MD 26 IMPROVEMENTS
WEST OF EMERALD LANE TO CALVERT WAY

AIR QUALITY ANALYSIS
TECHNICAL REPORT

February 2016

Carroll County, Maryland

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

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I. INTRODUCTION

This report presents the results of a review of air quality impacts associated with proposed improvements to MD 26 (Liberty Road) from 1,050 feet west of Emerald Lane to Calvert Way in Carroll County, Maryland. This study is intended as an evaluation of the project level air quality impacts of the proposed improvements. This evaluation is provided to meet the requirements of the Clean Air Act (CAA) and the National Environmental Policy Act (NEPA).

MD 26 is an undivided, urban other principal arterial running east to west with one to two lanes in both directions within the project limits. Land use along the corridor of the project is a mix of commercial, medium density residential, forest, other developed lands, and low density residential. The overall project extends approximately 0.64 mile along MD 26 (See **Figure 1**).

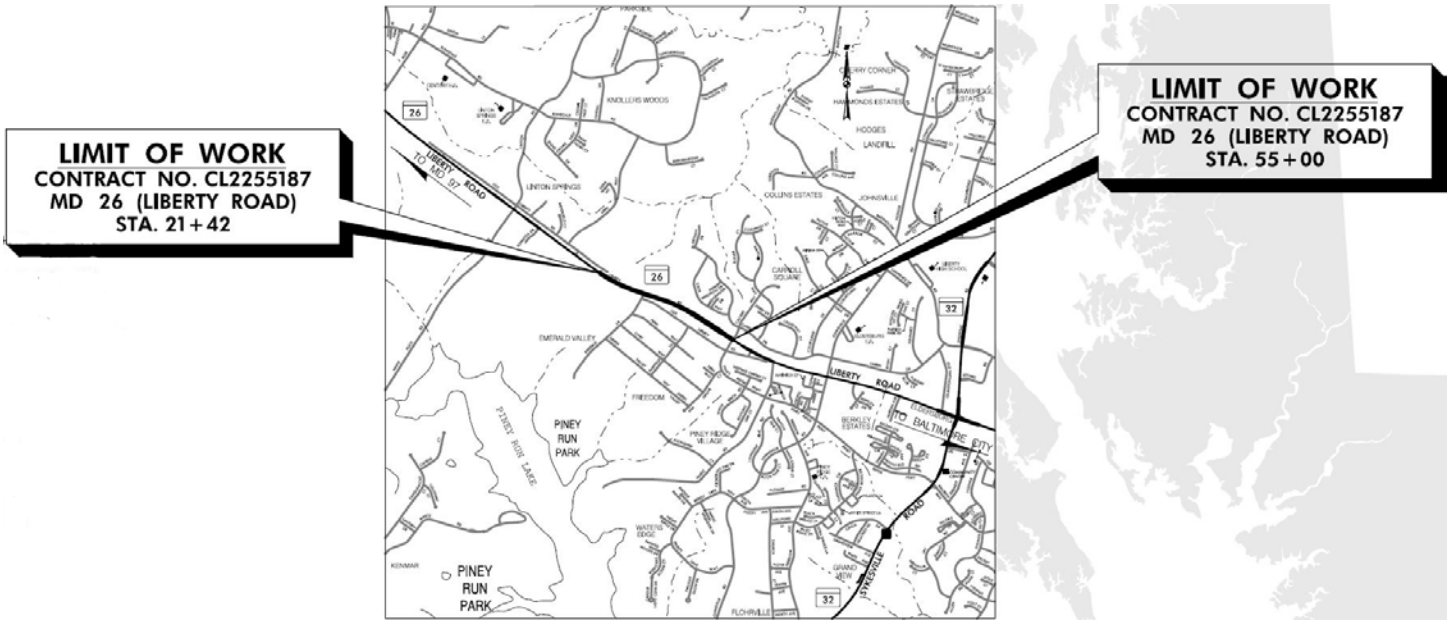


FIGURE 1 – Location Map

The purpose of the project is to improve traffic operation and safety within the proposed limits. This will be accomplished by to widening MD 26 to accommodate an additional westbound and eastbound travel lane. The primary scope of work will include full depth construction to the north of MD 26, as well as grading and the construction of a berm along the northern edge of MD 26. The secondary scope includes stormwater management and utility relocations. Refer to **Appendix A** for project design plans.

II. AIR QUALITY BACKGROUND

The Clean Air Act (CAA) Amendments 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 CAA and the Final Transportation Conformity Rule apply to the proposed transportation project because it involves federal action and funding.

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 implementation plan in effect under this chapter."* The CAA, Title I, Section 176 (c) 1, 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 and achieving expeditious attainment of such standards; and that such activities will not:*

i. cause or contribute to any new violation of any standard in any area;
ii. increase the frequency or severity of any existing violation of any standard in any area; or
iii. delay timely attainment of any standard or any required interim emission reductions or other milestones in any area."

As required by the CAA, 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 (NO_2), ozone (O_3), particulate matter (PM_{10} & $PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). These national 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, accounting for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

The CAA Amendments require that the EPA publish a designation 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, designating areas where pollutant levels exceed the NAAQS as nonattainment. After a nonattainment area improves conditions to meet the standard for the corresponding pollutant, it is re-designated as a maintenance area. Typically these designations are applied to entire counties or groups of counties.

To comply with the CAA, EPA has issued proposed rules, guidance clarifications, and final rules concerning transportation conformity and pollutants for which standards have been set. Following is a summary of recent rules and clarifications:

- *Transportation Conformity Rule $PM_{2.5}$ and PM_{10} Amendments; Final Rule*, March 24, 2010;
- *Using MOVES in Project-Level Carbon Monoxide Analyses*, December 2010;
- *Transportation Conformity Rule Restructuring Amendments*, March 14, 2012;
- *Transportation Conformity Regulations, as of April 2012*;
- *National Ambient Air Quality Standards for Particulate Matter*, January 15, 2013; and
- Update to the *Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*, November 2015.

TABLE 1 - National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary/ Secondary	Primary Standards		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 669964	Primary and Secondary	0.15 µg/m^3	Rolling 3-Month Average	Not to be exceeded
Nitrogen Dioxide 75 FR 6464	Primary	100 ppb	1-hour	98th 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 ($PM_{2.5}$) 71 FR 61144	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	98th percentile, averaged over 3 years
Ozone 80 FR 65292	Primary and Secondary	0.070 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	

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 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. 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.

III. ENVIRONMENTAL ANALYSIS

The project is located in Carroll County, Maryland, which is part of the Baltimore, MD designated area. A portion of the area, the Baltimore Central Business District, had been non-attainment for carbon monoxide; however, this area has been re-designated as a CO maintenance area. Since the project is located in Carroll County, it is not considered within a CO maintenance area. The area was classified as maintenance for the 1997 $PM_{2.5}$ standard by EPA on December 16, 2014. Maryland is neither within a PM_{10} maintenance nor nonattainment area.

For regional conformity determination, states develop State Implementation Plans (SIPs) to establish a plan for attaining and maintaining the NAAQS, as required by the CAA. Proposed and existing transportation projects and programs are compiled in short term (covering approximately 2-6 years) and long term (covering approximately 20 years) plans called transportation improvement programs (TIPs) and long range plans, respectively, according to urbanized area. Urbanized areas are geographic areas with a population greater than 50,000. These urbanized areas are governed by Metropolitan Planning Organizations (MPOs). MPOs are policy-making organizations which develop the TIPs and long range plans for their respective urbanized areas. Per 40 CFR 93.115, a project must come from a long range plan and TIP that conform to the SIP. This assessment includes regional conformity determination for the project.

At the project level, pollutants could possibly have localized (hot-spot) levels above the NAAQS. As outlined by 40 CFR 93.116 in the *Transportation Conformity Regulations, as of April 2012*, any highway or transit project which is proposed to receive funding assistance and/or approval through federal programs or the Federal Highway Administration (FHWA) must not *"cause or contribute to any new localized CO, PM_{10}, and/or $PM_{2.5}$ violations, increase the frequency or severity of any existing CO, PM_{10}, and/or $PM_{2.5}$ violations, or delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in CO, PM_{10}, and $PM_{2.5}$ nonattainment and maintenance areas."* To determine project level conformity, analyses must be performed for the respective pollutant set in the corresponding nonattainment or maintenance area where a project is located. To make the determination that a project is conforming, consultation in accordance with 40 CFR 93.105 is completed via the Interagency Consultation Group (ICG). The ICG for Maryland State Highway Administration (SHA) projects includes a representative from FHWA, EPA, the Maryland Department of the Environment (MDE), and the appropriate MPO. This assessment includes a project level conformity determination.

For the Baltimore, MD area, the Baltimore Regional Transportation Board (BRTB) serves as the MPO. The current long range plan, *Plan It 2035*, was adopted by BRTB on November 14, 2011. The latest TIP, covering fiscal years 2016 to 2019, was also adopted by BRTB on July 28, 2015.

IV. ENVIRONMENTAL CONSEQUENCES

1. Regional Conformity Determination

The currently approved BRTB long range transportation plan and TIP have been determined to conform to the requirements of the CAA Amendments of 1990 in accordance with 40 CFR 93.114. The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. The TIP includes the MD 26 improvement project under ID 60-9508-19, which is a listing of Areawide Safety and Spot Improvements. Therefore, the project is included in a regionally conforming TIP that meets the requirements of 40 CFR 93.115.

2. Project Level Conformity Determination

Although the project is not in a CO nonattainment or maintenance area, a qualitative CO assessment has been included. Also, because Carroll County is a maintenance area for $PM_{2.5}$, a project-specific $PM_{2.5}$ assessment has been provided.

To assist in analyzing potential project impacts to both CO and $PM_{2.5}$ levels, recent ambient air quality data from MDE air monitoring stations has been referenced. The closest MDE air monitoring station for the study area is located at the Northwest Police Station in Baltimore, Maryland. Monitoring data is available at other Maryland stations, including those located at Oldtown Fire Station (Baltimore), Howard University's Beltsville Laboratory (Beltsville), Padonia Elementary (Cockeysville), and 600 Dorsey Avenue (Essex). All these stations are located in EPA Region 3. Monitored ambient air quality data near the study area for the years 2012-2014 is presented in **Table 2** (see **Appendix B** for details).

TABLE 2 – Monitored Ambient Air Quality Data 2012-2014

Site (ordered from closest to farthest from project limits)			**Site 245100040 Oldtown Fire Station Baltimore MD**			**Site 240330030 Howard University Beltsville MD**			**Site 240053001 600 Dorsey Avenue Essex MD**		
Year			***2012***	***2013***	***2014***	***2012***	***2013***	***2014***	***2012***	***2013***	***2014***
Carbon Monoxide (CO) [ppm]	**1-Hour**	**1st Maximum**	2.5	2.4	1.7	1.3	1	1.5	2.3	2.4	2.4
		2nd Maximum	2.5	2	1.6	1.2	0.9	1	2.1	2.2	1.8
		Actual Exceedances	0	0	0	0	0	0	0	0	0
	8-Hour	**1st Maximum**	2.1	1.6	1.3	1.2	0.9	0.9	1.6	1.6	1.4
		2nd Maximum	1.6	1.3	1	0.9	0.9	0.8	1.6	1.4	1.3
		Actual Exceedances	0	0	0	0	0	0	0	0	0
Site (ordered from closest to farthest from project limits)			**Site 245100007 NW Police Station Baltimore MD**			**Site 240051007 Padonia Elementary Cockeysville MD**			**Site 245100040 Oldtown Fire Station Baltimore MD**		
Year			***2012***	***2013***	***2014***	***2012***	***2013***	***2014***	***2012***	***2013***	***2014***
Particulate Matter ($PM_{2.5}$) [ug/m^3]	**Annual**	**Weighted Annual Mean**	22	20	20	22	20	21	23	23	21
	24-Hour	**98th Percentile**	9.3	8.6	8.5	9.1	8.5	8.9	10	9.1	9.2

A. Carbon Monoxide (CO) Assessment

Since the study area is not in a CO nonattainment or maintenance area, a hot-spot conformity determination in conformance with 40 CFR 93.116 is not required, and a qualitative assessment that considers local factors is provided hereinafter.

As shown in **Table 2**, the maximum 1-hour monitored CO concentration of 2.5 ppm occurred in 2012 at Site 245100040, located at the Oldtown Fire Station, in Baltimore, MD. This concentration is 7.1 percent of the 1-hour CO NAAQS of 35.0 ppm. The maximum 8-hour monitored CO concentration of 2.1 ppm occurred in the same year at the same site, which is 23.3 percent of the 8-hour NAAQS of 9.0 ppm.

A review of project traffic volumes, summarized in **Table 3** (see **Appendix C** for details), demonstrates that the project will neither increase the traffic volumes nor result in changes in vehicle mix on this segment of MD 26. As shown in **Table 3**, MD 26 does not carry a

significant number of trucks; nor is there an increase in the percentage of trucks between the future no-build and build conditions. For the 2035 no-build conditions, the total MD 26 average daily traffic (ADT) volume is 31,700 vehicles and the total average daily number of diesel trucks is 2,219 vehicles. For the 2035 build conditions, the MD 26 ADT and diesel truck volumes are the same as the no-build conditions.

TABLE 3 - Traffic Data: MD 26 – East of Emerald Lane

Condition	Existing 2015	No-Build 2035	Build 2035
ADT	25,975	31,700	31,700
Percent Trucks	7	7	7
Daily Truck Volumes	1,818	2,219	2,219

In conclusion, because the data presented in **Table 2** demonstrates maximum recently monitored CO concentrations in the project area are a percentage of the CO NAAQS and the data in **Table 3** demonstrates the improvements will not result in significant changes in vehicle mix relative to the no-build conditions, construction of the project will not cause or contribute to a new violation of the CO NAAQS, increase the frequency or severity of any existing violation, or delay timely attainment of any standard or any required interim emission reductions or other milestones.

B. Particulate Matter ($PM_{2.5}$) Assessment

On March 10, 2006, EPA issued a final rule to address localized impacts of particulate matter: "*$PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-Level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} National Ambient Air Quality Standards*" (71 FR 12468). These rule amendments require the assessment of localized air quality impacts of federally funded or approved transportation projects in PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas. In November 2015 EPA issued "*Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas,*" which helps state and local agencies complete quantitative $PM_{2.5}$ and PM_{10} hot-spot analyses for project-level transportation conformity determinations of certain highway and transit projects.

Projects that require hot-spot analysis for $PM_{2.5}$ are those that are listed in 40 CFR 93.123(b)(1), which Appendix B to the December 2010 *Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas* defines as examples of projects of local air quality concern and include:

> *(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 PM_{10} or $PM_{2.5}$ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violations.

As discussed in examples outlined in the preamble to the March 10, 2006 final rule, projects of local air quality concern, 40 CFR 93.123(b)(1)(i) and (ii), have been interpreted as applying to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on the existing facility.

To assist with the ICG process, SHA has prepared the following assessment of the proposed improvements:

- This 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 local air quality concern based on the following considerations:
    - The proposed project involves widening MD 26 to accommodate an additional westbound and eastbound travel lane to improve traffic operations and safety.
    - As shown in **Table 3**, MD 26 does not carry a significant number of trucks; nor is there an increase in the percentage of trucks between the future no-build and build conditions. For the 2035 no-build conditions, the total MD 26 average daily traffic (ADT) volume is 31,700 vehicles and the total average daily number of diesel trucks is 2,219 vehicles. For the 2035 build conditions, the MD 26 ADT and diesel truck volumes are the same as the no-build conditions.
    - Depicted truck percentages represent the amount of light, medium and heavy truck activity along the given roadway segment. Unless predicated by significant land use changes (heavy truck generators), existing truck percentages are used as the primary factor in determining future percentages. The build condition will improve operation of the roadway, relieving system congestion, but will not necessarily induce new truck traffic origin-destination patterns.

Based on review and analysis as discussed above, it is determined that the project 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 local air quality concern as outlined under 40 CFR 93.123(b)(1). The project will not cause or contribute to a new violation of the $PM_{2.5}$ NAAQS, increase the frequency or severity of

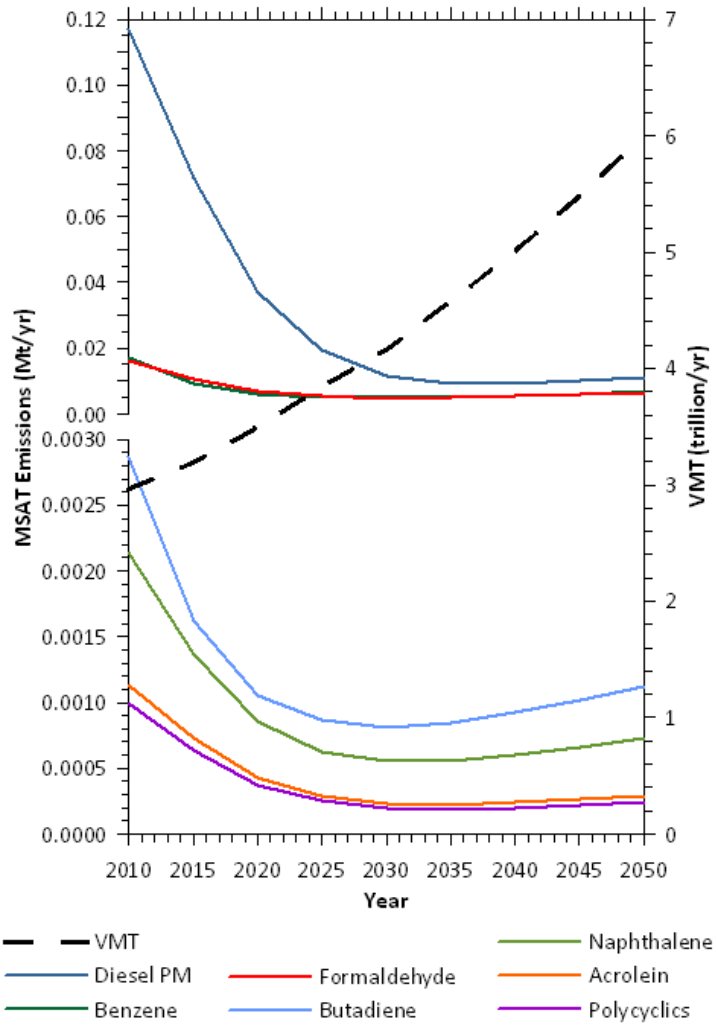
any existing violation, or delay timely attainment of any standard or any required interim emission reductions or other milestones.

3. MSAT Assessment

The FHWA December 2012 *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA* requires an assessment of MSATs under specific conditions. Since the projected no-build and build traffic 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 referenced FHWA guidance, the project would be considered a Project with No Meaningful Potential MSAT Effects.

The purpose of the project is to reduce traffic congestion and improve traffic safety within the proposed limits. 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 substantial 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 Motor Vehicle Emission Simulator (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 (**Figure 2**). This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.



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.

FIGURE 2 - National MSAT Emission Trends 1999 – 2050 for Vehicles Operating on Roadways Using EPA's MOVES2010b Model

4. 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 procedures to be followed by contractors involved in site work through publishing the *Standard Specifications for Construction and Materials*. The Maryland Air and Radiation Management Administration was consulted to determine the adequacy of the specifications in terms of satisfying the requirements of the *Regulations Governing the Control of Air Pollution in the State of Maryland*. The Maryland Air and Radiation Management Administration found the specifications to be consistent with the requirements of these regulations. Therefore, during the construction period,

all appropriate measures (Code of Maryland Regulations 26.11.06.03 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 the construction impact of the project is insignificant.

V. INTERAGENCY CONSULTATION GROUP / PUBLIC COORDINATION

Copies of this air quality analysis were circulated to FHWA, EPA, MDE, and BRTB staff for a 15 day Interagency Consultation Group review and comment period. FHWA, MDE, and EPA concurred that the project does not require a quantitative hot-spot analysis (**Appendix D**). With these concurrences, this air quality analysis will be placed on SHA's website for a 15 day public review and comment period.

APPENDIX

A - PLANS

B - MONITORED AMBIENT AIR QUALITY DATA 2012-2014

C - TRAFFIC DATA

D - INTERAGENCY CONSULTATION GROUP COORDINATION

APPENDIX A - PLANS

DRILL HOLES

DRILL HOLES

DRILL HOLES

BY: $USERNAME$

INDEX OF SHEETS

SHA

Maryland Department of Transportation

STATE HIGHWAY ADMINISTRATION

PLANS OF PROPOSED HIGHWAY

S.H.A. CONTRACT NO. CL2255187

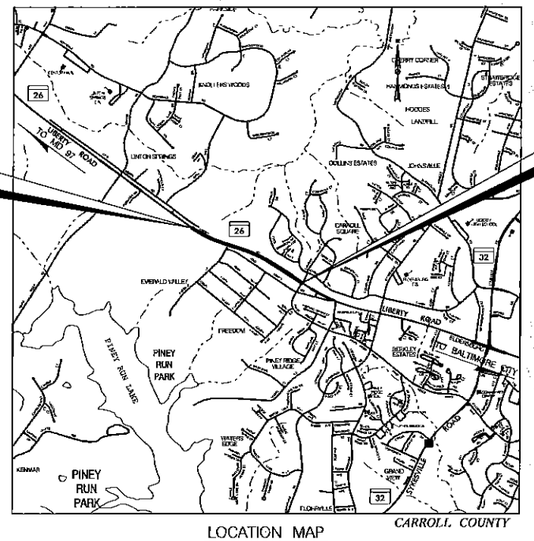
FEDERAL AID PROJECT NO. N/A

MD 26 WIDENING

FROM 1050 FT WEST OF EMERALD LANE TO CALVERT WAY

LIMIT OF WORK
CONTRACT NO. CL2255187
MD 26 (LIBERTY ROAD)
STA. 21+42

LIMIT OF WORK
CONTRACT NO. CL2255187
MD 26 (LIBERTY ROAD)
STA. 55+00



LOCATION MAP
SCALE : 1" = 2000'

CARROLL COUNTY

SCALE: 1" = 2000'

2000 0 2000 4000 feet

HORIZONTAL DATUM	NAD 83 /91
VERTICAL DATUM	NAVD 88

R-O-W PLAT NUMBERS			SURVEY BOOK NUMBERS
6876	25389	43979	25593
16608	26138	45074	
18525	26139	51156	
24021	26140	51157	
24022	26268		
24023	26269		
24025	30926		

DESIGN DESIGNATION		
ROADWAY	MD 26 (LIBERTY ROAD)	
CONTROLS / YEARS	2011	2031
AVERAGE DAILY TRAFFIC (A.D.T.)	28,400	41,400
DESIGN HOURLY VOLUME (D.H.V.)	9%	8%
DIRECTIONAL DISTRIBUTION	50%	50%
% TRUCKS - A.D.T.	10%	10%
% TRUCKS - D.H.V.	11%	11%
DESIGN SPEED M.P.H.	55 MPH	
FUNCTIONAL CLASSIFICATION	URBAN OTHER PRINCIPAL ARTERIAL	
CONTROL OF ACCESS	PARTIAL	
INTENSITY OF DEVELOPMENT	RURAL /SUBURBAN	
TERRAIN	ROLLING	
ANTICIPATED POSTED SPEED	50 MPH	

SOILS LEGEND

PLAN LOCATION OF SOIL BORING

SOILS INFORMATION IS TABULATED IN THE INVITATION FOR BIDS BOOK.

AASHTO DESIGN CRITERIA

THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE 2001 PUBLICATION OF AASHTO'S "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS."

STANDARD SPECIFICATIONS BOOK, BOOK OF STANDARDS AND MUTCD

ALL WORK ON THIS PROJECT SHALL CONFORM TO: THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATIONS SPECIFICATIONS ENTITLED STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2008 REVISIONS THEREOF OR ADDITIONS THERETO; THE SPECIAL PROVISIONS INCLUDED IN THE INVITATION FOR BIDS BOOK; THE ADMINISTRATIONS BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES AND THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

RIGHT OF WAY

RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL. FOR OFFICIAL FEE RIGHT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT OF WAY PLATS.

UTILITIES

THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE ACCURACY OF SAID LOCATIONS.

ENVIROMENTAL INFORMATION

MDE # 11-SF-0302

ALL STORMWATER MANAGEMENT FACILITIES CONSTRUCTED FOR CONTRACT NO. *CL2255187* SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATIONS BEST MANAGEMENT PRACTICES (BMP) INSPECTION AND REMEDIATION PROGRAM.

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION.

OWNERS / DEVELOPERS CERTIFICATION :

I / WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT OF WAY ENTRY FOR PERIODIC ON-SITE EVALUATION BY STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS.

COMPLETENESS OF DOCUMENTS

THE STATE HIGHWAY ADMINISTRATION SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM THE STATE HIGHWAY ADMINISTRATION'S CASHIER'S OFFICE. FAILURE TO ATTACH ADDENDA MAY CAUSE THE BID TO BE IRREGULAR.

BICYCLE COMPLIANCE

THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES FOR BICYCLE COMPATIBILITY IN COMPLIANCE WITH STATE AND FEDERAL LEGISLATION.

ADA COMPLIANCE

NO PEDESTRIAN OR ADA FACILITIES EXIST WITHIN THE PROJECT LIMITS.

REVISIONS

REVIEWED AND APPROVAL RECOMMENDED DATE

DISTRICT ENGINEER

APPROVAL RECOMMENDED DATE

DIRECTOR, OFFICE OF HIGHWAY DEVELOPMENT

APPROVED DATE

DEPUTY ADMINISTRATOR/CHIEF ENGINEER FOR PLANNING, ENGINEERING, REAL ESTATE AND ENVIRONMENT

WALLACE MONTGOMERY
ENGINEERS • PLANNERS • SURVEYORS • CONSTRUCTION MANAGERS
10150 York Road, Suite 200
Hunt Valley, Maryland 21030
410.494.9093 Tel / 410.667.0925 Fax
www.WallaceMontgomery.com
A Limited Liability Partnership

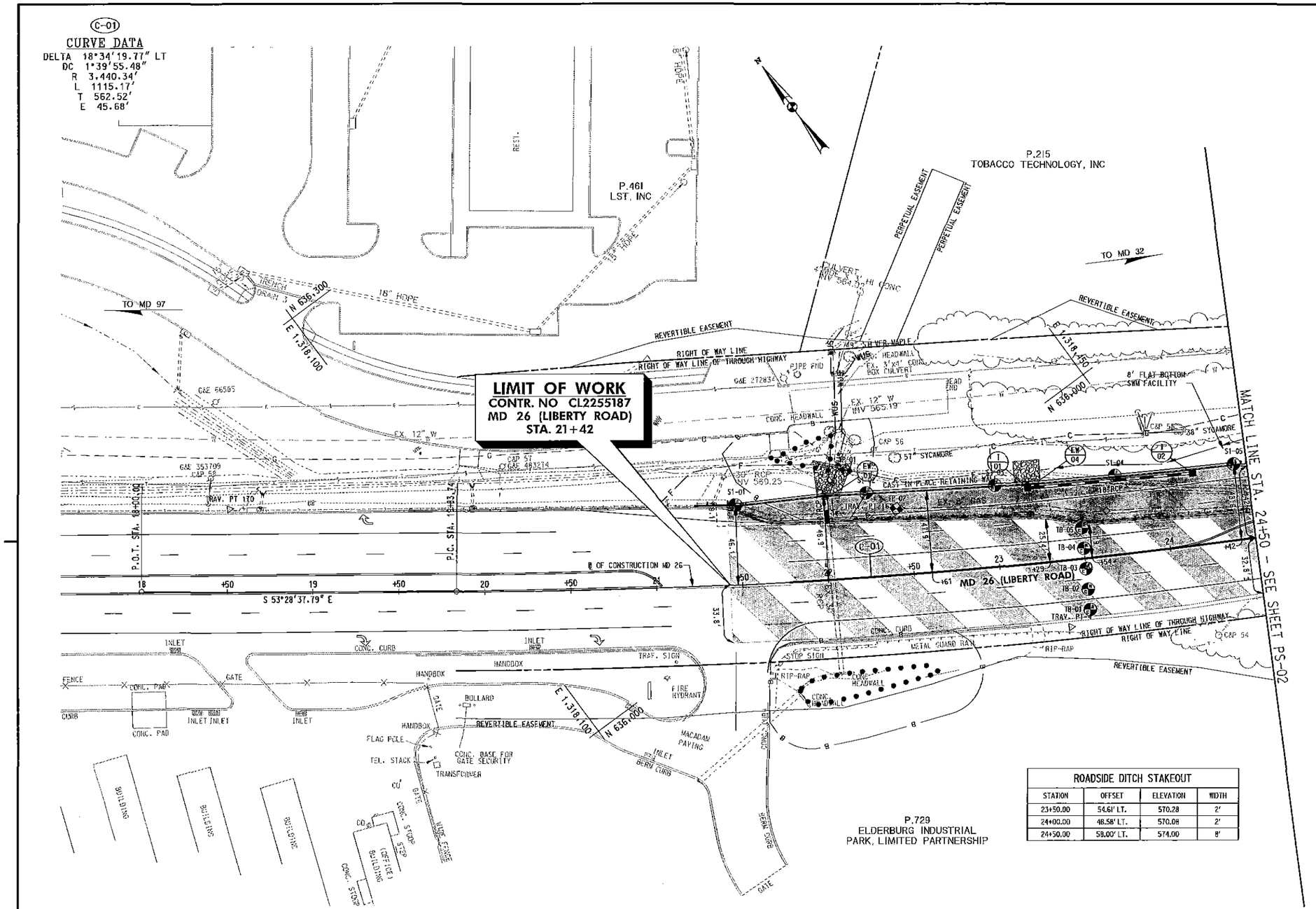
ROBERT J. HUDSON, P.E. DATE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 26238, Expiration Date: 08/7/2015.

SURVEY BOOK NO.

PLOTTED: Monday, February 23, 2015 AT 02:56 PM
FILE: M:\PROJ\2140162002\Roadway Design_Cadd_\pGN-T000_MD26.dgn

INDEXED



ROADSIDE DITCH STAKEOUT			
STATION	OFFSET	ELEVATION	WIDTH
23+50.00	54.61' LT.	570.28	2'
24+00.00	48.58' LT.	570.08	2'
24+50.00	58.00' LT.	574.00	8'

LEGEND

- FULL DEPTH HMA PAVING
- GRINDING & HMA RESURFACING
- PAVEMENT REMOVAL
- RIPRAP
- 202 +50 ℄ CONSTRUCTION
- PIPE, INLET, STORM DRAIN SYMBOLS
- END SECTION, STD. MANHOLE, ENDWALL

WALLACE MONTGOMERY
ENGINEERS·PLANNERS·SURVEYORS·CONSTRUCTION MANAGERS
10150 York Road, Suite 200
Hunt Valley, Maryland 21030
410.494.9093 Tel / 410.667.0925 Fax
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CROSS REFERENCE	
ITEM	DRAWING NOs.
TYPICAL SHEETS	TS-01 TO TS-02
SUPERELEVATION SHEETS	– – –
PIPE & DRAINAGE SCHEDULE	DD-01
GEOMETRIC LAYOUT SHEETS	GS-01 TO GS-02
ROADWAY PLAN SHEETS	PS-01 TO PS-06
ROADWAY PROFILE SHEETS	– – –
TRAFFIC CONTROL SHEETS	MT-01 TO MT-06
EROSION & SEDIMENT CONTROL	EP-01 TO EP-05
SIGNING & MARKING PLANS	SM-01 TO SM-06
LANDSCAPE PLAN SHEETS	LD-01 TO LD-03
UTILITIES	– – –

R/W PLAT NUMBER	
6876	26140
18608	28268
18525	28269
24021	30926
24022	43979
24023	45074
24025	51136
25389	51157
26138	
26139	

REVISIONS

PLOTTED: Monday, February 23, 2015 AT 01:05 PM
FILE: M:\PROJ\21606.0001\Roadway Design_Cadd_\oHD-P01_MD26.dgn

QUANTITY NOTES

TRAFFIC BARRIER W-BEAM USING 6 FOOT POST (MD 605.21)	
25 L.F.	MD 26 (LIBERTY ROAD) – STA. 21+23 TO STA. 21+48, LT.

TRAFFIC BARRIER W-BEAM ANCHORGE WITH RUB RAIL TO SAFETY SHAPE (MD 605.43)	
1 EA	MD 26 (LIBERTY ROAD) – STA. 21+50, 46' LT.

TRAFFIC BARRIER W BEAM ANCHORAGE TO TRAIL END OF JERSEY SHAPE OR F SHAPE (MD 605.44)	
1 EA	MD 26 (LIBERTY ROAD) – STA. 24+38 TO STA. 24+71, LT.

CLASS I RIP RAP FOR CHANNEL PROTECTION (SEE DD-01)	
38 S.Y.	MD 26 (LIBERTY ROAD) – STA. 22+04, LT. (L=20')
21 S.Y.	MD 26 (LIBERTY ROAD) – STA. 23+20, LT. (L=13')

REMOVAL OF EXISTING INLET	
1 EA	MD 26 (LIBERTY ROAD) – STA. 23+20, 29' LT.
1 EA	MD 26 (LIBERTY ROAD) – STA. 24+97, 20' LT.

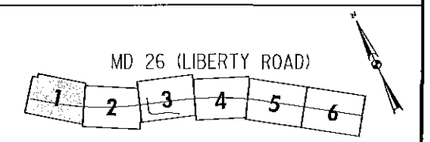
REMOVAL OF EXISTING PIPE	
21 L.F.	MD 26 (LIBERTY ROAD) – STA. 23+20, 29' LT. TO 50' LT.
15 L.F.	MD 26 (LIBERTY ROAD) – STA. 24+97, 20' LT. TO 35' LT.
10 L.F.	MD 26 (LIBERTY ROAD) – STA. 22+03, 50' LT. TO 60' LT.

REMOVAL OF EXISTING MANHOLE	
1 EA.	MD 26 (LIBERTY ROAD) – STA. 22+00, 48' LT.

REMOVE AND DISPOSE EXISTING TRAFFIC BARRIER	
326 L.F.	MD 26 (LIBERTY ROAD) – STA. 21+23, TO STA. 24+50, LT.

6' PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN	
7 L.F.	MD 26 (LIBERTY ROAD) – STA. 24+43 TO STA. 24+50, LT.

KEY MAP



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

MD 26 WIDENING

FROM 1050 FT WEST OF EMERALD LANE TO CALVERT WAY

ROADWAY PLAN

SCALE 1" = 30' DATE FEBRUARY 2015 CONTRACT NO. CL2255187

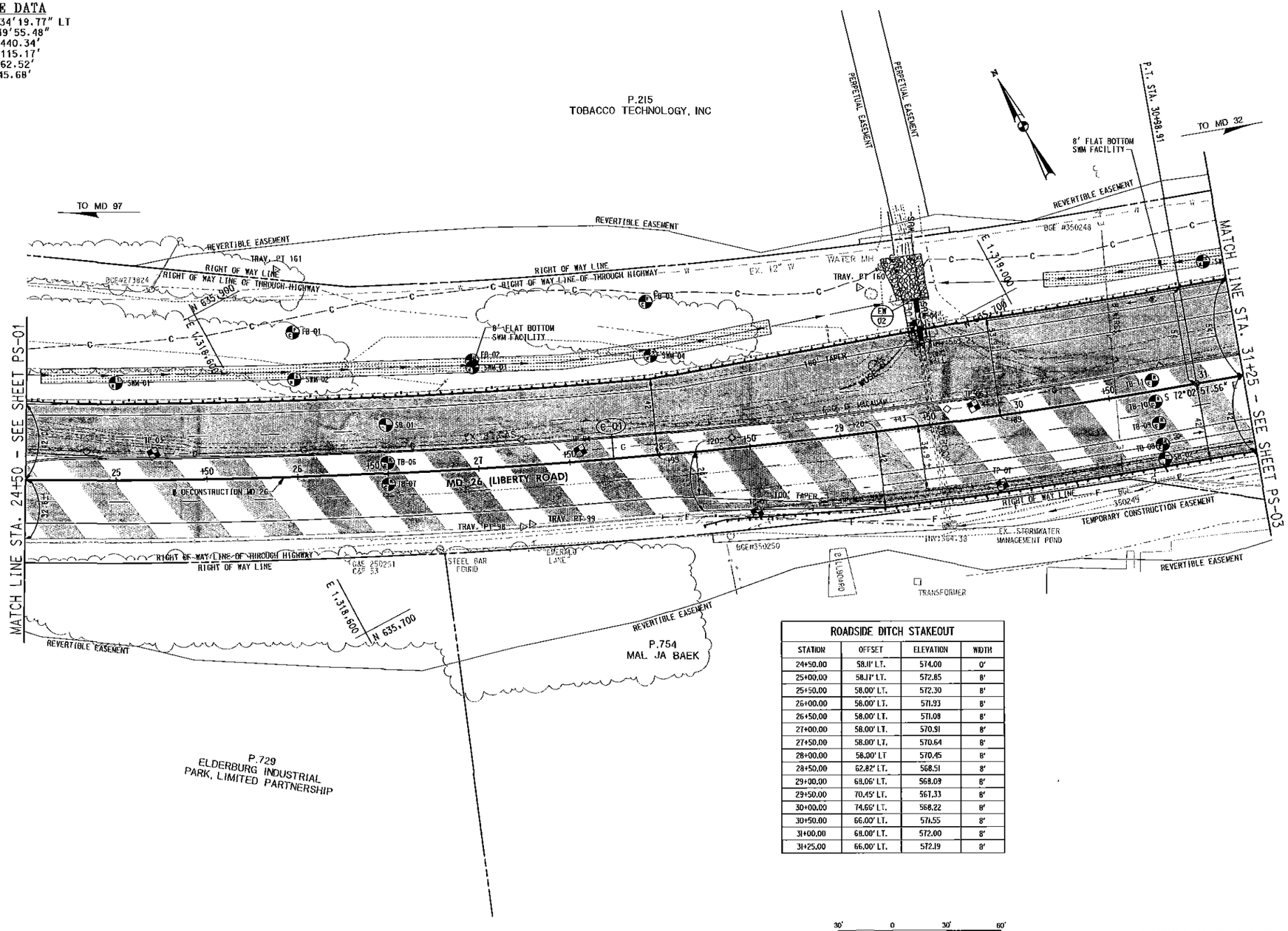
DESIGNED BY N.D.K. COUNTY CARROLL
DRAWN BY N.D.K. LOGMILE 8.42 TO 9.06
CHECKED BY M.J.B.
F.A.P. NO. SEE TITLE SHEET

DRAWING NO. PS-01 OF 06 SHEET NO. 08 OF 54

C-01

CURVE DATA

DELTA 18°34'19.77" LT
DC 1°39'55.48"
R 3,440.34'
L 1,115.17'
T 562.52'
E 45.68'



ROADSIDE DITCH STAKEOUT

STATION	OFFSET	ELEVATION	WIDTH
24+50.00	58.11' LT.	574.00	0'
25+00.00	58.17' LT.	572.85	8'
25+50.00	58.00' LT.	572.30	8'
26+00.00	58.00' LT.	571.93	8'
26+50.00	58.00' LT.	571.08	8'
27+00.00	58.00' LT.	570.51	8'
27+50.00	58.00' LT.	570.64	8'
28+00.00	58.00' LT	570.45	8'
28+50.00	62.82' LT.	568.51	8'
29+00.00	68.06' LT.	568.09	8'
29+50.00	70.45' LT.	567.33	8'
30+00.00	74.66' LT.	568.22	8'
30+50.00	66.00' LT.	570.55	8'
31+00.00	68.00' LT.	572.00	8'
31+25.00	66.00' LT.	572.19	8'

30' 0 30' 60'
SCALE: 1" = 30'

DATUM: NAD 8391 Horizontal
NAVD 88 Vertical

LEGEND

- FULL DEPTH HMA PAVING
- GRINDING & HMA RESURFACING
- PAVEMENT REMOVAL
- RIPRAP
- 202 +50 @ CONSTRUCTION
- PIPE, INLET, STORM DRAIN SYMBOLS
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SUPERELEVATION SHEETS	- - -
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ROADWAY PLAN SHEETS	PS-01 TO PS-08
ROADWAY PROFILE SHEETS	- - -
TRAFFIC CONTROL SHEETS	MT-01 TO MT-06
EROSION & SEDIMENT CONTROL	EP-01 TO EP-06
SIGNING & MARKING PLANS	SN-01 TO SN-06
LANDSCAPE PLAN SHEETS	LD-01 TO LD-03
UTILITIES	- - -

R / W PLAT NUMBER

6876	26140
19508	26268
18525	26269
24021	30926
24022	43979
24023	45074
24025	51156
25389	51157
26138	
26139	

REVISIONS

PLOTTED: Monday, February 23, 2015 AT 01:06 PM
FILE: M:\PTOW\214016.0002\Roadway Design_Cadd_\sHD-P002_MD26.dgn

QUANTITY NOTES

TRAFFIC BARRIER W-BEAM (MD 605.21)

646 L.F.	MD 26 (LIBERTY ROAD) - STA. 24+71 TO STA. 31+25, LT.
296 L.F.	MD 26 (LIBERTY ROAD) - STA. 28+33 TO STA. 31+25, RT.

END ANCHORAGE TERMINAL FOR TYPE A END TREATMENT EITHER OPTION (MD 605.01)

1 EA	MD 26 (LIBERTY ROAD) - STA. 28+21, 41' RT.

REMOVE AND DISPOSE EXISTING TRAFFIC BARRIER

70 L.F.	MD 26 (LIBERTY ROAD) - STA. 24+50 TO STA. 25+20, LT.
238 L.F.	MD 26 (LIBERTY ROAD) - STA. 27+60 TO STA. 31+00, LT.
286 L.F.	MD 26 (LIBERTY ROAD) - STA. 28+44 TO STA. 31+25, RT.

CLASS 1 RIP RAP FOR CHANNEL PROTECTION (SEE DD-01)

54 S.Y.	MD 26 (LIBERTY ROAD) - STA. 29+52, LT. (L=24')

6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN

667 L.F.	MD 26 (LIBERTY ROAD) - STA. 24+50 TO STA. 31+25, LT.
307 L.F.	MD 26 (LIBERTY ROAD) - STA. 28+21 TO STA. 31+25, RT.

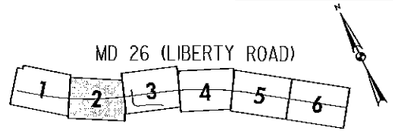
6" CIRCULAR PIPE UNDERDRAIN OUTLETS

10 L.F.	MD 26 (LIBERTY ROAD) - STA. 26+79 TO STA. 26+85, LT.
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 29+00, LT.
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 30+00, LT.
6 L.F.	MD 26 (LIBERTY ROAD) - STA. 28+21 TO STA 28+21 RT.
5 L.F.	MD 26 (LIBERTY ROAD) - STA. 30+68, RT.

REMOVAL OF EXISTING MASONRY

	MD 26 (LIBERTY ROAD) - STA. 29+50, LT.

KEY MAP



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

MD 26 WIDENING

FROM 1050 FT WEST OF EMERALD LANE TO CALVERT WAY

ROADWAY PLAN

SCALE 1" = 30' DATE FEBRUARY 2015 CONTRACT NO. CL2255187

DESIGNED BY N.D.K. COUNTY CARROLL
DRAWN BY N.D.K. LOGMILE 8.42 TO 9.06
CHECKED BY M.J.B.
F.A.P. NO. SEE TITLE SHEET

DRAWING NO. PS-02 OF 06 SHEET NO. 09 OF 54

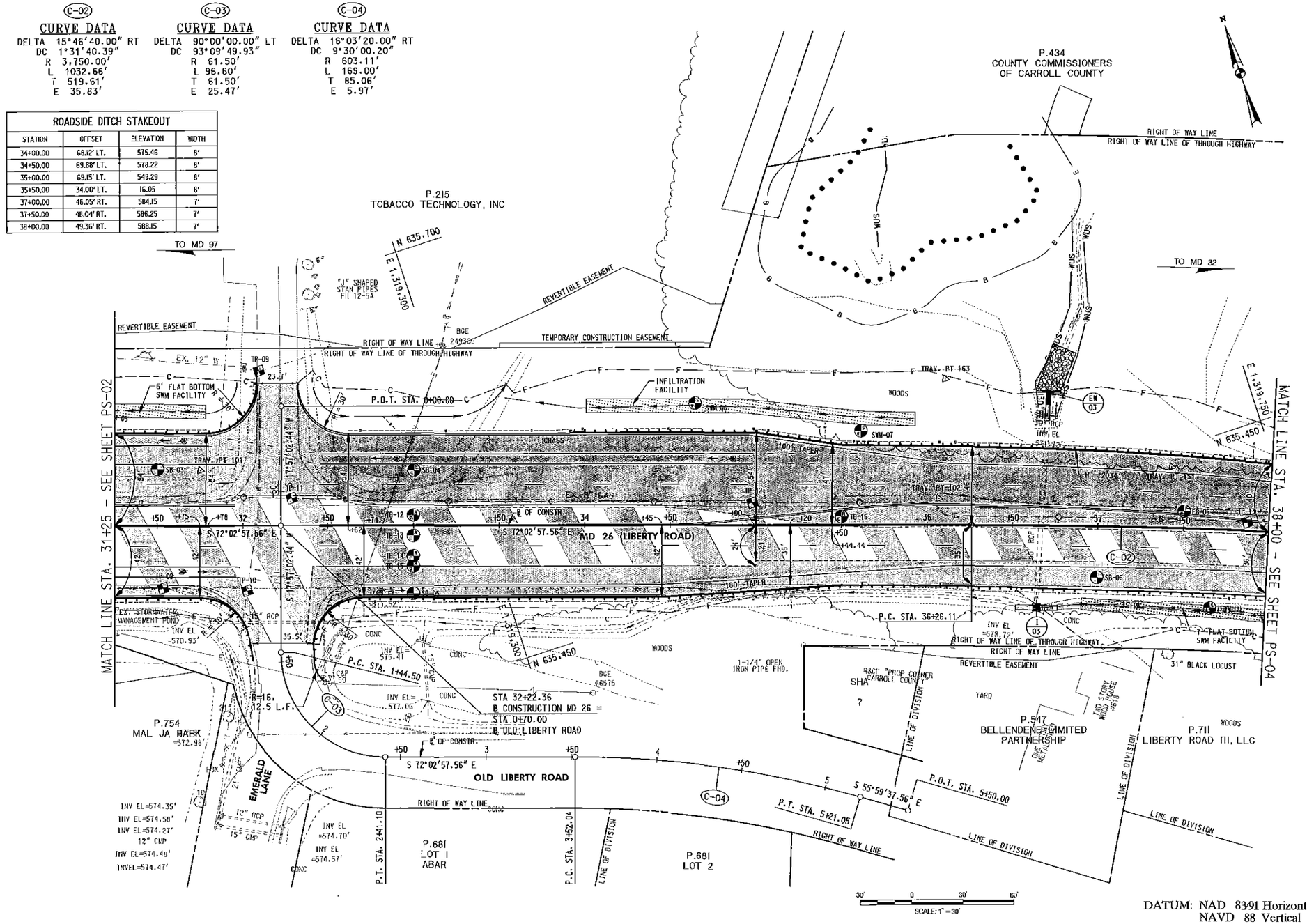
(C-02)
CURVE DATA
DELTA 15°46'40.00" RT
DC 1°31'40.39"
R 3,750.00'
L 1032.66'
T 519.61'
E 35.83'

(C-03)
CURVE DATA
DELTA 90°00'00.00" LT
DC 93°09'49.93"
R 61.50'
L 96.60'
T 61.50'
E 25.47'

(C-04)
CURVE DATA
DELTA 16°03'20.00" RT
DC 9°30'00.20"
R 603.11'
L 169.00'
T 85.06'
E 5.97'

ROADSIDE DITCH STAKEOUT

STATION	OFFSET	ELEVATION	WIDTH
34+00.00	68.12' LT.	575.46	8'
34+50.00	69.88' LT.	578.22	8'
35+00.00	69.15' LT.	549.29	8'
35+50.00	34.00' LT.	16.05	8'
37+00.00	46.05' RT.	584.15	7'
37+50.00	48.04' RT.	586.25	7'
38+00.00	49.36' RT.	588.15	7'



DATUM: NAD 8391 Horizontal
NAVD 88 Vertical

LEGEND
- FULL DEPTH HMA PAVING
- GRINDING & HMA RESURFACING
- PAVEMENT REMOVAL
- RIPRAP
- 202 +50 ℄ CONSTRUCTION
- PIPE, INLET, STORM DRAIN SYMBOLS, END SECTION, STD. MANHOLE, ENDWALL

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CROSS REFERENCE

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TYPICAL SHEETS	TS-01 TO TS-02
SUPERELEVATION SHEETS	- - -
PIPE & DRAINAGE SCHEDULE	DD-01
GEOMETRIC LAYOUT SHEETS	GS-01 TO GS-02
ROADWAY PLAN SHEETS	PS-01 TO PS-05
ROADWAY PROFILE SHEETS	- - -
TRAFFIC CONTROL SHEETS	MT-01 TO MT-06
EROSION & SEDIMENT CONTROL	EP-01 TO EP-06
SIGNING & MARKING PLANS	SN-01 TO SN-06
LANDSCAPE PLAN SHEETS	LD-01 TO LD-03
UTILITIES	- - -

R/W PLAT NUMBER

6876	26140
16608	26266
18525	26269
24021	30926
24022	43979
24023	45074
24025	51156
25389	51157
26138	
26139	

REVISIONS

PLOTTED: Monday, February 23, 2015 AT 01:05 PM
FILE: M:\FIELD\21498.0002\Roadway Design_Cadd_\cH10-P003_MD26.dgn

QUANTITY NOTES

TRAFFIC BARRIER W-BEAM (MD 605.21)

100 L.F.	MD 26 (LIBERTY ROAD) - STA. 31+25 TO STA. 32+08, LT.
403 L.F.	MD 26 (LIBERTY ROAD) - STA. 34+00 TO STA. 38+00, LT.
104 L.F.	MD 26 (LIBERTY ROAD) - STA. 31+25 TO STA. 32+06, RT.
595 L.F.	MD 26 (LIBERTY ROAD) - STA. 32+47 TO STA. 38+00, RT.

TYPE K TRAFFIC BARRIER END TREATMENT (MD 605.10)

1 EA.	MD 26 (LIBERTY ROAD) - STA. 32+08, 83' LT.
1 EA.	MD 26 (LIBERTY ROAD) - STA. 34+00, 54' LT.

REMOVE AND DISPOSE EXISTING TRAFFIC BARRIER

191 L.F.	MD 26 (LIBERTY ROAD) - STA. 36+10 TO 38+00, LT.
106 L.F.	MD 26 (LIBERTY ROAD) - STA. 31+25 TO 32+06, RT.
307 L.F.	MD 26 (LIBERTY ROAD) - STA. 32+49 TO 35+11, RT.

6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN

54 L.F.	MD 26 (LIBERTY ROAD) - STA. 31+25 TO STA. 31+78, LT.
50 L.F.	MD 26 (LIBERTY ROAD) - STA. 31+25 TO STA. 31+75, RT.
541 L.F.	MD 26 (LIBERTY ROAD) - STA. 32+62 TO STA. 38+00, LT.
527 L.F.	MD 26 (LIBERTY ROAD) - STA. 32+71 TO STA. 38+00, RT.

6' CIRCULAR PIPE UNDERDRAIN OUTLETS

12 L.F.	MD 26 (LIBERTY ROAD) - STA. 32+82 TO STA. 32+90, LT.
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 35+40, LT.
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 37+89, LT.
9 L.F.	MD 26 (LIBERTY ROAD) - STA. 32+71, RT.
7 L.F.	MD 26 (LIBERTY ROAD) - STA. 36+65, RT.
9 L.F.	MD 26 (LIBERTY ROAD) - STA. 35+20 TO STA. 35+21, RT.

ROADSIDE DITCH STAKEOUT

STATION	OFFSET	ELEVATION	WIDTH
31+25.00	67.67' LT.	579.58	8'
31+50.00	67.34' LT.	580.08	8'
32+50.00	67.44' LT.	577.03	0'
33+00.00	64.02' LT.	576.31	0'
33+50.00	15.16' LT.	571.69	0'

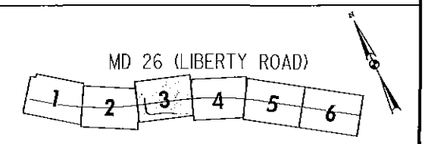
TYPE L TRAFFIC BARRIER ANCHORAGE (MD 605.13)

1 EA.	MD 26 (LIBERTY ROAD) - STA. 32+43, 79' RT.

CLASS I RIPRAP FOR CHANNEL PROTECTION (SEE DD-01)

41 S.Y.	MD 26 (LIBERTY ROAD) - STA. 36+75, LT. (L=24')

KEY MAP



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

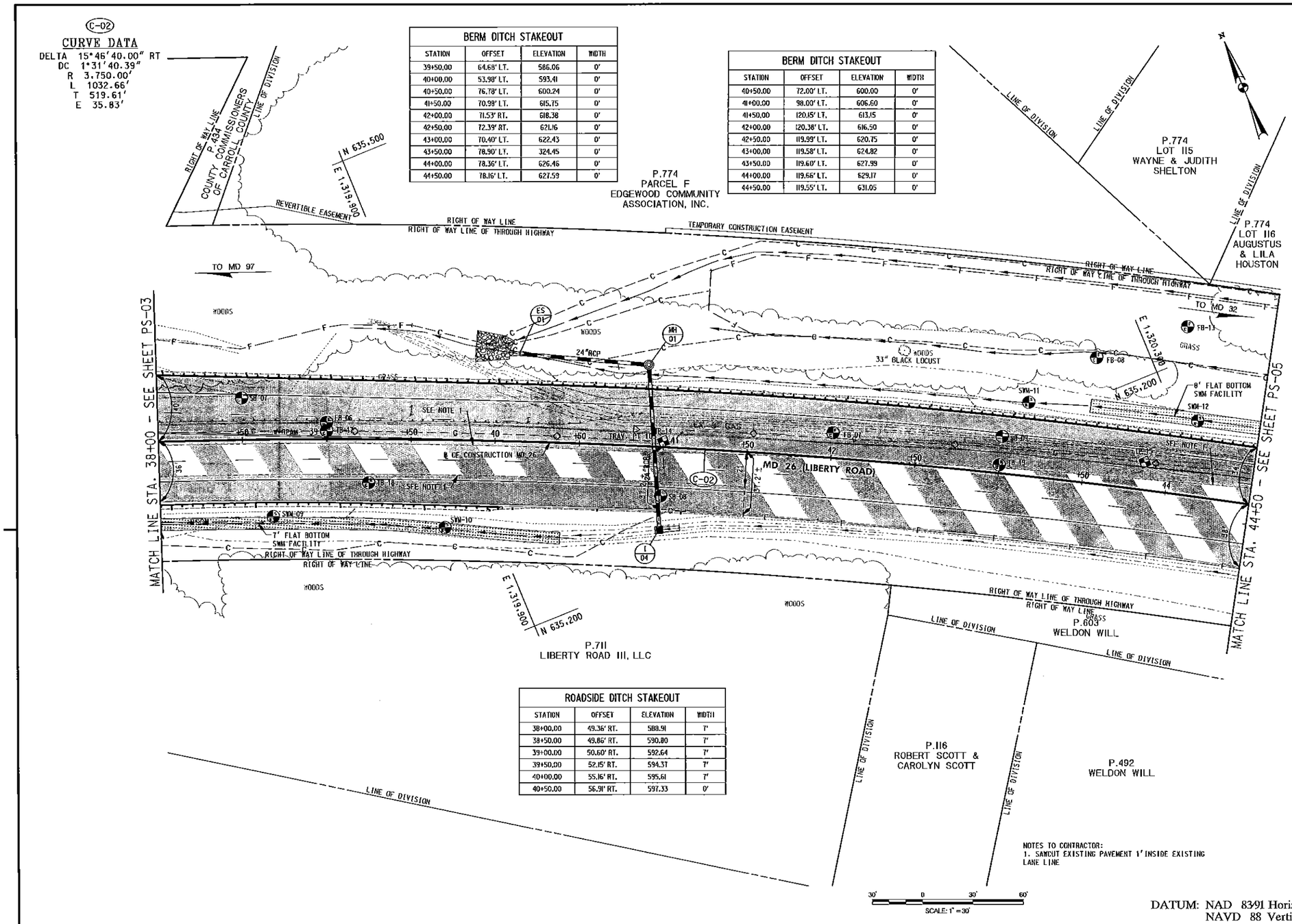
MD 26 WIDENING
FROM 1050 FT WEST OF EMERALD LANE TO CALVERT WAY

ROADWAY PLAN

SCALE 1" = 30' DATE FEBRUARY 2015 CONTRACT NO. CL2255187

DESIGNED BY N.D.K. COUNTY CARROLL
DRAWN BY N.D.K. LOGMILE 6.42 TO 9.06
CHECKED BY M.J.B.
F.A.P. NO. SEE TITLE SHEET

DRAWING NO. PS-03 OF 06 SHEET NO. 10 OF 54



QUANTITY NOTES

TRAFFIC BARRIER W-BEAM (MD 605.21)

650 L.F.	MD 26 (LIBERTY ROAD) - STA. 38+00 TO STA. 44+50, LT.
195 L.F.	MD 26 (LIBERTY ROAD) - STA. 38+00 TO STA. 39+96, LT.

TYPE K TRAFFIC BARRIER END TREATMENT (MD 605.10)

1 EA.	MD 26 (LIBERTY ROAD) - STA. 39+96, 40' RT.

REMOVE AND DISPOSE EXISTING TRAFFIC BARRIER

289 L.F.	MD 26 (LIBERTY ROAD) - STA. 38+00 TO 40+86, LT.

6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN

657 L.F.	MD 26 (LIBERTY ROAD) - STA. 38+00 TO STA. 44+50, LT.
347 L.F.	MD 26 (LIBERTY ROAD) - STA. 38+00 TO STA. 41+50, RT.

6" CIRCULAR PIPE UNDERDRAIN OUTLETS

9 L.F.	MD 26 (LIBERTY ROAD) - STA. 40+31 TO STA. 40+36, LT.
11 L.F.	MD 26 (LIBERTY ROAD) - STA. 42+77 TO STA. 42+85, LT.
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 39+11 TO STA. 39+18, RT.
9 L.F.	MD 26 (LIBERTY ROAD) - STA. 41+00, RT.

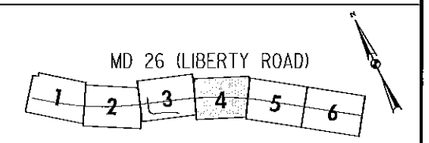
BERM DITCH STAKEOUT

STATION	OFFSET	ELEVATION	WIDTH
41+00.00	43.00' LT.	603.48	0'
41+50.00	43.00' LT.	605.76	0'
42+00.00	43.00' LT.	608.12	0'
42+50.00	43.00' LT.	610.46	0'
43+00.00	43.00' LT.	612.72	0'
43+50.00	46.00' LT.	614.00	8'
44+00.00	46.00' LT.	617.28	8'
44+50.00	46.00' LT.	619.51	8'

CLASS I RIPRAP FOR CHANNEL PROTECTION (SEE DD-01)

36 S.Y.	MD 26 (LIBERTY ROAD) - STA. 39+95, LT. (L=20')

KEY MAP



LEGEND

- FULL DEPTH HMA PAVING
- GRINDING & HMA RESURFACING
- PAVEMENT REMOVAL
- RIPRAP
- 202 +50 @ CONSTRUCTION
- PIPE, INLET, STORM DRAIN SYMBOLS
- END SECTION, STD. MANHOLE, ENDWALL

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LANDSCAPE PLAN SHEETS	LD-01 TO LD-03
UTILITIES	---

R / W PLAT NUMBER	
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REVISIONS

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

MD 26 WIDENING

FROM 1050 FT WEST OF EMERALD LANE TO CALVERT WAY

ROADWAY PLAN

SCALE 1" = 30' DATE FEBRUARY 2015 CONTRACT NO. CL2255187

DESIGNED BY N.D.K. COUNTY CARROLL
DRAWN BY N.D.K. LOGMILE 8.42 TO 9.06
CHECKED BY M.J.B.
F.A.P. NO. SEE TITLE SHEET

DRAWING NO. PS-04 OF 06 SHEET NO. 11 OF 64

PLOTTED: Monday, February 23, 2015 AT 01:05 PM
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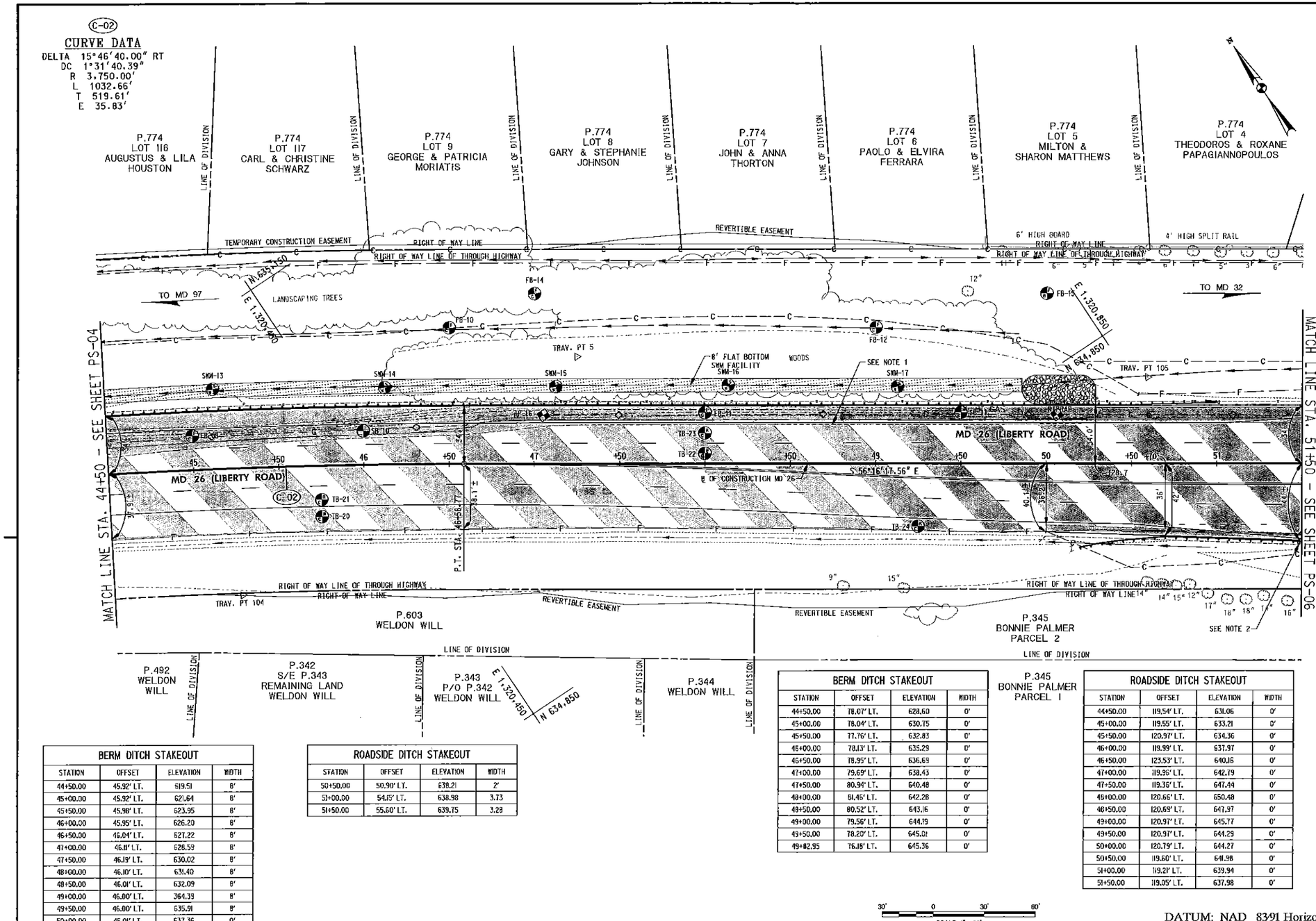


BERM DITCH STAKEOUT			
STATION	OFFSET	ELEVATION	WIDTH
44+50.00	45.92' LT.	619.51	6'
45+00.00	45.92' LT.	621.64	6'
45+50.00	45.98' LT.	623.95	6'
46+00.00	45.95' LT.	626.20	6'
46+50.00	46.04' LT.	627.22	6'
47+00.00	46.11' LT.	628.59	6'
47+50.00	46.19' LT.	630.02	6'
48+00.00	46.10' LT.	631.40	6'
48+50.00	46.01' LT.	632.09	6'
49+00.00	46.00' LT.	364.39	8'
49+50.00	46.00' LT.	635.91	8'
50+00.00	46.01' LT.	637.36	0'

ROADSIDE DITCH STAKEOUT			
STATION	OFFSET	ELEVATION	WIDTH
50+50.00	50.90' LT.	638.21	2'
51+00.00	54.15' LT.	638.98	3.73
51+50.00	55.60' LT.	639.75	3.28

BERM DITCH STAKEOUT			
STATION	OFFSET	ELEVATION	WIDTH
44+50.00	78.07' LT.	628.60	0'
45+00.00	78.04' LT.	630.75	0'
45+50.00	77.76' LT.	632.83	0'
46+00.00	78.13' LT.	635.29	0'
46+50.00	78.95' LT.	636.69	0'
47+00.00	79.69' LT.	638.43	0'
47+50.00	80.94' LT.	640.48	0'
48+00.00	81.45' LT.	642.28	0'
48+50.00	80.52' LT.	643.16	0'
49+00.00	79.56' LT.	644.19	0'
49+50.00	78.20' LT.	645.01	0'
49+82.95	76.18' LT.	645.36	0'

ROADSIDE DITCH STAKEOUT			
STATION	OFFSET	ELEVATION	WIDTH
44+50.00	119.54' LT.	631.06	0'
45+00.00	119.55' LT.	633.21	0'
45+50.00	120.97' LT.	634.36	0'
46+00.00	119.99' LT.	637.97	0'
46+50.00	123.53' LT.	640.16	0'
47+00.00	119.96' LT.	642.79	0'
47+50.00	119.35' LT.	647.44	0'
48+00.00	120.66' LT.	650.48	0'
48+50.00	120.69' LT.	647.97	0'
49+00.00	120.97' LT.	645.77	0'
49+50.00	120.97' LT.	644.29	0'
50+00.00	120.79' LT.	644.27	0'
50+50.00	119.60' LT.	641.98	0'
51+00.00	119.21' LT.	639.94	0'
51+50.00	119.05' LT.	637.98	0'

30' 0 30' 60'
SCALE: 1" = 30'

DATUM: NAD 8391 Horizontal
NAVD 88 Vertical

LEGEND

- FULL DEPTH HMA PAVING
- GRINDING & HMA RESURFACING
- PAVEMENT REMOVAL
- RIPRAP
- 202 +50 ℄ CONSTRUCTION
- PIPE, INLET, STORM DRAIN SYMBOLS, END SECTION, STD. MANHOLE, ENDWALL

QUANTITY NOTES

STANDARD TYPE A COMBINATION CURB AND GUTTER, 12" GUTTER PAN, 9" DEPTH (MD 620.02)	
121 L.F.	MD 26 (LIBERTY ROAD) - STA. 50+29 TO STA. 51+50, LT.
3 L.F.	MD 26 (LIBERTY ROAD) - STA. 50+48 TO STA. 51+50, RT.

TRAFFIC BARRIER W-BEAM (MD 605.21)	
116 L.F.	MD 26 (LIBERTY ROAD) - STA. 50+32 TO STA. 51+50, RT.
600 L.F.	MD 26 (LIBERTY ROAD) - STA. 44+50 TO STA. 50+50, LT.

END ANCHORAGE TERMINAL FOR TYPE A END TREATMENT EITHER OPTION (MD 605.01)	
1 EA.	MD 26 (LIBERTY ROAD) - STA. 50+20, 49' RT.

TYPE C TRAFFIC BARRIER END TREATMENT (MD 605.03)	
1 EA.	MD 26 (LIBERTY ROAD) - STA. 51+00, 36' LT.

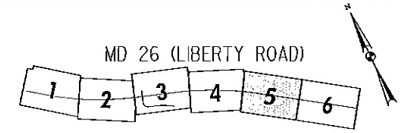
CLASS I RIP RAP FOR CHANNEL PROTECTION (SEE DD-01)	
77 S.Y.	MD 26 (LIBERTY ROAD) - STA. 50+09, LT. (L=43')

6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN	
700 L.F.	MD 26 (LIBERTY ROAD) - STA. 44+50 TO STA. 51+50, LT.
150 L.F.	MD 26 (LIBERTY ROAD) - STA. 50+00 TO STA. 51+50, RT.

6" CIRCULAR PIPE UNDERDRAIN OUTLETS	
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 45+33 TO STA. 45+26, LT.
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 47+82 TO STA. 47+74, LT.
5 L.F.	MD 26 (LIBERTY ROAD) - STA. 49+96 TO STA. 50+00, RT.
10 L.F.	MD 26 (LIBERTY ROAD) - STA. 50+25 TO STA. 50+31, LT.

NOTES TO CONTRACTOR:
1. SAWCUT EXISTING PAVEMENT 1' INSIDE EXISTING LANE LINE.
2. FLARE CURB ON 2' RADIUS AND NOSE DOWN.

KEY MAP



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10150 York Road, Suite 200
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410.494.9093 Tel / 410.667.0925 Fax
www.WallaceMontgomery.com
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CROSS REFERENCE	
ITEM	DRAWING NOs.
TYPICAL SHEETS	TS-01 TO TS-02
SUPERELEVATION SHEETS	– – –
PIPE & DRAINAGE SCHEDULE	DD-01
GEOMETRIC LAYOUT SHEETS	GS-01 TO GS-02
ROADWAY PLAN SHEETS	PS-01 TO PS-06
ROADWAY PROFILE SHEETS	– – –
TRAFFIC CONTROL SHEETS	MT-01 TO MT-06
EROSION & SEDIMENT CONTROL	EP-01 TO EP-06
SIGNING & MARKING PLANS	SN-01 TO SN-06
LANDSCAPE PLAN SHEETS	LD-01 TO LD-03
UTILITIES	– – –

R/W PLAT NUMBER	
6876	26140
16608	26268
16525	26269
24821	30526
24022	43979
24023	45014
24025	51158
25389	51157
26138	
26139	

REVISIONS

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

MD 26 WIDENING
FROM 1050 FT WEST OF EMERALD LANE TO CALVERT WAY

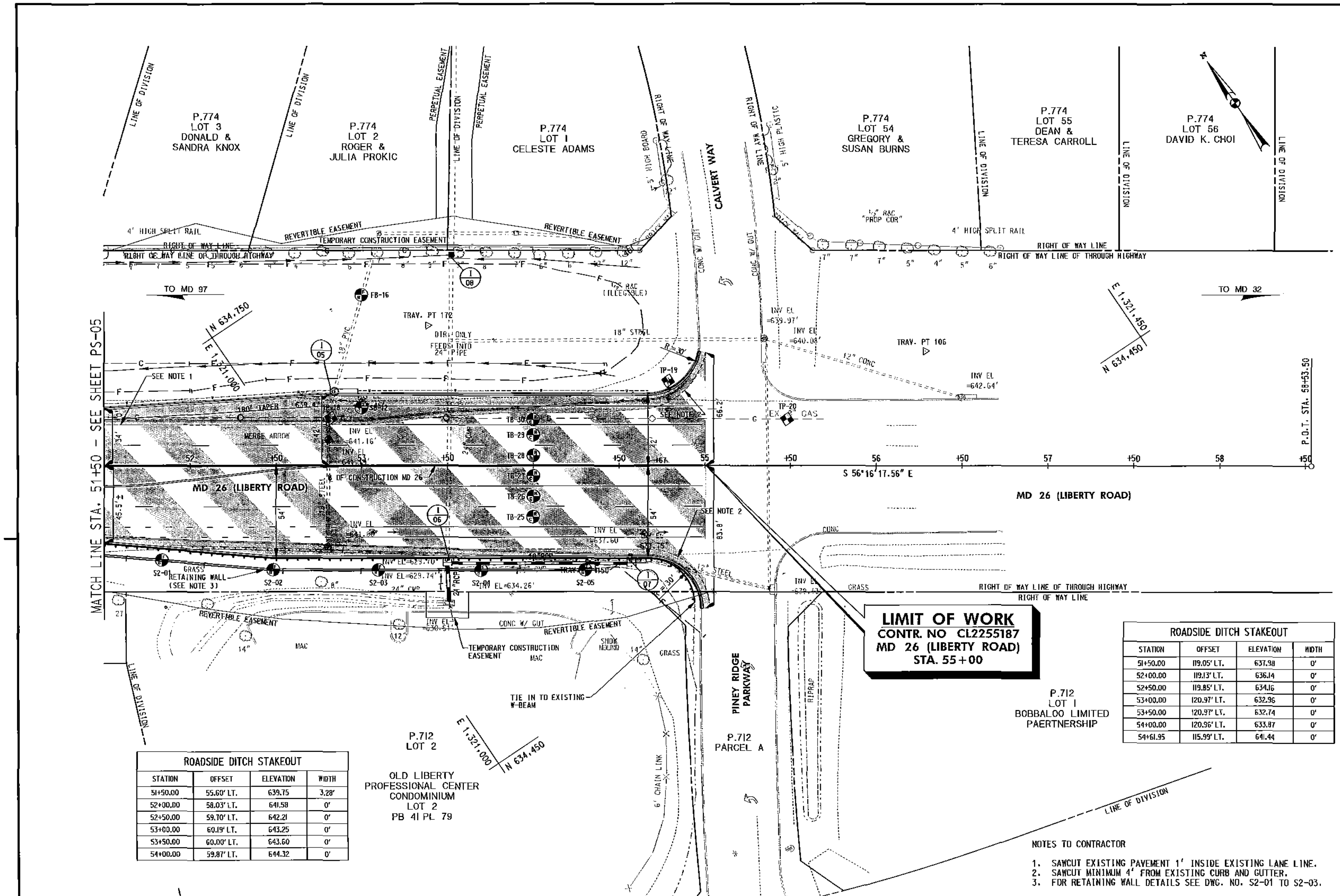
ROADWAY PLAN

SCALE 1" = 30' DATE FEBRUARY 2015 CONTRACT NO. CL2255187

DESIGNED BY N.D.K. COUNTY CARROLL
DRAWN BY N.D.K. LOGMILE 8.42 TO 9.06
CHECKED BY M.J.B.
F.A.P. NO. SEE TITLE SHEET

DRAWING NO. PS-05 OF 06 SHEET NO. 12 OF 54

PLOTTED: Monday, February 23, 2015 AT 01:55 PM
FILE: M:\PROJ\2135\0.0027\Roadway Design_Cadd_\sHD-PS05_MD26.dgn



ROADSIDE DITCH STAKEOUT

STATION	OFFSET	ELEVATION	WIDTH
51+50.00	55.60' LT.	639.75	3.28'
52+00.00	58.03' LT.	641.58	0'
52+50.00	59.70' LT.	642.21	0'
53+00.00	60.19' LT.	643.25	0'
53+50.00	60.00' LT.	643.60	0'
54+00.00	59.87' LT.	644.32	0'

ROADSIDE DITCH STAKEOUT

STATION	OFFSET	ELEVATION	WIDTH
51+50.00	119.05' LT.	637.98	0'
52+00.00	119.13' LT.	636.14	0'
52+50.00	119.85' LT.	634.16	0'
53+00.00	120.97' LT.	632.96	0'
53+50.00	120.97' LT.	632.74	0'
54+00.00	120.96' LT.	633.87	0'
54+61.95	115.99' LT.	641.44	0'

NOTES TO CONTRACTOR

1. SAWCUT EXISTING PAVEMENT 1' INSIDE EXISTING LANE LINE.
2. SAWCUT MINIMUM 4' FROM EXISTING CURB AND GUTTER.
3. FOR RETAINING WALL DETAILS SEE DWG. NO. S2-01 TO S2-03.

30' 0 30' 60'
SCALE: 1" =30'

DATUM: NAD 83/91 Horizontal
NAVD 88 Vertical

QUANTITY NOTES

STANDARD TYPE A COMBINATION CURB AND GUTTER, 12" GUTTER PAN, 9" DEPTH (MD 620.02)

359 L.F. MD 26 (LIBERTY ROAD) - STA. 51+50 TO STA. 54+97, LT.
365 L.F. MD 26 (LIBERTY ROAD) - STA. 51+50 TO STA. 54+98, RT.

REMOVAL AND DISPOSAL OF EXISTING TRAFFIC BARRIER W-BEAM

336 L.F. MD 26 (LIBERTY ROAD) - STA. 51+63 TO STA. 54+94, RT.

TRAFFIC BARRIER W-BEAM (MD 605.21)

360 L.F. MD 26 (LIBERTY ROAD) - STA. 51+50 TO STA. 54+94, RT.

REMOVE EXISTING INLET

1 EA. MD 26 (LIBERTY ROAD) - STA. 52+80, 28' LT.
1 EA. MD 26 (LIBERTY ROAD) - STA. 52+80, 48' RT.
1 EA. MD 26 (LIBERTY ROAD) - STA. 54+56, 55' RT.

REMOVAL OF EXISTING PIPE

28 L.F. MD 26 (LIBERTY ROAD) - STA. 52+80 TO STA. 52+86, LT.
107 L.F. MD 26 (LIBERTY ROAD) - STA. 53+50 TO STA. 54+57, RT.

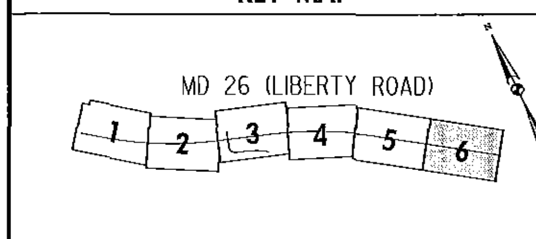
6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN

302 L.F. MD 26 (LIBERTY ROAD) - STA. 51+50 TO STA. 54+67, LT.

FLOWABLE BACKFILL FOR PIPE ABANDONMENT

70 C.Y. MD 26 (LIBERTY ROAD) - STA. 51+50 TO STA. 54+94, RT.

KEY MAP



LEGEND

- FULL DEPTH HMA PAVING
- GRINDING & HMA RESURFACING
- PAVEMENT REMOVAL
- RIPRAP
- 202 +50 ℄ CONSTRUCTION
- PIPE, INLET, END SECTION, STD. MANHOLE, ENDWALL — STORM DRAIN SYMBOLS

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ROADWAY PROFILE SHEETS	---
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LANDSCAPE PLAN SHEETS	LD-01 TO LD-03
UTILITIES	---

R/W PLAT NUMBER

6876	26140
16608	26268
18525	26269
24021	30926
24022	43979
24023	45074
24025	51156
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REVISIONS

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
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MD 26 WIDENING
FROM 1050 FT WEST OF EMERALD LANE TO CALVERT WAY

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SCALE 1" = 30' DATE FEBRUARY 2015 CONTRACT NO. CL2255187

DESIGNED BY N.D.K. COUNTY CARROLL
DRAWN BY N.D.K. LOGMILE 8.42 TO 9.06
CHECKED BY M.J.B.
F.A.P. NO. SEE TITLE SHEET

DRAWING NO. PS-06 OF 06 SHEET NO. 13 OF 54

PLOTTED: Monday, February 23, 2015 AT 01:05 PM

APPENDIX B - MONITORED AMBIENT AIR QUALITY DATA 2012-2014

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2012
Exceptional Events: Included (if any)

Obs	First Max 8hr	Second Max 8hr	Days 8hr Max >STD	First Max 1hr	Second Max 1hr	Days 1hr Max >STD	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8485	1.6	1.6	0	2.3	2.1	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
5921	0.3	0.3	0	0.3	0.3	0	None	1	240190004	University Of Maryland For Environmental And Estuarine Studies	Not in a City	Dorchester	MD	03
8182	0.4	0.4	0	1.8	0.8	0	None	1	240230002	Piney Run, Frostburg Reservoir, Finzel	Grantsville	Garrett	MD	03
8571	1.2	0.9	0	1.3	1.2	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8626	2.1	1.6	0	2.5	2.5	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	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: January 20, 2016

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2013
Exceptional Events: Included (if any)

Obs	First Max 8hr	Second Max 8hr	Days 8hr Max >STD	First Max 1hr	Second Max 1hr	Days 1hr Max >STD	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8716	1.6	1.4	0	2.4	2.2	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8477	0.3	0.3	0	1	0.4	0	None	1	240190004	University Of Maryland For Environmental And Estuarine Studies	Not in a City	Dorchester	MD	03
8626	0.3	0.3	0	0.5	0.4	0	None	1	240230002	Piney Run, Frostburg Reservoir, Finzel	Grantsville	Garrett	MD	03
8689	0.9	0.9	0	1	0.9	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8359	1.6	1.3	0	2.4	2	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

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Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: January 20, 2016

Monitor Values Report

Geographic Area: Maryland
Pollutant: CO
Year: 2014
Exceptional Events: Included (if any)

Obs	First Max 8hr	Second Max 8hr	Days 8hr Max >STD	First Max 1hr	Second Max 1hr	Days 1hr Max >STD	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
8460	1.4	1.3	0	2.4	1.8	0	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
8196	0.4	0.3	0	0.4	0.4	0	None	1	240190004	University Of Maryland For Environmental And Estuarine Studies	Not in a City	Dorchester	MD	03
8104	0.3	0.3	0	0.4	0.3	0	None	1	240230002	Piney Run, Frostburg Reservoir, Finzel	Grantsville	Garrett	MD	03
6248	0.9	0.8	0	1.1	0.9	0	None	1	240270006	Interstate 95 South Welocme Center	North Laurel	Howard	MD	03
6989	0.9	0.8	0	1.5	1	0	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
8533	1.3	1	0	1.7	1.6	0	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	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: January 20, 2016

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2012
Exceptional Events: Included (if any)

Duration Description=24 HOUR

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 HOUR	119	30.1	23.4	23	21.7	23	10.2	None	1	240031003	Anne Arundel Co. Public Works Bldg. 7409 Baltimore Annapolis Blvd.	Glen Burnie	Anne Arundel	MD	03
24 HOUR	112	29.5	22.6	21.5	18.3	22	8.9	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	41	21	18	16.8	13.7	21	9.1	None	2	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	116	28.2	25.5	24.7	23.6	25	10.7	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24 HOUR	121	25	22.3	21.7	20.8	22	8.5	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	43	25	22.1	15.4	13.9	25	8.3	None	2	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	97	24.7	23.8	15	14.7	24	7.8	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	35	14.8	14.7	14.2	12.6	15	7.8	None	2	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	121	23.8	22.5	22.1	21.8	22	9.3	None	1	245100007	Northwest Police Station, 5271 Reistertown Road	Baltimore	Baltimore (City)	MD	03
24 HOUR	111	23.7	22.6	22.5	20	23	9.6	None	1	245100008	Baltimore City Fire Dept.-Truck Company 20; 5714 Eastern Avenue	Baltimore	Baltimore (City)	MD	03
24 HOUR	304	26.3	25.5	24.4	23.7	23	10	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	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: July 17, 2015

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2013
Exceptional Events: Included (if any)

Duration Description=24 HOUR

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 HOUR	116	30.4	26.3	22.1	20.2	22	9.1	None	1	240031003	Anne Arundel Co. Public Works Bldg. 7409 Baltimore Annapolis Blvd.	Glen Burnie	Anne Arundel	MD	03
24 HOUR	111	26.5	24.7	19.9	19.7	20	8.5	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	53	26.9	20	17.9	17.8	20	8.5	None	2	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	113	35.2	29.4	26.8	23.4	27	9.5	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24 HOUR	121	22.2	20.1	18.6	17.5	19	7.8	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	32	21.7	18.5	16.4	12.7	22	8.2	None	2	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	106	23.5	20.4	17.2	15.5	17	7.5	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	50	16.6	15	15	14.7	17	7.9	None	2	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	116	28.6	27	20.4	18.8	20	8.6	None	1	245100007	Northwest Police Station, 5271 Reistertown Road	Baltimore	Baltimore (City)	MD	03
24 HOUR	114	32	28.7	24.3	22.8	24	9.4	None	1	245100008	Baltimore City Fire Dept.-Truck Company 20; 5714 Eastern Avenue	Baltimore	Baltimore (City)	MD	03
24 HOUR	303	34.6	29.8	29.7	27.7	23	9.1	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	MD	03

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Source: U.S. EPA AirData <http://www.epa.gov/airdata>
Generated: July 17, 2015

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2014
Exceptional Events: Included (if any)

Duration Description=24 HOUR

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 HOUR	120	24.1	23	22.9	22.5	23	9.1	None	1	240031003	Anne Arundel Co. Public Works Bldg. 7409 Baltimore Annapolis Blvd.	Glen Burnie	Anne Arundel	MD	03
24 HOUR	115	23	21.4	20.8	20.6	21	8.9	None	1	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	58	21.4	21.2	19	16.2	21	7.7	None	2	240051007	Padonia Elementary School, 9834 Greenside Drive	Cockeysville	Baltimore	MD	03
24 HOUR	110	25.9	23.3	21.6	21.3	22	9.7	None	1	240053001	600 Dorsey Avenue	Essex	Baltimore	MD	03
24 HOUR	119	22	18.1	17.4	16.2	17	7.8	None	1	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	29	13.9	13	12.9	10.7	14	6.7	None	2	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24 HOUR	115	20.4	17.1	15.4	14	15	7.8	None	1	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	57	17.3	15.9	13.2	13.1	16	7.1	None	2	240338003	Pg County Equestrian Center, 14900 Pennsylvania Ave.	Greater Upper Marlboro	Prince George's	MD	03
24 HOUR	122	22.4	20.9	20.3	19.7	20	8.5	None	1	245100007	Northwest Police Station, 5271 Reistertown Road	Baltimore	Baltimore (City)	MD	03
24 HOUR	110	23.7	22.1	22	21.2	22	9.3	None	1	245100008	Baltimore City Fire Dept.-Truck Company 20; 5714 Eastern Avenue	Baltimore	Baltimore (City)	MD	03
24 HOUR	322	30.4	27.4	26.4	26.1	21	9.2	None	1	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	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: July 17, 2015

Monitor Values Report

Geographic Area: Maryland
Pollutant: PM2.5
Year: 2014
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	335	28.8	28.4	28.1	27.6	24	8.6	None	3	240150003	Fair Hill Natural Resource Mgmt Area, 4600 Telegraph Road	Not in a city	Cecil	MD	03
24-HR BLK AVG	346	24.5	22.1	21.5	21.5	19	8.6	None	3	240190004	University Of Maryland For Environmental And Estuarine Studies	Not in a city	Dorchester	MD	03
24-HR BLK AVG	324	22.4	20.9	18.9	17.5	16	6.4	None	3	240230002	Piney Run, Frostburg Reservoir, Finzel	Grantsville	Garrett	MD	03
24-HR BLK AVG	351	30.8	30.5	29.4	26.8	21	10.3	None	3	240251001	Edgewood Chemical Biological Center (Apg), Waehli Road	Edgewood	Harford	MD	03
24-HR BLK AVG	261	25.9	23	22.8	22.2	21	12	None	3	240270006	Interstate 95 South Welocme Center	North Laurel	Howard	MD	03
24-HR BLK AVG	339	29.2	24.7	21.9	21.7	20	8.2	None	3	240290002	Millington Wildlife Management Area, Massey - Maryland Line Road (Route 330)	Not in a city	Kent	MD	03
24-HR BLK AVG	340	27.7	23.2	23	21.9	20	9	None	3	240313001	Lathrop E. Smith Environmental Education Center, 5110 Meadowside Lane	Not in a city	Montgomery	MD	03
24-HR BLK AVG	341	26.7	26.1	26	24.8	23	9.9	None	3	240330030	Howard University'S Beltsville Laboratory, 12003 Old Baltimore Pike	Beltsville	Prince George's	MD	03
24-HR BLK AVG	344	35.3	31.4	29.7	27.9	27	8.8	None	3	240430009	Md Correctional Institution 18530 Roxbury Road	Not in a city	Washington	MD	03
24-HR BLK AVG	348	32.9	30.5	29.9	29.1	23	11.1	None	3	245100040	Oldtown Fire Station, 1100 Hillen Street	Baltimore	Baltimore (City)	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: July 17, 2015

APPENDIX C - TRAFFIC DATA

Larry Hogan, *Governor*
Boyd Rutherford, *Lt. Governor*

State Highway Administration
Maryland Department of Transportation

Pete K. Rahn, *Secretary*
Melinda Peters, *Administrator*

MEMORANDUM

TO: Ms. Teri Soos, Assistant District Engineer
Project Development
District 7

ATTN: Ms. April Stitt

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

DATE: March 19, 2015

SUBJECT: MD 26 from Emerald Lane to Calvert Way
Carroll County
Project Number: CL225A21
Title Sheet/Loadometer Data

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

MD 26 – E. of Emerald Lane

	2015	2035
Average Daily Traffic (ADT):	25,975	31,700
Design Hour Volume (DHV):	10%	10%
Directional Distribution of DHV:	53%	53%
Percent Trucks – ADT:	7%	7%
Percent Trucks – DHV:	6%	6%

Truck Breakdown:

	2A	3D	2S1	2S2	3S2	3S3	Total
2015 ADT: 25,975	1,307	222	24	96	161	8	1,818
2035 ADT: 31,700	1,595	271	29	118	197	9	2,219

We recommend using WIM Station 0009-88 to produce the needed loadometer data.

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

FHWA Class	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
2015 ADT	79	19,409	4,669	137	1,170	178	44	120	161	7	0	0	1	25,975
2015 DHV	6	2,041	408	5	114	8	1	8	7	0	0	0	0	2,598
2035 ADT	96	23,688	5,697	167	1,428	217	54	147	197	8	0	0	1	3,1700
2035 DHV	7	2,475	498	21	139	10	1	10	9	0	0	0	0	3,170

An electronic copy of the loadometer data is stored on the S-Drive for use by the Pavement and Geotechnical Division, located here: S:\SHA\OPPE\PPD\Travel Forecasting\Loadometers\Carroll\MD 26\W of Emerald La. The existing percentage breakdown for Classes 9 through 13 is also attached.

If we can be of any further help, please feel free to contact the writer at 410-545-8796 or Ms. Lisa Shemer, Assistant Division Chief, at 410-545-5640.

By: Evan Hershman

Evan Hershman, P.E.
Travel Forecasting and Analysis
Data Services Engineering Division

Attachment: Percent of Class 9 through Class 13

cc: Mr. Matt Snare
Mr. John Concannon
Mr. Paulo DeSousa
Mr. Vachel Davis
Mr. Scott Dutrow

SHA State Highway Administration	MD 26 east of Emerald La	Preparer EH

Existing Breakdown of Percent of Class 9 through Class 13

Time	% of Class 9-13
0:00	0.51%
1:00	1.79%
2:00	1.53%
3:00	3.32%
4:00	2.55%
5:00	4.85%
6:00	3.06%
7:00	7.14%
8:00	7.65%
9:00	8.16%
10:00	9.69%
11:00	7.14%
12:00	8.42%
13:00	5.10%
14:00	5.87%
15:00	6.12%
16:00	5.10%
17:00	3.32%
18:00	2.81%
19:00	1.53%
20:00	2.04%
21:00	1.53%
22:00	0.51%
23:00	0.26%
Total	100.00%

APPENDIX D - INTERAGENCY CONSULTATION GROUP COORDINATION

Nicole M. Hebert

From: joy.liang@dot.gov
Sent: Wednesday, February 03, 2016 6:54 AM
To: CBrandt@sha.state.md.us; brian.hug@maryland.gov; Rudnick.Barbara@epamail.epa.gov; becoat.gregory@epa.gov; Khadr.Asrah@epa.gov; Magerr.Kevin@epamail.epa.gov; alexandra.brun@maryland.gov; stomlinson@baltometro.org
Cc: Shawn Burnett; Nicole M. Hebert
Subject: RE: MD 26 from Emerald Lane to Calvert Way Improvement Project - Air Quality Interagency Consultation

Good morning Chrissy,

FHWA concurs that the MD 26 from Emerald Lane to Calvert Way Improvement Project is not a 'project of local air quality concern' and that it meets the requirements of the CAA and 40 CFR 93. Additional quantitative hot spot analysis is not required.

Thank you for the opportunity to review.

Joy

From: Christina Brandt [mailto:CBrandt@sha.state.md.us]
Sent: Tuesday, January 26, 2016 2:24 PM
To: 'Brian Hug -MDE-'; 'Rudnick.Barbara@epamail.epa.gov'; 'Becoat, gregory'; 'Khadr, Asrah'; Liang, Joy (FHWA); 'Kevin Magerr'; 'Alexandra Brun -MDE-'; 'Sara Tomlinson'
Cc: 'Shawn Burnett'; 'Nicole M. Hebert'
Subject: MD 26 from Emerald Lane to Calvert Way Improvement Project - Air Quality Interagency Consultation

Good Afternoon,

Attached is the Draft Air Quality Technical Report for the MD 26 from Emerald Lane to Calvert Way project in Carroll 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 2016-2019 TIP includes the MD 26 improvement project under ID 60-9508-19, which is a listing of Areawide Safety and Spot Improvements.

Please review and provide concurrence/comments by February 9, 2016 . Please let me know if you have any questions.

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

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

Please consider the environment before printing this email

Nicole M. Hebert

From: Christina Brandt <CBrandt@sha.state.md.us>
Sent: Wednesday, February 03, 2016 12:43 PM
To: Shawn Burnett; Nicole M. Hebert
Subject: FW: MD 26 from Emerald Lane to Calvert Way Improvement Project - Air Quality Interagency Consultation

From: Alexandra Brun -MDE- [mailto:alexandra.brun@maryland.gov]
Sent: Wednesday, February 03, 2016 12:42 PM
To: Christina Brandt <CBrandt@sha.state.md.us>
Subject: Re: MD 26 from Emerald Lane to Calvert Way Improvement Project - Air Quality Interagency Consultation

Hi Christina,

MDE has reviewed the air quality analysis for the MD 26 Emerald Lane to Calvert Way project and we concur that it meets the requirements of the Clean Air Act and 40 CFR 93 without an additional quantitative hot-spot analysis.

Thank you,

Alex

On Tue, Jan 26, 2016 at 2:24 PM, Christina Brandt <CBrandt@sha.state.md.us> wrote:

> Good Afternoon,
>
> Attached is the Draft Air Quality Technical Report for the MD 26 from Emerald Lane to Calvert Way project in Carroll 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 2016-2019 TIP includes the MD 26 improvement project under ID 60-9508-19, which is a listing of Areawide Safety and Spot Improvements.

Nicole M. Hebert

From: Christina Brandt <CBrandt@sha.state.md.us>
Sent: Monday, February 08, 2016 8:01 AM
To: Shawn Burnett; Nicole Hebert
Subject: FW: MD 26 from Emerald Lane to Calvert Way Improvement Project - Air Quality Interagency Consultation

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From: Khadr, Asrah [mailto:Khadr.Asrah@epa.gov]
Sent: Tuesday, February 02, 2016 2:54 PM
To: Christina Brandt <CBrandt@sha.state.md.us>
Cc: McCurdy, Alaina <McCurdy.Alaina@epa.gov>; Rudnick, Barbara <Rudnick.Barbara@epa.gov>
Subject: RE: MD 26 from Emerald Lane to Calvert Way Improvement Project - 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: Tuesday, January 26, 2016 2:24 PM
To: 'Brian Hug -MDE-' <brian.hug@maryland.gov>; Rudnick, Barbara <Rudnick.Barbara@epa.gov>; Becoat, gregory <becoat.gregory@epa.gov>; Khadr, Asrah <Khadr.Asrah@epa.gov>; 'joy.liang@dot.gov' <joy.liang@dot.gov>; Magerr, Kevin <Magerr.Kevin@epa.gov>; 'Alexandra Brun -MDE-' <alexandra.brun@maryland.gov>; 'Sara Tomlinson' <stomlinson@baltometro.org>
Cc: 'Shawn Burnett' <sburnett@wtbco.com>; 'Nicole M. Hebert' <nhebert@wtbco.com>
Subject: MD 26 from Emerald Lane to Calvert Way Improvement Project - Air Quality Interagency Consultation

Good Afternoon,

Attached is the Draft Air Quality Technical Report for the MD 26 from Emerald Lane to Calvert Way project in Carroll County, Maryland.