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I-270 AT WATKINS MILL ROAD

AIR QUALITY ANALYSIS TECHNICAL REPORT

February 2014

Montgomery County, Maryland



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



**MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION**

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II. AIR QUALITY BACKGROUND

The Clean Air Act (CAA) Amendments of 1990 and the Final Transportation Conformity Rule [40 CFR Parts 51 and 93] direct the U.S. Environmental Protection Agency (EPA) to implement environmental policies and regulations that will ensure acceptable levels of air quality. Both the Clean Air Act and the Final Transportation Conformity Rule affect proposed transportation projects.

According to the CAA Title I, Section 176 (c) 2; *“No federal agency may approve, accept, or fund any transportation plan, program, or project unless such plan, program, or project has been found to conform to any applicable State Implementation Plan (SIP) in effect under this act.”* The Final Conformity Rule defines conformity as; *“Conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of such standards; and that such activities will not:*

- *Cause or contribute to any new violation of any NAAQS in any area;*
- *Increase the frequency or severity of any existing violation of any NAAQS in any area; or*
- *Delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in any area.”*

To comply with the CAA, the Environmental Protection Agency (EPA) has issued Proposed Rules, Guidance Clarifications, and Final Rules concerning the Conformity Determination of fine and course particulates (PM_{2.5} and PM₁₀); and Draft and Final Rules concerning quantitative analysis of CO and PM_{2.5}, and guidance on analysis of Mobile Source Air Toxics (MSATs). Following is a summary of recent rules and clarifications from EPA and FHWA:

Transportation Conformity Rule PM_{2.5} and PM₁₀ Amendments; March 10, 2006
Final PM Qualitative Guidance Clarification; June 12, 2009
Final PM Conformity Rule; March 10, 2010
Draft Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas; May 26, 2010
Final Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas; December 20, 2010.
Final Transportation Conformity Guidance for Quantitative Hot-spot Analyses in CO Nonattainment and Maintenance Areas; December 2010
Transportation Conformity Rule Restructuring Amendments; March 2012
Transportation Conformity Regulations as of April 2012
Interim Guidance Update on MSAT Analysis in NEPA; December 6, 2012
Revised Air Quality Standards for Particle Pollution, Annual PM_{2.5} NAAQS; December 14, 2012
Update to the Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas; November 2013

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants. These pollutants, known as criteria pollutants, are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ & PM_{2.5}), sulfur dioxide (SO₂), and lead (pb). These federal standards are summarized in **Table 1**. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare, and they account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

**TABLE 1
NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)**

Pollutant	Primary/ Secondary	Standard		Form
		Level	Averaging Time	
Carbon Monoxide 76 FR 54294	Primary	9 ppm	8-hour	Not to be exceeded more than once per year
		35 ppm	1-hour	
Lead 73 FR 66964	Primary and Secondary	0.15 µg/m ³	Rolling 3-Month Average	Not to be exceeded
Nitrogen Dioxide 75 FR 6474	Primary	100 ppb	1-hour	98 th percentile, averaged over 3 years
	Primary and Secondary	53 ppb	Annual	Annual Mean
Particulate Matter (PM ₁₀) 71 FR 61144	Primary and Secondary	150 µg/m	24-hour	Not to be exceeded more than once per year on average over 3 years
Particulate Matter (PM _{2.5}) 78 FR 3086	Primary	12 µg/m ³	Annual	Annual mean averaged over 3 years
	Secondary	15 µg/m ³	Annual	Annual mean averaged over 3 years
	Primary and Secondary	35 µg/m ³	24-hour	98 th percentile, averaged over 3 years
Ozone 73 FR 16436	Primary and Secondary	0.075 ppm	8-hour	Annual fourth highest daily maximum 8-hour concentration, averaged over 3 years
Sulfur Dioxide 75 FR 35520	Primary	75 ppb	1-hour	Not to be exceeded more than once per year
	Secondary	0.5 ppm	3-hour	

Section 107 of the 1977 Clean Air Act Amendment requires that EPA publish a list of all geographic areas in compliance with the NAAQS, as well as those areas not in compliance with the NAAQS. The designation of an area is made on a pollutant-by-pollutant basis. EPA's area designations consist of: Attainment, Unclassified, Maintenance, and Nonattainment. Ambient air quality is monitored through a network of stations to determine conditions throughout the country. EPA reviews the monitoring data, and areas where air pollution levels persistently exceed the NAAQS may be designated "nonattainment" for one or more pollutants. After a nonattainment area improves conditions to meet the standard for a pollutant, it is redesignated as a maintenance area. Typically these designations are applied to entire counties or groups of counties.

In addition to the criteria pollutants for which there are NAAQS, EPA also regulates air toxics. Toxic air pollutants are those pollutants known or suspected to cause cancer or other serious health effects. 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). The Clean Air Act (CAA) identified 188 air toxics. In 2001 EPA identified a list of 21 Mobile Source Air Toxics (MSATs), and highlighted six of these MSATs as “priority” MSAT.

Gases that trap heat in the atmosphere are often referred to as greenhouse gases (GHGs). Greenhouse gases are necessary to life, as we know it, because they keep the planet’s surface warmer than it otherwise would be. This is referred to as the Greenhouse Effect. As concentrations of greenhouse gases are increasing, the Earth’s temperature appears to be increasing. The principal greenhouse gases that enter the atmosphere because of human activities include carbon dioxide, methane, nitrous oxide, and fluorinated gases.

III. ENVIRONMENTAL ANALYSIS

The I-270/Watkins Mill Road interchange project is located in Montgomery County, Maryland, which is included as a part of the Washington, DC-MD-VA Metropolitan Statistical Area (MSA). The region has been classified as marginal nonattainment with respect to the 2008 eight-hour ozone standard and moderate nonattainment with respect to the 1997 eight-hour ozone standard. In addition this MSA has been classified as a nonattainment area for the 1997 fine particulate (PM_{2.5}) standard. A portion of the MSA, election districts 4, 7 and 13 of Montgomery County, had been nonattainment for carbon monoxide; however, as of September 27, 2010 this area has been re-designated as a CO Maintenance Area. The I-270/Watkins Mill Road interchange project is in election district 9, and therefore is not in a nonattainment or maintenance area for CO.

Transportation programs and plans must be evaluated for “conformity” to the applicable State Implementation Plan (SIP) provisions before projects can receive Federal funding. In addition, they must be in the current Constrained Long Range Plan (CLRP) and Transportation Improvement Program (TIP). A TIP generally presents projects anticipated over the next several years while the CLRP covers a longer period. A Metropolitan Planning Organization (MPO) is designated to develop the TIP and CLRP for a region, and to document their conformity with SIP provisions. For the Washington, DC MSA region, the National Capital Region Transportation Planning Board (NCRTPB), which is part of the Metropolitan Washington Council of Governments (MWCOC), serves as the MPO.

As the MPO, NCRTPB develops the TIP and CLRP for the region, including Montgomery County. Furthermore, it performs the related regional conformity analysis. Updates to the CLRP, referred to as the *2013 National Capital Region’s Financially Constrained Long-Range Transportation Plan*, were approved by NCRTPB on July 17, 2013. The latest TIP, covering the period FY 2013 to 2018, was also approved by NCRTPB on July 17, 2013. An updated regional conformity analysis covering both the TIP and CLRP was also approved on July 17, 2013.

At a regional level, a project is considered to be conforming if it is a part of a conforming TIP and CLRP. The proposed project is included in the Washington Metropolitan Region CLRP as project ID 1188 and the FY 2013-2018 TIP under TIP ID 3044.

IV. ENVIRONMENTAL CONSEQUENCES

In addition to the regional conformity analysis, any Federally funded project within a nonattainment or maintenance area for carbon monoxide or particulate matter must be analyzed at the project-level. At the project level, the pollutants could possibly have localized (“hot-spot”) levels above the

criteria. To satisfy the NEPA air quality assessment purpose, it has been common to analyze project-level CO conditions. The I-270/Watkins Mill Road interchange project is not in a CO nonattainment or maintenance area; therefore, a qualitative CO assessment has been included. Since Montgomery County is a nonattainment area for PM_{2.5}, a project-specific PM_{2.5} assessment has also been provided.

The Division of Air Quality, within the Maryland Department of the Environment is responsible for implementing and enforcing regulations to ensure that the air that Maryland citizens breathe is clean and healthful. This mission is accomplished through several methods, including air pollution monitoring. The CO air monitoring stations nearest to the study area are located at the MDE Howard University Laboratory site in Beltsville, Maryland, and the McMillan PAMS (Portfolio Analysis and Management System) site in N.W. Washington, D.C. The MDE PM_{2.5} air monitoring stations nearest to the study area are located at the MDE Howard University Laboratory site in Beltsville, Maryland and the Lathrop E. Smith Environmental Education Center in Rockville, Maryland. These sites are all in EPA Region 3. Monitored air quality data within or near the study area for the years 2010-2012 is presented in **Table 2**. For details of monitored data see **Appendix B**.

TABLE 2

Ambient Air Quality Monitoring Data 2010-2012								
			Site 11-001-1143 2500 1 st Street N.W. Washington, D.C.			Site 24-033-0030 12003 Old Baltimore Pike Beltsville, Maryland		
			2010	2011	2012	2010	2011	2012
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	-	3.1	2.5	1.5	1.7	1.3
		2nd Maximum	-	3	2.4	1.3	1.3	1.2
		# of Exceedances	-	0	0	0	0	0
	8-Hour	Maximum	-	2.5	1.9	1	1.1	1.2
		2nd Maximum	-	2.4	1.8	1	0.8	0.9
		# of Exceedances	-	0	0	0	0	0
			Site 24-033-0030 12003 Old Baltimore Pike Beltsville, Maryland			Site 24-031-3001 5110 Meadows Lane Rockville, Maryland		
			2010	2011	2012	2010	2011	2012
Particulate Matter [ug/m ³]	PM _{2.5}	98th Pct. 24-Hour	27	26	25	28	25	23
		# of Exceedances	0	0	0	0	0	0
		Mean Annual	12.1	11.6	11.3	11.1	10.9	10.3
		# of Exceedances	0	0	0	0	0	0

*Exceeds the primary annual PM_{2.5} NAAQS of 12 µg/m³

1. Carbon Monoxide (CO) Assessment

As mentioned, a portion of the Washington, DC-MD-VA Metropolitan Statistical Area (MSA) is considered to be a moderate maintenance area in terms of carbon monoxide (CO). This maintenance area encompasses Election Districts 4, 7 and 13 in Montgomery County and Election Districts 2, 6, 12, 16, 17 and 18 in Prince George's County. The I-270/Watkins Mill Road interchange

project area is in Election District 9 of Montgomery County. There has not been a local violation of the CO standard since 1988. Code of Federal Regulations Title 40, Part 93-Subpart A (40 CFR 93A) implements section 176(c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 *et seq.*). Paragraph 40 CFR 93.102 (b): *Geographic Applicability* states that the provisions of the subpart apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. Since the study area is not in a CO nonattainment or maintenance area, a project level hot-spot conformity determination in conformance with 40 CFR 93.116 is not required. Therefore, a qualitative assessment considering local factors in conformance with 40 CFR 93.123(a)(2)(ii) is provided hereinafter.

As shown in Table 2, the maximum 1-hour monitored CO concentration between 2010 and 2012 is 3.1 ppm at site 11-001-1143 in 2011, located in Washington, D.C. This concentration is 8.8 percent of the 1-hour CO NAAQS of 35.0 ppm. The maximum 8-hour monitored CO concentration between 2010 and 2012 is 2.5 ppm at this same site in 2011, which is 27.8 percent of the 8-hour CO NAAQS of 9.0 ppm.

A review of traffic data summarized in **Table 3** (see **Appendix C** for details), demonstrates that the I-270/Watkins Mill Road interchange project does not result in significant traffic volumes, or changes in vehicle mix or other factors that would cause an increase in CO emissions relative to the No-Build conditions along I-270. This project has been designed to relieve congestion, rather than increase roadway capacity; therefore, there is no noticeable change expected in the No-Build and Build traffic volumes or vehicle mix.

**TABLE 3
TRAFFIC DATA FOR I-270 AT WATKINS MILL ROAD**

Scenario	Existing (2013) ADT	Existing (2013) Truck Percentage	Existing (2013) # of Trucks	Prop. (2033) ADT	Prop. (2033) Truck Percentage	Prop. (2033) # of Trucks
No Build	166,000	8	13,280	229,700	8	18,376
Build	-	-	-	229,700	8	18,376

In conclusion, because the data in **Table 2** demonstrates monitored CO concentrations are a small percentage of the CO NAAQS, and data in **Table 3** demonstrates the vehicle mix will not be altered by the project, this project will not cause or contribute to a new violation of the CO NAAQS.

2. Particulate Matter (PM_{2.5}) Assessment

The project is located in Montgomery County, which is in the Washington DC-MD-VA Fine Particulate Matter (PM_{2.5}) nonattainment Area. This area was designated as nonattainment for PM_{2.5} based on 1997 NAAQS on January 5, 2005 by EPA. This designation became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Transportation conformity for the PM_{2.5} standards applied on April 5, 2006, after the one-year grace period provided by the Clean Air Act. On November 13, 2009 EPA designated nonattainment areas based on the 2006 24-hour PM_{2.5} NAAQS. The Washington DC-MD-VA region was not designated as nonattainment for the 2006 standard, therefore the designations based on the 1997 NAAQS remain in effect.

On March 10, 2006, EPA issued amendments to the Transportation Conformity Rule to address localized impacts of particulate matter: "*PM_{2.5} and PM₁₀ Hot-Spot Analyses in Project-level Transportation Conformity Determinations for the New PM_{2.5} and Existing PM₁₀ National Ambient Air*

Quality Standards” (71 FR 12468). These rule amendments require the assessment of localized air quality impacts of Federally funded or approved transportation projects in PM₁₀ and PM_{2.5} nonattainment and maintenance areas. On December 20, 2010, EPA issued “*Final Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas*,” (75 FR 79370), which helps state and local agencies complete quantitative PM_{2.5} and PM₁₀ hot-spot analyses for project-level transportation conformity determinations of certain highway and transit projects. This guidance included a two-year grace period until December 20, 2012.

Projects that require hotspot analysis for PM_{2.5} are those that are *Projects of Air Quality Concern* as enumerated in 40 CFR 93.123(b)(1):

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

As discussed in the examples of the preamble to the March 10, 2006 Final Rule for PM_{2.5} and PM₁₀ Hot-Spot Analyses in Project-Level Transportation Conformity Determinations (71 FR 12491), for projects involving the expansion of an existing highway, 40 CFR 93.123(b)(1)(i) has been interpreted as applying only to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on the existing facility.

Determination as to whether the I-270/Watkins Mill Road interchange project is a *Project of Air Quality Concern* will be finalized by Interagency Consultation. To assist with the Interagency Consultation process, SHA has prepared the following assessment of the proposed improvements:

- The I-270/Watkins Mill Road interchange project is considered under the following paragraph of 40 CFR 93:
 - 40 CFR 92.123(b)(1)(i), as amended, which includes “*New highway projects that have a significant number of diesel vehicles, and expanded projects that have a significant increase in the number of diesel vehicles.*”
- The proposed improvements do not meet the criteria set forth in 40 CFR 93.123(b)(1)(i) to be considered a project of “air quality concern” based on the following considerations:
 - The project consists of constructing a fully access controlled interchange between I-270 and Watkins Mill Road.
 - As shown in **Table 3**, there will not be a significant increase in trucks between the No-Build and Build conditions, as the truck percentage along I-270 at the intersection is projected to remain at 8% with the Build conditions. The expected number of trucks in both Build and No-Build conditions is 18,376.

- The construction will not result in meaningful changes between No-Build and Build traffic volumes or vehicle mix. A review of the traffic volumes in **Table 3** demonstrates that there will not be a "significant" increase in the number of vehicles along I-270 in the build conditions.
- A review of the considerations discussed above demonstrates that there will not be a "significant" increase in the number of trucks from the No-Build condition to the Build. This project has been designed to relieve congestion, rather than increase corridor capacity; therefore, there is no noticeable change expected in the No-Build and Build traffic volumes or vehicle mix.
- In addition, a qualitative assessment considering local factors in conformance with 40 CFR 93.123(b)(2) is provided hereinafter. As shown in Table 2, the maximum 98th percentile averaged over three years monitored PM_{2.5} concentration between 2010 and 2012 is 26 ug/m³ at site 24-033-0030, located in Beltsville, Maryland. This concentration is 74.3 percent of the PM_{2.5} NAAQS of 35.0 ug/m³. The maximum Mean Annual averaged over three years monitored PM_{2.5} concentration between 2010 and 2012 is 11.7 ug/m³ at this same site, which is less than the PM_{2.5} primary NAAQS of 12 ug/m³.
- Section 176(c) of the Clean Air Act and the Federal Conformity Rule requires that transportation plans and programs conform to the intent of the air quality state implementation plan (SIP) through a regional emissions analysis in PM_{2.5} nonattainment areas. The National Capital Regional Transportation Planning Board (NCRTPB) serves as the Metropolitan Planning Organization (MPO), and therefore it is responsible for the regional conformity determination.
- The currently approved NCRTPB Constrained Long Range Plan (CLRP), referred to as the *2013 Constrained Long Range Plan*, and the *2013-2018 Transportation Improvement Program* (TIP), have been determined to conform to the requirements of the Clean Air Act Amendments of 1990. These represent the currently conforming CLRP and TIP in accordance with 40 CFR 93.114. The proposed project is included in the July 17, 2013 Updates to the 2013 CLRP (ID 1188) and the FY 2013 to 2018 TIP (ID 3044).
- Based on review and analysis as discussed above, it is determined that the proposed I-270/Watkins Mill Road interchange will meet the Clean Air Act and 40 CFR 93.109 requirements for Fine Particulate Matter – PM_{2.5}. These requirements are met without a hot-spot analysis because the project has not been found to be a project of air quality concern as defined under 40 CFR 93.123(b)(1). The project will not cause or contribute to a new violation of the PM_{2.5} NAAQS, or increase the frequency or severity of an existing violation.

3. MSAT Assessment

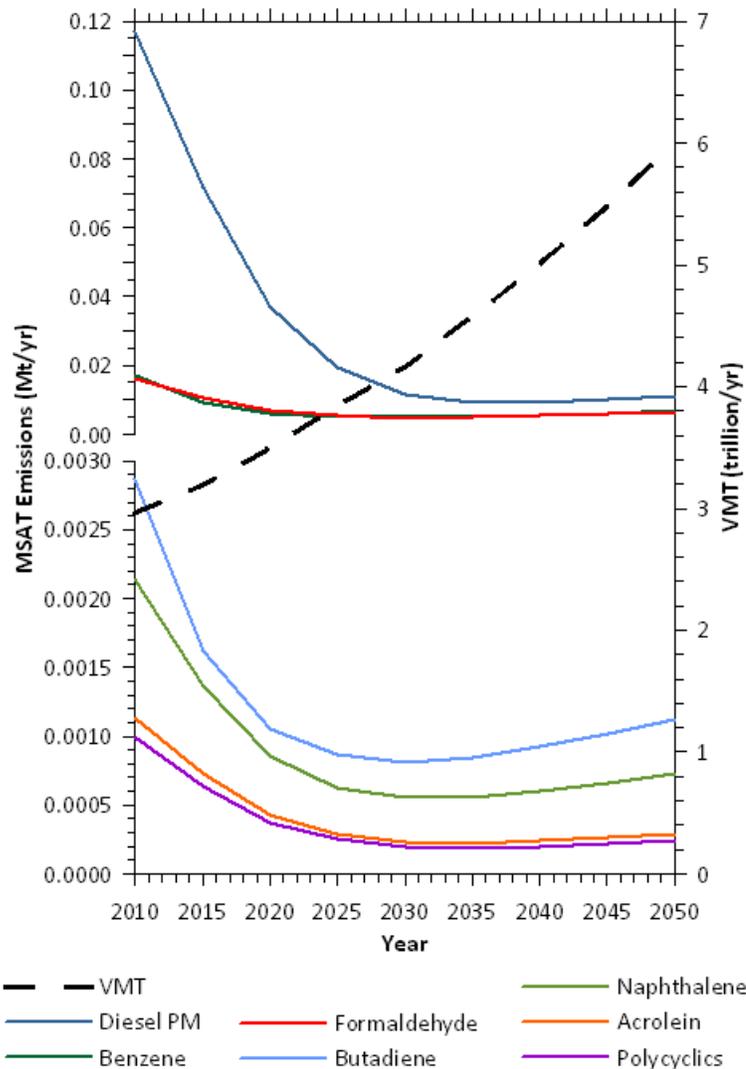
The Federal Highway Administration (FHWA) *Guidance Update on Mobile Source Air Toxic Analysis in NEPA* requires an assessment of Mobile Source Air Toxics (MSATs) under specific conditions. The EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers. These seven MSATs are: acrolein; benzene; 1,3-butadiene; diesel exhaust (organic gases and diesel particulate matter); formaldehyde; naphthalene; and polycyclic organic matter. Since the projected No-Build and Build traffic volumes and vehicle mixes are substantially the same, as reflected in **Table 3**, the project will have no meaningful impacts on traffic volumes or vehicle mixes. Therefore in accordance with the above referenced FHWA guidance, the project would be considered a **Project with No Meaningful Potential MSAT Effects**.

The purpose of this project is to relieve existing congestion at the I-270/MD 124 interchange and intersection as well as provide access from I-270 to the Metropolitan Grove Road (MARC) commuter rail station. The proposed work includes construction of a new structure carrying Watkins Mill Road over I-270 as well as interchange ramps connecting I-270 to Watkins Mill Road. The proposed work also includes relocating the existing interchange ramps from southbound I-270 to MD 124 and performing stream restoration work along an unnamed tributary to Seneca Creek that roughly parallels I-270 to the south.

This project has been determined to generate minimal air quality impacts for CAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the No-Build alternative.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 80 percent in the total annual emission rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 100 percent (see **Figure 2**). This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

**FIGURE 2:
NATIONAL MSAT EMISSION TRENDS 1999 - 2050
FOR VEHICLES OPERATING ON ROADWAYS
USING EPA's MOVES2010b MODEL**



Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.
Source: EPA MOVES2010b model runs conducted during May - June 2012 by FHWA.

4. Greenhouse Gas Assessment

From a NEPA perspective, it is analytically problematic to conduct a project level cumulative effects analysis of greenhouse gas emissions on a global-scale problem. Also, while Criteria Pollutant emissions last in the atmosphere for months, CO₂ emissions remain in the atmosphere far longer - over 100 years - and therefore require a much more sustained, intergenerational effort. Finally, due to the interactions between elements of the transportation system as a whole, project-level emissions analyses would be less informative than ones conducted at regional, state, or national levels. Because of these concerns, FHWA concluded that the CO₂ emissions cannot be usefully evaluated in the same way that other vehicle emissions are addressed. However, it can be stated

that estimates of CO₂ emissions, a primary factor in greenhouse gases, are based on the amount of direct energy required. The direct energy values represent the energy required for vehicle propulsion. This energy is a function of traffic characteristics such as volume, speed, distance traveled, vehicle mix, and thermal value of the fuel being used. A review of traffic data for the project reveals that, because there will not be a significant change in traffic volumes from the No-Build to Build conditions, CO₂ emission burdens will most likely result in almost no change as compared to the existing conditions.

In 2009, Maryland Governor Martin O'Malley and the Maryland General Assembly passed the Greenhouse Gas Emission Reduction Act of 2009 (GGRA). The law requires the State to develop and implement a Plan (the GGRA Plan or the Plan) to reduce greenhouse gas (GHG) emissions 25 percent from a 2006 baseline by 2020. The Greenhouse Gas Emissions Reduction Act Plan was published July 25, 2013. The Plan puts the State on track to achieve the 25 percent GHG reduction required by the law while also creating jobs and improving Maryland's economy. Initiatives outlined in the Plan also will help with other environmental priorities, including restoration of the Chesapeake Bay, improving air quality and other critical energy and national security issues.

5. Construction Impacts

The construction phase of the proposed project has the potential to impact the local ambient air quality by generating fugitive dust through activities such as demolition and materials handling. The State Highway Administration has addressed this possibility by establishing "Specifications for Construction and Materials" which specifies procedures to be followed by contractors involved in site work. The Maryland Air and Radiation Management Administration was consulted to determine the adequacy of the "Specifications" in terms of satisfying the requirements of the "Regulations Governing the Control of Air Pollution in the State of Maryland." The Maryland Air and Radiation Management Administration found the specifications to be consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland Regulations 10.18.06.03 D) would be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area. Mobile source emissions can also be minimized during construction by not permitting idling delivery trucks or other equipment during periods of unloading or other non-active use. The existing number of traffic lanes should be maintained during construction, to the maximum extent possible, and construction schedules should be planned in a manner that will not create traffic disruption and increase air pollutants. Application of these measures will ensure that construction impact of the project is insignificant.

V. AGENCY COORDINATION / INTERAGENCY CONSULTATION

By email dated January 13, 2013, copies of this air quality analysis were circulated to the Federal Highway Administration (FHWA), the Environmental Protection Agency (EPA), the Maryland Department of the Environment (MDE), and the Metropolitan Washington Council of Governments (MWCOC) for a 15-day Interagency Consultation review and comment period. Response emails were received from EPA, MDE, and FHWA. All responding agencies agreed the project is not a project of air quality concern and does not require a hot-spot analysis. FHWA noted a minor editorial comment, which has been corrected. This Air Quality Analysis will be placed on SHA's website for a 15 day public review and comment period. Refer to **Appendix D** for Interagency Consultation correspondence.

APPENDIX

A: PROJECT MAPPING

B: MONITORED AMBIENT AIR QUALITY DATA 2010-2012

C: TRAFFIC DATA

D: INTERAGENCY CONSULTATION CORRESPONDENCE

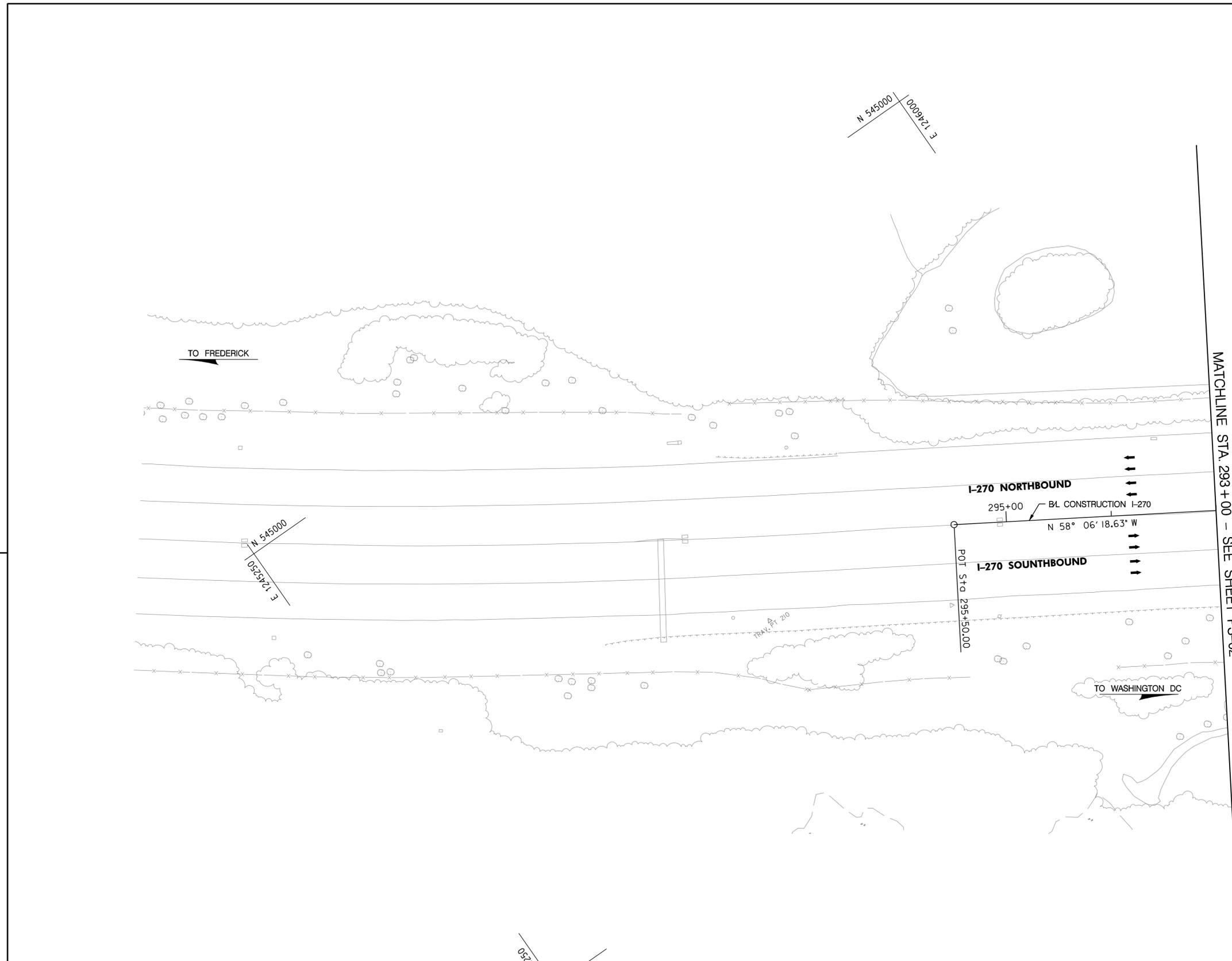
APPENDIX A: PROJECT MAPPING

QUANTITIES UNDER CONSTRUCTION



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED



MATCHLINE STA. 293 + 00 - SEE SHEET PS-02

TO FREDERICK

TO WASHINGTON DC

N 545000
E 1245250

N 545000
E 1245000

N 544500
E 1245250

LEGEND

- CONCRETE BRIDGE
- FULL DEPTH PAVING
- REMOVAL OF EXISTING PAVEMENT



BY: WagnerM -

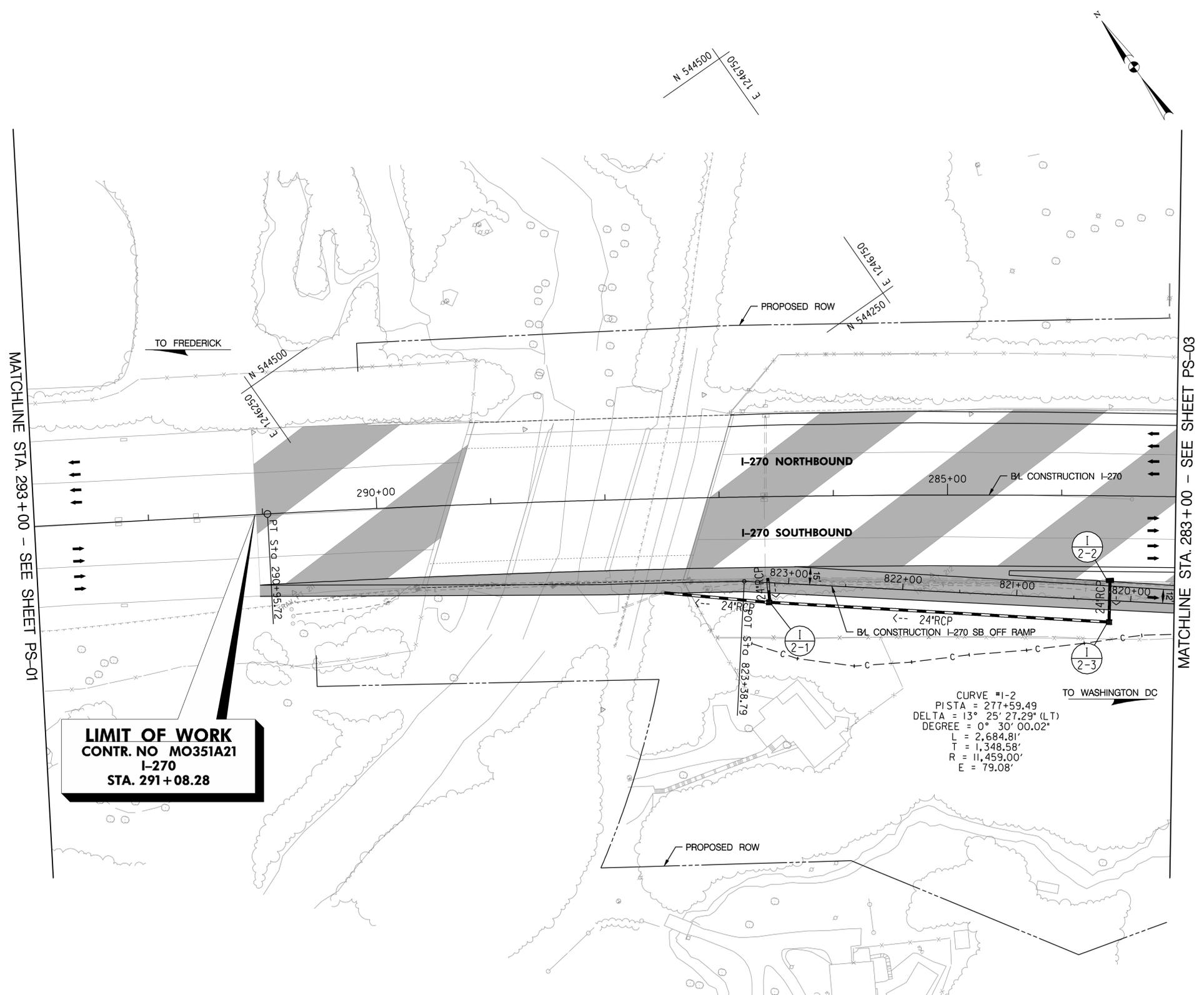
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DESIGNED BY	MAW	COUNTY	MONTGOMERY
DRAWN BY	JMN	LOGMILE	
CHECKED BY	CHB	HORIZONTAL SCALE	
F.A.P. NO.	SEE TITLE SHEET	VERTICAL SCALE	
DRAWING NO.	PS-01	OF	10
		SHEET NO.	14 OF 117

DRILL HOLES

DRILL HOLES

DRILL HOLES

BORDER REV. DATE: March 27, 2007



MATCHLINE STA. 293+00 - SEE SHEET PS-01

MATCHLINE STA. 283+00 - SEE SHEET PS-03

LIMIT OF WORK
 CONTR. NO. MO351A21
 I-270
 STA. 291+08.28

CURVE #1-2
 PISTA = 277+59.49
 DELTA = 13° 25' 27.29" (LT)
 DEGREE = 0° 30' 00.02"
 L = 2,684.81'
 T = 1,348.58'
 R = 11,459.00'
 E = 79.08'

LEGEND

	CONCRETE BRIDGE
	FULL DEPTH PAVING
	REMOVAL OF EXISTING PAVEMENT

QUANTITIES UNDER CONSTRUCTION

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED

REVISIONS	ROADWAY PLAN SHEETS	
	SCALE 1"=50'	ADVERTISED DATE _____ CONTRACT NO. MO3515170
	DESIGNED BY MAW	COUNTY MONTGOMERY
	DRAWN BY JMN	LOGMILE _____
	CHECKED BY CHB	HORIZONTAL SCALE _____
	F.A.P. NO. SEE TITLE SHEET	VERTICAL SCALE _____
	DRAWING NO. PS-02 OF 10	SHEET NO. 15 OF 117

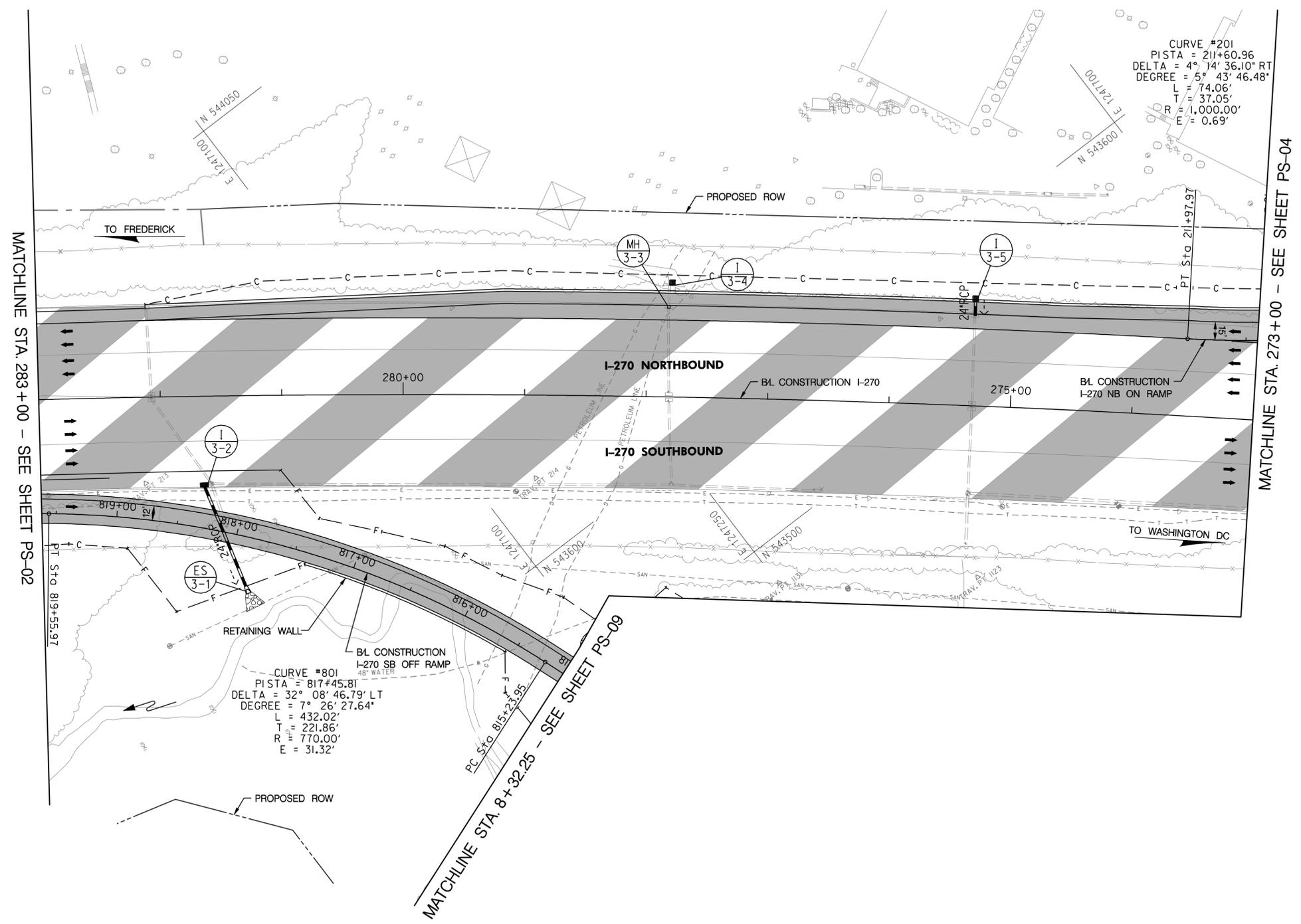
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BY: WagnerM





BORDER REV. DATE: March 27, 2007



QUANTITIES UNDER CONSTRUCTION

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED



BY: WagnerM

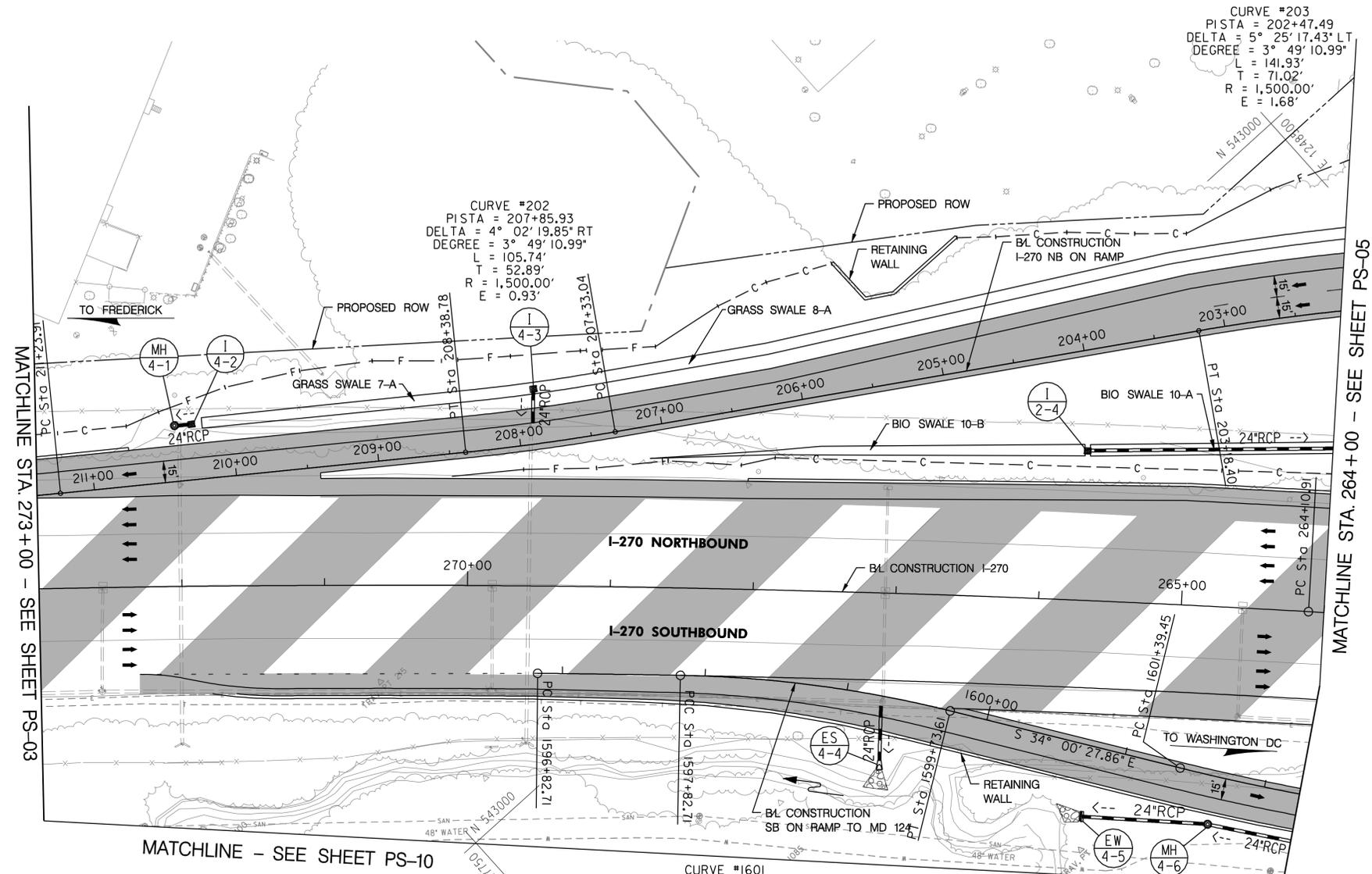
QUANTITIES UNDER CONSTRUCTION

DRILL HOLES

DRILL HOLES

DRILL HOLES

BORDER REV. DATE: March 27, 2007



CURVE #202
 PISTA = 207+85.93
 DELTA = 4° 02' 19.85" RT
 DEGREE = 3° 49' 10.99"
 L = 105.74'
 T = 52.89'
 R = 1,500.00'
 E = 0.93'

CURVE #203
 PISTA = 202+47.49
 DELTA = 5° 25' 17.43" LT
 DEGREE = 3° 49' 10.99"
 L = 141.93'
 T = 71.02'
 R = 1,500.00'
 E = 1.68'

CURVE #1601
 PISTA = 1597+32.71
 DELTA = 0° 30' 09.66" RT
 DEGREE = 0° 30' 09.66"
 L = 100.00'
 T = 50.00'
 R = 11,398.00'
 E = 0.11'

CURVE #1602
 PISTA = 1598+78.56
 DELTA = 12° 52' 03.61" RT
 DEGREE = 6° 44' 26.45"
 L = 190.90'
 T = 95.85'
 R = 850.00'
 E = 5.39'

CURVE #1603
 PISTA = 1602+64.45
 DELTA = 9° 31' 39.65" LT
 DEGREE = 3° 49' 10.99"
 L = 249.43'
 T = 125.01'
 R = 1500.00'
 E = 5.20'

MATCHLINE STA. 273+00 - SEE SHEET PS-03

MATCHLINE STA. 264+00 - SEE SHEET PS-05

MATCHLINE - SEE SHEET PS-10

MATCHLINE - SEE SHEET PS-11

LEGEND	
	CONCRETE BRIDGE
	FULL DEPTH PAVING
	REMOVAL OF EXISTING PAVEMENT



BY: WagnerM

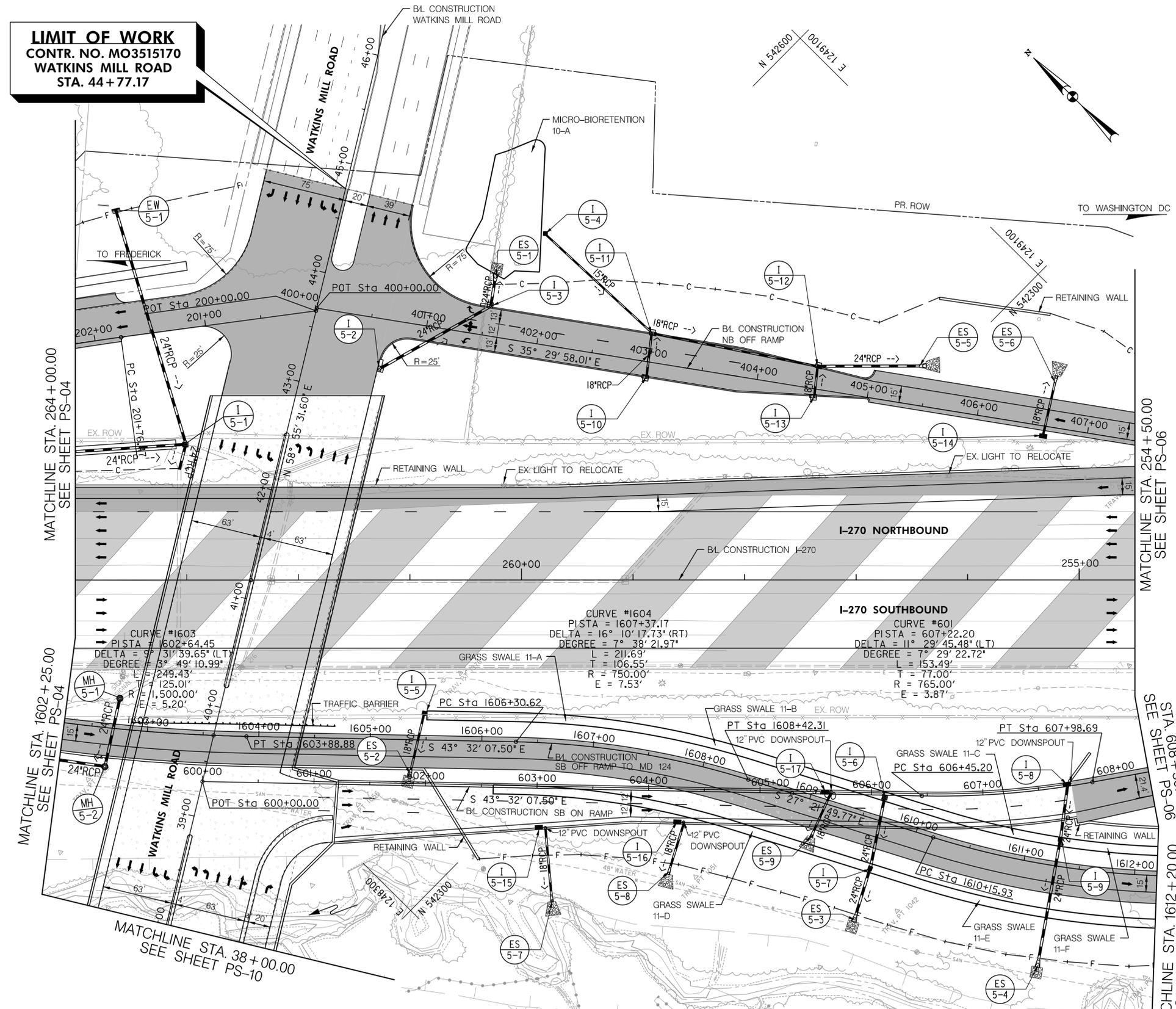
SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED

REVISIONS	ROADWAY PLAN SHEETS	
	SCALE	ADVERTISED DATE
	CONTRACT NO.	M03515170
	DESIGNED BY	MAW
	COUNTY	MONTGOMERY
	DRAWN BY	JMN
	LOGMILE	
	CHECKED BY	CHB
	HORIZONTAL SCALE	
	F.A.P. NO.	SEE TITLE SHEET
	VERTICAL SCALE	
	DRAWING NO.	PS - 04
	OF	10
	SHEET NO.	17 OF 117

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LIMIT OF WORK
 CONTR. NO. MO3515170
 WATKINS MILL ROAD
 STA. 44+77.17



QUANTITIES UNDER CONSTRUCTION

LEGEND

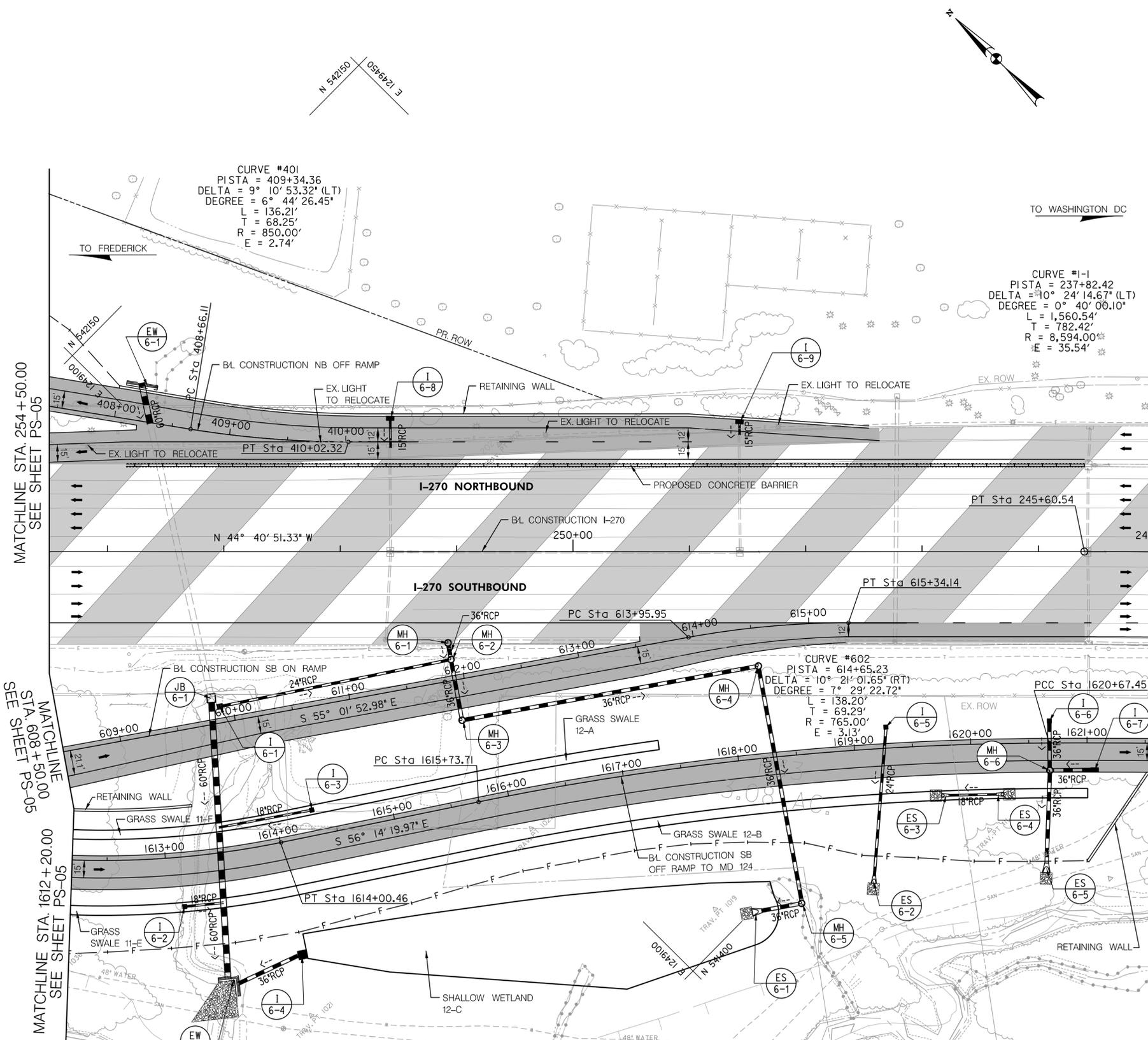
	CONCRETE BRIDGE
	FULL DEPTH PAVING
	GRINDING AND RESURFACING
	REMOVAL OF EXISTING PAVEMENT



BY: yllu -

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SCALE 1" = 50'		ADVERTISED DATE	CONTRACT NO. MO3515170
DESIGNED BY	YLIU	COUNTY	MONTGOMERY
DRAWN BY	YLIU	LOGMILE	
CHECKED BY	BDP	HORIZONTAL SCALE	
F.A.P. NO.	SEE TITLE SHEET	VERTICAL SCALE	
DRAWING NO.	PS-05	OF	10
		SHEET NO.	18 OF 117

QUANTITIES UNDER CONSTRUCTION



MATCHLINE STA. 254+50.00 SEE SHEET PS-05
 MATCHLINE STA. 608+50.00 SEE SHEET PS-05
 MATCHLINE STA. 1612+20.00 SEE SHEET PS-05

MATCHLINE STA. 245+00.00 - SEE SHEET PS-07

LEGEND

	CONCRETE BRIDGE
	FULL DEPTH PAVING
	GRINDING AND RESURFACING
	REMOVAL OF EXISTING PAVEMENT



BY: yllu -

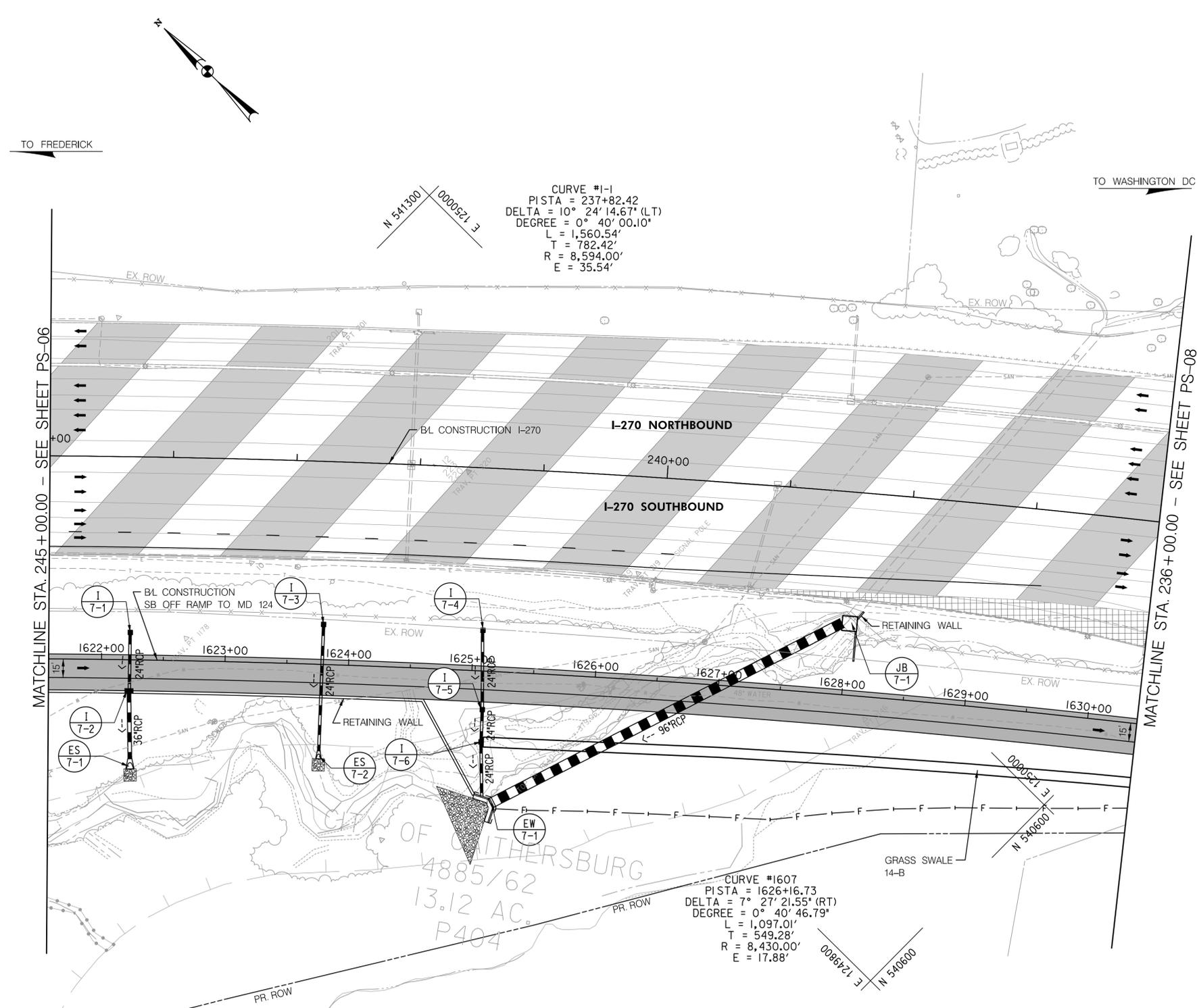


STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED

REVISIONS		ROADWAY PLAN SHEETS	
SCALE 1" = 50'		ADVERTISED DATE	CONTRACT NO. MO3515170
DESIGNED BY	YLIU	COUNTY	MONTGOMERY
DRAWN BY	YLIU	LOGMILE	
CHECKED BY	BDP	HORIZONTAL SCALE	
F.A.P. NO.	SEE TITLE SHEET	VERTICAL SCALE	
DRAWING NO.	PS-06	OF	10
		SHEET NO.	19 OF 117

QUANTITIES UNDER CONSTRUCTION



MATCHLINE STA. 245+00.00 - SEE SHEET PS-06

MATCHLINE STA. 236+00.00 - SEE SHEET PS-08

LEGEND

	CONCRETE BRIDGE
	FULL DEPTH PAVING
	GRINDING AND RESURFACING
	REMOVAL OF EXISTING PAVEMENT

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 HIGHWAY DESIGN DIVISION

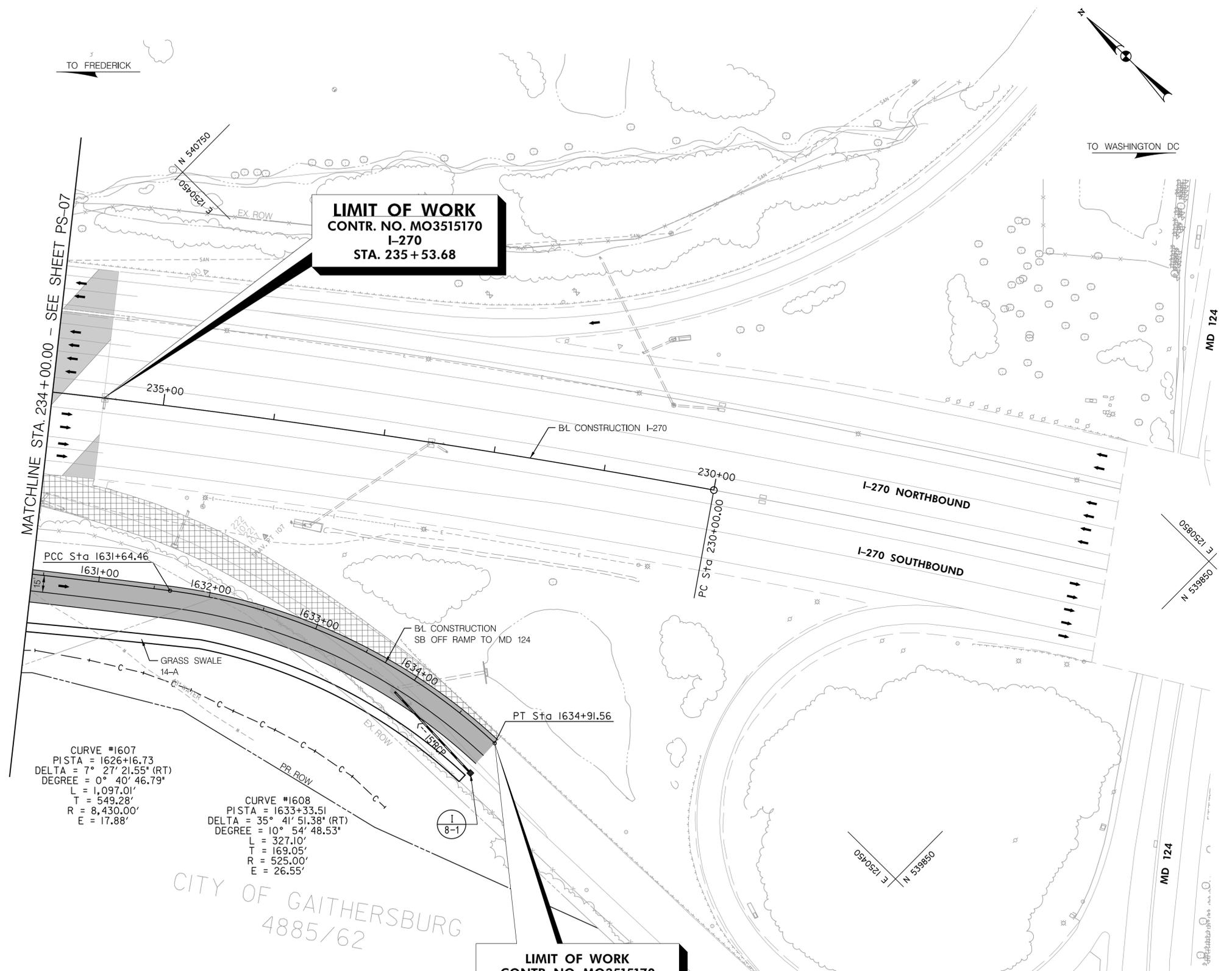
I-270 AT WATKINS MILL ROAD EXTENDED

REVISIONS		ROADWAY PLAN SHEETS	
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DESIGNED BY	YLIU	COUNTY	MONTGOMERY
DRAWN BY	YLIU	LOGMILE	
CHECKED BY	BDP	HORIZONTAL SCALE	
F.A.P. NO.	SEE TITLE SHEET	VERTICAL SCALE	
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BY: yliu

GF/PB
 AMERICAS, INC.
 A Joint Venture



QUANTITIES UNDER
CONSTRUCTION

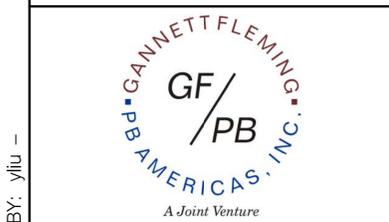


STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED

REVISIONS		ROADWAY PLAN SHEETS	
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DESIGNED BY	YLIU	COUNTY	MONTGOMERY
DRAWN BY	YLIU	LOGMILE	
CHECKED BY	BDP	HORIZONTAL SCALE	
F.A.P. NO.	SEE TITLE SHEET	VERTICAL SCALE	
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		SHEET NO.	21 OF 117

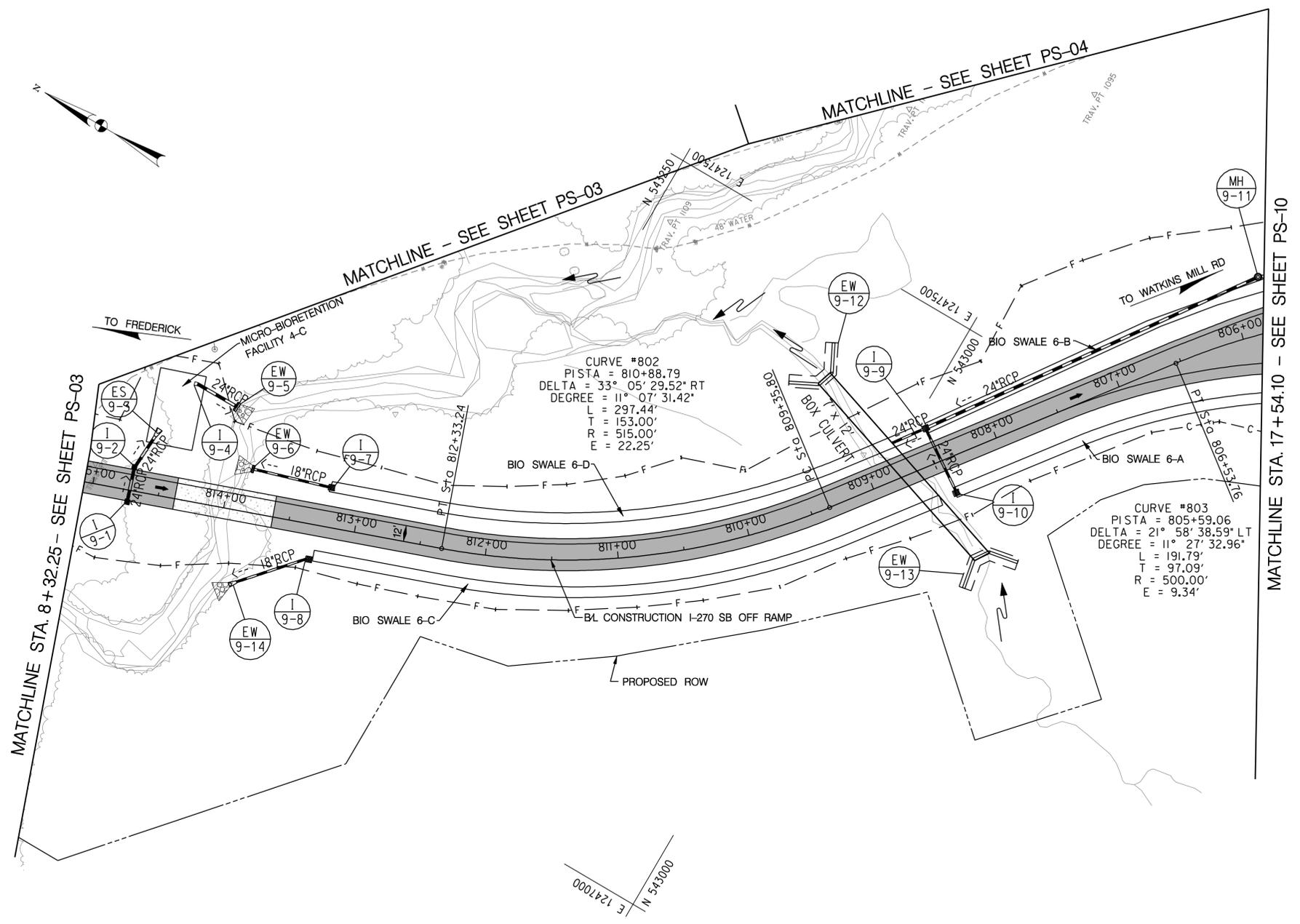
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LEGEND

	CONCRETE BRIDGE
	FULL DEPTH PAVING
	GRINDING AND RESURFACING
	REMOVAL OF EXISTING PAVEMENT

BY: yliu



QUANTITIES UNDER CONSTRUCTION

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED

LEGEND

	CONCRETE BRIDGE
	FULL DEPTH PAVING
	REMOVAL OF EXISTING PAVEMENT



BY: WagnerM

REVISIONS		ROADWAY PLAN SHEETS	
SCALE 1" = 60'		ADVERTISED DATE	CONTRACT NO. M03515170
DESIGNED BY	MAW	COUNTY	MONTGOMERY
DRAWN BY	JMN	LOGMILE	
CHECKED BY	CHB	HORIZONTAL SCALE	
F.A.P. NO.	SEE TITLE SHEET	VERTICAL SCALE	
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		SHEET NO.	22 OF 117

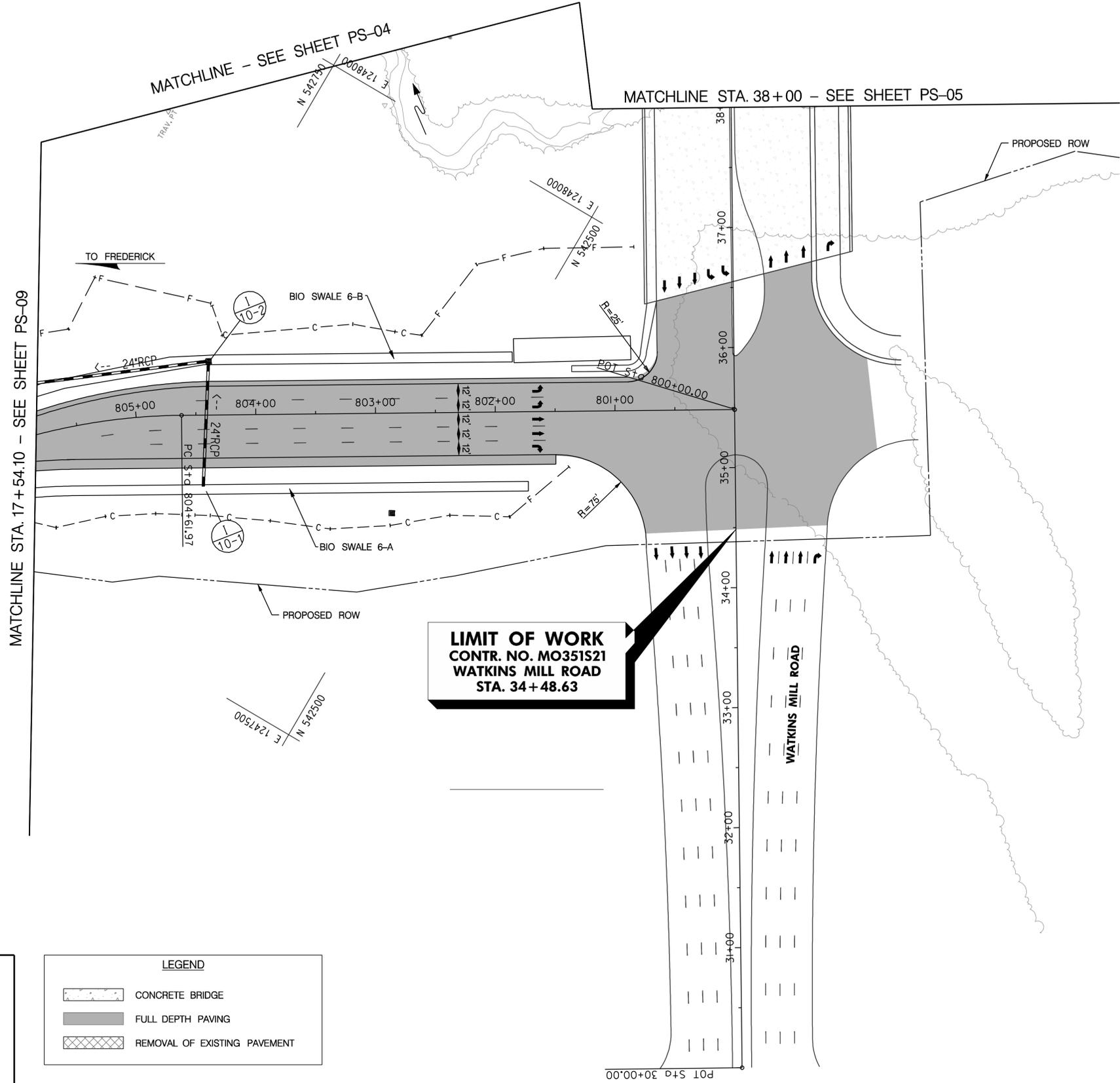
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QUANTITIES UNDER CONSTRUCTION



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY DESIGN DIVISION

I-270 AT WATKINS MILL ROAD EXTENDED



MATCHLINE STA. 17+54.10 - SEE SHEET PS-09

MATCHLINE - SEE SHEET PS-04

MATCHLINE STA. 38+00 - SEE SHEET PS-05

**LIMIT OF WORK
CONTR. NO. MO351S21
WATKINS MILL ROAD
STA. 34+48.63**

LEGEND

	CONCRETE BRIDGE
	FULL DEPTH PAVING
	REMOVAL OF EXISTING PAVEMENT



BY: WagnerM

DRILL HOLES

DRILL HOLES

DRILL HOLES

BORDER REV. DATE: March 27, 2007

REVISIONS	ROADWAY PLAN SHEETS	
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	DESIGNED BY MAW	COUNTY MONTGOMERY
	DRAWN BY JMN	LOGMILE _____
	CHECKED BY CHB	HORIZONTAL SCALE _____
	F.A.P. NO. SEE TITLE SHEET	VERTICAL SCALE _____
	DRAWING NO. PS-10 OF 10	SHEET NO. 23 OF 117

APPENDIX B: MONITORED AMBIENT AIR QUALITY DATA 2010-2012

Monitor Values Report

Geographic Area: Washington-Arlington-Alexandria, DC-VA-MD-WV

Pollutant: PM2.5

Year: 2010

Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	352	35.8	33.8	33.1	29.6	28	11.1	None	3	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Not in a city	Montgomery	MD	03
24-HR BLK AVG	352	39.5	38.7	38.1	32.6	27	12.1	None	3	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems.

<http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Washington-Arlington-Alexandria, DC-VA-MD-WV

Pollutant: PM2.5

Year: 2011

Exceptional Events: Included (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	305	32.4	30.1	30	26.3	24	10.8	None	4	110010043	2500 1st Street, N.W. Washington Dc	Washington	District of Columbia	DC	03
24-HR BLK AVG	331	31.8	30.5	30.2	29.9	25	10.9	None	3	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Not in a city	Montgomery	MD	03
24-HR BLK AVG	344	76.1	35.3	31.5	29.5	27	11.8	Included	3	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

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Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Washington-Arlington-Alexandria, DC-VA-MD-WV

Pollutant: PM2.5

Year: 2012

Exceptional Events: Excluded (if any)

Duration Description=24-HR BLK AVG

Duration Description	Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
24-HR BLK AVG	349	37.3	37	34.7	33.8	27	11.6	Excluded	4	110010043	2500 1st Street, N.W. Washington Dc	Washington	District of Columbia	DC	03
24-HR BLK AVG	356	33.1	30.2	29	25	23	10.3	None	3	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Not in a city	Montgomery	MD	03
24-HR BLK AVG	355	34.1	30.2	29.9	29.7	25	11.3	None	3	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

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Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Prince Georges County, MD

Pollutant: CO

Year: 2010

Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8107	1.5	1.3	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

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<http://www.epa.gov/airquality/airdata/ad_contacts.html>

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This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Prince Georges County, MD

Pollutant: CO

Year: 2010

Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	8103	1	1	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems.

<http://www.epa.gov/airquality/airdata/ad_contacts.html>

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This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Washington-Arlington-Alexandria, DC-VA-MD-WV

Pollutant: CO

Year: 2011

Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8680	5	4.2	0	None	1	110010023	Verizon Phone Co.2055 L St. N.W.	Washington	District of Columbia	DC	03
1 HOUR	8561	2.7	2.7	0	None	1	110010041	420 34th Street N.E.,Washington, Dc 20019	Washington	District of Columbia	DC	03
1 HOUR	2734	3.1	3	0	None	1	110010043	2500 1st Street, N.W. Washington Dc	Washington	District of Columbia	DC	03
1 HOUR	8183	1.7	1.3	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike Beltsville	Beltsville	Prince George's	MD	03
1 HOUR	8675	4.2	1.9	0	None	1	510130020	S 18th And Hayes St	Arlington	Arlington	VA	03
1 HOUR	8527	5.7	1.7	0	None	1	515100009	517 N Saint Asaph St, Alexandria Health	Alexandria	Alexandria City	VA	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

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Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Washington-Arlington-Alexandria, DC-VA-MD-WV

Pollutant: CO

Year: 2011

Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	8748	2.2	1.9	0	None	1	110010023	Verizon Phone Co.2055 L St. N.W.	Washington	District of Columbia	DC	03
8-HR RUN AVG END HOUR	8590	2.5	2.3	0	None	1	110010041	420 34th Street N.E.,Washington, Dc 20019	Washington	District of Columbia	DC	03
8-HR RUN AVG END HOUR	2730	2.5	2.4	0	None	1	110010043	2500 1st Street, N.W. Washington Dc	Washington	District of Columbia	DC	03
8-HR RUN AVG END HOUR	8145	1.1	0.8	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8-HR RUN AVG END HOUR	8704	1.4	1.4	0	None	1	510130020	S 18th And Hayes St	Arlington	Arlington	VA	03
8-HR RUN AVG END HOUR	8540	1.4	1.4	0	None	1	515100009	517 N Saint Asaph St, Alexandria Health	Alexandria	Alexandria City	VA	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems.

<http://www.epa.gov/airquality/airdata/ad_contacts.html>

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This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Washington-Arlington-Alexandria, DC-VA-MD-WV

Pollutant: CO

Year: 2012

Exceptional Events: Included (if any)

Duration Description=1 HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
1 HOUR	8712	2.5	2.2	0	None	1	110010023	Verizon Phone Co.2055 L St. N.W.	Washington	District of Columbia	DC	03
1 HOUR	8633	2.9	2.9	0	None	1	110010041	420 34th Street N.E.,Washington, Dc 20019	Washington	District of Columbia	DC	03
1 HOUR	5754	2.5	2.4	0	None	1	110010043	2500 1st Street, N.W. Washington Dc	Washington	District of Columbia	DC	03
1 HOUR	8571	1.3	1.2	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike Beltsville	Beltsville	Prince George's	MD	03
1 HOUR	8569	1.7	1.6	0	None	1	510130020	S 18th And Hayes St	Arlington	Arlington	VA	03
1 HOUR	5509	1.4	1.4	0	None	1	515100009	517 N Saint Asaph St, Alexandria Health	Alexandria	Alexandria City	VA	03
1 HOUR	3092	1.9	1.7	0	None	1	515100021	3200 Colvin Street	Not in a city	Alexandria City	VA	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems.

<http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

Monitor Values Report

Geographic Area: Washington-Arlington-Alexandria, DC-VA-MD-WV

Pollutant: CO

Year: 2012

Exceptional Events: Included (if any)

Duration Description=8-HR RUN AVG END HOUR

Duration Description	Obs	First Max	Second Max	Actual Exc	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8-HR RUN AVG END HOUR	8779	2	1.9	0	None	1	110010023	Verizon Phone Co.2055 L St. N.W.	Washington	District of Columbia	DC	03
8-HR RUN AVG END HOUR	8680	2.8	2.5	0	None	1	110010041	420 34th Street N.E.,Washington, Dc 20019	Washington	District of Columbia	DC	03
8-HR RUN AVG END HOUR	5735	1.9	1.8	0	None	1	110010043	2500 1st Street, N.W. Washington Dc	Washington	District of Columbia	DC	03
8-HR RUN AVG END HOUR	8651	1.2	0.9	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8-HR RUN AVG END HOUR	8606	1.6	1.4	0	None	1	510130020	S 18th And Hayes St	Arlington	Arlington	VA	03
8-HR RUN AVG END HOUR	5512	1.1	1	0	None	1	515100009	517 N Saint Asaph St, Alexandria Health	Alexandria	Alexandria City	VA	03
8-HR RUN AVG END HOUR	3100	1.6	1.6	0	None	1	515100021	3200 Colvin Street	Not in a city	Alexandria City	VA	03

Get detailed information about this report, including column descriptions, at http://www.epa.gov/airquality/airdata/ad_about_reports.html#mon

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated daily by state, local, and tribal organizations who own and submit the data. Please contact the appropriate air quality monitoring agency to report any data problems.

<http://www.epa.gov/airquality/airdata/ad_contacts.html>

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <<http://www.epa.gov/airdata>>

Generated: December 6, 2013

APPENDIX C: TRAFFIC DATA



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

Darrell B. Mobley, Acting Secretary
Melinda B. Peters, Administrator

MARYLAND DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Mr. Geoffrey Hall, Chief
Pavement and Geotechnical Division
Office of Materials Technology

ATTN: Mr. Jose Malheiro

FROM: Morteza Tadayon, Chief
Data Services Engineering Division
Office of Planning and Preliminary Engineering

DATE: March 18, 2013

SUBJECT: Montgomery County
I-270 at Watkins Mill Road Interchange (MP 11.47 to 12.64)
Project Number: MO351M21
Title Sheet and Loadometer Traffic Data

In response to your recent request for Title Sheet Traffic and Loadometer Data for the subject site, we offer the following:

I-270 at Watkins Mill Road:

	<u>2013</u>	<u>2033</u>
Average Daily Traffic (ADT):	166,000	229,700
Design Hour Volume (DHV):	8%	8%
Directional Distribution of DHV:	59%	59%
Percent Trucks – ADT:	8%	8%
Percent Trucks – DHV:	5%	5%

Truck Breakdown:

	2A	3D	2S1	2S2	3S2	3S3	Total
2013 ADT:	7,384	1,630	231	926	2,774	335	13,280
2033 ADT:	10,218	2,255	320	1,282	3,838	463	18,376

We recommend using WIM Station 1508-88 to produce the needed loadometer data.

The FHWA Vehicle Classification Data for this roadway was based on the following:

Mr. Geoffrey Hall
Page Two

FHWA Class	1	2	3	4	5	6	7	8	9	10	11	12	13
2013 ADT	566	123222	29263	1514	6497	1026	742	1256	3009	78	149	86	50
2013 DHV	43	9517	1619	58	314	10	0	78	84	4	2	1	2

Watkins Mill Road at I-270:

	<u>2013</u>	<u>2033</u>
Average Daily Traffic (ADT):	N/A	46,000
Design Hour Volume (DHV):	N/A	8%
Directional Distribution of DHV:	N/A	51%
Percent Trucks – ADT:	N/A	4%
Percent Trucks – DHV:	N/A	1%

Truck Breakdown:

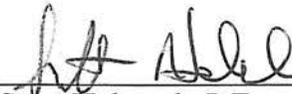
	2A	3D	2S1	2S2	3S2	3S3	Total
2013 ADT:	-	-	-	-	-	-	N/A
2033 ADT:	1,134	248	32	128	278	20	1,840

We recommend using WIM Station 5010-88 to produce the needed loadometer data.

The FHWA Vehicle Classification Data for this roadway was based on the following:

FHWA Class	1	2	3	4	5	6	7	8	9	10	11	12	13
2013 ADT	34	27239	3236	218	578	155	19	112	195	14	0	0	0
2013 DHV	3	2425	250	16	26	9	1	11	13	0	0	0	0

An electronic copy of the loadometer data will be sent along with a copy of this memorandum to your office. If we can be of further assistance, please feel free to contact the writer at 410-545-5647 or Subrat Mahapatra at 410-545-5649.

By: 
 Scott Holcomb, P.E.
 Data Services Engineering Division

cc: Mr. Paulo DeSousa
 Mr. Randy Gray
 Mr. Subrat Mahapatra
 Ms. Anyesha Mookherjee
 Mr. Shekhar Murkute

APPENDIX D: INTERAGENCY CONSULTATION CORRESPONDENCE

Nicole M. Hebert

From: Christina Brandt <CBrandt@sha.state.md.us>
Sent: Monday, January 27, 2014 7:26 AM
To: Shawn Burnett; Nicole M. Hebert
Subject: FW: I-270 at Watkins Mill Road - Air Quality Interagency Consultation

From: Khadr, Asrah [<mailto:Khadr.Asrah@epa.gov>]
Sent: Friday, January 24, 2014 3:54 PM
To: Christina Brandt
Cc: Rudnick, Barbara; McCurdy, Alaina; Becoat, gregory
Subject: RE: I-270 at Watkins Mill Road - Air Quality Interagency Consultation

EPA concurs with SHA's recommendation that this project does not require a quantitative hot-spot analysis.

Asrah Khadr, Environmental Engineer, EIT
U.S. Environmental Protection Agency, Region III
Air Protection Division
Office of Air Program Planning
1650 Arch Street
Philadelphia, PA 19103
Phone: 215-814-2071

From: Christina Brandt [<mailto:CBrandt@sha.state.md.us>]
Sent: Monday, January 13, 2014 10:52 AM
To: 'bhug@mde.state.md.us'; 'jeanette.mar@dot.gov'; McCurdy, Alaina; Rudnick, Barbara; Becoat, gregory; Khadr, Asrah; 'molly.berger@maryland.gov'; 'jrohlf@mwkog.org'
Cc: 'Shawn Burnett'; 'Nicole M. Hebert'
Subject: I-270 at Watkins Mill Road - Air Quality Interagency Consultation

Good Morning,

Attached is the PM2.5 Conformity Determination for the I-270 at Watkins Mill Road project located in Montgomery County, Maryland.

SHA is requesting concurrence that this project meets the requirements of the Clean Air Act and 40 CFR 93 without an additional quantitative hot-spot analysis.

The project is included in the FY 2013-2018 TIP as Project ID 3044.

Please review and provide concurrence/comments prior to January 27, 2014.

Thank you,

Chrissy

Christina Brandt

Environmental Manager

OPPE-Environmental Planning Division

MD State Highway Administration

707 North Calvert Street, Mail Stop C-301

Baltimore, MD 21202

Phone: 410-545-2874

E-mail: cbrandt@sha.state.md.us



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Call 511 or visit: www.md511.org



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Maryland now features 511 traveler information!
Call 511 or visit: www.md511.org

Nicole M. Hebert

From: Christina Brandt <CBrandt@sha.state.md.us>
Sent: Monday, February 10, 2014 3:07 PM
To: Shawn Burnett; Nicole M. Hebert
Subject: FW: FW: I-270 at Watkins Mill Road - Air Quality Interagency Consultation

From: Molly Berger -MDE- [<mailto:molly.berger@maryland.gov>]
Sent: Monday, February 10, 2014 12:38 PM
To: Christina Brandt
Subject: Re: FW: I-270 at Watkins Mill Road - Air Quality Interagency Consultation

Hi Chrissy,

MDE is fine with the MD I-270 at Watkins Mill Road Air Quality Analysis.

Thanks,

Molly

On Mon, Feb 10, 2014 at 7:28 AM, Christina Brandt <CBrandt@sha.state.md.us> wrote:

Good Morning Molly,

I wanted to follow up and see if you had any comments on the attached report.

Thanks!

Chrissy

Nicole M. Hebert

From: Christina Brandt <CBrandt@sha.state.md.us>
Sent: Monday, February 10, 2014 7:27 AM
To: Shawn Burnett; Nicole M. Hebert
Subject: FW: I-270 at Watkins Mill Road - Air Quality Interagency Consultation

From: Jeanette.Mar@dot.gov [<mailto:Jeanette.Mar@dot.gov>]
Sent: Monday, January 27, 2014 6:05 PM
To: Christina Brandt
Subject: RE: I-270 at Watkins Mill Road - Air Quality Interagency Consultation

Chrissy:

I concur that the I-270 at Watkins Mill Road project meets the requirements of the CAA and 40 CFR 93 and does not need an additional quantitative hot-spot analysis.

I have one minor editorial comment on page 2, please change "Mobile Air Source Toxics" to "Mobile Source Air Toxics".

Thanks!

Jeanette

Jeanette Mar
Environmental Program Manager
FHWA - DelMar Division
10 South Howard Street, Suite 2450
Baltimore, MD 21201
phone (410) 779-7152
fax (410) 962-4054

From: Christina Brandt [<mailto:CBrandt@sha.state.md.us>]
Sent: Monday, January 13, 2014 10:52 AM
To: 'bhug@mde.state.md.us'; Mar, Jeanette (FHWA); 'McCurdy.Alaina@epa.gov'; 'Rudnick.Barbara@epamail.epa.gov'; 'Becoat, gregory'; 'Khadr, Asrah'; 'molly.berger@maryland.gov'; 'jrohlf@mwcog.org'
Cc: 'Shawn Burnett'; 'Nicole M. Hebert'
Subject: I-270 at Watkins Mill Road - Air Quality Interagency Consultation