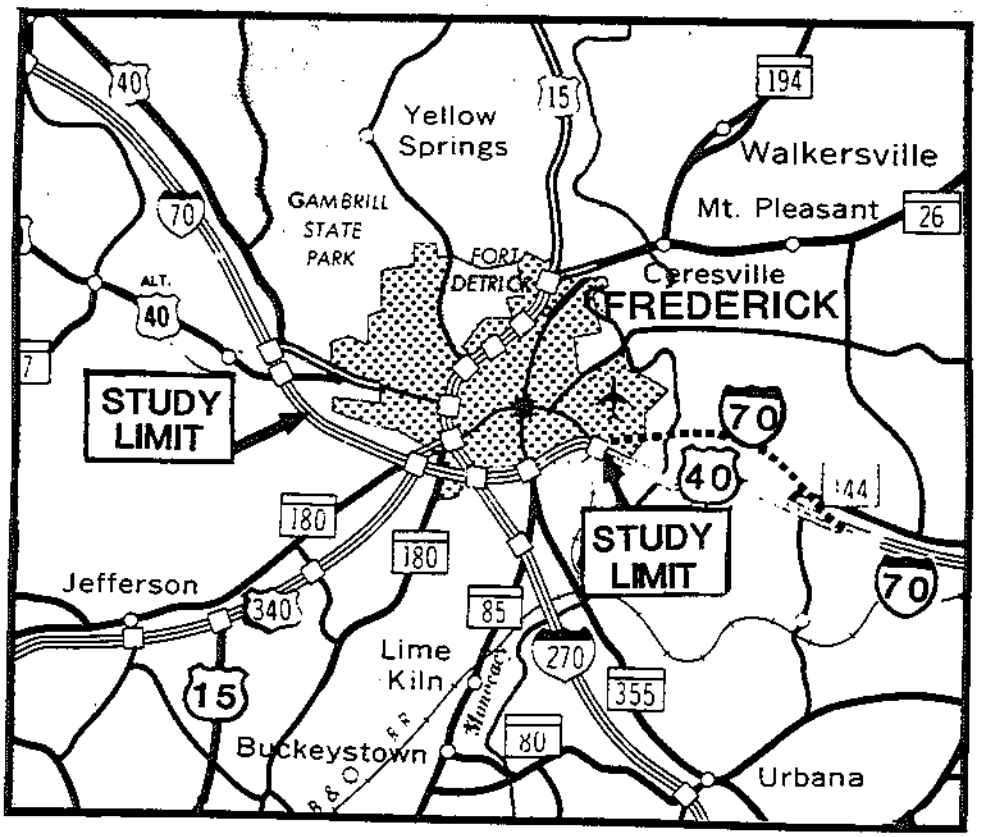
ENVIRONMENTAL ASSESSMENT

SECTION 4(f) EVALUATION

Contract No. F 866-101-772

I-70
Project Limits:
Mt. Phillip Road to Md. 144 (East Patrick Street)



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

and
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

REPORT NUMBER: FHWA-MD-EA-84-04-D

FEDERAL HIGHWAY ADMINISTRATION

REGION III

Interstate Route 70
From Mount Phillip Road to
Maryland Route 144
Frederick County, Maryland

ADMINISTRATIVE ACTION

ENVIRONMENTAL ASSESSMENT
4(f) Evaluation

U.S. Department of Transportation
Federal Highway Administration

and

State of Maryland
Department of Transportation
State Highway Administration

Submitted pursuant to 42 U.S.C. 4332 (s) (C) 23 U.S.C. 128 (a)
49 U.S.C. 303 (c), 16 U.S.C. 470 (f)
CEQ Regulations (40 CFR 1500 et seq.)

HAL KASSOFF
ADMINISTRATOR

4/23/85
DATE

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

4/29/85
DATE

by:
Federal Highway Administration
Division Administrator

SUMMARY

SUMMARY

1. ADMINISTRATIVE ACTION:

(x) Environmental Assessment
( ) Environmental Impact Statement
(x) Section 4 (f) Evaluation

2. ADDITIONAL INFORMATION:

Additional information concerning this action may be obtained by contacting:

Mr. Louis H. Ege, Jr.,
Acting Chief
Bureau of Project Planning
State Highway Administration
707 N. Calvert Street
Baltimore, Maryland 21202
Telephone: (301) 659-1130
Hours: 8:15 a.m. - 4:15 p.m.

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

3. DESCRIPTION OF PROPOSED ACTION

The proposed action would improve the operational and safety characteristics of Interstate Route 70 (I-70) from just west of Mt. Phillip Road to Maryland Route 144 in Frederick County, Maryland (approximately 5.3 miles). (See figure 1) The project area is the last segment of I-70 which does not conform to interstate design standards.

4. ALTERNATES CONSIDERED

Seven build alternates and the no-build alternate are being studied. The build alternates include two widening alternates, two alternates (numeral designations) for the reconstruction of the U.S. Route 15/340 and I-270/U.S. Route 40 interchanges, and three alternates (letter designations) for the reconstruction of the Maryland Routes 355/85 (Md. 355/85) and Reichs Ford Road/South

Street interchanges. A build solution would consist of a widening alternate for mainline I-70, a build alternate for the U.S. 15/340 and I-270/U.S. 40 interchanges, and a build alternate for the Maryland 355/Reichs Ford Road interchanges.

Inside and Outside Widening Alternates

The mainline alternates include both inside and outside widening. The inside widening alternate proposes the addition of a third travel lane in each direction within the median wherever possible and results in a 30' wide median with a continuous concrete median barrier from New Design Road to Maryland 144.

The outside widening alternate retains the existing median width and locates the additional lanes outside the present travel lanes. (See Figures 7-9)

Alternates 2 and 4 (U.S. 15/340 and I-270/U.S. 40 Interchanges)

Alternate 2 proposes the addition of the following movements at the U.S. 15/340 interchange:

-Eastbound I-70 to southbound U.S. 15/340 (outer connection)
-Eastbound I-70 to northbound U.S. 15/340 (loop)
-Southbound U.S. 15/340 to westbound I-70 (outer connection)
-Northbound U.S. 15/340 to westbound I-70 (loop)

The existing northbound U.S. 15/340 to eastbound I-70 ramp would be reconstructed. Construction of the northbound U.S. 15/340 to westbound I-70 loop necessitates the reconstruction of the northbound U.S. 15/340 to Maryland 180 loop ramp of the adjacent Maryland 180 interchange. Also, a new outer connecting ramp is proposed in the northeast quadrant of the Maryland Route 180 (Md. 180) interchange to replace the Maryland 180 to northbound U.S. 15/340 loop ramp. (See Figures 8a and 8b)

Alternate 2 also proposes the following movements at the U.S. 40/I-270 interchange:

-Northbound I-270 to eastbound I-70 (outer connection)
-Westbound I-70 to southbound I-270 (loop)

Alternate 4 differs from Alternate 2 in that the northbound and southbound U.S. 15/340 to westbound I-70 movements are located in the northwest quadrant of the U.S. 40/I-270 interchange. Also, there are no modifications to the Maryland Route 180 interchange. Alternate 4 also proposes the same movements described for Alternate 2 at the U.S. 40/I-270 interchange.

Alternates A, B-1 and B-2 (Maryland Routes 355/85 and Reichs Ford Road/South Street Interchange)

At the Maryland Routes 355/85 and the Reichs Ford Road/South Street interchanges, two reconstruction alternates are being considered. (See Figures 9a, 9b and 9c)

Alternate A proposes the reconstruction of the Maryland Route 355/85 and the Reichs Ford Road/South Street interchanges to current design standards in their existing configuration. At the Maryland 355/85 interchange, the northwest quadrant ramps would be relocated to form a signalized intersection opposite Walser Drive Maryland Route 914 (Adventist Road) would be terminated east of the Seventh Day Adventist Church. Also, the southwest quadrant ramps would be expanded with connections directly into both Md. 85 and Md. 355. A one-way turning roadway would provide continuity for northbound Md. 355 from the new connecting road toward the bridge over I-70. At the Reichs Ford Road/South Street inter-

change, Shaw's Road would be relocated approximately 300 feet further north at South Street. At the Reichs Ford Road/South Street interchange, ramps in the southeast quadrant would be expanded to intersect Reichs Ford Road south of the Quarry entrance.

The proposed configuration for the southern portions of Alternate B, is the same as proposed for Alternate A. The northern portions of the existing interchanges are removed under Alternate B and replaced by two lane exit and entrance connections into Walser Drive at East Street (proposed City project). Maryland Route 914 would be realigned to intersect Maryland 355 opposite Walser Drive. Signals are proposed at the Maryland 355/914/Walser Drive intersection and Walser Drive/East Street interchange ramp intersection. An outer ramp from eastbound Maryland 144 to westbound I-70 located east of the East Frederick Elementary School would serve industrial traffic from the vicinity of the Frederick Industrial Park and the Frederick Municipal Airport.

Two optional alignments, designated as B-1 and B-2, are being considered for the extension of Walser Drive. B-1 proposes the extension of Walser Drive easterly to South Street to a connection to relocated Shaws Road. B-2 extends Walser Drive northeasterly to South Street at Franklin Street.

No-Build Alternate

The No-Build Alternate consists of no major improvements to existing I-70 and associated interchanges. Routine maintenance would continue to be performed as warranted.

The Preferred alternate consists of inside widening from Mt.

Phillip Road to the U.S. 40/I-270 interchange, outside widening from I-270 to Maryland 144 and Alternate 4. For additional information on the alternates see Section III-C.

5. ENVIRONMENTAL SUMMARY

The No-Build Alternate would result in increased congestion and associated collision rates. Operational deficiencies caused by missing ramp movements would remain as well as the resulting circuity of travel and confusion for motorists unfamiliar with the area.

Improvements to this section of I-70 are in accordance with the Frederick City and County Comprehensive Plan.

One business would be displaced under the Inside Widening Alternate, while the Outside Widening Alternate would displace one business and one family. No relocations are required with either Alternate 2 or 4. Alternates A and B-1 each displace two businesses. Four families and two businesses would be displaced under Alternate B-2.

Alternates A requires the acquisition of right-of-way from Loats Park.

Right-of-way will not be required from any historic site listed on or eligible for the National Register of Historic Places. No significant archeological sites would be affected.

Both the proposed inside and outside widening of I-70 crosses tributaries of Ballenger Creek as do Alternates 2 and 4 proposed for the U.S. 15/340 interchange. Erosion and sediment control and stormwater management methods will minimize the effects of

construction on the water quality of the streams.

The area of I-70 between Maryland Route 355 and East Patrick Street contains a number of sinkholes. Three of these sinkholes function as stormwater drainage outfalls. Since the reliability of sinkholes as outfalls cannot be accurately predicted severe flooding could occur if they cease to function. Alternative drainage outfalls will be considered as part of the stormwater management measures proposed for this project to ensure that no flooding occurs as a result of this project.

Construction of this project would require review and approval by the Maryland Department of Natural Resources for a Sediment Control Plan and Stormwater Management. Also, the Maryland Department of Health and Mental Hygiene must approve a Water Quality Certificate.

No floodplains or wetlands would be impacted.

The Department of Natural Resources and the U.S. Fish and Wildlife Service have indicated that there are no known populations of threatened or endangered species within the study area.

Noise analyses conducted for the proposed project indicates that ambient or existing noise levels at three of fourteen sensitive receptors exceed the Federal Highway Administration (FHWA) 70 dBA noise abatement criteria. Seven receptors would experience design year (2010) L10 noise levels above the abatement criteria with the Build Alternates. Abatement considerations are warranted at one receptor, the East Frederick Elementary School. Six sensitive receptors will experience design year (2010) L10 noise levels above the FHWA criteria with

the No-Build Alternate.

An air quality analysis completed for this project shows that no violations of State and National Ambient Air Quality Standards will occur for either the No-Build or Build Alternates.

Table S-1 compares the impacts associated with the alternates under consideration.

TABLE S-1

COMPARISON OF ALTERNATES

Analysis Item	No Build	Inside Widening	Outside Widening	Alt. 2	Alt. 4	Alt. A	Alt. B 1	Alt. B 2
Families Displaced	0	0	0	0	0	0	0	4
Farms Displaced	0	0	1	0	0	0	0	0
Minority residences displaced	0	0	0	0	0	0	0	0
Businesses displaced	0	1	1	0	0	2	2	2
Consistent with land use plans	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Publicly owned parks or recreation areas affected	No	No	Yes	No	No	Yes	No	No
Historic sites required	No	No	No	No	No	No	No	No
Archeological sites affected	No	No	No	No	No	No	No	No
Sites exceeding air quality standards*	0	N/A	0	N/A	N/A	N/A	N/A	N/A
Sites exceeding noise abatement criteria* (Design Year)	6	N/A	7	N/A	N/A	N/A	N/A	N/A
Stream relocations	0	0	Yes	N/A	N/A	N/A	N/A	N/A
Stream crossings	0	3	3	1	1	0	0	0
Wetlands affected	No	No	No	No	No	No	No	No
Floodplains affected	No	No	No	No	No	No	No	No

*Base on outside widening which would result in rst case impacts

TABLE S-1 (Cont'd)

Analysis Item	No Build	Inside Widening	Outside Widening	Alt. 2	Alt. 4	Alt. A	Alt. B 1	Alt. B 2
Threatened or endangered species affected	None	None	None	None	None	None	None	None
Prime farmland required (acres)	0	0	0	0	0	0	0	0
Estimated cost (Thousands of 1984 dollars)								
Right-of-way	0	461	1,125	821	708	1,241	1,596	1,829
Construction	0	12,858	18,751	10,524	7,000	5,591	6,390	7,198

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

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

ENVIRONMENTAL ASSESSMENT FORM

	YES	NO	COMMENTS
A. Land Use Considerations			
1. Will the action be within the 100 year flood plain?	___	X	___
2. Will the action require a permit for construction or alteration within the 50 year flood plain?	___	X	___
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?	___	X	___
4. Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?	___	X	___
5. Will the action occur on slopes exceeding 15%?	___	X	___
6. Will the action require a grading plan or a sediment control permit?	X	___	Section IV.D
7. Will the action require a mining permit for deep or surface mining?	___	X	___
8. Will the action require a permit for drilling a gas or oil well?	___	X	___
9. Will the action require a permit for airport construction?	___	X	___
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?	___	X	___
11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland?	X	___	___

	YES	NO	COMMENTS
12. Will the action affect the use of any natural or man-made features that are unique to the county, state, or nation?	___	X	_____
13. Will the action affect the use of an archeological or historical site or structure?	___	X	_____
B. Water Use Considerations			
14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water?	___	X	_____
15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction?	___	X	_____
16. Will the action change the overland flow of storm water or reduce the absorption capacity of the ground?	X	___	Section IV. D. 3
17. Will the action require a permit for the drilling of a water well?	___	X	_____
18. Will the action require a permit for water appropriation?	___	X	_____
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?	___	X	_____
20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives?	___	X	_____

	YES	NO	COMMENTS
21. Will the action result in any discharge into surface or sub-surface water?	X		X
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?		X	
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X		Section IV. F
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?	X		Section IV. F
25. Will the action generate additional noise which differs in character or level from present conditions?	X		Section IV. G
26. Will the action preclude future use of related air space?		X	
27. Will the action generate any radiological, electrical, magnetic, or light influences?		X	
D. Plants and Animals			
28. Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?		X	
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?		X	
30. Will the action require a permit for the use of pesticides, herbicides or other biological, chemical or radiological control agents?		X	

	YES	NO	COMMENTS
E. Socio-Economic			
31. Will the action result in a pre-emption or division of properties or impair their economic use?	___	X	_____
32. Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	___	X	_____
33. Will the action alter land values?	___	X	_____
34. Will the action affect traffic flow and volume?	X	___	_____
35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource?	___	X	_____
36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?	___	X	_____
37. Is the action in accord with federal, state, regional and local comprehensive or functional plans--including zoning?	X	___	_____
38. Will the action affect the employment opportunities for persons in the area?	___	X	_____
39. Will the action affect the ability of the area to attract new sources of tax revenue?	X	___	_____
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?	___	X	_____

	YES	NO	COMMENTS
41. Will the action affect the ability of the area to attract tourism?	___	X	_____
F. Other Considerations			
42. Could the action endanger the public health, safety or welfare?	___	X	_____
43. Could the action be eliminated without deleterious affects to the public health, safety, welfare or the natural environment?	___	X	_____
44. Will the action be of statewide significance?	___	X	_____
45. Are there any other plans or actions (federal, state, county or private) that, in conjunction with the subject action could result in a cumulative or synergistic impact on the public health, safety, welfare, or environment?	___	X	_____
46. Will the action require additional power generation or transmission capacity?	___	X	_____
47. This agency will develop a complete environmental effects report on the proposed action.	___	___	_____

6. A sediment control permit will be required by the Water Resources Division of the Department of Natural Resources. Erosion control measures will be taken to minimize sedimentation during the project's construction phase.

16. The action will reduce the absorption capacity of the ground due to elimination of surface area. More water will run off due to the impermeable surface of the road. This impact is not significant.

21. The project section of Interstate 70 crosses tributaries of Ballenger Creek; sediment could be carried by small drainage systems into larger ones such as the Monocacy River.

23-24. Vehicle volumes on Interstate Route 70 will increase with or without the proposed improvements, which may change the volume and character of pollutants associated with the project section of I-70. A detailed air quality analysis has been completed for the project.

25. As noted in comment 23-24, anticipated traffic volume increases on the project section will increase noise levels in the corridor. These levels may exceed federal design noise level criteria. Noise sensitive receptors in the area are few in number as the corridor is largely agricultural. A detailed noise analysis of the No-Build and Build Alternates has been completed.

47. An Environmental Assessment will be completed.

TABLE OF CONTENTS

FIGURES

TABLES

I. DESCRIPTION OF PROPOSED ACTION

I. Description of Proposed Action

A. PROJECT LOCATION

The study area for this project is located along I-70 south of the City of Frederick in central Frederick County, Maryland. (See figure 1) Frederick City is surrounded by several arterial highways connecting Baltimore, Washington D.C., Virginia, central Pennsylvania and the Mid West.

B. PROJECT DESCRIPTION

The study segment of I-70 is a four (4) lane expressway divided by a variable width (28' to 38') rural median. The project area extends from just west of Mt. Phillip Road easterly to Md. Route 144 (East Patrick Street) near the eastern City boundary, a distance of 5.3 miles. See figure 2.

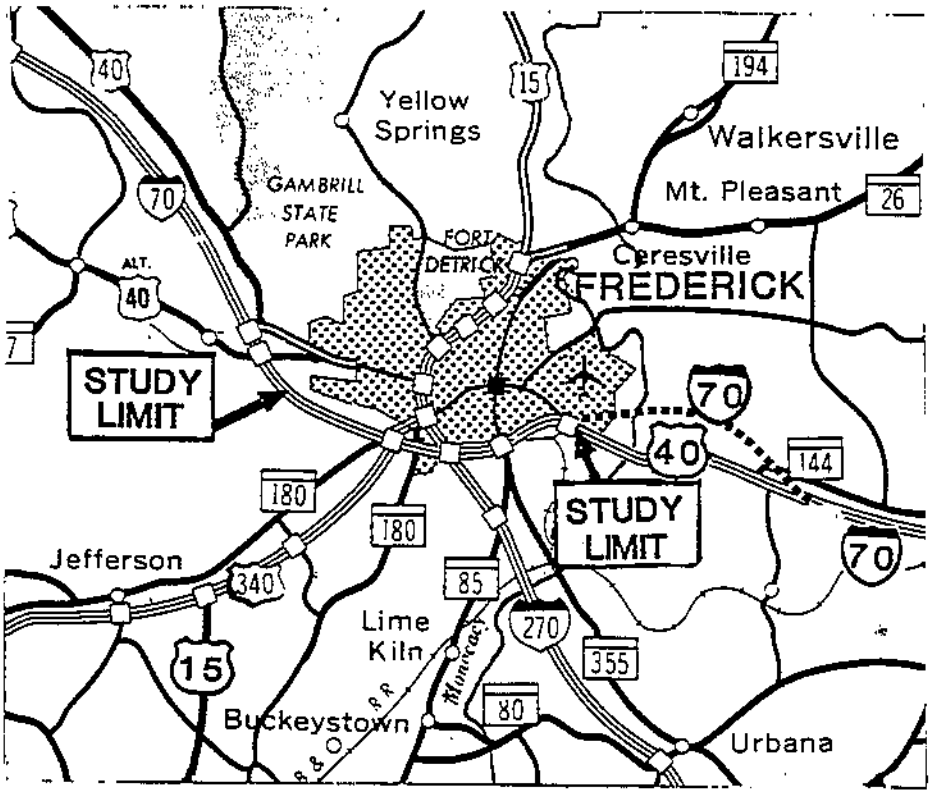
The purpose of this project is to study alternates which would upgrade I-70 to current interstate design standards and thereby increase the mobility of interstate travellers on both the primary and interstate highways.

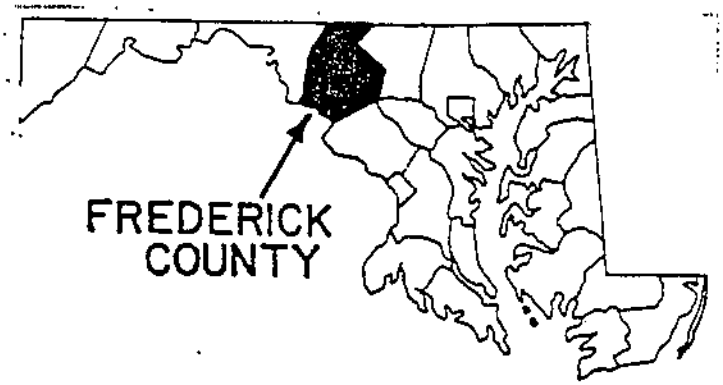
C. DESCRIPTION OF EXISTING ENVIRONMENT

1. Social Environment

Frederick County

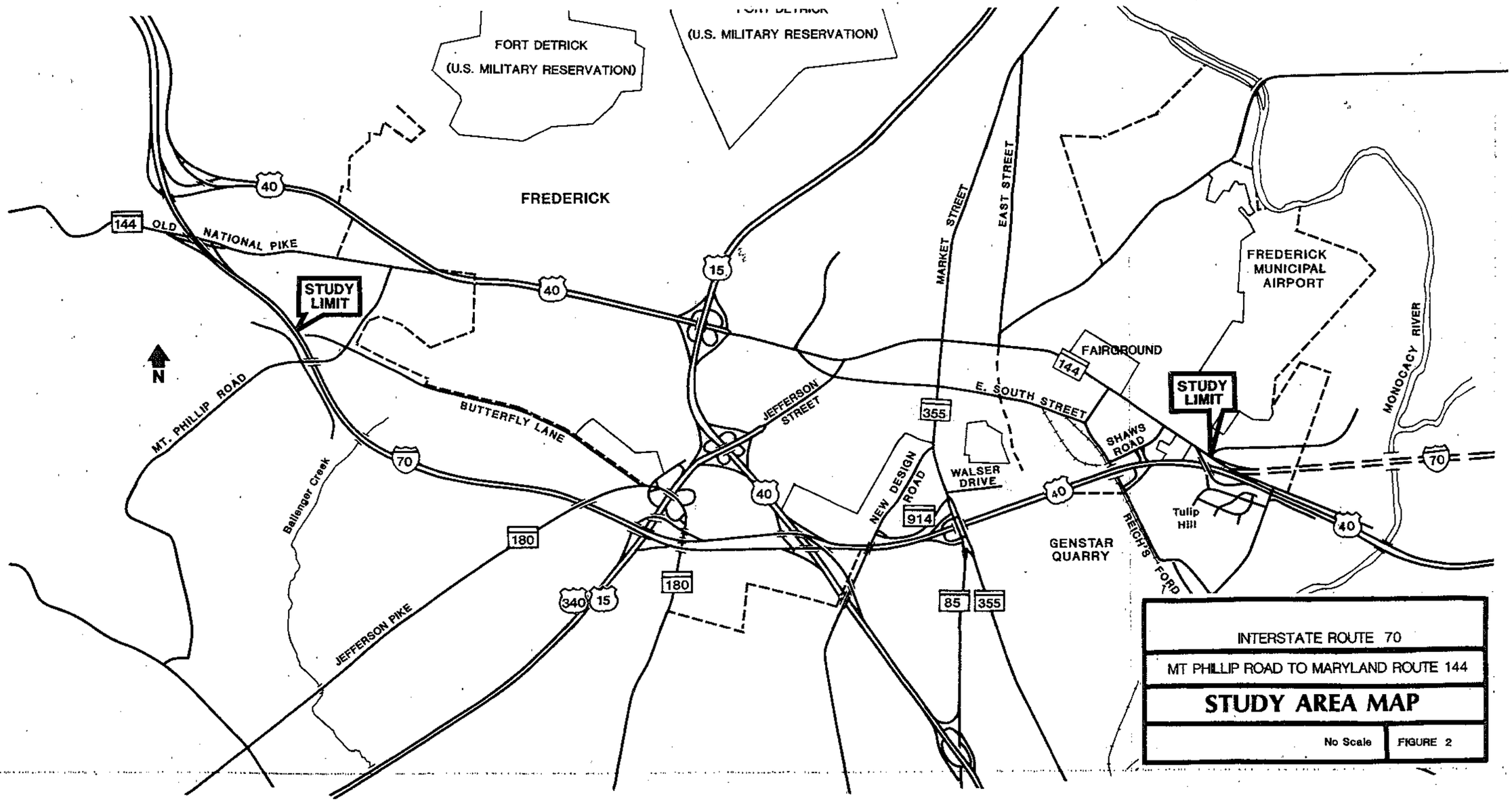
Frederick County's population in 1980 was 114,263 persons. During the 1970's the county was one of the fastest growing areas in the State. Its population increased 35.2% from 1970 to 1980. (See Table 1) This growth reflects the in-migration of people who want to live in Frederick County and commute to work in Baltimore or Washington, as well as those who are employed by the expanding federal government and related research-oriented businesses located along the I-70 and I-270 corridors.





LOCATION MAP

FIGURE 1



INTERSTATE ROUTE 70

MT PHILLIP ROAD TO MARYLAND ROUTE 144

STUDY AREA MAP

No Scale | FIGURE 2

The Maryland Department of State Planning predicts that the county's population will increase by another 37% by the year 2000.

Frederick Region

The project study area is within the Frederick Planning Region as defined by the Frederick County Planning Commission. The Region contains about 40% of the County's total population and has the highest density of any region in the County. Frederick City lies within the Frederick Planning Region.

Election Districts 2 and 23

Approximately three-quarters of the study area lies within Election District 2 which includes Frederick City, and the rest lies within Election District 23 (Ballenger). The two districts are very different in character. District 2 is far more urban and has a much larger and more diverse population than District 23.

TABLE 1

1970 - 1980 POPULATION IN STUDY AREA

	1980	1970	% Change 70-80
Frederick County	114,263	84,927	35.2
Frederick Region	44,689	36,255	23.3
Election District 2 (Frederick City)	29,847	25,908	15.2
Election District 23 (Ballenger)	1,779	1,110	60.3

2. Economic Environment

Because the county has an abundance of fertile soil and topography suitable for farming, the major industry has been,

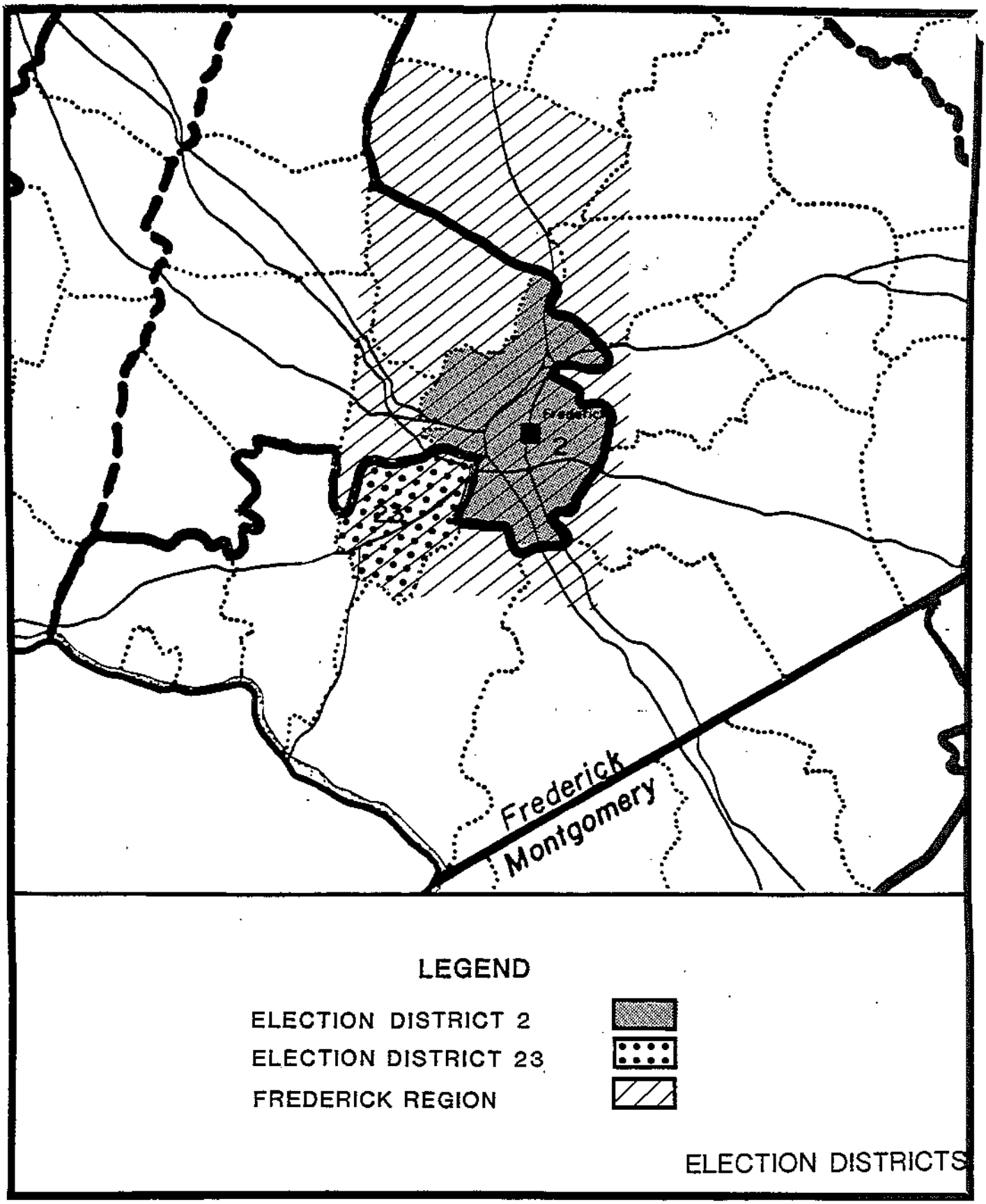

2
Frederick
Montgomery
LEGEND
ELECTION DISTRICT 2
ELECTION DISTRICT 23
FREDERICK REGION
ELECTION DISTRICTS

FIGURE 3

until recently, agriculture. Frederick County is still the major dairy-producing county in the state.

Since World War II, however, the county's economy has become increasingly dominated by the expansion of federal government related and research oriented businesses, as well as growing service and trade industries.

By 1980 less than 2% of the employed labor force in Election District 2 were employed in agriculture. Even in Election District 23, which is far more rural in character, only about 3% were employed in agriculture. There is also a trend away from employment in traditional manufacturing with primary metals, and toward new, high technology electronic and instrument manufacturing.

TABLE 2

1980 LABOR FORCE BY INDUSTRY

	Frederick County	Election District 2 (Frederick)	Election District 23 (Ballenger)
Wholesale or Retail Trade	19.3%	23.1%	16.6%
Services	28.2	32.4	25.4
Manufacturing	15.6	14.0	22.9
Public Administration	10.2	10.0	8.5
Construction	10.4	7.8	8.7
Transportation & Utilities	6.4	5.6	7.1
Finance, Insurance & Real Estate	4.9	5.4	7.9
Agricultural	5.0	1.7	3.1
	100	100	100.2

Frederick City is the retail activity center for almost all of Frederick County. Because of the large population concentration in and around the city, its central location and the absence of any other town of similar size which is closer than Hagerstown, Frederick City is the logical center for extensive retail and wholesale operations.

Retail expansion in recent years has occurred in the form of shopping centers. This includes three large shopping centers along U.S. Route 40 west and the Francis Scott Key Mall between I-270, Maryland 355 and Maryland 85 south of the study area.

The City also continues to be the center of most of the county's service activities. By far, the largest share of the county's professional, financial, insurance, real estate and communication activities are based in Frederick.

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

Every major employment category within the county is expected to increase. The construction industry and wholesale and retail trade are expected to increase most dramatically. This is based on the assumption that the recent high demand for housing in the county will continue (Frederick County experienced a 51% increase in housing units from 1970 to 1980). Expected increases in the trade sector are based largely on the need to serve the relatively affluent population that is moving to Frederick County in increasing numbers.

3. Land Use

Existing

Currently about 80% of the Frederick Planning Region remains in woodland, agricultural use or some other kind of open space. Residential uses comprise over 10% of the area and the remainder of the land is in commercial, industrial and public use.

Residential

Residential land use occurs at several points within the project limits. Medium and low density housing is located near the U.S. 15/340 interchange, near the East South Street/Franklin Street intersection and at Tulip Hill at the eastern end of the project. Several residences (some associated with farms) are scattered along the length of the project.

Agricultural

Outside the City limits the most common land use change in the Frederick Region in recent years has been the conversion of agricultural land to residential use. Near the study area this trend is most evident in the Ballenger Creek area south of I-70. Because the Frederick valley is extremely rich in prime farmland, the county has recently taken steps to prevent further development of this land by establishing agricultural preservation districts. There are no agricultural preservation districts within the study area. The western portion of the proposed project (between Mt. Phillip Road and the U.S. 15/340 interchange) is partly on farmland of statewide importance. The land in this area, south of I-70, is currently in agricultural use. Coordination with the Soil Conservation Service regarding this farmland is underway.

Commercial and Industrial

Commercial and industrial land uses are scattered along the I-70 corridor. The highest concentration of businesses is located

in the Evergreen Point area which is between Maryland 85 and Maryland 355 south of I-70. A large limestone quarry and associated aggregate and concrete operations are also located east of Maryland 355. I-70 also serves the Frederick Industrial Park (84 acres) and the Airport Industrial Park (37 acres) located to the north of Md. 144 in east Frederick.

Another new pocket of light industrial land use lies in the southwest part of the city adjacent to I-70 and U.S. 15/340.

Within the study area only a small portion of land is used for institutional or public use. A cemetery is located along I-70 between New Design Road and I-270, and the Maryland School for the Deaf, the East Frederick Elementary School, the Prospect High School and a Seventh Day Adventist Church are all located within the immediate study area.

Future

Frederick City and the surrounding area is designated by the County Planning Commission as the major new development center in the county for the next two decades. Outside of this growth area the majority of the county is intended for only low intensity uses such as conservation and agricultural/rural uses.

Residential

The area north and west of the city limits to the foothills of the Catoctin Mountains has been designated as the main low density residential growth area. Tuscarora Creek forms the northern boundary and I-70 forms the southern boundary of this area.

The Ballenger Creek area south of I-70 calls for high density residential use adjacent to the city and for medium density housing toward the creek to the south. Since Frederick City lies within a large belt of prime farmland, it is inevitable that some

EXISTING LAND USE

LEGEND

- MEDIUM DENSITY RESIDENTIAL
- LOW DENSITY RESIDENTIAL
- AGRICULTURAL/RURAL
- OPEN SPACE/INSTITUTIONAL
- COMMERCIAL
- INDUSTRIAL/EMPLOYMENT

N

FORT DETRICK
(U.S. MILITARY RESERVATION)

FREDERICK

STUDY LIMIT

OLD NATIONAL PIKE

MT. PHILLIP RD

BUTTERFLY LANE

JEFFERSON PIKE

JEFFERSON STREET

MARKET STREET

EAST STREET

PATRICK STREET

SOUTH STREET

FAIRGROUND

SHAWS ROAD

WALSER DRIVE

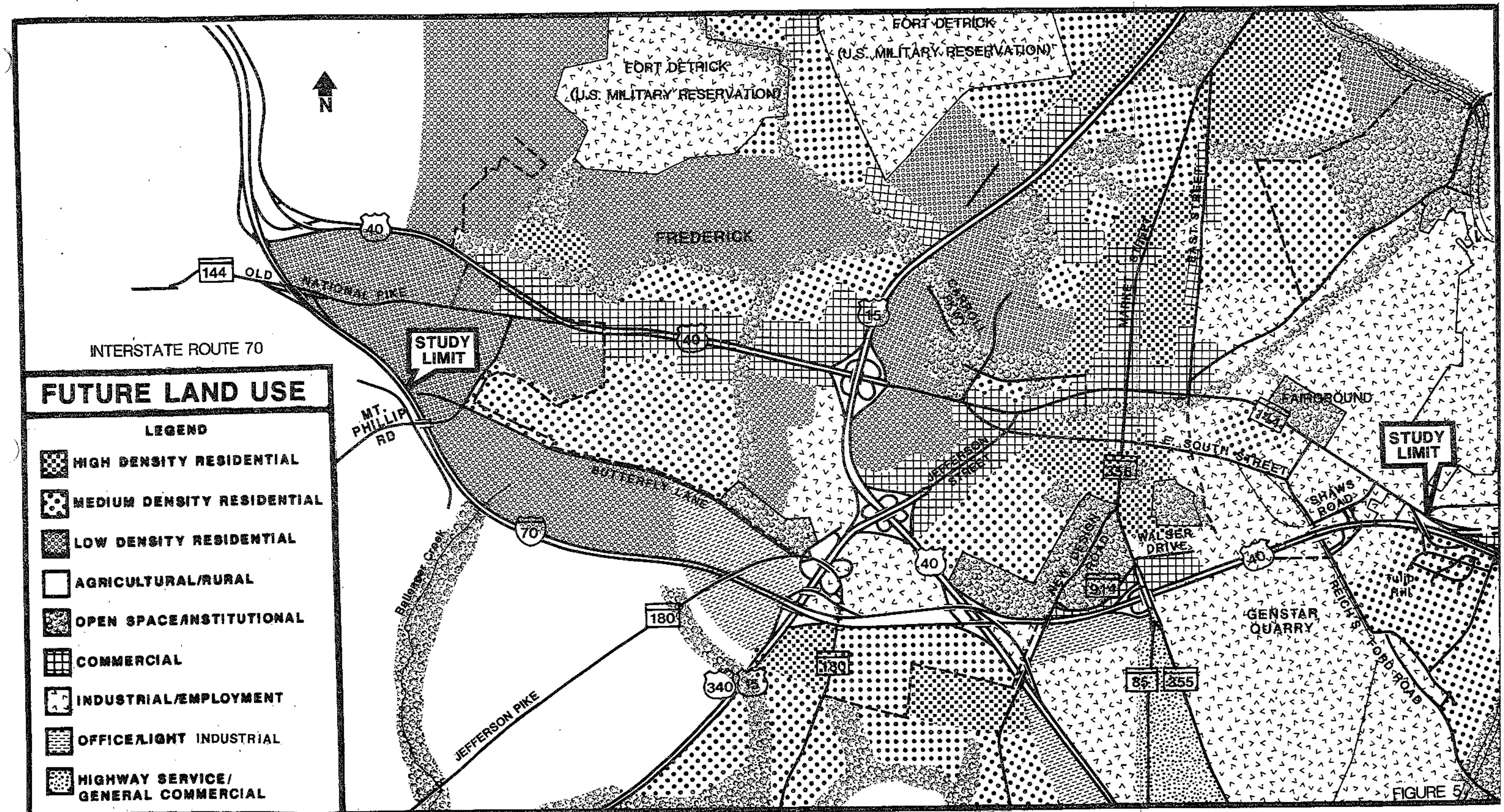
NEW DESIGN ROAD

Tulip Hill

GENSTAR QUARRY

40 144 15 70 180 340 355 85 914

FIGURE 4



FORT DETRICK
(U.S. MILITARY RESERVATION)
FORT DETRICK
(U.S. MILITARY RESERVATION)
N
FREDERICK
144
OLD NATIONAL PIKE
40
INTERSTATE ROUTE 70
STUDY LIMIT
MT PHILLIP RD
15
40
BUTTERFLY LANE
70
Ballenger Creek
180
340
15
180
JEFFERSON PIKE
JEFFERSON STREET
MARKET STREET
EAST STREET
FAIRGROUND
144
E. SOUTH STREET
355
STUDY LIMIT
SHAWS ROAD
WALSER DRIVE
NEW DESIGN ROAD
914
40
40
85
355
GENSTAR QUARRY
REICH'S FORD ROAD
Tulip Hill
FUTURE LAND USE
LEGEND
HIGH DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
LOW DENSITY RESIDENTIAL
AGRICULTURAL/RURAL
OPEN SPACE/INSTITUTIONAL
COMMERCIAL
INDUSTRIAL/EMPLOYMENT
OFFICE/LIGHT INDUSTRIAL
HIGHWAY SERVICE/
GENERAL COMMERCIAL

FIGURE 5

planned growth will occur on prime farmland. In order to minimize that use the county encourages this high density development as close to the city as possible. The areas designated for high density residences are just south of the U.S. 15/340 and I-70 interchange.

The area known as Tulip Hill is recommended for low density residential development.

Agricultural

The land south of I-70 from Mt. Phillip Road to west of Maryland 180 is recommended for agricultural/rural uses.

Commercial and Industrial

The comprehensive plan calls for office and light industrial land use in the area west of U.S. 15/340 just north and south of I-70. Continued commercial and industrial development is recommended for the Evergreen Point area, as far west as I-270 and as far east as Reichs Ford Road. An office/research park is planned for the areas just south, north and west of Evergreen Point because of their access, visibility and proximity to the city and to other major employment areas along the I-70 and I-270 corridors.

Another office/research park is planned east of the city to serve as a buffer between the residential area and the airport and industrial parks on Md. 144 (East Patrick Street).

4. Parks/Recreation Facilities

Several parks and recreation areas have been identified in the project area. (See figures 9a-9c)

Loats Park (42 acres), recently deeded to Frederick City for park development, is bounded by Maryland Route 355, Maryland Route 914 (Adventist Road) and New Design Road. (See figure 12)

Proposed Lewis Park is a four (4) acre parcel located east of the Union 76 Truck City along Md. 355 and abutting I-70. This area is owned by Frederick City, but is not proposed for development or recreation use. (See letter of April 28, 1981, from Robert Strine in the Appendix) Based on coordination with the City of Frederick, this area is not considered a 4(f) issue. The City will be paid for the property and those monies may be applied toward replacement land.

East Frederick Elementary School is located near the project's eastern limit on Maryland Route 144 at Shaws Road.

5. Historical and Archeological Sites

Historic site surveys of the study area have resulted in the identification of six (6) historic sites which are listed on the National Register of Historic Places or considered eligible for the National Register.

They are listed in the following table and shown on figures 8 and 9.

Table 3 - Historic Sites

Site No.	Name	Significance level
1	Prospect Hall	Listed on National Register Sept. 1980
2	Guilford	Listed on National Register 1975
A	Frame House	Maryland Historical Trust Inventory

Site No.	Name	Significance level
B	Stone Building	Maryland Historical Trust Inventory
I	Kline Farm (Linden Grove)	National Register eligible
J	Tidler Farm (Wm. Howard Farm)	Maryland Historical Trust Inventory
-	Humberson House	Maryland Historical Trust Inventory

Statements of Significance

Prospect Hall. This commanding large seven-bay collonaded structure is architecturally and historically significant for the Frederick area.

Guilford was built in 1810 and is one of the finest of the big country houses in Frederick County.

Linden Grove is significant as a late 18th century farmhouse built in a significant federal style more commonly found in towns than in rural areas. It may be the only building remaining from the original farmstead.

No significant archeological sites were identified in the project area. See the letters from the Maryland Historical Trust in the Appendix.

6. Natural Environment

a. Physiography - Topography

The I-70 study area lies within the Frederick Valley physiographic province. This province is situated between the Catoctin Mountains and the Western Piedmont. Topography is generally rolling, with slopes between 0 and 20%. Karst topographic features such as collapse areas and sinkholes occur in the study area east of I-270.

Elevations in the study area generally range from 270 feet above mean sea level (msl) to 420 feet above msl. Elevations gently rise from east to west.

b. Geology

The Frederick Valley is underlain by a continuous belt of moderately deformed Cambio-Ordovician carbonates and siltstones. The geologic structure of the area is an asymmetric synclinorium composed of three major formations, the Araby, Frederick, and Grove Formations, vertically from bottom to top. The study area extends across outcrops of the Frederick and Grove Formations.

The outcropping Frederick Formation consists of a sequence of micritic and peloidal limestones and dolomites. Outcrops of the Grove Formation are dominated by light gray limestones, and white or buff dolomites which contain varying amounts of coarse quartz sand.

The study area lies on a single hydrologic unit composed of the limestones of the Frederick and Grove formations. This unit contains the most productive aquifers in the Maryland Piedmont Region. Yields of wells range from one (1) to 580 gallons per minute (gpm), with a 20% chance of exceeding 50 gpm. These yields contrast with the surrounding aquifers, which are among the poorest in the Maryland Piedmont Region. Well yields are dependent on the amount of fractures in an area. The carbonate rocks of the Grove and Frederick formations are subject to weathering, but have a fair degree of permeability. Fracture zones where solutional weathering has occurred usually produce the highest yielding wells.

Solutional weathering in fracture zones also produces sinkholes, a geologic feature in the study area unique to karst topography. Sinkholes are formed when rain or runoff flows through a fracture, dissolving the surrounding carbonate rock. The fracture is dissolved to a point when the overlying soil can not support itself, and forms a depression, or sinkhole.

Sinkholes may form at rapid rates, depending on the amount, and acidity of runoff, and the solubility of the underlying carbonate rocks. Karst topography is conducive to the development of larger or new sinkholes.

Fourteen (14) major storm water outfalls were identified along the I-70 improvement corridor in a preliminary May, 1984 "Sinkhole and Stormwater Management Study". Three (3) of these outfalls currently drain into existing sinkholes. These three (3) sinkholes drain a total area of approximately 460 acres. (See figures 9a-9c) Sinkholes Numbers 1 and 3 have existed for some time and are presently operating as storm water outfalls. Sinkhole Number 2 is the residual of an old clay quarry. The area around Sinkhole Number 1 has recently developed new adjacent sinkholes. Should these sinkholes cease to function as outfalls for storm runoff, severe flooding could occur if no other outlet were provided. Implementation of a feasible alternative to drain the watershed should these sinkholes fail is under study.

The limestones of the Frederick Valley are actively mined in the study area. The Grove limestone is used for Portland and masonry cements, agricultural lime, and crushed stone aggregates. Carbonate rocks of the Frederick Formation are too thin bedded or schistose for use as crushed stone.

c. Soils

Soils in the I-70 study area belong primarily to the Duffield-Hagerstown Association. The Duffield soils are dominant, developed from interbedded limestones and shales of the Frederick formation. Hagerstown soils developed from the massive limestone of the Grove formation.

This association is very productive. The soil is deep, well drained, fertile, gently sloping in most places, and easily

managed.

d. Surface Water

The I-70 study area is in the Monocacy River watershed, and crosses tributaries of Ballenger Creek.

The Maryland Department of Natural Resources (DNR) classifies the waters of the State into four classes, based on their intended use. Ballenger Creek, in the study area, is designated as Class I waters (Water Contact Recreation and Aquatic Life). Waters of this designation are suitable for water contact sports and activities where the human body may come in direct contact with the surface water and the growth and propagation of fish (other than trout), other aquatic life, and wildlife.

e. Floodplains and Wetlands

No designated wetlands or 100 year floodplains have been identified in the project area.

f. Ecology

1). Vegetation

The native vegetation of the study area is classified as the Tulip Poplar Association (Brush et al 1976). However, little native vegetation remains, as the area has been extensively cleared and developed. Current major uses are of a commercial, industrial and residential nature. A few farms remain in the area, producing corn, wheat, and alfalfa crops. The majority of land which would be converted to highway usage currently exists as mowed right-of-ways along the existing highway and interchanges. The only treed areas remaining are: (1) a tract north of I-70 between Reichs Ford Road and Maryland Route 355, (2) a small oak-maple woodland associated with a tributary of Ballenger Creek at the U.S. Route 15/340 interchange and (3) a few miscellaneous fence rows which separate various land uses. The first area

mentioned above has been extensively disturbed as the result of dirt bike riders using the area. This use is not sanctioned by City officials.

2). Unique/Sensitive Areas

The Maryland Uplands Natural Areas Study (1975) is part of an ongoing effort by the Maryland Coastal Zone Management program to describe and assess the resources of Maryland's coastal areas and contributing watersheds. While this does not afford any protection to these areas, it is hoped that identified areas will remain relatively undisturbed. Area 5300 is in the study area, immediately west of U.S. Routes 40/15 and north of Prospect Hall High School. The 170 acre former farm is "an abandoned crop and pasture land with many heavy thicket fence rows and small areas of mature upland deciduous forest. The headwaters to Carroll Creek are also located here. Especially noteworthy is the diversity of both plant and animal species inhabiting this urban wild area". This area would not be affected by any of the proposed improvements.

3). Wildlife

a). Terrestrial

The project area is heavily used for industrial and commercial purposes, and there is very little remaining natural habitat for terrestrial wildlife. Habitat types available include mowed right-of-way, crop fields, and the few treed areas mentioned above. Only those species which can tolerate extensive human activity can inhabit this area. This includes songbirds, rabbits, groundhogs, skunks, raccoons, and eastern gray squirrels.

b). Aquatic

The project area lies within the Monacacy River watershed.

Four tributaries of the Monocacy, a state Scenic River, would be crossed by this project - all unnamed tributaries of Ballenger Creek.

Ballenger Creek flows south of I-70 through rural, agricultural land and is of relatively good quality. Prior to 1978, the Maryland Department of Natural Resources stocked Ballenger Creek with brown and rainbow trout. This was an experimental program, and was discontinued because temperatures in the creek were too high to support trout life yearround.

g. Endangered Species

Coordination with the Maryland Department of Natural Resources and the U.S. Fish and Wildlife Service indicates that there are no known populations of threatened or endangered species within the study area.

7. Existing Noise Environment

a. Identification of Noise Sensitive Areas

The noise sensitive areas (NSA) utilized in the analysis consist of residential, educational, and religious use areas. The locations of these receptors are shown on Figures 7-9.

Following is a brief description of these:

NSA 1 - one story brick East Frederick Elementary School located on East Patrick Street, north of Interstate 70. The building is not air-conditioned. A hard surfaced play area is located between the building and Interstate 70.

NSA 2 - a two-story frame house located at 7891 Reich's Ford Road, south of Interstate 70.

NSA 3 - the I-70 Motor Inn located in the northeast quadrant of the I-70/Maryland 355 interchange. The area consists of a brick air conditioned motel and adjacent parking. No exterior uses were evident.

NSA 4 - a farm owned by the Maryland School for the Deaf, located on Carrol Street north of Interstate 70. The building is not air-conditioned.

NSA 5 - a one and one-half story brick residence located at 5874 Maryland Route 355, south of the alignment of I-70.

NSA 6 - the Seventh Day Adventist Church and School complex, located west of Maryland 355 and north of Interstate 70. This building is air conditioned.

NSA 7 - the Mount Olivet Cemetery, located adjacent to the ramp from westbound Interstate 70 to U.S. Route 40.

NSA 8 - a National Register historic site located at 5927 New Design Road.

NSA 9 - an historic site located adjacent to northwest quadrant of the Interstate 70/Interstate 270 interchange. The site consists of a frame farm house and associated out buildings and is north of Solarex Corporation building.

NSA 10 - a two and one-half story residence located at 6023 Fair Oaks Road.

NSA 11 - a one story brick residence located at 6446 Maryland Route 180.

NSA 12 - a two story stone residence, known as Park Hall, located at 1100 East Patrick Street.

NSA 13 - a two story frame residence located at 802 South Street.

NSA 14 - four brick residences located at 6026 Fairfax Court.

NSA 15 - a one story brick residence located east of Mt. Phillip Road and north of I-70.

b. Existing Noise Monitoring Program and Results

An on-site noise monitoring program was conducted at each sensitive receptor. The monitoring was performed on August 7 and 14, 1984 using a BBN Model 614 Portable Noise Monitor System. The 614 is a combination sound level meter/microprocessor/printer which automatically measures, calculates and prints a wide range of statistical and cumulative sound levels including L_{10} and Leq.

Monitoring was performed for one-half hour periods at a location adjacent to each sensitive receptor. The system's microphone was calibrated both before and after each monitoring period to ensure the accuracy of results.

The results of the monitoring program are shown in table 4.

TABLE 4

EXISTING NOISE LEVELS

Noise Sensitive Area	Ambient L10
1	61 dBA
2	69 dBA
3	(75 dBA)
4	54 dBA
5	65 dBA
6	(72 dBA)
7	69 dBA
8	52 dBA
9	63 dBA
10	69 dBA
11	59 dBA
12	67 dBA
13	60 dBA
14	(74 dBA)
15	(71 dBA)

( ) Exceeds Federal Highway Administration noise abatement criteria.

II. NEED FOR THE PROJECT

II. Need for the Project

A. PURPOSE OF THE STUDY

This section of I-70 is the last segment of I-70 which does not conform to current interstate design standards. Missing movements would be provided and geometric deficiencies would be improved at study area interchanges. Thus, interstate travellers on both the primary highway and interstate highway systems would be afforded increased mobility by the completion of this project.

B. PROJECT BACKGROUND

The proposed roadway improvements conform to the goals and objectives of the January 1979 Frederick City and the December 1983 Frederick County Comprehensive Development Plans.

This project is included in the Interstate Development and Evaluation Program of the 1985-1990 for Project Planning and Final Design. Funding for Right-of-Way acquisition and Construction is not programmed.

Highway Needs Study History

The 1977 and 1979 Highway Needs Studies included the reconstruction of I-70 from I-270 to Maryland 144A (East Patrick Street) as a six (6) lane freeway.

The 1980 Highway Needs Inventory and the 1982 update of the Highway Needs Inventory included a six (6) lane divided reconstruction from U.S. 15/340 to west of East Patrick Street.

Highway Program History

In the 1979-1984 Consolidated Work Schedules (CWS), the I-70 project was included in the Interstate Project listing. Beginning with the 1981-1986 Consolidated Transportation Program (CTP) the project appeared in the Development and Evaluation Program, and has appeared in each succeeding CTP.

C. OTHER AREA PROJECTS

I-70 from Ijamsville Road to East Patrick Street

This project is under construction and consists of the relocation of I-70. Construction is scheduled for completion in June of 1986+.

D. DEFICIENCIES OF THE EXISTING FACILITY

The study segment of I-70 is a four (4) lane expressway divided by a variable width rural median. Each lane is 12' wide with a maximum 3% grade. The design speed varies from 60 to 70 miles per hour (MPH) with a posted speed of 55 mph. The expressway was built in accordance with design standards and criteria in effect as early as 1954. This criteria allowed closely spaced interchanges and short exit and entrance ramps. Some interchange movements are absent. Interchange ramp geometry is deficient under current standards. There is no safety grading. Full shoulder widths are not continued across bridges and several bridges will require redecking within the near future. Since 1960, design criteria have been revised to provide safer and more efficient expressways.

The interchanges at U.S. 15/340 and I-270/U.S. 40 lack some turning movements and do not provide access to I-70 in all directions. These movements are provided elsewhere. However, interstate travellers unfamiliar with the area, become confused and make sudden lane changes to access desired exit ramps. As traffic and development continue to increase, the missing movements will present ever increasing operational safety problems. Further, the interchange between Maryland Route 180 and U.S. 15/340 serving local traffic presents an operational problem due to its proximity to other interchanges.

Three (3) sets of movements are missing in the existing

network of the U.S. 15/340 and I-270/U.S. 40 interchanges. The three (3) sets of movements are currently accomplished in the following manner:

- the missing southbound U.S. 15/340 to westbound I-70 and the return movement, are made via the U.S. Route 15/-West Patrick Street interchange (north of the study area) and west along U.S. 40 to I-70 west. This portio of U.S. Route 40 (known as the Golden Mile) traverses one of the most significant retailing areas of Frederick City, contains several traffic signals and carries local, intra-state and interstate traffic.
- the missing northbound U.S. 15/340 to westbound I-70 movement and the return movement, eastbound I-70 to southbound U.S. 15/340, are the most complex set of the three (3) missing movements. This movement must be effected by proceeding north past the I-70/U.S. 15/340 interchange, through the U.S. 40/15/Jefferson Street interchange to the U.S. 15/40/West Patrick Street interchange, then west along U.S. 40 (Golden Mile) to westbound I-70.
- the missing northbound I-270 to eastbound I-70 movement and its return, are now made at the I-270/Md.85 interchange (south of the study area), north along Md. 85 to Md. 355, then a left turn at the Md. 355/I-70 interchange to east on I-70. (It should be noted that Md. 85 is now approaching commercial development equivalent to the "Golden Mile".)

The interchanges at Md. 355 and South Street/Reichs Ford Road have geometrically substandard radii and acceleration and deceleration lane lengths. Substandard radii are critical because of high percentages (up to 33%) of heavy duty trucks using these interchanges. Interchanges ramps which are substandard with tight radii contribute to vehicular rollovers and collisions.

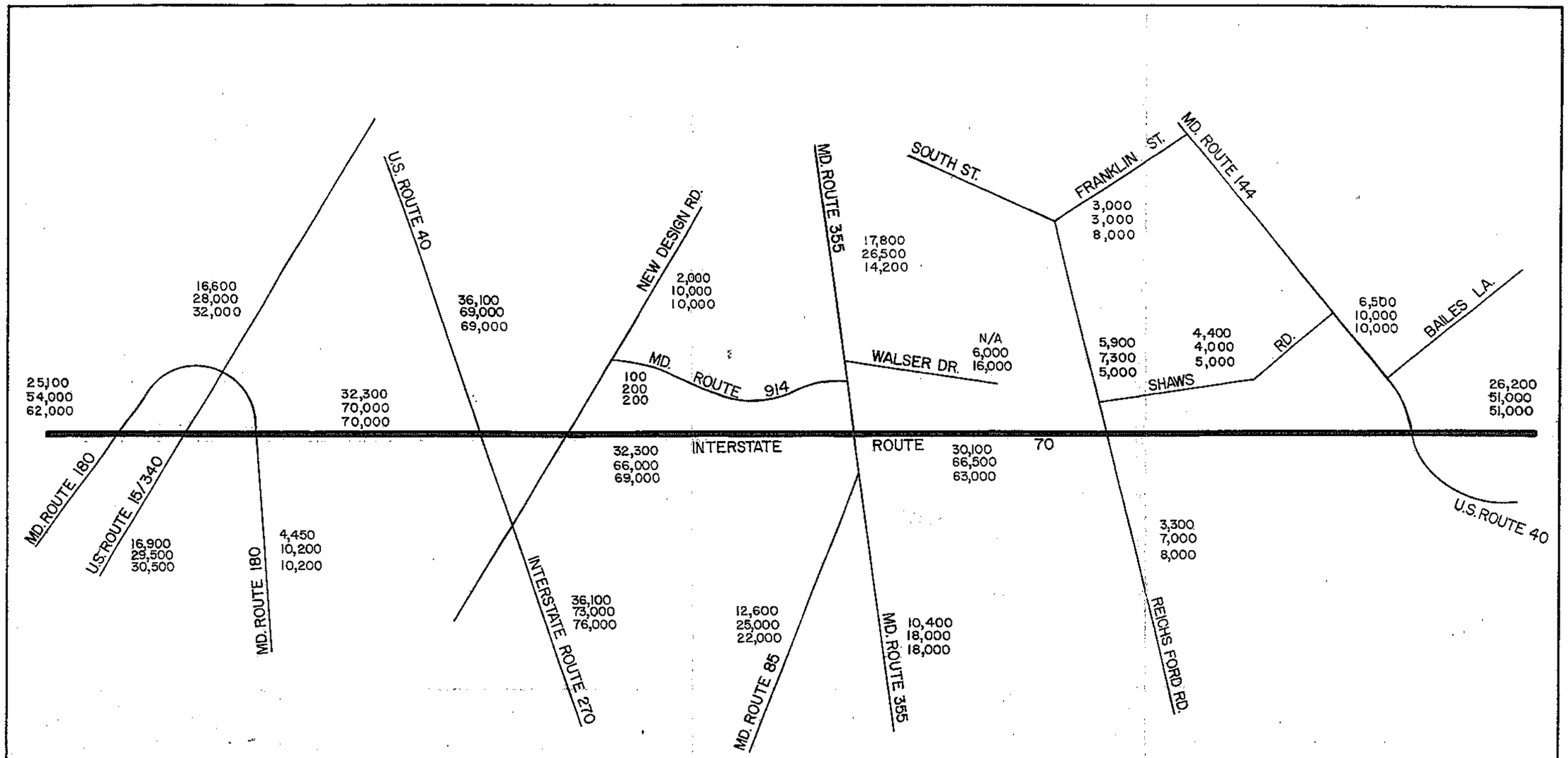
Short acceleration lanes result in loaded trucks entering main line I-70 at speeds far below normal, thus requiring avoidance manuvers on the part of other vehicles. Short deceleration lanes can contribute to excessive vehicular speeds on the turning roadway.

E. TRAFFIC

Existing average daily traffic volumes along the study segment of Interstate Route 70 range from 25,000 to 32,000. Trucks constitute approximately 25% of average daily traffic volumes on the ramps of the Md. 355 interchange and up to 33% of the average daily traffic on ramps of the South Street/Reichs Ford Road interchange. These truck percentages are significantly greater than on most State highways. The highway has adequate capacity for existing volumes during peak hours, but is approaching unstable flow.

By the design year 2010, traffic volumes are predicted to increase substantially (95% to 120%)as a result of planned land use in the vicinity of the City of Frederick and improved national mobility. Forecasted average daily traffic volumes range from approximately 54,000 west of U.S. Route 15/340 to 70,000 east of U.S. Route 15/340 to 51,000 east of East Patrick Street. See figure 6.

Quality of traffic flow along a highway is measured in terms



1982 ADT
2010 ADT NO-BUILD
2010 ADT BUILD

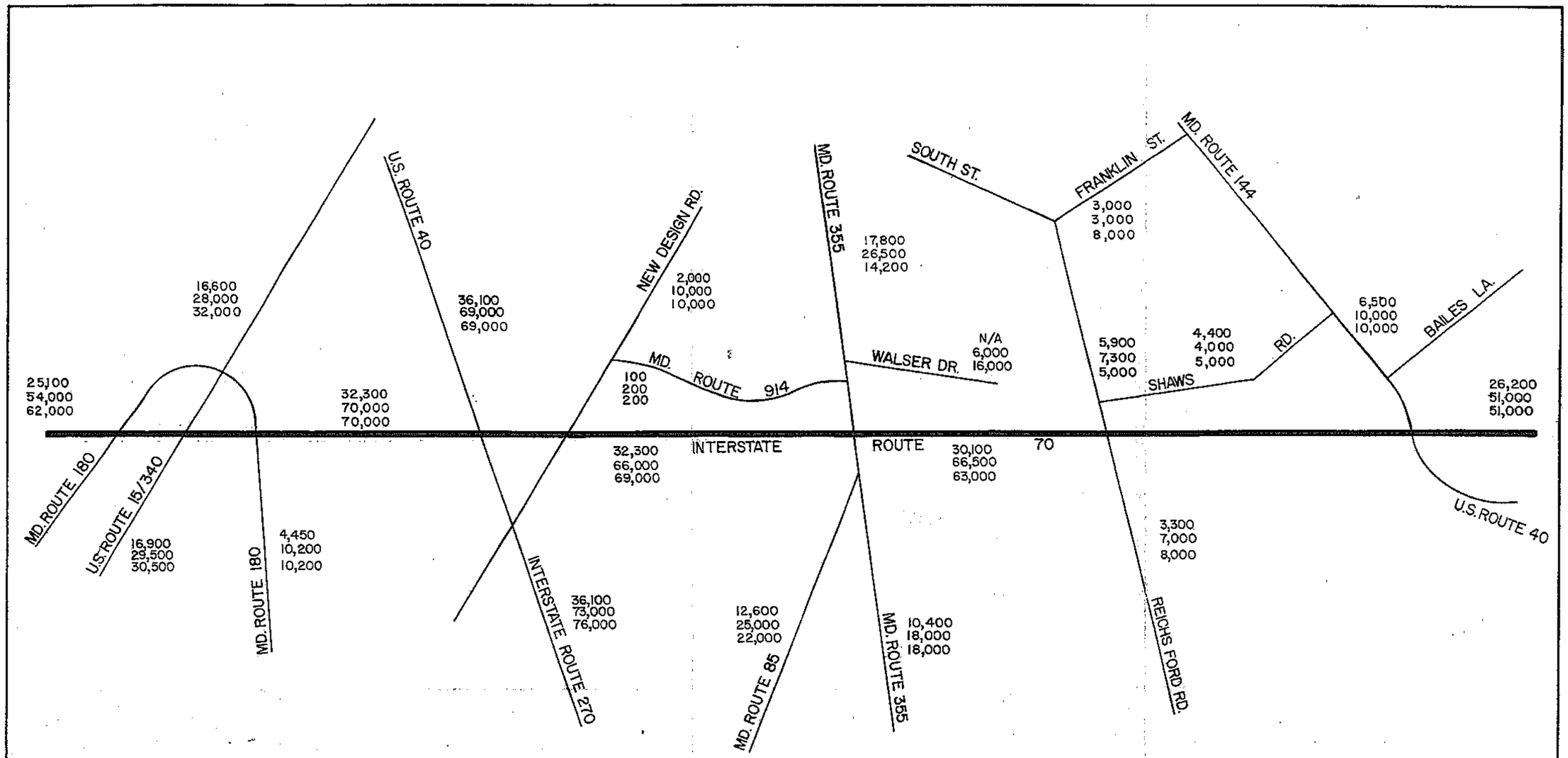
Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

TRAFFIC VOLUMES

FIGURE 6



1982 ADT
2010 ADT NO-BUILD
2010 ADT BUILD

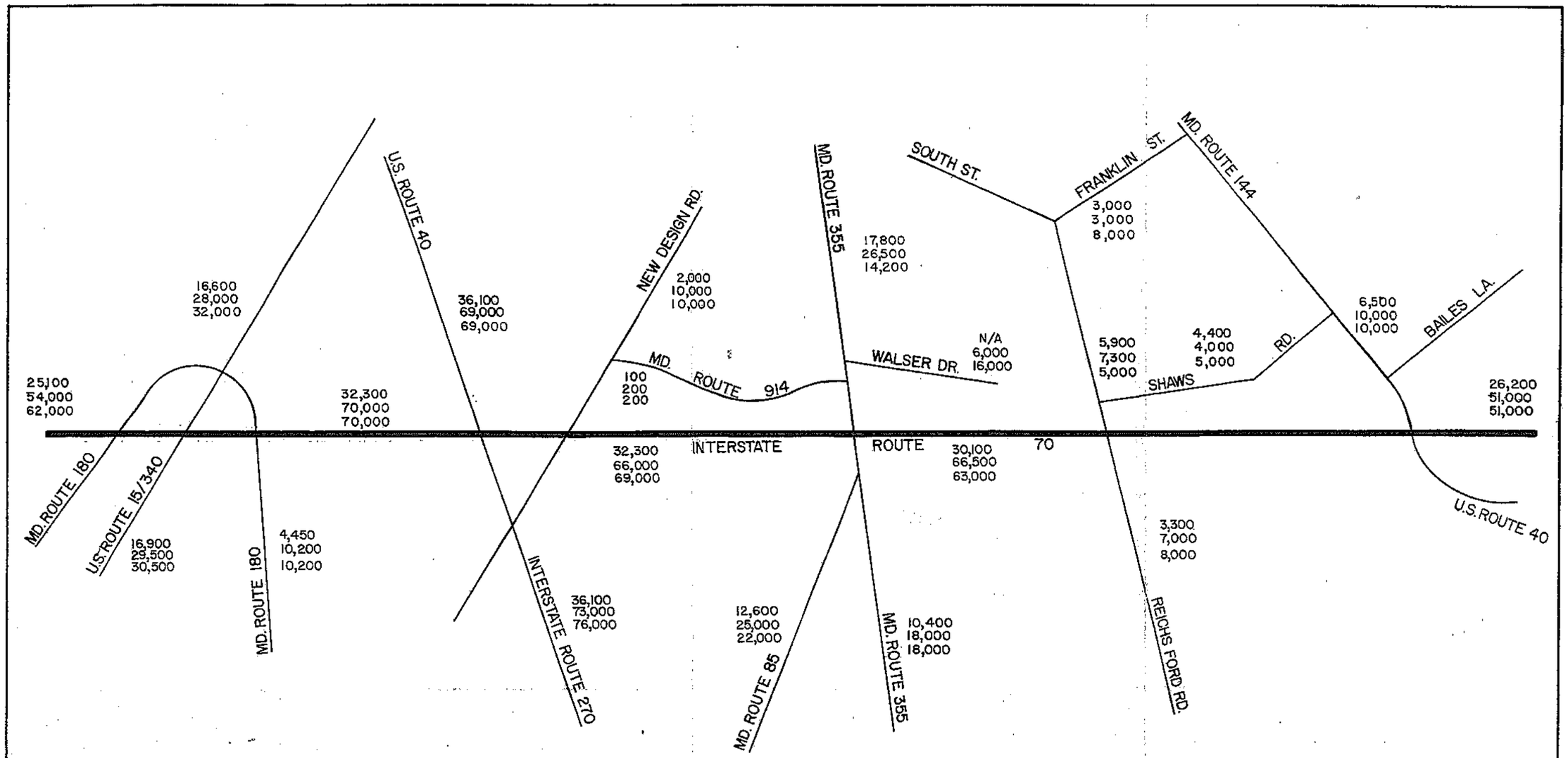
Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

TRAFFIC VOLUMES

FIGURE 6



1982 ADT
2010 ADT NO-BUILD
2010 ADT BUILD

Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

TRAFFIC VOLUMES

FIGURE 6

of level of service (LOS). This measure is dependent upon highway geometry and traffic characteristics and ranges from LOS "A" (Best) to LOS "C" (Minimum Desirable), to LOS "E" (capacity), and LOS "F" (Worst or Forced Flow). If no substantive improvements are implemented by the design year, the portions of the project from Mt. Phillip Road to U.S. Route 15/340 and from South Street to Maryland Route 144 are predicted to operate at capacity (Level of Service "E") and the segment from Interstate Route 270 to South Street is predicted to operate at forced flow (Level of Service "F"). These operating conditions are characterized by low operating speeds (15-35 mph) and recurrent stoppages. Table 5 indicates existing and projected levels of service for other segments of the project.

F. SAFETY

I-70, from Mt. Phillip Road to East Patrick Street, experienced 75 reported accidents during the study period from 1980 through 1982, resulting in an accident rate of 45 accidents per one hundred million vehicle miles (acc/100MVM) of travel. This existing rate is presently lower than the statewide average accident rate for similar design highways now under State maintenance. The cost to the motoring and general public as a result of these accidents is approximately $500,000/100MVM of travel.

The interchanges along this section of I-70 are presently experiencing operational deficiencies. Most notable are the missing ramp movements, and the existing ramps of substandard design. However, the accident experience at these interchanges (with the possible exception of the I-70/Maryland 355 interchange)

TABLE 5

TRAFFIC SUMMARY

Interstate Route 70
Mt. Phillip Road to Maryland Route 144 (East Patrick Street)
(Percent Saturation if Level of Service 'F')

Segments / Weaving Areas	1982		2010															
			NO-BUILD			ALTERNATE 2			ALTERNATE 4			ALTERNATE A			ALTERNATE B		
	Volume	LOS*	Volume	Increase	LOS*	Volume	Increase	LOS*	Volume	Increase	LOS*	Volume	Increase	LOS*	Volume	Increase	LOS*
Mt. Phillip Rd. to US 15/340	25,100	B	54,000	115%	E	62,000	147%	C/E[1]	62,000	147%	C/E[1]						
US 15/340 to I-270	32,300	B	70,000	117%	D	70,400	118%	C	74,000	129%	C						
Weaving EB		B			D			D			D						
Weaving WB		-			-			-			D						
I-270 to Md. 355	32,300	B	66,000	104%	F (1.19)	69,000	114%	D	69,000	114%	D	69,000	114%	D	69,000	114%	D
Weaving EB		-			-									D			D
Weaving WB		B			F (1.26)									D			
Md. 355 to South Street	30,100	B	66,500	121%	F (1.28)							66,500	121%	D	66,000	119%	D
Weaving EB		-			-									-			-
Weaving WB		-			-									-			D
South Street to Md. 144	26,200	B	51,000	95%	E							51,000	95%	C	51,500	97%	C
Weaving EB		-			D									C			-
Weaving WB		-			-									-			D

All volumes expressed in terms of average daily traffic.

* Level of Service during peak hours.
LOS B: Stable flow. Average operating speeds approximating posted limit with volumes about 50% of capacity.
LOS C: Stable flow. Average operating speeds about 50 MPH with volumes up to 75% of capacity.
LOS D: Approaching unstable flow. Average operating speeds about 40 MPH with volumes up to 90% of capacity.
LOS E: Unstable flow at capacity. Average operating speeds in the range of 30-35 MPH with occassional stoppages.
LOS F: Forced flow. Average operating speeds below 30 MPH with predominate stop-and-go type operation.

[1] 2 lanes eastbound expected to operate slightly over capacity, v/c = 1.12; 3 lanes westbound at stable flow.

does not indicate any severe accident problem. The low number of accidents at these areas is probably due to local drivers exercising caution as a result of their knowledge of the deficient ramp designs. Also, the reduced accident reporting policy adopted by the police agencies is believed to have had an impact affecting the reporting of property damage only accidents in the study section.

The ramp from eastbound I-70 to southbound Maryland 355 qualified as a High Accident Interchange Ramp during 1980 through 1982. This ramp experienced six accidents in the three-year period, all of which involved heavy-duty trucks. Overall, 20% of the vehicles involved in reported accidents within the study area were heavy-duty trucks; however, heavy-duty trucks do account for 22% of the total traffic volumes in the area.

The accident costs as indicated include present worth of future earnings of those persons killed and permanently disabled, as well as monetary losses resulting from injury and property damage acidents. The unit costs utilized in the above computations were based upon actual cost values obtained from independent cost studies conducted in Washington D.C., Illinois, and the California Division of Highways, and have been updated to 1982 prices.

III. ALTERNATES CONSIDERED

III. Alternates Considered

A. PROJECT HISTORY

1. Project Initiation Meeting

On July 6, 1978, a Project Initiation Meeting was held at the East Frederick Elementary School in Frederick City, Maryland. At this meeting, the original project which extended 2.6 miles along I-70 from the I-270 interchange to East Patrick Street was introduced to the public. As a result of comments received at that meeting the western limits of the project were extended from the I-270/U.S. 40 interchange to the U.S. Route 15/340 interchange, a total distance of 3.8 miles.

2. Alternates Public Meeting

Approximately 65 persons attended the Alternates Public Meeting (Workshop) held on January 24, 1980 at the East Frederick Elementary School. At that time, the addition of a third lane on the outside of the existing roadway and improvements to the interchanges were presented to the public. The following improvements, as well as a no-build alternate, were presented:

U.S. Route 15/340 interchange (These proposed improvements to the U.S. 15/340 and I-270/U.S. 40 interchanges have subsequently been refined and designated as Alternate 2).

- A new ramp from southbound U.S. Route 15/340 to westbound I-70

- A new ramp from eastbound I-70 to southbound U.S. Route 15/340

- A new loop from eastbound I-70 to northbbound U.S. Route 15/340 which would necessitate construction of a new outer connection from the northbound U.S. Route 15/340 to eastbound I-70 movement

- A new loop to provide for the northbound U.S. Route 15/340 to westbound I-70 movement which would require the removal of the

loop ramp from Maryland Route 180 to northbound U.S. 15/340 northbound

- A new ramp to provide access from Maryland Route 180 to northbound U.S. 340/15 and U.S. Route 40 southbound

I-270/U.S. 40 interchange

Two additional movements were proposed:

- A new outer connection from northbound I-270 to eastbound I-70 and located in the southeast quadrant

- A new loop in the northwest quadrant for the westbound I-70 to southbound I-270 movement

Md. 355/85 and Reichs Ford Road/South Street Interchanges

Alternate A proposes the expansion and reconstruction of the existing Md. Route 355 and South Street/Reichs Ford Road interchanges utilizing their present configurations. The southbound Md. Route 355 to westbound I-70 outer connection ramp would be relocated opposite Walser Drive. Maryland Route 914 (Adventist Road) would be closed with access to the Seventh Day Adventist Church and school from New Design Road only.

Alternate B proposes a new partial interchange to replace the I-70 westbound off and on movements at the South Street/Reichs Ford Road and Md. Route 355 interchanges. The proposed new interchange ramps would tie into an easterly extension of Walser Drive to South Street at Franklin Street or to South Street near Shaws Road. Both versions of Alternate B would intersect at-grade with the Frederick Subdivision of the Chessie System Railroads and an industrial siding. The existing interchange movements in the southern quadrants would be reconstructed as with Alternate A. (The version of this alternate designated Alternate B-1 intersects South Street at Shaws Road and Alternate B-2 intersects South

Street at Franklin Street.)

Alternate C proposed a full directional interchange tieing into an easterly extension of Walser Drive at a location similar to Alternate B. This interchange replaced the existing Reichs Ford Road and Maryland Route 355 interchanges. (See Alternates Dropped Section B.-2b)

3. Project Status Report

A Project Status Report was sent to the project mailing list in May, 1980. This report advised recipients of pending alternate modifications and provided an evaluation of comments received as a result of the Alternates Public Meeting (Workshop). Alternate C was dropped from further study.

4. Refinement of Alternates

In August, 1980 the following modifications were proposed for the interchange alternates selected for detailed study:

At the U.S. 15/340 interchange:

- Include a collector/distributor road along northbound U.S. 15/340 (See Alternates Dropped Section B. 1-C)

- Study an additional interchange south of I-70 in order to eliminate all access between U.S. 15/340 and Md. Route 180 (See Alternates Dropped Section B. 1-a)

- Modify the alternate under study (now Alternate 2) to eliminate the close proximity of the northbound U.S. 15/340 ramps through the I-70 and Md. 180 interchange areas (now Alternate 4)

I-270/U.S. 40 Interchange

- Study means of providing a more desirable merging length along southbound U.S. 40 between the proposed westbound I-70 to southbound I-270 loop ramp and the existing eastbound I-70 to southbound I-270 outer connection ramp

- Consider relocating the proposed northbound I-270 to

eastbound I-70 ramp to the east side of New Design Road

Md. 355 Interchange

Alternate A

- Expand the median distance (between the off and on ramps) to 50' (at the Md. 355/Walser Drive intersection) to avoid wrong way ramp entry.

- Study operational characteristics associated with the proposed cul-de-sacing of Md. 355 at Evergreen Point (area located south of existing Md. 85/355 intersection) and re-routing traffic via Md. Route 85

Alternate B

- Lengthen the deceleration lane along westbound I-70 to the northbound Walser Drive Extended to allow for more gradual slowing down of vehicles

- Consider an additional left turn storage lane and free right turn lanes at the intersection of the exit ramp with Walser Drive

- Add the movement from eastbound Md. Route 144 to westbound I-70 to accommodate future commercial/industrial traffic

5. Public Informational Meeting

On June 14, 1984, a Public Informational Meeting was held at the Frederick Senior High School to present the alternates (described in Section III.C) proposed for detailed studies. The project limits had been extended from west of Mt. Phillip Road to Md. 144 (East Patrick Street) approximately 5.3 miles. Approximately 105 persons attended this meeting.

The following issues and concerns were discussed at this meeting:

- The optional relocation of New Design Road into Md. Route 914 (Adventist Road) at the Seventh Day Adventist Church and

school was questioned as being conducive to higher operating speeds. Alternative alignments for a relocated Adventist Road were suggested to the north of the church and school buildings through Loats Park.

(Through subsequent coordination the City of Frederick indicated that the suggested relocation of Adventist Road, through park property, was not acceptable to the City. The relocation of New Design Road across I-70 into Adventist Road at the church was deemed excessively expensive. Therefore, both alignments were dropped from further consideration).

- Mr. J. Wm. Brosius suggested a number of conceptual revisions to configurations of the I-270/U.S. Route 40, Md. Route 355 and South Street/Reichs Ford Road interchanges including new access points to the interstate highway. (These suggestions were further described in Mr. Brosius' letter to SHA dated June 25, 1984).

- Two businessmen expressed concern about access to three commercial enterprises located on the east side of Md. Route 355 immediately south of I-70.

- Frederick County endorsed Alternates 4 and B-1 and;

1) advised against cul-de-saccing Adventist Road as required by Alternate A,

2) suggested that traffic flow to the Md. Route 355/New Design Road intersection be minimized,

3) favored maintaining planned continuity of the local street system,

4) rejected Alternate B-2 due to disruption of travel patterns and displacement of residents, and

5) found the proposed ramp from East Patrick Street to westbound I-70 essential for providing access from the commercial/industrial area in the vicinity of the airport, to the interstate system.

B. ALTERNATES DROPPED

During the course of the Project Planning study the following concepts and alternates (by interchange area) were developed and subsequently dropped from consideration due to deficiencies and/or

other aspects deemed unacceptable at the time of evaluation.

1. U.S. Route 15/340 - I-270/U.S. Route 40

a. Alternate 3

Studies were conducted in the vicinity of the U.S. Route 15/340 interchange focusing upon weaving problems (attributable to the close proximity of the Md. 180 interchange ramps) along U.S. Route 15/340 associated with Alternate 2 (an alternate now under consideration). Alternate 3 was developed as a modification of Alternate 2. It consisted of the removal of all ramps of the Md. Route 180 interchange, and a replacement diamond interchange located on U.S. Route 15/340 midway between I-70 and Mt. Zion Road to the south of I-70.

Alternate 3 was eliminated from further consideration because it did not address the operational problems on I-70, it resulted in significant adverse travel, and it crossed a major tributary of Ballenger Creek. Construction costs alone were an additional $5 million (not including right-of-way costs) which was not cost effective.

b. Alternate 5

Alternate 5 was an attempt to alleviate the problems experienced by motorists travelling southbound on the existing collectordistributor road within the Md. Route 180 interchange and along U.S. Route 15/340 and being required to select from three directional options (southbound U.S. Route 15/340, westbound I-70 and Md. Route 180) with Alternate 2. Alternate 5 consisted of relocating the southbound U.S .Route 15/340 to westbound I-70 outer connection ramp from the southbound collector-distributor road along U.S. Route 15/340. An outer connection ramp was to be relocated in the northwest quadrant of the I-70 intersection with Md. Route 180 (Jefferson Pike) adjacent to the electrical sub

station.

Alternate 5 was eliminated from further consideration because of residential displacements, diversion of significant traffic volumes onto a secondary highway and because it constituted an additional (unwarranted) access point to the interstate system from a secondary highway.

c. Other Options

Other options considered in various combinations in the vicinity of the U.S. Route 15/340 interchange included:

- a collector-distributor roadway adjacent to the northbound roadway of U.S. Route 15/340 to alleviate weaving problems,

- reconfiguration of the loop in the southwest quadrant of the Md. Route 180 interchange to reduce the number of simultaneous directional decisions required of motorists, and

- an at-grade intersection ramp of Md. Route 180 at US Route 15/340 to alleviate weaving problems along U.S. Route 15/340.

These options were eliminated from further consideration for one or more of the following reasons:

- weaving/merging problems;

- inadequate capacity;

- excessive volumes on collector-distributor roadways;

- inappropriate introduction of a stop condition on a freeway; and

- required rehabilitation of roadways not directly related to I-70 operational problems.

2. Md. Route 355 - South Street/Reichs Ford Road

a. Trumpet Interchange at Extended Walser Drive

This early (1979) interchange was located midway between Md. Route 355 and the South Street/Reichs Ford Road interchange. The interchange consisted of a large loop ramp and a directional

connection in the southwest quadrant providing exit and entry ramps on eastbound I-70. Outer connection ramps were provided in the northwest and northeast quadrant providing exit from and entry to westbound I-70.

This alternate was dropped from further consideration due to right-of-way impacts, inadequate traffic service and inconsistency with local master plans.

b. Alternate C

Alternate C presented at the January 1980 Alternates Public Meeting consisted of a full directional interchange replacing the Md. Route 355 and the South Street/Reichs Ford Road interchanges. The replacement interchange would have been located midway between the existing interchanges.

This alternate was eliminated from further consideration because:

- Preliminary traffic analyses indicated that a central interchange could not adequately handle the anticipated traffic volumes which would have been concentrated at the intersection with Walser Drive extended.

- Newly acquired recreational property at the Md. School for the Deaf would have been impacted.

- Right-of-way was required in close proximity to active mineral extraction operations.

3. Planning Concepts

At the Alternates Public Meeting (workshop) of January 24, 1980 Mr. J. William Brosius described conceptual proposals for reconfiguration of the interchanges at I-270/U.S. Route 40, Md. Route 355, South Street/Reichs Ford Road and East Patrick Street. The proposal as further described by Mr. Brosius' letter dated February 19, 1980 to the SHA also included new access points to

and from I-270 and New Design Road, and proposed to upgrade New Design Road to a "gateway" into the City of Frederick for motorists with origins and destinations to the south toward Washington, D.C.

Similar proposals were suggested by Mr. Brosius at the Public Informational Meeting of June 14, 1984 with further description and sketches submitted by letter to the SHA dated June 25, 1984.

These proposals were eliminated from consideration because of unacceptable geometrics, weaving deficiencies, lack of continuity of street systems, reduction of traffic service and inconsistency with local master plans.

These conceptual proposals and copies of the responses, dated April 2, 1980 and August 8, 1984, are available for review in the Bureau of Project Planning, SHA, 707 N. Calvert Street, Baltimore, Maryland, 21202.

C. DESCRIPTION OF ALTERNATES UNDER CONSIDERATION

1. No-Build Alternate

No major construction or capacity improvements would occur with the No-Build Alternate. Bridge deck replacements, resurfacing and routine maintenance within the existing right-of-way would be performed as warranted.

2. Build Alternates

The most recent geometric standards promulgated by the American Association of State Highway and Transportation Officials (AASHTO) have been applied during development of the build alternates.

All build alternates are compatible with the ongoing construction of I-70 on new location from Md. 144 (East Patrick Street) easterly to Ijamsville Road and with the proposed

extension of East Street (City project) southerly to the vicinity of I-70. The East Street project is not currently included in the City budget for construction.

The seven (7) build alternates should be considered in three (3) groupings. The first grouping consists of two (2) methods of widening Interstate Route 70, Inside Widening and Outside Widening. The second grouping consists of two (2) methods of reconstructing the U.S. Route 15/340 and the I-270/U.S. Route 40 interchanges to provide missing movements. These alternates have numeral designations. The third grouping consists of three (3) methods of reconstructing the Maryland Routes 85/355 and the South Street/Reichs Ford Road interchanges. These alternates have letter designations. Thus, a complete solution to the I-70 transportation corridor problem consists of an alternate for widening inside or outside of the existing travel lanes, a numbered alternate, and a lettered alternate. The State Highway Administration has a preferred alternate in two of the groups.

The alternates under consideration are identified in the written description that follows:

a. Inside and Outside Widening Alternates

The build alternates include two (2) methods of widening I-70 to accomodate design year capacity and safety requirements. See typical sections, figure 10.

Both widening alternates propose three (3) through lanes for I-70 eastbound from Maryland Route 180 (Jefferson Pike) to Maryland Route 144 (East Patrick Street). Three (3) through lanes are proposed westbound from Maryland Route 144 to the beginning of the truck climbing lane west of Mt. Phillip Road at the base of

Catoctin Mountain.

Continuous fencing would be constructed along the right-of-way line of through highway.

The inside widening alternate locates the additional travel lane in each direction within the existing median wherever possible. This alternate would result in a 30' wide median with a continuous concrete median barrier from west of New Design Road to Md. Route 144, a distance of approximately two (2) miles. Present easement areas would be acquired in fee simple.

The outside widening alternate retains the existing median width and locates the additional lanes outside the present travel lanes. This alternate requires more bridge reconstruction and the acquisition of slightly more right-of-way than the inside widening. Outside widening requires a short segment (1,500' $\pm$) of concrete median barrier at New Design Road, but preserves the present 50' median width from Maryland Routes 355/85 to East Patrick Street.

The existing alignment is retained with a minor exception which occurs at the intersection with New Design Road (grade separation) which forms the eastern boundary of Mt. Olivet Cemetery. At this location, the alignment of I-70 is shifted south as much as 40' and utilizes a retaining wall to avoid encroachment upon the cemetery.

To minimize right-of-way acquisition and displacements, a retaining wall is proposed along the south side of I-70 immediately east of Md. 180 (Jefferson Pike). This wall avoids the acquisition of a home containing four apartments.

The outside widening alternate requires a retaining wall along the south side of I-70 west of Reichs Ford Road to avoid aquisition of a stone washhouse and encroachment near a two story frame residence. Another retaining wall is required with the outside widening alternate along the south side of I-70 immediately west of Maryland Route 144 (East Patrick Street) to avoid encroachment upon the backyards and septic drain fields of two residences within the Tulip Hill subdivision.

The preferred alternate for the widening consists of a combination of inside and outside widening.

- Inside widening from Mt. Phillip Road to I-270/U.S. Route 40
- Outside widening from I-270/U.S. Route 40 to Maryland Route 144

b. Alternates at the U.S. 340/15 and I-270 interchanges

Alternate 2

Alternate 2 proposes the addition of most missing movements at the U.S. Route 15/340 and the U.S. Route I-270 interchanges and the relocation of northbound movements at the Md. 180 interchange. (See figure 8a)

At the U.S. Route 15/340 interchange, the following new movements are proposed:

- Eastbound I -70 to southbound U.S. 15/340 (outer connection)
- Eastbound I-70 to northbound U.S. 15/340 (loop)
- Southbound U.S. 15/340 to westbound I-70 (outer connection)
- Northbound U.S. 15/340 to westbound I-70 (loop)

The northbound U.S. 15/340 to eastbound I-70 outer connection would have to be reconstructed due to its displacement

by the proposed new eastbound to northbound loop.

Providing the northbound U.S. 15/340 to westbound I-70 loop results in displacement of the existing loop ramp in the southeast quadrant of the adjacent Md. Route 180 interchange. The displaced loop ramp (northbound movements) is replaced by a new outer connection in the northeast quadrant of the Maryland Route 180 interchange, connecting to both northbound U.S. Route 15/340 and the southbound outer connection at the adjacent U.S. Route 40 interchange. The loop ramp from northbound U.S. Route 15/340 to Maryland Route 180 would be reconstructed for improved geometrics.

At the U.S. Route 40/I-270 interchange, the northbound I-270 to eastbound I-70 outer connection and the westbound I-70 to southbound I-270 loop are added. The westbound I-70 to northbound U.S. 40 outer connection and the southbound U.S. 40 to eastbound I-70 direct connection are widened to two (2) lanes. The westbound I-70 to northbound U.S. 40 outer connection would be narrowed to a single lane prior to connecting with the auxiliary lane along northbound U.S. Route 40.

Alternate 2 provides all turning movements and tends to retain through traffic on the interstate system.

Alternate 4 (Preferred Alternate)

Alternate 4 provides essentially the same accessibility as Alternate 2 without modifying the Maryland Route 180 interchange. (See figure 8b)

At the U.S. Route 15/340 interchange, the following movements are added the same as Alternate 2:

- Eastbound I-70 to southbound U.S. 15/340 (outer connection).
- Eastbound I-70 to northbound U.S. 15/340 (loop).

The northbound to eastbound outer connection would be reconstructed as per Alternate 2. Instead of reconstructing the Maryland Route 180 interchange and adding the two ramps on the north side of the U.S. Route 15/340 interchange required by Alternate 2, movements from both northbound and southbound U.S. Route 15/340 to westbound I-70 are provided by a new outer connection in the northwest quadrant of the I-270/U.S. 40 interchange.

At the U.S. Route 40/I-270 interchange, the northbound I-270 to eastbound I-70 outer connection and westbound I-70 to southbound I-270 loop movements are added similar to Alternate 2. The westbound I-70 to northbound U.S. 40 outer connection and the southbound U.S. 40 to eastbound I-70 direct connection are widened to two (2) lanes, the same as Alternate 2.

Alternate 4 provides all turning movements and tends to retain through traffic on the interstate system. There is less disruption to existing travel patterns than with Alternate 2. Alternate 4 is less costly than Alternate 2.

c. Maryland 355/85 and South Street/Reichs Ford Road Interchanges

ALTERNATE A

Alternate A proposes reconstruction of the Maryland Routes 85/355 and the South Street/Reichs Ford Road interchanges in their present configuration (type) expanded to current design standards. (See figure 9a)

Md. 355 would be combined with Md. 85 and realigned through the reconstructed interchange. The realigned roadway would taper to existing roadway widths at each end of the improvement. See typical section of improvement on figure 10.

At the Md. 85/355 interchange, the ramps in the northwest

quadrant would be expanded and relocated to form a common signalized intersection with Md. 355 opposite Walser Drive. Md. 914 (Adventist Road) would be disconnected from Maryland Route 355 and cul-de-sacced just east of the Seventh Day Adventist Church. The ramps in the southwest quadrant would be connected directly into both Maryland Routes 85 and 355. The three (3) businesses abutting the east side of Md. 355 immediately south of I-70 would continue to access the roadway.

At the South Street/Reichs Ford Road interchange, Shaw's Road would be relocated northerly approximately 300 feet at South Street to accommodate better interchange ramp geometry in the northeast quadrant. The ramps in the southeast quadrant would be expanded to intersect Reichs Ford Road south of the quarry entrance. Local access would be adjusted.

Frederick City's East Street project proposes the easterly extension of Walser Drive across the tracks of the Chessie System Railroad to South Street at relocated Shaw's Road.

ALTERNATE B

Alternate B proposes reconstruction of the Md. 85/355 intersection and the southern portions of the Md. 85/355 and South Street/Reichs Ford Road interchanges the same as Alternate A. The northern portions of these interchanges would be removed and replaced by two (2) lane exit and entrance connections into Walser Drive at proposed East Street (to be constructed by the City of Frederick). (See figures 9b and 9c)

Maryland Route 914 (Adventist Road) is realigned to intersect Maryland Route 355 opposite Walser Drive.

The Maryland Route 355/Maryland Route 914/Walser Drive intersection and the Walser Drive/East Street/intersection ramp

intersection would be signalized.

An outer connection from eastbound East Patrick Street to westbound I-70 would serve anticipated westbound commercial/ industrial traffic with origins in the vicinity of the Frederick Industrial Park and the Frederick Municipal Airport. Shifting the alignment of the proposed westbound road of I-70 south, eliminating the safety grading and reducing the median width, eliminates the need to acquire School property.

Two (2) optional alignments of extended Walser Drive comprise the variations of Alternate B under consideration:

ALTERNATE B-1

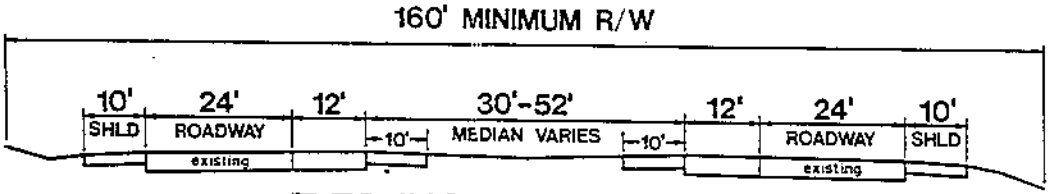
Alternate B-1 extends Walser Drive easterly to South Street to an adjusted location of Shaw's Road aligning with the City's proposed Monocacy Boulevard (See figure 9b). Walser Drive would cross an industrial siding and the Frederick Subdivision (spur track) of the Chessie System Railroads just west of South Street. The at-grade railroad crossing at South Street would be protected with signals as required by pertinent standards. It is anticipated that the end of the siding track will be abandoned, resulting in a single railroad crossing which carries four (4) trains per day. The Walser Drive/Shaw's Road/South Street intersection would probably warrant signalization by the design year.

ALTERNATE B-2

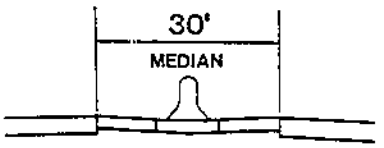
Alternate B-2 extends Walser Drive northeasterly to South Street at Franklin Street. The Walser Drive/South Street/Franklin Street intersection would probably require signalization by the design year. (See figure 9c)

This alignment passes to the west of the Farmers Cooperative Association fertilizer plant crossing both the industrial track siding and the Frederick Subdivision (spur track) at-grade. The

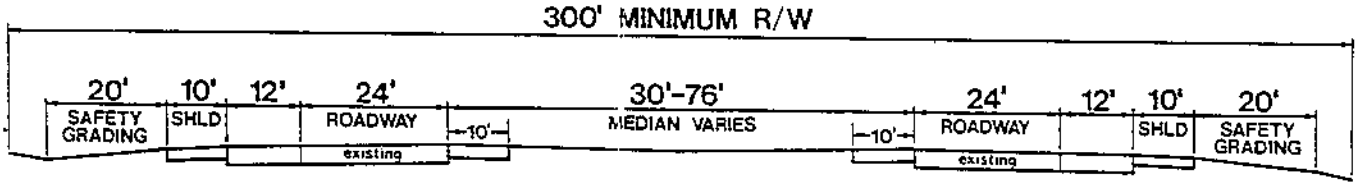
TYPICAL SECTIONS OF IMPROVEMENT



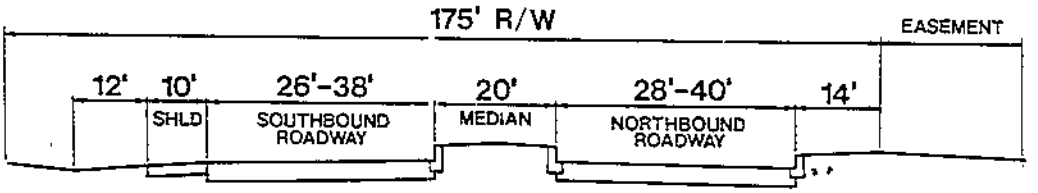
I-70 INSIDE WIDENING



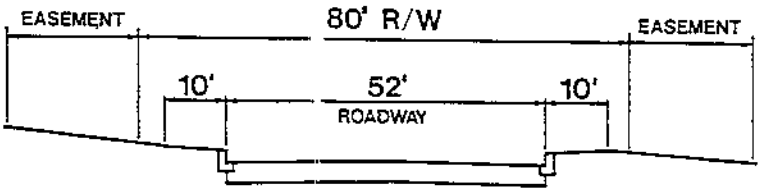
BARRIER



I-70 OUTSIDE WIDENING



MD. 85/355



WALSER DRIVE

FIGURE 10

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

industrial siding is in active service at this location with approximately two (2) trains per month to the fertilizer plant and occasional trains to Genstar's equipment maintenance shop. Thus, there would be two (2) at-grade railroad crossings with this alternate which may require protective signalization.

Alternates B-1 and B-2 are compatibile with the planned local street system, allow continuance of Maryland Route 914 (Adventist Road) and provide a direct connection between I-70 and East Street.

Alternate B-1 has the most "sinkhole" involvement, requires a railroad at-grade crossing and introduces a new traffic pattern.

Alternate B-2 requires relocation of a stormwater management impoundment and two (2) railroad at-grade crossings. It requires the most displacement of residents and introduces new traffic patterns. It has moderate involvement with "sinkholes" and is the most costly.

d. PREFERRED ALTERNATE

The preferred alternate of the State Highway Administration consists of: (Figure 11)

- Inside widening from Mt. Phillip Road to I-270/U.S. Route 40;

- Outside widening from I-270/U.S. Route 40 to Md. Route 144 (East Patrick Street) and

- Alternate 4

No preferred alternate has been selected for the improvement of the Maryland Route 355/85 and South Street/Reichs Ford Road interchanges due to the sinkhole involvement in this area.

STUDY LIMIT

← TO HAGERSTOWN

MT. PHILLIP ROAD

BUTTERFLY LANE

N

1" = 600'

TO BALTIMORE →

PENTER ROAD

15

ED CRONE LANE

INTERSTATE ROUTE 70

LANE

HOLTON

LEGEND

EXISTING ROADWAY

PROPOSED IMPROVEMENT

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

AIR AND NOISE RECEPTORS ①

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

INSIDE WIDENING

FIGURE 7a

STUDY LIMIT

← TO HAGERSTOWN

MT. PHILLIP ROAD

BUTTERFLY LANE

N

1" = 600'

TO BALTIMORE →

PENTER ROAD

15

ED CRONE LANE

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

INTERSTATE ROUTE 70

LEGEND

EXISTING ROADWAY

PROPOSED IMPROVEMENT

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

AIR AND NOISE RECEPTORS ①

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

OUTSIDE WIDENING

FIGURE 7b

LEGEND

EXISTING ROADWAY

PROPOSED IMPROVEMENT

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

AIR & NOISE RECEPTORS

HISTORIC SITES ON OR ELIGIBLE FOR THE NATIONAL REGISTER

N

1" = 600'

U.S. ROUTE 15/40

JEFFERSON STREET

U.S. ROUTE 40

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

CITY OF FREDERICK

MT. OLIVET CEMETERY

MD. ROUTE 355 MARKET STREET

MARYLAND SCHOOL FOR THE DEAF

LOATS PARK

WALSER DRIVE

MD. ROUTE 144

TRUCK CITY

MATCH

CHURCH

MD. ROUTE 180 BALLENGER CREEK PIKE

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

INTERSTATE ROUTE 270

NEW DESIGN ROAD

LINE

MD. ROUTE 85 BUCKEYSTOWN PIKE

MD. ROUTE 355

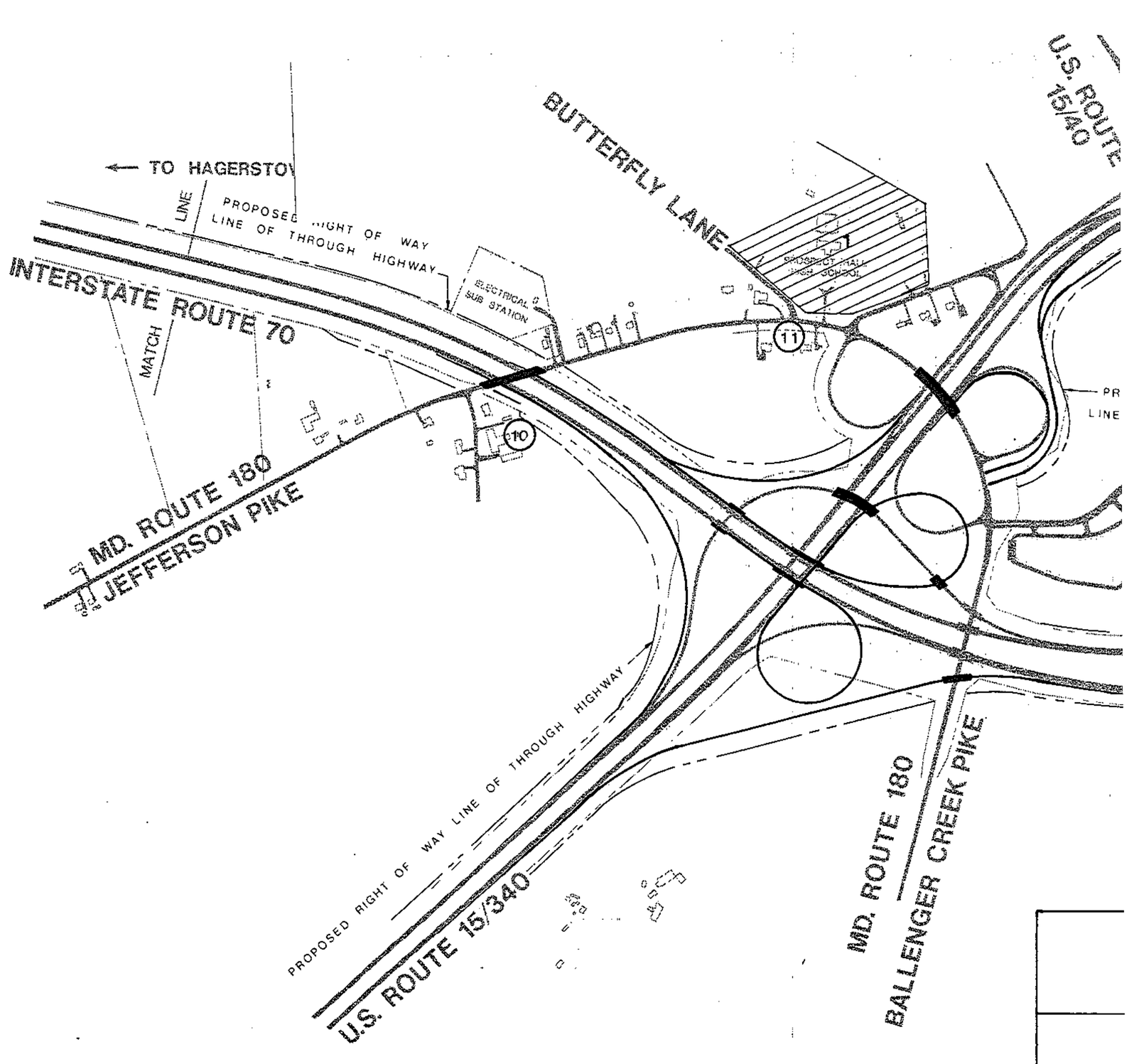
Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

ALTERNATE 2

FIGURE 8a


TO HAGERSTOWN
PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
MATCH LINE
INTERSTATE ROUTE 70
ELECTRICAL SUB STATION
BUTTERFLY LANE
U.S. ROUTE 15/40
11
10
MD. ROUTE 180
JEFFERSON PIKE
PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
U.S. ROUTE 15/340
MD. ROUTE 180
BALLENGER CREEK PIKE

LEGEND

EXISTING ROADWAY

PROPOSED IMPROVEMENT

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

AIR & NOISE RECEPTORS

HISTORIC SITES ON OR ELIGIBLE FOR THE NATIONAL REGISTER

N

1" = 600'

U.S. ROUTE 15/40

JEFFERSON STREET

U.S. ROUTE 40

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

CITY OF FREDERICK

MT. OLIVET CEMETERY

MD. ROUTE 355 MARKET STREET

MARYLAND SCHOOL FOR THE DEAF

LOATS PARK

WALSER DRIVE

MD. ROUTE 914

MD. ROUTE 180 BALLENGER CREEK PIKE

INTERSTATE ROUTE 270

NEW DESIGN ROAD

MD. ROUTE 85 BUCKEYSTOWN PIKE

MD. ROUTE 355

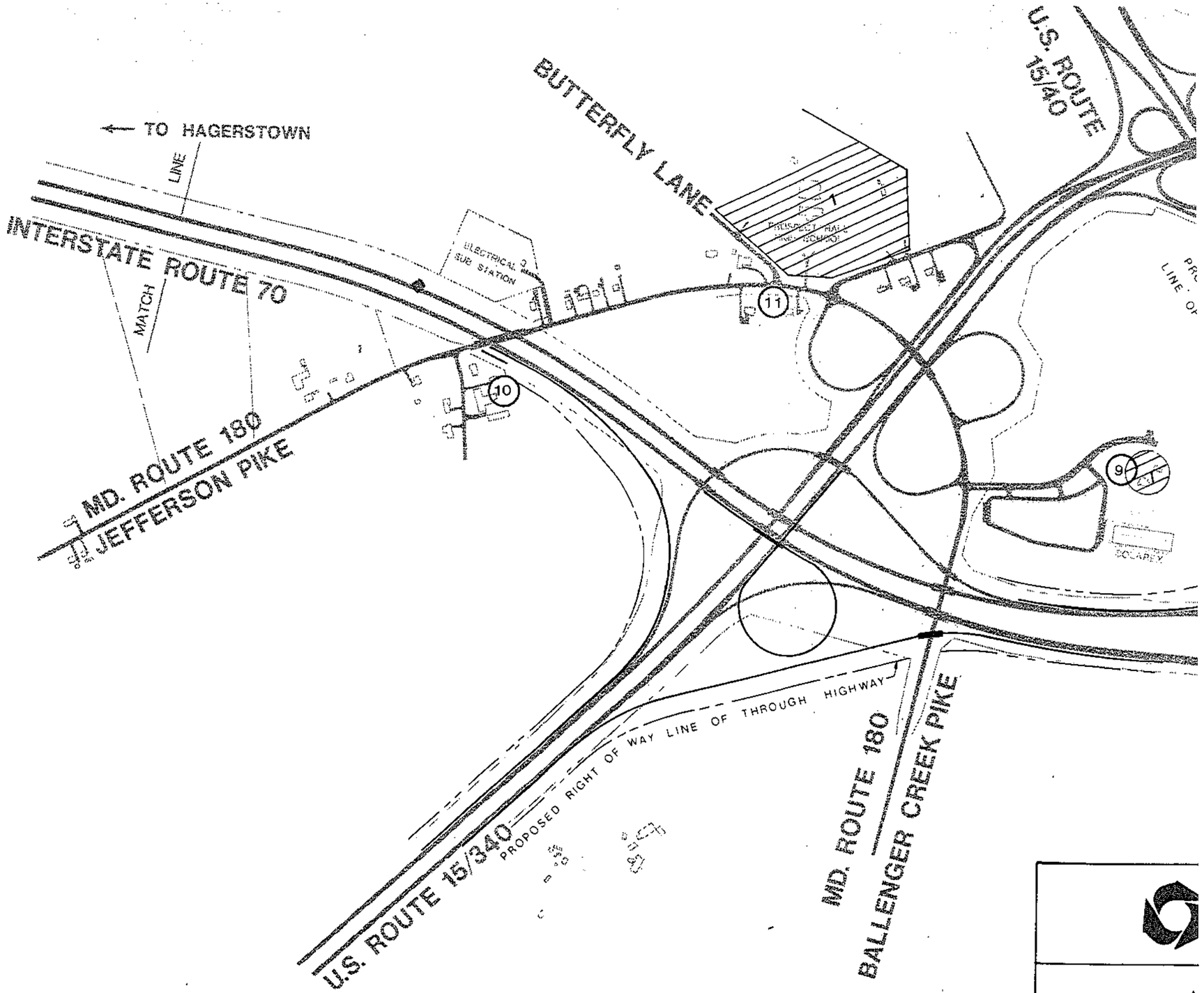
Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

ALTERNATE 4

FIGURE 8b


← TO HAGERSTOWN
LINE
MATCH
INTERSTATE ROUTE 70
MD. ROUTE 180
JEFFERSON PIKE
ELECTRICAL SUB STATION
BUTTERFLY LANE
U.S. ROUTE 15/40
11
10
9
U.S. ROUTE 15/340
PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
MD. ROUTE 180
BALLENGER CREEK PIKE

MT. PHILLIP

PROPOSED EAST STREET

SOUTH FRANKLIN STREET

MD. ROUTE 144

PROPOSED MONOCACY BLVD.

FREDERICK INDUSTRIAL PARK

BAILES LANE

TO AIRPORT

STUDY LIMIT

SHAWS ROAD

TO BALTIMORE

INTERSTATE ROUTE 70

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

REICH'S FORD ROAD

U.S. ROUTE 40

TULIP HILL

N

1" = 600'

LEGEND

EXISTING ROADWAY

PROPOSED IMPROVEMENT

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

AIR & NOISE RECEPTORS

HISTORIC SITES ON OR ELIGIBLE FOR THE NATIONAL REGISTER

Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

ALTERNATE A

MD. ROUTE 355
MARKET STREET

PROPOSED EAST STREET

WALSER DRIVE

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

MD. ROUTE 85
BUCKEYSTOWN PIKE

I.D. ROUTE 355

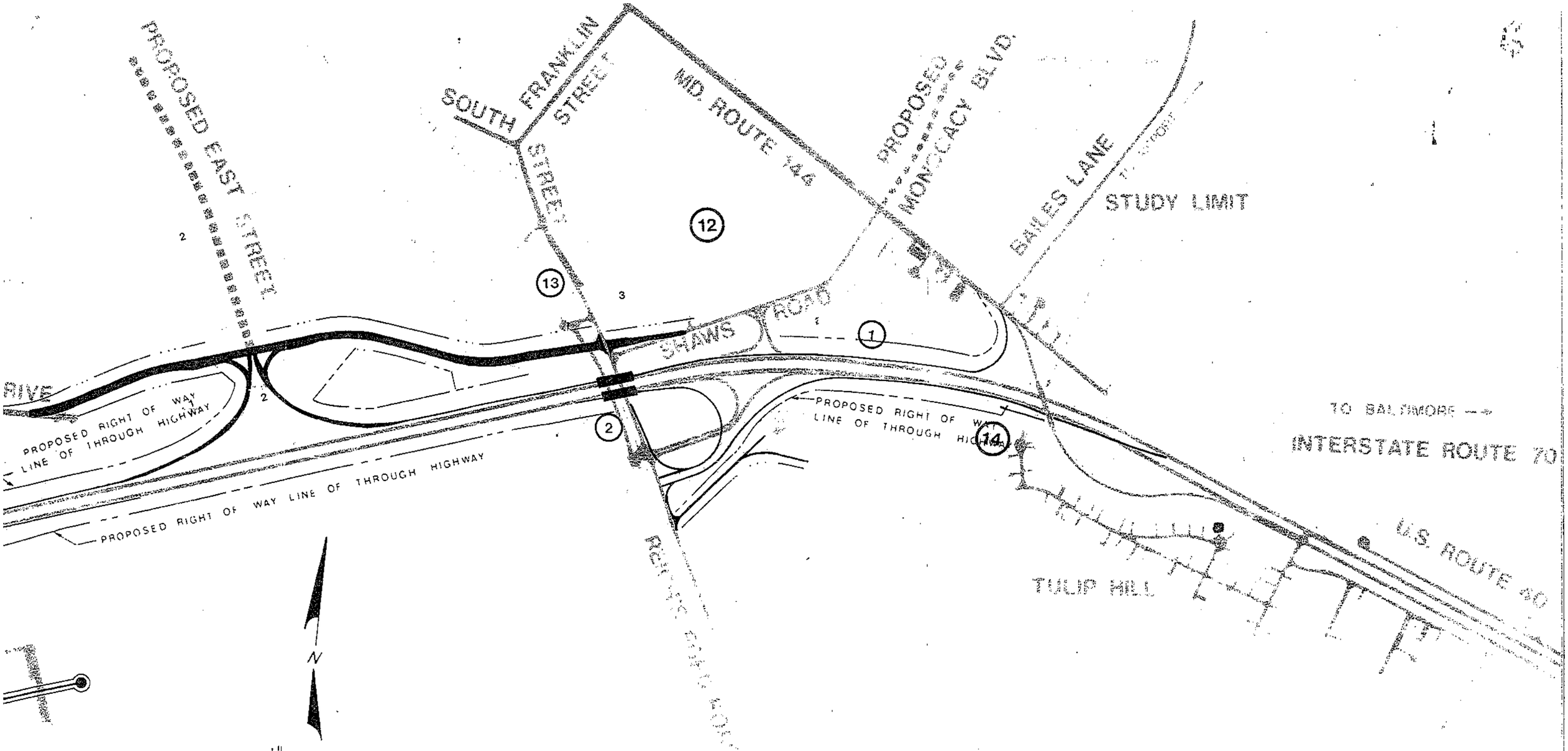
MT. OLIVET CEMETERY

MATCH LINE

N

1" = 600'

EXI
PRO
PRO
OF
EXI
OF
AIR
HIS
FOR



LEGEND

- EXISTING ROADWAY
- PROPOSED IMPROVEMENT
- PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
- EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY
- AIR & NOISE RECEPTORS
- HISTORIC SITES ON OR ELIGIBLE FOR THE NATIONAL REGISTER (1)

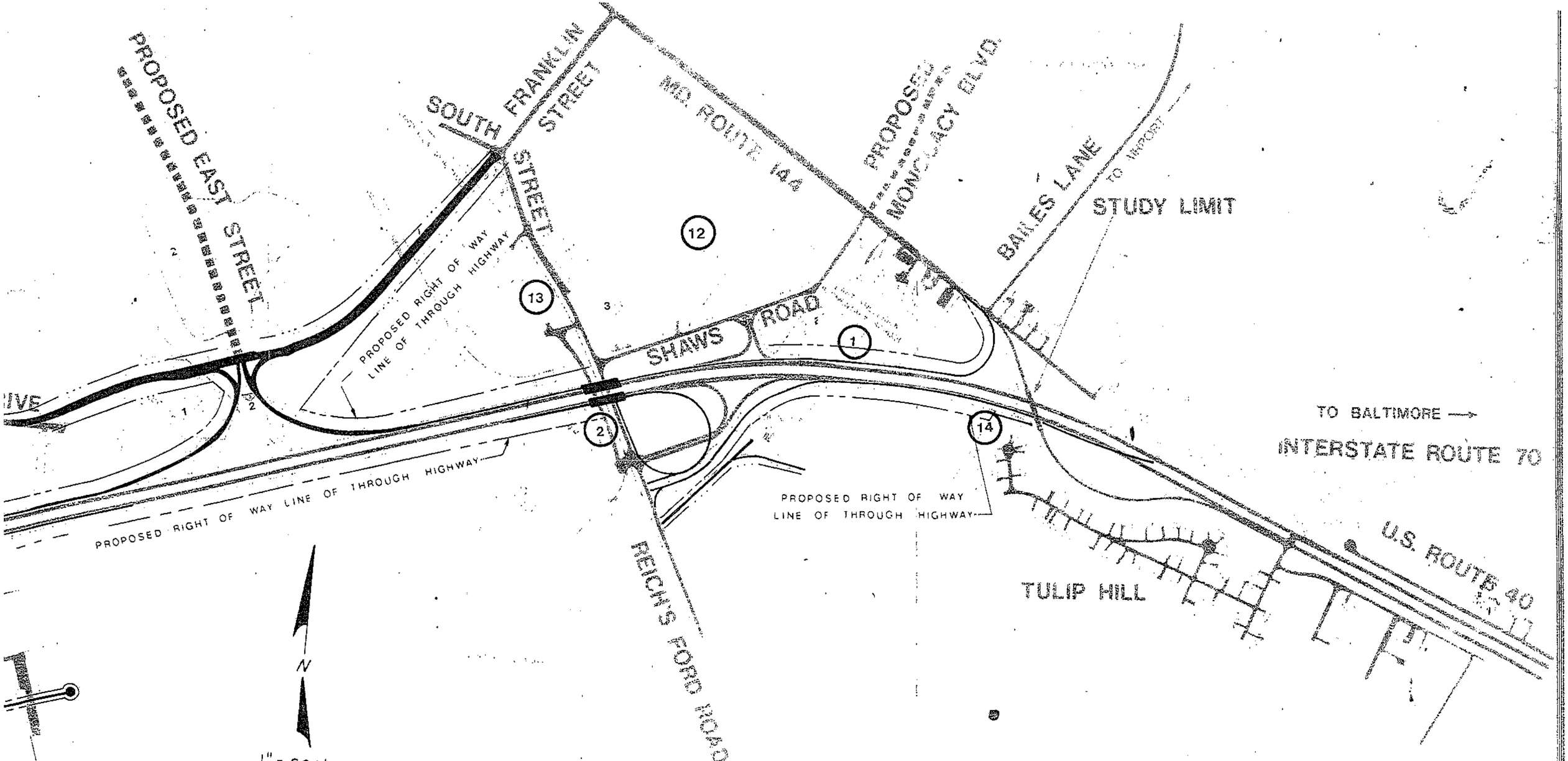
Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

ALTERNATE B-1

FIGURE 9b


PROPOSED EAST STREET
SOUTH FRANKLIN STREET
MD. ROUTE 144
PROPOSED MONOCACY BLVD.
BAKERS LANE
TO NEWPORT
STUDY LIMIT
PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
SHAWS ROAD
TO BALTIMORE
INTERSTATE ROUTE 70
U.S. ROUTE 40
TULIP HILL
REICH'S FORD ROAD
PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
N
1" = 600'
LEGEND
EXISTING ROADWAY
PROPOSED IMPROVEMENT
PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY
EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY
AIR & NOISE RECEPTORS
HISTORIC SITES ON OR ELIGIBLE FOR THE NATIONAL REGISTER
Maryland Department of Transportation
State Highway Administration
INTERSTATE ROUTE 70
MT. PHILLIP ROAD TO MARYLAND ROUTE 144
ALTERNATE B-2
FIGURE 9c

STUDY LIMIT

← TO HAGERSTOWN

MT. PHILLIP ROAD

BUTTERFLY LANE

N

1" = 600'

TO BALTIMORE →

ARPENTER ROAD

ED CRONE LANE

INTERSTATE ROUTE 70

LEGEND

EXISTING ROADWAY

PROPOSED IMPROVEMENT

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

PREFERRED ALTERNATE

FIGURE 11a

LEGEND

EXISTING ROADWAY

PROPOSED IMPROVEMENT

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

HISTORIC SITES ON OR ELIGIBLE FOR THE NATIONAL REGISTER

N

1" = 600'

U.S. ROUTE 15/40

JEFFERSON STREET

U.S. ROUTE 40

PROPOSED RIGHT OF WAY LINE OF THROUGH HIGHWAY

EXISTING RIGHT OF WAY LINE OF THROUGH HIGHWAY

CITY OF FREDERICK

MT. OLIVET CEMETERY

MD. ROUTE 355 MARKET STREET

WALSER DRIVE

MD. ROUTE 180 BALLENGER CREEK PIKE

INTERSTATE ROUTE 270

NEW DESIGN ROAD

MD. ROUTE 85 BUCKEYSTOWN PIKE

MD. ROUTE 144

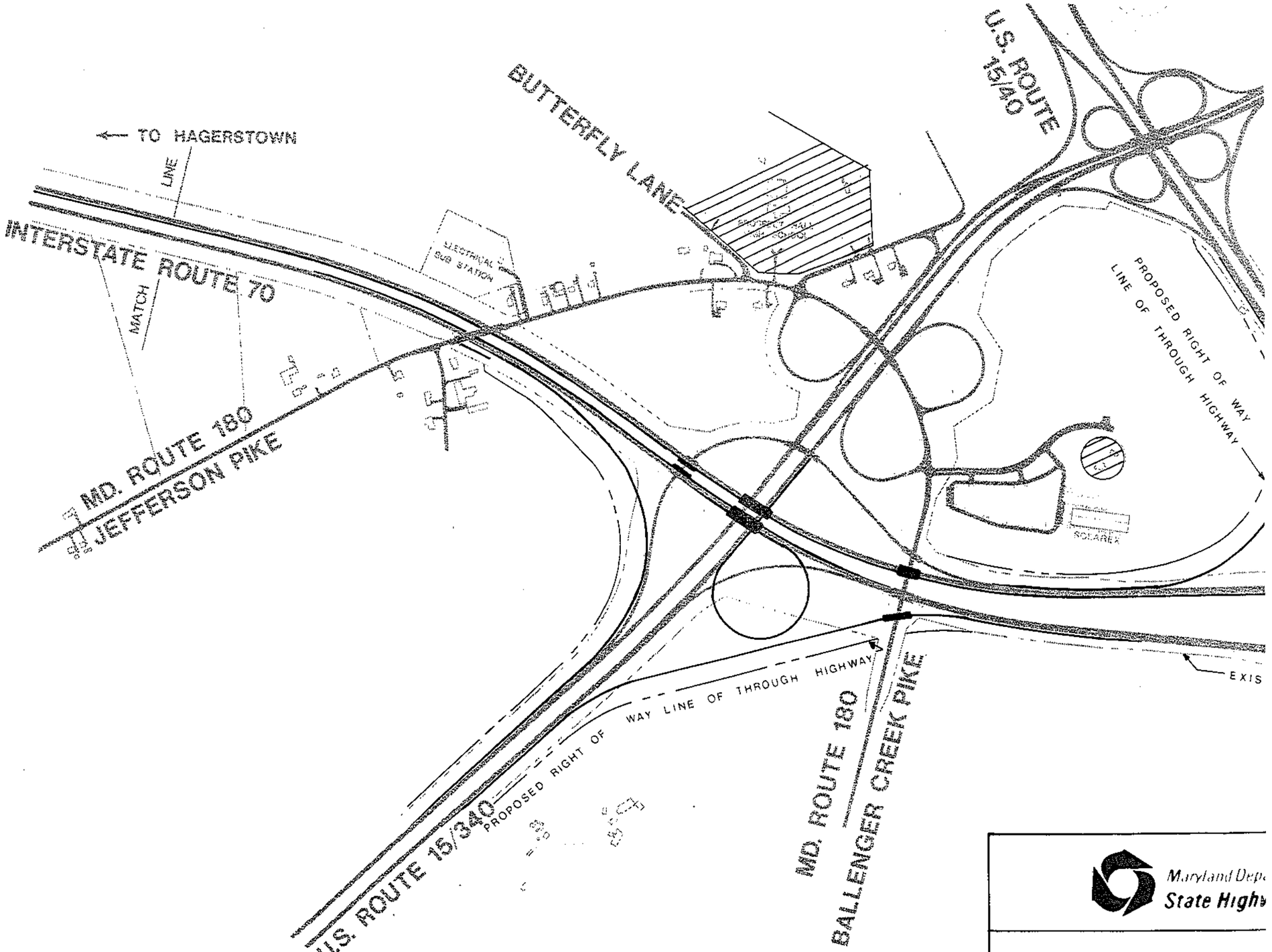
Maryland Department of Transportation
State Highway Administration

INTERSTATE ROUTE 70

MT. PHILLIP ROAD TO MARYLAND ROUTE 144

PREFERRED ALTERNATE

FIGURE 11b



Maryland Dep
State Highw

INTERSTATE

MT. PHILLIP ROAD TO

PREFERRED

MARYLAND ROUTE 355

MARYLAND ROUTE 914

PARK BOUNDARY

Reserved for Handicapped

BALL FIELD

B

PRACTICE

BALL FIELD

Parking

BALL FIELD

A

TENNIS COURTS

Volleyball Court

PICNIC AREA

NEW DESIGN ROAD

Parking

PLAYGROUND

INTERSTATE ROUTE 70

LOATS PARK

Loats Park

ALTERNATE A

RIGHT OF WAY

PROPERTY REQUIRED

NO SCALE

FIGURE 12

IV. ENVIRONMENTAL IMPACTS

IV. ENVIRONMENTAL IMPACTS

A. SOCIAL, ECONOMIC AND LAND USE IMPACTS

No-Build Alternate

The No-Build Alternate would adversely affect the business and industrial communities which depend on the local highway network for transporting goods and services. In addition, many local residents commute to work using I-70 and the four interchanges. Failure to make the proposed improvements will result in increased congestion and accident rates. A dangerous and congested transportation network will discourage potential employment sources from locating in the Frederick area.

Failure to improve the existing situation may also limit the planned residential development from occurring in accordance with area development plans.

Further, the No-Build Alternate is inconsistent with local Master Plans and would not accommodate predicted traffic increases through the design year 2010.

Inside and Outside Widening

The inside widening alternate would require the relocation of one business, a trucking company. The outside widening alternate would require displacement of one family and the same trucking company.

With both inside and outside widening alternates, access to community facilities and services would improve. Congestion would decrease and safety would improve for both local and through traffic.

Neither alternate would affect the cohesion or integrity of nearby communities.

None of the alternates would impact any prime farmland as defined by the Farmland Protection Policy Act of 1981 (Final Rule effective August 6, 1984). Some farmland of statewide importance would be impacted at the western end of the project by the outside widening alternate. Coordination with the Soil Conservation Service concerning this statewide - important farmland is underway.

Alternates 2 and 4

No relocations would be required with either Alternate 2 or 4 and there would be no impacts to the integrity or cohesion of any communities. The U.S. 15/340 and U.S. 40/I-270 interchanges serve (or will serve) several existing (and proposed) residential communities, as well as regional and interstate traffic. The proposed improvements would benefit these communities by improving the safety and travel times for all traffic using the interchanges.

In addition, these improvements to the local transportation network would support the county's plan for keeping residential growth within the Frederick planned growth area. Much of the recent growth in the Frederick area is characterized by residents who commute to work using I-70 and/or I-270. Improving their access to these corridors will enhance the attractiveness of living in or near Frederick without directly improving access to areas outside the planned growth area. Thus, both Alternate 2 and 4 are consistent with the county's desire to discourage growth outside this area such as in the large belt of prime farmland that surrounds Frederick City.

Alternates A, B-1 and B-2

Alternates A and B-1 would both require the displacement of two businesses. No families or farms would be affected. Alternate B-2 would require the displacement of four families and two businesses. None of the alternates would affect the cohesion or integrity of any communities.

All three alternates would have positive impacts on the business and industrial communities which are located on the eastern and southern edge of the city. Although access to three businesses would be slightly more circuitous because of the frontage road on Maryland Route 355, safety and travel time would improve. This would especially benefit the truck traffic serving the area, and would enhance the viability of the Frederick area as the county's major market place.

Alternate B-1 is the alternate most consistent with the Frederick City and County Comprehensive Plans.

None of the build alternates would adversely impact any minority groups, or handicapped individuals. All the required relocations are expected to be accomplished with minimal impact to the economic well-being of the companies and the family which would be involved. The relocations would be accomplished within a twelve month period.

Relocation would be handled in accordance with the requirements of the "Uniform Relocation Assistance and Land Acquisition Policies Act of 1970". All relocations would be treated in a timely, orderly and humane manner. Adequate housing is available for all the individuals to be relocated. All families

would be relocated into decent, safe and sanitary housing within their financial means. "Housing as a Last Resort" would be provided if necessary.

TITLE VI STATEMENT

It is the policy of the Maryland State Highway Administration to ensure compliance with the provisions of Title VI of the Civil Rights Act of 1964, and related civil rights laws and regulations which prohibit discrimination on the grounds of race, color, sex, national origin, age, religion, physical or mental handicap in all State Highway Administration program projects funded in whole or in part by the Federal Highway Administration. The State Highway Administration will not discriminate in highway planning, highway design, highway construction, the acquisition of right-of-way, or the provision of relocation advisory assistance.

This policy has been incorporated into all levels of the highway planning process in order that proper consideration may be given to the social, economic, and environmental effects of all highway projects. Alleged discriminatory actions should be addressed to the Equal Opportunity Section of the Maryland State Highway Administration for investigation.

B. SAFETY IMPACTS

All of the proposed alternates would alleviate operational and/or design deficiencies now found on the existing facility. These improvements would reduce the accident potential at the interchanges which have ramps of substandard design, or which are missing ramp movements completely. However, due to the

below-average accident experience now found in these areas, any accident reduction that occurs as a result of the proposed improvements cannot accurately be predicted.

Both of the widening alternates propose the construction of two additional through lanes to the existing four-lane, divided facility. These alternates would differ only in median width and design. Therefore, both alternates would be considered the same design class highway, and they would experience similar accident rates. Since the accident rate on the existing facility is below statewide average for this highway design, we could also expect these two alternates to operate with an accident rate below the statewide average as well.

Proposed Alternates "2" and "4" would add missing ramp movements to the interchanges of I-70 at U.S. 15/340 and I-70 at U.S. 40 and I-270. The construction of these ramps would provide additional access to I-70 that is necessary to allow free traffic flow in the area, reducing current traffic demands on U.S. 40 through Frederick.

Alternates "A" and "B" are proposed to rebuild the existing ramps at the interchanges of I-70 at Maryland 355 and I-70 at South Street/Reichs Ford Road, increasing the turning radii in accordance with higher design standards. This would provide safer truck movements and also a more gradual deceleration for the motorist when exiting from I-70 onto these ramps.

Under a No-Build Alternate, the operation deficiencies caused by the missing ramp movements will be magnified as the traffic volumes increase from development in the area. The existing substandard ramps are also a factor that is critical due to the concentration of heavy-duty trucks using these interchanges. These conditions create the potential for increased accident experience in the study area if no improvements are made.

C. PARKS AND RECREATION FACILITIES IMPACTS
(see Section 4(f) Involvement for detailed discussion)

No-Build Alternate

This alternate would not affect any parks or public recreation areas.

Inside and Outside Widening

Impacts to parks or recreation areas as a result of the proposed outside widening alternate are considered under the discussion for Alternates A, B-1, and B-2.

Alternates 2 and 4

These alternates would not result in impacts to either parks or public recreation areas.

Alternates A, B-1 and B-2 (Figures 9a, b, and c)

Alternate A requires the acquisition of 4.8 acres of right-of-way from Loats Park as the result of the reconstruction of the northwest quadrant ramps and the proposed widening of Md. Route 355.

D. HISTORICAL AND ARCHEOLOGICAL SITE IMPACTS

1. Historical Sites

The proposed build alternates will have no adverse effect on three historic sites eligible for or listed on the National Register of Historic Places; Linden Grove, Guilford, and Prospect Hall.

2. Archeological Sites

No significant archeological sites would be impacted. (See letters from the Maryland Historical Trust in the Appendix.)

E. NATURAL ENVIRONMENTAL IMPACTS

1. Geology

The occurrence of sinkholes associated with the karst topographic features within the study area is of major concern. Sinkholes are unstable geologic formations. Once the weight of the topsoil has collapsed into the limestone cavities, the bottom of the sinkhole is in contact with the watertable. Any materials placed within it, therefore, have the potential of impacting water quality in the surrounding area.

Sinkholes provide a valuable service to the local groundwater system by rapidly recharging the underground aquifer. The aquifer that lies to the southeast of the city of Frederick is the same one recharged by the sinkholes cited in this project. The City is currently considering utilizing this aquifer for three well stations to supplement the City's Water supply.1 The public water system is currently supplied by the Monocacy River, Linganore

1. Frederick County Comprehensive Plan Update Frederick Region, draft

Creek, Fishing Creek Reservoir, and Tuscarora Creek Impoundment.2

The amount of drainage provided by the sinkholes in the study area was preliminarily investigated. (See Section I. C. 6-b) Adequate drainage of the surrounding area will be maintained to ensure that no flooding occurs as a result of this project. The drainage provided by any one of the sinkholes could discontinue or new sinkholes could appear at any time. Therefore, the results of a State Highway Administration sinkhole study which is currently underway will be included in the final environmental document.

2. Soils

A portion of the land needed for this project is currently under cultivation. The only section zoned agricultural, however, is located directly east of Mt. Phillip Road.

No prime farm land will be affected.

3. Surface Water

The widening of I-70 will result in the widening of three (3) pipes or culverts for tributaries of Ballenger Creek located west of the U.S. 15/340 interchange. Alternates 2 and 4 will involve structure modifications at one (1) more tributary.

To prevent excessive sedimentation in the streams, a sediment control plan will be developed and vigorously applied throughout the project area. The sediment control plan will be submitted to DNR's Water Resources Administration for approval.

All build alternates would be subject to stormwater management regulations. Appropriate impoundments and adequate stormwater outfalls would be provided.

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2. Frederick County Comprehensive Plan, Volume 11:
Regional Plans
Frederick Planning Commission Recommendation

Preliminary studies show that sinkholes in the project area between Md. 355 and East Patrick Street function as highway stormwater drainage outfalls. Severe flooding could result if these sinkholes cease. Therefore, a drainage outfall has been developed as an alternative to the continued use of the sinkholes to ensure that no flooding occur as a result of this project. A Waterway Construction Permit would be required from the Department of Natural Resources if the proposed outfall is constructed. A more detailed discussion of this alternative outfall will be included in the Final Environmental Document.

Filtration methods will be employed to ensure that additional vehicle generated roadway pollutants (coolants, rubber, heavy metals, etc.) and de-icing agents in stormwater runoff will not significantly alter the groundwater composition.

4. Floodplains and Wetlands

The project would not impact any designated wetland or infringe upon a 100-year floodplain.

5. Ecology

a. Vegetation

A major part of the construction for this project will take place within the existing mowed right-of-way. This loss is insignificant in terms of vegetation. There will be some loss of woodland vegetation in the two areas mentioned in the vegetation section. The loss of the small tract north of I-70 is insignificant as this area is already severely disturbed as the result of dirt bike riding.

Alternate B-1 impacts 5.6 acres of woodland, and Alternate B-2 impacts 6.5 acres. Attempts will be made to retain the vegetation near the headwaters of the tributary of Ballenger Creek (between

U.S. 15/340 and Mt. Phillip Road), as it serves as a protective buffer for the stream.

Small portions of agricultural field would be lost in the vicinity of the I-270/U.S. 40 interchange, the 15/340 interchange, and directly east of Mt. Phillip Road.

The No-Build Alternate would incur no impacts on the study area vegetation.

b. Unique/Sensitive Areas

This project will not impact Maryland Upland Natural Area Number 5300 as no improvements are proposed in the vicinity.

c. Wildlife

1. Terrestrial

As mentioned earlier, there is very little remaining natural habitat or wildlife along this strip of I-70. The right-of-ways are mowed and offer little food or cover for wildlife. The forested tract north of I-70 is dissected by motorbike tracks, is very noisy, and does not offer suitable habitat. Selection of Alternate B-1 or B-2 would require property from this area. Comparatively, the area of greatest wildlife use is the streamside vegetation along Ballenger Creek. Every effort will be made to maintain this vegetative buffer and thus minimize impacts to wildlife.

2. Aquatic

The "build" alternates would cross four (4) tributaries of Ballenger Creek. Increased siltation and turbidity would occur which may adversely affect aquatic life. Streamside vegetation would be removed. Sediment and erosion control plans will minimize the effects of construction activities and stormwater management will reduce the amount of roadway pollutants which enter the

tributaries. These control measures should reduce the potential adverse effects to aquatic life.

3. Endangered Species

There are no known populations of threatened or endangered species within the study area.

F. AIR QUALITY IMPACTS

1. Analysis Objectives, Methodology, and Results

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

A microscale CO pollution diffusion analysis was conducted using the third generation California Line Source Dispersion Model, CALINE 3. This microscale analysis consisted of projections of 1 hour and 8 hour CO concentrations at sensitive receptor sites under worst case meteorological conditions for the No-Build and the Build Alternates for the design year (2010) and the estimated year of completion (1990).

a. Analysis Inputs

A summary of analysis inputs is given below. More detailed information concerning these inputs is contained in the Interstate Route 70 Air Quality Analysis which is available for review at the Maryland State Highway Administration, 707 North Calvert Street, Baltimore, Maryland, 21202.

Background CO Concentrations

In order to calculate the total concentration of CO which occurs at a particular receptor site during worst case meterological conditions, the background CO concentrations are considered in addition to the levels directly attributable to the facility under consideration. The background concentration resulting from area-wide emissions from both mobile and stationary sources were assumed to be the following:

	CO, PPM	
	1 hour	8 hour
1990	2.0	1.0
2010	2.0	1.0

Traffic Data, Emission Factors, and Speeds

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

The composite emission factors used in the analysis were derived from the Environmental Protection Agency (EPA) Mobile Source Emission Factors (March, 1978) and were calculated using the EPA MOBILE 1 computer program. An ambient air temperature of 20° F was assumed in calculating the emission factors for the 1 hour analysis and 35° F for the 8 hour analysis in order to approximate worst case results for each analysis case.

Average vehicle operating speeds used in calculating emission factors were based on the capacity of each roadway link considered, the applicable speed limit, and external influences on speed through the link from immediately adjacent links.

Meteorological Data

Worst-case meteorological conditions of 1 meter/second for wind speed and atmosphere stability class F were assumed for both the 1 hour and 8 hour calculations. In addition, as stated above, a worst-case temperature of 20° F was assumed for the 1 hour analysis and 35° F for the 8 hour analysis.

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

b. Sensitive Receptors

Site selection of sensitive receptors were made on the basis of proximity to the roadway, type of adjacent land use, and changes in traffic patterns on the roadway network. Fifteen (15) receptor sites were chosen for this analysis consisting of seven (7) residences, three (3) historic sites, two (2) schools, a cemetery, a church, and a motel. The receptor site locations were verified during study area visits by the analysis team. A general receptor site location map is shown on Figures 7-9 and a description of the receptor sites follows:

Receptor Number	Location/Description
1	East Frederick Elementary School 1 story brick, No air conditioning East Patrick Street
2	2 story frame 7819 Reichs Ford Road
3	I-70 Motor Inn Md. 355

Receptor Number	Location/Description
4	Maryland School for the Deaf Carroll Street, No air conditioning
5	Residence, 1 and 1/2 story brick 5874 Md. 355
6	7th Day Adventist Church
7	Mount Olivet Cemetery
8	Historic Site 5927 New Design Road
9	Historic Site (Solarex Corporation) 2 1/2 story brick
10	Residence, 2 1/2 story aluminum siding 6023 Fair Oaks Road
11	Residence, 1 story brick 6446 Md. 180
12	Residence, 2 story stone Park Hall 1100 East Patrick Street
13	Residence, two story frame 802 South Street
14	Residence, one story brick 6206 Fairfax Court
15	Residence, one story brick Mount Phillip Road

c. Results of Microscale Analysis

The results of the calculations of CO concentrations at each of the sensitive receptor sites for the No-Build and Build Alternates are shown on Table 6. The values shown consist of predicted CO concentrations attributable to traffic on various roadway links plus projected background levels. A comparision of the values in Table 6 with the S/NAAQS shows that no violations will occur for the No-Build or Build Alternates.

In general, the Build alternate for the 1 hour analysis

TABLE 6

CO CONCENTRATIONS (PPM)

Receptor	1990				2010			
	1 Hour		8 Hour		1 Hour		8 Hour	
	No Build	Build	No Build	Build	No Build	Build	No Build	Build
1. School	4.2	4.1	2.6	2.6	8.8	5.6	3.3	3.6
2. Historic Site	3.6	4.0	2.2	2.5	8.5	5.1	3.2	3.1
3. Inn	3.5	3.0	2.1	1.8	6.3	4.0	2.5	2.4
4. School	2.6	2.8	1.4	1.8	4.2	3.0	1.6	1.8
5. Residence	3.7	3.0	2.2	1.9	4.2	3.1	2.8	1.8
6. Church	4.0	4.3	2.4	2.8	8.1	5.8	3.1	3.6
7. Cemetery	3.5	3.6	2.1	2.4	5.1	5.0	3.1	2.1
8. Historic Site	2.8	2.8	1.5	1.5	4.2	3.2	1.7	1.7
9. Historic Site	2.8	2.8	1.5	1.5	4.2	3.4	1.7	2.1
10. Residence	2.8	2.6	1.5	1.5	3.2	3.2	1.7	1.8
11. Residence	2.4	2.6	1.4	1.5	2.8	2.6	1.5	1.5
12. Residence	2.6	2.3	1.4	1.3	5.0	2.8	1.8	1.6
13. Residence	2.6	2.3	1.4	1.3	3.0	2.5	1.2	1.5
14. Residence	2.8	2.8	1.5	1.5	4.0	3.4	2.2	2.1
15. Residence	2.6	2.5	1.4	1.3	3.5	3.0	1.6	1.7

National Ambient Air Quality Standards are: 1 Hour Peak - 35 PPM
8 Hour Peak - 9 PPM

Concentrations shown include background concentrations: 1 Hour - 2.0 PPM
8 Hour - 1.0 PPM

produces slightly lower concentrations than the No-Build in 1990 due to increased travel speeds associated with the Build Alternate. In 2010, the 1 hour concentrations for the No-Build Alternate are consistently higher than the Build Alternate due to lower travel speeds expected under the No-Build Alternate. The 8 hour concentrations are consistently lower than the 1 hour concentrations due to the higher travel speeds during the off-peak period and the lower traffic volumes.

In conclusion, the No-Build and Build Alternates will not result in violations of the 1 hour or 8 hour S/NAAQS in 1990 or 2010.

2. Construction Impacts

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

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

3. Conformity with Regional Air Quality Planning

This project is an area where the State Implementation Plan does not contain any transportation control measures. Therefore,

the conformity requirements of 23 CFR 770 with the exception of the construction procedures do not apply to this project.

4. Agency Coordination

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

G. NOISE IMPACTS

The purpose of the Noise Impact Analysis was to determine the change in noise levels at sensitive receptors adjacent to the project, due to the proposed improvements.

The noise abatement criteria as currently defined in the FHWA Procedures for Abatement of Highway Traffic Noise and Construction Noise (Table 6) were used to determine the overall noise impact of the proposed project. These criteria state that, for the existing land use categories in the project area, design-hour L_{10} sound levels should not exceed 70 dBA. The L_{10} level represents the noise level that is exceeded for ten percent of a predetermined time period, in this case one hour.

In order to assess the "worst case" condition, the analysis was performed utilizing the outside widening alternate, as this would place traffic closest to the noise sensitive areas. Design year levels for the No Build Alternate were also projected.

Future year (2010) noise levels modeling for both the Build and No-Build conditions was performed using the STAMINA 2.0 computer model developed by FHWA. This model allows the input of multiple roadways and receptors making it ideal for the project's configuration.

Necessary input data for the STAMINA program included:

- Coordinates and elevation of each roadway segment;

TABLE

NOISE ABATEMENT CRITERIA AND LAND USE RELATIONSHIPS
SPECIFIED IN FHPM 7-7-3

ACTIVITY CATEGORY	Leq (h)	L10 (h)	DESCRIPTION OF ACTIVITY CATEGORY
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

- Number of vehicles of each type (cars, medium trucks, heavy trucks) per roadway segment;
- Average speed for each vehicle type;
- Location and elevation of any ground cover material such as trees and/or shrubs; and
- Location and elevation of each receptor.

Receptor modeling locations are presented on Figures 7-9 and the study results are discussed in the following sections.

1. NO-BUILD ALTERNATE

Evaluation of the No-Build Alternate was performed to serve as a base case from which to assess the specific noise level increases resulting from the proposed improvements at each noise sensitive area. The No-Build Alternate assumes that no improvements other than normal maintenance will occur within the project area. Modeling of this scenario results in the following predicted design-hour L10 values:

No-Build Alternate Noise Levels

Site	Ambient Noise Levels	Predicted "No-Build" L_{10}	Change from Ambient
1	61	[73]	+12
2	69	69	Equals
3	[75]	70	- 5
4	54	56	+ 2
5	65	63	- 2
6	[72]	[72]	Equals
7	69	[75]	+ 6
8	52	65	+13
9	63	64	+ 1
10	69	[76]	+ 7
11	59	62	+ 3
12	67	63	- 4
13	60	60	Equals
14	[74]	[76]	+ 2
15	[71]	[74]	+ 3

[ ] Exceeds Federal Highway Administration noise abatement criteria

The results of the modeling show several situations where the predicted noise levels are lower than the current measured ambient levels. The explanation for this is based upon the fact that the ambient noise levels can be expected to fluctuate during the day and from day-to-day. This is due to differing traffic volumes, vehicle mix and speeds, influence from non-highway noise sources, etc.. The monitoring programs did not attempt to determine vehicular volume, mix, or speed; therefore, it can be expected that there may be circumstances where predicted levels do not equal or exceed monitored values.

As these noise levels are expected to occur without any improvements to the existing interstate, abatement considerations are not warranted.

Six (6) of the fifteen modeled sensitive areas will experience design year noise levels which exceed the FHWA L_{10} 70 dBA noise abatement criteria under the No-Build Alternate. These six NSA's are as follows:

1 - East Frederick Elementary School

The area of impact is the exterior playground located between the school building and the highway. Existing noise levels and the 70 dBA criteria would be exceeded by 12 and 3 decibels, respectively.

6 - Seventh Day Adventist Church

Ambient noise levels would not be exceeded, however, the 70 dBA abatement criteria would be exceeded by 2 decibels There is no identified exterior use at this receptor.

7 - Mt. Olivet Cemetery

Ambient noise levels would be exceeded by 6 decibels, while the 70 dBA abatement criteria would be exceeded by 2 decibels.

10 - Single Family Residence on Fair Oaks Road

Ambient noise levels would be exceeded by 7 decibels at

this location, to a level 6 decibels above the abatement criteria.

14 - Four Residences on Fairfax Court

A 2 decibel increase in the ambient L10 levels will result at this site, raising levels to 6 decibels over the abatement criteria. Ambient levels currently are 4 decibels above the abatement criteria.

15 - Single Family Residence located east of Mt. Phillip Road and north of I-70

Ambient noise levels would be exceeded by 3 decibels at this site, increasing levels to 4 decibels above the abatement criteria.

2. BUILD ALTERNATES

Construction of the Outside widening Alternate would not necessarily place traffic closer to area sensitive areas. However, this event, combined with the anticipated overall increase in traffic volumes by 2010, would yield the following design-hour L_{10} values at each location shown in Table 8.

The analysis of impact was based upon two criteria as follows:

- Relationship of predicted noise levels to ambient levels. Where ambient levels would increase by more than 10 dBA abatement consideration is warranted.
- Relationship of predicted noise levels to FHWA abatement criteria. If predicted noise levels exceed the criteria, abatement measures warrant consideration.

TABLE 8
BUILD ALTERNATES NOISE LEVELS

Site	Ambient Noise Levels	Predicted "Build" L10	Change from Ambient L10
1	61	[74]	+13
2	69	70	+ 1
3	[75]	[72]	- 3
4	54	56	+ 2
5	65	63	- 2
6	[72]	[72]	Equals
7	69	[75]	+ 6
8	52	65	+13
9	63	64	+ 1
10	69	[76]	+ 7

11	59	62	+ 3
12	67	63	- 4
13	60	60	Equals
14	[74]	[76]	+ 2
15	[71]	[78]	+ 7

[ ] Exceeds Federal Highway Administration Noise Abatement Criteria

The Build Alternates would result in L_{10} design year noise levels exceeding the FHWA L10 70 dBA noise abatement criteria at seven NSA's. These include the same six as described for the "No-Build" situation, plus NSA 3 the I-70 Motor Inn.

Of the seven NSA locations that would experience design year noise levels greater than the FHWA L10 70 dBA noise abatement criteria, three NSA's, 3 (Motor Inn), 6 (Church), and 7 (Mount Olivet Cemetery) do not have identified exterior or frequent uses.

NSA 1, the East Frederick Elementary School will experience a one decibel increase above the predicted No-Build L10 levels and will experience design year L_{10} noise levels 4 dBA over the FHWA noise abatement criteria and has an identified exterior use (playground) which warrants the consideration of noise mitigation measures. Additionally, since the building is not air-conditioned, it is possible that during "open window" conditions the interior L10 noise abatement criteria of 55 dBA may also be exceeded.

A preliminary noise barrier was investigated to protect this site. Several barrier length and height alternatives were studied. Projected design year noise levels could be reduced to $\pm$ 62 dBA L10 in the exterior playground area and $\pm$ 63 dBA L10 at the school building with a barrier 11 feet in height and 1,250 feet in length. The cost of a barrier, estimated at $23 per square foot would be approximately $316,250. Since a school is considered for cost-effectiveness purposes to be equivalent to 10 residences, the cost per residence is $31,625. This barrier is warranted because

of the nature of the activity use and the number of individuals potentially impacted. It is also cost effective.

NSA 8 is anticipated to experience an increase over ambient L10 noise levels of 13 dBA. When design year L10 noise levels increase ambient conditions by more than 10 dBA, noise abatement measures should be investigated. This particular site is an individual residence which is situated approximately 800 feet south of I-70. Because of this setback from the highway, a barrier would not be physically effective or result in a reduction in the project noise levels. Projected noise levels, while increasing ambient levels by 13 dBA will not exceed the Federal noise abatement criteria.

NSA 10 is an individual residential structure and abatement measures are not warranted due to the extensive costs involved. To reduce project noise levels to below Federal noise abatement criteria at NSA 10 would require a noise barrier approximately 1,200 feet in length and 12-14 feet in height. The cost to provide this protection would be approximately $358,800 based on an average barrier height of thirteen feet and in-place cost of $23.00 per square foot. This cost to provide protection to a single residence is considered prohibitive.

NSA 14 consists of four residential structures. To protect NSA 14 (4 residences) similarly, would require approximately 1,050 linear feet of barrier, 14 feet in height at a cost of approximately $338,100. As with NSA 10 this barrier is not considered cost effective, at a cost of $84,525 per residence.

NSA 15 This noise sensitive area will have a projected 2010 noise level 8 dBA above the abatement criteria and 7 dBA above ambient levels. A barrier 720' in length by 14' in height at a cost of $231,840 would be required to reduce the projected noise

levels 7-10 dBA. However, this barrier would not be cost-effective at $231,840 for one residence.

Design year noise levels will not exceed the FHWA noise abatement criteria at any of the identified historic sites adjacent to the project corridor.

Comparison of the Build and No-Build alternates indicates that the proposed improvements would result in a maximum of 2 dBA increase in design hour L_{10} over the No-Build condition.

3. CONSTRUCTION NOISE

An inevitable increase in project area noise levels will occur during the construction of the proposed improvements. Such noise differs significantly from that generated by normal traffic due to its unusual spectral and temporal nature. The actual level of noise impact during this period will be a function of the number and types of equipment being used as well as the overall construction procedure.

A number of measures can be utilized in order to minimize noise resulting from such activities. Such measures include, but by no means are limited to, the following:

- Any internal combustion engine used for any purpose on or related to the job should be equipped with a properly operating muffler;
- Conduct truck loading, unloading and hauling so that noise is kept to a minimum;
- Route construction equipment and vehicles in areas that will cause the least disturbance to nearby receptors where possible; and
- When appropriate, place continuously operated diesel-powered equipment, such as compressors or generators, in areas as far from or shielded from noise sensitive locations.

H. SECTION 4(f) INVOLVEMENT

Introduction

Section 4(f) of the Department of Transportation Act, as amended by Section 18 of the Federal Aid Highway Act of 1968, states that utilizing land from a significant publicly-owned park, recreation area, wildlife refuge, or any significant historic site for a federally funded transportation project is permissible only if there is no feasible and prudent alternative and if all possible planning to minimize harm is included as part of the project.

1. Proposed Action

Mainline I-70 from west of Mt. Phillip Road to Maryland Route 144 is a four lane expressway divided by a variable width median. Interchanges in the study area lack certain movements or have geometric deficiencies. The proposed project would upgrade the existing highway and interchanges to current interstate standards. For detailed information refer to Section II - Need for the Project.

2. Description of 4(f) Resources (Figures 9a, 9b, 9c)

The proposed improvements require land from Loats Park.

Loats Park

This park, under the jurisdiction of Frederick City, consists of approximately forty-two (42) acres. New Design Road is the area's western boundary. Maryland 355 is the eastern boundary and existing Maryland 914 (Adventist Road) is the southern boundary. Access to the area would be via New Design Road.

Proposed facilities include two (2) lighted ball fields, tennis courts, a playground area, picnic areas, and parking facilities. (See figure 12) The park facilities would be utilized

by city residents and school children. Construction of a park ballfield is underway.

3. Impacts on 4(f) Properties

Loats Park

Property is required from Loats Park due to proposed improvements along Maryland 355 which taper into the existing roadway width and as the result of the proposed improvements in the northwest quadrant of the Maryland 85/355 interchange. (See figures 9a and 12)

Alternate A requires the acquisition of approximately 4.8 acres from this park. Proposed facilities including the tennis courts, a practice infield and part of ballfield A and the area reserved for the handicapped would be required under Alternate A. The ballfield area has been graded.

Noise and air levels at Loats Park are not expected to change significantly as a result of the proposed I-70 improvements.

4. Avoidance Alternates

Loats Park

Alternates B-1 and B-2 avoid the acquisition of parkland. See pages III-15 to III-17 for a description.

The No-Build Alternate also avoids impacts to the park since there would be no major improvements to the Maryland Route 355/85 interchange or Adventist Road. Substandard radii and acceleration and deceleration lane lengths which do not meet current interstate design standards would remain. Further, maintaining the existing

interchange would not accommodate the projected traffic increases. As traffic volumes increase, the high percentage of heavy duty trucks entering mainline I-70 from Maryland Route 355 would also continue to impede traffic flow and create the potential for increased accident rates.

5. Mitigation Measures

Loats Park

The proposed Alternates, B-1 and B-2, would not require the acquisition of property from Loats Park and therefore would not require mitigation. However, landscaping along Maryland Route 914 may be considered to shield the view of the road from park users. The State Highway Administration and the City of Frederick would initiate coordination on the means to account for the proposed interchange improvements associated with Alternate A if it were selected. This coordination would be necessary to discuss replacement land and the relocation of proposed park facilities.

6. Consultation and Coordination

Coordination regarding the Park has been initiated and will (See V. Comments and Coordination Section) continue with Frederick City.

Copies of this document will be circulated to the appropriate agencies.

V. COMMENTS AND COORDINATION

Winchester Hall
12 E. Church Street
Frederick, Maryland 21701

Telephone (301) 694-1100

Board Of
County Commissioners
Frederick County

August 3, 1984

Mr. Louis Ege, Chief
Bureau of Projects Planning
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202

Re: I-70 from Mt. Phillip Road to Md. Route 144

Dear Mr. Ege:

The Frederick County Commissioners have reviewed the proposed alternatives to improvements planned for Interstate 70 between Mt. Phillip Road and Md. Route 144. The current proposals represent updates of the alternatives previously submitted in January, 1980 by the State Highway Administration.

After reviewing the revised alternatives in the light of current County plans and policies, the County Commissioners voted to support Alternative No. 4, with respect to improvements to the I-70/U.S. 340 Interchange and Alternative B-1 with respect to the improvements planned for the Maryland Route 355 and South Street Interchanges. (See attached). It is felt that these two alternatives most closely meet the concerns raised by the County in 1980 after the initial set of alternatives were proposed.

The Commissioners would further like to make the following comments:

1) Under certain proposed alternatives, Adventist Drive ends in a cul-de-sac, thereby preventing through traffic to Route 355. The result of this action would be to force all traffic to the existing intersection of New Design Road and Route 355. This would be unacceptable due to the poor sight distance and geometrics of this intersection and the projected increases in traffic along these roads. It is further felt that aligning Adventist Drive with the proposed Walser Drive would provide the most direct route of access to and from I-70 from the planned growth area in Ballenger Creek.

2) The direct connection of Walser Drive - Shaw Road and the proposed Monocacy Boulevard must be maintained. Any routing of Walser Drive towards Franklin Street would disrupt traffic patterns focused in the industrial area developing around the airport and along East Patrick Street.

3) Any improvements should include a ramp to allow traffic to head west on I-70 from East Patrick Street in the vicinity of East Frederick Elementary. Again, such a movement is essential to allow for adequate access to the Interstate system from this area.

We appreciate the opportunity to work with your office in the study of this project and look forward to continued cooperation in the future. Please feel free to contact me or our staff if you have any questions or require further information on the matter.

Sincerely,

The Board of County Commissioners
of Frederick County, Maryland

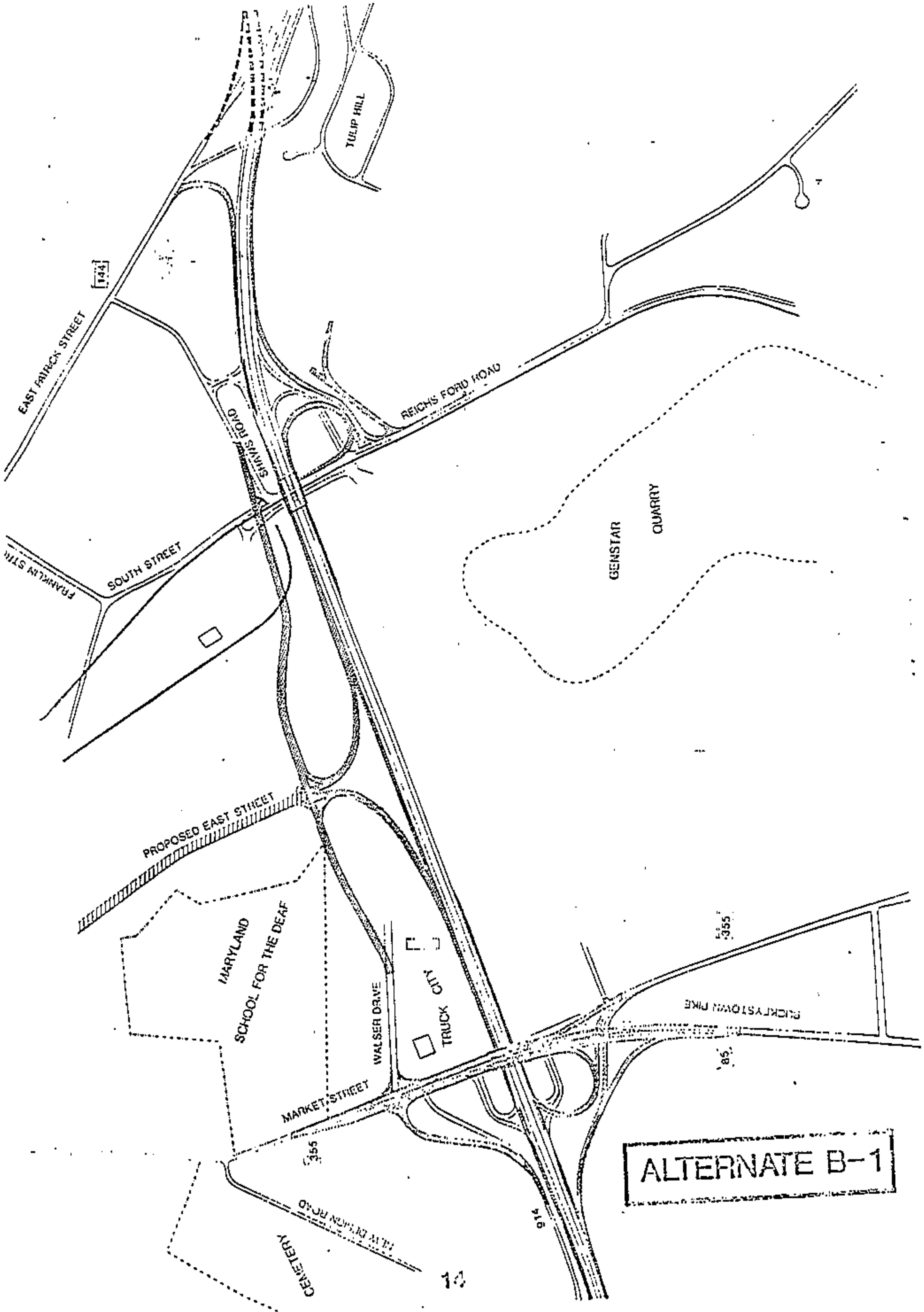
By: Galen R. Clagett

Galen R. Clagett, President

GRC/RB/dr

cc: Jim Shaw
Larry Johnson
Ken Coffey
Ron Young
Jim Schmersahl
Commissioners
E. Keith Bounds
Neil J. Pedersen
Cynthia D. Simpson

NEW DIVISION ROAD
ADVENTIST ROAD
CEMETERY
270
40
70
JEFFERSON STREET
SOLAREX
BALLENGER CREEK PIKE
160
HIGH SCHOOL
JEFFERSON PIKE
BUTTERFLY LANE
163
15/340
ALTERNATE 4


TULIP HILL
144
EAST PATRICK STREET
REICHS FORD ROAD
SOUTH STREET
GENSTAR
QUARRY
PROPOSED EAST STREET
MARYLAND
SCHOOL FOR THE DEAF
WALSER DRIVE
TRUCK CITY
MARKET STREET
355
85
CEMETERY
ALTERNATE B-1

RONALD N. YOUNG
Mayor

GLENN L. NIKIRK
Administrative Assistant

CAROLYN R. GREINER
Executive Assistant

July 31, 1984

Mr. Donald G. Honeywell, Project Manager
Bureau of Project Planning
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

RE: I-70 Improvements E. Patrick Street to Mt. Phillip Road

Dear Mr. Honeywell:

The Mayor and Board of Aldermen have reviewed the proposals for I-70 improvements and wish to go on record as supporting the following alternatives as outlined in the booklet prepared by SHA for the public informational meeting of June 14, 1984:

1. Inside widening west of I-270 and outside widening east of that point is preferred. In the City's opinion this will provide the needed additional roadway capacity for the future while maintaining a desired rural type facility with grass median throughout.

2. At MD 355, Alternative B-1 is preferred because it relocates the interchange so as to align with East St. Extended to the north and with proposed Monocacy Blvd. to the east.

3. At US 340/15, Alternative 4 is preferred as the less costly and less confusing option to provide missing movements and thus provide some relief from the through traffic on US 40 West.

Improvements to I-70 as proposed are supported by the City and are consistent with the Frederick City Comprehensive Plan. The increased capacity and additional interchange movements will benefit through traffic on the Interstate and also will facilitate planned growth and traffic circulation patterns of the City.

Subsequent to the June 14th public meeting, a modification to alternative B-1 was prepared by SHA and discussed with the City Engineer, Superintendent of Public Works and Planning Director at a meeting at the District 7 office on July 18, 1984. This modification relocates the connection between New Design Road and Md 355 at Walser Drive behind the Seventh Day Adventist Church & School and bisects the proposed Loats Park to be developed this year by the City. The Mayor and Board wish to

City Hall, 124 North Market Street, Frederick, Maryland 21701 (301) 662-5161

go on record as supporting Alternative B-1 as originally presented. A modification which bisects the park would not be acceptable to the City.

We appreciate this opportunity to comment and look forward to continued cooperation with the State Highway Administration as this project progresses.

Sincerely,

Ronald N. Young
Mayor.

cc: Mr. Wayne Clingan: SHA District 7
Mr. James A. Schmersahl, City Planning Director
E. Keith Bounds
Neil J. Pedersen

RNY/smr

OFFICE OF CITY ENGINEER

RICHARD D. PARKS, P.E.
CITY ENGINEER

City of Frederick
CITY HALL
Frederick, Maryland 21701
301/662-5161

BAL C. MENON
ASST. CITY ENGINEER

August 16, 1984

Mr. Louis H. Age, Jr. Acting Chief
Bureau of Project Planning
State Highway Administration
P.O. Box 707 North Calvert Street
Baltimore, MD 21203-0717

RE: Contract No. F-866-101-772
PDMS No. 101007
I-70. From Mt. Phillip Road
to Maryland Route 144

Gentlemen:

The City's Loats Park schedule consists of completing all grading and seeding by November 1, 1984 and park construction next spring. Attached find the latest development plan.

We do believe this park to be significant but have taken into account the future taking by the State Highway Administration for improving the I-70-355 interchange and widening Route 355. No future modifications to the park will therefore be necessary once construction of the State improvements take place.

Very Truly Yours,

Richard D. Parks, P.E.
City Engineer

RDP/smr

Enclosure

ROBERT L. STRINE
Director

JAMES W. SCHMIDT
Administrative Supervisor

RUSSELL L. CASTLE
Supt. Dept of Parks & Streets

LESTER R. DINGLE
Supt. Dept. of Sewer & Water

MARK A. ETZLER
Supv. Frederick Transit System

DEPARTMENT OF PUBLIC WORKS
CITY OF FREDERICK
FOUNDED 1745

GLENN G. GUYTON
Supt. Dept. of Lights & Signals

JAMES R. SHOWE
Supt. Sewage Collection & Dis

JOSEPH W. SMITH
Supt. Waste Collection & Disposal

HARVEY L. THOMAS
City Chemist

FRANKLIN E. WHITE, JR.
Supt. Water Treatment Plants

April 28, 1981

Mr. Richard S. Korlak
Chief, Environmental Management
Maryland Department of Transportation
Post Office Box 717
300 West Preston Street
Baltimore, Maryland 21203

RE: I-70
From U.S. Route 340/15
TO East Patrick Street
Contract No. F 886-101-772

Dear Mr. Krolak:

This letter is to advise you that the City of Frederick does not consider Lewis Park as being significant in terms of retention for future park land planning.

Lewis Park is not included in the fiscal year 1982-1987 Capital Improvements Program, nor is it identified on the Comprehensive Plan Map adopted and approved on January 19, 1979.

No proposed construction by the State Highway Administration ~~is~~ in the southern quadron of the City would effect any proposed usage of Lewis Park.

If I can be of further assistance, please do not hesitate to call.

Respectfully yours,

Robert L. Strine

ROBERT L. STRINE,
Director of Public Works

4/23/85-In a telephone conversation, Mr. Strine indicated that the information in this letter is still relevant for the Lewis Park area.

RLS/js

cc: files

88 HAMILTON AVENUE, FREDERICK, MARYLAND 21701 (301) 662-5161

BOARD OF EDUCATION OF FREDERICK COUNTY ANNEX
7446 HAYWARD ROAD
FREDERICK, MARYLAND 21701

January 25, 1985

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

Dear Mr. Ege:

RE: Contract No. F 866-101-772
P.D.M.S. No. 101007

This is in response to your letter, subject as above dated January 16, 1985 to Mr. Ron Johnson, Principal, East Frederick Elementary School, Frederick, MD.

At present, the East Frederick Elementary School site consists of nine (9) acres. This is below the recommended acreage for an elementary school of 525 capacity. In fact, under our policy, the required acreage for that school should be about 15 acres. This site size is intended to provide sufficient space for present and future educational requirements, not to satisfy public recreation needs. Based on this consideration, we cannot reduce the size of the site.

The public does use the site for recreational activities after school hours and on weekends. However, I do not think the loss of the particular area shown on the diagram contained in your letter would have any impact on after-hour public recreational use.

The Board of Education might be willing to consider trading the area required by the I-70 project for other land adjacent to the school. However, the land we received would have to be brought up to at least the standard of the land we give up and appropriate fencing would be required.

I suggest that a representative of your office meet me at East Frederick Elementary School to look over the site and discuss options which may be available. Any agreements reached at that meeting regarding the loss or trade of land at East Frederick Elementary will of course be subject to the approval of the Board of Education, the Frederick County Commissioners, and the State Interagency Committee on School Construction.

If you are interested in such a meeting, please call me at 301/694-1507 or MARCOM 248-1507.

Sincerely,

Wayne Hayden
Director
Logistical Services

WH:hg:85/324

cc: Dr. A. Thackston
Mr. J. F. Stann
Mr. R. Johnston
Wayne R. Clingan
Richard Schindel

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

TORREY C. BROWN, M.D.
SECRETARY

DONALD E. MAHL LOCHLAN
DIRECTOR

May 8, 1984

Mr. Louis H. Ege, Jr.
Chief, Environmental Mgmt.
State Highway Administration
P.O. Box 717/707 N. Calvert Street
Baltimore, Maryland 21203-0717

Dear Mr. Ege:

There are no known populations of listed threatened or endangered species within the project limits for the widening of Interstate Route 70 from Mt. Phillip Rd. to west of MD Route 144, as described to me in your letter of May 2, 1984.

Sincerely,

Gary J. Taylor
Nongame & Endangered
Species Program Manager

GJT:ba
cc: Carlo Brunori

(301) 827-8612
TTY FOR DEAF: STATE [illegible]

United States Department of the Interior

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

May 9, 1984

Mr. Louis H. Ege, Jr.
Chief, Environmental Management
Maryland Department of Transportation
P.O. Box 717
Baltimore, MD 21203

Dear Mr. Ege:

This responds to your letters of May 1 and May 2, 1984, request for information on the presence of Federally listed endangered or threatened species within the impact area of projects F-866-101-772, Frederick County and CL 416-102-770, Carroll and Baltimore Counties, Maryland. We are providing the following comments in accordance with the Endangered Species Act as amended by P.L. 97-304, 1982.

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

The following "Candidate" species (those placed under review in the Federal Register to determine suitability for listing) may be present in the project counties:

Species	Counties of Occurrence
bog turtle (Clemmys muhlenbergi)	Baltimore, Carroll, Frederick
pygmy shrew (Microsorex hoyi winnemana)	Baltimore
Darlington's spurge (Euphorbia purpurea)	Baltimore, Frederick
Parker's pipewort (Eriocaulon parkeri)	Baltimore

Candidate species are not legally protected under the Endangered Species Act and biological assessment and consultation requirements pursuant to that legislation do not apply to them. They are included here for the purpose of notifying you of possible future proposals and listings in advance, for consideration in your NEPA review process, and to encourage efforts to avoid adverse impacts to them. Additional information on these candidate species may be obtained by contacting the Maryland Natural Heritage Program Tawes State Office Building, 580 Taylor Avenue, Annapolis, MD 21401, telephone 301/269-3656.

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

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

Sincerely yours,

For Glenn Kinser
Supervisor
Annapolis Field Office

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

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

FRED L. ESKEW
ASSISTANT SECRETARY
FOR CAPITAL PROGRAMS

May 4, 1984

Mr. W. F. Schneider, Jr.
Bureau of Project Planning
State Highway Administration
707 North Calvert Street
Baltimore, MD 21203

Subject: Interstate Route 70 from Mount Phillip Road to West of East Patrick Street, Frederick County, Maryland
Contract No. F 866-101-772

Dear Mr. Schneider:

Review of the Heritage Program Data Base indicated that no rare species, unique natural community, or other significant environmental feature has been reported from within the study area for this project. If I can be of additional assistance, please do not hesitate to contact me.

Sincerely,

Arnold Norden

Arnold Norden
Maryland Natural Heritage Program

AN:lw

TELEPHONE:
TTY FOR DEAF-BALTIMORE 269-2609, WASHINGTON METRO 565-0450

Maryland Historical Trust

Ms. Cynthia D. Simpson
Acting Chief, Environmental Management
State Highway Administration
PO Box 717, 707 North Calvert Street
Baltimore, Maryland 21203-0717

September 27, 1984

RE: Contract No. F866-101-772
I-70 from Mt. Phillip Road
to Maryland Route 144
PDMS No. 101007

Dear Ms. Simpson:

Thank you for your letter of August 6, 1984 regarding the above-referenced project in Frederick County, Maryland.

We concur with your assessment that the frame house (A) and the stone building (B) do not meet the National Register criteria.

We believe that the proposed alternates will have no adverse effect on the three historic properties which lie within the impact area: Linden Grove, Guilford and Prospect Hall. Because this is a determination of no adverse effect you must request the comments of the Advisory Council. Please send your request to:

Mr. Ron Anzalone
Advisory Council on Historic Preservation
Suite 809 - 1100 Pennsylvania Avenue, NW
Washington, DC 20004.

If you have any questions or comments please call Ms. Kim Kimlin at 269-2438.

Sincerely,

George J. Andreve

George J. Andreve
Environmental Review
Administrator

GJA/KEK/hec

cc: Mrs. Glenn Michel
Mr. G. Bernard Callan
Mrs. Ruth Pettijohn
Ms. Rita Suffness
Mr. Ron Anzalone

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301)269-2212, 269-2438
Department of Economic and Community Development

Maryland Historical Trust

June 13, 1984

Mr. Louis H. Ege, Jr., Chief
Environmental Management
State Highway Administration
707 North Calvert Street
P.O. Box 717
Baltimore, Maryland 21203-0717

Re: I-70 from Mt. Philip Road to
Maryland Route 144

Dear Mr. Ege:

We concur with your opinion that the Humberson Property does not meet the National Register criteria for evaluation.

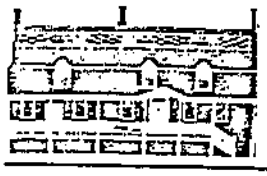
Sincerely,

J. Rodney Little
Director
State Historic Preservation Officer

JRL/KEK/bjs

cc: Mrs. Glenn Michel
Mr. G. Bernard Callan
Mr. Nicholas Wood

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301)269-2212, 269-2438
Department of Economic and Community Development



Maryland Historical Trust

October 2, 1980

Mr. William F. Schneider, Jr.
Chief, Bureau of Project Planning
State Highway Administration
P.O. Box 717
Baltimore, Maryland 21203

RE: Addendum report on the archaeological reconnaissance of Interstate 70 from Interstate 270 - F 866-101-772

Dear Mr. Schneider:

Our Staff Archaeologists have reviewed Terry Epperson's letter which adequately addresses the comments presented in our review letter dated June 16, 1980. The response was sufficient to concur that the areas not surveyed have a low probability of containing signficant archaeological sites and, therefore, will not require additional consideration.

Thank you for your cooperation in obtaining this additional data.

Sincerely,

Nancy Miller

Nancy Miller
Deputy State Historic Preservation Officer

NM/WEC/ca

cc: Terry Epperson
Rita Suffness
Mrs. Michel
Mrs. Louise Best

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301)269-2212, 269-2438
Department of Economic and Community Development

Archeology

Maryland Historical Trust

June 16, 1980

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

RE: I-5-70 from U.S. 15/350
to West of East Patrick Street
F 866-101-772

Dear Mr. Camponeschi:

Thank you for providing copies of the above referenced report for our review. I have discussed this report with Wayne Clark and have incorporated his comments into this letter.

The report generally addresses the nature of the archeological resources in the project areas. The historic discussion on Page 2 does not adequately develop the general historical developments in the area. Greater detail should have been provided by consulting Scharf's History of Western Maryland and Bailey Mark's thesis on the settlement patterns of the Germans. The report does not but should state the nature of the proposed improvements in the project areas. The report also needs to state either verbally or by the addition of a third map, the location of the areas surveyed, what percentage of the project area was surveyed during the current study and what percentage was surveyed during previous studies. The results of these surveys should be evaluated to determine the probability of other sites in the project area. In short, we require greater detail on the percentage and nature of the areas surveyed and a brief discussion on why the investigator feels that the survey results are sufficient to determine that significant sites do not exist in the unsurveyed portions of the project area. I concur with the opinion that Site 18 FR 144 and Area 1 are, in my opinion, ineligible for placement on the National Register due to the loss of the integrity of the sites and the limited nature of the deposits.

I look forward to receiving the response to my request for a revision of the report. Unless the response indicates otherwise, the report indicates that the proposed development will not affect significant archeological sites. Your cooperation in obtaining the requested revision will be appreciated.

Sincerely,

J. Rodney Little
State Historic Preservation
Officer

JRL/WEC/ca
cc: Suffness, Bastian,
Epperson, Schlagel

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301)269-2212, 269-2438
Department of Economic and Community Development

Maryland Historical Trust

June 27, 1978

1978 JUL 5 AM 10 56

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

STATE HIGHWAY ADMINISTRATION PROJECT PLANNING

RE: I-70 Archeological Report

Dear Mr. Camponeschi:

Our staff archeologist has reviewed Dennis Curry's report on the archeological survey of I-70.

With regards to the historic site of the Toll House, due to plowing and the lack of concentrated surface debries, our office does not recommend a more intensive archeological effort regarding this site. It seems doubtful that any significant data would be recovered from a plowed historic site that may have also been partially destroyed by the widening of Route 85.

Sincerely yours,

John N. Pearce
State Historic
Preservation Officer

JNP:LG:mms

cc: Dennis Curry
Margaret Ballard
Leland Gilsen

Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 269-2212, 269-2438
Department of Economic and Community Development

State of Maryland

84 12 05
1.5.0.1

OFFICE OF ENVIRONMENTAL PROGRAMS
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

201 WEST PRESTON STREET • BALTIMORE, MARYLAND 21201 • AREA CODE 301 • 383-3245

TTY FOR DEAF: Balto. Area 383-7555
D.C. Metro 565-0451

Adele Wilzack, R.N., M.S., Secretary

William M. Eichbaum, Assistant Secretary

December 5, 1984

Ms. Cynthia D. Simpson, Acting Chief
Environmental Management
Bureau of Project Planning (Room 310)
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202

RE: P.D.M.S. No. 101007
Contract No. F 866-101-772
Interstate Route 70
Mt. Phillip Road to
Maryland Route 144

Dear Ms. Simpson:

We have reviewed the Draft Air Quality Analysis for the above subject project and have found that it is not inconsistent with the Administration's plans and objectives.

Thank you for the opportunity to review this analysis.

Sincerely,

Edward L. Carter, Chief
Division of Air Quality Planning
and Data Systems
Air Management Administration

ELC:cw

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

DEC 14 1984

Ms. Cynthia D. Simpson, Acting Chief
Environmental Management
Bureau of Project Planning (Room 310)
Maryland State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202

Re: I-495, MD 190 to VA 193, Montgomery County, Maryland and Fairfax County, Virginia (A-FHW-00012-00)
I-70, Mr. Phillip Road to MD 144, Frederick County, Maryland (A-FHW-00011-MD)

Dear Ms. Simpson:

We reviewed the air quality analyses performed for the above referenced projects. Based upon this review, we have no objection to either of the projects from from an air quality standpoint. As such, we have rated the documents 'LO' in EPA's classification system. Please note that these comments relate only to air quality impacts of the facility, and that we will comment on other impacts of the project when the appropriate documents are submitted for our review.

If you have any questions, or if we can be of further assistance, please contact Mr. William J. Hoffman of my staff at 215-597-7828.

Sincerely,

Will J. Hoff

John R. Pomponio, Chief
Environmental Impact and
Marine Policy Branch

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

JAMES W. PECK
DIRECTOR

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

October 10, 1984

Mr. Donald G. Honeywell
Project Manager
Bureau of Project Planning
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

Re: WRA No. 80-PP-0512
SHA No. F-866-101-772
Description: I-70 from Mt. Phillip Road to MD 144

Dear Mr. Honeywell:

Please be advised that the Draft Hydraulic Report for the above referenced project in Frederick County has received necessary review relative to COMAR 08.05.03 and 08.05.03.06. Accordingly, it has been determined that the construction of the proposed outfall which will partially alter the cross-section of Monocacy River 100-year floodplain will require a Waterway Construction Permit from the Administration.

Furthermore, since the inter-agency hydraulic meeting held on September 28, 1984 required thorough investigation of the sink holes and their operation as well as the integrity of the proposed highway and its improvements, this office is interested in the outcome of such further investigation.

Finally, you have been provided with the comments from the Sediment and Stormwater Division by letter of September 10, 1984. A copy of review and recommendation by the Water Supply Division of this Administration which was sent to this office via a memorandum had been sent to you also.

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Telephone: (301) 269-2265
TTY FOR DEAF-BALTIMORE 269-2609 WASHINGTON METRO 565-0450

Once again, please be informed that if you find out that the outfall to Monocacy River and/or Carroll Creek would be the only alternative, the design and supportive data for the project shall be in compliance with COMAR 08.05.03.01 through 08.05.03.11.

If you have any questions regarding this matter, please contact me at (301) 269-2265.

.Sincerely,

M. Q. Taherian

M. Q. Taherian
Project Engineer
Watershed Permits Division

MQT:das

cc. Stephen F. Drumm
Cynthia D. Simpson
Linda A. Kelbaugh

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

October 4, 1984

MEMORANDUM

TO: M. Qasim Taherian, Waterway Permits Division

FROM: Richard C. Lucas, Water Supply Division R.C.L.

SUBJECT: Inter-agency Hydraulic Meeting on the I-70 Rehabilitation near Frederick, Md.

Regrettably, I did not attend the subject meeting. However, since you have indicated that the sinkhole problem related to I-70 storm water drainage is still under consideration, it would be appropriate to forward an additional comment to the State Highway Administration.

A review of water appropriation permit files has indicated that the Flintkote Stone Products Co. Quarry, located just south of the I-70 sinkholes uses approximately 200,000 gallons per day of groundwater and surface water for such diverse purposes as cooling water, process water, dust suppression, boiler replacement water, pollution control, sanitary facilities and potable water supply. This water is obtained from wells and a sump in the quarry. Additionally, the Industrial Waste Division of the Office of Environmental Programs has confirmed that the quarry has a permit to discharge up to 3.5 million gallons of water for dewatering purposes in the quarry. It thus appears that large quantities of groundwater enter the quarry property and are withdrawn through either seepage into the quarry pit (and subsequent pumping discharge) or through well pumpage. It is quite possible that water entering the nearby sinkholes may contribute to the quantity of groundwater removed from the quarry grounds. In other words, road runoff may enter the sinkholes, emerge in the quarry in a fairly short space of time and be pumped off into local streams.

It should be suggested to the State Highway Administration, that they conduct site specific hydrogeologic and economic investigations of the potential effects (both positive and negative) on the quarry and the surrounding environment of continued (or discontinued) use of these sinkholes for I-70 drainage.

RCL:sao
cc: Donald G. Honeywell

Telephone: (301) 269-2456
TTY FOR DEAF-BALTIMORE 269-2600 WASHINGTON METRO 565-0450

TORREY C. BROWN, M.D.
SECRETARY
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STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES ADMINISTRATION
TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401

September 10, 1984

Mr. Donald G. Honeywell
Project Manager
Bureau of Project Planning
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202

RE: WRA No. 79-PP-0155
SHA No. F-866-101-772

Description: I-70 from Mt. Phillip Road to MD-144

Dear Mr. Honeywell:

The Administration has received and reviewed the Draft Hydraulic Report for the above referenced project in Frederick County. The review was in regards to Sections 8-1105 and 8-11A-05 of the Natural Resources Article, Annotated Code of Maryland in regards to Sediment Control and Stormwater Management. The results of the review are as follows:

I. Sediment Control

Please be advised that the project will require review and approval for sediment control in compliance with the Erosion and Sediment Control Regulations.

II. Stormwater Management

1. The analysis used the March 1969 version of the U.S. Soil Conservation Service (SCS) TR-20 computer model. The analysis should have used the most recent version, i.e. the 1984 version. For our purposes it will be required that the most recent version be used.

2. On page number 18, assumption number 5, it was stated that ultimate development based on existing zoning maps was assumed. For stormwater management purposes the computations must be based on the existing development of the watershed, not ultimate development.

Telephone: (301) 269-2224
TTY FOR DEAF BALTIMORE

3. Please be advised that on page number 18, assumption number 7, the assumption is not entirely correct. The Administration will require stormwater management for peak discharge control if the post-development 2-year runoff discharges exceed the pre-development 2-year runoff discharges by more that 10%. It will be required that the peak discharges for the post-development 2-year and 10-year runoff discharges be reduced to levels at or below the pre-development 2-year and 10-year runoff discharges, respectively. Please be advised that certain water quality aspects of stormwater management may be required regardless of the increase in runoff discharges.

The Administration shall send a representative of the Sediment and Stormwater Divison to the meeting on Friday, September 28, 1984 at 10:00. This representative shall be able to answer any questions you may have concerning the sediment control requirements and stormwater management requirements for the proposed project.

Very truly yours,

Paul F. Clement

Paul F. Clement
Water Resources Engineer

PFC:roe

cc: C. K. Cover

Torrey C. Brown, M.D.
SECRETARY

John R. Griffin
DEPUTY SECRETARY

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

June 29, 1984

MEMORANDUM

TO: State Highway Administration,
Project Planning Team

FROM: George Krantz, Director
Fisheries Division

SUBJECT: SHA Contract No. F 866-101-772
I-70, Mt. Phillip Road to Md.
Rt. 144

Fisheries Division recommends that:

1. Either a no build or build alternative be considered.
2. Inside widening of I-70 be considered rather than outside widening.
3. Either Alternative 2 or 4 be considered.
4. Alternate A be considered rather than Alternate B-1, or B-2.

This review and comment was prepared by Ed Enamait of the Fisheries Division, 301-898-9724.

It is felt that road construction in this area would have minimal impact upon the fishery resources providing erosion and sediment control measures are practiced. Inside lane widening would require less bridge reconstruction and therefore less disturbance in/of waterways. Alternate A is preferred because it requires less alteration of the watershed than either B-1 or B-2.

BIBLIOGRAPHY I-70

City of Frederick, Frederick City Comprehensive Plan, Adopted January 1979.

Frederick County Planning Commission, Frederick County Comprehensive Plan, December 1983.

Maryland Department of Economic and Community Development, Brief Industrial Facts - Frederick County, 1984.

U.S. Bureau of Census, Census of Population and Housing - Summary Tape File 3A, 1980.

REFERENCES SITED

Brush, G. et al 1976.

Vegetation Map of Maryland - the existing natural forests. Department of Geography and Environmental Engineering. Johns Hopkins University, Baltimore, Maryland.

Maryland Fisheries Administration, 1975.

Sampling data of Ballenger Creek. Maryland Department of Natural Resources.

Maryland Fisheries Administration, 1979.

Carroll Creek Report: pp. 1-9.

Rogers, John et al 1975. Maryland Uplands Natural Areas

Study Coastal Zone Management Program, Annapolis, Maryland

VI. APPENDICES

Attachment for Environmental
Impact Documents
Revised February 18, 1981
Bureau of Relocation Assistance

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

All State Highway Administration projects must comply with the provisions of the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646) and/or the Annotated Code of Maryland, Real Property, Title 12, Subtitle 2, Sections 12-201 thru 12-212. The Maryland Department of Transportation, State Highway Administration, Bureau of Relocation Assistance, administers the Relocation Assistance Program in the State of Maryland.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. An improved property can be purchased or leased.

2. Dwelling units can be rehabilitated and purchased or leased.

3. New dwelling units can be constructed.

4. State acquired dwellings can be relocated, rehabilitated, and purchased or leased.

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

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