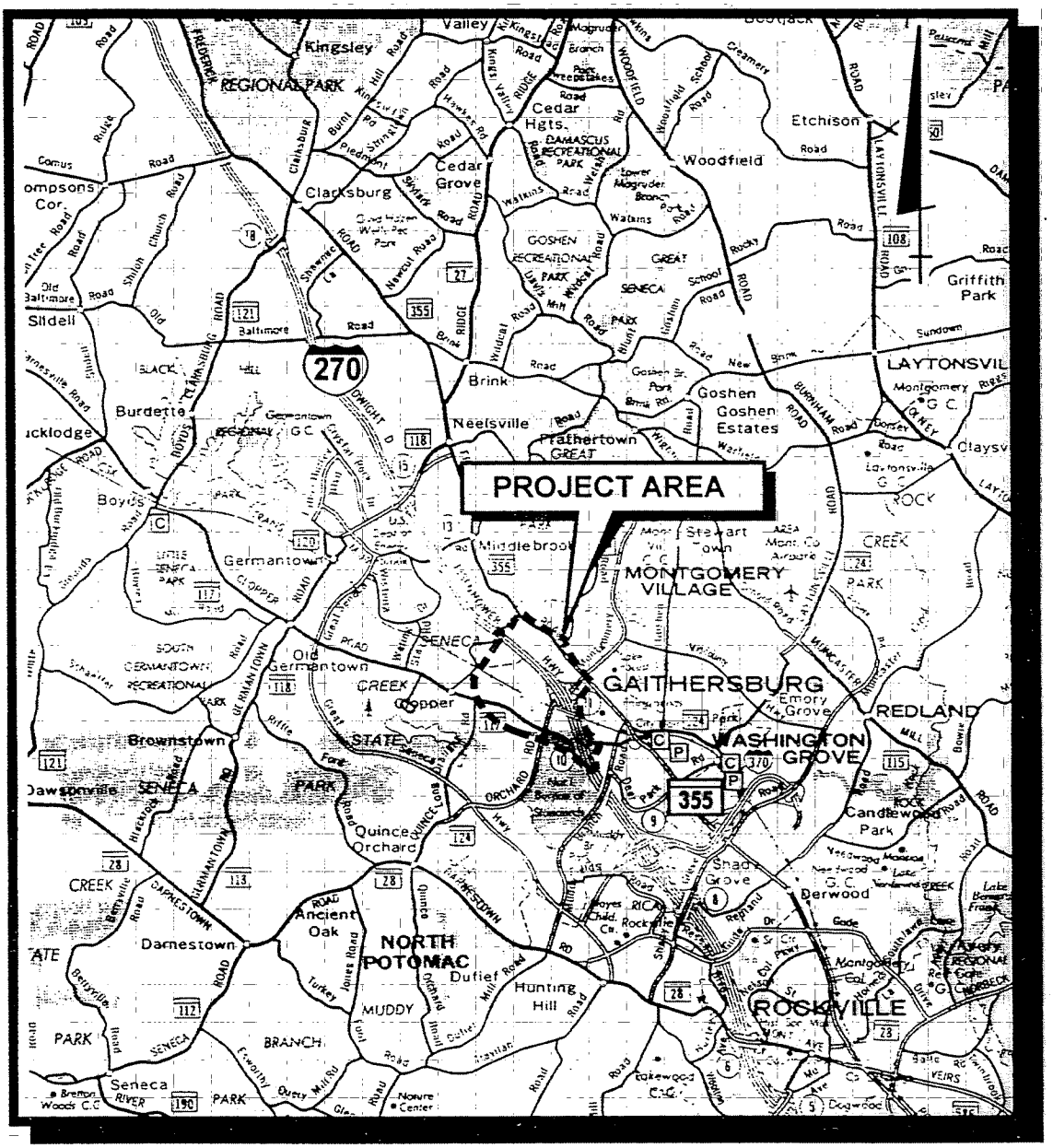
Environmental Assessment

Section 4(f) Evaluation

For Contract M0839B11

I-270 at Watkins Mill Road Extended

Montgomery County, Maryland



prepared by:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

REPORT NUMBER: FHWA-MD-EA-00-01-D

FEDERAL HIGHWAY ADMINISTRATION
REGION III

I-270 AT WATKINS MILL ROAD EXTENDED

ADMINISTRATIVE ACTION

ENVIRONMENTAL ASSESSMENT
SECTION 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(2)(C); 49 U.S.C. 303
23 U.S.C. 128(a) AND CEQ REGULATIONS (40 CFR 1500 et seq)

PARKER F. WILLIAMS
ADMINISTRATOR

11/16/00
Date

Neil J. Pedersen
NEIL J. PEDERSEN
DEPUTY ADMINISTRATOR FOR
PLANNING AND ENGINEERING

11/15/00
Date

Daniel W. Johnson for
NELSON J. CASTELLANOS
DIVISION ADMINISTRATOR
FEDERAL HIGHWAY
ADMINISTRATION

SUMMARY

SUMMARY

1. Administrative Action

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

2. Additional Information Concerning This Project May Be Obtained by Contacting:

Ms. Cynthia Simpson
Deputy Director
Office of Planning and
Preliminary Engineering
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202
Hours: 7:30 a.m. to 4:30 p.m.
Phone: (410) 545-8500

Ms. Denise Winslow
Federal Highway Administration
The Rotunda - Suite 220
711 West 40th Street
Baltimore, Maryland 21211
Hours: 7:30 a.m. to 4:30 p.m.
Phone: (410) 962-4342 ext. 116

3. Description of Action

The I-270 at Watkins Mill Road Extended project area is located in the northern portion of the City of Gaithersburg in Montgomery County, Maryland. The project area encompasses the I-270 corridor, from south of Seneca Creek Park to the Interchange of MD 124 (Quince Orchard Road/Montgomery Village Avenue)/MD 117 (Clopper Road); Watkins Mill Road, from MD 355 on the east to MD 117 on the west; and their environs (see Figure S-1).

The I-270 project at Watkins Mill Road Extended is investigating various alternates which will improve access between I-270 and the existing transportation network in northern Gaithersburg. Improved access is needed to accommodate economic development planned in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access (vehicular, pedestrian, bicycle and transit) to the Metropolitan Grove MARC Station to facilitate increased transit use.

This study evaluates alternative methods to improve traffic operations for locally oriented traffic in the project area. The improvements studied, including the extension of Watkins Mill Road and various interchange alternates with I-270, address safety and capacity requirements in order to alleviate existing deficiencies while accommodating projected traffic increases resulting

from planned growth in the area. All alternates developed in this study are compatible with the I-270/US 15 Multi-Modal Corridor Study alternates addressing the needs in the 30-mile segment of I-270 from I-370 to Frederick.

Alternates under consideration include the No Build (Alternate 1), the partial cloverleaf (Alternate 2), the full diamond (Alternate 3), the partial interchange (Alternate 4) and Watkins Mill Road Extended Without Interchange (Alternate 6).

In addition, several access options are being evaluated as part of each of the build alternates under consideration to improve pedestrian, bicycle, vehicular and transit access.

4. Alternates Descriptions

a. No Build Alternate

This alternate consists of routine maintenance, minor construction projects, and developer-based improvements associated with new developments. These minor improvements would not be expected to affect roadway capacity, safety, or accessibility to the growth areas of northern Gaithersburg.

b. Interchange Build Alternates

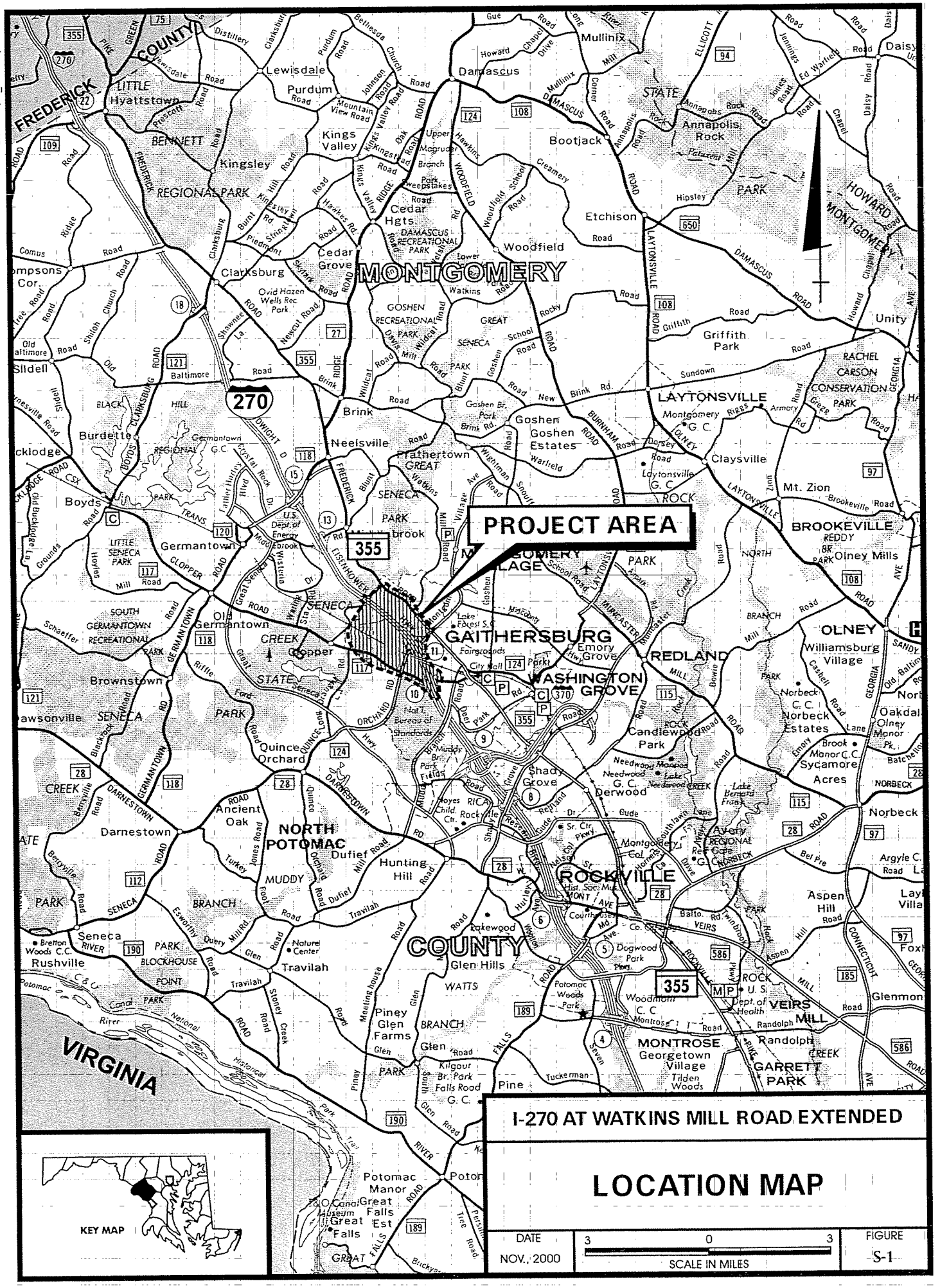
All Interchange Build Alternates include the extension of Watkins Mill Road between MD 117 and MD 355, including an overpass of I-270.

1) Alternate 2: Partial Cloverleaf Interchange

The partial cloverleaf interchange alternate consist of a diamond configuration on the northbound (east) side of I-270 and a partial cloverleaf configuration on the southbound (west) side of I-270. This alternate would use a two-lane Collector-distributor (C-D) roadway system on each side of I-270 to handle local traffic weaving on and off I-270. No ramps would be built in the environmentally sensitive southwest quadrant of the interchange. This alternate is similar to the concept developed as part of Montgomery County's 1998 engineering feasibility study.

2) Alternate 3: Full Diamond Interchange

The full diamond interchange alternate consists of a diamond configuration on both the northbound (east) and southbound (west) sides of I-270. This alternate would use a two-lane C-D system on the northbound side of I-270 only. Braided ramps would be used in the southwest quadrant of the interchange because of inadequate weaving distance along southbound I-270.


PROJECT AREA
I-270 AT WATKINS MILL ROAD EXTENDED
LOCATION MAP
KEY MAP
DATE
NOV., 2000
3 0 3
SCALE IN MILES
FIGURE
S-1
FREDERICK COUNTY
MONTGOMERY COUNTY
PRINCE GEORGES COUNTY
VIRGINIA
270
355
GAITHERSBURG
ROCKVILLE
CLARKSBURG
DAMASCUS
LAYTONSVILLE
BROOKEVILLE
OLNEY
REDLAND
WASHINGTON GROVE
NORTH POTOMAC
MONTROSE
GARRETT PARK
Germantown
Boyds
Burdette
Brink
Neelsville
Goshen
Woodfield
Etchison
Bootjack
Damascus
Mullinix
Lewisdale
Purdum
Kings Valley
Cedar Hgts
Cedar Grove
Kingsley
Hyattstown
Little Bennett Regional Park
Seneca
Darnestown
Travilah
Potomac
Rushville
Glen Hills
Montrose
Rockville
Derwood
Shady Grove
Olney
Sandy Spring
Unity
Griffith Park
Claysville
Mt. Zion
Olney Mills
Norbeck
Aspen Hill
Glenmont
Veirs Mill
Garrett Park
Potomac Manor
Great Falls
Pine
Tuckerman
Tilden Woods
Georgetown Village
Montgomery Village
Lakeforest
Fairgrounds
City Hall
Emory Grove
Candlewood Park
Needwood Lake
Lake Bernard Frank
Dogwood Park
Woodmont C.C.
Potomac Woods Park
Glen Hills
Piney Glen Farms
Kilgour Br. Park
Falls Road G.C.
Meadowbrook Stables
Great Falls Tavern
Great Falls Park
Great Falls Trail
Chesapeake & Ohio Canal National Historical Park
Seneca Creek State Park
Germantown Regional G.C.
Laytonsville G.C.
Montgomery G.C.
Needwood G.C.
Norbeck C.C.
Woodmont C.C.
Falls Road G.C.
Bretton Woods C.C.
Ovid Hazen Wells Rec Park
Goshen Recreational Park
Damascus Recreational Park
Little Seneca Park
Black Hill Regional Park
Rachel Carson Conservation Park
Blockhouse Point Park
Muddy Branch Park
Watkins Park
Great Seneca Park
Schaefer Recreational Park
Quince Orchard Park
Ancient Oak Park
Muddy Branch Park Fields
Olney Manor Pk.
Sycamore Acres
Williamsburg Village
Oakdale
Norbeck Estates
Aspen Hill
Argyle C.
Layhill Village
Foxhall
Glenmont
Randolph
Connecticut
Georgia
Bel Pre
Norbeck
Needwood
Lake Needwood
Lake Bernard Frank
Shady Grove
Derwood
Rockville
Montgomery Col.
Montgomery Col. Rockville Campus
Montgomery Col. Germantown Campus
Montgomery Col. Takoma Park/Silver Spring Campus

3) Alternate 4: Partial Interchange

The partial interchange alternate consists of a partial diamond interchange at I-270 and Watkins Mill Road Extended. Movements would only be allowed from Watkins Mill Road Extended to northbound I-270 and from southbound I-270 to Watkins Mill Road Extended.

c. Alternate 6: Watkins Mill Road Extended Without Interchange

This alternate consists of the extension of Watkins Mill Road from MD 117 east across I-270 and connecting to MD 355. It is included in the "no-build" or "baseline" scenario for the Metropolitan Washington Council of Government's travel demand model for the Washington region in the Constrained Long Range Plan (CLRP). This alternate does not include a conventional interchange of Watkins Mill Road and I-270 with access for general use traffic.

d. Access Options

Watkins Mill Road is being developed, as per the local master plans, to allow for pedestrian, bicycle, and vehicular access to transit, such as MARC, bus, and the master planned Corridor Cities Transitway (CCT), as well as to the planned economic development in northern Gaithersburg. Several access options are being evaluated as part of each of the "build" alternates under consideration. These options are as follows:

1) Option A: HOV Direct Access

High Occupancy Vehicles would have direct access to Watkins Mill Road Extended via a median interchange at Watkins Mill Extended, separate from the general use traffic.

2) Option B: Metropolitan Court Extended

The purpose of this option is to provide improved access from I-270 and Watkins Mill Road Extended for general use traffic to the Metropolitan Grove MARC Station. Access would be through a northern extension of Metropolitan Court to Watkins Mill Road just west of the CSX tracks.

3) Option C: MD 124 Access Ramp

The purpose of this option is to provide direct access from I-270 to the Master Planned Corridor Cities Transitway (light rail or bus) Station, as well as a relocated Metropolitan Grove MARC Station on the east side of the CSX tracks, via the I-270/MD 124 interchange. This option would also provide an access road for the planned economic development on the east side of the CSX tracks to the transit station(s).

5. Summary of Environmental Impacts

A summary comparison of impacts associated with the alternates under consideration is presented in Table S-1, and briefly described below.

Socioeconomic

The social and economic environments would generally be improved with the build alternates as a result of increased capacity and safer roadway and pedestrian conditions. With any of the build alternates, emergency vehicle response times in the study area would be improved, especially for incidents on or near I-270 between Middlebrook Road and MD 124.

Existing land use along I-270 consists of forest and agricultural uses. Existing land use along MD 117 and MD 355 consists of low-density commercial and some residential uses along MD 117. Planned land use in the study area consists largely of low-density commercial uses with office/light industrial in the center of the study area, multi-use south of Metropolitan Grove and east of MD 117, and low-density residential north of the Potomac Electric and Power Company (PEPCO) power lines.

The proposed project is consistent with the 1997 adopted City of Gaithersburg Master Plan. The study area is located largely within the corporate limits of the City of Gaithersburg, which has been designated as a Priority Funding Area (PFA) under the State's Smart Growth legislation.

Depending upon the alternate, between 26 to 89 acres of additional right-of-way will be required. It is anticipated that there will be no more than one residential relocation. No business displacements are anticipated. Through comprehensive community involvement efforts, steps have been taken to identify and avoid disproportionately high and adverse effects on minority and low-income communities as required by Executive Order 12898.

Up to 6.0 acres of Seneca Creek State Park and 0.3 acre of Middlebrook Park, both publicly owned public parks, may be required depending upon the alternate. Any use of publicly owned and used recreational area, wildlife or waterfowl refuge, or a significant historic or archeological site will require development and evaluation of avoidance or minimization alternates. A Section 4(f) Evaluation has been prepared to address these potential impacts.

The Maryland Historical Trust (MHT) has concurred that there are no historic standing structures either listed on or eligible for the National Register of Historic Places in the area of potential effect.

SHA has conducted a Phase 1B archeological survey revealing the presence of two prehistoric sites, three isolated historic artifacts and several isolated prehistoric artifacts. No additional work is recommended at any of these locations. There is no evidence to suggest that any of these archeological sites would be potentially significant or warrant preservation in place. MHT has concurred that there will be no historic properties affected by the proposed transportation improvements.

Natural Resources

Study area streams are designated as Use I waters by the Maryland Department of the Environment, (suitable for recreation, habitat for warm and cold water fish and other wildlife). The number of stream crossings required range from 3 to 10 depending upon the alternate. A range of 12 to 39 acres of woodlands and 1 to 3 acres of non-tidal palustrine wetlands will also be impacted depending upon the alternate. A range of 1 to 7 acres of the 100-year floodplain associated with Great Seneca Creek and one major tributary will be impacted. Coordination with the United States Fish and Wildlife Service and the Maryland Department of Natural Resources failed to identify any state or federally listed threatened or endangered plant or wildlife species or unique habitat known to exist in the project area.

Noise

The projected noise levels for the design year (2020) indicate that the Federal Highway Administration (FHWA) Noise Abatement Criteria (67 dBA) is approached or exceeded under both the no build and build conditions at both of the study area's sensitive areas.

Air Quality

The State and National Ambient Air Quality Standards will not be exceeded under the No Build Alternate or the Build Alternates.

TABLE S-1

I-270 AT WATKINS MILL ROAD EXTENDED
SUMMARY OF IMPACTS

	ALTERNATE								MAINLINE EASTERN SHIFT	C-D WESTERN SHIFT	NORTHBOUND BRAIDED RAMPS	ACCESS OPTION	
	NO-BUILD 1	2	2A	3	4	4A	6	6A				B	C
Socio-Economic Environment													
1. Displacements													
a. Residential	0	1	1	0	0	0	0	0	1	1	0	0	0
b. Business/Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**
2. No. of Properties & Resources Affected													
a. Residential	0	8	8	8	8	8	7	7	8	8	8	0	5
b. Business/Commercial	0	31	31	26	22	23	14	22	31	31	26	4	5
c. Parkland or Recreation Area	0	3	3	2	0	1	0	1	3	3	0	0	0
d. Church/School	0	0	0	0	0	0	0	0	0	0	0	0	0
e. Historic/Archeological	0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOTAL	**0**	**42**	**42**	**36**	**30**	**32**	**21**	**30**	**42**	**42**	**34**	**4**	**10**
3. Right-of-Way Required - Acres													
a. Residential	0	16.3	16.3	15.5	15.6	15.6	0.4	0.4	16.3	7.7	15.5	0	1.8
b. Business/Commercial	0	45.5	49.7	49.2	31.8	37.7	25.8	32.6	46.0	74.4	48.5	2.9	11.3
c. Parkland or Recreation Area	0	6.3	6.3	4.0	0	0.8	0	0.8	6.3	6.3	0	0	0
d. Church/School	0	0	0	0	0	0	0	0	0	0	0	0	0
e. Historic/Archeological	0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
TOTAL	**0**	**68.1**	**72.3**	**68.7**	**47.4**	**54.1**	**26.2**	**33.8**	**68.6**	**88.4**[1]	**64.0**	**2.9**	**13.1**
4. Consistent With Area Land Use Plans		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

TABLE S-1

I-270 AT WATKINS MILL ROAD EXTENDED
SUMMARY OF IMPACTS
(continued)

	ALTERNATE								MAINLINE EASTERN SHIFT	C-D WESTERN SHIFT	NORTHBOUND BRAIDED RAMPS	ACCESS OPTION	
	NO-BUILD 1	2	2A	3	4	4A	6	6A				B	C
Natural Environment													
1. Number of Stream Crossings	0	10	10	9	7	7	3	5	10	8	9	0	0
2. 100-Year Floodplain Affected - Acres	0	7.84	7.87	6.44	0.90	2.10	0.40	1.60	6.22	6.30	3.21	0	0
3. Wetlands Affected - Acres	0	1.08	1.12	0.70	0.34	0.54	0.32	0.52	1.08	1.08	0.36	0	1.01
4. Water of the U.S. Affected - Other Than Wetlands - LF	0	2930	2940	3205	1455	1675	840	1060	2430	1870	3585	0	0
5. Woodlands Affected - Acres	0	31.3	33.1	25.0	19.8	21.8	12.0	15.6	31.0	28.1	21.8	0.1	5.8
6. Stream Relocations - LF	0	1640	1640	1840	160	320	0	160	940	460	2290	0	0
7. Affected Threatened or Endangered Species	0	0	0	0	0	0	0	0	0	0	0	0	0
8. Area of Prime Farmland Affected	0	0	0	0	0	0	0	0	0	0	0	0	0
Noise Number NSAs Exceeding Abatement Criteria or Increasing 10 dBA or More Over Ambient	0	2	2	2	2	2	2	2	2	2	2	0	0
Air Quality CO Violations of 1-Hour or 8-Hour Standards	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost (x $1,000,000)	0.0	111	94	141	49	78	34	66	117	142	78	3.8	9.0

[1] C-D Western Shift includes right-of-way for more undevelopable land than any other alternate

I-270 AT
WATKINS MILL ROAD EXTENDED

The following Environmental Assessment Form is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. Its use is in keeping with the provisions of 1500.2 and 1500.6 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 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.

I-270 AT
WATKINS MILL ROAD EXTENDED

ENVIRONMENTAL ASSESSMENT FORM

	YES	NO	COMMENTS
A. Land Use Considerations			
1. Will the action be within the 100-year floodplain?	X		See Section V.E.3, p. V-19
2. Will the action require a permit for construction or alteration within the 50 year floodplain?		X	
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?	X		See Section V.E.5, p. V-22
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		See Section V.E.1, p. V-10
6. Will the action require a grading plan or a sediment control permit?	X		See Section V.E.1, p. V-10
7. Will the action require a mining permit for deep or surface mining?		X	

ENVIRONMENTAL ASSESSMENT FORM (Continued)

	YES	NO	COMMENTS
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		See Section V.A.4, p. V-4
12. Will the action affect the use of any natural or manmade features that are unique to the county, state, or nation?		X	
13. Will the action affect the use of an archaeological 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		See Section V.E.2, p. V-12

ENVIRONMENTAL ASSESSMENT FORM (Continued)

	YES	NO	COMMENTS
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		See Section V.E.2, p. V-12
17. Will the action require a permit for the drilling of a 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 treatment and/or land disposal of liquid waste derivatives?		X	
21. Will the action result in any discharge into surface or sub-surface water?	X		See Section V.E.2, p. V-12

ENVIRONMENTAL ASSESSMENT FORM (Continued)

	YES	NO	COMMENTS
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	X		See Section V.E.2, p. V-12
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X		See Section V.G., p. V-40
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?		X	
25. Will the action generate additional noise, which differs in character or level from present conditions?	X		See Section V.F., p. V-30
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		Conventional lighting for ramps, overpasses, etc. would be incorporated with any of the interchange build alternates
D. Plants and Animals			
28. Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?		X	See Section V.E.5, p. V-28

ENVIRONMENTAL ASSESSMENT FORM (Continued)

	YES	NO	COMMENTS
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?		X	See Section V.E.2, p. V-12 and Section V.E.6, p. V-28
30. Will the action require a permit for the use of pesticides, herbicides or other biological, chemical or radiological control agents?		X	
E. Socioeconomic			
31. Will the action result in a pre-emption or division of properties or impair their economic use?	X		See Section V.A. and V.B., p. V-1 and p. V-6
32. Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	X		See Section V.A., p. V-1
33. Will the action alter land values?	X		See Section V.B., p. V-6
34. Will the action affect traffic flow and volume?	X		See Section II.E., p. II-13
35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource?		X	

	YES	NO	COMMENTS
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		See Section II.B., p. II-1
38. Will the action affect the employment opportunities for persons in the area?	X		See Section II.B., p. II-2
39. Will the action affect the ability of the area to attract new sources of tax revenue	X		See Section II.B. and V.B., p. II-2 and p. V-6
40. Will the action discourage present sources of tax revenue from remaining in the area to attract new sources of tax revenue?		X	
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	

ENVIRONMENTAL ASSESSMENT FORM (Continued)

	YES	NO	COMMENTS
43. Could the action be eliminated without deleterious effects to the public health, safety, welfare or the natural environment?		X	See Section II.B., p. II-1
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		See Section V.H., p. V-47
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.		X*	

*In accordance with the Natural Environmental Policy Act, and 23 CFR 771, this Environmental Assessment has been prepared. This document satisfies the requirements of the Maryland Environmental Policy Act and the National Environmental Policy Act.

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I. DESCRIPTION OF PROPOSED ACTION

I. DESCRIPTION OF PROPOSED ACTION

A. Project Location

The I-270 at Watkins Mill Road Extended project area is located in the northern portion of the City of Gaithersburg in Montgomery County, Maryland. The project area encompasses the I-270 corridor, from south of Seneca Creek Park to the interchange of MD 124 (Quince Orchard Road/Montgomery Village Avenue)/MD 117 (Clopper Road); Watkins Mill Road, from MD 355 on the east to MD 117 on the west; and their environs (see Figure S-1 and I-1). Existing Watkins Mill Road is a discontinuous collector road which extends east from MD 355 (0.6 mile north of MD 124) for approximately 2.7 miles, 500 feet of which are within the project area. It also includes a 1,200 foot long segment, known as West Watkins Mill Road, that extends east from MD 117 (0.75 mile north of MD 124) and dead ends just west of the CSX rail lines. The resulting gap in Watkins Mill Road is approximately 1.0 mile long, across I-270.

The study area encompasses the project area (area directly affected by the project) and residential communities just outside the project area that may be indirectly affected by the project. The study area boundary mainly follows roadways, community boundaries and natural features, such as streams (see Figure I-1).

B. Project Description

The I-270 project at Watkins Mill Road Extended is investigating various alternates which will improve access between I-270 and the existing transportation network in northern Gaithersburg. Improved access is needed to accommodate economic development planned in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access (vehicular, pedestrian, bicycle and transit) to the Metropolitan Grove MARC Station to facilitate increased transit use.

This study evaluates alternative methods to improve traffic operations for locally oriented traffic in the project area. The improvements studied, including the extension of Watkins Mill Road and various interchange alternates with I-270, address safety and capacity requirements in order to alleviate existing deficiencies while accommodating projected traffic increases resulting from planned growth in the area. All alternates developed in this study are compatible with the I-270/US 15 Multi-Modal Corridor Study alternates addressing the needs in the 30-mile segment of I-270 from I-370 to Frederick.

Existing Watkins Mill Road is functionally classified as a collector road, MD 124 is functionally classified as an other principal arterial, and I-270 is functionally classified as an interstate highway and is part of the National Highway System. In addition, MD 355 is functionally classified as an other principal arterial and MD 117 is classified as a minor arterial.

Full build out of developable properties along Watkins Mill Road in the study area is not possible without the extension of Watkins Mill Road between MD 355 and MD 117 due to development constraints imposed by the City of Gaithersburg Master Plan. However, plans for much of this development are currently under review by Montgomery County and the City of Gaithersburg, pending approval of this project, which will provide improved access and mobility within the existing transportation system. This development includes: office/research development (2.3 million square feet of new development and 2.3 million square feet of re-development), commercial development (440,000 square feet of retail space, an 80,000 square foot theater complex, and a hotel), and residential development (1,500 units) are planned for the northern portion of the City of Gaithersburg. Both the City of Gaithersburg and Montgomery County have designated this project as a transportation priority.

In 1997, the segment of I-270 in the study area experienced failing levels of service in the peak hours, particularly at the I-270/MD 124 interchange. In addition, the existing roads within the study area lack the capacity and continuity to provide adequate accessibility to the planned development area. Full development as proposed by the City of Gaithersburg and the Montgomery County governments would overload the existing local transportation network. In addition, the accident rate along I-270, in the vicinity of MD 124, is significantly higher than the statewide average for similar roadways and is expected to worsen as congestion increases.

The I-270 at Watkins Mill Road extended interchange was previously included in the I-270/US 15 Multi-Modal Corridor Study and was shown as such in the Development and Evaluation Program of previous Consolidated Transportation Programs (CTP). At the request of Montgomery County and the City of Gaithersburg, it is included as a separate project in the Development and Evaluation Program of the 1999 - 2000 CTP. The I-270 at Watkins Mill Road extended interchange study can function with or without the I-270/US 15 Corridor Study and therefore has independent utility. The purpose and need, as well as the study area, for these two projects are different, with the I-270/US 15 study addressing mainline corridor capacity issues and this project addressing primarily local access issues.

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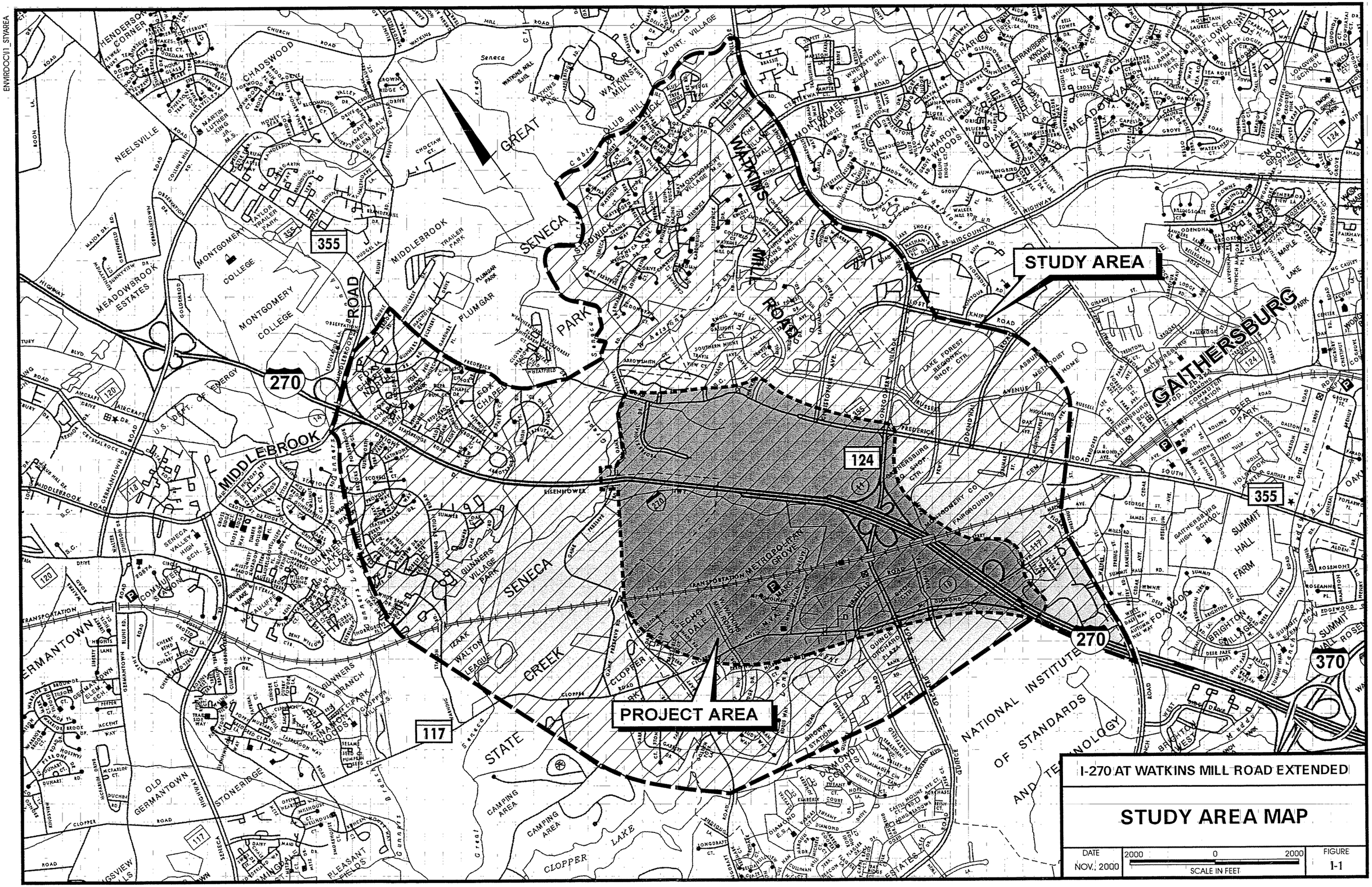

I-270 AT WATKINS MILL ROAD EXTENDED

STUDY AREA MAP

DATE	SCALE IN FEET	FIGURE
NOV., 2000	2000 0 2000	1-1

II. PURPOSE AND NEED

II. PURPOSE AND NEED

A. Purpose

The purpose of the I-270 at Watkins Mill Road Extended project is to provide improved access (vehicular, pedestrian, bicycle and transit) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use (see Figure I-1).

As indicated in a previous feasibility study prepared by the City of Gaithersburg and Montgomery County, improved access in northern Gaithersburg to I-270, such as from proposed Watkins Mill Road extended, would provide several benefits. The City of Gaithersburg and Montgomery County have made this project a priority in order to accommodate critical office and commercial development for northern Gaithersburg. Representatives of the City of Gaithersburg have indicated that several development plans have been on hold for over two years pending this project. Prior to the initiation of this study, the city and the county jointly conducted a feasibility study of an interchange of Watkins Mill Road Extended with I-270. The city and county recommended a partial cloverleaf interchange with I-270 and Watkins Mill Road extended as part of their feasibility study, completed in August of 1998.

Access at I-270 and Watkins Mill Road Extended had been part of the I-270/US 15 Multi-Modal Corridor Study, and was shown as such in the Development and Evaluation Program of previous Consolidated Transportation Programs (CTP). At the request of Montgomery County and the City of Gaithersburg, it is included as a separate project in the Development and Evaluation Program of the 1999-2004 CTP. A discussion of the justification for the "break out" of the I-270 at Watkins Mill Road Extended project from the I-270/US 15 Multi-Modal Corridor Study is included in Section II.D., Logical Termini/Independent Utility Justification.

B. Need

The need for this project is to provide a sufficient level of access and mobility to support economic development efforts in designated growth areas of northern Gaithersburg, as identified in the 1997 adopted City of Gaithersburg Master Plan. This need can be described using four major categories: planned economic development, roadway capacity, traffic safety and intermodal connectivity. The No Build and various build alternates are under consideration in this study. The No Build Alternate does not address the purpose and need. The Build Alternates

address the purpose and need to varying degrees, as summarized in Section II.E., Impacts to Traffic and the Transportation Network.

1. Planned Economic Development

The City of Gaithersburg has designated several parcels in northern Gaithersburg for economic development, where both employment growth and residential growth are planned to occur. These planned developments would accommodate 2.3 million square feet of new office/research space development and 2.3 million square feet of office/research space re-development within northern Gaithersburg, located within the designated City of Gaithersburg municipality. Several of these developments are awaiting additional determination on master plan alignments of transportation infrastructure. Full build out of this area is not possible without the additional transportation infrastructure. However, accessibility and mobility will need to be addressed for 94% of the office/research development and 57% of the residential development, which is being approved assuming the master plan infrastructure.

The planned economic development in northern Gaithersburg (see Figure II-1) projects or anticipates 2.3 million square feet of new office/research development space with 1,500 residential units and 2.3 million square feet of re-developed office/research space. It is noted that the square footage caps set forth by the land use plans are target numbers, which means that the 4.6 million square feet of economic development should be viewed as the ultimate development potential for this area. Furthermore, since the development potential in this area is based on approved Master Plans for these planning sectors, the development assumes that the master planned infrastructure will occur. Based on this ultimate development potential, the 4.6 million square feet of economic development would equate to approximately 73,051 new trips, the majority of which will occur regardless of the I-270 project at Watkins Mill Road Extended. The majority of future development within the study area does not depend on any specific infrastructure improvements; however, based on traffic and access in the area, the City of Gaithersburg and Montgomery County have deemed infrastructure improvements important to handle existing, as well as this approved and pending development.

The City of Gaithersburg has developed considerable detail concerning the amount of development that can occur in the study area for various levels of roadway improvement. This information is summarized in Section V.H. Secondary and Cumulative Effects Analysis, and the City of Gaithersburg Master Plan excerpts containing the information is included in Section VII. Comments and Coordination.

The City of Gaithersburg has subdivided Gaithersburg into six neighborhoods for planning purposes. Neighborhoods 5 and 6 (see Figure II-1), in the northern portion of the city,

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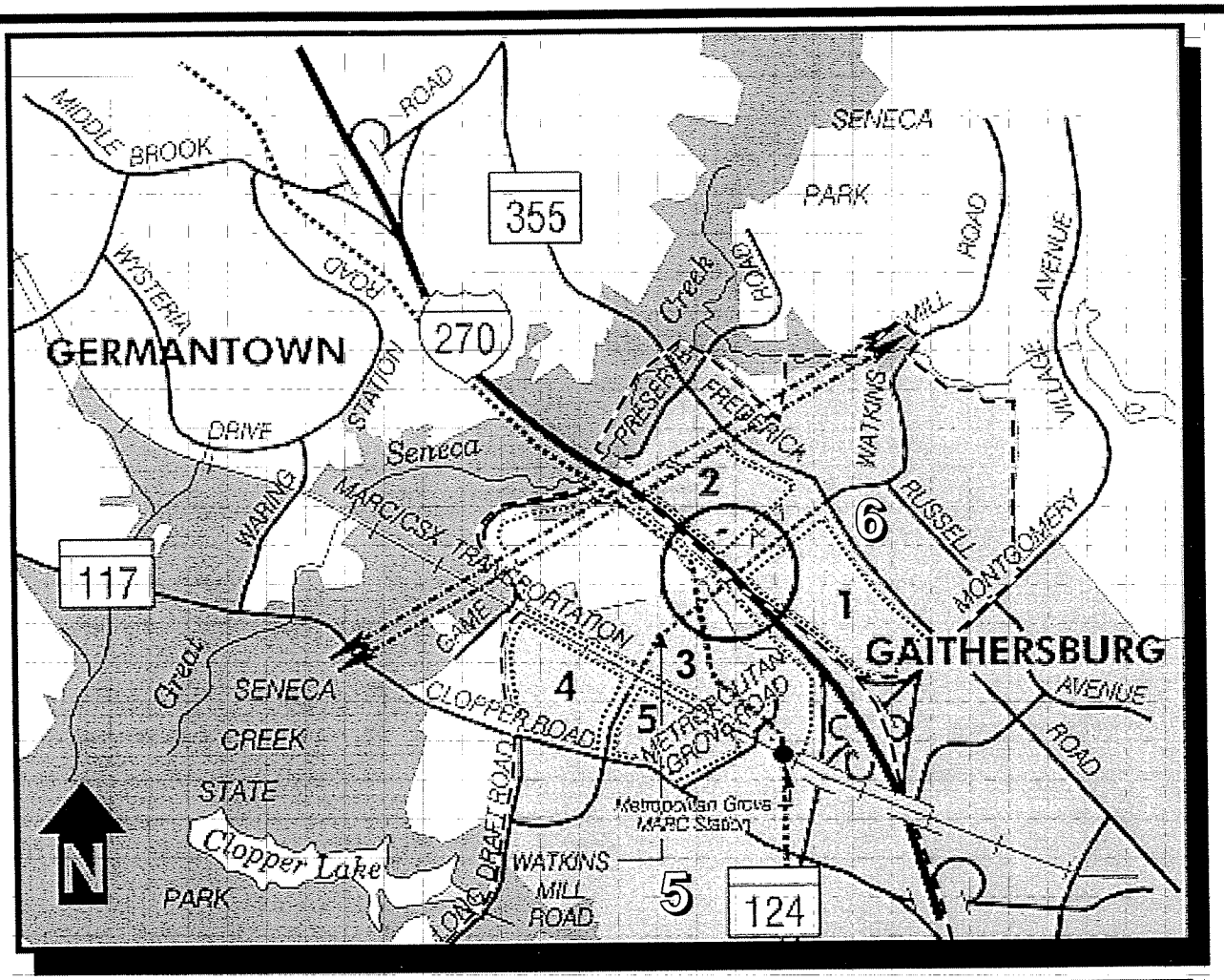

- Study Area
- City of Gaithersburg Boundary
- Parks
- PEPCO Power Lines
- A-17 City of Gaithersburg Master Plan Watkins Mill Road Extended
- City of Gaithersburg Master Plan I-270/Watkins Mill Road Extended Interchange
- Montgomery County Master Plan Corridor Cities Transitway (CCT) Alignment
- 6 Master Plan - Designated Neighborhoods

Planned Study Area Development

1. IBM (and Lockheed-Martin) Property (re-development)
   1.1 million s.f. office/research space
2. Casey Tract East (undeveloped)
   600,000 s.f. office/research space
3. Casey Tract West (undeveloped)
   1.7 million s.f. office/research space + 1,500 residential units
4. Bennington Corporation (re-development)
   800,000 s.f. office/research space
5. Metropolitan Grove Park (re-development)
   400,000 s.f. office/research space

I-270 AT WATKINS MILL ROAD EXTENDED

PLANNED STUDY AREA DEVELOPMENT

DATE	SCALE IN FEET	FIGURE
NOV., 2000	3000± 0 3000±	II-1

comprise most of this project's study area and have been slated in the Master Plan as areas for economic development. The Master Plan goal in these neighborhoods is to provide transit accessible, pedestrian-friendly town centers with access to other employment and residential areas. The City of Gaithersburg views these neighborhoods as having the greatest potential for a mixed use development of high quality. The undeveloped land on both sides of I-270 are the last large parcels within the Gaithersburg's Priority Funding Area. This land could support the emergence of a dynamic development due to the presence of the road network, the MARC rail station and the future light rail or busway stop.

The IBM (and Lockheed Martin) site is planned for 1.1 million square feet of office/research space (re-development) along with the following new development: 440,000 square feet of retail space; an 80,000 square foot theater complex with 4,000 to 4,500 seats; and a hotel with 250 to 350 rooms. The Casey Tract is planned for 2.3 million square feet of new office/research space and 1,500 to 2,000 residential dwelling units. Additional re-development is also planned for several sites along MD 117 and MD 355 (Bennington Corporation at 800,000 square feet and Metropolitan Grove Park at 400,000 square feet), as shown on Figure II-1 and Table II-1. Table II-1 shows the projected employment and residential populations for this area.

TABLE II-1
PLANNED DEVELOPMENT

	Potential Space	Projected Jobs	New Population
Re-Development			
IBM/Lockheed Martin	1.1 SF office/research	628	NA
Bennington Corporation	800,000 SF office/research	2,460	NA
Metropolitan Grove Park	400,000 SF office/research	1,142	NA
New Development			
Casey Tract East	600,000 SF office/research	2,400	NA
Casey Tract West	1.7 M SF office/ research + 1,500 residential units	6,800	4,050

The jobs projected for this area would serve to assist in balancing the housing and jobs within the City of Gaithersburg and along the I-270 Corridor. These jobs would largely consist of business and office research employment at a higher scale than just retail commercial,

consistent with the housing development within the city. It is envisioned that the new jobs associated with this projected development will be associated with large corporate companies who are seeking high visibility sites which are accessible from I-270. These office, research and development jobs will enhance the already existing firms along the Technology Corridor. The development potential for the vacant parcels and their expected job generation will include all sectors of the work force from very high technical positions to service workers all within mixed use developments.

2. Roadway Capacity

The existing typical section on I-270 in the study area is eight lanes with a 30-foot median and 10-foot outside shoulders. Alternates for the I-270/US 15 Multi-Modal Corridor Study could include local Collector-Distributor (C-D) lanes and a southbound HOV lane within the I-270/Watkins Mill Road Extended project area. The inside northbound lane operates as an HOV lane during the evening rush hour. The connection between the two existing sections of Watkins Mill Road is proposed in local master plans as a four-lane divided roadway.

I-270 is experiencing traffic congestion in the study area. In 1998, the Average Daily Traffic (ADT) volume along I-270 in the study area was 119,600 vehicles, with failing levels of service (LOS) in the peak hours at the I-270/MD 124 interchange, as shown on Figure II-2 and on Table II-2.

TABLE II-2
I-270 AVERAGE DAILY TRAFFIC (DOT) VOLUMES AND LEVELS OF SERVICE (LOS)

Location	ADT Volume	LOS Northbound		LOS Southbound	
		AM	PM (Peak Direction)	AM (Peak Direction)	PM
1998 Existing Traffic Conditions					
I-270 (North of Middlebrook Road)	86,100	B	D	E	B
I-270 (Between Middlebrook Road & MD 124)	119,600	B	E	E	B
I-270 (Between MD 124 & MD 117)	130,300	B	D	E	B
Projected 2020 Traffic Conditions					
I-270 (North of Middlebrook Road)	181,300	C	F	F	D
I-270 (Between Middlebrook Road & MD 124)	222,200	C	F	F	D
I-270 (Between MD 124 & MD 117)	203,650	C	F	F	C

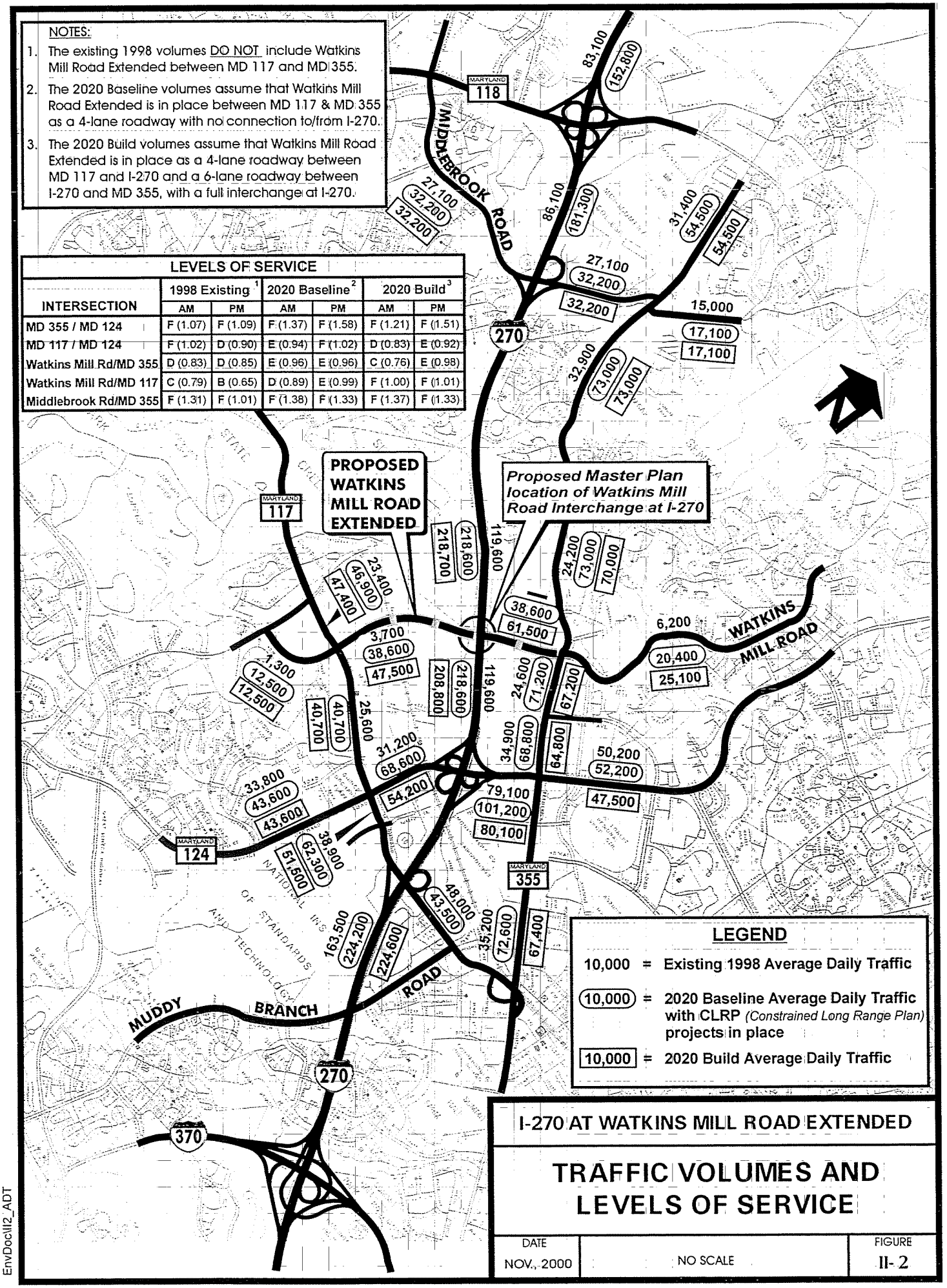

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TABLE II-3
INTERSECTION LOS
AND VOLUME-TO-CAPACITY (V/C) RATIOS

INTERSECTION	1998 Existing LOS		2020 LOS No-Build		2020 LOS Baseline[1]		2020 Build LOS[2]	
	AM	PM	AM	PM	AM	PM	AM	PM
MD 355/MD 124[3,4]	F 1.07	F 1.09	F 1.71	F 1.86	F 1.37	F 1.58	F 1.21	F 1.51
MD 117/MD124[5]	F 1.02	D 0.90	F 1.48	F 1.66	E 0.94	F 1.02	D 0.83	E 0.92
Watkins Mill Road/ MD 355[3]	D 0.83	D 0.85	F 1.06	F 1.70	E 0.96	E 0.96	C 0.76	E 0.98
Watkins Mill Road/ MD 117	C 0.79	B 0.65	F 1.31	F 1.10	D 0.89	E 0.99	F 1.00	F 1.01
Middlebrook Road/ MD 355	F 1.31	F 1.01	F 1.38	F 1.33	F 1.38	F 1.33	F 1.37	F 1.33

[1]The Baseline assumes that the extension of Watkins Mill Road from MD 355 to MD 117 will be in place without an interchange to I-270.
[2]The Build condition assumes a full movement interchange between I-270 and Watkins Mill Road Extended, such as with Alternates 2 and 3.
[3]Includes Improvements recently completed as part of the MD 355 project.
[4]Includes improvements proposed as part of the separate Congestion Relief Study (CRS).
[5]Includes additional lanes preliminarily proposed as part of the MD 117 Corridor Project Planning Study.

LOS is a measure of the congestion experienced by drivers and ranges from A (free flow with little or no congestion) to F (failure with stop-and-go conditions). LOS is normally computed for the peak periods of the typical day, with LOS D (approaching unstable flow) or better generally considered acceptable for highways in urban and suburban areas. At LOS E, volumes are near or at the capacity of the highway. LOS F represents conditions in which there are operational breakdowns with stop-and-go traffic and extremely long delays at signalized intersections. The V/C Ratio is the volume of a roadway/intersection divided by the capacity of a roadway/intersection. When a roadway or intersection is at capacity, the V/C ratio is at 1.0, which means that the roadway or intersection is failing.

3. Roadway Safety

The accident history has been researched for the three year time period from 1996 through 1998 for the five major roadways in the Study Area - I-270, MD 117, MD 124, MD 355 and Watkins Mill Road. The number of accidents, severity of accidents (e.g., fatalities, injuries, property damage), and types of accidents (e.g., rear end, sideswipe, left turn, angle, pedestrian, etc.) were catalogued and compared to statewide averages for similar facilities. Complete summaries of the accident data are provided in the Appendix of the document. Notable findings from the accident data are as follows:

a. I-270 from MD 117 to Middlebrook Road

- The only type of accident significantly higher than the statewide average was rear end.
- High Accident sections occurred in:
  1996 - - from 0.23 mi. S. to 0.27 mi. N. of Middlebrook Road
  1997 - - from 0.12 mi. S. to 0.38 mi. N. of MD 124 and
  1998 (2) - - from 0.22 mi. S. to 0.28 mi. N. of MD 124 and from 0.50 mi. S. of Middlebrook RD to Middlebrook Road

b. MD 117 from Great Seneca Highway to I-270

- Injury, property damage and total accidents were significantly higher than the statewide average.
- The types of accidents that were significantly higher than the statewide average included rear end, left turn, angle and fixed object.
- High Accident Intersections consisted of:
  1996 - - MD 117 at Great Seneca Highway
  1998 - - MD 117 at First Field Road
- High Accident Sections consisted of:
  1996 - - from 0.02 miles east of Waring Station Road to 0.06 miles west of Game Preserve Road (west).

c. MD 124 from MD 117 to MD 355

- The only type of accident significantly higher than the statewide average was rear end.
- This segment contained no High Accident Intersections or High Accident Sections

d. MD 355 from MD 117 to Middlebrook Road

- Injury, property damage and total accidents were significantly higher than the statewide average.
- The types of accidents that were significantly higher than the statewide average included rear end, sideswipe, left turn, angle and pedestrian.
- Highway Accident Sections consisted of :
  1998 (2) - - from 0.22 mi. S. to 0.28 mi. N. of MD 124 and from 0.50 mi. S. of Middlebrook Road to Middlebrook Road

e. Watkins Mill Road Entire Length (0.88 Mile)

- The only type of accident significantly higher than the statewide average was rear end.
- It is noted that average accident rates for county-maintained roads are not available. Therefore, the statewide average rates used here are derived from state-maintained highways designed similarly to Watkins Mill Road.

4. Intermodal Connectivity

As part of the economic development of northern Gaithersburg, intermodal connectivity to the existing MARC Service, the planned Corridor Cities Transitway (CCT) alignment, the feeder/local bus service and the existing and proposed roadway network is critical. Currently, the eastern half of the planned economic development center in northern Gaithersburg (IBM/Lockheed Martin and the Casey Tract East) cannot access I-270 or the transit station directly. In addition, the undeveloped western half of the planned economic development area in northern Gaithersburg is currently locked between the railroad tracks and I-270 without any access to any of the transportation network.

The study area is served by several providing agencies, including the Mass Transit Administration (MTA), the Washington Metropolitan Area Transit Authority (WMATA) and Montgomery County. These agencies provide the MTA Express Commuter Bus Service (#991), the Montgomery County Ride-On bus routes along MD 117 and MD 355 to the Shady Grove Metrorail Station, as well as regional Metrobus routes to Bethesda.

Commuter rail service is provided on the MARC Brunswick/CSX Transportation rail line. This rail line runs parallel to, and to the west of, I-270, and the line services areas between Martinsburg, West Virginia and Washington, D.C. Service is also provided to the City of Frederick via a "Meet the MARC" express bus connection at the Point of Rocks. The Metropolitan Grove MARC Station is within the study area, approximately 2,200 feet west of I-270, and includes a 353 space parking lot. Currently, the Metropolitan Grove Station is underutilized with only 138 average daily riders and 37% daily usage of the existing Metropolitan Grove MARC Station parking lot. This is low for a MARC Station, when compared to other MARC Stations. The Maryland MTA attributes the under-utilization of the Metropolitan Grove MARC Station to several issues, including:

- Low densities around the Metropolitan Grove MARC Station (40% of the 353 spaces used) compared to the Olde Towne Gaithersburg MARC Station (95% of the 280 spaces used) or the Germantown Station (50% of the 657 spaces used).

- Difficult road accessibility to the Metropolitan Grove MARC Station. This can be attributed to indirect access between the station and the interstate system, as well as heavy congestion surrounding the interstate and arterial roadways, such as MD 117 and MD 124, in the vicinity of the station.

- The Olde Towne Gaithersburg MARC Station is closer to and in the general direction of morning MARC travelers with a more direct southern access.

In addition, this station is planned to serve the locally proposed Metropolitan Grove Corridor Cities Transitway (CCT) Station (same location), which is on both the city and county master plans, as well as part of the I-270/US 15 Multi-Modal Corridor Study. The provision of improved access or relocation is necessary to achieve optimum utilization of the mass transit system to accommodate the planned economic development area.

As indicated by the above level of service summaries, the existing roads throughout the study area are deficient in that they lack the capacity and continuity to provide adequate future accessibility and intermodal connections for employee, customer, and residential access to the planned economic development area.

C. Other Transportation Projects

Several transportation improvements are currently under final design and construction within this project's study area by the State Highway Administration. This includes the recently completed widening of MD 355 (Frederick Road) between MD 124 and Game Preserve Road from a four-lane undivided roadway to a six-lane median divided roadway, similar to MD 355 south of MD 124. In addition, the interchange of MD 124 and I-270 is in final design for improvements to the ramps on the west side of the existing interchange to eliminate weaving conflicts along southbound I-270. These improvements include the addition of ramp lanes from I-270 southbound to MD 124 westbound and eastbound, as well as the removal of the loop ramp in the southwest quadrant of the interchange. As part of this design, the land in the southwest quadrant, where the existing loop ramp will be removed, will be utilized to implement a 400+ space park and ride lot, with an informational kiosk and bus connections. Finally, just south of the study area, final design is underway for interchange improvements to MD 117 and I-270 to add a missing interchange movement and a park and ride lot.

D. Logical Termini/Independent Utility Justification

The I-270 at Watkins Mill Road Extended project has been evaluated in terms of whether adequate justification under National Environmental Policy Act (NEPA) regulations is present for breaking this project out from the larger I-270/US 15 Multi-Modal Corridor Study. The goal of this evaluation is to clarify that each project:

- Connects logical termini and is of sufficient length to address environmental matters on a broad scope;
- Has independent utility or independent significance, i.e., is useable and a reasonable expenditure even if no additional transportation improvements in the area are accomplished;
- Will not restrict consideration of alternates for other reasonably foreseeable transportation improvements.

Discussion to support the above requirements is as follows:

1. Logical Termini

The project limits for the I-270 project planning study at Watkins Mill Road Extended are:

- the MD 124/MD 117 interchanges with I-270 to the south;
- the Great Seneca Creek to the north;

- MD 117 to the west; and
- MD 355 to the east.

The project area encompasses the closest I-270 access points and the major arterial roadways that serve the economic development areas of northern Gaithersburg. In addition, the project limits are of sufficient length to address the environmental issues associated with this project on a broad scope.

To the south, the MD 117 and MD 124 interchanges with I-270 are the closest crossroads to access the planned and existing economic and residential development in northern Gaithersburg. MD 124, functionally classified as an other principal arterial, and MD 117, functionally classified as a minor arterial, both carry east/west oriented traffic in the study area, to and from I-270. These two interchanges function together since in order to go north on I-270 from northern Gaithersburg, you must use the MD 124 interchange, while, in order to go south on I-270 from the west side of I-270 in northern Gaithersburg, the only current access is at MD 117. There is no access onto northbound I-270 at the MD 117 interchange. Both of these interchanges provide access to the Metropolitan Grove MARC Station. Therefore, the MD 117 and MD 124 interchanges with I-270 serve as major crossroads or "traffic generators" and make logical southern termini.

To the north, Middlebrook Road is the closest access point and major crossroad; however, it serves north oriented traffic. In addition, this interchange with I-270 is 2.7 miles north of MD 124 and the proposed economic development area. The Great Seneca Creek and Seneca Creek State Park provide a natural buffer between the planned economic development in northern Gaithersburg and the less dense area of Germantown. This environmental resource will provide a natural buffer for the northern study limits since every effort will be made to avoid impacts to both the Creek and the Park.

The east/west limits for the project area are MD 355/MD 117, respectively. MD 355 is functionally classified as an other principal arterial and MD 117 is functionally classified as a minor arterial. These two roadways are both north/south oriented state routes in the study area, carrying traffic to and from roads connecting to I-270 and other major arterial roadways.

An environmental inventory has been completed to identify the major socioeconomic, natural and cultural environmental features in the project area. Some of the environmental issues that would need to be addressed include the Great Seneca Creek, the Great Seneca Park, Secondary and Cumulative Effects, economic development and wetlands. These project limits allow the project planning study to look at any avoidance, minimization, or mitigation of any of the resources within the project area for any alternates developed.

2. Independent Utility

All projects must have independent utility or significance. While two projects can be related, they must both have independent utility in that each project can serve its transportation purpose whether or not the other project is built. The two projects in question have distinctly different and independent purpose and need.

The purpose of the I-270 project at Watkins Mill Road Extended is to provide improved access (vehicular, pedestrian, bicycle and transit use) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use.

The purpose for the larger I-270/US 15 Multi-Modal Corridor Study is to relieve congestion and safety concerns addressing the corridor wide travel for the 30 mile corridor, including a large number of longer distance trips.

The project at I-270 and Watkins Mill Road Extended can function with or without the transportation improvements associated with the I-270/US 15 Corridor Study. Access at I-270 and Watkins Mill Road Extended would provide a direct connection from northern Gaithersburg to I-270 and would not propose any additional capacity (high occupancy or general use lanes) for I-270, like the Corridor Study. In addition, Collector-Distributor (C-D), or local, lanes are being evaluated as part of the I-270 Corridor Study in this area. These C-D lanes are generally used to avoid weaving conditions or to handle local traffic in closely spaced interchange areas, particularly when under one mile in an urban area and can, therefore, function on a section to section basis without disrupting traffic.

This project would not force any other transportation improvements and is not expected to place a significant load onto the I-270 Corridor since it will likely redistribute and accommodate the forecast traffic rather than generate new traffic. The Montgomery County Watkins Mill Road Extended/I-270 Interchange Feasibility Study completed in 1998 showed a minimal increase of traffic on I-270 (see Appendix). The 2020 PM Peak Hour Forecast Traffic Volumes (prepared by the Maryland-National Capital Park and Planning Commission) showed a small increase with and without an interchange at Watkins Mill Road Extended. North of Watkins Mill Road Extended, I-270 showed an average increase of 5% in the southbound (off-peak) direction (ranging 4-6%), with a 2% average increase in the northbound (peak) direction. South of Watkins Mill Road, I-270 showed an average increase of 12.5% in the southbound (off-peak) direction, with a 5.5% average increase in the northbound (peak) direction. Please note

that this forecast modeling was done with a constant land use, which is important since the development will happen despite the outcome of additional access at Watkins Mill Road Extended. This project is needed to accommodate and support the economic development by providing the necessary access.

Furthermore, the former Intercounty Connector and current Congestion Relief Studies (1998 data) show that the intersections of MD 124/MD 355 and MD 117/MD 124 are currently operating at failing levels of service with volume to capacity ratios (AM/PM) of 1.07/1.14 and 1.04/1.06, respectively. This reflects that the additional capacity of Watkins Mill Road Extended and access to I-270 is needed to support the localized travel and accessibility for the planned economic development.

While additional access at I-270 and Watkins Mill Road Extended would enable economic development, it would not force any additional transportation improvements. Therefore, this project has independent utility and significance from the I-270/US 15 Multi-Modal Corridor Study.

3. Consideration of Other Projects

Another factor to consider when evaluating segmentation issues is whether the project will restrict or preclude consideration of any alternates for other reasonably foreseeable transportation improvements.

As mentioned earlier, the I-270/US 15 Multi-Modal Corridor Study is evaluating detailed alternates between the Shady Grove Metrorail Station and Biggs Ford Road and the Watkins Mill Road Extended study area is within this Corridor Study area. There are five alternates that have been carried into the detailed planning stage for engineering and environmental analysis. These alternates include a No Build (Baseline) Alternate, a Transportation System/Demand Management Alternate, Combination Alternate A, Combination Alternate B and Combination Alternate C. The Combination Alternates are generally considered the "build" alternates and include a variety of general use and high occupancy lane widening, a separate alignment transitway, new interchange options, as well as transportation system/demand management strategies.

The existing typical section for I-270 between MD 124 and Watkins Mill Road Extended includes four (4) southbound general use lanes, one (1) northbound HOV lane, three (3) northbound general use lanes, and two (2) northbound C/D lanes merging in with the mainline. The I-270 Corridor Study TSM/TDM Alternate in this segment would not add any lanes; however, the southbound inside shoulder could be restriped for HOV use. Any "build" alternates

in this same section for the I-270 Corridor Study would either add one (1) southbound lane for converting the inside lane for HOV lane use or two (2) southbound and two (2) northbound C-D lanes (the inside southbound lane would then be converted for HOV use). As demonstrated in Chapter IV Alternates Considered, any structure over or ramps connecting to I-270 as part of the Watkins Mill Road Extended project planning study would be designed so as to not preclude any of the alternates under consideration as part of the I-270/US 15 Multi-Modal Corridor Study.

In addition, several projects are under design or construction in this study area including:

- Intersection improvement at MD 355/MD 124
- Intersection improvement at MD 117/MD 124
- Interchange improvement and park and ride lot at I-270/MD 124
- Interchange improvement and park and ride lot at I-270/MD 117
- MD 355 (4 to 6 lanes) between MD 124 and Middlebrook Road

None of these projects would be precluded from design as part of this study.

Therefore, access at I-270 and Watkins Mill Road Extended would not preclude any of these transportation alternates from being implemented.

E. Impacts to Traffic and the Transportation Network

The proposed alternates under consideration for this project have been developed to address the projected levels of congestion that will occur as a result of substantial traffic volume growth from planned development in the Gaithersburg area. In addition, these alternates address accessibility to community facilities and transit facilities in the project area. One means of assessing how well the purpose and need of the project is being addressed is by an analysis of the traffic operations. For the purposes of analyzing traffic operations, the alternates are grouped into four basic categories. These four categories are as follows:

1. **Alternate 1:** No Build

2. **Alternate 2 and 3 (with applicable access options):** Full movement interchange for I-270/Watkins Mill Road Extended

3. **Alternate 4 (with applicable access options):** Half-diamond interchange with ramps connecting I-270 and Watkins Mill Road to and from the north

4. **Alternate 6 (with applicable access options):** Watkins Mill Road Extended from MD 117 to MD 255 with no connection to/from I-270.

The analysis of the impacts of the proposed alternates on the traffic operations in the roadway network has included level of service analysis at five existing intersections: MD 355/MD 124, MD 117/MD 124, Watkins Mill Road/MD 355, Watkins Mill Road/MD 117 and MD 355/Middlebrook Road. (Note: The MD 355/Middlebrook Road intersection essentially drops out of the comparison analysis since travel demand modeling results indicate that the influence area of an I-270/Watkins Mill Road interchange does not extend as far north as Middlebrook Road.) In addition, the peak hour volumes and operations for each of the ramp movements associated with the proposed Watkins Mill Road Extended, existing MD 124 and existing MD 117 interchanges, have been compared between the four categories described above.

The results of these analyses are shown on Figure II-3. The primary conclusions that can be drawn from the roadway network traffic operations analysis are as follows:

- There is a substantial amount of latent traffic demand between the Montgomery Village communities and I-270, meaning that the increased capacity offered to the local roadway network by an I-270/Watkins Mill Road interchange results in an increase in peak hour volumes on Watkins Mill Road, for the interchange build alternates versus the No Build Alternate or Alternate 6.

- The proposed ramp carrying southbound I-270 traffic exiting to Watkins Mill Road is projected to carry 1,775 vehicles in the morning peak hour for the design year 2020. Without this ramp (as with the No Build Alternate and Alternate 6), the existing southbound I-270 ramp exiting to MD 124 would carry 3,575 vehicles in the morning peak hour, for exceeding the capacity of the ramp or the downstream signalized intersection at the MD 124 ramp terminal. It is noted that the next closest southbound I-270 egress points are Middlebrook Road (3.3 miles to the north of MD 124) and I-270 (2.1 miles to the south of MD 124). Therefore, there are no alternates to MD 124 (other than the proposed Watkins Mill Road interchange) to access the proposed development areas of northern Gaithersburg.

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	AM	PM
No Build	F(1.06)	F(1.70)
Alt 2, 3	C(0.76)	E(0.98)
Alt 4	C(0.75)	F(1.02)
Alt 6	E(0.96)	E(0.96)

	AM	PM
No Build	-	-
Alt 2, 3	1,935	2,220
Alt 4	1,930	1,980
Alt 6	1,370	1,960

	AM	PM
No Build	-	-
Alt 2, 3	2,100	2,365
Alt 4	1,260	2,365
Alt 6	1,280	1,800

	AM	PM
No Build	F(1.71)	F(1.86)
Alt 2, 3	F(1.21)	F(1.51)
Alt 4	F(1.33)	F(1.56)
Alt 6	F(1.37)	F(1.58)

ACCESS OPTION A	AM	PM
No Build	-	-
Alt 2A	B	B
Alt 4A	D(0.89)	B
Alt 6A	A	B

	AM	PM
No Build	-	-
Alt 2, 3	B	E(0.94)
Alt 4	D(0.88)	D(0.86)
Alt 6	-	-

	AM	PM
No Build	-	-
Alt 2, 3	675	1,075
Alt 4	-	-
Alt 6	-	-

	AM	PM
No Build	925	1,250
Alt 2, 3	550	725
Alt 4	550	725
Alt 6	925	1,250

	AM	PM
No Build	5,575	10,575
Alt 2, 3	5,400	10,575
Alt 4	5,125	10,125
Alt 6	5,575	10,575

	AM	PM
No Build	6,200	11,250
Alt 2, 3	6,200	11,250
Alt 4	6,200	11,250
Alt 6	6,200	11,275

	AM	PM
No Build	-	-
Alt 2, 3	1,100	1,975
Alt 4	1,100	1,975
Alt 6	-	-

	AM	PM
No Build	6,200	11,250
Alt 2, 3	5,775	10,350
Alt 4	5,100	9,275
Alt 6	6,200	11,250

	AM	PM
No Build	725	1,525
Alt 2, 3	575	825
Alt 4	575	825
Alt 6	725	1,525

	AM	PM
No Build	1,025	2,100
Alt 2, 3	750	1,775
Alt 4	1,025	2,400
Alt 6	1,025	2,100

	AM	PM
No Build	500	1,425
Alt 2, 3	675	1,425
Alt 4	950	1,875
Alt 6	500	1,425

	AM	PM
No Build	12,800	6,650
Alt 2, 3	12,800	6,650
Alt 4	12,800	6,650
Alt 6	12,800	6,650

	AM	PM
No Build	-	-
Alt 2, 3	1,775	1,050
Alt 4	1,775	1,050
Alt 6	-	-

	AM	PM
No Build	12,800	6,650
Alt 2, 3	12,100	6,150
Alt 4	11,025	5,600
Alt 6	12,800	6,650

	AM	PM
No Build	3,575	2,400
Alt 2, 3	2,075	1,425
Alt 4	2,075	1,425
Alt 6	3,575	2,400

	AM	PM
No Build	11,175	5,500
Alt 2, 3	11,175	5,500
Alt 4	10,725	5,325
Alt 6	11,175	5,500

	AM	PM
No Build	6,075	12,000
Alt 2, 3	6,075	12,000
Alt 4	6,075	12,000
Alt 6	6,075	12,000

	AM	PM
No Build	-	-
Alt 2	F(1.00)	D(0.90)
Alt 4	B	D(0.86)
Alt 6	-	-

	AM	PM
No Build	-	-
Alt 2, 3	1,075	550
Alt 4	-	-
Alt 6	-	-

	AM	PM
No Build	1,950	1,250
Alt 2, 3	1,150	825
Alt 4	1,775	1,150
Alt 6	1,950	1,250

	AM	PM
No Build	-	-
Alt 2, 3	2,760	2,200
Alt 4	2,160	1,750
Alt 6	1,570	1,150

	AM	PM
No Build	-	-
Alt 2, 3	2,670	2,640
Alt 4	2,220	2,320
Alt 6	1,260	1,330

	AM	PM
No Build	2,625	1,400
Alt 2, 3	2,625	1,400
Alt 4	3,075	1,625
Alt 6	2,625	1,400

	AM	PM
No Build	13,800	6,900
Alt 2, 3	13,800	6,950
Alt 4	13,800	6,950
Alt 6	13,800	6,900

	AM	PM
No Build	F(1.31)	F(1.10)
Alt 2, 3	F(1.00)	F(1.01)
Alt 4	B	D(0.90)
Alt 6	D(0.89)	E(0.99)

	AM	PM
No Build	F(1.48)	F(1.66)
Alt 2, 3	D(0.83)	E(0.92)
Alt 4	F(1.09)	F(1.08)
Alt 6	E(0.94)	F(1.02)

MARYLAND 355

MARYLAND 124

MARYLAND 117

INTERSTATE 270

WATKINS MILL ROAD EXTENDED

SEE INSET FOR ALT. 3

INSET FOR ALT. 3

	AM	PM
Alt 3	D(0.85)	C(0.81)

	AM	PM
Alt 3	E(0.94)	A

I-270 AT WATKINS MILL ROAD EXTENDED

2020 AM / PM Design Hourly Volumes and Levels of Service

DATE: NOV., 2000

NOT TO SCALE

FIGURE: II-3

III. DESCRIPTION OF EXISTING ENVIRONMENT

III. DESCRIPTION OF EXISTING ENVIRONMENT

A. Social Environment

1. Population and Housing

According to information from the U.S. Bureau of the Census, the population of Montgomery County grew by 30.7 percent, from 579,053 to 757,027 people, during the period 1980 - 1990. By the design year 2020, the County's population is expected to reach 1,000,000 people based on projections prepared by the Maryland Office of Planning. This represents an increase of 32.1 percent over the 1990 County population.

The study area, centrally located in Montgomery County, extends along I-270 from Muddy Branch Road, south of MD 117, to Middlebrook Road, north of Great Seneca Creek. The demographics of the study area are described by utilizing data from a combination of census tracts, census block groups and traffic zones according to data availability which is discussed below. Census block groups are subdivisions of census tracts and traffic zones are delineated areas that are used by Maryland-National Capital Park and Planning Commission (M-NCPPC) in their demographic studies and forecasts. As shown on Figure III-1, the study area consists of the following 1990 census tracts or portions thereof: 7006.01.1 (block group), 7006.04.1 (block group), 7007.06, 7007.07, 7008.05, 7008.08, 7008.13, 7008.14 and 7008.15. The data available for these census block groups and tracts as a whole will be used to describe the study area. Census Block Groups 7006.01.1 and 7006.04.1 are used in lieu of their respective entire census tracts which encompass large geographic areas extending far beyond the study area boundary. Census data for 1980 is not available by block group, but data is available by traffic zone. The geographic area of Traffic Zone 213 (formerly Traffic Zone 287 under an old designation used to describe 1980 demographics) is comparable to the combined geographic area of Census Block Groups 7006.01.1 and 7006.04.1. Although the boundary of Traffic Zone 287 slightly overlaps 1980 Census Tract 7008.05, data for the traffic zone will be used in combination with 1980 census tract data to afford a comparison of 1980 and 1990 study area demographics. The boundaries of several of the study area census tracts were changed during the period 1980 - 1990. The geographic area encompassed by each of the 1990 Census Tracts 7007.07 and 7008.05 differs somewhat from the geographic area encompassed by each of their respective 1980 Census Tracts. Although not exactly the same, the geographic areas of the respective 1980 and 1990 census tracts are comparable and the census data for these tracts will be used in the study area analysis. Also, 1980 Census Tract 7008.07 was subdivided into 1990 Census Tracts 7008.14 and 7008.15. Thus, the 1980 demographics of the study area are described using data for Traffic Zone 287 (old designation) and Census Tracts 7007.06, 7007.07, 7008.05, 7008.07,

7008.08 and 7008.13. The boundaries of these tracts and traffic zone in relation to the 1990 study area census tracts are shown on Figure III-1.

During the period 1980 - 1990, the total population in the area defined by the study area census tracts, block groups and traffic zone nearly doubled, increasing by 91.1 percent, from 28,740 to 54,909 people. The population in Census Tract 7008.07 (comparable to 1990 Census Tracts 7008.14 and 7008.15 combined) more than quadrupled, increasing by 347.5 percent. In 1990, the largest portion (27.2 percent) of the total population in the area defined by the study area census tracts and block groups resided in Census Tract 7007.07, and the smallest percentage (2.6 percent) in Census Block Group 7006.04.1. Table III-1 shows population data for the study area for 1980 and 1990.

TABLE III -1

POPULATION AND GROWTH IN THE STUDY AREA

Area	1980	1990	% Change
Montgomery County	579,053	757,027	+ 30.7
Census Tract			
7006.01.1[a]	----	2,167	
7006.04.1[a]	----	1,446	
(Old) Traffic Zone 287[a]	1,119	----	+222.9
7007.06	2,556	2,835	+ 10.9
7007.07[b]	8,236	14,934	+ 81.3
7008.05[b]	5,207	7,071	+ 35.8
7008.08	3,084	5,389	+ 74.7
7008.13	5,037	5,400	+ 7.2
7008.07[c]	3,501	----	
7008.14[c]	----	11,051	
7008.15[c]	----	4,616	+347.5
TOTAL (STUDY AREA)	**28,740**	**54,909**	**+ 91.1**

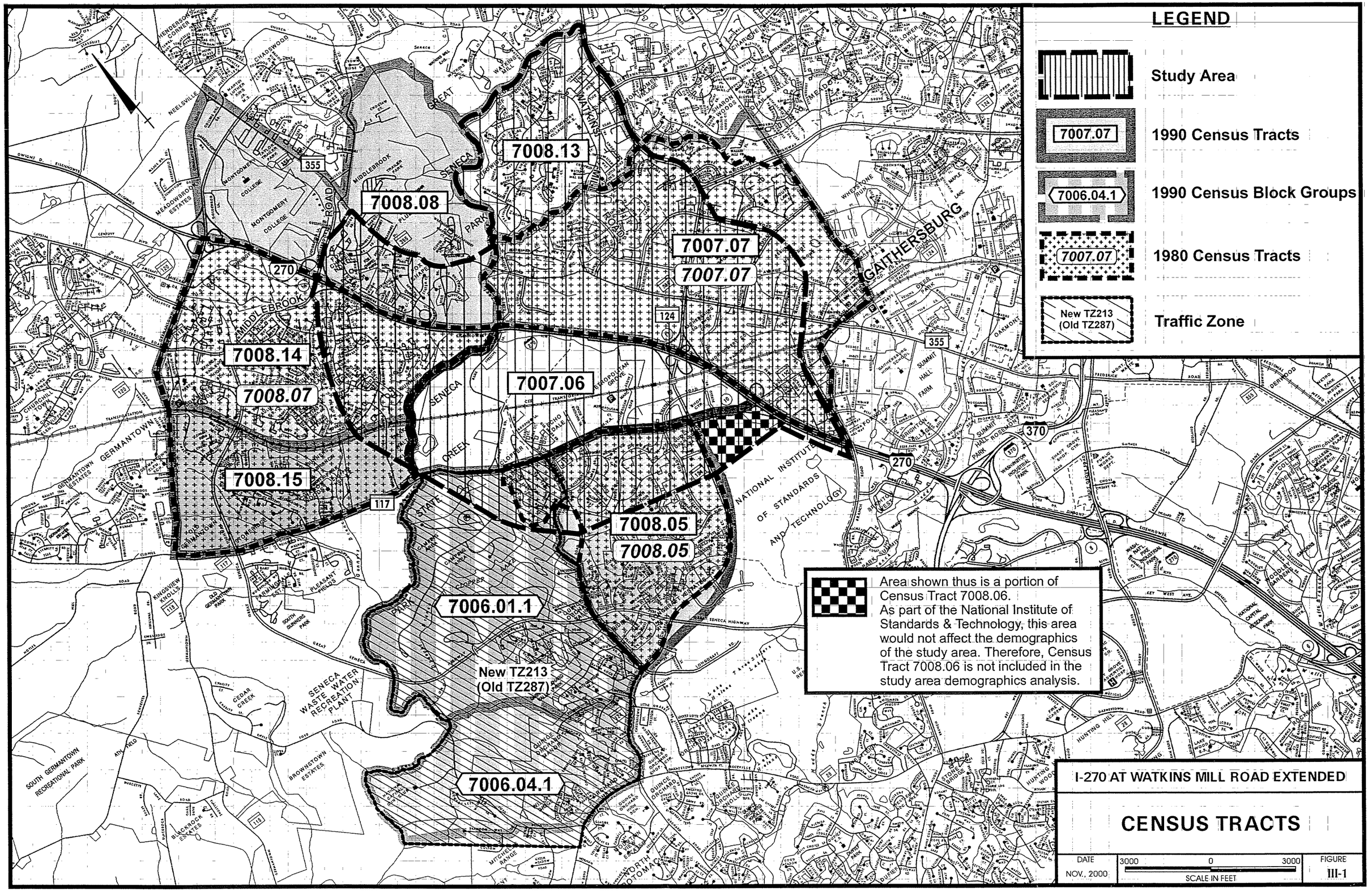
Source: U.S. Bureau of the Census

[a] 7006.01.1 and 7006.04.1 are census block groups whose combined geographic area is comparable to the geographic area of (new - 10/30/96) Traffic Zone 213, formerly (old) Traffic Zone 287.

[b] The 1980 and 1990 census tract boundaries are not exactly the same, but are comparable.

[c] The 1980 Census Tract 7008.07 was subdivided into 1990 Census Tracts 7008.14 and 7008.15.

EnvDoc\III1_Census



Countywide data from the U.S. Bureau of the Census indicate that the number of households in Montgomery County increased by 36.2 percent, from 207,195 to 282,228 households, during the period 1980 - 1990. In 1980, the average household size was 2.77 persons, while in 1990 the average household size in Montgomery County was 2.65 persons. By the year 2020, the number of households in Montgomery County is projected to reach 392,000 households, an increase of 38.9 percent over the 1990 countywide number of households. The total number of housing units in Montgomery County in 1990 was 295,723 units including 13,495 vacant units. By housing type, the single family detached units were the most numerous with 153,872 units, or 52.0 percent of the total number of housing units in Montgomery County in 1990. Based on census tract/traffic zone data, the number of households in the study area census tracts/traffic zone increased by 87.1 percent, from 11,487 to 21,490 households, during the period 1980 - 1990. According to information provided by M-NCPPC, the number of households within the study area can be expected to increase in the order of 15% over the next 20 years.

Age Distribution

An analysis of 1990 census data indicates that 69.5 percent of the total population in the study area census tracts were persons 17 through 64 years old, and 5.9 percent were persons 65 years and older. The largest percentage of the age group 65 years and older (61.6 percent) appears in Census Tract 7007.07. Census Tract 7007.07 also has the highest ratio of persons 65 years and older to total number of persons residing in the census tract (13.3 percent).

2. Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations issued on February 11, 1994, requires federal agencies "to identify and address as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations..." Minority is defined as "individual(s) who are members of the following population groups: American Indian or Alaskan Native, Asian or Pacific Islander, Black, not of Hispanic origin, or Hispanic." Also, low income populations should be identified as the median income below the Department of Health and Human Services poverty guidelines. These populations are to be provided access to public information and an opportunity to participate in matters relating to the environment.

The purpose of environmental justice is to identify and address "disproportionately high and adverse impacts" on minority populations and low income populations resulting from

alternates under consideration and to provide the opportunity for these populations to be involved in the public participation process.

Racial Characteristics

To identify minority and low income populations, a census tract analysis was first conducted. According to 1990 census data, 76.8 percent of the total population of Montgomery County were White, 12.2 percent were Black, 0.2 percent were American Indian, Eskimo or Aleut, 8.2 percent were Asian or Pacific Islander, and 7.2 percent were of Hispanic origin (any race of Hispanic origin). The 1990 census data also indicated the percentage of persons below the poverty level was 4.2 percent in Montgomery County. The census data used to establish the percentage of the population with income levels below poverty level is based on poverty thresholds which change each year and vary depending on family composition, according to the U.S. Bureau of the Census.

Census tract analysis was used to assess the percentage of minority and low income populations, (based on 1990 census data) residing in the study area. The percentage of minorities exceeds 20 percent in each of the study area census tracts, with the exception of Census Block Groups 7006.01.1 and 7006.04.1, which have minority percentages of 18.9 percent and 17.1 percent, respectively. Of the study area census tracts, the following have the highest percentage of minorities: Census Tracts 7007.07 (33.1 percent), 7008.15 (28.3 percent), 7008.05 (26.7 percent), 7008.08 (26.2 percent) and 7007.06 (25.0 percent). From this it can be concluded that minority populations are commonly found throughout the geographic area encompassed by the study area census tracts with the exception of the following areas: between I-270 and the MARC/CSX rail lines, north of Great Seneca Creek; between MD 124 and Great Seneca Creek, east of Whetstone Run; and between Long Draft Road and Great Seneca Creek, west of MD 117. Local planners have been involved in the process of community assessment and assisted in determining the location of minorities. It appears that there are predominantly minority communities in the residential neighborhoods along Watkins Mill Road east of MD 355, in the vicinity of Watkins Mill Elementary School and Montgomery Village Middle School. The study area census tracts with the highest percentage of persons below the poverty level are: Census Tracts 7007.07 (9.4 percent), 7008.08 (7.5 percent), 7008.05 (6.6 percent) and 7007.06 (4.5 percent). In general, the highest presence of low income groups is located in the geographic area determined to have the highest percentages of minority populations. Tables III-2 and III-3 summarize the 1990 census data relative to the racial distribution and economic characteristics of the study area census tracts.

Public involvement has been integrated throughout this project planning study. Among the purposes of the public involvement process is the outreach to minority or low income communities to provide information and to generate input on the project.

An initiation advertisement was printed in the Montgomery Journal, Gazettes and Washington Post when this project was initiated. It was also distributed to a mailing list, which included all property owners and residents within and slightly beyond our project study area. This includes churches, elected officials, community association presidents/representatives, and businesses. The advertisement included a card with state paid postage to be mailed if there was interest to be included on the project mailing list. The newspaper advertisement offered the same opportunity, with the exception of the postage paid card; however, both encouraged public participation, which could be initiated through email, a toll-free telephone call or mailing a letter or address.

Of the three churches in the study area identified as part of the community facilities inventory, only the Victory Church is within the project area (see Figure III-2). This church was contacted directly by phone, provided a project overview and invited to meet or otherwise contact SHA to discuss the project. It was verified that the church is located at the end of Metropolitan Court and that membership is predominantly minority. The name of a primary contact person was obtained, and SHA's request to convey the project information to that representative was acknowledged. No further response has been received. The other two are outside the project area and, although not contacted directly, are on the project mailing list.

The Focus Group was formed through consultation and coordination with the City of Gaithersburg Council and staff, as well as the Montgomery County staff. In addition, the study team identified representatives from all of the residential communities and large businesses in the study area. Therefore, the Focus Group consists of approximately ten members of business and community representatives in the project area, including Woodland Hills Home Owners Association (HOA), Montgomery Meadows Home Owners Association, Orchard Hills Civic Association, Montgomery Village Foundation, IBM, Wells and Associates, Gaithersburg Planning Commission, and Casey Management. SHA also invited individuals to sign up for the Focus Group if they had interest at the Alternates Public Workshop (11/99). One individual, representing the Humane Society did sign up and joint the Focus Group at this workshop.

SHA has sponsored one public workshop thus far for this project. An Alternates Public Workshop was held at the Activity Center at Bohrer in Gaithersburg, Maryland on November 23, 1999 where 50 people attended. The purpose of this workshop was to familiarize citizens with the study by presenting the purpose and need for the project, publicly presenting the preliminary alternates under consideration, and to also provide an opportunity for public participation in the planning process. This workshop was advertised in the Montgomery Journal, the Gazette newspapers, and the Washington Post, as well as on the City of Gaithersburg's web page. The advertisement was distributed in advance of the meeting to all persons residing in or owning property within the project study limits, including each of the churches, all elected officials governing this area, community association presidents, and businesses. In addition, the City of Gaithersburg Council held a meeting in advance of this public workshop, which was open to the public and broadcast on a local cable television, to brief the public and council on the alternates under consideration and announce the workshop. A public hearing will be held December 19, 2000 for this project, where similar outreach methods will be used.

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 or sexual orientation 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 Office of Equal Opportunity of the Maryland State Highway Administration for investigation.

This policy has been incorporated into all levels of the State Highway Administration's 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 SHA, 707 North Calvert Street, Baltimore, MD 21202 for investigation.

TABLE III-2

1990 RACIAL POPULATION CHARACTERISTICS

Location	White		Black		American Indian, Eskimo or Aleut		Asian or Pacific Islander		Other Persons		Hispanic Origin		% Minorities[1]
	Pop.	%	Pop.	%	Pop.	%	Pop.	%	Pop.	%	Pop.	%	
Montgomery Co.	581,379	76.8	92,375	12.2	1,870	0.2	61,774	8.2	19,629	2.6	54,327	7.2	27.8
Census Tract:													
7006.01.1	1,859	85.8	87	4.0	0	0	221	10.2	0	0	102	4.7	18.9
7006.04.1	1,210	83.7	80	5.5	0	0	156	10.8	0	0	11	0.8	17.1
7007.06	2,202	77.7	377	13.3	0	0	194	6.8	62	2.2	137	4.8	25.0
7007.07	10,658	71.4	2,069	13.9	73	0.5	1,263	8.5	871	5.8	1,538	10.3	33.1
7008.05	5,411	76.5	796	11.3	33	0.5	671	9.5	160	2.3	386	5.5	26.7
7008.08	4,207	78.1	810	15.0	38	0.7	204	3.8	130	2.4	362	6.7	26.2
7008.13	4,545	84.2	407	7.5	0	0	342	6.3	106	2.0	373	6.9	20.8
7008.14	8,808	79.7	1,387	12.6	22	0.2	655	5.9	179	1.6	573	5.2	23.9
7008.15	3,503	75.9	796	17.2	13	0.3	159	3.4	145	3.1	339	7.3	28.3
Study Area Census Tracts	**42,403**	**77.2**	**6,809**	**12.4**	**179**	**0.3**	**3,865**	**7.0**	**1,653**	**3.0**	**3,821**	**7.0**	**26.7**

Source: U.S. Bureau of the Census

[1] Black; American Indian, Eskimo or Aleut; Asian or Pacific Islander; Hispanic

TABLE III-3
1990 POVERTY STATUS CHARACTERISTICS

Location	Persons for Whom Poverty Status Was Determined	Persons Below Poverty	% Persons Below Poverty
Montgomey County	748,385	31,651	4.2
Census Tract:			
7006.01.1	2,167	15	0.7
7006.04.1	1,446	0	0
7007.06	2,835	127	4.5
7007.07	14,931	1,404	9.4
7008.05	7,068	469	6.6
7008.08	5,389	404	7.5
7008.13	5,396	143	2.7
7008.14	11,044	384	3.5
7008.15	4,613	170	3.7
Study Area Census Tracts	**54,889**	**3,116**	**5.7**

Source: U.S. Bureau of the Census

3. Communities Within the Study Area

The study area includes a number of existing residential communities consisting of single-family detached homes, townhouses and multi-family housing. The following residential communities included within the study area are indicated on Figure III-2 and are listed below according to their general location in the study area. For the following communities, the superscript 1 indicates a community of single family detached homes and the superscript 2 indicates townhomes or multi-family housing. Some of the communities consist of a combination of housing types.

Northern Study Area

Middlebrook Commons[2]
Gunner's View[1, 2]
Fox Chapel[1, 2]
Middlebrook Hill[1]
Caulfield[1]

Southern Study Area

Asbury Methodist Village (Retirement Community)[2]
Realty Park[1]
Stratford Mews[2]
Willows[2]
Londonderry[1, 2]

Eastern Study Area

Club Hill of Stedwick[2]
The Clusters[2]
Clubside[2]
The Heights[1]
Frenchton Place[2]
Ridges of Stedwick[1]
Mills Choice[2]
Clusters of Stedwick[2]
Village Overlook[2]
Walkers Choice[2]
Goshen Overlook[2]
Old Carriage Hill[2]
Windbrooke[2]
Woodland Hills[2]
Hunt Club[2]
Montgomery Meadows[2]
Montgomery Knolls[2]

Western Study Area

Parkridge[1]
Pheasant Run[1]
Diamond Property[2]
Quince Orchard Cluster[2]
Parkridge Estates[1]
Clopper[2]
Metropolitan Grove Park[2]
Orchard Pond[2]

4. Community Facilities

Community facilities and services that are located within the study area are indicated on Figure III-2 and listed below by their corresponding mapping identification number.

Schools

1. Fox Chapel Elementary School
2. Roberto W. Clemente Middle School
3. Watkins Mill Elementary School
4. Montgomery Village Middle School
5. Stedwick Elementary School
6. Brown Station Elementary School

Churches

7. Saint Rose of Lima
8. Victory Church
9. First Baptist

Libraries

10. Gaithersburg Regional

Fire Companies

11. Gaithersburg-Washington Grove Company 8

U.S. Post Offices

12. Montgomery Village

Governmental Features

13. Humane Society of the United States
14. Motor Vehicle Administration
15. State Highway Administration
16. National Institute of Standards and Technology

Points of Interest

17. Izaak Walton League
18. Visitor Center - Seneca Creek State Park
19. Wildlife Office - Seneca Creek State Park
20. Montgomery Village Information Center
21. YMCA
22. Montgomery Village Lawn Theater
23. Montgomery County Fairgrounds

Public Transportation

24. Metropolitan Grove Commuter Station (MARC)
25. Park and Ride Lot (I-270/MD 124 - under construction)
26. Park and Ride Lot (I-270/MD 117 - under construction)

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FACILITIES

Schools

1. Fox Chapel Elementary School
2. Roberto W. Clemente Middle School
3. Watkins Mill Elementary School
4. Montgomery Village Middle School
5. Stedwick Elementary School
6. Brown Station Elementary School

Churchs

7. Saint Rose of Lima
8. Victory Church
9. First Baptist

Libraries

10. Gaithersburg Regional

Fire Companies

11. Gaithersburg-Washington Grove Company 8

U.S. Post Offices

12. Montgomery Village

Governmental Features

13. Humane Society of the United States
14. Motor Vehicle Administration
15. State Highway Administration
16. National Institute of Standards and Technology

Points of Interest

17. Izaak Walton League
18. Visitor Center - Seneca Creek State Park
19. Wildlife Office - Seneca Creek State Park
20. Montgomery Village Information Center
21. YMCA
22. Montgomery Village Lawn Theater
23. Montgomery County Fair Grounds

Public Transportation

24. Metropolitan Grove Commuter Station (MARC)
25. Park and Ride Lot (under construction)
26. Park and Ride Lot (under construction)

LEGEND

- Park / Recreation Area
- WALKERS CHOICE — Residential Community
- Project Area
- Study Area

I-270 AT WATKINS MILL ROAD EXTENDED

COMMUNITY FACILITIES

DATE: NOV., 2000

2000 0 2000 SCALE IN FEET

FIGURE III-2

Public Water and Sewer Service

Throughout the study area, public water and sewer service is either existing or planned in the near future in accordance with the Comprehensive Ten Year Water Supply and Sewerage System Plan.

5. Parklands

Parks and recreation areas that are located in the study area are indicated on Figure III-2 and listed below:

Fox Chapel Park
Waring Station Park
Gunners Village Park
Middlebrook Hill Neighborhood Conservation Area
Seneca Creek State Park
Izaak Walton League
Great Seneca Park
Montgomery Village Golf Course
Robertson Park
Diamond Farms Park

Of the above listed parklands, the parks described below are publicly owned public parks that are located in the immediate vicinity of I-270.

- Fox Chapel Park, an M-NCPPC facility, is a 16-acre local park that includes multi-use courts, two tennis courts, two football/soccer fields, an open shelter and a hiker/biker trail.

- Middlebrook Hill Neighborhood Conservation Area, an M-NCPPC facility, is not developed with recreation facilities and there are no plans for any future development of this park. It is intended to remain a conservation park limited to passive recreation use such as hiking and nature study. This site was acquired by M-NCPPC as a dedication from the developer of the adjacent residential community.

- Seneca Creek State Park, a Maryland Department of Natural Resources facility, is a public recreational resource considered to be of major regional significance. Seneca Creek State Park is comprised of multiple parcels of land. Two parcels adjacent to I-270 were acquired with funds from the Land and Water Conservation Fund. Other parcels were acquired using Program Open Space funds. The park provides a wide

diversity of day use recreational opportunities that include hiking and nature study, bicycling and mountain biking, equestrian use, boating and fishing, picnicking, playgrounds, disc golf, baseball and multi-use athletic fields. Development of a hiker/biker trail that will pass under I-270 along Seneca Creek to connect the state park with M-NCPPC property upstream is being considered. If demand warrants, future recreational development may be considered in the vicinity of I-270 in the form of day use facilities on parkland adjacent to the Middlebrook Hill and Fox Chapel communities.

B. Economic Environment

1. Countywide Employment Characteristics

According to information from the U.S. Bureau of the Census, the labor force in Montgomery County grew by 43.1 percent, from 313,250 to 448,290 persons, during the period 1980 - 1990. By the year 2020, Montgomery County's labor force is expected to reach 577,280 persons, based on projections prepared by the Maryland Office of Planning. This represents an increase of 28.8 percent over the 1990 county labor force. Of the total number of employed persons in Montgomery County in 1990, the greater percentages of persons were employed in the following occupational areas: professional and related services such as health and educational services (32.5 percent), retail trade (13.6 percent), services such as business and repair, personal, entertainment and recreation services (12.4 percent), public administration (11.9 percent) and finance, insurance and real estate (9.0 percent). Countywide, the median household income in 1990 was $54,089, increasing in 1998 to $67,300, an increase of 24.4 percent over the eight-year period.

2. Study Area Employment Characteristics

Similar to the countywide statistics, of the total number of employed persons in the study area census tracts in 1990, the greater percentages of persons were employed in the following occupational areas: professional and related services such as health and educational services (25.8 percent), retail trade (16.7 percent), services such as business and repair, personal, entertainment and recreation services (13.9 percent), public administration (9.6 percent) and finance, insurance and real estate (9.0 percent).

There are a number of businesses located within the study area which provide a variety of employment in the commercial, industrial, research and office sectors. Many of these businesses are located in office/industrial parks and shopping centers. Places of employment in the study area include the following:

- Tech Park 270 (MD 117 and Pheasant Run Drive) - a research/development and office park.

- Bennington Corporate Center (MD 117 and West Watkins Mill Road) - includes a 62,560 square foot building occupied by Federal Express, three single story buildings providing research and development space totaling 191,922 square feet and two additional sites being completed for industrial/office space.

- Quince Orchard Plaza (MD 117 and MD 124) - a mixed commercial area that includes a 245,657 square foot retail center, two freestanding restaurants and a seven story 82,356 square foot office building.

- Quince Diamond Building, Diamond Square, Firstfield Center (MD 124 and West Diamond Avenue) - Quince Diamond Building: a six story 106,461 square foot office building; Diamond Square: a 100,575 square foot retail center; Firstfield Center: a retail area.

- Quince Tree Executive Center (West Diamond Avenue and Bureau Drive) - an industrial/office center.

- Crown Pointe Corporate Center (MD 355 and Professional Drive) - an industrial/office center.

- IBM, Lockheed Martin (MD 355 and MD 124) - industrial/research and development operations and offices.

- Hechinger's Square (MD 355, north of Watkins Mill Road) - a shopping center with gross leasable area of 86,942 square feet.

- Lakeforest Mall (Montgomery Village Avenue, east of MD 355) - the largest retail center in the Upcounty area.

- Gaithersburg Square (MD 355, south of Montgomery Village Avenue) - the oldest shopping center in the City of Gaithersburg.

- Avenel Business Park (West Diamond Avenue and Perry Parkway) - a research and development/office park.

Located at the southern extremity of the study area, there is an area that can be characterized as the retail and office core of the City of Gaithersburg. The area, which includes

Lakeforest Mall and Gaithersburg Square, is defined by the boundary formed by the following: Montgomery Village Avenue, Lost Knife Road, Odend'hal Avenue, MD 355, Chestnut Street and the MARC/CSX rail lines. Within this area, there is approximately 1.95 million square feet of retail and office space.

As stated in Chapter II. Purpose and Need, there is the potential for further growth in commercial, industrial, research and office development within the study area in accordance with area master plans. The major planned development areas in the study area that have substantial associated projected employment growth are listed below in Table III-4.

TABLE III-4

PLANNED STUDY AREA DEVELOPMENT AND EMPLOYMENT OPPORTUNITIES

	Potential Space	Projected Jobs	New Population
Re-Development			
IBM/Lockheed Martin	1.1 SF office/research	628	NA
Bennington Corporation	800,000 SF office/research	2,460	NA
Metropolitan Grove Park	400,000 SF office/research	1,142	NA
New Development			
Casey Tract East	600,000 SF office/research	2,400	NA
Casey Tract West	1.7 M SF office/ research + 1,500 residential units	6,800	4,050

C. Land Use

1. Existing Land Use in the Study Area

The existing land use in the study area consists of a mixture of a number of categories as follows: residential, commercial, industrial-research-office, institutional/governmental, utility, parkland, open-space/recreational, agricultural and forest. The existing land use in the study area is shown on Figure III-3.

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LEGEND

- Open Space / Recreational
- Residential
- Institutional/ Governmental
- Commercial
- Agricultural
- Industrial- Research- Office
- Parkland
- Forest
- Utility
- Study Area Boundary
- PFA — Limit of Priority Funding Area

STUDY AREA

PROJECT AREA

I-270 AT WATKINS MILL ROAD EXTENDED

EXISTING LAND USE

DATE: NOV., 2000

2000 0 2000
SCALE IN FEET

FIGURE: III-3

A significant portion of the study area is being used for residential purposes, which include single-family detached homes, townhouses and apartment complexes. Large pockets of residential land use occur at the following locations in the study area: north of Seneca Creek State Park, east of MD 355 and north of Montgomery Village Avenue, and west of the MARC/CSX rail lines between Seneca Creek State Park and Firstfield Road. Much of the commercial land use found in the study area is located east of I-270 along the MD 355 corridor, with some areas to the west of I-270 in the vicinity of MD 124. Commercial land uses in the study area include several shopping centers, restaurants, car dealerships and various retail uses. Gaithersburg Square, the oldest shopping center in the City of Gaithersburg, and Lakeforest Mall, the largest retail center in the northern Gaithersburg area, are included in the study area. Industrial-research-office land uses are scattered mostly throughout the central and southwestern portions of the study area.

Within the study area, industrial-research-office land uses include IBM/Lockheed Martin, Avenel Business Park, Quince Tree Executive Center, Bennington Corporate Center and Crown Pointe Corporate Center. Institutional/governmental land uses are scattered throughout the study area and include schools, churches, a fire company, a library, the Motor Vehicle Administration and the Metropolitan Grove MARC commuter station. The study area is bisected, from east to west, by a 250-foot wide utility right-of way containing Potomac Edison Power Company (PEPCO) transmission lines and a petroleum line owned by Colonial Pipelines. Parkland is located mostly in the northern half of the study area which includes a large area that is a portion of Seneca Creek State Park. Three areas of open space/recreational land use are identified in the study area - a segment of open land along the west side of I-270 in the northern end of the study area, a portion of the Montgomery Village Golf Course along the north side of Montgomery Village Avenue in the eastern tip of the study area, and Montgomery County Fairgrounds located along the east side of the MARC/CSX rail lines in the southern end of the study area. Two areas of agricultural land use are identified in the study area, one on the east side of I-270 and one on the west side of I-270 in the central portion of the study area. Forested areas are located mostly in the central portion of the study area between MD 355 and I-270 and between I-270 and the MARC/CSX rail lines.

2. Future Land Use in the Study Area

The Maryland-National Capital Park and Planning Commission (M-NCPPC) is a bi-County (Montgomery and Prince George's) agency whose responsibilities include all local plans, recommendations on zoning amendments, administration of subdivision regulations and general administration of parks. To carry out these responsibilities, M-NCPPC has divided the counties into planning areas. The study area for this project is located in three different planning areas -

Germantown and Vicinity (Planning Area 19), Gaithersburg Vicinity (Planning Area 20), and City of Gaithersburg (Planning Area 21). Land use plans and recommendations are contained in the respective master plan for each planning area.

The future land use designated in the study area consists of the following categories: residential, commercial, commercial-office-residential, commercial/industrial-research-office, industrial-research-office, employment, institutional/governmental, utility, private conservation and open space/parkland. The future land use within the study area is discussed below according to planning area and is indicated on Figure III-4.

Germantown and Vicinity

The extreme northern portion of the study area is located in the Germantown Planning Area. The Comprehensive Amendment to the Germantown Master Plan was approved and adopted in July, 1989. In directing the growth of the Germantown Planning Area, the master plan sets forth land use recommendations that provide a wide range of housing and employment opportunities along with a complete range of public facilities, services and amenities. The Germantown Master Plan utilizes a Townscape Design as the framework for land use decisions and specific development guidelines. The Townscape Design describes Germantown in terms of the following broad categories: Town Center, Villages and an Employment Corridor. Of these, the study area includes portions of two villages - Gunners Lake Village, located west of I-270, and Middlebrook Village, located east of I-270.

Two properties within the study area, both located in Gunners Lake Village, are identified in the Germantown Master Plan as having the potential to undergo planned development. One of these is an undeveloped 37-acre site located between I-270 and Waring Station Road, south of Middlebrook Road. This property was zoned R-150 (Residential, one-family, 10,500 square feet) under the 1974 Master Plan. The approved 1989 land use plan designates this property as employment land use. The 1989 Master Plan states that this property might be appropriate for office use under the O-M zone (Office Building, moderate intensity) if compatibility issues can be met such as, providing adequate parking, minimizing lighting impacts and providing visual buffers for adjoining residences. An alternative use of the property, as stated in the master plan, could be low-density, single-family detached units set back from I-270. Due to the noise impacts from I-270 and the high visibility of the property from I-270, townhouse development is not recommended. The 1989 Master Plan recommends a reclassification of the property to the RE-1 zone (Residential, one-family, 1 acre) to assure that only a limited number of single-family detached units are built, and also recommends that the cluster option be permitted. This property is adjacent to the Corridor Cities Transit Easement, a

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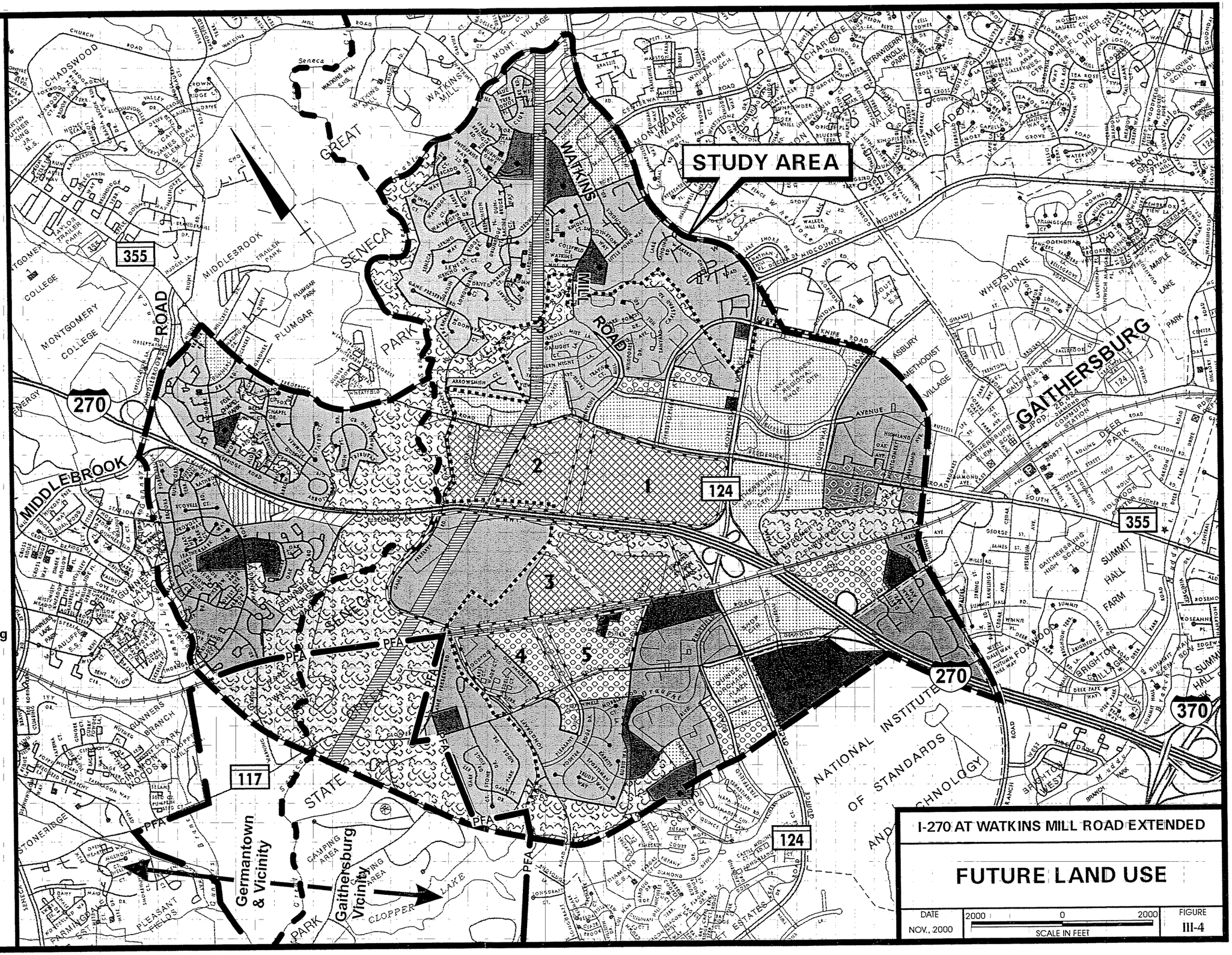
LEGEND

- Private Conservation
- Residential
- Institutional/ Governmental
- Commercial
- Commercial-Office Residential
- Commercial / Industrial-Research Office
- Industrial - Research Office
- Open Space / Parkland
- Employment
- Utility
- Study Area Boundary
- City of Gaithersburg Corporate Limits
- Planning Area Boundary
- 1 — Planned Study Area Development
- PFA — Limit of Priority Funding Area



I-270 AT WATKINS MILL ROAD EXTENDED

FUTURE LAND USE

DATE	SCALE IN FEET	FIGURE
NOV., 2000	2000 0 2000	III-4

proposed 70-foot wide right-of-way extending north from the Shady Grove Metro Station through the corridor cities of Gaithersburg, Germantown and Clarksburg. As such, the property will be studied for potential use as a transit station. If designated a transit station, the 1989 Master Plan states that an amendment to the plan should be considered to determine if multi-family residential use of the property would be appropriate. The other property identified within the study area in Gunners Lake Village is a partially wooded 10-acre site located on Waring Station Road opposite Roberto W. Clemente Middle School. Under the 1974 Master Plan, the property was zoned R-200 (Residential, one-family, 20,000 square feet) and was recommended for an elementary school site. The approved 1989 land use plan designates this property as institutional/governmental land use. The 1989 Master Plan states that if Montgomery County Public Schools designates this site as surplus, it is recommended that ownership of the property be transferred to the Montgomery County Parks Department to be developed as a local park. It is further recommended that ballfields and courts be constructed to meet community recreational needs regardless of how the site is developed.

Gaithersburg Vicinity

The northwestern and eastern portions of the study area are included in the Gaithersburg Vicinity Planning Area. The Gaithersburg Master Plan was approved and adopted in January, 1985 and amendments to the Plan were adopted in May, 1988 and July, 1990. Much of the land in the planning area is developed but there are several areas identified in the master plan which have a substantial amount of vacant land or land subject to redevelopment. However, these areas are either not located within the study area of the project or they have been annexed by the City of Gaithersburg and are subject to the land use guidelines of the city's master plan.

City of Gaithersburg

The central and southern portions of the study area are located in the City of Gaithersburg Planning Area. The City of Gaithersburg Master Plan was adopted/published in July, 1997. For planning purposes, the city is divided into six neighborhoods. The primary goal of the master plan is to provide a balance, on a neighborhood-by-neighborhood basis, between the competing issues and interests which affect future growth and development patterns. The study area includes portions of neighborhoods one, two and five and all of neighborhood six.

Within the study area in neighborhoods five and six, there are substantial amounts of vacant land that are planned for development, as well as, properties planned for re-development in accordance with the city's master plan. Included are the following:

- The IBM (and Lockheed Martin) site, located north of MD 124 between I-270 and MD 355, is planned for 1.1 million square feet of office/research space through re-development (Planned Development Area 1 in Figures II-1 and III-4).

- The Casey Tract East, located north of the IBM/Lockheed Martin site on the east side of I-270, is planned for 600,000 square feet of new office/research space (Planned Development Area 2 in Figures II-1 and III-4).

- The Casey Tract West, located south of Game Preserve Road on the west side of I-270, is planned for 1.7 million square feet of new office/research space and 1,500 to 2,000 residential dwelling units (Planned Development Area 3 in Figures II-1 and III-4).

- The Bennington Corporation, located on the north side of Watkins Mill Road between the MARC/CSX rail lines and MD 117, is planned for 800,000 square feet of office/research space through re-development (Planned Development Area 4 in Figures II-1 and III-4).

- Metropolitan Grove Park, located on the south side of Watkins Mill Road between the MARC/CSX rail lines and MD 117, is planned for 400,000 square feet of office/research space through re-development (Planned Development Area 5 in Figures II-1 and III-4).

- A vacant 3.3-acre lot, located west of Quince Orchard Plaza at Firstfield Road and Bank Street, is recommended for commercial land use by the master plan, envisioning a restaurant or retail uses totaling 30,000 square feet.

- Vacant parcels south of Game Preserve Road between MD 355 and Arrowsmith Court are planned for commercial development as an indoor skating rink.

In addition, the Asbury Methodist Village, included in neighborhood one within the study area, has the potential to undergo further development. The existing 117-acre retirement community, located south of Lakeforest Mall at Russell and Odend'hal Avenues, includes seven development areas. Concept approval has been obtained for a building master plan that provides a total of 3,083 units at build-out under the low-density residential land use recommended in the city's master plan. For the most part, land within the portion of neighborhood two that is located within the study area is developed.

In summary, there are many opportunities within the study area for planned growth in residential, commercial and office/research development or re-development in accordance with the land use recommendations contained in area master plans. Since I-270 and surrounding roads within the study area are already experiencing traffic congestion under existing conditions with failing levels of service in the peak hours at the I-270/MD 124 interchange, the growth potential in the study area could lead to an intensification of the current operational problems and further degrade accessibility in the area.

D. Historic and Archeologic Resources

1. Historic Standing Structures

The Maryland Historical Trust (MHT) has concurred that there are no historic standing structures either listed on or eligible for the National Register of Historic Places in the area of potential effect.

2. Archeological Sites

SHA has conducted a Phase 1B archeological survey revealing the presence of two prehistoric sites designated as site #18MO554, and site #18MO553. Due to the low density of artifacts at both sites, no further work is recommended. In addition to these two sites, three isolated historic artifacts and several isolated prehistoric artifacts were found and designated #18MOX100. No additional work is recommended at this location. There is no evidence to suggest that any of the three archeological sites would be potentially significant or warrant preservation in place.

Concurrence in a no effect determination to significant cultural resources, including historic standing structures and archeological sites, was received on October 13, 2000 (see Section VII. Comments and Coordination) from the Maryland Historical Trust.

E. Natural Environment

1. Physiography/Topography and Geology

Topographic information was obtained from the *USGS Topographic Map for Gaithersburg, Maryland* (USGS, 1945 (revised 1979)). The topographic map indicates that the study area ranges in elevation from approximately 320 feet to 450 feet above sea level. The area generally slopes towards the northwest, and slopes within the study area vary from 2% to 25%.

The *Soil Survey of Montgomery County, Maryland* (USDA, 1995) indicates that Montgomery County is within the Piedmont Physiographic Province. The *Bedrock Map of Montgomery County, Maryland* (USGS, 1975), indicates that Montgomery County is underlain by belts of metamorphic bedrock. These belts strike north-northeast and tend to dip to the southeast or northwest. The study area is underlain by crystalline rock of the Wissahickon Formation, which includes schist bedrock with metagraywacke, gneiss, and quartz inclusions. Schist rock is foliated, and primarily consists of interlocking plates of mica or chlorite.

2. Soils

The *Soil Survey for Montgomery County, Maryland* (USDA, 1995) indicates that 12 soil series occur within the study area (see Figure III-5).

- Gaila silt loam (1B, 1C) consists of very deep, well-drained soils occurring in upland topographic depressions and along drainage ways. These soils developed in material weathered from quartz muscovite schist.

- Glenelg silt loam (2B, 2C) consists of very deep, well-drained soils that developed in weathered micaceous material that originated from schist and gneiss. Glenelg soils occur on broad ridgetops and side slopes in uplands.

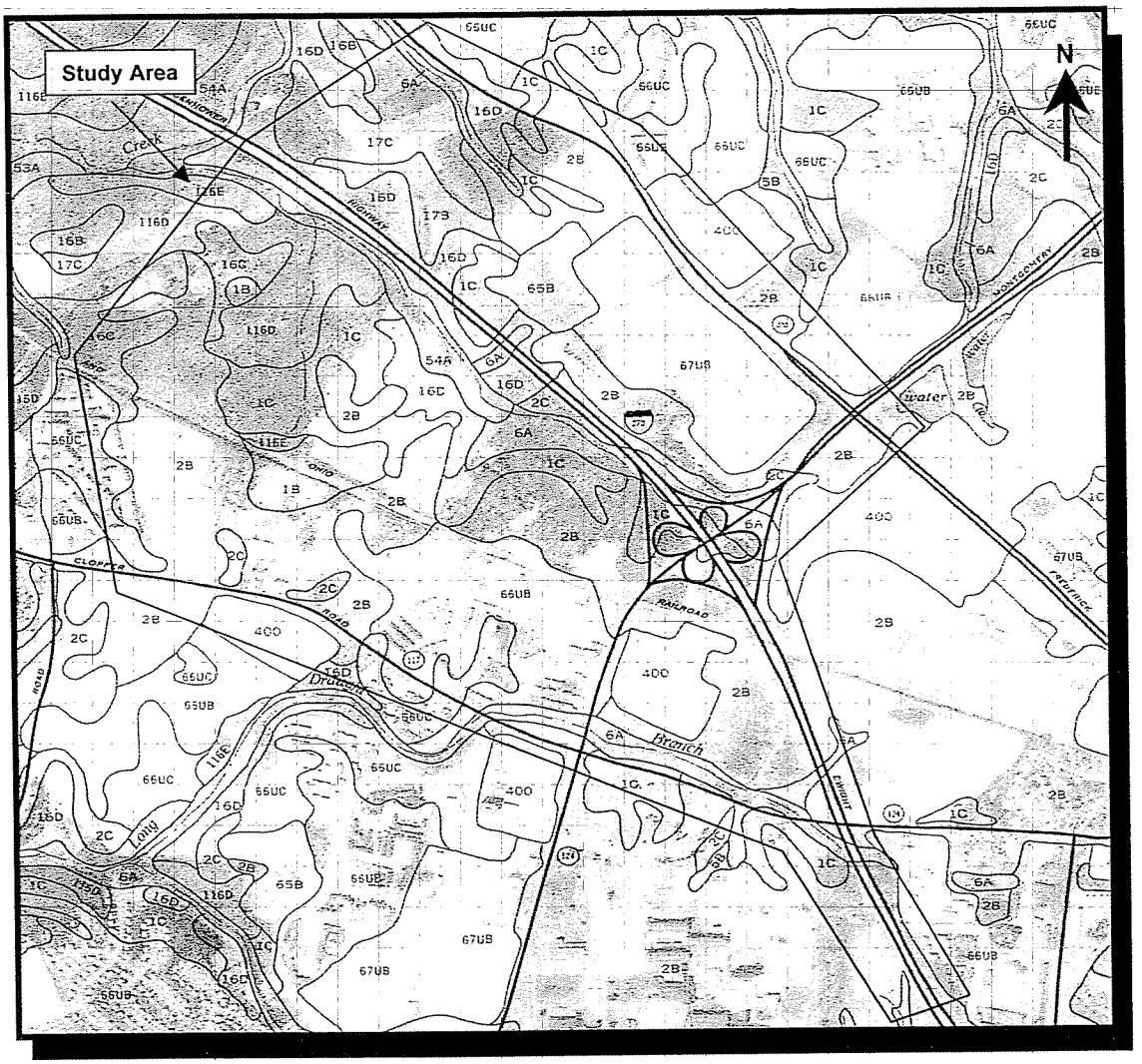
- Glenville silt loam (5A) consists of deep, moderately well-drained or somewhat poorly drained soils formed in residuum and colluvium weathered from schist and gneiss. These soils occur along drainageways and low areas on uplands.

- Baile silt loam (6A) consists of very deep, poorly drained soils occurring in upland topographic depressions, along drainageways and foot slopes. These soils developed from local alluvium and are underlain by weathered micaceous schist.

- Brinklow-Blocktown channery silt loam (16B, 16C, 16D) consists of well-drained, moderately steep, shallow soils. Brinklow soils developed from material weathered from acid crystalline rocks. Blocktown soils developed from material weathered from phyllite and schist

- Occoquan loam (17B, 17C) consists of deep, well-drained soils that occur on broad ridgetops and sideslopes in uplands. Occoquan soils formed from weathered gneiss and schist.

- Hatboro silt loam (54A) consists of very deep, poorly drained soils that developed from alluvium derived from metamorphic and crystalline rocks. Hatboro soils occur



LEGEND

1B,C	Gaila silt loam
2B,C	Glenelg silt loam
5A	Glenville silt loam
6A	Baile silt loam
16B,C,D	Brinklow-Blocktown channery silt loam
17B,C	Occoquan loam
54A	Hatboro silt loam
116D,E	Blocktown channery silt loam
65UB	Wheaton silt loam
66UB,UC	Wheaton-Urban land
67UB	Urban land-Wheaton
400	Urban land

Source: Soil Survey of Montgomery County, Maryland, Map No. 13. USDA, 1995

I-270 AT WATKINS MILL ROAD EXTENDED

SOIL SERIES MAP

DATE		FIGURE
NOV., 2000	1333 0 1333 SCALE IN FEET	III-5

on flood plains.

- Wheaton silt loam (65B) is characterized by very deep, well-drained upland soils formed from gneiss and schist. Wheaton soils are found in areas that have been altered by heavy equipment.

- Wheaton-Urban land complex (66UB, 66UC) consists of very deep, well drained Wheaton soil (65B) that has been altered by anthropogenic influences, intermingled with Urban land (400). These soils consist of approximately 50% Wheaton soil and 30 to 50% Urban land.

- Urban land-Wheaton complex (67UB) consists of Urban land intermingled with very deep, well-drained Wheaton soil that has been disturbed by anthropogenic influences. These soils consist of approximately 50 to 75% Urban land and 25% Wheaton soil.

- Blocktown channery silt loam (116D, 116E) consists of shallow, well-drained soils that developed from material weathered from phyllite and schist. Blocktown soils occur on uplands.

- Urban land (400), consists of areas where more than 75% of the ground surface is covered by asphalt, concrete buildings, and other impervious structures. Areas of miscellaneous fill are included in this mapping unit.

The Baile and Hatboro soil series are listed as hydric soils in both the *State of Maryland Hydric Soils List* (State of Maryland, 1990), and *Hydric Soils of the United States* (USDA, Soil Conservation Service, 1991). Prime farmland is defined in Chapter 7 of the Code of Federal Regulations, Part 657,1 (7 CFR Part 657.1), as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. The Gaila (1B) and Glenelg (2B) soil series, which are prevalent in the study area, are listed as Prime Farmland soils in the *Soil Survey of Montgomery County, Maryland* (USDA, 1995). However, since these soils are zoned for dense levels of development (generally Residential or Commercial/Industrial Research office – see Figure III-4), a Farmland Conversion Impact Rating, Form AD 1006, was not completed for this project.

3. Water Resources

a. Surface Water

Surface water bodies within the study area include:

- a 1,100 foot reach of Great Seneca Creek, which flows through the western boundary of the study area, in a northeast to southwest direction;

- a tributary of Great Seneca Creek, which flows approximately one mile through the study area, in a southeast to northwest direction, parallel to I-270; and

- a reach of Long Draught Branch, which flows approximately one mile through the southern portion of the study area in a southeast to northwest direction.

Under *Code of Maryland Regulations* (COMAR), section 26.08.02.08, Great Seneca Creek and its tributaries are classified as Use I-P, which includes "Water Contact Recreation, Protection of Aquatic Life, and Public Water Supply."

The Great Seneca Creek watershed is the largest watershed in Montgomery County, and encompasses agricultural land, as well as low- to high-density residential areas, including portions of the City of Gaithersburg. The streams within this watershed are habitat for almost every species of fish found in Montgomery County. The Great Seneca Creek tributary subwatershed is within a "Watershed Restoration Area." The county plans to study and implement stream habitat improvements, public education, and volunteer projects, as well as conduct baseline monitoring and stream condition assessments (Montgomery County, Maryland website, 2000).

Surface Water Quality Data Collection

To assess surface water quality within the study area, physical water quality parameters were measured and samples for biological and chemical analysis were collected at two sample points, as specified in EPA's *Rapid Bioassessment Protocols For Use in Wadeable Streams and Rivers: Periphyton, Benthic, Macroinvertebrates, and Fish* (EPA, 1999). Physical water quality parameters were collected in January 2000 from three locations, approximately 20 feet apart, at sample point WM-1 on the Great Seneca Creek tributary, and the three measurements were averaged. Measurements could be obtained from only one sample point, WM-2, on Great Seneca Creek due to snow and ice.

One set of water samples was also obtained for the analysis of bacterial and chemical parameters at each sample point in January 2000. Sampling was conducted at both WM-1 and WM-2 again in June 2000, since the detection limits used by the laboratory for cadmium, silver, and lead were below the EPA criteria for these metals. Water quality field and laboratory data were compared with the *Water Quality Criteria for Use in I-P Waters*, defined in COMAR 26.08.02.03, and with standards defined in the *EPA National Recommended Water Quality*

Criteria--Correction (EPA, 1999) to evaluate the water quality at each sample point. Additionally, macroinvertebrates were collected from each sample point to assess the biological health of the streams.

Water Quality Results

Physical Parameters

Most physical parameters detected during the sampling events were within the EPA or Maryland Department of the Environment (MDE) water quality criteria. Parameters, such as pH, dissolved oxygen, and temperature were well within the ranges set by the MDE for Use I-P waters. However, during both the January and June sampling events, total dissolved solids were detected at an average concentration of 418.3 mg/l at sampling point WM-1 on the Great Seneca Creek tributary. This concentration exceeds the MDE criterion of 150 mg/l. Field measurements are presented in Table III-5 and Table III-6.

TABLE III-5
WATER QUALITY PHYSICAL PARAMETERS, JANUARY 18, 2000

		Sampling Locations				
Parameter	**Water Quality Criteria[a]**	**Sampling Point WM1**				**Sampling Point WM2**
		Downstream	Midstream	Upstream	Average	
pH (standard units)	>6.5 <8.5 (MDE)	8.0	7.8	7.8	7.87	8.1
Dissolved Oxygen (mg/1)	>50 (MDE)	16.5	17.03	15.72	16.42	18.98
Temperature (°C)	<32.0 (MDE)	0.5	0.6	0.6	0.6	0.25
Conductivity (î S/cm)	N/A	952	957	947	952	230
Total Dissolved Solids (mg/1)	150 max 50-month Average (MDE)	**418**	**419**	**418**	**418.3**	**99**
Turbidity (NTU)	N/A	0.57	0.51	1.89	0.99	2.73
Stream Velocity (ft/second)	N/A	1.45	1.95	NMV	1.7	4.93

a. The Maryland Department of the Environment water quality criteria, as defined in COMAR 26.08.02.03 were used for those criteria not specified in the EPA water quality criteria.

Key:

°C = Degrees Celsius
mg/l = Milligrams per liter
µS/cm = MicroSiemens per centimeter
NA = No standard available
NMV = No measurable velocity
NTU = Nephelometric Turbidity Units

TABLE III-6

WATER QUALITY PHYSICAL PARAMETERS, JUNE 5, 2000[a]

Parameter	Water Quality Criteria[b]	Sampling Locations				
		Sampling Point WM1				Sampling Point WM2
		Downstream	Midstream	Upstream	Average	
pH (standard units)	>6.5 <8.5 (MDE)	7.7	7.7	7.8	7.73	7.75
Dissolved Oxygen (mg/l)	>5.0 (MDE)	10.63	10.57	11.36	10.85	10.42
Temperature (°C)	<32.0 (MDE)	17.0	17.0	17.0	17.0	17.0
Conductivity (µS/cm)	NA	866	869	867	867.3	204.5
Total Dissolved Solids (mg/l)	150 max 50-month Average (MDE)	**418**	**419**	**418**	**418.3**	97
Turbidity (NTU)	NA	1.68	1.13	1.33	1.38	9.41

a. The second water quality sampling allowed for an opportunity to confirm cadmium, silver, and lead levels, which have a very low detection limit (results in Table III-8).

b. The MDE water quality criteria, as defined in COMAR 26.08.02.03 were used for those criteria not specified in the EPA water quality criteria.

Key:

°C = Degrees Celsius
mg/l = Milligrams per liter
µS/cm = MicroSiemens per centimeter
NA = No standard available
NMV = No measurable velocity
NTU = Nephelometric Turbidity Units

Chemical Parameters

Most chemical parameters detected during the January sampling event were within the EPA or MDE water quality criteria. Nitrate, nitrite, and ammonia concentrations were well below the maximum concentrations set by the EPA. Heavy metals, including arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, copper, and zinc were all detected at concentrations within EPA water quality criteria. Analytical data are presented in Table III-7.

The laboratory detection limit for cadmium, silver, and lead was 0.01 mg/l, while the EPA and MDE criteria for these metals were far below this measurement. Therefore, additional sampling was conducted on June 5, 2000. Samples collected in both January and June 2000 were sent to Martel Laboratories for analysis. These results are presented in Table III-8. The remaining chemical parameters analyzed are not included in EPA or MDE water quality criteria.

TABLE III-7

WATER QUALITY CHEMICAL PARAMETERS (JANUARY 18, 2000)

Parameter (units)	Water Quality Criteria[a,b]	Sampling Points	
		WM-1	WM-2
Biochemical Oxygen Demand (mg/l)	NA	<2	<2
Chemical Oxygen Demand (mg/l)	NA	28	<14
Nitrite (mg/l)	10.0 (EPA)	<0.02	<0.02
Nitrate (mg/l)	10.0 (EPA)	2.9	2.7
Ammonia (mg/l)	195.4[c] (EPA)	0.4	0.3
Total Kjeldahl Nitrogen (mg/l)	NA	<0.5	<0.5
Organic Nitrogen (mg/l)	NA	<0.5	<0.5
Total Solids (mg/l)	NA	630	140
Suspended Solids (mg/l)	NA	<1	<1
Orthophosphate Phosphorus (mg/l)	NA	0.02	0.04
Total O-Phosphorus, as Phosphate (mg/l)	NA	0.06	0.12
MPN Fecal Coliforms (org/100 ml)	NA	150	<30
MPN Total Coliforms (org/100 ml)	NA	930	210
Arsenic (mg/l)	0.340 (EPA)	<0.005	<0.005

TABLE III-7

WATER QUALITY CHEMICAL PARAMETERS (JANUARY 18, 2000)

Parameter (units)	Water Quality Criteria[a,b]	Sampling Points	
		WM-1	WM-2
Barium (mg/l)	NA	0.11	<0.05
Selenium (mg/l)	0.020 (MDE)	<0.005	<0.005
Silver[d] (mg/l)	0.0034 (EPA)	<0.01	<0.01
Chromium (mg/l)	NA	<0.01	<0.01
Copper	0.018 (MDE)	<0.01	<0.01
Zinc	0.120 (EPA)	0.03	0.01
Lead[d]	0.082 (EPA)	<0.10	<0.10

a. The Maryland Department of the Environment water quality criteria as defined in COMAR 26.08.02.03-3 were used for those criteria not specified in the EPA water quality criteria.
b. The United States Environmental Protection Agency (EPA) water quality criteria was used (EPA 1999).
c. The water quality criterion for ammonia was calculated using the formula provided in EPA-822-Z-99-001.
d. The EPA criteria for cadmium, silver, and lead was below the laboratory detection limit for these metals. Therefore, additional sampling was conducted in June 2000.

Key:

mg/l = Milligrams per liter
NA = No standard available
MPN = Most probable number
Org/100ml = organisms per 100 ml

TABLE III-8
WATER QUALITY CHEMICAL PARAMETERS: CADMIUM, SILVER, AND LEAD (JUNE 5, 2000)

Parameter (units)	Water Quality Criteria[a,b]	Sampling Points	
		WM-1	WM-2
Cadmium (mg/l)	0.0043 (EPA)	<0.0005	<0.0005
Silver (mg/l)	0.0034 (EPA)	<0.001	<0.001
Lead	0.082 (EPA)	<0.005	<0.005

a. The Maryland Department of the Environment water quality criteria as defined in COMAR 26.08.02.03-3 were used for those criteria not specified in the EPA water quality criteria.
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Stream Geomorphology

The geomorphology of the Great Seneca Creek tributary was investigated using the techniques outlined in *Applied River Morphology* (Rosgen 1996). A Level II geomorphic assessment was conducted through 2,942 feet of this tributary that may be potentially impacted by the proposed project. The Level II assessment provides sufficient information to determine the stream type in the Rosgen Classification System. Stream type can then be utilized to assess the condition of the stream and provide insights into the past and future evolutionary progression of the stream channel.

The 2,942 foot length of stream channel studied was divided into nine separate reaches using obvious changes in stream type or other significant parameters. The location and extent of these reaches are mapped in Figure III-5a. Changes in sinuosity, slope, substrate, and width/depth ratio were all used in distinguishing stream reaches. Information collected for each reach included plan view and cross sectional information, and water surface slope and substrate size information.

Stream length was obtained in the field, by direct measurement of the thalweg, and sinuosity was calculated from available detailed topography. One representative cross-over (riffle) cross section was surveyed for each reach with the following information calculated from the resulting plots: bankfull cross sectional area, bankfull width, average and maximum bankfull depth, width/depth ratio, and entrenchment ratio. Water surface elevation drop was obtained for each reach in the field with an optical transit. Mean particle size (D50) of the bed and bank materials was obtained for each reach utilizing the Wolman Pebble Count Procedure, as described in Rosgen (1996).

The surveyed length of stream channel is quite diverse in geomorphology due to natural and anthropogenic factors. The channel is in transition in many areas, and did not always fit neatly into the stream type hierarchy, which is common in urbanizing watersheds. The designated reaches often exhibited short alternating reaches of several stream types, or the measured parameters were on the border between different types. Every effort was made to conform the existing information with the Rosgen Classification System. A summary of the information collected for each reach is provided below in Table III-9.

The laboratory detection limit for cadmium, silver, and lead was 0.01 mg/l, while the EPA and MDE criteria for these metals were far below this measurement. Therefore, additional sampling was conducted on June 5, 2000. Samples collected in both January and June 2000 were sent to Martel Laboratories for analysis. These results are presented in Table III-8. The remaining chemical parameters analyzed are not included in EPA or MDE water quality criteria.

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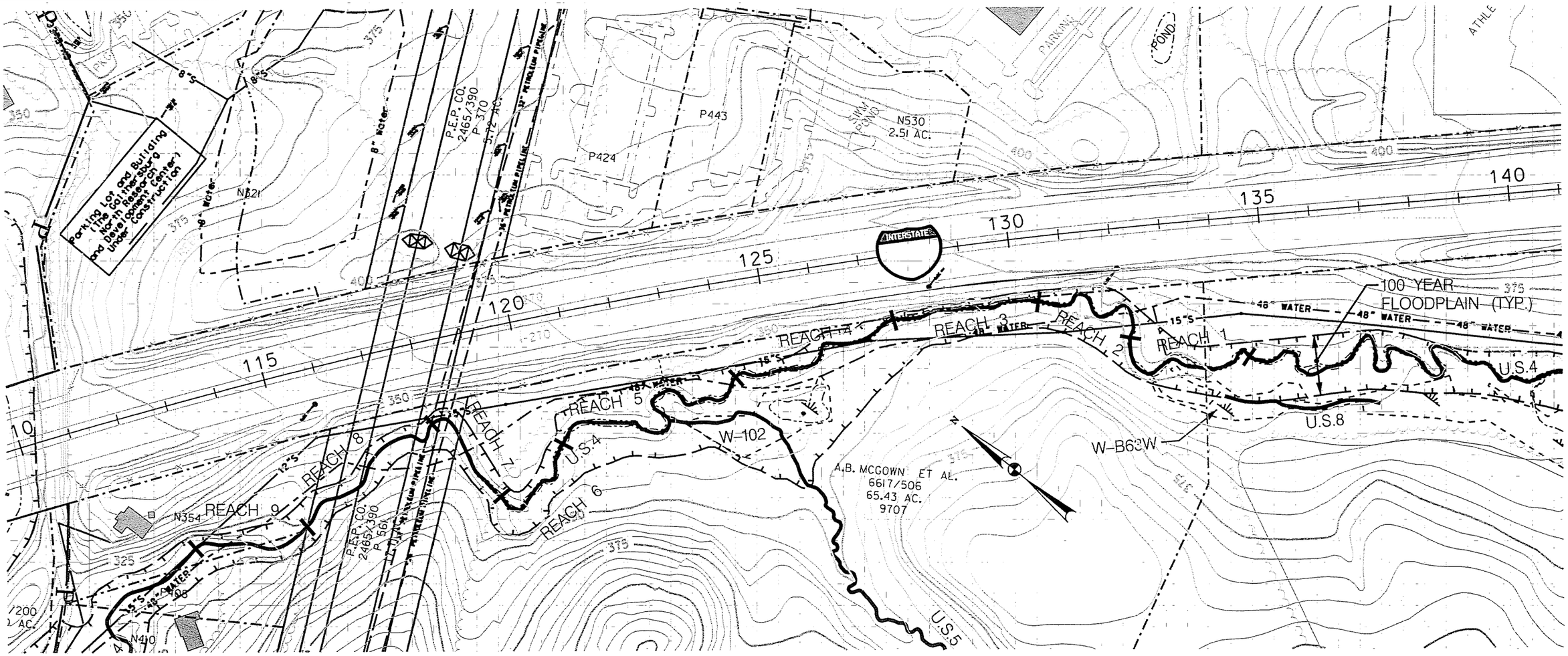
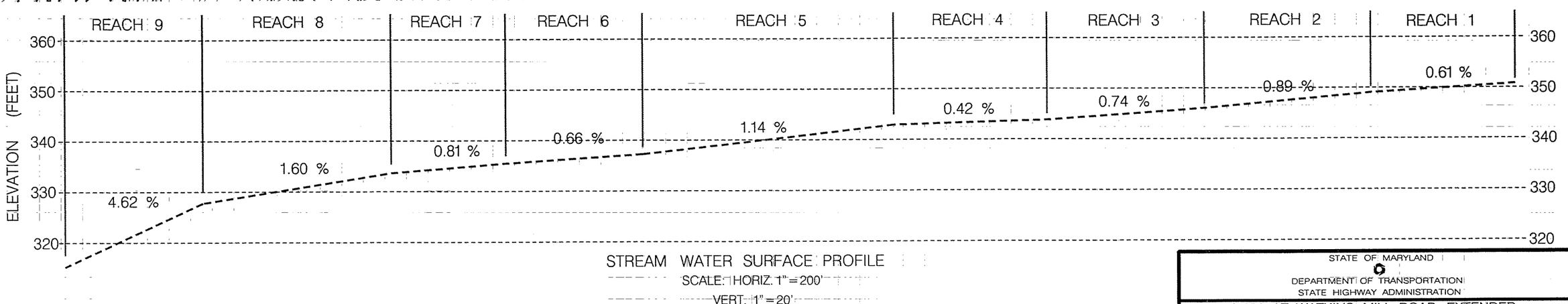




STREAM WATER SURFACE PROFILE
SCALE: HORIZ. 1" = 200'
VERT. 1" = 20'

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

GREAT SENECA CREEK TRIBUTARY
STREAM REACHES FOR ROSGEN ANALYSIS

DATE	SCALE	FIGURE
OCT., 2000	1" = 200'	III-5A

TABLE III-9
GREAT SENECA CREEK TRIBUTARY STREAM REACH DATA

Parameter	Stream Reach								
	1	2	3	4	5	6	7	8	9
Length (ft.)	288	332	310	375	496	271	226	372	272
Water Surface Fall (ft.)	1.77	2.97	2.24	1.57	5.65	1.78	1.82	5.92	12.6
Water Surface Slope (%)	0.61	0.89	0.74	0.42	1.14	0.66	0.81	1.60	4.62
Sinuosity	1.2	1.7	1.1	1.1	1.4	1.3	1.2	1.2	1.2
D50 (mm)	8.0	8.0	8.0	4.8	5.5	11.5	2.2	9.5	154
Bankfull Area	17.6	16.0	18.3	16.5	21.0	20.4	16.2	18.7	22.1
Bankfull Width	16.6	11.5	11.7	14.2	15.4	20.2	9.4	14.0	15.9
Bankfull Avg. Depth	1.1	1.4	1.6	1.2	1.6	1.0	2.3	1.8	2.0
Bankfull Max. Depth	1.7	2.0	1.9	1.6	1.8	1.4	2.6	2.3	2.4
Entrenchment Ratio	1.4	1.4	1.5	>2.2	1.5	1.2	>2.2	1.6	1.5
Width/Depth Ratio	15.7	15.7	7.4	12.2	13.1	20.0	4.1	7.6	8.0
Stream Type	**B4c/ C4**	**C4/B 4c**	**G4c/ B4c**	**E4**	**C4**	**F4/C4**	**E4**	**B4c**	**B2**

The stream varies greatly in stream type and condition throughout the studied length of 2,942 feet. The stable E4 reaches are primarily narrow man-made reaches associated with streambank armoring near the buried utilities. Reach 9 is the most unique reach in the study area, where the channel drops significantly through a boulder-dominated channel with significant steps. The other stream reaches are typical of urbanizing watershed streams, with a variety of stream types (B, D, F, and G) at various points in the evolutionary process.

The stream channel is obviously undergoing an adjustment to changing flow regimes resulting from development and an increase in impervious surfaces in its watershed. Degradation is the most evident form of vertical adjustment, although there are areas of isolated aggradation. Lateral adjustment in the form of streambank erosion is also common throughout.

The stream channel has also been significantly altered through its length. The construction of I-270 apparently cut off a significant meander and floodplain area and confined and straightened the stream to the south of the proposed Watkins Mill Road extension. A 48" water main and a 15" sewer pipe are also located in the stream valley, and run roughly parallel to the tributary. Extensive boulder armoring has been placed over the pipes at stream crossing points, and along streambanks where the parallel utilities are in close proximity.

Overall, the boulder armoring protecting the utilities was well placed and has acted to prevent additional streambank erosion. Perhaps most importantly, the armored stream crossings have protected the stream channel from further degradation. Natural bedrock outcrops and boulders at the end of the surveyed stream channel (Reach 9) also have provided beneficial grade control.

Aquatic Habitat Assessment

In accordance with EPA's *Rapid Bioassessment Protocols For Use in Wadeable Streams and Rivers: Periphyton, Benthic, Macroinvertebrates, and Fish* (EPA, 1999), habitat assessment forms were completed at sampling points WM-1 on the Great Seneca Creek tributary and WM-2 on Great Seneca Creek. Habitat features, such as riparian vegetation; stream length, width, and depth; canopy cover; water quality; sediment characteristics; and stream reach morphology were recorded. Table III-10 presents habitat features for Sampling Point WM-1 on the Great Seneca Creek tributary and WM-2 on Great Seneca Creek.

The habitat assessment parameters are rated and then summed to determine a total habitat score, which indicates the quality of the aquatic and riparian zone habitat. Each habitat feature receives an individual score; optimal habitat conditions score 16 to 20; suboptimal conditions score 11 to 15; marginal conditions score 6 to 10; and poor conditions score 0 to 5. Therefore, an optimal habitat receives a total score of 166 and above, a suboptimal habitat scores 113-165, a marginal habitat scores 60 to 112, and a poor habitat scores 0 to 59. The total habitat score for Great Seneca Creek was 156 and the total habitat score for the tributary was 145. The total habitat scores indicate that both streams have a suboptimal macroinvertebrate habitat ranking. Table III-12 presents habitat assessment scores for Sampling Point WM-1 on the Great Seneca Creek tributary and WM-2 on Great Seneca Creek.

TABLE III-10
MACROINVERTEBRATE HABITAT RESULTS, JANUARY 2000

Habitat Features	Sampling Point	
	Sample Point WM-1	Sample Point WM-2
Watershed Features	Forested Land, I-270	Forested Land, Residences, I-270
Riparian Vegetation (Dominant Species)	River Birch, Red Maple, Sycamore	Sycamore
Estimated Stream Reach Length (feet)	75	30
Estimated Stream Width (feet)	2.5	40
Estimated Stream Depth (inches)	6-9	10
Canopy Cover	Partly open	Partly open
High Water Mark (meters)	1 meter	1 meter
Aquatic Vegetation	Attached algae	None
Water Odors	Normal	Normal
Water Surface Oils	None	None
Sediment/Substrate Odors	Normal	Normal
Sediment/Substrate Oils	Absent	None
Stream Velocity (feet/second)	1.45	4.93

TABLE III-11
MACROINVERTEBRATE HABITAT

Inorganic Substrate Components (% substrate)	Sample Point WM-1	Sample Point WM-2
Bedrock	0	0
Boulder	0	30%
Cobble	20%	60%
Gravel	50%	10%
Sand	20%	0
Silt	10%	0
Clay	0	0
Organic Substrate Components (% substrate)		
Detritus	15%	5-10%
Muck-Mud	0	0
Marl	0	0
Stream Reach Morphology		
Riffle	20%	90%
Pool	30%	10%
Run	50%	0
Weather Conditions	Cold and rainy, deep snow cover, layer of ice on stream	Cold and rainy, deep snow cover, layer of ice on stream

TABLE III-12

HABITAT ASSESSMENT SCORES[a]

Habitat Feature	Sample Point WM-1	Sample Point WM-2
Epifaunal Substrate	14	17
Embeddedness	18	19
Velocity/Depth Regime	14	18
Sediment Deposition	13	18
Channel Flow Status	13	19
Channel Alteration	17	14
Frequency of Riffles	14	12
Bank Stability	6 (left bank) 7 (right bank) 13 total	6 (left bank) 7 (right bank) 13 total
Vegetative Protection	6 (left bank) 6 (right bank) 12 total	6 (left bank) 7 (right bank) 13 total
Riparian Vegetative Zone	10 (left bank) 7 (right bank) 17 total	6 (left bank) 7 (right bank) 13 total
Total Score	145	156

a. Optimal habitat conditions score 16 to 20; suboptimal habitat conditions 11 to 15; marginal habitat conditions 6 to 10, and poor habitat conditions 0 to 5.

During the January sampling, macroinvertebrate specimens were collected from sampling points WM-1 and WM-2 and identified to the lowest practical level (genus or species), as suggested in the *Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers: Periphyton, Benthic, Macroinvertebrates, and Fish* (EPA, 1999) methodology.

A total of 62 organisms, representing 10 genera, were collected from WM-1. Twenty-two organisms, representing seven genera, were collected from WM-2. Therefore, the results show greater species abundance and diversity in the tributary than in Great Seneca Creek. This may be attributed to a more diverse habitat in the tributary, as well as the presence of attached algae in the tributary, which could be utilized as an additional food source.

After these organisms were identified, designated tolerance values (DTV) were assigned to each genus. The DTV for each organism is an indicator of the amount of pollution that can be tolerated by that organism. An organism with a DTV of 0-3.0 is considered pollution-intolerant, an organism with a DTV of 3.1-6.9 is considered somewhat pollution-tolerant, and an organism

with a DTV of 7.0-10 is considered pollution-tolerant (Primrose and Stranko, 2000). The average DTV of the organisms collected from WM-1 was 5.98 and the average DTV of the organisms collected from WM-2 was 6.10, indicating a somewhat pollution-tolerant community in each stream.

Adult trout are stocked during the spring season in the mainstem of Great Seneca Creek downstream of the project area (see MDDNR letter dated March 26, 1999 in Section VII. Comments and Coordination).

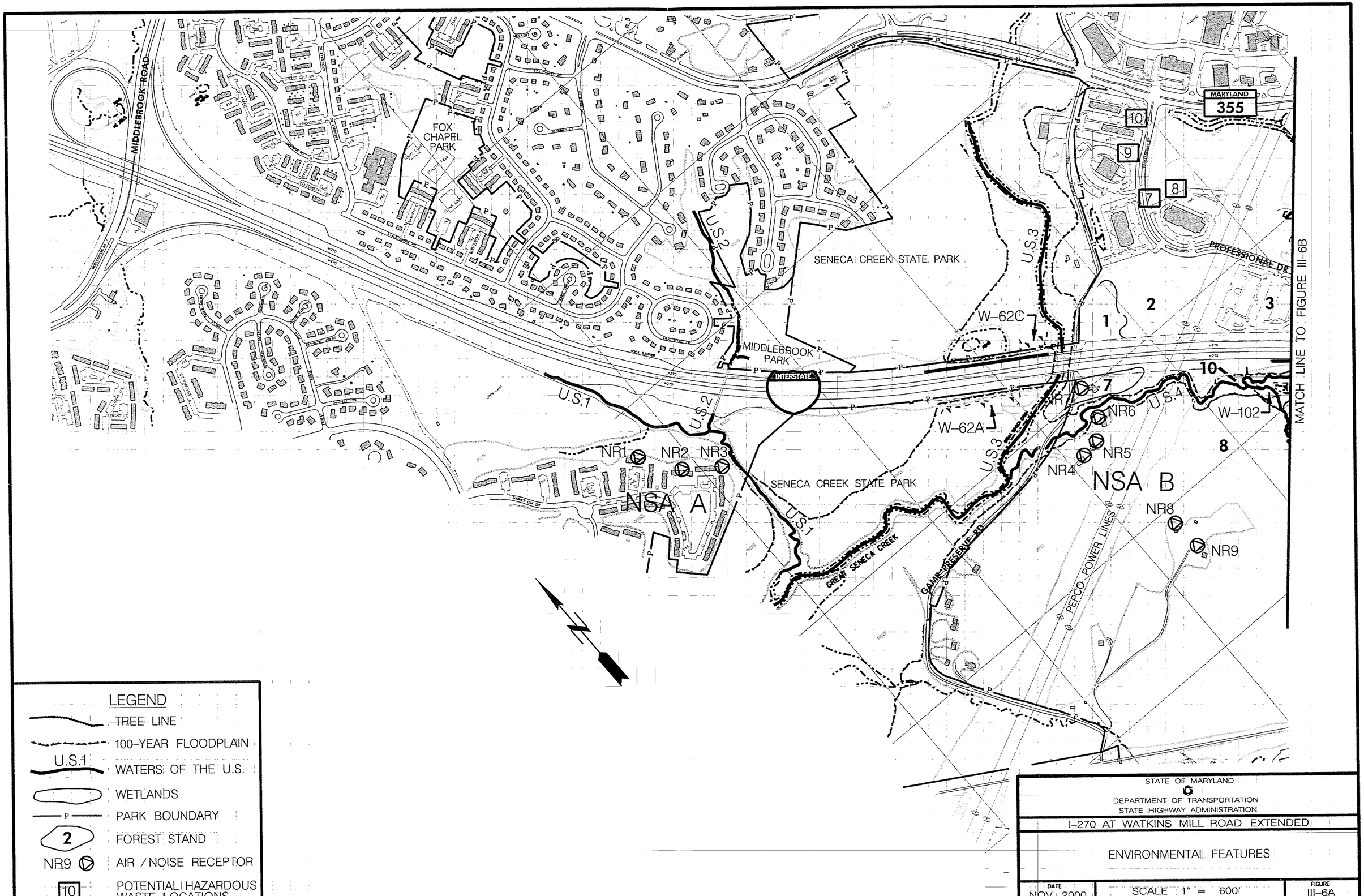
b. Groundwater

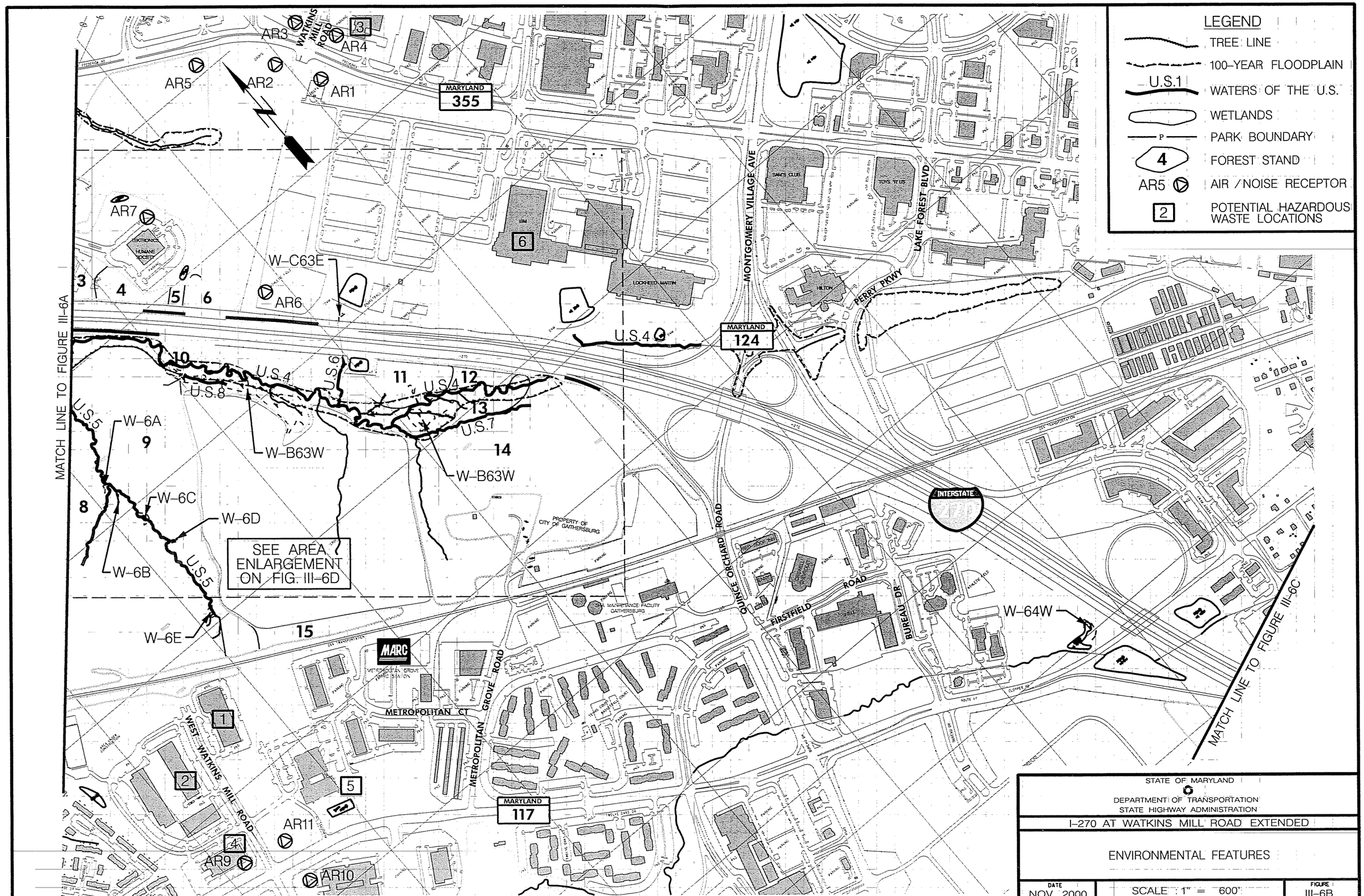
The *Ground Water Atlas of the United States, Delaware, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia* (USGS, 1997) indicates that in the vicinity of the study area, groundwater is stored in the crystalline rock aquifers of the Piedmont and Blue Ridge Physiographic Provinces. Contact with the Office of Ground Water and Drinking Water of US EPA confirmed that the study area is not located within a sole-source aquifer. Recharge rates vary greatly within the Piedmont and Blue Ridge aquifers, depending on precipitation and runoff. Most recharge occurs within the aquifers as a result of precipitation. Runoff is affected by topographic slope, permeability of the soils, and amount of impervious surfaces. Shallow groundwater flow in the study area is assumed to mimic topography and, therefore, groundwater is expected to flow through the study area in a westerly direction towards Great Seneca Creek.

For investigative purposes, information regarding nearby water wells from the Maryland Department of Environment (MDE) Groundwater Permits Program was obtained. According to MDE, 64 wells are located in or near the study area. Of the 64 wells identified, 13 are domestic, 48 are test wells, two are industrial wells, and one belongs to a public or private water company. MDE reports well depths within the range of 9 feet to 225 feet below the surface.

4. Floodplains

As shown on Figure III-6, the FEMA Flood Insurance Rate Maps for the City of Gaithersburg (FEMA, 1982) and Montgomery County, Maryland (FEMA, 1992) revealed that the 100-year floodplain extends 50 - 100 feet on either side of the Great Seneca Creek tributary, 100 - 1,000 feet on either side of Great Seneca Creek along the western boundary of the study area; and 50 - 500 feet on either side of Long Draught Branch, as it flows through the study area. The remainder of the study area is located within Zone C, which is an area of minimal flooding.


MIDDLEBROOK ROAD
FOX CHAPEL PARK
SENECA CREEK STATE PARK
MIDDLEBROOK PARK
INTERSTATE
U.S.1
U.S.2
U.S.3
MARYLAND 355
PROFESSIONAL DR
W-62C
W-62A
W-102
NR1
NR2
NR3
NR4
NR5
NR6
NR7
NR8
NR9
NSA A
NSA B
CREAT SENECA CREEK
GAME PRESERVE RD
PEPCO POWER LINES
MATCH LINE TO FIGURE III-6B
LEGEND
TREE LINE
100-YEAR FLOODPLAIN
WATERS OF THE U.S.
WETLANDS
PARK BOUNDARY
FOREST STAND
AIR / NOISE RECEPTOR
POTENTIAL HAZARDOUS WASTE LOCATIONS
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
I-270 AT WATKINS MILL ROAD EXTENDED
ENVIRONMENTAL FEATURES
DATE
NOV., 2000
SCALE : 1" = 600'
FIGURE
III-6A


LEGEND
TREE LINE
100-YEAR FLOODPLAIN
U.S.1
WATERS OF THE U.S.
WETLANDS
P
PARK BOUNDARY
4
FOREST STAND
AR5
AIR / NOISE RECEPTOR
2
POTENTIAL HAZARDOUS WASTE LOCATIONS
MARYLAND 355
MARYLAND 124
MARYLAND 117
WATKINS MILL ROAD
MONTGOMERY VILLAGE AVE
LAKE FOREST BLVD
PERRY PKWY
QUINCE ORCHARD ROAD
FIRSTFIELD ROAD
BUREAU DR
METROPOLITAN GROVE ROAD
METROPOLITAN CT
WEST WATKINS MILL ROAD
INTERSTATE
SAM'S CLUB
TOYS 'R' US
HILTON
IBM
LOCKHEED MARTIN
TEKTRONICS
HUMANE SOCIETY
MARC
METROPOLITAN GROVE STATION
MAINTENANCE FACILITY GAITHERSBURG
PROPERTY OF CITY OF GAITHERSBURG
AR1
AR2
AR3
AR4
AR5
AR6
AR7
AR9
AR10
AR11
W-C63E
W-6A
W-6B
W-6C
W-6D
W-6E
W-B63W
W-64W
U.S.4
U.S.5
U.S.6
U.S.7
U.S.8
SEE AREA ENLARGEMENT ON FIG. III-6D
MATCH LINE TO FIGURE III-6A
MATCH LINE TO FIGURE III-6C
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
I-270 AT WATKINS MILL ROAD EXTENDED
ENVIRONMENTAL FEATURES
DATE
NOV., 2000
SCALE : 1" = 600'
FIGURE
III-6B

MATCH LINE TO FIGURE III-6B

INTERSTATE

LEGEND

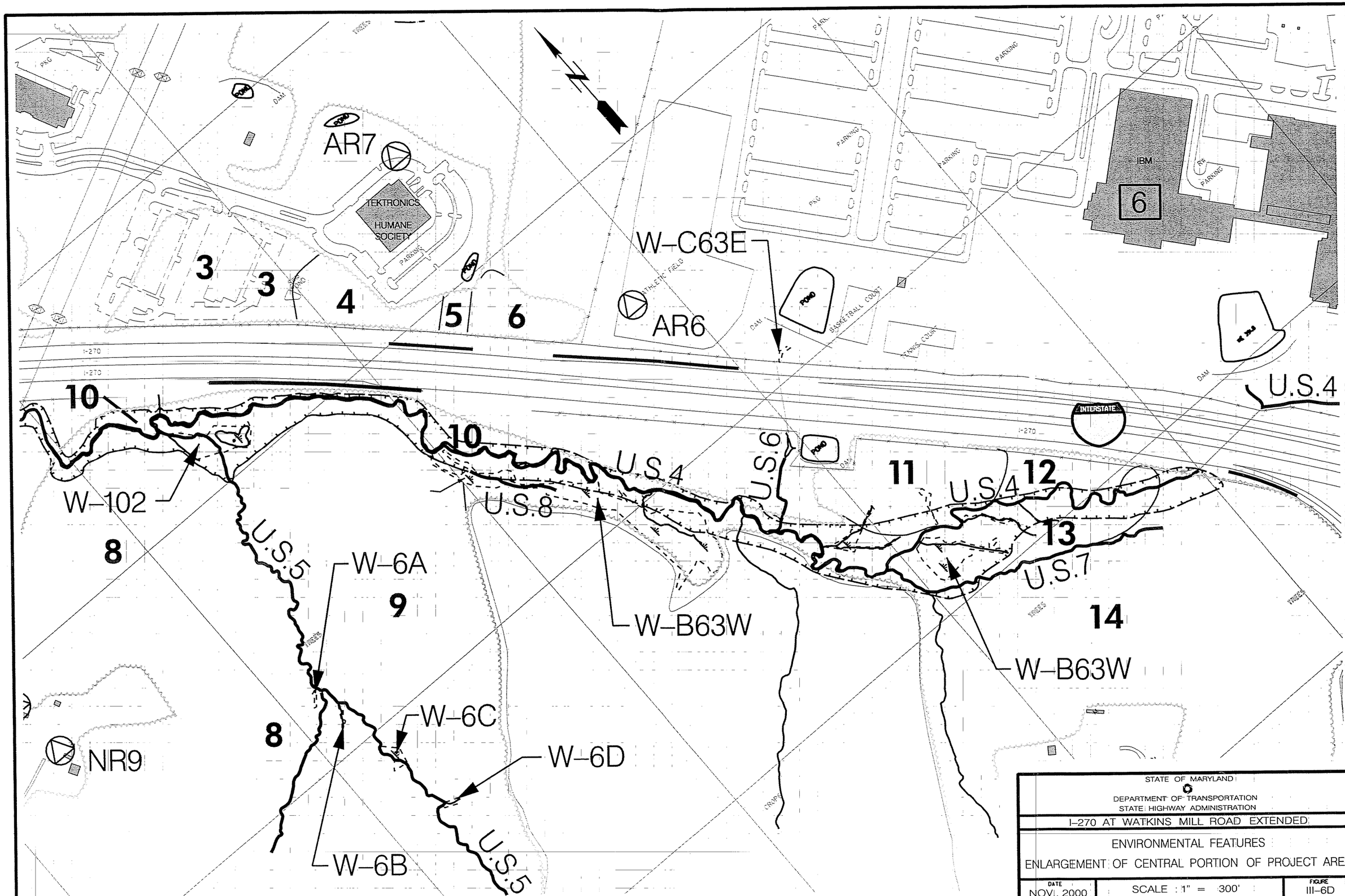
- TREE LINE
- 100-YEAR FLOODPLAIN
- U.S.1 WATERS OF THE U.S.
- WETLANDS
- P PARK BOUNDARY
- 4 FOREST STAND
- AR5 AIR / NOISE RECEPTOR
- 2 POTENTIAL HAZARDOUS WASTE LOCATIONS

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ENVIRONMENTAL FEATURES

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 600'	III-6C


AR7
TEKTRONICS
HUMANE
SOCIETY
PARKING
3
3
4
5
6
W-C63E
AR6
ATHLETIC FIELD
BASKETBALL COURT
TENNIS COURT
IBM
6
PARKING
I-270
10
10
U.S.4
U.S.6
11
12
13
14
U.S.4
U.S.4
U.S.8
U.S.7
U.S.5
U.S.5
W-102
8
W-6A
9
W-B63W
W-B63W
W-6C
W-6D
W-6B
8
NR9
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
I-270 AT WATKINS MILL ROAD EXTENDED
ENVIRONMENTAL FEATURES
ENLARGEMENT OF CENTRAL PORTION OF PROJECT AREA
DATE
NOV. 2000
SCALE : 1" = 300'
FIGURE
III-6D

5. Hazardous Materials/Waste Sites

A hazardous waste/materials investigation was performed in accordance with American Society for Testing and Materials (ASTM) 1527-97 guidelines (American Society for Testing and Materials, 1997) to identify any hazardous substance or petroleum product within the study area under conditions that indicate an existing release, past release, or a material threat of a release. Hazardous waste/materials investigations involve inquiries into previous property ownership and uses consistent with good commercial or customary practice as defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The investigation was completed by conducting on-site inspections and through a review of the following:

- historical information;
- federal and state environmental databases;
- topographic and geologic information; and
- local agency records.

For the purposes of the hazardous waste/materials investigation, the study area includes properties within the proposed right-of-way for the interchange construction at I-270 (not including the MD Route 124 interchange), and within a corridor approximately 400 feet wide, along the alignment of proposed Watkins Mill Road Extended. Development in the study area with the potential for being associated with hazardous materials includes: commercial properties, including the 50 West Watkins Mill Road property (formerly occupied by Federal Express Corporation), Medimmune, Inc., King Lincoln Mercury, and Genetic Therapy, Inc.; a railroad line; and a high-tension power line/petroleum pipeline right-of-way. Two petroleum pipelines run through the study area in a northeast to southwest direction and intersect I-270 and MD Route 355. Other land use in the project area includes vacant land, residential structures and various thoroughfares, including I-270, MD Route 355, and MD Route 117, Watkins Mill Road, and West Watkins Mill Road.

Historical Review

Aerial photographs from Air Photographics, Inc. were reviewed to determine previous site use. A review of aerial photographs dated June 1997, March 1985, March 1977, and July 1966 revealed that the study area was primarily vacant land, partially developed with various thoroughfares in 1966, residences were constructed at the intersection of MD Route 355 and

Watkins Mill Road prior to 1977, the King Lincoln Mercury facility was constructed at the intersection of MD Route 355 and Watkins Mill Road prior to 1985, and the Federal Express Corporation and Medimmune, Inc. were constructed along Watkins Mill Road West prior to 1997. Adjoining properties include the IBM Corporation, Lockheed-Martin, vacant land, streets, residences, and office buildings.

Field Investigation

Visual inspection of the study area revealed that household appliances, furniture, construction debris, and tires were deposited in the wooded portions of the study area. An abandoned vehicle was identified in a forested portion of the study area; however, it was stripped of the engine and no fuel leaks were observed. The vehicle appeared to have been abandoned many years ago. No hazardous materials were identified at these sites and, therefore, these areas of unauthorized dumping currently should not pose an environmental threat within the study area.

An inquiry was made to the Potomac Electrical Power Cooperative (PEPCO) in Washington, DC regarding electrical transformers containing polychlorinated biphenyls (PCBs) that may be located within the study area. Mr. Henry Woodard, with the Customer Reliability Department of PEPCO, stated that any transformers located within the study area are the property of PEPCO and, therefore, PEPCO is responsible for any of the electrical transformers that may still contain PCBs. Mr. Woodard could not specifically identify any PCB-containing transformers within the study area.

Database Review

Both federal and state databases, provided by Vista Information Solutions, Inc., were reviewed to identify potential adverse environmental conditions at or near the study area. Database reviews were performed using the minimum search distances specified by ASTM and State Highway Administration (SHA) guidelines. Where ASTM or SHA guidelines were not specific, conservative search distances were utilized according to good commercial practices. The investigation included a review of records regarding hazardous waste/materials management. Local emergency agencies were also contacted for information regarding any environmental concerns within the study area.

Figure III-6 presents locations of National Priorities List (NPL) facilities; Comprehensive Environmental Response, Compensation, Liability Information System No Further Remedial Action Planned (CERCLIS NFRAP) facilities; Resource Conservation and Recovery Act-Treatment, Storage, or Disposal (RCRA-TSD) facilities; RCRA large-quantity generators; solid

waste landfills; and leaking underground storage tank (LUST) facilities identified near the study area. Table III-13 presents on-site and adjoining hazardous waste facilities. Based on the information reviewed, none of these facilities pose an environmental threat within the study area at the present time.

TABLE III-13

POTENTIAL ON-SITE AND ADJOINING HAZARDOUS WASTE LOCATIONS

Figure III-6 I.D. #	Facility Name	Location	Database Listing	Project Impact Ranking
1	Federal Express Corp.	On-site, Watkins Mill Road West	Underground Storage Tank (UST) Database, RCRA Database (no violations)	High/Listed Site
2	Medimmune, Inc.	On-site, Watkins Mill Road West	RCRA Database (no violations), Emergency Response Notification System (ERNS) Database, State Spills Report	High/Listed Site
3	King Lincoln Mercury	On-site, MD Route 355	UST Database	High/Listed Site
4	Genetic Therapy, Inc.	On-site, Watkins Mill Road West	Nuclear Materials Handler	High/Listed Site
5	Weinschel Lucas, Inc.	Adjoining to the southeast, Clopper Road	CERCLIS NFRAP, RCRIS Database (with violations), UST Database	High/Listed Site
6	IBM Corporation	Adjoining to the northeast, MD Route 355	RCRIS Database (no violations), UST Database	High/Listed Site
7	Norden Service Co.	Adjoining to the northwest, MD Route 355	RCRIS Database (no violations)	Low/Listed Site
8	Gillette Capital Corp.	Adjoining to the northwest, MD Route 355	RCRIS Database (with violations), Nuclear materials handler	High/Listed Site
9	Microcarb, Inc.	Adjoining to the northwest, MD Route 355	RCRIS Database (with violations)	Low/Listed Site
10	Antex Biologies, Inc.	Adjoining to the northwest, MD Route 355	Nuclear materials handler	High/Listed Site

Ecological conditions within the study area were assessed to provide data regarding terrestrial and aquatic habitats, including wetlands and forests, and the potential presence of federally listed rare, threatened, or endangered species.

6. Wetlands

A wetland delineation, conducted in February 1998 and April 1999, identified ten wetlands within the study area. Wetlands were identified based on the Corps of Engineers (COE) *Wetland Delineation Manual* (Environmental Laboratory, 1987). This method includes the identification of three wetland parameters, hydrophytic vegetation, hydric soils, and hydrology. Wetland classifications were based on the USFWS Cowardin system (Cowardin, et al., 1979). The Jurisdictional Determination (JD) of the wetland boundaries was completed in two separate field reviews. The first wetland JD was conducted for the I-270/US 15 multi-modal corridor study in Dec./Nov. 1998 and covered an approximate 150-foot wide zone from the edge of pavement on either side of I-270 (see minutes letter dated 10/10/98 in Section VII.A. - Agency Coordination). The second wetland JD was conducted in July, 1999 for both the proposed Transitway (from Shady Grove Metro Station to MD 75 Extended) and proposed interchange at Watkins Mill Road Extended. This wetland JD covered the remainder of the project area not included in the first wetland JD (see minutes in letter dated 07/09/99 in Section VII.A.). Wetlands are shown on Figure III-6.

Prior to conducting a field investigation, possible wetlands were identified using preliminary wetland mapping completed during previous planning studies for the project, National Wetland Inventory (NWI) maps prepared by the U.S. Fish and Wildlife Service (US FWS), Soil Survey maps for Montgomery County, and topographic maps.

Ten wetlands were identified within the project area; Wetland W-6A, W-6B, W-6C, W-6D, W-6E, W-B63W, W-C63E, W-62A, W-62C and W-102. These wetlands are described below:

Wetland W-6A (Figure III-6B)

Wetland W-6A is a drainage swale classified as a palustrine emergent wetland with a seasonally flooded/saturated water regime (PEM1C/E) where it enters the main channel just south of the tributary. Water is supplied to the wetland by groundwater seepage and occasional flooding of the stream. During the site visit, there were drainage patterns in the wetland and water-stained leaves present. The dominant vegetation in the wetland consists of skunk cabbage *(Symplocarpus foetidus)*, Christmas fern *(Polystichlum acrostichoides)*, and stout woodreed *(Cinna arundinacea)*. Soils in the wetland are mapped as Blocktown channery silt loam, which is listed as highly erodible land by NRCS. There is also a Baile inclusion within the Blocktown series that is listed as hydric by NRCS. Soil samples exhibited a low-Chroma color of 10YR 4/2 and had few, faint mottles of 7.5 YR 4/6 color within the first three inches of the soil profile.

Below three inches, the soils were gleyed and had matrix colors of 10YR 5/1 and 10YR 6/1. Common, distinct mottles of 7.5YR 4/6 color were observed between 3 and 10 inches of the soil profile. Below 10 inches, the soils exhibited many, distinct mottles of 7.5YR 5/8 color. Functions associated with the wetland ranked high for sediment stabilization and water quality, while wildlife functions ranked low.

Wetland W-6B (Figure III-6B)

Wetland W-6B is a palustrine scrub-shrub/emergent wetland with a seasonally saturated water regime (PSS/PEMIC). It is located along the left bank just north of where the second tributary enters the channel. The wetland is supported by groundwater seeps. During the site visit, the wetland was inundated with one inch of water and soils were saturated in the upper 12 inches of the soil profile. Other indicators of wetness included drainage patterns and water-stained leaves in the wetland. The dominant vegetation in the herbaceous layer consists primarily of skunk cabbage *(Symplocarpus foetidus)*. The scrub-shrub portion of the wetland contains dominant vegetation that includes winterberry *(Ilex verticillata)*, black gum *(nyssa sylvatica)* and highbush blueberry *(Vaccinium corymbosum)*. Soils in the wetland are mapped as Blocktown channery silt loam, which is listed as highly erodible land by NRCS. An inclusion of Baile silt loam comprises most of the wetland and is listed as a hydric soil by NRCS. Soil samples exhibited the same matrix and mottle colors as those found in the previous emergent wetland. This wetland retains the same functions as the individually classified emergent and scrub-shrub wetland.

Wetland W-6C (Figure III-6B)

As the stream extends north, the channel ends abruptly within a forested floodplain wetland. The stream flows under ground through the wetland and provides the necessary water for this area. This area is classified as a palustrine forested wetland with a seasonally flooded/saturated water regime (PFO1C/E). During the site visit, there were drainage patterns and water-stained leaves in the wetland. The dominant vegetation in the canopy layer consists of sycamore *(Platanus occidentalis)* and red maple *(Acer rubrum)*. The shrub layer contains dominant vegetation that includes winterberry *(Ilex verticillata)*, and spicebush *(Lindera benzoin)*. The dominant vegetation in the herbaceous layer is stout woodreed *(Cinna arundinacea)*. Soils in the wetland are mapped as Gaila silt loam, which is listed as highly erodible land by NRCS. An inclusion of Baile silt loam is also located within this area and is listed as hydric by NRCS. Soil samples exhibited the same characteristics as those found in the emergent/scrub-shrub wetland. Functions associated with this wetland ranked high for sediment stabilization and water quality, while wildlife functions ranked low.

Wetland W-6D (Figure III-6B)

The channel becomes evident north of the forested wetland and remains intermittent to the headwaters of the stream. A small palustrine emergent wetland (Wetland W-6D) with a seasonally flooded water regime (PEM2C) juts out from the main channel of the stream. This area is supported by hillside seeps that flow through the wetland and into the stream. There is a lack of vegetation within the wetland; however, our site visit occurred prior to the start of the growing season. Soils in the wetland are mapped as Blocktown channery silt loam with inclusions of Baile silt loam. The Blocktown silt loam is considered highly erodible by NRCS, while Baile inclusions are classified as hydric.

Wetland W-6E (Figure III-6B)

The stream extends for approximately 600 feet to the headwaters, which is located east of the B&O Railroad tracks. This area is classified as a palustrine scrub-shrub wetland with a seasonally flooded/saturated water regime (PSS1C/E). Wetland W-6E is hydrologically supported by a series of seeps that break out of the hillside and flow into the channel and wetland. The dominant vegetation in the shrub layer consists of winterberry *(Ilex verticillata)* and spicebush *(Lindera benzoin)*. The herbaceous layer contains dominant vegetation that includes stout woodreed *(Cinna arundinacea)*, cinnamon fern *(Osmunda cinnamomea)* and skunk cabbage *(Symplocarpus foetidus)*. Soil classification and characteristics are identical to those found in the emergent wetland. This wetland retains the same functions as those described in the previous scrub-shrub wetland.

Wetland 102 (Figure III-6D)

Wetland 102 is located along a first order stream which flows from the Baltimore-Ohio rail line and drains into the Great Seneca Creek tributary. The wetland was flagged from approximately 550 feet southeast of the Watkins Mill Road West terminus, to its confluence with the Great Seneca Creek tributary, approximately 1,500 feet south of Game Preserve Road. Wetland 102 is bounded by vacant wooded land to the north, west, and south, and the Great Seneca Creek tributary to the east. The stream channel is approximately two to five feet wide and two to four inches deep. The stream bed is composed primarily of gravel. The stream valley opens into a floodplain, approximately 200 feet west of I-270. This floodplain was characterized as palustrine forested with a temporary/seasonally saturated water regime (PFO1A/E). The wetland receives hydrology from overbank flooding and groundwater seeps. The soils are saturated in the upper 12 inches and oxidized rhizospheres were observed. Dominant vegetation within the wetland includes red maple *(Acer rubrum)*, tulip popular *(Liriodendron tulipifera)*, spicebush *(Lindera benzoin)*, New York fern *(Thelypteris noveboracensis)*, jewelweed

(impatiens capensis), ground ivy *(glecoma hederacea)*, and poison ivy *(toxicodendron radicans)*. Soils exhibited low chroma colors and mottles, and were determined to by hydric.

The floodplain located to the east of the stream is classified as a palustrine forested/scrub-shrub wetland with a saturated/seasonally saturated water regime (PFO/PSS1B/E). At the time of the site visit, the wetland was inundated with approximately three to six inches of water, soils were saturated, and water marks were observed. Dominant vegetation within the wetland includes red maple *(Acer rubrum)*, tulip poplar *(Liriodendron tulipifera)*, black gun *(Nyssa sylvatica)*, spicebush *(Lindera benzoin)*, winterberry *(Ilex verticillata)*, black willow *(Salix nigra)*, white grass *(Leersia virginica)*, grass species (Graminae species), and false nettle *(Boehmeria cylindrical)*. Soils exhibited gleying, mottles, and low chroma colors.

Wetland W-B63W (Figure III-6B)

Wetland B63W is located along the Great Seneca Creek tributary from U.S. 5 to the intersection of Great Seneca Creek and I-270. This wetland system includes palustrine forested and emergent wetlands. The stream channel within this wetland was observed to be approximately six feet wide and 3.5 feet deep. The stream bed is composed primarily of gravel. An intermittent stream flows under I-270 and enters the tributary from the east, approximately 700 feet south of the proposed Watkins Mill Road Extended.

A palustrine forested wetland with a seasonally flooded/saturated water regime (PFO1C/E) is located approximately 250 feet south of the intermittent stream. At the time of the site visit, the wetland was found to be inundated with 0.5 to one inch of water, soils were saturated, and drainage patterns and oxidized rhizospheres were observed. Dominant vegetation includes red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), spicebush (*Lindera benzoin*), skunk cabbage (*Symplocarpus foetidus*), false nettle (*Boehmeria cylindrica*), and fowl manna grass (*Glyceria striata*). Soils exhibited low chroma colors and mottles.

Two additional intermittent streams drain into the Great Seneca Creek tributary south of the forested wetland. A palustrine forested wetland with a temporary/seasonally flooded water regime (PFO1A/C) is located in the Great Seneca Creek tributary floodplain, approximately 100 feet south of these intermittent streams. The wetland receives hydrology from overbank flooding and groundwater seeps. Drainage swales and oxidized rhizospheres also were observed within the wetland. Dominant vegetation includes red maple (*Acer rubrum*), black gum (*Nyssa sylvatica*), spicebush (*Lindera benzoin*), skunk cabbage (*Symplocarpus foetidus*), and ground ivy (*Glecoma herderacea*). Soils exhibited low chroma colors, gleying, and mottles.

A palustrine emergent wetland with a seasonally flooded water regime (PEM2C) is located along a narrow drainage swale, which parallels the west side of the Great Seneca Creek tributary and flows into the tributary approximately 150 feet south of the forested wetland. The wetland receives hydrology from groundwater seeps and overbank flooding. Additionally, wetland drainage patterns were observed. Dominant vegetation includes skunk cabbage (*Symplocarpus foetidus*). Soils exhibited low chroma colors, gleying, and mottles.

A palustrine emergent wetland with a seasonally saturated water regime (PEM1/2E) is located on the east side of the Great Seneca Creek tributary, north of its intersection with I-270. The wetland receives hydrology from overbank flooding. Additionally, saturated soils, water marks and drainage patterns were observed. Dominant vegetation includes skunk cabbage (*Symplocarpus foetidus*), arrow-leaved tearthumb (*Polygonum sagittatum*), big-leaved arrowhead (*Sagittaria latifolia*), halbred-leaved tearthumb (*Polygonum perfoliatum*), and false nettle (*Boehmeria cylindrica*). Soils exhibited low chroma colors, mottles, and gleying.

Wetland W-C63E (Figure III-6B)

Wetland C63E was identified east of I-270 and south of Game Preserve Road, on the southwestern boundary of the IBM property. This wetland is the outfall of an adjacent stormwater management pond, and includes a portion of the Great Seneca Creek tributary. Wetland C63E is bounded by a stormwater management pond to the north and northeast, a parking lot to the east, an I-270 on-ramp to the south, and I-270 to the west. The wetland was classified as palustrine emergent with a temporary water regime (PEM1A). The wetland receives hydrology from the stormwater management pond and a rising groundwater table. Dominant vegetation includes blue vervain (*Verbena hastata*), arrow-leaf tearthumb (*Polygonum sagittatum*), soft rush (*Juncus effusus*), nutsedge (*Cyperus esculentus*), and jewelweed (*Impatiens capensis*). Soils were identified in the Soil Survey for Montgomery County (USDA, 1995) as Baile silt loam, which is listed as hydric (State of Maryland, 1990).

Wetland W-62A (Figure III-6A)

Wetland 62A is located west of I-270 and north of Great Seneca Creek. A portion of the wetland was classified as palustrine emergent with a temporarily flooded water regime (PEM1A). This wetland was dominated by common reed *(Phragmites australis)*, arrow-leaf tearthumb *(polygonum sagittatum)*, soft rush *(Juncus effuses)*, rice-cut grass *(Leersia oryzoides)*, and barnyard grass *(Echinochloa muricata)*. A portion of the wetland was classified as palustrine, forested, broad-leaved deciduous, with a temporarily flooded water regime (PFO1A). This wetland is dominated by green ash *(Fraxinus pennsylvanica)*, red maple *(Acer rubrum)*, box elder *(Acer negundo)*, winterberry *(Ilex verticillata)*, arrow-wood *(Viburnum dentatum)*, skunk

cabbage *(Symplocarpus feotidus)*, and whitegrass *(Leersia virginica)*. Soils were identified in the Soil Survey for Montgomery County (USDA, 1995) as Hatboro silt loam, which is listed as hydric (State of Maryland, 1990).

Wetland W-62C (Figure III-6A)

Wetland 62C is located east of I-270 and north of Great Seneca Creek. The wetland was classified as palustrine emergent with a temporarily flooded water regime (PEM1A). The wetland is dominated by soft rush *(Juncus effuses)* and whitegrass *(Leersia virginica)*. Soils were identified in the Soil Survey for Montgomery County (USDA, 1995) as Hatboro silt loam, which is listed as hydric (State of Maryland, 1990).

Functions and Values

A wetland functional assessment was conducted for the wetlands associated with the Great Seneca Creek tributary, west of I-270 and north of MD Route 124 (see minutes dated 11/23/99 in Section VII.A.). The wetlands within this system have generally similar vegetation composition and hydrogeomorphic setting; therefore, all forested wetlands were assessed as one forested wetland and all emergent wetlands were assessed as one emergent wetland system.

The US Army Corps of Engineers (COE) recommended that the wetland systems within the study area be assessed using the *Evaluation for Planned Wetlands* (EPW) and *The Highway Methodology Workbook Supplement – Wetland Functions and Values: A Descriptive Approach*, also known as the New England Approach. The EPW takes a quantitative approach to wetland assessments; whereas the New England Approach is a qualitative assessment.

EPW Method

The EPW provides a functional capacity assessment method that measures the degree to which a wetland performs a function. The wetland is assigned a score between 0.0 and 1.0 for each function, with 0.0 representing no functional capacity, and 1.0 representing optimal functional capacity. Scores were calculated for each wetland function within the palustrine emergent wetland and palustrine forested wetland.

Table III-14 presents wetland functions and the assigned scores for the palustrine emergent wetland system, which includes emergent wetlands PEM2C and PEM1/2E within Wetland B63W. Table III-15 presents wetland functions and the assigned scores for the palustrine forested wetland system, which includes Wetland W6A-E, and forested wetlands PFO1C/E and PFO1A/C within Wetland B63W.

TABLE III-14

WETLAND ASSESSMENT SCORES FOR THE PALUSTRINE EMERGENT WETLAND SYSTEM

Functions Assessed	Wetland Assessment Score
Shoreline Bank Erosion Control	N/A
Sediment Stabilization[a]	0.82
Water Quality[b]	0.93
Wildlife[c]	0.22
Fish (Tidal)	N/A
Fish (Non-Tidal Stream/River)[d]	0.67
Fish (Non-Tidal Lake/Pond)	N/A
Uniqueness Heritage	N/A

a. Calculated by scoring the disturbance at the site, the water level fluctuation, the basal plant cover, leaf litter and debris cover, root structure, vegetation persistence, and wetland slope.

b. Calculated by scoring the disturbance at the site, water level fluctuation, wetland width, water contact with the toe of bank, surface runoff, wetland slope, basal plant cover, plant height, vegetation persistence, dominant substrate, hydrologic condition, detention time, sheet versus channel flow, and average water depth.

c. Calculated by scoring the disturbance of wildlife habitat, gross contamination, wetland size, layers of vegetation, condition of layers, spatial pattern of shrubs and trees, cover types, ratio of cover types, cover type interspersion, undesirable species, percent open water, vegetation/water interspersion, shape of upland/wetland edge, wildlife attractors, and islands.

d. Calculated by scoring the shoreline bank stability, disturbance at the site, disturbance in the channel/open water, fish habitat size, obstruction to fish passage, vegetative overhang, plant biomass, shape of wetland/water edge, available fish cover, percent pool area, bank undercut, current velocity within pools, spawning substrate, spawning structures, water quality ratings, nutrient/sediment/contaminant sources, dissolved oxygen, pH, maximum water temperature, and turbidity.

e. Calculated by scoring the presence of endangered species, rarity, unique features, historical or archaeological significance, the presence of natural landmarks, connection to a Wild and Scenic River, presence of parks, and its usefulness as a scientific research site.

Legend:
N/A = Not applicable to this wetland.

TABLE III-15

WETLAND ASSESSMENT SCORES FOR THE PALUSTRINE FORESTED WETLAND SYSTEM

Functions Assessed	Wetland Assessment Score[a]
Shoreline Bank Erosion Control	N/A
Sediment Stabilization[a]	0.79
Water Quality[b]	0.85
Wildlife[c]	0.50
Fish (Tidal)	N/A
Fish (Non-Tidal Stream/River)[d]	0.67
Fish (Non-Tidal Lake/Pond)	N/A
Uniqueness Heritage[e]	1.0

a. See Table 6-1 for footnote
b. See Table 6-1 for footnote
c. See Table 6-1 for footnote
d. See Table 6-1 for footnote
e. See Table 6-1 for footnote

Legend:
N/A = Not applicable to this wetland.

New England Approach

The New England Approach utilizes both professional judgment and wetland science to determine the functions performed by a wetland and to derive a value based on those functions. The wetlands within this system have generally similar vegetation composition and hydrogeomorphic setting. For the purposes of the New England Method, all forested and emergent wetlands, including Wetland 102, and Wetland B63W, were assessed as one wetland system, rather than as a forested wetland and an emergent wetland.

Table III-16 presents a list of wetland functions and their occurrence within the wetland.

TABLE III-16

WETLAND FUNCTION/VALUE OCCURRENCE

Function/Value	Occurrence	Principal Functions
Groundwater Recharge/Discharge	Yes	
Floodflow Alteration	Yes	
Fish and Shellfish Habitat	Yes	Yes
Sediment/Toxicant Retention	Yes	
Nutrient Removal	No	
Production Export	Yes	
Sediment/Shoreline Stabilization	Yes	
Wildlife Habitat	Yes	Yes
Recreation	No	
Educational Scientific Value	No	
Uniqueness/Heritage	Yes	Yes
Visual Quality/Aesthetics	Yes	
Endangered Species Habitat	No	

Both methodologies show that the principle or primary functions and values of the wetlands include: sediment stabilization, water quality, wildlife habitat, fish and shellfish habitat, and are valued for their Uniqueness and Heritage. As indicated in Tables III-14 and III-15, other functions and values exist to a lesser degree.

7. Wildlife and Terrestrial Habitat

The study area was inspected to identify wildlife, and to assess terrestrial and aquatic habitats. Additionally, the length of Great Seneca Creek and the tributary of Great Seneca Creek within the study area were walked to observe general stream characteristics. In general, EPA's *Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers: Periphyton, Benthic, Macroinvertebrates, and Fish* (EPA, 1999) was used for the habitat assessment.

Visual inspection of the study area revealed that terrestrial habitats included vacant, wooded land and vacant fields, surrounded by roads and areas developed with commercial and residential properties. The largest parcel of undeveloped land within the study area was west of I-270, north of MD Route 124 (Quince Orchard Road), and east of the Baltimore and Ohio railroad line. This parcel of land included approximately 145 acres of forested land and approximately 59 acres of vacant field. Wildlife in this portion of the study area included deer,

fox, rabbits, squirrels, and various species of birds. The remainder of the study area was developed with residences, office buildings, commercial properties, and roadways.

8. Forest Areas

The *Maryland State Forest Conservation Technical Manual* (Maryland Department of Natural Resources, 1997) defines a "forest stand" as a forested area greater than 10,000 square feet and with a minimum width of 35 feet. Forest stands within the study area were preliminarily identified using aerial photography and topographic maps prior to conducting field investigations. The boundaries of the forest stands and any significant, specimen, or potential champion trees were identified (see Figure III-6). Montgomery County defines a "significant" tree as a tree exhibiting a diameter at breast height (DBH) of 24 inches or greater, and a "specimen" tree as a tree exhibiting a DBH greater than or equal to 30 inches. A champion tree is the largest tree of an individual species in the state. A potential champion tree exhibits a DBH of at least 75 percent of the state champion of that species. Locations of significant and specimen trees were identified within the study area using a global positioning system (GPS) unit capable of sub-meter accuracy.

From December 1999 through March 2000, 15 forest stands covering approximately 56.11 acres of land were identified within that part of the study area affected by the proposed Watkins Mill Road extension and the I-270 interchange. These stands were dominated primarily by tulip poplar (*Liriodendron tulipifera*), American sycamore (*Platanus occidentalis*), and various species of oak. Most of these stands contained significant and specimen trees (see Figure III-6). A total of 333 significant trees and 182 specimen trees were documented; nine of these trees were located outside of forest stands. No champion trees were identified within the study area.

Aquatic habitats in the study area include a 1,100-foot reach of Great Seneca Creek, a one-mile reach of the Great Seneca Creek tributary, and a one-mile reach of Long Draught Branch. As discussed in the previous Water Resources section, biological information, such as habitat features and the abundance and diversity of macroinvertebrates was collected to assess stream health within the study area. For information regarding the aquatic habitat assessment, please refer to the Surface Water Quality section of this report.

9. Rare, Threatened and Endangered Species

The US Fish and Wildlife Service (USFWS) and the Maryland Department of Natural Resource's (MDDNR) Wildlife and Heritage Division were consulted to identify any rare, threatened, or endangered species that may occur in or near the study area. The USFWS and the

MDDNR's Wildlife and Heritage Division indicated there are no state or federally listed rare, threatened, or endangered floral or fauna species known to exist within the study area (Slattery and Pennington, 2000).

However, the Wildlife and Heritage Division's Natural Heritage database indicates that there are records for species of concern known to occur within the vicinity of the project site. These species could potentially occur on the project site itself, especially if the appropriate habitat exists. They are:

Scientific Name	Common Name	State Status
Botaurus lentiginosus	American Bittern	In Need of Conservation
Polygonum opelousanum	Opelousus Smartweed	Uncertain

In follow-up coordination, MDDNR stated that it was unlikely that the American Bittern or Smartweed would occur in the project area; however, these bird/plant species were found within one mile of the project area at some point in the past.

Also, the forested area on the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of this habitat is strongly encouraged by the Department of Natural Resources (see MDDNR lette dated 02/11/00 in Correspondence Section).

F. Existing Noise Conditions

1. Ambient Noise Level Measurements

Nine receptors were identified to represent the study area (see Figure III-7). For the noise evaluation, the receptors were separated into two Noise-Sensitive Areas (NSAs) identified as NSA A and NSA B. Each NSA represents a group of noise-sensitive receptors that could be affected by the proposed project. NSA A represents 79 attached townhouses in the Gunners View community, which is west of I-270 and adjacent to the north side of Seneca Creek State Park. NSA B represents six single-family residences in the Caulfield community, which is west of I-270 and adjacent to the south side of Seneca Creek State Park.

Ambient noise levels were measured and recorded in the study area, and vehicle counts were recorded to determine existing noise conditions. One 24-hour field noise measurement was recorded in May 2000 to characterize hourly sound level fluctuations. The hour of the day with

the peak-noise level was identified based on the field measurements. One-hour measurements were recorded during this peak hour at three additional locations to characterize the peak-hour sound environment at the sites. Traffic was counted during all hourly noise measurement sessions and classified according to vehicle type (e.g., automobiles, medium trucks, heavy trucks, buses, and motorcycles).

2. Results of Noise Monitoring

The field noise measurements and concurrent traffic counts were used to validate the TNM model at four locations within of the study area. The model was used to predict existing noise levels using SHA peak-hour traffic data. The model results for existing traffic noise were compared with the field noise measurements to determine whether the model realistically captured acoustic conditions within the study area. Table III-17 presents the measured ambient noise levels and model-predicted noise levels during the peak hour.

TABLE III-17

EXISTING NOISE LEVELS

Receptor	Location	Description	Existing Measured Ambient Noise Levels (dBA)	Existing Model-Predicted Noise Levels (dBA)
NSA A – Gunners View				
1	Summer Oak Dr	Attached Townhouse	-	63
2	Summer Oak Dr	Attached Townhouse	-	63
3 [a]	11523 Summer Oak Dr	Attached Townhouse	60	62
NSA B – Caulfield				
4	11230 Game Preserve Rd	Single-family Residence	-	64
5	11220 Game Preserve Rd	Single-family Residence	-	64
6 [a]	11210 Game Preserve Rd	Single-family Residence	65	62
7 [a]	11200 Game Preserve Rd	Single-family Residence	68	71
8	11510 Game Preserve Rd	Single-family Residence	-	59
9 [a]	11520 Game Preserve Rd	Single-family Residence	54	52

[a] Measurement location

As shown on the table, the existing measured noise levels and predicted noise levels at each location are within 3 dBA, which indicates that the model is a valid representation of existing traffic noise conditions within the study area.

EnvDocIII7_AirNoise

NOISE SENSITIVE AREA A

NOISE SENSITIVE AREA B

NR-1
NR-2
NR-3
NR-4
NR-5
NR-6
NR-7
NR-8
NR-9

R-1
R-2
R-3
R-4
R-5
R-6
R-7
R-8
R-9
R-10
R-11

WATKINS MILL ROAD

CLOPPER ROAD

I-270

MD 355

LEGEND

NR-9 Noise Analysis Receptor Identification

Receptor Location

R-1 Air quality Receptor Identification

WATKINS MILL ROAD EXTENDED

AIR QUALITY AND NOISE ANALYSIS RECEPTOR LOCATIONS

Date: NOV., 2000

1,100 0 1,100
SCALE IN FEET

Figure III-7

IV. ALTERNATES CONSIDERED

IV. ALTERNATES CONSIDERED

The following section presents information regarding all of the alternates that have been developed as part of this Project Planning Study, including those currently under consideration for this project as well as those that have been eliminated. Section IV.B describes the alternates that were dropped prior to the November 23, 1999 Alternates Public Workshop.

Section IV.C describes the preliminary alternates developed in Stage I of the Project Planning Study. Section IV.D describes the alternates that were dropped from further consideration following the Alternates Public Workshop. Section IV.E describes the alternates that were revised and carried forward for detailed comparative study in Stage II of the project. These Stage II alternates are the subject of this Environmental Assessment. The final selection of an alternate will not be made until the alternates impacts and comments on this document and from the public hearing have been fully evaluated.

A. Background Issues and Design Criteria Common to all Alternates

The proposed typical sections and geometric parameters have been developed in accordance with the design speeds and roadway segment functions, and were obtained from AASHTO's Geometric Design of Highways and Streets supplemented by applicable SHA policies and directives.

Gas lines, C&P transmission lines, PEPCO high tension wires and WSSC underground water lines are located within, or adjacent, to the proposed right-of-way of the build alternates. Utility reconnaissance through SHA District 3 offices has been completed to assess impacts and determine specific engineering constraints.

Planned and programmed transportation improvements in the general vicinity of the I-270 corridor in the study area are common to all alternates under consideration. These improvements are described as part of the existing environment and are detailed in Section II.C.

As stated in the Logical Termini/Independent Utility discussion in Chapter II, one roadway improvement project within the I-270 at Watkins Mill Road Extended project limits is of particular relevance to the alternates under consideration. That project is the I-270/US 15 Multi-Modal Corridor Study from the Shady Grove Metrorail Station to Biggs Ford Road. The proposed I-270/Watkins Mill Road Extended project would comprise a 2-mile long segment along I-270 within the project limits for the I-270/US 15 Multi-Modal Corridor Study, which covers 30 miles along I-270 and US 15.

The I-270/US 15 Multi-Modal Study is considering two basic typical section options within the I-270 at Watkins Mill Road project area, as shown in Figure IV-1. The first, entitled Combination Alternates A, B, C (Options 1 and 2) proposes the construction of a two-lane Collector-Distributor (C-D) roadway in each direction, outside the existing I-270 mainline roadways. The left lane in each direction of the main line would be for High Occupancy Vehicles (HOV). The second option, entitled Combination Alternates A, B, C (Option 3) would retain the existing northbound I-270 mainline roadway as-is, but add one lane to the southbound I-270 mainline, converting the far left southbound lane to HOV.

The alternates retained for detailed study in the I-270 at Watkins Mill Road Extended project planning study have been developed with full consideration of the Corridor Study's proposed typical sections. Further details of the relationship between this study's alternates and the Corridor Study typical sections is contained below in Section IV.E Alternates Retained for Detailed Study.

Traffic Calming

In response to comments received at the public workshop and from the Focus Group, traffic calming measures will be considered for Watkins Mill Road, west of MD 355 and for Pheasant Run, from MD 117 to Longdraft Road. These sections of local roadways extend beyond the project limits and fall under the responsibility of local jurisdictions, namely Montgomery County and the City of Gaithersburg. The following is a summary of possible traffic calming measures proposed by the city and county.

City of Gaithersburg

The following mitigation measures have been provided as a starting point for staff and residents to discuss their advantages and disadvantages on traffic flow, speeds, circulation and accessibility.

Watkins Road (City Limits to Russell Avenue)

- Landscaped medians where current striped median exist to narrow down the road width, potentially reducing speeds.
- Incorporate a traffic signal, roundabout or raised crosswalks with textured pavement and pedestrian refuge areas at the Travis Avenue intersection.
- The Russell Avenue intersection may incorporate signalization, raised crosswalks, textured pavement and pedestrian refuge areas in the median.

Pheasant Run Drive (Clopper Road to Longdraft Road)

- Raised crosswalk textured pavement and pedestrian refuge areas at Perrywinkle Lane and Tech Park 270 entrance.
- Raised crosswalks, textured pavement and pedestrian refuge areas at Rabbit Road.
- Chokers, mid-block narrowings or yield points could be constructed along some stretches of the entire length of the road to reduce roadway widths. Sometimes on-street parking is lost with mid-block narrowings.
- Consideration should be given to restricting through traffic from Watkins Mill Road onto Pheasant Run Road. Traffic that wanted to continue through to Longdraft Road could bypass this street entirely and be directed to the intersection of MD 117 and Longdraft Road. This could be done either through signal timing, channelization or through signage.

Montgomery County Department of Transportation and Public Works

On Watkins Mill Road, from the City of Gaithersburg limits to Great Seneca Creek, the following represents a list of potential applications which will be studied in more detail once a final I-270/Watkins Mill Road Interchange alternate is selected, designed, and constructed:

- Residents would be encouraged to participate in the Speed Watch program, and DPWT will schedule periodic deployment of the SMART (Speed Monitoring Awareness Radar Trailer - a portable, self-operating radar and speed display unit that can be used to promote speed awareness).
- DPWT will conduct speed studies and an engineering evaluation to determine whether traffic calming devices or other traffic safety measures are justified, after new traffic patterns and operations are normalized. Resident and citizen association input will be critical and will be used to develop a plan.
- Enforcement will be enhanced in coordination with the above actions and where specific safety problems are identified.

Other traffic calming which will be reviewed for application to Watkins Mill Road are:

- Traffic Circles (if designed to accommodate full movement by trucks and buses;
- Curb Extensions;

- Median or Pedestrian Refuge Islands (where not currently employed);
- Pavement Edgelines to narrow wide roadway to create parking lane or shoulder (already employed in vicinity of schools along A-17); and
- Chokers and Chicanes.

B. Preliminary Alternates Developed and Dropped from Consideration

Several alternates developed early in the project planning phase were not carried to the Alternates Public Workshop, and are discussed below:

1. Urban Diamond

The urban diamond interchange consisted of a single-point urban diamond at Watkins Mill Road Extended on both the northbound (east) and southbound (west) sides of I-270. This alternate would have used a two-lane C-D system on the northbound side of I-270 only. It would also have required an additional general use lane on I-270 on the southbound (west) side. Braided ramps were to be used in the southwest quadrant of the interchange because of inadequate weaving distances on southbound I-270. The right-of-way impacts for the urban diamond would have been more than that for a full diamond. The interchange structure required for this alternate would have been more expensive than any of the other alternates.

At the August 26, 1999 Interagency Field Review, it was decided not to carry this alternate to the Alternates Public Workshop for the following reasons:

- This alternate appears to have extensive environmental impacts to stream tributaries, wetlands and floodplains and is not favored by members of City and County staffs based on experience at the I-270/Falls Road interchange, or by federal and state environmental agency representatives.
- This alternate would contradict driver expectancy.

2. Double Decker

The double decker interchange consisted of a diamond interchange configuration on the northbound (east) side of I-270 and a partial cloverleaf on the southbound (west) side of I-270. This alternate would have used a two-lane C-D system on both sides of I-270. A two-level bridge would have crossed the Seneca Creek tributary at the same location west of I-270, minimizing stream crossings.

At the August 26, 1999 Interagency Field Review, it was decided not to carry this alternate to the Alternates Public Workshop for the following reasons:

- This alternate does not offer any operational advantages over Alternates 2 or 2-I, and it would have higher costs and environmental impacts to stream tributaries, wetlands and floodplains.
- Comments were provided that this alternate adds a lot of pavement with no additional transportation improvements.
- Concern was expressed that this alternate would impact the wetland canopy more extensively than other alternates.

3. Left -Hand Exit

The left-hand exit interchange consisted of a diamond configuration on the northbound (east) side of I-270 and a left-hand general use exit and entrance to and from southbound I-270. This alternate would have used a two-lane C-D system on the northbound side of I-270 only. The median of I-270 was to be widened to accommodate an HOV ramp. This alternate would have minimized environmental impacts on the west side of I-270 by containing all widening along the northbound side. Additional right-of-way would have been required along the east side of the I-270 mainline.

At the August 26, 1999 Interagency Field Review, it was decided not to carry this alternate to the Alternates Public Workshop for the following reasons:

- Federal Highway Administration stated that the general use left-hand exit is not desirable, since general use traffic would cross faster flowing HOV traffic to exit. This is not safe because it would contradict driver expectancy and compromise the HOV system.
- With the elimination of the left-hand exit and the addition of the braided ramp improvement to permit the Watkins Mill Extended to I-270 southbound movement in the southwest quadrant, this alternate is the ¾ Diamond Alternate, Alternate 3-I.

C. Preliminary Alternates Considered

The following alternates and access options were developed during Stage I of the project planning study and presented at the Alternates Public Workshop on November 23, 1999. All "build" alternates were developed to include the four or six lane extension (with auxiliary lanes) of Watkins Mill Road between MD 117 and MD 355 plus improvements to the Watkins Mill Road intersections with MD 117 and MD 355.

1. No Build Alternate

The No Build Alternate is currently under consideration for I-270 at Watkins Mill Road Extended. This alternate consists of routine maintenance, minor construction projects, and developer-based improvements associated with new developments. These minor improvements would not be expected to affect roadway capacity, safety, or accessibility to the growth areas of northern Gaithersburg. The No Build Alternate serves as a base for the comparison of all other alternates.

2. Interchange Build Alternates

a. Alternate 2: Partial Cloverleaf Interchange (County Feasibility Study Concept)

The partial cloverleaf interchange concept consists of a diamond configuration on the northbound (east) side of I-270 and a partial cloverleaf configuration on the southbound (west) side of I-270. This alternate would use a two-lane Collector-Distributor (C-D) lane system on each side of I-270 to handle local traffic weaving on and off of I-270. The diamond minimizes right-of-way impacts to the east. No ramps would be built in the environmentally sensitive southwest quadrant of the interchange. This alternate is the same concept as Montgomery County's 1998 engineering feasibility study concept.

b. Alternate 2-I: Partial Cloverleaf Interchange with Eastern Shift

The eastern shift of the partial cloverleaf interchange concept consists of a diamond configuration on the northbound (east) side of I-270 and a partial cloverleaf on the southbound (west) side of I-70. However, different from Alternate 2, the I-270 centerline would be shifted as much as 45 feet to the east to minimize impacts to the natural environment and wetlands on the west side of I-270 in this vicinity. A two-lane C-D system would be used on the northbound side and southbound side of I-270. Additional right-of-way would be required on the east side of I-270 beyond what is required for Alternate 2.

c. Alternate 3: Full Diamond Interchange

The full diamond interchange concept consists of a diamond configuration on both the northbound (east) and southbound (west) sides of I-270. This alternate would use a two-lane C-D lane system on the northbound side of I-270 only. Braided ramps would be used in the southwest quadrant of the interchange because of inadequate weaving distance along southbound I-270. The diamond minimizes right-of-way impacts and allows some flexibility in avoiding the

stream. Additional right-of-way would be needed for the braided ramps. The southbound exit ramp associated with this alternate has been designed to accommodate an additional southbound through lane for HOV as being planned under one of the alternates in the I-270/US 15 Corridor Study, as shown in Figure IV-1.

d. Alternate 3-I: ¾ Diamond Interchange

The partial diamond interchange concept consists of a diamond interchange of I-270 with Watkins Mill Road Extended on the northbound (east) side, permitting movements to and from northbound I-270. This alternate would use a two-lane C-D lane system on the northbound side of I-270 only. Braided ramps would be used in the southwest quadrant of the interchange because of inadequate weaving distance along southbound I-270. In order to minimize environmental impacts, no ramps would be built in the northwest quadrant of the interchange; thus no movement would be provided from southbound I-270 to Watkins Mill Road. The southbound exit ramp associated with this alternate has been designed to accommodate an additional southbound through lane for HOV as being planned under one of the alternates in the I-270/US 15 Corridor Study, as shown in Figure IV-1.

e. Alternate 4: Partial Interchange

The partial interchange concept consists of a partial diamond interchange at I-270 and Watkins Mill Road Extended. Movements would only be allowed from Watkins Mill Road Extended to northbound I-270 and from southbound I-270 to Watkins Mill Road Extended. No access would be provided from northbound I-270 to Watkins Mill Road Extended or from Watkins Mill Road Extended to southbound I-270. The southbound exit ramp associated with this alternate has been designed to accommodate an additional southbound through lane for HOV as being planned under one of the alternates in the I-270/US 15 Corridor Study, as shown in Figure IV-1. The partial interchange alternate could have a lower construction cost and allows some flexibility in avoiding the stream. This alternate would result in close signal spacing on Watkins Mill Road Extended.

f. Alternate 5: Diamond Interchange With Western C-D Road Shift

This diamond interchange with a western C-D lane system shift consists of a diamond configuration on both the northbound (east) side of I-270 and the southbound (west) side of I-270. A two-lane C-D lane system would be used on the northbound side of mainline I-270. The two-lane C-D lane system for southbound I-270 would be physically separated from

mainline I-270 by approximately 500 to 820 (north to south) feet. This should minimize the impacts to the natural environment and wetlands on the west side of I-270.

3. Baseline Alternate 6: Watkins Mill Road Extended without Interchange

This alternate consists of the extension of Watkins Mill Road from MD 117 east across I-270 and connecting to MD 355. It is included in the "no build" or "baseline" scenario for the Metropolitan Washington Council of Government's travel demand model for the Washington region in the Constrained Long Range Plan (CLRP). This alternate does not include a conventional interchange of Watkins Mill Road and I-270 with access for general use traffic; however, this alternate could include interstate access, via a slip ramp, for HOV and transit connections as part of the Access Options (see Section IV.C.4 below), similar to the other "build" alternates.

4. Access Options

Pedestrian, bicycle, vehicular and transit access are an important aspect of this project. Watkins Mill Road is being developed, as per the local master plans, to allow for pedestrian, bicycle, and vehicular access to transit, such as MARC commuter rail transit, bus, and the master planned Corridor Cities Transitway (CCT), as well as to the planned economic development in northern Gaithersburg. Several access options are being evaluated as part of each of the "build" alternates under consideration. These options are as follows:

a. Option A: HOV Direct Access

The purpose of this option is to provide exclusive ramp access for HOV users between I-270 and Watkins Mill Road Extended in order to reach the Metropolitan Grove MARC Station and the planned economic development areas adjacent to I-270. The inside lane in each direction on I-270 would be a High Occupancy Vehicle (HOV) lane. HOV's would have direct access to Watkins Mill Road Extended via a median interchange at Watkins Mill Extended, separate from the general use traffic. Since this option is contained within the I-270/Watkins Mill Road interchange area, each combination with a general use interchange alternate would result in a completely unique design.

b. Option B: Metropolitan Court Extended

The purpose of this option is to provide improved access from I-270 and Watkins Mill Road Extended for general use traffic to the Metropolitan Grove MARC Station. Access would be through a northern extension of Metropolitan Court to Watkins Mill Road just west of the

CSX tracks. This option would provide bicycle and pedestrian accommodation alongside Metropolitan Court extended and could be combined with Option A or any of the build alternates under consideration.

c. Option C: MD 124 Access Ramp

The purpose of this option is to provide direct access from I-270 to the Master Planned Corridor Cities Transitway (light rail or bus) Station, as well as a relocated Metropolitan Grove MARC Station on the east side of the CSX tracks, via MD 124. This would also provide an access road for the planned economic development on the east side of the CSX tracks to the transit station (s). Option C would have bicycle and pedestrian access on the north part of the new access road between the relocated MARC Station and Watkins Mill Road extended. The CCT station is being addressed as part of the I-270/US 15 Multi-Modal Study. This option could be combined with Option A or any of the build alternates under consideration.

D. Alternates Dropped Subsequent To The Alternates Public Workshop

As a result of preliminary planning analysis, agency coordination and public comments generated from the November 23, 1999 Alternates Public Workshop, the following alternates have been dropped. These alternates were dropped because they did not adequately address the project's purpose and need in the most efficient way, or were not the most environmentally sensitive improvement. The alternates were evaluated using data that differentiates them from the other alternates, including traffic (operations, safety and access), natural environmental impacts (wetlands, floodplains, Waters of the US, stream crossing/relocations and parklands), residential displacements, cost, right-of-way impacts and public comments.

1. Alternate 2-I with Access Options A, B and C

This alternate (with all three access options) was dropped from consideration following the January 19, 2000 Interagency Review presentation for the following reasons:

- This alternate is redundant, geometrically and operationally to Alternate 2, which is being carried forward with all access options.
- Based on preliminary studies it was determined that maintenance of traffic/ constructability issues associated with a lateral shift of up to 45 feet in this 8-lane segment of I-270 (four construction stages, extensive nighttime construction, lane shifts and lane/shoulder width reductions that would reduce capacity on this heavily traveled portion of I-270) would likely render this alternate not prudent.

However, it is noted that this issue was revisited at an April 7, 2000 Agency Field Review. Consensus was reached that Alternate 2-I could be dropped as a formal alternate, provided that the detailed studies stage of this project planning study include the development of Alternate 2 avoidance/minimization options, including a mainline shift(s) of similar nature to Alternate 2-I, that are developed to a level of detail comparable to the other alternates, and adequate documentation of the avoidance/minimization measures is completed.

The primary issue driving the need to consider shifting the mainline of I-270 is the tributary to Great Seneca Creek running parallel to I-270 for much of the study area, but closing to within 50 to 75 feet of an existing retaining wall at the edge of the existing shoulder for a length of approximately 650 feet, just north of the proposed Watkins Mill Road Extension overpass. Any widening of I-270 in this area would require engineering mitigation measures such as retaining wall reconstruction and/or stream relocation. Although this segment of stream channel is very straight and was probably relocated at some time during the construction or widening of I-270, it appears to be a mature, stable channel. The undesirability of stream relocation is reinforced by the presence of a 48-inch water main and 15-inch sewer main which zig-zag under the stream channel. Discussion of avoidance/minimization measures is contained in Section V.E.5.a.

2. Alternate 3 with Option A

Alternate 3 with Access Option A was dropped from consideration following the January 19, 2000 Interagency Review presentation based on traffic operational issues. Introducing an HOV intersection on the Watkins Mill Road overpass of I-270 would result in an undesirable spacing of four major signalized intersections within a length of approximately 800 feet. Alternate 3 was carried forward for further consideration with access Options B and C.

3. Alternate 3-I with Access Options A, B and C

This alternate (with all Access Options) was dropped from consideration following the January 19, 2000 Interagency Review presentation based on traffic operational issues. This alternate is redundant, geometrically and operationally, with Alternate 3, which is being retained, with the exception of the movement from southbound I-270 to Watkins Mill Road Extended, which is omitted under Alternate 3-I, thus access from southbound I-270 to Watkins Mill Road Extended is not provided. Access to the economic development and the MARC station on the west side of I-270 is an important need of this study. Preliminary traffic projections indicate that the ramp from southbound I-270 to Watkins Mill Road would carry 1,775 vehicles per hour (vph) during the AM peak period in 2020 under Alternate 3. Eliminating it, as does Alternate 3-I, would require these motorists to utilize the MD 124 interchange, where the ramp from

southbound I-270 is already projected to carry 2,075 vph. This could add significantly to the congestion along MD 124, MD 355 and MD 117, which are projected to have failing level of service conditions in 2020. For example, a motorist on southbound I-270 desiring to go to the planned development area along Watkins Mill Road on the east side of I-270 would need to travel an additional 2.6 miles through severely congested conditions at the I-270/MD 124 interchange, and on MD 124 and MD 117, including five signalized intersections.

4. Alternate 5 with Access Options A, B and C

This alternate (with all Access Option) was dropped from consideration following the January 19, 2000 Interagency Review presentation for the following reasons:

- This alternate is redundant to Alternate 2 which is being carried forward with all options and, to some extent, Alternate 3.
- While this alternate has 0.6 acres of wetland impacts and approximately 200 LF of Waters of the US impacts less than Alternate 3, the right-of-way and cost impacts double.
- While this alternate preserves approximately 1.0 acre of wetland over Alternates 2 and 3, it isolates the wetlands and causes extensive right-of-way impacts.

However, it is noted that this issue was revisited at an April 7, 2000 Agency Field Review. Consensus was reached that Alternate 5 could be dropped as a formal alternate, provided that the detailed studies stage of this project planning study include the development of Alternate 2 avoidance/minimization options, including a western C-D roadway shift(s) of similar nature to Alternate 5, that are developed to a level of detail comparable to the other alternates, and adequate documentation of the avoidance/minimization measures is completed. Discussion of avoidance/minimization measures is contained in Section V.E.5.a.

E. Alternates Retained for Detailed Study

As a result of preliminary planning analysis, agency coordination and public comments generated from the November 23, 1999 Alternates Public Workshop, the following alternates will be retained for detailed study. These alternates have been retained for detailed study because they best address the project purpose and need, while providing an environmentally sensitive transportation improvement.

There are several proposed stream crossings associated with each of the build alternates. Interagency coordination undertaken during Stages I and II of this project planning study has included development, discussion and field review of design issues at these stream crossings. Of

particular concern are Great Seneca Creek and the Great Seneca Creek tributary that runs parallel to the I-270 southbound roadway through the proposed Watkins Mill Road interchange and overpass areas. It is noted that each of the retained build alternates assumes the bridging of Watkins Mill Road crossing over Great Seneca Creek tributary, in order to minimize or avoid stream and associated wetland impacts from the Watkins Mill Road crossing itself. For reference, based purely on hydraulics, the waterway opening would be approximately a double-cell 10-foot by 10-foot box culvert or equivalent.

As stated in the previous section, the extension of Watkins Mill Road between MD 117 and MD 355 is an integral part of all of the build alternates. Not including auxiliary lanes, Watkins Mill Road is proposed to be a four lane divided roadway under Alternates 4 and 6 for the entire length between MD 117 and MD 355. Under Alternates 2 and 3, Watkins Mill Road is proposed to be four lanes from MD 117 to approximately 1,500 feet west of I-270 and six lanes from that point to MD 355.

The lane configurations for Watkins Mill Road Extended have been determined based on the level of service analyses performed for projected 2020 traffic volumes and the goal of achieving level of service E or better at each of the planned intersections from MD 117 to MD 355. The operations on Watkins Mill Road Extended are governed by the relatively close spacing of the intersections associated with Watkins Mill Road at MD 117, the western I-270 interchange ramp terminals, the eastern I-270 interchange ramp terminals, the future Casey/IBM developments east of I-270 and MD 355. From MD 117 to the western I-270 ramp terminals, peak hour, two-way 2020 traffic volumes on WMRE are projected to be approximately 3,000 to 3,500 vehicles per hour (vph) for Alternates 4 and 6 and approximately 3700 to 4800 vph for Alternates 2 and 3. Factoring in the turning volumes at the western ramp terminal, critical lane volume intersection analysis indicates that four through lanes are adequate west of I-270 with all alternates.

East of I-270, peak hour, two-way 2020 traffic volumes on Watkins Mill Road Extended are projected to be approximately 3,000 to 4,000 vph with Alternates 4 and 6; however, Alternates 2 and 3 require an additional auxiliary through lane through the intersection areas from the ramp terminal 1,500 west of I-270 to MD 355. Given that there are four intersections planned in this 3,500 foot long segment, with a maximum spacing of approximately 900 feet between intersections, it is necessary to carry this auxiliary through lane (in addition to the four basic through lanes) through the entire area with Alternates 2 and 3 to accommodate merging and diverging traffic, as well as provide adequate level of service through the intersections.

1. No Build Alternate

The description of this alternate remains unchanged from that presented in Section IV.C.1 above.

2. Alternate 2: Partial Cloverleaf (See Figures IV-4 through IV-8 and IV-41)

The description of this alternate remains unchanged from that presented in Section IV.C.2.a. above.

The U.S. Army Corps of Engineers maintains serious permitting concerns for Alternate 2 in its current configuration since other practicable and feasible alternates have been developed that would be less damaging to aquatic resources. Unlike Alternates 3 and 4, the location at which the southbound I-270 ramp to Watkins Mill Road crosses the adjacent stream tributary is basically fixed by gore spacing requirements related to the Middlebrook Road entrance onto southbound I-270 and the MD 124 exit from southbound I-270. A bridge can be provided with this ramp alignment to minimize stream impacts since an alignment shift is not possible.

3. Alternate 3: Full Diamond (See Figures IV-12 through IV-17 and IV-41)

The description of this alternate remains unchanged from that presented in Section IV.C.2.c. above. Several alignment options are under consideration for the northwest quadrant exit ramp, as shown on Figure IV-41.

4. Alternate 4: Partial Interchange (See Figures IV-18 through IV-20 and IV-41)

The description of this alternate remains unchanged from that presented in Section IV.C.2.e. above. Several alignment options are under consideration for the northwest quadrant exit ramp, as shown on Figure IV-41.

5. Alternate 6: Watkins Mill Road Extended without Interchange (Baseline - See Figures IV-21 through IV-22)

The description of this alternate remains unchanged from that presented in Section IV.C.3. above.

6. Alternate 2 with Access Option A: Partial Cloverleaf with Median HOV Ramps (See Figures IV-23 through IV-30)

This alternate would consist of the combination of Alternate 2 with Access Option A, as described in Section IV.C.4.a. This combination provides a full movement general use interchange with separate interchange ramps for HOV.

The U.S. Army Corps of Engineers maintains serious permitting concerns for Alternate 2 in its current configuration since other practicable and feasible alternates have been developed that would be less damaging to aquatic resources.

7. Alternate 4 with Access Option A: Partial Interchange with Median HOV Ramps (See Figures IV-31 through IV-34)

This alternate would consist of the combination of Access Option A, as described in Section IV.C.4.a., with Alternate 4. This combination provides a partial general use interchange with a full movement HOV interchange.

8. Alternate 6 with Access Option A: Watkins Mill Road Extended with Median HOV Ramps (See Figures IV-35 through IV-38)

This alternate would consist of the combination of Access Option A, as described in Section IV.C.4a., with Alternate 6. This combination provides a full movement HOV interchange at Watkins Mill Road Extended, with no general use interchange.

9. Access Option B (See Figure IV-39)

The description of this alternate remains unchanged from that presented in Section IV.C.4.b. above. Access Option B has been retained in combination with any of the build alternates retained for detailed studies – Alternates 2, 3 4 and 6. Access Option B could also be constructed with Access Options A and/or C.

10. Access Option C (See Figure IV-40)

The description of this alternate remains unchanged from that presented in Section IV.C.4.c. above. Access Option C has been retained in combination with any of the build alternates retained for detailed studies - Alternates 2, 3, 4 and 6. Access Option B could also be constructed with Access Options A and/or B.

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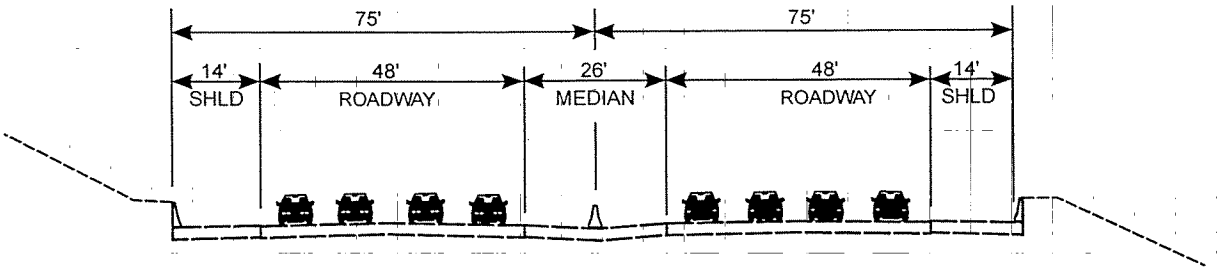
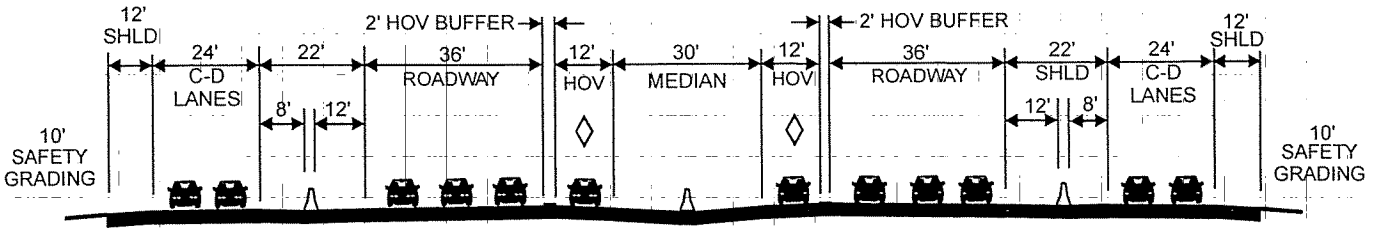
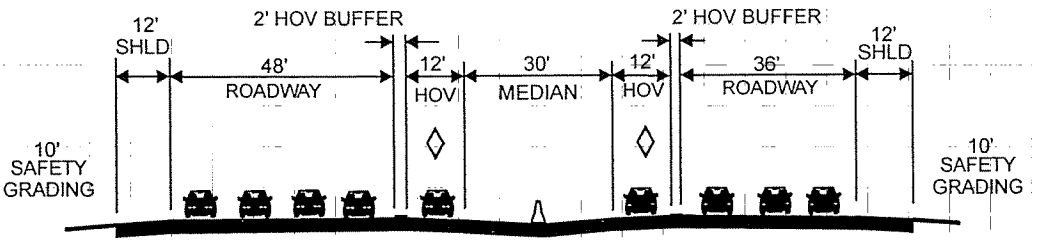


I-270 NORMAL SECTION - EXISTING



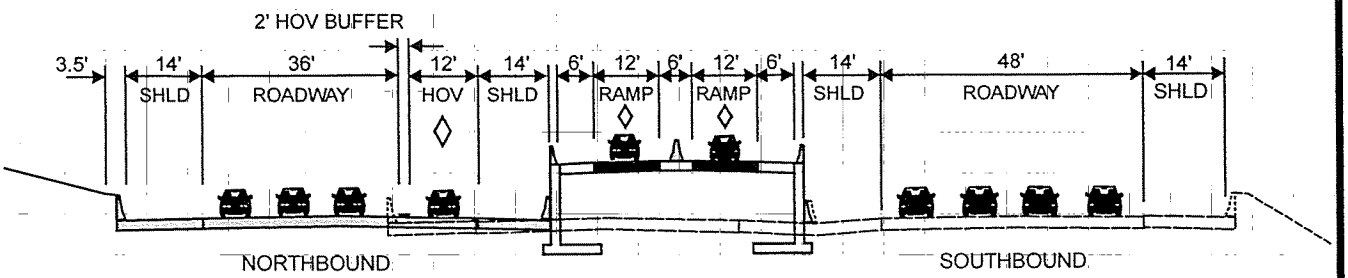
I-270 / US 15 MULTI-MODAL CORRIDOR STUDY OPTIONS 1 & 2

Compatible with I-270 at Watkins Mill Road Extended Alternates 2, 4 and 6



I-270 / US 15 MULTI-MODAL CORRIDOR STUDY OPTION 3

Compatible with I-270 at Watkins Mill Road Extended Alternates 3, 4 and 6



ACCESS OPTION A - MEDIAN HOV RAMPS

Compatible with I-270 at Watkins Mill Road Extended Alternates 2, 4 and 6

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

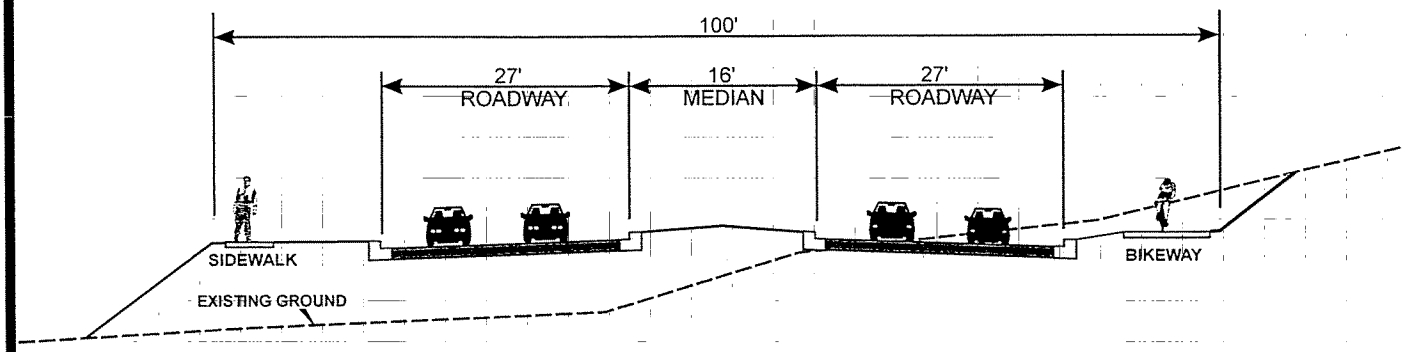
I-270 AT WATKINS MILL ROAD EXTENDED

TYPICAL SECTIONS
I-270 MAINLINE

BETWEEN MD 117 AND MIDDLEBROOK ROAD

DATE		FIGURE
NOV., 2000	NO SCALE	IV- 1

EnvDoc\IV2_TYPSWatkins.CDR

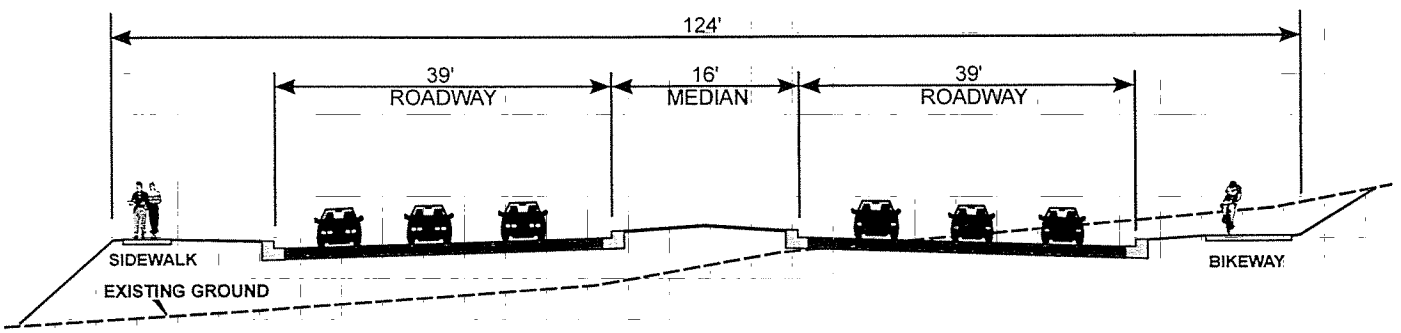


NORMAL SECTION - 4 LANE DIVIDED ARTERIAL HIGHWAY

Watkins Mill Road Extended

Applies to Alternates 2 and 3 from MD 117 to 1,000 feet± west of I-270 and to Alternates 4 and 6 from MD 117 to MD 355

NOTE:
Median would be widened to 28 feet to provide double left turns at I-270 interchange ramps, MD 117 and MD 355



NORMAL SECTION - 6 LANE DIVIDED ARTERIAL HIGHWAY

Watkins Mill Road Extended

Applies to Alternates 2 and 3 from 1,000 feet± west of I-270 to MD 355

NOTE:
Median would be widened to 28 feet to provide double left turns at I-270 interchange ramps and MD 117, and to 40 feet to provide triple left turns at MD 355

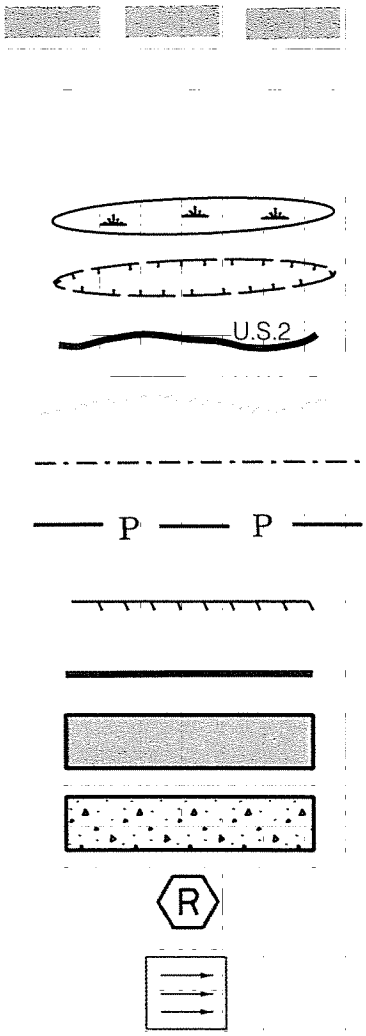
NOTE:
THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS, AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

I-270 AT WATKINS MILL ROAD EXTENDED

TYPICAL SECTIONS
WATKINS MILL ROAD EXTENDED

DATE		FIGURE
NOV., 2000	NO SCALE	IV- 2

LEGEND



MASTER PLANNED CORRIDOR CITIES TRANSITWAY ALIGNMENT (SUBJECT TO REFINEMENT UNDER I-270 / US 15 MULTI-MODAL CORRIDOR STUDY)

JURISDICTIONAL WETLAND DELINEATIONS

100 YEAR FLOODPLAINS

WATERS OF THE U.S.

TREE LINE

PROPERTY LINES

PARK BOUNDARY

CITY OF GAITHERSBURG LIMITS

EXISTING RETAINING WALL

PROPOSED ROADWAY

PROPOSED STRUCTURE

R

RESIDENTIAL RELOCATION

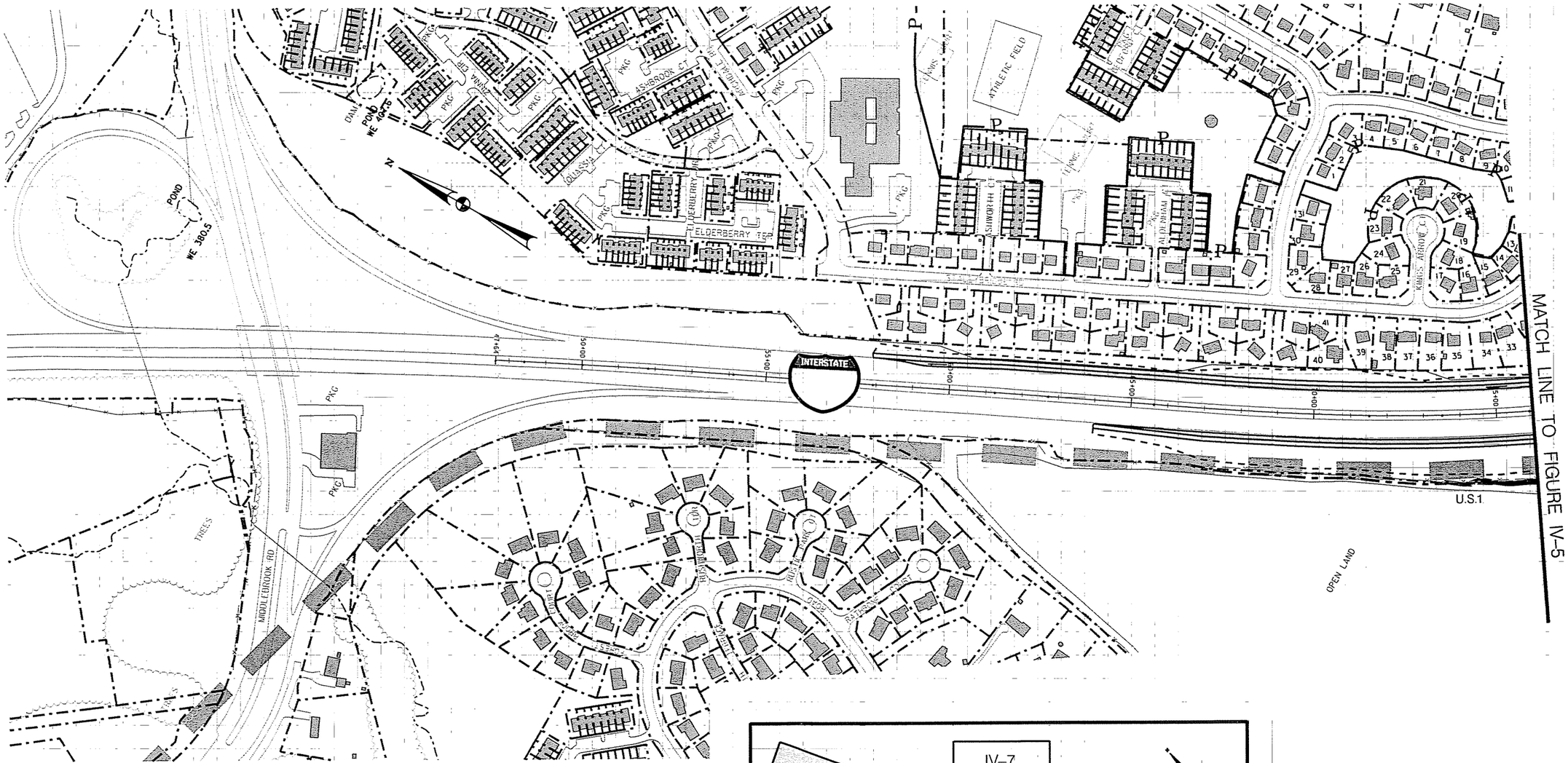
LANE CONFIGURATION

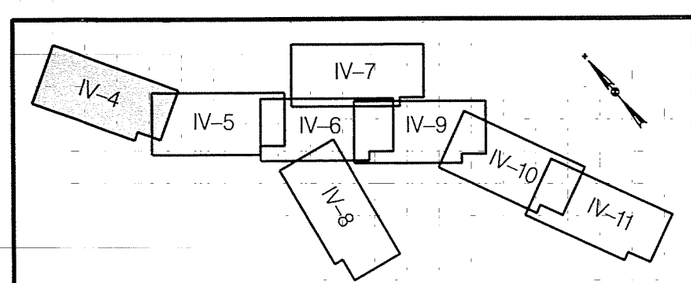
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

LEGEND

DATE	SCALE	FIGURE
NOV., 2000	1" = 200'	IV-3





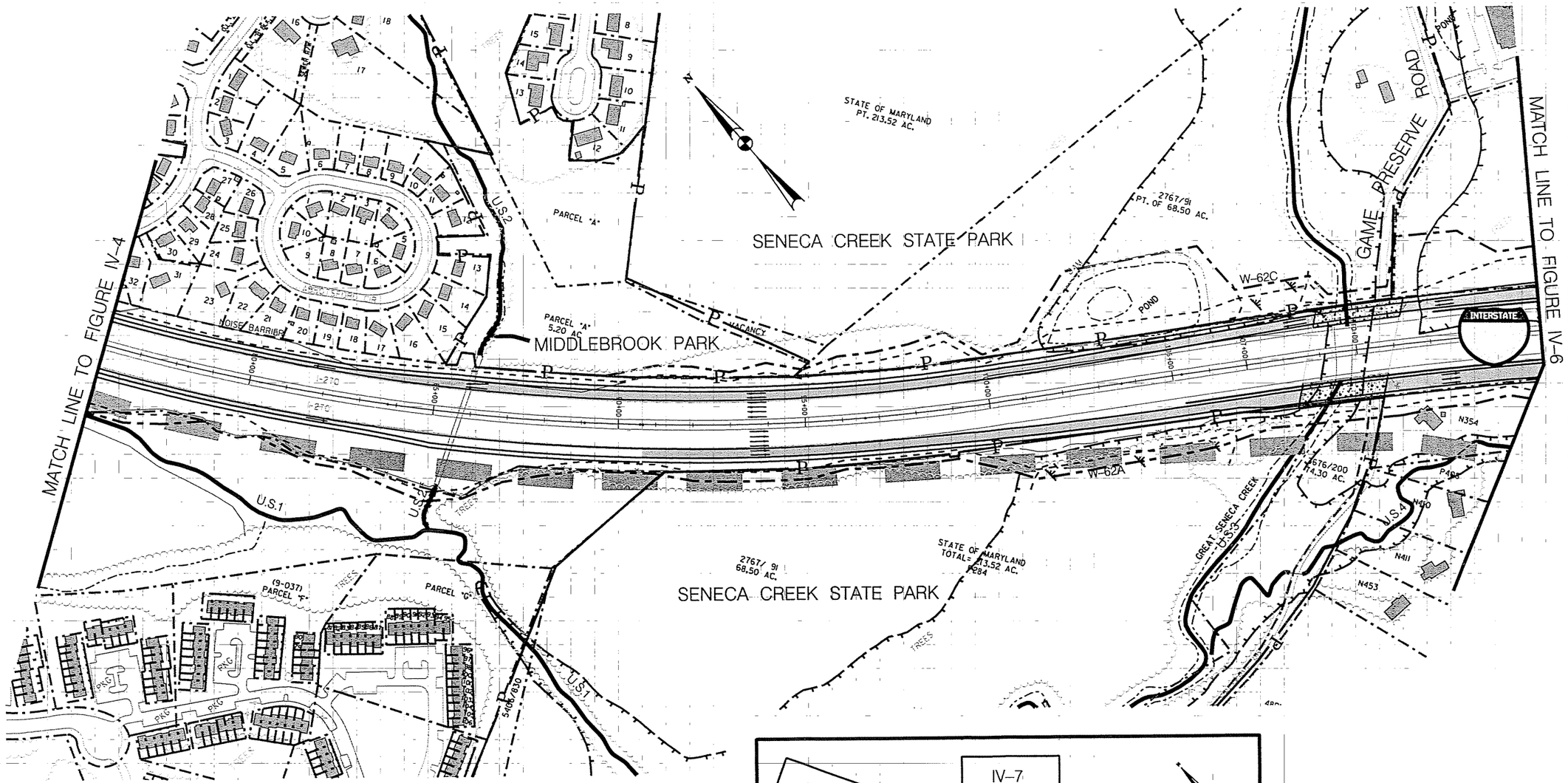
PLAN SHEET KEYMAP

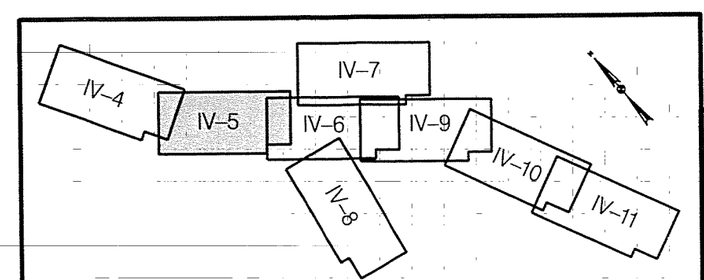
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2
PARTIAL CLOVERLEAF INTERCHANGE
I-270 STA. 58+00 TO STA. 76+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-4



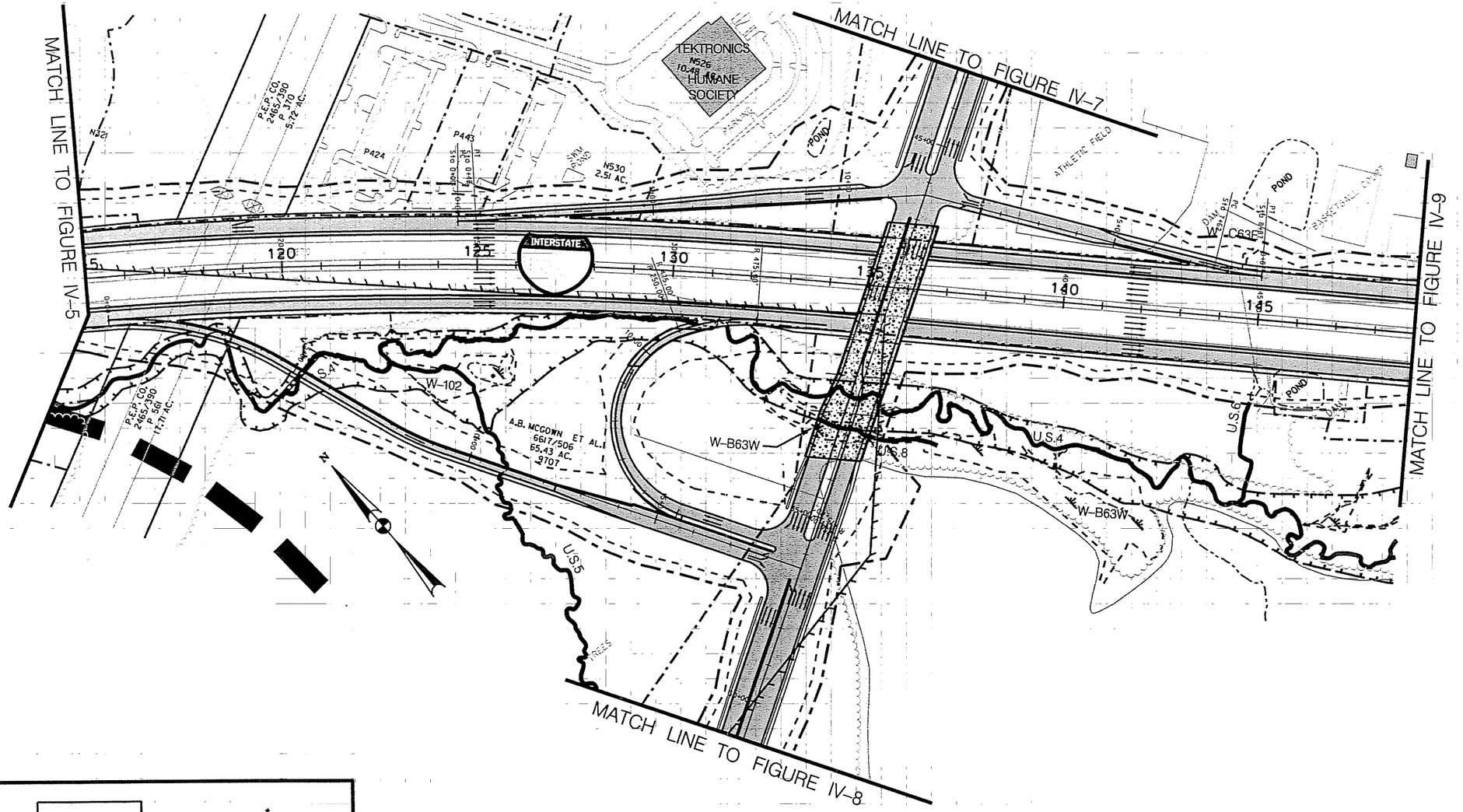


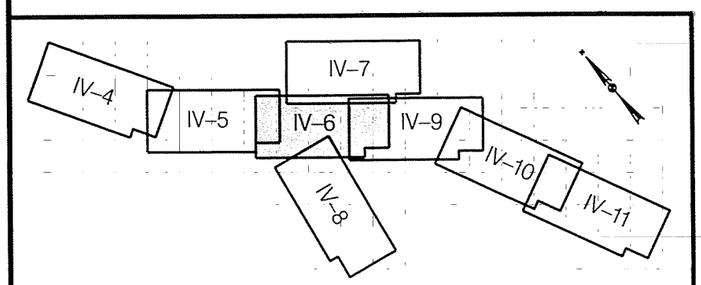
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2
PARTIAL CLOVERLEAF INTERCHANGE
I-270 STA. 76+00 TO STA. 115+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-5





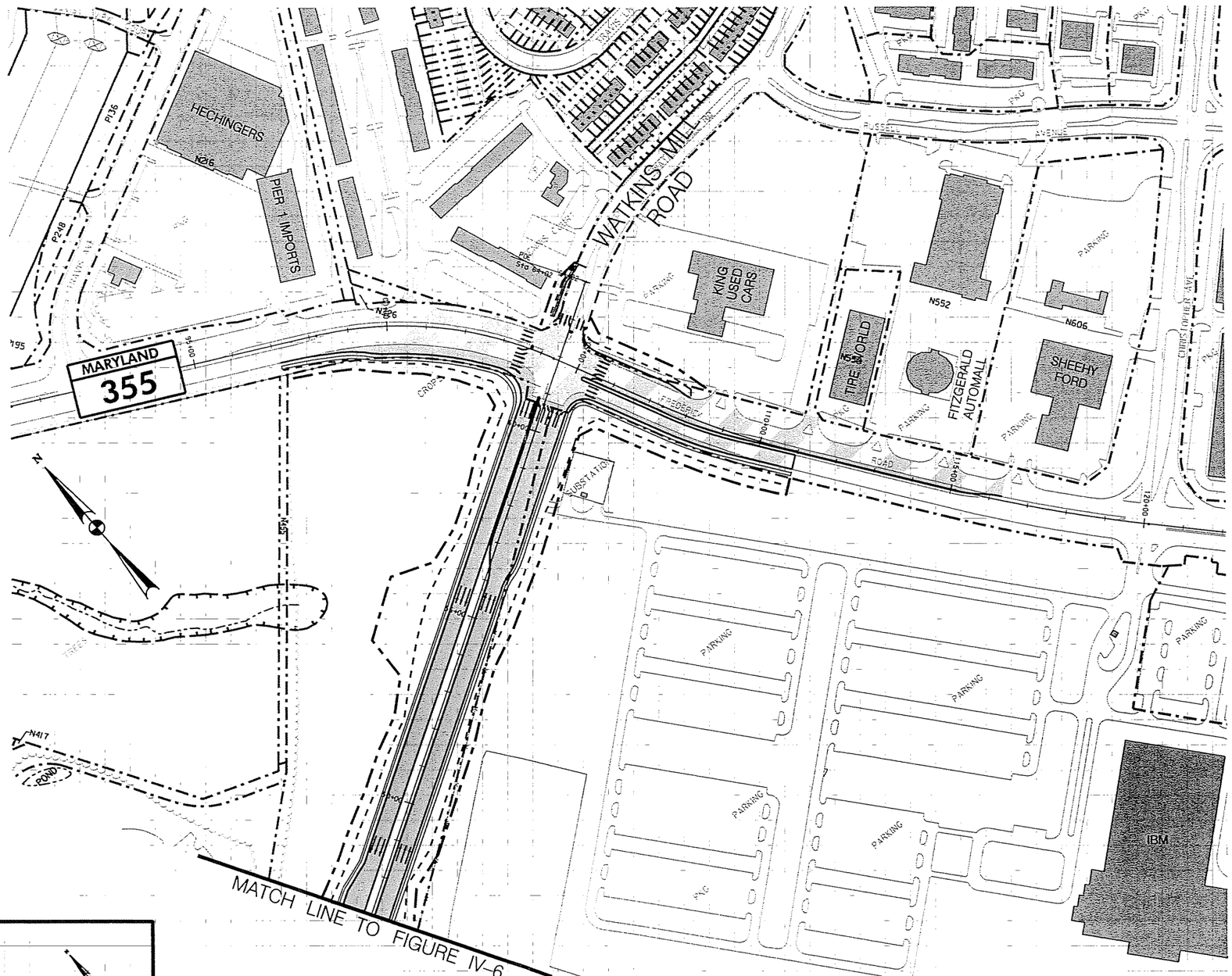
PLAN SHEET KEYMAP

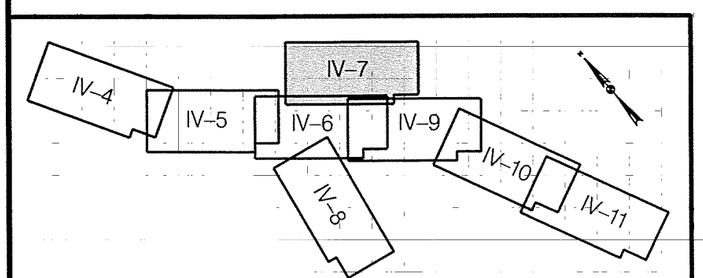
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2
PARTIAL CLOVERLEAF INTERCHANGE
I-270 STA. 115+00 TO STA. 149+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-6





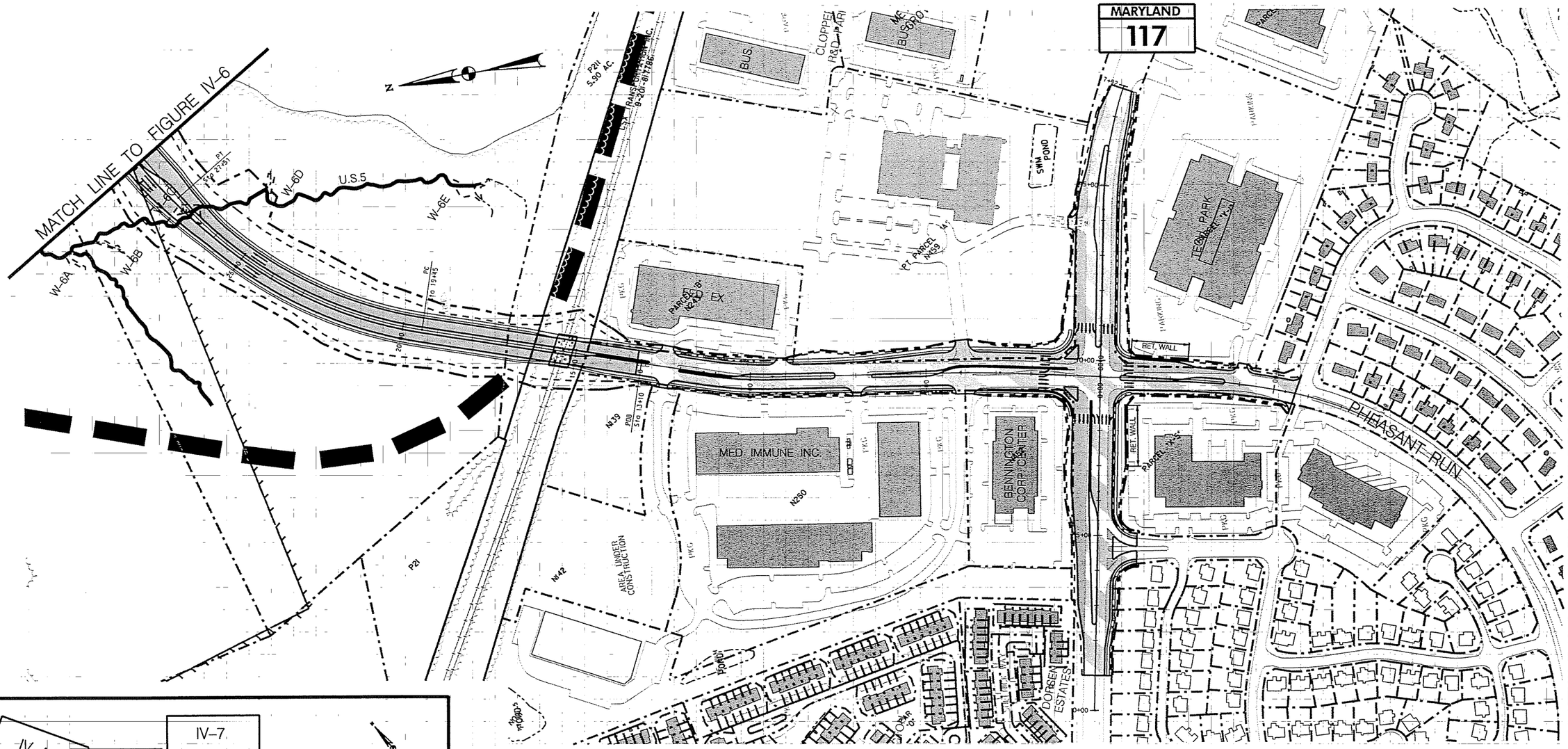
PLAN SHEET KEYMAP

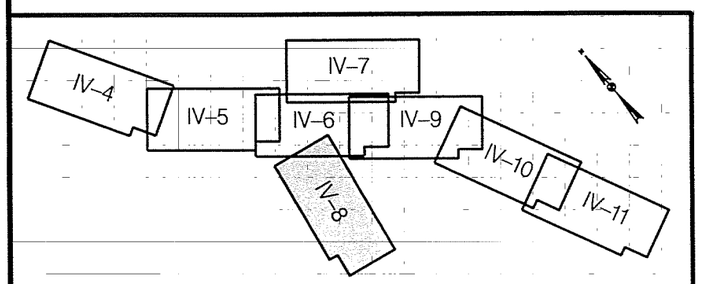
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I–270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2
PARTIAL CLOVERLEAF INTERCHANGE
WATKINS STA. 47+00 TO 64+02

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV–7





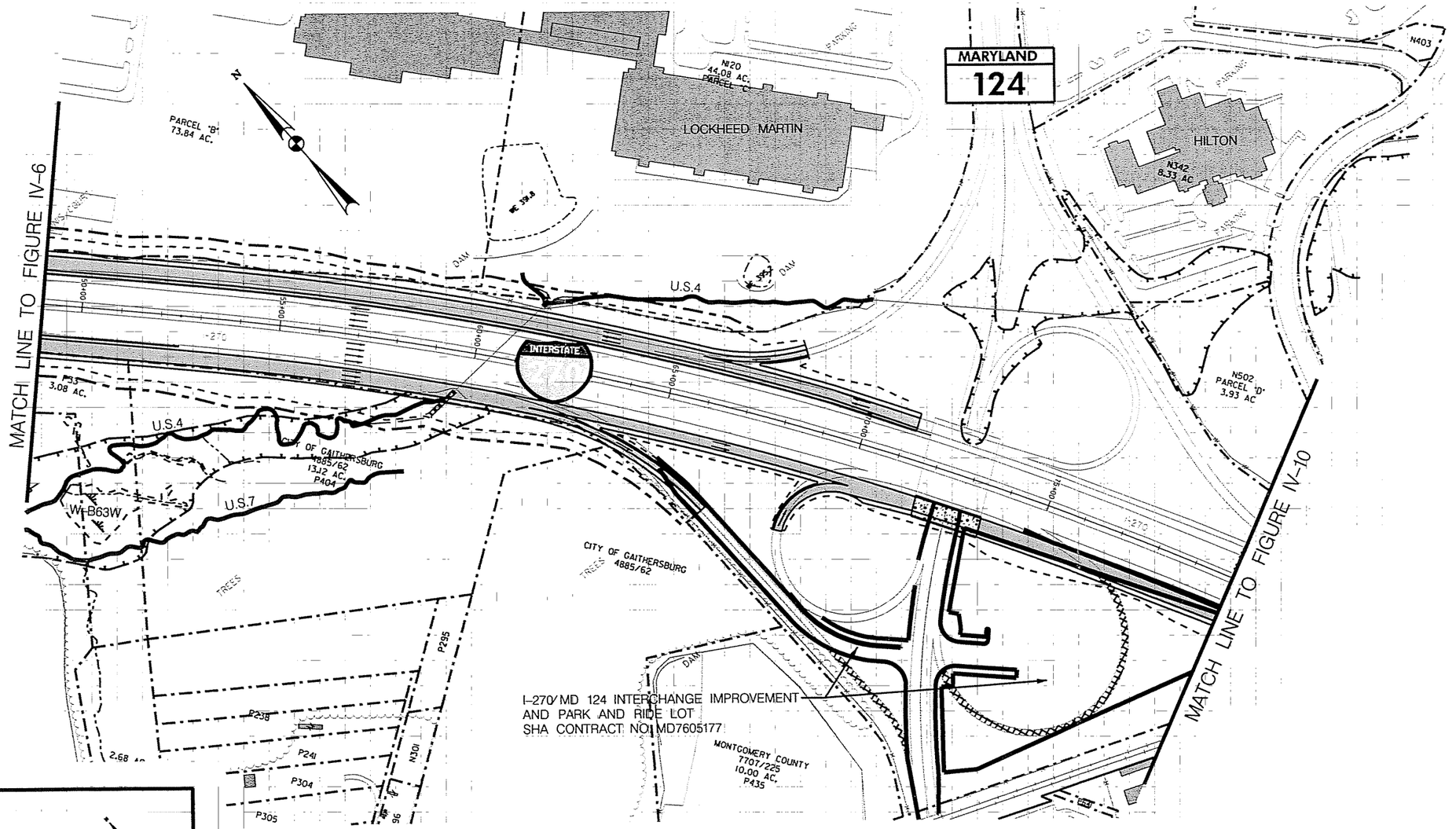
PLAN SHEET KEYMAP

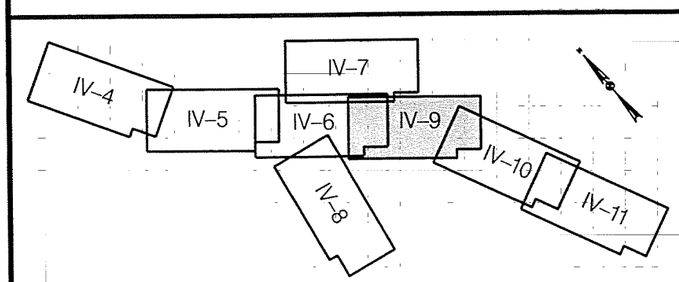
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2
PARTIAL CLOVERLEAF INTERCHANGE
WATKINS STA. 0+00 TO STA. 29+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-8





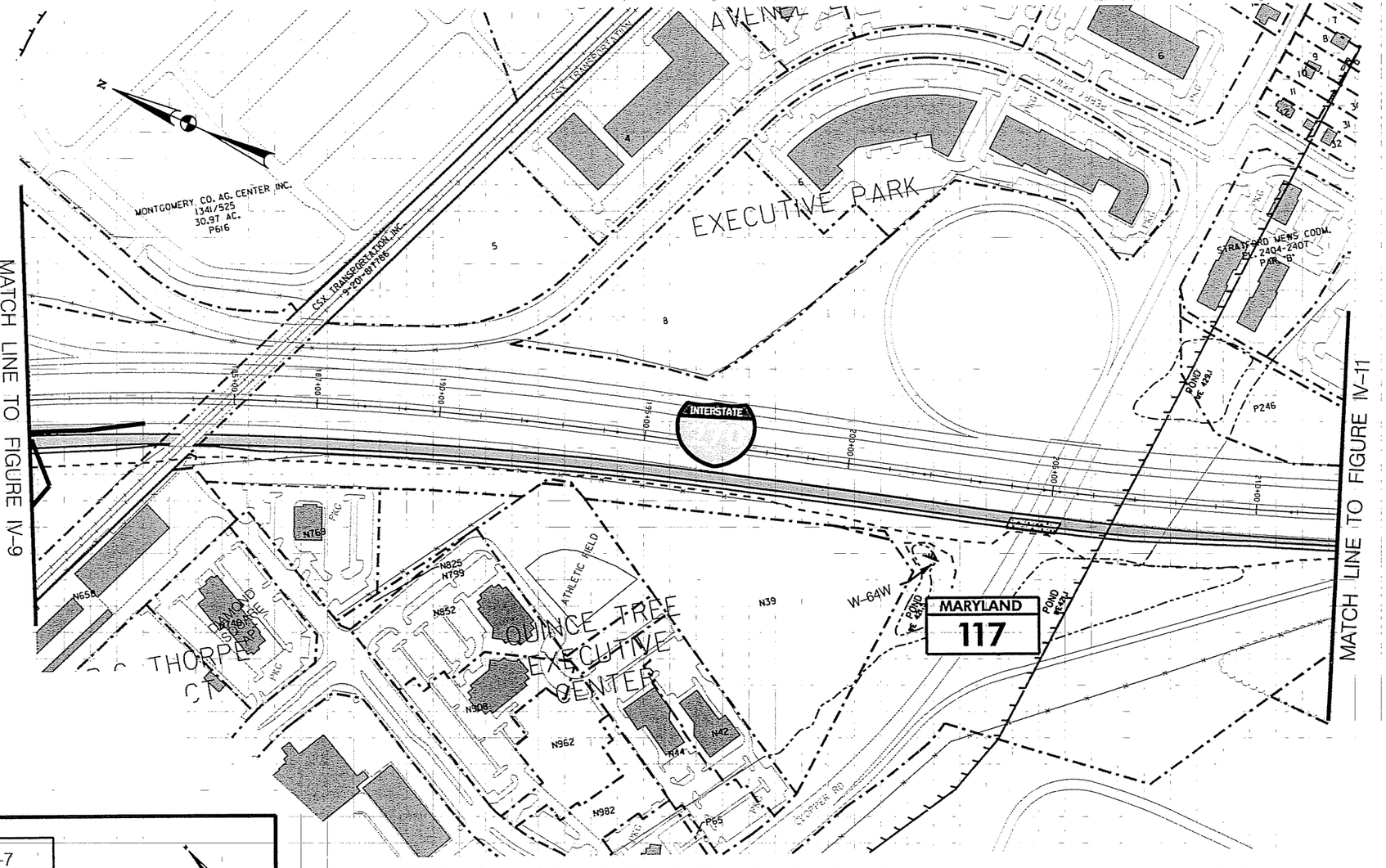
PLAN SHEET KEYMAP

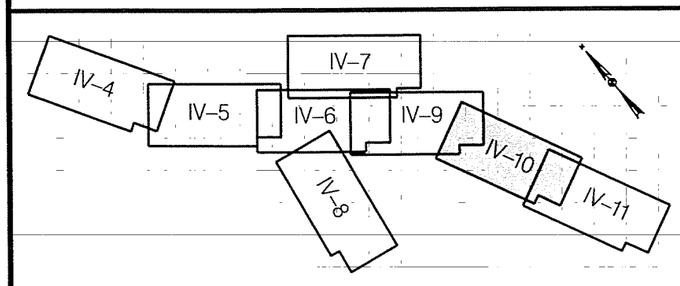
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2
PARTIAL CLOVERLEAF INTERCHANGE
I-270 STA. 149+00 TO STA. 180+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-9





PLAN SHEET KEYMAP

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

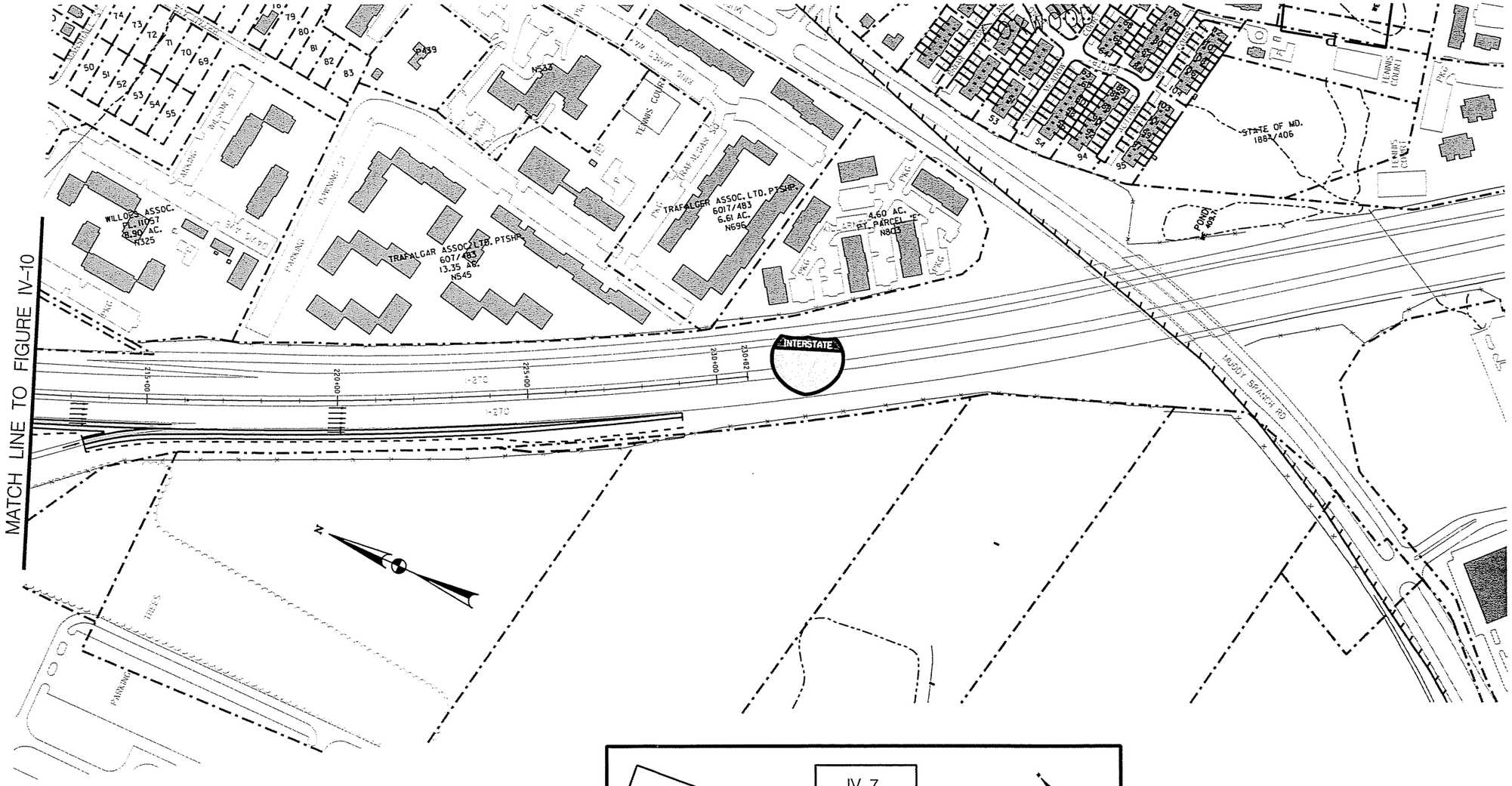
I-270 AT WATKINS MILL ROAD EXTENDED

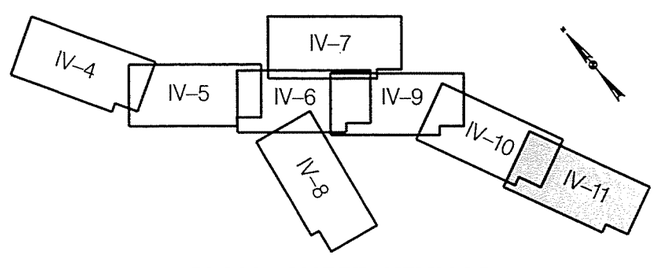
ALTERNATE 2

PARTIAL CLOVERLEAF INTERCHANGE

I-270 STA. 180+00 TO STA. 212+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-10





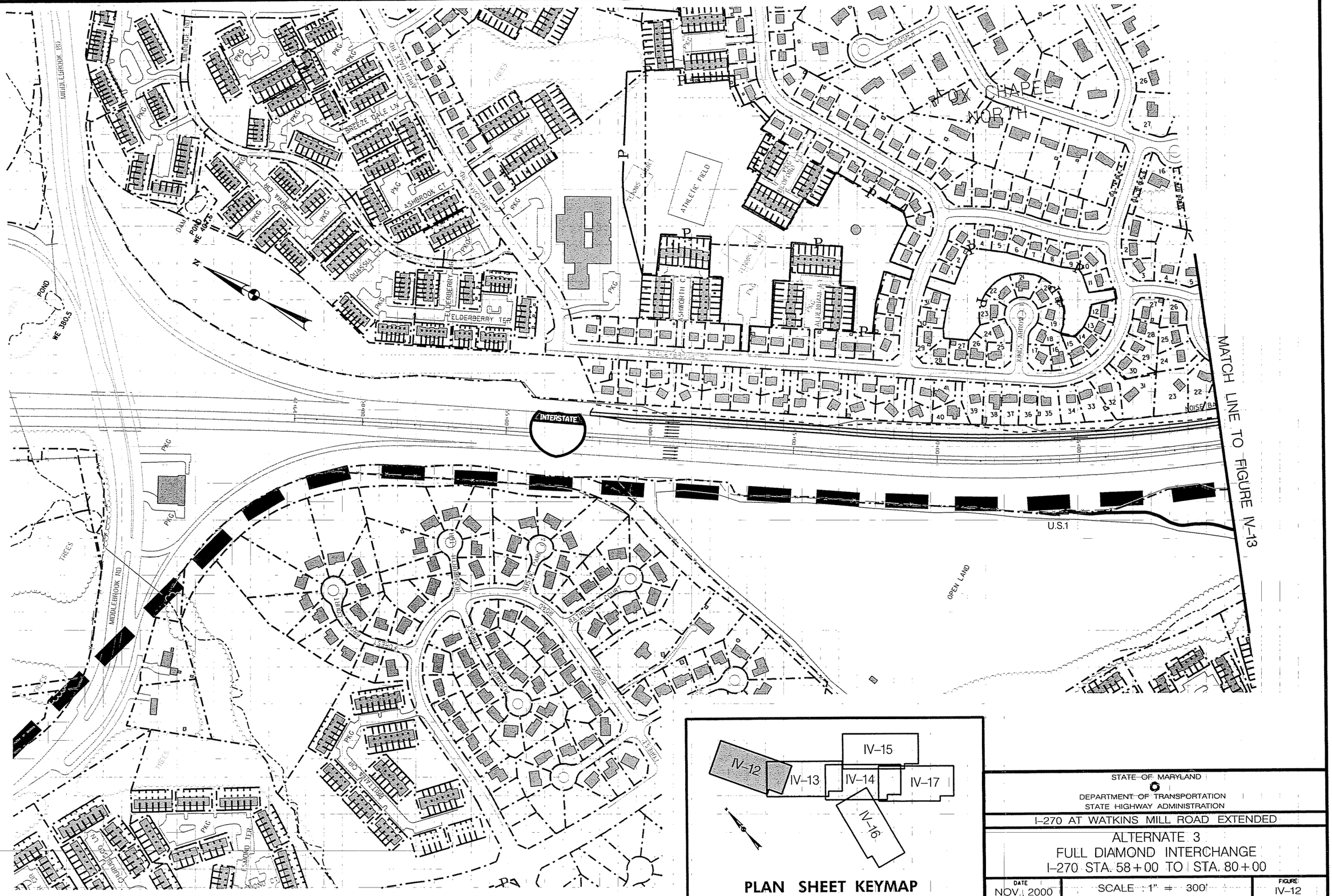
PLAN SHEET KEYMAP

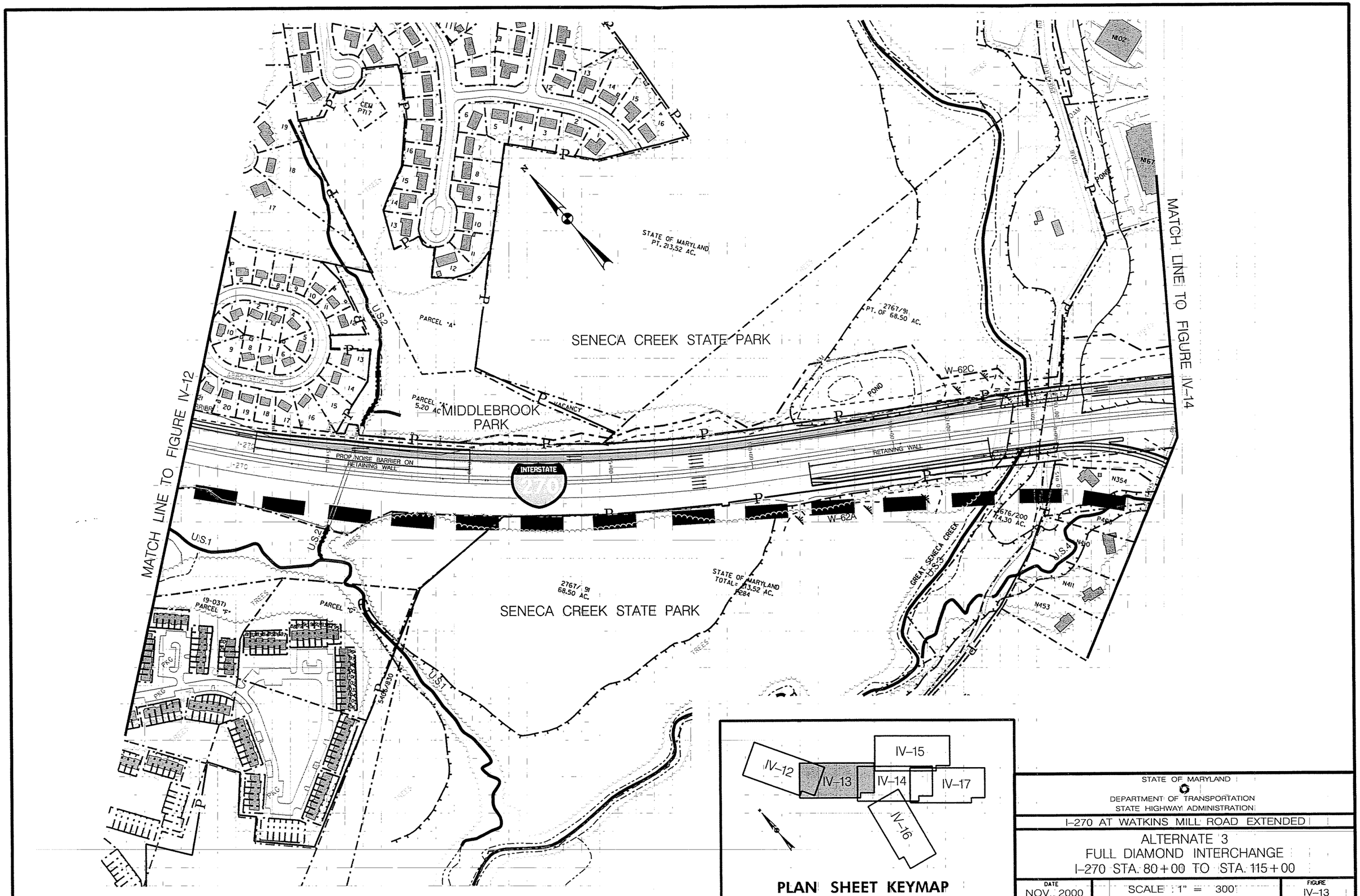
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2
PARTIAL CLOVERLEAF INTERCHANGE
I-270 STA. 212+00 TO STA. 229+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-11


MATCH LINE TO FIGURE IV-13
MIDDLEBROOK RD
MIDDLEBROOK LN
GAITHER RD
SNOWDEN FARM PKWY
SNOWDEN RIVER PKWY
SNOWDEN RIVER BLVD
SNOWDEN SQUARE DR
SNOWDEN SQUARE TER
SNOWDEN SQUARE CIR
RUTHERFORD FOREST
RUTHERFORD RIDGE
RUTHERFORD TER
RUTHERFORD CIR
DIAMOND TER
DIAMOND CIR
DIAMOND WAY
DIAMOND PKWY
DIAMOND CT
DIAMOND PL
DIAMOND LN
BRIGHTVIEW TER
BRIGHTVIEW CIR
BRIGHTVIEW PL
BRIGHTVIEW LN
BRIGHTVIEW CT
BRIGHTVIEW WAY
BRIGHTVIEW PKWY
BRIGHTVIEW BLVD
BRIGHTVIEW SQUARE
BRIGHTVIEW SQUARE TER
BRIGHTVIEW SQUARE CIR
BRIGHTVIEW SQUARE DR
BRIGHTVIEW SQUARE LN
BRIGHTVIEW SQUARE CT
BRIGHTVIEW SQUARE WAY
BRIGHTVIEW SQUARE PKWY
BRIGHTVIEW SQUARE BLVD
BRIGHTVIEW SQUARE PL
BRIGHTVIEW SQUARE RD
BRIGHTVIEW SQUARE ST
BRIGHTVIEW SQUARE AVE

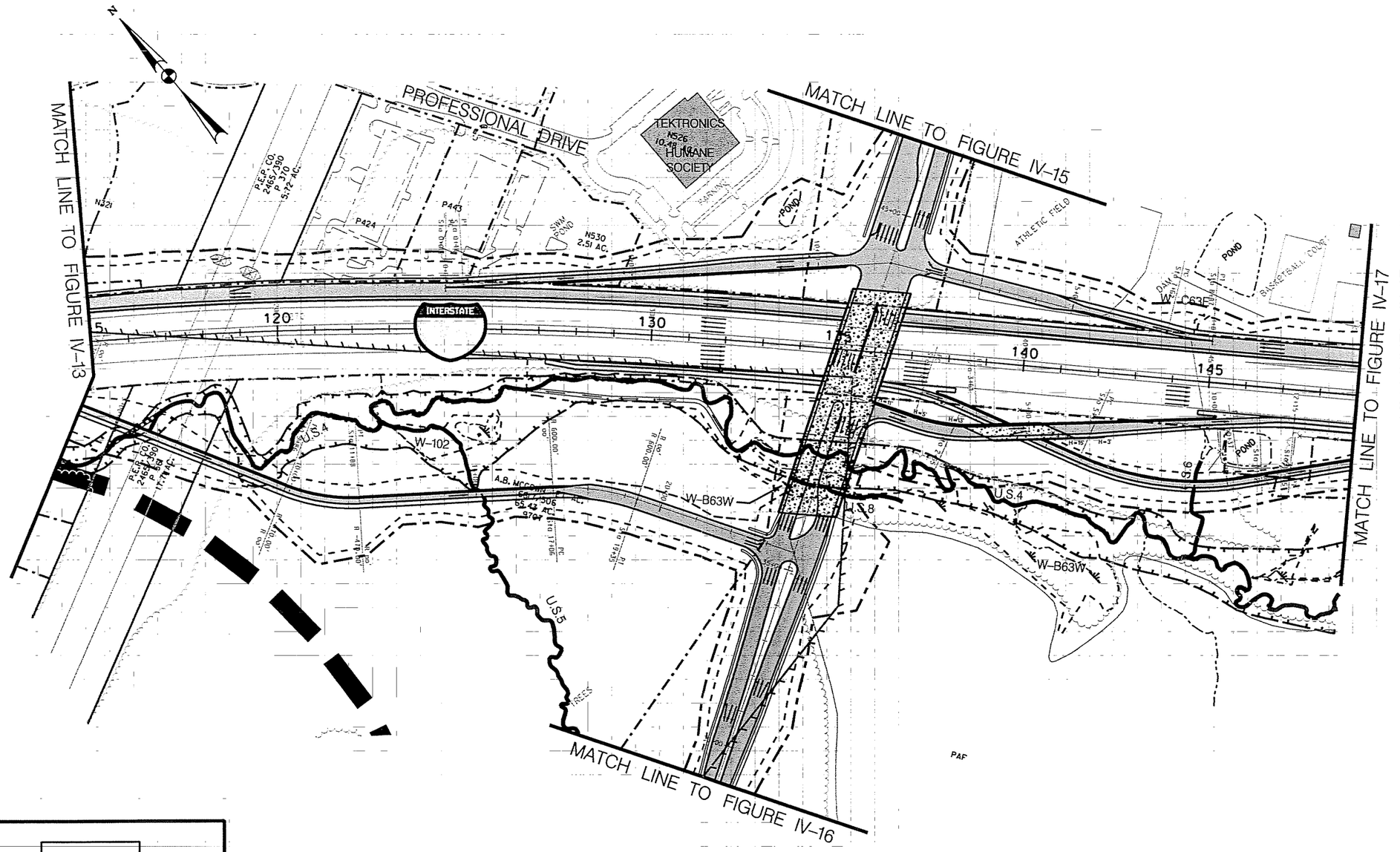


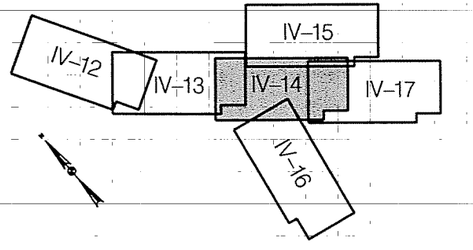
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3
FULL DIAMOND INTERCHANGE
I-270 STA. 80+00 TO STA. 115+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-13





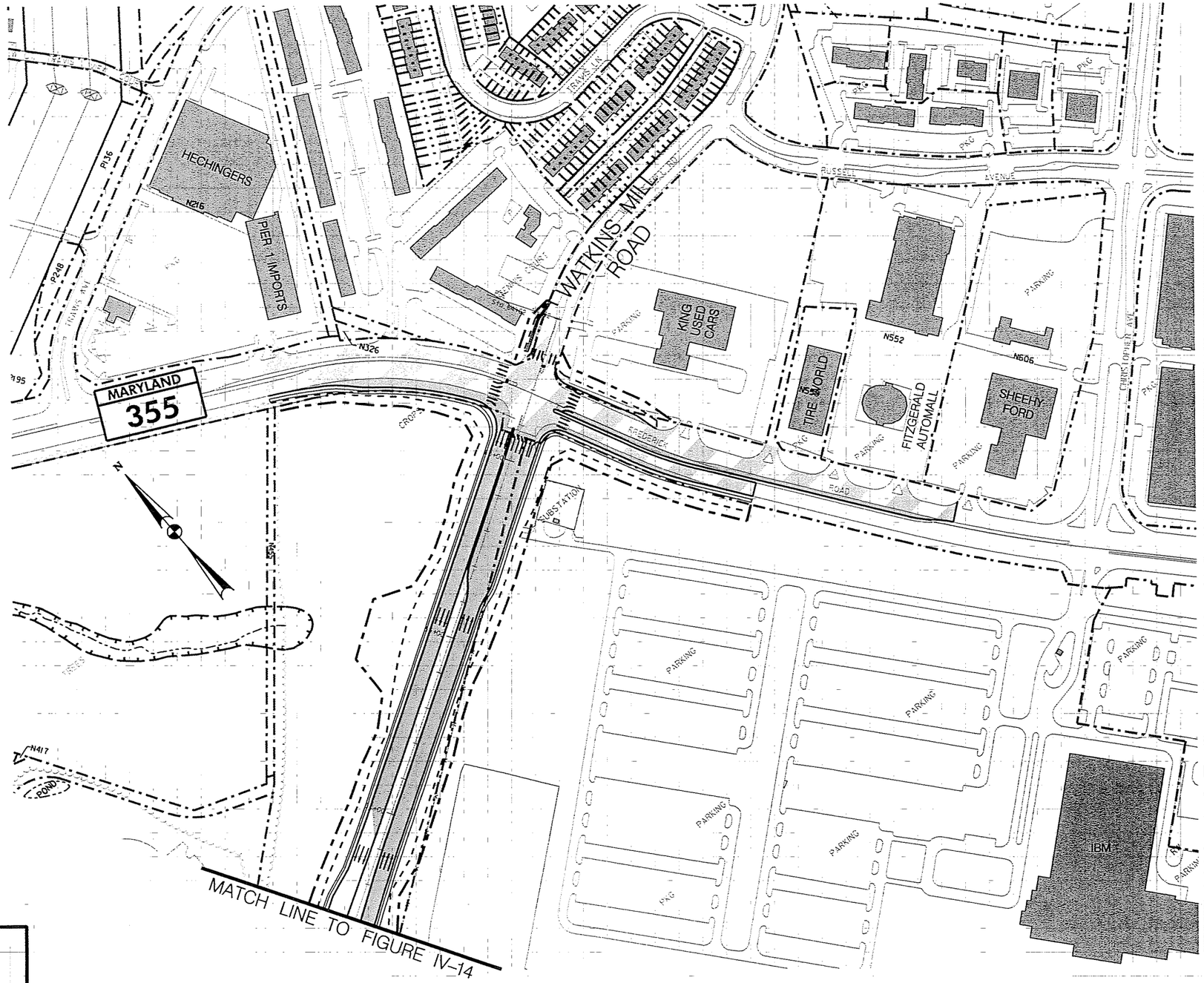
PLAN SHEET KEYMAP

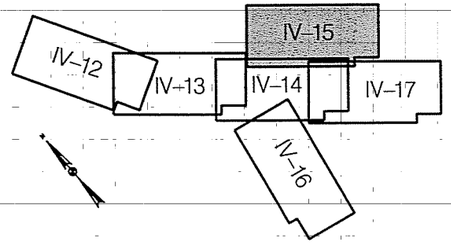
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I–270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3
FULL DIAMOND INTERCHANGE
I–270 STA. 115+00 TO STA. 149+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV–14





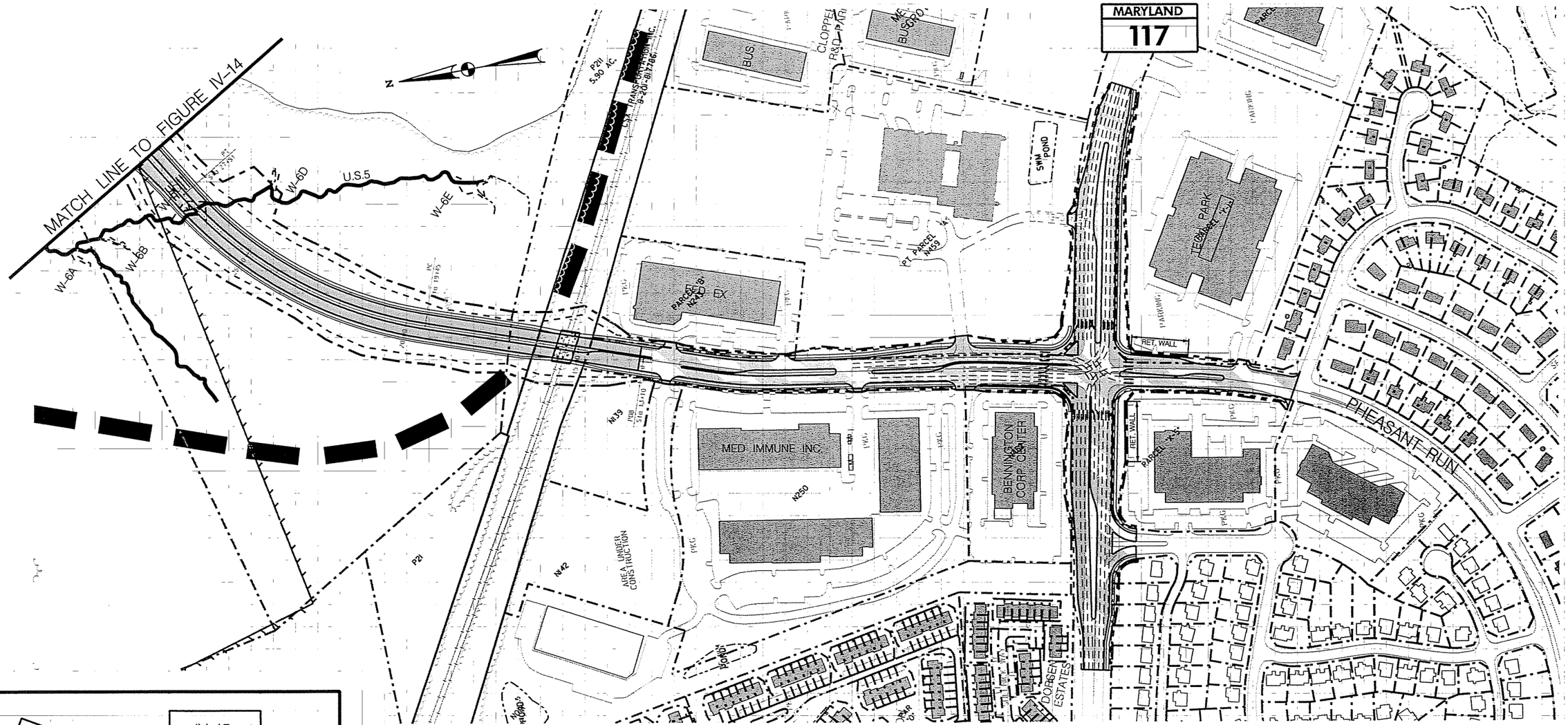
PLAN SHEET KEYMAP

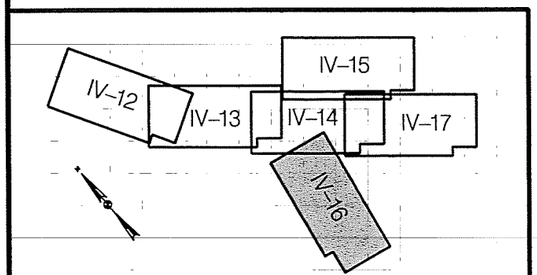
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I–270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3
FULL DIAMOND INTERCHANGE
WATKINS STA. 47+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV–15





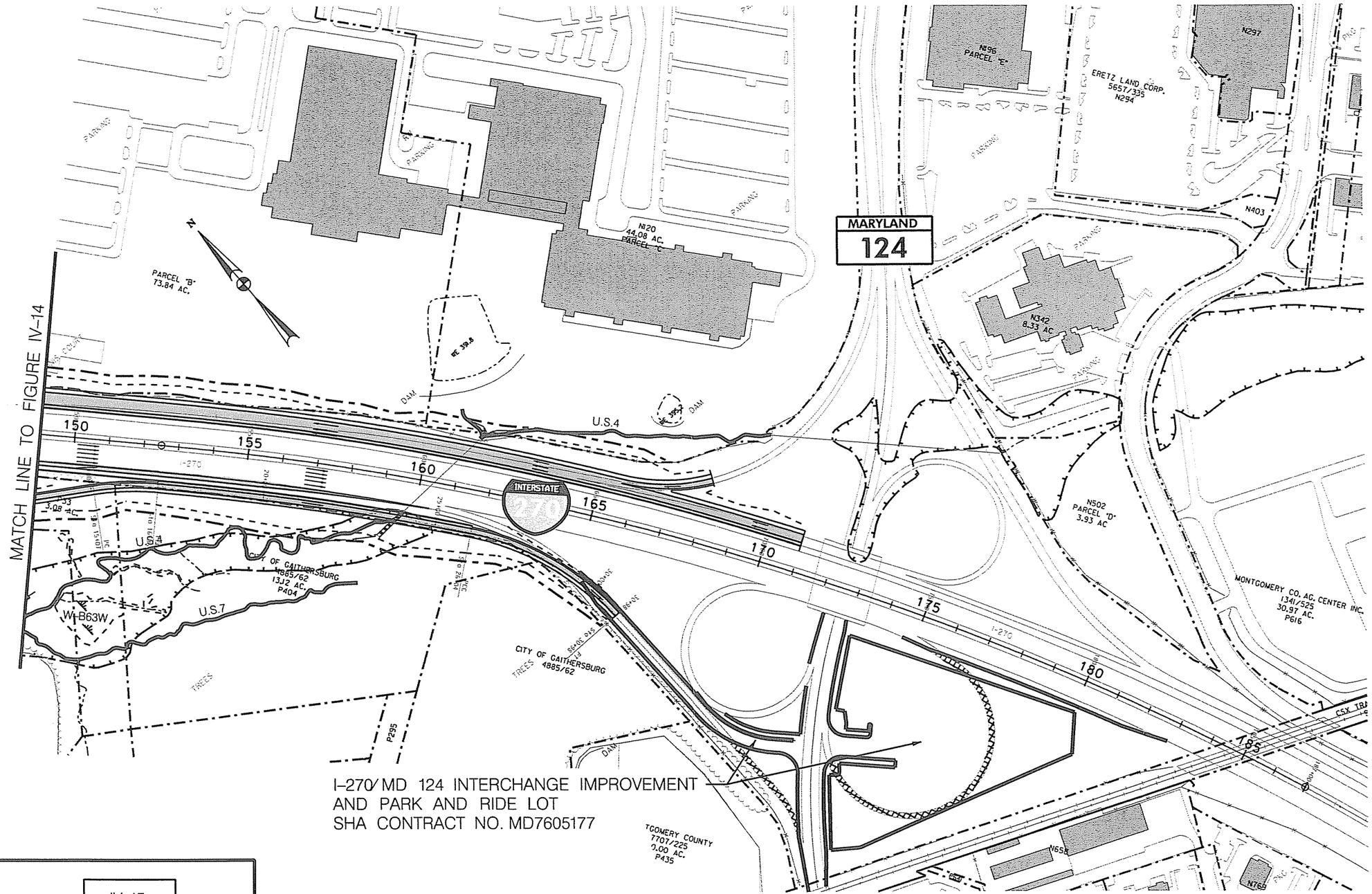
PLAN SHEET KEYMAP

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

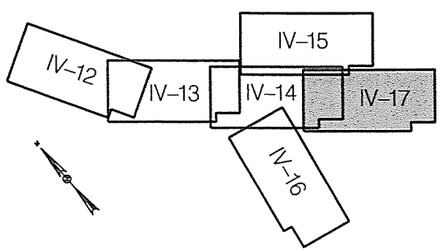
I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3
FULL DIAMOND INTERCHANGE
WATKINS STA. 0+00 TO STA. 29+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-16



I-270/ MD 124 INTERCHANGE IMPROVEMENT
AND PARK AND RIDE LOT
SHA CONTRACT NO. MD7605177



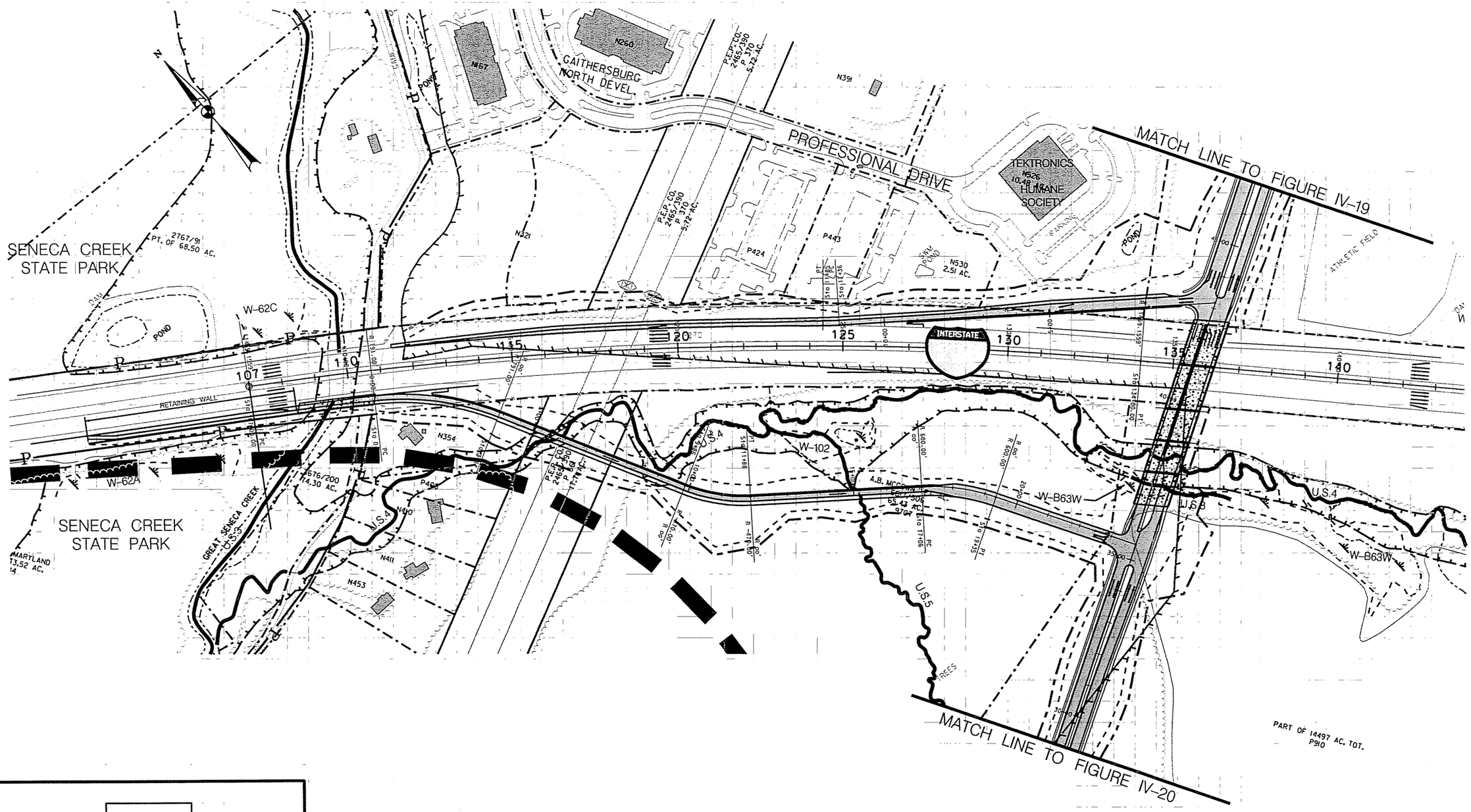
PLAN SHEET KEYMAP

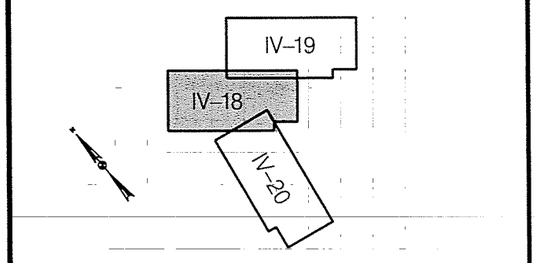
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3
FULL DIAMOND INTERCHANGE
I-270 STA. 149+00 TO STA. 171+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-17





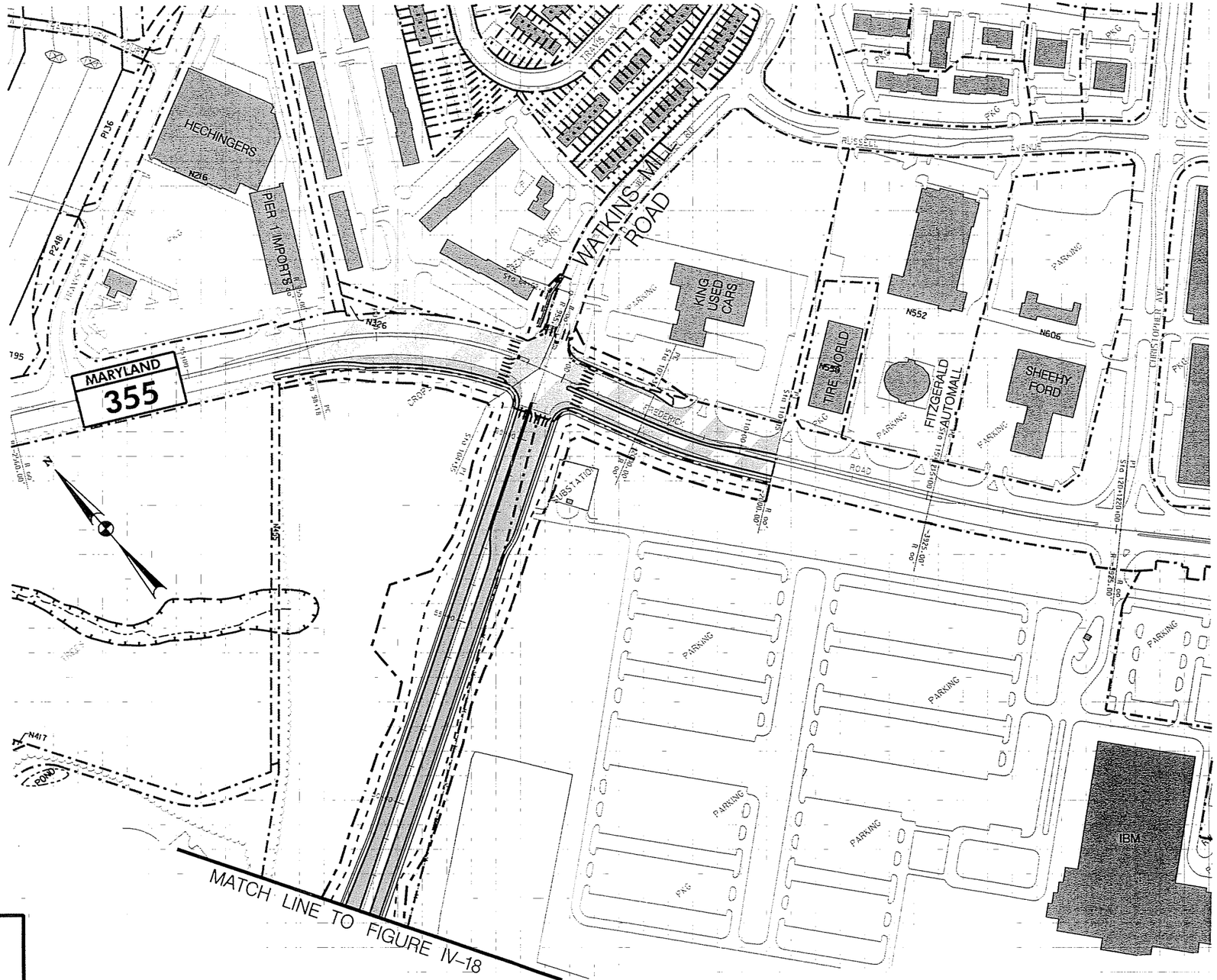
PLAN SHEET KEYMAP

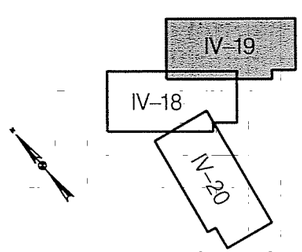
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4
PARTIAL INTERCHANGE
I-270 STA. 107+00 TO STA. 137+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-18





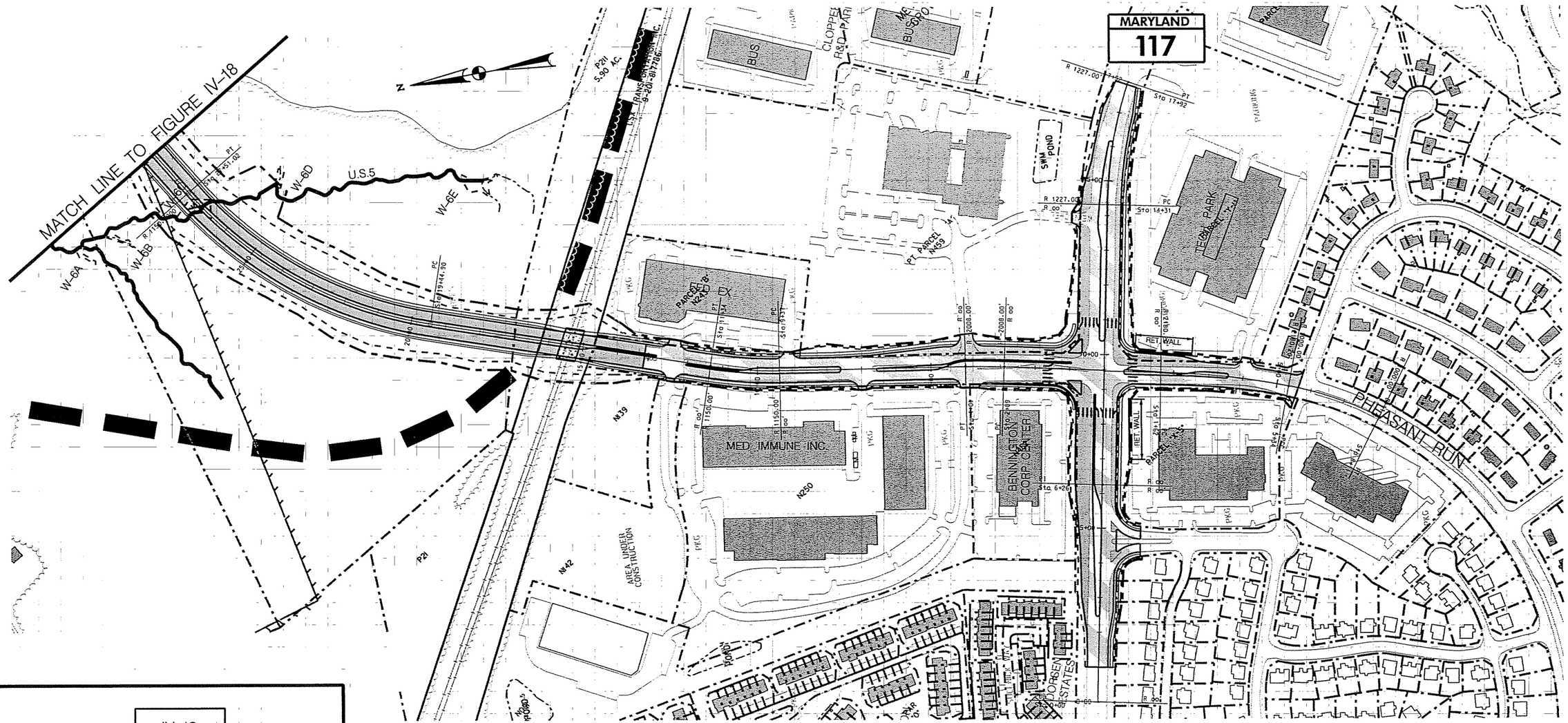
PLAN SHEET KEYMAP

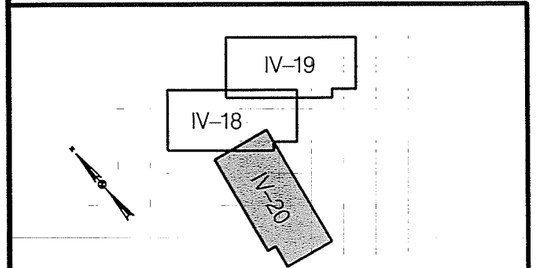
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4
PARTIAL INTERCHANGE
WATKINS STA. 47+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-19





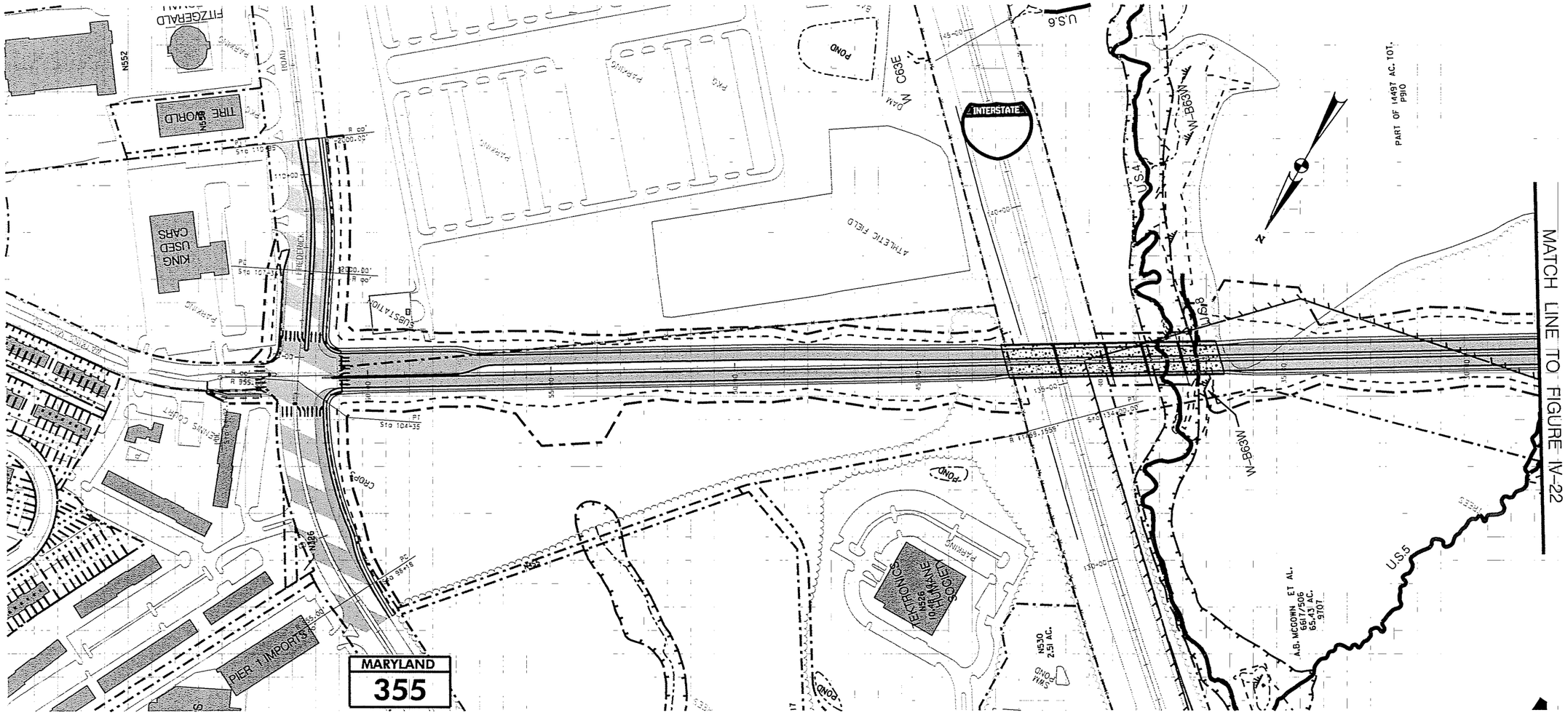
PLAN SHEET KEYMAP

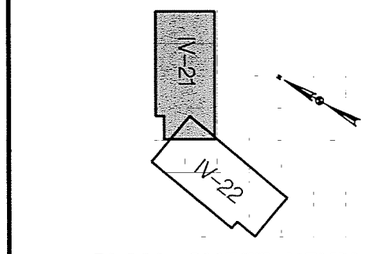
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4
PARTIAL INTERCHANGE
WATKINS STA. 0+00 TO STA. 29+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-20





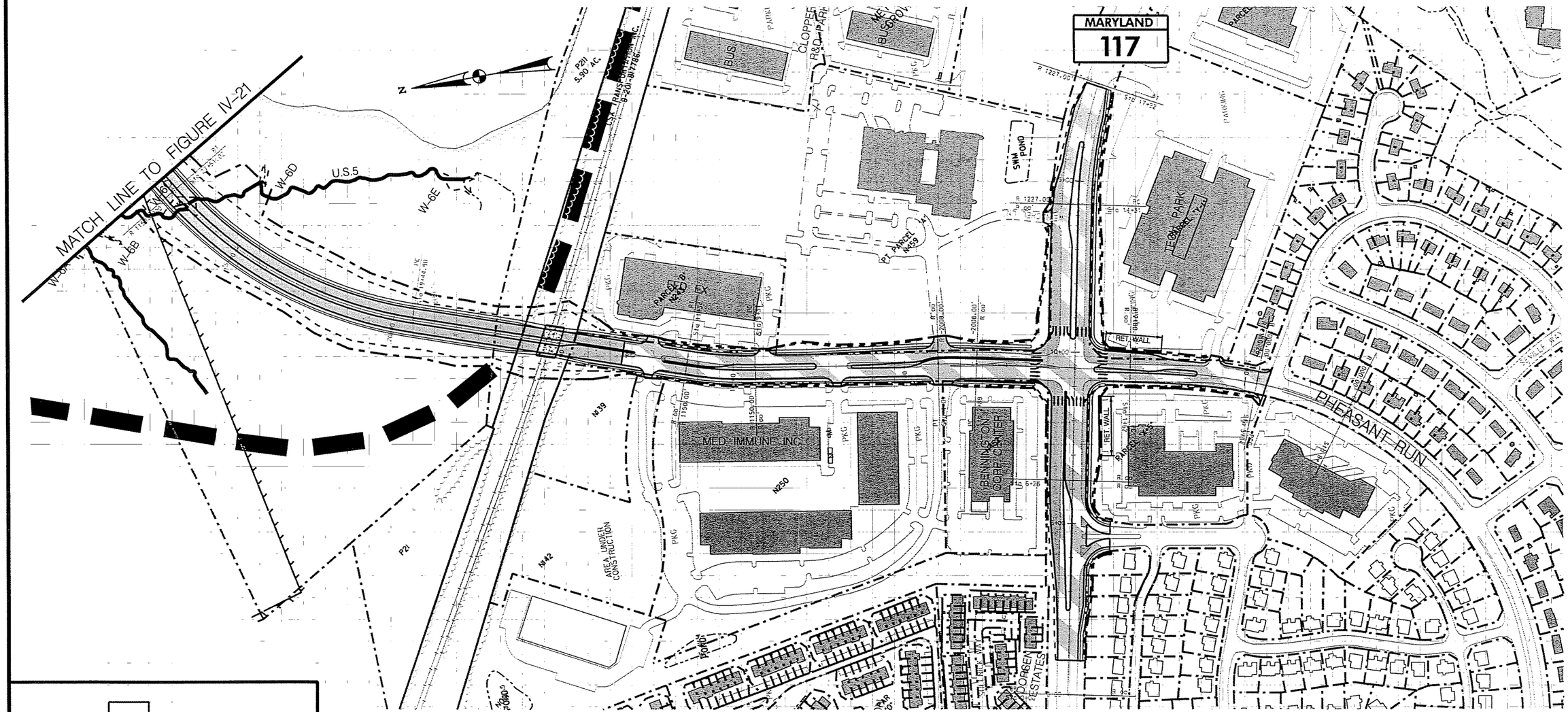
PLAN SHEET KEYMAP

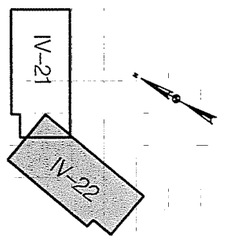
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6
WATKINS MILL ROAD EXTENDED
WATKINS STA. 28+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-21





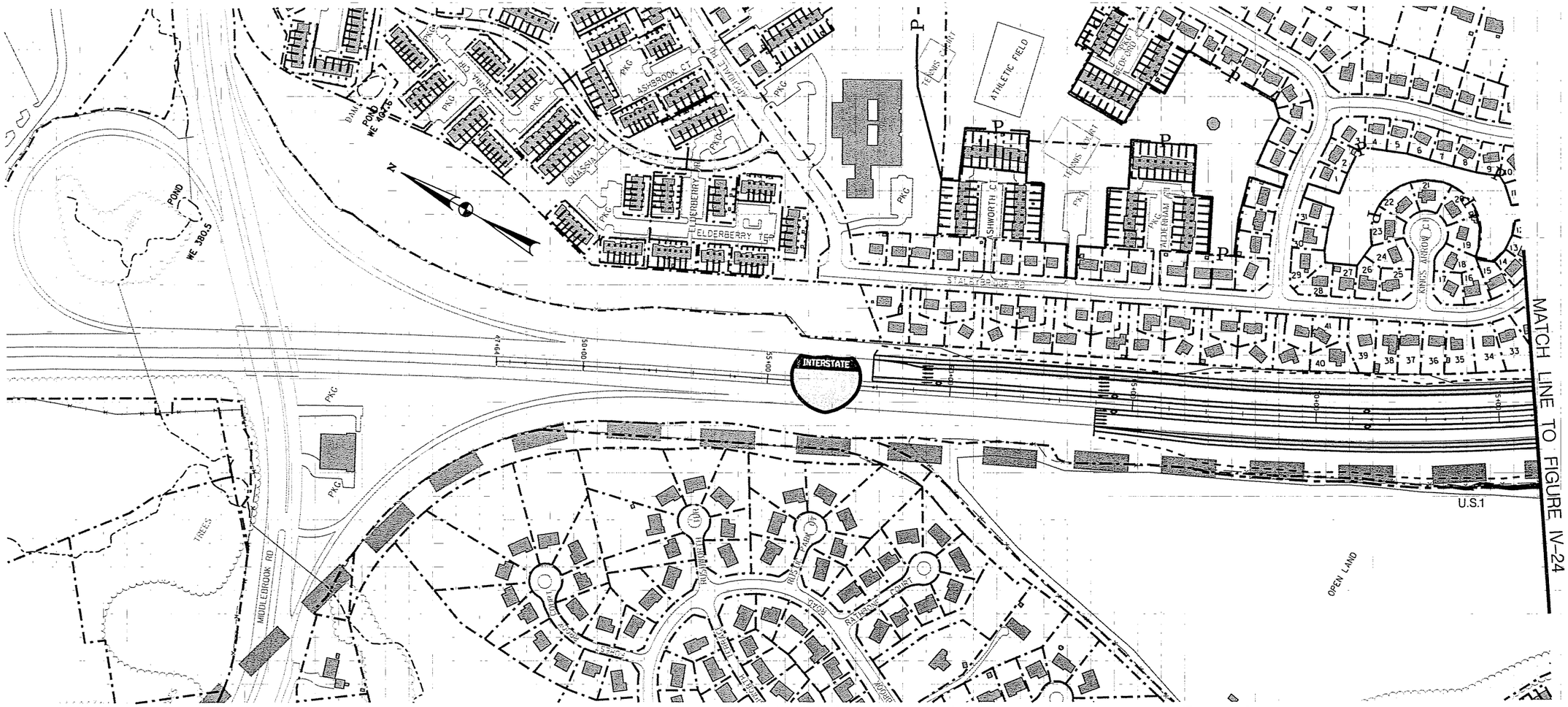
PLAN SHEET KEYMAP

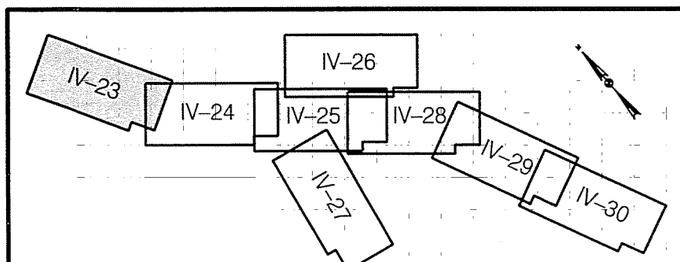
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6
WATKINS MILL ROAD EXTENDED
WATKINS STA. 0+00 TO STA. 28+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-22





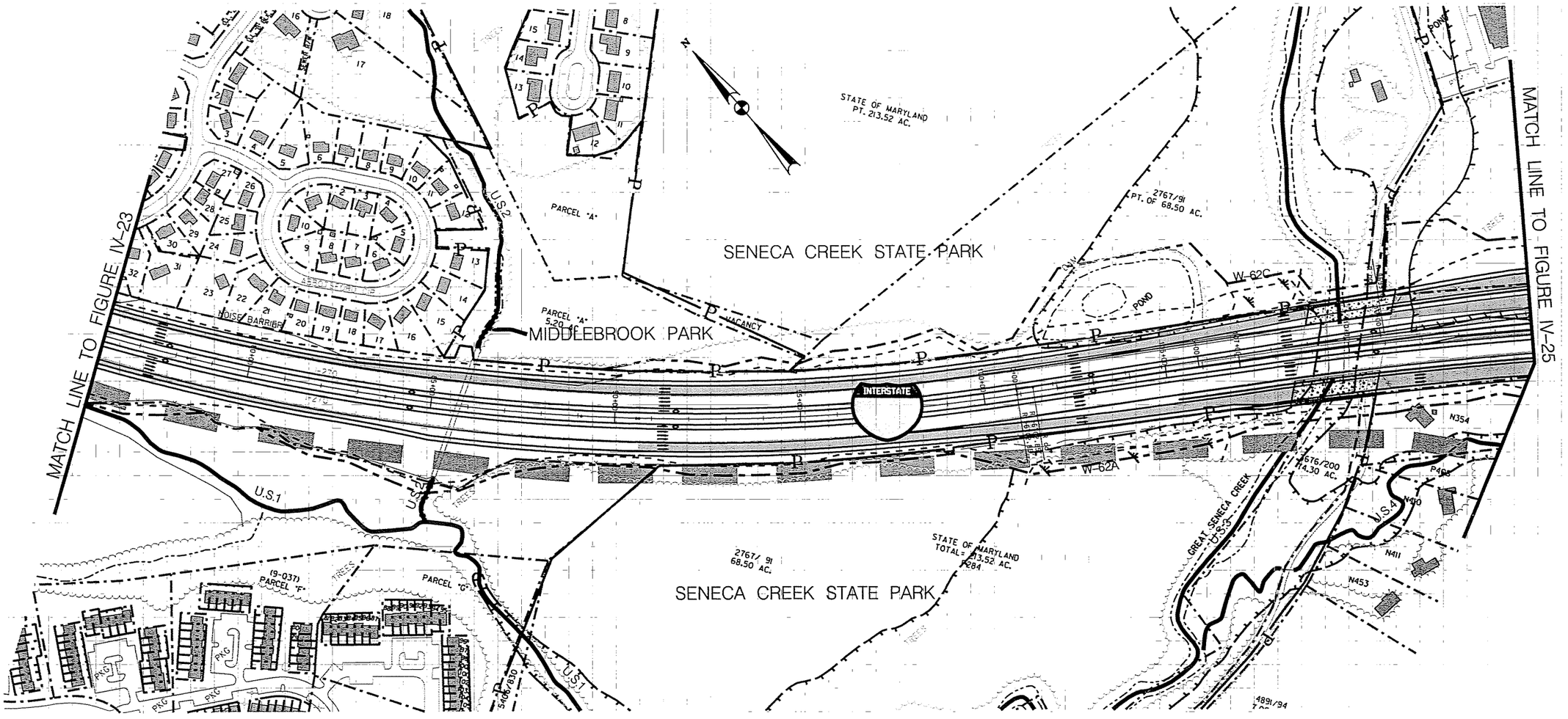
PLAN SHEET KEYMAP

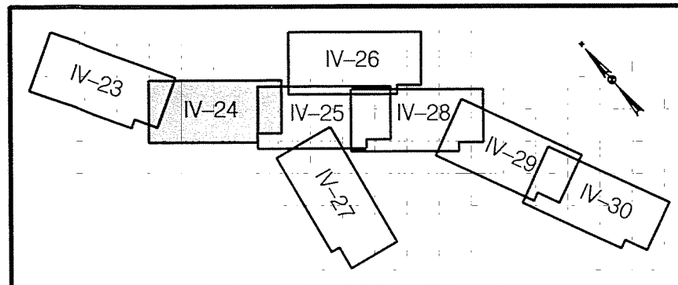
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 – OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/ MEDIAN HOV RAMPS
I-270 STA. 58+00 TO STA. 76+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-23





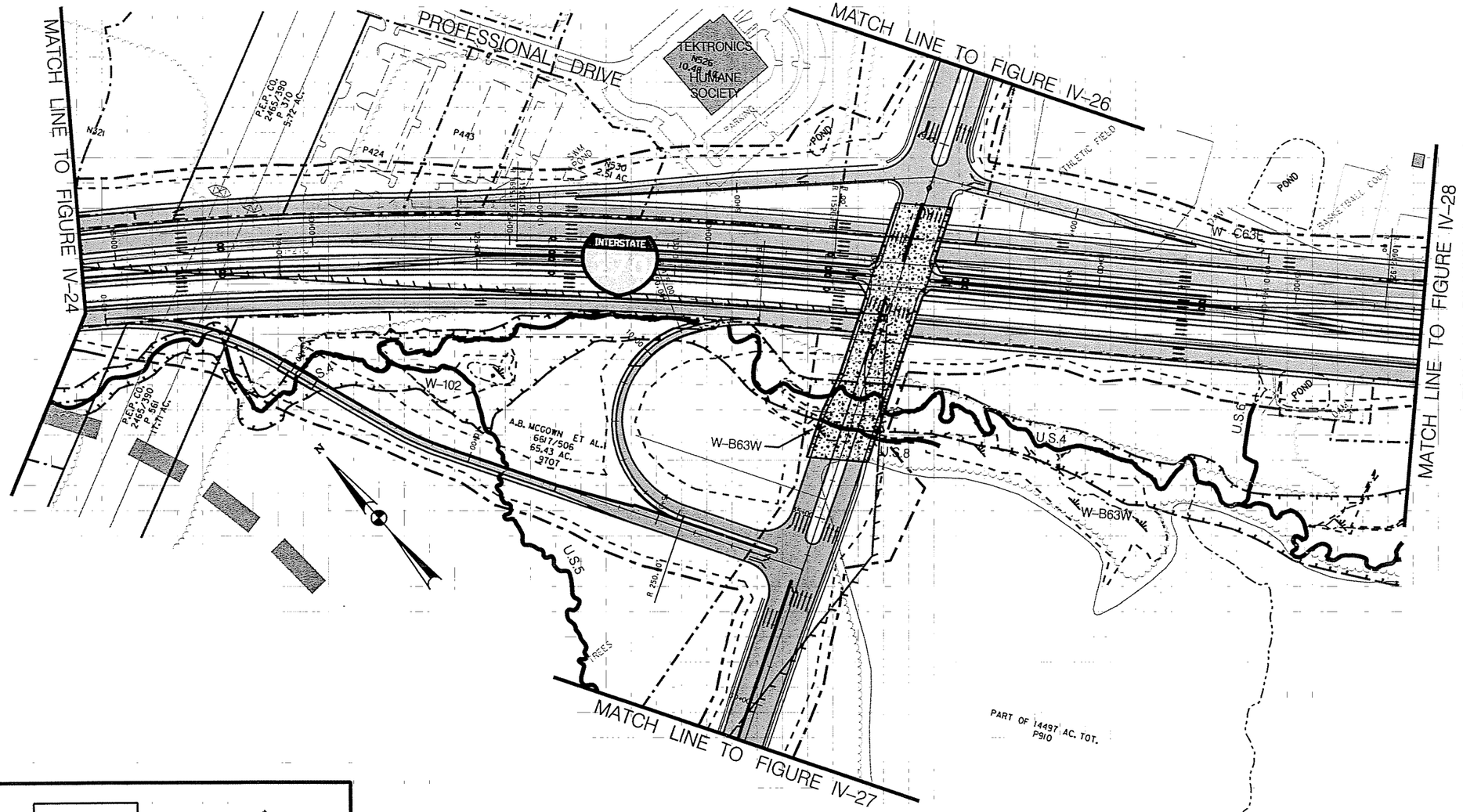
PLAN SHEET KEYMAP

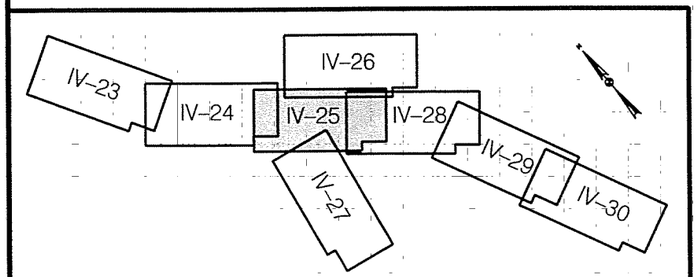
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 - OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/MEDIAN HOV RAMPS
I-270 STA. 76+00 TO STA. 115+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-24





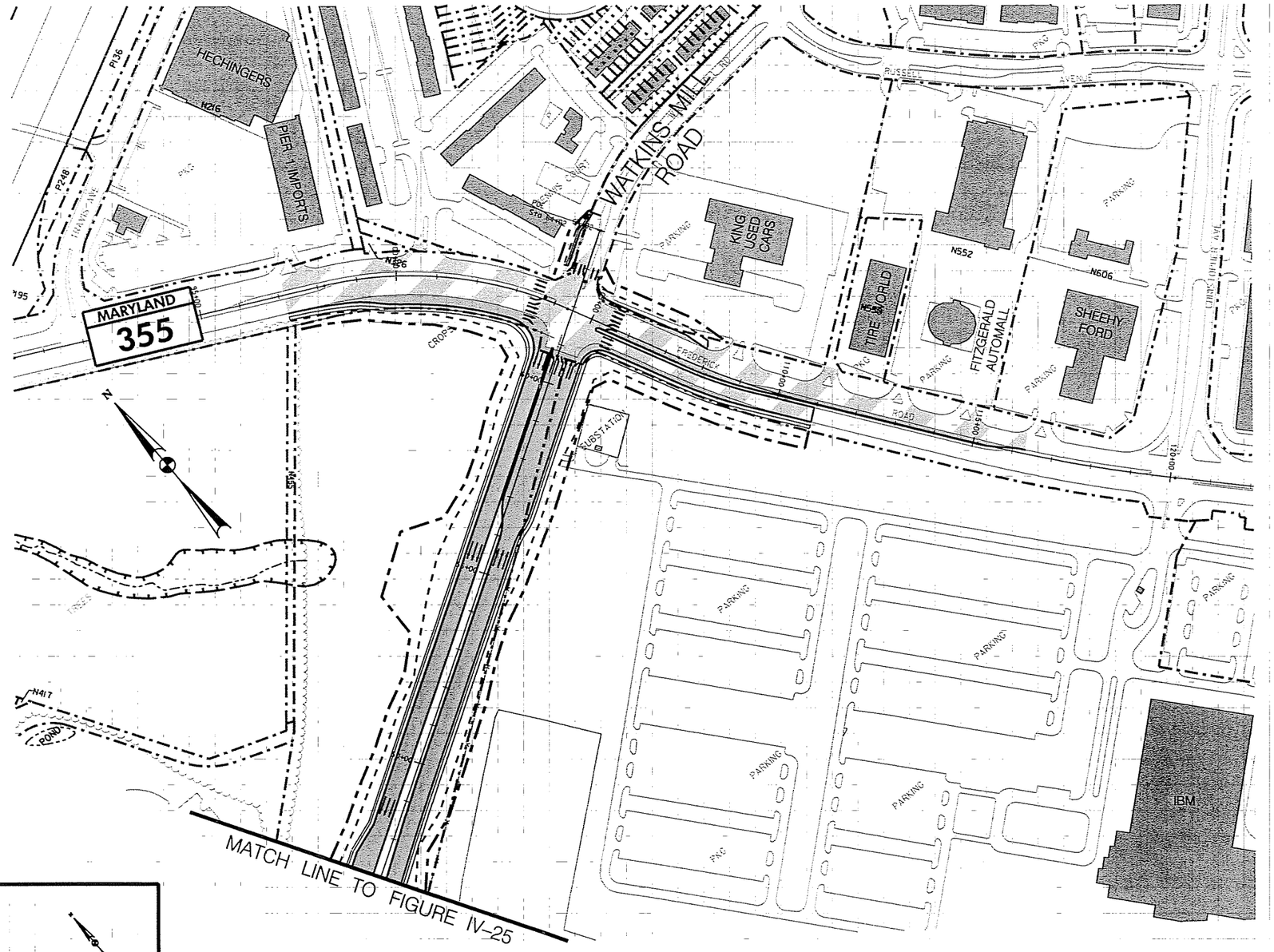
PLAN SHEET KEYMAP

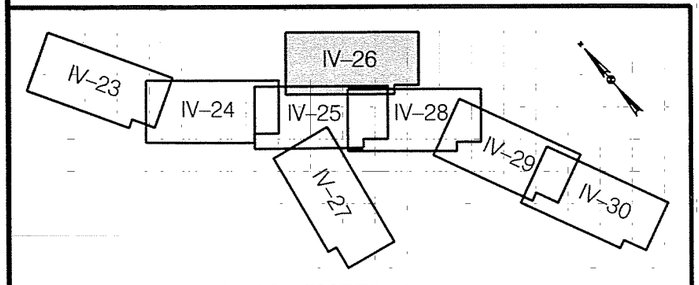
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 – OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/ MEDIAN HOV RAMPS
I-270 STA. 115+00 TO STA. 149+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-25





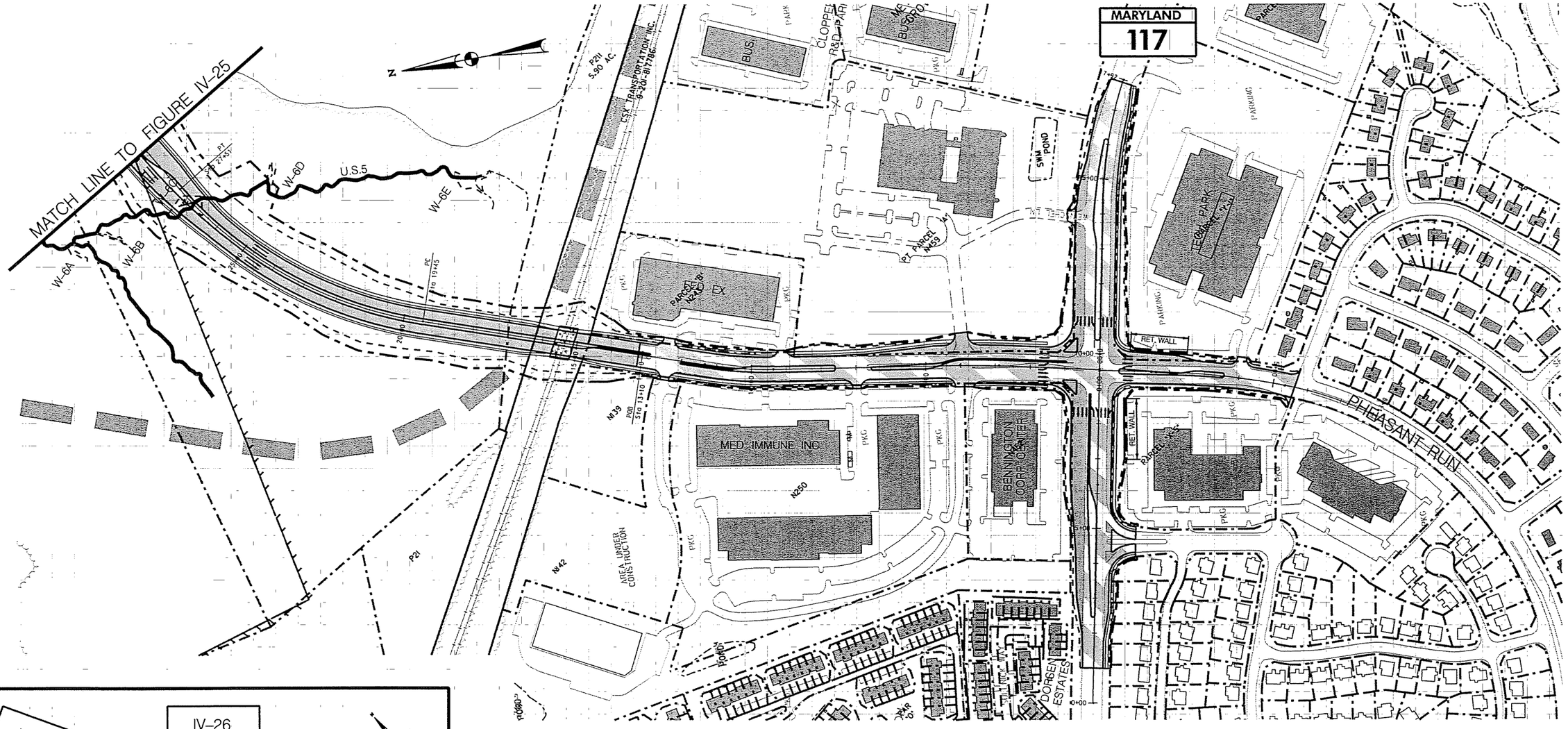
PLAN SHEET KEYMAP

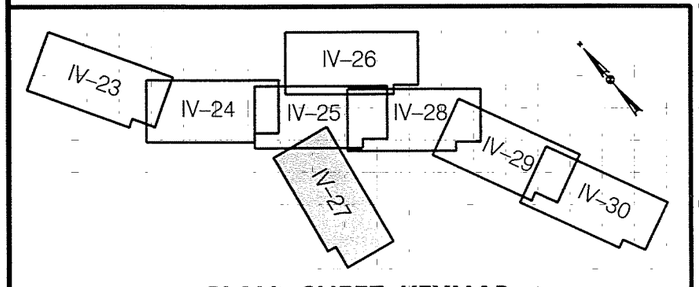
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 – OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/ MEDIAN HOV RAMPS
WATKINS STA. 47+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-26





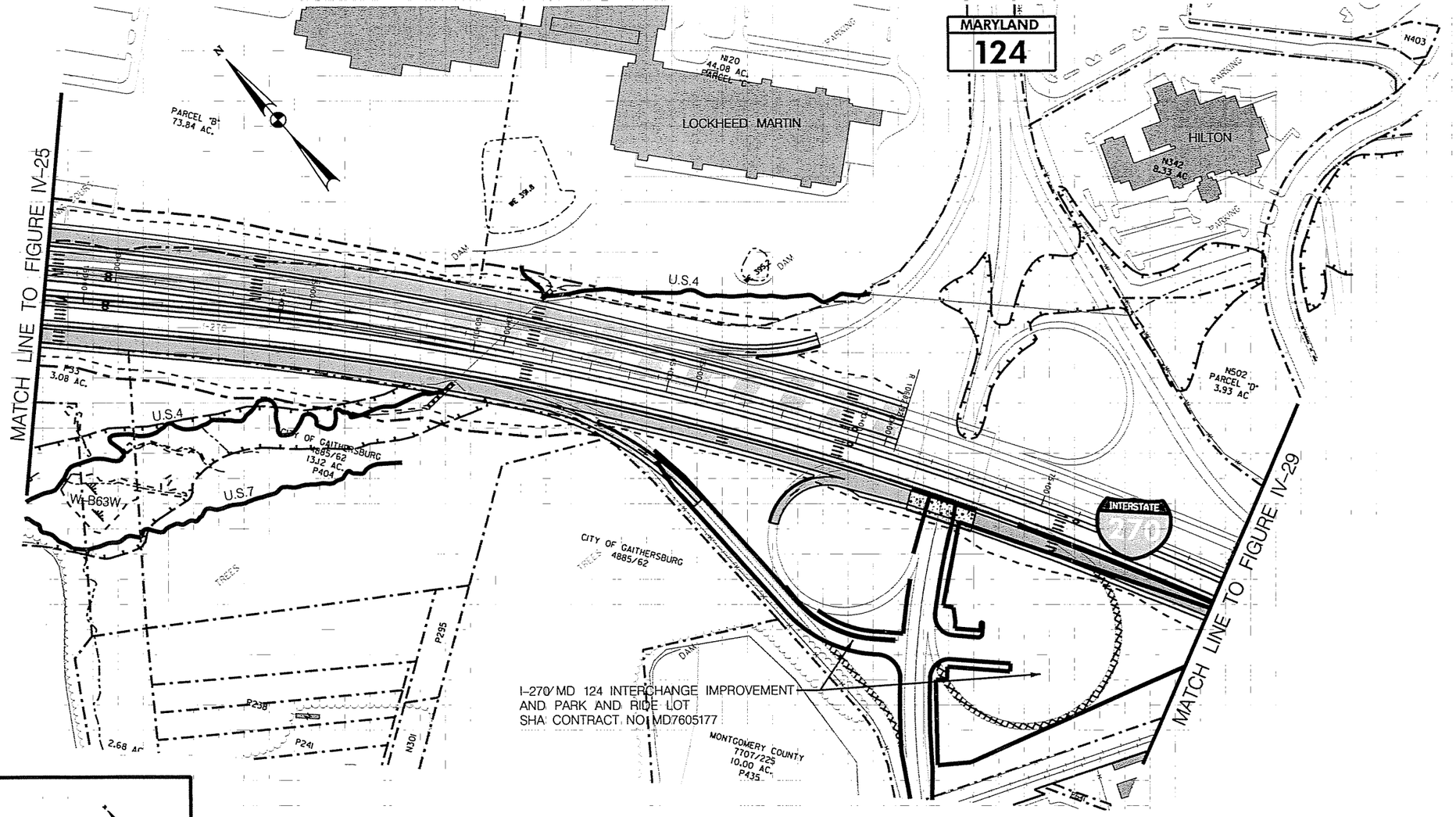
PLAN SHEET KEYMAP

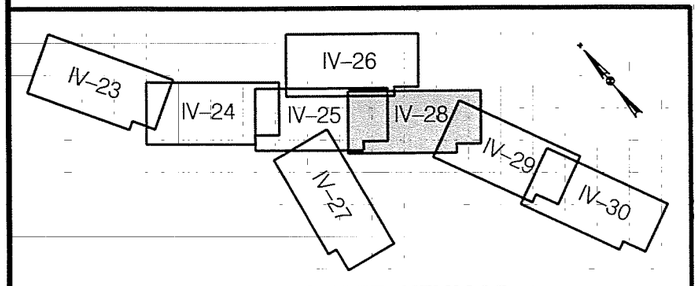
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 - OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/ MEDIAN HOV RAMPS
WATKINS STA. 0+00 TO STA. 29+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-27



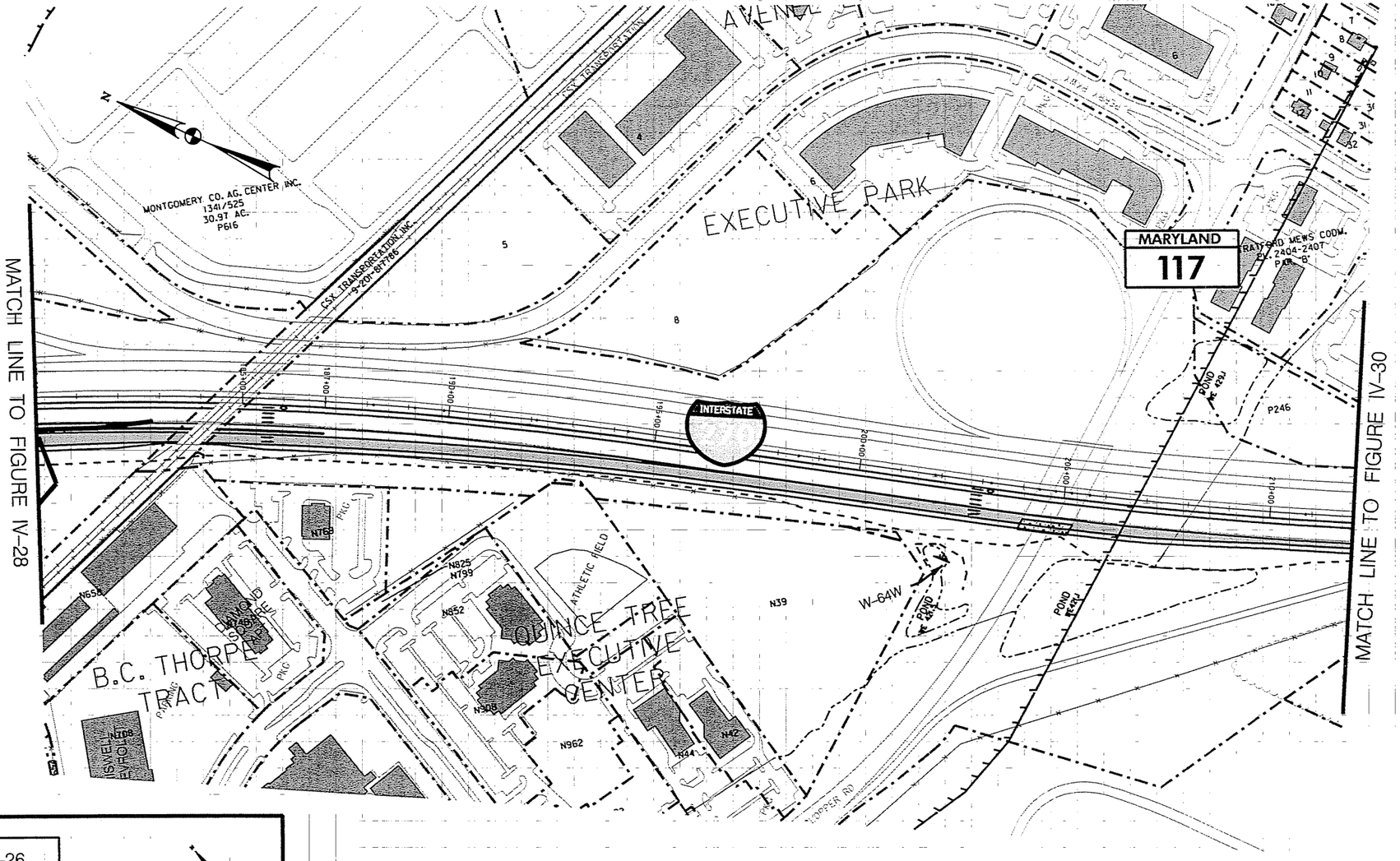


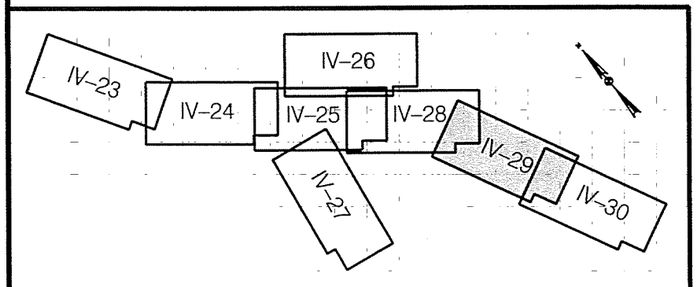
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 – OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/MEDIAN HOV RAMPS
I-270 STA. 149+00 TO STA. 180+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-28





PLAN SHEET KEYMAP

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 - OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/MEDIAN HOV RAMPS
I-270 STA. 180+00 TO STA. 212+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-29

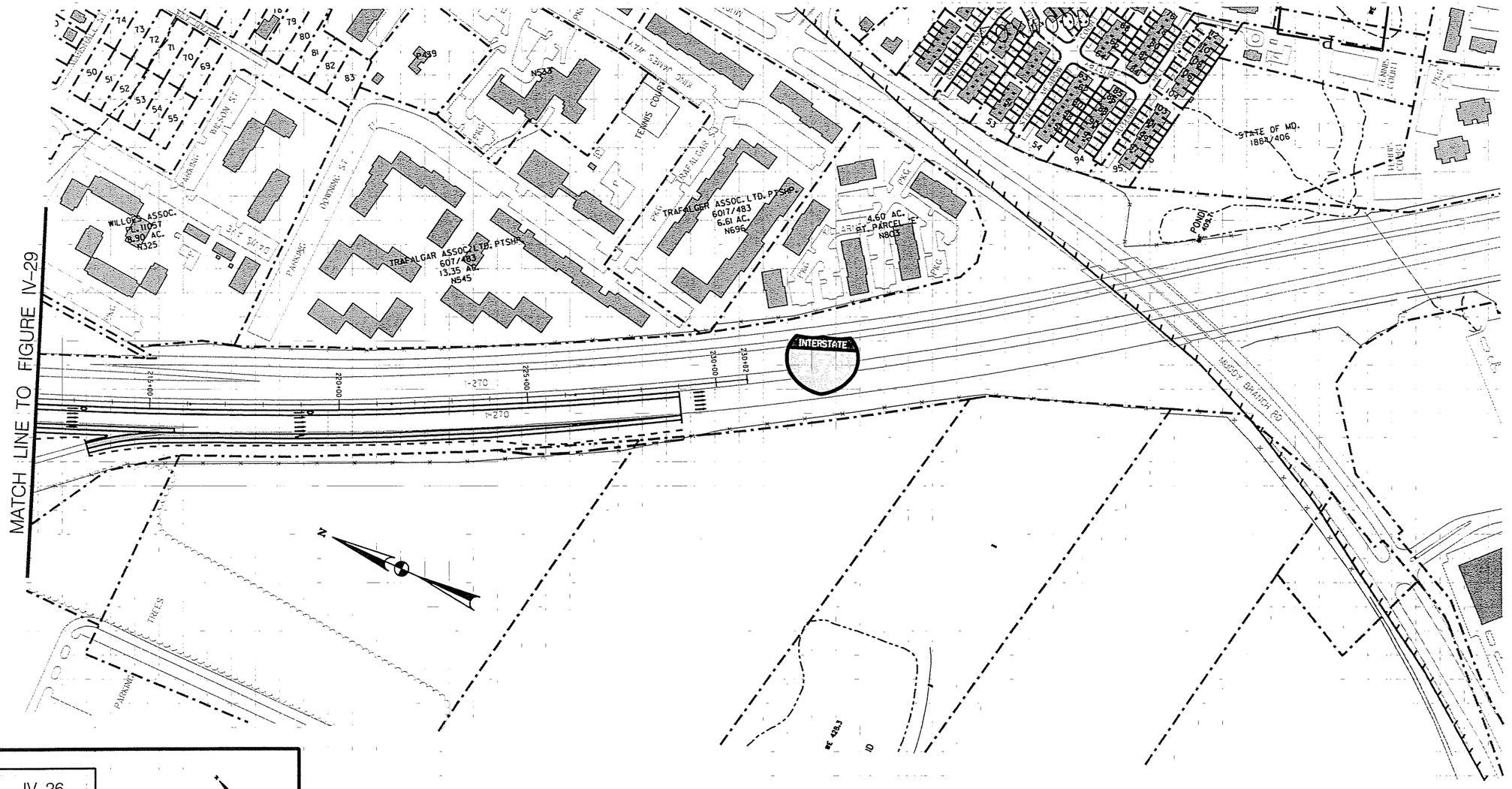


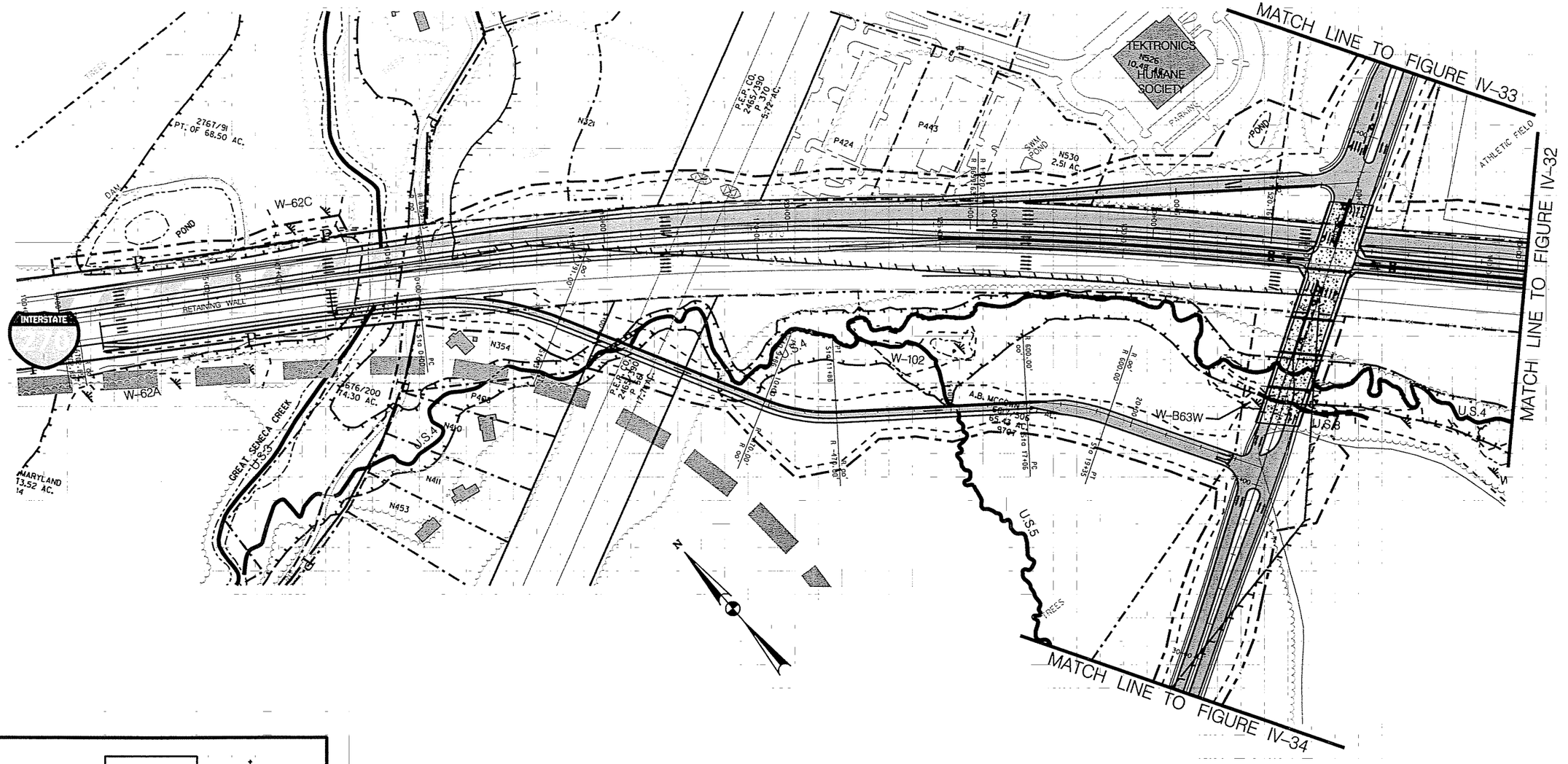
FIGURE IV-29

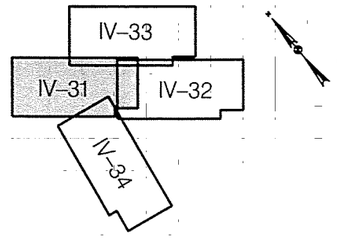
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 – OPTION A
PARTIAL CLOVERLEAF INTERCHANGE W/ MEDIAN HOV RAMPS
I-270 STA. 212+00 TO STA. 229+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-30





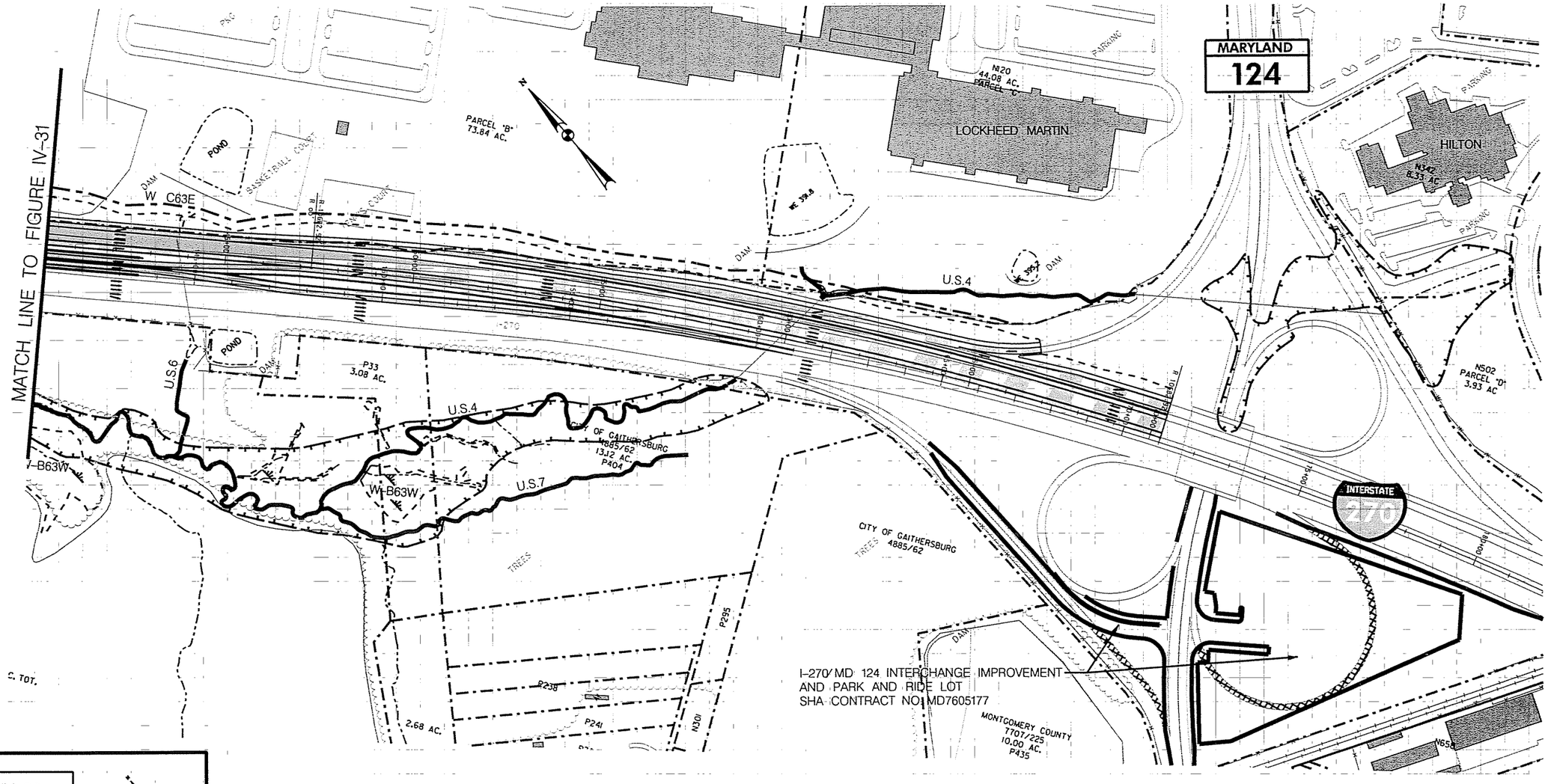
PLAN SHEET KEYMAP

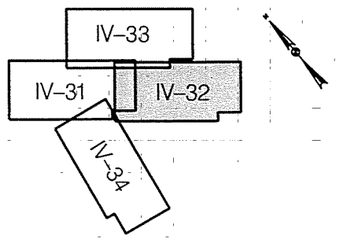
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4 – OPTION A
PARTIAL INTERCHANGE W/ MEDIAN HOV RAMPS
I-270 STA. 101+00 TO STA. 141+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-31





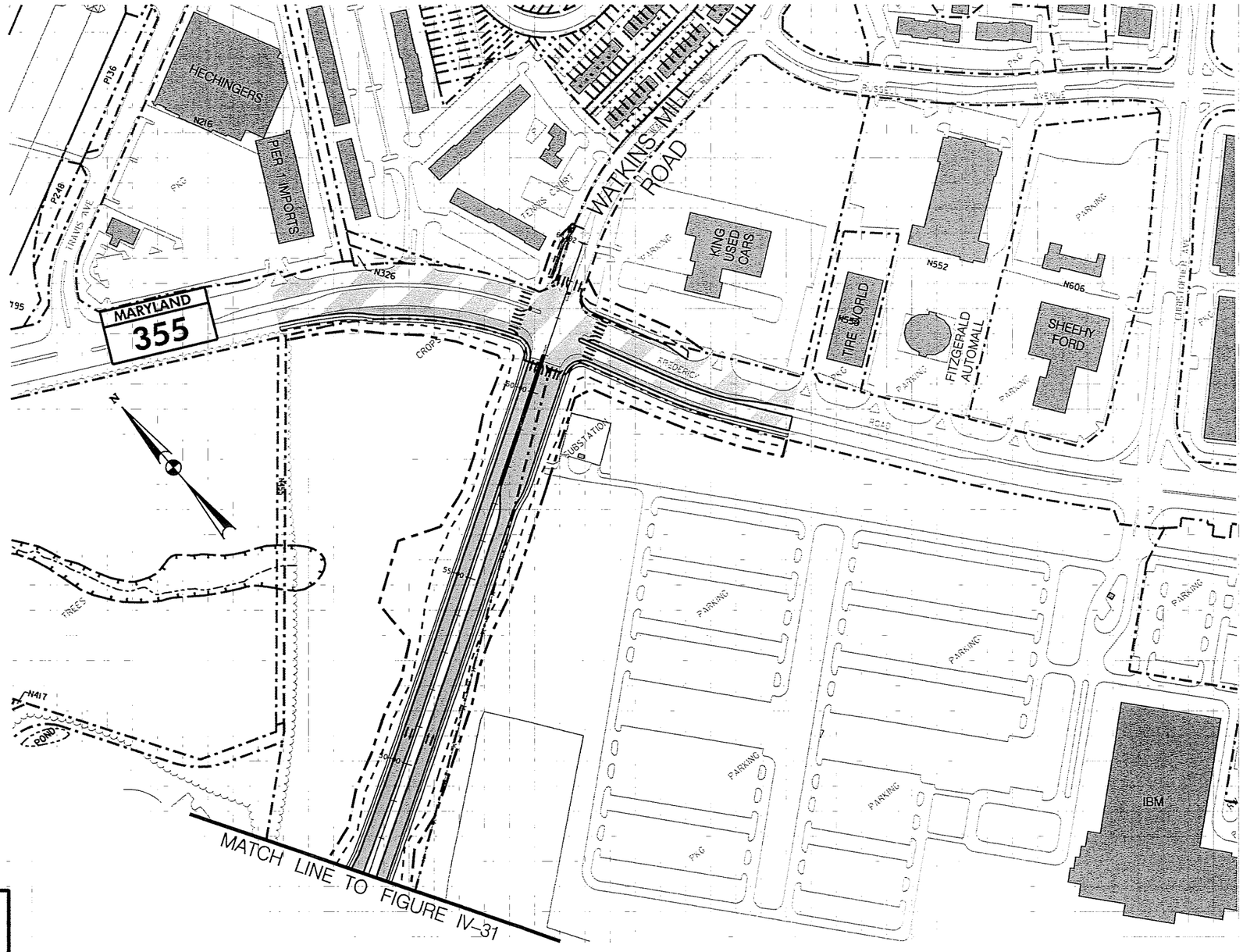
PLAN SHEET KEYMAP

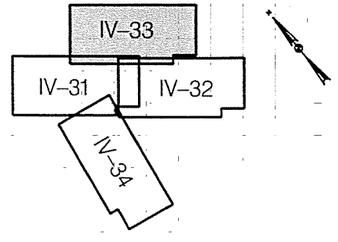
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4 – OPTION A
PARTIAL INTERCHANGE W/ MEDIAN HOV RAMPS
I-270 STA. 141+00 TO STA. 171+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-32





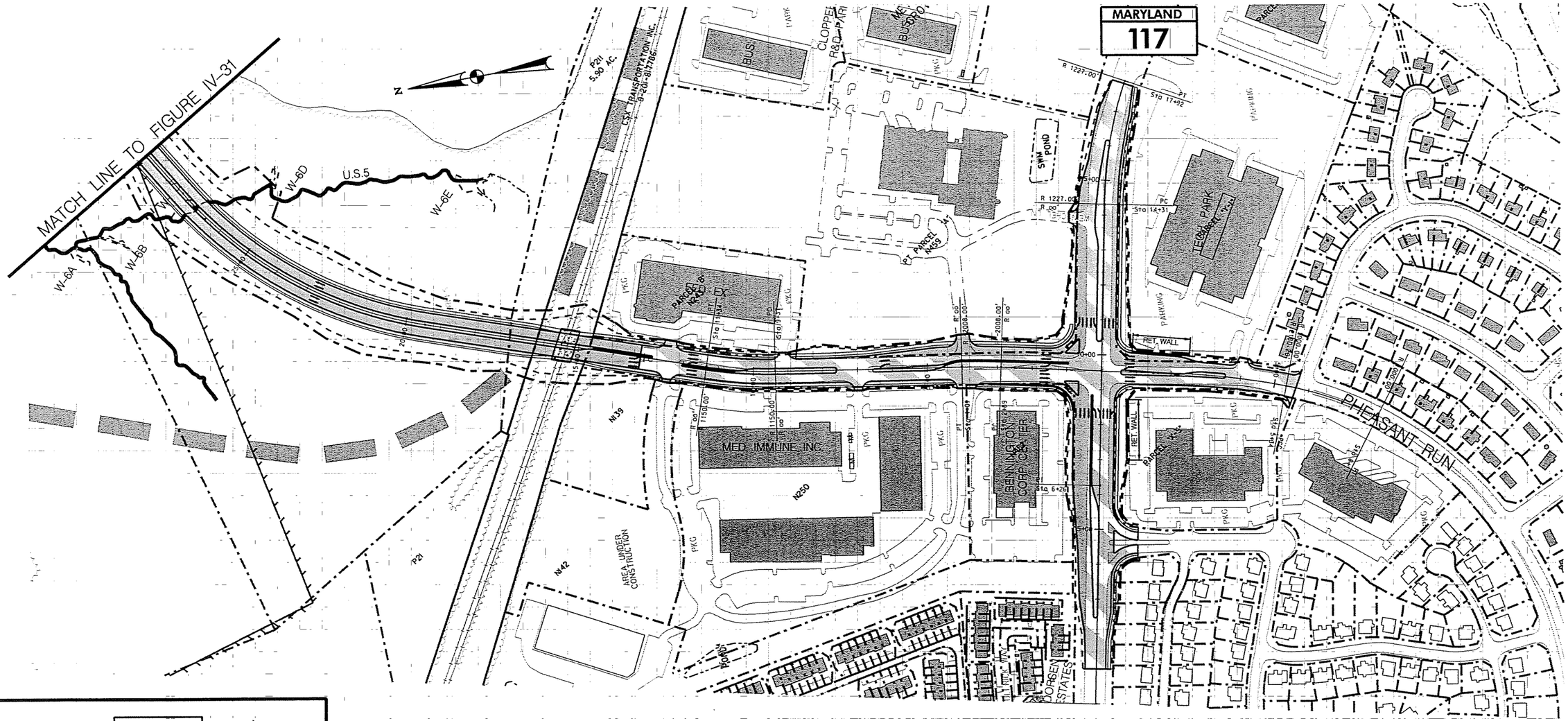
PLAN SHEET KEYMAP

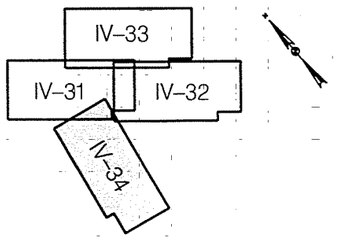
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4 – OPTION A
PARTIAL INTERCHANGE W/ MEDIAN HOV RAMPS
WATKINS STA. 47+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-33





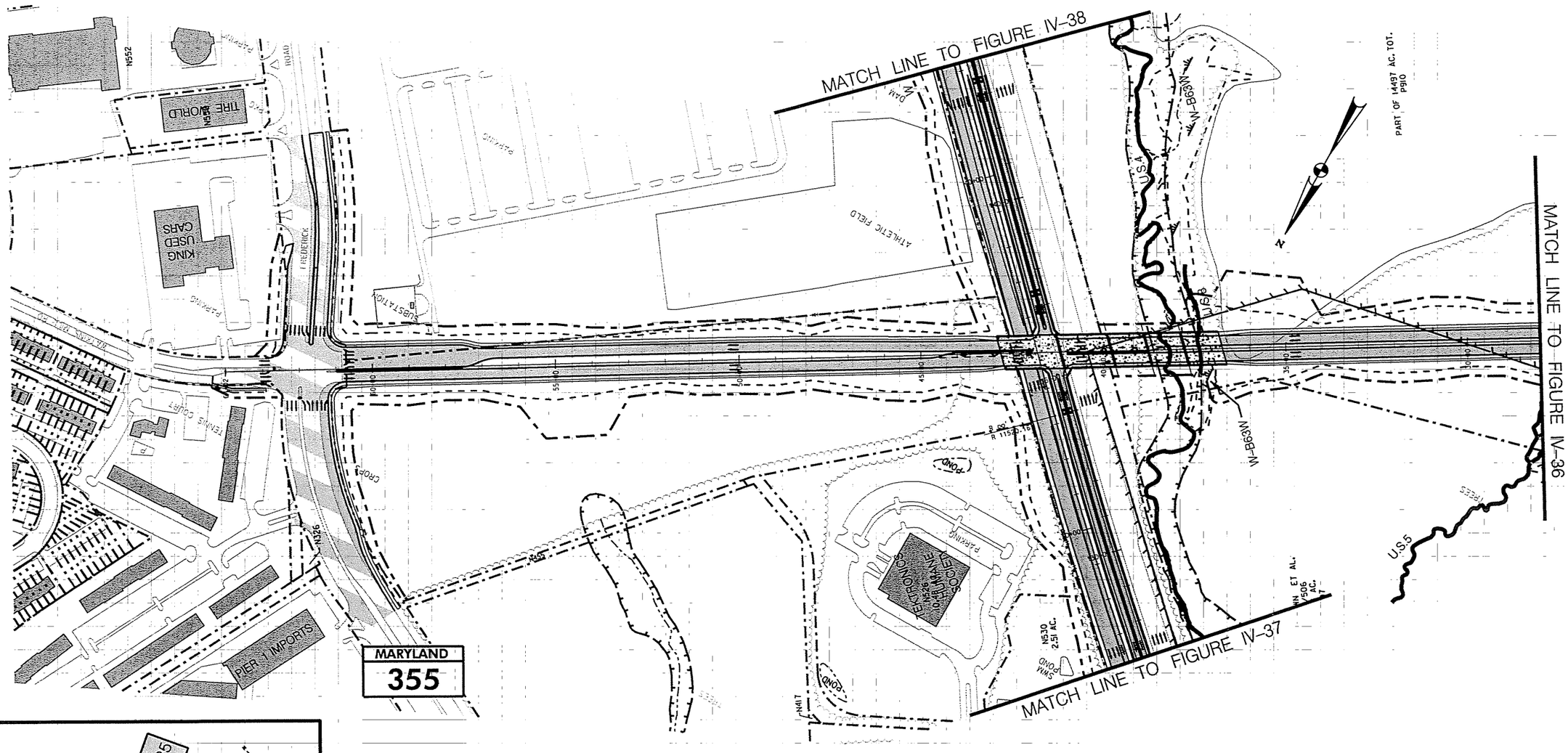
PLAN SHEET KEYMAP

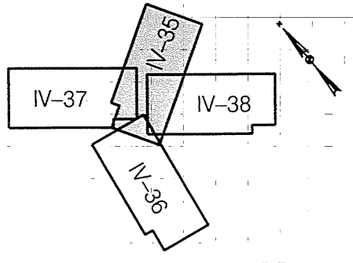
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4 – OPTION A
PARTIAL INTERCHANGE W/ MEDIAN HOV RAMPS
WATKINS STA. 0+00 TO STA. 29+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-34





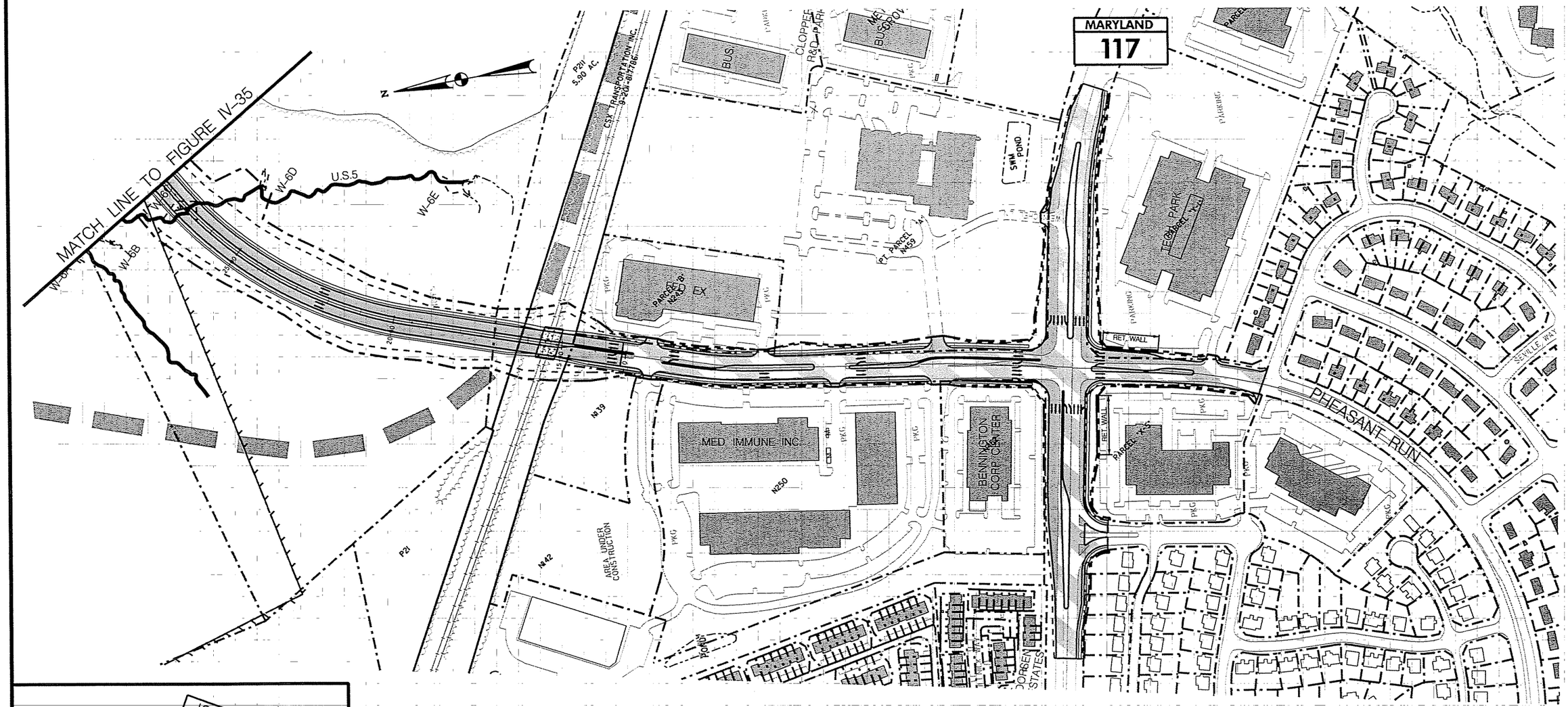
PLAN SHEET KEYMAP

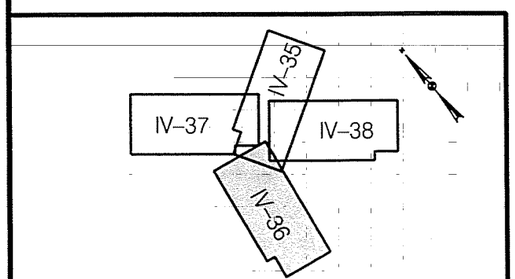
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6 – OPTION A
WATKINS MILL ROAD EXTENDED W/ MEDIAN HOV RAMPS
I-270 STA. 127+00 TO STA. 144+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-35





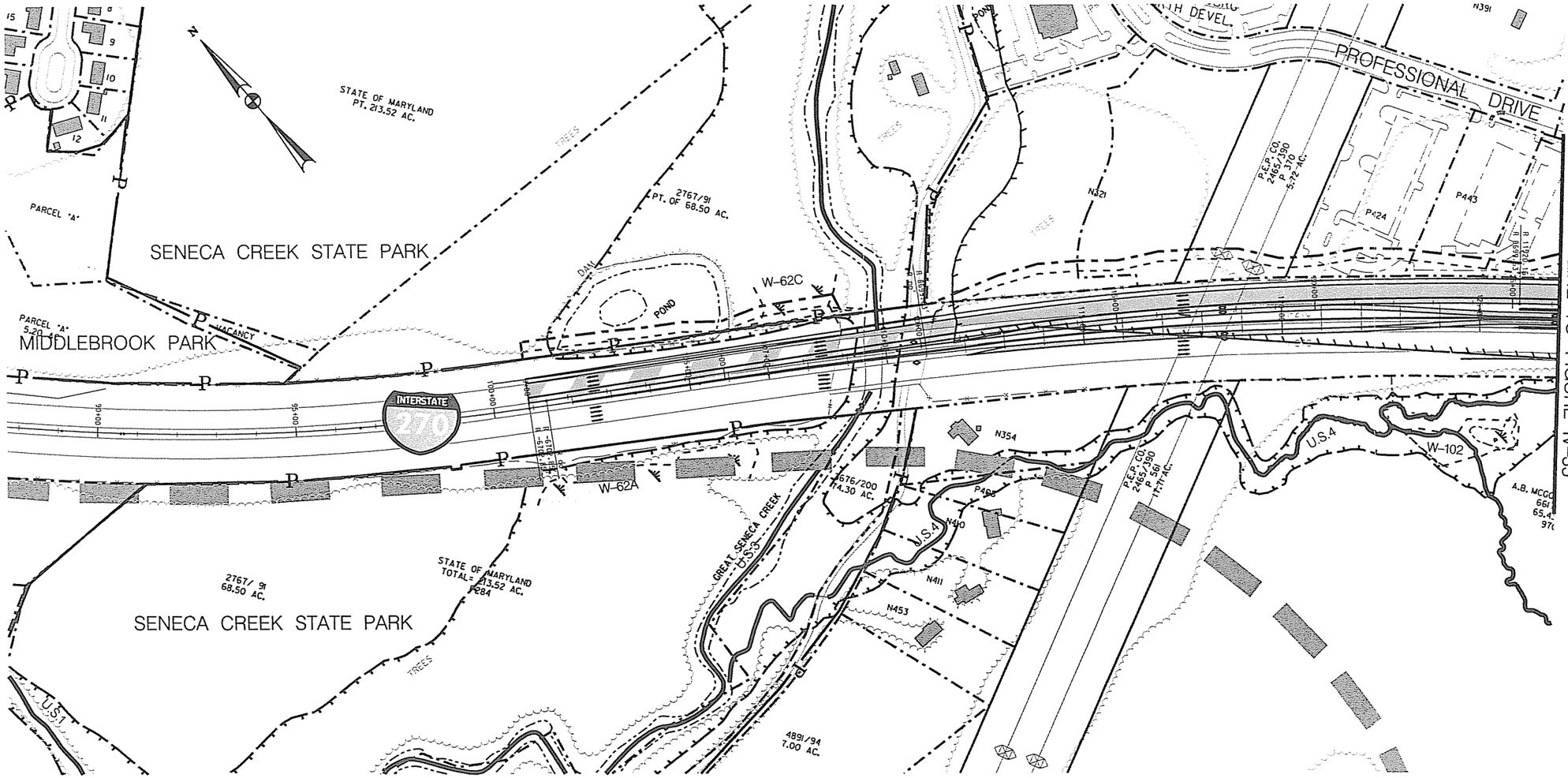
PLAN SHEET KEYMAP

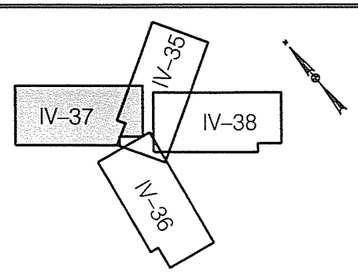
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6 – OPTION A
WATKINS MILL ROAD EXTENDED W/ MEDIAN HOV RAMPS
WATKINS STA. 0+00 TO STA. 28+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-36





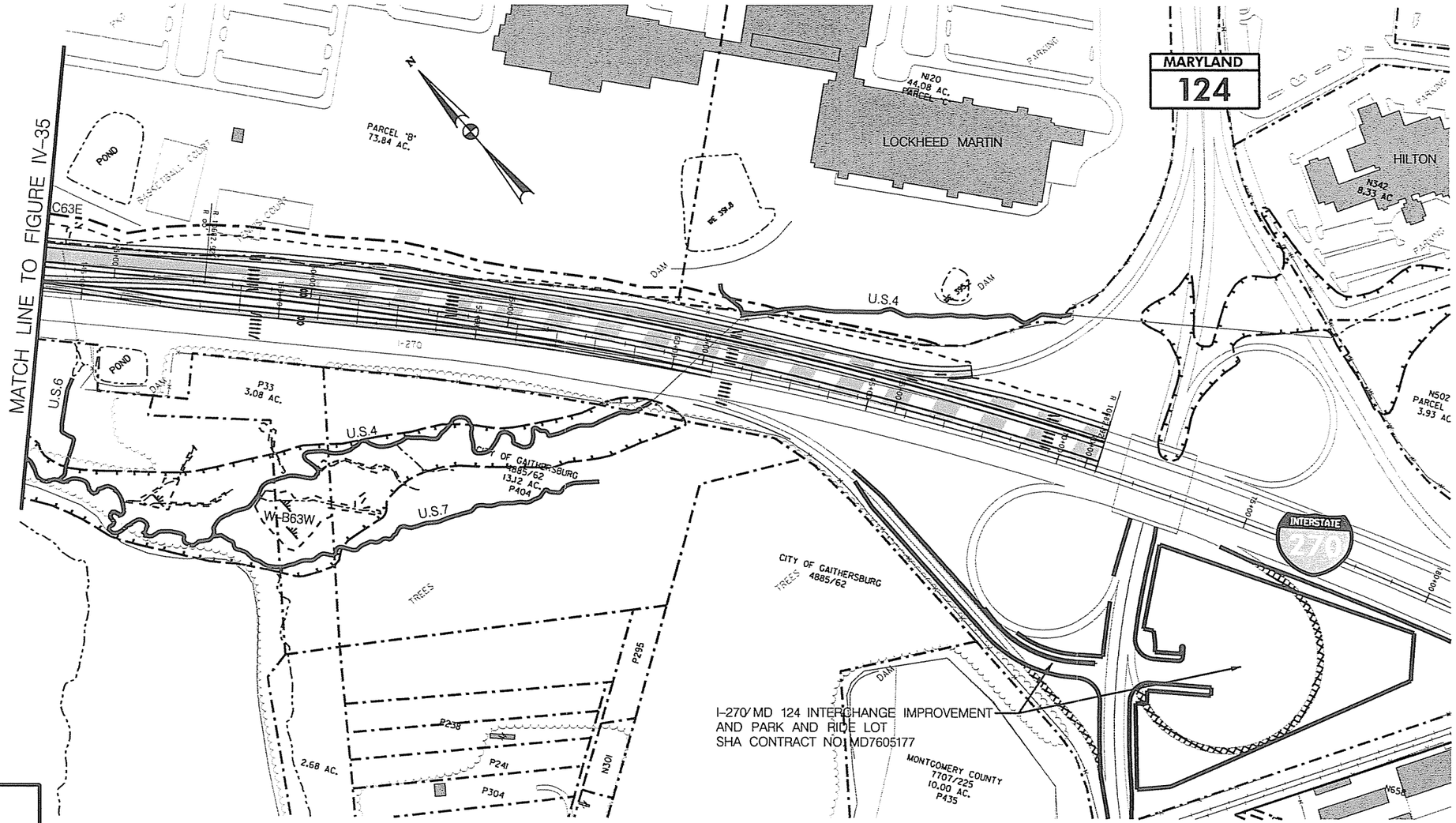
PLAN SHEET KEYMAP

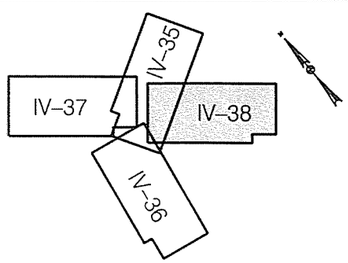
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6 – OPTION A
WATKINS MILL ROAD EXTENDED W/ MEDIAN HOV RAMPS
I-270 STA. 101+00 TO STA. 127+00

DATE		FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-37





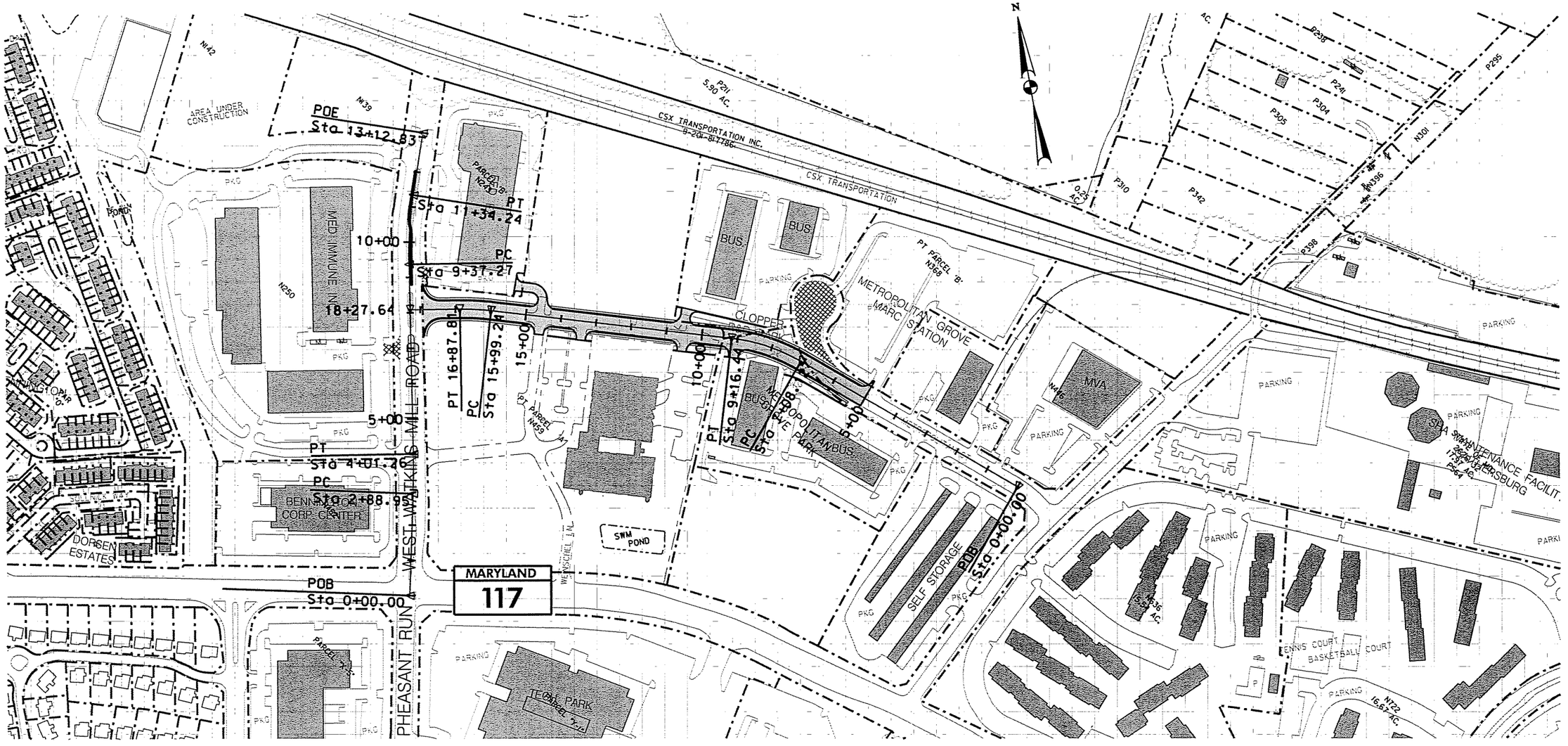
PLAN SHEET KEYMAP

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6 – OPTION A
WATKINS MILL ROAD EXTENDED W/ MEDIAN HOV RAMPS
I-270 STA. 144+00 TO STA. 171+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-38

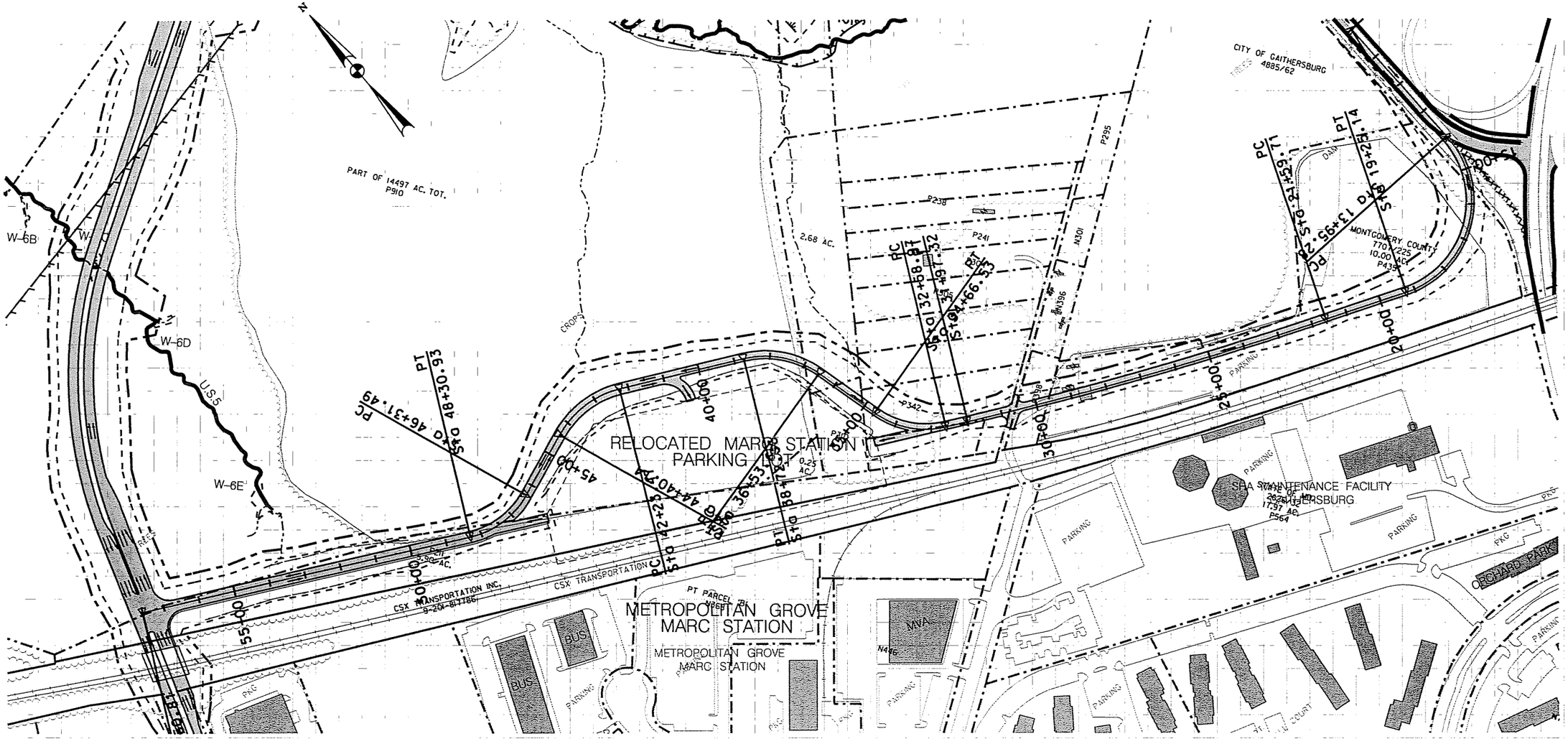


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

OPTION B
METROPOLITAN COURT EXTENDED

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	IV-39

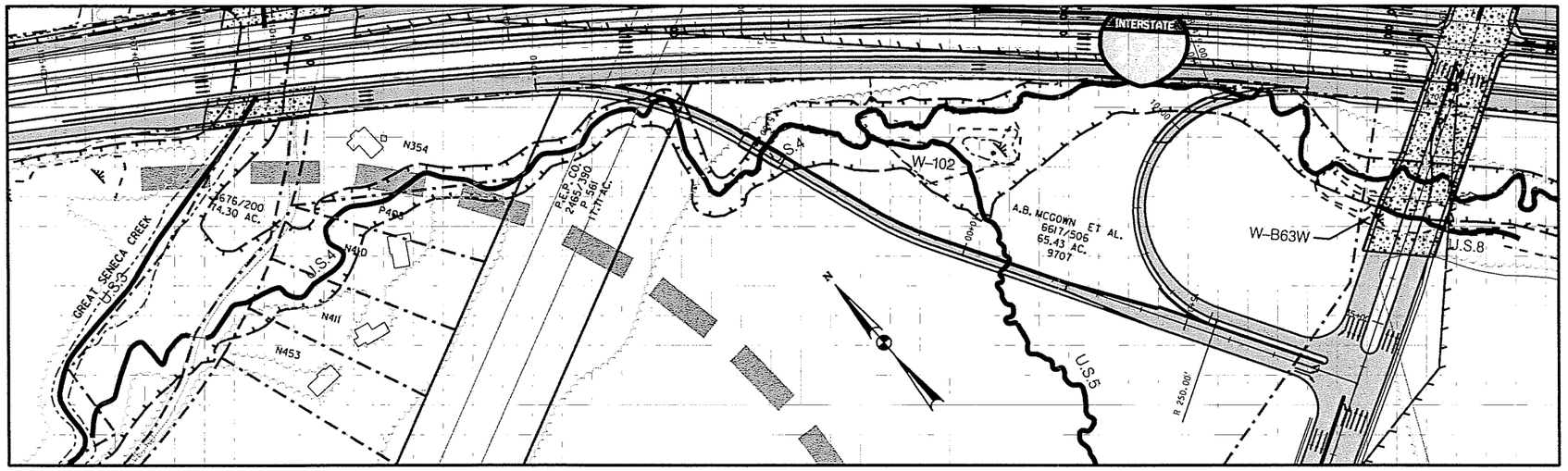


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

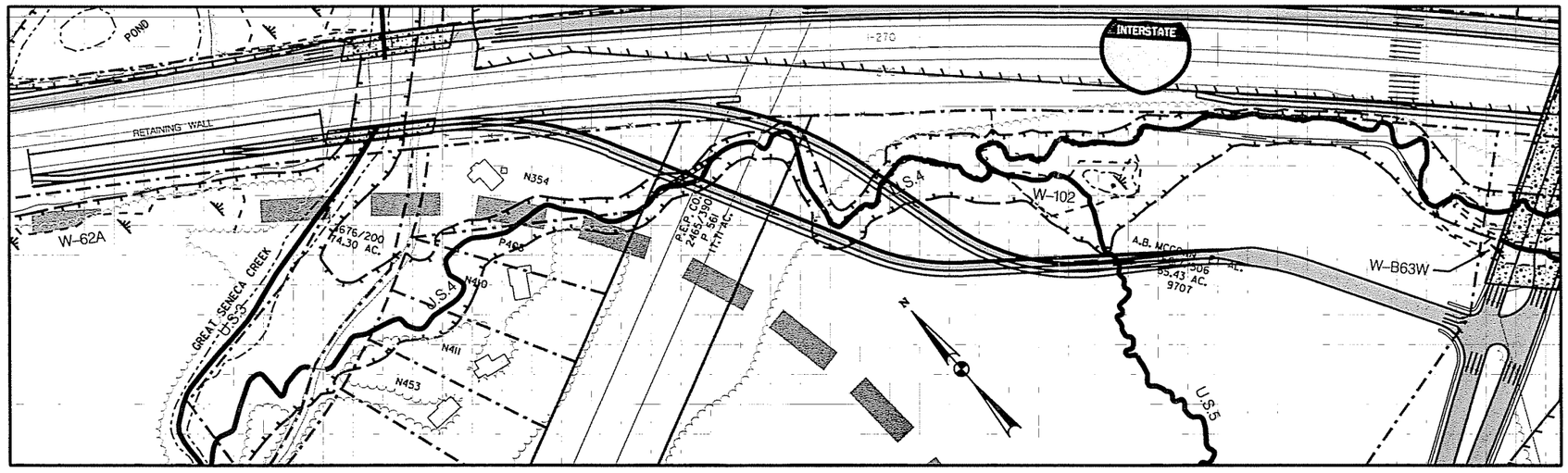
I-270 AT WATKINS MILL ROAD EXTENDED

OPTION C
MD 124 ACCESS RAMP

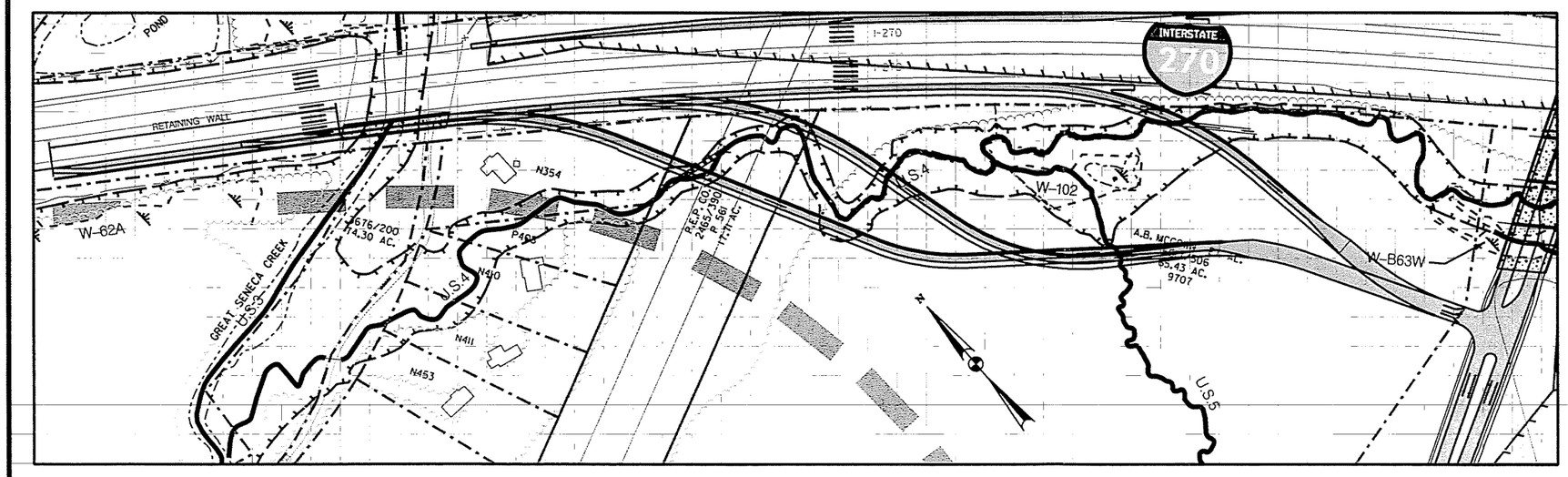
DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-40



ALTERNATE 2



ALTERNATE 3



ALTERNATE 4

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

NORTHWEST QUADRANT
RAMP OPTIONS

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	IV-41

V. ENVIRONMENTAL CONSEQUENCES

V. ENVIRONMENTAL CONSEQUENCES

This chapter of the EA describes the environmental consequences of the alternates under consideration, as well as a discussion of the consequences of avoidance and minimization of these impacts. Mitigation measures are also discussed where appropriate. The extent of impacts discussed in this chapter, as well as further opportunities to avoid and minimize impacts, will be refined during preliminary engineering, should a build alternate be selected.

A. Social

1. Displacements

a. Relocation Process

Relocation of any individuals, families, or businesses displaced by this project would be accomplished in accordance with the Uniform Relocation Assistance and Land Acquisition Policies of 1970 as amended by the Surface Transportation and Uniform Relocation Assistance Act, of 1987, and would be executed in a timely and humane fashion. In the event comparable replacement housing is not available for displaced persons or available replacement housing is beyond their financial means, replacement "housing as a last resort" will be utilized to accomplish the rehousing. A "Summary of the Relocation Assistance Program of the State of Maryland" is included in the Appendix of this document.

b. Description of Displacements and Relocations

An analysis of the probable displacements that would result from the build alternates under consideration has been made by the State Highway Administration. Pertinent information from this study is presented below. The preliminary right-of-way and relocation report is available for review at the State Highway Administration's District 3 Right-of-Way office.

The No Build Alternate will not require any residential or business displacements, or acquisition of right-of-way from the properties within the project area.

Alternate 2 (Partial Cloverleaf, see Figures IV-4 through IV-8) and Alternate 2 with Access Option A (Partial Cloverleaf with Median HOV Ramps, see Figures IV-23 through IV-30) would each require one residential displacement and relocation. The displacement structure would be the same for either alternate and is located along the west side of I-270 on Game Preserve Road, adjacent to the deceleration lane for the southbound exit ramp to Watkins Mill Road Extended. The residence is part of the Caulfield community and would be acquired in accordance with the requirements of the Uniform Relocation Assistance and Real Property

Policies Act of 1970, as it is anticipated that sufficient housing exists on the open market for relocation housing and can be completed with minimal impact to the economic well-being of those directly affected, as well as, those located in the project area.

Alternates 3 (Full Diamond, see Figures IV-12 through IV-17), 4 (Partial Interchange, see Figures IV-18 through IV-20), 4 with Access Option A (Partial Interchange with Median HOV Ramps, see Figures IV-31 through IV-34), 6 (Watkins Mill Road Extended without Interchange, see Figures IV-21 through IV-22) and 6 with Access Option A (Watkins Mill Road Extended with Median HOV Ramps, see Figures IV-35 through IV-38) would not result in any residential relocations. Access Options B (see Figure IV-39) and C (see Figure IV-40) would also require no residential relocations.

None of the build alternates under consideration or access options would result in any business displacements.

Right-of-way would need to be acquired for each build alternate and access option. Table V-1 summarizes the right-of-way requirements based on preliminary estimates.

TABLE V-1
RIGHT-OF-WAY REQUIRED - ACRES

Alt. 2	Alt. 2A	Alt. 3	Alt. 4	Alt. 4A	Alt. 6	Alt. 6A	Opt. B	Opt. C
68.1	72.3	68.7	47.4	54.1	26.2	33.8	2.9	13.1

2. Environmental Justice

The potential social impacts relating to low income and minority populations for this project can be categorized in terms of direct and indirect effects. Direct effects pertain to land acquisition or displacement and are minimal in terms of impact to minority populations in the project area. The build alternates under consideration are located on land that is largely vacant and undeveloped, and therefore would result in minimal residential impacts and no business displacements. The residential displacement associated with Alternates 2 and 2A is not considered to be in a minority or low-income community because none have been identified in the immediate project area, and this property owner is know to be non-minority. Much of the remaining residential right-of-way for the alternates is from vacant areas zoned residential or along the southbound side of I-270 (e.g., Game Preserve Road). Some minor strip right-of-way is required from four to six single family residential parcels along MD 117.

The indirect effects of the build alternates would be primarily in the form of changes in accessibility and traffic patterns. Design year 2020 average daily traffic projections for Watkins Mill Road east of MD 355 are approximately 25% higher with the full interchange build alternates (i.e., 2, 2A, and 3) than with the No-Build or Alternate 6. This portion of Watkins Mill Road is a county arterial which serves Montgomery Village, a community with a substantial minority presence. The increase in projected volumes reflects primarily additional route choice within Montgomery Village itself. Residents who now use MD 124 to access I-270 and points west would be able to use Watkins Mill Road for the same purpose. Congestion levels would be reduced under the build conditions at various intersections serving Montgomery Village.

As stated in Section IV.A., if a build alternate is selected, Montgomery County and the City of Gaithersburg would coordinate with area residents to develop traffic calming measures to mitigate the adverse effects of increased traffic volumes in the community and promote safety and pedestrian accessibility. Such measures would serve the purposes of maintaining posted speeds through the neighborhood and school crossing areas, and discouraging the use of the road as a cut-through by non-local residents.

Another indirect effect of the project is the support of economic development areas and improved accessibility to those areas. The improved accessibility helps ensure that the economic development benefits will be evenly distributed to surrounding communities (i.e., increased development without increased congestion), interstate travelers and transit users, through improved ability to get to jobs.

Based on this information there would not be disproportionately high and adverse impacts on minority or low-income populations with any of the alternates under consideration.

3. Disruption of Neighborhoods and Communities

Since I-270 is an existing facility, proposed improvements incorporated in the build alternates under consideration, including Access Option A (Median HOV Ramps) that would widen the footprint of I-270 would not disrupt community cohesion or impact access to community facilities and services, nor produce any adverse changes in social interaction. No new divisions of neighborhoods would occur. The extension of Watkins Mill Road from MD 117 to MD 355, an interchange of Watkins Mill Road and I-270 and improvements to existing intersections are features of the build alternates that would have a greater effect on the neighborhoods and communities. However, these effects would still be minimal since the area that would be traversed by the interchange and new roadway extension is largely vacant and undeveloped at the present time. This is particularly evident on the west side of I-270. The vacant parcel on the east side of I-270 is slated for development with up to 600,000 square feet

of office/research space. On the west side of I-270 up to 1.7 million square feet office/research space plus 1,500 residential units are planned.

East of MD 355, traffic forecasts indicate that Watkins Mill Road would experience an average daily traffic volume of 25,100 in the design year 2020 for the full access build alternates (Alternates 2 and 3), as compared to 20,400 with the No Build Alternate. Recognizing that this increased volume may create a disruption to the Montgomery Village community if a build alternate is selected, the Montgomery County Department of Public Works and Transportation would coordinate with SHA and investigate the implementation of one or more of the traffic calming measures outlined in Section IV.E.

Access Option B (Metropolitan Court Extended) and Option C (MD 124 Access Ramp) would not cause any disruption to neighborhoods and communities since Option B would be located in an area containing existing industrial-research-office development between the MARC/CSX rail lines and MD 117, and Option C would be located on largely vacant land along the east side of the MARC/CSX rail lines where 1.7 million square feet of office/research space plus 1,500 residential units are planned.

4. Effects on Parks and Recreation Facilities

Several of the build alternates under consideration would require right-of-way from publicly owned public parks located in the immediate project area. The parks that would be affected are Seneca Creek State Park, a Maryland Department of Natural Resources facility, which is traversed by I-270, and Middlebrook Hill Neighborhood Conservation Area, a M-NCPPC facility, which is located on the east side of I-270, adjacent to and north of Seneca Creek State Park. Seneca Creek State Park extends from the Potomac River to MD 355, a distance of approximately 15 miles and encompasses over 6,200 acres, while Middlebrook Hill Neighborhood Conservation Area is less than 12 acres in size.

Alternate 2 and Alternate 2 with Access Option A would each require the following parkland impacts: Middlebrook Hill Neighborhood Conservation Area - 0.3 acre, Seneca Creek State Park - 3.7 acres (east side of I-270) and 2.3 acres (west side of I-270).

Alternate 3 would require 0.3 acre of right-of-way from Middlebrook Hill Neighborhood Conservation Area and 3.7 acres (east side only of I-270) from Seneca Creek State Park.

Alternate 4 would not require right -of-way from any publicly owned public parks.

Alternates 4 and 6 with Access Option A would require 0.8 acre of right-of-way from Seneca Creek State Park on the east side of I-270.

Alternates 2, 2A, 3, 4 and 4A would require relocating a small portion of a hiking trail located within the existing right-of-way. This is the result of extending the pier for widening southbound I-270 structure over Great Seneca Creek.

Alternate 6 would not affect any publicly owned public parks. Similarly, Access Options B and C would also not affect any publicly owned public parks.

In accordance with the Department of Transportation Act, 49 U.S.C. 303 (c), a Section 4(f) evaluation of this project's use of land from publicly owned public parks is presented in Section VI.

5. Effects on Access to Community Services and Facilities

All of the build alternates under consideration would, to varying degrees, improve overall access and mobility in the project area.

Access to existing community services and facilities would be impacted by each of the build alternates. These impacts would be the same for any of the build alternates and would occur in the vicinity of the intersection of MD 117 and West Watkins Mill Road as a result of improvements to accommodate left turn movements requiring median construction. The new median construction would create a right-in/right-out situation at two locations: the entrance on the west side of MD 117, north of the intersection, which provides access to Pheasant Run community and the industrial-research-office development, and the entrance on the south side of West Watkins Mill Road, east of the intersection, which provides access to Alexandria Research Center. Since left-turn movements to these entrances would be prohibited, traffic making a left-turn to access these sites would be required to use alternate access points, utilizing Pheasant Run Drive to enter the Pheasant Run area and utilizing MD 117 to enter Alexandria Research Center.

Access Option B would provide improved access for general use traffic to the Metropolitan Grove MARC Station and would provide bicycle and pedestrian accommodation alongside Metropolitan Court extended.

Access Option C would impact the majority of parking at the Montgomery County property used to store vehicles which is located in the northwest quadrant of the I-270/MD 124 interchange, adjacent to the MARC/CSX rail lines. This option would provide direct access from I-270 to the Master Planned Corridor Cities Transitway (light rail or bus) Station, as well as a relocated Metropolitan Grove MARC Station on the east side of the CSX tracks, via MD 124. Option C would also provide an access road for the planned economic development on the east side of the CSX tracks to the transit station (s) and would have bicycle and pedestrian access on

the north part of the new access road between the relocated MARC Station and Watkins Mill Road extended.

The No Build Alternate consists of routine maintenance, minor construction projects and developer-based improvements associated with new developments, and these minor improvements would not be expected to affect accessibility in the project area.

B. Economic Impacts

1. Effects on Regional Business

The I-270 corridor is a vital, growing extension of the Washington Metropolitan regional economy. This interstate continues to be a focal point of major commercial development.

The No Build Alternate would not help address the planned growth needs of the county, and, in particular, the project area. This alternate is anticipated to have a negative impact on the county's business by not providing improved access to and from the transportation network to support economic development. Based on traffic and access in the area, the City of Gaithersburg and Montgomery County have deemed infrastructure improvements necessary to handle existing, as well as approved and pending development in the project area. On overall regional business, the No Build Alternate would have only a minor impact since businesses attracted to the region will select a location which is or will be accessible to the transportation network.

The build alternates would provide improved access and mobility in the area. Alternates 2, 2A and 3 propose a full range of movement interchange and would fully address the growth needs of the County and have a positive effect on regional business activities. Access Options B and C would further improve mobility in the area by improving access from I-270 and Watkins Mill Road Extended to the Metropolitan Grove MARC Station. These options would enhance the area's ability to accommodate and serve planned economic development. It is envisioned that projected development will be associated with large corporate companies who are seeking high visibility sites which are accessible from I-270. Alternates 4, 4A, 6, and 6A would not provide full range of movements to and from I-270, while those alternates would to varying degrees improve access and mobility, they would not fully address the growth needs of the County.

None of these parking impacts would be substantial.

2. Effects on Local Business

The No Build Alternate would not require the relocation or displacement of any business in the project area. This alternate would not provide improved levels of access and mobility to

serve planned economic development in designated growth areas. Several development plans have been awaiting a determination of master plan improvements to the transportation network. Planned developments would accommodate 2.3 million square feet of new office/research space development and 2.3 million square feet of office/research space re-development. Improved access and mobility are important to accommodate this approved economic development.

None of the build alternates under consideration or access options would result in any business displacements.

Alternate 2 would require a total of 45.5 acres of right-of-way acquisition from 31 local businesses. Relocation of parking for three businesses would be required to accommodate the proposed right-of-way requirement.

Alternate 2 with Access Option A would require a total of 49.7 acres of right-of-way acquisition from 31 local businesses. Relocation of parking for three businesses would be required to accommodate the proposed right-of-way requirement.

Alternate 3 would require a total of 49.2 acres of right-of-way acquisition from 26 local businesses. Relocation of parking for three businesses would be required to accommodate the proposed right-of-way requirement.

Alternate 4 would require a total of 31.8 acres of right-of-way acquisition from 22 local businesses. Relocation of parking for one business would be required to accommodate the proposed right-of-way requirements.

Alternate 4 with Access Option A would require a total of 37.7 acres of right-of-way acquisition from 23 local businesses. Three businesses would require the relocation of parking to accommodate the proposed right-of-way requirements.

Alternate 6 would require a total of 25.8 acres of right-of-way acquisition from 14 local businesses. One business would require the relocation of parking to accommodate the proposed right-of-way requirements.

Alternate 6 with Access Option A would require a total of 32.6 acres of right-of-way acquisition from 22 local businesses. Two businesses would require the relocation of parking to accommodate the proposed right-of-way requirements.

The build alternates under consideration would result in parking impacts at several of the area businesses as described below.

Alternate 2, Alternate 2 with Access Option A, Alternate 3 and Alternate 4 with Access Option A would each impact parking at the following businesses: Tektronics/US Humane Society, located in the northeast quadrant of the proposed I-270/Watkins Mill Road Extended interchange; Gaithersburg North Research and Development Center, located along the east side of I-270 on Professional Drive; and King Used Cars, located in the southeast quadrant of the intersection of MD 355 and Watkins Mill Road.

Alternate 4 and Alternate 6 would each impact parking at King Used Cars.

Alternate 6 with Access Option A would impact parking at Gaithersburg North Research and Development Center and King Used Cars.

Access Option B would impact parking at Alexandria Research Center, located in the southeast quadrant of the intersection of MD 117 and West Watkins Mill Road, and the adjacent business to the south in the Clopper Research and Development Park.

None of these parking impacts would be significant enough to put the businesses out of operation.

3. Effects on the Tax Base

The selection of the No Build Alternate would not provide improved access to and from the transportation network to accommodate and support planned economic development and this may have a detrimental effect on continued development in the project area.

The improvements proposed under the build alternates and access options would support planned economic development in designated growth areas through improved levels of access and mobility. The expansion of residential and commercial areas will have a positive effect on the County's tax base and revenues.

Of the build alternates under consideration, construction of Alternate 2 or Alternate 2 with Access Option A would remove one residential property from the tax base of the County, resulting in some initial revenue reduction; however, the overall impact is expected to be minimal. None of the build alternates would result in any business displacements. Over the long-term, there may be a net increase in the tax base as development and re-development occur in the study area.

C. Land Use Impacts

The 1997 City of Gaithersburg Master Plan and 1990 Amended Gaithersburg Vicinity Master Plan recognize the need for the transportation network to accommodate planned future development. Both master plans recommend the extension of Watkins Mill Road between MD 117 and MD 355. The City of Gaithersburg Master Plan also recommends an interchange at I-270 and Watkins Mill Road Extended. Future land use and development densities planned in designated growth areas in northern Gaithersburg are based on the provision of these transportation linkages. The build alternates, therefore, would not alter the ultimate intensity or pattern of land use development and re-development envisioned in these Master Plans.

Alternates 2, 3 and 4, along with all Access Options, are all consistent with the local master plans since each alternate proposes the extension of Watkins Mill Road between MD 117 and MD 355 (included in the Gaithersburg Vicinity Master Plan and the City of Gaithersburg Master Plan) and an interchange at Watkins Mill Road Extended and I-270 (included in the City of Gaithersburg Master Plan).

Alternate 6, along with all Access Options, is consistent with the Gaithersburg Vicinity Master Plan since it proposes the extension of Watkins Mill Road between MD 117 and MD 355. However, this project alternate is inconsistent with the City of Gaithersburg Master Plan since it does not propose an interchange at Watkins Mill Road Extended and I-270.

The build alternates facilitate new access to designated growth areas and it is not expected that they would place additional development pressure on any low growth areas in the general vicinity, nor cause or encourage land uses that are not compatible with area master plans.

The No Build Alternate is not consistent with the local master plans. Much of the planned development could occur through developer based projects, however full development potential could not be achieved under the No Build Alternate which would not provide an extension of Watkins Mill Road over I-270 or an interchange. Details of the permitted development and associated staging plans is included in Section V.H. - Secondary and Cumulative Effects Analysis.

D. Impacts to Cultural Resources

Concurrence in a no effect determination to significant cultural resources including historic standing structures and archeological sites was received on October 13, 2000, from the Maryland Historical Trust (see Section VII. Comments and Coordination). Concurrence in a no effect determination was received because there are no significant historic standing structures in

the project area and there is no evidence to suggest that any of the three archeological sites: #18MO554, #18MO553, and #18MOX100 would warrant preservation in place.

E. Natural Environment

1. Effects on Geology, Topography, and Soils

a. Geology and Topography

The build alternates under consideration would change the overall existing topographic conditions within the Watkins Mill Road Extended project area. None of the grades of the proposed alternates would exceed 6.0 percent, however, cutting and filling would be involved with each alternate. Alternates 2, 2A, and 3 would each involve a maximum cut of 42 feet, Alternate 4 would involve a maximum cut of 30 feet, and Alternate 6 would involve a maximum cut of 17 feet. Since the depth to bedrock within the study area is generally between two and nine feet, deep cutting and grading may impact the underlying geology of the study area. The maximum fill associated with each alternate would be 44 feet.

b. Soils

The No Build Alternate would have no effects on soils within the study area. However, the build alternates would result in disturbance of soils, including erosion and increased runoff, due to construction activities and loss of vegetation in the area. Areas with steep slopes would be modified by cut and fill activities, and soil profiles would change within the construction zones. Urban land soils (disturbed) would become more common throughout the study area, due to an increase in pavement and impervious surfaces.

The following table presents the mapped soil types for that portion of the study area that would be affected by the construction of the proposed Watkins Mill Road extension and the I-270 interchange, and the reported erosion hazard associated with each of these soil types.

SOIL EROSION HAZARDS

Soil Series	K – Value*	Depth to Bedrock (in.)
Gaila silt loam, 3-8% slopes (1C)	0.37	>60
Glenelg silt loam, 3-8% slopes (2B)	0.49	>60
Baile silt loam, 0-3% slopes (6A)	0.43	>60
Brinklow-Blocktown channery silt-loam, 15-25% slopes (16D)	0.24	25-30 (soft); >35 (hard phyllite)
Occoquan loam, 3-8% slopes (17B)	0.37	40 to 60
Occoquan loam, 8-15% slopes (17C)	0.37	40 to 60
Hatboro silt loam, 0-3% slopes (54A)	0.49	>60
Blocktown channery silt loam, 15-25% slopes (116D)	0.24	10 to 20

* K-value is a measure of the soil's erodibility based on a scale of 0.05 to 0.69. A K-value greater than 0.35 indicates that a severe potential for erosion exists for the corresponding soil series. For each soil series the maximum K-value for the profile was reported.

Source: USDA Soil Survey for Montgomery County, Maryland, 1995.

A majority of the soils in the study area occur on moderate and steep slopes and have a severe erosion hazard classification. Measures to protect soils from erosion would be implemented in accordance with an approved Erosion and Sediment Control Plan prepared in accordance with the *Maryland Standards and Specifications for Soil Erosion and Sediment Control.* Control measures would include: utilizing vegetation to stabilize sediment, reducing the amount of time and the area of a surface exposed to erosion; and utilizing appropriately sized sediment traps and sediment basins. Additional protection of surface water quality from impacts due to soil erosion are reported for highway construction projects in Maryland due to the designation of construction contractors as co-permittees on the NPDES Permit that is issued under Maryland's General Permit for construction activities, and implementation of a regular inspection program for construction site sediment control devices that includes penalties for inadequate maintenance.

c. Prime Farmland Soils

Review of the Soil Survey of Montgomery County, Maryland (USDA, 1995) indicates that prime farmland soils, including the Gaila and Glenelg soil series, are found in a farm field and a forested area located west of I-270 and east of the Baltimore and Ohio rail line. Since these areas are zoned for residential and commercial development, a Farmland Conversion Impact Rating Form AD 1006, was not completed for this project.

2. Water Resources/Aquatic Habitat

a. Surface Water Effects

The study area is located within the Great Seneca Creek watershed. Water resources within the study area include:

- A 1,100 linear feet reach of Great Seneca Creek which flows along the western boundary of the study area,
- One unnamed tributary to Great Seneca Creek which flows approximately 5,280 linear feet through the study area in a southeast to northwest direction parallel to I-270,
- One intermittent stream, which flows approximately 600 linear feet in a west to east direction toward the unnamed tributary to Great Seneca Creek discussed above, and
- Approximately 5,280 linear feet of Long Draught Branch, which flows through the southern portion of the study area in a southeast to northwest direction. None of the build alternates impact this resource

The No Build Alternate would not have an effect on the water resources of the study area. However, each build alternate would impact the stream channel dimensions, pattern, and profile, through bridging, relocation, or culverts. Tables V-2 through V-8 present the linear feet of stream impacts for Alternate 2, 2A, 3, 4, 4A, 6, and 6A. Table V-9 presents total linear feet of stream that would be impacted by each build alternate.

TABLE V-2
ALTERNATE 2 STREAM IMPACTS
(LINEAR FEET)

Stream	Bridge	Culvert	Relocation	Culvert Extension/ Relocation
Great Seneca Creek	210	0	0	0
Great Seneca Creek Tributary	390	250	1,070	570
Intermittent Tributary of Great Seneca Creek Tributary	0	440	0	0

TABLE V-3
ALTERNATE 2A STREAM IMPACTS
(LINEAR FEET)

Stream	Bridge	Culvert	Relocation	Culvert Extension/ Relocation
Great Seneca Creek	220	0	0	0
Great Seneca Creek Tributary	390	250	1,070	570
Intermittent Tributary of Great Seneca Creek Tributary	0	440	0	0

TABLE V-4
ALTERNATE 3 STREAM IMPACTS
(LINEAR FEET)

Stream	Bridge	Culvert	Relocation
Great Seneca Creek	130	0	0
Great Seneca Creek Tributary	415	200	1,840
Intermittent Tributary of Great Seneca Creek Tributary	0	620	0

TABLE V-5
ALTERNATE 4 STREAM IMPACTS
(LINEAR FEET)

Stream	Bridge	Culvert	Relocation
Great Seneca Creek	60	0	0
Great Seneca Creek Tributary	415	200	0
Intermittent Tributary of Great Seneca Creek Tributary	0	620	0

TABLE V-6
ALTERNATE 4A STREAM IMPACTS
(LINEAR FEET)

Stream	Bridge	Culvert	Relocation
Great Seneca Creek	70	0	0
Great Seneca Creek Tributary	415	200	160
Intermittent Tributary of Great Seneca Creek Tributary	0	620	0

TABLE V-7
ALTERNATE 6 STREAM IMPACTS
(LINEAR FEET)

Stream	Bridge	Culvert	Relocation
Great Seneca Creek	0	0	0
Great Seneca Creek Tributary	400	0	0
Intermittent Tributary of Great Seneca Creek Tributary	0	440	0

TABLE V-8
ALTERNATE 6A STREAM IMPACTS
(LINEAR FEET)

Stream	Bridge	Culvert	Relocation
Great Seneca Creek	60	0	0
Great Seneca Creek Tributary	400	0	160
Intermittent Tributary of Great Seneca Creek Tributary	0	440	0

TABLE V-9
SUMMARY OF STREAM IMPACTS
(LINEAR FEET)

Name	Use	Alternate						
		2	2A	3	4	4A	6	6A
Great Seneca Creek	I-P	210	220	130	60	70	0	60
Great Seneca Creek Tributary	I-P	2,280	2,280	2,455	775	935	400	560
Intermittent Tributary of Great Seneca Creek Tributary	I-P	440	440	620	620	620	440	440

Stream Geomorphology Impacts

The area with the potential for the greatest impact to stream resources lies just to the north of the proposed Watkins Mill Road Extended crossing of I-270. The Great Seneca Creek tributary in this area has already been significantly altered by the construction of I-270 and the installation of water and sewer lines. The stream flows roughly parallel to I-270 in this area, and has been channelized along the toe of slope of the highway for approximately 300 feet. A 48" water line and 18" sewer line are located in the stream valley, and also are oriented in a parallel direction. Alternates 2, 2A, 3, 4, 4A, 6, and 6A would all impact the stream channel to varying degrees in this area. The extent of stream impact and feasibility of mitigation will be substantial factors in the selection of an alternate. Of the two full interchange alternates, Alternate 3 is substantially less impactive and easier to mitigate than is Alternate 2.

There are a variety of stream channel types that may be impacted by the build alternates, and these stream types will exhibit varied responses to disturbance. The stream baseline information collected for this area will be used to devise appropriate avoidance and minimization measures and to guide future relocation or restoration if required. If a build alternate other than one of the avoidance/minimization options presented in this document (i.e., Mainline Eastern Shift and C-D Western Shift) is selected, avoidance and minimization efforts will be incorporated into final design and may include bridging, steepened side slopes with stabilization measures, retaining walls, and natural channel design principals. I-270 and the existing buried utilities impose considerable restrictions on future relocation or restoration.

Surface Water Quality Effects

For all alternates under study, highway runoff is a potential source of pollutants to surface water resources. Constituents in highway runoff are listed in Table V-10. The No Build Alternate would not be expected to result in long-term changes in water quality conditions. The long-term effects on water quality from the build alternate would be related to the increase in impervious area created by each of the alternates, and the potential changes to stream channel dimensions, pattern and profile that would accompany stream relocations, culvert and bridge construction. Changes to stream channel dimensions, pattern and profile result in long-term changes in water quality by changing natural sediment transport and biologic function.

Alternate 2, with the Mainline Eastern Shift and C-D Western Shift Options, has been studied to avoid relocating approximately 750 LF of the Great Seneca Tributary along the southbound (west) side of I-270 that would result under Alternates 2 and 2A. The Mainline Eastern Shift and C-D Western Shift Options would have the same traffic operations as Alternate 2, but would minimize the extent of stream impact and relocation. Refer to Figure V-1 showing a plan of the Mainline Eastern Shift Option and Figures V-2 and V-3 showing a plan of the C-D Western Shift Option.

IDENTICAL TO ALT. 2
NORTH OF THIS LINE

IDENTICAL TO ALT. 2
EAST OF THIS LINE

IDENTICAL TO ALT. 2
SOUTH OF THIS LINE

IDENTICAL TO ALT. 2
WEST OF THIS LINE

W-62C
W-102
W-B63W
W-B63E
W-6A
W-6B
N421
N354
N440
N411
N453
P424
P445
P446
P447
P448
P449
P450
P451
P452
P453
P454
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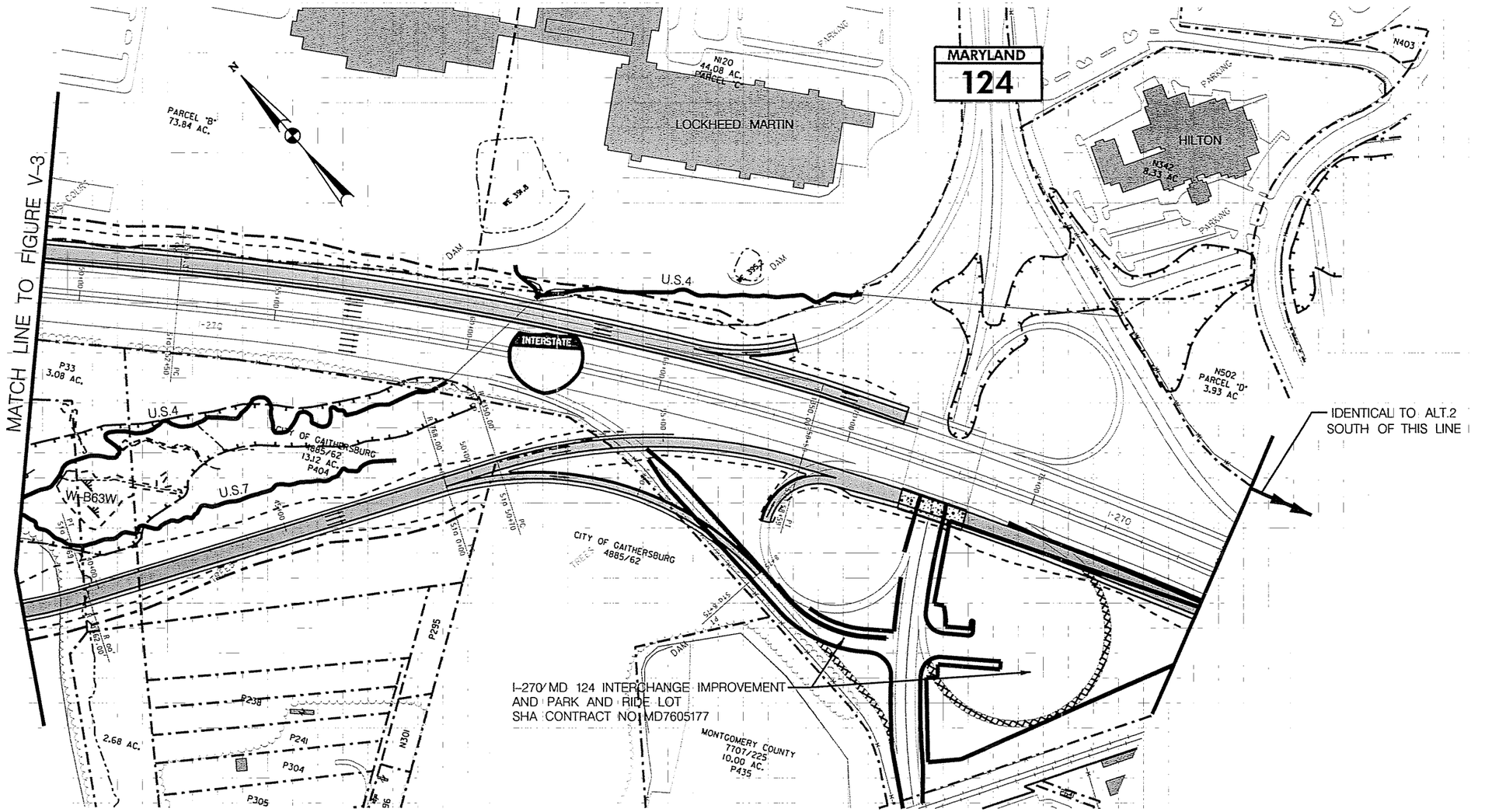

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 – WESTERN C-D SHIFT MINIMIZATION OPTION
I-270 STA. 149+00 TO STA. 180+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	V-3

TABLE V-10
HIGHWAY RUNOFF CONSTITUENTS

Suspended Solids (SS)	Particulates in suspension affecting turbidity
Volatile Suspended Solids (VSS)	Estimate of the inert and organic fraction of the suspended solid component
Total Kjeldahl Nitrogen (TKN)	Reduced forms of nitrogen including ammonia nitrogen and organic nitrogen; provides a measure of eutrophication potential of receiving water
Total Organic Carbon (TOC)	Organic carbon in runoff which may be correlated with BOD and COD
Chemical Oxygen Demand (COD)	Portion of organic matter that is susceptible to complete oxidation by a chemical oxidant
Total Nitrogen (TN)	Measure of the eutrophication potential of runoff; includes nitrite nitrogen, nitrate nitrogen, organic/ammonia nitrogen
Total Phosphorous (TP)	Measures the total nutrient load in runoff and eutrophication potential from orthophosphates and polyphosphates
Lead (Pb)	Toxic heavy metal derived from tire wear and combustion of leaded fuels
Zinc (Zn)	Toxic heavy metal derived from tire wear
Copper (Cu)	Toxic heavy metal derived from automobile and brake wear

The Great Seneca Creek watershed consists of approximately 35 square miles of land with approximately 21 percent impervious land cover. The construction of Watkins Mill Road Extended and the associated I-270 interchange would increase impervious area within the watershed by less than one percent. Additionally, the construction of Stormwater Management facilities designed to control post-construction stormwater runoff to pre-developed (pervious site) conditions would minimize the potential long-term effects on water quality associated with the impervious area. Current stormwater management regulations require both stormwater quality and quantity control measures. Stormwater management facilities that would be considered for implementation include infiltration devices, bioretention areas, retention ponds, extended detention ponds, vegetated swales and natural depressions.

All stream waters in the study area are designated Use 1-P by the Department of the Environment. Therefore, in-stream construction will be prohibited from March 1st to June 15th. A Waterway Construction Permit will be required from the Maryland Department of the Environment, Water Management Administration.

Best Management Practices (BMP's), to control stormwater runoff, and sediment and erosion control measures would be applied to protect stream quality. BMP's which would be considered for use include extended detention, infiltration, ponds and grassed swales. If necessary, any increased runoff to the streams caused by the increase in impervious area due to additional pavement would be addressed with quantity control stormwater management.

The increase in runoff of pollutants such as soils, nutrients, organics, heavy metals, lead, petroleum, and other highway salts resulting from the increase in traffic would be addressed with quality control stormwater management. The increase in impervious surface area resulting from the proposed improvements will produce a proportionate increase in the amount of roadway runoff carrying vehicle generated pollutants (i.e., oil, coolants, braking lining, rubber, etc.). Infiltration of stormwater runoff would be investigated as a means to provide quality control by filtering the runoff through the soil.

Water quality indices (e.g., parameters that quantify sediment, nutrients, bacteria, oxygen demand, etc.) for all streams affected should remain in the permissible range. The use of Best Management Practices (BMP's) to provide sound stormwater management would be implemented where any disturbance could affect water quality in the corridor.

Stormwater runoff for the project will be managed in accordance with the State of Maryland Department of the Environment's "Stormwater Management Guidelines for State and Federal Projects". These regulations will require stormwater management practices in the following order of preference:

- On-site infiltration;
- Flow attenuation by open vegetated swales and natural depressions;
- Stormwater retention structures; and
- Stormwater detention structures.

It has been demonstrated that these measures can substantially reduce pollutant loads and control runoff. Stormwater management areas will be identified during the final design phase.

To minimize water quality impacts, final design for the proposed improvements will include plans for grading, sediment and erosion control, and stormwater management, in accordance with State and Federal laws and regulations. Final plans require review and approval by the Maryland Department of the Environment, Water Management Administration. Sediment and erosion control measures will be designed and implemented in accordance with the "1991

Maryland Standards and Specifications for Soil Erosion and Sediment Control". Typical temporary sediment control measures which are installed in a project of this type include straw bale structures, slope silt fence, sediment traps, rip-rap linings, fiberglass erosion stops, dikes and swales, soil stabilization matting and stabilized construction entrances. The area disturbed by the construction will be held to a minimum and revegetated promptly after grading to minimize the potential for erosion and sedimentation.

Potential changes to stream channel dimensions, pattern and profile caused by stream relocations, culverts and bridges would be addressed in the design process to minimize the potential for long-term channel instability.

b. Groundwater Effects

The No Build Alternate would not affect groundwater in the study area. Each of the build alternates has the potential to affect groundwater in proportion to the conversion of existing pervious land cover (forests, open fields) to impervious surface created by the construction. Highway construction influences aquifer recharge areas by:

- direct conversion of permeable surfaces to impermeable surfaces,
- increased stormwater runoff rates, and
- potential introduction of highway derived stormwater contaminants to aquifers.

It is not anticipated that any of the build alternates would result in long-term adverse effects on groundwater. Although the conversion to impermeable surfaces reduces groundwater recharge, the amount of impervious surface represented by each of the build alternates is insignificant in terms of the total recharge area of the underlying aquifers. Additionally, existing Stormwater Management regulations require the control of post-construction stormwater to pre-construction pervious conditions through the use of Best Management Practices that address both the quantity and quality. Finally, the depth to the shallowest aquifer, based upon well records for the project area generally exceeds one hundred feet in depth.

3. Floodplains

The No Build Alternate would not affect the 100-year floodplain within the study area, however the construction of each of the build alternates would require the crossing of the Great Seneca Creek Tributary 100-year floodplain in various locations. Table V-11 presents the total acreage of floodplain that would be impacted by each build alternate.

TABLE V-11
ACRES OF FLOODPLAIN IMPACTED

Alternate	Acres of Floodplain Impacted
2	7.84
2A	7.87
3	6.44
4	0.90
4A	2.10
6	0.40
6A	1.60

Pursuant to the Flood Hazard Management Act of 1976 and in accordance with the Executive Order 11988, Floodplain Management, federal funds may not be used to support incompatible floodplain development unless no practical alternate exists. Based upon the FEMA-mapped 100-year floodplains, build Alternates 2 and 2A would involve the greatest 100-year floodplain impacts (in excess of 6 acres), and alternate 6 would involve the least impact (less than 0.5 acre.)

The estimated impacts to 100-year floodplains shown in Table V-11 are associated with bridge and culvert construction and stream relocation activities. Because of the need to extend the existing crossing of Great Seneca Creek and to cross the unnamed tributary of Great Seneca Creek with the interchange ramps, impacts to the 100-year floodplains cannot be avoided. Long-term impacts to 100-year floodplains are not expected to occur, because final designs will be based on detailed hydraulic studies to verify FEMA's 100-year floodplain elevations and determine appropriate culvert sizes. By incorporating these results into the final design plans, SHA should be able to avoid long-term floodplain impacts and maintain existing floodplain functions.

These estimates are based on preliminary structure lengths. Final determination of Structure Type 1 length will be made during the design phase of the project.

The State Highway Administration will prepare a detailed hydrologic and hydraulic study for the Selected Alternative during final design to identify the existing 100-year storm discharge and floodplain. Stormwater management will be provided and all hydraulic structures will be designed to accommodate the 100-year storm without causing substantial impact.

The use of standard hydraulic design techniques for all waterway openings which limit upstream flood level increases and approximate existing downstream flow rates will be utilized where feasible.

Use of state-of-the-art sediment and erosion control techniques and stormwater management controls will ensure that none of the encroachments would result in risks or impacts to the beneficial floodplain values or provide direct or indirect support to further development within the floodplain.

In accordance with the requirements of FHPM 6-7-3-2, which is a FHWA guideline for ensuring compliance with Executive Order No. 11988, the impacts of each encroachment have been evaluated to determine if it is a significant encroachment. A significant encroachment would involve one of the following:

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

Preliminary analyses indicate that no significant floodplain impacts are expected to occur as a result of any proposed build alternates. A floodplain finding, if required, will be presented in the final environmental document.

4. Effects on Hazardous Materials/Waste Sites

Visual inspection of the project area and a review of federal and state hazardous waste site databases reveals that underground storage tank facilities, nuclear materials handlers, Resource Conservation and Recovery Act generator facilities, and a Comprehensive Environmental Response, Compensation, and Liability Act, No Further Remediation Planned facility are located on-site and adjoining the study area. However, none of these facilities are located within the alignments for any of the alternates, and all of these facilities are currently in compliance with state and federal regulations. Therefore, these facilities do not pose an environmental threat to the study area at this time.

5. Wetlands

A Jurisdictional wetland field delineation, conducted jointly with SHA, MCDPWT, MDE, FHWA, USFWS, City of Gaithersburg, EPA, MDR and the COE in February 1998 and April 1999, identified ten wetlands within the project area, namely Wetlands W-6A, W-6B, W-6C, W-6D, W-6E, W-B63W, W-C63E, W-62A ,W-62 B and W-102.

The proposed Build Alternates have been designed with the intention of avoiding or minimizing harm to these wetlands, in accordance with Executive Order 11990. Federal, state, and local regulations require the mitigation and/or compensation for the unavoidable loss of wetland habitats. A joint federal and state Section 404 Corps of Engineers permit is required for any disturbance to wetlands associated with the alternates. Wetland mitigation would be coordinated with the US Corps of Engineers, Maryland Department of Environment, Maryland Department of Natural Resources, and the US Fish and Wildlife Service. Mitigated wetlands would closely resemble the wetlands disturbed by construction activities.

Table V-12 presents total acreage of impacted wetlands for each build alternate.

TABLE V-12
IMPACTED WETLAND AREA (ACRES)

Affected Wetland	Classification	Alternate						
		2	2A	3	4	4A	6	6A
W-6C	PFO1C/E	0.09	0.09	0.09	0.09	0.09	0.09	0.09
W-B63W	PFO1A/C	0.25	0.25	0.25	0.25	0.25	0.23	0.23
W-C63E	PEM1A	0.02	0.02	0.02	0	0.02	0	0.02
W-62A	PEM1A/ PFO1A	0.38	0.38	0	0	0	0	0
W-62C	PEM1A	0.34	0.38	0.34	0	0.18	0	0.18
TOTAL		**1.08**	**1.12**	**0.70**	**0.34**	**0.54**	**0.32**	**0.52**

The following is a description of each wetland and the impacts associated with each of the build alternates.

Wetland W-B63W (See Figure III-6B)

Wetland W-B63W is located along the Great Seneca Creek tributary from Wetland 105 to the intersection of the Great Seneca Creek tributary and I-270. This wetland includes several palustrine forested and palustrine emergent wetlands with the largest being approximately 1.80 acres in size (See Figure III-6D).

A palustrine forested wetland with a seasonally flooded/saturated water regime (PFO1C/E) is located south of the proposed Watkins Mill Road extension. Hydrologic indicators include inundation, saturated soils, drainage patterns, and oxidized rhizospheres. The wetland is dominated by red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), spicebush (*Lindera benzoin*), skunk cabbage (*Symplocarpus foetidus*), false nettle (*Boehmeria cylindrica*), and fowl manna grass (*Glyceria striata*). Soils exhibited low chroma colors and mottles.

Two intermittent streams drain into the Great Seneca Creek tributary south of the forested wetland. A palustrine-forested wetland with a temporarily/seasonally flooded water regime (PFO1A/C) is located in the Great Seneca Creek tributary floodplain, approximately 100 feet south of these intermittent streams. Hydrologic indicators include drainage swales and oxidized rhizospheres. The wetland is dominated by red maple (*Acer rubrum*), black gum (*Nyssa sylvatica*), spicebush (*Lindera benzoin*), skunk cabbage (*Symplocarpus foetidus*), and gill-over-the-ground (*Glecoma herderacea*). Soils exhibited low chroma colors, gleying, and mottles.

A palustrine emergent wetland with a seasonally flooded water regime (PEM2C) is located along a narrow drainage swale, which parallels the west side of the Great Seneca Creek tributary and flows into the tributary approximately 150 feet south of the forested wetland. The wetland receives hydrology from groundwater seeps and overbank flooding. Additionally, drainage patterns were observed. Dominant vegetation includes skunk cabbage (*Symplocarpus foetidus*). Soils exhibited low chroma colors, gleying, and mottles.

A palustrine emergent wetland with a seasonally saturated water regime (PEM1/2E) is located on the east side of the Great Seneca Creek tributary, north of its intersection with I-270. Hydrologic indicators include saturated soils, water marks and drainage patterns. Dominant vegetation includes skunk cabbage (*Symplocarpus foetidus*), arrow-leaved tearthumb (*Polygonum sagittatum*), big-leaved arrowhead (*Sagittaria latifolia*), halbred-leaved tearthumb (*Polygonum perfoliatum*), and false nettle (*Boehmeria cylindrica*). Soils exhibited low chroma colors, mottles, and gleying.

Roadway Extension/Interchange

Alternate 2, 2A, 3, 4, and 4A are expected to impact 0.25 acre of wetland B63W, as a result of roadway and associated grading. Alternate 6 and 6A are expected to impact 0.23 acre of Wetland B63W.

Avoidance (Wetland W-B63W/Alts. 2, 2A, 3, 4, 4A and 6)

Avoidance of Wetland W-B63W could be accomplished by lengthening the proposed Watkins Mill Road structure over I-270 approximately 50 feet. The costs associated with lengthening this structure for each Alternate as follows:

Alternate 2	-	$1,050,000
Alternate 3	-	$1,130,000
Alternate 4	-	$ 775,000
Alternate 6	-	$ 685,000
Alternate 2A	-	$1,130,000
Alternate 4A	-	$ 865,000
Alternate 6A	-	$ 685,000

Minimization (Wetland W-B63W/Alts. 2, 2A, 3, 4, 4A and 6)

The impact to W-B63W could be minimized to a 0.15 acre impact by reducing the slope ratio of the supporting slope for the abutment. It is proposed to be a 2:1 slope and could possibly be steepened to 1:1 with the use of geotextiles to mechanically stabilize the embankment.

Wetland W-C63E (See Figure III-6B)

Wetland W-C63E is located east of I-270 and south of Game Preserve Road, on the southwestern boundary of the IBM property. The wetland was classified as palustrine emergent with a temporarily flooded water regime (PEM1A). The wetland receives hydrology from the stormwater management pond and a rising groundwater table. Dominant vegetation includes blue vervain (*Verbena hastata*), arrow-leaf tearthumb (*Polygonum sagittatum*), soft rush (*Juncus effusus*), nutsedge (*Cyperus esculentus*), and jewelweed (*Impatiens capensis*). Soils were identified in the Soil Survey for Montgomery County (USDA, 1995) as Baile silt loam, which is listed as hydric (State of Maryland, 1990). Wetland W-C63E is 0.02 acre in size.

Roadway Extension/Interchange

Alternate 2, 2A, 3, 4A, and 6A are expected to impact 0.02 acre of Wetland C63E, as a result of roadway and associated grading.

Avoidance (Wetland W-C63E/Alternates 2 and 3)

Avoidance of W-C63E could be accomplished with the construction of a 100 feet ± long by 30 feet ± wide cantilevered structure at a cost of approximately $500,000.

Minimization (Wetland W-C63E/Alternates 2 and 3)

The impacts to Wetland W-C63E could be minimized to 0.01 acre by reducing the overall width of the proposed typical section. This could be accomplished by incorporating a painted collector distributor road in lieu of the proposed barrier separated facility. The painted collector-distributor road would cost less than the barrier separated facility but would not be as safe.

Wetland W-62A (See Figure III-6A)

Wetland W-62A is located west of I-270 and north of Great Seneca Creek, outside of the study area. A portion of the wetland was classified as palustrine emergent with a temporarily flooded water regime (PEM1A). This wetland was dominated by common reed (*Phragmites australis*), arrow-leaf tearthumb (*Polygonum sagittatum*), soft rush (*Juncus effusus*), rice-cut grass (*Leersia oryzoides*), and barnyard grass (*Echinochloa muricata*). A portion of the wetland was classified as palustrine, forested, broad-leaved deciduous, with a temporarily flooded water regime (PFO1A). This wetland is dominated by green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), box elder (*Acer negundo*), winterberry (*Ilex verticillata*), arrow-wood (*Viburnum dentatum*), skunk cabbage (*Symplocarpus feotidus*), and whitegrass (*Leersia virginica*). Soils were identified in the Soil Survey for Montgomery County (USDA, 1995) as Hatboro silt loam, which is listed as hydric (State of Maryland, 1990). The delineated portion of Wetland W-62A is 0.92 acre in size as shown in Figure III-6A. The total size of the wetland is not known since it extends westward beyond the limits of our study.

Roadway Extension/Interchange

Alternates 2 and 2A are expected to impact 0.38 acre of Wetland W-62A as a result of roadway and associated grading.

Avoidance (Wetland W-62A/Alternate 2)

Avoidance of W-62A could be accomplished by the construction of an 800 feet ± long by 19.5 feet ± (average height) retaining wall at a cost of approximately $1,030,000.

Minimization (Wetland W-62A/Alternate 2)

The impact to Wetland W-62A could be minimized to 0.18 acre by reducing the overall width of the proposed typical section. This could be accomplished by incorporating painted striping to delineate lanes on the collector-distributor road in lieu of the proposed barrier separated facility.

Avoidance (Wetland W-62A/Alternate 2A)

Avoidance of W-62A could be accomplished by the construction of an 800 feet ± long by 19.5 feet ± (average height) retaining wall at a cost of $1,030,000.

Minimization (Wetland W-62A/Alternate 2A)

The impact to Wetland W-62A could be minimized to 0.18 acre by reducing the overall width of the proposed typical section. This could be accomplished by incorporating painted striping to delineate lanes on the collector-distributor road in lieu of the proposed barrier separated facility.

Wetland W-62C (See Figure III-6A)

Wetland W-62C is located east of I-270 and north of Great Seneca Creek, outside of the study area. The wetland was classified as palustrine emergent with a temporarily flooded water regime (PEM1A). The wetland is dominated by soft rush (*Juncus effusus*) and whitegrass (*Leersia virginica*). Soils were identified in the Soil Survey for Montgomery County (USDA, 1995) as Hatboro silt loam, which is listed as hydric (State of Maryland, 1990). The delineated portion of Wetland W-62C is 0.45 acre in size as shown in Figure III-6A. The total size of this wetland is not known since it extends eastward beyond the limits of our study.

Roadway Extension/Interchange

Alternates 2 and 3 are expected to impact 0.34 acre of Wetland W-62C, Alternate 2A is expected to impact 0.38 acre of Wetland 62C, and Alternates 4A and 6A are expected to impact 0.18 acre of Wetland 62C, as a result of roadway and associated grading.

Avoidance (Wetland W-62C/Alternate 2)

Avoidance of Wetland W-62C could be accomplished by the construction of 300 feet ± long by 45 feet ± wide cantilevered structure at a cost of approximately $2,200,000.

Minimization (Wetland W-62C/Alternate 2)

The impact to Wetland W-62C could be minimized to 0.27 acre by reducing the overall width of the proposed typical section. This could be accomplished by incorporating a painted collector-distributor road in lieu of the proposed barrier separated facility.

Avoidance (Wetland W-62C/Alternate 2 - Option A)

Avoidance of Wetland W-62C could be accomplished by the construction of an 800 feet± long by 50 feet ± wide cantilevered structure at a cost of approximately $2,450,000.

Minimization (Wetland W-62C/Alternate 2-Option A)

The impact to Wetland W-62C could be minimized to 0.31 acre by reducing the overall width of the proposed typical section. This could be accomplished by incorporating a painted collector-distributor road in lieu of the proposed barrier separated facility.

Avoidance (Wetland W-62C/Alternate 3)

Avoidance of Wetland W-62C could be accomplished by the construction of a 300 feet ± long by 45 feet ± wide cantilevered structure at a cost of $2,200,000.

Minimization (Wetland W-62C/Alternate 3)

The impact to Wetland W-62C could be minimized to 0.27 acre by reducing the overall width of the proposed typical section. This could be accomplished by incorporating a painted collector-distributor road in lieu of the proposed barrier separated facility.

Avoidance (Wetland W-62C/Alternate 4 - Option A and Alternate 6 - Option A)

Avoidance of Wetland W-62C could be accomplished by the construction of a 300 feet ± long by 35 feet (average height) retaining wall at a cost of $1,000,000.

Minimization (Wetland W-62C/Alternate 4 Option A and Alternate 6 Option A)

The impact to W-62C could be minimized by reducing the slope ratio of the supporting fill slope. The proposed slope ratio is 2:1, but could be steepened through the use of geotextiles.

Wetland W-6C (See Figure III-6B)

Wetland W-6C is 0.09 acre in size and is located along the extension of Watkins Mill Road approximately 1,100 feet east of the CSX railroad tracks. Wetland 6-C is classified as a palustrine forested wetland with a seasonally flooded/saturated water regime (PF01C/E). The dominant vegetation in the canopy layer consists of *Platanus occidentalis* (sycamore) and *Acer Rubrum* (red Watkin maple). The shrub layer contains dominant vegetation that includes *Ilex verticillata* (winterberry) and *Lindera benzoin* (spicebush). The dominant vegetation in the herbaceous layer is *Cinna arundinacea* (stout woodreed). Soils in the wetland are mapped as Gaila silt loam, which is listed as highly erodible land by NRCS. An inclusion of Baile silt loam is also located within this area and is listed as hydric by NRCS.

Avoidance (W-6C/Alternates 2, 2A, 3, 4, 4A and 6)

Avoidance of W-6C could be accomplished by the construction of a 150 feet long by 90 feet wide bridge at a cost of $2,000,000.

Minimization

Due to the proximity of the wetland in relation to the extension of Watkins Mill Road, there is no practical minimization option. A bridge that is shorter in span length than the 150-foot bridge described under the Avoidance section above could minimize impacts, but would cost in excess of $1 million and would not be practical given that the wetland is less than 0.1 acre in size. Since the entire wetland is under the proposed road bed, a shift in the alignment is the only possible minimization measure. However, there are four wetlands (W-6A, W-6B, W-6C and W-6D) somewhat evenly spaced, perpendicular to Watkins Mill Road, and shifting would only result in impacts to the another wetland. It is not possible to shift enough to miss all four wetlands given the CSX railroad crossing and connecting to existing West Watkins Mill Road. In addition, this is the alignment as described in both the City of Gaithersburg Master Plan and the Gaithersburg Vicinity Master Plan .

In summary, total potential impacts are not substantial under any build alternate, and it is anticipated that mitigation requirements will be fulfilled during final design.

6. Wildlife and Terrestrial Habitats

The forested land within the study area provides habitat for deer, rabbits, fox, various species of birds, and other native wildlife. New road construction, increased noise, and clearing of forests would reduce the quality of these habitats. Species diversity and populations would be

impacted proportionally to the amount of habitat that is disturbed by the proposed construction. The acreage of woodland affected by each alternate is presented in Table V-13.

TABLE V-13
AFFECTED WOODLANDS

Alternate	Woodlands Affected (Acres)
1	0
2	31.33
2A	33.05
3	25.03
4	19.79
4A	21.80
6	12.02
6A	15.55

In addition to direct loss of habitats and deterioration of remaining habitats, the proposed build alternate would further fragment ecosystems within the study area. Fragmentation disrupts ecosystem structure and function and would be detrimental to those species requiring large home range. Loss of habitat for forest interior dwelling species (FIDS) due to fragmentation is of special concern in Maryland. Alternate 2, 2A, 3, 4, 4A, 6 and 6A would to varying degrees cause loss of habitat for FIDS.

Fragmentation of discrete habitat types is adverse since the edge zone which exists between two habitats generally supports a higher diversity of wildlife. Alternate 2, 2A, 3, 4, and 4A would result in the separation of a large portion of upland forest from the nearby floodplain and water resources. In addition to habitat fragmentation, each of the build alternate would create barriers to wildlife migration both within and between habitat types. Barriers to migration would be undesirable if areas used for forage are separated from nesting or roosting areas.

The Maryland Forest Conservation Act (FCA) enacted in 1991 mandates that one acre of reforestation must be provided for each acre cleared. The build alternate for this project would comply with regulations set forth in the FCA.

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The Maryland Forest Conservation Act (FCA) enacted in 1991 mandates that one acre of reforestation must be provided for each acre cleared. The build alternate for this project would comply with regulations set forth in the FCA.

a. Rare, Threatened or Endangered Species

Coordination with the USFWS and the MDDNR indicates that no state or federally listed rare, threatened, or endangered species are known to exist within the study area and therefore, would not be affected by any of the Build Alternates. However, correspondence with MDDNR indicated that two species of state concern (which is a lower and unregulated ranking than Rare) could potentially occur in the vicinity of the study area; American bittern (*Botaurus lentiginosus*), and Opelousus smartweed (*Polygonum opelousanum*). American bittern primarily inhabits areas of open marshland and lakes that do not occur within the study area. The American bittern may transiently use the wetlands and water within the study area. Opelousus smartweed is a variation of Water-pepper (*P. hydropiperoides*) that occurs in shallow water and wet soils along coastal plains (Brown, 1984). The study area is located in the Piedmont physiographic province and has no open marshlands or lakes. Field surveys were not conducted for either of these species.

F. Noise Impacts

1. Noise Prediction Methodology

a. Federal Highway Administration Standards/SHA Guidelines

The effects of noise from the proposed roadway extension and interchange are judged in accordance with the Federal Highway Administration as established by 23 Code of Federal Regulations (CFR) part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The FHWA criterion shown in Table I are based on specific land uses and are used in determining the need to study noise attenuation. All locations within the study area are of land use category B, which has an exterior design noise level of 67 dBA.

For this analysis, the Watkins Mill Road and Interstate 270 (I-270) improvements are considered a Type I project because the proposed construction will alter the traffic patterns in the study area. The Type I study also requires that no build and all build alternates be evaluated for existing noise receptors 20 years into the future. Future noise levels are predicted for the design-year using an FHWA-approved noise prediction model.

The predicted noise levels are presented for the No Build Alternate and Build Alternates 2, 3, 4 and 6, both with and without barriers. Alternates 2A, 4A and 6A would have the same results as Alternates 2, 4 and 6, respectively, as there are no differences between the alternates in the vicinity of the noise sensitive areas. Noise mitigation was only considered for noise sensitive areas that would be impacted by the four proposed build alternates. Watkins Mill Road

Extended will be constructed by Montgomery County. The interchange with I-270 will be designed and constructed using Federal and State funds.

TABLE V-14
FEDERAL HIGHWAY ADMINISTRATION (FHWA)
TITLE 23 OF THE CODE OF FEDERAL REGULATIONS, PART 772
NOISE ABATEMENT CRITERIA (NAC)

Activity Category	L_{eq} (1-hour) (dBA)	Description of Activity Category
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B.
D	--	Undeveloped land.
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Noise is often described as unwanted sound. In this report, noise and sound will be used interchangeably. Sound is a result of rapid variations of sound pressure above and below atmospheric pressure. Sound pressures are described in terms of "sound pressure levels" and are called *decibels* and denoted as dB. When sound pressure levels are measured or estimated, a filter called the "A-Weighting Network" is used to reduce the magnitude of low and very high frequency sounds, much like a human ear does. Sound pressure levels are reported in terms of an A-weighted sound level and expressed in dBA. The A-weighted rating of noise sources corresponds to the human ear's reduced sensitivity to low-frequency sound and correlates well with human perceptions of the annoying aspects of noise, particularly from traffic noise sources.

Moving traffic produces sound levels that vary as vehicles approach and then pass by an observer. The easiest way to quantify the changing sound is to measure or calculate an *average* sound level over some period of time. This single number representation of a variable sound level is called the "*equivalent sound level (L_{eq})*" and contains the same amount of sound energy as the varying sound level measured over a specified time period. For this analysis, the hourly L_{eq} are reported.

Generally, the annoyance associated with noise varies with the magnitude of the noise level, the source of the noise, and the individual's attitude toward the noise and its source. Although the human ear is sensitive, people barely perceive noise level changes of 2-3 dB. People readily perceive a change of 5 dB, and a 10 dB increase in noise level is perceived as a doubling of sound loudness. The following sound level measurements provide context for the noise levels commonly reported in highway noise studies. A quiet rural night is approximately 35 dBA. A quiet suburban night is approximately 40 dBA. A noisy urban day is approximately 75 dBA. A gasoline-engine powered lawn mower at 100 feet is approximately 70 dBA, and a diesel truck at 50 feet is approximately 85 dBA

According to SHA criteria, noise impact occurs when peak-hour traffic (worst case) meets or exceeds one of the following conditions:

- The noise level meets or exceeds 66 dBA
- The noise level increases by 10 dB or more over current levels to reach 57 dBA.

According to SHA criteria, a significant impact occurs if the peak-hour traffic meets or exceeds 72 dBA.

SHA has also established criteria to evaluate both the feasibility and reasonableness of barrier construction, as described in the following sections.

SHA considers barrier construction for noise impact mitigation to be feasible if it meets the following criteria:

- It could reduce noise levels by 7-10 dB or more at impacted receptors with the highest noise levels, usually those nearest the roadway.
- Its placement would not restrict pedestrian or vehicular access.
- It would not cause any safety or maintenance problem.
- It could be constructed, based on topography, drainage, utilities, etc.
- It would not adversely impact a Section 4(f) resource. Section 4(f) resources include publicly owned recreation areas and parks, wildlife areas, conservation areas, and

historic sites that are included on or considered eligible for the National Register of Historic Places.

- Its effectiveness would not be reduced by non-highway noise sources.

SHA considers barrier construction to be reasonable if it meets the following criteria:

- The majority of impacted residences would receive at least a 7-10 dB noise reduction.
- At least 75% of the impacted residents approve of the proposed noise abatement.
- The barrier would not have significant negative visual impact.
- Noise abatement cost would be equal to or less than $50,000 per benefited residence. An impacted residence would benefit from noise abatement if a minimum reduction of 3 dB follows mitigation. Non-impacted residences benefit from noise abatement if mitigation noise levels decrease by 5 dB. The cost per residence is determined by dividing the total barrier cost by the number of benefited residences. A unit cost of $16.54 per square foot is considered to be economically reasonable. When determining the cost per residence, a church or school is considered equal to 10 residences.
- No special circumstances exist (i.e., historical, natural, or cultural significance) that could be affected by the proposed noise abatement.

b. Noise Prediction/Barrier Analysis Methodology Using the FHWA Noise Model

A sound barrier analysis was performed following a multi-step, analytical approach to identify noise impacts and evaluate potential mitigation measures. This approach includes the collection of field noise measurements, which are used to validate the noise impacts predicted by FHWA's Traffic Noise Model (TNM) Version 1.0b. The TNM model was developed by FHWA to assess highway traffic noise levels and mitigation for a specific site. It uses an experimentally and statistically determined reference sound level for each class of vehicle (e.g., automobiles, medium-duty trucks, heavy-duty trucks, buses, and motorcycles), and it incorporates input from traffic data (i.e., volume, truck percentages, speeds) and site characteristics including topography, buildings, and roadway configuration.

The analytical approach to sound barrier analysis is summarized in the following five steps.

Field Data Collection

Ambient noise levels in the study area are measured using the procedures identified in the most recent guidance available.[1] Noise measurement data are collected at receptor locations throughout the study area during a 24-hour period. The 24-hour record for each location is analyzed to identify the one-hour period with the highest noise levels. During the noise data collection, field technicians note non-traffic-related noise sources that could influence background noise levels, such as aircraft overflight or other community noise sources. One-hour classified vehicle counts are also obtained during noise measurement activities.

Model Validation

The TNM model is used to calculate traffic-related noise levels in the project area. The classified traffic count data collected in the field are used as model input for the initial model run. The model results are compared with the field noise measurements to determine whether the model realistically characterizes the acoustic environment within the study area. Model results within 3 dB of field measurements indicate that the model presents a reasonable representation of existing conditions. Differences greater than 3 dB indicate that the model inputs require re-evaluation, potential adjustment or require additional field noise measurements.

Impact Assessment

The validated model of the study area and peak traffic volumes are used to determine the sound levels at locations for each alternate approach or those that exceed the NAC. A Sound Barrier Feasibility Analysis is performed for locations where impacts are predicted.

Sound Barrier Feasibility Analysis

The TNM model is used to determine whether a sound barrier could be constructed in the study area to provide a 7 to 10 dB reduction for impacted residences. The analytical results are used to define the required location, length, and height of the sound barrier to achieve this noise reduction. The feasibility of barrier construction is also considered.

Sound Barrier Reasonableness Analysis

If the analytical results indicate that a sound barrier achieve the desired noise reduction, the potential cost of barrier construction is evaluated to determine whether construction is

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[1] US Department of Transportation, Federal Highway Administration, *Measurement of Highway-Related Noise*, May 1996. Washington, DC.

reasonable. This evaluation considers the cost associated with the barrier, the number of residences that would benefit from the noise reduction, and other factors

2. Noise Prediction Results

Baseline (existing) noise levels and predicted noise levels for the year 2020 without barriers for the no build condition and the four alternate designs are presented in Table II. At noise sensitive areas (NSAs) impacted (> 66 dBA) by traffic on Watkins Mills Road and I-270, a barrier analysis was conducted. Results of the barrier analysis, including feasibility and cost-effectiveness, are shown in Tables V-17 and V-18.

Each NSA will be reevaluated following development of final engineering to verify that effective and reasonable solutions can be implemented. During final engineering, the specific horizontal and vertical location of Watkins Mill Road Extended, and the interchange ramps with I-270 (as appropriate) will be established, and detailed mitigation alternates will be examined at each location. The cost of mitigation for each NSA will be determined based on these detailed studies. Those barriers that meet the SHA criteria will be determined based on these detailed studies. Those barriers that meet the SHA criteria as accepted by FHWA will be constructed.

TABLE V-15
PREDICTED NOISE LEVELS (L_{EQ})

Receptor	Existing Measured Ambient Noise Levels (dBA)	Predicted No-Build Noise Level (dBA)[b]	Predicted Alternate 2 Noise Level (dBA)[c]	Predicted Alternate 3 Noise Level (dBA)[c]	Predicted Alternate 4 Noise Level (dBA)[c]	Predicted Alternate 6 Noise Level (dBA)[c]
NSA A – Gunners View						
1	-[a]	68	70	69	68	68
2	-[a]	67	70	68	67	67
3	60	66	68	67	66	66
NSA B – Caulfield						
4	-[a]	68	70	69	69	68
5	-[a]	68	70	69	69	68
6	65	67	68	68	68	67
7	68	75	77	77	77	76
8	-[a]	64	65	64	64	64
9	54	59	60	59	60	60

[a] Receptor location added for analysis with no ambient measurement.

[b] Predicted no-build noise levels are based upon SHA traffic volume forecasts presented in Appendix C and the existing roadway configuration.

[c] Predicted build noise levels are based upon SHA traffic volume forecasts presented in Appendix C and the proposed roadway configuration for the alternate.

Noise Sensitive Area A

Noise Sensitive Area A consists of receptors R1, R2, and R3 which represent 79 attached townhouses in the Gunners View Community, which is west of I-270 and adjacent to north side of Seneca Creek State Park. The four alternate 2020 build noise levels range from 66 dBA to 70 dBa. Therefore, they all meet the "impacted" SHA criterion of 66 dBA and require that a barrier analysis be performed. From the TNM model, predicted noise levels associated with the no-build condition and build alternates indicate that traffic noise at some receptor locations will increase by 1 to 3 dB compared to the no build conditions. This predicted increase is primarily a result of the change in traffic speed and traffic volume. Under the no-build condition, traffic speed is reduced because of congestion. Under the build alternates, free-flowing traffic conditions with higher speeds produce higher predicted noise levels. Increased traffic volume on I-270 under Alternates 2, 3, and 4 would contribute to higher noise levels, because an interchange would be created between I-270 and Watkins Mill Road.

The barrier evaluated to mitigate noise impacts at NSA A for each build alternate would:

- Be constructed along the west side of I-270;
- Be approximately 1,970 feet long and extend north from the north side of Seneca Creek State Park;
- Reduce noise levels approximately 7 to 11 dB at all 79 residences in the community;
- Incur a total cost between $642,500 and $792,300; and
- Incur a cost per benefited residence between $8,100 and $10,100.

The barriers evaluated for NSA A meet the criteria of $50,000 per resident and the noise level reduction criteria of 7 to 10 dB for all build alternates. Table V-16 provides descriptions of the barriers evaluated for NSA A under each Alternate.

Noise Sensitive Area B

Noise Sensitive Area B consists of receptors R4, R5, R6, R7, R8, and R9, which represent six single-family residences in the Caulfield community, which is west of I-270 and adjacent to the south side of Seneca Creek State Park. The four alternate 2020 build noise levels range from 60 dBA to 78 dBA. Receptors R8 and R9 do not meet or exceed SHA's 66 dBA noise impact level for the No Build or the Build Alternates. Therefore, only four of the six residences are impacted.

Mitigation of noise impacts in NSA B for build Alternates 2, 3, and 4 would require the construction of two separate barriers on the west side of I-270, because these alternates would

include an exit ramp, which the barrier cannot cross. Alternate 6 would require the construction of a single barrier to mitigate noise impacts near NSA B, and would be located on the west side of I-270. For the purpose of comparison, the heights, lengths, and cost information for the two barriers under Alternates 2, 3, and 4 were combined and evaluated as one barrier. The analysis shows that, in general, barriers for all alternates would:

- Range in length from approximately 2,500 to 3,500 feet;
- Range in height from 6 to 26 feet;
- Cost between $837,000 to $1,278,000; and
- Range in cost per benefited residence from $209,000 to $256,000.

The barriers evaluated for NSA B did not satisfy the $50,000 per residence cost criteria for build alternates 2, 3, 4, and 6. Table III-16 provides descriptions of the barriers evaluated for NSA B under each Alternate.

TABLE V-16

SOUND BARRIER DESCRIPTIONS

Location	Alternate	Height (feet)	Length (feet)	Total Cost	Benefited Residences	Cost Per Residence
NSA A	2	6-26	1,972	$642,500	79	$8,130
	3	6-26	1,966	$648,000	79	$8,200
	4	22-26	1,966	$792,300	79	$10,030
	6	6-26	1,966	$709,900	79	$8,990
NSA B	2	10-26	2,715	$949,500	4	$237,380
	3	8-26	3,140	$924,000	4	$231,000
	4	16-24	2,540	$837,600	4	$209,400
	6	8-26	3,462	$1,277,600	5	$255,520

3. Cumulative Effects Analysis

The highway currently identified as I-270 was originally constructed circa 1960 as a limited access highway with two lanes in each direction. A third lane was added in each direction in 1971 and the road was further widened to create four lanes in each direction in 1990. Each of these improvements caused small increases in noise levels for receptors present at the time of the improvements, but they did not warrant noise mitigation during their planning and design phases.

An analysis of the cumulative effects of highway noise was performed to determine whether these previous improvement project would meet SHA's Policy Reasonableness Criterion for noise mitigation. The policy states:

In the assessment of the no-build to build noise level change, consideration will be given to the cumulative effects of highway improvements made after the original highway construction. If the cumulative increase in design-year build noise level is equal to or greater than 3 decibels, noise abatement could be considered reasonable.

The residences and other facilities identified in the study area as noise-sensitive receptors were constructed over many years. The construction dates for these residences and facilities were compared to the dates of previous roadway improvements, and many of the construction dates associated with the receptors preceded certain I-270 improvements.

TABLE V-17
CUMULATIVE NOISE EFFECTS ANALYSIS

Receptor	Construction Dates	Noise Level (dBA)			Cumulative Noise Level Increase (dB)	Meets Reasonableness Criteria (Yes/No)
		Two lanes in each direction	Three lanes in each direction	Projected for this project (Build)[a]		
1	1980	(64) [b]	66	69	3	Yes
2	1980	(64)	65	68	3	Yes
3	1980	(63)	64	67	3	Yes
4	1978	(65)	67	70	3	Yes
5	1976	(65)	67	70	3	Yes
6	1964	64	65	69	5	Yes
7	1969	73	74	77	4	Yes
8	Prior to 1980	(60)	62	65	3	Yes
9	Prior to 1980	(55)	57	60	3	Yes

[a] These noise levels are approximate and within 1 dB of different alternates. See Table V-18, "Noise Analysis Summary," for further details.

[b] Parentheses ( ) indicate the road existed prior to the structure.

As shown in Table V-17, all of the receptors have undergone a cumulative increase in noise levels of approximately 3 dBA or greater, which indicates that they meet SHA's reasonableness criteria. However, Receptors 1 through 5, 8, and 9 do not achieve the 3 dBA criterion for all of the proposed alternates. Refer to Table V-18, "Noise Analysis Summary," for further details.

In conclusion, based on the cumulative noise level increase of 3 dBA or greater and the cost per residence of less than $50,000, noise mitigation warrants further consideration at NSA A. Noise mitigation does not warrant further consideration at NSA B since the cost per residence criteria is exceeded.

TABLE V-18
NOISE ANALYSIS SUMMARY

Receptor	Estimated Date Built	Alternative	Off-Peak Ambient Noise Level (dBA)	Model Validated Noise Level (dBA)	2020 Build Noise Level (dBA)	Baseline Noise Level (dBA)	Change Over Baseline (dBA)	2020 No-Build Noise Level (dBA)	Change Over 2020 No-Build (dBA)	2020 Build Noise Level With Barrier (dBA)	Insertion Loss (dBA)
NSA A - GUNNERS VIEW											
1	1980	2	NA	63	70	66	4	68	2.0	60	10
		3			69		3		1.0	59	10
		4			68		2		0.0	58	10
		6			68		2		0.0	58	10
2	1980	2	NA	63	70	65	5	67	3.0	59	11
		3			68		3		1.0	57	11
		4			67		2		0.0	57	10
		6			67		2		0.0	57	10
3	1980	2	60	62	68	64	4	66	2.0	58	10
		3			67		3		1.0	57	10
		4			66		2		0.0	56	10
		6			66		2		0.0	56	10
NSA B - CAULFIELD											
4	1978	2	NA	63	70	67	3	68	2.0	58	12
		3			69		2		1.0	59	10
		4			69		2		1.0	59	10
		6			68		1		0.0	56	12
5	1976	2	NA	63	70	67	3	68	2.0	58	12
		3			69		2		1.0	59	10
		4			69		2		1.0	59	10
		6			68		1		0.0	57	11
6	1964	2	65	62	68	64	4	67	1.0	58	10
		3			68		4		1.0	58	10
		4			68		4		1.0	58	10
		6			67		3		0.0	58	9
7	1969	2	68	70	77	73	4	75	2.0	62	15
		3			77		4		2.0	64	13
		4			77		4		2.0	64	13
		6			76		3		1.0	62	14
8	prior to 1980	2	NA	60	65	62	3	64	1.0	63	2
		3			64		2		0.0	61	3
		4			64		2		0.0	62	2
		6			64		2		0.0	58	6
9	prior to 1980	2	54	55	60	57	3	59	1.0	59	1
		3			59		2		0.0	58	1
		4			60		3		1.0	59	1
		6			60		3		1.0	57	3

G. Air Quality

1. Objectives and Type of Analysis

This air quality analysis has been prepared in accordance with the US Environmental Protection Agency (US EPA), the Federal Highway Administration (FHWA), and the Maryland State Highway Administration (MD SHA) guidelines. Carbon monoxide (CO) impacts are analyzed as the accepted indicator of vehicle-generated air pollution. The years of analysis were 2010 and 2020. Air pollution modeling was performed by first calculating emission rates then calculating CO concentrations. MOBILE5B was used to calculate vehicle emission rates using model input provided by the Maryland Department of Environment. Vehicle emission rates were used as input into the EPA CAL3QHC dispersion model to predict carbon monoxide (CO) concentrations at air quality sensitive receptors. Detailed analyses were performed for the No Build and Build Alternates for each analysis year, and the results were 1-hour and 8-hour average CO concentrations. Modeled 1-hour and 8-hour average CO concentrations were added to background CO concentrations for comparison to the State and National Ambient Air Quality Standards (S/NAAQS).

2. Construction Impacts

Project-related construction could potentially affect the local ambient air quality through activities such as the generation of fugitive dust during demolition. SHA established guidelines to minimize such effects in "Specifics for Construction and Materials", which provides specific procedures for contractors involved in site work. The Maryland Department of the Environment's (MDE's) Air and Radiation Management Administration (ARMA) was consulted to determine the adequacy of SHA's procedures in terms of satisfying the requirements of the "Regulation Governing the Control of Air Pollution in the State of Maryland." ARMA determined that SHA's specifications are consistent with these requirements. Therefore, all appropriate measures set forth in the Code of Maryland Regulations (10.18.06.03 D) would be implemented to minimize the effects of the proposed transportation improvements on local air quality.

3. Receptor Sites

Eleven (11) air quality receptors were selected to represent sensitive air quality locations within the study area (see Table V-19 and Figure III-7). All receptors were located near intersections and the proposed Interstate 270/Watkins Mill Road interchange. Receptor sites are

located near intersections because CO tends to concentrate in areas where vehicles are idling. Receptor sites included undeveloped lots and parking areas with unrestricted public access. One sensitive air quality receptor is the site of a transient camp, and the second is a residential townhouse development. Receptor locations are presented in Table I and shown in Figures III-6A, III-6B and III-6C.

TABLE V-19
AIR QUALITY RECEPTOR LOCATIONS

Receptor	Location	Description
R-1	MD 355/Watkins Mill Road Intersection – SW Corner	Vacant Lot With Unrestricted Access
R-2	MD 355/Watkins Mill Road Intersection – NW Corner	Vacant Lot With Unrestricted Access
R-3	MD 355/Watkins Mill Road Intersection – SE Corner	King Lincoln/Mercury Lot
R-4	Watkins Mill Road	Montgomery Knolls Townhouse Development
R-5	MD 355	Transient Lot – Campsite
R-6	MD 355	IBM Ball fields
R-7	Professional Drive	Humane Society
R-8	MD 117/Watkins Mill Road Intersection – NW Corner	Technology Park, Commercial Establishment
R-9	MD 117/Watkins Mill Road Intersection – NE Corner	Bennington Corporate Center
R-10	MD 117/Watkins Mill Road Intersection – SW Corner	Technology Park
R-11	MD 117/Watkins Mill Road Intersection – SE Corner	Weinshel Facility

4. Results of Microscale Analysis

A microscale analysis was performed to determine CO concentrations at receptor locations. Results of the CAL3QHC model are summarized in Table V-20. Based on the model, predictions for the No Build and the four build alternates would be less than the 1-hour standard (35 ppm) and the 8-hour standard (9 ppm) set forth in S/NAAQS.

Predicted increases in CO concentrations for 2020 were generally lower for the No Build than the build alternates. However, predicted CO concentrations for the No Build alternate at one receptor located at the MD Route 355/Watkins Mill Road intersection exceed those of

Alternatives 2 and 3. The higher concentration associated with the No Build Alternative may be attributed to increased congestion in the absence of the proposed roadway.

5. Conformity with Regional Air Quality Planning

The Watkins Mill Road Extended project is located in Montgomery County, Maryland, which is designated as SERIOUS non-attainment for ozone (O_3). Montgomery County is not designated as non-attainment for CO and particulate matter (PM10). The proposed project is included in the FY 2001 - 2006 Transportation Improvement Plan (TIP) and the 2000 Washington Area Constrained Long Range Plan (CLRP). The TIP and CLRP have undergone conformity analysis and a new Mobile Emissions Budget has been established for the Washington, D.C.-Maryland-Virginia Nonattainment Area. Therefore, the project is in conformity with regional air quality plans.

6. Analysis Inputs

a. Traffic Data

Traffic data used for this air quality analysis included average daily traffic volumes (ADTs), design hour volumes (DHV), and percent daily distributions (diurnal traffic curves) for both the build and No Build Alternatives. Traffic volumes and diurnal curves were provided by SHA. These data were compiled for each alternative and for each year of study. Highway Capacity Software (HCS) and traffic measurements were used to determine vehicle speeds. A free-flow traffic speed of 35 mph was assumed for I-270 based on traffic measurements during traffic counts. Speeds on MD 355, MD 117, and Watkins Mill Road were estimated to be 15 mph. Traffic data used throughout this study are presented in Appendix.

b. Vehicular Emissions

Mobile source emission factors were obtained for use in the CO prediction models using the latest version of the EPA Mobile Source Emission Factors Model, MOBILE5B, which was released September 14, 1996. The emission rates associated with individual vehicles are influenced by factors such as ambient air temperature, engine temperature, operation mode, average speed, and maintenance. The average emission rate for a fleet of vehicles operating on a highway is further influenced by the composition of the fleet, vehicle type, and vehicle age.

Metropolitan Washington Council of Government, (MWCOG) provided assumptions for these factors used in the project MOBILE5B models. These assumptions included the following:

- Vehicle ambient temperature of 46.5°F.
- MWCOG assumes 20.6% of vehicles are non-catalytic cold start vehicles, 27.3% are catalytic hot start vehicles, and 20.6% are catalytic cold start vehicles.
- MWCOG assumed certain emission credits, which were factored into the emissions rate calculation. Credits were based on the rate of compliance with the Maryland Vehicle Emissions Inspection Program (VEIP).
- MWCOG assumed a certain vehicle age distribution based on car registration data.
- MWCOG assumed emission credits for implementing low emitting vehicle (LEV) regulations.

Based on the MOBILE5B results, emissions factors for idling and running vehicles are shown below. The data are presented for various vehicle speeds for both the 1-hour and 8-hour scenarios in the years 2010 and 2020.

Automobile CO Emission Factors

Year	Running	Idling
2010	16 gm/mile	147 gm/mile
2020	15 gm/mile	143 gm/mile

c. Meteorological Factors

Meteorological conditions utilized for this analysis were selected to determine a worst-case, 1-hour maximum CO concentration. Such worst case 1-hour average analyses conducted for this study were performed using highest 1-hour traffic volumes and Stability Class D or F. A wind speed of 1 m/s - 2 m/s was used since this is the average winter wind speed. Both a.m. and p.m. peaks were analyzed. A maximum 1-hour CO impact was obtained for each air quality receptor by adding the background concentration to the one-hour receptor-specific CO concentration.

To estimate the maximum eight-hour average CO concentration, daily traffic distributions (diurnal curves) were used to separate the ADT's into hourly traffic volumes. Hourly time segments were analyzed to determine the receptor-specific CO concentrations. The worst consecutive eight hours were averaged and added to the background CO concentration to obtain the 8-hour average CO concentration.

d. CAL3QHC Analysis

The mathematical model used to estimate future CO concentrations is the current version of the EPA's CAL3QHC dispersion model, released in June 1993. The CAL3QHC dispersion model is a microcomputer-based modeling methodology developed to predict the level of CO or other inert pollutant concentrations for motor vehicles traveling near roadway intersections. CAL3QHC is a consolidation of EPA's CALINE3 line source dispersion model and an algorithm that internally estimates the length of the queues formed by idling vehicles at signalized intersections.

The CAL3QHC program requires that roadways be modeled as segments known as links. Links can be either free-flow links (roadways in which vehicles moving at a constant velocity) or queue links (roadways at intersections to model idling vehicles). No Build and the Build Alternates would contain both free-flow and queue links since two signalized intersections are present and signals are expected at the intersections of proposed Watkins Mill Road and the I-270 on/off ramps. Each can be one of four types of links based on the roadway geometry (at-grade, fill, bridge, or depresses).

CAL3QHC also requires the input of meteorological factors. These factors are average timing (minutes), surface roughness coefficient (cm), settling velocity (cm/s), deposition velocity (cm/s), wind speed (m/s), and mixing height (m). The values used for these factors were based on guidance for the CAL3QHC model, and are summarized below.

Watkins Mill Road Extended

Meteorological Assumptions

Parameter	Description
Average Timing	60 minutes
Surface Roughness	175 cm
Settling Velocity	0 cm/s
Deposition Velocity	0 cm/s
Wind Speed	1 m/s or 2 m/s
Mixing Height	1000 m
Stability Class	Class D or Class F

In order to calculate the total concentration of CO that occurs at a particular receptor site during worst case meteorological conditions, the background levels are added to the levels directly attributable to the facility under construction. Background levels were derived from the application of rollback methodology to onsite monitoring conducted by the Maryland Air Management Administration at their Bladensburg Site in Prince George's County during the period of 1999.

Background Concentrations Co

Year	1-Hour Concentration (ppm)*	8-Hour Concentration (ppm)
2010	5	3
2020	5	3

Maryland Department of Environment, Air and Radiation Management Administration

*None PPM = parts per million

TABLE V-20
CO CONCENTRATION SUMMARY
CO CONCENTRATION (PPM)

Receptor	2010								2020									
	Alt. 2		Alt. 3		Alt. 4		Alt. 6		No-Build		Alt. 2		Alt. 3		Alt. 4		Alt. 6	
	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr	1-hr	8-hr
R-1	9.8	7.0	9.8	7.0	9.8	8.3	9.7	6.9	7.8	4.0	11.0	7.8	11.0	7.7	11.1	7.7	10.7	7.4
R-2	7.0	4.7	7.0	4.7	7.0	5.4	7.4	4.7	7.0	4.2	10.0	6.0	10.0	5.9	9.8	6.0	9.7	5.7
R-3	7.2	4.8	7.2	4.8	7.2	5.7	7.8	4.9	8.8	5.4	10.6	6.4	10.6	6.3	10.6	6.3	9.8	6.0
R-4	7.3	5.0	7.3	4.9	7.3	5.7	7.5	5.2	8.6	4.6	10.9	6.2	10.9	6.2	8.6	6.2	8.5	5.5
R-5	5.7	3.3	5.7	3.3	5.7	4.1	5.8	3.3	7.4	3.8	8.3	4.2	8.3	4.2	7.7	4.1	6.6	3.7
R-6	5.8	3.5	5.4	3.5	4.7	3.3	4.0	2.5	4.2	2.6	6.4	3.9	6.5	3.7	6.3	3.3	4.6	2.7
R-7	5.3	3.4	5.2	3.2	4.8	3.6	3.9	2.4	4.0	2.5	6.2	3.7	6.2	3.8	6.1	3.6	4.6	2.7
R-8	9.1	5.5	9.1	5.7	9.1	7.0	8.5	5.3	9.1	5.6	12.2	6.7	12.2	6.6	9.7	5.8	11.5	6.8
R-9	10.6	7.0	10.6	7.1	10.6	8.5	10.5	7.0	8.3	5.1	11.6	7.4	11.6	7.6	12.7	7.9	13.8	8.4
R-10	7.0	4.6	7.0	4.7	7.0	5.4	6.9	4.6	10.5	6.1	9.6	5.5	9.6	5.4	7.9	5.3	9.6	5.9
R-11	7.4	5.0	7.4	5.1	7.4	5.8	7.4	5.0	8.7	5.4	9.6	6.4	9.6	6.4	9.7	6.5	10.6	7.1

Note: 1-hour average CO concentrations include a 5.0-ppm background concentration Worst case a.m. or p.m. is shown.
8-hour average concentrations include a 3.0-ppm background concentration.
The S/NAAQS for the 1-hour average is 35.0 ppm.
The S/NAAQS for the 8-hour average is 9.0 ppm.

H. Secondary and Cumulative Effects Analysis

In compliance with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.25(c)), the following analysis examines the secondary and cumulative effects on the environment which may result from this project. The CEQ regulations and guidelines entitled "Considering Cumulative Effects Under the National Environmental Policy Act" define secondary and cumulative effects as follows:

Secondary (Indirect) Effects: "Effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." (40 CFR 1508.8(b))

Cumulative Impacts: "Impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." (40 CFR 1508.7)

Each of the build alternates under consideration is addressed by this secondary and cumulative effects analysis (SCEA).

1. Scoping for the SCEA

a. Description of the Resources Addressed by the SCEA

An initial step in the SCEA process is to identify the resources for which secondary and cumulative effects are to be assessed. The list of resources considered in this SCEA is primarily based on those resources which would be directly impacted by the build alternates under consideration and includes parklands, surface waters, 100-year floodplains, wetlands and woodlands. In addition, the SCEA contains discussions on historic sites, protected agricultural land and agricultural land under development pressure. The build alternates under consideration would not result in direct impacts to National Register eligible historic resources or prime farmland. Effects to threatened or endangered species are not considered in the SCEA because coordination with the US Fish and Wildlife Service and the Maryland Department of Natural Resources indicates that there are no known Federal or State listed threatened or endangered plant or animal species or anadromous fish species located in the project area. There are records for species of concern known to occur within the project site. However, as these species are

unlikely to occur, it is not likely that direct or secondary impacts to these species would occur, and therefore no cumulative impacts would result.

b. Description of the SCEA Boundary

The geographic boundary for secondary and cumulative effects analyses, referred to as the SCEA boundary, is based on a number of sub-boundaries as shown on Figures V-4 to V-6 along with the project's SCEA boundary. The following sub-boundaries were considered in establishing the SCEA boundary: the extent of the alternates under consideration, the area of traffic influence, census tracts and block groups, planning areas, watersheds and sub-watersheds. In addition, the SCEA boundary for the I-270/US 15 Multi-Modal Corridor Study was considered in determining the overall extent of the SCEA boundary for the I-270/Watkins Mill Road Extended project since the project limits for the corridor study encompass the I-270/Watkins Mill Road Extended project area.

The overall SCEA boundary is a synthesis of the aforementioned sub-boundaries. The project's SCEA boundary encompasses the extent of the alternates under consideration, as well as, the area of traffic influence which is the geographic extent to which the I-270/Watkins Mill Road Extended project would affect traffic levels on the nearby roadways. The watershed and sub-watershed delineations used in determining the SCEA boundary are based on the watershed/sub-watershed designations contained in Montgomery County's Countywide Stream Protection Strategy, which provides detailed watershed assessments and descriptions of these sub-watersheds. The project's SCEA boundary is described in detail below (Refer to Figures V-5 and 6). The SCEA boundary lies within three planning areas - City of Gaithersburg, Gaithersburg Vicinity and Germantown and Vicinity.

- Beginning at the southern extremity of the SCEA boundary, at I-270, the SCEA boundary runs northeasterly along the 1990 census tract boundary between tracts 7007.07 and 7007.05 to the watershed boundary between Great Seneca Creek and Muddy Branch.

- It then follows the watershed boundary, easterly, to the sub-watershed boundary of Upper Long Draught which it follows to the Whetstone Run sub-watershed boundary.

- The SCEA boundary runs northerly along the Whetstone Run sub-watershed boundary to the boundary of Census Tract 7007.07.

- It then runs northerly along the census tract boundary of tracts 7007.07, 7008.12 and 7008.11.

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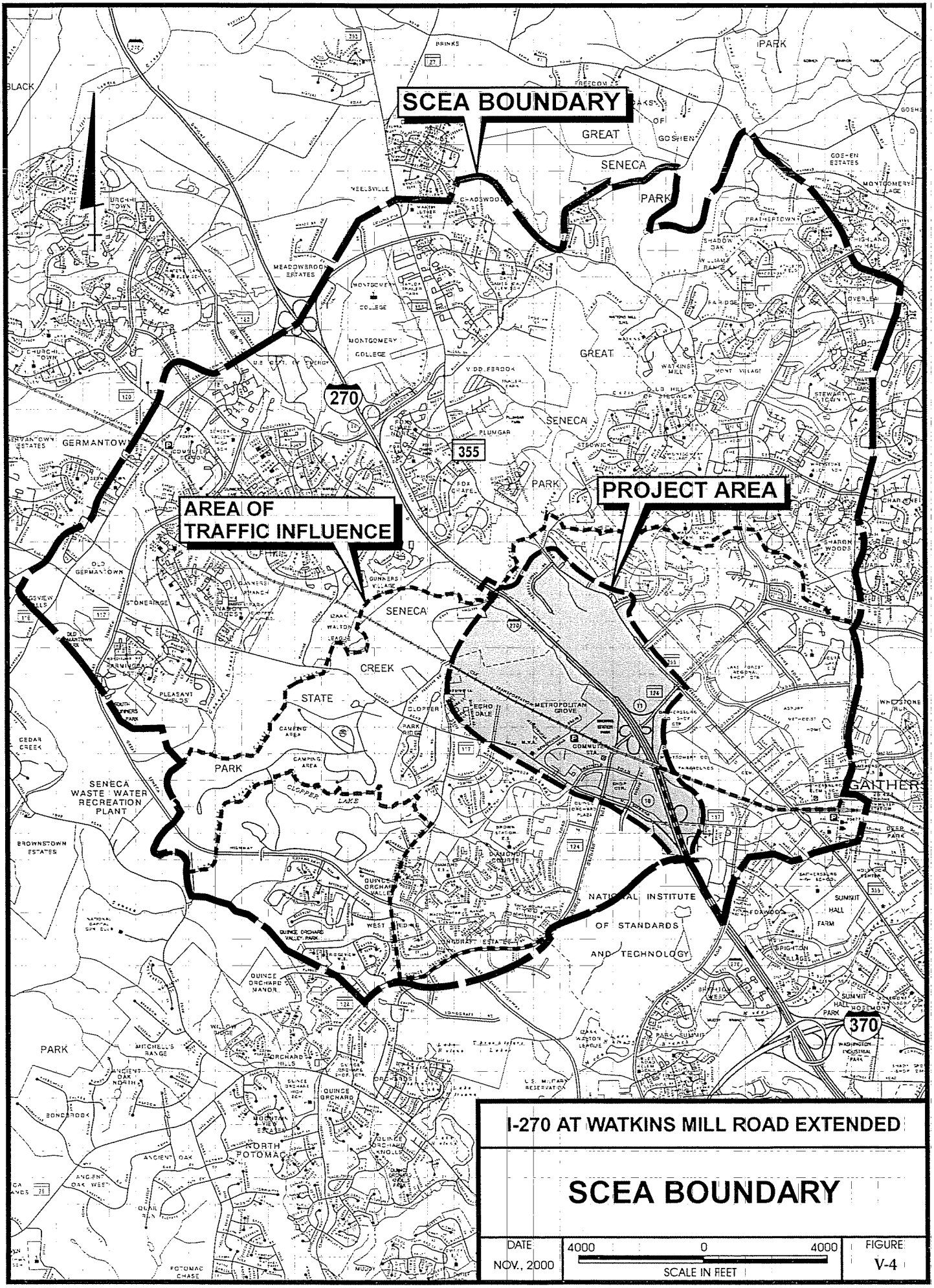

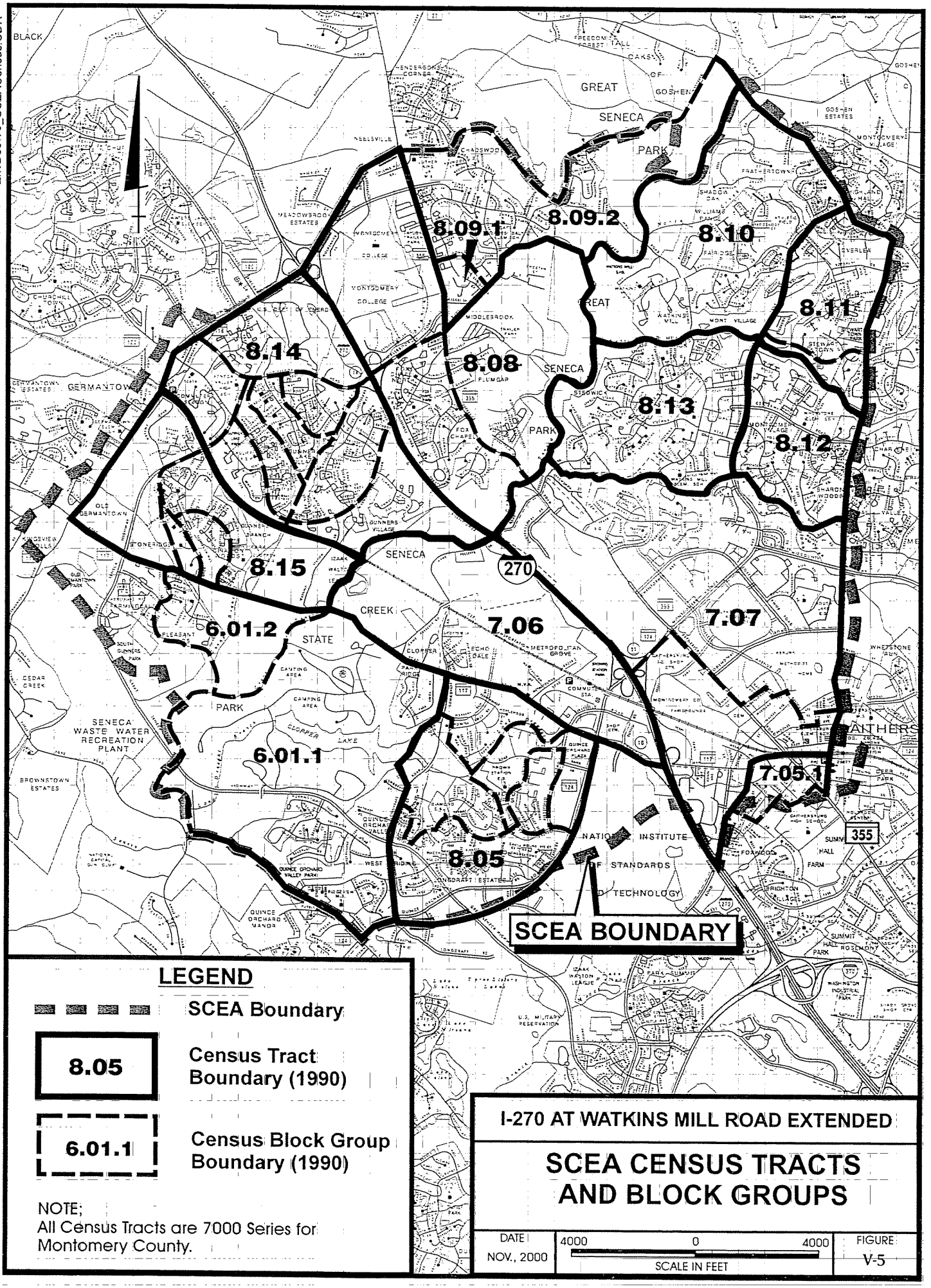
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8.09.1
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8.10
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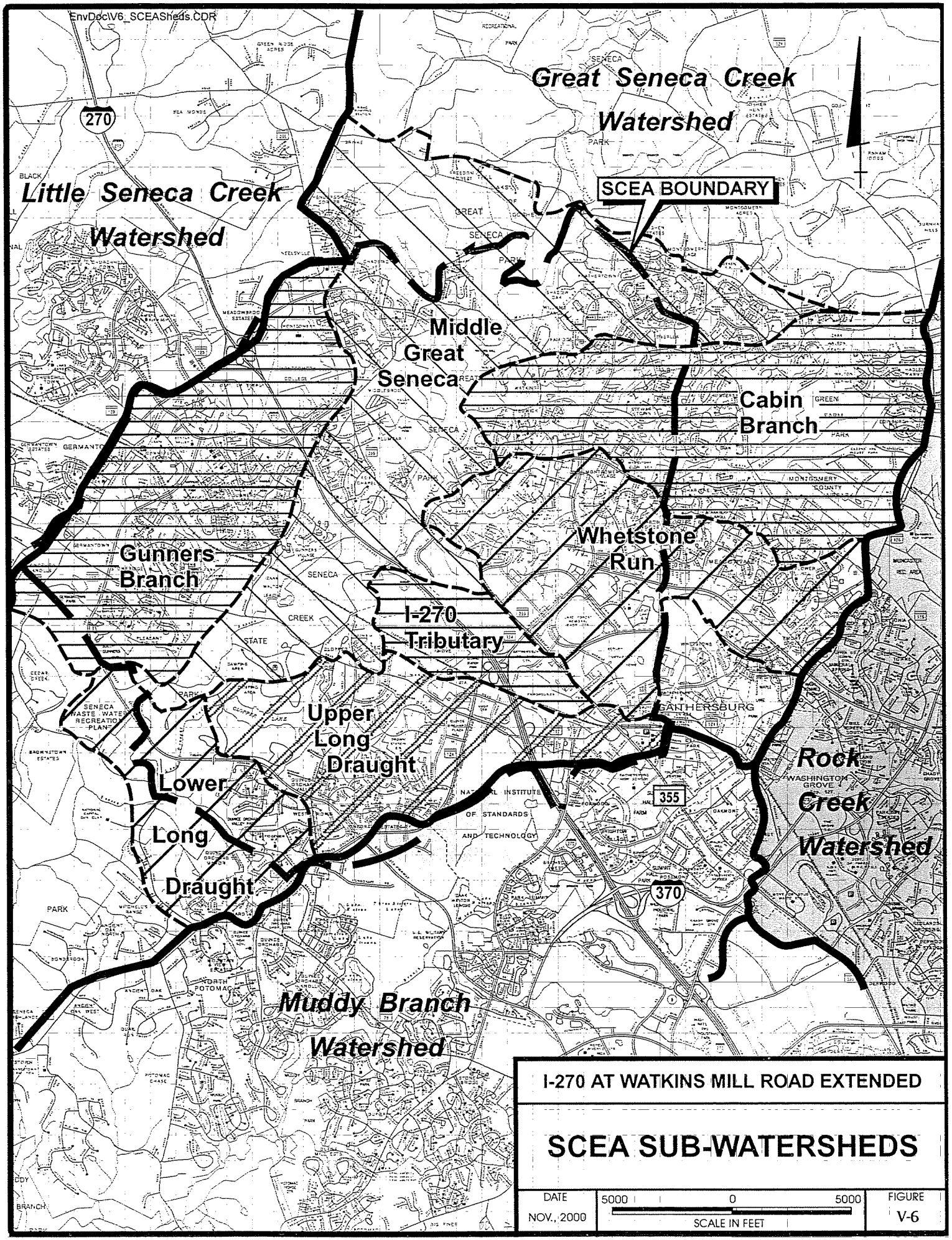
8.13
8.12
8.15
6.01.2
7.06
7.07
6.01.1
7.05.1
8.05
270
355
SCEA BOUNDARY
LEGEND
SCEA Boundary
8.05
Census Tract Boundary (1990)
6.01.1
Census Block Group Boundary (1990)
NOTE;
All Census Tracts are 7000 Series for Montomery County.
I-270 AT WATKINS MILL ROAD EXTENDED
SCEA CENSUS TRACTS AND BLOCK GROUPS
DATE
NOV., 2000
4000
0
4000
SCALE IN FEET
FIGURE
V-5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Great Seneca Creek Watershed
Little Seneca Creek Watershed
SCEA BOUNDARY
Middle Great Seneca
Cabin Branch
Gunners Branch
Whetstone Run
I-270 Tributary
Upper Long Draught
Lower Long Draught
Rock Creek Watershed
Muddy Branch Watershed
270
355
370
I-270 AT WATKINS MILL ROAD EXTENDED
SCEA SUB-WATERSHEDS
DATE
NOV., 2000
5000 0 5000
SCALE IN FEET
FIGURE
V-6

- The SCEA boundary then turns northwesterly and follows the census tract boundary of tracts 7008.11 and 7008.10 to the planning area boundary between Gaithersburg Vicinity and Goshen, Woodfield, Cedar Grove and Vicinity.

- It then runs northwesterly, then southwesterly, along the planning area boundary to the Germantown and Vicinity Planning Area.

- The SCEA boundary then turns northerly and follows the planning area boundary between Germantown and Vicinity and Goshen, Woodfield, Cedar Grove and Vicinity to the boundary of Census Block Group 7008.09.2.

- It then runs westerly along the boundary of Census Block Group 7008.09.2 to the Great Seneca Creek watershed boundary.

- The SCEA boundary runs southwesterly along the watershed boundary between Little Seneca Creek and Great Seneca, follows the boundary of Census Tract 7008.08 for a short distance and then continues along the watershed boundary to the I-270/US 15 SCEA boundary.

- It then turns southeasterly and follows the I-270/US 15 SCEA boundary to the sub-watershed boundary between Gunners Branch and Lower Long Draught-Quince Orchard which it follows to the Middle Great Seneca sub-watershed.

- The SCEA boundary runs southeasterly for a short distance along the sub-watershed boundary between Middle Great Seneca and Lower Long Draught-Quince Orchard and then follows the boundary of Census Block Group 7006.01.1 to the boundary of Census Tract 7006.01.

- It then runs southeasterly along the boundary of Census Tract 7006.01 and then turns northeasterly and follows along the census tract boundaries of tracts 7006.01 and 7008.05 to the watershed boundary between Great Seneca Creek and Muddy Branch.

- The SCEA boundary follows the watershed boundary, northeasterly, to the census tract boundary between tracts 7007.07 and 7008.06 which it follows southeasterly to the beginning point.

c. Temporal Limits of the SCEA

As part of the scoping process, a time frame is defined for the analysis of secondary and cumulative effects. The following events were considered in establishing the time frame for the SCEA which begins in 1980 and is projected through the design year 2020.

I-270 Chronology

- 1950's - The currently designated MD 355 was then called US 240 and in 1950, the construction of US 240 relocated, currently designated I-270, was begun.
- By 1960 - The original US 240 was redesignated as MD 355 and US 240 relocated was designated I-70S and US 240. The currently designated I-270Y (West Spur) was built and designated I-270.
- 1971 - The 3rd lanes were added in each direction between the Y-split and MD 118.
- 1975 - I-70 S was redesignated I-270.
- 1990 - The widening of I-270 to 8-lanes from the Y-split to Middlebrook Road was completed. This included new interchanges at MD 124, Middlebrook Road and I-370. Also, 2-lane CD roads were added to the portion from Montrose Road to the CSX bridge.
- 1996 - I-270 was widened to 3-lanes in each direction from MD 118 to MD 121 and HOV lanes were opened to I-495.

Major events that have occurred within the SCEA boundary include the following:

- The US Department of Energy, located in the northern extremity of the SCEA area, was established in 1977.
- Lakeforest Mall, the largest retail center in the Upcounty area located in the southern portion of the SCEA area, was built in 1978.
- Montgomery Village, a large residential community located in the southeastern portion of the SCEA area, was developed between 1966 and 1999, but underwent its most substantial growth in the 1980's.

In addition, rapid growth was experienced in the following areas:

- Gaithersburg, south of the project area, underwent rapid development in the 1970's making the City of Gaithersburg the fastest growing city in the State at that time.

- Germantown, north of the project area, experienced rapid residential development between 1980 and 1987 when more than 6,570 housing units were constructed which represented more than 60 percent of the entire residential housing stock in existence at that time.

Countywide data from the US Bureau of the Census show that the population in Montgomery County increased much greater during the period 1980 - 1990 than during the previous decade 1970 - 1980. As summarized below, the County experienced a 10.8 percent growth in population during the period 1970 - 1980 while the countywide population grew by 30.7 percent during the period 1980 - 1990.

Population In Montgomery County

1970	1980	1990	% Change 1970-1980	% Change 1980-1990
522,809	579,053	757,027	+10.8	+30.7

According to information from the Maryland Office of Planning (MDP), the total amount of developed land in Montgomery County grew by 8.8 percent during the period 1973 - 1981 and then grew by 23.7 percent during the period 1981 - 1990. Total development in Montgomery County during the period 1973 - 1990 is summarized below.

Developed Land In Montgomery County (Acres)

1973	1981	1990	% Change 1973-1981	% Change 1981-1990
87,996	95,703	118,376	+8.8	+23.7

In light of the above information and taking into consideration that the analysis of secondary and cumulative effects is to be performed using existing readily available data, the past time frame for the project's SCEA is 1980. The future time frame for the SCEA is the year 2020 which is the design year for the I-270/Watkins Mill Road Extended project.

2. Analysis

a. Methodologies

A combination of methodologies is used to assess secondary and cumulative effects to each SCEA resource considered. Quantified data is used if readily available but for the most part, the SCEA is presented qualitatively.

Separate discussions are provided for secondary effects and cumulative impacts to the SCEA resources considered. Secondary effects are discussed based on information contained in area master plans regarding potential development subject to staging constraints in conjunction with transportation improvements to Watkins Mill Road. For cumulative impacts from past actions, information is provided on past impacts to the resource and trends, if available. Various data sources were used to gather this information, including published literature and mapping from local, state and federal government offices, as well as, interviews with key personnel in these offices. Past land uses are compared to present land uses and related to impacts to a particular resource over time. For cumulative effects from future actions, a qualitative discussion of impacts to resources based on the future land use scenario within the SCEA boundary is provided in the context of the current regulatory framework.

b. Past, Present and Future Land Use Within the SCEA Boundary

Within the SCEA time frame (1980-2020), past, present and future land use within the SCEA boundary is identified. Based on available land use/land cover data from the Maryland Office of Planning (MDP), land use within the SCEA boundary in 1981 and 1997 is used to represent the past and present land use scenarios, respectively. Land use in 1990 is also identified to provide an intermediate condition between the past and present. Information from the land use plans contained in the area master plans for City of Gaithersburg, Gaithersburg Vicinity and Germantown and Vicinity is used to depict the future time frame (2020) for the SCEA. Land uses within the SCEA boundary include the following: residential, commercial, industrial, institutional, employment, mixed use, open space/parkland, open urban land, agriculture and forest. Countywide land use in 1981 and 1990 is also identified based on information from the MDP publication, "Maryland's Land, 1973-1990, A Changing Resource". Table V–21 depicts land use in Montgomery County and Table V–22 summarizes land use within the SCEA boundary. Present (1997) land use in the SCEA is shown on Figure V-7.

EnvDocIV7_97LandUse.CDR

LEGEND

- Residential
- Institutional
- Commercial
- Industrial
- Forest
- Open Urban Land
- Agriculture
- Park
- SCEA Boundary
- Project Area Boundary

SCEA BOUNDARY

I-270 AT WATKINS MILL ROAD EXTENDED

1997 LAND USE IN THE SCEA

DATE	SCALE IN FEET	FIGURE
NOV., 2000	3000 3000	V-7

TABLE V-21
LAND USE IN MONTGOMERY COUNTY

Land Use	1981 (Acres)	1990 (Acres)	% Change
Low Density Residential	29,528	39,056	+32.3
Medium/High Density Residential	39,592	48,927	+23.6
Commercial/Industrial	8,817	10,521	+19.3
Institutional/Open	15,797	16,072	+ 1.7
Bare Ground	1,969	3,800	+93.0
Agriculture	122,713	107,654	-12.3
Forest	97,564	89,318	- 8.5
Extractive/Barren	592	752	+27.0
Wetland	172	172	0
Water	7,780	8,252	+ 6.1
Total	324,524	324,524	

Source: "Maryland's Land, 1973-1990, A Changing Resource", Maryland Office of Planning

TABLE V-22
LAND USE WITHIN THE SCEA BOUNDARY

Land Use[1]	1981 (Acres)	1990 (Acres)	1997 (Acres)	2020 (Acres)
Residential	2,956	4,291	5,000	5,321
Commercial	828	1,107	1,131	1,102
Industrial	0	50	521	294
Institutional	556	670	962	908
Employment	not categorized	not categorized	not categorized	238
Mixed Use	not categorized	not categorized	not categorized	97
Open Space/Parkland	not categorized	not categorized	not categorized	2,777
Open Urban Land	496	580	575	not categorized
Utility	not categorized	not categorized	not categorized	195
Private Conservation	not categorized	not categorized	not categorized	531
Agriculture	2,668	1,478	437	not categorized
Forest	4,280	3,591	3,457	not categorized
Barren Land	129	263	10	not categorized
Total[2]	11,913	12,030	12,093	11,463

Source: 1981, 1990 and 1997 Land Use – Land Use/Land Cover Maps, Maryland Office of Planning
2020 Land Use – City of Gaithersburg Master Plan, 1997
Gaithersburg Vicinity Master Plan, Amended 1990
Germantown Master Plan, 1989

[1]The various data sources identify specific land uses as differing categories.
[2]Totals vary due to the following: differences in the level of detail provided by the various data sources, and water resources are not included.

Based on the above data for land use within the SCEA boundary, developed land (residential, commercial, industrial, institutional) increased by 75 percent (3,274 acres), from 4,340 to 7,614 acres, during the period 1981-1997. The 2020 developed land (residential, commercial, industrial, institutional, employment, mixed use) totals 7,960 acres. Although different data sources are used for 1997 and 2020 land uses, a comparison of developed land projects an increase of 5 percent (346 acres), from 7,614 to 7,960 acres, during the period 1997-2020.

According to local planners and information contained in the area master plans, the amount of development within the SCEA boundary that is dependent on improvements associated with the I-270/Watkins Mill Road Extended project represents a small portion of the potential development within the entire SCEA boundary. Most of the development can occur regardless of having an interchange at I-270 and Watkins Mill Road. The portion of the

Germantown planning area that is included within the SCEA boundary contains land that is either developed or planned for development that is not dependent on the alternates under consideration. For the most part, the land in the Gaithersburg Vicinity planning area that is included within the SCEA boundary is developed. The City of Gaithersburg, within the SCEA boundary, contains vacant land that is planned for development, as well as, properties planned for re-development. As outlined in the City of Gaithersburg Master Plan, certain roadway improvements must occur before all development can be completed in some of these areas. Development that is dependent on improvements associated with the alternates under consideration is discussed further in Section V.H.3. These development areas are located in the Priority Funding Area (Figure V-8) designated in Montgomery County.

As part of the assessment of cumulative effects, a number of other projects within the SCEA time frame (1980 - 2020), which have been completed, are currently underway, or are planned in the reasonably foreseeable future are identified within the SCEA boundary. This information is largely based on the Maryland State Highway Administration's (SHA) Constrained Long Range Plan (CLRP) and Consolidated Transportation Program (CTP) and Montgomery County's capital construction program. Existing readily available information was used to identify projects and obtain information about them. Some projects had more information readily available than others. Direct impacts from these projects in combination with the impacts from the I-270/Watkins Mill Road Extended project add to the cumulative effects within the SCEA boundary. The identified projects are discussed below and indicated on Figure V-9.

Other Projects Within the SCEA Boundary

- **I-270, Shady Grove Road to Y-Split, Multi-Lane Reconstruction:** Construction began on this SHA project in 1987 and was completed in 1992. It included 2-lane collector-distributor (C-D) roads from Montrose Road to the CSX bridge south of MD 124, only the northern portion of which are located within the SCEA boundary. (See note below for information on environmental impacts.)

- **I-270, South of MD 118 to Shady Grove Road, Eight Lane Reconstruction:** Construction began on this SHA project in 1989 and was completed in 1992. Excluding the southern portion of the project, the remaining portion is located within the SCEA boundary. (See note below for information on environmental impacts.)

- **I-270 (HOV Lanes):** This project was completed by SHA in 1996 and provided widening improvements from Middlebrook Road to north of MD 121, widening the facility (from 4 to 6 lanes). The southern portion of the overall improvements

provided by the project is located within the northern extremity of the SCEA area. (See note below for information on environmental impacts.)

- **I-270 NB (HOV Lane):** This work was completed by SHA in 1996 and consisted of two separate projects that provided modification improvements from south of Montrose Road to MD 124 and from MD 124 to Middlebrook Road. Only the northern portion of the first-listed project limits are located within the SCEA boundary while the second listing of improvement limits is wholly within the SCEA boundary. (See note below for information on environmental impacts.)

- **I-270 SB (HOV Lane):** This project was completed by SHA in 1996 and provided modification improvements from south of MD 118 to I-370. Excluding the southern portion of the project, the remaining portion is located within the SCEA boundary. It should be noted that the HOV lane added between I-370 and MD 121 has not been converted to HOV use but functions as a general use lane. (See note below for information on environmental impacts.)

(Note: The FONSI for I-270, from the Y-split to MD 121 lists the selected alternate as an eight-lane main line flanked by parallel C-D roads with a minimum of two lanes in each direction. The environmental summary includes the following impacts from the selected alternate: water quality - negligible effect, aquatic life - slight decrease in diversity, loss of habitat - 74 acres, wetlands affected - 4.5 acres, floodplains affected - 6 acres, parks - minor).

- **I-270 Interchange at MD 124:** Construction of this project by SHA began July 1999 and is approximately 30 percent completed. Construction is to be completed Spring, 2001. Improvements include closing the I-270 southbound to MD 124 eastbound loop ramp, providing a park and ride lot and modifying the I-270 southbound to MD 124 westbound ramp to accommodate movements to westbound and eastbound MD 124, as well as movements to the new 400 space park and ride lot. This work is contained within the existing right-of-way. This project will eliminate a hazardous weave situation on southbound I-270 and provide needed park and ride spaces in the Gaithersburg area. Impacts with this project were extremely minor, as all improvements were contained within existing right-of-way.

- **MD 117 Corridor Improvements:** SHA Project Planning is underway for improvements to existing intersections on MD 117 from Seneca Creek State Park to I-270. This project has a completion date of 2010 and includes intersection capacity improvements that are needed to relieve existing congestion and provide for approved

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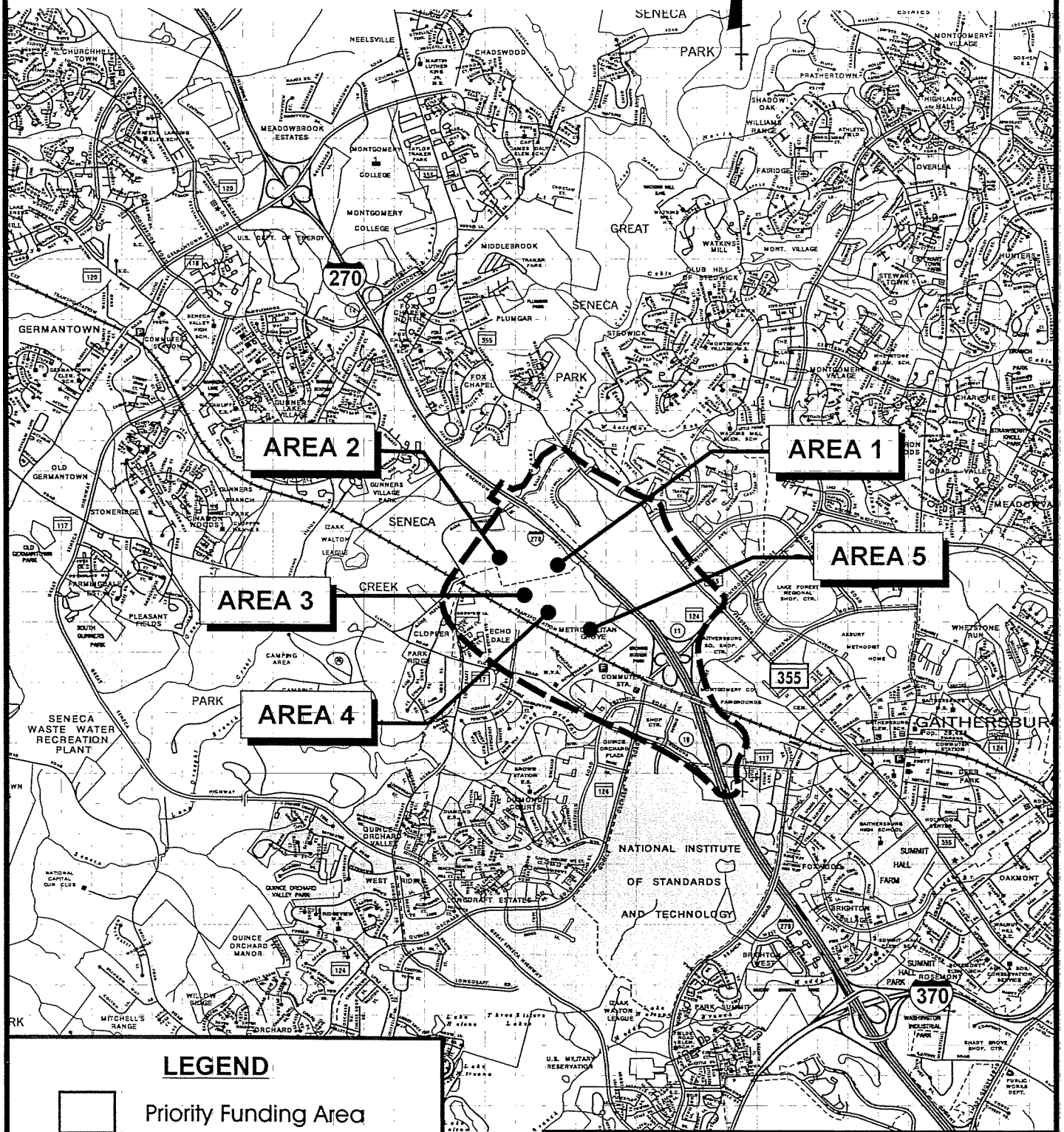

LEGEND

- Priority Funding Area
- Project Area Boundary
- AREA 1 — Development linked to infrastructure Improvements - See Section V.H.3.

I-270 AT WATKINS MILL ROAD EXTENDED

MONTGOMERY COUNTY PRIORITY FUNDING AREA

DATE	SCALE IN FEET	FIGURE
NOV., 2000	4000 0 4000	V-8

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Neelsville Church Road Improvements

118 Extension

Goshen Road at Snouffers School / Wightman Roads Intersection Improvements

SCEA BOUNDARY

MD 118

Middlebrook Center

Wisteria Business Park

Scenery Drive Improvement

Gunners Lake Village

Goshen Road Facility Planning

MD 355 Improvements

MD 118 Relocated

Germantown II Partnership

I-270 Improvements

Goshen Road Bridge # M-61B Replacement

Dunn Property

PROJECT AREA

Watkins Mill Road and Bridge Improvements

Great SENECA Highway Improvements

MD 117 Improvements

Congestion Relief Intersection Improvement Program

Christopher Avenue/Lost Knife Road and Midcounty Highway at Montgomery Village Avenue Intersection Improvements

Kingsview Village Center

MD 117 Corridor Improvements

I-270 Interchange at MD 117

MD 355 Reconstruction

Game Preserve Road Improvements

I-270 Interchange at MD 124

MD 117 Widening

Summit Avenue Bridge Replacement

MD 124 Improvements

I-270 AT WATKINS MILL ROAD EXTENDED

OTHER PROJECTS IN THE SCEA

DATE	3000 0 3000	FIGURE
NOV., 2000	SCALE IN FEET	V-9

and planned development in Germantown. (The draft Categorical Exclusion for this project includes the following environmental impacts: 100-year floodplains - 1.8 acres, wetlands - 0.04 acre, streams - 54 linear feet, 3 significant trees.)

- **MD 124:** The first phase of this project was completed by SHA in 1997 and provided widening improvements (from 2 to 4-lanes) from MD 28 to Longdraft Road. The next phase has a completion date of 2020 and provides widening improvements (from 4 to 6-lanes) within the same limits. Only the eastern portion of this project is located on the extreme western end of the SCEA area. This roadway was originally designed as a six-lane facility and approved under a 1988 FEIS in combination with MD 28 improvements. Widening impacts to four lanes were extremely minor, as they will be when expansion to six lanes occurs.

- **MD 355:** The initial section of this project was completed by SHA in 1996 and provided widening improvements (from 2 to 4-lanes) from Middlebrook Road to MD 27. Excluding the northern portion of this initial section, the remaining portion of the section is located within the SCEA boundary. A subsequent section of this project was completed in 1999 and provided widening improvements (from 2 to 6-lanes) from MD 124 to Middlebrook Road in order to relieve congestion on MD 355. Another phase of widening improvements (from 4 to 6-lanes) for the section of MD 355 from Middlebrook Road to MD 27 is scheduled for completion in 2010. (The Environmental Assessment for MD 355, from MD 27 to MD 124, lists Alternate 3 as providing 6-lanes. The summary of impacts includes the following impacts from Alternate 3: wetlands - 1.34 to 2.02 acres, floodplains - 1.90 to 2.56 acres, parklands - 4.38 to 4.61 acres, woodlands - 8.4 acres).

- **Goshen Road Facility Planning:** In the planning stage, this project by Montgomery County will provide widening improvements (from 2 to 4-lanes) from Girard Street to Warfield Road. Excluding the eastern portion of the project, the remaining portion is located along the southern end of the SCEA area. Information on environmental impacts was not readily available from Montgomery County.

- **Great Seneca Highway:** Not currently under construction, this project by Montgomery County will provide widening improvements (from 4 to 6-lanes) from Middlebrook Road to MD 124. Excluding a small segment centrally located within the project, the remaining portion is located within the SCEA boundary. Information on environmental impacts was not readily available from Montgomery County.

- **MD 117:** This project was completed by Montgomery County in 1999 and provided reconstruction and widening improvements (from 2 to 6-lanes) from existing MD 118 to relocated MD 118, approximately 600 feet. Information on environmental impacts was not readily available from Montgomery County.

- **MD 118 Relocated:** This work was completed by Montgomery County in 1999 and consisted of two separate projects which relocated MD 118 to the north of the existing alignment from south of MD 117 to MD 117 and from MD 117 to Wisteria Drive, a total of approximately 1.2 miles. The new roadway is a 6-lane facility. Information on environmental impacts was not readily available from Montgomery County.

- **MD 118:** This project has been completed by Montgomery County. It provided a 6-lane facility on a new alignment to the south of the existing MD 118 from MD 355 to I-270, approximately 0.8 mile. Information on environmental impacts was not readily available from Montgomery County.

- **MD 118 Extension (Germantown Road):** The initial section of this project has been completed by Montgomery County. It provided a 3-lane facility which extended MD 118 Relocated from MD 355 to Scenery Drive. A subsequent section, currently in the detailed design stage, will extend MD 118 as a 3-lane facility from Scenery Drive to Watkins Mill Road and is scheduled for completion in 2004. Information on environmental impacts was not readily available from Montgomery County.

- **Watkins Mill Road and Bridge:** This project was completed by Montgomery County in 1998 and provided widening improvements (from 1 or 2-lanes to 4-lanes) from north of Travis Avenue to Watkins Mill Drive. Information on environmental impacts was not readily available from Montgomery County.

- **I-270 Interchange at MD 117:** Final engineering and right-of-way acquisition by SHA are underway for construction of a new I-270 northbound to MD 117 eastbound ramp, a park and ride facility inside the loop ramp in the northeast quadrant, and the widening of MD 117 to allow it to operate at an acceptable level of service. This project will provide needed park and ride spaces in the Gaithersburg area and will provide access to Olde Town Gaithersburg. Construction is scheduled to begin Fall 2001 and be completed Fall 2002. This project is covered under the MD 117, I-270 to Muddy Branch Road, Categorical Exclusion discussed below.

- **Congestion Relief Intersection Improvement Program:** This SHA program provides improvements to a number of intersections in northern Montgomery and western Prince George's Counties. The improvements will provide relief to traffic congestion and improve east/west travel between I-270 and US 1. Final engineering and right-of-way acquisition/construction are underway at various locations. Of the intersections included in the program, two are located within the SCEA boundary. At the intersection of MD 355 and MD 124, construction was scheduled to begin Spring 2000 to add an eastbound through lane, add northbound and southbound left-turn lanes, and change the westbound right-turn lane to a right/through lane. Improvements at the intersection of MD 117 and MD 124 that will add eastbound and westbound through lanes with no split phasing are scheduled to be advertised for construction in 2003. Impacts will be extremely minor for these intersection widening projects.

- **MD 355, South Summit Avenue to Chestnut Street:** This SHA project received Location Approval in 1980. It provided for the reconstruction of five lanes. Information on environmental impacts was not readily available.

- **Summit Avenue Bridge over CSX:** This SHA project provided for replacement of the Summit Avenue Bridge over the CSX rail lines. A Categorical Exclusion was completed in 1990, based on extremely minor impacts.

- **MD 117, I-270 to Muddy Branch Road:** This SHA project includes widening, for 0.35 miles, on the north side of MD 117 to provide an additional through lane and five foot wide sidewalk, an eight foot wide hiker/biker trail on the south side of MD 117, and a park and ride lot. This project is in conjunction with the park and ride project at the I-270/MD 117 interchange. A Categorical Exclusion was completed in December, 1999. (The Final Categorical Exclusion for this project includes the following environmental information: two residential relocations are required; no wetlands or waters of the US are present in the project area; the project may impact the 100-year floodplain of Long Draught Branch.)

- **Neelsville Church Road:** This Montgomery County project is in the detailed design stage and is part of the public facilities roads project which reimburses developers for street construction that abuts County schools, M-NCPPC parks or other County facilities. Information on environmental impacts was not readily available from Montgomery County.

- **Scenery Drive:** Detailed design has been completed by Montgomery County for this project from east of MD 355 to south of Middlebrook Road. It is part of the public facilities roads project which reimburses developers for street construction that abuts County schools, M-NCPPC parks or other County facilities. Information on environmental impacts was not readily available from Montgomery County.

- **Game Preserve Road:** This Montgomery County project in the vicinity of Saint Rose of Lima Church on MD 117 has been completed and is open to traffic. It is part of the subdivision roads participation project that provides for the design, review and construction of roads or utility work that jointly benefits new subdivisions and the public-at-large. Information on environmental impacts was not readily available from Montgomery County.

- **Goshen Road Bridge No. M-61B:** This Montgomery County project is in the detailed design stage and will provide a new 2-lane bridge with increased hydraulic capacity to replace the existing deteriorated 2-lane bridge over Cabin Branch. Information on environmental impacts was not readily available from Montgomery County.

- **Christopher Avenue/Lost Knife Road and Midcounty Highway at Montgomery Village Avenue:** This Montgomery County project provides intersection improvements to relieve congestion and improve the level of service at each intersection. Notice to proceed with construction was issued in May, 2000. Information on environmental impacts was not readily available from Montgomery County.

- **Goshen Road at Snouffer School/Wightman Roads:** Intersection improvements for congestion mitigation are being studied by Montgomery County at this location as part of the intersection and spot improvements project. Information on environmental impacts was not readily available from Montgomery County.

In addition, through M-NCPPC, developer's projects within the SCEA boundary that have obtained approvals for site plans or subdivision plans have been identified and include the following:

- **Kingsview Village Center:** Located at MD 117 and Great Seneca Highway, 114,000 square feet of commercial/office space is proposed on 46.6 acres. Plans also include park dedication and a park and ride lot. Site plans have been approved. Information on environmental impacts was not readily available.

- **Middlebrook Center:** Located at MD 355 and Hudgel Lane, plans propose three commercial lots providing 53,083 square feet. The subdivision plans for this project have been approved. Information on environmental impacts was not readily available.

- **Wisteria Business Park:** Located on the south side of Wisteria Drive, approximately 200 feet west of Old Germantown Road, plans propose three lots for office use. Approval of subdivision plans is pending. Information on environmental impacts was not readily available.

- **Germantown II Partnership:** Located on the south side of MD 118 near Middlebrook Road, plans propose two commercial lots on six acres. Subdivision plan approval has been extended for this project. Information on environmental impacts was not readily available.

- **Dunn Property:** Located in the northwest quadrant of Clopper Road and Great Seneca Highway, plans propose 46 townhouse units on six acres. Subdivision plan approval has been extended for this project. Information on environmental impacts was not readily available.

- **Gunners Lake Village:** Located at I-270 and Waring Station Road, plans propose a 1,200 seat facility (New Covenant Fellowship Church) on 34 acres. Subdivision plans have been approved. Information on environmental impacts was not readily available.

3. Secondary Effects

According to information contained in the area master plans, the amount of development that is dependent on improvements associated with the build alternates under consideration represents a small portion of the potential development within the entire SCEA boundary. The majority of planned development can occur under the No Build (Alternate 1) scenario, which includes minor construction projects and developer-based improvements associated with new developments. Development that is subject to staging constraints in conjunction with improvements to Watkins Mill Road, including an interchange with I-270, is defined in the City of Gaithersburg Master Plan and is concentrated in an area of almost entirely vacant land located between I-270, the MARC/CSX rail lines, Game Preserve Road and MD 124. The City of Gaithersburg Master Plan does not differentiate between types of interchanges with regard to secondary development in the area but merely outlines the development that is dependent on "an interchange" at I-270/Watkins Mill Road Extended. Alternates 2, 3 and 4 are interchange build

alternates. The City's Master Plan also defines the development, in the previously described area, that can be supported at various stages of the extension of Watkins Mill Road from MD 117 to MD 355. Much of this development can occur under the No Build (Alternate 1) scenario through developer-based improvements, however, development that is dependent on Watkins Mill Road Extended crossing over I-270, without an interchange, is secondary development linked to Alternate 6. Development that can occur with the No Build (Alternate 1) and secondary development linked to transportation improvements that correspond to the build alternates under consideration is described below based on the information in the City of Gaithersburg Master Plan. Figure V-8 indicates the location of these areas of planned development that are defined in the City's Master Plan. The City of Gaithersburg Master Plan does not specifically address development linked to Access Options A, B and C.

Area 1 - The master plan land use designated for this area is commercial-industrial-research-office. Area 1 is located on a portion of the Casey Tract West (Planned Development Area 3 in Figures II-1 and III-4). This area could be developed for an office or a hotel conference center at varying densities depending on the following:

- The extension of West Watkins Mill Road to the edge of the I-270 right-of-way would support an office building or hotel equaling 300,000 square feet.

- The extension of West Watkins Mill Road from the CSX rail line over I-270 to intersect with Frederick Avenue would support an office building and hotel to include a maximum of 600 rooms or an 80,000 square foot conference center also to include 40,000 square feet of commercial/retail space. (Note: This corresponds to Alternate 6 and indicates the secondary development linked to the alternate.)

- The extension of West Watkins Mill Road from the CSX rail line over I-270 with direct access from I-270 by way of an interchange would support an office building, hotel and additional conference center. (Note: This corresponds to Alternates 2, 3 or 4 and indicates the secondary development linked to either of the alternates.)

Area 2 - The master plan land use designated for this area is mixed residential. Area 2 is located on a portion of the Casey Tract West (Planned Development Area 3 in Figures II-1 and III-4). The extension of West Watkins Mill Road over the CSX rail line would support the development of this area to provide a maximum of 300 housing units with 50 percent being single-family detached and 50 percent being single-family attached units equaling seven units per acre.

Area 3 - The master plan land use designated for this area is commercial-industrial-research-office. Area 3 is located on a portion of the Casey Tract West (Planned Development Area 3 in Figures II-1 and III-4). The extension of West Watkins Mill Road over the CSX rail line into the site would support commercial development in this area. A retail center of 150,000 square feet could be developed following an approved traffic study.

Area 4 - The master plan land use designated for this area is commercial-office-residential. Area 4 is located on a portion of the Casey Tract West (Planned Development Area 3 in Figures II-1 and III-4). The extension of West Watkins Mill Road over the CSX rail line to provide access to the site would support the development of this area for a highway oriented use, such as a bank, service station or other convenience shopping use. This area could also contain a transit related parking structure.

Area 5 - The master plan land use designated for this area is commercial-office-residential. As stated in the City's Master Plan, certain infrastructure improvements must occur before development can proceed. Development of the area could occur in phases after a traffic study is approved by the City traffic engineer. The density of residential and commercial development is subject to the following:

Residential Development

- The extension of West Watkins Mill Road across the CSX rail line into the site would support a base density of 600 residential units.
- If West Watkins Mill Road is further extended to I-270, an additional 250 units could be developed.
- If an interchange is in place at I-270 and West Watkins Mill Road, an additional 400 units could be developed. (Note: This corresponds to Alternates 2, 3 or 4 and indicates the secondary development linked to either of the alternates.) An additional 250 units could be developed if a transit-way (light rail or busway) is constructed.

Commercial Development

- The extension of West Watkins Mill Road from the CSX rail line to I-270 with two access points into the area would support a mixed use development not to exceed 700,000 square feet of office/retail space.

- The extension of West Watkins Mill Road from the CSX rail line over I-270 and intersecting with MD 355 (Note: This corresponds to Alternate 6.), and a grade separated crossing at Metropolitan Grove Road and the CSX rail line with an internal access link to West Watkins Mill Road would support an additional 500,000 square feet of office/retail space.

- An interchange at I-270 and West Watkins Mill Road would support an increase in density of an additional 300,000 square feet of office/retail space. (Note: This corresponds to Alternates 2, 3 or 4 and indicates the secondary development linked to either of the alternates.)

- If right-of-way dedicated for the Shady Grove/Clarksburg Transitway for light rail or busway is conveyed to Montgomery County and construction begun, an additional 200,000 square feet of office/retail space could be developed.

Following is a discussion of the secondary effects on SCEA resources that would result based on the potential development linked to the build alternates under consideration.

a. Surface Waters

Alternates 2, 3, 4 and 6 could have secondary effects on surface waters within the SCEA boundary. Secondary development linked to Alternates 2, 3, 4 and 6, as previously identified, would be located in the I-270 Tributary sub-watershed of the Great Seneca Creek. The secondary development associated with the alternates would result in replacing natural land cover with impervious areas which would increase stormwater runoff that could cause erosion and sedimentation in waterways and impact stream habitat conditions and aquatic life. The loss of natural land cover would also reduce groundwater infiltration which is detrimental to natural stream hydrology. These secondary effects caused by Alternates 2, 3, 4 and 6 would be mitigated through compliance with stormwater management and sediment and erosion control requirements administered by the Maryland Department of the Environment (MDE). Sediment and erosion control measures in place during construction would limit the sediment reaching the waterways and long-term stormwater management would control the runoff from new development. Also, best management practices utilized in stormwater management facilities would improve the water quality of the stormwater runoff.

b. Floodplains

Secondary development linked with Alternates 2, 3, 4 and 6 would be located in the vicinity of the 100-year floodplain associated with the I-270 Tributary. As indicated on Flood

Insurance Rate Maps from the Federal Emergency Management Agency (FEMA), the 100-year floodplain extends between 50 and 100 feet, approximately, on either side of the I-270 Tributary which extends south of Game Preserve Road along the west side of I-270. Current Maryland, federal and local regulations discourage development in floodplains and a Waterways Construction Permit is required for any floodplain encroachment. Also, the City of Gaithersburg Master Plan contains recommendations that portions of the area around the tributary be designated open space, the exact boundaries of the open space to depend on a schematic development plan of the area, as well as, a natural resources inventory. Given this and the current federal and state regulatory framework, it is unlikely that any major floodplain encroachment would occur as a secondary effect of Alternates 2, 3, 4 and 6.

c. Wetlands

Secondary development, previously described, that is linked with Alternates 2, 3, 4 and 6 would be located in the vicinity of wetland systems associated with the I-270 Tributary. The wetlands identified include the following types: palustrine forested, palustrine emergent and palustrine scrub-shrub. Wetlands are regulated through the requirements of Section 404 of the Clean Water Act, the Maryland Nontidal Wetlands Protection Act and the "no net loss" wetlands policies. The footprint of the secondary development associated with Alternates 2, 3, 4 and 6 is not known at this time, however, given the current federal and state regulatory framework, it is likely that the secondary effects to wetlands from Alternates 2, 3, 4 or 6 would be minimal.

d. Woodlands

The Maryland State Forest Conservation Technical Manual defines a forest stand as a forested area greater than 10,000 square feet and with a minimum width of 35 feet. Secondary development linked with Alternates 2, 3, 4 and 6 would be located in the vicinity of several forest stands identified between I-270 and the MARC/CSX rail lines, south of Game Preserve Road. Of the forest stands identified, the smallest measures approximately 1.5 acres and the largest approximately 72.2 acres. These forest stands also contain numerous "significant trees", which are defined as trees with a diameter at breast height (DBH) of 24 inches or greater, and "specimen trees", which exhibit a DBH of 30 inches or greater. Thus, there is the potential for some substantive secondary effects to woodlands from Alternates 2, 3, 4 or 6. However, impacts to woodlands would be regulated under the Maryland Forest Conservation Act of 1991 and effects would be offset through reforestation requirements.

e. Parklands

There are no parklands identified in the immediate area of the secondary development that is linked to Alternates 2, 3, 4 and 6. Therefore, secondary effects to parklands are not anticipated.

f. Historic Resources

An inventory of historic resources within the SCEA boundary was compiled based on previous SHA coordination with the Maryland Historical Trust that was conducted for the I-270/US 15 Multi-Modal Corridor Study. The inventory includes listings from the National Register of Historic Places (NRHP) and the Maryland Inventory of Historic Places (MIHP). The historic resources are indicated on Figure V-10 and their names are listed with their corresponding mapping identification number in Section V.H.4.f. and the Appendix.

The inventory does not identify any NRHP resources in the area of secondary development associated with Alternates 2, 3, 4 and 6 but does identify two MIHP resources bordering the area of secondary development - the B&O Railroad Underpass and the Metropolitan Branch B&O Railroad, indicated on Figure V-10, as numbers 36 and 37, respectively. Given their location, it is not expected that the planned development dependent on Alternates 2, 3, 4 and 6 would result in impacts to these historic resources and therefore, secondary effects are not anticipated. However, the footprint of the secondary development is not know at this time.

g. Agricultural Land

Although the agriculturally zoned land in Montgomery County lies outside the SCEA boundary, some agricultural uses are taking place on land within the SCEA boundary that is zoned other than agriculture. Active agricultural land is located in the area of secondary development linked with Alternates 2, 3, 4 and 6. The active agricultural land measures approximately 49.8 acres in area, stretching between I-270 and the CSX rail lines, midway between Game Preserve Road and MD 124. Although the footprint of the secondary development is not known at this time, secondary effects to the active agricultural land from Alternates 2, 3, 4 and 6 are expected to be substantial. However, this land is not zoned for agriculture and is planned for development in the City of Gaithersburg Master Plan.

4. Cumulative Impacts

a. Surface Waters

Surface waters included in the SCEA are located in the Great Seneca Creek watershed, the largest watershed located entirely within Montgomery County. The sub-watersheds associated with the SCEA surface waters are Middle Great Seneca, Gunners Branch, Cabin Branch, Whetstone Run, I-270 Tributary, Upper Long Draught and Lower Draught (Figure V-7). Whetstone Run, Gunners Branch and Upper Long Draught each have instream impoundments, Lake Whetstone, Gunners Lake and Clopper Lake, respectively.

Montgomery County has conducted an assessment of existing stream resource conditions in its 1,500 miles of streams based on aquatic life, stream channel habitat indicators and stream chemistry measurements. The results of the countywide assessment are contained in the document entitled, "Countywide Stream Protection Strategy" (CSPS), for which data was compiled during the Summer of 1997. Much of the following discussion on SCEA surface waters is based on information contained in the CSPS.

Over time, the county's landscape has experienced several cycles of change, from extensive land clearing, farming, abandonment and natural reforestation to rapid growth, transforming the county into its present urbanized status. The early agrarian practices which resulted in deforestation and sedimentation often had severe impacts on county streams, but time and nature's resiliency permitted many streams to recover. More recent impacts to stream resources have resulted from the development of watersheds to suburban and urban land uses and the inadequately controlled or uncontrolled stormwater from the developed areas which changes the natural stream flow and causes erosion and sedimentation. As reported in the CSPS, the dominant impacts to habitat conditions and aquatic life in Montgomery County's streams were from stream erosion and sedimentation. Also, it was noted that "the severity of stream habitat loss and biological community impairment in a sub-watershed appears generally related to the extent that developed land has replaced natural land cover with impervious areas". This loss of natural land cover results in increased stormwater runoff and reduced groundwater infiltration which is detrimental to the natural stream hydrology. It is evident from the data presented in Section V.H.2.b. that residential, commercial, industrial and institutional land uses increased during the period 1981 to 1997 within the SCEA boundary while agricultural and forest land have decreased. Thus, there has been a trend to convert land within the SCEA boundary to developed uses, thereby increasing the impervious area draining to streams. This trend is expected to continue into the future based on 2020 land use data, however, the rate at which developed land within the SCEA boundary increases is expected to slow dramatically from 75

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LEGEND

- MIHP District
- MIHP Site
- *NRHP District*
- *NRHP Site*

For a list of the Historic Resources in the SCEA, with their corresponding mapping indentification number, see Section V.H.4.f. and the Appendix

SCEA BOUNDARY

PROJECT AREA

THIS AREA ENLARGED FOR ADDITIONAL DETAIL

ENLARGED AREA

I-270 AT WATKINS MILL ROAD EXTENDED

HISTORIC RESOURCES IN THE SCEA

DATE: NOV., 2000

3000 0 3000

SCALE IN FEET

FIGURE V-10

percent during the period 1981 - 1997 to 5 percent projected for the period 1997 - 2020 (Section V.H.2.b.). The CSPS, which was compiled during the Summer of 1997, reported the following existing impervious area percentages, based on aerial photos, for the SCEA sub-watersheds.

Sub-watershed	% Impervious
Middle Great Seneca	21
Gunners Branch	23
Cabin Branch	23
Whetstone Run	33
I-270 Tributary	30
Upper Long Draught	28
Lower Long Draught	11

According to the CSPS, nearly all Montgomery County streams comply with Maryland water quality standards and criteria for dissolved oxygen, temperature and pH. Historically, this has been the case, however, the extent and diversity of biological life and stream habitat conditions vary significantly in county streams. Based on data collected through Summer 1997 and using biological indicators for fish and benthic macroinvertabrates, the CSPS has rated stream resources in the county as being in excellent, good, fair or poor condition. The SCEA sub-watersheds are rated as follows:

Sub-watershed	Stream Biological Condition (CSPS)
Middle Great Seneca	Good
Gunners Branch	Fair
Cabin Branch	Fair
Whetstone Run	Fair
I-270 Tributary	Poor
Upper Long Draught	Fair
Lower Long Draught	Good

Many areas within the SCEA boundary were developed prior to State requirements to provide stormwater management. According to the CSPS, stormwater management appears to be having positive effects mitigating, although not eliminating, impacts to streams from increased runoff from developing watersheds. In developed areas, stream draining areas without stormwater management appear to be more impaired than streams that are protected by

stormwater management. As reported in the CSPS, "this general conclusion is most apparent in sub-watersheds having high degrees of development and corresponding levels of watershed imperviousness".

Cumulative impacts to surface waters within the SCEA boundary result from the addition of the direct impacts and secondary effects resulting from each of the Alternates 2, 3, 4 and 6 to the impacts to surface waters from other past, present and future actions. Alternate 1 would not result in direct impacts to surface waters. Future planned development indicated in Section V.H.2.b. would add to past and current surface water impacts through increased impervious areas and stormwater runoff. However, effects to surface waters under the future land use scenario are expected to be minor due to the current regulatory framework for stormwater management and sediment and erosion control requirements administered by the Maryland Department of the Environment (MDE).

Although not yet available for all sub-watersheds, the CSPS provides some projected percentages of sub-watershed imperviousness (the ratio of paved area to total sub-watershed area). The projected impervious area percentages are based on generalized zoning information for the sub-watersheds at the time the CSPS was compiled in the Summer of 1997. The CSPS projects the impervious area percentage of Upper Long Draught to be in the range of 30 to 55 percent and that of Lower Long Draught to be in the range of 15 to 25 percent which represent increases over their existing impervious area percentages which are 28 percent and 11 percent, respectively, based on actual ground cover from aerial photos. This provides an indication of the change in sub-watershed imperviousness between the present and future time frames. Mitigation for increased stormwater runoff would be provided through stormwater management and sediment and erosion control regulations. In addition, the CSPS has assigned a watershed management category to each sub-watershed based upon stream conditions, existing watershed development and projected land use changes. For each category, "a set of management tools is identified to address the stream conditions and levels of development anticipated. The management categories and tools provide a basis for targeting interagency resources to address stream quality problems using a focused, watershed-based approach." The CSPS is intended to provide program guidance and public awareness for improving stream resource protection and working toward achieving the County's adopted stream protection goals which include the following as listed in the Montgomery County Code:

- "Protect, maintain, and restore high quality chemical, physical, and biological conditions in the waters of the state in the county;

- Reverse the past trends of stream deterioration through improved water management practices;

- Maintain physical, chemical, biological, and stream habitat conditions in County streams that support aquatic life along with appropriate recreational, water supply, and other water uses;

- Restore county streams damaged by inadequate water management practices of the past, by reestablishing the flow regime, chemistry, physical conditions, and biological diversity of natural stream systems as closely as possible."

b. Floodplains

The 100-year floodplains within the SCEA boundary occurring along Great Seneca Creek, Cabin Branch, Whetstone Run, Gunners Branch, I-270 Tributary and Long Draught Branch are indicated on Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA).

Past stresses to floodplains within the SCEA boundary have occurred. Any unregulated encroachments on the 100-year floodplain from development would have occurred prior to the passing of the Non-Tidal Wetlands Act in 1989 which affords protection to floodplains. As indicated in Section V.H.2.b., during the period 1981-1990, substantial increases occurred in residential, commercial, industrial and institutional land uses which included roadway construction associated with the development. Montgomery Village, a large residential community located in the southeastern portion of the SCEA area, was developed in the 1980's. Current Maryland, federal and local regulations discourage development in floodplains and a Waterways Construction Permit is required for any floodplain encroachment which includes grading, filling or placing structures in the 100-year floodplain. According to information from the US Army Corps of Engineers (COE), during the period from January 1, 1980 to June 27, 2000, a total of 834 permits were requested under Section 404 of the Clean Water Act for work conducted in vegetated and non-vegetated Waters of the US throughout Montgomery County. This list includes stream impacts, wetlands and shore erosion permits. Although the COE could not provide an exact number, it was indicated that the majority of the permits likely represent stream impacts, mostly for road crossings and restoration work associated with other approved land use changes.

Past alterations to floodplains within the SCEA boundary has eliminated or reduced some of the valuable functions associated with floodplains. Since 1927, over 27,000 acres of stream valley parkland has been acquired throughout the county which has helped mitigate impacts on

many stream floodplains. Of the floodplains associated with the streams within the SCEA boundary, substantial portions of the floodplains of Great Seneca Creek, Cabin Branch and Gunners Branch are located in parkland.

Direct impacts to the 100-year floodplain are quantified in Section V.E.3. for Alternates 2, 3, 4 and 6 and range from 0.40 to 7.84 acres. Alternate 1 would not result in direct impacts to the 100-year floodplain. Cumulative impacts to the 100-year floodplain within the SCEA boundary result from the addition of the direct impacts and secondary effects resulting from each of the Alternates 2, 3, 4 and 6 to the impacts to 100-year floodplain from other past, present and future actions. Future development anticipated within the SCEA boundary, as indicated in Section V.H.2.b., would add to past and present impacts to the 100-year floodplain. However, effects to floodplains under the future land use scenario are expected to be minimal as a result of the current regulatory framework and given that portions of the floodplains within the SCEA boundary are located in parkland.

c. Wetlands

Based on National Wetland Inventory (NWI) mapping, the wetlands located within the SCEA boundary include the following types: palustrine forested, palustrine emergent, palustrine open water, palustrine scrub-shrub, palustrine unconsolidated shore and lake. Ecological functions provided by wetlands include filtering pollutants in surface runoff, maintaining base flow in streams and slowing flood waters.

The United States Fish and Wildlife Service (USFWS), for areas within the Chesapeake Bay Watershed, has determined that Maryland experienced a net loss of 4,810 acres of wetlands during the period 1982-1989 (Tiner et. al. 1994). According to the MDP publication, "Maryland's Land, 1973-1990, A Changing Resource", the area of wetlands in Montgomery County totaled 172 acres in 1981 and also in 1990, indicating no net change. Information obtained from the COE showed a total of 834 permit requests under Section 404 of the Clean Water Act for work conducted in vegetated and non-vegetated Waters of the US throughout Montgomery County during the period form January 1, 1980 to June 27, 2000. Permits requested include stream impacts, wetlands and shore erosion permits. Although the COE could not provide an exact number, it was indicated that the majority of the permits likely represent stream impacts with some wetland impacts. It was further indicated that in the last eight years, there have been few wetland impacts in Montgomery County, as reviewed by the COE, and most of the impacts were under one acre. Wetland trends data for the area within the SCEA boundary is not readily available.

Direct impacts to wetlands that would result from Alternates 2, 3, 4 and 6 are quantified in Section V.E.5 and range from 0.32 to 1.08 acres. Alternate 1 would not result in direct impacts to wetlands. Cumulative impacts to wetlands within the SCEA boundary result from the addition of the direct impacts and secondary effects resulting from each of the Alternates 2, 3, 4 and 6 to the impacts to wetlands from other past, present and future actions. Future development within the SCEA boundary, indicated in Section V.H.2.b., would add to past and present impacts to wetlands. However, given the current federal and state regulatory framework contained in Section 404 of the Clean Water Act, the Maryland Nontidal Wetlands Protection Act and the "no net loss" wetlands policies, impacts to wetlands under the future land use scenario are expected to be minimal.

d. Woodlands

Forested areas within the SCEA boundary identified by 1997 MDP Land Use/Land Cover mapping includes deciduous, evergreen and mixed forests, as well as, brush areas. The forested areas are primarily located along the Great Seneca Park and Seneca Creek State Park.

According to the MDP publication, "Maryland's Land, 1973-1990, A Changing Resource", the area of forests in Montgomery County decreased by 8.5 percent, from 97,564 to 89,318 acres, during the period 1981-1990. Within the SCEA boundary, based on MDP mapping, the area of forests decreased by 19.2 percent, from 4,280 to 3,457 acres, during the period 1981-1997. As indicated in Section V.H.2.b., during the period 1981-1997, there were substantial increases in residential, commercial, industrial and institutional land uses within the SCEA boundary. A loss of forest area results in a loss of the valuable ecological functions associated with forests which include stabilizing soils, filtering nutrients and sediment, and regulating stormwater and stream flow.

The Maryland Forest Conservation Act of 1991 regulates forest resource impacts. Under the Act, for every 1 acre of forest cleared above a particular threshold for forest conservation, which is set depending on the zoning, 2 acres of forest must be replaced. Also, when non-forested land is developed a percentage of the land must be planted with trees. These restrictions on forest clearing and the requirements for reforestation provide a strong incentive for forest conservation.

Direct impacts to woodlands that would result from Alternates 2, 3, 4 and 6 are quantified in Section V.E.6 and range from 12.0 to 31.3 acres. Alternate 1 would not result in direct impacts to woodlands. Cumulative impacts to woodlands within the SCEA boundary result from the addition of direct impacts and secondary effects resulting from each of the Alternates 2, 3, 4 and 6 to the impacts to woodlands from other past, present and future actions. Future

development within the SCEA boundary, indicated in Section V.H.2.b., would add to past and present impacts to woodlands. Given the current regulatory framework for forest conservation and reforestation and the fact that much of the forested area within the SCEA boundary is located in parkland, however, no major impacts to woodlands under the future land use scenario are anticipated, particularly in light of past trends in forest loss before and after the enactment of the Maryland Forest Conservation Act in 1991. According to information from MDP, forest losses within the SCEA boundary totaled 689 acres during the period 1981-1990 while forest losses during the period 1990-1997 were reduced to a total of 134 acres within the SCEA boundary.

e. Parklands

Parklands and recreation areas identified within the SCEA boundary are listed below. Alternates 1 and 6 would not result in direct impacts to parkland and recreation areas. Alternates 2 and 3 would each result in direct impacts to Seneca Creek State Park and Middlebrook Hill Conservation Area, requiring right-of-way from the publicly owned public parks. Alternate 2 would require 6.3 acres of right-of-way from parkland which represents 9.3 percent of the total right-of-way required for Alternate 2. Alternate 3 would require 4.0 acres of right-of-way from parkland which represents 5.8 percent of the total right-of-way required for Alternate 3. In addition, Alternates 2 and 3 would require relocation of a small portion of a hiking trail associated with Seneca Creek State Park, on the west side of I-270, due to extending a bridge pier to widen the existing bridge at this location. Alternate 4 would not require right-of-way from parkland but would require relocation of the hiking trail as described for Alternates 2 and 3. However, under Alternate 4, this would be contained within the existing right-of-way for I-270. Impacts to parklands within the SCEA resulting from other future actions, including future development, are expected to be minimal since it would be extremely rare, if at all, that development would be permitted on public parkland. Also, use of land from a significant publicly owned public park or recreational area as part of a federally funded or approved transportation project would require a Section 4(f) evaluation to document that there are no feasible and prudent alternatives to the use of land from the park, and that the project includes all possible planning to minimize harm to the park.

Parklands and Recreation Areas Within the SCEA Boundary

Centerway Park	Izaak Walton League
City Hall Park/ Sanford W. Daily Municipal Center	Lee Street Park
Clear Spring Park	Middlebrook Hill (Neighborhood Conservation Area)
Constitution Garden	Montgomery Village Golf Course
Diamond Farms Park	Old Germantown Park
Fox Chapel Park	Plumgar Park
Gaithersburg Upcounty Senior Center	Robertson Park
Germantown East Park	Seneca Creek State Park
Great Seneca Park	South Gunners Branch Park
Gunners Branch Park	Stewartown Park
Gunners Lake Park	Waring Station Park
Gunners Village Park	

f. Historic Resources

An inventory of historic resources located within the SCEA boundary was compiled based on previous SHA coordination with the Maryland Historical Trust that was conducted for the I-270/US 15 Multi-Modal Corridor Study. The inventory includes listings from the National Register of Historic Places (NRHP) and the Maryland Inventory of Historic Places (MIHP). MIHP listings that also appear in the NRHP files are inventoried only once as a NRHP resource. A total of 101 historic resources (8-NRHP and 93-MIHP), which includes historic districts, are identified within the SCEA boundary and are indicated on Figure V-10. NRHP resources are listed below and MIHP resources are listed in the Appendix along with their corresponding mapping identification number and MIHP number.

NRHP

Map I.D. No.	Name of Historic Resource	MIHP No.
1	Gaithersburg B&O Railroad Station and Freight	21-151
2	Old Gaithersburg Historic District	21-002
3	J.A. Belt Building	21-135
4	Observatory Heights Historic District	
5	Gaithersburg Latitude Observatory	21-141
6	Chestnut and Meem Historic District	21-178
7	Thomas and Company Cannery	21-168
8	Brookes, Russell and Walker Historic District	21-165

The alternates under consideration would not result in direct impacts to National Register or National Register eligible historic resources. Future development within the SCEA boundary could add to cumulative impacts to historic resources. However, this development would be within planned areas consistent with the local master plans and thus, any impacts to historic resources would be expected to be minimal. As a result, Alternates 2, 3, 4 and 6 are not expected to influence the loss of historic properties within the SCEA boundary or accelerate the loss of historic resources as a result of cumulative development.

g. Agricultural Land

The amount of land used for farming in Maryland has been declining. The 1992 Census of Agriculture reports that 2,223,000 acres were being farmed at that time which signified a decline of more than 350,000 acres in ten years. According to "Maryland's Land: 1973 - 1990", a publication of the Maryland Office of Planning, agricultural land use in Montgomery County dropped to 107,654 acres in 1990, a decline of 21,108 acres during the period 1973 - 1990. The Atlas of Agricultural Land Preservation in Maryland (AALPM) indicates that many large areas of Maryland's prime and productive agricultural land are being fragmented by development.

Based on information contained in the AALPM, the agriculturally zoned land in Montgomery County is located outside of the SCEA area in the western, northern and northeastern parts of the county. Within the SCEA boundary, the land is either developed, planned for development or publicly owned land such as parks. The agricultural zoning in Montgomery County is rated "most protective", the highest category with regard to level of protection for preserving farmland based on the number of residential units that are permitted to be built on the property. Agricultural zoning that only permits one unit per 20 acres or more is rated "most protective". In Montgomery County, agriculturally zoned land permits one unit per 25 acres. The agricultural zoning in four of the 23 Maryland counties is classified as "most protective", generally the counties that have been or are subject to significant development pressure.

The AALPM reports that as a result of the Maryland Agricultural Land Preservation Foundation (MALPF) and a number of county easement programs, there has been more farmland preserved in Maryland than in any other state. Statewide, during the period 1974 - 1994, MALPF preserved over 128,000 acres of farmland. Through its local purchase of development rights (PDR) and transfer of development rights (TDR) programs, Montgomery County saved 43,314 acres which ranked the best of any local jurisdiction in America. In addition to MALPF easements and County easements, there are Maryland Environmental Trust (MET) easements

and private conservation easements that protect land in Montgomery County's agricultural zone which is located outside the SCEA boundary. However, most of the easements in Montgomery County were acquired through local programs with a large percentage of the easement acquisition in the western part of the county achieved through TDR's which utilize private funds to support preservation.

The AALPM indicates development pressure on land zoned for agriculture based on the number of new dwelling units a county expects to be built between 1995 and 2020. In Montgomery County, development pressure is determined using growth projections and planning data for transportation analysis zones (TAZ) within the county. By dividing the number of acres zoned to allow residential subdivision in each TAZ by the number of dwelling units expected for that TAZ, an estimate is produced of the number of acres available to absorb each new dwelling. Using this information, the development pressure on agriculturally zoned land that is not permanently preserved is rated using one of four categories ranging from high development pressure (fewer than 5 acres available per projected dwelling unit) to minimal development pressure (over 50 acres available per projected dwelling unit). The agriculturally zoned land in Montgomery County is located outside the SCEA boundary and all four of the development pressure categories are present in the agricultural zone. However, there are large areas with minimal development pressure and there is much more farm land with minimal development pressure than high development pressure.

Although there have been accomplishments in agricultural preservation in Maryland, MALPF reports, based on agricultural transfer tax receipts from 1987 through 1996, that 213,762 acres of farm land were converted to other uses. According to the AALPM, in the five years from 1992 through 1996, MALPF saved 29,607 acres which represents 49 percent of the 60,019 acres lost in the state. The preservation program in Montgomery County has been certified by the Office of Planning and MALPF. The AALPM reports that protective zoning and easement acquisition appear to have combined in a timely fashion to protect much of the agricultural zone in the western portion of Montgomery County from development.

Although the agriculturally zoned land in Montgomery County lies outside the SCEA boundary, some agricultural uses are taking place on land within the SCEA boundary that is zoned other than agriculture. According to estimates contained in the AALPM for Montgomery County, approximately 25,600 acres are in agricultural use on land not zoned for agriculture. Within the SCEA boundary and the heavily urbanized county as a whole, land used for agriculture that is not zoned for agriculture appears as small fragmented areas surrounded by development zones. Few of these areas appear in the agricultural reserve of Montgomery County

where preservation efforts have been taking place and there is a heavy concentration of easements.

The alternates under consideration would not result in direct impacts to prime farmland. Also, the agriculturally zoned land in Montgomery County lies outside the SCEA boundary. However, Alternates 2, 3, 4 and 6 would directly impact active agricultural land that is zoned other than agriculture in two locations - between I-270 and MD 355, south of Professional Drive, and between I-270 and the CSX rail lines, north of MD 124. Direct impacts to active agricultural land from Alternates 2, 3, 4 and 6 would range from approximately 9.1 to 10.4 acres. Cumulative impacts to agricultural land within the SCEA boundary result from the addition of the direct impacts and secondary effects resulting from each of Alternates 2, 3, 4 and 6 to the impacts to agricultural land from other past, present and future actions. However, land within the SCEA boundary is either developed, planned for development or publicly owned land such as parks. Thus, agricultural land within the SCEA boundary that would be impacted by future development or directly impacted by Alternates 2, 3, 4 and 6 is land that is not zoned for agriculture and is already planned for development.

5. Conclusions

Direct impacts on the environment from each of the alternates under consideration are added to other past, present and future actions to arrive at cumulative impacts. Alternate 1 would not result in direct impacts to the SCEA resources. Alternates 2, 3, 4 and 6 would result in direct impacts to surface waters, 100-year floodplains, wetlands and woodlands. Alternates 2 and 3 would result in direct impacts to parklands while Alternates 4 and 6 would not directly impact parklands. Direct impacts to National Register or National Register eligible historic resources would not result from Alternates 2, 3, 4 and 6. Prime farmland would not be directly impacted by Alternates 2, 3, 4 and 6, however, active agricultural land would be impacted. A description of direct impacts to the SCEA resources has been included in the previous discussion of cumulative impacts. Direct impacts have been quantified in detail in Section V.E.

Secondary effects to natural resources are expected to result from each of Alternates 2, 3, 4 or 6. Potential development in an area located south of Game Preserve Road between I-270 and the MARC/CSX rail lines is linked to transportation improvements provided by the alternates as described in the City of Gaithersburg Master Plan. Secondary effects to surface water in this area that could result from increased impervious area from development would impact the I-270 Tributary. This stream resource is currently rated as having a poor biological condition based on stream assessments by Montgomery County. Secondary effects to floodplains and wetlands are expected to be minimal. Substantive secondary effects to

woodlands could potentially result in the above described area which includes forest stands that range in size from 1.5 to 72.2 acres. Secondary effects to parklands and historic resources are not anticipated. Secondary effects to active agricultural land that is planned for development are expected to be substantial.

Cumulative effects to natural resources within the SCEA boundary are the result of impacts to resources from other past, present and future actions in addition to the direct impacts that would result from each of Alternates 2, 3, 4 or 6. Alternate 1 would not result in direct impacts to the SCEA resources. Surface waters, floodplains, wetlands and woodlands have all historically been impacted by development within the SCEA boundary and would be further impacted by Alternates 2, 3, 4 or 6. Impacts to these resources from other future actions within the SCEA boundary would add to the overall cumulative effect. Impacts to surface waters from other future actions are expected to be minor, partly due to the Countywide Stream Protection Strategy, which provides a means of managing watersheds to address stream conditions and levels of development anticipated, as well as, increasing public awareness on issues concerning stream resources. Floodplain impacts from other future actions within the SCEA boundary are expected to be minimal since major portions of the floodplains are located in parklands. Impacts to wetlands from other future actions are expected to be minimal as a result of the current regulatory framework and "no net loss" policies". No major impacts to woodland from other future actions are expected since much of the forested area within the SCEA boundary is located in parklands and forest losses have declined in light of conservation requirements. Impacts to parklands from future development within the SCEA boundary are expected to be minimal. Impacts to historic resources from other future actions are expected to be minimal. Agricultural land within the SCEA boundary that would be impacted by future development is land that is not zoned for agriculture and is already planned for development.

Overall, in the context of the current federal, state and local regulatory framework, future cumulative effects to resources are expected to be minor. Protection of natural and cultural resources would be facilitated through permitting, planning and zoning, and approval processes that are conducted by those agencies that regulate potential effects to resources.

VI. SECTION 4(f) EVALUATION

VI. SECTION 4(f) EVALUATION

A. Introduction

Section 4(f) of the Department of Transportation Act of 1966, now codified (49 U.S.C. 303(c)), essentially states that the U.S. Secretary of Transportation shall not approve any program or project which requires the use of land from a publicly owned public park, recreation area, wildlife or waterfowl refuge (as determined by the officials having jurisdiction over the resource) or historic site unless there is no feasible and prudent alternative to the use of the project resource and that the proposed action includes all possible planning to minimize harm to the property. This documentation has been prepared in accordance with 23CFR771.135 and is consistent with the criteria for a Section 4(f) Evaluation discussed therein.

This evaluation discusses proposed impacts to publicly owned public parks: Seneca Creek State Park and Middlebrook Hill Neighborhood Conservation Area. The impacts to the parks would occur as a result of proposed improvements, including the extension of Watkins Mill Road and various interchange alternates with I-270, that are being studied to improve traffic operations and accommodate planned growth in the project area. Seneca Creek State Park is traversed by I-270 and is located in the northern extremity of the project area. Middlebrook Hill Neighborhood Conservation Area is located on the east side of I-270, adjacent to the northern boundary of Seneca Creek State Park.

B. Description of Proposed Action

The I-270 at Watkins Mill Road Extended project area is located in the northern portion of the City of Gaithersburg in Montgomery County, Maryland. Existing Watkins Mill Road is a discontinuous collector road which extends east from MD 355 (0.6 mile north of MD 124). It also includes a 1,200 foot long segment, known as West Watkins Mill Road, that extends east from MD 117 (0.75 mile north of MD 124) and dead ends just west of the CSX rail lines. The resulting gap in Watkins Mill Road is approximately 1.0 mile long, across I-270.

The purpose of the I-270 project at Watkins Mill Road Extended is to provide improved access (vehicular, pedestrian, bicycle and transit) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use.

Full build out of properties along Watkins Mill Road in the project area is not possible without the extension of Watkins Mill Road between MD 355 and MD 117. However, much of this development is being approved and will need improved access and mobility within the existing transportation system. This development includes: office/research development (2.3 million square feet of new development and 2.3 million square feet of re-development), commercial development (440,000 square feet of retail space, an 80,000 square foot theater complex, and a hotel), and residential development (1,500 units) are planned for the northern portion of the City of Gaithersburg. Both the City of Gaithersburg and Montgomery County have designated this project as a transportation priority.

In 1997, the segment of I-270 in the project area experienced failing levels of service in the peak hours, particularly at the I-270/MD 124 interchange. In addition, the existing roads within the project area lack the capacity and continuity to provide adequate accessibility to the planned development area. Full development as proposed by the City of Gaithersburg and the Montgomery County governments would overload the existing local transportation network. In addition, the accident rate along I-270, in the vicinity of MD 124, is significantly higher than the statewide average for similar roadways and is expected to worsen as congestion increases.

This study evaluates alternative methods to improve traffic operations for locally oriented traffic in the project area. The improvements studied, including the extension of Watkins Mill Road and various interchange alternates with I-270, address safety and capacity requirements in order to alleviate existing deficiencies while accommodating projected traffic increases resulting from planned growth in the area. A detailed description of the alternates under consideration can be found in Section IV of this document.

C. Description of 4(f) Resources

Seneca Creek State Park

Seneca Creek State Park is located in the northern extremity of the project area and is traversed by I-270 in the vicinity of Game Preserve Road (Figure VI-1). A Maryland Department of Natural Resources owned facility, Seneca Creek State Park is a public recreational resource considered to be of major regional significance. The facilities provide a wide diversity of day use recreational opportunities that include hiking and nature study, bicycling and mountain biking, equestrian use, boating and fishing, picnicking, playgrounds, disc golf, baseball and multi-use athletic fields. Developing a hiker/biker trail that will pass under I-270 along Seneca Creek to connect the state park with M-NCPPC property upstream is being considered by DNR. Depending on the demand, additional recreational development in the future in the vicinity of I-270 is possible such as, providing day use facilities on parkland

MIDDLEBROOK HILL NEIGHBORHOOD CONSERVATION AREA

SENECA CREEK STATE PARK

LIMIT OF STUDY

LIMIT OF STUDY

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

4(f) RESOURCES

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 2000'	VI-1

adjacent to the Middlebrook Hill and Fox Chapel communities. Seneca Creek State Park is comprised of multiple parcels of land. Two parcels adjacent to I-270 were acquired with funds from the Land and Water Conservation Fund. Other parcels were acquired using Program Open Space funds. Seneca Creek State Park extends from the Potomac River to MD 355, a distance of approximately 15 miles and encompasses over 6,200 acres.

Middlebrook Hill Neighborhood Conservation Area

Middlebrook Hill Neighborhood Conservation Area is approximately 115 acres in size and is located on the east side of I-270, approximately 1,600 feet north of Game Preserve Road, adjacent to and north of Seneca Creek State Park (Figure VI-1). An M-NCPPC facility, Middlebrook Hill Neighborhood Conservation Area is not developed with recreation facilities and there are no plans for any future development of this park. It is intended to remain a conservation park limited to passive recreation use such as hiking and nature study. It should be noted that there are no improved hiker/biker trails in this facility. This site was acquired by M-NCPPC as a dedication from the developer of the adjacent residential community.

D. Impacts to 4(f) Property

Several of the build alternates under consideration would impact one or both 4(f) properties as described below. It should be noted that all of the build alternates under consideration include the extension of Watkins Mill Road between MD 117 and MD 355, which does not impact any 4(f) properties.

The only impacted amenity associated with Seneca Creek State Park is a set of wooden steps that traverse rip rap supporting Game Preserve Road. The wooden steps are located along the southbound side of I-270 (west side) next to the pier for the I-270 structure over Seneca Creek/Game Preserve Road. Alternates requiring this structure to be widened in the southbound direction (west side) will likely require relocation of the steps.

None of the build alternates would cause a significant increase in noise or visually impact the Seneca Creek State Park or Middlebrook Hill Neighborhood Conservation Area. The noise analysis confirms that there is less than a 3 decibel (dBA) increase in build vs. no-build noise levels for the design year 2020. Furthermore, the topography of this area is such that the park is lower than I-270; so widening I-270 would result in the same visual impact as existing, only the footprint of the roadway embankment would be up to 50 feet wider on each side of I-270.

Alternate 2: Partial Cloverleaf Interchange

This alternate is the same concept as Montgomery County's 1998 engineering feasibility study concept. Alternate 2 proposes a diamond configuration on the east side of I-270 and a partial cloverleaf configuration on the west side of I-270. This alternate would use a two-lane Collector-Distributor (C-D) lane system on each side of I-270 to handle local traffic weaving on and off of I-270. Construction of Alternate 2 would require the acquisition of right-of-way from within the park boundaries of Seneca Creek State Park, on the east and west sides of I-270, and Middlebrook Hill Neighborhood Conservation Area (Figure VI-2). The right-of-way required would consist of the following areas adjacent to I-270:

Seneca Creek State Park	-	3.68 acres (east side of I-270)
	-	2.30 acres (west side of I-270)
Middlebrook Hill Neighborhood Conservation Area	-	0.29 acre

The right-of-way required from Seneca Creek State Park on the east side of I-270 would use land from the park to provide the proposed two-lane C-D road, mostly for the necessary roadway supporting slopes, as well as, an area for stormwater management. It is anticipated that the existing stormwater management pond along northbound I-270 would require complete reconstruction and possibly enlargement with this alternate. On the west side of I-270, the right-of-way required from Seneca Creek State Park would use land from the park to provide the proposed two-lane C-D road and a deceleration lane for the proposed ramp to Watkins Mill Road Extended, mostly for the necessary roadway supporting slopes. The right-of-way required from Middlebrook Hill Neighborhood Conservation Area would use land from the park for the necessary roadway supporting slopes for the proposed two-lane C-D road.

Alternate 2 with Access Option A: Partial Cloverleaf with Median HOV Ramps

This alternate would consist of the combination of Alternate 2 with Access Option A to provide a full movement general use interchange with separate median interchange ramps for HOV users between I-270 and Watkins Mill Road Extended. Construction of Alternate 2 with Access Option A would require the acquisition of right-of-way from within the park boundaries of Seneca Creek State Park, on the east and west sides of I-270, and Middlebrook Hill Neighborhood Conservation Area (Figure VI-3). The right-of-way required would consist of the following areas adjacent to I-270:

Seneca Creek State Park	-	3.74 acres (east side of I-270)
	-	2.30 acres (west side of I-270)
Middlebrook Hill Neighborhood Conservation Area	-	0.29 acre

The right-of-way required from the parks would use the parkland similar to Alternate 2. The parkland would be used to provide the proposed two-lane C-D road on each side of I-270 and the deceleration lane for the proposed exit ramp on the west side of I-270, mostly for the necessary roadway supporting slopes for the C-D road and deceleration lane, as well as, an area for stormwater management on the east side of I-270. However, Alternate 2 with Access Option A, which includes median interchange ramps for HOV, would require 0.06 acre of additional right-of-way from Seneca Creek State Park on the east side of I-270, as compared to Alternate 2.

Alternate 3: Full Diamond Interchange

This alternate proposes a diamond configuration on both sides of I-270 and would use a two-lane C-D lane system on the east side of I-270 only. Braided ramps would be used in the southwest quadrant of the interchange because of inadequate weaving distance along southbound I-270. Construction of Alternate 3 would require the acquisition of right-of-way from within the park boundaries of Seneca Creek State Park, on the east side of I-270 only, and Middlebrook Hill Neighborhood Conservation Area (Figure VI-4). The right-of-way required would consist of the following areas adjacent to I-270:

Seneca Creek State Park	-	3.68 acres (east side of I-270)
Middlebrook Hill Neighborhood Conservation Area	-	0.29 acre

The right-of-way required from Seneca Creek State Park on the east side of I-270 would use land from the park to provide the proposed two-lane C-D road, mostly for the necessary roadway supporting slopes, as well as, an area for stormwater management. It is anticipated that the existing stormwater management pond along northbound I-270 would require reconstruction and possibly enlargement with this alternate. The right-of-way required from Middlebrook Hill Neighborhood Conservation Area would use land from the park for the necessary roadway supporting slopes for the proposed two-lane C-D road.

Alternate 4 with Access Option A: Partial Interchange with Median HOV Ramps

This alternate would consist of the combination of Access Option A with Alternate 4 to provide a partial general use interchange with a full movement HOV interchange. This alternate proposes a partial diamond interchange at I-270 and Watkins Mill Road Extended with separate median interchange ramps for HOV users. Construction of Alternate 4 with Access Option A would require the acquisition of right-of-way from within the park boundary of Seneca Creek State Park, on the east side of I-270 only (Figure VI-5). The right-of-way required from Seneca Creek State Park would consist of 0.79 acres, a narrow strip adjacent to I-270, that would be used for the necessary roadway supporting slopes for the I-270 template in the vicinity of the northern

limit of this alternate. The pond located along northbound I-270 would not be impacted enough to require reconstruction. In addition, there is not a large increase in impervious surface, as with Alternates 2 and 3, that would warrant using this pond for stormwater management.

Alternate 6 with Access Option A: Watkins Mill Road Extended with Median HOV Ramps

This alternate would consist of the combination of Access Option A with Alternate 6 to provide a full movement HOV interchange at Watkins Mill Road Extended, with no general use interchange. This alternate proposes the extension of Watkins Mill Road from MD 117 to MD 355 with exclusive ramp access for HOV users between I-270 and Watkins Mill Road Extended. Construction of Alternate 6 with Access Option A would require the acquisition of right-of-way from within the park boundary of Seneca Creek State Park, on the east side of I-270 only (Figure VI-6). The right-of-way required from Seneca Creek State Park would consist of 0.79 acres, a narrow strip adjacent to I-270, that would be used for the necessary roadway supporting slopes for the I-270 template in the vicinity of the northern limit of this alternate.

E. Avoidance

No-Build Alternate

This alternate consists of routine maintenance, minor construction projects and developer-based improvements associated with new developments. These minor improvements would not be expected to affect roadway capacity, safety, or accessibility to the growth areas of northern Gaithersburg.

Alternate 3 w/Northbound Braided Ramps Alternate (Figures VI-7 through VI-11)

This alternate would be identical to Alternate 3 (Full Diamond Interchange) for the southbound (west) side of I-270. The northbound (east side of I-270 for this alternate consists of three successive entrances to I-270. The first entrance would be from MD 124, and would require a grade separation from the C-D road. The second entrance would be from the C-D road and the third from the extension of Watkins Mill Road. All entrance ramps would consist of an 800-foot acceleration lane and 300-foot taper.

This is the only avoidance interchange alternate that would provide a full range of movements to and from I-270.

Alternate 4: Partial Interchange
(Figures IV-18 through IV-20)

The partial interchange concept consists of a partial diamond interchange at I-270 and Watkins Mill Road Extended. Movements would only be allowed from Watkins Mill Road Extended to northbound I-270 and from southbound I-270 to Watkins Mill Road Extended. As part of the I-270/U.S. 15 Corridor Study, an additional general use lane on the I-270 would be required for capacity reasons on the southbound (west) side if no southbound C-D lanes are added. That additional general use lane is assumed as part of this alternate.

Alternate 6: Watkins Mill Road without Interchange

This alternate consists of the extension of Watkins Mill Road from MD 117 east across I-270 and connecting to MD 355 as a 4-lane arterial. It is included in the "no-build" or "baseline" scenario for the Metropolitan Washington Council of government's travel demand model for the Washington region in the Constrained Long Range Plan (CLRP). This alternate does not include a conventional interchange of Watkins Mill Road and I-270 with access for general use traffic.

F. Measures to Minimize Harm

Alternates 2 and 2A

The preliminary design of Alternates 2 and 2A includes a retaining wall along the northbound (east) side of I-270, 750 feet long by 12 feet (average height) retaining wall that reduces the impact to Middlebrook Park 1.24 acres, from 1.53 acres to 0.29 acre at a cost of approximately $650,000. A noise barrier may need to be constructed on top of this retaining wall to replace an existing noise wall that would be removed. The cost of the noise barrier is not included in the $650,000.

The impacts to Middlebrook Park and Seneca Creek State Park could be further minimized by reducing the overall width of the proposed typical section. This could be accomplished by incorporating a painted collector-distributor C-D road in lieu of the proposed barrier separated facility. The painted C-D road functions in the same manner as the standard C-D; however the mainline through lanes are separated from the C-D roadway by a 4-foot wide striped area rather than shoulders and a concrete barrier. The painted C-D road would cost less than the barrier separated facility but would not be as safe. In addition, the slope ratio could be reduced from 2:1 to 1:1, by using geotextiles to mechanically stabilize the slopes. A full geotechnical analysis in the final design stage would need to be undertaken to determine if

mechanically stabilized embankments are feasible. Utilizing a painted Collector-Distributor road with 1:1 slopes would reduce the impact to Seneca Creek State Park as follows:

Alternate 2

Seneca Creek State Park	3.28 acres (east side of I-270) 1.70 acres (west side of I-270]
Middlebrook Hill Neighborhood Conservation Area	0.29 acre

Alternate 2A

Seneca Creek State Park	3.34 acres (east side of I-270) 1.70 acres (west side of I-270)
Middlebrook Hill Neighborhood Conservation Area	0.29 acre

Alternate 3

The preliminary design of Alternate 3 includes a retaining wall along the northbound (east) side of I-270, 750 feet long by 12 feet (average height) that reduces the impact to Middlebrook Park 1.24 acres from 1.53 acres to 0.29 acre at a cost of approximately $650,000. A noise barrier would be constructed on top of this retaining wall to replace an existing noise wall that would be removed. In addition, another retaining wall 650 feet long by 8 feet (average height) is proposed along the southbound (west) side of I-270 just north of Seneca Creek. This retaining wall avoids impacting one acre of Seneca Creek State Park and would cost approximately $380,000.

Alternate 4A

The preliminary design of Alternate 4A includes a retaining wall along the southbound (west side of I-270, 650 feet long by 8 feet (average height) and would cost approximately $380,000. This retaining wall is just north of Seneca Creek and avoids impacting one acre of Seneca Creek State Park. The impact to Seneca Creek State Park along the northbound (east) side of I-270 could be minimized to 0.40 acre by reducing the slope ratio from 2:1 to 1:1, by using geotextiles to mechanically stabilize the slopes. A full geotechnical analysis in the final design stage would need to be undertaken to determine if mechanically stabilized embankments are feasible.

Alternate 6A

The impact to Seneca Creek State Park along the northbound (east) side of I-270 could be minimized to 0.40 acre by reducing the slope ratio from 2:1 to 1:1, by using geotextiles to mechanically stabilize the slopes. A full geotechnical analysis in the final design stage would need to be undertaken to determine if mechanically stabilized embankments are feasible.

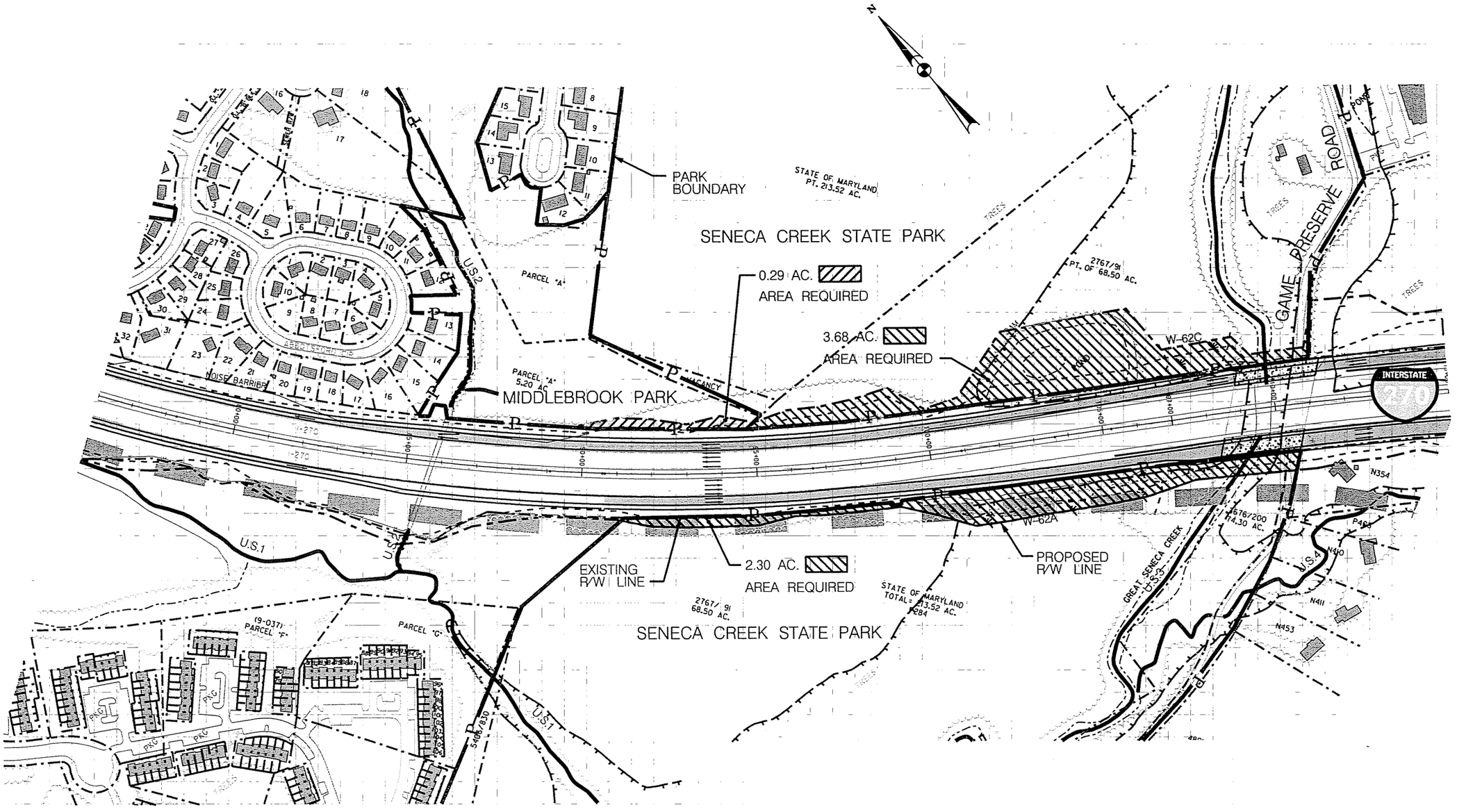
Stormwater Management Pond

Relocating the stormwater management pond, along northbound I-270 that is impacted by Alternates 2, 2A and 3, to a location outside of the park was considered as a possible minimization measure. However, such a relocation appears infeasible given that the pond is currently located at the low point in the I-270 profile, generally where stormwater management ponds need to be. Also, there is no vacant land along I-270 outside the park. Existing single family housing is located west of the park, and a high rise building is under construction in the parcel between Great Seneca Creek and the PEPCO right-of-way.

G. Coordination

Coordination has been undertaken with the Maryland-National Capital Park and Planning Commission who provides park management for the Middlebrook Hill Neighborhood Conservation Area, and with MDDNR Land and Water Conservation Service who has jurisdiction over the Seneca State Park. This coordination has concerned the development of alternates and the assessment of impacts to Section 4(f) resources impacted with the project alternates (see Section VII. Comments and Coordination).

Coordination will continue with M-NCPPC and MDDNR throughout the alternate selection process. All reasonable avoidance and minimization measures will be evaluated in consultation with park representatives. If park property is required with the alternate selected for construction, reasonable mitigation measures will be developed at that time. Mitigation could include parkland replacement, visual screening, and landscaping treatments for proposed retaining walls.

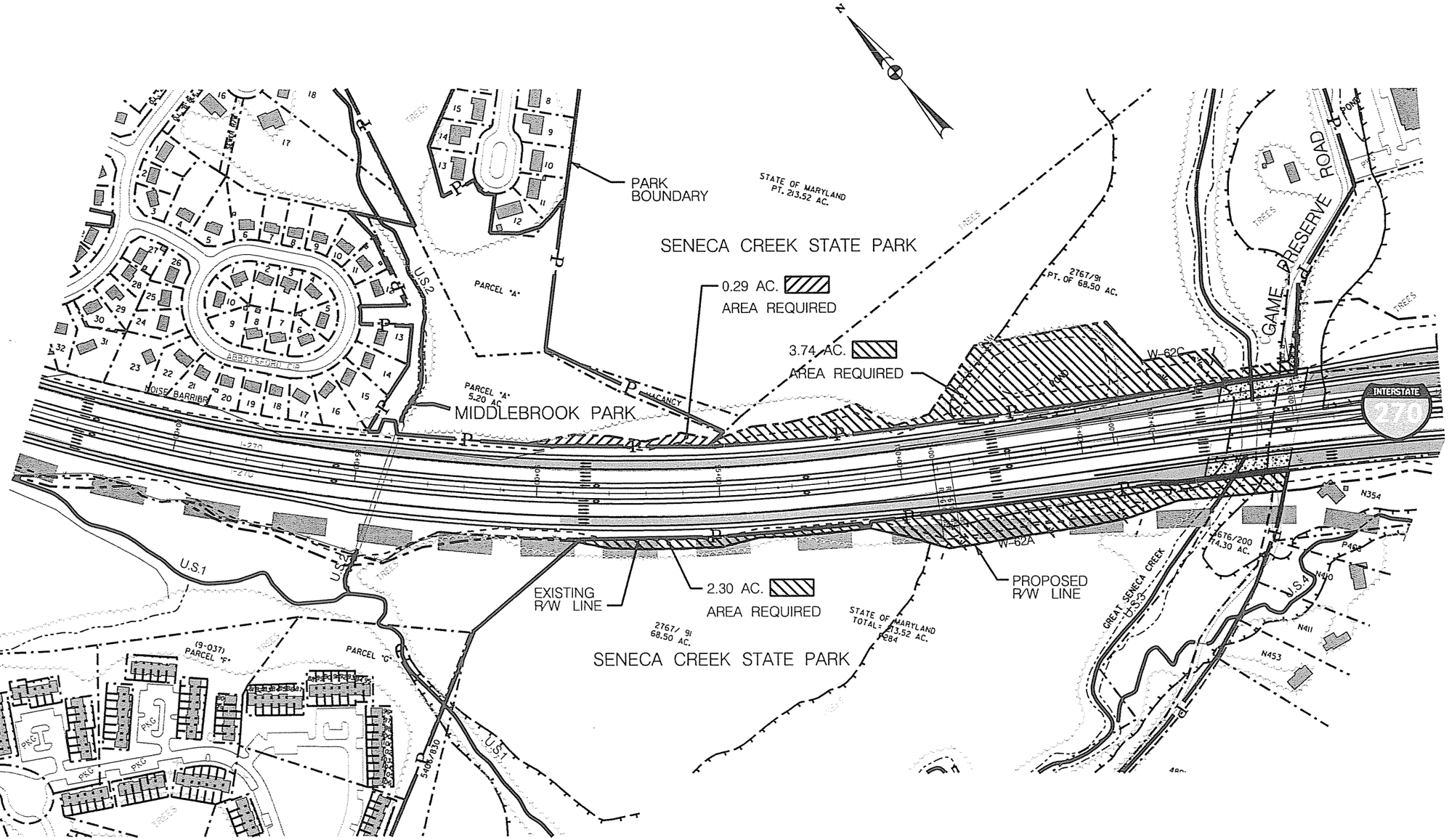


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2 – 4(f) IMPACTS

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-2

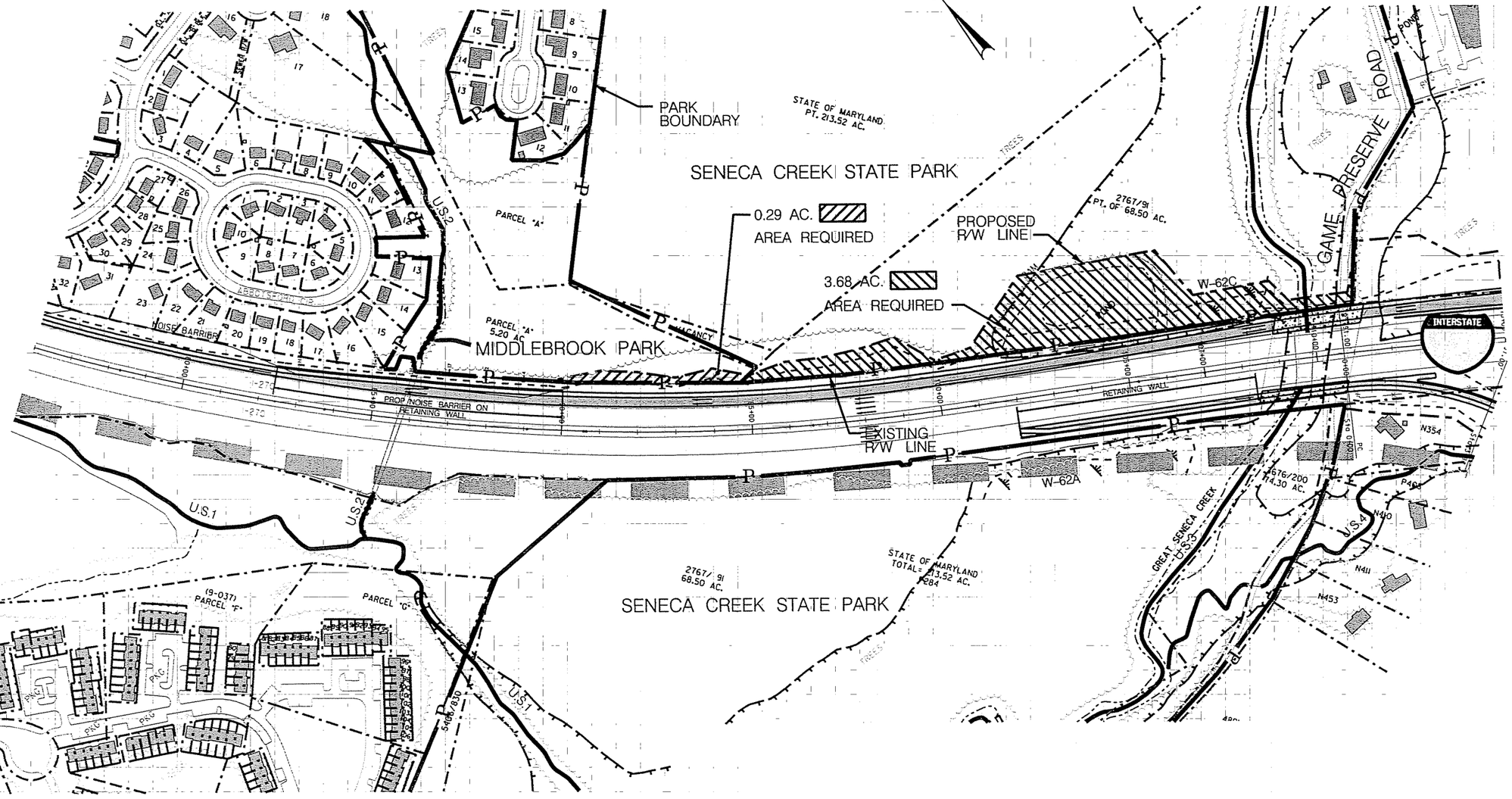


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 2A – 4(f) IMPACTS

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	VI-3



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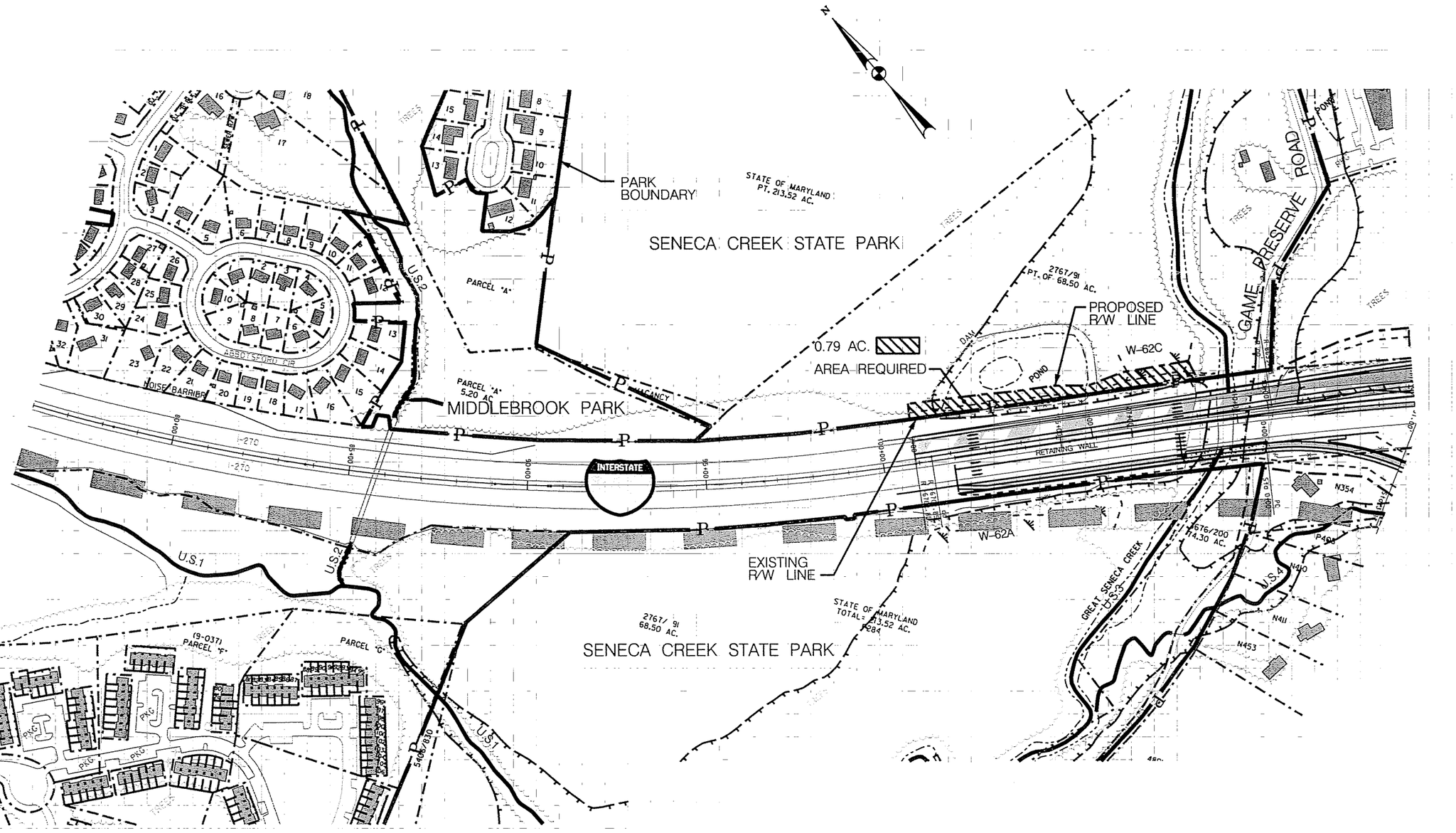
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3 – 4(f) IMPACTS

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	VI-4



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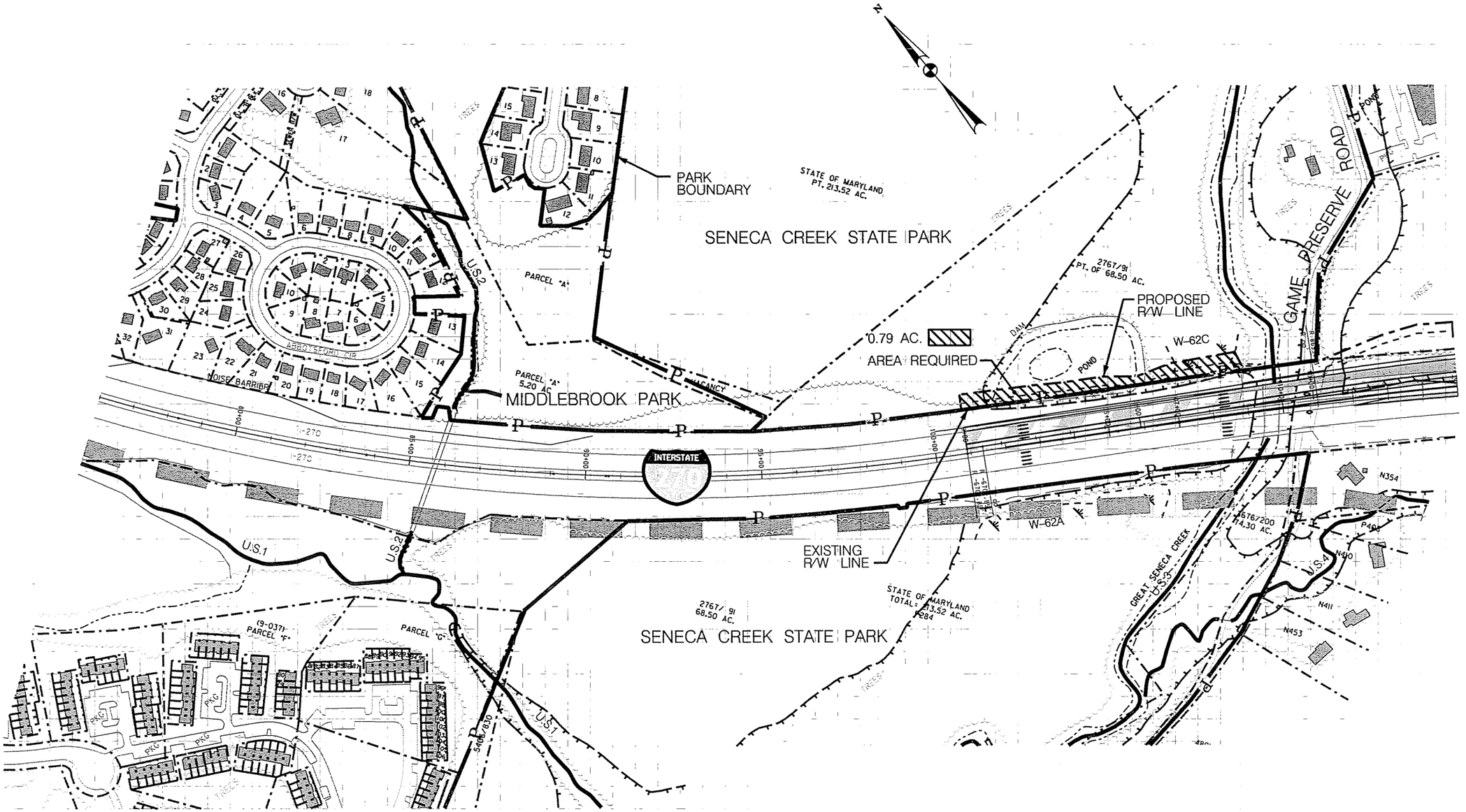
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4A – 4(f) IMPACTS

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-5



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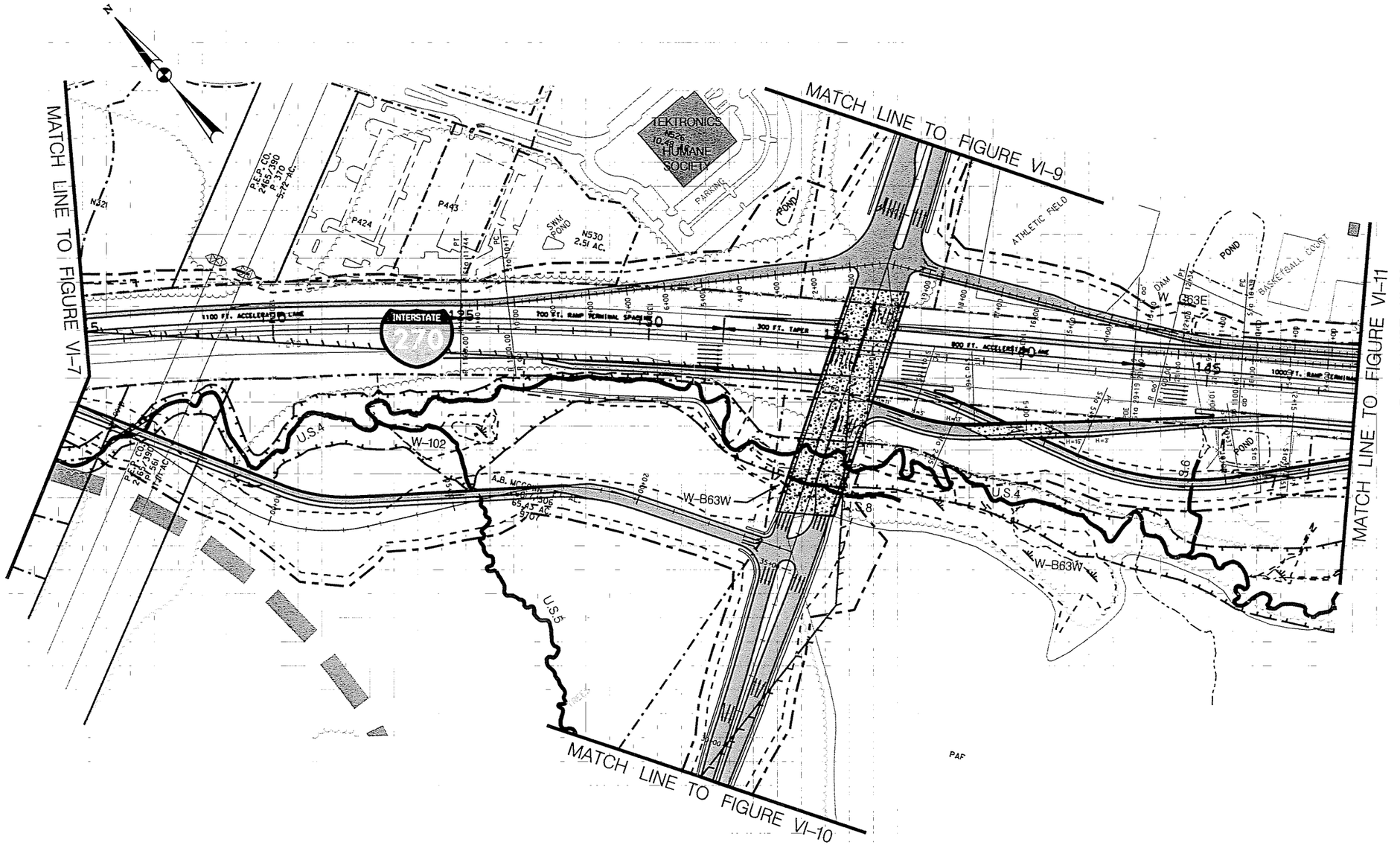
I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6A – 4(f) IMPACTS

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	VI-6



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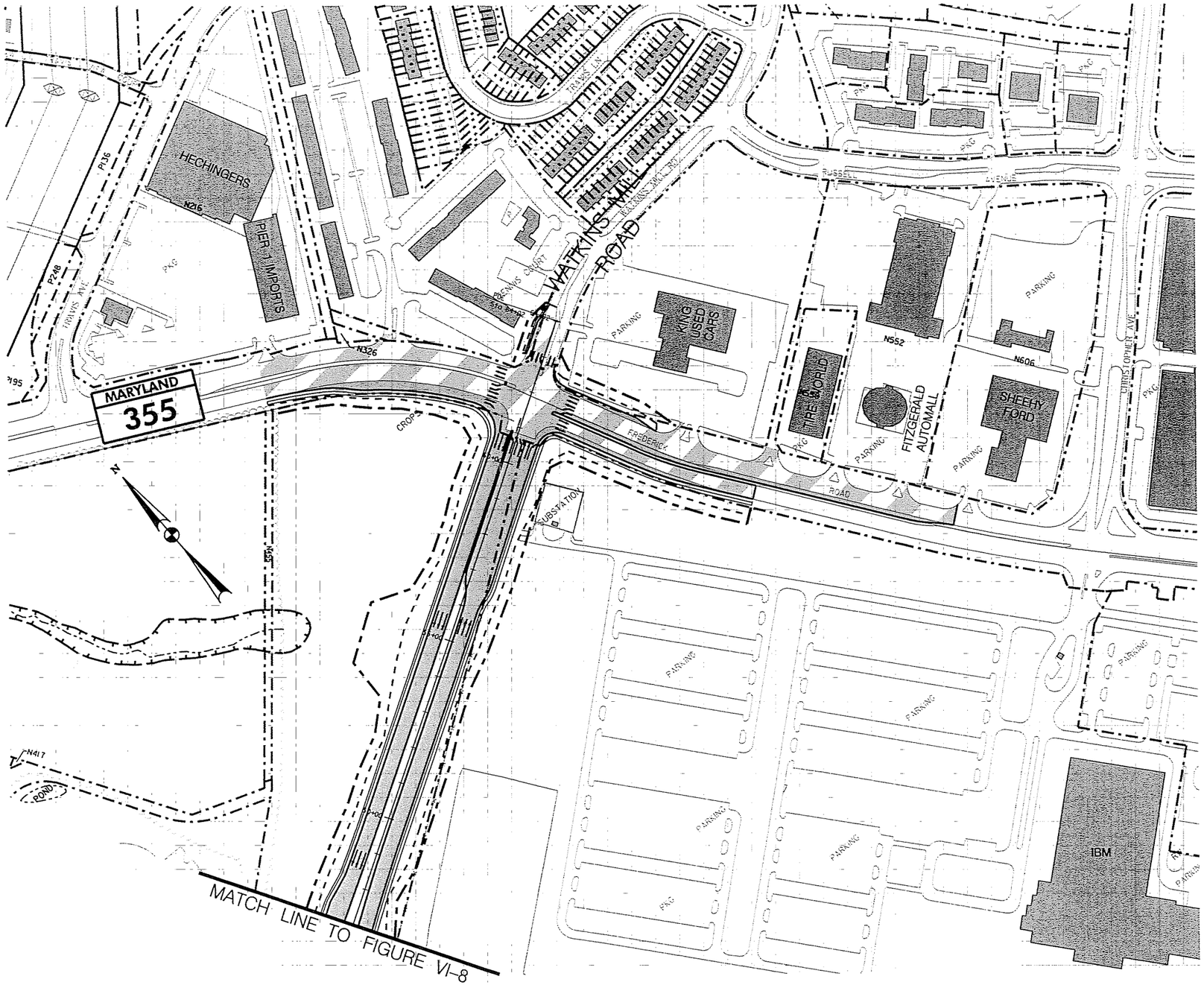
I–270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3 W/ NORTHBOUND BRAIDED RAMPS
(AVOIDANCE ALTERNATE)
I–270 STA. 115+00 TO STA. 149+00

DATE	SCALE	FIGURE
NOV., 2000	SCALE : 1" = 300'	VI–8



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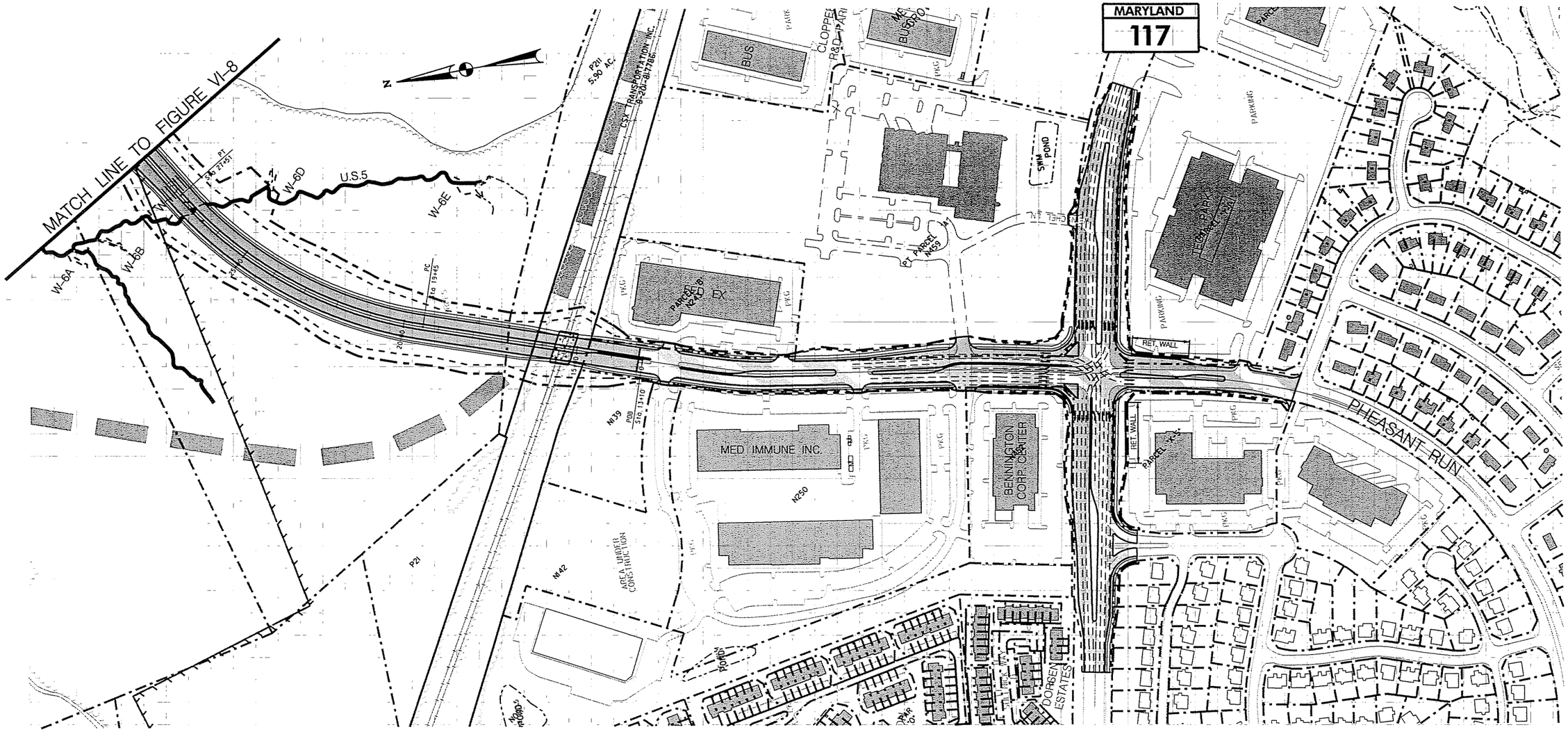
I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3 W/ NORTHBOUND BRAIDED RAMPS
(AVOIDANCE ALTERNATE)
WATKINS STA. 47+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-9



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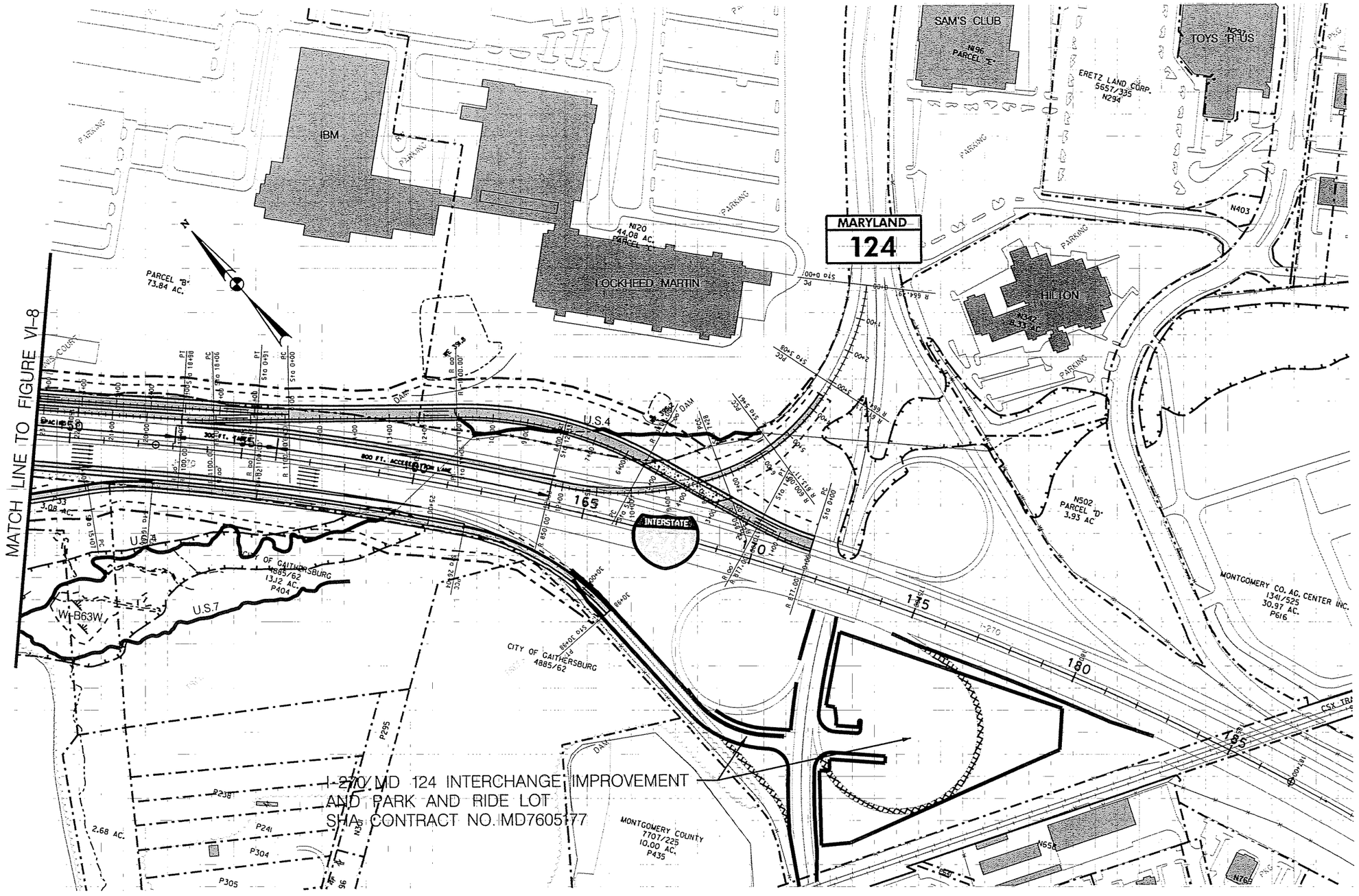
I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3 W/ NORTHBOUND BRAIDED RAMPS
(AVOIDANCE ALTERNATE)
WATKINS STA. 0+00 TO STA. 29+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-10



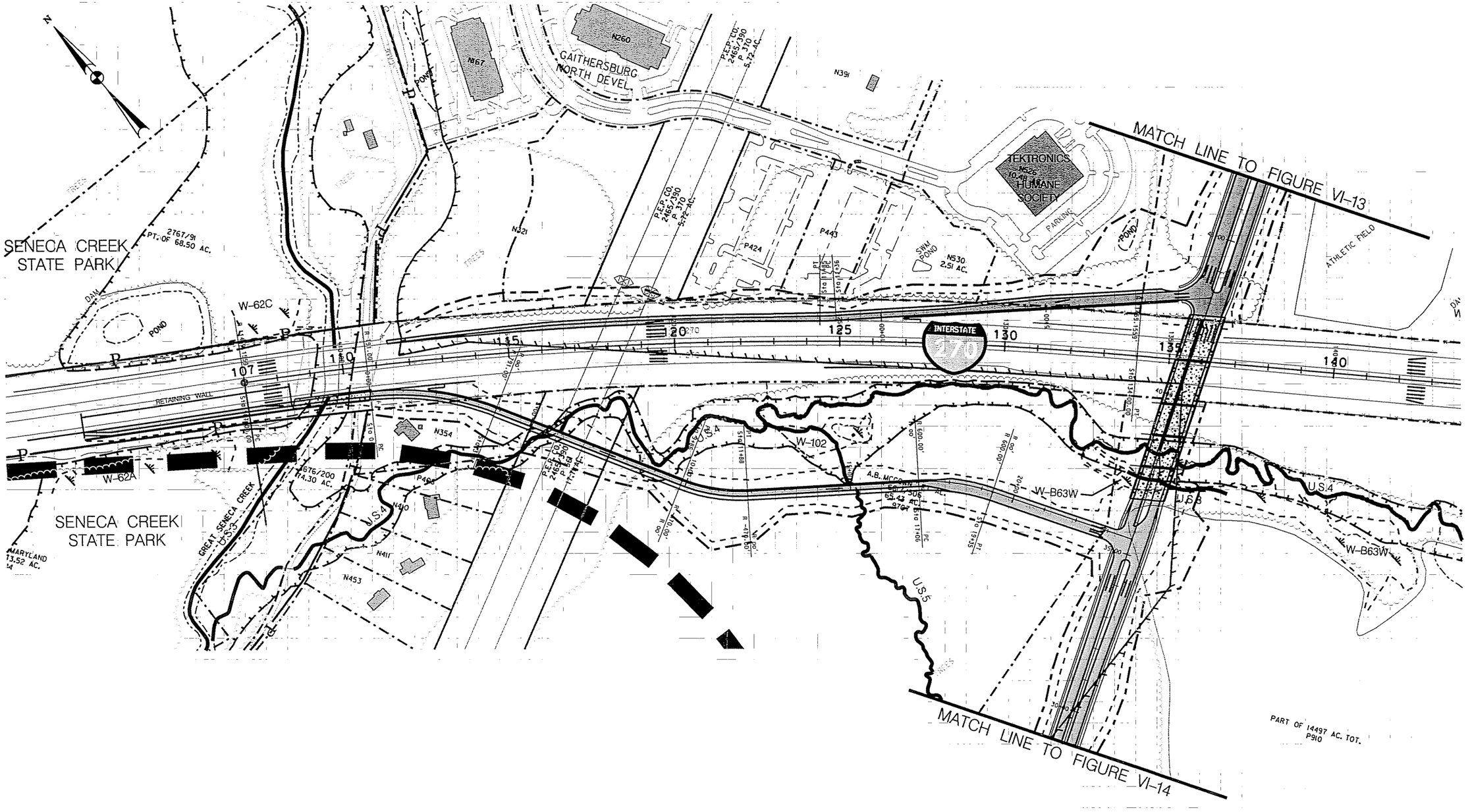
I-270/MD 124 INTERCHANGE IMPROVEMENT
AND PARK AND RIDE LOT
SHA CONTRACT NO. IMD7605177

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 3 W/ NORTHBOUND BRAIDED RAMPS
(AVOIDANCE ALTERNATE)
I-270 STA. 149+00 TO STA. 171+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-11

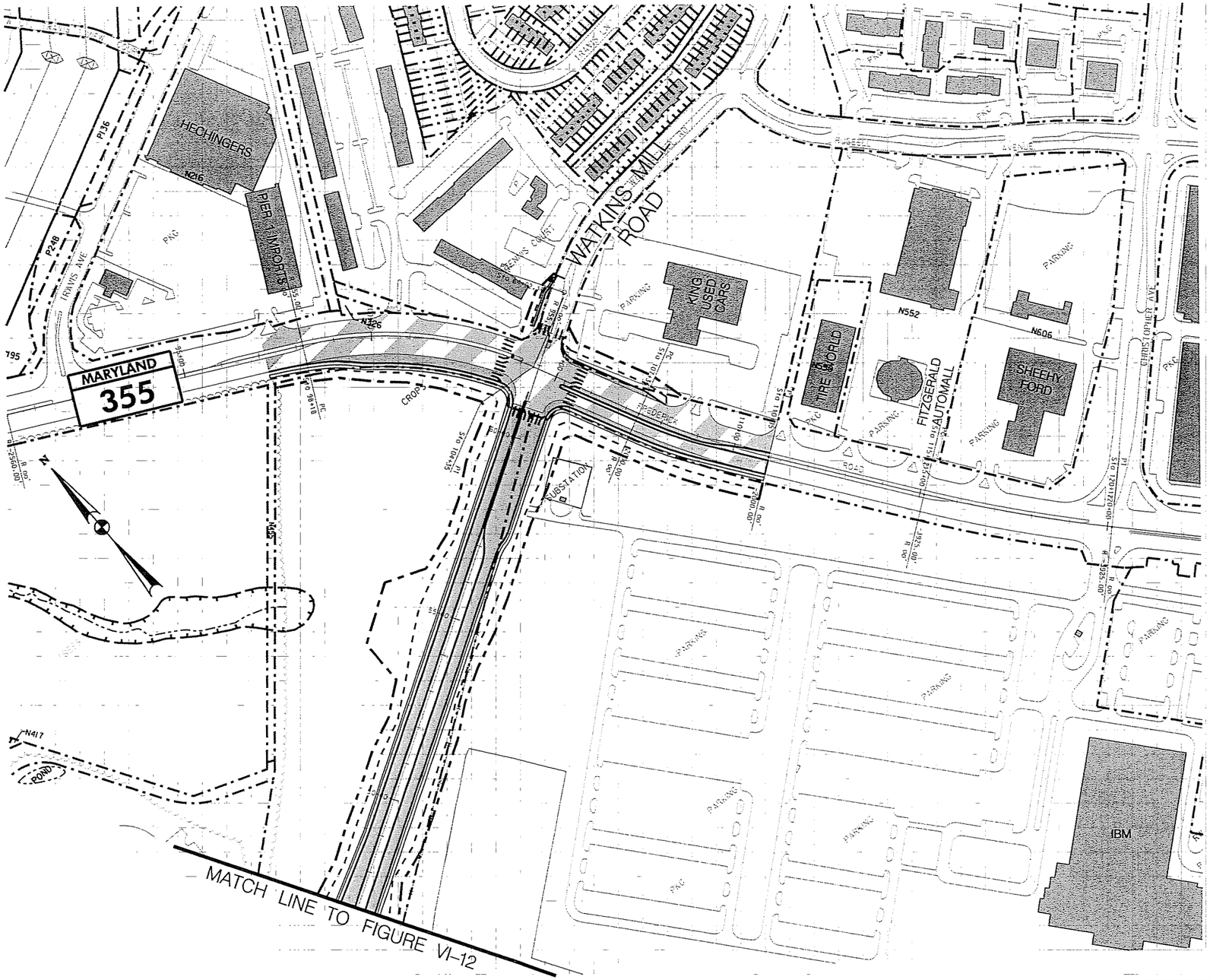


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4 – PARTIAL INTERCHANGE
(AVOIDANCE ALTERNATE)
I-270 STA. 107+00 TO STA. 137+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-12



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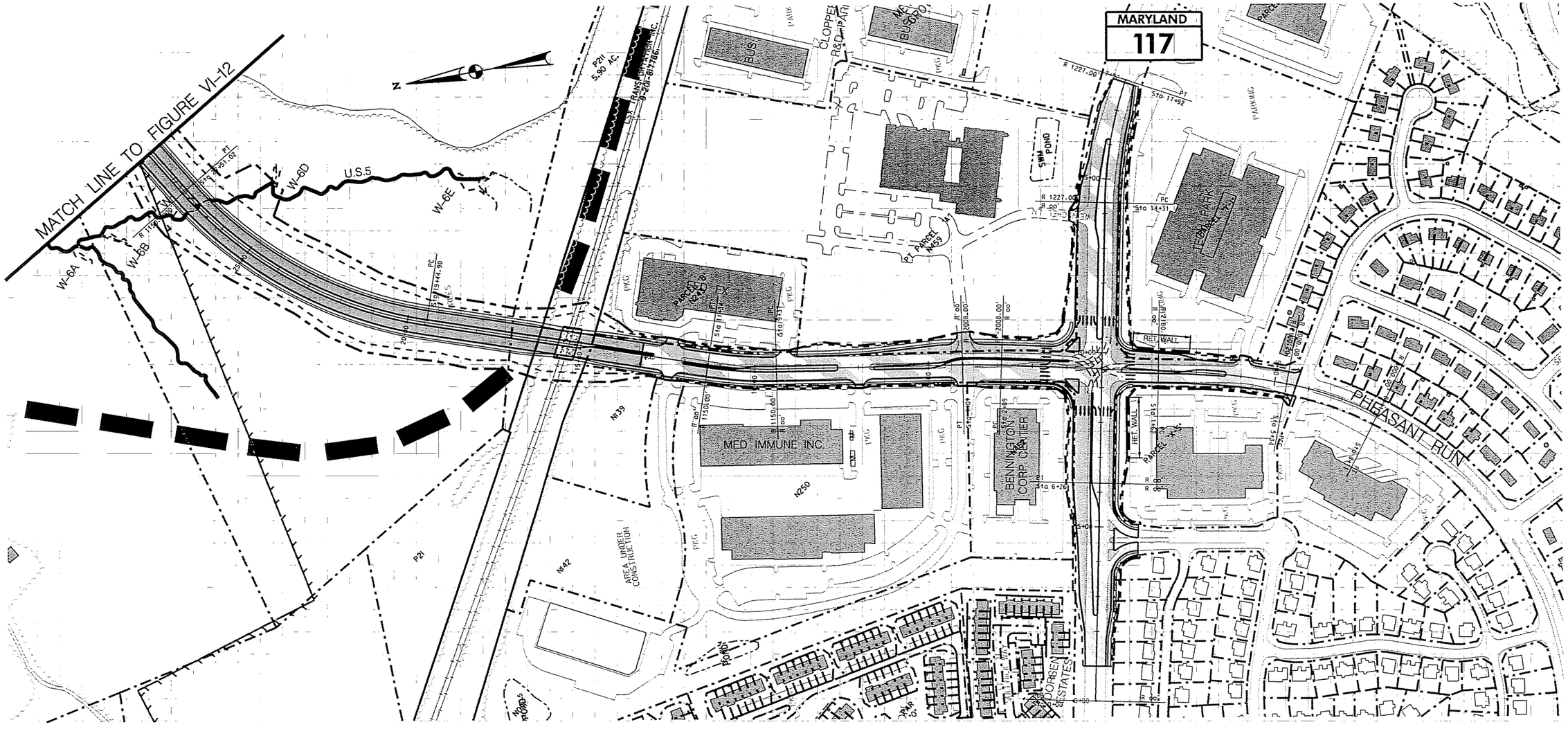
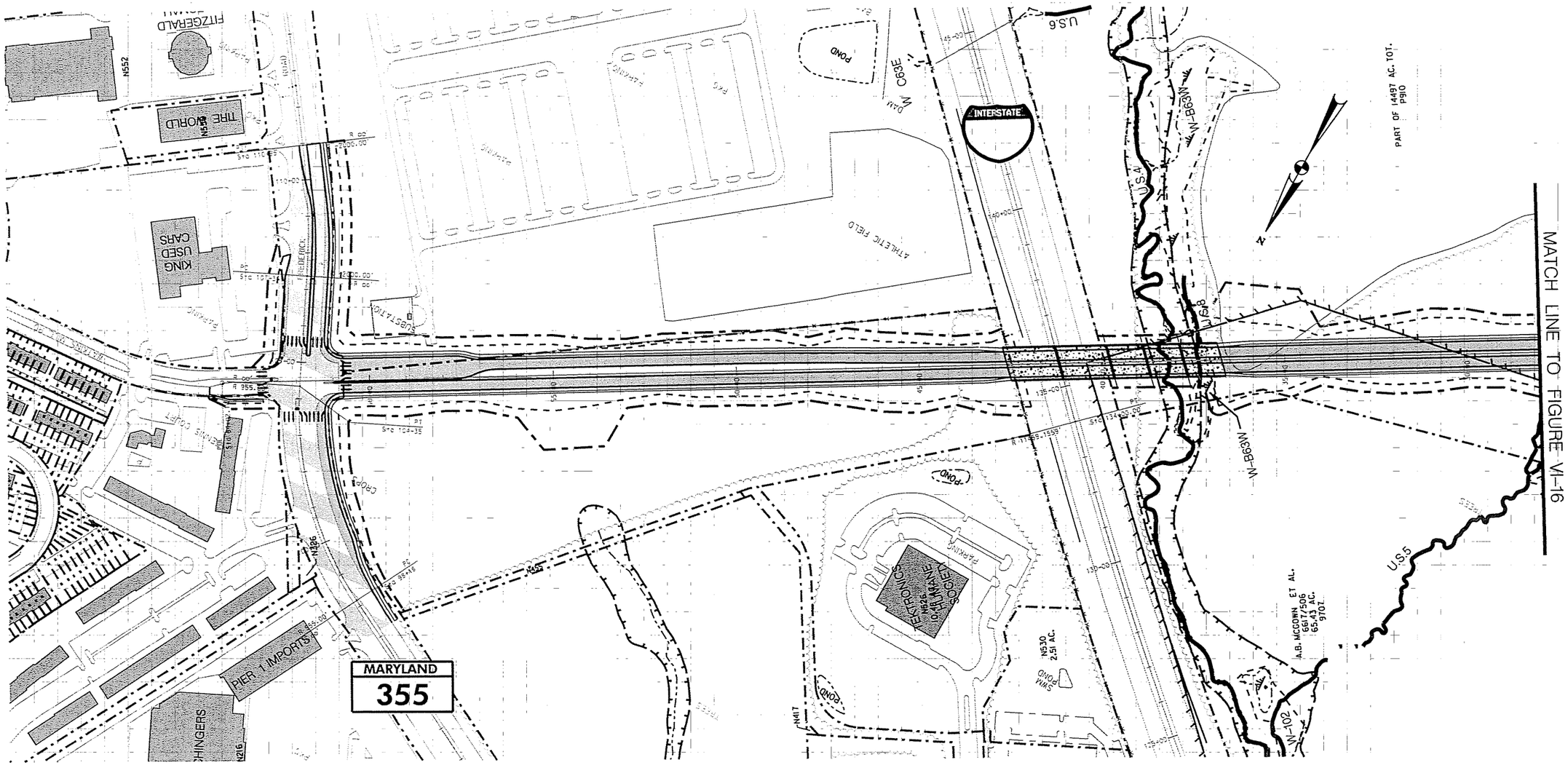
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 4 – PARTIAL INTERCHANGE
(AVOIDANCE ALTERNATE)
WATKINS STA. 47+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-13


MATCH LINE TO FIGURE VI-12
MARYLAND
117
W-6A
W-6B
W-6D
W-6E
U.S.5
P21
5.90 AC.
TRANSCO GAS PIPELINE
BUS
CLOPPER R&D PARK
MED IMMUNE BUS RD
SWM POND
PARKED
PARKED
PARKED



STATE OF MARYLAND
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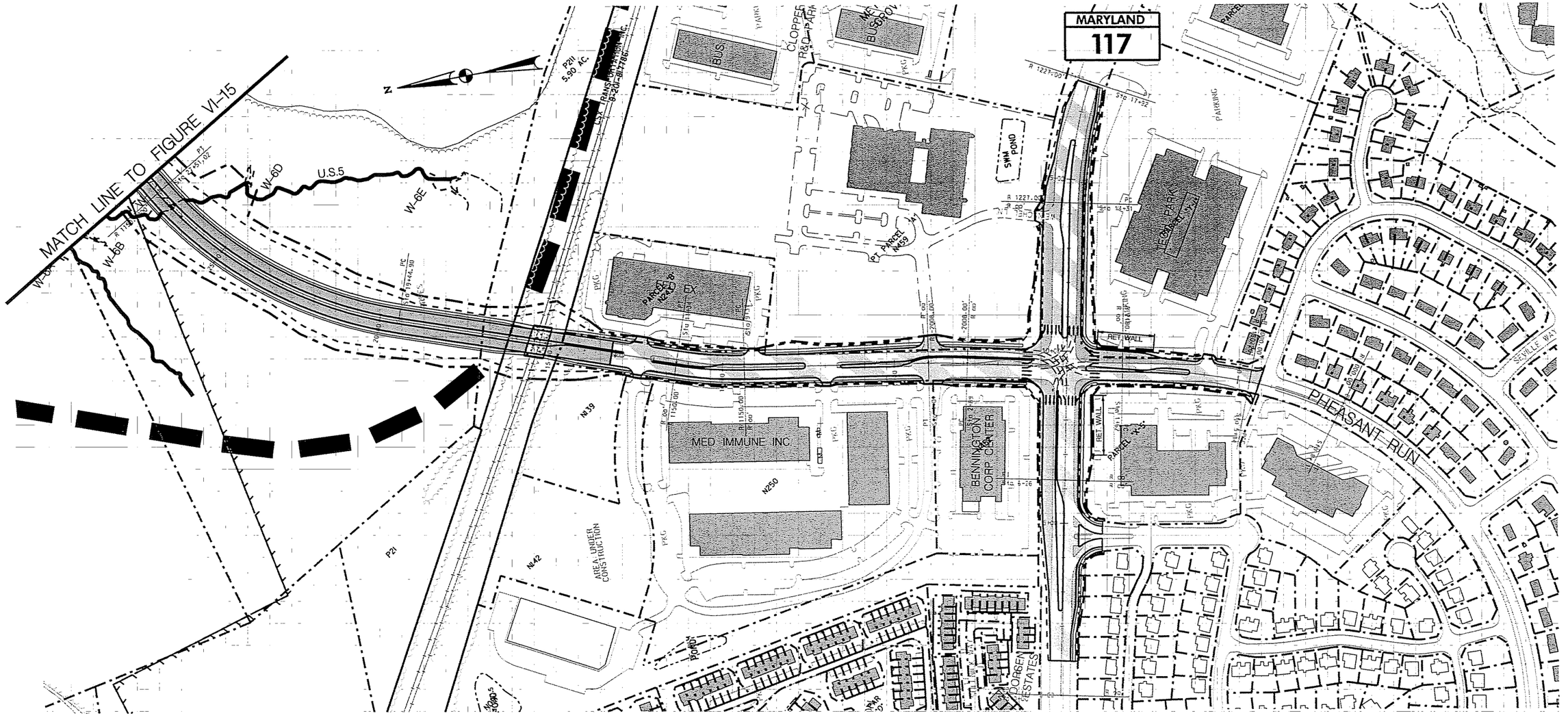
STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6 – WATKINS MILL ROAD EXTENDED
(AVOIDANCE ALTERNATE)
WATKINS STA. 28+00 TO STA. 64+02

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-15



STATE OF MARYLAND
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STATE HIGHWAY ADMINISTRATION

I-270 AT WATKINS MILL ROAD EXTENDED

ALTERNATE 6 – WATKINS MILL ROAD EXTENDED
(AVOIDANCE ALTERNATE)
WATKINS STA. 0+00 TO STA. 28+00

DATE	SCALE	FIGURE
NOV., 2000	1" = 300'	VI-16

VII. COMMENTS AND COORDINATION

INTERAGENCY COORDINATION

The I-270 project planning study at Watkins Mill Road Extended was discussed at seven Maryland State Highway Administration Interagency Review Meetings.

The March 17, 1999 Interagency Review meeting included a project introduction and overview on the Purpose and Need Statement for the project, along with the distribution of a draft copy of the Purpose and Need Statement. In attendance were representatives from the State Highway Administration (SHA), Federal Highway Administration (FHWA), US Environmental Protection Agency (EPA), Maryland Department of Transportation (MDOT), Maryland Historical Trust (MHT), Maryland Department of the Environment (MDE), US Corps of Engineers (COE), Maryland Department of Natural Resources (DNR), National Park Service (NPS), National Marine Fisheries (NMF), US Fish and Wildlife Service (USFWS), and the Maryland Office of Planning (MOP), which is now the Maryland Department of Planning (MDP). The project was preliminarily identified as a pilot project for environmental streamlining under the Transportation Equity Act for the 21st Century (TEA-21). It was requested that the agencies provide any feedback on questions regarding environmental streamlining and Interagency coordination to the project team and to the Environmental Streamlining Steering Committee.

The purpose of the April 21, 1999 Interagency Review meeting was to discuss comments, suggestions, and revisions to the draft Purpose and Need Statement as well as efforts to streamline this pilot project. In attendance were representatives from SHA, MDP, Montgomery County Department of Public Works and Transportation (MCDPWT), Maryland-National Capital Park and Planning Commission (M-NCPPC), MHT, DNR, MDE, FHWA, EPA, and the Wilson T. Ballard Company. A copy of a Draft Purpose and Need Statement and draft Environmental Streamlining procedures were distributed to the group. General comments raised included addressing transit services at the MARC Station, expanding the discussion on planned development, and looking into neighboring projects.

At the May 19, 1999 Interagency Review meeting, the project team met with the Interagency Review Group to discuss purpose and need including segmentation issues. In attendance were representatives from SHA, EPA, FHWA, DNR, MDP, and COE. Agency review of a draft segmentation paper hand-out were requested. It was noted that SHA would not proceed with the Purpose and Need Statement until the segmentation issues were addressed.

At the June 16, 1999 Interagency Review meeting, comments on the segmentation paper and milestones were reviewed. In attendance were representatives from SHA, EPA, FHWA, DNR, MDP, MDOT, and COE. Comments and questions concerning the segmentation paper

were addressed and copies were distributed to those who had not previously received it. The meeting also included a brief environmental overview and a review of the revised Purpose and Need Statement, which included changes made in response to agency and team comments. The revised one page Summary/Concurrence Form for the project Purpose and Need Statement was distributed. It was requested that an alternates scoping meeting be held at the next Interagency Review meeting, and that a field review take place the next day, if needed. Subsequent to the June 16, 1999 meeting, MDE was to provide wording revisions for the segmentation paper and an alternates field/office review meeting was to be scheduled after receiving concurrence on the purpose and need. The Purpose and Need Statement summary was submitted to the agencies on June 23, 1999 along with a request for their formal concurrence within 15 days.

The purpose of the July 21, 1999 Interagency Review meeting was to initiate scoping of preliminary alternates with the agencies, which would continue at the August 26, 1999 Interagency Field Review meeting. In attendance were representatives from SHA, EPA, FHWA, DNR, MDP, MDOT, COE and the Wilson T. Ballard Company.

It was noted that concurrence from all agencies had been received on the project Purpose and Need Statement. In addition to the five alternates developed and presented by SHA, the COE suggested three new alternates. It was suggested that all eight alternates be plotted and sent to the agencies for review prior to the August 26, 1999 Interagency Field Review meeting. Subsequent to the July 21, 1999 meeting, SHA sent copies of the mapping with the suggested alignments to the agencies for the August 26, 1999 Interagency Field Review Meeting.

At the October 20, 1999 Interagency Review meeting, the project team presented the alternates recommended to be dropped prior to the Alternates Public Workshop. In attendance were representatives from SHA, FHWA, DNR, MDP, MDE, COE, and the Wilson T. Ballard Company. It was noted that all of the build alternates include the four- to six-lane extension of Watkins Mill Road between MD 355 and MD 117, an HOV lane in both directions and various access options. Bicycle/Pedestrian access was discussed and noted that it would be highlighted at the workshop. A summary of the environmental impacts and an overview of the build traffic conditions were provided for the agencies.

The purpose of the January 19, 2000 Interagency Review meeting was to get agency comments on the draft alternates retained for detailed study. In attendance were representatives from SHA, FHWA, M-NCPPC, MHT, DNR, MDP, MDE, and COE.

It was noted that the Alternates Workshop was well attended and that most of the comments regarded traffic and safety concerns. As an addition to the alternates retained presentation, it was mentioned that the alternates were grouped into four categories for travel

forecasting purposes, also that more detailed traffic information would be provided as the project proceeds into Stage II. Tributaries of Great Seneca Creek are located within the project area and were noted as being designated as Use 1 Water by DNR. At the request of the COE to minimize impacts to aquatic resources, bridges and structures have been included into the preliminary design. It was recommended that SHA maintain coordination with the liaison for the Great Seneca Park property. SHA has continued to coordinate with park officials located within the project area.

A July 19, 2000 Interagency Review meeting was held to present crossing options of Great Seneca and to discuss stream impacts resulting from those options. In attendance were representatives from SHA, the Wilson T. Ballard Company, COE, MDP, DNR and MDE. The COE agreed to drop one ramp crossing. In addition, the COE suggested additional Rosgen studies. The COE, MDP, DNR and MDE requested review of the preliminary draft Environmental Assessment/4(f) document.

INTERAGENCY FIELD COORDINATION

Several Maryland State Highway Administration Interagency Field Review Meetings were held for the I-270 and Watkins Mill Road Extended project. Enclosed is a summary of various field meetings including field minutes.

Subsequent to a March 17, 1999 Interagency Review Meeting, a memorandum was drafted to discuss the possibility of the project becoming an environmental streamlining pilot project. Environmental streamlining efforts had been suggested to facilitate the merged National Environmental Policy Act (NEPA) process. The memorandum suggested strategies to achieve streamlining and discussion to prepare for the next Interagency Review Meeting. Preliminary discussions proposed a sequence of events for concurrence points on the project, including:

- the submittal of a draft document package to the agency members 15 - 30 days in advance of the upcoming monthly Interagency Review Meetings,
- meeting with agency members to discuss comments/suggestions on draft documents,
- discussing potential concurrence issues as they arise,
- submitting concurrence request letters immediately following the Interagency Review Meeting to achieve a 15 - 30 day concurrence timeframe,
- pre-scheduling Interagency Field Review Meetings at the beginning of the project, and
- identifying the criteria that could be used in eliminating alternates from further consideration.

On Friday, June 11, 1999, an Interagency Field Review Meeting was held to discuss segmentation issues, purpose and need issues, an environmental overview and to review the project area. In attendance were representatives from MCDPWT, MDE, COE, DNR, M-NCPPC, City of Gaithersburg, EPA, FHWA, USFWS, MDP and The Wilson T. Ballard Company. Upon reviewing the project area, the group outlined and revised a one page Purpose and Need Statement Summary Overview, which would also be used for concurrence.

On Thursday, August 26, 1999, an Interagency Field Review Meeting was held to scope and discuss preliminary alternates and review alignments in the field. In attendance were representatives from SHA, MCDPWT, MDE, COE, FHWA, USFWS, City of Gaithersburg, EPA, MDP, The Wilson T. Ballard Company and Straughan Environmental Services. The group

discussed the project background, preliminary alternates, and a preliminary Secondary and Cumulative Effects Analysis boundary. In discussing preliminary alternates, it was concluded that some shift be investigated with the alignment for what is now Alternate 2-I. The COE suggested a more favorable ramp alignment stream crossing of the Great Seneca Tributary. In addition, the group agreed to drop the Left-Hand Exit, the Double-Decker and the Urban Diamond Scenarios, largely due to driver expectancy, redundancy with other preliminary alternates or environmental constraints.

On Wednesday, September 29, 1999, an Interagency Field Review Meeting was held to review the functional assessments performed for the Watkins Mill Road Interchange wetlands with the purpose of reaching interagency consensus on the derived values of these areas. In attendance were representatives from SHA, COE, USFWS, DNR, Montgomery County, Straughan Environmental Services, Coastal Resources Inc. and The Wilson T. Ballard Company. Functional assessments were completed using both the Evaluation for Planned Wetlands (EPW) and New England methodologies. Consensus on the functional assessment was reached and a wetland delineation report was prepared.

On Friday, April 7, 2000, an Interagency Field Review Meeting was held to discuss and review in the field issues associated with Alternates 2 and 3 as they impact the stream tributary of the Great Seneca Creek and the wetland system adjacent to I-270. In attendance were representatives from SHA, COE, USFWS, The Wilson T. Ballard Company and Straughan Environmental Services. It was agreed that Alternates 2-I and 5 will be reviewed in more engineering detail as avoidance/minimization options to Alternates 2 and 3. Options for stream impact, stream relocations and ramps crossing the stream tributary were also discussed.

SUMMARY OF PUBLIC INVOLVEMENT

The State Highway Administration has met with citizens to discuss the I-270 Watkins Mill Road Extended Project on several occasions in the form of workshops or focus group meetings that were open to the public. There were also several meetings of a less formal nature, where SHA representatives met with local citizens that SHA knew were likely to be affected by alternates that had been developed.

- SHA has sponsored one public workshop thus far for this project. An Alternates Public Workshop was held at the Activity Center at Bohrer Park in Gaithersburg, Maryland on November 23, 1999 where 50 people attended. The purpose of this workshop was to familiarize citizens with the study by presenting the purpose and need for the project, publicly presenting the preliminary alternates under consideration, and to also provide an opportunity for public participation in the planning process. Preliminary Alternates 2, 2-I, 3, 3-I, 4 and 5 were presented along with Access Options A, B and C. The discussion concentrated on traffic and safety concerns, environmental concerns, accessibility, and suggestions for the alternates. Some of the traffic and safety concerns included the traffic impacts on Montgomery Village streets, on Thomas Farm, and to Game Preserve Road, as well as traffic safety implications near the schools. Environmental concerns included impacts on noise abatement, trees and stream flow. The public raised interest in pedestrian and bicycle accessibility with recommendations for safety modifications and landscaping.

- There have been four Focus Group Meetings held for this project. The Focus Group consists of approximately ten members of business and community representatives in the project area. At the meetings, there were representatives from the State Highway Administration, The Wilson T. Ballard Company, the City of Gaithersburg, Montgomery County, Woodland Hills Home Owners Association (HOA), Montgomery Meadows Home Owners Association, Orchard Hills Civic Association, Montgomery Village Foundation, IBM, Wells and Associates, Gaithersburg Planning Commission, and Casey Management.

    - On November 10, 1999 the Focus Group met to discuss the project development process, the project purpose and need, environmental issues, the preliminary alternates under consideration, and the upcoming Alternates Public Workshop. The mission of the focus group, the composition of the group and the tentative project schedule was also included in the discussion.

- On February 8, 2000, the Focus Group met to discuss the comments from the Alternates Public Workshop, the alternates recommended to be retained for detailed study, the environmental issues, the traffic analyses, and the upcoming steps in the study. The discussion included a summary of general feedback from the citizens that attended the November 23, 1999 Alternates Public Workshop. However, the main purpose of the meeting was to gain an understanding of the project alternates that have been recommended to be retained for detailed study. To address environmental issues, a summary of each alternate and the impacts associated with each, was provided. Right-of-way, wetlands, floodplains, and stream relocations were among the primary environmental concerns. An overview of the traffic issues and a comparison of traffic volumes at key locations with each alternate were also included in the discussion. It was concluded that the next steps in the study would include detailed traffic analyses, air and noise analyses, archeology studies and detailed engineering studies.

- On May 9, 2000, the Focus Group met to review issues associated with a few of the alternates that were retained for detailed study, and to discuss ongoing and upcoming project activities. Alternates 1, 2, 3, 4, and 6, along with Access Options A, B, and C, were displayed for discussion. The discussion focused on the environmental issues raised by the federal and state regulatory agencies. In order to avoid or minimize impacts to streams and wetlands, Alternates 2-1 and 5 will be further investigated as options to Alternates 2 and 3. In discussing traffic and engineering issues, the group reviewed the typical sections and intersection proposals based on level of service analysis for the design year of 2020. It was noted that, for the alternates, the secondary and cumulative effects analysis would be completed in time for the next Focus Group Meeting (September 2000).

- On September 26, 2000 the Focus Group plans to meet to review direct and indirect environmental impacts, the draft environmental document and the upcoming (December 2000) Location/Design Public Hearing.

A. AGENCY, LOCAL GOVERNMENT AND COMMUNITY COORDINATION

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 1715
BALTIMORE, MARYLAND 21203-1715

REPLY TO
ATTENTION OF:

SEP 0 8 1999

Operations Division

Subject: CENAB-OP-RMN (MD SHA/I-270 @ WATKINS MILL RD INTERCHANGE/ JD) 99-00838-12

CENAB-OP-RMN (MD SHA/I-270/US 15 SHADY GROVE METROSTATION TO BIGGS FORD ROAD/CCT ALIGNMENT/JD) 95-00876-12

Mr. Joseph R. Kresslein, Assistant Division Chief
Maryland State Highway Administration
Project Planning Division
707 North Calvert Street
Baltimore, Maryland 21202

Dear Mr. Kresslein:

I am replying to your request for a jurisdictional determination (JD) and verification of the delineation of waters of the United States, including jurisdictional wetlands, for the proposed subject projects.

The JD was conducted on July 7th and 8th, 1999. During those dates, minor changes were made to the delineation. The meeting minutes pertaining to the JD dated July 9, 1999, accurately reflected those changes. Therefore, this office considers the delineations for the subject projects to be accurate and complete.

Those areas that were determined to be jurisdictional are regulated by this office pursuant to Section 404 of the Clean Water Act. This verification is valid for five years from the date of this letter, unless new information warrants a revision before the expiration date.

You are reminded that any grading or filling of waters of the United States, including jurisdictional wetlands, is subject to Department of the Army authorization. Other state and local authorizations may also be required. In addition, the Interstate Land Sales Full Disclosure Act may require that prospective buyers be made aware, by the seller, of the Federal authority over any waters of the United States, including jurisdictional wetlands, being purchased.

If you have any questions concerning this matter, please call Mr. Steve Elinsky of this office at (410) 962-4503.

Sincerely,

Daniel L. Small
Acting Chief, Maryland Section Northern

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

April 2, 1999

Mr. Parker F. Williams
Administrator
State Highway Administration
707 N. Calvert St.
Baltimore, MD 21203-0717

ATTN: Mr. Mark D. Duvall

RE: Project No. MO839A11; I-270 at Watkins Mill Road Extended; Montgomery County, MD

Dear Mr. Williams:

This responds to your March 18, 1999, request for information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no biological assessment or further Section 7 consultation is required with the U.S. Fish and Wildlife Service. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. It does not address the Service's concerns pursuant to the Fish and Wildlife Coordination Act or other legislation. For information on the presence of other rare species, you should contact Ms. Lori Byrne of the Maryland Heritage and Wildlife Division at (410) 260-8570.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Andy Moser at (410) 573-4537.

Sincerely,

Robert J. Pennington
Assistant Field Supervisor
Div. of Habitat Evaluation and Protection

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

September 27, 1999

Mr. Derick Hallahan
Transportation Engineer
Rummel, Klepper & Kahl, LLP
81 Mosher Street
Baltimore, Maryland 21217-4250

RE: I-270/Watkins Mill Road Interchange
Montgomery County, MD

Dear Mr. Hallahan:

This responds to your September 8, 1999, request for information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

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

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the basin's remaining wetlands, and the long term of increasing the quality and quantity of the basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands proposed, the U.S. Army Corps of Engineers, Baltimore District should be contacted for permit requirements. They can be reached at (410) 962-3670.

RECEIVED
SEP 29 1999

We appreciate the opportunity to provide information relative to fish and wildlife issues and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Andy Moser at (410) 573-4537.

Sincerely,

Robert J. Pennington
Assistant Field Supervisor
Div. of Habitat Evaluation and Protection

Parris N. Glendening
Governor

Maryland Department of Natural Resources
Forest, Wildlife and Heritage Service
Tawes State Office Building
Annapolis, Maryland 21401

Sarah J. Taylor-Rogers
Secretary

Stanley K. Arthur
Deputy Secretary

February 11, 2000

Mr. Jason A. McNees
Straughan Environmental Services, Inc.
3905 National Drive, Suite 105
Burtonsville, MD 20866

RE: **Watkins Mill Road/I-270 Interchange, Environmental Assessment, Montgomery County.**

Dear Mr. McNees:

The Wildlife and Heritage Division has no records for Federal or State rare, threatened or endangered plants or animals within this project site. This statement should not be interpreted as meaning that no rare, threatened or endangered species are present. Such species could be present but have not been documented because an adequate survey has not been conducted or because survey results have not been reported to us.

However, the Wildlife and Heritage Division's Natural Heritage databse indicates that there are records for species of concern known to occur within the vicinity of the project site. These species could potentially occur on the project site itself, especially if the appropriate habitat exists. They are:

Scientific Name	Common Name	State Status
Botaurus lentiginosus	American Bittern	In Need of Conservation
Polygonum opelousanum	Opelousus Smartweed	Uncertain

Also, the forested area on the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of this habitat is strongly encouraged by the Department of Natural Resources. The following guidelines will help minimize the project's impacts on FIDS and other native forest plants and wildlife:

1. Concentrate development to nonforested areas.

Telephone: (410) 260-8540
DNR TTY for the Deaf: 410-974-3683

7

2. If forest loss or disturbance is absolutely unavoidable, concentrate or restrict development to the perimeter of the forest (i.e., within 300 feet of the existing forest edge), particularly in narrow peninsulas of upland forest less than 300 feet wide.

3. Limit forest removal to the "footprint" of houses and to that which is absolutely necessary for the placement of roads and driveways.

4. Wherever possible, minimize the number and length of driveways and roads.

5. Roads and driveways should be as narrow and short as possible; preferably less than 25 feet and 15 feet, respectively.

6. Maintain forest canopy closure over roads and driveways.

7. Maintain forest habitat up to the edges of roads and driveways; do not create or maintain mowed grassy berms.

8. Maintain or create wildlife corridors (for details, see Critical Area Commission's Guidance Paper on Wildlife Corridors).

9. Do not remove or disturb forest habitat during May-August, the breeding season for most FIDS. This seasonal restriction may be expanded to February-August if certain early nesting FIDS (e.g., Barred Owl) are present.

10. Afforestation efforts should target (1) riparian or streamside areas that lack woody vegetation, (2) forested riparian areas less than 300 feet, and (3) gaps or peninsulas of nonforested habitat within or adjacent to existing FIDS habitat.

For additional assistance, please contact David Brinker, Central Regional Ecologist for the Wildlife and Heritage Division, at (410) 744-8939, or write: 1200 Frederick Road, Catonsville, MD 21228.

Sincerely,

Michael E. Slattery

Michael E. Slattery,
Director,
Wildlife & Heritage Division

ER# 2000.0084.mo

Parris N. Glendening
Governor

Maryland Department of Natural Resources

ENVIRONMENTAL REVIEW

Tawes State Office Building
Annapolis, Maryland 21401
March 26, 1999

John R. Griffin
Secretary

Carolyn D. Davis
Deputy Secretary

Joseph R. Kresslein
Project Planning Division
Maryland Department of Transportation
State Highway Administration
P.O. Box 717
Baltimore, Maryland 21203-0717

Dear Mr. Kresslein:

This letter is in response to your letter of request, dated March 18, 1999, for information on the presence of finfish species in the vicinity of the Maryland Department of Transportation's Project No: MO839A11: I-270 @ Watkins Mill Road Extended in Montgomery County.

The subject project site is within the Great Seneca Creek (Washington Metropolitan Area) drainage area. Great Seneca Creek and all tributaries near your site are classified as Use I-P waters (Water Contact Recreation, Protection of Aquatic Life, and Public Water Supply). Generally, no instream work is permitted in Use I streams during the period of March 1 through June 15, inclusive, during any year.

Anadromous fish species are not present in Great Seneca Creek due to natural barriers located downstream on the Potomac River. However, downstream of your project site, adult trout are stocked during the spring season in the mainstem of Great Seneca Creek. The spring stocking season will be protected by the Use I instream work restriction period referenced above. Note that trout may also be stocked in the mainstem during the fall season, but no restriction period will be required in the fall. Thermal impacts are of concern in this watershed, despite the Use I classification, and should be addressed by your project plans. In addition to stocked trout in Great Seneca Creek mainstem, it is expected that the perennial reaches of streams in this area support resident populations of several fish species typically found in the region. Table A2-4 (attached) lists fish species documented by our Maryland Biological Stream Survey project in the Potomac Washington Metro Basin. Many of these species could potentially be found near your project site. These species should be adequately protected by the Use I instream work prohibition period, sediment and erosion control methods, and other Best Management Practices typically used for protection of stream resources.

If you have any questions concerning these comments, you may contact me at 410-260-8331.

Sincerely,

Ray C. Dintaman, Jr.

Ray C. Dintaman, Jr., Director
Environmental Review Unit

RCD
Attachment

Telephone:
DNR TTY for the Deaf: (410) 974-3683

Table A2-4. Fish species found in 1994 MBSS project sampling vs supplemental sampling, Potomac Washington Metro Basin

Fish Species	MBSS Study	Supplemental Sampling
AMERICAN EEL	X	X
BANDED KILLIFISH	X	X
BLACK CRAPPIE		X
BLACKNOSE DACE	X	X
BLUEGILL	X	X
BLUESPOTTED SUNFISH		X
BLUNTNOSE MINNOW	X	X
BROWN BULLHEAD	X	X
BROWN TROUT		X
CENTRAL STONEROLLER	X	X
CHAIN PICKEREL	X	X
CHANNEL CATFISH		X
COMMON CARP		X
COMMON SHINER	X	X
CREEK CHUB	X	X
CREEK CHUBSUCKER	X	X
CUTLIPS MINNOW	X	X
EASTERN MUDMINNOW	X	X
EASTERN SILVERY MINNOW	X	X
FALLFISH	X	X
FANTAIL DARTER	X	X
FATHEAD MINNOW	X	X
GIZZARD SHAD	X	X
GOLDEN REDHORSE	X	
GOLDEN SHINER	X	
GOLDFISH	X	X
GREEN SUNFISH	X	X
GREENSIDE DARTER	X	X
LAMPREY	X	X
LARGEMOUTH BASS	X	X
LEPOMIS HYBRID	X	X
LONGEAR SUNFISH		X
LONGNOSE DACE	X	X
MOSQUITOFISH	X	X
MOTTLED SCULPIN	X	X
NORTHERN HOGSUCKER	X	X
NOTROPIS SP.		X
POTOMAC SCULPIN	X	X
PUMPKINSEED	X	X

D·H·C·D

Maryland Department of Housing and Community Development

Division of Historical and Cultural Programs

100 Community Place
Crownsville, Maryland 21032

410-514-7600
1-800-756-0119
Fax: 410-987-4071
Maryland Relay for the Deaf:
1-800-735-2258

http://www.dhcd.state.md.us

Parris N. Glendening
Governor

Raymond A. Skinner
Secretary

Marge Wolf
Deputy Secretary

June 16, 1999

Mr. Bruce M. Grey
Assistant Division Chief
Project Planning Division
Maryland Department of Transportation
State Highway Administration
P.O. Box 717
707 North Calvert Street
Baltimore, MD 21202

RE: Project No. MO839A11
I-270: Watkins Mill Road Extended, Montgomery County, Maryland
(Section 106 Review – FHWA)

Dear Mr. Grey:

Thank you for your letter of May 4, 1999, which the Maryland Historical Trust received on May 12, 1999, regarding the above-referenced project. The letter requested the Trust's concurrence that only one property in the area of potential effect retains sufficient significance to be considered for inclusion in the National Register of Historic Places. Trust staff have reviewed the package and below are our comments.

SHA's letter indicates that "the scope of the project is poorly defined and it is impossible to establish the area of potential effects based on the current documentation (Grey, May 4, 1999, page 2). Although this paragraph deals specifically with the archeological investigations for the project, it appears to be pertinent to the architectural investigations as well. The coordination package included a copy of the USGS Quadrangle for Gaithersburg, and an APE boundary is marked. The Caulfield Farm's property boundary extends into the APE and therefore was investigated. However, your letter does not explain why no other architectural investigations were conducted within SHA's defined APE. Based on a 1945 USGS Quadrangle for Gaithersburg (see Attachment 1), it appears that there are several buildings in the area identified as "Metropolitan Grove" which are at least fifty years of age. The Trust has no information regarding the nature of the buildings at Metropolitan Grove. However, since it is near the old B&O Railroad line, there is reason to believe the buildings are either railroad related structures or dwellings possibly related to a nearby Methodist Meeting Camp at Washington Grove. The Trust would appreciate receiving additional information regarding Metropolitan Grove before we concur that the Caulfield Farm is the only site which retains significance.

EQUAL HOUSING OPPORTUNITY

We will await the assessment of archeological potential until the plans for the project have been determined.

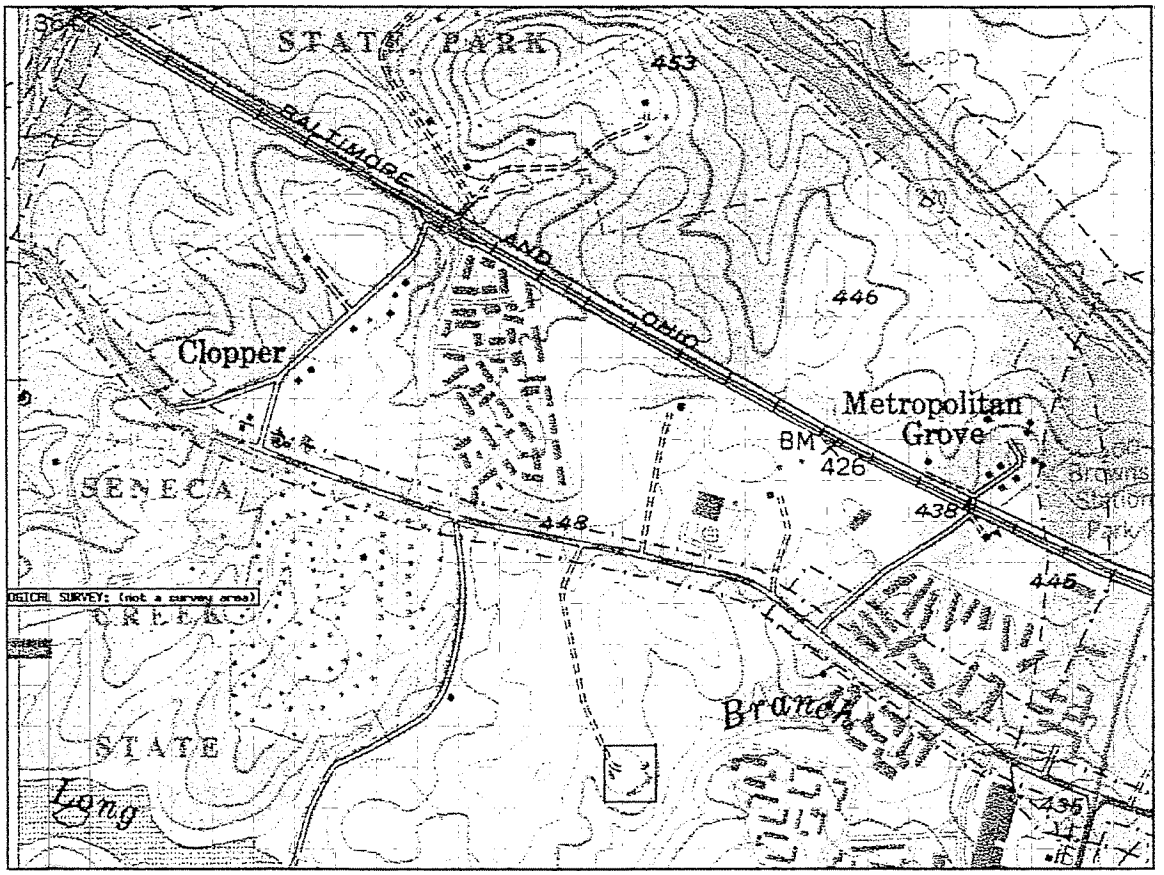
Thank you for providing us this opportunity to comment. Should you have any questions, please call Ms. Anne Bruder (for structures) at 410-514-7636 or me (for archeology) at 410-514-7631.

Sincerely,

Elizabeth J. Cole
Administrator, Archeological Program

EJC:AEB:199901283
Attachment
cc: Dr. Charles Hall (SHA)
Ms. Rita Suffness (SHA)
Ms. Pam Stephenson (FHWA)

ATTACHMENT 1



USGS QUAD FOR GAITHERSBURG MAP GRAPHIC PREPARED JUNE 10, 1999

14990269

EJL/AEB SHA

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

RECEIVED
SEP - 7 1999

September 2, 1999

RE: Project No. MO839A11
I-270: Watkins Mill Road Extended
Montgomery County, Maryland

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

On May 4 we conveyed the results of our historic sites reconnaissance. The purpose of this letter is to respond to your June 16 letter, notify you of a slightly expanded Area of Potential Effect (APE) for our project (I-270 at Watkins Mill Road Extended) and again seek your concurrence in our determination that the William Caulfield Farm (M20/38), the only historic structure within the APE for this project, would not meet the criteria for inclusion in the National Register of Historic Places.

Status—Expanded Area of Potential Effect
This project basically calls for interchange construction in close proximity to the Seneca Creek State Park in a highly developed area with intense commercial and residential development. We have expanded the preliminary area of potential effect (APE), as shown on Attachment 1, which is coterminous with the area of possible roadway improvements and extent of the viewsheds, where appropriate, from the roadway. It is likely, given the fact that the location of the Watkins Mill Road extended interchange would be confined to an area between the two spur roads, that the APE would be reduced at a later date.

Status—Architecture
In your June 16 letter you stated "Your letter does not explain why no other architectural investigation were conducted within SHA's APE" (See Attachment 2). We wish to inform you that the APE, located within an area heavily developed with commercial, housing and government structures in Gaithersburg, was carefully investigated. As shown on Attachment 3, the area that your reference as "Metropolitan Grove," based on a 1945 USGS Gaithersburg Quadrangle, has been totally obliterated—it is now the location of office parks, public facilities, such as MVA offices, the Metropolitan Police vehicle impoundment lots, Gaithersburg

heo: Zpe BC 9/20/99
Awaiting SHA's archeo. AOP

HA - CAULFIELD FARM
NOT ELIGIBLE
10/6/99
OEB

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Maintenance Yard, plus privately owned impoundment facilities and junkyards, and very large garden apartment complexes, etc. Although we were not allowed to access the entirety of the huge, privately held junkyard/impoundment facility, we were informed that the only structure on site was the office trailer which was in view. Much of the area that was called Metropolitan Grove is the location of Brown's Station Park.

Methods and Results of Identification of Historic Properties

Both architectural and archeological resource databases were investigated for the proposed project. The expanded APE was investigated for architectural resources

Architecture

No additional historic properties were identified in the expanded areas of the APE.

Archeology

The undertaking will be reviewed again when plans and an engineering description are available in order to ascertain the need for archeological identification investigations.

Review Request

We request your concurrence in our determination that the William Caulfield Farm (M20/38) would not meet the criteria for listing in the National Register by October 8. Should you have any questions or require clarification, please feel free to phone Ms. Rita M. Suffness on 410-545-8561 (or by E-Mail, *RSuffness@sha.md.state.us)* for historic standing structures or Ms. Mary F. Barse on 410-321-3232 (or by E-Mail, *MBarse@sha.md.state.us)* concerning archeology.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Bruce M. Grey
Bruce M. Grey
Assistant Division Chief
Project Planning Division

Accepted by:

State Historic Preservation Office

10/6/99
Date

CDS:RMS
Attachments (3)
cc: Ms. Mary F. Barse (w/attachments)
Ms. Anne Elrays (w/attachments)
Mr. Bruce M. Grey
Dr. Charles Hall
Mr. Joseph Kresslein
Ms. Pam Stephenson

Anne

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

September 13, 2000

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, Maryland
USGS *Gaithersburg* 7.5" Quadrangle

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

Introduction and Project Description

This letter serves to inform the Maryland Historical Trust of our finding that there will be no historic properties affected by the proposed project No. MO839A11. The project proposes to provide improved vehicular, pedestrian, bicycle, and transit access to and from the existing transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas of northern Gaithersburg. In addition to roadway improvements, modifications are planned at the Metropolitan Grove MARC Station to facilitate increased transit use. The existing station is underutilized due in part to poor access to the station from I-270, MD 117, and MD 124. This station will also serve the planned Corridor Cities Transitway (CCT) previously investigated during the I-270/US 15 Multi-Modal Study. As a result of preliminary planning analyses and public comment, the following alternates have been retained for detailed study:

No Build:
This alternate consists of routine maintenance, minor construction projects, and developer-based improvements associated with new developments.

Baseline Alternate (Alternate 6) with Options A, B, and C (Watkins Mill Road Extended):
This alternate includes the extension of Watkins Mill Road from MD 117 east across I-270 and connecting to MD 355.

Alternate 2 with Options A, B, C, Mainline Shift Option, Western C-D Shift Option, Braided Ramp Option (Partial Cloverleaf Interchange):
The partial cloverleaf interchange concept consists of a diamond configuration on the northbound

My telephone number is _____

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1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Alternate 3 with Options B, C, and Braided Ramp Option (Full Diamond Interchange):
The full diamond interchange concept consists of a diamond configuration on both the northbound (east) and southbound (west) sides of I-270. This alternate would use a two-lane C-(east) side of I-270 and a partial cloverleaf configuration on the southbound (west) side of I-270. It would use a two-lane Collector-Distributor (C-D) lane system on each side of I-270 to handle local traffic weaving on and off of I-270.

D lane system on the northbound side of I-270 only. Braided ramps would be used in the southwest quadrant of the interchange due to inadequate weaving distance along southbound I-270.

Alternate 4 with Options A, B, and C (Partial Diamond Interchange):
The partial diamond interchange concept consists of a partial diamond configuration with movements allowed only from Watkins Mill Road Extended to northbound I-270 and from southbound I-270 to Watkins Mill Road Extended. No access would be provided from northbound I-270 to Watkins Mill Road Extended or from Watkins Mill Road Extended to southbound I-270. The I-270 median would be widened to accommodate an elevated HOV interchange with Watkins Mill Road under Option A. An additional general use lane on the southbound (west) side of I-270 may be required.

Access Options:
Option A: HOV Direct Access
This option would provide special access for HOV users to and from Watkins Mill Road Extended in order to reach the Metropolitan Grove MARC Station and future economic development. The inside lane in each direction of I-270 would be an HOV lane. HOV's would have direct access to Watkins Mill Road Extended via a median interchange at Watkins Mill Road Extended separate from the general use traffic.

Option B: Metropolitan Court Extended
This option provides for improved access from I-270 and Watkins Mill Extended for general use traffic to the Metropolitan Grove MARC Station. Access would be through extending Metropolitan Court to Watkins Mill Road just west of the CSX tracks. Bicycle and pedestrian access would be provided alongside Metropolitan Court Extended.

Option C: MD 124 Access Ramp
This option would provide direct access from I-270 to the Corridor Cities Transitway (bus or light rail) Station, as well as a relocated Metropolitan Grove MARC Station on the east side of the CSX tracks, via MD 124. It would also provide an access road for planned economic development on the east side of the CSX tracks to transit. Bicycle and pedestrian access would be provided on the north part of the new access road between the relocated MARC Station and Watkins Mill Road Extended.

Mainline Shift Option
This option applies only to Alternate 2 and proposes to shift the I-270 centerline as much as 45 feet to the east to minimize impacts to the natural environment and wetlands on the west side of I-270. A two-lane C-D system would be used on the northbound side and southbound side of I-270. Additional right of way would be required beyond what is required for Alternate 2.

Western C-D Shift
This option applies only to Alternate 2 and proposes a western C-D lane system shift on both the northbound (east) and southbound (west) sides of I-270. The two-lane C-D lane system for southbound I-270 would be physically separated from mainline I-270 by approximately 500 to 820 (north to south) feet. This should minimize the impacts to the natural environment and wetlands on the west side of I-270.

Braided Ramp Option
The braided ramp option applies only to northbound I-270 between MD 124 and Great Seneca Creek Park, under either Alternate 2 or 3. This option provides a means by which westbound-MD 124 traffic destined for northbound I-270 would not need to weave with northbound I-270 traffic destined for Watkins Mill Road or eastbound MD 124 traffic destined for northbound I-270. This option would take the existing northbound I-270 C-D road, just north of its crossing of MD 124, and shift its alignment to the east in order to cross over top the MD 124 ramp entering northbound I-270. The shifted C-D road would then curve back to the west (limits of disturbance skirt the edges of the two ponds in the Lockheed Martin property) and split, with one lane continuing to Watkins Mill Road and the other merging with I-270 at the proposed Watkins Mill Road bridge. The ramp from Watkins Mill Road to northbound I-270 could then merge onto mainline I-270 prior to the crossing of the Great Seneca Creek Park.

Project plans are included for your review as Attachment I.

Funding

Federal funds are anticipated for this project.

Area of Potential Effects

The area of potential effects (APE) for this project is defined broadly enough to encompass worst case impacts anticipated under all alternatives and options. It anticipates direct and indirect construction, viewshed, and landuse impacts, and is indicated on the attached USGS 7.5" *Gaithersburg, MD*, quadrangle map (Attachment II).

Identification Methods and Results

Potentially significant architectural and archeological resources were both researched as part of the historic investigation instigated by the proposed transportation improvements at Watkins Mill Road.

Architecture: SHA Architectural Historian Rita M. Suffness consulted the SHA-GIS quadrangle mapping, and conducted a historic sites reconnaissance. Prior coordination with MHT resulted in a determination that the William Caulfield Farm (M20/38) – the only historic architectural property within the APE – is not eligible for listing on the National Register of Historic Places (Attachment III).

Archeology: SHA archeologist Mary F. Barse assessed the potential of the project area through consultation of SHA GIS mapping, historic mapping, and prior studies, and made a field visit on April 20, 2000. Given the favorable ecological setting of the project area and positive historic map review results, the APE was considered to have high archeological potential for historic and prehistoric resources. Consequently, the archeological consulting firm of John Milner Associates, Inc. was contracted to conduct a Phase I Archeological Identification survey for the project.

Enclosed for your review and comment is one copy of the resulting draft technical report entitled **Phase IB Archeological Survey, I-270 at Watkins Mill Road Extended, Montgomery County, Maryland** (Attachment IV), and a completed NADB Reports Recording Form (Attachment V). Two prehistoric archeological sites (18MO553 and 18MO554) and numerous isolated finds collectively designated 18MOX100 were identified. Site 18MO553 is impacted only by the Western C-D Shift Option. Site 18MO554 is impacted by Alternates 2, 3, 4, the Western C-D Option, the Mainline Shift Option, and the Braided Ramp Option. However, both sites are considered not eligible for inclusion on the National Register of Historic Places by virtue of their low research potential and absence of integrity.

The report has been reviewed by SHA and we believe it clearly conveys that sufficient work was conducted to ascertain an absence of significant historic and prehistoric archeological resources within the APE. We agree with the consultant's recommendation for no additional archeological investigations. Overall, we are pleased with the report's presentation. However, in addition to addressing your comments in the forthcoming final report, we will instruct our consultant to include a discussion of potential impacts from each of the alternatives and options.

Review Request

Please examine the attached maps, plans, and other supporting documentation including a Project Eligibility and Effects Table (Attachment VI). We request your concurrence by October 13, 2000 that there should be no historic properties affected by the proposed transportation improvements at Watkins Mill Road Extended. By carbon copy, we invite the Montgomery County Historic Preservation Commission and Montgomery Preservation, Inc. to provide comments and participate in the consultation process. Pursuant to the requirements of the implementing regulations found at 36 CFR Part 800, SHA seeks their assistance in identifying historic preservation issues as they relate to this specific project (see 36 CFR 800.2 © (4) and (6), and 800.3 (f) for information regarding the identification and participation of consulting parties.

and 800.4 and 800.5 regarding the identification of historic properties and assessment of effects). For additional information regarding the Section 106 regulations, see the Advisory Council on Historic Preservation's website, www.achp.gov, or contact, or contact the Maryland State Highway Administration or the Maryland Historical Trust. If no response is received by October 13, 2000, we will assume that these offices decline to participate. Please call Ms. Rita M. Suffness at 410-545-8561 with questions regarding standing structures for this project. Ms. Mary F. Barse can be reached at 410-545-2883 with concerns regarding archeology.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Bruce M. Grey
Bruce M. Grey
Deputy Division Chief
Project Planning Division

CONCURRENCE:

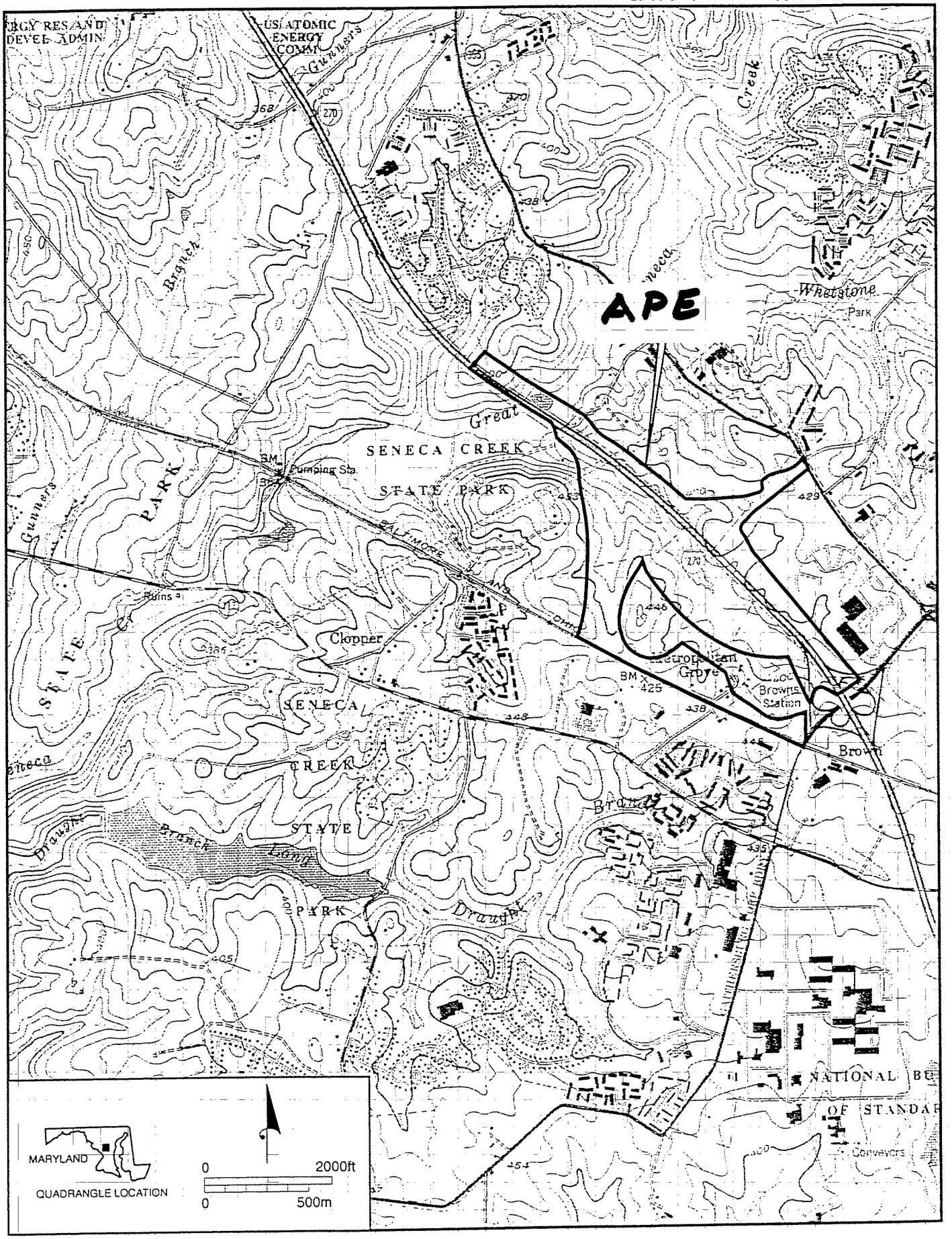
State Historic Preservation Office — Date

BMG:MFB:lc

Attachments:
I) Project Plans
II) USGS 7.5" Gaithersburg , MD quadrangle with APE
III) Previous Coordination Documentation
IV) Phase I Archeological Report
V) NADB Reports Recording Form
VI) Project Eligibility and Effects Table

cc: Ms. Mary F. Barse (w/ Attachments II and IV)
Ms. Judy Christensen (Montgomery Preservation, Inc.)
(w/ Attachments I through III, and Attachment VI)
Ms Anne Elrays (w/ Attachments II, Attachment IV and Attachment VI)
Dr. Charles Hall
Ms. Michelle D. Hoffman (w/ Attachments I through IV, and Attachment VI)
Mr. Donald H. Sparklin
Ms. Rita Suffness (w/ Attachments II and IV)
Ms. Gwen Marcus Wright (Montgomery County Historic District Commission)
(w/ Attachments I through III, and Attachment VI)

Attachment II



Project area depicted on USGS *Gaithersburg, MD.* 7.5 minute quadrangle (1945, photorevised 1979).

19990269

EJL/AEB SHA

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

RECEIVED
SEP - 7 1999

September 2, 1999

Attachment III

RE: Project No. MO839A11
I-270: Watkins Mill Road Extended
Montgomery County, Maryland

3613
Bam

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

On May 4 we conveyed the results of our historic sites reconnaissance. The purpose of this letter is to respond to your June 16 letter, notify you of a slightly expanded Area of Potential Effect (APE) for our project (I-270 at Watkins Mill Road Extended) and again seek your concurrence in our determination that the William Caulfield Farm (M20/38), the only historic structure within the APE for this project, would not meet the criteria for inclusion in the National Register of Historic Places.

Status—Expanded Area of Potential Effect
This project basically calls for interchange construction in close proximity to the Seneca Creek State Park in a highly developed area with intense commercial and residential development. We have expanded the preliminary area of potential effect (APE), as shown on Attachment 1, which is coterminous with the area of possible roadway improvements and extent of the viewsheds, where appropriate, from the roadway. It is likely, given the fact that the location of the Watkins Mill Road extended interchange would be confined to an area between the two spur roads, that the APE would be reduced at a later date.

Status—Architecture
In your June 16 letter you stated "Your letter does not explain why no other architectural investigation were conducted within SHA's APE" (See Attachment 2). We wish to inform you that the APE, located within an area heavily developed with commercial, housing and government structures in Gaithersburg, was carefully investigated. As shown on Attachment 3, the area that your reference as "Metropolitan Grove," based on a 1945 USGS Gaithersburg Quadrangle, has been totally obliterated—it is now the location of office parks, public facilities, such as MVA offices, the Metropolitan Police vehicle impoundment lots, Gaithersburg

cheo: Zpe BC 9/20/99 - AOP was completed 2/16/99
Awaiting SHA's cheo. AOP

HA - CAULFIELD FARM
NOT ELIGIBLE
10/6/99
[illegible]

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Maintenance Yard, plus privately owned impoundment facilities and junkyards, and very large garden apartment complexes, etc. Although we were not allowed to access the entirety of the huge, privately held junkyard/impoundment facility, we were informed that the only structure on site was the office trailer which was in view. Much of the area that was called Metropolitan Grove is the location of Brown's Station Park.

Methods and Results of Identification of Historic Properties

Both architectural and archeological resource databases were investigated for the proposed project. The expanded APE was investigated for architectural resources

Architecture

No additional historic properties were identified in the expanded areas of the APE.

Archeology

The undertaking will be reviewed again when plans and an engineering description are available in order to ascertain the need for archeological identification investigations.

Review Request

We request your concurrence in our determination that the William Caulfield Farm (M20/38) would not meet the criteria for listing in the National Register by October 8. Should you have any questions or require clarification, please feel free to phone Ms. Rita M. Suffness on 410-545-8561 (or by E-Mail, *RSuffness@sha.md.state.us)* for historic standing structures or Ms. Mary F. Barse on 410-321-3232 (or by E-Mail, *MBarse@sha.md.state.us)* concerning archeology.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Bruce M. Grey
Bruce M. Grey
Assistant Division Chief
Project Planning Division

Accepted by:

State Historic Preservation Office

10/6/99
Date

CDS:RMS
Attachments (3)
cc: Ms. Mary F. Barse (w/attachments)
Ms. Anne Elrays (w/attachments)
Mr. Bruce M. Grey
Dr. Charles Hall
Mr. Joseph Kresslein
Ms. Pam Stephenson

NADB - REPORTS RECORDING FORM

Complete items 5 through 14. Refer to the "Instructions for Completing NADB - Reports Recording Forms." The Maryland Historical Trust will record information for items 1 through 4.

1. DOCUMENT NO. _____

2. SOURCE _____ AND SHPO - ID _____

3. FILED AT

4. UTM COORDINATES

Zone	_____	Easting	_____	Northing
Zone	_____	Easting	_____	Northing
Zone	_____	Easting	_____	Northing
Zone	_____	Easting	_____	Northing
Zone	_____	Easting	_____	Northing
Zone	_____	Easting	_____	Northing

Continuation, see 14

5. AUTHORS Stuart Fiedel, Bryan Corle, Kerri Culhane

6. YEAR 2000
Year published.

7. TITLE Phase IB Archeological Survey, I-270 at Watkins Mill Road Extended, Montgomery County, Maryland.

8. PUBLICATION TYPE (circle one)

1. Monograph or Book
2. Chapter in a Book or Report Series
3. Journal Article
4. Report Series
5. Dissertation or Thesis
6. Paper presented at a Meeting
(7.) Unpublished or Limited Distribution Report
8. Other

9. INFORMATION ABOUT PUBLISHER/PUBLICATION
Follow the American Antiquity style guide published in 1983, Vol. 48, pp.438-441, for the type of publication circled.

10. STATE/COUNTY (Referenced by report. Enter as many states, counties, or towns, as necessary. Enter all, if appropriate. Only enter Town if the resources considered are within the town boundaries.)

STATE 1 MD COUNTY Montgomery TOWN

STATE 2 ____ COUNTY _____ TOWN

STATE 3 ____ COUNTY _____ TOWN

Continuation, see 14.

11. WORKTYPE (circle all code numbers that are appropriate)

0 General Management Plan / Environmental Document
1 Cultural Resources Management Plan
2 Cultural Resources Research Plan
3 Statement for Management
4 Outline of Planning Requirements
5 Cultural Resources Preservation Guide
6 Development Concept Plan
7 New Area Study/Reconnaissance Study
8 Boundary Study
9 Interpretive Prospectus
10 Special Planning/Management Study
11 Historical Study
12 Primary Document - Original
13 Primary Document - Translation
14 Advertisement
15 Popular Culture /History Document
16 Journal/Periodical
20 Historic Resource Study
21 Historical Base Map
22 Historical Handbook Text
23 Park Administrative History

24 Special History Study
30 Archeological General Considerations
31 Archeological Overview and Assessment
32 Archeological Identification Study (Phase I)
33 Archeological Evaluation Study (Phase II)
34 Archeological Data Recovery (Phase III)
35 Archeological Collections and Non-Field Studies
36 Socio-Cultural Anthropology Study
37 Social Impact Study
38 Ethnohistory Study
39 Special Archeology/Anthropology Study
40 Field Reconnaissance, Sampling
41 Field Reconnaissance, Research
42 Paleo-environmental Research
43 Archeometrics
44 Archeoastronomical Study
46 Remote Sensing
47 Archeozoological Study
48 Archeobotanical Study
49 Bioarcheological Study
50 Historic Buildings Report - Beginning February 1956
51 Historic Buildings Report - After February 1957 - Part I
52 Historic Buildings Report - Part II
54 Historic Buildings Report - After March 1960 - Part III
56 HSR-Administrative Data - After December 1971
57 HSR-Historical Data
58 HSR-Archeological Data
59 HSR-Architectural Data
61 Historic Structures Preservation Guide - After December 1971
62 Historic Structures Report - After October 1980
63 Cultural Landscape Report (Historic Grounds Report)
64 Ruins Stabilization and Maintenance Report
65 Special Historic Architecture Study
70 Scope of Collection Statement
71 Historic Furnishings Report - After October 1980
72 Collection Condition Survey
73 Collection Storage Plan
82 Collection Management Plan (Collection Preservation Guide)
83 Special Curatorial Study
84 Archeological Field Work, Indeterminate
85 Archeological Survey, Indeterminate
86 Field Reconnaissance, Minimal
87 Underwater Survey
88 Resources/Site Based Work, Indeterminate
89 Minimal/Informal Site Visitation
90 Oral History
91 Subsurface Activity, Indeterminate
92 Testing / Limited Excavation
93 Major Excavation

94 Underwater Resource/Site Based Work
95 Artifact/Collection Based Study/Report
96 Literature Synthesis / Review/Research Design
98 Intensive Determination of Surface Characteristics
99 Geomorphological Study
100 Geological Study
101 Paleontological Study
102 Population Reconstruction
103 Rock Art Study
104 Architectural Photography
105 Architectural Site Plan
106 Architectural Floor Plan
107 HABS Drawing
108 Physical Anthropology Study
109 Boat Survey
999 Other (Furnish a Keyword in Keyword Category 1 to identify the nature of this study.)

12. KEYWORDS AND KEYWORD CATEGORIES

0 Types of Resources (or "no resources")
1 Generic Terms/Research Questions/Specialized Studies
2 Archeological Taxonomic Names
3 Defined Artifact Types/Material Classes
4 Geographic Names or Locations
5 Time
6 Project Name/Project Area
7 Other Keywords

Enter as many keywords (with the appropriate keyword category number) as you think will help a person (1) who is trying to understand what the report contains or (2) who is searching the database for specific information. Whenever appropriate, record the number of acres studied in a document.

Montgomery Co.	[4]		[ ]		[ ]		[ ]
Piedmont	[4]		[ ]		[ ]		[ ]
Wading River Pt.	[3]		[ ]		[ ]		[ ]
Watkins Mill Road	[6]		[ ]		[ ]		[ ]
Lithic scatters	[0]		[ ]		[ ]		[ ]
	[ ]		[ ]		[ ]		[ ]
	[ ]		[ ]		[ ]		[ ]
	[ ]		[ ]		[ ]		[ ]
	[ ]		[ ]		[ ]		[ ]

Continuation, see 14.

13. FEDERAL AGENCY CODE

14. CONTINUATION/COMMENTS (include item no.)

FORM COMPLETED BY

Name Stuart Fiedel Date 8/22/00

Address John Milner Associates, Inc.
5259 Cherokee Ave., Suite 300

City Alexandria State VA

Zip 22312

Telephone Number (703)354-9737

94 Underwater Resource/Site Based Work
95 Artifact/Collection Based Study/Report
96 Literature Synthesis / Review/Research Design
98 Intensive Determination of Surface Characteristics
99 Geomorphological Study
100 Geological Study
101 Paleontological Study
102 Population Reconstruction
103 Rock Art Study
104 Architectural Photography
105 Architectural Site Plan
106 Architectural Floor Plan
107 HABS Drawing
108 Physical Anthropology Study
109 Boat Survey
999 Other (Furnish a Keyword in Keyword Category 1 to identify the nature of this study.)

12. KEYWORDS AND KEYWORD CATEGORIES

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1 Generic Terms/Research Questions/Specialized Studies
2 Archeological Taxonomic Names
3 Defined Artifact Types/Material Classes
4 Geographic Names or Locations
5 Time
6 Project Name/Project Area
7 Other Keywords

Enter as many keywords (with the appropriate keyword category number) as you think will help a person (1) who is trying to understand what the report contains or (2) who is searching the database for specific information. Whenever appropriate, record the number of acres studied in a document.

Montgomery Co.	[4]		[ ]		[ ]
Piedmont	[4]		[ ]		[ ]
Wading River Pt.	[3]		[ ]		[ ]
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Lithic scatters	[0]		[ ]		[ ]
	[ ]		[ ]		[ ]
	[ ]		[ ]		[ ]
	[ ]		[ ]		[ ]
	[ ]		[ ]		[ ]

Continuation, see 14.

13. FEDERAL AGENCY CODE

14. CONTINUATION/COMMENTS (include item no.)

FORM COMPLETED BY

Name Stuart Fiedel Date 8/22/00

Address John Milner Associates, Inc.
5259 Cherokee Ave., Suite 300

City Alexandria State VA

Zip 22312

Telephone Number (703)354-9737

Hybrid Eligibility/Effect Table

Project Name IS 270 At Watkins Mill Road Extended **September 12, 2000**

				Alternate #6 Baseline		Alternate 2#		Alternate #3		Alternate #4			
Resource	**Type**	**SHA NR Det.**	**SHPO Opinion**	**Impact**	**SHPO Concur**	**Impact**	**SHPO Concur**	**Impact**	**SHPO Concur**	**Impact**	**SHPO Concur**	**Attachment**	**Remarks**
William Caulfield Farm (M20/38)	S	X	10/06/99 (NE)	N/A		N/A		N/A		N/A		IV	Impacted by Western C-D Shift Option; Alternates 2, 3, and 4
18MO553	A	X	**Requested 09/11/00**	None	**Requested 09/11/00**	None	**Requested 09/11/00**	None	**Requested 09/11/00**	None	**Requested 09/11/00**		Impacted by Western C-D Shift Option
18MO554	A	X	**Requested 09/11/00**	None	**Requested 09/11/00**	None	**Requested 09/11/00**	None	**Requested 09/11/00**	None	**Requested 09/11/00**		Impacted by Western C-D Shift Option; Mainline Shift Option, Alternates 2, 3, and 4
Effect				**NPA**	**Requested 09/11/00**	**NPA**	**Requested 09/11/00**	**NPA**	**Requested 09/11/00**	**NPA**	**Requested 09/11/00**		

Codes:

Resource Types: S (Structure), A (Archeological Site), HD (Historic District), NHL (National Historic Landmark)
NR Determination: ND (Not Determined), X (Not Eligible), NR (Eligible), NRL (Listed), NHL (Landmark)
SHPO Opinion: (B) designates opinion regarding boundary, Code following date signifies SHPO opinion
Impact: None, No Adverse, Adverse
Effect: NPA (No Properties Affected), NAE (No Adverse Effect), AE (Adverse Effect)
Bold rows indicate review action requested

Maryland Department of Housing and Community Development

Division of Historical and Cultural Programs

100 Community Place
Crownsville, Maryland 21032

410-514-7600
1-800-756-0119
Fax: 410-987-4071
Maryland Relay for the Deaf
1-800-735-2258

http://www.dhcd.state.md.us

Parris N. Glendening
Governor

Raymond A. Skinner
Secretary

Marge Wolf
Deputy Secretary

October 16, 2000

Mr. Bruce Grey
Deputy Division Chief
Project Planning Division
State Highway Administration
707 North Calvert Street
P.O. Box 717
Baltimore, Maryland 21203-0717

RE: Project No. MO839A11, I-270 at Watkins Mill Road Extended, Montgomery County, Maryland

Dear Mr. Grey:

Thank you for your recent letter, dated 13 September 2000 and received by the Trust on 18 September 2000, regarding the above-referenced project.

IDENTIFICATION AND EVALUATION

Archeology: Your September 13th letter included a draft of the following report for our review: *Phase IB Archeological Survey, I-270 at Watkins Mill Road Extended, Montgomery County, Maryland* (August 2000). John Milner Associates, Inc., prepared the document.

The report comprehensively describes the survey's goals, methods, and results. It is clearly written and addresses the *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994). In our opinion, the background research and fieldwork were sufficient to identify the full range of archeological properties in the area of potential effects. The survey discovered two archeological sites and several isolated prehistoric and historic artifacts. The isolated artifacts lack important research potential, are ineligible for the National Register of Historic Places, and warrant no further study. The Casey site (18MO553) measured approximately 15 x 5 m and evidenced five stone flakes. The consultant found no temporally diagnostic artifacts at this prehistoric property. The core of the McGown site (18MO554) was about 50 m in diameter. Shovel testing and unit excavation recovered 159 lithic artifacts, primarily flakes. Milner also found several tools, one of which was a projectile point from the Late Archaic period.

Both sites 18MO553 and 18MO554 are low density lithic scatters from tool reduction. We concur that they have little important research potential and are ineligible for the National Register. Consequently, no further archeological studies are warranted for this project.

We request that the consultant revise the report to include a reference for Wading River projectile points (p. 23).

Architecture: On October 6, 1999, the Trust concurred with SHA's determination that no standing structures eligible for or listed in the National Register of Historic Places are located in the APE. We continue to concur in that opinion and additional architectural investigations are not warranted.

ASSESSMENT OF EFFECTS

Based on the information provided, the construction of the roadway improvements will have *no effect* on historic properties eligible for or listed in the National Register of Historic Places.

If you have questions or require additional information, please call Ms. Anne Bruder (for structures) at (410) 514-7636 or Dr. Gary Shaffer (for archeology) at (410) 514-7638.

Thank you for your cooperation and assistance.

Sincerely,

Elizabeth J. Cole
Administrator
Project Review and Compliance

EJC/GDS

cc: Dr. Charles Hall (SHA)
Ms. Denise Winslow (FHWA)
Ms. Rita Suffness (SHA)

167

RECEIVED
NOV 12 1999
NONTIDAL WETLANDS & WATERWAYS
WATER MANAGEMENT ADMIN., MDE

RECEIVED
FEB 28 2000
THE WILSON T. BALLARD
BY

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

Douglas M. Duncan
County Executive

Albert J. Genetti, Jr., P.E.
Director

November 4, 1999

Mr. David Walbeck
MDE Nontidal Wetlands and Waterways Division
2500 Broening Highway
Baltimore, Maryland 21224

RE: Father Hurley Boulevard Wetland Mitigation
Tracing #9X-NT-1260/199261006

Dear Mr. Walbeck:

The purpose of this letter is to request a transfer of mitigation credit at the Hawkins mitigation site that was purchased by Montgomery County from the Maryland State Highway Administration (MSHA) for $58,708.40. The one-acre credit was originally intended to satisfy the mitigation requirement for impacts associated with improvements to Watkins Mill Road.

The Watkins Mill Road project was never completed, and the County requests that 0.68 acres of this one-acre credit be applied to satisfy the mitigation requirement for Father Hurley Boulevard. The remaining 0.32 acres of credit would be reserved for future use on the Watkins Mill Road project, which is currently being designed by the MSHA.

As described in monitoring reports submitted to MDE by Coastal Resources, Inc., the Father Hurley mitigation site did not meet the minimum hydrology standards for wetland creation during the growing seasons of 1997 and 1998. Wetland impacts authorized for Father Hurley Boulevard include 15,470 sq. ft (0.36 acres) of forested nontidal wetlands, and 840 sq. ft. (0.02 acres) emergent nontidal wetlands. The mitigation requirement for these impacts is 0.76 acres using a replacement ratio of 2:1 for forested wetlands, and 1:1 for emergent wetlands.

The existing mitigation site for Father Hurley Boulevard provides 0.8 acres of riparian habitat at the confluence of two tributaries to Little Seneca Creek. The County intends to retain this area in a perpetual conservation easement, and requests that preservation credit be applied to

the mitigation debt using a 10:1 ratio (i.e., credit of 0.08 acres). If preservation credit is acceptable to MDE, the outstanding mitigation debt for the project would be 0.68 acres as summarized below:

Planting and preservation of forested riparian habitat	- 0.08 acre credit
Wetland creation at the Hawkins mitigation site	- 0.68 acre credit
Total mitigation proposal	- 0.76 acre

A signature block for MDE approval is provided below for your convenience. If you need any additional information to approve this mitigation proposal for Father Hurley Boulevard, please to call Gary Johnson of my staff at 240-777-7265, or Gary Jellick at 410-956-9000.

Sincerely,

Edgar A. Gonzalez, Chief
Division of Engineering Services

EAG/ja

cc: Susan Jacobs (SHA-Environmental Programs Division)
Bill Branch (SHA- Environmental Programs Division)
Rick Adams (Rummel, Klepper & Kahl)
Gary Jellick (Coastal Resources, Inc.)

TRANSFER OF MITIGATION CREDIT APPROVED:

David Walbeck 11/24/99
David Walbeck Date
Maryland Dept. of the Environment

MONTGOMERY VILLAGE FOUNDATION, INC.

10120 APPLE RIDGE ROAD
P.O. BOX 2130
MONTGOMERY VILLAGE, MARYLAND 20886-2130
(301) 948-0110 FAX (301) 990-7071 www.mvf.org

December 14, 1999

Michelle D. Hoffman, Project Manager
State Highway Administration
Office of Planning and Preliminary Engineering
Mail Stop C-301
Box 717
Baltimore, MD 21203-0717

Dear Ms. Hoffman:

The Montgomery Village Foundation wishes to inform you that its Transportation Policy supports Alternative 6: Watkins Mill Road Extended Without I 270 Connection and asks that it be retained as one of the alternatives for detailed study. The Foundation supports the construction and extension of mass transit alternatives, such as the Corridor Cities Transitway, along the I 270 corridor from Shady Grove to Germantown and eventually out to Frederick.

The community's primary concern is safety and the adverse impact of additional traffic on what we consider to be our local street – Watkins Mill Road. As you may be aware, there are two elementary schools and one middle school along a short stretch of Watkins Mill Road in Montgomery Village.

The Foundation asks SHA to expand the study area to include the intersections along Watkins Mill Road up to Stedwick Road north (taking in the three schools) and along Montgomery Village Avenue (Rt. 124) to MidCounty Highway. Expanding the study area in this manner would provide the necessary information for both Montgomery Village and Gaithersburg residents to fairly assess the effect of a new interchange on traffic levels in the neighborhoods adjoining the proposed roadway modifications.

Thank you for the opportunity to comment. We look forward to the next phase of the project and an opportunity to review the results of a more detailed analysis.

Sincerely,

Craig N. Capen

Craig N. Capen, President
Board of Directors

cc: Members of the Project Planning Team

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

December 28, 1999

Mr. Craig N. Capen, President
Board of Directors
Montgomery Village Foundation, Inc.
10120 Apple Ridge Road
P.O. Box 2130
Montgomery Village MD 20886-2130

Dear Mr. Capen:

Thank you for your interest in the project planning study at I-270 and Watkins Mill Road extended. Your comments in support of detailed study for alternate 6 and regional transit improvements are appreciated.

As you know, the purpose of this study is to improve vehicular, pedestrian, and transit access to and from the transportation network in order to accommodate and provide sufficient capacity to serve economic development in the designated growth areas of northern Gaithersburg. Both the City of Gaithersburg and Montgomery County have placed a high priority on this project in order to support designated economic development areas.

Your concern that improvements would increase traffic on Watkins Mill Road in your neighborhood will be taken into account. Detailed travel demand studies are underway to evaluate how improvements would effect the traffic patterns throughout the local area. We appreciate your personal and neighborhood-wide concerns with regard to additional traffic near the schools and on local streets.

At this point, the study team has compiled the public and agency comments from the Alternates Public Workshop and is assessing the impacts and benefits of each alternate in order to determine which concepts to carry forward for the more detailed engineering, traffic and environmental studies. It is possible that alternates will be refined to avoid or minimize impacts to the surrounding communities. Those alternates carried forward will be evaluated and presented in a draft environmental document and displayed at a public hearing for formal comment, tentatively scheduled for fall 2000. The conclusion of this study is anticipated in fall 2001, with the recommendation of a selected alternate and receipt of Location and Design approvals.

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Thank you again for your interest and bringing to our attention your important community concerns. I hope that you and the Montgomery Village Foundation remain involved in this study and continue to offer comments as we progress. If you should have any questions or would like for us to meet with the foundation, please feel free to contact me at 410-545-8547 or 1-800-548-5026.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By: Michelle D. Hoffman
Michelle D. Hoffman
Project Manager
Project Planning Division

Gaithersburg
A CHARACTER COUNTS! CITY

RECEIVED
TRAVEL FORECASTING SECTION
00 JAN -7 P. 1:01
JOB NO.

January 6, 2000

Mrs. Mona Sutton
Travel Forecasting Section
Project Planning Division
State Highway Administration
707 North Calvert Street
Baltimore, Maryland

Mona,

I have pulled out the sections of the Gaithersburg Master Plan that discusses the staging of the development activity within the "Study Area" for West Watkins Mill Road Extended. There wasn't a real easy way to put this in a chart and I know you would like to develop some traffic numbers as soon as possible. I think the Master Plan does a good job of explaining the various staging. As we have indicated previously, most of the development within the entire "Study Area" can occur regardless of the interchange. I have highlighted the "Map Designations" (as they are referred to in our Master Plan) that have some type staging activity in conjunction with the transportation improvements to Watkins Mill Road. As you will see, the amount of development subject to the staging constraints is a small portion of the potential development for the entire study area.

If you have any further questions please feel free to contact me by phone (301) 258-6330 or by email esoter@ci.gaithersburg.md.us.

Sincerely,

Eric E. Soter
Planner

Cc: File

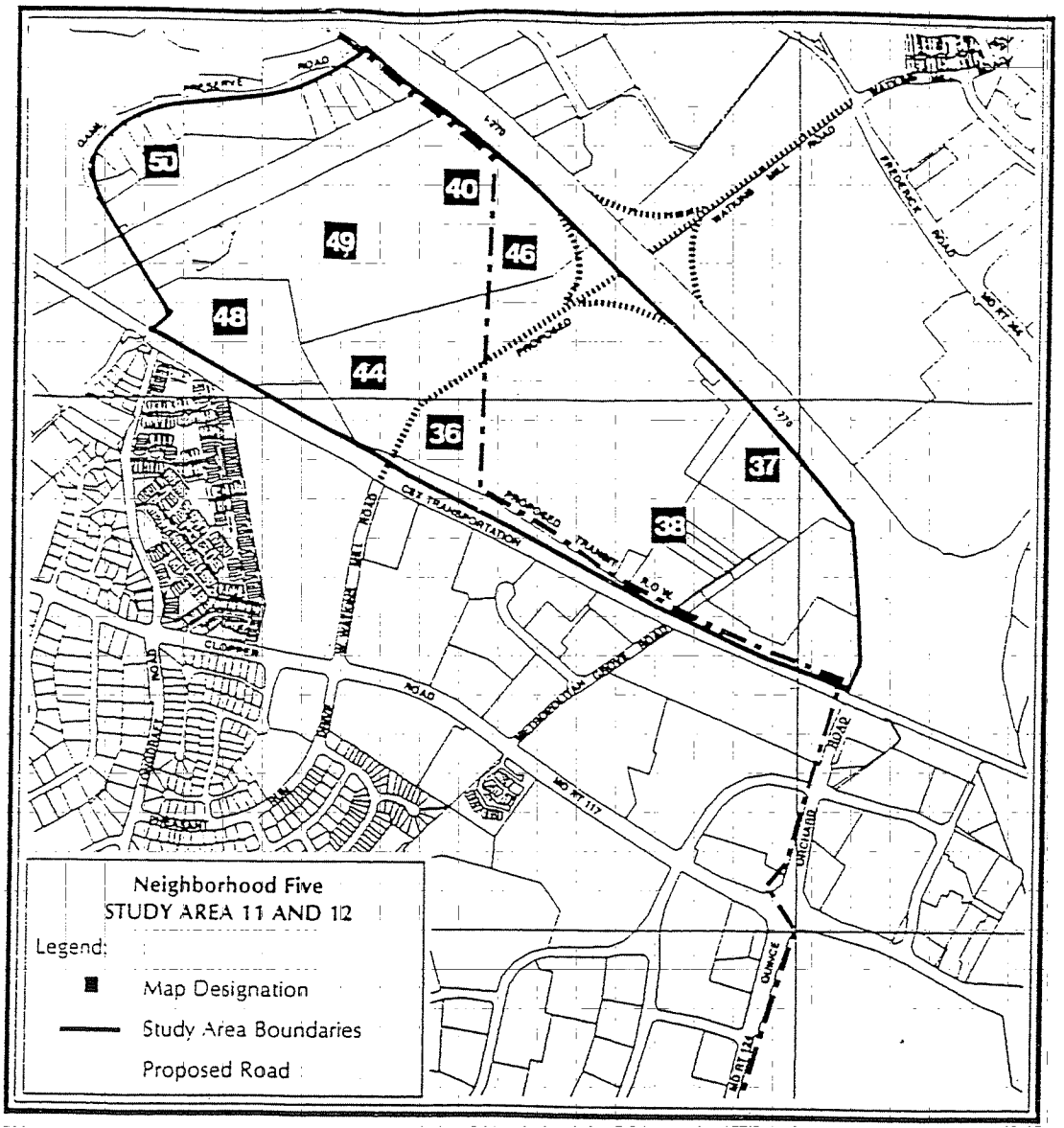
INTRODUCTION TO STUDY AREA 11 AND 12

The following two study areas, Study Areas 11 and 12, offer the greatest opportunity for future development in Neighborhood Five. Both of these study areas are almost entirely made up of vacant land waiting to be developed. The draft report on these two study areas reflects the recommendation of the Gaithersburg planning staff to cluster high density in and around an existing and planned transit stop.

There are certain assumptions that must be made while studying these two areas. The first is that West Watkins Mill Road would be constructed from the current intersection of Watkins Mill Road and Frederick Avenue, across Interstate 270 and the CSX rail line to meet up with the existing terminus of West Watkins Mill Road. Another assumption is the dedication of right-of-way and construction of a busway or light-rail line through these two study areas.

The original staff draft release, dated July 1994, contained three scenarios for Study Area 11 with map designation numbers 28 through 38, and for Study Area 12, five scenarios, with map designation numbers 39 through 51. These scenarios presented all possible options of land use for both study areas. However, it became evident from public hearings and work sessions that a combination of all the scenarios would be more advantageous for the City. The full text of the staff draft report, dated July 1994, for these scenarios, which include map designations 28 through 51, is available at the Planning and Code Administration in City Hall. To view a summary of all scenarios in Study Areas 11 and 12 see table titled *Adopted Land Use Designations and Comprehensive Rezoning* beginning on page 42.

STUDY AREA 11 AND 12



Total Area:	155.0 Acres
Predominant Land Use:	Vacant land

This study area is bounded by Interstate 270 to the north and east, the CSX rail line right-of-way to the south, and the proposed right-of-way for Watkins Mill Road Extended to the west. Study Area 11 contains several large pieces of property. The largest part of P910, owned by the Casey Trust, is roughly 100 acres. The City of Gaithersburg and Montgomery County own a total of 31 acres. There are several smaller one-acre lots with individual owners located just north of the unimproved portion of Metropolitan Grove Road north of the CSX tracks. The Montgomery County property and several of the smaller lots are being used for automobile storage. The rest of this study area including the City-owned land is vacant.

The parcels owned by Montgomery County (P435) and City of Gaithersburg (P138, P404) contain a covenant that limits development to a public use. The covenant states that the parcels are to be used solely for a public use approved by the Board of Public Works of Maryland. This covenant is recorded in Montgomery County Land Records, Liber 5765 and Folio 508 (see Appendix). The board of Public Works would have to amend the covenant to allow private development.

The following map designations will list the language for each specific land use proposal. For historical purposes the original staff proposal is summarized in the Land Use Plan Table on page 40. of this text.

Land use options, identified by map designation numbers on the Study Area 11 and 12 map on page 34, and listed in the chart beginning on page 42, are described below. A sketch plan for the proposed development in Study Areas 11 and 12 can be found in the Neighborhood Five Exhibit File located in the Planning and Code Administration in City Hall.

Land Use Options

28-35 **Eliminated.** These map designations were eliminated through the public hearing and work session process and are not part of the final adopted plan.

36 **Redesignate** part of P910 from industrial-research-office to **commercial-office-residential** (Map Designation 36). This designation may include a highway-oriented use, such as a bank, service stations, or other convenience shopping use, only after construction of the West Watkins Mill Road over the CSX rail line to provide access to the site. This parcel could also contain a transit related parking structure possibly utilizing both public and private funds.

Land Use and Zoning Actions

- Adopted commercial-office-residential designation
- Parcel rezoned to MXD

37 **Redesignate** part of parcels P910, P138, P404, P33, and P435 **from industrial-research-office to open space** (Map Designation 37). The open space designation on these 40 acres will be linked to any development in Study Area 11. The exact delineation of the boundaries for the open space will be determined at the time of a submission of a schematic development plan for neighboring Map Designation 38.

Land Use and Zoning Actions

- Adopted open space designation
- Parcels rezoned to MXD

38 **Redesignate** part of parcels P910, P435, P33, and P138, plus all of parcels, P310, P211, P238, P241, P304, P305, P342, P398, P295, N301, and N396 from industrial-research-office to **commercial-office-residential** (Map Designation 38). This designation will be affixed to this map designation to allow the following development to occur in phases only after a traffic study is deemed acceptable to the City traffic engineer. This plan reflects the desire of the City to cluster density around the proposed transit station in this map designation relative to high-rise residential development. Density will decrease outward from the transit stop.

It is the intent of this land use plan to allow 600 base residential units in this map designation. However, certain infrastructure improvements must occur before development can proceed. West Watkins Mill Road must be extended across the CSX rail line into the site to achieve this base density. An additional 250 units will be permitted if West Watkins Mill Road is completed to Interstate 270. An increase of 400 additional units will be permitted if an interchange at West Watkins Mill Road and Interstate 270 is in place, and an additional 250 units if a transitway (light rail or busway) is constructed.

In regards to commercial activity, development will be allowed to occur if the following are constructed:

- West Watkins Mill Road extended from the CSX rail line to Interstate 270 with two access points into the study area will permit a mixed use development with a FAR of .4 not to exceed 700,000 square feet of office/retail space.

- West Watkins Mill Road must be open to traffic from the CSX rail line over Interstate 270 to intersect with Frederick Avenue (MD Route 355), and a grade separated crossing for Metropolitan Grove Road with internal access link to West Watkins Mill Road for an additional 500,000 square feet of office/retail space.

- An interchange at West Watkins Mill Road and Interstate 270 will allow for an increase in density of an additional 300,000 square feet of office/retail space.

- The dedication of right-of-way must be conveyed to Montgomery County for the Shady Grove/Clarksburg Transitway for light rail or busway and construction begun before an additional 200,000 square feet of office/retail space is permitted.

Land Use and Zoning Actions

- Adopted commercial-office-residential designation with the above stated housing, and office/retail square footage caps, and infrastructure improvements.
- Parcels rezoned to MXD

39 **Eliminated.** This map designation was eliminated through the public hearing and work session process and is not part of the final adopted plan.

40 **Designate** part of parcels P910, and P707, plus all of parcels P561, P715, P717, P800, and property owned by the State of Maryland as **open space** (Map Designation 40). Reserve 27 acres as open space to preserve wetlands, steep slopes, and heavily forested areas. Exact boundaries will be determined by way of a natural resources inventory.

Land Use and Zoning Actions

- Adopted open space designation
- Parcels within the City limits rezoned MXD

41-43 **Eliminated.** These map designations were eliminated through the public hearing and work session process and are not part of the final adopted plan.

44 **Designate** part of parcels P910, and P21 as **commercial-industrial-research-office** (Map Designation 44). This designation will allow commercial development to occur if West Watkins Mill Road is constructed over the CSX rail line into the site. A retail center of 150,000 square feet may be constructed following acceptance of a traffic study.

Land Use and Zoning Actions

- Adopted commercial-industrial-research-office designation as proposed
- Parcels within the City limits rezoned MXD

45 **Eliminated.** This map designation was eliminated through the public hearing and work session process and is not part of the final adopted plan.

46 **Redesignate** part of parcels P910, and P707 as **commercial-industrial-research-office** (Map Designation 46). This designation could allow an office or a hotel conference center on approximately 5 acres at varying densities depending on the following:

- An office building **or** hotel equaling 300,000 square feet would be allowed only if West Watkins Mill Road is extended to the edge of the Interstate 270 right-of-way.

- An office building **and** hotel to include a maximum of 600 rooms, an 80,000 square foot conference center also to include 40,000 square feet of commercial/retail space would be permitted after West Watkins Mill Road is extended from the CSX rail line over I-270 to intersect with Frederick Avenue.

- The development of an office building, hotel **and** additional conference center will be permitted only after West Watkins Mill Road is extended from the CSX rail line over Interstate 270 with direct access from Interstate 270 by way of an interchange at the bridge of West Watkins Mill Road.

Land Use and Zoning Actions

- Adopted commercial-industrial-research-office designation with the above stated square footage caps and phasing plan.
- Parcels within the City limits rezoned to MXD

47 **Eliminated.** This map designation was eliminated through the public hearing and work session process and is not part of the final adopted plan.

48&49 **Designate** part of parcels P707, and P21 and parcel P880 as **mixed residential** (Map Designations 48 and 49). Development may occur only after West Watkins Mill Road is constructed over the CSX rail line. The maximum housing unit count on this 44-acre parcel for all dwellings will be 300 with 50 percent being single-family detached and 50 percent single-family attached units equaling 7 units per acre.

Land Use and Zoning Actions

- Adopted mixed residential designation with above stated unit cap and dwelling unit mix
- Parcels to be zoned MXD if annexed into the City

50 **Designate** parcels P582, P408, P477, P695, N354, N410, N411, N453, N475, N531, N532, N534, N546, and N601 as **low density residential** (Map Designation 50). Single-family detached units on one-acre lots would be permitted with access from Game Preserve Road.

Land Use and Zoning Actions:

- Adopted low density residential if annexed into City
- Parcels to be zoned R-90 if annexed into the City

51 **Eliminated.** These map designations were eliminated through the public hearing and work session process and are not part of the final adopted plan.

STAGING PLAN

The development envisioned in this land use plan is not currently expected to build out in the next ten years and, to avoid piecemeal development, one amended sketch plan including all public improvements and approximate siting of buildings should be submitted according to the staging elements below.

The implementation of staging elements for this plan will be controlled by the approval process for the Mixed Use Development (MXD) Zone through the schematic development plan (SDP) approval process. This process requires the Mayor and City Council, and the Planning Commission to approve all final decisions on SDP's. Any development in Study Areas 11 and 12 will subsequently be reviewed by the Planning Commission subject to the site development review process required for all types of development in the City. Phasing of development and the total square footage and number of housing units for each phase will not be approved until a traffic impact study is submitted to the Department of Planning and Code Administration and its conclusions acceptable to the City traffic engineer. A traffic impact study must demonstrate that critical intersections and links of roads (existing and planned) will operate at acceptable levels of service. The traffic generated by the proposed development, plus all approved subdivisions and all other current uses, shall operate at a mid-point level of service E; an acceptable level of service. The level of service standard assumes that it is the level at which the transportation facilities will operate satisfactorily at maximum capacity. The traffic impact study should be prepared utilizing: (1) the standard ITE trip generation rates, (2) local trip distribution patterns based on good traffic engineering practices, and (3) the Critical Lane Analysis method to determine acceptable levels of service or any other method readily acceptable.

MASTER PLAN TRANSPORTATION LINKAGES

With respect to the master planned roads, transit options, bike paths, and pedestrian walkways, a detailed evaluation of rights-of-way and paving widths, road classifications, and design criteria will be conducted during the anticipated update of the city-wide transportation element of the master plan. However, during the course of review of various map designations, recommendations relative to certain existing and proposed master planned roadways were necessary within the context of the planned land use decisions. The following conclusions were reached:

Study Areas 11 and 12

West Watkins Mill Road, as an arterial roadway with 120 feet of right-of-way, will be a maximum six-lane roadway with pedestrian and bicycle capacity. Two access points will be reserved along West Watkins Mill Road for ingress/egress of Study Areas 11 and 12.

Metropolitan Grove Road is proposed as an improved street with a grade separated crossing over the CSX rail line with an internal access road linking to West Watkins Mill Road.

The reservation of right-of-way for the construction of a transitway along the CSX railroad and the Metropolitan Grove MARC Rail Station, to traverse the Casey Property, and continue north along Interstate 270 must be executed. This transportation improvement is crucial to accommodate the levels of development recommended in this plan, and the Montgomery County Master Plans for Shady Grove and Germantown.

Direct access from Interstate 270, by way of an interchange, to link with West Watkins Mill Road is an important part of the transportation linkages.

NEIGHBORHOOD FIVE
SUMMARY OF ESTIMATED POPULATION

Study Area	Existing Population	Population Added With Commited Units	Population Added With Future Units	Total
1	260	0	-	260
2	9	0	-	9
4	1,843	-	-	1,843
5	422	95	-	517
6	1,279	-	35	1,314
7	673	286	-	959
8	3,191	86	-	3,277
9	1,610	-	-	1,610
10	1,024	-	38	1,062
11	-	-	6,203	6,203
12	-	-	717	717
TOTAL	10,311	467	6,993	17,771

Note: Population estimates have been derived by utilizing the following standards:

3.15 persons/dwelling unit for single family detatched
2.89 persons/dwelling unit for single family attatched
2.17 persons/dwelling unit for multifamily

LAND USE CLASSIFICATION HIERARCHY

Low Density Residential
Medium-Low Density Residential
Medium Density Residential
High Density Residential
Mixed Residential
Residential-Office
Commercial-Office-Residential
Mixed Use
Commercial
Commercial-Industrial-Research-Office
Industrial-Research-Office
Industrial
Institutional
Institutional-Residential
Open Space

ZONING CATEGORIES

R-A	Low Density Residential (maximum density: 2 units per acre)
R-90	Medium Density Residential (maximum density: 3.5 units per acre)
R-6	Medium Density Residential (maximum density: 6 units per acre)
RP-T	Medium Density Residential (maximum density: 9 units per acre)
R-18	Medium Density Residential (maximum density: 18 units per acre)
R-20	Medium Density Residential (maximum density: 21.5 units per acre)
R-H	High Density Residential (maximum density: 54 units per acre)
R-O	Planned Residential
R-B	Residential Buffer
C-B	Commercial Buffer
C-1	Local Commercial
C-2	General Commercial
C-3	Highway Commercial
CBD	Central Business District
C-P	Commercial Office Park
MXD	Mixed Use Development
E-1	Urban Employment
E-2	Moderate Intensity Industrial Park
I-1	Light Industrial
I-3	Industrial and Office Park
I-4	General Industrial

LAND USE PLAN DESIGNATIONS AND COMPREHENSIVE REZONING
1996

MAP DESIG	STUDY AREA	SUBDIVISION/ PARCEL/LOT	ACRES	PROPERTY OWNERS	1994 ZONING	1974 LAND USE DESIGNATION	1994 DRAFT PLAN LAND USE DESIGNATION	PLANNING COMMISSION RECOMMENDATION	MAYOR & COUNCIL ADOPTION	ADOPTED ZONING
1	1	N746	2.23	City of Gaithersburg, Mont Co.	C-2	Comm	High Den Res	Inst	Inst	C-2
2	1	Part of N770 Lot 10	1.06	McDonald Corporation	C-2	Comm	Comm	Comm	Comm	C-2
3	1	N962, N904	2.21	Quince Tree Assoc. Partnership	C-2	Comm	Comm	Comm	Comm	C-2
4	1	N39	6.46	Quince Tree Assoc. Partnership	C-2	Ind-Rsch-Off	Comm	Comm	Comm	C-2
5	2	P15, P41,P67	2.60	Craig Dart Howard M. Mills	R-200 (County)	Low Den Res (County)	Low Den Res (Opt A) Res-Off (Opt B) Comm-Off- Res (Opt C) Comm (Option D)	Comm-Off-Res	Comm-Off-Res	
6	3	Lot 1 Block C	2.20	One Bank St. Ltd. Partnership	E-1	Ind-Rsch-Off Comm (Opt B)	Ind-Rsch Off (Opt A)	Comm	Comm	C-2
7	3	Part of Lot 2 Block C	3.30	Watkins-Johnson	E-1	Ind-Rsch-Off	Ind-Rsch-Off (Opt A) Comm (Opt B)	Comm	Comm	C-2
8	3	P551	1.84	United States Postal Service	E-1	Ind-Rsch-Off	Inst	Inst	Inst	E-1

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MAP DESIG	STUDY AREA	SUBDIVISION/ PARCEL/LOT	ACRES	PROPERTY OWNERS	1994 ZONING	1974 LAND USE DESIGNATION	1994 DRAFT PLAN LAND USE DESIGNATION	PLANNING COMMISSION RECOMMENDATION	MAYOR & COUNCIL ADOPTION	ADOPTED ZONING
9	4	P105	6.30	Diamonds Farms HOA	R-A	Open Space	Med Den Res	Med Den Res	Med Den Res	RP-T
10	4	P106, P107	9.00	Montgomery County Players	R-A	Open Space	Inst	Inst	Inst	R-A
11	4	N56, N60, N78 N128, N131 N135, Outlot A	13.87	Quadrangle Developement	MXD	_	Ind-Rsch-Off	Comm-Ind-Rsch-Off	Ind-Rsch-Off	MXD
12	4	Fernshire Farms Subdivision	100.00	Multiple Owners	RP-T	_	Med Den Res	Med Den Res	Med Den Res	RP-T
13	4	Hidden Orchard Subdivision	9.30	Multiple Owners	R-90	_	Low Den Res	Low Den Res	Low Den Res	R-90
14	5	Bridlewood Subdivision	50.00	Multiple Owners	R-90	Res	Low Den Res	Low Den Res	Low Den Res	R-90
15	5	N355, N399	4.63	Madison Homes	RP-T	_	Med Den Res	Med Den Res	Med Den Res	RP-T
16	6	P458, P461 State Parcel	7.86	HCM Investments State of Maryland	R-90 (County)	Low Den Res (County)	Low Den Res Open Space	Low Den Res/ Open Space	Low Den Res/ Open Space	R-90 Cluster
17	6	Hunter's Trace Subdivision	9.55	Multiple Owners	R-90	High Den Res	Low Den Res	Low Den Res	Low Den Res	R-90

Abbreviations: ***Comm*** = *Commercial* ***Den*** = *Density* ***Ind*** = *Industrial* ***Inst*** = *Institutional* ***Med*** = *Medium* ***Off*** = *Office* ***Opt*** = *Option* ***Rec*** = *Recreational* ***Res*** = *Residential* ***Rsch*** = *Research*

* Map Designations without a Planning Commission recommendation in Study Areas 11 and 12 have been eliminated through the public hearing and work session process and are not part of the final adopted plan.

NOTE: Map Designations with Planning Commission recommendation but without adopted zoning are parcels outside the City limits.

MAP DESIG.	STUDY AREA	SUBDIVISION/ PARCEL/LOT	ACRES	PROPERTY OWNERS	1994 ZONING	1974 LAND USE DESIGNATION	1994 DRAFT PLAN LAND USE DESIGNATION	PLANNING COMMISSION RECOMMENDATION	MAYOR & COUNCIL ADOPTION	ADOPTED ZONING
18	7	Orchard Hills Subdivision	22.00	Centex Homes	R-6	Med Den Res	Med-Low Den Res	Med-Low Den Res	Med-Low Den Res	R - 6
19	7	Parcels X-1, X-2 Y-1 and Y-2	24.00	Tech Park 270 Partnership (Mulligan & Griffin)	E-1	Med Den Res	Ind-Rsch-Off	Ind-Rsch-Off	Ind-Rsch-Off	I - 1
20	8	P750	5.00	Madison Homes	RP-T	–	Med Den Res	Med Den Res	Med Den Res	R - 6
21	8	Parcel B	17.00	City of Gaithersburg	R-A	Open Space Med Den Res	Inst	Inst	Inst	R - A
22	8	201 Lot, Block D	5.00	Diamond Farms Enclave Partnership	C-1	Med Den Res	Comm	Comm	Comm	C-1
23	9	P564, N368	22.24	State of Maryland Montgomery County	I-3	Vacant Farm	Inst	Inst	Inst	R - A
24	9	N459, N243	21.0	Weinschel Co. Clopper Road Assoc.	I-3	–	Ind-Rsch-Off	Ind-Rsch-Off	Ind-Rsch-Off	I - 3
25	10	N250	28.83	Clopper Road Assoc.	I-3	–	Ind-Rsch-Off	Ind-Rsch-Off	Ind-Rsch-Off	I - 3
26	10	Game Preserve Woods Subdivision	13.54	Built Form Homes	R-90	–	Low Den Res	Low Den Res	Low Den Res	R - 90
27	10	Dorsey Estates Subdivision	3.50	Multiple Owners	R-18	–	Med Den Res	Med Den Res	Med Den Res	R - 18
28	11	P435, P138 P404	32.00	City of Gaithersburg Montgomery County	R-A	Open Space	Open Space	Eliminated*		
29	11	P398, P396, P295, P305, P304 P241, P238, P33 N396, N301	24.5	See Map Designation 38	I-1	Ind Rsch-Off	Ind Rsch Off	Eliminated*		

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MAP DESIG	STUDY AREA	SUBDIVISION/ PARCEL/LOT	ACRES	PROPERTY OWNERS	1994 ZONING	1974 LAND USE DESIGNATION	1994 DRAFT PLAN LAND USE DESIGNATION	PLANNING COMMISSION RECOMMENDATION	MAYOR & COUNCIL ADOPTION	ADOPTED ZONING
30	11	P211, P33 part of P910	100.00	Casey Trust	I-3	Ind-Rsch-Off	Ind-Rsch-Off	Eliminated*		
31	11	P138 part of P404	17.00	City of Gaithersburg Casey Trust	R-A I-3	Open Space Ind-Rsch-Off	High Den Res	Eliminated*		
32	11	P33, part of P910	21.00	Casey Trust	I-3	Ind-Rsch-Off	Med Den Res	Eliminated*		
33	11	part of P910	60.00	Casey Trust	I-3	Ind-Rsch-Off	Ind-Rsch-Off	Eliminated*		
34	11	P238, P241 P304, P305 N396, N301 P295, past of P404	47.00	See Map Designation 38	I-1 R-A	Open Space Ind-Rsch-Off	Comm	Eliminated*		
35	11	part of P910	27.80	Casey Trust	I-3	Ind-Rsch-Off	Ind	Eliminated*		
36	11	part of P910	4.00	Casey Trust	I-3	Ind-Rsch-Off	Comm	Comm-Off-Res	Comm-Off-Res	MXD
37	11	P435, P138 P33, P211 part of P404 and P910	122.00	City of Gaithersburg Montgomery County Casey Trust	R-A I-3	Open Space Ind-Rsch-Off	Mixed Res	Open Space	Comm-Off-Res	MXD

Abbreviations: ***Comm*** = *Commercial* ***Ind*** = *Industrial* ***Med*** = *Medium* ***Opt*** = *Option* ***Res*** = *Residential*
Den = *Density* ***Inst*** = *Institutional* ***Off*** = *Office* ***Rec*** = *Recreational* ***Rsch*** = *Research*

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NOTE: Map Designations with Planning Commission recommendation but without adopted zoning are parcels outside the City limits.

MAP DESIG	STUDY AREA	SUBDIVISION/ PARCEL/LOT	ACRES	PROPERTY OWNERS	1994 ZONING	1974 LAND USE DESIGNATION	1994 DRAFT PLAN LAND USE DESIGNATION	PLANNING COMMISSION RECOMMENDATION	MAYOR & COUNCIL ADOPTION	ADOPTED ZONING
38	11	P305, P304 P241, P238 N396, N301 P295, part of P910 P398, P310, P342	75.00	William Lee Sovran Bank Montgomery County William Busche Charles Vaughn Conrad Mills Richard Howard George Stevenson	I-1 I-3	Ind-Rsch-Off	Comm/Ind-Rsch-Off	Comm-Off-Res	Comm/Off Res	MXD
39	12	part of P910 P880, P21	40.00	Casey Trust	I-3	Ind-Rsch-Off	Ind-Rsch-Off	Eliminated*		
40	12	Part of P910	5.00	Casey Trust	I-3	Ind-Rsch-Off	Open Space	Open Space	Open Space	R - A
41	12	Part of P910	15.00	Casey Trust	I-3	Ind-Rsch-Off	Comm	Eliminated*		
42	12	P21, P880 Part of P910	20.00	Casey Trust	I-3	Ind-Rsch-Off	Ind-Rsch-Off	Eliminated*		
43	12	Part of P910	5.00	Casey Trust	I-3	Ind-Rsch-Off	Open Space	Eliminated*		
44	12	Part of P910 Part of P21	15.00	Casey Trust Devlin Lumber	I-3	Ind-Rsch-Off	Comm	Comm/ Ind-Rsch-Off	Comm/ Ind-Rsch-Off	MXD
45	12	Part of P910 P880	10.00	Casey Trust	I-3	Ind-Rsch-Off	Ind-Rsch-Off	Eliminated*		
46	12	Part of P910	24.00	Casey Trust A.B. McGown	I-3	Ind-Rsch-Off	Open Space	Comm/ Ind-Rsch-Off	Comm/ Ind-Rsch-Off	MXD
47	12	Part of P910	15.00	Casey Trust	I-3	Ind-Rsch-Off	Comm	Eliminated*		
48	12	P21, P880, P800 P717, P707 part of P910 P715, Part of P21	40.00	Casey Trust A.B. McGown Devlin Lumber	I-3	Ind-Rsch-Off	Ind Rsch-Off	Mixed Res	Mixed Res	MXD

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MAP DESIG	STUDY AREA	SUBDIVISION/ PARCEL/LOT	ACRES	PROPERTY OWNERS	1994 ZONING	1974 LAND USE DESIGNATION	1994 DRAFT PLAN LAND USE DESIGNATION	PLANNING COMMISSION RECOMMENDATION	MAYOR & COUNCIL ADOPTION	ADOPTED ZONING
49	12	Part of P707	40.00	A.B. McGown	I-3	Off/Light Ind (County)	Med Den Res	Mixed Res	Mixed Res	MXD
50	12	P582	17.00	A.B. McGown	R-200 (County)	Low Den Res (County)	Low Den Res	Low Den Res	Low Den Res	R-90
51	12	Game Preserve Road (12 lots)	12.00	A.B. McGown	R-200 (County)	Low Den Res (County)	Low Den Res	Eliminated*		
52	12	Part of P910	25.00	Casey Trust A.B. McGown	I-3	Ind-Rsch-Off	Ind-Rsch-Off	Eliminated*		

Abbreviations: ***Comm*** = *Commercial*; ***Den*** = *Density*; ***Ind*** = *Industrial*; ***Inst*** = *Institutional*; ***Med*** = *Medium*; ***Off*** = *Office*; ***Opt*** = *Option*; ***Rec*** = *Recreational*; ***Res*** = *Residential*; ***Rsch*** = *Research*

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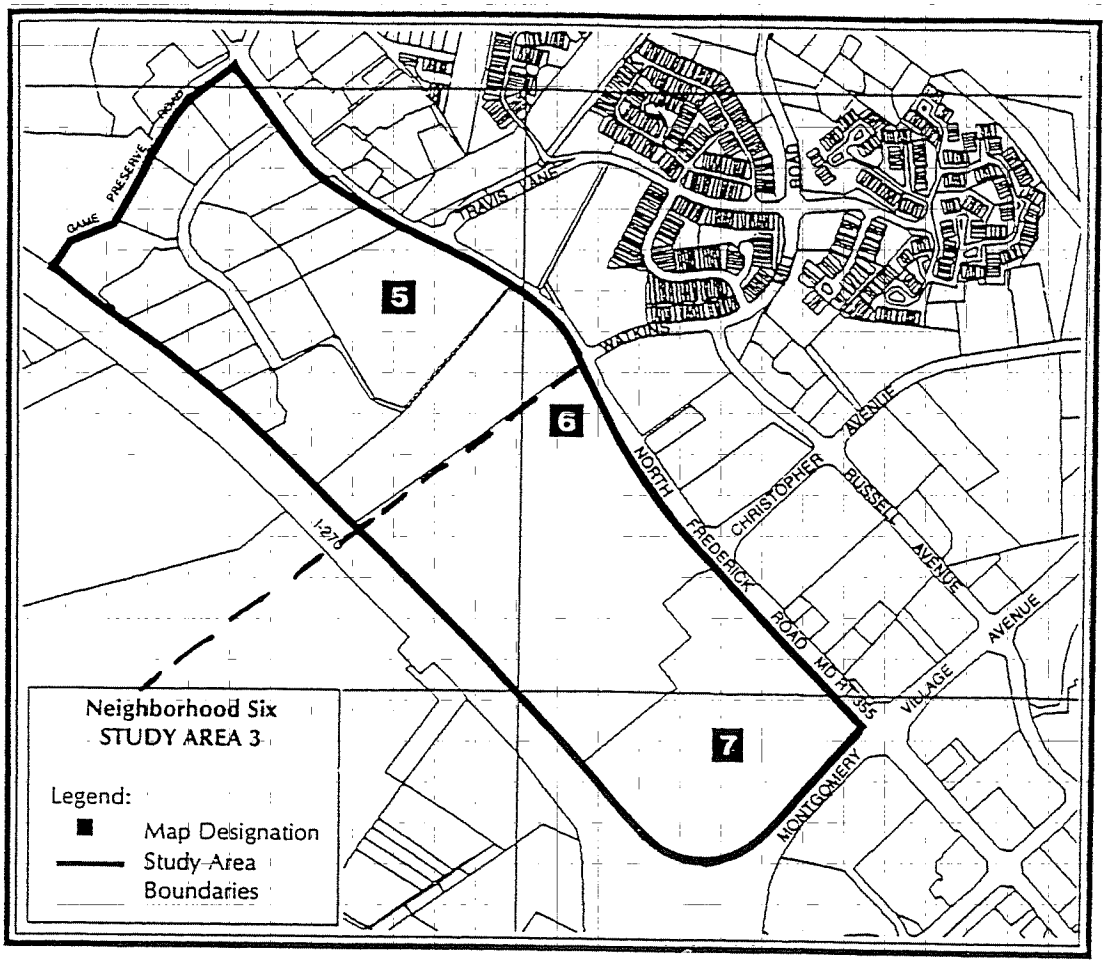
NOTE: Map Designations with Planning Commission recommendation but without adopted zoning are parcels outside the City limits.

STUDY AREA 3



Total Area	104
Estimated Population	0
Housing Units	0
Predominant Land Use	Industrial-Research-Office
Vacant Land	108 acres

Study Area 3 is bounded on the north by Game Preserve Road which is the northern boundary of the City, on the east by Maryland Route 355 (North Frederick Road), on the south by Montgomery Village Avenue, and on the west by Interstate 270. Since the time of the 1986 master plan evaluation in this neighborhood, 121 acres of land owned by Lockheed Martin/I.B.M. has been annexed (1991) into the corporate limits and is now included in the subject study area.

The current land use in the neighborhood is dominated by industrial-research-office uses and has not changed significantly over the past ten years during which time not much significant development has taken place. North of the Lockheed Martin/I.B.M. holdings there are approximately 68 acres of vacant land, which represents 61 percent of all the vacant land available for development in this neighborhood.

Land use options, identified by map designation numbers on the Neighborhood Six Study Area 3 map on page 12, and listed in the accompanying chart beginning on page 16, are described as follows:

Land Use Options

5 **Redesignate** parcels within Crown Pointe as **commercial/industrial-research-office** (Map Designation 5), to allow for expansion of office and research and development uses under the most flexible zoning options available. This map designation is a good location for signature buildings situated on sites within Study Area 3 where high visibility from Interstate 270 will create an attractive visual image for the City of Gaithersburg. All buildings should be required to front on Maryland Route 355 with parking to be located behind the buildings in order to camouflage large concentrated parking areas. This designation will permit greater zoning flexibility, higher level of design control, and a wider range of uses, particularly along Maryland Route 355. Additional flexibility in terms of permissible uses would be tempered by the controls typically exercised within the tenets of the MXD zone to control the quality of development therein.

Land Use and Zoning Actions:

- Adopted **commercial/industrial-research-office** land use designation
- Parcel rezoned to **MXD**

6 **Designate** the 73-acres of I.B.M. and N417, owned by the Casey Trust, as **commercial/industrial-research-office** (Map Designation 6) which equates to the Mixed Use development (MXD) Zone. Development of this site for commercial retail facilities could possibly include a hotel: expansion of office and research and development uses would be permitted. The City is currently evaluating the feasibility of constructing a new interchange at Watkins Mill Road Extended over Interstate 270 to link Neighborhoods Five and Six and provide alternative transportation options to the interchange of North Frederick Avenue and Montgomery Village Avenue. The location of any development on the vacant 33-acre parcel on the northern portion of the I.B.M. property should take into consideration the placement of a new interchange. The main emphasis of the siting of new buildings will be towards Watkins Mill Road Extended. Watkins Mill Road Extended should be designed so that it is compatible with surrounding uses and the design of the interchange incorporating, where feasible, appropriate traffic calming measures more in keeping with the City's design standards emphasizing pedestrian access. Access to the vacant 33 acres will be from Watkins Mill Road Extended and an additional access point from North Frederick Avenue.

Land Use and Zoning Actions:

- Adopted **commercial/industrial-research-office** land use designation
- Zoning remains **I-3**

7 **Redesignate** the 47-acre parcel owned by Lockheed/Martin as **commercial/industrial-research-office** (Map Designation 7). This parcel was annexed into the City as part of the larger I.B.M. annexation in 1991. This map designation will affix a land use to the property and the parcel should be rezoned to MXD.

Land Use and Zoning Actions:

- Adopted **commercial/industrial-research-office** land use designation
- Parcel rezoned to **MXD**

Study Area 3 would benefit from the adoption of design guidelines to control the visual appearance and location of buildings fronting on Maryland Route 355 and Watkins Mill Road Extended. Wherever possible, parking shall not be permitted to be located so as to front on Maryland Route 355 or Watkins Mill Road Extended. Inasmuch of the land fronting on Route 355 is vacant, tremendous visual impact can be attained through the adoption of such guidelines. Additionally, guidelines must attempt to control the appearance of buildings proximate to Interstate 270.

PROJECTIONS FOR STUDY AREA 1 WITH CURRENT DEVELOPMENT

Office Development	
Crown Pointe	318,523 sq. ft.
Russell Office Park	115,000 sq. ft.
Montgomery Executive Center	122,522 sq. ft.
I.B.M.	422,051 sq. ft.
Lockheed/Martin	520,850 sq. ft.
TOTAL	1,498,946 sq. ft.

LAND USE CLASSIFICATION HIERARCHY

Low Density Residential
Medium-Low Density Residential
Medium Density Residential
High Density Residential
Mixed Residential
Residential-Office
Commercial-Office-Residential
Mixed Use
Commercial
Commercial-Industrial-Research-Office
Industrial-Research-Office
Industrial
Institutional
Open Space

ZONING CATEGORIES

R-A	Low Density Residential (maximum density: 2 units per acre)
R-90	Medium Density Residential (maximum density: 3.5 units per acre)
R-6	Medium Density Residential (maximum density: 6 units per acre)
RP-T	Medium Density Residential (maximum density: 9 units per acre)
R-18	Medium Density Residential (maximum density: 18 units per acre)
R-20	Medium Density Residential (maximum density: 21.5 units per acre)
R-H	High Density Residential (maximum density: 54 units per acre)
R-O	Planned Residential
R-B	Residential Buffer
C-B	Commercial Buffer
C-1	Local Commercial
C-2	General Commercial
C-3	Highway Commercial
CBD	Central Business District
C-P	Commercial Office Park
E-1	Urban Employment
E-2	Moderate Intensity Industrial Park
I-1	Light Industrial
I-3	Industrial and Office Park
I-4	General Industrial

LAND USE PLAN DESIGNATIONS AND COMPREHENSIVE REZONING
1997

MAP DESIG	STUDY AREA	SUBDIVISION/ PARCEL/LOT	ACRES	PROPERTY OWNERS	1996 ZONING	1983 LAND USE DESIGNATION	1996 DRAFT PLAN LAND USE DESIGNATION	PLANNING COMMISSION RECOMMENDATION	MAYOR & COUNCIL ADOPTION	ADOPTED ZONING
1	1	N903, N956	4.00	Sports Pavilion, Inc.	I-3	Ind-Rsch-Off	Comm (Opt A) Comm/Ind-Rsch- Off (Opt B)	Comm	Comm	C-2
2	2	Pt Parcel "A" (portion of N441)	1.03	Conrad V. Aschenbach	C-2	Ind-Rsch-Off	Ind-Rsch-Off (Opt A) Comm-Off (Opt B)	Ind-Rsch-Off	Comm-Off	C-2
3	2	N616	5.24	Price Enterprises, Inc.	C-2	Comm-Rsch-Off	Comm-Off	Comm-Off	Comm-Off	C-2
4	2	N727	1.90	Montgomery County Teachers Federal Credit Union	C-2	Comm	Comm	Comm	Comm	C-2
5	3	N102,N167 N260, N273 N329, N391 N526, N530 P1151,P206 P424, P443 Lot 1	58.00	Crown Pointe	I-3	Ind-Rsch-Off	Ind-Rsch-Off (Opt A) Comm/Ind-Rsch-Off (Opt B)	Comm/Ind-Rsch-Off	Comm/Ind-Rsch-Off	MXD
6	3	Northerly Portion of N860, N417	221.89	I.B.M. Casey Trust	I-3	Ind-Rsch-Off	Comm/Ind-Rsch-Off	Comm/Ind-Rsch-Off	Comm/Ind-Rsch-Off	I-3
7	3	_	47.00	Lockheed/Martin	I-3	Ind-Rsch-Off	Ind-Rsch-Off	Comm/Ind-Rsch-Off	Comm/Ind-Rsch-Off	MXD

Abbreviations: ***Comm*** *= Commercial* ***Den*** *= Density* ***Ind*** *= Industrial* ***Inst*** *= Institutional* ***Med*** *= Medium* ***Off*** *= Office* ***Opt*** *= Option* ***Rec*** *= Recreational* ***Res*** *= Residential* ***Rsch*** *= Research*

COASTAL RESOURCES INC.

2988 Solomons Island Road
Edgewater, MD 21037
410-956-9000
410-956-0566 (Fax)

MEETING MINUTES

Date: November 10, 1998

To: Anne Elrays

From: David Raleigh Smith

Subject: Interstate 270 from Shady Grove Metro Station to Biggs Ford Road
Project No. FR 192B11

Purpose: Wetland Jurisdiction Determination

JD Date: October 22-23 and November 4 and 10, 1998

Location: Urbana Park and Ride, Frederick County

Attendees:
Anne Elrays, SHA-PPD
Bill Branch, SHA-EPD
Peter Keke, SHA-PPD
Julia Dietz, SHA-PPD
Steve Elinsky, USACOE
Joseph DaVia, USACOE
Rich Bulavinetz, USACOE
Bill Seiger, MDE
Matt Radcliffe, MDE
David Raleigh Smith, CRI
Ricardo Gonzales, CRI
Bridgette Grillo, CRI

The purpose of the meeting was to conduct a jurisdictional determination (JD) on the southern half of the I-270 project from MD 80 (Urbana) to Shady Grove Road. Forty-six wetlands were identified and flagged within the southern half of the project study area by Coastal Resources, Inc. It was agreed that the project study area be reduced for the southern portion of the I-270 corridor, to include from the edge of pavement on either side of the interstate out to the proposed right-of-way (ROW). This area averaged about 50 feet in width. It also included expanded areas in the vicinity of proposed new interchanges at MD 75 extended, New Cut Road, and Watkins Mill Road. The field review was completed in three days.

The attendees met at the Urbana Park and Ride at 9:00 a.m. on all three days. On the first day, questions regarding project scope, design, and engineering were addressed by Anne Elrays, Peter Keke, and Julia Dietz of MDSHA. It was reiterated that the project is in a preliminary stage. The ACOE also reiterated that alternatives utilize the median where practical, rather than expanding beyond existing ROW and that side slopes be maximized to further reduce impacts to wetlands and streams. The ACOE also noted that the wetland JD would only be valid to the proposed ROW. If it is later necessary to expand the project beyond the proposed ROW, additional wetlands would need to be flagged and verified. Anne

Elrays of MDSHA noted that upon completion, a copy of the wetland delineation and report should be sent to the National Park Service for wetlands south of Biggs Ford Road to Urbana. On all three days the group split into two teams. Each team was comprised of one ACOE and one MDE representative, with at least one consultant from CRI. On October 22, each team had at least one representative from MDSHA. A single representative from MDSHA was present during the subsequent visits. The following information summarizes the wetland JD results of both teams, for Wetland 6, 10, and 22-66.

Wetland 6E & 6W	Wetland 6W was accepted as Waters of the U.S. A note was made regarding the lack of fish passage below the culvert, as there is a 3' drop from the culvert outfall to the stream. Wetland 6E was accepted as flagged.
Wetland 10	Wetland 10 was determined to be ephemeral and was not taken as Waters of the U.S.
Wetland 22E & 22W	The Wetland 22W boundary was accepted as flagged. However, the agencies indicated that both sides of the stream should be surveyed between flags 17 and 53. A note will be made to the surveyors to survey the top of bank on the west side of the stream in this location. A small tributary stream enters the main stream from the west between flags 44 and 45. Surveyors should also locate the top of bank of this tributary upstream approximately 30 feet. The agencies identified a seep wetland adjacent to the stream opposite flag 51 to 53. The seep is outside the ROW, however, if the alignment changes the seep will need to be flagged. The culvert at flag 28 is 4' above the water surface, excluding fish passage. Wetland 22E was verified as flagged.
Wetland 23E & 23W	Wetland 23W and 23E were accepted as flagged.
Wetland 24E & 24W	Wetland 24 (Bennett Creek) was accepted as flagged. Bill Branch of MdSHA noted that the vegetated bar under the I-270 bridge provides good wildlife passage.
Wetland 25E & 25W	Wetland 25W was accepted as flagged. A 10-12" drop from the culvert to the water surface was acting as a blockage to fish passage. A vehicle was observed driving through the box culvert, raising a question about ROW issues. Within the PEM portion of Wetland 25E, flags 25E-26 through 25E-37 and flag 25E-39 were removed. The wetland boundary was tightened so that flag 25E-25 connects to 25E-38 and 25E-38 connects to 25E-40. Along the stream portion of Wetland 25E, flags 25E-2 and 25E-3 were removed. This area was considered to be road runoff only. A new flag 25E-2 was tied on the perennial portion of the stream opposite flag 25E-4.
Wetland 26E & 26W	The portion of Wetland A26W flagged as PFO was considered non-wetland by the agencies. The stream channel was re-flagged A26W-1 to A26W-6. The area identified as intermittent stream of Wetland B26W was determined to be ephemeral road runoff. The perennial stream was re-flagged B26W-1 to B26W-7. Bill Branch noted that the ephemeral channel and pipe outfall from the median were failing and in need of repair. Fish passage was blocked at the I-270 culvert by a 2-3' drop to the water surface. Wetland 26E was accepted as flagged. Several missing flags were retied. An approximately 50' X 150' emergent seep connects to the stream just outside the ROW. The area is enclosed in an electric fence and was not flagged. If the alignment extends out in this location, the area will need to be flagged and verified.
Wetland 27E & 27W	Wetland flags 27E-13 to 27E-27 were removed. Connect flags 27E-12 to 27E-26. Flag 27E-11 was moved approximately 8' further away from the stream. Wetland 27W was accepted as flagged.
Wetland 28	The channel was determined to be non-jurisdictional. Nontidal emergent wetlands were identified along the fringe of the pond out to about 8'. A note will be made to the survey team to survey the edge of pond and locate a wetland line 8' from the edge.
Wetland 29	The waterway was not determined to be jurisdictional. The emergent wetland was re-flagged as 29W-1 to 29W-6. The wetland connects downstream and outside the ROW to an intermittent stream channel.

Wetland 30	Flags 30W-1 to 30W-6 were removed along a small stream channel determined to be ephemeral by the agencies. The perennial stream and PFO were verified as flagged (30W-7 to 30W-16). The box culvert drops 6" to the water surface of the stream creating a blockage to fish passage.
Wetland 31	Wetland flags 31W-17 and 31W-18 were removed, as the agencies did not take jurisdiction on the channel. The verified boundary includes flags 31W-1 to 31W-16 and 31W-19 to 31W-25. The culvert is undercut and water drops 3' to the stream, creating a blockage to fish passage.
Wetland 32E & 32W	This stream channel was considered to be ephemeral and was not determined to be jurisdictional.
Wetland 33	The Corps verified all flags associated with wetland 33.
Wetland 34	Wetland 34 is associated with Little Bennett Creek. Flagging was verified. Bill Branch noted that the existing bridge allows good wildlife passage.
Wetland A35	This wetland was verified as flagged.
Wetland B35	This stream was determined to be ephemeral and non-jurisdictional.
Wetland C35	This wetland was verified as flagged.
Wetland D35	This wetland was verified as flagged.
Wetland E35	Wetland flags E35-62.1S to E35-62.5S were removed. The new boundary connects E35-62 to E35-63. Wetland flags E35-102N to E35-108N were moved. The new boundary connects flags E35-101N to E35-109N. Wetland flags E35-116N to E35-119N were removed. The new boundary connects flags E35-115N to E35-120N. The remainder of the wetland flagging was accepted by the agencies.
Wetland F35	This wetland was verified as flagged.
Wetland G35	This wetland was verified as flagged.
Wetland H35	This wetland was verified as flagged.
Wetland 36	Wetland 36 was accepted as flagged.
Wetland 37	This roadside ditch was determined to be non-jurisdictional; hydrology supported by road runoff.
Wetland 38	This wetland was verified as flagged.
Wetland 39	This wetland was verified as flagged.
Wetland 40	This stream channel was considered ephemeral and non-jurisdictional.
Wetland 41	This wetland was verified as flagged.
Wetland 42	This wetland was verified as flagged.
Wetland 43	This wetland was verified as flagged.
Wetland 44	This wetland was verified as flagged.
Wetland 45E & 45W	Wetland 45E was verified as flagged. Wetland flags 45W-2 and 45W-3 were moved to the top of bank. The remaining flags were accepted as flagged.
Wetland 46E	This wetland was verified as flagged. The agencies noted fish in the stream. If impacts are planned for the this wetland, the agencies would like to see deeper pools created in the stream for fish.

Wetland A46E	This wetland was verified as flagged.
Wetland B46E	This stream channel was determined to be ephemeral and non-jurisdictional. The agencies noted a wetland just outside the ROW. If the alignment expands in this area, the wetland would need to be flagged.
Wetland 47	This wetland was verified as flagged.
Wetland 48E & 48W	Wetland 48W was accepted as flagged. Wetland 48E was accepted as flagged. However, the agencies noted that the stream channel flows out of an instream pond.
Wetland 49	Wetland 49 was accepted as flagged up through flags 49W-00 to 49W-69 and from 49W-150 to 49W-197. Wetland flags 49W-70 to 49W-149 were outside of the proposed ROW and were not assessed at this time. It was noted that the wetland was actually flagged as Wetland 47W by mistake. A note will be made to the surveyors prior to the location of these flag points.
Wetland 50	This wetland was verified as flagged. MDE noted that it would be difficult to relocate the stream in this location.
Wetland 51	This wetland was verified as flagged. ACOE does not want to see the stream piped if impacts can not be avoided.
Wetland 52E & 52W	Wetland 52E and 52W were accepted as flagged.
Wetland 53	This wetland was verified as flagged.
Wetland 54	Wetland 54 was accepted as flagged.
Wetland 55	Wetland 55 was accepted as flagged.
Wetland 56	Wetland 56 was accepted as flagged. The eastern boundary of the wetland was not flagged, as it lies just outside the ROW. If the alignment expands in this location, the wetland boundary east of the stream will need to be flagged.
Wetland 57E & 57W	Wetland 57E was accepted as flagged. This wetland is associated with the Germantown Bog, a Nontidal Wetland of Special State Concern. None of the three state-listed plant species were observed during our delineation or JD. Wetland 57W was also accepted as flagged.
Wetland 58E & 58W	Wetland 58E and 58W were accepted as flagged.
Wetland 59E & 59W	The agencies did not take jurisdiction on Wetland 59E, indicating that it was an ephemeral stream channel. Wetland 59W was accepted as flagged.
Wetland 60E, 60W & 60N	Wetland 60E was accepted as flagged. The ACOE noted that the unflagged, created wetland east of Wetland 60E would need to be replaced if impacted. CRI and MDSHA will look into this mitigation site so that its limits can be located on the mapping. Wetland 60W was accepted as flagged. The ACOE noted that a forested wetland extends upslope from the stream, but just outside of the ROW. If the alignment is extended in this area, the PFO will need to be flagged. Wetland 60N was accepted as flagged.
Wetland A61W	This wetland was verified as flagged.
Wetland B61W	This wetland was verified as flagged.
Wetland 61	Wetland 61E was accepted as flagged. The stream enters a culvert that lies beyond the limits of a sound wall and outside of the proposed ROW.

Wetland A62W	Wetland A62W was determined to be non-jurisdictional by the ACOE because it was determined to be isolated from Great Seneca Creek. However, MDE did take jurisdiction on the wetland. The wetland boundary flags were verified by MDE.
Wetland B62E	Wetland B62E was determined to be non-jurisdictional. It is an old SWM pond created within an upland portion of the floodplain to Great Seneca Creek.
Wetland C62E	Wetland C62E was accepted as flagged. It was noted that the wetland ends on the east side of flag 1.
Wetland 62E & 62W	Wetland flagging for 62E & 62W was accepted. The boundary lies along the banks of Great Seneca Creek.
Wetland A63W	This wetland was verified as flagged.
Wetland B63W	Flags B63W-4 through B63W-9 were removed, as this floodplain area was determined to be non-wetland. Flag B63W-3 will now connect to flag B63W-10. The remaining flags were verified. The ACOE noted that a detailed alternatives analysis for the proposed Watkins Mill Road interchange in the vicinity of flag B63W-20A16 will be required, as this wetland is of high quality.
Wetland C63W	This stream channel was determined to be ephemeral and non-jurisdictional.
Wetland D63W	This wetland was verified as flagged.
Wetland A63E	This stream channel was accepted as flagged. Wetland stick flags, placed along a riprap channel extending south from the stream upslope to a ditch along MD 124, were not put there by CRI. The agencies did not take jurisdiction on this ephemeral channel. A note will be given to the surveyors not to locate the stick flags.
Wetland B63E	This portion of the stream channel was accepted as flagged. However, the ACOE indicated that if the adjacent SWM pond was built in uplands, that they would not take jurisdiction on the outlet channel (flags B63E-1, B63E-2 and B63E-7). After investigating the Montgomery County Soil Survey, it appears that this SWM pond was built in uplands. Therefore, we will notify the surveyors not to locate the flags along the pond outlet channel.
Wetland C63E	Wetland C63E was accepted as flagged. The ACOE indicated that if the SWM pond, from which the flagged outlet swale drains, was constructed in uplands that they would not take jurisdiction on the wetland. After consulting the Montgomery County Soil Survey, the pond appears to have been constructed in the headwaters of a first order stream that drains to Great Seneca Creek. Therefore, this wetland will be considered jurisdictional.
Wetland 64	This wetland was verified as flagged.
Wetland 65	This wetland was verified as flagged.
Wetland 66	This wetland was verified as flagged.

These minutes are in draft form and are being submitted to MDSHA for review and comment.

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

MEMORANDUM

TO: Mr. Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

FROM: Michelle D. Hoffman
Project Manager
Project Planning Division

DATE: June 24, 1999

SUBJECT: June 11 Interagency Meeting and Field Review

RE: Project Number MO839A11
I-270/Watkins Mill Road Extended
Montgomery County

On Friday, June 11, 1999, several representatives of the Project Team met to discuss issues related to the project Purpose and Need Statement. In particular, the discussion focused on the Segmentation Paper and the Purpose and Need Statement. The following people attended:

Jeremy Beck, SHA-PPD
Peter Campanides, SHA-D3
Jean Chait, Mont. Co. DPW&T
Jon B. Chamberlin, SHA-D3 R/W
Andrew Der, MDE
Steve Elinsky, USACE
Anne Elrays, SHA-PPD
Greg Golden, DNR-Env. Res.
Michelle Hoffman, SHA-PPD
Ki Kim, M-NCPPC
Melissa Kosenak, SHA-PPD
Mark Lotz, The Wilson T. Ballard Co.
Glenn Mlaker, City of Gaithersburg
Dan Putman, SHA-Plats & Surveys
Jamie Stark, EPA
Pam Stephenson, FHWA
Matt Storck, STV for SHA-D3
Paul Wettlaufer, USACE
David Sutherland, USFWS
Bihui Xu, MOP

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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

INTRODUCTION

Michelle Hoffman began the meeting with introductions and an overview of the purpose of the meeting, which included a field review for the purpose of understanding the proposed project study area and the purpose and need issues, followed by discussions of the Purpose and Need Statement and the environmental streamlining process.

Prior to beginning the field review, Michelle provided a brief overview of the project. This planning study will follow a "pilot" process for environmental streamlining. An interagency committee that holds regular meetings is developing the framework for this process. The committee suggested this purpose and need interagency field review as one of its first revisions to the traditional process.

Recent interagency involvement on the project has included the following:

- March 17, 1999: Draft Purpose and Need Statement first distributed
- April 21, 1999: Purpose and Need Statement discussed and need for Segmentation Paper identified
- May 9, 1999: Draft Segmentation Paper first distributed
- May 28, 1999: Latest revision of the Purpose and Need Statement and Segmentation Paper distributed (This represents the latest version except for deletion of references to "proper segmentation" on the first and last pages of the Segmentation Paper.)

The purpose of this meeting was not to request concurrence on purpose and need. This request will formally occur at the June 16, 1999 Interagency Meeting. Andrew Der stated that all agencies have not concurred on segmentation (i.e., I-270 at Watkins Mill Road separated from the I-270/US 15 Multi-Modal Corridor Study). Concerns regarding segmentation could be further addressed at the June 16th Interagency Meeting, if desired.

FIELD REVIEW

The field review lasted approximately two hours and included a drive along northbound I-270 to Middlebrook Road, MD 355 south, Watkins Mill Road at MD 355, the IBM property, westbound MD 124, northbound MD 117, Brown's Station Park, the Metropolitan Grove MARC Station, Watkins Mill Road at MD 117, Game Preserve Road and southbound I-270. Several stops were made along the way.

The following is a summary of discussions that took place during the field review:

- Glenn Mlaker gave an overview of the development planned on each side of I-270. East of I-270, south of the master plan location of Watkins Mill Road Extended, the IBM property is planned for the removal of its ball fields and part of its parking lot followed by construction of 1.1 million square feet of office/research space, including a multiplex theater and a hotel. Following the development of conceptual alternatives, IBM will be provided a worst case right-of-way line to allow them to plan their development. Also east of I-270, but north of the master plan alignment for Watkins Mill Road Extended, the Casey East Tract is planned for 600,000 square feet of office/research space. Included in the plans for this area is the extension of Professional Drive to loop back to the east to intersect MD 355 at an additional location south of its current intersection. West of I-270, the parcel known as the Casey West Tract covers both sides of the master plan location for Watkins Mill Road Extended. The development planned for this parcel includes 1.7 million square feet of office/research space and 1,500 residential units.
- Other development proposals related directly to the project purpose and need include the Bennington Corporation's redevelopment of a parcel in the northeast quadrant of MD 117/Watkins Mill Road to provide 800,000 square feet of additional office/research space and the Metropolitan Grove Park re-development to create 400,000 square feet of additional office/research space. Both of these areas are currently under construction.
- Conceptual plans for several of the above developments were reviewed along with conceptual plans for a proposed Watkins Mill Road Extended interchange with I-270, developed several years ago as part of a County Feasibility Study, which is referenced in the Purpose and Need Statement.
- Jean Chait reported that prior to developing a feasibility study for a Watkins Mill Road Extended interchange with I-270, Montgomery County completed 90 percent design plans for Watkins Mill Road Extended between MD 117 and MD 355 solely as an overpass of I-270. This included the submission of a wetland permit application to the US Army Corps of Engineers. This application was dated May 21, 1992, and included 0.5 acre of impact, based on a delineation verified in August, 1990. The application was also submitted to MDE which provided comments back to Montgomery County which were never responded to, and the file was therefore closed. The Corps permit has since expired because it was a Maryland General Permit. The JD associated with the permit has expired also, but may still be used as a reference for this study.

- Brown's Station Park is a publicly owned (joint County/City) parcel acquired as part of a land swap included as part of a highway project several years ago. The parcel is not currently used nor is it planned for any active or passive recreational uses. It is zoned mixed-use and not planned for inclusion in the parks and recreation system. Pending additional research related to funding sources for the acquisition of the property, it appears that this land does not qualify as a Section 4(f) resource.
- David Sutherland requested information concerning the total amount of woodland within the study area.
- The Metropolitan Grove MARC Station was included as a stop on the field review. The parking lot was less than half full which is considered to be typical every day use of this location. Parking lots at adjacent stations on the MARC line are known to be much more heavily utilized, which has led to the theory that poor accessibility and congestion on the surrounding road network leads to under-utilization of this station. Access to this station off of I-270 requires five-to-six turns through intersections that are heavily congested at rush hour. One of the detailed alternates in the I-270/US 15 Multi-Modal study is the Corridor Cities Transitway, parallel to I-270, which includes shared use of this MARC Station. The extent to which poor accessibility contributes to low MARC station utilization was questioned by several attendees. Michelle will contact MTA to gather more data on utilization (please see the revised Purpose and Need Statement). Steve Elinsky and Peter Campanides suggested moving the station to the Brown's Station Park location, which could be more easily accessed from the MD 124 interchange. Michelle stated that this could be considered when conceptual alternatives are developed.
- Paul Wettlaufer suggested consideration of extending Long Draft Road east of MD 117 as the east-west connector across to MD 355 rather than Watkins Mill Road because it may have fewer wetland impacts. From brief inspection in the field, it appeared that an extension of Long Draft Road east of MD 117 would result in extensive impacts to residential communities; however, this concept could also be identified during the alternates scoping process.
- Some potential conceptual designs were discussed at the request of the Corps of Engineers, including the use of braided ramps along southbound I-270 which would provide a grade separation for southbound traffic from Watkins Mill Road Extended to cross over traffic exiting onto MD 124, thereby averting the weaving of high volumes of exiting and merging traffic on the I-270 mainline or future collector-distributor (C-D) roads. C-D roads will likely be considered along both northbound and southbound I-270. Paul Wettlaufer requested a commitment that would result in no widening to the west side of I-270. Michelle responded that such a commitment could not be made since build traffic volumes and conceptual alternates have not yet even been determined.

OFFICE MEETING

Following the field review, discussion of purpose and need issues continued back at the Montgomery County Executive Office Building. Discussion included the following:

Project History

Michelle highlighted key points in the history of the project:

- The I-270/US 15 Corridor Study has included the Watkins Mill Road interchange in conceptual form.
- Independently from the I-270/US 15 Corridor Study, Montgomery County developed 90% design plans for a Watkins Mill Road connection between MD 117 and MD 355, without an I-270 interchange, as designated in the Northern Gaithersburg Area Montgomery County Master Plan. Wetland permit applications were submitted to the Corps of Engineers and MDE, but subsequently lapsed since the County did not pursue the project.
- Montgomery County and the City of Gaithersburg jointly conducted a feasibility study for an I-270 interchange with Watkins Mill Road Extended.
- The interchange was placed on the City of Gaithersburg Master Plan.
- The study was added to the CTP.
- SHA initiated the I-270/Watkins Mill Road Extended study in early 1999 at the request of the City and County.

Study Area Boundary

The study area boundary should be increased slightly to include the following:

- The MD 355/MD 124 intersection.
- The MD 355/Professional Drive intersection.
- Several hundred feet of Watkins Mill Road, east of MD 355.
- The Great Seneca Creek crossing of I-270.

Agency members requested that the boundary for Secondary and Cumulative Effects Analysis include portions of Montgomery Village.

Segmentation

- Paul Wettlaufer acknowledged that the Corps has signed-off on the decision to separate this project from the I-270 Corridor Study; however, he expressed concern that the two studies be carefully coordinated to avoid wasted construction (i.e., C-D roads or ramps that are built for Watkins Mill and need to be removed/relocated later for the corridor improvements). The Watkins Mill study should be performed with worst case mainline scenario.

- Andrew Der's concerns over segmentation will be discussed at the June 16 interagency meeting once he has spoken with Elder Ghigiarelli.

Environmental Overview

Anne Elrays summarized the environmental assessment that has been completed for the project:

- DNR/Fish & Wildlife coordination has been completed, indicating no rare, threatened or endangered species in the Study Area.
- There are no anadramous fish in the Study Area.
- Portions of the Study Area have been taken through the wetland JD process. The remainder of the Study Area will be covered as part the wetland JD to be completed on July 7-9 as part of the I-270/US 15 Corridor Study. Wetland delineations, flagging and functional assessment will be completed prior to this field review.
- Historic resources consist only of one Maryland inventory site--the William Caulfield House.
- Phase I archeology will need to be performed on the west side of I-270 in the Study Area. The east side of I-270 is much more extensively developed, but some Phase I will still be necessary.
- Although all streams are currently considered Use I, Greg Golden stated that Use IV should probably be assumed for Great Seneca Creek and its tributaries since it is a stocked trout stream. The process to officially reclassify the streams will take some time, but is likely underway.

Miscellaneous Issues

- A possible inconsistency was noted in the Purpose and Need Statement's forecast of 6,920 additional residents in the Study Area based on 1,500 new residential units (4.6 persons per household seems high).
- There was inquiry concerning the status of M-83. M-83, the Mid-County Highway, is a planned major highway parallel and to the east of MD 355. It remains in the County Master Plan, but it is not in the CLRP and no work is currently being pursued.
- Several agency members requested that local intersection improvements be included in the scope of alternatives considered, if needed.

- The Purpose and Need should more clearly state what development in the area is directly dependent upon I-270 access enhancements to be built. Glenn Mlaker has previously reported that all proposed development in the area (listed above) can proceed independent of access improvements except for 800,000 SF of commercial space and 650 residences. Perhaps this can be expressed as a percentage of the total planned development (please refer to the revised Purpose and Need Statement).
- Minor changes were proposed to the Draft Concurrence Form for Project Purpose and Need to be distributed at the June 16 Interagency Meeting. Sentences in the Project Needs section should read as follows: "Improved access *to mass transit* is needed..."; and "The planned economic development will overload the existing *local* transportation network."

FOLLOW-UP ITEMS/ADDITIONAL INFORMATION

- Any major changes that agency members believe are needed to the Purpose and Need, Segmentation or Concurrence documents should be faxed to Michelle by June 14th. A 15-day concurrence period will be requested at the Interagency Meeting on June 16th.
- If Purpose and Need issues can be resolved, the July 21 Interagency Meeting will be used to scope preliminary alternates.
- A field review will be held in July to continue the alternates scoping and walk the riparian corridor parallel to I-270.
- In a conversation with Bill Branch (SHA Environmental Programs) held subsequent to the June 11th meeting, it was determined that SHA acquired 1.0 acre of land for the purpose of mitigating the 0.5 acre impact that would have resulted from the County's Watkins Mill Road Extended project. This mitigation site remains available for use with this project.

This summarizes the discussion of topics at the June 11, 1999 Interagency Review Meeting. If you have any questions or comments, please advise Michelle Hoffman, the Project Manager at 410-545-8547, or Anne Elrays, the Environmental Manager, at 410-545-8562. Both of them can be reaced at 1-800-548-5026.

cc: Mr. Neil J. Pedersen
File
Attendees
Project Team

COASTAL RESOURCES INC.

2988 Solomons Island Road
Edgewater, MD 21037
410-956-9000
410-956-0566 (Fax)

MEETING MINUTES

Date: **July 9, 1999**

To: **Anne Elrays**

From: **David Raleigh Smith**

Subject: **I-270 Transitway from Shady Grove Metro Station to Comsat, Watkins Mill Road Interchange, MD 75 Extended**
Project No. FR 192B11

Purpose: **Wetland Jurisdiction Determination**

JD Date: **July 7-8, 1999**

Location: **Metropolitan Grove Station, Montgomery County**

Attendees: **Anne Elrays, MSHA-PPD**
Bill Branch, MSHA-EPD
Melissa Kosenak, MSHA-PPD
Steve Elinsky, USACOE
Joseph DaVia, USACOE
Bill Seiger, MDE
Matt Radcliffe, MDE
George Fleagle, Wilson T. Ballard
David Raleigh Smith, CRI
Bridgette Grillo, CRI

The purpose of the meeting was to conduct a jurisdictional determination (JD) on remaining wetlands associated with the I-270 project. The JD included the proposed Transitway from Shady Grove Metro Station to Comsat, MD 75 Extended, and Watkins Mill Road Extended. Coastal Resources, Inc. identified and flagged seventeen wetlands within the alignment of the Transitway. For the proposed Watkins Mill Road interchange, wetland flagging was extended along two streams that are tributaries of Great Seneca Creek. Portions of these stream systems were flagged within the Transitway alignment and I-270 corridor. The field review was completed in two days.

The attendees met at the Metropolitan Grove Station at 10:00 a.m. on July 6, 1999 and at 9:30 a.m. on July 8, 1999. On both days the group split into two teams. Each team was comprised of one ACOE and one MDE representative, with at least one consultant from CRI. On July 6, 1999, each team had at least one representative from MSHA. A single representative from MSHA was present during the subsequent visit. On the first day, George Fleagle of Wilson T. Ballard addressed questions regarding the design and engineering of the Watkins Mill Road interchange. It was reiterated that the project is in a preliminary design stage. Steve Elinsky of the COE expressed concern that the proposed interchange was located within an area with considerable wetlands of potentially high quality. To obtain an assessment of wetland functions and values, Mr. Elinsky requested that CRI complete the functional

assessment of the Watkins Mill Road interchange wetlands using the EPW method, as has been done for the rest of the I-270 project. However, he would like CRI to supplement this information by also completing an assessment of these wetlands using the New England method. Mr. Elinsky also suggested that an interagency field meeting be held to review the functional assessment results and reach consensus on the value of the Watkins Mill Road interchange wetlands. He indicated that he would take the lead on contacting the U. S. Fish and Wildlife Service, Maryland Department of Natural Resources and other interested agencies and would try to schedule the meeting sometime this summer. CRI agreed to complete the functional assessments by July 31, 1999. The following information summarizes the wetland JD results of both teams for Transitway wetlands 1-17 and Watkins Mill Road wetlands 102, 105, and B63W.

Transitway

For the Transitway wetlands, it was noted that the 17 wetlands were renumbered from the original flagging for convenience. The new wetland numbers correspond to wetland numbers on the flagging as follows: 1 = 100, 2 = 101, 3 = 103, 4 = 104, 5 = 105, 6 = 102, 7 = 106, 8 = 107, 9 = 108, 10 = 109, 11 = 156, 12 = 155, 13 = 154, 14 = 153, 15 = 152, 16 = 151, 17 = 150.

Wetland 1	Accepted as flagged.
Wetland 2	Accepted as flagged.
Wetland 3	Flag 103-2B was moved downslope about 12'. Flags 103-8A to 103-11A were missing. Flags 103-8A and 103-11A were retied and should connect to one another. The remainder of the wetland flags were accepted as flagged.
Wetland 4	Accepted as flagged.
Wetland 5	Wetland 5 is located along a tributary of Great Seneca Creek and was accepted as flagged. The agencies noted that the Transitway alignment crosses this portion of the stream.
Wetland 6	Wetland 6 is part of the same wetland system as Wetland 5 and was accepted as flagged. The agencies noted that the Transitway alignment spans the entire stream valley of Wetland 6 and shifting the alignment would protect the hydrology of this area. The agencies and George Fleagle of Wilson T. Ballard discussed an alternative to the proposed Transitway, which entails moving the alignment north of the stream and into the adjacent uplands. The alternate alignment would extend south to the west side of Wetland B63W and join I-270 south of Browns Station Park. The COE suggested that if a rail line is proposed for the Transitway alignment that it should parallel the Marc Line to avoid Wetlands 6, 102, and B63W.
Wetland 7	Accepted as flagged.

Wetland 8	Flags W8-3A through W8-5A were moved approximately fifteen feet west from their original location along the stream. This area was broadened in order to include a narrow floodplain wetland. The remainder of the wetland flagging was accepted by the agencies.
Wetland 9	Accepted as flagged.
Wetland 10	Accepted as flagged.
Wetland 11	Moved flags 156-18 and 156-19 back to the stream channel, as the floodplain in this vicinity was determined to be dry. It was noted by both MDE and COE that the forested area west of the stream and floodplain was wetland, but is currently outside the proposed Transitway alignment. New flags 156-20 to 156-23 were tied along the west side of the stream. Flag 156-23 should connect to flag 156-0 at the culvert beneath Muddy Branch Road.
Wetland 12	Accepted as flagged.
Wetland 13	Accepted as flagged.
Wetland 14	Retied missing flag 153-1 and added a flag (153-1.5) between 153-1 and 153-2. Moved flags 153-5 and 153-6 down the swale about 25'. The remainder of the wetland was accepted as flagged.
Wetland 15	The COE and MDE classified the downstream portion of the wetland (between flags 152-10 and 152-14) as riverine (waterway) only. The upstream portion includes palustrine forested habitat. The agencies noted that the stream is presently being diverted through twin 18" corrugated plastic pipes for an apparent temporary stream crossing. The original channel on the downstream side was dry between the crossing and the temporary outfall further downstream.
Wetland 16	The riprap stream channel on the downstream side of the culvert was not flagged. This area should be shown on mapping as waters of the U. S. by surveying the top of bank along the stream out to the Transitway study limits. The agencies concurred that the vegetated stream channel on the upstream side of the culvert should be labeled as a waterway only (R2UB).
Wetland 17	Accepted as flagged.

Watkins Mill Road Interchange

Wetland 102	This wetland is an extension of flagging for Wetland 6. This area was verified as flagged. Bill Branch of MSHA suggested protecting this system (both Wetland 6 and Wetland 102) by retaining the forested buffer associated with the stream. All agencies suggested that an alternative for the Transitway should include avoiding this system.
Wetland 105	Wetland 105 is an extension of flagging for Wetland 5. This area was verified as flagged.

Wetland B63W

A jurisdictional determination has previously been performed on the portion of the wetland that extends from the end of the flagging for Wetland 105 until it crosses proposed Watkins Mill Road extended. At this point, the flagging resumes for Wetland B63W and incorporates several vegetated and riverine wetlands. Flags B63W-103 through B63W-105 were moved approximately 25 feet to the edge of the swale due to the lack of hydric soil indicators. The remainder of the wetland flagging for Wetland B63W was accepted as flagged. Bill Branch suggested maintaining the forested riparian buffer that already exists along this system by acquiring an easement that would prevent further development of this area. He also commented that the establishment of this buffer could serve as a riparian corridor between Great Seneca Creek and Brown's Station Park. George Fleagle discussed a bridge that would span Wetland B63W with potential ramps to I-270. Steve Elinsky of the COE suggested that the bridge needs to be high enough to allow clearance for the forested buffer. Bill Branch commented that the pillars for the wetland need to be strategically placed in order to minimize impacts. The COE did not agree with the location of the interchange and would like to see viable alternatives to avoid impacting Wetland B63W. Issues pertaining to the Marc Station were discussed, as the Corps would like to see the Marc Station relocated to Brown Stations Park.

MD 75 Extended

No wetlands were identified within the study area for the MD 75 extended alignment. The COE indicated that if the highway alignment were to shift north in the vicinity of the rubble land fill west of MD 355, MSHA would need to delineate the instream stormwater management pond and stream. These wetlands are presently outside the study area for MD 75 extended.

These minutes are in draft form and are being submitted to MSHA for review and comment.

COASTAL RESOURCES INC.

2988 Solomons Island Road
Edgewater, MD 21037
410-956-9000
410-956-0566 (Fax)

MEETING MINUTES

Date: 11/23/99

To: Attendees

From: David Raleigh Smith

Purpose: Watkins Mill Road Functional Assessment Review

Location: Metropolitan Grove Station, Gaithersburg

Attendees:
Anne Elrays, SHA-PPD
Bill Branch, SHA-EPD
Steve Elinsky, USACOE
Greg Golden, MD DNR
Ray Li, USFWS
Jean Chait, Montgomery County
Eileen Straughan, Straughan Environmental
George Fleagle, Wilson T. Ballard
David Raleigh Smith, CRI
Bridgette Grillo, CRI

The purpose of this meeting was to review the functional assessments performed for the Watkins Mill Road Interchange wetlands with the purpose of reaching interagency consensus on the derived values of these areas. CRI previously completed draft functional assessments of the wetlands using both the Evaluation for Planned Wetlands (EPW) and New England methodologies.

The attendees met at Metropolitan Grove Station at 9:30 a.m. on September 29, 1999. David Smith explained to the group that the Watkins Mill Road alignment spans wetlands that are part of a large riparian system that are broadly similar in plant composition and hydrogeomorphic setting. For this reason the functions for all of the forested wetlands were assessed as a single forested wetland and all emergent wetlands were assessed as a single emergent wetland. When this was carried out using the New England method no differences were observed in the principal functions for emergent or forested wetlands. Therefore, emergent and forested wetlands were combined into a single wetland assessment.

The attendees agreed to first walk the entire Watkins Mill Road alignment in order to familiarize everyone with this wetland system and then regroup to review the functional assessments. The group started at the northern end of the alignment, just south of the Pepco overhead transmission right-of-way. Greg Golden of MD DNR asked about an apparent cleared area along the waterway

that was evident on an aerial photograph taken from the early 1990s. George Fleagle explained that there was both a water and sewer line that parallels the stream corridor and crosses the main stem within the proposed Watkins Mill Road Interchange. The utility alignment has not been maintained recently, as evidenced by 20-foot-tall saplings growing within the formerly cleared area.

The initial discussion centered on the proposed interchange alignment with respect to the existing wetland and waterway boundaries. George Fleagle, of Wilson T. Ballard, explained that the proposed southbound ramp to Watkins Mill Road crosses the intermittent stream (Transitway Wetland 102) that drains east to the main stem from the vicinity of the Metropolitan Grove Marc Station. The ramp would continue through the uplands west of the wetland system. Bill Branch stated that a 50-75' buffer should be maintained from the ramp's limit of disturbance to the wetland in order to minimize right of way requirements. George Fleagle also discussed the relocation of 600 feet of the main stem (wetland B63W) as part of alternates considering a collector-distributor road adjacent to southbound I-270.

As the group reached the largest portion of the forested wetland (B63W), several concerns about protecting this area were expressed. George Fleagle explained that the Watkins Mill Road Extended bridge would be 600' in length and would span the extensive forested wetland associated with wetland B63W. Steve Elinsky of USACOE proposed moving the bridge south over the incised portion of the wetland in an attempt to reduce the impacts to this system.

The field assessment ended at a small forested wetland swale located south of the larger system, and included an intermittent, riprap-lined stream that drains a stormwater management pond east of I-270. The attendees decided that it was not necessary to walk the rest of the alignment, as the wetlands are very similar in vegetation composition and hydrogeomorphic setting. In the original wetland delineation of the Watkins Mill Road alignment, a much larger study area was assumed. However, after reviewing the plans presented by George Fleagle it became apparent that the southern portion of the wetland system is located outside of the limits of disturbance for the preliminary alternates. This modification does not discount any of the functional assessments associated with the system because the planning process is still ongoing.

After viewing the wetlands within the proposed Watkins Mill alignment, the group reviewed the proposed alignment alternatives presented by George Fleagle. Following this discussion, the group reviewed the draft functional assessments completed by CRI. Steve Elinsky commented that the overall score seemed low for the wildlife functions involved in the EPW method. The group reevaluated each question and altered a few of the individual scores associated with this function. The results were only slightly higher than the initial overall score assigned to this function. While the EPW assessment for the wildlife function only ranked an intermediate score, the team agreed that wildlife habitat was a principal function of the site. David Smith explained that the EPW method acts as a guideline during the mitigation process, during which the wildlife function for the planned wetland can be increased by adding certain wildlife attractors to the design of a wetland.

Mr. Elinsky was concerned that neither groundwater recharge/discharge and floodflow alteration were included as principal functions using the New England method. He commented that groundwater is the main source of hydrology for the Watkins Mill wetland system. During the

field review, signs of groundwater discharge were present and were providing a base flow to the perennial and intermittent streams within the system. The group agreed that these reasons support the need to make groundwater discharge/recharge a principal function. The floodflow alteration function was also determined to be a principal function because the forested riparian buffer associated with the stream slows the flow velocities during flooding, therefore, reducing flood damage. Recently deposited drift lines and debris within the riparian zone of the stream were observed during the field review.

Greg Golden felt that nutrient removal is a function being provided by the wetland system, and was concerned that it did not show up as occurring using the New England method. The list of qualifiers for this function were reviewed and a few were added. The additional qualifiers increased the total so that at least half of the qualifiers were observed, making nutrient removal an occurrence within the wetland.

The group also wanted to review the uniqueness/heritage function in both the EPW and New England methods. Furthermore, this area should not be considered parkland when evaluating the uniqueness/heritage function. The New England method assesses the function based on the effectiveness of the wetland to provide habitat for various types of animals typically associated with wetlands, not whether the area is a designated park. In comparison, the EPW method considers the rarity of the wetland and any other unique features. Using EPW, most of the elements were not applicable to the site, however, the element that relates to a wetland's connection to wild and scenic rivers does apply. The Watkins Mill wetland system drains to the Montgomery County portion of the Potomac River, which is a State-designated scenic river. Therefore, the uniqueness/heritage function still applies.

CRI agreed to make the necessary changes to the functional assessment data sheets and insert them into the wetland delineation report being prepared. If there are any changes or corrections to these minutes please submit them me as soon as possible. A final copy will be distributed once all the edits are made.

cc: Attendees

THE WILSON T. BALLARD COMPANY

TELEPHONE MEMORANDUM

PROJECT:	I-270@WATKINS MILL ROAD EXTENDED	**DATE:**	MARCH 30, 2000
FILE NO.:	0100-225.06	**TIME:**	2:25
CALL TO:	PAT HEAPHY (Seneca Creek State Park Manager)		
CALL FROM:	GEORGE FLEAGLE		
TELEPHONE NO.:	1-301-924-2127		

SUBJECT: IMPACTS TO SENECA CREEK STATE PARK

As per a request from Anne Elrays, Pat Heaphy was contacted to discuss the impacts to Seneca Creek State Park resulting from the Alternates Retained for Detailed Study (ARDS).

The mapping provided in the ARDS Package concentrated on the Watkins Mill Road interchange area and did not show the area just north of Seneca Creek where the Park is located. I described the proposed improvements and resulting impacts to the Park for each of the ARDS. Pat understood the impacts to the Park resulting from the ARDS.

Pat informed us that the Seneca Creek State Park extended form the Potomac River to MD 355, a distance of approximately 15 miles and encompassed over 6200 acres. North of MD 355 it is Great Seneca Park and run by the Maryland-National Capital Park and Planning Commission. WTB will update our mapping to show "Seneca Creek State Park" south of MD 355 and "Great Seneca Park" north of MD 355.

By *George Fleagle*

cc: Ms. Hoffman
Ms. Elrays

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

October 5, 1999

Re: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Mr. Nelson J. Castellanos
Division Administrator
Federal Highway Administration
711 West 40 Street
The Rotunda-Suite 220
Baltimore MD 21211

Attention: Ms. Pamela Stephenson

Dear Mr. Castellanos:

The State Highway Administration (SHA) is writing to request your concurrence with a determination of the non-applicability of Section 4(f) of the US DOT Act of 1966 (49 U.S.C. Section 303), regarding property located within the I-270/Watkins Mill Road Extended project area known as Brown Station or Metropolitan Grove Park.

SHA is currently conducting a Project Planning study at I-270 and Watkins Mill Road Extended to provide improved access to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas. An Alternates Public Workshop has been scheduled for November 23, 1999.

Recent correspondence (attached) with representatives of the City of Gaithersburg, the agency with jurisdiction over the property, indicates that while the property is designated for public use, it is not currently being used as parkland or for recreational purposes and is not intended or proposed to be used as parkland or for recreational purposes in the foreseeable future. Also attached is a Zoning and Master Plan map of the area.

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

In accordance with the Federal Highway Administration guidance on the applicability of Section 4(f), we request your concurrence on the signature line below, that the Brown Station or Metropolitan Park is not subject to the requirements of Section 4(f) of the US DOT Act of 1966.

Very truly yours,

Parker F. Williams
Administrator

by: Cynthia D. Simpson for
Neil J. Pedersen, Director
Office of Planning and
Preliminary Engineering

Concurrence:

Pamela J. Stephenson for
Federal Highway Administration
Division Administrator

April 26, 2000
Date

NJP:AE:lc

Attachments

cc: Ms. Anne Elrays
Ms. Michelle Hoffman
Mr. Joseph Kresslein
Ms. Gay Olsen
Ms. Melinda Peters
Ms. Cynthia Simpson
Ms. Pamela Stephenson

THE WILSON T. BALLARD COMPANY
17 GWYNNS MILL COURT
OWINGS MILLS, MARYLAND 21117

OFFICE MEMORANDUM

DATE TYPED: June 12, 2000

PROJECT: I-270 at Watkins Mill Road Extended

FILE: 100-225.01

SUBJECT: Meeting held on June 8, 2000 at M-NCPPC, Silver Spring, Maryland

PRESENT:

Mr. Ki Kim	M-NCPPC, Transportation
Ms. Jean Chait	Montgomery County, DPWT/OPD
Ms. Seekey Cacciatore	M-NCPPC
Ms. Nellie Maskal	M-NCPPC
Mr. Eric Soter	City of Gaithersburg
Mr. Mark Lotz	The Wilson T. Ballard Company
Mr. Jerry Karczeski	The Wilson T. Ballard Company

The purpose of the meeting was to obtain information concerning environmental resources, land use and development issues related to the project's secondary and cumulative effects analysis (SCEA). After a brief description of the project's SCEA boundary, time frame, SCEA resources and the Alternates Retained for Detailed Study (ARDS), a discussion followed which is summarized below:

- Ms. Cacciatore offered to produce mapping showing parklands and information regarding recent development in the SCEA boundary, including development in the pipeline. She requested a digital file of the SCEA boundary in Arcview format referenced to the 1983 Maryland State Coordinate System. The Wilson T. Ballard Company will provide the required digital file of the SCEA boundary.
- Mr. Soter requested a digital copy of the SCEA boundary in Arcview format.
- Ms. Maskal offered to provide information in the form of a summary description of the developments (name, type of development-residential or commercial, size, square footages, etc.) that are referenced in the aforementioned Arcview mapping. Additional environmental information for a particular development will be made available at M-NCPPC by requesting the development's file.
- M-NCPPC has a website, M-NCPPC.org, which contains population projections and other types of information that could possibly be useful in performing the project's SCEA.
- Mr. Soter offered to provide a copy of the summary of environmental impacts for the proposed development of the IBM property based on the preliminary plans submission.

- Two M-NCPPC manuals, Environmental Guidelines (January, 2000) and Trees-Approved Technical Manual (September, 1992), were provided to The Wilson T. Ballard Company through Mr. Kim. The manuals provide information on the environmental management of development and the forest conservation program in Montgomery County, respectively.
- Ms. Chait stated that the Department of Permitting Services at Montgomery County Department of Public Works could provide information on the number of stream crossing permits issued. The contact person for this information is Mr. Daryl Porterfield (240-777-6351).
- Ms. Maskal agreed that the land use plans contained in the master plans for the SCEA area would provide a good representation of 2020 land use within the SCEA boundary.
- Mr. Soter offered to provide information, possibly a write-up, indicating what development could occur with the No-Build Alternate, what development is dependent on Alternate 6 which would provide Watkins Mill Road Extended over I-270 without interstate access, and what development is dependent on the construction of Watkins Mill Road Extended with an interchange at I-270 as provided in Alternates 2, 3 and 4. (It was agreed that the type of interchange or Access Option A, B, or C would not have a major influence on secondary development since the main factor to consider is whether or not there would be an interchange at I-270.)
- Ms. Cacciatore provided the name of a contact person at the U.S. Army Corps of Engineers, Ms. Marion Gall (410-962-5682), who could provide information about wetland permits issued.
- Mr. Kim stated that the portion of the Germantown and Vicinity planning area that is included within the SCEA boundary contains land that is either developed or approved for development and therefore, the development in this area is not dependent on the ARDS.

By Jerry Korczeski/MDL

GEK/kld
cc: Attendees
Ms. Michelle Hoffman, SHA Project Planning Division
Ms. Anne Elrays, SHA Project Planning Division
File

B. NEPA/404 CORRESPONDENCE

PURPOSE AND NEED CONCURRENCE

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 28, 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Mr. Nelson J. Catellanos
Division Administrator
Federal Highway Administration
The Rotunda-Suite 220
711 West 40th Street
Baltimore MD 21211

Attn: Ms. Pamela Stephenson

Dear Mr. Castellanos:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and the summary statement for your concurrence.

Please provide your concurrence on the Purpose and Need summary statement by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Sincerely,

Parker F. Williams
Administrator

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

My telephone number is 1-888-204-4828

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

Definition of Concurrence:
"Written determination by the agency that information to date is adequate and the agency agrees that the process can be advanced to the next stage. Agencies agree not to revisit the previous process steps unless conditions change."

Project Description:
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Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented ✓ Concur with Comments _____ Do Not Concur _____

Comments / Reasons for Non-Concurrence: _____

Additional Information Needed: _____

Signature: Pamela S. Stephenson Agency: Federal Highway Administration Date: 7/8/99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25, 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Mr. Richard Spencer
U.S. Army Corps of Engineers
CENAB-OP-RX
P.O. Box 1715
Baltimore MD 21201

Attention: Mr. Steve Elinsky

Dear Mr. Spencer:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement for concurrence.

Please provide your concurrence on the Purpose and Need summary statement by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: _____
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

Definition of Concurrence:
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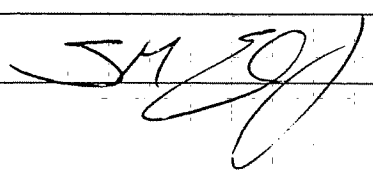
Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented ✓ Concur with Comments _____ Do Not Concur _____

Comments / Reasons for Non-Concurrence: _____

Additional Information Needed: _____

Signature:  Agency: USACE Date: 7.8.99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Ms. Denise Rigney
NEPA Compliance Section
Environmental Protection Agency
Region III - 3ES30
1650 Arch Street
Philadelphia PA 19103-2029

Dear Ms. Rigney:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement for concurrence.

Please provide your concurrence on the Purpose and Need summary statement by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: _____
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

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Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented_____ Concur with Comments_____ Do Not Concur_____

Comments / Reasons for Non-Concurrence:
We also concur with logical termini and independent utility of this project

Additional Information Needed:

Signature: Jamie C. Stark Agency: EPA Date: 7/13/99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Mr. Robert Zepp
U.S. Department of the Interior
Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis MD 21401

Attn: Mr. David Sutherland

Dear Mr. Zepp:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement for concurrence.

Please provide your concurrence on the Purpose and Need summary statement by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

July 15, 1999

Ms. Cynthia Simpson
Deputy Director
Maryland State Highway Administration
Office of Planning and Preliminary Engineering
707 North Calvert St.
Baltimore, MD 21203-0717

Attn: Ms. Gay L. Olsen

Re: I-270 at Watkins Mill Road Extended

Dear Ms. Simpson:

The U.S. Fish and Wildlife Service (Service) has reviewed the draft: "Purpose and Need Statement for the I-270 at Watkins Mill Road Extended" dated May 28, 1999, and we are providing concurrence (enclosed). The proposed Watkins Mill Road Extended is located on the northern limits of the City of Gaithersburg. The alignment has been identified between MD 355 and MD 117, and runs approximately 1600 feet south of and parallel with the PEPCO power lines located on the southern periphery of Seneca Creek State Park. We would like to take this opportunity to provide early comments on impacts to fish and wildlife resources resulting from the proposed Watkins Mill Road Extended project. Impacts identified by the Service within this report have been categorized as *primary*, *secondary*, and *cumulative effects*.

Due to the region's close proximity and easy access to Washington D.C., the project area is highly urbanized. With the exception of lands protected in public parks (Seneca Creek State Park and Brown's Station Park), limited fish and wildlife habitats remain in the area. The proposed project is anticipated to result in impacts to numerous streams, wetlands, and forested uplands within the Great Seneca Creek watershed.

Primary Effects

The identified alignment will directly impact several streams and wetlands within the Great Seneca Creek (Use IV) watershed. Specifically, Watkins Mill Road Extended is anticipated to

cross two streams and disturb several wetland systems.

Located immediately west of I-270, an unnamed tributary of the Great Seneca Creek watershed will be impacted by the I-270/Watkins Mill Road interchange. Further west, an unnamed tributary of Great Seneca Creek will be crossed by Watkins Mill Road extended. These stream crossings could possibly result in barriers to fish passage and accelerated rates of erosion to banks and streambeds.

Impacts to area wetlands are also anticipated. Palustrine forested and scrub-shrub wetlands have been identified adjacent to the unnamed tributary along I-270. Disturbances to these wetlands such as crossings and fill, would destroy many of the functions associated with these critical landscapes including wildlife habitat, groundwater recharge and water quality enhancement. Disturbances to these wetlands are also expected to increase the severity of peak discharge and further augment the erosion of instream habitats.

To avoid these impacts, the Service recommends reducing stream and wetland crossings. Minimizing the footprint of Watkins Mill Road Extended may be accomplished through limitations of lane widths, and eliminating shoulders and medians. The Service also recommends shifting the I-270/Watkins Mill Road interchange 250 feet north, thereby reducing road-crossings over jurisdictional wetlands. To maintain these system's hydrological integrity, the Service encourages the use of expanded bridges and overpasses to protect wetlands and floodplains.

Secondary Effects

The conversion of forested upland habitats to impervious roadway surfaces resulting from the Watkins Mill Road Extended project will further increase the severity of peak discharge. The increased roadway cover will affect rates of infiltration, percolation, interception, evaporation and transpiration, and result in elevated levels of surface runoff during storm events.

Other concerns of the Service include losses of riparian cover. The benefits of riparian cover to wildlife resources have been well documented. Riparian areas buffer many of the pollutants entering waters, including sediments and roadway contaminants. Riparian vegetation also act to moderate water temperature, provide cover, and is a source of organic detrital matter and woody debris.

To avoid these impacts, the Service recommends the construction of a storm water management pond in uplands located within the stream's watershed. The design of the pond should specifically address the increased severity of peak discharges and act to filter sediments and contaminants from the waters. A forested buffer should be developed around the pond to compensate for upland habitats impacted by Watkins Mill Road Extended.

Cumulative Effects

Limited development currently exists within Casey Tracts West and East. However, Watkins Mill Road Extended will facilitate a projected 2.3 million square feet of office/research space and 1,500 residential units. This conversion of forested uplands to impervious surfaces (rooftops, parking facilities, access roads, walkways) will eliminate the tract's remaining terrestrial habitats and significantly impact area streams and wetland resources.

Due to its down-gradient location and sources of hydrology, Great Seneca Creek will also exhibit increased rates of erosion and sedimentation. Increases in impervious cover, and disturbances to wetlands and streams located in the watershed will cumulatively increase peak flows and sediment transport. Particularly, increases in peak flows are expected to result in the erosion of creek banks and beds and generate elevated levels of sedimentation.

The designated alignment of the proposed Corridor Cities Transitway (CCT) is also anticipated to affect area resources. The CCT in conjunction with Watkins Mill Road extended has been identified as critical to the economic development of northern Gaithersburg. However, the designated alignment of the CCT would tale Seneca Creek Park lands for highway construction. Located within the identified right-of-way is the mainstem of Great Seneca Creek and associated wetlands and floodplains; consequently, the development of the CCT could severely degrade aquatic and terrestrial habitats within the park.

Due to the highly urban environment and limited wildlife habitats remaining in the study area, the Service considers these impacts to be significant. We hope these impacts will be reduced as we develop alternatives in the next plan of this project. If you have any questions regarding our comments please contact Raymond Li of my staff at (410)573-4531.

Sincerely,

John P. Wolflin
Supervisor
Chesapeake Bay Field Office

Enclosure

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

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Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented ✓ Concur with Comments _____ Do Not Concur _____

Comments / Reasons for Non-Concurrence: _____

Additional Information Needed: _____

Signature: R. L. Hough Agency: USFWS Date: 7-15-99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

July 23, 1999

Re: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County MD

Mr. John P. Wolflin
United States Department of the Interior
Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis MD 21401

Dear Mr. Wolflin:

The Maryland State Highway Administration (SHA) has received the Fish and Wildlife Service's concurrence with comments on the revisions to the Purpose and Need Statement for the I-270 at Watkins Mill Road Extended Project Planning Study, dated May 28, 1999. I would like to respond to the comments attached to your concurrence letter.

The SHA is aware of the sensitive nature of environmental resources of the Watkins Mill Road Extended study area and will seek to minimize potential impacts to streams, wetlands, and forested uplands within the Great Seneca Creek Watershed early in the Project Planning process. Measures we will investigate to reduce environmental impacts include spanning the wetlands with longer bridges and overpasses, as well as shifts in the alignment and footprint, as suggested by you and your staff. By utilizing bridge structures for crossings of sensitive areas, many of the concerns associated with wetland disturbance, such as crossing and fill, will be minimized. In addition, the use of structures should minimize the loss of riparian cover as well as reduce increases in the peak discharge.

During the design stage of this project, the SHA will evaluate the implementation of sediment traps and stormwater retention basins for any build alternative selected. Through the use of sediment traps during construction, the amount of sediment discharged into surrounding waters can be controlled so as to minimize effects to fish passages as well as to minimize induced sediment agradation or degradation. Following construction, sediment traps can be converted into stormwater retention basins in order to reduce the impacts of a new roadway to the surrounding waters. Due to increased roadway cover, affects to rates of infiltration, percolation, interception, evaporation, transpiration and elevated levels of surface water are inevitable during a storm event, however, stormwater retention basins prove effective in minimizing such impacts. It will be necessary to complete more detailed engineering studies

My telephone number is _____

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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

before locations for sediment traps and stormwater retention basins can be determined for optimum effectiveness.

The SHA is studying the crossing of Watkins Mill Road Extended in the location stipulated by the Montgomery County and City of Gaithersburg Master Plans. Your recommendation for a 250 foot northern shift in the alignment will be explored through the alternates scoping to determine its engineering viability. Approximately 2.3 million square feet of new office/research space and 1,500 residential units are also part of the City's Master Plan. Please note that this development will occur independent of the extension of Watkins Mill Road since the city approval is based on the Master Plan infrastructure. In addition, the Corridor Cities Transitway (CCT) Study, which is on both the Montgomery County and City of Gaithersburg Master Plans is a separate study being undertaken by the SHA and MTA. We will consider the transit alignment concerns in the I-270/US 15 Multi-Modal Corridor Study.

Please feel free to call Michelle Hoffman, the project manager, at 410-545-8547 or Anne Elrays, the environmental manager, at 410-545-8562 if you should have any questions. Both Ms. Hoffman and Ms. Elrays can also be reached toll-free within Maryland at 1-800-548-5026.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph Kresslein
Assistant Division Chief
Project Planning Division

cc:

Ms. Elizabeth Cole, Maryland Historic Trust
Mr. Andrew Der, Maryland Department of the Environment
Mr. Steve Elinsky, US Army Corps of Engineers
Ms. Anne Elrays, Maryland State Highway Administration
Mr. Joe Finkle, Maryland State Highway Administration
Mr. Elder Ghigiarelli, Maryland Department of the Environment
Mr. Greg Golden, Maryland Department of Natural Resources
Ms. Michelle Hoffman, Maryland State Highway Administration
Ms. Susie Jacobs, Maryland State Highway Administration

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25, 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Mr. John W. Howard
Superintendent
National Park Service
Antietam & Monocacy National Battlefields
P.O. Box 158
Sharpsburg MD 21782

Dear Mr. Howard:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your comments on the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement.

Please provide your comments on the Purpose and Need by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

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CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

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Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented X Concur with Comments _____ Do Not Concur _____

Comments / Reasons for Non-Concurrence: none

Additional Information Needed: none

Signature: J. W. Howard (J.W. Howard) Agency: Antietam/Monocacy National Battlefield Date: 7/1/99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25, 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Mr. Ray Dintaman, Director
Environmental Review Unit
Maryland Department of Natural Resources
Tawes State Office Building, B-3
Annapolis MD 21401

Dear Mr. Dintaman:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your comments on the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement.

Please provide your comments on the Purpose and Need by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

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Parris N. Glendening
Governor

Kathleen Kennedy Townsend
Lt. Governor

Maryland Department of Natural Resources
ENVIRONMENTAL REVIEW
Tawes State Office Building
Annapolis, Maryland 21401

John R. Griffin
Secretary

Stanley K. Arthur
Deputy Secretary

July 15, 1999

Gay Olsen
Project Planning Division
Maryland Department of Transportation
State Highway Administration
P.O. Box 717
Baltimore, Maryland 21203-0717

Dear Ms. Olsen:

This letter is in reply to Joseph Kresslein's letter of request, dated June 25, 1999, for Maryland Department of Natural Resources (DNR) comments on the Purpose and Need Statement for Project No. MO839A11, I-270 at Watkins Mill Road Extended, Montgomery County; PDMS No. 151170.

The Department has been participating in discussions of this project at the monthly Interagency Meetings and at the field meeting. Following the recent discussion of certain items within the Statement and minor changes made as a result of these discussions, we have no comments on the Purpose and Need Statement. In the upcoming review phases, we will advocate optimized protection of the natural resources located in the vicinity of the project study area.

If you have any questions concerning these comments, you may contact Greg Golden of my staff at 410-260-8334.

Sincerely,

Ray C. Dintaman Jr.

Ray C. Dintaman, Jr., Director
Environmental Review Unit

Telephone: (410) 260-8330
DNR TTY for the Deaf: (410) 260-8835
Toll Free #: 1-877-620-8DNR

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

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Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented ✓ Concur with Comments _____ Do Not Concur _____

Comments / Reasons for Non-Concurrence: _____

Additional Information Needed: _____

Signature: Ray C. Dintamon, Jr. Agency: Department of Natural Resources Date: 7-15-99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25, 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Mr. Elder Ghigiarelli
Maryland Department of the Environment
Water Management Administration
Non-Tidal Wetlands and Waterways Division
2500 Broening Highway
Baltimore MD 21401

Dear Mr. Ghigiarelli:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your comments on the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement.

Please provide your comments on the Purpose and Need by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

Definition of Concurrence:
"Written determination by the agency that information to date is adequate and the agency agrees that the process can be advanced to the next stage. Agencies agree not to revisit the previous process steps unless conditions change."

Project Description:
The project involves a study of transportation access and mobility improvements to I-270 in the vicinity of the locally proposed extension of Watkins Mill Road.

Project Purpose Statement:
The purpose of the project is to provide improved access (vehicular, pedestrian, bicycle, and transit) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use.

Project Needs:

- Office/research, commercial, and residential development is planned for the northern portion of the City of Gaithersburg within the designated Priority Funding Area (PFA). Achieving the maximum zoning levels of this area is not possible without improvements to the transportation network. Approximately 6% of the office/research development and 43% of the residential development will not occur without these transportation improvements. Therefore, the approved development (94% of the office/research development and 57% of the residential development) further defines the need to address mobility and access within the existing transportation system to the planned economic development.
- The current Metropolitan Grove MARC Station is underutilized since there is poor access to the station from the interstate and arterial roadways surrounding the station. The provision of improved access or relocation is necessary to achieve optimum utilization of the mass transit system to accommodate the planned economic development area.
- In 1997, I-270 in the study area experienced failing levels of service in the peak hours at the I-270/MD 124 interchange. Full development as proposed by the City of Gaithersburg and the Montgomery County governments would overload the existing local transportation network.

Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented ✓ Concur with Comments _____ Do Not Concur _____

Comments / Reasons for Non-Concurrence: _____

Additional Information Needed: _____

Signature: Elder A. Ghigiarelli Jr. Agency: MDE Date: 7/9/99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25, 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Mr. J. Rodney Little
Office of Preservation Services
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your comments on the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement.

Please provide your comments on the Purpose and Need by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

Definition of Concurrence:
"Written determination by the agency that information to date is adequate and the agency agrees that the process can be advanced to the next stage. Agencies agree not to revisit the previous process steps unless conditions change."

Project Description:
The project involves a study of transportation access and mobility improvements to I-270 in the vicinity of the locally proposed extension of Watkins Mill Road.

Project Purpose Statement:
The purpose of the project is to provide improved access (vehicular, pedestrian, bicycle, and transit) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use.

Project Needs:

- Office/research, commercial, and residential development is planned for the northern portion of the City of Gaithersburg within the designated Priority Funding Area (PFA). Achieving the maximum zoning levels of this area is not possible without improvements to the transportation network. Approximately 6% of the office/research development and 43% of the residential development will not occur without these transportation improvements. Therefore, the approved development (94% of the office/research development and 57% of the residential development) further defines the need to address mobility and access within the existing transportation system to the planned economic development.
- The current Metropolitan Grove MARC Station is underutilized since there is poor access to the station from the interstate and arterial roadways surrounding the station. The provision of improved access or relocation is necessary to achieve optimum utilization of the mass transit system to accommodate the planned economic development area.
- In 1997, I-270 in the study area experienced failing levels of service in the peak hours at the I-270/MD 124 interchange. Full development as proposed by the City of Gaithersburg and the Montgomery County governments would overload the existing local transportation network.

Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

Concur as Presented_____ Concur with Comments_____ Do Not Concur_____ No objection X

Comments / Reasons for Non-Concurrence: _____

Additional Information Needed: _____

Signature: Ephraim J. Cole Agency: MHT Date: 7/9/99

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 25, 1999

RE: Project No. MO839A11
I-270 at Watkins Mill Road Extended
Montgomery County, MD
PDMS No. 151170

Ms. Christine Wells
Principal Planner
Maryland Office of Planning
PAND
301 West Preston Street
Baltimore MD 21201

Attn: Ms. Bihui Xu

Dear Ms. Wells:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Purpose and Need for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Purpose and Need informational package and summary statement for concurrence.

Please provide your concurrence on the Purpose and Need summary statement by July 12, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph Kresslein at 410-545-8550.

Very truly yours,

Louis H. Ege, Jr.
Deputy Director
Office of Planning and
Preliminary Engineering

By: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

CONCURRENCE FORM FOR PROJECT PURPOSE AND NEED

I-270 at Watkins Mill Road Extended Project Planning Study
City of Gaithersburg, Montgomery County
June 16, 1999

Definition of Concurrence:
"Written determination by the agency that information to date is adequate and the agency agrees that the process can be advanced to the next stage. Agencies agree not to revisit the previous process steps unless conditions change."

Project Description:
The project involves a study of transportation access and mobility improvements to I-270 in the vicinity of the locally proposed extension of Watkins Mill Road.

Project Purpose Statement:
The purpose of the project is to provide improved access (vehicular, pedestrian, bicycle, and transit) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use.

Project Needs:

- Office/research, commercial, and residential development is planned for the northern portion of the City of Gaithersburg within the designated Priority Funding Area (PFA). Achieving the maximum zoning levels of this area is not possible without improvements to the transportation network. Approximately 6% of the office/research development and 43% of the residential development will not occur without these transportation improvements. Therefore, the approved development (94% of the office/research development and 57% of the residential development) further defines the need to address mobility and access within the existing transportation system to the planned economic development.
- The current Metropolitan Grove MARC Station is underutilized since there is poor access to the station from the interstate and arterial roadways surrounding the station. The provision of improved access or relocation is necessary to achieve optimum utilization of the mass transit system to accommodate the planned economic development area.
- In 1997, I-270 in the study area experienced failing levels of service in the peak hours at the I-270/MD 124 interchange. Full development as proposed by the City of Gaithersburg and the Montgomery County governments would overload the existing local transportation network.

Request for Concurrence:
Having discussed the project purpose and needs presented above, the following agencies, by their signature to this document, signify concurrence with the I-270 at Watkins Mill Road Extended Project Planning Study Purpose and Need.

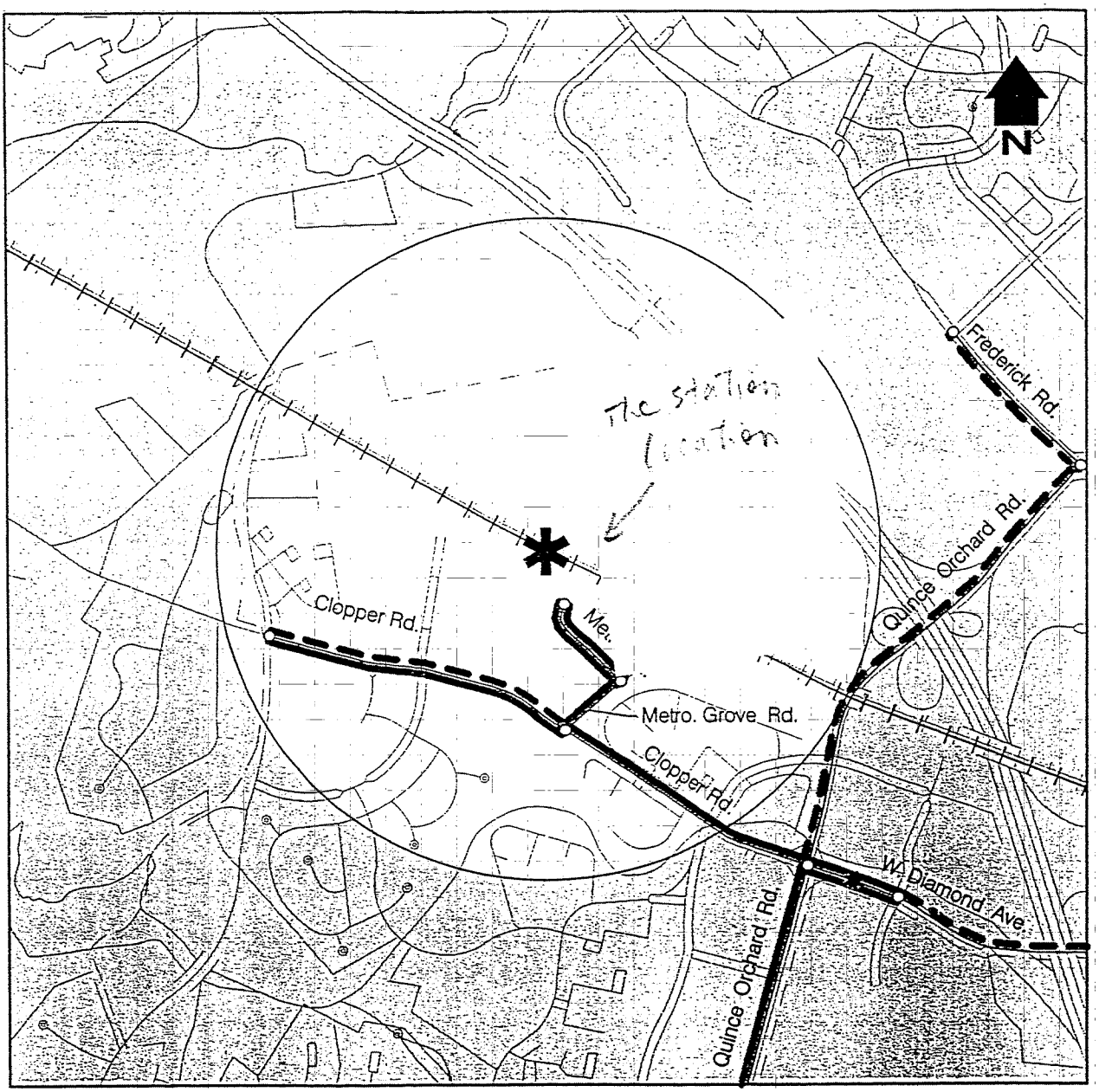
Concur as Presented_____ Concur with Comments ✓ Do Not Concur_____

Comments / ~~Reasons for Non-Concurrence~~: The correct location for the Metropolitan Grove MARC station must be shown on each figure in the Purpose + Need Information package.

Additional Information Needed:_____

Signature: Christine A Wells Agency: MD Office of Planning Date: 7/8/99

Metropolitan Grove Station
MARC Brunswick Line
Pedestrian Access Routes



0.6 Mile Radius

LEGEND	
✱	Rail Station
✲	Adjacent Rail Station
———	Inventory Route
○	Route Segment End Points
+++	Rail Transit Line
✸	Pedestrian Accidents
———	Sidewalk
– – –	Partial Sidewalk

0 750 1500 3000

Scale: 1" = 1500'

Base map source: MD State Highway Administration, Grid Map Series.

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

July 20, 1999

RE: I-270 @ Watkins Mill Road Extended

Ms. Christine Wells
Principal Planner
Maryland Office of Planning
301 W. Preston Street, Suite 1101
Baltimore MD 21201

Dear Ms. Wells:

Thank you for your coordination on the Maryland State Highway Administration (SHA) project planning study to improve access and mobility at I-270 and Watkins Mill Road Extended in Montgomery County, Maryland. As you know, this project is the SHA pilot project for environmental streamlining under the Transportation Equity Act for the 21st Century (TEA-21). The concurrence/summary sheet was one such strategy to investigate environmental streamlining for the development of this project.

I have received your signed concurrence form and thank you for a timely response with your concurrence and comments. In response to your comment, the SHA will update all of the figures drafted to date for the Purpose and Need Statement to reflect the correct location of the Metropolitan Grove MARC Station. These figures will be included in the environmental document.

The development of this project planning study includes an Alternates Public Workshop this Fall/Winter (1999/2000) and a Public Hearing tentatively scheduled for the Fall of 2000. The conclusion of this study is anticipated by the Winter/Spring of 2001, with the recommendation of a selected alternate and Location and Design approvals.

Thank you again for your coordination. If you have any questions, please feel free to call Michelle Hoffman, the project manager, at 410-545-8547 or Anne Elrays, the environmental manager, at 410-545-8562. Both Michelle and Anne can be reached at 1-800-548-5026.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By: Michelle D. Hoffman

Michelle D. Hoffman
Project Manager
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
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Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717

ALTERNATES RETAINED FOR DETAILED STUDY
CONCURRENCE

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 3, 2000

Re: Contract Number MO839B11
I-270 at Watkins Mill Road Extended
Alternates Retained for Detailed Study

Mr. Nelson J. Castellanos
Division Administrator
Federal Highway Administration
The Rotunda - Suite 220
711 West 40th Street
Baltimore MD 21211

Attn: Ms. Pamela Stephenson

Dear Mr. Castellanos:

This letter serves to address comments contained in your e-mail message dated January 18, 2000 to Ms. Michelle Hoffman regarding the Alternates Retained for Detailed Study (ARDS) package for the referenced project. Your comments were in reference to Alternate 4 and Alternate 6.

Alternate 4

The reasons for recommending that Alternate 4 not be retained for detailed study are primarily traffic-related, which calls into question whether this alternate can adequately address the purpose and need for this project of improving accessibility in northern Gaithersburg. Since this alternate is currently the only alternate, besides the No-Build (Alternate 1) and the Baseline (Alternate 6) Alternates, that provides avoidance of impacts to Section 4(f) resources (Great Seneca Park), we will carry this alternate forward for a more detailed analysis. In addition, I would like to provide the following traffic evaluations to better clarify why SHA has concerns with Alternate 4 addressing the project's purpose and need.

Traffic projections and analysis performed subsequent to initial drafts of the ARDS package reveal the following, as presented at the January 19, 2000 Interagency Meeting:

- Each of the ramps to be eliminated under Alternate 4 would carry 1,075 vehicles per hour (vph) during the AM Peak Period in 2020, were they provided. Most, if not all, of this traffic would divert to the I-270 interchanges with MD 124 and MD 117, thereby increasing congestion on MD 124, MD 117, and MD 355, which are projected to have failing level of service conditions in 2020. Specific traffic volume increases in the design year of 2020 with

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the partial access ramps (only to and from the north), as compared to alternates providing a full range of movements, are as follows:

1. The volume on the northbound I-270 ramp onto MD 124 would increase from 750 vph to 1,025 vph in the AM Peak Period and from 1,775 vph to 2,400 vph in the PM Peak Period.
2. The volume on the westbound MD 124 ramp connecting to southbound I-270 would increase from 1,150 vph to 1,775 vph in the AM Peak Period and from 825 vph to 1,150 vph in the PM Peak Period.
3. The volume on the eastbound MD 117 ramp to southbound I-270 would increase from 2,625 vph to 3,075 vph in the AM Peak Period and from 1,400 vph to 1,625 vph in the PM Peak Period.
4. Average Daily Traffic (ADT) volumes on MD 124 would increase by approximately 10% east of I-270 and 20% west of I-270.
5. ADT volumes on MD 117 would increase by 25% between MD 124 and I-270.
6. ADT volumes on MD 355 would increase by 14% north of MD 124.

- As you can see, Alternate 4 will cause significant increases in vehicles per hour on the surrounding intersections and interchanges. This is largely due to the lack of full movements provided by Alternate 4.

- Travel times could be significantly longer for motorists in the study area with Alternate 4, as compared to the full interchange alternates. For example, a motorist on northbound I-270 desiring to go to the planned development area on the east side of I-270 at Watkins Mill Road would need to travel 1.2 miles through heavy congestion at the I-270/MD 124 interchange and on MD 124 and MD 355, including four signalized intersections, rather than simply exit I-270 directly at Watkins Mill Road.

- Therefore, this alternate does not fully address the purpose and need statement for the project to improve accessibility in northern Gaithersburg.

- Elimination of these ramps also results in motorists exiting southbound I-270 at Watkins Mill Road not being able to directly reenter the southbound roadway, a condition generally discouraged by FHWA on Interstate interchanges.

We agree that the statement in the ARDS package that, "...this alternate does not provide any [environmental] improvements..." is not entirely correct. We believe it would be more accurate to say that environmental improvements offered by Alternate 4 do not likely offset the many traffic operational disadvantages that would result in comparison to the full interchange alternates. Furthermore, the volumes outlined above on various ramps and roadway segments with Alternate 4 would likely require additional lane(s) on at least some of those segments for satisfactory operations in 2020, beyond what would be required for the full interchange alternates. Therefore, pending detailed studies to analyze the need and develop plans for additional ramp and roadway widening, current assessments of costs and environmental impacts for Alternate 4 may be understated.

Based on preliminary alternates analysis, it does appear that Alternate is 4 the only "build" alternate, other than Alternate 6, that avoids Section 4(f) impacts. However, we anticipate that, as required, a thorough analysis of Section 4(f) avoidance minimization on and mitigation measures will be undertaken during detailed studies for Alternates 2 and 3. One measure that will likely be considered is the braiding of the MD 124 entrance and Watkins Mill Road exit ramps on the northbound side of I-270. This would allow reduction or elimination of the northbound Collector-Distributor (C-D) road, at and north of, Watkins Mill Road, thereby allowing a shorter taper for the Watkins Mill Road ramp onto northbound I-270 and a reduced footprint across the Great Seneca Park (similar to that with Alternate 4). Traffic, right-of-way and environmental issues associated with this, or similar, Alternate 2/3 variation will be considered during detailed studies, as will further evaluations of Alternate 4.

Alternate 6

Alternate 6 reflects a "Baseline" condition (as modeled in the Metropolitan Washington Council of Government's (MWCOG) Regional Travel Demand Model for 2020) in the Constrained Long Range Plan for the Washington region. This alternate is a "no-build" for the traffic models since the extension of Watkins Mill Road between MD 355 and MD 117, which is included in the current version of both the Gaithersburg Area Master Plan and the City of Gaithersburg Master Plan, is programmed in the region's CLRP. This no-build or baseline scenario is not a "true" no-build like Alternate 1, because it does not represent current conditions and has not undergone environmental analyses or approvals. In addition, extension of Watkins Mill Road includes the consideration of Access Options A, B, and C, which would enhance HOV and transit mode accessibility. Furthermore, retention of Alternate 6 as the "Baseline" alternate in this study maintains consistency with terminology used in the overall I-270 Corridor Study. This Baseline Alternate is recommended for detailed studies, not only for comparison purposes, but also because it has strong public favor from Montgomery Village community representatives.

This alternate is included in the current local master plans, has the lowest environmental impact of the "build" alternates, and is favored by some local area residents. Therefore, this study would be remiss in not carrying Alternate 6 forward. In addition, traffic operations (level of service) at the intersections of the Watkins Mill Road tie-in points with MD 117 and MD 355 could be better with Alternate 6 since interstate access is not directly utilizing this locally extended roadway. Please note that while Alternate 6 could enhance traffic operations at these two intersections over "build" alternates, traffic congestion and delay could deteriorate in other parts of the study area. This will need to be more fully evaluated in the detailed study stage to ensure that this improvement would satisfy the purpose and need in achieving improved accessibility and mobility in northern Gaithersburg.

Alternates Dropped Subsequent to the Alternates Public Workshop:

Several alternates were dropped as a results of the preliminary planning phase and public comments generated from the November 23, 1999 Alternates Public Workshop. These alternates were dropped since they did not adequately address the project's purpose and need in the most efficient way or were not the most environmentally sensitive transportation improvement. These alternates include:

- Alternate 2-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 2, providing little environmental relief with higher costs and right-of-way impacts.)
- Alternate 3 Option A (dropped since direct HOV access with this alternate is not geometrically and operationally feasible)
- Alternate 3-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief and missing a critical movement.)
- Alternate 5 Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief with higher costs and right-of-way impacts and isolating the wetlands.)

Alternates Retained for Detailed Study:

The following lists the alternates that we would like to carry into the more detailed planning analysis:

- No-Build Alternate
- Baseline CLRP (Alternate 6) - Options A, B & C (Watkins Mill Road Extended)
- Alternate 2 - Options A, B & C (Partial Cloverleaf Interchange)
- Alternate 3 - Options B & C (Full Diamond Interchange)
- Alternate 4 – Options A, B & C (Partial Interchange)

Having discussed the I-270 at Watkins Mill Road Extended alternates retained for detailed study presented above, the following agency (by signing this document):

✓ Federal Highway Administration	___ National Park Service
___ Environmental Protection Agency	___ National Marine Fisheries Service
___ Corps of Engineers	___ MD Department of Natural Resources
___ US Fish and Wildlife Service	___ MD Department of the Environment

✓ **Concurs (without comments)** ___ **Concurs (with minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence: _____

___ MD Historical Trust	___ Metropolitan Planning Organization
___ MD Office of Planning	

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments: _____

Additional Information Needed: _____

Signature: Harold Stephens Date: 2/23/00

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Mr. Paul Wettlaufer
Transportation Program Manager
U.S. Army Corps of Engineers
Baltimore District
CENAB-OP-R
P.O. Box 1715
Baltimore MD 21201

Dear Mr. Wettlaufer:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed study were presented at the January 19 Interagency Review meeting. Attached is a copy of the Alternates Retained for Detailed Study informational package, which has been updated since the Interagency presentation, as well as a summary statement for concurrence.

Please provide your concurrence on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

REPLY TO
ATTENTION OF

MAR 0 9 2000

Operations Division

Subject: CENAB-OP-RMN(MD SHA/I-270 @ WATKINS MILL ROAD EXTENDED/ALTERNATIVES RETAINED)99-00838-12

Maryland State Highway Administration
Project Planning Division
Attn: Ms. Gay L. Olsen
707 North Calvert Street
Baltimore, Maryland 21202

Dear Ms. Olsen:

The Baltimore District of the U.S. Army Corps of Engineers (Corps) has reviewed the Alternatives Retained for Detailed Study package for the I-270/Watkins Mill Road Extended project and offers the following comments. The Corps concurs with the alternatives to be carried forward provided that SHA incorporate the following modifications to Alternatives 2 and 3.

Alternative 2 – An eastern shift of I-270 should be incorporated into this alternative. The shift would serve to reduce the need for a stream relocation and a retaining wall in the vicinity of Stations 125 through 130 on I-270 thereby minimizing impacts to the aquatic environment that are associated with this alternative.

Alternative 3 – The beginning of the exit ramp from I-270 Southbound to the MD 124 interchange should be moved to the south. This would also serve to reduce the need for stream relocations and a retaining wall in the vicinity of Stations 125 through 130 on I-270.

Option C (any alternative) – This option utilizes the MD 124 interchange to provide access to the western portion of the development area from I-270 Southbound. The utilization of Option C in any alternative would reduce impacts to the aquatic environment while providing cost savings to SHA. This office has been informed in past discussions that the utilization of this option combined with any alternative is inadvisable due to projected overloading of the MD 124 interchange. Why is Option C still on the table?

If you have any questions concerning this matter, please contact Mr. Steve Elinsky of this office at 410.962.4503.

Sincerely,

for Paul R. Wettlaufer
Transportation Program Manager

Copy Furnished:

Denise Rigney, EPA/Region 3
Pamela Stevenson, FHWA/Maryland Division
Bob Zepp, USFWS/CBFO
Greg Golden, DNR/ERU
Andy Der, MDE/WMA

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

March 20, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
City of Gaithersburg
Montgomery County, Maryland

Mr. Paul R. Wettlaufer
Transportation Program Manager
U. S. Army Corps of Engineers
Baltimore District
CENAB-OP-RMN
P.O. Box 1715
Baltimore MD 21203-1715

Dear Mr. Wettlaufer:

Thank you for reviewing and providing comments on the Alternates Retained for Detailed Study (ARDS) package for the planning study at I-270 and Watkins Mill Road Extended. The purpose of this letter is to address your comments on Alternate 2, Alternate 3, and Option C.

Alternate 2

The study team will investigate the potential of an eastern shift of mainline I-270 in the vicinity of stations 125 through 130 for engineering and cost feasibility in order to avoid or minimize impacts to the adjacent wetlands. This shift will be evaluated incrementally from the current alignment to the 45-foot eastern shift of mainline I-270, which is Alternate 2-I.

Please recall, as a result of preliminary planning analysis and public comments generated from the November 23, 1999 Alternates Public Workshop, Alternate 2-I was dropped. Alternate 2-I was not carried forward because it did not adequately address the project's purpose and need in the most efficient way, and was redundant, geometrically and operationally, to Alternate 2. While Alternate 2-I has 0.2 acres of wetland impacts and approximately 700 LF of Waters of the US impacts less than Alternate 2, the cost ($3 million +/-), difficulties associated with maintenance of traffic during construction and right-of-way required for a 45 foot mainline shift are impractical. In addition at the Alternates Public Workshop, public comments from were not in favor of this alternate due to the extensive right-of-way impacts.

My telephone number is _____

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1-800-735-2258 Statewide Toll Free

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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

If you would like to sit down and discuss this issue further, it may be helpful. Please feel free to call me, or I will contact you once we have evaluated the effectiveness and magnitude of this shift.

Alternate 3

The study team will evaluate the possibility of beginning the exit ramp from southbound I-270 to MD 124 further south. The feasibility of this shift will be determined from traffic data, which mandates necessary ramp approach lengths for design and safety considerations.

Option C

Option C alone, or with dropped Alternate 3-I (i.e., no exit ramp from southbound I-270 to Watkins Mill Road Extended), would indeed overload the MD 124 interchange; however, this option is being evaluated as a component of the Alternatives. It is being evaluated to determine if Option C (in conjunction with any of these Alternates) could increase accessibility in the vicinity of the Metropolitan Grove Station without adversely impacting traffic and safety operations at the MD 124 interchange.

If you have any questions, please call Ms. Michelle Hoffman, the project manager at 410-545-8547, or Ms. Anne Elrays, the environmental manager at 410-545-8562. Michelle and Anne can be reached toll-free at 1-800-548-5026.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By: Michelle D. Hoffman
Michelle D. Hoffman
Project Manager
Project Planning Division

Attachments
cc: Ms. Elizabeth Cole, MHT
Mr. Andrew Der, MDE
Mr. Ray Dintaman, DNR
Mr. Steve Elinsky, COE
Ms. Anne Elrays, SHA
Mr. Elder Ghigiarelli, MDE
Mr. Greg Golden, DNR

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

April 14, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
City of Gaithersburg
Montgomery County, Maryland

Mr. Paul R. Wettlaufer
Transportation Program Manager
U. S. Army Corps of Engineers
Baltimore District
CENAB-OP-RMN
P.O. Box 1715
Baltimore MD 21203-1715

Dear Mr. Wettlaufer:

Thank you for reviewing and providing comments on the Alternates Retained for Detailed Study (ARDS) package for the planning study at I-270 and Watkins Mill Road Extended and for attending the April 7th conflict resolution field review. The purpose of this letter is to address your comments on Alternate 2, Alternate 3, and Option C as discussed at the field review. Please also refer to the attached field review minutes.

Alternate 2

The study team will investigate the potential of an eastern shift of mainline I-270 in the vicinity of stations 125 through 130 for engineering and cost feasibility in order to avoid or minimize impacts to the adjacent wetlands as an option to Alternate 2. This shift will be evaluated incrementally from the current alignment to the 45-foot eastern shift of mainline I-270, which is Alternate 2-I.

Alternate 3

The study team will evaluate the possibility of beginning the exit ramp from southbound I-270 to MD 124 further south. However, as discussed at the field review the feasibility of this shift will be determined from traffic data, which mandates necessary ramp approach lengths for design and safety considerations. As discussed, initial review shows that it may not be possible to shift this ramp without substantial design exceptions.

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Option C

Option C alone, or with dropped Alternate 3-I (i.e., no exit ramp from southbound I-270 to Watkins Mill Road Extended), would indeed overload the MD 124 interchange; however, this option is being evaluated as a component of the Alternatives. It is being evaluated to determine if Option C (in conjunction with any of these Alternates) could increase accessibility in the vicinity of the Metropolitan Grove Station without adversely impacting traffic and safety operations at the MD 124 interchange.

If you have any questions, please call Ms. Michelle Hoffman, the project manager at 410-545-8547, or Ms. Anne Elrays, the environmental manager at 410-545-8562. Michelle and Anne can be reached toll-free at 1-800-548-5026.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By: Michelle D. Hoffman
Michelle D. Hoffman
Project Manager
Project Planning Division

Attachments
cc: Ms. Elizabeth Cole, MHT
Mr. Andrew Der, MDE
Mr. Ray Dintaman, DNR
Mr. Steve Elinsky, COE
Ms. Anne Elrays, SHA
Mr. Elder Ghigiarelli, MDE
Mr. Greg Golden, DNR
Mr. John Howard, NPS
Mr. Joseph Kresslein, SHA
Mr. Jeff Knoedler, NPS
Mr. Raymond Li, USFWS
Ms. Gay Olsen, SHA
Ms. Denise Rigney, EPA
Mr. Brian Smith, FHWA
Mr. Donald Sparklin, SHA
Ms. Jamie Stark, EPA
Ms. Pam Stephenson, FHWA
Mr. David Whitaker, MOP
Mr. James Wynn, SHA
Ms. Bihui Xu, MOP

I-270/Watkins Mill Road Extended – Project Planning Study – April 18, 2000
CONCURRENCE FORM FOR ALTERNATES RETAINED FOR DETAILED STUDY

Definition of Concurrence:
"Written determination by the agency that information to date is adequate and the agency agrees that the process can be advanced to the next stage. Agencies agree not to revisit the previous process steps unless conditions change."

Project Description:
The project involves a study of transportation access and mobility improvements to I-270 in the vicinity of the locally proposed extension of Watkins Mill Road between MD 355 and MD 117.

Project Purpose Statement:
The purpose of the project is to provide improved access (vehicular, pedestrian, bicycle, and transit) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use.

Purpose of Package:
The purpose of this package is to request concurrence on the alternates retained for detailed study for the project planning study at I-270 and Watkins Mill Road.

Alternates Dropped Prior to the Alternates Public Workshop:
Three alternates were dropped at the August 26, 1999 Interagency Field Review, prior to the Alternates Public Workshop, due to structure costs, pavement issues, driver expectancy and natural environmental impacts. These alternates include the following:

- Left Hand Exit (dropped since it violated driver expectancy and contradicted the HOV system).
- Single Point Urban Diamond (dropped since it had a high structure cost, structure related impacts to the natural environment and contradicts driver expectancy).
- Double Decker (dropped since it added a lot of pavement and destroyed the wetland canopy).

Preliminary Alternates Evaluated:
Several alternates were evaluated in the preliminary planning phase. All of the alternates included the extension of Watkins Mill Road between MD 355 and MD 117 as either 4-lanes or 6-lanes and the potential of access options. The three access options include:

- *Option A – HOV Direct Access* from I-270 (inside lanes) to Watkins Mill Road (structure).
- *Option B – Metropolitan Court Extended* from the existing MARC Station to Watkins Mill Road, just west of the CSX tracks.
- *Option C – MD 124 Access Ramp* from southbound I-270 to the master planned Corridor Cities Transitway and a relocated MARC Station on the east side of CSX tracks.

The alternates considered included:

- Alternate 2 (Partial Cloverleaf Interchange – County Feasibility Study)
- Alternate 2-I (Partial Cloverleaf Interchange with Eastern Shift)
- Alternate 3 (Full Diamond Interchange)
- Alternate 3-I (3/4 Diamond Interchange) – Missing movement from southbound I-270 to Watkins Mill Road and MARC Station.
- Alternate 4 (Partial Interchange) – Movements only to/from the north.
- Alternate 5 (Full Diamond Interchange with Western Collector-Distributor Lane Shift)
- Baseline (Alternate 6 - Watkins Mill Road Extended between MD 355 and MD 117 with no interstate access, consistent with the Constrained Long Range Plan)

Alternates Dropped Subsequent to the Alternates Public Workshop:
Several alternates were dropped as a results of the preliminary planning phase and public comments generated from the November 23, 1999 Alternates Public Workshop. These alternates were dropped since they did not adequately address the project's purpose and need in the most efficient way or were not the most environmentally sensitive transportation improvement. These alternates include:

- Alternate 2-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 2, providing little environmental relief with higher costs and right-of-way impacts.)
- Alternate 3 Option A (dropped since direct HOV access with this alternate is not geometrically and operationally feasible)
- Alternate 3-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief and missing a critical movement.)
- Alternate 5 Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief with higher costs and right-of-way impacts and isolating the wetlands.)

Alternates Retained for Detailed Study:
The following lists the alternates that we would like to carry into the more detailed planning analysis:

- No-Build Alternate
- Baseline CLRP (Alternate 6) - Options A, B & C (Watkins Mill Road Extended)
- Alternate 2 - Options A, B & C (Partial Cloverleaf Interchange)
- Alternate 3 - Options B & C (Full Diamond Interchange)
- Alternate 4 – Options A, B & C (Partial Interchange)

Having discussed the I-270 at Watkins Mill Road Extended alternates retained for detailed study presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
X Corps of Engineers
___ US Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Department of Natural Resources
___ MD Department of the Environment

____ **Concurs (without comments)** X **Concurs (with minor comments)** ____ **Does Not Concur**

Comments / Reasons for Non-Concurrence: Provided that an eastern shift of the I-270 mainline, and a western C-D road similar to Alt. 5, are analyzed as an avoidance/minimization measure during this study.

___ MD Historical Trust
___ MD Office of Planning
___ Metropolitan Planning Organization

____ **Provides Comments (below or attached)** ____ **Has No Comments**

Comments: _____

Additional Information Needed: _____

Signature: Paul Wettenhall Date: 5/15/00

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Ms. Denise Rigney
NEPA Compliance Section
Environmental Protection Agency
Region III - 3ES30
1650 Arch Street
Philadelphia PA 19103-2029

Attn: Ms. Jamie Stark

Dear Ms. Rigney:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed study were presented at the January 19 Interagency Review meeting. Attached is a copy of the Alternates Retained for Detailed Study informational package, which has been updated since the Interagency presentation, as well as a summary statement for concurrence.

Please provide your concurrence on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

410-209-5003
Attn: Anne Elrays

Alternates Dropped Subsequent to the Alternates Public Workshop:
Several alternates were dropped as a results of the preliminary planning phase and public comments generated from the November 23, 1999 Alternates Public Workshop. These alternates were dropped since they did not adequately address the project's purpose and need in the most efficient way or were not the most environmentally sensitive transportation improvement. These alternates include:

- Alternate 2-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 2, providing little environmental relief with higher costs and right-of-way impacts.)
- Alternate 3 Option A (dropped since direct HOV access with this alternate is not geometrically and operationally feasible)
- Alternate 3-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief and missing a critical movement.)
- Alternate 5 Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief with higher costs and right-of-way impacts and isolating the wetlands.)

Alternates Retained for Detailed Study:
The following lists the alternates that we would like to carry into the more detailed planning analysis:

- No-Build Alternate
- Baseline CLRP (Alternate 6) - Options A, B & C (Watkins Mill Road Extended)
- Alternate 2 - Options A, B & C (Partial Cloverleaf Interchange)
- Alternate 3 - Options B & C (Full Diamond Interchange)
- Alternate 4 – Options A, B & C (Partial Interchange)

Having discussed the I-270 at Watkins Mill Road Extended alternates retained for detailed study presented above, the following agency (by signing this document):

___ Federal Highway Administration
X Environmental Protection Agency
___ Corps of Engineers
___ US Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Department of Natural Resources
___ MD Department of the Environment

X **Concurs (without comments)** ____ **Concurs (with minor comments)** ____ **Does Not Concur**

Comments / Reasons for Non-Concurrence:_____

___ MD Historical Trust
___ MD Office of Planning
___ Metropolitan Planning Organization

____ **Provides Comments (below or attached)** ____ **Has No Comments**

Comments:_____

Additional Information Needed:_____

Signature: Jamie C. Stark Date: 4/13/00

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Mr. Robert Zepp
U.S. Department of the Interior
Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis MD 21401

Dear Mr. Zepp:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed study were presented at the January 19 Interagency Review meeting. Attached is a copy of the Alternates Retained for Detailed Study informational package, which has been updated since the Interagency presentation, as well as a summary statement for concurrence.

Please provide your concurrence on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

March 22, 2000

Ms. Cynthia Simpson
Deputy Director
Maryland State Highway Administration
Office of Planning and Preliminary Engineering
707 North Calvert St.
Baltimore, MD 21203-0717

Attn: Ms. Gay L. Olsen

Re: I-270 at Watkins Mill Road Extended

Dear Ms. Simpson:

The U.S. Fish and Wildlife Service (Service) has reviewed the proposed Alternates Retained for Detailed Study for I-270/Watkins Mill Extended. The Service recommends retaining Alternates 2-I and 5, Options A, B & C for further study.

Alternate 2-I: Partial Cloverleaf Interchange with Eastern Shift has been proposed for abandonment due to the costs and ROW requirements associated with the eastern shift. However, total costs and ROW acquisition requirements would be comparable to other alternatives retained for further study. For instance, Alternate 2 would require 80-84 acres of acquisition (as compared to 67-72 acres for Alternate 2-I). Another issue concerning the eastern shift is the difficulties associated with maintenance of traffic during construction. The Service believes the temporary disruptions to traffic during construction is justified in the avoidance and minimization of impacts to natural resources, including the protection of 1000 linear feet of stream.

Although Alternate 5: Diamond Interchange with Western C-D Shift would require high levels of right-of-way acquisitions, the Service recommends retaining this alternate for further detailed analysis. The Service favors this alternate because impacts to natural resources are fully minimized, while providing a full access interchange to Watkins Mill Road.

The Service concurs with the elimination of Alternate 3, Option A and Alternate 3-I, Options A, B & C without comment. If you have any questions regarding our comments please contact Raymond Li of my staff at (410)573-4531.

Sincerely,

for John P. Wolflin
Supervisor
Chesapeake Bay Field Office

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Mr. Ronald S. Kirby
Director of Department of Transportation Planning
Maryland Washington Council of Governments
777 N. Capital Street. N.E.
Suite 300
Washington D.C. 20002-4239

Dear Mr. Kirby:

In accordance with the merged Environmental/Regulatory process, the Maryland State Highway Administration requests your comments on the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. Attached is a copy of the Alternates Retained for Detailed Study informational package and summary statement for comments.

Please provide your comments on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Alternates Dropped Subsequent to the Alternates Public Workshop:
Several alternates were dropped as a results of the preliminary planning phase and public comments generated from the November 23, 1999 Alternates Public Workshop. These alternates were dropped since they did not adequately address the project's purpose and need in the most efficient way or were not the most environmentally sensitive transportation improvement. These alternates include:

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The following lists the alternates that we would like to carry into the more detailed planning analysis:

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- Alternate 4 – Options A, B & C (Partial Interchange)

Having discussed the I-270 at Watkins Mill Road Extended alternates retained for detailed study presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ US Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Department of Natural Resources
___ MD Department of the Environment

____ **Concurs (without comments)** ____ **Concurs (with minor comments)** ____ **Does Not Concur**

Comments / Reasons for Non-Concurrence: _____

___ MD Historical Trust
___ MD Office of Planning
XX Metropolitan Planning Organization

X **Provides Comments (below or attached)** ____ **Has No Comments**

Comments: Selection of alternates retained for detailed study should include reference to region's policy goals, as adopted by the TPB in October 1998.

Additional Information Needed: _____

Signature: Ronald Kirby Date: 3/29/00

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Mr. John Parsons
National Park Service
1100 Ohio Drive
Room 220
SW Washington D.C. 20242

Dear Mr. Parsons:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed study were presented at the January 19 Interagency Review meeting. Attached is a copy of the Alternates Retained for Detailed Study informational package, which has been updated since the Interagency presentation, as well as a summary statement for concurrence.

Please provide your concurrence on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

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The following lists the alternates that we would like to carry into the more detailed planning analysis:

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- Alternate 3 - Options B & C (Full Diamond Interchange)
- Alternate 4 – Options A, B & C (Partial Interchange)

Having discussed the I-270 at Watkins Mill Road Extended alternates retained for detailed study presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ US Fish and Wildlife Service
X National Park Service
___ National Marine Fisheries Service
___ MD Department of Natural Resources
___ MD Department of the Environment

X Concurs (without comments) **___ Concurs (with minor comments)** **___ Does Not Concur**

Comments / Reasons for Non-Concurrence: _____

___ MD Historical Trust
___ MD Office of Planning
___ Metropolitan Planning Organization

____ Provides Comments (below or attached) **____ Has No Comments**

Comments: _____

Additional Information Needed: _____

Signature: Sara Rementhal Date: 3/6/00

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Mr. Ray Dintaman, Director
Environmental Review Unit
Maryland Department of Natural Resources
Tawes State Office Building, B-3
Annapolis MD 21401

Dear Mr. Dintaman:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed study were presented at the January 19 Interagency Review meeting. Attached is a copy of the Alternates Retained for Detailed Study informational package, which has been updated since the Interagency presentation, as well as a summary statement for concurrence.

Please provide your concurrence on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
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Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Parris N. Glendening
Governor

Kathleen Kennedy Townsend
Lt. Governor

Maryland Department of Natural Resources
ENVIRONMENTAL REVIEW
Tawes State Office Building
Annapolis, Maryland 21401

Sarah J. Taylor-Rogers
Secretary

Stanley K. Arthur
Deputy Secretary

March 13, 2000

Gay Olsen
Project Planning Division
Maryland Department of Transportation
State Highway Administration
P.O. Box 717
Baltimore, Maryland 21203-0717

Dear Ms. Olsen:

This letter is in reply to Joseph Kresslein's letter of request, dated February 8, 2000, for Maryland Department of Natural Resources (DNR) concurrence with the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended Project (Project No. MO839B11), Montgomery County.

The Department participated in discussions of this project at the Interagency Meetings and at several site visits. The information provided in the recently submitted project package has been reviewed. The Department of Natural Resources concurs with the Alternates Retained for Detailed Study, with the following comments:

1. We support continued avoidance and minimization efforts to protect natural resources in the project Study Area. Because the tributary on the west side of I-270 has a quality forested riparian zone associated with it, a wildlife corridor and terrestrial habitat complex exists in this area. Minimization of forest vegetation loss is an important consideration. It appears that there are still opportunities to incorporate or consider design features and minor alignment shifts within the current Alternatives to minimize both terrestrial and aquatic resource impacts.

2. There is a reach of a tributary that is currently adjacent and parallel to southbound I-270. This stream reach remains relatively stable despite its very straight nature and confinement/loss of floodplain on the east bank. Efforts should be made to avoid further channelization or relocation of this stream reach as well as all other reaches of the stream.

3. We advocate minimization of tributary crossings for the project as feasible. Stream crossings should be made as close to perpendicular as possible and bridges should be considered for the necessary crossings to protect aquatic habitat.

Telephone: (410) 260-8330
DNR TTY for the Deaf: (410) 260-8835
Toll Free #: 1-877-620-8DNR

As planning progresses, please continue to coordinate as necessary with Arnold Norden of our Resource Planning Unit (410-260-8406) regarding any potential impacts to DNR lands. Our review of wetland and waterway impacts through the Maryland Streamlined Environmental and Regulatory Process is a separate review and does not fulfill DNR's requirements to review impacts to DNR property.

If you have any questions concerning these comments, you may contact Greg Golden of my staff at 410-260-8334.

Sincerely,

Ray C. Dintaman, Jr.

Ray C. Dintaman, Jr., Director
Environmental Review Unit

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

RECEIVED
FEB 11 2000
WATER MANAGEMENT ADMIN.
WETLANDS & WATERWAYS PROGRAM

Mr. Elder Ghigiarelli
Maryland Department of the Environment
Water Management Administration
Non-Tidal Wetlands and Waterways Division
2500 Broening Highway
Baltimore MD 21401

See Attached

Dear Mr. Ghigiarelli:

In accordance with the merged Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence with the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed study were presented at the January 19 Interagency Review meeting. Attached is a copy of the Alternates Retained for Detailed Study informational package, which has been updated since the Interagency presentation, as well as a summary statement for concurrence.

Please provide your concurrence on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

E. Gheyrarelly

I-270/Watkins Mill Road Extended – Project Planning Study – February 2, 2000
CONCURRENCE FORM FOR ALTERNATES RETAINED FOR DETAILED STUDY

Definition of Concurrence:
"Written determination by the agency that information to date is adequate and the agency agrees that the process can be advanced to the next stage. Agencies agree not to revisit the previous process steps unless conditions change."

Project Description:
The project involves a study of transportation access and mobility improvements to I-270 in the vicinity of the locally proposed extension of Watkins Mill Road between MD 355 and MD 117.

Project Purpose Statement:
The purpose of the project is to provide improved access (vehicular, pedestrian, bicycle, and transit) to and from the transportation network to accommodate and provide sufficient capacity to serve planned economic development in designated growth areas (Priority Funding Areas) of northern Gaithersburg. In addition, it is important to improve access to the Metropolitan Grove MARC Station to facilitate increased transit use.

Purpose of Package:
The purpose of this package is to request concurrence on the alternates retained for detailed study for the project planning study at I-270 and Watkins Mill Road.

Alternates Dropped Prior to the Alternates Public Workshop:
Three alternates were dropped at the August 26, 1999 Interagency Field Review, prior to the Alternates Public Workshop, due to structure costs, pavement issues, driver expectancy and natural environmental impacts. These alternates include the following:

- Left Hand Exit (dropped since it violated driver expectancy and contradicted the HOV system).
- Single Point Urban Diamond (dropped since it had a high structure cost, structure related impacts to the natural environment and contradicts driver expectancy).
- Double Decker (dropped since it added a lot of pavement and destroyed the wetland canopy).

Preliminary Alternates Evaluated:
Several alternates were evaluated in the preliminary planning phase. All of the alternates included the extension of Watkins Mill Road between MD 355 and MD 117 as either 4-lanes or 6-lanes and the potential of access options. The three access options include:

- *Option A – HOV Direct Access* from I-270 (inside lanes) to Watkins Mill Road (structure).
- *Option B – Metropolitan Court Extended* from the existing MARC Station to Watkins Mill Road, just west of the CSX tracks.
- *Option C – MD 124 Access Ramp* from southbound I-270 to the master planned Corridor Cities Transitway and a relocated MARC Station on the east side of CSX tracks.

The alternates considered included:
- Alternate 2 (Partial Cloverleaf Interchange – County Feasibility Study)
- Alternate 2-I (Partial Cloverleaf Interchange with Eastern Shift)
- Alternate 3 (Full Diamond Interchange)
- Alternate 3-I (3/4 Diamond Interchange) – Missing movement from southbound I-270 to Watkins Mill Road and MARC Station.
- Alternate 4 (Partial Interchange) – Movements only to/from the north.
- Alternate 5 (Full Diamond Interchange with Western Collector-Distributor Lane Shift)
- Baseline (Alternate 6 + Watkins Mill Road Extended between MD 355 and MD 117 with no interstate access, consistent with the Constrained Long Range Plan)

Alternates Dropped Subsequent to the Alternates Public Workshop:

Several alternates were dropped as a results of the preliminary planning phase and public comments generated from the November 23, 1999 Alternates Public Workshop. These alternates were dropped since they did not adequately address the project's purpose and need in the most efficient way or were not the most environmentally sensitive transportation improvement. These alternates include:

- Alternate 2-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 2, providing little environmental relief with higher costs and right-of-way impacts.)
- Alternate 3 Option A (dropped since direct HOV access with this alternate is not geometrically and operationally feasible)
- Alternate 3-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief and missing a critical movement.)
- Alternate 5 Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief with higher costs and right-of-way impacts and isolating the wetlands.)

Alternates Retained for Detailed Study:

The following lists the alternates that we would like to carry into the more detailed planning analysis:

- No-Build Alternate
- Baseline CLRP (Alternate 6) - Options A, B & C (Watkins Mill Road Extended)
- Alternate 2 - Options A, B & C (Partial Cloverleaf Interchange)
- Alternate 3 - Options B & C (Full Diamond Interchange)
- Alternate 4 – Options A, B & C (Partial Interchange)

Having discussed the I-270 at Watkins Mill Road Extended alternates retained for detailed study presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ US Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Department of Natural Resources
✓ MD Department of the Environment

✓ **Concurs (without comments)** ___ **Concurs (with minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence: _____

___ MD Historical Trust
___ MD Office of Planning
___ Metropolitan Planning Organization

___ **Provides Comments (below or attached)** ___ **Has No Comments**

Comments: _____

Additional Information Needed: _____

Signature: Elder A. Ghigiarelli Jr. Date: 4/13/00

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 8, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Mr. J. Rodney Little
Office of Preservation Services
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

In accordance with the merged Environmental/Regulatory process, the Maryland State Highway Administration requests your comments on the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed Study were presented at the January 19 Interagency Review meeting. Attached is a copy of the Alternates Retained for Detailed Study informational package, which has been updated since the Interagency presentation, as well as a summary statement for comments.

Please provide your comments on the Alternates Retained for Detailed Study summary statement by March 13, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Alternates Dropped Subsequent to the Alternates Public Workshop:
Several alternates were dropped as a results of the preliminary planning phase and public comments generated from the November 23, 1999 Alternates Public Workshop. These alternates were dropped since they did not adequately address the project's purpose and need in the most efficient way or were not the most environmentally sensitive transportation improvement. These alternates include:

- Alternate 2-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 2, providing little environmental relief with higher costs and right-of-way impacts.)
- Alternate 3 Option A (dropped since direct HOV access with this alternate is not geometrically and operationally feasible)
- Alternate 3-I Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief and missing a critical movement.)
- Alternate 5 Options A, B & C (dropped since this alternate is functionally redundant to Alternate 3, providing little environmental relief with higher costs and right-of-way impacts and isolating the wetlands.)

Alternates Retained for Detailed Study:
The following lists the alternates that we would like to carry into the more detailed planning analysis:

- No-Build Alternate
- Baseline CLRP (Alternate 6) - Options A, B & C (Watkins Mill Road Extended)
- Alternate 2 - Options A, B & C (Partial Cloverleaf Interchange)
- Alternate 3 - Options B & C (Full Diamond Interchange)
- Alternate 4 – Options A, B & C (Partial Interchange)

Having discussed the I-270 at Watkins Mill Road Extended alternates retained for detailed study presented above, the following agency (by signing this document):

___ Federal Highway Administration
___ Environmental Protection Agency
___ Corps of Engineers
___ US Fish and Wildlife Service
___ National Park Service
___ National Marine Fisheries Service
___ MD Department of Natural Resources
___ MD Department of the Environment

____ **Concurs (without comments)** ____ **Concurs (with minor comments)** ____ **Does Not Concur**

Comments / Reasons for Non-Concurrence: _____

✓ MD Historical Trust
___ MD Office of Planning
___ Metropolitan Planning Organization

____ **Provides Comments (below or attached)** X **Has No Comments**

Comments: We look forward to completing the Section 106 process.

Additional Information Needed: _____

Signature: Ephraim T. Cole Date: 2/17/2000

MARYLAND *Office of Planning*

Parris N. Glendening
Governor

Ronald M. Kreitner
Director

April 3, 2000

Ms. Cynthia D. Simpson, Deputy Director
Office of Planning & Preliminary Engineering
Maryland State Highway Administration
P.O. Box 717
Baltimore, MD 21203-0717

Attention: Ms. Gay L. Olsen

Re: I-270/Watkins Mill Road Extended Project;
Alternates Retained for Detailed Study

Dear Ms. Simpson:

This is in response to your request for OP's comments on the Alternates Retained for Detailed Study for the I-270/Watkins Mill Road Extended Project. We have reviewed the information provided in the Alternates Retained for Detailed Study package and the Planning Act Project Review Checklist completed by SHA and provide our comments as follows.

Smart Growth Areas Act Implications

The I-270/Watkins Mill Road Extended Project and its Alternates Retained for Detailed Study are located in a Montgomery County Priority Funding Area (PFA). OP has evaluated the County PFAs' designation and found it meets the criteria provided by the PFA law. When a preferred alternative is selected, Montgomery County would have to certify to SHA that it is located within a Priority Funding Area.

No Build Alternate

Under the No Build Alternate, transportation accessibility would not be improved to support planned development within the Priority Funding Areas in northern Gaithersburg since there is no provision of any major transportation facility improvements. Therefore, the No Build Alternate by virtue of it fails to meet the purpose and need of the project and would not be consistent with the Maryland Economic Growth, Resource Protection, and Planning Act of 1992 and the State's Smart Growth policy.

Alternate 6 - Option A, B & C

Alternate 6-A, B & C would provide the proposed Watkins Mill Road extension between MD 355 and MD 117 as well as transit station, HOV lane, and pedestrian/bicycle access improvements. Alternate 6-A, B & C, however, would not provide access to/from I-270 through

Local Planning Assistance: 410-767-4550 Fax: 410-767-4480
301 West Preston Street • Baltimore, Maryland 21201-2305

the Watkins Mill Road extension, so that transportation accessibility in the northern Gaithersburg may not be improved to the extent that supports full development potential in the Priority Funding Areas. At this point, however, there is no sufficient information on how or whether transportation accessibility would be improved and how this alternate would fulfill the purpose and needs of the project. As stated in the Alternate Retained for Detailed Study package, SHA will further evaluate the effectiveness of the alternate at the detailed study stage. Upon receiving this information, we can then assess the consistency of Alternate 6-A, B & C with the Planning Act.

Alternate 2-A, B, & C and Alternate 3-B, & C

Both alternates would provide the Watkins Mill Road extension and a full interchange at Watkins Mill Road Extended / I-270, as well as transit station, HOV lane, and pedestrian/bicycle access options. Based on the traffic volume information provided in the Alternate Retained document, it seems that these two alternatives would provide better relief to traffic congestion on the area roadways, except on Watkins Mill Road, than the other build alternatives. Provision of direct access to/from I-270 through the Watkins Mill Road Extended would significantly improve accessibility to the Priority Funding Areas in northern Gaithersburg where development/redevelopment is planned. Provision of transportation facilities to support growth in PFAs is consistent with the intent of the Maryland Economic Growth, Resource Protection, and Planning Act of 1992. We note that both alternatives would have adverse environmental impacts. We also recognize that in coordination with resource and local agencies, SHA will continue to address strategies to minimize such impacts as the project study proceeds.

Alternate 4-A, B & C

Alternate 4-A, B & C would provide the Watkins Mill Road extension and a partial interchange at Watkins Mill Road Extended / I-270, as well as transit station, HOV lane, and pedestrian/bicycle access options. According to SHA, Alternate 4 - A, B & C does not fully meet the project purpose of improving accessibility in northern Gaithersburg since the proposed partial interchange at Watkins Mill Road Extended / I-270 would not provide access to/from I-270 south of Watkins Mill Road Extended. However, it is unclear how provision of a partial interchange would affect the development potential in the Priority Funding Areas. We expect that SHA will further the detailed study to clarify the effect of development potential in PFAs under Alternate 4-A, B & C.

Other Comments

We commend SHA's effort to accommodate pedestrian and bicycle facility improvements in the project. Under all build alternatives, pedestrian and bicycle access between east and west of I-270 and to/from transit stations would be improved. We assume that all proposed pedestrian and bicycle facilities would be built to meet the new AASHTO or SHA standards since such information has not been provided in the document for review.

We would like to have more information on the need for a 6-lane option for the proposed Watkins Mill Road extension. We are concerned that in a cumulative way, additional and widened highways could invite more automobile travel and less transit and other transportation mode usages. The 6-lane highway option could implicate a less pedestrian/bicycle friendly

environment for the areas it cuts through.

Should you have any questions regarding our comments, please do not hesitate to contact me or Bihui Xu at 410-767-4551.

Sincerely

David Whitaker, AICP
Principal Planner

cc: Ron Young, OP
Nelson Castellanos, FHWA
Attention: Pam Stephenson
Denise Rigney, EPA
Attention: Jamie Stark
Keith Harris, COE
Attention: CENB-OP-R, Paul Wettlaufer
Bob Pennington, USFWS
Timothy Goodger, NMFS
Attention: John Nichols
Jeffrey Knoedler, NPS
Ray Dintaman, DNR
Elder Ghigiarelli, MDE
Michael Day, MHT
Fatimah Hasan, MDOT

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

April 18, 2000

Mr. David Whitaker, AICP
Principal Planner
Maryland Office of Planning
301 West Preston Street
Baltimore MD 21202-2305

Dear Mr. Whitaker:

Thank you for your letter regarding the Alternates Retained for Detailed Study (ARDS) on the project planning study if I-270 and Watkins Mill Road Extended Study. In addition, we appreciate your review of the Planning Act Review Checklist for this project.

Throughout the Stage II detailed studies, we look forward to working with you and Bihui Xu of your staff as well as the other agency representatives, to refine the alternatives and learn more about traffic and environmental impacts. All of the pedestrian and bicycle improvements will be designed in accordance with both AASHTO and SHA standards. Enclosed, as you requested is the traffic information, showing the need for Watkins Mill Road Extended as four-lanes between MD 117 and I-270 and four lanes with two auxillary lanes, or a total of six lanes between I-270 and MD 355. Much of this need is derived from the development planned and approved on the east side of I-270. Please note that both the City of Gaithersburg and Montgomery County are imposing the need for developers to accommodate pedestrian and bicycle access within and to their developments. In addition, SHA will be working with the local jurisdictions, as part of this study to promote traffic calming, where appropriate in and around this study area.

Thank you again for your letter. If you have any questions, please feel free to contact Michelle Hoffman, the project manager, at 410-545-8547, or Anne Elrays, the Environmental Manager, at 410-545-8562. Both can be reached toll free at 1-800-548-5026.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

February 18, 2000

RE: Project No. MO839B11
I-270 at Watkins Mill Road Extended
Montgomery County, MD

Ms. Tanya K. Schmieler
Planning Supervisor
Maryland-National Capital Park and Planning Commission
Department of Parks
9500 Brunett Avenue
Silver Spring, MD 20901

Dear Ms. Schmieler:

The Maryland State Highway Administration is writing to request your comments on the attached Alternates Retained for Detailed Study informational package for the I-270/Watkins Mill Road Extended project. The Alternates Retained for Detailed Study were presented at the January 19 Interagency Review meeting. Please note that up to two acres of Middlebrook Hill Conservation Area adjacent to I-270 may be required with Alternate 2 Options A, B, and C and with Alternate 3 Options B and C.

Please provide your comments on the Alternates Retained for Detailed Study by March 20, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please contact Mr. Joseph R. Kresslein at 410-545-8550.

Sincerely,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

by: Joseph R. Kresslein
Joseph R. Kresslein
Assistant Division Chief
Project Planning Division

My telephone number is _____

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Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Department of Parks, Montgomery County, Maryland
9500 Brunett Avenue • Silver Spring, Maryland 20901

FAX TRANSMITTAL SHEET

PARK PLANNING & DEVELOPMENT DIVISION

(301) 585-1921 fax
(301) 495-2535 tel.

DATE: MAY 22, 2000

TO: ANN ELRAYS FAX #: 410-209-5003

FROM: BILL GRIES PHONE #: 301-650-2861

NUMBER OF PAGES, INCLUDING THIS ONE: 1

COMMENTS

PER YOUR REQUEST, TRANSMITTED ARE STAFF COMMENTS REGARDING THE SHA PROJECT @ I-270 AND WATKINS MILL ROAD (MIDDLEBROOK NEIGHBORHOOD CONSERVATION AREA)

As a result of a site visit with Wendy Hanley and Art Nelligan, area park managers, on May 4, 2000, Environmental Planning/Natural Resources staff has the following comments with regard to SHA's proposed acquisition of a portion of Middlebrook NCA.

The area delineated for acquisition by SHA is approximately 56,100 s.f. immediately adjacent to the existing I-270 right-of-way (ROW) and varies from apx. 50' to 150' wide. This acquisition is proposed as a part of Alternates 2 and 3 for improvements to Watkins Mill Road. As you stated, the park was acquired by dedication and therefore could be sold on "fee simple" basis to SHA. Due to these circumstances, staff would concur with the proposal.

The existing conditions of the area include a mature hardwood forest dominated by White and Chestnut Oaks and a tributary and headwater seep of Seneca Creek. Any disturbance to the tributary would be regulated and permitted through the state and the US Army COE.

Should this alternate be chosen in the future which would probably mean the clearing of all forest, Parks will have an additional opportunity to look at the park impacts as adjacent neighbors. And, should SHA require additional easements for construction or ROW, Parks will have an chance to look at mitigation at that time.

If you have any questions please call me at 301-495-4541.

C. ELECTED OFFICIALS CORRESPONDENCE

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

March 10, 2000

The Honorable Kumar P. Barve
Chairman, Montgomery County Delegation
Maryland House of Delegates
222 Lowe House Office Building
6 Governor Bladen Boulevard
Annapolis MD 21401-1991

Dear Delegate Barve:

The State Highway Administration (SHA) has completed initial project planning studies at I-270 and Watkins Mill Road Extended, Project Number MO839B11, to provide improved access to and from the transportation network to serve planned economic development in the designated growth areas of northern Gaithersburg. Several build alternates were analyzed, each of which included the extension of Watkins Mill Road between MD 355 and MD 117 as either four or six lanes. With the exception of Alternate 6, all of the preliminary build alternates included a partial or full interchange connecting I-270 and Watkins Mill Road Extended. The preliminary alternates consisted of the following:

- Alternate 1 (No Build)
- Alternate 2 (Partial Cloverleaf Interchange)
- Alternate 2-I (Partial Cloverleaf Interchange with Eastern Shift of I-270)
- Alternate 3 (Full Diamond Interchange)
- Alternate 3-I (3/4 Diamond Interchange)
- Alternate 4 (1/2 Diamond Interchange)
- Alternate 5 (Full Diamond Interchange with Western Collector-Distributor Lane Shift)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

Early in the planning stages, we developed concepts and prepared an environmental inventory of the area to identify social, economic, natural and cultural resources. We considered these resources in the development of alternates. On November 23, 1999, an Alternates Public Workshop was held at the Activity Center at Bohrer Park in Gaithersburg, where we presented the findings of the initial project planning evaluations to interested citizens and business representatives. A copy of the brochure distributed at the workshop is enclosed for your reference.

My telephone number is **410-545-0400 or 1-800-206-0770**

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Subsequent to the Alternates Public Workshop, the public and agency comments were evaluated and several alternates were selected for the more detailed traffic, engineering, and environmental evaluations. These alternates include:

- Alternate 1 (No Build)
- Alternate 2 (Partial Cloverleaf Interchange)
- Alternate 3 (Full Diamond Interchange)
- Alternate 4 (1/2 Diamond Interchange)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

In accordance with Transportation Article 8-612 of the Maryland Code Annotated (1993 Repl. Vol.), we request the Montgomery County Council's concurrence to proceed with final project planning studies for I-270 at Watkins Mill Road Extended. If you have any questions, please feel free to call me or Mr. Neil Pedersen, our Director of Planning and Preliminary Engineering, who may be reached at 410-545-0411 or 1-888-204-4828.

Sincerely,

Parker F. Williams
Administrator

Enclosure
cc: Mr. Neil J. Pedersen, Director of Planning and Preliminary Engineering, Maryland State Highway Administration

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

March 10, 2000

The Honorable Douglas M. Duncan
Montgomery County Executive
101 Monroe Street
2nd Floor
Rockville MD 20850

Dear County Executive Duncan:

The State Highway Administration (SHA) has completed initial project planning studies at I-270 and Watkins Mill Road Extended, Project Number MO839B11, to provide improved access to and from the transportation network to serve planned economic development in the designated growth areas of northern Gaithersburg. Several build alternates were analyzed, each of which included the extension of Watkins Mill Road between MD 355 and MD 117 as either four or six lanes. With the exception of Alternate 6, all of the preliminary build alternates included a partial or full interchange connecting I-270 and Watkins Mill Road Extended. The preliminary alternates consisted of the following:

- Alternate 1 (No Build)
- Alternate 2 (Partial Cloverleaf Interchange)
- Alternate 2-I (Partial Cloverleaf Interchange with Eastern Shift of I-270)
- Alternate 3 (Full Diamond Interchange)
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- Alternate 5 (Full Diamond Interchange with Western Collector-Distributor Lane Shift)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

Early in the planning stages, we developed concepts and prepared an environmental inventory of the area to identify social, economic, natural and cultural resources. We considered these resources in the development of alternates. On November 23, 1999, an Alternates Public Workshop was held at the Activity Center at Bohrer Park in Gaithersburg, where we presented the findings of the initial project planning evaluations to interested citizens and business representatives. A copy of the brochure distributed at the workshop is enclosed for your reference.

My telephone number is **410-545-0400 or 1-800-206-0770**

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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Subsequent to the Alternates Public Workshop, the public and agency comments were evaluated and several alternates were selected for the more detailed traffic, engineering, and environmental evaluations. These alternates include:

- Alternate 1 (No Build)
- Alternate 2 (Partial Cloverleaf Interchange)
- Alternate 3 (Full Diamond Interchange)
- Alternate 4 (1/2 Diamond Interchange)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

In accordance with Transportation Article 8-612 of the Maryland Code Annotated (1993 Repl. Vol.), we request the Montgomery County Council's concurrence to proceed with final project planning studies for I-270 at Watkins Mill Road Extended. If you have any questions, please feel free to call me or Mr. Neil Pedersen, our Director of Planning and Preliminary Engineering, who may be reached at 410-545-0411 or 1-888-204-4828.

Sincerely,

Parker F. Williams
Administrator

Enclosure
cc: Mr. Neil J. Pedersen, Director of Planning and Preliminary Engineering, Maryland State Highway Administration

bcc: The Honorable Sidney A. Katz, Mayor, City of Gaithersburg
Ms. Jean Chait, Montgomery County Department of Public Works and Transportation
Mr. John Clark, Montgomery County Department of Public Works and Transportation
Mr. Albert Gennetti, Director, Montgomery County Department of Public Works and Transportation
Mr. David B. Humpton, City of Gaithersburg
Dr. Glenn Orlin, deputy Staff Director, Montgomery County Council
Mr. Eric Soter, City of Gaithersburg
Mr. Clark Wagner, City of Gaithersburg
Ms. Anne Elrays, Environmental Analyst, State Highway Administration
Mr. Bruce M. Grey, Deputy Division Chief, State Highway Administration
Ms. Michelle D. Hoffman, Project Manager, State Highway Administration
Mr. Joseph Kresslein, Assistant Division Chief, State Highway Administration
Mr. Douglas Simmons, Division Chief, State Highway Administration
Ms. Cynthia D. Simpson, Deputy Director, State Highway Administration
Mr. Dennis Simpson, Assistant Division Chief, State Highway Administration
Mr. Glen Smith, Regional Planner, State Highway Administration
Mr. James Wynn, Assistant Division Chief, State Highway Administration

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

April 12, 2000

The Honorable Douglas M. Duncan
Montgomery County Executive
2nd Floor
101 Monroe Street
Rockville MD 20850

Dear County Executive Duncan:

Thank you for your recent letter responding to our inquiries on project planning studies at I-270 and Watkins Mill Road extended, particularly regarding Alternate 4. This letter provides some background information on Alternate 4.

Alternate 4, the partial diamond interchange that only provides access to and from the north along I-270, was initially proposed to be dropped from further consideration. This was as a result of concerns with traffic and the alternate's ability to satisfy the purpose and need of this study, which is to provide improved access to and from the transportation network to serve planned economic development in the designated growth areas of northern Gaithersburg. We have similar concerns over whether Alternate 6 could adequately address the purpose and need of this planning study.

Based on the preliminary environmental analysis, however, it appears that Alternate 4 is the only "build" alternate, other than Alternate 6, that avoids Section 4(f) impacts to the publicly owned Great Seneca Park. As per section 4(f) requirements, it is necessary that any impact to a 4(f) resource, such as the Great Seneca Park, be mitigated through avoidance, minimization, or compensation, with avoidance as the primary objective. Based on this fact, the Federal Highway Administration required that Alternate 4 be retained for detailed study. We anticipate that, as required, a thorough analysis of Section 4(f) avoidance, minimization, and mitigation measures will be undertaken during detailed studies of Alternates 2 and 3. Impacts to the Great Seneca Park may be avoided with these full interchange alternates, which may more adequately address the purpose and need of this study.

My telephone number is 410-545-0400 or 1-800-206-0770

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Thank you again for your letter. If you have any questions, please feel free to call me or Mr. Neil Pedersen, our Director of Planning and Preliminary Engineering, who may be reached at 410-545-0411 or 1-888-204-4828.

Sincerely,

Parker F. Williams
Administrator

cc: Ms. Pamela Stephenson, Environmental Analyst, Federal Highway Administration
Mr. Neil J. Pedersen, Director of Planning and Preliminary Engineering, State Highway Administration

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

March 10, 2000

The Honorable Ida G. Ruben
Chairperson, Montgomery County Senate Delegation
Senate of Maryland
100 James Senate Office Building
110 College Avenue
Annapolis MD 21401-1991

Dear Senator Ruben:

The State Highway Administration (SHA) has completed initial project planning studies at I-270 and Watkins Mill Road Extended, Project Number MO839B11, to provide improved access to and from the transportation network to serve planned economic development in the designated growth areas of northern Gaithersburg. Several build alternates were analyzed, each of which included the extension of Watkins Mill Road between MD 355 and MD 117 as either four or six lanes. With the exception of Alternate 6, all of the preliminary build alternates included a partial or full interchange connecting I-270 and Watkins Mill Road Extended. The preliminary alternates consisted of the following:

- Alternate 1 (No Build)
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- Alternate 3-I (3/4 Diamond Interchange)
- Alternate 4 (1/2 Diamond Interchange)
- Alternate 5 (Full Diamond Interchange with Western Collector-Distributor Lane Shift)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

Early in the planning stages, we developed concepts and prepared an environmental inventory of the area to identify social, economic, natural and cultural resources. We considered these resources in the development of alternates. On November 23, 1999, an Alternates Public Workshop was held at the Activity Center at Bohrer Park in Gaithersburg, where we presented the findings of the initial project planning evaluations to interested citizens and business representatives. A copy of the brochure distributed at the workshop is enclosed for your reference.

My telephone number is **410-545-0400 or 1-800-206-0770**

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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Subsequent to the Alternates Public Workshop, the public and agency comments were evaluated and several alternates were selected for the more detailed traffic, engineering, and environmental evaluations. These alternates include:

- Alternate 1 (No Build)
- Alternate 2 (Partial Cloverleaf Interchange)
- Alternate 3 (Full Diamond Interchange)
- Alternate 4 (1/2 Diamond Interchange)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

In accordance with Transportation Article 8-612 of the Maryland Code Annotated (1993 Repl. Vol.), we request the Montgomery County Council's concurrence to proceed with final project planning studies for I-270 at Watkins Mill Road Extended. If you have any questions, please feel free to call me or Mr. Neil Pedersen, our Director of Planning and Preliminary Engineering, who may be reached at 410-545-0411 or 1-888-204-4828.

Sincerely,

Parker F. Williams
Administrator

Enclosure
cc: Mr. Neil J. Pedersen, Director of Planning and Preliminary Engineering, Maryland State Highway Administration

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

March 10, 2000

The Honorable Michael L. Subin
Chairman, Montgomery County Council
100 Maryland Avenue
Rockville MD 20850

Dear Chairman Subin:

The State Highway Administration (SHA) has completed initial project planning studies at I-270 and Watkins Mill Road Extended, Project Number MO839B11, to provide improved access to and from the transportation network to serve planned economic development in the designated growth areas of northern Gaithersburg. Several build alternates were analyzed, each of which included the extension of Watkins Mill Road between MD 355 and MD 117 as either four or six lanes. With the exception of Alternate 6, all of the preliminary build alternates included a partial or full interchange connecting I-270 and Watkins Mill Road Extended. The preliminary alternates consisted of the following:

- Alternate 1 (No Build)
- Alternate 2 (Partial Cloverleaf Interchange)
- Alternate 2-I (Partial Cloverleaf Interchange with Eastern Shift of I-270)
- Alternate 3 (Full Diamond Interchange)
- Alternate 3-I (3/4 Diamond Interchange)
- Alternate 4 (1/2 Diamond Interchange)
- Alternate 5 (Full Diamond Interchange with Western Collector-Distributor Lane Shift)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

Early in the planning stages, we developed concepts and prepared an environmental inventory of the area to identify social, economic, natural and cultural resources. We considered these resources in the development of alternates. On November 23, 1999, an Alternates Public Workshop was held at the Activity Center at Bohrer Park in Gaithersburg, where we presented the findings of the initial project planning evaluations to interested citizens and business representatives. A copy of the brochure distributed at the workshop is enclosed for your reference.

My telephone number is **410-545-0400 or 1-800-206-0770**

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

Mailing Address: P.O. Box 717 • Baltimore, MD 21203-0717
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Subsequent to the Alternates Public Workshop, the public and agency comments were evaluated and several alternates were selected for the more detailed traffic, engineering, and environmental evaluations. These alternates include:

- Alternate 1 (No Build)
- Alternate 2 (Partial Cloverleaf Interchange)
- Alternate 3 (Full Diamond Interchange)
- Alternate 4 (1/2 Diamond Interchange)
- Alternate 6 (Watkins Mill Road Extended between MD 355 and MD 117 with no general-purpose or mixed-flow interstate access)

In accordance with Transportation Article 8-612 of the Maryland Code Annotated (1993 Repl. Vol.), we request the Montgomery County Council's concurrence to proceed with final project planning studies for I-270 at Watkins Mill Road Extended. If you have any questions, please feel free to call me or Mr. Neil Pedersen, our Director of Planning and Preliminary Engineering, who may be reached at 410-545-0411 or 1-888-204-4828.

Sincerely,

Parker F. Williams
Administrator

Enclosure
cc: Mr. Neil J. Pedersen, Director of Planning and Preliminary Engineering, Maryland State Highway Administration

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

June 16, 2000

Mr. David Hondowicz
Policy Analyst
Office of Councilmember Phil Andrews
Montgomery County Council
100 Maryland Avenue
Rockville MD 20850

Dear Mr. Hondowicz:

Thank you for your continued interest in the planning study at I-270 and Watkins Mill Road Extended. You raise a very good question about which alternates are still under consideration. I apologize for any confusion and hope that this letter helps to clarify your concern.

Since the November, 1999 Alternates Public Workshop, we have reviewed agency and public comments and sought concurrence from the environmental regulatory agencies on four alternates to carry forward into the detailed planning stage for traffic, engineering and environmental studies, including the following:

- No Build (Alternate 1) – Consists of routine maintenance only.
- Baseline (Alternate 6) – Watkins Mill Road would be extended, but without interstate access for the general use traffic. (Options A, B, C)
- Alternate 2 – Watkins Mill Road would be extended and would have a partial cloverleaf interchange at I-270 with full interstate access. (Options A, B, C)
- Alternate 3 – Watkins would be extended and would have a full diamond interchange at I-270 with full interstate access. This alternate does not include the HOV direct access ramp. (Options B, C)

It was further requested by the Federal Highway Administration that Alternate 4 be retained for detailed study. Alternate 4 includes the extension of Watkins Mill Road with a partial diamond interchange at I-270 with access only to and from the north, including options A, B and C. The reason for retaining Alternate 4, even though the partial access may not fully address the purpose and need for this study, is because at the time, it was the only alternate, besides the No-Build Alternate and the Baseline Alternate, that did not impact the Great Seneca Park, a resource protected by Section 4(f).

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
1-800-735-2258 Statewide Toll Free

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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202

Alternates 2-I, 3-I and 5 were not retained for detailed study. Please note; however, that the US Army Corps of Engineers and the US Fish and Wildlife Service felt that any impacts to the stream along the west side of I-270 (a tributary to the Great Seneca Creek) should be avoided or minimized by any transportation improvements. Therefore, as part of Alternate 2, both Alternate 2-I (the eastern shift of mainline I-270 with the same interchange configuration) and Alternate 5 (a full diamond with the southbound Collector-Distributor, or local, lanes on the west side of the Wetland/Stream area) should be further evaluated as options to Alternate 2. Therefore, while not being carried forward as alternates on their own, Alternates 2-I and 5 will be further evaluated for comparison purposes to avoid or minimize any impacts to the tributary of Great Seneca Creek on the west side of I-270. This does mean, that as options to Alternate 2, these design concepts could be pursued.

Thank you again and I look forward to your continued involvement in the planning study at I-270 and Watkins Mill Road Extended. Please feel free to call me at 410-545-8547 or 1-800-548-5026.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and Engineering

By: _____
Michelle D. Hoffman
Project Manager
Project Planning Division

cc: Ms. Jean Chait, Transportation Planner, Montgomery County Department of Public Works and Transportation,
Mr. Clark Wagner, Urban Design Director, City of Gaithersburg
Ms. Anne Elrays, Environmental Manager, State Highway Administration

VIII. APPENDICES

APPENDIX

SCEA Historic Resources from the Maryland Inventory of Historic Places (MIHP)
(See Figure V-11)

Map I.D. No.	Name of Historic Resource	MIHP No.
9	Neelsville Presbyterian Church	19-05
10	Cider Barrel	19-33
11	E.G. Ward Farm	19-08
12	Log Cabin – demolished	19-12
13	Crawford - Lippart House	19-31
14	Germantown Historic District	19-13
15	Madeline V. Waters House	19-13-01
16	Bungalows	19-13-04
17	Pumphrey - Mateney House	19-13-05
18	Pumphrey Store	19-13-02
19	Liberty Milling Company	19-13-03
20	Suburban Bank Building (Germantown Railroad Station)	19-32
21	Wallich - Heimer House	19-13-07
22	Upton Bowman House	19-13-06
23	Old Germantown	19-17
24	Old M.E., Church, South (The Medical Clinic)	19-17-03
25	Old Trinity M.E. Church, site and cemetery	19-17-02
26	Snyder - King Barn #1 - demolished	19-18
27	F. Gusendorf Log House (Dunn Log House)	19-19
28	William Musser House, site and barn	19-20
29	William Cromwell House	19-23
30	Joseph A. Taney Farm (Strider Log Meathouse)	19-22
31	Clopper Mill Ruins (Maccubbin's Mill, Woodlands Mill)	19-21
32	Woodlands, site and smokehouse	20-29
33	St. Rose of Lima Roman Catholic Church (St. Rose's Church & Cemetery)	20-28
34	Briggs Farm #2	20-26
35	Locust Grove Farm (Rabbitt Farm)	21-001
36	B&O Railroad Underpass	20-30
37	Metropolitan Branch, B&O Railroad	0

Map I.D. No.	Name of Historic Resource	MIHP No.
	MIHP	
38	Waring Viaduct	19-10
39	Waring - Crawford Farm	19-11
40	Ricketts Cemetery	19-09
41	Watkins Mill, site	19-07
42	William Thompson House	14-53
43	Waters - Dorsey House (and Cemetery) - demolished, 1972	20-02
44	Early 20th Century Bungalow	21-090
45	Stone and Frame House	21-091
46	Colonial Revival Frame House-Office	21-045
47	Foster & Rosalie Summers House	21-169
48	Garrison W. Beall House	21-167
49	Henry H. Fraley House	21-155
50	Lewis Reed Residence	21-154
51	Late Victorian Frame House	21-088
52	Late Victorian Frame House	21-089
53	Late Victorian Barn	21-105
54	Big A Auto Parts (Lyric Theater)	21-147
55	Late Victorian Stucco House - demolished	21-131
56	Oscar Fulks/William Harding House (Mathias Service Center)	21-173
57	WSSC Water Plant (WSSC Pump Houses & Water Tank)	21-177
58	Early 20th Century Bungalow	21-104
59	Charles and Nan Fox House (Fox House)	21-171
60	Charles Beall, Jr. House (Elizabeth Gaither House)	21-170
61	House with Shingled Gable	21-012
62	House with Bargeboards	21-011
63	Frame House	21-010
64	Early 20th Century Bungalow	21-115
65	Early 20th Century Bungalow	21-116
66	Colonial Revival Frame House	21-117
67	Cole-Ward House	21-172
68	Colonial Revival Frame House	21-119
69	First Baptist Church Property (Crawfordtown)	21-174
70	Gartner + Patterson House (Crawfordtown)	21-176
71	Fletcher House (Crawfordtown)	21-175

Map I.D. No.	Name of Historic Resource	MIHP No.
	MIHP	
72	Mills House	20-24
73	Colonial Revival Frame House	21-160
74	R. Dorsey House	21-163
75	Late Victorian Frame House	21-114
76	Late Victorian Frame House	21-113
77	Late Victorian Frame House	21-112
78	Late Victorian House	21-146
79	Colonial Revival Frame House	21-095
80	Early 20th Century Bungalow	21-094
81	Gothic Revival House	21-145
82	Gothic Revival Frame House	21-111
83	Late Victorian Frame House	21-112
84	Colonial Revival Frame House	21-109
85	Late Victorian Frame House	21-110
86	Late Victorian Frame House	21-143
87	Late Victorian Frame House	21-144
88	Early 20th Century Bungalow	21-093
89	Early 20th Century Bungalow	21-092
90	Early 20th Century Bungalow	21-102
91	Early 20th Century Bungalow	21-100
92	Late Victorian Frame House	21-098
93	Colonial Revival Frame House	21-099
94	Early 20th Century Bungalow	21-097
95	Late Victorian Frame House	21-096
96	Inns of Court	21-125
97	Ballet 106	21-126
98	St. Martin's Parish House	21-140
99	Late Victorian Frame House	21-108
100	T-Shaped Frame House - DeSellum and Francis Avenues	21-009
101	Thomas Fulks House	21-129

Maryland Department of Transportation
State Highway Administration

Parris N. Glendening
Governor
John D. Porcari
Secretary
Parker F. Williams
Administrator

MEMORANDUM

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

FROM: Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

DATE: April 17, 2000

SUBJECT: Project Number MO839B11
I-270/Watkins Mill Road Extended
Montgomery County

RE: April 17, 2000 Interagency Field Review Meeting Conflict Resolution on ARDS

On Friday, April 7, 2000, members of the Project Team, and representatives of the U.S. Army Corps of Engineers (COE) and the U.S. Fish and Wildlife Service (FWS) met to initiate the second step of Conflict Resolution for the project's Alternates Retained for Detailed Study (ARDS) and discuss coordination with the I-270/US 15 Multi-Modal Corridor Study. Part of the meeting occurred over lunch with the remainder in the field. The following people attended:

Steve Cohen, Straughan Env. Services
Steve Elinsky, COE
George Fleagle, The Wilson T. Ballard Co.
Michelle Hoffman, SHA PPD
Melissa Kosenak, SHA PPD
Raymond Li, FWS
Mark Lotz, The Wilson T. Ballard Co.
Paul Wettlaufer, COE

INTRODUCTION

Michelle Hoffman stated that there were two basic purposes to the meeting, first to discuss coordination issues related to the alternates associated with the I-270/U.S. 15 Study, and second to initiate the first stage of Conflict Resolution regarding ARDS for this study. A summary of the discussion is as follows:

My telephone number is _____

Maryland Relay Service for Impaired Hearing or Speech
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OCT-23-2000(MON) 11:38 OE 410 209 5003 P.002

Additional Southbound HOV Lane (part of the I-270/US 15 Study)

With the progress of the I-270/US 15 Study, including the refinement of the alternates typical section, and the transitioning of the I-270/Watkins Mill Road Extended Study (I-270/WMRE) into the Detailed Studies Stage, the decision has been made to assume the widening of the I-270 mainline to provide an additional southbound through lane for HOV with all I-270/WMRE interchange alternates that do not include a Collector-Distributor roadway. This represents a modification of assumptions included in the plans and impacts matrices associated with the ARDS package. This modification would allow an accounting of the ultimate impacts within the portion of the I-270 corridor where Watkins Mill Road interchange improvements are proposed. Of the alternates planned to be retained for detailed study with the I-270/WMRE Study, the additional southbound through lane affects portions of the designs of Alternates 3, 4 and 6, but not Alternate 2, as described below.

Michelle reviewed the typical section alternates that are part of the I-270/US 15 Study using typical section handouts. Within the portion of the I-270 corridor most applicable to the I-270/WMRE study, there are two basic typical section options associated with the I-270/US 15 Study. The first, designated Combination Alternates A, B, C (Options 1 and 2), proposes four through lanes in each direction (same as existing, except the left southbound lane would be converted to HOV) with a two-lane C-D roadway in each direction. Steve Elinsky inquired as to why two lanes were needed on the C-D roadway. It was responded that generally Interstate C-D's are almost always two lanes for optimum operations; one acts as a through lane while the other serves traffic in close proximity to entrances and exits. A less impacting C-D option that could be considered is the painted C-D option that reduces the offset between the mainline and C-D. Consideration of this option, which is generally considered as a safety compromise as compared to regular C-D's, would be made only with Federal Highway Administration's (FHWA) approval. The second option, designated Combination Alternates A, B, C (Option 3), proposes widening the mainline only in the southbound direction to provide four general use lanes plus one HOV lane southbound while the northbound remains unchanged with three general use lanes plus one HOV lane.

Therefore, to remain compatibility with the I-270/US 15 Study, I-270/WMRE Alternates 3, 4 and 6 will be modified to include the additional southbound through lane, and Alternate 2 will remain unchanged, except for slight modifications to match the exact C-D typical section dimensions prescribed with the I-270/US 15 Study. The inclusion of the additional southbound through lane will increase the shoulder width assumed in the areas of auxiliary lanes in the vicinity of merges and diverges. Studies are underway to determine the changes in overall impacts for each alternative. Based on a meeting held with Ms. Pamela Stephenson of FHWA on March 31, 2000, the differences in impacts with the revised alternates, as compared to the impacts presented in the ARDS package, will be reviewed with FHWA as soon as possible to determine whether or not the ARDS package needs to be revised.

A-5

Alternate 3 – Gore Shift of Southbound I-270 Ramp towards MD 124

In a previous Interagency Meeting and in their letter dated March 9, 2000, representatives of the COE recommended moving the proposed gore of the southbound I-270/MD 124 Alternate 3 exit ramp to a point south of the existing retaining wall to reduce stream impacts which would decrease the deceleration lane. This issue has been investigated, and George Fleagle explained that such a shift would not be possible without compromising AASHTO recommended criteria of 1,000-foot spacing for successive ramp entrances (Green Book Figure X-72). Since Alternate 3 braids the southbound exit ramp to MD 124 under the southbound entrance ramp to I-270 from Watkins Mill Road, a southerly shift in the exit ramp would necessitate a southerly shift of the entrance ramp gore and taper which is already right at the 1,000-foot minimum distance threshold from the existing MD 124 entrance ramp.

Shift of Southbound I-270 Exit Ramp to Watkins Mill Road with Alternates 2, 3 and 4

At the Jurisdictional Delineation (JD) Interagency Field Review for the project, held in late 1999, Steve Elinsky reviewed preliminary concept plans for the southbound I-270 exit ramp to Watkins Mill Road (Option 1) and recommended a northerly shift of the gore and westerly shift of the ramp alignment to cross the Great Seneca Creek tributary at a more desirable point outside the wooded area (Option 2). This ramp shift was incorporated in these alternates, submitted to the District R/W Office for estimates and included in the ARDS analysis. The original ramp alignment was submitted to the District R/W Office as part of Alternate 2-I and was found to require 13.25 acres less R/W, corresponding to a cost difference of $3.7 million.

The two alternative ramp locations were reviewed in the field. A third location, basically between the previous two, was suggested by COE representatives to be developed conceptually (Option 3). It was decided that this ramp will be developed, and after sufficient engineering analysis is completed, a meeting will be held with the COE to consider dropping the northernmost ramp alignment, depending upon the findings. A minor stream relocation at a protruding elbow of the stream can be assumed in developing the third ramp alignment.

Eastern Shift of Alternate 2

Preliminary Alternate 2-I represented basically the same interchange design as Alternate 2, but included an eastern shift of the entire I-270 mainline of up to 45 feet over a distance of approximately one mile to avoid approximately 700 linear feet of stream relocation on the west side of I-270. Alternate 2-I was recommended to be dropped in the ARDS package based on cost, maintenance of traffic, safety/constructibility issues and R/W impacts along the east side. Comments on the ARDS package from FWS called for retaining Alternate 2-I.

A-6

The Wilson T. Ballard Company has taken a slightly more detailed look at maintenance of traffic issues and found that it would be feasible to laterally shift the mainline of I-270; however, it would require four construction stages, extensive nighttime construction, and lane shifts and lane/shoulder width reductions that would reduce capacity on this heavily traveled portion of I-270.

Based on the redundancy of Alternate 2-I with Alternate 2, and the requirement to study avoidance/minimization of the stream and wetland impacts, consensus was reached that Alternate 2-I could be dropped as a formal alternate, provided that the detailed studies stage of this project planning study include the development of Alternate 2 avoidance/minimization options, including a mainline shift(s) of similar nature to Alternate 2-I, that are developed to a level of detail comparable to the other alternates, and adequate documentation of the avoidance/minimization measures is completed. This decision may have little bearing on the total amount of engineering analysis to be completed, as compared to that necessary if Alternate 2-I were formally retained, but may help the schedule and environmental documentation in that it reduces the number of alternates and may not require the revision of the ARDS package.

The primary issue driving the need to consider shifting the mainline of I-270 is the tributary to Great Seneca Creek running parallel to I-270 for much of the study area, but closing to within 50 to 75 feet of an existing retaining wall at the edge of the existing shoulder for a length of approximately 650 feet, just north of the proposed Watkins Mill Road Extension overpass. Any widening of I-270 in this area would require engineering mitigation measures such as retaining wall reconstruction and/or stream relocation. Although this segment of stream channel is very straight and was probably relocated at some time during the construction or widening of I-270, it appears to be a mature, stable channel. The undesirability of stream relocation is reinforced by the presence of a 48-inch water main and 15-inch sewer main which zig-zag under the stream channel. Record utility plans will be obtained, and these mains will be among the issues considered in assessing each of the alternates and the avoidance/minimization options.

In developing detailed alternates analysis with any of the alternates in the vicinity of the 650-foot portion stream channel immediately adjacent to the road, consensus was reached that the following four options should be developed:

1. Construct a retaining wall at the proposed jersey barrier location and support the wall with as much 2:1 slope area as necessary to ensure that the relocated stream will not reach the wall (basically a lateral shift of the current condition).
2. Use 2:1 slopes off the back of the jersey barrier and translate the existing stream invert laterally as necessary to relocate the stream.
3. Use slope stabilization measures to allow 1:1 slopes off the back of the jersey barrier to minimize the amount of stream relocation.
4. Evaluate the overall gradient of the stream and, if feasible, allow the stream invert to be formed by the intersection of the fill slope (at whatever ratio works) with the existing back slope.

A-7

Alternate 5

As with Alternate 2-I, Alternate 5 was developed in Stage I, carried to the Alternates Workshop, recommended to be dropped in the ARDS package, but recommended to be retained as part of FWS comments on the ARDS. Consensus was reached, after considerable discussion, to treat Alternate 5 similarly to Alternate 2-I in that Alternate 5 will be dropped as a formal, stand-alone alternate, but an avoidance/minimization option(s), similar to Alternate 5, will be developed for Alternate 2. This option(s) will be developed to a level of detail comparable to the other alternates, and appropriate documentation of the avoidance/minimization measures will be completed. An eastern shift in the ramp alignment associated with the Alternate 5 ramp will be made to allow it to hug the wetland boundary more closely, while keeping a 50-foot buffer between the wetland and the limit of disturbance, to minimize R/W impacts.

This summarizes the discussion of topics at the April 7, 2000 Interagency Field Review Meeting. If you have any questions or comments, please advise Michelle Hoffman, the Project Manager at 410-545-8547, or Anne Elrays, the Environmental Manager, at 410-545-8562. Both of them can be reached toll-free in Maryland at 1-800-548-5026.

Attachments
cc: File
Project Team
Ms. Elzabeth Cole, MHT
Mr. Andrew Der, MDE
Mr. Ray Dintaman, DNR
Mr. Steve Elinsky, COE
Ms. Anne Elrays, SHA
Mr. Elder Ghigiarelli, MDE
Mr. Greg Golden, DNR
Mr. John Howard, NPS
Mr. Joseph Kresslein, SHA
Mr. Jeff Knoedler, NPS
Mr. Raymond Li, USFWS
Ms. Gay Olsen, SHA
Ms. Denise Rigney, EPA
Mr. Brian Smith, FHWA
Mr. Donald Sparklin, SHA
Ms. Jamie Stark, EPA
Ms. Pamela Stephenson, FHWA
Mr. David Whitaker, MOP
Mr. James Wynn, SHA
Ms. Bihui Xu, MOP

A-8

MEMORANDUM

TO: Ms. Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering
State Highway Administration

FROM: Wanda J. Brocato
Project Planning Division
State Highway Administration

DATE: July 27, 2000

SUBJECT: Interagency Review Meeting Follow-up

The following projects and/or topics presented at the July 19 Interagency Review (IAR) Meeting require follow-up coordination with the review agencies:

Project Presentations

US 1 Bel Air Bypass – Agency Comments on Project Update

- Corps of Engineers (COE) (Paul Wettlaufer) and (Steve Elinsky) requested that we make sure that conceptual mitigation (including streams) is included in the Selected Alternative & Conceptual Mitigation package, which will be sent out in two weeks (August 2) for concurrence/comment. State Highway Administration (SHA) (Monty Rahman) will follow-up on this matter.

- SHA Consultant (Gil Estridge) is coordinating a field review meeting concerning the stream restoration across from the Rahl property. The COE (Steve Elinsky), Maryland Department of the Environment (MDE) (David Boellner), Department of Natural Resources (DNR) (Larry Leasner) will be attending this field review to be scheduled for late August 2000.

- Maryland Department of Planning (MDP) (Bihui Xu) wanted to know if the current Park and Ride lot will be eliminated during construction, and what will happen to the MTA bus service. SHA (Vaughn Lewis) will follow-up on this and respond to Bihui on this matter.

MD 5 Metro Access Study – Agency Comments on Project Update

- MDP (Bihui Xu) wants the intersection at Auth Way and MD 5 to accommodate bicycles and pedestrians. SHA (Monty Rahman) is drafting a written response to Bihui on this matter.

I-270/Watkins Mill Road – Agency Comments on Issues

- Four alignment options for the northwest quadrant ramp were reviewed with Alternates 2, 3 and 4. COE (Steve Elinsky) and DNR (Greg Golden) agreed to drop the westernmost option provided bridges are evaluated where the other three options cross the tributary to Great Seneca Creek. COE (Steve Elinsky) requested that Rosgen studies be extended north to the area of the tributary ramp crossing. SHA team will look into this matter.

- SHA Consultant (Mark Lotz) asked if any agencies would like to review the Preliminary Draft document. These agencies are interested and will receive copies to review: COE (Steve Elinsky and Paul Wettlaufer), MDP (Bihui Xu), DNR (Greg Golden) wants two copies, and MDE (Cindy Nethen) wants two copies.

The next Interagency Review Meeting will be on **Wednesday, August 16.**

Project Managers, in conjunction with the Environmental Managers, Travel Forecasters, OED personnel and/or BDD-Hydraulics personnel, are to ensure that the appropriate follow-up coordination occurs. This information is necessary in order to move forward with these projects in the Merged process.

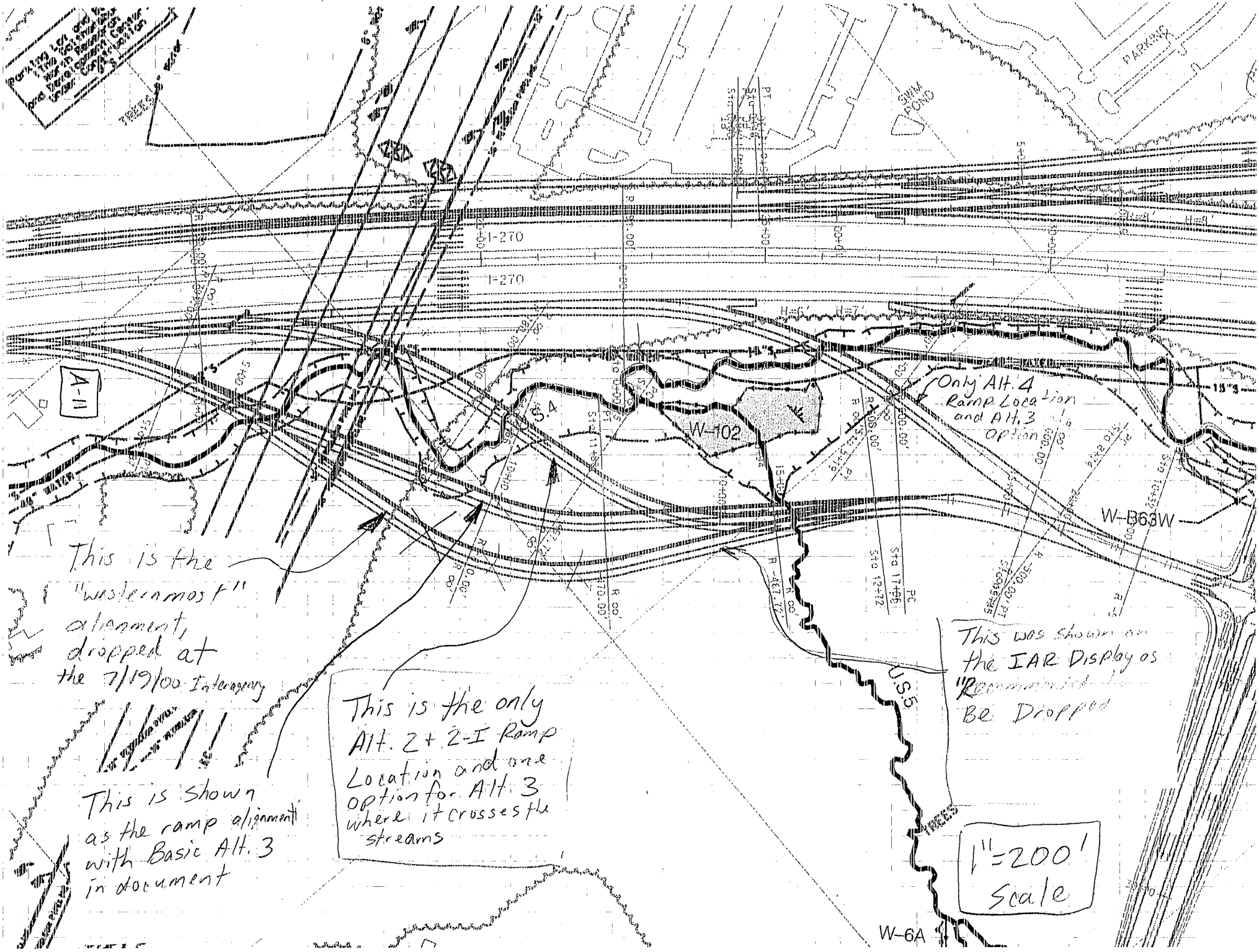
If you have any questions about this, please contact me at (410) 545-8569.

WJB:brl

cc:

SHA
Mr. Mark Duvall
Ms. Anne Elrays
Mr. Joseph Finkle
Mr. Bruce Grey
Ms. Michelle Hoffman
Mr. Randall Inouye
Ms. Susie Jacobs
Mr. Joe Kresslein
Ms. Gay Olsen
Mr. Neil Pedersen
Mr. Monty Rahman
Ms. Cathy Rice
Mr. Robert Sanders
Mr. Donald Sparklin
Ms. Lorraine Strow
Mr. Jim Wynn

AGENCIES
Mr. Harvey Bloom (BMC)
Mr. David Boellner (MDE)
Ms. Anne Bruder (MHT)
Ms. Elizabeth Cole (MHT)
Mr. Bob Cooper (MDE)
Mr. Joseph DaVia (COE)
Mr. Andrew Der (MDE)
Mr. Steve Elinsky (COE)
Mr. Elder Ghigiarelli (MDE)
Mr. Greg Golden (DNR)
Mr. J. Hamilton (MDE)
Mr. Steve Harman (COE)
Ms. Fatimah Hassan (MDOT)
Ms. Lisa Hoerger (DNR-CBCAC)
Mr. Larry Hughes (DNR)
Ms. Mary Huie (FHWA)
Mr. John Hurt (MDE)
Mr. Ron Kirby (MWCOG)


PARKING
SWIM POND
I-270
W-102
W-68W
W-6A
U.S.5
Only Alt. 4 Ramp Location and Alt. 3 option 3/3
This is the "westernmost" alignment, dropped at the 7/19/00 Interagency
This is shown as the ramp alignment with Basic Alt. 3 in document
This is the only Alt. 2 + 2-I Ramp Location and one option for Alt. 3 where it crosses the streams
This was shown on the IAR Display as "Recommended" to Be Dropped
1"=200' Scale

will have grade-separated interchanges beyond the lot. A crossing for pedestrians and bicycles will be provided over MD 5.

MOP (Bihui Xu) requested that the intersection of MD 5 and Auth Way be made more pedestrian and bicycle friendly.

SHA (Ken Briggs) requested a copy of the public hearing brochure.

DNR (Greg Golden) requested confirmation that there were no wetland or stream impacts associated with the project. SHA confirmed that there were no impacts to streams or wetlands resulting from the changes. DNR (Greg Golden) added that the three-dimensional models were very helpful in understanding the design.

Project No. MO839B11
I-270/Watkins Mill Road in Montgomery County
Status: Agency issues and avoidance/minimization of impacts to tributary of Great Seneca Creek
Presentation Goal: Agency Comments
Project Manger: Michelle Hoffman x8547
Environmental Manager: Anne Elrays x8562

Presentation Summary

SHA presented the Alternates Retained for Detailed Study at an Interagency Review Meeting. The draft Alternates Retained for Detailed Study (ARDS) was distributed in February 2000. SHA received comment letters from agency representatives concurring with the ARDS with revisions to Alternates 2 and 3 due to stream impacts. SHA conducted a field view on April 7, 2000 to resolve the issues with the Alternates Retained for Detailed Study.

An additional southbound lane may be needed if there are no collector-distributor lanes. This refinement affects Alternate 3 and minimally affects Alternates 4 and 6. The impacts were updated after this refinement and are presented in the revised environmental summary chart.

The original location of the ramp from southbound I-270 to Watkins Mill Road Extended was in the northwest quadrant. At the jurisdictional determination field view for wetlands, the COE suggested revising the ramp location so that the stream crossing is outside of the wooded area. SHA evaluated this revision and determined that it would require an additional 13 acres of right-of-way at an approximate cost of $4,000,000. Subsequently, SHA developed other options to reduce stream impacts.

Maryland Department of Transportation
State Highway Administration
Interagency Review Meeting
Meeting Summary
July 19, 2000

SHA noted that a Rosgen Level II analysis was underway for the tributary. The tributary has been divided into four reaches. The information will be used to compare the impacts of the stream crossing options.

The preliminary Draft Environmental Assessment/Section 4(f) Evaluation will be available for review on August 21 and, to expedite the review, a review meeting will be held on September 25. The document will be distributed to the public in early November and the location/design hearing will be held in December 2000. MOP, COE, DNR, and MDE requested copies of the preliminary draft document. DNR and MDE noted that they needed two copies.

Issues Discussed/Comments

DNR (Greg Golden) asked about the length of stream to be affected. SHA responded that approximately 60 to 70 linear feet of stream would be relocated. DNR (Greg Golden) requested that the options for a bridge and the avoidance of the stream crossing be retained so that the impacts and costs can be compared.

SHA noted that the options could not be incorporated into Alternate 2.

DNR (Greg Golden) expressed concern regarding the crossing of the stream at the elbow. He recommended that the stream be evaluated in more detail to ascertain impacts to the stream. The evaluation should be approached as a team that includes SHA, MDE and DNR. SHA commented that the detailed stream analysis could include that portion of stream as well.

DNR (Greg Golden) stated that according to DNR policy, if a stream is relocated, mitigation would be required elsewhere along the stream in addition to the reconstruction of the relocated stream segment.

Materials Distributed

Outstanding Merged-Process Correspondence (7/12/00)
Calendar (7/18/00)
Tentative Schedule of Project Activities and/or Information to be Provided to Resource Agencies (7/13/00)

Maryland Department of Transportation
State Highway Administration
Interagency Review Meeting
Meeting Summary
July 19, 2000

Attendance

Name	Representing	Telephone Number
Mark Duvall	State Highway Administration	(410) 545-8557
Gay Olsen	State Highway Administration	(410) 545-8504
Wanda Brocato	State Highway Administration	(410) 545-8569
Patricia Greene	State Highway Administration	(410) 545-8528
Joe Kresslein	State Highway Administration	(410) 545-8550
Darrell Sacks	State Highway Administration	(410) 545-8527
Jim Wynn	State Highway Administration	(410)545-8520
Cindy Nethen	MD Department of Environment	(410)631-8043
Greg Golden	MD Department of Natural Resources	(410) 260-8334
Bihui Xu	Maryland Office of Planning	(410)767-4567
Steve Elinsky	US Army Corps of Engineers	(410)962-4527
Paul Wettlaufer	US Army Corps of Engineers	(410)962-5676