



Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor

Beverley K. Swaim-Staley, Secretary
Neil J. Pedersen, Administrator

Maryland Department of Transportation

December 23, 2009

Re: Project No. PG691A11
MD 197 Planning Study
From Kenhill Drive for MD 450 Relocated
Prince George's County, Maryland
Categorical Exclusion

Mr. Nelson J. Castellanos
Division Administrator
Federal Highway Administration
City Crescent Building
10 South Howard Street, Suite 2450
Baltimore, Maryland 21201

Attention: Mr. Jitesh Parikh

Dear Mr. Castellanos:

In accordance with the CEQ Regulations 23 CFR 771 and 23CFR774, the Maryland State Highway Administration (SHA) is submitting this Categorical Exclusion (CE) documentation and requesting Location Approval for the proposed improvements to MD 197 between Kenhill Drive and MD 450 Relocated in Prince George's County (**Figure 1**). A Location/Design Public Hearing was held February 13, 2008; and a follow-up Public Open House was held March 24, 2009. The SHA Administrator concurred on the SHA Preferred Alternative on June 17, 2009.

I. Purpose and Need

This proposed project addresses the need for additional roadway capacity to accommodate existing and future traffic volumes, as well as safety improvements, and will provide an enhanced transportation network between Kenhill Drive and MD 450 Relocated in the City of Bowie. In addition, this project will enhance pedestrian and bicycle safety and will improve access for study area residents, the school, and park.

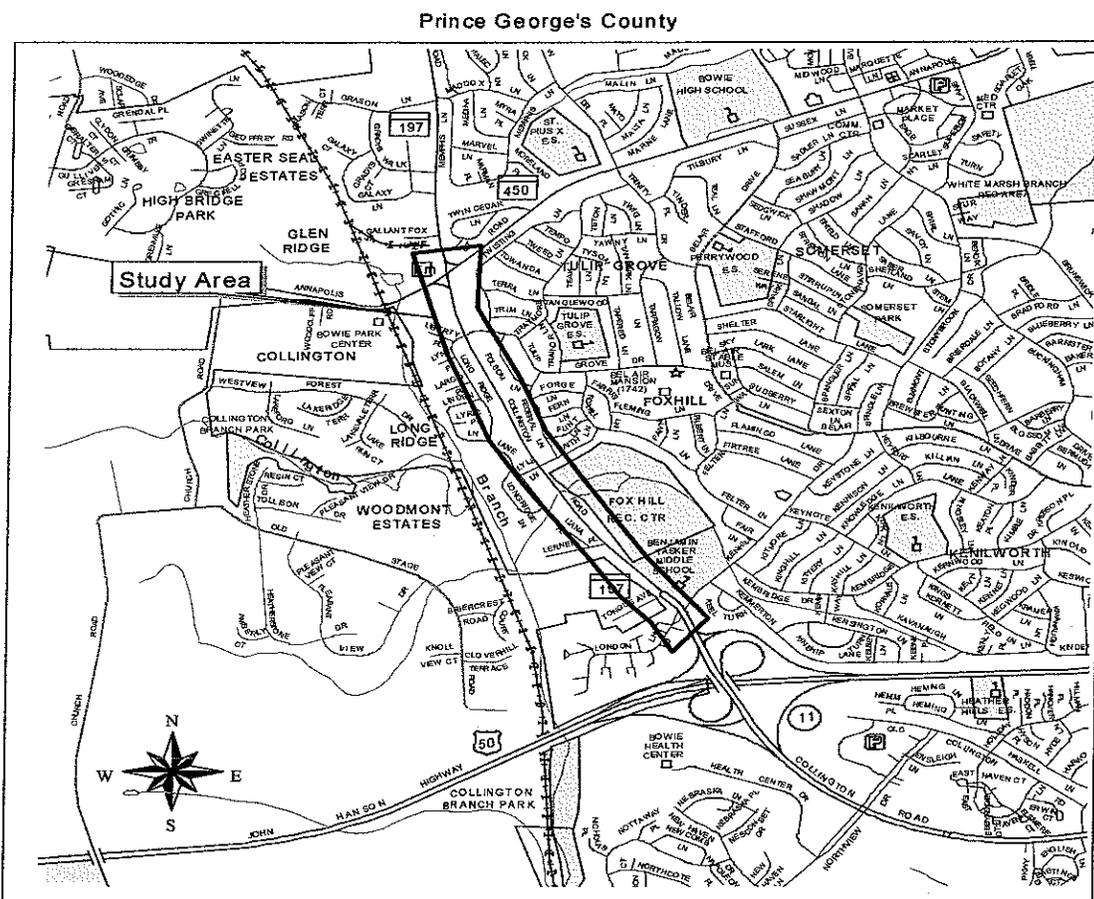
The project area, extending approximately 1.4 miles from Kenhill Drive to MD 450 Relocated, is a portion of the 14 mile MD 197 roadway that stretches from Laurel to Bowie. It is functionally classified by the SHA as a Secondary Arterial, and by the Federal Highway Administration (FHWA) as an Urban Other Principal Arterial. MD 197 is one of two primary north-south routes serving the Bowie, Laurel, Davidsonville, and Columbia areas and currently functions as a regional arterial and local access roadway.

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Figure 1. Location Map

MD 197: Kenhill Drive to MD 450 Relocated



The existing two lanes of MD 197, constructed in 1965 within a 150-foot wide right-of-way (ROW), were originally intended to become the southbound roadway of a future undivided highway where the northbound lanes would be constructed to the east of the existing roadway. The project was included in previous versions of the Maryland Department of Transportation Consolidated Transportation Program CTP during the 1980s. In 1986, bonds would have provided funds for Prince George's County to design and construct a four-lane divided highway on MD 197 between Kenhill Drive and MD 450. However, in early 1992 the project was put on hold at the request of local elected officials and then deleted from the county's Capital Improvement Program due to a revenue shortfall.

The project is now a priority for both Prince George’s County and the City of Bowie. The project is consistent with the approved Bowie and Vicinity Master Plan and Sectional Map (2006). The current MD 197 Planning Study is funded for project planning only and will be a candidate for the design, right-of-way acquisition, and construction phases when funding is available. The project is currently listed in the CTP for 2009-2014.

In 2008, Average Daily Traffic (ADT) volumes between Kenhill Drive and MD 450 Relocated were 36,825 vehicles per day, including truck volumes. Based on approved future land uses, traffic volumes are forecasted to increase by the year 2030 to between 56,500 and 58,500 vehicles per day, an increase of approximately 35 percent.

Further complicating the traffic operations in this corridor, the substantial increases in ADTs along some intersecting roadways are forecasted as well. The ADT volumes at specific intersections illustrate the need for additional capacity and intersection improvements within the project area. The intersecting roads with the greatest 2007 ADT were MD 450 Relocated (25,225) and Kenhill Drive (12,675). By 2030, these volumes are projected to be 43,125 at MD 450 Relocated and 16,325 at Kenhill Drive, an increase of 71 percent and 29 percent, respectively (**Table 1**).

Table 1: MD 197 Existing and Forecasted ADT Data for MD 197 Crossroads

MD 197 Crossroad	2007 ADT	2030 No-Build ADT	Percent Increase
MD 450 Relocated	25,225	43,125	71%
Gallant Fox Lane	2,100	2,650	26%
Old MD 450	7,325	9,450	29%
Long Ridge Lane/Tulip Grove Drive	3,075	3,700	20%
Lyle Lane/Faith Lane	500	625	25%
Lerner Place	225	275	22%
Kenhill Drive/London Lane	12,675	16,325	29%

II. Alternatives Considered

Typical sections were developed to provide an optimal balance of operational and safety improvements while minimizing impacts to environmental resources and private property. Refinements to the alternatives were based upon input from community officials, concerned citizens, and SHA study team members. The majority of refinements made were in response to requests that the proposed typical sections be narrowed to minimize property and forest impacts.

Other requests involved investigations into pedestrian mobility and safety, traffic signal optimization, retaining wall placement, and noise abatement design. A No Build alternative (Alternative 1), a Transportation System Management alternative (Alternative 2), a five-lane alternative (Alternative 3) and a four-lane alternative (Alternative 4) were analyzed. All proposed alignments would use Foxhill Lake for storm water quantity management associated with the additional impervious surfaces.

Following the February 2008 Combined Location/Design Public Hearing, SHA received recommendations from concerned citizens and the Bowie City Council that resulted in modifications to Alternatives 3 and 4. The same design changes were proposed with each alternative and include a continuous five-foot sidewalk along the western edge of the roadway (in addition to the continuous 10-foot hiker/bicycle path along the eastern edge) between Kenhill Drive and MD 450 Relocated, and an 8-foot tree panel adjacent to the curb between Lerner Place and Tulip Grove Drive/Long Ridge Lane. The intersection at Kenhill Drive was also modified to provide a right-turn only lane along with a combined through/left movement and a left turn only movement to maintain a LOS C/C without introducing additional pavement or impacts. Finally, locations were identified where retaining walls would reduce property and environmental impacts, to be investigated further during the final design phase.

The study team also investigated if reversible travel lanes would provide congestion relief through the corridor and found that the directional distribution of traffic volumes did not support this idea for two reasons. First, the relatively short project area (1.4 miles) did not support this type of facility. Second, the required moveable barrier and/or overhead directional gantries were not consistent with the character of the roadway.

In response to comments that the Alternative 4, 20-foot median was too wide, the study team investigated opportunities to narrow the proposed median between Lerner Place and Tulip Grove Drive/Long Ridge Lane. The study team faced several design limitations when looking at opportunities to narrow the median, such as American's with Disability Act (ADA) accessibility laws prohibiting medians narrower than 16 feet at intersection approaches featuring left turn only lanes and state safety design standards that require a minimum median width of 12 feet to support street trees. In addition, the distance between median breaks was not the minimal safe design standard length for curve transitions unless the Faith Lane/Lyle Lane median break was closed.

Closing the median at Faith Lane/Lyle Lane would force additional traffic to Tulip Grove Drive/Long Ridge Lane, resulting in a slightly worse LOS B/D (down from LOS B/C), while allowing a 12-foot width for a median that, at approximately 1,700 feet, exceeds the design standard for curve transitions. The redesigned median widens to the ADA required 16 feet at the Lerner Place and Tulip Grove Drive/Long Ridge Lane intersections, and to 20 feet wide to the north and south of these two intersections.

SHA Preferred Alternative

Based upon the feedback received from the community and the City of Bowie, modifications were made to existing Alternative 4. Renamed Alternative 4 Modified, it was recommended to the SHA Administrator and was selected as SHA's Preferred Alternative on June 17, 2009. The following design elements, as described above, were incorporated as part of the SHA Preferred Alternative (**Attachment 1**):

- A four-lane divided closed section with a raised variable median width (12-20 feet), 11-foot inside travel lanes, and a 16-foot bicycle-compatible outside travel lane in each direction;
- Minimization of proposed median from 20 feet to 12 feet between Long Ridge Lane/Tulip Grove Drive and Lerner Place/Foxhill Park intersections;
- Closure of proposed median opening at Faith Lane/Lyle Lane intersection ;
- One new (third) southbound through travel lane at MD 450 Relocated and one new through lane at Kenhill Drive;
- Inclusion of five-foot sidewalk along southbound edge of MD 197;
- Inclusion of eight-foot street-tree panel along proposed edge of pavement between Long Ridge Lane/Tulip Grove Drive and Lerner Place/Foxhill Park intersections.

III. Public Involvement

SHA and the City of Bowie hosted a Public Open House on March 24, 2009 to provide updated results of the engineering and environmental analyses and to explain the changes to the four-lane typical section that resulted in the new Alternative 4 Modified concept. Approximately 70 citizens attended the meeting and agreed with the additional tree plantings and closure of the median break for left turn access at Faith Lane and Lyle Lane.

Other outreach efforts, to keep local stakeholders informed and involved in the decision-making process, included project newsletter surveys, brochures, a December 6, 2006 Alternates Public Workshop, a November 14, 2007 Informational Open House, and a February 13, 2008 Public Hearing. Over 100 citizens attended each meeting. The majority of the responses to the 2006 summer newsletter and survey centered on traffic congestion and travel time during peak travel hours, requests that the roadway be upgraded to a multi-lane roadway, concerns about impacts during construction, and comments on the alternatives and perceived problem areas such as pedestrian access and safety. In contrast, comments received at the workshop, open houses and public hearing included requests to narrow the highway footprint. Other issues included comments about speeding, traffic signals, congestion, safety, facility design, noise, community cohesion, public transportation, and property impacts. Alternative 4 Modified seeks to address these concerns by creating a boulevard feel with the additional tree plantings and new sidewalk, while adding additional lanes to this portion of MD 197 in Bowie. Issues such as signal timing were forwarded to the District Office for more immediate solution.

IV. Existing Environment and Environmental Consequences

Environmental Technical Studies were conducted to identify the potential for community effects and for impacts to natural and cultural resources, contaminated sites, air quality, and noise sensitive areas/uses.

Community Effects

Land use within Bowie has been shaped by a series of master plans since 1964. The most recent master plan, The Bowie and Vicinity Master Plan (2006), has 93 percent of its area already developed or approved for site plans or subdivisions. Commercial areas are located along major transportation routes within the study area and project area. An industrial area is located on MD 197 at Gallant Fox Lane. The Smart Growth Initiatives of 1997 require the state to direct funding to locally designated growth areas. These locally designated areas, or Priority Funding Areas (PFAs), have a higher priority for state funded infrastructure improvements than non-designated areas. The entire project area is within a PFA.

The SHA Preferred Alternative requires 3.6 acres of ROW from a total of 67 properties (66 residential and one commercial). These linear impacts are mostly generated from the grading required to widen the highway and provide tie-in slopes to the existing ground. There are no residential or commercial displacements, however, six sheds and approximately 21 (out of 132) parking spaces on the Annapolis Collington Business Center property would be impacted (**Attachment 1**).

Foxhill Park, located adjacent to the corridor, is 45.5 acres in size. The majority of the land (44.35 acres) was acquired through a donation in 1963 with the remainder (1.17 acres) obtained from Maryland State Roads in 1971. The park contains a playground area, four tennis courts, one basketball court, three softball fields with a football soccer overlay field, one baseball field, and a hiker/biker/equestrian trail. As previously stated, SHA is proposing to use the existing stormwater management facility (Foxhill Lake) in Foxhill Park (a publicly owned public park), to address increases in stormwater quantity. The proposed expansion of the facility would require 1.7 acre (74,052 square feet) of temporary easements associated with construction access, and 0.6 acre (26,136 square feet) of temporary easements associated with grading the edge of Foxhill Lake within the park. FHWA concurred on October 26, 2009 that the requirements of Section 4(f) of the US DOT Act (49 U.S. C. Section 303) do not apply to the temporary use of land (**Attachment 2**). The Maryland National Capital Parks and Planning commission, as the official with jurisdiction, previously concurred with this determination on December 24, 2007 (**Attachment 3**).

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs Federal agencies to identify and address disproportionately high adverse human health or environmental effects, including the interrelated social and economic effect its programs, policies, and activities may have on minority and low-income populations. Census block groups were analyzed to identify whether environmental effects would be disproportionately high and adverse for minority and low income populations within the study area. No minority or low-income communities were identified within the study area. Therefore, no high or disproportionate adverse effects to Environmental Justice population are anticipated.

Natural Resources

The MD 197 study area falls within the Patuxent River watershed. Both streams within the study area are tributaries of Collington Branch and are classified as Use I streams (Water Contact Recreation and Protection of Aquatic Life) with an in-stream restriction for construction activities from March 1 through June 15.

The Maryland Department of Natural Resources advises that during construction, all fish species would be adequately protected by the Use I in-stream work prohibition period, sediment and erosion control methods, and other Best Management Practices that are specifically designed to protect aquatic resources as outlined in MDE Stormwater Design Manual. No impacts to known rare, threatened or endangered species are anticipated.

The replacement of the Foxhill Park Lake culvert (**Attachment 1**) associated with the roadway widening would require excavation in the tributary to Collington Branch and would impact 0.10-acre of 100-year Federal Emergency Management Agency floodplain for this tributary. The excavation has the potential to generate sediment that could impact aquatic species; sediment and erosion control measures will be strictly enforced during construction to minimize water quality impacts. The stormwater management design will ensure that flood elevations on adjoining private property do not increase as a result of the floodplain impacts.

Wetland fringes were found at Foxhill Lake and at two existing stormwater management systems (northwest quadrant of MD 450 and MD 197, and southeast quadrant of Kenhill Drive and MD 197). Foxhill Park Lake would be impacted by the proposed use of the lake for stormwater retention. Permanent impacts include excavation at the lake edge to increase the capacity of the lake, and disturbance to the lake embankment during the replacement of the outfall structure. Excavation at the lake edge will likely impact the wetland plants (spatterdock). Based upon preliminary studies, SHA estimates that the volume of stormwater runoff from MD 197 would impact 0.6 acre of wetlands in the park. Once the project moves into the design phase a permit application will be processed for these impacts.

SHA's proposed use of Foxhill Lake for runoff retention requires temporary use of the park. FWA previously concurred October 26, 2009 that the temporary use of Foxhill Park is not subject to the requirements of Section 4(f) (**Attachment 2**). SHA will minimize the temporary impacts to the surrounding Foxhill Park by storing equipment elsewhere, using sediment and erosion control methods, placing fencing around all large trees, minimizing tree removal, mitigating at a 1:1 ratio for the trees that are removed, replanting native vegetation, and repairing the outfall culvert.

The SHA Preferred Alternative would impact 9.8 acres of forest and 12 specimen trees. The Maryland Reforestation Law requires that SHA replace impacted forest on an acre-for-acre basis within the watershed. Initial plans include mitigating the majority of the impacts with native tree species plantings at Foxhill Park, with any remaining impacts mitigated within the watershed. These sites will be secured prior to the final advertisement date.

An Initial Site Assessment was completed to identify sites with possible hazardous waste materials that may be impacted by the project. Only the Levitt electrical substation, approximately 200 feet west of MD 197, is of some concern due to several electric transformers that could potentially contain polychlorinated biphenyls located there. No spills have been reported for this site nor was any stressed vegetation or ground staining observed during a site visit. However, a Preliminary Site Assessment will be conducted during the Final Design phase of the project if the design shows that groundwater will be reached by the proposed improvements.

Cultural Resources

On June 2, 2006 the Maryland Historical Trust (MHT) concurred that there are no historic standing structures on or eligible for the National Register of Historic Places (NRHP) within the area of potential effects from the project. A Phase 1 archeological survey was completed in the fall of 2007 on four sites on the high terrain overlooking Collington Branch. The MHT concurred January 23, 2008 that the isolated flakes and bottle dumps found did not retain sufficient integrity or research potential to be eligible for listing in the NRHP. On November 20, 2009 MHT concurred that there would be no properties affected by the grading of Foxhill Lake (**Attachment 4**).

Air Quality

A project-level air quality analysis was conducted in accordance with US Environmental Protection Agency (US EPA) and FHWA guidelines, and an air quality technical report was prepared by the study team. The study team performed an air quality analysis that evaluated potential changes likely to result from the proposed build alternatives. The study included an analysis for carbon monoxide (CO) and examined the potential for localized particulate matter (PM_{2.5}) found primarily in exhaust from diesel-powered vehicles. The qualitative Mobile Source Air Toxics (MSAT) analysis predicted the relative levels of benzene, acrolein, formaldehyde, 1,3-butadiene, acetaldehyde, and diesel exhaust. Testing was conducted at the intersections of MD 197/MD 450 and MD197/Kenhill Drive because of the heavier traffic volumes and levels of congestion at these locations.

Existing levels of CO were measured using air quality receptors in close proximity to the project area. A mathematical model developed by the US EPA used projected traffic volumes and roadway configuration to predict air quality conditions for the year 2030. Future CO levels resulting from this project would not exceed the National Ambient Air Quality Standards (NAAQS). None of the peak hour CO concentrations would exceed the NAAQS threshold of 35 parts per million (ppm). The maximum eight-hour average concentration of CO would not exceed the NAAQS threshold of 9 ppm.

The MD 197 project meets the requirements of the Clean Air Act and 40 CFR 93.109 of the Code of Federal Regulations for PM_{2.5}. The project is therefore considered not of air quality concern. None of the proposed build alternatives, including the SHA Preferred Alternative, would result in a significant increase in the number of diesel-powered vehicles on MD 197. Currently the MD 197 project area is used primarily by gasoline-powered vehicles. The proposed build alternatives and their corresponding improvements to traffic operations would not change the use of the roadway by gasoline-powered vehicles. The regulatory agencies concurred with this assessment, and the project was available for public comment on the SHA project website from June 9 – 24, 2009. No comments were received.

The FHWA *Guidance on Air Toxic Analysis in NEPA Documents*¹ requires analysis of MSATs under specific conditions. The EPA has designated six prioritized MSATs, which are known or probable carcinogens or can cause chronic respiratory effects. The six prioritized MSATs are: Benzene; Acrolein; Formaldehyde; 1,3-Butadiene, Acetaldehyde; and Diesel Exhaust (Diesel Exhaust Gases and Diesel Particulate Matter). Per SHA traffic analysis, the Build traffic volumes (ADT) and truck percentages are equal to the No-build traffic volumes (ADT) and truck percentages. Also, the maximum 2030 traffic volume (ADT) is 58,500 on MD 197 which is less than 140,000. Therefore the MD 197 project would be a “*minor widening project that serves to improve operations of a highway.....without adding substantial new capacity or creating a facility that is likely to meaningfully increase emissions*”² and would be considered a Project with Low Potential MSAT Effects.

Because SHA traffic analysis demonstrates that the Build traffic volumes (ADT) and truck percentages are equal to the No-build traffic volumes (ADT) and truck percentages, the MD 197 project will not result in any meaningful changes in traffic volumes, vehicle mix, or any other factor that would cause an increase in emissions impacts. As such, FHWA has determined that this project will generate minimal air quality impacts for the Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns.

¹ Interim Guidance on Air Toxic Analysis in NEPA Documents

² *ibid*

Included herein is a basic analysis of the likely MSAT emissions 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 any of the Build Alternatives. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information.

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

The US EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSAT in the context of highway projects. The tools to predict how MSAT disperse are also limited. Even if emission levels and concentrations of MSAT could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude reaching meaningful conclusions about project-specific health impacts. Research into the health impacts of MSAT 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. The US EPA is in the process of assessing the risks of various kinds of exposures to these pollutants.

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

For each alternative, the amount of MSAT emitted would be proportional to the annual average daily traffic (AADT), or vehicle miles traveled (VMT). Although the Build traffic volumes (ADT) and truck percentages are equal to the No-build traffic volumes (ADT) and truck percentages, the VMT within the study area estimated for the Build Alternatives may be slightly greater than that of the No-build, because the Build Alternatives will reduce congestion and increase efficiency of the roadway, and may attract additional trips from elsewhere in the transportation network.

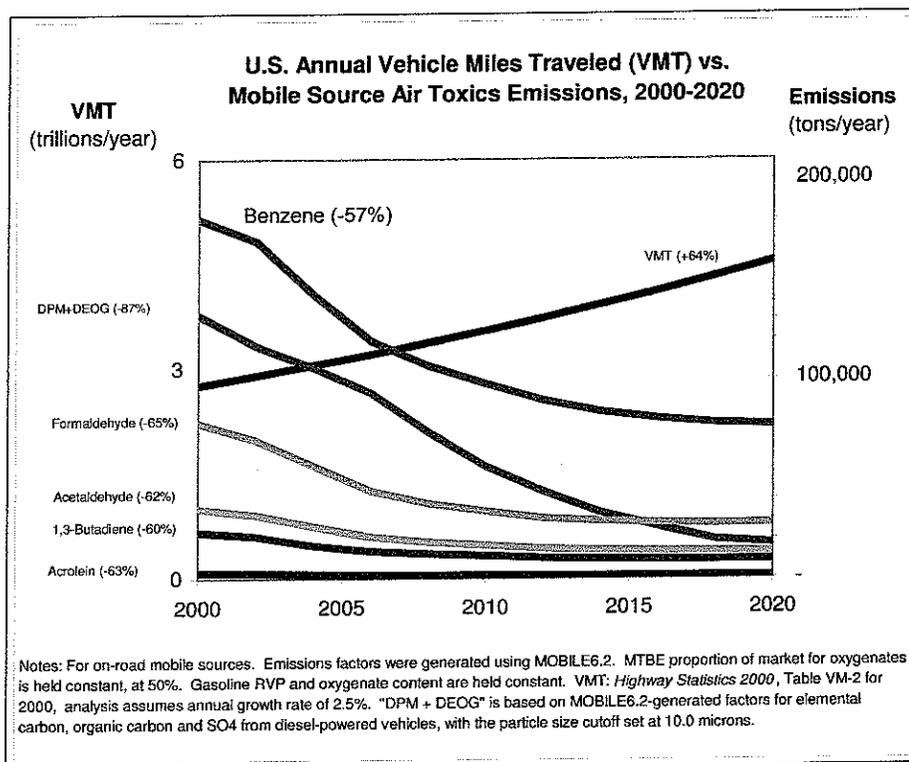
This slight increase in VMT may lead to slightly higher MSAT emissions along the MD 197 corridor for the Build Alternatives. The emissions increase due to increased VMT is offset somewhat by lower MSAT emission rates due to increased speeds, since according to EPA's MOBILE 6.2 emissions model, emissions of all of the priority MSAT, except for diesel particulate matter, decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

The additional lanes will have the effect of moving some traffic closer to nearby homes and businesses; therefore, there may be localized areas where ambient concentrations of MSAT could be higher under the Build Alternatives than the No-build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the side where the roadways shift towards the residences and businesses. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-build alternative cannot be accurately quantified due to the inherent deficiencies of current models.

MSAT dispersion studies have shown that air toxics from the roadway start to drop off at about 100 meters, and that by 500 meters, most studies have found it very difficult to distinguish the roadway air toxic concentrations from background air toxic concentrations in any given area. Sensitive receptors are those facilities most likely to contain large concentrations of the more sensitive population. There is one sensitive receptor within 100 meters: Benjamin Tasker Middle School. There is also one sensitive receptor with 500 meters: Tulip Grove Elementary School.

In summary, when a highway is widened and moves closer to receptors, the localized level of MSAT emissions for the Build Alternatives could be higher relative to the No-build Alternative, but this could be offset due to increases in speeds and reductions in congestion (associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. Furthermore, at both the project location and regionally, MSAT concentrations will decrease in future years due to EPA's vehicle emission and fuel regulations (**Figure 2**).

Figure 2. MSAT Concentrations over Time and Miles Traveled



Noise

A total of seven Noise Sensitive Areas (NSAs) were identified within the project area. Eighteen (18) receptor sites were used to model the existing and future noise environment within those areas. Five of the seven NSAs (NSAs 1 – 5) were determined to be eligible for noise abatement due to impacts from the proposed roadway improvements. The noise measurements, results of the noise analysis, and descriptions of each NSA are summarized in **Tables 2 and 3**. A final decision on the installation of abatement measures would be made when the project transitions into the final design stage.

Table 2. Noise Measurements

NSA	Alternatives 3 & 4 2030 No Build Noise Level	Alternative 3 2030 Build Noise Level	Change	Alternative 4 2030 Build Noise Level	Change
1	62	65	NA	65	NA
	61	65	NA	65	NA
	62 (modeled location)	67	5	68	6
	61 (modeled location)	67	6	67	6
2	59	63	4	62	3
	61	67	6	66	5
3	65	69	4	69	4
	60	62	NA	61	NA
	64	68	4	68	4
	61	63	NA	63	NA
4	62	68	6	68	6
	57	63	6	63	6
	62	61	NA	61	NA
	60	68	8	68	8
5	65	70	5	70	5
	62	69	7	69	7
	64	70	6	70	6
6	71	73	2	74	3
	65	70	5	70	5
7	58	65	7	65	7

Note: NA = noise level increases from the build condition is below perceptible increase levels
Bold = meets SHA noise level impact criteria

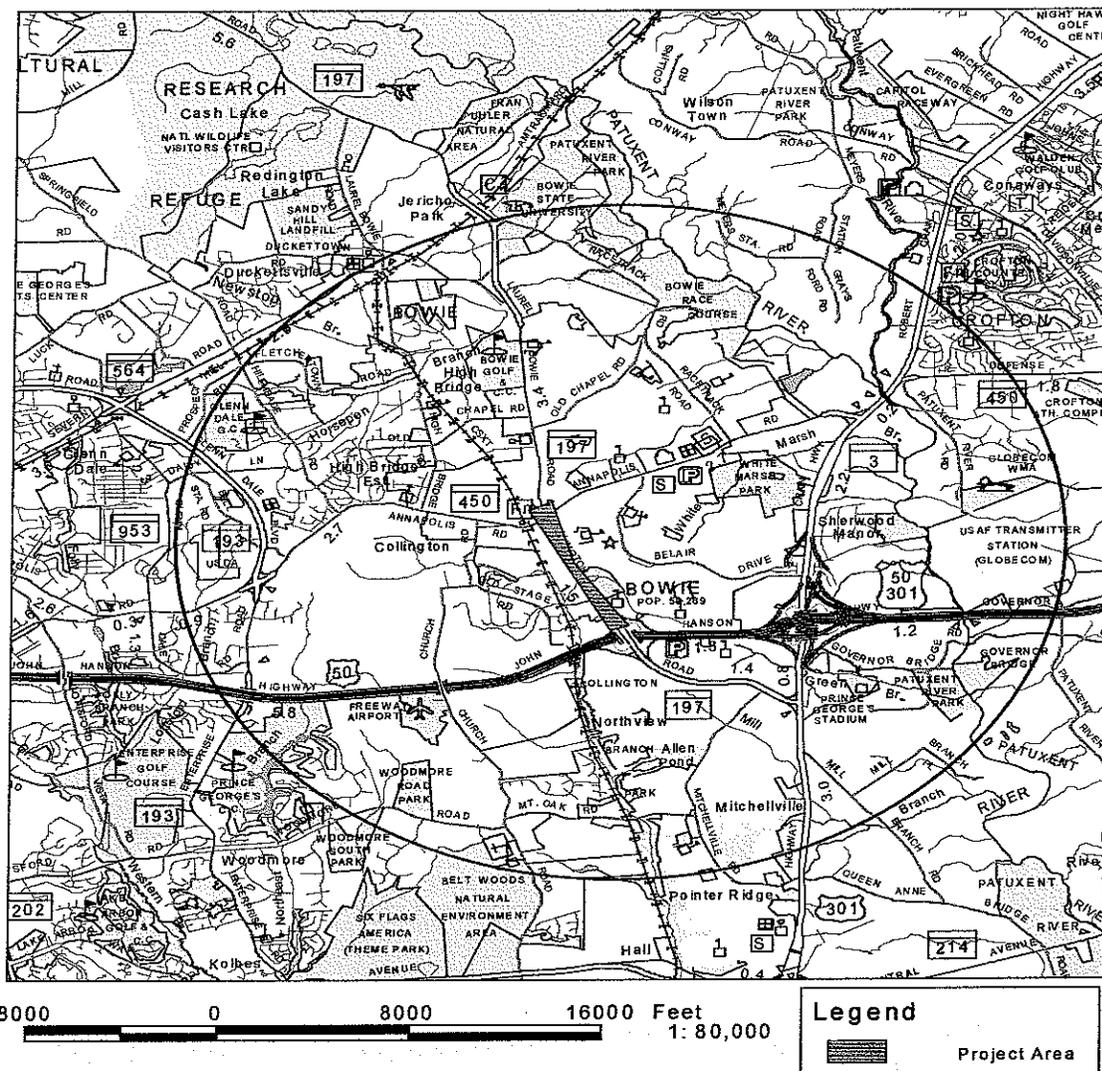
Table 3. Noise Sensitive Areas

NSA	Location	Type Structures	Barrier	Comment
1	East of MD 197 between Annapolis Road and Old Annapolis Road	17 single family residences	Yes	Along Twin Cedar Lane and Twin Court
2	East of MD 197 between Old Annapolis Road and Tulip Grove Drive	12 single-family residences	Yes	Along Twisting Lane
3	West of MD 197 on Long Ridge Lane to Lyle Lane	24 single-family residences	Yes	Includes Liberty Place
4	East of MD 197 between Tulip Grove Drive and Faith Lane	30 single-family residences	Yes	Along Folsom Lane and Federal Lane
5	West of MD 197 between Lyle Lane and south of Lerner Place	12 single-family residences	Yes	Along Long Ridge Lane, Lianan Place, and Lerner Place
6	West of MD 197 north of London Lane/Kenhill Drive intersection to south of Lerner Place	7 single-family residences	No	These homes are impacted by roadway noise, but an effective barrier would block their driveway access
7	East of MD 197 from north of Kenhill Drive to north of Lerner	Foxhill Park and Benjamin Tasker Middle School	No	The outdoor use areas are too far from the roadway noise to reach minimum impact levels

Indirect and Cumulative Effects

Indirect effects are impacts on resources that are potentially caused by land use changes induced by the project. The proposed SHA Selected Alternative will not create new land development opportunities. No new intersections are proposed, and the proposed roadway improvements are on the existing alignment. In addition, the congestion relief that the project will provide will not encourage development elsewhere within the indirect and cumulative effects (ICE) boundary (Figure 3).

Figure 3. Approximate ICE Boundary



Cumulative effects are the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.” (40 CFR 1508.7). The Bowie and Vicinity Master Plan and Sectional Map Amendment (2006) directs future employment growth to designated Mixed-Use Activity Centers and anticipates these areas will be better served by transit facilities in the future (to minimize future infrastructure needs). Therefore, development pressures on existing resources within the ICE boundary will be minimized.

Based on the goals of the master plan, future effects to communities and businesses should include transportation efficiencies and more residential and retail choices at existing and future mixed use areas. Cumulative impacts to parks and recreational facilities are not anticipated since the acreage of these areas within the 2006 Master Plan area is expected to increase over time through implementation of goals of the 2002 General Plan, the Countywide Green Infrastructure Master Plan (2005) and the Bowie and Vicinity Master Plan and Sectional Map Amendment (2006).

Implementation of the Countywide Green Infrastructure Plan will set aside more land for green infrastructure and open space along the Patuxent River and Collington Branch stream valley, thus increasing the amount of floodplain within the ICE analysis boundary. Most of the land within the ICE boundary has been developed and therefore water quality should not be further degraded as a result of development activities. Furthermore, stormwater management regulations have become an effective means of maintaining water quality in developing areas.

The remaining wetlands, streams, and floodplains that exist within the ICE boundary are designated by Prince George’s County as being regulated green infrastructure. Streams and wetlands are also regulated by the MDE and COE. Accordingly, any proposed impacts to these areas will be scrutinized by the county through the subdivision review and permitting processes, and by State and Federal agencies. It should be further noted that much of the remaining wetlands within the ICE boundary are located within existing subdivisions, and therefore there should be no further significant development pressure on those areas for the foreseeable future.

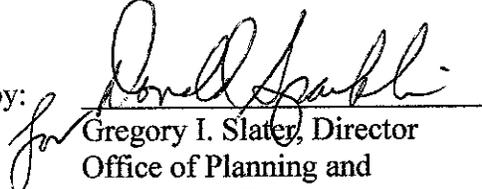
Future impacts to forest resources will be lessened due to protection afforded by the Countywide Green Infrastructure Plan, which protects natural habitat areas to meet a variety of goals. Forested areas within the ICE boundary are generally associated with the Collington Branch tributary and other stream systems that are areas identified in the Plan.

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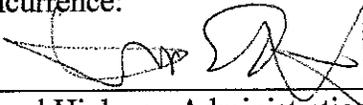
In summary, the SHA Preferred Alternative would not involve any significant environmental impacts to social, economic, natural or cultural resources. It would not induce significant foreseeable indirect or cumulative alterations in land use or affect planned growth. As such, we request your concurrence that the project remains property classified as a CE. If you agree with this determination, please indicate your approval. Additionally, your signature will constitute Location Approval for the proposed project.

Sincerely,

Neil J. Pedersen
Administrator

by: 
Gregory I. Slater, Director
Office of Planning and
Preliminary Engineering

Concurrence:



for Federal Highway Administration-DelMar Division
Division Administrator

30 DEC 09

Date

Enclosure
Attachments

cc: Ms. Felicia Alexander, Assistant Division Chief, SHA-PMD
Ms. Karen Arnold, Environmental Manager, SHA-EPLD [w/attachments]
Ms. Lourdes Castaneda, Area Engineer, FHWA DelMar Division [w/attachments]
Mr. Bruce M. Grey, Deputy Director, SHA-OPPE
Ms. Allison Grooms, Team Leader, SHA --EPLD [w/attachments]
Mr. Thomas Hinchliffe, SHA-ORE [w/attachments]
Mr. Joseph R. Kresslein, Assistant Division Chief, SHA-EPLD
Mr. Todd Nichols, Chief, SHA-EPD [w/attachments]
Mr. Darrell Mobley, District Engineer, SHA-District 3 [w/attachments]
Ms. Sue Rajan, Project Manager, SHA-PMD [w/attachments]
Mr. Mike Rowe, SHA-OFIT
Mr. Alan Straus, Project Manager, URS [w/attachments]
Ms. Nicole Washington, Assistant Division Chief, SHA-PMD