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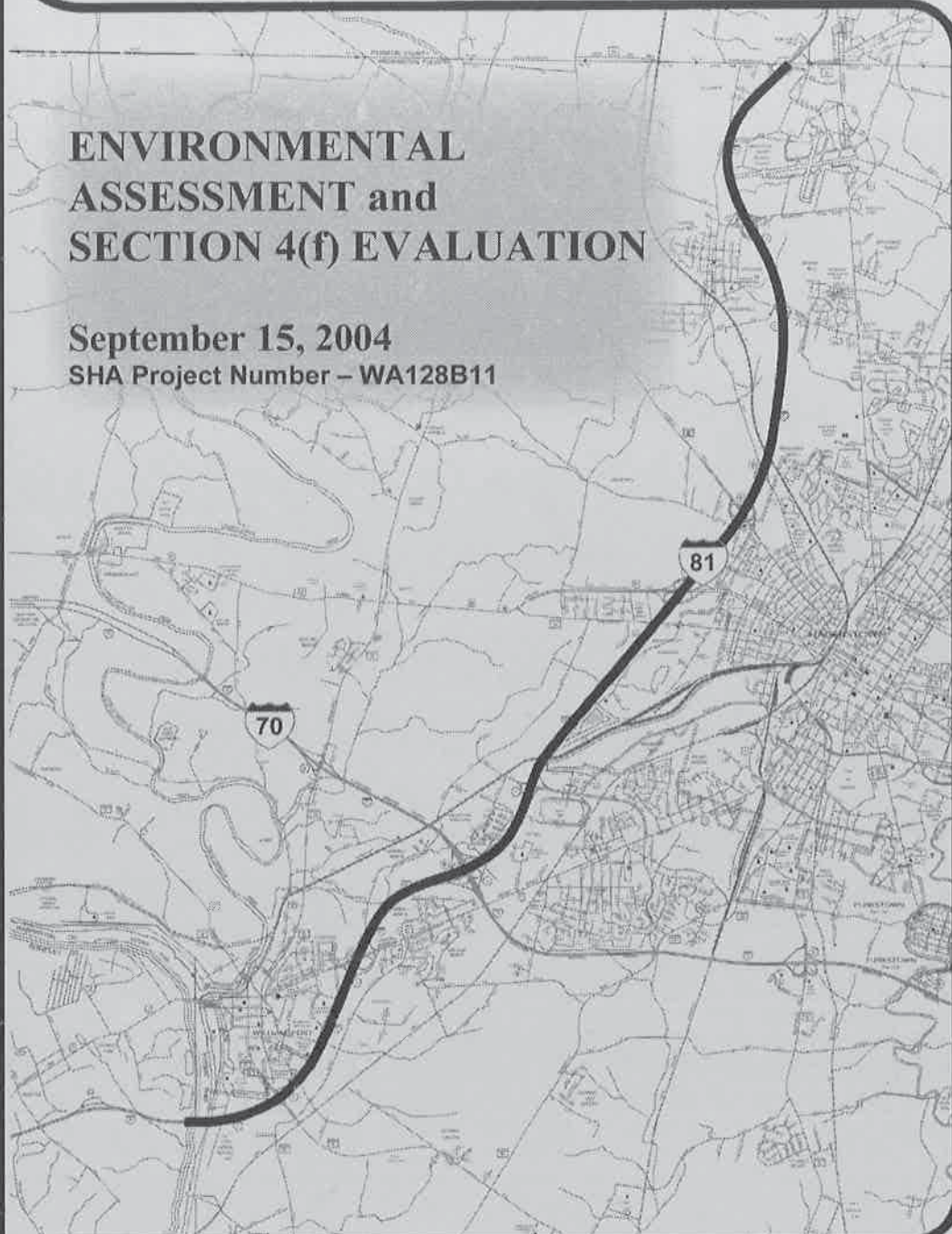
I-81 Improvement Project

From the West Virginia State Line to the
Pennsylvania State Line

ENVIRONMENTAL ASSESSMENT and SECTION 4(f) EVALUATION

September 15, 2004

SHA Project Number – WA128B11



Maryland Department of Transportation
State Highway Administration



**I-81 Improvement Project
From the West Virginia State Line to the Pennsylvania State Line**

ADMINISTRATIVE ACTION

**Environmental Assessment/Section 4(f) Evaluation
Washington County, Maryland**

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),
and CEQ REGULATIONS (40 CFR 1500 et seq.)

NEIL J. PEDERSEN
ADMINISTRATOR

DATE

Raja Veeramachaneni, Director
Office of Planning and
Preliminary Engineering

DATE

Nelson Castellanos
Federal Highway Administration
Division Administrator

SUMMARY

ADMINISTRATIVE ACTION

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

INFORMATIONAL CONTACTS

Additional information pertaining to this project may be obtained by contacting either:

Ms. Cynthia Simpson
Deputy Director
Office of Planning and
Preliminary Engineering
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202
Hours: 8:00 a.m. to 4:30 p.m.
Telephone: (410) 545-8500

Ms. Caryn Brookman
Federal Highway Administration
Maryland Division
City Crescent Bldg. – Suite 2450
10 South Howard Street
Baltimore, Maryland 21201
Hours: 7:30 a.m. to 4:30 p.m.
Telephone: (410) 779-7146

SUMMARY**PURPOSE AND NEED**

The purpose of this project is to improve safety and traffic operations along I-81 from the West Virginia state line to the Pennsylvania state line.

The traffic conditions along the Maryland portion of I-81 have deteriorated over time as the area has developed. Increasing truck traffic and geometric deficiencies in ramp configurations and acceleration/deceleration lane lengths at the interchanges have created merge and weave problems along the 12-mile corridor, contributing to a high number of crashes. Approximately 34 percent of the vehicles using I-81 are trucks, representing one of the highest rates in Maryland.

ALTERNATES CONSIDERED

Alternates considered include the following:

- Alternate 1 – No-Build
- Alternate 2 – Interchange Improvements
- Alternate 2A – Interchange Improvements with Collector-Distributor Roads
- Alternate 3 – Inside Widening
- Alternate 3A – Inside Widening with Collector-Distributor Roads
- Toll Options
- Truck Weigh and Inspection Station

SUMMARY OF ENVIRONMENTAL IMPACTS

A summary of the environmental impacts associated with the alternates under consideration is presented in this section and is summarized in Table S-1.

- Two businesses would be displaced by the Maugans Avenue Interchange options.
- Toll Options 2 and 4 would require the acquisition of active farmland from one farm operation.
- The Chesapeake and Ohio Canal National Historical Park would be affected by the build alternates. Widening of the I-81 bridge over the Potomac River would create temporary construction impacts in the park and would permanently alter views within the park.
- Toll options would allow for the build alternates to be constructed sooner.
- The toll options would have both beneficial and adverse economic affects on interstate commuters, trucking companies, and trucking-related businesses.
- The build alternates would have no adverse effect on cultural resources in the project area.
- Interchange improvements under all the build alternates would impact wetlands, streams, forest land, agricultural land, farmland soils, and floodplains.
- One site with potential hazardous materials may be affected.
- Compared to the no-build condition, minor changes in noise levels are anticipated with the build alternates.
- The State/National Ambient Air Quality Standards would not be exceeded by the build alternates.

Table S-1 Summary of Impacts										
RESOURCES	ALTERNATE				TOLL OPTION				WEIGH	
	1	2	2A	3	3A	3A, Option B	1	2	3	4
No-Build		Interchange Improvements	Interchange Improvements w/ Collector-Distributor Roads	Inside Widening	Inside Widening w/ Collector-Distributor Roads	Two Lane I-81 Mainline Parallel to the Collector-Distributor Road	Dual Toll Plaza b/wm. Potomac River and Conococheague Street	Toll Plazas at North and South ends of I-81, tolling drivers entering MD	Toll Plazas at North and South ends of I-81, tolling drivers exiting MD	Dual Toll Plazas at North and South ends of I-81
Socio-Economic Environment										
1 Displacements										
a. Residential	0	0	0	0	0	0	0	0	0	0
b. Business/Commercial	0	2	2	2	2	2	0	0	0	0
TOTAL DISPLACEMENTS	0	2	2	2	2	2	0	0	0	0
2 No. of Properties & Resources Affected										
a. Residential	0	14	16	15	18	18	2	4	3	7
b. Business/Commercial	0	12	17	12	17	17	0	1	2	3
c. Parkland/Recreation Area	0	0	0	1*	1*	1*	0	0	0	0
d. Church/School	0	0	0	0	0	0	0	0	0	0
e. Historical/Archaeological	0	0	0	1*	1*	1*	1	1	0	1
TOTAL PROPERTIES	0	26	33	28*	36*	36*	3	6	5	11
3 Right-of-Way Required - Acres										
a. Residential	0	6.70	8.95	6.80	9.30	7.70	5.28	5.08	5.36	10.44
b. Business/Commercial	0	9.40	18.20	9.40	18.30	18.30	0	1.31	3.93	3.24
c. Parkland/Recreation Area	0	0	0	1.20*	1.20*	1.20*	0	0	0	0
d. Church/School	0	0	0	0	0	0	0	0	0	0
e. Historical/Archaeological	0	0	0	1.20*	1.20*	1.20*	2.47	4.39	0	2.47
TOTAL ACRES	0	16.10	27.15	17.40*	29.00*	27.20*	7.75	10.78	9.29	16.15
Natural Environment										
1 Number of Stream Crossings	0	16	16	20	20	19	0	0	0	0
2 Linear Feet of Stream (Total)	0	6,254	7,186	8,239	9,953	9,149	0	0	50	50
Perennial	0	1,892	2,420	3,517	4,348	4,348	0	0	50	50
Intermittent	0	302	1,590	652	1,906	1,906	0	0	0	0
Ephemeral/Intermittent	0	3,177	2,372	3,187	2,895	2,895	0	0	0	0
Ephemeral	0	883	804	883	804	0	0	0	0	0
3 100-Year Floodplain Affected (acres)	0	2.00	4.00	2.10	4.00	4.00	0	0	0	0
4 Wetlands Affected (acres)	0	1.00	1.00	1.00	1.00	1.00	0	0	0	0
5 Woodlands Affected (acres)	0	7.00	15.00	7.00	16.00	16.00	6.86	4.08	4.70	6.86
6 Area of Prime Farmland Affected (acres)	0	4.00	9.00	4.00	11.00	11.00	0.11	5.19	0.07	5.25
7 Agricultural Land Affected (acres)	0	4.00	9.00	4.00	11.00	11.00	0.11	5.19	0.07	5.25
8 Urban or Built-Up Land (acres)	0	6.00	6.00	6.00	6.00	6.00	0	0	0	0
Cost										
Preliminary Engineering	\$0	\$30-\$35	\$40-\$45	\$55-\$60	\$60-\$65	\$60-\$65	\$5-\$10	\$5-\$10	\$5-\$10	\$5-\$10
Right-of-Way	\$0	\$10-\$15	\$15-\$20	\$10-\$15	\$20-\$25	\$20-\$25	\$5-\$10	\$5-\$10	\$5-\$10	\$5-\$10
Construction	\$0	\$190-\$195	\$240-\$245	\$350-\$355	\$400-\$405	\$400-\$405	\$25-\$30	\$30-\$35	\$30-\$35	\$40-\$45
Total	\$0	\$230-\$235	\$295-\$300	\$415-\$420	\$480-\$485	\$480-\$485	\$35-\$40	\$40-\$45	\$40-\$45	\$50-\$55

* A temporary construction easement would be needed from the Chesapeake and Ohio Canal NHP. The Chesapeake and Ohio Canal NHP is considered both a parkland and a historic site, and therefore, it is included in both.

ENVIRONMENTAL ASSESSMENT FORM

The following Environmental Assessment Form is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. Its use is in keeping with the provisions of 1500.4(k) and 1506.2 and 1506.6 of the Council of Environmental Quality Regulations, effective July 31, 1979, which recommend that federal, state and local procedures be integrated into a single process to reduce duplication.

The checklist identifies specific areas of the natural and socio-economic environment which have been considered while preparing this Environmental Assessment (EA). The reviewer can refer to the appropriate section of the document, as indicated in the "Comment" column of the form, for a description of specific characteristics of the natural or socio-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, a specific area of the environment was not identified to be within the project area or would not be impacted by the proposed action.

**Improvements to I-81, Maryland Veterans Memorial Highway
West Virginia State Line to Pennsylvania State Line
Washington County, Maryland**

ENVIRONMENTAL ASSESSMENT FORM	Yes	No	Comments
A. Land Use Considerations			
1. Will the action be within the 100-year flood plain?	X		See Section III.C.2.g
2. Will the action require a permit for construction or alteration within the 50-year flood plain?		X	See Section III.C.2.g
3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?	X		See Section III.C.2.f
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 III.C.1
6. Will the action require a grading plan or a sediment control permit?	X		See Section III.C.2.g
7. Will the action require a mining permit for deep or surface mining?		X	
8. Will the action require a permit for drilling a gas or oil well?		X	
9. Will the action require a permit for airport construction?		X	
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?		X	
11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland?	X		See Section III.A.3 and III.C.1
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 archeological or historical site or structure?	X		See Section III.B

ENVIRONMENTAL ASSESSMENT FORM	Yes	No	Comments
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 III.C.2.f
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 III.C.2.a, III.C.2.b, and III.C.2.c
17. Will the action require a permit for the drilling of a water well?		X	
18. Will the action require a permit for water appropriation?		X	
19. Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?		X	
20. Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives?		X	
21. Will the action result in any discharge into surface or sub-surface water?	X		See Section III.C.2.c
22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?	X		
C. Air Use Considerations			
23. Will the action result in any discharge into the air?	X		See Section III.F
24. If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor?		X	See Section III.F
25. Will the action generate additional noise, which differs in character or level from present conditions?	X		See Section III.E
26. Will the action preclude future use of related air space?		X	See Section III.A.3
27. Will the action generate any radiological, electrical, magnetic, or light influences?		X	

ENVIRONMENTAL ASSESSMENT FORM	Yes	No	Comments
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 III.C.3.d
29. Will the action result in the significant reduction or loss of any fish or wildlife habitats?	X		See Section III.C.3.a and III.C.3.b
30. Will the action require a permit for the use of pesticides, herbicides or other biological, chemical, or radiological control agents?		X	
E. Socio-Economic			
31. Will the action result in a preemption or division of properties or impair their economic use?	X		See Section III.A.5
32. Will the action cause relocation of activities, structures, or result in a change in the population density or distribution?	X		See Section III.A.1
33. Will the action alter land values?	X		See Section III.A.4.c
34. Will the action affect traffic flow and volume?	X		
35. Will the action affect the production, extraction, harvest, or potential use of a scarce or economically important resource?	X		
36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?		X	
37. Is the action in accord with federal, state, regional, and local comprehensive or functional plans, including zoning?	X		See Section III.A.5
38. Will the action affect the employment opportunities for persons in the area?	X		See Section III.A.4
39. Will the action affect the ability of the area to attract new sources of tax revenue?	X		See Section III.A.4.c
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?	X		See Section III.A.4.c
41. Will the action affect the ability of the area to attract tourism?		X	

ENVIRONMENTAL ASSESSMENT FORM	Yes	No	Comments
F. Other Considerations			
42. Could the action endanger the public health, safety, or welfare?	X		
43. Could the action be eliminated without deleterious affects to the public health, safety, welfare, or the natural environment?		X	
44. Will the action be of statewide significance?		X	
45. Are there any other plans or actions (federal, state, county, or private) that, in conjunction with the subject action could result in a cumulative or synergistic impact on the public health, safety, welfare, or environment?	X		See Section IV
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		See Environmental Assessment

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Table 3-28 – CO Concentration (ppm) in 2025 for the Toll Options

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PURPOSE AND NEED

I. PURPOSE AND NEED

A. PROJECT LOCATION AND DESCRIPTION

The Maryland Department of Transportation State Highway Administration (SHA) is conducting a Project Planning Study for Interstate 81 (I-81) in Washington County. I-81 serves as a major north-south highway and regional connector linking Maryland, Pennsylvania, Virginia, and West Virginia. The segment of I-81 included in the study extends from the West Virginia state line in the south, north to the Pennsylvania state line, a distance of approximately 12 miles (see Figure 1 - Regional Map, and Figure 2 - Project Area).

The typical existing cross section on I-81 includes a four-lane, divided roadway with two 12-foot lanes in each direction with 4-foot inside shoulders, 10-foot outside shoulders, and a variable (24 feet to 64 feet) grass median. A two-lane collector-distributor (C-D) roadway exists through the I-70 interchange. The existing typical sections for I-81 are provided in Figure 3.

B. PURPOSE OF THE PROJECT

The purpose of this project is to improve traffic operations and safety for vehicles using the I-81 corridor and to address needed transportation improvements.

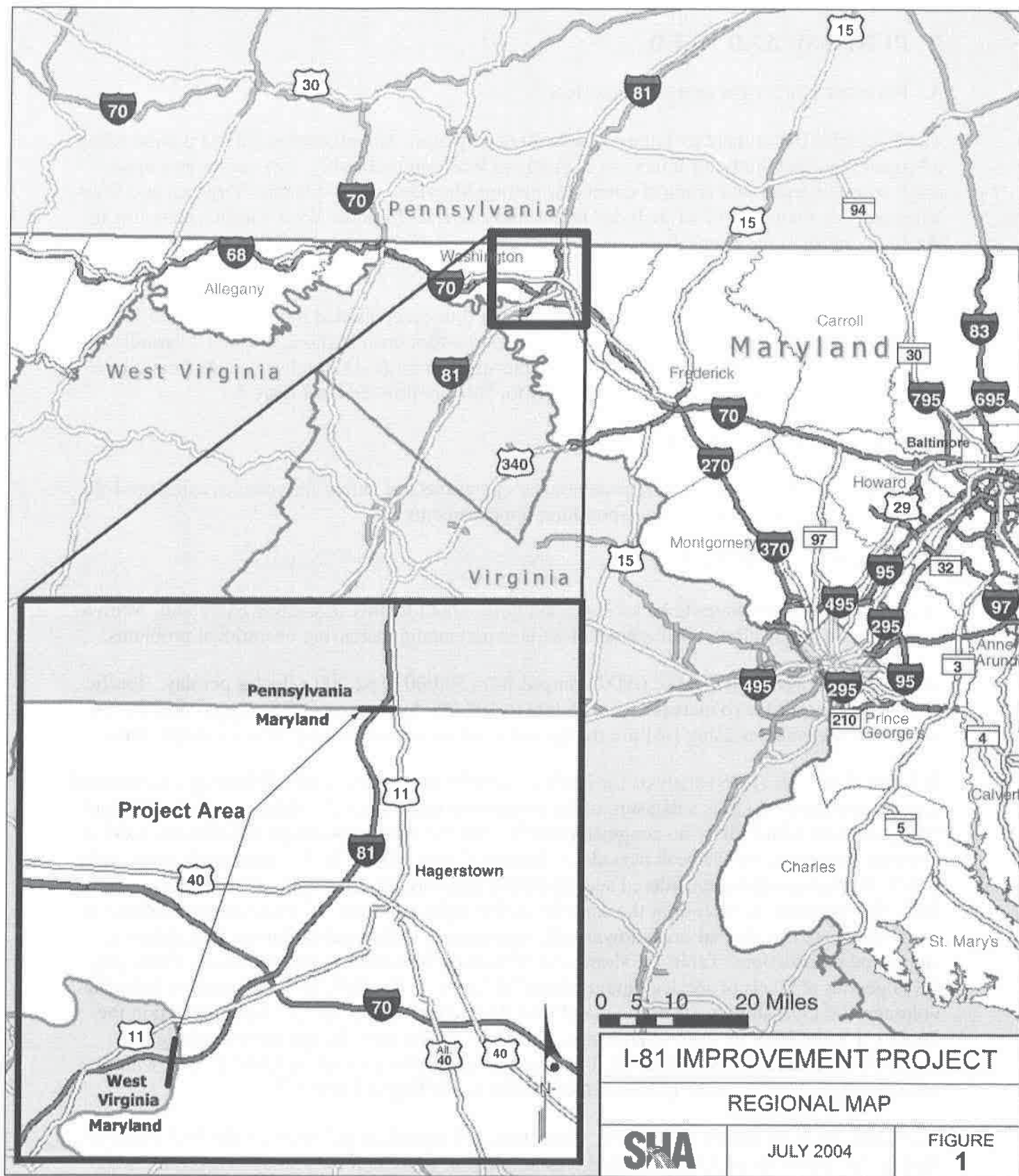
C. NEED FOR THE PROJECT

The I-81 corridor continues to be an important north-south facility in western Maryland. With a heavy truck volume along this highway, I-81 is experiencing increasing operational problems.

The 2000 Average Daily Traffic (ADT) ranged from 30,000 to 62,000 vehicles per day. Traffic volumes are projected to increase from 55,000 to 102,000 by the year 2025. Approximately 34 percent of the vehicles using I-81 are trucks, representing one of the highest rates in the state.

A Level of Service (LOS) analysis for 2000 and 2025 was performed for all freeway sections and interchange ramps. 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. Table 1-1 shows the LOS of each freeway segment on I-81. Currently, I-81 operates at levels of service ranging from "A" to "C." By 2025, with the increase in traffic volumes, the LOS along parts of the mainline will deteriorate to LOS "E." Not reflected in the Table 1-1 is the LOS for each interchange. For the I-70/I-81 interchange, the interchange currently operates at LOS D. In 2025, this interchange will be reduced to LOS "E" and with one segment of the southbound CD lane at the interchange falling to LOS "F."

From January 1998 to December 2002, there were 415 reported crashes along the I-81 mainline. During this period there were nine fatal crashes. The crash data for the study is listed in Table 1-2.



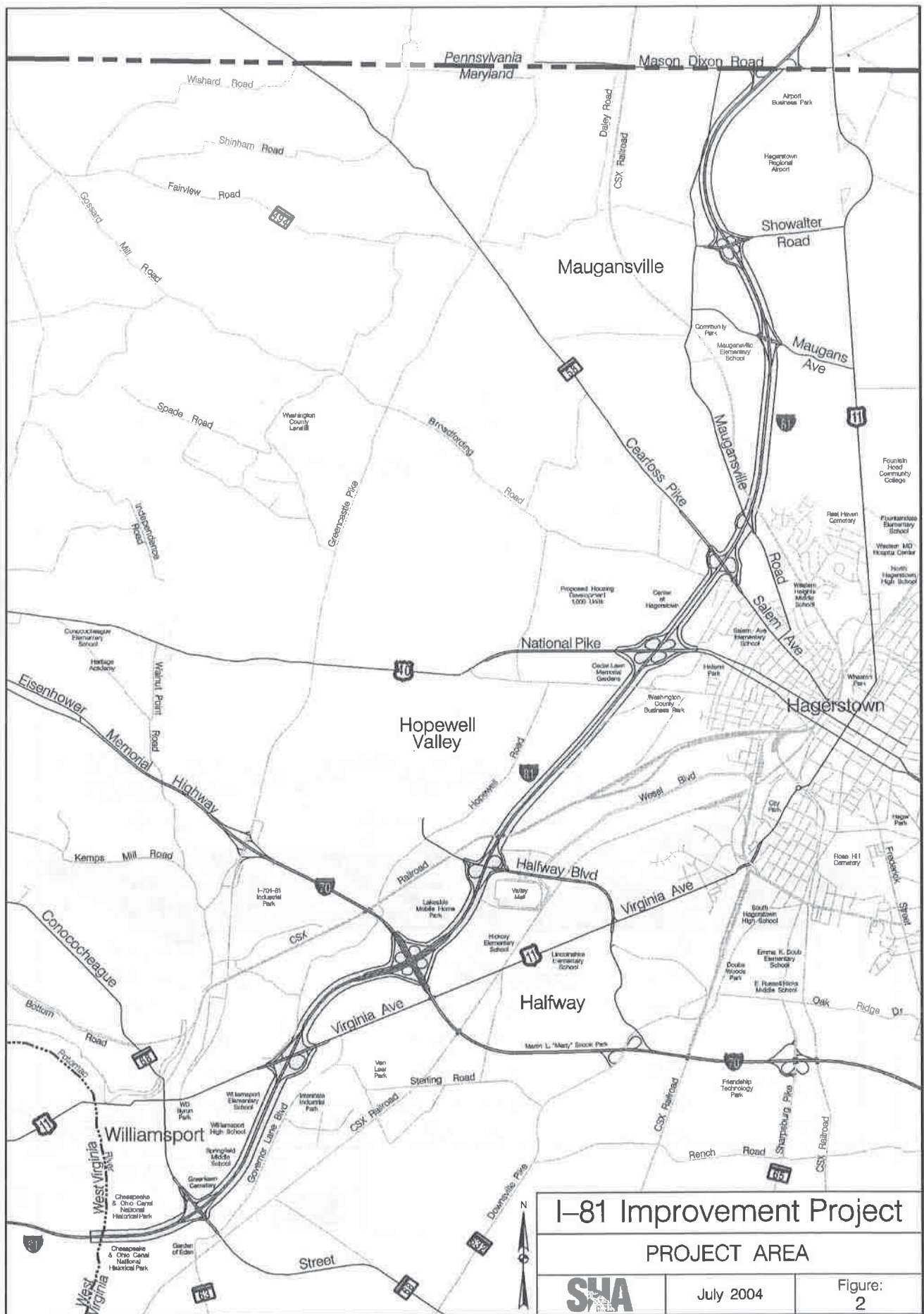


Table 1-2: I-81 Mainline Crash Data by Severity

Severity	1998	1999	2000	2001	2002	Total	Study Rate (Rate/100 mvm)	Statewide Avg. Rate
Fatal	3	0	4	0	2	9	0.8	0.4
Injury	41	42	49	40	33	205	18.1	21.1
Prop. Damage	38	43	43	42	35	201	17.7	32.1
Total	82	85	96	82	70	415	36.6	53.6

ALTERNATES CONSIDERED

II. ALTERNATES CONSIDERED

A. ALTERNATES PRESENTED TO THE PUBLIC AT THE ALTERNATES WORKSHOP

SHA considered a full range of alternates during the initial planning stages of the project. At the June 20, 2002, Alternates Public Workshop, six build alternates and the No-Build alternate were presented to the public. Four build alternates (Alternates 2, 2A, 3 and 3A) and the No-Build alternate were retained for detailed study, and two alternates (Alternates 4 and 4A) were dropped from further consideration. The description of these alternates along with the reason they were dropped from further consideration are described below.

Alternate 4 – Outside Widening

Under this alternate, the existing I-81 mainline would be widened to six lanes along the outside of the roadway. A 12-foot lane and a 12-foot shoulder would be added to the outside of the existing roadway, providing three 12-foot lanes, a 12-foot outside shoulder and a variable (4-foot to 10-foot) inside shoulder in each direction. The interchange improvements listed in Alternate 2 would also be included.

Alternate 4 was not recommended for further study. Widening to the outside requires two more property displacements than Alternate 3 and affects 36 more properties. Alternate 3, widening to the inside, provides the same level of service with less cost.

Alternate 4A – Outside Widening with Collector-Distributor Roads

Under this alternate, the existing I-81 mainline would be widened along the outside and a two-lane C-D road would be constructed, which would extend from the I-70 interchange to the Halfway Boulevard interchange. All interchange improvements listed in Alternate 2 and the C-D road modifications in Alternate 2A would be included in this alternate.

Alternate 4A was not recommended for further study. This alternate would require two more right-of-way displacements than Alternate 3A and affects 29 more properties. Alternate 3A provides the same level of service with less cost.

B. ALTERNATES RETAINED FOR DETAILED STUDY

Descriptions of each alternate retained for detail study are presented below. Designs of each build alternate including the weigh station and toll plaza options showing the proposed roadway improvements, right-of-way, land use, displacements, and other features are presented at the end of this section.

Alternate 1 – No-Build

The No-Build Alternate consists of routine maintenance and spot improvements to the existing roadway and interchanges. Minor improvements would occur as part of normal

would be three through lanes. The C-D road would be two lanes located adjacent to the existing I-81 mainline separated by concrete jersey barriers.

- **Option B – Two-Lane Mainline with Two Lane Collector-Distributor Road.** The mainline along I-81 between the I-70 and Halfway Boulevard interchanges would be two through lanes. The C-D road would be two lanes. The existing outside lane in the north and south directions along I-81 would become the inside lane for the C-D road between the I-70 and Halfway Boulevard interchanges.

Alternate 3A would improve traffic flow and safety, which meets the purpose and need, by improving interchanges and widening the mainline of I-81 and by adding a C-D road between I-70 and Halfway Boulevard. See alternates mapping at the end of this section for more detail information on the proposed improvements for each alternate.

Toll Plaza Options

Due to the state's current financial constraints, consideration is being given to utilizing toll financing for the proposed improvements. Toll plazas could be constructed at the northern and southern ends of I-81 in Maryland. Tolling would allow for additional funding for construction to help program and implement the improvements in a shorter period of time. Local trips within Maryland would not be tolled. The toll options would help meet the project's purpose and need by accelerating the time in which improvements to I-81 could be made.

Options for the toll plazas along I-81 have been included in the study; one of the following toll options may be chosen in conjunction with any of the build alternates. Each option would include a 2-acre site for one administrative building and parking, five cash/electronic toll collection lanes, and two high-speed electronic toll collection lanes. For all the build alternates, the construction and use of toll plazas are being evaluated.

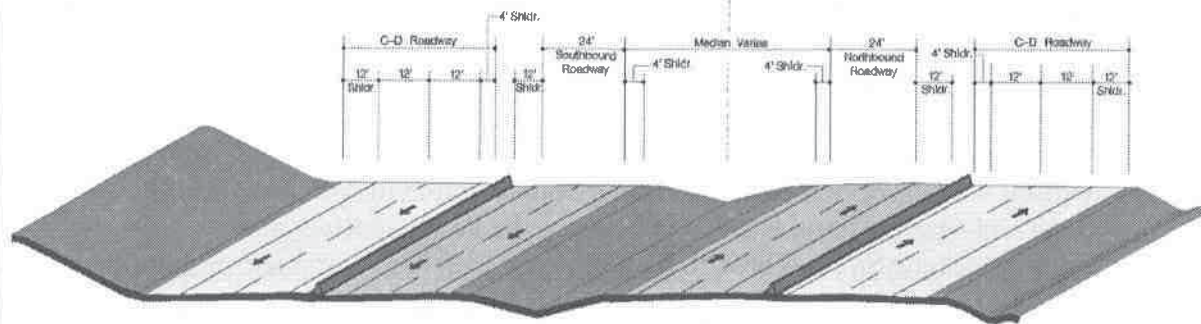
Four options are being considered for the placement of the toll plazas. The toll plaza locations for each option are shown in the Alternates Mapping.

- **Option 1** - With this option, tolls are proposed for both directions of I-81 between the Potomac River and Conococheague Street. Through the toll plazas, both high speed and cash toll lanes would be provided in each direction along the mainline. Drivers would pay tolls as they enter and exit Maryland near the West Virginia state line. The toll would be the same entering and exiting Maryland.
- **Option 2** - This option proposes to toll southbound I-81 between Showalter Road and Mason Dixon Road and along northbound I-81 between the Potomac River and Conococheague Street. Both high speed and cash toll lanes would be provided on I-81 through both toll areas, and only those drivers entering the state would pay tolls. The toll would be the same for vehicles entering Maryland from either West Virginia or Pennsylvania.

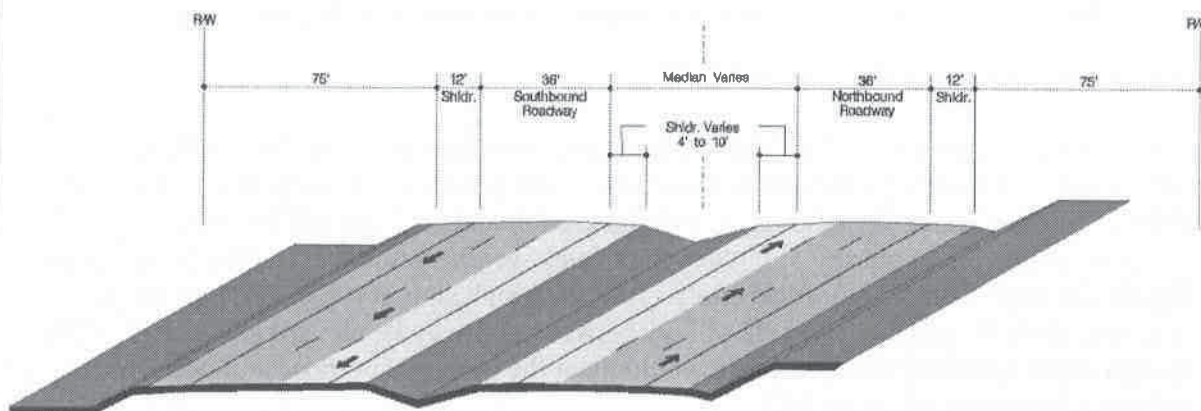
- **Option 3** - This option proposes to toll northbound I-81 between Showalter Road and Mason Dixon Road and along southbound I-81 between the Potomac River and Conococheague Street. Both high speed and cash lanes would be provided on I-81 through both toll areas, and only those drivers exiting the state would pay tolls. The toll would be the same for vehicles exiting Maryland into either West Virginia or Pennsylvania.
- **Option 4** - This option proposes tolling both direction of I-81, between Showalter Road and Mason Dixon Road, and between the Potomac River and Conococheague Street. Through the toll areas, both high speed and cash toll lanes would be provided in each direction along the mainline to accommodate the high traffic volumes. Drivers would pay tolls as they enter and exit Maryland near the West Virginia and Pennsylvania state lines. The toll would be the same entering and exiting Maryland at the West Virginia and Pennsylvania state lines.

Weigh and Inspection Station Option

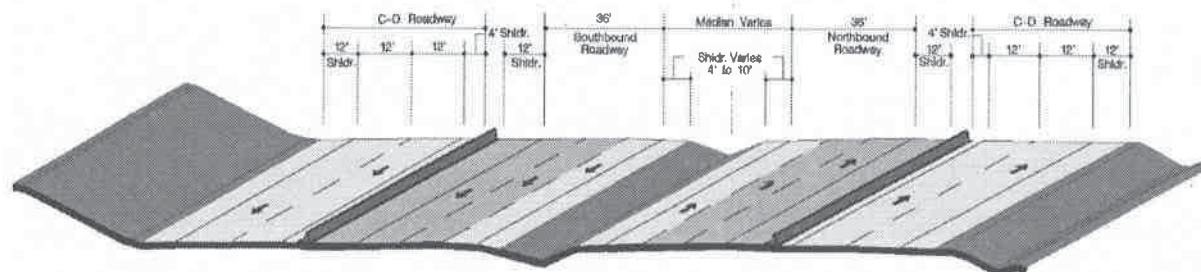
The 12-mile segment of I-81 in Maryland and the 26-mile segment of I-81 in West Virginia do not have a permanent weigh station. The two states, in conjunction with the Federal Motor Carrier Vehicle Safety Administration and the Federal Highway Administration, are exploring alternates for a truck weigh station that has the potential for significant improvements in truck safety. A truck weigh station is proposed on an 11-acre site along the southbound side of I-81 between Halfway Boulevard and US 40. The Weigh and Inspection Station Option would meet the project's purpose and need by helping to improve safety on I-81.



Alternate 2A - Interchange Improvements w/ Collector-Distributor Roads



Alternate 3 - Inside Widening



Alternate 3A - Inside Widening w/ Collector-Distributor Roads

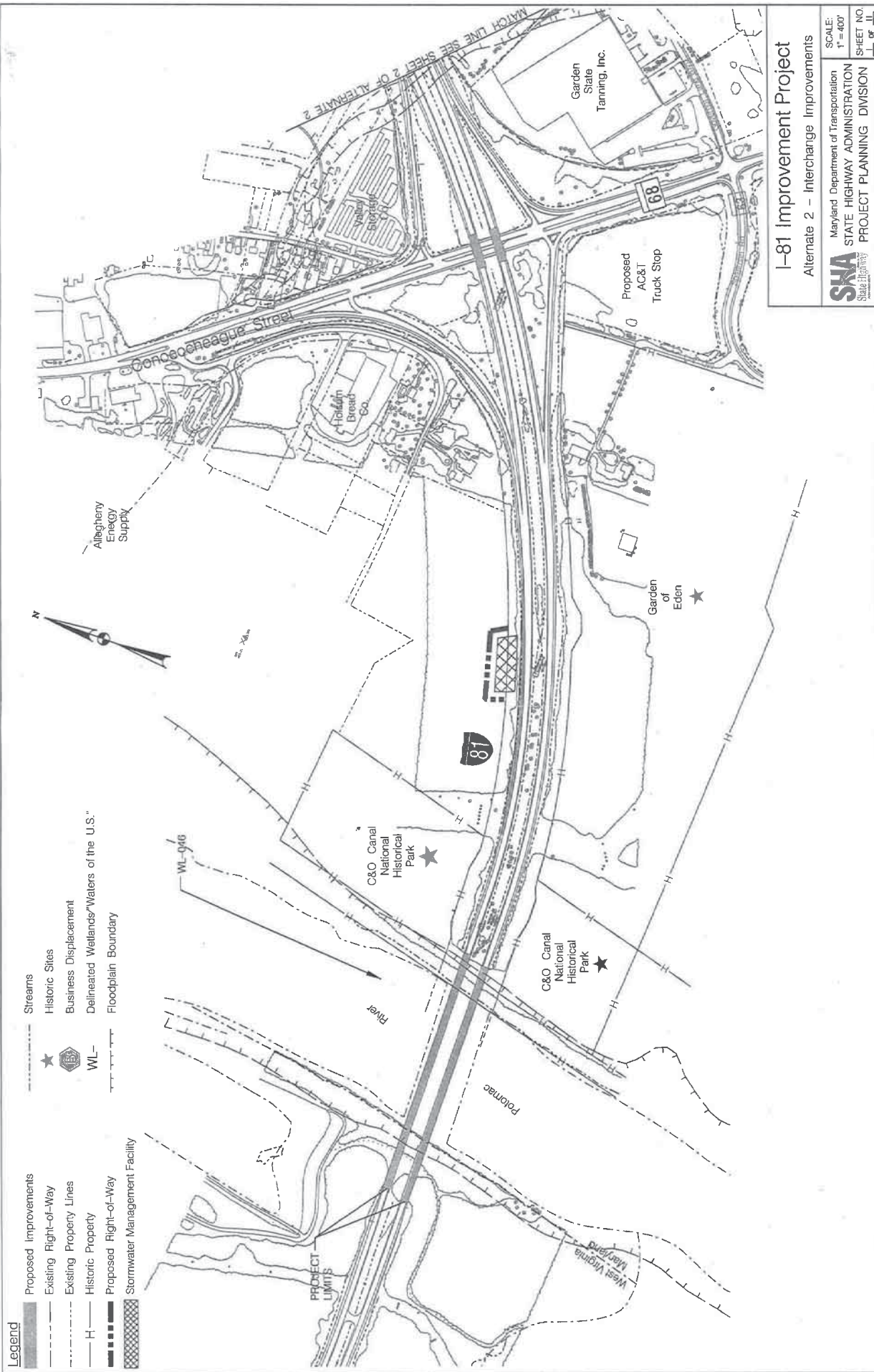
I-81 IMPROVEMENT PROJECT

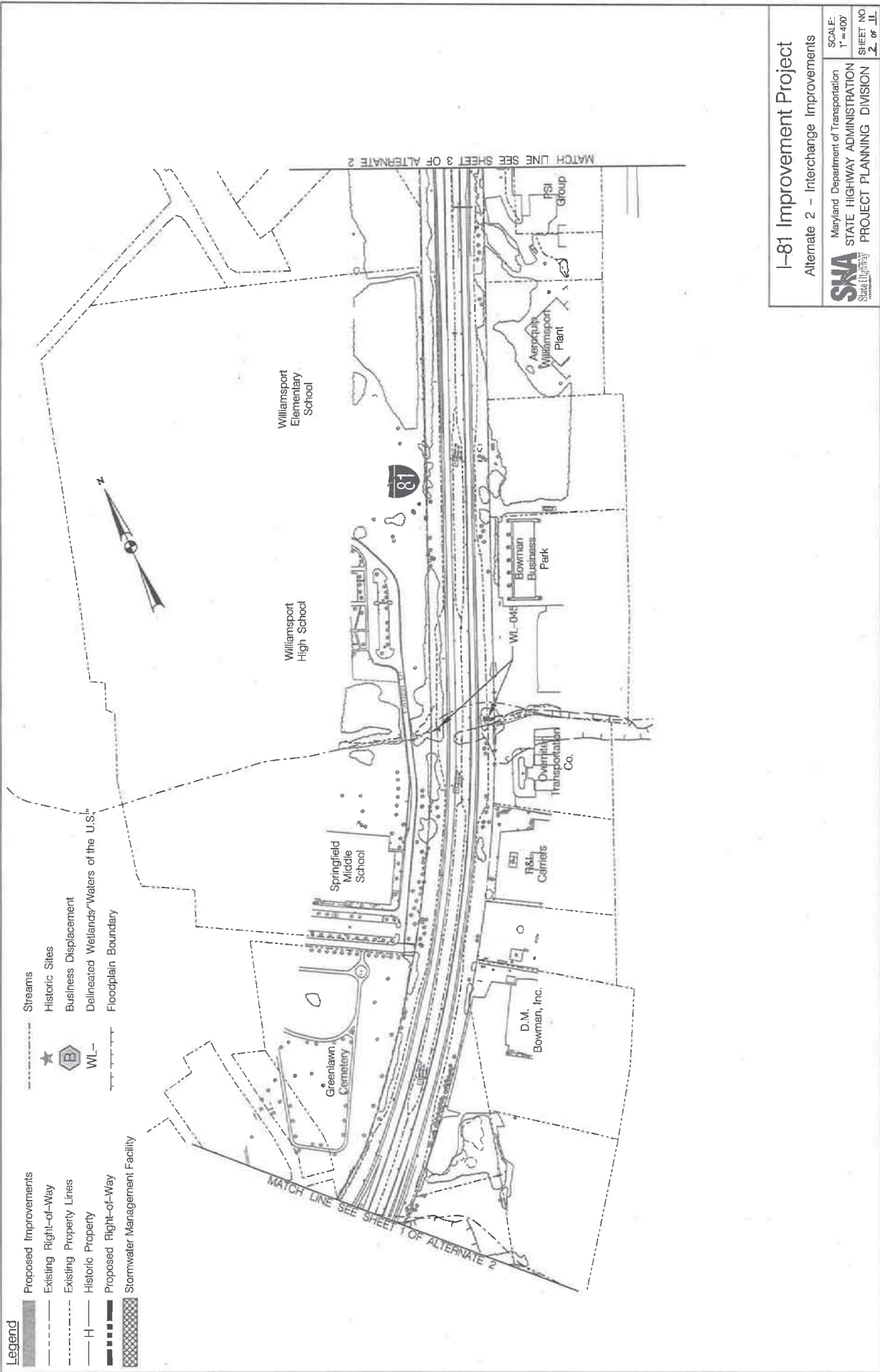
TYPICAL SECTIONS
ALTERNATES RETAINED FOR DETAILED STUDY

SHA

NOT TO SCALE

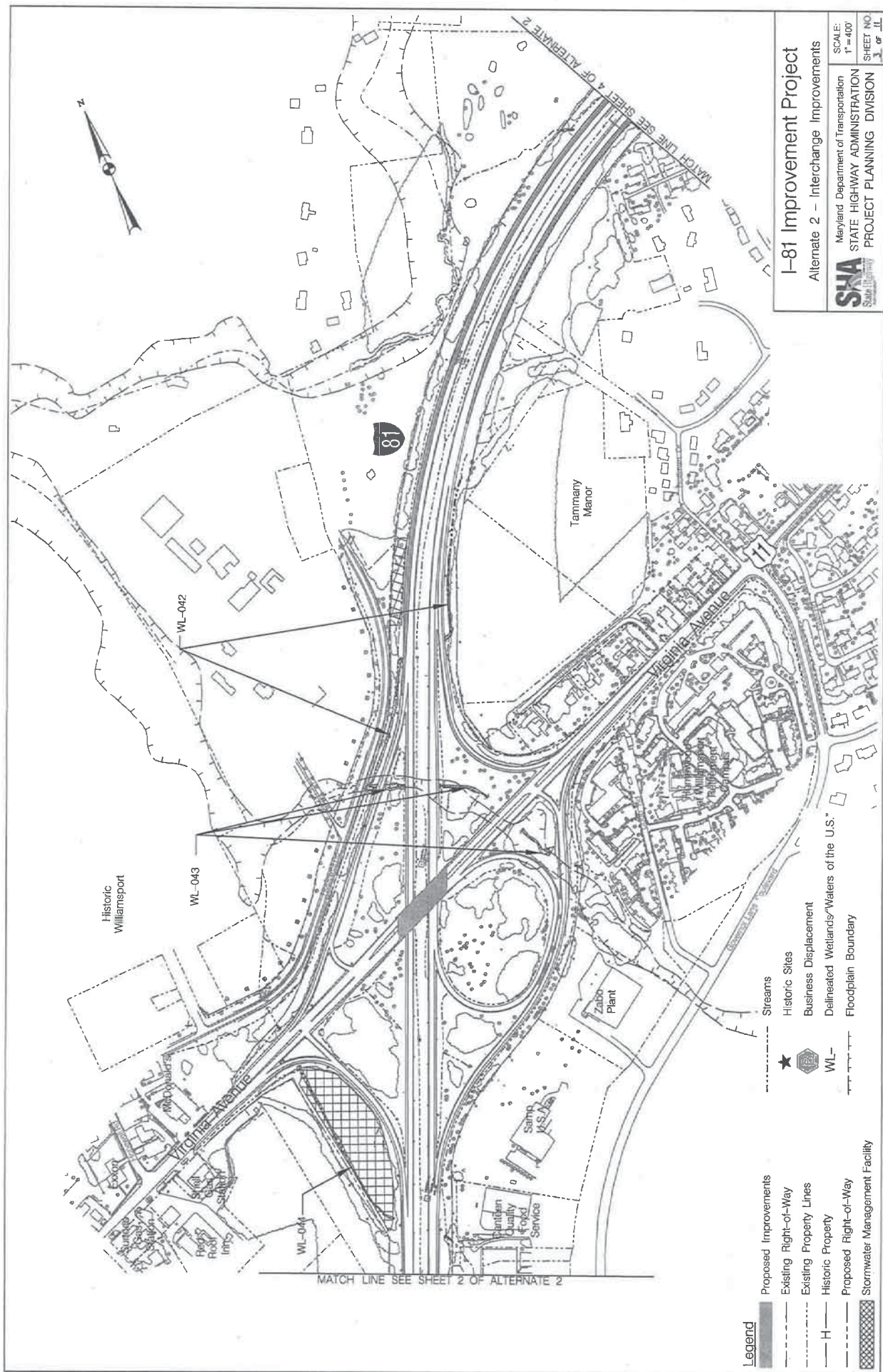
FIGURE
4





I-81 Improvement Project Alternate 2 - Interchange Improvements

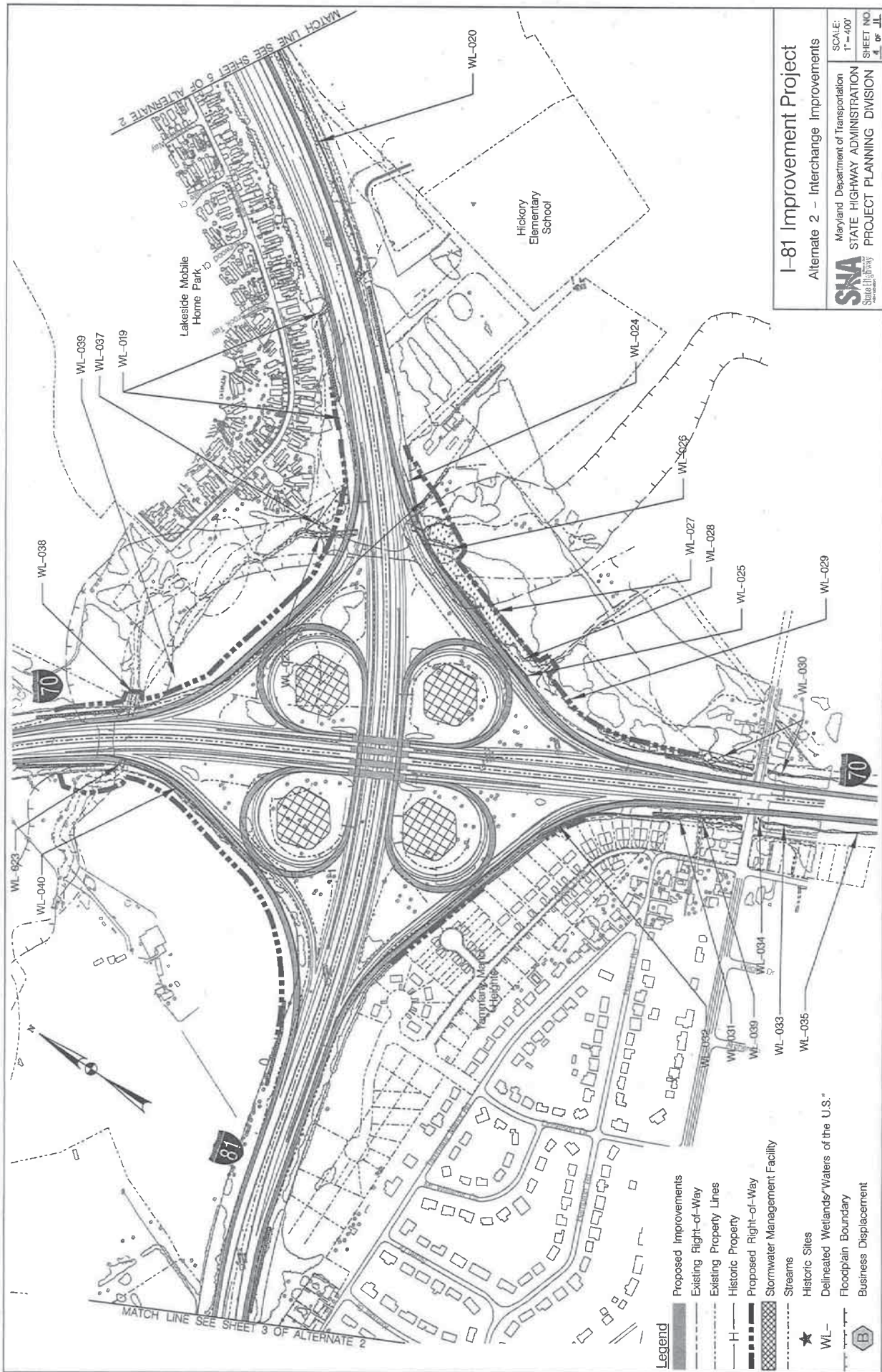
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	PROJECT PLANNING DIVISION	SHEET NO. 2 of 11



I-81 Improvement Project

Alternate 2 - Interchange Improvements

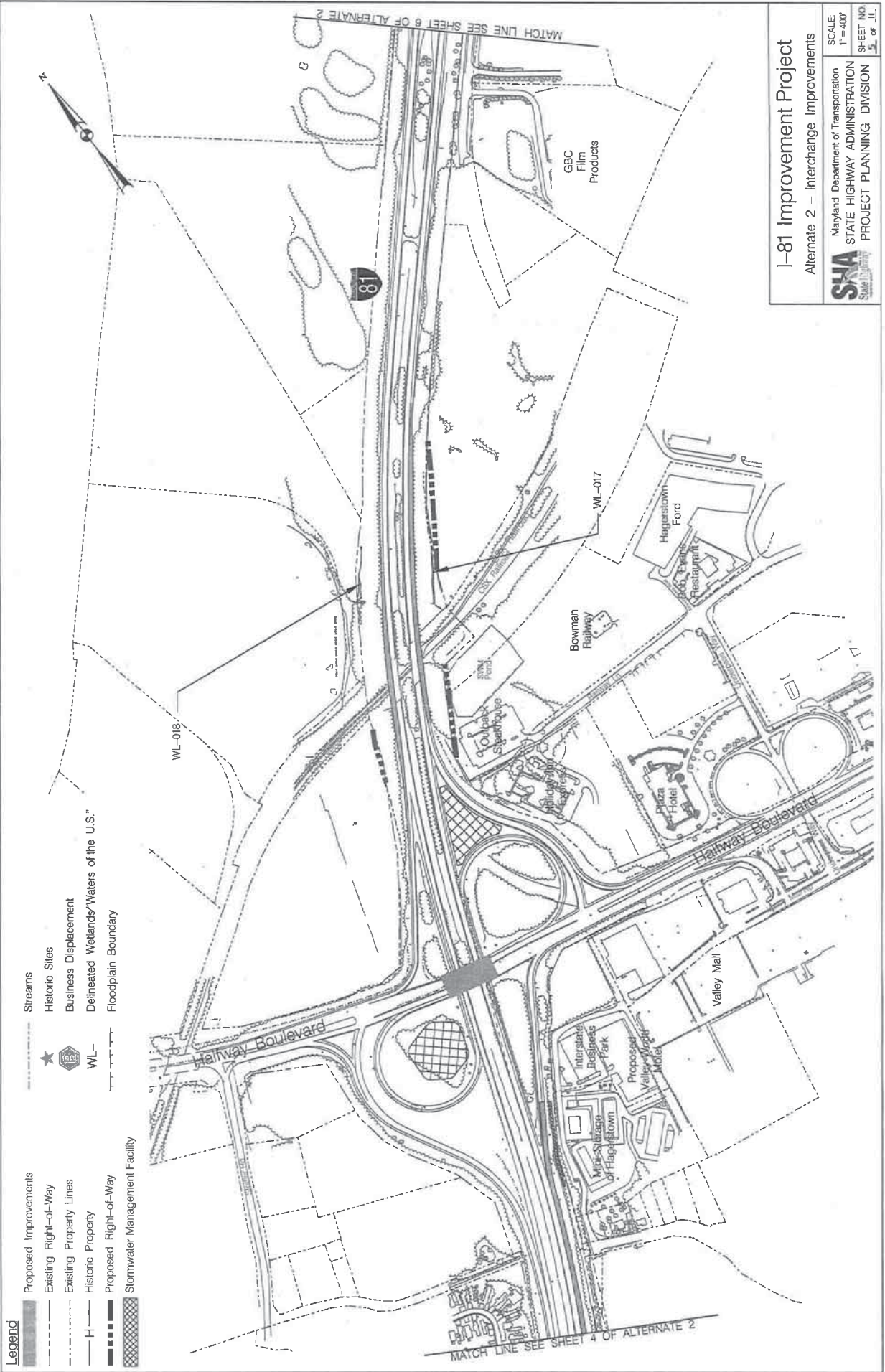
SHA
State Highway Administration
Maryland Department of Transportation
PROJECT PLANNING DIVISION
SCALE: 1" = 400'
SHEET NO. 1 of 11



I-81 Improvement Project

Alternate 2 - Interchange Improvements

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	PROJECT PLANNING DIVISION	SHEET NO. 4 OF 11



I-81 Improvement Project

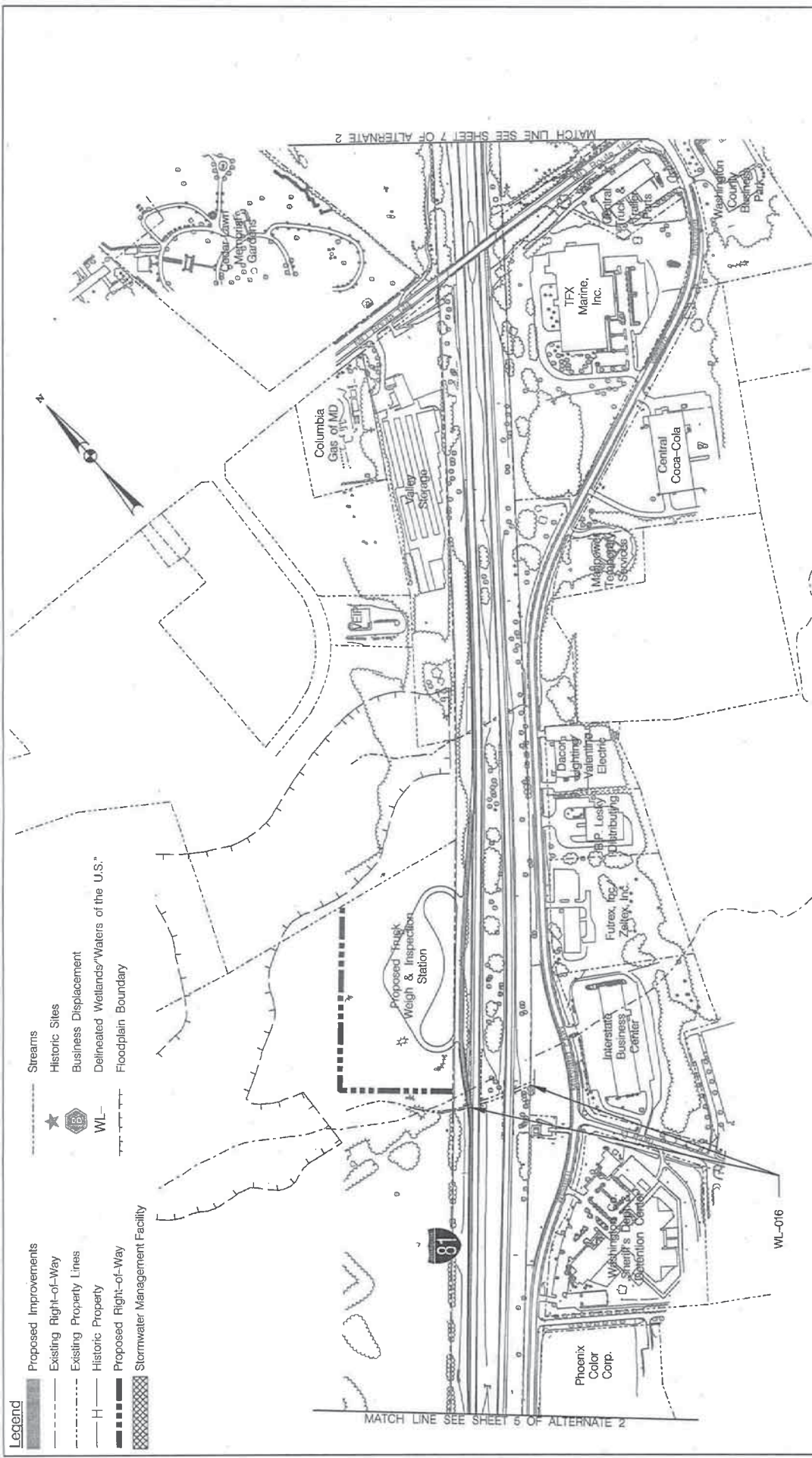
Alternate 2 - Interchange Improvements



Maryland Department of Transportation
 STATE HIGHWAY ADMINISTRATION
 PROJECT PLANNING DIVISION

SCALE: 1" = 400'

SHEET NO. 1 OF 11



- Legend**
- Proposed Improvements
 - Existing Right-of-Way
 - Existing Property Lines
 - H Historic Property
 - Proposed Right-of-Way
 - Stormwater Management Facility
 - Streams
 - Historic Sites
 - Business Displacement
 - Delineated Wetlands/Waters of the U.S.*
 - Floodplain Boundary

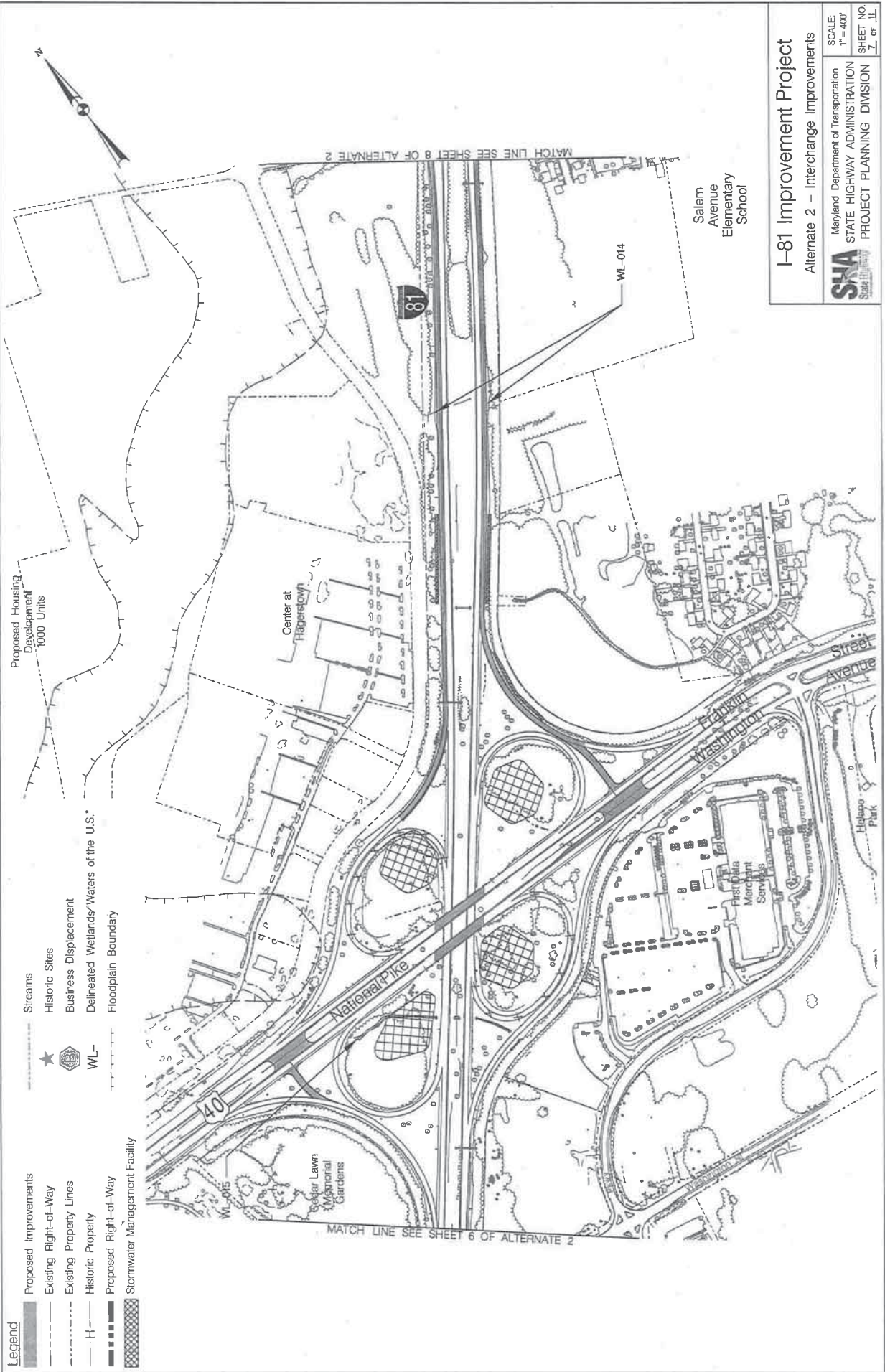
I-81 Improvement Project

Alternate 2 - Interchange Improvements

STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

SCALE:
1" = 400'

SHEET NO.
5 OF 11



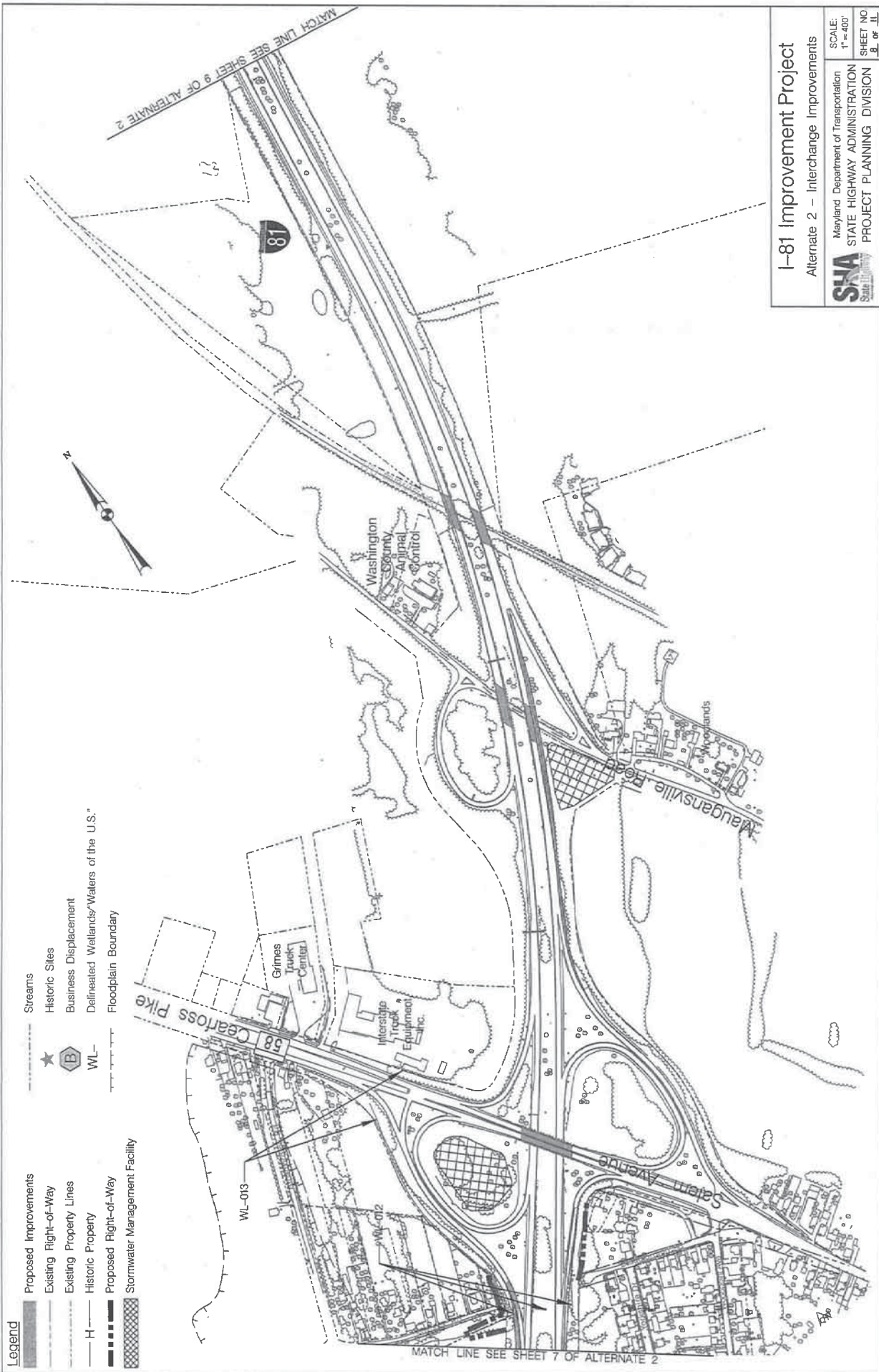
Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility

- Streams
- Historic Sites
- Business Displacement
- Delineated Wetlands/Waters of the U.S.
- Floodplain Boundary

I-81 Improvement Project
 Alternate 2 - Interchange Improvements

	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION	SCALE: 1" = 400'
	PROJECT PLANNING DIVISION	SHEET NO. 1 OF 11

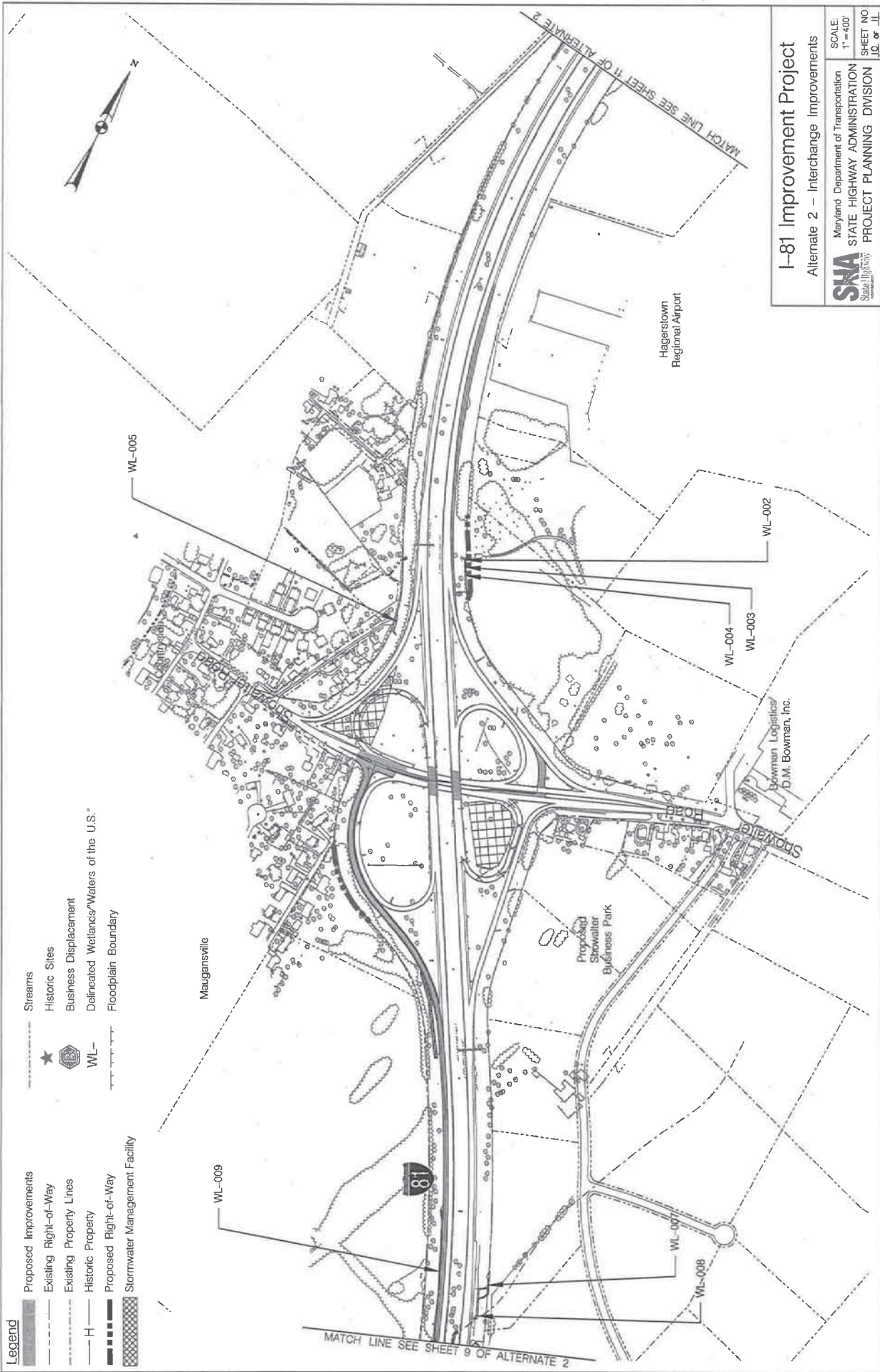


Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- H Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility
- Streams
- Historic Sites
- Business Displacement
- Delineated Wetlands/Waters of the U.S.
- Floodplain Boundary
- WL-

I-81 Improvement Project Alternate 2 - Interchange Improvements

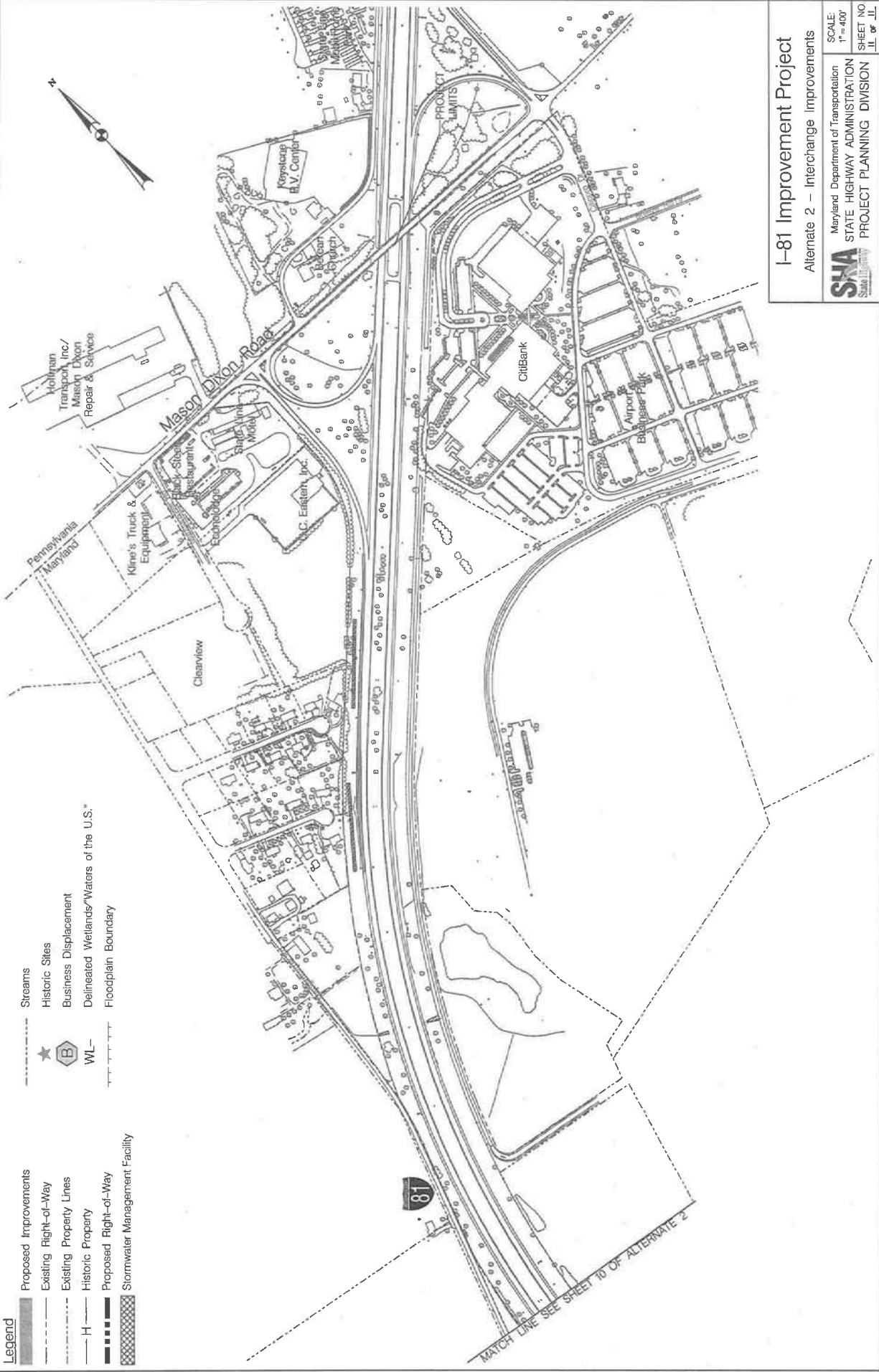

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 Maryland Department of Transportation
 STATE HIGHWAY ADMINISTRATION
 PROJECT PLANNING DIVISION
 SHEET NO. 8 OF 11



I-81 Improvement Project

Alternate 2 - Interchange Improvements

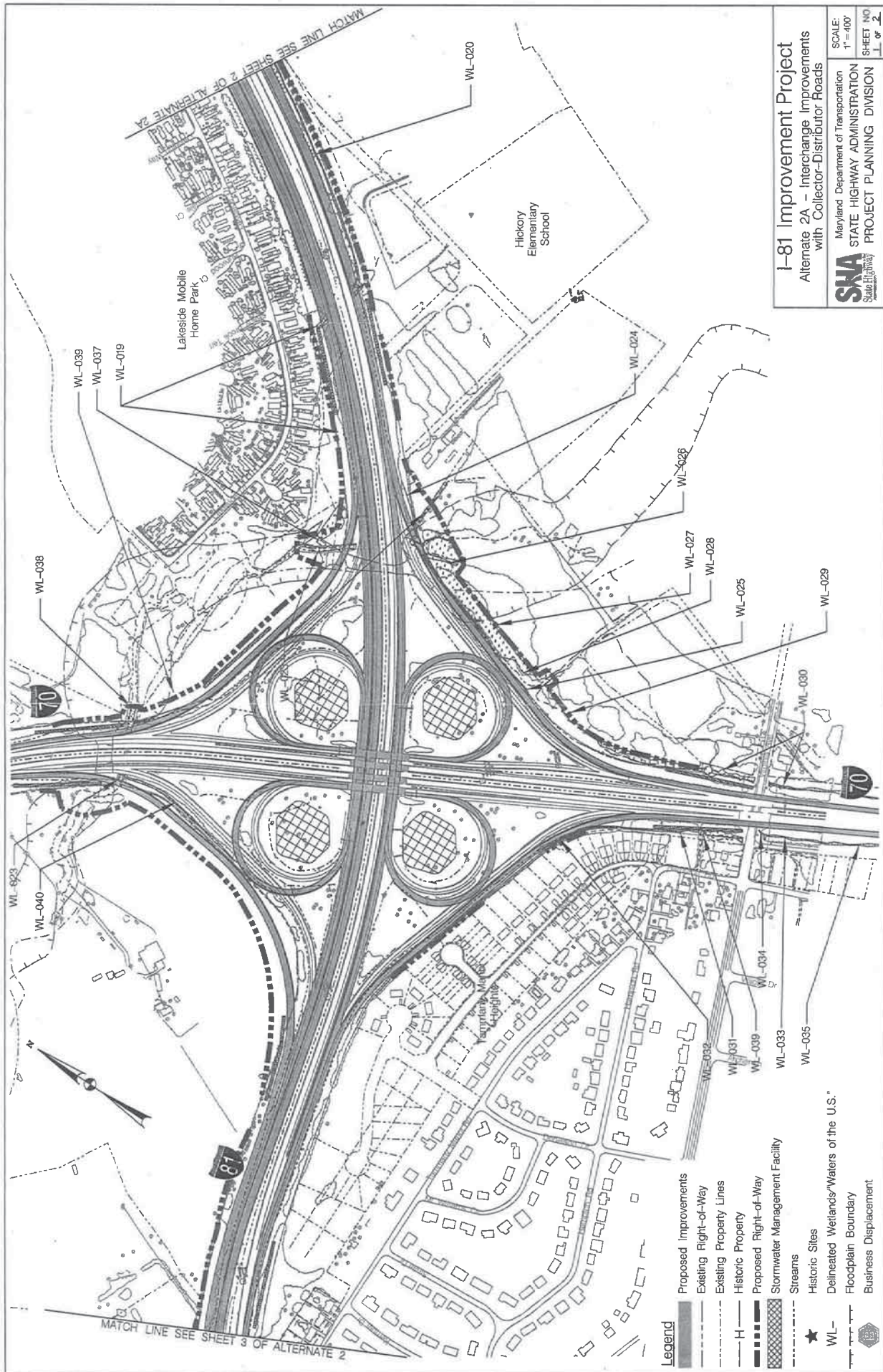
SHA Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION State Highway Administration	SCALE: 1" = 400'
	SHEET NO. 10 of 11
	PROJECT PLANNING DIVISION



I-81 Improvement Project


Alternate 2 - Interchange Improvements

SHA Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION PROJECT PLANNING DIVISION	SCALE: 1"=400'
	SHEET NO. II OF II



I-81 Improvement Project

Alternate 2A - Interchange Improvements
with Collector-Distributor Roads


SMA
 State Highway Administration
 Maryland Department of Transportation

SCALE:
1" = 400'

SHEET NO.
1 of 2

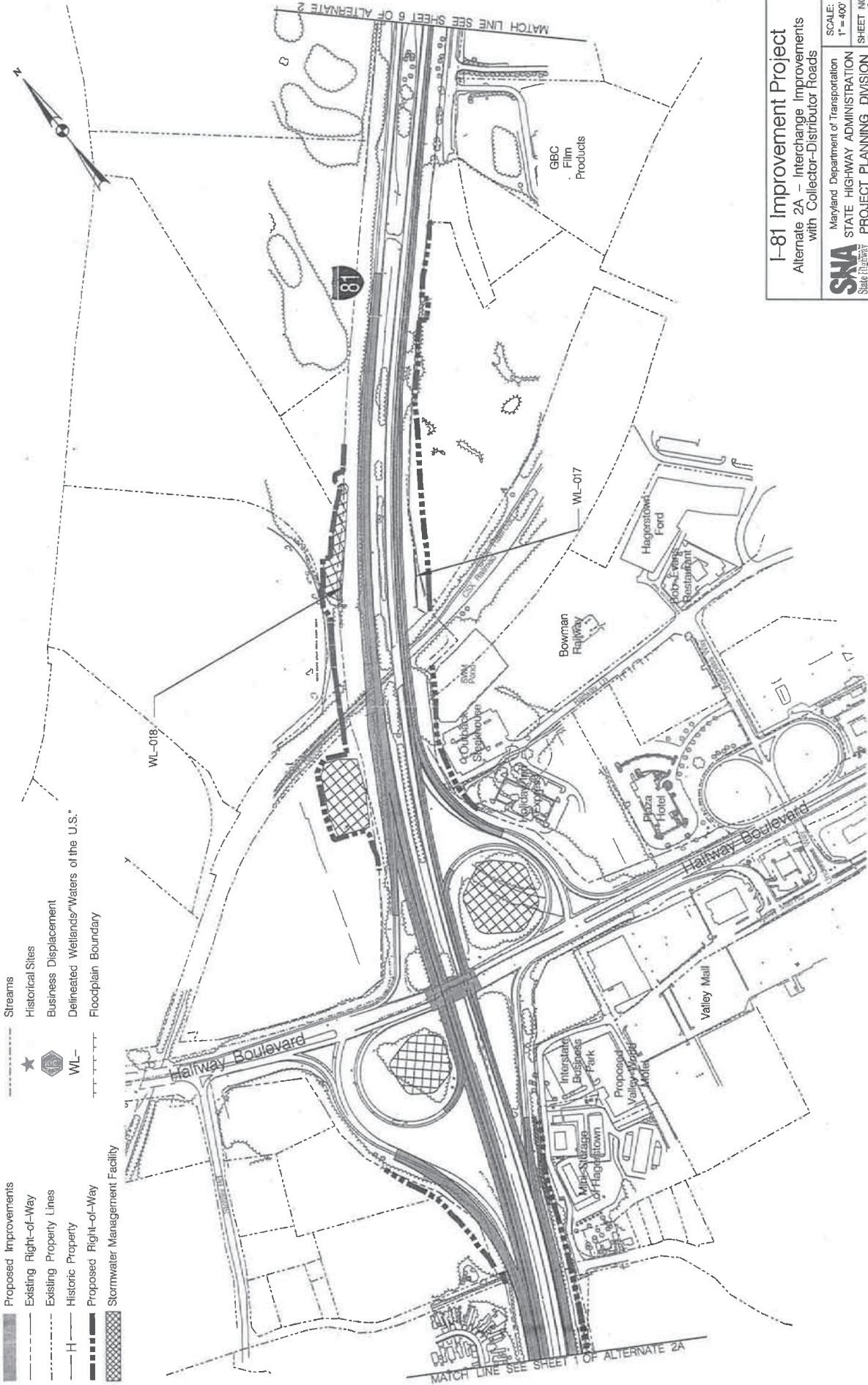
PROJECT PLANNING DIVISION

- Legend**
- Proposed Improvements
 - Existing Right-of-Way
 - Existing Property Lines
 - Historic Property
 - Proposed Right-of-Way
 - Stormwater Management Facility
 - Streams
 - Historic Sites
 - Wetlands/Waters of the U.S.
 - Floodplain Boundary
 - Business Displacement

Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility

- Streams
- Historical Sites
- Business Displacement
- Delineated Wetlands/Waters of the U.S.*
- Floodplain Boundary
- WL-



I-81 Improvement Project

Alternate 2A - Interchange Improvements
with Collector-Distributor Roads

SHA

State Highway Administration

Maryland Department of Transportation

STATE HIGHWAY ADMINISTRATION

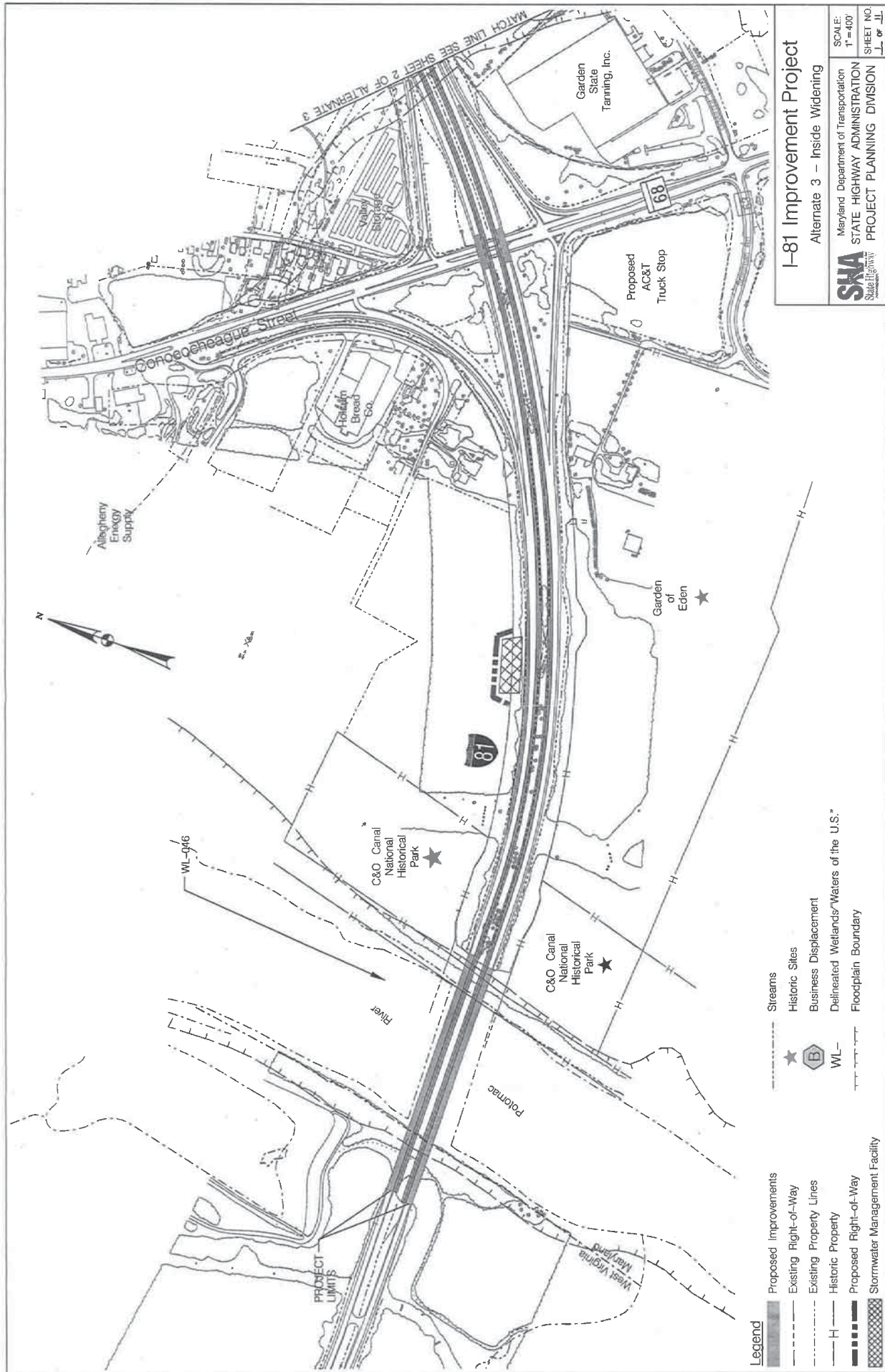
PROJECT PLANNING DIVISION

SCALE:

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SHEET NO.

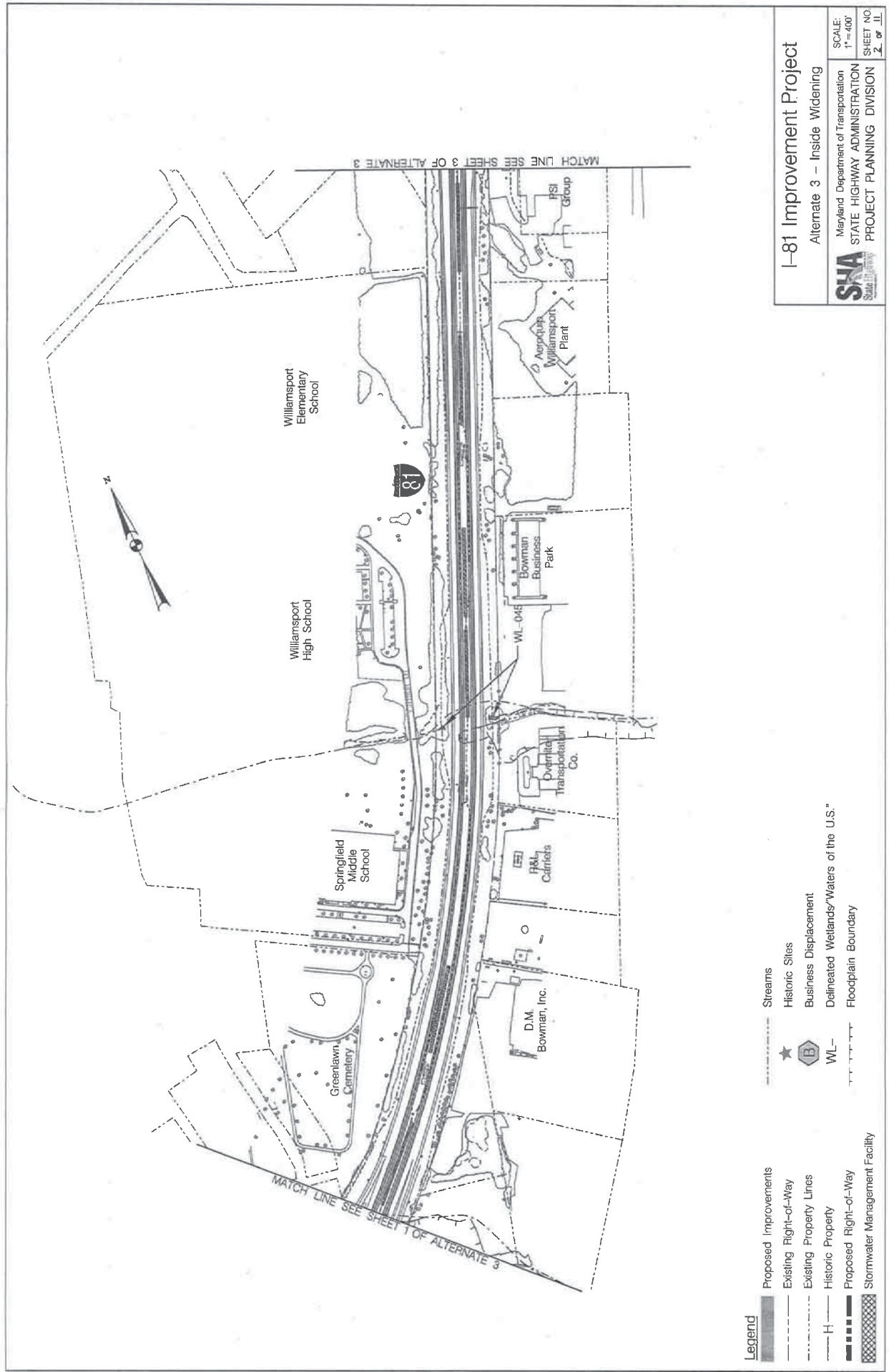
2 of 2



I-81 Improvement Project Alternate 3 - Inside Widening

SNA State Highway Administration	SCALE: 1" = 400'	SHEET NO. 1 of 11
	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION	PROJECT PLANNING DIVISION
	PROJECT PLANNING DIVISION	

- Legend**
- Proposed Improvements
 - Existing Right-of-Way
 - Existing Property Lines
 - Historic Property
 - Proposed Right-of-Way
 - Stormwater Management Facility
 - Streams
 - Historic Sites
 - Business Displacement
 - Delineated Wetlands/Waters of the U.S.
 - Floodplain Boundary



Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- H- Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility

- Streams
- Historic Sites
- Business Displacement
- WL- Delineated Wetlands/Waters of the U.S.
- Floodplain Boundary

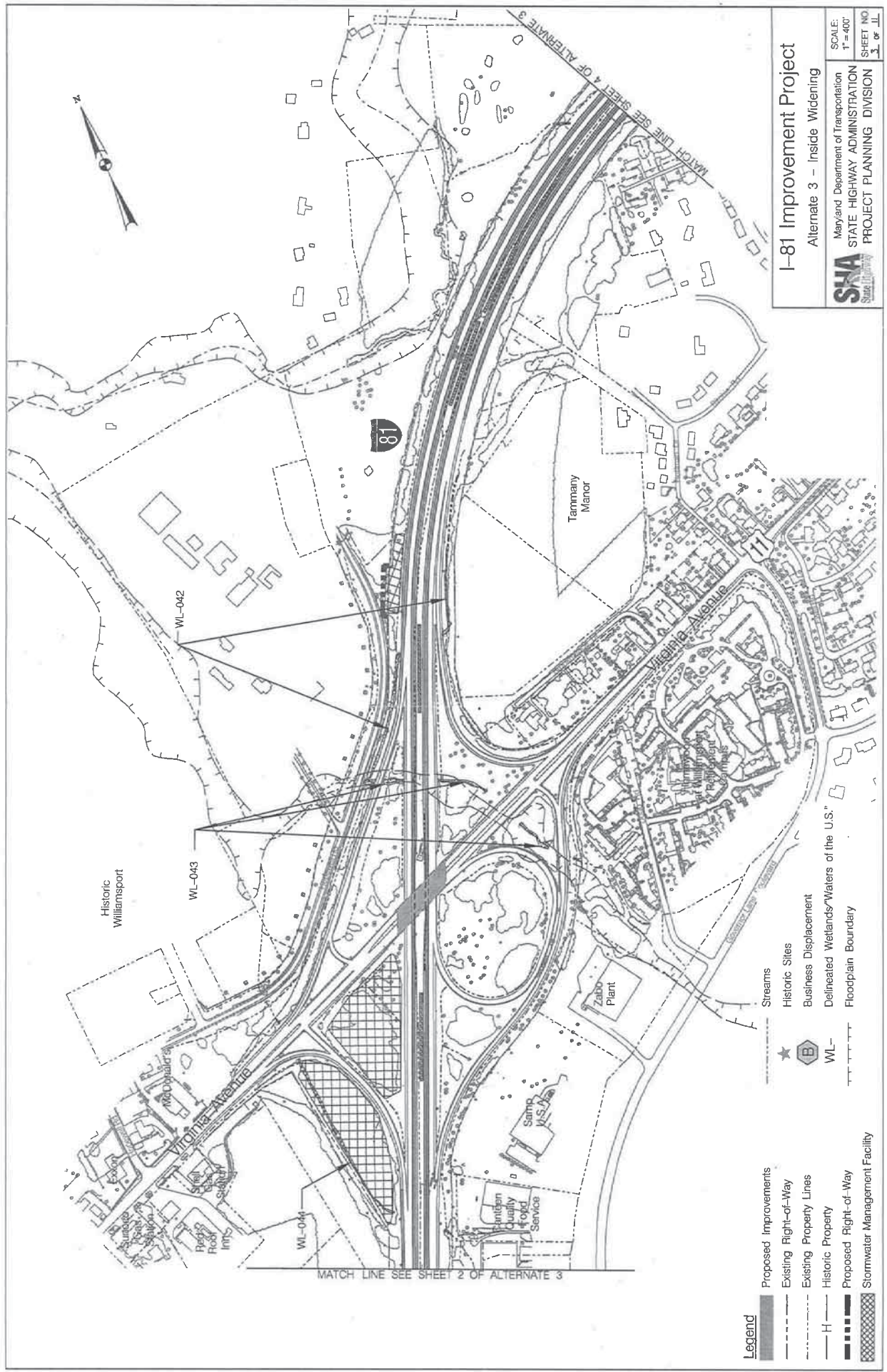
I-81 Improvement Project

Alternate 3 - Inside Widening

SHA
State Highway Administration
Maryland Department of Transportation
PROJECT PLANNING DIVISION

SCALE:
1" = 400'

SHEET NO.
2 OF 11



Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility

- Streams
- Historic Sites
- Business Displacement
- Delineated Wetlands/Waters of the U.S.
- Floodplain Boundary

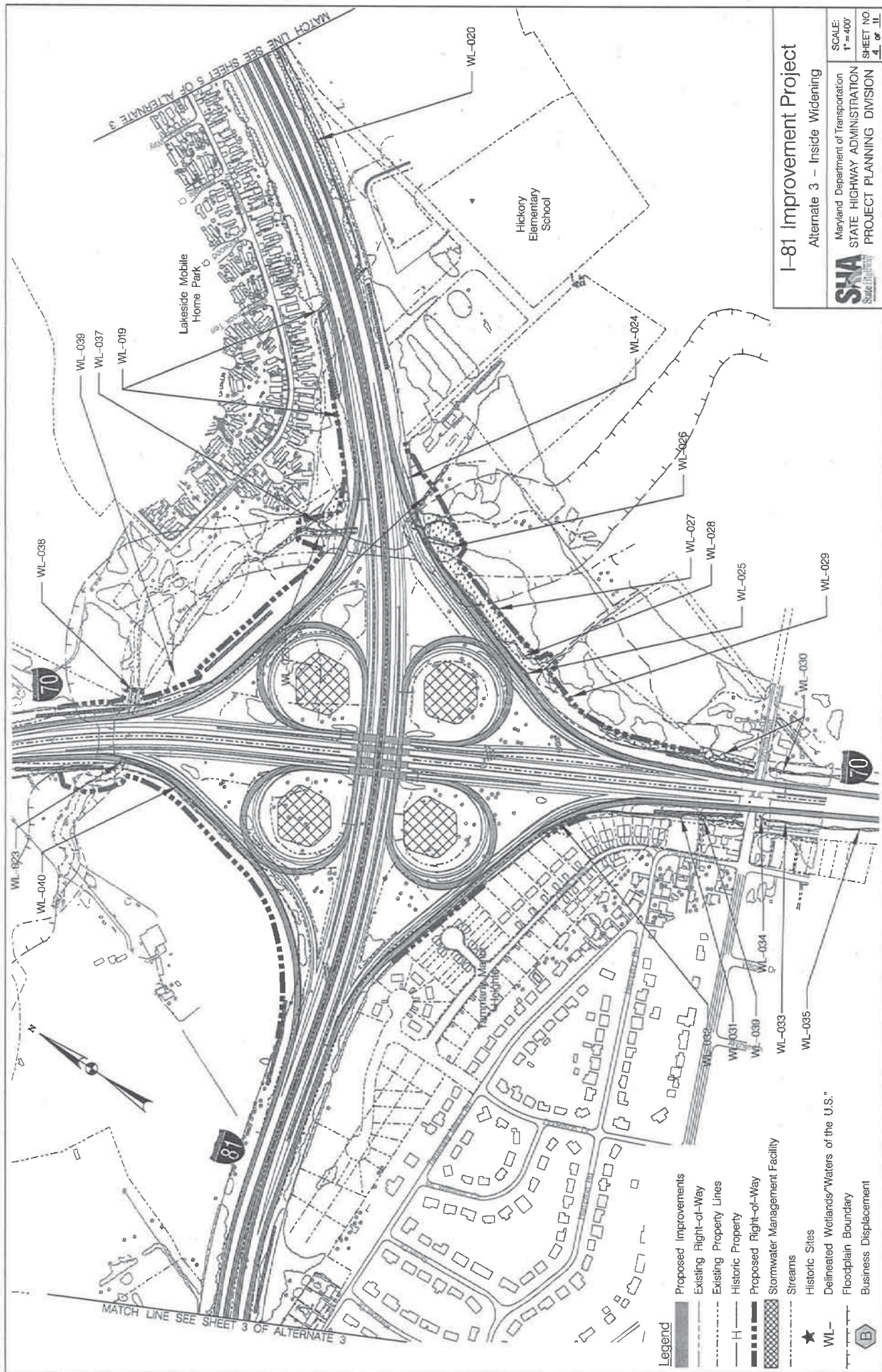
I-81 Improvement Project

Alternate 3 - Inside Widening

SCALE:
1" = 40'


SHEET NO.
3 of 11

Mayland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

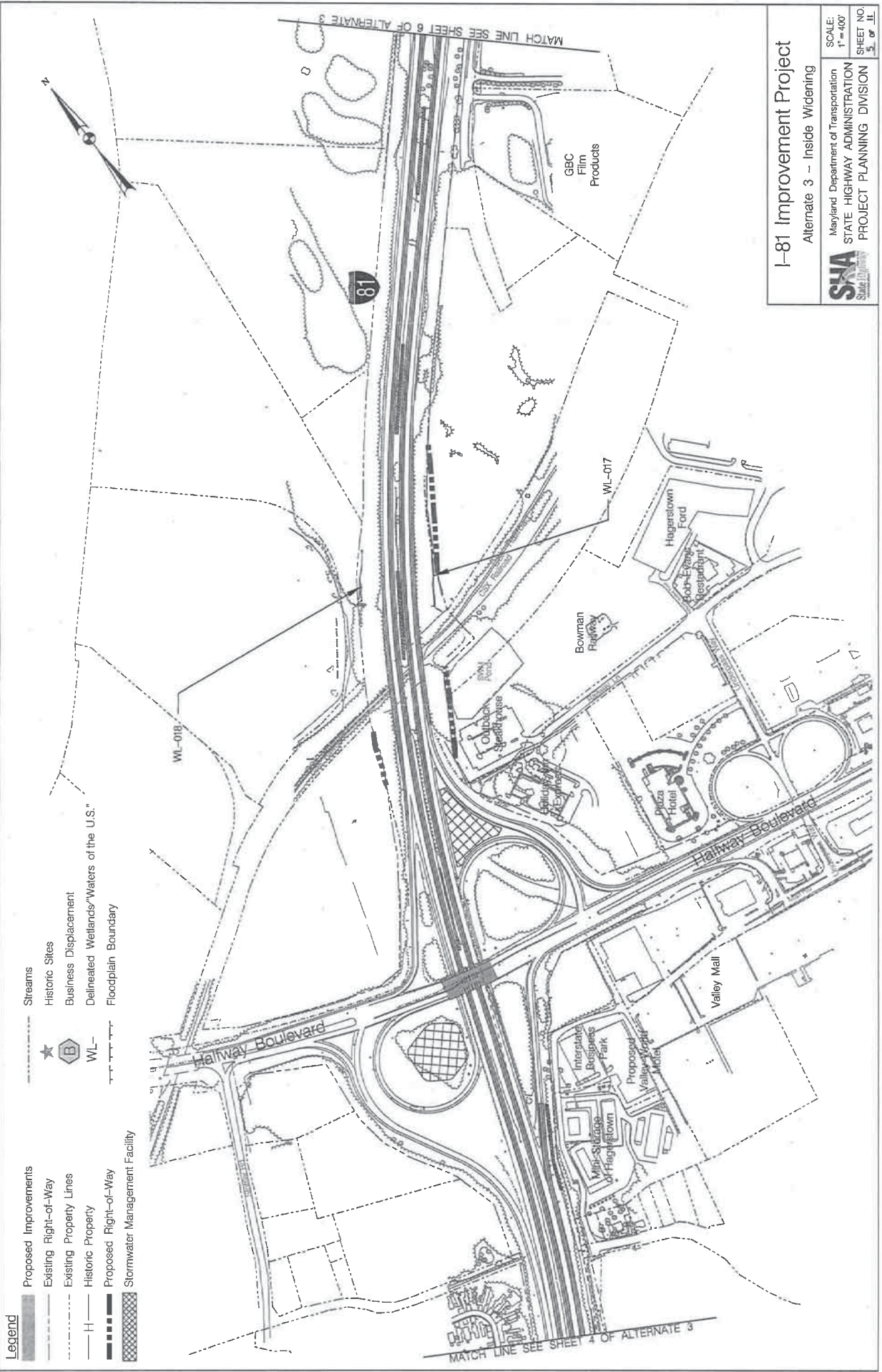


I-81 Improvement Project

Alternate 3 - Inside Widening


SHA
 State Highway Administration

SCALE:
 1" = 400'
SHEET NO.
 4 of 11



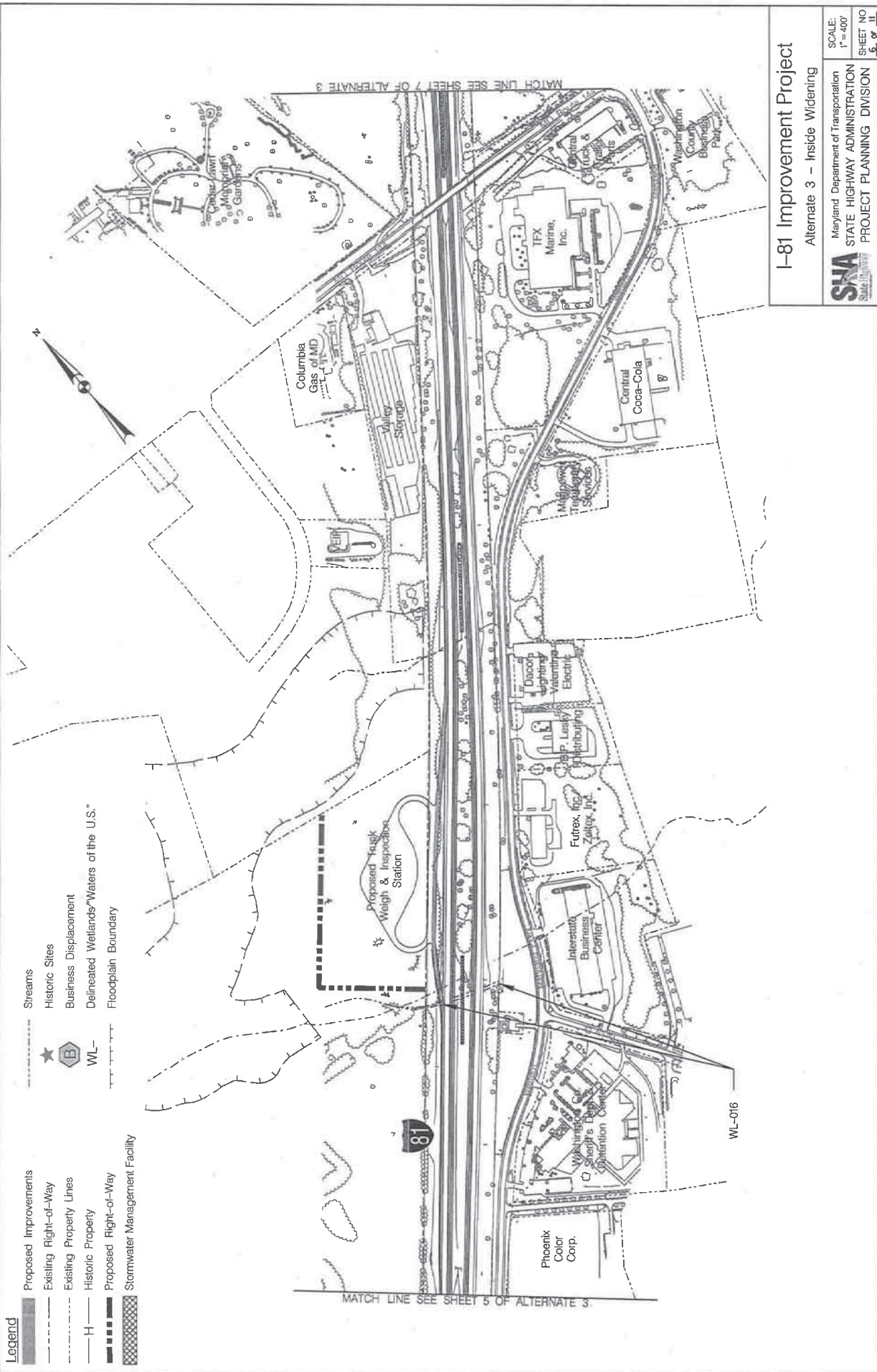
I-81 Improvement Project

Alternate 3 -- Inside Widening



Maryland Department of Transportation
 STATE HIGHWAY ADMINISTRATION
 PROJECT PLANNING DIVISION

SCALE:
 1" = 400'
 SHEET NO.
 5 OF 11



I-81 Improvement Project

Alternate 3 - Inside Widening

SHA

State Highway Administration

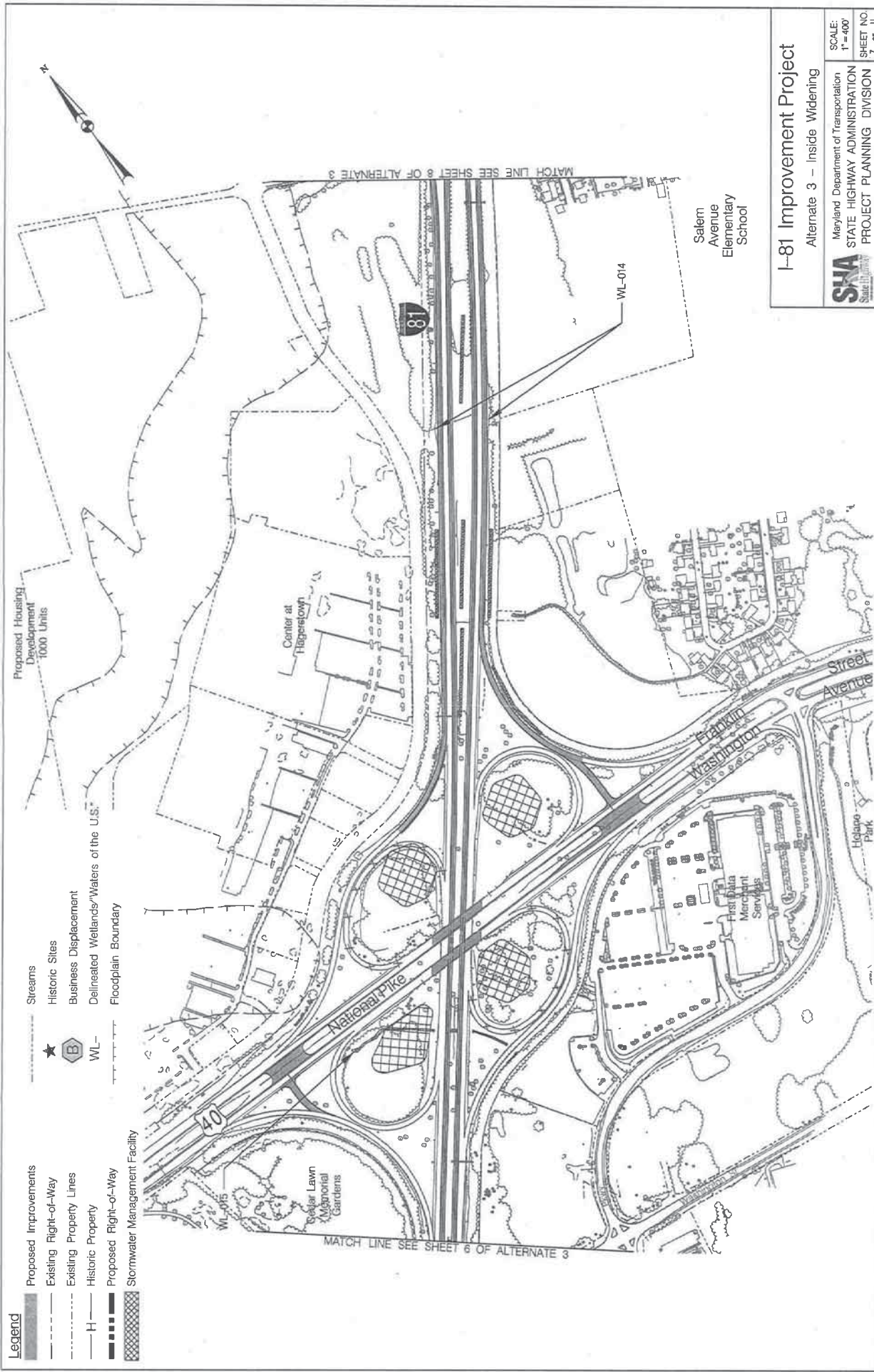
Maryland Department of Transportation

STATE HIGHWAY ADMINISTRATION

PROJECT PLANNING DIVISION

SCALE: 1" = 400'

SHEET NO. 6 OF 11



Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- H Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility

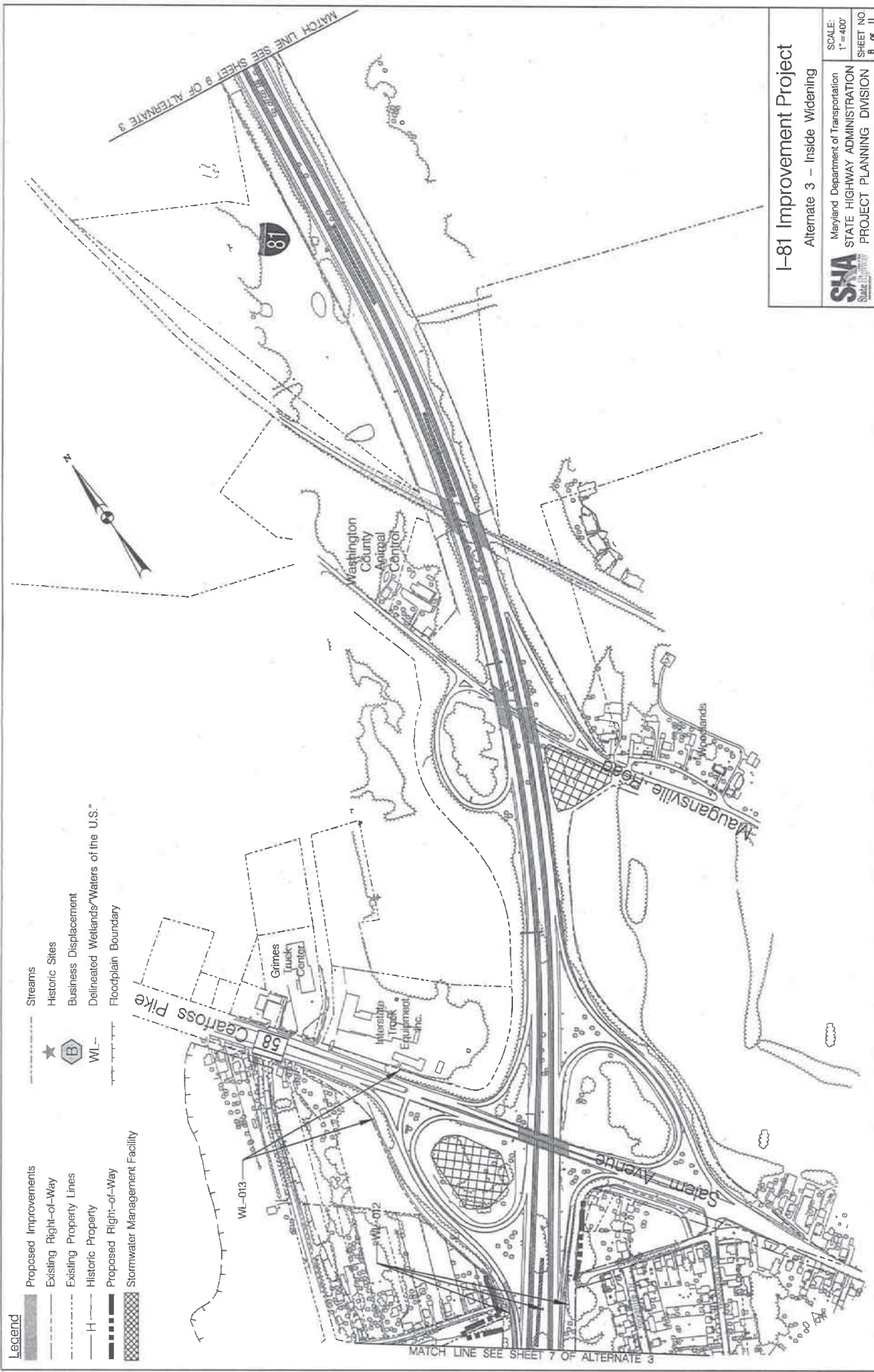
- Streams
- Historic Sites
- Business Displacement
- Delimited Wetlands/Waters of the U.S.
- Floodplain Boundary

I-81 Improvement Project

Alternate 3 - Inside Widening

	SCALE: 1"=400'
	SHEET NO. 1 of 11

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION



- Legend**
- Proposed Improvements
 - Existing Right-of-Way
 - Existing Property Lines
 - Historic Property
 - Proposed Right-of-Way
 - Stormwater Management Facility
 - Streams
 - Historic Sites
 - Business Displacement
 - Delineated Wetlands/Waters of the U.S.
 - Floodplain Boundary

I-81 Improvement Project

Alternate 3 - Inside Widening

SCALE:
1"=400'

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

PROJECT PLANNING DIVISION

SHEET NO.
11

SHEET NO.
12

Option B



WL-010

MATCH LINE SEE SHEET 10 OF ALTERNATE 3

Option A

WL-011

81

MATCH LINE SEE SHEET 8 OF ALTERNATE 3

Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility

- Streams
- Historic Sites
- Business Displacement
- Delineated Wetlands/Waters of the U.S.
- Floodplain Boundary

I-81 Improvement Project

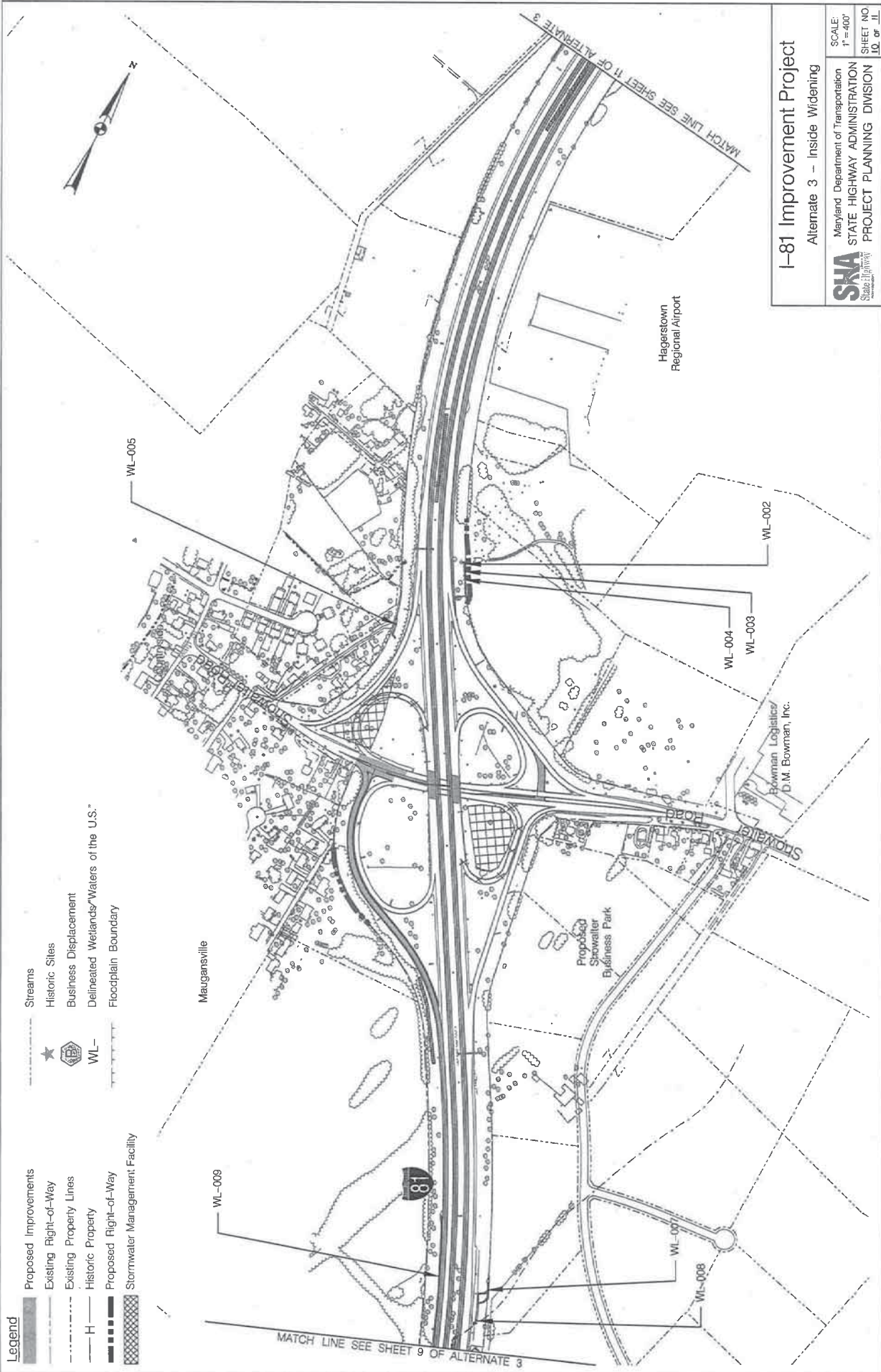
Alternate 3 - Inside Widening

SHA
State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

SCALE:
1" = 400'

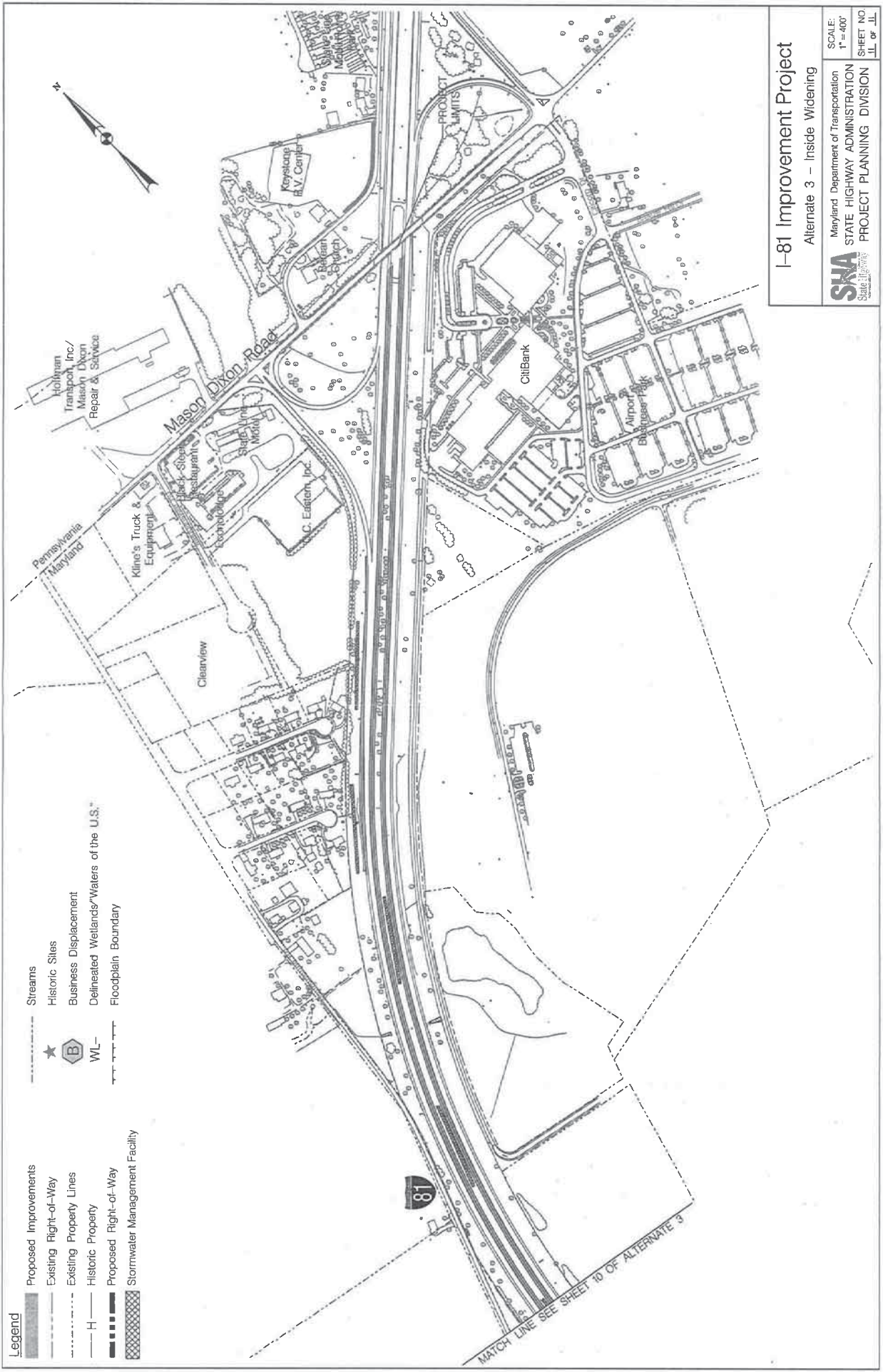
SHEET NO.
3 of **11**



I-81 Improvement Project

Alternate 3 — Inside Widening

SHA State Highway Administration State Planning Division	SCALE:	SHEET NO.
	1" = 400'	10 of 11
	STATE HIGHWAY ADMINISTRATION	PROJECT PLANNING DIVISION



I-81 Improvement Project

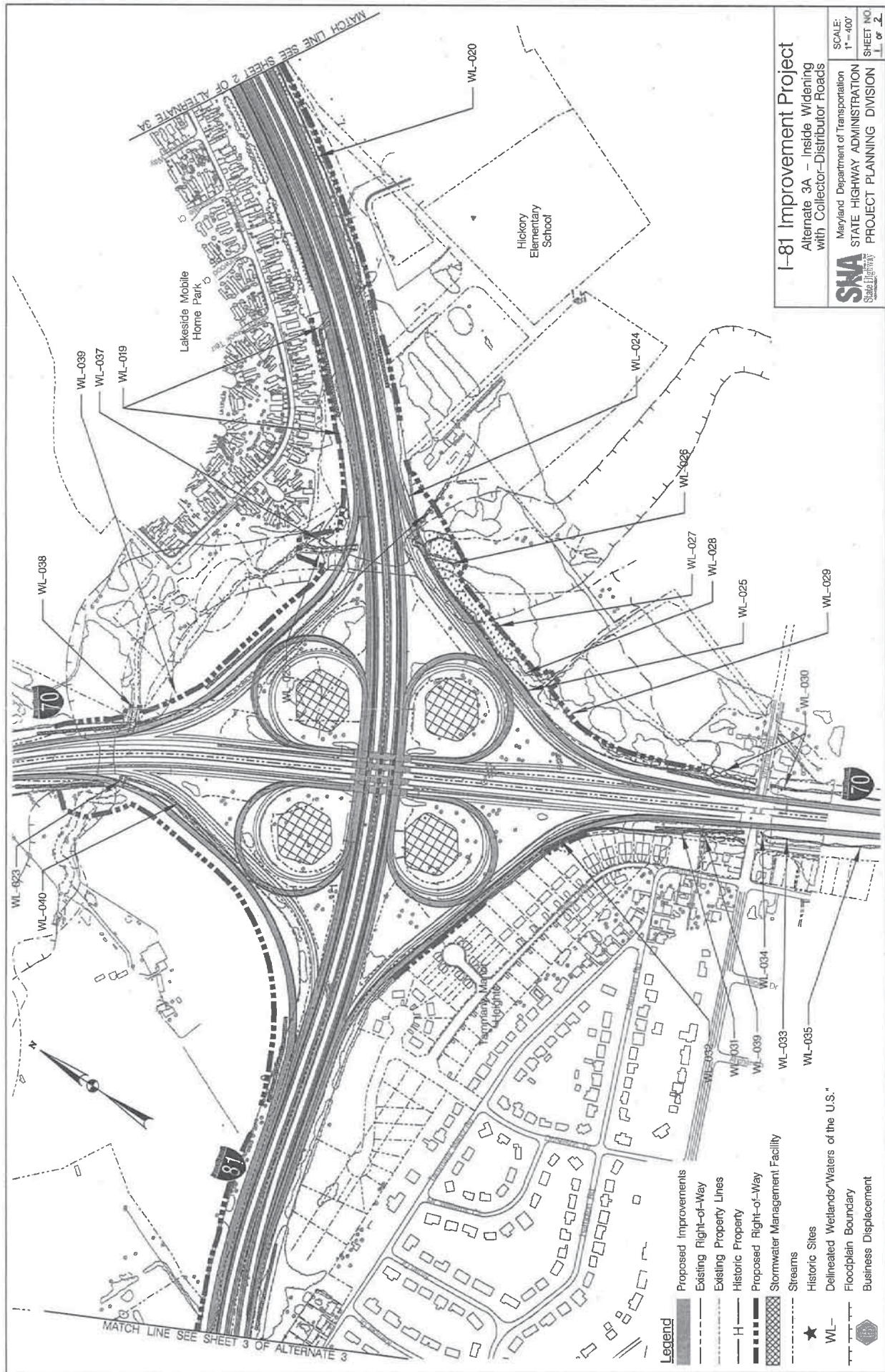
Alternate 3 - Inside Widening

SKA
State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION


SCALE:
1" = 400'

SHEET NO.
11 OF 11



I-81 Improvement Project

Alternate 3A - Inside Widening with Collector-Distributor Roads


SNA
 State Highway Administration
 Maryland Department of Transportation
 PROJECT PLANNING DIVISION

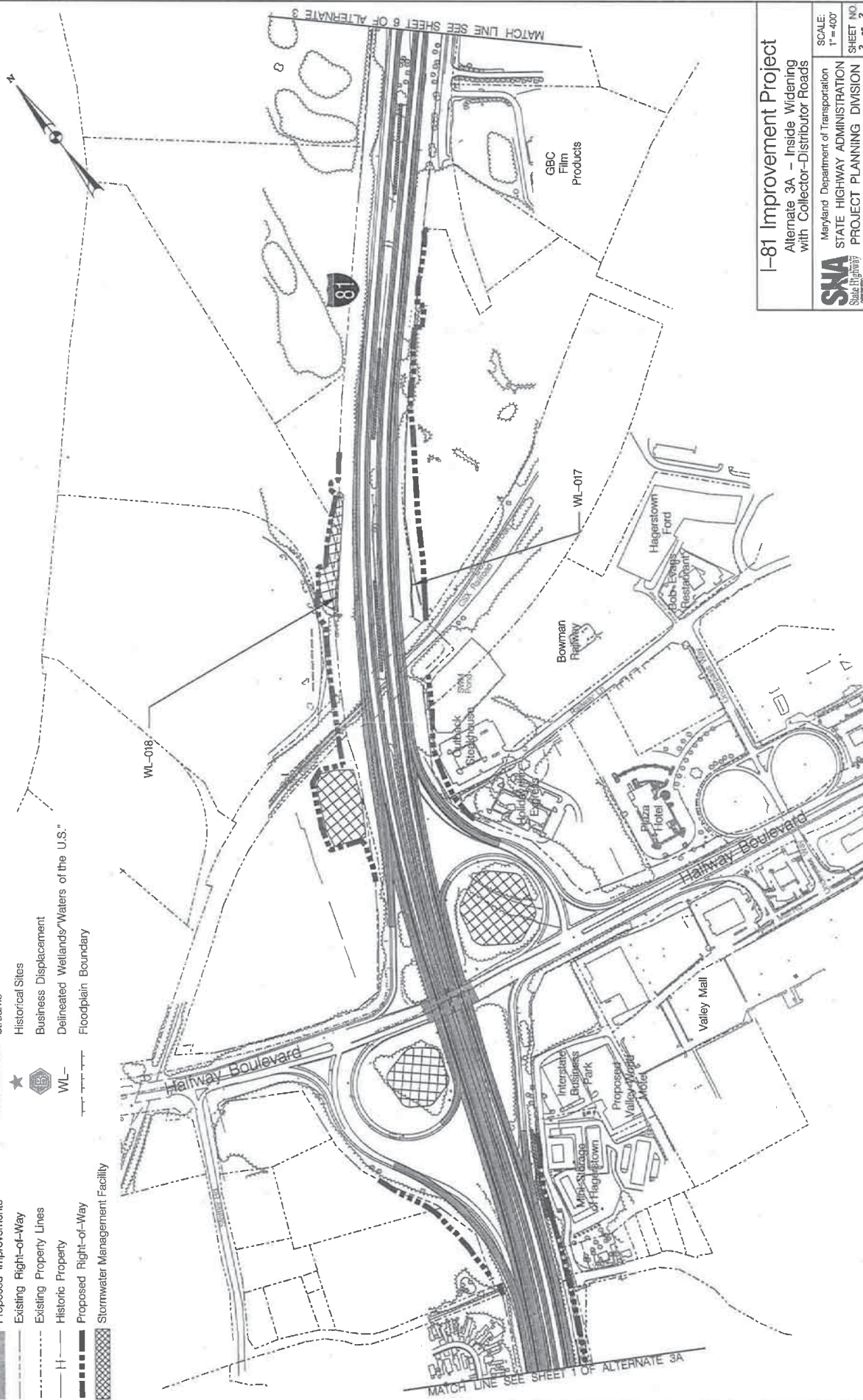
SCALE: 1" = 400'

SHEET NO. 1 of 2

Legend

- Proposed Improvements
- Existing Right-of-Way
- Existing Property Lines
- Historic Property
- Proposed Right-of-Way
- Stormwater Management Facility

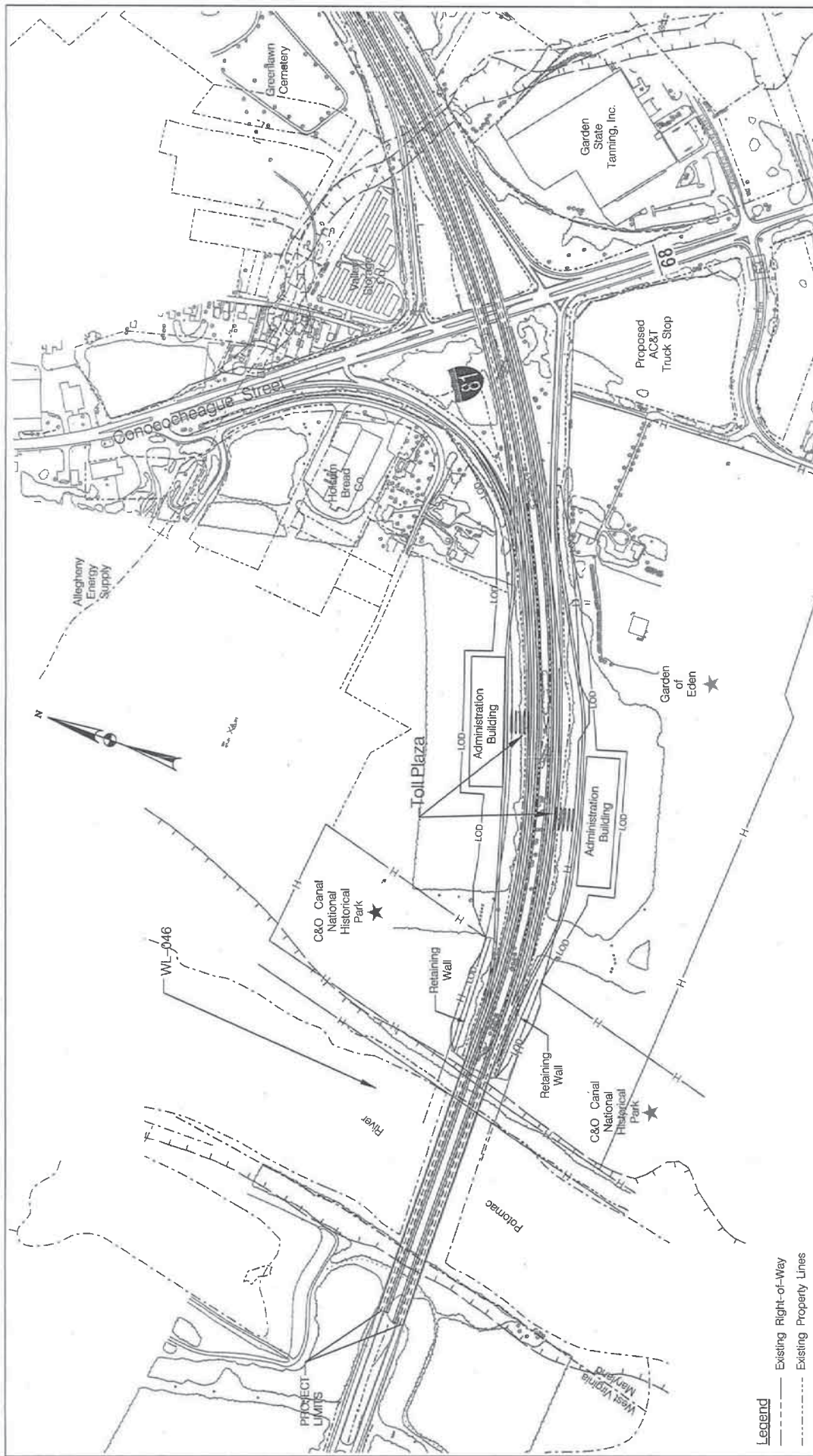
- Streams
- Historical Sites
- Business Displacement
- Delineated Wetlands/Waters of the U.S.
- Floodplain Boundary



I-81 Improvement Project
 Alternate 3A - Inside Widening
 with Collector-Distributor Roads


SKA STATE HIGHWAY ADMINISTRATION State Highway	SCALE: 1"=400'
	SHEET NO. 2 of 2

PROJECT PLANNING DIVISION



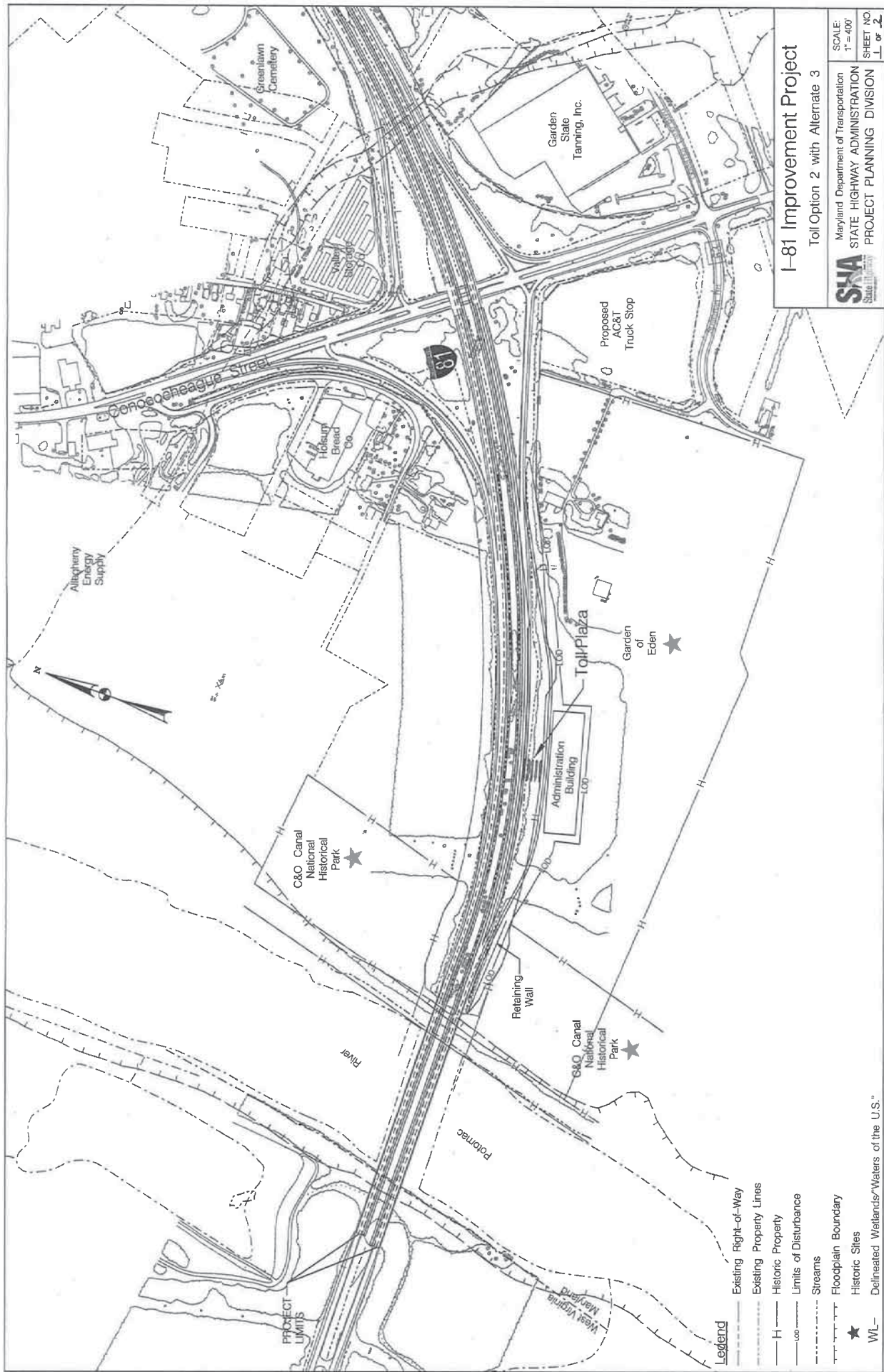
I-81 Improvement Project

Toll Option 1 with Alternate 3

	SCALE:	1" = 400'
	Maryland Department of Transportation	
	STATE HIGHWAY ADMINISTRATION	
	PROJECT PLANNING DIVISION	
	SHEET NO.	1 of 1

Legend

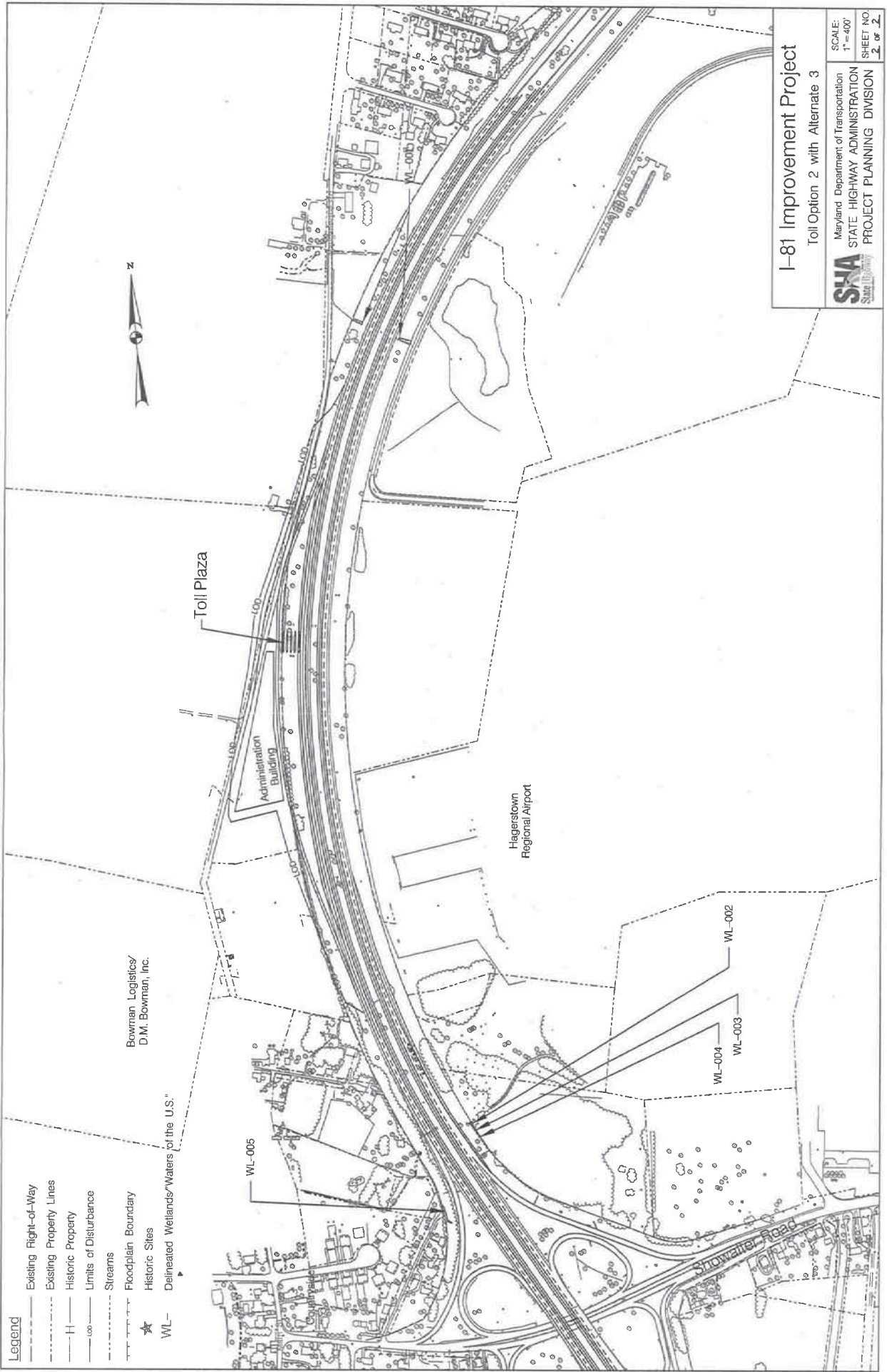
- Existing Right-of-Way
- Existing Property Lines
- Historic Property
- Limits of Disturbance
- Streams
- Floodplain Boundary
- Historic Sites
- WL- Delineated Wetlands/Waters of the U.S.

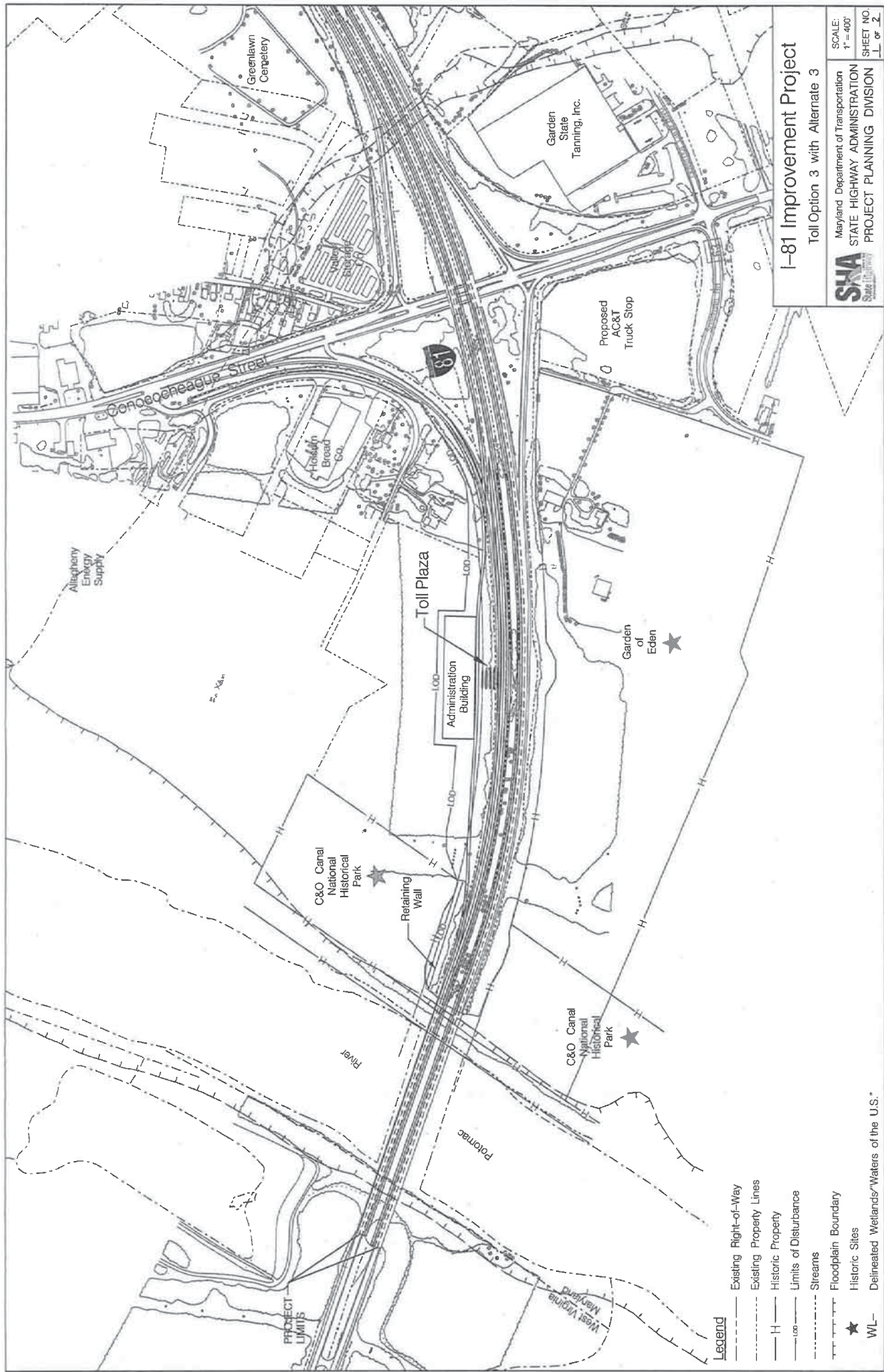


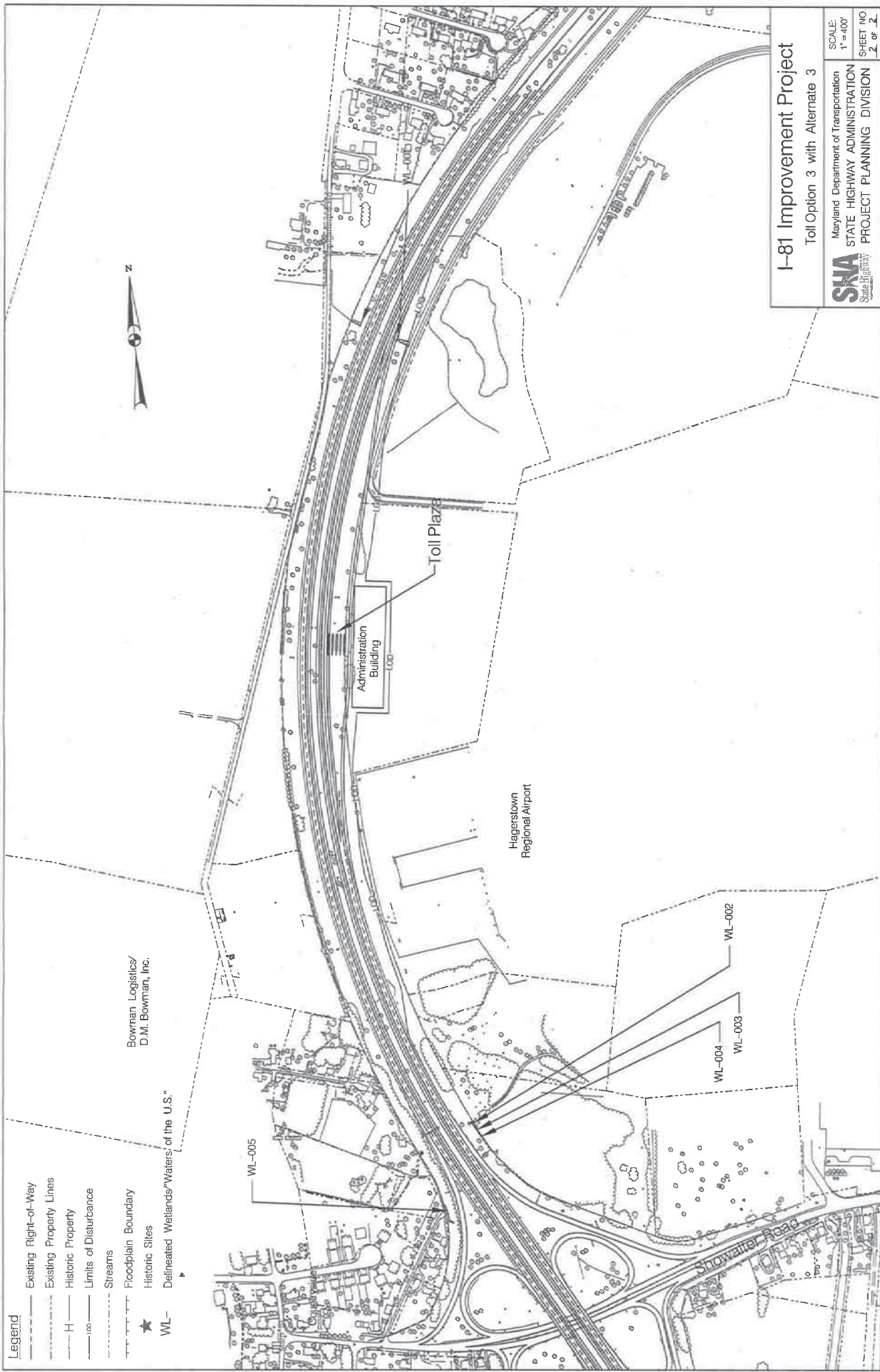
I-81 Improvement Project

Toll Option 2 with Alternate 3

MDOT Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION	SCALE: 1" = 400'	SHEET NO. 1 of 2
	PROJECT PLANNING DIVISION	







I-81 Improvement Project

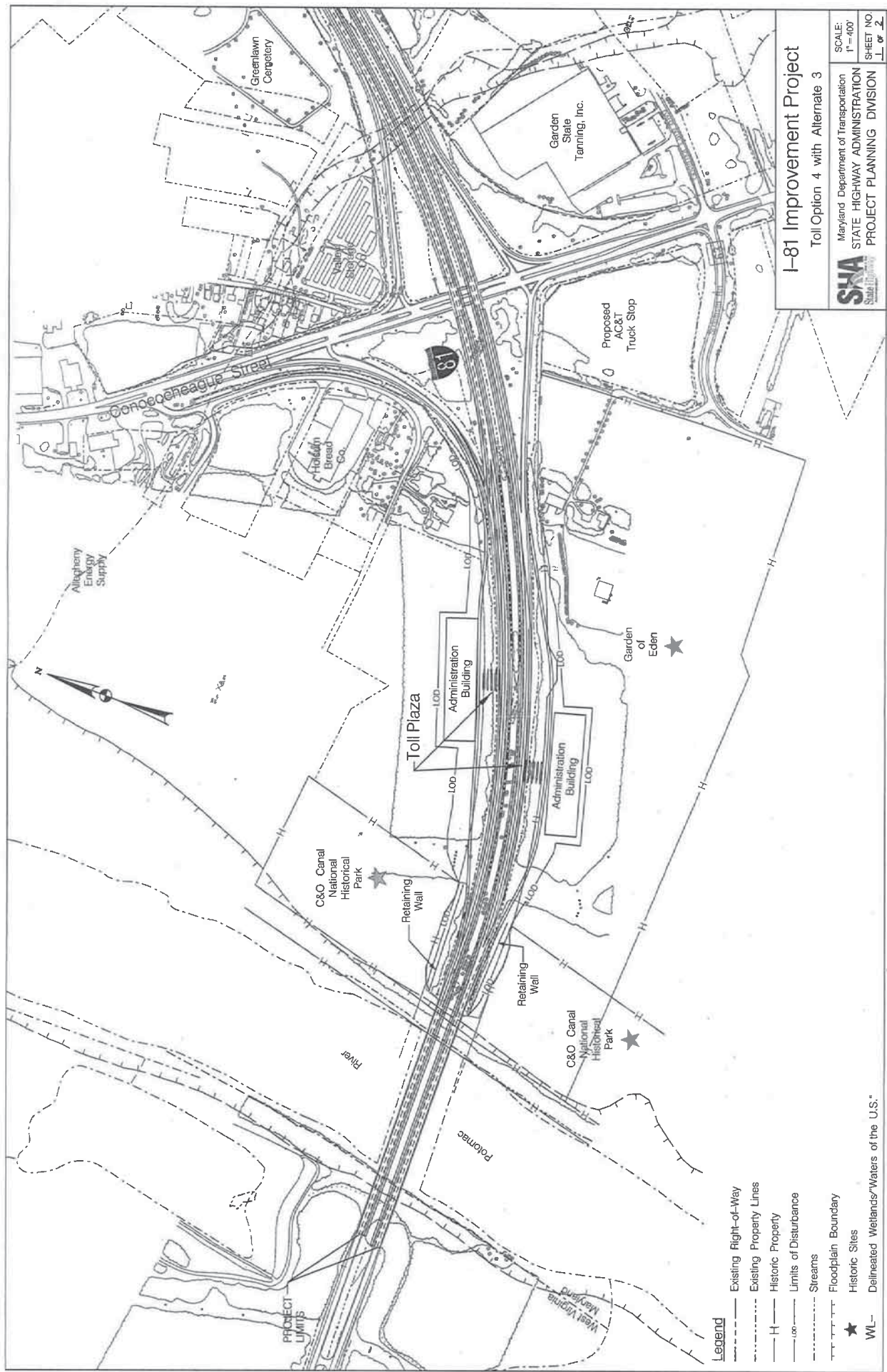
Toll Option 3 with Alternate 3

SCALE: 1" = 400'

SHEET NO. 2 of 2

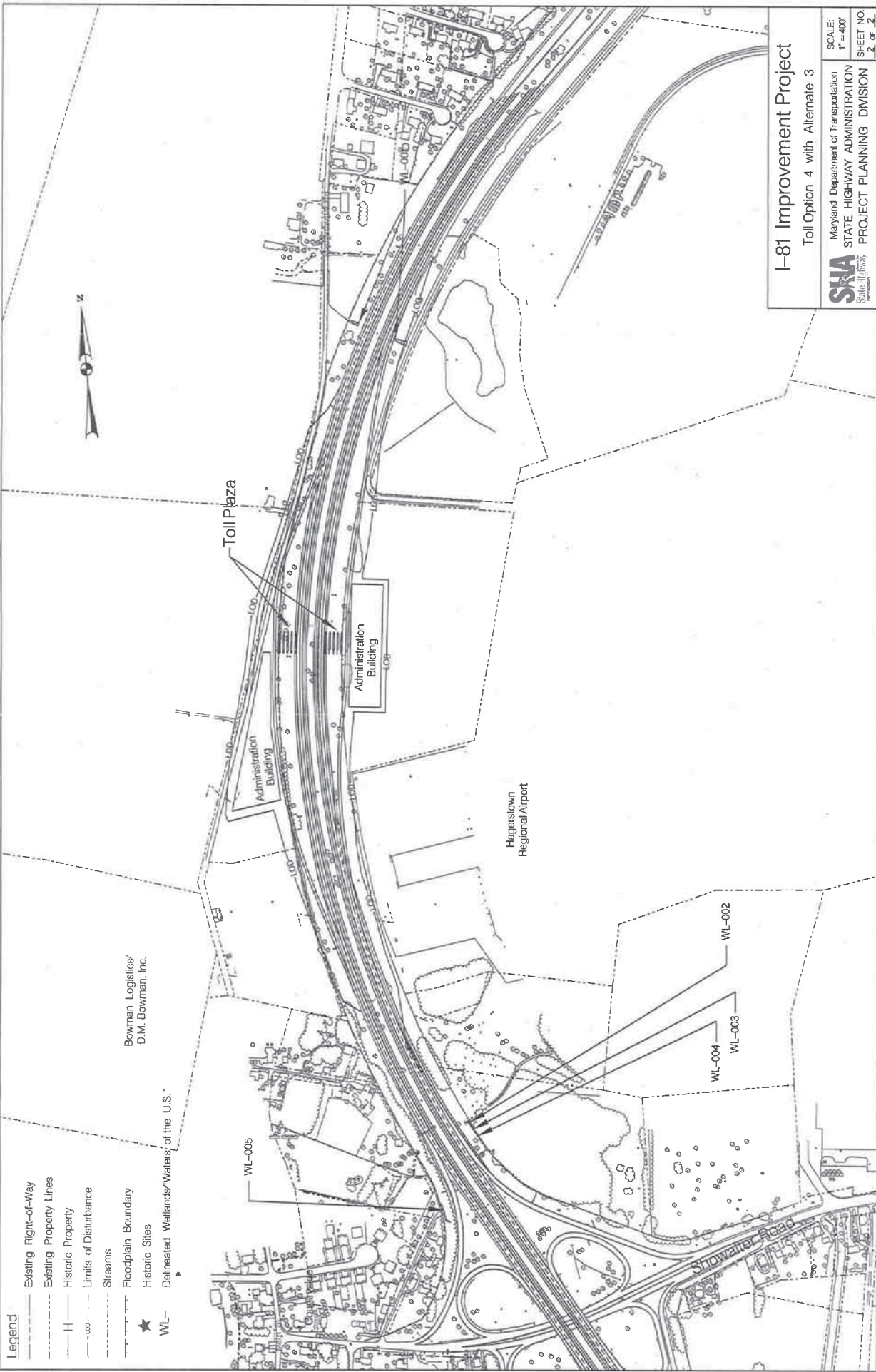
MDOT
State Highway

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION



I-81 Improvement Project Toll Option 4 with Alternate 3

SHA	Maryland Department of Transportation	SCALE: 1"=400'
	STATE HIGHWAY ADMINISTRATION	SHEET NO. 1 of 2
	PROJECT PLANNING DIVISION	



EXISTING ENVIRONMENT AND IMPACTS

III. EXISTING ENVIRONMENT AND IMPACTS

A. SOCIOECONOMIC ENVIRONMENT

Community Profile

a) Existing Conditions

Detailed information on the project area demographics, neighborhoods, communities, community facilities, and services is available in the I-81 Socioeconomic Technical Report (SHA, 2004). Tables 3-1 through 3-5 provide information on the demographics of the project area including population, age, race, and disabilities.

The population of the State of Maryland in 2000 was 5,296,486, increasing by 1,374,087 (25.9 percent) from 1970. In 2000, the population of Washington County was 131,923, increasing by 28,094 (21.2 percent) from 1970. The population of the census tracts covering the project area was 33,901 in 2000, up 6.5 percent from 31,725 in 1990. Future growth predictions are not available for the project area. However, it can be assumed that the trends in this area would be consistent with those of Washington County.

Approximately 56.4 percent of the population residing in the census tracts covering the project area are in the 20 to 64 age group. This percentage is slightly higher than that of the county and of the state. The 65+ age group made up 17.2 percent of the individuals in the project area, slightly higher than both the county and the state.

The majority of individuals, 99.5 percent or 33,720 individuals, living within census tracts that fall within the project area are non-minority and 0.543 percent or 181 individuals are minorities (Census, 2003). The percentage of minority individuals in the project area is much lower than that of the state or the county.

Residential development in the project area includes: scattered residential areas, the outskirts of Williamsport, Halfway, the Homewood at Williamsport Retirement Campus, Tammany Manor, the Lakeside Mobile Home Park, Countryside, Clearview, and the outskirts of Maugansville (see Figure 5).

Various commercial and industrial areas along I-81 include the area around Williamsport, Halfway, near the US 40 interchange, and near the Salem Avenue interchange. Industrial and business parks along the I-81 corridor include the Airport Business Park, Hagerstown Business Park, Hunter's Green Business Center, Interstate Industrial Park, Newgate Industrial Park, and Washington County Business Park Airpark.

Within the project area, there are active dairy farms on the west side of I-81: at US 11, at Maugans Avenue, and at the Showalter Road interchange.

Table 3-1: Population Trends

	1990	2000	2010	2020
State of Maryland	4,780,753	5,296,486	5,722,800	6,083,125
Washington County	121,393	131,923	140,824	149,835
Project Area	31,725	33,901	Not Available	Not Available

Source: U.S. Census Bureau, 2000

Table 3-2: Population Age Characteristics

	Age 19 and under		Ages 20-64		Age 65 or older	
		% of Total		% of Total		% of Total
State of Maryland	1,492,965	28.2%	3,204,214	60.5%	599,307	11.3%
Washington County	33,934	25.7%	79,299	60.1%	18,690	14.2%
Project Area	8,949	26.4%	19,127	56.4%	5,825	17.2%

Source: U.S. Census Bureau, 2000

Table 3-3: Disabled Individuals

	Disabled Individuals*	
State of Maryland	17.6%	854,345
Washington County	32.9%	40,827
Project Area	33.1%	11,216

*Disabilities were tallied for the civilian non-institutionalized population 5 years and over.

Source: U.S. Census Bureau, 2000

Table 3-4: Minority Individuals

	Total Population	African American		American Indian and Alaska Native		Asian		Native Hawaiian and Other Pacific Islander		Some Other Race		Total Minority Population	
		% of Total Population		% of Total Population		% of Total Population		% of Total Population		% of Total Population		% of Total Population	
State of Maryland*	5,296,486	1,525,036	28.8	39,437	0.75	238,408	4.5	6,179	0.12	134,621	2.5	1,830,789	36.7
Washington County*	131,923	10,879	8.25	633	0.48	1,301	0.99	111	0.08	843	0.64	13,767	10.4
Project Area	33,901	143	0.42	2	0.006	17	0.05	1	0.003	18	0.053	181	0.534

*Numbers for race were tallied for race "alone or in combination."

Source: U.S. Census Bureau, 2000

Table 3-5: Income

	Per Capita Income	Median Household Income	Median Family Income
State of Maryland	\$25,614	\$52,868	\$61,876
Washington County	\$24,267	\$44,450	\$48,962
Project Area	\$18,850	\$41,410	\$47,284

Source: U.S. Census Bureau, 2000

b) Description of Displacements and Relocations and Right-of-Way Acquisition

The following section describes property that would be acquired under each alternate. New right-of-way required for each alternate is shown in Table 3-6.

Under the No-Build Alternate, no residences, commercial property, or farmlands would be displaced, nor would any property acquisition be required.

Under the build alternates, no residential buildings would be acquired, and no residents would be displaced. Under all of the build alternates, two businesses located at the Maugans Avenue interchange would be displaced by Option A (see Sheet 9 or 11 on Alternates Mapping) for the interchange improvements (see Section II.B for a description of the proposed Maugans Avenue interchange improvements). A Burger King restaurant would need to be acquired for the reconstruction of the interchange. Reconfiguration of the interchange would eliminate the access road that currently serves the Microtel Inn & Suites. Elimination of the access road would eliminate access to the Microtel Inn & Suites, resulting in a displacement. A second option for improvements to the Maugans Avenue interchange (Option B) would not require any additional right-of-way.

Both Toll Options 2 and 4 would affect one active farm, a dairy operation on the east side of I-81, just north of the Showalter Road exit. Toll Option 2 would require the acquisition of approximately 5 acres, and Toll Option 4 would require the acquisition of approximately 3 acres of the farm. The farm operation consists of 70 acres of owned land and an additional 150 acres of leased land. Toll Option 2 would therefore affect 7.1 percent of the owned farmland and 2.3 percent of the total farm operation. Toll Option 4 would affect 4.3 percent of the owned farmland and 1.4 percent of the total farm operation. The land that would be acquired is used for cropland and is zoned A-Agriculture.

Table 3-6: Right-of-Way Required By Alternate

	Unimproved Land (Acres)	Improved Land (Acres)	Temporary Construction Easement (Acres)
Alternate 2	15.3	0.8	0
Alternate 2A	26.35	0.8	0
Alternate 3	15.4	0.8	1.2
Alternate 3A	27.0	0.8	1.2
Toll Option 1	7.75	0	0
Toll Option 2	10.78	0	0
Toll Option 3	9.29	0	0
Toll Option 4	15.52	0	0
Weigh and Inspection Station	11	0	0

EXISTING ENVIRONMENT AND IMPACTS

III. EXISTING ENVIRONMENT AND IMPACTS

A. SOCIOECONOMIC ENVIRONMENT

Community Profile

a) Existing Conditions

Detailed information on the project area demographics, neighborhoods, communities, community facilities, and services is available in the I-81 Socioeconomic Technical Report (SHA, 2004). Tables 3-1 through 3-5 provide information on the demographics of the project area including population, age, race, and disabilities.

The population of the State of Maryland in 2000 was 5,296,486, increasing by 1,374,087 (25.9 percent) from 1970. In 2000, the population of Washington County was 131,923, increasing by 28,094 (21.2 percent) from 1970. The population of the census tracts covering the project area was 33,901 in 2000, up 6.5 percent from 31,725 in 1990. Future growth predictions are not available for the project area. However, it can be assumed that the trends in this area would be consistent with those of Washington County.

Approximately 56.4 percent of the population residing in the census tracts covering the project area are in the 20 to 64 age group. This percentage is slightly higher than that of the county and of the state. The 65+ age group made up 17.2 percent of the individuals in the project area, slightly higher than both the county and the state.

The majority of individuals, 99.5 percent or 33,720 individuals, living within census tracts that fall within the project area are non-minority and 0.543 percent or 181 individuals are minorities (Census, 2003). The percentage of minority individuals in the project area is much lower than that of the state or the county.

Residential development in the project area includes: scattered residential areas, the outskirts of Williamsport, Halfway, the Homewood at Williamsport Retirement Campus, Tammany Manor, the Lakeside Mobile Home Park, Countryside, Clearview, and the outskirts of Maugansville (see Figure 5).

Various commercial and industrial areas along I-81 include the area around Williamsport, Halfway, near the US 40 interchange, and near the Salem Avenue interchange. Industrial and business parks along the I-81 corridor include the Airport Business Park, Hagerstown Business Park, Hunter's Green Business Center, Interstate Industrial Park, Newgate Industrial Park, and Washington County Business Park Airpark.

Within the project area, there are active dairy farms on the west side of I-81: at US 11, at Maugans Avenue, and at the Showalter Road interchange.

Table 3-1: Population Trends

	1990	2000	2010	2020
State of Maryland	4,780,753	5,296,486	5,722,800	6,083,125
Washington County	121,393	131,923	140,824	149,835
Project Area	31,725	33,901	Not Available	Not Available

Source: U.S. Census Bureau, 2000

Table 3-2: Population Age Characteristics

	Age 19 and under		Ages 20-64		Age 65 or older	
		% of Total		% of Total		% of Total
State of Maryland	1,492,965	28.2%	3,204,214	60.5%	599,307	11.3%
Washington County	33,934	25.7%	79,299	60.1%	18,690	14.2%
Project Area	8,949	26.4%	19,127	56.4%	5,825	17.2%

Source: U.S. Census Bureau, 2000

Table 3-3: Disabled Individuals

	Disabled Individuals*	
State of Maryland	17.6%	854,345
Washington County	32.9%	40,827
Project Area	33.1%	11,216

*Disabilities were tallied for the civilian non-institutionalized population 5 years and over.

Source: U.S. Census Bureau, 2000

Table 3-4: Minority Individuals

	Total Population	African American		American Indian and Alaska Native		Asian		Native Hawaiian and Other Pacific Islander		Some Other Race		Total Minority Population	
		% of Total Population		% of Total Population		% of Total Population		% of Total Population		% of Total Population		% of Total Population	
State of Maryland*	5,296,486	1,525,036	28.8	39,437	0.75	238,408	4.5	6,179	0.12	134,621	2.5	1,830,789	36.7
Washington County*	131,923	10,879	8.25	633	0.48	1,301	0.99	111	0.08	843	0.64	13,767	10.4
Project Area	33,901	143	0.42	2	0.006	17	0.05	1	0.003	18	0.053	181	0.534

*Numbers for race were tallied for race "alone or in combination."

Source: U.S. Census Bureau, 2000

Table 3-5: Income

	Per Capita Income	Median Household Income	Median Family Income
State of Maryland	\$25,614	\$52,868	\$61,876
Washington County	\$24,267	\$44,450	\$48,962
Project Area	\$18,850	\$41,410	\$47,284

Source: U.S. Census Bureau, 2000

b) Description of Displacements and Relocations and Right-of-Way Acquisition

The following section describes property that would be acquired under each alternate. New right-of-way required for each alternate is shown in Table 3-6.

Under the No-Build Alternate, no residences, commercial property, or farmlands would be displaced, nor would any property acquisition be required.

Under the build alternates, no residential buildings would be acquired, and no residents would be displaced. Under all of the build alternates, two businesses located at the Maugans Avenue interchange would be displaced by Option A (see Sheet 9 or 11 on Alternates Mapping) for the interchange improvements (see Section II.B for a description of the proposed Maugans Avenue interchange improvements). A Burger King restaurant would need to be acquired for the reconstruction of the interchange. Reconfiguration of the interchange would eliminate the access road that currently serves the Microtel Inn & Suites. Elimination of the access road would eliminate access to the Microtel Inn & Suites, resulting in a displacement. A second option for improvements to the Maugans Avenue interchange (Option B) would not require any additional right-of-way.

Both Toll Options 2 and 4 would affect one active farm, a dairy operation on the east side of I-81, just north of the Showalter Road exit. Toll Option 2 would require the acquisition of approximately 5 acres, and Toll Option 4 would require the acquisition of approximately 3 acres of the farm. The farm operation consists of 70 acres of owned land and an additional 150 acres of leased land. Toll Option 2 would therefore affect 7.1 percent of the owned farmland and 2.3 percent of the total farm operation. Toll Option 4 would affect 4.3 percent of the owned farmland and 1.4 percent of the total farm operation. The land that would be acquired is used for cropland and is zoned A-Agriculture.

Table 3-6: Right-of-Way Required By Alternate

	Unimproved Land (Acres)	Improved Land (Acres)	Temporary Construction Easement (Acres)
Alternate 2	15.3	0.8	0
Alternate 2A	26.35	0.8	0
Alternate 3	15.4	0.8	1.2
Alternate 3A	27.0	0.8	1.2
Toll Option 1	7.75	0	0
Toll Option 2	10.78	0	0
Toll Option 3	9.29	0	0
Toll Option 4	15.52	0	0
Weigh and Inspection Station	11	0	0

c) Relocation Process

Compensation to and 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. Additional information is available in SHA's Summary of The Relocation Assistance Program of the State Highway Administration of Maryland.

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, physical or mental handicap in all State Highway Administration program projects funded in whole or in part by the Federal Highway Administration. The State Highway Administration will not discriminate in highway planning, highway design, highway construction, the acquisition of right-of-way, or the provision of relocation advisory assistance. This policy has been incorporated into all levels of the highway planning process in order that proper consideration may be given to 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:

*Ms. Jennifer Jenkins, Director
Office of Equal Opportunity
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202
Phone: (410) 545-0315*

Environmental Justice**d) Existing Conditions**

Consistent with Title VI and Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority and Low Income Populations" (EJ), the Maryland State Highway Administration's Environmental Justice Guidelines defines minorities as persons belonging to any of the following groups: Black, Hispanic, Asian American, and American Indian and Alaskan Native. Low-income is defined as a person whose median household income is at or below the U.S. Department of Health and Human Services (DHHS) poverty guidelines.

To identify low-income or minority populations within the immediate I-81 project area to date, information on race and income was collected from the U.S. Census Bureau, the Washington County Planning Office, and Washington County Public Schools (WCPS). Low income populations were determined by comparing the 2000 Census data to 1999 DHHS poverty guidelines. Census data was used to determine the number and locations

of individuals that met the definition of minority per the SHA Environmental Justice guidelines.

Based on U.S. Census Bureau data, there are minority persons residing near the I-81 project. There are 15 block groups bordering the study area. These block groups extend approximately 2 miles on each side of I-81. Minority individuals live in nine block groups out of these 15. Table 3-7 provides a breakdown of the minority population within the nine block groups in which minority individuals live.

According to 2000 Census data, which is the latest information available at the block group level, within the 15 block groups near I-81, 836 people lived in households that income levels below the 1999 poverty level (see Table 3-8). The WCPS provided information on children participating in the Free and Reduced Lunch Program (WCPS, 2003). According to the WCPS, there were very few students participating in the program living along the I-81 corridor.

According to WCPS, some children living in the Lakeside Mobile Home participate in the Free and Reduced Lunch Program. Children living in the Lakeside Mobile Home Park attend Hickory Elementary School, Springfield Middle School, and Williamsport High School.

Approximately 24 percent of the students at Maugansville Elementary School participate in the Free and Reduced Lunch Program, and approximately 20 percent of the students at Williamsport Elementary participate in the program. These numbers are average for Washington County. At Springfield Middle School, 28 percent of the students participate in the Free and Reduced Lunch Program. This school serves several public housing communities which are not in the project area. Williamsport High School has 13 percent of their students participating in the Free and Reduced Lunch Program. The percentage of students participating in the Free and Reduced Lunch Program at schools serving the project area is below the county-wide percentage of 32.8 percent.

The Halfway Manor Apartments is located on Lincoln Avenue approximately 0.75 miles east of I-81. While there is no data to indicate that the residents of the Halfway Manor Apartments fall below the DHHS definition of poverty, the facility offers subsidized housing.

Public outreach in the areas with low income populations included public meetings at Maugansville Elementary School, a meeting with the Lakeside Mobile Home Park and a meeting with the Williamsport Town Council. The primary concern raised at these meetings was the potential noise levels changes resulting from the roadway improvements. Public outreach efforts to communities in the project area will continue throughout the project planning process.

Table 3-7: Minority Individuals in Block Groups Adjacent to I-81

	Block Group	African American	American Indian and Alaska Native	Asian	Some other race	Two or more races	Total Minority Population
Census Tract 3.01	2	22	0	0	0	6	28
Census Tract 9	2	0	0	0	0	1	1
Census Tract 9	3*	113	0	1	0	0	114
Census Tract 103	1	6	1	0	0	5	12
Census Tract 104	1	1	1	10	0	0	12
Census Tract 104	4	0	0	0	0	2	2
Census Tract 105	3	1	0	0	0	3	4
Census Tract 108.01	1	0	0	0	1	1	2
Census Tract 108.01	2	0	0	6	0	0	6
Totals	19	143	2	17	1	18	181

*Census Tract 9, Block Group 3 includes the prison population at the Sheriff's Department and Detention Center

Source: U.S. Census Bureau, 2000

Table 3-8: Income Summary for Block Groups Adjacent to I-81

	Block Group	Per Capita Income	Median Household Income	Median Family Income	Number of Individuals Living Below Poverty Level	Total Population	% Living Below Poverty Level
Census Tract 3.01	1	\$15,679	\$33,973	\$38,906	19	1,177	1.6%
Census Tract 3.01	2	\$15,227	\$36,695	\$39,506	89	2,472	3.6%
Census Tract 9	2	\$14,969	\$40,656	\$40,833	46	853	5.3%
Census Tract 9	3	\$12,346	\$28,125	\$24,453	67	1,112	6.0%
Census Tract 10.02	3	\$19,720	\$40,417	\$47,372	29	1,282	2.3%
Census Tract 103	1	\$20,672	\$35,700	\$44,600	58	1,329	4.3%
Census Tract 104	1	\$16,634	\$55,643	\$55,337	32	1,676	1.9%
Census Tract 104	2	\$20,105	\$40,370	\$51,382	93	1,220	7.6%
Census Tract 104	3	\$22,001	\$51,250	\$54,931	10	1,438	0.69%
Census Tract 104	4	\$23,735	\$42,679	\$42,679	27	990	2.7%
Census Tract 105	3	\$19,392	\$41,964	\$50,818	16	1,024	1.6%
Census Tract 108.01	1	\$19,321	\$37,581	\$47,969	122	1,303	9.4%
Census Tract 108.01	2	\$23,823	\$63,700	\$65,000	31	1,530	2.0%
Census Tract 108.02	1	\$15,932	\$33,750	\$41,780	136	1,764	7.7%
Census Tract 108.02	2	\$22,204	\$46,917	\$36,781	61	1,025	6.0%

Source: U.S. Census Bureau, 2000

e) Effects on Minority and Low-Income Populations

Under the No-Build Alternate, no low income or minority individuals would be directly affected.

While there are no known minority communities in the project area, there are minority individuals residing in the census tracts that fall within the project area. No residents will be displaced by the build alternates. One community, the Lakeside Mobile Home Park, has been identified as potentially having low-income residents. In addition, there is potential for low-income persons to reside in the vicinity of the project area. The Lakeside Mobile Home Park would not be directly affected by any of the proposed build alternates; minority individuals living near I-81 and residents of the Lakeside Mobile Home Park may be affected by temporary construction noise. Under the build alternates, 2025 build noise levels in the mobile home park are expected to decrease when compared to 2025 no-build noise levels (see Section III.E for additional information on noise impacts). Specific information on noise impacts can be found in Section III.E of this Environmental Assessment (EA).

The Halfway Manor Apartments, which includes subsidized housing, is located approximately 0.2 miles from US 11. Under the toll options, traffic may be diverted from I-81 to US 11 (see Community Facilities and Services, for information on traffic diversions). Access to and from the Halfway Manor Apartments may be affected by increased traffic at the US 11/Lincoln Avenue intersection.

There is no evidence that low-income or minority populations would be disproportionately affected by any of the build alternates being considered for the I-81 Improvement Project.

Community Facilities and Services**a) Existing Conditions**

Community Facilities and Services are shown in Figure 5. Eleven schools serve residents of the project area. Of these schools, Springfield Middle School, Williamsport High School, and Williamsport Elementary School are located adjacent to I-81 within the project area.

No health care facilities were identified in or adjacent to the project area. The closest hospital is the Washington County Hospital (WCH), located approximately 2 miles east of I-81. One emergency service facility, the Washington County Sheriff's Department and Detention Center, is located at 500 Western Maryland Parkway on the east side of I-81 between I-70 and US 40. Sheriff's deputies access I-81 at US 40. The State Police are responsible for service calls on I-81, and the Washington County Sheriff's Office services the area along I-81. The fire stations serving the project area are Maugansville Goodwill Fire Department, Volunteer Fire Co. of Halfway, Williamsport Volunteer Fire Department, and the Funkstown Volunteer Fire Department. There are no religious facilities located directly within the project area. Most religious facilities are located in Williamsport, Maugansville, and Hagerstown. There are three cemeteries located within

the project area; Greenlawn Cemetery and Cedar Lawn Memorial Gardens are immediately adjacent to I-81.

The Chesapeake and Ohio Canal National Historical Park is the only park or recreational area located within the project area. The canal and the towpath are located along the Potomac River and the towpath and canal crosses under I-81 at the southern end of the project area. The trail is accessible in Williamsport and Hancock, and services are provided at major access points (DNR, 2000).

Hagerstown Regional Airport (HGR) is adjacent to I-81 at the north end of the project area. In addition, there are 33 motor freight common carriers in the project area. I-68, I-70, I-81, MD 68, MD 340, MD 522, US 11, US 40 and US 40 Alternate are the major roads serving Washington County.

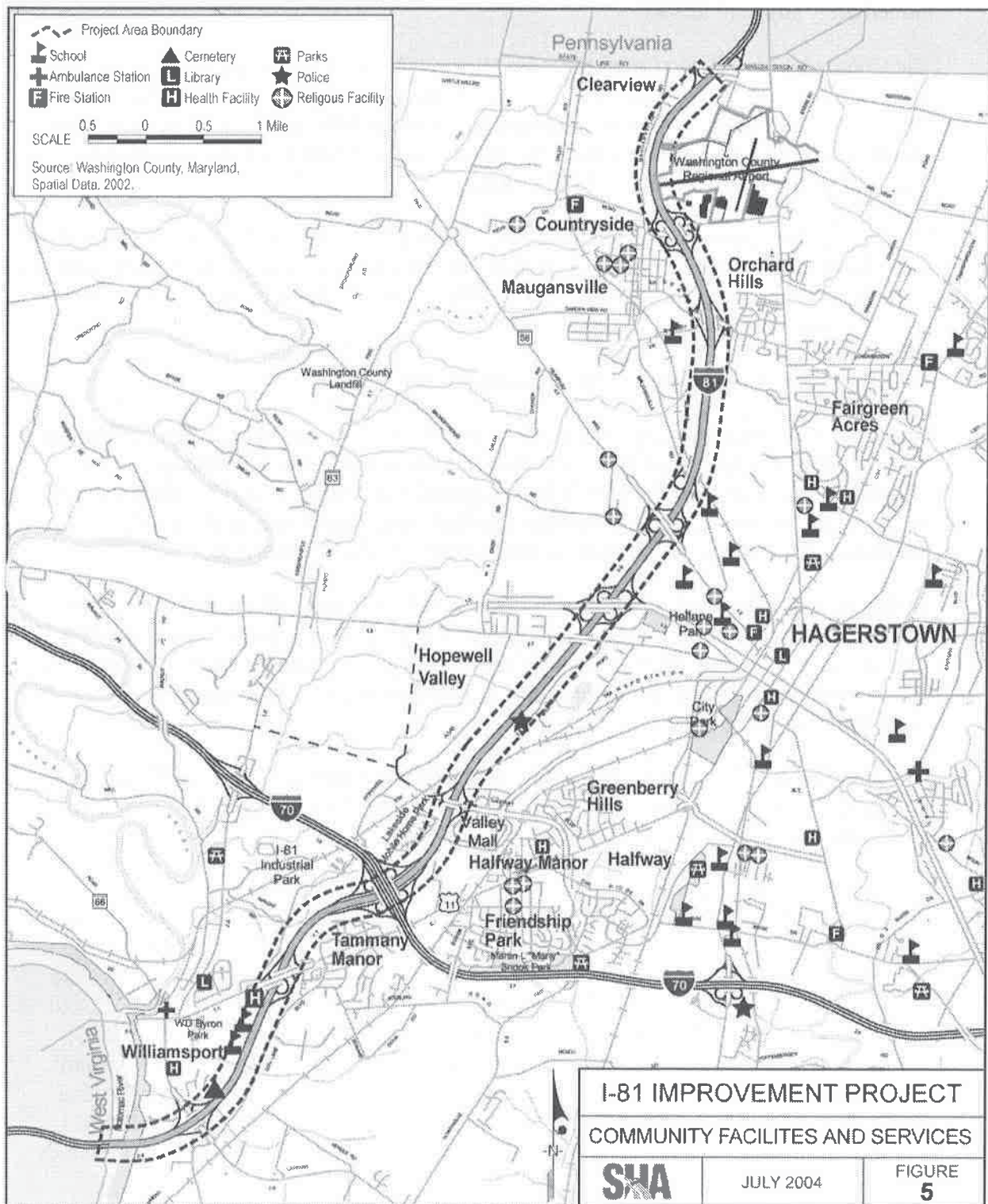
b) Effects on Community Facilities and Services

Under the No-Build Alternate, increased congestion on I-81 could negatively affect travel time for school buses using I-81 to travel to schools in the corridor. Without improvements to the interchanges, it is anticipated that crashes would continue to occur requiring resources from emergency services including state police and the local ambulance companies. In addition, response times would be increased.

Under the build alternates, improved highway levels of service, decreased congestion, and general improvement in traffic operations along I-81 would improve accessibility to community facilities and services and improve emergency response times. Traffic delays during construction could temporarily affect access to these facilities as well as emergency response times.

No schools would be directly affected by the build alternates; however, traffic delays during the construction phase could temporarily affect school buses, as I-81 is used in several of the bus routes to the schools along I-81.

Access to and from the Washington County Sheriff's Department and Detention Center, located on the east side of I-81 between I-70 and US 40, could temporarily be affected by reconstruction of the US 40 interchange. There are currently no emergency turn-arounds on I-81 for emergency and law enforcement vehicles, and none are proposed under the build alternates. There is currently a grassed median, which varies in width from 24 to 64 feet, which can be used for emergency turn-arounds if necessary. Under Alternate 3, Inside Widening, and Alternate 3A, Inside Widening with Collector-Distributor Roads, the width of the median would be narrowed, and the median would be replaced with a concrete jersey barrier near I-70 and Halfway Boulevard. However, due to the short distance between interchanges on I-81, it is not anticipated that emergency turn-arounds would be needed.



Expansion of the I-81 bridge over the Chesapeake and Ohio Canal National Historical Park and the Potomac River would affect the park. Widening the bridge would require construction of new piers within the park. In addition, a temporary construction easement may be needed in the park to access the construction area. Access on the towpath east and west of the I-81 bridge may be temporarily restricted during construction, affecting persons hiking on the towpath. SHA would work with the National Park Service and the Chesapeake and Ohio Canal National Historical Park to construct temporary paths that protect park users from construction activities and that allow emergency vehicles to travel under the bridge. The National Park Service would be consulted with to define the criteria for short-term, temporary closures for the protection of park visitors and resources, so that the park would remain open to visitors during the construction. The expanded bridge would have a long-term affect on the visual quality of the park by adding a new element to the park's landscape. Toll Options 1, 2, 3, and 4 could have an impact on views from the park. The park is approximately 400 feet from the proposed toll plazas. However, a temporary construction easement may be needed through the park to access the construction area for the toll plazas and administration buildings at the southern end of I-81. The diversion of traffic could lead to increased congestion on US 11 in the vicinity of the park's Cushwa Visitor Center, impeding access to this facility.

The Chesapeake and Ohio Canal National Historical Park is owned and maintained by the National Park Service. The National Park Service has been mandated by the Organic Act of 1916 to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations." While minimal impacts to the Park are anticipated with the Alternates 3 and 3A and toll options, these impacts are not expected to result in any impairment to park resources or values. Coordination with the NPS has been initiated and will continue through the final document.

Land from the Hagerstown Regional Airport would not be acquired for the interchange improvements or inside widening proposed under the build alternates. The airport does have runway approach lights in the median of I-81. These lights would not be removed; however, under Alternates 3, Inside Widening, and Alternate 3A, Inside Widening with Collector-Distributor Roads, wiring supplying power to the lights may need to be relocated. Utility work would be closely coordinated with the Board of County Commissioners, which owns and operates the airport. In addition, any new signs placed on I-81 would be in compliance with Federal regulations for signs in the vicinity of an airport. Signs installed within 500 feet transversely on the extended runway centerline could be up to 30 feet high. Any signs installed beyond 500 feet should have an additional 1-foot vertical clearance for every 7 foot of horizontal (FAR Part 77).

Under the toll options, persons that use I-81 to access out-of-state facilities would be required to pay between \$0.50 and \$4.00 per round-trip.

Under the various toll options, traffic may be diverted from I-81 to secondary roads as travelers attempt to avoid paying tolls (see Section III.A.3b. of the I-81 Socioeconomic Technical Report and the I-81 Toll Diversion Analysis Report for additional information

on traffic diversion). The toll options would not have any additional impact on emergency services. Emergency vehicles would be equipped with transponders that allow them to go through the toll plazas without stopping and would be able to use any of the lanes when responding to emergencies on either side of the toll plazas. Land from the Hagerstown Regional Airport would be acquired under Toll Option 2 for construction of the toll plaza. Under Toll Options 3 and 4 approximately 3.93 acres of land would be acquired from the airport for construction of the toll plazas and an administration building. This land is not within the airport's Runway Protection Zone (RPZ). Representatives from the airport have expressed safety concerns with the placement of toll plazas and/or an administration building in this area.

The diverted traffic would affect travel conditions on other roadways in the region including MD 68, US 11, Showalter Road, and PA 163. A traffic diversion analysis was completed for each of the toll options. The analysis took into consideration cost of tolls, length and condition of alternate travel routes, and roadway capacities. The results of the diversion analysis for a \$0.50 to \$2.00 toll rate are shown in Table 3-10.

No community facilities or services would be affected by the construction or operation of the weigh station. Operation of the proposed weigh station could lead to the diversion of truck traffic from I-81. Truck drivers attempting to avoid the weigh station may utilize other north/south routes including US 11 and MD 63, resulting in increased truck volumes on these roadways.

Table 3-9: Critical Lane Volume

	US 11 and Showalter Road		US 11 and PA 163		US 11 and MD 68/MD63	
	AM	PM	AM	PM	AM	PM
2004 (Existing)	A (535)	A (570)	A (468)	A (613)	A (481)	B (1,028)
2025 (No-Build)	A (760)	A (810)	A (676)	A (883)	A (764)	E (1,565)
2025 (Alternates 2, 2A, 3, and 3A)	A (760)	A (810)	A (676)	A (883)	A (764)	E (1,565)
2025 (Toll Option 1)	NA	NA	NA	NA	B (1,028) - C (1,248)	F (1,966) - F(2,408)
2025 (Toll Option 2)	B (1,080) - F (1,724)	B (1,057) - E (1,576)	A (943) - C (1,227)	D (1,312) - E (1,767)	B (1,022) - B (1,123)	F (1,727) - F (1,746)
2025 (Toll Option 3)	B (1,150) - E (1,504)	B (1,124) - D(1,399)	A (810) - B (1,114)	B (1,094) - F (1,939)	A (785) - A (893)	F (1,943) - F(2,384)
2025 (Toll Option 4)	E (1,453) - F (1,857)	D (1,358) - F (1,683)	B (1,075) - D (1,384)	F (1,648) - F (2,608)	B (1,026) - B (1,144)	F (1,975) - F (2,295)

**Table 3-10: Total Number of Vehicles Diverted to Other Roadways Per Day
(\$0.50 to \$2.00 Toll Tate)**

Toll Option	Vehicles Diverted		
	Passenger Vehicles	Trucks	Total
1	7,200 – 12,500	2,600 – 6,300	9,800 – 18,800
2	6,800 – 14,600	3,400 – 9,400	10,200 – 24,000
3	7,800 – 14,800	2,000 – 7,400	9,800 – 22,200
4	15,700 – 25,700	6,500 – 13,500	22,200 – 39,200

Economic Environment

a) Existing Conditions

Regional Economy

The top five industries in Washington County are educational, health, social services, manufacturing, and retail trade. The majority of new jobs in the county are projected to be in the transportation, wholesale trade, retail trade, and service areas of the economy. Approximately 4,200 acres in Washington County are within three state-designated Enterprise Zones: City of Hagerstown/Washington County Enterprise Zone; Hagerstown Regional Airport Enterprise Zone; and the Foreign Trade Zone (FTZ) #255 (EDC, 2003).

While most residents in Washington County work within the county, some residents commute to other counties to work. Likewise, residents of other counties commute to work in Washington County. Some of these individuals, especially those crossing state lines to work, may utilize I-81. Table 3-11 presents information on where individuals reside versus where they work.

Table 3-11: Residence County to Work Place County Flows

Residence County-State	Workplace County-State	Count
Washington County, MD	Alleghany County, MD	102
Washington County, MD	Berkeley County, WV	920
Washington County, MD	Franklin County, PA	2,140
Washington County, MD	Frederick County, MD	7,150
Washington County, MD	Washington County, MD	44,219
Alleghany County, MD	Washington County, MD	666
Berkeley County, WV	Washington County, MD	4,696
Franklin County, PA	Washington County, MD	7,841
Frederick County, MD	Washington County, MD	2,153
Berkeley County, WV	Franklin County, PA	308
Franklin County, PA	Berkeley County, WV	203

Source: U.S. Census Bureau, 2003

Local Economy

The primary industries located in the study area are: educational, health, social services, manufacturing, retail trade, construction, and public administration. Commercial and industrial businesses in the project area include trucking related industries, food-related industries, hotels, and retail establishments. The industrial and business parks along the I-81 corridor include the Airport Business Park, Hagerstown Business Park, Hunter's Green Business Center, Interstate Industrial Park, Newgate Industrial Park, and Washington County Business Park Airpark. The businesses within the project area employing the greatest number of individuals are Mack Trucks (1,027 individuals), Garden State Tanning (1,007 individuals), and Phoenix Color Corp (725 individuals).

b) Economic Effects

Under the No-Build Alternate, traffic congestion could affect regional business activities. I-81 is a major north-south interstate, extending from Canada to Tennessee. Congestion and crashes on the Maryland portion of the roadway could impede access to and from the area and slow the transport of goods and services, resulting in rising costs. Under the No-Build Alternate, traffic congestion could impede access to and from local businesses, resulting in loss of business and eventually the relocation of businesses from the area. These impacts could have a negative long-term effect on regional and local economic conditions.

The build alternates could provide relief to traffic congestion, improve safety, and in general, improve the transportation system along I-81. This would affect regional business activities in a positive way by improving access to and from the area, and improving the flow of goods and services carried by trucks along I-81.

Likewise, the improvements to I-81 would have a positive affect on local businesses and employment in the area because the access to the different commercial areas along I-81 would be improved. In addition, many of the businesses along the I-81 corridor are transportation related businesses, such as trucking and distribution centers and truck services. These businesses would all benefit from improved conditions on I-81, allowing for improved movement of goods and services.

Under the build alternates, two businesses, a fast-food restaurant and a motel, located at the Maugans Avenue interchange would be displaced by interchange improvement Option A (see Section II.B for a description of the proposed Maugans Avenue interchange improvements). Approximately eight individuals are employed by the motel, and 33 individuals are employed by the fast-food restaurant. Both businesses depend on their proximity to a highway interchange for business, and most land at the I-81 interchanges is already developed.

The build alternates would require the acquisition of 16 to 28 acres of private property. The property that is acquired by SHA would become tax exempt and no longer be subject to property taxes. The build alternates are not anticipated to negatively affect the value of remaining property in the project area.

Under each of the toll options, travelers in passenger vehicles using I-81 would be required to pay between \$0.50 and \$2.00 to enter or exit the state. There would be no toll for using I-81 for intrastate travel. This toll would finance construction of improvements to I-81 in a shorter time than would be possible without tolls. By expediting improvements, the toll options would have a positive long-term effect on economic conditions by facilitating the movement of goods and services through the region. Local residents would be able to benefit from the improved conditions on I-81 to access local businesses without paying tolls.

Under the toll options, commuters who use I-81 and cross state lines to get to work would pay between \$0.10 and \$2.00 in tolls per day¹. Based on 240 workdays per year, the average commuter would incur costs between \$24 and \$480 per year. These costs may induce people to use alternate routes to work, change jobs, or relocate their place of residence.

Under the various toll options, commercial vehicles would pay tolls of between \$1.73 and \$7.04 per trip. Projected toll revenues from commercial vehicles would be between \$35,465 and \$153,800 per day and between \$12,214,725 and \$56,137,000 per year.

Monies spent on tolls would be unavailable for use in the general economy, which could have a direct effect on local economic conditions. In addition, out of state residents may be less likely to cross into Maryland to patronize businesses in the project area. Increased cost to the trucking industry because of tolls may be passed on to businesses in the project area receiving goods and services. Businesses in turn would most likely pass these increased costs on to customers.

There are numerous trucking industry related businesses in the vicinity of I-81 including truck service centers and small to large distribution centers. Distribution centers located within the project area would realize the greatest economic impact from the introduction of tolls on I-81. These facilities house fleets of vehicles, which make local and long-distance trips on a regular basis. Trips which require crossing state lines would be subject to tolls under the various toll options. This increased cost would directly affect revenues of the trucking industry and could cause relocation or closing of businesses.

The toll plaza and administration building associated with the toll options would require the acquisition of between 8 and 15.5 acres of private property. As with the other build alternates, the property that is acquired by SHA would become tax exempt and no longer be subject to property taxes, which in turn would decrease county and state revenues. If trucking related businesses incur substantial cost from the introduction of tolls on I-81, they may choose to relocate out of the area. In addition, trucking related businesses may choose not to locate in the project area in the future. These changes could negatively affect property values in the area and subsequently county and state tax revenues.

The traffic diversion analysis that was conducted for the toll options showed that between 6,800 and 25,700 passenger cars and between 2,000 and 13,500 trucks per day could

¹ The toll rate for commuters includes a 60 percent discount with the purchase of commuter toll passes (based on discount offered on existing Maryland Transportation Authority facilities).

divert to other roadways if I-81 is tolled. The diversion analysis did not take into account geometric conditions of possible diversion roads, which could deter motorists from taking these routes. Detailed analysis of the cost of tolls for passenger vehicles and trucks is available in Section IV-B of the I-81 Socioeconomic Technical Report and the I-81 Toll Diversion Analysis.

The weigh and inspection station would require the acquisition of approximately 11 acres of private property, removing it from the tax base. Commercial vehicles may divert to other north/south routes to avoid the weigh station. This change in traffic patterns could affect area businesses, including gas stations and restaurants that are patronized by truck drivers.

Land Use

a) Existing Conditions

Existing Land Use

Land use in the project area is primarily commercial/industrial and residential (see Alternates Mapping at the end of Section II, Alternates). The industrial and business parks along the I-81 corridor include the Airport Business Park, Hagerstown Business Park, Hunter's Green Business Center, Interstate Industrial Park, Newgate Industrial Park, and Washington County Business Park Airpark. A variety of industrial buildings and office spaces are also available for sale or lease, including some with airport runway access.

Residential areas in the project area include Williamsport, Halfway, the Homewood at Williamsport Retirement Campus, Tammany Manor, the Lakeside Mobile Home Park, Countryside, Clearview, and the outskirts of Maugansville. Existing land use is presented in Figure 6.

Forested areas are interspersed with development along the I-81 corridor. Agricultural land is located on the west side of I-81 between Virginia Avenue and US 70, and from south of Maugans Avenue to the Maryland/Pennsylvania state line. Recreational land use in the project area is limited to the Chesapeake and Ohio Canal National Historical Park.

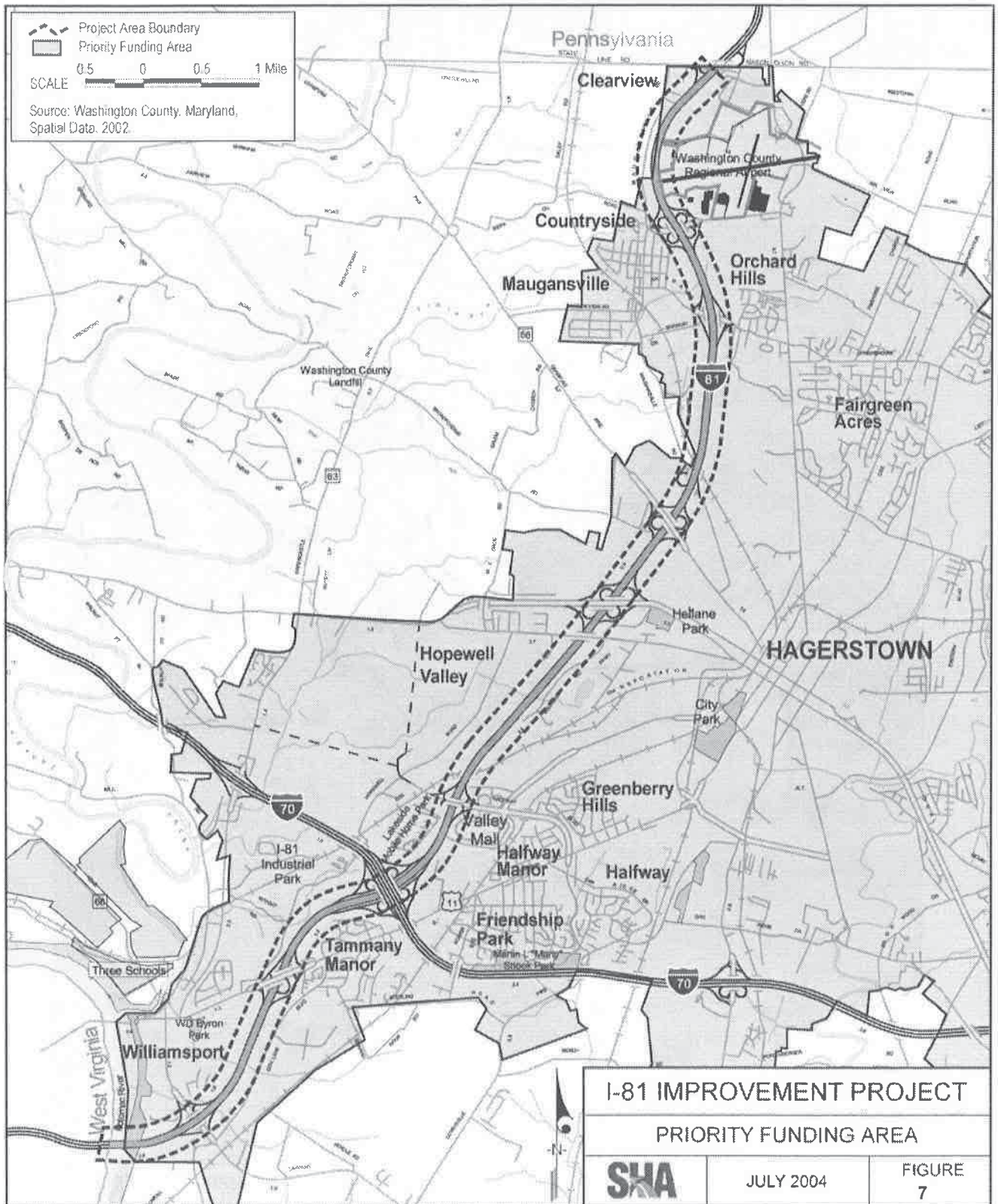
The 1997 General Assembly passed five pieces of legislation and budget initiatives—Priority Funding Areas, Brownfields, Live Near Your Work, Job Creation Tax Credits, and Rural Legacy—known collectively as "Smart Growth" (MDP, 2003b). Smart Growth directs the state to target programs and funding to support established communities and locally designated growth areas, and to protect rural areas. The Priority Funding Areas Act provides a geographic focus for the state's investment in growth-related infrastructure. The entire I-81 project area is in Washington County's Priority Funding Area (see Figure 7).

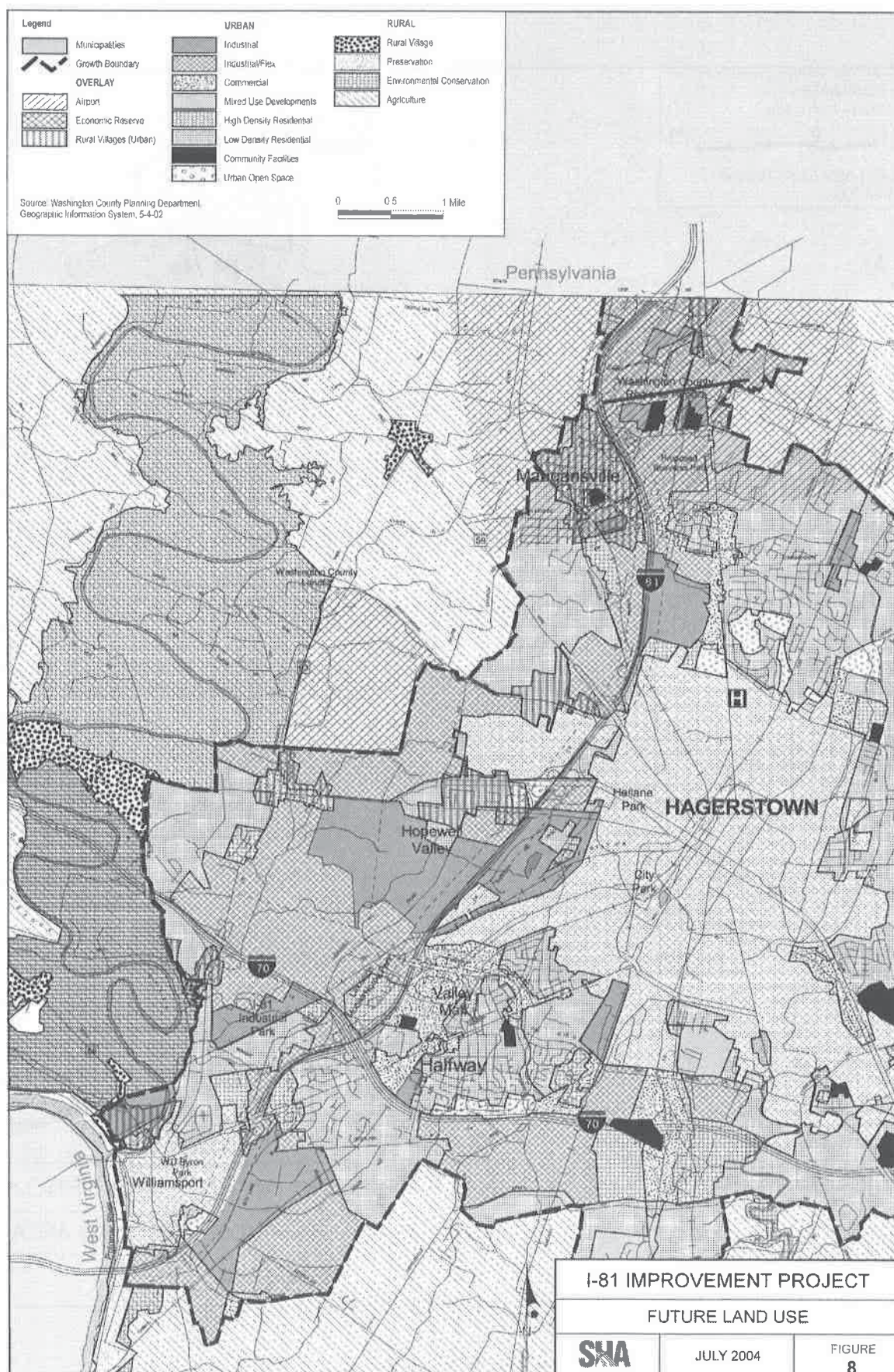
Future Land Use

Proposed development in the project area includes the build-out of industrial and business parks and new residential areas. Much of the undeveloped land in the project area is designated for development under the Washington County Land Use Plan (see Figure 8).

According to the Washington County Office of Planning, the development trends that have occurred over the past 10 years along I-81 are anticipated to continue even if improvements to the roadway are not made.







b) Effects on Land Use

The Washington County Comprehensive Plan, developed in accordance with the 1992 Planning Act, identifies improvements to roadways in growth areas and calls for widening I-81 to six lanes. Under the No-Build Alternate, deficiencies on I-81 would not be corrected. Therefore, this alternate is not consistent with the County's Comprehensive Plan.

Improvements to I-81 under the build alternates would require the acquisition of land and changes in existing land use. Land would be changed from commercial and residential, agricultural, and forested to highway use (see Table 3-12).

Alternates 2 and 2A are not consistent with the Washington County Comprehensive Plan since I-81 would not be widened under these alternates. Alternates 3 and 3A are consistent with the county plan, which calls for widening I-81 to six lanes. None of the alternates under consideration would substantially change future land use in the project area. According to the Washington County Office of Planning, the development trends that have occurred over the last 10 years along I-81 are anticipated to continue with or without improvements to the roadway.

Toll options for I-81 were not considered in the Washington County Comprehensive Plan. If trucking related businesses incur substantial cost from the introduction of tolls on I-81, they may choose to relocate out of the area, thus, changing future land uses in the area.

Table 3-12: Land Use Changes By Alternate

Anderson Land Use	Alternate						Toll Option				Weigh and Inspection Station
	1 (acres)	2 (acres)	2A (acres)	3 (acres)	3A (acres)	3A, Option B (acres)	1 (acres)	2 (acres)	3 (acres)	4 (acres)	(acres)
Residential and Commercial Land	0	6	6	6	6	6	0	0	0	0	0
Agricultural Land ¹	0	4	7	4	8	8	<1	5	4	9	0
Forest Land	0	7	15	7	16	16	7	4	5	5	11.2
Wetland	0	1	1	1	1	1	0	0	0	0	0
Total Acres	0	18	29	18	31	31	7	9	9	14	11.2

¹ Includes wooded fencerows and edges associated with fields.

B. CULTURAL ENVIRONMENT

Historic and Archeological Resources

a) Existing Conditions

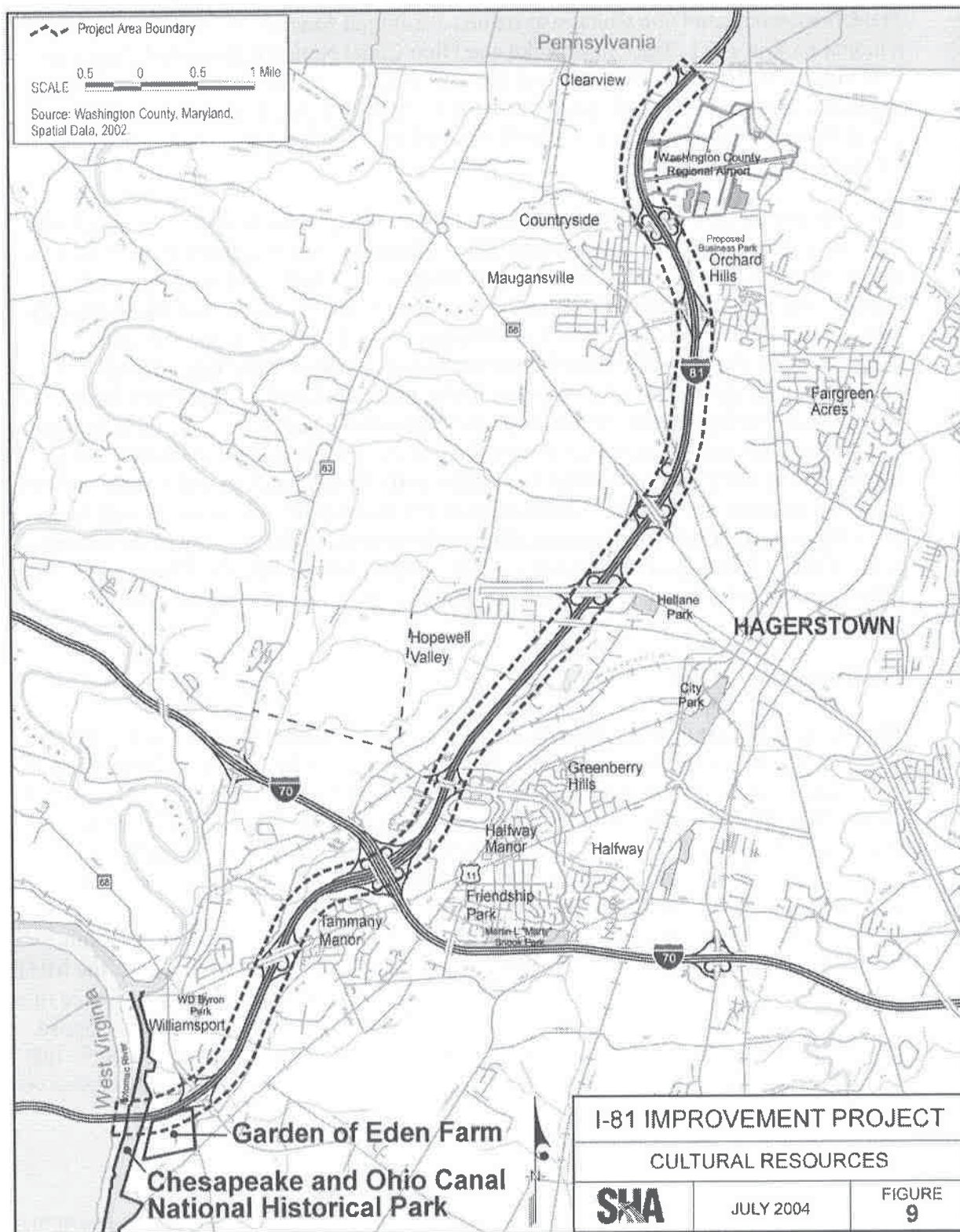
Identification and evaluation of historic architectural and archeological resources were conducted in accordance with federal and state laws, which protect significant cultural resources.

Background research and field surveys were conducted to facilitate identification of the cultural resources identified on Figure 9. Review of previous planning and research studies, existing inventories of historic properties, previous survey information, and historic maps was undertaken. The research considered the magnitude and nature of the undertaking, degree of federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the Area of Potential Effects (APE). Reports were prepared to facilitate evaluation of the cultural resources. These documents include *Determination of Eligibility Forms; Phase I Archeological Survey for Proposed Improvements to I-81, from West Virginia to the Pennsylvania Line, Washington County, Maryland* (Millis 2003); and *Phase I Intensive Archeological Survey for Proposed Toll Plazas along I-81, Washington County, Maryland* (Millis 2004).

All cultural resources identified during the architectural and archeological surveys were submitted to the Maryland Historical Trust (MHT) for National Register of Historic Places (NRHP) eligibility determinations, or comment on the need for further evaluation. NRHP criteria evaluates the significance of properties based on their integrity, and determines if those properties are associated with broad patterns of our history (Criterion A); or are associated with the lives of persons significant in our past (Criterion B); or that embody the distinctive characteristics of a type, period, or method of construction representing the work of a master, or have artistic value (Criterion C); or that yield information important in prehistory or history (Criterion D) (36 CFR 60.4, and National Register Bulletin No. 15). Correspondence documenting prior consultation with the MHT and other interested parties is provided in Section V of this EA.

Historic Resources

The term "historic standing structures" refers to any above-ground building, structure, district, or object that attributes to our cultural past. When these resources meet the criteria for listing in the National Register of Historic Places, they are historic properties that must be considered under the requirements of the National Historic Preservation Act of 1966. The MHT has concurred that two historic resources located within the APE are listed on or determined eligible for the NRHP. The APE for this project includes 200 feet on either side of the I-81 corridor to accommodate the various alternates/options proposed between the Potomac River at the southern limit up to Mason Dixon Line Road at the northern project limit. The project's APE and the locations of the Chesapeake and Ohio Canal and the Garden of Eden are illustrated on Figure 9. A description of each property and its significant characteristics are provided below.



Chesapeake and Ohio Canal National Historical Park

The Chesapeake and Ohio Canal was named a National Monument in 1961 and became a national park in 1971. The Chesapeake and Ohio Canal National Historical Park was listed in the NRHP in 1979. Although the National Register nomination form does not implicitly provide criteria of significance for its eligibility, the Chesapeake and Ohio Canal National Historical Park is eligible under Criterion A for its history and Criterion C for its architecture.

The Chesapeake and Ohio Canal follows the route of the Potomac River for 184.5 miles from Washington, D.C. to Cumberland, MD. The canal operated from 1828-1924 as a transportation route, primarily hauling coal from western Maryland to the port of Georgetown in Washington, D.C. The Chesapeake and Ohio Canal was the lifeline for communities and businesses along the Potomac, as coal, lumber, grain, and other agricultural products gently floated down the canal to market. This magnificent water highway linked the rapidly growing west to the east and played an important role in the growth and development of our country. Hundreds of original structures, including locks, lockhouses, and aqueducts, serve as reminders of the canal's role as a transportation system during the Canal Era. The Chesapeake and Ohio Canal National Historical Park preserves remains of America's colorful canal era. In addition, the canal's towpath provides a nearly level, continuous trail through the spectacular scenery of the Potomac River Valley. Every year millions of visitors come to hike or bike the Chesapeake and Ohio Canal in order to enjoy the natural, cultural, and recreational opportunities available.

Garden of Eden Farm

The Garden of Eden farm is significant under National Register Criterion C for its architecture and for its association with the history of agriculture in Washington County. The house is set back from MD 63, which is the first exit on northbound I-81 once in the state of Maryland. The house is oriented north and not toward the road. A tree lined drive leads to the built large brick structure circa 1855. It features many gables and a dominant steeply pitched, slate clad roof. Between the house and I-81 is a bank barn. East of the house are the remaining farm fields. This property was determined eligible for the NRHP under Criterion C, Architecture, with the MHT concurrence in October 2001. A revised Determination of Eligibility (DOE) was recently submitted to the MHT for the Garden of Eden to revise the National Register boundary due to the presence of a large truck container facility located on the property just south of the rear of the house. MHT concurrence to revise the boundary to the Garden of Eden that would include the house, barn, and associated fields, and eliminate the truck container facility was received on August 8, 2004.

Archeological Resources

The term "archeological resources" refers to all evidences of past human occupation that can be used to reconstruct the lifeways of past peoples. These include sites, artifacts, environmental, and all other relevant information, as well as the contexts in which they

occur. All archeological (prehistoric and historic) sites must be evaluated for their eligibility for the NRHP by the MHT.

The APE for archeological investigations was defined by the worst case limits of ground disturbance for all the alternates and toll options. Archeological identification investigations were conducted within the APE to ascertain the range and number of historic and prehistoric period archeological resources present, and to make recommendations for further evaluations for eligibility to the National Register.

Five archeological sites (18WA500, 501, 502, 503, and 504), and several isolated finds (18WAX 107, 108, 109, and 110) were located in the APE (Millis 2003, 2004). None of the archeological sites were determined to be eligible for NRHP listing as documented in SHA/SHPO correspondence dated September 29, 2003, and October 15, 2003; and SHA correspondence dated July 30, 2004 (see Section V).

Widening of the bridge will entail work in the Chesapeake and Ohio National Historical Park. Due to topographic conditions, the only portion of the Park to have archeological potential is the high terrace well above the canal, towpath, and Potomac River. Construction of new piers and abutments will affect only steep slopes with no archeological potential. As presently conceived, primary construction staging will be done from the West Virginia side of the river, and from the I-81 median on the terrace top on the Maryland side to avoid impacts to any potential archeological resources in the park. Any need for archeological work as a result of the development of design plans will be dealt with as a stipulation in a Memorandum of Agreement (MOA).

A citizen's report of a possible unmarked cemetery in the vicinity of the Showalter Road interchange was investigated by a detailed interview with local residents, examination of prior SHA construction data, archival deed research, and Phase I fieldwork. No evidence of a cemetery within the APE was documented.

b) Effects on Cultural Resources

The requirements of the National Historic Preservation Act (NHPA) of 1966, as amended, are implemented in 36 CFR 800. The NHPA established the Advisory Council on Historic Preservation (ACHP). The ACHP developed procedures for compliance with Section 106 of the NHPA. If historic properties listed in, or determined eligible for, the NRHP are identified (36 CFR 800.4), the sponsoring agency must assess how its project will affect them. Throughout this assessment, the agency should work with the MHT and consider the views of others, such as representatives of local governments, property owners, members of the public, and the ACHP. The agency's assessment should use the criteria found in the ACHP's regulations and guidance (36 CFR 800.5).

In considering the potential effects of the project on the identified resources, the agency may make one of the following three determinations:

- no historic properties affected,
- no historic properties adversely affected, or
- historic properties adversely affected.

According to the current guidance, “An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.”

In consultation with MHT, two historic properties and five archeological sites were identified within the APE for the I-81 project. SHA consulted with the MHT, NPS, and others to determine the potential effects of the project on the historic properties. The MHT determination of effects on cultural resources is documented in letters dated August 4, 2004.

Historic Sites

The two historic properties (the Garden of Eden farm and the Chesapeake and Ohio Canal National Historical Park) located within the APE for the project are shown on Figure 9 and the Alternates Mapping at the end of Section II of this EA. The effects of the alternates being considered for improvements to I-81 as part of this project are discussed below.

The No-Build Alternate would not affect the Garden of Eden or the Chesapeake and Ohio Canal National Historical Park.

Under Alternate 2, improvements to the I-81 at MD 68 interchange would provide an acceleration lane for traffic coming from Conococheague Street to I-81 southbound. This improvement mainly takes place on Conococheague Street and is not in close proximity to the Garden of Eden or Chesapeake and Ohio Canal National Historical Park; therefore, neither resource would be affected by this alternate.

In addition to the improvements proposed under Alternate 2, Alternate 2A proposes a two-lane collector distributor road from the I-70 exchange to the Halfway Boulevard Exchange. Since this collector-distributor road is located farther north of the Garden of Eden and the Chesapeake and Ohio Canal National Historical Park, neither would be affected by Alternate 2A.

Since the inside widening improvements proposed under Alternate 3 are within existing right-of-way, the Garden of Eden or the Chesapeake and Ohio Canal National Historical Park would not be affected by this alternate.

The inside widening proposed under Alternates 3A and 3B occurs within existing right-of-way, and the collector-distributor roads associated with these alternates are located far north of the Garden of Eden and the Chesapeake and Ohio Canal National Historical Park. As a result, there would be no effect to the Garden of Eden from the inside widening or interchange improvements. Under these alternates, SHA Bridge No. 21078 on I-81 over the Potomac would be widened. The steel girder bridge was constructed in 1965 and is not considered eligible for the NRHP. Widening the bridge would require the extension of the existing 36-foot long piers. Each of the piers would be extended an additional 19 feet toward the median of the bridge. The extended piers would be 6 feet wide, the same as the existing piers. No adverse effects would occur to the Chesapeake

and Ohio National Historical Park as long as the towpath and canal prism is not physically impacted by the bridge widening and that the amount of vegetation removal required for the bridge work is strictly limited. A visual impact would occur from the inside widening of the bridge. The inside widening would increase the size of the roadway which currently has a visual effect on the park.

In addition to Alternates 1, 2, 2A, 3, 3A, and 3B, there are four toll options which may be paired with any of the alternates. Toll Options 1 through 4 all propose construction of toll plazas in the northbound and/or southbound directions of I-81 between the Potomac River and Conococheague Street. An administration building would be constructed on the northbound and/or southbound side of I-81, just north of the park. The Chesapeake and Ohio Canal National Historical Park would incur physical and visual impacts associated with construction of the widened highway, toll plaza, and administration buildings. Noise impacts are expected to increase by 3 dBA at the Chesapeake and Ohio Canal National Historical Park, however, this increase in noise level does not lessen the contributing characteristics of the Chesapeake and Ohio Canal National Historical Park as a NRHP property. Visually, the construction of the administration building on each side of I-81 would add new visual features in the landscape. However, since the towpath and canal prism lie approximately 20 feet below the I-81 corridor, this new construction would not adversely impact the character-defining features of the Chesapeake and Ohio Canal National Historical Park. Therefore, SHA has determined that no adverse effect would occur to the Chesapeake and Ohio Canal National Historical Park by the toll options.

Toll Options 1 and 4 are located in the vicinity of the Garden of Eden. Currently, the Garden of Eden is located just south of the I-81 and MD 63 interchange and screened from I-81 through vegetation. The required widening to accommodate the needed lanes for the toll booths occurs south of the proposed revised NRHP boundary. The construction of the administration building would be a new visual characteristic to the landscape. However, this new visual addition would not adversely affect any character-defining features of the Garden of Eden. Character defining features of the Garden of Eden include the house and its stylistic details (windows, doors, wood siding, rails, etc), the barn, the agricultural fields, and the more specified landscape features of the tree lined driveway, the configuration of the driveway, associated landscape by the house.

In a letter to the MHT dated July 8, 2004, the SHA requested concurrence in a no effect determination for the No-Build (Alternate 1) and Build Alternates 2, 2A, 3, 3A, and 3B, and a no adverse effect determination for the inclusion of Toll Options 1 through 4. Concurrence in these effect determinations was received from the SHPO on August 4, 2004.

Archeological Resources

No archeological resources eligible for National Register of Historic Places listing have been located in the APE as presently defined; therefore no effect would occur. Concurrence in these effect determinations was received from the SHPO on August 4, 2004.

C. NATURAL ENVIRONMENT

The No-Build Alternate would not affect the natural environment in the project area. Therefore, this section focuses on the potential impacts of the build alternates. Detailed information on natural resources for the project area and potential impacts can be found in the Natural Environmental Technical Report.

Geology, Topography, and Soils

a) Existing Conditions

The project area is located within the eastern portion of the Valley and Ridge Province known as the "Great Valley," which is composed of Cambrian and Ordovician age limestone and dolomite. Several fossil deposit locations occur in the vicinity of the following interchanges with I-81: MD 68, US 40, I-70, Halfway Boulevard, and Showalter Road.

I-81 is elevated approximately 100 feet above the Potomac River with a steep rocky hillside adjoining the southbound edge of pavement immediately north of the Potomac River. On the south side of the Potomac River, there is a narrow floodplain with the elevated I-81 roadbed. Throughout the length of the project area, the roadway is elevated on fill material above the surrounding land in some areas and at grade in other areas.

Soil surveys show 16 soil series occur within the project area, 13 in Washington County and three in Berkeley County. The Washington County soils are Downsville, Duffield, Fairplay, Funkstown, Hagerstown, Lappans, Lindsides, Melvin, Opequon, Quarry, Swanpond, Udorthents, and Urban land. The Berkeley County soils are Combs, Monongahela, and Weikert Berks.

Nine soils types in the project area are prime farmland soils and three are soils of state-wide importance. The prime farmland soils were in the following series: Downsville, Duffield, Funkstown, Hagerstown (two soil types), Lindsides, Swanpond, Swanpond-Funkstown, and Combs.

b) Impacts and Minimization/Mitigation

All of the build alternates have the potential to have an adverse impact on fossil deposits and lands with potential mineral resource development; however, the alternates would not involve extensive cut and fill and would not be substantially outside the existing area of disturbance of the interstate and interchanges.

Construction activities are proposed in the area of the I-81 overpass over the CSXT rail line in Alternates 2, 2A, 3, and 3A. Steep slopes are sensitive to erosion; therefore, construction activities could impact the topography in this area. In addition, under Alternates 3 and 3A, construction activities are planned for inside widening on I-81 at the Potomac River. These construction activities, which include extending the width of the existing piers to the inside of the existing bridge, could have localized impacts on steep riverbanks.

All of the potential actions would involve cut and fill construction activities and the use of heavy equipment, which would disrupt the existing soil profiles and result in soil compaction. Most of the soils along I-81 are highly disturbed from prior roadway construction and impacts associated with the project alternates would be negligible.

All of the build alternates and toll options would impact some prime farmland soils and soils of state-wide importance. The acreages impacted of prime farmland soils and soils of state-wide importance for the alternates are shown in Table 3-13.

Table 3-13
Prime Farmland Soils and Soils of Statewide Importance

Alternate	Impact (Acres)
Alternate 2	4
Alternate 2A	9
Alternate 3	4
Alternate 3A	11
Toll Option 1	0.1
Toll Option 2	5.2
Toll Option 3	0.1
Toll Option 4	8.8

A Farmland Conversion Impact Rating (NRCS-CPA-106) was completed for the project in compliance with the Farmland Protection Policy Act. The values calculated for the build alternates were below the recommended threshold for submission to and consultation with the U.S. Department of Agriculture Natural Resources Conservation Service (FHWA, 1985). As planning and design continues, avoidance and minimization will be explored to reduce impacts to prime farmland soils and soils of statewide importance.

Best management practices would be incorporated into the engineering design and contractor specifications to minimize the extent of the soil disturbances and the amount of cut and fill required. Mitigation would include the use of erosion control measures such as silt fences, erosion blankets, and re-vegetation of exposed soils to reduce the erosion and soil loss. A sediment and erosion control plan would be submitted to and approved by the Maryland Department of the Environment (MDE). Appropriate sediment and erosion control devices would be installed as needed in accordance with the *1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control*.

Water Resources

a) Existing Conditions

According to the Ground Water Atlas of the United States, Delaware, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, and West Virginia HA 730-L (Trapp and Horn, 1997), the project area is underlain by aquifers of the Valley and Ridge Physiographic Province. The carbonate bedrock that underlies the Great Valley receives recharge from precipitation that falls directly within the region, as well as from runoff

from adjacent ridges. Precipitation will also act as a recharge source in sinkholes, which form when part of the roof of a solution cavity collapses, and forms a direct connection from the land surface to a carbonate aquifer. Detailed information on existing groundwater in the project area can be found in Section C of the Natural Environmental Technical Report.

“Waters of the U.S.” are defined by the U.S. Army Corps of Engineers (COE) as “coastal and inland waters, lakes, rivers, and streams that are navigable waters of the United States, including their adjacent wetlands” and “tributaries to navigable waters of the United States, including adjacent wetlands” (*Corps of Engineers Wetlands Delineation Manual* [Environmental Laboratory, 1987]).

Surface waters in the project area consist of ephemeral, intermittent, and perennial streams (see Table 3-14). The Conococheague Creek and its tributaries are designated as Use IV-P streams. The Potomac River and unnamed tributaries flowing directly into the Potomac River are designated as Use I-P streams. Each waterway is depicted on the Alternates Mapping in Section II of this EA.

Water quality in the project area is within MDE and Environmental Protection Agency (EPA) standards. Baseline water quality conditions can be found in the Natural Environmental Technical Report. In general, the stream habitat and water quality is poor to marginal because of the existing suboptimal conditions such as low number of attachment sites, channel alterations, and poor water quality parameters such as pH and turbidity.

c) Impacts and Minimization/Mitigation

Under the build alternates, most of the highway and interchange improvements would occur at grade, reducing the depths of excavation necessary. Shallow excavations reduce the likelihood that groundwater flow would be affected. However, the build alternates would increase impervious surfaces which can reduce ground water infiltration and recharge. The road improvements would increase the impervious area between 175 acres to 223 acres. The increase in impervious surfaces when compared to size of the 12-mile project area is relatively small; thus, the improvements with appropriate stormwater management practices would have negligible impacts on groundwater. Lastly, highway alignments are potential sources for groundwater contamination sources from deicing activities, urban runoff, and fuel leakage that can seep into the groundwater. Implementation of best management practices and stormwater management facilities would reduce the potential for groundwater contamination.

Table 3-14 summarizes the impacts in linear feet of stream for each alternate. Each build alternate would involve bridge widening and box culvert extensions, along with the construction of retaining walls to minimize impacts to wetlands and adjoining properties. Table 3-15 provides a summary of the number of bridges, drainage structures, and retaining walls for each alternate. In some cases, these streams are ditch-like waterways that convey water to “waters of the U.S.” These streams are jurisdictional and would be relocated towards the outside of new roadway alignment.

The widening of the bridge over the Potomac River would include the replacement of the existing decking, the expansion of the decking, and the extension of the existing piers. This action would require approximately 0.26 acre of fill be placed into "waters of the U.S." because the 10 existing piers in the Potomac River would be extended laterally by 19 feet. The extended piers would be 6 feet wide, the same as the existing piers.

Indirect, short-term impacts to water quality typically occur during construction from grading and removal of vegetation, which results in increased sedimentation and runoff velocities into nearby streams. All of the build alternates would increase impervious surfaces. Impervious surfaces can affect water quality because of increased runoff directly into the streams without the filtering affects of vegetative buffers. The increase in impervious surface when compared to the project area is relatively small; thus, the improvements would have minor indirect impacts on water quality because of increased runoff velocities.

Alternates 3 and 3A includes widening both bridge spans over the Potomac River, which would have additional short-term and long-term adverse impacts on water quality. The in-water construction to widen the piers would disturb the riverbed and suspend sediments into the water column. The majority of the construction activities would occur within the confines of cofferdams, and, therefore, the potential impacts on water quality from suspended sediment would be minimized. Other short-term impacts on water quality from construction include the release of construction debris and substances.

The bridge over the Potomac River has an open drainage system, which collects roadway stormwater runoff from I-81 and discharges the surface water directly into the Potomac River. The widening of the bridge would increase the amount of impervious surface, which would contribute to an increase in the stormwater runoff into the Potomac River. Potential pollutants on the bridge entering the Potomac River such as gasoline, oil, tires, brake particulate, litter, dust, salt, sand, and gravel from normal traffic use would increase. The potential hazardous materials being transported on the bridge or its approaches would also increase as traffic volumes on I-81 increase.

Table 3-14
Impacts to “Waters of the U.S.” in the I-81 Project Area

		Estimated Impacts (feet)							
		Alternates							
“Waters of the U.S.”	Classification	2 (Roadway – LOD ¹)		2A (Roadway – LOD)		3 ² (LOD – LOD)		3A (LOD – LOD)	
		Perpendicular Stream	Parallel Stream	Perpendicular Stream	Parallel Stream	Perpendicular Stream	Parallel Stream	Perpendicular Stream	Parallel Stream
WL-002	Perennial	20	--	20	--	70	--	70	--
WL-006	Perennial	50	--	50	--	150	--	150	--
WL-009	Perennial	40	--	40	--	30	620	30	620
WL-011	Intermittent	200	--	200	--	120	250	120	250
WL-015	Perennial	--	--	--	--	95	--	109	--
WL-017	Perennial	200	--	250	400	350	150	358	400
WL-018	Ephemeral	--	--	--	140	--	--	--	140
WL-019	Intermittent	70	--	140	--	250	--	286	--
WL-020	Intermittent	--	32	--	1,250	--	32	--	1,250
WL-023	Perennial	315	--	310	--	340	--	668	--
WL-024	Ephemeral	--	145	--	145	--	145	--	145
WL-025	Ephemeral/ intermittent	--	834	--	834	--	834	--	834
WL-026	Perennial	55	--	55	--	51	--	56	--
WL-027	Perennial	90	--	90	--	75	--	75	--
WL-028	Perennial	35	--	35	--	35	--	35	--
WL-030	Ephemeral/ intermittent	--	907	--	743	--	916	--	746
WL-031	Perennial	30	--	30	--	177	--	160	--
WL-032	Ephemeral/ intermittent	--	678	--	678	--	678	--	678
WL-033	Ephemeral/ intermittent	--	728	--	57	--	729	--	577
WL-33A	Perennial	--	187	--	120	--	187	--	120
WL-035	Ephemeral/ intermittent	--	30	--	60	--	30	--	60
WL-038	Ephemeral	--	97	--	97	--	97	--	97
WL-040	Ephemeral	--	641	--	422	--	641	--	422
WL-041	Perennial	40	--	190	--	80	--	360	--
WL-042	Perennial	10	--	10	--	160	--	160	--
WL-043	Perennial	--	--	--	--	90	--	90	--
WL-044	Perennial	60	760	60	760	30	760	60	760
WL-046	Perennial	--	--	--	--	--	67 ³	--	67 ³
Total Impacts		1215	5,039	1,480	5,706	2,103	6,136	2,787	7,166
		6,254		7,186		8,239		9,953	

¹LOD = Limits of Disturbance

² For Alternate 3, the area of impact for each stream was calculated from the outer limits of disturbance across all the lanes to the limits of disturbance on the other side of the Interstate. As a result, the area of impact is likely overstated but considers worst-case scenario for each stream crossing.

³ Impacted transect width of Potomac River from widening of existing bridge.

Table 3-15 - Number of Bridges, Drainage Structures, and Retaining Walls per Alternate

Alternate	Bridges	Box Culverts	Retaining Walls
2	3	11	2
2A	3	15	4
3	15	21	2
3A	15	28	5

A joint federal/state permit would be required for the activities that alter “waters of the U.S.” The applicant must demonstrate that proposed impacts to streams are necessary and unavoidable, and all avoidance and minimization measures have been fully exhausted. The joint federal/state permit would prohibit instream work in Use IV streams from March 1 through May 31, and prohibit instream work in Use I streams between March 1 and June 15. A detailed alternates analysis may also be required as part of the joint federal/state permit application process. Any impacts to streams would be mitigated in accordance with COE and MDE guidelines. Replacement ratios would be determined based on consultation with the regulatory agencies following the jurisdictional determination. If on-site, in-kind mitigation cannot be accomplished, mitigation site searches would be conducted to identify appropriate mitigation sites.

Coordination with MDE to comply with the EPA's Phase II stormwater regulation to obtain a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges associated with construction-related land disturbances would also occur. Best management practices and appropriate pollution prevention measures would be followed to reduce the release of construction debris and substances into the Potomac River.

Best management practices for stormwater management and sediment control would be implemented to minimize potential water quality impacts from any alternate. The proposed locations of stormwater management facilities, such as ponds and swales, are depicted on the Alternates Mapping at the end of Section II of this EA. The stormwater facilities would facilitate sediment deposition from the surface water prior to entering streams or other water bodies. Best management practices for sediment control would include the use of erosion control measures such as silt fences, erosion control blankets, and re-vegetation of exposed soils to reduce the erosion and soil loss.

The stormwater management for the project would consider the increased impervious area associated with widening the I-81 bridge over the Potomac River. During the design stage, it will be determined whether open or closed drainage would be provided on the bridge. As more detailed designs are developed, additional stormwater control and water quality measures could be recommended.

Wetlands

a) Existing Conditions

The locations of the boundaries of areas delineated as wetlands or “waters of the U.S.” are illustrated on the Alternates Mapping at the end of Section II in this EA. More

detailed information on wetlands can be found in the I-81 Wetlands Investigation Report as well as the I-81 Natural Environmental Technical Report.

Seven wetlands were identified within the project area during field investigations. These drainage systems flow to natural "waters of the U.S." and exhibit evidence of regular hydrology supported by groundwater or ephemeral drainage from adjacent uplands.

b) Impacts and Minimization/Mitigation

Impacts to wetlands are regulated under Section 404 of the Clean Water Act and under the State of Maryland Non-tidal Wetland Protection Act. As shown in Table 3-16, direct impacts to wetlands have been identified for each build alternate. No wetlands exist within the project area for the weigh station or the toll options.

Table 3-16
Wetland Impacts in the I-81 Project Area

	Wetland Classification	Extent within Project Area (square feet)	Estimated Impacts (square feet)					Weigh and Inspection Station
			Alternates				Toll Options	
			2	2A	3	3A	All options	
WL-010	PEM1/PFO1A	4,412	1,232	1,232	1,231	1,231	0	0
WL-018	POW	875	0	875	0	875	0	0
WL-022	PEM1/PFO1A	11,170	170	370	171	370	0	0
WL-029	PEM/PSS1B	88,698	39,423	39,423	40,161	44,298	0	0
	Total	105,155 (2.41 acres)	40,825 (0.94 acre)	41,900 (0.96 acre)	41,563 (0.95 acres)	45,904 (1.05 acres)	0	0

A permit would be required for any activity that alters a non-tidal wetland or its 25-foot buffer. Impacts to wetlands would be mitigated in accordance with COE and the guidelines set forth in MDE's Maryland Non-tidal Wetland Mitigation Guidance document (July 1998). Acreage replacement ratios would be used to determine the amount of mitigation required. For forested and scrub-shrub wetlands, the replacement ratio is 2:1; for emergent wetlands, the replacement ratio is 1:1.

The preferential sequence of mitigation would begin with the replacement of functions and values of wetlands impacted on-site and in-kind wherever possible. If on-site, in-kind mitigation cannot be accomplished, then mitigation sites would be sought first within the impacted watershed and the appropriate sites chosen for the creation of new wetlands or enhancement of existing wetlands. Monitoring of wetland mitigation sites is required for a period of five years after construction of a mitigation project.

Floodplains

a) Existing Conditions

The proposed action must comply with Executive Order 11988 "*Floodplain Management*." For transportation projects, the U.S. Department of Transportation (DOT) Order 5650.2 entitled "*Floodplain Management and Protection*" prescribes policies and procedures for ensuring that proper consideration is given to the avoidance and mitigation of floodplain impacts.

FEMA flood mapping indicates that regulated 100-year floodplains cross the project area in several areas (FEMA, 1998). The location of each floodplain is depicted on the Alternates Mapping at the end of Section II of this EA. In the project area, the floodplains are associated with perennial and intermittent waterways. The floodplains' functions are primarily flood storage, groundwater recharge, wildlife habitat, water quality maintenance, and recreation (as in the case of the Chesapeake and Ohio Canal National Historical Park). Table 3-17 provides a summary of the floodplains within the project area and their associated functional value.

Table 3-17
FEMA-Designated 100-year Floodplain Locations and Functional Values

Stream	Location	Functional Value
Potomac River	Southern project area boundary	Outdoor recreation, wildlife habitat, natural beauty, moderation of floods (storage), groundwater recharge, water quality maintenance
Unnamed tributary to the Potomac River	Immediately north of the I-81/MD 68 interchange	Wildlife habitat, flood storage, groundwater recharge, water quality maintenance
Unnamed tributary to Conococheague Creek	Approximately 3,200 feet north of the I-81/MD 68 interchange	Wildlife habitat, flood storage, groundwater recharge, water quality maintenance
Unnamed tributary to Semple Run	Within the northern and western quadrants of the I-81/US 11 interchange	Wildlife habitat, flood storage, groundwater recharge, water quality maintenance
Semple Run	Immediately north of the I-70 interchange	Wildlife habitat, flood storage, groundwater recharge, water quality maintenance
Unnamed tributary to Conococheague Creek	Approximately 2,000 feet south of MD 144	Wildlife habitat, flood storage, groundwater recharge, water quality maintenance

b) Impacts and Minimization/Mitigation

Potential impacts to floodplains were evaluated with respect to the criteria in Executive Order 11988 (Floodplain Management) and the Federal Aid Policy Guide. In the case of the I-81 improvements and road widening, the existing road conditions transect the stream channels perpendicularly; therefore, longitudinal encroachments do not exist for any of the build alternates. Table 3-18 presents the potential encroachments into the 100-year floodplain by alternate.

Table 3-18
Floodplain Impacts by Alternate

Alternate	Floodplains Affected	Total Acreage of Impacts
No-Build Alternate	None	0
Alternate 2	Floodplain associated with Semple Run	2.1
Alternate 2A	Floodplain associated with Semple Run	4.0
Alternate 3	Floodplain associated with Semple Run	2.1
Alternate 3A	Floodplain associated with Semple Run	4.0
Alternate 3A, Option B	Floodplain associated with Semple Run	4.0
Alternate 3	Floodplain associated with Potomac River	<0.1
Alternate 3A	Floodplain associated with Potomac River	<0.1
Alternate 3A, Option B	Floodplain associated with Potomac River	<0.1
Weigh and Inspection Station	None	0
Toll Options 1, 2, 3, and 4	None	0

Minimization and avoidance were considered in the preliminary design of the build alternates; however, based on the existing road configuration, avoidance is not feasible. The exact amount of cut, fill and the potential effects of the extended culverts and new piers, as is the case with the bridge widening over the Potomac, would be determined during the final design.

Biological Resources

Aquatic Habitat and Biota

a) Existing Conditions

A habitat assessment performed for the I-81 Improvement Project indicates that the quality of the aquatic and riparian zone habitat within the portions of the stream assessed is suboptimal to marginal. The collection and identification of macroinvertebrates in three representative stream reaches along the corridor also indicates that the habitat quality and water quality are very poor. Water quality samples were collected at six stations within three streams that flow through the I-81 corridor. The stream reaches in

the project area included an unnamed perennial tributary to Conococheague Creek that flows near the I-81/MD 68 interchange, an unnamed perennial tributary to Conococheague Creek that flows through the I-81/US 11 interchange; and Semple Run, a perennial tributary of Conococheague Creek near the I-70/I-81 interchange. Fish sampling in the project area yielded few fish, and no amphibians or reptiles were observed during the surveys.

According to the MDNR, perennial reaches of the smaller tributaries throughout the project area may support resident populations of warmwater fish species typically found in the region. Intermittent stream reach that are not too distant from perennial stream reaches may also support fish during longer periods of sustained flow (MDNR, 2001a).

The U.S. Fish and Wildlife Service (USFWS) indicated that no federally proposed or listed endangered or threatened aquatic species are known to exist in the project area (USFWS, 2001). The MDNR indicated that no state-listed rare, threatened, or endangered aquatic plant or wildlife species are known to occur within the project area. State species of concern are known to have occurred in the vicinity of the project area (MDNR, 2001b). In addition, Conococheague Creek and its tributaries have been identified as having a high likelihood of providing habitat for rare freshwater mussels. No surveys were recommended by either agency.

b) Impacts and Minimization/Mitigation

Under the build alternates, the interchange improvements would have construction impacts that could adversely affect stream habitat quality and stream characteristics, thereby indirectly adversely impacting macroinvertebrate and fish populations in the streams. Land disturbance and culvert extensions in areas where I-81 crosses streams could have direct impacts to streams and affect water quality and aquatic biota habitat. Some increased stream shading at bridges and culverts would occur. The impacts would be minor because the area of disturbance at each stream would be very small.

A joint federal/state permit would be required for the activities that alter "waters of the U.S." The applicant must demonstrate that proposed impacts to streams are necessary and unavoidable and that all avoidance and minimization measures have been fully exhausted. The joint federal/state permit would prohibit instream work in Use IV streams from March 1 through May 31, and prohibit instream work in Use I streams between March 1 and June 15. Any impacts to streams would be mitigated in accordance with COE and Maryland Department of the Environment (MDE) guidelines.

Coordination with MDE to comply with the EPA's Phase II stormwater regulation to obtain a NPDES permit for stormwater discharges associated with construction-related land disturbances would also occur. Best management practices and appropriate pollution prevention measures would be followed to reduce the release of construction debris and substances into the Potomac River.

Best management practices for stormwater management and sediment control would be implemented to minimize potential water quality impacts from any alternate. The proposed locations of stormwater management facilities, such as ponds and swales, are

depicted on the Alternates Mapping at the end of Section II of this EA. The stormwater facilities would facilitate sediment deposition from the surface water prior to entering streams or other water bodies. Best management practices for sediment control would include the use of erosion control measures such as silt fences, erosion control blankets, and re-vegetation of exposed soils to reduce the erosion and soil loss. Mitigation measures would be similar to that described for wetlands and “waters of the U.S.” In the design and construction, avoidance and minimization would be practiced to the extent practicable to protect water quality.

Terrestrial Habitat and Biota

a) Existing Conditions

The land uses and vegetative land cover types within 500 feet either side of the I-81 corridor are illustrated on the Alternates Mapping at the end of Section II of this EA.

Urban or Built-up Land is the predominant land use adjacent to the existing I-81 alignment, comprising approximately 35 percent of the land use adjacent to the I-81 alignment. Forest Land comprises approximately 30 percent of the land use adjacent to I-81, consists mainly of mixed forest on areas formerly used for agriculture and occurs primarily along the northern portion of the alignment.

Most of the vegetation along the alternates consists of species introduced for landscaping purposes or native or naturalized successional species that have become established in areas disturbed by past construction (e.g., roadways) or agriculture. Mature forests and large trees occur only along the Potomac River, the Chesapeake and Ohio Canal National Historical Park, and along protected stream buffers. Representative plant species of the project area can be found in Section H of the Natural Environmental Technical Report.

Approximately 60 species of birds are commonly observed in the project area (NPS, 1990, Audubon Society of DC, 2002) and approximately 40 other species are less commonly noted. Forest interior dwelling birds, which require large areas of intact forest, are expected to be present in the mature deciduous forests near the Potomac River and in the Chesapeake and Ohio Canal National Historical Park. These species include pileated woodpecker, barred owl, ovenbird, and wood thrush. A list of representative wildlife species of the project area can be found in Section H of the Natural Environmental Technical Report.

The USFWS indicated that no federally proposed or listed endangered or threatened terrestrial plant or wildlife species are known to exist in the project area (USFWS, 2001). The MDNR indicated that no state-listed rare, threatened or endangered terrestrial plant or wildlife species are known to occur within the project area. State species of concern are known to have occurred in the vicinity of the project area (MDNR, 2001b). The potential for impacting these species is low because most of the disturbance would be within or near the maintained right-of-way. No surveys were recommended by MDNR.

b) Impacts and Minimization/Mitigation

Except for the weigh station and the toll options, most of the impacts are confined to linear bands alongside the highway. Under the build alternates, impacts would occur to forest edges and landscaping trees and shrubs that provide nesting and cover sites for birds such as sparrows, mourning dove, northern mockingbird, and blue jay. Forest edges also provide cover for eastern cottontail and small rodents. Agricultural land that would be affected by the toll options provides cover and food for killdeer, eastern cottontail, small rodents, and sparrows plus food for red-tailed hawk, white-tailed deer, and mourning dove.

Table 3-19 presents the potential impacts to land use by alternate.

Table 3-19
Summary of Land Cover Impacts for Each Alternate

Anderson Land Use	Alternate				Toll Option				Weigh and Inspection Station
	2 (acres)	2A (acres)	3 (acres)	3A (acres)	1 (acres)	2 (acres)	3 (acres)	4 (acres)	(acres)
Urban or Built-Up Land	6	6	6	6	0	0	0	0	0
Agricultural Land ¹	4	9	4	11	<1	5	<1	3	0
Forest Land	7	15	7	16	7	4	5	5	11.2
Wetland	1	1	1	1	0	0	0	0	0
Total Acres	18	31	18	34	7	9	5	8	11.2

¹ Includes wooded fencerows and edges associated with fields.

Under the build alternates, no Federal or state listed endangered or threatened plant and wildlife species are known to exist in the project area; however, a few state-listed species of concern are known to exist in the vicinity of the project area. The potential for impacting these species is low because most of the disturbance would be within or near the maintained right-of-way. No surveys were recommended by the MDNR.

Best management practices would be incorporated into the engineering design to minimize the areal extent of disturbances and land required for additional rights-of-way. These practices will minimize the impacts to land cover beyond the current right-of-way boundaries and the conversion of these land uses to Transportation, Communications, and Utilities land use. Engineering design will be used to minimize the amount of Forest Land to be cleared and only the minimum number of trees and woody plants will be cut to meet the need of the project.

Forests are protected through the State Forest Conservation Act and Reforestation Law Natural Resources Article 5-103 for state-funded projects. The law requires that transportation projects cut or clear only the minimum number of trees and other woody

plants as necessary that is consistent with sound engineering practice. Cleared forest land will be mitigated by forest replacement on an acre-for-acre basis on publicly owned property in the county.

If a mitigation site cannot be located, monies will be placed into the State Reforestation Law Fund to plant replacement trees on public lands.

D. HAZARDOUS MATERIALS/WASTE SITES

a) Existing Conditions

An Initial Site Assessment (ISA) was completed for the I-81 project area. Approximately 37 properties were screened during field visits to document existing conditions and to determine the potential risk associated with possible right-of-way expansion. Most of these properties were determined to pose a low risk; however, one site was determined to pose a medium risk, according to SHA risk criteria. A Resource Conservation and Recovery Information System-Small Quantity Generator (RCRIS-SQG) with no reported violations exist in the vicinity of Maugans Avenue. Evidence of petroleum releases, including motor oil and waste oil, were noted at the facility. These releases represented a recognized environmental condition. In addition, evidence of an underground storage tank (UST) was noted at this facility although the facility was not identified on the state-registered UST database. Further investigation and assessment would be necessary to determine whether releases from this facility have impacted the project area. More detailed information can be found in the ISA prepared for the project.

b) Impacts and Minimization/Mitigation

Under the build alternates, improvements to the Maugans Avenue Interchange under all the build alternates would have potential to affect a property with potential environmental constraints. With Option A, a portion of a site would be acquired that is a Resource Conservation and Recovery Information System-Small Quantity Generator (RCRIS-SQG) with no reported violations, which is a medium risk site according to SHA ranking criteria. Under Option B, a small portion of the same property would be acquired. During the site inspection conducted for the ISA, recognized environmental conditions were noted on the subject parcel. Depending on the area required for acquisition, further investigation such as soil sampling and testing could be required to determine whether potential releases from the facility have impacted or have the potential to impact the property under consideration. Should contaminated soil be present within the project area, excavation and proper removal/disposal of the material would be required.

The toll options and weigh station option would not affect any known hazardous waste sites that appear in the regulatory databases searched for the project.

E. NOISE

a) Existing Conditions

Ambient noise level measurements were conducted at 36 receptor sites located within 16 Noise Study Areas (NSA) (see Table 3-20). The NSAs are residential areas, and

receptors were selected to represent the overall noise environment and to determine locations where residences could be impacted by traffic noise throughout the project corridor. See the I-81 Noise Analysis Report for a detailed explanation of the noise analysis. The ambient noise levels shown in Table 3-20, as recorded over 20-minute periods, represent a generalized view of current noise levels. Monitored ambient levels in the project area ranged from 53 to 74 dBA.

Table 3-20: Existing Noise Levels

NSA	Site	Address	Description	Date Start Time	Monitored L _{eq} (dBA)*
A	R-1	15860 Lockwood Road	Residence	6/6/2003 10:30AM	65
	R-1A	Right-of-way	NW side of I-81 along the Potomac River	N/A	N/A
	R-2	15914 Lockwood Road	Residence	6/6/2003 10:30AM	62
B	R-3	Spielman Road Hogmire-Berryman Farm	Historic	6/6/2003 10:30AM	64
	R-3A	Hogmire-Berryman Farm	SE side of I-81 along the Potomac River	N/A	N/A
	R-3B	Right-of-way	SE side of I-81 along the Potomac River	N/A	N/A
C	R-4	334 Sunset Avenue Springfield Middle School	School	6/6/2003 11:37AM	61
	R-5	5 South Clifton Drive Williamsport High School	School	6/6/2003 11:37AM	58
	R-6	1 South Clifton Drive Williamsport Elementary School	School	6/6/2003 11:37AM	60
D	R-7	16408 Brookmeade Drive	Residence	6/6/2003 1:15PM	59
E	R-8	285 Doub Road	Townhouse	6/6/2003 1:15PM	53
	R-9	241 Doub Road	Townhouse	6/6/2003 1:15PM	56
F	R-10	16606 Tammany Manor Road	Residence	5/20/2003 11:23AM	70
	R-11	16712 Tammany Manor Road	Residence	6/26/2003 12:40PM	60
	R-12	16808 Tammany Manor Road	Residence	6/26/2003 12:40PM	55
	R-13	16830 Tammany Manor Road	Residence	6/17/2003 10:52AM	60
	R-14	16916 Hampton Road	Residence	6/17/2003 10:52AM	63

Table 3-20: Existing Noise Levels

NSA	Site	Address	Description	Date Start Time	Monitored L _{eq} (dBA)*
G	R-15	11125 Lakeside Drive	Residence	5/20/2003 1:05PM	70
	R-16	11145 Lakeside Drive	Residence	5/20/2003 1:05PM	72
	R-17	11307 Lakeside Drive	Residence	5/20/2003 1:05PM	74
H	R-18	213 Woodpoint Road	Residence	6/17/2003 1:42PM	54
I	R-19	371 Yorkshire Drive	Residence	6/17/2003 12:45PM	59
	R-20	10500 Broadfording Road	Residence	6/17/2003 12:45PM	66
J	R-21	18030 Hollyhock Road	Residence	7/2/2003 11:40AM	69
K	R-22	1424 Maugansville Road	Residence	5/30/2003 10:43AM	63
	R-23	1525 Kensington Drive	Residence	5/30/2003 10:43AM	58
L	R-24	18307 Shawley Drive	Residence	7/2/2003 10:28AM	65
M	R-25	13925 Sunrise Drive	Residence	5/30/2003 2:22PM	64
	R-26	18039 Showalter Road	Residence	7/2/2003 11:06AM	64
N	R-27	18217 Showalter Road	Residence	5/30/2003 3:20PM	61
O	R-28	14119 Stoneridge Lane	Residence	5/30/2003 2:22PM	60
	R-29	14229 Maugansville Road	Residence	5/30/2003 3:20PM	65
	R-29A	Maugansville Road	NW corner I-81 /Showalter Road Interchange	N/A	N/A
	R-29B	Maugansville Road	West side of I-81, north of Showalter Road	N/A	N/A
P	R-30	18121 Sky View Lane	Residence	5/30/2003 1:11PM	73
	R-31	18113 Clearway Drive	Residence	5/30/2003 1:11PM	73

* See Section III-D for an explanation of L_{eq} and dBA.

b) Impacts and Minimization/Mitigation

The noise impact evaluation was completed in accordance with SHA's *Sound Barrier Policy*, dated May 11, 1998. This is a Type I noise project as defined in 23 CFR, Part 772. A Type I project provides evaluation of noise mitigation for projects that propose construction of a highway on new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes.

Alternate 3A, inside widening with collector-distributor roads was modeled as worse case scenario and compared to the No-Build Alternate. Noise levels were modeled in accordance with the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) that computes highway traffic noise levels at user-defined receivers, and aids in the design of highway noise barriers. The noise levels given in this section are for the noisiest hour(s) of the day. The combination of 2025 peak hour traffic and associated travel speed resulted in the "worst-case" noise levels for this analysis.

**Table 3-21: Summary of Sound Levels (dBA) for Alternates 2, 2A, 3, and 3A
Design Year 2025**

NSA	Receiver	2025 No-Build Level	2025 Build Level	Change Over No-Build
A	R-1	68	69	1
	R-2	65	65	0
B	R-3	65	66	1
	R-4	65	65	0
C	R-5	63	64	1
	R-6	63	64	1
D	R-7	61	61	0
E	R-8	59	59	0
	R-9	56	57	1
F	R-10	74	74	0
	R-11	61	61	0
	R-12	56	57	1
	R-13	57	58	1
	R-14	60	61	1
G	R-15	73	71	-2
	R-16	77	75	-2
	R-17	76	76	0
H	R-18	58	59	1
I	R-19	61	60	1
	R-20	69	70	1
J	R-21	72	72	0
K	R-22	65	65	0
	R-23	59	59	0
L	R-24	64	64	0
M	R-25	63	63	0
	R-26	66	66	0

Table 3-21: Summary of Sound Levels (dBA) for Alternates 2, 2A, 3, and 3A
Design Year 2025

NSA	Receiver	2025 No-Build Level	2025 Build Level	Change Over No-Build
N	R-27	60	61	1
O	R-28	61	61	0
	R-29	66	66	0
P	R-30	76	75	1
	R-31	75	75	0

Table 3-22: Summary of Sound Levels (dBA) for Proposed Toll Plazas

Design Year 2025

Toll Option	Receiver	2025 No-Build Level	2025 Build Level	Change Over No-Build
Option 1	R-1	68	71	3
	R-2	65	65	0
	R-3	65	64	-1
	R-1A	72	72	0
	R-3A	65	65	0
	R-3B	74	74	0
Option 2	R-1	68	70	2
	R-2	65	65	1
	R-3	65	65	0
	R-1A	72	72	0
	R-3A	65	65	0
	R-3B	74	74	0
	R-28	61	61	0
	R-29	66	66	0
	R-29A	67	67	0
	R-29B	74	74	0
Option 3	R-1	68	70	2
	R-2	65	65	0
	R-3	65	65	0
	R-1A	72	72	0
	R-3A	65	65	0
	R-3B	74	74	0
	R-28	61	61	0
	R-29	66	66	0
	R-29A	67	67	0
	R-29B	74	74	0

The effects of noise from each alternate were judged in accordance with FHWA's activity/criteria relationship published in 23 CFR, Part 772, and subsequent memoranda. The FHWA criteria, shown in Table 3-23, are based on specific land uses and are used in determining the need for studying noise attenuation measures. All locations within this study area are of land use Category B, which has a design noise level of 67 dBA (L_{eq}).

Table 3-23: FHWA Noise Abatement Criteria [Hourly A-Weighted Sound Level Decibels (dBA)]

Activity Category	L_{eq}	Description of Activity Category
A	57 dBA (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 its intended purpose.
B	67 dBA (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 dBA (exterior)	Developed lands, properties, or activities not include in Categories A or B above.
D	None	Undeveloped lands.
E	52 dBA (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: 23 CFR, Part 772

This evaluation was also completed in accordance with the *State Highway Administration's Sound Barrier Policy*. This policy states that any NSAs experiencing future noise levels of 66 dBA qualify for further mitigation analysis. When mitigation is investigated, feasibility and reasonableness criteria established must be met in order for a barrier to be considered for construction. These criteria are summarized below:

Feasibility Criteria

- Noise levels can be reduced by 7 - 10 dBA at receptors with the highest noise levels.
- Placement of barrier does not restrict vehicular or pedestrian access.
- Barrier does not cause any safety or maintenance problems.
- Barrier can be constructed given topography, drainage, utilities, etc.
- There are no non-highway noise sources that would reduce barrier effectiveness.

Reasonableness Criteria

- The majority of impacted receptors receive a 7 - 10 dBA noise reduction.
- At least 75 percent of the impacted residents approve of the proposed noise abatement.
- A 3 dBA or greater change in design year noise levels over design year no-build noise levels is expected to result from the proposed action, OR the cumulative effect of highway improvements on the design year noise levels at receptors that existed when prior improvements were made is equal to or greater than 3 dBA.
- Build levels are equal to or greater than 72 dBA and there is any increase in noise levels between no-build and build alternates.

- The barrier can not have significant negative visual impact, such as a high barrier adjacent to residences.
- The cost of noise abatement is equal to or less than \$50,000 per residence benefited on a NSA basis. A barrier will also be considered reasonable if the cost per residence benefited for the NSA is less than \$100,000/residence and the cost per residence considering the entire project is less than \$50,000/residence.
- There are special Section 4(f) circumstances (e.g., historical or cultural significance).

In acoustical analysis, various methods of noise abatement are possible: noise attenuation through a barrier or berm placed between the source and the receptor; traffic flow restrictions or controls; and attenuation of noise generated by the vehicles. The recommended mitigation measure for this study would be noise attenuation through a barrier.

Several types of sound barriers, including reflective walls, absorptive walls and earth berms, can be used to reduce noise levels at sensitive receptors. When barriers are constructed, reflective walls are generally used. Absorptive walls can be used where reflective barriers would exacerbate noise levels on the opposite side of the roadway. This is generally the case when the roadway width to barrier height ratio is 10:1 or less.

Noise mitigation was considered for each NSA based on the results of the noise modeling. Investigation of a sound barrier was warranted at 8 of the 16 NSAs. In the remaining NSAs, the projected 2025 noise levels do not exceed or equal 66 dBA and therefore, investigation of noise barriers is not warranted.

Noise Sensitive Area A - NSA A consists of single-family residences on the northwest side of I-81 at the southern limit of the study. A barrier is not reasonable at this location since the 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels.

Noise Sensitive Area F - NSA F consists of single-family residences on the east side of I-81 in the south quadrant of the I-81 and I-70 interchange. A barrier is not reasonable at this location because the impacted 2025 build noise levels decrease when compared to 2025 no-build noise level.

Noise Sensitive Area G - NSA G consists of mobile homes in the Lakeside Mobile Home Park on the west side of I-81, between its interchanges with I-70 and Halfway Boulevard. A barrier is not reasonable at this location because the 2025 build noise levels decrease when compared to 2025 no-build noise levels.

Noise Sensitive Area I - NSA I consists of single-family residences on the east side of I-81 in the south quadrant of the I-81 and US 40 interchange. A barrier is not reasonable at this location because the 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels.

Noise Sensitive Area J - NSA J consists of single-family residences on the west side of I-81 in the west quadrant of the I-81 and MD 58 interchange. A barrier is not reasonable at

this location because the 2025 build noise levels decrease in comparison to the 2025 no-build noise levels.

Noise Sensitive Area M - NSA M consists of single-family residences on the west side of I-81 in the southwest quadrant of the I-81 and Showalter Road interchange. A barrier is not reasonable at this location because the 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels.

Noise Sensitive Area O - NSA O consists of single-family residences on the west side of I-81 in the northwest quadrant of the I-81 and Showalter Road interchange. A barrier is not reasonable at this location because the 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels.

Noise Sensitive Area P - NSA P consists of single-family residences on the west side of I-81 between the interchanges with Showalter Road and Mason Dixon Road. A barrier at this location is not reasonable because the 2025 build noise levels decrease in comparison to the 2025 no-build levels.

Toll Option 1 – Southern Portion of I-81

Toll Option 1 is located in the vicinity of NSAs A and B. Under Toll Option 1, noise receptors consist of single-family residences on the northwest side of I-81 and a historic farmhouse on the southeast side of I-81. Additional receptors were added to analyze the entire area potentially impacted by the toll plazas. R-1A is located on the northwest side of I-81 near the Potomac River. R-3A is located at a single-family residence on the southeast side. R-3B is located on the southeast side of I-81 near the Potomac River. The receptors are located in the southern quadrant of the I-81 and MD 68 interchange. The projected 2025 build and no-build noise levels equal or exceed 66 dBA.

A barrier is not reasonable at the southern area receptors because the 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels, and the cost per residence is over \$50,000.

Toll Option 2 – Southern and Northern Portions of I-81

Toll Option 2 is located in the vicinity of NSAs A, B, and O. Option 2 consists of the same receptor locations as Option 1 for the southern toll area. The northern toll area consists of single-family residences (R-28 and R-29) on the west side of I-81. Additional receptors were added to analyze the entire area potentially impacted by the toll plazas. Two more single-family residences (R-29A and R-29B) were located along the west side of I-81 in the northwest quadrant of the I-81 and Showalter Road interchange.

A barrier is not reasonable at the southern area receptors due to the fact that 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels. A barrier is not reasonable at the northern area receptors due to the fact that 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels and the proposed topography will not allow a noise barrier to be constructed between the administration building and Maugansville Road.

Toll Option 3 – Southern and Northern Portions of I-81

Toll Option 3 is located in the vicinity of NSAs A, B, and O. Option 3 consists of the same receptor locations used in Option 2. The residences are located in the southern quadrant of I-81 and MD 68 interchange, and the northwest quadrant of the I-81 and Showalter Road interchange.

Noise barriers are not reasonable at the southern area receptors or northern area receptors due to the fact that 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels.

Toll Option 4 – Southern and Northern Portions of I-81

Toll Option 4 is located in the vicinity of NSAs A, B, and O. Option 4 consists of the same receptor locations used in Option 2. The residences are located in the southern quadrant of I-81 and MD 68 interchange, and the northwest quadrant of the I-81 and Showalter Road interchange.

A barrier is not reasonable at the southern area receptors due to the fact that 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels. A barrier is not reasonable at the northern area receptors due to the fact that 2025 build noise levels do not equal or exceed a 3 dBA increase over the 2025 no-build noise levels and the proposed topography will not allow a noise barrier to be constructed between the administration building and Maugansville Road.

Construction Noise

Land uses that would be sensitive to vehicular noise would also be sensitive to construction noise. Although highway construction is a short-term phenomenon, it can cause significant noise impacts. Additionally, it is likely that some construction may occur at night to avoid severe traffic impacts. The extent and severity of the noise impact would depend upon the phase of construction and the noise characteristics of the construction equipment in use. Construction would have direct impact on receptors located close to the construction site and would have an indirect impact on receptors located near roadways whose traffic flow characteristics are altered due to rerouting from the construction site.

As with any major construction project, areas around the construction site are likely to experience varied periods and degrees of noise impact. This type of project would probably employ the following pieces of construction equipment that would likely be sources of construction noise:

- Bulldozers and earthmovers
- Graders
- Front end loaders
- Dumps and other diesel trucks
- Compressors

Maintenance of construction equipment will be regular and thorough to minimize noise emissions because of inefficiently tuned engines, poorly lubricated moving parts, poor to ineffective muffling/exhaust systems, etc.

F. AIR QUALITY

a) Existing Conditions

The I-81 improvement project is located in Washington County, Maryland, which is not designated as a non-attainment area for any pollutants. All areas of this county meet the national ambient air quality standards for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and particulate matter (PM₁₀). The State Implementation Plan (SIP) for this area does not include any transportation control measures. Therefore, with the exception of the construction procedures, the conformity requirements of 40 CFR 50 do not apply to this project.

A detailed microscale air quality analysis has been performed to determine the local CO impact of the proposed project. The locations of air quality sensitive receptors used in the analysis are shown on Table 3-24 and on the Alternates Mapping at the end of Section II of this EA. Detailed analysis is available in the I-81 Air Quality Technical Report.

Table 3-24: Air Quality Receptor Locations

Receptor	Address / Location	Description
R-1	15860 Lockwood Road	SW Corner I-81/MD 68 Interchange
R-1A	Right-of-way	NW side of I-81 along the Potomac River
R-2	15914 Lockwood Road	SE Corner I-81/MD 68 Interchange
R-3	Hogmire-Berryman Farm	SE Corner I-81/MD 68 Interchange
R-3A	Hogmire-Berryman Farm	SE side of I-81 along the Potomac River
R-3B	Right-of-way	SE side of I-81 along the Potomac River
R-10	16606 Tammany Manor Road	Northbound I-70
R-11	16712 Tammany Manor Road	Northbound I-70 exit ramp
R-12	16808 Tammany Manor Road	Northbound I-70 exit ramp
R-13	16830 Tammany Manor Road	Northbound I-70 exit ramp
R-14	16916 Hampton Road	Northbound I-70 exit ramp
R-15	11125 Lakeside Drive	Southbound I-70
R-28	14119 Stoneridge Lane	NW corner I-81/Showalter Road Interchange
R-29	14229 Maugansville Road	NW corner I-81/Showalter Road Interchange
R-29A	Maugansville Road	NW corner I-81/Showalter Road Interchange
R-29B	Maugansville Road	West side of I-81, north of Showalter Road
R-30	18121 Sky View Lane	West side of I-81, north of Showalter Road
R-31	18113 Sky View Lane	West side of I-81, south of Mason Dixon Rd
S Toll Plaza	Matrix of 10 receptors	South Toll Plaza
N Toll Plaza	Matrix of 10 receptors	North Toll Plaza

CO impacts are analyzed as the accepted indicator of vehicle-generated air pollution. The EPA CAL3QHC dispersion model is used to predict CO concentrations for air quality sensitive receptors for both the build year (2010) and design year (2025). The detailed analyses predict air quality impacts from CO vehicular emissions for both the

no-build alternate and the build alternates at Receptors 10 through 15 around the I-70 / I-81 interchange. Other receptors used in this analysis were used to predict air quality impacts for the tolling options. Modeled 1-hour and 8-hour average CO concentrations are added to background CO concentrations for comparison to the State and National Ambient Air Quality Standards (S/NAAQS).

b) Impacts and Minimization/Mitigation

Results of Microscale Analysis - A summary of the CO concentrations is shown in Tables 3-25 through 3-28. The receptor's concentrations at both alternates are below the State and National Ambient Air Quality Standards in the 1-hour and 8-hour analyses.

Tables 3-25 and 3-26 presents the results of the analysis at Receptors 10 through 15 for the years 2010 and 2025. For the projected hourly peak-traffic volumes, results indicated the range of CO concentrations would be 2.7 to 4.9 ppm for the AM peak hour, and 2.9 to 5.9 ppm for the PM peak hour in 2010. For the projected hourly peak-traffic volume in 2025, the results indicated the range of CO concentrations would be 2.4 to 4.6 ppm for the AM peak hour and would be 2.8 to 5.4 ppm for the PM peak hour. The model results indicate for the projected the range of 8-hour average CO concentrations for all alternates would be 1.2 to 3.2 ppm in 2010, and 1.0 to 2.7 ppm in 2025.

Tables 3-27 and 3-28 present the results of the analysis at the receptors in the vicinity of the tolling areas for the years 2010 and 2025. For the projected hourly peak-traffic volumes, results indicated that the range of CO concentrations would be 2.1 to 4.1 ppm for the AM peak hour, and 2.4 to 4.1 ppm for the PM peak hour in 2010. For the projected hourly peak-traffic volume in 2025, the results indicated that the range of CO concentrations would be 2.0 to 4.0 ppm for the AM peak hour and would be 2.3 to 3.9 ppm for the PM peak hour. The model results indicate for the projected range of 8-hour average CO concentrations for all tolling options would be 1.2 to 1.9 ppm in 2010, and 1.1 to 1.7 ppm in 2025.

Table 3-25: CO Concentration (ppm) in 2010

Receptor	No-Build			Alternate 2			Alternate 2A			Alternate 3			Alternate 3A		
	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr
R-10	4.8	5.8	3.2	4.9	5.9	3.0	4.0	4.3	2.2	3.9	4.1	2.0	3.8	4.0	2.0
R-11	2.8	3.5	1.8	2.8	3.3	1.5	2.9	3.6	1.5	2.7	3.2	1.3	2.7	3.2	1.4
R-12	2.7	3.1	1.7	2.8	3.1	1.4	2.9	3.1	1.4	2.5	3.2	1.3	2.4	3.1	1.3
R-13	2.6	2.8	1.6	2.5	2.8	1.3	2.7	2.9	1.2	2.6	2.9	1.3	2.7	2.9	1.3
R-14	2.6	2.9	1.8	2.8	2.9	1.5	2.7	2.9	1.5	3.0	3.1	1.7	3.0	3.1	1.7
R-15	3.3	4.1	2.4	3.5	4.8	2.2	3.3	4.0	2.0	3.4	4.1	2.0	3.5	4.3	2.0

Notes: 1-hour CO concentrations include a 1.3-ppm background level.

8-hour average CO concentrations include a 0.6-ppm background level

The S/NAAQs for the 1-hour average is 35.0-ppm.

The S/NAAQs for the 8-hour average is 9.0-ppm.

Table 3-26: CO Concentration (ppm) in 2025

Receptor	No-Build			Alternate 2			Alternate 2A			Alternate 3			Alternate 3A		
	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr
R-10	4.5	5.3	2.7	4.6	5.4	2.7	3.6	4.0	2.0	3.8	3.8	1.9	3.7	3.6	1.9
R-11	2.6	3.1	1.3	2.5	3.0	1.3	2.7	3.2	1.3	2.7	2.9	1.2	2.7	2.9	1.2
R-12	2.6	2.9	1.2	2.6	2.8	1.3	2.7	2.8	1.3	2.3	2.9	1.1	2.3	2.9	1.2
R-13	2.2	2.3	1.0	2.3	2.6	1.1	2.4	2.5	1.0	2.3	2.8	1.1	2.3	2.8	1.1
R-14	2.4	2.7	1.3	2.5	2.8	1.4	2.5	2.7	1.3	2.5	2.8	1.5	2.7	2.8	1.5
R-15	3.1	3.8	1.9	3.2	4.2	2.1	3.1	3.8	1.9	2.9	3.7	1.9	2.9	3.6	1.9

Notes: 1-hour CO concentrations include a 1.3-ppm background level.

8-hour average CO concentrations include a 0.6-ppm background level

The S/NAAQs for the 1-hour average is 35.0-ppm.

The S/NAAQs for the 8-hour average is 9.0-ppm.

Table 3-27: CO Concentration (ppm) in 2010

Receptor	No Tolls			Tolling Option 1			Tolling Option 2			Tolling Option 3			Tolling Option 4		
	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr
R-1	2.3	2.7	1.3	2.3	3.3	1.4	2.3	2.7	1.3	2.4	3.4	1.4	2.3	3.3	1.4
R-1A	2.4	2.9	1.4	2.4	2.9	1.4	2.4	2.9	1.4	2.4	2.9	1.4	2.4	2.9	1.4
R-2	2.1	2.4	1.2	2.1	2.4	1.2	2.1	2.4	1.2	2.1	2.4	1.2	2.1	2.4	1.2
R-3	2.5	2.9	1.4	2.4	2.8	1.2	2.6	3.0	1.3	2.4	2.7	1.2	2.4	2.8	1.2
R-3A	2.6	3.0	1.4	2.6	2.9	1.2	2.7	3.2	1.4	2.3	2.8	1.3	2.6	2.9	1.2
R-3B	3.3	3.8	1.9	2.6	3.8	1.4	3.1	3.8	1.6	2.8	3.8	1.6	2.6	3.8	1.4
R-28	2.9	3.1	1.4	2.9	3.1	1.4	2.8	2.9	1.4	2.7	3.1	1.3	2.6	2.9	1.2
R-29	3.1	3.6	1.5	3.1	3.6	1.5	2.8	3.2	1.4	2.9	3.4	1.4	2.6	3.0	1.4
R-29A	3.1	3.4	1.5	3.1	3.4	1.5	2.8	3.0	1.5	2.9	3.3	1.5	2.7	3.0	1.4
R-30	3.6	4.0	1.8	3.6	4.0	1.8	3.4	3.7	1.7	3.4	3.6	1.7	3.2	3.5	1.6
R-30A	3.3	3.6	1.7	3.3	3.6	1.7	3.1	3.4	1.6	3.1	3.7	1.6	2.9	3.4	1.5
R-31	3.6	3.8	1.8	3.6	3.8	1.8	3.3	3.5	1.8	3.4	3.9	1.7	3.1	3.6	1.6
S Toll Plaza	2.7	3.2	1.5	2.8	3.7	1.4	2.9	3.5	1.4	2.6	3.1	1.5	2.8	3.7	1.4
N Toll Plaza	3.3	3.6	1.7	3.3	3.6	1.7	4.1	4.1	1.8	3.1	3.3	1.5	3.9	3.9	1.7

Notes: 1-hour CO concentrations include a 1.3-ppm background level.

8-hour average CO concentrations include a 0.6-ppm background level

The S/NAAQs for the 1-hour average is 35.0-ppm.

The S/NAAQs for the 8-hour average is 9.0-ppm.

Table 3-28: CO Concentration (ppm) in 2025

Receptor	No-Build			Alternate 2			Alternate 2A			Alternate 3			Alternate 3A		
	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr	AM	PM	8-Hr
R-1	2.2	2.6	1.3	2.3	4.1	1.4	2.3	2.6	1.2	2.3	4.0	1.5	2.3	4.1	1.4
R-1A	2.3	2.6	1.3	2.3	2.6	1.3	2.3	2.6	1.3	2.3	2.6	1.3	2.3	2.6	1.3
R-2	2.0	2.3	1.1	2.1	2.7	1.1	2.0	2.3	1.1	2.0	2.4	1.1	2.1	2.7	1.1
R-3	2.4	2.6	1.3	2.4	2.7	1.1	2.6	2.7	1.3	2.2	2.6	1.2	2.4	2.7	1.1
R-3A	2.5	2.9	1.3	2.7	2.8	1.2	2.8	3.1	1.3	2.3	2.6	1.2	2.7	2.8	1.2
R-3B	2.9	3.6	1.7	2.5	3.4	1.3	2.8	3.4	1.5	2.6	3.6	1.5	2.5	3.4	1.3
R-28	2.8	2.8	1.3	2.8	2.8	1.3	2.7	2.6	1.2	2.6	2.8	1.2	2.5	2.6	1.1
R-29	2.9	3.0	1.4	2.9	3.0	1.4	2.7	2.8	1.3	2.8	3.0	1.3	2.6	2.8	1.3
R-29A	3.0	2.9	1.4	3.0	2.9	1.4	2.6	2.9	1.3	2.8	2.9	1.3	2.5	2.8	1.3
R-30	3.5	3.7	1.6	3.5	3.7	1.6	3.3	3.3	1.5	3.3	3.4	1.5	3.1	3.1	1.5
R-30A	3.1	3.5	1.5	3.1	3.5	1.5	3.4	3.2	1.4	2.9	3.5	1.5	3.1	3.3	1.4
R-31	3.3	3.4	1.6	3.3	3.4	1.6	3.2	3.3	1.6	3.1	3.3	1.5	3.0	3.2	1.4
S Toll Plaza	2.6	2.9	1.4	2.9	3.5	1.4	2.9	3.1	1.4	2.4	2.9	1.3	2.9	3.5	1.4
N Toll Plaza	3.2	3.2	1.5	3.2	3.2	1.5	4.0	3.9	1.7	3.0	3.1	1.4	3.9	3.8	1.5

Notes: 1-hour CO concentrations include a 1.3-ppm background level.

8-hour average CO concentrations include a 0.6-ppm background level

The S/NAAQs for the 1-hour average is 35.0-ppm.

The S/NAAQs for the 8-hour average is 9.0-ppm.

Construction Impacts - The construction phase of the proposed project has the potential to impact the local ambient air quality by generating fugitive dust through activities such as demolition and materials handling. The State Highway Administration has addressed this possibility by establishing "Standard Specifications for Construction and Materials," which specifies procedures to be followed by contractors involved in site work.

The Maryland Air and Radiation Management Administration was consulted to determine the adequacy of the "Specifications" in terms of satisfying the requirements of the "Regulations Governing the Control of Air Pollution in the State of Maryland." The Maryland Air and Radiation Management Administration found the specifications to be consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland Regulations 26.11.06.03D) would be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area.

G. SECONDARY AND CUMULATIVE EFFECTS ANALYSIS

A Secondary and Cumulative Effects Analysis (SCEA) was completed for I-81 Improvement Project. The Code of Federal Regulations (40 CFR 1508.8(b)) defines secondary, or indirect effects, as impacts "caused by the action and are later in time or farther removed in distance, but still reasonably foreseeable." Indirect effects may include growth including 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. The Code of Federal Regulations (40 CFR 1508.7) defines cumulative effects as the "impact on the environment which result 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."

In accordance with the SHA's *Secondary and Cumulative Effects Analysis Guidelines, June 2000*, a scoping process was conducted to identify the geographic area and time frame that would be appropriate to analyze the secondary and cumulative effects of the I-81 project. This scoping resulted in the definition of a geographic boundary, temporal limits, and identification of the resources that may be sensitive to changes associated with the direct and secondary effects of the I-81 project, along with the actions of others.

a) Boundary

The geographic boundary for the I-81 planning study consists of a combination of natural and human resource boundaries. The SCEA boundary (see Figure 10) is dominated by the Conococheague Creek watershed boundary to the west, and sub-watersheds of the Antietam and Marsh Creek Watersheds to the east, except on its easternmost side where the Urban Growth Area/Priority Funding Area/Water Service Area/Sewer Service Area Boundaries (which are coincident) form a small portion of the study area. The SCEA boundary is composed of elements of the following sub-boundaries:

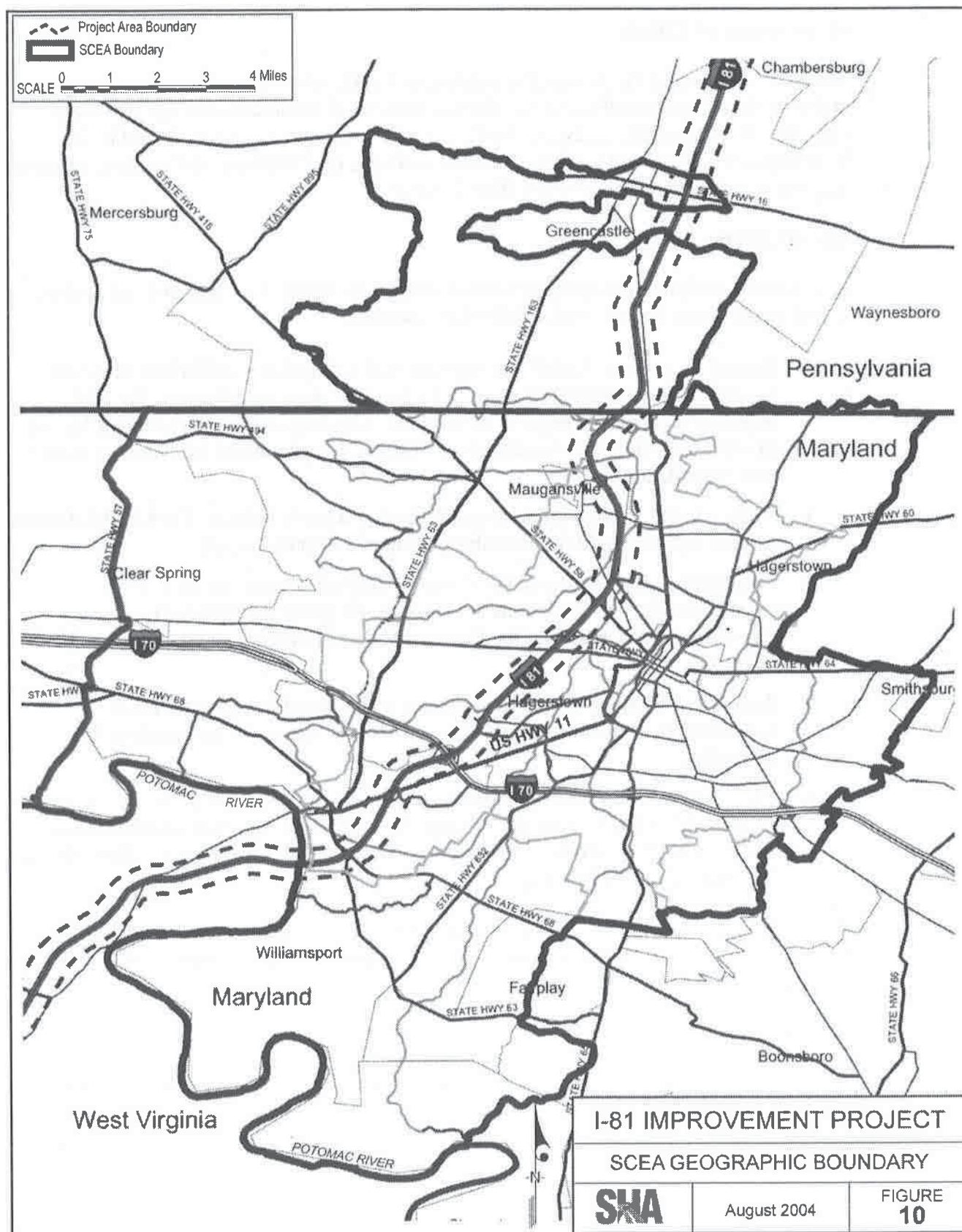
- Watersheds/Drainage Basins – The boundaries of the Conococheague Watershed and three sub-watersheds of Antietam and Marsh Creeks form the outermost limits of the SCEA boundary.
- Area of Traffic Influence – The area of traffic influence is encompassed by the SCEA boundary.
- Planning Areas – The Urban Growth Area of Hagerstown, Funkstown, and Williamsport is a sub-boundary of the SCEA boundary on the east side.
- Census Tracts – The Census Tracts for a sub-boundary for the SCEA boundary.
- Priority Funding Areas (PFAs) and Enterprise Zones – PFAs and Enterprise Zones are coincident with the Urban Growth Area and are a sub-boundary of the SCEA boundary. They are contained within the western boundary of the watersheds/sub-watersheds and overlap the eastern boundary.
- Water/Sewer Service Areas- Future water/sewer service areas are coincident with the Urban Growth Area and thus are a sub-boundary of the SCEA boundary.

b) Timeframe

A time frame of 35 years, from 1990 to the project design year of 2025 was selected to represent the SCEA time frame. Factors considered in developing this past and future time frame included:

- Major events
- Construction of major roads
- Changes in Land Use
- Population changes
- Employment changes
- Data availability
- Agency input

A major consideration in developing the time frame for the I-81 corridor was a zoning change that occurred in 1990, when large areas of agricultural land were rezoned to allow substantial industrial and commercial development to occur. The project's design-year of 2025 was used as the reasonably foreseeable future time frame, because design-year traffic is based on the future land use planning. In addition, the 2025 time frame coincides roughly with Washington County's land use plan, the best available source of data regarding future land use.



c) Summary of Effects

The SCEA evaluated the potential secondary and cumulative effects on socio-economic and natural environmental features. The secondary and cumulative effects that were identified were generally associated with planned development as envisioned in the Washington County Master Plan. The Plan indicates that Washington County is expected to grow significantly over the next 20 to 25 years.

Direct Effects

Based on an analysis of the project's direct effects, the build alternates and toll options would cause direct impacts to the following resources:

- **Natural Resources:** Each build alternate and toll option would affect different aspects of the natural environment. Depending upon the alternate, the I-81 Improvements would impact 16-20 stream crossings, 6,254–9,953 linear feet of streams, 7-16 acres of woodlands, 4-11 acres of agricultural land, and up to one acre of wetlands.
- **Surface water quality and quantity, including aquatic habitat:** Each build alternate and toll option would increase the amount of impervious area.
- **Floodplains:** Each of the build alternates and toll options would require construction in the floodplains associated with minor tributaries of Conococheague Creek and the Potomac River; between 2 and 4 acres would be affected.
- **Properties:** Some of the build alternates and toll options would include displacement of businesses and/or acquisition of acreage from residential properties.
- **Park and Historic Resources:** Some of the build alternates and toll options would require right-of-way from the Chesapeake and Ohio Canal National Historical Park and historic resources. Impacts range from 0.82-4.41 acres for the park and 1.11-5.21 acres for historic resources.

The analysis of direct effects indicated that none of the build alternates would cause adverse impacts to communities, including environmental justice communities, air quality, the local economy, or noise.

Indirect Effects

Based on information obtained from the Washington County Planning Office, none of the build alternates would induce growth beyond what is included in the 2002 Plan. The build alternatives were reviewed for their potential to induce growth or cause indirect effects and determined that:

- None of the build alternates would create interchanges at new locations.
- None of the build alternates would provide access to previously inaccessible parcels of land.

- None of the build alternates would increase the capacity of the roadway to facilitate growth in the vicinity of the I-81 corridor.
- None of the toll plaza options would divert levels of traffic to other roads to such a degree that would encourage development of businesses that serve drivers beyond the commercial areas indicated in the 2002 Plan.
- None of the build alternates would have indirect effects to parklands or lead to additional public projects that would require any further acquisition of land or displacements

Also, the projected growth data was reviewed in the 2002 Plan. Based on its analysis, it was determined that growth in Washington County is planned to occur with or without the implementation of the I-81 improvement project. Therefore, none of the project alternates has the potential to induce growth beyond what is expected, and will not create secondary effects.

Cumulative Effects

The build alternatives when added to past present and reasonably foreseeable actions were reviewed for their potential to have a cumulative effect on the following resources.

- **Parkland:** Cumulative impacts to parklands within the SCEA boundary are anticipated to be minimal as park resources are afforded protection from the effects of Federally funded transportation projects under Section 4(f) of the USDOT Act of 1966 (Section 4(f)).
- **Cultural Resources:** Development associated with the population and employment growth in Washington County may affect cultural resources. Similar to park resources, historic resources are afforded protection from the effects of Federally funded transportation projects under Section 4(f) along with the coordination required under Section 106 of the National Historic Preservation Act of 1966. In addition, Washington County has an active program to protect its cultural resources through its review and approval processes and also has a Historic District Commission. Therefore, cumulative effects on historic resources are expected to be minimal.
- **Water Resources:** Although improvements to I-81 are included in Washington County's Plan, the specific I-81 project contribution to watershed vulnerability was estimated to provide a context for the effect of this project in relation to other planned growth in the area. The project would contribute an estimated 175 to 223 acres of new impervious surface based on the preliminary engineering analysis. As a result, new stormwater management facilities would be constructed for water quality and quantity control. As a result, none of the build alternates have the potential to increase the vulnerability of the portion of the Conococheague Watershed within the SCEA area.

c) SCEA Conclusion

The conclusion of the SCEA analysis for I-81 improvements is that direct impacts to environmental resources would be mitigated and there is no potential for secondary

effects to environmental resources. SCEA study area environmental resources are generally vulnerable to degradation because of past and future development in Washington County. However, future development is anticipated to have minimal effects on these resources due to a myriad of protective laws.

SECTION 4(f) EVALUATION

IV. SECTION 4(f) EVALUATION

A. INTRODUCTION

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. 303 (c) and 23 U.S.C. 138) permits the use of publicly owned land from any public park or recreation area, wildlife or waterfowl refuge, or historic site (as determined by the officials having jurisdiction over the park, recreation area, refuge, or site) only if there is no prudent and feasible alternate to the use of such land, and all possible planning has been undertaken to minimize harm resulting from this use.

This Section 4(f) Evaluation presents an assessment of the permanent impact to the Chesapeake and Ohio Canal National Historical Park, as well as a discussion of avoidance alternates and minimization measures, and mitigation for the proposed impacts. Additionally, this evaluation will address temporary use of minor amounts of parkland from the Chesapeake and Ohio Canal National Historical Park (1.2 acres).

B. DESCRIPTION OF THE PROPOSED ACTION

A Project Planning Study is being conducted for Interstate 81 (I-81) in Washington County, Maryland. The purpose of this project is to improve safety and traffic operations along I-81 from the West Virginia state line to the Pennsylvania state line. Additional information on the Purpose and Need for the I-81 Improvement Project can be found in Section I of this EA.

C. ALTERNATES CONSIDERED

Descriptions of each alternate retained for detailed study are presented in detail in Section II of the I-81 EA. Alternates considered include the following:

Alternate 1 – No-Build Alternate: The No-Build Alternate includes routine maintenance and spot improvements to the existing roadway and interchanges.

Alternate 2 – Interchange Improvements: This alternate would include improvements to the following interchanges:

- Exit 1: MD 68/MD 63
- Exit 2: US 11
- Exit 3: I-70
- Exit 4: Halfway Boulevard
- Exit 5: US 40
- Exit 6: MD 58
- Exit 8: Maugans Avenue
- Exit 9: Showalter Road
- Exit 10: PA 163

Alternate 2A – Interchange Improvements with Collector-Distributor Roads:

Alternate 2A includes interchange improvements listed above as well as the construction

of a two-lane collector-distributor (C-D) road through the I-70 and Halfway Boulevard interchanges.

Alternate 3 – Inside Widening: Under this alternate, the existing I-81 roadway would be widened on the inside towards the median to six lanes.

Alternate 3A – Inside Widening with Collector-Distributor Road: This alternate includes widening existing I-81 towards the median to six lanes and constructing a two-lane C-D roadway, which would extend from the I-70 interchange to the Halfway Boulevard interchange.

Toll Plaza Options: Toll plazas could be constructed at the northern and southern ends of I-81 in Maryland. One of the following toll options may be chosen in conjunction with any of the build alternates. Each option would include a 2-acre site for an administrative building and parking, five cash/electronic toll collection lanes, and two high-speed electronic toll collection lanes.

- **Option 1** - With this option, tolls are proposed for both directions of I-81 between the Potomac River and Conococheague Street. Drivers would pay tolls as they enter and exit Maryland near the West Virginia state line.
- **Option 2** - This option proposes to toll southbound I-81 between Showalter Road and Mason Dixon Road and along northbound I-81 between the Potomac River and Conococheague Street. Only those drivers entering the state would pay tolls.
- **Option 3** - This option proposes to toll northbound I-81 between Showalter Road and Mason Dixon Road and along southbound I-81 between the Potomac River and Conococheague Street. Only those drivers exiting the state would pay tolls.
- **Option 4** - This option proposes tolling both direction of I-81, between Showalter Road and Mason Dixon Road, and between the Potomac River and Conococheague Street. Drivers would pay tolls as they enter and exit Maryland near the West Virginia and Pennsylvania state lines.

Weigh and Inspection Station Option: A truck weigh station would be constructed on an 11-acre site along the southbound side of I-81 between Halfway Boulevard and US 40.

D. DESCRIPTION OF THE SECTION 4 (F) RESOURCE

The use of one Section 4(f) resource within the project area would be required by the alternates/options under consideration. This resource, the Chesapeake and Ohio Canal National Historical Park, qualifies for Section 4(f) protection as both a public park/recreation area and as a historic site. The location of the resource in proximity to the I-81 improvement project is shown on Figure 11.

The Chesapeake and Ohio Canal National Historical Park is located at the southern end of I-81 along the Maryland side of the Potomac River and is the only park within the I-81 project area. The park follows the Potomac River for 184.5 miles from Washington, D.C.

to Cumberland, Maryland. Within the project area, this linear park contains the canal and towpath, which cross under I-81 at the southern end of the project area. The trail is accessible in Williamsport and Hancock, Maryland.

The Chesapeake and Ohio Canal was named a National Monument in 1961 and became a national park in 1971. The Chesapeake and Ohio Canal National Historical Park was listed in the National Register of Historic Places in 1979. The canal is one of the most intact canals from the American canal-building era and has not undergone substantial modifications along its entire length. Sections of the canal between Georgetown in Washington, DC, and Riley's Lock in Maryland have been restored while the remainder of the canal is in ruin. Most of the towpath from Georgetown to Cumberland can still be traveled by horseback, foot, or bicycle.

Within the project area, the Chesapeake and Ohio Canal National Historical Park of approximately 184 feet of land on the north side of the Potomac River. The only feature of the canal in this area is the towpath which runs under the existing I-81 Potomac River bridge.

E. DESCRIPTION OF IMPACTS

There would be no impacts to Section 4(f) Resources under the No-Build Alternate, Build Alternates 2 and 2A, Toll Options 1 through 4, and the Weigh and Inspection Station Option.

Alternates 3 and 3A would impact the Chesapeake and Ohio Canal National Historical Park through permanent use of land for the widening of the Potomac River bridge (see Figure 12) and through a temporary construction easement.

Under Alternates 3 and 3A, the widening of the bridge over the Potomac River would include the replacement of the existing deck, the expansion of the deck, and the extension of the existing piers. There are currently two 36-foot long bridge piers in Chesapeake and Ohio Canal National Historical Park (Piers 7 and 8 on Figure 13). The existing piers are 6 feet wide. Each of the piers would be extended an additional 19 feet toward the median of the bridge. The extended piers would be 6 feet wide, the same as the existing piers.

The total permanent impact to the park from the extended piers would be 228 square feet. The ownership of the land beneath the I-81 bridge is currently under investigation. If the land is not owned by the state, the land will be purchased or a permanent easement from the National Park Service will be obtained.

In addition to the permanent use of park property, the proposed widening of I-81 will require a 1.2-acre of temporary use from the Chesapeake and Ohio Canal National Historical Park. A temporary easement is needed for construction activities associated with widening the bridge over the Potomac River. The ownership of the Chesapeake and Ohio Canal National Historical Park outside of existing and proposed SHA right-of-way will remain with the National Park Service and will continue to be maintained by the National Park Service.

The FHWA has determined that the requirements of Section 4(f) of the DOT Act do not apply to the temporary use of parkland when the project meets the following criteria:

- *The duration of the use will be temporary and less than the time needed for construction of the project.*

The temporary use of the Chesapeake and Ohio Canal National Historical Park property for construction staging will be completed prior to final completion of the I-81 improvements.

- *The ownership of the property will not change or result in the retention of long term or indefinite interests in the land for transportation purposes.*

The ownership of the Chesapeake and Ohio Canal National Historical Park outside of existing and proposed SHA right-of-way will remain with the National Park Service and will continue to be maintained by the National Park Service.

- *The scope of the work will be minor, in which the nature and magnitude of the changes to the resource will be minimal.*

Temporary use of Chesapeake and Ohio Canal National Historical Park property consists of a 1.2-acre construction easement. This area is small in comparison to the size of the overall park, which covers over 19,500 acres; therefore the work would be minor and not change the overall resource. However, the potential impacts resulting from temporary use would be minimized to the extent possible and take into consideration protection of all features within and adjacent to the construction easement.

- *There will be no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis.*

The work proposed which will require temporary use of the Chesapeake and Ohio Canal National Historical Park will not result in any permanent adverse physical impacts. The only recreational facility in the area where temporary use is required is the canal towpath. SHA would work with the National Park Service to construct temporary paths that protect park users from construction activities and that allow emergency vehicles to travel under the bridge.

- *The land being used will be fully restored, in that the resource will be returned to a condition, which is at least as good as that which existed prior to the project.*

The areas within the Chesapeake and Ohio Canal National Historical Park where temporary use is proposed will be restored to an acceptable condition upon completion of the proposed improvements.

F. AVOIDANCE AND MINIMIZATION OF IMPACTS

Avoidance Alternates

In addition to the No-Build Alternate, which would have no impact on the Chesapeake and Ohio Canal National Historical Park, avoidance alternates were assessed.

Alternates 2 and 2A, with or without the toll options, would avoid right-of-way acquisition from the Section 4(f) resource. Under Alternate 2, improvements to I-81 would be limited to the existing interchanges. Improvements to I-81 under Alternate 2A would be limited to the existing interchanges and to the stretch of roadway between I-70 and Halfway Boulevard. Neither of these alternates would involve improvements to the bridge over the Potomac River or to I-81 in the vicinity of the Chesapeake and Ohio Canal National Historical Park.

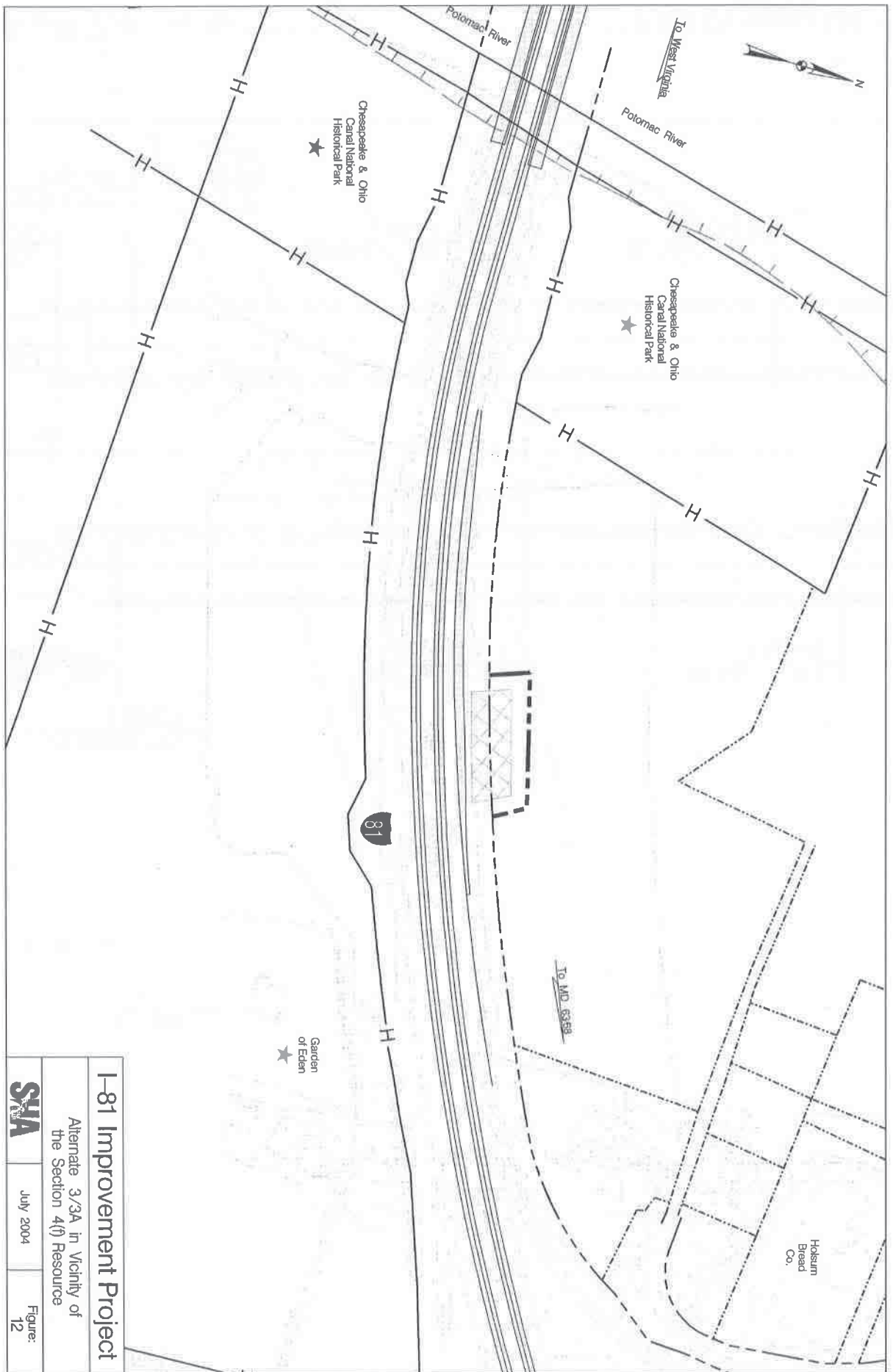
Minimization of Impacts

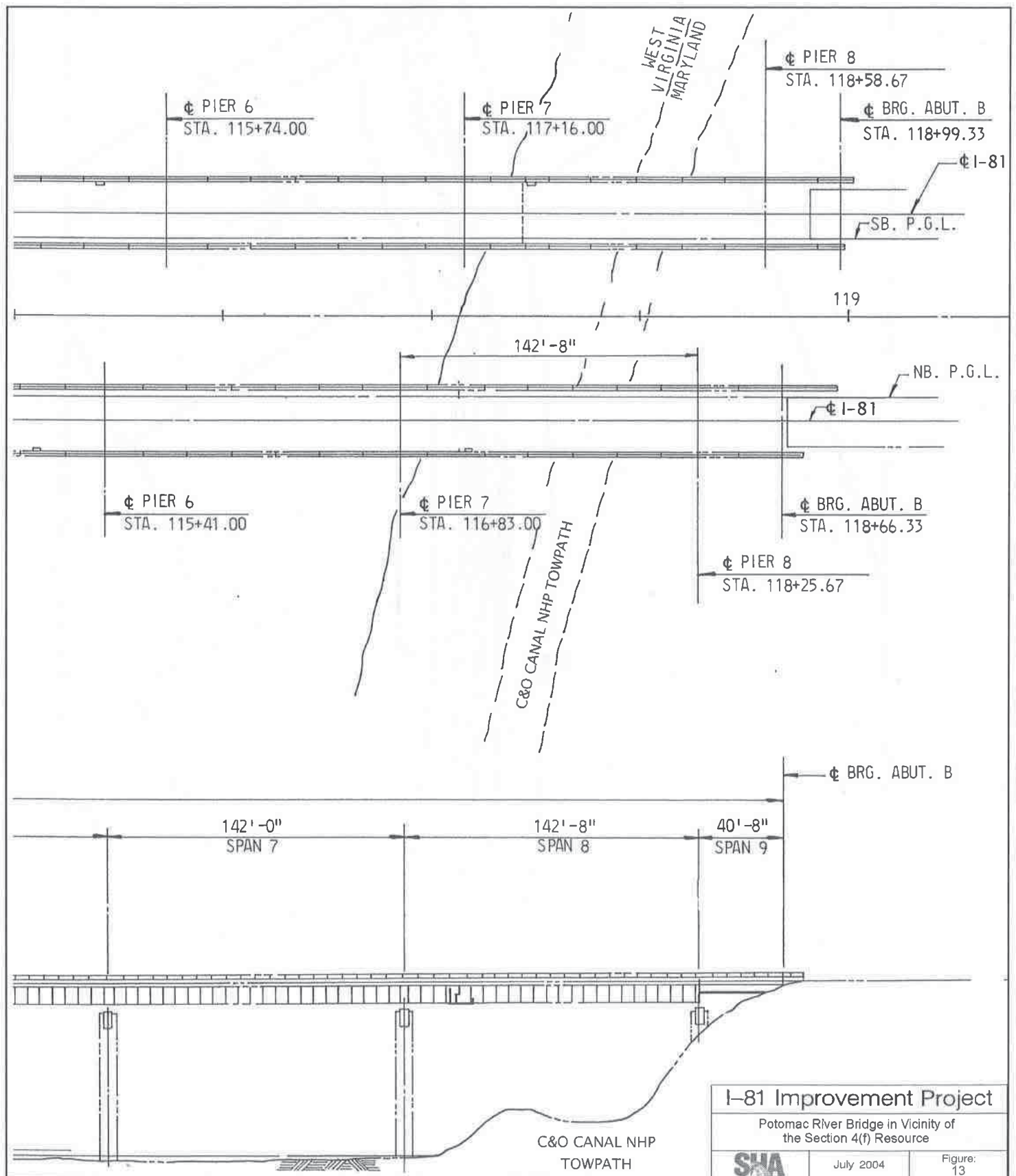
Under Alternates 3 and 3A, impacts to the Section 4(f) resource would be minimized by limiting the footprint of the bridge piers within the park to the extent possible. In addition, efforts will be made to minimize impacts to the temporary easement area. Coordination with the National Park Service would occur to construct temporary paths that protect park users on the towpath from construction activities and that allow emergency vehicles to travel under the bridge. In addition, the areas within the Chesapeake and Ohio Canal National Historical Park where temporary use is proposed will be restored to an acceptable condition upon completion of the proposed improvements.

G. CONSULTATION AND COORDINATION

Coordination has been ongoing with the Maryland Historical Trust (MHT) and the National Park Service (see Section 3.B of the I-81 EA for additional information). Both agencies are part of the Maryland State Highway Administration's Agency Review Committee and have concurred with the project's purpose and need and the alternates retained for detailed study. Coordination with MHT has also been undertaken in compliance with Section 106 of the National Historic Preservation Act (see Section 3.B of the I-81 EA for additional information). Coordination with the National Park Service and MHT will continue throughout the NEPA process.







I-81 Improvement Project

Potomac River Bridge in Vicinity of
the Section 4(f) Resource

SHA

July 2004

Figure:
13

COMMENTS AND COORDINATION

V. COMMENTS AND COORDINATION

Agency coordination and public involvement was conducted throughout the process of developing the Purpose and Need, Alternates, and EA for the I-81 Improvement Project. This section summarizes the coordination with other federal, state and local agencies; elected officials, public groups, businesses and citizens. The agency coordination letters and/or response as well as public comments are provided at the end of this section. Minutes of public meetings are included in the I-81 Technical Files.

A. STREAMLINE PROCESS COORDINATION

Purpose and Need

The Purpose and Need Statement for the I-81 Improvement project was presented to the agencies for review and comment on August 15, 2001. In general, each agency concurred with the Purpose and Need with minor or no comments. An errata sheet was prepared addressing agency comments on the Purpose and Need. Substantive comments included the following:

- COE commented that the purpose should include specific measures of effectiveness for the project and under the need, further explain and/or list the underlying problem is being solved.
- DNR requested that smaller wetlands be mentioned in the Purpose and Need Statement.
- Maryland Department of Planning requested that SHA distinguish the Commenting Area on the Priority Funding Area on the map be distinguished.

The following table provides a listing of the agency correspondences on the Purpose and Need Statement.

Correspondences	To	From	Date
Concurrence on Purpose and Need Statement	SHA	COE	Oct. 24, 2001
Concurrence on Purpose and Need Statement	SHA	NOAA National Marine Fisheries Service	Dec. 11, 2001
Response on Purpose and Need Statement	SHA	NOAA National Marine Fisheries Service	Sept. 19, 2001
Concurrence on Purpose and Need Statement	SHA	Maryland Department of Planning	Dec. 3, 2001
Concurrence on Purpose and Need Statement	SHA	Environmental Protection Agency	Oct. 25, 2001
Concurrence on Purpose and Need Statement	SHA	Maryland Department of Natural Resources	Oct. 25, 2001
Concurrence on Purpose and Need Statement	SHA	Federal Highway Administration	Oct. 24, 2001
Comments and Concurrence on Purpose and Need Statement	SHA	National Park Service	Oct. 1 and Oct 9, 2001
Concurrence on Purpose and Need Statement	SHA	Maryland Historical Trust	Oct. 16, 2001

Alternates Retained for Detailed Study (ARDS)

The Alternates Retained for Detailed Study (ARDS) for the I-81 Improvement project was presented to the agencies for review and comment on April 10, 2003. In general, each agency concurred with the ARDS findings with minor or no comments. An errata sheet was prepared addressing agency comments on the ARDS package. The ARDS package was updated with the addition of the toll options and presented to each agency for comment. Substantive comments included the following:

- FHWA requested that SHA include a table with existing and projected Average Daily Traffic be added to the ARDS and that SHA resolve the issue at the I-70 interchange with regards to 2 through lanes and 2-lane Collector-Distributor roads, or 3 through lanes and 2-lane roads.
- COE requested that wetland impacts be updated.

The following table provides a listing of the agency correspondences on the ARDS package. Agency concurrences to the ARDS report can be found in Appendix A - Agency Coordination

Correspondences	To	From	Date
Request for Concurrence on ARDS	FHWA	SHA	Apr. 10, 2003
Concurrence on ARDS	SHA	Maryland Department of Planning	May 27, 2003
Concurrence on ARDS	SHA	U.S. Fish and Wildlife Service	Apr. 28, 2003
Concurrence on ARDS	SHA	Environmental Protection Agency	May 1, 2003
Concurrence on ARDS	SHA	Maryland Historical Trust	May 5, 2003
Concurrence on ARDS	SHA	Corp of Engineers	May 5, 2003
Comments on Preliminary Draft ARDS	SHA	Federal Highway Administration	Jan. 23, 2003
Concurrence on ARDS	SHA	Federal Highway Administration	May 8, 2003
Concurrence on Revised ARDS Presented during (Informational Workshop)	SHA	Maryland Historical Trust	June 2, 2004
ARDS Summary Handout	NPS	SHA	May 19, 2004
Concurrence on Revised ARDS Presented during (Informational Workshop)	SHA	NPS	June 23, 2004

Other Agency Coordination

Other agency coordination correspondences are listed below and letters are provided in Appendix A.

Correspondences	To	From	Date
Response to request for information on finfish	SHA	Maryland Department of Natural Resources	July 10, 2001
Response to request for information on threatened and endangered species	SHA	U.S. Fish and Wildlife Service	July 18, 2001
Response to request for information on threatened and endangered species	SHA	Maryland Department of Natural Resources	July 18, 2001
Response to request for information and comment on cultural resources	SHA	Maryland Department of Housing and Community Development	Oct. 30, 2001
Request for information and comment on cultural resources	Maryland Historical Trust	SHA	Sept. 10, 2001
Request for concurrence on potential effect on cultural resources	Maryland Historical Trust	SHA	Sept. 29, 2003
Concurrence with eligibility and comments on draft report	SHA	Maryland Historical Trust	Oct. 15, 2003
Request for comment and meeting for Alternates Retained for Detailed Study package	National Park Service C&O Canal National Historical Park	SHA	Aug. 29, 2003
Response to request for comments on project	National Park Service Philadelphia Support Office	SHA	Feb. 23, 2003
Request for information on project area	National Park Service C&O Canal National Historical Park	SHA	July 9, 2001
Response to request for information on parks	SHA	Washington County Parks Maintenance Department	July 12, 2001
Request for information on parks	Washington County Parks and Recreation	SHA	July 2, 2001
Jurisdictional Determination Field Review	COE, MDE and USFWS	SHA	Sep. 12 and 25, 2003
Response to request for concurrence on SHA determination of affect	SHA	Maryland Historical Trust	August 8, 2004

Elected Official Correspondences

Correspondences	To	From	Date
Informational letter	Honorable Gregory I. Snook, President, Washington County Board of Commissioners	SHA	Feb. 5, 2003
Informational letter	Honorable Robert A. McKee, Chair Washington County Delegates	SHA	Feb. 5, 2003
Informational letter	Honorable Donald F. Munson, Senate of Maryland	SHA	Feb. 5, 2003
Informational letter	Honorable Christopher B. Shank Maryland House of Delegates	SHA	Feb. 5, 2003
Informational letter	Honorable John P. Donoghue, Maryland House of Delegates	SHA	Feb. 5, 2003
Informational letter	Honorable Robert A. McKee, Chair Washington County Delegates	SHA	Oct 10, 2002
Informational letter	Honorable Donald F. Munson, Senate of Maryland	SHA	No Date
Informational letter	Honorable William J. Wivell, Board of Commissioners of Washington County	MdTA	Mar. 9, 2004
Comments on project	MDOT	Honorable William J. Wivell, Board of Commissioners of Washington County	Feb. 2, 2004

Emergency and Rescue Services Coordination

Correspondences	To	From	Date
Request for comment regarding effect of project on emergency services	Funkstown VFD	SHA	June 19, 2003
Request for comment regarding effect of project on emergency services	Maryland State Police	SHA	June 19, 2003
Request for comment regarding effect of project on emergency services	Maugansville Goodwill Fire Department	SHA	June 19, 2003
Request for comment regarding effect of project on emergency services	Volunteer Fire Department of Halfway	SHA	June 19, 2003
Request for comment regarding effect of project on emergency services	Washington County Department of Emergency Services	SHA	June 19, 2003

Correspondences	To	From	Date
Request for comment regarding effect of project on emergency services	Washington County Sheriff's Office	SHA	June 19, 2003
Request for comment regarding effect of project on emergency services	Washington County LEPC	SHA	June 19, 2003
Request for comment regarding effect of project on emergency services	Williamsport VFD	SHA	June 19, 2003

Summary of Interagency Meetings

As part of the agency's review process, interagency meetings were held throughout the course of the I-81 Improvement Project. Agencies involved in the meetings included SHA, FHWA, COE, MDNR, MdTA, Maryland Department of Planning and other state agencies. Key milestones of the Interagency Project Review included meetings for the field review, Purpose and Need, and Alternates Retained for Detailed Study.

B. PUBLIC INVOLVEMENT

The Maryland State Highway Administration's Project Planning Division conducted Informational Public Workshops on November 5, 2001, at Maugansville Elementary School and November 8, 2001, at Williamsport High School in Washington County. The workshops were held in order to introduce the project to the community and inform them on the purpose of the project, the planning process, and the existing safety/capacity issues along I-81. Approximately 80 citizens attended the first public workshop and expressed concerns relating to the noise generated by interstate traffic, installation of noise barrier walls, residential displacements, truck traffic, and geometric deficiencies. Approximately 25 citizens attended the second workshop and made comments regarding noise walls, widening to three lanes, and installing a truck weigh station along the corridor.

On June 20, 2002, an Alternates Public Workshop was held at Western Heights Middle School. Six build alternates (2, 2A, 3, 3A, 4, and 4A) and the no-build alternate were presented to the public. Approximately 100 people attended including local residents, community leaders, elected officials, and county representatives. The comments ranged from concerns regarding residential and noise impacts to the increase of truck traffic along I-81.

After the addition of the toll options, a second Alternates Public Meeting was held on May 26, 2004, at North Hagerstown High School. The alternates presented at the public meeting including Alternates 1, 2, 2A, 3, and 3A as well as the truck weigh station and four toll plaza options. Public comments ranged from opposition of tolls to concerns about noise and traffic.

C. SUMMARY OF MEETINGS WITH LOCAL BUSINESSES AND COMMUNITIES

The SHA conducted numerous meetings with local businesses and communities along the I-81 corridor to inform them of the proposed action being considered and the potential

impacts. The following table is a summary of the meetings with local businesses and communities.

Local Business and Community Meetings

Date	Business/Community	Comments/Concerns
June 30, 2003	Hagerstown Business Community	Expressed the need to widen I-81
June 26, 2003	Ghattas Enterprises	Preferred Option B
June 26, 2003	Microtel Hotel	Financial impacts and restricting access
June 26, 2003	Burger King	Financial impacts
June 26, 2003	Lakeside Mobile Home Park	Noise
June 7, 2004	Outback Steakhouse	Effects of placing tolls on workers who commute from Pennsylvania and West Virginia
June 7, 2004	Bowman Development Corporation	Concerned about other future development planned for site
June 14, 2004	Williamsport Town Council	Diversion of traffic off of I-81 to avoid paying the toll
June 24, 2004	Hagerstown Regional Airport	Placement of the toll plazas in or near the airport protection zone and economic development areas

**APPENDIX A –
COMMENTS AND COORDINATION LETTERS**

STREAMLINE PROCESS COORDINATION

I-81 Improvement Project
Draft Alternates Retained for Detailed Study
Errata Sheet

04/02/03

Page	Reviewer	Comments	Response
2	FHWA	<ul style="list-style-type: none"> Please include a table with existing and projected ADT along the corridor 	<ul style="list-style-type: none"> See page 2: Added new table (Table 1 Average Daily Traffic)
13 (Table 3)	US Army Corps of Eng.	<ul style="list-style-type: none"> Revise impact chart. According to the chart, Alternate 4 has no wetlands impacts; however, Alternate 2, 2A, 3, & 3A have wetland impacts. 	<ul style="list-style-type: none"> See Table 4 (Table 3 is now Table 4) Revised the impact chart shown in the Alternates Public Workshop brochure to show correct impacts.
13	Hagerstown MPO	<ul style="list-style-type: none"> Extend the Collector/Distributor Road further south on the north bound lane toward the US 11 Interchange and further north towards the US 40. 	<ul style="list-style-type: none"> The traffic at US 11, in conjunction with the impacts and costs of extending the collector distributor, does not justify this extension. In addition, it could be a problem since crossovers from the mainline to the collector distributor can not be provided. Vehicles may not realize they need to exit at this interchange for Halfway Boulevard.
15	FHWA	<ul style="list-style-type: none"> Resolve the I-70 interchange with regards to 2 through lanes and 2-lane CD roads or 3 through lanes and 2-lane CD roads. 	<ul style="list-style-type: none"> (See page 15) Added a C/D option to Alternate 3A

04/02/03

Page	Reviewer	Comments	Response
15	FHWA	<ul style="list-style-type: none"> Please indicate what other methods the team used to identify low-income and minority communities besides looking at Census Tract data. 	<ul style="list-style-type: none"> (See page 15) The text has been revised to provide additional information on low-income and minority populations. Census data was obtained for the Block Group and Block levels. In addition to this information, interviews were conducted with the Washington County Planning Office, the Washington County Schools, and the U.S. Department of Housing and Urban Development.

Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

MARYLAND DEPARTMENT OF TRANSPORTATION



Robert L. Pedersen, Secretary
Neil J. Pedersen, Acting Administrator

APR 10 2003

Re: Project No. WA128B11
I-81: West Virginia State Line to
Pennsylvania State Line
Washington County, Maryland

Mr. Nelson J. Castellanos
Federal Highway Administration
Division Administrator
The Rotunda - Suite 220
711 West 40th Street
Baltimore MD 21211

ATTN: Ms. Denise King

Dear Mr. Castellanos:

In accordance with the Streamlined Environmental/Regulatory Process, the Maryland State Highway Administration requests your concurrence on the Alternates Retained for Detailed Study (ARDS) for the I-81 Improvement Study. The ARDS information was presented at the March 19 Interagency Review Meeting. Responses to comments received on the draft ARDS package have been incorporated into the document and are listed in the accompanying errata sheet.

Please provide us with your concurrence on ARDS by May 5, addressed to the attention of Ms. Gay L. Olsen in the Project Planning Division. Should you have any questions, please call Mr. Joseph Kresslein at (410) 545-8550.

Sincerely,

Neil J. Pedersen
Acting Administrator

by:
Douglas H. Simmons, Director
Office of Planning and
Preliminary Engineering

410-545-7412

Mr. Nelson J. Castellanos
I-81: WV State Line to PA State Line
Page Two

Attachments

cc: Mr. Bruce Grey, Deputy Division Chief, Project Planning Division, State Highway
Administration
Ms. Denise King, Environmental Specialist, Federal Highway Administration
Mr. Joseph R. Kresslein, Assistant Division Chief, Project Planning Division, State
Highway Administration
Ms. Gay Olsen, Special Assistant, Project Planning Division, State Highway
Administration
Mr. Steven K. Korman, Project Planning Division, State Highway
Administration
Ms. Cynthia Simpson, Deputy Director, Office of Planning and Preliminary Engineering,
State Highway Administration
Ms. Lorraine Snow, Environmental Manager, Project Planning Division, State Highway
Administration
Mr. Jim Wynn, Assistant Division Chief, Project Planning Division, State Highway
Administration

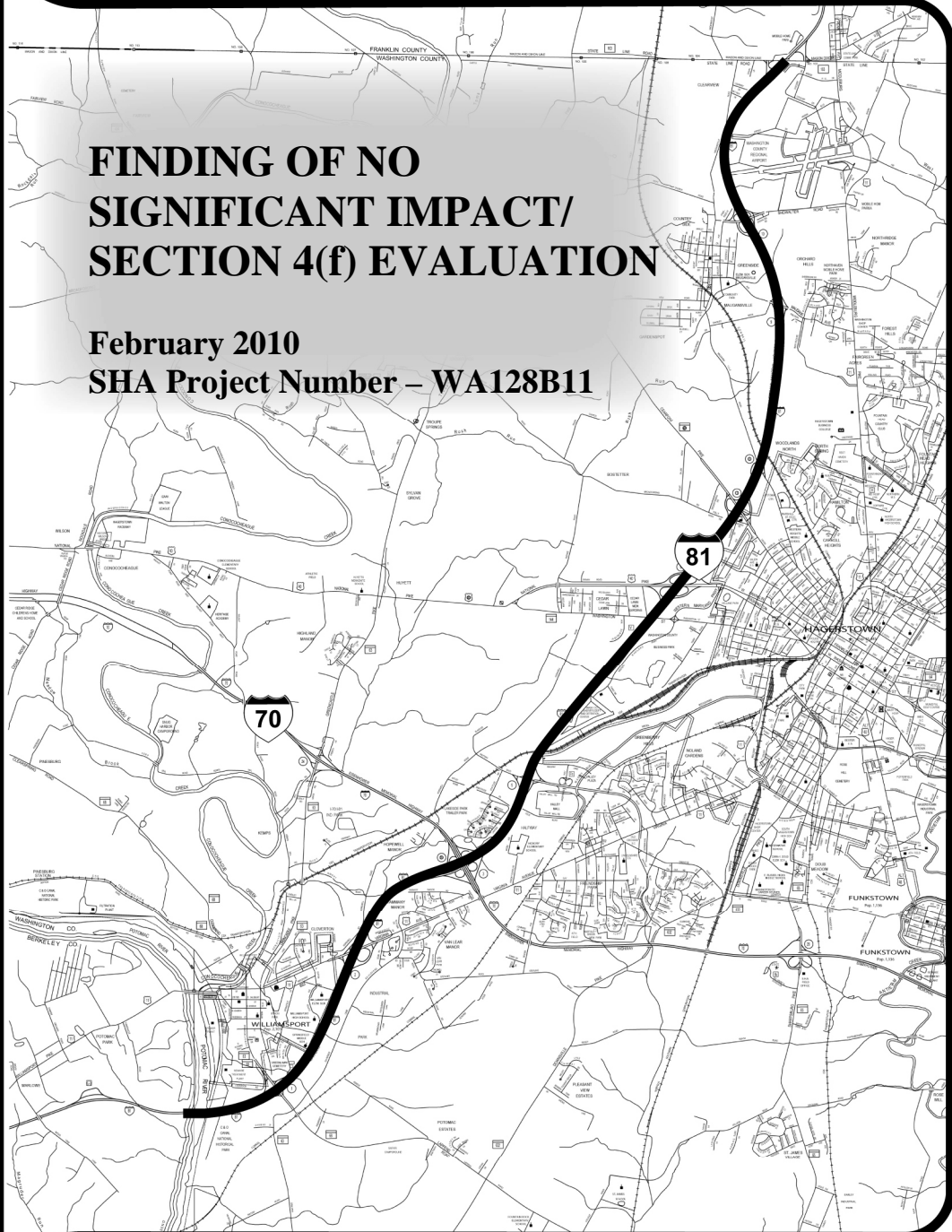


I-81 Improvement Project

From the West Virginia State Line to the
Pennsylvania State Line
Washington County, Maryland

FINDING OF NO SIGNIFICANT IMPACT/ SECTION 4(f) EVALUATION

February 2010
SHA Project Number – WA128B11



Maryland Department of Transportation
State Highway Administration
in cooperation with the National Park Service



**FEDERAL HIGHWAY ADMINISTRATION
DELMAR DIVISION**

FINDING OF NO SIGNIFICANT IMPACT/SECTION 4(f) EVALUATION

**I-81 IMPROVEMENT PROJECT
FROM THE WEST VIRGINIA STATE LINE TO THE PENNSYLVANIA STATE LINE
WASHINGTON COUNTY, MARYLAND**

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

and

**STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION**

The Federal Highway Administration (FHWA) has determined that the Maryland State Highway Administration (SHA) Selected Alternate, Alternate 3A – Inside Widening with Collector-Distributor Roads, will have no significant impact on the human, natural, or cultural environment. The SHA Selected Alternate includes interchange improvements and the widening of mainline I-81 to three lanes in each direction through Washington County, Maryland, from the West Virginia state line to the Pennsylvania state line, a segment of approximately 12 miles.

The SHA Selected Alternate will require approximately 31.7 acres of right-of-way; however, no residential or commercial displacements are required. Within the limits of disturbance for the SHA Selected Alternate, 7,876 linear feet of stream, 1.19 acres of wetlands, 4.0 acres of the 100-year floodplain, and 18.2 acres of woodlands will be impacted. Physical and visual effects to the Chesapeake and Ohio Canal National Historical Park (C&O NHP) will occur from the placement of new piers and inside widening of the Potomac River Bridge. An MOA has been executed between the SHA/FHWA, Maryland Historical Trust and the National Park Service which identifies measures to mitigate impacts to the C&O NHP. The SHA Selected Alternate also includes measures to mitigate impacts to streams, wetlands, and forest resources.

This Finding of No Significant Impact/Section 4(f) Evaluation (FONSI/4(f)) has been independently evaluated by the FHWA and SHA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) is not required. The FHWA and SHA take full responsibility for the accuracy, scope, and content of the FONSI/4(f).

Neil J. Pedersen, Administrator
Maryland State Highway Administration

B. M. Slater / K
MARYLAND STATE HIGHWAY ADMINISTRATION
Gregory I. Slater, Director
Office of Planning and Preliminary Engineering

2/17/10
Date

J. J. Castellanos
FEDERAL HIGHWAY ADMINISTRATION
Nelson Castellanos, Division Administrator
DELMAR Division

2/25/10
Date

FOR

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- Appendix A. SHA Selected Alternate Plates
- Appendix B. Memorandum of Agreement and Section 4(f) Temporary Use
Correspondence
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I. Record of Decision

Robert L. Ehrlich, Jr., *Governor*
Michael S. Steele, *Lt. Governor*



Robert L. Flanagan, *Secretary*
Neil J. Pedersen, *Administrator*

Maryland Department of Transportation

MEMORANDUM

TO: Mr. Raja Veeramachaneni
Director
Office of Planning and
Preliminary Engineering

FROM: Bruce M. Grey *Bob Anderson*
for Deputy Director
Office of Planning and
Preliminary Engineering

DATE: October 19, 2005

SUBJECT: I-81 Improvement Project
WA128B11

RE: Administrator's Selection Meeting

On August 2, 2005, a meeting was held at SHA Headquarters in Conference Room 400 to present the Team-Recommended Alternate for the I-81 Improvement Study. Present at this meeting were:

Harry Stephen	Century Engineering
John Christman	G&O
Lori Huffman	G&O
Fred Wagner	G&O
John Wiser	G&O
Phil Ridenour	Hagerstown Regional Airport
Mike Nixon	MDOT-OPCP
Neil Pedersen	SHA-Administrator
Bobby Fisher	SHA-District 6
George Small	SHA-District 6 Traffic
Ken Briggs	SHA-HDD
Claudine Myers	SHA-HHD
Bob Bancroft	SHA-MCD
Robert Booker	SHA-OOTS
Dave Czorapinski	SHA-OOTS

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Mr. Raja Veeramachaneni
Page Two

Raja Veeramachaneni	SHA-OPPE
Felicia Alexander	SHA-PPD
Carol Ebright	SHA-PPD
Joe Finkle	SHA-PPD
Bruce Grey	SHA-PPD
Melissa Hess	SHA-PPD
Joe Kresslein	SHA-PPD
Odessa Phillip	SHA-PPD
Nicole Washington	SHA-PPD
Jamie Lake	SHA-RIPD
James Thompson	SHA-RIPD
Don Bailey	WVDOT
Bill MacLeod	SHA-OOTS
Douglas Simmons	SHA-Deputy Administrator
Dennis Simpson	MdTA

After introductions, Nicole Washington began the meeting by giving an overview of the project, including public involvement and comments received. Since the Alternates Public Workshop in 2002, the Project Team held several community meetings. An Informational Workshop was held May 26, 2004. The purpose of the meeting was to provide an update for the public on the study; to present the detailed engineering, environmental studies; and to inform the public of additional improvement options. Approximately fifty people attended this meeting. Public comments ranged from opposition of tolls to concerns about noise and traffic. A Location/Design Public Hearing was held October 6, 2004 where approximately fifty people attended. Comments from this meeting ranged from opposition of tolls, fear of traffic diversions onto local roads, and opposition to the Truck Safety and Inspection Station. In addition to the workshop and hearing, a number of meetings were also held with various business owners and communities; such as Outback Steakhouse, Lakeside Mobile Park, and the Hagerstown Regional Airport.

Next, John Christman presented the study alternates, including weigh station and toll options that were presented at the Location/Design Public Hearing. These alternates consist of the following:

- **Alternate 1 – No Build**

Other than routine maintenance and safety improvements, no major improvements would be made under this alternate. This will serve as the basis of comparison for the other alternates.

- **Alternate 2 – Interchange Improvements**

This alternate consists of upgrades to the existing roadway and interchanges to improve overall operations and safety. This would include providing adequate acceleration/deceleration lanes and shoulders. Interchange radii would be brought up to current American Association of State Highway and Transportation Officials (AASHTO) design standards. Alternate interchange schemes have been developed, which include removal of the existing loop ramps to eliminate weave movements along I-81. With this alternate the mainline roadway would remain four lanes. The interchange improvements are as follows:

Exit 1: I-81 @ MD 68 – The acceleration lane provided for traffic coming from Conococheague Street (MD 68) to southbound I-81 would be extended.

Exit 2: I-81 @ US 11 – All of the existing acceleration/deceleration lanes would be extended, except for the deceleration lane provided for traffic traveling from northbound I-81 to US 11.

Exit 3: I-81 @ I-70 – Acceleration/Deceleration lanes would be extended to provide safer merge areas. Ramp terminals would be redesigned to tie in with the mainline. An auxiliary lane similar to the one provided in the southbound direction along I-81 would be provided in the northbound direction between I-70 and Halfway Boulevard (Figure 5).

Exit 4: I-81 @ Halfway Boulevard – This interchange was reconstructed in November 2000. Therefore, no major changes would be anticipated under this alternate.

Exit 5: I-81 @ US 40 – The interchange would be converted from a full cloverleaf to a diamond or half-cloverleaf design. The ramps in the northwest (US 40 west to I-81 south) and southeast (US 40 east to I-81 north) quadrants would be removed and replaced with slip ramps. In addition, an auxiliary lane would be constructed in both directions along I-81 between the US 40 interchange and MD 58 (Cearfoss Pike).

Exit 6: I-81 @ MD 58 – The acceleration/deceleration lanes at this interchange would be extended in order to meet current AASHTO standards and accommodate growing traffic volumes along I-81. In addition, an auxiliary lane would be constructed in both directions along I-81 between MD 58 (Cearfoss Pike) and the US 40 interchanges.

Exit 7: I-81 @ Maugansville Road – The short distance between this interchange and the MD 58 interchange causes traffic congestion and safety issues; however, due to the limited distance, no major changes are anticipated under this alternate.

Exit 8: I-81 @ Maugans Avenue – Two options were investigated for this interchange.

Option A – With this option a loop ramp would be constructed in the northwest quadrant.

Option B – Widen the existing ramp to two lanes – A double left-turn lane would be constructed at Maugans Avenue westbound to I-81 southbound.

Exit 9: I-81 @ Showalter Road – The acceleration/deceleration lanes along the east side of I-81 would be extended. The ramps in the northwestern and southeastern quadrants of the interchange would be replaced with slip ramps. An auxiliary lane would also be provided along southbound I-81 from Showalter Road to Maugans Avenue.

Exit 10: I-81 @ PA 163 – This interchange is half in Pennsylvania and half in Maryland. The existing acceleration lanes on the Maryland portion of the interchange would be extended.

- **Alternate 2A – Interchange Improvements w/ Shortened and Modified Collector-Distributor Roads**

Under this alternate, the above interchange improvements (for Alternate 2) are proposed as well as the construction of a two-lane Collector-Distributor (C-D) Road, which would extend approximately one point two miles from the I-70 interchange through the Halfway Boulevard interchange. A C-D Road currently exists through the I-70 interchange and would be brought up to current AASHTO standards and extended. The I-70 and Halfway Boulevard interchanges would need to be modified to connect with the improved C-D Road. This modification would remove the merge and weave problems from the mainline between these interchanges.

- **Alternate 3 – Inside Widening**

This alternate consists of widening the existing I-81 roadway within the existing median. The roadway would be widened to allow three twelve-foot lanes, a twelve-foot outside shoulder and a variable (four foot-ten foot) inside shoulder. Interchange improvements from Alternate 2 would also be included.

- **Alternate 3A – Inside Widening w/ Collector-Distributor Roads**

This alternate includes widening I-81 on the inside of the existing roadway and the construction of a two-lane C-D Road, which would extend from the I-70 interchange through the Halfway Boulevard interchange, removing the merge and weave problems from the mainline between these interchanges. The interchange improvements listed in Alternate 2 would also be included.

- **Alternate 3A, Option B – Inside Widening w/ Collector-Distributor Roads**

This alternate includes the same improvements listed in Alternate 3A. However, between the I-70 and Halfway Boulevard interchanges, I-81 would continue to be two lanes in each direction.

Several Toll Options were also presented at the 2004 Workshop and the Public Hearing.

Next, Odessa Phillip provided an environmental overview. A summary of the impacts are attached. After the overview, Neil Pedersen asked if the construction of Alternate 2A would be sufficient and if we need inside widening. John responded by saying there will be capacity issues in ten to fifteen years at the north end of the project. Capacity issues currently exist at the I-70 and Halfway Boulevard interchanges. In addition, West Virginia and Pennsylvania are planning to widen their sections of I-81 to six lanes. Neil then asked about coordination with the National Park Service (NPS). Odessa responded stating that the project team has held several meetings with the NPS to discuss their concerns about stormwater management (SWM), right-of-way (ROW) ownership, impacts, and drainage. This coordination is ongoing and mitigation of these issues will be achieved once we have more details from NPS. Neil then suggested that the team prepare a cost breakdown for each construction phase. John described the Team Recommended Alternate, Alternate 3A Inside Widening w/ C-D Road. The changes that have been made to this alternate since the Public Hearing were at the I-81/US 11 and I-81/MD 58 interchanges. These include the following:

- The MD 58 ramp, carrying traffic from I-81 Southbound to MD 58 Westbound would be converted to a 'T' intersection.
- The US 11 ramps would be redesigned so the existing slip ramp in the northwest quadrant would be relocated closer to the bridge. This would allow for a longer left turn lane along westbound US 11. For safety reasons, the two lanes of traffic traveling along US 11 would need to merge down to one lane when approaching the ramp intersections. If necessary, interconnected traffic signals could be installed at a later date at both ramp intersections.

The next item discussed was project issues. Nicole mentioned that the proposed weigh station would be constructed on a 10-acre parcel of land. The proposed layout of such a facility was presented.

Nicole mentioned that the Washington County Commissioners are not in favor of the weigh station along I-81, specifically they were concerned about the weaving distance between traffic getting onto southbound I-81 from the US 40 interchange competing with trucks entering the weigh station. The commissioners were also concerned about potential traffic diversion onto local roads, from trucks to avoid the station. Raja Veeramachaneni stated that he is also concerned about traffic diversions caused by construction of the weigh station. Dave Czorapinski discussed the concept behind the Virtual Truck Safety and Inspection Station and how the system would prevent diversion by using roving units that patrol diversion routes and penalize diverters. The estimated construction cost for the weigh station facility is \$42 million, which excludes the purchase of ten to twelve acres of ROW.

Neil Pedersen asked Don Bailey what his thoughts were on the Truck Safety & Inspection Station. Don stated that West Virginia is open to discussion on potentially constructing a facility in the northbound direction along I-81 in West Virginia. Don then distributed an official statement from the West Virginia Department of Transportation, dated August 1, 2005, documenting that West Virginia is open to discussion on the issue.

Neil recommended that Maryland and West Virginia coordinate on providing a joint weigh station facility along I-81 – one facility in the southbound direction in Maryland and one facility in the northbound direction in West Virginia. Neil also stated that he would like to know how many truck weight violations are on record at the I-70 interchange and elsewhere along the corridor. Dave stated that Commissioner Munson with the Washington County Commissioners is adamantly against a weigh station facility along I-81 in Maryland. Nicole also stated that Gary Rohrer, Director of the Washington County Board of Public Works supports the weigh station, as does the staff at the County Office; however, he stated that some of the Commissioner's and business community members are concerned with the economic impacts of the weigh station. They see it as a revenue-builder for the Motor Carrier Administration only and do not see the benefits to the local community.

Neil stated that the project team needs to market the weigh station better; educate them on the safety benefits of truck weighing and inspection. In addition, Neil asked that the weigh station be separated from the overall I-81 Improvement Study. Since some of the Commissioners are in objection to the weigh station, Neil recommends that further discussion with the Washington County Commissioners, in regards to the weigh station, be postponed until after the 2006 CTP tour.

Nicole discussed the issues that remain with NPS. She stated that construction of the widening to the bridge over the Potomac River could occur on the first set of piers on the Maryland side, from the top of the deck within the existing bridge median. Raja has requested that we receive confirmation from SHA Bridge Design that sequencing for bridge reconstruction can actually take place between the dual bridges over the Potomac River. Raja is not convinced that all of the construction can be done from this location. Nicole mentioned the limestone bluffs and the two bridge piers currently located on park property. Neil wants resolution on the bridge reconstruction sequencing issue before he makes any recommendation on these issues.

Nicole discussed the results from the I-81 Multi-State Meeting. Virginia is studying widening I-81 to six lanes. Pennsylvania has completed a feasibility study which evaluated widening I-81 to six lanes, West Virginia is widening to six lanes up until six miles before the Maryland state line. Don Bailey stated that all engineering work is complete for widening to six lanes through West Virginia.

Odessa began a discussion on the noise wall analysis along the corridor. Odessa stated that the NPS does not want noise sampling done along the C & O Canal National Historic Park. The initial noise analysis determined that noise walls would not be needed in the area of the park and towpath. Odessa mentioned three locations that may be eligible for noise walls once the noise analysis is revised: (one) the Lakeside Mobile Home park, (two) along Southbound I-81 near PA 163, (three) the Northwest and Southeast quadrants of the I-70 interchange. Noise walls should be added to cost estimates. Neil suggested that the cost for noise walls be added to the cost estimate as a contingency, not as an actual cost breakdown.

The team agreed that travel speeds along I-81 are extremely high. Trucks were noted to travel at speeds up to 80 mph. Bill MacLeod stated that forty to fifty percent of the sixty-seven reported accidents at the I-70 interchange were speed-related. Neil feels that traffic traveling along the C-D Roads is moving too fast. The project team should develop ways to slow traffic through this area, as well as along the mainline.

Nicole stated that, in coordination with the Federal Highway Administration, Interstate Access Permit Approvals (IAPA) would only be needed for the I-70 interchange improvements and the weigh station. Doug Simmons wants documentation on the IAPA, where it clearly states that approval will not be needed for the improvements proposed at other interchanges. This documentation is needed in order to move forward.

Neil asked if there were any outstanding issues in regards to the Hagerstown Regional Airport. Phil Ridenour stated that there are no longer any issues now that the proposed light tower has been removed from the I-81 median. Phil will submit revised plans to SHA as soon as possible.

Neil suggested that the Project Team coordinate with a traffic behavioral expert to further investigate the improvements being proposed at the I-70 Interchange.

Meeting Follow-Up

- Develop wording on why tolls are not part of the Selected Alternate
- Develop a cost estimate and phased construction plan for the I-70/I-81 Interchange including the C-D Road
- Determine measures to reduce speed on the C-D Road and seek guidance from a traffic behavioral expert to review short-term and long-term concepts to determine if the improvements are sufficient
- Correspond with the Federal Motor Carrier Safety Administration regarding the proposed I-81 Truck Weigh and Inspection Station
- Separate the I-81 Truck Weigh & Inspection Station from the I-81 Improvement Study
- Correspond with Pennsylvania on the I-81 Truck Weigh & Inspection Station
- Confirm the construction sequencing for the Bridge over the Potomac River
- Obtain written verification from the Federal Highway Administration on the Interstate Access Point Approval requirements for the project
- Include an additional contingency in the cost estimates for noise walls
- Determine whether the pavement would have to be fully reconstructed if the project were not built within the next fifteen years.
- Coordinate with local entities such as the Washington County Sheriffs Office and trucking companies regarding the Truck Weigh and Inspection Station; however, refrain from coordinating with elected officials until after the Consolidated Transportation Project (CTP) briefing.

A separate memorandum documenting the results of all of the follow up items was sent to you under separate cover.

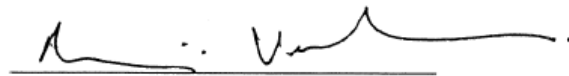
Administrator's Selection

The Final Team Recommendation for the project includes: Alternate 3A inside widening with C-D roads. At the time of the Administrator's Selection Meeting, the Administrator postponed formal selection until the follow-ups and the Team Recommended Alternative with the Administrator and he concurred with the Team Recommendation.

Raja Veeramachaneni
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I concur that the above statements accurately represent decisions made by the Administrator during the August 2, 2005 Administrator Selection Meeting. Alternate 3A Inside Widening with C-D Road, was presented following this meeting was selected for the I-81 Improvement Project.

Concurrence:



Raja Veeramachaneni, Director
Office of Planning and
Preliminary Engineering

10/19/05
Date

Attachments

cc: Attendees
I-81 Project Team (excluding attendees)

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Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor



Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

MEMORANDUM

TO: Mr. Raja Veeramachaneni, Director
Office of Planning and
Preliminary Engineering

FROM: *fr* Bruce M. Grey *Bob Sanden*
Deputy Director
Office of Planning and
Preliminary Engineering

DATE: October 19, 2005

SUBJECT: I-81 Improvement Project
WA128B11

RE: Administrator's Selection Follow-Up Meeting

On Thursday, September 29, 2005, a meeting was held to discuss the follow-up items received at the August 2, 2005 Administrator's Selection Meeting, the schedule, and next steps. Present at this meeting were:

Harry Stephen	Century Engineering
John Christman	Greenhorne & O'Mara (G&O)
Lori Huffman	G&O
Fred Wagner	G&O
Bob Fisher	SHA-District 6
George Small	SHA-District 6
Linda Zeebee	SHA-District 6
John Narer	SHA-OB
Bill Branch	SHA-OED
Ken Briggs	SHA-OHD
Dilip Patel	SHA-OOTS
Raja Veeramachaneni	SHA-OPPE
Felicia Alexander	SHA-PPD
Dennis M. Atkins	SHA-PPD
Carol Ebright	SHA-PPD

Mr. Raja Veeramachaneni
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Bruce Grey	SHA-PPD
Melissa Hess	SHA-PPD
Kameel Holmes	SHA-PPD
Joe Kresslein	SHA-PPD
Nicole Washington	SHA-PPD
Matthew Allen	Wallace Montgomery & Associates

After introductions, Nicole Washington began the meeting by reviewing the purpose of this follow-up meeting. The follow-ups, including the responses received since the Administrator's Selection Meeting, are attached. In order to make the meeting more efficient, it was decided to only discuss the major follow-up items which require further detailed explanation or direction.

Next, Nicole asked John Narer to review the proposed construction sequencing for the bridge over the Potomac River. Overall, John informed the team that the bridge would be widened using the same technique as was used during the original construction. Traffic would be separated to the far side of the existing structure and the widening area in the median would be isolated. The berm, in the existing approach roadway median, would be removed so that the new median pavement could be created. A work platform would be excavated from the existing I-81 roadway onto the bluff behind the proposed pier widening, to facilitate the construction of the pier widening. If possible, these footings would be inserted beneath the visible surface to reduce visual impacts. Excavated rock may be re-grouted in place as another mechanism to reduce the visual impacts.

The C&O Canal prism and towpath can be protected to the extent possible by using wooden lagging boards to cover and protect it, which would allow visitors to safely continue using the facility. However, vegetation currently in the canal prism would need to be cleared to aid in the process. The towpath would most likely need to be utilized during these construction efforts, as well as for the construction of a protective structure for the canal prism towpath. Lighter weight vehicles would need to be used to carry construction materials to the site for these protective structures, when needed. SHA would document the original condition of the trail and restore it to the same condition upon completion of the construction activities.

The crane size and location commitment would be forthcoming from the contractor at the time of construction. However, Bridge Design would work with the contractor to develop the least impactful solution. A launching beam system and two cranes placed on the existing bridge may be used to erect beams closest to the Maryland side of the bridge, without the need to access the C&O Canal and towpath. Raja stated that the team needs to make sure any additional impacts associated with this method of construction are communicated to the park officials.

George Small mentioned that the construction timing of the additional lane along the bridges would need to be coordinated with West Virginia's project that is proposing inside widening along I-81.

The next item on the agenda discussed was the I-70/I-81 interchange improvements. Nicole mentioned that members of the team met with human factors experts, Gary Alexander and Fred Hanscom to come up with ways to improve safety at the interchange. A table was comprised to list short-term, interim, and long-term improvements at the interchange. George reviewed the short-term and interim improvements that the team is proposing. These improvements are listed in the attached table. George then asked Matthew Allen to discuss the signing and lighting project that Office of Traffic and Safety (OTS) is currently evaluating. Matthew stated that OTS has been working on upgrading the signing and lighting at the interchange. Below are some of the issues with the I-81/I-70 interchange signing and lighting:

- All existing signage within the interchange fails to meet current MUTCD standards (ie. fonts, retro reflectivity, placement, and visibility).
- Most of the signs should be cantilever-mounted rather than ground-mounted signs.
- Advanced interchange signing should be mounted on cantilevers to provide adequate warning to vehicles.
- The poles associated with the cantilever sign structures at this interchange must be placed far enough from the road to allow for the future road widening proposed in the I-81 Improvement Study.
- There are major costs associated with providing additional lighting at the interchange. The electricity allowance is currently at the maximum.
- The whole lighting infrastructure at this interchange would need to be upgraded to not only handle the existing lighting that should be at this interchange, but to also handle the long-term improvements.
- Costs associated with the signing and lighting improvements are:
 - \$600,000 for signing upgrades
 - \$300,000 – 400,000 for lighting upgrades
 - \$1,500,000 for additional signing & lighting (from table)
- The budget for all of these proposed improvements is currently undetermined.

John Christman then reviewed the following long-term improvements for the interchange, which are proposed in the I-81 Improvement Study:

- Phase 1 – Reconstruct directional ramps and widen I-70 Bridges
- Phase 2 – Reconstruct I-70 Mainline Bridges
- Phase 3 – Replace the Collector-Distributor (C-D) road bridges and reconstruct loop ramps
- Phase 4 – Widen I-81 C-D road

Mr. Raja Veeramachaneni
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Bob Fisher questioned the status of the weigh station and how it will be coordinated with the I-81 construction. Nicole responded by saying that per Neil Pedersen's request, the weigh station has been removed from the study and will now proceed forward as a separate project through the OOTS, Motor Carrier Division.

Bill Branch then discussed the results from the Mitigation Site Search Meeting held September 13, 2005. Bill stated that the team looked at approximately ten to twelve properties that could possibly be used for wetland mitigation. There are two properties that are currently available for purchase and would serve well as wetland mitigation sites. There are farm fields located near Conococheague Creek that could provide ten to twenty acres of wetland mitigation, with additional room for reforestation. Bill, along with the Army Corps of Engineers, recommends that SHA begin property acquisition negotiations as soon as possible. Raja Veeramachaneni stated that the property costs should be determined before we begin negotiating.

Nicole began discussing the project schedule and the next steps. Nicole stated that the team would prepare a memo for the August 2, 2005 Administrator's Selection Meeting. Raja suggested that Nicole include the updated schedule recommendations in the memo from that meeting.

Nicole mentioned that the Selected Alternative/Conceptual Mitigation (SACM) review period may affect the schedule. The SACM is currently scheduled to be presented at the next Interagency Meeting (currently scheduled for November 16). Raja stated that the first priority should be to start the process for the I-70/I-81 short-term and interim improvements. The team should prioritize the improvements to this interchange and put them in order of importance in the table.

Raja questioned the proposed tree clearing at the I-70/I-81 interchange. He stated that clearing all the trees within the interchange should not be necessary. George Small responded by saying that the trees prevent oncoming vehicles from determining their path along the interchange ramps, which in turn prevents them from choosing the correct speed at which to approach the ramps. In addition, traffic traveling along the I-70 directional ramps can not see the signing for the upcoming C-D Road because of the overhanging trees. Raja recommended that the line of sight be determined along each ramp and that we should only clear those trees that are within that line of sight area. The table was updated to reflect Raja's recommendation.

Carol Ebright questioned whether or not a letter had been sent out to the National Park Service regarding their concerns with proposed impacts. Odessa Phillip is preparing the letter, but was waiting for the construction sequencing for the bridge. She now has that information and will be moving forward with mailing the letter.

Mr. Raja Veeramachaneni
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There being no further business the meeting was adjourned.

Follow-ups from the meeting were discussed as follows:

- Obtain cost estimates for the mitigation properties.
- Update the table of I-70 interchange improvements to reflect Raja's recommendations.

Attachments

cc: Attendees
Project Team

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II. Comparison of Impacts

Table 1: Summary of Environmental Impacts

		ALTERNATE						TOLL OPTION				WEIGH STATION
		1	2	2A	3	SHA Selected Alternate 3A, Option A	Alternate 3A, Option B	1	2	3	4	
RESOURCES		No-Build	Interchange Improvements	Interchange Improvements w/ Collector- Distributor Roads	Inside Widening	Inside Widening w/ Collector- Distributor Roads	Two Lane I-81 Mainline Parallel to the Collector- Distributor Road	Dual Toll Plaza btwn. Potomac River and Conococheague Street	Toll Plazas at North and South ends of I-81, tolling drivers entering MD	Toll Plazas at North and South ends of I-81, tolling drivers exiting MD	Dual Toll Plazas at North and South ends of I-81	SB I-81 between Halfway Blvd and US 40
Socio-Economic Environment												
1	Displacements											
	a. Residential	0	0	0	0	0	0	0	0	0	0	0
	b. Business/Commercial	0	0	0	0	0	0	0	0	0	0	0
TOTAL DISPLACEMENTS		0	0	0	0	0	0	0	0	0	0	0
2	No. of Properties & Resources Affected											
	a. Residential	0	14	16	15	21	18	2	4	3	7	1
	b. Business/Commercial	0	8	13	8	23	13	0	1	2	3	0
	c. Parkland/Recreation Area	0	0	0	1	1	1	0	0	0	0	0
	d. Church/School	0	0	0	0	0	0	0	0	0	0	0
	e. Historical/Archaeological	0	0	0	1	1	1	1	1	0	1	0
TOTAL PROPERTIES		0	22	29	24	46	32	3	6	5	11	1
3	Right-of-Way Required - Acres											
	a. Residential	0	6.70	8.95	6.80	10.02**	7.70	5.28	5.08	5.36	10.44	11
	b. Business/Commercial	0	3.21	12.01	3.21	18.77**	12.11	0	1.31	3.93	3.24	0
	c. Parkland/Recreation Area	0	0	0	2.95	2.95*	2.95	0	0	0	0	0
	d. Church/School	0	0	0	0	0	0	0	0	0	0	0
	e. Historical/Archaeological	0	0	0	2.95	2.95*	2.95	2.47	4.39	0	2.47	0
TOTAL ACRES		0	9.91	20.96	12.96	31.74**	22.76	7.75	10.78	9.29	16.15	11
Natural Environment												
1	Number of Stream Crossings	0	23	26	27	29	29	0	0	0	0	0
2	Linear Feet of Stream (Total)	0	4,859	6,925	6,017	7,876	7,876	0	0	0	50	0
	Perennial	0	935	1,142	2,173	2,590	2,590	0	0	50	50	0
	Intermittent	0	302	1,604	356	1,658	1,658	0	0	0	0	0
	Ephemeral/Intermittent	0	2,673	2,673	2,673	2,673	2,673	0	0	0	0	0
	Ephemeral	0	815	955	815	955	955	0	0	0	0	0
3	100-Year Floodplain Affected (acres)	0	2.00	4.00	2.10	4.00	4.00	0	0	0	0	0
4	Wetlands Affected (acres)	0	1.16	1.16	1.16	1.19	1.16	0	0	0	0	0
5	Woodlands Affected (acres)	0	7.00	15.00	7.00	18.22	16.00	6.86	4.08	4.70	6.86	11
6	Area of Prime Farmland Affected (acres)	0	4.00	9.00	4.00	11.00	11.00	0.11	5.19	0.07	5.25	0
7	Agricultural Land Affected (acres)	0	4.00	9.00	4.00	11.00	11.00	0.11	5.19	0.07	5.25	0
8	Urban or Built-Up Land (acres)	0	6.00	6.00	6.00	6.00	6.00	0	0	0	0	0
Cost (in millions)												
Preliminary Engineering		\$0	\$30-\$35	\$40-\$45	\$55-\$60	\$60-\$65	\$60-\$65	\$5-\$10	\$5-\$10	\$5-\$10	\$5-\$10	
Right-of-Way		\$0	\$10-\$15	\$15-\$20	\$10-\$15	\$22-\$27	\$20-\$25	\$5-\$10	\$5-\$10	\$5-\$10	\$5-\$10	
Construction		\$0	\$190-\$195	\$240-\$245	\$350-\$355	\$405-\$410	\$400-\$405	\$25-\$30	\$30-\$35	\$30-\$35	\$40-\$45	
Total		\$0	\$245-\$250	\$330-\$335	\$485-\$490	\$562-\$567	\$550-\$555	\$35-\$40	\$40-\$45	\$40-\$45	\$50-\$55	\$42
* A temporary construction easment for access of approx. 2.95 acres in addition to the ROW requirements listed above would be needed from the C&O Canal NHP. Right-of-way costs have not been updated to reflect this increase in ROW. The C&O Canal NHP is considered both a parkland and a historic site, and in both the Parkland/Recreational Area and Historical/Archeological categories. However, the C&O Canal NHP is added only once to the total properties and total acres.												
** Option 3A impacts have been revised to include revisions to the storm water management facilities since the Environmental Assessment.												

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III. SHA Selected Alternate

A. Summary of Actions and Recommendations

The State Highway Administration (SHA) has evaluated potential alternates and options for improvements to the I-81 corridor, traversing Washington County, Maryland. The I-81 corridor serves as a major north-south highway and regional connector linking Maryland, Pennsylvania, Virginia and West Virginia.

The existing I-81 (Figure 21) is a four-lane divided roadway with two 12-foot lanes in each direction, 4-foot inside shoulders, 10-foot outside shoulders, and a variable (24 to 64-foot) grass median. A two-lane C-D road exists through the I-70 interchange. The C-D road runs adjacent to northbound and southbound I-81 beginning approximately 800 feet south of the I-70 interchange (Figure 2) and merges back into the mainline approximately 500 feet north of the interchange. All movements to and from I-70 are made via the C-D road.

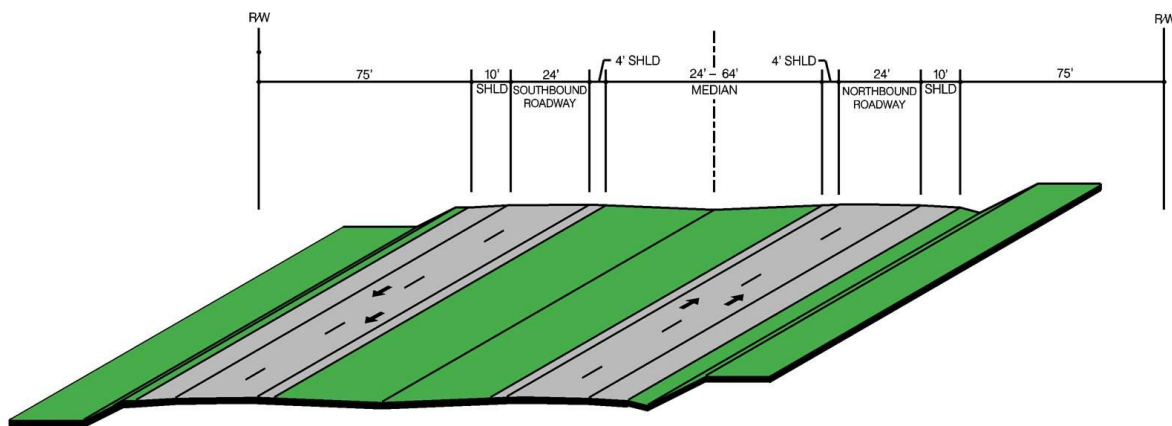


Figure 1: Existing I-81 Typical Section

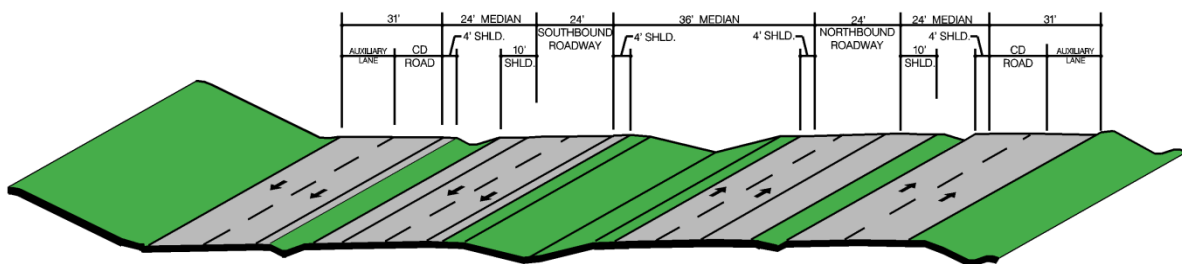


Figure 2: Existing I-81 Typical Section (at the I-70 interchange)

Purpose and Need

The purpose of this project is to improve traffic operations and safety along the I-81 corridor from the West Virginia state line to the Pennsylvania state line, a distance of approximately 12 miles. The I-81 corridor is an important north-south facility in western Maryland. Recent and planned economic development activities along the corridor have caused I-81 to experience increasing operational problems. A Level of Service (LOS) analysis for 2000 and 2025 was performed for all I-81 mainline sections and interchange ramps. Level of Service 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). In 2000, I-81 was operating at levels of service ranging from “A” to “C.” By 2025, with the increase in traffic volumes, the LOS along parts of the mainline will deteriorate to LOS “E.”

In addition, safety is currently compromised by a high percentage (34 percent Average Daily Traffic) of truck traffic combined with substandard interchange design and poor spacing between interchanges. From January 1999 to June 2004, there were 452 reported crashes along the I-81 mainline. The average crash rate for this study section was 35.3 crashes for every 100 million vehicle miles of travel (acc/100 mvm). While this crash rate is lower than the statewide average crash rate of 54 acc/100 mvm for similar highways now under state maintenance, the rates for fatal crashes (1.0 acc/100 mvm) and truck related crashes (12.0 acc/100 mvm) are significantly higher than the statewide average of 0.4 acc/100 mvm and 9.0 acc/100 mvm, respectively. The crash history for the study area is listed in Table 2.

Table 2: I-81 Mainline Crash Data

Year	1999	2000	2001	2002	2003	2004	Total	Study Rate (acc/100 mvm)	Statewide Avg. Rate (acc/100 mvm)
Fatal	0	4	0	2	6	1	13	1.0*	0.4
Injury	42	49	40	33	35	17	216	16.9	21.1
Property Damage	43	43	42	35	42	18	223	17.4	32.1
Truck Related Crashes	36	36	31	18	26	7	154	12.0*	9.0
Total	85	96	82	70	83	36	452	35.3	53.6

*Significantly higher than the statewide average rate

Between January 1998 and December 2002, there were 131 crashes on the interchange ramps along I-81 between the West Virginia and Pennsylvania state lines. Roughly 51 percent (67 of 131) of those crashes occurred on the I-70 interchange ramps. Approximately 40 percent of the I-70 crashes (27 of 67) involved heavy trucks. Ten of those 27 truck crashes occurred at the loop ramp in the south quadrant of the interchange, eastbound I-70 to northbound I-81, where truck drivers were exceeding the speed limit and overturned their vehicles.

Without improvement, it will be difficult to maintain a future acceptable LOS and safety along the highway.

Seven alternates were considered during the development of the I-81 Improvement Project. Of these, the No-Build and four build alternates (with six options) were retained for detailed engineering and environmental study. Additionally, due to the state’s financial constraints, consideration was given to utilizing toll financing for the proposed improvements. During and immediately following the Location/Design Public Hearing, the public expressed concerns regarding the toll options. The primary concern was the projected traffic volumes, which could

be diverted to the local street system by those drivers trying to avoid paying a toll. The diversion analysis was developed using an earlier version of the regional transportation model for the Hagerstown area. This model did not include information on trip purpose distributions or distinguish between passenger cars or truck patterns. In order to more accurately respond to the concerns raised during the public hearing, a more detailed analysis would be required. Therefore, at this time toll options are not part of the SHA Selected Alternate for the I-81 Improvement Project; however, tolls are not precluded from consideration in the future. A description of the alternates studied is included in the Record of Decision, Section I of this FONSI.

Alternate 3A – Inside Widening with Collector-Distributor Roads is the SHA Selected Alternate for this project. Under this alternate, I-81 will be widened to six twelve-foot wide lanes on the inside (towards the median). The outside lanes will include a C-D road consisting of two twelve-foot wide lanes with an additional twelve-foot wide auxiliary lane extending from the I-70 interchange through the Halfway Boulevard interchange for both north and southbound structures (Figure 3). This alternate will require the widening of the northbound and southbound spans of Bridge No. 21078, which carries I-81 over the Potomac River. Mapping for the SHA Selected Alternate is provided in **Appendix A**.

A typical cross section of Alternate 3A – Inside Widening with C-D roads is provided below.

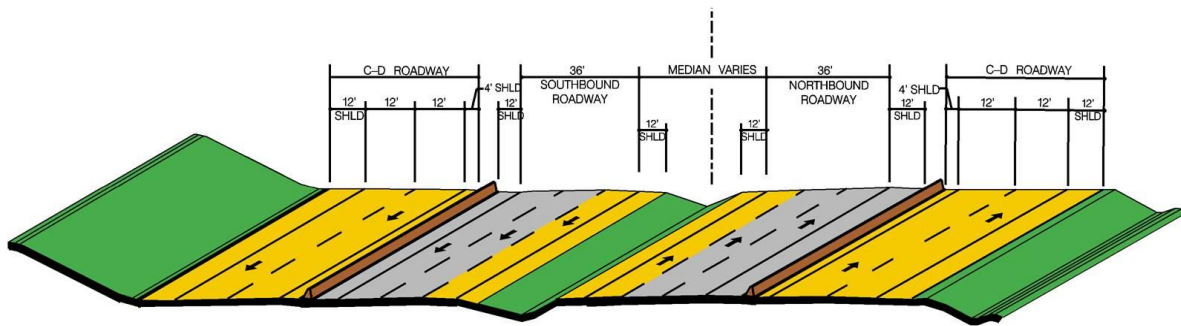


Figure 3: Typical Section Alternate 3A - Inside Widening with C-D Roads

Alternate 3A – Inside Widening with C-D Roads best fulfills the project’s Purpose and Need because the interchange improvements, in conjunction with the mainline widening and C-D road extension, enhance safety and traffic operations better than the other alternates. Because Alternate 3A – Inside Widening with C-D Roads is a more comprehensive approach and includes both inside widening and C-D roads, it results in more earth disturbance and therefore, greater environmental impacts than the other alternates. However, the other alternates do not fully address safety concerns for the weave movements on and off the mainline and/or do not address added capacity to the mainline.

The improvements at the interchanges proposed with the SHA Selected Alternate include the following:

Exit 1: MD 68/MD 63 – Traffic volumes are relatively low at this interchange, and only five crashes occurred over a 5-year period from 1998-2002. Only one ramp (MD 68/63 to southbound I-81) has an unacceptable 2025 LOS in the PM peak hour, due to an insufficient acceleration lane. The acceleration lane from Conococheague Street (MD 68) to southbound I-

81 will be extended from the existing length of 500 feet to 1,230 feet. This will improve the 2025 LOS in the PM peak hour from “D” to “C”.

Exit 2: US 11 – Traffic volumes are relatively low at this interchange, except for the ramp from southbound I-81 to US 11. Only three crashes occurred during the 1998-2002 study period. The two southbound ramps will operate at a LOS “D” in 2025 due to high traffic volumes and/or insufficient acceleration/deceleration lanes. All of the existing acceleration/deceleration lanes will be extended to at least 1,200 feet, except for the deceleration lane provided for traffic traveling from northbound I-81 to US 11.

Exit 3: I-70 – This interchange will be completely reconstructed due to the existing poor geometry and lack of acceleration/deceleration lanes on both I-81 and I-70. In the 5-year period from 1998-2002, 67 crashes occurred at this interchange. Due to the proximity of the Halfway Boulevard interchange, an auxiliary lane will be provided to connect the I-70 westbound off-ramp to the Halfway Boulevard eastbound off-ramp. This will provide increased distance for vehicles to weave and improve the LOS and operations through this area.

The C-D road will run from the I-70 interchange (Exit 3) through the current Halfway Boulevard interchange (Exit 4) as follows. A typical section of this portion of the roadway is provided as Figure 4.

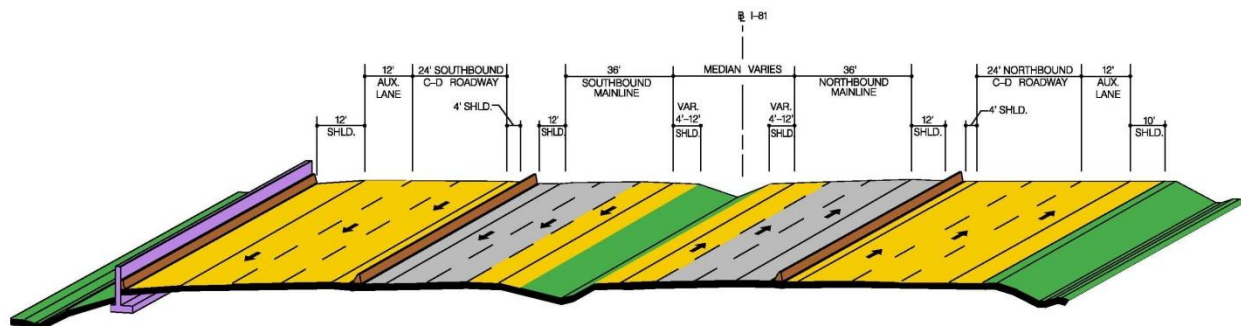


Figure 4: Alternative 3A, Option A (at the I-70 interchange)

Northbound I-81 – The two-lane northbound C-D road will begin approximately 2,300 feet north of US 11 as a two-lane exit ramp. The outside lane will provide drivers with two options: connect with the I-70 eastbound ramp or continue through the interchange. The inside lane will continue through the interchange. An auxiliary lane will join the two-lane C-D road at the I-70 on-ramp and continue north to the Halfway Boulevard interchange, ending at the off-ramp to Halfway Boulevard eastbound. The two-lane C-D road will then merge back to I-81 approximately 3,000 feet north of Halfway Boulevard. All movements to and from I-70 and Halfway Boulevard will be made from this C-D road.

Southbound I-81 – The two-lane southbound C-D road will begin approximately 3,300 feet north of Halfway Boulevard and continue through the Halfway Boulevard interchange with a third auxiliary lane connecting the on-ramp from Halfway Boulevard to the I-70 westbound off-ramp. The C-D road will then merge back with the mainline approximately 2,500 feet north of the US 11 exit ramp gore.

The construction of the C-D road will move the merge and diverge movements off the mainline onto the C-D road where the lower speeds and volumes will allow these movements to be safer. This will significantly improve the operations and safety along the mainline. The existing Halfway Boulevard structure was designed to allow for the inside widening of I-81. However, in order to provide the C-D road, it will be necessary to construct a retaining wall along Halfway Boulevard (see **Appendix A**).

- **Exit 5: US 40** – Weaving issues exist due to the cloverleaf structure of the interchange. Most of the ramps will operate at a LOS “D” for the year 2025 under the existing conditions. For a 5-year period from 1998-2002, there were 16 crashes. The interchange will be converted from a full cloverleaf to a diamond or half-cloverleaf design. The ramps in the northwest (US 40 west to I-81 south) and southeast (US 40 east to I-81 north) quadrants will be removed and replaced with slip ramps. This will eliminate the weave that currently exists at this interchange and reduce the number of crashes. Left turn lanes will be constructed for US 40 eastbound to I-81 northbound and for US 40 westbound to I-81 southbound. Due to the distance between this interchange and Exit 6, an auxiliary lane will be provided for the northbound and southbound directions connecting the two interchanges. This will allow a weave movement rather than the merge and diverge in the short distance in addition to providing longer lengths for vehicles to accelerate and decelerate. With these improvements, all movements are projected to operate at a LOS “C” or better in 2025.
- **Exit 6: MD 58** – Under existing conditions, every ramp at this interchange will function at a LOS “D” or worse in either the AM or PM peak hour in 2025. In addition, 13 crashes occurred at this interchange in a 5-year period from 1998-2002. The acceleration lanes provided for traffic coming from MD 58 to I-81 in either direction are severely inadequate. The acceleration/deceleration lanes on the ramps to I-81 northbound and southbound will be extended from 450 feet to 1,230 feet in order to accommodate growing traffic volumes along I-81. This will improve the merge LOS from “E” to “D” on the northbound ramp and from “D” to “C” on the southbound ramp. Due to the distance between this interchange and Exit 7, an auxiliary lane will be constructed in both directions along I-81 between MD 58 (Cearfoss Pike) and the US 40 interchanges. This will allow a weave movement rather than the merge and diverge in the short distance in addition to providing longer lengths for vehicles to accelerate and decelerate.
- **Exit 8: Maugans Avenue** – The existing ramp to southbound I-81 will be widened to two lanes. A double left-turn lane will be constructed on westbound Maugans Avenue to I-81 southbound. The intersection of Maugans Avenue and the I-81 southbound ramp will operate at LOS “C” in the AM peak hour and “D” in the PM peak hour. The merge onto I-81 will operate at LOS “D” and “C” in the AM and PM peak hours, respectively.
- **Exit 9: Showalter Road** – The majority of the ramps have an acceptable LOS, and six crashes occurred from 1998-2002. Weaving issues exist due to the cloverleaf structure of the interchange. The existing interchange will be modified to a half cloverleaf in order to eliminate the weave movement on I-81. Eliminating the loop ramps in the northwest and southwest quadrants and providing left turn lanes on Showalter Road will eliminate the weave between the loop ramps.

- **Exit 10: PA 163** – This interchange is half in Pennsylvania and half in Maryland. There are acceptable levels of service at all ramps and four crashes occurred in a 5-year period from 1998-2002. The existing acceleration lanes on the Maryland portion of the interchange will be extended from 1,056 feet to 1,230 feet, improving the AM LOS from “C” to “B”.

B. Environmental Impact Summary

A detailed analysis was conducted to determine the potential for impacts to socio-economic, cultural, and natural environmental resources. Air quality and noise analyses were also conducted. Please refer to Table 1 in Section II for a summary of environmental impacts associated with the SHA Selected Alternate and other alternates retained for detailed study. Environmental impacts associated with the SHA Selected Alternate are discussed below.

1. Socioeconomic Environment

The project corridor currently supports a variety of land uses including residential, commercial, industrial, and active agricultural uses. The project supports existing and planned development in the Hagerstown Regional Growth Area and is consistent with the *Comprehensive Plan for the County* for Washington County, adopted in 2002. Growth areas, as defined by the *Comprehensive Plan for the County*, are areas within the County where development is to be encouraged. These areas surround urban locations where the required infrastructure to support intensive development is in existence or planned. An overview of the Land Use Plan mapping contained in the *Comprehensive Plan for the County* depicts land use classifications abutting the I-81 corridor to include industrial areas, commercial areas, the municipality areas of Hagerstown and Williamsport and a small portion of land abutting I-81 that is classified for residential use.

The project is primarily within Washington County’s designated Priority Funding Area (PFA). A small portion of the project is located outside the PFA. This comprises less than 2 percent (approximately 820 LF) of the total project lane mileage (approximately 62,500 LF), which does not exceed 20 percent of the total lane mileage of the project and therefore complies with Maryland’s 1997 Smart Growth Legislation. The SHA Selected Alternate is also consistent with the Maryland Economic Growth, Resource Protection, and Planning Act of 1992.

Under the SHA Selected Alternate, no residential or business/commercial buildings will be displaced. Approximately 31.7 acres of additional right-of-way will be required.

The SHA Selected Alternate will have generally positive impacts on the communities within the study area by providing relief of traffic congestion, improving safety, and improving overall traffic flow along the I-81 corridor. Response times for emergency vehicles will be expected to improve with the SHA Selected Alternate. Improved access and levels of service on I-81 will help facilitate planned economic development within the project area. Therefore, these improvements will serve to increase accessibility to community facilities and services, promoting local community cohesion and improving the overall quality of life.

U.S. Census Bureau data identifies minority and low-income populations residing within the I-81 project area, but no cohesive minority communities were identified. No residents will be displaced by the SHA Selected Alternate. There is no evidence that low-income or minority

populations will be disproportionately affected by the SHA Selected Alternate. Public outreach in the areas with low-income populations included public meetings at Maugansville Elementary School, a meeting with the Lakeside Mobile Home Park and a meeting with the Williamsport Town Council. The primary concern raised at these meetings was the potential noise level changes resulting from the roadway improvements. Public outreach efforts to communities in the project area will continue throughout project design.

The SHA Selected Alternate will require the construction of additional piers for the bridge over the Potomac River, some of which will occur on National Park Service (NPS) property. The piers are necessary to accommodate the widened roadway section. Approximately 2.95 acres of right-of-way for a perpetual deed of easement and an additional 1.12 acres for a construction permit will be required from the Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP) property (Figure 5). Since easements for transportation use were never recorded for the original bridge crossing on NPS property, these easements will be formalized as part of this undertaking.

2. Cultural Resources

The Area of Potential Effects (APE) for cultural resources for this project is defined as 200 feet to either side of I-81 between the project's southern limit in West Virginia to State Line Road at the northern project limit. Also included is the portion of the Potomac River itself and all construction staging areas that may be outside of 200 feet from either side of I-81. Two historic resources were identified in the APE for the I-81 Improvement Project: the Garden of Eden, which is eligible for the National Register of Historic Places (NRHP), and the C&O Canal NHP, which is listed in the NRHP.

Since the inside widening improvement proposed under the SHA Selected Alternate is within the existing SHA right-of-way and the proposed collector-distributor roads are located far north of the Garden of Eden farm, construction of the SHA Selected Alternate will have no impact to the Garden of Eden farm. In a letter to Maryland Historical Trust (MHT) dated July 8, 2004, SHA requested concurrence of a no effect determination for the No-Build (Alternate 1) and Build Alternates 2, 2A, 3, 3A and 3B. Concurrence with these effect determinations was received from MHT on August 4, 2004 (*I-81 Improvement Project Environmental Assessment and Section 4(f) Evaluation, 2004*).

Construction of the SHA Selected Alternate will impact the C&O Canal NHP. For a length of 671 linear feet (LF) a portion of I-81 traverses through NPS park property. Impacts to the C&O Canal NHP will occur due to inside widening of mainline I-81 and widening of the northbound and southbound spans of Bridge No. 21078, where I-81 crosses over the Potomac River.

Impacts to the C&O Canal NHP will include:

- Visitor Use – intermittent interruptions to pedestrian and bicycle use of the towpath for a period of two weeks at the onset of construction activities and for two weeks at the conclusion. These interruptions will occur for a one mile segment of towpath from Lockwood Road to the crossing under Bridge No. 21078. Additional intermittent closures could occur for the duration of the project along a 400' length of towpath, where it crosses underneath the bridge. These closures will only occur during construction

events that could be dangerous to visitors and staff (such as the pouring of concrete overhead).

- Vegetation – potential vegetation removal within the work zone on the limestone bluff and within the canal prism, and the I-81 inside median from the bridge to the eastern boundary of the park; bridge span widening will result in increased shading.
- Towpath – potential physical damage due to construction activities and vehicle access.
- Viewshed – permanent impacts due to pier and bridge span widening, and temporary impacts due to vegetation removal, and construction equipment and activities.

Figure 5 depicts potential uses of C&O Canal NHP property.

In the updated effects determination, submitted to Maryland Historical Trust (MHT) on January 18, 2006, SHA stipulated that significant features of the park, such as the landscape, towpath and limestone bluffs, will be adversely affected by the SHA Selected Alternate. MHT concurred with the adverse effect determination on February 22, 2006. As a result, SHA consulted with NPS and MHT to develop a Memorandum of Agreement (MOA) to address the adverse effects to the C&O Canal NHP. The MOA was signed by FHWA, SHA, NPS, and MHT on November 19, 2008. During the design phase of the project FHWA, NPS, SHA, and the MHT will consult and develop an Avoidance and Treatment Plan for the C&O Canal NHP. The Plan will address the widening of SHA Bridge No. 21078, stormwater management facilities, construction sequences and staging areas, protection of the canal prism and towpath, adherence to NPS gross vehicle weight restrictions, and minimization of impacts to park resources and park visitors. Following construction, the SHA will implement a Restoration Plan. The Restoration Plan will provide sustainable vegetation at the I-81 bridge using native species, while recognizing the need to maintain visibility of critical C&O Canal NHP features and will also address the repair of any damage to the towpath or canal prism that occurs as a result of construction activities.

No archeological resources eligible for the National Register of Historic Places were identified within the APE as presently defined. A fish weir, located in the bed of the Potomac River a short distance upstream from the APE, is a recorded archeological site in both Maryland (18WA196) and West Virginia (46BY157). This feature and site will be avoided by currently proposed staging from the West Virginia side of the Potomac.

Mitigation Sites

The preferred wetland and stream mitigation sites were assessed for archeological potential and architectural history. A Phase I archeological survey at the preferred wetland mitigation site (WM-8 Bowman Site) will be completed during detailed design, when limits of disturbance, including construction staging and access areas, are available. The creation of a wetland site at this location has a low potential to impact historic standing structures. However, a detailed review of plans with the worst case scenario limits of disturbance, including construction staging and access areas, will occur with regard to historic standing structures.

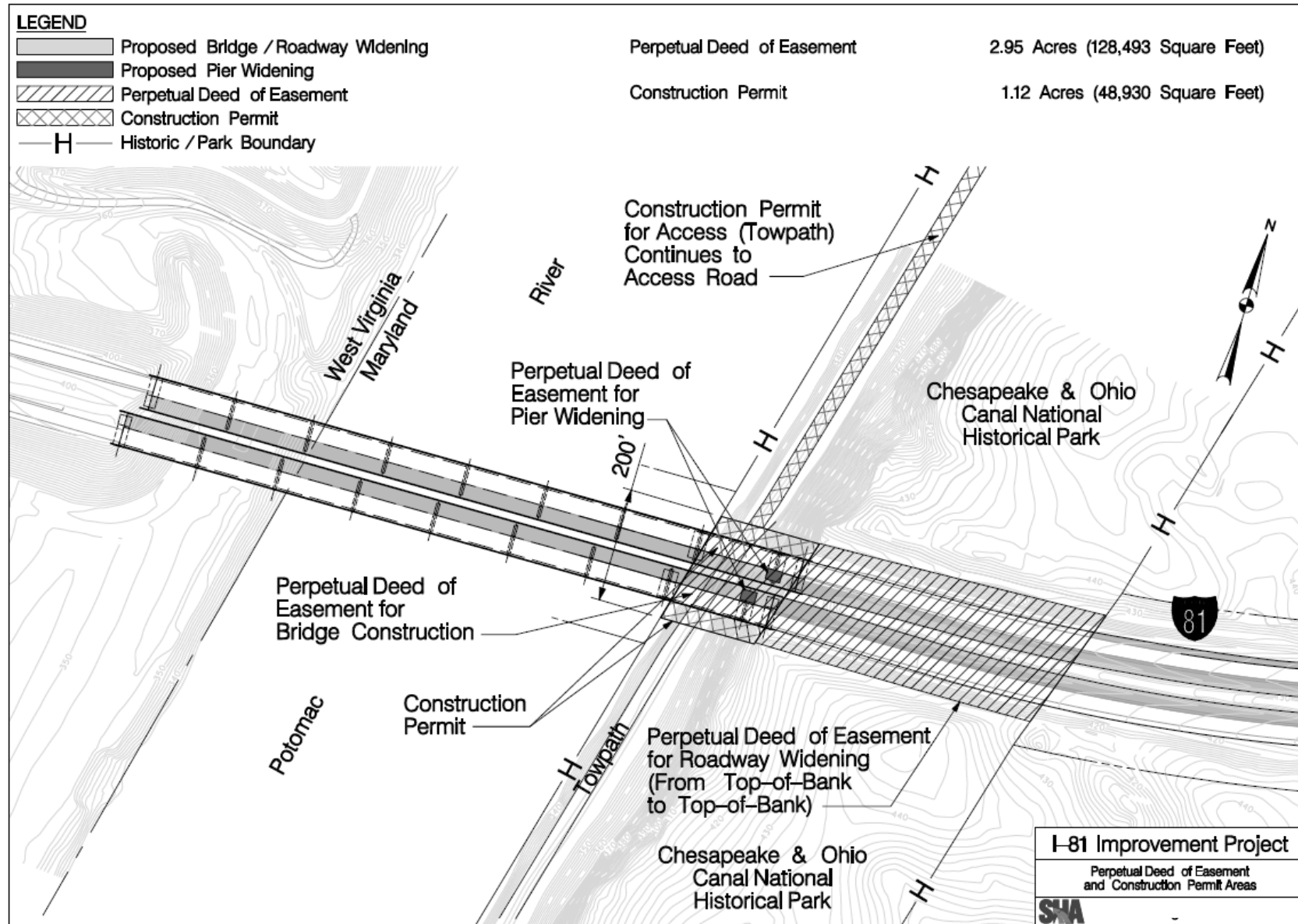


Figure 5: Perpetual Deed of Easement and Construction Permit Areas

Stream restoration at the SM-1 Weller Site has low potential to impact historic standing structures. Upon availability of detailed plans, impacts to historic standing structures will be further evaluated, and the need for Phase I archeological survey will be determined at that time.

3. Natural Environment

The project area is located within the eastern portion of the Valley and Ridge Province known as the "Great Valley." Soil Surveys show 16 soil series occur within the project area. Nine soil types in the project area are prime farmland soils and three are soils of statewide importance. The SHA Selected Alternate will impact 11 acres of prime farmland soil and soils of statewide importance. The impacts will be to narrow strips of land adjacent to the roadway. A Farmland Conversion Impact Rating Form AD-1006 was completed for the project in accordance with the Farmland Protection Policy Act. Form AD-1006 can be found in the Environmental Assessment. Form AD-1006 provides an evaluation of farmland within the study area, and determines if farmland is suitable for protection from conversion into non-agricultural uses. Based on the 12 site assessment criteria on Form AD-1006, the SHA Selected Alternate received a score of less than 80. This is below the level suitable for protection and recommended threshold for submission to, and consultation with, the U.S. Department of Agriculture Natural Resources Conservation Service. Furthermore, no farming operation will be adversely impacted by the SHA Selected Alternate. Best management practices would be incorporated into the engineering design and contractor specifications to minimize the extent of the soil disturbances and the amount of cut and fill required. Mitigation would include the use of erosion control measures such as silt fences, erosion blankets, and re-vegetation of exposed spoils to reduce the erosion and soil loss. A sediment and erosion control plan would be submitted to and approved by the Maryland Department of the Environment (MDE). Appropriate sediment and erosion control devices would be installed as needed in accordance with the *2010 Maryland Standards and Specifications for Soil Erosion and Sediment Control*.

The SHA Selected Alternate will impact approximately 18.2 acres of forest. Cleared forest land will be mitigated by forest replacement at a 1:1 ratio on publicly owned property in the county in compliance with the Maryland Reforestation Law (Natural Resources Article Section 5-103) for state-funded projects. Potential mitigation sites will be investigated during the design phase of the project. If a mitigation site cannot be located, monies will be placed into the State Reforestation Fund to plant replacement trees on public land. The SHA Selected Alternate will impact vegetation within the C&O Canal NHP. Up to 0.18 acre of clearing will occur within the canal prism in order to install protection for the prism itself and for the protection of Park visitors and staff. Up to 0.64 acre of clearing will occur along the limestone bluff under the I-81 bridge crossing. While limestone bluffs or cliffs are considered a unique plant habitat type by the DNR Maryland Natural Heritage Program, no individual rare, threatened, or endangered species are known to exist at the limestone bluff within the project area. SHA will coordinate with the NPS and conduct a rare plant survey of this area during the design phase of the project. All removed vegetation will be replaced at a 1:1 ratio with comparable native species, with special consideration given to shade-tolerant species in areas where shading will be increased due to bridge span widening.

The SHA Selected Alternate will have minor impacts on wildlife and their habitat. The U.S. Fish and Wildlife Service (USFWS) indicated on July 2, 2008 (see **Appendix C**) that the project area

was within known summer habitat range of the federally endangered Indiana bat (*Myotis sodalis*). The SHA consulted with USFWS regarding the SHA Selected Alternate and associated impacts, providing detailed mapping of the existing woodland boundaries and the areas to be cleared as part of the construction activity. Based on this mapping USFWS replied on October 6, 2008 (see **Appendix C**) that the proposed project is not likely to adversely affect the endangered Indiana bat.

The Maryland Department of Natural Resources (MDNR) indicated in a letter dated April 30, 2008 (see **Appendix C**); that there is one area of potential concern within the study area, along the C&O Canal near Williamsport. In the floodplain forest habitat along this part of the C&O Canal there is a record for White Trout Lily (*Erythronium albidum*) and for large-leaved waterleaf (*Hydrophyllum macrophyllum*), both are state-listed threatened species. In the limestone cliff habitat near the C&O Canal is a record for Arbor-vitae (*Thuja occidentalis*) and for the cherrydrop snail (*hendersonia occulta*), both of these are also state-listed threatened species. NPS also provided SHA with a rare plant survey identifying state listed plant species in the vicinity of the study area.

Rare plant surveys of the C&O Canal NHP have been previously conducted by MDNR south of Bridge No. 21078. During these surveys the following state threatened or endangered species were discovered: threatened – wild false indigo (*Baptisia australis*), white trout lily (*Erythronium albidum*), and arbor-vitae (*Thuja occidentalis*); endangered – large-leaved waterleaf (*Hydrophyllum macrophyllum*) and smooth cliffbrake (*Pellaea glabella*). Three State watchlist species were also present. While rare plant surveys were not conducted in the immediate area of Bridge No. 21078, conditions are similar to those south of the bridge, and therefore are capable of supporting these or other rare, threatened, or endangered plant species. SHA will coordinate with the NPS and DNR to conduct a rare plant survey in the vicinity of Bridge No. 21078 on the C&O Canal NHP property during the design phase when more information is available on construction methods.

The proposed action will comply with Executive Order 11988 *Floodplain Management*. For transportation projects, the U.S. Department of Transportation (DOT) Order 5650.2 entitled *Floodplain Management and Protection* prescribes policies and procedures for ensuring that proper consideration is given to the avoidance and mitigation of floodplain impacts. Federal Emergency Management Agency flood mapping indicates that regulated 100-year floodplains cross the project area in several locations. Approximately 4.0 acres of the Semple Run floodplain will be impacted, and less than 0.1 acre of the Potomac River floodplain will be impacted by the SHA Selected Alternate.

According to the Ground Water Atlas of the United States, the project area is underlain by aquifers of the Valley and Ridge Physiographic Province. Surface waters in the project area consist of ephemeral, intermittent, and perennial streams. The SHA Selected Alternate will require 0.026 acre of fill to be placed into waters of the US due to the widening of the bridge over the Potomac River. The fill is a result of the lateral extension of the 10 existing piers in the Potomac River needed to widen the bridge. Additionally, the SHA Selected Alternate will impact approximately 7,876 LF of waters of the US (Table 4). Of the total stream impact, 2,590 LF of impacts will occur to perennial streams, 1,658 LF of impact will occur to intermittent streams, and the remaining 3,628 LF of impact will occur to ephemeral channels (i.e. roadside

ditches). Indirect, short-term impacts to water quality typically occur during construction from grading and removal of vegetation, which results in increased sedimentation and runoff velocities into nearby streams. Furthermore, the project will impact the C&O Canal NHP canal prism, which is considered navigable water by the US Army Corps of Engineers (USACE). The portion of the C&O Canal NHP canal prism located in the project area is unwatered, thus there is no need to coordinate with the US Coast Guard.

The SHA Selected Alternate will unavoidably impact approximately 1.19 acres of wetlands (Table 3) consisting of 1.10 acres of Palustrine Emergent/Palustrine Scrub Shrub (PEM/PSS), 0.07 acres of Palustrine Emergent/Palustrine Forest (PEM1/PFO), and 0.02 acres of Palustrine Open Water (POW). The SHA Selected Alternate includes inside widening along I-81 as a measure to minimize impacts to adjacent properties and natural resources, including wetlands and streams.

Safety issues at the I-70 interchange made it necessary to improve the existing interchange in order to meet current design standards. Approximately 51 percent of the reported crashes on the I-81 interchange ramps between the West Virginia and Pennsylvania state lines occurred on the I-70 interchange ramps. Roughly 40 percent of the I-70 interchange crashes involved heavy trucks, particularly at the loop ramp in the south quadrant of the interchange, eastbound I-70 to northbound I-81. At the interchange, (see **Appendix A**), retaining walls will be used to minimize impacts to wetland areas and to avoid 6 to 8 residential displacements. Furthermore, 2:1 side slopes are proposed where appropriate to minimize impacts to streams and wetlands. The steeper sides slope and retaining walls will allow for 1,073 LF of streams and approximately 31,000 square feet (0.71 acre) of wetlands to be avoided by the SHA Selected Alternate alignment. A 25-foot buffer was applied to calculate the limits of disturbance for the project and further avoidance and minimization measures will be explored during Final Design.

Wetland and Stream Mitigation

The SHA Selected Alternate will impact approximately 1.19 acres (66,369 square feet) of wetlands. Based on the mitigation ratios of 1:1 for PEM and 2:1 for PSS and PFO wetlands, approximately 2.30 acres (100,188 square feet) of wetland mitigation will be required to compensate for unavoidable wetland impacts associated with the project. The amount of mitigation required is based on the replacement ratios stipulated in the Maryland Compensatory Mitigation Guidance, as well as coordination with the USACE Baltimore District and the Maryland Department of the Environment (MDE). The goal of the mitigation is to replace and enhance functions of aquatic resources unavoidably impacted in the study area.

Table 3 provides the estimated wetland impacts and mitigation requirements for the I-81 improvements. Wetland impacts will be mitigated off site.

Table 3: Wetland Impacts and Mitigation

Wetland ID*	Wetland Classification	Impacts (acres)	Mitigation (acres)
WETL018	PEM	0.02	0.02
WETL029	PSS	1.10	2.20
WETL010, WETL022	PFO	0.04	0.08
TOTAL		1.19	2.30

* Described in the *I-81 Improvement Project Wetland Investigation Report*, dated July 2003 (updated August 2003).

The SHA Selected Alternate will impact a total of 7,876 LF of streams, including 2,590 LF of perennial streams, 1,658 LF of intermittent streams, and 3,628 LF of ephemeral streams. Approximately 1,692 LF of impacts to perennial and intermittent streams cannot be replaced within existing SHA right-of-way, and will be mitigated off site at a 1:1 ratio. The remaining 2,556 LF of impacted perennial and intermittent streams parallel the roadway, and will be replaced in-kind as part of the highway improvement project. The 3,628 LF of impacted ephemeral streams will also be replaced in-kind. Table 4 summarizes stream impacts and mitigation.

Table 4: Stream Impacts and Mitigation

Stream Classification	Stream Impacts (LF)	In-Kind Mitigation (LF)	Off-Site Mitigation (LF)
Ephemeral	3,628	3,628	0
Intermittent	1,658	1,503	155
Perennial	2,590	1,053	1,537
TOTAL	7,876	6,184	1,692

Mitigation for the canal prism is considered in both the stream and cultural resources mitigation. The MOA identifies mitigation for cultural resource impacts to the canal prism to help satisfy the Section 106 requirements necessary to obtain the Clean Water Act Section 404/Section 10 permits. Any physical impacts to the C&O Canal NHP canal prism that the USACE will classify as permanent will require compensatory mitigation that will be satisfied at the proposed stream mitigation site. During the design phase for the bridge portion of the project, SHA will coordinate with the USACE regarding any permit revisions that may be required for work in the canal prism.

Nine potential wetland mitigation sites and fourteen potential stream mitigation sites were identified and evaluated along the I-81 corridor and within the Conococheague Creek watershed in Washington County. The preferred mitigation/restoration sites selected for further studies and the concept design evaluation are based on coordination with the USACE and MDE.

Initially, the WM-2 McCauley Site was the preferred wetland mitigation site. Subsequent investigation showed that two known archeological sites are located partly within the McCauley

property. Eligibility of these sites for the National Register of Historic Places has not been determined. As a result, the property was dropped as a potential wetland mitigation site.

The sites proposed for wetland mitigation (WM-8 Bowman Site) and stream restoration (SM-1 Weller Site) were selected according to their overall mitigation/restoration potential.

WM-8 Bowman Site - The Bowman site is an approximate 37-acre parcel located along Semple Run between Hopewell Road and I-81 north of Williamsport (Figure 6). Semple Run flows southwestward to join Conococheague Creek just north of Williamsport, about a mile from its confluence with the Potomac River. The Bowman site is estimated to be able to provide 1.4 acres of wetland mitigation. This would be slightly greater than a 1:1 replacement ratio for the estimated 1.19 acres of impacts but less than the required 2.36 acres of mitigation. Based upon final configuration of the property acquisition (which would likely occur during the design phase of the project, once right-of-way funding has been allocated), sufficient upland buffer area would be retained (10:1 ratio) as an additional mitigation feature which will add an acre toward meeting the anticipated mitigation requirement. Upon the receipt of funding, SHA will coordinate with the reviewing agencies for approval. Wetland mitigation on the site would likely involve containing surface runoff in the Semple Run basin through constructed embankments, and/or shallow excavation to expose seasonally high groundwater conditions. SHA would make the following goals in the utilization of the Bowman site in stream mitigation:

- SHA would purchase the Bowman site in fee simple or as part of the right-of-way acquisition. This would result in covenants, plats, and deed restrictions being placed upon the property; preventing future encroachment by adjacent property owners and permitting access to the property in perpetuity by SHA employees and their consultants as well as officials from COE, USFWS, EPA, MDE, and DNR.
- Included in the restrictions placed on the property deed would be a provision that no adjacent landowner would be granted an easement to allow for stormwater discharge to be piped to the mitigation project area or be allowed to acquire an easement for placing pipes (sewer, water, gas, etc.) through any portion of the mitigation property.
- The perimeter of the buffer would be posted with SHA signs that demarcate the property boundaries; these would be maintained by SHA as necessary.
- It is SHA's goal to provide an effective buffer with adequate habitat for all mitigation projects. Where practicable, the created wetland would be designed with a 250-foot buffer area. A minimum buffer of 150 feet would be obtained for the wetland mitigation project.

Prior to acquisition of the Bowman property, SHA would provide a preliminary wetland creation design plan (30 % Design) with designated buffer areas, to COE, MDE, USFWS, EPA, and DNR for their review. These agencies will determine if the mitigation goals and buffer widths meet their expectations. If no consensus can be reached on the mitigation site or plan and no satisfactory solution can be found, SHA will eliminate this site or plan from further consideration and find another mitigation site or plan that meets the approval of the above listed agency representatives.

SM-1 Weller Site-Rockdale Run - The Weller Site is the preferred stream restoration site located at the headwaters of Rockdale Run immediately west of Mercersburg Road and is prioritized as the Number 1 stream restoration site. This site is located in a large open pasture-land with no forested/scrub-shrub vegetation (Figure 6). The Weller Site offers approximately 3,853 linear feet of perennial and intermittent stream restoration opportunity by providing riparian planting and streambank fencing along Rockdale Run. There are several existing riparian planting projects throughout the Rockdale Run sub-watershed. The addition of this restoration project would extend the protection to the headwaters of the Conococheague Creek drainage basin and Rockdale Run. Restoration activities would include riparian plantings, streambank fencing, cattle crossings, and minor bank grading and stabilization (where necessary). SHA would make the following goals in the utilization of the Weller site for stream mitigation:

- SHA anticipates that the Weller site would be obtained in perpetual easement.
- Access in perpetuity of the stream mitigation site by SHA and their consultants as well as officials from COE, USFWS, EPA, MDE, and DNR. would be included in the deed language for the perpetual easement.
- SHA would establish a minimum buffer width of 150 feet (75 feet on either side of the stream) to provide for stream stabilization with buffer plantings adding a corridor of habitat for wildlife. Where practicable, the stream restoration would be designed with a 200-foot buffer area.
- Fencing would be installed to prevent livestock from entering the buffer easement area. Maintenance of this fencing would be provided by SHA or its representatives. The buffer side of the fencing would be permitted to naturalize in order to provide an effective stream buffer.

SHA would provide a preliminary stream restoration design plan (30 % Design) with designated buffer areas, to COE, MDE, USFWS, EPA, and DNR for their review. These agencies will determine if the mitigation goals and buffer widths meet their expectations. If no consensus can be reached on the mitigation site or plan and no satisfactory solution can be found, SHA will eliminate this site or plan from further consideration and find another mitigation site or plan that meets the approval of the above listed agency representatives.

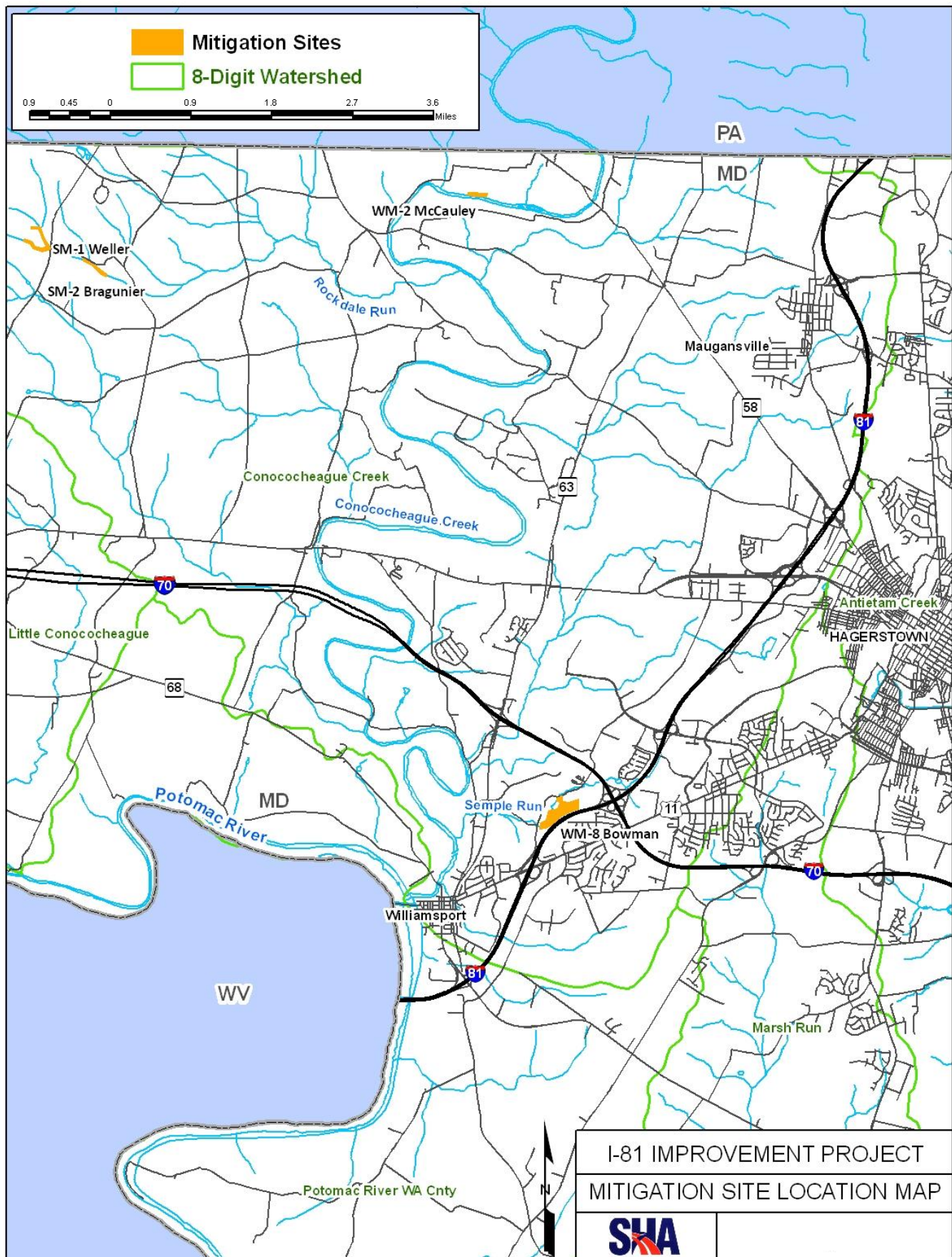


Figure 6: Mitigation Site Location Map

4. Air Quality

An updated Air Quality Technical Report was completed in April 2009 to evaluate the I-81 Improvement Project's compliance with Regional, State and National Ambient Air Quality Standards and updated Clear Air Act requirements. These updated air quality analyses considered 2008 to 2030 traffic projections. The I-81 Improvement Project is located in Washington County, Maryland. This county is not designated as non-attainment for carbon monoxide (CO), Nitrogen Dioxide (NO₂), Sulfur Dioxide (SO₂), Lead (Pb), coarse particulate matter (PM₁₀), or ozone (O₃). On January 5, 2005, the EPA designated the Martinsburg, WV – Hagerstown, MD Region (Washington County in Maryland, and Berkeley County in West Virginia) as nonattainment for fine particulate matter, PM_{2.5}. This designation became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Transportation conformity for the PM_{2.5} standards applied on April 5, 2006. Since the project is located in a non-attainment area for PM_{2.5}, conformity to the State Implementation Plan (SIP) is determined through a regional air quality analysis performed on the Transportation Improvement Plan (TIP) and transportation plan. This project conforms to the SIP as it originates from a conforming TIP and transportation plan. For PM_{2.5}, project level conformity also requires an assessment of localized emissions impacts for certain projects that meet the requirements of projects of air quality concern as described in 40 CFR 93.123(b)(1).

CO Analysis

Since the Location/Design Public Hearings, and as described in the April 2009 Air Quality Technical Report, a detailed microscale air quality analysis for carbon monoxide (CO) was performed to determine the air quality impact of the proposed project. The State and National Ambient Air Quality Standards (S/NAAQS) for a 1-hour average is 35.0 ppm. The S/NAAQS for an 8-hour average is 9.0 ppm.

A summary of the CO concentrations is shown in Table 5. The receptor's concentrations for both alternates studied are below the State and National Ambient Air Quality Standards in the one-hour and eight-hour analyses.

For the No-Build Alternate, the projected maximum 1-hour CO concentration is 4.8 ppm in 2010 and 4.3 ppm in 2030, and the projected maximum 8-hour CO concentration is 2.2 ppm in 2010 and 2.0 ppm in 2030. For the SHA Selected Alternate, the projected maximum 1-hour CO concentration is 4.8 ppm in 2010 and 4.6 ppm in 2030, and the projected maximum 8-hour CO concentration is 2.1 ppm in 2010 and 1.9 ppm in 2030. The maximum 1-hour concentrations do not exceed the 1-hour NAAQS of 35 ppm, and the maximum 8-hour concentrations do not exceed the 8-hour NAAQS of 9 ppm.

Table 5: CO Concentration (ppm) at Residential Receptor Locations

Receptor	2010				2030			
	No- Build		SHA Selected		No-Build		SHA Selected	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
R-10	2.9	1.4	2.9	1.4	2.8	1.3	2.7	1.3
R-11	2.9	1.2	3.0	1.1	2.6	1.1	2.9	1.1
R-12	2.7	1.2	2.9	1.1	2.5	1.0	2.8	1.0
R-13	2.5	1.1	2.5	1.0	2.4	1.0	2.5	0.9
R-14	2.6	1.3	2.6	1.3	2.4	1.2	2.6	1.1
R-15	3.6	1.7	3.9	2.0	3.2	1.6	3.7	1.9
AQ1	4.8	2.2	4.8	2.1	4.3	2.0	4.6	1.9

Notes: 1-hour CO average concentrations include a 0.8 ppm background level. Worst case (a.m. or p.m. shown)

8-hour average CO concentrations include a 0.4 ppm background level

The S/NAAQs for the 1-hour average is 35.0 ppm

The S/NAAQs for the 8-hour average is 9.0 ppm

Construction Impacts

The State Highway Administration established “Specifics for Construction and Materials” as procedures to be followed by contractors involved in construction activities in an effort to minimize impacts to ambient air quality through the generation of fugitive dust. The Maryland Air and Radiation Management Administration was consulted to determine the adequacy of the specifications in terms of satisfying the requirements of the “Regulations Governing the Control of Air Pollution in the State of Maryland.” These specifications were determined to be consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland regulations 26.11.06.03D) will be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area. Specifically, the application of water during demolition, land clearing, grading, and construction operations will work to minimize fugitive dust. Also, when in motion, all open body trucks for transporting materials should be covered and excavated material should be removed from the project site promptly.

The existing number of traffic lanes will be maintained during construction to the maximum extent and construction schedules will be planned in a manner that will not create traffic disruption and increase air pollutants. Application of these measures will ensure that the construction impact of the project is not significant.

PM_{2.5} Analysis

On March 10, 2006, EPA issued amendments to the Transportation Conformity Rule to address localized impacts of particulate matter: “*PM_{2.5} and PM₁₀ Hot-Spot Analyses in Project-level Transportation Conformity Determinations for the New PM_{2.5} and Existing PM₁₀ National Ambient Air Quality Standards*” (71 FR 12468). These rule amendments require the assessment of localized air quality impacts of Federally-funded or approved transportation projects in PM₁₀

and PM_{2.5} nonattainment and maintenance areas deemed to be *projects of air quality concern*¹. Projects that require hotspot analysis for PM_{2.5} are those projects that are *Projects of Air Quality Concern* as enumerated in 40 CFR 93.123(b)(1):

- (i) *New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;*
- (ii) *Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;*
- (iii) *New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;*
- (iv) *Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and*
- (v) *Projects in or affecting locations, areas, or categories of sites which are identified in the PM₁₀ or PM_{2.5} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.*

As discussed in the examples to the preamble to the March 10, 2006 Final Rule for PM_{2.5} and PM₁₀ Hot-Spot Analyses in Project-Level Transportation Conformity Determinations (71FR12491), for projects involving the expansion of an existing highway, 40 CFR 93.123(b)(1)(i) has been interpreted as applying only to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on the existing facility. This has been further clarified in a proposed rule amendment as "*EPA is proposing to clarify this provision as ``New highway projects that have a significant number of diesel vehicles, and expanded projects that have a significant increase in the number of diesel vehicles.*"²

The Maryland State highway Administration (SHA) has prepared the following analysis of the proposed improvements:

- The existing traffic conditions in the I-81 corridor have deteriorated due to changes in land use and increase in vehicle traffic since its initial construction. This deteriorated condition is most evident by geometric deficiencies in ramp configurations and acceleration/deceleration ramps that have created merge and weave problems within the project area. The purpose of the proposed reconstruction of I-81 is to improve the operation and safety of I-81 within Maryland, rather than increasing the through capacity of I-81 as a whole. As part of the I-81 traffic studies a sophisticated traffic operations simulation model, called CORSIM, was developed. This model determined that deficiency with existing I-81 is the product of failed traffic operations at the numerous interchanges resulting in congestion and reduced safety due to the large number of merges required, especially between the Halfway Boulevard Interchange and the I-70 Interchange. The CORSIM model demonstrates that the proposed improvement will

¹ Criteria for identifying *projects of air quality concern* is described in 40 CFR 93.123(b)(1), as amended.

² Transportation Conformity Rule Amendments to Implement Provisions Contained in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) [Federal Register: May 2, 2007 (Volume 72, Number 84)] [Proposed Rules] [Page 24489]

improve the operation and therefore the safety of these merges.

- As shown in Table 6, in 2030 (Design Year), the proposed construction is anticipated to add an additional 793 diesel trucks per day to I-81 within this area.
- As shown in Table 9, in 2030 (Design Year), the proposed construction is anticipated to add an additional 1,385 diesel trucks in total per day to the I-81/I-70/Halfway Boulevard interchange area.
- Traffic data is presented herein for the existing year (2008) and the Design Year (2030). The existing Average Daily Traffic (ADT) and the projected 2030 No-Build and SHA Selected Alternate ADT for I-81, I-70 and Halfway Boulevard as shown in Table 6 through 9 represent the unconstrained user demand. The traffic data provides worse case traffic volumes on critical roadway links. Based upon SHA staff interpretation of refined output from the Hagerstown/Eastern Panhandle Metropolitan Planning Organization (HEPMPO) regional travel demand model, travel demand forecasts were determined for No-Build and SHA Selected Alternate conditions. Average Daily Traffic on the SHA Selected Alternate section is expected to increase over the No-Build ADT. This increase in ADT is not significant, however for the following reasons:
 - o The improvements along the Maryland section of I-81 are designed to accommodate future peak period demand on the study segment solely, thereby improving the operation and safety of the traveling public. These improvements are not intended to increase roadway capacity or to induce traffic in the off-peak periods.
 - o Although there will be some slight increase between No-Build ADT and SHA Selected Alternate due to changes in local land use resulting from a more efficient I-81, through traffic is not expected to change. This is generally due to the fact that the four-lane sections of I-81 immediately adjacent to Maryland in West Virginia and in Pennsylvania are not proposed to be improved within the time frame of the Long Range Transportation Plans (LRTP) for those areas, and therefore were not included in the regional Conformity Determination. Thus these nearby adjacent sections of I-81 that will remain four-lane sections will have the effect of metering through traffic entering the improved six-lane section of I-81 within Maryland.
 - o Although there are alternate north-south interstate routes including I-95 to the east and I-79 to west, the number of trucks using I-81 to by-pass the congested Baltimore/Washington DC metropolitan area is an *interstate* concern rather than an *intrastate* (regional) concern. North-South trips that begin from the eastern portion of Maryland will tend to use I-95 around Washington DC rather traveling the great distance west to I-81. Trips that begin in the central and western parts of Maryland will use I-81 or I-79 depending on their destination. These trips would not change with improvements to I-81. Interstate trips that begin in distant states to the north or south may use I-95, I-81 or I-79 depending on many factors that affect traffic flow from the origin of the trip to the trip destination. SHA, together with other states throughout the country, have initiated a study determine how traffic moves between the various states and what factors most significantly affect traffic flow. Because this study is in its initial phase, data is not yet available;

therefore at the current time is not possible to determine what, if any, effect the proposed improvements will have on traffic traveling between states

- o Users will take the shortest origin-destination path.
 - o During peak traffic periods, diversion from what is the shortest path of travel between origin/destination points to alternate routes would not be attractive to the majority of users. Traffic conditions on these alternative routes are generally as bad or worse than conditions on I-81 during these peak travel periods. Significant congestion, slower speeds and numerous traffic lights translate into longer travel times along these alternate routes. During off-peak periods, an uncongested I-81 will be equally attractive to users for either the No-Build or SHA Selected Alternate condition.
- The I-81 Project will not have a significant increase in number of trucks due to construction of the project. Although, as previously discussed, ADT will increase slightly. Based on a memorandum from SHA dated October 27, 2008, the percent of diesel truck traffic is not expected to change between the SHA Selected Alternate and No-Build conditions. The total daily number of trucks at the I-81/I-70/Halfway Blvd. interchange will increase by 1,385 from No-Build to SHA Selected Alternate conditions. The number of trucks does not significantly increase for the following reasons:
 - o Depicted diesel truck percentages represent the amount of light, medium and heavy diesel truck activity along a given roadway segment in accordance with FHWA's 13 vehicle classification guidelines. Existing percentages are derived from 48-hour portable classified count data. Without the addition of significant truck land use generators to the traffic influence area, truck percentages would remain relatively unchanged between the No-Build and SHA Selected Alternate conditions for this section of I-81. Current truck origin-destination patterns will dictate future patterns, unless changes are made in policy or there is a significant influx in truck generators to the traffic influence area - neither of which has been assumed by the approved Regional Transportation model.
 - o Trucks, which are the primary emitter of mobile source PM_{2.5}, will tend to stay on I-81 since the alternative routes would require frequent stop/start conditions due to traffic signals, and may not have lane widths, roadway grades, and curves that suit these types of vehicles. In addition, since the majority of trucks on I-81 are traveling through Maryland between West Virginia and Pennsylvania, the drivers would not be familiar with alternative routes within Maryland. Similarly other users, primarily local drivers traveling alternative routes under the No-Build condition, will tend to remain on these alternative routes for local trip use due to non-congestion-related reasons such as route familiarity, and aggressive driving associated with higher speeds on I-81
- The I-81 Improvement Project also does not meet the criteria set forth in 40 CFR 93.123(b)(1)(ii), as amended, to be considered a *project of air quality concern* because it affects interchanges that will not “change to Level-Of-Service D, E or F because of increased traffic volumes from a significant increase in number of diesel vehicles related to the project.” The I-81 Project will improve the operation and safety of affected interchanges.

- Section 176(c) of the Clean Air Act and the federal conformity rule require that transportation plans and programs conform to the intent of the state air quality implementation plan (SIP) through a regional emissions analysis in PM_{2.5} nonattainment areas. The Long Range Multi-Modal Transportation Plan from the HEPMPO has been determined to conform to the intent of the SIP. HEPMPO is the federal and state designated regional transportation planning organization that serves as a forum for cooperative decision making in the three-county region of Berkeley and Jefferson Counties in West Virginia and Washington County, Maryland. On March 21, 2007, HEPMO adopted the 2008-2011 Transportation Improvement Program (TIP) for this region. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. This project conforms to the SIP as it originates from a conforming TIP and transportation plan. In this TIP, the I-81 project is listed as “a study of widening and interchange improvements” This is consistent with the currently proposed I-81 project, which consists of inside widening of I-81 and various interchange and ramp improvements. Therefore, the project comes from a conforming plan and program in accordance with 40 CFR 93.115. Conformity to the purpose of the SIP means that the transportation activity will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS or “standards”).
- Based on review and analysis as discussed above, it is determined that the I-81 Project meets the Clean Air Act and 40 CFR 93.109 requirements. These requirements are met for particulate matter without a project-level hot-spot analysis, since the project has **not been found to be a project of air quality concern** as defined under 40 CFR 93.123(b)(1). Since the project meets the Clean Air Act and 40 CFR 93.109 requirements, the project will not cause or contribute to a new violation of the PM_{2.5} NAAQS, or increase the frequency or severity of a violation.
- Comments pertaining to the above analysis were received from MDE on December 2, 2008. These were addressed as described in an errata. By email dated December 16, 2008, the above PM_{2.5} analysis was approved by SHA and FHWA, and sent to EPA and MDE for Interagency Consultation. On December 31, 2008, approval was received from EPA and MDE. FHWA, SHA, EPA, and MDE agreed with the conclusion that the I-81 Improvement Project **is not a project of air quality concern under 40 CFR 93.123(b)(1)**. No other comments were received within the 15-day Interagency Consultation period (December 31, 2008). On March 24, 2009 this PM_{2.5}Conformity Determination was placed on SHA’s website, beginning a 15-day public review and comment period. No comments were received during the review period.

Table 6: I-81 Traffic Volumes

	2008 Existing	2030 No-Build	2030 SHA Selected Alternate	Change: 2030 No-Build vs. SHA Selected Alt.	% Change: 2030 No-Build vs. SHA Selected Alt.
SHA ADT Volumes	75,400	107,075	109,650	2,575	2.4%
Percent of Diesel Trucks - % ADT	Diesel Truck Percentage is 30.81% Assumption would be made that the diesel truck percentage would be 30.81% for future No-Build/SHA Selected Alternate conditions. Actual truck volumes would increase proportional to increase in overall traffic.				
SHA Daily Diesel Truck Volumes	23,231	32,990	33,783	793	2.4%

Table 7: I-70 Traffic Volumes

	2008 Existing	2030 No-Build	2030 SHA Selected Alternate	Change: 2030 No-Build vs. SHA Selected Alt.	% Change: 2030 No-Build vs. SHA Selected Alt.
SHA ADT Volumes	63,225	87,850	89,975	2,125	2.4%
Percent of Diesel Trucks - % ADT	Diesel Truck Percentage is 21.35% Assumption would be made that the diesel truck percentage would be 21.35% for future No-Build/SHA Selected Alternate conditions. Actual truck volumes would increase proportional to increase in overall traffic.				
SHA Daily Diesel Truck Volumes	13,499	18,756	19,210	454	2.4%

Table 8: Halfway Boulevard Traffic Volumes

	2008 Existing	2030 No-Build	2030 SHA Selected Alternate	Change: 2030 No-Build vs. SHA Selected Alt.	% Change: 2030 No-Build vs. SHA Selected Alt.
SHA ADT Volumes	34,425	53,425	54,725	1,300	2.4%
Percent of Diesel Trucks - % ADT	Diesel Truck Percentage is 30.81% Assumption would be made that the diesel truck percentage would be 30.81% for future No-Build/SHA Selected Alternate conditions. Actual truck volumes would increase proportional to increase in overall traffic.				
SHA Daily Diesel Truck Volumes	3,652	5,668	5,806	138	2.4%

Table 9: I-81/I-70/Halfway Boulevard Traffic Volumes

	2008 Existing	2030 No-Build	2030 SHA Selected Alternate	Change: 2030 No-Build vs. SHA Selected Alt.	% Change: 2030 No-Build vs. SHA Selected Alt.
SHA ADT Volumes	173,050	248,350	254,350	6,000	2.4%
Percent of Diesel Trucks - % ADT	Diesel Truck Percentage is 30.81% Assumption would be made that the diesel truck percentage would be 30.81% for future No-Build/SHA Selected Alternate conditions. Actual truck volumes would increase proportional to increase in overall traffic.				
SHA Daily Diesel Truck Volumes	40,382	57,414	58,799	1,385	2.4%

MSAT (MOBILE SOURCE AIR TOXICS) ANALYSIS

Background

FHWA *Guidance on Air Toxic Analysis in NEPA Documents*³ requires analysis of Mobile Source Air Toxics (MSAT) under specific conditions. The EPA has designated six prioritized MSATs, which are known or probable carcinogens or can cause chronic respiratory effects. The six prioritized MSATs are: Benzene; Acrolein; Formaldehyde; 1,3-Butadiene, Acetaldehyde; and Diesel Exhaust (Diesel Exhaust Gases and Diesel Particulate Matter). Per SHA traffic analysis, the maximum Average Daily Traffic (ADT) volumes along I-81 occur in the SHA Selected Alternative. The ADT for the 2030 SHA Selected Alternate is 109,650, which is less than the “140,000 to 150,000 ADT criterion” discussed in the referenced guidance. Therefore, this would be a minor widening project *“that serves to improve operations of highway.....without adding substantial new capacity or creating a facility that is likely to meaningfully increase emissions”*⁴. Therefore, the I-81 Improvement Project would be considered a **Project with Low Potential MSAT Effects**.

The I-81 Improvement Project will not result in any meaningful changes in traffic volumes, vehicle mix, or any other factor that would cause an increase in emissions impacts. As such, FHWA has determined that this project will generate minimal air quality impacts for the Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Included herein is a basic analysis of the likely MSAT emission impacts of this project.

Unavailable Information

Available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the SHA Selected Alternative. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. The tools to predict how MSATs disperse are also limited. Even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude reaching meaningful conclusions about project-specific health impacts. Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels

³ Interim Guidance on Air Toxic Analysis in NEPA Documents, February 3, 2006

⁴ *ibid*

found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses. The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants.

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions-if any-from the SHA Selected Alternate.

Project Specific Discussion

For each alternate (No-Build and SHA Selected), the amount of MSATs emitted would be proportional to the annual average daily traffic (AADT), or vehicle miles traveled (VMT). The Vehicle Miles Traveled (VMT) within the study area estimated for the SHA Selected Alternate may be slightly greater than that of the No-Build, because the SHA Selected Alternate will reduce congestion and increase efficiency of the roadway, has slightly higher projected ADT volumes, and may attract additional trips from elsewhere in the transportation network. This slight increase in VMT may lead to slightly higher MSAT emissions along the I-81 corridor for the SHA Selected Alternate. The emissions increase due to increased VMT is offset somewhat by lower MSAT emission rates due to increased speeds, since according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs, except for diesel particulate matter, decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

Although mainline I-81 is being widened to the center, the additional C-D lanes and interchange ramps of the SHA Selected Alternate will have the effect of moving some traffic closer to nearby homes and businesses; therefore, there may be localized areas where ambient concentrations of MSATs could be higher under the SHA Selected Alternate than the No-Build Alternate. The localized increases in MSAT concentrations would likely be most pronounced along the side where the roadways shift towards the residences and businesses. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-Build Alternate cannot be accurately quantified due to the inherent deficiencies of current models.

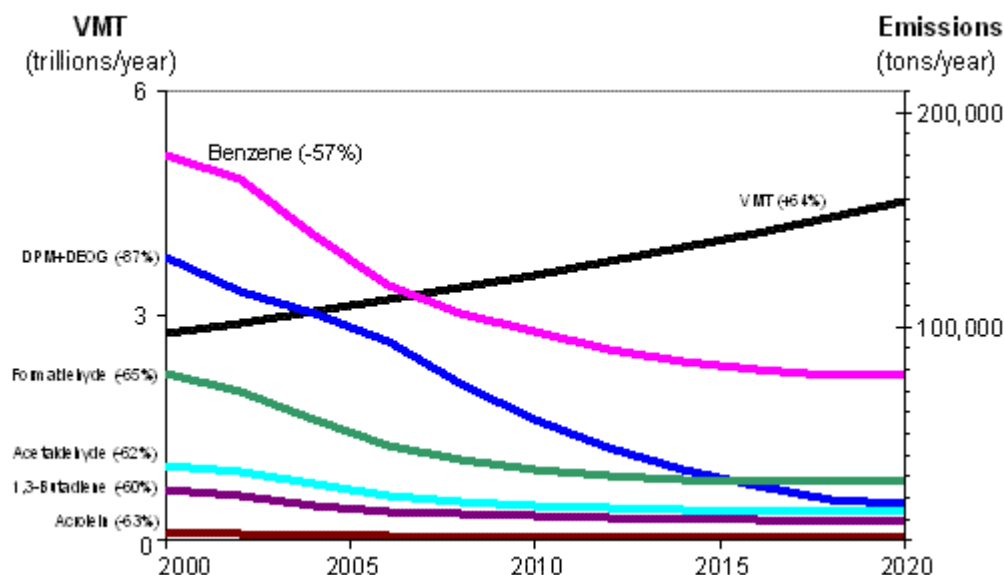
In sum, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the SHA Selected Alternate could be higher relative to the No-Build Alternate, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. Furthermore, at both the project location and regionally, MSAT concentrations will decrease in future years due to EPA's vehicle emission and fuel regulations (Figure 7).

MSAT dispersion studies have shown that air toxics from the roadway start to drop off at about 100 meters, and that by 500 meters most studies have found it very difficult to distinguish the roadway air toxic concentrations from background air toxic concentrations in any given area.

Sensitive receptors are those facilities most likely to contain large concentrations of the more sensitive population.

There are one sensitive receptor within 100 meters of the I-81 roadway and three sensitive receptors within 500 meters of the I-81 roadway as follows:

- 90 meters: Springfield Middle School, 334 Sunset Ave, Williamsport MD 21795
- 300 meters: Hickory Elementary School, 11101 Hickory School Road, Williamsport MD 21795
- 220 meters: Williamsport Elementary School, 1 Clifton Ave, Williamsport MD 21795
- 145 meters: Williamsport High School, 5 Clifton Ave, Williamsport MD 21795



Notes: For on-road mobile sources. Emissions factors were generated using MOBILE6.2. MTBE proportion of market for oxygenates is held constant, at 50%. Gasoline RVP and oxygenate content are held constant. VMT: Highway Statistics 2000, Table VM-2 for 2000, analysis assumes annual growth rate of 2.5%. "DPM + DEOG" is based on MOBILE6.2-generated factors for elemental carbon, organic carbon and SO₄ from diesel-powered vehicles, with the particle size cutoff set at 10.0 microns.

Reference: Interim Guidance in Air Toxic Analysis in NEPA Documents, February 3, 2006

Figure 7: U.S. Annual Vehicle Miles Travelled (VMT) vs. Mobile Source Air Toxics Emissions, 2000-2020

5. Noise

An updated noise technical report was completed in May 2009, using the 2030 traffic data prepared for the updated air quality report. The effects of noise from each alternate were evaluated in accordance with FHWA's activity/criteria relationship published in 23 CFR, Part 772, and subsequent memoranda. The SHA Selected Alternate was modeled in accordance with the FHWA Traffic Noise Model (TNM) that computes highway traffic noise levels at user-defined receivers, and aids in the design of highway noise barriers. The noise levels analyzed in this section are for the noisiest hour(s) of the day. The combination of 2030 peak hour traffic and associated travel speed resulted in the "worst-case" noise levels for this analysis.

The *I-81 Technical Noise Report – May 2009* evaluated 115 receptor sites, which were grouped into 16 Noise Sensitive Areas (NSAs). These NSAs are illustrated in **Appendix A** and described

below. Since no roadway improvements are currently being considered on I-81 in West Virginia or Pennsylvania, the through traffic volumes on I-81 have only a very small increase in the build alternate over no-build conditions. For the SHA Selected Alternate, the Federal Noise Abatement Criteria were approached or exceeded at thirteen NSAs, and investigation of a sound barrier was warranted at each of these areas. NSAs E, H, and L do not exceed noise impact criteria. Therefore, they did not warrant investigation of noise mitigation.

NSA A consists of single-family residences (R-1 and R-2) on the northwest side of I-81, at the southern limit of the study. The receptors are located in the western quadrant of the I-81 and MD 68 interchange. The projected design year build noise level equals or exceeds 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA A, a barrier was investigated for the build alternate. The 961 foot long barrier is along the west side of I-81, starting at the end of the on-ramp from the Conococheague Street interchange and extending southward, and would achieve an insertion loss of up to 9 dBA at the impacted receivers. The estimated cost per benefited residence is \$277,644. A barrier is not reasonable at this location because the design year build noise levels do not equal or exceed a 3 dBA increase over the design year no-build noise levels, and the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA B consists of an historic farmhouse (R-3) on the southeast side of I-81. The receptor is located in the southern quadrant of the I-81 and MD 68 interchange. The impacted historic site is Garden of Eden Farm. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA B, a barrier was investigated for the build alternate. The 1,320 foot long barrier is along the east side of I-81, starting along the off-ramp to MD 68 and extending southward, and would achieve an insertion loss of up to 7 dBA at the impacted receivers. Since the impacted receptor at this location is historic, it counts as 10 equivalent residences in the cost per benefited residence calculation. The estimated cost per benefited residence is \$166,654. A barrier is not reasonable at this location because the design year build noise levels do not equal or exceed a 3 dBA increase over the design year no-build noise levels, and the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA C consists of three schools (R-4, R-5 and R-6) on the west side of I-81. All fields and play areas at R-4 and R-5 are located behind the schools and are protected by the school buildings from highway noise. The playground at R-6 is located between the school building and I-81, but is shielded from the highway by dense tree vegetation. The schools are located along I-81 between its interchanges with MD 68 and US 11. The schools are Springfield Middle School (R-4), Williamsport High School (R-5), and Williamsport Elementary School (R-6). The projected design year build noise levels exceed or equal 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA C, two barriers were investigated for the build alternate. Both barriers are located along the west side of I-81; the first one starts at the beginning of the off-ramp to MD 68 and extends approximately 1,400 feet northward; the second starts at the end of the on-ramp from US 11 and extends approximately 1,700 feet southward. The barriers can achieve an insertion loss of up to 7 dBA at the impacted receivers. The impacted receptors within this NSA are both schools, which count as 10 benefited residences. Combined, the estimated cost per benefited residence is \$129,871. A

barrier is not reasonable at this location because the design year build noise levels do not equal or exceed a 3 dBA increase over the design year no-build noise levels, and the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA D consists of single-family residences (R-7) on the east side of I-81. The residences are located in the northeast quadrant of the I-81 and US 11 interchange. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA D, a barrier was investigated for the build alternate. The 1,859 foot long barrier is along the east side of I-81, starting along the on-ramp from US 11 and extending northward, and would achieve an insertion loss of up to 11 dBA at the impacted receivers. The estimated cost per benefited residence is \$64,048. Although the individual cost per benefited residence for this NSA is over \$50,000, it is under \$100,000 per benefited residence and eligible for project wide cost averaging. Considering this area for project cost averaging, the cost for all feasible and reasonable barriers is less than \$50,000 per benefited residence. See Table 10 for a summary of the barrier cost averaging. Therefore, the barrier for NSA D meets current feasibility and reasonableness criteria.

NSA E consists of multiple-family townhouses (R-8 and R-9) in the Homewood Williamsport Retirement Campus on the east side of I-81. The residences are located in the southeast quadrant of the I-81 and US 11 interchange. The projected design year build noise levels do not exceed or equal 66 dBA. Therefore, investigation of a sound barrier is not warranted at this location.

NSA F consists of single-family residences (R-10, R-11, R-12, R-13, and R-14) on the east side of I-81. The residences are located in the south quadrant of the I-81 and I-70 interchange. New homes are located adjacent to receptors R-13 and R14. At the time of the noise measurements, many of the houses were not built; therefore no noise readings were taken. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA F, a barrier was investigated for the build alternate. The 4,735 foot long barrier is along the east side of I-81, starting at the beginning of the CD lanes for the I-70 interchange and extending northward along the ramp to eastbound I-70; it would achieve an insertion loss of up to 14 dBA at the impacted receivers. The estimated cost per benefited residence is \$57,186. Although the individual cost per benefited residence for this NSA is over \$50,000, it is under \$100,000 per benefited residence and eligible for project wide cost averaging. Considering this area for project cost averaging, the cost for all feasible and reasonable barriers is less than \$50,000 per benefited residence. See Table 10 for a summary of the barrier cost averaging. Therefore, the barrier for NSA F meets current feasibility and reasonableness criteria.

NSA G consists of mobile homes (R-15, R-16, and R-17) in the Lakeside Mobile Home Park on the west side of I-81. The residences are located along I-81 between its interchanges with I-70 and Halfway Boulevard. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA G, a barrier was investigated for the build alternate. The 2,920 foot long barrier is along the west side of I-81, starting at the end of the on-ramp from the Halfway Boulevard interchange and extending southward to the off ramp to the I-70 interchange, and

would achieve an insertion loss of up to 14 dBA at the impacted receivers. The estimated cost per benefited residence is \$17,316. The barrier meets current feasibility and reasonableness criteria.

NSA H consists of single-family residences (R-18) on the east side of I-81. The residences are located in the northeast quadrant of the I-81 and US 40 interchange. The projected design year build noise levels do not equal or exceed 66 dBA. Therefore, investigation of a sound barrier is not warranted at this location.

NSA I consists of single-family residences (R-19 and R-20) on the east side of I-81. The receptors are located in the south quadrant of the I-81 and US 40 interchange. The projected design year build noise level exceeds 66 dBA at R-20. Therefore, investigation of a sound barrier at this location is warranted. To protect the impacted receptors of NSA I, a barrier was investigated for the build alternate. The 760 foot long barrier is along the east side of I-81, starting at the end of the off-ramp from the Salem Avenue interchange and extending southward, and would achieve an insertion loss of up to 9 dBA at the impacted receivers. The estimated cost per benefited residence is \$98,827. The predicted noise levels exceed 72 dBA and there is an increase between no build and build noise levels. Although the individual cost per benefited residence for this NSA is over \$50,000, it is under \$100,000 per benefited residence and eligible for project wide cost averaging. Considering this area for project cost averaging, the cost for all feasible and reasonable barriers is less than \$50,000 per benefited residence. See Table 10 for a summary of the barrier cost averaging. Therefore, the barrier for NSA I meets current feasibility and reasonableness criteria.

NSA J consists of single-family residences (R-21) on the west side of I-81. The receptors are located in the west quadrant of the I-81 and MD 58 interchange. The projected design year build levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA J, a barrier was investigated for the build alternate. The 1000 foot long barrier is along the west side of I-81, starting along the on-ramp from the MD 58 interchange and extending southward, and would achieve an insertion loss of up to 12 dBA at the impacted receivers. The estimated cost per benefited residence is \$148,248. A barrier is not reasonable at this location because the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA K consists of single-family residences (R-22 and R-23) on the east side of I-81. The receptors are located along I-81 between the Maugansville Road and Maugans Avenue interchanges. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA K, a barrier was investigated for the build alternate. The 509 foot long barrier starts along the on-ramp from Maugansville Road, and extends northward; it would achieve an insertion loss of up to 7 dBA at the impacted receivers. The estimated cost per benefited residence is \$397,868. A barrier is not reasonable at this location because the design year build noise levels do not equal or exceed a 3 dBA increase over the design year no-build noise levels; and the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA L consists of single-family residences (R-24) on the west side of I-81. The receptors are located in the southwest quadrant of the I-81 and Maugans Avenue interchange. The projected design year build noise levels do not equal or exceed 66 dBA. Therefore, investigation of a sound barrier is not warranted at this location.

NSA M consists of single-family residences (R-25 and R-26) on the west side of I-81. The receptors are located in the southwest quadrant of the I-81 and Showalter Road interchange. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA M, a barrier was investigated for the build alternate. The 1,113 foot long barrier starts along the south side of Showalter Road, and extends along the on-ramp from Showalter Road to SB I-81; it would achieve an insertion loss of up to 11 dBA at the impacted receivers. The estimated cost per benefited residence is \$131,674. The barrier is not feasible at this location because it would have to cut off driveway access to receptors 26 and 26-1 in order to get a reasonable reduction in noise levels. The barrier is also not reasonable at this location because the design year build noise levels do not equal or exceed a 3 dBA increase over the design year no-build noise levels; and the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA N consists of single-family residences (R-27) on the east side of I-81. The receptors are located in the southeast quadrant of the I-81 and Showalter Road interchange. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA N, a barrier was investigated for the build alternate. The 1,766 foot long barrier starts along the off-ramp to Showalter Road and extends southward, and would achieve an insertion loss of up to 7 dBA at the impacted receivers. The estimated cost per benefited residence is \$1,321,274. A barrier is not reasonable at this location because the design year build noise levels do not equal or exceed a 3 dBA increase over the design year no-build noise levels; and the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA O consists of single-family residences (R-28 and R-29) on the west side of I-81. The residences are located in the northwest quadrant of the I-81 and Showalter Road interchange. The projected design year build noise level equals or exceeds 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA O, a barrier was investigated for the build alternate. The 1,069 foot long barrier is along the west side of I-81, starting at the end of the off-ramp to the Showalter Road interchange and extending northward, and would achieve an insertion loss of up to 7 dBA at the impacted receivers. The estimated cost per benefited residence is \$774,690. A barrier is not reasonable at this location because the design year build noise levels do not equal or exceed a 3 dBA increase over the design year no-build noise levels; and the cost per benefited residence is over \$100,000, so this NSA is not eligible for project wide cost averaging considerations.

NSA P consists of single-family residences (R-30 and R-31) on the west side of I-81. The residences are located along I-81 between its interchanges with Showalter Road and Mason Dixon Road. The projected design year build noise levels equal or exceed 66 dBA. Therefore, investigation of a sound barrier is warranted at this location. To protect the impacted receptors of NSA P, a barrier was investigated for the build alternate. The 2,500 foot long barrier is along

the west side of I-81, starting at the end of the on-ramp from the Mason Dixon Road interchange and extending southward, and would achieve an insertion loss of 5 to 16 dBA at the impacted receivers. The estimated cost per benefited residence is \$99,910. Although the individual cost per benefited residence for this NSA is over \$50,000, it is under \$100,000 per benefited residence and eligible for project wide cost averaging. Considering this area for project cost averaging, the cost for all feasible and reasonable barriers is less than \$50,000 per benefited residence. See Table 10 for a summary of the barrier cost averaging. Therefore, the barrier for NSA P meets current feasibility and reasonableness criteria.

Cost Averaging

In accordance with SHA Sound Barrier Policy, barriers for which the cost per residence is more than \$50,000, but less than or equal to \$100,000, may be considered reasonable if the average cost per residence for all barriers on the project is less than or equal to \$50,000 (Table 10).

Table 10: Project Cost Averaging

NSA	Note	Residences Benefited	Barrier Cost	Cost/Residence
A	Impacted; Cost greater than \$100,000/res.	N/A	N/A	N/A
B	Impacted; Cost greater than \$100,000/res.	N/A	N/A	N/A
C	Impacted; Cost greater than \$100,000/res.	N/A	N/A	N/A
D	Impacted; Barrier meets criteria	18	\$1,152,872	\$64,048
E	Not Impacted	N/A	N/A	N/A
F	Impacted; Barrier meets criteria	60	\$3,431,178	\$57,186
G	Impacted; Barrier meets criteria	120	\$2,077,978	\$17,316
H	Not Impacted	N/A	N/A	N/A
I	Impacted; Barrier meets criteria	3	\$296,480	\$98,827
J	Impacted; Cost greater than \$100,000/res.	N/A	N/A	N/A
K	Impacted; Cost greater than \$100,000/res.	N/A	N/A	N/A
L	Not Impacted	N/A	N/A	N/A
M	Impacted; Barrier not feasible	N/A	N/A	N/A
N	Impacted; Cost greater than \$100,000/res.	N/A	N/A	N/A
O	Impacted; Cost greater than \$100,000/res.	N/A	N/A	N/A
P	Impacted; Barrier meets criteria	17	\$1,698,470	\$99,910
	Summary (all feasible and reasonable)	218	\$8,656,978	\$39,711

A final decision on the installation of abatement measures would be made upon completion of project design and the public involvement process. Detailed information for each NSA and analyzed barrier is summarized in Table 11.

Table 11: Noise Abatement Analysis Summary

NSA	Receiver	Adjusted Ambient Level ¹	Design Year No-Build Level	Design Year Build Level	Change Over No-Build	Change Over Ambient	With Barrier	Insertion Loss	Barrier Analysis	
A	R-1	65	69	69	0	4	60	9	Height = 14' – 20'	Cost = \$555,288
	R-2	62	66	66	0	4	59	7	Avg. Height = 17.0'	Benefited Residences = 2
									Length = 961'	Cost/Res. = \$277,644
									Barrier is not reasonable.	
B	R-3	64	65	66	1	2	59	7	Height = 26'	Cost = \$1,166,540
									Avg. Height = 26.0'	Benefited Residences = 10
									Length = 1,320'	Cost/Res. = \$166,654
									Barrier is not reasonable.	
C	R-4	63	66	66	0	3	59	7	Height = 22' – 26'	Cost = \$2,597,430
	R-5	60	63	64	1	4	64	0	Avg. Height = 24.8'	Benefited Residences = 20
	R-6	62	65	66	1	4	59	7	Length = 3,083'	Cost/Res. = \$129,871
									Barrier is not reasonable.	
D	R-7	61	65	65	0	4	58	7	Height = 16' – 20'	Cost = \$1,152,872
	R-7A	N/A ²	70	70	0	N/A ²	60	10	Avg. Height = 18.2'	Benefited Residences = 18
	R-7B	N/A ²	74	74	0	N/A ²	63	11	Length = 1,859'	Cost/Res. = \$64,048
	R-7C	N/A ²	72	73	1	N/A ²	62	11		
	R-7D	N/A ²	67	67	0	N/A ²	59	8	Barrier meets criteria.	
E	R-8	55	59	60	1	5	N/A	N/A	Criteria not exceeded. Barrier is not required.	
	R-9	58	58	58	0	0	N/A	N/A		
F	R-10	72	75	75	0	3	61	14	Height = 14' – 26'	Cost = \$3,431,178
	R-10A	N/A ²	63	64	1	N/A ²	59	5	Avg. Height = 21.3'	Benefited Residences = 60
	R-10B	N/A ²	66	66	0	N/A ²	58	8	Length = 4,735'	Cost/Res. = \$57,186
	R-10C	N/A ²	63	63	0	N/A ²	55	8		
	R-10D	N/A ²	66	67	1	N/A ²	57	10		
	R-10E	N/A ²	61	61	0	N/A ²	61	0		
	R-10F	N/A ²	65	66	1	N/A ²	59	7		
	R-10G	N/A ²	69	70	1	N/A ²	60	10		
	R-11	62	62	63	1	1	54	9		
	R-12	57	57	57	0	0	55	2		
	R-12A	N/A ²	73	74	1	N/A ²	64	10		
	R-12B	N/A ²	72	73	1	N/A ²	64	9		
	R-12C	N/A ²	69	73	4	N/A ²	63	10		
	R-12D	N/A ²	65	65	0	N/A ²	59	6		
	R-12E	N/A ²	63	64	1	N/A ²	60	4		
	R-12F	N/A ²	60	61	1	N/A ²	57	4		
	R-12G	N/A ²	60	60	0	N/A ²	57	3		
	R-13	61	60	61	1	0	58	3	Barrier meets criteria	

NSA	Receiver	Adjusted Ambient Level ¹	Design Year No-Build Level	Design Year Build Level	Change Over No-Build	Change Over Ambient	With Barrier	Insertion Loss	Barrier Analysis
F (cont.)	R-13A	N/A ²	69	72	3	N/A ²	61	11	See previous page.
	R-13B	N/A ²	64	67	3	N/A ²	60	7	
	R-13C	N/A ²	63	64	1	N/A ²	59	5	
	R-14	64	66	66	0	2	59	7	
	R-14A	N/A ²	64	65	1	N/A ²	60	5	
	R-14B	N/A ²	61	62	1	N/A ²	58	4	
	R-14C	N/A ²	69	70	1	N/A ²	63	7	
	R-14D	N/A ²	68	68	0	N/A ²	60	8	
	R-14E	N/A ²	70	72	2	N/A ²	64	8	
	R-N1A	N/A ²	65	65	0	N/A ²	N/A	N/A	
	R-N1B	N/A ²	65	65	0	N/A ²	N/A	N/A	Barrier meets criteria.
G	R-N2	N/A ²	70	70	0	N/A ²	N/A	N/A	Height = 16' – 26' Avg. Height = 20.9' Length = 2,920' Cost = \$2,077,978 Benefited Residences = 120 Cost/Res. = \$17,316
	R-15	72	73	73	0	1	62	11	
	R-15A	N/A ²	63	63	0	N/A ²	62	1	
	R-15B	N/A ²	63	63	0	N/A ²	61	2	
	R-15C	N/A ²	66	66	0	N/A ²	63	3	
	R-15D	N/A ²	68	68	0	N/A ²	62	6	
	R-16	74	75	77	2	3	63	14	
	R-16A	N/A ²	66	66	0	N/A ²	62	4	
	R-16B	N/A ²	75	76	1	N/A ²	62	14	
	R-16C	N/A ²	76	76	0	N/A ²	64	12	
	R-17	76	77	77	0	1	65	12	
	R-17A	N/A ²	66	66	0	N/A ²	61	5	
	R-17B	N/A ²	66	66	0	N/A ²	61	5	
	R-17C	N/A ²	76	76	0	N/A ²	64	12	
	R-17D	N/A ²	78	78	0	N/A ²	65	13	
	R-17E	N/A ²	78	78	0	N/A ²	65	13	
	R-17F	N/A ²	75	75	0	N/A ²	65	10	
	R-17G	N/A ²	71	71	0	N/A ²	64	7	
	R-C6-1	N/A ²	68	68	0	N/A ²	66	2	
	R-C6-2	N/A ²	66	66	0	N/A ²	61	5	
	R-C6-3	N/A ²	71	71	0	N/A ²	62	9	
	R-C6-4	N/A ²	67	67	0	N/A ²	62	5	
	R-C6-5	N/A ²	70	70	0	N/A ²	62	8	
	R-C6-6	N/A ²	65	65	0	N/A ²	61	4	Barrier meets criteria.
H	R-18	56	59	59	0	3	N/A	N/A	Criteria not exceeded. Barrier is not required.
	R-18A	N/A ²	58	58	0	N/A ²	N/A	N/A	
	R-18B	N/A ²	57	57	0	N/A ²	N/A	N/A	
I	R-19	61	61	61	0	0	60	1	Height = 10 – 12' Avg. Height = 11.5' Cost = \$296,480 Benefited Residences = 3
	R-19A	N/A ²	56	56	0	N/A ²	56	0	

NSA	Receiver	Adjusted Ambient Level ¹	Design Year No-Build Level	Design Year Build Level	Change Over No-Build	Change Over Ambient	With Barrier	Insertion Loss	Barrier Analysis
I (cont.)	R-19B	N/A ²	57	57	0	N/A ²	57	0	Length = 760' Cost/Res. = \$98,827 Barrier meets criteria.
	R-20	68	70	70	0	2	63	8	
	R-20A	N/A ²	72	73	1	N/A ²	64	9	
	R-C8-1	N/A ²	61	61	0	N/A ²	59	2	
	R-C8-2	N/A ²	64	65	1	N/A ²	62	3	
	R-C8-3	N/A ²	63	63	0	N/A ²	60	3	
J	R-21	71	72	73	1	2	61	12	Height = 16' – 20' Cost = \$592,994 Avg. Height = 17.4' Benefited Residences = 4 Length = 1,000' Cost/Res. = \$148,248 Barrier is not reasonable.
	R-C8-4	N/A ²	64	65	1	N/A ²	61	4	
	R-C8-5	N/A ²	68	69	1	N/A ²	62	7	
	R-C8-6	N/A ²	59	60	1	N/A ²	58	2	
K	R-22	63	66	66	0	3	59	7	Height = 22' – 24' Cost = \$397,868 Avg. Height = 23.0' Benefited Residences = 1 Length = 509' Cost/Res. = \$397,868 Barrier is not reasonable.
	R-23	58	59	59	0	1	59	0	
L	R-24	65	65	65	0	0	N/A	N/A	Criteria not exceeded. Barrier is not required.
M	R-25	66	66	66	0	0	59	7	Height = 12' – 16'' Cost = \$526,694 Avg. Height = 13.9' Benefited Residences = 4 Length = 1,113' Cost/Res. = \$131,674 Barrier is not feasible.
	R-25-1A	N/A ²	61	62	1	N/A ²	59	3	
	R-25-1B	N/A ²	62	62	0	N/A ²	59	3	
	R-25-1C	N/A ²	62	63	1	N/A ²	58	4	
	R-25-1D	N/A ²	64	65	1	N/A ²	59	6	
	R-25-2	N/A ²	63	63	0	N/A ²	61	2	
	R-26	65	69	69	0	4	58	11	
	R-26-1	N/A ²	69	69	0	N/A ²	62	7	
N	R-N3	N/A ²	67	68	1	N/A ²	61	7	Height = 22' Cost = \$1,321,274 Avg. Height = 22.0' Benefited Residences = 1 Length = 1,766' Cost/Res. = \$1,321,274 Barrier is not reasonable.
	R-27	63	63	65	2	2	65	0	
O	R-28	62	62	62	0	0	62	0	Height = 20' – 22' Cost = \$774,690 Avg. Height = 21.3' Benefited Residences = 1 Length = 1,069' Cost/Residence = \$774,690 Barrier is not reasonable.
	R-28-1A	N/A ²	63	63	0	N/A ²	63	0	
	R-28-1B	N/A ²	64	64	0	N/A ²	64	0	
	R-28-2A	N/A ²	61	61	0	N/A ²	61	0	
	R-28-2B	N/A ²	62	62	0	N/A ²	62	0	
	R-29	67	67	67	0	0	60	7	
	R-29-1	N/A ²	62	63	1	N/A ²	62	1	
P	R-30	75	76	76	0	1	62	14	Height = 16' – 24' Cost = \$1,698,470 Avg. Height = 20.0' Benefited Residences = 17 Length = 2,500' Cost/Residence = \$99,910 Barrier meets criteria.
	R-30-1	N/A ²	68	69	1	N/A ²	62	7	
	R-30-2A	N/A ²	67	68	1	N/A ²	61	7	
	R-30-2B	N/A ²	66	67	1	N/A ²	60	7	
	R-30-2C	N/A ²	65	66	1	N/A ²	59	7	
	R-30-2D	N/A ²	63	64	1	N/A ²	58	6	

NSA	Receiver	Adjusted Ambient Level ¹	Design Year No-Build Level	Design Year Build Level	Change Over No-Build	Change Over Ambient	With Barrier	Insertion Loss	Barrier Analysis
P (cont.)	R-30-3A	N/A ²	64	65	1	N/A ²	62	3	See previous page
	R-30-3B	N/A ²	63	64	1	N/A ²	60	4	
	R-31	75	75	75	0	0	59	16	
	R-31-1A	N/A ²	67	67	0	N/A ²	61	6	
	R-31-1B	N/A ²	67	69	2	N/A ²	62	7	
	R-31-2A	N/A ²	63	63	0	N/A ²	59	4	
	R-31-2B	N/A ²	62	63	1	N/A ²	58	5	
	R-N4	N/A ²	73	74	1	N/A ²	65	9	Barrier meets criteria.

¹ Peak Ambient Noise Levels are based on field measurements, which includes background noise. See page II-3. 2030 No-Build and 2030 Build noise levels are based on the calibrated TNM model, which only considers noise due to traffic. The TNM model is considered calibrated if the measured and predicted noise levels are within 3 dBA.

² These locations were added to increase the accuracy of the noise modeling. Field Measurements were not taken at these locations.

6. Hazardous Materials

An Initial Site Assessment (ISA) was completed to document the potential presence or absence of contamination and/or hazardous substances within the project area, and the likelihood for adverse environmental impacts from activities on adjacent properties. The Hagerstown Trucking Enterprises facility, in the vicinity of Maugans Avenue interchange, was identified as having evidence of petroleum releases, including motor oil and waste oil. In addition, evidence of an underground storage tank (UST) was noted at this facility, although the facility was not identified on the state Registered UST database. No impacts to this property will be expected as a result of the SHA Selected Alternate, which calls for improvements that will be located more than 900 LF from the site. No other areas of concern were identified within the impact area of the SHA Selected Alternate.

7. Secondary and Cumulative Effects

The Secondary and Cumulative Effects Analysis (SCEA) for I-81 improvements associated with the SHA Selected Alternate concluded that no major impacts are anticipated. Direct impacts to resources, as well as proposed mitigation, are discussed in Section III, B 1-6 of this FONSI. There is little potential for secondary effects to environmental resources because the SHA Selected Alternate will not induce growth beyond what is expected with or without the improvements to I-81. The secondary and cumulative effects identified were generally associated with planned development as envisioned in the Washington County Master Plan. The Plan indicates that Washington County is expected to grow by 0.7 percent per year through 2050. Based on information obtained from the Washington County Planning Office, this growth is not contingent on improving I-81 and the SHA Selected Alternate will not induce growth beyond what is included in the 2002 Plan.

The SCEA study area's environmental resources are generally vulnerable to degradation because of past and future development in Washington County. The SHA Selected Alternate, when added to past, present and reasonably foreseeable actions, was reviewed for its potential to have a cumulative effect. Cumulative effects to parklands within the SCEA boundary are anticipated to be minimal as park resources are afforded protection from the effects of Federally funded transportation projects under Section 4(f) of the US Department of Transportation Act of 1966 (Section 4(f)). Other planned development in the study area is not expected to encroach on park property.

Development associated with the population and employment growth in Washington County may affect cultural resources. Similar to park resources, significant historic resources are afforded protection from the effects of federally funded transportation projects under Section 4(f) along with the coordination required under Section 106 of the National Historic Preservation Act of 1966. In addition, Washington County has an active program to protect its cultural resources through its review and approval processes and also has a Historic District Commission. Therefore, cumulative effects on historic resources are expected to be minimal.

Although improvements to I-81 are included in Washington County's Plan, the specific I-81 project contribution to watershed vulnerability was estimated in order to provide a context for the effect of this project in relation to other planned growth in the area. The I-81 project will

contribute an estimated 175 to 223 acres of new impervious surface based on the preliminary engineering analysis. However, new stormwater management facilities will be constructed to address water quality and quantity control, not only for currently proposed improvements, but also to address some current substandard conditions. As a result, the SHA Selected Alternate has the potential to improve overall water quality within the portion of the Conococheague Watershed within the SCEA study area.

IV. Section 4(f) Evaluation

A. Introduction

Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended 2005 (49 U.S.C. 303 (c) and 23 U.S.C. 138) permits the use of publicly owned land from any public park or recreation area, wildlife or waterfowl refuge, or historic site (as determined by the officials having jurisdiction over the park, recreation area, refuge, or site) only if there is no prudent and feasible alternative to the use of such land, and all possible planning has been undertaken to minimize harm resulting from this use.

This Final Section 4(f) Evaluation presents an assessment of the permanent and temporary impacts to the C&O Canal National Historical Park (NHP) resulting from the State Highway Administration (SHA) Selected Alternate 3A – Inside Widening with Collector-Distributor (C-D) Roads, as well as a discussion of avoidance alternates, minimization measures, and mitigation for the proposed impacts.

B. Description of the Proposed Action

The I-81 Improvement Project extends from the West Virginia state line to the Pennsylvania state line through Washington County, Maryland. The purpose of this project is to improve safety and traffic operations along I-81 from the West Virginia state line to the Pennsylvania state line.

1. Alternates Considered

Descriptions of each alternate retained for detailed study are presented in detail in Section II of the I-81 EA and in the Record of Decision (Section I) of this FONSI. Alternates considered include the following:

Alternate 1 – No-Build Alternate: The No-Build Alternate includes routine maintenance and spot improvements to the existing roadway and interchanges.

Alternate 2 – Interchange Improvements: This alternate will include improvements to the following interchanges:

- Exit 1: MD 68/MD 63
- Exit 2: US 11
- Exit 3: I-70
- Exit 4: Halfway Boulevard
- Exit 5: US 40
- Exit 6: MD 58
- Exit 8: Murgans Avenue
- Exit 9: Showalter Road
- Exit 10: PA 163

Alternate 2A – Interchange Improvements with C-D Roads: Alternate 2A includes the interchange improvements listed for Alternate 2, as well as the construction of a two-lane C-D road through the I-70 and Halfway Boulevard interchanges.

Alternate 3 – Inside Widening: Under this alternate, the existing I-81 roadway will be widened on the inside, towards the median, to six lanes.

Alternate 3A – Inside Widening with C-D Roads: This alternate will include widening existing I-81, towards the median, to six lanes and constructing a two-lane C-D roadway, which will extend from south of the I-70 interchange to north of the Halfway Boulevard interchange.

Toll Plaza Options: Four different toll options were evaluated in conjunction with the build alternates. Each option will include a two-acre site for an administrative building and parking, five cash/electronic toll collection lanes, and two high-speed electronic toll collection lanes.

Weigh and Inspection Station Option: A truck weigh station will be constructed on an 11-acre site along the southbound side of I-81 between Halfway Boulevard and US 40.

2. Description of the SHA Selected Alternate

Alternate 3A – Inside Widening with Collector-Distributor Roads is the SHA Selected Alternate for this project. Under this alternate, I-81 will be widened to six lanes on the inside (towards the median). The outside lanes will include a two-lane C-D road with an additional auxiliary lane extending from the I-70 interchange through the Halfway Boulevard interchange for both north and southbound structures. This alternate will require the widening of the northbound and southbound spans of Bridge No. 21078, which carries I-81 over the Potomac River. Mapping for the SHA Selected Alternate is provided in **Appendix A**.

Alternate 3A – Inside Widening with C-D Roads best fulfills the project’s Purpose and Need because the combination of interchange improvements and mainline widening, in conjunction with C-D road extension, provides a more comprehensive approach to addressing safety concerns and traffic operations than the other alternates. The SHA Selected Alternate addresses the safety concern of vehicles entering and exiting I-81 between I-70 and Halfway Boulevard while providing added capacity to the mainline to improve traffic flow and safety along I-81. In addition, inside widening ensures compatibility with future plans for I-81 widening in both West Virginia and Pennsylvania.

C. Description of the Section 4(f) Property

The use of one Section 4(f) resource within the project area will be required by the SHA Selected Alternate. This resource, the Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP), qualifies for protection under Section 4(f) as both a public park/recreation area and as a historic site. The C&O Canal NHP is located at the southern end of I-81 along the Maryland side of the Potomac River and is the only park

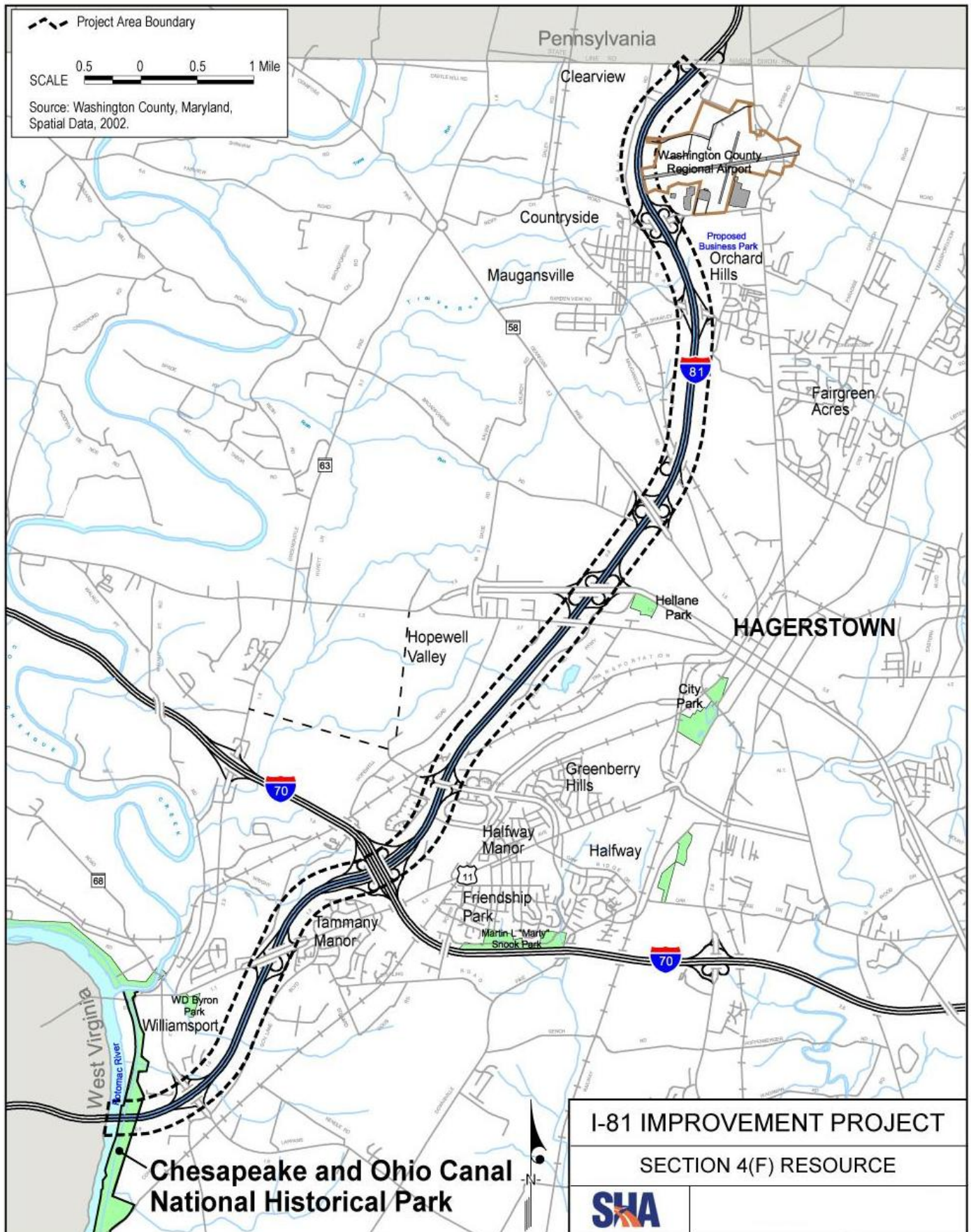


Figure 8: Section 4(f) Resource

within the I-81 project area (Figure 8). The park follows the Potomac River for 184.5 miles from Washington, D.C. to Cumberland, Maryland. The C&O Canal NHP is owned and operated by the National Park Service (NPS) for use by the public primarily as a recreational facility.

Within the project area, this linear park contains the canal and towpath, which cross under I-81 at the southern end of the project area. The towpath offers hiker and biker opportunities to park visitors and is accessible from various locations in the project vicinity, with a visitors center at the Cushwa Basin in Williamsport about a mile west of the project area. The towpath is used by approximately 3 million visitors annually. Lock 44 is 0.6 mile west of the I-81 bridge. The C&O Canal was named a National Monument in 1961 and in 1971, President Richard M. Nixon signed the legislation that established the C&O Canal NHP. The C&O Canal NHP was listed in the National Register of Historic Places (NRHP) in 1979. The canal is one of the most intact canals from the American canal-building era and has retained many of its original features along its entire length. Sections of the canal between Georgetown in Washington, D.C. and Riley's Lock in Maryland have been restored while the remainder of the canal is in various states of disrepair. Most of the towpath from Georgetown to Cumberland can still be traveled by horseback, foot, or bicycle.

D. Description of Impacts to the Section 4(f) Property

1. Comparison of Alternates

As depicted in Table 12, there will be no impacts to Section 4(f) resources under the No-Build Alternate and Build Alternates 2 and 2A. Build Alternates 2 and 2A include improvements to I-81 at the existing interchanges. Improvements to I-81 under Alternate 2A will be limited to the existing interchanges and to the stretch of roadway between I-70 and Halfway Boulevard. These alternates will not provide additional capacity on the mainline of I-81. Alternates 3, 3A and 3A, Option B will have visual and physical impacts to the C&O Canal NHP through temporary and permanent use of land. Use of the Section 4(f) resource will be attributable to the widening of Bridge No. 21078 over the Potomac River, including extension of existing piers, and inside widening of the I-81 mainline.

Table 12: Comparison of Section 4(f) Temporary and Permanent Use by Alternate

Alternate	1	2	2A	3	3A	3A, Option B
Temporary Use						
Towpath Access	0	0	0	0.86	0.86	0.86
Total Temporary Use	0	0	0	0.86	0.86	0.86
Permanent Use						
Vegetation Removal	0	0	0	0.81	0.81	0.81
Inside Roadway Widening/Pier Extension	0	0	0	0.80	0.80	0.80
Total Permanent Use	0	0	0	1.61	1.61	1.61

2. Impacts of the SHA Selected Alternate

Under the SHA Selected Alternate, impacts to the C&O Canal NHP will include:

- Visitor Use – intermittent interruptions to pedestrian and bicycle use of the towpath for a period of two weeks at the onset of construction activities and for two weeks at the conclusion. These interruptions will occur for a one-mile segment of towpath from Lockwood Road to the crossing under Bridge No. 21078. For the duration of the project, additional intermittent closures could occur for a 400-foot length of towpath where it crosses underneath the bridge. These closures will only occur during construction events that could be dangerous to visitors and staff (such as the pouring of concrete overhead)
- Vegetation – potential vegetation removal within the work zone on the limestone bluff and within the canal prism, and the I-81 inside median from the bridge to the eastern boundary of the park; bridge span widening will result in increased shading
- Towpath – potential physical damage due to construction activities and vehicle access
- Viewshed – permanent impacts due to pier and bridge span widening, and temporary impacts due to vegetation removal, and construction equipment and activities

In the updated effects determination, submitted to Maryland Historical Trust (MHT) on January 18, 2006, SHA stipulated that significant features of the park; such as the landscape, towpath and limestone bluffs, will be impacted by the SHA Selected Alternate. MHT concurred with the adverse effect determination on February 22, 2006. As a result, SHA has consulted with the National Park Service (NPS) and MHT to develop a Memorandum of Agreement (MOA) to address the adverse effects to the C&O

Canal NHP. The MOA was approved by the Federal Highway Administration (FHWA), SHA, NPS, and MHT on November 19, 2008 and can be found in **Appendix B**.

No archeological resources eligible for the NRHP were identified within the area of potential effects (APE).

Temporary and Permanent Use of the Section 4(f) Property

Under the SHA Selected Alternate, widening of Bridge No. 21078 will include the replacement and lengthening of the existing deck and the extension of the two existing 36-foot parallel piers. The bridge spans over the C&O Canal NHP will be widened to the inside an additional 27 feet. Each of the piers will remain 6 feet in width, and will be extended an additional 19 feet toward the median of the bridges. Pier extension and associated vegetation removal will cause permanent impacts of 0.81 acre to the C&O Canal NHP.

The inside widening (within the existing median) of the 671 linear feet (LF) of mainline I-81 within the C&O Canal NHP boundary will permanently impact 0.80 acre of parkland. This area is in the existing median between the northbound and southbound lanes.

Temporary use of C&O Canal NHP includes intermittent towpath access to and from the work zone, located on park property underneath Bridge 21078 before it crosses the Potomac River, and a small buffer area around the work zone. Temporary impacts will total 0.86 acre.

Figure 9 depicts potential temporary and permanent Section 4(f) uses of the C&O Canal NHP under the SHA Selected Alternate.

The FHWA has determined that the requirements of Section 4(f) of the DOT Act do not apply to the temporary use of parkland when the project meets the following criteria:

- *The duration of the use will be temporary and less than the time needed for construction of the project.*

The temporary use of the C&O Canal NHP property for construction staging will be completed prior to final completion of the I-81 improvements.

- *The ownership of the property will not change or result in the retention of long term or indefinite interests in the land for transportation purposes.*

The ownership of the C&O Canal NHP outside of existing and proposed SHA right-of-way will remain with the NPS and will continue to be maintained by the NPS.

- *The scope of the work will be minor, in which the nature and magnitude of the changes to the resource will be minimal.*

Temporary use of C&O Canal NHP property consists of a construction permit and access to the bridge. This area is small in comparison to the size of the overall park, which covers over 19,500 acres; therefore the work will be minor and not change the overall resource. However, the potential impacts resulting from temporary use will be minimized and will take into consideration protection of all features within and adjacent to the construction permit. A list of avoidance, minimization, and mitigations measures follows in Section E.

- *There will be no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis.*

The work proposed which will require temporary use of the C&O Canal NHP will not result in any permanent adverse physical impacts. The only recreational facility in the area where temporary use is required is the canal towpath. SHA will work with the NPS to construct temporary paths that protect park users from construction activities and that allow emergency vehicles to travel under the bridge.

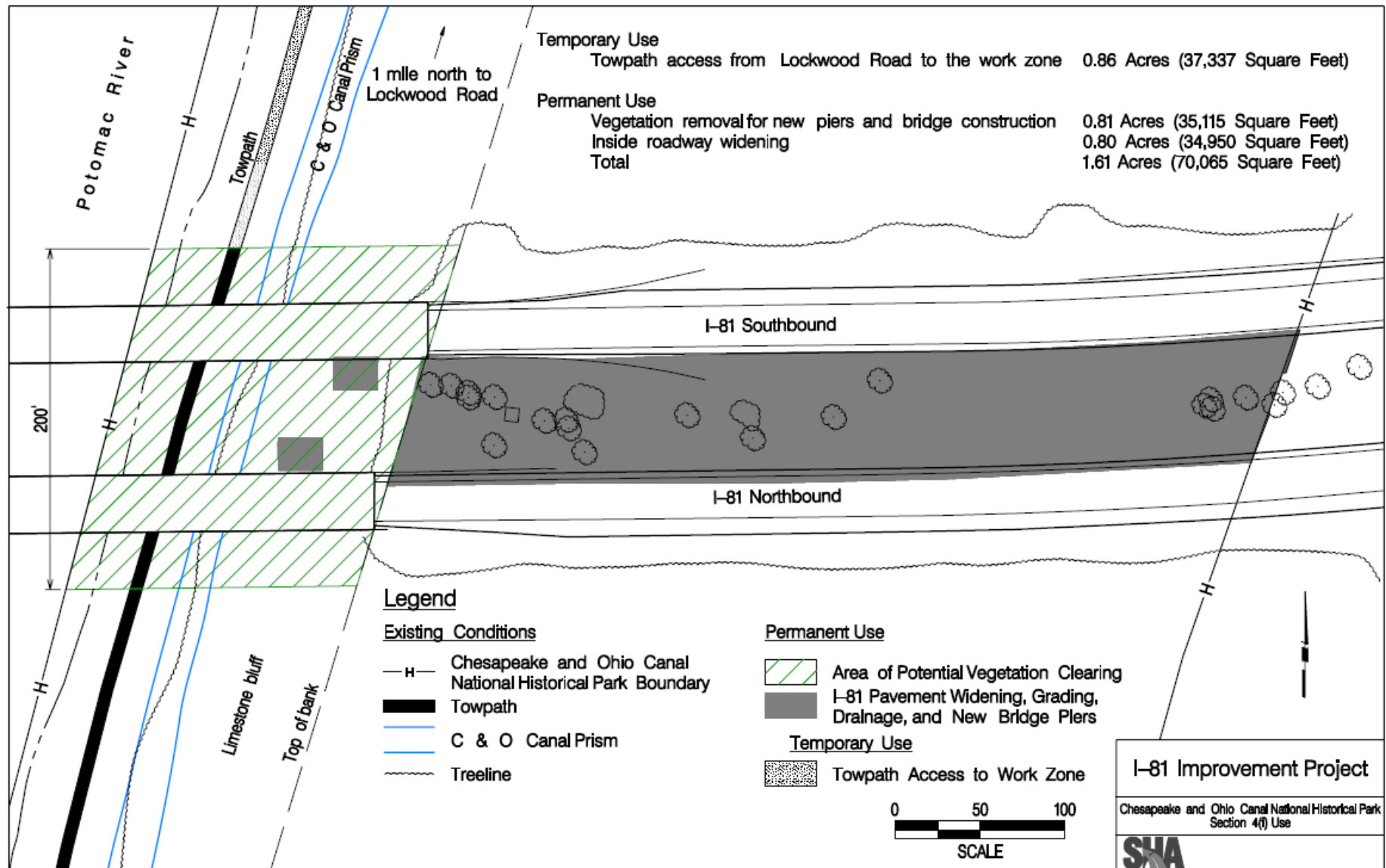


Figure 9: C&O Canal NHP Section 4(f) Use

- *The land being used will be fully restored, in that the resource will be returned to a condition, which is at least as good as that which existed prior to the project.*

The areas within the C&O Canal NHP where temporary use is proposed will be restored to an acceptable condition upon completion of the proposed improvements through the implementation of a Restoration Plan as identified in the approved MOA. The MOA identified the Restoration Plan as being developed during the final design phase of the project and in consultation with NPS and MHT.

Perpetual Deed of Easement

A perpetual deed of easement of approximately 2.95 acres will be needed for construction, operation, and future maintenance activities associated with widening the bridge over the Potomac River and inside widening of the inside lanes approaching the bridge. The ownership of the C&O Canal NHP outside of existing and proposed SHA right-of-way will remain with the NPS and the area below the bridge will continue to be maintained by the NPS. SHA will continue to maintain the median of I-81 on park property.

E. Avoidance Alternates

In addition to the No-Build Alternate, which will have no impact on the C&O Canal NHP, avoidance alternates were assessed.

Alternates 2 and 2A, with or without the toll options, will avoid deed of easement acquisition from the Section 4(f) resource. Under Alternate 2, improvements to I-81 will be limited to the existing interchanges. Improvements to I-81 under Alternate 2A will be limited to the existing interchanges and to the stretch of roadway between I-70 and Halfway Boulevard. Neither of these alternates will involve improvements to Bridge No. 21078 or to I-81 in the vicinity of the C&O Canal NHP.

Alternate 2 and Alternate 2A will improve traffic flow and safety in the vicinity of the interchanges on I-81, which is consistent with the Purpose and Need for the project; however, these alternates will not provide additional capacity on the mainline of I-81. Additional capacity along the entire corridor will help to provide space for the passenger cars to maneuver along with the high truck volumes already using I-81. If West Virginia and Pennsylvania widen their sections of I-81, traffic may become bottlenecked within Maryland, leading to increased volumes on the local street system. Due to the need for additional capacity to accommodate these maneuvers for driver safety and to provide a consistent section of roadway with the adjacent states, these alternates were not selected.

The Truck Weigh and Inspection Station will have no impact on any Section 4(f) resources. However, the Truck Weigh Station was removed from consideration with this project because of the number of concerns raised over the location, the operation of the facility, and the economic impacts to the local trucking companies.

The No-Build Alternate, Alternate 2, and Alternate 2A are not feasible and prudent.

F. Measures to Minimize Harm

1. Minimization of Impacts

Under Alternates 3 and 3A, impacts to the Section 4(f) resource will be minimized by limiting the footprint of the bridge piers within the park by constructing new piers directly adjacent to the existing piers. In addition, efforts will be made to minimize impacts to the construction permit areas through compliance with towpath weight restrictions and other protective measures. NPS has indicated that the towpath must remain accessible to visitors during construction. Coordination with the NPS will occur regarding the construction of temporary paths that protect park users on the towpath during construction and that allow emergency vehicles to travel under the bridge.

The following measures are included in the MOA (**Appendix B**) to avoid and minimize impacts to the C&O Canal NHP during the construction period:

- SHA will use all practicable measures to minimize disturbances to, and provide appropriate treatment of, the C&O Canal NHP and to all elements that contribute to the National Register historic district during the construction of the project. The FHWA, the NPS, the SHA, and the MHT will consult and develop an Avoidance and Treatment Plan for the C&O Canal NHP (Plan). The Plan will address the widening of SHA Bridge No. 21078, stormwater management facilities, construction sequences and staging areas, protection of the canal prism and towpath, adherence to NPS gross vehicle weight restrictions, and minimization of impacts to park resources and park visitors. The SHA will submit the draft Plan to the NPS and the MHT for review and comment and ensure that the Plan is implemented in consultation with the NPS. The SHA will include the Plan in the bid package and final construction documents.
- No stormwater management areas will be constructed within the boundaries of the C&O Canal NHP and the canal prism will not be considered a stormwater management facility.
- No scuppers will be installed on SHA Bridge No. 21078 that will expel stormwater within the boundaries of the C&O Canal NHP.
- No access to the Potomac River shall be permitted from the C&O Canal NHP. The only access across C&O Canal NHP property will be in conjunction with work activities directly within the boundaries of the C&O Canal NHP.
- The only staging within the C&O Canal NHP will be for construction work within the C&O Canal NHP boundaries. All conditions for staging and access on C&O Canal NHP property will be outlined within a temporary construction/access special use permit from the NPS.
- SHA will provide the NPS with copies of all permits associated with the project, including access agreements from West Virginia landowners. The project will require permits from the US Army Corp of Engineers (USACE) and the Maryland Department of the Environment (MDE). The SHA will work with the USACE, the MDE, and the NPS to obtain all of the necessary permits for the project.

- SHA will supply the NPS with a list of the type, size, and Gross Vehicle Weight (GVW) of construction equipment and vehicles to be used on C&O Canal NHP property for inclusion in the temporary construction special use permit, as well as an estimation of the number of trips per vehicle. The SHA shall also provide information pertaining to the storage of construction materials.
- SHA will observe the 12 ton weight limit for the towpath. At the time of this MOA, weight limits have not been established for particular areas of concern along the towpath, including, but not limited to, a historic waste weir. An evaluation of weight limits along the towpath will need to be evaluated prior to construction. Vehicles are restricted to a single axle, H-15 load limit, unless otherwise approved by the NPS.
- SHA will supply the NPS with an estimate of the amount of infill, in cubic yards, needed in the canal prism. Infill will consist of a clean quarry material over filter fabric and is to be approved by the NPS. Infill will be in accordance with the 1994 Maryland specifications for soil, erosion, and sediment control. Erosion and sediment controls will be in place. SHA will analyze potential impacts to the canal prism, under normal and flooding conditions, as a result of infill of the canal prism and will provide the analysis to the NPS early in the design phase of the project.
- SHA will supply the NPS with a flood event action and cleanup plan.
- Tree trimming along the towpath may be required, but is not likely to be beyond the normal NPS maintenance for small vehicle access along the towpath. In the event that tree trimming along the towpath is necessary, it will occur only as consistent with the NPS maintenance for small vehicle access, and under the prior approval and direction of the NPS staff.
- Whenever possible, the SHA will conduct activities that will require closure of the towpath outside of normal C&O Canal Park operating hours. If towpath closures are required within normal operating hours, a shuttle service will be provided for park visitors whenever the towpath is closed for more than fifteen (15) minutes.
- SHA will coordinate with the NPS and Allegheny Power for the use of Lockwood Road.
- The area of temporary construction easement will not exceed 200 feet from the centerline between SHA Bridge No. 21078. Construction work will be addressed in a special use permit.
- A fish weir, a recorded archeological site located in the bed of the Potomac River a short distance upstream from the APE, will be avoided by currently proposed staging from the West Virginia side of the Potomac. Should avoidance prove impossible in future stages of this project, this resource will be evaluated for National Register eligibility and an appropriate treatment will be devised.

2. Mitigation

SHA has and will continue to coordinate with the NPS and the MHT regarding potential impacts to the C&O Canal NHP and its cultural landscape features. Mitigation measures for cultural resources impacts have been identified by SHA, MHT, NPS, and FHWA for impacts to the C&O Canal NHP, and are outlined in the MOA (**Appendix B**). In addition, SHA proposes additional environmental stewardship. A discussion of the mitigation and environmental stewardship for the project follows.

Restoration Plan

Following construction, SHA will implement a Restoration Plan, which will be developed during the final design phase in consultation with NPS and MHT.

The Restoration Plan will provide sustainable vegetation at the I-81 bridge using native species, while recognizing the need to maintain visibility of critical C&O Canal NHP features. Vegetation will be selected, as agreed to by NPS, to best restore the functions and values of the existing forested system. All trees to be removed to accommodate construction activities will be inventoried prior to construction and a 1:1 dbh replacement of approved replacement vegetation will be provided. In areas that have been previously disturbed with little to no archeological concerns, the Restoration Plan will consider the establishment of larger trees rather than numerous small trees. Additional NPS land above and beyond the immediate area of disturbance may be required for fulfilling the 1:1 dbh requirement. The Restoration Plan will address bare and erodible soils, particularly surrounding the bridge abutment areas.

The Restoration Plan will also address the repair of any damage to the towpath or canal prism that occurs as a result of construction activities.

Towpath Repair

In addition to repairs to the portion of towpath used for construction access and staging, SHA will provide funding for one (1) mile of routine towpath repair (not including significant erosion repairs) at a location to be chosen by NPS. The amount to be provided will be the 2007 known costs for routine towpath repair (\$77,000 per mile), which will be adjusted annually for inflation beginning with 2007 dollars and ending with the year of actual construction. NPS will complete the repair.

Land Exchange and Permits

NPS will pursue an exchange of land or interest in land with the SHA under the authority provided at 16 USC 4601-22(b). By means of a proposed exchange, NPS will convey to SHA perpetual deed of easement granting air rights for the bridge over the C&O Canal NHP and perpetual deed of easement for the I-81 bridge piers occupying Federally-owned land in the C&O Canal NHP. In return, SHA will provide to the NPS lands or interests in land of equal value and situated within the C&O Canal NHP boundary.

NPS will issue a temporary construction/access special use permit to govern the use of temporary construction areas.

Future Archeological Investigations within the C&O Canal NHP

SHA will consult with NPS and MHT to determine the need for additional identification, evaluation, and treatment as appropriate, of archeological resources within the C&O Canal NHP. This will include any construction easement areas on the limestone bluff tops that overlook the canal prism and towpath, or potential staging areas on floodplain areas adjacent to the project location. SHA will also implement any identification, evaluation, and treatment deemed necessary in accordance with the provisions of Stipulation III of the MOA (**Appendix B**).

Should any additional archeological investigations be necessary on lands administered by the NPS, the archeological contractor shall first apply for an Archeological Resources Protection Act (ARPA) permit, to be reviewed concurrently by the Superintendent of the C&O Canal NHP and the Regional Archeologist, National Capital Region (NCR). Applications for an ARPA permit will be obtained from the Regional Archeologist. Assuming the reviewers recommend that the application be approved, the Regional Director, NCR, will issue the permit.

Environmental Stewardship

As part of the environmental stewardship efforts for the undertaking, SHA shall provide Transportation Enhancement Program (TEP) funding to assist NPS with the stabilization and restoration of the Catocin Aqueduct, located on the C&O Canal. As the federal owner of this historic property, NPS shall be the lead agency responsible for complying with Section 106 of the National Historic Preservation Act of 1966, as amended for the stewardship project. NPS shall ensure that the plans and specifications for the work conform to the applicable approach set forth in the Secretary of Interior's *Standards for the Treatment of Historic Properties* (36 CFR Part 68).

Project Design

SHA will submit plans to FHWA, NPS, MHT and all other consulting parties for review and comment at the type, size, and location (TS&L) phase (approximately 30 percent complete), semi-final review (approximately 60 percent complete), and the final review detailed design phase (approximately 90 percent complete).

At each review phase, SHA will schedule a design review meeting to afford all consulting parties the opportunity to provide comments on aspects of the project design. SHA will produce minutes following each meeting that will document the commitments agreed upon during the review.

A minimum of thirty days prior to the contract award date, SHA will submit final construction plans and specifications to FHWA, NPS, MHT, and all other consulting parties for final review. The purpose of the final review is to ensure that all of the

comments generated at the prior design reviews have been adequately incorporated into the construction documents.

All construction staging areas and materials storage will be predetermined and shown on the final detailed design plans.

Future Activities – Cultural Resources Investigations

Related ancillary activities including, but not limited to, construction staging areas, stormwater management facilities, wetland mitigation areas, parkland mitigation areas, reforestation areas, and alignment modification or design refinements may be added to this undertaking in the future. Should activities be added for which cultural resources studies have not been completed, SHA shall ensure that consultation ensues with MHT and other relevant consulting parties including NPS and the West Virginia State Historic Preservation Office (WV SHPO), as appropriate, and that all required cultural resources studies are implemented in accordance with the applicable performance standards in Stipulation IV.

Should historic properties be unexpectedly identified during the implementation of the undertaking, SHA shall ensure that reasonable efforts are made to avoid, minimize, or mitigate adverse effects to such properties, and shall consult with MHT and FHWA to resolve any unavoidable adverse effects pursuant 36 CFR 800.6. SHA shall ensure that any resulting cultural resources work is accomplished in accordance with the relevant performance standards in Stipulation IV. NPS shall be a consulting party to any unexpected discoveries of historic properties found within the bounds of the C&O Canal NHP.

Although field investigation and archival research are unable to verify a citizen's report of a cemetery or Native American burial sites within the APE, the possibility that graves are present within the impacts area cannot be excluded. Monitoring during construction will be conducted by SHA in this location. The results of the monitoring effort shall be included in a report that will be disseminated to MHT, and special provisions will be added to the project's construction documents.

In the event that human burials are encountered during archeological investigations or construction in any portion of the project areas, SHA will ensure that any human remains and grave-associated artifacts are brought to the immediate attention of MHT and the Washington County States Attorney. No activities that might disturb or damage the remains will be conducted until MHT has determined whether excavation is necessary and/or desirable. If burials are discovered within the C&O Canal NHP, all procedures will comply with the Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601) and the NPS Publication National Register Bulletin 41 *Guidelines for Evaluation and Registering Cemeteries and Burial Places* (Washington, D.C. 1992). Otherwise, procedures will comply with Article 27, §§ 265 and 267 of the Annotated Code of Maryland. Consultation will be conducted with the appropriate affiliated Indian tribes or the Maryland Commission on Indian Affairs in the event Native American burials are encountered.

The fish weir, a recorded archeological site located in the Potomac a short distance north of the APE, will be avoided by currently proposed staging from the West Virginia side of the Potomac. Should avoidance prove impossible in future stages of the project, this resource will be evaluated for National Register eligibility and an appropriate treatment will be devised as stipulated in Section III of the MOA (**Appendix B**).

G. Consultation and Coordination

Coordination has been ongoing between, FHWA, SHA, MHT and NPS. These agencies are part of the SHA's streamlined environmental/regulatory process and have concurred with the project Purpose and Need, the Alternates Retained for Detailed Study, and the Selected Alternate/Conceptual Mitigation Document. Coordination with MHT has also been undertaken in compliance with Section 106 of the National Historic Preservation Act (see Section 3.B of the I-81 EA for additional information).

SHA coordinated with MHT on September 10, 2001 regarding standing structures, on September 29, 2003 regarding Phase I archeological survey for various alternates, and on July 8, 2004 regarding the inclusion of potential toll facilities and the extension of the project to include Bridge No. 21078. SHA received MHT concurrence in a determination of No Adverse Effect on August 4, 2004 for the I-81 Improvements Project. On January 18, 2006, SHA submitted additional information on SHA's Selected Alternate and determined that the project will have an Adverse Effect on C&O Canal NHP, which is listed in the NRHP (page 89).

SHA received a letter from the NPS dated December 9, 2005 outlining potential mitigation measures for the project (page 85). SHA met with representatives of the NPS on March 9, 2006 to discuss the project and gather feedback on the potential affects to the park. At the meeting, potential mitigation for impacts to the Section 4(f) resource was discussed and a draft MOA presented for comment.

SHA informed West Virginia State Historic Preservation Officer of the project, and associated Section 106 coordination with MHT, on March 7, 2006 and received a request for more information in October 19, 2006 (page 100).

A meeting was held on August 16, 2006 between FHWA, SHA and NPS to discuss mitigation opportunities and right-of-way concerns. The area required for easements as well as permanent and temporary uses were summarized. Due to the lack of detail available for the design, NPS requested an amendment to the MOA for unforeseen design impacts.

A meeting was held on May 29, 2007 between FHWA, SHA and NPS to discuss the status of the MOA. SHA presented mitigation agreements between NPS and SHA from similar projects. SHA also proposed the use of TEP funding toward the restoration of the Catocin Aqueduct, as part of environmental stewardship for the project. A revised MOA was drafted as a result of this meeting.

NPS provided comments on the revised MOA on February 11, 2008. SHA incorporated these comments into the draft document, and the revisions were sent to NPS on April 17, 2008.

On May 1, 2008, MHT was sent a copy of the Draft MOA for review and comment (page 86). On June 4, 2008, MHT concurred with SHA's Determination of Adverse Effects, and offered comments recommending minor revisions to the MOA.

SHA received a letter from NPS dated May 30, 2008 with a minor revision to be included in the final version of the MOA (page 81).

On November 19, 2008; the MOA was signed by NPS, SHA, MHT, and FHWA.

H. Concluding Statement

Based on the above considerations, there is no feasible and prudent alternative to the use of land from the C&O Canal NHP and the proposed action includes all possible planning to minimize harm to the C&O Canal NHP resulting from such use.

V. Summary of Public Involvement

A. Public Workshops and Meetings

The following summarizes the formal public involvement meetings held by the State Highway Administration (SHA), in chronological order.

The SHA held an Informational Public Workshop at Maugansville Elementary School, in the northern portion of the study area, on November 5, 2001. The purpose of the workshop was to introduce the project to the community and to inform the public of the Purpose and Need for the project, planning process, and existing safety/capacity issues along I-81. Approximately 80 citizens attended this workshop and expressed concerns relating to the noise generated by the interstate traffic, installation of noise barrier walls, residential displacements, truck traffic, and geometric deficiencies.

A second Informational Public Workshop was held at Williamsport High School, in the southern portion of the study area, on November 8, 2001. The purpose of the workshop was to introduce the project to the community and to inform the public of the Purpose and Need for the project, the planning process, and existing safety/capacity issues along I-81. Twenty-five citizens attended this workshop and provided comments regarding noise walls, widening to three lanes and installation of a truck weigh station along the corridor.

An Alternates Public Workshop was held on June 20, 2002 at Western Heights Middle School in Washington County. One-hundred and one people attended the workshop including local residents, community leaders, elected officials, and county representatives. The purpose of the workshop was to familiarize the public with the study and provide an opportunity for public participation in the planning process. Six build alternates and the no-build alternate were presented. The comments received ranged from concerns regarding residential and noise impacts to the increase of truck traffic along I-81.

An Informational Public Workshop was held on May 26, 2004 at North Hagerstown High School in Washington County. The purpose of the workshop was to provide citizens with an update on the project which then included four toll plaza options. Approximately 50 people attended this meeting. Public concerns included opposition to the toll options and concerns about noise and traffic.

Public outreach in areas with low-income populations included public meetings at Maugansville Elementary School, a meeting with the Lakeside Mobile Home Park, and a meeting with the Williamsport Town Council. The primary concern raised at these meetings was potential noise level changes resulting from the roadway improvements.

A Location/Design Public Hearing was conducted on October 6, 2004 at Hagerstown High School in Washington County. Five individuals provided oral testimony and approximately 20 provided written comments, summarized below and included in Section VI. The comments were assessed to determine which improvement options were

favorable by the community. This information was then utilized by SHA to make a recommendation to the Administrator.

B. Summary of Written Comments and SHA Responses

- The majority of citizens were opposed to the toll plaza options due to concerns about the actual payment of tolls, the possibility of diverted traffic (users who will potentially avoid the tolls) through residential areas, and the potential for increased vehicle emissions. SHA responded that toll options were under consideration due to the severe financial constraints faced by the State of Maryland, and the fact that the toll options could help fund the project and significantly decrease the construction timeframe of improvements to I-81. In addition, SHA noted that in order to understand the effects of the tolls on surrounding roads, a traffic study was undertaken to analyze existing and future traffic along US 11 and MD 63. The study indicated that it will be unlikely that these roads will support diverted traffic (due to toll avoidance) because of either geometric or capacity limitations. Therefore, drivers will likely remain on I-81. (Note: While toll options were under consideration at the time of the Location/Design Public Hearing, toll options are not included in the SHA Selected Alternate.)
- Several citizens were concerned about the weigh station option. SHA indicated that the 12-mile segment of I-81 in Maryland and the 26-mile segment in West Virginia do not include truck weigh stations. The limited enforcement activities that have been conducted show a significant number of violations; therefore, truck weigh station options were being considered to help increase safety along the corridor. (Note: While weigh station options were under consideration at the time of the Location/Design Public Hearing, they are not included in the SHA Selected Alternate.)
- Several residents were also concerned about noise levels. SHA summarized the technical noise analysis and provided the SHA's Sound Barrier Policy and FHWA's noise abatement criteria, explaining why noise barriers were not recommended at this time. (Note: An updated noise analysis was conducted and the findings presented in *I-81 Technical Noise Report – May 2009*, finding that noise abatement is warranted at NSAs D, F, G, I, and P.)
- A small number of citizens commented on various environmental concerns. SHA addressed specific concerns regarding soils and mitigation measures, and included in the response a copy of the Natural Environment Technical Report.

In addition to the public meetings and hearing, the SHA conducted approximately ten meetings with local businesses and communities along the I-81 corridor to inform them of the proposed actions being considered and the potential impacts to their businesses and communities (Table 13). Community associations generally expressed support for the project, but were concerned about traffic diversions caused by the toll options and noise issues. Several business owners were concerned by the potential financial impact due to restricted access and the placement of tolls.

Table 13: Local Business and Community Meetings

Date	Business/Community	Comments/Concerns
June 30, 2003	Hagerstown Business Community	Expressed the need to widen I-81
June 26, 2003	Ghattas Enterprises	Preferred Option B
June 26, 2003	Microtel Hotel	Financial impacts and restricting access
June 26, 2003	Burger King	Financial impacts
June 26, 2003	Lakeside Mobile Home Park	Noise
June 7, 2004	Outback Steakhouse	Effects of placing tolls on workers who commute from Pennsylvania and West Virginia
June 7, 2004	Bowman Development Corporation	Concerned about other future development planned for site
June 14, 2004	Williamsport Town Council	Diversion of traffic off of I-81 to avoid paying the toll
June 24, 2004	Hagerstown Regional Airport	Placement of the toll plazas in or near the airport protection zone and economic development areas

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VI. Comments and Coordination

Agency coordination and public involvement were conducted throughout the project planning process for the I-81 Improvement Project. This section summarizes the coordination with federal, state and local agencies conducted since the approval of the Environmental Assessment. The agency coordination letters are provided at the end of this section.

A. Streamlined Process Coordination

As part of the State Highway Administration (SHA) streamlined environmental and regulatory review process, interagency meetings were held throughout the course of the I-81 Improvement Project. Agencies involved in the meetings included SHA, Federal Highway Administration, National Marine Fisheries Service, US Fish and Wildlife Service, Environmental Protection Agency, National Park Service, US Army Corps of Engineers, Maryland Department of Natural Resources, Maryland Department of the Environment, Maryland Historical Trust, Maryland Transportation Authority, Maryland Department of Planning and other federal, state, and local government agencies. Key milestones of the Interagency Project Review included meetings for field reviews, Purpose and Need, Alternates Retained for Detailed Study and the SHA Selected Alternate/Conceptual Mitigation (SA/CM).

The streamlined process coordination documentation for the Purpose and Need and Alternates Retained for Detailed Study can be found in the Environmental Assessment. Since the approval of the Environmental Assessment, SHA presented the SA/CM package to the agencies. A draft SA/CM was submitted on March 15, 2006. After receiving agency comments, a revised SA/CM was resubmitted to the agencies on May 21, 2008. Table 14 provides a listing of the agency correspondences on the SHA's SA/CM package.

Table 14: SHA SA/CM Agency Correspondence

Correspondences	To	From	Date
Concurrence on SA/CM	SHA	Federal Highway Administration	07/09/2009
Concurrence on SA/CM	SHA	US Fish and Wildlife Service	12/22/2009
Concurrence on SA/CM	SHA	Maryland Department of the Environment	10/08/2008
Concurrence on SA/CM	SHA	Maryland Department of Planning	9/19/2008
Concurrence on SA/CM, requested that SHA address USFWS comments on Indiana bat	SHA	Maryland Department of Natural Resources	9/19/2008
Concurrence on the SA/CM	SHA	Maryland Historical Trust	9/18/2008
Concurrence on SA/CM	SHA	Environmental Protection Agency	9/18/2008
Requested additional information regarding the Indiana bat	SHA	US Fish and Wildlife Service	9/18/2008
Concurrence on SA/CM	SHA	Maryland Historical Trust	9/18/2008
Concurrence on SA/CM	SHA	National Park Service	9/12/2008
Suggestion to conduct detailed archeological assessments on all potential and preferred mitigation sites, particularly the WM-2 McCauley site.	SHA	Maryland Historical Trust	6/4/2008

B. Government Agency and Elected Officials Comments

A summary of comments provided by government agencies and elected officials since the Location/Design Public Hearing is provided in Table 15 and Table 16. A complete copy of written comments and SHA's response to each comment is provided at the end of this section.

Table 15: Summary of Government Agency Comments

Date	Comment	From
June 4, 2008	Comments following review of the MOA. Suggested additional language be included.	Maryland Historic Trust
May 30, 2008	Comment for the final version of the MOA.	National Park Service
April 19, 2007	Mitigation suggestions for impacts to the C&O Canal NHP and comments on MOA	National Park Service
February 22, 2006	Additional Coordination with the NPS is necessary for adverse effect as consultation proceeds	Maryland Historical Trust
December 9, 2005	Mitigation suggestions for impacts to the C&O Canal NHP	National Park Service
November 3, 2004	Opposed to all tolling options and weigh station. Suggested improvements to the MD 58 westbound exit ramp. Supports Option A for Maugans Avenue interchange.	Robert Slocum, PE Deputy Chief Engineer Washington County, Maryland, Engineering Department
November 3, 2004	Comments on development of Toll Options 1, 3, and 4	Dennis Simpson, Planning Manager, Maryland Transportation Authority

Table 16: Summary of Elected Officials Comments

Date	Comment	From
March 29, 2005	Supports widening of I-81. Opposes tolls and removal of the Marshall Street interchange	The Honorable William Breichner ,Mayor, Hagerstown, Maryland
November 5, 2004	Expressed concerns about toll plazas near the West Virginia state line due to traffic congestion and air quality issues	The Honorable Steven C. Teuffel, President, Berkley County Commission, West Virginia

C. Summary of Public Comments

A summary of public comments from the Location Design Public Hearing is found in Table 17. A complete copy of written comments and SHA's response to each comment is provided at the end of this section.

Table 17: Public Hearing Written Comments

Date	Comment	From
November 11, 2004	Opposed toll booths and weigh station due to air quality concerns	Terry and Tony Shrader
November 3, 2004	Opposed to toll options due to increased truck volume	Tracy Moats
November 2, 2004	Opposed to toll plazas Comments on roadway improvements	Leslie Wolf
October 6, 2004	Opposed to toll options	Gregory Snook
October 6, 2004	Opposed to toll options	Anonymous
October 6, 2004	Opposes toll options and weigh station Favors I-81 improvements	Kelly and Robert Slogum
October 4, 2004	Concerns about ambient air quality due to toll plazas and weigh station in the Maugans Avenue area	John Felder
September 24, 2004	Requests I-81 access at West Washington Street	Robert Seek
September 23, 2004	Favors widening I-81 Opposes toll plaza options	W.J. Myers
September 20, 2004	Comments on soil characteristics and mitigation plans	Susan Semas
September 18, 2004	Opposed to toll plazas	Herman Serig III
September 17, 2004	Comments on noise level guidelines, truck weigh station options, toll options	Benjamin Chlebnikow
September 16, 2004	Opposed to toll options Supports interchange improvements only	Terry Land
September 16, 2004	Favors Options 3 or 3A with toll plazas	Thomas Horst
September 15, 2004	Requested information about environmental impacts Supports Alternate 2 and Toll Option 4	Bernadette Wagner
September 15, 2004	Opposed to toll options	Charles Reed
Unknown	Opposes any tolls	Anonymous

Government Agencies and Elected Officials Comments



United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

IN REPLY REFER TO:

D30 (NCR-LRP)

MAY 30 2008

Mr. Nelson J. Castellanos
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
DELMAR Division - Maryland
10 South Howard Street, Suite 2450
Baltimore, Maryland 21201

Dear Mr. Castellanos:

We have received the revised Memorandum of Agreement pertaining to the Interstate 81 improvements in Washington County, Maryland. We have reviewed the revised document and offer a single addition for the final version. We ask that under Section IV C (Curation), a notation be added that copies of all records sent to the Museum Resource Center be sent to the Chesapeake and Ohio Canal National Historical Park Library.

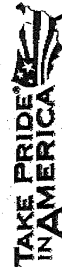
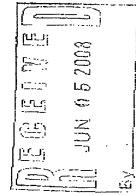
We look forward to implementation of this agreement with your office and the Maryland State Highway Administration. Should you have any questions, please contact the office of Lands, Resources and Planning at (202) 619-7025.

Sincerely,

Lisa A. Mendelson-Jelmini

Regional Director, National Capital Region

cc:
Ms. Beth Cole
Maryland Historical Trust



United States Department of the Interior

NATIONAL PARK SERVICE
C&O Canal National Historical Park
1830 Dual Highway, Suite 100
Hagerstown, Maryland 21740

REPLY REFER TO
L32 (CHOH)

April 19, 2007

Ms. Denise King
Federal Highway Administration
Maryland Division
10 South Howard Street, Suite 2450
Baltimore, Maryland 21201

Ms. King:

In accordance with the timeline agreement set during the Interstate 81 project meeting on August 18, 2006, we offer the following information.

Mitigation

Mitigation for the proposed expansion of Interstate 81 is in response to the need for temporary construction activities and for the exchange of land needed for Interstate 81 within the boundaries of the Chesapeake and Ohio Canal NHP. The temporary construction activities have the potential to impact park resources. The proposed project will also impact park operations and create an extensive area of over one mile of construction interruption for our park visitors. The mitigation cited below will not be limited to the Interstate-81 project area.

Based on past projects and comparable impacts of this project, we estimate that mitigation should range between \$2,000,000 and \$3,000,000. The value of the project mitigation will be adjusted annually for inflation beginning with 2006 dollars and ending with the year of actual construction.

We have looked at several categories for potential mitigations. Due to the fact that construction funding, as stated by Maryland State Highway staff in the August 18 meeting, may not occur for at least ten years, we are hard pressed to develop detailed scopes of work for the proposed mitigations. The final mitigations for the project will be dependent upon the design and development of the construction drawings and projected impacts to the park's resources and operations. The mitigations offered, also, are generic in nature. We have selected these items, as they are a consistent need within the park each year. More detailed scopes of work will be provided upon the development of the construction drawings with known areas of impacts to park resources and visitor enjoyment.

In keeping with the National Park Service's procedure for cost estimations on future projects, we are supplying totals under Class C estimates. These figures are based on current known costs for similar projects or from construction estimate guides, such as R.S. Means.

a. Towpath Repairs Scope of Work –

The historic canal towpath is a relatively level earthen pathway that was constructed for use by mules and handless to pull canal boats along the C&O Canal. The towpath embankment also served to contain water within the canal prism. Today this pathway is used by park visitors as the main pedestrian travel corridor within the park. Visitors can travel from Georgetown, DC to Cumberland, MD along the Potomac River. In several sections of the park, the canal is rewatered and the maintenance and integrity of the towpath embankment is integral to the containment of canal waters.

The towpath is a ten-foot wide gravel corridor. While privately-owned vehicles are not permitted on the towpath, park maintenance and emergency vehicles do have access to the towpath.

The towpath requires routine maintenance. Basic wear and tear involves the development of puddles and ruts. Frequent erosion occurs because of flood events which includes the washing away of crusher run topping and critical earth sub-base material.

Towpath repairs require correction of deficiencies through minor grading, application of park specified crusher runs, and repairs of erosion areas under the guidance of the park's engineer. Sufficient drainage will be established. Drainage will be toward the canal whenever possible; otherwise, drainage will be toward the river. Drainage should be 1 inch for every 4 feet.

Anytime more than 12 inches of fill material is required to bring the towpath to grade or to develop appropriate drainage, the existing towpath surface will be scarified in order to properly receive and bond the new materials. Materials will be applied in 6-inch lifts and will be sufficiently compacted by making five passes with 50% overlap.

A layer of not less than 6 inches of towpath surfacing aggregate will be applied and, depending on conditions, may need to be applied in two or more equal layers with proper compaction.

Current Class C estimate for the average cost per mile for routine towpath repairs (not including significant erosion repairs) is \$77,000.

b. Hazard Tree Removal Scope of Work–

The C&O Canal NHP contains forested terrain. Hazard trees are removed to ensure the safety of park visitors, park employees, and the protection of park resources. Hazard trees are damaged or dead trees that have the potential to fall within visitor use areas or have the potential to uproot, causing damage to historic structures.

Current Class C estimates for contract work is for 140 hazard trees at \$138,000.00.

c. Historic Structures Repair (Masonry) Scope of Work –

The C&O Canal NHP preserves the most intact 19th Century American canal system in North America. The National Park Service is responsible for the preservation and maintenance of 1368 individual historic structures associated with the historic canal. The majority of these structures, excluding the historic towpath and canal prism, are masonry. These structures include culverts, waste weirs, locks, bypass flumes, guard locks, river locks, bridge abutments, and aqueducts. The *Secretary of Interior's Standards for the Treatment of Historic Properties* provides park staff with guidance on appropriate preservation treatments for the structures.

Work to any feature near water will have stabilized construction entrances. Straw bale dike and silt fencing will be established in accordance to state and local regulations. Excavation and/or realignment of existing stonework, repoint masonry mortar joints of headwalls, wingwalls and barrel vaults will be to NPS standards and guidelines. All disturbed areas will be stabilize by seeding and mulching within 7 days.

Repointing of existing masonry structures will be with appropriate/approved mortar mixes and includes minor replacement of missing masonry components. All work is to match the original.

Class C estimate for raking repointing mortar joints on historic masonry structures is \$25-35 per square foot. To provide replacement stone can cost up to \$300 per square foot.

d. Visitor Amenities (comfort stations, contact stations, emergency call boxes, etc.)–

The park provides basic amenities for park visitors. These amenities range from flush toilet comfort stations to porta-lets at remote hiker/biker campsites. Both municipal and potable well water sources are located within the park. Visitor contact stations are located at various locations within the park. These contact stations provide educational information to park visitors.

Capital property depreciation and deterioration from usage affects all of the above listed facilities. As a result, the park is required to routinely request funding for repairs or replacement.

Class C cost estimates for these types of facilities vary.

e. Specific individual projects –

Upon Interstate 81 construction funding, park managers and Maryland State Highway Administration managers should revisit the mitigation listing to identify any individual projects, such as the Williamsport Lift Bridge, to be included within the overall mitigation actions.

Cultural Resources Review

Dr. Stephen Potter, National Capital Regional Archeologist, has reviewed the cultural resource report and has submitted his comment via email dated September 7, 2006. Melissa Hess, SHA, was copied on his review comments. Dr. Potter's comments are contained within the suggested revisions to the Memorandum of Agreement of this letter.

Memorandum of Agreement

We have some concerns regarding the Section 4f temporary construction easements. In order to be exempt from the provisions of Section 4f, the temporary construction easements need to be used less than the duration of the project, and not remove any mature vegetation. This requires us to evaluate them on a case-by-case basis. The current project plans are not detailed enough to determine the level of impacts. SHA needs to show exactly where the temporary construction easements will be so that we can make this determination.

Specific MOA clause changes;

The MOA needs to include a clause that cites NPS authority. Please insert "WHEREAS The NPS enters into this MOA pursuant to the authorities found at 16 U.S.C. Section 1-3.

Section I.B. Please add the following language: Should any additional archeological investigations be necessary on lands administered by the NPS, the archeological contractor shall first apply for an Archeological Resources Protection Act (ARPA) permit, to be reviewed concurrently by the Superintendent of the C&O Canal NHP and the Regional Archeologist, National Capital Region (NCR). Applications for an ARPA permit may be obtained from the Regional Archeologist. Assuming the reviewers recommend that the application be approved, the Regional Director, NCR, will issue the permit.

Section I.E. Please change to read "MD SHA will analyze and mitigate storm water runoff impacts along US 11 at the C & O Canal NHP entrance and the historic Cushman warehouse at the Cushman Basin in Williamsport.

Section III. B. Please add the NPS as a consulting party to any unexpected discoveries of historic properties, particularly if they are found within the bounds of C&O Canal NHP.

Section IV. A. This section makes reference to 36 C.F.R. Part 61, Appendix A. We do not know of an Appendix A for the C.F.R. cited. Perhaps the reference should be 36 C.F.R. Part 61.4(e), which provides that State Historic Preservation Officers must appoint or employ a professionally qualified staff.

IV. C. All materials and records resulting from cultural resource investigations on C&O Canal NHP are the property of the federal government, to be curated by the NPS at the NCR's Museum Resource Center (MRCE) in Landover, Maryland.

Additional MOA conditions;

Upon determination of project construction dates, the SHA will resubmit Threatened and Endangered Species review requests to the appropriate review agencies. Updated information will be submitted for review by the National Park Service. Necessary changes in project planning will be undertaken to address any potential impacts to identified resources.

The MOA will have a sunset date NTE 5 years upon which time the MOA will be reassessed by all signatory parties. A time period NTE 10 years can only be used if requested and justified in writing, and approved by solicitor review. If SHA desires a time period exceeding 5 years, please submit written justification.

The MOA needs to include the name, address, telephone number, facsimile number, and email address for all key officials.

Please add the following standard clauses:

Civil Rights. All activities pursuant to this MOA shall be in compliance with all federal laws and regulations prohibiting discrimination on grounds of race, color, sexual orientation, national origin, disabilities, religion, age, or sex.

Publication of Results of Studies. No signatory will unilaterally publish a joint publication without consulting the other signatories. This restriction does not apply to popular publication of previously published technical matter. Publication pursuant to this MOA may be produced independently or in collaboration with others; however, in all cases proper credit will be given to the efforts of those contributing to the publication. In the event no agreement is reached concerning the manner of publication or interpretation of results, any signatory may publish data after due notice and submission of the proposed manuscripts to the others. In such instances, the signatory publishing the data will give due credit to the cooperation but will assume full responsibility for any statements on which there is a difference of opinion.

Letter of Concurrence

Project concurrence will need review and signature approval from the Regional Director, Joseph Lawler. Susan Hinton, Regional Transportation Liaison, will coordinate the review and approval of this correspondence. Ms. Hinton can be reached at (202) 619-7106.

Right-of-Way

The NPS intends to pursue an exchange of land or interests in land with the Maryland State Highway Administration (SHA) under the authority provided at 16 USC 460j-22(b). By means of a proposed exchange, NPS would convey to SHA a permanent easement granting air rights for the bridge over the park and a permanent right for the bridge piers in the park. In return, NPS would expect to receive from SHA lands or interests in land of equal value and situated within or

6
adjacent to the park boundary. Our preference is to acquire replacement lands or interests therein located in proximity to the Route 81 project, if possible.

Limits for Construction

SHA has asked park staff for information regarding access limits to the projected work zone. SHA has indicated that there is no other means of access to the site except via the historic towpath. No further information was offered in the August 18 meeting regarding access from the Potomac River.

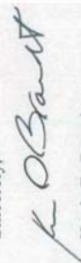
The historic towpath has a park-wide Gross Vehicle Weight (GVW) restriction not to exceed 12 tons. All vehicles must be single axle. However, other historic structures to be crossed by vehicles and equipment, such as culverts and waste weirs, are evaluated on case-by-case basis as they are typically rated at a lower GVW. An engineering evaluation for such structures within the project zone will be required and appropriate measures will be taken to ensure no damage will be incurred.

The current proposed area for construction staging at the bridge will affect mature trees and vegetation. In addition to the mitigation measures listed previously, all trees to be removed will need to be inventoried and a 1:1 dbh replacement will be required.

SHA has proposed using the area of the historic canal prism and towpath as project staging. A very general staging area has been outlined. It is difficult at this time, based on the information presented, to make a determination for total resource impacts. While other construction projects have established fill within the canal prism, this project appears to exceed the cubic yard volume of these other projects. Should the canal prism be temporarily infilled, means and methods to restore the canal prism to preconstruction grades and topographical details will need to be ensured. Typically, the NPS requires a fabric filter barrier be placed on existing terrain prior to adding the infill.

We hope that we have addressed all outstanding issues. Should you need further clarification, please contact Lynne Wigfield, Compliance Officer, at (301) 745-5802.

Sincerely,



Kevin D. Brandt
Superintendent

cc: Ms. Elizabeth J. Cole, MD Historic Trust, 100 Community Place, Crownsville, MD 21032
Mr. Joe DeVita, U.S. Army Corps of Engineers, Baltimore District, P.O. Box 1715, Baltimore, MD 21203-1714
Mr. Sean McKewen, MDE, 160 South Water Street, Frostburg, MD 21532

bcc:
NCR-Surname/File
NCR-JT'arson
NCR-Transportation Liaison-Susan Hinton
NCR-CHOH-LWigfield
NCR-CHOH-BCarlstrom
NCR-CHOH-STamburro
NCR-CHOH-PSBell
NCR-CHOH-BHofe
NCR-CHOH-BSpinrad
NCR-CHOH-DCopenhaver
NCR-CHOH-WSpiurad

LWigfield: jac:Interstate 81 Project: 4/5/07

sent for JEP 4/6/07



United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

IN REPLY REFER TO:

L30 (NCR-LRP)

DEC 9 2005

Mr. Raja Veeramachaneni
Director

Office of Planning and Preliminary Engineering
Maryland State Highway Administration
707 North Calvert Street, 3rd Floor
Baltimore, Maryland 21202

Dear Mr. Veeramachaneni:

In July, members of the Maryland State Highway Administration (SHA) met with park staff to discuss the Interstate 81 Expansion Project. During that meeting, SHA members asked if there would be any mitigations that could be provided to the Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP) to offset the potential impacts of this project. We thank you for the opportunity to provide mitigation suggestions pertaining to the Interstate 81 Expansion Project.

The C&O Canal NHP preserves the most intact example of a 19th century canal system in the United States. While we would like things to remain status quo in regards to modern impacts, we are not against the proposed expansion of the existing I-81. We have expressed that lane widening to the inside of the existing north and south bound lanes would be the alternative to provide the least impact to the park. We offer the following information pertaining to mitigations for your consideration:

1. Provide sustainable vegetation at the US 11 and I-81 bridges using native species. We realize that bridge abutment areas are difficult at best to vegetate, but we would encourage development and implementation of a landscape plan that could address bare soil and erodeable areas.
2. Lock 44 water leak problem. Lock 44 is a historic canal feature, located between US 11 and I-81 near Lockwood Road. The lock and associated lockhouse have undergone extensive preservation work within the last 10 years. Lock 44 is within an area of the C&O Canal NHP and, is currently artificially rewetted to present an example of what the canal would have looked like during its operational period. The wetted section begins at the Cushwa turning basin and was intended to extend to Lockwood Road. However, there is a leak within the canal prism in the vicinity of

TAKE PRIDE
IN AMERICA

Lock 44. To date, we have not procured funding to determine the source of the leak and, as a result, we have had to establish a clay dike upstream of the lock and halt the water from entering the lock. This is unfortunate as the lock is a key element pertaining to the operation of the canal. Williamsport is our most densely populated area of the canal and has a variety of historic canal features. It is our hope that one day we will be able to make this area a high priority visitor destination that would include an operational canal boat demonstration.

3. Repairs to the clay liner of the canal prism. The historic C&O Canal NHP used clay as a waterproof liner within the canal prism. We continue to use clay as our main method for canal repairs. The canal prism near Lock 44, once the leak is repaired, would need attention to the clay liner so that we would be able to extend the watered area through Lock 44 to Lockwood Road.
4. Performing preservation/maintenance to historic stone bridge abutments at Falling Waters. This site is approximately four (4) miles downstream of I-81. These stone abutments are the remaining components of a bridge that spanned the canal at this location. Some sources indicate that this was one of the pivot bridges that was constructed by the C&O Canal Company. There is also some information regarding a ferry operation in this location, which would have used the bridge as a means of river access. The stone abutments are constructed of rough-cut limestone. The abutments are in need of vegetation removal and repointing of masonry joints.
5. Screening or noise barriers in conjunction with I-81 boundaries of project. These barriers would help reduce the impacts of the roadway within the park.
6. Preservation maintenance on the historic lift bridge adjacent to the US 11 bridge. This iron bridge was constructed circa 1923 to carry a railroad line across the canal to the Potomac Edison powerplant. The deck of the bridge could be raised to a height of 17 feet above the canal to accommodate the passage of canal boats. The nearby Cushwa Basin was extensively used as a coal transfer location for boats bearing coal from Western Maryland.
7. Correct stormwater drainage issues along Route 11 at the Cushwa Basin in Williamsport. Currently the stormwater runoff impacts our gravel entrance area and the historic Cushwa warehouse.
8. Preservation maintenance of historic masonry stonework within the corridor of the project area. This could include repairs to historic masonry culverts, retaining walls, waste weirs, abutments, etc. This would not include repairs to the Conococheague Aqueduct.

We thank you for the opportunity to outline some of our resource concerns within the project area. We hope that these types of mitigations will be feasible in conjunction with your expansion project. Please address all correspondence and document review to my attention and copies to Kevin Brandt, Superintendent, C&O Canal NHP, Lynne Wigfield, Compliance Officer, C&O Canal NHP and William Spinrad, Lands Coordinator, C&O Canal NHP, 1850 Dual Highway, Hagerstown, Maryland 21740. If you have any questions, please contact Lynne Wigfield at (301) 745-5802.

Sincerely,



Regional Director, National Capital Region

cc:

Mr. Rodney Little, MD Historical Trust
Ms. Odessa Phillip, SHA
Ms. Caryn Brookman, FHWA, Maryland Division
Ms. Denise King, FHWA, Maryland Division

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor



John D. Porcari, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

May 1, 2008

RE:

Project No. WA128B11
I-81: West Virginia State Line to
Pennsylvania State Line
Washington County, Maryland
USGS Williamsport, Hagerstown, and Mason-
Dixon 7.5" Quadrangle

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville MD 21032-2023

Dear Mr. Little:

This letter serves to provide the Maryland Historical Trust (MHT) with the Memorandum of Agreement (MOA) for the proposed SHA Project No. WA128B11 on I-81 from the West Virginia State Line to the Pennsylvania State Line in Washington County, Maryland. On February 2, 2006, MHT concurred with the Maryland State Highway Administration's (SHA) determination that this project would have an adverse effect on the Chesapeake & Ohio Canal National Historical Park, which is listed in the National Register of Historic Places.

SHA requests that you review the MOA for the project (Attachment 1) and provide us with comments by May 15, 2008. The MOA outlines the measures that will be implemented to avoid, minimize, and mitigate the adverse effects of the project. SHA has invited the National Park Service (NPS) to be a signatory to the MOA. Staff of the NPS, National Capital Region and staff of the Chesapeake & Ohio Canal National Historical Park have reviewed and commented on the MOA. SHA has revised the MOA in accordance with the NPS comments, as indicated on the comment sheet included as Attachment 2.

Please contact Ms. Melissa Blair at 410-545-8560 (via email at mblair@sha.state.md.us) with questions regarding the MOA.

My telephone number/toll-free number is

Maryland Relay Service for Impaired Hearing or Speech: 1.800.735.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone: 410.545.0300 • www.marylandroads.com

Mr. J. Rodney Little
I-81: West Virginia State Line to Pennsylvania State Line
Page Two

Very truly yours,

Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

by:

Julie M. Schablitsky
Julie M. Schablitsky
Cultural Resources Team Leader
Project Planning Division

Attachments: 1) Memorandum of Agreement
2) Review Comments Sheet

cc: Ms. Melissa Blair, SHA-PPD
Mr. Kevin Brandt, National Park Service, C&O Canal NHP (w/Attachments)
Ms. Carol Ebright, SHA-PPD
Mr. Bruce M. Grey, SHA-OPPE
Ms. Susan Hinton, National Park Service, National Capital Region (w/Attachments)
Ms. Denise King, FHWA (w/Attachments)
Mr. Joseph Kresslein, SHA-PPD
Ms. Heather Lowe, SHA-PPD
Dr. Julie Schablitsky, SHA-PPD
Ms. Nicole Washington, SHA-PPD
Ms. Lynn Wigfield, National Park Service, C&O Canal NHP (w/Attachments)
Ms. Alexis Zimmerer, SHA-PPD

Concurrence with the MD State Highway Administration's
Determination(s) of Eligibility and/or Effects

Project Number: WA128B11 MHT Log No. 200801363
Project Name: I-81: West Virginia State Line to Pennsylvania State Line
County: Washington County
Letter Date: May 2, 2008

The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MD State Highway Administration's determinations as follows:

Eligibility (as noted in the Eligibility Table [N/A]):

☐ Concur
☐ Do Not Concur

Effect (as noted in the Effects Table [N/A]):

☐ No Properties Affected
☐ No Adverse Effect
☐ Conditioned upon the following action(s) (see comments below)
☐ Adverse Effect

Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable):

☐ Agree

Comments:

SEE ATTACHED CONTINUATION SHEET

By:

Epig Cole
MD State Historic Preservation Office/
Maryland Historical Trust
Date: 6/4/2008

Return by U.S. Mail or Facsimile to:
Dr. Julie M. Schablitsky, Cultural Resources Team Leader, Project Planning Division,
MD State Highway Administration, Room 717, Baltimore, MD 21203-6717
Telephone: 410-545-8870 and Facsimile: 410-209-5004

cc:

Denise King (FHWA)
Kevin Brandt (C&O Canal)
Lynn Wigfield (C&O Canal)
Susan Hinton (NPS)
Nicole Washington (SHA)

Concurrence with the MD State Highway Administration's
Determination(s) of Eligibility and/or Effects

CONTINUATION SHEET #1
Maryland Historical Trust Comments

Project Number: WA128B11 MHT Log No. 200801363
Project Name: I-81: West Virginia State Line to Pennsylvania State Line
County: Washington County
Letter Date: May 2, 2008

Thank you for providing the Maryland Historical Trust with an opportunity to review the following documents SHA prepared for the I-81 undertaking:

1. Draft Memorandum of Agreement and
2. SHA Selected Alternate/Conceptual Mitigation (SACM) Concurrence Document.

The draft MOA provides a reasonable and appropriate array of mitigation measures to resolve the undertaking's adverse effect on the C&O Canal National Historical Park and establishes procedures for ongoing consultation between the signatory parties to address historic preservation issues during the design and construction phases of the project. We recognize that the MOA reflects the results of extensive negotiation between SHA and NPS to develop the resulting mitigation package. We offer the following comments and look forward to working with SHA and NPS to finalize the MOA and implement its stipulations:

1. The MOA should include a header with its title and page numbers:
Memorandum of Agreement
I-81 Improvement Project from the WV to PA Lines
Page ___ of ___
2. Stipulation I.C Towpath Repair: This section should stipulate the party responsible for performing the towpath repair of the additional one mile of towpath chosen by NPS. Will SHA provide the funding to NPS who will then complete the repair? Or will SHA both fund and construct the repairs?
3. Stipulation IV.B: Please list the Advisory Council's new archaeology guidance - *Advisory Council on Historic Preservation - Section 106 Archaeology Guidance* (ACHP 2007).
4. The SACM discusses an environmental stewardship component of the project that would be used for enhancement activities over and above the mitigation measures and post construction restoration activities for the C&O Canal NHP. The document states that SHA intends to use TEP funds to assist the NPS with restoration of the Catocin Aqueduct on the C&O Canal. We applaud SHA's stewardship efforts for this project and believe that stewardship should be acknowledged as a component of the MOA, as was done for the ICC project. We suggest the following language for the MOA:

Environmental Stewardship – Restoration of the Catocin Aqueduct

As part of the environmental stewardship efforts for the Undertaking, MD SHA shall provide Transportation Enhancement Program funding to assist NPS with the stabilization and restoration of the Catocin Aqueduct, located on the C&O Canal. As the federal owner of this historic property, NPS shall be the lead agency responsible for complying with Section 106 of the National Historic Preservation Act of 1966, as

Concurrence with the MD State Highway Administration's
Determination(s) of Eligibility and/or Effects

CONTINUATION SHEET #2
Maryland Historical Trust Comments

Project Number: WA128B11 MHT Log No. 200801363
Project Name: I-81: West Virginia State Line to Pennsylvania State Line
County: Washington County
Letter Date: May 2, 2008

amended for the stewardship project. NPS shall ensure that the plans and specifications for the work conform to the applicable approaches set forth in the Secretary of Interior's *Standards for the Treatment of Historic Properties* (36 CFR Part 68).

5. The SACM presents information on SHA's wetland and stream mitigation sites and identifies the preferred wetland mitigation site as WM-2 McCauley site, situated on the north side of Conococheague Creek near the PA/MD border. We understand that SHA has not yet done any internal assessment of the proposed mitigation sites with its cultural resources staff for potential effects on historic properties. Since the SACM provided a detailed aerial photograph of the WM-2 McCauley site, we examined our records for information about this property. Our preliminary look at this parcel suggests that it may have substantive archeological resources, including the potential for human remains, which could be adversely affected by planned wetland creation activities.

The Maryland Inventory of Historic Properties records two known archeological sites, 18WA54 and 18WA56, on the parcel, and identifies several other known sites adjacent to the property. Site 18WA54 is recorded as a multiple-component site with prehistoric remains associated with Late Archaic and Woodland base camps and an 18th – 19th c. slave quarter. Site 18WA56 consists of a prehistoric lithic scatter. Both sites were recorded by professional archaeologist Michael Stewart in 1980, but have never been evaluated for their National Register eligibility. SHA should not present WM-2 as its preferred mitigation site until it has carefully assessed its potential for impacts to archeological resources and determined that the site does not contain any fatal flaws that would preclude its use as a wetland mitigation site. At this stage of project planning, it is certainly prudent and advisable for SHA to complete detailed cultural resources assessments of not only its preferred but also its short list of possible mitigation parcels. SHA should closely examine its internal coordination procedures for these mitigation sites, to ensure that it has the information to make informed decisions during the critical stages of project planning.



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Petersen, Administrator

Maryland Department of Transportation
January 18, 2006

Re:

Project No. WA128B11
I-81: West Virginia State Line to
Pennsylvania State Line
Washington County, MD
USGS *Williamsport, Hagerstown, and Mason-*
Dixon 7.5" Quadrangles

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 provide the Maryland Historical Trust (MHT) with additional information regarding the Maryland State Highway Administration's (SHA) proposed Project No. WA128B11, and to inform you of our finding that the project will have an adverse effect on historic properties. This project was previously coordinated with the MHT on September 10, 2001 regarding standing structures, on September 29, 2003 regarding Phase I archeological survey for the various alternates, and on July 8, 2004 regarding the inclusion of potential toll facilities, extension of the project to include the I-81 bridge over the Potomac River, and revisions to the boundary of the Garden of Eden (MIHP WA-I-377). SHA received your latest concurrence in a determination of No Adverse Effect on August 4, 2004 for the I-81 corridor project. Since that time, SHA has identified a Selected Alternate and the scope of the project has been further defined.

SHA's Selected Alternate is Alternate 3A – Inside Widening with Collector-Distributor Roads. This alternate includes widening I-81 between the West Virginia State Line and the Pennsylvania State Line, and the construction of a two-lane Collector-Distributor Road. The Collector-Distributor Road would extend from the I-81/I-70 interchange through the I-81/Halfway Boulevard interchange, removing the merge and weave problems from the mainline between these interchanges. Interchange improvements are as follows:

Exit 1: I-81 @ MD 68 – The acceleration lane provided for traffic coming from Conococheague Street (MD 68) to southbound I-81 would be extended.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech: 1.800.735.2258 Statewide Toll Free
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Mr. J. Rodney Little

I-81: West Virginia State Line to Pennsylvania State Line
Page Two

Exit 2: I-81 @ US 11 – All of the existing acceleration/deceleration lanes would be extended, except for the deceleration lane provided for traffic traveling from northbound I-81 to US 11.

Exit 3: I-81 @ I-70 – Acceleration/Deceleration lanes would be extended to provide safer merge areas. Ramp terminals would be redesigned to tie in with the mainline. An auxiliary lane similar to the one provided in the southbound direction along I-81 would be provided in the northbound direction between I-70 and Halfway Boulevard.

Exit 4: I-81 @ Halfway Boulevard – This interchange was reconstructed in November 2000. Therefore, no major changes are anticipated.

Exit 5: I-81 @ US 40 – The interchange would be converted from a full cloverleaf to a diamond or half-cloverleaf design. The ramps in the northwest (US 40 west to I-81 south) and southeast (US 40 east to I-81 north) quadrants would be removed and replaced with slip ramps. In addition, an auxiliary lane would be constructed in both directions along I-81 between the US 40 interchange and MD 58 (Cearfoss Pike).

Exit 6: I-81 @ MD 58 – The acceleration/deceleration lanes at this interchange would be extended in order to meet current AASHTO standards and accommodate growing traffic volumes along I-81. A second option would be to eliminate the loop ramps and use the existing off ramps with signalized intersections at MD 58. An auxiliary lane would be constructed in both directions along I-81 between MD 58 (Cearfoss Pike) and the US 40 interchanges.

Exit 7: I-81 @ Maugansville Road – The short distance between this interchange and the MD 58 interchange causes traffic congestion and safety issues; however, due to the limited distance, no major changes are anticipated.

Exit 8: I-81 @ Maugans Avenue – Two options were investigated for this interchange. One option consists of the installation of a circular ramp in the northwest quadrant for traffic accessing I-81 south from Maugans Avenue west. The second option is to install an additional lane on the ramp from Maugans Avenue to I-81 south.

Exit 9: I-81 @ Showalter Road – The acceleration/deceleration lanes along the east side of I-81 would be extended. The ramps in the northwest (Showalter Road west to I-81) and southeast (Showalter Road east to I-81) quadrants would be removed and replaced with slip ramps. An auxiliary lane would be constructed along southbound I-81 from Showalter Road to Maugans Avenue.

Exit 10 – I-81 @ PA 163 – This interchange is half in Pennsylvania and half in Maryland. The existing acceleration lanes on the Maryland portion of the interchange would be extended.

Alternate 3A now involves widening Bridge No. 21078, which carries I-81 over the Potomac River. Built in 1965, Bridge 21078 consists of dual steel girder bridges, each with a span of 142 feet and a roadway width of 30 feet. On the Maryland side of the Potomac River, the original bridge piers and abutments were constructed on a limestone bluff, which is a part of the Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP).

In order to accommodate an additional travel lane on both northbound and southbound I-81, the decks of each of the dual structures of Bridge No. 21078 would be widened to the inside. It is anticipated that new or replaced piers for the widened structures would be built using the same method as their original construction. Traffic will be separated to the far side of the existing structure and the widening area in the median would be isolated. On the approach roads, the berm in the existing roadway median would be removed so that the widening could be accomplished. A work platform will be moved from the existing I-81 roadway to the bluff behind the proposed pier work. This staging area will impact the C&O Canal NHP property, although the precise limits of disturbance have not been defined, pending future design issues. If possible, the footings will be constructed beneath the visible surface.

The canal prism would be protected to the extent possible by using materials such as wooden lagging boards and/or fencing to cover and protect it. Vegetation currently in the canal prism would need to be cleared to aid in the process.

The towpath would be covered with a protective structure to allow visitors to the park to safely continue using the facility. The towpath is likely to be used during bridge construction efforts, and to create the towpath protective structure noted above. Lighter weight vehicles would use the towpath to carry construction materials to the site when needed. SHA would document the original condition of the towpath and restore it to the same condition upon completion of the construction activities.

The crane size and location will be determined by the contractor at the time of construction, although the SHA Office of Bridge Design will work with the contractor to develop the least impactful solution. A launching beam system is under consideration, utilizing two cranes placed on the existing bridge to erect beams closest to the Maryland shore without the need to access the C&O Canal NHP towpath.

A causeway would likely be erected in the Potomac River parallel to the two existing bridges to accommodate construction activities. Access to the West Virginia side of the river would probably utilize an existing industrial road, and provide entrance to the causeway near the West Virginia abutment of Bridge No. 21078.

Details regarding drainage on the improved bridge structure will need to be considered further in the design process. The current structure drains towards Maryland and various options will need to be evaluated for cost, efficiency, minimizing impacts within the park, and other factors at that time.

Toll options are not part of the Selected Alternate at this time.

Project plans are included as **Attachment 1**. Specific engineering information identifying important design elements such as the type of drainage systems, specific right-of-way and easement requirements, stormwater (SWM) management design, and construction phasing will not be determined until the project is funded for design.

Funding

Federal funds are anticipated for this project.

Area of Potential Effects

The Area of Potential Effects (APE) for this project is 200 feet to either side of I-81 between the Potomac River at the southern limit to State Line Road at the northern project limit, as indicated on the attached SHA quadrangle map for Williamsport, Hagerstown, and Mason Dixon (**Attachment 2**).

Identification Methods and Results

Potentially significant architectural and archeological resources were both researched as part of the historic investigation instigated by the proposed improvements to I-81 in Maryland.

Architecture: SHA Architectural Historian Melissa Hess consulted previous cultural resources investigations, C&O Canal histories, the SHA-GIS Cultural Resources Database, and conducted a field visit on November 17, 2005.

The APE has not changed since our last coordination in 2004. The APE was drawn to accommodate the various Alternates and Options and interchange improvements that were included in the I-81 planning study. These alternates and options were described in our previous coordination. The APE continues to encompass the area of possible visual, audible, and physical impacts to standing and archeological historic properties that may be caused by above-described Selected Alternate.

As stated in our July 8, 2004 letter for this project, there are two historic standing structures within the APE, the Garden of Eden (WA-I-377), which is eligible for the National Register of Historic Places (NRHP), and the C&O Canal NHP (NR-12), which is listed in the NRHP.

As a result of our last coordination, the historic boundary for the Garden of Eden was revised to exclude a large cargo container and truck facility that is now located on the property. As the proposed improvements to I-81 in the vicinity of the property would be within the existing right-of-way, would occur largely at-grade, and would not involve substantial visual, audible, or atmospheric changes, the Garden of Eden will not be impacted by the Selected Alternate.

In our July 8, 2004 letter, the widening of Bridge No. 21078 was not included in the description of Alternate 3A, but was described as part of Toll Option 1. At that time, it was believed that the proposed bridge widening would occur within existing SHA right-of-way. The letter stated that there would be no impacts to the C&O Canal NHP, as long as the park was not physically impacted by the bridge widening and the amount of vegetation removal was strictly limited.

The widening of Bridge No. 21078 is now included as a component of Alternate 3A (the Selected Alternate). Since our prior assessment, it was determined that SHA does not own right-of-way under Bridge No. 21078, but that the land under the bridge, including the footprint of the piers, belongs to the National Park Service (NPS). The bridge over the park was constructed under a revocable construction easement rather than a permanent easement. As a result, any improvements to I-81 that propose expansion of the roadway and bridge would require property acquisition or an easement from the NPS for construction of additional bridge piers.

SHA has determined that significant features of the park will be impacted by the Selected Alternate. Correspondence with the NPS and additional research clarified important elements that contribute to the historical significance of the park. As stated in the NRHP nomination for the C&O Canal NHP, the canal's principal areas of historical significance are architecture and engineering, commerce and transportation, and conservation. Summarizing the theme of conservation, the nomination form explains that while the builders of the canal did not foresee it, its creation led to the preservation of a large portion of the Maryland bank of the Potomac in a relatively unspoiled state. The 1938 transfer of the canal property to the National Park Service resulted in the conscious preservation of the canal for its historical, natural, and recreational values. The C&O Canal NHP is best understood as a cultural landscape, a geographic area that includes both cultural and natural resources.

A September 23, 2004 letter from the C&O Canal National Historical Park to the Federal Highway Administration (FHWA) stated that the rock hillside on the landward side of the canal is a character defining feature for the canal. A letter from the Secretary of the Interior's Office of Environmental Policy and Compliance to FHWA dated January 31, 2005 reiterated this point stating that, "each segment of the park has varied and unique features that help tell the story of the construction and operation of the canal. In this particular area, the limestone bluffs adjacent to the canal at the I-81 Bridge are a unique feature. Any alteration to the bluffs would have an impact to the park at that location."

Although current plans for widening Bridge No. 21078 are conceptual in nature and specific engineering details are not yet available, SHA has determined that widening the bridge will have an adverse impact on the C&O Canal NHP. The construction will result in some amount of excavation on the limestone bluff within the historic boundary of the park. The construction of new or widened piers would result in a larger permanent physical and visual intrusion on the bluff face.

Construction of the Selected Alternate will not result in additional audible impacts to the C&O Canal NHP. Following receipt of comments from the NPS, additional noise monitoring was performed along the towpath in the vicinity of Bridge No. 21078. Data gathered from these studies indicated that although the park is impacted by the roadway and its associated noise in the existing condition, there would be less than a 3 dBA difference between future build and future no build scenarios.

Condition photographs of the C&O Canal NHP in the area of Bridge No. 21078 are included as **Attachment 3**. It is anticipated that there will be adverse impacts to the C&O Canal NHP from the construction of new or widened piers for Bridge No. 21078. Impacts to the park will be minimized to the extent possible, and mitigation measures will be investigated and developed in coordination with NPS.

Archeology: Based on earlier assessments of archeological potential by SHA Archeologist Carl A. Ebricht, SHA conducted Phase I archeological surveys for the various proposed alternates (Millis 2003), and for proposed toll facilities and a truck weigh station (Millis and Joy 2004). Although several archeological sites were identified, none were considered eligible for NRHP listing (**Attachment 4**). MHT concurred in these determinations.

The canal prism and towpath are listed in the Maryland Inventory of Historic Properties (MIHP) as historic structures. Because the C&O Canal NHP in the immediate area of the bridge lacks a floodplain between the towpath and the Potomac River, and lacks terrain between the canal prism and the bluffs, SHA believes that this specific area has low potential for significant archeological deposits. In addition to the topographic restrictions in the project area, the I-81 bridge crosses the C&O Canal NHP and Potomac River at a random location with respect to the historic use of the canal and river. The crossing is not at the site of any historical fords, ferries, bridges, or canal locks, limiting the potential for archeological remains associated with ancillary activities that are found elsewhere along the canal.

SHA believes that the bluff tops and terrace above the Potomac River within the C&O Canal NHP have high prehistoric and historic potential, as would adjacent intact floodplain areas. These areas would require additional archeological work, should they be impacted. It is not anticipated that the fish weir (18WA196) in the Potomac River just upstream from the I-81 bridge will be impacted.

Mr. J. Rodney Little
I-81: West Virginia State Line to Pennsylvania State Line
Page Seven

At this point in the planning process, potential impacts to archeological resources are not fully known, particularly with regard to any construction easements and rights-of-entry that may be required with the C&O Canal NHP. Any Memorandum of Agreement (MOA) for this project will include stipulations for coordination and consultation with the NPS on potential archeological impacts from stormwater management within park boundaries; future staging areas both within and outside of the park; proposed protections to known resources such as the fish weir; and future identification and evaluation studies, if needed.


Review Request

Please examine the attached plans, map, photographs, and Effects Table (**Attachment 4**). We request your concurrence by February 20, 2006 that there would be adverse effects on historic properties by the I-81 corridor project. By carbon copy, we invite the Washington County Historic District Commission, Washington County Historical Trust, and the National Park Service to provide comments and participate in the Section 106 process. Pursuant to the requirement 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 (c) (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 the Maryland State Highway Administration or the Maryland Historical Trust). If no response is received by February 20, 2006, we will assume that these offices decline to participate. Please contact Ms. Melissa Hess at 410-545-8560 (or via email at mhess@sha.state.md.us) with questions regarding standing structures for this project. Ms. Carol Ebright may be reached at 410-545-2879 (or via email at cebright@sha.state.md.us) with concerns regarding archeology.

Very truly yours,

Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

by:


Mary F. Barse
Assistant Division Chief
Project Planning Division

Mr. J. Rodney Little
I-81: West Virginia State Line to Pennsylvania State Line
Page Eight

Attachments: 1) Project Plans
2) Area of Potential Effects Map
3) Condition Photographs
4) Effects Table

cc:

Ms. Mary F. Barse, SHA-PPD
Mr. Kevin Brandt, C&O Canal NHP, NPS (w/Attachments)
Ms. Caryn Brookman, FHWA
Ms. Carol Ebright, SHA-PPD (w/Attachments 2, 3, and 4)
Mr. Richard Ervin, SHA-PPD
Mr. Steven Goodrich, Washington County Historic District Commission (w/Attachments)
Mr. Bruce M. Grey, SHA-OPPE
Ms. Melissa Hess, SHA-PPD (w/Attachments 2, 3, and 4)
Mr. Joseph Kresslein, SHA-PPD
Dr. John F. Krowka, Washington County Historical Trust, Inc. (w/Attachments)
Mr. John Narer, SHA-OBDD
Ms. Odessa Phillips, SHA-PPD (w/Attachments 2, 3, and 4)
~~Ms. Nicole Washington, SHA-PPD~~
Ms. Lynn Wigfield, C&O Canal NHP, NPS (w/Attachments)

RECEIVED

MAY 01 2006

GREENHORNE & OMARA, INC

**Concurrence with the MD State Highway Administration's
Determination(s) of Eligibility and/or Effects**

Project Number: WA128B11 MHT Log No. 2006 00 189
Project Name: I-81: West Virginia State Line to Pennsylvania State Line
County: Washington
Letter Date: January 18, 2006

The Maryland Historical Trust has reviewed the documentation attached to the referenced letter and concurs with the MD State Highway Administration's determinations as follows:

Eligibility (as noted in the Eligibility Table [Attachment N/A]):

- ☐ Concur
☐ Do Not Concur

Effect (as noted in the Effects Table [Attachment 4]):

- ☐ No Properties Affected
☐ No Adverse Effect
☐ Conditioned upon the following action(s) (see comments below)
☒ Adverse Effect

Agreement with FHWA's Section 4(f) criteria of temporary use (as detailed in the referenced letter, if applicable):

- ☐ Agree

Comments:

ADDITIONAL COMMENTARY WITH THE NPS IS NECESSARY AS
CONSULTATION PROCEEDS

By:  Date: 2-22-06
MD State Historic Preservation Office/
Maryland Historical Trust

Return by U.S. Mail or Facsimile to:
Ms. Mary F. Barsc, Assistant Division Chief, Project Planning Division,
MD State Highway Administration, P.O. Box 717, Baltimore, MD 21203-0717
Telephone: 410-545-2883 and Facsimile: 410-209-5004

cc: Mr. Richard Ervin, SHA
Ms. Lynne Wiegand, NPS
Mr. Kevin Brandt, NPS



Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Elberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

February 15, 2008

Ms. Heather Murphy, Deputy Director
Attention: Dr. Marty Baker
Office of Planning & Capital Programming
Maryland Department of Transportation
7201 Corporate Center Drive
Hanover, MD 21076


Re: The COMAR 11.04.13- Smart Growth Regulations Concurrence for the I-81
Improvement Project in Washington County

Dear Ms. Murphy,

This letter is in response to your request for COMAR 11.04.13 - Smart Growth concurrence for the I-81 Improvement Project in Washington County, Maryland.

Having participated in the project planning study, we recognize the project would improve traffic operations and safety along I-81, a freeway heavily traveled by trucks. The project will also support the existing and planned economic developments along the I-81 corridor in Washington County. As your letter indicated, a small segment of the project that bisects the Chesapeake and Ohio National Historic Park is located outside of the PFAs. In accordance with COMAR 11.04.13 - Smart Growth, i.e., the Linear Feature Regulations, the project will be considered locating inside PFAs if the segment outside of PFAs is less than 5% of the total project lane miles. Based on the information provided by MDT/SHA, we note that the segment outside of the PFAs comprises less than 1% of the total project lane miles. This is less than the 5% threshold defined in the Linear Feature Regulations.

Therefore, Maryland Department of Planning concurs that the I-81 Improvement Project complies with COMAR 11.04.13 - Smart Growth, i.e., the Linear Feature Regulations; and the project locates inside of the PFAs. Should you have any questions with regard to this concurrence, please do not hesitate to contact Ms. Bihui Xu at 410-767-4568 or by email at bxu@mdp.state.md.us.

Sincerely,

Pat Goucher, Director
Infrastructure Planning
Office of Smart Growth

CC: Mr. Joe Kresslein, Deputy Division Chief, Project Planning, SHA

301 West Preston Street • Suite 1101 • Baltimore, Maryland 21201-2205
Telephone: 410.767.4500 • Fax: 410.767.4480 • Toll Free: 1.877.767.6272 • TTY Users: Maryland Relay
Internet: www.MDP.state.md.us



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

March 7, 2006

Re: Project No. WA128B11
I-81: West Virginia State Line to
Pennsylvania State Line
Washington County, MD
USGS Williamsport, Hagerstown, and Mason-
Dixon 7.5" Quadrangles

Ms. Susan Pierce
Deputy State Historic Preservation Officer
West Virginia Division of Culture and History
The Cultural Center Capitol Complex
1900 Kanawha Boulevard East
Charleston, WV 25305-0300

Dear Ms. Pierce:

Introduction and Project Description

This letter serves to inform the West Virginia State Historic Preservation Officer (WV SHPO) of the Maryland State Highway Administration's (SHA) project on I-81 from the West Virginia State Line to the Pennsylvania State Line in Washington County, Maryland. We invite the WV SHPO to provide comments and participate in the Section 106 process.

The SHA selected Alternate 3A involves widening I-81 between the West Virginia State Line and the Pennsylvania State Line, and the construction of a two-lane Collector-Distributor Road. The scope of work includes I-81 interchange improvements at MD 68, US 11, I-70, US 40, MD 58, Mangansville Road, Mangans Avenue, Showalter Road, and PA 163. In order to accommodate additional travel lanes, the scope of work will include widening SHA Bridge No. 2107801 and Bridge No. 2107802, which carry I-81 over the Potomac River below Williamsport, terminating on the West Virginia side of the river. Built in 1965, the bridges are dual steel girder bridges, each with a span of 1,196 feet and a roadway width of 30 feet. On the Maryland side of the Potomac River, the original bridge piers and abutments were constructed on a limestone bluff, which is a part of the C&O Canal National Historical Park (C&O Canal NHP). Currently, a staging area is proposed on the West Virginia side of the Potomac River, adjacent to the north side of the I-81 bridges. A project location map is included as **Attachment 1**.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech: 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone: 410.545.0300 • www.marylandroads.com

Ms. Susan Pierce
I-81: West Virginia State Line to Pennsylvania State Line
Page Two

Prior Consultation between SHA and the Maryland Historical Trust (MHT)

The following briefly describes the development of the project and resulting consultation with MHT. Copies of the consultation correspondence are provided in **Attachment 2**.

A. SHA consulted with MHT on September 10, 2001 regarding historic standing structures eligibility and an assessment of archeological potential. MHT concurred with SHA's findings on October 30, 2001. SHA's archeological assessment noted the presence of 18WA196, a fish weir in the bed of the Potomac Riverbed abutting the West Virginia shore, close to the I-81 crossing.

B. SHA consulted with MHT on September 29, 2003 regarding our completed Phase I archeological survey (Millis 2003) for Alternates 2, 2A, and 3A on September 29, 2003. No NHRP eligible resources were identified. MHT concurred with those findings on October 15, 2003. The NHRP eligibility of the fish weir was not addressed since the bridge widening was not then part of the project scope.

C. Based on an expansion of the project's scope to include possible toll facilities, a weigh station, and widening of the two bridge spans over the Potomac River, SHA conducted additional Phase I archeological survey (Millis and Joy 2004), and re-evaluated the boundaries of an historic property in Maryland, the Garden of Eden (WA-I-377). Because of the lack of floodplain and presence of steep bluffs at the C&O Canal, SHA established that the canal prism and towpath, within the specific project APE, would be treated as elements of the historic built environment, rather than as an archeological site. Unlike the MD 34 Rumsey Bridge project, I-81 crosses the C&O Canal at a random location with regard to past historic activities, not at an historic river crossing. In addition, SHA identified and completed an archeological assessment of the proposed construction staging areas in West Virginia on the north and south sides of the I-81 bridge, and conducted additional research on the fish weir in the Potomac River (**Attachment 3**). SHA concluded that the proposed staging area south of the bridges in West Virginia had high archeological potential; but that the area north of the bridges had been heavily disturbed and was unlikely to contain any intact, significant, archeological resources.

Through the West Virginia Department of Highways (WVDOH), the WV SHPO provided an archeological assessment of the project vicinity via email on April 13, 2004 (**Attachment 4**). The WV SHPO noted the presence of the fish weir in the Potomac riverbed, and agreed that the proposed staging area south of the bridges had high archeological potential. The WV SHPO made no comment on the northern staging area.

Ms. Susan Pierce
I-81: West Virginia State Line to Pennsylvania State Line
Page Three

The fish weir in the Potomac riverbed has been assigned archeological site numbers in both Maryland (18WA196) and West Virginia (46BY157). There is contradictory information on file about the exact location of this feature, based on comparisons between the MHT site form, the site's mapped location, aerial photographs, and the West Virginia site form and published reports (Stewart 1997, Guzy 1999). Fortunately, a 1989 USGS aerial photograph clearly shows the fish weir during a low-water period, located farther upstream from the recorded locations in both the Maryland and West Virginia site files. The preferred staging area, extending 300 feet north of the bridges, would not impact the fish weir.

SHA consulted with MHT on July 8, 2004 concerning the above information and regarding SHA's determination that the project would have no adverse effects on historic properties. MHT concurred with SHA's determination of no adverse effect on August 4, 2004.

D. After the addition of bridge widening to the project scope, clarification of land ownership issues within the C&O Canal NHP in the APE, and discussions of possible staging strategies, and following consultation with the National Park Service (NPS), SHA further consulted with MHT on January 18, 2006 regarding SHA's determination that the project would have adverse effects on historic properties. Adverse impacts would occur to the C&O Canal NHP. MHT concurred with SHA's determination of adverse effect on February 22, 2006.

Future Coordination

SHA has drafted a Memorandum of Agreement (MOA) for this project, which has not yet been circulated for review. Since a proposed staging area is currently the only impact of this project in West Virginia, SHA is inviting the WV SHPO to be a concurring party to the MOA. This MOA will be circulated for your review and comment in the near future. We seek your confirmation that you wish to participate as a concurring party on the MOA for this project.

Review Request

Please examine the attached map, prior Section 106 coordination correspondence, archeological assessment, and WV SHPO email. We request your agreement that the northern staging area in West Virginia has low archeological potential, and invite the WV SHPO to provide comments on the project and participate in the Section 106 process. Pursuant to the requirements of the implementing regulations found at 36 CFR Part 800, SHA seeks your assistance in identifying historic preservation issues as they relate to this specific project (see 36 CFR 800.2 (c) (4) and (6), and 800.3 (f) for information regarding the identification and

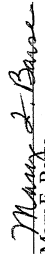
Ms. Susan Pierce
I-81: West Virginia State Line to Pennsylvania State Line
Page Four

participation of consulting parties, and 800.4, and 800.5 regarding the identification of historic properties and assessment of effects). Please contact Ms. Melissa Hess at 410-545-8560 (or via email at mhess@sha.state.md.us) with questions regarding standing structures for this project. Ms. Carol Ebright may be reached at 410-545-2879 (via email at cebright@sha.state.md.us) with concerns regarding archeology.

Very truly yours,

Bruce M. Grey
Deputy Director
Office of Planning and
Preliminary Engineering

by:

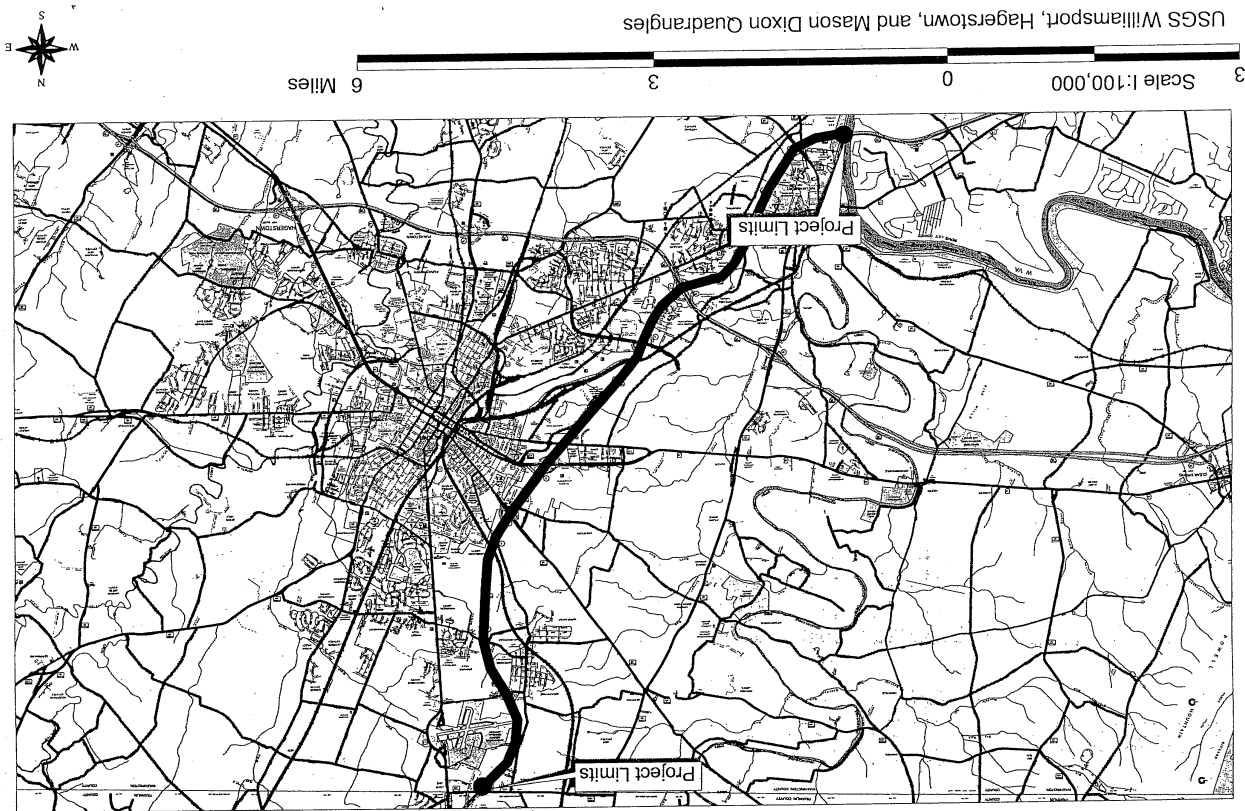

Mary F. Barse
Assistant Division Chief
Project Planning Division

Attachments: 1) Project Location Map
2) MHT Consultation
3) SHA's Archeological Assessment of Staging Areas in West Virginia
4) WV SHPO Email Regarding Cultural Resources

cc:

Ms. Mary F. Barse, SHA-PPD
Ms. Carol Ebright, SHA-PPD
Mr. Richard Ervin, SHA-PPD
Mr. Bruce M. Grey, SHA-OPPE
Mr. Ben Hark, WVDOT (w/Attachments)
Ms. Melissa Hess, SHA-PPD
Ms. Denise King, FHWA (w/Attachments 3 and 4)
Mr. J. Rodney Little, MHT (w/Attachments 3 and 4)
Ms. Odessa Phillip, SHA-PPD
Ms. Nicole Washington, SHA-PPD

I-81: WV State Line to PA State Line Project Location Map



Archeological Assessment for Widening the I-81 Bridge over the Potomac River

April 27, 2004

SHA Archeologist Carol A. Ebricht assessed the archeological potential of the project area for the widening of the I-81 bridge over the Potomac River. This includes potential staging areas on the West Virginia side of the river. Widening of both lanes of the bridge to the inside is proposed, and will require the widening of existing piers. Potential staging areas include parcels 300 feet long and 350 feet wide on each side of the bridge in West Virginia. The project will be federally funded.

The project area has not been previously surveyed. As noted in the prior assessment of April 25, 2001, there is a recorded fish weir in Potomac River bed at the I-81 crossing (18WA196). There is contradictory information on file about the exact location of this feature, placing it both in the project area or slightly upstream from it (cf. MHT site form, MD site location mylars, SHA GIS aerial photograph, Guzy 1999, Stewart 1997). This site may be the same as the weir recorded by West Virginia as 46BY157, whose location was also noted to be imprecise. A field visit on April 26 failed to resolve this issue due to seasonally high water conditions. Fortunately, a 1989 USGS aerial photograph provided by Guzy (personal communication) clearly shows the fish weir, further upstream from both recorded locations in the Maryland and West Virginia files. A labeled version of the photograph is attached. This shows that the weir would be outside our worst case limits of disturbance.

Based on a series of emails and maps received on April 22, 2004, we understand that potential construction staging areas will be restricted to 300 feet north and south of the existing bridge, extending 350 feet back from the edge of the Potomac River. The 300 x 350 foot rectangle north of the bridge has been substantially disturbed by the original construction of the bridge abutment and by the construction of adjacent industrial waste ponds.

The 300 x 350 foot rectangle to the south is largely intact, aside from the construction of the bridge abutment, and occupies a section of essentially level, relatively wide floodplain, adjacent to the confluence of a Potomac tributary. These settings have high potential for multicomponent prehistoric sites that may be both deeply buried and stratified. Early historic sites may also occur in these settings, which contain arable lands easily accessed from the river. On April 13, 2004, the WVSHPO noted that the area on the south side of the bridge had a high probability for archeological sites, based on the presence of recorded sites in nearby, similar settings. We agree. A Phase I survey should be conducted prior to utilization of the potential staging area on the south side of the I-81 bridge. Should sites be encountered, there is a very strong possibility that these would progress to Phase 3 data recovery. This could be quite expensive due to the probability of deeply buried deposits being present.

We would strongly recommend that the staging area south of the I-81 bridge be dropped from consideration. The northern staging area could be used without requiring any additional archeological work. The fish weir in the Potomac River is a sufficient distance upstream from the bridge that it can be avoided, even if the northern staging area is employed. Should the southern staging area be kept, a decision needs to be made whether SHA or WVDOT will be responsible for conducting the Phase I archeological survey and any subsequent work. If SHA conducts the survey as part of the upcoming work on the proposed toll facilities, we will have to coordinate with both MHT and the WV SHPO.

Attachment 4

From: Ben Hark <bhark@dot.state.wv.us>
To: "lstrow@sha.state.md.us" <lstrow@sha.state.md.us>
Date: 04/13/2004 3:38:00 PM
Subject: FW: I-81 Bridge

Lorraine,

Our cultural resource staff researched the SHPO files for the area on your map in the vicinity of I-81 on the West Virginia side. Below is a summary of what was found. Let me know if you need anything else.

Ben Hark
 Environmental Section Head
 Engineering Division

-----Original Message-----

From: Jacqueline Giles
 Sent: Tuesday, April 13, 2004 3:09 PM
 To: Ben Hark
 Subject: I-81 Bridge

Historic Resources

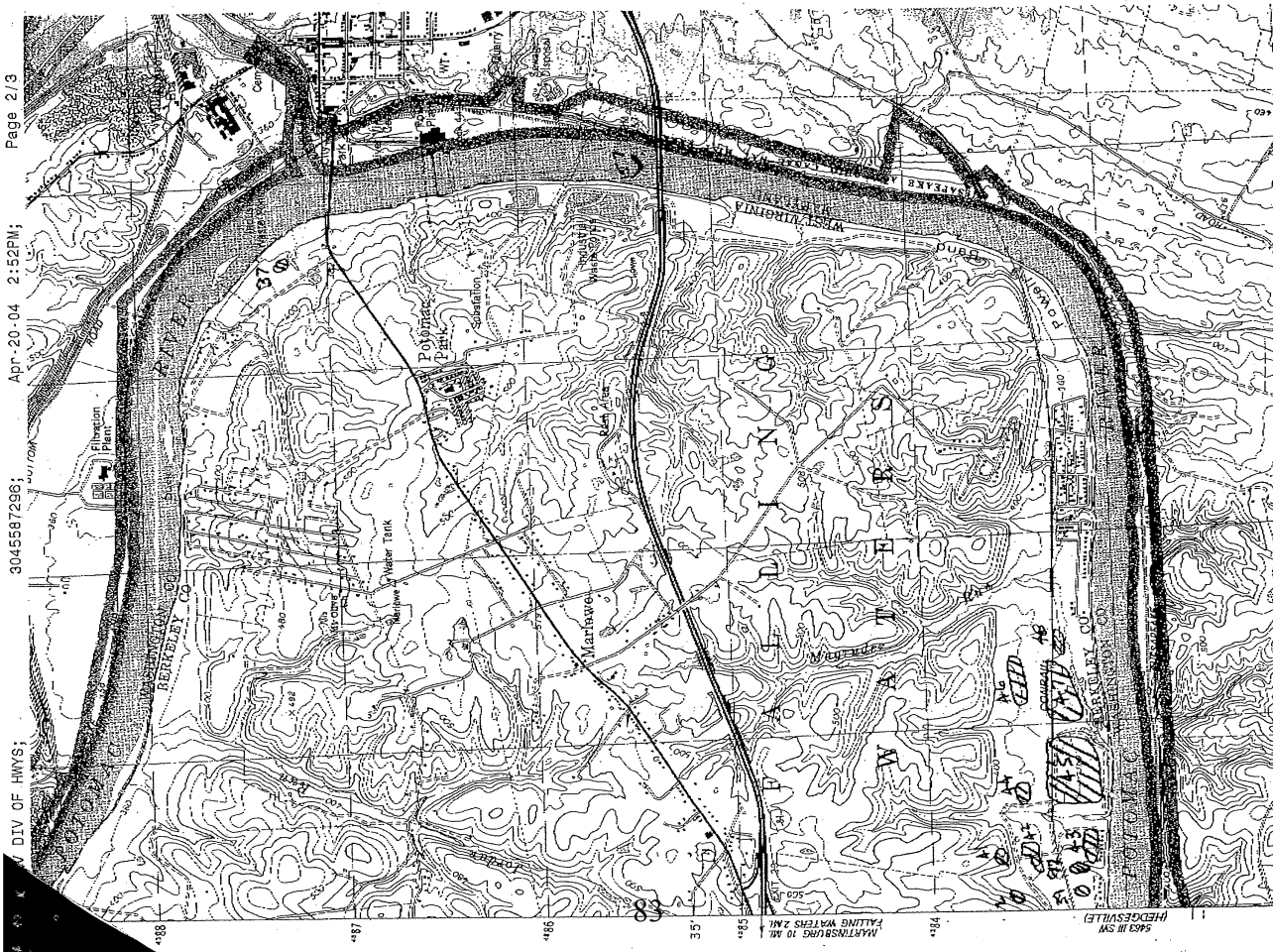
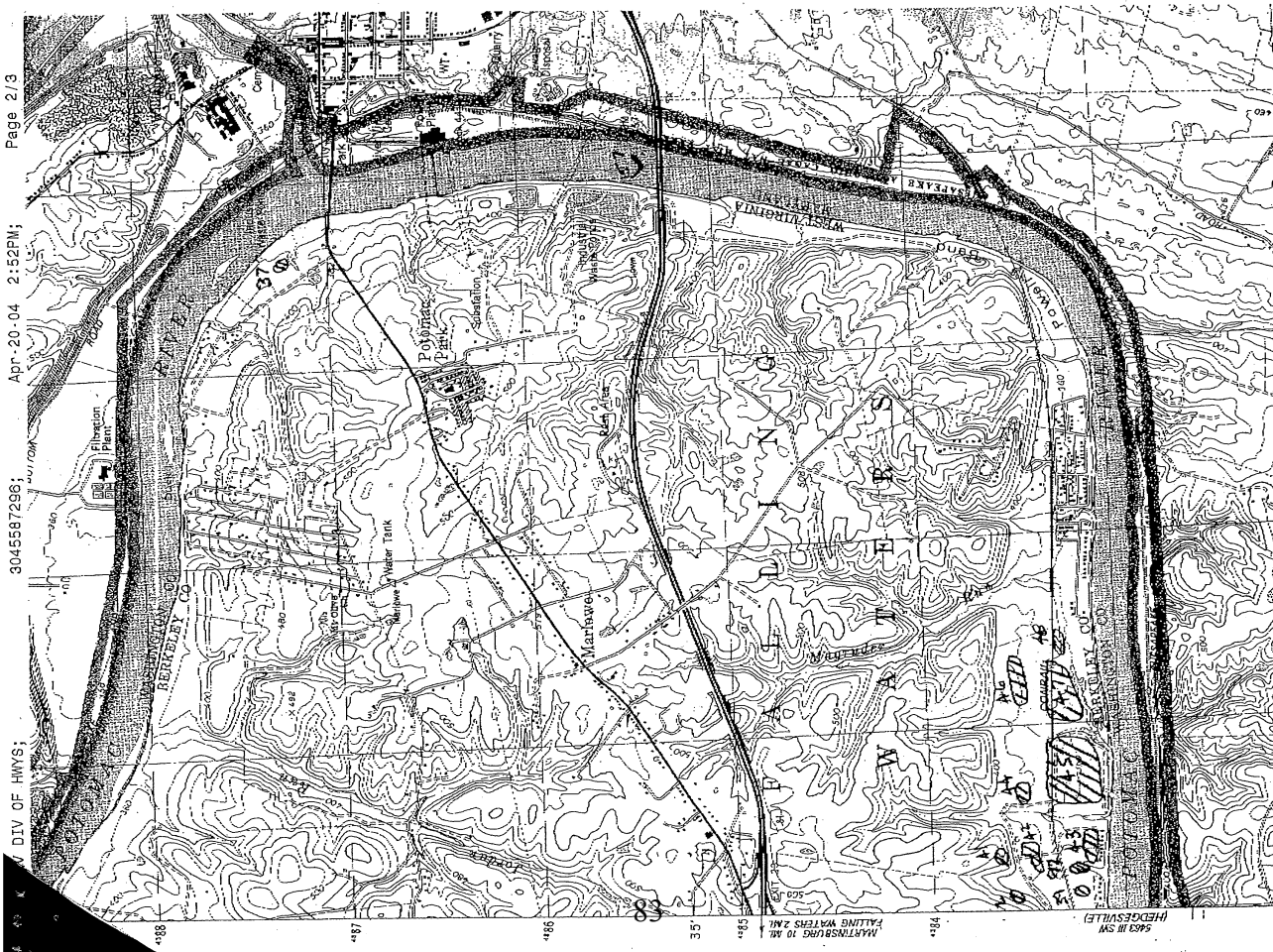
A file search was conducted at the WVSHPO for historic properties within the immediate project area on April 7th, 2004. There are no eligible historic resources or National Register properties within the immediate area of potential effects; however, there are several structures within a one mile radius of the project area that were included in the Historic Resource Survey of the Marlowe area done by Michael Gioulis in 1997/1998. These properties would be well outside the view shed of the existing bridge.

Archeological sites:

There is only one recorded archaeological site near the existing river crossing. This is a purported fish trap in the center of the river about 100m north of the existing I-81 crossing (E 257,030, N 4,385,345; Zone 18, NAD 27). This was inferred from the original 1979 report to be made of stone. Whether it was physically revisited in 1999 is not clear. Note that the original position was recorded on a 15' quadrangle using distances from corners of that map.

Other recorded sites are in terrain very similar to that south of the existing crossing. There is a cluster of 10 sites in the river bottom southwest of the project area centered at about E 254,000 and N 4,383,500 (Zone 18, NAD 27). These are located from the foot of the valley wall to the bank of the river. There is a single site northwest of the confluence of Conococheague Creek at about E 256,600 and N 4,387,300.

Our experience is that older reports of sites are of dubious utility, but we would consider the (apparently) undisturbed southern project area to have a high probability for archaeological sites. If you want more detail, contact us.



Site No. (Name) 45392 White Bush #8

Co-ordinates locating site on Williamsport Quadrangle (7.5-15 Min)

a. 773-276 mm stakes from (north, south)

b. 8-10 mm stakes from (east, west)

1. Map of site and surroundings, taken from quadrangle.



3. Culture

4. Excavations

16. When

48. Remarks: Keep information on informant confidential!

49. Recommendations: Survey and evaluate potential. Items thus indicated will be filled in by HVS representative.



BERKELEY COUNTY HISTORIC LANDMARKS COMMISSION

136 EAST RACE STREET ■ MARTINSBURG, WV 25401 ■ 304-267-4713

September 1, 2006

Ms. Mary F. Barse
Assistant Division Chief
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

Re: I-81 WV State Line to Pennsylvania State Line
Project No. WA 128B11

Dear Ms. Barse:

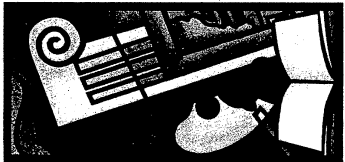
The above expansion of I-81 has been reviewed by the Berkeley County Historic Landmarks Commission and there are no objections to the project.

Thank you for giving us the opportunity to review this project for any detrimental impact on any historic properties in the area.

Sincerely,

Don C. Wood
Don C. Wood
Chairman

SEP05:06 PM 1:37 OPPE



WEST VIRGINIA
DIVISION OF
CULTURE & HISTORY
The Cultural Center
1900 Kanawha Blvd., E.
Charleston, WV
25305-0300

Phone 304.558.0220
Fax 304.558.2779
TDD 304.558.3562
www.wvculture.org
EO/AAE Employer

October 19, 2006

Ms. Mary F. Barse
Assistant Division Chief
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

RE: I-81 WV State Line to Pennsylvania State Line
Project No. WA128B11
FR#: 06-559-BY-1

Dear Ms. Barse:

We have reviewed the above referenced project to determine its effects on cultural resources. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

Thank you for submitting additional information pertaining to the proposed staging area. Recently submitted photographs document the heavily disturbed ground in the northern section of the project area near the industrial waste ponds. However, it is our understanding that nearer to the bridge, the slope leading down to the Potomac River and a narrow strip of land along the stream bank appear to be intact. Given the presence of the Chesapeake and Ohio Canal National Historic Park on the opposite bank of the Potomac River, we are concerned that the strip of land could be a tow path associated with the canal. Does archival research limit the existence of the tow path to the Maryland side of the river? Has an archaeologist examined the bank of the Potomac River to ensure that a buried archaeological site is not present and eroding out of the bank?

Thank you for your cooperation. If you need clarification on our request or the Section 106 process, please contact Susan M. Pierce, Deputy State Historic Preservation Officer, or Lora A. Lamarre, Senior Archaeologist, at (304) 558-0240.

Sincerely,

Randall Reid-Smith
Randall Reid-Smith
Commissioner
RRS/SMP/LAL



CITY OF HAGERSTOWN, MARYLAND

William M. Breichner
Mayor

March 29, 2005

Mr. Bruce Grey, Deputy Director
Office of Planning & Preliminary Engineering
State Highway Administration
707 North Calvert Street
Mail Stop C-301
Baltimore, MD 21202

RE: I-81 Improvement Project
Location/Design Comments

Dear Mr. Grey:

The purpose of this letter is to advise your office of the concerns of the City of Hagerstown, Maryland. I have reviewed this with the City Administrator, the Director of Planning and the City Engineer and you may consider these to be the summary comments from the City of Hagerstown.

We understand the desire for this project to move forward, and we agree that there is a need to widen I-81 through Maryland and other states. Our main concern is for the citizens of the City of Hagerstown, and how this project may affect them during construction and after the roadway is widened.

The proposed toll booths may cause additional traffic to use local streets to avoid paying the toll. Route 11 parallels I-81 and runs through the City of Hagerstown. Truck traffic could exist from I-81 onto Route 11 before reaching the toll booths, pass through the City on Route 11, and return to I-81 after passing the toll booths. Some of the local streets in the City were not designed for high volumes of truck traffic, and trucks passing through the City may cause problems for motorists, pedestrians and residents living along this "bypass" route. The additional noise and air pollution generated by these trucks will have an adverse impact on the City of Hagerstown.

City Hall, 1 East Franklin Street, Hagerstown, Maryland 21740

E-mail: mayor@hagerstownmd.org

Fax: (301) 796-3424

TDD: (301) 797-6617

Telephone: (301) 739-8577 x110

Mr. Bruce Grey
March 29, 2005
Page 2

If the State insists on constructing toll booths, we ask that the project include design elements to make it difficult for trucks to use local streets as a bypass, and even prohibit them from some streets.

Another issue that involves citizens of Hagerstown is the volume of truck traffic along the western boundary of the City. Several trucking companies currently use the partial interchange at Marshall Street to access I-81. Since this is not a full-access intersection, these trucks also use Marshall Street, and other local streets in residential neighborhoods, to get to the full-access interchange at MD Route 58 and I-81. If at all possible, we would like to see the Marshall Street interchange be made into a full-access intersection. However, if that is not possible, we would encourage the State Highway to, at a minimum, maintain the current partial movement at Marshall Street. We are strongly opposed to the total removal of the Marshall Street interchange.

Finally, the additional traffic volumes will add noise to the nearby residential areas, and we ask that consideration be given to resolve this concern during construction.

Sincerely,

THE CITY OF HAGERSTOWN

William Breichner
Mayor

c: Robert Rosenbush, Maryland Department of Planning
Bruce Zimmerman, City Administrator
Kathleen Maher, Hagerstown Planning Director
Rodney Tisue, Hagerstown City Engineer



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

April 29, 2005

The Honorable William M. Reichner
Mayor, City of Hagerstown
City Hall – Room 202
1 East Franklin Street
Hagerstown MD 21740

Dear Mayor Reichner:


Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates the City of Hagerstown's and your interest in this study.

Your support for widening I-81 and concern regarding the effects of tolls, specifically the possible diversions onto other roadways, and impacts on local motorists, pedestrians, and residents has been noted. We recognize the many concerns associated with tolls on I-81 that have been raised by the City, other elected officials, and the public. As a result of these concerns, we have decided not to pursue any of the tolling options as part of this study.

In regards to the Maugensville Road interchange, as a result of its proximity to the MD 58 interchange and inadequate spacing for weave movements, we cannot provide full movements at this location. We are recommending that this partial interchange remain, however, we will continue to monitor this segment of road for any possible future improvements.

Thank you again for your letter. If you have any additional questions or comments, please do not hesitate to contact Mrs. Nicole Washington, the Project Manager, at 410-545-8570, 1-800-548-5026, or nwashington@sha.state.md.us. She will be pleased to assist you. Of course, you should never hesitate to contact me directly, if you prefer.

Sincerely,


Neil J. Pedersen
Administrator

cc: Mrs. Nicole Washington, Project Manager, SHA
Mr. Raja Veeramachaneni, Director of Planning and Preliminary Engineering, SHA

My telephone number/toll-free 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
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410-545-0300 • www.marylandroads.com

The Honorable William M. Reichner

Page Two

bcc: Mr. Dennis M. Atkins, Assistant Division Chief, Project Planning Division, SHA
Ms. Kim Booker, Administrative Assistant, Project Planning Division, SHA
Mr. Bruce M. Grey, Deputy Division Chief, Office of Planning and Preliminary Engineering, SHA
Mr. Steven L. Kreseski, Chief of Staff, Office of the Governor
Mr. David Marks, Chief of Staff, Secretary's Office
Mr. Edward Miller, Chief of Staff, MDOT
Ms. Odessa Phillip, Environmental Analyst, Project Planning Division, SHA
Ms. Nanette Schiele, State Legislative Manager, MDOT
Mr. Douglas H. Simmons, Deputy Administrator for Planning and Engineering, SHA
Mr. Dennis Simpson, Maryland Transportation Authority
Ms. Linda Singer, Legislative Manager, SHA
Mr. Joe Waggoner, Maryland Transportation Authority



County Commission of Berkeley County

400 WEST STEPHEN STREET, SUITE 201
MARTINSBURG, WEST VIRGINIA 25401
PHONE (304) 264-1923

THE COMMISSION
HOWARD L. STRAUSS, COMMISSIONER
STEVEN C. TEUFEL, COMMISSIONER
JOHN E. WRIGHT, COMMISSIONER

www.berkeleycountycomm.org

DEBORAH HAMMOND
COUNTY ADMINISTRATOR
SHERRY A. CAIN
ADMINISTRATIVE SECRETARY

November 5, 2004

Ms. Nicole Washington
Project Manager
Maryland Department of Transportation
State Highway Administration
Office of Planning and Preliminary Engineering
Mail Stop C-301
Box 717
Baltimore, MD 21203-0717

Ref: Project Planning Study - I-81
Washington County, Maryland

Dear Ms. Washington:

The Berkeley County Commission held a public meeting at the regular Thursday, November 4, 2004 meeting pertaining to various transportation issues that have direct impact upon the Eastern Panhandle of West Virginia. As Berkeley County is a member of the MPO, Metropolitan Planning Organization for Washington County, Maryland, Berkeley County, West Virginia and Jefferson County, West Virginia and a portion of Franklin County, Pennsylvania, we reacted with alarm regarding the proposals to construct toll booths on I-81 in order to fund the Maryland portion of the I-81 improvements as well as the truck weigh station option. Both options will severely affect the safe and efficient movement of traffic through the I-81 corridor. The potential back ups from either actions could bring traffic to a virtual standstill in Berkeley County entering the State of Maryland.

The inability for traffic to flow safely and efficiently into Washington County, Maryland will have a profound effect on commuters who travel the length of I-81 for work purposes and for customer choices for shoppers through the I-81 corridor. The Hagerstown Mall has become a destination location for shoppers in Pennsylvania, West Virginia and Virginia due to the anchor stores located there. Both the paying of a toll and the long queues of traffic into the toll booths would have a significant effect on shopping destinations and would re-direct that traffic to Frederick County, Maryland to the east or

to similar shopping areas in the Northern Virginia area. Many shoppers in the northern portion of Berkeley County do most if not all of their shopping in Washington County, Maryland. These proposals would place a serious effect on shopping preference.

In addition to these issues, Berkeley County and Jefferson County are part of an Early Action Compact to address ozone levels above federal standards. The queuing of truck traffic to both enter weigh stations and queue for toll lanes will only add to the idling of diesel engines and in turn the ozone levels within Berkeley County.

From a traffic safety standpoint, economic development impact and the impact on the environment, the Berkeley County Commission wishes to record our strong opposition to the proposed toll options 1-4 and the truck weigh station option. For the record we also wish you to be informed that the participants at our public meeting which included the Berkeley County legislative delegation as well as representation from Jefferson County, West Virginia and the Berkeley County Development Authority also stated their opposition to these proposals.

Thank you for your attention to these comments. It is our understanding that the Washington County Commissioners have taken a similar stance in opposition. We wish to take this time to support their decision on this matter. Please include our mailing address on your list for future meetings and comments on these important issues.

Sincerely,

Steven C. Teufel, President
Berkeley County Commission

Doc: ltrtomdot/st/dh



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

February 7, 2005

The Honorable Steven C. Teufel
President, Berkeley County Commission
Suite 201
400 West Stephen Street
Martinsburg, WV 25401

Dear President Teufel:

Thank you for your comments regarding future improvements to I-81 in Washington County, Maryland. The State Highway Administration (SHA) appreciates your interest in its project planning studies. The Berkeley County Commission's opposition to tolls and the potential truck weigh station has been noted and will be included as part of the official public hearing record.

Maryland is facing severe resource and financial constraints. Without tolls, construction of the I-81 improvements could take as long as 20 to 30 years. With tolls, the project could be programmed and constructed over a shorter period of time. After the Alternates Public Workshop in 2002, the study team was asked to study toll options as a way to help finance the project. All of the proposed alternates are being considered with and without tolls. Once detailed engineering and environmental analyses are complete, an alternate without tolls could be selected. Please be assured that no decision has been made to go forward with a toll option.

Your letter stated the Commission's concern for the impact that tolls could have on the local economy, as the payment of tolls and traffic congestion could cause shoppers to divert elsewhere. In order to alleviate bottlenecks and congestion at the toll areas, a combination of highway-speed electronic and cash toll lanes would be provided. The electronic toll lanes would require an E-Z Pass transponder and enable drivers to pay tolls at highway speeds. This technology would reduce the number of drivers who would have to stop and, as a result, would also reduce the potential for long queues.

The weigh station option was added to the study to help increase safety in the corridor. The 12-mile segment of I-81 in Maryland and the 26-mile segment of I-81 in West Virginia do not have any truck weigh stations. The limited enforcement activities that have been conducted show a significant truck violation rate for size, weight, and safety.

My telephone number/toll-free number is 410-545-5400 or 1-800-206-0770

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Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

The Honorable Steven C. Teufel
Page Two

Interstate 81 carries the highest concentration of commercial vehicles of any highway in Maryland—between 35 and 40 percent of all traffic. Based on the experience of the roving patrols of the Maryland State Police Commercial Vehicle Enforcement Division, we believe that a weigh station is an option that should be considered as part of this study.

You also mentioned concern about ozone levels as a result of congestion. As noted above, the tolling technology proposed for the I-81 Improvement Study permits and encourages tolling without reduction of travel speeds. Lanes for those paying cash tolls would be set off to the right of the mainline, to minimize queuing. Washington County recently became a non-attainment area under the new eight-hour standard. Because of this recent change, conformity findings have not been made for the Hagerstown/Eastern panhandle Metropolitan Planning Organization Long Range Plan or Transportation Improvement Program. As a result of the recent approval by the Environmental Protection Agency (EPA), the County will not need to do an eight-hour conformity test if attainment is made by 2007.

Thank you again for your comments. If you have any additional questions or concerns, please do not hesitate to contact Mrs. Nicole Washington, Project Manager, at 410-545-8570 or nwashington@sha.state.md.us. She will be pleased to assist you. Of course, you should never hesitate to contact me directly, if you prefer.

Sincerely,

Neil J. Pedersen
Neil J. Pedersen
Administrator

cc: Mrs. Nicole Washington, Project Manager, Project Planning Division, SHA

The Honorable Steven C. Teufel
Page Two

bcc: Mr. Dennis Atkins, Assistant Division Chief, Project Planning Division, SHA
Mr. Dennis R. Atkins, Deputy Director of Traffic and Safety, SHA
Ms. Missy Cassidy, Director of Policy and Governmental Affairs, MDOI
Mr. Keith Duerling, Director of Engineering, MdTA
Mr. Bruce Grey, Deputy Director of Planning and Preliminary Engineering, SHA
Ms. Odessa Phillip, Environmental Manager, Project Planning Division, SHA
Mr. Dennis Simpson, Planning Manager, MdTA
Mr. Joe Waggoner, Deputy Executive Secretary of Facility Development, MdTA
Mr. Raja Veeramachaneni, Director of Planning and Preliminary Engineering, SHA
Richard Y. Woo, Ph.D., Director of Policy and Research, SHA



**WASHINGTON COUNTY
ENGINEERING DEPARTMENT**
Washington County Administrative Annex
80 West Baltimore Street
Hagerstown, Maryland 21740-8003
Telephone: 240-313-2400
FAX: 240-313-2401
Deaf and Hard of Hearing call 7-1-1 for Maryland Relay

Ms. Nicole Washington
Project Manager
Project Planning Division
Maryland State Highway Administration
707 North Calvert Street
Mail Stop C-301
Baltimore, MD 21202

November 3, 2004

Dear Ms. Washington:

First, I would like to thank you and the Maryland State Highway Administration for allowing the Board the opportunity to comment on the I-81 improvement project. This much-needed project will have a significant impact on life in Washington County throughout the 21st Century.

On November 2, 2004, your design consultant, John Christman, of Greenhorn and O'Mara, and I presented the I-81 Improvement Project to the Board of County Commissioners of Washington County (Board). This letter serves to summarize Board comments for inclusion in the Public Hearing Transcript to Maryland State Highway Administration's Location /Design Public Hearing held on October 6, 2004.

The Comments are as follows:

- 1) Although the Board recognizes the state's funding concerns associated with completing this project in a timely manner, they are opposed to tolling I-81 traffic under any of the options presented. After much discussion with a variety of stakeholders in the County, the Board believes that tolls present some very serious consequences for Washington County and those consequences outweigh the benefits derived from tolling. Placing tolls on I-81 introduces many of the same concerns intended to be solved by the I-81 improvement project. The Board's concerns include: potential impact to the local economy, diverted local traffic, additional air and noise pollution, and safety concerns at our airport.
 - a) First is the impact to the local economy. A primary factor in the economic development success in Washington County has been the strong transportation infrastructure offered by I-81 and I-70. The Board, as well as our Economic Development Commission, believes tolls would be a deterrent when trying to attract clients to our region that depend on transportation. Tolls would also have a negative fiscal impact on many of the current transportation companies located in the County including Fed Ex, Bowman Trucking, Tractor Supply, Mack Trucks and many others. This could result in lost jobs for Washington County.


- b) The Board believes tolls will deter through travelers to stop in the County. There is likely to be a perception by some that they will be tolled again when entering or exiting the interstate, thus they will not exit. When provided a choice to stop in Maryland or stop in a neighboring toll free state, there is potential for shopping, food, and fuel sales to be lost. The Environmental Assessment and 4(f) Evaluation dated September 15, 2004, speaks specifically to the concerns under the "Economic Effects" section, pages 26-28. It says, "This increased cost would directly affect revenues of the trucking industry and could cause relocation or closing of businesses". It also concludes "Monies spent on tolls would be unavailable for use in the general economy, which could have a direct effect on local economic conditions. In addition, out of state residents may be less likely to cross into Maryland to patronize businesses in the project area."
- c) According to your own models, the traffic diverted from tolls is significant. Increased traffic on our local, already deficient, roads (particularly in the Williamsport area and Route 11 near Pennsylvania) would add to the current congestion and maintenance costs to the state and county. As your research indicates, a great deal of traffic on the Interstate is local commuter traffic. Much of this traffic will reroute to avoid tolls. Those rerouted local trips will lay a heavy burden on an already heavily taxed local network.
- d) With the increased diverted traffic on our local roads stopped at traffic signals and the stop-n-go traffic at the tolls, the air and noise quality in Washington County would be negatively impacted.
- e) Washington County, with assistance from the State and Federal Government, has begun a major runway extension project at Hagerstown Regional Airport costing over \$60M. The east west layout of the primary runway causes planes to take off over I-81 close to the Pennsylvania line. As a result, the Airport requested their consultant URS to review the proposed project. These comments are attached. From this review, the Airport Commission and the Board concur with the URS findings. Of note is "all proposed structures, parking areas and storm water management facilities must be outside" the Runway Protection Zone.

- 2) Consider improvement to the I-81 southbound to MD58 westbound exit ramp. The radius of this ramp is not adequate. It appears to spiral to a smaller radius quite rapidly, which is difficult to anticipate for the unsuspecting driver. With retail and residential development in the immediate area, as well as access to a major shopping center, the problem will only become more evident with time.
- 3) Two options are proposed for the I-81 southbound to Maugans Avenue exit ramp. The Board prefers Option "A", as it would have less impact upon the businesses in that quadrant of the interchange.
- 4) Currently, the movement from Interstate 81 southbound to US11 northbound requires crossing two lanes of through traffic, one left turn lane, and entering northbound US11 traffic. Please consider alternatives that may improve this movement.
- 5) The Board is opposed to the installation of a weigh station on I-81 in Maryland; including the proposed weigh station site between US40 and Halfway Boulevard. Please fully consider the following reasons for the opposition:

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- a) There is simply no area that provides ample space between interchanges on Maryland's section of I-81. Weaving of I-81 through traffic, weigh station traffic, US40 traffic entering I-81 and Halfway Boulevard traffic exiting I-81 a safety hazard. Increased use of both Halfway Boulevard and US40 will only exacerbate the problem.
- b) The possible backup of trucks entering the weigh station would negatively impact the US40 interchange as well as I-81 through traffic.
- c) A bypass route from US40 to Greencastle Pike to I-70 is readily available to any potential offender seeking to avoid the weigh station. The Board encourages the Maryland State Highway Administration to continue discussion with neighboring states to place a weigh station in a safer location outside of Maryland, as they are much better suited logistically to handle one.
- 6) Among the options presented, the Board finds options 3 and 3A most attractive. The Board would like to request that the interchange improvement be considered first, with the I-70 interchange having top priority.
- 7) Finally, please do not underestimate the impact this project will have on Washington County. From the Environmental Assessment and 4(f) Evaluation dated September 15, 2004, "The build alternates could provide relief to traffic congestion, improve safety, and in general, improve the transportation system along I-81. This would affect regional business activities in a positive way... Likewise, the improvements to I-81 would have a positive affect on local businesses and employment in the area..."

In closing, I would like to take this opportunity to thank you for offering to present the project in person. However, the Commissioners decided to review this project prior to the November 8, 2004 deadline in order to provide you with their comments. I look forward to continued coordination with you regarding this very important project for Washington County!

Respectfully,

 Robert Slocum, P.E.
 Deputy Chief Engineer

Enclosure

C: Rod Shoop, via e-mail
 Terry McGee, P.E. via E-mail
 Gary Roimer, P.E. via E-mail

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Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

January 13, 2005

Mr. Robert Slocum
Washington County Engineering Department
Washington County Administrative Annex
80 West Baltimore Street
Hagerstown, Maryland 21740-6003

Dear Mr. Slocum:

Thank you for administering the presentation of the I-81 Improvement Study to the Board of Commissioners of Washington County. I have reviewed your comments received from the meeting and they have been documented as part of the official Public Hearing Record. This letter will serve to address the comments and offer responses to any inquiries.

Your concerns regarding the impacts of tolling on the local economy are noted. At this time, we are uncertain what percentage of local clients would be dissuaded from patronizing businesses in Washington County as a result of tolls. We are also unable to clearly quantify what percentage of business owners would choose to relocate to neighboring states, what the financial impacts would be on the business owners relying on transportation or their end users, or what potential increased benefits may be realized due to a newer, safer, more reliable paid facility. It should be recognized, however, that the expected increases in traffic along the I-81 corridor may also deter users from the area due to heavy congestion. Utilizing traditional funding sources and the related construction times associated with less dedicated funds will result in a much longer construction duration and during this period the local economy may still be negatively impacted.

Discussions with representatives of the trucking industry currently patronizing Washington County as well as creative discounting plans may be used to help minimize the impact on the local economy. The State Highway Administration (SHA) recognizes the importance of the trucking industry and we are concerned about the impacts to the local economy. In order to understand the effects of tolls on the local economy we are conducting an economic analysis.

My telephone number/toll-free number is _____
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Mr. Robert Slocum
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Another concern was related to the traffic diversion onto local roads. In order to understand the effects of the tolls on surrounding roads, we have completed a traffic impact study. In the study, we analyzed existing and future traffic along US 11 and MD 63. In 2025, without tolls along I-81, traffic operations are near failing conditions at the US 11 and MD 63/68 intersection. Based on this very conservative analysis, if tolls are implemented along I-81, traffic may potentially divert to these local roads. The geometric design of US 11 and MD 63 will not accommodate this increase in the number of vehicles, so it is likely that these users would return to I-81. SHA is currently researching additional measures to implement to minimize these diversions.

Air and Noise Quality was another stated concern of the Board. As part of the environmental analysis for the I-81 Improvement Study, a technical noise analysis was performed. Ambient noise level measurements were conducted at 36 receptor sites located within 16 Noise Study Areas. Monitored ambient levels in the project area ranged from 53 to 74 dBA. The noise impact evaluation was completed in accordance with SHA's Sound Barrier Policy and the Federal Highway Administration's noise abatement criteria. Because noise levels will not increase more than 3 dBA in the project area, noise walls were not recommended. However, landscaping will be used to provide visual screening.

Regarding Air Quality, a detailed microscale air quality analysis has been performed to determine the local Carbon Monoxide (CO) impact of the proposed project. CO impacts are analyzed as the accepted indicator of vehicle-generated air pollution. There were a total of 20 air quality sensitive receptors used in the analysis, with five of those receptors in the Maugans Avenue vicinity. The EPA CAL3QHC dispersion model is used to predict CO concentrations for air quality sensitive receptors for both the build year (2010) and design year (2025). Receptors used in this analysis were also used to predict air quality impacts for the tolling options. For the projected hourly peak-traffic volumes, analysis results indicated the range of CO concentrations to be 2.7 to 4.9 ppm for the AM peak hour, and 2.9 to 5.9 ppm for the PM peak hour in 2010. For the projected hourly peak-traffic volume in 2025, the results indicated the range of CO concentrations would be 2.4 to 4.6 ppm for the AM peak hour and 2.8 to 5.4 ppm for the PM peak hour. The CO concentrations decrease between the build year and the design year and the levels are well below the State and National Ambient Air Quality Standards (S/NAAQS) of 9 ppm for 1 hour concentrations. The 8 hour concentrations are well below the 8 hour concentrations S/NAAQS of 35 ppm.

Mr. Robert Sloum
Page Three

As for the Hagerstown Regional Airport safety concerns, the State Highway Administration has met with Airport officials and understands the limitations placed on the project by the presence of the Runway Protection Zone (RPZ). We are fully aware of the structural restrictions in this area and would take the necessary measures to not obstruct the performance of the airport. SHA would also consider the placement and type of stormwater management facilities with respect to the RPZ requirements.

Next, the Board suggested that the I-81 southbound to MD 58 westbound exit ramp be improved. As stated previously, the purpose of the study is to improve traffic operations and safety along the I-81 corridor. In order to determine whether a significant safety problem existed at specific interchanges in the corridor accident data for each interchange was analyzed. The I-81 southbound ramp to westbound MD 58 had one accident during the 2 year period that was evaluated. Because of this, it was decided not to make any modifications to this ramp.

The Board also suggested improving the I-81 southbound to US 11 movement. We are currently investigating measures to improve this situation. There are several options that we are considering. One option is the construction of a loop ramp in the southwest quadrant to allow the I-81 southbound to US 11 eastbound movement. This measure would require additional right of way, as well as a deceleration lane on I-81 under the existing bridge. Secondly, we are studying the realignment of the ramps to form a single intersection. The ramps to and from I-81 are offset, if we can align them to form a single intersection, a signal may be warranted which would improve the operations at the intersection. However, we need to investigate the feasibility of doing this action, as a left turn lane would be required on the US 11 bridge and sight distance could be an issue. The third measure that we are researching includes providing signals at the two existing ramps. This implementation would be considered a split T-intersection and the signals would need to be interconnected.

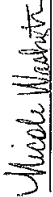
The Board's opposition to the truck weigh station has been documented. The study team proposed a station because the 12-mile segment of I-81 in Maryland and the 26-mile segment of I-81 in West Virginia does not have any truck weigh stations. The weigh station option was added to the study to help increase the safety of the corridor which was part of the projects purpose and need. The limited enforcement activities that have been conducted show a significant truck violation rate for size, weight and safety. During 2001 and 2002 the Maryland State Police, Commercial Vehicle Enforcement Unit performed 1,676 portable truck weighings that resulted in 1106 overweight citations. In addition to the overweight citations, 448 vehicles were placed out-of-service for an 18.7% rate, and 300 Drivers were placed out-of-service for a 12.5% rate which is well above the state average of 6.5%. In addition to weight and safety violations, they made 13 criminal arrests, found two handgun violations and three controlled dangerous substance violations.

Mr. Robert Sloum
Page Four

Thank you again for your comments. If you should have any questions or comments, please feel free to contact Mrs. Nicole Washington, the Project Manager at 410-545-8570 or 1-800-548-5026. She can also be reached via email at nwashington@sha.state.md.us.

Very truly yours,

Bruce Grey
Deputy Director
Office of Planning and
Preliminary Engineering

By: 
Nicole Washington
Project Manager
Project Planning Division

cc: Mr. Dennis Simpson, Maryland Transportation Authority w/ incoming
Mr. Dennis R. Atkins, State Highway Administration w/ incoming
Ms. Odessa Phillip, State Highway Administration w/ incoming



**MARYLAND
TRANSPORTATION
AUTHORITY**

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Robert L. Flanagan
Chairman

Louise P. Hobilzelli
Walter E. Woodford, Jr., P.E.
John B. Norris, Jr., P.E.
Rev. Dr. William C. Calhoun, Sr.
Andrew N. Barrow
Susan M. Affleck Bauer, Esq.

Trent M. Kittleman
Executive Secretary

Engineering Division
300 Authority Drive
Baltimore MD 21222-2200
410-286-8470
410-286-8475 (fax)

410-365-7024 (TTY)
1-888-754-0098

e-mail: mdtaengineer@mdtransportationauthority.com

www.mdtransportationauthority.com

November 3, 2004

Mr. Raja Veeramachaneni, Director
Office of Planning and Preliminary Engineering
Maryland State Highway Administration
Mail Stop C-401
707 North Calvert Street
Baltimore MD 21202

Dear Mr. Veeramachaneni:

As we have discussed prior to the I-81 Improvement Study public hearing, the Maryland Transportation Authority has some concerns regarding the Preliminary Traffic and Revenue Analysis prepared by Wilbur Smith and Associates (WSA). The following are additional Maryland Transportation Authority (MDTA) comments on the Preliminary Traffic and Revenue Analysis.

GENERAL COMMENTS

- The assumptions adopted by WSA need to be more fully explained. The analysis is not transparent. For example –
 - What is the percentage of through and local trips?
 - Is a commuter discount applied?
 - Are commercial vehicles assumed to be restricted on US 11?
- Develop a different diversion rate for through and local traffic. Even if commercial vehicles are not restricted, it is highly unlikely that through and local trips will have similar diversion rates.
- Develop an incremental approach to tolling for Option 4. Applying the model independently to each toll location is unrealistic.
- Review the impact of the 50 cents toll. The WSA model does not perform well at the lower toll levels.
- Identify the alternative routes. This should include short diversion routes for local traffic and short and long diversion routes for through traffic.
- Identify capacity impacts on diversionary routes. Clearly, "backwash" will occur and diversion route speeds will decrease.
- Include constant dollar revenues as well as "market" inflation revenues. Develop tables for Option 4 that are consistent with Options 1 and 3.
- Options 1 and 3 only divert traffic in the direction of the toll and Option 4 diverts traffic in both directions at both toll locations.

Mr. Raja Veeramachaneni
November 3, 2004
Page 2 of 3

EDITORIAL COMMENTS

Executive Summary

- Page ES2: Use of "one or two directional tolling"
- Page ES2: Key finding #1 – "due" not "do"
- Page ES2: Key finding #4 – should it be "just beyond the toll plaza"?
- Table ES1: This table is confusing; results need to be on a consistent toll basis.
- Page ES3: Key finding #6: This is not correct for same toll revenue level. Option 4 is 20% lower than Option 1 at a \$2 toll (\$1 at each of the two toll plazas in Option 4).

MAIN REPORT

- Page 1-6: No mention of 60% discount for commuters using EZPass. Was it considered?
- Page 1-6: No mention of impedance difference for short and long routes.
- Page 1-6: Diversion issues not discussed –
 - Restriction for commercial vehicles on US 11?
 - Knowledge of diversion routes by through traffic is very limited, particularly auto traffic
 - Diversion levels are high for MD 63 and US 11. (See Figures 1, 2 and 3). Is this realistic? Once traffic volumes increase from diversion, diversion route speeds will fall and traffic will "backwash" onto I-81.
- Page 6-10: Capacity restrictions on US 11 not included in the analysis.
 - The purpose of trips used by WSA is not behavioral. Auto trips should be broken into business, commuter and social categories. Even an approximate breakdown would have given better values of time. Long and short trips help in identifying route options but not the travelers' behavioral response.
- Page 6-10: The behavioral values of time used by WSA seem to assume all local auto trips are made by commuters (VOT 9.6 \$/hour) and all through auto traffic is business (VOT 19.2 \$/hour). This is an unlikely scenario. In addition, WSA seems to assume all local commercial vehicle trips are "pick-up and delivery vans" (VOT \$50 /hour) and all through commercial vehicles are very large and carry high "value added" commodities (VOT \$60 /hour). More discussion and some justification are needed.
- Page 6-10: It would be helpful to include constant dollar revenues for purposes such as cost-benefit comparisons with operating costs and capital needs.
- Page 6-10: Demand Curves: The WSA curve is very sensitive to a toll of 50 cents; it shows a 24% fall in demand. However, the model becomes very insensitive beyond 50 cents (e.g., only a 1% fall in demand with a 50 cent increase in tolls from \$1.50 to \$2.00).
- Page 10-24: Revenues: The WSA model overstates the impact of low tolls and understates the impact of high tolls.
- Page 10-24: Traffic Impact: There are possible typos in Figures 7, 10, 13, and 16. If these are actual model results rather than typos as suggested by WSA in their response to our earlier comments, then WSA should make manual adjustments to the results as it is unlikely that people will behave as inconsistently as the model suggests.

Mr. Raja Veeramachaneni
November 3, 2004
Page 3 of 3

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Summary Chart: Table 14 – this is very misleading, needs a common toll comparison. At \$2, Option 1 generates \$50.2 million, Option 4 only \$42.4 million. That is a 20% improvement for Option 1. It also diverts 14,000 less vehicles. It is unreasonable to suggest results are similar.

It should be noted that the reason Option 4 has such high traffic diversion compared to Option 1 is the very large traffic impact that is suggested by the WSA model, when applying a 50 cent toll. "Apply a toll of 50 cents once, as in Option 1, and 13,000 trips are diverted. Apply a toll of 50 cents twice, as in Option 4, and 28,000 trips are diverted." However, the \$1 toll in Option 1 diverts only 18,000 trips. Is it reasonable to believe that paying half the toll twice will increase diversion by 55%?

It should be noted in the WSA analysis that it appeared that a \$2 toll in Option 1 produces less diversion than a \$1 toll (50 cents per plaza) in Option 4 (i.e., 22,400 compared with 28,400). Also, a \$2 toll in Option 4 (\$1 at each plaza) creates a diversion of 41,200 vehicles. WSA should explain how diverted traffic is behaving at each toll. In Option 4, is the north and south toll diversions additive, or not?

These comments are intended to improve the preliminary traffic and revenue analysis done for the I-81 Improvement Study. We would be pleased to meet with staff from SHA and WSA to discuss these comments. Please contact me at 410-288-8485 or dsimpson@mdta.state.md.us to set up a meeting.

Sincerely,


Dennis N. Simpson
Planning Manager

cc: Mr. Keith A. Duerling, Maryland Transportation Authority
Ms. Cynthia Simpson, Maryland State Highway Administration
Mr. Joseph Waggoner, Maryland Transportation Authority
Ms. Nicole Washington, Maryland State Highway Administration



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

February 17, 2005

Mr. Dennis N. Simpson
Planning Manager
Engineering Division
Maryland Transportation Authority
300 Authority Drive
Baltimore MD 21222-2200

Re: Response to Comments on I-81 Traffic Impact & Toll Revenue Study

Dear Mr. Simpson:

In response to the letter you prepared on November 3, 2004 identifying the Maryland Transportation Authority's (MDTA) comments on the I-81 Preliminary Traffic Impact and Toll Revenue Study, I have coordinated with the Project Management Team and Wilbur Smith and Associates (WSA) to address your comments. A response is provided to each of the questions/comments below. This letter also serves to address any concerns raised at the December 7, 2004 meeting at which we discussed the Preliminary Traffic Impact and Toll Revenue Study and the intended direction for the study. Since we received your comments during the Public Hearing comment period, your comments and our responses will be included in the Public Hearing Transcript.

First, this study was performed using only readily available information. A more detailed analysis was originally proposed, including travel pattern and characteristic surveys and a more sophisticated modeling approach; however, since it was decided that we only needed to do a NEPA Grade analysis versus an Investment Grade analysis, a much more simplified approach was selected. In addition, it was also decided to make use of the previously developed Hagerstown model. The Hagerstown model did not include information on trip purpose distributions, nor passenger car versus truck patterns; therefore, in order to segment the traffic into cars versus trucks, traffic counts at various locations on I-81 were used.

My telephone number/toll-free number is

Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free

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The traffic and revenue impact analysis was performed using a slightly refined version of the Hagerstown model, using TRANPLAN equilibrium assignment techniques, a version which has been adapted by WSA to reflect willingness to pay and toll facility marketshare. While significant traffic impacts are anticipated on alternative routes, delay impacts associated with the diversions were calculated within the TRANPLAN model using traditional "speed flow" curves. No detailed simulations were performed to estimate the actual increases in delay due to the diversions; this could be a particular issue with respect to the southern toll plaza, given the constraint of the US 11 Bridge over the Potomac River and difficult geometry on its approaches. In essence, while the model estimated an increase in delays at each progressively higher toll rate, the increased delay at the US 11 Bridge over the Potomac River may be somewhat higher as determined from this preliminary analysis. This could affect the percent of traffic diversion. As discussed at our meeting, an added delay through Williamsport will be incorporated into the model as we update this analysis.

Several other questions in your letter related to a perception that values of time are varied by trip purpose. This was not the case. Separate values of time were developed for passenger cars and commercial vehicles. However, in keeping with several of the other questions raised in your letter, an attempt was made to recognize the relative "familiarity" of through motorists by using a much higher value of time for through trips than was applied for local trips. In this case, a through trip would be any trip which would be external to the entire Hagerstown area model, be that on I-81 or I-70. Differential values of time discussed in the report relate to the differential handling of through versus local trips, not trip purpose.

It was determined that only about 35 percent of the I-81 traffic passes entirely through the modeling area. In addition, about 65 percent has an origin and/or destination within the Hagerstown modeling area. This can be observed by looking at the existing traffic counts at the various interchange ramps throughout the region. Ramp volumes represent a relatively high proportion of mainline traffic volumes at several of the interchanges, indicating a large proportion of locally oriented traffic on I-81.

Also, it is important to note that there are relatively small time savings for using I-81 instead of other local roads, at the particular locations selected for potential toll plazas. For example, at the proposed southern location, I-81 saves only about three minutes or so as compared with US 11 between the northernmost interchange in West Virginia and the US 11 interchange north of Williamsport. Obviously, the delay on US 11 would increase as traffic diverts from I-81 to US 11, and indeed the model developed by WSA shows this travel time difference increasing to up to 13 minutes at high toll rates. However, at the lowest toll rates, the travel time savings is still in the 5 minute range.

It was requested at the meeting that the additional measures developed to minimize the traffic diversions onto local roads be implemented into the model. These measures include restraining truck traffic through Williamsport and other local roads through geometric limitations or posted signs, designating US 11 as Business US 11 to deter truck traffic, and creating a streetscape in Williamsport to slow diverted traffic. SHA will look into these options further as the study progresses.

Several of the questions raised by the Authority relate to the performance of the model, suggesting that the model overestimates diversion at low toll rates and underestimates them at higher toll rates. There are several reasons for this phenomenon:

- Since 65 percent of the traffic is locally oriented, a majority of motorists would be familiar with alternative routes, they would simply be exiting earlier or entering later depending on specific origin and destination;
- With a travel time savings of 3-5 minutes, even with a \$0.50 toll, the cost per minute saved by using I-81 would be \$0.10-\$0.17 per minute, as compared to an average value of time for local passenger car motorists estimated at \$0.16 per minute (at 2004 levels). The local component of traffic is diverted early in the assignment process (i.e., at low toll rates) – at higher toll rates the delays on alternative routes increase within the model, making the alternative route less attractive;
- At higher toll rates, the proportion of "local" traffic remaining on I-81 decreases significantly, and the remaining "through" movement is analyzed using a much higher value of time (\$0.32 per minute at 2004 levels); and
- At the Southern Plaza about 20 percent of the diverted traffic is oriented directly to and from Williamsport itself; this traffic would have an I-81 time advantage of even less than 3 minutes.

Finally, in preparing this response, we further reviewed the model for reasonableness.

Overall, the model is functioning properly, although the local trip component seems to be somewhat "overcalibrated" for the toll-free condition. This is primarily true at the northern plaza, which may tend to slightly overstate the diversion potential. We will review this further and if corrections are needed we will update the analysis. However, this should not substantially alter the results.

The other factor, as noted above, is that the model may be underestimating the negative impact on travel speeds along existing US 11, particularly at the Potomac River – hence, also overstating diversion potential particularly at lower toll rates. This could be refined through a more detailed simulation analysis, but short of this, WSA could test the impact of manually imputing additional nominal delays at the Potomac River crossing at each progressively higher toll rate.

Depending on the results of the sensitivity analysis, and calibrations described above, it may be necessary to conduct further detailed studies. Origin and destination (OD) surveys may be useful to determine the number of local or regular trips. It is possible that these findings will have an impact on the overall diversion numbers since the majority of diversions will be from the local traffic and not through traffic on I-81.

Another issue that came up through our coordination with the Authority was what is the “cost” to the Hagerstown economy of not moving forward with improvements to I-81. Will doing nothing to improve the safety of the interchanges along I-81 result in eventual similar diversions to I-81 as would occur under the tolling scenario? SHA will attempt to answer this question through an economic analysis to be conducted in early 2005.

Specific responses to the comments in Mr. Simpson’s letter are provided below –
Following each of the Authority’s comments.

GENERAL COMMENTS

- The assumptions adopted by WSA need to be more fully explained. The analysis is not transparent. For example –
 - What is the percentage of through and local trips? *Approximately 35% through and 65% local.*
 - Is a commuter discount applied? *No. However, as decided at the meeting, a commuter discount of 60% will be incorporated into the revised analysis.*
 - Are commercial vehicles assumed to be restricted on US 11? *Currently, no special restrictions are assumed. However, the additional measures developed to reduce diversion onto local roads, as presented at the meeting, do restrict truck traffic in a variety of manners and will be implemented into the model.*
- Develop a different diversion rate for through and local traffic. Even if commercial vehicles are not restricted, it is highly unlikely that through and local trips will have similar diversion rates. *Different diversion rates were dealt with by using a much higher Value of Time (VOT) for through motorists. Through motorists were given a higher value of time to reflect their unfamiliarity with the alternate routes.*

- Develop an incremental approach to tolling for Option 4. Applying the model independently to each toll location is unrealistic. *We are not clear what the question means. The model assumes and analyzes both toll plazas together for Option 4.*
- Review the impact of the 50 cents toll. The WSA model does not perform well at the lower toll levels. *A lot of local trips with minimal time savings are lost quickly which might be mitigated with a commuter discount. Also, the southern plaza is unique in that as the toll rates continue to increase, diversion does not increase as significantly. This is a result of the US 11 becoming congested and also a significant amount of the remaining traffic is through traffic with much higher VOT mentioned above.*
- Identify the alternative routes. This should include short diversion routes for local traffic and short and long diversion routes for through traffic. *The modeled area includes the alternate routes and the most logical is used to bypass the toll. There is no convenient long distance alternate route beside US 11 and MD 63.*
- Identify capacity impacts on diversionary routes. Clearly, “backwash” will occur and diversion route speeds will decrease. *The model uses a capacity restraint equilibrium process where speeds on the alternate routes decrease as the volume to capacity ratio increases. However, as noted above, this may underestimate added delays at the competing US 11 Bridge over the Potomac River. At the meeting, a concern was raised regarding the constraint to account for capacity issues at the traffic lights on the diversion routes. SHA will affirm that the model is constrained enough to account for capacity issues with traffic lights, most notably in the northern end of the project area.*
- Include constant dollar revenues as well as “market” inflation revenues. *The study did inflate value of time but not toll rates.*
- Develop tables for Option 4 that are consistent with Options 1 and 3. Options 1 and 3 only divert traffic in the direction of the toll and Option 4 diverts traffic in both directions at both toll locations. *We can change the tables if preferred. We assume that you would like directly comparable toll rates for Option 4.*

EDITORIAL COMMENTS

Executive Summary

Page ES2: Use of "one or two directional tolling" *Document will be corrected.*

Page ES2: Key finding #1 – "due" not "do" *Document will be corrected.*

Page ES2: Key finding #4 – should it be "just beyond the toll plaza"? *Yes, document will be corrected.*

Table ES1: This table is confusing; results need to be on a consistent toll basis. *See response above.*

Page ES3: Key finding #6: This is not correct for same toll revenue level. Option 4 is 20% lower than Option 1 at a \$2 toll (\$1 at each of the two toll plazas in Option 4). *This will be adjusted if we change the table as discussed above.*

MAIN REPORT

Page 1-6: No mention of 60% discount for commuters using EZPass. Was it considered? *No.*

Page 1-6: No mention of impedance difference for short and long routes. *The impedance difference is accounted for by increasing the lower travel speeds and delays associated with the alternate routes.*

Page 1-6 Diversion issues not discussed – *See previous responses*

Restriction for commercial vehicles on US 11? *We are currently working on restricting some commercial vehicles along US 11 based on vehicle length; however we will not be able to restrict all commercial vehicles. The model can be adjusted to reflect these restrictions.*

- Knowledge of diversion routes by through traffic is very limited, particularly auto traffic. *Used double VOT to simulate this effort.*
- Diversion levels are high for MD 63 and US 11. (See Figures 1, 2 and 3). Is this realistic? Once traffic volumes increase from diversion, diversion route speeds will fall and traffic will "backwash" onto I-81. *Equilibrium assignments were used to reflect this.*
- Capacity restrictions on US 11 not included in the analysis. *These were recognized in the model, but without a detailed simulation of impacts*

Page 6-10 The purpose of trips used by WSA is not behavioral. Auto trips should be broken into business, commuter and social categories. Even an approximate breakdown would have given better values of time. Long and short trips help in identifying route options but not the travelers' behavioral response. *There is no basis for this breakout since no Origin/Destination data was collected and the consultant was given a 1 purpose trip table (all vehicles). WSA did disaggregate the trip table into Passenger Cars and Commercial Vehicles. The consultant then further disaggregated to local and thru traffic and varied VOT by these categories.*

Page 6-10 The behavioral values of time used by WSA seem to assume all local auto trips are made by commuters (VOT 9.6 \$/hour) and all through auto traffic is business (VOT 19.2 \$/hour). This is an unlikely scenario. In addition, WSA seems to assume all local commercial vehicle trips are "pick-up and delivery vans" (VOT \$30 /hour) and all through commercial vehicles are very large and carry high "value added" commodities (VOT \$60 /hour). More discussion and some justification are needed. *The differences in values of time used for local and thru traffic relate to the familiarity or non familiarity of diversion routes of local and non local users, not based on trip purpose.*

Page 6-10 It would be helpful to include constant dollar revenues for purposes such as cost-benefit comparisons with operating costs and capital needs. *A revised scope will be developed. As part of this scope, constant dollar revenues will be included.*

Page 6-10 Demand Curves: The WSA curve is very sensitive to a toll of 50 cents; it shows a 24% fall in demand. However, the model becomes very insensitive beyond 50 cents (e.g., only a 1% fall in demand with a 50 cent increase in tolls from \$1.50 to \$2.00). *See response above for reasons why less sensitive as tolls increase.*

Page 10-24 Revenues: The WSA model overstates the impact of low tolls and understates the impact of high tolls. *See response on page 2.*

Page 10-24 Traffic Impact: There are possible typos in Figures 7, 10, 13, and 16. If these are actual model results rather than typos as suggested by WSA in their response to our earlier comments, then WSA should make manual adjustments to the results as it is unlikely that people will behave as inconsistently as the model suggests. *Manual adjustments will be made.*

Page 25 Summary Chart: Table 14 – this is very misleading, needs a common toll comparison. At \$2, Option 1 generates \$50.2 million, Option 4 only \$42.4 million. That is a 20% improvement for Option 1. It also diverts 14,000 less vehicles. It is unreasonable to suggest results are similar. *WSA can change this to have "apples and apples" on through toll rates.*

Mr. Dennis N. Simpson
Page Eight

It should be noted that the reason Option 4 has such high traffic diversion compared to Option 1 is the very large traffic impact that is suggested by the WSA model, when applying a 50 cent toll. "Apply a toll of 50 cents once, as in Option 1, and 13,000 trips are diverted. Apply a toll of 50 cents twice, as in Option 4, and 28,000 trips are diverted." However, the \$1 toll in Option 1 diverts only 18,000 trips. Is it reasonable to believe that paying half the toll twice will increase diversion by 55%? *It is not appropriate to simply consider through toll rates. Only 35% of traffic is through. This means only through trips (35%) would have the same toll in the example cited. In fact, in Option 4 several more trips (i.e. local trips to/from the north) are subjected to tolls.*

It should be noted in the WSA analysis that it appeared that a \$2 toll in Option 1 produces less diversion than a \$1 toll (50 cents per plaza) in Option 4 (i.e., 22,400 compared with 28,400). Also, a \$2 toll in Option 4 (\$1 at each plaza) creates a diversion of 41,200 vehicles. WSA should explain how diverted traffic is behaving at each toll. In Option 4, is the north and south toll diversions additive, or not? *The diversions shown for Option 4 include both the south plaza and north plaza.*

We hope these responses are helpful. The additional analysis studies are underway and a report of the results from the additional analysis is being prepared to present to the elected officials in early 2005. If you should have any additional questions or comments, please feel free to contact me at 410-545-8512 or 1-800-548-5026.

Sincerely,



Raja Veeramachaneni, Director
Office of Planning and
Preliminary Engineering

cc: Ms. Felicia Alexander, SHA
Mr. Scott Allaire, WSA
Mr. Dennis Atkins, SHA
Mr. Keith Duerling, MdTA
Mr. David Greenwood, WSA
Mr. Bruce M. Grey, SHA
Ms. Odessa Phillip, SHA
Mr. Joe Waggoner, MdTA
Ms. Nicole Washington, SHA

Public Comments Received Since the Public Hearing

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT

WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004

5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL

1200 PENNSYLVANIA AVENUE

HAGERSTOWN, MD 21742

PLEASE NAME TERRY & TONI SHRADER DATE 11-7-04

PRINT ADDRESS 15529 NATURAL WELL RD.

CITY WILLIAMSPORT STATE MD. ZIP 21795

I/We wish to comment or inquire about the following aspects of this project:

WE WISH TO EXPRESS OUR OPPOSITION TO TALL BOOTH
AND A WEIGH STATION ON I-81 IN WASHINGTON
COUNTY FOR THE FOLLOWING REASONS:
1) OUR AIR QUALITY IN WASHINGTON COUNTY IS ALREADY
UNFIT ACCORDING TO RECENT STATE TESTS. ADDITIONAL
TRAFFIC CONGESTION AND IDLING WILL ONLY LOWER OUR
AIR QUALITY AND INCREASE THE HEALTH HAZARD TO AREA
RESIDENTS
2) WILLIAMSPORT HAS BEEN A MAJOR SOURCE OF AIR



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

November 18, 2004

Mr. and Mrs. Terry and Toni Shrader
15529 Natural Well Road
Williamsport MD 21795

Dear Mr. and Mrs. Shrader:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your concerns regarding air quality, the potential toll plazas, and the truck weigh station have been noted and will be included as part of the official Public Hearing record.

On your comment card, you stated your concern for air quality impacts in Washington County and particularly at the Williamsport School Complex. As part of the environmental analysis for this project, a detailed microscale air quality analysis has been performed to determine the local carbon monoxide (CO) impact of the proposed project. CO impacts are analyzed as the accepted indicator of vehicle-generated air pollution. There were a total of 20 air quality sensitive receptors used in the analysis. The Environmental Protection Agency (EPA) dispersion model is used to predict CO concentrations for air quality sensitive receptors for both the build year (2010) and design year (2025). The same receptors used in this analysis were also used for predicting air quality impacts for the tolling options. For the projected hourly peak-traffic volumes, analysis results indicated the range of CO concentrations to be 2.7 to 4.9 ppm for the AM peak hour, and 2.9 to 5.9 ppm for the PM peak hour in 2010. For the projected hourly peak-traffic volume in 2025, the results indicated the range of CO concentrations would be 2.4 to 4.6 ppm for the AM peak hour and 2.8 to 5.4 ppm for the PM peak hour. The CO concentrations decrease significantly between the build year and the design year and the levels measured are within the acceptable range.

On your comment card, you also mentioned a concern about the noise effects on the Williamsport School Complex and surrounding areas. As part of the environmental analysis for the I-81 Improvement Study, a technical noise analysis was performed. Ambient noise level measurements were conducted at 36 receptor sites located within 16 Noise Sensitive Areas. Monitored ambient levels in the project area ranged from 53 to 74 dBA. The noise impact evaluation was completed in accordance with SHA's Sound Barrier Policy and the Federal Highway Administration's noise abatement criteria. Because noise levels will not increase more than 3 dBA in the project area, noise walls were not recommended. However, other measures, such as landscaping will be implemented to provide visual screening.

My telephone number/toll-free number is _____

Maryland Relay Service for Impaired Hearing or Speech: 1-800-735-2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Mr. and Mrs. Terry and Toni Shrader
Page Two

Thirdly, on your comment card, you noted concern for the potential adverse impacts of congestion on the C & O National Historical Park and the surrounding area. In order to alleviate congestion at the toll areas, a combination of Highway Speed Electronic and Cash Toll Lanes would be provided. The Highway Speed Electronic Toll Lanes would require an E-Z Pass transponder and enable drivers to pay tolls at speeds of up to 70 miles per hour; thereby, reducing the number of drivers who have to stop and the potential for long queues.

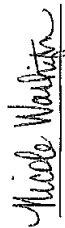
Lastly, on your comment card, you stated your concern about toll traffic diversion into the town of Williamsport and surrounding areas. In order to understand the effects of the tolls on surrounding roads, we have completed a traffic impact study. In the study, we analyzed existing and future traffic along US 11 and MD 63. In 2025, without tolls along I-81, traffic operations are near failing conditions at the US 11 and MD 63/68 intersection. Based on this very conservative analysis, if tolls are implemented along I-81, traffic may potentially divert to these local roads. The geometric design of US 11 and MD 63 will not accommodate this increase in the number of vehicles, so it is likely that these users would return to I-81. SHA is currently researching measures to minimize these diversions.

Thank you again for your comments. If you have any additional questions or concerns, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:



Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)

241 E. Potomac Street
Williamsport, MD 21795

November 3, 2004

Dear Mrs. Washington,

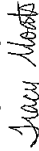
My name is Tracy Moats. I am a resident of Williamsport, MD. I am writing to express my opposition to any of the toll options under consideration for the I-81 Improvement Project – West Virginia State Line to Pennsylvania State Line (Project No. WA128B11).

I moved to Williamsport approximately four years ago. I was attracted to the town right away. We live in a quaint, beautiful small town. It has a rich history, wonderful schools for my daughter to attend, a certain charm, and is one of the few towns that have access to the C&O Canal and Potomac River. My concern is with the traffic flow through the town any of those toll options would create. There is an exit in West Virginia near the state line where traffic can get onto Route 11. I can see commuters using Route 11 through the remainder of West Virginia and crossing the Route 11 bridge (which, if I am correct, is only 2 lanes) into Williamsport and then traveling through our town until they get past the toll station. Have you ever been to our town when there is an accident on Route 81? Traffic is diverted through Williamsport. The traffic is horrible, as ours is a small town not equipped for that heavy of a traffic flow. There are traffic signals at most intersections that will cause heavy traffic flow to "stop up" our streets. Please visit our town and study traffic flow/patterns before making any kind of decisions. The citizens of Williamsport are constantly trying to enhance the positive qualities of our town. Any of these toll options will be detrimental to this cause.

Please consider a toll option (if one has to be put in place at all) of tolling both southbound and northbound I-81 between Showalter Road and Mason Dixon Road where there are already businesses that cater to the trucking industry and it is not a heavily populated residential area like Williamsport is.

I know you will take the time to give my request full thought and consideration and will try to do what is best for the future of our unique town. Thank you for your time. Please include me on your mailing list for any future information concerning this project.

Respectfully,



Tracy Moats

NOV 04 1 08 50 PM



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Petersen, Administrator

Maryland Department of Transportation

November 24, 2004

Ms. Tracy Moats
241 E. Potomac Street
Williamsport, Maryland 21795

Dear Ms. Moats:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your concern and your opposition to toll options along I-81 has been noted and will be included as part of the official Public Hearing record.

I would like to let you know why tolls are being considered for this project. After the Alternates Public Workshop in 2002, the study team was asked to study toll options as a way to help finance the project. The State of Maryland is currently facing severe resource and financial constraints. Without tolls, construction of the I-81 improvements could be phased over approximately 20 years; however, with tolls the project could be programmed and constructed over a shorter period of time. Currently, all of the proposed alternates are being considered with and without tolls. Once detailed engineering and environmental analyses are complete, an alternate without tolls could be selected.

In order to understand the revenue potential of tolls, we have completed a traffic impact study. The study focused on estimating the minimum toll revenue; therefore, it estimated conservatively high traffic diversion levels without considering the limited capacity on local roads. In 2025, without tolls along I-81, traffic operations are near failing conditions at the US 11 and MD 63/68 intersection. As you noted in your letter, the geometric design of US 11 and MD 63 will not accommodate this increase in the number of vehicles, so it is likely that these users would remain on I-81. SHA will implement additional measures to minimize these diversions.

410-545-0412/888-204-4828


My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Ms. Tracy Moats
Page Two

Thank you again for your comments and your interest in this study. Your name and address have been added to our mailing list. If you should have any questions or comments, please feel free to contact Mrs. Nicole Washington, the Project Manager at 410-545-8570, 1-800-548-5026, or via email at nwashington@sha.state.md.us. She will be pleased to assist you.

Sincerely,


Raja Veeramachaneni, Director
Office of Planning and
Preliminary Engineering

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)
Mrs. Nicole Washington, Project Manager, SHA (w/incoming)

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE NAME Mr Terry Land DATE 9/16/04
PRINT ADDRESS 249 Vickie Dr
CITY Hagerstown STATE MD ZIP 21740

☒ We wish to comment or inquire about the following aspects of this project:

Proposed Toll solution on I-81 to help raise money to complete
improvement project. The impact it will have on normally
quiet city streets and neighborhoods -
I have a proposal that will eliminate the need for tolls,
in the 1st place. Entrance/exit ramps may still need
to be tweaked, but I have a solution to the clasher's
that I did not read about in your packet.
Thank you -

☒ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List

From: "Terry Land" <ajrthulheis@sonmedia.com>
To: <nwashington@sha.state.md.us>
Date: 11/03/2004 8:55:21 AM
Subject: I-81 Project

To whom it may concern,

I am a concerned citizen of Hagerstown, MD, living on the West side, and will be directly affected by whatever happens on I-81. As a professional Insurance Agent, I travel the highway frequently, and see many infractions that are ignored, it seems, so there is no wonder there are so many mishaps on this road. I do not claim to have "the answer", however, I do know that installing toll booths at either end of the borders, to attempt to slow vehicles down, or reconfiguring the exits, will not alleviate the situation. To me, the only thing that will prevent the accidents at high speed on I-81, in the state of Maryland, (since this is what you are concentrating on), will be to lower the speed limit to a maximum of 55 mph and ENFORCING IT!!! After all, what good are our laws if people are breaking them every day. I have seen personally, police vehicles, both marked and unmarked cruising at speeds that make me look like I am standing still, but do not have the lights or sirens on. This to me is an extreme hazard, and one that encourages others to do the same. A lower posted speed limit, for the 12 mile stretch, would soon be accepted and a way of life.

In my opinion, truckers are the biggest abusers, especially in inclement weather. They can see farther, so they go faster, and kick up a lot of water so we can not see. In bad weather, perhaps trucks' speed limit should be 50 mph.

Yes some exits need repaving, granted. That can still be done. That is growth and readily accepted. But to install toll booths, people will do everything in their power to avoid the road. This means the city streets will become completely bottlenecked and cause a greater problem than you hoped to prevent. RT 11, Virginia Ave, from Williamsport up to Hagerstown and through; Maudensville Ave, which right now is a headache with all the traffic, will soon be unbearable, especially to the local residents; North of Hagerstown, RT 11 Pennsylvania Ave off Maudensville, up to Pennsylvania, will be bumper to bumper.

I apologize I was not able to make it to the meeting in October, but I had a family emergency and called to explain. I was encouraged to write to you, hoping it would be read by people truly looking for a solution to our perceived problem on I-81. I fully appreciate your time and will be available for further comments at 301-797-9004, or 240-217-2145, or my email address. You can also reach me at: 249 Vickie Dr, Hagerstown, MD 21740.

One of the things that really motivated me to write you, is that our neighborhood has been totally changed over the past 2 years; from a dead end, cul-de-sac, (which was the reason we bought there- safety for our kids), to the Fernrose Project, revitalizing the area, with no input from us. Our quiet street will soon become a "through" street thoroughfare!! Since I had nothing to say about that, it is important to me that you hear me on the I-81 issue. It is alright to make changes. But changes for changes sake, hurts a lot of people, especially when those changing things don't have to live here and reap.

I appreciate your time, and look forward to hearing from you and having dialogue.

Yours truly,

Terry L. Land

Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor



Maryland Department of Transportation

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

December 9, 2004

Mr. Terry Land
249 Vickie Drive
Hagerstown MD 21740

Dear Mr. Land:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your concerns regarding speed enforcement and toll plazas, specifically the possible diversions onto local roads, have been noted and will be included as part of the official Public Hearing record. On your comment card, you stated that you had a suggestion for the improvements to I-81. In a follow up e-mail you suggested lowering the speed limit in I-81.

After the Alternates Public Workshop in 2002, the Study Team was asked to study toll options as a way to help finance the project. The State of Maryland is currently facing severe resource and financial constraints. Without tolls, construction of the I-81 improvements could be phased over approximately 20 years; however, with tolls the project could be programmed and constructed over a shorter period of time. Currently all of the proposed alternates are being considered with and without tolls. Once detailed engineering and environmental analyses are complete, an alternate without tolls could be selected.

In order to understand the effects of the tolls on surrounding roads, we have completed a traffic impact study. In the study, we analyzed existing and future traffic along US 11 and MD 63. In 2025, without tolls along I-81, traffic operations are near failing conditions at the US 11 and MD 63/68 intersection. Based on this very conservative analysis, if tolls are implemented along I-81, traffic may potentially divert to these local roads. The geometric design of US 11 and MD 63 will not accommodate this increase in the number of vehicles, so it is likely that these users would return to I-81. SHA will implement additional measures to minimize these diversions.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Mr. Terry Land
Page Two

In your e-mail, you suggested lowering the speed limit to improve the safety conditions on I-81. The objective of determining a proper speed limit for a roadway is to satisfy the public's demand for service in a safe and efficient manner. A speed limit should be attractive to a traveler in terms of time, convenience, and safety. The speed limit on I-81 was chosen to fulfill the public's need for rapid travel on the roadway, while considering safety and highway design issues. Since 1999, there have been 414 reported crashes on I-81 in Maryland. Only 5% of these crashes were determined to be caused by high speeds. None of the twelve fatal crashes since 1999 were determined to be speed related. Based on this data, SHA has concluded that high speeds are not the main cause of safety problems on I-81. Attached to this letter, is a brochure which provides more information on speed limits, including conditions that influence speed limits, crash frequency related to speed limits, and speed safety.

The Commander of the Hagerstown State Police Barrack has been contacted regarding your speed enforcement concern. He stated that police state troopers are currently monitoring the speed of vehicles on I-81. The high volume of traffic makes it difficult to observe and catch violators in a safe manner. However, the high volume of traffic does help serve to reduce speed effectively, as vehicles do not have the physical clearance for high speeds.

Thank you again for your comments. If you should have any questions or comments, please feel free to contact Mrs. Nicole Washington, the Project Manager at 410-545-8570 or 1-800-548-5026. She can also be reached via email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Project Manager
Project Planning Division

Enclosure

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/ incoming)
Mr. Dennis R. Atkins, Deputy Director, Office of Traffic and Safety, SHA

Leslie D. Wolff
16816 Broadfording Road
Hagerstown, Md. 21740-1117

November 2, 2004

Maryland Department of Transportation
State Highway Administration
Office of Planning and Preliminary Engineering
Project Manager, Nicole Washington
Ref. Project WA128B11

Dear Nicole:

My name is Leslie Wolff my wife Mary and I live at Martin's Cross roads, Washington County Maryland. More specifically 16816 Broadfording Road, our home is in plain view of Maryland State Route 63. We have lived here for 24 years. Additionally I am one of the residents of Washington County who had their home place impacted by the building of I81. My mother still lives in the house my father and grandfather built just off of Showalter Road. My entire family has serious concerns about the planned modifications to I81. While most people agree that work must be done, we are asking that it be done with greater consideration to the people who must live with the project during construction and ultimately the completed project.

I will break down my comments into 5 categories.

1. Tolls and their impact
2. Highway noise
3. Suggestions on the road improvements
4. Lack of Current Law Enforcement
5. My observations

I. TOLLS AND THEIR IMPACT:

The interstate highway system was not designed as a Toll Road system. This makes conversion to a toll road problematic at best. Why? Believe it or not people will try to save a dollar in some seemingly inconvenient way in order to spend it elsewhere. In the Location/Design Public Hearing Publication on page 4 it is recognized that bypassing of the toll booths will occur. Some of the traffic figures are of serious concern. Depending on the plan adopted up to 5 million EXTRA vehicles will divert to Rt. 63 annually. Even if the figure is less, the road will not handle it, the facts from other areas such as RT17 in Virginia show that people are more than willing to take a short cut. The noise, safety risks and loss of a rural way of life are a real concern, additionally since RT 63 is a State Route no doubt state dollars will have to be spent to up grade RT 63 before or shortly after the toll booths open on I81. It may sound extreme; however locals do have a pulse on traffic in their areas and I truly believe facilities will rise sharply if traffic is allowed to by pass tolls booths on I81 by using RT 63. Whether the highway should be toll or not is a political decision; however if tolls are the financing choice the folks along RT 63 and RT11 MUST be protected from the potential bypass traffic.

II. Noise Concern:

Having lived directly below south bound interstate 81 from the time it was built until I married at age 21 and still regularly visiting my mother I have a clear opinion of the noise level regardless of what meters may show. It is currently TOO LOUD. Many people have asked me why I speak loudly; it took some years to realize that it is a condition resulting from living with the constant drone, (frequently a deafening roar) of the highway. A calm evening with a little humidity allows one to hear the tire whine of tractor trailers from state line to Maugans Ave. going south and from Maugans Ave. to State line going north.....

November 2, 2004
Page 2

The topography of the little valley below I81 South @ Showalter Road adds to the problem. There is a hill to the South west of the highway that causes the noise to echo and stay trapped in the tight area. Many nights between 8PM and about 2AM it is nearly impossible to sleep. To add starting and stopping traffic to this mix make me shutter. Additionally I cannot believe that an improved highway will not bring more traffic (unless they opt to bypass the tolls going south) with more traffic comes more noise, it is just plain common sense. To not put up noise barriers in this area, and possibly some others, seems almost inhuman to me. To spend millions on road improvements for the masses and not be willing to spend a comparatively small amount for the benefit of the citizens most affected is just plain wrong.

III. Road Improvement (my thoughts)

The points I make here are assuming that a toll plan is enacted.

Going North to South with Southbound traffic tolled at the northern location:

1. Eliminate the exit at State Line. Some industry will be impacted; however this is now a limited access toll road. Most highway users can go south to Showalter road or North RT11 Greencastle to access I81 with little inconvenience. Truck firms will probably do this south bound anyway to avoid the toll.
2. The plan to remove the Cloverleaf at Showalter Road and upgrade the interchange is good, use it.
3. Service lane between Showalter Road and Maugans Ave. and Plans for Maugans Ave. Good use them.
- 4. Eliminate the Maugansville road exit; it is a rudiment of past bad planning.
- 5. Eliminate the entire RT58 exit. There are no Highway services industries there (yet). The 2 truck repair firms work mostly on scheduled jobs and can be easily accessed from RT40 VIA the new Garland Groh Boulevard and if people need to access I81 from Salem Ave. once again they can do so via Garland Groh Boulevard. My reasoning is that the inflow of traffic; especially south bound; causes disruption of flow due to the merge and the people trying to move right to exit at RT 40. The two interchanges are too close together similar to the problem at Showalter Road and Maugans Ave. The Center @ Hagerstown was designed with the idea that most of the traffic would enter from Rt40. Eliminating the RT 58 interchange would allow for greater upgrades to RT40 to be completed without interference from the RT58 interchange. The only hitch I see (there is always one) is the entrance to The Center at Hagerstown is made to have truck traffic flow to the rear of the stores, deliveries circumvent this now by going in from Salem Ave. The McDonalds on the corner makes property to improve that intersection to allow truck flow to the 2 stops, previously mentioned, questionable.
- 6. RT40; Basically enlarge the clover leaf. The property to do so seems available on 3 of the 4 sides. Exception is northbound exit to RT40 East. This probably does not need changed anyway. Planning and simple things are important.

Example: South bound I81 to RT 40 West. The lane to the Center @ Hagerstown is a direct feed from I81. The solid line on RT40 does not allow for a legal merge to the right for some distance. However the YIELD sign is still in its original location on the ramp, thus giving the people coming from I81 the right of way once they pass the sign. There are frequent "conflicts" with people trying to move right with a line of traffic coming off of I81. If the RT58 interchange was to be eliminated this matter as well as some that the Planning Department may note will, of necessity, need to be carefully addressed.

7. Truck Scale: yes we need one. Placing it between RT40 and Halfway Boulevard is not a wise safety move. I am sure it would be a good idea to scale trucks before I70. However it would be safer if a scale (or scales) were built on I70 to address this issue. Move the planned joint venture scale to the area where the plans show a potential toll booth on the southbound lane, below the I70 interchange. Keep in mind truck traffic flow will be disrupted two times in the short distance known as Maryland I81 South, once at the Northern Toll booth and once at the truck scale. How will the industry come to view Maryland?

November 2, 2004
Page 3

8. Halfway Boulevard: Sorry no idea here at all. This interchange should never have been upgraded when the Valley Mall was put in. It is too close to the I70 interchange and there is no practical way to move it. This area is going to be a dilemma for generations to come.

9. I70 Interchange. The state needs to acquire more land there while it is still available. The plan to expand the interchange within the land currently owned by the state is inadequate. By the time the job is complete, Maryland will be looking at how to improve this area again (4th time?) Buy the land and do it right. The interchange area should have a size increase to allow for future growth and the need to upgrade RT70 which will surely follow the RT81 upgrade. Additionally if I81 is to be a true toll road, there will need to be booths constructed on both the southbound and northbound access ramps to I81.

10. RT11 at Williamsport: I am not sure here. Look at item 11 and then think about this one.

11. RT. 63 at Conococheague Street. Eliminate this exit also. The industry in the area can use Governor Lane Boulevard to access I81 via RT11. The Fire Department/Ambulance squad has long had a "Future Home" sign next to McDonalds on RT11 so if they move there access to the highway is not an issue. Put the northbound toll booth in this area as planned. Removing this Conococheague St. interchange should greatly reduce the scale of bypass traffic in Williamsport. Some may still choose to get off onto RT11 at Marlow, however this "scenic" route will discourage many and West Virginia can designate a portion of RT11 NO THROUGH TRUCKS if they so choose or the Potomac River Bridge may be weight restricted. Put the truck scale on the southbound side across from the northbound toll plaza.

Final Note: Our fathers thought well of Hagerstown to put so many access roads into our town. However in an ever changing world, safety would seem to indicate the less may be good. By eliminating 4 interchanges perhaps some money can be redirected to greater improvements to the remaining ones.

IV: Lack of Law Enforcement

This may not be a direct SHA function, yet some points need to be made here. Potentially millions of dollars are going to be spent to upgrade a major highway because of a high accident rate. While agreeing that the amount of traffic on the road, especially truck traffic, has dramatically increased, the speed with which it travels is also a large contributor to the problem. On October 31, 2004 I traveled from Williamsport to Showalter Road, the traffic flow rate was 70- 75 MPH despite a speed limit of 65 -60 depending on the area involved. Additionally there were those in cars and trucks that choose to pass us at even higher speeds. While I do not use I81 daily in recent years there appears to be little interest in speed enforcement on the road. It would seem to me that accidents involving merge areas would be reduced if traffic simply traveled a little slower, thus allowing for reaction time to lane changes and merges into traffic. Merging onto I81 southbound from either Showalter Road or RT40 West is a full throttle or complete stop experience. When you see 4 or more trucks taking up both lanes coming at you 75 MPH+ one can see the potential for disaster real quick. After stopping others approaching you from behind do not readily appreciate the circumstances and rear end collisions are possible, or they "whip" into oncoming traffic rather than stop behind you.

Until the road can be up graded I continue to recommend one speed for I81, the short distance of the posted 65 MPH serves no real purpose. I recommend a speed of 60 MPH for all of I81 with STRICT 24/7 enforcement. The cost of this in dollars is still small in comparison to the cost in road upgrade dollars and lives. Additionally RT70 should have a reduced speed from Huiyets in the west to RT 40 in the east. Slowing traffic in this increasing congested area will give breathing room to the I70/I81 interchange.

November 2, 2004
Page 4

V. My observations:

First thank you for reading this lengthy letter in its entirety, while it is all my own observations, please allow me to share a few personal notes:

1. I have benefited the interstate highway system from Connecticut to Miami, From Hagerstown to Omaha etc. I know that many people had to sacrifice land, homes and other things to make this possible. I also know that in the past, Government agencies responsible for these wonderful roads have at times run very roughshod over people. I had hoped this would not prove true in this project. However the very mention of using emanate domain in the meeting on October 6, 2004 gives me the feeling very little has changed. That and the seeming lack of genuine concern for the people who live near the highway and those affected by it in other areas is disappointing.

2. I am not in favor of making I81 a toll road. My letter involves what I see as items that must, of necessity, be completed IF the highway were to be made a toll road. I favor continuing the free flow of commerce on our nation's highways.

3. Regardless of the plan adopted, noise barriers in select areas are not optional, they are a necessity.

4. I saw an event on November 1, 2004 that adds weight to my safety concern about traffic by passing the tolls and using RT 63. A local farmer (yes farm equipment regularly uses RT 63) was traveling south pulling a disc harrow. The equipment took up more than a full lane. I heard horns, screeching of tires and looked to see a northbound tractor trailer had nearly run into a car who tried to pass the slow moving equipment. Additionally the farmer had nearly run into the ditch in the south side of the road (there is no shoulder up here) and the truck just avoided ending up in a neighbor's yard. I can only see this scene being repeated, with perhaps worse results, during highway construction and on into the future if tolls are enacted.

5. I am willing to take some time off of work (employer willing) in order to physically show you my areas of concern and explain why I feel addressing them will make a better job both in the roadway and in the relationship between we the people and the Maryland Highway Administration.

I have a friend from Eastern Europe; his grasp of English is still limited. When he cannot explain something to me fully he has a catch phrase that applies here.

"Come I show you"

I may be reached at:

Home 301-790-3904

Work 301-735-6911 x 165

Address:

Leslie D. Wolff

16816 Broadfording Road

Hagerstown, Maryland 21740-1117

Thank You; Leslie D. Wolff

Cc: JAW, ES, File



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

Ms. Leslie D. Wolff
16816 Broadfording Road
Hagerstown MD 21740

November 24, 2004

Dear Ms. Wolff:

Thank you for your letter regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your concerns regarding toll plazas, highway noise, interchange configurations, and sufficient law enforcement have been noted. Your comments will be included as part of the official Public Hearing record.

After the Alternates Public Workshop in 2002, the Study Team was asked to study toll options as a way to help finance the project. The State of Maryland is currently facing severe resource and financial constraints. Without tolls, construction of the I-81 improvements could be phased over approximately 20 years; however, with tolls the project could be programmed and constructed over a shorter period of time. Currently all of the proposed alternates are being considered with and without tolls. An alternate without tolls could be selected.

In order to understand the effects of the tolls on surrounding roads, we have completed a traffic impact study. In the study, we analyzed existing and future traffic along US 11 and MD 63. In 2025, without tolls along I-81, traffic operations are near failing conditions at the US 11 and MD 63/68 intersection. Based on this very conservative analysis, if tolls are implemented along I-81, traffic may potentially divert to these local roads. The geometric design of US 11 and MD 63 will not accommodate this increase in the number of vehicles, so it is likely that these users would return to I-81. SHA will implement additional measures to minimize these diversions. Our engineers are currently researching measures such as limiting or prohibiting truck traffic on local roads.

In your letter, you stated concerns regarding noise impacts in the study area. As part of the environmental analysis for the I-81 Improvement Study, a technical noise analysis was performed. Ambient or existing noise level measurements were taken at 36 receptor sites located within 16 Noise Study Areas. Monitored ambient levels in the project area ranged from 53 to 74 dBA. The noise impact evaluation was completed in accordance with SHA's Sound Barrier Policy and the Federal Highway Administration's noise abatement criteria.

My telephone number/toll-free number is
Maryland Relay Service for Impaired Hearing or Speech 1.800.755.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Ms. Leslie D. Wolff
Page Two

I am including a copy of SHA's Sound Barrier Policy for your reference. Because noise levels will not increase more than 3 dBA in the project area, noise walls were not recommended. However, other measures, such as landscaping will be used to provide visual screening.

I have contacted the Commander of the Hagerstown State Police Barrack, regarding your speed enforcement concern. He stated that police state troopers are currently monitoring the speed of vehicles on I-81. However, the high volume of traffic makes it difficult to observe and catch violators in a safe manner. Positively, the high volume of traffic does help reduce the likelihood of speeding, as vehicles do not have the physical clearance for high speeds.

In your letter, you presented several road improvement suggestions. One of the suggestions consisted of eliminating the exit at State Line. Removal of this exit presents a problem, as only half of this interchange is in Maryland. Citicorp is located in the southeast quadrant with nearly 3,000 employees. If this interchange is closed it would divert traffic onto US 11 and Showalter Road. Traffic projections indicate that between 15,000 to 20,000 trips per day will use this interchange. This diversion onto US 11 would result in increased congestion along this roadway.

Another road improvement you suggested was to eliminate the Maugansville Road exit. The elimination of this interchange was investigated early in the study. Projected traffic for this interchange is approximately 2,500 vehicles per day. Elimination of this interchange would require vehicles to pass through residential areas in order to get from Maugansville Road to US 40. The residential impacts of the exit elimination resulted in the decision that this interchange should remain.

Your next suggestion was to eliminate the entire MD 58 exit. Traffic projections indicate that approximately 12,000 vehicles per day will use this interchange in 2025. Due to the proximity of the interchange to the US 40 interchange, our current project plans show an auxiliary lane that would connect the on ramp from MD 58 eastbound to I-81 southbound with the US 40 off ramp. A similar lane would be provided in the northbound direction. This improvement would minimize the weave movement through this area and provide a greater distance for acceleration and deceleration for vehicles entering at MD 58 and exiting at US 40.

Next, you suggested that we enlarge the cloverleaf at the I-81/US 40 interchange. In order to minimize the weave on I-81, it is proposed that the cloverleaf ramps in the northwest and southeast quadrants be removed. This includes the US 40 eastbound to I-81 northbound and the US 40 westbound to I-81 southbound movements. These movements would become left turns from US 40 with new connections to the existing slip ramps.

Ms. Leslie D. Wolff
Page Three

At the I-70 interchange, you proposed that more land be acquired to expand the interchange. We are proposing to completely reconstruct this interchange to current standards. The acceleration and deceleration lanes would be extended and the radius of the cloverleaf ramps would be increased. The majority of work can be completed within the existing right of way.


Lastly, you proposed the elimination of the exit at MD 63 and Conococheague Street. It is projected that approximately 18,000 vehicles per day would use this interchange in 2025. The elimination of this interchange would increase traffic on US 11. While some of the traffic would use Governor Lane Boulevard, a number of trips would divert through Williamsport, impacting the residences along this roadway. Thus, the elimination is not an effective option. It should be noted that any elimination of an interchange would have immeasurable impacts on the surrounding roadway network and need to be thoroughly assessed.

Thank you again for your comments and your interest in this study. If you should have any additional questions or comments, please feel free to contact Mrs. Nicole Washington, the Project Manager at 410-545-8570 or 1-800-548-5026. She can also be reached via email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:


Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, State Highway Administration
(w/incoming)

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT"

WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE NAME Gregory S. Cook DATE President of
PRINT ADDRESS Board of
CITY Commissioner STATE MD ZIP

I/We wish to comment or inquire about the following aspects of this project:

Does SHA consider new houses that
was collected by the local mpo?
(Hagerstown)

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

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I-81 IMPROVEMENT PROJECT
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NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE PRINT NAME ADDRESS CITY STATE ZIP
DATE 10/6
US 11 (NOF US 40)

I/We wish to comment or inquire about the following aspects of this project:

disarrayed that people on US 11
are unaware that the I-81
improvements will have
such a negative impact on their
quality of life.

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the
mail are already on the project Mailing List

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

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1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE PRINT NAME ADDRESS CITY STATE ZIP
DATE

I/We wish to comment or inquire about the following aspects of this project:

Please remove my name and
address from your mailing list.
I do not wish to receive any mailings.
Thank you

☐ Please add my/our name(s) to the Mailing list.

☒ Please delete my/our name(s) to the Mailing list.

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QUESTIONS AND/OR COMMENTS

WA128B11

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NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE PRINT NAME ADDRESS CITY STATE ZIP
DATE 10/6

I/We wish to comment or inquire about the following aspects of this project:

displeased w/ impact of tolls
on traffic in Williamsport

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

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I-81 IMPROVEMENT PROJECT
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NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE PRINT NAME ADDRESS CITY STATE ZIP
DATE 10/6

I/We wish to comment or inquire about the following aspects of this project:

upset that proposed tolls
won't project paid for w/ traditional
transportation revenues

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004, 5:30 P.M.
NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

NAME Kelly & Robert Slocum DATE 10/6/04
ADDRESS 18005 SAMUEL CIRCLE
CITY HAGERSTOWN STATE MD ZIP 21740

We wish to comment or inquire about the following aspects of this project:

- ① THE TOLL FACILITIES SHOULD BE LIMITED TO THE SOUTH END IF NOT ELIMINATED ENTIRELY, CONSIDER THE QUEUE AND THE IMPACT ON LOCAL ROADS FROM DIVERSION ROUTES.
- ② THE WEIGH STATION LOCATED ON I-70 WILL CREATE A GREATER SAFETY HAZARD THAN IT ELIMINATES WITH THE WEAVE SECTIONS ON BOTH THE 40 END & THE HALFWAY BLVD END. THIS WEAVE REQUIRES SERIOUS ANALYSIS & RECONSIDERATION. ALSO CONSIDER THE DIVERSION POTENTIAL OF 40 TO GREENCASTLE PIKE TO I-70.
- ③ FAVOR OPTION B ON MARGANS AVENUE I-81/SB RAMP INTERSECTION

☒ Please add my/our name(s) to the Mailing List.*

☐ Please delete my/our name(s) from the Mailing List.

* Persons who have received a copy of the brochure through the mail are already on the project Mailing List

④ GREAT PROJECT w/o TOLLS AND WEIGH STATION



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Maryland Department of Transportation

November 18, 2004

Mr. and Mrs. Robert Slocum
18005 Samuel Circle
Hagerstown MD 21740

Dear Mr. and Mrs. Slocum:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your concerns about the truck weigh station, tolls, and support for Option B at the Mangans Avenue Interchange has been noted. Your comments will be included as part of the official Public Hearing record.

In your letter, you stated that you were in support of either eliminating the tolls or limiting them to the south end of the project. The study team had several reasons why tolls were considered for this project. After the Alternates Public Workshop in 2002, the Study Team was asked to study toll options as a way to help finance the project. The State of Maryland is currently facing severe resource and financial constraints. Without tolls, construction of the I-81 improvements could be phased over approximately 20 years; however, with tolls the project could be programmed and constructed over a shorter period of time. Currently all of the proposed alternates are being considered with and without tolls. Once detailed engineering and environmental analyses are complete, an alternate without tolls could be selected.

Your letter also stated concerns about the potential queues generated because of the toll plazas. In order to alleviate congestion at the toll areas, a combination of Highway Speed Electronic and Cash Toll Lanes would be provided. The Highway Speed Electronic Toll Lanes would require an E-Z Pass transponder and enable drivers to pay tolls at speeds of up to 70 miles per hour; thereby, reducing the number of drivers who have to stop and the potential for long queues.

The last concern that was stated in your letter was related to the truck weigh station. In your letter, you stated that a truck weigh station will create a greater safety hazard than the situation it is trying to address. The 12-mile segment of I-81 in Maryland and the 26-mile segment of I-81 in West Virginia do not have any truck weigh stations. The weigh station option was added to the study to help increase the safety of the corridor. The limited enforcement activities that have been conducted show a significant truck violation rate for size, weight and safety.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.755.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Mr. and Mrs. Robert Slocum
Page Two

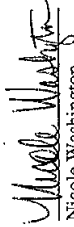
During 2001 and 2002 the Maryland State Police, Commercial Vehicle Enforcement performed 1,676 portable truck weightings that resulted in 1106 overweight citations. In addition to the overweight citations, 448 vehicles were placed out-of-service for an 18.7% rate, and 300 drivers were placed out-of-service for a 12.5% rate which is well above the state average of 6.5%. In addition to weight and safety violations, they made 13 criminal arrests, found two handgun violations and three controlled dangerous substance violations.

Thank you again for your comments. If you have any additional questions or concerns, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:


Nicole Washington
Project Manager
Project Planning Division

cc: Mr. Dennis R. Atkins, Deputy Director, Office of Traffic and Safety, SHA (w/incoming)
Ms.-Odessa Phillip, Environmental Manager, SHA (w/incoming)

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT

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WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE

NAME JOHN FELDER DATE 4-OCT-04

PRINT

ADDRESS 1179 LINDSAY LANE

CITY HAGERSTOWN STATE MD ZIP 21742

I/We wish to comment or inquire about the following aspects of this project:

The Mack Trucks Engine Development Laboratory, located southeast of the Magoans Road Exit (Exit 9) of I-81, has a concern with options proposed in the I-81 Improvement Project. We prefer I-81 traffic move at a constant speed through the section of road 1.5 miles South and 1 mile North of the intersection of Magoans Road Exit (Exit 9) and I-81. Vehicles accelerating or decelerating due to the installation of proposed toll both options are likely to result in an increase of engine exhaust emissions from I-81 traffic. Our concern is the operation of our new Engineering Development Laboratory, which the State of Maryland helped secure for the western Maryland area. Since the predominant winds are from the N-NW direction, the laboratory operation will be sensitive to the ambient air quality from that direction.

The Engineering Development Laboratory will be developing new technologies for use on future heavy duty vehicle transportation. Future engines will emit much lower levels of emissions than today, and the measurement of the emissions would be more difficult if there is an increased level of ambient emissions.

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List

File

Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor



Maryland Department of Transportation

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

November 16, 2004

Mr. John Felder
1179 Lindsay Lane
Hagerstown MD 21742

Dear Mr. Felder:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our highway planning studies. Your comments will become part of the official Public Hearing record.

On your comment card, you expressed concern that the proposed toll options would have a negative effect on the new Mac Truck Engineering Development Laboratory, located at the northern end of I-81 in Maryland. Specifically, you were concerned about an increased level of ambient emissions due to vehicles reducing speeds to pay tolls. In order to alleviate bottlenecks and congestion at the toll areas, a combination of Highway Speed Electronic and Cash Toll Lanes would be provided. The Highway Speed Electronic Toll Lanes would require an E-Z Pass transponder and enable drivers to pay tolls at speeds up to 70 miles per hour; thereby, reducing the number of drivers who have to stop and the potential for long queues.

In addition, as part of the environmental analysis for this project, a detailed microscale air quality analysis has been performed to determine the local carbon monoxide (CO) impact of the proposed project. CO impacts are analyzed as the accepted indicator of vehicle-generated air pollution. There were a total of 20 air quality sensitive receptors used in the analysis, with five of those receptors in the Maugans Avenue vicinity. The Environmental Protection Agency (EPA) dispersion model is used to predict CO concentrations for air quality sensitive receptors for both the build year (2010) and design year (2025). Receptors used in this analysis were also used when predicting air quality impacts for the tolling options. For the projected hourly peak-traffic volumes, analysis results indicated the range of CO concentrations to be 2.7 to 4.9 ppm for the AM peak hour, and 2.9 to 5.9 ppm for the PM peak hour in 2010. For the projected hourly peak-traffic volume in 2025, the results indicated the range of CO concentrations would be 2.4 to 4.6 ppm for the AM peak hour and 2.8 to 5.4 ppm for the PM peak hour. The CO concentrations decrease significantly between the build year and the design year and the levels measured fall into the acceptable range.

My telephone number/toll-free number is
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Mr. John Felder
Page Two

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or concerns, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8370 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)

Mr. John Felder
Page Three

bcc: Mr. Dennis R. Atkins, Deputy Director, Office of Traffic and Safety, SHA (w/incoming)

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE
PRINT

NAME Robert J. Seck DATE 9/24/04
ADDRESS 17330 W. Washington St.
CITY Hagerstown STATE MD ZIP 21740

I/We wish to comment or inquire about the following aspects of this project:

I recall that when I-81 was in the initial planning stage, consideration was not given to access to West Washington St.
I did advise before the original planning committee, with a request for the possible consideration for an exit at this location.
Is there a possibility of any access at this location in the future?
Thank you for a response. I will check.

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List



Robert L. Ehrlich, Jr. Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

November 10, 2004

Mr. Robert J. Seek
17530 W. Washington Street
Hagerstown MD 21740

Dear Mr. Seek:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your concern regarding access to I-81 from West Washington Street has been noted and will be included in the official Public Hearing record.

Unfortunately, access to I-81 from West Washington Street can not be provided. The American Association of State Highway and Transportation Officials (AASHTO) design standards require a minimum of one mile between interchange access points in urban areas and two miles in rural areas. West Washington Street is only 0.2 miles south of the US 40 interchange; therefore, it is too close to allow access onto I-81.

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or concerns, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Project Manager
Project Planning Division

Attachment

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/ incoming)

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE NAME W.J. MYERS DATE 9-23-04
PRINT ADDRESS 16603 BUFORD DR.
CITY WILLIAMSPORT STATE MD. ZIP 21795

I/We wish to comment or inquire about the following aspects of this project:

I DO NOT THINK COLLECTING TOLL IS A
GOOD OPTION, HOWEVER IF IT COULD BE
DONE WITHOUT HINDERING THE FLOW OF
TRAFFIC IT MAY BE ACCEPTABLE.
I THINK WE SHOULD BEGIN CONSTRUCTION OF
AN ADDITIONAL LANE AT ONCE, BECAUSE THE
NEED IS SO GREAT, THE PROJECT COULD BE
FINANCED AND PAID FOR THROUGH TAKATION OF
GASOLINE, ALL KINDS OF VEHICLE LICENSE TAXES AND
A SPECIAL SALES TAX. WHAT HAS ALREADY STARTED
THEIR PROJECT, MAYBE WE COULD FIND OUT HOW THEY
ARE FINANCING THEIR JOB.

☐ Please add my/our name(s) to the Mailing list. IT CAN BE DONE
☐ Please delete my/our name(s) to the Mailing list. LET'S DO IT NOW!!

* Persons who have received a copy of this brochure through the
mail are already on the project Mailing List

Switzerland
11/11/04



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

November 16, 2004

Mr. W.J. Myers
16603 Buford Drive
Williamsport MD 21795

Dear Mr. Myers:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your support for widening I-81 and concerns regarding tolls and the effect tolls would have on the flow of traffic have been noted and will be included in the official Public Hearing record.

After the Alternates Public Workshop in 2002, the Study Team was asked to study toll options as a way to help finance the project. The State of Maryland is currently facing severe resource and financial constraints. Without tolls, construction of the I-81 improvements could be phased over approximately 20 years; however, with tolls the project could be programmed and constructed over a shorter period of time. Currently all of the proposed alternates are being considered with and without tolls. Once detailed engineering and environmental analyses are complete, an alternate without tolls could be selected.

In your letter, you stated that you do not think collecting tolls along I-81 is a good option; however, if it could be done without hindering the flow of traffic, it may be acceptable. In order to alleviate congestion and bottlenecks at the toll areas, a combination of Highway Speed Electronic and Cash Toll Lanes will be provided. The Highway Speed Electronic Toll Lanes will require an E-Z Pass transponder and enable drivers to pay tolls at speeds up to 70 miles per hour; thereby, reducing the number of drivers who have to stop.

You also asked in your letter if we could find out how West Virginia funded their improvements. Representatives from West Virginia Department of Transportation are on our Study Team. The improvements that are scheduled and completed along I-81 in West Virginia were paid for through that state's transportation fund. Their primary source of revenue for funding on-going administration, general maintenance and construction is derived from fuel taxes, automobile privilege tax, motor vehicle registration, and license fees.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Mr. W.J. Myers
Page Two

The State of Maryland also uses a transportation fund to build new highways and make roadway improvements. This fund primarily consists of revenue from the gas tax and motor vehicle registration and titling fees. However, some highway expansion projects area so large and expensive that it would take decades to accumulate enough money in the Transportation Trust Fund to pay for them. Tolls would allow this project to be built more quickly and free up traditional funding for other transportation needs.

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or comments, please do not hesitate to contact Mrs. Nicole Washington, the Project Manager, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE PRINT
NAME CLIFFORD MYERS DATE 9-23-04
ADDRESS 17532 CEDAR LAWN DR.
CITY HAGERSTOWN STATE MD ZIP 21740

I/We wish to comment or inquire about the following aspects of this project:

☒ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Finnegan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

November 5, 2004

Mr. Clifford Myers
17532 Cedar Lawn Drive
Hagerstown MD 21740

Dear Mr. Myers:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your name has been added to the mailing list for the I-81 Improvement Study.

Thank you again for your interest in the I-81 Improvement Study. If you have any questions or comments, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By: Nicole Washington

Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE NAME Susan Semas DATE 9/20/04
PRINT ADDRESS 30730 Park Drive
CITY Princess Anne STATE MD ZIP 21853

I/We wish to comment or inquire about the following aspects of this project:

I would like to see site specific soils information to identify
areas of soils formed in limestone to identify any potential for sinkholes
as well as areas of hydric soils to see what any mitigation
may be necessary. Also it would be nice to know
potential of soils for use for road construction and soil
erosion potential.

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the
mail are already on the project Mailing List



Robert I. Ehrlich, Jr., Governor
Michael S. Stea, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

December 16, 2004

Ms. Susan Semas
30730 Park Drive
Princess Anne MD 21853

Dear Ms. Semas:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your comments will become part of the official Public Hearing record.

In your letter, you requested site specific soil information to identify areas of soils formed in limestone and to determine any potential for sinkholes in the area. The Washington County area is primarily a limestone valley. There is the potential for sinkhole formation and sinkholes have occurred on and near I-81. SHA has an aggressive program to arrest sinkhole formation on its roadways. All new construction includes much more intensive geotechnical studies to identify sinkhole issues. Special drainage controls are standard in limestone areas and embankment stabilization and subsurface pressure grouting are always considered. For further information regarding site specific soil information, please contact Mr. David Martin at our Brooklandville office at 410-321-3107.

In your letter you also requested information on hydric soils. Attached to this letter is a copy of the Natural Environmental Technical Report, which shows areas of hydric soils.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

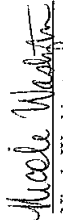
Ms. Susan Semas
Page Two

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or comments, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:


Nicole Washington
Project Manager
Project Planning Division

Attachment

cc: Mr. David Martin, Geologist, SHA
Ms. Odessa Phillip, Environmental Manager, SHA

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE

NAME Herman J. Serig III DATE 9-18-04

PRINT

ADDRESS 12012 Hopewell Road

CITY Hagerstown STATE MD ZIP 21740

I/We wish to comment or inquire about the following aspects of this project:

Why Do we Need Tolls In
Washington County, I 81 For A
12 Mile stretch of Road. Wherease
The Eastern Part of The State
The Big Cities like Baltimore And
Rockville Do Not Have Tolls
Marysville And Williamsport Md.
Will Have Nothing But Traffic Jams
If MD. Puts Tolls On I 81 North + South

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

Mr. Herman J. Serig III
12012 Hopewell Road
Hagerstown MD 21740

November 16, 2004

Dear Mr. Serig:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your concerns regarding the tolls and possible diversions due to the tolls have been noted and will be included as part of the official Public Hearing record.

After the Alternates Public Workshop in 2002, the Study Team was asked to study toll options as a way to help finance the project. The State of Maryland is currently facing severe resource and financial constraints. Without tolls, construction of the I-81 improvements could be phased over approximately 20 years; however, with tolls the project could be programmed and constructed over a shorter period of time. Currently all of the proposed alternates are being considered with and without tolls. Once detailed engineering and environmental analyses are complete, an alternate without tolls could be selected.

In order to understand the effects of the tolls on surrounding roads, we have completed a traffic impact study. In the study, we analyzed existing and future traffic along US 11 and MD 63. In 2025, without tolls along I-81, traffic operations are near failing conditions at the US 11 and MD 63/68 intersection. Based on this very conservative analysis, if tolls are implemented along I-81, traffic may potentially divert to these local roads. The geometric design of US 11 and MD 63 will not accommodate this increase in the number of vehicles, so it is likely that these users would return to I-81. SHA will implement additional measures to minimize these diversions.

On your comment card, you stated that other cities in Maryland, such as Baltimore and Rockville, were not looking at tolls. Currently, the Maryland Department of Transportation (MDOT), the Maryland Transportation Authority (MdTA), and SHA are considering a new alternative to help deliver on the Administration's promise to provide Maryland's residents, employees, and businesses with an alternative to sitting idle in traffic: Express Toll Lanes. Several project planning studies now underway include evaluation of Express Toll Lanes, including several of the state's busiest highway segments: portions of I-95 north of Baltimore, I-270, I-695, and the I-95/I-495 Capital Beltway.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech: 1-800-735-2258 Statewide Toll Free
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Mr. Herman J. Serig III
Page Two

Thank you again for your comments. If you should have any questions or comments, please feel free to contact Mrs. Nicole Washington, the Project Manager at 410-545-8570 or 1-800-548-5026. She can also be emailed at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

Mr. Benjamin Chlebnikow
17626 York Road
Hagerstown MD 21740

Dear Mr. Chlebnikow:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies.

PLEASE NAME Benjamin Chlebnikow DATE Sept 17, 2004
PRINT ADDRESS 17626 York Road
CITY Hagerstown STATE MD ZIP 21740

We wish to comment or inquire about the following aspects of this project:

- 1) We need a complete set of maps, all (7) sheets
- 2) Review noise levels guidelines
- 3) Truck weight station proposed (10) acre
- 4) Toll options
- 5) overall picture of impact on area homes

☐ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

November 10, 2004

In your letter, you requested information regarding the toll plazas, the proposed truck weigh station, and a complete set of maps. The first brochure we mailed to the study area was missing three pages of mapping. Because we recognized this printing error, we mailed corrected versions of the brochure with full sets of mapping. A copy of this brochure will be sent to your residence along with this letter. For your further information, a map of the proposed truck weigh station 10 acre site is attached to this letter.

You also requested information regarding the overall impact on residential properties in the project area. Under none of the alternatives or options would residential buildings be acquired or would residents be displaced. The proposed toll options and truck weigh station also require no acquisition of residential properties.

Thirdly, you requested a review of the noise level information. Attached to this letter is a copy of SHA's Sound Barrier Policy and a pamphlet guide on sound barriers. As part of the environmental analysis for the I-81 Improvement Study, a technical noise analysis was performed. Ambient noise level measurements were conducted at 36 receptor sites located within 16 Noise Study Areas. Monitored ambient levels in the project area ranged from 53 to 74 dBA. The noise impact evaluation was completed in accordance with SHA's Sound Barrier Policy and the Federal Highway Administration's noise abatement criteria. Because noise levels will not increase more than 3 dBA in the project area, sound barriers were not recommended. However, other measures, such as landscaping, will be implemented to provide screening.

My telephone number/toll-free number is

Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Mr. Benjamin Chlebnikow
Page Two

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or concerns, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Nicole Washington
Project Manager
Project Planning Division

Attachments

cc: Ms. Odessa Phillip, Environmental Manager, SHA

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11
INFORMATIONAL PUBLIC WORKSHOP

I-81
FROM THE WEST VIRGINIA STATE LINE
TO THE PENNSYLVANIA STATE LINE

Wednesday, May 26, 2004
5:00 p.m. - 8:00 p.m.

North Hagerstown High School
1200 Pennsylvania Avenue
Hagerstown MD 21742

PLEASE PRINT NAME ADDRESS CITY STATE ZIP DATE
Thomas E. Horst 17803 Alpine Drive MD 21767

I/We wish to comment or inquire about the following aspects of this project:

I would vote for Option 3 or 3A, ^{Nazais Ave-Opt. A}
~~that~~ Toll Option 2 with an
addition of Toll Booths on I-70
East Bound into Washington County
near Worleburg. These tolls would
help pay for Interstate Costs in Western MD
I may encourage increased use of I-68 as
we'll.

☐ Please add my/our name(s) to the Mailing List.

☐ Please delete my/our name(s) from the Mailing List.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Petersen, Administrator

Maryland Department of Transportation

November 15, 2004

Mr. Thomas E. Horst
17803 Alpine Drive
Maugansville MD 21767

Dear Mr. Horst:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your support for Alternate 3 and Alternate 3A, with Maugans Avenue Interchange Option A has been noted. Your comments will be included as part of the official Public Hearing record.

In your letter, you stated that you were in support of Toll Option 2 with an addition of toll plazas located on I-70 eastbound into Washington County. At this time, because the project is limited to making improvements to I-81 between the West Virginia and Pennsylvania state lines, we will not be looking to add any tolls along I-70.

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or comments, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech: 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE
PRINT

NAME Michael L. Martin DATE 9-16-04

ADDRESS P.O. Box 254

CITY Maugansville STATE MD ZIP 21767

I/We wish to comment or inquire about the following aspects of this project:

☒ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing list



Robert L. English, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Petersen, Administrator

Maryland Department of Transportation

November 5, 2004

Mr. Michael L. Martin
P.O. Box 254
Maugansville MD 21767

Dear Mr. Martin:

Thank you for your comments regarding the future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your name has been added to the mailing list for the I-81 Improvement Study.

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or concerns, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.543.0300 • www.marylandroads.com

STATE HIGHWAY ADMINISTRATION QUESTIONS AND/OR COMMENTS

WA128B11
LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE NAME Bernadette Wager DATE 9/15/04
PRINT ADDRESS 1300 Starbridge Ct
CITY Hagerstown STATE MD ZIP 21742

We wish to comment or inquire about the following aspects of this project:

I am not attached to the design but would like to learn more about the environmental impact of the planned improvements. I have experienced difficulty moving onto SR 16 from Rt 158 due to an extremely tight ramp and wish to have a truck traffic. The ramp to SR 16 will be extended. I support Alternates 1 and 2 and oppose Alternate 3, which calls for inside widening.

I support Toll Option 4 because it will help to capture funds from out of state residents who are able to toll bridge. I also support the truck weigh station option.

☒ Please add my/our name(s) to the Mailing list.

☐ Please delete my/our name(s) to the Mailing list.

* Persons who have received a copy of this brochure through the mail are already on the project Mailing List



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

November 15, 2004

Ms. Bernadette Wagner
13010 Starbridge Court
Hagerstown MD 21742

Dear Ms. Wagner:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies. Your support for Alternate 2 and Toll Option 4, as well as the truck weigh station has been noted. Your concern regarding Alternate 3 has also been noted. Your comments will be included in the official Public Hearing record.

On your comment card, you requested information regarding the environmental impacts of the proposed improvements. Attached to this letter is a summary of environmental impacts. As you can see, the most land is required by Alternate 3A with 29,00 acres. One acre of wetlands and up to 16 acres of woodlands may be affected by the build alternates. The toll plazas would not have an impact on wetlands and would affect between 4.08 and 6.86 acres of woodlands.

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or comments, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Project Manager
Project Planning Division

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Ms. Bernadette Wagner
Page Two

cc: Ms. Odessa Phillip, Environmental Manager, SHA (w/incoming)
Mr. Dennis R. Atkins, Deputy Director of Office of Traffic and Safety, SHA
(w/incoming)

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT
WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE NAME Charles E. Reed DATE Sept 15, 2004
PRINT ADDRESS 310 Daycotah Ave.
CITY Hagerstown STATE MD ZIP 21740

I/We wish to comment or inquire about the following aspects of this project:

I would like to know if West Virginia and Pennsylvania
are going to put toll booths on I-81.
I believe they will, and if so that means we the people
will pay twice for these road improvements. Once for the road
improvement itself, and twice for the use of it to get from
West Virginia and Pennsylvania to Maryland where I live.
How do I register to speak at the hearing?
Retired Government worker Charles E. Reed
9-15-04

- ☐ Please add my/our name(s) to the Mailing list.
☐ Please delete my/our name(s) to the Mailing list.
* Persons who have received a copy of this brochure through the mail are already on the project Mailing List



Robert L. Ehrlich, Jr. Governor
Michael S. Steele, Lt. Governor

Robert L. Flanagan, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

November 12, 2004

Mr. Charles E. Reed
310 Daycotah Avenue
Hagerstown MD 21740

Dear Mr. Reed:

Thank you for your comments regarding future improvements to I-81 in Washington County. The State Highway Administration (SHA) appreciates your interest in our project planning studies.

On your comment card, you questioned whether West Virginia or Pennsylvania will utilize tolls as a way of financing their improvements to I-81. Currently, Maryland is the only state that is researching toll funding for I-81. Thus, a driver traversing I-81 through West Virginia, Maryland, and Pennsylvania would only be tolled by the state of Maryland if a toll option is selected.

On your comment card, you also asked how to register to speak at the Location/Design Public Hearing. We tried to contact you by phone concerning the hearing speaker registration, because a letter would not have reached you in time for the Hearing. However, your phone number is unlisted. Speaker registration could have been completed via phone, email, or mail. It is important, to note that your letter was received during the comment period and will be part of the official public hearing record.

My telephone number/toll-free number is _____
Maryland Relay Service for Impaired Hearing or Speech: 1.800.735.2258 Statewide Toll Free
Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • www.marylandroads.com

Thank you again for your interest in the I-81 Improvement Study. If you have any additional questions or comments, please do not hesitate to contact the Project Manager, Mrs. Nicole Washington, at 410-545-8570 or toll free at 1-800-548-5026 or by email at nwashington@sha.state.md.us.

Very truly yours,

Cynthia D. Simpson
Deputy Director
Office of Planning and
Preliminary Engineering

By:

Nicole Washington
Nicole Washington
Project Manager
Project Planning Division

cc: Ms. Odessa Phillip, Environmental Manager, SHA

STATE HIGHWAY ADMINISTRATION
QUESTIONS AND/OR COMMENTS

WA128B11

LOCATION/DESIGN PUBLIC HEARING

I-81 IMPROVEMENT PROJECT

WEST VIRGINIA STATE LINE TO PENNSYLVANIA STATE LINE

WEDNESDAY, OCTOBER 6, 2004
5:30 P.M. - 8:30 P.M.

NORTH HAGERSTOWN HIGH SCHOOL
1200 PENNSYLVANIA AVENUE
HAGERSTOWN, MD 21742

PLEASE NAME DATE
PRINT ADDRESS
CITY STATE ZIP

I/We wish to comment or inquire about the following aspects of this project:

Charge drivers on I 81 increase trucks on side roads
to avoid paying tolls. You idiots causing more problems
and avoid doing it right the first time, who is getting
the kick backs for this. How many years will we have to pay
tolls. Just like tolls for improvements on I 70 in PA, forever and
very little done. What happens to all the money MD gains from the
poor people who buy the worthless lottery tickets. Citizens are
being charged more and more for fines and taxes and bring
home less and less in pay checks. Funny how Wash. County Commission
get pay raise at same time this project starts. Funny how it
is Engineers who get up to \$14,000 a year. Stop the abuse of Citizens.

☐ Please add my/our name(s) to the Mailing list.

☒ Please delete my/our name(s) to the Mailing list.

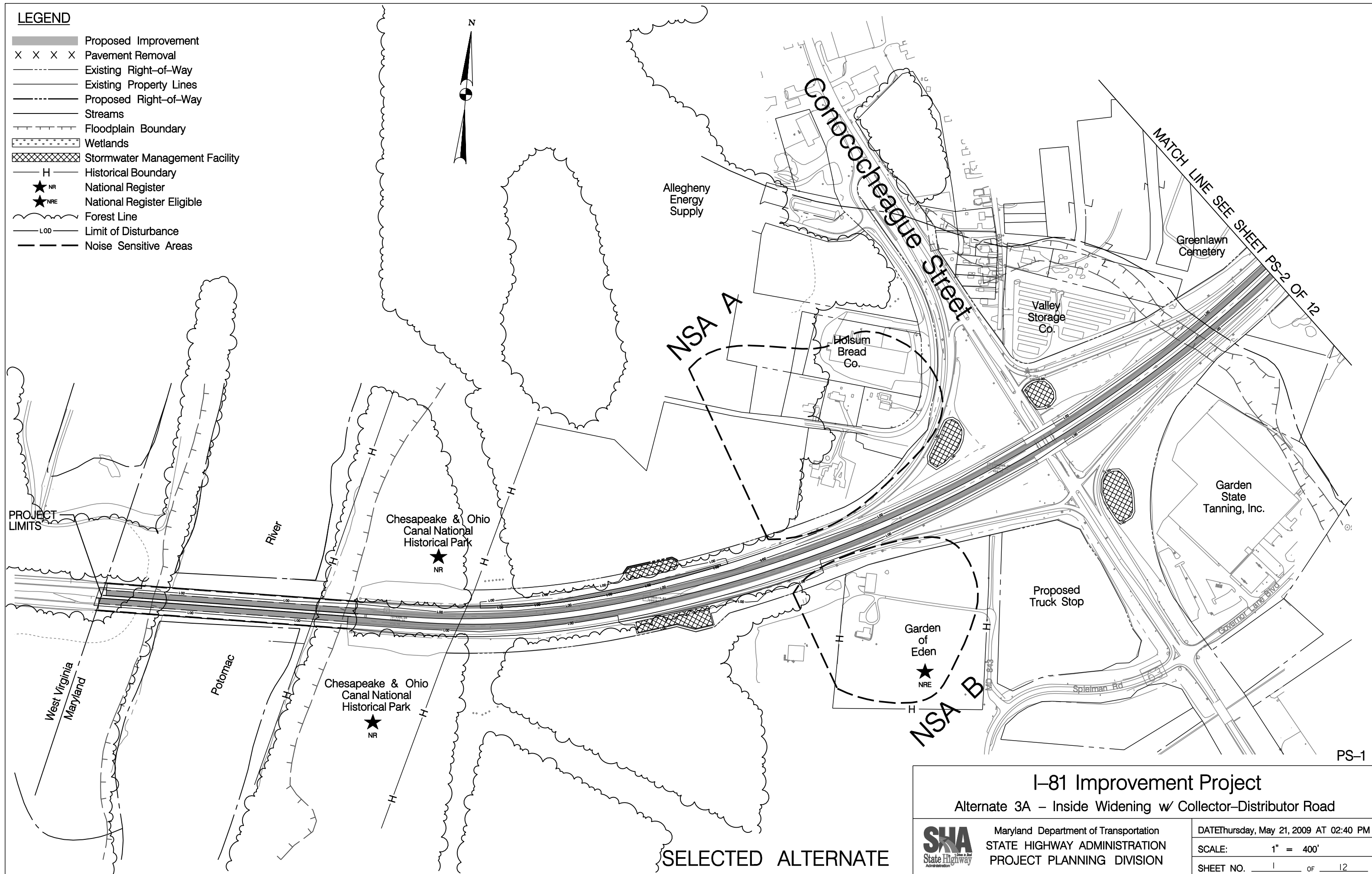
* Persons who have received a copy of this brochure through the
mail are already on the project Mailing List

Appendix A

SHA Selected Alternate Plates

LEGEND

- Proposed Improvement
- Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
- Wetlands
- Stormwater Management Facility
- H Historical Boundary
- ★^{NR} National Register
- ★^{NRE} National Register Eligible
- Forest Line
- LOD Limit of Disturbance
- Noise Sensitive Areas

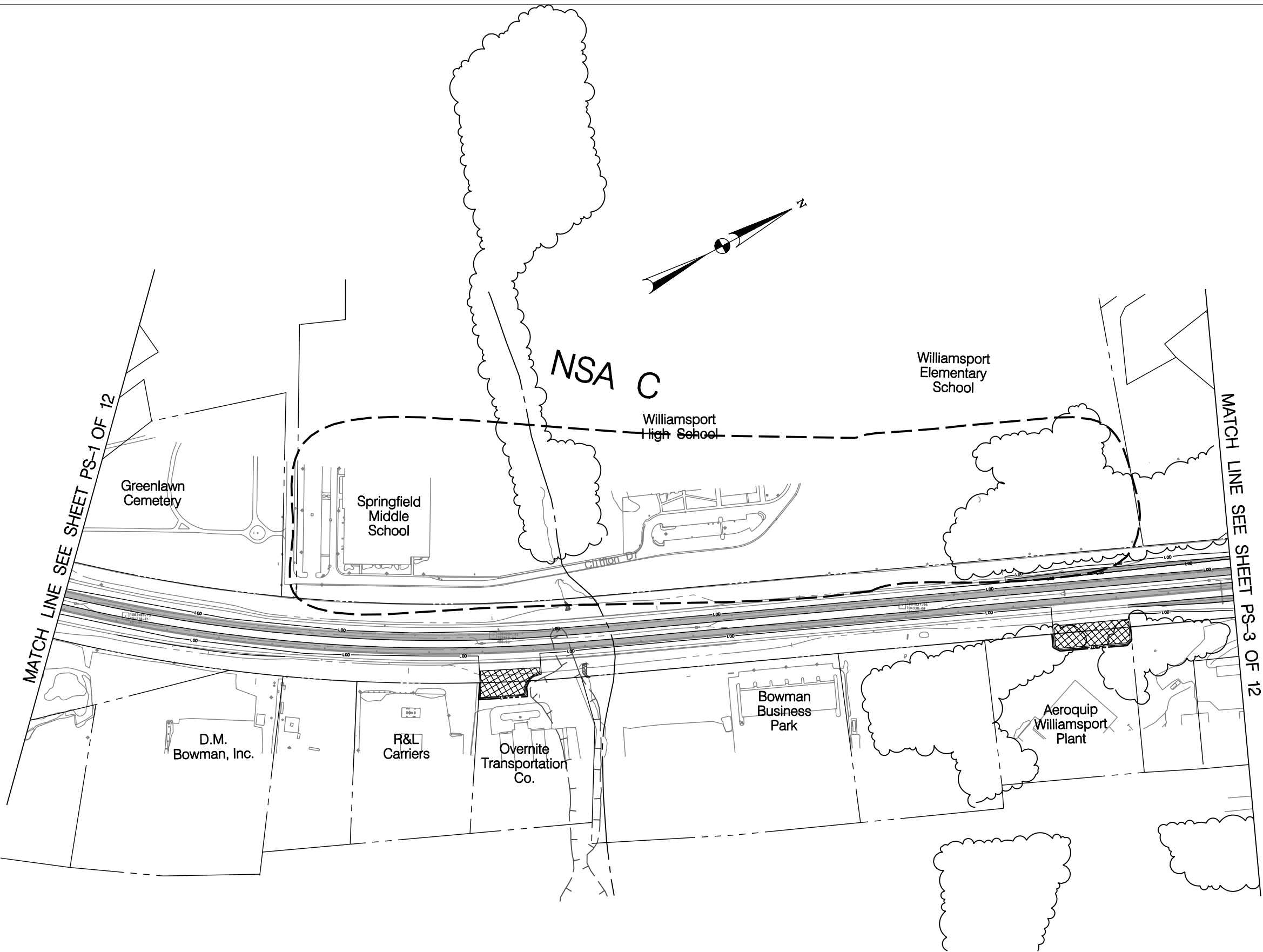


PS-1

I-81 Improvement Project	
Alternate 3A - Inside Widening w/ Collector-Distributor Road	
SHA State Highway Administration	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION PROJECT PLANNING DIVISION
	DATE Thursday, May 21, 2009 AT 02:40 PM
	SCALE: 1" = 400'
SHEET NO. 1 OF 12	


LEGEND

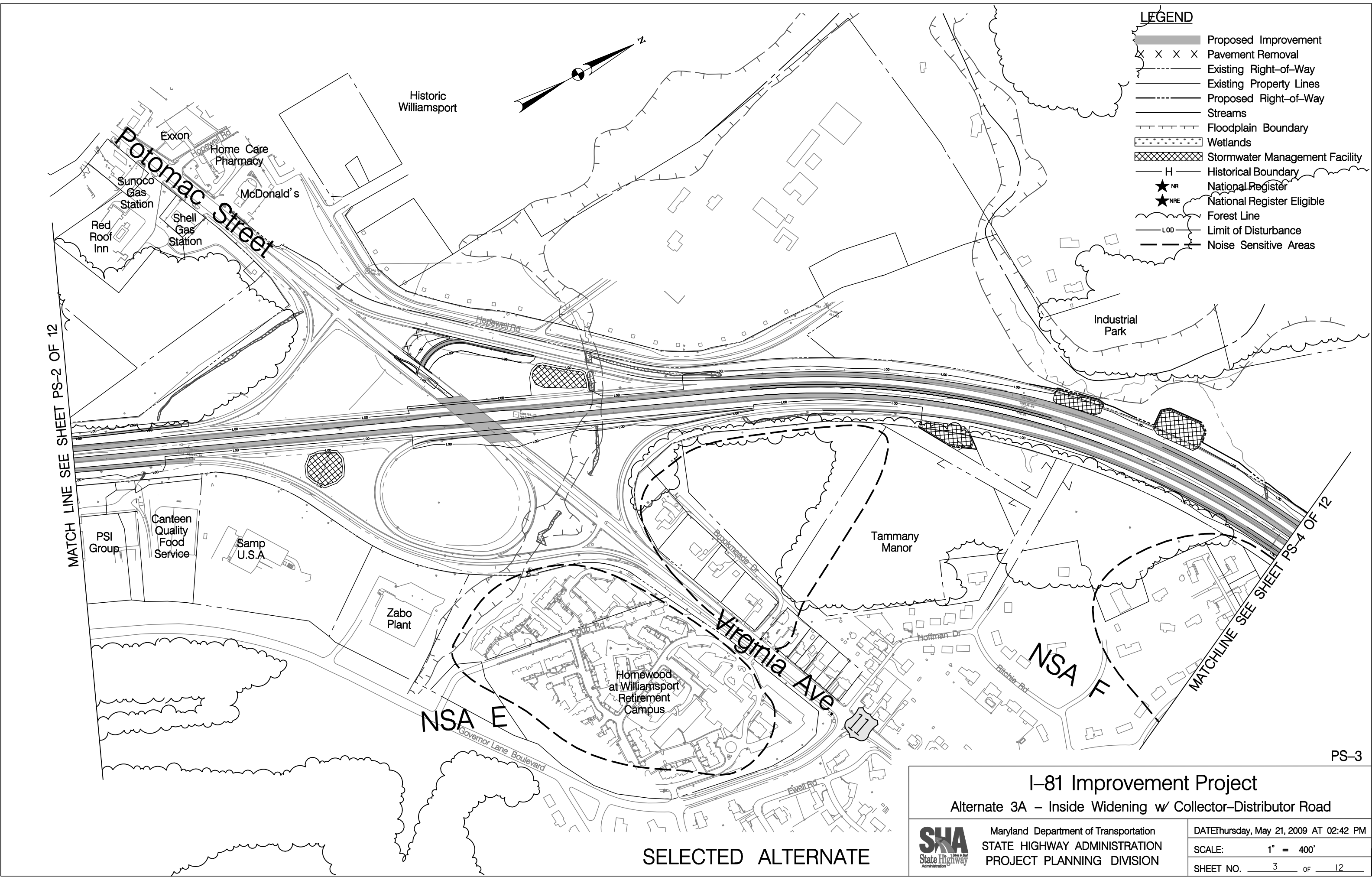
- Proposed Improvement
- X X X X Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
- Wetlands
- Stormwater Management Facility
- H Historical Boundary
- ★^{NR} National Register
- ★^{NRE} National Register Eligible
- Forest Line
- LOD Limit of Disturbance
- Noise Sensitive Areas



PS-2

SELECTED ALTERNATE

I-81 Improvement Project		
Alternate 3A – Inside Widening w/ Collector-Distributor Road		
	Maryland Department of Transportation	DATE Thursday, May 21, 2009 AT 02:41 PM
	STATE HIGHWAY ADMINISTRATION	SCALE: 1" = 400'
	PROJECT PLANNING DIVISION	SHEET NO. 2 OF 12




LEGEND

- Proposed Improvement
- Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
- Wetlands
- Stormwater Management Facility
- H Historical Boundary
- ★ NR National Register
- ★ NRE National Register Eligible
- Forest Line
- LOD Limit of Disturbance
- Noise Sensitive Areas

I-81 Improvement Project

Alternate 3A – Inside Widening w/ Collector-Distributor Road



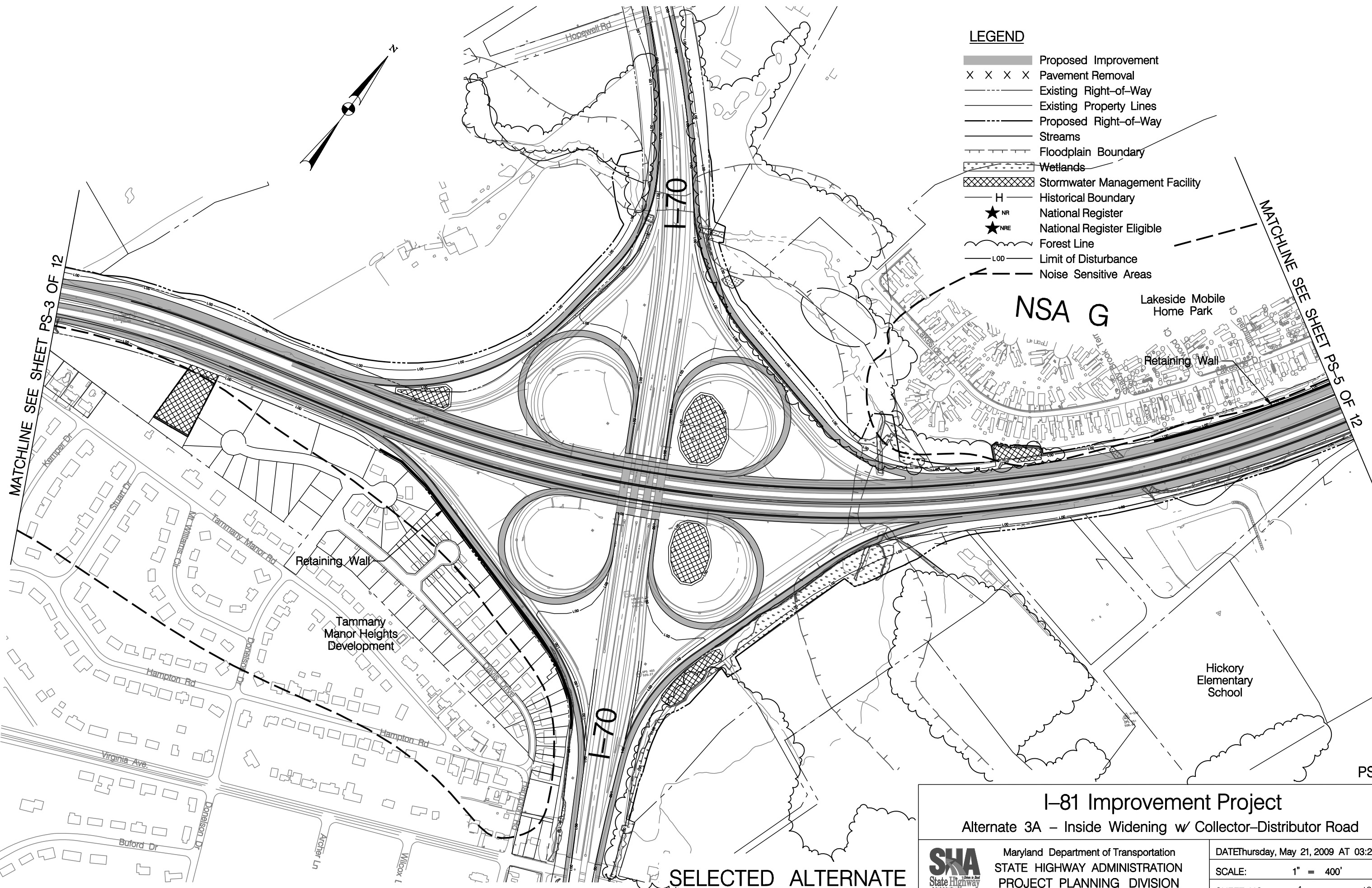
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

DATEThursday, May 21, 2009 AT 02:42 PM



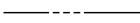
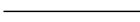





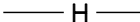



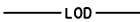

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SHEET NO. 3 OF 12


SELECTED ALTERNATE



LEGEND

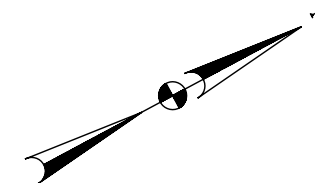
-  Proposed Improvement
-  Pavement Removal
-  Existing Right-of-Way
-  Existing Property Lines
-  Proposed Right-of-Way
-  Streams
-  Floodplain Boundary
-  Wetlands
-  Stormwater Management Facility
-  Historical Boundary
-  National Register
-  National Register Eligible
-  Forest Line
-  Limit of Disturbance
-  Noise Sensitive Areas

SELECTED ALTERNATE

<h2 style="margin: 0;">I-81 Improvement Project</h2> <p style="margin: 0;">Alternate 3A – Inside Widening w/ Collector-Distributor Road</p>	
<div style="display: flex; align-items: center;"><div><p style="margin: 0;">Maryland Department of Transportation</p><p style="margin: 0;">STATE HIGHWAY ADMINISTRATION</p><p style="margin: 0;">PROJECT PLANNING DIVISION</p></div></div>	<p style="margin: 0;">DATE Thursday, May 21, 2009 AT 03:20 PM</p> <p style="margin: 0;">SCALE: 1" = 400'</p> <p style="margin: 0;">SHEET NO. 4 OF 12</p>

LEGEND

- Proposed Improvement
- Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
- Wetlands
- Stormwater Management Facility
- H Historical Boundary
- ★_{NR} National Register
- ★_{NRE} National Register Eligible
- Forest Line
- LOD Limit of Disturbance
- Noise Sensitive Areas



MATCHLINE SEE SHEET PS-4 OF 12

MATCHLINE SEE SHEET PS-6 OF 12

SELECTED ALTERNATE

PS-5

<h2 style="margin: 0;">I-81 Improvement Project</h2> <p style="margin: 0;">Alternate 3A – Inside Widening w/ Collector-Distributor Road</p>		
<p style="margin: 0;">Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION PROJECT PLANNING DIVISION</p>	<p style="margin: 0;">DATE Thursday, May 21, 2009 AT 03:19 PM</p> <p style="margin: 0;">SCALE: 1" = 400'</p> <p style="margin: 0;">SHEET NO. 5 OF 12</p>	

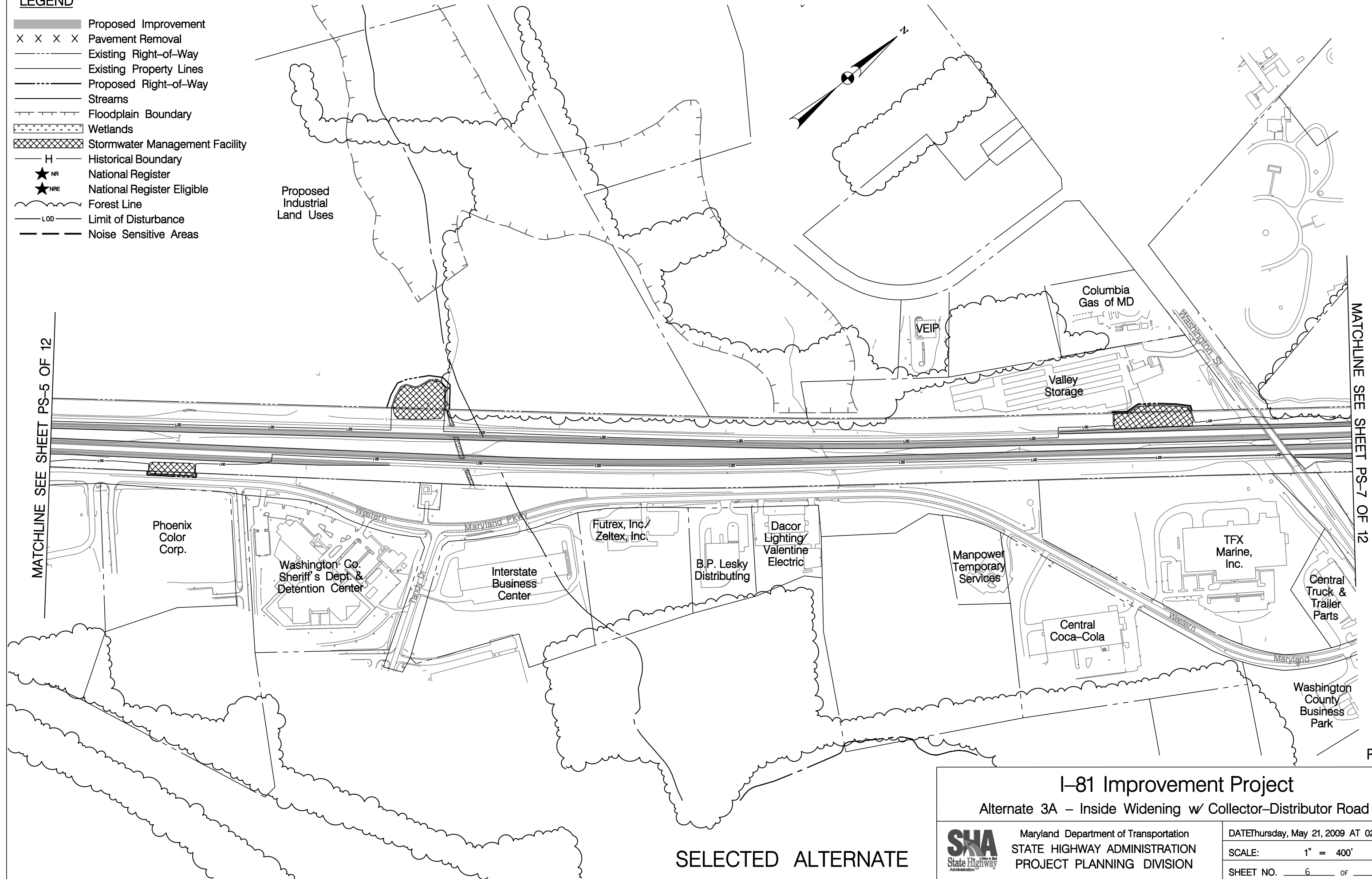
LEGEND

- Proposed Improvement
- X X X X Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
- Wetlands
- Stormwater Management Facility
- H Historical Boundary
- ★^{NR} National Register
- ★^{NRE} National Register Eligible
- Forest Line
- L_{OD} Limit of Disturbance
- Noise Sensitive Areas

Proposed
Industrial
Land Uses

MATCHLINE SEE SHEET PS-5 OF 12

MATCHLINE SEE SHEET PS-7 OF 12



PS-6

SELECTED ALTERNATE

I-81 Improvement Project
Alternate 3A – Inside Widening w/ Collector-Distributor Road



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

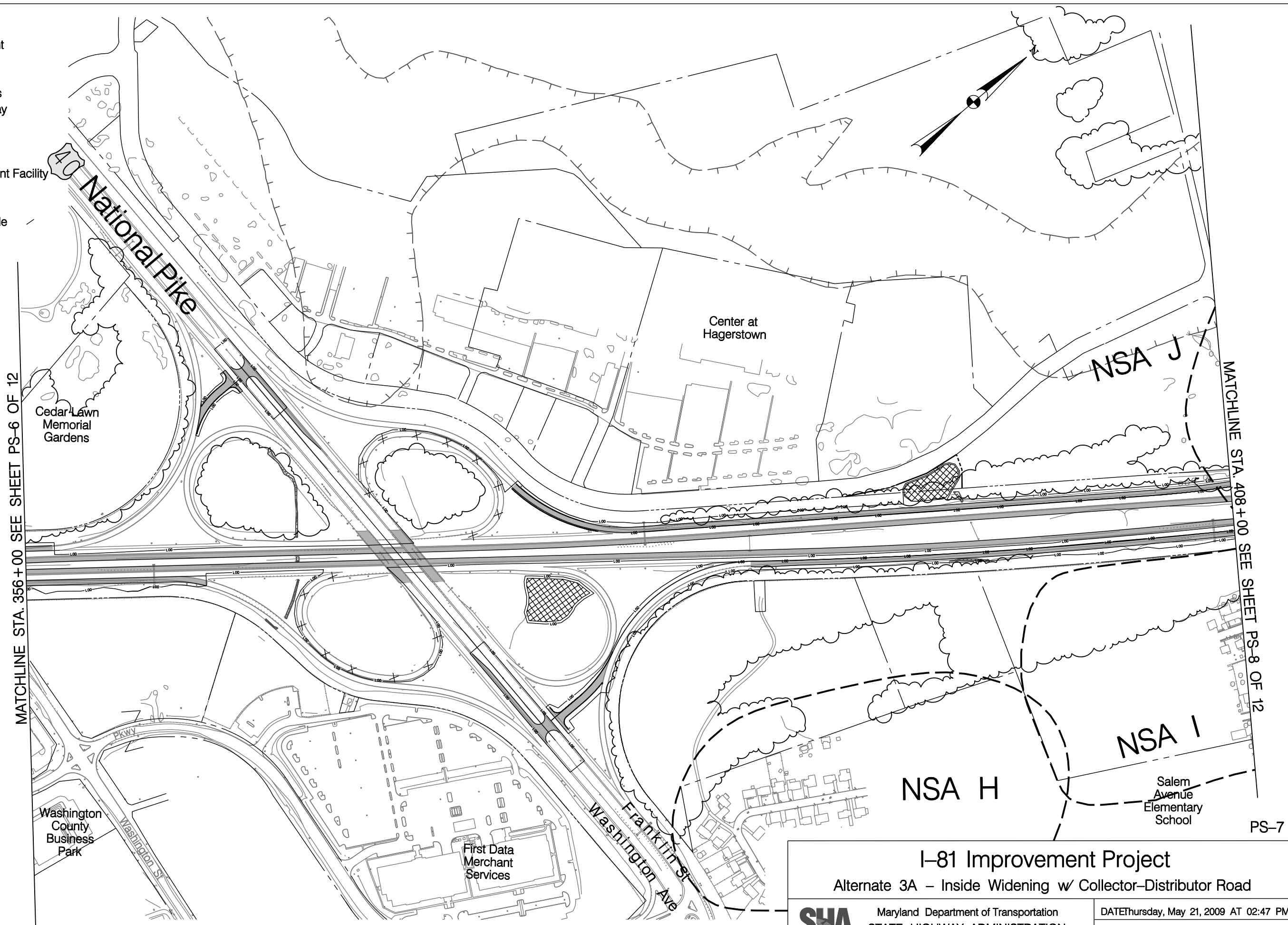
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SCALE: 1" = 400'

SHEET NO. 6 OF 12

LEGEND

- Proposed Improvement
- Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
- Wetlands
- Stormwater Management Facility
- H Historical Boundary
- ★^{NR} National Register
- ★^{NRE} National Register Eligible
- Forest Line
- LOD Limit of Disturbance
- Noise Sensitive Areas



SELECTED ALTERNATE

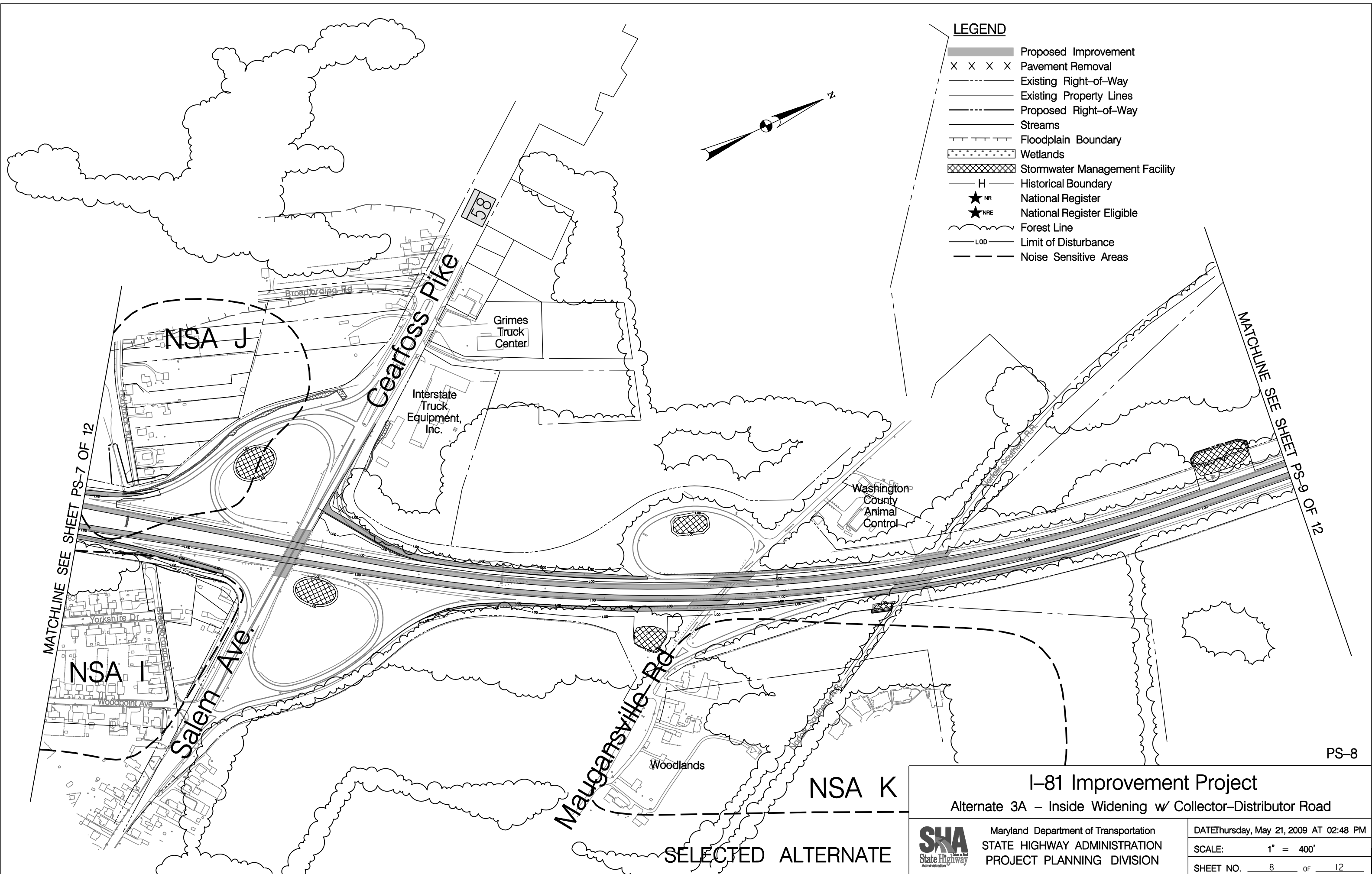


Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

I-81 Improvement Project
Alternate 3A – Inside Widening w/ Collector-Distributor Road

DATE Thursday, May 21, 2009 AT 02:47 PM
SCALE: 1" = 400'
SHEET NO. 7 OF 12

PS-7



LEGEND

- Proposed Improvement
- Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
- Wetlands
- Stormwater Management Facility
- Historical Boundary
- National Register
- National Register Eligible
- Forest Line
- Limit of Disturbance
- Noise Sensitive Areas


MATCHLINE SEE SHEET PS-7 OF 12

MATCHLINE SEE SHEET PS-9 OF 12

PS-8

I-81 Improvement Project

Alternate 3A – Inside Widening w/ Collector-Distributor Road



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

DATEThursday, May 21, 2009 AT 02:48 PM

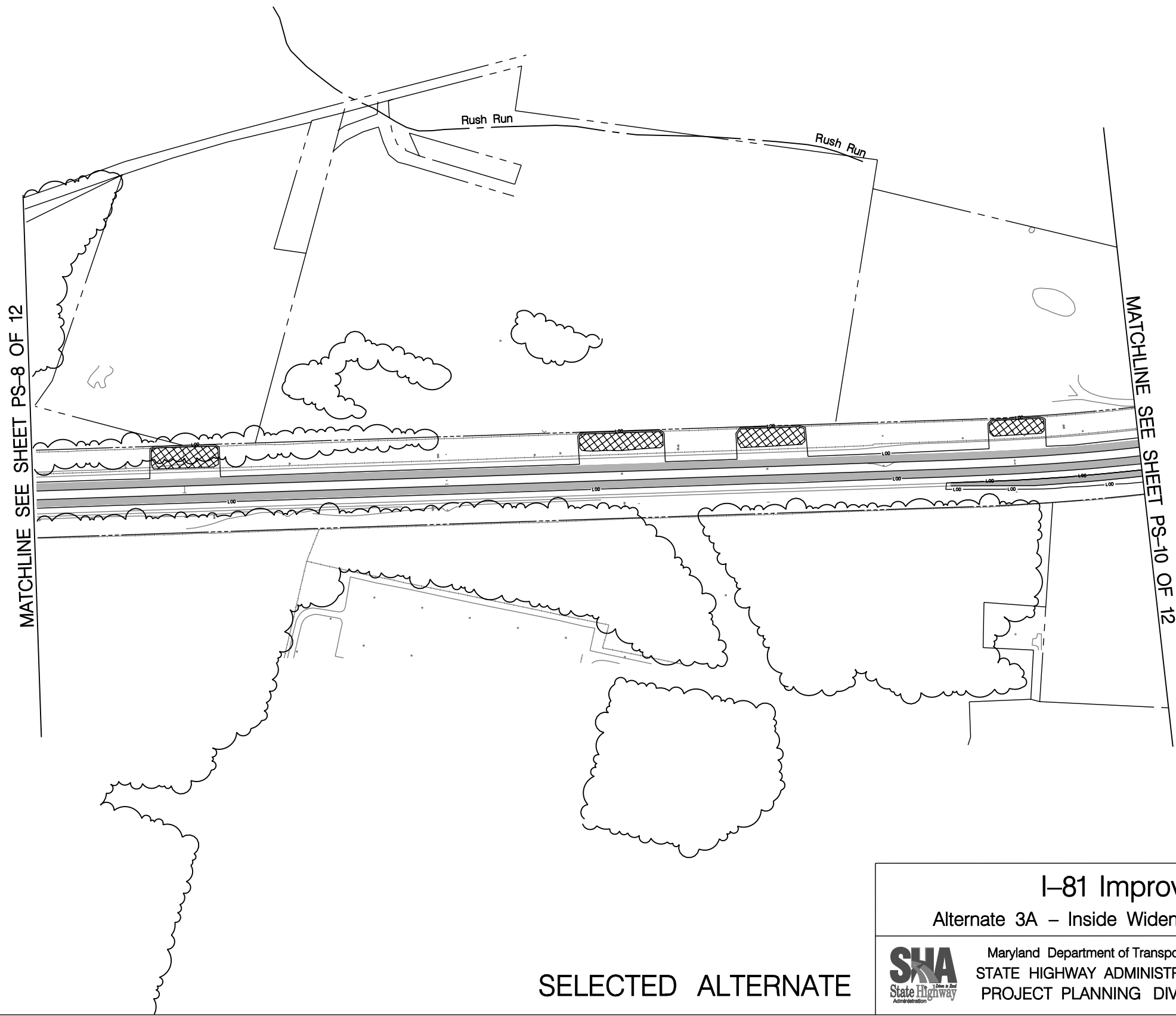
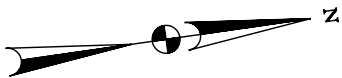
SCALE: 1" = 400'

SHEET NO. 8 OF 12

SELECTED ALTERNATE


LEGEND

- Proposed Improvement
- Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
- Streams
- Floodplain Boundary
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- ★^{NRE} National Register Eligible
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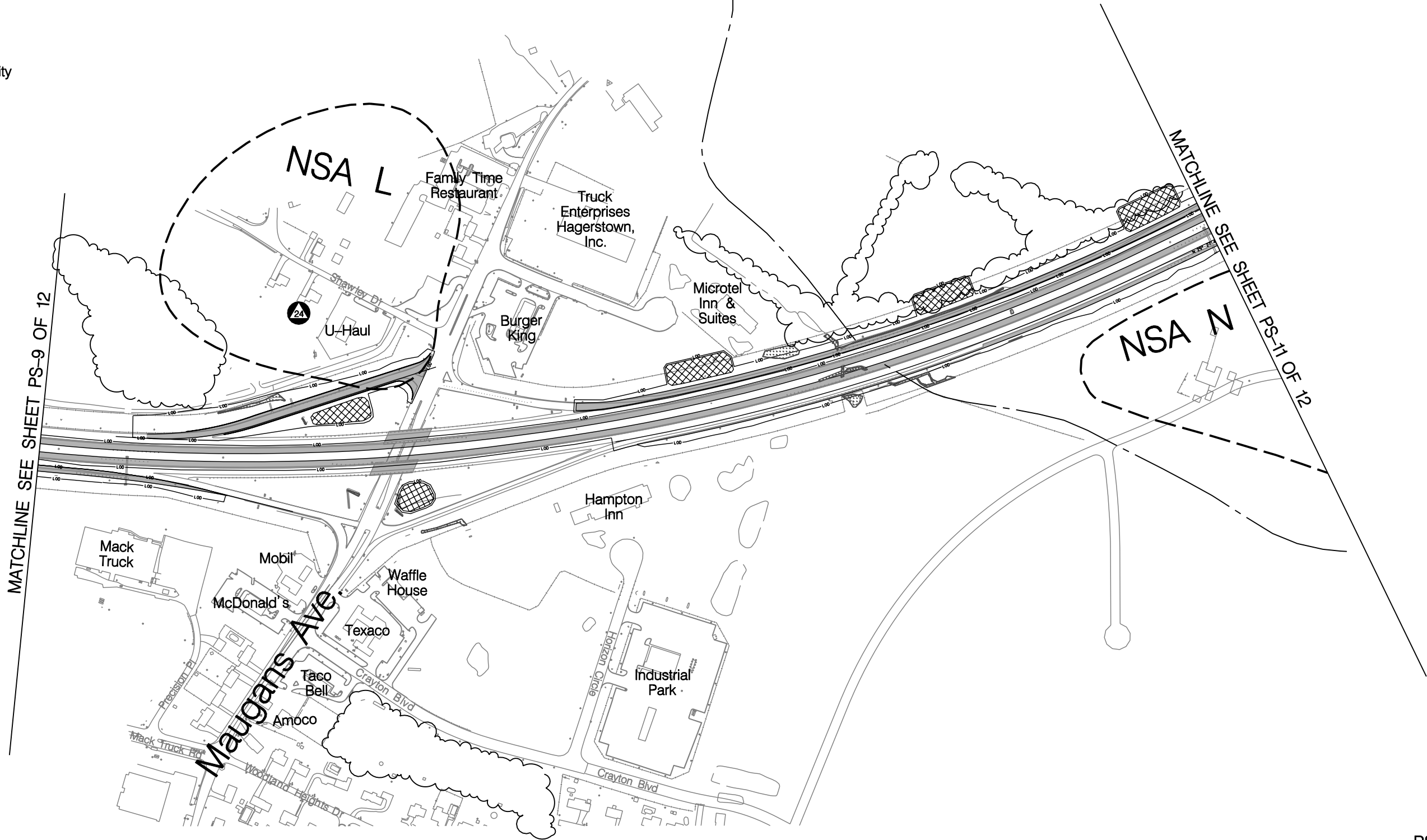
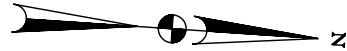
PS-9

SELECTED ALTERNATE

I-81 Improvement Project	
Alternate 3A – Inside Widening w/ Collector-Distributor Road	
 Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION PROJECT PLANNING DIVISION	DATE Thursday, May 21, 2009 AT 02:49 PM
	SCALE: 1" = 400'
	SHEET NO. 9 OF 12


LEGEND

- Proposed Improvement
- X X X X Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
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- Floodplain Boundary
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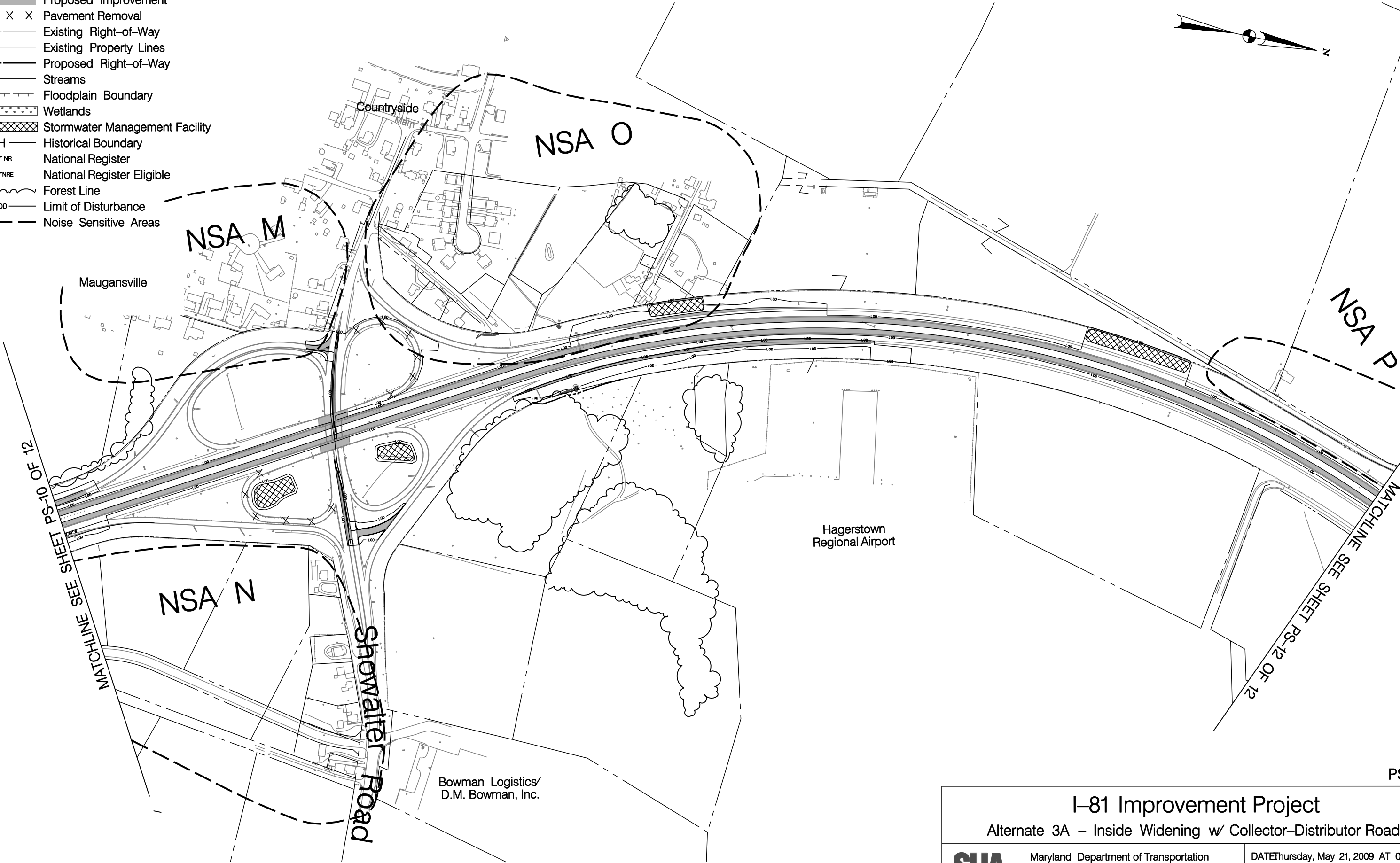
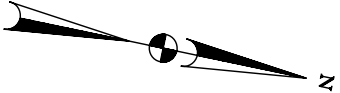
PS-10

SELECTED ALTERNATE

I-81 Improvement Project	
Alternate 3A – Inside Widening w/ Collector-Distributor Road	
 Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION PROJECT PLANNING DIVISION	DATE Thursday, May 21, 2009 AT 02:50 PM
	SCALE: 1" = 400'
	SHEET NO. 10 OF 12

LEGEND


- Proposed Improvement
- X X X X Pavement Removal
- Existing Right-of-Way
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SELECTED ALTERNATE

I-81 Improvement Project

Alternate 3A – Inside Widening w/ Collector-Distributor Road

 Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

DATE

Thursday, May 21, 2009 AT 02:50 PM

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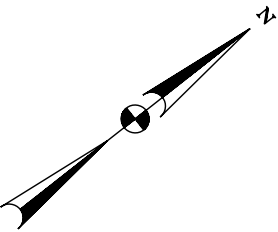
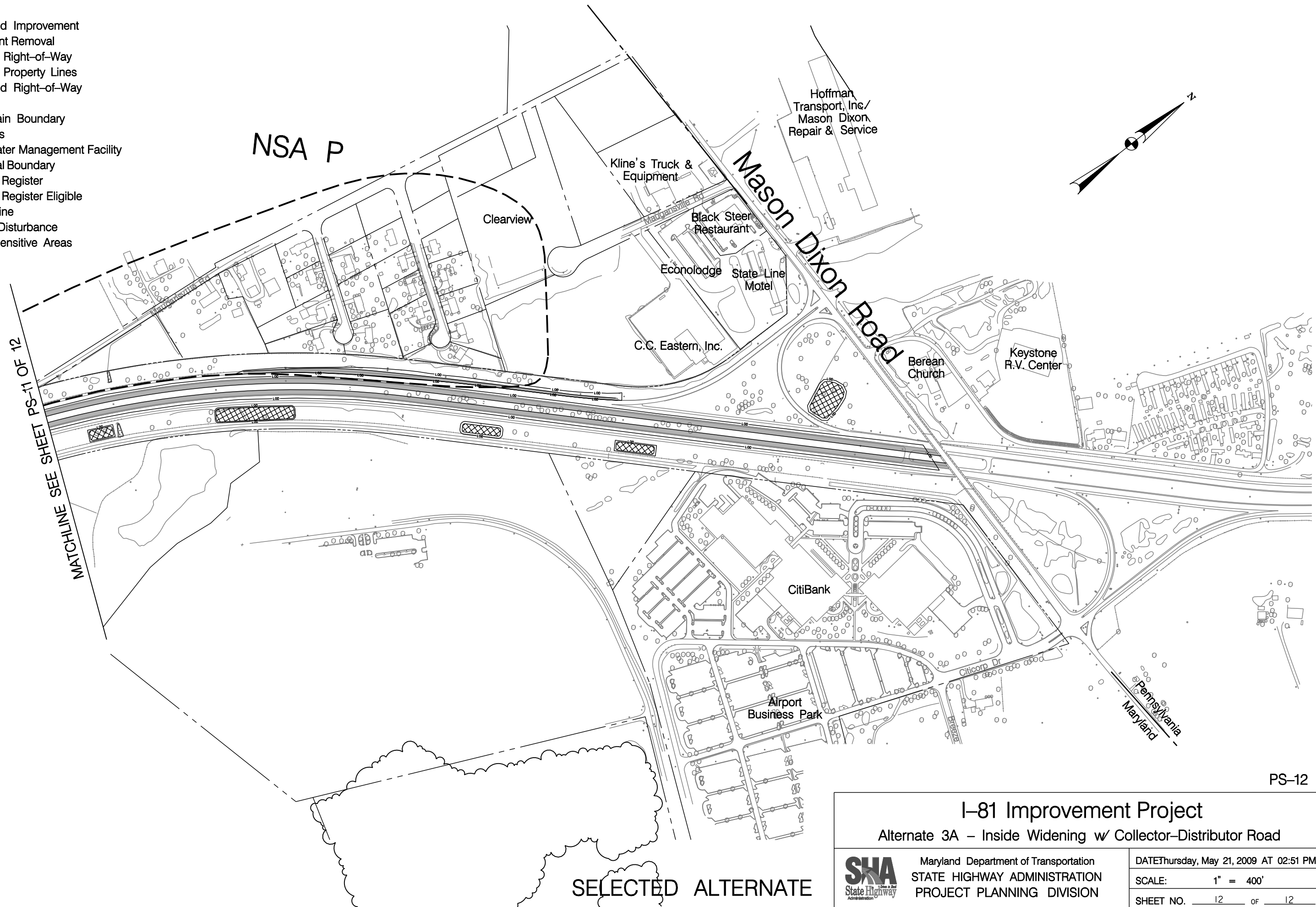
1" = 400'

SHEET NO.

11 OF 12

LEGEND

- Proposed Improvement
- X X X X Pavement Removal
- Existing Right-of-Way
- Existing Property Lines
- Proposed Right-of-Way
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PS-12

I-81 Improvement Project
Alternate 3A – Inside Widening w/ Collector-Distributor Road



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
PROJECT PLANNING DIVISION

DATE Thursday, May 21, 2009 AT 02:51 PM
SCALE: 1" = 400'
SHEET NO. 12 OF 12

SELECTED ALTERNATE

Appendix B

Memorandum of Agreement

**MEMORANDUM OF AGREEMENT AMONG
THE FEDERAL HIGHWAY ADMINISTRATION,
THE NATIONAL PARK SERVICE,
THE MARYLAND STATE HIGHWAY ADMINISTRATION, AND
THE MARYLAND STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR 800 REGARDING
THE I-81 IMPROVEMENT PROJECT
IN WASHINGTON COUNTY, MARYLAND**

WHEREAS, the Federal Highway Administration (FHWA) proposes to assist the Maryland State Highway Administration (MD SHA) with the improvement of I-81 from the West Virginia State Line to the Pennsylvania State Line in Washington County, Maryland as described in the Finding of No Significant Impact/Section 4(f) Evaluation (FONSI/4(f)) for the project; and

WHEREAS, after detailed study of various alternatives and consideration of efforts to avoid and minimize certain project impacts, the MD SHA has selected Alternate 3A as the SHA Selected Alternate for design and construction; and

WHEREAS, the FHWA has established the Undertaking's Area of Potential Effects (APE), as defined at 36 CFR 800.16(d), to be 200 feet to either side of I-81 between the Potomac River at the southern project limit to State Line Road at the northern project limit, to encompass the geographic areas within which the Undertaking may directly or indirectly cause alterations in the character or use of historic properties; and

WHEREAS, the FHWA has determined that the Undertaking will have adverse effects on a historic property listed in the National Register of Historic Places (National Register) identified as the Chesapeake & Ohio Canal National Historical Park (C&O Canal NHP); and

WHEREAS, the FHWA has determined that the Undertaking will require the use of a Section 4(f) resource, identified as the C&O Canal NHP; and

WHEREAS, it is understood that this Memorandum of Agreement (MOA) is based upon review of conceptual design alternatives, which will be refined during the final design process and reviewed by partners during the final design process; and

WHEREAS, the FHWA has determined that the Undertaking may affect unidentified cultural resources in areas that are associated with ancillary project activities including, but not limited to, construction staging areas, construction easements, stormwater management and drainage facilities, wetland mitigation areas, parkland mitigation areas, reforestation areas, and other actions connected to the Undertaking and alignment modifications during the final design process that have not yet been subject to prior cultural resources investigations; and

WHEREAS, the FHWA has consulted with the Maryland State Historic Preservation Officer (MD SHPO), pursuant to 36 CFR 800, the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the National Park Service (NPS) enters into this MOA pursuant to the authority found at 16 USC. Section 1-3; and

WHEREAS, the MD SHA and the NPS have participated in the consultation, have responsibilities for implementing stipulations under this MOA, and pursuant to 36 CFR 800.6(c)(2) have been invited to be signatories to this MOA; and

WHEREAS, the FHWA has identified and consulted with the following parties in the Section 106 process: the West Virginia State Historic Preservation Officer (WV SHPO), the Washington County Historic District Commission, and the Washington County Historical Trust; and

WHEREAS, the WV SHPO has been invited to be a concurring party in this MOA and declined to participate; and

WHEREAS, the FHWA notified the Advisory Council on Historic Preservation (Council) of the Undertaking's adverse effect on historic properties and it declined to participate in the consultation; and

WHEREAS, the FHWA and the MD SHA sought and considered the views of the public on this Undertaking through the public involvement process described in the FONSI/4(f); and

NOW, THEREFORE, the FHWA, the NPS, the MD SHA, and the MD SHPO agree that upon the FHWA's decision to proceed with the further planning and construction of the Undertaking, the FHWA shall ensure that the following stipulations are implemented in order to take into account the effects of the Undertaking on historic properties, and that these stipulations shall govern the Undertaking and all its parts until this MOA expires or is terminated.

STIPULATIONS

The FHWA and the MD SHA shall ensure the following measures are carried out:

I. C&O Canal National Historical Park

A. Avoidance and Minimization

- 1) The MD SHA will use all practicable measures to minimize disturbances to, and provide appropriate treatment of, the C&O Canal NHP and to all elements that contribute to the National Register historic district during the construction of the project. The FHWA, the NPS, the MD SHA, and the MD SHPO will consult and develop an Avoidance and Treatment Plan for the C&O Canal NHP (Plan). The Plan will address the widening of MD SHA Bridges No. 2107801 and 2107802, stormwater management facilities, construction sequences and staging areas, protection of the canal prism and towpath, adherence to NPS gross vehicle weight restrictions, and minimization of impacts to park resources and park visitors. The MD SHA will submit the draft Plan to the NPS and the MD SHPO for review and comment and ensure that the Plan is implemented in consultation with the NPS. The MD SHA will include the Plan in the bid package and final construction documents.
- 2) No stormwater management areas will be constructed within the boundaries of the C&O Canal NHP and the canal prism will not be considered a stormwater management facility.
- 3) No scuppers will be installed on MD SHA Bridges No. 2107801 and 2107802 that would expel stormwater within the boundaries of the C&O Canal NHP.
- 4) No access to the Potomac River shall be permitted from the C&O Canal NHP. The only access across C&O Canal NHP property will be in conjunction with work activities directly within the boundaries of the C&O Canal NHP.
- 5) The only staging within the C&O Canal NHP will be for construction work within the C&O Canal NHP boundaries. All conditions for staging and access on C&O Canal NHP property will be outlined within a temporary construction/access special use permit from the NPS.
- 6) The MD SHA will provide the NPS with copies of all permits associated with the project, including access agreements from West Virginia landowners. The project will require permits from the United States Army Corps of Engineers (USACE) and the Maryland Department of the Environment (MDE). The MD SHA will work with the USACE, the MDE, and the NPS to obtain all of the necessary permits for the project.
- 7) The MD SHA will supply the NPS with a list of the type, size, and Gross Vehicle Weight (GVW) of construction equipment and vehicles to be used on C&O Canal NHP property for inclusion in the temporary construction special use permit, as well an estimation of the number of trips per vehicle. The MD SHA shall also provide information pertaining to the storage of construction materials.
- 8) The MD SHA will observe the 12 ton weight limit for the towpath. At the time of this MOA, weight limits have not been established for particular areas of concern along the towpath, including, but not limited to, a historic waste weir. An evaluation of weight

limits along the towpath will need to be evaluated prior to construction. Vehicles are restricted to a single axle, H-15 load limit, unless otherwise approved by the NPS.

9) The MD SHA will supply the NPS with an estimate of the amount of infill, in cubic yards, needed in canal prism. Infill will consist of a clean quarry material over filter fabric and is to be approved by the NPS. Infill will be in accordance with the 1994 Maryland specifications for soil, erosion, and sediment control. Erosion and sediment controls will be in place. The MD SHA will analyze potential impacts to the canal prism, under normal and flooding conditions, as a result of infill of the canal prism and will provide the analysis to the NPS early in the design phase of the project.

10) The MD SHA will supply the NPS with a flood event action and clean up plan.

11) Tree trimming along the towpath may be required, but is not likely to be beyond the normal NPS maintenance for small vehicle access along the towpath. In the event that tree trimming along the towpath is necessary, it will occur only as consistent with the NPS maintenance for small vehicle access, and under the prior approval and direction of the NPS staff.

12) Whenever possible, the MD SHA will conduct activities that would require closure of the towpath outside of normal C&O Canal Park operating hours. If towpath closures are required within normal operating hours, a shuttle service will be provided for park visitors whenever the towpath is closed for more than fifteen (15) minutes.

13) The MD SHA will coordinate with the NPS and Allegheny Power for the use of Lockwood Road.

14) The area of temporary construction easement will not exceed 200 feet from the centerline between MD SHA Bridges No. 2107801 and 2107802. Construction work will be addressed in a special use permit.

B. Restoration Plan

1) Following construction, the MD SHA will implement a Restoration Plan, which will be developed during the final design phase in consultation with the NPS and the MD SHPO.

2) The Restoration Plan will provide sustainable vegetation at the I-81 bridge using native species, while recognizing the need to maintain visibility of critical C&O Canal NHP features. Vegetation will be selected, as agreed to by NPS, to best restore the functions and values of the existing forested system. All trees to be removed to accommodate construction activities will be inventoried prior to construction and a 1:1 dbh replacement of approved replacement vegetation will be provided. In areas that have been previously disturbed with little to no archeological concerns, the Restoration Plan will consider the establishment of larger trees rather than numerous small trees. Additional NPS land above and beyond the immediate area of disturbance may be required for fulfilling the 1:1 dbh requirement. The Restoration Plan will address bare and erodeable soils, particularly surrounding the bridge abutment areas.

3) The Restoration Plan will also address the repair of any damage to the towpath or canal prism that occurs as a result of construction activities.

C. Towpath Repair

1) In addition to repairs to the portion of towpath used for construction access and staging, MD SHA will provide funding for one (1) mile of routine towpath repair (not including significant erosion repairs) at a location to be chosen by NPS. The amount to be provided will be the 2007 known costs for routine towpath repair (\$77,000 per mile), which will be adjusted annually for inflation beginning with 2007 dollars and ending with the year of actual construction. The NPS will complete the repair.

D. Land Exchange and Permits

1) The NPS will pursue an exchange of land or interest in land with the MD SHA under the authority provided at 16 USC 4601-22(b). By means of a proposed exchange, the NPS will convey to the MD SHA perpetual deed of easement granting air rights for the bridge over the C&O Canal NHP and perpetual deed of easement for the I-81 bridge piers occupying Federally-owned land in the C&O Canal NHP. In return, the MD SHA will provide to the NPS lands or interests in land of equal value and situated within the C&O Canal NHP boundary.

2) The NPS will issue a temporary construction/access special use permit to govern the use of temporary construction areas.

E. Future Archeological Investigations within the C&O Canal NHP

1) The MD SHA will consult with the NPS and the MD SHPO to determine the need for additional identification, evaluation, and treatment as appropriate, of archeological resources within the C&O Canal NHP, including any construction easement areas on the limestone bluff tops that overlook the canal prism and towpath, or potential staging areas on floodplain areas adjacent to the project location, and implement any identification, evaluation, and treatment deemed necessary in accordance with the provisions of Stipulation III.

2) Should any additional archeological investigations be necessary on lands administered by the NPS, the archeological contractor shall first apply for an Archeological Resources Protection Act (ARPA) permit, to be reviewed concurrently by the Superintendent of the C&O Canal NHP and the Regional Archeologist, National Capital Region (NCR). Applications for an ARPA permit will be obtained from the Regional Archeologist. Assuming the reviewers recommend that the application be approved, the Regional Director, NCR, will issue the permit.

F. Environmental Stewardship – Restoration of the Catoctin Aqueduct

As part of the environmental stewardship efforts for the Undertaking, MD SHA shall provide Transportation Enhancement Program funding to assist NPS with the stabilization and restoration of the Catoctin Aqueduct, located on the C&O Canal. As the federal owner of this historic property, NPS shall be the lead agency responsible for complying with Section 106 of the National Historic Preservation Act of 1966, as amended for the stewardship project. NPS shall ensure that the plans and specification for the work conform to the applicable approaches set forth in the Secretary of Interior's *Standards for the Treatment of Historic Properties* (36 CFR Part 68).

II. Project Design

A. Design Plans Review and Comment

1) The MD SHA will submit plans to the FHWA, the NPS, and the MD SHPO and all other consulting parties for review and comment at the type, size, and location (TS&L) phase (approximately 30% complete), semi-final review (approximately 60% complete), and the final review detailed design phase (approximately 90% complete).

2) At each review phase, the MD SHA will schedule a design review meeting to afford all consulting parties the opportunity to provide comments on aspects of the project design. The MD SHA will produce minutes following each meeting that will document the commitments agreed upon during the review.

3) A minimum of thirty days prior to the contract award date, the MD SHA will submit final construction plans and specifications to the FHWA, the NPS, the MD SHPO, and all other consulting parties for a final review. The purpose of the final review is to ensure that all of the comments generated at the prior design reviews have been adequately incorporated into the construction documents.

4) All construction staging areas and materials storage will be predetermined and shown on the final detailed design plans.

III. Future Activities – Cultural Resources Investigations

A. Ancillary Activities and Alignment Modifications

Related ancillary activities including, but not limited to, construction staging areas, stormwater management facilities, wetland mitigation areas, parkland mitigation areas, reforestation areas, and alignment modifications or design refinements may be added to this Undertaking in the future. Should such activities be added for which cultural resources studies have not been completed, the MD SHA shall ensure that consultation ensues with the MD SHPO and other relevant consulting parties including the NPS and

the WV SHPO, as appropriate, and that all required cultural resources studies are implemented in accordance with the applicable performance standards in Stipulation IV and with the following procedures:

1) *Identification*: MD SHA professional cultural resources staff shall review any additions or changes to the project and implement identification investigations as necessary to identify any historic properties that may be impacted by the proposed activity or alignment modification. The MD SHA shall provide all completed information to the MD SHPO, the FHWA, and relevant consulting parties under this MOA for review and comment. If the MD SHPO does not provide comments within 30 calendar days of receipt, the MD SHA may assume the MD SHPO acceptance of the results.

2) *Evaluation*: The MD SHA shall evaluate all cultural resources identified in the areas inventoried under Stipulation III.A.1 in accordance with 36 CFR 800.4(c) to determine their eligibility for the National Register. The MD SHA shall provide the results of any such evaluation efforts to the MD SHPO, the FHWA, and relevant consulting parties for review and comment. If the MD SHPO does not provide comments within 30 calendar days of receipt, the MD SHA may assume the MD SHPO acceptance of the results.

3) *Treatment*: Should any property eligible for inclusion in the National Register be identified under Stipulations III.A.1 and III.A.2, the MD SHA shall make a reasonable and good-faith effort to avoid adversely impacting the resources by relocating or modifying the proposed action. If adverse effects are unavoidable, the MD SHA, the FHWA, the MD SHPO and relevant consulting parties shall consult in accordance with 36 CFR 800.6 to develop and implement appropriate treatment options. The MD SHA shall ensure that any resulting cultural resources work is accomplished in accordance with the relevant performance standards in Stipulation IV.

B. Unexpected Discovery of Historic Properties

Should historic properties be unexpectedly identified during the implementation of the Undertaking, the MD SHA shall ensure that reasonable efforts are made to avoid, minimize, or mitigate adverse effects to such properties, and shall consult with the MD SHPO and the FHWA to resolve any unavoidable adverse effects pursuant to 36 CFR 800.6. The MD SHA shall ensure that any resulting cultural resources work is accomplished in accordance with the relevant performance standards in Stipulation IV. The NPS shall be a consulting party to any unexpected discoveries of historic properties found within the bounds of the C&O Canal NHP.

C. Possible Human Remains at Showalter Road

Although field investigations and archival research were unable to verify a citizen's report of a cemetery or Native American burial sites within the APE, the possibility that graves are present within the impact area cannot be excluded. Monitoring during construction will be conducted by the MD SHA in this location. The results of the monitoring effort shall be included in a report that will be disseminated to the MD SHPO, and special provisions will be added to the project's construction documents.

D. Burials

1) In the event that human burials are encountered during archeological investigations or construction in any portion of the project area, the MD SHA will ensure that any human remains and grave-associated artifacts are brought to the immediate attention of the MD SHPO and the Washington County States Attorney. No activities that might disturb or damage the remains will be conducted until the MD SHPO has determined whether excavation is necessary and/or desirable. If burials are discovered within the C&O Canal NHP, all procedures will comply with the Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601) and the NPS Publication National Register Bulletin 41 *Guidelines for Evaluation and Registering Cemeteries and Burial Places* (Washington DC 1992). Otherwise, procedures will comply with Article 27, §§ 265 and 267 of the Annotated Code of Maryland.

2) Consultation will be conducted with the appropriate affiliated Indian tribes or the Maryland Commission on Indian Affairs in the event Native American burials are encountered.

E. Fish Weir in the Potomac River Bed

A fish weir, located in the bed of the Potomac River a short distance upstream from the APE, is a recorded site in both Maryland (18WA196) and West Virginia (46BY157). This archeological feature and site will be avoided by currently proposed staging from the West Virginia side of the Potomac. Should avoidance prove impossible in future stages of this project, this resource will be evaluated for National Register eligibility and an appropriate treatment will be devised as stipulated in Section III.

IV. Professional Standards

A. Professional Qualifications

The MD SHA shall ensure that all cultural resources work performed pursuant to the MOA is carried out by or under the direct supervision of a person or persons meeting at a minimum the Professional Qualifications Standards set forth in the Secretary of the Interior's Standards for Archeology and Historic Preservation (36 CFR Part 61).

B. Standards and Guidelines

The MD SHA shall ensure that all cultural resources investigations and work performed pursuant to this MOA shall be conducted in a manner consistent with the principles and standards contained in the documents (and subsequent revisions thereof) listed below:

- *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (1983 and successors);
- *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994);
- *Standards and Guidelines for Architectural and Historical Investigations in Maryland* (Maryland Historical Trust, 2000);
- *Advisory Council on Historic Preservation – Section 106 Archaeology Guidance* (ACHP 2007);
- *Recommended Approach for Consultation on Recovery of Significant Information for Archeological Sites*, ACHP 1999 (64 FR 27085-27087);
- *Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 CFR Part 68).

C. Curation

All materials and records resulting from cultural resources investigations on the C&O Canal NHP are the property of the federal government, to be curated by the NPS at the NCR's Museum Resource Center (MRCE) in Landover, Maryland. Copies of all records sent to the MRCE will be sent to the Chesapeake and Ohio Canal National Historical Park Library. All other materials, including but not limited to field reports, photographs, field sketches, etc., and records resulting from cultural resources investigations conducted for the project will be curated in accordance with 36 CFR 79 at the Maryland Archeological Conservation Laboratory, provided that clear title or deeds of gift to the collections have been obtained.

V. Dispute Resolution

Should the MD SHPO, or any of the signatories to this MOA, object in writing within 30 days to any plans or actions proposed pursuant to this MOA, the FHWA shall consult with the objecting party to resolve the objection. If the FHWA determines that the objection cannot be resolved, the FHWA shall request the comments of the Council pursuant to 36 CFR 800.7. Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR 800.7(c)(4) with reference only to the subject of the dispute; the FHWA's responsibility to carry out all actions under this MOA that are not subject of the dispute will remain unchanged.

VI. Amendment

If any of the signatories to this MOA believes that its terms cannot be carried out, or that an amendment to these terms must be made, that signatory shall immediately consult with the other signatories to develop amendments in accordance with 36 CFR 800.6(c)(7). If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation V will be followed.

VII. Termination

Any signatory to this MOA may terminate it by providing 30 days written notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA would require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

VIII. Duration

This MOA shall be null and void if its terms are not carried out within ten (10) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

IX. Civil Rights

All activities pursuant to this MOA shall be in compliance with all federal laws and regulations prohibiting discrimination on grounds of race, color, sexual orientation, national origin, disabilities, religion, age, or sex.

X. Publication of Results of Studies

No signatory will unilaterally publish a joint publication without consulting the other signatories. This restriction does not apply to popular publication of previously published technical matter. Publication pursuant to this MOA may be produced independently or in collaboration with others; however, in all cases proper credit will be given to the efforts of those contributing to the publication. In the event no agreement is reached concerning the manner of publication or interpretation of results, any signatory may publish data after due notice and submission of the proposed manuscript to the others. In such instances, the signatory publishing the data will give due credit to the cooperation but will assume full responsibility for any statements on which there is a difference of opinion.

Execution of the MOA by the FHWA, NPS, MD SHA, and MD SHPO, its subsequent submission to the Council, and implementation of its terms evidence that FHWA has afforded the signatories an opportunity to comment on the Undertaking and its effects on historic properties, and that FHWA has taken into account the potential effects of the undertaking on historic properties.

FEDERAL HIGHWAY ADMINISTRATION

By: William A. Wade
for Nelson J. Castellanos, Division Administrator

Date: 11/19/2008

MARYLAND STATE HIGHWAY ADMINISTRATION

By: Neil J. Pedersen
Neil J. Pedersen, Administrator

Date: 10/14/08

**UNITED STATES DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE,
NATIONAL CAPITAL REGION**

By: Joseph M. Lawler
Joseph M. Lawler, Regional Director

Date: 7/30/08

MARYLAND STATE HISTORIC PRESERVATION OFFICER

By: J. Rodney Little
J. Rodney Little, State Historic Preservation Officer

Date: 8-15-08

Contact Information for Key Officials

Mr. Nelson J. Castellanos
Federal Highway Administration
Division Administrator
DelMar Division
10 South Howard Street, Suite 2450
Baltimore, MD 21201
Phone (410) 962-4440
Fax (410) 962-4054
nelson.castellanos@fhwa.dot.gov

Mr. Neil J. Pedersen
Administrator
Maryland State Highway Administration
707 North Calvert Street
Baltimore, MD 21202
Phone (410) 545-0400
Fax (410) 209-5009
npedersen@sha.state.md.us

Mr. Joseph M. Lawler
Regional Director
National Park Service
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242
Phone (202) 619-7000
Fax (202) 619-7220
joe_lawler@nps.gov

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032
Phone (410) 514-7601
Fax (410) 514-7678
rlittle@mdp.state.md.us

Appendix C

Section 7 Coordination



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573-4575



July 2, 2008

Bruce Grey
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

RE: Project No. Wa128b11 I-81 Improvement Project Washington County

Dear Bruce Grey

This responds to your letter, received February 19, 2008, requesting 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.*).

The above referenced project is within the summer habitat range of the federally endangered Indiana bat (*Myotis sodalis*). This species may use the project area for foraging and roosting between April 1 and mid November. Indiana bat summer foraging habitats are generally defined as riparian, bottomland, or upland forest, and old fields or pastures with scattered trees. Streams, associated flood plain forests, and impounded bodies of water (e.g., ponds, wetlands and reservoirs) have also been identified as preferred foraging habitats for pregnant and lactating Indiana bats. This species feeds exclusively on flying insects. Roosting/maternity habitat consists primarily of live or dead tree species five-inches in diameter at breast height, or greater, which have exfoliating bark that provides space for bats to roost between the bark and bole of the tree. Tree cavities, crevices, splits, or hollow portions of tree boles and limbs also provide roost sites. The Indiana bat could be impacted by construction activity that involves removing potential roost trees and maternity habitat. Any potential impacts on Indiana bat habitat should be analyzed as a part of your environmental assessment. If such impacts may occur, further section 7 consultation with the U.S. Fish and Wildlife Service may be required.

Except for occasional transient individuals, no other federally proposed or listed endangered or threatened species are known to exist within the area. Should additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

6 '08 JUL 15 PM 1:16 EDT

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.

Effective August 8, 2007, under the authority of the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service (Service) removed (delist) the bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife. However, the bald eagle will still be protected by the Bald and Golden Eagle Protection Act, Lacey Act and the Migratory Bird Treaty Act. As a result, starting on August 8, 2007, if your project may cause "disturbance" to the bald eagle, please consult the "National Bald Eagle Management Guidelines" dated May 2007.

If any planned or ongoing activities cannot be conducted in compliance with the National Bald Eagle Management Guidelines (Eagle Management Guidelines), please contact the Chesapeake Bay Ecological Services Field Office at 410-573-4573 for technical assistance. The Eagle Management Guidelines can be found at:

<http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>.

In the future, if your project can not avoid disturbance to the bald eagle by complying with the Eagle Management Guidelines, you will be able to apply for a permit that authorizes the take of bald and golden eagles under the Bald and Golden Eagle Protection Act, generally where the take to be authorized is associated with otherwise lawful activities. This proposed permit process will not be available until the Service issues a final rule for the issuance of these take permits under the Bald and Golden Eagle Protection Act.

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 goal 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 is proposed, the U.S. Army Corps of Engineers, Baltimore District should be contacted for permit requirements. They can be reached at (410) 962-3670.

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,



Leopoldo Miranda Castro
Field Supervisor

cc: Lori Byrne, Maryland Wildlife and Heritage Division, Annapolis, MD



Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Eric Schwaab, Deputy Secretary

April 30, 2008

Mr. Bruce M. Grey
Maryland Department of Transportation
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

**RE: Environmental Review for Project No. WA128B11, I-81 Project Planning Study,
Washington County, Maryland.**

Dear Mr. Grey:

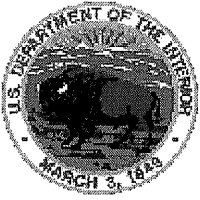
The Wildlife and Heritage Service's database indicates that there is one area of potential concern within the study area as delineated on your maps. There are records for RT&E species in close proximity to a portion of the project study area along the C&O Canal near Williamsport. In the floodplain forest habitat along this part of the C&O Canal there is a record for White Trout Lily (*Erythronium albidum*) and for Large-leaved Waterleaf (*Hydrophyllum macrophyllum*), both state-listed threatened species. In limestone cliff habitat near the Canal there is a record for Arbor-vitae (*Thuja occidentalis*) and for the Cherrydrop Snail (*Hendersonia occulta*), both state-listed threatened species.

The WHS recommends that impacts to the area south of I-81 along the C&O Canal be avoided in order to reduce the likelihood of adverse impacts to these important native species. We look forward to further coordination with SHA as this project moves forward and project details become available. Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER #2008.0301.wa
cc: G. Golden, DNR
D. Feller, WHS



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573-4575



9:08 OCT 09 PM 1:32 11/10/08 6

October 6, 2008

Bruce Grey
Deputy Director
Office of Planning and Preliminary Engineering
State Highway Administration
707 North Calvert Street
Baltimore, MD 21202

ATTN: Joseph Kresslein

RE: Project # WA128B11, I-81 from the West Virginia state line to the Pennsylvania state line, Washington County, Maryland

Dear Mr. Grey:

Thank you for sending us the detailed mapping of woodland boundaries and the areas to be cleared as a part of the referenced project. These were very helpful in assessing the significance of the effects of the proposed clearing on Indiana bat (*Myotis sodalis*) habitat.

Review of these maps and other information previously provided to us indicates that the proposed project will have minimal effect on the habitat of this endangered species. This conclusion is principally based on the following:

- 1) the small size of the total woodland clearing for the entire project (17.9 acres),
- 2) the fact that in all cases, the individual areas to be cleared are small in comparison with the size of the woodlots containing them, and
- 3) the fact that all clearing is near (generally within 200 feet of) the existing roadways.

In light of this information, it is our conclusion that the proposed project is not likely to adversely affect the endangered Indiana bat.

We appreciate the opportunity to review the proposed project. Should you have any questions concerning this response, please contact Andy Moser of my Threatened and Endangered Species Program at (410) 573-4537.

Sincerely,

A handwritten signature in black ink, appearing to read 'Leopoldo Miranda-Castro', written over a horizontal line.

Leopoldo Miranda-Castro
Field Supervisor