 feet in diameter, and Sweet Gum up to 3 feet in diameter. Vegetation which has been retained are Holly, Blueberry, Huckleberry, Blackberry, Red Maple, Iron Wood, and saplings of the specimens which compose the overstory or canopy vegetation. The other area of mature trees is composed of White and Red Oak up to 2 feet in diameter. Some of these trees are impacted by the selected alternate.

There are portions, of varying width, in the corridor
which were previously cleared during the installation of sanitary and water utilities.

## 3.B.7 Fish and Wildlife

As previously noted (Section 3.B.5 - Hydrology) neither Brier Ditch nor Beaverdam Creek is biologically productive and supports no significant freshwater or anadromous fish species. Both of these streams have experienced considerable pollution and degradation from the commercial and residential development adjacent to their locations. Beaverdam Creek especially has been used as a repository for refuse.

Due to the surrounding development, the wildlife found , within the corridor is limited to small rodents such as mice, voles and shrews, as well as somewhat larger animals such as squirrels and rabbits.

There are no known populations of any endangered or rare species within the project area. A letter to this effect from the Maryland Department of Natural Resources, Director of the Non-Game Wildife Program is included in Appendix A.

## 3.B. 6 Visual

The corridor presents several different urban vistas. The Riverdale Road area is predominantly apartment complexes. Maryland Route 450 (Defense Highway) is totally commercialized, with a wide range of services offered. Between Maryland Route 450 and U.S. Route 50 (John Hanson Highway), the corridor shows three types of urban development: apartment, townhouse and single family residential. The Route 50 - Pennsy Drive area
is characterized by industrial development, mostly truck related.
From Riverdale Road to U.S. Route 50 the corridor is gently rolling and wooded. Interspersed between the cited development adjacent to the corridor are individual single family homes. South of U.S. Route 50 the corridor is generally flat, which is typical of lands within and adjacent to floodplains.

## 3.C Social Environment

The social characteristics of the people residing in the project area are shown by using three broad sets of characteristics: population, employment and housing. Data has been collected at three levels to show the comparison between the project area population and that of the larger areas. These three levels are: the County, the two planning areas (see Plate 7) as defined by the Maryland National Capital Park and Planning Commission, and the neighborhood comprising of the project area. The neighborhood data was compiled using two sets of boundaries: the Census Tract, as defined by the U.S. Department of Commerce, Social and Economic Statistics Administation, and the neighborhood boundaries as defined by the Prince George's County Department of Human Resources and Community Development (see Plate 8).

## 3.C.1 Population

Prince George's County, Maryland, the most populous in the State, has experienced tremendous population growth since the end


of World War II. The population has grown from 194,182 in 1950 to 660,567 in 1970, an increase of $240 \%$. Although population growth is expected to continue, it is not expected that the future growth will be as rapid as that of the previous twenty years. Shown below is an analysis of the current and projected population levels for Prince George's County.

TABLE 2
PRINCE GEORGES COUNTY POPULATION PROJECTIONS ${ }^{4 /}$


The growth of Prince George's County has been influenced heavily by the District of Columbia and the areas nearest the District are already heavily populated. ${ }^{\text {5/ }}$ Much of the future growth will occur outside of the Capital Beltway (I-95), as the area inside the Beltway is already developed, although not to total capacity.

4/ Prince George's County Planning Department, 1978. Recommended Forecasts of Population, Households and Employment.

5/ Prince George's County Department of Community Development, Community Renewal Program, 1970. County In Transition.

The study area lies predominantly within the BladensburgDefense Heights Planning Area, (P.A. 69) and to a lesser extent, in the Model Neighborhood Area (P.A. 72A) (see Plate 7). As shown below, the population of these planning areas is projected to increase slowly from 1980 to 1985.
$\frac{\text { TABLE } 3}{i^{2}}$
PROJECTED POPULATION - PLANNING AREAS 69 AND TEA-


One factor in the limited growth projection for P.A. 69 ( $0.36 \%$ per year) is the urban nature of much of the area. The Bladensburg-Defense Heights vicinity represented $12 \%$ of the County's population in 1970. Planning Area 72 A has a slightly greater potentaal for population growth than does P.A. 69, (1.79\% per year). This growth, however, will not occur within the study area, as that portion of P.A. 72A is used for industrial and commercial purposes. 7/

Population density is one measure of the degree of urbanization that an area has experienced. The more persons per square mile, the more urbanized the area.

6/ Maryland National Capital Park and Planning Commission, 1979. Cooperative Forecast Round 2.

I/ Prince George's County Department of Community Development, Community Renewal Program, 1974. The Neighborhoods of Prince George's County.

Shown below in Table 4 are the population densities found in the County, in the planning areas, and in the studj area.

TABLE 4
POPULATION DENSITY

|  | Total <br> Land Area <br> Acres | Pop. Density <br> 1970-Persons <br> Per Acre | Pop. Density <br> 1976-Persons <br> Per Acre |
| :---: | :---: | :---: | :---: |
| Prince George's Co. | $297,502.8^{*}$ | 2.22 |  |
| Planning Area 69 | $9,052.2$ | 4.74 | $\mathrm{~N} / \mathrm{A}$ |

Study Area:

| Defense Heights | $1,155.6$ | 11.45 | 12.42 |
| :---: | :---: | :---: | :---: |
| Landover Hills | $1,412.4$ | 9.28 | 10.84 |
| Planning Area 72A | $8,153.4$ | 7.47 | N/A |

Study Area:

| Landover Road | $2,760.6$ | 10.86 | 11.88 |
| :--- | :--- | :--- | :--- |

*Excluded from the total area are certain lands of State and Federal ownership (University of Maryland, Andrews Air Force Base, and Agricultural Center).

The study area divisions exhibit higher population densities than do the County or the total planning areas. This difference may be accounted for in the prevalance of apartment dwellings in the study area and in the greater proportion of undeveloped (or underdeveloped) lands in the County and the planning areas.

Non-white residents of Prince George's County represented 15\% of the total population in 1970, an increase from $9.3 \%$ in 1960. In terms of numbers, in 1970 the non-white population in Prince George's County was about 99,000 persons. Of this, the
majority, $92.7 \%$, were Black. The remainder were of other ethnic backgrounds, primarily Asian. ${ }^{8 /}$

The non-white population in the Bladensburg-Defense Heights vicinity was 1861 persons in 1970 , or $2.5 \%$ of the population within that area. A comparison of neighborhoods shows there are proportionally fewer non-white residents in the study area than in the total planning areas.

The Model Neighborhoods Planning Area, however, had nonwhite population levels well above the County's. This area's population was $69.9 \%$ non-white and the Landover Road neighborhood was $58.2 \%$ non-white.

TABLE 5
RACIAL COMPOSITION 1970

|  | Total <br> Population | Non-White <br> Population | Percent <br> Non-White |
| :--- | :---: | :---: | :---: |
| Prince George's County | 660,567 | 99,000 | 15.0 |
| Bladensburg-Defense <br> Heights Vicinity* | 75,021 | 1,861 | 2.5 |
| Defense Heights | 13,227 | 167 | 1.3 |
| Landover Hills | 12,926 | 247 | 1.9 |
| Model Neighborhood Area* | 56,413 | 39,406 | 69.9 |
| Landover Road | 29,782 | 17,340 | 58.2 |
| (*These areas do not precisely correspond to Planning Areas.) |  |  |  |

## 3.C. 2 Transportation Facilities

Currently the public transportation facilities within the
Route 410 corridor consist of bus, taxi and Metrorail.

8/ Prince George's County Department of Human Resources and Community Development, Community Renewal Program, 1971. An Economic Profile.

The principal bus service operates within Prince George's County under the Washington Metropolitan Area Transit Authority. The Model Neighborhood Area Master Plan cites a high rate of taxi usage within the Model Neighborhood area as an indication of the inability of many area residents and workers to travel by other means to, within, and from the area. The Metro Transit System alleviates this condition in the Model Neighborhood area and adjacent areas by providing additional transit services as well as a more balanced system of circulation (see Section 4.C).

In the vicinity south of Pansy Drive and Maryland Route 410, the Washington Metropolitan Area Transit Authority (WMATA) proposes to construct a Metrobus Garage and Maintennance Farcility for 250 buses (see Plate 2). This facility is part of an overall plan to provide better service for the existing and future bus routes in the integration of the Metrobus and Metrorail Systems.

## 3.C. 3 Recreation

The selected alternate for Maryland Route 410 Extended will not require the use of any public recreational acreage.

At present, the Maryland Route 410 corridor north of U.S. Route 50 is served by 7 developed park and/or park school recreation facilities (see Plate 9) with a total of 61.2 acres. There are three additional sites with acreage of 16.82 which have been purchased or are in the negotiation stages. The specific sites are as follows:


## TABLE 6

## RECREATION SITES

Defense Heights:
*Wildercroft Elementary School 6.0
Beacon Heights Elementary School 8.8
*Wildercroft Recreation Center $\quad 7.4$ Glenridge Recreation Center 12.0
*New Carrollton Recreation Center 4.0 Martin Wood Park (negotiation) 10.0

Landover Hills:

| West Lanham Hills Park School | 7.0 |
| :--- | :---: |
| Landover Recreation Center | 16.0 |
| West Lanham Hills Recreation Center | 6.4 |
| Bellmeade Park | 0.42 |

78.02 Acres
(*Located adjacent to the Defense Heights and Landover Hills Neighborhoods.)

In addition to the above recreation sites, there is a proposed 91-acre community park planned for the area west of Maryland Route 410 between Maryland Route 450 and Riverdale Road (see Plate 14). This area is presently designated as M-NCPPC Park on the approved Master Plan for the BladensburgDefense Heights area. This brings the total parkland available to the residents of the Defense Heights-Landover Hills neighborhoods in the vicinity of the corridor to 169 acres.

The corridor, south of U.S. Route 50, is served by three park and/or school recreational facilities (see Plate 9) with a total area of 23.0 acres. The specific sites are as follows:

Dodge Park School (largely undeveloped) - 8.0 Acres Glenarden Woods Elementary School 5.0

Glenarden Recreation Center $\frac{10.0}{23.0 \text { Acres }}$

In addition to the above facilities, the residents of this portion of the Landover Road neighborhood have access to various recreational facilities located in adjacent communities and/or areas. These include:

Ardmore Recreation Center Kentland Recreation Center Martin Luther King Recreation Center (owned by the town of Glenarden)

Based on the Maryland National Capital Park and Planning Commission Standard of 10 acres per 1,000 people, approximately 290 acres of parkland will be needed to satisfy the expected neighborhood population in the year 2000. Greenbelt Park and land oriented to the Anacostia River contained within Planning Area 69 accounts for over l, 200 recreational acres. The neighborhood facilities, combined with Greenbelt Park and the Anacostia River lands, would more than meet the required MNCPP Standard.

## 3.C. 4 Historical

There are no historic sites within the Maryland Route 410 corridor or adjacent to it (see Appendix E). Only one historic site, "Riverdale" - the Calvert Mansion, is in the vicinity of the project area. This structure, built circa 1801, is approximately l-3/4 miles from the corridor, placing it well beyond the corridor.
3.C. 5 Archaeological

One archaeological site was located during a field surveg of the study corridor on March 15, 1976. One archaeologi-
cal artifact, a stemmed projectile point of coarse-grained purple quartzite, was found on the surface. This specimen probably dates from the late archaic period (4000-1000 B.C.).

No other materials were found on the surface and a number of small test holes dug in the vicinity likewise were unproductive. No additional archaeological surveys were recommended. No evidence of prehistoric camps were encountered along the right-of-way. If, during the construction of the project, sites are discovered, salvage procedures will be employed in accordance with the applicable Federal directives.

## 3.C.6 Public Institutions

There are several public schools located near the Maryland Route 410 corridor (see Plate 10). These are Beacon Heights Elementary, West Lanham Hills Elementary and Glenridge Junior High School. In addition, the Landover Hills neighborhood includes two parochial elementary schools: St. Mary's and the Ascension Lutheran School. No public school property is anticipated for acquisition and no additional school construction is planned within, or adjacent to the Maryland Route 410 corridor. However, West Lanham Hills Elementary School and Glenridge Junior High School are programmed for additions and/ or renovations, The proposed construction of Maryland Route 410 will not interfere with these additions or renovations. 3.C. 7 Community Facilities

Health facilities in Prince George's County, Maryland are extensive, both in terms of type of facility and in spatial

distribution of facilities. There are two Public Health Centers near the project area: the Department of Headquarters in Cheverly and the John Carroll Clinic near Lanham.

There are no public libraries within the Maryland Route 410 corridor.

## 3.D Economic Environment

The growth of the Federal government and population in Washington, D.C. during the twentieth century has had a significant influence upon the urbanization of Prince George's County. The pressures attendant with that growth still continue as an exertive force in the development of Prince George's County.

Results of this growth has been the expansion of contract construction and retail trade activities in the County. These factors represent two of the largest industrial sectors in the County and with the addition of the service industry constitute well over half of the private sector employment. Wholesale trade and manufacturing are becoming increasingly important to to the economy of the County.

## 3.D. 1 Tax Base

Approximately 67 to 97 acres of land will be removed from the County and State Tax Rolls due to the selected alternate. The loss in the tax base to the agencies involved are:
Prince George's County - \$158,000 (approx.) State - $\$ 7,000$ (approx.) However, this loss would be replaced partially or com-
pletely by the taxes collected from the commerical developments expected to be attracted to the "Metro East Triangle" area.

At present, all of the property within the Metro East Triangle has been sold and several buildings have been built. Some of these buildings are occupied by the Peoples Security Bank of Maryland, the Retail Clerks Union, Rouse \& Associates, the Digital Equipment Corporation and Landmarks Metroplex Office No. 1. Rouse \& Associates presently has two buildings under construction and a fourteen-story hotel is scheduled for construction in April 1981.

## 3.D. 2 Income

The 1977 per capita money income for Prince George's County was $\$ 6,850$. This was higher than the State of Maryland, which was $\$ 6,561$. Shown below are the 1977 per capita money income estimates for the planning areas considered in this report.

TABLE 7
1977 Per Capita Money Income Estimates
Planning Area 69:

New Carrollton
Handover Hills
Cheverly
Bladensburg

Planning Area 72A:
Glenarden
Seat Pleasant
Fairmont Heights Capital Heights

| $\$$ | $7,202$. |
| :--- | :--- |
| $\$$ | $7,414$. |
| $\$$ | $8,732$. |
| $\$$ | $6,714$. |


| $\$$ | $5,565$. |
| :--- | :--- |
| $\$$ | $4,825$. |
| $\$$ | $4,780$. |
| $\$$ | $4,799$. |

As can be seen, Bladensburg and those listed under Planming Area 72 A dip below the 1977 per capita money income for

Prince George's County.
The percentage of the population in these areas that are below the poverty level (non-farm family of 4, headed by a male, $\$ 3.745$ ), as defined by the U.S. Social and Economic Statistics Administration, can serve as indicators (see Table 8).

## TABLE 8

Population Below Poverty Level (Families) 1970
Prince George's County - $\quad 4.3 \%$
Bladensburg-Defense Heights Vicinity:
Defense Heights Neighborhood - $1.4 \%$
Landover Hills Neighborhood - 1.9\%
Model Neighborhood Area - $\quad 7.6 \%$
Landover Road Neighborhood - $5.8 \%$
The Model Neighborhood Area and the Lanham Road Neighborhood were the only areas in the project area with incidences of poverty higher than the County average.

## 3.D. 3 Labor Force

The majority of Prince George's County work force are engaged in whitecollar occupations, with clerical workers representing the largest occupational category ( $25 \%$ of the work force). Shown below is the distribution of the work force by occupation:

TABLE 9
Occupations - Prince George's County

| Professional | $23.8 \%$ |
| :--- | ---: |
| Technical | $5.3 \%$ |
| Managers/Self-Employed | $8.9 \%$ |
| Sales | $5.4 \%$ |
| Clerical | $25.3 \%$ |
| Skilled | $12.6 \%$ |
| Semi-Skilled | $8.9 \%$ |


| Unskilled | $0.9 \%$ |
| :--- | :--- |
| Service | $7.9 \%$ |
| Household | $0.5 \%$ |
| Unclassified | $0.5 \%$ |

The following table illustrates the number of workers in private wage and salary employment, those in government employment, and those in other employment categories (proncipally self-employed, unpaid family workers).

TABLE 10
Wage And Salary Employment Prince George's County

|  | Number | Percent |
| :--- | ---: | :---: |
| Private Wage \& Salary | 152,504 | $57 \%$ |
| Government Workers | 107,188 | $40 \%$ |
| Other Workers | 9,713 | $3 \%$ |
| Total | 269,405 | $100 \%$ |

As can be seen, government employment, which includes State and local governments, as well as the Federal government, contributes significantly to the economy of the County.

The residents of the project area are predominantly wage and salary workers in the private sector. In only one census tract did the number of government workers exceed the number in the private sector. In the other tracts, government workers represented about one-third of the workers, the remainder being private sector wage and salary earners.

## 3.D. 4 Industry

There are a number of areas in the County where economic activity is concentrated. The Maryland National Capital Park and Planning Commission has identified thirteen areas as non-
community potential employment areas, in addition to the numerous Federal employment centers in the County. One of these non-community potential employment centers forms the southern boundary of the Maryland Route 410 corridor - the Ardwick Industrial Park (see Plate ll). Economic activities within the industrial park are predominently wholesale truck and transportation oriented, with some light manufacturing. In a recent survey of the businesses in the park, it was found that trucking and automobile transportation, and therefore, the streets and other public rights-of-way provided by the County, were of above average importance to most of the respondents. Access to this area is considered by many to be inadequate. There are only two major points of ingress and egress and the volume of traffic using these points has grown considerably over the past decade. However, with the construction of the Maryland Route 410/U.S. Route 50 Interchange, access to the Ardwick Industrial Park should improve considerably.

Table 11 indicates the distribution of the lands zoned industrial contained within the two planning areas, as well as those acreages petitioned for zoning changes under various industrial categories.

TABLE 11
Land Zoned Industrial ${ }^{\text {9// }}$
Developed Undeveloped Petitioned

| Prince George's County | $7,405 \mathrm{Ac}$. | $3,014 \mathrm{Ac}$. | $3,549 \mathrm{Ac}$. |
| :--- | ---: | ---: | ---: |
| Planning Area 69 | 331 Ac. | 35 Ac. | 10 Ac. |
| Planning Area 72A | 705 Ac. | 512 Ac. | 98 Ac. |

9/ Maryland National Capital Park and Planning Commission, February 1975. Short-Term Industrial Zoning Needs Study.

In terms of the locations of existing sites, there appears to be a strong orientation towards the railroad and major vehicular circulation facilities. This is true of the existing development, as well as the zoned but undeveloped industrial land and land covered by pending zoning petitions.

The development of the Metro Station as the "Metro East Triangle" (Plate 12) adjacent to the Ardwick Industrial Park is expected to stimulate a great deal of new economic activity. The "Metro East Triangle" is formed by the Capital Beltway, U.S. Route 50 (John Hanson Highway), and the Amtrak railroad tracks. With the improvements to the public facilities, sheduled for 1980 in Prince George's County Capital Improvement Program, the potential for new or increased employment opportunities appear to be highest around the approved Metro Stations within the following locations: the proposed Capital Heights New Town Center, and the Ardwick Industrial Park. The opportunity for increased employment around the New Carrollton Metro Station has been estimated at over 4,000 jobs in the Transit Impact Study. $10 /$

## 3.D. 5 Commercial Development

There are a number of large, regional shopping centers in Prince George's County, the development of many of which was spurred by the construction of the Capital Beltway in the 1960's. The Economic Index of Prince George's County lists 52 shopping centers as being among the largest in the Metropolitan Washing-

ton area. In addition to these large facilities, there are numerous other commercial areas that are neighborhood oriented.

The Defense Heights neighborhood has over 100 acres (or $9.0 \%$ of the neighborhood land area) in commercial development. Of this, almost one-half is concentrated in a regional shopping center, the Capital Plaza. This center is located on Defense Highway near the Baltimore/Washington Parkway. The remainder of the commercial development in this area is found along Defense Highway and tends to be either commu-nity-serving retail and service facilities, or highway-oriented facilities.

Commercial development in the Landover Hills neighborhood also occupies over 100 acres. Development is almost entirely community-serving or highway-oriented. The nature of development is strip-commercial and includes clothing stores, grocery stores, and gas stations. Most of this is located along Landover Road and Defense Highway, which has the larger concentration.

Commercial development in the Landover Road neighborhood occupies 115 acres, over 80 acres of which is in the Landover Mall Shopping Center. Other commercial development consists of the Dodge Park Shopping Center, the Kent Village Shopping Center, and a small shopping facility in Palmer Park. The Dodge Park and Kent Village centers are located on Landover Road. 3.D. 6 Community Services

For the provision of police protection, Prince George's

County is presently divided into five administration districts or "precincts". Each of the County Police substa. ions has the responsibility for patrolling an individual precinct.

Maryland Route 410 corridor is currently serviced by the Seat Pleasant Station, located on Addison Road.

The corridor is also serviced by three fire stations located in Riverdale Neights, $\mathrm{L} a n d o v e r ~ H i l l s ~ a n d ~ W e s t ~ L a n h a m ~ H i l l s ~$ (see Plate 13). The West Lanham Hills fire station area of primary protection also includes the segment of the corridor located to the south of U.S. Route 50 .

With Riverdale Heights and Landover Hills being in close proximity to Prince George's General, Prince George's Doctors and Leland Memorial Hospitals, 75 percent or more of emergency calls will be transported to those three, with Prince George's General receiving most of the calls.


## 4. LAND USE PLANNING

## 4.A OnGoing Plans

4.A.1 Land Use

The majority of the selected alignment for Maryland Route 410 Extended lies within Planning Area 69, "Bladens-burg-Defense Heights". The remainder of the selected alignmont (U.S. Route 50 to Penney Drive) lies in the northern portion of Planning Area 72A, "Model Neighborhood Area".

As a result of the approved Master Plan for Area 69, a portion of the right-of-way requirements for the improvement has been acquired or placed in reservation along the corridor.

Maryland Route 410 Extended (East-West Highway) is shown in the Bladensburg-Defense Heights approved Master Plan dated December 1980 for Planning Area 69 as a proposed arterial highway.

The current plan for Planning Area 72A, "Model Neighborhood Area", was adopted by the Maryland National Capital Park and Planning Commission and approved by the Prince George's County Council. The plan is serving as the official guide for all major land use and public facility decisions for Planning Area 72A.

The approved Master Plan for the planning areas establishes an implementation staging concept. The goal is "to prescribe a sequence of development that facilitates the
adequate provision of public facilities and services, and provides for logical growth and development of the planning area". The staging plan intends to indentify future points in the development process when it will be necessary to fund new highway and other public facilities.

Within the immediate Maryland Route 410 corridor, the Master Plan proposes seven categories of land use (plate 14). These land uses are listed below:

```
Single Family Residential
Multiple Family Residential
Commercial
Industrial
Public, Quasi-Public
Parks
Open Spaces
```

A comparsion of existing and planned land use in the area reveals much about expected development trends. In general, there will be a conversion of existing woodlands, and/or lands not currently in use, to residential properties. Maryland Route 410 Extended would improve access to the proposed development.

The Master Plan for Planning Area 72A allows for continued development of the industrial area located in the northern and western portion of the planning area.

## 4.A. 2 Water and Sewer Service

Staged development within the area would depend to a great extent on the ability to obtain water and sewer service. A new secondary sewage treatment facility has been built and is currently in operation serving the area.


## 4.A. 3 Commercial Area and Activity Centers

The goal of the commercial area and activity element of the approved Master Plan is "to provide for well-designed activity centers responsive to local needs for shopping, public services and recreating, at locations that reinforce the community structure". No planned activity center would be adversely affected by the extension of Maryland Route 410.

## 4.A. 4 Arterial Highways

The proposed alignment of Maryland Route 410 Extended, as shown in the 1980 Master Plan for Planning Area 69, is designated as an 'Arterial Highway'. An arterial highway is a facility having a minimum l20-foot right-of-way, and four or more lanes. The proposed improvement would provide for east-west traffic demand through the center of the planning area. This traffic demand will become more evident with the development of the Metro East Triangle.

The proposed alignment for Maryland Route 410 Extended, as shown in the September 1973 Master Plan for Planning Area 72A, designates the proposed improvement between U.S. Route 50 and Pennsy Drive as a 'Collector' type highway. The future connection between Pennsy Drive and Jefferson Avenue is designoted as a proposed 'Primary' highway (Plate 12). One of the objectives of the Master Plan for Planning Area 72A is "to provide an adequate major circulation system in balanced velationship to the Metro Transit System station site, living areas and other land use within the Model Neighborhood Area".

## 4.A. 5 Transit

Two WMATA facilities are located within the general area of the Maryland Route 410 Extended corridor: the Landover Road and New Carrollton Stations. Both stations are within Planning Area 72A (Plate 7).

The closest station to the corridor is the rail rapid : : transit facility at New Carrollton, located in an area known as the "Metro East Triangle" (Plate 12). The "Metro East Triangle" is in the northeastern corner of Planning Area 72A and is formed by the intersection of the Amtrak railroad tracks, U.S. Route 50 and I-95 (Capital Beltway). In conjunction with the development and use of the rapid transit system, feeder bus routes have been established to serve the system and the accompanying facilities.

## 4.B Existing Use

In the immediate Maryland Route 410 corridor, there are eight categories of existing land use (Plate 15). These categories are listed below along with an indication of their velafive abundance within the corridor:

TABLE 12

## CURRENT LAND USE

Single Family Residential ..... 10\%
Multi-Family Residential ..... 4\%
Commercial ..... 4\%
Industrial ..... $13 \%$
Public, Quasi-Public ..... $12 \%$
Parklands ..... $1 \%$
Open Space ..... $8 \%$
Land Not In Use/Woodland ..... $48 \%$


The selected alignment begins at Riverdale Road in an area of apartments, some single family dwellings, and service oriented commercial establishments. From this area the road would proceed southerly through an area of undeveloped woodland, along a branch of Brier Ditch. To the east of the road are the Lanham Woods and West Lanham Estates subdivisions. The latter of these subdivisions is abutted by land previously reserved for highway construction. The Glenridge Junior High School and the Glenridge Shopping Center at Annapolis Road also adjoin this dedicated ground to the west. At Annapolis Road, which is the drainage divide between Brier Ditch and Beaverdam Creek, the land use is all commercial - restaurants, auto retail, shopping and service stations, etc. From Annapolis Road, the highway would again pass through an area of undeveloped woodland until nearing Ardmore-Ardwick Road. At this point, the road would abut the Lanham Terrace Apartments. Proceeding from the apartments, the highway would pass through an area of single family detached homes and then follow the existing interchange ramp from Ardmore-Ardwick Road over U.S. Route 50. East of the selected alignment is a development of townhouses known as Hanson Oaks. After crossing U.S. Route 50, the alignment crosses Beaverdam Creek, its floodplain, the Amtrak (Pennsylvania Railroad) tracks, and the Metro line. It then enters the Ardwick Industrial Park and terminates at Penney Drive, a four-1 ane facility, 46 feet curb to curb to Polk Street.

## 4.C Federal Actions In The Area

Action was undertaken to use Federal funds for the Metro System. The regional plan for Metro was adopted in March 1968 by the jurisdictions concerned.

Of the 101 total miles of track in the system, over $14 \%$ is in Prince George's County. The system includes four routes in Prince George's County. One of the four routes (the New Carrollton Line) would serve the project area and has stations at Landover and New Carrollton.

The planning for the New Carrollton Station (traffic access development, etc.) included the assumption that Maryland Route 410 Extended would be constructed ans an integral part of the system.

In addition to the Metro System, other projects within the area are being conducted with Federal participation. These projects are the reconstruction of U.S. Route 50 (I-97 project), the Baltimore/Washington Parkway and studies to construct the Cabin Branch Interchange.

The I-97 project consists of an interchange at I-95/ U.S. Route 50 and the reconstruction of U.S. Route 50 to Interstate standards. The limits of this project are from west of the I-95/U.S. Route 50 Interchange to South River for a total distance of approximately 15 miles. The project is a candidate for addition to the Maryland Department of Transportation 1981-1986 Construction Program following Project Planning activities.

The Baltimore/Washington Parkway is proposed as a sixlane reconstruction type project. The project limits are from the D.C. line to the Baltimore City line for a total distance of approximately 30 miles. An Interim Alternates Meeting was held in June 1976 and Location Approval is estimated for the Spring of 1983. The project is still in the Project Planning stages.

There are no activities planned beyond the Project Planming studies for the U.S. Route 50/Cabin Branch Interchange. A total of three Public Hearings were conducted with the latest being held on April 17, 1979.

## 5. PROBABLE IMPACTS OF THE SELECTED ALTERNATE

## 5.A Direct Impacts

5.A.1 Natural/Wilalife

The selected alternate passes through an area of habitat as described in Section 3.B.7. This area is closely surrounded by development of varying degrees of density. The streams are biologically unproductive and larger species of wildlife, uncomfortable living in close proximity to human activities, have long since moved to other areas. The only species remaining are small creatures which can live in small areas in close proximity to man.

It is to be expected, therefore, that only the wildlife occupying the actual land to be built upon will be affected in the long run by the construction process. During construction, the habitat area impacted might include an additional 100 yards on either side.

After construction there may be a continuing small number of road kills associated with the new road, especially where habitat exists on both sides of the road. Fencing would prove ineffective as these animals are generally burrowers.

Consultation with the Maryland Department of Natural Resources has revealed that Maryland Route 410 does not jeopardize the continued existence of any known rare or endangered species. A letter to this effect from the Director of the Nongame Wildlife Program is included in Appendix A.

## 5.A. 2 Social

The selected alternate will require the displacement of four businesses (night-club, towing service, construction maintenance service and machine shop) and nine homes, relocating an astimated thirty (30) persons. One family is projected to need housing as last resort. The value of these nine homes ranges between $\$ 60,000$ and $\$ 150,000$. Fifteen of those who would be displaced are of a black minority group. However, there does not appear to be any other adverse impact likely on any other groups (such as elderly persons, handicapped persons, pedestrians or bicyclists) caused by the selected alternate. The income ranges of the residential displacees are from approximately $\$ 11,000$ to $\$ 33,000$.

The selected alternate would reduce the response time for West Lanham Hills Fire Station No. 28 to the northern portion of Planning Area 72 A , south of U.S. Route 50 .

The selected alternate will provide easier access to the Metro facilities at New Carrollton, thereby reducing the number of vehicles utilizing the existing local road network within the project area.

The selected alternate would also provide access to the Ardwick Industrial area. Access to this area from the RiverdaleHyattsville vicinity is currently possible only via a series of local streets which results in considerable truck traffic in residential neighborhoods.

The selected alternate will not require the use of any public recreational acreage.

The selected alternate for the intersection of Maryland

Route 410 Extended and Riverdale Road (Alternate 2) will not require the acquisition of any buildings. However, the same is not true for the mainline between Riverdale Road and Maryland Route 450 (Annapolis Road). The two dwellings at the end of Patterson Street would be affected.

The selected alternate at the juncture of Maryland Route 410 Extended and Maryland Route 450 (Annapoli s-Road) is a signalized at-grade intersection that utilizes a raised concrete median on Maryland Route 450. The purpose of the raised median is to prevent vehicles from crossing Maryland Route 450, thus preventing potential rear-end collisions. The night-club that is located on the south side of Maryland Route 450, opposite the Glenridge Shopping Center, would be affected by this alternate.

The selected alternate for the combined interchanges on U.S. Route 50 cause the greatest amount of impact. Three businesses and seven single family dwellings, displacing approximately 23 persons (fifteen of which are minority group members), would be affected. The three businesses are located on Adams Avenue. Four of the seven single family homes are located on Ardmore-Ardwick Road, two are located on Parkwood Street in the Bellmeade subdivision and one is located on Adams Avenue.

It is anticipated that there will be some reduction in property values of the homes located on Parkwood Street in the Bellmeade subdivision. This is due to the partial taking of property for and the proximity of Ramp 'A' (see Exhibit 7).

A detailed study was made of the available replacement properties on the market for the subject area. According to local real estate agents and local newspapers, there are 19 suitable homes available in the same price range $(\$ 60,000)$ and 17 business sites ( 5 sale, 12 lease) available to relocate the 8 homes and 4 businesses to be taken. Five rental housing units are available for the one rental housing unit displaced.

There are no known State or Federal projects that would interefere significantly with the successful relocation of the displacees on this project. The estimated lead time for successful completion of relocation is twenty-four months. It is felt that all relocation could be accomplished in accordance with the requirments of the Uniform Relocation Assistance and Land Acquisition Program Act of 1970. The Maryland State Highway Administration Relocation Assistance Program is described in Appendix G.

Currently, communities along Ardwick Road north of the proposed IJ.S. $50 / 410$ interchange have direct access to U.S. Route 50 eastbound and indirect access to U.S. 50 westbound. Average travel distance to the Metro Station area is approximately $3 / 4$ mile, while travel to westbound U.S. 50 is apporoximately $1 / 2$ miles, via U.S. 50 eastbound and the Metro East interchange. With the construction of MD 410 Extended, the existing connection to U.S. 50 will be removed, and access to U.S. 50 will be provided via existing
local roads to MD 410 Extended. The travel distance to westbound U.S. 50 would remain relatively unchanged and the travel distance to the Metro area would increase by approximately 1 mile. This impact is offset by the increased safety and lower traffic volumes of the local roads. An at-grade intersection was not considered at the MD 410/Ardwick Road intersection because of the proximity of interchange ramps, the various grades involved, and the difficulty of making such a configuration work safely and efficiently.

## 5.A. 3 Air

The air quality anlaysis of the subject project was completed in September, 1979. No violations of the one-hour or eight-hour State and National Ambient Air Quality Standards are predicted to occur in either study year (1985 and 2005) adjacent to the line segments studied. This project is consistent with the State Implementation P1 an and has been evluated considering: 1) relationship to reginoal air quality goals, 2) microscale carbon monoxide levels, and 3) construction impacts. See Appendix $D$ for results of the Air Analysis and Consistency Statement.

| 5.A. 4 Noise |  |
| :---: | :---: |
| The following noise sensitive receptors have been iden- |  |
| tified for the Mary | 410 Extended project: |
| Noise Sensitive Area |  |
| 1 \& 2 | Wildercrof't Apartment complex east of existing Riverdele Road |
| 3 | Auburn Manor Apartments east of NSA 1 and 2, north of the centerline of Maryland Route 410 Extended |
| 4 | Four single family residences in Lanham Woods along Sunrise Drive, west of Patterson Lane |
| 5 | Development of thirteen single family residences on Sunrise Drive, east of Patterson Lane |
| 6 | Eleven single family residences along Jefferson Street in West Lanham Estates, north of the centerline of Maryland Route 410 Extended |
| 7 | Seven single family residences along Ingraham Street and Jefferson Street in West Lanham Estates, east of NSA 6 |
| 8 | A single family residence at the corner of Annapolis Road and 67th Avenue |
| 9 | Single family residential development of Landover Hills along Emers on Road east of Annapolis Road and north of the centerline of Maryland Route 410 Extended. A portion of the area adjacent to the right-of-way at Maryland Route 410 is presently undeveloped. |
| 10 | Three single family residences along the west side of Ardmore-Ardwick Road northeast of the centerline of Maryland Route 410 Extended |
| 11 | Proposed West Lanham Hills Recreation Center presently undeveloped. There are no present plans for development. |



The mainline portion of Maryland Route 410 Extended, including the selected alternate at Riverdale Road (Alternate 2), will impact noise sensitive areas $1,2,3,4,5,6,9,17,18$, 19 and 20. The selected alternate at Maryland Route 450 (Alternate l) will impact noise sensitive areas 7 and 8 . Noise sensiLive areas $10,12,13,14,15$ and 16 will be impacted by Alternate 2 Modified, the selected alternate for the combined interchanges on U.S. Route 50.

Noise sensitive areas l, 2 and 3 contain twelve threestory apartment buildings, which will be impacted to varying degrees. Areas 4 and 5 contain more than fifty (50) improved residential lots, areas 6, 7, 8 and 11 , over thirty (30) impproved lots, area 9, more than forty (40). Area 9 also includes approximately thirty-five (35) unimproved lots. Areas 10, 12 and 13 consist of eight (8) garden apartment structures, ten (10) improved residential lots and approximately fifteen (15) unimproved residential lots; areas 15,16 and 17 , six to eight apartments and twenty to thirty residences and areas 18 and 19 over thirty (30) improved residences. Noise sensitive area 20 was established at Glenridge Junior High School.

The overall impact of the Maryland Route 410 Extended project will be a severe increase in ambient levels at most of the noise sensitive areas. This is due to the fact that the receptors presently experience low levels of traffic generated noise.

Only one noise sensitive area (19), a residential develop--
ment along 67th Place, is expected to exceed Federal Design noise levels. Noise control measures have been investigated and it appears that measures can be implemented to reduce the impacts at noise sensitive areas $1,3,4,5,6,7,8$ and 17. Plate 16 illustrates where these noise control measures would be recommended and further studied during final design. The measures would be fences, walls, earth berms or combinations of each. The range of attenuation that can be expected is 8 to 10 dBA . Heights of these noise control masure would average 12 to 15 feet and estimated costs are approximately $\$ 200$ lineal foot of barrier. Additional information can be found in the Noise Analysis for this project. The report was also distributed to local jurisdiction for their use in zoning and permit activities.

The Wildercroft Elementary School has been permanently closed and was not considered as a noise sensitive area.

## 5.A. 5 Water Quality/Aquatic Life

Beaverdam Creek and Brier Ditch are polluted and biologically unproductive. They support no significant fish population. Nevertheless, the construction of Maryland Route 410 Extended could have impacts upon the aquatic life present in the Anacostia-Potomac River System, particularly if construction coincides with periods of heavy rains. However, every effort will be made to minimize these impacts and to reduce short-term water quality degradation to acceptable levels.

Disruption to the existing groundwater table is anticipated to be minimal. Additional information in the form of soil boring will be obtained and a more accurate assessment of the groundwater table will be made during the design phase.


## 5.A.6 Stream Modification/Improvement

The selected alternate would necessitate two crossings of Brier Ditch and the rechanneling of approximately 1000 feet of a branch of Brier Ditch adjacent to Lanham Woods (see Exhibit 4 on page 6-9). Additionally, there will be three other crossings of drainage swales. Beaverdam Creek will be crossed i via structure, therefore minimizing the impact to this stream.

The relocation of Brier Ditch cannot be avoided without significantly increasing the impact upon the Glenridge Shopping Center at Maryland Route 450 and the Lanham Terrace Apartments north of Ardmore-Ardwick Road.

In those cases where a Waterway Construction Permit is required, the State Highway Administration will cooperate with the Department of Natural Resources in order to design stream changes and crossings in a manner which will meet the long-term environmental requirements of the previously described existing biological community structure, and mitigate any associated adverse impacts. This will be the case for Brier Ditch.

## 5.A. 7 Flood Hazards

In accordance with Executive Order 11988, the 100-year floodplain associated with Beaverdam Creek has been conceptionally delineated and an evaluation of impact made.

Federal Insurance Administration maps are not available for the project area. A floodplain study of the area was completed by the Washington Metropolitan Area Transit Authority and was adopted by the Maryland Department of Natural Resources.

Exhibit 1 depicts the 100-year floodplain limits within the project area and are based on data obtained from Prince George's County and the U.S. Army Corps of Engineers.

Beaverdam Creek and its floodplain is fed by several tributaries, most of which originate beyond the Triangle. Two of the sources are on the west side of the Amtrak Rail. Their rate of flow into the Triangle is governed by the drainage structures under the Amtrak right-of-way. A third source originates on the east side of the Capital Beltway. The flow of this source is governed by the drainage structures under the Beltway and the enclosed system associated with the New Carrollton Metro Station. A fourth tributary emanates in the southwest quadrant of the I-95/U.S. Route 50 Interchange and flows northwesterly under U.S. Route 50 into Beaverdam Creek. The confluence of these tributaries is situated in the Triangle adjacent to Corporate Drive. From the point of confluence, Beaverdom Creek flows southwesterly toward the Ardmore-Ardwick underpass of U.S. Route 50. The rate of flow through this underpass is controlled by the pipe under the access ramp from westbound U.S. Route 50 to Garden City Drive. The area contained between this access ramp and Corporate Drive constitutes the existing retention system for the Triangle.

The selected alternate for the interchanges on U.S. Route 50 (Alternate 2 Modified) were developed utilizing and in conformance with the above noted floodplain studies. With the exception of Ramp 'I' and portions of Ramp ' $L$ ' and Adams


Avenue Extended, which are proposed to be built on fill material, bridges were depicted in the southeast and southwest quadrants of the Maryland Route 4I0/U.S. Route 50 Interchange in part to determine that the impacts to Beaverdam Creek and its floodplain can be minimized.

Hydraulic and hydrology studies are presently being conducted on Beaverdam Creek and its tributaries. Upon completion of these studies, the actual length of structures will be determined to provide proper floodplain management.

In July 1979, a floodplain field review was conducted by representatives of Federal, State and County to validate findings and field conditions with Brier Ditch, Beaverdam Creek and their floodplains and tributaries. As a result of that field review, it was concluded that the construction of Maryland Route 410 Extended, including the combined interchanges on U.S. Route 50, would not impose a significant impact on the floodplains of either Beaverdam Creek or Brier Ditch.

None of the alternates selected will have a significant encroachment on the floodplain, afford risk to property or life, result in any impacts to the beneficial floodplain values or provide direct or indirect support to further development within the floodplain.

## 5.A. 8 Construction

As with all highway construction projects, the selected improvement can potentially affect residents of the area by increasing air pollution, noise pollution, water pollution and visual pollution. Each of these problems, while unavoidable, can be
mitigated somewhat by careful planning.
During the construction phases of the project, noise emitted from construction equipment will be sporadic and of varying intensity. Information regarding noise levels from construction equipment such as bulldozers, earthmovers, sarapers, etc. is limited and no prediction methods are currently available to assess the impact. A listing of noise levels measured for various types of construction equipment is given in Table 13. These levels are based upon limited measurement data and will vary depending on age and maintenance of equipment.

Construction under normal circumstances would be confined to the hours between 7 arm. - 6 p.m. No adverse impacts during evening or nighttime is expected to occur and consideration will be given to temporary noise control measures where warranted.

The various stages of construction where impacts can occur are clearing and grubbing, grading, paving, seeding and mulching.

## 5.A.9 Borrow Areas

In accordance with the provisions and requirements of Chapter 245 of the Acts of 1970 for the State of Maryland, the Contractor shall be responsible for obtaining permits and/or approvals from the appropriate County agency for any off-site work, which includes off-site borrow pits, waste areas, and the treatment of these during and after completion of the project. The County agency would refer the plan for such areas to the


NOTE: Eased on limited available data samples

Soil Conservation District for review and approval of the aerosion and sediment control provisions. A copy oi the permits and/or approvals must be furnished to the Engineer prior to

## 5.B Secondary Impacts

The construction of a highway corridor through vacant or unimproved areas could result in impacts that are secondary to the initial undertaking. Among these impacts are more rapid commercial land development, alteration of population and area growth patterns, and changes in the pattern of social and economic activities. These changes can have far more impact, in a cumulative sense, than the primary impacts associated with the highway improvement. The existing Master Plans for the area ensure that these will only occur where desired.

In the case of Maryland Route 410 Extended, the highway corridor is predominantly wooded or vacant land, and is in an area which has experienced a large amount of development. The approved Master Plan for Planning Area 69, which includes the highway corridor between Riverdale Road and U.S. Route 50, shows Maryland Route 410 Extended. Thus, by utilization of the Master Plan, development has been limited primarily to those areas adjacent to the corridor. The same is true for the adjacent Master Plan for Planning Area 72A. In this case, the highway corridor passes through the Ardwick Industrial Park.

Maryland Route 410 Extended will also provide better access to the Metro Station at New Carrollton. This action, by rerouting non-local traffic off local streets and onto limited
access Maryland Route 410 Extended, could induce a more intentsified land use in the areas immediately adjace it to the road interchanges and Metro Station, and provide greater employment opportunities.

## 5.C Mitigation of Impacts

When considering the adverse impacts associated with a highway construction action, it must be realized that these impacts fall within three time frames: construction, the short-term and the long-term. Mitigation of adverse impacts is essentially the alternation of practices and plans to reflect the constraints present in each of these time frames. This section will address the potentials for mitigation of adverse environmental impacts of the selected action discussed in the previous section.

The construction of Maryland Route 410 Extended will have certain impacts upon the corridor, depending to a certain degree upon which alternate is selected.

To reduce right-of-way acquisition and construction impacts to those properties that are adjacent to the corridor, two types of roadway sections, open and closed, for the mainline have been evaluated and will be considered during the final design phase of the project. These sections each utilize a raised median that varies from 16 to 30 feet. As discussed in the Draft Environmental Impact Statement, the median width for the mainline of Maryland Route 410 Extended was 54 feet.

To minimize impacts to those properties in the vicinity of Maryland Route 410 Extended and Maryland Route 450, an atgrade signalized intersection has been selected in lieu of the diamond type interchange.

To provide access to the Hanson Oaks community, Alternate 2 Modified (the selected alternate) provides for a bridge over Maryland Route 410 Extended (see Exhibit 7).

The State Highway Administration has the responsibility to protect Maryland's land, water and air from pollution which may result from its assigned activities. This responsibility is documented in the following manner: for all alignments, Federal and State regulations would be incorporated into the construction specifications and coordinated with the Maryland Department of Natural Resources to minimize water quality degradation and other environmental impacts.

All highway contracts contain specific items for erosion and sediment control measures. These include:

- Temporary sediment traps
- Temporary ditch basins
- Retaining streams in natural state
- Stone embedded baffles in concrete channels to act as energy dissipaters
- Berming of fills and installing temporary slope drains
- Construct certain side ditches as first order of business
- Install permanent slope pipes at no-cut, no-fill intersection
-. Construct serrated cuts where soils permit
- Rip-Rap ditches for velocity control
- Permanent seeding and mulching as soon as possible
-. Terracing of steep slopes accompanied with woody vegetaction
- Temporary seeding where grading will be exposed for an extended period

Close liaison will be maintained with Soil Engineers, the Department of Water Resources, the Soil Conservation Service and other government agencies implementing these erosion and sediment control measures. Also, close liaison will be maintaine with the Maryland Department of Natural Resources concerning the location and design of structures which affect water courses.

It is standard design procedure to maintain the maximum amount of existing vegetation and to require re-vegetation of all exposed soil areas. Drainage channels will be lined with material appropriate for the velocity of water carried if needed. Structures will be provided with waterway openings of proper shape and size to pass flood flows with a minimum increase in the natural or existing flood flow velocity at the structure and to keep the rise of the upstream flood surface to a minimum. Detailed standards and specifications are stated in the State Highway Administration's "Book of Standards Highway and Incidental Structures", and "Erosion and Sediment Control Programs" as approved by the Maryland Department of Natural Resources.

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

The Maryland Bureau of Air Quality and Noise 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 and Noise Control found that the specifications are consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures will be taken to minimize the impact on the air quality of the area.

## 6. ALTERNATES

## 6.A Alternate Corridor

With the adoption of the Master Plans for Planning Areas 69 and 72A, and the subsequent reservation and/or acquisition of land for highway construction along with the adjacent divelopment, an additional alternate alignment for Maryland Route 410 Extended would be inconsistent with the master plans and was not considered (see Exhibit 2 and Section 2.C, page 2-15).

## 6.B Detailed Description of the Selected Alternate

As previously mentioned in Chapter l, the Selected Alternate for Maryland Route 410 Extended consists of a signalized at-grade intersection (Alternate 2) at Riverdale Road, a signalized at-grade intersection (Alternate 1) at Maryland Route 450, two (2) interchange configurations (Alternate 2 Modified) on U.S. Route 50 that are connected with a collector-distributor road system, and a " T " type intersection at Pennsy Drive. This section will address each of those alternates selected, the construction and right-of-way costs and a summary of the impacts associated with each alternate.

## 6.B.1 Riverdale Road (Alternate 2)

The alternate selected at Riverdale Road and Maryland Route 410 Extended is a channelized " $T$ " intersection, which will be signalized (see Exhibit 3). Maryland Route 410 Extended has been shifted easterly from the centerline alignment to allow the extreme right lane of eastbound Riverdale Road, which is a


right turn Lane, to clear 67th Place. 'lh channelization island is large and clearly defined and would provide some storage area to permit safer merging movements. This alternate provides for a free dual right turn from eastbound Riverdale Road to southbound Maryland Route 410 and a signalized dual left turn movement from northbound Maryland Route 410 to westbound Riverdale Road.

Right-of-way required from the apartments on the south side of Riverdale Road between 67 th Place and 67 th Avenue has been minimized. However, right-of-way acquisition will be require from several private owners and the former Wildercroft Elementary School on the north side of Riverdale Road. This alternate reduces the impact of 67 th Place on the right turn lane from eastbound Riverdale Road.

All existing entrances are provided for, however, numerous entrances located off the western portion of Riverdale Road may tend to break-up the through movements on Riverdale Road.

A consolidation of the eastern entrances for the former Wildercroft Elementary School is recommended for this alternate.

## 6.B.2 Centerline Maryland Route 410 Extended

As previously mentioned in Section 6.A, an additional alternate alignment for Maryland Route 410 Extended would be inconsistent with the area master plans.

This section will describe the centerline of Maryland Route 410 Extended and the typical roadway sections that have been evaluated.

After leaving Riverdale Road, the centerline of Maryland Route 410 Extended is generally in a cut section for approximately 3,000 feet. From this point to the at-grade intersection selected at Maryland Route 450, the vertical alignment is in fill. Vertical grades range from $1 \%$ to $4 \%$ through this area. The maximum degree of curve utilized through this portion of the road is $1^{\circ}$ - $30^{\prime \prime}$ (see Exhibit 4).

After leaving Maryland Route 450, the alignment generally remains in fill. Approaching Ardmore-Ardwick Road, the alignment then transitions from fill to cut, and remains in cut until it crosses U.S. Route 50 via structure. After crossing U.S. Route 50 , the alignment generally remains in a fill section to Pennsy Drive. Vertical grades range from $3 \%$ to $5 \%$, and the maximum degree of curve is 2 degrees.

Two types of roadway sections are being considered for the centerline of Maryland Route 410 Extended from Riverdale Road to U.S. Route 50: an 'Open' type (Alternate 1) and a 'Closed' type (Alternate 2).

Alternate 1 consists of two 24 -foot wide roadways that are separated by a raised median that varies in width from 16 to 30 feet. Each roadway would have a 12-foot outside shoulder, 10feet of which is paved, followed by l8-feet of safety grading (see Exhibit 5). Two future lanes could be placed in the median, if necessary, by utilizing a double-faced concrete median barrier.

Alternate 2 would also consist of two 24 -foot wide roadways that are separated by a raised median that varies in width
$\bullet$ $\bullet$ $\bullet$


16 to 30 feet (see Exhibit 5). Type 'A' combination curb and gutter is provided along the outside edge of the shoulders (driver's right) to contain the runoff. Two additional lanes, separated by a double-faced concrete barrier could be constructed utilizing the 30-foot wide median. Utilization of this section would reduce right-of-way acreage requirements and establishment takings.

Alternates 1 and 2 will be considered as design alternates during the project's final design phase.

The roadway section for the centerline of Maryland Route 410 Extended from U.S. Route 50 to Pennsy Drive will be a 'Closed' type (see Exhibit 5).

## 6.B. 3 Maryland Route 450 (Alternate 1)

The alternate selected at the juncture of Maryland Route 410 Extended and Maryland Route 450 (Annapolis Road) is a signalized at-grade intersection (see Exhibit 6). With the exception of the single left turn lane that is provided on Maryland Route 450 for those vehicles destined to go northbound on Maryland Route 410 (and 76th Avenue), double left turns and storage will be provided for the remaining left turn movements. Three through lanes in each direction would be provided on Maryland Route 450 along with a raised concrete curb in the median to prevent vehicles from turning across oncoming traffic into the various commercial establishments. The raised median, however, would only be constructed from the intersection with Maryland Route 410 Extended south to Gelatin Street and north to 76 th Avenue.


Most of the improvements can be accomplished within the existing right-of-way of Maryland Route 450. However, additional right-of-way will be required on the south side of Maryland Route 450 to allow for the three through lanes.

This alternate would require no major utility relocation. The channelization islands are relatively large and clearly defined.

## 6.B. 4 Combined Interchanges on U.S. Route 50 <br> (Alternate 2 Modified)

The alternate selected for the combined interchanges on U.S. Route 50 (John Hanson Highway) is Alternate 2 Nodified (see Exhibit 7). This alternate provides access to the Ardwick Industrial Park, the New Carrollton Metro Station and the Metro East Triangle area via a Collector-Distributor Road System. This system serves as the main link between these two interchanges on U.S. Route 50.

Access to the Hanson Oaks Community is provided by a bridge over Maryland Route 410 Extended (see Exhibit 7).

One study that is presently being conducted for the I-97 Project is the consideration of High Occupancy Vehicle (HOV) lanes. The use of these lanes could be incorporated into the Maryland Route 410 Extended project and serve as an alternate to the Collector-Distributor (C-D) road system. Basically, the HOV lanes (or system) would consists of utilizing and converting the existing eastbound roadway of U.S. Route 50 to two-way traffic. The existing westbound roadway

would remain. A new eastbound roadway for U.S. Route 50 would be constructed parallel to the HOV lanes. A 48-foot wide median would separate the two roadways.

The advantage of utilizing and incorporating a system like this into the Maryland Route 410 Extended project is that the westbound collector-distributor road would no longer be required. In other words, the existing westbound roadway of U.S. Route 50 is replacing the westbound collector-distributor (C-D) road. Another advantage is that only one new roadway (the eastbound roadway of U.S. Route 50) needs to be constructed as opposed to constructing two for the C-D system. This not only would reduce the right-of-way acreage requirements and construction costs, it would also minimize the imppact to those properties that are located in the northeast and northwest quadrants of the Maryland Route 410/U.S. Route 50 Interchange.

The I-97 Project Public Hearing was held on March 3, 1981 at the Benjamin Tasker Junior High School in Bowie, Maryland. A decision by the State Highway Administration regarding the use of either the HOV lanes or C-D roads is expected by Summer, 1981.

## 6.B. 5 Construction and Right-of-Way Costs

Exhibit 8 illustrates the construction and right-Ofway costs for the selected alternates. The total costs shown in Exhibit 8 are based on a 30 -foot wide raised median for the mainline of Maryland Route 410 Extended.

## EXHIBIT 8

## CONSTRUCTION AND RIGHT-OF-WAY COST;

MARYLAND ROUTE 410 EXTENDED
(30-Foot Wide Raised Median)

Description

| Right-of-Way | Right-of-Way <br> Acres |
| :---: | :---: |
| Costs |  |


| Construction | Total |
| :---: | :---: |
| Costs | Cost of |

Improvement

## Selected

Alternate
(Open Roadway
88 \$ 9,907,300 \$ 45,400,000 \$ 55,307,300
Section)

Selected
Alternate
$\begin{array}{ccccc}\begin{array}{c}\text { (Closed Roadway } \\ \text { Section) }\end{array} & 84 & \$ 9,527,800 & \$ 45,628,000 & \$ 55,155,800\end{array}$

NOTE: The construction of noise control measures would add an estimated $\$ 1,920,000$ to the total cost of the project.

## 6.B. 6 Summary of the Impacts

In this section the various impacts resulting from each alternate selected are brought together to furnish a composite picture of the adverse and positive effects.

Because each of the alternates selected follow basically the same alignment, most of the impacts are essentially indentical. This is certainly true with the wildife and habitat, endangered species, water quality, stream modification, flood hazard, air quality, noise, social and visual impacts which were described in Section 5.A, Direct Impacts. There are, however, some differences between each alternate selected. These differences will be highlighted in this summary section.

In order to comprehend the impact resulting from increases of ambient noise levels, the following categories have been established and will appear in those exhibits for Project Noise Levels.

Change In Ambient Noise Levels Impact Assessment

$$
\begin{array}{ll}
+0-5 d B A & \text { Negligible } \\
+6-10 d B A & \text { Minor } \\
+1 l-15 d B A & \text { Significant } \\
\text { over l5dBA } & \text { Severe }
\end{array}
$$

As stated earlier, the selected alternate is the construction of Maryland Route 410 Extended.

The selected alternate begins at the intersection of 67 th Avenue and Riverdale Road. Riverdale Road will become Maryland Route 410 for approximately 800 feet. At the point where Maryland Route 410 Extended leaves Riverdale Road, a signalized atgrade intersection was selected. Maryland Route 410 Extended then passes through a vacant area approaching Maryland Route 450.

At Maryland Route 450 , a signalized at-grade intersection was selected.

Leaving Maryland Route 450, Maryland Route 410 Extended continues southerly crossing U.S. Route 50 (John Hanson Highway). Two interchange configurations on U.S. Route 50 that are connected with a Collector-Distributor road system were selected. After crossing U.S. Route 50, Maryland Route 410 Extended crosses Beaverdam Creek and its floodplain, the Amtrak railroad tracks, and the elevated Washington Metropolitan Area Transit Authority (WMATA) tracks, before terminating at Pennsy Drive.

This summary of impacts section will follow basically the alignment just described. First, the impacts of the signalized at-grade intersection at Riverdale Road will be presented, followed by the mainline of Maryland Route 410 Extended, the signalized at-grade intersection at Maryland Route 450, and finally the combined interchanges on U.S. Route 50 (John Hanson Highway).
a. Riverdale Road (Alternate 2)

The alternate selected at Riverdale Road and Maryland Route 410 Extended will require the acquisition of right-of-way from several private owners and the former Wildercroft Elementary School, thereby reducing not only the individual holdings, but also reducing the County tax base (see Exhibit 9).

The entrance to 67 th Place could present a problem due to westbound vehicles on Riverdale Road turning across the through eastbound movement. The converse is also true because

## DISPLACEMENT AND RELOCATION FACTORS

MARYLAND ROUTE 410 EXTENDED
RIVERDALE ROAD
(30-Foot Wide Raised Median)

| ALTERNATE <br> SELECTED | NO. OF PROPERTIES AFFECTED |  | IMPROVEMENTS AFFECTED |  | ACREAGE REQUIRED |  | VALUE OF LAND TAKEN OFF TAX ROLLS |  | ANNUAL TAX LOSS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | OPEN | CLOSED | OPEN | CLOSED | OPEN | CLOSED | OPEN | CLOSED | OPEN | CLOSED |
| Alternate 2 | 6 | 6 | 0 | 0 | 4.6 | 4.5 | \$ 232,168 | \$ 212,503 | \$ 4,574 | \$ 4,186 |

of the close proximity of 67 th Place to the intersection of Maryland Route 410 Extended. The movements into or from 67 th Place would be interfered with by vehicles eastbound on Riverdale Road turning southbound on Maryland Route 410 Extended. To alleviate this impact to 67 th Place, Maryland Route 410 Extended has been moved easterly. This would locate the 67 th Place entrance off of the turn lane, thereby providing a better intersection flow.

A consolidation of the two eastern entrances for the former Wildercroft Elementary School is also considered under this alternate.

This alternate does not violate the State and Federal one hour or eight hour ambient air quality standards.

Noise sensitive area (NSA) 19, a residential area (see Plate 16), would be impacted by this alternate. NSA 19 is expected to exceed Federal design noise levels (see Section 5.A.4).
b. Mainline Maryland Route 410 Extended

As a result of the approved Master Plans (reference Section 2.C), development in the vicinity of the highway corridor has been limited only to areas adjacent to the roadway alignment. For instance, commercial development along Maryland Route 450, west of the proposed West Lanham Hills Recreation Center, has been permitted with the exception of the area that is utilized for the crossing of Maryland Route 410 Extended. West of the centerline alignment (opposite the proposed West Lanham Hills

Recreation Center) are the Lanham Terrace Apartments. Any shift in the centerline alignment of Maryland Route 410 Extended would result in considerable adverse impact to these apartments and the Recreation Center, which would involve a $4(f)$ Statement. In addition, considerable adverse impacts would occur at the Glenridge Shopping Center, West Lanham Estates and other developed areas.

To even further minimize the impacts to the alignment of Maryland Route 410 Extended, two alternate roadway sections that have raised medians varying in width from 16 to 30 feet were evaluated and will be considered during the design phase as alternatives.

Alternate 1 consists of two 24-foot wide roadways that are separated by a raised median that varies in width from 16 to 30 feet. Each roadway would have a l2-foot outside shoulder, l0-feet of which is paved, followed by l8-feet of safety grading (see Exhibit 5). Two future lanes could be placed in the median, if necessary, by utilizing a double-faced concrete median barrier.

Alternate 2 would also consist of two 24 -foot wide roadways that are separated by a raised median that varies in width from 16 to 30 feet (see Exhibit 5). Type 'A' combination curb and gutter is provided along the outside edge of the shoulders (driver's right) to contain the runoff. Two additional lanes, separated by a double-face concrete barrier could be constructed utilizing the 30 -foot wide median. Utilization of this section
would reduce right-of-way acreage requirements and establishment takings.

Both sections would permit the placement of a third lane per direction in the 30 -foot wide median at some future time.

Considering the 30 -foot wide raised median, Exhibit 10 illustrates the displacement and relocation factors associated with the mainline of Maryland Route 410 Extended.

An area of West Lanham Estates in the vicinity of centerline station $79-80 \pm$ is in close proximity to the centerline of Maryland Route 410 Extended. A portion of Jefferson Street and private dwellings to the east of the centerline would suffer visual impact. The same is true from station 116 to $123 \pm$ in the vicinity of the Wildercroft Apartments. The centerline of Maryland Route 410 Extended passes to the west of the parking lot adjacent to one of the apartment buildings. No portions of Jefferson Street or the parking area adjacent to Wildercroft Apartments would be acquired. However, the two dwellings at the end of Patterson Street (east of the apartments) would be acquired.

Two schools, Beacon Heights Elementary and Glenridge Junior High School, are located adjacent to the mainline corridor. The closest of these is Glenridge Junior High, some 700 feet west of the centerline alignment. The construction of Maryland Route 410 Extended would have a minimal impact on these two facilities.

The noise level in the design year 2005 is expected to

DISPLACEMENT AND RELOCATION FACTORS
MARYLAND ROUTE 410 EXTENDED
MAINLINE
(30-Foot Wide Raised Median)

be in the 62 to $72 d B A$ range. By constructing noise barriers, it is expected that exterior ground noise levels wound be reduced approximately IOdBA.

The mainline portion of the project would impact the noise sensitive areas adjacent to it and others of the same degree regardless of the alternate constructed. The noise sensifive areas impacted by this portion of the alignment are 1, 2, 3, $4,5,6,9,11,17,18,19$ and 20. Area 19 would experience a Federal design noise level exceedance. Areas 3, 5, 6, 11, 17 and 20 would experience severe increases (over 15dBA). The levels projected represent the noise anticipated within the sensitive area at the closest point to the alignment (see Exhibit ll).

The highway corridor contains large areas of land which are undeveloped. One area between Maryland Route 450 and U.S. Route 50 (John Hanson Highway) has been subdivided. However, no housing construction is currently underway. Construetion of Maryland Route 410 Extended would greatly increase the ambient noise in these areas. Federal design noise level criteri do not specifically pertain to undeveloped lands. Projections based upon aforementioned traffic parameters indicate that the design noise level for Category B would be exceeded 70 to 75 feet from the highway. Other approximate noise. levels are listed in the following table.

Distance From Highway
100
200
300 400

| $\mathrm{L}_{10}$ | LE Q <br> 70 dBA |  | 67 dBA |
| :--- | :--- | :---: | :---: |
| 66 dBA | 63 dBA |  |  |
| 63 dBA | 60 dBA |  |  |
| 61 dBA | 58 dBA. |  |  |

PROJECT NOISE LEVELS - MARYLAND ROUTE 410 EXTENDED
MAINLINE


Copies of the Technical Noise Report were sent to Prince George's County Land Planning Officials.

Neither of the two alternate highway sections are expected to violate the State and Federal one hour or eight hour ambient air quality standards.

During construction, short-term degradation of the water quality in Brier Ditch can be expected. However, degradation would be kept to a minimum and there would be little impact on this short-term degradation.

The construction of Maryland Route 410 Extended would allow planned development to occur at a much faster rate. The 'Closed' type roadway section for the mainline would better lend itself to future development that would the 'Open' section. With the curbed closed section, future entrances could be made to Maryland Route 410 Extended with a minimum amount of disruption to the roadway and the adjoining drainage system.
c. Maryland Route 450 (Alternate 1)

The alternate selected for the juncture of Maryland Route 410 Extended and Maryland Route 450 is a signalized atgrade intersection.

This alternate will require the acquisition of the nite-club that is located opposite the Glenridge Shopping Center and additional right-of-way along the south side of Maryland Route 450 (just north of the intersection) to accommodate the additional lanes through this area.

A raised concrete median will be constructed west of
the intersection to Gallatin Street and east of the intersection to 76 th Avenue. The concrete median, a necessary safety feature, will eliminate turns across Maryland Route 450 to various commercial establishments. Some change in public buying or service habits could result. This could have a minor adverse impact on the adjacent commercial establishments.

A signal will be provided at 76 th Avenue and Maryland Route 450 to control turning movements into and out of 76 th Avenue.

Some minor adjustment to the sanitary lines in the area is anticipated. This will cause no adverse impact.

Exhibit 12 illustrates the displacement and relocation factors for a 30 -foot wide raised median and Exhibit 13 illustrates the project noise levels for this alternate.
d. Combined Interchanges on U.S. Route 50
(Alternate 2 Modified)
The selected alternate for the combined interchanges on U.S. Route 50 (John Hanson Highway) is Alternate 2 Modified. These interchanges are connected by a collector-distributor road system which provides for direct access to the Metro East Triangle, the New Carrollton Metro Station and the Ardwick Industrial Park.

This alternate would require the acquisition of three (3) businesses that are located on Adams Avenue, four (4) single family dwellings on Ardmore-Ardwick Road, and two (2) single family dwellings on Parkwood Street in the Bellmeade subdivision.

DISPLACEMENT AND RELOACTION FACTORS
MARYLAND ROUTE 410 EXTENDED
MARYLAND ROUTE 450
'(30-Foot Wide Raised Median)

| ALTERNATE <br> SELECTED | NO. OF PROPERTIES AFFECTED |  | IMPROVEMENT <br> AFFECTED |  | ACREAGE <br> REQUIRED |  | VALUE OF LAND TAKEN OFF TAX ROLLS |  | ANNUAL TAX LOSS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | OPEN | CLOSED | OPEN | CLOSED | OPEN | CLOSED | OPEN | CLOSED | OPEN | CLOSED |
| Alternate 1 | 1 | 1 | 1 | 1 | 4.3 | 3.8 | \$ 980,089 | \$ 866,125 | \$ 19,308 | \$ 17.063 |


| NOISE SENSITIVE AREA | DESCRIPTION | AMBIENT $L_{10} L_{E Q}$ | $\begin{aligned} & \text { DESIGN YEAR } \\ & \mathrm{L}_{10} \quad(2005) \mathrm{L}_{\mathrm{EQ}} \end{aligned}$ | $\begin{gathered} \text { CHANGE IN } \\ \mathrm{L}_{10} \end{gathered}$ | IMPACT <br> ASSESSMENT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - 7 | Residential | 50 dBA 47 | 65 dBA 62 | + 15 | Severe |
| - 8 | Residential | 55 dBA 52 | $66 \mathrm{dBA} \quad 63$ | + 11 | Severe |

Access to the Hanson Oaks Community will be provided via Ardmore-Ardwick Road, and a bridge over Maryland Route 410 Extended.

To reduce construction costs and impacts to the Amtrack and WMATA tracks, a "diamond" configuration was selected for those ramps that are located in the southeast and southwest quadrants of the Maryland Route 410/U.S. Route 50 Interchange.

After crossing U.S. Route 50 approaching Pansy Drive, the typical roadway section for Maryland Route 410 Extended transitions to a 56-foot closed section (see Exhibit 5). Utilizing a roadway section of this type in conjunction with a retaining wall adjacent to the Hechinger Company would minimize the impact to the Ardwick Industrial Park. A "T" type intersection will be constructed at Pennsy Drive.

This alternate will not impose a significant impact on Beaverdam Creek and its floodplain.

The construction of these two interchanges, in conjunction with the development that is currently taking place within the Metro East Triangle, would facilitate expansion and further development of the Ardwick Industrial Park and the Model Neighborhood area. Also, construction of this alternate would remove truck traffic from neighborhood streets.

Response time from Fire Station No. 28 (reference Plate 13) to emergencies within the southern portion of the Maryland Route 410 Extended corridor would be reduced due to a more direct route of response. This could lead to a reduction of
insurance rates in this portion of the corridor.
Exhibit 14 illustrates the displacement and relocalion factors for this alternate. Exhibit 15 illustrates the project noise levels for Alternate 2 Modified. The change in ambient levels are expected to increase by a range of 2-1ldBA.

## 6.C Alternatives Considered

This section will briefly describe other alternates that were considered during the course of the study, but were not chosen as part of the selected alternate. Additional information such as: air and noise impacts, construction costs, right-of-way costs, displacement and relocation can be found in the Draft Environmental Impact Statement (FHWA-MD-EIS-79-04-D). 6.C.1 Riverdale Road (Alternate 1 and 3)

Alternates 1 and 3 (Exhibits 16 and 17) are both at-grade signalized intersections. Both are similar in that they each provide free dual right turns from eastbound Riverdale Road to Maryland Route 410 Extended southbound, and from northbound Maryland Route 410 Extended to eastbound Riverdale Road (after stopping). Also, both alternates provide dual left turn lanes from northbound Maryland Route 410 Extended to westbound Riverdale Road. However, in utilizing a concept such as this, the stopline for those vehicles waiting to make a left turn from northbound Route 410 to westbound Riverdale Road must be clearly defined to avoid having them interfere with those vehicles making a left turn from westbound Riverdale Road to the southbound lanes of Route 410 on the other signal phase. The alter-

## DISPLACEMENT AND RELOCATION FACTORS MARYLAND ROUTE 410 EXTENDED <br> COMBINED INTERCHANGES ON U.S. ROUTE 50

| ALTERNATE | NO. OF PROPERTIES | IMPROVEMENTS |  |  |
| :--- | :---: | :---: | :---: | :---: |
| SELECTED | AFFECTED | AFFECTED |  | REREAGE |
|  |  |  |  | VALUE OF LAND TAKEN |
|  |  |  |  |  |

Alternate 2
Modified

38
$9 i$
54.40
$\$ 3,606,030$
\$ 71,280

MARYLAND ROUTE 410/U.S. ROUTE 50 INTERCHANGE
AND
U.S. ROUTE 50/NEW CARROLLTON METRO STATION ACCESS INTERCHANGE

ALTERNATE 2 MODIFIED



nate selected (Alternate 2) does not have dual left turn lanes.
To reduce the impact of 67 th . Place on the right turn lane from eastbound Riverdale Road, Maryland Route 410 Extended was shifted in an easterly direction in the alternate selected. Note the location of Maryland Route 410 Extended in Alternates 1 and 3.
6.C. 2 Mainline Maryland Route 410 Extended

As mentioned in earlier sections of this document, an additional alternate alignment for this project would be inconsistent with area Master Plans, and therefore, was not considered.

Initially., two (2) types of roadway sections were proposed for the mainline of Maryland Route 410 Extended from Riverdale Road to U.S. Route 50 (see Exhibit 18).

Alternate 1 was an 'Open' type roadway section having two 24-foot wide lanes in each direction separated by a 54 -foot wide median. Each roadway has 10 -foot wide shoulders on the outside (driver's right) and 4-foot wide median shoulders on the inside (driver's left). Two additional lanes could have been constructed within the median area. Drainage ditches were provided left and right of the centerline.

Alternate 2 was a "Closed' type roadway section. It had the same median width, number of lanes and shoulder widths as in Alternate 1, except that curb and gutter was added to the outside shoulders (driver's right) to contain teh runoff within the proposed improvement. Utilization of this section would have reduce right-of-way acreage requirements and establishment takings.


TYPICAL SECTION RAMPS MD. ROUTE 450 AND U.S. ROUTE 50 INTERCHANGE


TYPICAL SECTION-RAMP WITH CURB MD. ROUTE 4IO AND U.S. ROUTE 50 INTERCHANGE

## notes:

1. The dimensions shown are for the purpose of determining cost estimates and
environmental impacts, and are subject to change during the final design phase
2. The typical sections shown hereon were initially considered and have been addressed in the Draft Environmental Impoct Statement.

Both of these sections, when utilized, would have required land from a proposed $4(f)$ area (West Lanham Hills Recreation Center) and would have had more of an impact to those properties along the mainline between Riverdale Road and U.S. Route 50 than the two sections that are shown in Exhibit 5. 6.C. 3 Maryland Route 450 (Alternates 2 and 3)

Alternate 2 is an at-grade signalized intersection (see Exhibit 19). It is the same as Alternate 1 (the selected alternate) except that the raised concrete curb in the median on Maryland Route 450 has now been replaced with a striped median. By utilizing striping in lieu of the raised median, traffic will be able to turn across Maryland Route 450 to the adjacent commercial establishments. However, this increased flexibility also carries with it an increase in traffic hazards, therefore, Alternate 2 was not selected.

Alternate 3 is a grade-separated diamond interchange (see Exhibit 20). This alternate requires considerably more right-of-way than the other two alternates. The Glenridge Shopping Center would lose a considerable amount of their parking spaces and access to the Shopping Center via Route 450 would be eliminated. The $60^{\prime \prime}$ Washington Suburban Sanitary Commission waterline would have to be relocated. Also, traffic would be permitted to cross Maryland Route 450 (striped median). These turning vehicles would interfere with the through movements of traffic along Maryland Route 450 and cause a safety hazard. Therefore, this alternate was not selected.


## 6.C. 4 Combined Interchanges on U.S. Route 50 (Alternates 1 and 2)

Alternate 1 consists of two interchanges on U.S. Route 50 (see Exhibit il). Both interchanges are connected with a collec-tor-distributor road system that is independent of U.S. Route 50. Because of the complexity in constructing those ramps over the Washington Metropolitan Area Transit Authority (WMATA) and Amtrak rail systems at the Maryland Route $410 / \mathrm{U} . \mathrm{S}$. Route 50 Interchange area, and the impact of Ramps ' $A$ ' and ' $E$ ' to several homes on Parkwood Street, this alternate was not selected. Also, access to the Hanson Oaks community would have been denied via ArdmoreArdwick Road, thus requiring the construction of Ellen Road Extended to Hanson Oaks Drive.

Alternate 1 would require the same three businesses on Adars Avenue as in the selected alternate. However, a total of eleven homes would be affected, displacing approximately thirty-six (36) people.

Alternate 2 (Exhibit 22) is very similar to Alternate 1 , except that Ramp 'E' (northwest quadrant of Maryland Route 410/ U.S. Route 50) has now been replaced with Ramp 'I' at the U.S. Route 50/New Carrollton Metro Station Access Interchange and Ramp 'G' has been replaced with Ramp 'M'. Even though Ramp 'L' replaces Ramp 'E', thus reducing the impact to those homes along Parkwood Street in the Bellmeade subdivision, this alternate would still require extensive ramp construction over the WMATA and Amtrak rail systems. In addition to constructing Elfin Road



Extended (as in Alternate l), this alternate would require the acquisition of the same three businesses on Adams Avenue and six dwellings.

## 6.C. 5 TSM Alternates

A total of four TSM Alternates were considered and revaluated for the Maryland Route 410 Extended project.

The purpose of the TSM Alternate is to determine what improvements could be made to an existing network of local streets (usually within the study area) to accommodate a projected volume of traffic for a given design year for a "NoBuild" Alternate. Some of these improvements could consist of constructing new streets and commuter parking lots, widening streets to increase capacity and extending streets to complete a network of streets. Also, new traffic signals could be installed and bike paths added to the pavements. Along with these improvements, the economic, engineering, social and environmental impacts are also evaluated.

## a. ISM Alternate 1

ISM Alternate l (Plate 17) represents a proposal that was prepared by the Combined Citizens Coalition for the Maryland Route 410 Extended Project (see Appendix A) and presented to the Maryland State Highway Administration on March 18, 1980. After review and consideration by the interdisciplinary team, a written report of this proposal, dated July 7, 1980, was prepared and submitted to the representative of the Combined Citizens Calition. A copy of this report can be found in Appendix A.


Basically, TSM Alternate 1 consists of reconstructing Riverdale Road to six lanes from 61st Place to 67th Avenue, and to five lanes from 67th Avenue to Maryland Route 450; the extension of Riverdale Road from Maryland Route 450 to 85th Avenue; the extension of Ellin Road to Ardwick Road bypassing the Hanson Oaks subdivision (a connection to Hanson Oaks Drive would also be provided); the extension of 85 th Avenue to Elfin Road; and the extension of Jefferson Avenue to Pennsy Drive. A complete 'diamond' interchange was assumed at the juncture of Maryland Route 410 Extended and U.S. Route 50. The Metro Access Interchange would remain as shown in Plate 17.

Reconstructing Riverdale Road to five lanes from the vicinity of 67 th Avenue to Maryland Route 450 in this alternate would provide an acceptable level of service through the project's design year. However, this expansion would result in noise level exceedence at six noise sensitive areas.

Implementing this alternate would affect a total of twelve (12) dwellings, l retail outlet store (Toy'R'US) and l apartment building that is located within the Bryant Woods Apartment complex. The total construction costs and right-ofway costs are $\$ 47,441,000$ and $\$ 11,323,000$.
b. TSM Alternate 2

TSM Alternate 2 (Plate 18) is similar to TSM Alternate 1 except that the ramp in the northwest quadrant of the Maryland Route 410/U.S. Route 50 Interchange has been deleted.

The impacts associated with TSM Alternate 2 are similar

to those for TSM Alternate 1. The same retail outlet store and the same apartment building would have to be acquired, with eleven (ll) single family homes being affected. The dwelling not being affected by this alternate is the last house on the south side of Ardwick Road near the interchange at U.S. Route 50. This dwelling would not have to be acquired because the ramp in the northwest quadrant has been eliminated from the proposed partial diamond interchange at U.S. Route 50. As in TSM Alternate 1 , this alternate also exceeds the project's design noise levels at the same six (6) locations on Riverdale Road. The total construction and right-of-way costs associated with this alternate are approximately $\$ 47,200,000$ and $\$ 11,300,000$ respectively.
c. TSM Alternate 3

TSM Alternate 3 (Plate 19) is similar to TSM Alternate l, except that the extension of Riverdale Road from Maryland Route 450 to 85 th Avenue has been deleted. The reatail outlet store and the apartment building are not required and ten (10) single family homes are being affected. This is due to the elimination of the extension of Riverdale Road between Maryland Route 450 and 85 th Avenue. However, the proposed full diamond interchange at U.S. Route 50 will require the acquisition of the house located on Ardwick Road, previously mentioned in TSM Alternate 1. As In TSM Alternates 1 and 2, this alternate will also exceed the project's design noise levels on Riverdale Road. The total construction and right-of-way costs associated with TSM


Alternate 3 are approximately $\$ 46,900,000$ and $\$ 8,400,000$ respectively.
d. TSM Alternate 4

TSM Alternate 4 (Plate 20) is similar to TSM Alternate 3 and has the least impact of all four TSM Alternates considered. This alternate will require the acquisition of nine (9) single family dwellings. As in Alternate 3, the retail outlet store and the apartment building are not acquired. The home on the south side of Ardwick Road near the interchange on U.S. Route 50 would not have to be acquired. As in the other three alternates, this alternate will also violate the project's design noise levels on Riverdale Road. The total construction and right-of-way costs associated with this alternate are $\$ 46,600,000$ and $\$ 8,400,000$.

## 6.C. 6 No-Build Alternate

With the No-Build Alternate, Maryland Route 410 Extended would not be constructed. The crowded condition on Riverdale Road would continue to exist and increase in severity as the generated traffic increases, even if Riverdale Road is widened to a four-lane facility from the Baltimore/Washington Parkway to Maryland Route 450 by Prince George's County. The No -Build Alternate, or road widening, would not help to solve the problem of north/south movements within the area. Public transportation within the area would remain a problem, even with the opening of the New Carrollton Metro Station.

If Maryland Route 410 were not extended as proposed, the

$L_{10}$ noise levels at sensitive areas would remain at present levels or increase slightly ( $1-3 d B A$ ). This is due to the fact that no new source of traffic noise would be introduced into the area. Exhibit 23 presents as estimate of noise levels in 2005. Of the twenty noise sensitive areas, two would experience levels that exceed Federal design noise levels. Those two residential areas are 15 and 16 .

## 6.D Selected Alternates for Location Design Approval

The following alternates for the Maryland Route 410 Extended project are selected for location approval:

1. Alternate 2 for the intersection of Riverdale Road and Maryland Route 410 Extended;
2. Alternate 1 for the juncture of Maryland Route 410 Extended and Maryland Route 450;
3. and Alternate 2 Modified for the U.S. Route 50 segment of the project.

In addition to the above alternates, the following design features are also included:

1. A roadway section that provides full access controls for the mainline of Maryland Route 410 Extended from Riverdale Road to the structure over U.S. Route 50;
2. A closed roadway section for the mainline of Maryland Route 410 Extended from U.S. Route 50 to Pennsy Drive;
3. Consideration in the project design phase of utilizing a typical roadway section that has a raised median ranging in width from 16 to 30 feet. The design phase activities will determine whether to use an 'Open' or 'Closed' type roadway section;
4. Consideration of stage construction during the design phase for the combined interchanges on U.S. Route 50.

PROJECT NOISE LEVELS - NO-BUILD ALTERNATE

 it can be expected that levels may increase by $2-3$ dBA by the design year.

+ Federal design noise level violation.


## 7. PROBABLE ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

## 7.A Probable Impacts

This section will discuss the probable impacts upon the environment previously described which, from the standpoint of prudent decision-making, are considered adverse and unavoidable at this time. In some cases, the unavoidable adverse impacts may be substantially minimized, if not totally eliminoted, during the detailed design phase or during the actual construction phase of the project. However, for the purpose of this Environmental Impact Statement, all such impacts will be identified.

## 7.A.1 Relocation

Right-of-way acquisition if one of the more important impacts of this, or for that matter, any highway project. In spite of careful planning, refinement, reservation and/or acquisition of right-of-way, the selected alternate for the Maryland Route 410 Extended project will require the acquisition of one (1) night-club, three (3) businesses and nine (9) dwellings, resulting in the dislocation of an estimated thirty (30) residents, fifteen of which are minority group members. One family is projected to need housing as last resort. Due to the long interval of time between the commencement of relocation activity and the commencement of construction of the improvement and the amount of replacement housing and commercial establishments available in Prince George's County, no significant problems are anticipated with regard to relocation.

## 7.A. 2 Visual

Some visual intrusion upon the residents adjacent to the Maryland Route 410 corridor can be anticipated along the selected alternate. However, through the use of proper landscaping this visual intrusion could be reduced.

## 7.A.3 Water Quality

The construction of Maryland Route 410 Extended necessitates the crossing of Brier Ditch twice, and contributing swales three times. Beaverdam Creek and its adjoining floodplain will be crossed via bridges for the mainline and ramps. The mainline approaching Beaverdam Creek will cross contributing swales twice.

During the construction phase of the project, every effort will be made to control erosion. However, it is likely that some sediment may reach these streams and have an adverse effect on water quality and aquatic life. The precise effect on water quality will be highly dependent upon the types of materials entering the stream, i.e. whether the materials entering are construction materials or petroleum products or soil. With the implementation of erosion and sediment control measures, every effort will be made to minimize these impacts and to reduce short-term water quality degradation to acceptable levels.

## 7.A. 4 Wildlife

The construction of Maryland Route 410 Extended will necessitate the use of wildlife habitat to a large degree within the right-of-way. However, it is not feasible to expect the
the area, if the selected alternate is not constructed, to remain in its predominantly wooded and/or undeveloped state. Through re-vegetation practices following the construction, much of the physical and visual impact may be mitigated.

## 7.A. 5 Utilities

The construction of Maryland Route 410 Extended may require some adjustments to the existing utilities within the corridor. However, this adjustment is not expected to inconvenience any of the users.

## 7.A. 6 Noise

The generation of construction equipment noise during the building of Maryland Route 410 Extended will be adverse to the surrounding area and is relatively unavoidable. Localized shielding may be utilized in some instances to reduce noise from a single source, but overall construction site noise cannot be eliminated.

Noise generated by automobiles using the new facility likewise cannot be completely eliminated. The use of smooth roadway surface and gradual grades will reduce the generation of noise to some degree. The analysis of noise impacts (see Section 5.A.4) shows that there are twenty (20) noise sensitive areas within the corridor. Noise Sensitive Area 19 is the only area that exceeds the Federal design noise levels. Noise control measures such as: fences, walls, landscape screen plantings, earth berms or combinations of each are recommended and as they are site specific remedies, they will be further studied during

## 8. SHORT-TERM IMPACTS AND LONG-TERM BENEFITS

As outlined earlier in this Statement, the construction of Maryland Route 410 Extended would have a number of shortterm impacts that would adversely affect the environment. During the construction phase trees, vegetation and wildlife habitat may be disturbed and removed. There will be some soil erosion, noise and air pollution generated by construction equipment on the site. During the construction period, vehicles traveling some roads may experience delays and/or diversion causing minor social and economic inconvenience. Activities in the areas adjacent to construction may also be disrupted by the noise and activity necessary for construction of the facility.

The short-term adverse impacts from noise created by construction equipment, air pollution, and disruption of activities will diminish after construction. With the development of more efficient combustion of fuels, improved design of tires, engines and roadway surfaces, the longer term adverse impacts from air and noise pollution would presumably decrease somewhat in time. Where feasible, noise from the highway will be abated by acoustical barriers. The social impact created by the relocation of homes and businesses would, over a period to time, diminish because of their re-establishment in new locations. No community is being divided and kept separate from its other half. Instead, the alignment has
utilized, for the most part, vacant area set aside years ago for this project.

The long term productivity of the area would be enhanced in several ways. Improved access would be provided to the commercial establishments adjacent to Maryland Route 450, as well as the Metro Station. Traffic flow to and from the Ardwick Industrial Park would be improved. The selected alternate would also improve the traffic flow within the Model Neighborhood area, including the Metro Station by providing a direct link to other parts of the County. The enhancement of additional employment areas can improve the economic base of the area and the County.

There would also be an improvement in safety. The selected alternate would remove traffic from arteries which are approaching capacity or have already reached their capacity.
9. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The land to be used for the construction of Maryland Route 410 Extended cannot be termed an absolute and irreversiole loss.

Although the land utilized by the project cannot be termed irreversible, the growth pressures to which the project is responding may very well commit the undeveloped adjacent areas to forms of development that would preclude the possibility of the roadway being used for any other purpose. In addition, the land use preempted by the construction of Maryland Route 410 Extended may never be able to be re-established in the study area.

Irreversible and irretrievable commitments of resources created by the project include: the use of wildlife habitat, the removal of trees when the highway is built, the rock or minerals excavated, and the borrow material required, both in the land to be utilized and the additional fuel necessary to haul it. The alteration of the visual environment for some areas is also an irreversible impact. In other areas, the landscaping of the right-of-way will re-establish some measure of the wooded view now extant.

## 10. IMPACT ON PROPERTIES AND SITES OF HISTORIC SIGNIFICANCE

There will be no impact on any properties of State or Local significance arising from the construction of Maryland Route 410 Extended. Both the Maryland Historic Trust and the Prince George's County Division of the Maryland National Capital Park and Planning Commission have reported that there are no properties or sites of historic significance within the Maryland Route 410 corridor. Consultations with the Maryland State Archaeologist have revealed that there are no sites of archaeological significance within the Maryland Route 410 corridor (see Appendix A).

APPENDIX A
COMIENTIS AND COORDINATION

$$
\text { December } 10,1975
$$

Jarrett L. Cross
Environment \& Technology
Assessments, Inc.
7768 Hoodmont Avenue
Bethesda, Md. 20014
Dear Mr. Cross:
Proposed State Highway Administration road improvements to Maryland Routes 410, 193, and Route 22, east of Bel Air, do not jeopardize the continued existence of any known endangered species population.

Sincerely,
Bernard filcall=7
Bernard F. Halle, Director Nongame Wildlife Program
cc: R. Bitely
C. Brunori
G. Taylor

A Combined Location/Design Public Hearing was held December 4, 1979 at Glenridge Junior High School. The purpose of the Public Hearing was to receive testimony regarding the location and design of the Maryland Route 410 Extended Project and the environmental consequences of implementing the alternates under consideration. The No-Build and Build Alternates together with the engineering, economic, social and environmental consequences expected to result from these alternates were presented to the public for consideration.

Mr. Shook, District Engineer for the Maryland State Highway Administration (MSHA) in Montgomery and Prince George's Counties, opened the hearing by giving a brief description of the project and introduced those members of the Project Planming Team who would participate in the hearing.

Following Mr. Shook, Mr. S. L. Helwig, Project Manager, MSHA, described the alternates and summarized the environmental impacts associated with each alternate. The alternates he described were the two types of roadway sections (open and closed) that could be utilized for the mainline of Maryland Route 410 Extended, three at-grade signalized " T " type intersections for Riverdale Road at Maryland Route 410 Extended, two at-grade signalized intersections and a diamond interchange for the juncture of Route 410 and Maryland Route 450 (Annapolis Road),
and two types of interchange configurations on U.S. Route 50 (John Hanson Highway). Following the description of these alternates, Mr. Helwig then described the No-Build Alternate. A summary of the environmental effects then followed.

Mr. Jonathan Willis, Chief of the Right-Of-Way Division for District 3, followed by explaining the State Highway Administration's right-of-way acquisition policies.

Ms. JoAnn Hardnett of the State Highway Administration Equal Employment Opportunity Office continued the presentation by describing Title VI of the Civil Rights Act of 1964, as 'amended, and it's relevance to the project.

Prior to intermission, Mr. Shook brought to everyone's attention that there were additional brochures available at the table in the hallway. Also, he mentioned that written comments received by December 17,1979 would be included in the hearing transcript. And for those who had not signed up to speak that evening and wished to do so, could sign up at the desk during intermission.

During intermission, citizens were invited to view wall displays of the proposed alternates. Mr. Charles Walsh, Mr. Louis Age and Mr. Jim Thompson of the Maryland State Highway Administration and Mr. Robert Campbell and Mr. Michael Chasin of Baltimore Transportation Associates were on hand to answer questions.

The hearing continued with the following comments:

1. David Bird, State Delegate representing the $23 r d$ District, expressed concern of this project. He questioned the
need of extending the road past U.S. Route 50 and the conection to Riverdale Road. He felt there should be access to Pennsy Drive to service the Industrial Park and there should be access to the Metro Station and the $\operatorname{Triangle}$ beyond that to service the employees and the commuters that are coming into the area. He was also concerned that designated park areas not be developed for other purposes with the advent of the roadway, and that the Regional Park be developed concurrently with the highway. Reiterating his concern of this project, he urged all citizens to be vigilent, that this road project does not become a nightmare in the 23rd District. RESPONSE: The section of Maryland Route 410 Extended from Riverdale Road to U.S. Route 50 appears in the approved Master Plan for the Bladensburg-Defense Heights area and the adopted Model Neighborhood Area Master Plan (see page 201). If this section were not built, vehicles would continue to use a series of local streets for access to the Ardwick Industrial area and the Metro East Triangle area. Air and noise problems would continue to exist and the number of accidents would continue to increase on these streets (see page 2-12). The proposed park is part of the land use plan and is included in the approved master plan. The county has the responsibility to protect and develop the park site.
2. Sylvania Woods, member of the House of Delegates, representing District 25 and the other members of the 25th Legislative District team, spoke in support of Alternate 2 for the roadway and interchanges.
3. Mr. Stephen Oseroff, Director of Real Estate for Giant

Food, spoke in favor of Alternate 2 for the
interchange at Maryland Route 410 /Maryland Route 450.
He strongly opposes Alternate 3, the diamond
interchange.
4. Mr. Addison Pinkney, local resident, was concerned over the differences in the posted speed limits for Ardmore-Ardwick Road (30 mph), Buchanan Stet (15 mph) and the Glenridge area ( 25 mph ); the lack of snow removal equipment and sanitation equipment to clean streets; and the increase in traffic volumes on local streets from the Metro East Triangle.
5. Mr. Vernon Leon, Vice President of Citizens Bank \& Trust Company, was concerned over the large radius (200 feet) and right of way lines that are shown for the free right turn lane at the intersection of Ardwick-Ardmore Road and Adams Avenue. He presented an alternate plan with a smaller radius (110 feet). RESPONSE: Alternate 2 Modified, the selected alternate, has been revised to reflect the 110 -foot radius. A letter regarding this decision is included in this Appendix.
6. Ms. Alberta G. Jones, 7541 Ardwick-Ardmore Road, wanted to know what noise abatement measures were being planned along MD 410 Extended. Ms. Jones, a minority, was especially interested in why no noise control measures were planned in her neighborhood, since the predominantly white community of Bellemeade would receive protection in the form of barriers placed along Parkwood and Taylor Streets and 74th Place.

RESPONSE: While barriers were considered to protect these areas in the DEIS, they are not recommended.

Reanalysis of design year noise levels utilizing refined traffic projections indicates that none of the areas in Bellmeade or the Ardwick area will exceed design noise levels. Moreover, for the most part, increases over ambient noise levels are negligible to minor. However, two noise sensitive areas (\#10 and \#12), in Ms. Jones' area, will experience an 11 dBA increase. Full noise control measures are not considered cost effective at these two sites (see the feasibility discussion in Appendix E). Partial abatement measures in the form of landscape screen plantings will be implemented.
7. Mr. David F. Murray, of Ben Dyer Associates, representing Shell $0 i 1$ (developer of the Metro East $\operatorname{Tr}$ jangle), endorsed Alternate 2 for the U.S. Route 50 Interchange.
8. Alice McNeil, a resident of the Ardmore Road neighborhood, expressed displeasure over the project and stated that the only altenrate the neighborhood would accept would be the No-Build Alternate. She also mentioned that Riverdale Road is the worst road in the County and that more effort and money should be spent on Riverdale Road and not an extension. RESPONSE: On March 18, 1980, the Combined Citizens Coalition presented a proposal to the State Highway Administrator. One of the items in that proposal was the consideration of upgrading and improving the existing highways and intersections. Riverdale Road, among others, was included. A report was prepared and is included in this Appendix (see letter dated July 7, 1980). Al so reference Section 6.C.5.
9. Mr. Herman McNei.1, who lives at 7720 Ardmore-Ardwick Road, expressed how he was unable to gather information about the proposed highway, and why access to the Triangle area would not be from the Capital Beltway. He also prefers the No-Build Alternate. RESPONSE: Reference letter dated November 16,1979 in this Appendix. Access to the Metro East Triangle area from the Capital Beltway would be inconsistent with the Master Plan.
10. Mr. Daniel M. Morahan, who resides at 400574 th Place, Bellemeade, spoke in favor of the Maryland Route 410 project.
11. Marion Br own, a minority, who resides at 7716

Ardmore-Ardwick Road and represents the

Ardmore-Ardwick Women's Auxiliary, denounced the proposed Route 410 project and urged the State Highway Administration to adopt the No-Build Alternate.

She feels the proposed access is inconvenient and will isolate the remaining homes making them more vulnerable to being vandalized and to receiving poor policy and fire protection. She feels it will also adversely impact the school children since their walk to school and church will be lengthened. RESPONSE: The selected alternate (Alternate 2 Modified) at the Maryland Route $410 / \mathrm{U}$. S. Route 50

Interchange, provides access to the Hanson Oaks Area by bridging Maryland Route 410 extended, reconnecting Ardmore-Ardwick Road. That access will be maintained.
12. Gwendolyn Johnson, who resides at 7604 Ardmore-Ardwick Road, was concerned about the safety of the children crossing the proposed highway, major black radio stations not being used to announce the Public Hearing, and the destruction of historic trees. She also wanted it known that she did not want to live at the end of a dead end street. She urged the No-Build Al ternate.

RESPONSE: Sidewalks and painted crosswalks for pedestrians will be provided at each at-grade signalized intersection selected. There are two areas that escaped logging operations which consist of mature trees. One of these areas is Bellemeade Park and the other is a wooded area to the north of Ardwick Road. The selected alternate will not impact Bellemeade Park, however, some the the trees (White and Red Oak) in the other area would be impacted (See Section 3.8.6). Ardmore-Ardwick Road will be reconnected, and not terminated, at Maryland Route 410 Extended. To further assure that minorities in the area were informed of the project, two additional public meetings were held - February 26, 1980 and March 18, 1980. Black radio stations and newspapers were utilized to publicize these meetings.
13. Mr. Ken Richard, who works for the United Food and Commercial Workers, favors Alternate 2 for the combined interchanges on U.S. Route 50.
14. Mr. Edward C. Gibbs, a lawyer, speaking in behalf of his clients, favors Alternates 1 and 2 at the juncture of Maryland Route $410 /$ Maryland Route 450 , and supports Alternate 2 for the combined interchanges.
15. Mr. James W. Rogers, Jr., speaking in behalf of the Metro East Owners Association, supported Alternate 2 for access into the Metro area, and the interchange at Maryland Route $450 /$ Maryland Route 410 Extended.
16. Mr. Don McDaniel spoke of concern about the open access to the highway, and how Riverdale Road would become more con-
gested. He feels that Route 410 cannot be built under it's present plan. RESPONSE: Access to Maryland Route 410 Extended will be permitted only at Riverdale Road, Maryland Route 450 (Annapolis Road), U.S. Route 50 and Pennsy Drive. The constriction of Maryland Route 410 Extended would relieve the overcrowded conditions on Riverdale Road which is presently being used as one of the local streets to provide access to the Ardwick Industrial area and the Metro East Triangle area (see Section 2.B).

RE: Contract No. P 891-025-371 Maryland Route 410 Extended From Vicinity of the $B / W$ Parkway To Pennsy Drive Including U.S. Route 50 Interchanges

Mr. Herman McNeil
7720 Ardwick-Ardmore Road
Landover Hills, Maryland 20784
Dear Mr. McNeil:
In response to your request at the November 14 Informational Meeting, I am providing a copy of the Project Draft Environmental Impact Statement. As per our conversation you will review this document with the membership of your community association.

I believe this review will assist your community in the preparation and presentation of your comments at the December 4 Public Hearing.

If $I$ can be of further assistance feel free to contact either myself or Ms. Jo Ann Hardnett of our Equal Opportunity Section. M's Hardnett's telephone number is 301-383-5605.

Very truly yours,
Eugene T. Camponeschi, Chief Bureau of Project Planning

ETC:SLH: dd
Attachment
cc: Mr. Hal Kassoff
Mr. Wm. F. Schneider, Jr.
Mr. Richard Krolak
Mr. William Shook
Ms. JoAnn Hardnett
Mr. Jona than Willis
Mr: Robert Campbell

- My telephone numbiber̃ is - 383-4338

RE: Contract No.P 891-025-371
Maryland Route 410 Extended From Vicinity of the $B / W$ Parkway To Pansy Drive including U.S. Route 50 Interchanges

Mr. James Sullivan
Mr. Edward C. Gibbs, Jr.
Shipley, Knight, Manzi \&.Zanecki
14324 Old Marlborough Pike
Upper Marlboro, Maryland 20870
Dear Mr. Gibbs:
This response is relative to your inquiry on behalf of Mr. James Sullivan.

The information concerning the alternatives at the juncture of Proposed Maryland Route 410 Extended and Route 450 is correct. Specifically this Administration is prepared to present at the Project Public Hearing on December 4, 1979, three options for the juncture of these two roadways.

Alternates 1 and 2 propose an at-grade intersection at this point. The principal difference of these alternates (l \& 2) is the type of median which will be provided along Route 450 . This choice of median treatments will not affect Mr. Sullivan's property.

Alternate 3 at this location proposes a diamond type intersection enabling Route 410 Extended to pass under Route 450. Route 450 in this alternate would pass over the proposed route on the same plane as exists today.

A third element enters into consideration at this point of the discussion. This element has to do with the choice of a roadway section for the mainline of Route 410 Extended. Two alternate mainline roadway sections are available for consideration as depicted on the attached graphic. The open typical section (Alternate l) will require the greatest amount of Right of way for its' construction.

Therefore, the affect of the combination of alternates on the Sullivan property can best be described as follows:
$\qquad$

Mr. Edward C. Gibbs, Jr.
November 21, 1979
Page 2
1.) Intersection alternates $1 \& 2$ combined with closed mainline roadway Alternate 2 should not require the acquisition of land from the Sullivan property.
2.) Inciersection Alternates $1 \& 2$ combined with open mainline roadway Alternate $l$ is anticipated to require the acquisition of approximately . 01 acre from the southwest corner of the Sullivan property as indicated on the 60 scale plat.
3.) The affect to the Sullivan property resulting from Interchange Alternate 3 is governed by the criteria for the interchange ramps which are similar to the open roadway mainline alternate. This combination will consequently produce the greatest impact of approximately .16 acre which is also depicted on the 60 scale plat of the property.

The selection of one. of these three alternate combinations will be made following the December 4 Public Hearing.

If I can be of further assistance, please contact me via telephone number 383-4338.

> Very truly yours,

Eugene T. Camponeschi, Chief Bureau of Project Planning


ETC:SLH: dd
Attachments
cc: Mr. William Shook
Mr. James Sullivan
(w/attach.)
Mr. James Keseling "n "
Mr. Robert Campbell

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## DEPARTMENT OF TRAIISPORTATION <br> UPVITED STATES COAST GUARD

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning ejecu:Lamillic
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21211
Dear Mr. Camponeschi,
The Draft Environmental Impact Statement (DEIS) for Contract No. P 891-025-371, forwarded by Mr. Hal Kassoff's letter of October 30, 1979, has been reviewed. The two waterways in the project area (Beaverdam Creek and Brier Ditch) are not navigable for bridge administration purposes and no Coast Guard bridge permits will be required.


RESPONSE: None

United States Department of Agriculture

Soil
Conservation
Service

4321 Hartwick Road
College Park, Maryland 20740

159:
November 26, 1979

Mr. Eugene T. Camponesch1, Chief
Bureau of Project Planning FRJjeciotinilliNG State Highway Administration
300 West Preston Street
Baltimore, Maryland 21211

Dear Mr. Camponeschi:
410
Thank you for the opportunity to review the Maryland Rt. 412 proposed construction ELS.

The only comment we offer is we saw no mention of the presence or absence of prime agricultural lands in the project. We believe that even if there are none present, the EIS should so state.

If we can be of further assistance, please let us know.
Sincerely,


Gerald R. Calhoun State Conservationist

cc: Ray F. Chapman, Chairman, Anne Arundel SCD, 1660 Reidel Road, Box 374, Gambrills, Maryland 21054
Norman A. Berg, Administrator, SCS, South Bldg., Washington, D.C. Director of the Environmental Services Division, SCS, South Bldg., Washington, D.C

[^0]December 6, 1979

Mr. M. S. Caltrider
State Highway Administrator
State Highway Administration
Maryland Department of Transportation
300 West Preston Street
Baltimore, Maryland 21201
Dear Mr. Caltrider:
In response to your request, the National Capital Planning Commission, at its meeting on December 6, 1979, reported to the Maryland Department of Transportation State Highway Administration that the plan for the extension of Maryland Route 410 from Riverdale Road to Pansy Drive as shown on NCPC Map File No. 3203(44.10)28762, will not have a negative impact on the function of the Federal establishment or other Federal interests in the National Capital Region.

A copy of the Acting Executive Director's Recommendation, as approved by the Commission, is enclosed for your information.


George H.F. Oberlander
Acting Executive Director

## Enclosure

RESPONSE: None

STATE Key Ab:
:TONAL CAPITAL PLANNING COMM
.UN
1325 G STREET NW.
WASHINGTON, DC 20576
NCPC File No. 1958

> MARYLAND ROUTE 410 EXTENDED PRINCE GEORGE'S COUNTY, MARYLAND LOCATION AND DESIGN

Acting Executive Director's Recommendation
November 30, 1979

The Acting Executive Director recommends that the Commission report to the
Maryland Department of Transportation State Highway Administration that the plan for the extension of Maryland Route 410 from Riverdale Road to Pansy Drive as shown on NCPC Map File No. 3203(44.10)28762, will not have a nagatrave impact on the function of the Federal establishment or other Federal
interests in the National Capital Region.

## Description of the Project

The State Highway Administration of the Maryland Department of Transportation has scheduled a location/design hearing on the 2.6 mile extension of Route 410 from Riverdale Road to Pansy Drive in Prince Georges County. Proposed is a new four-lane divided roadway on a right-of-way part of which has been acquired or reserved through local subdivision planning by Prince Georges County. The new road would extend Route 410 as a circumferential arterial highway reaching from Route U.S. 50 to Bethesda. Access is proposed at four points: Riverdale Road just east of the Baltinore-Washington Parkway, Maryland. Route 450 (Annapolis Road), U.S. 50, and Penney Drive. A part of the project is the reconstruction of the U.S. 50 interchange with Ardmore-Ardwick' ?od, including a new interchange to provide access to the New Carrollton Metro Station and the Beltway Station of Amtrak. In this interchange, the existing connections to Ardmore-Ardwick Road would be replaced by connections to the new Route 410 Extended.

At this stage of the planning, in addition to the "no build" alternative only one centerline location is proposed. However, alternatives to intersection and interchange designs are still under consideration. These include three at-grade " $\mathrm{I}^{\prime \prime}$ intersections at Riverdale Road, two at-grade intersections and one grade separated "diamond" interchange at Route 450, and two alternate interchange configurations combining the U.S. Route $50 / \mathrm{Maryl}$ and Route 410 interchange with the New Carrollton Metro Access Interchange utilizing a collector distributor road system. In addition, two alternate cross sections for the main roadway are presented; one with curbs and gutters and "closed" drainage, and one with
open shoulders and drainage. Total estimated costs range from $\$ 35,395,000$ for the lowest cost combination, fo alternatives to $\$ 40,355,000$ for the most expensive.

The reconstructed interchange at U.S. Route 50 would affect 38 to 50 properties and displace 21 to 36 residents. A small area of park land would be involved in right-if-way for the mainline roadways in the area just south of Maryland Route 450 . Between 0.07 and 0.11 acres of the 6.41 acre side of the West Lanham Hills Recreation Center would be required. No Federal funds were used by the Maryland-National Capital Park and Planning Commission to acquire this site.

Traffic use of the new facility, projected to the year 2005, would be maximum of 68,000 vehicles per day at the north end of Riverdale Road just east of the Baltimore-Washington Parkway and 36,600 in the vicinity of U.S. Route 50 .

Previous Commission Action
On June 28, 1979, the Commission commented to the Prince George's County Planning Board on the preliminary Master Plan for the Bladensburg-Defense Heights Planning Area. This plan provided for the extension of Maryland Route 410 and no negative impact on Federal interests was identified in that review.

## Federal Interest Evaluation of the Plan

The alternative plans for Maryland Route 410 Extended have been reviewed for their impact on the interests and function of the Federal establishment in the National Capital Region. There are no Federal facilities in the vicinity of the proposed highway alignment, nor is there any Capper-Cramton land involved. The project conforms to the Major Thoroughfare Plan element of the Comprehenside Plan for the National Capital adopted by the Commission on December 11, 1968. As such it can contribute indirectly to access for Federal employees in home-to-work community trips. The nearest concentration of Federal employees is at Prince Georges Plaza, in leased space, about three miles to the west of this project. .

The Baltimore-Washington Parkway, a Federal facility operated by the National Park Service, is about one-quarter mile to the west of the northwest end of this project. Any upgrading of the parkway interchanges or to Riverdale Road to make it compatible with the proposed Route 410 extended will be addressed in the ongoing Baltimore-Washington Parkway study.

The proposed improvement to the U.S. Route $50 / \mathrm{New}$ Carrollton Metro Station Access Interchange will enhance access to the Amtrak Beltway Station where a relocation is proposed which would better relate it to the Metro station and improve parking. Therefore, it appears that the proposal to extend Maryland Route 410 and improve the U.S. Route 50 interchanges at Route 410 and the New Carrollton Metro Station access will not have a negative impact on the interests or function of the Federal establishment in the National Capital Region.

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES ADMINISTRATION
tawes state office euiloing
ANNAPOLIS, MARYLAND 21401
(301) 269-2265

December 13, 1979

## MEMORANDUM

TO: Lester A. Levine FROM: Michael A.


SUBJECT: Clearinghouse 80-11-498
Draft EIS I:a. 410 - WRA No. 80-PP-0486

Coments regarding the above referenced project are as follows:
1 - General - the entire report fails to adeqtately adress the direct impacts of construction to the waterways of Beaverdam Creek, Brier Ditch, and trikutaries. Statemerts like
"Beaverdan Creek, like Brier Ditch is biologically improductive..."
irply that there will be an overall lack of concern for these waterways during the planning and design of this project. In accordance with the regulations governing waterway construction the impacts to these strearns will be evaluated accordingly, regardless of their water cuality. Furthermore, it is pointed out that: (a) all hydraulic structures will be carefully.reviewed, and (b) the channelization of streams should be the last alternative considered when adaressing alternatives, however, if channelization is selected, the Highway Administration would have to insure a stable channel design before a waterway construction permit could be issued.

2 - Page 26: paragraph 4 further implies that the aforementioned streams are of no value. This paragraph must be corrected to reflect that the streams impacted are, at a minimum, Class I waters.

3 - The increase in stormwater runoff as a result of this project needs to be addressed by given proper attention to methods of stormwater management and the "Maryland Interim Watershed Management Policy".

4 -Page 74: paragraph 1 should state that all stream changes will require a Waterway Construction Permit From DNR and must comply with the governing regulations.

5 - Page 82: change wording - Department of Water Resources to Department of Natural Resources.

I have taken the liberty of keeping the report with our files for reference MAP/CRC/EC

RESPONSE: Permits from Water Resources Administration will be applied for during the final design phase. The degraded condition of Beaverdam Creek and Brier Ditch has been concurred with by the Department of Natural Resources Memorandum dated December 14, 1979. Hydraulic and hydrology studies are presently being conducted on Beaverdam Creek and its tributaries. These detailed studies are expected to be completed by mid-1981.



## MEMORANDUM



In response to your November 21,1979 request we have reviewed the subject draft EIS and have the following comments. We note that the study area traversed Brier Ditch and Beaverdam Creek watersheds. On May 29, 1979 we supplied comments to Kirk Cover of the Watershed Permits Section, WRA on the Cabin Branch Interchange, crossing Beaverdam Creek not far from the subject Study Area. Our analysis of environmental impacts as well as references to the scientific literature for the subject project are much the same as for the Cabin Branch Interchange. Therefore we have attached a copy of those comments to avoid needless repetition.

Our comments on this draft EIS have been prepared by Bob Schueler.

## Comments

1. In several places in the draft EIS the very degraded condition of the fisheries habitat in Brier Ditch and Beaverdam Creek resulting from past urbanization and development is cited (pages $26,28,29,61,73$, and 139). Further, on page 26, it is stated that "Neither Brier Ditch nor Beaverdam Creek is classified by the Maryland Department of Natural Resources pursuant...", inferring that these streams are not considered as having fishlife which must be conserved, because of the polluted nature of the streams. The Tidal Fisheries Division (TFD) takes the view that energetic pollution control and abatement programs can hopefully improve water quality to the point that previously degraded fisheries habitat can be restored. In the case of these two streams, however, degradation has proceded to such an extent that we concur in the draft EIS conclusions.

2. With the degree of additional residential and industrial development projected for the Study Area and facilitated by the proposed highway construction (pages 54, 56, 79 and 144) conditions in these already degraded habitats can be expected to worsen. In this connection we are at a loss to understand the statement on page 139 that "With the implementation of the erosion and sediment control measures, the water quality of the streams in question could be upgraded through the study corridor." This infers the possibility of enhancement. If this is intended, the support and rationale for this position should be given.
3. While we do not see how even good erosion and sediment control during highway construction can do more than protect existing stream quality for aquatic life, we agree that such rigorous control (pages 7.3, 80 and II9) is very necessary. Effective implementation of such control is closely related to the degree of inspection and enforcement applied by the appropriate State and County inspectors whose resources may be very thinly spread.
4. The proposed highway will generally traverse the last significant corridor of remaining open space in the Study Area as well as in much of the area immediately surrounding it. Granting the extent of damage from past urbanization and development, we reluctantly concur in the thrust of the document that further encroachment will not make the almost totally degraded fisheries habitat significantly worse. Consideration of externalities beyond the Study Area (which are not covered in the draft EIS) puts a different dimension on this problem, however. The most important fisheries impact of further degradation of Beaverdam Creek and Brier Ditch from additional residential and industrial development speeding run-off and generating and transporting, additional sediment, heavy metals, PCB and other chlorinated hydrocarbons as well as oil and other contaminants, will be downstream - well beyond the Study Area. The extent that this will contribute to a worsening of water quality and fisheries habitat conditions in the tidewater Anacostia-Potomac River system should be addressed in the draft EIS. Improvement of the water quality and fisheries habitat of the tidewater Anacosita-Potomac system is of broad interest and the possible impact of the proposed project upon this downstream system should not be ignored by a restricted scope of impact in the draft EIS.

RESPONSE: The construction of Maryland Route 410 Extended could have impacts upon the aquatic life present in the Anacostia-Potomac River system, particularly if construetion coincides with periods of heavy rains. Every effort will be made to minimize these impacts and to reduce shortterm water quality degradation to acceptable levels. Errsion and sediment control methods will be implemented and close liaison will be maintained with Soils Engineers, the Department of Water Resources, the Soil Conservation Service and other government agencies.

PEPETCATIENTION OF:
NABPL-E

Mr. Eugene T. Camponeschi


Chief
Bureau of Project Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21211

Dear Mr. Camponeschi:.

The Baltimore District, Corps of Engineers, has reviewed the Draft Environmental Impact Statement (DEIS) for Maryland Route 410.

The project as presented would not affect any existing or proposed Corps' projects. The report has made an adequate identification of the l00-year flood plain. . The alternative considered was developed utilizing the above noted information, therefore, no adverse drainage or flooding impacts are. expected to occur.

The DEIS also indicates that the proposed plan would necessitate various stream crossings, rechanneling approximately 1,000 feet of a branch of Brier Ditch and the discharge of dredged or fill material into navigable waters of the United States. As noted in Appendix B, a permit would be required for each occurrence pursuant to Section 404 of the Federal Water Pollution Control Act as amended which falls under the regulatory jurisdiction of the Corps of Engineers.. Any questions that you may have regarding permits can be directed to Mr. J. Durkay, Regulatory Functions Branch, at 962-3477.

We appreciate the opportunity to comment on the DEIS and if we can be of further assistance, please contact us.

## Sincerely yours,



RESPONSE: In those cases where a Waterway Construction Permit is required, the State Highway Administration will cooperate with the Department of Natural Resources in designing those stream crossings and the rechanneling of Brier Ditch.

Mr. L. Vernon Leon
Vice President, Real Estate
Citizens Bank \& Trust Company of Md.
6200 Baltimore Boulevard
Riverdale, Maryland 20840
Dear Mr. Leon:
I apologize for having extended your apprehension relative to the impact of the Route 410 project on your property on ArdwickArdmore Road. At our meeting on May l, 1979, I acknowledged your concern with regard to this matter and indicated that the solution might best be worked out in the design phase of the project.

Your letter to Secretary $0^{\prime}$ Donnell has accelerated the action on this matter. I have reviewed your proposal utilizing a turning radius of 110 feet with our Engineering Section. In their opinion, your proposal will suffice even though the projected turning movemints in this quadrant are significantly higher than in the opposite quadrants. That being the case, we will adopt a radius of 110 feet for the movement in question to mitigate the potential impact on your establishment.

I agree with you on the advantages of extending Monroe and Jefferson Streets, however, I might also advise you that this is a matter to be taken up with the County inasmuch as these streets are County facilities.

ETC:SLH:bh
cc: Mr. Hal Kissoff
Mr. Paul Milash
Mr. C. Harrison
Mr. William L. Shook
Mr. Robert Campbell
Mr. Robert J. Houst

Very truly yours,
Eugene T. Camponeschi, Chief Bureau of Project Planning
by:



Mr. Eugene T. Camponeschi, Chief Bureau of Project Planning State Highway Administration 300 West Preston Street
Baltimore, Maryland 21211

December 26, $19792^{11}$


Refer to: Draft Environmental Statement, Contract No. P 891-025-371 MD. Route 410 Extended

Dear Mr. Camponeschi:
Disturbing soil on relatively steep slopes along Beaverdam Creek will tend to increase erosion. In addition to the erosion control measures on p. 81, terracirg on certain slopes, and planting of woody vegetation will hāve f̂avorable long-term effects.

Access to the Hanson Oaks subdivision could perhaps be provided bys an extension of Decatür Road with less impact on natural resources than by extension of Ellin Road, a much longer right-of-way through what appears to be a wooded area.

Thank you for the opportunity to review this Statement.

dALE O. VANDENBURG
Staff Director
Environmental Quality Evaluation

| RE | Ardmore-Ardwick Road will not be severed by the construction of Maryland Route 410 Extended, as initially proposed. Ardmore-Ardwick Road will be kept open and a bridge will be constructed over Maryland Route 410 connecting Hanson Oak Drive. <br> Terracing of steep slopes accompanied with woody vegetation is acknowledged. and has been added to the list in Section 5.C. |
| :---: | :---: |

## MARYLAND

$3 C 1$ W. PRESTON STREET
BALTIMORE. MARYLAND 21201
harry hughes governor
$\ldots . .-\therefore \quad \begin{aligned} & \text { CONSTANCE LIEDER }\end{aligned}$

Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning

$$
\text { December 27, } 1979
$$ State Highway Administration

300 West Preston Street
Baltimore, Maryland 21211
SUBJECT: ENVIRONMENTAL IMPACT STATEMENT (ELS) REVIEW
Applicant: State Highway Administration
Project: Draft EIS - Md. Route 410 Extended from Vicinity oi the B/W Parkway to Pennsy Drive Including U.S. Route 50 Interchange (Prince George's County) SHA \#P891-025-371

State Clearinghouse Control Number: 80-11-498
State Clearinghouse Contact: James MicConnaughhay (383-2467)
Dear Mr. Camponeschi:
The State Clearinghouse has reviewed the above project. In accordance with the procedures established by the Office of Management and Budget Circular A-95, the State Clearinghouse received comments from the following:

Department of Agriculture, Department of Public Safety \& Correctional Services, Department of Budget and Fiscal Services, Department of Education, Department of General Services, Department of Economic and Community Development including their Historical Trust section, Department of Health and Rental Hygiene, including the Office of Planning and the Environmental Health Administration and our staff noted that the statement appears io adequately cover those areas of interest to their agencies.

Department of Natural Resources indicated (copy attached) that further consideration should be given to mitigating the direct impacts of construction to the waterways of Beaverdam Creek, Brier Ditch and tributaries and that proper methods for stormwater management need to be further considered.

Metropolitan Washington Council of Governments and the National Capital Planning Commission have been given the opportunity to conduct the required regional and Federal A-95 review and these responses will. probably be forwarded within the prescribed time period specified by Circular A-95.

We hope these comments are useful in your agency's continued evaluation of the project and anticipate that the comments will be considered and documented in the Final Statement on the project. Thank you for your attention to the A-95 review process.

cc: Clyde Pyers
Gordon Kama
Wayne Cowley
William Goy
David Kicker
Earl Seboda
Lowell Frederick
Edward Pigo
Max Eisenberg
Henry Silbermann
Walter Scheiber
George Oiderlander
Leo Ritter
JMc:BG: pw

# THE PRINCE GEORGES COUNTY GOVERNMENT 

## JINN 2 BRO

Mr. Walter A. Scheiber
Executive Director
Metropolitan Washington
Council of Governments
1875 Eye Street, N.W.
Washington, D.C. 20006
Re: COG No. 80-03-007.
Dear Mr. Scheiber:
The County staff, in cooperation with staff of the MarylandNational Capital Park and Planning Commission, has been reviewing the draft of the Environmental Impact Statement on the Maryland Route 410 Extended project, which was the subject of an A-95 referral from your Office dated November 30, 1979.

I am informed that the Transportation Planning Board staff has recommended that the Clearinghouse referral be forwarded without comment on the design alternatives, with indication that the project is in accordance with the region's transportation plan.

The county government has, for several years, urged the construction of this project at the earliest possible date, and we continue to do so. We will be submitting specific comments directly to the Maryland Department of Transportation with regard to. design alternatives.


[^1]
## R-95 METROPOLITAN CLEARINGHOUSE MEMORANDUM

DATE: January 3, 1980

## to: Mr. Eugene T. Camponeschi, Chief <br> State Highway Administration <br> 300 inst Preston Street <br> Baltimore, Maryland 21211

SUBJECT: PROJECT NOTIFICATION AND REVIEW FOR
PROJECT: Draft Environmental Impact Statementog No.: 80-03-007
N. Rte. 410 from B/W Parkway to Pansy Drive

APPLICAR:: Maryland Department of Transportation


#### Abstract

The proje₹ =itle, COG number, and applicant's name should be used in all correspondance wit: COG concerning this project. Correspondence should be addressed to Mr . Walter A. Sheiber, Executive Director. The staff may be reached by telephone at 223-6802.


## FINAL DISPOSITION

We $\mathrm{E}=\mathrm{r} \in$ concluded review of the above item and have determined that its nature does =vt warrant metropolitan comments. A copy of this memorandum and any attacinents should accompany your application to indicate that the Metropolitan Clearinghouse review has been completed.

A cosy of the above item has been sent to for =eview and comment, with direct response to be made by
Copies of any local agency comments which you receive should also accompany your appisization to the Federal agency.

We hare concluded review of the above item and have determined that it is in general accord with the metropolitan planning process and COG's adopted policies. A coz: of this memorandum and any attachments should accompany your application to indicate that the Metropolitan Clearinghouse review has been completed.

We hare concluded review of the above item and submit herewith, the attached Metropolitan Clearinghouse Review Comments. A copy of this memorandum and the attache comments should accompany your application when submitted to the Federal agency to indicate that the Metropolitan Clearinghouse review has been completed.

## WE APPRECIATE YOUR COOPERATION

Clearinghouse review comments will be valid for a period of two years from the date of this $\hat{A}-95$ Metropolitan Clearinghouse Memorandum. All projects not submitted to the Federal funding agency within that period must be resubmitted to the clearinghouse for update of tie review comments before formal application is made to the Federal Government.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 111
6TH AND WALNUT STREETS
PHILADELPHIA. PENNSYLVANIA 19106
JAN 3 1379 $\quad \because \therefore \therefore \cdot \therefore \%$
Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning State Highway ACZinistration
300 West Preston Street
Baltimore, Maryland 21211
Re: Maryland Route 410 Extended
Dear Mr. Camponeschi:
We have reviewed the Draft Environmental Impact Statement for the proposed project referenced above, and have classified it as LO-2 in EPA's Reference Category. We have enclosed a copy of the Definition of Codes for the General Nature of EPA Comments to provide a more detailed description of this rating. In accordance with our responsebilities under Section 309 of the Clean Air Act to inform the public of EPA's views on the potential environmental effects of Federally assisted actions, this rating will be published in the Federal Register.

Although the proposed project has been designed to avoid creating any significant adverse environmental impacts, we would like to see several issues clarified in the Final EIS. In Section 5.A.8, "Flood Hazards," it should be emphasized that the proposed roadway will cross Beaverdam Creek and its floodplain on bridges. It is also our understanding that Maryland State law and local land use regulations strictly limit construction and development in the floodplain. Furthe discussion of these topics in the EIS would help support the conelusion that tins project is consistent with Executive Order 11988 ("Floodplain Management").

We also believe that it would be helpful to include some additional discussion of this project's relationship to Maryland's State Amplementation Plan. The SIP consistency statement (page 65) could be expanded to show how this particular project fits into the plans for meeting the National Ambient Air Quality. Standards.

If you have any questions concerning our comments, please contact Mr. Eric Johnson of my staff at (215) 597-4388.

Sincerely yours,

COMMEMTATOR: John R. Pomponio, Chief EIS \& Wetlands Review Section United States Environmental Protection Agency

RESPONSE: 1) To avoid impacting Beaverdam Creek and its floodplain, structures have been utilized in the southeast and southwest quadrants of the Maryland Route 410/U.S. Route 50 Interchange. The majority of Ramp 'L' and Adams Avenue Extended are also on structures (see Exhibit 7).
2) The Air Quality Consistency Statement for this project can be found in Appendix D.

ER -79/1073

# United States Department of the Interior <br> OFFICE OF TILE SECRETARY <br> WASHINGTON, D.C. 20240 

Dear lug. Ilinsigy:
This is in response to a request for the Department of the Interior's comments on the draft environmental/Section $4(f)$ statement for SR -410 Extended (From Saltimore-liashington Parhavay to Ienasy Drive), Prince Georges County, Maryland.

SECTINN 4(f) Comate
This Department concurs that there is no Feasible and prudent alternative to the use of a small portion of West Lanai ails Fecreation Center and that all possible measures to minfaire harm to that area have been planned. including land replacement.

A letter dated August 16, 1979, from the Maryland Historical Trust,
 not eligible for the National Register, vinci would in e affected by the proposed project. Because of its historical significance, the department of Transportation (DOT) rill need to determine if. Section $4(f)$ of the DOT Acct is applicable. If it is applicable, DOT rust submit appropriate documentation for formal comment by the Department of the Interior.

ENVIROMRTAL STATERTAT COMTTMTS
The environmental statement is adequate insofar as the Recreation Center is concerned.

## SUEEARY COMETS

The Department of the Interior would offer no objection to U.S. Department of Transportation Section $4(\mathrm{f})$ approval for the use of land from the Recceaction Center. Our views on possible historic site Section $4(E)$ involvement will be provided then and if DOT determines to submit appropriate documentation.

## Sincerely yours,

James H. Tathlesberger
Special Assistant to

Mr. Emil Elinsky

$$
\text { cc: } \frac{\text { Pr. Fnisenc T, Camponeschi }}{\text { Chief, Bureau of Project Planing }} \begin{aligned}
& \text { Maryland Department of Transportation } \\
& \text { State higinay Administration } \\
& \text { P.O. Box } 717 \\
& 300 \text { West Preston Street } \\
& \text { Baltimore, Maryland } 21211
\end{aligned}
$$

COMMENTATOR: James H. Rathlesberger
United States Department of the Interior
RESPONSE: Site No. 2 would not be affected by the construction of this project, nor are the restrictions of $4(f)$ applicable.

FE: Draft EIS for Md. Route 410 extended (SHA AP891-025-37) State Clearinghouse Control Number: 80-11-498

Dear Mr. Camponeschi:
The Public School Construction Program interposes no objection to the draft environmental impact statement.

The Wildercroft Elementary School has been closed and declaredisurplus by the Prince George's County Board of Education. Its transfer to the Prince George's County government has been requested and is pending the solution to the payment of the outstanding bonded indebtedness, currently a state responsibility. The Prince George's County Board of Education remains the owner and will contimue to maintain and administer the facility, as well as handle any negotiations for the transfer of the school to the county.

Similarly, any impact upon the other two schools which are within the acoustic sphere of influence of this project rust be accommodated with the county board of Education.


LJR/NH/jc
cc: Mr. James McConnaughhay

RESPONSE: None

Subject: Draft EIS/Seetion 4(f) Statement, Maryland, Route 410 Extended, FHWA-MD-EIS-79-4-D

From: Director, Office of Environment and Safety

## memorandum

 Date: 10 ': ${ }^{2}: 1980$Reply to
Attn. of:
To: Chief, Environmental Programs Division FHWA/HEV-10

We have reviewed the draft statement on Maryland Route 410 extended in Prince George's County, and we offer the following comments.

The draft indicates that as a result of the planning (project is on the master plan) only one location alignment is considered. The final should summarize the alternatives that were considered in the planning process before the alignment was placed on the plan and before right of way aeguisition began.

The proposed alignment will take land from the West Lanham Hills Reereation Center. Two shifts in the alignment to avoid the recreation center were considered and dismissed. One does not appear to be feasible and prudent beeause of the additional community disruption (relocation of two apartments, one of which contains a nursery or day care center). However, the shift which requires a retaining wall may be feasible and prudent and further consideration appears necessary. The draft dismisses this alignment beeause the retaining wall would cost $\$ 100,000$, which is more than the cost of replacement land for the recreation center. However, this is probably a small increase in total project cost.

Court interpretations of section $4(f)$ do not allow a determination that an alternative is not prudent simply because there are cheaper options. If the costs are not of "extraordinary magnitude" (definition of prudent in Overton Park decision) then the retaining wall alignment is a viable alternative and cannot be dismissed based on a limited cost increase.

We appreciate the opportunity to review and comment on the draft EIS.


RESPONSE: 1) The development of the Maryland Route 410 Extended Project is discussed on Page 2-15 in Section 2.C. The project was developed in accordance with the approved Maryland State Action Plan.
2) No land will be acquired from the West Lanham Hills Recreation Center. There will be no $4(f)$ involvement.

From the vicinity of the Baltimore/Washington Parkway
to Pennsy Drive including
U.S. Route 50 Interchanges

The Honorable David P. Bird
Delegate, 23rd District
House of Delegates
Room 203
Lowe Office Building
Annapolis, Maryland 21401
Dear Delegate Bird:
This letter is in response to your inquiry on the Route 410 project dated January 18, 1980. The State Highway Administration is in agreement with you on the determination of priorities for the staged construction of the interchange elements along U.S. Route 50. Mr. Caltrider confirmed his posture on the importance of expanding access to the Metro East Triangle during our meeting on January $30,1980$.

At the January 30 , 1980 meeting, we also discussed possible modifications which may be applicable to our proposed Interchange Alternate 2. These modifications will lower the estimated cost of the interchange by reducing the complexity of construction in the area of the Amtrak/Metro Rail Lines. We have not proposed the modification of the ramps in the opposite quadrants for the following reasons. Analysis of the westbound collector-distributor road indicates that peak hour traffic will operate at an average speed of 45 miles per hour". In order to maintain this speed from the westbound collector-distributor road onto the northbound lanes of Route 410 Extended, a ramp radius of 550 feet is required. A lesser radius will tend to slow traffic which in the peak hour will affect the operation of both the collector-distributor roadway and the mainline of Route 410 .

The peak hour traffic volume from southbound Route 410 to westbound Route 50 is projected to approach 500 vehicles. The bulk of this volume, especially in the A.M. peak, is projected to be destined for the Landover Metro Station. It is important to provide an efficient exit ramp for these vehicles, but of even greater importance is the need to provide an efficient method of egress for the traffic from the Ardwick Industrial area to the westbound lanes of Route 50. This movement is projected to number $S 20$ vehicles in the P.M. peak hour via Ramp ' $N$ ' of Alternate 2. It is necessary to integrate the profiles of Ramp 'A' with. Ramp 'll' so their combined volumes can enter the collector-distributor

The Honorable David P. Bird
February 5, 1980

## Page 2

roadway and ultimately the westbound lanes of Route 50. It is the combined portion of Ramp 'A' and its merge with the collector-distributor roadway that creates the most direct impact to the Bellemead community. Therefore, two-thirds of the traffic using the critical section of Ramp 'A' is originating from the Ardwick Industrial area while the remaining one-third is emanating from the southbound lanes of Route 410 Extended. The alternate to Ramp ' $N$ ' merging with Ramp 'A' for this movement is a loop, as proposed by Prince George's County, which would involve all of the single family residences in the 7700 block of Ardwick-Ardmore Road (see enclosed sketch).

This proposed construction of Route 410 Extended will complete the east-west highway (Maryland Rovite 4l0) providing access to the employment and transportation facilities in the Route 50 corridor and in so doing, will divert traffic which, under the No-Build Alternate, would have iittle prerogative but to use Riverdale Road, Finns Lane, and Ardwick-Ardmore Road to reach their destination along Route 50.

Many factors have been considered in the development of the interchange alternates at this location. We believe the alternates which we discussed last week will provide the most efficient network with the least impact on the adjacent development.

Thank you for your comments and the opportunity to respond.


HK: bh
Enclosure
cc: Mr. M. S. Caltrider (w/attach:)
Mr. Thomas L. Cloonan
Mr, William L: Shook
ML. Eugene T. Camponeschi

Mr. Robert Campbell


February 5, 1980
FEB 81980
MEETING SUMMARY
B. T. A., INC. BALTIMORE, MD.

Contract No. P 891-025-371 Maryland Route 410 Extended
From the vicinity of the Baltimore/Washington Parkway To Pansy Drive including U.S. Route 50 Interchanges

TIME: 8:30 A.M.s January 30, 1980
PLACE: Room 210, Prince George's County Delegation Room, Lowe Office Building, Annapolis, Maryland

PARTICIPANTS:
Senator Thomas P. O'Reilly
Delegate Frank B. Pesci, Sr.
Delegate David Bird
Delegate Sylvania w. Woods, Jr.
Delegate Nathaniel Exum
Kenneth V. Duncan
Chief, Admin. Officer
Prince George's Co.
Vaughn E. Barkdoll

Alexander Fluery
George C. Martin
Mike Enrico
Lester Wilkinson
M. S. Caltrider

Hal Kissoff
William L. Shook
S. L. Helwig

Director, P. G. Co.
Dept. of Public works
\& Transportation
P. G. ${ }_{n} \mathrm{Co}_{\mathrm{n}} \mathrm{M}_{\mathrm{n}}^{\mathrm{DPV}}$

- $\quad$ n
M.N.C.P.\& PAC.

State Highway Admin.
" $\quad$ " $\quad$ "

PURPOSE: Briefing of County Leqislative Delegation and County Staff

Mr. Kenneth Duncan opened the meeting with a brief exnlanacion to the elected participants relative to the issue surroundina the proposed interchange alternate which was developed by the County Department of Public Works (DPW) and the Maryland National Capital Park and Planning Commission (MNCP\&PC) staffs for the U.S. Route 50 sequent of the Maryland Roue $4 l 0$ study corridor. This alternate was requested by the County to be presented by the state lianway Administration at the object Public marina. The State Highway Administration, after evaluating the alternate, opted not to include it in the presentation, which led to further
discussion of the matter culminating in this meeting with the combined staffs and elected officials. At this point, Mr. Kassoff summarized the status of the project indicating that the Public Hearing was held on December 4, 1979. A community meeting is scheduled on February 20,1980 to informally discuss a number of issues that have surfaced at the hearing and following the hearing by several neighborhood groups.

In the interim since the hearing, the Bureau of Project Planning has continued to assess the County interchange alternate with particular emphasis on the cost. At the same time, we have updated the construction cost estimates for the SHA interchange alternates. This activity has resulted in an increase in the cost of the SHA alternates from an estimate in the low $\$ 20$ million bracket to the mid $\$ 20 \mathrm{million}$ bracket. However, using the same cost factors, the County/MNCP\&PC alternate is found to cost approximately $\$ 1 l$ million dollars more. In light of the present financial restraints of this Administration, this differential is difficult to justify. Furthermore, as explained by Mr. Kassoff, the configuration of the County alternate is not as compatible with the intermediate arterial classification assigned to Route 410 Extended. It was also emphasized that the Collector-Distributor system proposed by the State Highway Administration is justified because of the numerous (potentially twenty) merging and diverging movements associated with the proposed interchange reconstruction in the Route 50 corridor between Maryland route 410 Extended and Maryland Route 704.

Mr. Kassoff proceeded to describe the methodology used to determine noise impacts by highway generated sources and the potential mitigation measures which may be considered, if required, in the design of a project. The measures chosen will be coordinated with the affected property owners and communities.

In response to Mr. Martin's concern, both Mr. Caltrider and Mr. Kassoff assured the group that this project is compatible with the studies being developed for the reconstruction of U.S. Route 50 commencing at the Capital Beltway interchange.

The discussion then led to the ratio of Feतeral participation in the project which was confirmed to be $75 \%$ in the construction phase.

Throughout this meeting, the underlyina concern revolved around obtaining Location/Design Approval and proceeding to the construction phase in the most expeditious manner. The most critical element of this study is the expanded access to the Metro East Trianqle. Mr. Caltrider responded that construction can be staged with the Metro Access being the first staqe, followed by the construction of the mainline of Route 410 Extended including the koute $410 / 50$ senment of the combined interchange.

Senator O'Reilly requested that he and his associates be apprised of the differences between the SHA alternates and the alternate proposed by the County. Mr. Kassoff and the writer described the significant differences in the two concepts as well as the modifications to Alternate 2 which have been made by our engineering staff. In this segment of the discussion, it was indicated that the justification for this project is predicated on the need to provide additional circumferential access to the employment and transportation facilities adjacent to the Route 50 corridor. The corridor for the construction of the mainline of Route 410 is restricted by development immediately adjacent to the land reserved for its construction. One exception to this controlled development is the neighborhood along the 7600-7700 blocks of Ardwick-Ardmore Road. The impact on this neighborhood, which is predominantly black, has become a very sensitive issue within the past three months. For this reason, the selection of a project alternate has been deferred until after a community meeting is held with these residents on February 20,1980 in the attempt to resolve their concerns. One of the most active of the citizens interested in this matter is Mr. Herman McNeil. Delegate Woods stated that he is aware of Mr. McNeil's opposition, and doubts that he can be satisfied short of the selection of the No-Build Alternate.

Delegate Woods was also opposed to the potential land loop at the intersection of Route 410 Extended and Pennsy Drive. Mr. Caltrider assured him that this feature of the Alternate 2 modification would not be considered after this meeting, particularly since the site is proposed for a Metrobus garage.

The question of providing continuity of Ardwick-Ardmore Road through the proposed Route 410 corridor was the final topic of discussion. The Area Master Plan proposes a grade separated connection from Ellin Road to Ardwick-Ardmore Road. This connection is routed to the north of the Hanson Oaks Subdivision. In the early stage of the combined interchange study, the Project Planning team considered and rejected a grade separated connection on the location of the present street. Discussion of this topic resulted in the agreement that our engineering staff would explore the feasibility, cost, and impact of providing a connection at the two locations for further consideration.

At the conclusion of the meeting, Mr. Duncan was reminded that the Hearing transcript was still being held open for the receipt of comments from the County. If they propose to submit their position for inclusion in this document, we would aupreciate the timely receipt of this material. Mr. Martin and Mr. iilkinson were reluctant to accept the fact that the Count:
interchange alternate was so much more costly than the SHA alternates. They were extended an invitation to review the breakdown of the cost factors if they choose to do so. Mr. Kassoff requested to be present for this discussion if these gentlemen opt to pursue the matter.


SLH:bh
cc: Mr. M. S. Caltrider
Mr. Hal Kissoff
Mr. William L. Shook
Mr. Thomas L. Cloonan
Mr. Eugene T. Camponeschi
Mr. Robert J. Houst
Mr. Gordon Daily
Mr. Foster T. Hoffman
Mr. Cal Higdon
Ar. Robert Campbell

JUL 91980
B. T. A., INC. baltimore, hd.

RE: Contract No. P 891-025-371
Maryland Route 410 Extended
From the vicinity of the
Baltimore/Washington Parkway
To Pansy Drive including
U.S. Route 50 Interchanges

Citizens Coalition Alternate

Mr. Herman McNeil, President Ardwick Civic Association
Member Combined Citizens Coalition 7720 Ardwick-Ardmore Road Landover Hills, Maryland 20784

Dear Mr. McNeil:
This report is being submitted to you as the representative of the Combined Citizens Coalition. On March 18, 1980, the Combine Citizens Coalition presented a proposal to State Highway Administrator Caltrider which suggested the following cortsideralions:
I. We propose the 'No-Build' Alternate for extension of Highway 410 beyond Route 50 to Riverdale Road.
II. We propose that the State Highway Administration's Administrator call a six month halt to any further work on this project in order to carefully review the alternatives listed below and incorporate these as reasonable alternatives in the Environmental Impact Statement.
III. In that six month period, we propose that the State Highway Administration develop plans for downgrading permanently the entire 410 Extended project. These plans should be as extensive as all previous plans developed on this highway and should be given consideration equal to those already developed. The new plans should include the following.
A. Interchange at Ardwick-Ardmore Road and Route 50.

1. The ramp on the north side of Route 50 is to be rebuilt at the same service level as at present. (Adequate for automobile and light truck traffic only.)
2. The loop on the south side of Route 50 (from Ardwick Road southbound to Route 50 eastbound) is to be rebuilt at the same service level as at present.
B. From Route 50 to Pansy Drive
3. To relieve traffic congestion in the Ardwick Industrial Park, build Route 410 from Route 50 south to Penney Drive.
4. Southbound ramp from Route 50 east and eastbound ramp from 410 north are proposed for the interchange at Route 50. These ramps should be of sufficient grade to accommodate industrial traffic.
5. Maryland 410 should be extended south of Pansy Drive to Jefferson Avenue which should be extended providing better traffic movement: in the industrial area.
C. Metro East Triangle - the same improvements as proposed by the State Highway Administration Project Planning Team.
D. Metro Access
6. Riverdale Road and 85 th Avenue should be extended to Elfin Road providing Metro access from the New Carrollton vicinity.
7. Extend Ell in Road to the Hanson Oaks Development.
8. Upgrade and improve existing highways and intersections in the area including Annapolis Road, Riverdale Road, Ardwick-Ardmore Road, Harking Road, 85 th Avenue, etc.

In response to this proposal, I would like to report on the findings of the Study Team as they relate to the individual items.
I. No-Build Alternate

This Administration has the responsibility to determine the conclusion of this study which will provide the greatest benefit for the motorists who utilize the study corridor. At this time, the choice lies between the No-Build Alternate, a Full Build Alternate, the Citizens Coalition Alternate, or the most beneficial combination of the above alternates. been carefully considered.
II. Six Month Halt

At the March 18, 1980 meeting, Administrator Caltrider indicated that the State Highway Administration would not agree to a definite delay in the planning process. However, he did guarantee that this Administration would investigate the Coalition Alternate before a decision on the project is made. It was also stated that whatever the choice of alternates turned out to be, the Final Environmental Impact Statement would describe the Citizens Alternate and the findings of the study of the Citizens Alternate. The Final Environmental -Impact Statement will: not be prepared until an alternate is selected by Administrator Caltrider.

As this report is being prepared, we are approaching the expiration of four months since the March 18, 1980 introduction of the Citizens Coalition Alternate.

## III. Study of Citizens Coalition Alternate

A. Interchange at Ardwick-Ardmore Road and Route 50

1. Ramp on north side of Route 50. Study of the possibility of adapting the existing ramp on the north side of Route 50 has revealed the following factors:
a. The adaptation to the proposed collectordistributor roadways paralleling Route 50 would reduce the ramp length by approximately $20 \%$ from the present 700 feet to 550 feet.
b. The reduction in length would increase the grade of this ramp to $7 \%$. The existing grade is 2\%. The grade should not exceed 5\% for this ramp.
c. In order to provide the same service characteristics for traffic traveling north on Ardwick-Ardmore Road from this ramp, the existing curved segment of the ramp would have to be reconstructed. Similarly, the straight segment of the existing ramp would have to be expanded to two lanes to provide adequate storage for left turning vehicles whose destination is Pennsy Drive.
d. The adaptation of this ramp would require the virtual complete reconstruction of the ramp. This adaptation would not require the acquisilion of any of the four residences situate. along Ardwick-Ardmore Koan. However, neither would it improve the operational or safety characteristics of the interchange ramp.
2. Loop on south side of Route 50. This Administration's proposal to modify the proposed interchange to a diamond configuration would eliminate the need for this existing loop. Vehicles southbound from Ardwick-Ardmore Road would turn left onto the ramp paralleling the railroad track for access to eastbound Route 50 and the Capital Beltway. This modification would greatly reduce the complexity of construction of interchange ramps over the railroad while at the same time providing interchange ramps that will satisfactorily accommodate projected traffic volumes.
B. From Route 50 to Pennsy Drive
3. Build roadway from Route 50 to Pansy Drive. The Connecting roadway from Route 50 to Pennsý Drive is a vital element of the combined Route 50 interchange concept. This connection with the associted interchange ramps on the south side of Route 50 provides access from eastbound Route 50 to both the industrial area and the Metro East Triangle. . It is also proposed as the primary means of access from the industrial area to eastbound Route 50 and the Capital Beltway.
4. Interchange Ramps. The proposed diamond interchange ramps will accommodate the projected traffic including truck traffic whose origin or destination is in the areas adjacent to Route 50.
5. Connection to Jefferson Avenue. The connection from Penney Drive to Jefferson Avenue would be beneficial to the operation of the system. This connection would divert an average of 8500 vehicles per day from the intersection of ArdmoreArdwick Road and Adams Avenue. This diversion would allow the intersection to operate more efficiently. The estimated cost (right of way and construction) of providing this connection is \$641,000.
C. Metro East Triangle Access. This Administration appreciates the Citizen Coalition's recognition of the need to expand the access roadways providing service for the Metro East Triangle. The configuration of Alternate 2 has received the greatest support following the Public Hearing presentation.

## D. Metro Access

1. Extension of Riverdale Road and 85th Avenue. The State Highway Administration's analysis and study of these elements of the Coalition proposal have revealed the following information:

## Riverdale Road Extension

The extension of- Riverdale Road was assumed to provide a two lane street with shoulders such as existing Harkins Lane. The traffic analyses for the Citizens Coalition Roadway Network reveals that the four-way intersection at Route 450 created by the extension of Riverdale Road will continue to be congested during daily peak hours. It is projected that 8,000 vehicles would use this extension daily by the project's design year of 2006. Without the extension, these vehicles would utilize Ardmore-Ardwick Road, Harking Lane, Finns Lane, and the 85 th Avenue/Ellin Road connection to Ardmore-Ardwick Road for access to U.S. Route 50. The traffic analysis of this element is only one of the considerations that must be taken into account.

The extension of Riverdale Road must be fairly circuitous to minimize impact to the Bryant. Woods Apartment complex as well as the homes at the end of Cross Street. The eighty (80) foot difference in elevation between Route 450 and 85 th Av énue also results in a less than desirable grade for the extension.

Consideration must be given to the right of way and relocation impact of extending Riverdale Road. The right of way necessary to support this construction would result in the loss of parking facilities for the Toys ' $R$ ' Us store; which would eliminate that site as a functional retail outlet. The westernmost building of the Bryant Woods complex would be required to support this construetion. The two homes at the east end of Cross Street would also need to be acquired to construct the extension. The right of way and relocation costs for this extension are estimated to be $\$ 2,900,000$, combined with the estimated construetron cost of $\$ 550,000$ resulting in a combined cost of nearly $\$ 3,500,000$.

Our investigation has included the extension of 85 th Avenue from its present terminus to Ell in
Road near the west Metro parking lot entrance. The estimated construction cost of this roadway is \$382,500. No right of way would be required.
2. In conjunction with the extension of 85 th Avenue, we have studied, in accordance with your proposal, the extension of Ellen Road to intersect Aramore-

Ardwick Road. This extension would bypass the Hanson Oaks. Subdivision to the north, as shown in the Area Master. Plan, intersecting Ardmore-Ardwick Road in the 7500 block. This connection would provide the opportunity for motorists to use 85 th Avenue and Ellen Road rather than Route 450 to get to Ardmore-Ardwick: Road and ultimately U.S. Route 50. This alternative route will attract over 7,000 vehicles by the 2005 design year.

The minimum right of way to support the construelion of this extension is sixty (60) feet. The intersection at Ardmore-Ardwick Road will require the acquisition of two single family homes in the 7500 block. The estimated right of way cost including the acquisition and relocation associate with the affected dwellings is $\$ 304,000$.

The estimated construction cost of this extension is $\$ 3,194,000$. This estimate includes the construction of a two lane roadway with shoulders plus a connection from this roadway to Hanson Oaks Drive: The cost estimate takes into account a bridge to span the floodplain between the Hanson Oaks and West Lanham Hill communities.

The total estimated right of way and construction cost for the extension of Elfin Road is nearly $\$ 3,500,000$.
3. Upgrade and improve existing highways and intersections. In response to the Citizen Coalition proposal, the Project Planning Team reviewed the existing highway network to determine the most probable segments that would have to be reconstructed to accommodate projected traffic in the study corridor. In addition to the new segments which have already been described, it was agreed that additional capacity would be required along Riverdale Road from the vicinity of 67 th Avenue to Route 450. The present Riverdale Road varies from two lanes, east of 67 th Avenue, to three. lanes and eventually a four lane street as it approaches the Route 450 intersection. The four lane segment is 44 feet wide, as compared to the normal 50 foot width of a four lane urban street.

Upon completion of the traffic analysis, it was decided that Riverdale Road should be reconstructed as a five lane, 62 foot urban street with sidewalks to provide an acceptable level oi service through the project design year. These five
lanes would provide two lanes in either direction with a continuous left turn storage lane to provide access to intersecting streets as well as commercial and residential properties adjacent to existing Riverdale Road.

The sixty-two (62) foot street would require an average of ninety (90) feet of right of way to support its construction. Fourteen (14) to twenty-eight (28) feet of additional right of way would be needed to satisfy the ninety (90) foot requirement. The proposed expansion will result in design noise lever s being exceeded at six locations. Noise control measures are not feastbile due to the numerous access points.

The expanded street with its associated additional right of way will necessitate acquisition of seven single family residences. The estimated right of way and relocation cost for the expansion of Riverdale Road is $\$ 960,000$. The estimated constriction cost associated with this expansion is $\$ 3,231,000$ resulting in a total estimated cost of approximately $\$ 4,200,000$.

It is the Project Planning Team's determination that Route 450 cannot be expanded from its present six lanes from. 85 th Avenue westerly without imposing a tremendous impact on the adjacent development. It would not be necessary or feasible to reconstruct Finns Lane, Harking Road, or Ardmore-Ardwick Road after considering the status of these roadways.

In summary, the State Highway Administration has studied the proposed Citizens Coalition Alternate. This study, has concluded that this alternate should consider the reconstruction of Riverdale Road, the construction of 85 th Avenue, and Ellyn Road to provide relief on Route 450 and the construction of the Connection from Pennsy Drive to Jefferson Avenue to relieve the Adams Avenue - Ardmore-Ardwick. Road intersection. This study has revealed that the extension of Riverdale Road is not beneficial in light of the impacts to the area versus the marginal traffic operational advantages.

The expansion of Riverdale Road combined with the Elfin Road connection would require the reloction of nine families.

The expansion of Riverdale Road would result in six noise level violations which could not be relieved by the consideration of noise barriers.

The study has revealed that it would not be safe nor cost effective to adapt the existing ramp from westbound Route 50 to northbound Aramore-Ardwick. Road.

The total estimated right of way and construction cost of the Citizens Coalition Alternate including a partial interchange at the juncture of Routes 410 Extended and U.S. Route 50 is $\$ 57,700,000$. If it is agreed to eliminate the extension of Riverdale Road from this estimate, the total would be reduced by
approximately $\$ 3,500,000$.

Attached to this report is a matrix comparing the major considerations for the entire spectrum of project alternates.

If you have any questions with regard to the content of this report, please contact my office.
 Office of Planning and Preliminary Engineering

HR:bh
Attachment

cc: Mr. M. S. Caltrider<br>Mr. Thomas L. Cloonan<br>Mr. Eugene T. Camponeschi<br>Mr. Carl E. Rath<br>Mr. Wm. F. Schneider, Jr.<br>Mr. Charles R. Anderson<br>Mr. William C. Krieger<br>Mr. Robert J. Finch<br>Mr, Jerry L. White<br>M2. Paul Milash<br>Mr. Robert Campbell<br>Mr. Roy Gingrich

Mr. William I. Slacum
Secretary
State Roads Commission
FROM:
Hal Kissoff, Director Office of Planning and Preliminary Engineering

SUBJECT: Contract No. P•891-025-371
Maryland Route 410 Extended From
Vicinity of the $B / W$ Parkway
To Fennsy Drive Including U.S. Route 50 Interchanges

The Project Planning Team Recommendation for the Route 410 Extended project was presented to Administrator Caltrider on August 12, 1980 .

The Team Recommendation is described in the attached meeting summary. The specific components of the recommendation are as follows:

Commencing at the terminus of existing route 410 in the vicinity of 61 st Place, the capacity of Riverdale Road must be increased, either prior to, or simultaneous with, the construction of Maryland Route 410 Extended, to accommodate the recommended alternate.

Signalized intersection Alternate 2 for the intersection of Riverdale Road at the point of diversion of Route 410 Extended.

A roadway section, with full access controls will be considered for the mainline of Route 410 from Riverdale. Road to the structure over U.S. Route 50. A raised median ranging in width from sixteen (16) to thirty (30) feet will be considered in the project design phase. The design phase activities will also determine whether to use an open or closed outside section to reduce construction impacts on adjacent improved properties. From Route 50 to the proposed intersection with Pansy Drive the mainline roadway would transition to a 54 foot closed roadway section.

The diamond interchange alternate at the juncture of Route 410 and 450 .

An Ardmore-Ardwick Road structure over Route 410.V.

Combined Intercnange Alternate 2 Modified for the Route 50 segment of the study corridor. This intercinange alternate proposes that the two primary components of the combined interchange (i.e. Route $410 / \mathrm{Metro}$ East Access) be connected by collector-distributor roads paralleling U.S. Route 50.

On July 28, 1980 a meeting was conducted, concerning the study alternates for the abutting $I-97$ project. As a result of this meeting the $1-97$ project will consiaer interchange alternates which would be compatible with C-D concept. The I-97 project will also develop an alternative which-will provide an HOV roadway in the median of reconstructed U.S. Route 50 to a suitable transition point west of the proposed juncture of Route 410 Extended. The final decision on this issue ( $C-D$ roads vs. HOV lanes) cannot be made until the public hearing is conducted for the $1-97$ project.

The FEIS for the Route 410 project will address the options available to the Highway Administration on this matter.

Discussion of staged interchange construction continued with the description of a preliminary staging concept for the easterly segment of the U.S. Route 50 combined interchange. This concept proposes the interim construction of two diamond type ramps on the north side of Route 50 accessing the westbound $C-D$ road to the grade separated roadway which in Alternate 2 Modified connects Ardwick Road to Corporate Drive. Ramps $I$ and $J$ of Alternate 2 Modified. would also be constructed in the preliminary stage. On the south side of Route 50 access to the Metro East Triangle would be provided by the existing ramp to the grade separated connection. Egress from the triangle and the industrial area would be provided via the construction of Ramp ${ }^{\prime} \mathrm{H}^{\prime}$.

A follow-up meeting with representatives of the Federal Highway Administration Darticipating was convened on September 3, 1980 (See attached summary). The September 3, 1980 meeting determined that $4 f$ involvement can be avoided by the reduction of the mainline median width in combination with the use of an outside curbed roadway and suggested centerline curve modifications.

The estimated cost for segment $l$ (West of the U.S. 50/Amtrak Structures) of Interchange Alternate 2 Modified is \$24,165,000. The estimated cost for segment 2 of this interchange alternate is $\$ 21,182,000$. This estimate has been revised to include the right of way and construction cost of Aa jams Avenue in segment 2. Both estimates represent total cost with additives.

Tin is information is being transmitted to you as part of the procedure by which you submit the action to Administrator Caltriaer, receive his approval, formally record and file the Administrator's decision.


HY: dd
Attachments

```
cc: Mr. Frederick Gottemoeller
    Mr. Wm. K. Lee,.III
    Mr. Wm. F. Lins; Jr.
    Mr. Eugene T. Camponeschi
    Mr. Paul Milash
    Mr. James Gatley
    Mr. Wm. F. Schneider, Jr.
    Mr. Charles Nalsh
```

NOTES:

1. The results of further investigation indicate that the potential traffic service benefits of a diamond interchange would not justify the additional costs involved. On February 10, 1981, the Administrator amended the selected alternate to provide an at-grade intersection at the juncture of Maryland Route 410 Extended and Route 450. The at-grade alternate includes a raised concrete median on Route 450 from the intersection with Route 410, west to Gallatin Street and east to 76 th Avenue. The concrete median, a necessary safety feature, will eliminate turns across Route 450 to various commercial establishments. Traffic movements from either direction into and out of 76 th Avenue will continue.
2. Chapter 6, Section 6.B.4, describes Alternate 2 Modified and the High Occupancy Vehicle (HOV) lane concept.

# MEMORANDUM OF ACTION OF STATE HIGHWAY ADMINISTRATOR M. S. CALTRIDER TUESDAY, SEPTEMBER 23, 1980 

CONCURRENCE WITH PRIOR ACTION

In accordance with Chapter $V$ of the Maryland Action Plan, a Final Environmental Impact Statement is being prepared on the following project:

1. State Contract No. P 891-025-371

Maryland Route 410 extended from vicinity of the $B / W$ Parkway to Pennsy Drive (including the U.S. Rte. 50 Interchanges).

The decision to proceed with this project was made by the Administrator at meetings held on August 12, 1980 and September 3, 1980. A summary of these meetings contains the specific location recommendations for this project.

Copy: Mr. F. Gottemoeller
Mr. W. K. Lee, III
Mr. W. F. Line, Jr.
Mr. E. T. Camponeschi
Mr. P. Milash
Mr. J. Gatley
Mr. W. F. Schneider, Jr.
Mr. C. Walsh
Mr. H. Kissoff
SHA-Contract P 891-025-371

## UNITED STATES DEPARTMENT OF THE INTERIOR: <br> FISH AND WILDLIFE SERVICE DELMARVA AREA OFFICE 1825 VIRGINIA STREET ANNAPOLIS, MD 21401 <br>  <br>  <br> BT. A. MO. <br> 

## MAR 261981

Robert L. Campbell
Baltimore Transportation Associates
Airport Investment Building
Baltimore-Washington International Airport
Post Office Box 8657
Baltimore, MD 21240

Dear Mr. Campbell:
This responds to your March 23, 1981 request for information on the presence of Federally listed or proposed endangered or threatened species within the impact area of the extension of Maryland Route 410 from the vicinity of the Baltimore-Washington Parkway to Pansy Drive, Prince Georges County, Maryland.

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

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

A list of Federally listed endangered and threatened species in Maryland is enclosed for your information. Please contact Andy Moser or Martha Carlisle (301-269-6324), our Endangered Species Specialists, if you need further assistance.

Sincerely yours,


Area Manager
Enclosure

A-54

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## APPENDIX B

## ASSESSMENT OF SIGNIFICANT

ENVIRONMENTAL EFFECTS

## ENVIRONMENTAL ASSESSMENT FORM

The Environmental Assessment Form, which is included on the following pages, was developed in response to the requirements of the Maryland Environmental Policy Act of 1974. This report is to be prepared for all State actions and registered with the Maryland State Clearinghouse through the Maryland Department of Transportation.

The form provides a rather comprehensive summary of the areas of environmental concern. The items that are noted as having comments attached are discussed within the text of the Final Environmental Impact Statement. Footnote references are provided for the convenience of the reader.

Yes No $\quad$| Comment |
| :--- |
| Attached |

A. Land Use Considerations

1. Will the action be within the 100 year flood plain?

$$
\mathrm{X} \quad \text { Sec. 5.A. } 8
$$

2. Will the action require a permit for construction or alternation within the 50 year flood plain?

$$
\underline{X} \quad \mathrm{X} / \mathrm{A}
$$

3. Will the action require a permit for dredging, filling, draining or alternalion of a wetland?
$\underline{X}$ Sec. 3.B.5
4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?
$\underline{\mathrm{X}} \quad \underline{\mathrm{N} / \mathrm{A}}$
5. Will the action occur on slopes exceeding $15 \%$ ?
$\mathrm{X} \quad$ Sec.3.B.1
6. Will the action require a grading plan or a sediment control permit?

$$
\mathrm{X} \quad \text { Sec. 5.C }
$$

7. Will the action require a mining permit for deep or surface mining?
$\underline{X} \quad \mathrm{X}$ NRA
8. Will the action require a permit for drilling a gas or oil well?

9. Will the action require a permit for airport construction?
$\mathrm{X} \quad \mathrm{X}$
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?
— $\quad \mathrm{X} \quad \mathrm{N} / \mathrm{A}$
11. Will the action effect the use of a public recreation area, park, forest, wildife management area, scenic river or wildland?
$\longrightarrow \quad \mathrm{X}$ Sec. 3.C. 3
12. Will the action effect the use of any natural or manmade features that are unique to the County, State or Nation? $\longrightarrow \quad \mathrm{X} \quad \mathrm{N} / \mathrm{A}$
13. Will the action affect the use of any archaeological or historical site or structure? — X Sec. 3.C. 4 \& 5
B. Water Use Considerations
14. Will the action require a permit for the change of the, course, current, or crosssection of a stream or other body of water?

X
Sec. 5.A. 6
15. Will the action require the construction, alternation or removal of a dam, reservoir, or waterway obstruction?
$\longrightarrow \quad \mathrm{X}$
N/A
16. Will the action change the overland flow of storm water or reduce the absorption capacity of the ground?
$\therefore \quad \mathrm{X} \quad$ N/A
17. Will the action require a permit for the drilling of a water well?

X $\mathrm{X} \quad$ N/A
18. Will the action require a permit for water appropriaction?
X

Comment
Yes No Attached
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?
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?

I $\quad \mathrm{X} \quad \mathrm{N} / \mathrm{A}$
21. Will the action result in any discharge into surface or subsurface water?
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?
$\xrightarrow{X}$
Sec. 5.A. 5 \& Chapter 7
C. Air Use Considerations?
23. Will the action result in any discharge into the air

$$
\mathrm{X} \quad \text { Chapter } 8
$$

24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?
$\longrightarrow$ X Sec. 5.A. 4
25. Will the action generate additional noise which differs in character or level from present conditions? $\qquad$ X
26. Will the action preclude future use of related air space?
27. Will the action generate any radiological, electrical, magnetic or light influences?
$\longrightarrow \quad \mathrm{X}$
N/A
X
D. Plants and Animals
28. Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?
Comment
Attached
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?
30. Will the action require a permit for the use of pesticides, herbicides or other

- biological, chemical or radiological control agents? $\quad \mathrm{X}$ NRA


## E. Socio-Economic

31. Will the action result in a pre-emption or division of properties or impair their economic use? $\quad X \quad X \quad$ Chapter 7
32. Will the action cause redocation of activities, structres or result in a change in the population density or distribution?

| Sec. $5 . \mathrm{B} \&$ |
| :--- |
| $\mathrm{X} \quad$Sec. $4 . \mathrm{A} 3$. |

33. Will the action alter land values?

34. Will the action affect traffic flow and volume?

Yes No Chapter

35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource? $\quad \mathrm{X} \quad \mathrm{N} / \mathrm{A}$
36. Will the action require a license to construct a sawmill or other plant for the manufacture of fores products? $\quad \mathrm{X}$ NRA
37. Is the action in accord with Federal, State, regional and local comprehensive or fundtional plans, including zoning? $X$ Sec. 2.A \& 2.D
38. Will the action affect the employment opportunities for persons in the area? $\quad \mathrm{X}$ Sec. 3.D. 4
39. Will the action affect the ability of the area to attract new sources of tax revenue? $\quad \mathrm{X}$ Sec. 3.D.1
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?
— X Sec. 3.D.1
41. Will the action affect the ability of the area to attract tourism?
— $\mathrm{X} \quad$ NRA
F. Other Consideration
42. Could the action endanger the public health, safety or welfare?
$\longrightarrow \quad \mathrm{X}$ Sec. 5.A. 7
43. Could the action be eliminoted without deleterious effects to the public health, safety, welfare, or the natural environment?
— $\mathrm{X} \quad \mathrm{N} / \mathrm{A}$
44. Will the action be of statewide significance?

X Sec. 2.B
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? — $\mathrm{X} \quad \mathrm{N} / \mathrm{A}$
46. Will the action require additional power generation or tranmission capacity? $\longrightarrow \quad \mathrm{X} \quad$ NRA
G. Conclusion
47. This agency will develop a complete environmental effects report on the proposed action.


The development of the Environmental Impact Statement under NEPA will satisfy the requirements of MEPA in accordance with the Council of Environmental Quality Regulations of 1978.

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APPENDIX C
WATER QUALITY

During the period from January 1975 through March 1976 water samples were collected and analyzed from three locations along Beaverdam Creek (Plate 21). The results of the tests conducted for each water sampling location are available from the Prince George's County Health Department, Bureau of Environmental Health, Cheverly, Maryland

A. GENERAL

The following receiving water quality standards are established to protect the uses indicated. Where the waters of the State are, or may be, affected by discharges from point sources, these standards shall apply outside of a mixing zone designated by the Administration.

## B. STANDARDS FOR CLASS I WATERS

Water Contact Recreation and Aquatic Life:
(1) Bacteriological Standards

There shall be no sources of pollution which constitute a public health hazard. If the fecal coliform density exceeds a log mean of $200 / 100 \mathrm{ml}$, the bacterial water quality shall be considered acceptable only if a detailed sanitary survey and evaluation discloses no significant public health risk in the use of the waters.
(2) Dissolved Oxygen Standard

The dissolved oxygen concentration shall be not less than $4.0 \mathrm{mg} /$ liter at any time, with a minimum daily average of not less than $5.0 \mathrm{mg} /$ liter, except where, and to the extent that, lower values occur naturally.
(3) Temperature Standard
a. Thermal effects shall be limited and controlled so as to prevent:

1. Temperature changes that adversely affect aquatic life;
2. Temperature changes that adversely affect spawning success and recruitment; and
3. Thermal barriers to the passage of fish.
b. Temperature elevations above natural shall be limited to $5^{\circ} \mathrm{F}$, and the temperature may not exceed $90^{\circ} \mathrm{F}$ outside of designated mixing zones.
c. This limitation of temperature changes in Class I Waters does not preclude the discharge of warmed water. Warming of a portion of a body of water is permissible if it will not produce substantial detriment and if the volume of the new temperature is of such size and duration that the exposure of organisms or life stages thereof, is less than the time associated with deleterious biological effects at that particular temperature.
(4) pH Standard

Normal pH values must not be less than 6.5 , nor greater than 8.5, except where, and to the extent that, pH values outside this range occur naturally.
(5) Turbidity Standard
a. Turbidity may not exceed levels detrimental to aquatic life, and
b. Within limits of Best Practicable Control Technology Currently Available, turbidity may not exceed for extended periods of time above those levels normally provailing during the periods of base flow in the surface waters, and
c. Turbidity in the receiving water resulting from any discharge may not exceed 50 JTU (Jackson Turbidity Units) as a monthly average, nor exceed 150 JTU at any time.

## C. STANDARDS FOR CLASS II WATERS

Shellfish Harvesting:
(1) Bacteriological Standards
a. The Most Probable Number (MPN.) of coliform organisms may not exceed $70 / 100 \mathrm{ml}$ as a median value, and not more than 10 percent of the samples may exceed an MPN of $230 / 100 \mathrm{ml}$ for a five-tube decimal dilution test (or $330 / 100 \mathrm{ml}$, where the three -tube decimal dilution is used).
b. Compliance also shall be achieved with the sanitary and bacteriological requirements as set forth in the latest edition of "National Shellfish Sanitation Program Manual of Operations".
(2) Dissolved Oxygen Standard

Same as for Class I Waters.
(3) Temperature Standard

Temperature elevations above natural shall be limited to $4^{\circ} \mathrm{F}$ in September through Mary, and to $1.5^{\circ} \mathrm{F}$ in June through August, outside of designated mixing zones.
(4) pH Standard

Same as for Class I Waters.
(5) Turbidity Standard

Same as for Class I Waters.
D. STANDARDS FOR CLASS III WATERS

Natural Trout Waters:
(1) Bacteriological Standards

Same as for Class I Waters.
(2) Dissolved Oxygen Standard

The dissolved oxygen concentration may be not less than $5.0 \mathrm{mg} /$ liter at any time, with a minimum daily average of not less than $6.0 \mathrm{mg} /$ liter, except where, and to the extent that, lower dissolved oxygen occurs naturally.
(3) Temperature Standard
a. No significant thermal changes, and
b. Temperature may not exceed $68^{\circ} \mathrm{F}$ beyond the distance from any point of discharge specified by the Administration, except where, and to the extent that, higher temperature values occur naturally.
(4) pH Standard

Same as for Class I Waters.
(5) Turbidity Standard

Same as for Class I Waters.
E. STANDARDS FOR CLASS IV WATERS

Recreational Trout Waters:
(1) Bacteriological Standards

Same as for Class I Waters
(2) Dissolved Oxygen Standard

Same as for Class I Waters.
(3) Temperature Standard
a. Thermal effects shall be limited and controlled so as to prevent:

1. Temperature changes that adversely affect aquatic life;
2. Temperature changes that adversely affect spawning success; and
3. Thermal barriers to the passage of fish.
b. Temperature may not exceed $75^{\circ} \mathrm{F}$ beyond the distance from any point of discharge specified by the Administration, except where, and to the extent that, higher temperature values occur naturally.
(4) pH Standard

Same as for Class I Waters.
(5) Turbidity Standard

Same as for Class I Waters.

* Department of Natural Resources, Regulation 08.05.04.03

APPENDIX D
AIR QUALITY ANALYSIS

## A. CONSISTENCY WITH THE STATE IMPLEMENTATION PLAN

Consistency with the State Implementation Plan has been evaluated for this project 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 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 Amplementation Plan/Transportation Control Plan for addressing attainment with Air Quality Standards, and 4) the review process which
"certifies" that adequate transportation and air quality planning is being conducted in these urbanized areas.

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

Thirdly, this project is included in the regional transporttion plan and Transportation Improvement Program for 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.

Since regional pollutants such as hydrocarbons and oxides of nitrogen, precursors of photochemical oxidants (smog), are addressed through this regional planning process only carbon monoxide emmissions, a more localized pollutant, are being addressed quantitatively in this analysis.
2) Microscale Carbon Monoxide Levels

The air quality analysis of the subject project was completed in September 1979. No violations of the one-hour or eight-hour State and National Ambient Air Quality Standards are predicted to occur in either study year (1985 and 2005) adjacent to the line segments studied. Reference this Appendix for summary of results.

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

This project is consistent with the State Implementation Plan for Air Quality.
B. COORDINATION WITH OTHER AGENCIES

Copies of this report were forwarded to the U.S. EPA and the Maryland Department of Health and Mental Hygiene for review and comments.

## SUMMARY OF RESULTS

MARYLAND ROUTE 410 EXTENDED AIR ANALYSIS

This report summarizes the conclusions of the air quality analysis performed concerning the proposed construction of Maryland Route 410 extended, in Prince George's County.

The proposed project involves the construction of an approximately 2.5 milelong connector roadway linking existing Maryland Route $A_{i} 10$, Riverdale Road, with Route 450, then Route 50, and finally Pennsylvania Drive, in Ardmore, where a Metro subway station is proximally located.

Six receptors plus one set of edge-of-right-of-way (EROW) hypothetical receptors were selected. Since Route 410 existing was designated "No-Build," only two of the receptors so selected were sufficiently close to No-Build to be affected by it.

The six selected receptors and three EROW sites for each case (Build vs. No-Build) are indicated on the map shown in Figure 1. The receptors are:

- Site 1 - Wildercroft Apartment Complex, east of existing Route 410, nearest unit. Affected by mainline No-Build, or the intersection of Route 410 with Build.
- Site 2 - A single-family residence on Sunrise Drive, east of Patterson Lane, in a cluster of such residences; the nearest residence to Build (mainline) Route 410 was selected.
- Site 3 - Tanham Terrace Apartments, a set of four-story garden-style apartments, affected by mainline Build only.
- Site 4 - A single-family residence west of Ardmore-Ardwick Road, affected by mainline Build as well as three different interchange alignments between Build and U.S. Route 50. This residence is just outside of the ROW requirements of the most extensive Interchange alternate.
- Site 5 - Another single-family residence in a cluster of same located on 67th Place, east of existing Route 410. This receptor is affected by the intersection of Route 410 with Build, or mainline No-Build alone, even more so than Site 1.

- Site 6 - Glenridge Junior High School, on Gallatin Street, in the central portion of the study area. Affected by mainline Build only. Although site 6 is not expected to be utilized during the expected time of peak $C 0$ emission from the highway ( $5-6$ p.m.), it would be affected by part of the maximum conservative 8 -hour period of emission, and the intervening terrain between it and Build is relatively flat, thus making it conducive towards application of the HIWAY model even though it is farther from the line source (about 850 feet) than any other receptor.
- Sites Fa, Tb, Tc - Edge-of-right-of-way (EROW), uninhabited sites. $7 \mathrm{a}-7 \mathrm{c}$ are located 8,16 , and 32 m (26.2, 52.4, and 105.0 feet) respectively, from EROW of Build as it would interchange with Route 450 (Annapolis Road) under either of two configurations. No corresponding EROW-receptor set was selected for No-Build, as differing lane and traffic figures would make any such comparison meaningless. Site Pa is near to the Suburban Trust Bank building.

The analysis was carried out using EPA's HIWAY line source diffusion estimatimon program, with emission factors generated from a run of the EPA MOBILE program. Traffic figures were taken from the Maryland State Highway Administration's traffic forecasts. The meteorcligical assumptions corresponded to those listed in Specifications for Consulting Engineer's Services, Volume II, Section VII.

The results of the HIWAY runs are shown in Table 1. For the receptors that were modeled on the basis of differing interchange alignments, the maximum CO figure is displayed and the interchange alternate identified. Note that signalization was not accounted for in this analysis as queuing estimates were not available. Since traffic flow projections did not vary among the different build interchange alternates, the CO concentration figures were all nearly the same at sites affected by these interchanges.

In most cases, the highway-derived CO concentrations were at or less than projected background levels. The EROW sites (Ta, Tb, and Pc) are among the highest of the group in terms of total co levels, due to their proximity to the mainline roadway. No-Build tends to create higher values of CO concentration than Build at corresponding sites ( 1 and 5 ) due mainly to reduced vehicle running speeds. Site 5 is predicted to experience the maximum CO impact, with a worst-case estimate of $13.7 \mathrm{mg} / \mathrm{m}^{3}$ expected in 1985 , peak hour traffic conditions and $5.5 \mathrm{mg} / \mathrm{m}^{3} \mathrm{maximum}$


* 1985/2005 concentrations, including projected background cO levels. ** See text for explanation.

NB: Receptor sites $2-4$ and 6 would not be significantly affected by the No-Build Alternate.

NOTE: The current and planned land use between Receptor Sites $7 \mathrm{a}, 7 \mathrm{~b}$ and 7 c is commercial.

8-hour traffic conditions, No-Build alternate. The State and National Ambient Air Quality Standards with which to compare all of these figures to are:

$$
\text { S/NAAQS for } \mathrm{CO}, \mathrm{mg} / \mathrm{m}^{3}
$$

Maximum One-hour 40
Maximum Consecutive Eight-Hour 10

Thus, Site 5 under No-Build would experience a worst-case CO concentration that is 34 percent of the maximum one-hour standard and 55 percent of the maximum eighthour standard

Thus, it is shown that the Build alternate will not violate any CO standard at any site and is sufficiently below the standards at all inhabited sites as to be of no concern from a health standpoint relative to carbon monoxide effects

The Build alternate is also shown to be less of a pollution source at sites corresponding to the No -Build alternate as well. This project is therefore consistent with the Maryland SIP for air quality.

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## APPENDIX E

## NOISE

Only one (1) design noise level violation (NSA \#19) is projected to occur with the build alternate. Twelve (12) noise sensitive areas, where design noise level exceedences will not occur, will experience significant or severe noise level increases. These NSA's are 1, 3, 4, $5,6,7,8,10,11,12,17$, and 20 . Control measures were investigated • for each of these areas, and are planned, at NSA's $1,3,4,5,6,7$, and 17. Plate 16 on page 5-9 shows the location of these measures. Fences, walls, earth berms or a combination of each could be used and the height would be approximately 12-15 feet. The following are the estimated costs of these barriers:

| Noise Sensitive Area | Cost of Noise Control  <br> $1^{*}$ $\$ 405,000$ <br> 3  <br> 4 $\$ 417,200$ <br> 5  <br> 6 $\$ 338,000$ <br> 7  <br> 8 $\$ 305,000$. |
| :---: | :---: |

*This barrier would also protect NSA \#2.
The abatement goal is a reduction of the $L_{10}$ level by 10 dbA . Some of the NSA's impacted are apartment buildings (Areas 1, 3, and 17). The control measures proposed will reduce impact at the ground level and, in some cases, the second story level only. Barriers in excess of 15 feet would be required to reduce noise levels at the upper stories. Due to cost and visual impact, barriers of the proportion to protect upper floors are not considered practical. The design of the proposed barriers will be coordinated with the affected community during the project design phase.

Full control measures are not considered to be feasible at the following locations:

NSA Area 8 is a single family residence while area 10 consists 8 of three residences. Construction costs of barriers would exceed $\$ 100,000$ per residence. Since design noise levels (DNL) are not exceeded and only a few homes would be protected, barriers at these sites are not economically feasible. However, landscape screen plantings will be employed at both areas as a partial mitigation measure at an estimated cost of $\$ 55,000$. The design of these plantings will consider their year round effect. In addition, area 8 will receive a $3-5 \mathrm{dbA}$ reduction in the design year as a result of control measures planned for areas 6 and 7 .

$$
A-79 a
$$

Area 11 is the West Lanham Hills Recreation Center, which is presently undeveloped. There are no plans for developing this area and no noise control measures are planned. If the park would be developed prior to highway construction, the design of the highway facility will consider noise control measures in this area. In addition, a copy of the report has been provided to the local planning board.

Area 12 consists of the Hanson Oaks Apartments. Only the building closest to the proposed alignment would experience an 11dbA increase. The other buildings in the complex are over $300^{\prime}$ from the proposed alignment. Construction of a barrier would not result in significant reductions due to the distance that would result between the barrier and the receiver. Diffraction over the top of the barrier would limit the reduction achievable from a barrier. Furthermore, predicted noise levels are still well below the design noise level. This abatement, then, is not considered cost effecfive.

Area 19 consists of a single family residential development along 67 th Place south of Riverdale Road. While this NSA results in a minor noise increase, it exceeds federal design noise levels by 3dbA. Construction of a barrier is not recommended because of its cost and relatively small amount of abatement. The at-grade intersection at Riverdale Road and 67 th Place would prevent construction of a barrier of sufficient length to reduce noise levels by more than $3-4 \mathrm{dbA}$.

Area 20 is the Glenridge Junior High School. The 14 dbA increase over ambient levels will occur during peak hours. Nonpeak hours will occur during normal school hours. Nonpeak $\mathrm{L}_{10}$ noise levels will be $4-5 \mathrm{dbA}$ below the peak hour $\mathrm{L}_{10}$, bringing the $\mathrm{L}_{10}$ exterior level to 57 dbA , a level which will' not adversely impact exterior or interior school activities. Therefore, abatement is not considered warranted.

Based on the predicted noise levels for sites 9, 13, 14A, $14 \mathrm{~B}, 15,16$, and 18 being below DNL's and only minor increases over existing levels, abatement was not considered warranted.

Sites 14 B and 16 are predicted to reach 70 dbA which is the DNL. A barrier was considered in the DEIS, however, it is not recommended. Due to proximity, additional costs (rightof -way and construction) and the minor increase in noise levels at these sites, a barrier was determined not to be cost effective at this time.

## NOISE TERMINOLOGY

Since the province of noise and the physics of acoustics lie somewhat outside the range of the average reader, it would be beneficial to briefly discuss the definitions of some of the more general terms that will be used. An understanding of these concepts is important if the reader is to make adenquate decisions concerning the environmental impact associated with the construction of a highway facility.

Design Noise Level - the noise level established by the noise standards set forth by the Federal Highway Administration for various land uses or activities, to be used for determining traffic noise impacts and the assessment of the need for the type of noise abatement treatment for a particular highway section.

Decibel ( dB ) - a logarithmic "unit" that indicates the ratio between two powers. A ratio of ten in power corresponds to a difference of ten decibels.
dA - the sound pressure levels in decibels measured with frequency weighting network corresponding to the 'A-Scale' on a standard sound level meter. The A-Scale tends to suppress lower frequencies (e.g. below $1,000 \mathrm{~Hz}$ ). (Hertz $=$ cycles per second.)
$\mathrm{L}_{10}$ - the sound level that is exceeded ten percent of the time (the tenth percentile) for the period under considertion. This value is an indicator of both the magnitude and frequency of occurrence of the loudest noise events.

> Ambient Noise Level - the noise level existing in an area
> before proposed highway. This quantity is measured in
> aBA and expressed as $L_{10}$ or $L_{50}$ ambient noise levels.
> Noise Control Measures - any of a number of means to attennate noise including: walls, acoustic fences, earth mounds (berms), depressing the roadway, etc.

Analysis of the Acoustic Impact from this project has been conducted in accordance with the procedures set forth in Federal Highway Program Manual, Volume 7, Chapter 7, Section 3, "Noise Standards and Procedures".

FHPM, 7-7.3 has established design noise levels for varying land use areas, expressed in terms of an $L_{10}$ noise level. Design Noise Levels

Noise Level Land Use Category

60dBA

70 aBA

Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualiaties is essential if the area is to continue to serve its intended purpose. For example, such areas could include amphitheatres, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.

Residences, motels, hotels, public meeting rooms, schools, churches, hosvitals, libraries, picnic areas, recrealion areas, playgrounds, active sports area, and parks.

75dBA Developed lands, properties or activities not included in the above categories.

Unlimited
Undeveloped lands.
55dBA
(interior)
Public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

As a means of understanding these noise levels better, levels associated with daily situations are given below.

Noise Levels
State Highway Administration of Maryland

| Common Outdoor <br> Noise Sources | Noise Level <br> dBA | Common Indoor |
| :--- | :---: | :---: |

Jet Fly over at 1000 feet 110
Gas lawn mower
at 3 feet 100

Diesel truck at
50 feet
$\begin{array}{lr}\text { Noise urban daytime } & 80 \\ & \\ \text { Gas lawn mower at } & \\ \text { l00 feet } & \\ \text { Commercial area } & 70\end{array}$
Heavy traffic at 300 feet

Quiet urban daytime 50
Quiet urban nighttime 40

Quiet suburban nighttime 30
Quiet rural nighttime 20

Rock Band
Inside subway train
(New York)

Food blender at 3
feet
Garbage disposal at 3 feet
Shouting at 3 feet
Vacuum cleaner at 10 feet Normal speech at 3 ft .

Large business office
Dishwasher next room
Small theatre, large conference room (background)

Library
Bedroom at night
Concert hall (background)
Broadcast \& recording studio

Threshold of hearing

## 270

APPENDIX F
HISTORICAL
A-82

April 2, 1974
AG: \%ion
pROJECT FLAB HiNG
Mr. Eugene T. Camponeschi, Chief
Bureau of Project Planning
Maryland Department of Transportation
State Highway Administration
P.O. Box 717

300 West Preston Street
Baltimore, Maryland 21208

RE: Contract P 981-371
MD Route $\leq 10$ Extended

Dear Mr. Camponeschi:
The Maryland Historical Trust has learned from our field representfive in Prince Georges County that no historic sites exist within the immediate proximity of the route of $M D$ Route $\leq 10$ extenced.
The Maryland Historical Trust appreciates the continuing spirit of understanding with which the State Highway Administration treats historic preservation.

## Sincerely,



NM: sh

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

Subject: Maryland Route 410 extended, B-W Parkway to Pennsy Drive; Contract No. P 891-025-371, F.A.P. No. Su-SUG $9573(1)$

Dear Mr. Camponeschi:
Further investigation of the site designated \#2 in Stephen Levy's letter of April 17,1978 ( 6720 Riverdale Road) shows it is definitely of local historic significance, but probably not eligible for the National Register. Historic boundaries given in Levy's letter of April 27, 1978, should be amended to place the south boundary of this property 15 feet back from the existing right of way of Riverdale Road.

Please contact us if further information is required.
Sincerely,


Peter Kurtze Historic Sites Surveyor


PK/PBW/van

## APPENDIX G

RELOCATION ASSISTANCE PROGRAM

## ＂SUM：PRY OF THE RELOCATION RSSISTAMCE PROGPLE：OF THF



 Feal Property Rccuisitice Policies Act ce lc70＂（Pioiic
 Properte，Titie 12，Suここごie 2，Sectiuns i2－201＝izu 12－212． The ！！aryiand Departrent c＝Trarsportatior，State yichnay
 the Fisiocation hssistanc＝Erocram．in the stese cs Maryianc．

The provisions of the $F \in \dot{=} \equiv$ ral and State Lav recuire trie



 payments are $\$ 15,000$ for owner－occupants and $\$ 4,00$ ：三č
 cerzain payments may de riode for increased mortcace interest costs ancior incicientai expenses．In oráer to reseive tinese payments，the dispiaced person must occupy decent，safe and sanitary repiacement housinc．In adaition to the repiace－ ment nousing peymerts ceszribed apove，there are aiso moving cost payments to persons，businesses，iams ane non－ஜ̌ofic organizations．Actuai moving costs for residences inciucie actuai movinc cosss up to 50 miles or a scnecule
 to sjé．

The moving cost pamments to businesses are kroken cown into severai catec̣ories，winich inciude acrual moving expenses and pavments＂in lieu oiz actual moving expenses．The owner c a cispiaced ousiness is entitlec to receive a porment fa actuai reasonabie moving and related expenses in moving his ousiness，or personal property；actual direct losses of tangioie personal propミニこi：ana acruai reasonable expenses for searching for a repiasement site．

Tne aciuai reasonssie marano expenses may de baje for a movi py e comerciai movi＝ $0=$ 三or a seli－move．Generaijy，pay－ ments for the actuai reasonabie movana expenses are inmitea
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 ditference 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 experrses must be supported by receipted bills. Time spent in the actual search may be reimsburied 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 displace 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 locitions to the displaced business, and the availability of suitable replacement sites are also factors.

In order to determine the amount of the "in lieu of" moving expenses payment, the average annual net earning of the business is considered to be one-half of the net earnings before taxes, during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State, with approval of the Federal Highway Administration, may use another two-year period that would be more. Fepresentative. Average annual net earnings include any compenstation 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 earings, such as income tax returns, for the tax years in question.

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

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

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 unilimed 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 furchased 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 AcquisiLion Policies Act of $1970^{\prime \prime}$ requires that the State Highway Administration shall not proceed with any phase of any project which will cause the relocation of any person, or proceded with any construction project until it has furnished satisfactory assurances that the above payments will be provided and that all displaced persons will be satisfactorily relocated to comparable decent, safe and sanitary housing within their financial means or that such housing is in place and has been made available to the displaced person.

## APPENDIX H

TITLE VI OF THE 1964 CIVIL RIGHTS ACT

## TITLE VI OF THE 1964 CIVIL RIGHTS ACT POLICY STATEMENT


#### Abstract

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


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## APPENDIX I

Maryland State Highway Administration Bureau of Accident Studies 1976. Accident Statistical Data Relating to the Proposed Construction of Maryland Route 410 Extended from Riverdale Road to Pennsy Drive

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U. S. Department of Transportation, Federal Highway Administration 1974

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## APPENDIX J

ARCHAEOLOGICAL

Archeological Reconnaissance of Proposed Maryland Route 410 Extended, Prince Georges County

Geoffrey W. Conrad

Division of Archeology
Maryland Geological Survey

## INTRODUCTION

On March 15, 1976, Geoffrey W. Conrad and Spencer 0. Geasey of the Division of Archeology, Maryland Geological Survey, conducted a preliminary archeological reconnaissance of the area to be affected by the extension of Maryland Route 410 southwest of New Carrollton. The entire length of the proposed right-of-way, approximately 2.5 miles, was traversed on foot. All eroding banks and areas of exposed surface were examined for archeological remains by visual inspection, cleaning profiles, and digging small test holes. Test holes were also excavated in selected vegetated areas in order to insure that buried cultural deposits were not overlooked.

## PREVIOUS INVESTIGATIONS

No sites had been previously recorded in the study area.

## THE 1976 RECONNAISSANCE

One archeological specimen was found during the 1976 reconnaissance. Its location is shown in Figure 1.

## $\frac{P R X}{2}$

2: A stemmed projectile point of coarse-grained purple quartzite was found on the surface at this location. This specimen probably dates to the Late Archaic period (4000-1000 BC).

No other materials were found on the surface around the point; a number of small test holes dug in the vicinity were likewise unproductive. Evidently the point is an isolated specimen lost by a member of a hunting party.

No evidence of prehistoric camps or workshops was encountered along the right-of-way. There are several possible explanations for this lack of sites.

The only part of the study area with any significant archeological potential is its northern end, where the right-ofway parallels a small, unnamed creek flowing northward into Brier Ditch. It may be that prehistoric Indians lived along larger streams like Brier Ditch and only hunted along smaller tributary creeks. The lone projectile point found during the 1976 reconnaissance offers some support for this idea.

Alternatively, if there were any campsites along the creek, they would probably have been situated on its eastern side, where there is some relatively flat land behind the bank. The proposed right-of-way lies on the west side of the creek, where slopes are steeper and less suitable for habitation. Unfortunately, any sites that may have been present on the more favorable east side probably would have been destroyed or obscured by housing developments.

ASSESSMENT OF POSSIBLE IMPACT
No known impact on archeological sites.
RECOMMENDATIONS
None.

GLOSSARY
Projectile point: A point or blade of stone, bone, etc., attached to an arrow, spear, or dart.
Test hole: An irregular hole 1-2 feet in diameter and $1^{+}$ feet deep, depending on local soils, dug to check for subsurface archeological remains.

Workshop, A site used primarily for the manufacture of tools or utensils.

Appendix II
SITE DESIGNATIONS
The Division of Archeology identifies isolated specimens with a two-letter county abbreviation; the letter "X", indicating an isolated find; and an inventory number. For example, $\frac{\text { PR }}{2}$, the projectile point mentioned in this report,
is the second such isolated find recorded for Prince Georges County.

Appendix III
QUALIFICATIONS OF INVESTIGATORS
Geoffrey W. Conrad: PhD in Anthropology, Harvard University. Archeological fieldwork in Wyoming, Colorado, Eastern Arctic, and Peru. Previously employed at the National Museum of Natural History, Smithsonian Institution. Publications on Eastern Arctic, Mesoamerica, and Peru.

Spencer 0. Geasey: Amateur archeologist with 30 years of experience in Maryland Archeology. Publications on Maryland archeology in regional journals.


[^0]:    RESPONSE: The reference to prime and unique farmland has been added to Chapter l, Section I.D, Summary of Environmental Impacts.

[^1]:    RESPONSE: Specific comments relative to Prince George's County concern of this project have been addressed in letters dated June 15, 1979 and November 29, 1979. In addition to these two letters, a meeting was held in Prince George's County Delegation Room in Annapolis, Maryland on January 30, 1980. A summary of that meeting can be found in Appendix A.

