EXPEDITED
MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	15910 Emory Lane, Rockville	**Meeting Date:**	2/12/2020
Resource:	*Master Plan Site #23/111* **Nathan Shaw House**	**Report Date:**	2/3/2020
		Public Notice:	1/29/2020
Applicant/Owner:	MCDOT for Patricia Shepherd		
Review:	HAWP	**Tax Credit:**	No
Case Number:	23/111-20A	**Staff:**	Brian Crane

PROPOSAL: Construction of a box culvert and other sitework.

STAFF RECOMMENDATION:

☑ **Approve**
☐ **Approve with conditions**

ARCHITECTURAL DESCRIPTION:

SIGNIFICANCE: Nathan Shaw House/Muncaster Miller's House Master Plan Historic Site
STYLE: Vernacular T-House
DATE: c.1879

Fig. 1: Location of proposed work near the Nathan Shaw House.

PROPOSAL

The applicant proposes to replace an existing culvert at the edge of the subject property. The culvert conveys water from an unnamed stream east of Emory Lane running parallel to Muncaster Mill Road. The stream ultimately joins North Branch Rock Creek. The work will disturb approximately 400 square feet of ground within the boundary of the Nathan Shaw Master Plan Historic Site.

The Montgomery County Planning Department Compliance Review Archaeologist reviewed and approved a plan of archaeological testing within the limits of proposed ground disturbance proposed by Montgomery County DOT. Consistent with this plan, professional archaeological consultant R.K.&K. excavated three shovel test pits in the project area. These tests did not identify any significant archaeological material. There is no evidence that the proposed culvert work will harm anything of archaeological value, and is compatible with the archaeological features of the Nathan Shaw House Master Plan Historic Site. Staff recommends approval of the HAWP.

APPLICABLE GUIDELINES:

Policy On Use of Expedited Staff Reports for Simple HAWP Cases

IV. The Expedited Staff Report format may be used for modifications to a property, which do not significantly alter its visual character.

Montgomery County Code; Chapter 24A-8

(b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to ensure conformity with the purposes and requirements of this chapter, if it finds that:
   (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
   (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter (*Ord. No. 9-4, § 1; Ord. No. 11-59.*).

Secretary of Interior's Standards for Rehabilitation

The Secretary of the Interior defines rehabilitation as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values." The relevant *Standards* are as follows:

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

STAFF RECOMMENDATION:

Staff recommends that the Commission **approve** the HAWP application under the Criteria for Issuance in Chapter 24A-8(b), (1) and (2) having found that the proposal will not substantially alter the exterior features of the historic resource and is compatible in character with the purposes of Chapter 24A;

and with the *Secretary of the Interior's Standards for Rehabilitation #2* and *8*;

and with the general condition that the applicant shall present the **3 permit sets of drawings, if applicable, to Historic Preservation Commission (HPC) staff for review and stamping** prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that final project design details, not specifically delineated by the Commission, shall be approved by HPC staff or brought back to the Commission as a revised HAWP application at staff's discretion;

and with the general condition that the applicant shall notify the Historic Preservation Staff if they propose to make **any alterations** to the approved plans. Once the work is completed the applicant will contact the staff person assigned to this application at 301-563-3402 or brian.crane@montgomeryplanning.org to schedule a follow-up site visit.

[redacted]

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact: Patricia Shepherd
100 Edison Park, 4th floor
Gaithersburg, MD
20878
(240) 777-7231

Contact Email: Patricia.shepherd@montgomerycountymd.gov Contact Person: Pat Shepherd

Daytime Phone No.: 240-777-7231

Tax Account No.: 08-00715448

Name of Property Owner: Farideh Iravani Daytime Phone No.: fira@live.com

Address: 1204 Drake Street, Vienna, VA 22180
Street Number *City* *State* *Zip Code*

Contractor: _____ Phone No.: _____

Contractor Registration No.: _____

Agent for Owner: Stephen C Pitts Daytime Phone No.: 240-777-7217
Montgomery County Department of Transportation-Division of Transportation Engineering, Planning Section Manager

LOCATION OF BUILDING/PREMISE

House Number: 15910 Street: Emory Lane

Town/City: Rockville Nearest Cross Street: Muncaster Mill Road

Lot: _____ Block: _____ Subdivision: 0502

Liber: 56114 Folio: 00191 Parcel: P283

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE:

			CHECK ALL APPLICABLE:					
[X] Construct	[ ] Extend	[ ] Alter/Renovate	[ ] A/C	[ ] Slab	[ ] Room Addition	[ ] Porch	[ ] Deck	[ ] Shed
[ ] Move	[ ] Install	[ ] Wreck/Raze	[ ] Solar	[ ] Fireplace	[ ] Woodburning Stove		[ ] Single Family	
[ ] Revision	[ ] Repair	[ ] Revocable	[ ] Fence/Wall (complete Section 4)		[ ] Other: _____			

1B. Construction cost estimate: $ ~~1,500,000.00~~ 1,500,000.00

1C. If this is a revision of a previously approved active permit, see Permit # _____

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTENSIONS/ADDITIONS

2A. Type of sewage disposal: 01 [ ] WSSC 02 [ ] Septic 03 [ ] Other: N/A

2B. Type of water supply: 01 [ ] WSSC 02 [■] Well 03 [ ] Other: N/A

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

[ ] On party line/property line [ ] Entirely on land of owner [ ] On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Stephen C Pitts
Signature of owner or authorized agent

January 14, 2020
Date

Approved: 902404 *For Chairperson, Historic Preservation Commission*

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: _____ Date Filed: _____ Date Issued: _____

Edit 6/21/99

SEE REVERSE SIDE FOR INSTRUCTIONS

Authorization to Undertake Work

The reason Montgomery County Department of Transportation (MCDOT) is able to undertake this work is that the Emory Lane/Muncaster Mill Shared Use Path is fully funded for design and construction in the Montgomery County Approved FY19-24 Capital Improvements Program under the Bikeways Program-Minor Projects (CIP 0507596). In addition Montgomery County received a Maryland Bikeways "matching" Grant in the amount of $300,000 to offset costs for final design engineering drawings including developing cost estimates and obtaining permits. The MDOT Bikeways Grant Agreement expires on October 31, 2020. MCDOT anticipates construction to begin in Summer 2020.

THE FOLLOWING ITEMS MUST BE COMPLETED AND THE REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.

1. **WRITTEN DESCRIPTION OF PROJECT**

   a. **Description of existing structure(s) and environmental setting, including their historical features and significance:**

   The proposed project involves the replacement of an existing culvert crossing under Emory Lane in Olney, Montgomery County, Maryland and constructing a new culvert. A small portion of the proposed limits of disturbance (400 square feet) for the new culvert will extend on to the property of the Nathan Shaw House (M: 23-111), a National Register of Historic Places (NRHP) eligible property and a Montgomery County Master Plan for Historic Preservation-designated property. The existing dual 36-inch diameter corrugated metal pipe (CMP) conveys flows from an unnamed stream east of Emory Lane, running parallel to Muncaster Mill Road and eventually converging with North Branch Rock Creek. Based on observations from a January 24, 2019 field investigation, there are signs of spawling along the outside of the culvert headwalls, deterioration at the pavement connection to the headwalls, and corrosion along the interior of the CMPs, thus requiring complete replacement.

   b. **General description of project and its effect on the historic resources (s), the environmental setting, and where applicable, the historic district:**

   The proposed culvert features will include a 9' wide by 4' deep reinforced concrete box culvert (replacing the existing dual 36" CMPs), culvert invert depression of one (1) foot below existing channel bed in accordance with Maryland Department of Natural Resource (MDNR) requirements, concrete headwall with squared edge at pipe opening, and riprap channel protection and the inlet and outlet. The limits of disturbance for the construction proposed culvert extend 400 square feet onto the Nathan Shaw House historic property, which includes the Nathan Shaw House, three outbuildings, and a well. The proposed construction on the historic property does not involve or effect any of these standing resources. An archaeological survey of the LOD within the historic property was undertaken at the request of the Montgomery County Planning Department's Historic Preservation Office to determine if the proposed construction would effect any below ground cultural resources. The archaeological survey did not identify any cultural resources (see attached archaeological survey technical memo). No trees within the historic property will be removed (see the attached Tree Survey).

2. **SITE PLAN**

   Site and environmental setting, drawn to scale. You may use your plat. Your site plan must include:

   a. the scale, north arrow, and date;

   b. dimensions of all existing and proposed structures; and

   c. site features such as walkways, driveways, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.

3. **PLANS AND ELEVATIONS**

   You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8 1/2" x 11" paper are preferred.

   a. ***Schematic construction plans***, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.

   b. Elevations (facades), with marked dimensions, clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each facade affected by the proposed work is required.

4. **MATERIALS SPECIFICATIONS**

   General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings. See Section 1.2 and the Site Plan

5. **PHOTOGRAPHS**

   a. Clearly labeled photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.

   b. Clearly label photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

6. **TREE SURVEY**

   If you are proposing construction adjacent to or within the dripline of any tree 6" or larger in diameter (at approximately 4 feet above the ground), you must file an accurate tree survey identifying the size, location, and species of each tree of at least that dimension.

7. **ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS**

   For **ALL** projects, provide an accurate list of adjacent and confronting property owners (not tenants), including names, addresses, and zip codes. This list should include the owners of all lots or parcels which adjoin the parcel in question, as well as the owner(s) of lot(s) or parcel(s) which lie directly across the street/highway from the parcel in question.

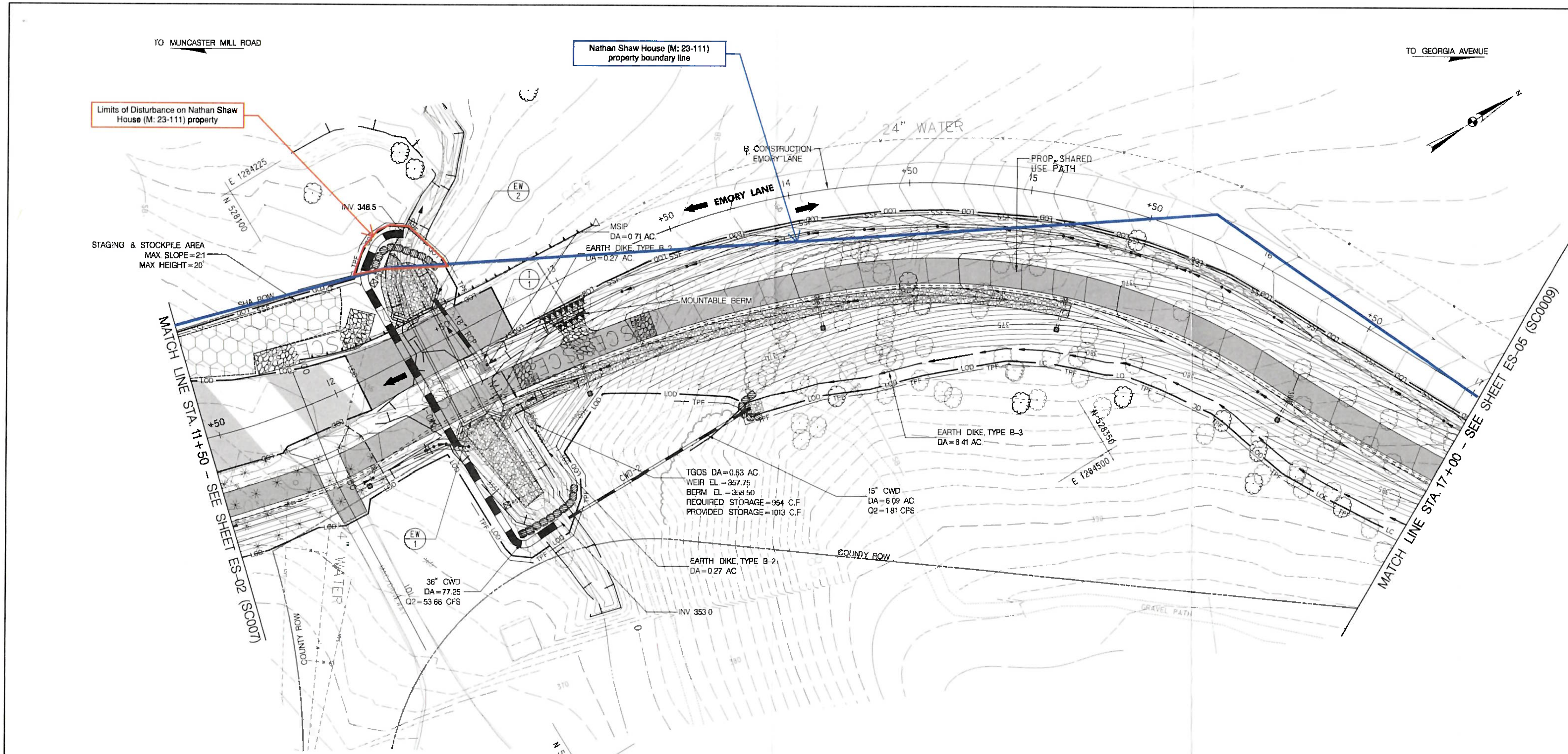
PLEASE PRINT (IN BLUE OR BLACK INK) OR TYPE THIS INFORMATION ON THE FOLLOWING PAGE.
PLEASE STAY WITHIN THE GUIDES OF THE TEMPLATE, AS THIS WILL BE PHOTOCOPIED DIRECTLY ONTO MAILING LABELS.

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address	**Owner's Agent's mailing address**
Farideh Iravani 1204 Drake Street Vienna, VA 22180	

Adjacent and confronting Property Owners mailing addresses

15920 Emory Lane, Rockville, MD (adjacent) Farideh Iravani 15920 Emory Lane Rockville, MD 20853	15901 Emory Lane, Rockville, MD (confronting) John and Rosemary Powers 15901 Emory Lane Rockville, MD 20853
5035 Muncaster Mill Road, Rockville, MD (adjacent) M-NCPPC 8787 Georgia Avenue Silver Spring, MD 20910-3716	Sweetbirch Dr, Rockville, MD (confronting) Norbeck Manor Homeowners Association, Inc PO Box 12156 Silver Spring, MD 20908-0156



LEGEND

SCE	STABILIZED CONSTRUCTION ENTRANCE
LOD	LIMIT OF DISTURBANCE
DF	DIVERSION FENCE
TGOS	TEMPORARY GABION OUTLET STRUCTURE
TSOS	TEMPORARY STONE OUTLET STRUCTURE
	RIPRAP FOR SEDIMENT CONTROL
	MOUNTABLE BERM
	STAGING/STOCKPILE AREA
	SAME-DAY STABILIZATION
MIP	MEDIAN INLET PROTECTION
TPF	TREE PROTECTION FENCE
	EXISTING TREELINE /CANOPY COVER
	ROW LINE
	PROPERTY LINE
	EX STORM DRAIN PIPE
X	TREE REMOVAL
	EX. TREE TO REMAIN
330	EX. CONTOUR
	PROPOSED TYPE K INLET
	PROP STORM DRAIN PIPE
	PROPOSED END SECTION
430	PROP CONTOUR
	PROPOSED DRAINAGE DITCH
	FINE MILLING AND RESURFACING
	FULL DEPTH PAVEMENT
	PAVEMENT CONVERSION TO OPEN SPACE
	SIGNIFICANT/SPECIMEN (>24" DBH) OR ROADSIDE TREE W/CRITICAL ROOT ZONE

NOTES

1. WHERE NO SCE IS PROVIDED, CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT WITHIN THE LOD THIS EQUIPMENT SHALL BE KEPT WITHIN THE LOD UNTIL THE PROPOSED WORK IS COMPLETE AND SHALL HAVE TREADS/TIRES CLEANED PRIOR TO LEAVING THE LOD
2. ALL STAGING AND STOCKPILING MUST BE WITHIN THE LOD SEDIMENT CONTROL FOR THE STAGING/STOCKPILE AREA MUST BE PROVIDED IF NEEDED OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.
3. ALL SIGNIFICANT TREES WITHIN THE LOD SHALL BE REMOVED AND WILL NOT BE SHOWN WITH A REMOVAL SYMBOL ("X") FOR VISUAL CLARITY
4. TREE PROTECTION FENCE (TPF) TO BE PLACED ALONG THE LOD TPF IS OFFSET FROM LOD FOR VISUAL CLARITY.

RK&K
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700 E. Pratt Street, Suite 500 | Baltimore, MD 21202
Engineers | Construction Managers | Planners | Scientists
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OWNER/ADDRESS:
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
PATRICIA SHEPHERD
PATRICIA.SHEPHERD@MONTGOMERYCOUNTYMD.GOV
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7231

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date
APPR. VED
Chief, Division of Transportation Engineering — Date

DESIGNED BY LMG DRAWN BY LMG CHECKED BY SBP

SC/SWM 09 OF 12 DWG. ES-04

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

SCALE 1" = 20' DATE AUGUST 2019

SHEET NO. 45 OF 80

PLOTTED: Tuesday, September 10, 2019 AT 01:42 PM
FILE: \\balsrv04\v2013\2013\13184_MCDOT\Task 33_ Emory Lane SUP\CADD\Plans\pES-P004_EmoryLn.dgn

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

C.I.P. CONTRACT NO. 0507596

MISS UTILITY

THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL UNDERGROUND UTILITIES IN THE AREA OF PROPOSED WORK ARE LOCATED PRIOR TO COMMENCING CONSTRUCTION WORK. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF CHAPTER 36A OF THE MONTGOMERY COUNTY CODE.

THE CONTRACTOR IS ALSO RESPONSIBLE FOR LOCATING ALL PRIVATE UTILITIES (NOT LOCATED BY MISS UTILITY) WITHIN M-NCPPC PROPERTY AT THEIR EXPENSE. ALL UTILITIES SHOWN ON THE PLANS ARE PROVIDED FOR INFORMATION ONLY AND SHALL BE CONSIDERED APPROXIMATE. M-NCPPC SHALL NOT BE RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. ANY UTILITIES OR OTHER UNDERGROUND FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

STORMWATER MANAGEMENT
REVIEWED DATE
APPROVED DATE
SM FILE NO.

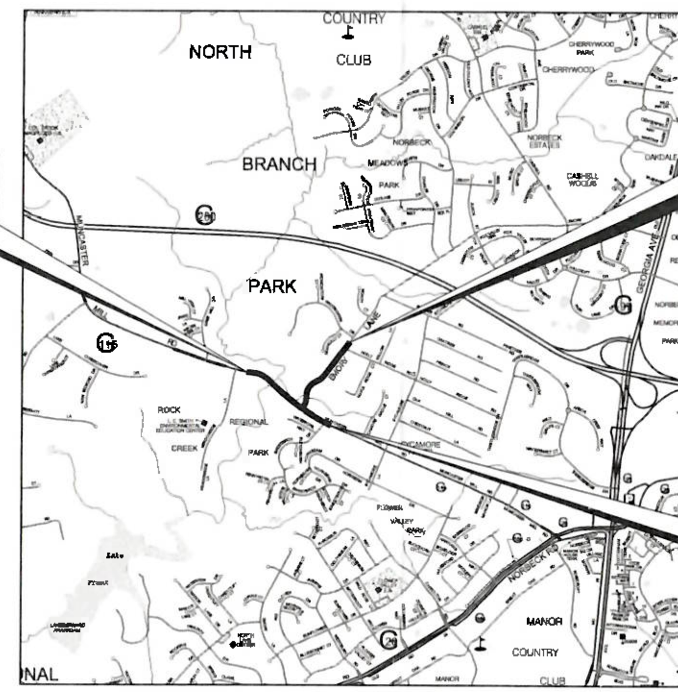
SEDIMENT CONTROL TECHNICAL REQUIREMENTS:
REVIEWED DATE
APPROVED DATE

ADMINISTRATIVE REQUIREMENTS:
REVIEWED DATE
SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

DPS approval of a sediment control or stormwater management plan is for demonstrated compliance with minimum environmental runoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties.

LIMIT OF WORK
MUNCASTER MILL ROAD
STA. 336+50.00



LIMIT OF WORK
EMORY LANE
STA. 27+65.00

LIMIT OF WORK
MUNCASTER MILL ROAD
STA. 357+70.50

VICINITY MAP
SCALE: 1" = 2,000'

DPS PERMIT NO. XXXXXX

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PERMITTING SERVICES
FINAL APPROVAL

DATE ____
BY ____

*SUBJECT TO DEDICATION OF RIGHT OF WAY AND EASEMENTS PER COUNTY CODE SECTION 50.

95% DESIGN REVIEW
AUGUST 2019

RELATED REQUIRED PERMITS

To be completed by the consultant and placed on the first sheet of the Sediment Control/Stormwater Management plan set for all projects

IT IS THE RESPONSIBLITY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL PERMIT:

TYPE OF PERMIT	REQ'D	NOT REQ'D	PERMIT NO.	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain district		X			
WATERWAYS/WETLAND(S) a. Corps of Engineers	X				
b. MDE	X				
c. MDE Water Quality Certification	X				
MDE Dam Safety		X			
Montgomery County/DNR Roadside Tree Care Blanket Permit	X				
Montgomery County Roadside Tree Protection Law Approval	X				
NPDES NOTICE OF INTENT	X				
OTHERS (Please List):		X			
MNCPPC Park Construction Permit		X			
WSSC	X				
Montgomery County Tree Canopy Construction Law Approval		X			

INDEX OF SHEETS

DESIGN DESIGNATION

ROADWAY	MUNCASTER MILL RD		EMORY LANE	
ROADWAY LENGTH (MILES)	0.40		0.33	
CONTROLS YEARS	2017	2030	2017	2030
AVERAGE DAILY TRAFFIC (A.D.T.)	17,572	18,750	6,025	6,860
DESIGN HOURLY VOLUME (D.H.V.)	1,760	1,875	785	890
DIRECTIONAL DISTRIBUTION	50%	50%	49%	51%
% TRUCKS (A.D.T.)	4%	4%	4%	4%
% TRUCKS (D.H.V.)	-	-	-	-
FUNCTIONAL CLASSIFICATION	ARTERIAL		ARTERIAL	
CONTROL OF ACCESS	NONE		NONE	
INTENSITY OF DEVELOPMENT	SUBURBAN		SUBURBAN	
TERRAIN	ROLLING		ROLLING	
DESIGN SPEED (M.P.H.)	40 MPH		30 MPH	
ANTICIPATED POSTED SPEED (M.P.H.)	40 MPH		30 MPH	

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PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSION ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 18530
EXPIRATION DATE: 12/15/19

STATE OF MARYLAND ★ RICHARD J. ADAMS JR. ★ No. 18530 ★ PROFESSIONAL ENGINEER

OWNER/ADDRESS:
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
PATRICIA SHEPHERD
PATRICIA.SHEPHERD@MONTGOMERYCOUNTYMD.GOV
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7231

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL:
Chief, Transportation Planning and Design Section — Date
APPROVED:
Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY JCW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH
TITLE SHEET

DWG. TI-01

SCALE 1"=2000' DATE AUGUST 2019 SHEET NO 1 OF 80

ABBREVIATIONS

AASHTO	American Association of State Highway Transportation Officials
ADT	Average Daily Traffic
AHD	Ahead
APPROX	Approximate
℄ or B/L	Baseline
BK	Back /Book
BIT.	Bituminous
B.C.	Bituminous Concrete
B.M.	Bench Mark
BOT	Bottom
C.C	Center of Curve
CAP	Corrugated Aluminum Pipe
CAPA	Corrugated Aluminum Pipe Arch
CATV	Cable Television
C.B.R.	California Bearing Ratio
℄ or C/L	Centerline
CL	Class
CLF	Chainlink Fence
CMP	Corrugated Metal Pipe
C.O.	Cleanout
COMB	Combination
CONC	Concrete
CONSTR.	Construction
COR	Corner
CORR.	Correction
CPP-S	Corrugated Polyethylene Pipe – Type 'S'
CSP	Corrugated Steel Pipe – Aluminized Type 2
CSPA	Corrugated Steel Pipe Arch – Aluminized Type 2
DC	Degree of Curve
D.H.V.	Design Hourly Volume
D.I.	Drop Inlet
DIA.	Diameter
D.O.	Double Opening
E	East
E	Electric
E	External Distance
EA	Each
EB	Eastbound
ELEV	Elevation
ES	End Section
EX or EXIST	Existing
FT	Feet
F or FL	Flowline
F.B.D	Flat Bottom Ditch
F.H	Fire Hydrant
FWD.	Forward
G	Gas
G.V.	Gas Valve
H.B.	Handbox
HDPE	High Density Polyethylene
HDWL	Headwall
HERCP	Horizontal Elliptical Reinforced Concrete Pipe
HP	High Point
IN	Inch
I.S.T.	Inlet Sediment Trap
INV.	Invert
J.B.	Junction Box
K	K Inlet
L	Length
LF	Linear Feet
L.L.	Liquid Limit
LP	Low Point
L.P.	Light Pole
LT.	Left
MAC	Macadam
M.C.	Moisture Content
MAX.	Maximum
M.D.D.	Maximum Dry Content
MOD.	Modified
MIN.	Minimum
N	North
NB	Northbound
NE	Northeast
N.P.	Non-Plastic
O.C	On Center
OHE	Overhead Electric
O.M.	Optimum Moisture
PAV'T.	Pavement
PC	Point of Curvature
PCC	Point of Compound Curvature
P/C	Point of Crown
P/GE	Profile Grade Elevation
P.G.E.	Profile Ground Elevation
P.G.L.	Profile Grade Line
P/GL	Profile Ground Line
P/R	Point of Rotation
P.I.	Plasticity Index
PI	Point of Intersection
POC	Point On Curve
POT	Point On Tangent
PPWP	Polyvinyl Chloride Profile Wall Pipe
PROP	Proposed
PRC	Point of Reverse Curve
PT	Point
PT	Point of Tangency
PVC	Point of Vertical Curve
PVC	Polyvinyl Chloride
PVI	Point of Vertical Intersection
PVRC	Point of Vertical Reverse Curve
PVT	Point of Vertical Tangency
R	Radius
R.F.	Rock Fragments
RT	Right
RW or R/W	Right of Way
RCP	Reinforced Concrete Pipe
RCPP	Reinforced Concrete Pressure Pipe
R.Q.D.	Rock Quality Designation
R.M.	Rootmat
S	South
SAN.	Sanitary Sewer
SB or S/B	Southbound
S.D	Storm Drain
S.D.D.	Surface Drain Ditch
S/E	Super Elevation
SF	Silt Fence
SF	Square Feet
SHT.	Sheet
SPP	Structural Steel Plate Pipe
SPPA	Structural Steel Plate Pipe Arch
S.P.T.	Standard Penetration Testing
SRP	Steel Spiral Rib Pipe – Aluminized Type 2
SRPA	Steel Spiral Rib Pipe Arch – Aluminized Type 2
SSD	Stopping Sight Distance
SSF	Super Silt Fence
STD.	Standard
STA	Station
SO.	Single Opening
SY	Square Yards
SWM	Stormwater Management
T	Tangent
T	Telephone
T.C.	Top of Cover
T.G.	Top of Grate
T or TL	Traverse Line
T.M.	Top of Manhole
TRAV.	Traverse
TS	Temporary Swale
T.S.	Top of Slab
T.S.	Topsoil
TYP.	Typical
U.D.	Under Drain
U.G.	Underground
U.P.	Utility Pole
USDA	United States Department of Agriculture
VCL	Vertical Clearance
V.C.L.	Vertical Curve Length
W	Water
W	West
WB	Westbound
WB	Wetland Buffer
W.M.	Water Meter
W.S.	Wrapped Steel
WUS	Waters of the United States
W.V.	Water Valve

LEGEND

PROPOSED MEDIAN BARRIER
ELECTRICAL HAND BOX – SIGNALS (H.B.)
FLOW LINE
STATE, COUNTY OR CITY LINES
PROPOSED TRAFFIC BARRIER
EXISTING TRAFFIC BARRIER
PROPOSED FENCE LINE
EXISTING FENCE LINE
RIGHT OF WAY LINE
EXISTING ROADWAY
RAILROAD
BASE LINE OR SURVEY LINE
FIRE HYDRANT (F.H.)
HISTORIC BOUNDARY
WETLAND BOUNDARY
PROPOSED PIPE /CULVERT
EXISTING PIPE /CULVERT
EXISTING DROP INLET
UTILITY POLE
WETLAND
WETLAND BUFFER
WATERS OF THE U.S. (WUS)
100 YEAR FLOODPLAIN
HEDGE /TREE LINE
BUSH /TREE
CONIFEROUS TREE
GROUND ELEVATION
GRADE ELEVATION

GENERAL NOTES

1. RIGHT OF WAY LINES ARE SHOWN FOR ASSISTANCE IN INTERPRETING PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES.
2. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST HOLES BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCE IS LESS THAN TWELVE (12) INCHES, THEN CONTACT THE MONTGOMERY COUNTY DOT PROJECT MANAGER AND THE APPROPRIATE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.
3. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF ANY EXCAVATION WORK AT 1-800-257-7777.
4. REPAIRS TO UTILITIES OR PROPERTY DAMAGED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
5. SAW CUTS WILL NOT BE MEASURED BUT WILL BE INCIDENTAL TO OTHER RELATED ITEMS AS SPECIFIED IN THE CONTRACT DOCUMENTS.
6. ALL WORK ON THIS PROJECT SHALL CONFORM TO THE 2019 MDSHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, REVISIONS THEREOF OR ADDITIONS THERETO, THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS, AND THE LATEST VERSION OF THE MARYLAND MUTCD.
7. PAVEMENT RESURFACING SHALL BE COMPLETED WITHIN FOURTEEN (14) CALENDAR DAYS AFTER FINE MILLING. FINE MILLING OPERATIONS SHALL NOT BEGIN UNLESS THERE IS A SUFFICIENT TIME TO RESURFACE THE ROADWAY BEFORE COLD WEATHER.
8. TOPOGRAPHIC FIELD SURVEY WAS COMPLETED BY MCDOT IN 2010, AND CDDI IN 2017 AND 2018
9. HORIZONTAL COORDINATES ARE BASED ON MARYLAND STATE PLANE, NAD 83. VERTICAL DATUM IS NGVD 29

PLOTTED Tuesday, August 13, 2019 AT 01:38 PM

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7231

NO	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ — DRAWN BY KBJ — CHECKED BY JCW

DWG. AB-01

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE
SHARED USE PATH

GENERAL NOTES, ABBREVIATIONS AND LEGEND

SCALE NONE — DATE AUGUST 2019

SHEET NO 2 OF 80

NOTE: SEE SHEET GS-02 FOR SHARED USE PATH BASELINE

BASELINE CONTROL COORDINATES — DRIVEWAY 1

STATION	NORTH	EAST
POT STA 100+00.00	528,083.8677	1,284,300.3956
PC STA. 100+35.28	528,077.9534	1,284,335.1779
PI STA. 100+45.18	528,076.2937	1,284,344.9390
PT STA. 100+55.06	528,075.7145	1,284,354.8233
POT STA. 101+24.28	528,071.6661	1,284,423.9195

BASELINE CONTROL COORDINATES — DRIVEWAY 2

STATION	NORTH	EAST
POT STA 120+00.00	528,631.1677	1,284,706.2899
PC STA. 120+26.75	528,614.5959	1,284,727.2914
PI STA. 120+40.94	528,606.2828	1,284,738.7909
PT STA. 120+55.13	528,598.4106	1,284,750.5965
POT STA. 121+94.27	528,519.0864	1,284,864.9144

BASELINE CONTROL COORDINATES — DRIVEWAY 3

STATION	NORTH	EAST
POT STA 140+00.00	528,761.5207	1,284,806.2634
PC STA. 140+51.11	528,731.0412	1,284,847.2856
PI STA. 140+69.16	528,720.2713	1,284,861.7808
PT STA. 140+86.63	528,716.7724	1,284,879.4968
PC STA. 140+86.71	528,716.8074	1,284,879.4177
PI STA. 141+13.17	528,711.6814	1,284,905.3721
PT STA. 141+38.18	528,693.3256	1,284,924.4240

BASELINE CONTROL COORDINATES — DRIVEWAY 4

STATION	NORTH	EAST
POT STA 160+00.00	528,982.3120	1,284,968.3644
PC STA. 160+39.46	528,958.6237	1,284,999.9224
PI STA. 160+58.82	528,947.0032	1,285,015.4036
PCC STA. 160+78.10	528,937.9042	1,285,032.4890
PI STA. 160+93.38	528,930.7216	1,285,045.9760
PT STA. 161+08.11	528,930.3003	1,285,061.2506

BASELINE CONTROL COORDINATES — NORTH BRANCH TRAIL

STATION	NORTH	EAST
PC STA. 10+00.00	528,103.3098	1,283,840.4004
PI STA. 10+63.94	528,132.5071	1,283,897.2834
PT STA. 11+13.78	528,093.1268	1,283,947.6556

BASELINE CONTROL COORDINATES — EMORY

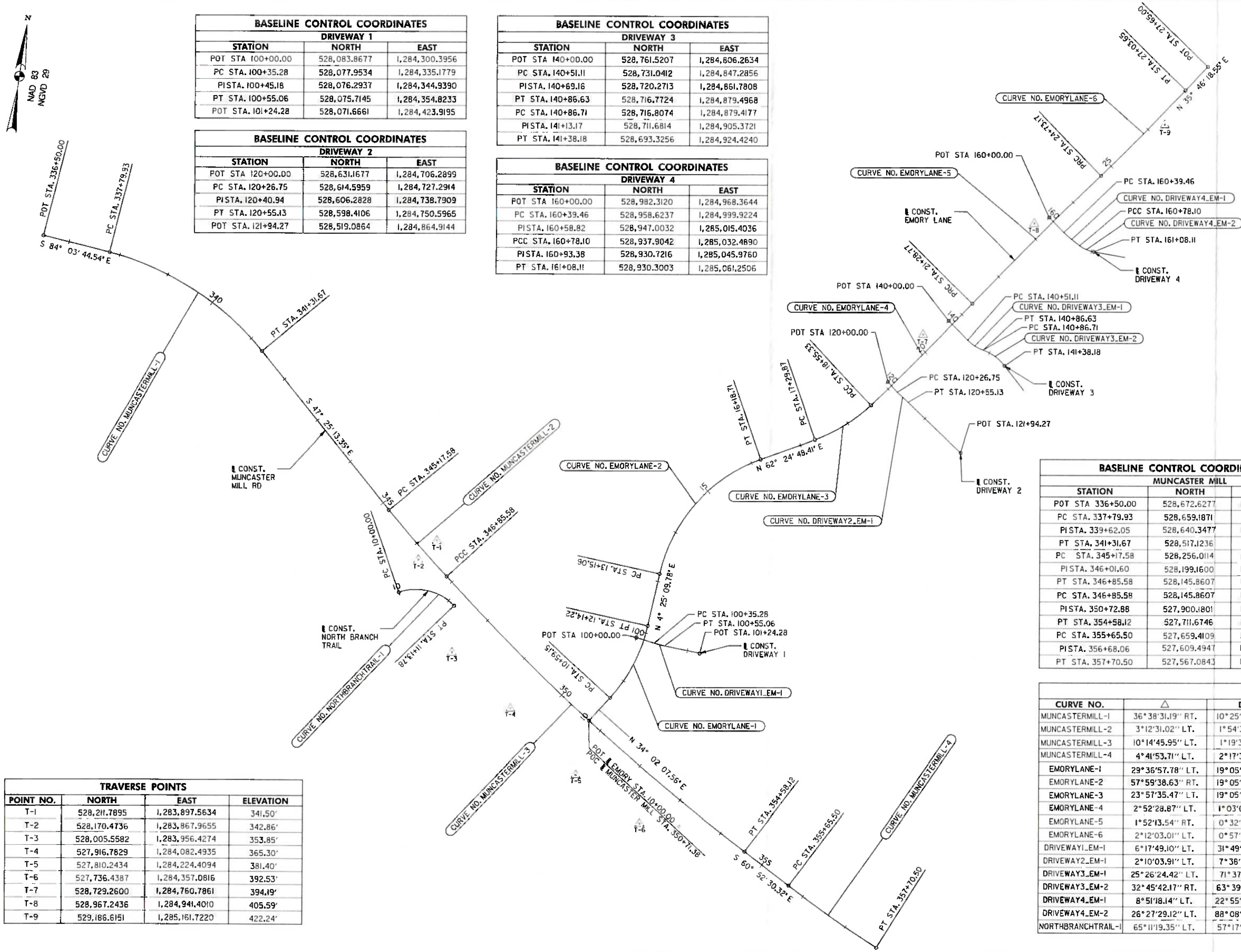
STATION	NORTH	EAST
POT STA 10+00.00	527,914.7636	1,284,234.6253
PC STA. 10+59.15	527,963.7779	1,284,267.7300
PI STA. 11+38.45	528,029.5001	1,284,312.1193
PT STA. 12+14.22	528,108.5726	1,284,318.2305
PC STA. 13+15.06	528,209.1121	1,284,326.0009
PI STA. 14+81.33	528,374.8901	1,284,338.8132
PT STA. 16+18.71	528,451.8889	1,284,486.1825
PC STA. 17+29.87	528,503.3669	1,284,584.7071
PI STA. 17+93.53	528,532.8458	1,284,641.1272
PT STA. 18+55.33	528,582.6964	1,284,680.7144
PC STA. 18+55.33	528,582.6964	1,284,680.7144
PI STA. 19+92.08	528,689.4294	1,284,766.2039
PT STA. 21+28.77	528,800.3155	1,284,846.2331
PC STA. 21+28.77	528,800.3155	1,284,846.2331
PI STA. 23+00.99	528,939.4935	1,284,947.6659
PT STA. 24+73.17	529,075.2866	1,285,053.5873
PC STA. 24+73.17	529,075.2860	1,285,053.5869
PI STA. 25+88.42	529,166.1597	1,285,124.4702
PT STA. 27+03.65	529,259.6885	1,285,191.8115
POT STA. 27+65.00	529,309.4685	1,285,227.6768

BASELINE CONTROL COORDINATES — MUNCASTER MILL

STATION	NORTH	EAST
POT STA 336+50.00	528,672.6277	1,283,070.3936
PC STA. 337+79.93	528,659.1871	1,283,199.6258
PI STA. 339+62.05	528,640.3477	1,283,380.7675
PT STA. 341+31.67	528,517.1236	1,283,514.8684
PC STA. 345+17.58	528,256.0114	1,283,799.0285
PI STA. 346+01.60	528,199.1600	1,283,860.8980
PT STA. 346+85.58	528,145.8607	1,283,925.8527
PC STA. 346+85.58	528,145.8607	1,283,925.8527
PI STA. 350+72.88	527,900.1801	1,284,225.2579
PT STA. 354+58.12	527,711.6746	1,284,563.5892
PC STA. 355+65.50	527,659.4109	1,284,657.3924
PI STA. 356+68.06	527,609.4947	1,284,746.9826
PT STA. 357+70.50	527,567.0843	1,284,840.3603

CURVE DATA

CURVE NO.	Δ	Dc	R	T	L	E
MUNCASTERMILL-1	36°38'31.19" RT.	10°25'02.69"	550.00'	182.12'	351.74'	29.37'
MUNCASTERMILL-2	3°12'31.02" LT.	1°54'35.49"	3,000.00'	84.02'	168.00'	1.18'
MUNCASTERMILL-3	10°14'45.95" LT.	1°19'34.65"	4,320.00'	387.30'	772.54'	17.33'
MUNCASTERMILL-4	4°41'53.71" LT.	2°17'30.59"	2,500.00'	102.56'	205.00'	2.10'
EMORYLANE-1	29°36'57.78" LT.	19°05'54.94"	300.00'	79.31'	155.07'	10.31'
EMORYLANE-2	57°59'38.63" RT.	19°05'54.94"	300.00'	166.27'	303.66'	43.00
EMORYLANE-3	23°57'35.47" LT.	19°05'54.94"	300.00'	63.66'	125.45'	6.68'
EMORYLANE-4	2°52'28.87" LT.	1°03'04.68"	5,450.00'	136.75'	273.44'	1.72'
EMORYLANE-5	1°52'13.54" RT.	0°32'35.12"	10,550.00'	172.22'	344.41'	1.41'
EMORYLANE-6	2°12'03.01" LT.	0°57'17.75"	6,000.00'	115.25'	230.47'	1.11'
DRIVEWAY1_EM-1	6°17'49.10" LT.	31°49'51.56"	180.00'	9.90'	19.78'	0.27'
DRIVEWAY2_EM-1	2°10'03.91" LT.	7°38'21.97"	750.00'	14.19'	28.38'	0.13'
DRIVEWAY3_EM-1	25°26'24.42" LT.	71°37'11.01"	80.00'	18.06'	35.52'	2.01'
DRIVEWAY3_EM-2	32°45'42.17" RT.	63°39'43.12"	90.00'	26.46'	51.46'	3.81'
DRIVEWAY4_EM-1	8°51'18.14" LT.	22°55'05.92"	250.00'	19.36'	38.64'	0.75'
DRIVEWAY4_EM-2	26°27'29.12" LT.	88°08'50.47"	65.00'	15.28'	30.02'	1.77'
NORTHBRANCHTRAIL-1	65°11'19.35" LT.	57°17'44.81"	100.00'	63.94'	113.78'	18.69'



TRAVERSE POINTS

POINT NO.	NORTH	EAST	ELEVATION
T-1	528,211.7895	1,283,897.5634	341.50'
T-2	528,170.4736	1,283,867.9655	342.86'
T-3	528,005.5582	1,283,956.4274	353.85'
T-4	527,916.7829	1,284,082.4935	365.30'
T-5	527,810.2434	1,284,224.4094	381.40'
T-6	527,736.4387	1,284,357.0816	392.53'
T-7	528,729.2600	1,284,760.7861	394.19'
T-8	528,967.2436	1,284,941.4010	405.59'
T-9	529,186.6151	1,285,161.7220	422.24'

PLOTTED Tuesday, August 13, 2019 AT 01:38 PM
FILE \\baisrv04\2013\2013\13184_MCDOT\Task 33_Emory Lane SUP\CADD\Plans\pGS-P000_EmoryLn.dgn

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Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY JCW

DWG. GS-01

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

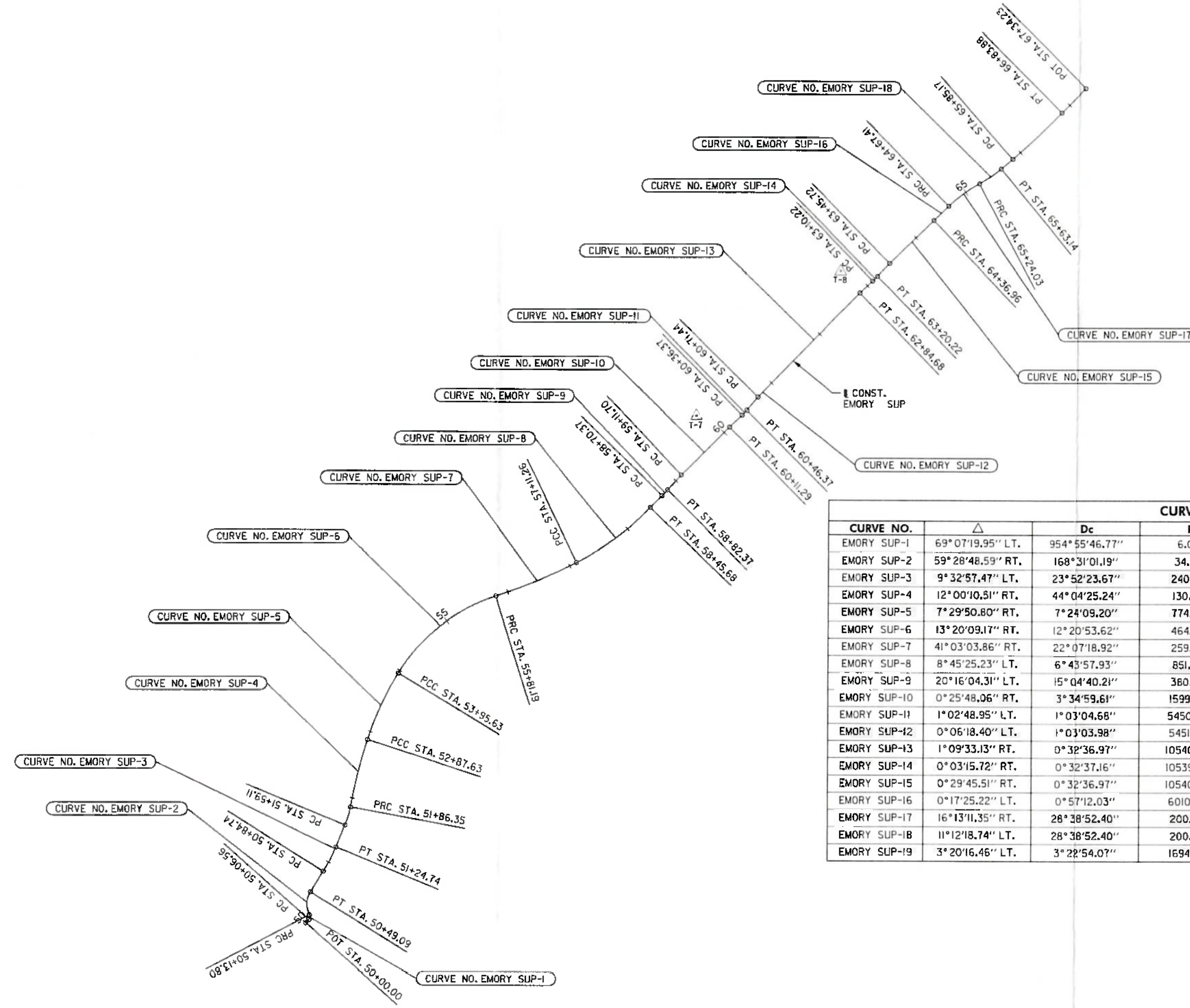
GEOMETRY SHEET

SCALE 1"=100' DATE AUGUST 2019

SHEET NO 3 OF 80

NAD 83
NGVD 29

BASELINE CONTROL COORDINATES		
EMORY SUP		
STATION	NORTH	EAST
POT STA. 50+00.00	527,915.9505	1,284,299.1781
PC STA. 50+06.56	527,921.4237	1,284,302.7910
PI STA. 50+10.69	527,924.8731	1,284,305.0679
PT STA. 50+13.80	527,928.2298	1,284,302.6565
PC STA. 50+13.80	527,928.2298	1,284,302.6565
PI STA. 50+33.22	527,944.0057	1,284,291.3231
PT STA. 50+49.09	527,961.7804	1,284,330.2696
PC STA. 50+84.74	527,964.9878	1,284,300.7790
PI STA. 51+04.78	528,012.7401	1,284,321.6198
PT STA. 51+24.74	528,032.1708	1,284,093.9217
PC STA. 51+59.11	528,065.4906	1,284,335.0044
PI STA. 51+72.78	528,078.7377	1,284,338.3657
PT STA. 51+86.35	528,092.3942	1,284,208.9975
PC STA. 51+86.35	528,092.3942	1,284,338.8986
PI STA. 52+37.06	528,143.0690	1,284,340.8760
PT STA. 52+87.63	528,193.0524	1,284,349.4486
PC STA. 52+87.63	528,193.0524	1,284,349.4486
PI STA. 53+41.87	528,246.5161	1,284,358.6181
PT STA. 53+95.63	528,296.4231	1,284,379.8722
PC STA. 53+95.63	528,296.5231	1,284,379.8722
PI STA. 54+92.59	528,385.6373	1,284,417.8663
PT STA. 55+81.19	528,427.9641	1,284,505.1085
PC STA. 55+81.19	528,427.9641	1,284,505.1085
PI STA. 56+46.35	528,456.4065	1,284,563.7328
PT STA. 57+11.26	528,493.4426	1,284,617.3436
PC STA. 57+11.26	528,493.4426	1,284,617.3436
PI STA. 57+79.18	528,532.0479	1,284,673.2259
PT STA. 58+45.68	528,587.6211	1,284,712.2749
PC STA. 58+70.37	528,607.1121	1,284,727.4250
PI STA. 58+76.37	528,611.9680	1,284,730.9501
PT STA. 58+82.37	528,616.7972	1,284,734.5115
PC STA. 59+11.70	528,640.8017	1,284,751.3757
PI STA. 59+61.50	528,680.0570	1,284,782.0095
PT STA. 60+11.29	528,719.8655	1,284,811.9208
PC STA. 60+36.37	528,739.3401	1,284,827.7324
PI STA. 60+41.37	528,743.3512	1,284,830.7176
PT STA. 60+46.37	528,747.3678	1,284,833.6953
PC STA. 60+71.44	528,768.4944	1,284,847.1805
PI STA. 61+78.06	528,854.7863	1,284,909.8128
PT STA. 62+84.68	528,939.7933	1,284,974.1780
PC STA. 63+10.22	528,959.5161	1,284,990.4046
PI STA. 63+15.22	528,963.4952	1,284,993.4326
PT STA. 63+20.22	528,967.4713	1,284,996.4644
PC STA. 63+45.72	528,988.3185	1,285,011.1414
PI STA. 63+91.34	529,024.5285	1,285,038.8898
PT STA. 64+36.96	529,060.4969	1,285,066.9506
PC STA. 64+36.96	529,060.4969	1,285,066.9506
PI STA. 64+52.18	529,072.5029	1,285,076.3171
PT STA. 64+67.41	529,084.5562	1,285,085.6227
PC STA. 64+67.41	529,084.5562	1,285,085.6227
PI STA. 64+95.91	529,107.1150	1,285,103.0388
PT STA. 65+24.03	529,123.9112	1,285,126.0630
PC STA. 65+24.03	529,123.9112	1,285,126.0630
PI STA. 65+43.65	529,135.4739	1,285,141.9130
PT STA. 65+63.14	529,149.8962	1,285,155.2140
PC STA. 65+85.17	529,166.5174	1,285,169.6703
PI STA. 66+34.54	529,204.1928	1,285,201.5706
PT STA. 66+83.88	529,243.6617	1,285,231.2231
POT STA. 67+34.23	529,283.9209	1,285,261.4694



CURVE DATA						
CURVE NO.	△	Dc	R	T	L	E
EMORY SUP-1	69°07'19.95" LT.	954°55'46.77"	6.00'	4.13'	7.24'	1.29'
EMORY SUP-2	59°28'48.59" RT.	168°31'01.19"	34.00'	19.42'	35.30'	5.16'
EMORY SUP-3	9°32'57.47" LT.	23°52'23.67"	240.00'	20.05'	40.00'	0.84'
EMORY SUP-4	12°00'10.51" RT.	44°04'25.24"	130.00'	13.67'	27.23'	0.72'
EMORY SUP-5	7°29'50.80" RT.	7°24'09.20"	774.00'	50.71'	101.28'	1.66'
EMORY SUP-6	13°20'09.17" RT.	12°20'53.62"	464.00'	54.24'	108.00'	3.16'
EMORY SUP-7	41°03'03.86" RT.	22°07'18.92"	259.00'	96.97'	185.57'	17.56'
EMORY SUP-8	8°45'25.23" LT.	6°43'57.93"	851.00'	65.16'	130.07'	2.49'
EMORY SUP-9	20°16'04.31" LT.	15°04'40.21"	380.00'	67.92'	134.42'	6.02'
EMORY SUP-10	0°25'48.06" RT.	3°34'59.61"	1599.00'	6.00'	12.00'	0.01'
EMORY SUP-11	1°02'48.95" LT.	1°03'04.68"	5450.00'	49.79'	99.58'	0.23'
EMORY SUP-12	0°06'18.40" LT.	1°03'03.98"	5451.00'	5.00'	10.00'	0.00'
EMORY SUP-13	1°09'33.13" RT.	0°32'36.97"	10540.00'	106.63'	213.24'	0.54'
EMORY SUP-14	0°03'15.72" RT.	0°32'37.16"	10539.00'	5.00'	10.00'	0.00'
EMORY SUP-15	0°29'45.51" RT.	0°32'36.97"	10540.00'	45.62'	91.24'	0.10'
EMORY SUP-16	0°17'25.22" LT.	0°57'12.03"	6010.00'	15.23'	30.45'	0.02'
EMORY SUP-17	16°13'11.35" RT.	28°38'52.40"	200.00'	28.50'	56.62'	2.02'
EMORY SUP-18	11°12'18.74" LT.	28°38'52.40"	200.00'	19.62'	39.11'	0.96'
EMORY SUP-19	3°20'16.46" LT.	3°22'54.07"	1694.30'	49.37'	98.71'	0.72'

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240-777-7231

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY JCW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE
SHARED USE PATH

GEOMETRY SHEET

SCALE 1"=100' DATE AUGUST 2019

DWG. GS-02

SHEET NO 4 OF 80

PLOTTED: Tuesday, August 13, 2019 AT 01:38 PM
FILE: \\balsrv04\x2013\2013\13184_MCDOT\Task 33_ Emory Lane SUP\CADD\Plans\pGS-P001_EmoryLn.dgn

TEST HOLE DATA

NO.	UTILITY	STATION	OFFSET	NORTHING	EASTING	TOP UTILITY ELEVATION	SURFACE ELEVATION
TH-1	WATER	-	-	528,126.4378	1,284,175.0030	343.66	354.50
TH-2	WATER	-	-	528,163.7279	1,284,300.3630	347.38	353.98

8" PLAIN PORTLAND CEMENT CONCRETE FOR DRIVEWAY MIX NO. 9

BASELINE	STATION	QTY
EMORY LANE	STA. 11+74.43 TO STA. 11+99.29, RT	33 SY

1.5" SUPERPAVE ASPHALT MIX 9.5MM FOR SURFACE

BASELINE	STATION	QTY
EMORY LANE	STA. 11+50.00 TO STA. 17+00.00, RT	53 TON
EMORY LANE	STA. 12+10.00 TO STA. 12+75.00, RT/LT	27 TON

TYPE C TRAFFIC BARRIER END TREATMENT (SHA STD. MD 605.03)

BASELINE	STATION	QTY
EMORY LANE	STA. 12+72.61 TO STA. 13+22.61, LT	1 EA

TRAFFIC BARRIER W BEAM W/8 FOOT POST (SHA STD. MD 605.25)

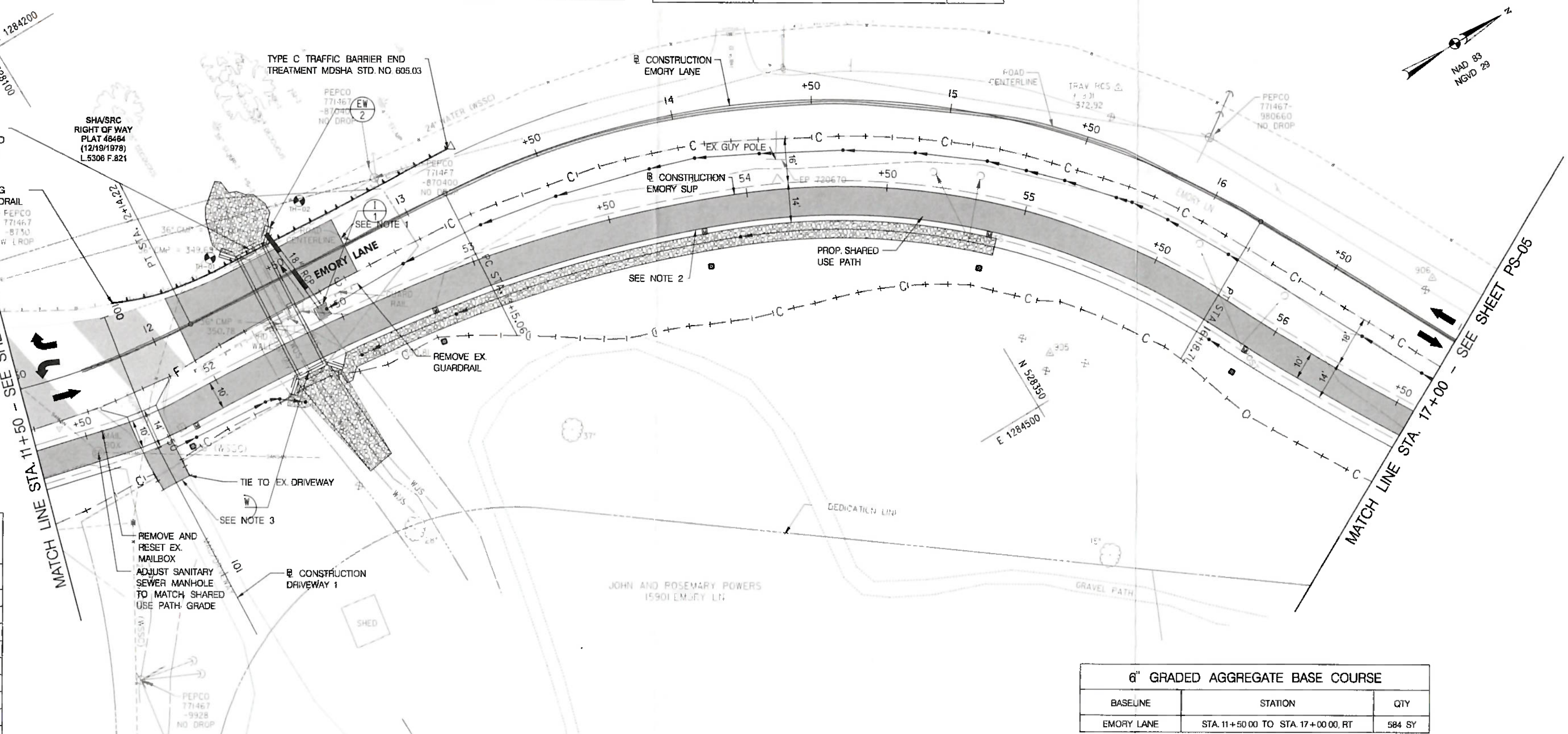
BASELINE	STATION	QTY
EMORY LANE	STA. 11+91.51 TO STA. 12+33.89, LT	42 LF
EMORY LANE	STA. 12+55.39 TO STA. 12+72.61, LT	17 LF

NESTED TYPE 5 GUARDRAIL WITH TUBULAR BACKUP

BASELINE	STATION	QTY
EMORY LANE	STA. 12+33.89 TO STA. 12+55.39, LT	1 EA

2.5" SUPERPAVE ASPHALT MIX 19MM FOR BASE

BASELINE	STATION	QTY
EMORY LANE	STA. 12+10.00 TO STA. 12+75.00, RT/LT	45 TON



EMORY LANE DITCH SCHEDULE EMORY LANE BASELINE RT

STATION	DITCH INV (FT)	OFFSET (FT)	BOTTOM WIDTH (FT)
12+60	355.35	15.53	3.75
13+10	356.50	15.45	2
13+60	358.09	16.95	2
14+10	361.00	16.93	2
14+60	364.50	17.91	2
15+10	368.51	16.37	2
15+60	371.66	15.49	2
16+10	373.97	15.50	2
16+60	373.36	15.42	2

6" GRADED AGGREGATE BASE COURSE

BASELINE	STATION	QTY
EMORY LANE	STA. 11+50.00 TO STA. 17+00.00, RT	584 SY

3" SUPERPAVE ASPHALT MIX 19MM FOR BASE

BASELINE	STATION	QTY
EMORY LANE	STA. 11+82.40 TO STA. 11+93.69, RT	3 TON

4" GRADED AGGREGATE BASE COURSE

BASELINE	STATION	QTY
EMORY LANE	STA. 12+10.00 TO STA. 12+75.00, RT/LT	152 SY

PAVING LEGEND

- HMA SHARED USE PATH
- FULL DEPTH HMA
- GRINDING AND RESURFACING
- CONC SIDEWALK / DRIVEWAY APRON

NOTES

1 SEE DRAWING NO. DT-01, PAVEMENT DETAIL E
2 SEE DRAWING NO. DT-01, PAVEMENT DETAIL C
3 SEE DRAWING NO. DT-01, PAVEMENT DETAIL D

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240-777-7231

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL: Chief, Transportation Planning and Design Section — Date

APPROVED: Chief, Division of Transportation Engineering — Date

DESIGNED BY: KBJ DRAWN BY: KBJ CHECKED BY: JCW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

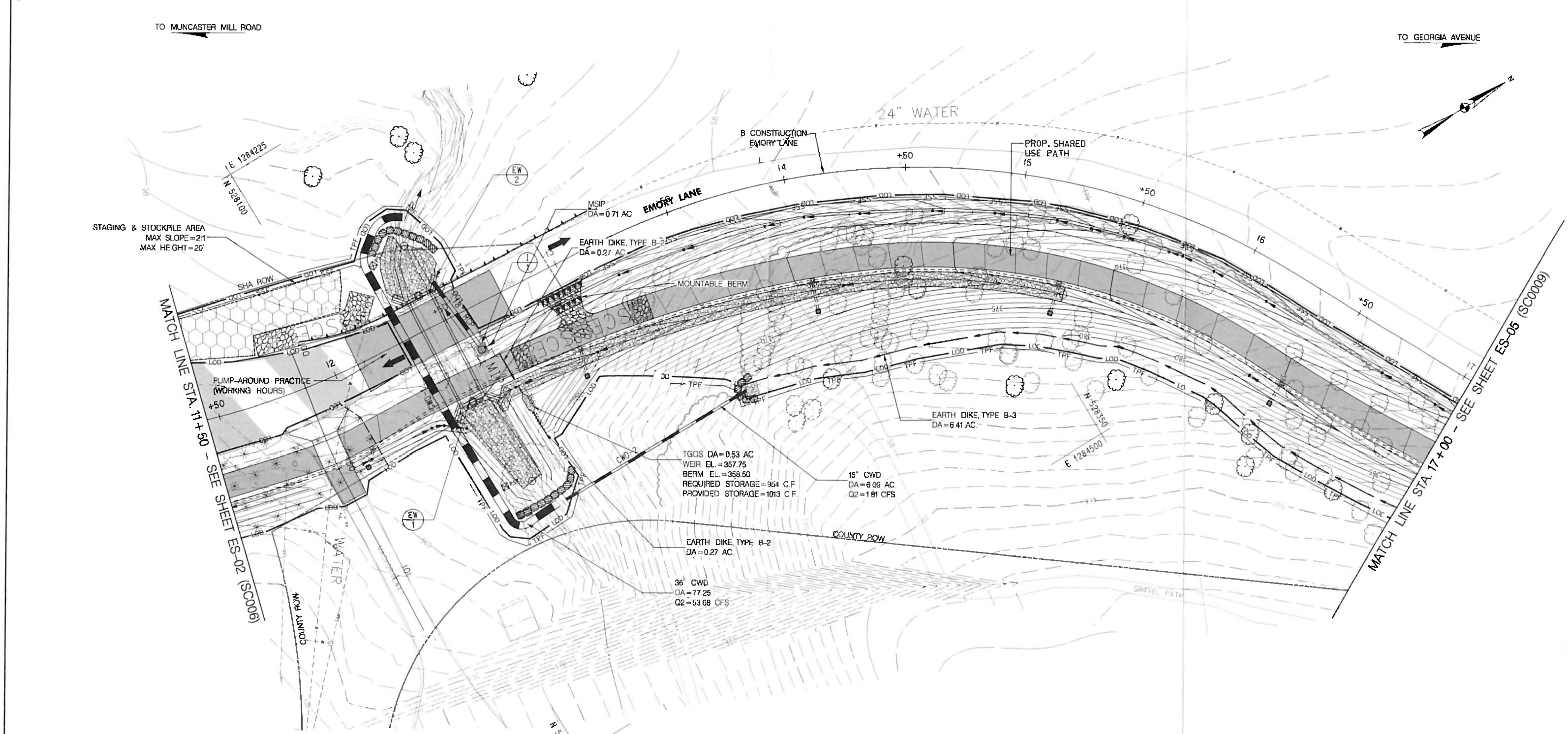
MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2019

DWG. PS-04

SHEET NO. 13 OF 80



LEGEND

SCE	STABILIZED CONSTRUCTION ENTRANCE
LOD	LIMIT OF DISTURBANCE
DF	DIVERSION FENCE
TGOS	TEMPORARY GABION OUTLET STRUCTURE
TSOS	TEMPORARY STONE OUTLET STRUCTURE
	RIPRAP FOR SEDIMENT CONTROL
	MOUNTABLE BERM
	STAGING/STOCKPILE AREA
	SAME-DAY STABILIZATION
MIP	MEDIAN INLET PROTECTION
	EXISTING TREELINE /CANOPY COVER
TPF	TREE PROTECTION FENCE
	ROW LINE
	PROPERTY LINE
	EX STORM DRAIN PIPE
X	TREE REMOVAL
	EX TREE TO REMAIN
430	EX. CONTOUR
	PROPOSED TYPE K INLET
	PROP STORM DRAIN PIPE
	PROPOSED END SECTION
430	PROP CONTOUR
	PROPOSED DRAINAGE DITCH
	FINE MILLING AND RESURFACING
	FULL DEPTH PAVEMENT
	PAVEMENT CONVERSION TO OPEN SPACE
	SIGNIFICANT/SPECIMEN (>24" DBH) OR ROADSIDE TREE W/CRITICAL ROOT ZONE

NOTES

1. WHERE NO SCE IS PROVIDED, CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT WITHIN THE LOD. THIS EQUIPMENT SHALL BE KEPT WITHIN THE LOD UNTIL THE PROPOSED WORK IS COMPLETE AND SHALL HAVE TREADS/TIRES CLEANED PRIOR TO LEAVING THE LOD.
2. ALL STAGING AND STOCKPILING MUST BE WITHIN THE LOD SEDIMENT CONTROL FOR THE STAGING/STOCKPILE AREA MUST BE PROVIDED IF NEEDED OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.
3. ALL SIGNIFICANT TREES WITHIN THE LOD SHALL BE REMOVED AND WILL NOT BE SHOWN WITH A REMOVAL SYMBOL ("X") FOR VISUAL CLARITY.
4. TREE PROTECTION FENCE (TPF) TO BE PLACED ALONG THE LOD TPF IS OFFSET FROM LOD FOR VISUAL CLARITY.

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL:

Chief, Transportation Planning and Design Section — Date

APPROVED:

Chief, Division of Transportation Engineering — Date

DESIGNED BY LMG — DRAWN BY LMG — CHECKED BY SBP

SC/SWM 08 OF 11 — DWG. ES-04

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

SCALE 1" = 20' — DATE AUGUST 2019

Existing Property Condition Photographs (duplicate as needed)

Detail: View northeast from public ROW toward 15910 Emory Lane (the Nathan Shaw House M: 23-111)

Detail: View north from public ROW toward culvert project area and 15910 Emory Lane

Existing Property Condition Photographs (duplicate as needed)

Detail: View south toward culvert project area on property of 15910 Emory Lane.

Detail: View of riprap associated with the culvert to be replaced

Existing Property Condition Photographs (duplicate as needed)

Detail: View northwest of culvert project area on historic property at 15910 Emory Lane

Detail: View southwest toward 15910 Emory Lane from adjacent property at 15920 Emory Lane

Existing Property Condition Photographs (duplicate as needed)

Detail: View north toward 15910 Emory Lane from confronting property at 15901 Emory Lane

Detail: View north toward 15910 Emory Lane from confronting property along Muncaster Mill Road (Sweetbirch Drive)

Existing Property Condition Photographs (duplicate as needed)

Detail: View southwest toward 15910 from adjacent property at 5035 Muncaster Mill Road

Detail:

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DESIGN SECTION
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY: SJK DRAWN BY: AWG CHECKED BY: GRD

DWG. TS-01

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

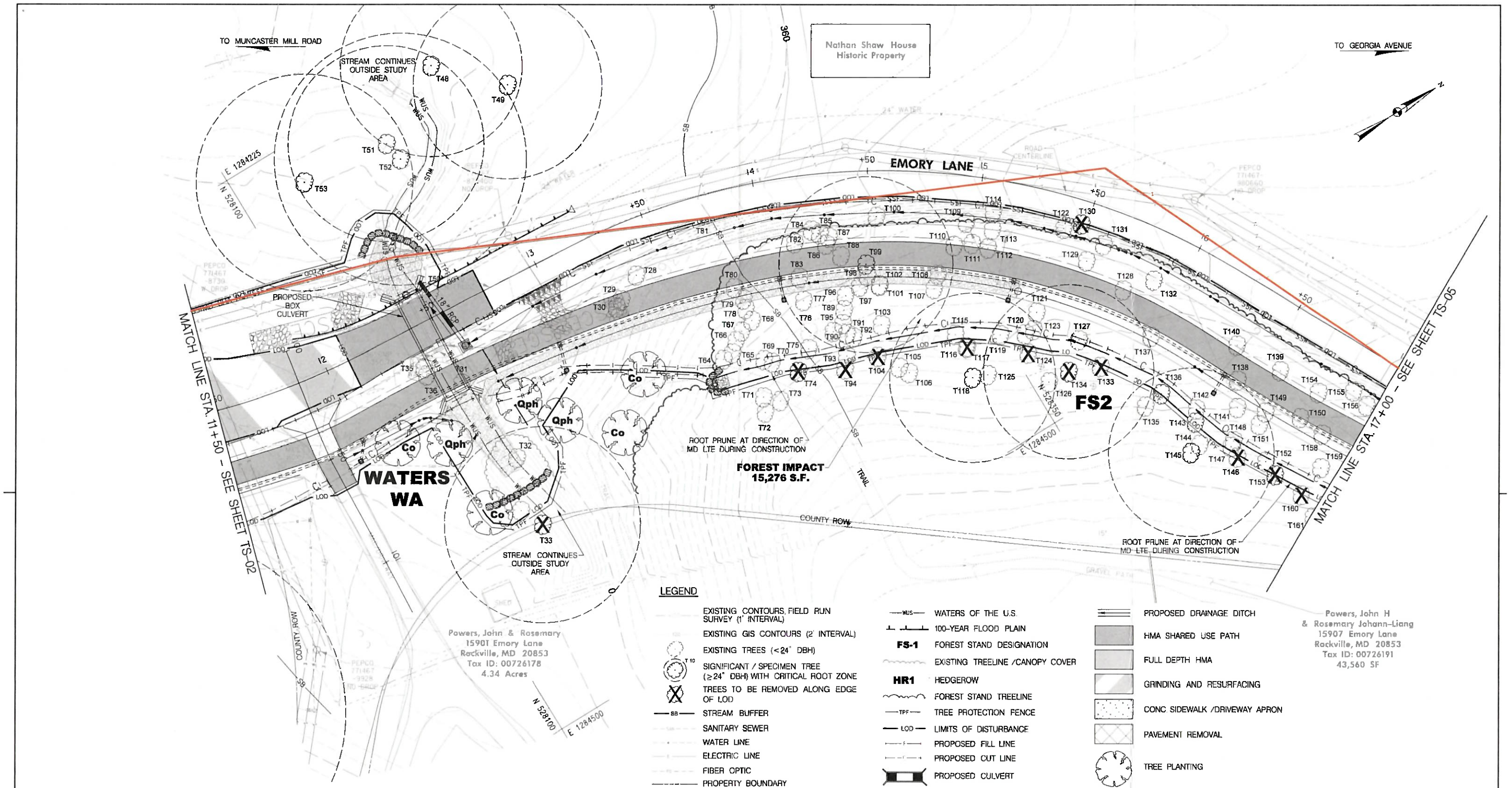
MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

TREE SAVE KEY SHEET

SCALE 1"=100' DATE DECEMBER 2019

SHEET NO. 70 OF 80

PLOTTED: Monday, December 02 2019 AT 08:17 AM
FILE: \\baserv04\v2013\2013\13184 _MCDOT\Task 33_ Emory Lane SUP\CADD\Plans\pTP-0001 KeyPlan_EmoryLn.dgn



LEGEND

- EXISTING CONTOURS, FIELD RUN SURVEY (1' INTERVAL)
- EXISTING GIS CONTOURS (2' INTERVAL)
- EXISTING TREES (<24" DBH)
- SIGNIFICANT / SPECIMEN TREE (≥24" DBH) WITH CRITICAL ROOT ZONE
- TREES TO BE REMOVED ALONG EDGE OF LOD
- STREAM BUFFER
- SANITARY SEWER
- WATER LINE
- ELECTRIC LINE
- FIBER OPTIC
- PROPERTY BOUNDARY
- STABILIZED CONSTRUCTION ENTRANCE
- WATERS OF THE U.S.
- 100-YEAR FLOOD PLAIN
- FS-1 FOREST STAND DESIGNATION
- EXISTING TREELINE /CANOPY COVER
- HR1 HEDGEROW
- FOREST STAND TREELINE
- TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE
- PROPOSED FILL LINE
- PROPOSED CUT LINE
- PROPOSED CULVERT
- RIPRAP FOR SEDIMENT CONTROL
- PROPOSED DRAINAGE DITCH
- HMA SHARED USE PATH
- FULL DEPTH HMA
- GRINDING AND RESURFACING
- CONC SIDEWALK /DRIVEWAY APRON
- PAVEMENT REMOVAL
- TREE PLANTING
- RIPRAP
- PROPOSED PEDESTRIAN LIGHT

TREE PLANTING SCHEDULE

QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING
3	Qph	*Quercus phellos*	Willow Oak	3" Caliper, 14' Height	B&B	as shown
4	Co	*Celtis occidentalis*	Hackberry	3" Caliper, 14' Height	B&B	as shown
7	Total street/specimen tree mitigation plantings					

NOTES:

1. SEE DWG 8 FOR TREE PROTECTION DETAILS, TSP NOTES, MASTER TREE PLANTING SCHEDULE, FOREST STAND TABLE, AND SEQUENCE
2. SEE DWGS 9 – 10 FOR TREE TABLE, AND TREE PLANTING DETAIL
3. ALL TREES WITHIN LOD WILL BE REMOVED

SCALE 1" = 20'

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MARYLAND DNR QUALIFIED PROFESSIONAL — 9-10-2019 DATE

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY SJK DRAWN BY AWG CHECKED BY GRO

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

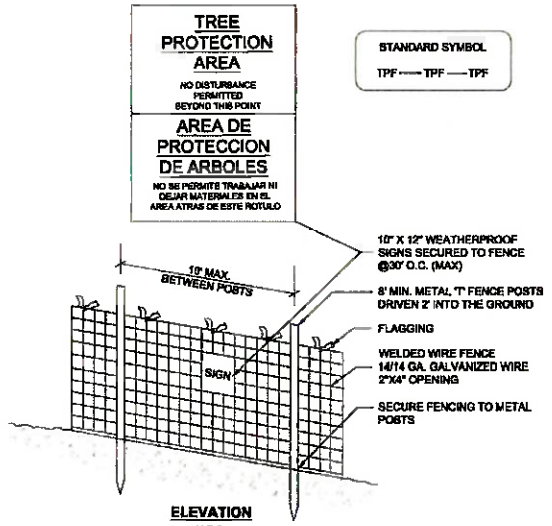
TREE SAVE PLAN

SCALE 1" = 20' DATE DECEMBER 2019

DWG. TS-05

SHEET NO 74 OF 80

PLOTTED: Monday, December 02, 2019 AT 07:28 AM
FILE: \\baanvs4\v2013\2013\13164_MCDOT\Task 33_Emory Lane SUP\CADD\Plans\pTP-0004_EmoryLn.dgn



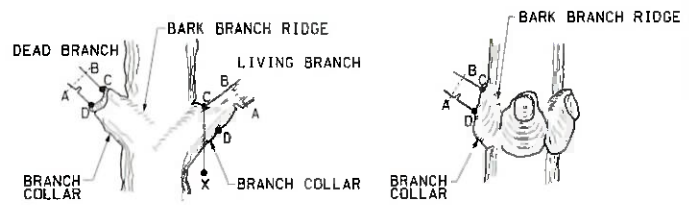
ELEVATION
N.T.S.

NOTES:

1. PRACTICE MAY BE COMBINED WITH SEDIMENT CONTROL FENCING.
2. LOCATION AND LIMITS OF FENCING SHALL BE COORDINATED IN FIELD WITH ARBORIST
3. BOUNDARIES OF PROTECTION AREA SHOULD BE STAKED PRIOR TO INSTALLING PROTECTIVE DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED
5. PROTECTIVE SIGNAGE IS REQUIRED.
6. FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCE

N.T.S.

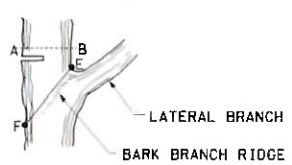


Notes:

1. Remove branch weight by undercutting at A and remove limb by cutting through AB.
2. Remove stub at CD (line between branch bark ridge and outer edge of branch collar)
3. If D is difficult to find on hardwoods, angle of CD to trunk should be the reflective angle of the bark branch ridge to the trunk.
4. Only prune at specified times.
5. Remove no more than 30% of crown at one time.

PRUNING A BRANCH

N.T.S.



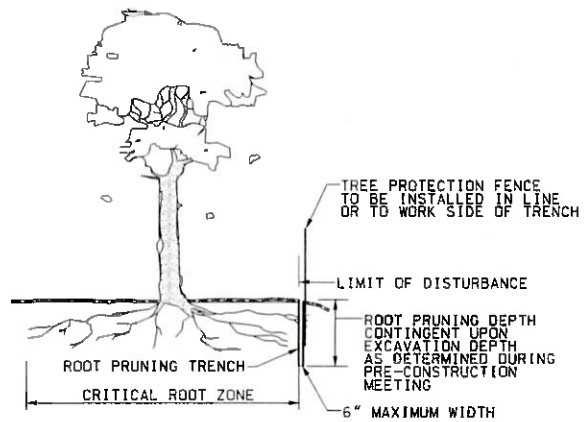
Notes:

1. Remove top weight by undercutting at A and remove limb by cutting through AB.
2. Remove stub at EF parallel to the bark branch ridge.
3. Only prune at specified times.
4. No more than 30% of the crown to be removed at one time.
5. Diameter of lateral branch should be no less than 30% of the diameter of the leader.

PRUNING A LEADER TO REDUCE SIZE

N.T.S.

Source: Adapted from Steve Clark & Associates/ACRT, Inc.



Notes:

1. Retention Areas to be established as part of the tree save plan review process.
2. Boundaries of Retention Areas to be staked, flagged and/or fenced prior to trenching.
3. Exact location of trench should be identified.
4. Trench should be immediately backfilled with soil removed or organic soil.
5. Roots should be cleanly cut using vibratory knife or other acceptable equipment.
6. In some instances, it may be beneficial to perform root pruning at the edge of the excavation rather than at the LOD, provided the roots between the excavation edge and the LOD are protected during construction.

ROOT PRUNING DETAIL

N.T.S.

Source: Adapted from Steve Clark & Associates/ACRT, Inc. and Forest Conservation Manual, 1991

TSP Notes:

1. ALL AREAS OUTSIDE OF THE LOD SHALL BE CONSIDERED FOREST/TREE PRESERVATION AREAS TO BE LEFT UNDISTURBED.
2. FIVE SIGNIFICANT (>24" DBH) TREES AND ONE SPECIMEN TREE (>30" DBH OR 75% OF STATE CHAMPIONS) WILL BE REMOVED. OTHER SIGNIFICANT AND SPECIMEN TREES HAVE SOME CRITICAL ROOT ZONE WITHIN THE LOD AND MAY REQUIRE SUPPLEMENTAL TREE PROTECTION MEASURES. ALL WORK ACTIVITIES NEAR THESE TREES SHALL BE SUPERVISED AND DIRECTED BY A MD LICENSED TREE EXPERT (LTE).
3. TREE SAVE PLANS PREPARED BY SALLY KISHTER, QP, AND FIELD DATA COLLECTED ON FEBRUARY 26, 2018, WITH SUPPLEMENTAL DATA COLLECTED JANUARY & FEBRUARY 2019.
4. PROJECT AREA IS LOCATED WITHIN THE UPPER ROCK CREEK WATERSHED WITH WATERSHED USE CLASSES OF III (NORTH BRANCH ROCK CREEK - OFF SITE) & IV (UNNAMED TRIBUTARY).
5. PROJECT STUDY AREA IS OUTSIDE THE UPPER ROCK CREEK SPA, AND NOT WITHIN ANY SPA OR PMA.
6. 100-YEAR FLOODPLAIN DATA IS FROM MONTGOMERY COUNTY FEMA GIS DATA. PANEL NO. 24031C0351D (EFFECTIVE DATE 9/26/2006) - NONE WITHIN STUDY AREA.
7. ONE WATERWAY AND NO WETLANDS WERE FIELD DELINEATED WITHIN THE STUDY AREA. NWI AND DNR WETLAND INVENTORY MAPPING INDICATES THAT THERE ARE NO WETLANDS OR WATERS WITHIN THE STUDY AREA.
8. DNR AND USFWS DETERMINED THAT THERE ARE NO STATE OR FEDERAL RTE RECORDS WITHIN THE BOUNDARIES OF THE STUDY AREA (MARCH 2018 RESPONSE LETTER & ONLINE CERTIFICATION), AND NO RTE'S WERE OBSERVED ON SITE.
9. MHT DETERMINED THAT THE PROJECT WILL HAVE NO ADVERSE EFFECT ON HISTORIC PROPERTIES IN THEIR 4/16/18 AND 7/23/19 RESPONSE LETTERS. WEST OF EMORY LANE A SMALL PORTION OF THE PROJECT IS LOCATED WITHIN THE NATHAN SHAW HOUSE PROPERTY BOUNDARIES (M: 23-111), A NATIONAL REGISTER ELIGIBLE HISTORIC PROPERTY AND A MONTGOMERY COUNTY MASTER PLAN FOR HISTORIC PRESERVATION LISTED PROPERTY (INCLUDED IN MHT'S 7/23/19 RESPONSE). COORDINATION WITH M-NCPPC HISTORIC PRESERVATION STARTED 6/24/19 FOR THIS PROPERTY, AND A HISTORIC AREA WORK PERMIT (HAWP) WILL BE SUBMITTED TO THE COUNTY HISTORIC PRESERVATION COMMISSION (HPC) FOR PROPOSED WORK ON THE NATHAN SHAW HOUSE PROPERTY PER M-NCPPC HISTORIC GUIDANCE.
10. THE PURPOSE OF THIS PROJECT IS TO PROVIDE NEW SHARED USE PATHS ALONG EMORY LANE FROM MUNCASTER MILL ROAD TO HOLLY RIDGE ROAD (CONNECTING TO EXISTING PATH) AND ALONG MUNCASTER MILL ROAD BETWEEN EMORY LANE AND THE PROPOSED NORTH BRANCH TRAIL.
11. PROPERTY BOUNDARIES ARE FROM AN MCDOT FIELD RUN METES AND BOUNDS SURVEY COMPLETED SEPTEMBER 2010, WITH THE 15921 EMORY LANE FOREST CONSERVATION EASEMENT (RETENTION AREA) ADDED FROM THE SC2011013 FINAL FCP (APPROVED 3/21/2011).
12. THE TOTAL LIMITS OF DISTURBANCE (LOD, LINEAR PROJECT NET TRACT AREA) IS 2.00 ACRES. THE LOD IS PRIMARILY WITHIN THE EXISTING ROAD RIGHT-OF-WAYS (ROW).
13. THE TREE TABLE NOTES REMOVAL OF ALL SURVEYED TREES THAT WILL BE REMOVED, BUT WITHIN FORESTS AND HEDGEROWS REMOVAL 'X'S ARE ONLY SHOWN FOR TREES OUTSIDE / ON THE EDGE OF THE LOD ON PLAN SHEETS FOR LEGIBILITY PURPOSES. ALL TREES WITHIN THE LOD ARE TO BE REMOVED.
14. TPF IS SHOWN OUTSIDE THE LOD FOR VISIBILITY ON THE PLANS, BUT IT SHALL BE INSTALLED ALONG THE LOD.
15. MCDOT ARBORIST TO BE NOTIFIED BY PROJECT MANAGER TO INSPECT ANY TREE ROOTS >2" DIAMETER THAT ARE DAMAGED OR SEVERED ON TREES RECOMMENDED FOR ROOT PRUNING.

Planting Notes:

1. All planting shall be conducted in accordance with Section 710 - Tree, Shrub, and Perennial Installation and Establishment of the MD SHA 2019 Standard Specifications for Construction and Materials unless specified otherwise on the Tree Save Plans. This includes watering during the establishment period.
2. Any areas damaged during construction shall be repaired by the contractor at no cost to Montgomery County.
3. The contractor shall verify the locations of existing utilities prior to any plant installation and shall contact Miss Utility (1-800-257-7777) a minimum of 48 hours prior to any plant installation.
4. The contractor shall notify a Montgomery County representative of any discrepancies or potential problems prior to commencing work.
5. The contractor shall use the Master Planting Schedule on the Tree Save Details & Notes plans as a measurement of plant quantities.
6. Any request to substitute plants of different species, cultivars, size, growth habit or planting stock type shall be submitted in writing to the Montgomery County representative as a substitution request. Substitutions will not be permitted without written approval from a Montgomery County representative.

Sequence of Events for Properties Required to Comply With Forest Conservation Plans, Exemptions from Submitting Forest Conservation Plans, and Tree Save Plans

The property owner is responsible for ensuring all tree protection measures are performed in accordance with the approved final forest conservation plan or tree save plan, and as modified in the field by a Planning Department Forest Conservation Inspector. The measures must meet or exceed the most recent standards published by the American National Standards Institute (ANSI A300).

Pre-Construction

1. An on-site pre-construction meeting is required after the limits of disturbance have been staked and flagged and before any land disturbance.
2. The property owner must arrange for the meeting and following people must participate at the pre-construction meeting: the property owner or their representative, construction superintendent, International Society of Arboriculture (ISA) certified arborist/Maryland Licensed Tree Expert (representing owner) that will implement the tree protection measures, The Planning Department Forest Conservation Inspector, and Montgomery County Department of Permitting Services (DPS) Sediment Control Inspector. The purpose of this meeting is to verify the limits of disturbance and discuss specific tree protection and tree care measures shown on the approved plan. No land disturbance shall begin before tree protection and stress-reduction measures have been implemented and approved by the Planning Department's Forest Conservation Inspector.

a. Typical tree protection devices include:
   i. Chain link fence (four feet high)
   ii. Super silt fence with wire strung between the support poles (minimum 4 feet high) with high visibility flagging.
   iii. 14 gauge, 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility flagging.

b. Typical stress reduction measures may include, but are not limited to:
   i. Root pruning with a root cutter or vibratory plow designed for that purpose. Trenchers are not allowed, unless approved by the Forest Conservation Inspector
   ii. Crown Reduction or pruning
   iii. Watering
   iv. Fertilizing
   v. Vertical mulching
   vi. Root aeration systems

Measures not specified on the Tree Save Plan may be required as determined by the Forest Conservation Inspector in coordination with the property owner's arborist.

3. A Maryland Licensed Tree expert must perform, or directly supervise, the implementation of all stress reduction measures. Documentation of the process (including photographs) may be required by the Forest Conservation Inspector, and will be determined at the pre-construction meeting.
4. Temporary tree protection devices must be installed per the approved Forest Conservation Plan, Exemption Plan, or Tree Save Plan and prior to any land disturbance. The Forest Conservation Inspector, in coordination with the DPS Sediment Control Inspector, may make field adjustments to increase the survivability of trees and forest shown as saved on the approved plan.
5. Tree protection fencing must be installed and maintained by the property owner for the duration of construction project and must not be altered without prior approval from the Forest Conservation Inspector. All construction activity within protected tree and forest areas is prohibited. This includes the following activities:
   a. Parking or driving of equipment, machinery or vehicles of any type.
   b. Storage of any construction materials, equipment, stockpiling, fill, debris, etc.
   c. Dumping of any chemicals (i.e., paint thinner), mortar or concrete remainder, trash, garbage, or debris of any kind.
   d. Felling of trees into a protected area.
   e. Trenching or grading for utilities, irrigation, drainage, etc.
6. Forest and tree protection signs must be installed as required by the Forest Conservation Inspector. The signs must be waterproof and wording provided in both English and Spanish. During Construction
7. Periodic inspections will be made by the Forest Conservation Inspector. Corrections and repairs to tree protection devices must be completed within the timeframe given by the Inspector.
8. The property owner must immediately notify the Forest Conservation Inspector of any damage to trees, forests, understory, ground cover, and any other undisturbed areas shown on the approved plan. Remedial actions, and the relative timeframes to restore these areas, will be determined by the Forest Conservation Inspector.

Post-Construction

9. After construction is completed, but before tree protection devices have been removed, the property owner must request a final inspection with the Forest Conservation Inspector. At the final inspection, the Forest Conservation Inspector may require additional corrective measures, which may include:
   a. Removal, and possible replacement, of dead, dying, or hazardous trees
   b. Pruning of dead or declining limbs
   c. Soil aeration
   d. Fertilization
   e. Watering
   f. Wound repair
   g. Clean up of retention areas, including trash removal
10. After the final inspection and completion of all corrective measures the Forest Conservation Inspector will request all temporary tree and forest protection devices be removed from the site. Removal of tree protection devices that also operate for erosion and sediment control must be coordinated with both DPS and the Forest Conservation Inspector and cannot be removed without permission of the Forest Conservation Inspector. No additional grading, sodding, or burial may take place after the tree protection fencing is removed.
11. Long-term protection measures, including permanent signage, must be installed per the approved plan. Installation will occur at the appropriate time during the construction project. Refer to the approved plan drawing for the long-term protection measures to be installed.

MASTER TREE PLANTING SCHEDULE

QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING
3	Qph	*Quercus phellos*	Willow Oak	3" Caliper, 14' Height	B&B	as shown
4	Co	*Celtis occidentalis*	Hackberry	3" Caliper, 14' Height	B&B	as shown
7	Total street/specimen tree mitigation plantings					

Specimen Tree Planting Note: One specimen tree (T14, 32" dbh) will be removed. Three trees will be planted to meet M-NCPPC's required mitigation of 1" planted per 4" removed (8" mitigation) with minimum 3" cal. plantings.

FOREST STAND TABLE

ID	Dominant Species	Dominant Size Class	Condition	Retention Value	Notes	Acres in LOD
FS1	Tulip Poplar	12-20"	Fair	moderate	mid-successional; 70% canopy closure, incl. black cherry, black walnut, & black locust; moderate invasive species, vine cover, & downed woody debris	0.129
FS2	Tulip Poplar & inclusions Red Maple/Green Ash	12-20"	Good	moderate to high (on slope by stream)	mid-successional; 80% canopy closure, incl. black cherry; low to moderate invasive species, & high downed woody debris	0.484
FS3	White & Black Oak	12-20"	Fair to Good	moderate	mid-successional; 90% canopy closure, incl. black walnut & some sycamore; low to moderate invasive species, moderate vines & downed woody debris	0.023
FS4	Black Cherry & inclusions of Virginia Cedar & Red Maple	6-11"	Fair to Poor	low to moderate (on steep slopes)	early to mid-successional; 65% canopy closure, incl. black walnut & tulip poplar; moderate invasive species & downed woody debris; high vines	0.0001
					TOTAL	0.6461

Forest Mitigation Note
Forest mitigation will be done via off-site forest mitigation bank at a 1:1 ratio per M-NCPPC mandatory referral recommendation

9-10-2019
MARYLAND DNR QUALIFIED PROFESSIONAL — DATE

DWG. TS-08

SEAL

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GAITHERSBURG, MARYLAND

CONTACT:
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240-777-7220
DESIGN SECTION
240-777-7221

NO	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KJH DRAWN BY AWG CHECKED BY GRO

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

TREE SAVE DETAILS & NOTES

SCALE N.T.S. DATE DECEMBER 2019

SHEET NO 77 OF 80

PLOTTED: Monday, December 02, 2019 AT 07:39 AM
FILE: \\baarvc4\w2013\2013\12184 _MCDOT\Task 33_ Emory Lane SUP\CADD\Plans\pTP-P007_EmoryLn.dgn

Muncaster/Emory Shared Use Paths Tree Inventory

Tree No.	Removal	Common Name	Scientific Name	DBH (in.)	Condition	RT**	Comments
T1		Crape myrtle	*Lagerstroemia indica*	4	Good	C	7 stem: 2 - 4", 3 - 3", 2 - 2"
T2		White pine	*Pinus strobus*	11	Good	C	In yard
T3		White pine	*Pinus strobus*	11	Fair-Good		Slightly one-sided, in OH wires a little
T4		White pine	*Pinus strobus*	9	Good	C	
T5*		American elm	*Ulmus americana*	44	Fair		Included bark, holes in bark -damage, moderate dead branches
T6		Chinese elm	*Ulmus parvifolia*	5	Fair-Good		Minor dead branches
T7*		Red maple	*Acer rubrum*	25	Fair-Good	C	Split 2-3' from ground: 25" & 24" stems, Little one-sided
T8		Sweetbay magnolia	*Magnolia virginiana*	1	Fair-Good	C	Newly planted, still has stakes
T9	X	Cherry	*Prunus sp.*	8	Fair-Good	C	Vines in lower canopy, at South end of wood fence section
T10	X	Black locust	*Robinia pseudoacacia*	3	Fair-Good	C	2" tree <2' behind 3", Vines in canopy
T11*		Tulip poplar	*Liriodendron tulipifera*	43	Good		Minor-moderate Dead branches, included bark, Flagged root, in yard by driveway
S11		Virburnum	*Viburnum sp.*	2	Fair-Good		Multistem ornamental shrub, Some dead stems
T12		Black locust	*Robinia pseudoacacia*	4	Fair-Good		Vines, old leader broken
T13		Black locust	*Robinia pseudoacacia*	4	Fair-Good		Vines
T14*	X	Tulip poplar	*Liriodendron tulipifera*	32	Fair-Good	C	
T15*		Tulip poplar	*Liriodendron tulipifera*	33	Fair-Good		
T16*		Red maple	*Acer rubrum*	25	Fair		Mod. dead branches, girdling roots, dead branches, slight lean
T17		Black gum	*Nyssa sylvatica*	7	Fair-Good		
T18		Red maple	*Acer rubrum*	7	Fair-Poor		Large trunk wound, dead leader
T19		Red maple	*Acer rubrum*	7	Fair-Good		Power line pruning
T20		Sycamore	*Platanus occidentalis*	11	Fair		Skinny crown
T21		Red maple	*Acer rubrum*	5	Fair		Lean
T22		Red maple	*Acer rubrum*	10	Fair-Poor		Twin, splits at 3-4 feet
T23*	X	Tulip poplar	*Liriodendron tulipifera*	26	Fair		Pruned branches, 14" black locust growing immediately adjacent
T24		Japenese cedar	*Cryptomeria japonica*	2	Good		Landscaping, ~10' tall
T25		Japenese cedar	*Cryptomeria japonica*	2	Good		Landscaping, ~10' tall
T26		Japenese cedar	*Cryptomeria japonica*	2	Good		Landscaping, ~10' tall
T27		Japenese cedar	*Cryptomeria japonica*	2	Good		Landscaping, ~10' tall
T28	X	Shingle oak	*Quercus imbricaria*	2	Fair	C	Vines into canopy, vines growing into trunk
T29	X	Shingle oak	*Quercus imbricaria*	1	Fair	C	Vines into canopy
T30	X	Shingle oak	*Quercus imbricaria*	2	Fair	C	Vines into canopy
T31	X	Black walnut	*Juglans nigra*	4	Fair	S	Heavy vine cover into the canopy, splits into 3 stems: 3", 3", 4"
T32	X	Black walnut	*Juglans nigra*	4	Fair	C	Heavy vine coverage in canopy
T33*	X	Black walnut	*Juglans nigra*	28	Fair-Poor		Heavy vine coverage into canopy, large trunk wound, several dead branches
T34	X	Chinese elm	*Ulmus parvifolia*	10	Fair	C	Heavy vine coverage into the canopy, Split into 3 trunks 10, 2, 4"
T35	X	Sycamore	*Platanus occidentalis*	4	Fair	S	Vines into canopy, on headwall, broken branches
T36	X	Black walnut	*Juglans nigra*	4	Fair-Poor	S	3 stem: 4", 3", 2"; Vines into canopy, vines strangling trunks
T37*		White oak	*Quercus alba*	50	Fair-Poor	S	Significant wound from lost branch (20+") some trunk decay evident, otherwise crown looks healthy
T38		Bradford pear	*Pyrus calleryana*	5	Fair	S	Vines into canopy, leaning
T39		Virginia cedar	*Juniperus virginiana*	4	Fair	S	Twin: 3", 4"; One-sided
T40		Flowering dogwood	*Cornus florida*	6	Fair-Poor	S	Twin: 6" & 5"; Half dead, a lot of dead wood, third stem totally dead
T41		Virginia cedar	*Juniperus virginiana*	5	Fair-Poor	S	Vines in crown, dead wood, Shrub-like growth form, leaning
T42	X	Black cherry	*Prunus serotina*	21	Fair	S	Twin: 21" & 15"; Heavy vine coverage in canopy, included bark, dead branches
T43	X	Chinese elm	*Ulmus parvifolia*	4	Fair	S	Heavy vine coverage in crown
T44	X	Black walnut	*Juglans nigra*	8	Fair-Poor	S	Lean, significant vines in crown
T45		Red maple	*Acer rubrum*	4	Fair-Good	S	Lean
T46	X	Red maple	*Acer rubrum*	20	Fair	S	Heavy vine coverage in canopy, included bark
T47*		Sycamore	*Platanus occidentalis*	32	Fair-Good	S	Several stems splitting above 4.5", vines into lower canopy
T48*		Black Walnut	*Juglans nigra*	26	Fair		Moderate dead branches
T49*		Black Walnut	*Juglans nigra*	27	Fair		~2 ft. x 1 ft. trunk damage with some rot, moderate+ dead branches
T50	X	White mulberry	*Morus alba*	2	Poor	S	Broken leader, vines in canopy, on bank at headwall
T51*		Red maple	*Acer rubrum*	28	Fair		Minor girdling roots, minor old wounds -mostly healed, moderate dead branches
T52*		Tulip poplar	*Liriodendron tulipifera*	36	Fair		minor girdling roots, vines into lower canopy

* Significant & Speciman Trees (≥ 24" DBH)

** S = Roadside Tree in state/SHA ROW; C = in county ROW

Tree No.	Removal	Common Name	Scientific Name	DBH (in.)	Condition	RT**	Comments
T53*		Tulip poplar	*Liriodendron tulipifera*	31	Fair-Good		Moderate dead branches, slightly one-sided
T54		Black cherry	*Prunus serotina*	10	Poor		Covered in vines
T55		Bradford pear	*Pyrus calleryana*	6	Fair-Poor	S	Heavy vines
T56		Black cherry	*Prunus serotina*	7	Poor	S	Heavy lean, vines. Poor crown
T57		Tulip poplar	*Liriodendron tulipifera*	7	Fair-Poor	S	Broken leader
T58		Black cherry	*Prunus serotina*	7	Fair-Poor	S	Irregular crown shape. Lean
T59		Red maple	*Acer rubrum*	7	Fair-Poor	S	Heavy vines. Broken branches
T60		Red maple	*Acer rubrum*	6	Fair	S	Vines, lean, irregular crown
T61		Red maple	*Acer rubrum*	16	Fair-Good	S	Few small vines
T62	X	Black walnut	*Juglans nigra*	12	Fair	S	Broken branches
T63	X	Black cherry	*Prunus serotina*	15	Fair-Poor	S	Irregular crown. Broken branches
T64	X	Green ash	*Fraxinus pennslyvanica*	18	Fair	C	Lean. Vines
T65	X	Black cherry	*Prunus serotina*	8	Poor	C	Missing crown
T66	X	Black cherry	*Prunus serotina*	8	Fair-Poor	C	Lean. Thin crown
T67	X	Black gum	*Nyssa sylvatica*	12	Fair-Good	C	One sided, thin crown
T68	X	Red cedar	*Juniperus virginiana*	9	Good	C	
T69	X	Red maple	*Acer rubrum*	8	Fair	C	Thin crown. Irregular growth form
T70	X	Sycamore	*Platanus occidentalis*	17	Fair	C	Irregular growth
T71		Black cherry	*Prunus serotina*	10	Fair	C	Thin crown
T72		Black cherry	*Prunus serotina*	11	Fair	C	Thin crown
T73		Red maple	*Acer rubrum*	15	Fair-Good	C	Thin crown
T74	X	Red maple	*Acer rubrum*	15	Fair-Good	C	Thin crown
T75	X	Red maple	*Acer rubrum*	7	Fair	C	Lean. Thin crown
T76	X	Red maple	*Acer rubrum*	13	Fair	C	One sided crown. Lean
T77	X	Black cherry	*Prunus serotina*	9	Fair-Poor	C	Thin crown
T78	X	Black cherry	*Prunus serotina*	13	Poor	C	Thin crown
T79	X	Virginia pine	*Pinus virginiana*	11	Poor	C	Heavy lean
T80	X	Red maple	*Acer rubrum*	15	Fair	C	Thin, one sided crown. Vines. Lean
T81	X	Red cedar	*Juniperus virginiana*	10	Good	C	
T82	X	Red maple	*Acer rubrum*	12	Fair	C	One sided branching
T83	X	Black cherry	*Prunus serotina*	7	Fair-Poor	C	Lean. Thin branches
T84	X	Red cedar	*Juniperus virginiana*	6	Fair-Good	C	Lopsided crown
T85	X	Red maple	*Acer rubrum*	9	Poor	C	No crown
T86	X	Red maple	*Acer rubrum*	9	Fair-Good	C	Thin crown
T87	X	Red cedar	*Juniperus virginiana*	6	Good	C	
T88	X	Red maple	*Acer rubrum*	9	Fair-Good	C	Lean
T89	X	Red maple	*Acer rubrum*	10	Fair-Poor	C	Severe lean
T90	X	Red maple	*Acer rubrum*	13	Fair-Good	C	One sided crown
T91	X	Red maple	*Acer rubrum*	8	Fair-Good	C	Irregular growth
T92	X	Red maple	*Acer rubrum*	8	Fair-Good	C	Thin crown
T93	X	Red maple	*Acer rubrum*	6	Fair-Good	C	Thin branches
T94	X	Black cherry	*Prunus serotina*	13	Fair-Poor	C	Lean
T95	X	Red maple	*Acer rubrum*	8	Good	C	
T96	X	Red maple	*Acer rubrum*	7	Fair-Good	C	One sided crown
T97	X	Red maple	*Acer rubrum*	6	Good	C	
T98	X	Red maple	*Acer rubrum*	6	Fair-Good	C	Thin crown
T99*	X	Tulip poplar	*Liriodendron tulipifera*	25	Good	C	
T100	X	Black gum	*Nyssa sylvatica*	6	Fair-Poor	C	Heavy vines, thin crown
T101	X	Red maple	*Acer rubrum*	7	Fair-Good	C	Thin crown
T102	X	Red maple	*Acer rubrum*	7	Fair-Good	C	Thin crown
T103	X	Red maple	*Acer rubrum*	8	Fair	C	Thin crown
T104	X	Red maple	*Acer rubrum*	6	Good	C	
T105		Red maple	*Acer rubrum*	6	Fair	C	Thin crown, lean
T106		Red maple	*Acer rubrum*	6	Fair	C	One sided crown
T107	X	Black cherry	*Prunus serotina*	8	Fair	C	Thin crown
T108	X	Red maple	*Acer rubrum*	7	Good	C	
T109	X	Sassafras	*Sassafras albidum*	7	Fair-Poor	C	Heavy lean, vines
T110	X	Red maple	*Acer rubrum*	8	Fair	C	One sided crown
T111	X	Red maple	*Acer rubrum*	6	Poor	C	Thin crown, vines
T112	X	Green ash	*Fraxinus pennslyvanica*	12	Poor	C	Close to dead
T113	X	Sassafras	*Sassafras albidum*	6	Poor	C	Heavy vines, dying crown
T114	X	Sassafras	*Sassafras albidum*	8	Poor	C	Broken leader, lean
T115	X	Black cherry	*Prunus serotina*	11	Fair	C	Thin crown
T116	X	Black cherry	*Prunus serotina*	7	Poor	C	Thin crown, heavy lean
T117	X	Red maple	*Acer rubrum*	7	Fair	C	Thin crown, heavy lean, irregular growth form
T118*		Tulip poplar	*Liriodendron tulipifera*	24	Fair-Good	C	Dead and broken branches, lean, irregular growth form
T119	X	Black cherry	*Prunus serotina*	8	Fair-Good	C	Thin crown

MARYLAND DNR QUALIFIED PROFESSIONAL 9-10-2019 DATE

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ROCKVILLE, MARYLAND

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DWG. TS-09

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

TREE SAVE DETAILS & NOTES

SCALE N.T.S. DATE DECEMBER 2019

SHEET NO 78 OF 80

PLOTTED: Monday, December 02, 2019 AT 07:45 AM
FILE: \\...\2013\3184_MCDOT\Task 33_Emory Lane SUP\CADD\Plans\pTP P008_EmoryLn.dgn

Tree No.	Removal	Common Name	*Scientific Name*	DBH (in.)	Condition	RT**	Comments
T120	X	Mockernut hickory	*Carya tomentosa*	7	Fair-Good	C	Thin crown
T121	X	Tulip poplar	*Liriodendron tulipifera*	12	Fair-Good	C	Dead branches
T122	X	Black walnut	*Juglans nigra*	6	Poor	C	Heavy vines, no crown
T123	X	Pin cherry	*Prunus pensylvanica*	6	Fair	C	Lean, dead branches
T124	X	Tulip poplar	*Liriodendron tulipifera*	19	Good	C	
T125		Mockernut hickory	*Carya tomentosa*	9	Fair-Good	C	Lean
T126		Red cedar	*Juniperus virginiana*	6	Good	C	
T127	X	Red maple	*Acer rubrum*	6	Fair-Poor	C	Poor growth form
T128	X	Red cedar	*Juniperus virginiana*	7	Fair-Poor	C	Knotted trunk, poor form
T129	X	Red cedar	*Juniperus virginiana*	6	Fair	C	Vines
T130	X	Black walnut	*Juglans nigra*	18	Fair	C	Dead branches
T131	X	Red cedar	*Juniperus virginiana*	8	Fair-Good	C	Pruned for powerlines
T132	X	Red cedar	*Juniperus virginiana*	8	Fair	C	Vines
T133	X	Red cedar	*Juniperus virginiana*	6	Good	C	
T134*	X	Tulip poplar	*Liriodendron tulipifera*	24	Good	C	
T135		Red cedar	*Juniperus virginiana*	8	Fair-Good	C	Dead branches
T136	X	Red maple	*Acer rubrum*	8	Fair-Good	C	Dead branches
T137	X	Red cedar	*Juniperus virginiana*	8	Good	C	
T138	X	Tulip poplar	*Liriodendron tulipifera*	20	Fair-Good	C	Lopsided crown
T139	X	Red cedar	*Juniperus virginiana*	8	Good	C	
T140	X	Black cherry	*Prunus serotina*	6	Fair-Poor	C	Poor form, dead branches
T141	X	Red maple	*Acer rubrum*	6	Good	C	
T142	X	Red maple	*Acer rubrum*	6	Fair-Good	C	Thin crown
T143	X	American elm	*Ulmus americana*	6	Fair	C	Leaning on adjacent tree, erratic branching
T144		Tulip poplar	*Liriodendron tulipifera*	9	Fair	C	Lean
T145*		Tulip poplar	*Liriodendron tulipifera*	24	Good	C	
T146	X	Red maple	*Acer rubrum*	8	Fair	C	Trunk damage
T147	X	Red maple	*Acer rubrum*	8	Fair	C	One sided crown
T148	X	Black cherry	*Prunus serotina*	7	Poor	C	Vines, thin crown
T149	X	Red maple	*Acer rubrum*	6	Good	C	
T150	X	Red maple	*Acer rubrum*	7	Fair	C	One sided crown
T151	X	Tulip poplar	*Liriodendron tulipifera*	6	Poor	C	Broken leader
T152	X	Black cherry	*Prunus serotina*	11	Fair-Poor	C	Heavy lean, poor form
T153	X	Black gum	*Nyssa sylvatica*	10	Fair-Poor	C	Heavy vines
T154	X	White mulberry	*Morus alba*	10	Poor	C	Heavy lean and heavy vines. Twin trunk
T155	X	Black cherry	*Prunus serotina*	8	Poor	C	Heavy vines, lean
T156	X	Black walnut	*Juglans nigra*	8	Fair-Good	C	Lean
T157	X	White mulberry	*Morus alba*	11	Fair	C	Vines, lean
T158	X	Red maple	*Acer rubrum*	9	Fair	C	Twin trunk, broken branches
T159	X	Red maple	*Acer rubrum*	14	Fair	C	Twin trunk with included bark
T160	X	Red maple	*Acer rubrum*	8	Fair	C	Multistem x4, included bark
T161		Red maple	*Acer rubrum*	8	Poor	C	Broken leader, water sprouts
T162		American elm	*Ulmus americana*	8	Fair-Good	C	Dead branches
T163	X	Black cherry	*Prunus serotina*	13	Fair-Poor	C	Heavy lean, twin trunk. No flag
T164	X	Tulip poplar	*Liriodendron tulipifera*	14	Fair-Good	C	Irregular crown, no flag
T165	X	Tulip poplar	*Liriodendron tulipifera*	20	Fair	C	Vines, no flag
T166	X	Tulip poplar	*Liriodendron tulipifera*	7	Fair-Good	C	Irregular crown, no flag
T167		Tulip poplar	*Liriodendron tulipifera*	15	Good	C	
T168		Tulip poplar	*Liriodendron tulipifera*	12	Fair	C	Vines, minor trunk wound
T169		Flowering dogwood	*Cornus florida*	6	Fair	C	Heavy lean
T170		Tulip poplar	*Liriodendron tulipifera*	13	Poor	C	Missing crown, heavy vines
T171		Tulip poplar	*Liriodendron tulipifera*	7	Poor	C	Missing crown, vines
T172	X	Pin cherry	*Prunus pensylvanica*	8	Poor	C	Heavy lean and heavy vines
T173	X	Black walnut	*Juglans nigra*	6	Poor	C	Heavy vines, poor form
T174	X	Black walnut	*Juglans nigra*	11	Poor	C	Twin trunk, broken leader, poor form
T175	X	Black cherry	*Prunus serotina*	11	Fair	C	Poor form, lean
T176	X	Black walnut	*Juglans nigra*	9	Fair-Poor	C	Lean, heavy vines
T177	X	White mulberry	*Morus alba*	9	Poor	C	Vines, dying
T178	X	Black walnut	*Juglans nigra*	18	Poor	C	Broken leader
T179	X	Black walnut	*Juglans nigra*	6	Poor	C	Heavy lean and heavy vines
T180	X	Black walnut	*Juglans nigra*	18	Fair-Poor	C	Heavy vines into canopy
T181	X	Black walnut	*Juglans nigra*	18	Poor	C	Heavy vines into canopy, broken leader
T182*	X	Tulip poplar	*Liriodendron tulipifera*	28	Fair	C	Bent trunk
T183	X	Redbud	*Cercis canadensis*	6	Good	C	
T184	X	Flowering dogwood	*Cornus florida*	6	Fair	C	Broken branches, twin trunk
T185	X	Flowering dogwood	*Cornus florida*	9	Fair	C	Broken branches, twin trunk

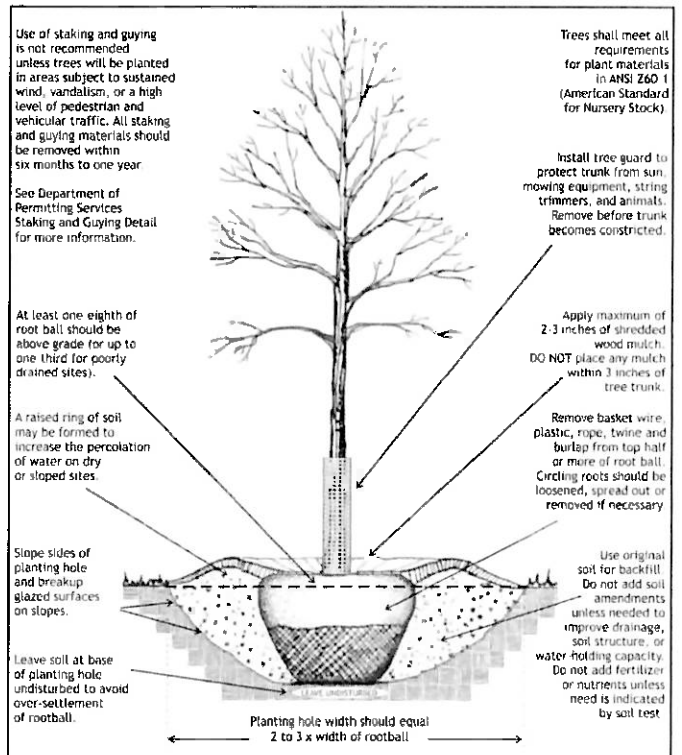
* Significant & Speciman Trees (≥ 24" DBH)

** S = Roadside Tree in state/SHA ROW; C = in county ROW

Tree No	Removal	Common Name	*Scientific Name*	DBH (in.)	Condition	RT**	Comments
T186	X	Black locust	*Robinia pseudoacacia*	12	Poor	C	Dying, to be removed. Overhangs road
T187	X	Black cherry	*Prunus serotina*	7	Poor	C	Dying, to be removed
T188	X	Redbud	*Cercis canadensis*	9	Good	C	
T189	X	Redbud	*Cercis canadensis*	9	Good	C	
T190	X	Black locust	*Robinia pseudoacacia*	8	Poor	C	Dying, to be removed, no flag
T191	X	Black walnut	*Juglans nigra*	9	Poor	C	Dying, to be removed, no flag
T192	X	Black walnut	*Juglans nigra*	10	Poor	C	Dying, to be removed, no flag
T193	X	Black walnut	*Juglans nigra*	21	Poor	C	Dying, to be removed, no flag. Triple trunk
T194	X	Black cherry	*Prunus serotina*	10	Poor	C	Dying, to be removed, no flag
T195	X	White mulberry	*Morus alba*	10	Poor	C	Dying, to be removed, no flag
T196	X	Black cherry	*Prunus serotina*	13	Poor	C	Dying, to be removed, no flag
T197	X	White mulberry	*Morus alba*	10	Poor	C	Dying, to be removed, no flag
T198	X	Black walnut	*Juglans nigra*	12	Poor	C	Heavy vines, missing crown
T199	X	Black walnut	*Juglans nigra*	10	Poor	C	Dying, to be removed, no flag. Twin trunk
T200	X	Black walnut	*Juglans nigra*	8	Poor	C	Dying, to be removed, no flag.
T201	X	Black walnut	*Juglans nigra*	8	Poor	C	Dying, to be removed, no flag.
T202	X	Black walnut	*Juglans nigra*	8	Poor	C	Dying, to be removed, no flag.
T203	X	Black walnut	*Juglans nigra*	8	Poor	C	Dying, to be removed, no flag.
T204	X	Black walnut	*Juglans nigra*	13	Poor	C	Dying, to be removed, no flag. Triple trunk
T205	X	Black cherry	*Prunus serotina*	9	Fair-Poor	C	Heavy vines
T206	X	Black gum	*Nyssa sylvatica*	16	Good	C	Renumbered, tree flag is a duplicate T161.

* Significant & Speciman Trees (≥ 24" DBH)

Roadside Tree Mitigation Note: 90 county Roadside Trees ≥ 6" DBH and in better than poor condition are being removed. To meet the 3:1 replacement requirements, $750 per Roadside Tree removal ($250 per replacement tree) minus $1,750 for the 7 tree plantings will be paid into the Street Tree Fund prior to construction for a total of $65,750.



	MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES	TREE PLANTING DETAIL FOR BALLED AND BURLAP NURSERY STOCK	DATE 6/14
			SCALE NONE

TREE CONDITION ASSESSMENT GUIDELINES

- ***Excellent*** - healthy tree with exceptional growth form; no visible defects, well-formed crown; few minor dead branches acceptable, this tree condition is rare.
- ***Good*** - healthy tree, very minor defects/decay acceptable with callous forming/complete; well-formed crown; minor lean and/or few minor/major dead branches acceptable; vines may be growing along trunk but not present within crown.
- ***Fair*** - health questionable/stress evident; structurally sound tree; defects present that do not affect structural integrity; moderate lean, minor/major dead branches may be present; crown not broken out but not necessarily well formed or even; vines may be growing along trunk and within crown.

  Ex. Fair tree could be experiencing insect damage, or exhibit a growth form that makes it very susceptible to wind damage in an open setting.
- ***Poor*** - significant health problems, may be structurally unsound, may be dead or dying; may contain significant decay; may have broken or missing top/crown; may have heavy lean; vines may be significantly affecting tree health.

Note: These guidelines were developed by RK&K based on the professional judgment of our Certified Arborists and other senior environmental staff.

RK&K
Rummel, Klepper & Kahl, LLP
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PH: (410) 728-2900
Engineers | Construction Managers | Planners | Scientists
www.rkk.com

9-10-2019
MARYLAND DNR QUALIFIED PROFESSIONAL — DATE

DWG. TS-10

OWNER/ADDRESS
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT
DIVISION OF TRANSPORTATION ENGINEERING
240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KJH DRAWN BY AWG CHECKED BY GRO

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

MUNCASTER MILL ROAD / EMORY LANE SHARED USE PATH

TREE SAVE DETAILS & NOTES

SCALE N.T.S. DATE DECEMBER 2019

SHEET NO. 79 OF 80

PLOTTED: Monday, December 02, 2019 AT 07:48 AM
FILE: \\balen04\p2013\2013164_MCDOT\Task 33_ Emory Lane SUP\CADD\Plans\pTP-P008_EmoryLn.dgn

700 East Pratt Street, Suite 500 | Baltimore, MD 21202 | P 410.728.2900 | T 800.787.3755 | www.rkk.com

January 17, 2020

Sandra Heiler
Chairman
Montgomery County Historic Preservation Commission
8787 Georgia Avenue
Silver Spring, MD 20910

Dear Chairman Heiler:

On behalf of the Montgomery County Department of Transportation (MCDOT) and at the request of the Montgomery County Planning Department's Historic Preservation Office (HPO), Rummel, Klepper & Kahl, LLP (RK&K) completed a limited archaeological survey within a portion of Emory Lane and Muncaster Mill Road Shared Use Paths project's limits of disturbance (LOD). The area of potential effect (APE) is defined as the 400 square feet (37 square meters) of the project's LOD that extends onto the Nathan Shaw House (M: 23-111) property, a National Register eligible historic property also listed on the Montgomery County Master Plan for Historic Preservation, for the purposes of rehabilitating a stream culvert (**Figure 1**). Historically, the Nathan Shaw house served as the tenant house for a number of millers who operated the Muncaster Mill grist and saw mills. The purpose of the survey was to identify the presence or absence of archaeological resources associated with the historic or precontact occupation of the property within the portion of the APE. This technical memorandum is being submitted in supplement to the MCDOT's Historic Area Work Permit (HAWP) application.

RK&K submitted an archaeological testing plan to Brian Crane, an archaeologist at the HPO, that was approved on July 30, 2019. RK&K excavated three judgmentally placed shovel tests pits (STPs) within the APE on December 5, 2019 (**Figure 2**). The APE was inspected visually to determine the placement of the STPs. Each STP measured approximately 1.5 feet (45 centimeters) in diameter and extended to a depth of 0.4-feet (12 centimeters) into Pleistocene-aged subsoil in accordance with the *Standards and Guidelines for Archaeological Investigations in Maryland* (Schaffer and Cole 1994). All soil was screened through 0.25-inch mesh for the recovery of artifacts. Locations of the STPs were recorded using an iPad, EOS Positioning Systems Arrow 100 external GNSS antenna, and the ArcCollector App to submeter accuracy. No cultural materials were recovered.

STP 1 was excavated north of the stream on level ground. Heavy brush and eroded slopes prevented the excavation of additional STPs north of the stream. STP 1 contained two strata: a dark yellowish brown (10YR3/4) sandy loam Ap horizon and a yellowish-brown sandy clay loam (10YR5/6) B-horizon subsoil, which was encountered at 0.7 feet (22 centimeters) below ground surface. No cultural materials were recovered.

STPs 2 and 3 were excavated south of the stream on level ground. STP 2 was located immediately south of the stream bed. STP 2 contained hydric soils: a dark grayish brown (10YR4/2) silt clay loam Ap horizon and a grayish brown (10YR5/2) silt clay B horizon with yellowish brown (10YR5/6) clay inclusions; the B horizon was encountered at 0.8 feet (26 centimeters) below ground surface. No cultural materials were recovered. STP 3 was excavated south and east of STP 2 on level ground at the southern edge of the APE. STP 3 also contained a hydric soils: a very dark grayish brown (10YR3/2) silt loam Ap horizon and a light grayish brown (10YR6/2) silt clay B horizon, which was encountered at 1.0 foot (31 centimeters) below ground surface. No cultural materials were recovered.

The archaeological investigation recovered no cultural materials. No further work is recommended within the APE.

Sincerely,
Rummel, Klepper & Kahl, LLP

Karen Hutchins-Keim, PhD, RPA
Principal Investigator

Figure 1: USGS Topographic Map depicting the Emory Lane APE and the Nathan Shaw House (M: 23-111) Property

Figure 2: STP Locations within Emory Lane APE

Karen A. Hutchins-Keim, RPA
Archaeological Principal Investigator / Lab Manager

Education: PhD/Archaeology, Boston University/2013
BA/History, Vassar College/2005

Registration: RPA/Register of Professional Archaeologists #32243933

Years' Experience: 13

Dr. Hutchins-Keim is the archaeological lab manager and a principal investigator with RK&K's Planning Group. Dr. Hutchins-Keim has 13 years archaeological experience in the Mid-Atlantic and Northeast. Her experience includes Phase I, II, and III excavations, documentary research, technical report writing, NRHP eligibility assessments, archaeological field management, archaeological lab management, and Section 106 of NHPA. Her project experience has involved Phase I, II, and III excavations throughout the Mid-Atlantic and the Northeast for transportation and telecom clients as well as local municipalities and non-profits.

Maryland Department of Transportation State Highway Administration | Phase I Archaeological Survey for Alternative 2 Modified Improvements to US 220 from I-68 to Cresaptown, Allegany County, Maryland. Principal Investigator/Task Manager. Phase I Archaeological Survey for twelve parcels along US 220. Oversaw technical management of fieldwork, artifact processing and analysis of two multicomponent sites and three historic sites, and technical report. Co-authored archaeological report and coordinated with geophysical survey specialist and MDOT SHA archaeologist.

MDOT SHA | Simon Hill Cemetery Disinterment Project, Prince George's County, Maryland. Advanced Historical Archaeologist. Conducted archival research on the cemetery and supervised the work of a research assistant. Authored the historical background of the cemetery and co-authored the final report synthesizing the results of the archaeological fieldwork at and disinterment of the cemetery, analysis of cemetery hardware and burials goods, and the analysis of human remains.

MDOT SHA | Bush Tavern, Harford County, Maryland. Advanced Project Director. Phase I/II Archaeological Survey of 18th-century tavern along MD 7 in Bush, Maryland. Oversaw the completion of archaeological lab processing tasks and co-authored the archaeological technical report.

MDOT SHA | Phase I/II Old Marlboro Pike, Upper Marlboro, Prince George's County, Maryland. Advanced Project Director. Archaeological survey and excavation of 18th/19th-century plantation and steamboat landing at Compton Bassett and along Patuxent River for MDOT SHA. Directed archaeological survey and excavation and supervised subcontractors and co-authored archaeological technical report.

City of Baltimore Department of Recreation and Parks | Archaeological Assessment of Potential for Proposed Clifton Mansion Improvements Project, Clifton Park, Baltimore, Maryland. Principal Investigator. Assessed archaeological potential of the MHT Easement historic property. Authored the archaeological assessment report.

West Virginia Division of Highways | Phase I Archaeological Survey of Proposed WVDOH Maintenance Facility and the Westfall Site (46PU282), Black Betsy, Putnam County, West Virginia. Principal Investigator/Lab Manager. Phase I Archaeological Survey of 10-acre parcel containing known prehistoric archaeological site. Oversaw technical management of fieldwork, artifact processing and analysis of one prehistoric site, and technical report. Co-authored archaeological report, recommended Phase II Evaluation, and coordinated with WVDOH.

West Virginia Division of Highways | Phase I Archaeological Survey of Hide-A-Way Road-CR 36/1 Highland Dam Removal Slips Repair, Harrison County, West Virginia. Principal Investigator/Lab Manager/Task Manager. Phase I Archaeological Survey of 4-acre parcel. Oversaw technical management of fieldwork, artifact processing and analysis of one historic site, and technical report. Co-authored archaeological report, made determinations of eligibility, and coordinated with WVDOH.