



final environmental statement

SECTION 4 (f) STATEMENT

CONTRACT No. H 520-000-474
F.A.P. No. S 9075 (6)
RELOCATED MARYLAND ROUTE 24
FROM U.S. ROUTE 1 (BEL AIR BY-PASS)
TO MARYLAND ROUTE 24 AT I-95
IN HARFORD COUNTY

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

REPORT NUMBER: FHWA-MD-EIS-76-02-F

Federal Highway Administration
Region III

RELOCATED MARYLAND ROUTE 24

U.S. Route 1 (Bel Air By-Pass) to Interstate 95
Harford County

ADMINISTRATIVE ACTION

FINAL

ENVIRONMENTAL IMPACT STATEMENT
SECTION 4(f) STATEMENT

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and

MARYLAND DEPARTMENT OF TRANSPORTATION
State Highway Administration

Submitted pursuant to 42 U.S.C. 4332 (2) (C), 23 U.S.C. 128 (a)
and 49 U.S.C. 1653(f), 16 U.S.C. 470(f)

M. S. Caltrider
State Highway Administrator

11 Apr. 78
Date

by: Frederick Gottenmoeller
Frederick Gottenmoeller
Director, Office of Planning
and Preliminary Engineering

Jan. 9, 1979
Date

by: R. A. Davino
R. A. Davino, Director
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Federal Highway Administration
Region 3

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Form SHA 63.0-DP1, Preliminary Relocation Studies

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SUMMARY SHEET

Federal Highway Administration

(1) Administrative Action Environmental Statement

Draft Final
 Section 4(f) Statement Included

(2) Additional information is available from Mr. Eugene T. Camponeschi, Maryland State Highway Administration, 300 West Preston Street, Baltimore, Maryland 21201, phone (301) 383-4327 or contact Mr. Edward Terry, Jr., District Engineer, Federal Highway Administration, Rotunda Suite 220, 711 W. 40th Street, Baltimore, Maryland 21211, phone (301) 962-4010.

(3) The project is located in Harford County, Maryland, and can be described as the relocation of Maryland Route 24 from U.S. 1 (Bel Air Bypass), southwest of Bel Air to Interstate Route 95 (John F. Kennedy Memorial Highway) a distance of approximately 6.3 miles.

Five alternates were analyzed during the location study and preparation of the Draft Environmental Impact Statement. Alternates 1, 2 and 3 (Relocation Alternates), were proposed as ultimate 6 lane divided facilities. Initial construction for the relocation alternates was planned to consist of one 24 foot roadway with two 10 foot shoulders with an interchange at U.S. Route 1 Bypass. A 200 foot minimum right-of-way was provided. Also considered were alternates which consisted of upgrading the existing facility and a Do-Nothing Alternate.

After receiving comments on the Draft Environmental Impact Statement from Federal, State and Local agencies, and having received testimony during the public hearing held on June 29, 1976, the State Highway Administration has recommended that Alternate 3 (Relocation Alternate) be adopted for final design and construction.

(4) Relief of thru traffic congestion in Bel Air creating a safer vehicular and pedestrian travel network is the major direct beneficial effect of the proposed project. Because an improved transportation network is conducive to an expanding and progressive economic environment in a town such as Bel Air, this effect should be viewed as an indirect beneficial impact of this project.

The recommended alternate will require the acquisition of 6 residences. There will also be a temporary increase in ambient air and noise levels during construction activities. Erosion and sedimentation problems are always possible during this type of construction and excavation, but are considered minor impacts in this project due to the precautions which will be taken to minimize the erosion during construction. The

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Recommended Alternate (3) will require 36.5 acres of right-of-way through an area adjacent to the 200 acre Heavenly Waters Park Project in west Bel Air. Because this is public land and the road will have an effect on it, a 4(f) Statement has been prepared and is incorporated in this statement. In addition, the recommended alternate will require property acquisition from three historic sites. The involvement with these sites have also been discussed in the Section 4(f) Statement.

- (5) The following is a brief location description of each of the three relocation alternates along with the upgrading alternate and do-nothing alternate, which have been studied during the location study and preparation of the Draft Environmental Impact Statement.

Alternate 1 - On relocation from U.S. Route 1 Bypass to Plumtree Road. Along existing Maryland Route 24 from Plumtree Road to Saint Mary's Church Road. Relocation east of and adjacent to existing Maryland Route 24 from Saint Mary's Church Road to I-95.

Alternate 2 - Identical to Alternate 1 from U.S. Route 1 Bypass to Saint Mary's Church Road then continuing from Saint Mary's Church Road to Interstate Route 95 on relocation west of Maryland Route 24.

Alternate 3 - From U.S. Route 1 Bypass to a point north of Plumtree Road same as Alternates 1 and 2, then a new alignment from this point tying into Alternate 2 north of Singer Road. Identical to Alternate 2 from north of Singer Road to Interstate Route 95.

Alternates 1, 2 and 3 require the relocation of residences and the acquisition of new right-of-way throughout the corridor.

Alternate 4 - Update existing Maryland Route 24 to the extent practical.

Alternate 5 - "Do-Nothing".

- (6) Federal, State and Local entities from which comments have been requested.

A. Federal

1. Corps of Engineers
2. Department of Interior
 - *a. Bureau of Outdoor Recreation
 - b. Bureau of Sport Fisheries and Wildlife
 - c. Deputy Assistant Secretary for Programs
 - d. National Park Service
 - *e. Division of Water and Environmental Planning
3. Department of Housing and Urban Development
- *4. Department of Agriculture
5. U.S. Department of Commerce
6. Department of Health, Education and Welfare
- *7. Environmental Protection Agency
8. Office of Economic Opportunity
9. Soil Conservation Service
- *10. Federal Energy Administration

B. State

- 1. Department of Budget and Fiscal Planning
- 2. Department of General Services
- *3. Department of Economic and Community Development
- *4. Maryland Historical Trust
- *5. Maryland Historical Society
- 6. State Department of Education
- 7. State Board of Community Colleges
- *8. Department of Natural Resources
- *9. Department of State Planning
- *10. Department of Public Safety and Correctional Services
- 11. Maryland Office of Economic Opportunity
- 12. Department of Health and Mental Hygiene
- 13. Environmental Health Administration
 - a. Division of Solid Waste Control
 - b. Bureau of Air Quality Control
 - c. Division of Water and Sewerage
- 14. Department of Transportation
- 15. State Soil Conservation Committee
- 16. Automobile Club of Maryland
- 17. Maryland Motor Truck Association

C. Harford County

- 1. Department of Public Works
- 2. Health Department
- 3. Board of Education
- 4. Department of Parks and Recreation
- 5. Economic Development Commission
- 6. Department of Planning and Zoning
- 7. Harford County Community Council
- *8. Citizens Groups :

League of Women Voters of Harford County
 Historical Society of Harford County
 Hearthside Bicycle Club in Harford County
 Baltimore Bicycling Club of Baltimore, Maryland
 West Bel Air Civic Association
 Bel Air Toll Gate Town Center
 Harford Environmental Committee
 Abington-Otter Point Association
 Bel Air Acres Association
 Bynum Ridge Association
 Camelot Community Association
 Cedar Springs Community Association
 Colonial Acres Association
 Cool Spring Association
 Edgewood Meadows Civic Association

* Agencies from which comments were received

- Fallston Meadows Community Association, Inc.
- Forest Green Community Association
- Forest Hill Improvement Association
- Forest Lake Community Association
- Pleasant Hills Improvement Association
- Ridge Croft Association
- Rolling Green Community Association
- Tollgate Civic Improvement Association
- Valley View Association
- Wakefield Meadows Association
- Wildwood - Carrs Mill Association
- Winters Run Association
- Worthington Heights Association
- Fountain Green Association
- Goat Hill Community Association
- Greater Benson Association
- Greater Fallston Association
- Greenspring Hills Association
- Harford Estates Association
- Harford Square Association, Inc.
- Homestead Village Community Association
- Joppatowne Civic Association
- Kingswood Civic Improvement Association
- Madonna Manor Improvement Association

(7) The Draft Environmental Impact Statement was sent to the Council on Environmental Quality on April 27, 1976.

1.1 Historical Resume

Since the 1940's the Bel Air and Edgewood sections of Harford County have experienced rapid population growth. Bel Air has evolved from a small town of less than 2,000 people into an urban area of just over, 12,000 people. In the 1960 census Edgewood had a population of 1,670 people. By 1970, a 412 percent population increase had raised the total to 8,000. This increase, plus the addition in 1970 of Joppatown with 9,092 people has raised the population total within the corridor between Bel Air to Edgewood and Joppatown to well over 30,000.¹

The main service road for this corridor is Maryland Route 24 which between 1940 and 1974 has been maintained as a two lane highway. This highway has not been improved and enlarged in proportion to the increased population it must serve. Today, this highway is becoming increasingly inadequate for handling the present and projected vehicular traffic. A pattern within the corridor has placed industrial employment near Edgewood, commercial development chiefly around the County Seat of Bel Air, and heavy residential concentrations in both of these areas causing extensive vehicular travel between the two areas via Route 24. From an ADT in 1950 of about 3,000, Maryland Route 24 has grown to a 1977 ADT of about 19,200. In order to relieve this congestion problem which now exists and is expected to increase in the near future according to traffic projections, there are two courses of action which are available. The first is to upgrade existing Md. 24 into a multi-lane highway. The second would be to construct an access controlled multi-lane facility in a new location.

During the 1954-57 funding period, the expansion and resurfacing of Md. 24 from Bel Air to Emmorton was completed, although the expansion only involved the addition of an average of 8 feet to the existing road surface. The 1964 Twenty Year Plan lists the existing Md. 24 as a primary roadway from U.S. 1 in Bel Air to the Edgewood Underpass. The section of Md. 24 in Bel Air to .3 mile north of Md. 23 is classified as a secondary roadway. Growth in traffic volume prompted what was then the State Road Commission to call for a widening of Md. 24 to a 4 lane divided highway in the vicinity of Emmorton with the rest of the facility between the aforementioned boundary being need of resurfacing.

The first mention of a relocation for Md. 24 between I-95 and the Bel Air Bypass comes in the 1968-1988 Needs Study. The description for the primary project indicates a need for a 4 lane divided highway. In the 1971 Needs Study the improvement for the section of Md. 24 between I-95 and U.S. 1 is a 6 lane divided highway. The aforementioned segment is classified as primary critical. Finally in the critical section of the 1973-1992 Needs Study, Md. 24 Relocated from I-95 to Md. 24 south of Plumtree Road is a 4 lane divided construction (ultimate 6 lane). The 1975 Needs Study shows the same status for this road as did the 1973 study. The section of Md. 24

¹ Population figures taken from Maryland Population 1930-1970; Maryland Department of State Planning - Publication No. 171, Page 56.

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Relocated from Md. 24 south of Plumtree Road to U.S. 1 Bypass is shown as a 2 lane construction critical (ultimate 6 lane) and a 4 lane divided reconstruct (ultimate 6 lane) in the non-critical section.

"The SHA Secondary Construction Program, fiscal 1973-1977 authorized the beginning of expenditures for preliminary engineering studies, from the U.S. 1 Bypass to south of Plumtree Road. The 1976-1980 Secondary Program tentatively projects the following: Completion of the Project Planning phase in F.Y. 1976, the beginning of Project Engineering in F.Y. 1977 with completion in F.Y. 1979. The beginning of right-of-way acquisition is projected for F.Y. 1979 with completion after F.Y. 1980. Since the Program is reviewed and updated annually, alterations of this schedule, dependent on the projects progress and the Department of Transportation financial situation are possible. The section from south of Plumtree Road to I-95 is in the State Highway Administration Twenty Year Highway Needs Study for F.Y. 1977-1996 and is included at this time for location and environmental considerations." "This same improvement is also identified in the current 1977-1996 Twenty Year Highway Needs Study."

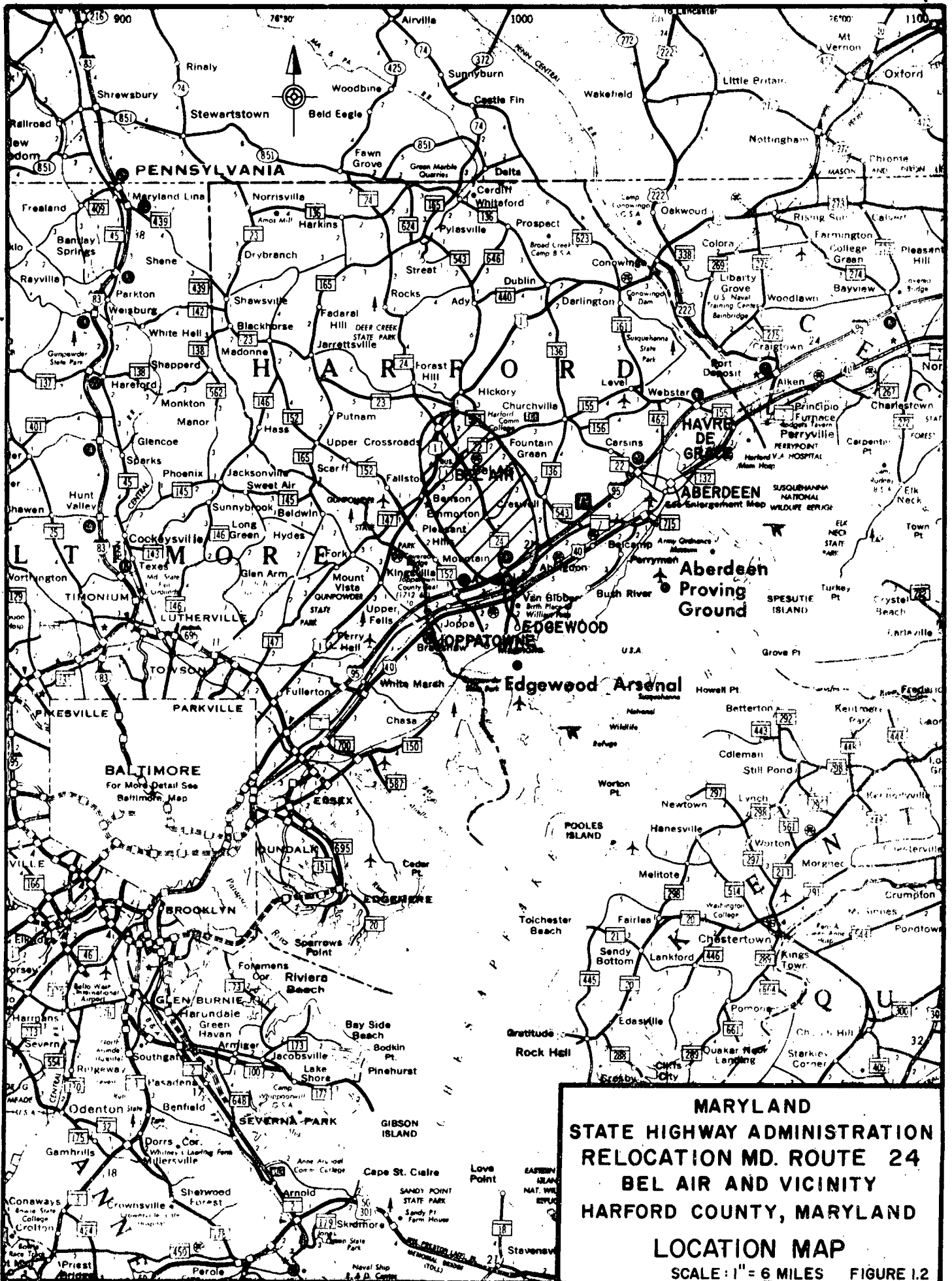
At the present time there are three plans which contain schemes for the relocation of Md. 24. These include: The Comprehensive Plan for Harford County, the Regional Planning Councils General Development Plan, and The Major Thoroughfare Plan for Bel Air.

Following the circulation of the Draft Environmental Impact Statement, the State Highway Administration held a public hearing on June 29, 1976 at 7:30 P.M. in the Bel Air Senior High School, Bel Air, Maryland for the purpose of receiving testimony concerning the five alternates which were discussed in the Draft Environmental Impact/4(f) Statement. After reviewing the testimony presented at the public hearing, and after giving consideration to the written comments received from Federal, State and Local agencies and the general public, it is recommended that Alternate 3 be adopted for final design and construction.

1.2 Location Description

The proposed Maryland Route 24 is situated in Harford County in the northeastern section of Maryland, adjacent counties surrounding Harford include: Baltimore to the west and south, Cecil to the east, and York County in Pennsylvania to the north. The project site lies within the vicinity of the Baltimore Urban Area, and is situated immediately west of the Aberdeen Proving Grounds on the Chesapeake Bay.

Highways serving the Bel Air-Edgewood Corridor include: Maryland Routes 24, 22, 152 and U.S. Route 1, with north-south routes interstate 95 and interstate 83 about 18 miles west.



**MARYLAND
STATE HIGHWAY ADMINISTRATION
RELOCATION MD. ROUTE 24
BEL AIR AND VICINITY
HARFORD COUNTY, MARYLAND
LOCATION MAP
SCALE: 1" = 6 MILES FIGURE 1.2**

1.3 Description of the Surroundings

The Surroundings in General

The proposed relocation of Maryland Route 24 located in Harford County lies primarily in the piedmont geologic province of the county. The southern tip of the project area is in the Coastal Plain geologic province. The area is one of mixed farmland and woodland on rolling hills. Located within the affected corridor is the urban center of Bel Air along with its surrounding developments. The Bel Air urban area has a population over 12,000 with the population of the surrounding area being greater than 30,000 people.¹

Central Bel Air is a bustling suburban town of both residential and commercial development with the outlying areas surrounding the town being landmarked with residential developments. This development includes apartments, houses, townhouses, etc., all typical of a modern and expanding suburban area. Most of the residential developments lay within a strip on both sides of existing Md. 24 extending from the central core of Bel Air south to I-95 (Kennedy Memorial Highway). Some of the housing developments and apartment complexes which lie adjacent to the north-south Route 24 are as follows:

- Homestead Village, Homelands, Silver Spring Heights,
- Wakefield Meadows, Forest Lawn, Fairmont, Country
- Village Apartments, Colonial Acres, Glenwood,
- Evergreen Heights, Valley View, Bright Oaks and
- Bright Oaks Apartments, Emmorton, Preston Manor,
- Lou Mar Estates, Constant Friendship and Woodsdale
- Apartments.²

Most of the commercial activity lies within the town limits of Bel Air with most of the Industrial development being south of the corridor in Edgewood.

The town of Bel Air is the Seat of Government for Harford County with most of the county government agency offices being located within the town limits. County employees and people having business with the county government are major contributors to both pedestrian and vehicular traffic in Bel Air.

Major highways affecting the proposed corridor include U.S. 1 which now has an interchange with existing Route 24 just north of Bel Air, and a proposed interchange with relocated 24 at Heavenly Waters Park on the west side of town. At the south end of the corridor is I-95 (Kennedy Memorial Highway), which now has an interchange with Md. 24 and would be connected with Relocated 24 should the project be undertaken. Other major

¹ Population figures taken from "Maryland Population 1930-1970"; Maryland Departments of State Planning - Publication No. 171, Page 56.

² Developments from field trip and Map of Harford County 1972-73.

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highways which serve the area include Maryland Route 152 to the west of the corridor and Maryland Route 543 to the east of the corridor.

Minor arterial roads in the area which serve the developments surrounding the town of Bel Air and have intersections with existing Route 24 include Moores Mill Road, Churchville Road, McPhail Road, Ring Factory Road, Patterson Mill Road, Plumtree Road, Wheel Road, Singer Road and Woodsdale Road. Toll Gate Road does not intersect 24 but is a major arterial road which lies just west of Existing 24 and serves several developments including Bel Air Acres and Camelot.

Urban areas within Harford County which make up the metropolitan area of the southern portion of the county are Aberdeen and Havre De Grace to the east and Joppatown to the south.

The proposed intersection for U.S. 1 and Relocated 24 would occur in an area known as Heavenly Waters Park. Heavenly Waters is comprised of three sections of land owned by Harford County for the park and one section of land which is to become the property of the State Highway Administration as right-of-way for the proposed intersection. Heavenly Waters Park lies along Heavenly Waters run and the Toll Gate sanitary landfill. The terrain at this section of the corridor is rather severe because of the Heavenly Waters Run Stream Valley. The elevation differential within the park area is 177 feet going from a high elevation of 427 to a low elevation of 250 feet at the stream bed. Atkisson Reservoir and Winters run are the major bodies of water in the area and both lie west of the proposed corridor. However, two tributaries of Winters Run, Plumtree Run and Heavenly Waters Run are within the corridor.

Demographic Background³

Harford County has experienced enormous population growth in recent years. The population in 1960 was 76,722 but a 50% increase in ten years pushed the population to 115,378 people in 1970. In 1970 males comprised 51.3% of the population while 48.7% were female. In addition, 8.2% of the population was black. The Planning Department estimated an April, 1973 population of 132,364 which indicates a 15% increase over the three year period.

Figures for 1970 indicate that 34.7% of Harford County's labor force commuted outside the county to work. The military installation at Aberdeen Proving Ground provides 37% of direct in-county employment. No other single source of employment accounts for more than 17% of Harford County employment force.

³ Harford County Comprehensive Plan, Pages 30-32.

Despite the tremendous growth in population over the last 12 years, the age distribution remained fairly constant. The constancy of the age distribution implies that most of the people who are moving into the county are families with young children. This will mean a continued growth in the school population.

In 1970, over 50% of all residents of Harford County graduated from high school compared to 21.5% for 1960.

The median income for a family in Harford County in 1970 was \$10,770 compared to \$6,423 in 1960. For the black population in 1970 the median family income was \$7,387 compared to the 1960 income of \$4,258. While the 1960 median income for the general population was 34% higher than for the black population, in 1970 the percentage dropped to 31%.

Public Facilities and Services

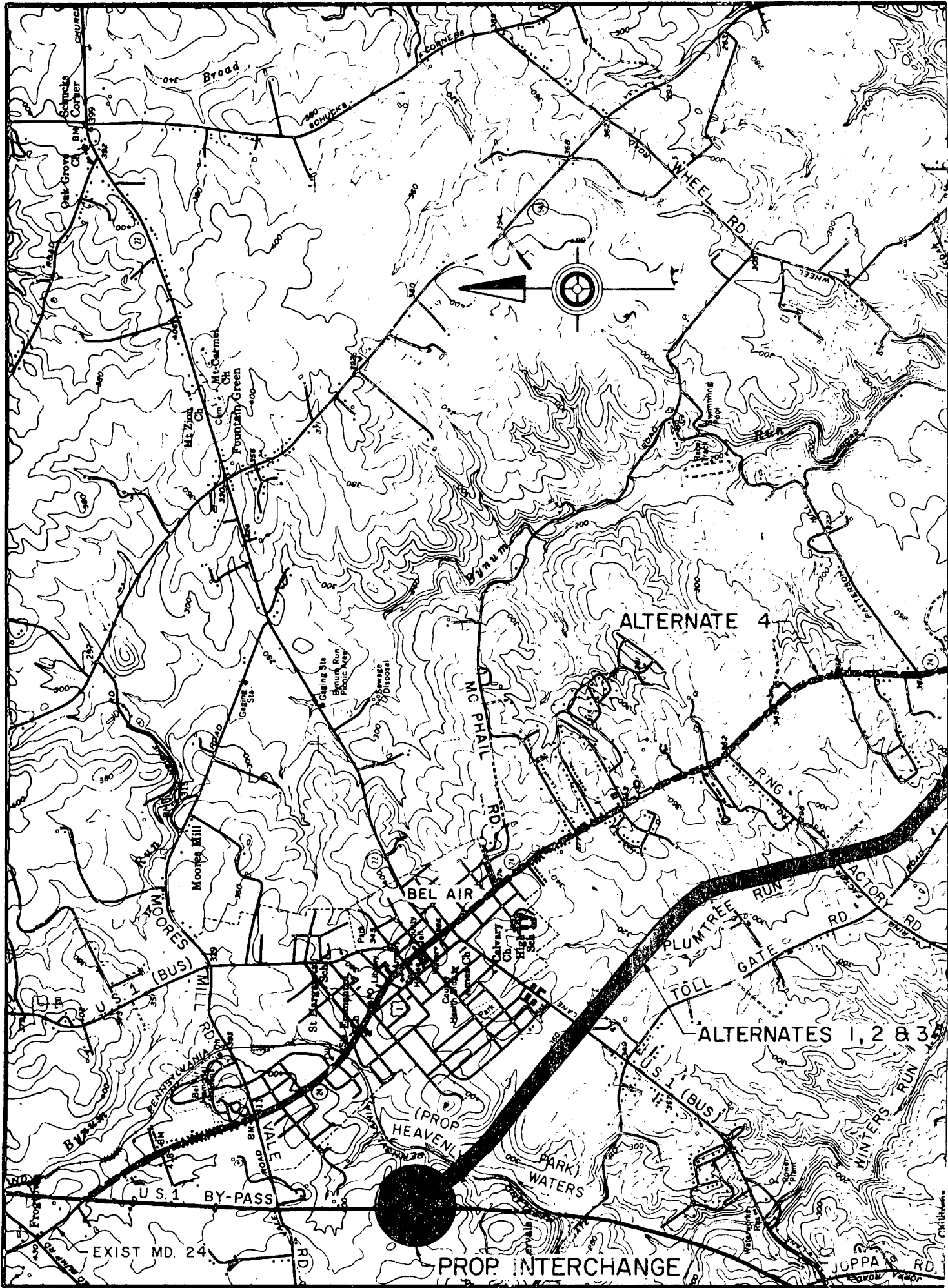
Public facilities and services include schools, libraries, government offices, parks, fire protection, police protection, public utilities including water, sewage, gas, electricity and transportation, health and welfare services and churches etc.

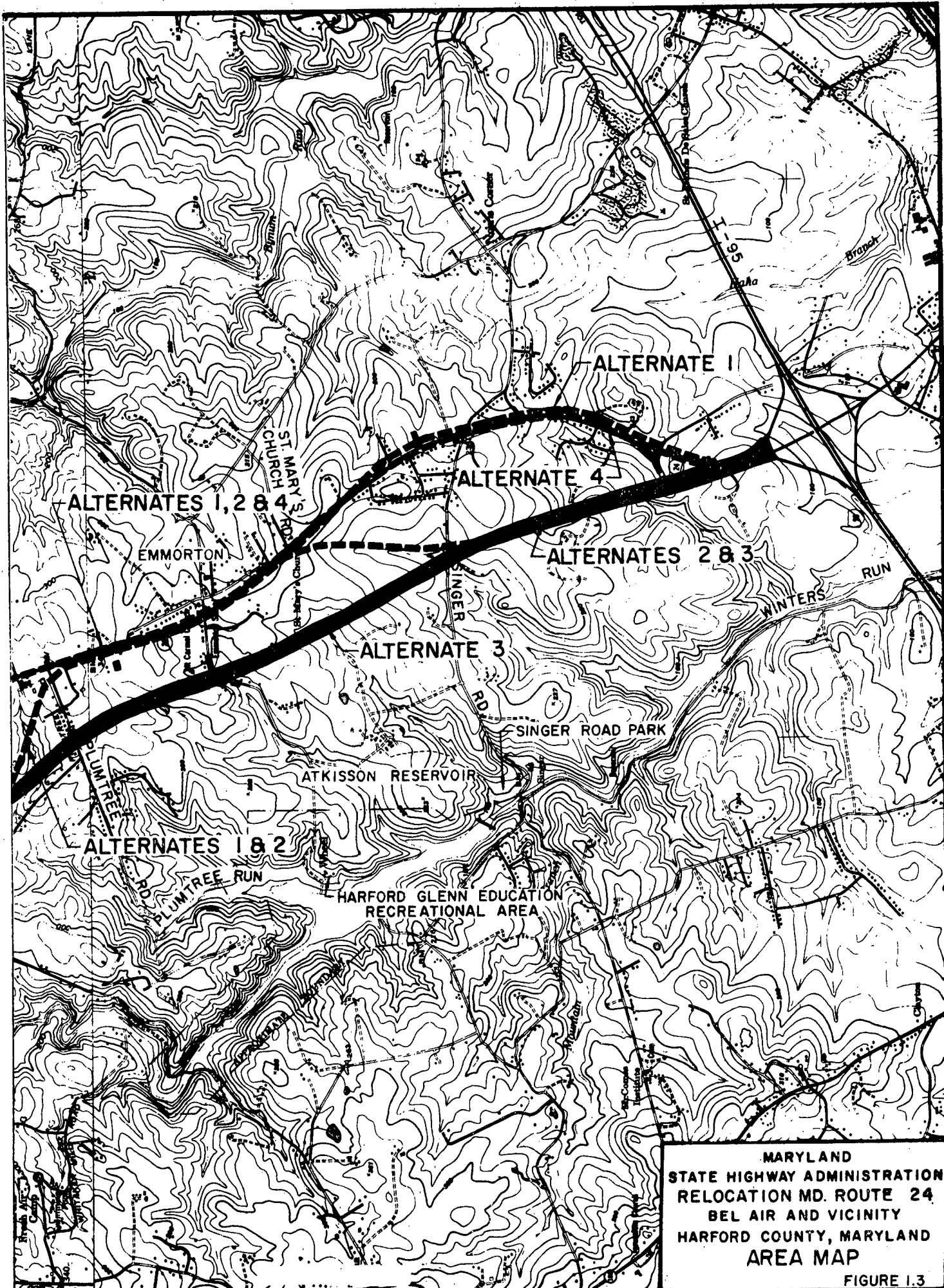
Educational facilities within the Bel Air vicinity consist of the Bel Air High School, Bel Air Junior High School, Homestead Elementary, Wakefield Elementary, Bel Air Elementary, St. Margaret's School and the Harford County Library. Churches which are located near the affected corridor include Emmanuel Episcopal, First Presbyterian, Ames Methodist, Emmorton Baptist, Mt. Carmel Methodist, St. Mary's Church, Calvary Baptist, Unitarian Universalist Fellowship, Bel Air United Methodist, Good Shepherd Lutheran Christ Our King Presbyterian and Valley Baptist Church.

Fire protection for the area surrounding Bel Air is provided by a volunteer fire company whose fire station is located on Hickory Street in Bel Air. Police protection includes the 27 man Bel Air Police Department with a station on Hickory Street in Bel Air, the Harford County Sheriffs Department and the Maryland State Police who have a barracks at Benson a few miles west of Bel Air. The Harford County Detention Center is located at the north end of Bel Air near the intersection of Route 24 and the U.S. 1 Bypass.

Bel Air is the seat of government for Harford County with most of the county government agencies and departments being located within the town limits of Bel Air. A County Health Building is also located in Bel Air. Other welfare services within this area include the Bel Air day care center and the Harford Center on Main Street.

The major parks in this area are the Harford Glenn Education-Recreational Area, the Singer Road Park at Atkisson Reservoir and the Proposed Heavenly Waters Park to be located adjacent to the intersection of U.S. 1 Bypass and Relocated Route 24.





MARYLAND
 STATE HIGHWAY ADMINISTRATION
 RELOCATION MD. ROUTE 24
 BEL AIR AND VICINITY
 HARFORD COUNTY, MARYLAND
 AREA MAP
 FIGURE I.3

1.4 Local Physiography and Geology

Harford County lies in two physiographic provinces, the northern part being the Piedmont and the southern part in the Coastal Plain. The Piedmont constitutes 80% of the area. Some areas of the county are characterized by hills capped with thin deposits of gravel, sand and clay. Occassionally such deposits are formed as valley-side terrace deposits or as alluvial fill in valley bottoms. The millions of years of geologic activity has resulted in the rolling topography, varied mineral resources and vast differences in ground water resources. The entire county is within the Western Chesapeake Drainage area region. This basin can be further divided in Harford County into the Susquehanna River Basin, the Bush River Basin and a small part of the Gunpowder River Basin. These drainage basins can further be divided into smaller basins such as Winters Run, Broad Creek, Bynum Run, Deer Creek, etc. These basins can again be divided into sub-drainage an so on. The streams in the Piedmont area tend to have fairly steep slopes and usually flow swiftly over rocky beds. When streams reach the coastal plain they flow sluggishly into the tidal estuaries of the bay. Surface water resources such as natural lakes do not occur in the county and scattered small ponds that do exist are almost always man made for farm use. The greatest amount of wells are found in the Piedmont Region of Harford County but good well yields are sporadic in this area because it is necessary that the well intersect fractures in the crystalline rock in order to obtain good yields. These fractures are very local in nature. Soils in humid climates such as in Harford County are leached in the surface horizons and create a silica rich residue with a high organic content. The soils develop deep profiles and broad topographic forms result, additionally shaped by soil creep and water erosion. More weather resistant bedrock forms outcrops along hillsides. Soil depths are generally shallow on the Ridges and deeper in the Valleys.¹

Within the proposed relocation corridor slopes range from 0-30%. Depth to rock vary from 2-20 feet or more in portions within the Piedmont Plateau. Types of available rock include granite, gneiss, mica schist, and gabbro. The unconsolidated sedimentary materials are composed predominately of sands and gravel with lesser amounts of clays and silts. Loams and silt loams are prevalent in Piedmont Plateau areas. Loams, sandloams, and loamy sands are dominant in Coastal Plain Areas. Soil stability is poor to fair in floodplains, foot slopes and upland depressions, fair to good in uplands and certain footslopes and depressions.

¹ Harford County Comprehensive Plan, Environment Section, Page 150.

1.5 Need For Project

Deficiencies of Existing Facility

The existing Maryland Route 24 within the affected corridor is a two lane free access highway extending from the U.S. 1 Bypass intersection south through Bel Air to I-95, the Kennedy Memorial Highway. Severe traffic congestion presently exist in center city Bel Air and will become worse in the future. This traffic congestion contributes to the following hazardous conditions which now exist:

- a. Heavy pedestrian traffic in central Bel Air.
- b. Uncontrolled access now necessitates much start and stop movement throughout the corridor from U.S. 1 Bypass to I-95.
- c. The problem of mixing high speed through traffic with typically slower moving local traffic.
- d. Two 90° turns required for southbound traffic on existing 24.
- e. Traffic controls cause confusion for unfamiliar drivers in Bel Air.

Traffic traveling south on Md. 24 must now use Bond Street through the center of Bel Air to U.S. 1 Business. This is a hazardous intersection because of the left turn necessitated by the southbound traveler. U.S. 1 Business is a very busy highway throughout the day. Much of the traffic originates from the commercialized west end of town where the Harford Mall is located. The driver making the turn onto U.S. 1 from Bond Street must traverse the first three lanes of U.S. 1 and proceed into the far right lane in order to make a right turn onto Md. 24 at Main Street 400 feet to the east. From the intersection of U.S. 1 and Main Street the congestion on Md. 24 decreases south to I-95. There are several at-grade intersections with other minor arterial roads which serve many of the residential developments along the Route 24 Corridor. These roads include Ring Factory Road which serves Camelot, Patterson Mill Road, Plumtree Road, Wheel Road, Salem Church Road, Singer Road and Abington Road. These roads along with the service roads from adjacent developments and commercial establishments contribute to hazardous conditions all along the busy free access Maryland Route 24.

The northbound traffic from I-95 encounters the same intersections and traffic problems as the southbound traveler until he reaches the U.S. 1 Business intersection in the center of Bel Air. From this point Md. 24 uses Main Street Bel Air until it merges with Bond Street at the north end of

town. Main Street is one of the most congested roads within Bel Air and the surrounding vicinity. From U.S. 1 Business to Gordon Street where Main Street connects to Bond Street, several traffic signals and turning lanes are provided. On both sides of Main Street are Municipal and county government offices whose employees and visitors contribute significantly to the pedestrian traffic along with the every day downtown shopper. The many traffic control devices and the different turning lanes makes the situation more confusing and hazardous for a driver unfamiliar with the Bel Air area.

The capacity for existing Maryland Route 24 at level of Service E is 1,919 vehicles per hour. The existing road reached capacity in 1976 when the section of Existing Md. 24 from Ring Factory Road to Lee Street in Bel Air was analyzed and found to provide a level of Service E. (See Alternatives Map, Figure 4.0a).

Anticipated Safety Benefits

The following table* shows the accident breakdown for the years 1971 through 1975.

<u>Severity</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Fatal Accidents	3	1	3	0	0
Number Killed	4	2	3	0	0
Injury Accidents	30	26	43	37	51
Number Injured	51	44	75	59	71
Property Damage Accidents	82	66	96	91	125
Total Accidents	115	93	142	128	176
Annual Vehicle Miles Traveled	28,786,820	31,665,954	33,923,830	30,957,110	34,265,935
Accident Rate Per 100 Million Vehicle Miles of Travel	399.49	293.69	418.58	413.47	513.63

From 1971 through 1975 Md. Route 24 between U.S. Route One and I-95 experienced an average accident rate of 407.77 accidents per 100 million vehicle miles of travel. This is significantly higher than the statewide average of 326.07 per 100 million vehicle miles of travel. If no improvements are made to the subject roadway, one can expect, in addition to the normal traffic growth, an increase in vehicular conflicts which are normally associated with congestion on highways of this design. The accident rate

* Accident Experience and Analysis Report, Bureau of Accident Studies, Maryland Department of Transportation.

will undoubtedly continue to rise with a corresponding increase in motor vehicle accident costs exceeding the present cost of \$1,333,182 per 100 million vehicle miles of travel for the motorist now using Md. 24.¹

The combination of controlled access operation provided by the re-located facility, together with a reduction of traffic congestion along the existing highways will significantly reduce the vehicle accident rate in the project area. According to statewide studies of highways similar to the one proposed for Md. 24 Relocated, the accident rate will be reduced by approximately 43%, along with accident costs being reduced proportionately.

The right-of-way for existing Maryland 24 is of variable widths and is adjacent to many different types of development as it extends from the U.S. 1 Bypass to I-95. In the northern portions through central Bel Air the right-of-way is through basically residential and commercial properties. As the roadway extends south it affects more farm and vacant land and fewer commercial and residentially developed land. In view of the diversity of land use along the existing facility and the free access provided to roadside properties, potential strip development would be encouraged. This type of development would contribute significantly to traffic congestion and increased accident rates.

Summary of Supporting or Relevant Studies

The specific purpose of this project is to relieve traffic in and around Bel Air, and to provide a controlled access highway to connect U.S. 1 to I-95 via relocated Md. 24 Bypass thus creating a safer and more efficient travel network. The proposed project is in accordance with the Comprehensive Plan for Harford County, The General Development Plan and The Plan for Land Use and Major Thoroughfares for Bel Air. The goals of the first plan are to make recreational, business, government and industrial facilities within the proposed corridor more accessible to the general population. The Comprehensive Plan also includes a major thoroughfare plan which defines the purpose of relocated Md. 24 as being a road which would serve densely built up areas as well as long distance traffic within or through the county. According to the General Development Plan the proposed project would provide the framework for metropolitan travel between large interacting communities and activities of regional significance.

¹Bureau of Accident Statistics and Analysis

1.6 Proposed Highway Facilities

The proposed highway improvement consists of relocating Maryland Route 24 in Harford County for a distance of approximately 6.3 miles. The existing Md. 24 corridor is a major arterial road which acts as a link between Bel Air and the industrialized areas of Edgewood and Joppatowne. The corridor of Md. 24 being considered for relocation in this project extends from Interstate 95 to the U.S. 1 Bypass just north of Bel Air.

The proposed facility would provide a bypass around central Bel Air for through traffic traveling from the U.S. 1 Bypass to I-95 or Edgewood and Joppatowne located south of I-95. An interchange will be provided at U.S. 1 Bypass and an interchange already exists at I-95. This project will relieve much of the traffic congestion which now exists in and around Bel Air. Thus, the project will provide for a much more efficient travel link between the southern portion of the county around Joppatowne to the central portion of the county around Bel Air.

The proposed relocation of Maryland 24 is an integral part in the planning goals for Harford County. The improved transportation facilities will reinforce the land planning and economic development objectives by providing improved access to population centers, farms, and natural resource areas. The relocation appears in several documents prepared by the Harford County Department of Planning and Zoning. These documents include The Comprehensive Plan, The General Development Plan and The Major Thoroughfare Plan for Bel Air.

A total of three relocation alternates and one road improvement on the present location were considered. A brief description of the studied alternates and a summary of their associated impacts are discussed in Section 4.0 (The Recommended Alternative).

The design for the proposed Maryland Route 24 was based on environmental factors and on analysis and comparisons of operational features, capacity potentials, the overall adaptability of the location and consideration to the construction and right-of-way costs that would be incurred. The existing and proposed roadways have been evaluated and studies conducted to determine the extent of improvements that may be necessary. The design includes upgrading the capacity of several local roadways and the needs and desirability of providing service roadways along the proposed facility.

As the project now stands it is proposed that a relocation will be built in stages, where the initial construction will be two lanes with the ultimate construction being four or six lanes. All right-of-way required for the construction of the ultimate facility will be acquired prior to the initial phase of construction. This staging will allow the project to provide limited service during a time when it is most needed, while at the same time keeping the project within the fiscal boundaries set forth in the Highway Administration Budget.

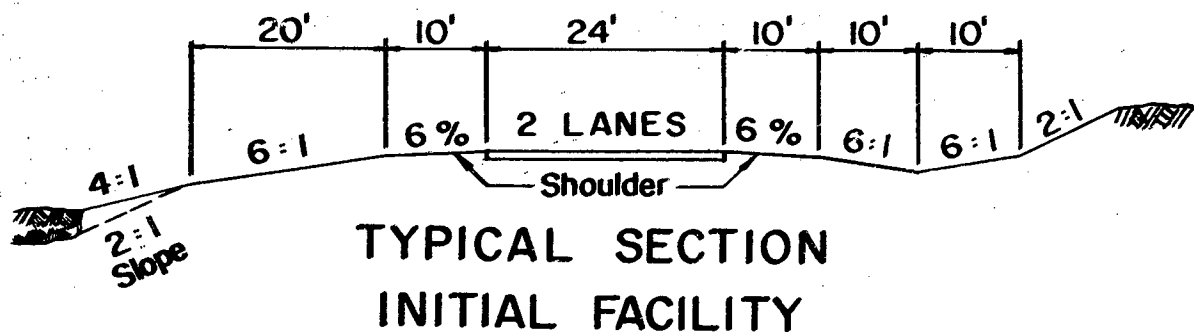
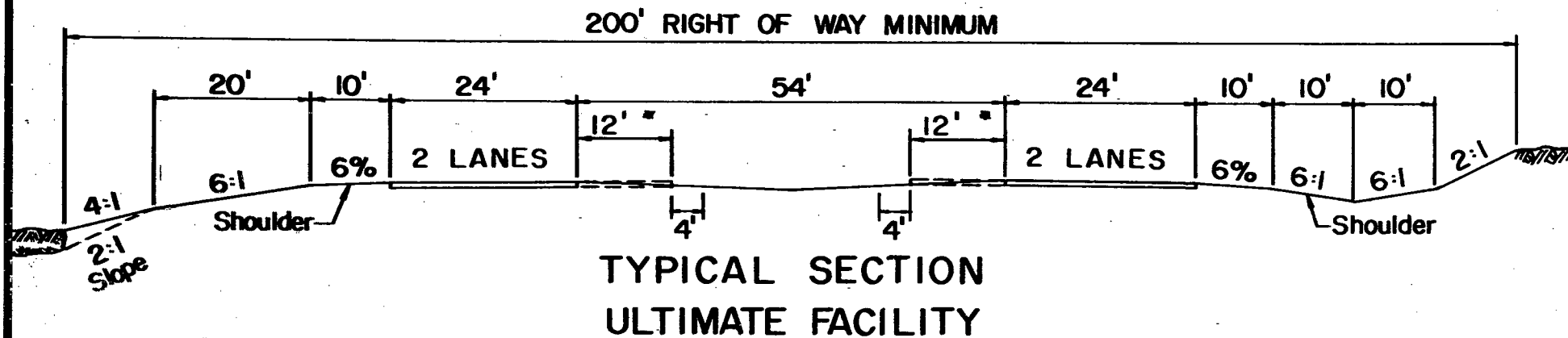
An analysis of traffic data determined, to a large degree, the type of facility that would be required, interchange types and locations and other design elements. Traffic forecasts show that the relocation will carry an average daily traffic from 20,000 to 42,000 vehicles by the design year of 1998. The traffic diagrams provided on the following pages indicate the projected traffic volumes on the existing and the studied relocation alternates for the years 1974, 1978 and 1998.

The initial construction will consist of two twelve foot lanes with two ten foot shoulders. The ultimate construction which will be undertaken approximately five years after the initial construction, will consist of constructing two more twelve foot lanes and two ten foot shoulders approximately 34 feet apart creating a 4 lane highway with a 54 foot graded and grassed median. The 4 lane road will be built within the 200 foot minimum right-of-way. If the ultimate construction is to be six lanes, two more 12 foot lanes will be added in the median area. Thus, no additional right-of-way acquisition outside the 200 foot minimum would be required. The roadway will be constructed as controlled access allowing at-grade intersections at points of major access. Improvements will be made on many of the intersecting roads in order to provide a more efficient highway system. The controlled access means that only service roads will have approaches to the relocation. No individual property owners will have direct access to the proposed relocation.

This document addresses the impacts associated with the completion of a potential six-lane facility. Since the construction of the facility will be staged according to increasing traffic demands, the SHA and FHWA will re-evaluate the adequacy of this document on regular intervals in accordance with the Maryland Action Plan.

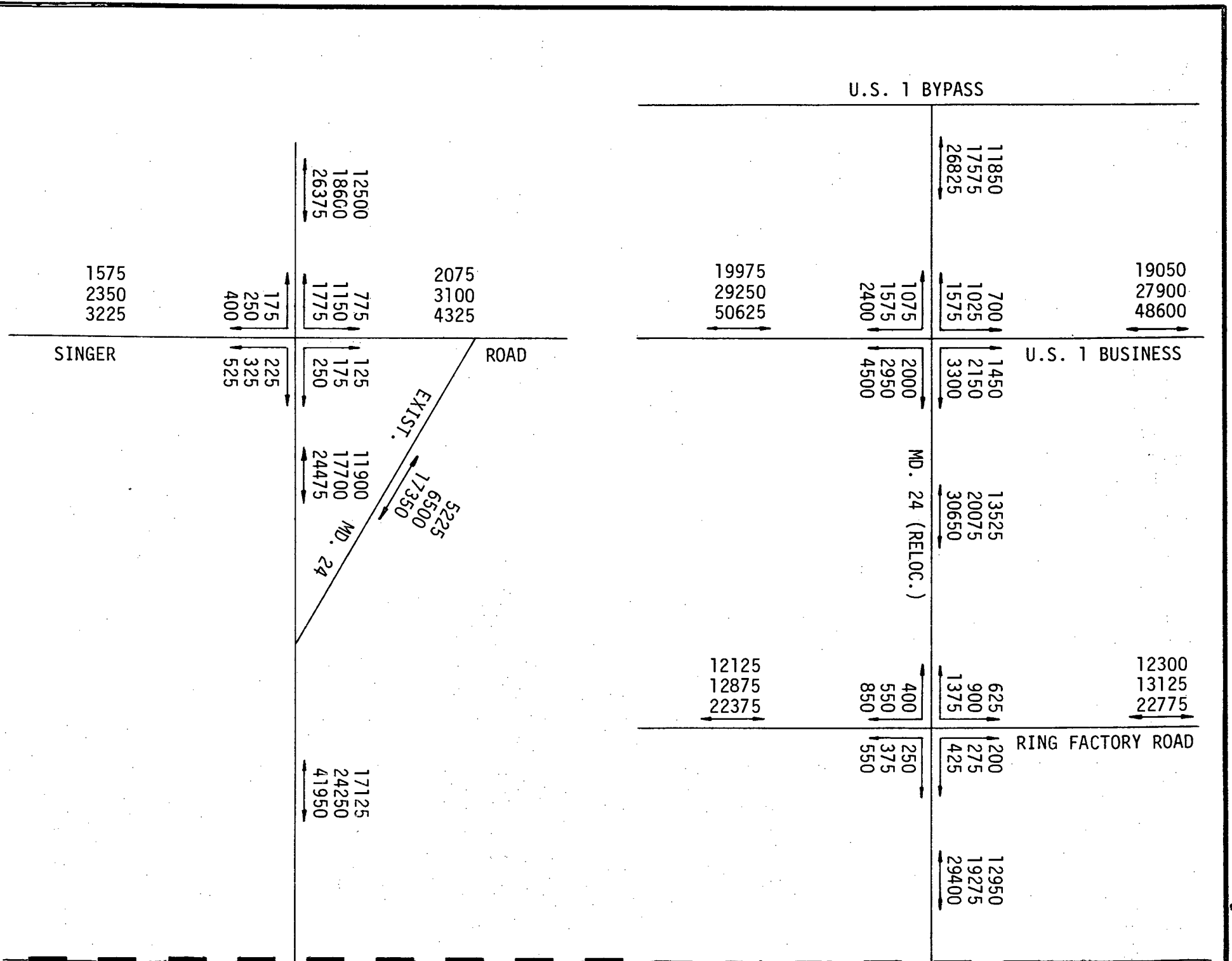
The traffic projections shown on the following pages for studied alternates 4 and 5 were made without the use of any constraints. These projections reflect a demand for highway use in this corridor and may at certain locations exceed the capacity of the existing highway.

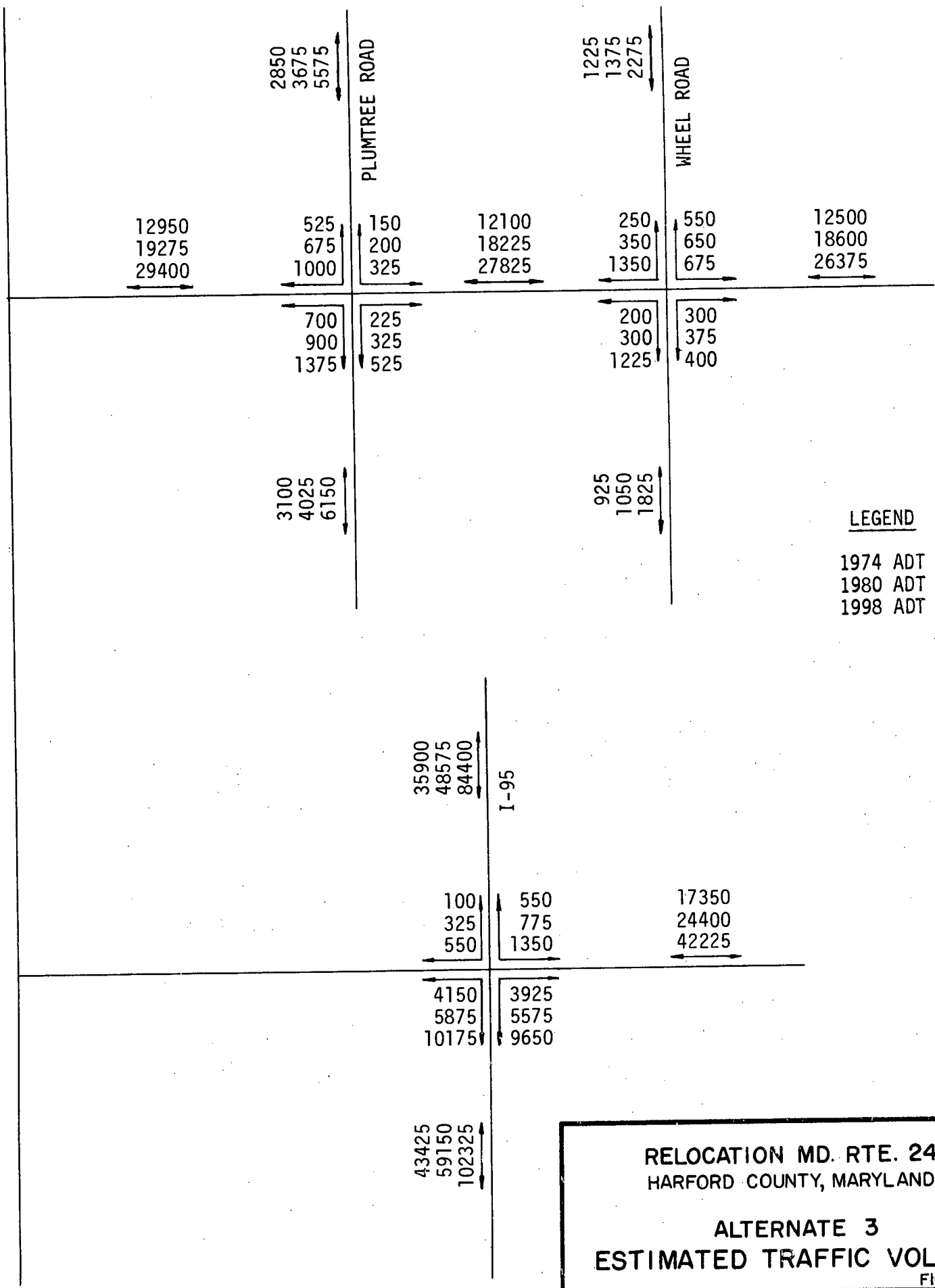
* Additional Lanes to Provide 6 Lane Facility (Where Required)

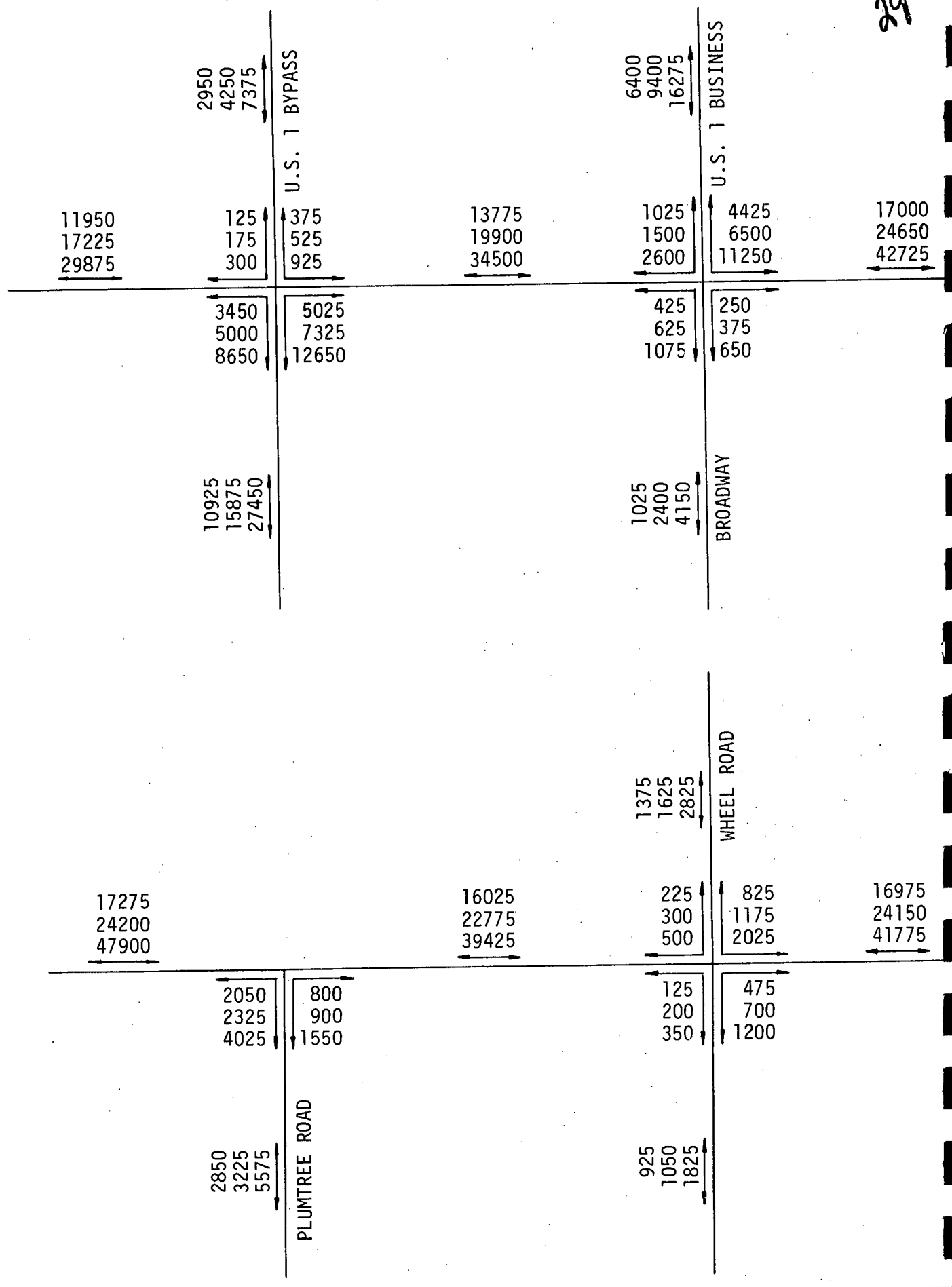


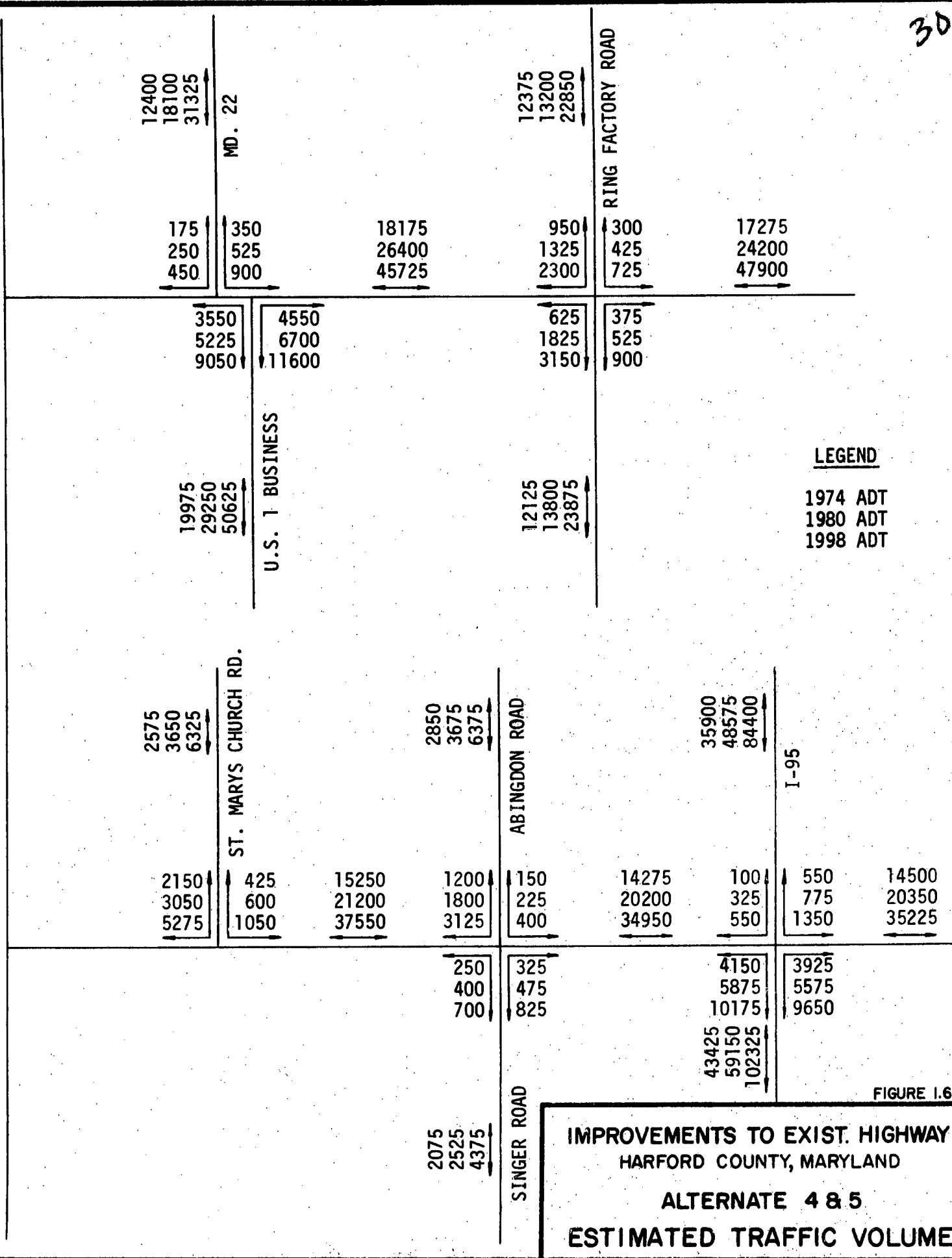
MARYLAND ROUTE 24
HARFORD COUNTY
I-95 to U.S. 1 By-Pass
PROPOSED RELOCATION
TYPICAL ROADWAY SECTION

26









LEGEND
 1974 ADT
 1980 ADT
 1998 ADT

FIGURE 1.6c

**IMPROVEMENTS TO EXIST. HIGHWAY
 HARFORD COUNTY, MARYLAND
 ALTERNATE 4 & 5
 ESTIMATED TRAFFIC VOLUME**

1.7 Economic Inventory

The proposed improvement for Md. 24 would have a significant impact on the economic base in Harford County and especially on the town of Bel Air and the immediate surrounding area. The actual impact will be discussed in section 3.0, while the existing economic situation is discussed in this section labeled as the Economic Inventory. Most information for this inventory was obtained from two documents supplied by the Harford County Economic Development Commission with some reference to the Comprehensive Master Plan for Harford County. The two documents from the Economic Development Commission are the Community Economic Inventory for Harford County and Harford County Unlimited 70's. Any detailed information needed by the reader may be obtained from these three documents. The following text is a general background of the economic situation in Harford County.

ECONOMIC BASE¹

Harford County's economic base consists of two large military research and development installations, namely; U.S. Army Aberdeen Proving Ground and U.S. Army Edgewood Arsenal. Aberdeen Proving Ground has a multi-million dollar Nuclear Pulse Reactor facility and Edgewood Arsenal has a 15 million electron volt Tandem Van de Graaff Accelerator facility. Also new to the Edgewood Arsenal is a four million dollar clinical research laboratory. Both of these installations are expanding in their research and development fields and with the merger of these two installations there is little likelihood of closing or moving. Harford County has sixty manufacturers in the county and over 1,200 business establishments of all proportions.

The number of separate businesses in operation in the county is at a high level. There are more of them in the area, in proportion to population, than in many parts of the country. New businesses are being born in the county every year as local residents embark on new ventures and outside service industries put well known branches in the county's new shopping centers. Small and moderate-sized businesses in the local area have proved to be quite durable. They have more than held their own, despite the tough competition from chain stores and other large enterprises. A census report shows that Harford County's business establishments-small, medium and large-provide gainful employment for 15,283 men and women in "covered" jobs. By covered is meant employment that falls within the scope of social security. Wages and salaries for these workers have been rising steadily, bringing payrolls to a new high.

INDUSTRIAL ZONED LAND²

Harford County at the present time has approximately 5,000 acres of land zoned industrial. 3,000 acres are for heavy industry (M-2) and the

¹ Harford County Unlimited 70's, County Commissioners of Harford County.

² Ibid.

remainder, 2,000 acres are for light industry, (M-1). In the industrial corridor there are 3 industrial parks, one with approximately 285 acres, one with approximately 90 acres and the other 100 acres, which are serviced by the Penn Central and B&O C&O railroad. Industrial Parks located out of the corridor consist of one in Bel Air, 140 acres, Forest Hill, 50 acres with 75 additional acres available, one at Hickory with 75 acres and one in the northern part of the county which consists of approximately 75 acres. The latter is geared to Research and Development.

Many of the industrial areas not in parks are served either by the Penn Central or B&O C&O railroad system: All areas within the corridor have easy accessibility to the John F. Kennedy Expressway, with three interchanges, one at Havre de Grace, Aberdeen and Edgewood.

The topography ranges from almost level to somewhat gentle rolling terrain, with minimal grading. All the areas are within the limits of 7% gradient. Water and sewerage are available at some locations.

Industrial Zoned Land

210 parcels.....1,999 acres.....zoned M-1.....for light manufacturing
 218 parcels.....3,000 acres.....zoned M-2.....for heavy manufacturing
 TOTAL 4,999 acres of which 1,000 acres are in use

ECONOMIC CHARACTERISTICS³

Distribution of Net Cash Income, 1972 ^{3/}

Percent of Households

Distribution	Harford County	Baltimore SMSA	Maryland	U.S.
\$ 0 - \$ 2,999	11.0	10.8	10.5	15.4
3,000 - 4,999	10.6	10.1	9.6	10.5
5,000 - 7,999	22.9	24.6	22.8	19.8
8,000 - 9,999	14.6	14.9	15.0	14.4
10,000 - 14,999	20.3	17.9	20.3	22.3
15,000 and over	20.6	21.4	21.8	17.6

Net Effective Buying Income:

Per Capita	\$3,710	\$3,837	\$ 4,040	\$ 3,779
Median Household Cash Income	8,728	8,597	8,955	8,605
Total (Millions)	475.6	8,155.5	16,535.5	791,506.1

³ Community Economic Inventory, Page 7.

Statistics from page 1.7.2 show the distribution of net cash income and the net effective buying income. These data include all sources of cash income, less all taxes. Net effective buying income also includes income in kind - payments in noncash goods and services, such as food and housing; imputed rentals of owner-occupied homes; and imputed value of food raised and consumed on farms.

Distribution of Employment, Harford County, December, 1972* 4/

<u>Classification</u>	<u>Number</u>	<u>Percentage</u>
Industry	16,829	53.0
Manufacturing	4,613	27.4
Wholesale and Retail Trade	5,793	34.4
Service and Other	2,792	16.6
Construction	1,685	10.0
Transportation, Communication, and Utilities	1,160	6.9
Finance, Insurance and Real Estate	725	4.3
Mining and Quarrying	61	0.4
Agriculture (1972 estimate)	1,091	3.4
Government (1972 estimate)	13,815	43.6
TOTAL	31,735	100.0

* Excluded are railroad, nonprofit organizations, domestic service, self-employed and unpaid family workers.

FUTURE EMPLOYMENT

Total Employment in Harford County⁴

1970 -	27,800
1980 -	40,500
1990 -	59,100

Employment by Industry in Harford County

<u>Industry</u>	<u>1980</u>	<u>1990</u>
Agriculture	700	600
Construction	2,200	3,500
Manufacturing	5,400	7,100
Trans. Comm. & Public Utilities	2,300	3,000
Wholesale Trade	2,800	7,100
Retail Trade	6,200	8,000
Finance, Insurance & Real Estate	1,500	2,200
Services	7,800	11,800
Government	11,600	15,800
	40,500	59,100

⁴ Harford County Comprehensive Master Plan, page 195, The Economy in the Future

Labor Market Area⁵

The labor market area of Harford County, as delineated by the Maryland Employment Security Administration, includes all of Harford County plus contiguous areas of Baltimore and Cecil Counties in Maryland and Chester, Lancaster, and York Counties in Pennsylvania.

Labor Force

The civilian labor force in Harford County was estimated to be 46,500 in October, 1973*. The unemployment rate was estimated to be 1.5% in October, 1973*.

Estimated County Labor Potential

In June, 1973 there were approximately 21,770 persons in seven major components included in the supply of labor available to Harford County. These are:

1. Average annual active unemployment insurance claimants	3,460
2. Unemployed whose claims have expired	348
3. Unemployed who were not claimants for unemployment insurance	415
4. The underemployed person who would shift from low paying or seasonal jobs	2,750
5. High school graduates expected to enter the labor force annually	956
6. Residents of the County who commute outside the County to work but would work in the County if comparable jobs were available	12,750
7. Women not now in the labor force who would enter if jobs were available	<u>1,100</u>
Estimated total potential	21,779

* Preliminary

BUSINESS CLIMATE⁶

Harford County, with its larger communities of Aberdeen, Bel Air, Havre de Grace, Edgewood, and Joppatowne, enjoys a most favorable business climate. The County's "natural" advantages of location, climate, terrain, and population growth are vigorously aided and abetted by an alert citizenry.

⁵ Community Economic Inventory, Page 8.

⁶ Community Economic Inventory, Page 19.

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Working in liaison with forward-looking incorporated communities and local Chambers of Commerce is the Economic Development Commission of Harford County. The Economic Development Commission is a County government agency and is charged with promoting the orderly economic development of the County.

The Economic Development Commission provides assistance to industrial developers and industrialists, tourist developers and tourists, commercial developers, real estate agents and new residents.

In order to enhance its attractiveness to industry, Harford County exempts tax on machinery, tools and equipment; manufacturers' inventories; and warehousing inventories.

Harford County Fiscal Data⁷

Total Assessment (Fiscal 1974)	\$625,000,000.00
Income (Fiscal 1973)	31,633,536.00
Expenditures (Fiscal 1973)	30,357,626.00
Bonded Indebtedness (Fiscal 1973):	
General Government	38,484,072.00
Roads	1,276,000.00
Water & Sewers	30,276,000.00
Moody's Bond Rating	A

Type of Government⁸

Harford County has a home rule, charter form of government and is governed by a County Executive and a seven member Council who are elected for a four year term.

There are two incorporated towns, Aberdeen and Bel Air and one city, Havre De Grace, within the County. The town of Aberdeen is governed by five elected commissioners and the town of Bel Air is governed by a Mayor and five commissioners. The City of Havre De Grace is governed by a Mayor and six councilmen.

Taxes

The 1973-1974 tax rates for the incorporated town are as follows: Aberdeen - \$1.00; Bel Air - \$.80; and Havre de Grace - \$1.15 (with a reduced County rate as listed below*).

County and State assessment ratios for Fiscal 1974 are as follows:

⁷ Community Economic Inventory, Page 37.

⁸ Directory of Maryland Municipal Officials 1975, pp. 25 & 26.

	<u>Harford County</u>	<u>Maryland</u>
Tax Rate Per \$100 of Assessed Value	\$2.66*	\$0.21
Assessment Ratio		
Real Property	50-60%	50-60%
Machinery, tools and equipment	Exempt	Exempt
Manufacturers' inventories	Exempt	Exempt**
Warehousing inventories	Exempt	Exempt**

*County rate of \$2.51 is applied within incorporated towns.

**Inventories are actually assessed at 100% and taxed by the State, but tax is deductible from State corporation income tax. If necessary, cash rebate is given.

A surtax of fifty percent of the State personal income tax liability is levied by Harford County.

1.8 Environmental Resource Inventory

Under this section any natural feature of the area around Bel Air affected by the proposed corridor which may be considered as a resource will be listed and discussed in this inventory. A resource in this context is anything that could be conserved and made useful now or in the near future.

Agriculture¹

In 1969 there were 839 farms in Harford County. The average size per farm was 159 acres, the average value per farm was \$120,267, and the average value per acre was \$756.10. There were 583 full owners, 178 part owners and 78 tenant operators.

Farm Sales* Harford County 1969

<u>Farm Products</u>	<u>Value</u>
Market Value of all Agricultural Products Sold	\$12,422,595
Crops including nursery products and hay	2,366,909
Forest products	56,556
Livestock, poultry and their products	9,999,130
Average per farm	14,806

* Farm sales represent the market value before taxes and expenses.

Timber²

Harford County contains approximately 131,900 acres of commercial forests, representing 46% of the total land acreage. Principal types of trees, number of acres and percent of total forest are as follows:

<u>Class of Land</u>	<u>Acres</u>	<u>Percent</u>
Commercial forest land	131,900	46.0
Noncommercial forest land	29,800	10.4
Nonforest land	125,000	43.6
	<u>286,700</u>	<u>100.0</u>
 <u>Commercial Ownership</u>		
Farmer-owned	27,000	20.5
Other private	104,900	79.5
State	---	---
Other public	---	---
	<u>131,900</u>	<u>100.0</u>

¹ Community Economic Inventory, Page 62.

² Community Economic Inventory, Page 63.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland or wildlife.

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, range, woodland or wildlife.

Soil Suitability for Wildlife				
<u>Series</u>	<u>Soil Map⁶ Symbol</u>	<u>Open Land</u>	<u>Woodland</u>	<u>Wetland</u>
Aldino	AdB	Good	Good	Very Poor
	AdC	Good	Good	Very Poor
	AsB	Poor	Good	Very Poor
Alluvial	Au	Fair	Fair	Fair
Chester	CcB2	Good	Good	Very Poor
	CcC2	Good	Good	Very Poor
Glenelg	GcC2	Fair	Good	Very Poor
Neshaminy	NeA	Good	Good	Very Poor
	NeB2	Good	Good	Very Poor
	NsC	Poor	Fair	Very Poor
	NsD	Poor	Fair	Very Poor

Road Suitability

The Aldino series is considered fair for road fill with a high potential for frost action. The Chester series is rated fair to good with moderate frost action and a need for cuts and fill. High Mica content along with moderate frost action and the need for cuts and fills are highway problems related to the Glenelg series which has a road fill rating of poor to fair. Neshaminy is rated as fair road fill with a low to moderate shrink swell potential. All of the Alluvial Soil in this corridor is located near the streambeds and would not be used for any highway engineering purposes.

Soils are an important factor in any type excavation and construction work and should be considered in urban and rural planning.

⁶ Soil Map Symbols taken from Soil Survey Maps prepared by United States Department of Agriculture. Maps available from Soil Conservation Service (U.S.D.A.) upon request.

Limitations

<u>Series</u>	<u>Soil Map⁷ Symbol</u>	<u>Limitations</u>	
		<u>Home Sites</u>	<u>Streets</u>
Aldino	AdB	Slight - Moderate	Moderate
	AdC	Moderate	Severe
	AsB	Slight - Moderate	Moderate
Alluvial	Av	Severe	Severe
Chester	CcB2	Slight	Moderate
	CcC2	Moderate	Severe
Glenelg	GcC2	Slight	Moderate
Neshaminy	NeA	Slight	Slight
	NeB2	Slight	Moderate
	NsC	Slight - Moderate	Slight - severe
	NsD	Severe	Severe

The final topic to be discussed under "Soils" is there limitations in relation to recreational uses. These uses refer to the development of playgrounds, camp areas, picnic areas, paths and trails. The Aldino series offers slight to moderate limitations with slopes being cause of some severe limitations. Limitations for Alluvial soils are considered severe because of poor drainage and the flood hazard. The Chester series has moderate to severe limitations for camp areas due to course surface fragments and steep slope while for other uses it has slight to moderate limitations. Glenelg limitations are listed as moderate to severe due to slope. Limitations range from slight to severe depending on slope and stoniness for the Neshaminy soils.

Water

The relocation of Maryland Route 24 would cross Heavenly Waters Run and Plumtree Run which are tributaries of Winters Run which inturn feeds Atkisson Reservoir. The area also has springs and wells which may be affected by the proposal.

Surface Water

Heavenly Waters is a very small stream with clear water and a sandy gravelly bottom and rapid current. Plumtree Run is another small stream with a sandy, gravelly bottom and fairly rapid current. These two streams have some species of minnows living in them but the streams support no game fish. The main use of these streams would be for the watering of livestock. These two streams flow into Winters Run and Alkisson Reservoir. Winters Run and the Reservoir do support a small sport fishery. Atkisson Reservoir is a heavily silted reservoir which is an emergency water supply for the Edgewood Arsenal and is used for recreational purposes including boating and fishing. The reservoir lies approximately one mile west of the proposed highway.

⁷Soil Map Symbols taken from Soil Survey Maps prepared by United States Department of Agrucilture. Maps available from Soil Conservation Service (U.S.D.A.) upon request.

<u>Commercial Forests by Stand Class</u>	<u>Acres</u>	<u>Percent</u>
Sawtimber	97,200	73.7
Poletimber	25,100	19.0
Sapling and Seedling	8,500	6.5
Nonstocked areas	<u>1,100</u>	<u>0.8</u>
	131,900	100.0
 <u>Commercial Forests by Type</u>		
Yellow pines	4,000	3.0
Oak-pine	6,000	4.5
Oak-hickory	93,900	71.2
Oak-gum	20,700	15.8
Elm-ash-red maple	3,600	2.7
Miscellaneous types	<u>3,700</u>	<u>2.8</u>
	131,900	100.0

Minerals³

Gabbro and related ultramafic rocks are present in a wide belt through central Harford County. Large bodies of gabbro also occur in the eastern part of the County.

Elongated bodies of serpentine occur across northern Harford County. Some serpentine occurs with the ultramafic rocks associated with gabbros.

A large mass of quartz diorite gneiss extends across Harford County.

Cockeysville Marble crops out in small areas in Harford County. This rock ranges in composition from a pure calcite marble to a dolomite marble, and in some places it contains much mica. The major use for the rock is crushed stone, but the pure calcite marble is used for roofing granules and white aggregate, and in a finely-ground form, as white mineral filler and agricultural limestone. Some types may be pure enough for chemical use.

The Peach Bottom Slate in northern Harford County has been used in the past for roofing slate and is suitable for the production of roofing granules. The weathered slate may be useable for lightweight aggregate, but results of firing tests have not been very encouraging.

Talc and soapstone masses occur in small areas in Harford County.

Soils⁴

Soils within the proposed Route 24 Relocation Corridor include a major set of five soil series found in substantial amounts throughout the corridor and a minor set of five soil series found in lesser amounts. The major set includes the Aldino, Alluvial, Chester, Glenelg and Neshaminy series. The

³ Community Economic Inventory, Page 64.

⁴ Soil Survey of Harford County, United States Department of Agriculture, Soil Conservation Service

minor set consists of the Brandywine, Codorus, Kelley, Montalto and Watchurg series. Throughout this portion on soils, only the major set of soils will be evaluated. The minor soils have not been evaluated because the procedure is time consuming and any evaluation would be of minimum value due to the small amounts of these soils located in the corridor.

The following is a table showing the yields of two common farm crops which could be obtained from these soils under improved management. Each soil will be listed with it's soil capability class.

<u>Series</u>	<u>Soil Map⁵ Symbol</u>	<u>Class</u>	<u>Soil</u>	<u>Bu. Corn/A.</u>	<u>Bu. Wheat/A.</u>
Aldino	AdB	II	Aldino Silt Loam 3-8% Slope	105	45
Aldino	AdC	III	Aldino Silt Loam 8-15% Slope	100	40
Aldino	AsB	VI	Aldino Very Stony Silt Loam 0-8% Slope	None	None
Alluvial	Av	VI	Alluvial Land	None	None
Chester	CcB2	II	Chester Silt Loam 3-8% Slope	135	50
Chester	CcC2	III	Chester Silt Loam 8-15% Slope	125	45
Neshaminy	NeA	I	Neshaminy Silt Loam 0-3% Slope	135	50
Neshaminy	NeB2	II	Neshaminy Silt Loam 3-8% Slope	135	50
Neshaminy	NsC	VI	Neshaminy and Montalto Very Stony Silt Loam 0-15% Slope	None	None
Neshaminy	NsD	VI	Neshaminy and Montalto Very Stony Silt Loams 15-25% Slope	None	None

CAPABILITY CLASSES, the broadest groups, are designated by Roman Numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

⁵Soil Map Symbols taken from Soil Survey Maps prepared by United States Department of Agriculture. Maps available from Soil Conservation Service (U.S.D.A.) upon request.

Ground Water

Small to moderate quantities of ground water are yielded to wells in the area. Ground water in the area is now excellent. Average yields for wells in the different bedrock formations range from 7.8 to 8.6 gallons per minute. The rock formations of the area can be expected to yield reliable domestic supplies, but larger supplies are difficult to find.

Aesthetic and Recreational Value

The Bel Air area offers its residents a pleasant rural setting. Areas near the corridor which offer the residents an aesthetically pleasing atmosphere and provide recreational benefits include Singer Road Park, Atkisson Reservoir, Harford Glenn Education-Recreational Area and the proposed Heavenly Waters Park.

The area know as Heavenly Waters is located at the northern terminus of the proposed relocation. It consists of Heavenly Waters Run and the heavily wooded area surrounding the stream bed. It is to be the future site of a multipurpose recreational park for Harford County. The stream, varied slopes and prime woodlands located in the Heavenly Waters Valley make it a prime location for such a park.

Just southeast of Heavenly Waters on the south side of U.S. 1 Business is the Plumtree Run flood plain. This area is also surrounded by prime forest lands although the terrain is less severe when compared to the Heavenly Waters terrain. Due to the rapid growth of the Bel Air area, prime forest lands such as this area along Plumtree Run may become important areas for potential recreational development.

The remainder of the corridor extending from Ring Factory Road to Interstate 95 is predominantly agricultural lands with small patches of wooded areas. Several residential developments also dot the landscape. The lower portion of the corridor from Ring Factory Road south to I-95 has been subject to rapid residential development and will continue to be subject to rapid future development. Such developments as Box Hills, Village of Mclean and Constant Friendship are proposed as high density townhouse developments. Preserving some amounts of agricultural and forest lands will help preserve a semi-rural setting around the Bel Air Area, although rapid development will greatly increase the population of the area. Preserving a semi-rural setting around these developments will offer residents an alternative living style when compared to the life style in the townhouse settings in and around Baltimore proper.

Singer Road Park and Harford Glenn Education-Recreational Area located on Atkisson Reservoir are located approximately one mile west of the proposed corridor. These sites are presently the major recreation sites for the Bel Air area.

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1.9 4(f) Land Involvement

Heavenly Waters Park is a proposed park to be located at the northwest corner of Bel Air. Approximately 200 acres of land belong to Harford County for the development of this multi-purpose facility. The proposed relocation of Maryland Route 24 will have an interchange with U.S. 1 Bypass in the center of Heavenly Waters Park, between Vale Road and Tollgate Road. The main alignment of the proposed relocation will run southeast through the park area crossing Heavenly Waters Run. Harford County officials are now planning the facilities and programs which will be incorporated into the park. A preliminary master plan has been completed for the park and the design takes into account the fact that Harford County officials anticipate that the relocation alternate will be approved for construction. The State Highway Administration owns right-of-way within the Heavenly Waters Park Area. Harford County has traded land needed by the Highway Administration in return for land owned by the Highway Administration which would complement the development of the park around the interchange. Because of the involvement with public land which would be required, a separate 4(f) Statement has been prepared and is contained within this statement in a separate section.

There are numerous historical sites of state, local, or national significance along the project corridor. The following sites have been identified as requiring 4(f) involvement:

1. Park Farm
2. Woodview
3. Constant Friendship

Additional details concerning the involvement with these sites are provided in Section 8.0 and the attached 4(f) Statement.

2.0 Relationship Between the Proposed Action and the Land Use Plans, Policies and Controls

At this point an evaluation of present and future plans of Harford County in relation to the effect the proposed road will have on them will be made. An evaluation will be made of the major plans and policies for present and future land use as they now exist in respect to the proposed relocation of Route 24. The plans under consideration include the Harford County Comprehensive Plan, the Thoroughfare Plan for Bel Air, the General Development Plan along with the present and future land use map, and a draft land use element.

The first plan put under consideration is the Harford County Comprehensive Master Plan which was adopted in April of 1974. The plan is made up of three goals, and policies are then listed which would help accomplish each goal. The plan carries no enforceable weight but is only a guideline for implementing legislation which would help accomplish those goals. Each goal and its policies will be listed and then followed by an evaluation of the proposals effect on the goal and policies. Goal number one is "Conservation of the Natural Environment".¹

Policy A-1: The county shall require compliance with the air and water pollution standards and will itself be an adherent to those standards. Industry and conservation can and will be compatible resources in Harford County.

Policy A-2: Structural development and the altering of land forms will be prohibited in the annual flood plains, state designated wetlands and water recharge areas and severely restricted in the 100-Year Flood Plain areas.

Policy A-3: Streams within the county will be brought to their assigned Maryland Water Quality Standards. The county will make efforts to see that those streams flowing into the county meet these same standards in cooperation with other jurisdictions.

Policy A-4: Storm drainage studies shall be made and appropriate regulations adopted to control flooding, erosion and siltation of streams. The protection and expansion of significant wooded areas must be considered as well.

Policy A-5: Waterfront reservations for public use will be protected.

Policy A-6: Public water impoundments and intake areas will be protected from the danger development represents

¹ Harford County Comprehensive Master Plan
Goal I: Conservation of Our Natural Environment, Pages 5-11.

to the quality and quantity of water in such areas. Development shall be kept at very low densities in such drainage areas to minimize the potential of surface and subsurface pollution of all types and from all sources.

Policy A-7: The proper disposal of all liquid and solid wastes should be on the basis of studies and waste disposal plans. The county should aim at tertiary treatment of sanitary sewage.

Policy A-8: The county shall provide for the protection of the environment by the adoption of performance standards to control sources of air pollution, water pollution, noise pollution, thermal pollution, pesticide control and others.

Policy B-1: No new development shall be permitted in our critical resource areas such as wetlands, sand and gravel deposit lands and prime agricultural lands beyond the 20-year water and sewer service areas. These resource areas must be of sufficient size to be economically viable.

Policy B-2: Public improvements and expenditures shall be minimal in our critical natural resources areas.

Policy C-1: Development shall adhere to the limitations of the land with respect to the soil, topography, drainage, vegetation and sub-strata.

Policy C-2: Minimize the adverse effects of necessary electrical, gas and communication systems upon the visual environment. Emphasis should be on underground utility lines.

Policy D-1: Provide a realistic quantity of land to meet forthcoming development needs, conserving the remainder of the rural countryside for resource production and recreation.

All of the aforementioned policies under Goal I: Conservation of our Natural Environment from the Harford County Comprehensive Plan are dependent on the creation of a conservation committee which would put forth proposals for the creation of ordinances to protect the natural environment in the county. Although the policies put forth in the comprehensive plan carry no enforceable weight, many of the policies are actually being enforced through State and Federal Laws which protect the environment. However, some of the policies are not part of any State or Federal Regulation and are worthy of consideration because they show the desires of the citizenry of Harford County and what type of controls may be implemented in the future to protect the Harford County Environment. If ordinances existed which would make these policies enforceable, policies A-4 and A-8 could possibly be affected by the implementation of the recommended alternate or any of the other two relocation alternates.

Policy A-4 deals with the protection of wooded areas. A Land Parcel which lies south of U.S. 1 Bypass known as the Heavenly Waters Area is now owned by the county and the area is being planned as a park and recreation facility for the county. This area is heavily wooded and suited for recreational purposes. Any of the relocation alternates would require destruction of much of this wooded land within and surrounding the park. Land lying south of U.S. 1 Business near the Bel Air Plaza is also heavily wooded with a diversified selection of hardwoods. This type of area would most likely be a prime area to be saved if Policy A-4 were enforceably implemented through an ordinance. The impact on such areas could be minimized by maintaining as many trees as possible within the right-of-way to act as a buffer between the road and the wooded areas. The recreational value of such areas has been realized at Heavenly Waters and may become of real value along Plumtree Run south of Bel Air Road as development pressures require more land for recreational facilities. Although Heavenly Waters is being developed as a multipurpose facility the demand for open space natural conditions will remain high as the residential growth increases in the Bel Air Vicinity. This growth will increase the value of such open space wooded areas south of Bel Air Road. Policy A-8 is the policy which would control problems of noise and air pollution.

The remaining policies are in general, expressed in a way which encompasses all of the environmental problems that exist in hopes that the government will pursue legislation to protect the environment in Harford County. The relocation alternates should not come in direct conflict with any of these remaining policies. However, indirect effects of the road which include increased development due to improved transportation and accessibility to the area could cause situations to arise where the remaining policies A-1-3-5-6-7, B-1-2, C-1-2 and D-1 would be placed in jeopardy. Social and economic growth which includes residential, commercial and industrial development along with the improved transportation required for this growth and development is seldom compatible with environmental protection. Thus, some type of priority must be established by the people of the county in order to cope with the trade-offs which have been necessitated. Environmental protection is called for in one section of the Comprehensive Plan while improved transportation along with social and economic growth is stressed in another section of the plan. This leads to the question, "is the Relocation project compatible with the local plans and policies of the area?" This is of course a personal judgement decision which is answered differently by each individual. A more indepth discussion on plans and policies for social and economic growth along with transportation and how they relate to the proposed action are discussed on pages 3.2.1 thru 3.2.4.

Goal II: A Quality Living Environment for All²

Policy I-1: Land use and transportation planning shall be closely coordinated.

²Harford County Comprehensive Plan, Page 22.

This policy has wide ramifications. It shows the concern and awareness that these officials have for the benefits and disbenefits brought about by road transportation improvement. However, the priority question still exists. Strong pressures caused by the advantage of having new businesses locate in the region may cause relaxation of this policy in order to keep a business in the community, thus degrading the transportation and land use network in that area where the business locates. The proposed Relocation does seem to meet well with the proposed land use for the area except in the vicinity of Heavenly Waters Park. From U.S. 1 Business to I-95 much of the land is under development for commercial, residential and industrial facilities. The relocation would provide the needed improved transportation network through the developing area. Ordinances which would implement a strict enforcement of policy I-1 could prevent many problems which might come about on the collector roads which connect to the Relocation. These roads include Singer, Wheel, Plumtree and Ring Factory.

Goal III: A Sound Balanced and Diversified Economy³

Objective J: Encourage the growth of a sound and diversified industrial base.

Policy J-1: Promote growth in industrial and commercial activities that have favorable public revenues to cost ratios.

Policy J-2: Promote growth in industries which will provide convenient employment for present county residents and the growing county labor force.

Policy J-3: The county should promote a diversified industrial base to lessen its economic dependence on a few employment centers.

Policy J-6: Agriculture and other resource production activities shall be encouraged.

Objective K: Promote the thoughtful location of industrial and commercial development.

Policy K-1: The comprehensive master plan shall describe the most suitable areas for commercial and industrial development. The county shall be guided by this plan.

Policy K-2: The county shall encourage the location of major commercial and industrial areas where direct access can be gained to major transportation facilities.

Policy K-3: Industrial and commercial activities will be encouraged to locate in clusters and in industrial parks, rather than isolated individual locations to maximize energy conservation and to control pollution related to energy transportation requirements.

³ Comprehensive Plan, Pages 24-26.

Probably the most important factor involved in promoting a sound and diversified economy is the ability of an area to attract new businesses to that area. Transportation plays a major role in attracting new businesses into a community. There is no question that the relocation of Md. 24 will set up a transportation network through a proposed area of development which will attract new businesses and this diversify the economic base around Bel Air. The relocation of 24 will provide excellent access from developed areas to I-95 and U.S. 1. Thus, all policies concerned with diversifying the economy would make the relocation favorable in relation to the desire for economic growth. Only policy J-6 which is concerned with the encouragement of agriculture and other resource production activities is questionable. Agricultural development, in an area where industrial, residential and commercial establishments are competing for valuable land, will usually take a back seat to the more profitable commercial and industrial development. In other words it may be difficult to implement the preservation of agricultural land when the pressure of the higher value per acre industrial or commercial business is vying with the less valuable per acre farmland for the open space around Bel Air.

Draft Land Use Element

Included in this document are two statements of goals, objectives and policies. The Citizen's Review Committee, which was formed to review and provide citizen participation and input for the Comprehensive Master Plan, suggested one set. The other set of goals are the ones produced by the Department of Planning and Zoning of Harford County. Most of the objectives, goals and policies were incorporated into the Master Plan.

Existing Land Use Map - (Figure 2.0a)

This Land Use Map was prepared in 1973, and shows the existing land use as of that date. Maryland Route 24 Relocated is, of course, not shown on the existing Land Use Map. If the relocation were placed on this map (Figure 2.0a) it would not cut through any major development area. The relocation would come in contact with three minor low density residential areas at Plumtree Road, Wheel Road and along Md. 24 near Constant Friendship. The impacts on the minor developments are discussed in Section 4.0 of this statement. The relocation will pose no specific planning problems in terms of existing land use.

General Land Use Plan of 1976 - (Figure 2.0b)

The General Land Use Plan is designed to act as a guide for the future growth and development of Harford County. Although not officially approved, the 1976 Plan shows the county's most recent desires for planned development. This plan will become the official General Land Use Plan should it be approved by the County Commissioners.

The 1976 Plan depicts Md. Route 24 as a relocated highway. The northern section of the proposed roadway (U.S. 1 to Plumtree Road), as shown on the plan, is common with all of the relocation alternatives studied. The southern section swings further to the west than any of the previously studied alternatives and closely parallels Winters Run. The Harford County Department of

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Planning and Zoning requested that the State Highway Administration consider the county alternate after the Draft Environmental Impact Statement was circulated and the hearing held.

The State Highway Administration performed a preliminary engineering and environmental analysis for this alternate. The following is a summary of the findings:

- The county alternate provides the most indirect route between the project termini, resulting in a longer travel distance than any of the alternatives previously studied.
- The Harford County alternate would cost approximately \$20.6 million as compared to an average cost of \$16.3 million for the other relocation alternates presented at the Public Hearing.
- Maryland Route 24 is designated as a major arterial in the state highway system. The County's plan is envisioned as a parkway type roadway with greenbelts and accessibility to the public; this type of facility is not consistent with the designated purpose of Md. 24.
- From an engineering and environmental stand point the county alternate is undesirable due to the proximity to Winters Run and the rough terrain it would traverse.

The preliminary engineering and environmental analysis indicated that the county alternate did not offer any advantage over those alternates previously studied.

Although the recommended alternate is not totally consistent with the proposed General Development Plan it is the most consistent of the previously studied alternates. Alternate 3 is consistent with the presently adopted landuse plans dated 1969.

General Land Use Plan (1969) - Figure 2.0c)

This plan was developed by Harland Bartholomew and Associates of Washington, D.C. for the Harford County Planning and Zoning Commission. It is designed to be used as a guide for the physical development of Harford County and is the officially approved Master Plan for Harford County. Maryland 24 Relocated is shown on this plan (see Figure 2.0c). The relocation is shown as four lane divided highway and will not cut through any developments. The idea behind this plan is that the area will develop around the road. Maryland Route 24 Relocated is consistent with this plan.

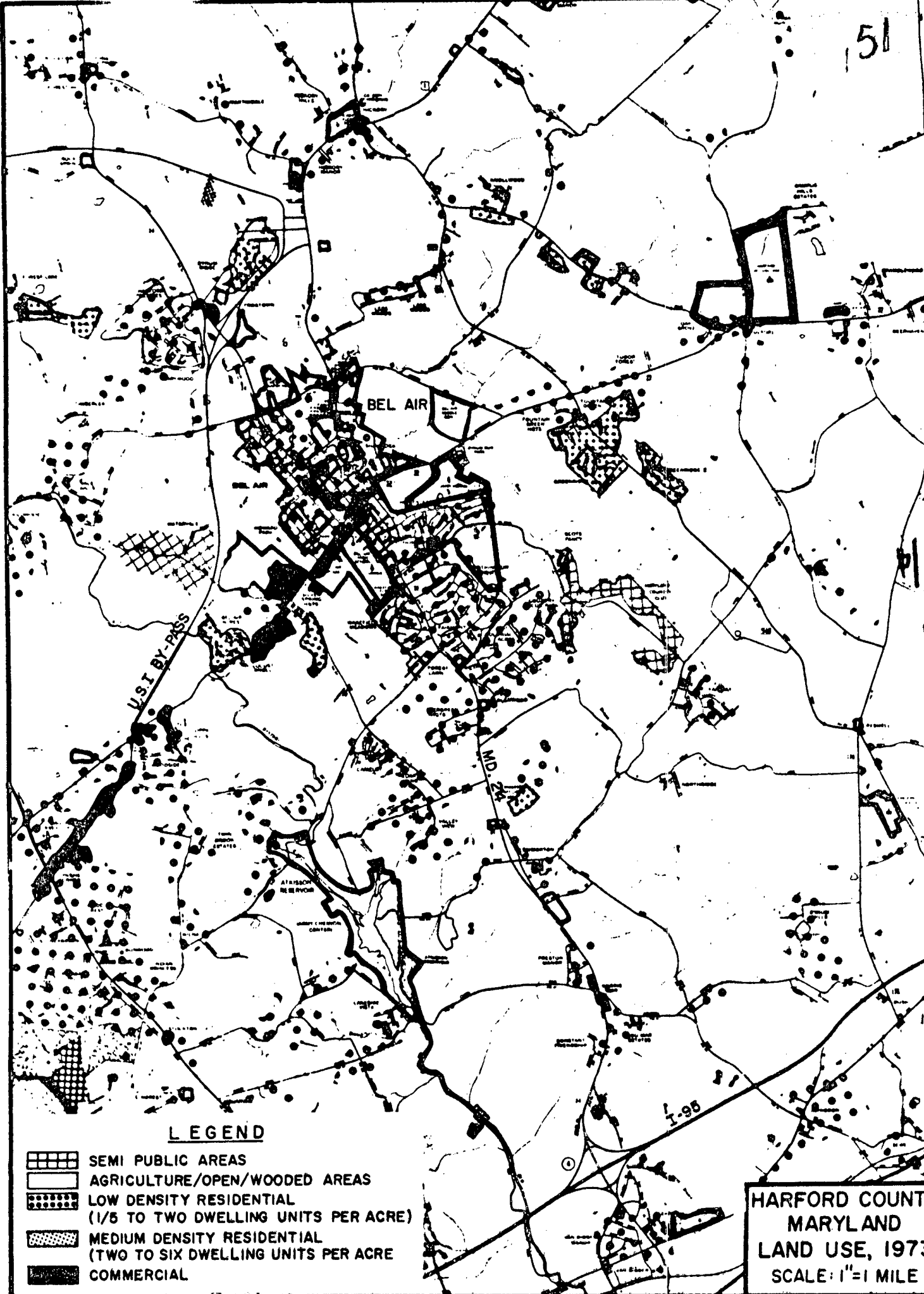
Land Use and Thoroughfares for Bel Air - (Figure 2.0d)

This plan which was developed by Harland Bartholomew and Associates shows the general development pattern for Bel Air. It was adopted by the commissioners of Bel Air in 1970. The alignment shown on the subject plan between the areas south of Ring Factory Road to U.S. 1 Bypass is generally similar to






Alternates 1, 2 & 3 of the State Highway Administration. It appears to be a necessary highway for the Bel Air Transportation Network and for this reason it can be considered consistent with this plan.

Proposed Master Plan for Heavenly Waters Park - (Figure 2.0e)

Maryland 24 Relocated appears on this plan. Throughout the design studies for the relocation of Md. 24 the Recreation Department of Harford County has been consulted. Thus, the park was planned around the proposed interchange with coordination with the State Highway Administration allowing the planners to obtain lands which would mutually improve the development of the park and the highway.
















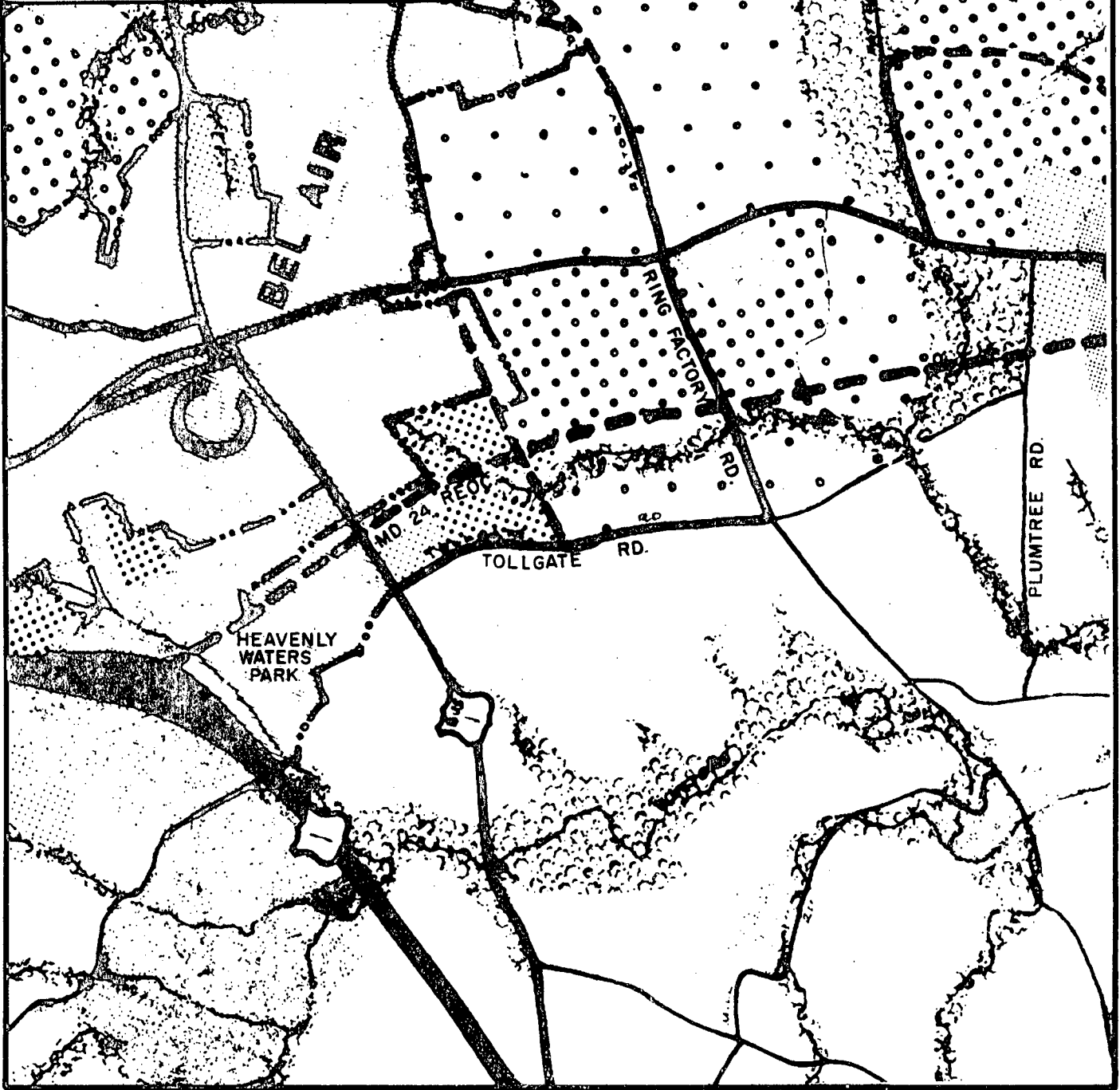
LEGEND

-  SEMI PUBLIC AREAS
-  AGRICULTURE/OPEN/WOODED AREAS
-  LOW DENSITY RESIDENTIAL
(1/5 TO TWO DWELLING UNITS PER ACRE)
-  MEDIUM DENSITY RESIDENTIAL
(TWO TO SIX DWELLING UNITS PER ACRE)
-  COMMERCIAL

**HARFORD COUNTY
MARYLAND
LAND USE, 1973
SCALE: 1"=1 MILE**

LEGEND

-  NATURAL FEATURES PROTECTION AREA
-  EXISTING INSTITUTIONAL AND PUBLIC AND SEMI-PUBLIC RECREATION
-  RURAL RESIDENTIAL
-  VERY LOW INTENSITY
-  LOW INTENSITY
-  MEDIUM INTENSITY
-  MEDIUM HIGH INTENSITY
-  HIGH INTENSITY
-  EMPLOYMENT
-  EXTRACTION
-  TOWNS
-  COMMUNITY CENTER
-  PROPOSED HIGHWAYS

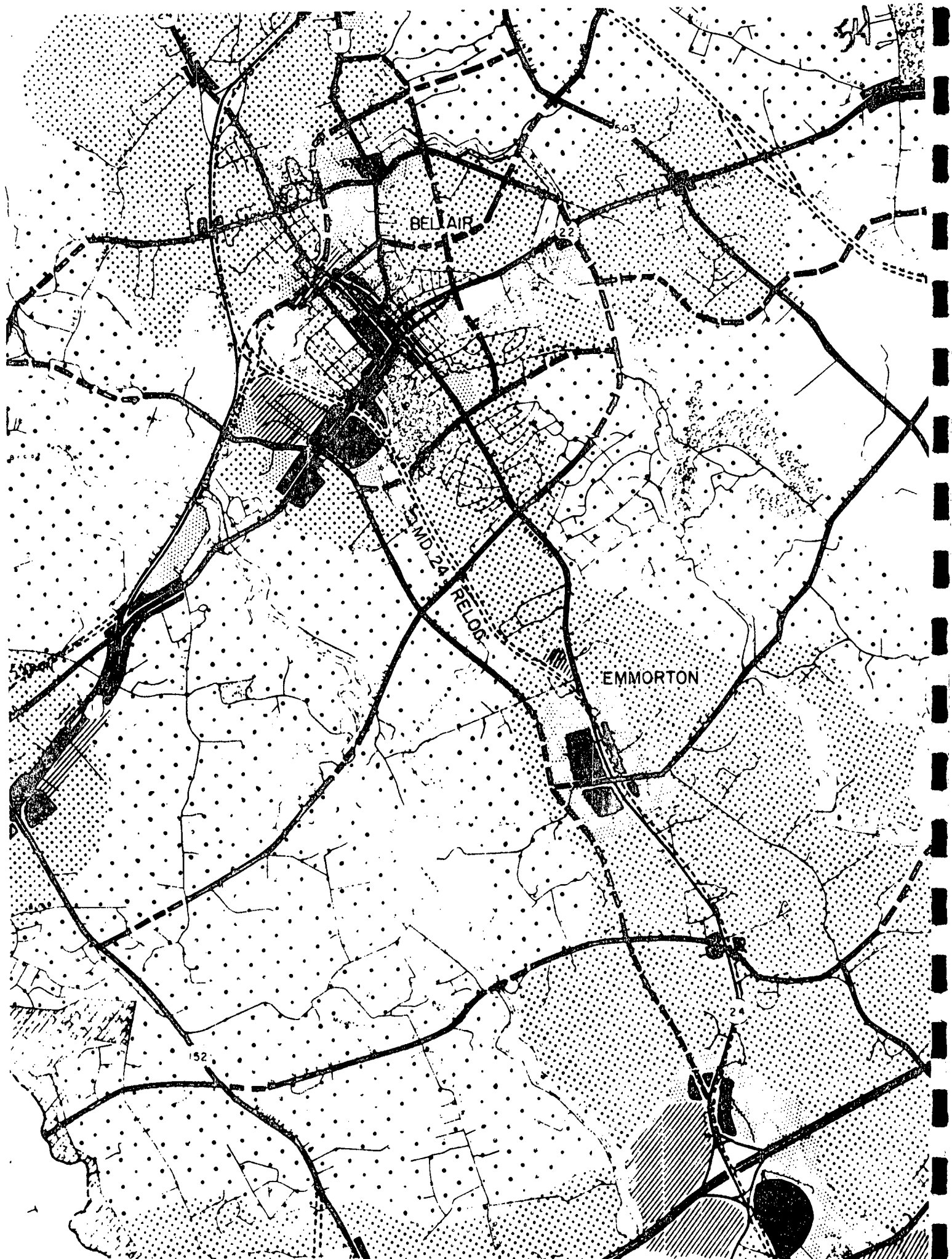




HARFORD COUNTY, MARYLAND
GENERAL LAND USE PLAN
1976

SCALE: 1" = 1/2 MILE +

FIGURE 2.0b



BELLAIR

EMMORTON

MD 24
RELOD

152








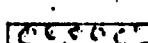

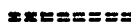

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643

24

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L E G E N D

-  AGRICULTURAL-RURAL RESIDENTIAL (Less Than One Dwelling Unit Per Acre)
 -  LOW DENSITY RESIDENTIAL (One To Two Dwelling Units Per Acre)
 -  MEDIUM DENSITY RESIDENTIAL (Two To Four Dwelling Units Per Acre)
 -  HIGH-MEDIUM DENSITY RESIDENTIAL (Four To Fifteen Dwelling Units Per Acre)
 -  COMMERCIAL
 -  LIGHT INDUSTRIAL
 -  EXISTING PUBLIC, SEMI-PUBLIC AND PARKS
 -  FUTURE PUBLIC, SEMI-PUBLIC AND PARKS OR OPEN SPACE
-
- | | | |
|---|------------------------|---|
| EXISTING | | PROPOSED |
|  | DIVIDED EXPRESSWAY |  |
|  | OTHER ARTERIAL HIGHWAY | |

HARFORD COUNTY, MARYLAND
 GENERAL LAND USE PLAN, 1969
 SCALE: 1" = 4000'
 FIGURE 2 0c

TOWN OF BEL AIR, MARYLAND

RESOLUTION	EFF DATE	LOCATION	VERIFIED BY
	6-17-71	D. G.	<i>56</i>

THIS PLAN HAS BEEN DESIGNED TO GUIDE THE PHYSICAL DEVELOPMENT OF BEL AIR PURSUANT TO THE PROVISIONS OF ARTICLE 68B, CODE OF PUBLIC GENERAL LAWS OF MARYLAND. THE PLAN WAS ADOPTED BY RESOLUTION OF THE BEL AIR PLANNING COMMISSION ON SEPTEMBER 28, 1970, AFTER A QUARTERLY PUBLIC HEARING HELD ON SEPTEMBER 16, 1970.

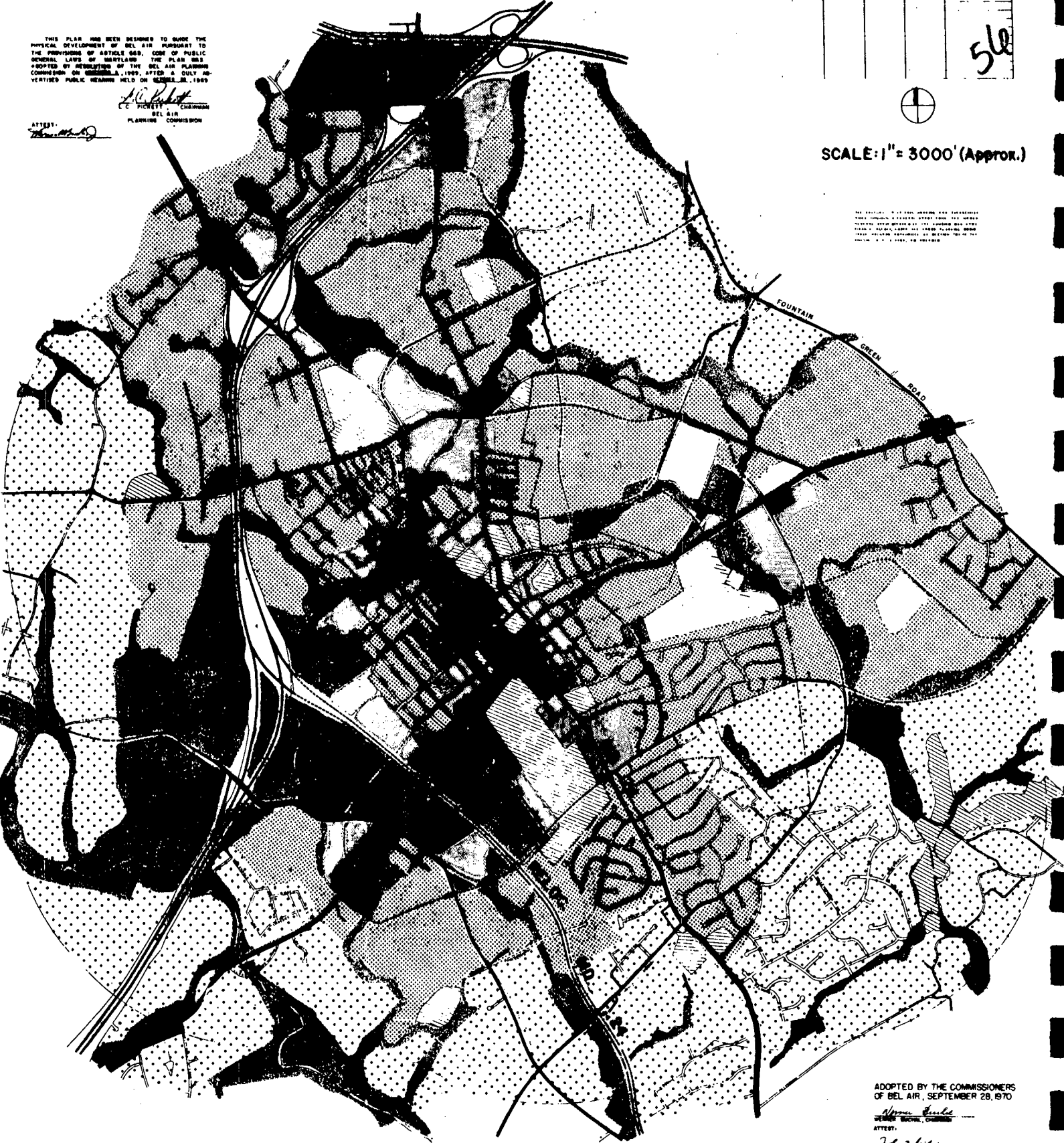
A.C. Robert
 C.C. PICKENS, CHAIRMAN
 BEL AIR
 PLANNING COMMISSION

ATTEST:
[Signature]



SCALE: 1" = 3000' (Approx.)

THE TOWN OF BEL AIR, MARYLAND, HAS ADOPTED THIS PLAN PURSUANT TO THE PROVISIONS OF ARTICLE 68B, CODE OF PUBLIC GENERAL LAWS OF MARYLAND. THE PLAN WAS ADOPTED BY RESOLUTION OF THE BEL AIR PLANNING COMMISSION ON SEPTEMBER 28, 1970, AFTER A QUARTERLY PUBLIC HEARING HELD ON SEPTEMBER 16, 1970.



ADOPTED BY THE COMMISSIONERS OF BEL AIR, SEPTEMBER 28, 1970

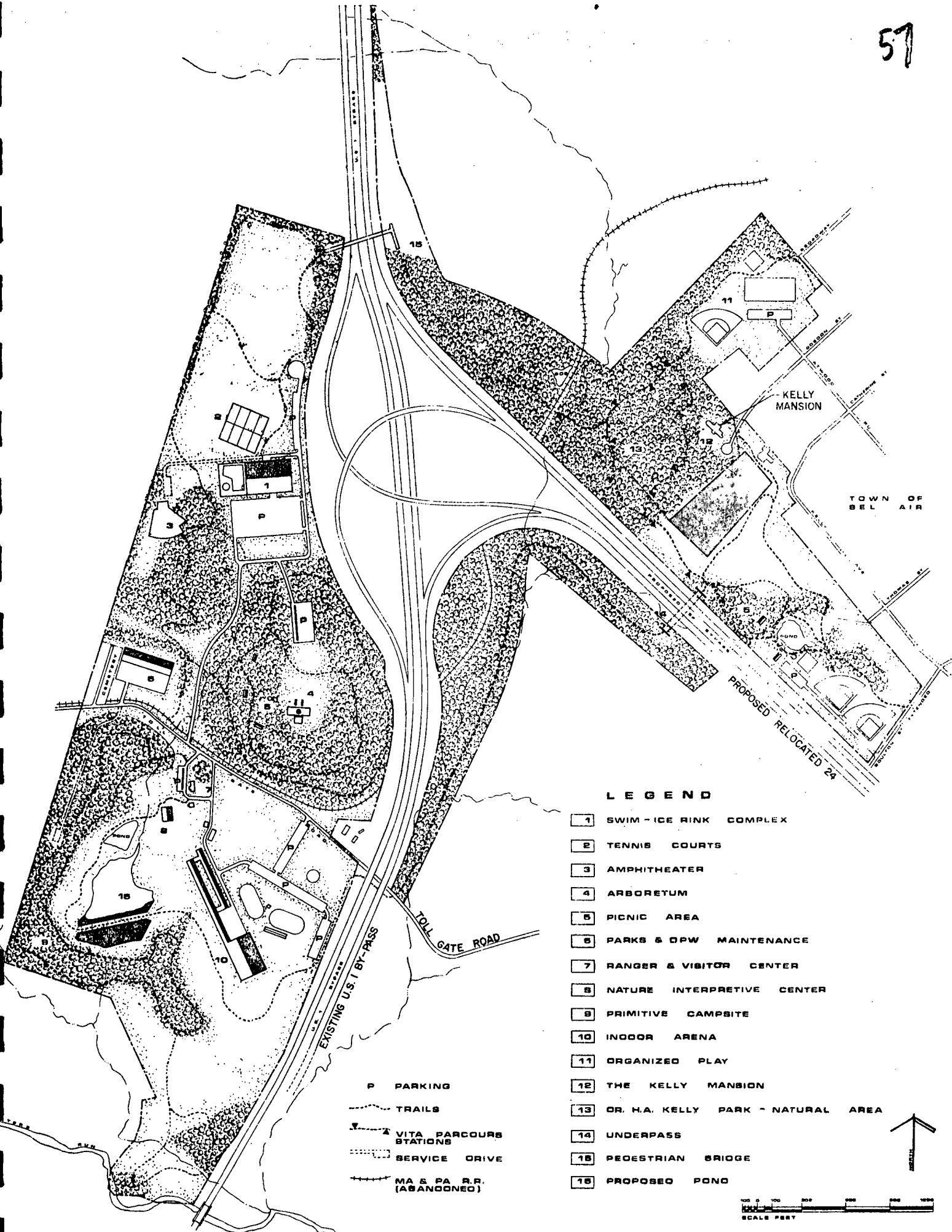
Harland Bartholomew
 HARLAND BARTHOLOMEW AND ASSOCIATES
 ATTEST:

John J. [Signature]

THE PLAN FOR LAND USE AND MAJOR THOROUGHFARES

LEGEND

- | | | | | |
|--------------------------------|------------------------|--------------------|-------------|-----------------------------|
| LOW DENSITY RESIDENCE | COMMERCIAL | EXISTING HIGHWAY | NEW HIGHWAY | TWO MOVING LANES, SECONDARY |
| MEDIUM DENSITY RESIDENCE | INDUSTRIAL | MAJOR THOROUGHFARE | LOCAL ROAD | TWO TO FOUR LANES, PRIMARY |
| HIGH-MEDIUM DENSITY RESIDENCE | PUBLIC AND SEMI-PUBLIC | MAJOR THOROUGHFARE | LOCAL ROAD | FOUR LANES DIVIDED, PRIMARY |
| PARKS AND PERMANENT OPEN SPACE | | | | |



LEGEND

- 1 SWIM - ICE RINK COMPLEX
- 2 TENNIS COURTS
- 3 AMPHITHEATER
- 4 ARBORETUM
- 5 PICNIC AREA
- 6 PARKS & DPW MAINTENANCE
- 7 RANGER & VISITOR CENTER
- 8 NATURE INTERPRETIVE CENTER
- 8 PRIMITIVE CAMPSITE
- 10 INDOOR ARENA
- 11 ORGANIZED PLAY
- 12 THE KELLY MANSION
- 13 OR. H.A. KELLY PARK - NATURAL AREA
- 14 UNDERPASS
- 15 PEDESTRIAN BRIDGE
- 15 PROPOSED POND

- P PARKING
- TRAILS
- ▲ VITA PARCOURS STATIONS
- SERVICE DRIVE
- MA & PA R.R. (ABANDONEE)



Direct Effects

Direct effects include those impacts both beneficial and adverse which are the first impacts created by the implementation of the proposed project. Direct impacts must occur first before the possibility of secondary effects can come into existence.

Sections 3.1 through 3.14 of this Environmental Impact Statement are concerned with direct impacts the proposed highway will have on the Environment.

3.1 Traffic and Transportation

The Relocation Alternatives

The proposed relocation of Maryland Route 24 will provide a transportation network which would be superior to the existing facility or the planned improvements made on the existing road, which would include the updating process called for in Alternate 4. Relocated 24 would eliminate the through traffic now passing through Bel Air from U.S. 1 Bypass to I-95 via the existing Route 24 and move it to the new relocation. Thus, the development of such a road will create safer travel in central Bel Air by removing the high speed traffic from the slower moving local traffic. This proposed roadway will provide improved accessibility required in the Bel Air Area due to industrial, commercial and residential development. The travelers who would use the new highway would benefit through the reduction of hazardous conditions which now exist on Md. 24.

By eliminating or relieving the existing hazardous conditions the motorist is afforded a faster, safer and more efficient mode of travel. The proposed Relocation would have at-grade intersections at the crossroads which serve the existing residential developments.

The relocation of Md. 24 will change the traffic patterns throughout the Bel Air Area. Once the relocation is completed there will be a period of time in which traffic will have to adjust from the old transportation network to the use of a new network including the use of the new Md. 24 facility. This may create some traffic control problems until a new traffic pattern in the area is established. One area of concern may be near the Harford Mall where the relocation will cross U.S. 1 Business (Bel Air Road). This intersection will undoubtedly be the busiest intersection along the new facility. Located near this intersection are the Bel Air Plaza, Harford Mall, several gas stations and several restaurants. These establishments serve a large area around Bel Air, thus these commercial establishments are in themselves large traffic generators. There are several roads which will be used to dissipate the traffic in the area. They include Toll Gate Road, U.S. 1 Business, Md. 24 Relocated and the existing Md. 24. Some traffic generated from this area may find it advantageous to use the old Md. 24 facility while some may use Toll Gate Road which runs parallel to the relocated Md. 24 facility. Undoubtedly, it will take a period of months for traffic to adjust to the new pattern. Other areas of concern exist along several of the minor collector roads located in the corridor. These roads include Ring Factory, Plumtree, Wheel and Singer roads. The new facility will cause traffic to flow from Md. 24 Relocated to the Existing Md. 24 and vice versa via these minor collector roadways. This is due to the fact that much of residential development lies along existing Md. 24. The net result is an increase in the amount of traffic using these minor roadways between the two major highway facilities.

W

Alternate 4 (upgrade existing roadway to extent practical)

This proposal would only relieve some of the congestion but will not eliminate it because the road would use Bond and Main Street through Center City Bel Air. Motorists travelling from U.S. 1 Business to Interstate 95 will still have to mix with slower moving local traffic in center city Bel Air thus necessitating a continued stop and go situation. This proposal does not meet with the Harford County plans.

Although the road will relieve some of the congestion it will not provide a roadway which will significantly improve the accessibility of Bel Air to the major highways surrounding the Baltimore-Washington Area. Thus, industries needing improved accessibility may not locate in Bel Air as is desired in the Comprehensive Plan for Harford County. Projections show that this proposal will not be able to sufficiently meet the needs of the community in the future.

This alternate will allow the traffic pattern to remain basically the same as it now exists. Thus, the period of traffic pattern adjustment which would probably be a necessary evil for the relocation alternates will not be present under alternate four. However, the existing traffic pattern will be greatly disrupted during the construction of this alternate.

Do-Nothing

The traffic congestion problem in Center City Bel Air would remain and continue to get worse through the years. The hazards which are associated with downtown Bel Air will continue to worsen. These hazards include the following:

- a. More starting and stopping along with more turning of traffic.
- b. Greater pedestrian traffic problem.
- ✓ c. More truck traffic would have to use the inefficient existing route should certain industries decide to locate in areas zoned industrial. This would add greatly to the safety problem in Center City Bel Air.
- d. Continued free access which would encourage strip development.

This alternate would eliminate all traffic and transportation problems associated with the construction of a new facility. However, this is a minor short term benefit when one looks at the other problems that this alternate will create. This alternate will allow Md. 24 to reach its carrying capacity. Thus, motorists wishing to use Md. 24 will find other alternates to use. This may in turn create traffic problems on the alternate facilities. For these reasons it would appear that the do-nothing alternate offers no long term solution to traffic-transportation problems within the area.

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Bikeways

The possibilities of Bikeways have been reviewed for this project. A bike trail has not been proposed for the relocation since it would require additional land outside the right of way to construct a Class I bike trail. Any bike trail along the proposed facility would have to be a Class I trail since controlled access roads restrict the paths. A Class I facility is completely removed from the roadway for the exclusive use of bicycles and pedestrians. However, the existing Md. 24 could be used as a Class II or III bike trail. A Class II trail is a marked portion of the roadway or shoulder that provides an exclusive lane for bicycles but is subject to occasional vehicular use. A Class III trail is a shared facility with vehicles and bicycles using the traffic lane. Signs indicate a bike route. The feasibility of bikeways will be studied during later design stages.

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3.2 Socio-Economics

The dual decisions of whether to construct a four lane divided, controlled access highway between I-95 and the U.S. 1 Bypass at Bel Air, and where to locate the facility, should it be built, are crucial to the future regional development of the Bel Air and Edgewood areas.

All of the relocation alternates involve the proposed Heavenly Waters Park. The improved access afforded the park area by the relocation alternates will likely lead to heavier park usage. This will especially result as population pressure in Harford County and Bel Air increases in future decades. (See Section 1.10 and Section 4(f) Statement for an evaluation of impacts on Heavenly Waters Park).

Constant Friendship Industrial Park is a proposed development to be located west of existing Md. 24 near I-95 and is zoned M-1 (Light Industrial). Relocation alternates should prove highly beneficial to this industrial park due to increased access provided. The relocation would provide the only access on a north-south basis between two important trucking routes, I-95 and U.S. 1. This dual access position will allow industrial traffic to flow without disturbing central areas of the Bel Air community. In view of the rapidly increasing population in the area, industrial development is essential if the economy is to be anything other than just dependent upon Baltimore commerce and the U.S. Army Aberdeen Proving Ground and U.S. Army Edgewood Arsenal.¹ The relocation alternates adequately provide for suitable industrial growth.

According to SHA estimates of traffic volumes and projections, the relocation will remove about 50 - 75% of the average daily traffic from existing Maryland 24, thus alleviating much of the present traffic congestion. Portions of Existing Maryland Route 24 reached capacity (level of Service E) in 1976. A relocation would shift much of the traffic burden off of existing Maryland 24, so that it would not reach capacity until around the year 2000. When these routes are operating at capacity a restriction to future growth in the area will likely occur. This will logically imply an outward push for both residential and commercial activities. This, of course, does not deny the usefulness of a relocated highway. Quite to the contrary, delaying vehicle capacity restrictions for a quarter century are important spurs to regional development in Harford County. There is no evidence that a facility providing a capacity greater than that proposed for Md. 24 Relocated would more suitably service future conditions in the county. In fact, an alternate with greater capacity, carrying heavier traffic densities and pushing vehicle restrictions beyond the year 2000, will only lead to more dense development. That likelihood, given the abundance of relatively less dense areas to the north, east and west is probably one best avoided since the community, in part, should provide an alternative to the dense population life style of Baltimore.

¹ Community Economic Inventory, Page 21 - E.

According to statewide studies of highways similar to the one proposed for Maryland 24 relocated, the accident rate will be reduced by about 43%, along with accident costs being reduced proportionately. The monetary savings to motorists, along with the corresponding anticipated decrease in the loss of life and human misery brought about by the reduction in accidents, makes a relocation of 24 more socially acceptable as far as safety is concerned.

Much of Harford County is rural in nature, as can be seen from the fact that only 51.7% of the population is classified as urban, and about 46% of the total land area is in farmland. Growth in the county is underscored by the fact that between 1966 and 1973 vacant and agricultural land went from 80% of total land to 71%, while residential land increased in use from 4.6% of total land to about 8.0%, a 75% increase in seven years. Commercial land use has increased in this period from 671.9 acres to 1999.8 acres, while industrial land use has increased from 801.5 acres to 867 acres. An improved highway system will further stimulate the growth of the Bel Air area in terms of residential, commercial and industrial development, since it will provide high speed access to the major employment areas of the county.

The town of Bel Air's population increased about 46.7% in the sixties, and is expected to increase about 40% in the seventies. The Edgewood area increased from 1,670 people in 1960 to about 8,000 people in 1970 - an increase of over 400%. Much of this increase can be related to the expansion and creation of industrial parks in the Edgewood area along with the existence of the U.S. Army Edgewood Arsenal. (See Figure 3.2) Although present trends at military installations have been toward a reduction in staffing, the Department of State Planning is projecting a stable military employment in Harford County between 1980 and 1990 with a slight increase in government employment during the same period.

In the 1970 - 1990 period, Harford County's population is projected to increase by about 66%, along with employment increasing about 91%. The Bel Air area will increase in population in this time period by about 89%. Employment growth, is anticipated due partly to the 1971 merger of Edgewood Arsenal with the Aberdeen Proving Ground, along with the continued expansion in the research and development fields by these installations. The above statistics support the belief that use of Maryland 24 will greatly increase in the near future due to the movement of labor.

The largest employer in Harford County is the military installation at the Aberdeen Proving Ground. It alone provides about 37% of direct in-county employment. Together with the Edgewood Arsenal, it plays a significant role in terms of employment and growth for the area. In 1970, Harford County had about 46,343 workers. About 65.3% of these people worked in the county, while about 34.7% commuted outside the county to work. 14% of the county's workers commuted to Baltimore County to work, along with about 9% going to Baltimore City for employment. Almost 40% of the workers in the Bel Air area commute to these two major areas to work. The development of Md. 24 relocated is essential to reduce the burden of existing highways and also meet the needs

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of these workers. Since 85% of Harford County's workers go to work by car, the need for a fast, efficient means of road transportation is evident. Md. 24 relocated would provide a great improvement over the existing, heavily congested, two lane facility, and would effectively separate the local and long distance traffic.

Bel Air is the seat of government for Harford County, as well as a major commercial center. There is heavy residential concentration in both the Edgewood and Bel Air areas, along with the area between Bel Air and Aberdeen. Industrial development is centered around a corridor which extends from Joppatowne north through Edgewood, Aberdeen and Havre De Grace. Most of the industrial parks in this corridor are located in the Edgewood area.

If this pattern of residential and nonresidential development is to function properly, an efficient transportation system must be available. Existing and planned industrial development along U.S. 40 and near Maryland 24 and I-95 should make the Edgewood area one of the major employment centers in the county and in the Baltimore region. Industrial workers must be able to reach their jobs. Shoppers wishing to go to the regional shopping center area (Harford Mall and Bel Air Plaza) and other commercial establishments in Bel Air must also be accommodated.

There are several proposed shopping centers in the project area that will benefit from the improved access and mobility provided by a relocated Maryland 24. Bel Air South Shopping Center (west of Wheel Road near Emmorton), Box Hill Shopping Center (near I-95 and Maryland 24), and Constant Friendship Shopping Center (west of Maryland 24) would all benefit from increased access via relocated Maryland 24. Existing shopping centers (Harford Mall and Bel Air Plaza) will benefit greatly from the new highway, if built, since there is a signalized intersection proposed with U.S. 1 Business.

Summary

Maryland 24 relocated will definitely have an economic impact on the corridor. Most highway relocations through already developed areas have led to severe distortions in the neighborhood patterns that formerly existed. However, none of the proposed alternates would involve splitting a neighborhood, or cutting off access routes. The improved higher speed facility will enable motorists to reduce travel times between Bel Air and the Edgewood area, thus increasing the mobility between the residential and employment centers. Commercial establishments in the Bel Air area will benefit from the improved access of Maryland 24 relocated, although some business may be lost due to the development of new businesses elsewhere in the corridor.

Relocation of Maryland 24 will improve access to large employment centers at the Aberdeen Proving Grounds and the Edgewood Arsenal, and future industrial centers in the southern industrial corridor of Harford County. Relocation of Maryland 24 will also improve alternate routes for cross-county traffic in addition to I-95 and U.S. 40, and also improve roads to existing and future recreation areas, especially in the northern sections of the county.

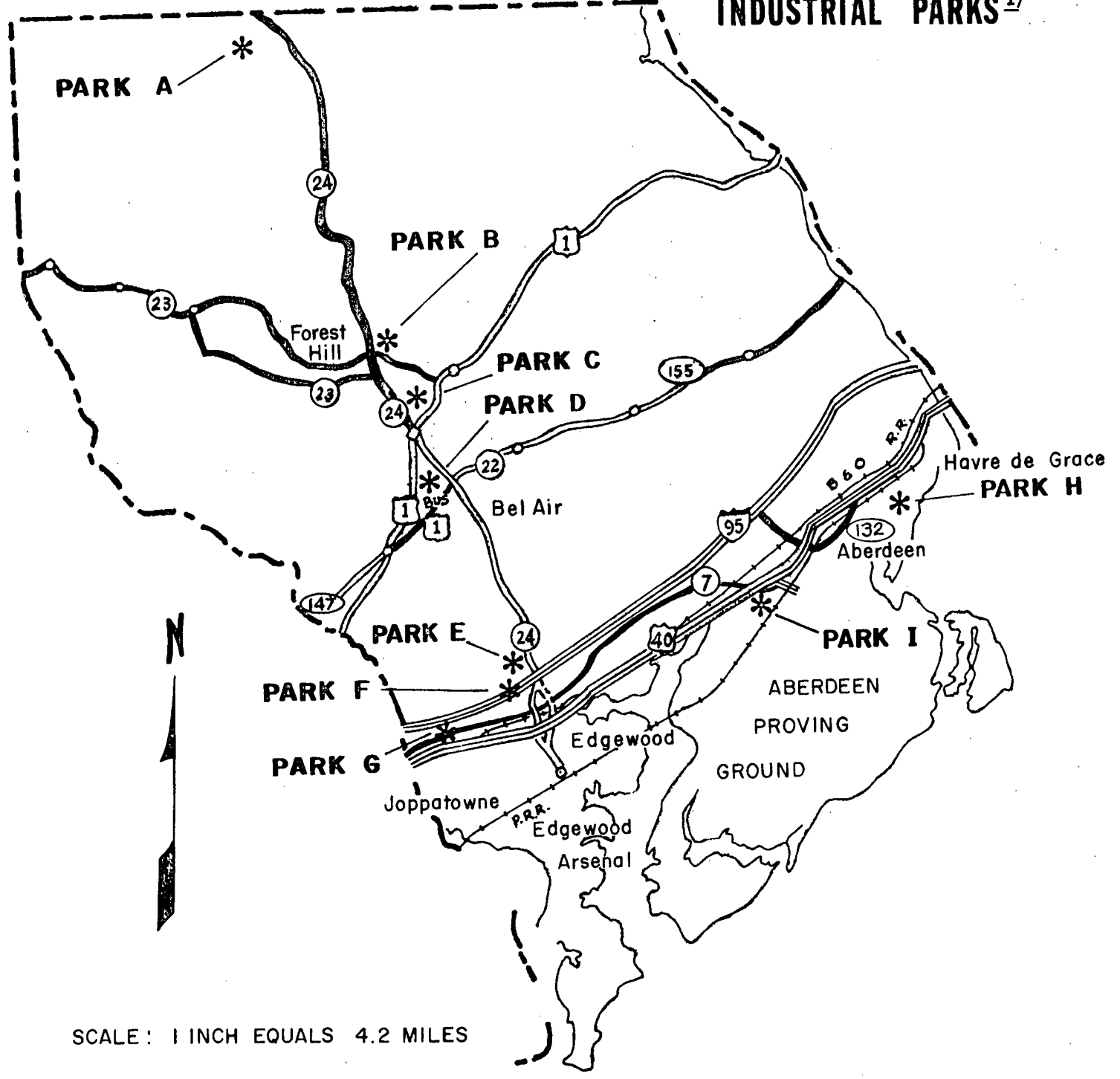
There will be no relocation of any minorities by the alternate 3, the recommended alternate.

The project may require as many as 40 persons to be relocated. The specific relocations and socio-economic impacts of each alternate are discussed in Section 4.0 (Recommended Alternative). A Summary of Relocation Assistance Program and discussions of effected improvements can be found in Appendix "A".

Wle

- *PARK A - BECTON DICKINSON RESEARCH AND DEVELOPMENT CENTER
- PARK B - FOREST HILL INDUSTRIAL PARK
- *PARK C - BYNUM RIDGE INDUSTRIAL PARK
- *PARK D - FAIRGROUNDS INDUSTRIAL PARK
- *PARK E - CONSTANT FRIENDSHIP INDUSTRIAL PARK
- *PARK F - WINTERS RUN INDUSTRIAL PARK
- PARK G - EDGEWOOD INDUSTRIAL PARK
- PARK H - CHESAPEAKE INDUSTRIAL PARK
- PARK I - PERRYMAN INDUSTRIAL PARK

HARFORD COUNTY INDUSTRIAL PARKS^{1/}



SCALE: 1 INCH EQUALS 4.2 MILES

*INDUSTRIAL PARK UNDER DEVELOPMENT

^{1/} Community Economic Inventory, Harford County Maryland, 1974

FIGURE 3.2

3.3 Planning and Aesthetics

Background

Bel Air, the county seat for Harford County, is located in the southwestern quarter of the county, with Md. 24 serving as the main north-south highway connector between two main east-west connectors, U.S. 1 and I-95. Harford County's eastern boundary is formed by the Susquehanna River with Havre De Grace located at its confluence with the Chesapeake Bay. The Chesapeake Bay, with most of its shoreline occupied by the U.S. Army's Aberdeen Proving Ground and the Edgewood Arsenal, forms Harford County's southern boundary. At the northern terminus of the Proving Ground is located Harford County's largest Urban Center, Aberdeen Maryland, about five miles southwest of Havre De Grace. Baltimore County is located west of Harford County with the Gun Powder River and State Park forming its southwestern boundary. Harford's northern boundary is formed by the State line between Pennsylvania and Maryland. Finally, because Bel Air is located some twenty-three miles northeast of the City of Baltimore, it must be considered as being located within the Baltimore Regional Planning area.

Planning Considerations

The topography of Harford County is that of the rolling hill and flat areas normally associated with Piedmont and Coastal Plain physiographic provinces.

"The boundary between the two provinces is roughly marked by the Fall Line in the vicinity of the B&O Railroad tracks. Some areas of the County are characterized by hills capped with thin deposits of gravel, sand and clay of Tertiary and Quaternary age. Occasionally, such deposits are formed as valley-side terrace deposits or as alluvial fill in valley bottoms".

Environment p. 150
Harford County Comprehensive Master Plan

This is significant because it gives some insight to the basic land form that exists within the study area. Harford County's basic drainage pattern is part of the Western Chesapeake Drainage area region, with the Susquehanna, Bush and Gun Powder Rivers being classified as major drainage ways. Further, these are divided into smaller streams in the drainage hierarchy such as Winters Run, Broad Creek, Bynum Run and Deer Creek. The northern portion of the study area is situated on a ridge that drains from the east into Bynum Run and westerly into Winters Run. The former is no problem because construction in the study area should not have an adverse impact on Bynum Run.

However, the relocation proposal would traverse Heavenly Waters Run and Plumtree Run. Heavenly Waters Run flows into Winters Run, which in turn

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feeds the Atkisson Reservoir. Plumtree Run flows directly into Atkisson Reservoir. The Environmental segment of the Harford County Master Plan states that:

"Streams are important to the county, not only as potential drinking water sources, but also as recreational areas, for transport of treated wastes for industrial uses and as support systems for man and all other life forms which are an essential part of the ecosystem".

Environment p. 151
Harford County Comprehensive Master Plan

The effect of the relocation on the streams of the County should be minimal. This assumption is based on the following: First, in the general hierarchy of drainage streams within Harford County, Plumtree Run and Heavenly Waters Run would appear to be two of the smaller drainage streams. Secondly, the General Development Plan (draft C-1) for Harford County prepared by the Department of Planning and Zoning, dated April 1974, indicates that open space natural feature protection category has been assigned to the Winters Run area west of the study area and Bynum Run east of the study area. While it would appear this is a draft consideration by the Department of Planning and Zoning, it would appear that at this time there is no conflict within the Plumtree Run area for any relocation proposal.

Although the Heavenly Water Run Area appears as natural feature protection category, the most important natural feature is the wooded areas along the slopes of the stream not necessarily the stream itself. Thus, there would appear to be little likelihood of a conflict.

Culverts will be used to allow the stream to flow under the road and no major channel relocation of either stream has been proposed.

Because of its proximity to the city of Baltimore, and subject to expansion pressures, Harford County has undergone a rapid population growth during the past thirteen years, as indicated in the following:

<u>Year</u>	<u>Baltimore Region</u>	<u>Harford County</u>
1960	1,803,745	76,722
1970	2,071,016	115,378
1973	2,117,800*	132,364*

* Est. Md. Dept. of Health & Mental Hygiene

Draft Land Use, Element p. 8
Harford County Comprehensive Planning Report

Thus it is apparent that while the Baltimore Regional area underwent a growth rate of 17.5% for this time span, Harford County increased by some

55,000 persons, an increase of 73% for the same period. Harford's growth is expected to continue because population projection estimates show a 1980 population at 155,000 persons with an additional 80,000 estimated by the year 2000. Thus economic trends notwithstanding it would appear that Harford County, and the Bel Air area, can expect a continued growth rate for the next twenty six years. This is further evidenced by the volume of new residential construction taking place along existing Md. 24 as well as within the Bel Air urban area.

There are 10,304 acres of vacant residentially zoned land, 1,217 acres of vacant land zoned for commercial use and over 5,000 acres of vacant land zoned industrial. If all the existing vacant land zoned residentially is developed at maximum densities, election districts 1, 2 and 3 would increase by approximately 118,718, 24,925 and 33,610 people respectively. Maryland Route 24 lies in districts 1 and 3.¹

"A tremendous change from rural land to developments in apartments, single family housing, and owner-occupied townhouses is occurring in the corridor south of Bel Air to Edgewood on Route 24. Box Hills, a new subdivision in the early construction stages, encompasses about 519 acres and about 1,900 housing units are planned. Constant Friendship, in the same corridor and in the early planning stages, will have over 2,000 housing units, and industrial park, and a regional shopping center".

Community Economic Inventory,
Harford County Maryland, Page 44

The main industrial development of Harford County lies adjacent to U.S. 40 and I-95 between Joppatowne and Aberdeen. The strip between I-95 and U.S. 1 with an improved Route 24 could be the next area to be developed heavily. The county is presently serviced by 44 truck lines and 3 railroad lines. The employment breakdown is presently 53% Industrial, 43.6% Government and 3.4% Agriculture. Two Industrial Parks are now under proposal for the corridor along Route 24. They are Constant Friendship Industrial Park with 106 acres zoned M-1 (Light Industrial) with access via Route 24 and Winters Run Industrial Park with 235 acres zoned M-1 (Light Industrial) and M-2 (Heavy Industrial) with access via Route 7 and 24.²

Evidence of Harford County's growth can be seen in its building permits which declined from 2,042 in 1967 to 1,337 in 1969 but then quickly rose to 3,347 in 1972.³

The growth of development in the area has been documented in the Draft Land Use Element prepared by the Harford County Department of Planning and Zoning.

¹ Harford County Comprehensive Plan, Page 33.

² Economic Inventory, Harford County Maryland.

³ Harford County Unlimited 70's.

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"The third development potential category is those lands now subject to intense development pressures because of improved major roads occurs, zoning and subdivision platting. These areas are located mainly along the west side of Route 24, but are also found just north of Joppatowne and the Willoughly Beach Area".

Draft Land Use, Element p. 37
Harford County Comprehensive Planning Report

The importance of Md. 24 in the Harford County as a major thoroughfare is further substantiated in the transportation report ADT's reported for 1973. Here the count for Md. 24 at 15,400 ADT immediately south of Bel Air and decreasing to 8,700 ADT's at the Md. 24 and I-95 Interchange. This volume of traffic is further substantiated in the 1971 Accidents Reports for Harford County in that Md. 24 had some 200 accidents reported for that year which represents 7.1% of the total occurring within the county.

Population economic trends - transportation, land use, evaluation are an intergal part of any Future Land Use Projection. The role that Md. 24 will play in the future was also evaluated by the Harford County Department of Planning and Zoning, as indicated by the following.

"The second step in the preparation of the proposed Land Use Map was an examination of the County Transportation System. This included not only the existing roads, but proposed new roads and proposed improvements to the existing roads as well. These include new Route 24, a realignment of 152, a new East-West Highway, the new Perring Parkway, and changes on minor routes".

Draft Land Use Element, Page 38

The Department of Planning and Zoning also made a land use projection assuming that minimal improvements were made to the County Road Systems.

".....development pattern in county made minimal improvements in addition to the State Highway Program or improving primarily the existing State Highways and new or relocated Md. Routes 1, 24, 152 and 22.

Draft Land Use Element, Page 41

Thus while the Planning Staff is still in the process of finalizing the General Development Plan and related policies it is evident that Md. Route 24 is an intergal part of this plan, at least on the basis of their preliminary review.

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"The "non-critical" part of the needs study will be critical for Harford County's future needs, particularly the section of relocated Md. 24 from Emmorton to I-95/Md. 24 Interchange. The county has an opportunity to assist the implementation of the plan by overseeing the design of new Md. 24 in this important corridor between Bel Air and Edgewood".

Transportation Plan, Page 145
Harford County Comprehensive Master Plan

This tends to reinforce the important role that local officials place in Md. 24 within the future land use pattern for Harford County.

Aesthetics

Aesthetics should be related to the type of highway facility being reviewed. Since Relocated Md. 24 can be classified as a partially controlled access facility it does not have the wider corridor normally associated with a limited access highway. However, the overall width of the proposed corridor does appear to be somewhat tight, averaging as a general rule a width of about two hundred feet. This reduces the potential impact on adjacent developed lands, because it is narrow. Little, if anything, can be done to mold the highway into the existing land form. A review of the preliminary vertical profile indicates that excessive cuts and fills have been avoided, and the horizontal geometrics are well within accepted standards for this type of highway.

In recent years more emphasis has been placed on the consideration of aesthetics in highway design. The recommended alternate provides the motorist a pleasing view of the Bel Air area, passing through the large stands of mature trees near Heavenly Waters and south of U.S. Route 1 Business, then traversing the rolling farmlands of the southern portion of the corridor.

Although, the aesthetic benefits may be increased for the highway user, those who live along the corridor may see the roadway as a disbenefit. The intrusion of a new highway and subsequent development in the rural buffer surrounding Bel Air may adversely affect the rural setting.

The enforcement of properly planned zoning to assure that overdevelopment does not occur, would help to minimize the negative impacts on aesthetics.

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3.4 Terrestrial Ecology

PROCEDURE

Ecological surveys were conducted along the proposed corridors of Maryland Route 24 on August 20 and October 21, 1974. Dominant forms of vegetation were identified, habitat types recorded, and some of the more common species of wildlife observed. Wildlife less obvious and not actually observed in the field can be inferred from climatic and vegetational data as well as data obtained from the Maryland Department of Natural Resources.

The project area is composed of several types of ecosystems. These are: mature forests; early succession forests; old-field; small freshwater streams; pasture; and agricultural cropland; (primarily soybeans and corn). There are no rare or endangered species of plants within the Md. 24 Corridor.

Of particular importance are several mature forest stands (See Fig. 3.4). These are not only of ecological interest but also add considerable beauty to the area and lend a rural atmosphere to a developing community.

Because of substantial ecological variation along the proposed route, the comments concerning terrestrial ecology will be organized to discuss the following segments: U.S. Route 1 Bypass to U.S. Route 1 Business; Business U.S. Route 1 to Ring Factory Road; Ring Factory Road to Plumtree Road; Plumtree Road to Singer Road; Singer Road to Interstate 95.

U.S. Route 1 Bypass to Business Route 1 (Site Number 1)

The relocation of Md. 24 would cross a small stream known as Heavenly Waters near an area where a sanitary landfill was located. Vegetation along this stream and surrounding slopes is composed mostly of young poplar, dogwood, and honeysuckle. A mature stand of timber located in this area known as Heavenly Waters has dominant canopy species which include beech, white oak, large poplar and a shrub layer of dogwood. The ground cover is sparse in this area. Because of the mature stands of timber located in this area, preservation of this ecological condition would be desirable.

U.S. Route 1, Business to Ring Factory Road (Site Numbers 2 and 3)

In this segment the proposed relocation would pass through tracts of old field, mature forest and pasture land systems. There are two significant mature forest stands in the corridor, both of similar floristic composition (See Figure 3.4). Dominant canopy trees in these stands are white oak, red oak, hickory, american beech and black gum. Both forest areas are equally

impressive and their loss would have to be considered a severe environmental impact of the proposed highway construction due to the aesthetic quality these trees have in relation to the rural surrounding. Along the moist banks of a small stream known as Plumtree Run can be found the interesting and uncommon liverwort which is a small, nonflowering green plant.

Ring Factory Road to Plumtree Road (Site Number 4)

The proposed corridor would pass through a mosaic of field-pasture land and one relatively small stand of mature forest (See Figure 3.4). Again the most sensitive area is a mature forest tract which is composed primarily of a homogeneous stand of large white oak and american beech.

Other environmentally significant features include lowlands along Plumtree Run which may be suitable habitat for the Bog Turtle. The location of the Recommended Alternate appears to provide a sufficient buffer between the roadway and areas of potential habitat. In Maryland, the Bog Turtle is protected as an endangered species under the Maryland Department of Natural Resources' state listing.

Plumtree Road to Singer Road

The Recommended Alternate (3) is the only one of the alternates which lies on relocation through this area. This area is mainly agricultural lands and early succession forests with occasional large trees interspersed along the hedge rows. Because of the immaturity of the vegetation and low species diversity, this early successional forest is not of major ecological interest.

Singer Road to Interstate 95

Two of the alternates pass through this area on relocation over rolling terrain with an interspersion of agricultural lands on the flatter areas and early successional forests and pasture lands on the steeper slopes. There should be no major environmental impact on this area.

Summary

The most severe environmental impacts of a relocation are the northern half of the corridor, and appear to be the segmentation or elimination of several mature forest stands between U. S. Route 1 and Plumtree Road. Also, the conflict that exists between the location of a major highway interchange and a proposed park development (Heavenly Waters) cannot be easily resolved. The number of acres of mature forests which will be destroyed by the Recommended Alternate are shown in Table 4 on Page 4.0.7. Minor alignment adjustments will be evaluated during detailed final design activities in an effort to further reduce the acreage required by Alternate 3.

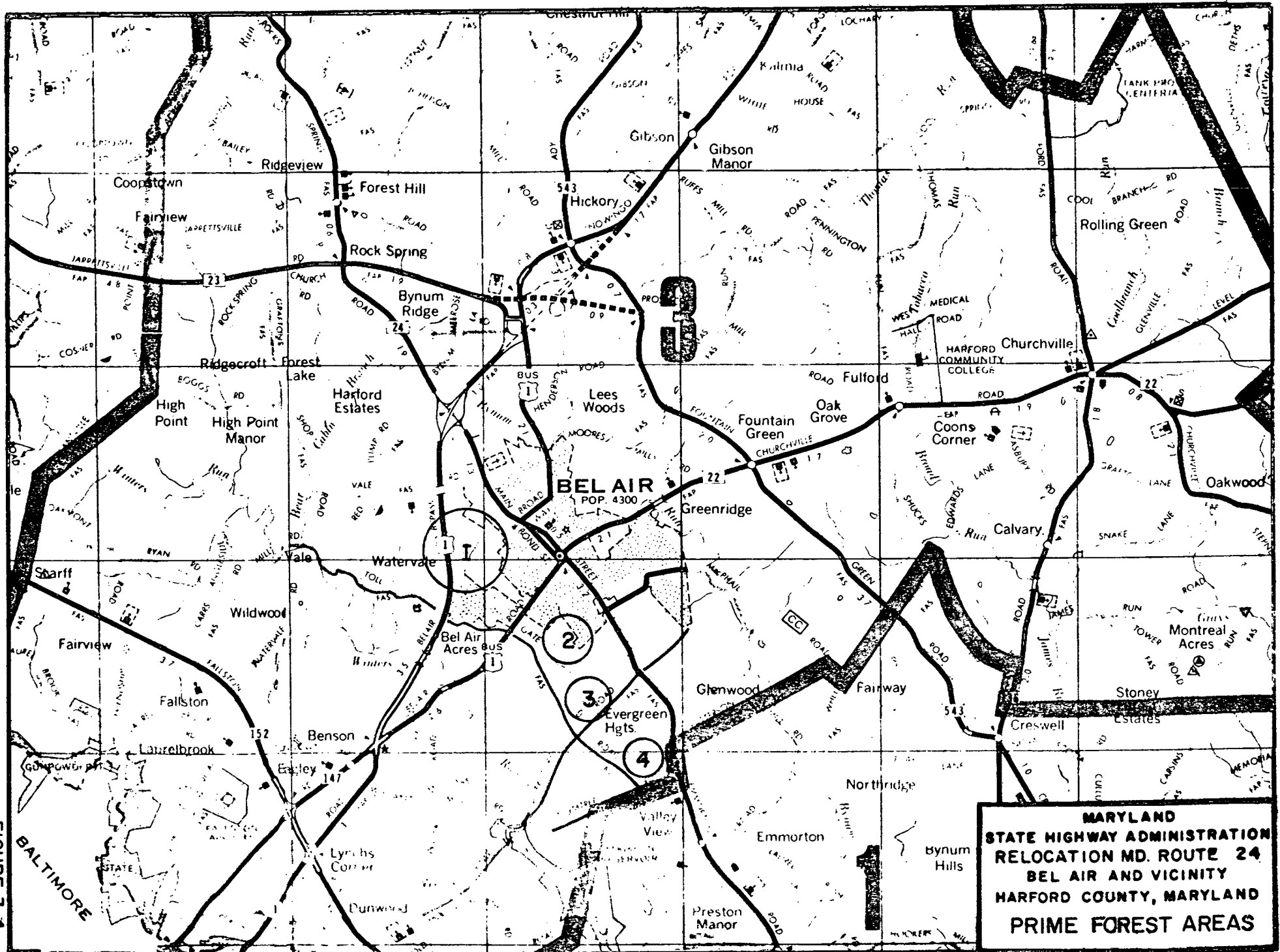


FIGURE 3.4

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3.5 Wildlife

Because of the high density of dwellings in the project area, wildlife species in forest tracts and old-field habitats are probably restricted to those types more tolerant to these conditions. It should be pointed out that this county has endemic populations of the reptile, *Clemmys muhlenbergii* or bog turtle. In Maryland the Bog Turtle is protected as an endangered species. The coverage provided includes a ban on the taking, transportation, possession or sale of this species within the state under a maximum fine of \$1,000. Although few bog habitats are present in the proposed corridors none of this species have been observed. Impacts associated with this state endangered species are discussed on page 3.5.2.

Mammals which are likely to be found in the study area include the following: Opossum, Star-nosed Mole, Short-tailed Shrew, Striped Skunk, Eastern Chipmunk, Red Squirrel, Gray Squirrel, White-footed Mouse, Deer Mouse, House Mouse, Rabbit, Red Fox and Raccoon.

Birds which are permanent residents of this area and may be found within the study area include the following: Screech Owl, Yellow Shafted Flicker, Hairy Woodpecker, Downy Woodpecker, Blue Jay, Common Crow, Black-capped Chickadee, Tufted Titmouse, White-breasted Nuthatch, Brown Creeper, Mockingbird, Robin, Eastern Bluebird, Cedar Waxwing, Starling, Red Winged Blackbird, Common Crackle, Cowbird, Cardinal, House Finch, American Goldfinch, Slate-colored Junco, Song Sparrow.

Bird species which would be found in this area during the summer include the Yellow billed Cuckoo, Black-billed Cuckoo, Ruby-throated Hummingbird, Crested Flycatcher, Eastern Phoebe, Least Flycatcher, Eastern Wood Pewee, House Wren, Catbird, Brown Thrasher, Wood Thrush, Red eyed Vireo, Black and White Warbler, Blackburnian Warbler, Chestnut sided Warbler, Cerulean Warbler, Chestnut side Warbler, Prairie Warbler, oven-bird, Yellow Throat, Yellow Breasted Chat, House Sparrow, Bob White, Baltimore Oriole, Purple Grackle, Indigo Bunting and Chipping Sparrow.

Species of birds found in this area during the winter include the Evening Grosbeak, Purple Finch, Pine Grosbeak, Redpoll, Red Crossbill, Tree Sparrow, White-crowned Sparrow and White-throated Sparrow.

Migrant birds to this area are the Rock Dove, Mourning Dove, Yellow-bellied Flycatcher, Olive-sided Flycatcher, Veery, Rusty Blackbird, Brewers Blackbird, and many different types of Warblers.

Permanent refers to species that can be expected to be found during all months of the year. Summer residents are those species that would be expected to be found from spring through early fall. The occurrence in winter would be unusual. Most of these species would be nesting in the area,

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but not all of them. Winter residents includes species that would be expected to be found during the winter season but not during the summer. How early in the fall or how late in the spring the species would be present varies considerably from species to species. Migrants are species that normally are present in the area only during the spring and fall migration. These species would be unusual in the area during the summer or winter months.

Waterfowl are likely to be found close to the study area, but because of the lack of any major bodies of standing water and the small size of the streams in the area, they are not included in the list.

The proposed relocation should not have any major significant impact on the wildlife and their distribution throughout the area. Limiting factors such as existing roads and residential developments will continue to restrict the numbers of wildlife in the Bel Air - Edgewood corridor. The addition of the Relocated 24 would have a relatively minor limiting effect in comparison to the existing limiting factors. Table 3 on Page 4.0.7 shows the number of acres of potential wildlife habitat which may be lost due to highway construction.

Endangered Species

Potential habitat for the Bog Turtle, a State listed endangered species, exists in the vicinity of the project corridor. Three areas have been identified and avoided by the alignment of Alternate 3. At the two areas nearest the alignment, no turtles have been observed by either the Maryland Department of Natural Resources or other field investigators. Both of these areas are approximately 500 feet southwest of the highway corridor, and no negative impacts are expected. At the third area, two species of turtles (the Wood Turtle and the Box Turtle) have been observed during field investigations. Local citizens have indicated observing Bog Turtles at other occasions. This area is approximately 1,000 feet southwest of the proposed corridor. These three areas will all be avoided during design and construction activities.

3.6 Aquatic Biology

The proposed corridor would pass over Heavenly Waters Run just south of the U.S. 1 Bypass. The stream is usually not more than about four feet wide with clear water and a sandy gravelly bottom and rapid current. It contains several species of minnows and darters and its fairly rocky bottom is an adequate environment for the larvae of many common insects. This stream does eventually flow into Winters Run north of Atkisson Reservoir and contains minimal amounts of aquatic life which would not be significantly affected by road construction through this area.

South of U.S. 1 Business the proposed relocation would cross Plumtree Run three times. This stream is very similar to Heavenly Waters Run and the same insignificant impacts are likely to occur. Plumtree Run eventually flows into Atkisson Reservoir which is a shallow, heavily silted lake. Small amounts of siltation which may occur in this stream should not affect the small amounts of aquatic life present.

The possibility of an endangered species, the Maryland darter, was investigated. This darter is known to exist in the Deer Creek Watershed north of Bel Air. However, none of these species have ever been recorded in the Winters Run Watershed.¹

Both Plumtree Run and Heavenly Waters Run are classified by the Maryland Department of Natural Resources as recreational trout waters. This classification signifies that these waters are capable of supporting trout for a sport fishery during a short period of time. Neither of these streams have trout in them at this time nor are there any immediate plans to have them stocked in the near future. If these streams were to be stocked it would be on a put and take basis. These streams are not of sufficient quality to support trout reproduction.²

1,2 Maryland Department of Natural Resources Water Resources Administration.

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3.7 Air Quality

Study Approach

During the course of the air quality studies, consultations between the Federal Highway Administration, the Maryland Department of Transportation, the Maryland Bureau of Air Quality Control and the State Highway Administration, Bureau of Landscape Architecture were maintained. One of the determinations was that a mesoscale analysis will not be required for this project.

This air quality impact study was conducted at the microscale level. The microscale level of analysis concentrates on the air quality impact of the proposed highway project within the highway corridor. "The boundaries of the microscale impact of the (proposed) highway are...represented by the point at which the pollutant levels from the highway reach background levels. This scale is primarily related to sensitive receptors (e.g. Hospitals, Schools, etc.)".³

The scope of this microscale air quality analysis includes the determination of carbon monoxide emissions during the one hour peak and the highest consecutive eight hour period. The future air quality findings are compared with the national ambient air quality standards which are applicable in Maryland to determine if each alternative will result in compliance with the ambient air quality standards.

Traffic data that provides the one hour peak and the highest consecutive eight hour peak average is required for model predictions of the highest possible pollutant concentrations directly related to traffic. Traffic estimates were supplied by the Bureau of Urban and Regional Liaison, State Highway Administration, Maryland Department of Transportation, for the proposed highway and the existing highway during 1974, 1980 and 1998. Traffic volumes for 1975, 1978, 1988 and 1998 are indicated on Figure 3.7.c.

Discussion with representatives of the Department of Health and Mental Hygiene and the Federal Highway Administration, revealed that there is a lack of historical air quality and meteorological data for the project area. Because meteorological and air quality studies were not performed for this analysis, several assumptions had to be made. These assumptions were as follows:

Worst Meteorological Conditions:

1. One Hour Peak Average (5:00 P.M.)
 - A. Wind Speed - 1 meter/second
 - B. Stability Class - F

³ Highway Air Pollution, National Highway Institute, United States Department of Transportation, 1973.

- 2. Highest Consecutive Eight Hour Average (12:00 P.M. - 8:00 P.M.)
 - A. First Four Hours
 - 1. Wind Speed - 2 meters/second
 - 2. Stability Class - D
 - B. Second Four Hours
 - 1. Wind Speed - 1 meter/second
 - 2. Stability Class - F

Ambient Air Quality (Background)

- 1. One Hour Peak Average - 5 parts per million
- 2. Highest Consecutive Eight Hour Average - 2 parts per million

Calculations of existing and future air quality were made with the wind 22.5° relative to the highway for 1975, 1978, 1988 and 1998 conditions.

Correspondence was received from the Maryland Bureau of Air Quality and Noise Control stating that the project area lies within the Baltimore Air Quality Control Region and as such must be consistent with the air quality implementation plan for that region. The air quality analysis was directed to explore the possibility of increased traffic induced by the new facility as well as estimates of current and future air quality levels. Consideration is also to be made regarding short-term impacts due to construction and land clearing.

The air quality impact of building and of not building the proposed highway was analyzed by modeling vehicle emissions of carbon monoxide. The analysis was conducted assuming a wind 22.5° to the highway at a speed of 1 meter per second (2 miles per hour). Background was assumed to be 5 ppm Stability F, during the maximum one hour average and 2 ppm Stability D, during the first four hours and 2 ppm Stability E, during the second four hours of the maximum eight hour average (i.e., Highest Consecutive Eight Hours) during 1978, 1988 and 1998 conditions.

Total levels of carbon monoxide (background + highway carbon monoxide) in the mixing cell are well below the one hour and eight hour standards of 35 ppm (parts per million) and 9 ppm, respectively, for all alternates in the critical year 1978. The highest one hour and eight hour concentrations for Alternate 3 are 9.3 ppm and 4.2 ppm, respectively. The total one hour and eight hour concentrations of carbon monoxide for Alternate 5 are expected to peak in 1975 at 11.8 ppm and 4.9 ppm, respectively. These concentrations are within the one hour and eight hour standards for carbon monoxide.

Total levels of carbon monoxide in the study area are also expected to decrease yearly through 1988 and then increase very slightly through 1998 (1998 levels will still be below 1978 levels). Due to the special nature of the traffic volume in Alternate 5, total levels of carbon monoxide will decrease yearly until 1988 and then remain constant through 1998. In conclusion, human health will not be endangered whether or not the proposed highway is built.

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TOTAL¹ CONCENTRATION OF CARBON MONOXIDE
DURING WORST METEOROLOGICAL CONDITIONS (ppm)

	<u>ALTERNATE 1</u>	<u>ALTERNATE 2</u>	<u>ALTERNATE 3</u>	<u>ALTERNATE 4</u>	<u>ALTERNATE 5 NO-BUILD</u>
<u>1-HOUR CONCENTRATION</u>					
1978	9.6	8.8	9.3	8.9	8.9
1988	7.6	7.2	7.4	6.3	6.3
1998	8.8	8.1	8.2	6.3	6.3
<u>8-HOUR CONCENTRATION</u>					
1978	4.3	3.9	4.2	3.9	3.9
1988	3.3	3.1	3.2	2.7	2.7
1998	3.7	3.5	3.6	2.7	2.7

Note: Since the preparation of this analysis, the Environmental Protection Agency Document AP-42 Supplement V has replaced all previous documents as the source for motor vehicle emission factors. In order to determine the effect of using Supplement V on the carbon monoxide concentrations predicted in the analysis, emission factors were calculated using Supplement V and compared to the earlier factors; it was found that no violations of the NAAQS for carbon monoxide will occur with any alternate in the years studied.

To complete the comparisons of the air quality impacts with and without a new highway facility, requires an assessment of pollutant loads for the existing highway facility and comparing the result to the pollutant load with a new highway. The change in pollutant burden is a function of the rate of change in traffic volumes, speeds, and emission factors. In pre-1975 vehicles, the emission factors for CO and HC are expected to reduce with higher average route speeds while factors for NO_x increase. Therefore, a highway facility with a better operating mode will result in less CO and HC at the expense of an increase in NO_x. Both HC and NO_x are involved in the photochemical reaction to form smog.

The traffic volumes utilized in the Pollutant Burden Analysis are for the estimated time of completion (1978) and twenty years thereafter (1998).

¹ Background plus mixing cell

The tabulations of Pollutant Loads in tons per day are summarized as follows:

	<u>1978</u>				
	<u>ALTERNATE 1</u>	<u>ALTERNATE 2</u>	<u>ALTERNATE 3</u>	<u>ALTERNATE 4</u>	<u>ALTERNATE 5</u>
CO	3.46	3.18	3.69	3.55	3.55
HC	0.40	0.36	0.42	0.39	0.39
NO _x	1.36	1.23	1.42	1.23	1.23

	<u>1998</u>				
	<u>ALTERNATE 1</u>	<u>ALTERNATE 2</u>	<u>ALTERNATE 3</u>	<u>ALTERNATE 4</u>	<u>ALTERNATE 5</u>
CO	2.23	2.13	2.16	2.39	2.39
HC	0.19	0.18	0.18	0.20	0.20
NO _x	0.76	0.72	0.73	0.81	0.81

Several observations can be made as a result of this analysis:

- (1) With the construction of Alternates 1, 2, 3 or 4, or the adoption of the No-Build alternative, the CO, HC and NO_x pollution burden will decrease during the 1978-1998 period.
- (2) The variations in pollutant burden in either analysis year are greatly influenced by the differences in total travel length.

- Alternate 1 - 6.87 miles
- Alternate 2 - 6.69 miles
- Alternate 3 - 6.28 miles
- Alternate 4 - 7.56 miles
- Alternate 5 - 7.56 miles

The higher pollutant loads for Alternate 4 and 5 during 1998 can be attributed to these facilities accommodating a similar traffic load as the other Alternates, but over a greater travel length.

- (3) The pollutant burden resulting from the relocation alternatives, improvements to the existing facility, or the adoption of the Do-Nothing alternative will not result in any significant changes in the total pollutant burden within the project area.

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As the subject project is located within the Metropolitan Baltimore Intrastate A.Q.C.R., it is necessary to evaluate three characteristics of the proposed facility when determining consistency with the State Implementation Plan: micro-scale carbon monoxide levels, construction impact, and the effect on regional emissions.

The project Air Quality Analysis assessed the micro-scale carbon monoxide impact of the facility. This analysis determined that no State or Federal Ambient Air Quality Standards for carbon monoxide will be exceeded adjacent to the project during the completion and design years. As a result of this conclusion, the project is consistent with this aspect of the State Implementation Plan.

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

The impact of the project on regional emissions must be evaluated due to the effect the project may have on the ambient air quality of the total region. The proposed improvements will not result in an increase in VMT but will improve the operational characteristics of the corridor. These qualities are associated with a reduction in regional emissions. The project, therefore, is consistent with this aspect of the SIP.

NATIONAL PRIMARY AMBIENT AIR QUALITY STANDARDS

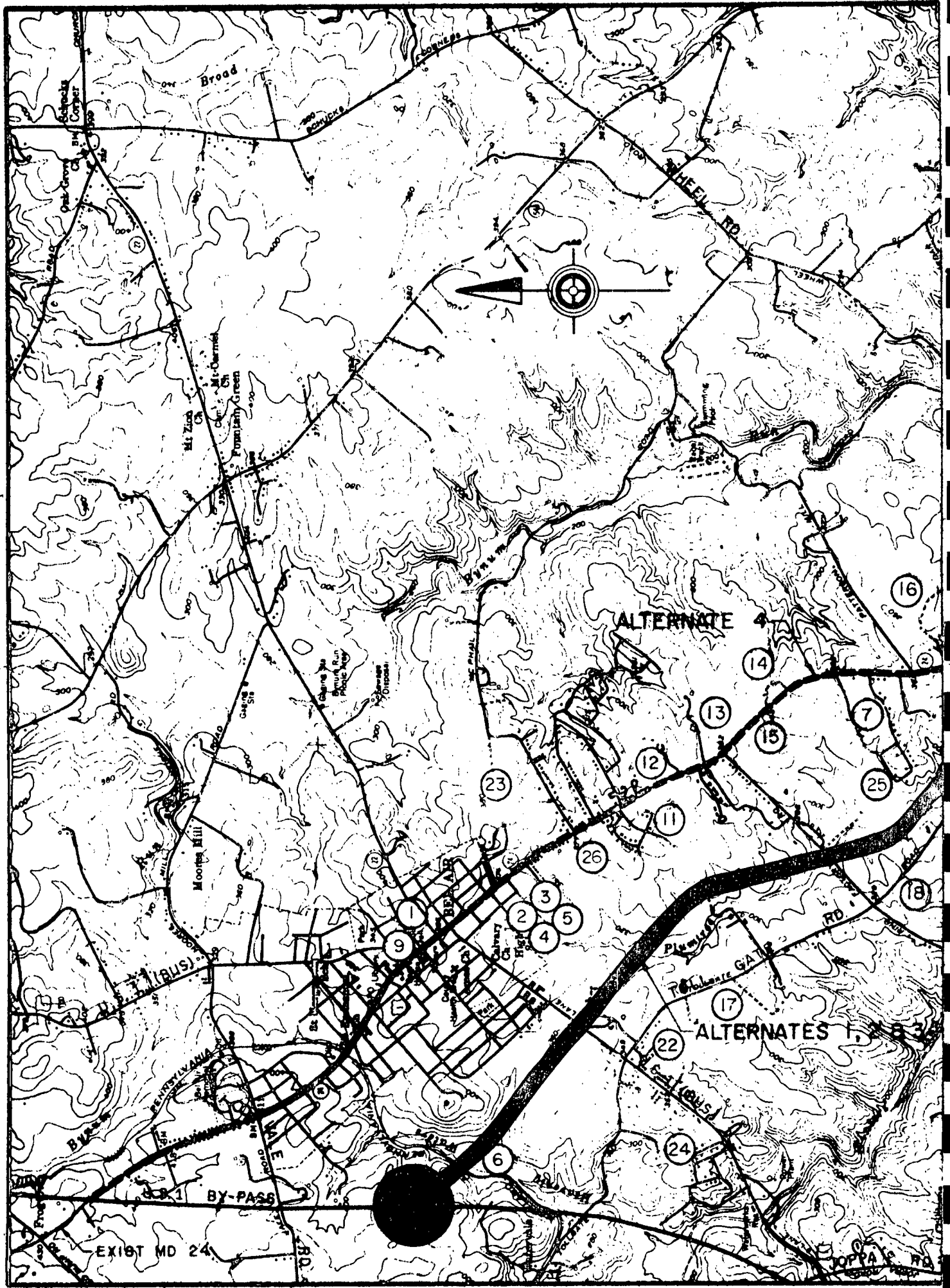
<u>Pollutant</u>	<u>Standard</u>
Carbon Monoxide (CO)	35 ppm ¹ (max. 1 hr. concentration) ² 9 ppm (max. 8 hr. concentration) ²
Photochemical Oxidant (O _x)	0.08 ppm (max. 1 hr. concentration) ²
Hydrocarbons (HC) ³	0.24 ppm (max. 3 hr. concentration 6 to 9 a.m.) ²
Nitrogen Dioxide (NO ₂)	0.05 ppm (annual arithmetic mean)
Sulfur Oxides (SO ₂)	0.03 ppm (annual arithmetic mean) 0.14 ppm (max. 24 hr. concentration) ²
Particulate Matter	75 micrograms/cubic meter (annual arithmetic mean) 260 micrograms/cubic meter (max. 24 hr. concentration) ²

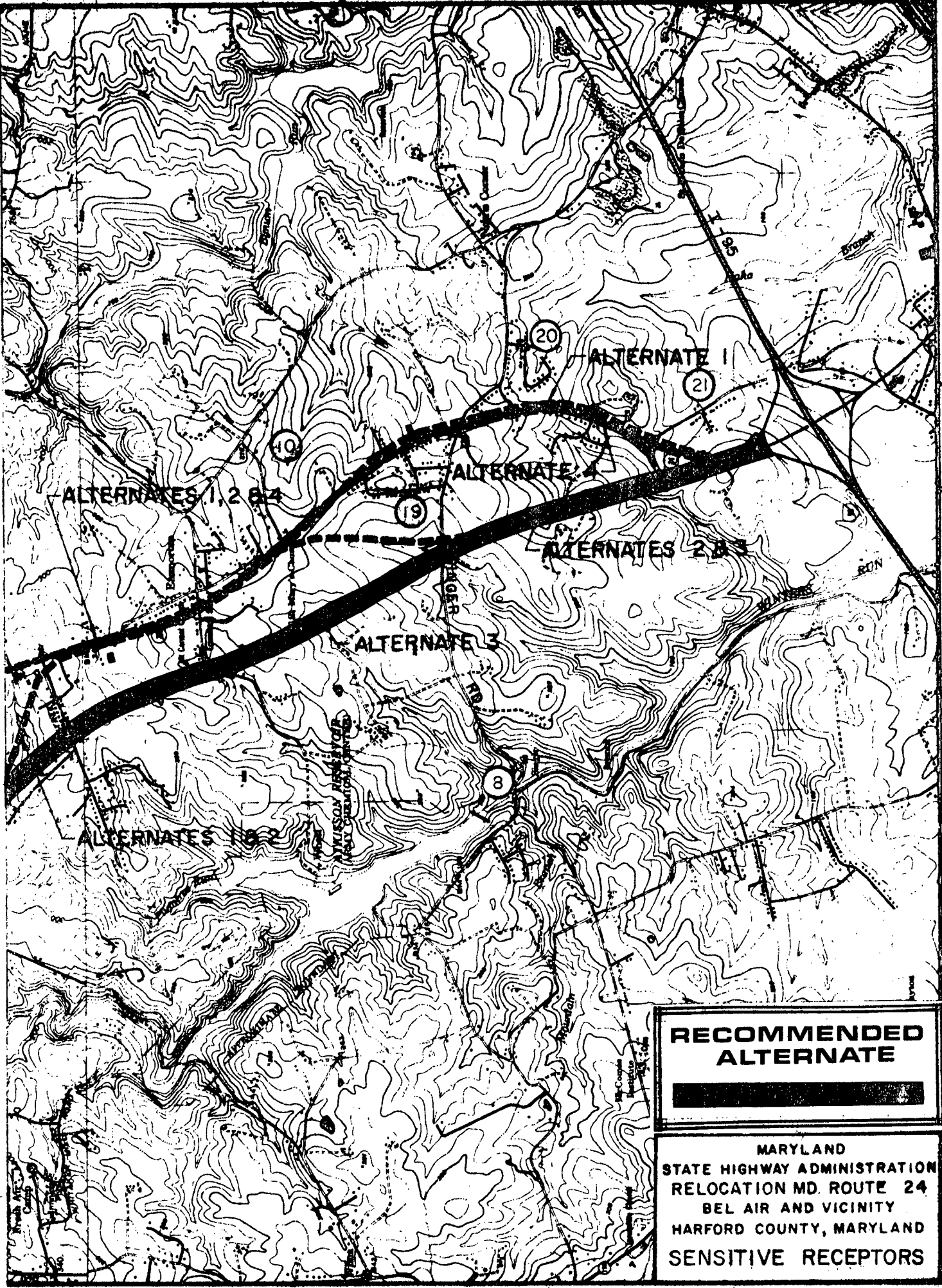
¹ ppm - parts per million

² Not to be exceeded more than once per year

³ Hydrocarbon standard is set for use as a guide in devising implementation plans to achieve oxidant standards.

FIGURE 3.7a





RECOMMENDED ALTERNATE

MARYLAND
 STATE HIGHWAY ADMINISTRATION
 RELOCATION MD. ROUTE 24
 BEL AIR AND VICINITY
 HARFORD COUNTY, MARYLAND
 SENSITIVE RECEPTORS

FIGURE 3.7b

Sensitive Receptors

Site Numbers Correspond to Those Shown on Previous Page

Schools

1. Bel Air Elementary School
2. Bel Air High School
3. Bel Air Jr. High School
4. Homestead Elementary School
5. Wakefield Elementary School

Parks

6. Heavenly Waters
7. Evergreen Heights Park
8. Atkisson Picnic Area

Residential Developments

9. Central Bel Air
10. Village of McLean
11. Forest Lawn
12. Fairmont
13. Colonial Acres
14. Glenwood
15. West Riding
16. Bright Oaks
17. Fox Bow
18. Camelot
19. Preston Manor
20. Lou Mar Estates
21. Woodsdale Apartments
22. Silver Spring Heights
23. Homestead Village, Homelands, Country Village Apartments
24. Bel Air Acres
25. Evergreen Heights
26. Wakefield Meadows

FIGURE 3.7.b

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TRAFFIC USED IN AIR QUALITY ANALYSIS

ALTERNATE	YEAR	AVERAGE DAILY TRAFFIC	AVERAGE SPEED (mph)
1	1975	-	-
	1978	22,990	35
	1988	33,770	
	1998	44,075	
2	1975	-	-
	1978	19,175	35
	1988	29,790	
	1998	41,650	
3	1975	-	-
	1978	21,875	35
	1988	32,115	
	1998	41,950	
4	1975	-	-
	1978	21,890	25
	1988	34,735	
	1998	47,900	
5	1975	18,430	25
	1978	21,890	25
	1988	34,735	
	1998	47,900	

FIGURE 3.7.c

3.8 Noise

The following discussion is a summary of the results of the analysis contained in the "Noise Report" prepared for the subject project. The preparation of this report is a requirement of the Federal Highway Administration of the United States Department of Transportation for Implementing Section 109(i) of Title 23, United States Code.

Ambient Noise Measurements

The "ambient" noise in any area is the "background" noise that is developed by all of the natural and man-made noises within a given area. For the purposes of highway noise studies, ambient noise measurements are taken in order to establish a base for the existing noise conditions. This information provides a reference for comparison of the changes that are anticipated with the proposed highway facility. The difference in noise levels, before and after the completion of the proposed project, provides an indication of the impact of the noise within the project area.

Design Year Noise Levels

In general, the more a new noise exceeds the previous ambient, the more objectionable it will be. If the increase is 5 dB or less it is regarded as negligible increase. An increase of 6 - 10 dB is a minor increase, an increase of 11 - 15 dB is considered a significant increase, while an increase greater than 15 dB is a severe increase. Where possible, noise control measures are studied to minimize increase over ambient levels to less than 10 dBA. These measures may take the form of an earth berm or mound, an acoustic fence or wall or a combination of both. Planting trees and shrubs can result in up to a 10 dB reduction of noise levels; however, the vegetation must be 70 - 100' in depth, extremely dense and at least 15' in height. Right of way to accomplish this type of planting is not available on this project.

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Methodology

Design year (1998) noise levels have been predicted utilizing the Maryland State Highway Administration's Traffic Prediction Model Based upon a prediction method presented in the National Cooperative Highway Research Program Report #117.

Analysis of the Acoustic Impact from this project has been conducted in accordance with the procedures set forth in Federal-Aid Highway Program Manual, Volume 7, Chapter 7, Section 3 (FHPM 7-7-3).

This analysis of noise has been conducted through the following steps.

1. Identification of areas which are sensitive to noise and may be impacted by noise from this highway.
2. Measurement of ambient noise levels.
3. Prediction of design year traffic generated noise levels.
4. Analysis of noise impact on noise sensitive areas.
5. Identification of the need for noise abatement measures and feasibility of construction.

FHPM 7-7-3 has established noise criteria for varying land use areas, expressed in terms of an L_{10} noise level, L_{10} being a statistical noise level that is equaled or exceeded for 10% of a given time period.

Design Noise Levels

Noise Level

60 dBA	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. For example, such areas could include amphitheaters, 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.
70 dBA	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports area and parks.
75 dBA	Developed lands, properties or activities not included in above categories.
Unlimited	Undeveloped lands.
55 dBA (Interior)	Public meeting rooms, schools, churches, libraries, hospitals, and other such public buildings.

Impact Assessment

The following section of the noise impact evaluation provides a comparison of Predicted Noise Levels with Ambient and Design Noise Levels (FHPM 7-7-3) in addition to rather general discussions relating to noise sensitive areas for each of the studied alternate alignments. The locations for these noise sensitive sites for each of the alternate alignments (Alternates 1 thru 4), are indicated on Figures 3.8.a thru 3.8.e.

The sensitive locations affected by the recommended alternate are also shown on the plan sheets in Section 4.0.

ALTERNATE 1

Comparison of Predicted Noise Levels with Ambient and Design Noise Levels (FHPM 7-7-3)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
1	Residential	44	67	+23	-3	Severe increase - FHWA design noise levels not exceeded
2	Residential	43	75	+32	+5	Severe increase -
3	Residential	47	76	+29	+6	Severe increase - barrier does not appear feasible
4	Residential/ Religious	63	80	+17	+10	Severe increase -
5	Religious/ Historic	65	76	+11	+6	Significant increase - barrier does not appear feasible
6	Residential	65	78	+13	+8	Significant increase - barrier does not appear feasible
7	Residential	71	79	+8	+9	Minor increase -
8	Residential	71	79	+8	+9	Minor increase - barrier does not appear feasible
9	Proposed Heavenly Waters Park	*	*	*	*	*

* Note: See page 3.8.12 for discussion of noise impact on proposed Heavenly Waters Park.

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ALTERNATE 2

Comparison of Predicted Noise Levels with Ambient and Design Noise Levels (FHPM 7-7-3)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
1	Residential	44	67	+23	-3	Severe increase - noise barrier will be studied
2	Residential	43	75	+32	+5	Severe increase - noise barrier will be studied
3.8.4 3	Residential	47	76	+29	+6	Severe increase - noise barrier does not appear feasible
4	Residential/ Religious	63	80	+17	+10	Severe increase - noise barrier will be studied
5	Religious	65	65	none	-5	Negligible increase
6	Residential	43	70	+27	equal to	Severe increase noise barrier does not appear feasible.
7	Proposed Heavenly Waters Park	*	*	*	*	*

* Note: See page 3.8.12 for discussion of noise impact on proposed Heavenly Waters Park.

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ALTERNATE 3

Comparison of Predicted Noise Levels with Ambient and Design Noise Levels (FHPM 7-7-3)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
1	Residential	44	67	+23	-3	Severe increase noise barrier will be studied
2	Residential	43	75	+32	+5	Severe increase noise barrier will be studied
3	Residential	62	74	+12	+4	Significant increase - noise barrier will be studied
4	Residential	53	72	+19	+2	Severe increase noise barrier will be studied
5	Religious	61	65	+4	-5	Negligible increase
6	Residential	43	70	+27	equal to	Severe increase noise barrier does not appear feasible
7	Proposed Heavenly Waters Park	*	*	*	*	*

3.8.5

* Note: See page 3.8.14 for discussion of noise impact on proposed Heavenly Waters Park.

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ALTERNATE 4

Comparison of Predicted Noise Levels with Ambient and Design Noise Levels (FHPM 7-7-3)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
1	Residential	65	85	+20	+15	Severe increase noise barrier does not appear feasible
3.8.6 2	Residential	73	76	+3	+6	Negligible increase noise barrier does not appear feasible
3	Residential	63	82	+19	+12	Severe increase noise barrier does not appear feasible
4	Residential	62	82	+20	+12	Severe increase noise barrier does not appear feasible
5	Residential	65	82	+17	+12	Severe increase noise barrier does not appear feasible
6	Historic	60	70	+10	equal	Significant increase noise barrier will be studied
7	Educational/ Residential	60	70	+10	equal	Significant increase noise barrier will be studied

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ALTERNATE 4 (cont'd.)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
8	Residential	62	72	+10	+2	Significant increase noise barrier does not appear feasible
9	Residential/ Religious	63	78	+15	+8	Significant increase noise barrier does not appear feasible
10	Residential	72	85	+13	+15	Significant increase noise barrier does not appear feasible
3.8.7 11	Residential	61	79	+18	+9	Severe increase noise barrier does not appear feasible
12	Residential	62	81	+19	+11	Severe increase noise barrier will be studied
13	Residential	67	79	+12	+9	Significant increase noise barrier will be studied
14	Religious	61	76	+15	+6	Significant increase noise barrier does not appear feasible

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ALTERNATE 4 (cont'd.)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
15	Religious	62	77	+15	+7	Significant increase Noise barrier does not appear feasible
16	Residential	63	80	+17	+10	Significant increase Noise barrier does not appear feasible
3.8.8 17	Residential	68	81	+13	+11	Significant increase Noise barrier does not appear feasible
18	Religious	63	80	+17	+10	Severe increase Noise barrier will be studied
19	Religious	65	76	+11	+6	Significant increase Noise barrier does not appear feasible
20	Residential	64	79	+15	+9	Significant increase Noise barrier will be studied

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ALTERNATE 4 (cont'd.)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
21	Residential	65	78	+13	+8	Significant increase - noise barrier does not appear feasible
3.8.9 22	Residential	71	79	+8	+9	Minor increase Noise barrier does not appear feasible
23	Residential	71	79	+8	+9	Minor increase Noise barrier does not appear feasible

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ALTERNATE 5 "Do-Nothing"

Comparison of Predicted Noise Levels with Ambient and Design Noise Levels (FHPM 7-7-3)

Noise Sensitive Area	Land Use	Ambient L ₁₀	Design Year L ₁₀ (1998)	Change in L ₁₀	Relation to Design Noise Levels	Assessment
1	Residential	65	69	+4	-1	Negligible increase
2	Residential	73	77	+4	+7	Negligible increase
3	Residential	63	67	+4	-3	Negligible increase
3.8.10 4	Residential	62	66	+4	-4	Negligible increase
5	Residential	65	69	+4	-1	Negligible increase
6	Historic	60	64	+4	-6	Negligible increase
7	Educational & Residential	60	64	+4	-6	Negligible increase
8	Residential	62	66	+4	-4	Negligible increase
9	Residential & Religious	63	67	+4	-3	Negligible increase
10	Residential	72	76	+4	+6	Negligible increase

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ALTERNATE 5 "Do-Nothing"
(cont'd.)

Noise Sensitive Area	Land Use	Ambient L_{10}	Design Year L_{10} (1998)	Change in L_{10}	Relation to Design Noise Levels	Assessment
11	Residential	61	65	+4	-5	Negligible increase
12	Residential	62	66	+4	-4	Negligible increase
13	Residential	67	71	+4	+1	Negligible increase
14	Religious	61	65	+4	-5	Negligible increase
3.8.11 15	Religious	62	66	+4	-4	Negligible increase
16	Residential	63	67	+4	-3	Negligible increase
17	Residential	68	72	+4	+2	Negligible increase
18	Religious	63	67	+4	-3	Negligible increase
19	Religious	65	69	+4	-1	Negligible increase
20	Residential	64	68	+4	-2	Negligible increase
21	Residential	65	69	+4	-1	Negligible increase
22	Residential	71	75	+4	+5	Negligible increase
23	Residential	71	75	+4	+5	Negligible increase

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Alternate 3 (Recommended Alternate)

Three (3) of the six (6) noise sensitive areas indicated in this Alternate will have design year noise levels above the criteria set forth in FHPM-7-7-3.

Religious and Educational Land Use Impacts

Area 5 is the only religious land use area affected by this Alternate. The design year noise level will not exceed the criteria of FHPM-7-7-3 and a 4 dBA increase, negligible increase, will be experienced. No adverse impact will occur. No educational facilities are impacted by this Alternate.

Commercial and Industrial Land Use Impacts

No adverse impact on any commercial or industrial area can be anticipated as a result of this Alternate.

Residential Land Use Impacts

Area 6 is above the elevation of Md. 24 and to achieve a significant reduction, a barrier at this area would have to be 20'± or more in height. Any barrier of less height would have little or no attenuation value. This residence is an isolated structure, away from other development and an exception will be requested. Noise control measures at Areas 1, 2, 3 and 4 may be feasible and will be studied further during later design stages.

Area 7 is the proposed Heavenly Waters Park. The proposed park master plan indicates those areas identified as sensitive to highway noise. Two areas within the proposed park are considered to be particularly sensitive to noise. One area is at the southeastern portion of the park and consists of a picnic area, pond and ball fields. The other area will be adjacent to the proposed interchange west of U. S. Route 1 and consists of a proposed arboretum. L₁₀ design year noise levels from the proposed improvement will be 69 dBA at the picnic/pond/ball field area and 67 dBA at the arboretum. The L₁₀ levels at the arboretum are conservative because of the fact that a cut will exist between the park and the highway. This was not accounted for in the projection.

Federal L₁₀ design noise levels will not be exceeded. For more detail on the noise analysis prepared for this area, see Pages 27 and 27a in the 4(f) Section of this document.

Alternate 5

(Do-Nothing) - In 1976, Md. Route 24 reached traffic capacity in some locations. Consequently, four (4) of the twenty-three (23) noise sensitive areas now exceed FHPM-7-7-3 design noise levels.

Since the traffic capacity has been reached, each of the twenty-three (23) noise sensitive areas will experience an increase of 4 dBA over the 1973 ambient. This results in a marginal increase in the area.

Undeveloped Land Use Impacts

There exists areas of undeveloped land along each alternate. Noise control measures were not planned for these areas. It can be expected that the levels which appear in Chart 2 will occur in the design year in these areas. These levels are the maximum based upon projected traffic volumes. Any future development desirous of a quieter environment should locate beyond the zone of land that will experience noise levels above the desired level.

L10 Design Noise Level at Distances
From Edge of Near Lane

100'	79 dBA
200'	74 dBA
300'	71 dBA
400'	69 dBA
500'	68 dBA
600'	66 dBA

As part of the implementation process for FHPM-7-7-3, ...highway agencies shall cooperate with local officials by furnishing approximate generalized future noise levels for various distances from the highway improvement, and shall make available information that may be useful to locate communities to protect future land development from becoming incompatible with anticipated highway noise levels. Copies of this report and any future refinements or supplemental reports will be forwarded to the following agencies to assist in their land use planning efforts:

Department of Planning and Zoning, Harford County
Harford County Planning Advisory Board
County Office Building
45 South Main Street
Bel Air, Maryland 21014

Town Planning Commission of Bel Air
39 Hickory Avenue
Bel Air, Maryland 21014

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The Federal Highway Administration issued a FHWA Notice on January 21, 1975 regarding distribution of "The Audible Landscape: A Manual for Highway Noise and Lane Use." Outlined in this notice is a process to inform local planning and zoning agencies of the highway noise relationship to land use. A copy of the aforementioned manual was forwarded to the Department of Planning and Zoning, Harford County as part of this process.

Construction Noise

During the construction phases of this project, noise generated by construction equipment will impact noise sensitive areas previously discussed. Information regarding noise levels from construction equipment such as bulldozers, earthmovers, scrapers, etc. is limited. There will be unavoidable periods of annoyance for the duration of the construction of this project.

Summary

Alternates 1 thru 3 are relocation alternates and, therefore, would impact fewer noise sensitive areas than Alternates 4 or 5. The possibilities of constructing noise barriers are also greater for Alternates 1 thru 3. With Alternates 4 and 5 this is not as feasible due to numerous entrance drives which would severely compromise any barriers constructed. The Do-Nothing Alternate would result in an increase of approximately 4 dBA over existing levels. The noise level increases associated with this alternate could be controlled by the carrying capacity of the existing highway. Because of the general lack of extensive development along the three (3) relocation alternates, they presented the least noise impact. It should be noted, however, that as future development occurs, the total impact could equal or exceed that along existing Maryland Route 24 unless proper controls could be implemented to prevent development from occurring in areas of high noise levels.

Request for Exceptions to Design Noise Standards

The analysis of noise impact for each alternate proposal for Maryland Route 24 indicated one or more areas where noise control measures do not appear to be a feasible approach to reduce anticipated noise levels to a more acceptable level. This factor was considered in the selection of the Recommended Alternate. During later design stages a more detailed analysis will be made on a case by case basis to determine where exceptions will be requested for the Recommended Alternate.



figure 3.8a

**NOISE SENSITIVE AREAS
ALTERNATE I**



figure 3.8b

**NOISE SENSITIVE AREAS
ALTERNATE 2**



figure 3.8c

**NOISE SENSITIVE AREAS
ALTERNATE 3**

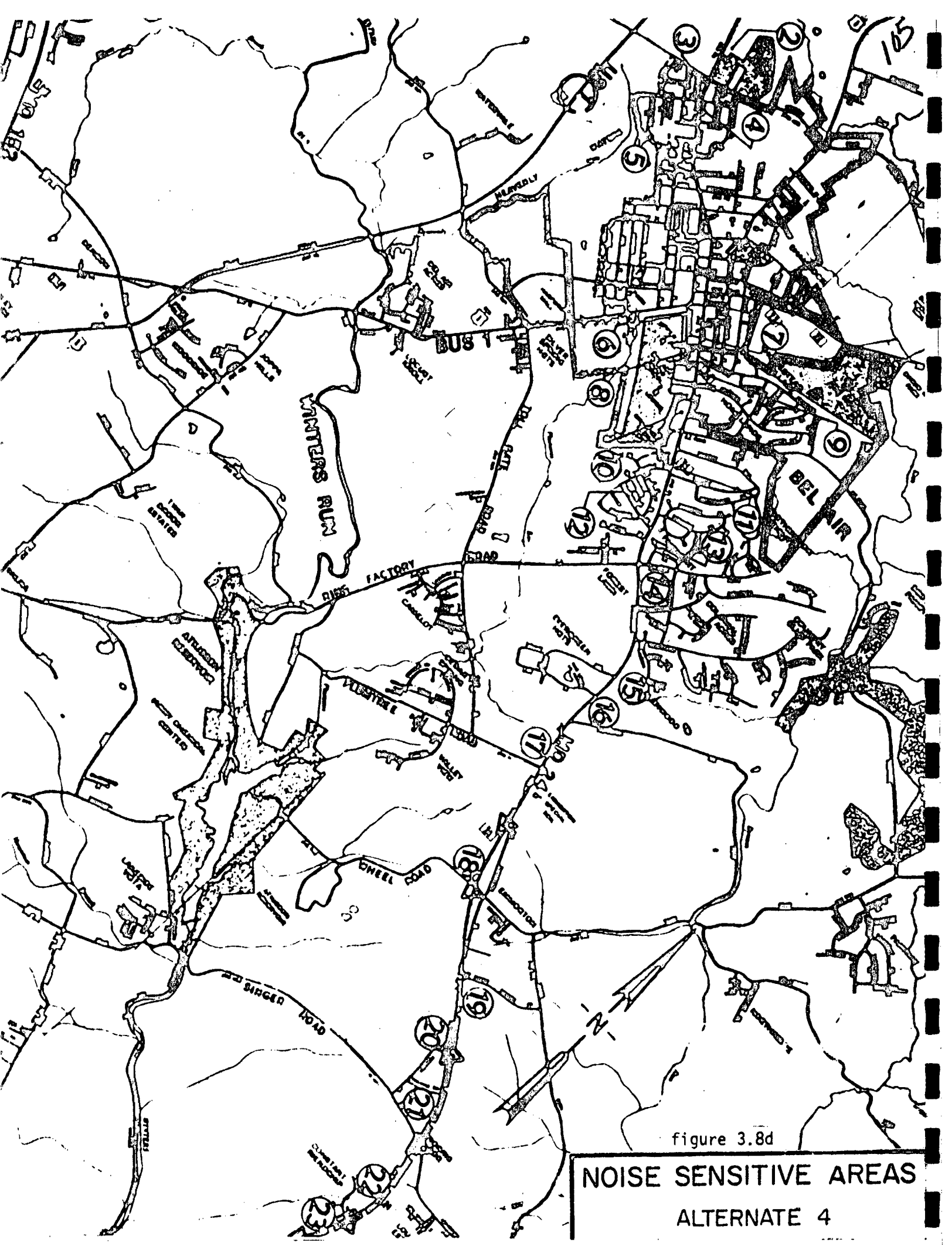


figure 3.8d

NOISE SENSITIVE AREAS
ALTERNATE 4

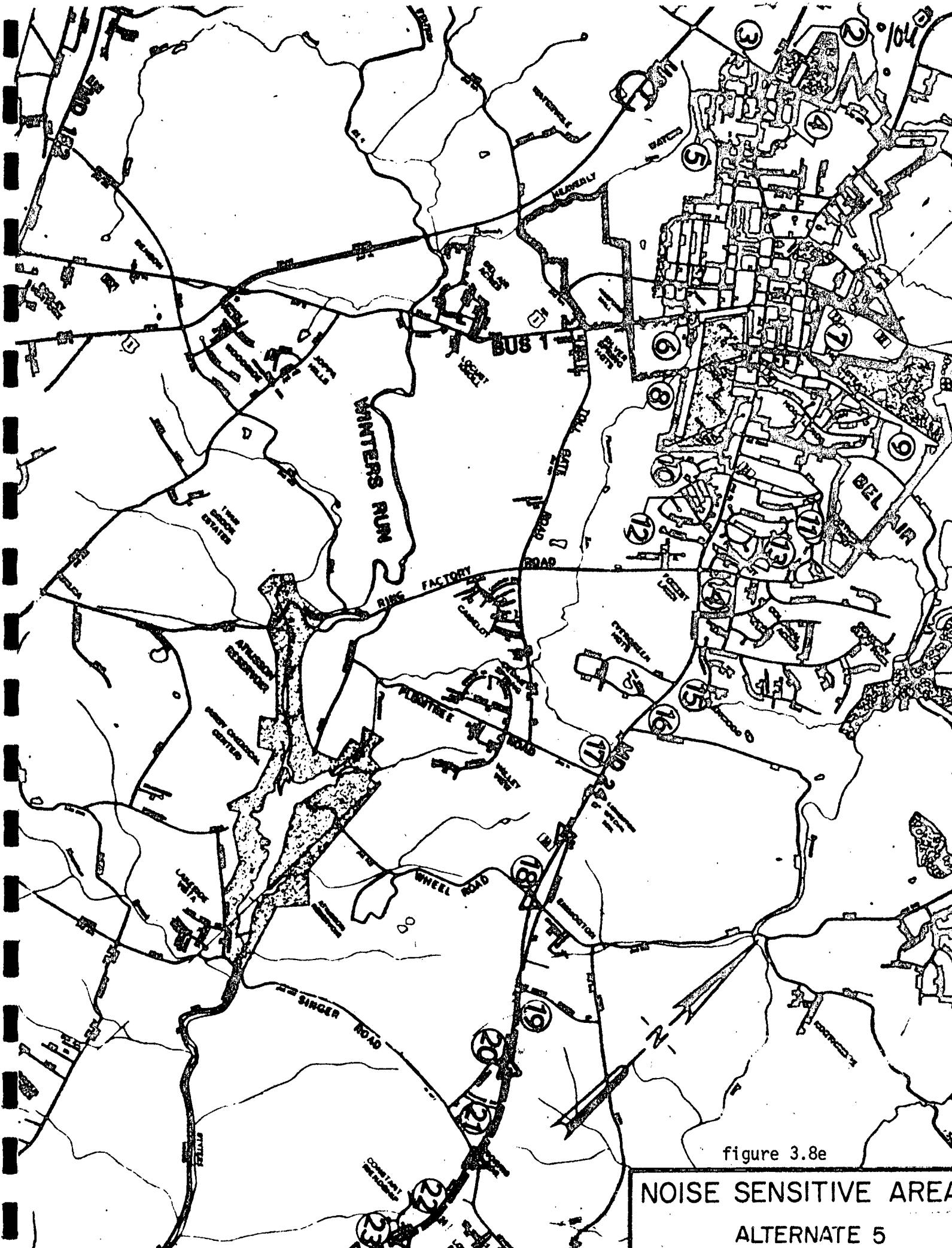


figure 3.8e

NOISE SENSITIVE AREA
ALTERNATE 5

3.9 Water Quality, Erosion and Siltation

Erosion and sediment problems created by this project will be controlled in accordance with the Erosion and Sediment Control Program adopted by State Highway Administration and approved by Department of Natural Resources, September 3, 1970, in accordance with Chapter 245 of the Acts of the 1970 Maryland General Assembly.

The following is a summary of this program:

The State Highway Administration has the responsibility to protect Maryland's land, waters and air from pollution which may result from its assigned activities. In this regard, the above mentioned Program is implemented in the following manner:

A. Highway Location

Erosion and sediment control factors are considered during the location phase. The highway is fitted to the topography and every effort is made to minimize damage to streams.

Close liaison is maintained with Soils Engineers, Department of Water Resources, Soil Conservation Service and other government bodies.

B. Highway Design

Contracts presently under design and all future contracts will contain specific items for erosion and sediment control. These include:

- Temporary Sediment Traps.
- Temporary Ditch Basins.
- Retaining Streams in Natural State.
- Stone embedded baffles in concrete channels to act as energy dissipators.
- Construct certain side ditches as first order of business.
- Berming of fills and install temporary slope drains.
- Install permanent slope pipes at no-cut, no-fill intersection.
- Construct serrated cuts where soils permit.
- Install Level Spreaders to convert channel flow to sheet flow.
- Rip-Rap Ditch for velocity control.
- Permanent seeding and mulching as soon as possible. Temporary seeding where grading will be exposed for an extended period.

C. Highway Construction

This phase is responsible for project inspection and insuring that the erosion and sediment design described above is performed in the proper sequence

and method. Enforcement of the provisions is insured through Administration action and reinforced by the Maryland Department of Water Resources.

Contractors are required by State Law to obtain permits from appropriate County Agencies for work performed on private property outside of the highway right of way.

Permits will be required from the Water Resources Administration of the Department of Natural Resources for the construction of culverts over both Plumtree and Heavenly Waters Run. All applications for permits shall be accompanied by a hydraulic calculation of the effects of filling in the flood plain and shall be supported by a description of the benefits to be expected. Where counties or other local governments have adopted zoning restrictions or other controls over the land affected, the applicant shall submit evidence in writing to the Department that the proposed work is in conformance with such restrictions and controls.

Method of Study

Corridors were evaluated on the basis of their potential for generating significant sources of sediment and the effect of expected sediment yields on a defined water use.

Estimates of gross erosion rates can be made using the Universal Soil Loss Equation. Although the equation will yield useful results for construction of soil erosion control devices, its usefulness as a method of quantifying impact assessment is limited. For these reasons the Universal Soil Loss Equation has not been used.

Sediment yields can be highly variable as shown by the variations in reported yields in the literature. The soil associations in the study area generally are quite highly erodible so that gross sediment yields in the construction area may be in excess of 200 tons/acre/year. However, it should be noted that only a fraction of the eroded soil actually reaches the stream because of entrapment in vegetation, etc., and hence, net sediment yields ordinarily would be much less than 200 T/Ac./Yr.

Erosion control measures will be required on the project in accordance with state and county regulations. Therefore, actual sediment yields which would result in any adverse effects on water quality should be quite low. Erosion control technology is developing quite rapidly and numerous techniques are now used to reduce erosion and sediment damage.

Measures used to control erosion shall include, but are not limited to, the use of berms, dikes, dams, sediment basins, sediment traps, filters, fiber mats, netting, gravel or crushed stone, mulch, grasses, slope drains and other methods. Erosion and sediment control measures shall be coordinated with the construction of the permanent drainage facilities, such as pipes, culverts, headwassel, ditch paving, flumes, etc., which shall be constructed prior to or as soon as practicable after the grading operations is begun to assure economical, effective and continuous erosion and siltation control.

Control of other potential pollutants depends to a large degree on placement of material storage and equipment maintenance areas. Proper design can minimize runoff from such sites. Concern for pollution potential must also dictate materials and methods to be used for the control of dust in the construction area, etc.

The discussions under Site Evaluations are qualitative interpretations of the potential impact of the proposed construction on surface waters in the study area. A more quantitative analysis can be made at a later date if conditions warrant the additional costs involved.

Site Evaluations

A field visit of the study area was made to evaluate the potential impact of the proposed construction on surface water quality. Although there are no major stream modifications proposed for this project, several streams will definitely be affected but impacts generally are considered to be minor. These minor impacts would mainly consist of slight aesthetic degradation caused by unsightly turbid conditions in the stream during construction. The amount of solids suspended in the stream will not be of sufficient magnitude to cause sedimentary problems such as the smothering of bottom dwelling organisms which inturn disrupts the stream ecosystem. Brief comments on each of these streams follow:

A. Heavenly Waters

This stream is very small, quite clear with a sandy gravelly bottom and rapid current. Some erosion will occur but impacts will be reduced through the use of standard erosion control measures. Extreme care must be exercised in location and construction of the interchange of relocated Md. 24 with Bel Air Bypass (U.S. Route 1) due to the presence of a sanitary landfill located on the west side of the U.S. 1 Bypass. The cells of the landfill may be disturbed during construction releasing leachate from the landfill into the stream causing severe degradation in the chemical quality. During the next design phase of this project alternate interchange schemes will be studied. The reduction or elimination of the conflict with the sanitary landfill will be considered at that time. In the event the interchange scheme adopted for final design encroaches on the landfill test borings will be made to determine the depth of refuse deposition. Alternate methods for preventing leachate from polluting the waters of Heavenly Waters Run will be investigated. Included in this investigation will be a program of refuse removal and subsequent refill with acceptable fill material. Refilling will likely be necessary to assure that an adequate buffer zone exists between any refuse remaining and the highway cut slope. Also to be investigated will be the collection and treatment of leachate should it be determined that leachate flow is directed toward the highway cut clope.

B. Plumtree Run

This stream is small, also with a sandy, gravelly bottom and fairly rapid current. It passes predominantly through pasture land so the primary water use is for livestock watering. Numerous minnows were observed at several stations although it is unlikely the stream would support any significant sport fishery. The following stations were identified as having potential water quality impacts:

1. Station 122 - the relocation corridor will cross the stream in the vicinity of this station. Construction of a sewer in this area about one year ago did not appear to have any significant impact on the stream and it is unlikely the proposed construction would have a major effect. Erosion control measures will keep damage to a minimum.
2. Stations 135, 147+50, 160 and 165 - the corridor crosses several very small tributaries at these stations. Flows are intermittent in most years so that the impact will be minimal. However, since slopes in the vicinity are moderately steep, and the soils are highly erodible, proper erosion control procedures must be instituted.
3. Station 169 - Ring Factory Road - some erosion will undoubtedly occur but impacts will be negligible. Stream banks are forested in the immediate area of this crossing. Little effect of the recent construction of the sewer and pumping station on the stream could be noted. Hence, long term impacts from the proposed road construction will be negligible.
4. Station 187 - a stream crossing is proposed at this station. Proper erosion control measures will minimize sedimentation. Care must be taken during construction to prevent pollution of the stream with materials of construction, oils, etc.
5. Stations 202 and 211 - several small intermittent tributaries will be affected by the proposed corridor in this vicinity. However, impacts will be minor.

C. Winters Run

Tributaries to Winters Run other than Plumtree Run which will be affected by the proposed construction are all small and very clear with sandy gravelly bottoms. They pass through mixed pasture and small wood lots for the most part. No fish life was observed at the time of the visit so the primary beneficial use of the tributaries likely is for livestock watering. Minor water quality impacts may occur and they are discussed in Section 4.0. This is due to the fact that the alternates are

different in this area where these tributaries are found and thus each alternate would affect the tributaries at different locations and in different degrees of severity.

D. Atkinson Reservoir

A visit was made to the Harford Glen Educational and Recreation Area to check the Atkinson Reservoir, an impoundment on Winters Run. The reservoir is used principally for fishing and boating - no swimming is permitted. However, the reservoir also serves as an emergency water supply source for the Edgewood Arsenal. The reservoir is a shallow, heavily silted body of water which was affected badly by Hurricane Agnes in 1972. In light of the present condition of the reservoir, little impact resulting from any minimal amounts of sedimentation from the proposed construction should be expected.

Summary and Conclusions

The surface waters in the study area do not appear to be utilized to any significant degree except for livestock watering and minor recreational uses. The proposed project crosses Heavenly Waters Run, Plumtree Run and tributaries of Winters Run several times.

Minor stream channel alterations are anticipated at most of the stream crossings. Since the proposed project has not progressed beyond the preliminary design stage, the exact nature of these alterations has not been determined. Generally, they consist of channel straightening in the immediate vicinity of the crossing structure, along with the placing of stone rip-rap to protect the structures from flood damage. Improvements or alterations to the stream channels would be designed to provide for a low flow channel to assure free passage for stream biota. Permits from both the Maryland Water Resources Administration and the U.S. Army Corps of Engineers are required for such actions, and are granted only after careful review of plans and specifications. The specific type of stream alteration will be determined during the design phase of the project. Normally, the damage is short-term, in the form of sedimentation and loss of some bottom dwelling organisms. The U.S. Fish and Wildlife Administration will be contacted and coordinated with during the design phase of the project.

As noted earlier, extreme care must be exercised in the vicinity of the interchange of the proposed relocation of Md. Route 24 with the U.S. Route 1 in order to avoid discharge of leachate from the sanitary land fill to Heavenly Waters. The State Highway Administration will have to receive approval from the county and the state for any replacement site for refuse removed from the landfill.

Sediment yields to Atkinson Reservoir should be minor or non-existent due to the distance the reservoir is located from the points where the corridor locations affect the tributary streams. It would be well if the

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proposed cleaning of the reservoir could be delayed until the highway construction is complete in order to get maximum benefits from the improvement. Plumtree Run will be most affected but these effects would be local in nature and of temporary duration. Care must be used to protect any small farm ponds located in the vicinity.

No prediction can be made at this time as to the possible effects of air-borne or surface runoff of chemical pollutants from the road surface on surface water quality. This potential impact is of primary concern because of the use of the Atkinson Reservoir as an emergency water supply source for Edgewood Arsenal. However, if proper precautions are taken, this impact should be insignificant.

There are no maintenance or salt storage areas planned for the corridor. Thus, the potential for spillage of toxic materials is minimized. Proper use of deicing salts during winter should have no affect on the use of surface waters.

3.10 Ground Water Resources¹

The relocated Maryland Route 24 will traverse a portion of the Piedmont Upland underlain by several metamorphic, crystalline formations, which, near the southern end of the proposed relocation, are overlain by a thin veneer of younger sands, gravels and clays. There are no valuable mineral resources associated with any of these geologic formations.

Small to moderate quantities of ground water are yielded to wells in the area. With the exception of a few very local areas discussed in the body of the report the construction of the highway will not interfere with ground water supplies. Ground water quality in the area is now excellent. With proper design there will be no deleterious effect of ground water quality along the construction site.

Two of the ramps at the intersection of Maryland Route 24 Bypass and U.S. Route 1 Bypass will be cut into an existing landfill. Design of these cuts will have to take into account the problem of exposing landfill material and the possible interception of polluted leachate from the landfill.

The results of this study indicate that no major environmental impact related to geology and ground water will occur because of the construction of Maryland Route 24 Bypass.

Geology

Physiography

The proposed highway site is located for the most part in the Upland Section of the Appalachian Piedmont Physiographic Province, which consists of gently rolling, sporadically dissected topography. The southern mile or mile and one-half end of the highway lies in the Coastal Plain. No sharp break in the topography at the Piedmont-Coastal Plain contact along the highway line is present and the typically flat Coastal Plain lowland relief only becomes apparent farther to the south.

Bedrock Units (See Figure 3.10a)

The rocks of the Piedmont are highly metamorphosed sediments and igneous rocks which have been deformed and metamorphosed several times since their original formation, with the result that their age and origin have been for years the source of scientific controversy. In this report we follow the nomenclature used on the Geologic Map of Harford County (Southwick and Owens, 1968). The formations traversed by the proposed Maryland Route 24 Bypass, including all alternates, are, from north to south:

¹ Conlin and Gray Associates, Consulting Geologists, Md. 24 Relocation.

1. Baltimore Gabbro
2. Port Deposit Gneiss
3. James Run Gneiss
4. Wissahickon Formation

Surficial Deposits

1. Saprolite - the bedrock formations of the Piedmont have been altered through long weathering to saprolite which is formed by the chemical alteration of the original rock minerals, chiefly through the action of percolating rain water. Feldspars and other silicate minerals are altered to clay and metallic oxides but quartz is essentially unchanged. The result is a reddish-brown clay and quartz mantle in which the original texture and structure of the parent rock can usually be easily perceived.

The thickness of the saprolite varies, and is partly related to the topography, being thickest under upland areas and thinnest in deep stream valleys. In many stream valleys the streams have eroded away all of the saprolite and outcrops of fresh, unweathered rock are present. Elsewhere, fresh outcrops are rare, except in roadcuts and other excavations.

Rock type also influences saprolite thickness. The Wissahickon schist generally has the greatest saprolite thickness, followed by the Port Deposit Gneiss and Baltimore Gabbro.

It should be emphasized that only the larger streams have eroded through the saprolite, while tributaries, such as Plumtree Run show few, if any, fresh rock outcrops.

2. Potomac Group - near the southern end of the area the bedrock formations and the saprolite are overlain by sands, gravels and clays of the Potomac Group. These deposits were laid down in Cretaceous time by rivers and streams flowing across a surface of low relief. The deposits are extremely variable in grain size, both vertically and laterally. Generally speaking, the basal deposits are coarse and permeable and this zone tends to be a zone of ground water movement.

Since the area of this report is at the edge of the sediments they are probably less than 100 feet thick.

Structure

The crystalline rocks of the Piedmont have been folded, refolded and fractured many times. The structures of environmental interest are schistosity

and jointing of the later deformations which impart a regional grain to the area and control topography, ground water movement and slope stability.

Mineral Deposits

The only mineral exploitations associated with the rocks present has been for building materials, such as stone, sand, clay, gravel, etc. There are no existing quarries along the proposed route and no obviously favorable sites.

Hydrogeology

The hydrogeology of the area has been investigated in terms of determining the impact of highway construction and travel. Information for this study has been obtained from published literature, particularly Bulletin 17, Maryland Department of Geology, Mines and Water Resources, "The Water Resources of Baltimore and Harford Counties", by R.J. Dingman and H.F. Ferguson, 1956, and Report of Investigations, number 10, Maryland Geological Survey, "Ground Water Occurrence in the Maryland Piedmont", by L.J. Nutter and E.G. Otton, 1969. Additional information has come from data on file with the U.S. Geological Survey, Ground Water Branch, discussions with Mr. Nutter of the U.S. Geological Survey, E.T. Cleaves, of the Maryland Geological Survey, and field examination by the authors.

Ground Water Conditions

Depths to seasonally high water table (usually occurring in early spring): (A) Piedmont Plateau areas: 0.0 - 3.0 feet in flood plains, footslopes and upland depressions; 10.0 to 30.0 feet or more in other Piedmont Plateau upland areas (the water table is usually located in rock); (B) Coastal Plain areas: 0.0 - 3.0 feet in flood plains, footslopes, and upland depressions; 5.0 feet or more in other Coastal Plain areas.

Localized impacts specifically related to the recommended alternate are discussed in Section 4.0 (The Recommended Alternative).

Local Highway Effects

U.S. Route 1 - Maryland Route 24 Interchange

Both the Westbound Lane of relocated Maryland Route 24 connection to the Southbound Lane of the U.S. Route 1 Bypass and the Southbound Lane Bypass connection to relocated Maryland Route 24 Eastbound Lane have sizeable (44 to 67 feet deep) cuts proposed on the west side of the present U.S. Route 1 Bypass. Each of these cuts will be through portions of the existing Tollgate Sanitary Landfill and will include areas that have been filled with refuse. Data from borings, ground water monitoring wells, drainage pits, and landfill excavations were used to construct a ground water contour map, (Figure 3.10c) and indicate that ground water and stability problems will be encountered.

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The Maryland Route 24 Westbound cut extends from approximately station 20 to beyond station 40 and varies in depth from five feet to 44 feet (Figure 3.10d). From approximately station 26 to station 30 the upper portion of the cut will be in completed landfill. Measurements of the depth of the existing drainage pits suggest that the refuse is present to depths of 27-28 feet. The base of the refuse also represents the original bedrock-saprolite interface or where trenching by the landfill operators met refusal. Ground water measurements indicate that the cut will intersect the water table, at least in those areas where information is available.

The Maryland Route 24 Eastbound Lane cut extends from station 10 to approximately station 25 and varies in depth from eight feet to 68 feet. The upper portion of the cut will be in refuse fill from approximately station 13 to station 22. Based on available data the refuse fill in the area is as thick as 30 feet in places. Ground water measurements suggest that part of the water table is, at present, in the refuse and part below the refuse. The water table is higher than the bottom of the proposed cut along the entire length of the cut.

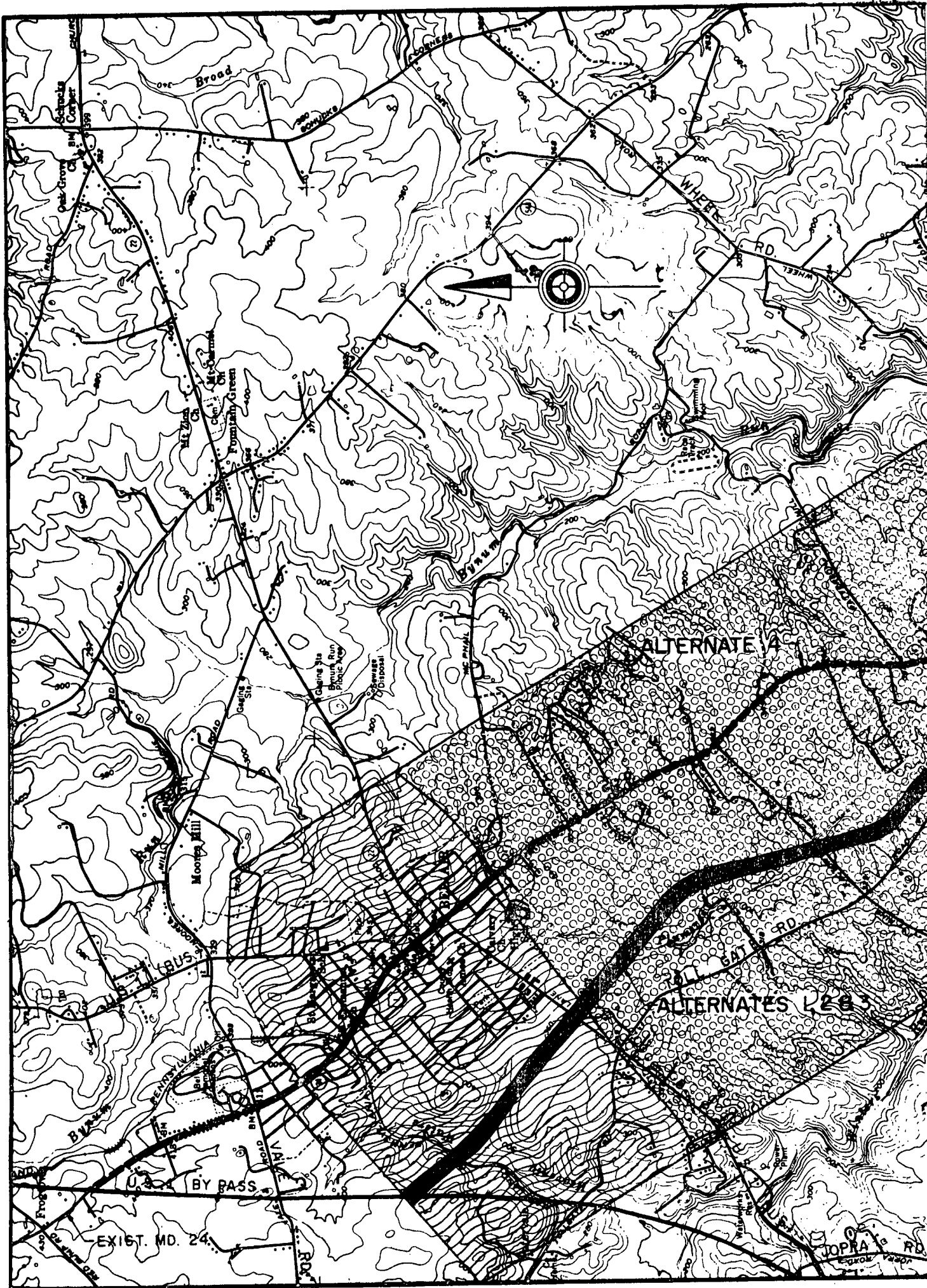
The proposed cuts in the U.S. Route 1-Maryland Route 24 Interchange area will lower the water table in the immediate vicinity of the cuts and will alter the ground water flow direction toward the cuts. Some problems with seepage may occur on the cut slope because of the general water table lowering but no major difficulties should develop. The most critical problem will occur in the refuse fill areas where percolating leachate in the refuse will possibly flow along the refuse fill-bedrock interface and toward the cut. Contamination of the surface waters would occur and, depending upon the slope of the refuse fill-bedrock interface, a zone of potential slippage might be present.

As previously discussed the interchange geometrics will be further studied during the next design phase. If the scheme adopted for final design involves encroachment on the sanitary landfill precautions will be taken to prevent water quality degradation. - See page 3.9.3(A).

Other construction in the interchange area, including the remaining sections of the Maryland Route 24 Westbound Lane, the Southbound Lane, the Westbound Lane Ramp, and the Northbound Lane Ramp, is involved with normal highway fill. Some local raising of the water table may occur but in most cases local drainage is associated with the low fill areas and these drainage-ways will be maintained by culverts, etc., so that the water table will remain essentially where it is at pre-construction time.

Before final design work is completed on the U.S. Route 1-Maryland Route 24 Interchange, the area should be investigated by closely spaced borings especially where refuse fill exists. It is critical that the depth of the refuse fill and the depth of the refuse fill-bedrock interface and/or the saprolite-bedrock interface be determined so that a proper cut design can be made to guarantee leachate control and slope stability.

All of the relocation alternates are the same from the U.S. 1 Bypass to Ring Factory Road. For this reason we have discussed the problem of the Sanitary Landfill in this section and discuss the problems associated with the individual alternates under section 4.0 (Alternatives).



ALTERNATE A

ALTERNATES L & E



EXIST. MD. 24

TOPRA RD

Broad

WHEELER RD.

MOOREA MILL

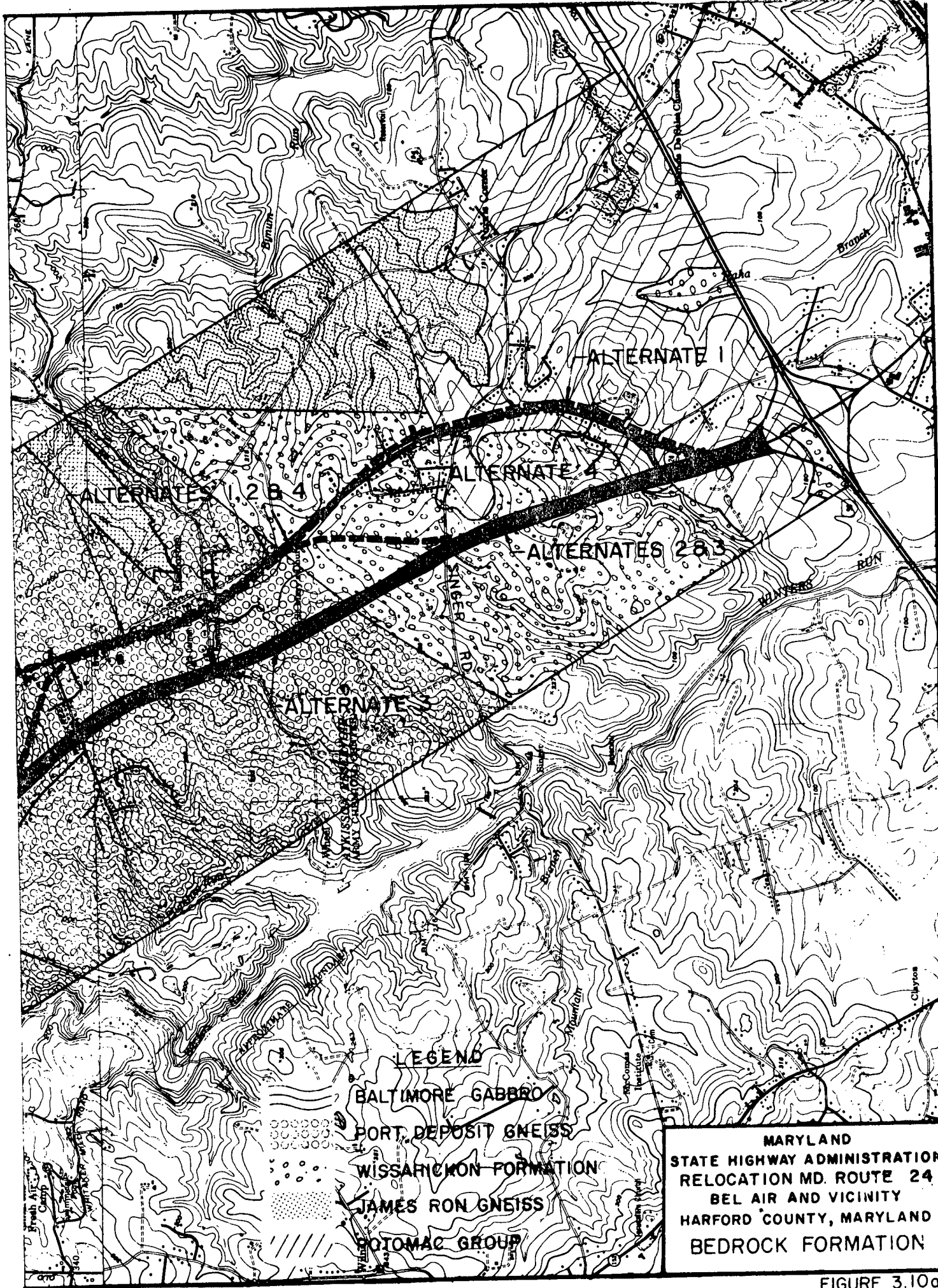
BY PASS

MORRIS RD.

B. W. ...

VA

Equival. Va. 20



ALTERNATE 1

ALTERNATE 2

ALTERNATES 1, 2, 3, 4

ALTERNATES 2 & 3

ALTERNATE 5

LEGEND

BALTIMORE GABBRO

PORT DEPOSIT GNEISS

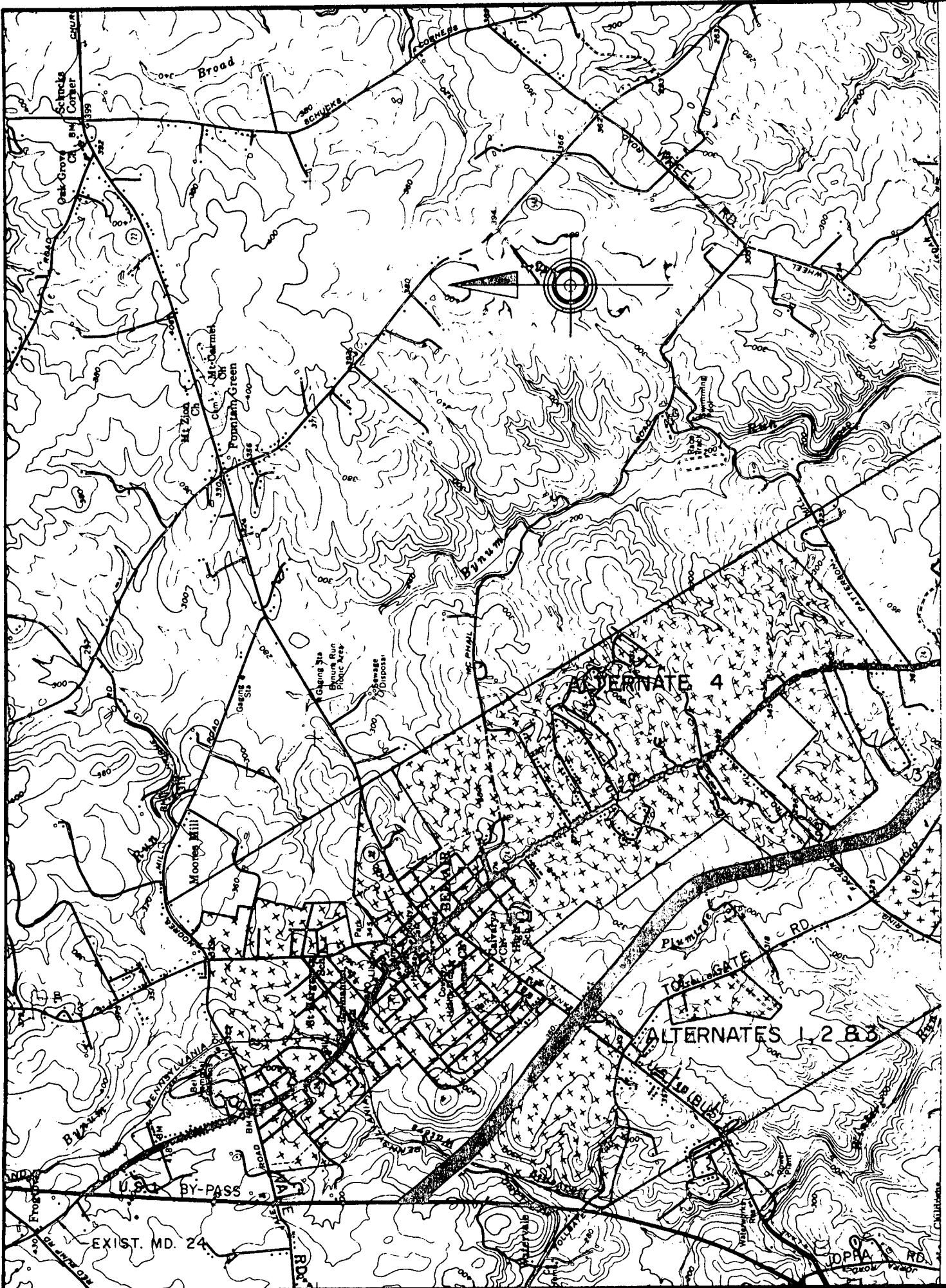
WISSAHICKON FORMATION

JAMES RON GNEISS

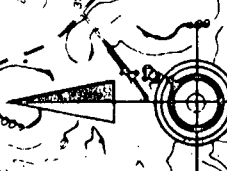
POTOMAC GROUP

MARYLAND
 STATE HIGHWAY ADMINISTRATION
 RELOCATION MD. ROUTE 24
 BEL AIR AND VICINITY
 HARFORD COUNTY, MARYLAND
 BEDROCK FORMATION

FIGURE 3.10a



Broad



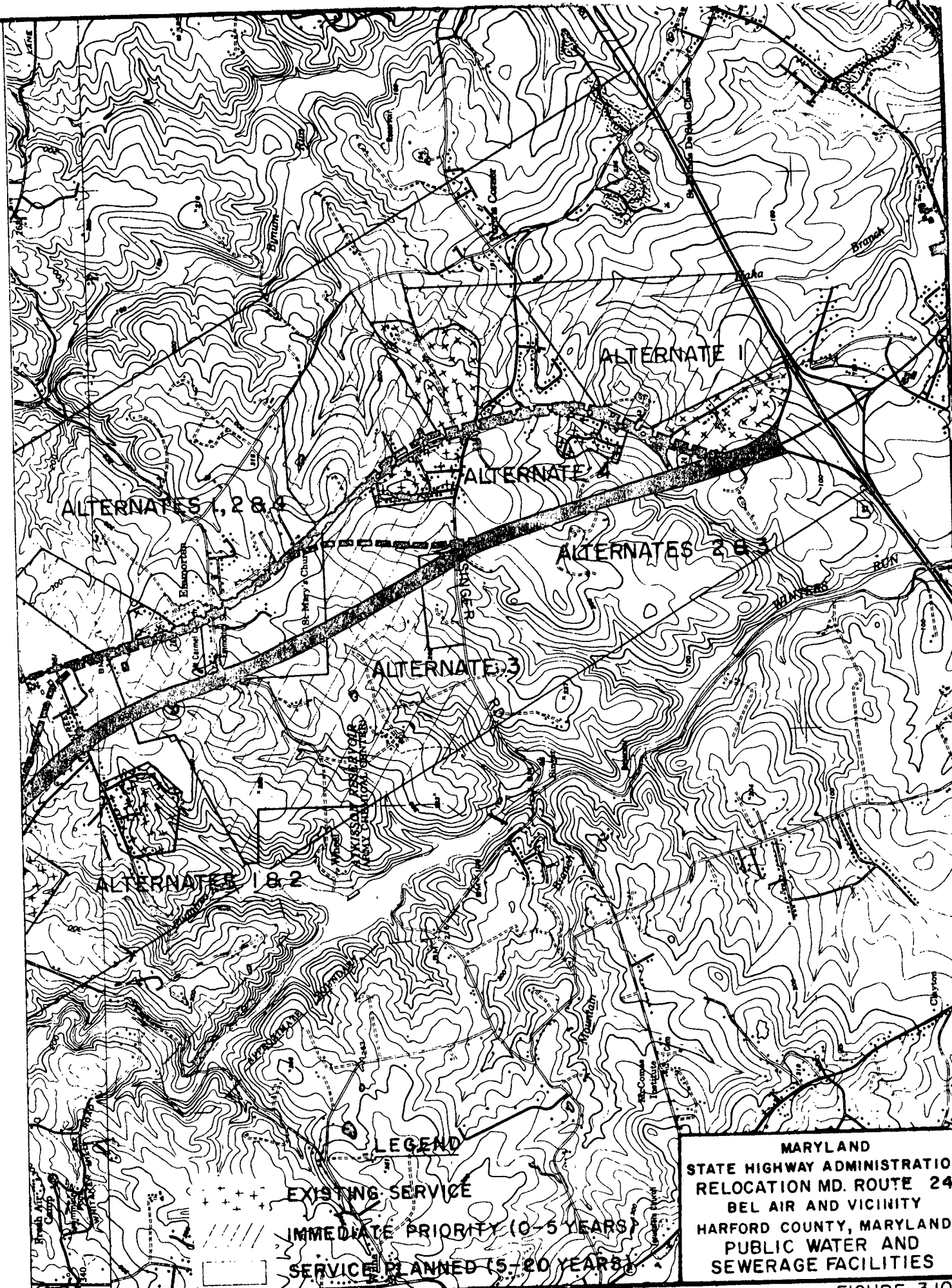
ALTERNATE 4

ALTERNATES 1, 2 & 3

U.S. BY-PASS

EXIST. MD. 24

JOPPA RD



LEGEND

EXISTING SERVICE

IMMEDIATE PRIORITY (0-5 YEARS)

SERVICE PLANNED (5-20 YEARS)

**MARYLAND
STATE HIGHWAY ADMINISTRATION
RELOCATION MD. ROUTE 24
BEL AIR AND VICINITY
HARFORD COUNTY, MARYLAND
PUBLIC WATER AND
SEWERAGE FACILITIES**

FIGURE 3.10E

ANTICIPATED EXTENT OF LANDFILL

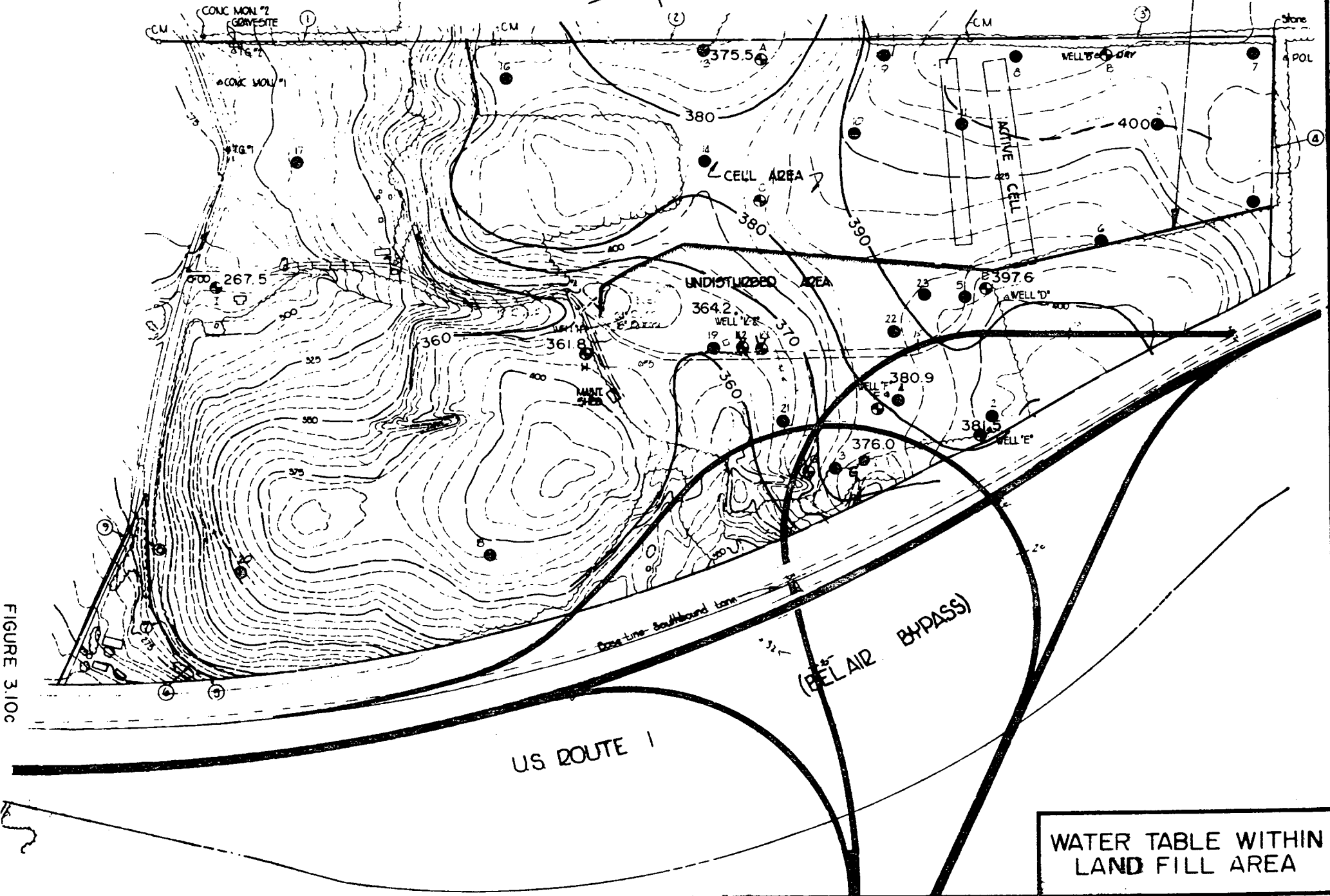
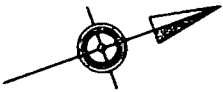


FIGURE 3.10C

WATER TABLE WITHIN
LAND FILL AREA

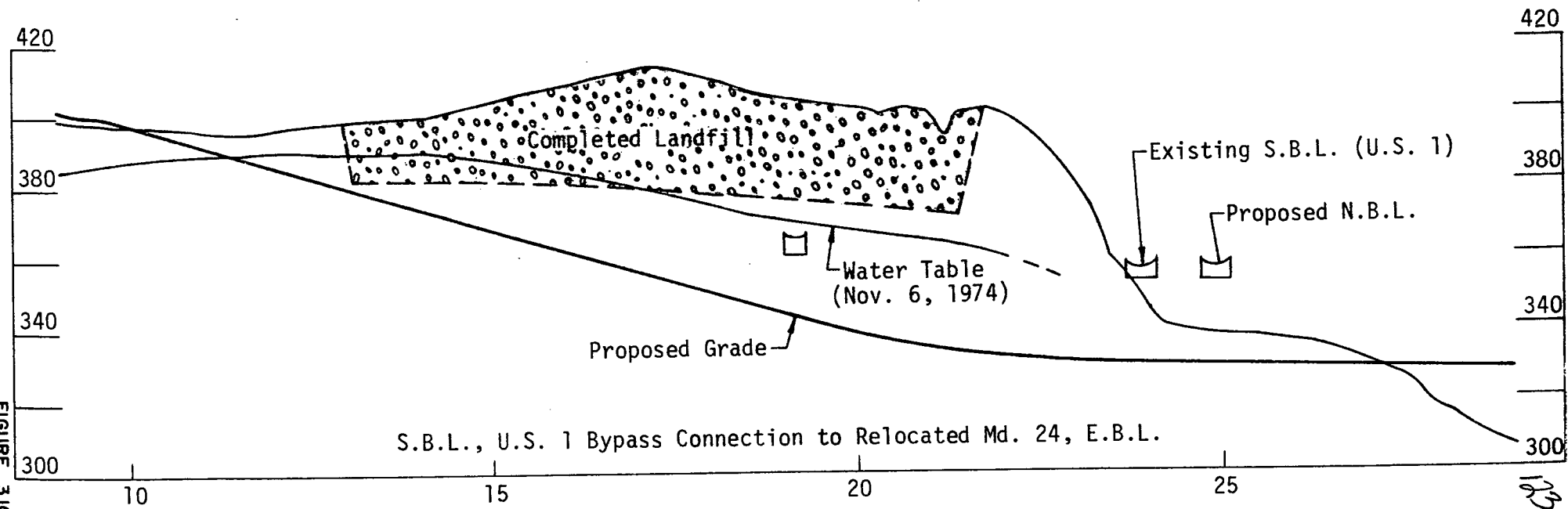
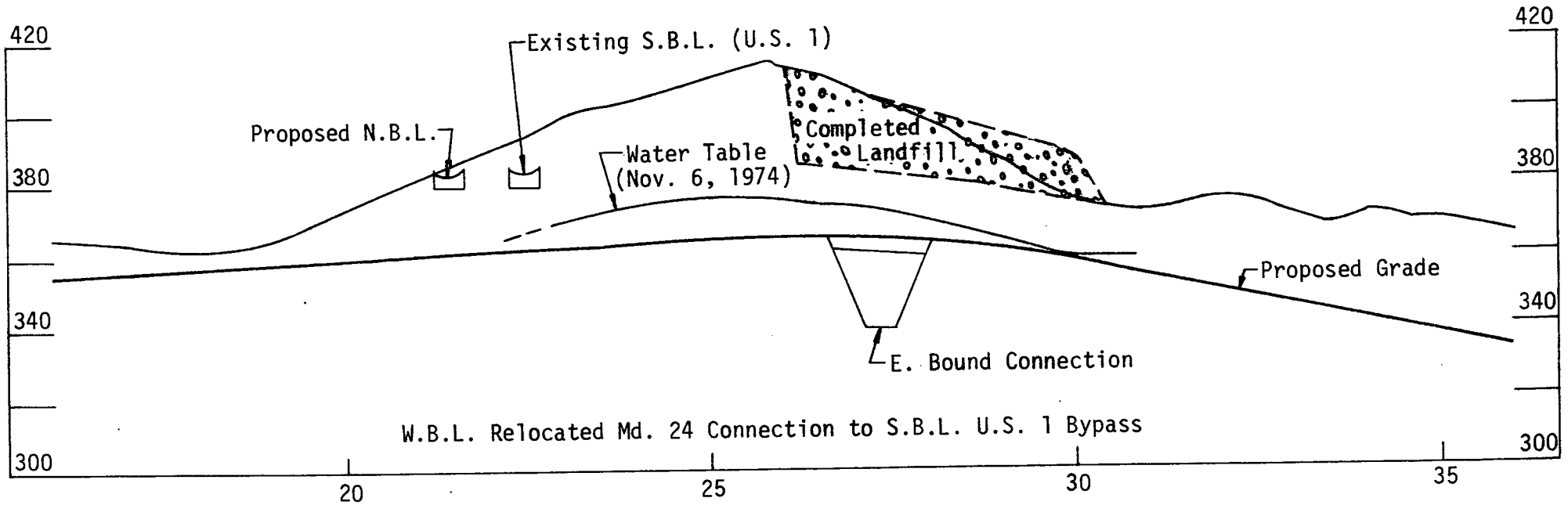


FIGURE 3.104

SCALE: 1" = 200' Horizontal/40' Vertical

CROSS SECTION OF TOLL GATE SANITARY LAND FILL

3.11 Utilities

Major utility problems are not anticipated in this project. A pumping station which is located on the east side of relocated 24 at Ring Factory Road will not be affected. There should be no problem in accommodating changes in existing transmission lines, sewage and water lines along with any other services such as gas which would be required under the relocation proposal.

3.12 Recreation

This project will result in improved access to two recreational areas in the Bel Air area. The project will provide people in southern Harford County a safer and faster route to central Harford County where the Harford Glenn Education and Recreational facility on Atkisson Reservoir and the proposed Heavenly Waters Park are located.

The proposed Heavenly Waters Park will surround the intersection of U.S. 1 Bypass and Relocated Maryland Route 24. The park is currently being designed as a multi-purpose recreational facility to be used by all the people of Harford County. The planners are fully aware of the proposed relocation and are planning the park around the intersection. Existing U.S. 1 right-of-way has been tentatively traded to Harford County in return for right-of-way through the Heavenly Waters area to the Harford Mall. The land acquired by Harford County from the highway administration will complement the design of the park. Access to the park will be via the Boulton Street extension which has an intersection with relocated Maryland 24. Access to this park will also be via Tollgate Road.

Harford Glenn Education and Recreational area is located approximately 1 mile west of the relocated 24 on Wheel Road. Wheel Road will have an at-grade intersection with the new highway. Thus, easier travel to this facility will be provided.

Indirect Effects

Indirect effects include those impacts caused by the primary effects discussed in Sections 3.1 through 3.13. Indirect effects are many times referred to as secondary effects or secondary impacts. They are created directly by the primary effects and not the proposed project itself. Growth in population and the economic base of an area is a common secondary effect, caused by a better transportation system, which in turn is a primary effect of this project. Section 3.15 is concerned with an assessment of indirect environmental effects.

3.13 Secondary Impacts

Area growth is probably the major factor contributing to a change in the social and economic structure of an area. This proposed highway like similar highways located in semi urban areas will increase the accessibility of the Bel Air area to the Baltimore Metropolitan area. This improvement in the area's accessibility to Baltimore and its major transportation corridors will invite new businesses both commercial and industrial to locate along the new corridor. With this influx causing growth in development of lands in the area, there must also be a change in the economic and social structure. This is a two-fold process by which the road affects the growth factor and the growth factor in turn affects the socio-economic structure. This process is known as an indirect or secondary effect of a project. This process, unlike those which occur as direct impacts, is very subtle and somewhat clandestine. It is a type of impact, whether it be beneficial or adverse, which develops very slowly.

Now more than ever indirect effects must be recognized and evaluated, for in many instances they play a more significant role than do the direct impacts. Potentially, the relocation of Maryland Route 24 offers such a situation.

As shown in previous sections of this Environmental Impact Statement, the Bel Air area has been subject to rapid growth. The construction of Md. 24 relocated will allow the Bel Air area to continue its development and growth. If nothing is built the area's transportation network will become increasingly inefficient until future growth will be hindered by the inadequacy of the network to support any new transportation demands brought by new development.

Indirect effects related to natural environmental conditions includes the transition of natural wildlife habitats to developed residential, commercial, and industrial lands as a result of increased accessibility to the area.

The Public Water and Sewerage Facilities Map (Figure 3.10b) shows that most areas where growth and development is anticipated will have public water and sewerage within five years. These areas are made up of the proposed developments of Box Hills and the Village of McLean. The only exception, is in the area of the proposed Constant Friendship Development where no public water and sewerage is planned within the next five years but is planned for in the next 5 to 20 years. The construction of the road and the possible development of the Constant Friendship Area may necessitate early development of Public Water and Sewerage in this area.

4.0 Recommended Alternative

During the development of this project, several alternate locations for the proposed project were studied and evaluated. These studies have included the analysis of alternate interchange designs as well as the effect on the local and regional roadway network. Some of the schemes were discarded on the basis of design features, construction costs, property damages or their inability to accommodate the future traffic projections.

In order to determine the best location for the proposed improvement, the State Highway Administration conducted studies in the corridor to investigate impacts of all feasible methods for accomplishing the improvement. These studies investigated the relative utility, capacity and safety of the alternative from the highway user's standpoint, as well as the relative effects on the local area, the disruption of local communities, relocation of people and the effects on the environment.

The Maryland Department of Transportation Action Plan is the tool which insures that all factors are considered when determining the location for a proposed highway. The specific purpose of the Action Plan is to achieve transportation improvements by the Department that are in the best overall public interest. The plan relies on application of interdisciplinary analysis, interagency cooperation, full public participation and early consideration to economic, social and environmental impacts in the Departments' planning, location and design process.

The Draft Environmental Impact/4(f) Statement was circulated for comment to public and private organizations and individuals in April, 1976. Subsequently the State Highway Administration held a location public hearing on June 29, 1976 at the Bel Air Senior High School for the purpose of receiving formal testimony concerning the five (5) alternatives discussed in the Draft Environmental Impact/4(f) Statement.

As a result of an intensive review of the engineering studies; public hearing testimony; comments received from federal, state and local agencies; along with a review of the social, economic and environmental consequences, it has been recommended that Alternate 3 be adopted for Final Design.

The five alternates that were studied during the location study and preparation of the Draft Environmental Impact Statement included the following:

Alternate 1 - On relocation from U.S. Route 1 Bypass to Plumtree Road. Along existing Maryland Route 24 from Plumtree Road to Saint Mary's Church Road. Relocation east of and adjacent to existing Maryland Route 24 from Saint Mary's Church Road to I-95.

Alternate 2 - Identical to Alternate 1 from U.S. Route 1 Bypass to Saint Mary's Church Road then continuing from Saint Mary's Church Road to Interstate Route 95 on relocation west of Maryland Route 24.

Alternate 3 - From U.S. Route 1 Bypass to a point north of Plumtree Road same as Alternates 1 and 2, then a new alignment from this point tying into Alternate 2 north of Singer Road. Identical to Alternate 2 from north of Singer Road to Interstate Route 95.

Alternates 1 and 3 require the relocation of residences. Alternates 1, 2 and 3 require acquisition of new right-of-way throughout the corridor.

Alternate 4 - Update existing Maryland Route 24 to the extent practical.

Alternate 5 - "Do-Nothing".

See Alternatives Location Map, Figure 4.0.a.

The following is a summary of the factors contributing to the determination that Alternate 3 is the only prudent and feasible alternative:

The recommended alternate provides the most effective long-term solution of the project objectives. Of primary importance is maintenance of an efficient highway transportation network which will permit the orderly growth and development of the Bel Air area. Alternate 3 by being on relocation its entire length, eliminates the inefficiencies of mixing through traffic with local traffic. All of the other studied alternates would require a mixing of traffic to varying degrees. As planned residential and commercial developments along Md. 24 are completed and become functional, the benefits achieved by separation of local and through traffic will become even more important.

Alternates 1, 2 and 4 would require fitting the proposed highway into a rapidly developing corridor from Emmorton to I-95. Thus, the additional ingress and egress points which would be required with these alternates would create continued traffic conflicts. In contrast, Alternate 3 which is on relocation its entire length, traverses primarily undeveloped land. Although some of this land is part of the proposed developments which front on existing Md. 24, new points of access will not be provided to these developments by Alternate 3. As a result, less congestion will occur and the highway network efficiency will be maintained for a greater period of time.

Alternate 3 provides the shortest overall travel length between the project termini. This factor together with the more efficient mode of operation provided with a relocated facility, results in the lowest annual vehicle operation costs for the alternates under consideration. In the event that Alternates 1, 2 or 4 had been selected for construction, and future residential and commercial development pressures in the Emmorton area and to the east dictated the need for a relocated facility at some future date, the long-term advantages of the adoption of Alternate 3 in terms of annual capital costs becomes much more apparent.

The combination of controlled access operation along the relocated facility provided by Alternate 3, together with a reduction of traffic

congestion along the existing facility, make the recommended alternate the safest and is subsequently estimated to have the least amount of accident costs.

Other factors which influenced the selection of Alternate 3 include the following:

1. This alternate is considered to have the least impact on historical sites within the project area. (See Section 8.0 and Section 4(f) Statement).
2. Alternate 3 has the least noise impact. (See Section 3.8).
3. Alternate 3 is more compatible with the Harford County General Development Plan of 1976 which shows a complete relocation for Md. 24 from U.S. Route 1 to I-95.

The following is a summary of the major benefits of the other studied alternates along with a summary of why each alternate was not selected:

Do-Nothing Alternate - The major benefit of this alternate is that it will have no direct adverse impact on wildlife, aquatic ecosystems, terrestrial ecosystems, water quality or archeological sites within the project corridor. Although, no capital will be expended for construction and right-of-way acquisition, this short-term benefit is negated by the long-term losses caused by an inefficient transportation network which hinders economic growth and development of the area.

Other factors influencing the decision not to implement the Do-Nothing Alternate include the following:

1. Increasing traffic congestion in and around Bel Air.
2. Increasing roadway user costs due to traffic delays.
3. Accident potential along the existing facility will continue to increase.
4. Reduced efficiency of the police and fire protection.
5. With construction costs increasing at a rate of at least 5 percent per year, any delay in constructing an improvement which may become an absolute necessity in the future, will require greater capital investments when construction is implemented.

Alternate 1 - This alternate was designed as a relocation which by-passes the congested areas of central Bel Air but uses to the greatest extent possible the existing Md. 24 corridor in the southern half of the project area. Although, this alternate would require less initial construction and right-of-way costs when compared to the recommended alternate, such short-term savings are out weighed by the benefits achieved through a complete relocation.

Other major factors influencing the decision to eliminate Alternate 1 from further design considerations include the following:

1. Alternate 1 will affect the historic integrity of four sites, three more than the recommended alternate.
2. Alternate 1 will have an adverse noise impact on seven of the eight affected sensitive areas. In contrast the recommended alternate has an adverse impact on three of the six sensitive areas it affects.
3. This alternate will have the most severe impact on the existing community by displacing forty people and four businesses.

Alternate 2 - Alternate 2 was designed to achieve a separation between the existing roadway and the relocation while at the same time minimizing impacts on the existing community. Alternate 2 would require no residence or business relocations. This alternate is adaptable to staged construction since it uses a portion of the existing roadway between Plumtree Road and Emmorton.

The benefits that are achieved with this alternate are, for the most part, offset by the disadvantages associated with utilizing a portion of the existing highway corridor.

Alternate 2 shares a common alignment with existing Md. 24 for a relatively short distance. A significant length of new highway construction is required to shift from the relocated corridor to existing Md. 24, then again diverging to a relocated alignment. The net results is a facility requiring a greater travel length, higher construction costs and a lower level of traffic operation than the recommended alternate. The joint use of the existing Md. 24 corridor creates additional traffic conflicts for both local and thru traffic.

Other factors which were considered in the decision to eliminate this alternate from further studies include the following:

1. This alternate would have a noise impact on three of the six sensitive areas affected by this alternate, including Mount Carmel Church (Historic Site).
2. This alternate will require the acquisition of sixty nine acres of property from four historic sites and will have an adverse impact on the historic integrity of five sites, four more than are affected by the recommended alternative.

Alternate 4 - This alternate involves improving the existing highway by providing additional traffic lanes and intersection improvements. This alternate reduces the construction costs by more than one-half and would require only one housing relocation and one business relocation. Although this alternative will relieve the existing traffic problems to some degree on a short-term basis, the long-term costs of a facility which reaches capacity in a short period of time combined with the increased user costs

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and higher accident potential make this alternative unacceptable. Other factors contributing to the determination that this alternate is not prudent or feasible included the following:

1. This alternate would result in excessive noise levels at all but two of the twenty three noise sensitive areas affected.
2. Alternate 4 would affect the historic integrity of seven sites, six more than the recommended alternative.
3. This alternate is not compatible with the plans and policies of Harford County.
4. If this alternate were constructed the capacity of the existing Md. 24 corridor would be extended for a relatively short period of time. Because of planned development in the Bel Air area, land suitable for a new highway corridor may not be available in the future.

Alternate Comparisons

Table 1

Costs

Alternates	1	2	3	4	5
Right-of-Way Costs	2,500,000	1,875,000	2,554,532	578,000	0
Construct (Initial)	8,716,450	9,722,397	10,554,366	5,156,470	0
Initial Total	11,216,450	11,597,397	13,108,898	5,734,470	0
Ultimate (Additional 2 Lanes)	4,395,801	4,967,243	3,610,900	--	0
Total Ultimates	15,612,251	16,564,640	16,719,798	5,734,470	0
Length	6.6 miles	6.6 miles	6.3 miles	7.5 miles	

Table 2

Relocation

Alternates	1	2	3	4	5
Number of Persons Displaced	40	0	30	1	0
Individuals Other Than Families	20	0	5	0	0
Number of Families	9	0	6	1	0
Number of Businesses	4*	0	0	1	0
Number of Churches	1**	0	0	0	0

* One Vacant Building Not Counted

** Calvary Tabernacle United Pentecostal Church

Table 3
Land Use Impacts

Alternates	1	2	3	4	5
Forest Acres	95	95	98	0	0
Open Space Acres ¹	109	137	158	0	0
Developed Acres ²	58	24	11	0	0
Wetland Acres ³	0	0	0	0	0

Footnotes:

- 1 Open Space - Includes lands of agricultural and non-agricultural herbaceous growth.
- 2 Developed - Includes lands which have been landscaped in order to compliment industrial, commercial or residential development.
- 3 Wetlands - Some areas within the required right-of-way of the Recommended Alternate, consist of poorly drained, seasonally wet meadows. Although these areas support some hydrophytic vegetation, their value as wetland habitat is very limited. These areas represent rather normal or common conditions and soils that may be found throughout the watersheds and much of this section of Maryland.

Table 4
Impacts of Recommended Alternate on Mature Forests

Map Site ¹	Total Acres	Approximate Acreage Destroyed
1	248	54
2	92	9
3	55	11
4	37	7

Footnote:

- 1 See Map of Mature Forest Sites, Figure 3.4.

Table 5
Excavation and Fill Quantities
Maryland Route 24
Alternate 3

Section	Excavation	Fill
(1) Interchange	705,266 cys	534,597 cys
(2) Bus. 1 to Ringfactory Road	127,031 cys	212,836 cys
(3) Ringfactory Road to South of Singer Road	504,232 cys	477,443 cys
(4) Singer to I-95	328,316 cys	290,611 cys
Total	1,664,845 cys	1,515,487 cys

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Alternate 3 (Location and Impacts)

The recommended alternate extends in a southeasterly direction from a point on U.S. Route 1 Bypass 1,200 feet north of Tollgate Road and 2,400 feet south of Vale Road. Between Tollgate Road and Vale Road the U.S. 1 Bypass will be widened from two to four lanes. The existing roadway will become the two southbound lanes and a new two lane roadway will be constructed approximately 50 feet east of the existing road surface and will become the two northbound lanes. The interchange is located in an area known as Heavenly Waters. The area lies east of U.S. 1 Bypass and consists of the Heavenly Waters Run stream bed and heavily wooded rolling topography surrounding the stream. On the west side of U.S. 1 Bypass is located the Tollgate Sanitary Landfill. The northbound and southbound lanes cross Heavenly Waters Run, requiring as much as 60 feet of fill to be placed in the stream valley.

A ramp will diverge from the existing U.S. 1 southbound lane and connect it to the southbound lane of Relocated Md. 24. This ramp will loop to the west of the bypass and cut through an area which is now part of the Tollgate Sanitary Landfill. This will require cuts to be made into the landfill in order that the required grade may be maintained. The alternate then curves in an easterly direction and passes under the four lane U.S. 1 Bypass. Two bridges must be provided at this point in order that the bypass can cross over this ramp. The ramp continues in a southeasterly direction over Heavenly Waters Run until it ties into the main alignment at Station 75.

Just north of Tollgate Road a ramp will be constructed to provide access from the northbound lanes of U.S. 1 to the southbound lanes of the Relocated 24.

Access from the northbound lanes of the relocated 24 to the U.S. 1 Bypass will be provided by two ramps which will diverge from the northbound lanes at approximately Station 59. The right lane of the northbound 24 Relocation will have a direct connection to the northbound lanes of the U.S. 1 Bypass. The ramp, which connects the northbound lanes of the recommended alternate to the U.S. 1 Bypass, must pass under U.S. 1. Two bridges will be built to provide clearance for U.S. 1 to pass over the ramp. On the west side of the bypass the ramp curves in a southerly direction through the landfill area and crosses over the ramp which connects southbound U.S. 1 to southbound Md. 24 Relocated. A fifth span must be built at this point to provide clearance for the two ramps. This ramp eventually connects with the southbound lane of U.S. 1. This interchange will be surrounded on all sides by the proposed Heavenly Waters Park.

From Station 75 the main alignment continues in a southeasterly direction abutting the Harford Mall which lies to the west from Station 85 to 100. At Station 90 there will be an at-grade intersection with the Boulton Street Extension. The Boulton Street Extension runs from Tollgate Road through the mall and connects with the old Boulton Street in central Bel Air. One thousand feet south of the Boulton Street intersection is the Bel Air Road (U.S. 1 Business) intersection. This intersection will also be at-grade. Roadway improvements will be made on Bel Air Road for a distance of approximately 1,000 feet to the east and 600 feet west of the intersection. These improvements consist of lane widening on the south side lanes of Bel Air Road. Bel Air Road connects to the U.S. 1 Bypass at Benson a few miles west of the intersection and

runs through Bel Air to the east. This road provides a major access route to Bel Air for traffic using the U.S. 1 Bypass. Many commercial establishments lie along Bel Air Road including the Harford Mall and the Bel Air Plaza. From U.S. 1 Bypass to Bel Air Road a distance of approximately one mile the initial construction of this alternate will be a four lane divided highway with a fifty foot median.

South of Bel Air Road to it's connection with I-95 the initial construction will be two lanes. The ultimate and final construction will be two more lanes bringing the total to four lanes within five years after the initial construction. The two lanes to be constructed initially will become the northbound lanes of the ultimate facility.

South of Bel Air Road the alignment is west of and adjacent to the Bel Air Plaza for a distance of 800 feet. A strip of land approximately 1,500 feet long and 100 feet wide extending from Bel Air Road to just south of the Bel Air Plaza has been purchased as right of way by the State Highway Administration thus reserving this parcel for the relocation. The road continues in a southeasterly direction and passes into a wooded section of land at Station 112. Between Station 120 and 123 the alternate must pass over an existing sewer line and Plumtree Run. The alignment passes from the flat forested area up a slight grade and crosses under some power lines into open pasture land at Station 129. Open pasture land and a rolling topography is predominant from Station 129 to 155. From Station 125 to Station 145 the alternate curves in a more southerly direction. At Stations 134+80 and 147+40 the alignment passes over two intermittant tributaries of Plumtree Run requiring approximately 20 feet of fill at both locations. Between Stations 135 and 145 the alternate lies only 600 feet west of the residential development of Wakefield Meadows. From Station 155 to 169 the alignment cuts across the side hills adjacent to Plumtree Run on which the vegetation is mixed hardwoods. An intermittant tributary of Plumtree Run is again crossed near Station 160. The road continues southbound crossing a sewer line and Plumtree Run at Stations 166 and 165 respectively. The alternate joins Ring Factory Road at a point three-tenth of a mile east of Tollgate Road. A relocated Ring Factory Road will be constructed some 40 feet north of the present road surface thus providing an improved horizontal alignment for it's at-grade intersection with Relocated Md. 24. The relocation of Ring Factory Road will extend from a point 300 feet east of the intersection to a point 500 feet west of the proposed intersection. Ring Factory Road serves the developments of Comelot and Forest Lawn. From Station 169 to 195 the alternate will lie on side hills of Plumtree Run passing through open pasture land. The alignment curves in an easterly direction passing over Plumtree Run at Station 187. From here the proposed highway continues in a southerly direction paralleling Tollgate Road at a distance of 400 to 600 feet. Between Station 190 and Station 195 the alignment lies approximately 500 feet south of Evergreen Heights. Between Stations 200 and 215 the road surface of the initial construction lies just 200 feet from homes located along Tollgate Road. When ultimate construction is completed these homes will lie within 150 feet of the highway. From Station 200 to Station 207 as the ascending grade of the proposed highway extends towards Plumtree Road the alignment crosses two small intermittant tributaries of Plumtree Run. At Station 216 an at-grade intersection with Plumtree Road will be provided. Road surface and grade improvements will be made for a distance of 250 feet east and 200 feet west of the proposed intersection. Several residences will be required at this intersection.

South of Plumtree Road the proposed highway continues its southerly run across a relatively flat terrain. The road continues south crossing a small intermittant tributary of Winters Run. From this tributary the road will continue downgrade until it intersects Wheel Road at Station 250. A portion of Wheel Road extending from a point 500 feet east of the proposed highway to a point 550 feet west of the proposed road, will be relocated south of the existing road surface. This relocation will eliminate the sharp bend which now exists at this point on Wheel Road. This is a low lying area and several springs are found in the vicinity of this intersection. The road continues southbound passing through a small wooded area into relatively open and flat terrain until Station 276 where it will pass over an intermittant stream. Stations 271 to 277 and 293 to 305 are forested areas. At Station 305 the proposed highway will have an at-grade intersection with Singer Road. Grade improvements will be made on Singer Road for a distance of 350 feet east and 500 feet west of the proposed intersection. Singer Road serves the residential development of Preston Manor.

South of the Singer Road intersection the alignment will travel in a more southeasterly direction through open farm land until Station 64 where it will pass down a slight draw along the edge of a wooded area adjacent to Constant Friendship. At Station 81 the proposed highway will cross over a dirt road which provides access for a private farm house to Porter Drive and Existing Md. 24. From this farm road the alignment continues decending until Station 94 where it crosses an intermittant stream. At approximately Station 100 an intersection will be provided with the new Woodsdale Road. The new Woodsdale Road will extend from the intersection of Existing Md. Route 24 and Woodsdale Road to the intersection of the proposed highway, a distance of approximately 800 feet. On the west side of the intersection Woodsdale Road will curve to the south and join Arundel Road. From Station 100 the proposed highway continues approximately 1,000 feet in a southerly direction and joins Existing 24 near I-95.

Impacts of the Recommended Alternate

Socio-Economic

The Recommended Alternate has an initial right-of-way and construction cost of \$10,554,366 with the right-of-way comprising \$2,544,532 of this total cost. The ultimate construction will add an additional \$3,610,900, bringing the total to \$16,709,798. The higher right-of-way costs for this alternate is partially due to the fact that the alignment between Ring Factory Road and Singer Road involves taking five residences valued at between \$25,000 and \$50,000 in addition to 110 acres of unimproved land valued at \$704,000. This alternate will displace a total of thirty people. The direct initial affect on tax revenues will be an annual loss of approximately \$12,000.

The proposed alternate, being located in an area away from the main corridor of residential and commercial development, will not greatly disrupt the neighborhoods and the lives of residents during construction. The alternate would serve the function of removing congestion from the Bel Air area efficiently by avoiding the mix of local and thru traffic. This alternate is the shortest of all alternates considered in the study, thus, it will

contribute substantial savings to the motorist. Because the recommended alternate provides for the control of access along its entire length, significant benefits will result from the standpoint of traffic safety.

Relocation Impacts

This proposed facility will not, generally speaking, have a disruptive effect on the adjacent communities. First, in the section between U.S. Route 1 and Business Route 1, the alignment traverses unimproved property. In the vicinity of Business Route 1, there is extensive commercial development, but there would be no adverse impacts as a result of this construction. Further, there are no adverse effects on particular groups, such as elderly and handicapped. Hardship or adverse impact to community facilities and services are not anticipated. A recent field inspection revealed that MacDonalds' has erected one of their standard carry-out food outlets in proximity to this alignment. It is not possible at this time to determine exactly what effect this alignment will have on the MacDonalds' property. Aside from this possibility, no adverse effect on residential, commercial and industrial development is anticipated, nor will population disposition be affected. It is expected that adjacent property values will remain stable and possibly increase as a result of the construction of this alternate.

In the area between Business Route 1 and south of Plumtree Road, the land use is agricultural with middle income residential development scattered along this alternate. Otherwise, the community impact is much the same as described above.

From Plumtree Road south to I-95 the alternate will not affect any existing residential and commercial communities. Access to community services, facilities and shopping areas will most probably be improved. Schools, churches, and recreational centers will not be affected.

Six houses will be affected. It is estimated that thirty persons will have to be relocated. These six families are owner-occupants. There will be no businesses, farms or non-profit organizations displaced. There is no known effect on members of a minority group.

The relocation plan for this alternate will utilize the existing housing market in the area of the project. At the time of this study, forty-seven single family dwellings were for sale in the area. This is typical for this area of Harford County and agrees with former surveys of available housing. Of these, there were sufficient homes available in the price ranges that the relocatees could be expected to afford. In addition, there were approximately fifty rental units available in most price ranges.

There will be no impact on the neighborhood into which the displaced persons are expected to move. There are no known Federal, State or municipal programs that would affect the housing market. Lead time required could be as little as six months and not more than twelve months. Those persons who will be relocated will be provided with the benefits and payments as required by the "Uniform Relocation Assistance and Land Acquisition

Policies Act of 1970", (Public Law 91-646). These services would be provided by the Office of Real Estate, District #4, Brooklandville.

See Standard State Highway Administration Relocation Form (SHA 63.0 - DP - 1) on the following page.

Planning

The proposed facility is located west of the existing Maryland Route 24, thus it avoids all but a few of the existing structures located on Plumtree Road. Impacts on existing land use patterns will be greatly reduced by this alternate.

Construction of this alternate on lands which are primarily now vacant will permit the future land use pattern to adjust to the highway location. In addition, a review of planning documents prepared by the Harford County Planning and Zoning Department indicates a preference of a Relocated Maryland 24. Thus, this alternate is consistent with present plans and policies for the county.

Water Quality

Minor stream channel alterations are anticipated at most of the stream crossings. Since the proposed project has not progressed beyond the preliminary design stage, the exact nature of these alterations has not been determined. Generally, they consist of channel straightening in the immediate vicinity of the crossing structure, along with the placing of stone rip-rap to protect the structures from flood damage. Improvements or alterations to the stream channels would be designed to provide for a low flow channel to assure free passage for stream biota. Permits from both the Maryland Water Resources Administration and the U.S. Army Corps of Engineers are required for such actions, and are granted only after careful review of plans and specifications. The specific type of stream alteration will be determined during the design phase of the project. Normally, the damage is short-term, in the form of sedimentation and loss of some bottom dwelling organisms. The U.S. Fish and Wildlife Administration will be contacted and coordinated with during the design phase of the project.

Ground Water

The recommended alternate will affect ground water flow at the various locations of cuts and fills.

Ground water impacts are as follows:

U.S. Route 1 - Maryland Route Interchange

Both the Westbound Lane of relocated Maryland Route 24 connection to the Southbound Lane of the U.S. Route 1 Bypass and the Southbound Lane Bypass connection to relocated Maryland Route 24 Eastbound Lane have sizeable (44 to

Bureau of Relocation Assistance Office of Real Estate 300 West Preston Street - Room 402 Baltimore, Maryland 21201	STATE HIGHWAY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION OF MARYLAND	S.H.A. 63.0-DP-1 (10-35-74) Page 1 Preliminary Relocation Studies Maryland Project: H520-1-423 Federal Aid Project: S 9075(7) Federal: U.S. Rte. 1 to I-95 Alternate Number: 3 General File No. 5R559
Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement <input checked="" type="checkbox"/> Acquisition Stage Study _____		

RESIDENTIAL OCCUPANTS AND IMPROVEMENTS AFFECTED

OCCUPANCY STATUS	DWLS.	DWLG. UNITS	FAM.	IND.	TYPE OF CONSTRUCTION							AGE								BEDROOMS				ESTIMATED VALUE (000's) OF NEW (USE 10%)								
					BRICK	FRAME	CONV.	DET.	SEM. DET.	ROW	MULTI FAM.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up	\$0-\$20	\$20-\$40	\$40 -					
OWNER OCCUPIED	6	6	6	6	4	2		6						2	3	1				4	1	1				4	1	1			4	2
TENANT OCCUPIED																																
TOTALS	6	6	6	6	4	2		6						2	3	1				4	1	1				4	1	1			4	2

RESIDENTIAL IMPROVEMENTS AVAILABLE

ASKING PRICE RANGE (000's)	DWLS.	TYPE OF CONSTRUCTION							AGE			ROOMS								BEDROOMS											
		BRICK	FRAME	CONV.	DET.	SEM. DET.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up											
\$0-20	5	1	3	1	4	1			1	4			3	2				3	2												
\$20-40	15	5	5	5	15			3	9	3			4	11				4	11												
\$40 -	27	18	6	3	27			16	6	5			5	21	1				5	22											
TOTALS	47	24	14	9	46	1		19	16	12			7	18	21	1			7	18	22										

Source: Harford County Multiple List

SER.	MONTHLY RENT						APT.	WORKS	TOTALS
	0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250	\$250 to \$300	\$300 & UP			
1		10	11				21	21	
2			10	12			22	22	
3			5	7			10	2	
4 up									

Source: Harford County Multiple List

4.0.14

BUSINESSES, FARMS, AND NON-PROFIT ORGANIZATIONS AFFECTED

OCCUPANCY STATUS	BUSINESSES					FARMS				NON-PROFIT ORGANIZATIONS			
	RETAIL	CONV.	HOPE.	CHAIN	EMP.	DAIRY	CATTLE	TRUCK	EMP.	RFL.	SOC.	INST.	EMP.
OWNER													
TENANT													
TOTALS													

AVAILABLE REPLACEMENT SITES

TYPE OF SITE	BUSINESS	NON-PROFIT	FARMS
SALE			
LEASE			
TOTALS			

Source: _____

Remarks: _____

Estimated average family size 4 - 30
 Estimated total number persons affected _____
 Estimated number of minority group members affected N/A, number of owner occupant families N/A, number of tenant occupant families N/A, and number of individuals N/A.

Estimated number of minority owned or operated businesses _____
 Estimated number of minority employees _____
 Estimated number of minority owned or operated farms _____ N/A
 Estimated number of minority employees _____
 Estimated number of minority non-profit organizations _____
 Estimated number of minority employees _____

Signature: Richard Skope (RELOCATING OFFICER) Date: 4/10/75 -- Revised - 3/28/77

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67 feet deep) cuts proposed on the west side of the present U.S. Route 1 Bypass. Each of these cuts will be through portions of the existing Tollgate Sanitary Landfill and will include areas that have been filled with refuse. Data from borings, ground water monitoring wells, drainage pits, and landfill excavations were used to construct a ground water contour map (Figure 3.10c) and indicate that ground water and stability problems will be encountered.

The Maryland Route 24 Westbound cut extends from approximately Station 20 to beyond Station 40 and varies in depth from 5 feet to 44 feet (Figure 3.10d). From approximately Station 26 to Station 30 the upper portion of the cut will be in completed landfill. Measurements of the depth of the existing drainage pits suggest that the refuse is present to depths of 27-28 feet. The base of the refuse also represents the original bedrock-saprolite interface or where trenching by the landfill operators met refusal. Ground water measurements indicate that the cut will intersect the water table, at least in those areas where information is available.

The Maryland Route 24 Eastbound Lane cut extends from Station 10 to approximately Station 25 and varies in depth from 8 feet to 68 feet. The upper portion of the cut will be in refuse fill from approximately Station 13 to Station 22. Based on available data the refuse fill in the area is as thick as 30 feet in places. Ground water measurements suggest that part of the water table is, at present, in the refuse and part below the refuse. The water table is higher than the bottom of the proposed cut along the entire length of the cut.

The proposed cuts in the U.S. Route 1-Maryland Route 24 Interchange area will lower the water table in the immediate vicinity of the cuts and will alter the ground water flow direction toward the cuts. Some problems with seepage may occur on the cut slope because of the general water table lowering but no major difficulties should develop. The most critical problem will occur in the refuse fill areas where percolating leachate in the refuse will possibly flow along the refuse fill-bedrock interface and toward the cut. Contamination of the surface waters would occur and, depending upon the slope of the refuse fill-bedrock interface, a zone of potential slippage might be present.

As previously discussed the interchange geometrics will be further studied during the next design phase. If the scheme adopted for final design involves encroachment on the sanitary landfill precautions will be taken to prevent water quality degradation. - See page 3.9.3(A)

Other construction in the interchange area, including the remaining sections of the Maryland Route 24 Westbound Lane, the Southbound Lane, the Westbound Lane Ramp, and the Northbound Lane Ramp, is involved with normal highway fill. Some local raising of the water table may occur but in most cases local drainage is associated with the low fill areas and these drainageways will be maintained by culverts, etc., so that the water table will remain essentially where it is at pre-construction time.

Before final design is completed on the U.S. Route 1-Maryland Route 24 Interchange, the area should be investigated by closely spaced borings especially where refuse fill exists. It is critical that the depth of the refuse fill and the depth of the refuse fill-bedrock interface and/or the saprolite-bedrock interface be determined so that a proper cut design can be made to guarantee leachate control and slope stability.

Ring Factory Road to Plumtree Road (Stations 170-215).

At this point the alignment is much closer to the houses on Tollgate Road, which are at present served by wells, than are the other two relocation alternates.

The houses are on a gentle ridge and the fill of the gully to the north should improve recharge to the wells. At Plumtree Road intersection (See Site #4, Figure 3.10b) there are three, possibly four houses whose wells could suffer some loss of recharge as the result of highway paving and drainage. Service is planned for the area in the five to ten year period.

Plumtree Road to Wheel Road (Station 215 to 250).

Most of this section is now farmland with no ground water use, except for two spring fed farm ponds (See Site #5, Figure 3.10b) at about Station 235. The smaller pond will be covered by highway fill. This factor, along with improved drainage through the culvert, may lessen the ground water discharge to the lower pond. It is not possible to estimate the proportion of ground water seepage to surface inflow in the maintenance of the water level in the lower pond, but after construction reduced ground water flow may cause lowering of water levels in dry periods.

The houses along Wheel Road are now served by wells and a developed spring exists at the bend in Wheel Road (See Site #6, Figure 3.10b). The 15 foot deep cut between Station 239 and 247 will probably affect ground water flow in the area, as well as breaching the existing pond. The area is of Immediate Priority for water service and affected houses could probably be supplied by the time the highway is constructed.

Wheel Road to Singer Road (Stations 250 to 305).

This section is now farm land with no ground water use close to the highway. From Wheel Road to about Station 275 water service is planned in the five to ten year period. The deepest cut in this section is 19 feet deep and probably will not materially alter ground water flow patterns. Future domestic wells in the area should not be affected by the highway.

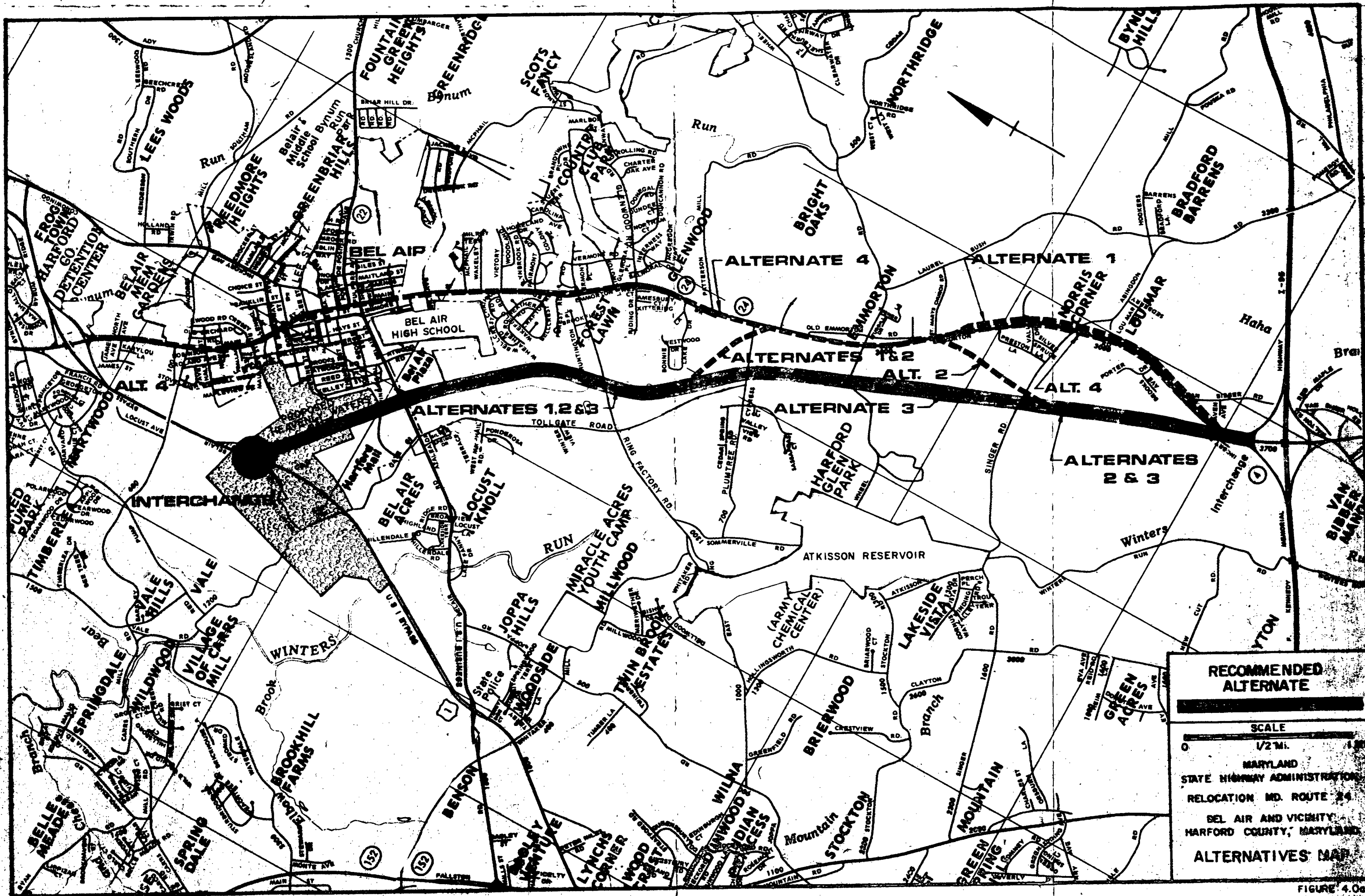
From Station 275 to Singer Road water service is in the Immediate Priority category. Two cuts in the section, 26 and 24 feet deep are deep enough to cause some small diversion of the ground water flow directions. The effect will not be large enough to hinder future domestic well development.

If wells should in fact suffer a loss in water supply due solely to the referenced cuts into permeable aquifers, the State Highway Administration would take appropriate measures to restore water supply to the affected dwellings.

144

Historical - Archaeological Impacts

The impact of the Recommended Alternative on properties and sites of historical and cultural significance is provided in Section 8.0 of this Statement.



RECOMMENDED ALTERNATE

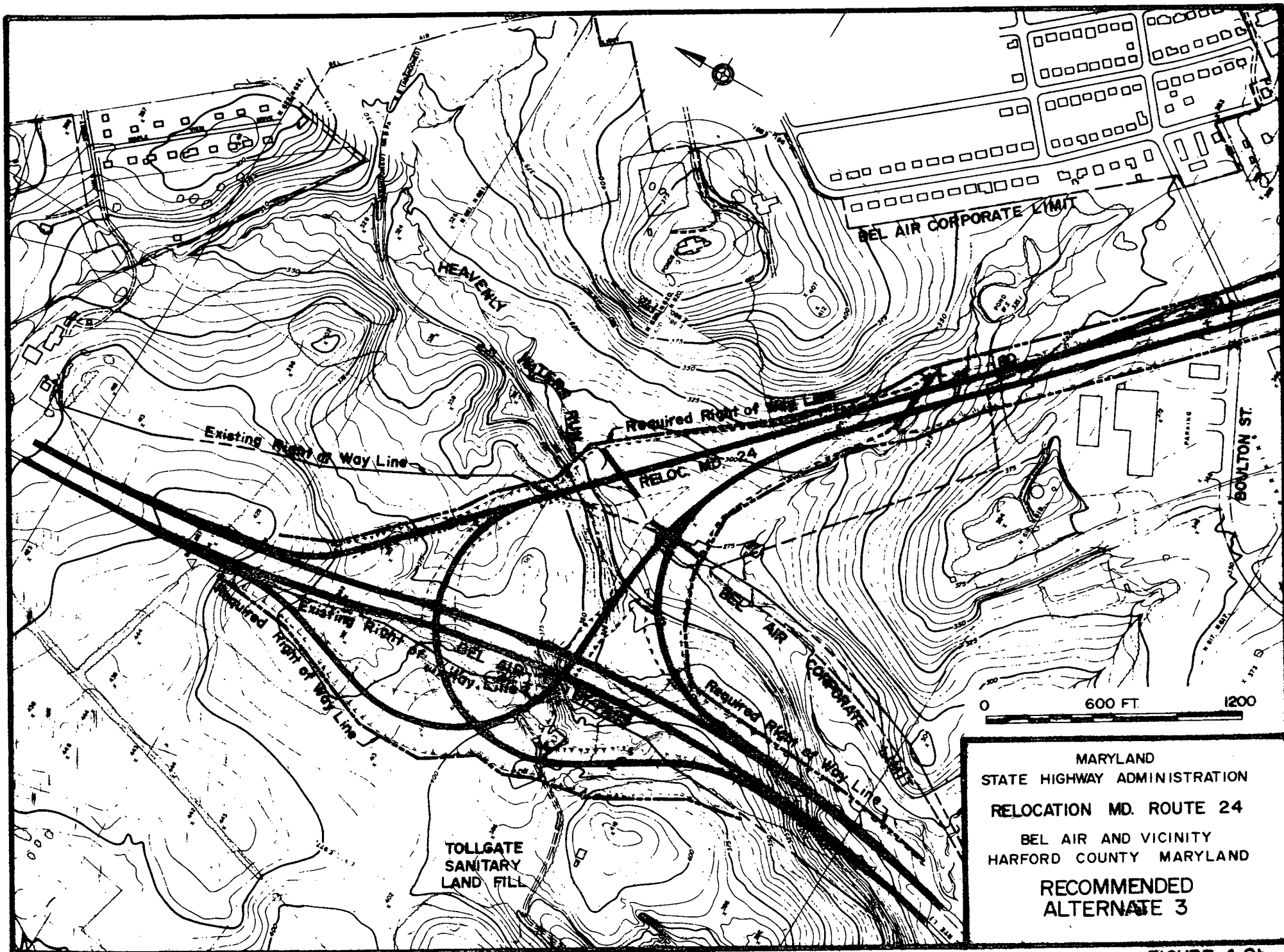
SCALE

0 1/2 Mi. 1 Mi.

MARYLAND
STATE HIGHWAY ADMINISTRATION
RELOCATION MD. ROUTE 24
BEL AIR AND VICINITY
HARFORD COUNTY, MARYLAND

ALTERNATIVES MAP

FIGURE 4.0a



MARYLAND
 STATE HIGHWAY ADMINISTRATION
 RELOCATION MD. ROUTE 24
 BEL AIR AND VICINITY
 HARFORD COUNTY MARYLAND
 RECOMMENDED
 ALTERNATE 3

FIGURE 4.0b-148

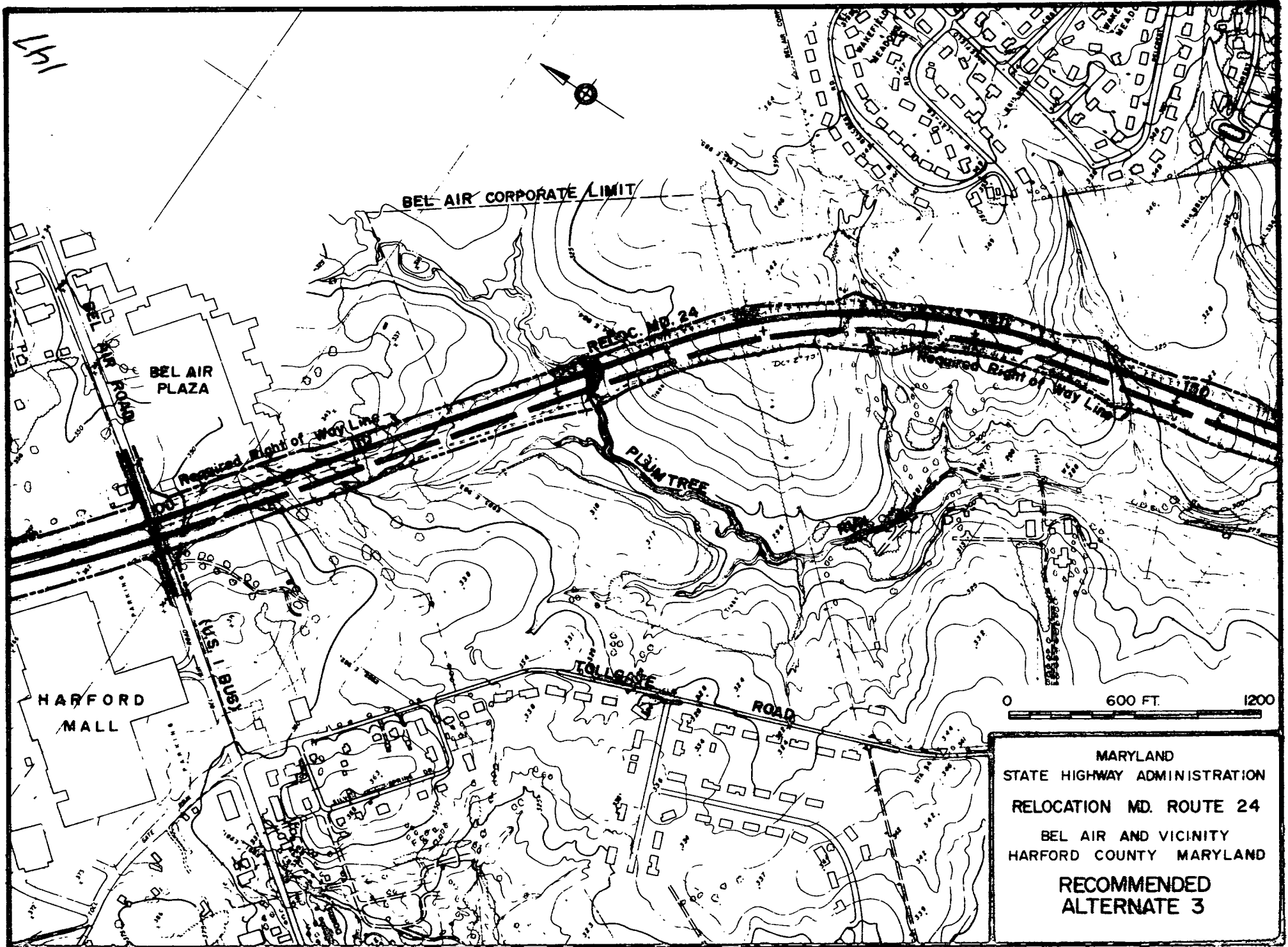


FIGURE 4.0c

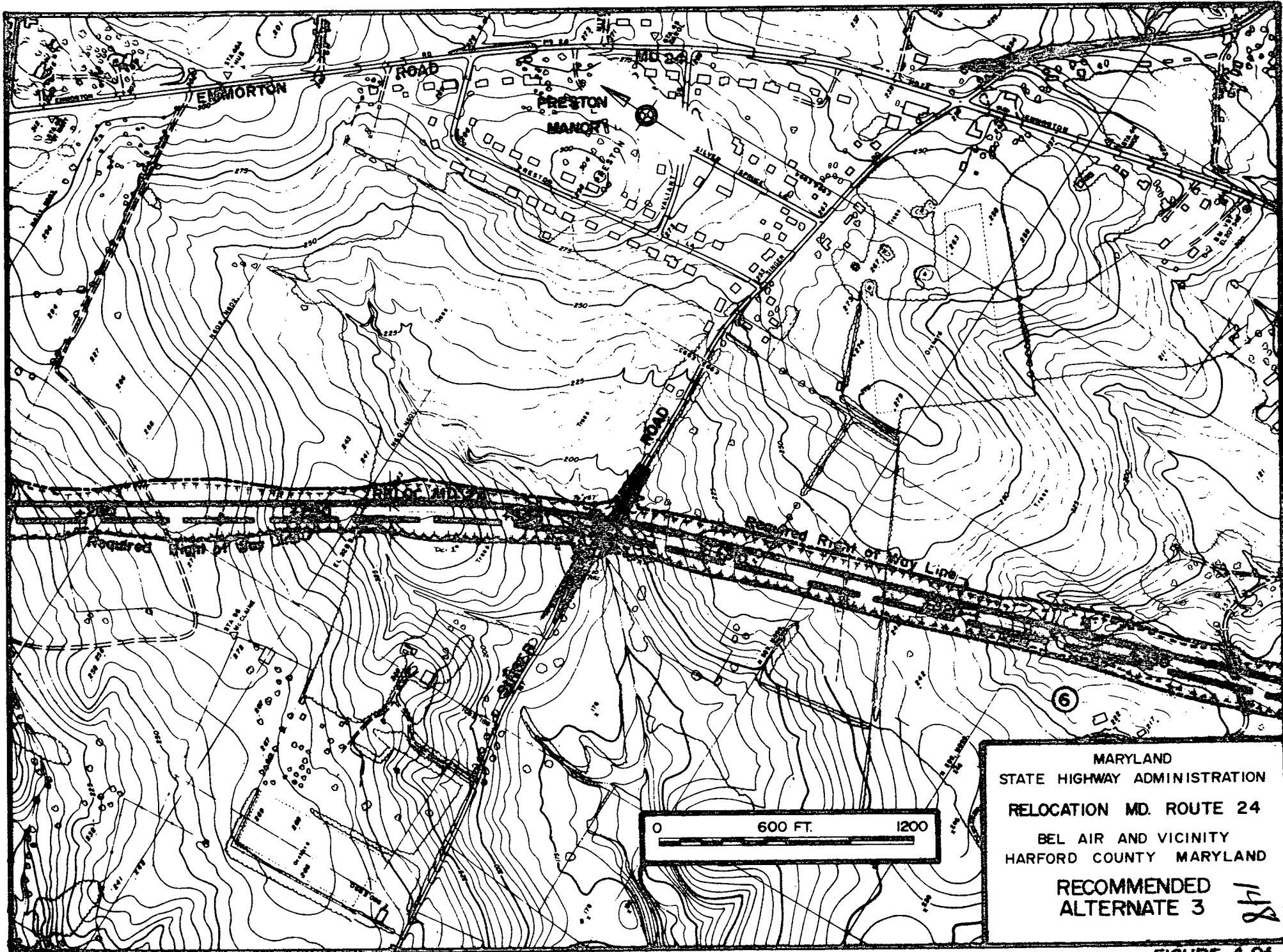


FIGURE 4.01

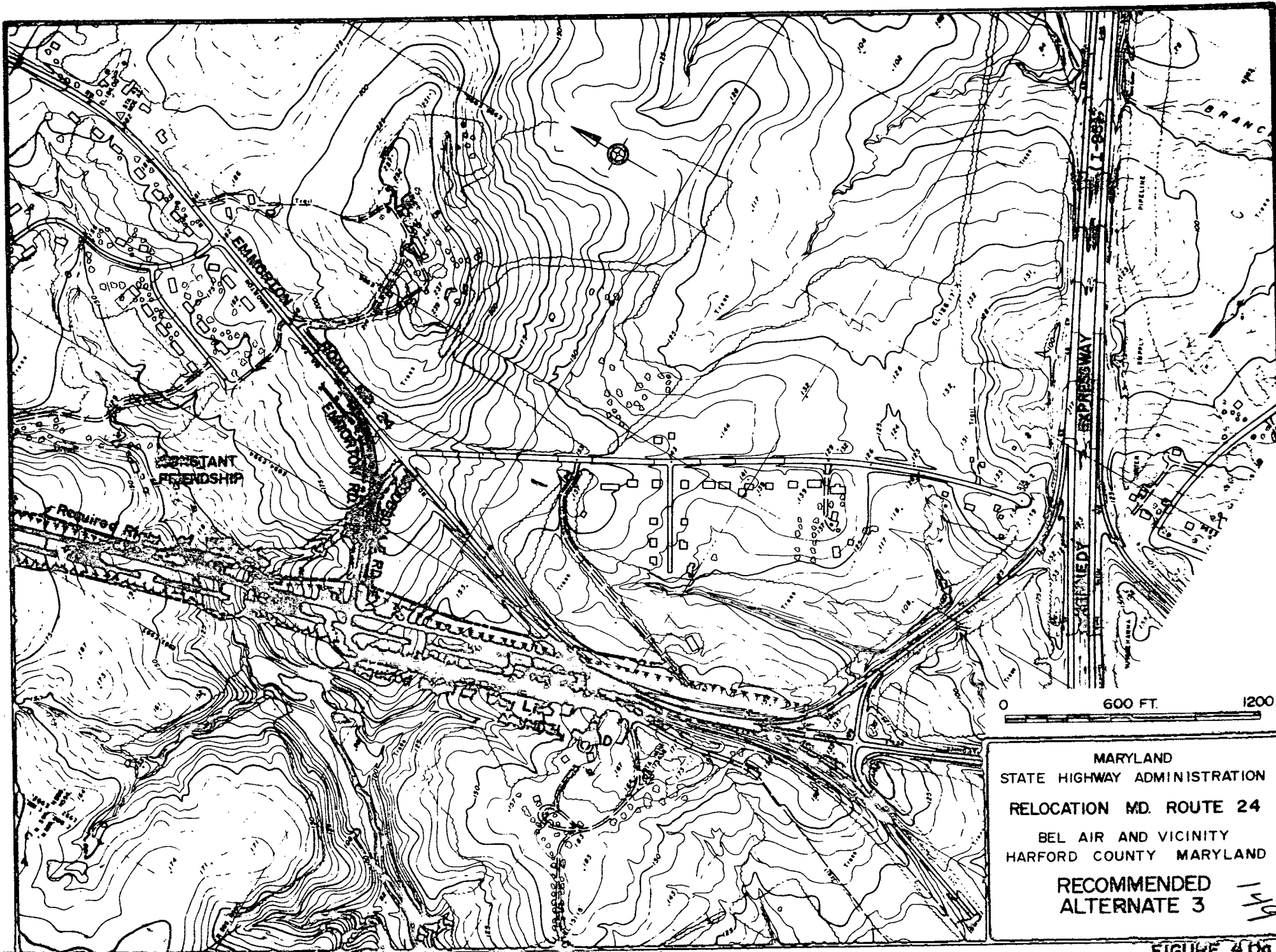


FIGURE 4.06

5.0 Any Probable Adverse Environmental Effects
Which Cannot be Avoided
Should the Proposal be Implemented

The adverse environmental effects can be divided into two categories, those which will take place during construction and those which will be present after construction and continue indefinitely.

The environmental effects during construction include sedimentation, open burning, erosion, contaminated water supplies, nuisances such as dust, noise, temporary traffic delays and detours and open unseeded slopes on aesthetic qualities. These adverse affects will be minimized by the implementation of policies and procedures set forth by the highway administration.

The long-term adverse environmental effects may include noise levels, relocation of families and houses, loss of agricultural land, change in land use. The following is a brief description of those adverse environmental effects which are significant and cannot be avoided.

An adverse effect, which cannot be eliminated, will of course, be the necessity for acquiring the project right-of-way and diverting it from other uses. The adverse effects also include the disruption and inconvenience to those who will be forced to relocate their homes as a result of the proposed construction. During the construction period some unavoidable noise will be experienced in the project area. A major long-term impact will be the expected change in land use, especially in the interchange areas. This will have the effect of increasing the population density in the area, and this expected development will produce an impact on the environment.

Another unavoidable impact associated with the construction of the proposed highway facility, which is difficult to define, is the social impacts imposed upon those individuals whose homes are displaced by the highway construction.¹ The displacement of these individuals disturbs the social homogeneity of the social areas that have similar styles of life. It would be considered fairly accurate to assume that the degree of the highway impact on the affected communities is directly related to the degree of social intimacy disturbed. For instance, the long-range effect of the highway proposal might be to increase the number of residents as a result of new building activity. More often than not, former residents will be engulfed by a new style of life so that their degree of social intimacy and thus their community environment are adversely affected. Too often, the assessment of the highway impact associated with the acquisition of residences rests solely on the compensation for the economic value of the dwelling unit, while the economic and social importance of the dwelling units are dissimilar. The dislocation of a specific segment of the population from a given community not only implies a change in budgetary allocations for the dwelling unit used but also a change in style of life per se. This change in the individuals' budget

as a result of changing rent or mortgage payments permanently influences other budgetary items for these family groups and might decrease the probability to participate in a life style similar to that which they have been accustomed.¹

Adverse effects could occur by the creation of unstable slopes by highway cuts and fills and by damage by cuts and fills to local ground water flow systems.²

Short term effects on surface water quality could occur from sediment deposited in streams and lakes during construction. Practicing erosion control procedures that are established would minimize these effects.³

The Recommended Alternate will require acquisition of land from an area which is destined for use as the Harford County Park. Heavenly Waters Park is to be located around the interchange area where U.S. 1 Bypass connects with the relocated Maryland 24. The proposed highway construction thru this area will result in the elimination of approximately 54 acres of prime forest land. However, all but approximately 15 acres of this woodland is within SHA property previously acquired for the proposed interchange construction. Throughout the relocation corridor the highway crosses through the Plumtree Run Flood Plain. At several points throughout the corridor are prime forest areas. These forest areas combined with Plumtree Run make for good recreational land which is becoming very scarce in the rapidly growing Bel Air area. Several of these potential recreational areas will be encroached upon by the proposed highway. With the destruction of these forest areas must also come the disruption or destruction of the ecological systems within those forests.

The extent of many of these impacts have been discussed in Section 3.0 (Probable Impact of the Proposed Project) and Section 4.0.

Table 3 on page 4.0.7 shows the various land use acreages that may be lost due to highway construction.

1 3.2 Socio Economics, This EIS.

2 3.10 Ground Water, This EIS.

3 3.9 Water Quality, This EIS.

6.0 The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

Much of the disruption to the environment which occurs during construction of a highway is of short-term duration. The final outcome of the project should have a long-term beneficial affect on the whole environment.

The most noticeable uses of the environment are during construction. The conversion of land from agriculture and other uses to right-of-way for the highway is the most obvious use. It is one which must be considered a long-term use of man's environment. Increased noise levels, air pollution due to dust and smoke from construction equipment, erosion and sedimentation, and disruption of normal traffic patterns are adverse impacts which are of short-term duration during the construction of the highway. This short-term use of the environment should be offset by the increased long-term benefits which will be incurred by this project. These benefits include a safer highway, more efficient travel network, along with increased assessability to the Bel Air area which should stimulate future industrial, commercial and residential growth and development.

The short-term uses of the environment, which include the inconveniences to people who must relocate, road detours, construction nuisances and the farm land and wood land taken for construction, is outweighed by the maintenance and enhancement of the long-term productivity by reducing traffic congestion, improving access and improving traffic safety.

7.0 Any Irreversible and Irretrievable Commitments
Of Man's Resources Which Would be Involved
In the Proposed Action Should it be Implemented

The proposed highway improvement is an investment of long-term nature. Because it is, it must be considered relatively permanent. Although transportation must be responsive to technological change, advancements in motor vehicle transportation will probably be consistent with the present form of highway transportation or with modifications that can be made logically and economically. The land used for construction of the highway surface is lost as a resource for future use.

The new highway will provide better access to areas of undeveloped land, thus opening up that land to future development. This will eliminate such land from the resource inventory of the Bel Air area. The adverse impact of this irreversible change in the land use adjacent to the highway can be minimized by proper planning and controls imposed by federal, state and local planning agencies.

The large amounts of money and man-hours which must be expended for the construction of such a highway is of course an irreversible and irretrievable commitment of man's resources. Material commitments that are irretrievable include the construction materials utilized on the project, such as stone, cement and steel.

The destruction of prime forest lands along Plumtree Run and Heavenly Waters Run is not only an ecological loss but is an irretrievable socio-economic loss due to the recreational potential of some of these lands. Lands with recreational value are becoming increasingly important in the Bel Air area due to the areas rapid population growth causing an increasing demand for recreational facilities.

Some cultural resources would be irreversibly committed because of acquisition of some residences for construction and the eventual change from a rural residential area to a developed area over a period of time as a result of planned growth.

The highway and the expanded development of the adjacent land which will occur due to improved access will eliminate much land which could be used for farming. This loss may become increasingly important in the future due to the increasing population and bad economic conditions. This road and the development which is likely to accompany the construction of such a project will commit the Bel Air area to an irreversible development pattern of suburbia in place of the existing rural residential setting.

8.0 The Impact On Properties And Sites
Of Historic and Cultural Significance

Historical Sites

There are numerous historic sites of state, local, or national significance along the corridor. The following list provided by the Maryland Historical Trust gives a brief description of those sites: (See letter of March 13, 1975, page 8.0.7).

<u>Map Site No.</u>	<u>Structure</u>	<u>Description</u>
1	Graybeal Kelly House	An early twentieth century Renaissance Revival House with late nineteenth century wooden barns.
2	Fritz-Kelly House	Large Brick Georgian House of 1835.
3	Frogtown Stone House	Unoccupied nineteenth century granite house of three bays.
4	Old Scott House	There are two early houses on the property, one probably eighteenth century. The main house of frame construction was built in the early nineteenth century.
A	Historic District I	Being considered for possible Historic District designation by county planners. Includes several historic sites.
	Presbyterian Manse	A stone and shingle house of 19th century.
	Presbyterian Church	A Gothic Revival Church designed by George Archer and built in 1881.
	Emmanuel Church	
B	Historic District 2	Being considered for possible Historic District designation by county planners. Includes several Historic sites.
	Harford Academy	Built in 1820 is considered worthy of nomination to National Register by the MD Historical Trust.

<u>Map Site No.</u>	<u>Structure</u>	<u>Description</u>
	I.O.O.F. Odd Fellows Lodge	A brick, Greek Revival lodge of one tall story over a high stone basement. It was originally built as a Church in 1852. The lodge has been nominated and is in the process of being approved by the National Register office.
5	Four Houses	Built during the mid to late 19th century.
6	Mount Carmel Church	Vernacular Greek Revival Stone Church
7	Emmorton School	
8	Brand-Pierce House	Late Nineteenth Century pre Queen Anne.
9	Saint Mary's Church	A small Gothic Revival Church built in 1851 of gray rubble stone walls with cut granite trim. The structure is listed on the National Register of Historic places.
10	Park Farm	Brick, built in the 18th century, not now occupied.
11	Noyes-Archer House	Late 19th century stone, built in the Renaissance Revival style.
12	Monmouth Farm	The main house, probably built in the 18th century, is one and one-half stories of stone with a gambrel roof. There is a two-story stone addition showing simple Greek Revival detail. Interior Baltimore woodwork of about 1800 is present. A group of stone and frame out buildings including an octagonal smoke-house, surround the house. The site considered worthy of being listed on the national register.
13	Woodview	An early 19th century Georgian house.
14	Constant Friendship	An abandoned frame house thought to be of the 18th century but probably 19th century. There are some log out buildings.

<u>Site</u>	<u>Structure</u>	<u>Description</u>
Bel Air		There are several other historic buildings in Bel Air which are located along Route 1 or 24 but are not shown on the maps.
30 N. Main St.	Graham House	Two and one-half story frame, built in the 18th century.
4 S. Main St.	Smithers Shop	A small 19th century frame shop.
6 S. Main St.	Smithers House	A small, two-story 19th century house.
20 S. Main St.		Victorian, two-story frame house with a modern shop front on the first floor.
	Harford County Courthouse	Two-story, brick building with a cupola built during the last half of the 19th century.
17 Courtland St.	Archer Building	A 19th century, two-story brick residence, now partially offices.
Courtland and Main St.	Courtland Hardware	This frame building was first an 18th century stage coach stop and was later altered to be a 19th century hotel.
200 S. Main St.	Walter Finney House	A well kept Victorian House of two and one-half stories, now law offices.
202 S. Main St.	Dr. Russell's Office	Two story brick
303 S. Main St.	Van Bibber House	The brick portion of this house is on the tax records of 1798. It received 19th century additions and now has three sections.
	Hays Jacobs House	
Pa. Ave. and Bond St.	Hanna Moore Apt. Building	Typical 19th century Bel. Air frame house.
Lee and Bond Sts.	Vernon Iones House	Small stone house of one and one-half stories.

Due to the existence of these historic sites within the corridor, the State Highway Administration has implemented procedures which will conform with Section 106 of the Historic Preservation Act. Section 106 of the Historic Preservation Act requires that federal, federally assisted and federally licensed undertakings affecting properties included in the National Register, or properties deemed eligible for inclusion in the National Register be submitted to the Advisory Council on Historic Preservation for review and comment prior to approval.

On September 23, 1975 a field review of the historic sites within the corridor was made to determine the sites which are eligible for the National Register and if there will be any affect by the relocation alternatives. In attendance were representatives of the Maryland Historical Trust, Federal Highway Administration, State Highway Administration and the Consultant.

Subsequent to this Survey the State Historic Preservation Officer made a preliminary review regarding the sites and the effects of the alternate alignments (See letter of October 14, 1975 on pages 8.0.11 and 8.0.12).

Following further coordination with the State Highway Administration and the Federal Highway Administration, the State Historic Preservation Officer submitted his revised opinions on the historic sites (see letter of November 26, 1975, page 8.0.13 and Memo of Understanding, Page 8.0.13a).

The results of this coordinated effort are recorded in Table I, next page. Coordination under 36 CFR 800 has determined that Alternate 3 will not affect any sites in this corridor.

TABLE I

Map Site #	Site Name	Eligible For National Register	Alternates which may affect Historic Integrity of Site	Alternates Which Require Historic Property Acquisition
1	Graybeal Kelly House	Yes	None	None
2	Fitz-Kelly House	Yes	None	None
3	Frogtown Stone House	No	Alt. 4	Alt. 4
4	Old Scott House	Yes	None	None
A	Historic District I	Yes	Alt. 4	None
B	Historic District II	Yes	None	None
5	Four Houses on Main Street	No	Alt. 4	None
6	Mount Carmel Church	Yes	Alts. 1,2,4	None
7	Emmorton School	Yes	Alts. 1,2,4	None
8	Brand-Pierce House	Yes	None	None
9	St. Mary's Church	Already listed on National Register	Alts. 1,2,4	Alts. 1,4
10	Park Farm	Yes	Alts. 1,2,4	Alts 1,2,3
11	Noyes-Archer House	Yes	None	None
12	Monmouth Farm	Yes	None	Alts. 2
13	Woodview	Yes	None	Alts. 2,3
14	Constant Friendship	Yes	Alts. 2	Alts. 2,3

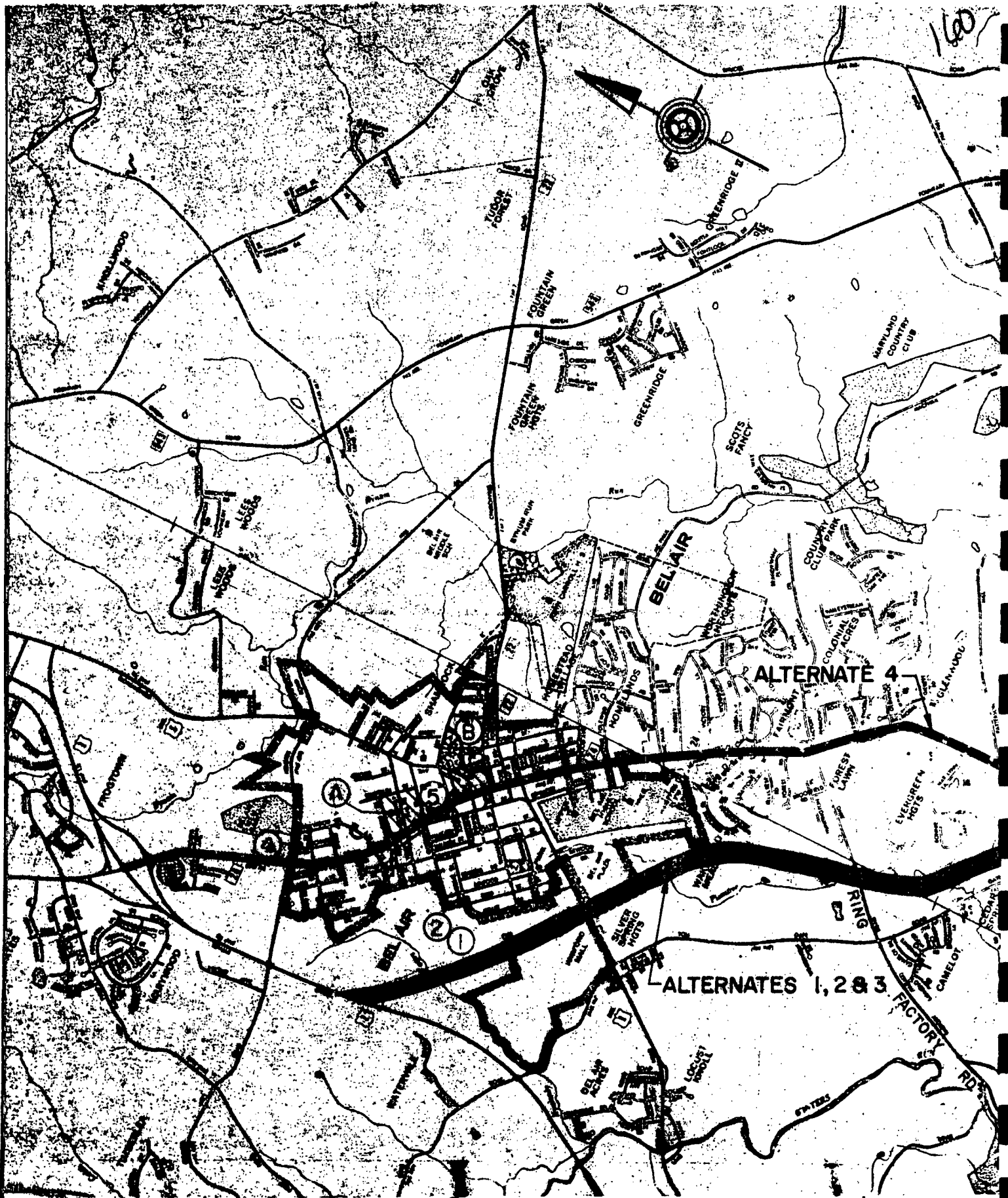
8.0.5

Although there were possible negative impacts affecting the various historic sites depending on the alternate alignment studied, the impacts were not considered to be of a magnitude that would preclude the adoption of any of the previously studied alternatives.

This assessment of the impact on the Historical Sites is reflected in the environmental evaluation made by the Maryland Historical Trust, included on pages 8.0.11 and 8.0.12 of this Statement.

Had a relocation alternate not been selected, the increasing traffic and congestion on the existing Route 24 would have had an adverse impact on the historic integrity of sites located along the highway.

It should also be noted that the project does not affect any proposed or existing units of the National Park System.



A. Historic District 1
 B. Historic District 2 (Includes I.O.O.F. Odd Fellows Lodge which has been nominated to the National Register)

- | | |
|-------------------------|--------------------|
| 1. Graybeal Kelly House | 4. Old Scott House |
| 2. Fritz - Kelly House | 5. Four Houses |
| 3. Frogtown Stone House | |

LEGEND

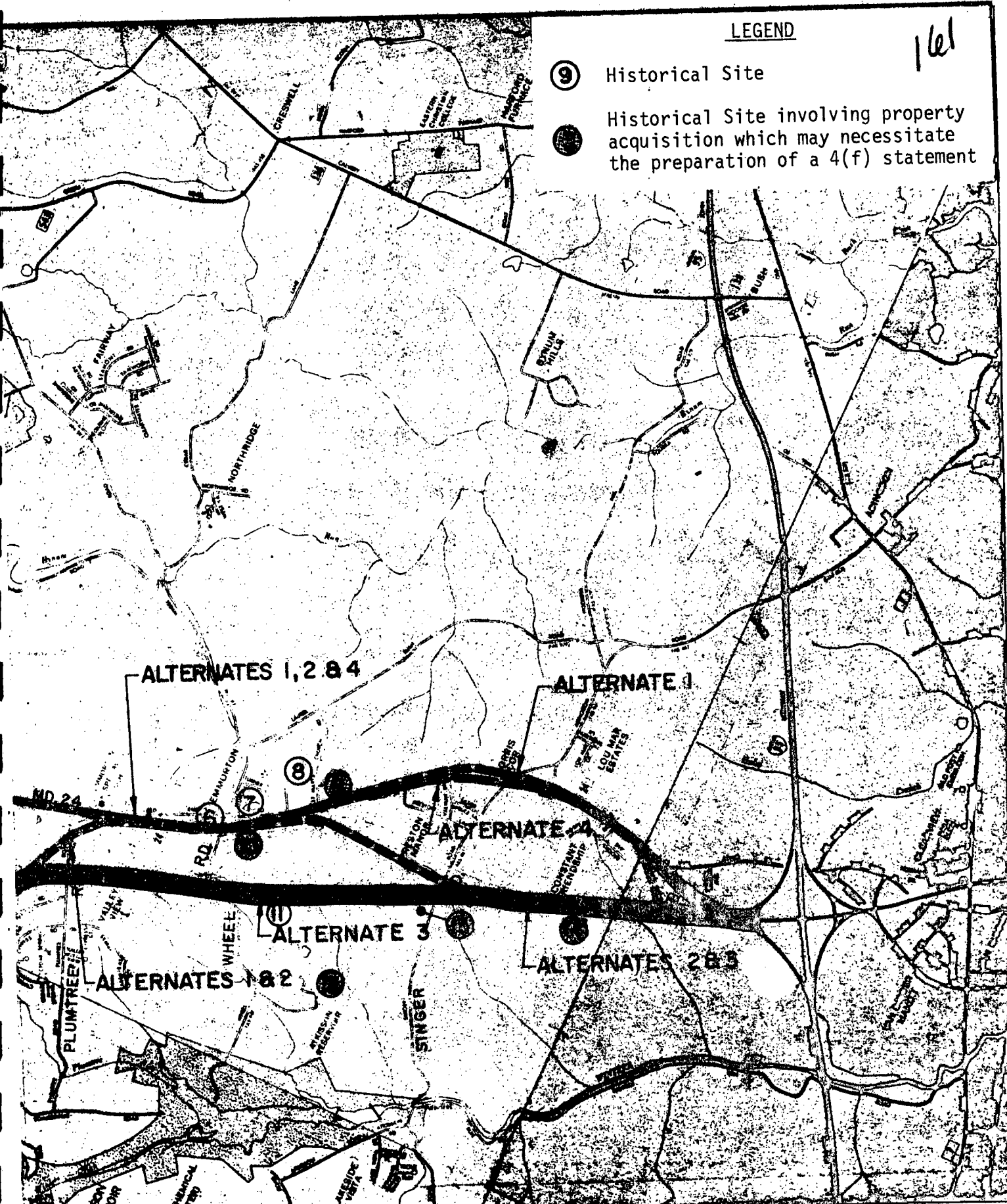
161



Historical Site



Historical Site involving property acquisition which may necessitate the preparation of a 4(f) statement



- 6. Mount Carmel Church
- 7. Emmorton School
- 8. Brand-Pierce House

- 9. Saint Marys Church (National Register)
- 10. Park Farm
- 11. Noyes Archer House

- 12. Monmouth Farm
- 13. Woodview
- 14. Constant Friendship

FIGURE 3.12

RELOCATION MD. RTE 24
 BEL AIR and VICINITY
 HARFORD COUNTY, MARYLAND
 HISTORICAL SITE MAP



THE MARYLAND HISTORICAL TRUST

Shaw House · 21 State Circle · Annapolis, Maryland · 21401

(301) 267-1212

(301) 267-1438

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March 13, 1975

Mr. John V. Rignani, P.E.
President
Rignani Associates, Inc.
P.O. Box 501, 3510 Trindle Road
Camp Hill, Pennsylvania 17011

RIGNANI ASSOCIATES					
RECEIVED					
MAR 17 1975					
JVR	JK	PLS			FILE
JK	✓	✓			

RE: Md. 24 Historic Sites
Bel Air, Harford County

7322-6

Dear Mr. Rignani:

This letter is in response to your requests for information concerning historic sites that would be affected by the re-location of Route 24 in the vicinity of Bel Air, Harford County, Maryland. It has taken longer than usual to coordinate this data, but it is hoped that it will be of use to you for your environmental impact report, and for those who will make the decisions concerning Route 24.

There are numerous historic sites of importance in this area. Their locations are shown on the enclosed copies of maps which you have sent us. Some sites are affected by more than one alternate, but the enclosed copies do show the locations of all the sites confirmed by our records and a member of the Harford County Committee of the Maryland Historical Trust. The following is a list of these structures and a brief description of them:

Fritz & Kelly House - an early twentieth century Renaissance Revival house with late nineteenth century wooden barns

Graybeal-Kelly House - a large brick Georgian house of 1835

Mt. Carmel Church - vernacular Greek Revival stone church

Emmorton School

Park Farm (Wilson-Graham House) - brick, built c. 1800, not now occupied

St. Mary's - a small Gothic Revival parish church built in 1851 of gray rubble stone walls with cut granite trim

DEPARTMENT of ECONOMIC and COMMUNITY DEVELOPMENT

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Mr. John V. Rignani, P.E.
Page Two
March 13, 1975

Brand-Pierce House - late nineteenth century pre-Queen Anne

Constant Friendship - an abandoned frame house thought to be of the eighteenth century but probably mostly nineteenth century. There are some log outbuildings.

Noyes-Archer House (Hazel Glen) - late nineteenth century stone built in the Renaissance Revival style.

Monmouth Farm - the main house, probably built in the eighteenth century, is one and one-half stories of stone with a gambrel roof. There is a two-story stone addition showing simple Greek Revival detail. Interior Baltimore woodwork of about 1800 is present. A group of stone and frame outbuildings including an octagonal smokehouse, surround the house.

Woodview - an early nineteenth century Georgian house.

Old Scott House - there are two early houses on the property, one probably eighteenth century. The main house of frame construction was built in the early nineteenth century.

Frogtown Stone House - an unoccupied nineteenth century granite house of three bays.

I.O.O.F. Odd Fellows Lodge - a brick, Greek Revival lodge of one tall story over a high stone basement. It was originally built as a church in 1852.

Harford (or Bel Air) Academy - built c. 1820.

Four Houses - built during the mid-to-late nineteenth century.

Presbyterian Church - a Gothic Revival Church designed by George Archer and built in 1881.

Presbyterian Manse - a stone and shingle style house of c. 1900

There are other historic buildings in Bel Air which are located along Route 1 or 24. They are not shown on the maps but are given below:

Graham House, 30 N. Main Street - two and one-half story frame, built c. 1800.

Smithers Shop, 4 South Main Street - a small, nineteenth century frame shop.

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Mr. John V. Rignani, P.E.
Page Three
March 13, 1975

Smithers House (now the Bridal Shop) 6 S. Main Street - a small, two-story nineteenth century house

20 South Main Street - Victorian, two-story frame house with a modern shop front on the first floor

Harford County Courthouse - a two-story, brick building with a cupola built during the last half of the nineteenth century

Archer Building, 17 Courtland Street - a nineteenth century, two-story brick residence, now partially offices

Courtland Hardware, Southeast corner of Courtland and Main Streets. This frame building was first an eighteenth century stage coach stop and was later altered to be a nineteenth century hotel.

Walter Finney House, 200 South Main Street - a well kept Victorian house of two and one-half stories, now law offices

Dr. Russell's office, 202 S. Main Street, two story brick

Van Bibber House, 303 South Main Street - the brick portion of this house is on the tax records of 1798. It received nineteenth century additions and now has three sections.

Hays-Jacobs House

Hannah Moore Apt. Bldg., Pennsylvania Avenue and Bond Street - this is a typical nineteenth century Bel Air frame house

Vernon Jones House, Southeast corner of Lee and Bond Streets - a small stone house of one and one-half stories

Of the sites mentioned, St. Mary's Church is now on the National Register of Historic Places. The I.O.O.F. Odd Fellows Lodge has been nominated and is in the process of being approved by the National Register office. It is felt that Park Farm, Monmouth Farm, and the Harford Academy are all worthy of being listed on the National Register. The Academy would be listed as part of an historic district (#2 on the Bel Air map) now being considered by the county planners. District #1 is also being considered as the Broadway Historic District. Here, there is the Stepping Stone Museum under private ownership; but there are talks underway with

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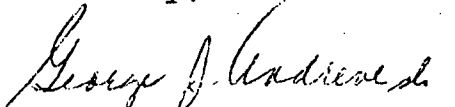
Mr. John V. Rignani, P.E.
Page Four
March 13, 1975

the county parks and recreation department to establish a farm museum in this district.

Because of the adverse impact on the town of Bel Air, it is felt that the road should not be enlarged so as to encourage what will presumably be a larger volume of thru traffic to pass through the center of Bel Air. It is hoped that some form of by-pass alternative will be selected rather than Alternate 4. Alternates 1 and 2 appear to have an adverse effect on historic sites where they join the existing Md. Rt. 24 from Plumtree Road to St. Mary's Church Road. Sites in this portion include Mt. Carmel Church, Emmorton School, Park Farm, St. Mary's Church, and the Brand-Pierce House. Alternate 3 seems now to be most consistent with the objectives of the Trust since it appears to impose the least impact on historic buildings in this area. We hope that you will consider all of these sites in your planning process.

Thank you for giving the Maryland Historical Trust the opportunity to comment.

Sincerely,


George J. Andreve
Assistant Architectural
Historian

GJA:sh
Enclosures: 8 maps

cc: Mr. James T. Wollon, Jr., AIA



The Maryland Historical Trust

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

IN HOUSE
CONSULTANT
166

October 14, 1975

Mr. Don Eckhardt, Chief
Environmental Evaluation
Bureau of Project Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

RE: Contact No. H 520-000-74
Relocation of Maryland Route 24 from U.S. 1 to I-95

PROJECT PLANNING
OCTOBER 15 1975

Dear Mr. Eckhardt:

At the request of the State Highway Administration I have reviewed the information on historic sites relative to the proposed relocation of Maryland Route 24. The following represents my opinion on the eligibility of the sites for the National Register and on possible effects to the site by the proposed construction. I do not feel that difficulties will arise from the resolution of any preservation concerns.

<u>Site Name</u>	<u>State Historic Preservation Office eligibility</u>	<u>Opinion on effect</u>
Graybeal Kelly House	eligible	Alt. 1, 2, 3
Fitz-Kelly House	eligible	Alt. 1, 2, 3
Frogtown Stone House	not eligible	Alt. 4
Old Scott House	eligible	None
Historic District I	eligible	Alt. 4
Historic District II	eligible	Alt. 4
Four Houses on Main Street	not eligible	Alt. 4
Mount Carmel Church	eligible	Alt. 1, 2, 3, 4
Emmerton School	eligible	Alt. 1, 2, 3, 4
Brand-Pierce House	eligible	Alt. 1, 2, 4
St. Mary's Church, National Register site		Alt. 1, 2, 4
Park Farm	eligible	Alt. 1, 2, 3, 4
Noyes-Archer House	eligible	Alt. 3
Montmouth Farm	eligible	None
Woodview	eligible	Alt. 2, 3
Constant Friendship	eligible	Alt. 2, 3

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Mr. Don Eckhardt
Page 2
October 14, 1975

My opinions on the effects to the historic sites are subject to modification since complete data on the possible effects are not available to me at this time.

Sincerely,



John N. Pearce
State Historic Preservation Officer

JNP:NM:jl

cc: Mr. John L. Clark
Mrs. Frederick Viele
Mr. James T. Wollon, Jr.
Ms. Ellen Ramsey
Mr. Gary Larsen



The Maryland Historical Trust

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

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26 November 1975

PROCESSED
NOV 26 1975

Mr. Gary Larsen
Division Environmental Engineers
Federal Highway Administration
711 W. 40th Street, Rotunda Suite 220
Baltimore, Maryland 21211

Re: Contract No. H 520-000-74
Maryland Rt. 24 from U.S. 1 to I95

Dear Gary:

Pursuant to the meeting of November 25, 1975, between you, Margaret Ballard of State Highway Administration and Nancy Miller, I agree to amend my preliminary opinion on effect as expressed in my letter of October 14, 1975, to Don Eckhardt of State Highway Administration as follows:

<u>Site Name</u>	<u>State Historic Preservation Office Eligibility</u>	<u>Opinion on Effect</u>
Graybeal Kelly House	eligible	None
Fitz-Kelly House	eligible	None
Frogtown Stone House	not eligible	Alt. 4
Old Scott House	eligible	None
Historic District I	eligible	Alt. 4
Historic District II	eligible	None
Four Houses on Main Street	not eligible	Alt. 4
Mount Carmel Church	eligible	Alt. 1, 2, 4
Emmerton School	eligible	Alt. 1, 2, 4
Brand-Pierce House	eligible	None
St. Mary's Church		
National Register Site		Alt. 1, 2, 4
Park Farm	eligible	Alt. 1, 2, 4
Noyes-Archer House	eligible	None
Montmouth Farm	eligible	None
Woodview	eligible	None
Constant Friendship	eligible	Alt. 2, 3

Sincerely yours,

John N. Pearce
John N. Pearce
State Historic Preservation
Officer

JNP/sc

8.0.13

cc: John Clark, Mrs. Viele, James T. Wollon, Jr., Ellen Ramsey, Don Eckhardt
Margaret Ballard Department of Economic and Community Development

MEMORANDUM OF UNDERSTANDING

We the undersigned, agree that the proposed highway project along Maryland Route 24 between U.S. 1 and I-95, H 520-000-474, will incur no effect on "Constant Friendship", an historic site probably eligible for the National Register of Historic Places.

Frederick Gottemoeller
Frederick Gottemoeller, Director
Office of Planning and
Preliminary Engineering

14 July 77
DATE

John N. Pearce
John N. Pearce, State Historic
Preservation Officer, Maryland
Historical Trust

9/14/77
DATE

Emil Elinsky
Emil Elinsky, Division
Administrator, Federal Highway
Administration

10/5/77
DATE

Archaeological Resources

In order to provide the necessary impact assessment, the Maryland Department of Natural Resources, Division of Archaeology, conducted a preliminary reconnaissance to provide an indication of major cultural resources present and to provide a reasonable estimate of what an intensive reconnaissance might reveal. On the basis of this reconnaissance a generalized evaluation was made as to the extent that the various alternatives being considered can be rated with respect to the potential impact on the archaeological resources.

Previous investigations¹ have encountered ten sites within the general study area. Of the ten, six were destroyed during the construction of Interstate Route 95.

Three previously unreported sites and one possible site location were discovered and recorded during the 1975 survey² conducted by the Division of Archaeology.

All site locations indicated below, are on file at the Division of Archaeology, Maryland Geological Survey. While the Division of Archaeology is aware of the necessity of making site locations available during the planning process, they are nonetheless hesitant to make detailed information about those locations generally available because of the problem of the exposure of sites to increased vandalism.

¹Hunt, Alice P.; Charles B. Hunt; and T. Latimer Ford - Archaeology of the Northeast Expressway from Baltimore to the Susquehanna River. Xeroxed manuscript on file at the Division of Archaeology, Maryland Geological Survey. (1964)

¹Stephenson, Robert L.; Alice L.L. Ferguson; and Henry G. Ferguson The Accokeek Creek Site: A Middle Atlantic Seaboard Culture Sequence. Museum of Anthropology, University of Michigan, Anthropological Papers, no. 20. Ann Arbor. (1963)

²Geoffrey W. Conrad: Ph.D. in Anthropology, Harvard University. Archaeological fieldwork in Wyoming, Colorado, Eastern Arctic, and Peru. Previously employed at the National Museum of Natural History, Smithsonian Institute. Publications on Eastern Arctic, Mesoamerica, and Peru.

²Spencer O. Geasey: Amateur archaeologist with 30 years of experience in Maryland archaeology. Publications on Maryland archaeology in regional journals.

²Paul Cresthall: Experienced Amateur Archaeologist.

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Previous Investigations¹

Cresthull

Cresthull had previously recorded five sites within the general survey area. They are:

18 HA9 (Winters Run A): A small campsite dating to the Archaic Period (8000-1000BC). Destroyed during the construction of I-95.

18 HA10 (Winters Run B): A small campsite dating to the Archaic Period.

18 HA23 (Shulka): A small cemetery that dates ca. AD 1800-1870. Attempts to identify the cemetery in historic records have been unsuccessful. Landfill from the old Bel Air dump has been deposited here.

18 HA26 (Winters Run C): A heavy concentration of quartzite chipping debris.

18 HA88 (Box Hill Stream): A workshop dating to the Archaic period. Quartz cobbles from the stream bed were used as the raw material for manufacturing stone tools. Most of this site was cleared in 1974 in preparation for the construction of a housing development.

Hunt, Hunt, and Ford:

In 1926 Alice P. Hunt, Charles B. Hunt, and T. Latimer Ford conducted a reconnaissance along the proposed route of I-95 between Baltimore and the Susquehanna River (Hunt et al. 1964). They located five small sites near the present junction of I-95 and MD 24. All of these sites were destroyed during the construction of I-95.

The 1975 Survey²

The three sites discovered during the 1975 survey are as follows:

18 HA96 (Heavenly Waters Dump): A trash dump dating to the late 19th century AD. The site contains scattered concentrations of broken crockery and bottles, etc.

18 HA97 (Harford Mall): A workshop for the manufacture of stone tools; age uncertain. The site consists of a very light scatter of chipping debris, predominately of white quartz, and seems to have been used only sporadically.

18 HA98 (Singer Road): This site was found along the edge of a cultivated field sloping down to a small brook. The field was in use at the time of the survey, and only a small portion of the ground was exposed. As a result, the total extent of the site could not be determined. Nonetheless, some quartz crystals and quartz chipping debris were noted, and two projectile points were collected.

Area A: This locality, a cultivated field on high ground sloping down to a small brook, is similar to 18HA98 and might contain similar materials. However, the field lies on rented farmland, and the tenant would not permit access to his property.

¹Ibid.

²Ibid.

1977 Survey

In the reconnaissance report for the 1975 survey, it was recommended that two sites, 18HA98 and Area A, be revisited and further investigations made. Following the circulation of the Draft Environmental Impact Statement the State Highway Administration requested that the Division of Archaeology provide a statement of significance for the two areas recommended for further investigations in the 1975 survey. On June 23, 1977, the Maryland Geological Survey, Division of⁴ Archaeology, attempted to investigate both areas (18HA98 and Area A). Only 18HA98 was inspected, as permission to examine Area A was refused by the tenant.

A controlled surface collection and limited test excavations are recommended for 18HA98 for two reasons. First and primarily, 18HA98 represents one of the few hunting/campsites located near the head of a low order stream in this area of Harford County. Further investigation of 18HA98 should yield information regarding prehistoric settlement and exploitative patterns when studied in relation to the numerous sites known closer to Winters Run. Second, although the test pits dug during the 1977 investigation revealed artifacts only in the plowzone, the size of these test pits was severely restricted as the field was planted. Larger excavation units are necessary to define the vertical extent of the site and for locating subsurface archaeological features.

⁴ Dennis C. Curry: MA candidate, Department of Anthropology, Catholic University

Archaeological fieldwork in Virginia, Maryland, and West Virginia, including numerous cultural resource surveys.

Previously employed by the Thunderbird Research Corporation

Spencer O. Geasey: Amateur archaeologist with 30 years experience in Maryland archaeology.

Publications on Maryland archaeology in regional journals.

Assessment of Possible Impact

It should be noted that regardless of which highway corridor was selected, all sites would be subject to indirect impacts due to increased development within the project area. The extent of this potential impact cannot be assessed at present.

Three of the sites previously identified, 18HA10, 18HA26, and 18HA88 are not located within the vicinity of the recommended alternate (Alternate 3) and therefore will not require further consideration.

Site 18HA23, while located in proximity to the proposed interchange with U.S. 1 By-pass, will not be directly impacted. This site has been utilized as a sanitary landfill; the historical significance has not been established.

The relocation alternates which include the Recommended Alternative would destroy Site 18HA96 and 18HA97. However, both of these sites are of relatively minor cultural importance. They contain only small amounts of material, and information that might be obtained from them could be better obtained at more extensive sites with greater amounts of material. Accordingly, neither site would be likely to attract archaeologists or historians planning intensive investigations.

Site 18HA98 which would be adversely affected by the recommended Alternative has been recommended for controlled surface collections and limited text excavations. This site although of importance, is not considered of such significance to warrant a change in the proposed highway location. The recommended collections and excavations will allow archaeologists to obtain the information from this site which is necessary in their attempts to understand the prehistoric development of the area.

Area A would also be adversely affected by the recommended Alternative. Reconnaissance of Area A, as well as some nearby areas in the proposed right-of-way with apparent equal potential for archaeological remains, will be undertaken.

Note:

The Maryland State Highway Administration is currently preparing an agreement with an archaeological consultant to conduct surveys of Site 18HA98 and Area A. Therefore, it is impossible at this time to accurately determine the extent of involvement, but indications are that the resources are not of any value that could not be adequately salvaged to preserve or record the events which have occurred at these sites.

9.0 References

- 9.1.1 Historical Resume
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- 9.1.3 Description of the Surroundings
Publication No. 171, Maryland Department of State Planning.
Harford County Comprehensive Master Plan, 1974.
- 9.1.4 Local Physiography and Geology
Harford County Comprehensive Master Plan, 1974.
- 9.1.5 Existing Highway Facilities
Bureau of Accident Statistics and Analysis.
- 9.1.7 Economic Inventory
Harford County Unlimited 70's, prepared by the County Commissioners of Harford County.
Community Economic Inventory, Harford County, Maryland, compiled and published by the Division of Business and Industrial Development, Maryland Department of Economic and Community Development, 1974.
Harford County Comprehensive Master Plan, 1974.
- 9.1.8 Environmental Resource Inventory
Community Economic Inventory, Harford County, Maryland, compiled and published by the Division of Business and Industrial Development, Maryland Department of Economic and Community Development, 1974.
Soil Survey of Harford County, United States Department of Agriculture, Soil Conservation Service.
- 9.2.0 Relationship Between the Proposed Action and the Land Use Plans, Policies and Controls
Harford County Comprehensive Plan, 1974.
General Development Plan (Draft C-1), Department of Planning and Zoning for Harford County, Maryland, 1974.
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General Development Plan for Harford County, prepared by Harland Bartholomew and Associates for Harford County Department of Planning and Zoning, 1969.
Plan for Land Use and Major Thoroughfares for Bel Air, Maryland, prepared by Harland Bartholomew and Associates for Commissioners of Bel Air, 1970.
- 9.3.2 Socio-Economics
Socio-Economics, Maryland Route 24 Relocation, Stephen P. Coelen, Ph.D., 1974.
Community Economic Inventory, Harford County, Maryland, compiled and published by the Division of Business and Industrial Development, Maryland Department of Economic and Community Development, 1974.

- 9.3.3 Planning and Aesthetics
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- 9.3.4 Terrestrial Ecology
 Terrestrial Ecology, Maryland Route 24 Relocation,
 Robert C. Scherer, Ph.D., Ecologist, 1974.
- 9.3.5 Wildlife
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- 9.3.6 Aquatic Biology
 Aquatic Biology, Maryland Route 24 Relocation, Robert C.
 Scherer, Ph.D., Ecologist, Professor of Biology, Lock
 Haven State College, 1974.
- 9.3.7 Air Quality
 Air Quality, Maryland Route 24 Relocation, Rignani
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 the Federal Highway Administration, Washington, D.C.,
 April 1972.
 Highway Capacity Manual - 1965, Highway Research Board,
 Special Report 87, 1966.
- 9.3.8 Acoustics
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- 9.3.9 Water Quality, Erosion and Siltation
 Water Quality, Md. 24 Relocation, David A. Long, Ph.D., P.E.,
 Water Quality, 1974
 Swerdon, P.M. and Kountz, R.R., "Sediment Runoff
 Control at Highway Construction Sites, A Guide
 for Water Quality Protection", Engineering Research
 Bulletin B-108, The Pennsylvania State University,
 University Park, PA, January, 1972.

9.3.10 Ground Water Resources

Ground Water Resources, Maryland 24 Relocation, Conlin and Gray Associates, Consulting Geologists, 1974.

Cleaves, Emery T., (1968) "Piedmont and Coastal Plain Geology along the Susquehanna Aqueduct, Baltimore to Aberdeen, Md". Maryland Geological Survey, R.I. n.8.

Dingman, R. J. and Ferguson, H. F., (1956) "The Ground Water Resources of the Piedmont Part" in "The Water Resources of Baltimore and Harford Counties", Maryland Department of Geology, Mines and Water Resources, Bulletin 17.

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Nutter, L. J. and Otton, E. G., (1969) "Ground Water Occurrence in the Maryland Piedmont". Maryland Geological Survey, Report of Investigations n.10.

Southwick, D. L. and Owens, J. P., (1969) "The Geology of Harford County, Maryland". Maryland Geological Survey.

9.3.15 Feasible Measures Which Could be Used to Avoid or Reduce Adverse Impacts

Maryland Department of Transportation Action Plan, June 15, 1973.

II.

AGENCIES NOTIFIED AND A COPY OF THEIR REPLY
FOLLOWED BY MARYLAND STATE HIGHWAY ADMINISTRATION
EVALUATION AND RESPONSE WHEN APPLICABLE

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Maryland Route 24 Relocated Environmental Statement

Check List For

Environmental Statement Responses

Project No.: FHWA-MD-EIS-76-02-D

County: Harford

Agency	Date Reply Received	Comments In Section
<u>FEDERAL</u>		
Corps of Engineers	No Reply	
Department of the Interior	7/15/76	*4(f) Statement 3.12, 3.5, 5.0, 4.0, 3.8, 8.0
Department of Housing and Urban Development	No Reply	
Department of Agriculture	6/16/76	*
Department of Commerce	No Reply	
Department of Health, Education and Welfare	No Reply	
Environmental Protection Agency	6/3/76	*3.9
Office of Economic Opportunity	No Reply	
Department of Transportation Assistant Secretary for Environment, Safety, and Consumer Affairs	7/1/76	*Section 4(f) Statement
Soil Conservation Service	No Reply	
Federal Energy Administration	7/13/76	*
<u>STATE</u>		
Department of Budget and Fiscal Planning	No Reply	
Department of General Services	No Reply	

* Note: Comments are answered on letter or on page following the agency letter.

Agency	Date Reply Received	Comments In Section
Department of Economic and Community Development	Reply through State Planning 6/9/76	No Substantive Comment
Maryland Historical Trust		
Maryland Historical Society		
State Department of Education	No Reply	
State Board of Community Colleges	No Reply	
Department of Natural Resources Wildlife Administration	6/23/76	*
Department of Natural Resources Water Resources Administration	6/9/76	* 3.9
Department of State Planning	6/9/77	No Comment Needed
Department of Public Safety and Correctional Services	6/9/77 Reply through State Planning	No Comment Needed
Maryland Office of Economic Opportunity	No Reply	
Department of Health and Mental Hygiene	No Reply	
Environmental Health Administration Division of Solid Waste Control Bureau of Air Quality Control Division of Water and Sewerage	No Reply No Reply No Reply	
State Soil Conservation Committee	No Reply	
Automobile Club of Maryland	No Reply	
Maryland Motor Truck Association	No Reply	
<u>COUNTY</u>		
Department of Public Works	No Reply	
Health Department	No Reply	
Board of Education	No Reply	
Department of Parks and Recreation	No Reply	
Economic Development Commission	No Reply	
Department of Planning and Zoning	6/4/76	*2.0
Harford County Community Council	No Reply	

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UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
NORTHEASTERN AREA, STATE AND PRIVATE FORESTRY
6816 MARKET STREET, UPPER DARBY, PA. 19082
(215) 596-1671

8400
June 16, 1976



Mr. Robert J. Hajzyk, Director
Office of Planning and
Preliminary Engineering
Maryland Department of Transportation
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201


Refer to: Draft Environmental
Statement, Relocated MD Route 24,
Harford County, Contract No.
H520-000-474

Dear Mr. Hajzyk:

We feel that adverse impact on forested land caused by the highway construction described in the above statement, would be minimized by using existing roads as much as possible. A bypass of the city of Bel Air however, seems necessary to prevent traffic congestion, which would tend to increase air pollution. Thus from our point of view Alternate 1 would be the best choice of the proposed alternatives.

Thank you for the opportunity to review this Draft Statement.

Sincerely,


DALE O. VANDENBURG
Staff Director
Environmental Quality Evaluation

EVALUATION OF COMMENTS

No comments are required in response to this
agencies review of the Draft EIS.

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United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-76/427

JUL 14 1976

Dear Mr. Elinsky:

This is in response to a request for the Department of the Interior's comments on the draft environmental/Section 4(f) statement for Maryland Route 24 from U.S. 1 to I-95, Bel Air, Harford County, Maryland.

Section 4(f) Comments:

Page 1.10.1 states that "Harford County has traded land needed by the Highway Administration in return for land owned by the Highway Administration which would complement the development of the park around the interchange." From this, it appears that the exchange of public parkland took place before this environmental/Section 4(f) statement was prepared; an action which would be inconsistent with U.S. DOT Order 5610.1b. The final statement should identify the exchanged lands on a map and discuss the specific relationship of the exchange to the park and to the Section 4(f) determination.

1

The statement discusses the numerous adverse impacts from the proposed project to Heavenly Waters Park. They are as follows:

1. A large interchange will be located in the center of the park, maximizing the direct loss of parkland, Figure 2.0e. This is the most undesirable location for the proposed road vis-a-vis the park. Such a location is wholly incompatible with park and recreation values and activities. As noted in the Section 4(f) statement, page 17, "the construction of an interchange in the center of the park will greatly disrupt the natural setting and destroy much of the prime forested area."
2. The interchange would trisect the parkland making one section (the southeast section) dysfunction as a future recreation area because of its shape and relative inaccessibility. This area represents a severed parcel. Park visitor movement between the three segments would be extremely poor since the roadway, even with the pedestrian walkways, would constitute a large barrier.

2

3



Mr. Emil Elinsky, Baltimore, Maryland

Page 3.2.1 states that "The improved access afforded the park area by the relocation alternatives will likely lead to heavier park usage." This statement may not be true in this case since none of the alternatives provide direct access to the park from the proposed roadway. Additionally, there is no indication that user access to the park is a problem.

3

3. Page 17 of the Section 4(f) statement notes that "Aesthetically the relocation will have an adverse impact on the natural setting of the park. It is virtually impossible to fit the road to the natural terrain of this area. Large cuts and fills will have to be made in order to maintain the accepted grade standards for this type of road through this steeply sloping terrain." Such cuts and fills will constitute a massive intrusion into the natural setting of the park, a primary resource value.

4

4. The noise impact evaluation contained in the statement provides a comparison of predicted noise levels with existing ambient levels for each of the alternative alignments. Based on that information, it appears that major increases in noise levels would occur within Heavenly Waters Park. The final statement should identify the Park as a noise sensitive site and provide specific information on existing and predicted noise levels.

5

5. The proposed project will introduce a substantial new traffic volume into the area to the detriment of park values.

6

In summary, this Department believes the proposed project would greatly reduce the recreational values of Heavenly Waters Park. It adversely intrudes upon the area in every manner, and is destructive of this prime recreational resource.

Alternatives:

Because of these very substantial adverse impacts, we believe the most thorough consideration should be given to alternatives which avoid the use of parkland. This has not been done in this draft environmental/ Section 4(f) statement. The statement fails to provide any specific and detailed information to support a determination that there is no feasible and prudent alternative to the use of parkland for highway purposes.

7

Mr. Emil Elinsky, Baltimore, Maryland

Page 22 of the Section 4(f) statement notes that "Placing the interchange just south of the park will require the relocation of many homes along Winters Run and many homes in Silver Spring Heights. Also, this location is adjacent to Winters Run on extreme slopes which would increase the erosion hazards and the costs of construction." There is no information on the exact number of homes that would have to be relocated nor is there data on construction costs for development of a southern alternative. None of the maps show any large number of structures south of the park. Although soil erosion might be a problem, standard engineering practices likely could mitigate or largely eliminate this concern. In any case, erosion along the southern alternative might not constitute more of a problem than along the proposed route, also an area of steep topography.

7

It appears that it may be possible to shift the proposed interchange southwest of the proposed park, thereby eliminating the Section 4(f) taking.

As required by Title 23, Part 771.19, the final statement should provide detailed information on this alternative:

"Accurate and detailed information is needed to support the Federal Highway Administrator's determination that there is no feasible or prudent alternative. Supporting information should demonstrate that there are unique problems, truly unusual factors present, and evidence that the cost or community disruption resulting from alternative routes reaches extraordinary magnitudes."

All Possible Planning to Minimize Harm:

With regard to the second provision of Section 4(f), the statement does not discuss any measures to minimize harm to the impacted parkland.

The proposed project will have extensive adverse impacts on existing and planned recreational use of the project area which warrant a thorough response to this provision of Section 4(f). An adequate response to the second provision of Section 4(f) should include at least the following items:

8

1. Replacement of park acreage lost directly to the highway.
2. Replacement or compensation for the severed portion of the proposed park that will be dysfunctional as a result of the location of the proposed interchange.

Mr. Emil Elinsky, Baltimore, Maryland

- 3. Provision for adequate pedestrian access between the park parcels.
- 4. Planting of trees and shrubs along both sides of the right-of-way as a visual and noise barrier.

Environmental Statement Comments:

Historic and Archeologic Features:

The project does not affect any existing or proposed units of the National Park System.

Fish and Wildlife Resources:

Sections 3.5 and 5.0 should address the types and amount (acres) of all fish and wildlife habitats including streams, farmland, woodland, and wetland that will be affected by the project.

In addition to the mammals and migrating song birds listed in Section 3.5, other game species inhabiting much of the project area should be identified as well.

Additional alternative alignments at or near Ring Factory Road in a northwesterly direction toward Business U.S. 1 should be explored. An upgrading of existing Route 24 (alternative 4) to Ring Factory Road would be considerably more environmentally acceptable than the other proposed routes. The use of Route 24 would eliminate disturbance of the area east of Atkinson Reservoir where bog turtles have been reported.

Other:

The final statement should quantify the large amounts of cut and fill material required for the project and alternatives. It should be expanded to discuss the location of any borrow and/or spoil areas needed for project purposes. Sections of the statement dealing with the description of the existing environmental setting can describe the borrow and/or spoil area locations under preproject conditions as they relate to flora, fauna, and aesthetics. These areas should be drained, contoured, and reseeded to make them as reusable as possible.

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Mr. Emil Elinsky, Baltimore, Maryland

Summary Comments:

The Department of the Interior assumes a position of nonconcurrence to FHWA approval of a Section 4(f) determination for the proposed project because of the failure to adequately consider alternatives and because there is no proposed response to the second provision of this Section. Pursuant to U.S. DOT Order 5610.1b-9-c-(1)-(c), we are informing, by copy of this letter, the Assistant Secretary for Environment, Safety and Consumer Affairs, U.S. Department of Transportation, of our non-concurrence and of our objection on environmental grounds to the presently proposed project.

13

As this Department has a continuing interest in this matter, we would be willing to review and comment on a technical assistance basis, on any subsequent material for this project. The Regional Director of the Northeast Regional Office of the Bureau of Outdoor Recreation, Philadelphia, Pennsylvania, telephone number 8-597/7987 has the responsibility for coordination of the Department's interest for this project. If you should require further information, please contact this office.

Sincerely yours,

(Sgd) Stanley D. Doremus

Deputy Assistant

Secretary of the Interior

Mr. Emil Elinsky
Division Administrator
Federal Highway Administration
Rotunda Suite 220
711 West 40th Street
Baltimore, Maryland 21211

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

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Response to:

United States Department of Interior

The exchange of land parcels was made in principle in order to facilitate the planning of both the park and the highway. Since the exchange was in principle and not in deed, the action should not be considered inconsistent with U.S. Department of Transportation Order 5610.1b.

Because of the concern expressed by the Department of Interior over the involvement with Heavenly Waters Park, a meeting was held on November 16, 1976 with representatives of the Federal Highway Administration, State Highway Administration and the Department of Interior. The meeting was held to resolve the comments made by the Department of Interior in the preceding letter. Subsequent to this meeting the Department of Interior informed the Federal Highway Administration of the additional information required for the Section 4(f) Statement.

A map has been provided in the final statement to identify the exchanged parcels of land. (See Figure 8 of the 4(f) Statement). Discussions of the specific relationship of the exchange to the park and Section 4(f) determination has also been included. (See page 23 of 4(f) Statement).

Although Md. 24 Relocated does not enhance the quality of the overall recreation development, since the park and highway were designed through a coordinated planning effort, a balance of man-made development with the physical resource has been achieved without serious impacts.

The areas designated for recreational development and use were designed to maximize the physical resources of the site with consideration given to the area to be acquired for the proposed highway right-of-way. Adequate buffer areas have been maintained between the proposed highway and adjacent recreational areas in order to preserve the integrity of the recreational development and mitigate physical or aesthetic encroachment of the highway.

The proposed action will not create any significant isolation or division of a valued area of recreational development. The division that exists because of the U.S. 1 by-pass is responsible for the major limitations affecting the recreational activity range of the park. The relocation of Md. 24 separates a relatively small "natural area" in the southeastern portion of the park from the recreational development to the north, but does not otherwise affect recreational activities.

Pedestrian and equestrian access will be provided to the southeastern section of the park along Toll Gate Road and via a pedestrian underpass beneath Md. 24 Reloc. A pedestrian bridge over U.S. 1 bypass will complete the linkage between the areas of the park. The pedestrian bridge over U.S. 1 will provide safer access between the developed sections of the park than presently exists.

In regards to the Department's comment about park accessibility; Boulton Street which is the major access road to the portion of the park located on the east side of U.S. Route 1, has direct access to Relocated Md. Route 24.

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The aesthetic impact on the proposed Heavenly Waters Park is now discussed on pages 28 thru 30 of the Section 4(f) Statement.

4

A discussion of noise levels for the park is now provided on page 3.8.13 and on page 27 of the Section 4(f) Statement.

5

This concern is addressed on page 28 of the Section 4(f) Statement.

6

The information requested by the Department is now provided in the Section 4(f) Statement, see pages 31 to 32a.

7

Measures to minimize impacts to park land are now discussed on page of the Section 4(f) Statement.

In response to Item #1, "Replacement of park acreage lost directly to the highway," the State Highway Administration has previously acquired a large portion of the land which will be used for the interchange. It has been agreed upon in principle that some right-of-way that the SHA now owns will be turned over to the county in exchange for land needed for highway right-of-way. The additional land needed for highway construction will be compensated for monetarily. Such monies can be used in the future by the county to buy additional land or construct additional facilities. For additional description see page 23 of the Section 4(f) Statement.

8

In reference to Item #2, Since the park does not exist at this time and is being planned around the highway there will be no portions that are dysfunctional.

In regard to Item #3, Adequate pedestrian access between the park parcels will be provided by a pedestrian bridge and tunnel. If the highway is not constructed there will be no direct access between the park parcels.

In reference to Item #4, Landscapping as an attenuation measure is discussed on page 30 of the Section 4(f) Statement.

See page 8.0.6.

9

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The acreages of various land uses which may be lost to highway construction are listed in Table 3, page 4.0.7.

10

There are no significant numbers of other game animals inhabiting the project area.

Such alternates would not appear feasible at this time since they would have severe impacts on the community of Forest Lawn and the recently constructed housing development of West Riding. See page 3.5.2 for further discussion.

11

The quantities of cut and fill material required for each alternate are listed in the Table 5, page 4.0. 8. However, at this stage of design it is not known where the borrow and spoil areas will be located. After the borrow and spoil areas are used, they will be contoured, drained, and reseeded in a suitable way so as to make the land reusable. This will all be done in accordance with the appropriate state and county regulations.

12

Due to the Department of Interior's concern over project involvement with Heavenly Waters Park and their subsequent position of nonconcurrence to Section 4(f) determination, a meeting was held with the Department of Interior in order to resolve the problems. (See letter documenting this meeting on next page).

13

4220

WORKING
 IN PROGRESS
 REVISIONS
 APPROVED
 REVIEWED
 CONCURRED

Mr. A. George Ostensen
 Federal Highway Administration
 Rotunda Suite 220
 711 West 40th Street
 Baltimore, Maryland 21211

NOV 22 1970

Dear Mr. Ostensen:

We appreciated the opportunity to meet and discuss with you the Department of the Interior's comments on the draft environmental/Section 4(f) statement for Maryland Routs 24 from U.S. 1 to I-95, Bel Air, Harford County, Maryland.

This will confirm our suggestions that the final statement include the following:

1. A more accurate history of the proposed project, and the Park. 1
2. Information on the proposed interchange. We suggest this be described as land replacement for parkland taken -- the best measure to minimize harm to the park. 2
3. Information to demonstrate that the southern alternative is not feasible and prudent because of the number of homes and commercial structures that would have to be relocated. 3
4. Substantiation that the noise levels in the vicinity of Heavenly Waters Park will not exceed FHWA's standards. 4
5. Maps clearly delineating the current rights-of-way, land needed for the project, and the proposed replacement acreage. Existing and planned park facilities should be identified. 5

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The inclusion of this material would help resolve our concerns about the project and its impacts on the Park.

If you should require further information or assistance regarding this matter, please contact this office.

Sincerely yours,

MICHAEL H. GORDON, Chief
Division of Water and
Environmental Planning

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

Response to:

United States Department of Interior After The November 16, 1976 Meeting
With The Federal Highway Administration

A chronological listing of events involving the park and highway is shown on page 21 of the 4(f) Statement. | 1

This information is now provided in the 4(f) Statement on pages 21-24. | 2

Additional information has been provided in response to this request on pages 31 to 32a of the Section 4(f) Statement. | 3

See page 3.8.13 and page 27 of Section 4(f) Statement. | 4

See Section 4(f) Statement. A map delineating the current rights-of-way, and the parcel exchange is shown in Figure 8. Existing park facilities are shown on the Existing Culture Map (Figure 5) while planned park facilities are shown on the Master Plan (Figure 6). | 5

UNITED STATES GOVERNMENT

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY

HER 192

Memorandum

01 JUL 1976

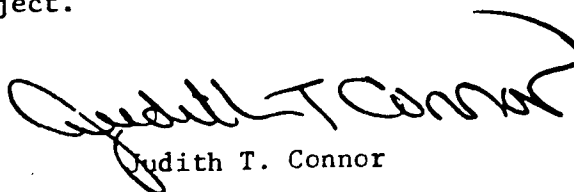
DATE:
 SUBJECT: **Draft Environmental Impact Statement/Section 4(f) Determination - Relocation Maryland Route 24 Harford County, Maryland**
 FHWA-00-SIS-76-02-D
 In reply refer to: TES-72
 FROM : Assistant Secretary for Environment, Safety, and Consumer Affairs
 TO : Chief, Environmental Programs Division, FHWA/HEV-10

This office has reviewed the draft environmental impact statement/section 4(f) determination for the relocation of Maryland Route 24 in Harford County, Maryland. The environmental effects of the project are generally well covered. However, the final statement should give more attention to the ~~potential adverse effects~~ upon the proposed ~~Heavenly Waters Park~~.

Consideration should be given in the final statement to an alternative south of the park. Such an alternative could apparently be located south of Tollgate Road without deleterious effects upon the park. Various interchange designs with tighter ramps or an at-grade intersection with proper signalization could be considered for such an alternative and could still meet the goal of safe and efficient traffic flow. It is not made clear in the draft statement why such an alternative is not feasible and prudent. The cited factors of community disruptions and design problems do not appear to be more onerous than the disruptive effects upon the park of the presented alternative.

The final statement should consider such an alternative alignment and discuss in more detail measures to ameliorate the disruptive effects of the presented alternative upon the aesthetic and recreational values of the park.

We appreciate the opportunity to review this draft environmental impact statement for this project.


 Judith T. Connor

193

Response to:

Comments Made by Assistant Secretary for Environment, Safety, and Consumer Affairs

Response to these comments have been provided on pages 29 thru
32 of the Section 4(f) Statement.

194



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

June 3, 1976

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

Re: Maryland Route 24, from U. S. Route 1 to I-95

Dear Mr. Camponeschi:

We have reviewed the draft Environmental Impact Statement for the above proposed project and have classified it as ER-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. Also, in accordance with our responsibilities 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.

While the scope of the draft is considered adequate, EPA notes concern for noise, air, and water quality impacts, and asks that further information be supplied. These concerns are outlined in detail below.

From a noise standpoint, Alternate 3 appears to be the alignment with the least impacts under present circumstances. This is because it is stated that barriers are being studied at the four sites where the 70 dBA level is exceeded, and because all other alternates (except the "no build"), indicate several severe impacts where barriers are not considered to be feasible. The final EIS should state which alignment is preferred, and give the results of the noise barrier studies at each of the adversely affected sites. Also, at these sites where it is stated that a barrier does not appear to be feasible, the final EIS should include information describing where barriers will and will not be implemented. Furthermore, the final EIS

<input type="checkbox"/> CAMPONESCHI	<input type="checkbox"/> CATHERMAN	<input type="checkbox"/> HARRIS
<input type="checkbox"/> GIBBY	<input checked="" type="checkbox"/> JARNEY	<input type="checkbox"/> QUINCY
<input checked="" type="checkbox"/> KIRCHNER	<input type="checkbox"/> GRANDY	<input type="checkbox"/> ANATA
<input type="checkbox"/> SCHNEIDER	<input type="checkbox"/> HEWIG	<input type="checkbox"/> KELLER
<input type="checkbox"/> UHL	<input type="checkbox"/> H. HANAN	<input type="checkbox"/> WILLIAMSON
<input type="checkbox"/> ACTION	<input checked="" type="checkbox"/> INFO	<input type="checkbox"/> FILE

Copy to B.L.A

1 | should include the non-rush hour noise levels where exceptions are to be requested, since these requests are based on the statement that the noise levels are below standards during this time.

EPA would like to note that there appears to be a significant difference in the treatment of noise impacts when comparing the recently reviewed DEIS for the Arundel Expressway with the DEIS for Relocated Maryland Route 24. For the Arundel Expressway, the breakdown of impact terminology by dB level on page C-24 differs substantially from that used for Route 24 on page 3.8.1. The Arundel DEIS states that "an arbitrary judgement currently being used in the highway noise impact analysis associates noise increases of 5-15 dB with "some impact". Noise level increases of more than 15 dB are generally considered severe."

2 | By contrast, the Route 24 DEIS states that "an increase of 6-10 dB is a minor impact, an increase of 11-15 dB is considered a significant impact, while an increase greater than 15 dB is a severe impact."

This is confusing for two reasons:

1. Both EIS's were done by the same organization and yet impacts are defined differently.

2. Both EIS's define 15 dB increases as severe, yet on page C-33 (of the Arundel DEIS), an increase of 16.8 is regarded as a "significant increase".

EPA would suggest that in the future, the terminology used in describing noise impacts be more consistent from EIS to EIS.

3 | Finally, you might wish to refer to the GSA construction noise regulations regarding noise levels for construction equipment, since the noise ranges given on page 3.8.18 seem somewhat high.

4 | With respect to water quality, erosion and sedimentation control during and after construction is essential, especially when Heavenly Waters Run and Plumtree Run are being crossed, since these drain indirectly into the Atkisson Reservoir. Berms, dikes, dams, sediment basins, sediment traps, filters, and other techniques should be incorporated wherever possible, as is mentioned on page 19 of the 4f statement.

196

5 | Runoff should be controlled to the greatest possible extent. Seeding, using hay bales, swales, and other techniques should be employed. The salting of roads should also be properly managed; using the proper type of salt and covering the salt stockpiles against intermittent rainfall. Contamination of waters from leachate runoff from the sanitary landfill must be minimized. Although it is not presently known how the landfill will be handled, these plans should be in the final EIS.


6 | We note that several homes have wells which could be affected by the required cuts, and that service is expected to be provided to them in the next several years. If this service is not provided, or if the highway unexpectedly affects wells in areas where service is not planned to be provided, then EPA would like to know what the plans for mitigation might be. Finally, the use of culverts should include proper devices to prevent increased rates of flow.

7 | With respect to air quality, while EPA expects no significant problems, there are several areas where more information should be provided in the final EIS. The analysis should be performed at major intersections where other major routes contribute to the concentrations. These intersections should also be analyzed for the possibility of a queuing situation developing which would also adversely affect CO concentrations. Adding the distances of the receptor points from the roadways to the schematic diagrams seen in Figures 1.6b - 1.6e would be helpful in clarifying the air analysis. You might also wish to include an intersection schematic, showing lane volumes and the receptor points used in the modeling.

8 | In the section on secondary impacts, the effects of growth and development upon the air quality of the project area and the region should be addressed. In view of the regional scale photochemical oxidant problem, the final EIS should address the question of whether or not this growth will result in higher emissions of hydrocarbons and the other precursory pollutants which result in the formation of photochemical oxidants.

We hope that this review will assist you in the preparation of the final Environmental Impact Statement. If you have any questions, or if we can be of further assistance, you may wish to contact Mr. Sam Little or Mr. William Hoffman of my staff at 215-597-7093. We would appreciate the receipt of five copies of the final Environmental Impact Statement at such time as it is filed with the Council on Environmental Quality.

Sincerely yours,


Nicholas M. Ruha
Chief

EIS and Wetlands Review Section

Response to:

Comments Made By The Environmental Protection Agency

Actual completion of noise barrier studies which includes determination of where exceptions will be requested, cannot be accomplished until the project design stage. The Environmental Impact Statement identified where adverse impacts were likely and the apparent feasibility of noise control. Exception requests, if required, would be pursued during later design stages.

1

The noise studies for the Arundel Expressway were performed by a consultant using the criteria set forth in the National Cooperative Highway Research Program Report 117. The noise studies for MD 24 were performed by the State Highway Administration's Bureau of Landscape Architecture which utilized it's own criteria for impact significance.

2

The Maryland State Highway Administration's Bureau of Landscape Architecture will review G.S.A. construction noise regulations as suggested. It is recognized that continual updating of information is necessary to provide accurate assessments of environmental impacts.

3

In response to this comment see page 3.9.6.

4

In response to this comment see Section 3.9.

5

Should any wells be adversely affected by the construction of the highway, the State Highway Administration will provide a service hook-up to a public water supply or will drill a new well for the land owner.

6

The air quality analysis for this project provided calculations of carbon monoxide concentration within the mechanical mixing cell. Predictions were not made for down wind concentrations because the concentrations within the mechanical mixing cell are well below the national ambient air quality standards and, therefore, would be below the standards in the down wind direction due to wind turbulence.

7

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It was assumed for the purpose of this report that background carbon monoxide accounts for the influence of surrounding highways (existing and future) in the study area on total concentrations within the mixing cell. Therefore, emission modeling was not performed for the other highways in the study area.

The Maryland Air Quality Guidelines require that calculations of the pollutant loads in tons per day be provided for each alternative for carbon monoxide, nitrogen dioxide, and hydrocarbons. This analysis was performed and included in the "Air Quality Report", for MD 24.

In order to accurately determine the total pollutant burden for the alternatives under consideration it was necessary to calculate the tons/day associated with the composite traffic assignments for both the relocated facility and the traffic remaining on the existing roadway. This analysis can be summarized as follows:

	<u>1978</u>				
	<u>Alternate 1</u>	<u>Alternate 2</u>	<u>Alternate 3</u>	<u>Alternate 4</u>	<u>Alternate 5</u>
CO	3.46	3.18	3.69	3.55	3.55
HC	0.40	0.36	0.42	0.39	0.39
NO _x	1.36	1.23	1.42	1.23	1.23

	<u>1998</u>				
	<u>Alternate 1</u>	<u>Alternate 2</u>	<u>Alternate 3</u>	<u>Alternate 4</u>	<u>Alternate 5</u>
CO	2.23	2.12	2.16	2.39	2.39
HC	0.19	0.18	0.18	0.20	0.20
NO _x	0.76	0.72	0.73	0.81	0.81

Several observations can be made as a result of this analysis:

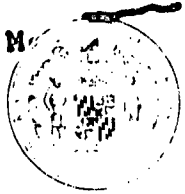
- (1) With the construction of Alternates 1, 2, 3 or 4, or the adoption of the No-Build alternative, the CO, HC and NO_x pollution burden will decrease during the 1978-1998 period.
- (2) The variations in pollutant burden in either analysis year are greatly influenced by the differences in total travel length.

199

- Alternate 1 - 6.87 miles
- Alternate 2 - 6.69 miles
- Alternate 3 - 6.28 miles
- Alternate 4 - 7.56 miles
- Alternate 5 - 7.56 miles

The higher pollutant loads for Alternates 4 and 5 during 1998 can be attributed to these facilities accommodating a similar traffic load as the other Alternates, but over a greater travel length.

- (3) The pollutant burden resulting from the relocation alternatives, improvements to the existing facility, or the adoption of the Do-Nothing alternative will not result in any significant changes in the total pollutant burden within the project area.



MARVIN MANDL
GOVERNOR

RECEIVED

JUN 9 1976

200

MARYLAND

DEPARTMENT OF STATE PLANNING

301 WEST PRESTON STREET
BALTIMORE, MARYLAND 21201
TELEPHONE 301 383 2451

OFFICE OF
PLANNING & PRELIMINARY ENGINEERING
SECRETARY OF STATE PLANNING
MADELINE L. SCHUSTER
DEPUTY SECRETARY

June 8, 1976

Mr. Robert Hajzyk, Director
Office of Preliminary Engineering and Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT

Applicant: State Highway Administration

Project: Draft EIS - Relocated Md. Rt. 24 from U.S. Rt. 1 to
I-95 (Harford County)

State Clearinghouse Control Number: 76-4-910

State Clearinghouse Contact: Warren D. Hodges (383-2467)

Dear Mr. Hajzyk:

The State Clearinghouse has reviewed the above statement. In accordance with procedures established by the Office of Management and Budget Circular A-95, the State Clearinghouse received comments from the following:

Department of Public Safety & Correctional Services, Department of Economic & Community Development, Department of Agriculture, Environmental Health Administration and our staff: noted that the statement adequately covers those areas of interest to their agencies.

Department of Natural Resources: provided information (copy attached) on their evaluation of the alternative locations referenced in the statement and advised that a waterway construction permit must be obtained prior to construction.

Thank you for your attention to the A-95 process, and we look forward to continued cooperation with your agency.

Sincerely,

Vladimir Wahbe

Encl.

cc: Robert Lally, Young Hance, Edward Symes, Donald Noren, Paul McKee and Nadine Jones.

SW

EVALUATION OF COMMENTS

No comments are required in response to this agencies review of the Draft EIS.



201

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

June 1, 1976

MEMORANDUM

TO: Joseph Knapp *Bum*
JK

FROM: Kenneth E. McElroy, Jr. *KEM*

SUBJECT: SCH Project 76-4-910, Draft EIS - Relocated Md. Rt. 24
from US Rt. 1 to Md. Rt. 24 at I-95 near Bel Air
(Harford County)

This document examines the environmental impacts associated with each of the four alternative alignments for new limited access roadway intended to replace Route 24 between I-95 and the Rt. 1 Bel Air bypass. Alternates 1 through 3 involve a bypass to the southwest of Bel Air, providing a north-south route which allows through traffic to avoid the center of town. Alternate 4 involves only upgrading the existing road, providing no option for this through traffic. Alternate 4 would have the least water quality impact. The nature of the stream use makes it relevant for the Water Resources Administration to consider this alternative as the most viable alternative for this project. However, this alternate provides no solution for the problem of through traffic in the town of Bel Air. Of the remaining choices, alternate 1 would provide a bypass while causing the least disruption of existing terrain. The EIS notes that alternates 1 through 3 will impact the streams of Heavenly Waters, Plumtree Run and Winters Run with increased runoff during and after construction. They will also necessitate the relocation of part of an existing sanitary landfill. WRA should be notified on how landfill cells to be removed are to be disposed.

A permit for waterway construction must be obtained from WRA prior to construction.

KEM/mm

Maryland Department of State Planning
State Office Building
301 West Preston Street
Baltimore, Maryland 21201

Date: 6/1/76

202

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT REVIEW

Applicant: State Highway Administration

Project: Draft EIS - Relocated Md. Rt. 24 from US Rt. 1 to
Md. Rt. 24 I-95 (Harford County)

State Clearinghouse Control Number: 76-4-910

We have reviewed the above draft environmental impact statement and our comments as to the adequacy of treatment of physical, ecological, and sociological effects of concern are shown below:

	Check (X) for each item	
	None	Comment enclosed
1. Additional specific effects which should be assessed:	X	
2. Additional alternatives which should be considered:	X	
3. Better or more appropriate measures and standards which should be used to evaluate environmental effects:		X
4. Additional control measures which should be applied to reduce adverse environmental effects or to avoid or minimize the irreversible or irretrievable commitment of resources:	X	
5. Our assessment of how serious the environmental damage from this project might be, using the best alternative and control measures:		X
6. We identify issues which require further discussion of resolution as shown:		X

Signature *Kenneth C. ...*
Title Chief, Planning Section
Agency Water Resources Administration

David W. K. Lee

203

Response to:

State of Maryland, Department of Natural Resources, Water Resources Administration

A discussion of the potential involvement with the sanitary landfill is provided on page 3.9.4. The disposition of excavated waste material will be in accordance with the applicable state and county regulations and policies.

1

209



June 22, 1976

Robert J. Hajzyk, Director
Office of Planning and Preliminary
Engineering
300 West Preston Street
Baltimore, MD 21201

Dear Mr. Hajzyk:

The Wildlife Administration has no objection to the proposed improvement of Maryland Route 24 (Contract # H-520-000-474) Emmorton Road, Harford County.

The general area of road work is being encroached upon by suburban homes and developments. The main area of concern is for the possible existence of the bog turtle in the work area. Only 2 areas of potential habitat were found with no bog turtles present.

The two sites should be avoided, as additional searching may locate some bog turtles there. A copy of the map with the two sites, area 1 rated A and area 2 rated B, is enclosed.

Sincerely yours,

Carlo R. Brunori

Carlo R. Brunori
Director, Environmental Review

CRB:jw

cc: Bitely
Hodil
Halla
Peeden

✓	✓	✓
✓	✓	✓
✓	✓	✓

Copy to B LA 24 June 76

205

Response to:

Maryland Department of Natural Resources

All of the alternates studied including the recommended alternate do not encroach upon the bog habitat identified on the map.



1



DEPARTMENT OF PLANNING & ZONING

206

June 29, 1976

Mr. Robert J. Hajzyk, Director
Office of Planning and Preliminary Engineering
Maryland Department of Transportation
Post Office Box 717
300 West Preston Street
Baltimore, Maryland 21203

Dear Mr. Hajzyk:

This letter will act as our official request to have the Maryland Department of Transportation consider the Environmental Impact Statement for the proposed Alternate #6, realignment for Maryland Route 24 corridor (see attached).

Thank you for your consideration.

Sincerely yours,

Kenneth Green, Director

KG:js

CC: Mr. Larry Saben



DEPARTMENT OF PLANNING & ZONING

257

June 1, 1976

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

Dear Mr. Camponeschi:

Re: DRAFT, ENVIRONMENTAL STATEMENT (DES)
RELOCATION RT. 24 Between U.S. 1 and I-95

The Department of Planning & Zoning has serious reservations about the four alternate alignments indicated on the Area Map (fig. 1.3) in Section 2.0 Land Use Planning. The DES considered only the 1969 General Land Use Map (fig. 2.06) and Major Thoroughfare Plan (fig. 2.0b) with no mention of the proposed '76 Plan or the suggested Rt. 24 alignment. Representatives of MDOT were notified on several occasions in 1975 of this westerly alignment, alternate #5 between Plumtree Road and I-95.

The broad concept of the Emmorton area, Planning District V (Plumtree/Patterson Mill Roads to I-95 between Winters Run and Bynum Run), was to establish three neighborhoods. These neighborhoods are separated by green belts, following stream valleys and focus on separate neighborhood-oriented uses along the existing Rt. 24. The existing Rt. 24 would serve as a major collector, part of a loop road system for inter-communication between the neighborhoods and as an alternate N/S access between Bel Air and I-95.

Another of the planning concepts for the district was to create a pedestrian/bike system between Bynum and Winters Runs using the green belts as the connecting links. The existing and committed development in the district gave us the advantage to accomplish this - however, this was dependent on Rt. 24 being relocated as proposed by planning with underpasses for uninterrupted access. To locate Rt. 24 as proposed by MDOT would sever the connecting links by a high-speed, high-volume roadway.

✓	_____	_____	HOPKINS
✓	_____	_____	HUTZLER
_____	_____	_____	JANATA
_____	_____	_____	KOLLER
_____	_____	_____	WILLIAMSON
_____	_____	_____	_____

REMARKS: ACTION INFO FILE

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208

Mr. Eugene T. Camponeschi

- 2 -

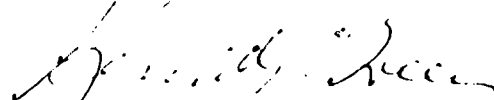
June 1, 1976

Part of the Department's concept was to make more open space available to the residents of the County at large and not reserve it, at the rear of developments, for the sole use of the occupants. With the County's Rt. 24 proposal, both the Bynum and Winters Run valleys would be accessible to County residents. It was felt this was particularly necessary in this area because of the lack of accessible open space south of Rt. 40. The Department of Parks and Recreation also expressed interest in this proposal.

The design of the proposed Rt. 24 was also considered. It was felt this road should be "parkway" in character taking advantage of the scenic nature of the area as opposed to a "highway" type route. Speed was not a prime consideration since the distance from I-95 to U.S. 1 is only about 5 1/2 to 6 miles.

The Department of Planning recommends that the Environmental Statement be expanded to include the proposed alignment as indicated on the 1976 General Land Use Map.

Sincerely yours,


Kenneth Green, Director

KG:js

209

Response to:

Comments Made By Harford County Department of Planning and Zoning

In accordance with the request made by the Harford County Department of Planning and Zoning the State Highway Administration directed it's Bureau of Landscape Architecture to make a preliminary study of the alternate suggested by the county. The results of this study are presented on page 2.0. 6 .

1

FEDERAL ENERGY ADMINISTRATION
REGION III
1421 CHERRY STREET
PHILADELPHIA, PA. 19102

210

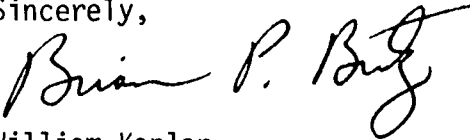
JUL 13 1976

Mr. Robert J. Hajzyk
Director
Office of Planning and Preliminary Engineering
Maryland Department of Transportation
P. O. Box 717
300 West Preston Street
Baltimore, Maryland 21202

Dear Mr. Hajzyk:

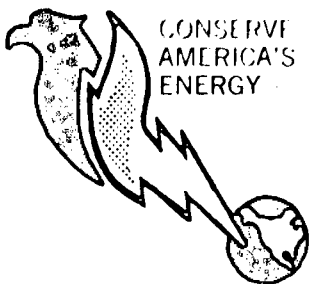
Our regional office has reviewed the draft environmental impact statement for the 6.7 mile section of Maryland Route 24 (FAP No. S-9075-6) and we have no comments at this time.

Sincerely,

for 
William Kaplan
Director, Energy Conservation
and Resource Development

EVALUATION OF COMMENTS

No comments are required in response to this agencies review of the Draft EIS.



III.A.

PUBLIC HEARING COMMENTS
AND EVALUATIONS

212

The Draft Environmental Impact/4(f) Statement was circulated for comments to public and private organizations and individuals in April 1976.

Subsequently, the Maryland Department of Transportation's Highway Administration held a location public hearing on June 29, 1976 at 7:30 P.M., at the Bel Air Senior High School, Bel Air, Maryland for the purpose of receiving comments concerning the five alternates which were discussed in the Draft Environmental Impact/4(f) Statement.

During the public hearing, comments were received from sixteen individuals some of which represented public or private organizations. An additional ten individuals responded by mail on the "Question and/or Recommendation Forms" as provided by the State Highway Administration during the public hearing.

The following is a summary of the substantive comments received:

1. A majority of those individuals making comments felt that there was a need for the project. However, some felt that there exist feasible solutions other than the five proposed alternatives considered in the Draft Environmental Impact/4(f) Statement. It was recommended that Tollgate Road and a by-pass further west of the proposed alternates be considered for development.
2. Of the nine individuals who made recommendations for a specific alternative, six individuals favored one of the non-relocation alternatives, citing in general, the savings to the tax payer and maintenance of the now rural setting as being important positive effects of such alternatives.
3. The priest of St. Mary's Episcopal Church spoke in behalf of the church vestry, a member of the church vestry, and himself. The overall opinion of the vestry is that the highway will have no adverse impact on the church and its members as long as the roadway pavement comes no closer to the structure than it does at present. However, the father and a member of the vestry do feel the church would be adversely affected if the road would be enlarged in any way as proposed under alternates one or four. The basis of their remarks being increased noise, air pollution, hazardous conditions for those travelers passing through the St. Mary's - Md. 24 intersection. Thus, they would favor alternates two or three which relocate the road away from St. Mary's Church.
4. Several comments were received suggesting that portions of the proposed alternates be interchanged to create new alternates.

1

2

- 5. A representative of the League of Women Voters emphasized the importance of Heavenly Waters Park and criticized the Highway Administration for not providing a noise assessment of the park area in the Draft Environmental Impact/4(f) Statement. The representative suggested completing existing projects in town to relieve some downtown traffic but suggested further consideration of "Mass Transit" in order to solve Md. 24 problem. 3
- 6. The Harford County Department of Planning and Zoning suggested a new location for proposed Md. 24 Relocated that would correspond with the new recommended 1976 Comprehensive Master Plan for the county. 4
- 7. Several stressed the need for bikeway development which would improve the safety of the biker and could act to stimulate greater bicycle use thus, possibly decreasing the use of motorized vehicles on Md. 24. 5
- 8. Two individuals testified that the relocation alternates could adversely affect their livelihood since they own small businesses along Md. 24 and such relocations would reduce their potential clientel.
- 9. A local citizen made several comments regarding the analysis of highway noise and air quality which was presented in the DEIS. Concern was expressed over the predicted noise levels, the validity of the noise level descriptor utilized to assess impacts, the effect of night-time noise, and noise control measures. It was further stated that the air quality analysis should have included other pollutants in addition to carbon monoxide. 6

214

Response to:

Public Hearing Comments

The State Highway Administration has complied with this request by performing a preliminary investigation of the suggested Tollgate Road Alternate. The findings of this investigation are as follows:

The proposal of the State Highway Administration is to provide a controlled access, ultimate multi-lane divided highway, which, will be necessary to safely handle the anticipated traffic.

This highway is planned to be contained within a minimum of 200 feet of right-of-way. However, until such time as a dual highway is needed, it is planned to purchase the ultimate right-of-way, but to construct only one two-lane facility which will ultimately become one roadway of the planned dual highway.

The latest design criteria of the State Highway Administration and the Federal Highway Administration is to be used in the design and construction of this proposed highway. These standards dictate that the new highway be a 24 foot two-lane facility with 10 foot shoulders and 20 feet of safety grading provided on either side. The maximum vertical grade permitted in this type of terrain is 6%, i.e., rises or falls 6 feet in 100 feet, while the maximum allowable horizontal curve is 4 degrees, i.e., a radius of approximately 1430 feet.

The existing Tollgate Road is a county road and is substandard according to present design criteria of the State Highway Administration. It consists of an average width of approximately 18 feet, has several areas in which the grades are from 8 to 10%, and several horizontal curves which are extremely sharp, with radii varying between 225 feet and 350 feet.

To meet the State Highway Administration design criteria, Tollgate Road between Plumtree Road and the U.S. Route 1 By-Pass, would have to be reconstructed. This would entail widening the existing road, revising the horizontal alignments where necessary, and the elimination of the steep grades. This would also involve additional right-of-way taking to contain the supporting slopes of the new roadway, thus residents along this roadway would lose some of their front property. The use of retaining walls in cuts and fills to lessen the right-of-way damage is not recommended due to the potential danger they present, the expense involved and they are not pleasing to the eye. Had this alternate been selected, the ultimate improvement to a divided highway with control of R/W as proposed by the State Highway Administration to safely handle projected traffic, could not be achieved. There would also be many problems created at the intersection of Tollgate Road, Business Route 1, and the existing properties which presently front on Tollgate Road.

The other alternate along this route would be to construct a dual highway parallel to and east to Tollgate Road. Access to the dual facility would be controlled, i.e., at intersecting roads only with Tollgate Road becoming a service road.

With either alternate, Tollgate Road between U.S. Business Route 1 and the Bel Air By-Pass would have to be relocated in its entirety to accommodate the proposed interchange with the Bel Air By-Pass. The existing access to the Harford Mall Shopping Center from Tollgate Road would have to be redesigned, with some of the access points being eliminated.

Had an alignment in the Tollgate Road area been selected, some residents would have been required to give up their homes and relocate. This is a very expensive process and creates many problems for those involved. Therefore, the State Highway Administration makes every endeavor to keep this problem to a minimum. This proposal would also meet with opposition from H.U.D., Maryland Department of Natural Resources and Harford County as it would effect a portion of the existing Heavenly Waters Park.

Since 1958, efforts by the State Highway Administration for the proposed relocation of Maryland Route 24 have been coordinated with the officials of Bel Air and Harford County. Some property alongside the Harford Mall has been held in reservation while other property has been purchased in the area of the proposed interchange with the Bel Air By-Pass in the area of the proposed Heavenly Waters Park, and adjacent to the Bel Air Plaza.

As a result of this planning and cooperation between town, county, and state officials, there would be no extensive right-of-way damage or relocation problems created by the relocation of Maryland Route 24 and its connection to U.S. Business Route 1 as proposed by the State Highway Administration.

Based on the findings of this investigation as stated, and considering the adverse effects upon the residents along Tollgate Road, the long range planning and coordination between local, county, and state officials, the State Highway Administration recommends that no further consideration be given to the relocation of Maryland Route 24 along the Tollgate Road alignment.

The interchanging of alternates to create new alignments has been considered throughout the design studies. Various combinations were considered in an effort to incorporate the best features of each alignment. Studies have been conducted to investigate solutions to the programming and stage construction of this facility; combining segments of various alternates was an integral part of this analysis.

2/16

A discussion of noise impacts on Heavenly Waters Park is now provided on page 3.8.14 and page 25 of the Section 4(f) Statement.

Roadway improvements within Bel Air will be made under the TOPICS Program, but this will not negate the need for the relocation of Maryland Route 24.

Trends in transportation are still single car oriented. Thus, even though mass transit may provide some relief, improvements to Md. Route 24 will still be necessary.

In response to this comment see page 2.0.6 for the response made by the State Highway Administration to the letter sent from the Department of Planning and Zoning requesting consideration of their Master Plan Alternate.

Because the recommended alternate (Alternate 3) will aid in decreasing traffic along existing Md. 24, a bicycle path along the existing roadway becomes more feasible and will be studied during later design stages.

It was indicated that the proposed route will be half the distance of the present by-pass to his neighborhood. The distance will be 1,800 to 2,000 feet from the nearest point on Catherine Street. Based on this, the maximum design year noise level would be approximately 58dBA(L₁₀). Although no actual measurements of ambient noise were made along Catherine Street, ambient noise levels are around 50dBA(L₁₀), based upon similar areas in the corridor. The maximum increase in ambient levels would be 8dBA(L₁₀), a minor increase.

The remarks about L₁₀ level are well taken. This is the noise level exceeded 10% of the design hour which will occur in the design year. It is a representation of peak volume impact. The L₁₀ levels projected for the design year are not continuous levels but will occur for approximately six minutes out of an hour.

The procedures utilized to analyze the impact of noise were established by the Federal Highway Administration and do not address the investigation of frequency related noise impacts. As the noise levels projected are overall levels, that is, account for levels at all frequencies, the particular strength of any one particular frequency is included as a function of the overall L₁₀ level.

Again the FHWA criteria have seen fit to address only the peak hour L10 noise level. This usually does occur during daytime hours. The problem is magnified because at nighttime other background noise is usually absent and this tends to make highway noise levels more annoying.

The discussion of noise control measures and the relation to local streets is based on the fact that for the Do-Nothing alternate the presence of entrance drives along Maryland Route 24 would defeat the purpose of any barrier due to the voids these entrances would create in the barrier. This would significantly compromise barrier effectiveness.

The "Air Quality Report" which was prepared for this project provided an analysis of pollutant loads for each alternate for carbon monoxide, nitrogen dioxide, and hydrocarbons. The results of this analysis indicated that the pollutant burden resulting from the relocation alternatives, improvements to the existing facility, or the adaption of the Do-Nothing alternative will not result in any significant changes in the total pollutant burden within the project area. The "Air Quality Report" is a separate reference document; this report is available for public inspection.

III.B.

WRITTEN COMMENTS RECEIVED
FROM CITIZENS FOLLOWING
THE PUBLIC HEARING
AND EVALUATIONS

RECEIVED
2A

STATE HIGHWAY ADMINISTRATION

QUESTION AND/OR RECOMMENDATION FORM

Maryland Route 24
From U.S. Route 1 (Bel Air By-Pass)
To Maryland Route 24 at I-95
Contract No. H 520-000-474
F.A.P. No. S 9075(6)
LOCATION PUBLIC HEARING
June 29, 1976

In order to provide a method by which comments or inquiries of an involved or individual nature can be answered satisfactorily, please submit the following information:

NAME Edwin Clark
ADDRESS 205 Pleasant Rd
Bel Air Md ZIP CODE 21014
COUNTY Harford

I/We wish to comment or inquire about the following aspects of this project.

1. In the event RIT 3 is decided upon:
 - a. What property owners are affected?
 - b. To what extent?
2. C. after hearing how long before decision?
3. What could possibly be rationalizations for act 3, also was political? Is guaranteed closeness of cash estimates for 203.
4. RIT 3 is most expensive & disruptive to 6 residential property owners & unnecessarily so
5. Revise appeal procedures, other than the courts, if any.

Response to:

Comments Made By Edwin Clarke

The specific impacts on properties within the Alternate 3 corridor will not be determined until the final design phase of the project.

1

The decision has been made and Alternate 3 has been recommended for final design.

2

The rationale for the selection of Alternate 3 as the recommended alternate is primarily because of its long-term benefits. (See discussion of the recommended alternate in Section 4.0).

3

Since Alternate 3 is three-tenths of a mile shorter than Alternate 2, the construction costs for four lanes of Alternate 3 will be approximately 500,000 dollars less than Alternate 2. However, Alternate 3 will require approximately 700,000 dollars more for right-of-way since it impacts more improved properties.

3

Although, the recommended alternate will disrupt residential properties on Plumtree Road, these costs must be weighed against the benefits achieved.

3

The first level of appeal is through the public forums provided by the Maryland Action Plan. The views expressed at these meetings will be reviewed by the decision making agencies at the state and federal levels of government, and should create an awareness on the part of the elected officials.

4

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STATE HIGHWAY ADMINISTRATION

QUESTION AND/OR RECOMMENDATION FORM

Maryland Route 24
From U.S. Route 1 (Bel Air By-Pass)
To Maryland Route 24 at I-95
Contract No. H 520-000-474
F.A.P. No. S 9075 (6)
LOCATION PUBLIC HEARING
June 29, 1976

In order to provide a method by which comments or inquiries of an involved or individual nature can be answered satisfactorily, please submit the following information:

NAME WESLEY W. WELCH, JR. PRESIDENT HISTORICAL SOCIETY OF HARFORD COUNTY, MD.
ADDRESS PO BOX 371
BEL AIR, MD ZIP CODE 21014
COUNTY HARFORD

I/We wish to comment ~~or inquire~~ about the following aspects of this project.

WE ARE INTERESTED IN THE SEVERAL HISTORIC STRUCTURES
IN THIS REGION AND WE NOTE THAT THE S.H.A. HAS
BEEN IN COMMUNICATION WITH THE MARYLAND HISTORICAL
TRUST. WE THINK THIS IS THE LOGICAL PROCEEDING AND
WE SUPPORT THE MARYLAND HISTORICAL TRUST'S OPINION.

EVALUATION OF COMMENTS

No comments are required in response to this statement.

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STATE HIGHWAY ADMINISTRATION

QUESTION AND/OR RECOMMENDATION FORM

Maryland Route 24
From U.S. Route 1 (Bel Air By-Pass)
To Maryland Route 24 at I-95
Contract No. H 520-000-474
F.A.P. No. S 9075(6)
LOCATION PUBLIC HEARING
June 29, 1976

In order to provide a method by which comments or inquiries of an involved or individual nature can be answered satisfactorily, please submit the following information:

NAME Hyatt Wood Young & Elizabeth W. Young
ADDRESS 92 Ken Campbell & Partners
321 Equitable Bldg, Towson Md. ZIP CODE 21204
COUNTY Baltimore

I/We wish to comment ~~or inquire~~ about the following aspects of this project.

We do not feel you should take good farm land
and underdeveloped stream property along with
mature forest stands. Use Alternative #5
and not discriminate against farmers and
hard working agricultural people who have
been the backbone of Harford County since
more than a century. Every year productive
ground is destroyed and you are too blind
to see more roads and cars and development
are not the answer to this problem. What
good is a park when you have killed the
wild life, the birds, turtles, fish, foxes,
opossum and then you are doing the children
are delinquents and juveniles. Money secrets
influence too many public officials to the
detriment of the tenant owners. Why should shops
Centers come before old Harford Counties.

223

Response to:

Comments Made By Hyatt Hood Young and Elizabeth W. Young

The loss of farm land, stream property, mature forests, etc. are all costs of the project which were carefully considered and weighed against the benefits before the final decision was made.

1

RECEIVED

JUN 25 1976

STATE HIGHWAY ADMINISTRATION

RECEIVED 224

JUN 23 1976

PLANNING SUPPORT SECTION

QUESTION AND/OR RECOMMENDATION FORM

DIRECTOR'S OFFICE OF PLANNING & PRELIMINARY ENGINEERING

Maryland Route 24
From U.S. Route 1 (Bel Air By-Pass)
To Maryland Route 24 at I-95
Contract No. H 520-000-474
F.A.P. No. S 9075 (6)
LOCATION PUBLIC HEARING
June 29, 1976

In order to provide a method by which comments or inquiries of an involved or individual nature can be answered satisfactorily, please submit the following information:

NAME Mr. & Mrs. Bruce Conway
ADDRESS 3703 Lincoln Ave
Wheaton ZIP CODE 21509
COUNTY Harford

I/We wish to comment or inquire about the following aspects of this project.

See above on Contract 2 and 3.

EVALUATION OF COMMENTS

No comments are required in response to this statement.

STATE HIGHWAY ADMINISTRATION

RECEIVED
JUL 1 1976 225

QUESTION AND/OR RECOMMENDATION FORM

DEPT. OF TRANSPORTATION
OFFICE OF PLANNING & PRELIMINARY ENGINEERING

Maryland Route 24
From U.S. Route 1 (Bel Air By-Pass)
To Maryland Route 24 at I-95
Contract No. H 520-000-474
F.A.P. No. S 9075(6)
LOCATION PUBLIC HEARING
June 29, 1976

In order to provide a method by which comments or inquiries of an involved or individual nature can be answered satisfactorily, please submit the following information;

NAME R. C. Chance
ADDRESS 623 South Atwood Road
Baldwin Maryland ZIP CODE 21014
COUNTY Harford

I/We wish to comment or inquire about the following aspects of this project.

Please Consider a Bike Path
should be extension for Emmorton Road,
no matter which numbered plan
is accepted. Many bicyclists use Route
24 and its offshoots. We need an
authentic, properly labeled cycling artery.
Many folks will use it. I
have a good pulse on local demands, even
though citizen support was minimal the other side.
A local group similar to the Baltimore
County Bikeways Taskforce could band together
to if their efforts were effective.

Ecologically Yours
Bob Chance

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Response to:

Comments Made By R. C. Chance

Because the recommended alternate (Alternate 3) will aid in decreasing traffic along existing Md. 24, a bicycle path along the existing roadway becomes more feasible and will be studied during later design stages.

1

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STATE HIGHWAY ADMINISTRATION
QUESTION AND/OR RECOMMENDATION FORM

Maryland Route 24
From U.S. Route 1 (Bel Air By-Pass)
To Maryland Route 24 at I-95
Contract No. H 520-000-474
F.A.P. No. S 9075(6)
LOCATION PUBLIC HEARING
June 29, 1976

In order to provide a method by which comments or inquiries of an involved or individual nature can be answered satisfactorily, please submit the following information:

NAME JUNE C. WEEKS
ADDRESS 27 IDLEWOOD STREET
BEL AIR, MD. CODE 21014
COUNTY HARFORD

I/We wish to comment or inquire about the following aspects of this project.

Your historical resume describes the relocation of Route 24 as a critical need. The schedule indicates that the State Highway Administration intends to alleviate this situation in a very leisurely fashion. Why?

Are Harford County elected officials, local & state, aware of your leisurely approach? If so are they doing anything at all - to exert pressure - to speed up this project?

Why is there no mention of the accident rate for this road in your publication? Is this of any concern to the State Highway Administration? Harford County Office

Would you define "controlled access"? If this means that access will be limited to specific locations why are these not designated on your map?

P.S. Homestead School is not south of Ring Factory Road.

228

Response to:

Comments Made By June C. Weeks

Because of fiscal restraints, budgeting has extended the schedule for most new roadway construction throughout the state. In addition, laws requiring time for participation by federal, state and local agencies as well as the public in the planning process, has extended the time required between plan initiation and actual construction.

1

Accident statistics are of importance and are now shown on pages 1.5.1 and 1.5.2.

2

"Controlled Access" is defined in the glossary of the EIS as a highway where entrances and exits are kept at a minimal amount as is feasible. All access points to the local roadways are shown on the plan sheets in Section 4. All access to private driveways will be via service roadways or existing Md. 24. Wheel Road is the only one not shown for Alternates 1 and 2 since there is no new proposed construction for this intersection.

3

STATE HIGHWAY ADMINISTRATION

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QUESTION AND/OR RECOMMENDATION FORM

Maryland Route 24
From U.S. Route 1 (Bel Air By-Pass)
To Maryland Route 24 at I-95
Contract No. H 520-000-474
F.A.P. No. S 9075(6)
LOCATION PUBLIC HEARING
June 29, 1976

In order to provide a method by which comments or inquiries of an involved or individual nature can be answered satisfactorily, please submit the following information:

NAME Kathleen M. Keckell (Mrs) Route 7
ADDRESS 1000 Greenfield Rd RT 3
Forest Hill Md CODE 21085
COUNTY Howard County

I/We wish to comment or inquire about the following aspects of this project.

My dear Mr. Delaney W. Loring
I wrote you, reflecting RT 3. I then I attended the meeting the past Tuesday evening. I feel that my request is sympathy. It seems to me that kind of law has been said to the highest bidder, granting building permits daily - daily which has now created a situation you are supposed to correct. I understand that even the change of location has which is a property to be maintained. I am my opinion to upgrade RT 24, a whole of way, but the purpose of route 24 is already have one of your routes happen to Route 24 highway by with Montgomery, Prince and Maryland State 1. And we can see what type of route 1. I think should use RT 152 when possible. The highway 152 - 152 - 152 - 152 should keep you solve the problem they have helped to create, Good luck

Kathleen M. Keckell
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502 Greenfield Road
Rt 3 Joppa, Md. 21085
June 23, 1976

Mr. Rajesh H. Shetty
Project Manager - Highway Adm.
Office of Planning and Policy Eng.
Box 717 Baltimore, Md. 21203

Dear Sir:

After due consideration I am strongly
opposed to the Emmorton Road as a
super-highway but believe that Route 3
the most intelligent choice.

I have based my conclusions on
the following:

- ① The traffic on Emmorton Road at present.
- ② The number of accidents on that road at present.
- ③ The housing developments on both sides of Emmorton Rd. which are increasing.

(4) Due to the highway developments the traffic on this road should be diminished so that the fire departments and ambulance services will not be impeded in their service.

In addition my objection can be noted by the permit to allow the Acorn stores to meet at Route 1 and Route 152. This is a dangerous intersection even with the help of the stop light which you have so generously installed.

Since I frequently see all these routes I understand what I write. I beg to remain your obedient servant.

Loucky M. Astell
1-Mrs Robert F.

P.S. I am a member of St Mary's Church on Emmerton Rd. There are at present about 5 churches with signs on Emmerton Rd.

EVALUATION OF COMMENTS

No comments are required in response to this statement.

LOCATION
PUBLIC HEARING

232
JUL 18 1976
PLANNING & PRELIMINARY E.

MARYLAND ROUTE 24 (from Bel Air By-Pass to I-95)

Thank you for giving such good notices about these hearings and being receptive to our comments.

Living on Singer Road near 24, I have been aware of the increase in traffic on 24 and in particular at the intersection of 24 and #1.

But I am tired of seeing new roads paralleling one another. Also, there seems to be a lack of concern that we are still having an energy crisis.

Why are we continually ignoring some of the variety of forms of transportation.

I. Walking--but we cannot because of a lack of side walks

II. Biking--this is the one I would prefer to dwell on the longest. All we need in so many cases are wide smooth shoulders along the present roads that lead us to our work, schools, places of worship, stores and friends. We need bikers licenced to make sure they understand safety rules. In special cases additional safety measures are needed to protect the bikers at dangerous intersections by such things as over passes. Why do you ignore bikes when the sale has jumped so and they are so evident.

III. Where are the buses? There are so many one in the car people heading to work at Edgewood and Baltimore. We also need intra-county small mind ones to circle the numerous developments near Bel Air and others for "Dial a Ride" to meet special needs of the elderly, young mothers and after school special events.

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3

IV. Another Road to get from Joppatowne or Edgewood is Mountain or 152. Turn right at Bel Air Rd. and then to the By Pass and there will be no need to go through the town of Bel Air.

These three things plus the "One-Way" System of Main and Bond St. I think would eliminate the need for a new 24. Could we not improve, preserve, beautiful, and out law spot commercial zoning along the present road?

I know if I lived in a home on or very near 24 that I had given a lot of time, money and love to get as I wanted I would not be anxious to sell and have it demolished. But isn't losing a few replaceable homes better than putting a by pass through Heavenly Waters Park which like Farm Land-- once built and hard topped on never is returned to the original use. Park Land is not cheaper by the dozen. This park included some very special things for our county in its plans.

It would also be a disaster to have a new 24 as a scenic highway along Winters Run. Having black top near such a valuable stream is a major source of pollution.

I appreciate your problems while trying to work out a plan to suit us all. Thank you

John Schwanke
701 Singer Rd.
Abingdon, Md. 21009
676-4004

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Response to:

Comments Made By Ann Schwanke

The recommended alternate (Alternate 3) will reduce the traffic load on existing Md. 24. Thus, construction of a bikeway on existing Md. 24 will become more feasible. During later design stages the possibility of bikeway construction will be investigated.

1

Undoubtedly, there is a need for some forms of mass transit in the Bel Air area. This need will likely continue to increase in the future. However, at this time the dominant mode of transportation in this area is the automobile. Thus, the situation dictates that highway construction in the Md. 24 corridor be of top priority.

2

Although Md. 152 provides an alternative north-south route through southeastern Harford County, traffic projections along with origin and destination studies show that improvements are needed within the Md. 24 corridor.

3

IV
APPENDIX A

SUMMARY OF RELOCATION ASSISTANCE PROGRAM
FORM SHA 63.0-DP1, PRELIMINARY RELOCATION STUDIES

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

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

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

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

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Generally, payments for the actual reasonable moving expenses are limited to a 50 mile radius. In both cases, the expenses must be supported by receipted bills. An inventory of the items to be moved must be prepared, and two estimates of the cost must 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

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exceed the difference between the cost of replacement and the amount that could be realized from the sale of the personal property.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses. If the business is to be re-established, 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 costs of moving the item. If the business is being discontinued or the item is not to be replaced in the re-established business, the payment will be the lesser of the difference between the depreciated value of the item 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, the owner is entitled to receive the reasonable expenses of the sale and the estimated cost of moving the item. In this case, the business should arrange to have the personal property removed from the premises.

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

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

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

In order to determine the amount of the "in lieu of" moving expenses payment, the average annual net earnings of the business is considered to be one-half of the net earnings before taxes, during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State, with approval of the Federal Highway Administration, may use

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

For displaced farms and non-profit organizations, actual reasonable moving costs generally up to 50 miles, actual direct losses of tangible personal property, and searching costs are paid. The "in lieu of" actual moving cost payments provide that 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 cannot be established in the area or cannot operate as an economic unit. 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 adequate replacement housing is not available to rehouse persons displaced by public projects or that available replacement housing is beyond their financial means, housing of last resort will be utilized to accomplish the rehousing. Housing of last resort means that the State Highway Administration will take all necessary action to provide adequate and satisfactory housing, including the possibility of building new houses. Detailed studies will be completed by the State Highway Administration and approved by the Federal Highway Administration before housing of last resort could be utilized. Housing of last resort could be provided to displaced persons in several different ways although not limited to the following:

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

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

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

Bureau of Relocation Assistance
Office of Real Estate
300 West Preston Street - Room 402
Baltimore, Maryland 21201

STATE HIGHWAY ADMINISTRATION
OF THE
DEPARTMENT OF TRANSPORTATION
OF MARYLAND

S.H.A. 63.0-DP-1 (10-35-76) Page 1 Preliminary Relocation Studies
Maryland Project: H520-1-423 Federal Aid Project: S 9075(7)
Terminal: U.S. Rte. 1 to I-95

Alternate Number: 3 General File No. CRCCR

Indicate which of the following applies to the information below: Draft Environmental Impact Statement _____ Conceptual Stage Study _____ Final Environmental Impact Statement Acquisition Stage Study _____

RESIDENTIAL OCCUPANTS AND DOCUMENTS AFFECTED

OCCUPANT STATUS	DUPLEX	TRIPLEX	FAM.	IND.	TYPE OF CONSTRUCTION		AGE					YEARS					RENT-YRS				ESTIMATED VALUE (000's) OR RENT (RENT 100)								
					BRICK	FRAME	COND.	IMP.	SEM. IMP.	ROW	MULTI FAM.	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8+	1	2	3	4 up	\$0-\$70	\$70-\$90	\$90 -		
OTHER OCCUPIED	6	6	6	6	1	2		6					2	3	1			4	1	1				4	1	1		4	2
TENANT OCCUPIED																													
TOTALS	6	6	6	6	1	2		6					2	3	1			4	1	1				4	1	1		4	2

RESIDENTIAL IMPROVEMENTS AVAILABLE

ASTERO PRICER RANGE (000's)	DUPLEX	TYPE OF CONSTRUCTION					AGE			ROOMS					BEDROOMS					
		BRICK	FRAME	COND.	IMP.	SEM. IMP.	ROW	0-10 YRS.	11-30 YRS.	31 YRS. UP	3	4	5	6	7	8 up	1	2	3	4 up
\$0-20	5	1	3	1	4	1		1	4			3	2				3	2		
\$20-40	15	5	5	5	15			3	9	3		4	11				4	1		
\$40 -	27	18	6	3	27			16	6	5		7	5	21	1			5		22
TOTALS	47	24	14	9	46	1		19	16	12		7	18	21	1		7	18		22

Source: Harford County Multiple List

REN.	RENTAL REV.						APT.	RENTS	TOTALS
	0 to \$100	\$100 to \$150	\$150 to \$200	\$200 to \$250	\$250 to \$300	\$300 & UP			
1		10	11				21	21	
2			10	12			22	22	
3			5	7			10	2	
4 up									

Source: Harford County Multiple List

BUSINESSES, FARMS, AND NON-PROFIT ORGANIZATIONS AFFECTED

OCCUPANT STATUS	BUSINESSES					FARMS				NON-PROFIT ORGANIZATIONS			
	RETAIL	COMM.	FOOD	CHUR.	EDU.	BARN	LATHE	TRUCK	EDU.	REF.	SOC.	INDU.	EDU.
OTHER													
TENANT													
TOTALS													

AVAILABLE REPLACEMENT SITES

TYPE OF SITE	BUSINESS	NON-PROFIT	FARMS
LEASE			
TOTALS			

Source: _____
Remarks: _____

Estimated average family size 4 .30
Estimated total number persons affected _____
Estimated total number of minority group members affected 7/8, number of owner occupied families N/A, number of tenant occupied families N/A, and number of individuals 7/8.

Estimated number of minority owned or operated businesses _____
Estimated number of minority employees _____
Estimated number of minority owned or operated farms _____ N/A
Estimated number of minority employees _____
Estimated number of minority non-profit organizations _____
Estimated number of minority employees _____

Signature: Richard Swops (RELOCATING OFFICER) Date: 4/10/75 -- Revised - 3/28/77

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Report Number: FHWA-MD-EIS-76-02-F
Relocation of Maryland Route 24 from
the U.S. 1 Bypass to I-95 in Harford
County

ADMINISTRATIVE ACTION

SECTION 4(f) STATEMENT

for

Land Involvement at the Proposed
Heavenly Waters Park
and
Historical Sites

U.S. DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

and

State of Maryland
Department of Transportation
State Highway Administration

Submitted pursuant to Section 1653 (f),
Title 49 U.S.C. 1/, Section 138, Title
23 U.S.C.

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NOTE: Pages 17, 19 and 20 not used.

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4(f) STATEMENT

Description of Project

The proposed highway improvement consists of relocating Maryland Route 24 in Harford County for a distance of approximately 6.5 miles. The portion of Md. 24 being considered for relocation extends from Interstate 95 to the U.S. 1 Bypass just north of Bel Air.

Existing Md. 24 is a major arterial road which acts as a link between Bel Air and the industrialized areas of Edgewood and Joppatowne. The proposed facility will provide a bypass around central Bel Air, thereby relieving much of the traffic congestion which now exists in that area. The relocation of Md. 24 will provide a more efficient travel link between the project termini.

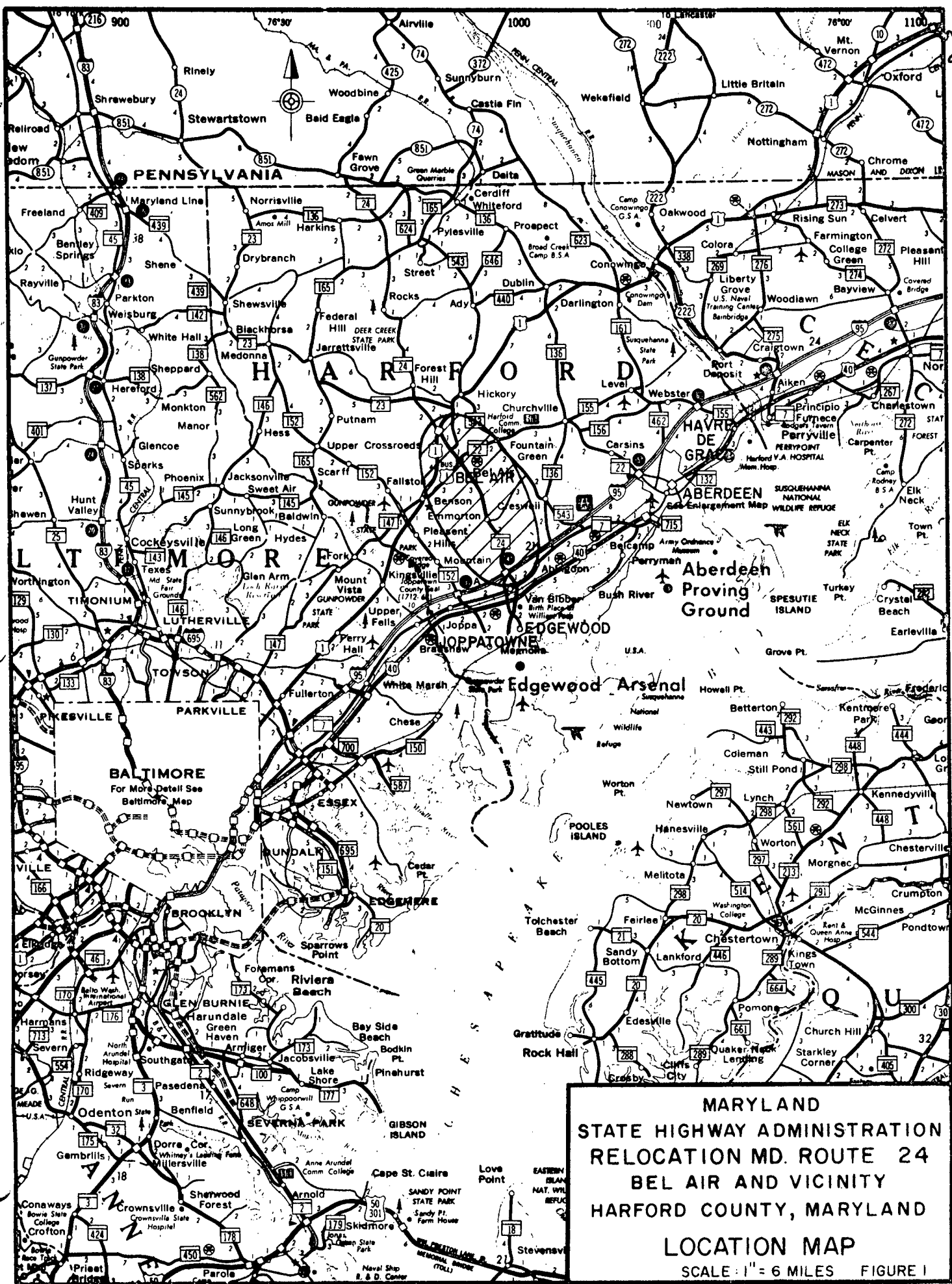
Alternate 3 which consists of a complete relocation of Md. Route 24 has been selected by the State Highway Administration as the recommended alternate.

The design for the proposed Maryland Route 24 was based on environmental factors, and on analyses and comparisons of operational features, capacity potentials, the overall adaptability of the location and consideration to the construction and right-of-way costs that would be incurred. The existing and proposed roadways have been evaluated and studies conducted to determine the extent of improvements that may be necessary. The design includes upgrading the capacity of several local roadways.

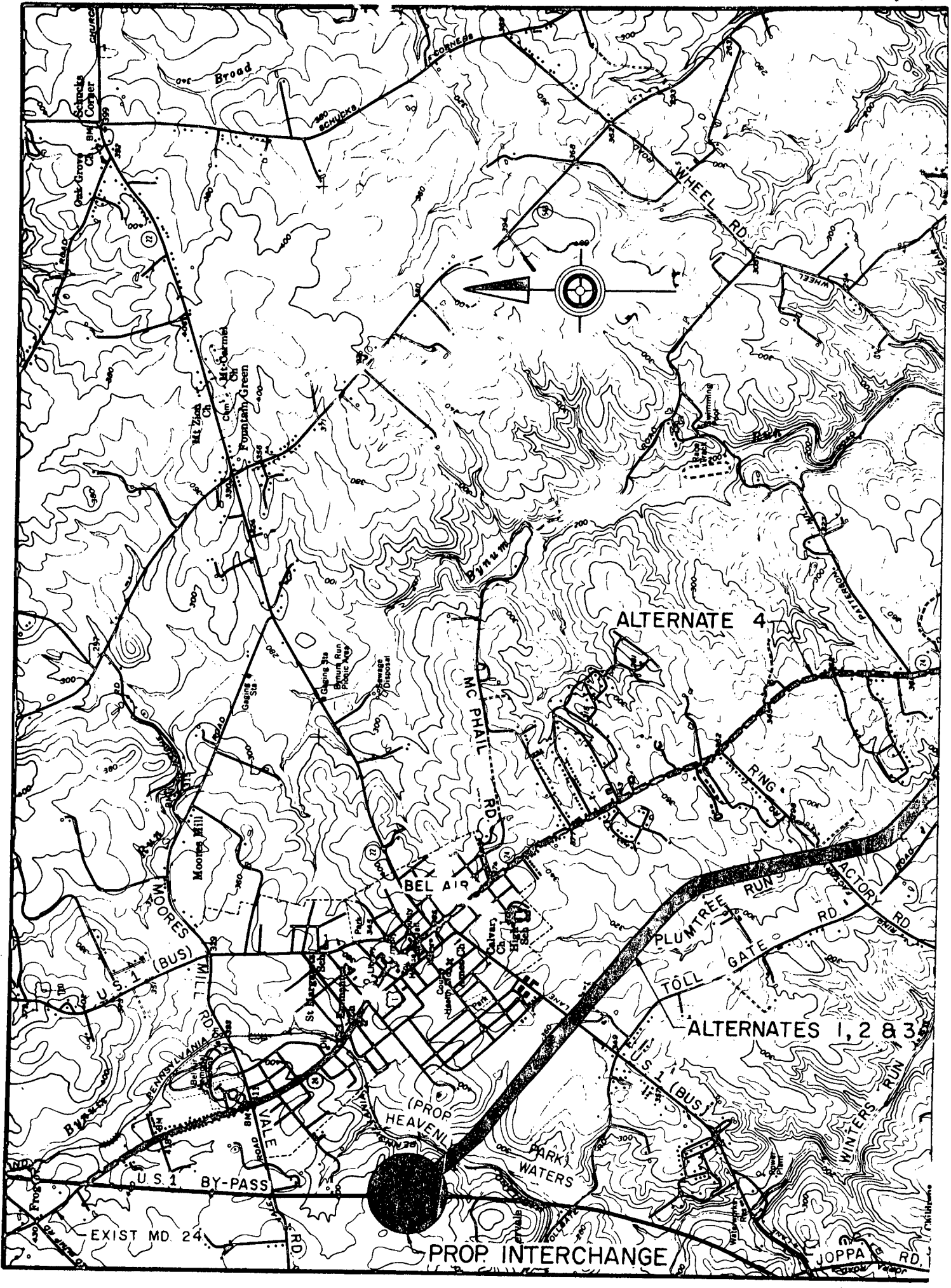
It is proposed that the relocation will be built in stages, where the initial construction will be two lanes with the ultimate construction being four or six lanes. All right-of-way required for the construction of the ultimate facility will be acquired prior to the initial phase of construction. This staging will allow the project to provide limited service during a time when it is most needed, while at the same time keeping the project within the fiscal boundaries set forth in the Highway Administration Budget.

An analysis of traffic data determined, to a large degree, the type of facility that would be required, interchange types and locations and other design elements. Traffic forecasts show that the relocation will carry an average daily traffic from 20,000 to 12,000 vehicles by the design year of 1998.

The initial construction will consist of two twelve foot lanes with two ten foot shoulders. The ultimate construction which will be undertaken approximately five years after the initial construction, will consist of constructing two additional lanes and two ten foot shoulders approximately 34 feet apart, creating a 4 lane highway with a 54 foot graded and grassed median. The 4 lane road will be built within the 200 foot minimum right-of-way. If the ultimate construction is to be six lanes, two more 12 foot lanes will be added in the median area. Thus, no additional right-of-way acquisition



MARYLAND
 STATE HIGHWAY ADMINISTRATION
 RELOCATION MD. ROUTE 24
 BEL AIR AND VICINITY
 HARFORD COUNTY, MARYLAND
 LOCATION MAP
 SCALE: 1" = 6 MILES FIGURE 1



ALTERNATE 4

ALTERNATES 1, 2 & 3

PROP INTERCHANGE

EXIST MD 24

JOPPA RD.

PARK WATERS

BEL AIR

U.S. 1 (BUS)

U.S. 1 BY-PASS

TOLL GATE RD.

PLUNTREE RUN RD.

FACTORY RD.

MC PHAIL RD.

RING RD.

MOORE MILL

MOORES MILL

MOORES MILL

MOORES MILL

MOORES MILL

MOORES MILL

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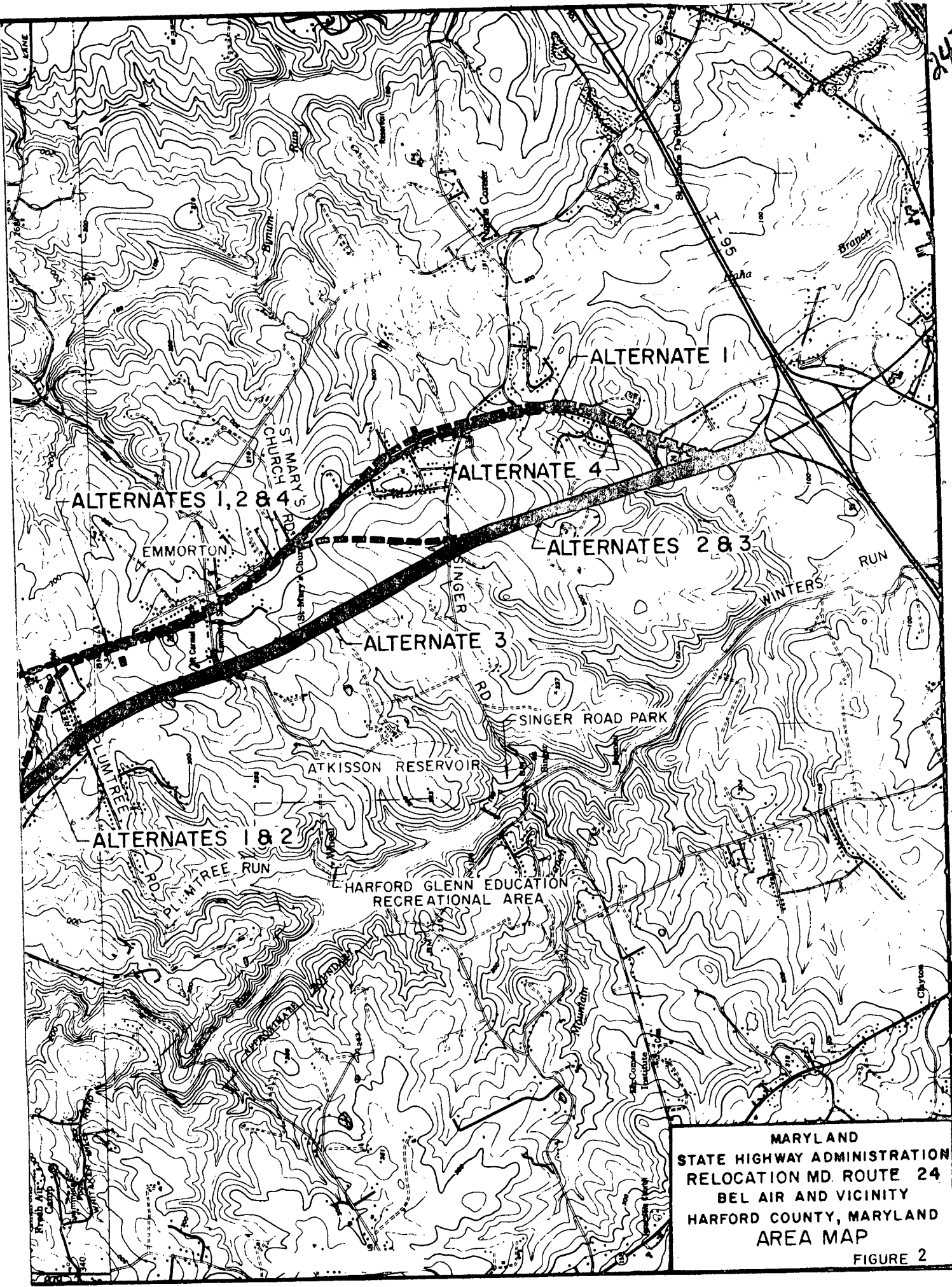
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MARYLAND
STATE HIGHWAY ADMINISTRATION
RELOCATION MD. ROUTE 24
BEL AIR AND VICINITY
HARFORD COUNTY, MARYLAND
AREA MAP
FIGURE 2

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outside the 200 foot minimum would be required. The roadway will be constructed as partially controlled access allowing at-grade intersections at points of major access. Improvements will be made on many of the intersecting roads in order to provide a more efficient highway system. The controlled access means that only intersecting roads and service roads will have approaches to the relocation. No individual property owners will have direct access to the proposed relocation.

This document addresses the impacts associated with the completion of a potential six-lane facility. Since the construction of the facility will be staged according to increasing traffic demands, the SHA and FHWA will re-evaluate the adequacy of this document on regular intervals in accordance with the Maryland Action Plan.

Recommended Alternatives

In order to determine the best location for the proposed improvement, the State Highway Administration conducted studies in the corridor to investigate impacts of all feasible methods for accomplishing the improvement. These studies investigated the relative utility, capacity and safety of the alternatives from the highway user's standpoint, as well as the relative effects on the local area, the disruption of local communities, relocation of people and the effects on the environment. Some of the schemes were discarded on the basis of design features, construction costs, property damages or their inability to accommodate the future traffic projections.

The Maryland Department of Transportation Action Plan is the tool which insures that all factors are considered when determining the location for a proposed highway. The specific purpose of the Action Plan is to achieve transportation improvements by the Department that are in the best overall public interest. The plan relies on application of interdisciplinary analysis, interagency cooperation, full public participation and early consideration to economic, social and environmental impacts in the Departments' planning, location and design process.

The Draft Environmental Impact/4(f) Statement was circulated for comment to public and private organizations and individuals in April, 1976. Subsequently the State Highway Administration held a location public hearing on June 29, 1976 at the Bel Air Senior High School for the purpose of receiving formal testimony concerning the five (5) alternatives discussed in the Draft Environmental Impact/4(f) Statement.

As a result of an intensive review of the engineering studies; public hearing testimony; comments received from federal, state and local agencies; along with a review of the social, economic and environmental consequences, it has been recommended that Alternate 3 be adopted for Final Design.

The five alternates that were studied during the location study and preparation of the Draft Environmental Impact Statement included the following:

Alternate 1 - A relocated roadway is provided from U.S. Route 1 Bypass to Plumtree Road. From this point to Saint Mary's Church Road the alignment is located along existing Md. 24. From Saint Mary's Church Road to I-95 the proposed roadway is relocated east of and adjacent to the existing alignment.

Alternate 2 - Identical to Alternate 1 from U.S. Route 1 Bypass to Saint Mary's Church Road then continuing from Saint Mary's Church Road to Interstate Route 95 on relocation west of Maryland Route 24.

Alternate 3 - From U.S. Route 1 Bypass to a point north of Plumtree Road the alignment is common with Alternates 1 and 2, then providing a new alignment from this point tying into Alternate 2 north of Singer Road. Identical to Alternate 2 from north of Singer Road to Interstate Route 95.

Alternates 1 and 3 require the relocation of residences. Alternates 1, 2 and 3 require acquisition of new right-of-way throughout the corridor.

Alternate 4 - Update existing Maryland Route 24 to the extent practical.

Alternate 5 - "Do-Nothing".

See Alternatives Location Map, Figure 3.

The following is a summary of the factors contributing to the determination that Alternate 3 is the only prudent and feasible alternative:

The recommended alternate provides the most effective long-term solution of the project objectives. Of primary importance is maintenance of an efficient highway transportation network which will permit the orderly growth and development of the Bel Air area. Alternate 3 by being on relocation its entire length, eliminates the inefficiencies of mixing through traffic with local traffic. All of the other studied alternates would require a mixing of traffic to varying degrees. As planned residential and commercial developments along Md. 24 are completed and become functional, the benefits achieved by separation of local and through traffic will become even more important.

Alternates 1, 2 and 4 would require fitting the proposed highway into a rapidly developing corridor from Emmorton to I-95. Thus, the additional points of access which would be required with these alternates would create continued traffic conflicts. In contrast, Alternate 3 which is on relocation its entire length, traverses primarily undeveloped land. Although some of this land is part of the proposed developments which front on existing Md. 24, new points of access will not be provided to these developments by Alternative 3. As a result, less congestion will occur and the highway network efficiency will be maintained for a greater period of time.

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The recommended alternative provides the shortest overall travel length between the project termini. This factor together with the more efficient mode of operation provided with a relocated facility, results in the lowest annual vehicle operation costs for the alternates under consideration. In the event that Alternates 1, 2 or 4 had been selected for construction, and future residential and commercial development pressures in the Emmorton area and to the east dictated the need for a relocated facility at some future date, the long-term advantages of the adoption of Alternate 3 in terms of annual capital costs becomes much more apparent.

The combination of controlled access operation provided by the relocated facility, together with a reduction of traffic congestion along the existing highways will significantly reduce the vehicle accident rate in the project area. According to state wide studies of highways similar to the one proposed for Md. 24 Relocated, the accident rate will be reduced by approximately 43%, along with accident costs being reduced proportionately.

Other factors which influenced the selection of Alternate 3 include the following:

1. This alternate is considered to have the least impact on historical sites within the project area. (See Section 8.0 of the FEIS).
2. Alternate 3 has the least noise impact (See Section 3.8 of the FEIS).
3. Alternate 3 is more compatible with the Harford County General Development Plan of 1976 which shows a complete relocation for Md. 24 from U.S. Route 1 to I-95.

Alternatives Studied But Not Selected

Do-Nothing Alternate - The major benefit of this alternate is that it will have no direct adverse impact on wildlife, aquatic ecosystems, terrestrial ecosystems, water quality or archeological sites within the project corridor. Although, no capital will be expended for construction and right-of-way acquisition, this short-term benefit is negated by the long-term losses caused by an inefficient transportation network which hinders economic growth and development of the area.

Other factors influencing the decision not to adopt the Do-Nothing Alternate include the following:

1. Increasing traffic congestion in and around Bel Air.
2. Increasing roadway user costs due to traffic delays.
3. Accident potential along the existing facility will continue to increase.

- 4. Reduced efficiency of the police and fire protection.
- 5. With construction costs increasing at a rate of at least 5 percent per year, any delay in constructing an improvement which may become an absolute necessity in the future, will require greater capital investments when construction is implemented.

Alternate 1 - This alternate was designed as a relocation which bypasses the congested areas of central Bel Air but uses, to the greatest extent possible, the existing Md. 24 corridor in the southern half of the project area. Although, this alternate would require less initial construction and right-of-way costs when compared to the recommended alternate, such short-term savings are outweighed by the benefits achieved through a complete relocation.

Other major factors influencing the decision to eliminate Alternate 1 from further design considerations include the following:

- 1. Alternate 1 will affect the historic integrity of four sites.
- 2. Alternate 1 will have an adverse noise impact on seven of the eight affected sensitive areas. In contrast the recommended alternate has an adverse impact on three of the six sensitive areas it affects.
- 3. This alternate will have the most severe impact on the existing community by displacing forty people and four businesses.

Alternate 2 - Alternate 2 was designed to achieve a separation between the existing roadway and the relocation while at the same time minimizing impacts on the existing community. Alternate 2 would require no residence or business relocations. This alternate is adaptable to staged construction since it uses a portion of the existing roadway between Plumtree Road and Emmorton.

The benefits that are achieved with this alternate are, for the most part, offset by the disadvantages associated with utilizing a portion of the existing highway corridor.

Alternate 2 shares a common alignment with existing Md. 24 for a relatively short distance. A significant length of new highway construction is required to shift from the relocated corridor to existing Md. 24, then again diverging to a relocated alignment. The net results is a facility requiring a greater travel length, higher construction costs and a lower level of traffic operation than the recommended alternate. The joint use of the existing Md. 24 corridor creates additional traffic conflicts for both local and thru traffic.

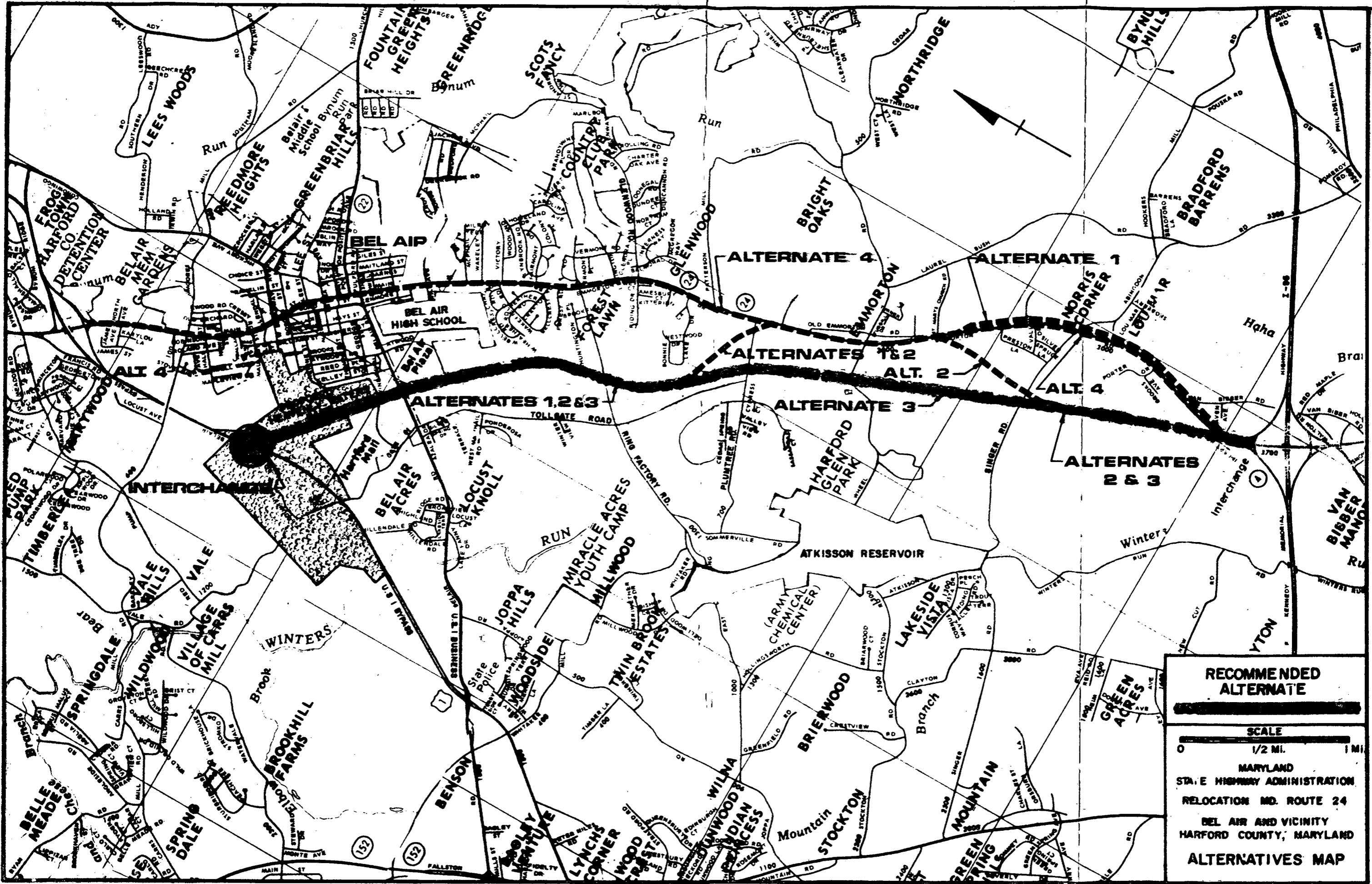
Other factors which were considered in the decision to eliminate this alternate from further studies include the following:

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1. This alternate would have a noise impact on three of the six sensitive areas affected, including Mount Carmel Church (Historic Site).
2. This alternate will require acquisition of property from three historic sites and will have an adverse impact on the historic integrity of five sites.

Alternate 4 - This alternate involves improving the existing highway by providing additional traffic lanes and intersection improvements. This alternate reduces the construction costs by more than one-half and would require only one housing relocation and one business relocation. Although this alternative will relieve the existing traffic problems to some degree on a short-term basis, the long-term costs of a facility which reaches capacity in a short period of time combined with the increased user costs and higher accident potential make this alternative unacceptable. Other factors contributing to the determination that this alternate is not prudent or feasible included the following:

1. This alternate would result in excessive noise levels at all but two of the twenty three noise sensitive areas affected.
2. Alternate 4 would affect the historic integrity of seven sites.
3. This alternate is not compatible with the plans and policies of Harford County.
4. If this alternate were constructed the capacity of the existing Md. 24 corridor would be extended for a relatively short period of time. Because of planned development in the Bel Air area, land suitable for a new highway corridor may not be available in the future.



RECOMMENDED ALTERNATE

SCALE

0 1/2 Mi. 1 Mi.

MARYLAND
STATE HIGHWAY ADMINISTRATION
RELOCATION MD. ROUTE 24
BEL AIR AND VICINITY
HARFORD COUNTY, MARYLAND

ALTERNATIVES MAP

FIGURE 3

Alternate Comparisons

<u>Alternates</u>	1	2	3	4	5
Right-Of-Way Costs	\$ 2,500,000	\$ 1,875,000	\$ 2,554,532	\$ 578,000	0
Construction-Initial	8,716,450	9,722,397	10,554,366	5,156,470	0
Total-Initial	11,216,450	11,597,397	13,108,898	5,734,470	0
Ultimate Construction (Six Lanes)	4,395,801	4,967,243	3,610,900	---	0
Total-Ultimate (Six Lanes)	15,612,251	16,564,640	16,719,798	---	0
Length	6.6 miles	6.6 miles	6.3 miles	7.5 miles	7.5 miles
Number of Persons Displaced	40	0	30	1	0
Residences Affected	9	0	6	1	0
Number of Businesses Affected	4	0	0	1	0
Impact on Heavenly Waters Park	yes	yes	yes	no	no
Number of Historic Property Acquisitions	2	3	3	2	0
Number of Sites Whose Historic Integrity Will Be Adversely Affected	4	4	0	7	0
Noise Sensitive Receptors	9	7	7	23	23
Number of Sites Adversely Affected By Increased Noise	7	3	3	21	6
Type of Access	Partially Controlled	Partially Controlled	Partially Controlled	Partially Controlled	Free

7

10/24

Description of Project Involvement With Historical Sites

The Recommended Alternate will require property acquisition from three (3) historic sites. (See Figures 4, 4a) These sites include:

1. Constant Friendship (Map Site #14) - is an abandoned frame house thought to be of the 18th century but probably 19th century. There are some log out-buildings. The site is considered to be eligible for the National Register. Located just west of the Constant Friendship Subdivision, the property on which the historical site is located extends from Singer Road to the Md. 24 - I-95 Interchange. The Recommended Alternate would require approximately 35 acres of property acquisition for new right-of-way. It should be noted that this property is to be used for the planned residential development of Constant Friendship. The total acreage of the site is 831.5 acres.

The Federal Highway Administration and the State Historic Preservation Officer have determined that the recommended alignment will have "No effect" under the Advisory Council Procedures. (Code of Federal Regulations in Title 36, Chapter 8, Part 800).¹

2. Woodview (Map Site #13) - is an early 19th century Georgian house located on Singer Road, 2,400 feet west of Preston Lane. The site is considered eligible for nomination to the National Register.

Although Alternate 3 will require property acquisition from the historical property, it does not pass sufficiently close to the structure to have an adverse impact on the historic integrity of the site. Alternate 3 will pass 700 feet east of the structure and will require approximately 5 1/2 acres of the privately owned property for right-of-way. The total area of the site is 50 acres.

The Federal Highway Administration and the State Historic Preservation Officer have determined that the recommended alignment will have "no effect" under the Advisory Council Procedures.²

3. Park Farm (Map Site #10) - The Recommended Alternate will require right-of-way from this property. The historical structure itself is located approximately 300 feet west of Existing Md. 24, just south of Wheel Road. The privately owned, unoccupied block structure was built in the 18th century and is considered to be eligible for nomination to the National Register. Alternate 3 which will be located more than 1,000 feet west of the historic site will require 18 acres of property acquisition, but is not considered to have an adverse effect on the historic integrity of the site. The Federal Highway Administration and the State Historic Preservation Officer have determined that the recommended alignment will have "no effect" under the Advisory Council Procedures.³ The total area of the site is 147 acres.

¹ See "Memorandum of Understanding," Page 18.

² See Letter of Correspondence Page 16
³ Ibid.

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The relationship between the various alternatives and their involvement with historic sites is indicated in the following table:

Table 1

<u>Alternates</u>	<u>Sites Requiring Property Acquisition/ 4(f) Statement</u>	<u>Number of Acres Acquired</u>	<u>Number of Sites Whose Historic Integrity Will Be Adversely Affected By Alternate</u>
1	2	8	4
2	3	54	4
3	3	58	0
4	2	2	7

The Do-Nothing Alternate will also have an adverse impact on historic sites since air and noise pollution increases along the existing facility will have an adverse impact on the many historical sites located along Md. 24.

Although the recommended alternate requires the largest area of right-of-way to be acquired from historic properties, it results in the most favorable net impact of all construction alternatives under consideration. As indicated on Figures 4A and 4B the recommended alternate was developed to provide the optimum location with respect to the historic structures located on the Park Farm, Woodview, and Constant Friendship properties. The minimization of impacts to the historic structures contributed to the determination of "no effect" by the FHWA and SHPO.

Approximately 35 of the 58 acres of right-of-way required from historic properties by Alternate 3 involve land from Constant Friendship. Private interests have made commitments in regard to developing this property as a residential and commercial complex. Constant Friendship is owned by the developers, who have prepared at least two plans for development of the property; all development plans call for the demolition of the farm buildings.

The noise analysis prepared for the selected alternate showed that none of the historic sites would experience noise levels in excess of the Federal Design Noise Levels in the design year of 2005.

The closest historic structures to the edge of right-of-way line of the selected alternate are the structures associated with Constant Friendship. The structures are approximately 200 feet from the edge of the right-of-way line. The ambient L₁₀ noise level of Constant Friendship is 43 dBA. In the design year the L₁₀ noise level will be 70 dBA. While this is considered a

severe impact, it should be remembered that this property is now owned by a private developer and is scheduled to be developed as a residential sub-division. A copy of the noise report has been submitted to the Harford County Department of Planning and Zoning, and the Town Planning Commission of Bel Air. The developer of the proposed sub-division is also aware of the project and the noise report is available for his use when planning the sub-division.

Of the remaining sites along the recommended alternate, Woodview, Park Farm, Noves Archer House, and Monmouth Farms, the closest structure to the edge of right-of-way line is approximately 700 feet. Based on the fact that a structure 200 feet from the edge of right-of-way line will experience a design year L10 of 70 dBA, it is anticipated that a structure a minimum of 700 feet away from the edge of right-of-way line would experience a negligible impact, if any, from the selected alternate. In addition to the distance, the selected alternate traverses heavily wooded areas in the vicinity of each site, except Constant Friendship, which will provide a psychological barrier to the occupants of the structures.

Additional information on the noise analysis prepared for the project is available on Pages 27 and 27a of this document.

Access to all of the Historic sites, except Constant Friendship, will remain the same. Intersections are planned with the recommended alternate and Singer Road and Wheel Road. The intersections will allow the historic sites to maintain access to existing Maryland Route 24, without changing traffic patterns. A service road will be provided in the vicinity of Constant Friendship to serve the residents of the proposed sub-division.

The recommended alternate will have the most severe visual impact on Constant Friendship, passing within approximately 200 feet of the historic structures. However, as discussed earlier, this site will be removed and the property developed as a sub-division.

In regard to the other sites, the recommended alternate passes through dense woodland in the vicinity of each site and will be a minimum of 700 feet away from each historic structure. The distance of each site from the roadway, in addition to the existing stands of trees and the rolling terrain of the area serve to minimize the minor visual modifications that may result. An effort has also been made to avoid and minimize excessive cuts and fills along the vertical profile and retain as much of the existing vegetation along the alternate. This will allow the existing trees to act as a shield or screen between the historic sites and the recommended alternate. In addition to the existing vegetation, landscaping will be used to blend the project into the existing environment and to avoid introducing an element into the area that will drastically change the environmental setting in which the historic sites now exist.

The Maryland Historical Trust has reviewed the project and agree that the distance, trees and topography eliminate any effect as defined in the 106 procedures.

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Based upon the investigation of the historic properties involved there is no feasible and prudent alternative to the taking of property from these sites. Other than minor alignment adjustments, any effort to reduce property damages on one property would likely result in a corresponding impact to adjacent properties.

Agency Coordination

See letters of correspondence Pages 10 through 18.



THE MARYLAND HISTORICAL TRUST

Shaw House · 21 State Circle · Annapolis, Maryland · 21401

(301) 267-1212

(301) 267-1438

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March 13, 1975

Mr. John V. Rignani, P.E.
President
Rignani Associates, Inc.
P.O. Box 501, 3510 Trindle Road
Camp Hill, Pennsylvania 17011

RIGNANI ASSOCIATES					
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RE: Md. 24 Historic Sites
Bel Air, Harford County

7322

Dear Mr. Rignani:

This letter is in response to your requests for information concerning historic sites that would be affected by the relocation of Route 24 in the vicinity of Bel Air, Harford County, Maryland. It has taken longer than usual to coordinate this data, but it is hoped that it will be of use to you for your environmental impact report, and for those who will make the decisions concerning Route 24.

There are numerous historic sites of importance in this area. Their locations are shown on the enclosed copies of maps which you have sent us. Some sites are affected by more than one alternate, but the enclosed copies do show the locations of all the sites confirmed by our records and a member of the Harford County Committee of the Maryland Historical Trust. The following is a list of these structures and a brief description of them:

Fritz-Kelly House - an early twentieth century Renaissance Revival house with late nineteenth century wooden barns

Graybeal-Kelly House - a large brick Georgian house of 1835

Mt. Carmel Church - vernacular Greek Revival stone church

Emmorton School

Park Farm (Wilson-Graham House) - brick, built c. 1800, not now occupied

St. Mary's - a small Gothic Revival parish church built in 1851 of gray rubble stone walls with cut granite trim

Mr. John V. Rignani, P.E.
Page Two
March 13, 1975

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Brand-Pierce House - late nineteenth century pre-Queen Anne

Constant Friendship - an abandoned frame house thought to be of the eighteenth century but probably mostly nineteenth century. There are some log outbuildings.

Noyes-Archer House (Hazel Glen) - late nineteenth century stone built in the Renaissance Revival style.

Monmouth Farm - the main house, probably built in the eighteenth century, is one and one-half stories of stone with a gambrel roof. There is a two-story stone addition showing simple Greek Revival detail. Interior Baltimore woodwork of about 1800 is present. A group of stone and frame outbuildings including an octagonal smokehouse, surround the house.

Woodview - an early nineteenth century Georgian house.

Old Scott House - there are two early houses on the property, one probably eighteenth century. The main house of frame construction was built in the early nineteenth century.

Frogtown Stone House - an unoccupied nineteenth century granite house of three bays.

I.O.O.F. Odd Fellows Lodge - a brick, Greek Revival lodge of one tall story over a high stone basement. It was originally built as a church in 1852.

Harford (or Bel Air) Academy - built c. 1820.

Four Houses - built during the mid-to-late nineteenth century.

Presbyterian Church - a Gothic Revival Church designed by George Archer and built in 1881.

Presbyterian Manse - a stone and shingle style house of c. 1900

There are other historic buildings in Bel Air which are located along Route 1 or 24. They are not shown on the maps but are given below:

Graham House, 30 N. Main Street - two and one-half story frame, built c. 1800.

Smithers Shop, 4 South Main Street - a small, nineteenth century frame shop.

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Mr. John V. Rignani, P.E.
Page Three
March 13, 1975

Smithers House (now the Bridal Shop) 6 S. Main Street - a small, two-story nineteenth century house

20 South Main Street - Victorian, two-story frame house with a modern shop front on the first floor

Harford County Courthouse - a two-story, brick building with a cupola built during the last half of the nineteenth century

Archer Building, 17 Courtland Street - a nineteenth century, two-story brick residence, now partially offices

Courtland Hardware, Southeast corner of Courtland and Main Streets. This frame building was first an eighteenth century stage coach stop and was later altered to be a nineteenth century hotel.

Walter Finney House, 200 South Main Street - a well kept Victorian house of two and one-half stories, now law offices

Dr. Russell's office, 202 S. Main Street, two story brick

Van Bibber House, 303 South Main Street - the brick portion of this house is on the tax records of 1798. It received nineteenth century additions and now has three sections.

Hays-Jacobs House

Hannah Moore Apt. Bldg., Pennsylvania Avenue and Bond Street - this is a typical nineteenth century Bel Air frame house

Vernon Jones House, Southeast corner of Lee and Bond Streets - a small stone house of one and one-half stories

Of the sites mentioned, St. Mary's Church is now on the National Register of Historic Places. The I.O.O.F. Odd Fellows Lodge has been nominated and is in the process of being approved by the National Register office. It is felt that Park Farm, Monmouth Farm, and the Harford Academy are all worthy of being listed on the National Register. The Academy would be listed as part of an historic district (#2 on the Bel Air map) now being considered by the county planners. District #1 is also being considered as the Broadway Historic District. Here, there is the Stepping Stone Museum under private ownership; but there are talks underway with

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Mr. John V. Rignani, P.E.
Page Four
March 13, 1975

the county parks and recreation department to establish a farm museum in this district.

Because of the adverse impact on the town of Bel Air, it is felt that the road should not be enlarged so as to encourage what will presumably be a larger volume of thru traffic to pass through the center of Bel Air. It is hoped that some form of by-pass alternative will be selected rather than Alternate 4. Alternates 1 and 2 appear to have an adverse effect on historic sites where they join the existing Md. Rt. 24 from Plumtree Road to St. Mary's Church Road. Sites in this portion include Mt. Carmel Church, Emmorton School, Park Farm, St. Mary's Church, and the Brand-Pierce House. Alternate 3 seems now to be most consistent with the objectives of the Trust since it appears to impose the least impact on historic buildings in this area. We hope that you will consider all of these sites in your planning process.

Thank you for giving the Maryland Historical Trust the opportunity to comment.

Sincerely,

George J. Andrevé
George J. Andrevé
Assistant Architectural
Historian

GJA:sh
Enclosures: 8 maps

cc: Mr. James T. Wollon, Jr., AIA



The Maryland Historical Trust

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

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IN HOUSE
CONSULTANT

October 14, 1975

Mr. Don Eckhardt, Chief
Environmental Evaluation
Bureau of Project Planning
State Highway Administration
300 West Preston Street
Baltimore, Maryland 21201

RE: Contact No. H 520-000-74
Relocation of Maryland Route 24 from U.S. 1 to I-95

PROJECT NO. 24-11-95
PROJECT TITLE
PROJECT LOCATION

Dear Mr. Eckhardt:

At the request of the State Highway Administration I have reviewed the information on historic sites relative to the proposed relocation of Maryland Route 24. The following represents my opinion on the eligibility of the sites for the National Register and on possible effects to the site by the proposed construction. I do not feel that difficulties will arise from the resolution of any preservation concerns.

<u>Site Name</u>	<u>State Historic Preservation Office eligibility</u>	<u>Opinion on effect</u>
Graybeal Kelly House	eligible	Alt. 1, 2, 3
Fitz-Kelly House	eligible	Alt. 1, 2, 3
Frogtown Stone House	not eligible	Alt. 4
Old Scott House	eligible	None
Historic District I	eligible	Alt. 4
Historic District II	eligible	Alt. 4
Four Houses on Main Street	not eligible	Alt. 4
Mount Carmel Church	eligible	Alt. 1, 2, 3, 4
Emmerton School	eligible	Alt. 1, 2, 3, 4
Brand-Pierce House	eligible	Alt. 1, 2, 4
St. Mary's Church, National Register site		Alt. 1, 2, 4
Park Farm	eligible	Alt. 1, 2, 3, 4
Noyes-Archer House	eligible	Alt. 3
Montmouth Farm	eligible	None
Woodview	eligible	Alt. 2, 3
Constant Friendship	eligible	Alt. 2, 3

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Mr. Don Eckhardt
Page 2
October 14, 1975

My opinions on the effects to the historic sites are subject to modification since complete data on the possible effects are not available to me at this time.

Sincerely,

John N. Pearce
John N. Pearce
State Historic Preservation Officer

JNP:NM:jl

cc: Mr. John L. Clark
Mrs. Frederick Viele
Mr. James T. Wollon, Jr.
Ms. Ellen Ramsey
Mr. Gary Larsen



The Maryland Historical Trust

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

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26 November 1975

PROCEEDINGS
11
NOV 26 1975

Mr. Gary Larsen
Division Environmental Engineers
Federal Highway Administration
711 W. 40th Street, Rotunda Suite 220
Baltimore, Maryland 21211

Re: Contract No. H 520-000-74
Maryland Rt. 24 from U.S. 1 to I95

Dear Gary:

Pursuant to the meeting of November 25, 1975, between you, Margaret Ballard of State Highway Administration and Nancy Miller, I agree to amend my preliminary opinion on effect as expressed in my letter of October 14, 1975, to Don Eckhardt of State Highway Administration as follows:

<u>Site Name</u>	<u>State Historic Preservation Office Eligibility</u>	<u>Opinion on Effect</u>
Graybeal Kelly House	eligible	None
Fitz-Kelly House	eligible	None
Frogtown Stone House	not eligible	Alt. 4
Old Scott House	eligible	None
Historic District I	eligible	Alt. 4
Historic District II	eligible	None
Four Houses on Main Street	not eligible	Alt. 4
Mount Carmel Church	eligible	Alt. 1, 2, 4
Emmerton School	eligible	Alt. 1, 2, 4
Brand-Pierce House	eligible	None
St. Mary's Church		Alt. 1, 2, 4
National Register Site		Alt. 1, 2, 4
Park Farm	eligible	None
Noyes-Archer House	eligible	None
Montmouth Farm	eligible	None
Woodview	eligible	None
Constant Friendship	eligible	Alt. 2, 3

Sincerely yours,

John N. Pearce
State Historic Preservation
Officer

JNP/sc

cc: John Clark, Mrs. Viele, James T. Wollon, Jr., Ellen Ramsey, Don Eckhardt
Margaret Ballard Department of Economic and Community Development

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MEMORANDUM OF UNDERSTANDING

We the undersigned, agree that the proposed highway project along Maryland Route 24 between U.S. 1 and I-95, H 520-000-474, will incur no effect on "Constant Friendship", an historic site probably eligible for the National Register of Historic Places.

Frederick Gottemoeller
Frederick Gottemoeller, Director
Office of Planning and
Preliminary Engineering

14 July 77
DATE

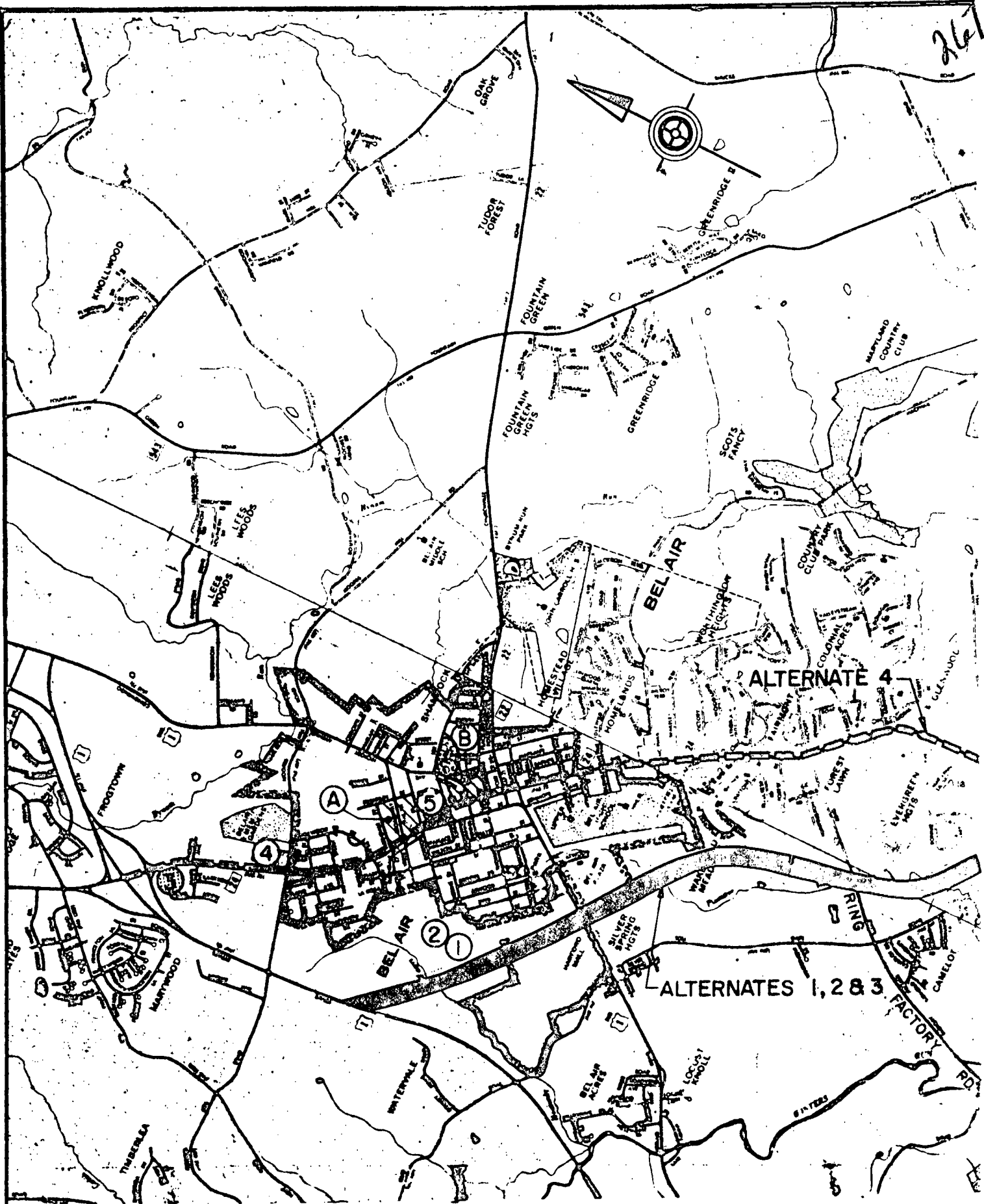
John N. Pearce
John N. Pearce, State Historic
Preservation Officer, Maryland
Historical Trust

9/14/77
DATE

Emil Elinsky
Emil Elinsky, Division
Administrator, Federal Highway
Administration

10/5/77
DATE

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A. Historic District 1
 B. Historic District 2 (Includes I.O.O.F. Odd Fellows Lodge which has been nominated to the National Register)

- | | |
|--------------------------|--------------------|
| 1. Graybeal Kelly House | 4. Old Scott House |
| 2. Fritz - Kelly House | 5. Four Houses |
| 3. Frogstown Stone House | |

LEGEND

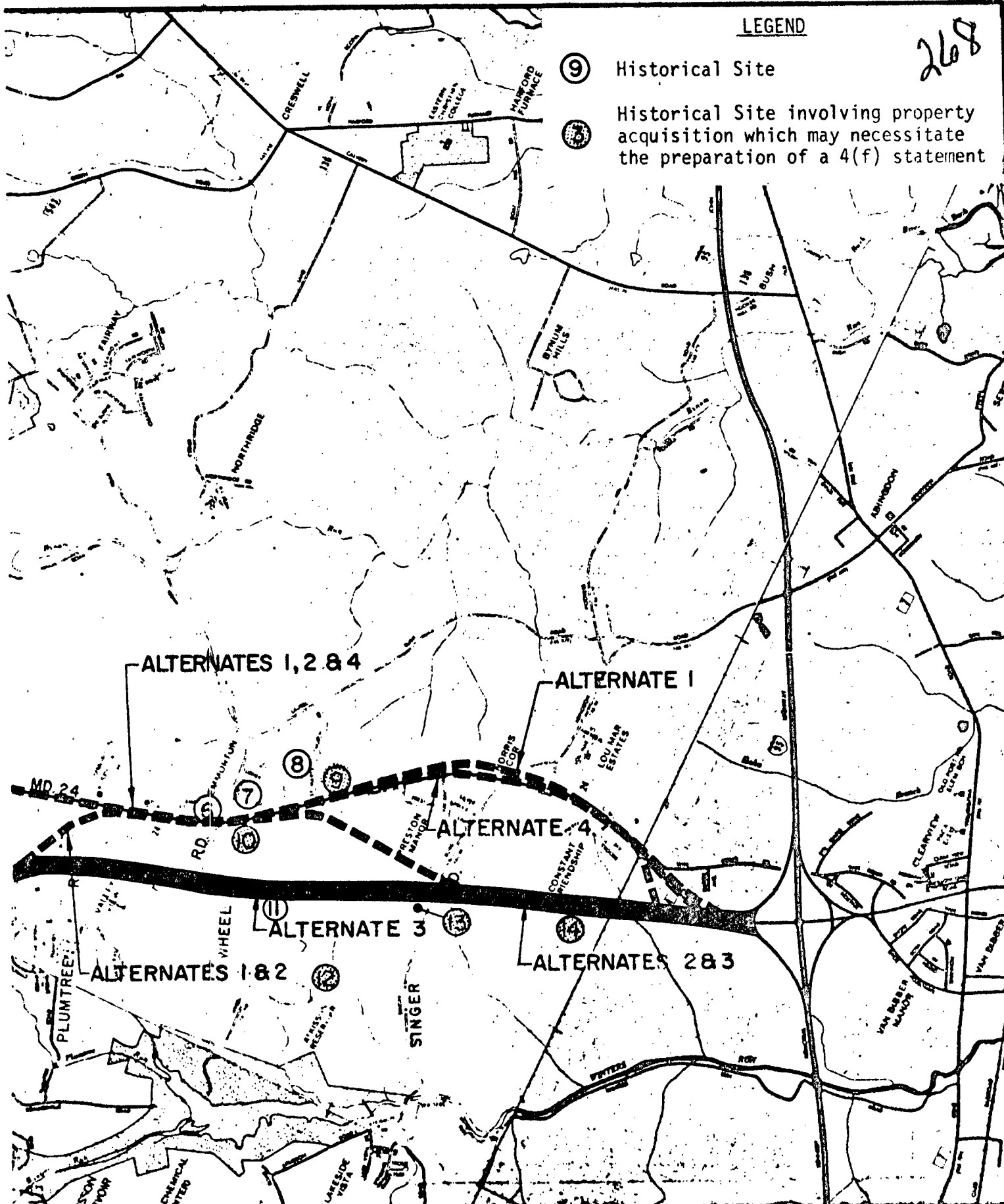
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Historical Site



Historical Site involving property acquisition which may necessitate the preparation of a 4(f) statement



- 6. Mount Carmel Church
- 7. Emmorton School
- 8. Brand-Pierce House
- 9. Saint Marys Church (National Register)
- 10. Park Farm
- 11. Noyes Archer House
- 12. Monmouth Farm
- 13. Woodview
- 14. Constant Friendship

RELOCATION MD. RTE 24
 BEL AIR and VICINITY
 HARFORD COUNTY, MARYLAND
 HISTORICAL SITE MAP

Figure 4

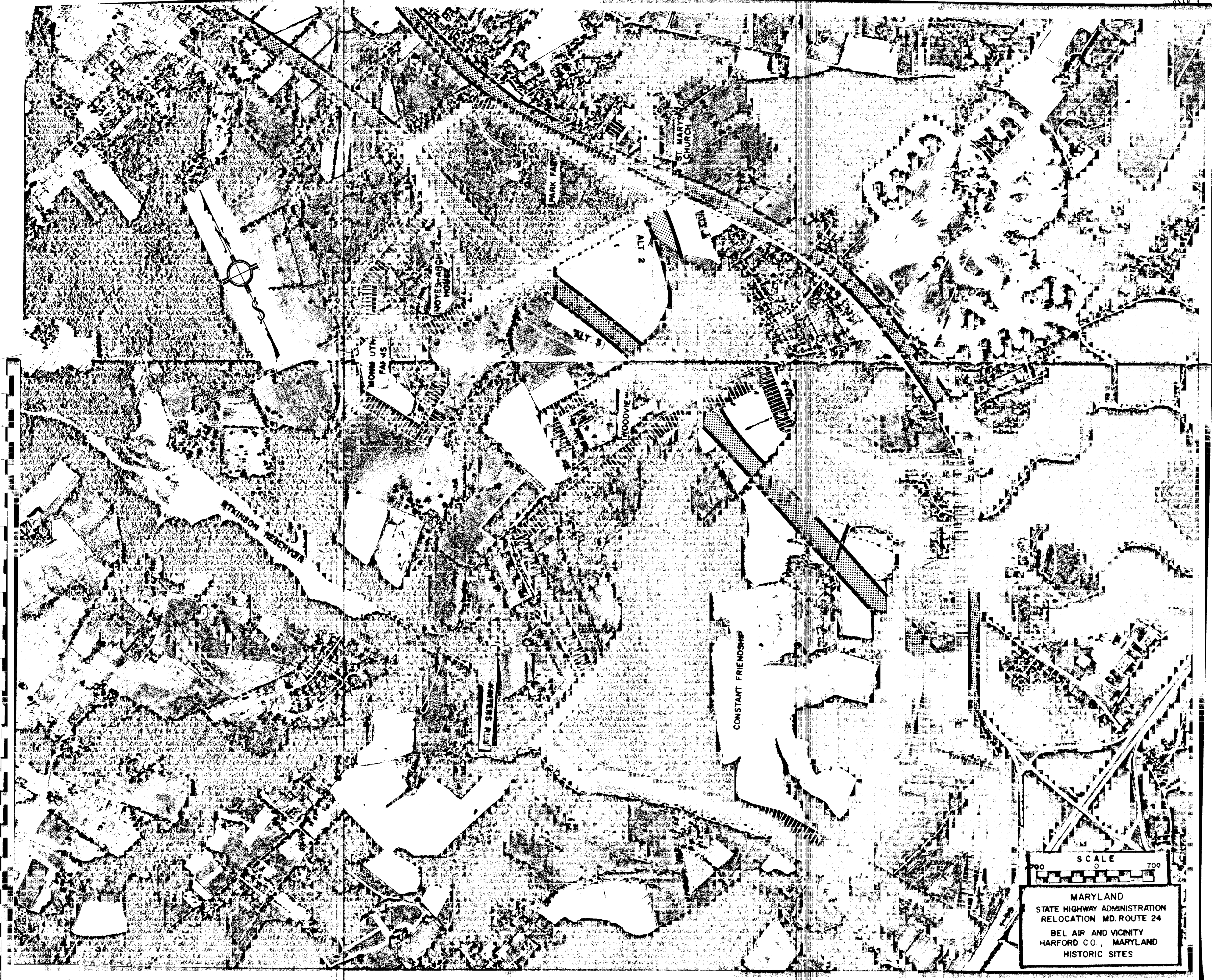


FIGURE 40

Description of Project Involvement With Heavenly Waters Park

Heavenly Waters Park is a proposed multipurpose recreational facility to be developed on the northwest corner of Bel Air. There are five major properties which will be incorporated into park use. These properties include the Kelly property, the sanitary land fill, the equestrian center, the county home property and some land owned by the State Highway Administration. The proposed park area is located adjacent to the U.S. Route 1 Bypass. The three relocation alternates for Md. 24 Bypass are involved with the proposed park development. (See Existing Culture Map, Figure 5).

The Maryland Route 24 Relocation will have an interchange with U.S. Route 1 Bypass halfway between Vale Road to Tollgate Road. The alignment of the proposed relocation will run southeast through the park area. Harford County Officials have been consulted throughout the design studies for the relocation of Md. 24 and have received periodic updates from the State Highway Administration as to the status of the preliminary design.

During the development of both the park and the highway, extensive cooperation has existed between the State Highway Administration and Harford County Officials. The following is a chronology of the events surrounding the development of both the park and the highway:

- 1963 - First right-of-way acquisition for the Md. 24 Bel Air Bypass interchange acquired in conjunction with the U.S. 1 Bel Air Bypass project.
- 1964 - Harford County Commissioners request alignment studies for the relocation of Maryland Route 24.
- 1964 - Remaining properties are acquired for the U.S. 1 Md. 24 interchange including the Kelly, Fair Grounds and O'Neil properties.
- 1968 - Proposed relocation included in the 1968-1988 Highway Needs Study.
- 1969 - Harford County Officials determine that Heavenly Waters would be useful as a park site.
- 1970 - A location study for alternate interchange designs for Maryland Routes 1 and 24 was completed in November.
- 1971 - Harford County Officials indicated Heavenly Waters land including the Kelly property is under option.
- 1972 - State Highway Administration held coordination meetings with town and county officials.
- Officials indicate they favor Interchange Scheme 6. (Scheme 6 is the interchange scheme adopted by the State Highway Administration for this project).

- The A-95 Review Procedures are completed for the Maryland Route 24 relocation project.
- 1973 - The State Highway Administration project coordination process is completed for Md. 24 relocated in March.
 - Cooperation between the State Highway Administration and the county continues as discussions are held to determine what land exchanges could be made which would mutually benefit development of both the park and the highway.
- 1974 - In January, county officials acknowledge transfer of land parcels in principal between the State Highway Administration and the county. (See Letter of Correspondence, Page 36).
 - The Master Plan for Heavenly Waters Park was completed in October by the consulting firm of Total Design Confederation. This plan reflects the proposed relocation of Md. 24. The plan incorporates interchange Scheme 6 and all proposed land exchanges between the State Highway Administration and the county.

The State Highway Administration and the county have worked closely together since the beginning of the project in the 1960's. This coordination culminated in a memorandum of understanding when the county agreed to a land parcel exchange on January 28, 1974. (See Letters of Correspondence, Pages 34 to 43).

The park size is approximately 200 acres. The area of land required for the highway is approximately 80 acres, bringing the total land involvement of both park and highway to 280 acres. However, of the 80 acres to be used for highway purposes, only 36.5 acres are required from Harford County property. The remaining acreage is presently owned by the State Highway Administration as right-of-way for existing U.S. 1 Bypass. (See Map of Parcels, Figure 8).

The Master Plan for the park completed in December of 1974 by a planning consultant for the Harford County Department of Parks and Recreation, shows the park as having three main sections. (See Figure 5). The section which lies on the northeast side of the proposed Route 24 Bypass is adjacent to the Harford Mall and is the closest section to central Bel Air. This area is made up of the Kelly property. It would contain two organized play areas. The southern play field is partially started with two ball fields in existence adjacent to the Boulton Street Extension. The second area will be located adjacent to Broadway and Gordon Street with access to this area being via Atwood Road. Also located in this portion is the Kelly Mansion and the Dr. H.A. Kelly Park - Natural Area. The mansion would be preserved in its existing state and would be used for passively oriented indoor activities and formal organizational group meetings. The Howard A. Kelly Natural Area is a wooded section surrounding the mansion. This area will remain in its natural state for educational and recreational purposes. This area will also contain several picnic areas and a pond.

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The second section of the park lies along the south side of a ramp connecting the northbound lanes of U.S. 1 to the southbound lanes of the proposed Maryland Route 24 Bypass. This area consists of the SHA property obtained by the county in the trade. This area will remain in its natural wooded state and will have only a native trail passing through it connecting the Kelly section to the final section made up of the equestrian center, sanitary land fill and the county home property. There will be an underpass beneath the proposed highway connecting the Kelly portion to this section. This portion will join the remaining section via Tollgate Road.

The remaining section lies on the west side of the U.S. Route 1 Bypass. This portion is made up of three properties. On the south side of Tollgate Road is the equestrian center property and the county home property. Located north of Tollgate Road is the sanitary landfill property. The area south of Tollgate Road would include the equestrian center with an indoor arena, a nature interpretive center, one small pond and one large pond, a primitive camp site and several trails. The area north of Tollgate Road will be the most extensively developed section. Included will be a swimming pool, an ice rink complex, tennis courts, amphitheater, arboretum, a picnic area and several trails and parking lots. This section will be connected to the Kelly area by a pedestrian bridge over the U.S. 1 Bypass at the northern edge of the park.

When developed, Heavenly Waters Park will be the largest passively oriented park in Harford County. At this time the county has no facility comparable to the proposed park. There are several park areas in the Bel Air area, but none have the recreational potential of Heavenly Waters Park. Areas in and around Bel Air used for recreation include Atkisson Reservoir, Harford Glenn Education and Recreational Area, Singer Road Park, Bel Air Community Park and many school recreation areas.

The Kelly property which is 103 acres in size, has restrictions placed upon it by deed. The county is required to leave the property in its basic natural condition and can only develop active areas in the existing non-wooded tracts. The project is being designed to leave as much land as possible in its natural state while meeting the requirements of a multipurpose facility. In 1975, Mr. Kelly officially notified Harford County Department of Parks and Recreation that he has no objection to the land exchange between SHA and the county.

Review of the Land Parcel Exchange Plan for Heavenly Waters (Figure 8) shows the following:

1. Parcel 2 (U.S. 1 Right-Of-Way) which will be transferred from SHA to Harford County will provide the connection between Parcel 4 (Kelly Property) and the southern portion of the park made up of the equestrian center and the county home properties.
2. Parcels 3 and 6 (U.S. 1 Right-Of-Way) which will be transferred from SHA to Harford County provides the connection between the Kelly Property and the northern portion of the park Activity Area made up of the sanitary landfill.

- 3. Parcel 5 which is now part of the Kelly Property must be acquired for right-of-way if Md. 24 Relocated is to be constructed.
- 4. Parcel 1 must also be acquired for highway right-of-way.

It should be noted that the county now owns the sanitary landfill, equestrian center and county home. The Kelly Property is under option to the county.

A list of activities to be provided at this park along with the estimated yearly attendance is as follows:

	<u>Activity</u>	<u># of Programs</u>	<u>Registration</u>	<u>Attendance</u>
1.	Art	14	361	4,566
2.	Badminton	1	8	213
3.	Ballet & Tap	44	636	13,278
4.	Band	1	40	2,242
5.	Baseball	37	3,114	68,172
6.	Basketball - Boys	39	1,469	32,321
7.	Basketball - Girls	16	452	6,116
8.	Basketball - Mens	3	190	2,985
9.	Baton/Drum	28	679	14,542
10.	Bowling	1	51	723
11.	Cake Decorating	2	20	96
12.	Cheerleading	10	91	1,198
13.	Chess	5	161	1,349
14.	Coffee Hour	1	28	238
15.	Color Guard	3	57	1,042
16.	Dance, Modern	1	13	68
17.	Dance, Round	1		376
18.	Dance, Square	4	147	4,785
19.	Dog Obedience	4	149	1,317
20.	Dramatics	2	23	203
21.	Equestrian Center	45	11,000	
22.	Hockey, Field	2	45	279
23.	Fitness, Men	7	354	3,708
24.	Fitness, Women	11	643	4,828
25.	Football, Flag	4	131	2,559
26.	Football, Tackle	22	1,050	35,290
27.	General Ball Skills	1	22	177
28.	Golden Age	6	459	11,415
29.	Golf, Indoor	3	31	166
30.	Guitar	7	144	1,322
31.	Gymnastics	15	539	7,461
32.	Jogging	2	226	6,230
33.	Karate	2	299	5,595
34.	Lacross	1	34	1,140
35.	Lifesaving	-	-	-

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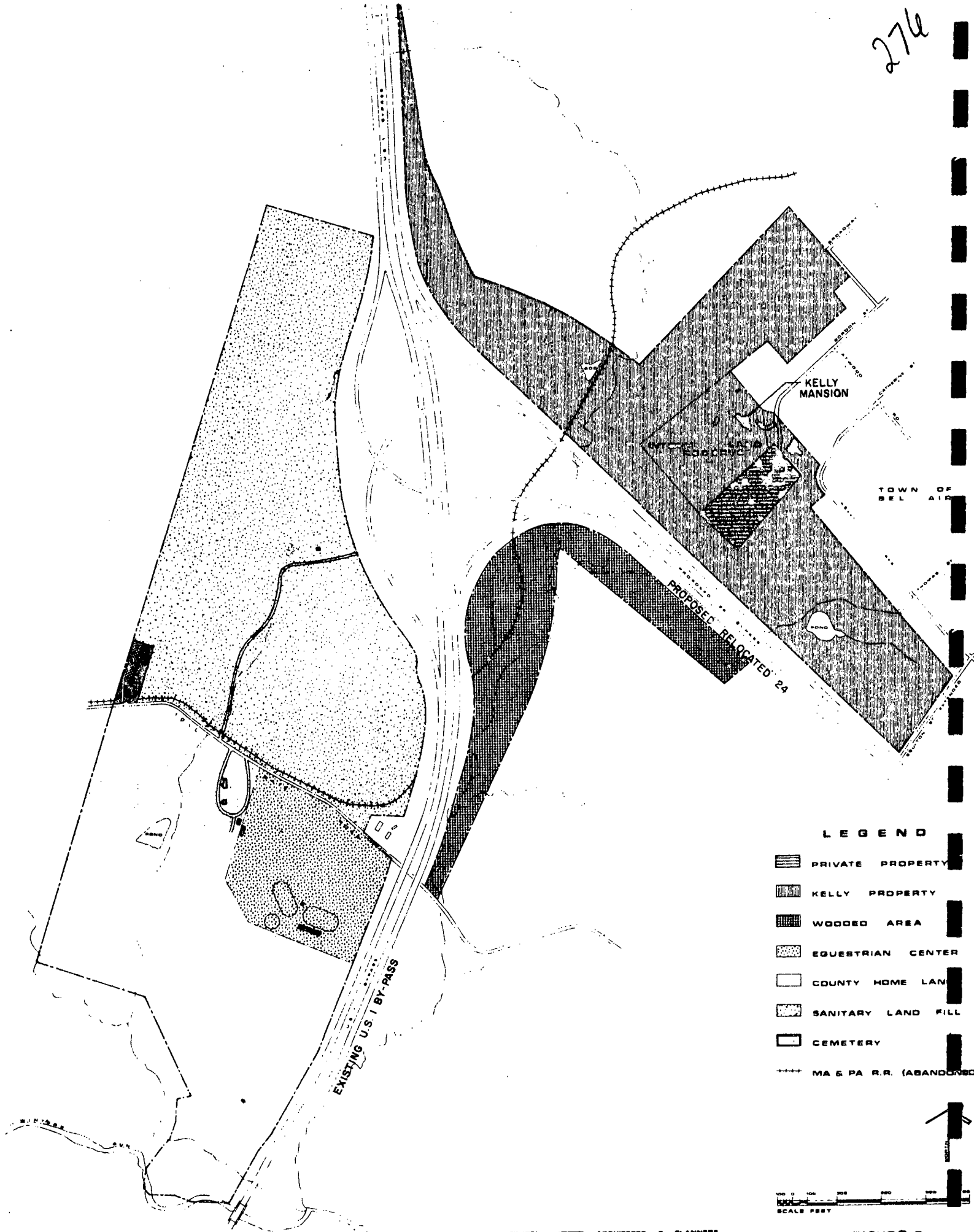
	<u># of Programs</u>	<u>Registration</u>	<u>Attendance</u>
36. Organizational Meetings	-	-	275
37. Pom-Poms	2	20	531
38. Pre-Teen Center	1	18	382
39. Riding Club	1	-	109
40. Rifle	1	10	176
41. Saturday Special	1	23	259
42. Soccer	7	270	5,406
43. Softball, Boys	6	165	292
44. Softball, Girls	26	1,444	23,185
45. Softball, Mens	6	415	4,080
46. Softball, Womens	7	327	2,848
47. Sports Camp	4	696	9,426
48. Swedish Walking	3	27	498
49. Swimming	8	354	2,528
50. Table Tennis	1	27	563
51. Teen Center	4	613	2,698
52. Tennis Indoor	7	283	2,039
53. Tennis	11	2,084	30,996
54. T.O.P.S.	1	12	246
55. Tumbling	6	159	1,574
56. Volleyball, Girls	1	22	-
57. Volleyball, Men	2	41	796
58. Volleyball, Women	8	222	1,949
59. Wrestling	5	119	1,640
60. Yoga	1	12	64

There will be no direct access to the park from either U.S. Route 1 Bypass or the proposed Maryland Route 24 Relocation. Atwood Road in Bel Air will provide vehicle access to the organized play area in the northeast portion of the Kelly Property. Access to the Kelly Mansion will be via Gordon Street. Access to the organized play area at the southeast corner at the Kelly Property adjacent to the Harford Mall will be via the Boulton Street Extension. Boulton Street does have direct access to the proposed highway. On the west side of the U.S. 1 Bypass, access to the heavily developed portion of the park will be by use of Tollgate Road. (See Figure 6).




The Heavenly Waters area has many physical features that will complement the development of a passively oriented park. The small stream known as Heavenly Waters Run has small amounts of aquatic life and offers an aesthetically pleasing atmosphere to the viewer as it passes through the wooded valley. Much of the wooded area is made up of trees in their ecological climax stage. In other words, almost all vegetation is in the form of large trees making this section a prime forest area. The slopes of the valley are very steep making the valley very desirable for nature-oriented recreation. However, the valley slopes do present problems for any type of structural development in this section. The park area presently has two ponds and one bog area which allows for fishing and educational study opportunities for those interested in aquatic life.

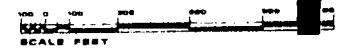
The purchase of the Kelly Property will be financed through funds from the county, state and Department of Housing and Urban Development. The breakdown is approximately 25% county, 25% state, and 50% HUD. The cost of developing the facilities and natural open space within the park will be approximately 5 1/2 million dollars. This development will be financed through a grant from the Department of Natural Resources and by a county bond issue. At this time the county owns the county home property, the property to the equestrian center, and the sanitary landfill.

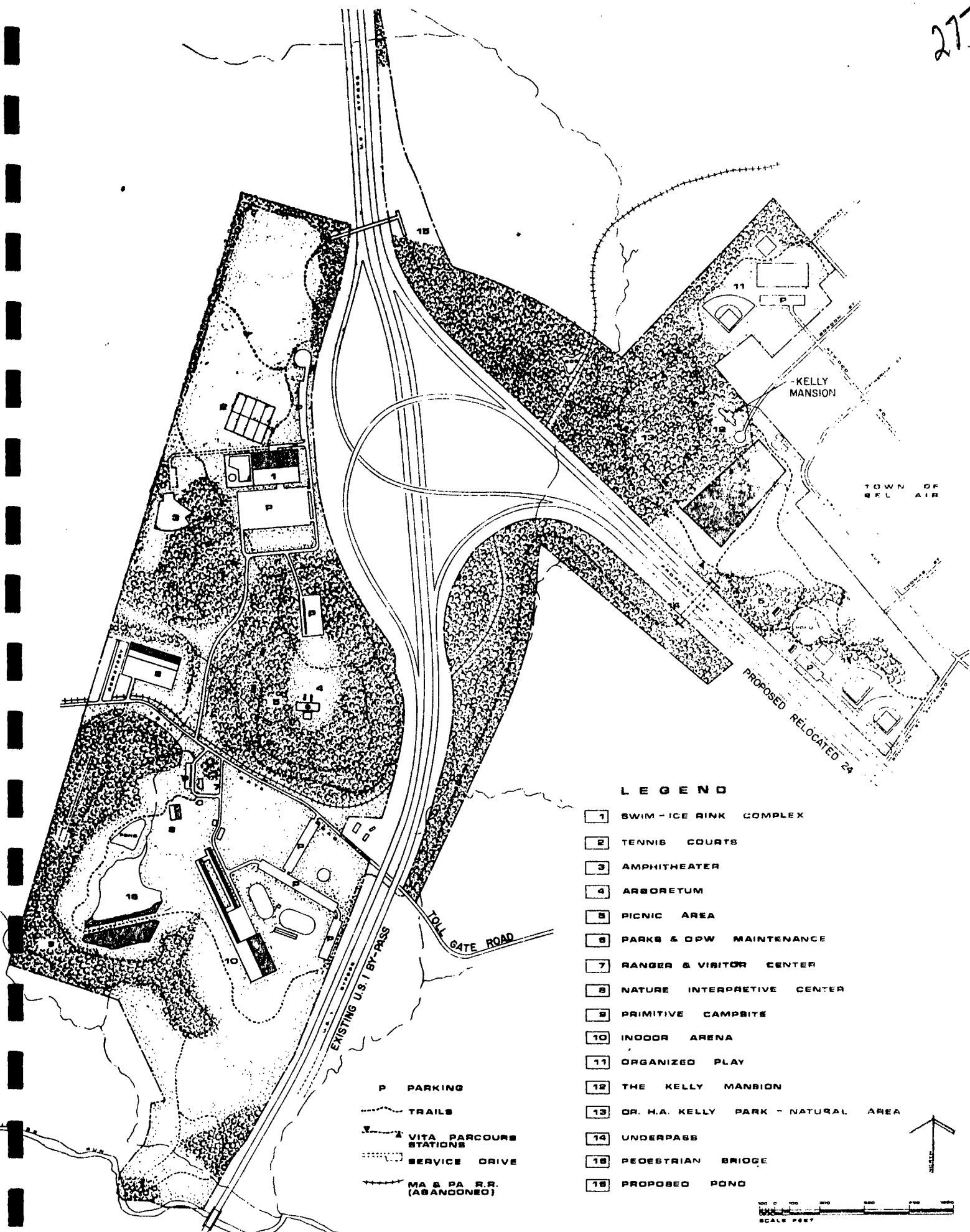
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LEGEND

-  PRIVATE PROPERTY
-  KELLY PROPERTY
-  WOODED AREA
-  EQUESTRIAN CENTER
-  COUNTY HOME LAND
-  SANITARY LAND FILL
-  CEMETERY
-  MA & PA R.R. (ABANDONED)

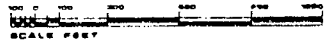




LEGEND

- 1 SWIM-ICE RINK COMPLEX
- 2 TENNIS COURTS
- 3 AMPHITHEATER
- 4 ARBORETUM
- 5 PICNIC AREA
- 6 PARKS & OPW MAINTENANCE
- 7 RANGER & VISITOR CENTER
- 8 NATURE INTERPRETIVE CENTER
- 9 PRIMITIVE CAMPSITE
- 10 INDOOR ARENA
- 11 ORGANIZED PLAY
- 12 THE KELLY MANSION
- 13 DR. H.A. KELLY PARK - NATURAL AREA
- 14 UNDERPASS
- 15 PEDESTRIAN BRIDGE
- 16 PROPOSED POND

- P PARKING
- TRAILS
- VITA PARCOURS STATIONS
- SERVICE DRIVE
- MA & PA R.R. (ABANDONED)



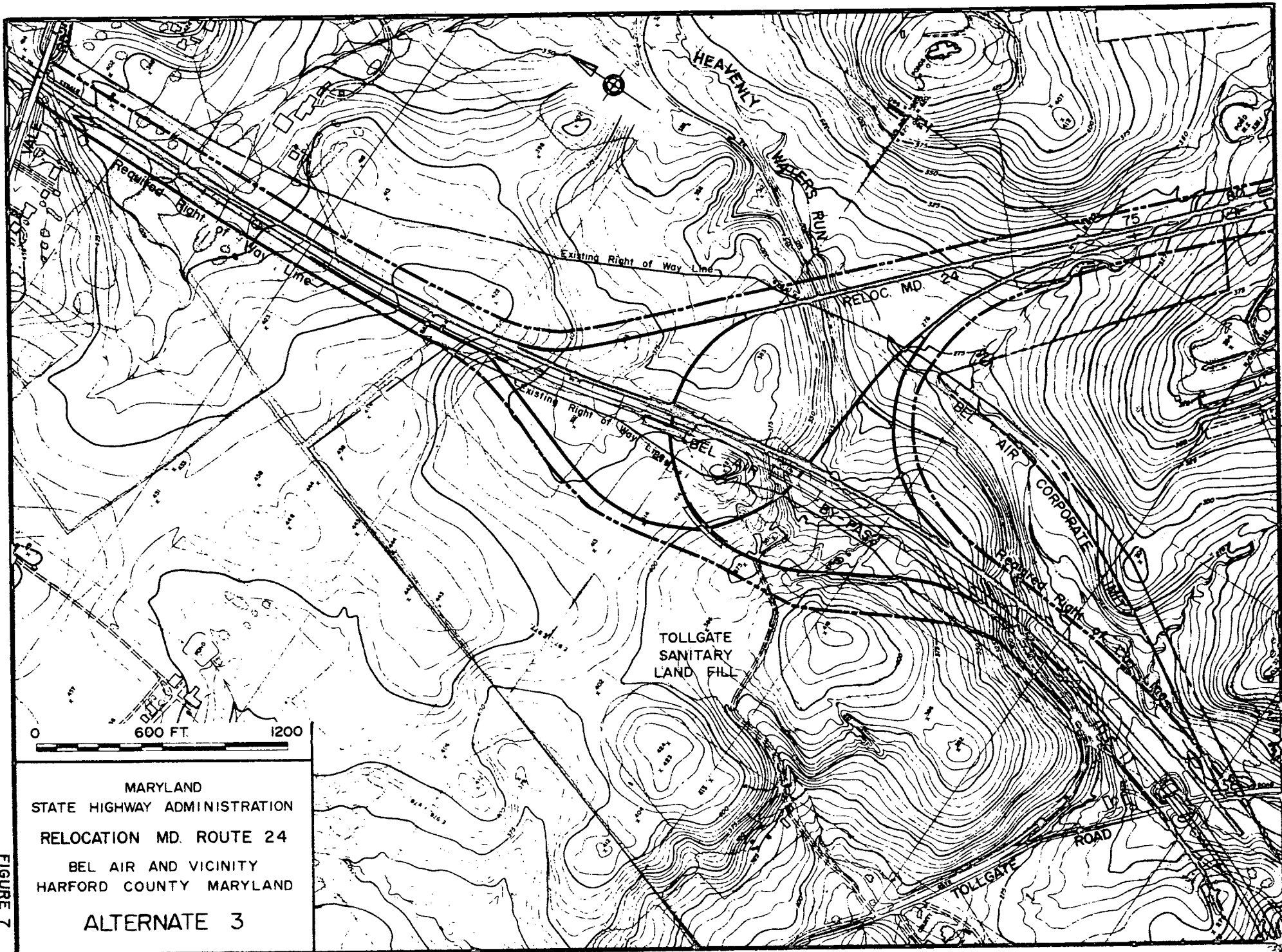


FIGURE 7

LAND PARCEL EXCHANGE FOR HEAVENLY WATERS

		ACRES
PARCEL # 1	HARFORD COUNTY TO S.H.A.	18.5+
PARCEL # 2	S.H.A. TO HARFORD COUNTY	20.8+
PARCEL # 3	S.H.A. TO HARFORD COUNTY	8.7+
*PARCEL # 4	TO BE RETAINED BY HARFORD COUNTY	9.5+
*PARCEL # 5	HARFORD COUNTY TO S.H.A.	18.0+
PARCEL # 6	S.H.A. TO HARFORD COUNTY	4.2+

----- : APPROXIMATE BOUNDARY LINE OF PROPOSED HEAVENLY WATERS PARK.

*NOTE: PARCELS 4 AND 5 ARE NOW PART OF THE KELLY PROPERTY WHICH IS TO BE ACQUIRED BY THE COUNTY FOR PARK USE.

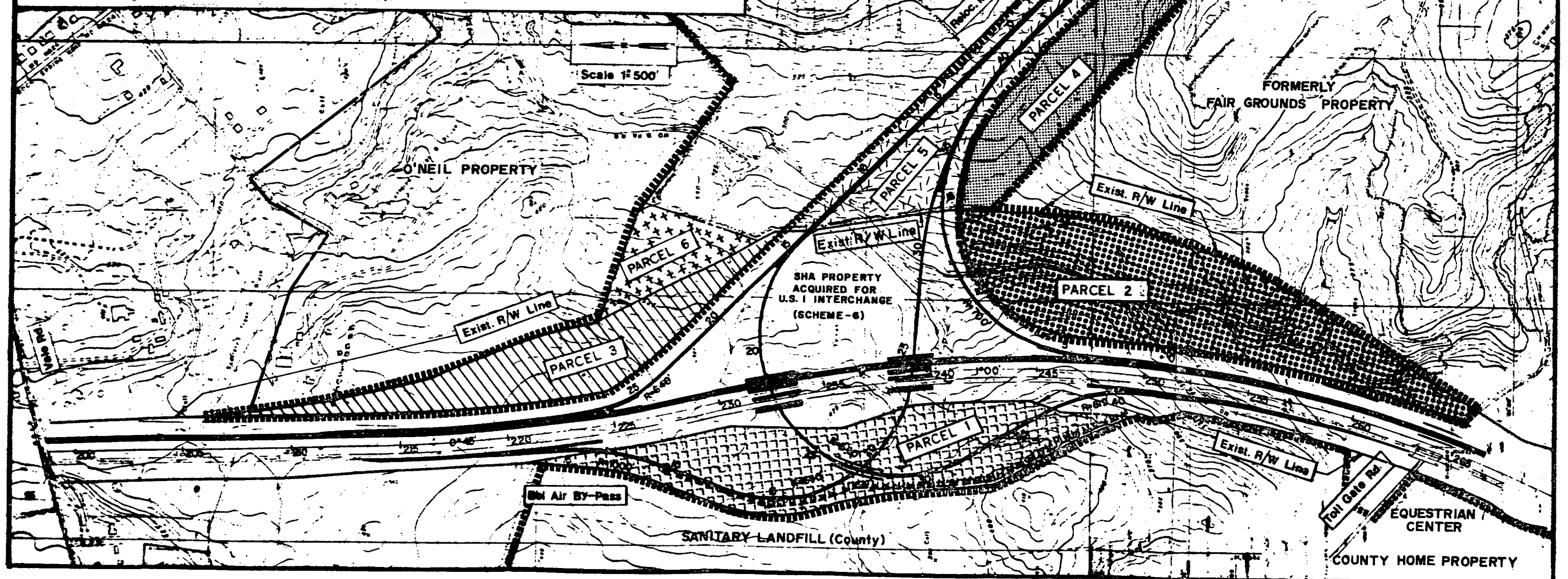


FIGURE 8

Impacts on Proposed Heavenly Waters Park

Although there is no direct access provided to the park from the proposed highway improvements, the overall accessibility will undoubtedly be improved by virtue of the more efficient highway system. The improved accessibility will likely lead to heavier park attendance than would normally occur without the proposed improvements. Boulton Street, which is the major access road into the northeast section of the park, has a direct connection to Md. 24 Relocated.

The increased traffic volumes generated within the vicinity of the park are of particular concern with respect to the effect on air quality and highway noise.

No air quality problems are anticipated within the Heavenly Waters Park area. According to the Technical Air Quality Report for Md. 24 Relocated, the predicted emissions will be far below the national ambient air quality standards.

Three (3) areas within the proposed park have been identified as potentially sensitive to noise. These noise sensitive areas have been studied to determine the impact of the project. The areas studied in relation to Alternate 3 are:

- NSA 7a - Picnic/pond/ballfields. Area located along north side of relocated Maryland 24, east of the proposed Maryland 24/U. S. 1 interchange.
- NSA 7b - Swim - Ice Rink Complex. Not yet constructed but to be constructed on the present site of the Tollgate Sanitary Landfill due west of the proposed Maryland 24/U. S. 1 interchange.
- NSA 7c - Aboretum, play area and picnic facilities. Not yet developed but to be constructed on the present site of the Tollgate Sanitary Landfill southwest of the proposed Maryland 24/U. S. 1 interchange.

See Figure 8A. Development of the picnic/pond/ballfield is scheduled to begin sometime in late 1978 or early 1979. Since the Tollgate Sanitary Landfill will continue in operation for a minimum of four more years, expansion and development of the remainder of the park facilities will begin after the landfill ceases operation.

Predictions of the design year noise levels were made using the Federal Highway Administration Highway Traffic Noise Prediction Model. Noise level projections and ambient noise levels (measured August 10, 1978) are shown in Table I on Page 27a.

Noise sensitive activity areas identified within the park will not exceed the 70 dBA design noise level. The picnic/pond/ballfield area would experience a significant increase in ambient levels if the proposed project is constructed. For an evaluation of the potential need for noise abatement measures see Page 30.

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TABLE I
PROJECT NOISE LEVELS

Relocated Maryland Route 24
Heavenly Waters Park

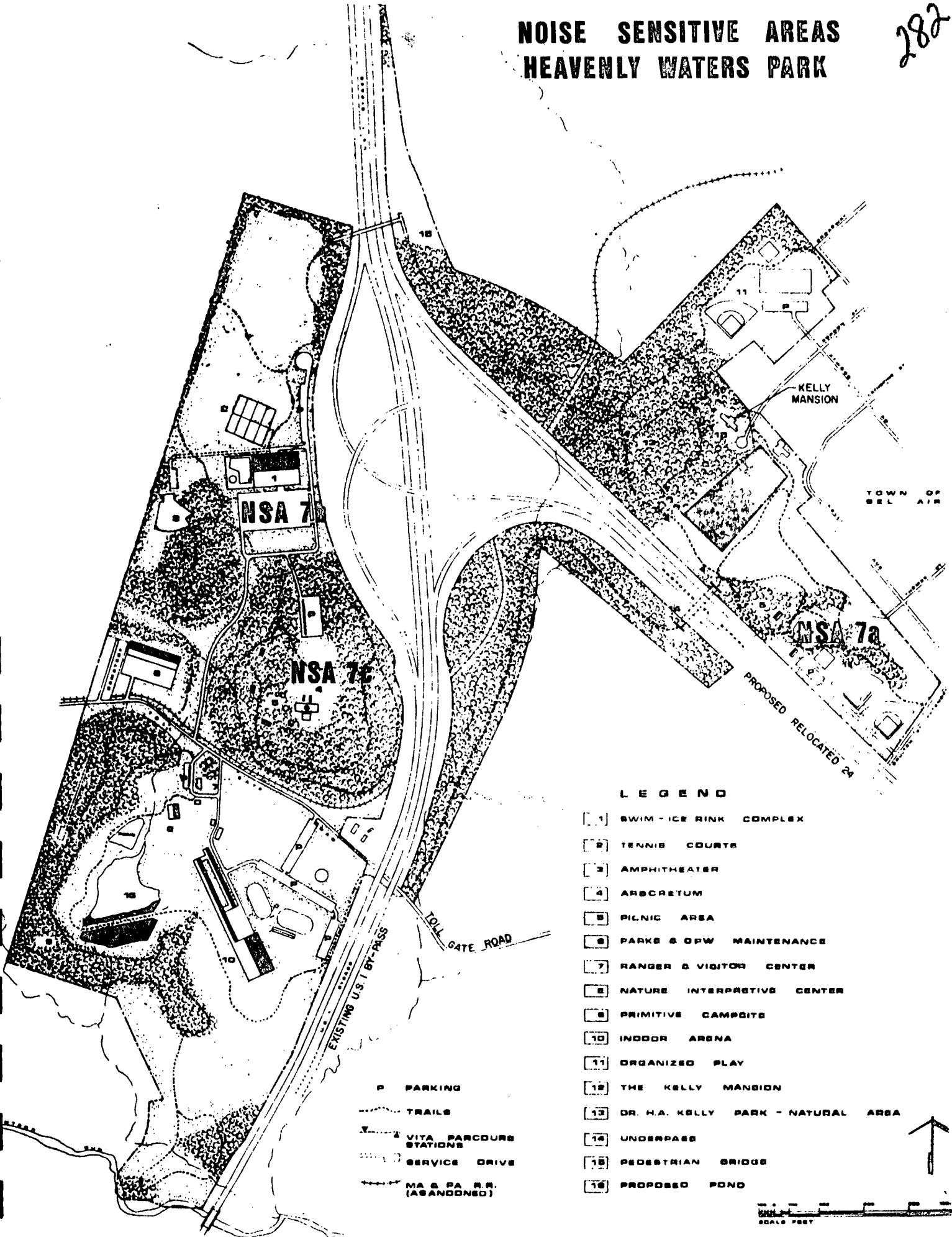
NOISE SENSITIVE AREA	AMBIENT L ₁₀ LEVEL		DESIGN YEAR L10 LEVEL	Impact
			Build Alternates	
7a	9:50 A.M.	55 dBA	70 dBA	Significant
7b	10:35 A.M.	50 dBA	59 dBA	Minor
7c	10:35 A.M.	50 dBA	54 dBA	Negligible

A significant amount of attention needs to be focused on how the relationship of the roadway to adjacent park areas might create impacts on the natural resources, human use, and aesthetic, cultural value. The evaluation of these impacts have been viewed in terms of the known or probable plans for future change within the proposed park area. No attempt has been made to speculate on revisions to the park master plan which may occur if the Md. 24 relocation is not constructed.

Vegetation along Heavenly Waters Run and surrounding slopes is composed mostly of young poplar, dogwood, and honeysuckle. A mature stand of timber located in this area has dominant canopy species which include beech, white oak, large poplar and a shrub layer of dogwood. The ground cover is sparse in this area. The proposed highway construction thru this area will result in the elimination of approximately 54 acres of prime forest land. However, all but approximately 15 acres of this woodland is within SHA property previously acquired for the proposed interchange construction.

NOISE SENSITIVE AREAS HEAVENLY WATERS PARK

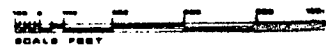
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LEGEND

- [1] SWIM-ICE RINK COMPLEX
- [2] TENNIS COURTS
- [3] AMPHITHEATER
- [4] ARBRETUM
- [5] PICNIC AREA
- [6] PARKS & OPW MAINTENANCE
- [7] RANGER & VISITOR CENTER
- [8] NATURE INTERPRETIVE CENTER
- [9] PRIMITIVE CAMPOITS
- [10] INDOOR ARENA
- [11] ORGANIZED PLAY
- [12] THE KELLY MANSION
- [13] DR. H.A. KELLY PARK - NATURAL AREA
- [14] UNDERPASS
- [15] PEDESTRIAN BRIDGES
- [16] PROPOSED POND

- P PARKING
- TRAILS
- VITA PARCOURS STATIONS
- SERVICE DRIVE
- MA & PA R.R. (ABANDONED)



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The spatial form of the natural landscape will be modified by the proposed action. Because of the steeply sloping terrain, the alignment does not conform to the land form of the area. As the planning and design process proceeds alternate interchange schemes will be defined with greater detail in an effort to reduce the impacts to the surrounding physical environment.

The proposed action will not create any significant isolation or division of a valued area of recreational development. The division that exists because of the U.S. 1 by-pass is responsible for the major limitations affecting the recreational activity range of the park. The relocation of Md. 24 separates a relatively small "natural area" in the southeastern portion of the park from the recreational development to the north, but does not otherwise affect recreational activities.

Pedestrian and equestrian access will be provided to the southeastern section of the park along Toll Gate Road and via a pedestrian underpass beneath Md. 24 Reloc. (See Figure 6). A pedestrian bridge over U.S. 1 bypass will complete the linkage between the areas of the park. The pedestrian bridge over U.S. 1 will provide safer access between the developed sections of the park than presently exists.

The ambient environmental conditions within the affected area of the park are presently influenced by the visual, audible and atmospheric elements of existing highway facilities (U.S. 1 by-pass, Toll Gate Road, U.S. 1 Business, and local streets). Therefore, the introduction of the proposed action into this environment will not render the setting difficult or unpleasant to use.

The determination of the visual aesthetic impacts of the proposed action requires an essentially subjective evaluation. The positive aspects of this evaluation pertains to the opportunities provided to the highway user to view the environmental resources which exist adjacent to the highway. The primary concerns related to the visual impact of the proposed improvements are related to the local residents' and park patrons' view of the road. The depressed grades of the ramps located west of U.S. 1 by-pass will generally alleviate the visual effects of these improvements on adjacent development. The relationship between the terrain and physical features, and the alignment and geometrics of the roadways east of U.S. 1 are aesthetically incompatible. However, the potential impacts perceived by park patrons will be mitigated because of the mature woodlands which exist adjacent to the proposed roadways.

Heavenly Waters Run is normally not more than about four feet wide with clear water, a sandy gravelly bottom and rapid current. It contains several species of minnows and darters and provides an adequate environment for the larvae of many common insects.

The soil associations in the study area generally are highly erodible so that gross sediment yields could potentially be in excess of 200 tons/acre/year. However, it should be noted that only a fraction of the eroded soil actually reaches the stream because of entrapment in vegetation, etc., and hence, net sediment yields ordinarily would be greatly reduced. Some erosion

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will occur but impacts will be reduced through the use of standard erosion control measures.

Extreme care must be exercised in location and construction of the interchange with the Bel Air Bypass due to the presence of a sanitary landfill located on the west side of the U.S. 1 By-pass. The cells of the landfill may be disturbed during construction releasing leachate from the landfill into the stream causing severe degradation in the chemical quality. During the next design phase of this project alternate interchange schemes will be studied. The reduction or elimination of the conflict with the sanitary landfill will be considered at that time. In the event the interchange scheme adopted for final design encroaches on the landfill, test borings will be made to determine the depth of refuse deposition. Alternate methods for preventing leachate from polluting the waters of Heavenly Waters Run will be investigated. Included in this investigation will be a program of refuse removal and subsequent refill with acceptable fill material. Refilling will likely be necessary to assure that an adequate buffer zone exists between any refuse remaining and the highway cut slope. Also to be investigated will be the collection and treatment of leachate should it be determined that leachate flow is directed toward the highway cut slope.

Erosion control measures will be required on the project in accordance with state and county regulations. Therefore, actual sediment yields which would result in any adverse effects on water quality should be quite low.

Other construction in the interchange area, including the remaining sections of the Maryland Route 24 Westbound Lane, the Southbound Lane, the Westbound Lane Ramp, and the Northbound Lane Ramp, is involved with normal highway fill. Some local raising of the water table may occur but in most cases local drainage is associated with the low fill areas and these drainage ways will be maintained by culverts so that the water table will remain essentially where it is at the present time.

Planning Measures to Minimize Harm

When considering the planning measures to be incorporated into the project, it is important to recognize the mitigation effects that are inherent in the park design. The areas designated for recreational development and use were designed to maximize the physical resources of the site with consideration given to the area to be acquired for the proposed highway right-of-way. Adequate buffer areas have been maintained between the proposed highway and adjacent recreational areas in order to preserve the integrity of the recreational development and mitigate physical or aesthetic encroachment of the highway.

The proposed right-of-way is located primarily along "natural areas". These areas will be maintained in their natural state and will provide trails, or pathways for hikers and equestrian use. The trails are proposed between areas of recreation development and/or points of interest. Fencing will be provided along the highway right-of-way in order to restrict public access and protect wildlife within these areas.

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The visual environment is of major importance to most park users. Although it is not possible to mold the highway alignment to the terrain through the park area, screening is provided in many areas. The proposed ramp connections to Md. 24, west of the U. S. 1 by-pass, are in considerable cut and the roadway will therefore be shielded from view of adjacent recreational areas. As the ramps join the existing grade of U. S. 1, several hundred feet of mature woodland is provided between the roadway and sensitive park areas. The ramp connections and the Md. 24 alignment, east of U. S. 1 by-pass, transverse an area of mature woodland. Although the roadway grades require large embankments in the vicinity of Heavenly Waters Run, a significant degree of shielding will be provided by the heavy vegetation.

There is one area of recreation development that may require additional measures to minimize visual impacts of the highway. The area west of Boulton Street Extended may require plantings along the northbound right-of-way to provide additional shielding. Plantings will be selected to harmonize with existing vegetation.

Development plans for Heavenly Water's Park have been formulated, according to Harford County Public Works and recreation officials. During the development of the Heavenly Waters Master Plan, care was taken to minimize the potential intrusion of noise through the proper site selection of park uses; i.e. campsites and amphitheater located away from highway noises. The vertical alignment of the future ramps and Maryland 24 will provide a degree of acoustical shielding for adjacent areas. The heavily wooded areas that border the proposed reduction, are of considerable psychological and aesthetic value. The retention of these wooded buffers would be a primary design consideration.

Noise sensitive activity areas within the park will not experience design noise level violations. These areas are identified on Page 27. The picnic/pond/ballfield area would experience a significant increase in ambient levels if the proposed project is constructed.

Noise abatement will be studied in the project design phase, to reduce the projected increase in the picnic/pond/portion of the area. It does not appear possible to obtain a meaningful reduction in the ballfield area due to the at-grade intersection of future Maryland Route 24 with Boulton Street.

Coordination with Harford County park officials will be required in the determination of the type of abatement measure. An earth berm or combination berm/wall would be a desirable solution. The type of measure to be provided will be evaluated in relation to the right-of-way required versus the design to retain natural vegetation as a buffer.

Md. 24 Relocated does not enhance the aesthetic quality of the overall recreation development. However, since the park and highway were designed through a coordinated planning effort, a balance of man-made development with the physical resource has been achieved serious impacts.

During the construction of the highway, measures will be taken to minimize the impacts on the park area. Existing trees and other vegetation will be maintained within the undisturbed portions of the interchange. Erosion control measures will be closely monitored to insure protection to Heavenly Waters Run.

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Alternative To Use Of Park Lands

Benson Alignment

The State Highway Administration's Bureau of Project Planning has studied an alignment for Maryland 24 Relocated which would avoid involvement with the parklands (See Figure 9). However, this alignment has many severe impacts and deficiencies which has warranted the discontinuance of any further investigations or plan development beyond the preliminary planning stage.

The subject alternate was proposed to connect to the U. S. 1 By-Pass approximately 1/4 mile from the existing intersection between U. S. Route 1 (By-Pass) and U. S. Business Route 1 (Bel Air Road) at Benson. The U. S. 1 By-Pass is divided at this point to accommodate an interchange with the proposed Perring Freeway (Maryland Route 41).¹

Some traffic movements will be very difficult to accomplish with an interchange located in this area, particularly westbound Maryland 24 to northbound U. S. Route 1 and vice versa. Other movements, depending upon the type of interchange selected, would require very long ramps, and some of the existing roadway may have to be relocated. Structures would be unusually long due to the undesirable angles on which they would be constructed. From the interchange area, the alignment would lead generally in an easterly direction crossing Winters Run and traversing Bel Air Acres at a point approximately midway between the U. S. 1 By-Pass and U. S. 1 Business. Then turning in a south-east direction, it would cross Business Route 1 approximately 1,000 feet south of Business Route 1. These intersections at U. S. Route 1 and Tollgate Road occur at an undesirable angle which would make some turning movements more difficult to achieve.

The alignment would connect to Alternate 3 at a point midway between Business Route 1 and Ring Factory Road.

This alignment would cause extensive damage to properties which lie between U. S. Route 1 (By-Pass) and U. S. Business Route 1 (Bel Air Road).

Preliminary investigations show that this alternate would require the relocation of 19 dwellings. Conservatively estimating that each residence is occupied by a family of three, this alternate will displace 27 more people than the recommended alternate (30). This alternate would also require the relocation of 2 businesses.

A proposed site for the elderly would be directly impacted.

¹ The Perring Freeway is not presently included in the State Highway Administration's program planning for the near future. However, this project has been assigned a high priority in the county's transportation systems planning.

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This alternate would also require property from an historic site known as Joshua's Meadow, which is eligible for the National Register of Historic Places. The centerline of the alternate would be approximately 150 feet from the structures on the property. Approximately 15 acres will be required from the property for right-of-way purposes. See Figure 4.

The alternate would also require an additional 28 acres of prime agricultural land. Winters Run would also have to be crossed with the use of a box culvert. While it is not expected that the stream will experience an adverse impact, sedimentation and erosion is always a concern.

Projected traffic estimates indicate that the major movements are from northbound Maryland Route 24 to northbound U. S. Route 1 By-Pass to communities north of Bel Air.

The Benson Alignment would add approximately 1.3 miles and corresponding time to the travel trips of motorists whose destinations are to the north. It has been determined that the majority of traffic on the west end of the project is destined for U. S. Route 1 north. Thus, the traffic volumes using U. S. Route 1 to and from the north destined for Maryland Route 24 Relocated would be considerably lower under this alignment than the recommended alignment. Rather than traveling the additional distance, which is taking the motorist out of his way and adding to the highway user cost, the motorist will use the existing Maryland Route 24 through the Town of Bel Air. This would greatly compromise the effectiveness and purpose of this portion of the project, because it will not help to significantly decrease the traffic volumes in the Town of Bel Air, a primary consideration in the need for the project.

As the traffic increases, the congestion in Bel Air will increase resulting in increased levels of air and noise pollution with the town and specifically along the residential and business developments abutting existing Maryland Route 24. The increased congestion will also result in a safety hazard for pedestrians as well as the motorist. With motorists using the existing road, the new facility would be under utilized and not fulfill its intended purpose or the objectives of the extensive planning that determined its location.

The Maryland Historical Trust has gone on record to be opposed to any alignment that would not help to reduce traffic volumes in Bel Air because of the various historic sites and districts within the town.

The final conclusion based on these adverse impacts is that the Benson Alignment is not a prudent or feasible alternate to the use of parkland.

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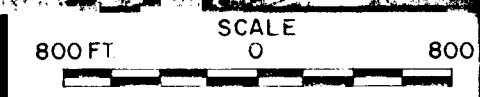
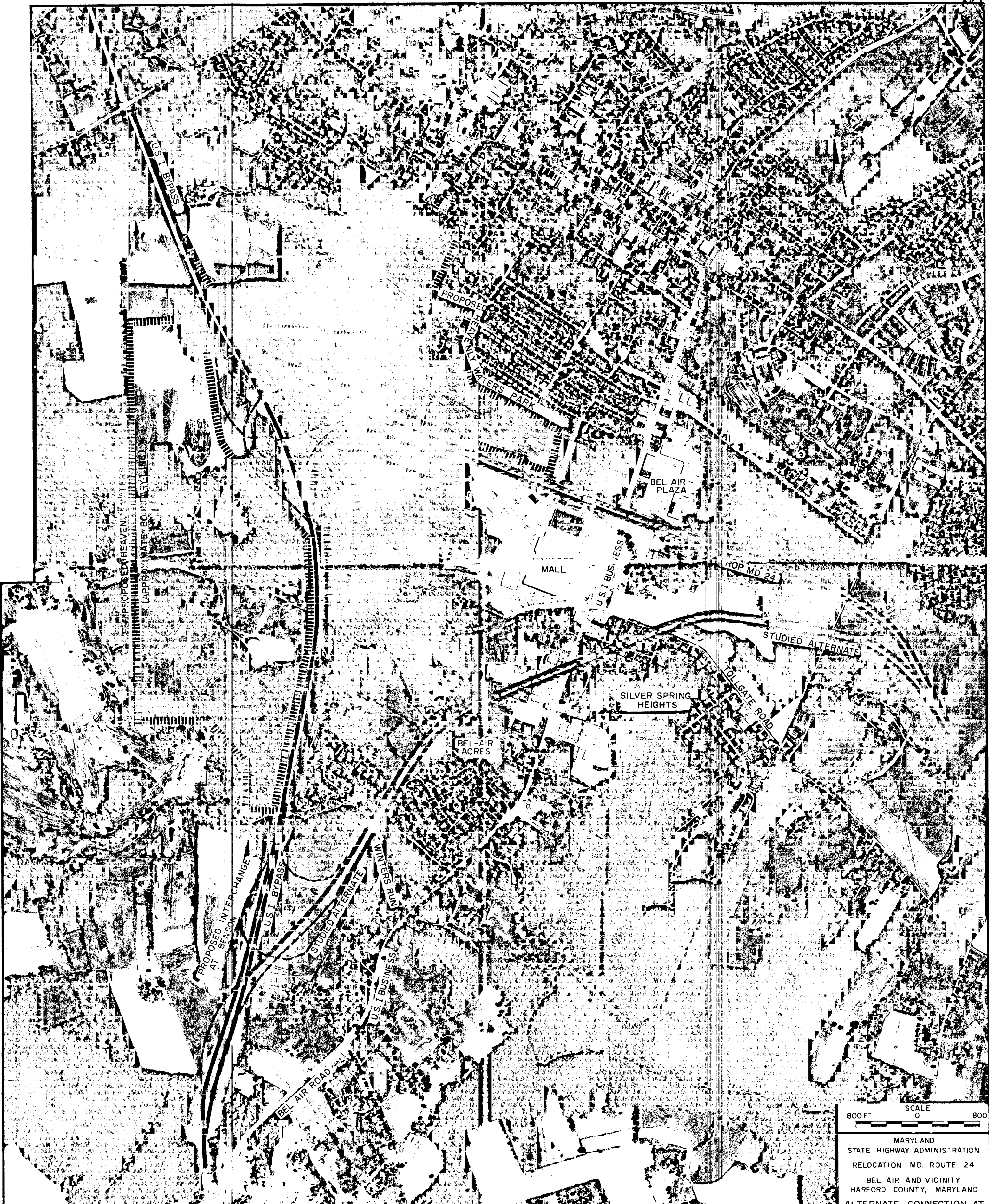
Benson Alignment Summary Chart

(For a comparison with the recommended alternate, see Page 4.0.6 of this document)

Construction Costs	\$15,600,000
Right-of-Way Costs	\$ 2,960,000
Length	7.0 miles
Dwellings Taken	15
Businesses Taken	8
Impact on Heavenly Waters Park	No
Number of Historic Property Acquisitions	4
Number of Sites Whose Historic Integrity will be Adversely Affected	12
Type of Access	Partial

Footnotes:

- ¹ The Benson Alignment is common to Alternate 3 (Recommended Alternate) from a point 4,000 feet south of U.S. 1 to I-95.
- ² The proposed interchange of Alternate 3 has been coordinated with Harford County planning with respect to Heavenly Waters Park, partial right-of-way has been acquired. Right-of-way adjacent to Harford Mall has been reserved. The Benson Alignment would require complete acquisition of new right-of-way.



MARYLAND
 STATE HIGHWAY ADMINISTRATION
 RELOCATION MD. ROUTE 24
 BEL AIR AND VICINITY
 HARFORD COUNTY, MARYLAND
 ALTERNATE CONNECTION AT
 BENSON (Avoiding Parklands)

Tollgate Road

The State Highway Administration has also studied a Tollgate Road alignment in an attempt to minimize the effects to the proposed parkland. See Figure 10.

Approximately 3,600 feet of existing Tollgate Road, between U. S. Route 1 and Business 1, would have to be relocated to accommodate the proposed interchange with U. S. Route 1. The existing access to the Harford Mall from Tollgate Road would have to be redesigned with some points of access totally eliminated. Two entrances to the mall would be eliminated requiring motorists who would have used those entrances to use the U. S. Business 1 entrance. This will put additional traffic on a road that is currently experiencing congestion problems and create a safety hazard by requiring motorists to turn across two lanes of traffic to gain access to the mall.

A service road approximately 1,300 feet in length would also have to be constructed to provide the residents who formerly had direct access to Tollgate Road access to U. S. Business 1 and destinations north and south.

Right-of-way damages would be extremely high, approximately \$6.5 million. The high cost is due to the required acquisition of nineteen commercial buildings in the area of the Tollgate Road and U. S. Business 1 intersection. In addition, nine residents would have to be acquired for the construction of this alignment. This would involve approximately eleven families. Three of the homes that would be acquired are occupied by minority families. This alignment would also impact two historic sites which are considered eligible for the National Register of Historic Places. One, the Jackson House, located at the intersection of Tollgate Road and U. S. Business 1, would be destroyed. The alignment would also require the acquisition of approximately eighteen acres of property associated with the second site known as Joshua's Meadow. The property is located at the intersection of Tollgate Road and U. S. Route 1. The interchange would create a visual impact on the rural setting of the site. The site's direct access to Tollgate Road would be removed and new access provided by a service road to U. S. Business 1.

Southeast of Business 1, Tollgate Road would be barricaded. This would have an adverse effect upon communities already developed along Tollgate Road by creating undesirable traffic movements. Residents south of Tollgate Road who now have access to Business 1 at Tollgate Road would have to travel in a circuitous pattern south on Tollgate Road and north on Ring Factory Road to Relocated Maryland Route 24, then northwest to Business 1. The total trip would add approximately 2 miles to the existing travel patterns and add to the highway user cost. This alternate would also require the acquisition of eleven acres of prime agricultural land. A service road, requiring an additional three acres of prime agricultural land, would be required to provide access to the house located on the property.

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The Tollgate Road alignment would bring the traffic on Relocated Maryland 24 much closer to the existing residential communities along Tollgate Road between Ring Factory Road and U. S. Business 1.

The distance from the selected alternate's centerline to the residential community in the vicinity of Tollgate Road and Ring Factory Road would be approximately 1,650 feet. The distance under the Tollgate Road alternate would be approximately 300 feet. In the vicinity of the Silver Spring Heights community, Business 1 and, Tollgate Road, the distance would be approximately 1,650 feet from the selected alternate. The Tollgate Road alternate would be approximately 300 feet from the sub-division. The closeness of the Tollgate Road alternate would be expected in noise levels at the heaviest edges of these communities in excess of the Federal Design Noise Level of 70 dBA.

While placing of the interchange south of the park at Tollgate Road will reduce the amount of land taken from the proposed parkland, the interchange at Tollgate Road will not miss the park completely. It will require a minimum of thirty acres of proposed park property. This includes fourteen acres from an existing equestrian center located west of U. S. Route 1, introducing some noise and visual intrusion into the center. In addition, three caretaker homes would be acquired.

These effects are caused by the shifting interchange and alignment southward from Ring Factory Road to U. S. Route 1. The remainder of the alignment would be consistent with Alternate 3.

The proposed interchange with U. S. Route 1 has been studied and designed in accordance with engineering criteria established by the American Association of State Highway and Transportation Officials. This interchange was designed to be consistent with and maintain the existing freeway status of U. S. Route 1. A redesign of the interchange as an at grade intersection would not meet the existing design criteria of U. S. Route 1 and would severely compromise the purpose of the U. S. Route 1 by-pass concept. Safety considerations involved with the junction of these two major facilities justify the provision of an interchange connection.

During the final design stage of the project, it may be possible to further refine the interchange geometrics which could result in some minor reduction in the taking. As discussed earlier, the interchange shown meets desirable engineering criteria and represents the required taking of property under those conditions. A number of other interchange configurations have been considered; however, they would require even more park property.

A conscientious effort will be made within reasonable engineering traffic movement, and safety concerns to develop a final geometric layout which will minimize the amount of parkland required.

The final conclusion based on the adverse effects and deficiencies discussed above is that the Tollgate Road alignment and elimination of the interchange connection are not feasible and prudent alternates to the use of parkland.

Tollgate Road Alignment Summary Chart

(For a comparison with the recommended alternate, see Page 4.0.6 of this document)

Construction Costs	\$14,000,000
Right-of-Way Costs	\$ 6,500,000
Length	5.6 miles
Dwellings Taken	9
Businesses Taken	19
Impact on Heavenly Waters	Yes
Number of Historic Properties Acquired	5
Number of Sites Whose Historic Integrity will be Adversely Affected	2
Type of Access	Partial

Footnotes:

- ¹ The Tollgate is common to Alternate 3 (Recommended Alternate) from a point 2,000 feet southeast of Ring Factory Road to I-95.
- ² The proposed interchange of Alternate 3 has been coordinated with Harford County Planning with respect to Heavenly Waters Park, partial right-of-way has been acquired. Right-of-way adjacent to Harford Mall has been reserved. The Tollgate alignment would require complete acquisition of new right-of-way.

PROPOSED HEAVENLY WATERS PARK

HARFORD MALL

DEL AIR PLAZA

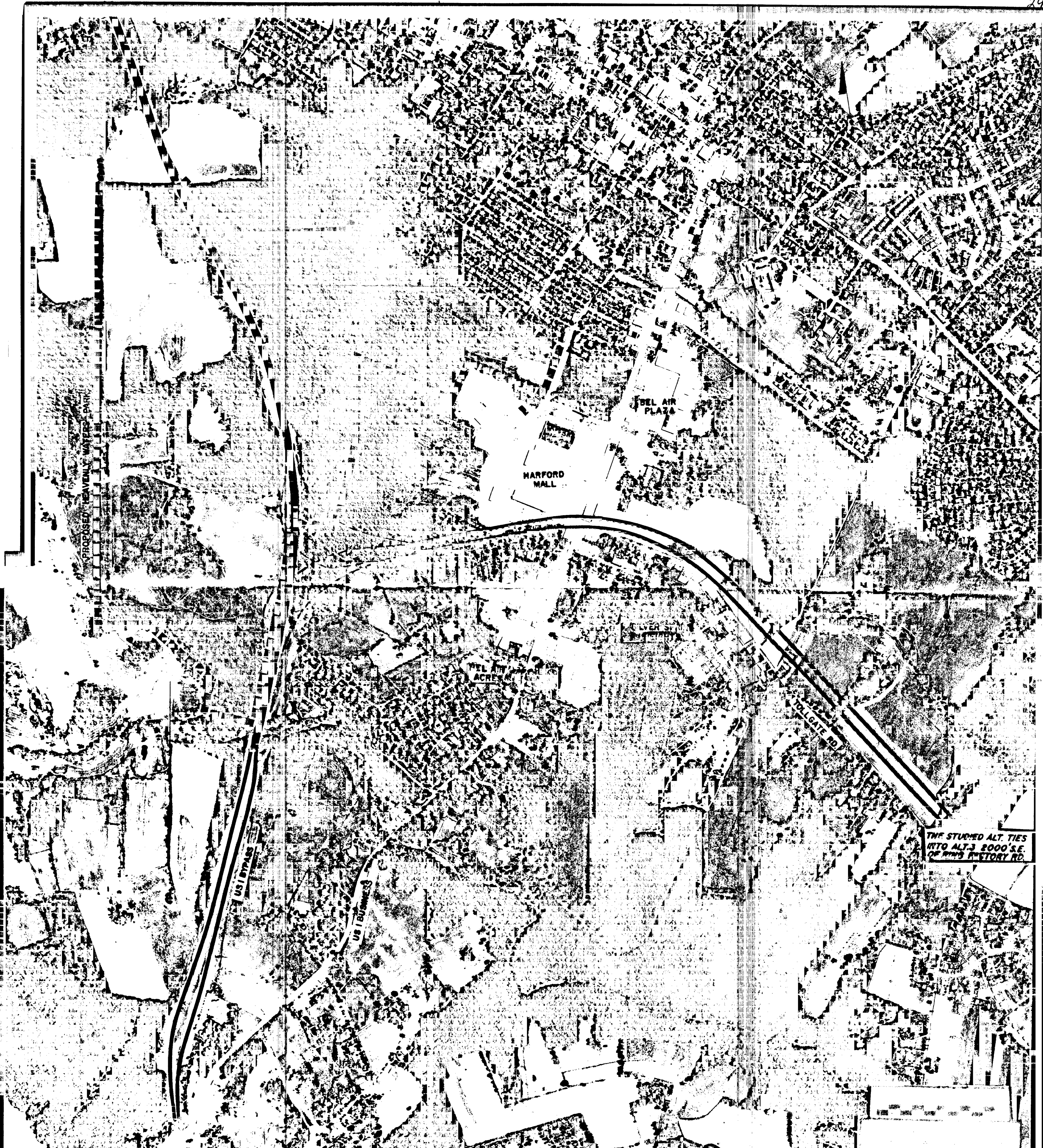
DEL AIR

DELGATE RD

US 1 BYPASS

US 1 BUSINESS

THE STUDIED ALT. TIES INTO ALT. 3 2000' S.E. OF KING STREET RD.



Coordination

Throughout the development of the project the State Highway Administration has worked in close cooperation with the county in order to provide a highway that meets the needs of the motoring public while minimizing the adverse impacts on the Heavenly Waters Park property.

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Copy

September 26, 1973

RE: Contract No. R 520-000-474
Relocation Maryland Route 24
U.S. 1 Bel Air By-Pass to
U.S. Route 1 (Business)
HEAVENLY WATERS PARK

Mr. Charles B. Anderson
County Executive
45 South Main Street
Bel Air, Maryland 21014

Dear Mr. Anderson:

The purpose of this letter is to advise you of the current status of the proposed highway project and the State Highway Administration's desire for a memorandum of understanding concerning a proposed land exchange with Harford County to facilitate the development of Heavenly Waters Park and the construction of relocated Maryland Route 24. It is intended that this memorandum of understanding will be included in the Environmental Impact Statement as an indication of the cooperative planning which has transpired between our agencies in the planning of the two public projects.

The relocation of Maryland Route 24 had been proposed for many years prior to the park concept and also shown on adopted Master Plans for both the County and the Town of Bel Air. With serious consideration for Heavenly Waters Park developing in 1969, subsequent meetings were held to identify the compatibility of both projects within the area. This involved the reevaluation of the U.S. 1 - Relocated Route 24 Interchange. As a result, the Town of Bel Air modified their Major Thoroughfare plan to eliminate a town connection along the old Ma and Pa Railroad. This action allowed for simplicity of interchange and a desirable park plan.

The attached interchange "Scheme 6" is the result of numerous studies and has the approval of the State Highway Administration, Town of Bel Air officials, Harford County Parks and Recreation, and the Harford County Public Works as of December 19, 1972. The relocation of Maryland Route 24 was initiated in the State's Twelve Year Program with preliminary surveys completed in the early 1960's. Some right of way has been acquired at the intersection of proposed Maryland Route 24 and Business Route 1. Right of way has been reserved throughout the recently completed Harford Mall, which adjoins the "Kelley" property, now part of the proposed Heavenly Winters Park.

The current status of the project is as follows: The project is in our current 1974-78 Secondary Construction and Reconstruction Program, page 2 of 3, line 8, with preliminary engineering scheduled in fiscal 1974. Right of way is scheduled in fiscal 1976 with construction scheduled in fiscal 1978. It is a Federal Aid Secondary Highway with Federal assistance anticipated in the funding. The A-95 review was completed in May, 1972 and the Coordination Process was completed in March, 1973. Prior to approval of an alignment, Environmental Statements, Public Hearing, and Location Study Report are required. We anticipate completion of the above in early 1974.

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Mr. Charles B. Anderson
September 26, 1973
Page 2

Copy

A meeting was held March 30, 1973 with representatives of the State Highway Administration and Harford County Parks and Recreation to discuss the status of the projects in order that funding can be approved by H.U.D. utilizing Federal Open Space Funds. Of prime concern to both responsibilities before approved by H.U.D. of Open Space Funds, was a determination of acreage involved and a subsequent equitable monetary exchange.

The map attached, scale 1"=500', delineates the parcels in question and a schematic of interchange scheme 6. As evidenced by this plan, recommended Interchange #6 allows the State Highway Administration to relinquish parcels 2, 3, and 6. Parcels 3 and 6 would be continuous to Heavenly Waters Park. Parcel 3 has an important role in that it serves as a link between Heavenly Waters Park (continuity provided either over or under relocated Route 24) and the County property to the west of U.S. Route 1. Heavenly Waters Stream also traverses a great portion of the length of Parcel 2.

Harford County parcels 1 and 5 are very important for the construction of this highway project. Parcel 4 becomes land-locked County property. However, this land exchange would allow access to it via parcel 2 and County can retain ownership.

Assuming Harford County retains ownership of parcel 4, the proposed land exchange would be: State Highway Administration parcels 2, 3, and 6 (33.7 acres±) at an estimated cost of \$168,000; and for Harford County parcels 1 and 5 (36.5 acres±) at an estimated cost of \$182,500. This results in an additional expenditure to the State Highway Administration of 2.8 acres ± or \$14,000. The above estimates were prepared by the State Highway Administration Office of Real Estate and are approximate subject to more accurate calculations prior to negotiations.

After your review, I welcome your comments on such a land exchange in order that commitments on our part will satisfy Federal concerns for both the highway and the park.

Very truly yours,

/S/ Robert J. Hajzyk, Director
Office of Planning and
Preliminary Engineering

RJH:bh
Attachment

cc: Mr. Walter E. Woodford, Jr. (w/attach.)
Mr. Hugh G. Downs " "
Mr. Northam B. Friese " "
Mr. Richard H. Trainer " "
Mr. Thomas C. Champness " "

Prepared by: Mr. Foster T. Hoffman
Bureau of Project Planning (61.3)



297

January 28, 1974

MEMORANDUM OF UNDERSTANDING

Mr. Robert J. Hajzyk, Director
Maryland Department of Transportation
State Highway Administration
Office of Planning and Preliminary Engineering
P. O. Box 717
300 West Preston Street
Baltimore, Maryland 21203

RECEIVED
JAN 29 1974
DIRECTOR, OFFICE OF
PLANNING & PRELIMINARY ENGINEERING

Subject: Contract No. H 520-000-474
Relocation of Maryland Route 24
U.S. 1 Bel Air (By-Pass to
U.S. Route 1) Business
HEAVENLY WATERS PARK

Dear Mr. Hajzyk:

This will confirm your request of September 26, 1973, concerning a letter of understanding on the above subject matter.

After numerous meetings and alternate schemes, Harford County has agreed to "Interchange Scheme 6". In so doing, an exchange of properties is necessary and is described below:

Harford County Property to	
State Highway Administration - - - - -	Parcel #1 - 18.5 Acres
	Parcel #5 - 18.0 Acres
	Total - 36.5 Acres
State Highway Administration to	
Harford County - - - - -	Parcel #2 - 20.8 Acres
	Parcel #3 - 8.7 Acres
	Parcel #6 - 4.2 Acres
	Total 33.7 Acres

The exchange of land results in an expenditure to the State Highway Administration of 2.8 acres or, approximately, \$14,000.

In addition, Harford County intends to retain ownership to Parcel #4. The State Highway Administration has agreed to provide access from the Kelly Park to Parcel #4 by means of a tunnel. The Department of Parks and Recreation deems this access essential in order to facilitate future planning and development. This provides the only access from the Kelly Park to the County Home property.

DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
PLANNING SECTION

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Page 2
January 28, 1974

Mr. Robert J. Hajzyk, Director
Maryland Department of Transportation
State Highway Administration

We acknowledge and confirm this transfer. The additional land or monetary exchange due Harford County will, of course, be subject to more accurate calculations prior to settlement.

Sincerely,



Charles B. Anderson
County Executive

cc: Town of Bel Air, Maryland
Department of Parks and Recreation
Department of Public Works
Department of Planning and Zoning



299

JAMES B. COULTER
SECRETARY

LOUIS N. PHIPPS, JR.
DEPUTY SECRETARY

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

(301) 267-5041

July 7, 1975

The Honorable Charles B. Anderson
Harford County Executive
45 S. Main Street
Bel Air, Maryland 21014

RE: POS 220-12-1
Heavenly Waters Land Exchange

Dear Mr. Anderson:

This is to acknowledge the receipt of your request concerning a Departmental decision on the land exchange involving the above referenced project.

After reviewing this matter, the Department of Natural Resources finds the land exchange to be satisfactory. Harford County and the State Highway Administration may proceed with the land exchange.

Please keep this office informed as to the progress and details of all transactions which complete the transfer.

Sincerely,

James B. Coulter
James B. Coulter
Secretary

RIGNANI ASSOCIATES						
RECEIVED						
AUG 26 1975						
JVR						FILE

JBC:dw

- cc: Fred L. Eskew, DNR
- William A. Krebs, DNR
- William C. Greer, DNR
- Ronald C. Manning, Harford County
- Robert J. Hajzk, SHA ✓

Mr. Camporeale
Mr. Rose
Mr. Postal

ADMINISTRATION
PROJECT PLANNING

1975 JUL 21 PM 1 38

✓	BARONASCHI	
	BROWN	HELWIG
	BOYD	WELLMAN
	WALKER	HOPKINS
	...	LAUST
	...	BRO

300



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
BALTIMORE AREA OFFICE
MERCANTILE BANK AND TRUST BUILDING
170 HOPKINS PLAZA
BALTIMORE, MARYLAND 21201

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
400 EAST WASHINGTON STREET
WASHINGTON, D.C. 20472

February 20, 1975

RECEIVED
3.3PMR

RECEIVED
FEB 21 1975

PARKS & RECREATION

Mr. Ronald C. Manning
Open Space Coordinator
Department of Parks and
Recreation
Harford County
Bel Air, Maryland

Dear Mr. Manning:

Subject: Project OSL-MD-03-06-1021 (A)

Your request for a conversion of two parcels contained in HUD Project OS-1021 to the proposed "U.S. 1 - Relocated Route 24 Interchange" and substitution of three comparable state-owned parcels will require further documentation.

With this letter I am sending the latest Rules governing the Open Space Land Program, HUD 6240.8. As Martin Bement of our staff conveyed by phone on 2/11/75, paragraph 14 of these Rules, Approval Procedures for Conversion, will give you the specific "conversion" requirements.

In response to your question concerning the use of the original acquisition appraisals for the parcels to be converted, it is our opinion that new independent real estate appraisals must be conducted due to the age of the original appraisals. New appraisals should be conducted for the proposed "substitute" parcels so that both sets of appraisals reflect current value (see HUD 6240.8, paragraph 14 for the general requirement).

Call Martin Bement, 962-3718, for any assistance in documenting this proposed conversion of land.

Sincerely,

Evans H. Rotnschild
Acting Area Director

Enclosure

*NOTE: SEE PAGE 44 FOR
ADDITIONAL COORDINATION
COMMENTS



DEPARTMENT OF PARKS AND RECREATION

FILE

IN HOUSE

CONSULT

301

Richard L. Rex
Director

John F. Weber
Deputy Director

4520
MD 24
U.S. 1 To I-95

March 3, 1975

Mr. Eugene T. Camponeschi
Chief, Bureau of Project Planning
State Highway Administration
300 West Preston St.
Room 500
Baltimore, Maryland 21201

RE: Transfer of Property
Due to the U.S. 1 -
Relocate Route 24
Interchange

Dear Mr. Camponeschi,

I have written to both the Department of Housing and Urban Development and the Department of Natural Resources concerning the above referenced transfer. Please find enclosed a Xerox copy of the information I have received from Housing and Urban Development. This information should provide you with the "Specific Conversion Requirements".

It is extremely important that your agency and ours meet to determine who will provide the necessary information and pay the cost of appraisals should they be deemed necessary.

Please feel free to contact me or Mr. Richard L. Rex at your earliest convenience.

Sincerely,

Ronald C. Manning
Open Space Coordinator

RCM: sm
Encl.

cc. Rignani, Assoc.

<input checked="" type="checkbox"/> CAMPONESCH	<input type="checkbox"/> MELWIG	<input type="checkbox"/> JANATA
<input checked="" type="checkbox"/> DORSEY	<input type="checkbox"/> HOFFMAN	<input type="checkbox"/> KOLLER
<input checked="" type="checkbox"/> ECKHARDT	<input type="checkbox"/> HOPKINS	<input type="checkbox"/> SCHNEIDER
<input type="checkbox"/> EGE	<input type="checkbox"/> HOUST	<input type="checkbox"/> UHL
<input checked="" type="checkbox"/> ACTION	<input checked="" type="checkbox"/> INFO	<input type="checkbox"/> COPIES

REMARKS:



DEPARTMENT OF PARKS AND RECREATION

302

Richard L. Rex
Director

John F. Weber
Deputy Director

May 2, 1975

H 520

Mr. William Krebs, Director
Program Open Space
Texas State Office Building
Annapolis, Maryland 21401

PROJECT # 220-12-1
HEAVENLY WATERS ACQUISITION

220-12-1-4

RE: Project # FOS 220-12-1
Heavenly Waters Acquisition

Dear Bill,

Please find enclosed a Xerox copy of a letter that I sent to you on January 22, 1975.

Our Department has been working closely with the State Highway Administration with regards to the proposed land transfer. We are looking for some response to my previous letter so that we may proceed with mutual intentions.

Both agencies are presently in the process of working with the Department of Housing and Urban Development, who funded 50% of this project, in an effort to receive their approval of the proposed land transfer.

Looking forward to hearing from you in the near future, I remain

Sincerely,

Ronald C. Manning
Open Space Coordinator

RCM: sm

Encl.

cc: Harry Dorsey, State Highway Administration

C O P Y

303

January 22, 1975

Mr. William Krebs, Director
Program Open Space
Tawes State Office Building
Annapolis, Maryland 21401

RE: Project #POS 220-12-1
Heavenly Waters Acquisition

Dear Bill,

The above referenced acquisition project allowed our Department to acquire approximately 103 acres of open space, outside the Town limits of Bel Air. This project was funded through 50% HUD money, 25% POS money, and 25% Local Harford County funds.

During this project application procedure, this Department was made aware by the State Highway Administration that approximately 18 acres of open space would be needed from this parcel for the proposed Route 24 Bypass. Through careful consideration, our Department in conjunction with the then County Commissioners determined to follow through with the acquisition.

At the same time, we worked toward reaching a fair and equitable land transfer with the State Highway Administration. We are enclosing copies of correspondence between the County Government and the State Highway Administration concerning this solution, along with a copy of our new park master plan.

Recently a meeting was held between our Department, the Public Works Department, and the State Highway Administration. At this meeting, we were informed that the State will be pursuing this land transfer. It is for this reason, that we write to you.

We feel that the land transfer and other incidental items of concern will be of benefit to the overall park master plan and operation. We are requesting official approval of this

C O P Y

304

January 22, 1975
Page 2

transfer so that Harford County and the State Highway Administration may proceed with our mutual intentions at a future date.

Should you need additional information concerning this matter, please feel free to call.

Sincerely,

/S/ Ronald C. Manning
Open Space Coordinator

RCM/sm
Encl. 3

NOTE: Ronald C. Manning
Open Space Coordinator
Department of Parks and Recreation
Harford County



H 520
(Consultant)

(Mr) Manning, Ronald

Maryland Department of Transportation

State Highway Administration

April 1, 1975

Harry R. Hughes
Secretary
Bernard M. Evans
Administrator

305

RE: Contract No. H 520-400
Relocated Maryland Route 24
From U.S. Route 1 (Bel Air
By-Pass) to I-95
Transfer of property
Heavenly Waters Park

Mr. Ronald C. Manning
Open Space Coordinator
Harford County Department
of Parks and Recreation
Bel Air, Maryland 21014

Dear Mr. Manning:

This is relative to your letter of March 3, 1975 concerning the proposed exchange of parcels resulting from proposed Maryland Route 24 through Heavenly Waters Park.

Your letter suggests a meeting regarding reappraisals of the land transfer as required by the U.S. Department of Housing and Urban Development.

In this vein, Mr. R. H. Dorsey of this bureau contacted Mr. Martin Bement of HUD regarding this matter. Mr. Bement indicated that we must comply with HUD's rules for "Appraisal Procedures Conversion". However, it is my understanding that new appraisals will not be necessary until after due process including public hearings, alignment approval, and finalization of right of way plats.

As there is an understanding between Harford County and the State Highway Administration regarding the exchange of properties, we anticipate no difficulties when the transfer is consummated.

In order to familiarize Mr. Bement with the project, we are forwarding to him a print of the parcels and a copy of the project schedule.

Very truly yours,

Eugene A. Camponeschi

Eugene T. Camponeschi, Chief
Bureau of Project Planning

ETC:RHD:bh

cc: Mr. Robert J. Hajzyk (w/attach.)
Mr. Martin Bement " "
Mr. Calvin W. Reese " "

Mr. Capronesi

II.

**AGENCIES NOTIFIED AND A COPY OF THEIR REPLY
FOLLOWED BY MARYLAND STATE HIGHWAY ADMINISTRATION
EVALUATION AND RESPONSE WHEN APPLICABLE**

307

MD. ROUTE 24 RELOCATED 4(f) STATEMENT

Check list for 4(f) statement responses

Project No. _____
County: Harford

Agency	Date Reply Received	Comments in Section 4(f)
<u>FEDERAL</u>		
Corp of Engineers	No Reply	
Department of the Interior	7/15/76	pages 21, 22, 23, 24, 27, 28, 29, 30, 31, 32
Department of Housing and Urban Development	No Reply	
Department of Agriculture	No Reply	
Department of Commerce	No Reply	
Department of Health, Education and Welfare	No Reply	
Environmental Protection Agency	No Reply	
Office of Economic Opportunity	No Reply	
Department of Transportation Assistant Secretary for Environment, Safety and Consumer Affairs	7/1/76	pages 29, 30, 31, 32, 32a
Soil Conservation Service	No Reply	
<u>STATE</u>		
Department of Budget and Fiscal Planning	No Reply	
Department of General Services	No Reply	
Department of Economic and Community Development	No Reply	
Maryland Historical Trust		
Maryland Historical Society		

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<u>Agency</u>	<u>Date Reply Received</u>	<u>Comments in Section 4(f)</u>
<u>STATE (cont.)</u>		
State Department of Education	No Reply	
State Board of Community Colleges	No Reply	
Department of Natural Resources Wildlife Administration	No Reply	
Department of Natural Resources Water Resources Administration	No Reply	
Department of State Planning	No Reply	
Department of Public Safety and Correctional Services	No Reply	
Maryland Office of Economic Opportunity	No Reply	
Department of Health and Mental Hygiene	No Reply	
Environmental Health Administration	No Reply	
Division of Solid Waste Control	No Reply	
Bureau of Air Quality Control	No Reply	
Bivision of Water and Sewerage	No Reply	
State Soil Conservation Committee	No Reply	
Automobile Club of Maryland	No Reply	
Maryland Motor Truck Association	No Reply	
<u>COUNTY</u>		
Department of Public Works	No Reply	
Health Department	No Reply	
Board of Education	No Reply	
Department of Parks and Recreation	No Reply	
Economic Development Commission	No Reply	
Department of Planning and Zoning	No Reply	
Harford County Community Council	No Reply	

309



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-76/427

JUL 14 1976

Dear Mr. Elinsky:

This is in response to a request for the Department of the Interior's comments on the draft environmental/Section 4(f) statement for Maryland Route 24 from U.S. 1 to I-95, Bel Air, Harford County, Maryland.

Section 4(f) Comments:

Page 1.10.1 states that "Harford County has traded land needed by the Highway Administration in return for land owned by the Highway Administration which would complement the development of the park around the interchange." From this, it appears that the exchange of public parkland took place before this environmental/Section 4(f) statement was prepared; an action which would be inconsistent with U.S. DOT Order 5610.1b. The final statement should identify the exchanged lands on a map and discuss the specific relationship of the exchange to the park and to the Section 4(f) determination.

1

The statement discusses the numerous adverse impacts from the proposed project to Heavenly Waters Park. They are as follows:

1. A large interchange will be located in the center of the park, maximizing the direct loss of parkland, Figure 2.0e. This is the most undesirable location for the proposed road vis-a-vis the park. Such a location is wholly incompatible with park and recreation values and activities. As noted in the Section 4(f) statement, page 17, "the construction of an interchange in the center of the park will greatly disrupt the natural setting and destroy much of the prime forested area."
2. The interchange would trisect the parkland making one section (the southeast section) dysfunction as a future recreation area because of its shape and relative inaccessibility. This area represents a severed parcel. Park visitor movement between the three segments would be extremely poor since the roadway, even with the pedestrian walkways, would constitute a large barrier.

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310

Mr. Emil Elinsky, Baltimore, Maryland

Page 3.2.1 states that "The improved access afforded the park area by the relocation alternatives will likely lead to heavier park usage." This statement may not be true in this case since none of the alternatives provide direct access to the park from the proposed roadway. Additionally, there is no indication that user access to the park is a problem.

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- 3. Page 17 of the Section 4(f) statement notes that "Aesthetically the relocation will have an adverse impact on the natural setting of the park. It is virtually impossible to fit the road to the natural terrain of this area. Large cuts and fills will have to be made in order to maintain the accepted grade standards for this type of road through this steeply sloping terrain." Such cuts and fills will constitute a massive intrusion into the natural setting of the park, a primary resource value.
- 4. The noise impact evaluation contained in the statement provides a comparison of predicted noise levels with existing ambient levels for each of the alternative alignments. Based on that information, it appears that major increases in noise levels would occur within Heavenly Waters Park. The final statement should identify the Park as a noise sensitive site and provide specific information on existing and predicted noise levels.
- 5. The proposed project will introduce a substantial new traffic volume into the area to the detriment of park values.

In summary, this Department believes the proposed project would greatly reduce the recreational values of Heavenly Waters Park. It adversely intrudes upon the area in every manner, and is destructive of this prime recreational resource.

Alternatives:

Because of these very substantial adverse impacts, we believe the most thorough consideration should be given to alternatives which avoid the use of parkland. This has not been done in this draft environmental/ Section 4(f) statement. The statement fails to provide any specific and detailed information to support a determination that there is no feasible and prudent alternative to the use of parkland for highway purposes.

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311

Mr. Emil Elinsky, Baltimore, Maryland

Page 22 of the Section 4(f) statement notes that "Placing the interchange just south of the park will require the relocation of many homes along Winters Run and many homes in Silver Spring Heights. Also, this location is adjacent to Winters Run on extreme slopes which would increase the erosion hazards and the costs of construction." There is no information on the exact number of homes that would have to be relocated nor is there data on construction costs for development of a southern alternative. None of the maps show any large number of structures south of the park. Although soil erosion might be a problem, standard engineering practices likely could mitigate or largely eliminate this concern. In any case, erosion along the southern alternative might not constitute more of a problem than along the proposed route, also an area of steep topography.

7

It appears that it may be possible to shift the proposed interchange southwest of the proposed park, thereby eliminating the Section 4(f) taking.

As required by Title 23, Part 771.19, the final statement should provide detailed information on this alternative:

"Accurate and detailed information is needed to support the Federal Highway Administrator's determination that there is no feasible or prudent alternative. Supporting information should demonstrate that there are unique problems, truly unusual factors present, and evidence that the cost or community disruption resulting from alternative routes reaches extraordinary magnitudes."

All Possible Planning to Minimize Harm:

With regard to the second provision of Section 4(f), the statement does not discuss any measures to minimize harm to the impacted parkland.

The proposed project will have extensive adverse impacts on existing and planned recreational use of the project area which warrant a thorough response to this provision of Section 4(f). An adequate response to the second provision of Section 4(f) should include at least the following items:

1. Replacement of park acreage lost directly to the highway.
2. Replacement or compensation for the severed portion of the proposed park that will be dysfunctional as a result of the location of the proposed interchange.

(B)

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312

Mr. Emil Elinsky, Baltimore, Maryland

- 3. Provision for adequate pedestrian access between the park parcels.
- 4. Planting of trees and shrubs along both sides of the right-of-way as a visual and noise barrier.

Environmental Statement Comments:

Historic and Archeologic Features:

The project does not affect any existing or proposed units of the National Park System.

Fish and Wildlife Resources:

Sections 3.5 and 5.0 should address the types and amount (acres) of all fish and wildlife habitats including streams, farmland, woodland, and wetland that will be affected by the project.

In addition to the mammals and migrating song birds listed in Section 3.5, other game species inhabiting much of the project area should be identified as well.

Additional alternative alignments at or near Ring Factory Road in a northwesterly direction toward Business U.S. 1 should be explored. An upgrading of existing Route 24 (alternative 4) to Ring Factory Road would be considerably more environmentally acceptable than the other proposed routes. The use of Route 24 would eliminate disturbance of the area east of Atkinson Reservoir where bog turtles have been reported.

Other:

The final statement should quantify the large amounts of cut and fill material required for the project and alternatives. It should be expanded to discuss the location of any borrow and/or spoil areas needed for project purposes. Sections of the statement dealing with the description of the existing environmental setting can describe the borrow and/or spoil area locations under preproject conditions as they relate to flora, fauna, and aesthetics. These areas should be drained, contoured, and reseeded to make them as reusable as possible.

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Mr. Emil Elinsky, Baltimore, Maryland

Summary Comments:

The Department of the Interior assumes a position of nonconcurrence to FHWA approval of a Section 4(f) determination for the proposed project because of the failure to adequately consider alternatives and because there is no proposed response to the second provision of this Section. Pursuant to U.S. DOT Order 5610.1b-9-c-(1)-(c), we are informing, by copy of this letter, the Assistant Secretary for Environment, Safety and Consumer Affairs, U.S. Department of Transportation, of our non-concurrence and of our objection on environmental grounds to the presently proposed project.

As this Department has a continuing interest in this matter, we would be willing to review and comment on a technical assistance basis, on any subsequent material for this project. The Regional Director of the Northeast Regional Office of the Bureau of Outdoor Recreation, Philadelphia, Pennsylvania, telephone number 8-597/7987 has the responsibility for coordination of the Department's interest for this project. If you should require further information, please contact this office.

Sincerely yours,

(SGA) Stanley D. Doremus

Deputy Assistant Secretary of the Interior

Mr. Emil Elinsky
Division Administrator
Federal Highway Administration
Rotunda Suite 220
711 West 40th Street
Baltimore, Maryland 21211

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

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Response to:

United States Department of Interior

The exchange of land parcels was made in principle in order to facilitate the planning of both the park and the highway. Since the exchange was in principle and not in deed, the action should not be considered inconsistent with U.S. Department of Transportation Order 5610.1b.

Because of the concern expressed by the Department of Interior over the involvement with Heavenly Waters Park, a meeting was held on November 16, 1976 with representatives of the Federal Highway Administration, State Highway Administration and the Department of Interior. The meeting was held to resolve the comments made by the Department of Interior in the preceding letter. Subsequent to this meeting the Department of Interior informed the Federal Highway Administration of the additional information required for the Section 4(f) Statement.

A map has been provided in the final statement to identify the exchanged parcels of land. (See Figure 8 of the 4(f) Statement). Discussions of the specific relationship of the exchange to the park and Section 4(f) determination has also been included. (See page 23 of 4(f) Statement).

Although Md. 24 Relocated does not enhance the quality of the overall recreation development, since the park and highway were designed through a coordinated planning effort, a balance of man-made development with the physical resource has been achieved without serious impacts.

The areas designated for recreational development and use were designed to maximize the physical resources of the site with consideration given to the area to be acquired for the proposed highway right-of-way. Adequate buffer areas have been maintained between the proposed highway and adjacent recreational areas in order to preserve the integrity of the recreational development and mitigate physical or aesthetic encroachment of the highway.

The proposed action will not create any significant isolation or division of a valued area of recreational development. The division that exists because of the U.S. 1 by-pass is responsible for the major limitations affecting the recreational activity range of the park. The relocation of Md. 24 separates a relatively small "natural area" in the southeastern portion of the park from the recreational development to the north, but does not otherwise affect recreational activities.

Pedestrian and equestrian access will be provided to the southeastern section of the park along Toll Gate Road and via a pedestrian underpass beneath Md. 24 Reloc. A pedestrian bridge over U.S. 1 bypass will complete the linkage between the areas of the park. The pedestrian bridge over U.S. 1 will provide safer access between the developed sections of the park than presently exists.

In regards to the Department's comment about park accessibility; Boulton Street which is the major access road to the portion of the park located on the east side of U.S. Route 1, has direct access to Relocated Md. Route 24.

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The aesthetic impact on the proposed Heavenly Waters Park is now discussed on pages 28 thru 30 of the Section 4(f) Statement.

A discussion of noise levels for the park is now provided on page 3.8.13 and on page 27 of the Section 4(f) Statement.

This concern is addressed on page 28 of the Section 4(f) Statement.

The information requested by the Department is now provided in the Section 4(f) Statement, see pages 31 to 32a.

Measures to minimize impacts to park land are now discussed on page of the Section 4(f) Statement.

In response to Item #1, "Replacement of park acreage lost directly to the highway," the State Highway Administration has previously acquired a large portion of the land which will be used for the interchange. It has been agreed upon in principle that some right-of-way that the SHA now owns will be turned over to the county in exchange for land needed for highway right-of-way. The additional land needed for highway construction will be compensated for monetarily. Such monies can be used in the future by the county to buy additional land or construct additional facilities. For additional description see page 23 of the Section 4(f) Statement.

In reference to Item #2, Since the park does not exist at this time and is being planned around the highway there will be no portions that are dysfunctional.

In regard to Item #3, Adequate pedestrian access between the park parcels will be provided by a pedestrian bridge and tunnel. If the highway is not constructed there will be no direct access between the park parcels.

In reference to Item #4, Landscapping as an attenuation measure is discussed on page 30 of the Section 4(f) Statement.

See page 8.0.6.

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SEARCHED	INDEXED
SERIALIZED	FILED
NOV 22 1976	
FBI - BALTIMORE	

4220

Mr. A. George Ostensen
 Federal Highway Administration
 Rotunda Suite 220
 711 West 40th Street
 Baltimore, Maryland 21211

NOV 22 1976

Dear Mr. Ostensen:

We appreciated the opportunity to meet and discuss with you the Department of the Interior's comments on the draft environmental/ Section 4(f) statement for Maryland Route 24 from U.S. 1 to I-95, Bel Air, Harford County, Maryland.

This will confirm our suggestions that the final statement include the following:

1. A more accurate history of the proposed project, and the Park.
2. Information on the proposed interchange. We suggest this be described as land replacement for parkland taken — the best measure to minimize harm to the park.
3. Information to demonstrate that the southern alternative is not feasible and prudent because of the number of homes and commercial structures that would have to be relocated.
4. Substantiation that the noise levels in the vicinity of Heavenly Waters Park will not exceed FHWA's standards.
5. Maps clearly delineating the current rights-of-way, land needed for the project, and the proposed replacement acreage. Existing and planned park facilities should be identified.

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The inclusion of this material would help resolve our concerns about the project and its impacts on the Park.

If you should require further information or assistance regarding this matter, please contact this office.

Sincerely yours,

MICHAEL H. GORDON, Chief
Division of Water and
Environmental Planning

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

Response to:

United States Department of Interior After The November 16, 1976 Meeting
With The Federal Highway Administration

A chronological listing of events involving the park and highway is shown on page 21 of the 4(f) Statement.

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This information is now provided in the 4(f) Statement on pages 21-24.

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Additional information has been provided in response to this request on pages 31 to 32a of the Section 4(f) Statement.

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See page 3.8.13 and page 27 of Section 4(f) Statement.

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See Section 4(f) Statement. A map delineating the current rights-of-way, and the parcel exchange is shown in Figure 8. Existing park facilities are shown on the Existing Culture Map (Figure 5) while planned park facilities are shown on the Master Plan (Figure 6).

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HER

UNITED STATES GOVERNMENT

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY

Memorandum

01 JUL 1976

DATE:
 SUBJECT: **Draft Environmental Impact Statement/Section 4(f) Determination, Relocated Maryland Route 24**
Harford County, Maryland
FHWA-10-EIS-76-02-D
 In reply refer to: **TES-72**

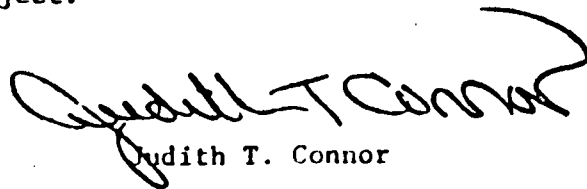
FROM : Assistant Secretary for Environment, Safety, and Consumer Affairs
 TO : Chief, Environmental Programs Division, FHWA/HEV-10

This office has reviewed the draft environmental impact statement/section 4(f) determination for the relocation of Maryland Route 24 in Harford County, Maryland. The environmental effects of the project are generally well covered. However, the final statement should give more attention to the potential adverse effects upon the proposed Heavenly Waters Park.

Consideration should be given in the final statement to an alternative south of the park. Such an alternative could apparently be located south of Tollgate Road without deleterious effects upon the park. Various interchange designs with tighter ramps or an at-grade intersection with proper signalization could be considered for such an alternative and could still meet the goal of safe and efficient traffic flow. It is not made clear in the draft statement why such an alternative is not feasible and prudent. The cited factors of community disruptions and design problems do not appear to be more onerous than the disruptive effects upon the park of the presented alternative.

The final statement should consider such an alternative alignment and discuss in more detail measures to ameliorate the disruptive effects of the presented alternative upon the aesthetic and recreational values of the park.

We appreciate the opportunity to review this draft environmental impact statement for this project.


 Judith T. Connor

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Response to:

Comments Made by the Assistant Secretary for Environment, Safety, and Consumer Affairs of the United States Department of Transportation

Undoubtedly, it is physically possible to construct a highway south of Tollgate Road which would eliminate any adverse impacts on Heavenly Waters Park. However, such an alternate is not considered prudent or feasible due to construction and right of way costs, number of business and resident relocations, and higher road user costs created by a much longer alternate. These disbenefits of such an alternate are discussed in detail on pages 31 to 32a of the Section 4(f) Statement.

Various interchange designs which could reduce the impact on the park will be studied during final design for the recommended alternate.

A more complete discussion of measures to minimize harm are now discussed on page 29 of the Section 4(f) Statement.

III

PUBLIC HEARING COMMENTS
AND EVALUATIONS

322

The Draft Environmental Impact/4(f) Statement was circulated for comments to public and private organizations and individuals in April 1976.

Subsequently, the Maryland Department of Transportation's Highway Administration held a location public hearing on June 29, 1976 at 7:30 P.M., at the Bel Air Senior High School, Bel Air, Maryland for the purpose of receiving comments concerning the five alternates which were discussed in the Draft Environmental Impact/4(f) Statement.

During the public hearing, comments were received from sixteen individuals some of which represented public or private organizations. An additional ten individuals responded by mail on the "Question and/or Recommendation Forms" as provided by the State Highway Administration during the public hearing.

The following is a summary of the substantive comments received:

1. A majority of those individuals making comments felt that there was a need for the project. However, some felt that there exist feasible solutions other than the five proposed alternatives considered in the Draft Environmental Impact/4(f) Statement. It was recommended that Tollgate Road and a by-pass further west of the proposed alternates be considered for development.
2. Of the nine individuals who made recommendations for a specific alternative, six individuals favored one of the non-relocation alternatives, citing in general, the savings to the tax payer and maintenance of the now rural setting as being important positive effects of such alternatives.
3. The priest of St. Mary's Episcopal Church spoke in behalf of the church vestry, a member of the church vestry, and himself. The overall opinion of the vestry is that the highway will have no adverse impact on the church and its members as long as the roadway pavement comes no closer to the structure than it does at present. However, the father and a member of the vestry do feel the church would be adversely affected if the road would be enlarged in any way as proposed under alternates one or four. The basis of their remarks being increased noise, air pollution, hazardous conditions for those travelers passing through the St. Mary's - Md. 24 intersection. Thus, they would favor alternates two or three which relocate the road away from St. Mary's Church.
4. Several comments were received suggesting that portions of the proposed alternates be interchanged to create new alternates.

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- 5. A representative of the League of Women Voters emphasized the importance of Heavenly Waters Park and criticized the Highway Administration for not providing a noise assessment of the park area in the Draft Environmental Impact/4(f) Statement. The representative suggested completing existing projects in town to relieve some downtown traffic but suggested further consideration of "Mass Transit" in order to solve Md. 24 problem.
- 6. The Harford County Department of Planning and Zoning suggested a new location for proposed Md. 24 Relocated that would correspond with the new recommended 1976 Comprehensive Master Plan for the county.
- 7. Several stressed the need for bikeway development which would improve the safety of the biker and could act to stimulate greater bicycle use thus, possibly decreasing the use of motorized vehicles on Md. 24.
- 8. Two individuals testified that the relocation alternates could adversely affect their livelihood since they own small businesses along Md. 24 and such relocations would reduce their potential clientel.
- 9. A local citizen made several comments regarding the analysis of highway noise and air quality which was presented in the DEIS. Concern was expressed over the predicted noise levels, the validity of the noise level descriptor utilized to assess impacts, the effect of night-time noise, and noise control measures. It was further stated that the air quality analysis should have included other pollutants in addition to carbon monoxide.

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Response to:

Public Hearing Comments

The State Highway Administration has complied with this request by performing a preliminary investigation of the suggested Tollgate Road Alternate. The findings of this investigation are as follows:

The proposal of the State Highway Administration is to provide a controlled access, ultimate multi-lane divided highway, which, will be necessary to safely handle the anticipated traffic.

This highway is planned to be contained within a minimum of 200 feet of right-of-way. However, until such time as a dual highway is needed, it is planned to purchase the ultimate right-of-way, but to construct only one two-lane facility which will ultimately become one roadway of the planned dual highway.

The latest design criteria of the State Highway Administration and the Federal Highway Administration is to be used in the design and construction of this proposed highway. These standards dictate that the new highway be a 24 foot two-lane facility with 10 foot shoulders and 20 feet of safety grading provided on either side. The maximum vertical grade permitted in this type of terrain is 6%, i.e., rises or falls 6 feet in 100 feet, while the maximum allowable horizontal curve is 4 degrees, i.e., a radius of approximately 1430 feet.

The existing Tollgate Road is a county road and is substandard according to present design criteria of the State Highway Administration. It consists of an average width of approximately 18 feet, has several areas in which the grades are from 8 to 10%, and several horizontal curves which are extremely sharp, with radii varying between 225 feet and 350 feet.

To meet the State Highway Administration design criteria, Tollgate Road between Plumtree Road and the U.S. Route 1 By-Pass, would have to be reconstructed. This would entail widening the existing road, revising the horizontal alignments where necessary, and the elimination of the steep grades. This would also involve additional right-of-way taking to contain the supporting slopes of the new roadway, thus residents along this roadway would lose some of their front property. The use of retaining walls in cuts and fills to lessen the right-of-way damage is not recommended due to the potential danger they present, the expense involved and they are not pleasing to the eye. Had this alternate been selected, the ultimate improvement to a divided highway with control of R/W as proposed by the State Highway Administration to safely handle projected traffic, could not be achieved. There would also be many problems created at the intersection of Tollgate Road, Business Route 1, and the existing properties which presently front on Tollgate Road.

The other alternate along this route would be to construct a dual highway parallel to and east to Tollgate Road. Access to the dual facility would be controlled, i.e., at intersecting roads only with Tollgate Road becoming a service road.

With either alternate, Tollgate Road between U.S. Business Route 1 and the Bel Air By-Pass would have to be relocated in its entirety to accommodate the proposed interchange with the Bel Air By-Pass. The existing access to the Harford Mall Shopping Center from Tollgate Road would have to be redesigned, with some of the access points being eliminated.

Had an alignment in the Tollgate Road area been selected, some residents would have been required to give up their homes and relocate. This is a very expensive process and creates many problems for those involved. Therefore, the State Highway Administration makes every endeavor to keep this problem to a minimum. This proposal would also meet with opposition from H.U.D., Maryland Department of Natural Resources and Harford County as it would effect a portion of the existing Heavenly Waters Park.

Since 1958, efforts by the State Highway Administration for the proposed relocation of Maryland Route 24 have been coordinated with the officials of Bel Air and Harford County. Some property alongside the Harford Mall has been held in reservation while other property has been purchased in the area of the proposed interchange with the Bel Air By-Pass in the area of the proposed Heavenly Waters Park, and adjacent to the Bel Air Plaza.

As a result of this planning and cooperation between town, county, and state officials, there would be no extensive right-of-way damage or relocation problems created by the relocation of Maryland Route 24 and its connection to U.S. Business Route 1 as proposed by the State Highway Administration.

Based on the findings of this investigation as stated, and considering the adverse effects upon the residents along Tollgate Road, the long range planning and coordination between local, county, and state officials, the State Highway Administration recommends that no further consideration be given to the relocation of Maryland Route 24 along the Tollgate Road alignment.

The interchanging of alternates to create new alignments has been considered throughout the design studies. Various combinations were considered in an effort to incorporate the best features of each alignment. Studies have been conducted to investigate solutions to the programming and stage construction of this facility; combining segments of various alternates was an integral part of this analysis.

3/16

A discussion of noise impacts on Heavenly Waters Park is now provided on page 3.8.14 and page 27 of the Section 4(f) Statement.

Roadway improvements within Bel Air will be made under the TOPICS Program, but this will not negate the need for the relocation of Maryland Route 24.

Trends in transportation are still single car oriented. Thus, even though mass transit may provide some relief, improvements to Md. Route 24 will still be necessary.

In response to this comment see page 2.0.6 for the response made by the State Highway Administration to the letter sent from the Department of Planning and Zoning requesting consideration of their Master Plan Alternate.

Because the recommended alternate (Alternate 3) will aid in decreasing traffic along existing Md. 24, a bicycle path along the existing roadway becomes more feasible and will be studied during later design stages.

It was indicated that the proposed route will be half the distance of the present by-pass to his neighborhood. The distance will be 1,800 to 2,000 feet from the nearest point on Catherine Street. Based on this, the maximum design year noise level would be approximately 58dBA(L₁₀). Although no actual measurements of ambient noise were made along Catherine Street, ambient noise levels are around 50dBA(L₁₀), based upon similar areas in the corridor. The maximum increase in ambient levels would be 8dBA(L₁₀), a minor increase.

The remarks about L₁₀ level are well taken. This is the noise level exceeded 10% of the design hour which will occur in the design year. It is a representation of peak volume impact. The L₁₀ levels projected for the design year are not continuous levels but will occur for approximately six minutes out of an hour.

The procedures utilized to analyze the impact of noise were established by the Federal Highway Administration and do not address the investigation of frequency related noise impacts. As the noise levels projected are overall levels, that is, account for levels at all frequencies, the particular strength of any one particular frequency is included as a function of the overall L₁₀ level.

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Again the FHWA criteria have seen fit to address only the peak hour L₁₀ noise level. This usually does occur during daytime hours. The problem is magnified because at nighttime other background noise is usually absent and this tends to make highway noise levels more annoying.

The discussion of noise control measures and the relation to local streets is based on the fact that for the Do-Nothing alternate the presence of entrance drives along Maryland Route 24 would defeat the purpose of any barrier due to the voids these entrances would create in the barrier. This would significantly compromise barrier effectiveness.

The "Air Quality Report" which was prepared for this project provided an analysis of pollutant loads for each alternate for carbon monoxide, nitrogen dioxide, and hydrocarbons. The results of this analysis indicated that the pollutant burden resulting from the relocation alternatives, improvements to the existing facility, or the adaption of the Do-Nothing alternative will not result in any significant changes in the total pollutant burden within the project area. The "Air Quality Report" is a separate reference document; this report is available for public inspection.

6