

SUMMARY

1. Administrative Action

Federal Highway Administration:

- () Environmental Assessment
- () Draft Environmental Impact Statement
- (X) Final Environmental Impact Statement
- () Finding of No Significant Impact

2. Informational Contacts

The following persons may be contacted for additional information concerning this document:

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3. Project History

MD 32 from MD 108 to I-70 is currently a two-lane undivided roadway. It was constructed in phases in the late 1950s to the early 1960s and was intended to be a multi-lane freeway, as shown on the original contract plans. MD 32 appeared as an access controlled freeway in the 1971 Howard County General Plan and was described as the Patuxent Freeway in the 1969 Major Thoroughfare Plan, a component of the 1971 Howard County General Plan. The dualized portion of the MD 32 Patuxent Freeway south of the study area was constructed beginning in the early 1980s (1980 to 1984), with the section immediately south of MD 108 completed in the mid-1990s.

In 1989, a corridor study was initiated by the State Highway Administration (SHA) to consider the widening of MD 32 from MD 108 to I-70. The roadway followed a new alignment north of Burntwoods Road which extended to the northwest to connect to the existing I-97 interchange; this alignment was referred to as the MD 32/ MD 97 Connector. After facing strong opposition from the public and elected officials, then Governor Schaffer directed the study to be dropped. Subsequently, the widening of MD 32 from MD 108 to I-70 was included again in the 1991 Howard County priority letter. Two years later in a 1993 letter to the Maryland Secretary of Transportation, County Executive Ecker requested that SHA study the widening MD 32 on the existing alignment and add the project to the Consolidated Transportation Plan (CTP). SHA initiated project planning in 1994.

Between 1995 and 1996 the Purpose and Need and alternatives were developed for the MD 32 Planning Study, with an Alternatives Public Workshop to present the alternatives on June 25, 1996,

followed by an Informational Public Workshop on June 16, 1998. The Draft Environmental Impact Statement (DEIS) was prepared and on display between February 3, 1999 and April 19, 1999, with the Location/ Design Public Hearing on March 18, 1999.

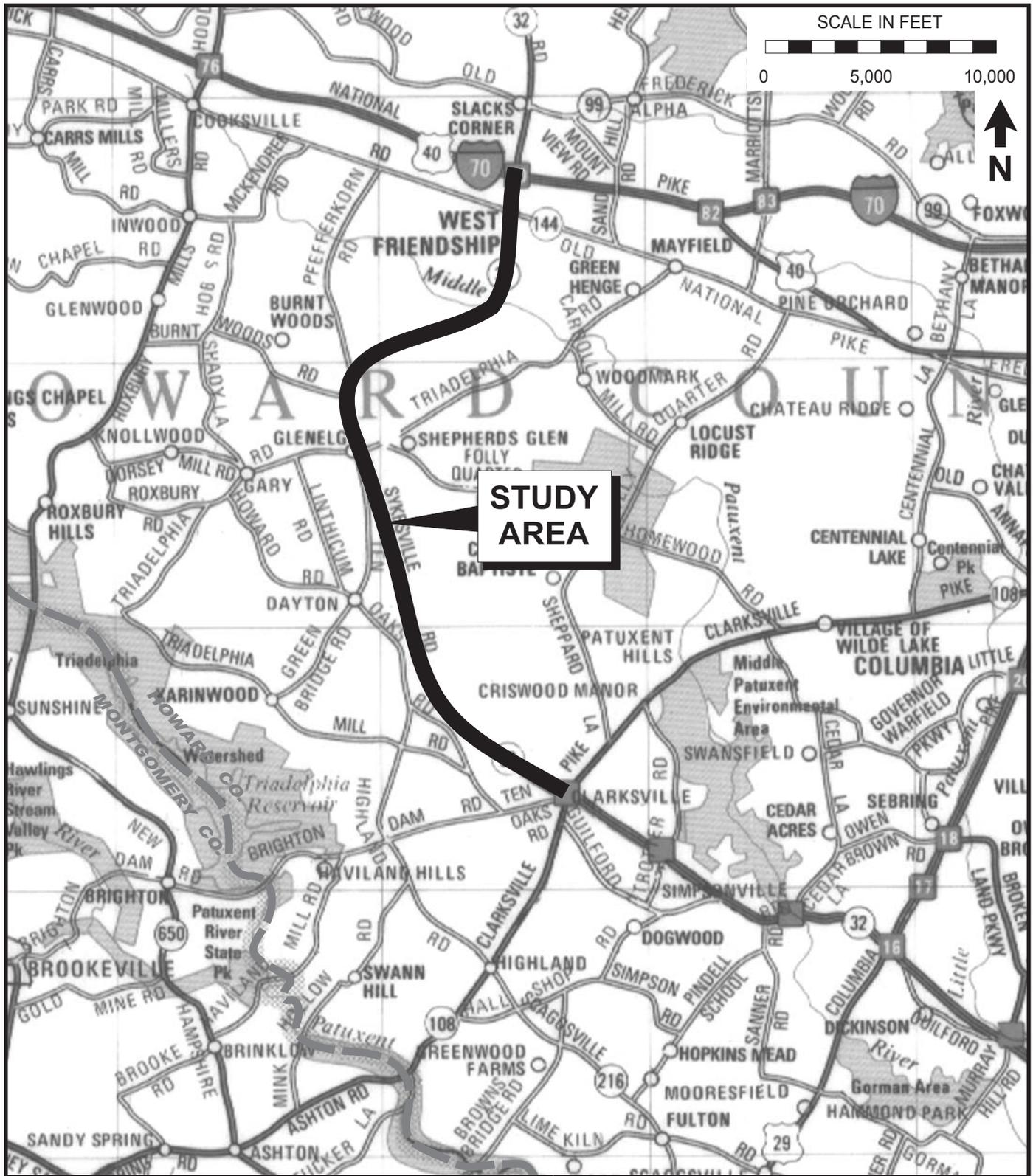
In 2000, in response to comments from the Public Hearing, SHA established an independent and objective MD 32 Land Use Expert Panel (LUEP) to estimate potential land use changes that may result from different proposed highway improvements, while taking into account the local market and planning environment. The results of the LUEP were published in June 2004.

A reevaluation of the DEIS was initiated in November 2003 since three years had elapsed since the signing of the DEIS. FHWA concurred with the reevaluation on March 22, 2004 indicating that a supplemental document was not required. On July 21, 2004, the Board of Public Works approved the Smart Growth exception for the MD 32 Planning Study, thereby authorizing the Maryland Department of Transportation to program funding for the construction of this project although it is outside of a priority funding area. An Informational Public Workshop was held on September 8, 2004 to present additional interchange options and results from the 2004 Reevaluation. A second environmental reevaluation was prepared to describe the additional interchange options developed at MD 144 and Rosemary Lane. FHWA concurred with the second reevaluation on April 27, 2005. The SHA Selected Alternative and Conceptual Mitigation (SACM) package was concurred on by the Resource Agencies on May 27, 2005. Since this time, the information from the DEIS and the Public Hearing have been incorporated into this FEIS.

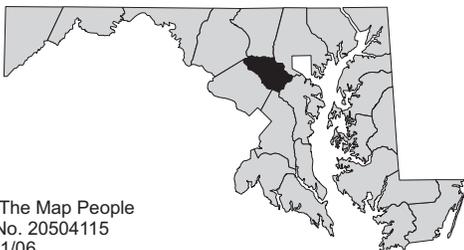
4. Description of Action

The purpose of this project is to improve traffic operations and safety conditions while minimizing impacts to local residents, businesses, and the environment, as well as to provide continuity with the remaining portion of the system. The MD 32 study area extends nine miles from MD 108 to I-70 in Howard County. Refer to **Figure S-1 and Figure S-2A and S-2B**. The need for improvements in this portion of MD 32 are fully described in **Section I** of this Final Environmental Impact Statement (FEIS) and include the following:

- **Completion of the Patuxent Freeway System:** Building this section of MD 32 from MD 108 to I-70 will provide a continuous four-lane divided highway with full access control for the last segment of the “Patuxent Freeway” that stretches from Annapolis to I-70, which will help provide continuity with the remainder of the highway system in Maryland.
- **Traffic and Safety:** The current 2003 average daily traffic (ADT) along MD 32 ranges from 23,900 vehicles per day just south of the intersection with MD 144 to 26,400 vehicles per day just south of the intersection with Linden Church Road. The projected 2025 No-Build ADT for these areas are 31,600 and 35,900 vehicles per day respectively, an increase of 36 percent. With the full implementation of this project, the anticipated reduction in accident rate is 56.6 accidents for every 100 million vehicle miles traveled. Based on these historical accident rates, the No-Build condition could result in approximately 113 accidents per year by 2025. This compares to the Build condition projected to result in only 68 accidents per year.



KEY MAP OF MARYLAND



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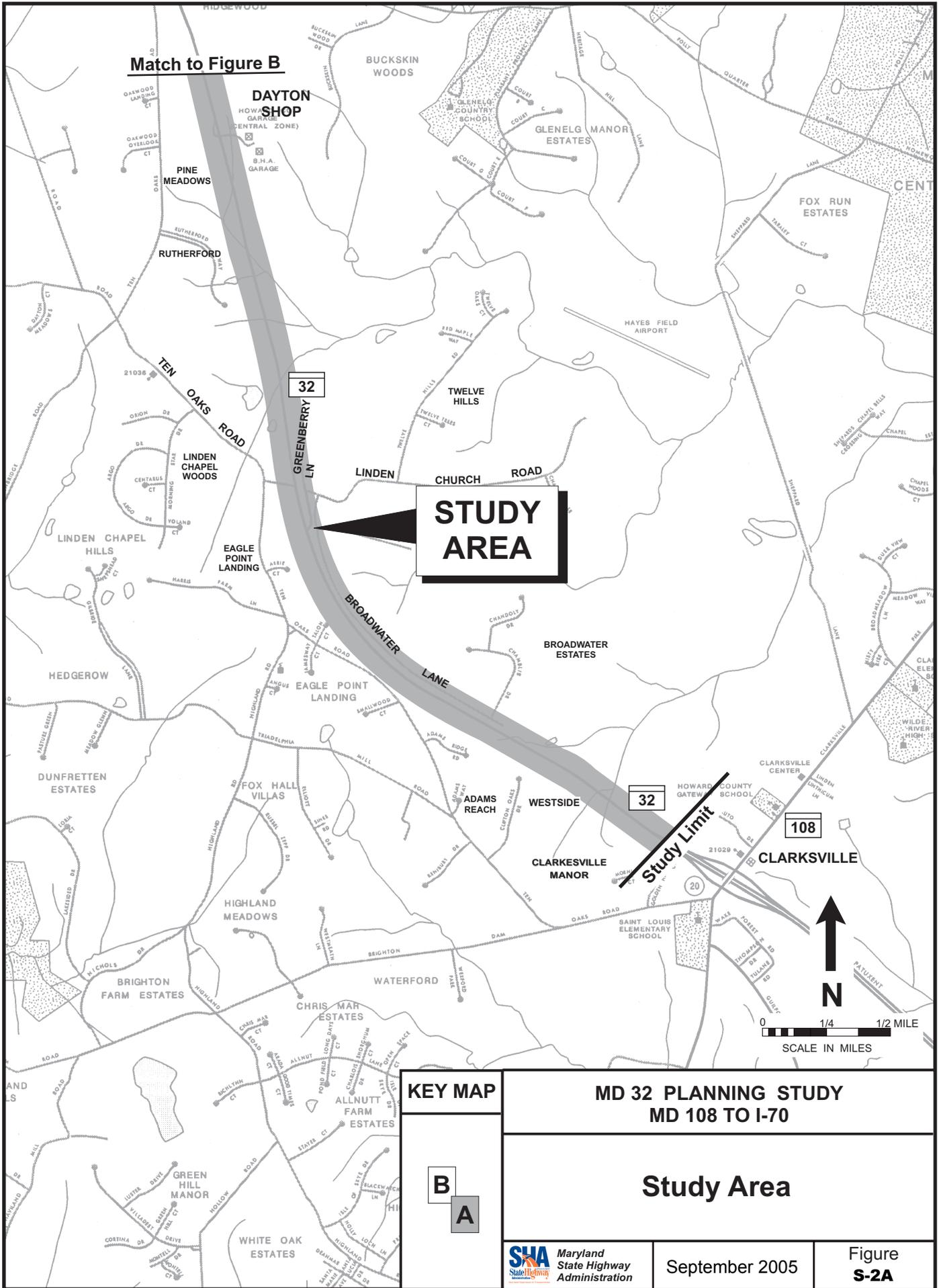
**MD 32 PLANNING STUDY
 MD 108 TO I-70**

Vicinity Map



September 2005

Figure
S-1



Match to Figure B

STUDY AREA

Study Limit



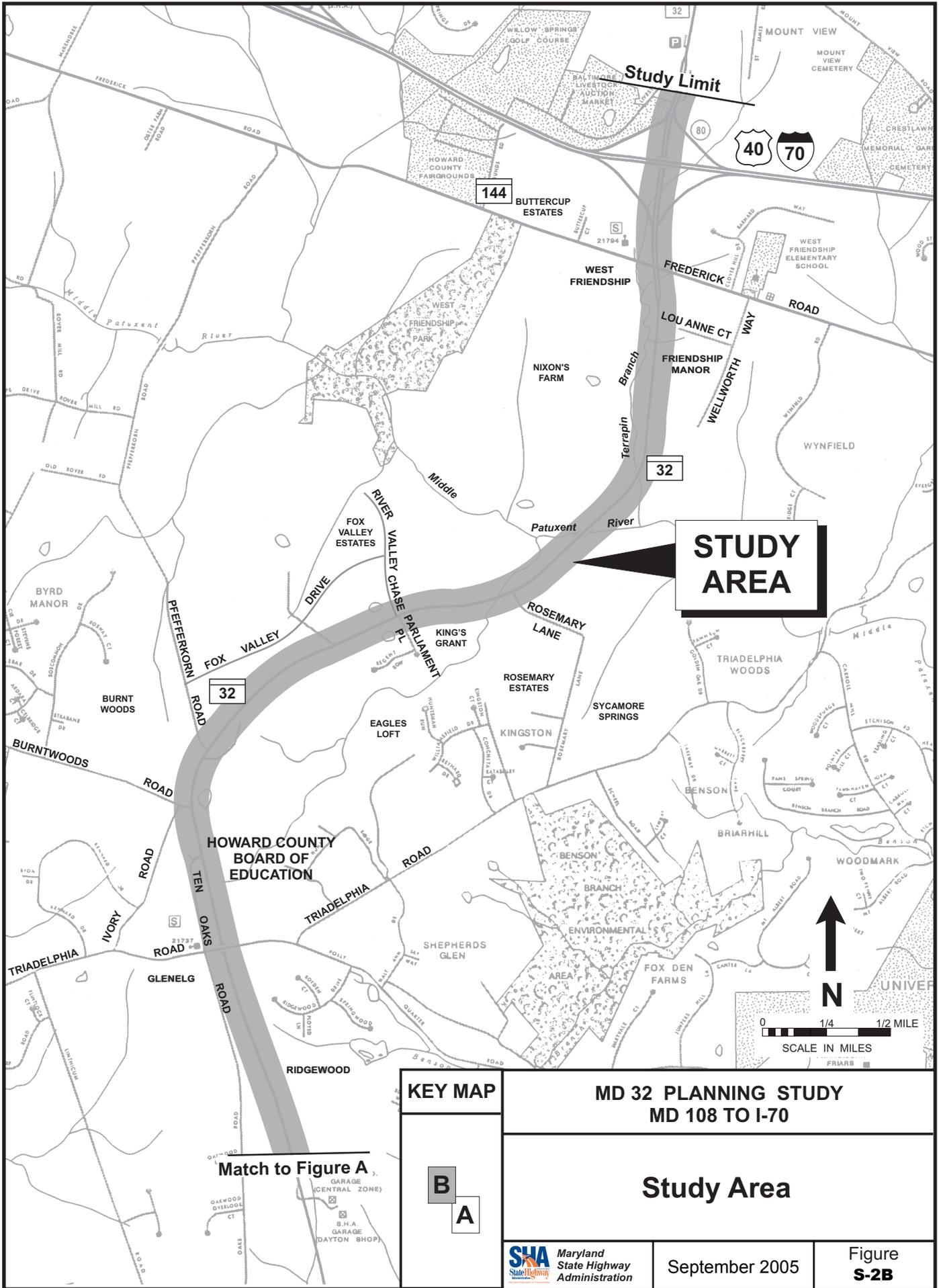
0 1/4 1/2 MILE
SCALE IN MILES

KEY MAP

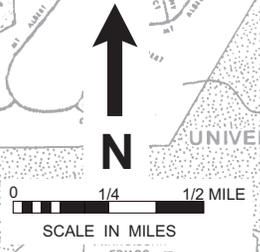
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**MD 32 PLANNING STUDY
MD 108 TO I-70**

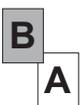
Study Area



STUDY AREA



KEY MAP



**MD 32 PLANNING STUDY
MD 108 TO I-70**

Study Area

- **Regional Growth:** Baltimore Metropolitan Council (BMC) Round 6 Growth Data within the immediate vicinity of this section of MD 32 shows a projected increase in population, households, and employment (38.4 percent, 47.9 percent, and 16.3 percent, respectively) from 2000 to 2025; see **Figure I-1**, Howard County Growth Data for Project Vicinity Map.

With the increasing population and household growth occurring in the eastern portion of the County, travel demand for MD 32 is projected to increase with employment centers located in eastern Howard, Anne Arundel, and Montgomery Counties and Washington, DC.

A wide range of alternatives were developed and refined to minimize environmental impacts while addressing the Purpose and Need. The build alternatives considered improvements including both two and four lanes with interchanges. The alternatives are summarized in the following section and described in detail in **Chapter II**.

5. Description of Alternatives

A. Alternatives Presented in the Draft Environmental Impact Statement and Location and Design Public Hearing

The initial Alternatives Retained for Detailed Study (ARDS) were presented in the January 21, 1999 DEIS and at the March 1999 Location and Design Public Hearing. These alternatives included the No-Build Alternative and Build Alternatives I and II.

No-Build Alternative would provide no major improvements to the existing MD 32 roadway other than spot safety and maintenance improvements. Thus, the No-Build Alternative is the baseline of comparison for the transportation analysis of the build alternatives. A detailed description of this alternative is presented in **Section II.A.1** of this FEIS.

Build Alternative I would propose an access controlled, four-lane, divided highway with a 34-foot median. There would be seven interchanges proposed with Build Alternative I, including a separate interchange at Nixon's Farm Lane. A detailed description of this alternative is presented in **Section II.A.2.b**.

Build Alternative II would propose an access controlled, four-lane, divided highway with a 34-foot median. There would be six interchanges proposed with Build Alternative II. Under this alternative access to Nixon's Farm Lane and MD 144 would be provided via the MD 144 Interchange and access roads in lieu of the two separate interchanges proposed in Build Alternative I. A detailed description of this alternative is presented in **Section II.A.2.c**.

B. Alternatives Developed Subsequent to the Public Hearing

In response to agency and public comments on the DEIS, Build Alternative II was modified and a two-lane alternative was studied.

Build Alternative II Modified is similar to the Build Alternative II in the DEIS. However, Build Alternative II Modified includes a modified interchange design at Burntwoods Road (Option 3),

Rosemary Lane (Option 2A), and MD 144 (Option 12M). Build Alternative II Modified also includes a 12-foot mainline shift to the east to provide a greater buffer for the Terrapin Branch. The shift would begin just north of the Terrapin Branch crossing of MD 32 and continue to the existing dualized section, just south of MD 144. This shift would require that 12 feet of existing pavement be removed on the west side and be replaced on the east side of the existing roadway. This alternative is SHA's Selected Alternative because it meets the Purpose and Need of the project by improving safety and capacity throughout the corridor while attempting to minimize right-of-way impacts; residential and business displacements; and environmental impacts. SHA's Selected Alternative is described in **Section II.E**.

A **Two-Lane Build Alternative** was also considered in response to comments at the Public Hearing and on the DEIS. Two, two-lane build alternatives were considered, a two-lane roadway with and without a barrier in the median. The two-lane alternative without the barrier and with interchanges would result in higher travel speeds and the potential safety concerns associated with these higher speeds on a non-separated roadway. If a barrier were placed in the median with either intersections or interchanges, it would eliminate head-on collisions; however, rear-end accidents are the most common accident type experienced and a barrier would not help eliminate these accidents because it would not increase capacity. In addition, barriers or interchanges for a two-lane roadway could make for more unsafe conditions by consolidating the locations where vehicles enter the roadway, while taking away the protected time to enter the roadway that the signals provide. It would be difficult to merge onto a roadway from an entrance ramp when that roadway is already congested.

In addition, a traffic analysis of the two-lane alternative was performed. The capacity of a two-lane roadway with access points, intersections, and interchanges is approximately 1,800 vehicles per hour (vph). Existing 2003 traffic data for MD 32 shows that there are approximately seven hours per day where the corridor is handling 1,300 to 1,800 vph. With signalized intersections, this causes back-ups at certain locations along MD 32 during these seven hours. The 2025 No-Build data indicates an increase in the daily traffic demand and includes projected volumes of around 1,800 to 2,500 vph for the same seven-hour period in the morning and evening where the corridor is over capacity. With the No-Build Alternative, this would cause delays along the entire length of the roadway for seven hours a day at a minimum as it will take time to get traffic moving as the demand on the roadway decreases. The two-lane alternative could address access control on MD 32, but it would not address the safety or capacity desires in the Purpose and Need for MD 32. For a description of the two-lane build alternative considered refer to **Section II.B.2**.

C. Alternatives Not Preferred

The **No-Build Alternative** was not selected as the recommended alternative because it does not meet the Purpose and Need, to improve the traffic operations and safety conditions in the study area, and complete MD 32 as a controlled access divided roadway. Refer to **Section II.C**.

Build Alternative I was not selected because an additional interchange was not needed at Nixon's Farm to accommodate traffic and there was concern over the close proximity of the three interchanges at I-70, MD 144, and Nixon's Farm and their consecutive ramps. Also, Build Alternative I would require additional new crossings of the Terrapin Branch. Refer to **Section II.C**.

The **Two-Lane Alternative** was not selected. Although it would address access control on MD 32, it would not address the need for increased capacity on the mainline. Therefore, the two-lane build alternative does not fully meet the Purpose and Need of increased safety and adequate capacity. Refer to **Section II.C**.

D. Interchange Options Considered

Interchange Options Retained for Consideration Subsequent to the Public Hearing

Many interchange options were considered for the six proposed interchange locations. Following the DEIS, the interchange options that were retained for further consideration are listed below. Refer to **Section II.D** for additional information.

- Linden Church Road Interchange Option 2 – *this option was selected following the Public Hearing.*
- Dayton Shop Interchange Option 1 Modified – *this option was selected following the Public Hearing.*
- Burntwoods Road Interchange Option 2 – *this option was not selected following the development of additional interchange options.*
- Rosemary Lane Interchange Option 2 – *this option was not selected following the development of additional interchange options.*
- Nixon’s Farm Interchange Option 2 – *this option was not selected based on the selection of Build Alternative II.*
- MD 144 Interchange Option 3M – *this option was not selected following the development of additional interchange options.*
- MD 144 Interchange Option 4 – *this option was not selected following the development of additional interchange options.*
- I-70 Interchange Option 2 – *this option was selected following the Public Hearing.*

Minimization Interchange Options

In response to public and agency comments received on the DEIS, one additional interchange option at Burntwoods Road, three additional interchange options at Rosemary Lane, and one additional interchange options at MD 144 were considered in the three-year Reevaluation of the DEIS (approved March 2004).

Subsequent to the 2004 Reevaluation, further minimization interchange options at Rosemary Lane and MD 144 were developed in response to new public and agency comments to reduce the amount of impacts. At the Informational Public Workshop on September 8, 2004, five additional, minimization interchange options were presented at Rosemary Lane and six additional, minimization interchange options were considered at MD 144. Following the Informational Public Workshop, six more minimization interchange options at MD 144 were developed at the request of the environmental agencies. Consequently, a second Environmental Reevaluation was prepared to describe the additional, minimization interchange options and impacts (approved April 27, 2005). All of the interchange options considered are described in **Section II**.

Burntwoods Road Interchange Option 3

Burntwoods Road Interchange Option 3 was selected because it was preferred by the residents on the east side since it moved the ramps further away from their homes. Refer to **Section II.D.3.a** for more information.

Rosemary Lane Interchange Option 2A

Rosemary Lane Interchange Option 2A was selected because it balances the natural and socioeconomic impacts and addressed the agencies concerns about the length of stream impacts. Refer to **Section II.D.3.b** for more information.

Rosemary Lane Interchange Option 4

Rosemary Lane Interchange Option 4 was not selected because access was eliminated from southbound MD 32 to Rosemary Lane and River Valley Chase, which would change the existing response routes for Howard County emergency services. Refer to **Section II.D.3.c** for more information.

Rosemary Lane Interchange Option 6

Rosemary Lane Interchange Option 6 was not selected because access was eliminated from southbound MD 32 to Rosemary Lane and River Valley Chase, which would change the existing response routes for Howard County emergency services. Refer to **Section II.D.3.d** for more information.

Rosemary Lane Interchange Option 7

Rosemary Lane Interchange Option 7 was not selected because of the additional crossing of the unnamed tributary to the Middle Patuxent and the increased residential impacts. Refer to **Section II.D.3.e** for more information.

Rosemary Lane Interchange Option 8

Rosemary Lane Interchange Option 8 was not selected because it provides a small additional reduction to the stream impacts beyond Option 2A, but it further impacts the residents on the west side who already have right-of-way impacts to their properties. Refer to **Section II.D.3.f** for more information.

Rosemary Lane Interchange Option 9

Rosemary Lane Interchange Option 9 was not selected because it provides a small additional reduction to the stream impacts beyond Option 2A, but it further impacts the residents on the west side who already have right-of-way impacts to their properties. Refer to **Section II.D.3.g** for more information.

Rosemary Lane Interchange Option 10

Rosemary Lane Interchange Option 10 was not selected because it would re-direct the additional traffic through the Burntwoods Road interchange and it does not provide access for emergency vehicles at Rosemary Lane and River Valley Chase. Refer to **Section II.D.3.h** for more information.

Rosemary Lane Interchange Option 11

Rosemary Lane Interchange Option 11 was not selected due to increased residential impacts and lack of stream impact reduction. Refer to **Section II.D.3.i** for more information.

MD 144 Interchange Option 4M

MD 144 Interchange Option 4M was not selected because the west frontage road was not designed to accommodate the volume of local traffic that is now generated by the Fox Chase Estates development. Refer to **Section II.D.3.j** for more information

MD 144 Interchange Option 5

MD 144 Interchange Option 5 was not selected because it does not provide the amount of buffer between MD 32 and the Terrapin Branch that was requested by the agencies. Refer to **Section II.D.3.k** for more information.

MD 144 Interchange Option 5A

MD 144 Interchange Option 5A was not selected because it crossed the Terrapin Branch at a meander in the stream, which could cause further erosion of the banks. In addition, it would impact contiguous forest surrounding the stream. Refer to **Section II.D.3.l** for more information.

MD 144 Interchange Option 5M

MD 144 Interchange Option 5M was not selected due to the reduced median width along MD 32 and the compromised geometry of the ramps. Refer to **Section II.D.3.m** for more information.

MD 144 Interchange Option 8

MD 144 Interchange Option 8 was not selected due to concerns that this option would not meet the Purpose and Need. Regional traffic destined for the Howard County Fairgrounds would have a minimal increase in travel distance of one mile to MD 144 and would use the frontage road, which was designed to collect the local traffic. Refer to **Section II.D.3.n** for more information.

MD 144 Interchange Option 9

MD 144 Interchange Option 9 was not selected because it would impact the Terrapin Branch by adding four new crossings. In addition, it would add four ramp movements on MD 32, close to MD 144, similar to Build Alternative I, and there were concerns with the close proximity of these movements. Refer to **Section II.D.3.o** for more information.

MD 144 Interchange Option 9M

MD 144 Interchange Option 9M was not selected because it would impact the Terrapin Branch by adding four new crossings. In addition, it would have a potential residential displacement on the west side of MD 32 near Nixon's Farm. Refer to **Section II.D.3.p** for more information.

MD 144 Interchange Option 10

MD 144 Interchange Option 10 was not selected because it had greater overall impacts even though it increased the buffer to the stream; consequently, it did not direct balance the natural and socioeconomic impacts because it included more impacts to both types of resources. Refer to **Section II.D.3.q** for more information.

MD 144 Interchange Option 12

MD 144 Interchange Option 12 was not selected because it had greater impacts to wetlands, streams, and right-of-way even though it reduced the impacts to the contiguous forest adjacent to the Terrapin Branch. Motorists traveling southbound on MD 32 would have a minimal increase in travel distance of 0.5 miles to access MD 144 and would pass in front of the residences along the access road. In addition, the environmental agencies did not support this option. Refer to **Section II.D.3.r** for more information.

MD 144 Interchange Option 12M

MD 144 Interchange Option 12M was selected. The option will have greater impacts to wetlands, streams and right-of-way. Motorists traveling southbound on MD 32 would have a minimal increase in travel distance of 0.5 miles to access MD 144 and would pass in front of the residences along the access road. However, the option would eliminate impacts to Wetland OO and it would reduce impacts to the contiguous forest adjacent to the Terrapin Branch. In addition, the environmental agencies supported this option. Refer to **Section II.D.3.s** for more information.

MD 144 Interchange Option 13

MD 144 Interchange Option 13 was not selected because it had greater impacts to wetlands, streams, and right-of-way even though it would reduce the impacts to contiguous forest adjacent to the Terrapin Branch. Motorists traveling southbound on MD 32 would have a minimal increase in travel distance of 0.4 miles to access MD 144 and would pass in front of the residences along the access road. In addition, the environmental agencies did not support this option. Refer to **Section II.D.3.t** for more information.

MD 144 Interchange Option 14

MD 144 Interchange Option 14 was not selected because it would have greater impacts to wetlands, streams, and right-of-way. In addition, the environmental agencies did not support this option. Refer to **Section II.D.3.u** for more information.

MD 144 Interchange Option 15A

MD 144 Interchange Option 15A was not selected because it had greater impacts to wetlands, streams, and right-of-way. In addition, the environmental agencies did not support this option. Refer to **Section II.D.3.v** for more information.

MD 144 Interchange Option 15B

MD 144 Interchange Option 15B was not selected because it had greater impacts to wetlands, streams, and right-of-way. In addition, the environmental agencies did not support this option. Refer to **Section II.D.3.w** for more information.

E. SHA's Selected Alternative and Interchange Options

Based on information and analyses in this FEIS and input from the public and agencies, SHA's Selected Alternative for MD 32 from MD 108 to I-70 is Build Alternative II Modified. It was chosen as SHA's Selected Alternative because it meets the Purpose and Need of the project by improving safety and capacity throughout the corridor while attempting to minimize right-of-way impacts; residential and business displacements; and environmental impacts.

Build Alternative II Modified includes constructing two new lanes, generally on the west side of existing MD 32 resulting in a four-lane divided highway. Upon completion of this project, the access points onto MD 32 will be controlled and limited to the interchanges. This project will complete MD 32 from I-97 in Anne Arundel County to I-70 as a fully access controlled roadway. Access control on MD 32 from MD 108 to I-70 will be achieved through six grade separated interchanges at the following locations: Linden Church Road, Dayton Shop, Burntwoods Road, Rosemary Lane, MD 144, and I-70. Detailed descriptions of the alternatives and interchange options considered are described in **Section II**.

The **Linden Church Interchange Option 2** will provide access to the local roadway network with a full diamond interchange at MD 32 and Linden Church Road. West of the proposed interchange, Linden Church Road begins at an existing T-intersection with Ten Oaks Road. Just east of Ten Oaks Road, Linden Church Road will be realigned to the south and will then cross over MD 32. On the east side of MD 32, the roadway will tie back into existing Linden Church Road just east of Broadwater Lane. In the northeast quadrant of the interchange, Greenberry Lane will be realigned to the east to create a four-leg intersection with Broadwater Lane and Linden Church Road. Greenberry Lane will be designed as an access road.

On the west side, the ramp terminals will form a four-leg intersection with Linden Church Road, and stop control is anticipated for the southbound ramp approach. A roundabout will be constructed at the intersection of Linden Church Road and the northbound ramp terminals on the east side of the interchange.

The **Dayton Shop Interchange Option 1 Modified** will provide access to the State and County Dayton Shop maintenance facilities with diamond ramps to and from MD 32 southbound and right-in/right-out access northbound. The southbound ramps will connect to a bridge spanning MD 32 just north of the existing entrance. The new bridge and entrance road is referred to as Dayton Shop Road. The northbound access point will be relocated approximately 500 feet south of the existing driveway and is referred to as Access Road 3. Within the Dayton Shop property, an additional road, Access Road 2, will be constructed to connect Access Road 3 to Dayton Shop Road in front of the State maintenance facilities. Access Road 1 will connect Dayton Shop Road with the back of the State facilities. Two retaining walls, approximately 1,100 feet long, will be required to support the fill between the southbound ramps and the MD 32 mainline.

The **Burntwoods Road Interchange Option 3** will consolidate the current access points at Ten Oaks Road, Burntwoods Road, and Pfefferkorn Road on the west and East Ivory Road on the east. Approximately 2,200 feet of the MD 32 mainline will be shifted to the east through the interchange. The southbound right-in/right-out ramps will connect to a realigned Pfefferkorn Road at a

T-intersection. The northbound diamond ramps will connect to the extended Burntwoods Road at a roundabout, just east of MD 32.

West of the interchange, Burntwoods Road will be relocated north of its existing alignment and will continue in a northeasterly direction across MD 32 to connect with East Ivory Road in the northeast quadrant of the interchange. Pfefferkorn Road will be extended south, parallel to MD 32, to intersect with Burntwoods Road and an extended Ten Oaks Road at a roundabout. From this new roundabout, Ten Oaks Road will continue south and connect to its existing alignment slightly south of the existing terminus. Ivory Road will connect to Ten Oaks Road, south of the roundabout.

The **Rosemary Lane Interchange Option 2A** will provide access to the local roadway system with right-in/right-out ramps to frontage roads on both sides of MD 32. Rosemary Lane will be extended over MD 32 to the west frontage road to provide east to west access. The Rosemary Lane bridge over MD 32 will be extended on the west side to span the unnamed tributary of the Middle Patuxent River and a retaining wall or other form of retained fill will be utilized along the southbound exit ramp to avoid the relocation of the tributary.

The MD 32 mainline will be constructed immediately west of the existing roadway for approximately one mile through the interchange to avoid impacts to the King's Grant community and improve the horizontal geometry. A portion of the existing roadway on the east side will be used as the east frontage road to connect Parliament Place with Rosemary Lane. A roundabout will be located at the intersection of the frontage road and Rosemary Lane. The northbound right-in/right-out ramps will create a T-intersection with this east frontage road. In the northeast quadrant, an access road will connect one driveway to the roundabout.

On the west side, the frontage road will connect River Valley Chase to Rosemary Lane extended over MD 32. The southbound right-in/right-out ramps will create a T-intersection with this west frontage road. In the southwest quadrant, the access driveway serving the River Valley Chase flag lots will remain in its current location.

The small community of properties in the northeast quadrant of the Rosemary Lane interchange will connect to the north to Wellworth Way and MD 144. The southern limit of existing Wellworth Way will be extended west to existing MD 32 and will then travel south parallel to MD 32 and cul-de-sac at an existing driveway. This extension of Wellworth Way will not allow access to MD 32.

The **MD 144 Interchange Option 12M** will consolidate the current access points at MD 144, Fox Chase Estates, and the dispersed driveways between these two roads. This option will provide a frontage road parallel to and west of southbound MD 32, which extends from Fox Chase Estates to MD 144 and is designed to accommodate local traffic. Southbound access will be provided with right-in/right-out ramps located approximately 2,500 feet south of the existing MD 144 intersection that creates a T-intersection with this frontage road. At the request of the Army Corp of Engineers (USACE), bridges will be used on the southbound ramps to provide stream protection when crossing the Terrapin Branch.

Northbound access will be provided by a loop ramp and an outer directional ramp in the southeast quadrant. MD 144 will remain in its existing location, but it would be raised to span over MD 32. Roundabouts will be provided at the intersections of the ramps/access road with MD 144.

The mainline will be shifted 12 feet to the east to provide a greater buffer to the Terrapin Branch; this shift will require 12 feet of existing pavement be removed on the west side and be replaced on the east side of the existing roadway. The shift will begin just north of the Terrapin Branch crossing of MD 32 and continue to the existing dualized section near MD 144.

The **I-70 Interchange Option 2** will provide a partial cloverleaf interchange with loop ramps and slip ramps in the northeast and southwest quadrants. The loop ramps will provide free flow access from MD 32 to I-70. The left turn movement from the I-70 off ramps to MD 32 will utilize slip ramps, which will be controlled by half signals. Northbound traffic on MD 32 will be controlled by the signal at the westbound I-70 exit ramp while the southbound traffic will be controlled by the signal at the eastbound I-70 exit ramp.

SHA's Selected Alternative includes a preliminary **stormwater management** (SWM) plan. The dualization of MD 32 and the addition or modification of six interchanges would result in approximately 81.3 acres of new impervious surface requiring treatment in the Middle Patuxent Watershed. Stormwater management requirements for the project would be designed to satisfy the requirements of the Maryland Department of the Environment's (MDE) Stormwater Management Guidelines for State and Federal Projects, 2001, and based on design principles required by the Maryland Stormwater Design Manual, Volumes I & II, MDE, 2000. The stormwater management facilities have been located adjacent to the roadway to control runoff, to treat for water quality, and to provide quantity control. A total of 92 facilities located within the 35 points of study would provide treatment for 88.2 acres of new and existing impervious surface. Consequently, there would be an overall surplus of 6.9 acres of treatment throughout the study area. Beyond providing the required treatment necessary under stormwater regulations, this conceptual design sought to minimize impacts to environmental and cultural resources, and to maintain, as much as possible, existing hydrologic conditions and connectivity.

An **Access Management Plan** has been developed which could be implemented prior to the full construction of SHA's Selected Alternative to address the public's concerns about the need for short-term safety improvements. The plan will provide improvements to MD 32 between Burntwoods Road and MD 144 by removing existing driveways and access points directly onto MD 32 and redirecting the traffic to the existing local intersections. These improvements will be designed to be consistent with SHA's Selected Alternative. The access management options are detailed below.

The **Wellworth Way** access will provide access from parcels 76, 78, 97, 125, 126, 127, and 246 to Wellworth Way. This connection will eliminate direct access to MD 32 for five driveways and numerous residences. In addition, this access option will require the purchase of parcel 38; SHA is currently in the process of acquiring this property. Wellworth Way will be extended west toward MD 32 and then parallel MD 32 across the Terrapin Branch bridge and cul-de-sac at the existing driveway for parcel 76. This is the ultimate configuration and will not require future modifications to be compatible with SHA's Selected Alternative.

The **Rosemary Lane West Frontage Road** alignment will follow the alignment of the frontage road in SHA's Selected Alternative from Fox Valley Estates to the driveway for parcel 35. It will provide access for two driveways and five homes to River Valley Chase, on the west side of MD 32 and remove their direct access to MD 32. This is the ultimate configuration and will require no future

modifications to be compatible with SHA's Selected Alternative. This improvement will require the purchase of parcels 93 and 79 before construction could begin. Both parcels are proposed displacements in SHA's Selected Alternative for the west frontage road in the Rosemary Lane Interchange. Purchase of these properties will remove two residences/two driveways from MD 32.

The **Rosemary Lane East Frontage Road** alignment will follow the ultimate east frontage road horizontal alignment from the Rosemary Lane interchange configuration. It will provide access from Parcel 17, Lots 1-12, A and B and parcel 119 to Rosemary Lane. Providing the frontage road connection to Rosemary Lane will remove the access point for Twin Pines development from MD 32 and redirect the twelve residences plus one existing residence to access MD 32 at Rosemary Lane. For the construction of SHA's Selected Alternative, a portion of this interim frontage road will need to be reconstructed due to the vertical geometry of existing and proposed Rosemary Lane.

The **Rosemary Lane East Driveway** alignment will follow the ultimate east driveway horizontal alignment from the Rosemary Lane interchange configuration. It will provide access from Parcel 36 to Rosemary Lane. Parcel 36 is a single-family lot with driveway access to MD 32. Providing the frontage road connection to Rosemary Lane will remove the driveway connection to MD 32 and require the property to access MD 32 at Rosemary Lane. For the construction of SHA's Selected Alternative, a portion of this interim frontage road will need to be reconstructed due to the vertical geometry of existing and proposed Rosemary Lane.

The **MD 144 West Frontage Road** alignment will follow the ultimate west frontage road horizontal alignment from the MD 144 interchange configuration. The west frontage road will connect from Fox Chase Estates to Nixon's Farm driveway to MD 144. Providing the frontage road connection to MD 144 will remove the access point for Fox Chase Estates, three driveways (one south of Nixon's Farm and two north of Nixon's Farm), and Nixon's Farm Lane as well as 21 residences who will access MD 32 from MD 144. For the construction of SHA's Selected Alternative, a portion of this interim frontage road will need to be reconstructed due to the vertical geometry of existing and proposed MD 144. This improvement will require two right-of way purchases before construction could begin: Parcel 141 and Parcel 16, both near MD 144.

Parcel 8 is a 64-acre open parcel near the Burntwoods Road interchange, just north of Ivory Lane East on the east side of MD 32. It is zoned rural residential. The land use is designated as agricultural (2002 Howard County Land Use), but the land is currently not farmed. The parcel includes two driveways with access to MD 32 and is owned by an individual who resides in the state of Oregon. This parcel is not specifically part of the Access Management Plan; however, it is described because it has the potential to develop in the future and would require some type of access to MD 32. If the parcel develops, then access would be provided to the south to Ivory Road East; however, it is possible that a developer could provide this access.

6. Summary of Environmental Impacts

The MD 32 study area is generally zoned rural residential with adjacent land uses consisting primarily of agricultural land and large lot residential development. **Table S-1** presents a summary of the environmental impacts for each of the alternatives. It should be noted that the impacts in the DEIS were calculated using a ten-foot offset from the preliminary engineered toe of slope to the limit of disturbance to account for drainage ditches and impacts related to construction activities. Since the time of the DEIS, SHA's construction experience has shown that a ten-foot offset does not provide an adequate area to perform the construction activities. Consequently, a 25-foot offset from the preliminary engineered toe of slope to the limit of disturbance has been used for SHA's Selected Alternative to ensure there is adequate distance to construct the roadside drainage ditch; include slope rounding; provide erosion and sediment control measures; install temporary and permanent diversion ditches for clean water as needed; and allow the contractor access to construct the side slopes. For these reasons, two sets of impact numbers for SHA's Selected Alternative are presented in **Table S-1** and throughout the impact analysis. The purpose of providing the impacts with an offset of ten feet to the limit of disturbance is to allow the reader to compare the impacts of SHA's Selected Alternative to the impacts presented for Alternative I and Alternative II in the DEIS. The impacts calculated using a 25-foot offset to the limit of disturbance are also provided. These totals represent the proposed impacts of SHA's Selected Alternative and are being used to develop appropriate mitigation for the project. The following paragraphs briefly describe the impacts for each alternative.

The **No-Build Alternative** was evaluated as the baseline condition and would have no environmental impacts.

DEIS Build Alternative I (dualize along existing MD 32 providing a 34-foot median and full access control with seven interchanges) would require the displacement of nine residences and one business, and would impact 101.6 acres of total right-of-way. This alternative would also impact 3.3 acres of wetlands, 14.1 acres of floodplains, and 73.1 acres of woodlands. It would require 20 stream crossings and impact 8,940 linear feet of stream channel by encroachment, crossing, and/or possible relocation. It would also impact 15 Noise Receptors and four Hazardous Waste Sites. This alternative would not adversely affect archeological sites or historic structures.

DEIS Build Alternative II (dualize along existing MD 32 providing a 34-foot median and full access control with six interchanges) would require the displacement of nine residences, one business, and 89.1 acres of total right-of-way. This alternative would also impact 2.2 acres of wetlands, 14.1 acres of floodplains, and 71.5 acres of woodlands. It would require 20 stream crossings and impact 5,732 linear feet of stream channel by encroachment, crossing, and/or possible relocation. It would also impact 15 Noise Receptors and four Hazardous Waste Sites. This alternative would not adversely affect archeological or historic structures.

Build Alternative II Modified (dualize along existing MD 32 providing a 34-foot median and full access control with six interchanges) with either the ten or 25 feet to the limit of disturbance would require the relocation of nine residences, displacement of one business, and the acquisition of 125.1 acres of total right-of-way.

The impacts of Build Alternative II Modified with ten feet to the limit of disturbance would include 3.4 acres of wetlands, 11.5 acres of floodplains, and 71.0 acres of woodlands. This alternative would also require 39 new stream crossings and impact 6,742 linear feet of stream channel by encroachment, crossing, and/or possible relocation. This alternative would also impact 12 Noise Receptors and two Hazardous Waste Sites. This alternative would result in an adverse effect on one archeological site (18HO261); however, no historic structures will be adversely affected.

The impacts of Build Alternative II Modified with 25 feet to the limit of disturbance would include 4.0 acres of wetlands, 14.7 acres of floodplains, and 87.4 acres of woodlands. This alternative would require 39 new stream crossings and impact 7,200 linear feet of stream channel by encroachment, crossing, and/or possible relocation that would require mitigation. This alternative would also impact 12 Noise Receptors and two Hazardous Waste Sites.

Two historic structures were determined to be eligible for the National Register of Historic Places, the Westwood M.E. Church (HO-207) and the Milton Shipley Farm Corncrib (HO-645). However, SHA found that the Selected Alternative would not have an adverse effect on the Westwood M.E. Church or the Milton Shipley Farm Corncrib; the SHPO concurred with this finding on May 12, 2005. SHA's Selected Alternative would have an adverse effect on one archeological site (18HO261). The State Historic Preservation Officer (SHPO) has concurred that future archeological work will be required to conclusively define the National Register eligibility if the site is affected. Consequently, SHA has assumed eligibility of the site and identified that SHA's Selected Alternative will adversely affect the property. A Memorandum of Agreement between FHWA, SHA, and the SHPO formalizes the commitment to complete identification, evaluation, and treatment as appropriate.

SHA's Selected Alternative will not require the use of property from any known Section 4(f) resources, including publicly owned parks, recreation areas, wildlife and waterfowl refuges, or significant cultural resources. Although one potentially significant archeological site (Site 18HO261) as noted above will be adversely affected by SHA's Selected Alternative, preliminary evaluations and coordination with the Maryland State Historic Preservation Officer (MD SHPO) indicates that the site does not warrant preservation in place, but it is important for the information that would be derived through excavation of the site, as outlined in the Memorandum of Agreement (MOA) signed by the MD SHPO and FHWA (Refer to **Appendix C.**) As Section 4(f) applies only to archeological sites that warrant preservation in place, a Section 4(f) evaluation is not required.

7. Cooperating Agencies

As part of the National Environmental Policy Act (NEPA) review process (40 CFR 1501.6) for the study, the USACE and the US Environmental Protection Agency (EPA) have been included as cooperating agencies.

8. Federal or State Actions Required (Permits, Approvals, Etc.)

The following permits and approvals will be required for the project.

- **Section 404 of the Clean Water Act/Section 10 of the Rivers and Harbors Act:** Federal permit authorization is administered by the USACE pursuant to Section 404 of the Clean

Water Act (Federal Water Pollution Control Act) (33 U.S.C. 1344) of 1972, as amended, and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). This permit process regulates the discharge of dredge and fill material or the placement of structures into waters of the United States, including jurisdictional wetlands.

- **Section 401 of the Clean Water Act – Water Quality Certification:** Federal/State permit authorization is administered jointly by the USACE and the Maryland Department of the Environment (MDE) pursuant to Section 401 of the Clean Water Act (33 U.S.C. 1344) and the Annotated Code of Maryland (COMAR) 26.08.02.10. This permit authorization regulates the discharge of fill material into federal and state waterways in conjunction with Section 404 of the Clean Water Act.
- **National Environmental Policy Act (NEPA):** Federal approval authorization is administered by the FHWA pursuant to the NEPA of 1969 (42 U.S.C. 4321). This approval process provides a comprehensive review/oversight of activities affecting the natural environment with the objective of ensuring protection of its natural, cultural, and historical elements.
- **National Pollution Discharge Elimination System (NPDES):** Federal permit authorization is administered by the EPA and the MDE pursuant to the Clean Water Act (33 U.S.C. 1344) of 1972 as amended, particularly in conjunction with Section 402 of the Water Quality Act of 1987. This permit process regulates the discharge of point-source pollutants into federal and/or state waterways.
- **Section 106 of the National Historic Preservation Act:** Federal and State coordination is undertaken by the FHWA, the SHA, and the Maryland Historical Trust (State Historic Preservation Office, SHPO), in consultation with the Advisory Council on Historic Preservation, pursuant to the National Historic Preservation Act of 1966, as amended. Activities within proximity of historical structures are evaluated in order to determine the effect of the undertaking and to protect and preserve significant historical and archeological resources. A Section 106 Memorandum or Agreement has been fully executed and includes specific actions and measures designed to constitute adequate and acceptable mitigation of adverse effects of SHA's Selected Alternative (Refer to **Appendix C**).
- **Maryland State Non-tidal Wetland Permit Authorization:** State permit authorization is administered by the MDE pursuant to the Nontidal Wetlands Protection Act, Environmental Article, Section 5-901. This permit process regulates impacts caused to non-tidal wetlands and/or their associated 25-foot buffers.
- **Maryland Reforestation Law:** State approval authorization is administered by the Maryland Department of Natural Resources (DNR) pursuant to the Maryland Reforestation Law, Natural Resources Article, Section 5-103, as amended. This approval process regulates forest disturbance resulting from roadway construction activities, in which roadway construction projects utilizing state funding must replace impacted forests on an acre-for-acre (1:1) basis.

9. Areas of Controversy

Throughout the public involvement process the public has expressed concern over several issues.

- **Noise:** Many area residents are concerned about existing noise levels along MD 32, especially noise caused by trucks. Residents are concerned that the additional traffic generated by dualizing MD 32 will result in unacceptable noise levels. In addition, communities outside the study area have expressed concern that the additional traffic attracted by dualizing this segment of MD 32 will further exacerbate existing noise problems.

*The effects of noise from each build alternative were evaluated in accordance with the Federal Highway Administration's activity/criteria relationship published in 23 CFR, Part 772 and subsequent memorandum. (Refer to **Sections III.J** and **IV.J** for more information on the noise analysis.) Upon review of the results, it was determined that none of the Noise Sensitive Areas meet all of the feasibility and reasonableness criteria as set forth in SHA's Sound Barrier Policy (1998) as approved by FHWA, for consideration for sound barriers. In addition, the public expressed concerns regarding the negative visual effect that noise barriers would have on the rural character of the roadway. Therefore, SHA will consider installation of non-sound barrier options such as vegetative screening for areas that do not qualify for noise barriers. Screening (i.e. dense landscape plantings or other measures) would be strategically placed in the SHA right-of-way to screen residential areas in close proximity to MD 32. The exact location, type, and amount of screening will be determined in final design.*

- **Truck Traffic:** Many residents are concerned about the volume of trucks on MD 32. Trucks are viewed by the residents as safety hazards and as causing excessive noise. Some residents requested that trucks be prohibited along this portion of MD 32, restricted from using it by time of day, or required to pay a toll.

MD 32 south of I-70 is part of both Maryland's primary highway system and the National Highway System. These networks are intended to provide for interregional transportation of goods and services and are, therefore, meant to accommodate truck traffic. Truck prohibitions are not options that can be considered.

- **Safety Concerns Prior to Capacity Improvements:** Many residents have expressed concerns about the immediate need for safety improvements prior to widening MD 32. Residents have requested that a two-lane alternative with safety improvements be considered over a four-lane build alternative.

*An Access Management Plan is also being considered as an interim improvement that could be implemented prior to the construction of SHA's Selected Alternative. These improvements would remove existing driveways and minimize access points directly onto MD 32. In addition, these improvements will also be designed to coordinate with the alignments in SHA's Selected Alternative. Refer to **Section II.E.C** for more information on the Access Management Plan for the project.*

- **Land Use:** During the public comment period for the DEIS, both the resource agencies and

the public expressed concerns about the potential secondary development that could occur from widening MD 32. Concern was also expressed that the boundary for the Secondary and Cumulative Effects Analysis did not cover a large enough area.

As a result of comments received at the 1999 Public Hearing and from the resource agencies related to the potential land use impacts of the proposed alternatives and the boundary of the Secondary and Cumulative Effects Analysis (SCEA), SHA established an independent and objective MD 32 Land Use Expert Panel of nine members having local, regional, and national land use expertise. The charge to this group was to estimate potential land use changes that may result from different proposed highway improvements, taking into account the local market and planning environment. The results from the Land Use Expert Panel, published in July 2004, were inconclusive due to mixed opinions. The results have been considered in the update of the SCEA Analysis for the FEIS.

The Secondary and Cumulative Effects Analysis concluded that the improvements to MD 32 would not induce secondary development from dependent projects, land use changes, or zoning changes, but may induce secondary effects to environmental resources through changes to the rate of development. Cumulative effects to resources are expected to occur within areas currently zoned residential or urban build-up and would generally avoid environmentally sensitive areas such as floodplains and agricultural easements. Also, the cumulative effects to environmental resources will be regulated by existing applicable federal, state, and local legislation through individual avoidance, minimization, and/or mitigation strategies. Refer to Section IV.O for more information.

10. Next Steps in the Project Development Process

The project planning process will conclude following the receipt of Location and Design Approvals on the selected alternative. A Record of Decision (ROD) from FHWA will constitute Location Approval. The SHA Administrator will grant Design Approval on the design elements of SHA's Selected Alternative.

11. Summary Table

Table S-1 presents a summary of the social, cultural, economic, and natural environmental impacts of the project alternatives presented in this document.

Table S-1: Comparison of Environmental Impacts

Environmental Factors	No-Build	DEIS Build Alternative I	DEIS Build Alternative II	Build Alternative II Modified SHA's -Selected Alternative	
		10 feet to LOD ¹	10 feet to LOD ¹	10 feet to LOD ²	25 feet to LOD ³
Socio-economic					
Right-of-way	0	101.6 acres	89.1 acres	124.0 acres	125.1 acres
Residential Relocations	0	9	9	9	9
Business Displacements	0	1	1	1	1
Active Farmland	0	23.5 acres	21.5 acres	28.3 acres	28.3 acres
Public Parks	0	0	0	0	0
Public Facilities	0	0	0	0	0
Cultural Resources					
Archeological Sites	0	0	0	1	1
Historic Structures	0	No adverse effect	No adverse effect	No adverse effect	No adverse effect
Natural Resources					
Stream Crossings	0	20	20	39	39
Stream Impact	0	8,940 lf	5,732 lf ⁴	6,742 lf	7,200 lf⁴ (41,150 sf)
100-Year Floodplain	0	14.1 acres	14.1 acres	11.5 acres	14.7 acres
Wetlands	0	3.3 acres	2.2 acres	3.4 acres	4.0 acres³ (173,349 sf)
Woodlands	0	73.1 acres	71.5 acres	71.0 acres	87.4 acres
Federally Listed RTE Species	0	0	0	0	0
State Listed RTE Species	0	0	0	0	0
Air Quality	0	No violation	No violation	No violation	No violation
Noise Receptors Impacted	0	15	15	12	12
Hazardous Waste Sites	0	4	4	2	2
Cost Estimate					
Right-of-way	\$0	\$11 million ⁴	\$10 million ⁴	\$23.8 million ⁵	\$23.8 million⁵
Engineering & Construction	\$0	\$145-\$150 million ⁴	\$132-\$137 million ⁴	\$181.5 million ⁵	\$181.5 million⁵
Total Cost	\$0	\$156-\$160 million ⁴	\$142-\$147 million ⁴	\$205 million ⁵	\$205 million⁵

Notes: 1 The DEIS Build Alternative impacts were calculated using 10 feet to the limit of disturbance.

2 Impacts were calculated using 10 feet to the limit of disturbance for SHA's Selected Alternative for comparison purposes.

3 SHA's Selected Alternative impacts calculated using 25 feet to the limit of disturbance represent the proposed impacts and are being used to develop appropriate mitigation for the project.

4 Stream impacts for DEIS Build Alternative II was 5,732LF. This number could not be verified; therefore, a new total for stream impacts was calculated as 13,314 LF. 6,114 LF are ephemeral streams that will be replaced in kind at a ratio of 1:1. The remaining 7,200 LF of stream impacts require stream mitigation.

5 Based on 1998 dollars

6 Based on 2004 dollars

12. Environmental Assessment Form

The Environmental Assessment Form for the MD 32 Planning Study is presented on the following pages. The Environmental Assessment Form is a requirement of the Maryland Environmental Policy Act and Maryland Department of Transportation Order 11.01.06.02. The use of this form follows 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 recommended that duplication of federal, state, and local procedures be integrated into a single process.

The checklist identifies specific areas of the natural and socio-economic environment that have been considered while preparing this Environmental Assessment Form. The reviewer can refer to the appropriate section of this FEIS 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 study area. The form also includes any potential impacts, beneficial or adverse, that the action may incur. The "No" column indicates that during the scoping and coordination processes, that specific area of the environment was not identified to be within the study area or would not be impacted by the proposed action.

Environmental Assessment Form

		<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
A.	Land Use Considerations			
1.	Will the action be within the 100 year floodplain?	<u>X</u>	___	<u>See Section III.F and IV.G</u>
2.	Will the action require a permit for construction or alteration within the 50 year floodplain?	___	<u>X</u>	
3.	Will the action require a permit for dredging, filling, draining, or alteration of a wetland?	<u>X</u>	___	<u>See Section.IV.F</u>
4.	Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil?	___	<u>X</u>	
5.	Will the action occur on slopes exceeding 15%?	___	<u>X</u>	

	<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
6. Will the action require a grading plan or a sediment control permit?	<u>X</u>	—	<u>See Section.IV.E</u>
7. Will the action require a mining permit for deep or surface mining?	—	<u>X</u>	
8. Will the action require a permit for drilling a gas or oil well?	—	<u>X</u>	
9. Will the action require a permit for airport construction?	—	<u>X</u>	
10. Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices?	—	<u>X</u>	
11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland?	—	<u>X</u>	
12. Will the action affect the use of any natural or man-made features that are unique to the County, State, or Nation?	—	<u>X</u>	
13. Will the action affect the use of an archaeological or historical site or structure?	<u>X</u>	—	<u>See Section III.C and IV.C</u> <u>Refer to Appendix C for the Memorandum of Agreement</u>
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?	<u>X</u>	—	<u>See Section III.E and IV.E</u>
15. Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction?	—	<u>X</u>	

		<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
16.	Will the action change the over-land flow of stormwater or the absorption capacity of the ground?	<u>X</u>	—	<u>See Sections II.E, III.E and IV.E</u>
17.	Will the action require a permit for the drilling of a water well?	—	<u>X</u>	
18.	Will the action require a permit for water appropriation?	—	<u>X</u>	
19.	Will the action require a permit for the construction and operation of facilities for treatment or distribution of water?	—	<u>X</u>	
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?	—	<u>X</u>	
21.	Will the action result in any discharge into surface or sub-surface water?	<u>X</u>	—	<u>See Sections III.E and F, and IV.E</u>
22.	If so, will the discharge affect ambient water quality limits or require a discharge permit?	—	<u>X</u>	
C.	Air Use Considerations			
23.	Will the action result in any discharge into the air?	—	<u>X</u>	<u>See Sections III.I and IV.I</u>
24.	If so, will the discharge affect ambient air quality limits or produce a disagreeable odor?	—	<u>X</u>	
25.	Will the action generate additional noise which differs in character or level from present conditions?	<u>X</u>	—	<u>See Section III.J and IV.J</u>

		<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
26.	Will the action preclude future use of related air space?	<u>—</u>	<u>X</u>	
27.	Will the action generate any radiological, electrical, magnetic, or light influences?	<u>—</u>	<u>X</u>	
D.	Plants and Animals			
28.	Will the action cause the disturbance, reduction, or loss of any rare, unique or valuable plant or animal?	<u>—</u>	<u>X</u>	
29.	Will the action result in the significant reduction or loss of any fish or wildlife habitats?	<u>—</u>	<u>X</u>	<u>See Sections III.H and IV.H</u>
30.	Will the action require a permit for the use of pesticides, herbicides or other biological, chemical, or radiological control agents?	<u>—</u>	<u>X</u>	
E.	Socio-economic			
31.	Will the action result in a preemption or division of properties or impair their economic use?	<u>X</u>	<u>—</u>	<u>See Sections IV.A.1.a and IV.A.2.a</u>
32.	Will the action cause relocation of activities or structures, or result in a change in the population density of distribution?	<u>X</u>	<u>—</u>	<u>See Sections IV.A.1.a and IV.A.2.a</u>
33.	Will the action alter land values?	<u>—</u>	<u>X</u>	
34.	Will the action affect traffic flow and volume?	<u>X</u>	<u>—</u>	<u>See Section IV.B</u>

	<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
35. Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource?	<u> </u>	<u> X </u>	<u>See Section IV.D</u>
36. Will the action require a license to construct a sawmill or other plant for the manufacture of forest products?	<u> </u>	<u> X </u>	
37. Is the action in accord with federal, state, regional and local comprehensive or functional plans - including zoning?	<u> X </u>	<u> </u>	<u>See Section IV.A.3</u>
38. Will the action affect the employment opportunities for persons in the area?	<u> </u>	<u> X </u>	<u>See Sections III.A.2 and IV.A.2.</u>
39. Will the action affect the ability of the area to attract new sources of tax revenue?	<u> </u>	<u> X </u>	
40. Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere?	<u> </u>	<u> X </u>	
41. Will the action affect the ability of the area to attract tourism?	<u> </u>	<u> X </u>	
F. Other Considerations			
42. Could the action endanger the public health, safety, or welfare?	<u> </u>	<u> X </u>	
43. Could the action be eliminated without deleterious affects to the public health, safety, welfare, or the natural environment?	<u> </u>	<u> X </u>	<u>See Section I.C</u>

		<u>Yes</u>	<u>No</u>	<u>Comments Attached</u>
44.	Will the action be of statewide significance?	<u>X</u>	___	<u>See Section I.B</u>
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?	___	<u>X</u>	
46.	Will the action require additional power generation or transmission capacity?	___	<u>X</u>	
G.	Conclusion			
47.	This agency will develop a complete environmental effects report on the proposed action.	<u>X</u>	___	<u>Environmental Impact Statement</u>