III. ENVIRONMENTAL CONSEQUENCES OF THE PREFERRED ALTERNATIVE

A detailed analysis of the Preferred Alternative was conducted to determine potential effects to socioeconomic, cultural and natural environmental resources (**Table III-1**). This analysis is based upon the Preferred Alternative as it is now defined and which FHWA is approving with this FONSI. Further, this document reflects changes in wetland determinations and limits of disturbance of floodplains and woodlands that have occurred since the EA.

The following is a summary of effects associated with the Preferred Alternative.

Table III-1. Summary of Impacts

RESOURCE CATEGORY	Express Toll Lanes Alternative (Preferred Alternative)	
	EA Impacts	FONSI Impacts
TOTAL ROW (acres)	52.6	52.6
Properties Affected (number)	85	96
Residential Displacements (number)	0	0
Commercial Property Structural Displacements (number)	1	1
Wetlands (acres)	1.3	1.19[1, 2, 3]
Stream Impacts (linear feet)/(square feet)	16,000/N/A	9,931/61,113[1, 2, 3]
Floodplain (acres)	7.7	9.5[4]
Woodland (acres)	122	127
Threatened/Endangered Species (species)	0	0
NR/NRE Historic Sites (number)	0	0
NR/NRE Archaeological Sites (number)	0	0
Noise Sensitive Areas (number)	7 NSAs	7 NSAs
Air Quality Sites Exceeding CO S/NAAQS (number)	0	0
Section 4(f) Resources (number)	0	0

[1]Since the EA, a Jurisdictional Determination was completed by the USACE and MDE. Some of the wetland and streams impacts presented in the EA have been determined non-jurisdictional. [2]Minimization and avoidance measures have been added to the design of the Preferred Alternative since the EA was issued. [3]Impacts have been separated into permanent and temporary impacts (see Appendix E). [4]Based on updated data since the EA, the 100-Year floodplain boundaries have been revised.

A. Socioeconomic Resources

1. Land Use

Existing land use within the Section 200 Study Area is dominated by forested, residential, and agricultural land uses, with large concentrated areas of commercial development near many of the interchanges.

The Preferred Alternative would result in the direct conversion of only minor amounts of residential, commercial, and open space land to transportation use. These minor land use impacts would be located throughout the Section 200 corridor, adjacent to the existing highway. As previously stated, the purpose of Section 200 is to address capacity and safety needs on Section 200 and thereby improve access, mobility, and safety for local, regional and inter-regional

traffic, including passenger, freight, and transit vehicles. Although the project needs include capacity and safety, the State and County land development policies will determine the extent, pace, and location of development growth along I-95. Section 200 would accommodate future planned growth within the Study Area; however, future growth is not dependent on proposed improvements to Section 200. Section 200 is currently, and would remain, a fully access-controlled highway under the Express Toll Lanes Alternative.

2. Right-of-Way and Displacements

The majority of improvements associated with the Preferred Alternative would be located within MDTA's existing ROW; however, approximately 52.6 acres of new ROW would be required. One commercial property, the Izaak Walton League of America Sportsman Club, located in the northwest quadrant of the I-95/MD 24 interchange, would be displaced. No residential displacements would be required with the Preferred Alternative.

In accordance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, all families, individuals, and businesses displaced by the project would be treated fairly, consistently, and equitably so that they will not suffer disproportionate impacts as a result of the project (**Appendix B**). MDTA will provide relocation assistance and advisory services to eligible persons who are displaced by this project.

The Preferred Alternative would require the closure and removal of the existing bridge carrying Old Mountain Road over I-95. This will result in minor community cohesion impacts, by changing local traffic patterns in the community where this portion of the I-95/MD 152 interchange is located. Local residents would no longer have direct access across I-95, and would be required to access MD 152 via MD 7 on the east side of I-95 and Old Mountain Road on the west side of I-95 to make that movement. While this may inconvenience residents who currently utilize this road, it could also benefit the community by eliminating cut-through traffic and improving safety.

The Preferred Alternative would also require the relocation of the existing park and ride lot currently located within the I-95/MD 152 interchange ramp area, in the southeast quadrant of the interchange. The new park and ride lot will have more available parking spaces and be transit accessible, which would allow for more residents of the surrounding communities to use the new park and rides for rideshare and/or transit opportunities.

Numerous other ROW impacts were avoided by designing retaining walls along sections of I-95 that would have required extensive cut or fill slope areas. The retaining walls reduced the footprint of disturbance required in these areas, avoiding the ROW impacts.

3. Local Businesses

The Preferred Alternative would result in the displacement of one commercial property located near the I-95/MD 24 interchange (the Izaak Walton League of America Sportsman Club). Since this alternative involves the widening of an existing access-controlled highway corridor and

would not add or remove any interchanges, access to local businesses would not be substantially altered. Also, by reducing traffic congestion by improving traffic operation along I-95 through this corridor, access to local businesses would be improved.

4. Environmental Justice

It is the policy of MDTA to ensure compliance with the provisions of Title VI of the Civil Rights Act of 1964, and related civil rights laws and regulations which prohibit discrimination on the grounds of race, color, sex, national origin, age, religion, or physical or mental handicap in all projects that involve action by the FHWA. MDTA will not discriminate in project planning, design, construction, ROW acquisitions, or provision of relocation advisory assistance. This policy has been incorporated in all levels of the planning process in order that proper consideration may be given to the social, economic, and environmental effects of all transportation projects. Alleged discriminatory actions should be addressed for investigation to the Equal Employment Opportunity and Diversity Programs, to the attention of Mr. Louis Jones, Chief, Equal Employment Opportunity and Diversity Programs, Maryland Transportation Authority, 2310 Broening Highway, Suite 150, Baltimore, MD 21224.

Furthermore, Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations" requires that each Federal agency identify, and address, any disproportionately high and adverse impact on minority and/or low-income populations resulting from alternatives under consideration and to provide opportunity for participation in the public involvement process.

An analysis of affected persons in the Study Area indicates that no disproportionate high or adverse effects would occur to minority or low-income populations as a result of the Express Toll Lanes Alternative.

5. Transit

Existing bus transit within the study area (express bus service from White Marsh to Harford County and circulation bus service in the Aberdeen area) would benefit from the implementation of ETLs under the Preferred Alternative. Improved traffic flow provided by the ETLs and increased park and ride capacity provided by the proposed park and ride lots would make bus transit a more attractive option to travelers. Bus utilization of the ETLs would also provide a cost effective and reliable means of transportation for transit riders.

6. Aesthetics

The Preferred Alternative would affect visual quality by introducing additional pavement and structural elements along the Section 200 corridor. This would include expanded travel lanes, reduced median width, and the addition of new structures such as retaining walls, sound barriers and bridges. The added width of the Preferred Alternative would also reduce existing green space in the median and extend into the roadsides in some locations. Some existing trees and

roadside landscaping would be removed, which would reduce wooded buffers between the highway and adjacent homes.

New highway structures at the MD 24 interchange would be visible along the corridor. Other visual impacts would occur from the proposed park and ride lots along MD 24 and MD 152. It is expected that landscaping of the new lots to reduce visual effects would be incorporated into the final design of the lots. It is unknown at this time the extent of impacts from the lighting fixtures that will be included with the lot designs; however, it is not expected to be significantly more intense than the existing light at the lot, roadway, highway, and interchange ramps. Efforts will be taken to reduce light impacts to communities.

Other structures along the corridor would include sound barriers and retaining walls along roadsides where cut and fill slopes would need to be minimized. Other possible locations for new structures may include bridge abutments. When located in visible areas, these retaining walls and sound barriers could receive aesthetic treatments such as patterning and staining to create a more context-sensitive finish. Additionally, plantings could be added near barriers and retaining walls to help soften their appearance. The finish will be coordinated throughout the corridor and with other structural elements to maintain visual continuity.

7. Community Facilities and Services

The Preferred Alternative would result in very minor impacts to community facilities and services. One community facility, the Trinity Baptist Church property, located near the I-95/MD 152 interchange, would be impacted by the Preferred Alternative. This alternative would not displace the church; however, it will require a portion of its property for placement of the relocated park and ride lot.

By providing safer and more efficient travel times throughout the study area, it is expected that the Preferred Alternative would have a positive effect on community services such as emergency services and transit, and improve access to other community services throughout the project area.

B. Cultural Resources

The Maryland State Historic Preservation Officer (SHPO), which is the Maryland Historic Trust (MHT), has determined that two Register of Historic Places (NRHP) eligible sites are located within the Area of Potential Effect (APE). One site is the Onion-Rawl House located at 11314 Reynolds Road in Baltimore County. The other is the St. Francis de Sales Church located at 1450 Abingdon Road in Harford County. On January 28, 2010, the MD SHPO determined St. Francis de Sales Church and Onion-Rawls House would not be adversely affected by the Preferred Alternative, and no further consultation is required (see **Appendix C**).

Studies were performed to identify archaeological resources and the potential effects of the Preferred Alternative on these resources. Results of the Phase IA Assessment indicated that 83 previously identified archeological sites are present within the APE. Due to the likelihood that additional archeological resources are present within the Section 200 corridor and through

coordination with MHT on June 13, 2007, a Phase IB Archeological Assessment was conducted. Results from the Phase IB study indicated that all of the 83 sites, except for one (HaHa Branch Quartz Quarry site), were found to have no resources. A Supplemental Phase I Archeological Survey was performed on the HaHa Branch Quartz Quarry site (18HA17). Based on the results of the Supplemental Phase I Archeological Survey, the MD SHPO determined no archeological sites will be impacted by the Preferred Alternative, and no additional coordination is required.

C. Natural Environment

1. Farmlands

The Preferred Alternative would impact both Prime Farmland Soils and Soils of Statewide Importance due to the proposed widening and interchange improvements. A total of 78.5 acres of Prime Farmland Soils and 120 acres of Soils of Statewide Importance would be impacted.

The Farmland Protection Policy Act (FPPA) of 1984 states that "farmland does not include land already in or committed to urban development or water storage". The entire Study Area is developed and is located within a PFA as designated by the Maryland Department of Planning. Therefore, Prime Farmland Soils and Soils of Statewide Importance located/mapped within the Study Area are exempt from FPPA coordination.

2. Soils

The Preferred Alternative would expose soils during the construction phase, thereby potentially resulting in soil erosion and subsequent sedimentation. Erosion and sedimentation would primarily be caused by removal of existing vegetation and placement of fill, leading to increased exposure of soils to weather and runoff potential. Eroded soils could be washed into nearby streams and wetlands, resulting in sedimentation. This is especially notable within the I-95/ MD 152, I-95/MD 24, and I-95/MD 543 interchanges.

The amount of impervious area would increase by 75 percent throughout the Study Area, from 300 acres to 525 acres. The amount of erosion and sedimentation would also increase in areas exposed temporarily during construction due to the increase in stormwater runoff from the impervious surfaces.

Several methods will be used during construction to decrease erosion effects, including structural, vegetative, and operational methods. Grading and Erosion and Sedimentation (E&S) Plans will provide control measures to minimize potential impacts during pre-construction and post-construction activities in accordance with Maryland Department of the Environment (MDE) regulations.

3. Floodplains

The Preferred Alternative would impact approximately 9.5 acres of 100-year floodplains in the Study Area (**Table III-2**). The majority of floodplain impacts are due to fill encroachments or

placement of structures within floodplain areas. Avoidance and minimization efforts would include reducing encroachments by increasing the steepness of fill slopes and/or incorporating retaining walls, and lengthening of bridge spans to reduce or eliminate pier placement within floodplain areas.

Table III-2. Express Toll Lanes Alternative Impacts to 100-Year Floodplains

Floodplain	Express Toll Lanes Alternative (acres)
Little Gunpowder Falls	5.4
Gunpowder Falls	
Winters Run	2.5
HaHa Branch	0.2
Bynum Run	1.2
James Run	
Carsins Run	0.2
Total	**9.5**

4. Forests

The Preferred Alternative would impact 127 acres of forest. The majority of forest impacts would occur from improvements to the interchanges within the Study Area. To maintain traffic during construction and provide onsite staging areas and/or temporary roadways during different phases of construction, all of the woodlands within the immediate vicinity of the interchanges were assumed to have permanent impacts. Pending further study and/or final engineering design, impacts to some of these forested areas may be minimized. The majority of the affected forest stands are fragmented.

The Preferred Alternative will comply with the Maryland Reforestation Act, which requires the minimization of cutting or clearing trees, replacement of wooded areas affected and/or contributions to a reforestation fund for highway construction projects. Mitigation for forest impacts will be provided at a one-to-one ratio.

5. Large and Significant Trees

The Preferred Alternative would impact 47 large and significant trees. Of these 47 large and significant trees, 25 would be removed under the Preferred Alternative. As the project progresses into the design and construction phase, impacts to large and significant trees may change. Some trees may be avoided completely, while others may no longer remain suitable for retention due to effects from soil compaction, root injury, limb or trunk injury, or altered hydrology.

6. Forest Interior Dwelling Species (FIDS)

The Preferred Alternative would impact approximately 14.7 acres of Forest Interior Dwelling Species (FIDS) habitat within the Study Area due to the placement of SWM facilities and

roadway widening. The SWM facilities and road widening would result in a shift of the forest edge towards the interior of the forest, minimizing the interior habitat available.
MDTA will make every possible effort to avoid/minimize project impacts to FIDS habitat and other native forest plants and wildlife. Minimization measures could include the following:

- Avoiding placement of new roads or related construction in the forest interior. If unavoidable, restrict construction of roads to the perimeter of the forest.
- Avoiding removal or disturbance of forest habitat from May through August, which is the breeding season for most FIDS.
- Maintain forest habitat as close as possible to the road, and
- Maintain grass height of at least ten inches during the breeding season (May-August).

7. Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) indicated that "except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the Study Area." On April 13, 2006, the DNR indicated the possible occurrence of the state rare Ostrich Fern (*Matteuccia struthiopteris*) within the vicinity of the Study Area. MDTA conducted a survey in September 2006 for the Ostrich Fern, which did not identify any occurrence of Ostrich Fern within the Study Area. On May 22, 2007, the DNR concurred with the findings and agree that there is no presence of Ostrich Fern in the Study Area (**Appendix C**).

8. Noise

There were 29 Noise Sensitive Areas (NSAs) identified in the Study Area. Within these NSAs, individual noise receptor locations were selected to represent each of the communities potentially affected by project improvements. A total of 228 receptors were identified within the 29 NSAs to represent the overall noise environment and to determine locations where residences may be impacted by traffic noise. Of the 29 NSAs, it was determined that the Preferred Alternative would impact seven NSAs.

Sound barriers were evaluated and found feasible and reasonable for all seven of the impacted NSAs within the Study Area: 1, 5/6, 13, 16, 17, 23, and 28 (**Table III-3**). Thus, to mitigate noise impacts, MDTA will construct sound barriers. The locations of the sound barriers are displayed on the Preferred Alternative Plates in **Appendix A**.

The noise analysis findings and recommendations will be reevaluated in the future for consistency with the Final Rule 23 CFR 772 published by FHWA on July 13, 2010.

Table III-3. Preliminary Noise Barrier Cost Analysis Summary

NSA	Length (ft)	Height (ft)	Cost of Sound Barrier	Benefited Residences	Cost/Benefited Residence	Location of Sound Barrier (plate #)
1	3,368	15-32	$1,913,251	26	$73,587	1,2
5/6	5,568	28	$3,012,984	101	$29,832	6,7,8
13	3,100	32	$1,906,647	61	$31,256	14,17
16	5,243	32	$3,225,118	58	$55,605	19,20
17	4,233	30	$2,447,462	26	$94,133	19,20,21
23	2,983	28	$1,614,397	160	$10,090	30,31
28	910	22	$543,373	18	$29,687	9,10

9. Air

The Section 200 Study Area is located in Baltimore and Harford counties, within the Metropolitan Baltimore Intrastate Air Quality Control Region. This region is not designated as a non-attainment area for the following pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and particulate matter (PM_{10}). It is however designated as a non-attainment area for ozone (O_3) and fine particulate matter ($PM_{2.5}$). Because of this non-attainment designation for ozone, the region is subject to the implementation of reasonably available control measures, such as the Vehicle Emissions Inspection Program (VEIP), and also is subject to air quality conformity requirements under Section 176 of the Clean Air Act, which require that the region's long range transportation plan conform to the limits on pollutant emissions in Maryland's State Implementation Plan.

Additionally, 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). On March 10, 2006, EPA issued amendments to the Transportation Conformity Rule to address localized impacts of particulate matter: *$PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} 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 PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas deemed to be *projects of air quality concern.* Since the Environmental Assessment (EA) was approved in

2007, the $PM_{2.5}$ analysis has been reevaluated (see analysis results below) to include current air quality information and guidance.[1, 2, 3,4]

a. CO Analysis

As described in the EA, a detailed microscale air quality analysis for 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. Since there have been no significant changes to the project scope since approval of the *Air Quality Technical Report* (July 2007), air quality modeling results for CO are assumed to remain the same and do not require reevaluation at this time.

[1] **73FR4420 Transportation Conformity Rule Amendments To Implement Provisions Contained in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU); Final Rule.** On January 24, 2008 EPA issued an action in which "*EPA is amending the transportation conformity rule to finalize provisions that were proposed on May 2, 2007*". In this final rule "*EPA is changing § 93.104(b)(3) to require that the MPO and DOT determine conformity of a transportation plan at least every four years, and § 93.104(c)(3) to require that the MPO and DOT determine conformity of a transportation improvement program (TIP) at least every four years. The pre-existing regulations required these determinations to be made at least every three years.*"

[2] **Final PM Qualitative Guidance Clarification; June 12, 2009**: "*On March 29, 2006, the Environmental Protection Agency (EPA) and the Federal Highway Administration (FHWA) issued joint guidance on how to perform qualitative hot-spot analyses in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas titled, "Transportation Conformity Guidance for Qualitative Hot-spot Analysis in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas" (March 2006 guidance). The guidance provides information for State and local agencies to meet the $PM_{2.5}$ and PM_{10} hot-spot analysis requirements established in the March 10, 2006, final transportation conformity rule (71 FR 12468)"*

"Since issuing the March 2006 guidance, a lawsuit was filed challenging a project's conformity determination, including the project's $PM_{2.5}$ hot-spot analysis that relied on method A (comparison to another location with similar characteristics). Method A is described in question 4.1 of the March 2006 guidance. As part of a settlement agreement on that lawsuit (Environmental Defense, et al. v. USDOT, et al., No. 08-1107 (4th Cir., dismissed Nov. 17. 2008)), FHWA agreed to issue a clarification on a specific schedule, in coordination with EPA, to the March 2006 guidance. This clarification does not supersede the March 2006 guidance or the March 10, 2006 final transportation conformity rule; it only further explains how to implement the existing guidance and the hot-spot analysis requirements in the final rule. The clarification also does not create any new requirements and does not serve as guidance for $PM_{2.5}$ and PM_{10} quantitative hot-spot analyses."

[3] **75 FR 14260** Transportation Conformity Rule $PM_{2.5}$ and PM_{10} Amendments; Final Rule (March 24, 2010): "*In this action, EPA is amending the transportation conformity rule to finalize provisions that were proposed on May 15, 2009. These amendments primarily affect conformity's implementation in PM2.5 and PM10 nonattainment and maintenance areas. EPA is updating the transportation conformity regulation in light of an October 17, 2006 final rule that strengthened the 24-hour PM2.5 national ambient air quality standard (NAAQS) and revoked the annual PM10 NAAQS. In addition, EPA is clarifying the regulations concerning hot-spot analyses to address a December 2007 remand from the Court of Appeals for the District of Columbia Circuit. This portion of the final rule applies to PM2.5 and PM10 nonattainment and maintenance areas as well as carbon monoxide nonattainment and maintenance areas."*

[4] **EPA-420-P-10-001 Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (May 2010): "***This guidance describes how to complete quantitative hot-spot analyses for certain highway and transit projects in PM2.5 and PM10 nonattainment and maintenance areas. This guidance describes conformity requirements for hot-spot analyses, and provides technical guidance on estimating project emissions with the Environmental Protection Agency's (EPA's) MOVES2010 model, California's EMFAC2007 model, and other methods. It also outlines how to apply air quality models for PM hot-spot analyses and includes additional references and examples. However, the guidance does not change the specific transportation conformity rule requirements for quantitative PM hot-spot analyses, such as what projects require these analyses……..EPA plans to establish a two-year grace period before MOVES is required in quantitative PM and CO hot-spot analyses."*

Modeling was conducted for the Study Area using the EPA's MOBILE 6.2 emissions model and CAL3QHC dispersion model to determine whether the project would cause any carbon monoxide (CO) "hotspots." The models predicted CO vehicular emissions at each receptor location in the existing year as well as the design year (2030) for the Express Toll Lanes Alternative and all associated interchange options. Background CO concentrations were added to the modeled 1-hour and 8-hour average CO concentrations for comparison to the State and National Ambient Air Quality Standards (NAAQS). No CO concentrations were predicted to be in violation of the NAAQS under either of the study years for any of the receptor locations for the preferred alternative.

b. $PM_{2.5}$ Analysis and Conformity Determination

As discussed in the Transportation Conformity Guidance, "*The March 10, 2006 final rule requires a qualitative $PM_{2.5}$ hot-spot analysis to be completed for project-level conformity determinations for projects of air quality concern completed on or after April 5, 2006, when $PM_{2.5}$ conformity requirements apply and the final rule is effective*". On March 29, 2006, the FHWA published Guidance on Qualitative Hot-Spot Analysis for $PM_{2.5}$ and PM_{10} in nonattainment areas. A $PM_{2.5}$ conformity determination for the I-95 Section 200 Project was provided in July 2007. As previously referenced, on June 12, 2009 EPA issued a clarification to this guidance. Specifically, EPA clarified "*how to conduct a qualitative $PM_{2.5}$ or PM_{10} hot-spot analysis using method A (comparison to another location with similar characteristics)*".[5]

On March 10, 2010, EPA signed *the Transportation Conformity Rule $PM_{2.5}$ and PM_{10} Amendments; Final Rule.* This rule was published in the Federal Register on March 24, 2010 (75 FR 14260) and became effective on April 23, 2010. This final rule updated the transportation conformity regulation in light of an October 17, 2006 final rule that strengthened the 24-hour $PM_{2.5}$ national ambient air quality standard (NAAQS) and revoked the annual PM_{10} NAAQS.[6]

Federal regulations provide the requirements for determining the frequency of air quality conformity determinations. Specifically, 40CFR93.104(d) requires a redetermination of conformity "*if one of the following occurs: a significant change in the project's design concept and scope; four*[7] *years elapse since the most recent major step to advance the project; or initiation of a supplemental environmental document for air quality purposes. Major steps include NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; and, construction (including Federal approval of plans, specifications and estimates).*"

The Baltimore, MD $PM_{2.5}$ area was designated as nonattainment for the 1997 $PM_{2.5}$ NAAQS on January 5, 2005 by the US EPA. This designation became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Transportation conformity for the 1997 $PM_{2.5}$ standards applied on April 5, 2006, after the one-year grace period provided by the Clean

[5] Final PM Qualitative Guidance Clarification; June 12, 2009
[6] National Ambient Air Quality Standards for Particulate Matter; Final Rule (75 FR 14260)
[7] Amended per Transportation Conformity Rule Amendments To Implement Provisions Contained in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU); Final Rule [73FR4420]

Air Act. In October 2006 EPA issued a Final Rule revising the $PM_{2.5}$ NAAQS; reducing the level of the 24-hour $PM_{2.5}$ standard to 35 micrograms per cubic meter (µg/m3) and retaining the level of the annual $PM_{2.5}$ standard at 15µg/m3[8]. This Final Rule did not rescind the 1997 PM 2.5 NAAQS. Effective December 14, 2009, the Baltimore, MD $PM_{2.5}$ area was redesignated as attainment for the 2006 24-hour PM 2.5 NAAQS.[9] The area remains as nonattainment for the Annual $PM_{2.5}$ NAAQS. Transportation conformity for $PM_{2.5}$ standards remain the same as those set on April 5, 2006 for the 1997 NAAQS until April 23, 2011; the one-year grace period from the date that the Transportation *Conformity Rule PM2.5 and PM10 Amendments; Final Rule* became effective. As discussed on FHWA's frequently asked questions for "$PM_{2.5}$ Project-Level Conformity and Hot-Spot Analyses," if a project requires a FHWA approval or authorization, a project-level conformity determination is required prior to the first such action on or after April 5, 2006, even if the project has already completed the NEPA process, or for multi-phase projects, even if other phases of the project have already been constructed.

As discussed in the examples to the preamble to the March 10, 2006 *Final Rule for $PM_{2.5}$ and PM_{10} 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) 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 final rule amendment which changed 40CFR93 as follows: "*93.123(b)(1)(i) New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;*"[9]

The Baltimore Regional Transportation Board approved the 2010-2013 TIP and the Transportation Outlook 2035, as adopted on November 30, 2009, concluded that the region's transportation plan and program are in conformity with the SIP relative to air quality goals. The U.S. Department of Transportation has made a conformity determination on the Transportation Outlook 2035 and 2010-2013 TIP. I-95 Section 200 is listed as a Regionally Significant and Non-Federally Funded Transportation Improvement in the 2010-2013 TIP. Therefore, the I-95 Section 200 Project has been included in a conforming plan and program in accordance with 40 CFR 93.115. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93.

Based on review and analysis of the proposed I-95 Section 200 Alternatives, it has been determined that the project has not been found to be a project of air quality concern as defined under 40 CFR 93.123(b)(1). This determination is based on the following elements of the proposed project:

- The project's traffic engineering data suggests there will not be a significant increase in the percentage of diesel vehicles utilizing the corridor. The Section 200 project does not have a significant increase in the number of diesel vehicles due to construction of the

[8] National Ambient Air Quality Standards for Particulate Matter; Final Rule (75 FR 14260)
[9] Air Quality Designations for the 2006 24-Hour Fine Particle (PM2.5) National Ambient Air Quality Standards; Final Rule (74FR58688)
[9] National Ambient Air Quality Standards for Particulate Matter; Final Rule (75 FR 14260)

project. As shown in Table III-4, the truck traffic associated with the 2030 "Build" condition versus the "No-Build" condition indicates an increase in overall truck volumes of 200 vehicles.

- Future truck percentages are assumed to be slightly less (0.56%) than the existing truck percentages for the purpose of this analysis. Current and future build and no build traffic data are listed in the table below. Depicted truck percentages represent the amount of light, medium and heavy 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 Build conditions. 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.

- The difference in number of "diesel" trucks between the "build" and "no-build" would be further diminished as diesel trucks represent only a portion of the overall trucks using this facility that is shown in **Table III-4**. Diesel trucks are the primary contributor of transportation-induced $PM_{2.5}$ emissions.

- The implementation of the EPA's "2007 Highway Rule" is projected to remove diesel engine emissions from the equivalent of 90 percent of the total truck fleet, or about 13 million trucks and buses, by the year 2030. EPA's 2007 "Highway Rule" was finalized in January 2001. A variety of approaches have been considered in developing the qualitative assessment for this project relative to $PM_{2.5}$ conformity. Considering the multitude of factors and trends that will affect the particulate emissions of diesel vehicles, the most critical element is the incorporation of the EPA's "2007 Highway Rule", finalized in January 2001.

Table III-4: 2030 Build and No-Build AADT and Truck Volumes

		2005	2030 Build	2030 No build	Change between Build and No Build
AADT	Min Max	89,000 165,000	131,000 231,000	129,000 229,000	2,000 2,000
Truck Percentage*		11.51%	10.95%	10.96%	0.01%
Truck Volume	Min Max	12,000 19,000	17,100 25,300	16,900 25,100	200 200

*Truck percentage is based on maximum AADT volumes

Based on review and analysis as discussed above, it is determined that the Section 200 project will not lead to a significant increase in diesel vehicles and does not meet any other criteria in 40

CFR 93.123(b) for a project of air quality concern. In addition, the project meets the Clean Air Act (CAA) and 40 CFR 93.109 requirements for particulate matter without a project-level hot-spot analysis, since the project has **not been found to be a project of air quality of 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.

By email dated May 14, 2010 the above analysis was approved by MDTA, and was sent to FHWA. By email dated May 26, 2010 the analysis was approved by FHWA and forwarded to EPA, MDE and Baltimore Metropolitan Council (BMC) for Interagency Consultation. On June 9, 2010 approval was received from the Interagency Consultation Group (EPA, MDE and BMC) with some minor comments from BMC, which have been addressed. FHWA, EPA, BMC and MDE agreed with the conclusion that the Section 200 project **is not a project of air quality concern under 40 CFR 93.123(b)(1)**. On June 30, 2010, this $PM_{2.5}$Conformity Determination was placed on MDTA's website, beginning a 15-day pubic review and comment period. No comments were received during the review period.

c. Construction Related Emissions

The Maryland State Highway Administration has 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 (ARMA) was consulted, and determined that these specifications would satisfy the requirements of the *Regulations Governing the Control of Air Pollution in the State of Maryland*. 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.

Construction-related emissions for the project were considered to be temporary since construction-related emissions will last less than five years at any one site, meeting the criterion of section 93.123 (c)(5). Therefore, construction emissions are not required to be included in the CO hotspot analysis. EPA has not approved a $PM_{2.5}$ SIP for Maryland, nor has EPA or the state air agency made any significance findings related to reentrained road dust for the Baltimore, MD $PM_{2.5}$ nonattainment area. Therefore reentrained road dust is not considered in the analysis, per the Conformity Rule. In addition, as there is not an applicable $PM_{2.5}$ SIP, there are no $PM_{2.5}$ control measures and the project is in compliance with 40 CFR 93.117.

d. Mobile Source Air Toxics (MSATs) Analysis Background

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQSs), the EPA also regulates air toxics. Most air toxics originate from human-

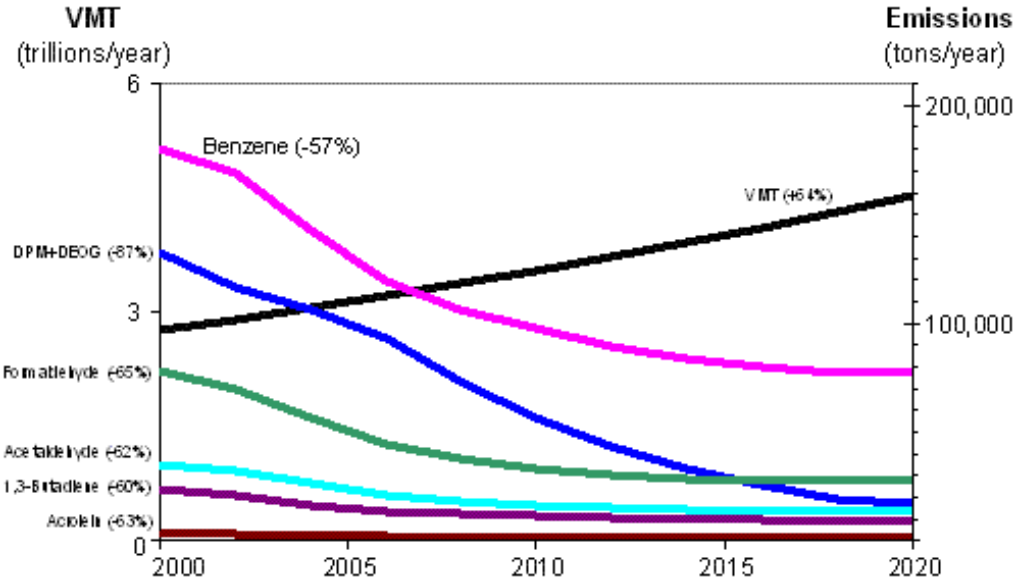
made sources including on-road mobile sources, non-road mobile sources (e.g. airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the CAA. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the CAA and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources, 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the CAA. In its rule EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, the FHWA has determined that even with a 64 percent increase in VMT (vehicle miles traveled), these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadine, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in the following graph:

EPA adopted its second MSAT Rule in February 2007 which regulates emissions further by setting more restrictive engine emission standards for new vehicles. These new standards will cause increased emission reductions in addition to those already forecasted in **Figure III-1**.

Figure III-1. U.S. Annual Vehicle Miles Traveled (VMT) vs. Mobile Source Air Toxics Emissions, 2000-2020



e. MSAT Project Level Assessment

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. The Section 200 project has AADT values greater than 150,000 by the Design Year 2030, and also has the potential to significantly increase the capacity of the mainline roadway due to the addition of travel lanes. Although the volume exceeds FHWA's recommended volume for performing a qualitative analysis, it is believed that a qualitative analysis is warranted for this project. The projected AADT will not exceed the FHWA guidance until 2030. Over the next 20 years, significant additional reductions in vehicle emitted pollutants are anticipated as noted in the **Figure III-1.** These additional reductions will come as a result of technology changes occurring now, such as hybrid vehicles, and through regulations such as EPA's new MSAT2 Rule adopted February 2007. The additional reductions ***are not accounted*** for in **Figure III-1**.

If mitigation were to be considered for this project, there are several strategies that could potentially be employed in an attempt to minimize the long-term MSATs emissions (as outlined in the FHWA's Interim Guidance on Air Toxic Analysis in NEPA Documents, February 2006). Operational strategies that focus on speed limit enforcement or traffic management policies may help reduce MSAT emissions even beyond the benefits of fleet turnover. Well-traveled highways with high proportions of heavy-duty diesel truck activity may benefit from active Intelligent Transportation System programs, such as traffic management centers or incident management systems.

Planners also may want to consider the benefits of establishing buffer zones between new or expanded highway alignments and areas of vulnerable populations. Modifications of local zoning or the development of guidelines that are more protective also may be useful in separating emissions and receptors. The initial decision to pursue MSATs emissions mitigation should be the result of interagency consultation.

In this document, MDTA has been provided with a qualitative analysis of MSATs emissions relative to the various alternatives, and has acknowledged that the project alternatives may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain. Because of this uncertainty, the health effects from these emissions cannot be estimated.

Unavailable Information for Project Specific MSAT Impact Analysis: This Air Quality Report includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the alternatives in this Technical Air Quality Report. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:
Information that is Unavailable or Incomplete: 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 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.

i. Emissions

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. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model - emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE 6.2 as an obstacle to quantitative analysis. These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE 6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

ii. Dispersion

The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The NCHRP is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

iii. Exposure Levels and Health Effects

Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near

roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs: 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 found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at http://www.epa.gov/iris. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust** (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function

and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community: Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

10. Hazardous Materials

A Preliminary Site Assessment (PSA) was conducted for the JFK Maintenance Facility #1, located at 2819 Belcamp Road, near the northwest quadrant of the I-95/MD 543 interchange. Soil sample analysis determined that contaminated soil is present within the maintenance facility property, however the current design of the Preferred Alternative would not impact this site. Should the design change during the detailed design phase, additional studies are recommended to determine the extent of contamination. Furthermore, it is recommended that additional soil sampling and monitoring should occur prior to any ground disturbing work in the vicinity of the JFK Maintenance Facility #1.

11. Streams

MDTA has coordinated with the USACE to ensure all minimization and avoidance efforts for stream and wetland impacts have been considered during the planning phase of Section 200.

MDTA will continue to coordinate with the USACE on all stream and wetland impacts throughout the design and construction phases.

Several stream crossings would be required for the Preferred Alternative resulting in 9,931 linear feet of perennial and intermittent stream impacts and 7,650 linear feet of impacts to ephemeral systems (**Table III-5**). The impacts would include culvert extensions, channel relocations, filling of waters, and piping of waters between existing culverts. Stream impact numbers have been reduced since publication of the Environmental Assessment with the refinement of the jurisdictional status of waters and implementation of additional avoidance and minimization measures.

Table III-5. Stream Impacts from the Express Toll Lanes Alternative

Interchange Option	STREAM IMPACTS			
	Permanent		Temporary	
	Perennial and Intermittent	Ephemeral	Perennial and Intermittent	Ephemeral
Mainline	2,409 l.f. *(9,944 s.f.)*	4,340 l.f. *(12,126 s.f.)*	2,896 l.f. *(15,062 s.f.)*	2,686 l.f. *(9,677 s.f.)*
MD 152				
Option 1A	3,560 l.f. *(18,417 s.f.)*	1,536 l.f. *(5,412 s.f.)*	1,312 l.f. *(9,534 s.f.)*	693 l.f. *(2,237 s.f.)*
MD 24				
Option 2	3,040 l.f.* *(26,607 s.f.)*	297 l.f.* *(2,004 s.f.)*	380 l.f.* *(4,064 s.f.)*	0
MD 543				
Option 7	839 l.f. *(3,411 s.f.)*	825 l.f. *(2,568 s.f.)*	1,086 l.f. *(3,803 s.f.)*	522 l.f. *(1,849 s.f.)*
MD 22				
Option 1	83 l.f. *(2,734 s.f.)*	652 l.f. *(1,700 s.f.)*	130 l.f. *(2,405 s.f.)*	1,792 l.f. *(3,579 s.f.)*
Total	**9,931 l.f.** ***(61,113 s.f.)***	**7,650 l.f.** ***(23,810 s.f.)***	**5,804 l.f.** ***(34,868 s.f.)***	**5,693 l.f.** ***(17,342 s.f.)***

*Impacts calculated for stream impacts at the I-95/MD 24 Interchange Option 2 do not include previously impacted streams by the I-95/MD 24 Interchange Project (Permit # 06-NT-0189/200663654).

The majority of the streams impacted are classified as "Use I waters" and have minimal value for aquatic life. Most of the intermittent and ephemeral streams' primary water source is stormwater runoff from I-95.

Complete avoidance of stream systems by the Preferred Alternative is not feasible because most of the impacted systems lie perpendicular to existing I-95. Minimization efforts for Waters of the United States (WUS) include the use of steeper (2:1) roadway embankments and retaining walls to minimize the footprint. As this project progresses into final design, avoidance and minimization measures will continue to be evaluated. Minimization of additional effects such as shading, loss of riparian vegetation, and potential changes to stream hydrology/hydraulics will be considered during the final design. Many streams in the Study Area currently have floodplain

access; this will be retained wherever possible to preserve benefits such as velocity dissipation, storage, and sedimentation/stabilization. Retaining or adding riparian buffers will also be considered during the project's design phase.

12. Wetlands

The Preferred Alternative would permanently impact 1.19 acres of wetlands and temporarily impact 0.90 acre of wetlands. All temporary impacts were determined using a 25 foot buffer from the proposed limits of disturbance (LOD) for this alternative. Wetland impact numbers have been reduced since publication of the Environmental Assessment because of refinements to the jurisdictional status of wetlands and implementation of additional avoidance and minimization measures. Please refer to **Appendix A** for the locations of the wetlands in association with the Preferred Alternative. Impacts to wetlands are listed in **Table III-6 and Appendix E**.

Avoidance of wetlands located adjacent to existing I-95 is not achievable. Unavoidable impacts to wetlands will be minimized by using steeper cut and fill slopes or constructing retaining walls wherever possible and reasonable. Portions of the roadway were specifically designed to impact the median and minimize impacts to adjacent high quality streams and wetlands.

Table III-6. Express Toll Lanes Alternative – Interchange Options Impacts to Wetlands

Alternative/ Option	Wetland Type	Wetland Impacts		Isolated Wetlands (Waters of the State)	
		Permanent (acres)	Temporary (acres)	Permanent (acres)	Temporary (acres)
ETL Mainline	PFO	0.28	0.37	0.01	0.00
	PSS	0.02	0.00	0.00	0.00
	PEM	0.05	0.03	0.05	0.03
MD 152 Option 1A	PFO	0.28	0.12	0.15	0.04
	PSS	0.08	0.00	0.00	0.00
	PEM	0.11	0.02	0.02	0.01
MD 24 Option 2	PFO	0.26	0.24	0.00	0.00
	PSS	0.00	0.00	0.00	0.00
	PEM	0.00	0.02	0.00	0.00
MD 543 Option 7	PFO	0.00	0.03	0.00	0.00
	PSS	0.00	0.00	0.00	0.00
	PEM	0.09	0.08	0.00	0.00
MD 22 Option 1	PFO	0.00	0.00	0.00	0.00
	PSS	0.00	0.00	0.00	0.00
	PEM	0.00	0.00	0.00	0.00
Subtotals	**PFO**	**0.83**	**0.75**	**0.16**	**0.04**
	PSS	**0.10**	**0.00**	**0.00**	**0.00**
	PEM	**0.26**	**0.15**	**0.07**	**0.04**
TOTALS		**1.19**	**0.90**	**0.23**	**0.08**

*Impacts calculated for wetland impacts at the I-95/MD 24 Interchange Option 2 do not include previously impacted wetlands by the I-95/MD 24 Interchange Project (Permit # 06-NT-0189/200663654).

D. Publicly Owned Parks and Recreation Areas

The Preferred Alternative would not require the use of any publicly owned public parks or recreation areas. Therefore, coordination through the Section 4(f) process is not required. Retaining walls were added to reduce the footprint of disturbance, thereby avoiding impacts to Gunpowder Falls State Park, the Clayton Road Conservation Area, and the Bush Declaration Natural Resources Management Area.

E. Indirect and Cumulative Effects Analysis (ICE) Summary

The ICE used a geographic boundary and temporal limits to evaluate impacts to socio-economic, cultural, and natural environmental resources. The ICE boundary was determined by overlaying a combination of individual socio-economic and natural resource sub-boundaries including census tracts, area of traffic influence (ATI), and sub-watersheds. Although several sub-boundaries were considered, the ICE boundary for this study consists of the census tract sub-boundary only; the ATI boundary was entirely within the census tract boundary, and because of its large size, the sub-watershed boundary was only used to evaluate impacts to natural resources.

A time frame of 60 years was selected for the ICE (1970-2030). This time frame was chosen after reviewing historical events that took place in the project area, changes in population growth, availability of data, and the design year of the project.

Land use is not anticipated to change substantially in the ICE boundary as a result of the Preferred Alternative. Areas most likely to experience additional residential development include undeveloped areas in the vicinity of interchange locations. Typically, these areas are zoned to permit future development. Within the Section 200 corridor, the majority of undeveloped lands are outside of the Baltimore County designated Urban Rural Demarcation Line (URDL), and the Harford County designated Development Envelope. Therefore, large scale developments in these areas are unlikely, unless the boundaries of the designated growth areas identified by the respective Counties are expanded.

The Preferred Alternative will have direct, indirect, and cumulative effects on socio-economic, cultural, and natural environmental resources, including effects to surface water/aquatic habitat, forest/terrestrial habitat, floodplains, wetlands, cultural resources, and communities and businesses. However, any indirect and cumulative impacts to these resources will be regulated by applicable State, Local, and Federal laws protecting individual resources (such as the Clean Water Act, the Maryland Forest Conservation Act, and the National Historic Preservation Act).

Within the Section 200 corridor, I-95 is a limited access interstate highway, connected by only grade-separated interchanges. Although several interchanges may be impacted by the proposed improvements, no new interchanges or road connections will be provided by this project. The Section 200 project will not provide any road linkages that do not presently exist, and therefore will not open additional areas to development opportunities. Because of the land use and zoning restrictions currently in place by Baltimore and Harford Counties, and that fact that

redevelopment and infill opportunities are available on parcels of land that are currently zoned for commercial, industrial, or other uses, it is unlikely that the construction of the Section 200 project will result in significant land use changes.