HOWARD COUNTY
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION AND SPECIAL PROJECTS DIVISION
BID NO. XXXX
MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

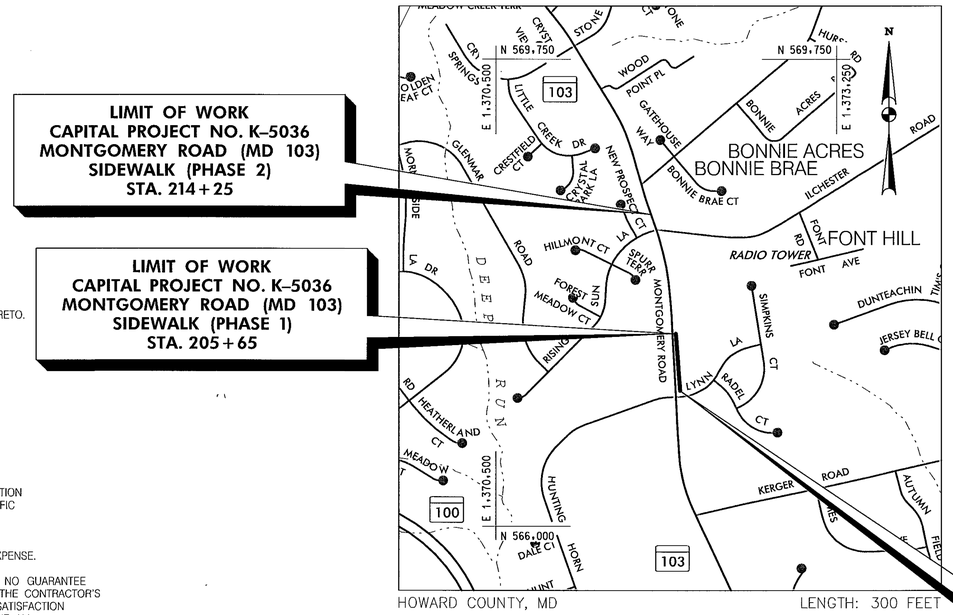
INDEX OF DRAWINGS

DESIGN NARRATIVE

THE PROPOSED SEDIMENT CONTROLS WILL SAFELY FILTER AND CONVEY SEDIMENT-LADEN RUNOFF FROM THE WORK AREA DURING CONSTRUCTION. PAVEMENT REMOVAL AND ONE NON-ROOFTOP DISCONNECT WILL PROVIDE SWM WHILE MAINTAINING EXISTING NATURAL FLOW PATTERNS.

GENERAL NOTES

1. THIS CONTRACT SHALL BE CONSTRUCTED UNDER PROVISIONS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION (S.H.A.) "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS," DATED JULY 2008, AND ALL REVISIONS THEREOF AND ADDITIONS THERETO.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1870 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION WORK.
4. PROJECT BACKGROUND:
   LOCATION: ELLICOT CITY, MARYLAND — ADC MAP COORDINATES
   Tax Map: 31 — MAP: 28
   Election District: 9B — BLOCK: B7
5. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ALL MDSHA TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATIONS.
6. ANY DAMAGE CAUSED BY THE CONTRACTOR TO EXISTING PUBLIC RIGHT-OF-WAY, EXISTING PAVING, EXISTING CURB AND GUTTER, EXISTING UTILITIES, ETC. SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
7. THE EXISTING UTILITIES SHOWN HEREON ARE LOCATED FROM THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS MADE TO THEIR ACCURACY. THE APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND CONVENIENCE. THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES TO HIS OWN SATISFACTION AND WELL IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES. ADDITIONALLY, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXITING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE.
8. CLEARING SHALL BE LIMITED TO THE "LIMIT OF DISTURBANCE" AS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN. GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE AT ALL LOCATIONS. CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS EXCEPT AS OTHERWISE DIRECTED.
9. THE CONTRACTOR SHALL TAKE EXTREME CAUTION NOT TO DISTURB THE EXISTING VEGETATION OUTSIDE THE LIMITS OF CONSTRUCTION AND TO PROTECT DESIGNATED TREES.SOIL STABILIZATION SHALL CONFORM TO "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL," DATED 2011, PUBLISHED JOINTLY BY WATER MANAGEMENT ADMINISTRATION, SOIL CONSERVATION SERVICE, AND STATE SOIL CONSERVATION COMMITTEE.
10. ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED AND VERIFIED IN ACCORDANCE WITH AASHTO T-180. CONTRACTOR SHALL NOT PARK OR DRIVE EQUIPMENT NOR STORE MATERIALS IN THE CRITICAL ROOT ZONE OF TREES TO BE SAVED.
11. ALL STORMWATER MANAGEMENT FACILITIES CONSTRUCTED FOR THIS CONTRACT SHALL BE INSPECTED BIANNUALLY WITH MAINTENANCE PROVIDED WHEN REQUIRED.
12. THE GRADING LIMITS SHOWN ON THE PLAN SHALL NOT BE EXCEEDED. ANY CHANGES IN THE GRADING, EROSION AND SEDIMENT CONTROL PLAN, STORMWATER MANAGEMENT FACILITY OR THE SEGMENT OF THE WORK MUST BE REVIEWED AND APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
13. THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS OFFICE OF PURCHASING. FAILURE TO ATTACH ALL ADDENDA MAY CAUSE BID TO BE DEEMED IRRELEGULAR.
14. THE RIGHT-OF-WAY LINES AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL RIGHT-OF-WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT-OF-WAY PLAT.
15. COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED ON THE MARYLAND STATE GRID NAD '83/'91 AS PROJECTED FROM THE HOWARD COUNTY GEODETIC CONTROL STATIONS 31GD, 31GC. VERTICAL DATUM USED IS NAVD '88 GEOID 12A.
16. THE FOLLOWING LANDOWNERS ARE AFFECTED BY THE LOD FOR THIS PROJECT: YOUNG, CHO AND WYCKOFF CHARLES III



HOWARD COUNTY, MD — LENGTH: 300 FEET

LOCATION MAP

SCALE: 1"=600'

HORIZONTAL DATUM	NAD 83 /91
VERTICAL DATUM	NAVD 88

600' 0 600' 1200'
SCALE: 1" = 600'

STANDARD STABILIZATION NOTE:

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

HOWARD COUNTY D.P.W. CONTROL

TRAVERSE POINTS WERE DERIVED FROM HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONTROL POINTS.

1. 31GC
2. 31GD

SITE ANALYSIS

TOTAL AREA OF SITE.....0.28 ACRES
AREA OF DISTURBED.....0.28 ACRES
AREA TO BE ROOFED OR PAVED.....0.06 ACRES
AREA TO BE VEGETATIVELY STABILIZED.....0.22 ACRES

CUT & FILL QUANTITIES

CUT.....120 CUBIC YARDS
FILL.....400 CUBIC YARDS

6/12/2017
MARK J. BODMANN, 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. 31487, EXPIRATION DATE: 03182019

SEDIMENT CONTROL

Owners/Developer Certification:

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Owner's/ Developer's Signature — 11 AUG 17 Date

KRISTOFER L. SINGLETON Project Mgr.
Printed Name & Title

Design Certification:

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Designer's Signature — 6-12-17 Date

GLENN MARSCHKE
Printed Name — MD Registration No. 16142 (P.E.) R.L.S., or R.L.A. (circle one)

Professional Certification:

"I hereby certify 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. 16142, Expiration Date: 8/17/2018"

(Title block, certification, seal, and signature shall appear close to each other)

Howard SCD Signature Block:

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — 5/17/17 Date

EP-17-31

DESIGN DESIGNATION	
ROADWAY	MD 103
CONTROLS / YEARS	2015
AVERAGE DAILY TRAFFIC (A.D.T.)	12,744
DESIGN SPEED M. P. H.	50
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL
CONTROL OF ACCESS	NONE
INTENSITY OF DEVELOPMENT	URBAN
TERRAIN	FLAT
ANTICIPATED POSTED SPEED	40

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

9250 BENDIX ROAD
COLUMBIA, MD 21045

DIRECTOR OF PUBLIC WORKS — DATE — CHIEF, BUREAU OF ENGINEERING — Thomas E. Butler 8/10/17 — DATE

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — 8/9/17 — DATE — CHIEF, BUREAU OF HIGHWAYS — 8/10/2017 — DATE

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
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STATE OF MARYLAND — MARK JOSEPH BODMANN — No. 31487 — PROFESSIONAL ENGINEER — 6/12/17

DATE	REVISION	BY	APP'R.

TITLE SHEET, INDEX OF DRAWINGS & GENERAL NOTES

MAP 31 — GRID 14, 20 — PARCEL: 0205 — ELECTION DISTRICT NO. 9B

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817

ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE: JUNE 2017	DRAWING NUMBER: TI-01
CHECKED BY: M.J.B.	WM&A FILE #: 215023.0002
DRAFTED BY: J.W.L. & J.D.W.	SCALE: AS SHOWN
DESIGNED BY: N.D.K.	SHEET NUMBER: 01 OF 12

Monday, June 12, 2017 At 09:18 AM

ABBREVIATIONS

A.A.S.H.T.O. - AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
A.D.T. - AVERAGE DAILY TRAFFIC
AHD - AHEAD
APPROX. - APPROXIMATE
B : B/L - BASELINE
BK - BACK / BOOK
BIT. - BITUMINOUS
B.C. - BITUMINOUS CONCRETE
B.M. - BENCH MARK
BOT. - BOTTOM
C.C. - CENTER OF CURVE
C.C.&G. - COMBINATION CURB AND GUTTER
CATV - CABLE TELEVISION
C.B.R. - CALIFORNIA BEARING RATIO
C : C/L-CENTERLINE
CL. - CLASS
CLF - CHAINLINK FENCE
C.M.P. - CORRUGATED METAL PIPE
C.O. - CLEANOUT
CLR. - CLEARANCE
COMB. - COMBINATION
CONC. - CONCRETE
CONSTR. - CONSTRUCTION
CONTR. - CONTRACT
COR. - CORNER
CORR. - CORRECTION
CT. - COURT
C.Y. - CUBIC YARDS
Dc - DEGREE OF CURVE
D.H.V. - DESIGN HOURLY VOLUME
D.I. - DROP INLET
DIA. - DIAMETER
D.S. - DESIGN SPEED
D.O. - DOUBLE OPENING
DR. - DRIVE
E - EAST
E - ELECTRIC
E - EXTERNAL DISTANCE
EA. - EACH
E.B.R. - EASTBOUND ROADWAY
ELEV. - ELEVATION
ENDW. - ENDWALL
ENTR - ENTRANCE
E.R.C.C.P. - ELLIPTICAL REINFORCED CEMENT CONCRETE PIPE
ES - END SECTION
EX. : EXIST. - EXISTING
FT. - FEET
F : FL - FLOWLINE
F.B.D. - FLAT BOTTOM DITCH
F.H. - FIRE HYDRANT
F.S. - FULL SUPER
FWD. - FORWARD
G - GAS
GA. - GAUGE OR GAGE
G.V. - GAS VALVE
H.B. - HANDBOX
H.L.S.D. - HEADLIGHT SIGHT DISTANCE
H.D.P.E. - HIGH DENSITY POLYETHEYLENE
HDWL. - HEADWALL
H.E.R.C.P. - HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
H.P.-HIGH POINT
IN. - INCH
I.S.T. - INLET SEDIMENT TRAP
INV. - INVERT
J.B. - JUNCTION BOX
L - LENGTH
LN. - LANE
L.F. - LINEAR FEET
L.L. - LIQUID LIMIT
L.P. - LIGHT POLE
L.P. - LOW POINT
LT. - LEFT
MAC. - MACADAM
MAX. - MAXIMUM
M.B. - MAIL BOX
M.C. - MOISTURE CONTENT
MD. - MARYLAND
M.D.D. - MAXIMUM DRY DENSITY
MIN. - MINIMUM
MOD. - MODIFIED
N - NORTH
N.B.R. - NORTHBOUND ROADWAY
N.E. - NORTHEAST
N.P. - NON-PLASTIC
N.S. - NORMAL SECTION
NO. - NUMBER
N.T.S. - NOT TO SCALE
O.C. - ON CENTER
OHE - OVERHEAD ELECTRIC
O.M. - OPTIMUM MOISTURE
PAV'T. - PAVEMENT
P.C. - POINT OF CURVATURE
P.C.C. - POINT OF COMPOUND CURVATURE
P/C - POINT OF CROWN
P/GE - PROFILE GRADE ELEVATION
P.G.L - PROFILE GRADE LINE
P/GL - PROFILE GROUND LINE
P/R - POINT OF ROTATION
P.I. - PLASTICITY INDEX
P.I. - POINT OF INTERSECTION
P.O.C. - POINT ON CURVE
P.O.T. - POINT ON TANGENT
PROP. - PROPOSED
P.R.C. - POINT OF REVERSE CURVE
PT. - POINT
P.T. - POINT OF TANGENCY
P.V.C. - POINT OF VERTICAL CURVATURE
PVC - POLYVINYL CHLORIDE
P.V.I. - POINT OF VERTICAL INTERSECTION
P.V.R.C. - POINT OF VERTICAL REVERSE CURVE
P.V.T. - POINT OF VERTICAL TANGENCY
R - RADIUS
RD - ROAD
R.F. - ROCK FRAGMENTS
RTE. - ROUTE
RT. - RIGHT
RW : R/W - RIGHT OF WAY
R.C.P. - REINFORCED CONCRETE PIPE
R.C.C.P. - REINFORCED CEMENT CONCRETE PIPE
R.Q.D. - ROCK QUALITY DESIGNATION
R.M. - ROOTMAT
S - SOUTH
SAN. - SANITARY SEWER
S.B.R. - SOUTHBOUND ROADWAY
S.D. - STORM DRAIN
S.D.D. - SURFACE DRAIN DITCH
S/E - SUPER ELEVATION
S.F. - SILT FENCE
SHLD. - SHOULDER
SHT. - SHEET
S.P.P. - STRUCTURAL PLATE PIPE
S.P.T. - STANDARD PENETRATION TESTING
S.S.D. - STOPPING SIGHT DISTANCE
S.S.F. - SUPER SILT FENCE
STD. - STANDARD
STA. - STATION
S.Y. - SQUARE YARDS
SWM - STORMWATER MANAGEMENT
T - TANGENT
T: TEL - TELEPHONE
T.C. - TOP OF COVER
T.G. - TOP OF GRATE
T.P. - TOP OF PIPE
T : 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. - UNDERDRAIN PIPE
U.G. - UNDERGROUND
U.P. - UTILITY POLE
U.S.D.A. - UNITED STATES DEPARTMENT OF AGRICULTURE
VCL - VERTICAL CLEARANCE
V.C.L. - VERTICAL CURVE LENGTH
W - WATER
W - WEST
W.B.R. - WESTBOUND ROADWAY
W.M. - WATER METER
W.S. - WRAPPED STEEL
W.V. - WATER VALVE

CONVENTIONAL SIGNS

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 OR SURVEY LINE (+50)
FIRE HYDRANT (F.H.)
HISTORIC BOUNDARY
TOE OF FILL LINE (F)
TOP OF CUT LINE (C)
LIMIT OF DISTURBANCE LINE (LOD)
SIDE DITCH LINE
UNDERDRAIN (U)
UNDERGROUND CABLE TV (CATV)
UNDERGROUND ELECTRIC (E)
UNDERGROUND FIBER OPTICS (FO)
UNDERGROUND GAS (G)
UNDERGROUND TELEPHONE (T)
UNDERGROUND WATER (W)
OVERHEAD CABLE TV (CATV)
OVERHEAD ELECTRIC (E)
OVERHEAD FIBER OPTICS (FO)
OVERHEAD TELEPHONE (T)

PROPOSED PIPE/CULVERT
EXISTING PIPE/CULVERT
EXISTING DROP INLET
UTILITY POLE
WETLAND
WETLAND BOUNDARY
WETLAND BUFFER (B)
FOREST BUFFER
STREAMS
WATERS OF U.S. (WUS)
HEDGE /TREE LINE
BUSH /TREE
CONIFEROUS TREE
INLET PROTECTION (TYP.)
GROUND ELEVATION (DATUM LINE 173.6)
GRADE ELEVATION (DATUM LINE 210.22)
SOIL BORING (SB-01)
STORMWATER MANAGEMENT BORING (SWM-01)
PAVEMENT CORE BORING (PC-01)
FOUNDATION BORING (FB-01)

INTERCEPTOR BERM (I.B.)
TEMPORARY BERM (T.B.)
TEMPORARY SLOPE DRAIN (T.S.D.)
SUPER SILT FENCE (S.S.F.)
SILT FENCE (S.F.)
STRAW BALE STRUCTURE (S.B.S.)
PLACED RIPRAP DITCH
TEMPORARY STONE OUTLET STRUCTURE (T.S.O.S.)
GABIONS
TEMPORARY SEDIMENT TRAP WITH SILT FENCE (T.S.T.)
TEMPORARY SEDIMENT TRAP WITH STRAW BALES (T.S.T.)
TRAVERSE POINT (WMA 6)
REBAR & CAP (WMA 7)
SPRING HEAD
WELL LOCATION (WELL)
COMB. CURB & GUTTER
SEPTIC TANK (SEPTIC)
PROPOSED UTILITY POLE
RIPRAP
SWM BIO-SWALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

9250 BENDIX ROAD
COLUMBIA, MD 21045

DIRECTOR OF PUBLIC WORKS — DATE 8/10/17
CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17
CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

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STATE OF MARYLAND — MICHAEL J. BOLAND — No. 21487 — PROFESSIONAL ENGINEER — 8/12/17

DATE	REVISION	BY	APP'R.

ABBREVIATIONS & SYMBOLS

MAP 31 | GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B
ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817
ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE JUNE 2017	DRAWING NUMBER GN-01
CHECKED BY: M.J.B.	WM&A FILE #: 215023.0002
DRAFTED BY: J.W.L. & J.D.W.	SCALE N.T.S.
DESIGNED BY: N.D.K.	SHEET NUMBER 02 OF 12

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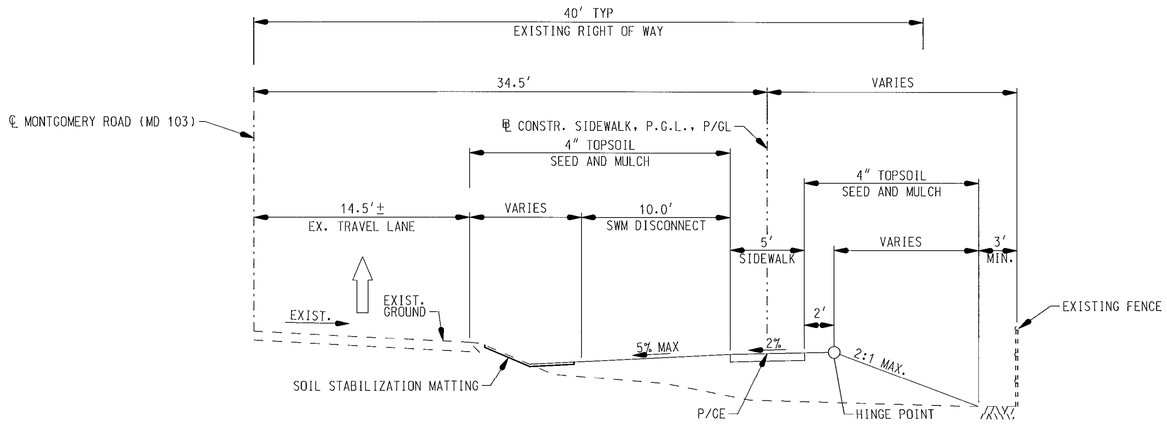
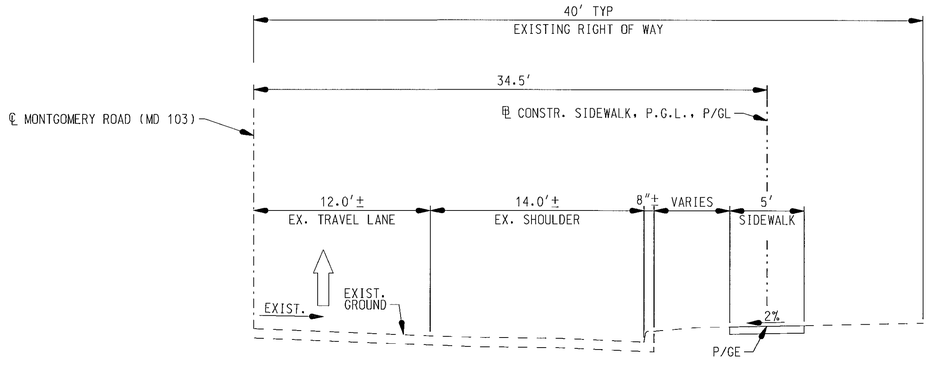
Monday, June 12, 2017 AT 09:18 AM



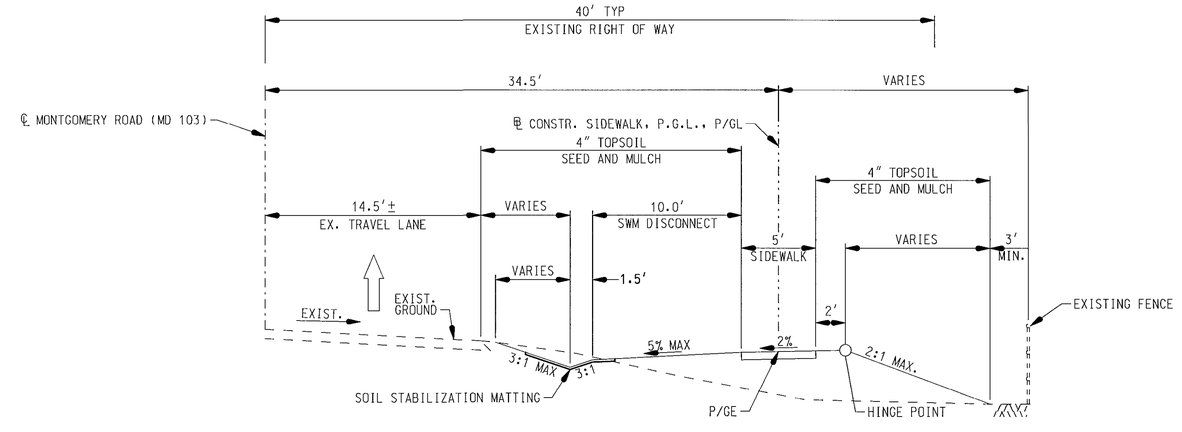
MONTGOMERY ROAD (MD 103) DISCONNECT LEFT

STA. 202+84± TO STA.204+12±
NOT TO SCALE



MONTGOMERY ROAD (MD 103) TYPICAL SECTION

STA. 201+95± TO STA.202+05±
NOT TO SCALE



MONTGOMERY ROAD (MD 103) DISCONNECT LEFT

STA. 204+12± TO STA.204+65±
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

DIRECTOR OF PUBLIC WORKS — DATE 8/11/17

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17

9250 BENDIX ROAD
COLUMBIA, MD 21045

CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17

CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

WALLACE MONTGOMERY
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STATE OF MARYLAND — NICOLE D. KOLB — No. 31481 — PROFESSIONAL ENGINEER — 6/12/17

DATE	REVISION	BY	APP'R.

TYPICAL SECTIONS

MAP 31 | GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B

ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817

ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE	DRAWING NUMBER
JUNE 2017	TS-01
CHECKED BY: M.J.B.	WM&A FILE #: 215023.0002
DRAFTED BY: J.W.L. & J.D.W.	SCALE N.T.S.
DESIGNED BY: N.D.K.	SHEET NUMBER 03 OF 12

Monday, June 12, 2017 AT 09:18 AM

℄ OF CONSTRUCTION				
POINT DESCR.	STATION	COORDINATES NORTH	COORDINATES EAST	BEARING
MONTGOMERY ROAD (MD 103)				
P.O.T.	100+00.00	566,966.7892	1,371,959.9099	N 03°13'41.0" W
P.O.T.	106+50.00	567,615.7578	1,371,923.3083	
SIDEWALK				
P.O.T.	201+15.64	567,084.1859	1,371,987.8436	N 03°13'41.0" W
P.O.T.	206+50.00	567,617.7005	1,371,957.7535	

SOIL STABILIZATION MATTING (TYPE B FOR CHANNEL BOTTOM)	
170 S.Y.	℄ OF SIDEWALK - STA. 202+97 TO STA. 205+48, LT.

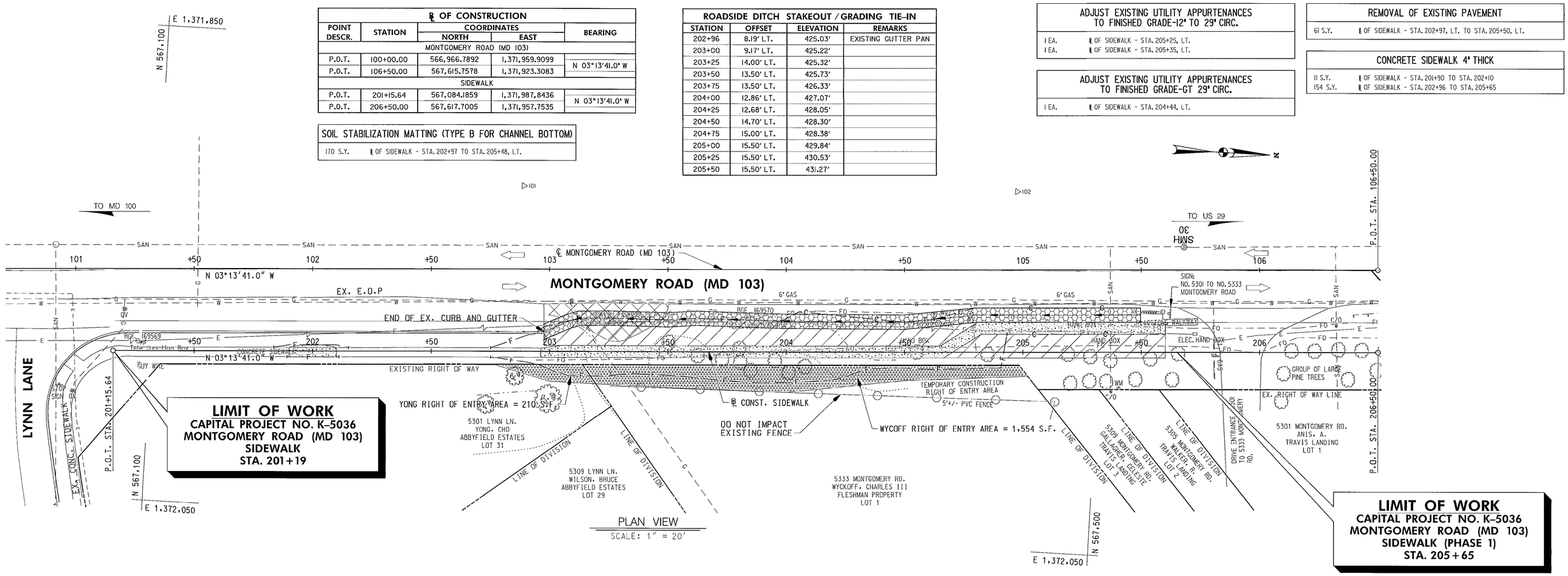
ROADSIDE DITCH STAKEOUT / GRADING TIE-IN			
STATION	OFFSET	ELEVATION	REMARKS
202+96	8.19' LT.	425.03'	EXISTING GUTTER PAN
203+00	9.17' LT.	425.22'	
203+25	14.00' LT.	425.32'	
203+50	13.50' LT.	425.73'	
203+75	13.50' LT.	426.33'	
204+00	12.86' LT.	427.07'	
204+25	12.68' LT.	428.05'	
204+50	14.70' LT.	428.30'	
204+75	15.00' LT.	428.38'	
205+00	15.50' LT.	429.84'	
205+25	15.50' LT.	430.53'	
205+50	15.50' LT.	431.27'	

ADJUST EXISTING UTILITY APPURTENANCES TO FINISHED GRADE-12" TO 29" CIRC.	
1 EA.	℄ OF SIDEWALK - STA. 205+25, LT.
1 EA.	℄ OF SIDEWALK - STA. 205+35, LT.

ADJUST EXISTING UTILITY APPURTENANCES TO FINISHED GRADE-GT 29" CIRC.	
1 EA.	℄ OF SIDEWALK - STA. 204+44, LT.

REMOVAL OF EXISTING PAVEMENT	
61 S.Y.	℄ OF SIDEWALK - STA. 202+97, LT. TO STA. 205+50, LT.

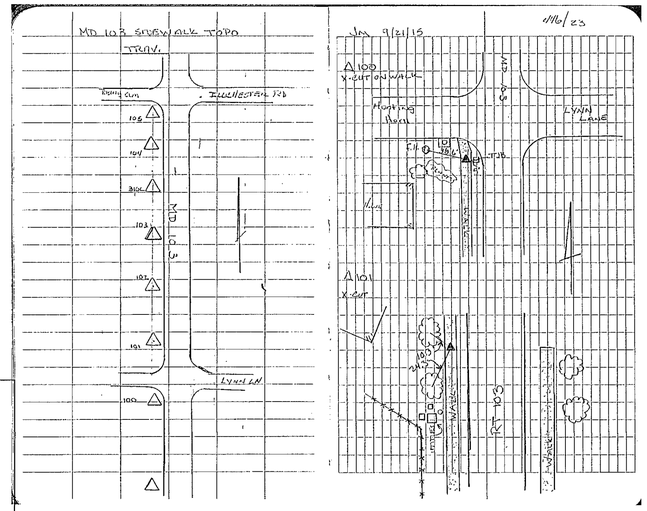
CONCRETE SIDEWALK 4" THICK	
11 S.Y.	℄ OF SIDEWALK - STA. 201+90 TO STA. 202+10
154 S.Y.	℄ OF SIDEWALK - STA. 202+96 TO STA. 205+65



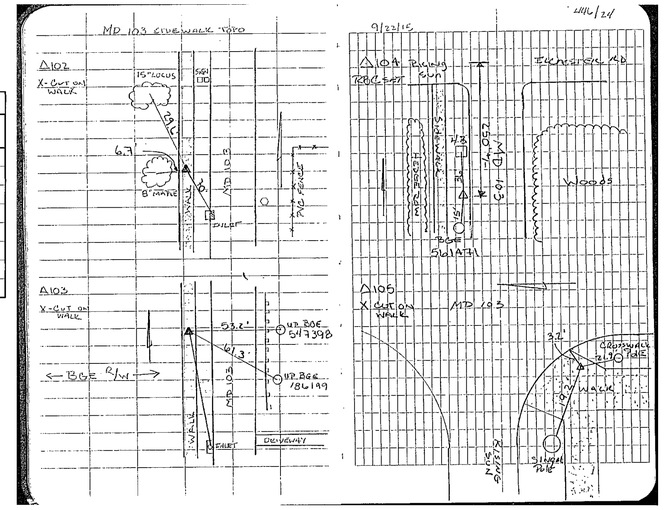
PLAN VIEW
SCALE: 1" = 20'

LIMIT OF WORK
CAPITAL PROJECT NO. K-5036
MONTGOMERY ROAD (MD 103)
SIDEWALK
STA. 201+19

LIMIT OF WORK
CAPITAL PROJECT NO. K-5036
MONTGOMERY ROAD (MD 103)
SIDEWALK (PHASE 1)
STA. 205+65



CONTROL TRAVERSE				
POINT NO.	COORDINATES NORTHING	COORDINATES EASTING	ELEVATION	DESCRIPTION
31GC	567,877.21	1,371,879.01	448.52'	HOWARD COUNTY MONUMENT
31GD	566,299.85	1,372,014.02	419.34'	HOWARD COUNTY MONUMENT
100	566,999.52	1,371,922.40	418.67'	X CUT SET
101	567,253.45	1,371,908.64	425.84'	X CUT SET
102	567,461.80	1,371,898.95	431.40'	X CUT SET
103	567'670.86	1,371,886.94	438.18'	X CUT SET
104	568,117.35	1,371,846.36	463.29'	RBC SET
105	568,342.11	1,371,778.19	476.91'	X CUT SET



NOTES:
1) ALL CONSTRUCTION WITHIN THE SHA RIGHT OF WAY SHALL CONFORM TO SHA STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND MATERIALS.
2) DAILY LANE CLOSURES SHALL BE IN ACCORDANCE WITH MD 104.02-01 THRU MD 104.02-10.
3) CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES DURING CONSTRUCTION.
4) EXISTING FENCE NOT TO BE IMPACTED.

20' 0 20' 40'
SCALE: 1" = 20'

LEGEND

- FULL DEPTH HMA PAVING
- CONCRETE SIDEWALK
- GRAVEL REMOVAL
- RIPRAP
- SWM DISCONNECT
- SSM (TYPE B)
- EASEMENT AREA
- 202 +50 ℄ CONSTRUCTION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

9250 BENDIX ROAD
COLUMBIA, MD 21045

DIRECTOR OF PUBLIC WORKS — DATE 8/11/17
CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17
CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

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

STATE OF MARYLAND — MARK J. BODNAR — No. 21441 — REGISTERED PROFESSIONAL ENGINEER — 8/9/2017

DATE	REVISION	BY	APP'R.

ROADWAY PLAN

MAP 31 GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B

ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817

ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE	DRAWING NUMBER
JUNE 2017	PS-01
CHECKED BY: M.J.B.	WM&A FILE #: 215023.0002
DRAFTED BY: J.W.L. & J.D.W.	SCALE 1" = 20'
DESIGNED BY: N.D.K.	SHEET NUMBER 04 OF 12

℄ OF CONSTRUCTION				
POINT DESCR.	STATION	COORDINATES		BEARING
		NORTH	EAST	
MONTGOMERY ROAD (MD 103)				
P.O.T.	100+00.00	566,966.7892	1,371,959.9099	N 03°13'41.0" W
P.O.T.	106+50.00	567,615.7578	1,371,923.3083	
SIDEWALK				
P.O.T.	201+15.64	567,084.1859	1,371,987,8436	N 03°13'41.0" W
P.O.T.	206+50.00	567,617.7005	1,371,957.7535	

SOIL STABILIZATION MATTING (TYPE B FOR CHANNEL BOTTOM)	
170 S.Y.	℄ OF SIDEWALK - STA. 202+97 TO STA. 205+48, LT.

ROADSIDE DITCH STAKEOUT / GRADING TIE-IN			
STATION	OFFSET	ELEVATION	REMARKS
202+96	8.19' LT.	425.03'	EXISTING GUTTER PAN
203+00	13.27' LT.	425.22'	
203+25	14.00' LT.	425.32'	
203+50	14.00' LT.	425.74'	
203+75	14.00' LT.	426.35'	
204+00	14.00' LT.	427.10'	
204+25	14.00' LT.	427.81'	
204+50	14.00' LT.	428.50'	
204+75	14.00' LT.	429.00'	
205+00	14.00' LT.	429.16'	
205+25	4.50' LT.	430.87'	
205+50	4.50' LT.	431.60'	

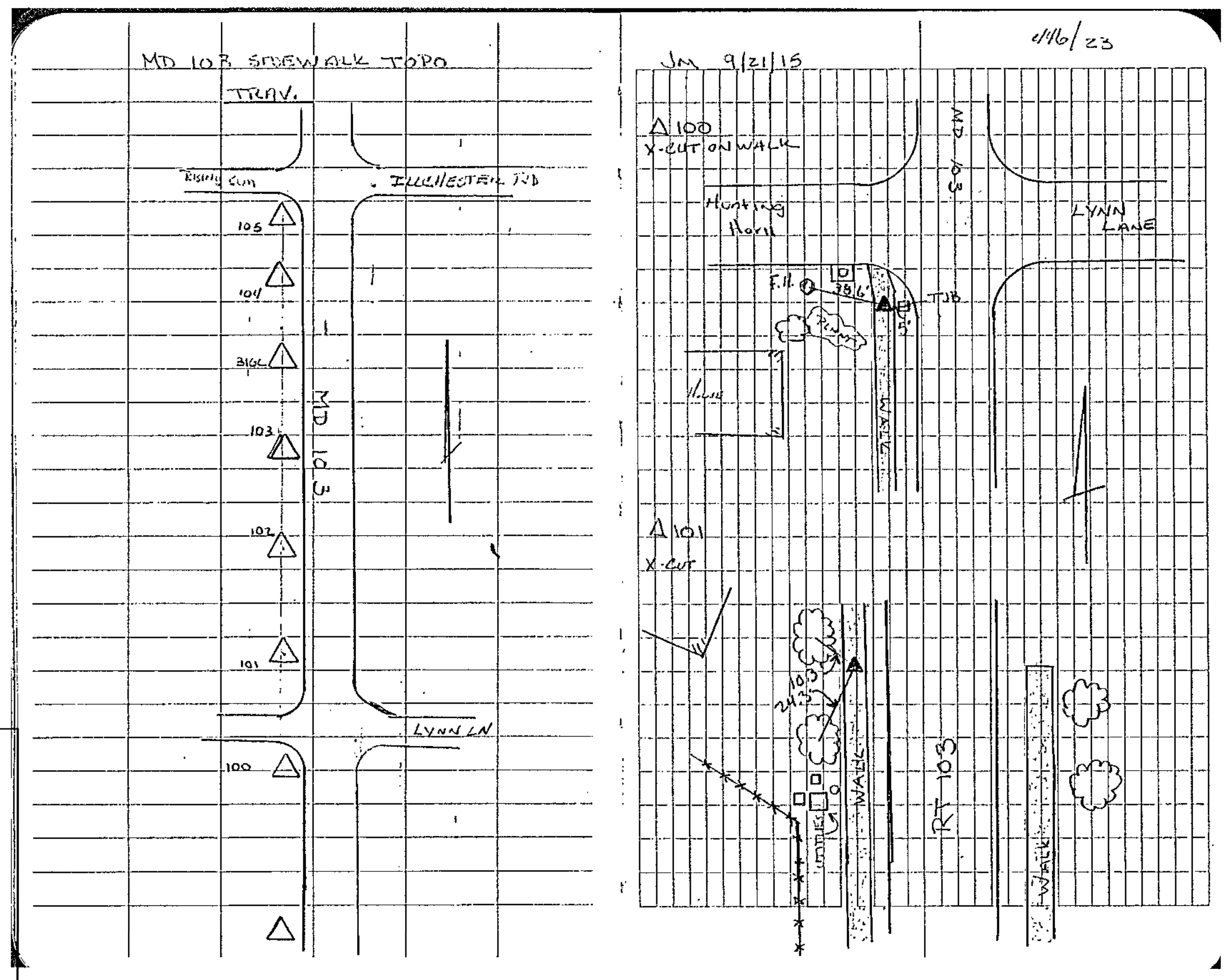
ADJUST EXISTING UTILITY APPURTENANCES TO FINISHED GRADE-12" TO 29" CIRC.	
1 EA.	℄ OF SIDEWALK - STA. 205+25, LT.
1 EA.	℄ OF SIDEWALK - STA. 205+35, LT.

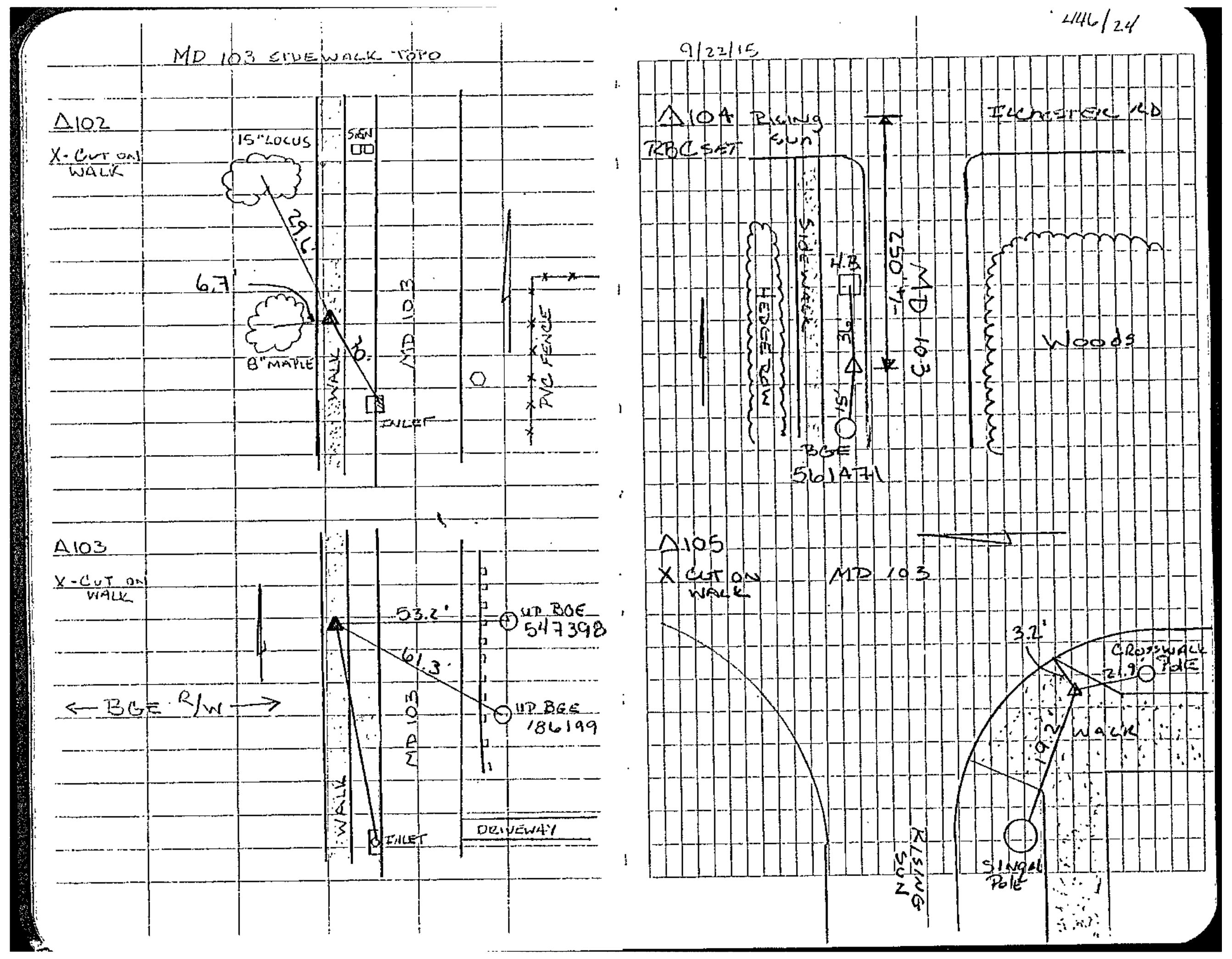
ADJUST EXISTING UTILITY APPURTENANCES TO FINISHED GRADE-GT 29" CIRC.	
1 EA.	℄ OF SIDEWALK - STA. 204+44, LT.

REMOVAL OF EXISTING PAVEMENT	
61 S.Y.	℄ OF SIDEWALK - STA. 202+97, LT. TO STA. 205+50, LT.

CONCRETE SIDEWALK 4" THICK	
11 S.Y.	℄ OF SIDEWALK - STA. 201+90 TO STA. 202+10
154 S.Y.	℄ OF SIDEWALK - STA. 202+96 TO STA. 205+65

PLAN VIEW
SCALE: 1" = 20'





CONTROL TRAVERSE				
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LEGEND

▨	FULL DEPTH HMA PAVING	▨	SWM DISCONNECT
▨	CONCRETE SIDEWALK	▨	SSM (TYPE B)
▨	GRAVEL REMOVAL	▨	EASEMENT AREA
▨	RIPRAP	202 +50	℄ CONSTRUCTION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

9250 BENDIX ROAD
COLUMBIA, MD 21045

8/11/17 DIRECTOR OF PUBLIC WORKS DATE
Thomas Butler 8/10/17 CHIEF, BUREAU OF ENGINEERING DATE
8/9/17 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE
8/10/2017 CHIEF, BUREAU OF HIGHWAYS DATE

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A Limited Liability Partnership

MARK J. BODMAN No. 31487
6/12/17

DATE	REVISION	BY	APP'R.

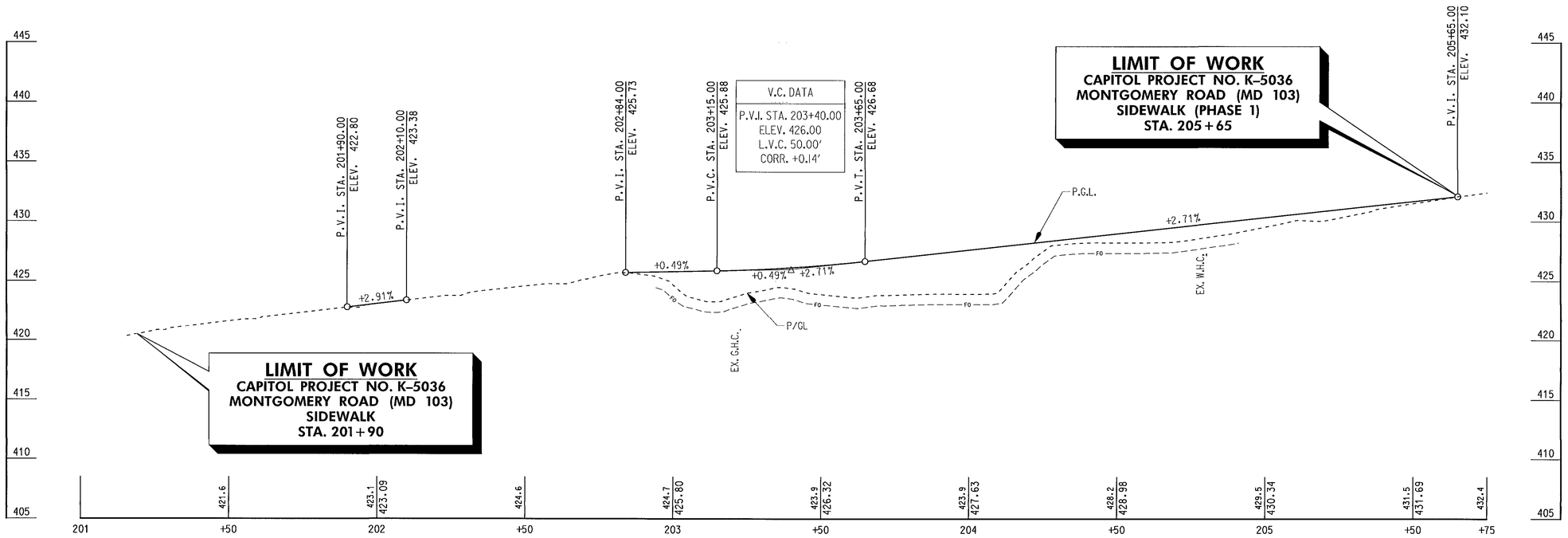
ROADWAY PLAN

MAP 31 GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B
ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817
ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE JUNE 2017	DRAWING NUMBER PS-01
CHECKED BY: M.J.B.	WM&A FILE #: 215023.0002
DRAFTED BY: J.W.L. & J.D.W.	SCALE 1" = 20'
DESIGNED BY: N.D.K.	SHEET NUMBER 04 OF 12



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

DIRECTOR OF PUBLIC WORKS — DATE 8/11/17

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17

9250 BENDIX ROAD
COLUMBIA, MD 21045

CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17

CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

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STATE OF MARYLAND — MICHAEL J. BOSLEY — No. 31487 — PROFESSIONAL ENGINEER
8/9/2017

DATE	REVISION	BY	APP'R.

SIDEWALK PROFILE

MAP 31 | GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B

ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817

ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE: JUNE 2017	DRAWING NUMBER: PR-01
CHECKED BY: M.J.B.	WM&A FILE #: 215023.0002
DRAFTED BY: J.W.L. & J.D.W.	SCALE: AS SHOWN
DESIGNED BY: N.D.K.	SHEET NUMBER: 05 OF 12

Monday, June 12, 2017 AT 09:18 AM

HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages:
   a. Prior to the start of earth disturbance,
   b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading,
   c. Prior to the start of another phase of construction or opening of another grading unit,
   d. Prior to the removal or modification of sediment control practices.

   Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

6. Site Analysis:

Total Area of Site:	0.28	Acres
Area Disturbed:	0.28	Acres
Area to be roofed or paved:	0.06	Acres
Area to be vegetatively stabilized:	0.22	Acres
Total Cut:	115	Cu. Yds.
Total Fill:	400	Cu. Yds.
Offsite waste/borrow area location:	A SITE WITH AN ACTIVE GRADING PERMIT: TO BE DETERMINED BY CONTRACTOR	

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:
   - Inspection date
   - Inspection type (routine, pre-storm event, during rain event)
   - Name and title of inspector
   - Weather information (current conditions as well as time and amount of last recorded precipitation)
   - Brief description of project's status (e.g., percent complete) and/or current activities
   - Evidence of sediment discharges
   - Identification of plan deficiencies
   - Identification of sediment controls that require maintenance
   - Identification of missing or improperly installed sediment controls
   - Compliance status regarding the sequence of construction and stabilization requirements
   - Photographs
   - Monitoring/sampling
   - Maintenance and/or corrective action performed
   - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).

9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.

10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of HSCD-approved field changes.

11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

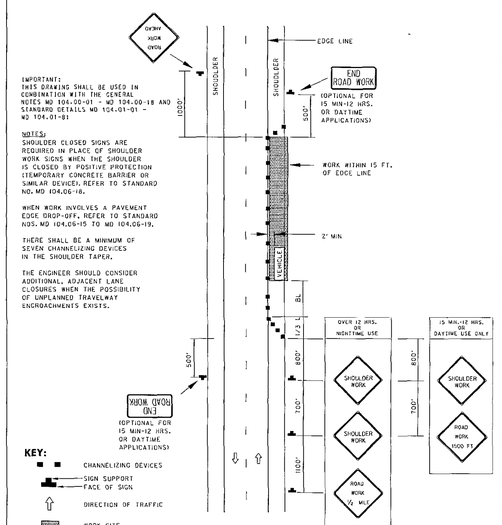
14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.

15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
   - Use I and IP March 1 - June 15
   - Use III and IIIP October 1 - April 30
   - Use IV March 1 - May 31

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

Rev. 3-2017

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



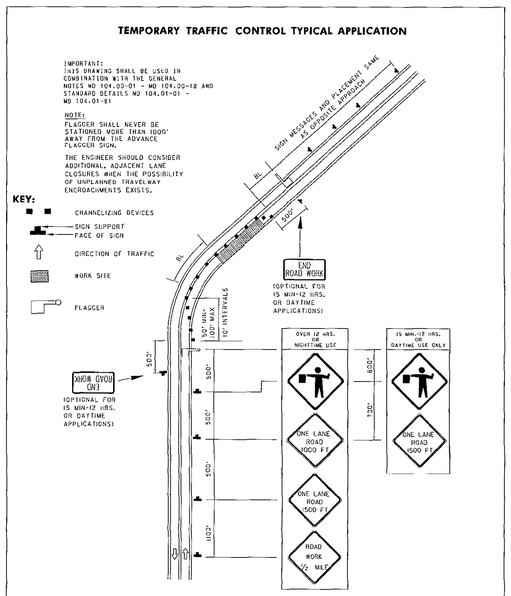
SPECIFICATION 104	CATEGORY CODE ITEMS

APPROVED _____ DIRECTOR - OFFICE OF TRAFFIC AND SAFETY

SHA	APPROVAL + SHA REVISIONS		APPROVAL + FEDERAL HIGHWAY ADMINISTRATION	
	APPROVAL	8-20-03	APPROVAL	9-23-03
	REVISED	8-11-10	REVISED	10-9-10
	REVISED		REVISED	
	REVISED		REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHOULDER WORK /2-LANE, 2-WAY GREATER THAN 40 MPH
STANDARD NO. MD 104.02-01

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



SPECIFICATION 104	CATEGORY CODE ITEMS

APPROVED _____ DIRECTOR - OFFICE OF TRAFFIC AND SAFETY

SHA	APPROVAL + SHA REVISIONS		APPROVAL + FEDERAL HIGHWAY ADMINISTRATION	
	APPROVAL	8-20-03	APPROVAL	9-23-03
	REVISED	8-11-10	REVISED	7-29-10
	REVISED		REVISED	
	REVISED		REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
FLAGGING OPERATION/2-LANE, 2-WAY EQ/LESS THAN 40 MPH
STANDARD NO. MD 104.02-10

B-1 STANDARDS AND SPECIFICATIONS
FOR
STABILIZED CONSTRUCTION ENTRANCE

Definition

A layer of aggregate that is underlain with nonwoven geotextile at points of ingress and egress of the construction site.

Purpose

To reduce tracking of sediment onto roadways and provide a stable area for entrance to or exit from the construction site.

Conditions Where Practice Applies

Stabilized construction entrances must be located at all points of construction ingress and egress.

Design Criteria

1. Where possible, locate the stabilized construction entrances at the high side of the project area.
2. For single family residential lots, locate the entrance at the permanent driveway.
3. Stabilized construction entrances cannot be installed over pavement.
4. Minimum length is 50 feet (30 feet for single family residential lots).
5. Minimum width is 10 feet. Flare entrance 10 feet minimum at the existing road to provide a turning radius.
6. The orientation of the stabilized construction entrance may vary from a straight line to a curve or "L" shape depending on the topography and right-of-way.
7. All surface water flowing to or diverted toward the stabilized construction entrance (SCE) must be piped under the entrance. Size the pipe to convey the runoff generated by the 2-year, 24-hour frequency storm at minimum. The minimum permissible pipe size is 6 inches. When the entrance is located at a high spot and has no drainage to convey, a pipe is not necessary.

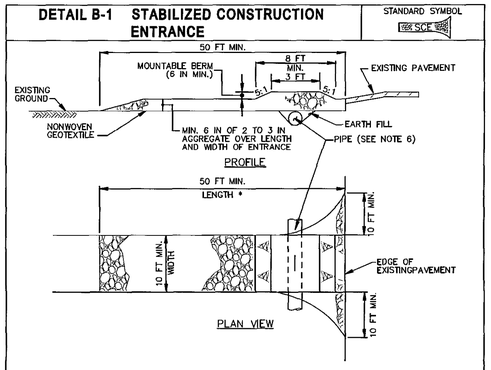
Maintenance

The SCE must be maintained in a condition that minimizes tracking of sediment. This may require adding stone or making other repairs as conditions demand to maintain a clean surface, the mountable berm, and the specified dimensions. All stone or sediment spilled, dropped, or tracked onto the adjacent roadway must be removed immediately by vacuuming, scraping, and/or sweeping. Washing the roadway to remove mud tracked onto pavement is not acceptable unless the wash water is directed to an approved sediment control practice.

B.1

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.2

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

9250 BENDIX ROAD
COLUMBIA, MD 21045

DIRECTOR OF PUBLIC WORKS — DATE 6/1/17
CHIEF, BUREAU OF ENGINEERING — DATE 5/16/17
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 5/9/17
CHIEF, BUREAU OF HIGHWAYS — DATE 5/10/2017

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

STATE OF MARYLAND — GLENN W. MARSHALL — No. 16112 — PROFESSIONAL ENGINEER — 6-12-17

DATE	REVISION	BY	APP'R.

EROSION & SEDIMENT CONTROL NOTES

MAP 31 | GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B
ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817
ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE	DRAWING NUMBER
JUNE 2017	ES-01
CHECKED BY: C.V.M.	WM&A FILE #: 215023.0002
DRAFTED BY: A.L.H.	SCALE N.T.S.
DESIGNED BY: A.L.H.	SHEET NUMBER 06 OF 12

B-4-4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6B
Seed Mixture (from Table B.1): N/A

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
N/A	ANNUAL RYEGRASS	40	3/1 TO 5/31; 8/1 TO 9/30	0.5"	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	FOXTAIL MILLET	30	6/1 TO 7/31	0.5"		

B-4-5 STANDARDS AND SPECIFICATIONS

FOR

PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use
   a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
   b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
   c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
   d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .
2. Turfgrass Mixtures
   a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
   b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
      i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where

rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

      iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought proue areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
      iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

   c. Ideal Times of Seeding for Turf Grass Mixtures

Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)

Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

   d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
   e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6B
Seed Mixture (from Table B.3): 1

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	P_2O_5	K_2O	Lime Rate
1	SWITCH GRASS	10	3/1 TO 5/15 & 8/15 TO 9/15	½- ½ in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	CREEPING RED FESCUE	15	3/1 TO 5/15 & 8/15 TO 9/15	½- ½ in				
	PARTRIDGE PEA	4	3/1 TO 5/15 & 8/15 TO 9/15	½- ½ in				

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6B
Seed Mixture (from Table B.3): 6

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	P_2O_5	K_2O	Lime Rate
6	TALL FESCUE	40	3/1 TO 5/15 & 8/1 TO 10/15	½- ½ in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	PERENNIAL RYEGRASS	25	3/1 TO 5/15 & 8/1 TO 10/15	½- ½ in				
	WHITE CLOVER	5	3/1 TO 5/15 & 8/1 TO 10/15	½- ½ in				

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications
   a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
   b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
   c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
   d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
   e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.

2. Sod Installation
   a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
   b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
   c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
   d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

3. Sod Maintenance
   a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
   b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
   c. Do not mow until the sod is firmly rooted. No more than ⅓ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

1. Temporary Stabilization
   a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and fillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding

1. Specifications
   a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P_2O_5 (phosphorous), 200 pounds per acre; K_2O (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching

1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. **Note: Use only sterile straw mulch in areas where one species of grass is desired.**
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
2. Application
   a. Apply mulch to all seeded areas immediately after seeding.
   b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. **Use of asphalt binders is strictly prohibited.**
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

9250 BENDIX ROAD
COLUMBIA, MD 21045

DIRECTOR OF PUBLIC WORKS — DATE 8/11/17
CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17
CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

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STATE OF MARYLAND — JOHN W. MARSHALL — No. 16142 — PROFESSIONAL ENGINEER — 6-12-17

DATE	REVISION	BY	APP'R.

EROSION & SEDIMENT CONTROL NOTES

MAP 31 GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B

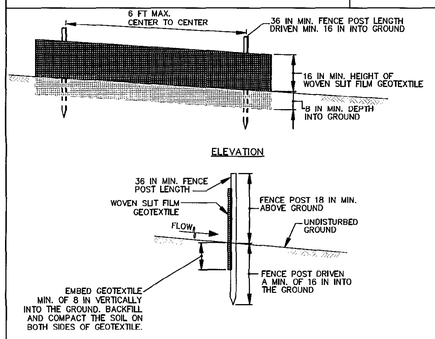
ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817

ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE	DRAWING NUMBER
JUNE 2017	ES-02
CHECKED BY: C.V.M.	WM&A FILE #: 215023.0002
DRAFTED BY: A.L.H.	SCALE N.T.S.
DESIGNED BY: A.L.H.	SHEET NUMBER 07 OF 12

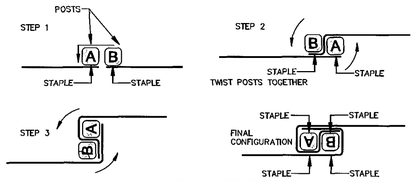
DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



ELEVATION

CROSS SECTION



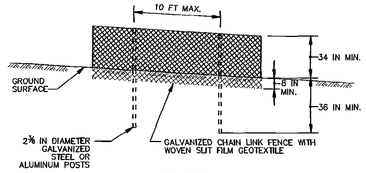
JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

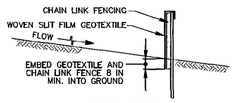
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



ELEVATION



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B-4-8 STANDARDS AND SPECIFICATIONS

FOR

STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

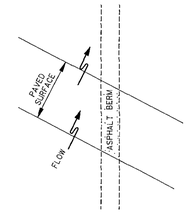
1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

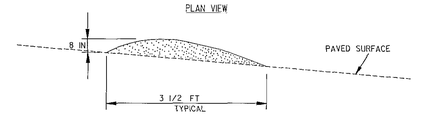
The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

DETAIL C-5 TEMPORARY ASPHALT BERM

STANDARD SYMBOL: TAB



PLAN VIEW



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT BERM ON AN UNINTERRUPTED, CONTINUOUS GRADE.
2. INSTALL BERM TO CONFORM TO CROSS SECTION DIMENSIONS OF A UNIFORM HEIGHT OF 8 INCHES MINIMUM AND APPROXIMATE WIDTH OF 3½ FEET.
3. PROVIDE OUTLET PROTECTION AS REQUIRED ON PLAN.
4. COMPACT ASPHALT BERM.
5. REPAIR DAMAGED ASPHALT. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.
6. UPON REMOVAL OF ASPHALT BERM, RETURN TO ORIGINAL CONDITIONS OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅛ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

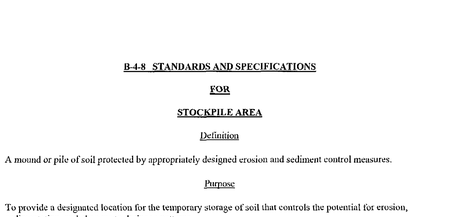
SSM shall conform to the following:

SOIL STABILIZATION MATTING

TEST PROPERTY and METHOD	TYPE A	TYPE B	TYPE C	TYPE D
Functional Longevity	Degradable; 24 months	Non-degradable; Permanent	Non-degradable; Permanent	Degradable; 48 months
Matting Fiber	Excelsior	Non-woven; synthetic, UV-stabilized	Synthetic lattice; easily soil infilled and compacted.	Woven coir
Netting on Top and Bottom	Degradable, synthetic	Non-degradable synthetic; UV-stabilized	–	–
Netting Opening	No more than 2.0 x 1.0 in.	No more than 0.75 x 0.75 in.	–	–
Stitching, Thread, and Spacing	Degradable, no more than 4.0 in. apart	Non-degradable, UV-stabilized, synthetic, no more than 4.0 in. apart	–	–
Thickness D 6525	At least 0.25 in.	At least 0.30 in.	At least 0.50 in.	At least 0.30 in.
Weight D 6475, D 6655	At least 9.6 oz per yd^2	At least 10.0 oz per yd^2	At least 7.0 oz per yd^2	At least 19.0 oz per yd^2
Tensile Strength (MD) D 6818	At least 6.25 lb per in.	At least 12.5 lb per in.	At least 14.6 lb per in.	–
Tensile Strength (TD) D 6818	At least 4.7 lb per in.	At least 12.5 lb per in.	At least 14.6 lb per in.	–
Tensile Strength > 500 hr. exp. D 4355	–	At least 80% of original	At least 80% of original	–
Light Penetration D 6567	At least 15 %	At least 15%	–	–
Porosity or Open Area	–	–	At least 80%	At least 35%
Soil Loss Ratio at 2 in. per hr. for 30 min. D 6459	At least 5.0 to 1	At least 5.0 to 1	–	–
Shear for 0.5 in. soil loss D 6460	At least 1.75 lb per ft^2	At least 2.5 lb per ft^2	–	–

DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: PSSMC – * 0.77 lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS:

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

9250 BENDIX ROAD
COLUMBIA, MD 21045

DIRECTOR OF PUBLIC WORKS — DATE 6/11/17
CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17
CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

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

STATE OF MARYLAND — CHRISTOPHER V. MONTGOMERY — No. 16142 — PROFESSIONAL ENGINEER — 6-12

DATE	REVISION	BY	APP'R.

EROSION & SEDIMENT CONTROL DETAILS

MAP 31 GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B
ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817
ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE	DRAWING NUMBER
JUNE 2017	ES-03
CHECKED BY: C.V.M.	WM&A FILE #: 215023.0002
DRAFTED BY: A.L.H.	SCALE N.T.S.
DESIGNED BY: A.L.H.	SHEET NUMBER 08 OF 12

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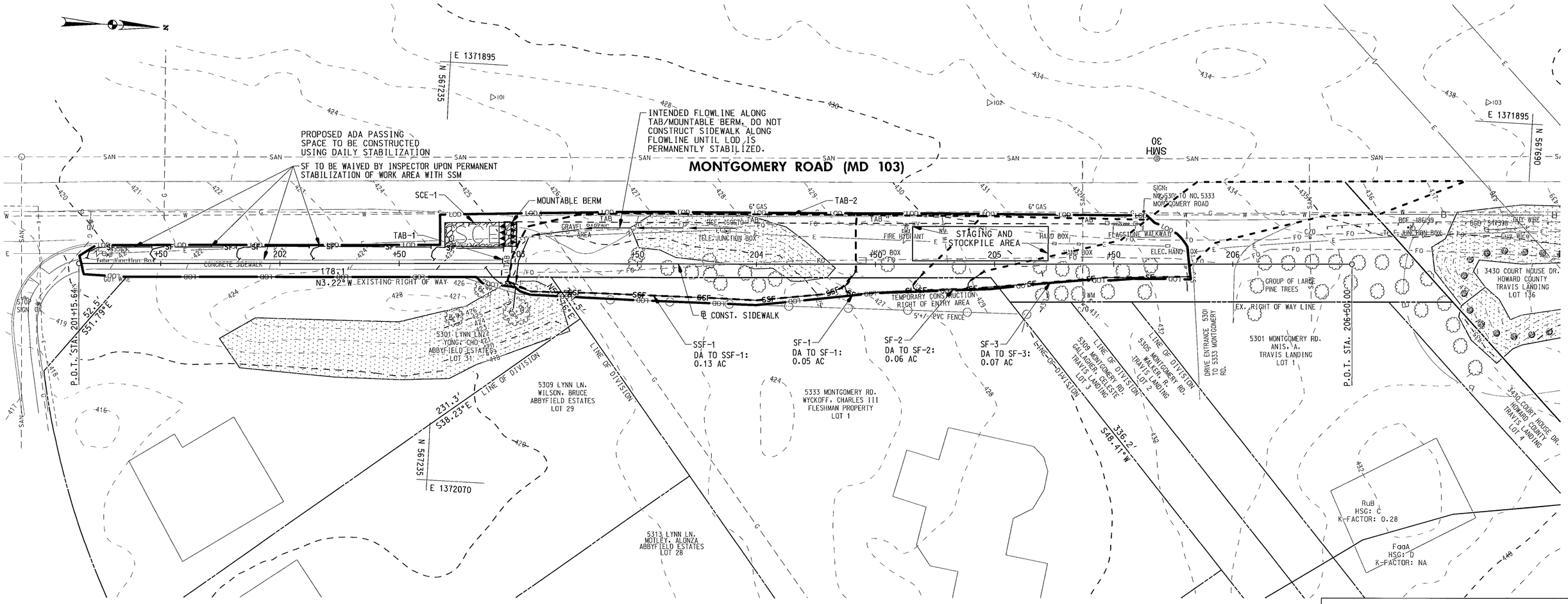
Monday, June 12, 2017 AT 09:19 AM



PLAN VIEW
SCALE: 1" = 20'

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL NOTIFY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION (410) 974-2755 AND THE HOWARD COUNTY BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION, (410) 313-1870 AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION. (1 DAY)
2. THE CONTRACTOR SHALL OBTAIN A HOWARD COUNTY GRADING PERMIT PRIOR TO BEGINNING CONSTRUCTION. (1 DAY)
3. DELINEATE THE LIMITS OF DISTURBANCE OF THE SITE. (1 DAY)
4. INSTALL PERIMETER E&S CONTROL DEVICES SILT FENCE SF-1, SF-2, SF-3, TEMPORARY ASPHALT BERM TAB-1 AND TAB-2, AND SUPER SILT FENCE SSF-1. INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (2 DAYS)
5. CLEAR AND GRUB WITHIN THE INSTALLED PERIMETER CONTROLS. (4 DAYS)
6. BEGIN BY REMOVING THE EXISTING GRAVEL PULL-OFF AREA. RELOCATE THE STABILIZED CONSTRUCTION ENTRANCE AS NECESSARY. CONDUCT THE PROPOSED GRADING, RELOCATING SECTIONS OF IMBRICATED SILT FENCE WHERE NECESSARY. THE PROPOSED SWALE SHALL BE STABILIZED WITH PERMANENT SOIL STABILIZATION MATTING AS SHOWN ON THE PROPOSED PLAN. ALL REMAINING AREAS NOT DRAINING TO SF OR SSF SHALL BE STABILIZED WITH TEMPORARY SOIL STABILIZATION MATTING. EACH EFFORT SHALL BE CONSTRUCTED DURING A FIVE DAY DRY WEATHER FORECAST. (5 DAYS)
7. CONSTRUCT THE PROPOSED SIDEWALK USING DAILY STABILIZATION. DO NOT CONSTRUCT MORE THAN CAN BE FULLY STABLIZED AT THE END OF EACH WORKING DAY. EACH EFFORT SHALL BE CONSTRUCTED DURING A FIVE DAY DRY WEATHER FORECAST. (5 DAYS)
8. AFTER THE FINAL STABILIZATION OF THE ENTIRE SITE AND WITH THE AUTHORITY OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROLS. STABILIZE ALL AREAS DISTURBED BY THIS PROCESS. (3 DAYS)

SILT FENCE		
SF-1	STA. 204+42, 2.9' RT. TO STA. 204+65, 11.0' RT.	38 L.F.
SF-2	STA. 204+70, 3.4' RT. TO STA. 204+88, 10.3' RT.	31 L.F.
SF-3	STA. 204+96, 2.9' RT. TO STA. 205+82, 5.2' RT.	104 L.F.

SUPER SILT FENCE		
SSF-1	STA. 202+86, 1.6' RT. TO STA. 204+36, 9.9' RT.	154 L.F.

TEMPORARY ASPHALT BERM		
TAB-1	STA. 202+94, 8.5' RT. TO STA. 202+96, 7.2' LT.	16 L.F.
TAB-2	STA. 202+94, 19.2' LT. TO STA. 205+64, 18.5' LT.	270 L.F.

DAILY STABILIZATION NOTE

ALL DISTURBED AREAS NOT DIRECTED TO A SEDIMENT CONTROL DEVICE SHALL BE STABILIZED AT THE END OF EACH WORK DAY. THE CONTRACTOR SHALL NOT DISTURB AN AREA GREATER THAN THAT WHICH CAN BE STABILIZED AT THE END OF EACH WORK DAY.

20' 0 20' 40'
SCALE: 1" = 20'

MAINTENANCE OF TRAFFIC

1. SHOULDER PROTECTION SHALL BE IN ACCORDANCE WITH SHA STANDARD MD 104.02-01.
2. FLAGGING OPERATION AND LANE CLOSURE SHALL BE IN ACCORDANCE WITH SHA STANDARD MD 104.02-10.
3. SEE SHEET ES-01 FOR DETAILS.

TEMPORARY STAGING AND STOCKPILE AREAS

THE CONTRACTOR SHALL ESTABLISH TEMPORARY STAGING AND STOCKPILE AREAS AT LOCATIONS APPROVED BY THE ENGINEER. THESE AREAS SHALL BE ESTABLISHED SUCH THAT WETLAND, WETLAND BUFFERS, FORESTED AREAS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS ARE NOT IMPACTED. TEMPORARY STAGING AND STOCKPILE AREAS SHALL BE LOCATED WITHIN THE LIMIT OF DISTURBANCE AND DRAIN TO A FUNCTIONING SEDIMENT CONTROL DEVICE, AND MUST NOT IMPEDE UPON OR IMPAIR THAT DEVICE. THE LOCATION OF THESE AREAS SHALL NOT ALTER DRAINAGE DIVIDES.

CONSTRUCTION VEHICLE INGRESS & EGRESS

1. WHERE NO SCE IS PROVIDED, THE CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT THAT SHALL BE ALLOWED WITHIN THE LOD. THE EQUIPMENT SHALL REMAIN WITHIN THE LOD UNTIL THE PROPOSED WORK IS COMPLETED AND SHALL HAVE TREAD/TIRES CLEANED PRIOR TO LEAVING THE LOD.
2. PRIOR TO VEHICLES LEAVING THE SITE, WHEELS SHALL BE CLEANED OR WASHED TO REMOVE SEDIMENT. ALL SEDIMENT SPILLED, DROPPED OR TRACKED ONTO ROAD MUST BE REMOVED IMMEDIATELY BY VACUUMING, SCRAPING, OR SWEEPING. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE THAT DRAINS TO AN APPROVED SEDIMENT CONTROL DEVICE.

LEGEND

- WETLAND BOUNDARY
- ELECTRIC LINE
- SANITARY SEWER
- WATER LINE
- FIBER OPTIC LINE
- GRAVEL REMOVAL
- SOIL STABILIZATION MATTING
- SIDEWALK
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- TEMPORARY ASPHALT BERM (TAB)
- SUPER SILT FENCE (SSF)
- SILT FENCE (SF)
- ℄ OF CONSTRUCTION (5 +50)
- DRAINAGE AREA TO E&S PRACTICE
- PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- EXISTING CONTOURS (SURVEY)
- EXISTING CONTOURS (GIS)
- SOIL BOUNDARY (NAME, HSG, K-FACTOR)
- STEEP SLOPES (>15%)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

DIRECTOR OF PUBLIC WORKS — DATE 8/11/17
CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17
CHIEF, BUREAU OF HIGHWAYS — DATE 8/14/2017

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COLUMBIA, MD 21045

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A Limited Liability Partnership

STATE OF MARYLAND — JOHN W. MARSHALL — No. 16142 — PROFESSIONAL ENGINEER — 8-14-17

DATE	REVISION	BY	APP'R.

EROSION & SEDIMENT CONTROL PLAN
EXISTING CONDITIONS

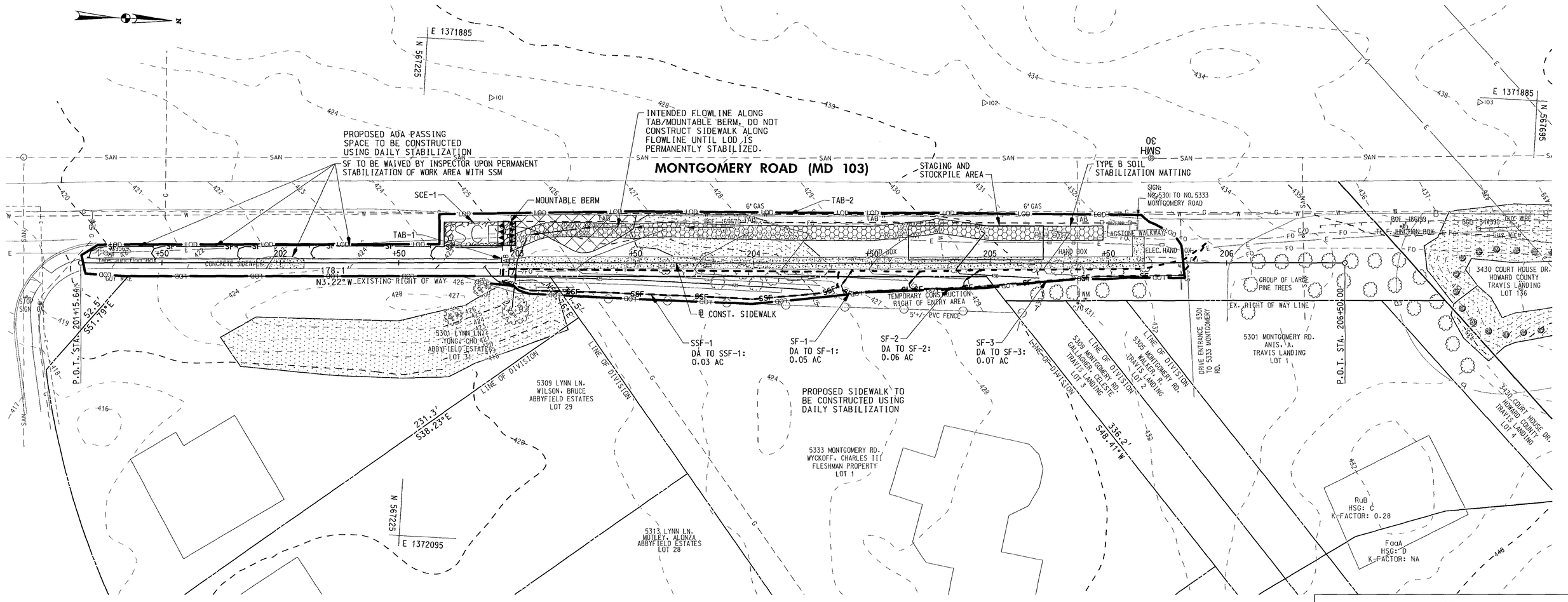
MAP 31 | GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B
ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817
ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE	DRAWING NUMBER
JUNE 2017	ES-04
CHECKED BY: C.V.M.	WM&A FILE #: 215023.0002
DRAFTED BY: A.L.H.	SCALE: 1" = 20'
DESIGNED BY: A.L.H.	SHEET NUMBER: 09 OF 12

Monday, June 12, 2017 AT 09:19 AM



PLAN VIEW
SCALE: 1" = 20'

DAILY STABILIZATION NOTE

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20' 0 20' 40'
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- STABILIZED CONSTRUCTION ENTRANCE (SCE)
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- SUPER SILT FENCE (SSF)
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- DRAINAGE AREA TO E&S PRACTICE
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STATE OF MARYLAND · GLENN W. MARSHALL · No. 16142 · PROFESSIONAL ENGINEER

DATE	REVISION	BY	APP'R.

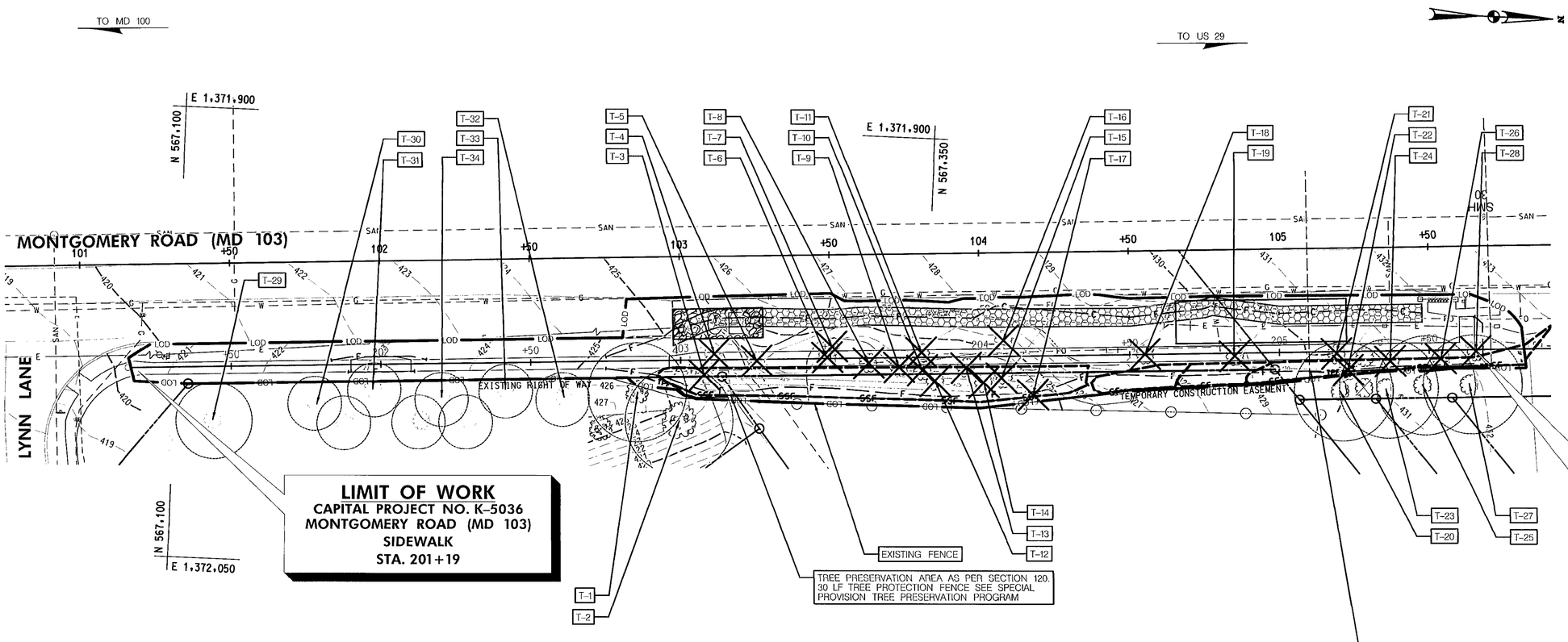
EROSION & SEDIMENT CONTROL PLAN
PROPOSED CONDITIONS

MAP 31 | GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B
ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817
ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE	DRAWING NUMBER
JUNE 2017	ES-05
CHECKED BY: C.V.M.	WMA FILE #: 215023.0002
DRAFTED BY: A.L.H.	SCALE: 1" = 20'
DESIGNED BY: A.L.H.	SHEET NUMBER: 10 OF 12



TREE IMPACT SCHEDULE

TREE	REMOVAL	BOTANICAL NAME	COMMON NAME	CONDITION	DBH	TREATMENT	COMMENTS
T-1		*Fraxinus pennsylvanica*	Ash	Fair	11"	TREE PROTECTION FENCE AND ROOT PRUNING	
T-2		*Fraxinus pennsylvanica*	Ash	Fair	12"	TREE PROTECTION FENCE AND ROOT PRUNING	
T-3	X	*Pyrus calleriana*	Bradford Pear	Fair	3"		
T-4	X	*Pyrus calleriana*	Bradford Pear	Fair	3"		
T-5	X	*Pyrus calleriana*	Bradford Pear	Fair	3"		
T-6	X	*Diospyros virginiana*	Persimmon	Fair	7"		
T-7	X	*Diospyros virginiana*	Persimmon	Fair	7"		
T-8	X	*Diospyros virginiana*	Persimmon	Fair	10"		
T-9	X	*Diospyros virginiana*	Persimmon	Fair	6"		
T-10	X	*Diospyros virginiana*	Persimmon	Fair	6"		
T-11	X	*Diospyros virginiana*	Persimmon	Fair	6"		
T-12	X	*Diospyros virginiana*	Persimmon	Fair	6"		
T-13	X	*Diospyros virginiana*	Persimmon	Fair	6"		
T-14	X	*Diospyros virginiana*	Persimmon	Fair	6"		
T-15	X	*Quercus palustris*	Pin Oak	Fair	25"		Multi-stem
T-16	X	*Quercus rubra*	Red Oak	Fair	18"		Columnar
T-17	X	*Quercus rubra*	Red Oak	Fair	10"		
T-18	X	*Acer rubrum*	Red Maple	Good	10"		
T-19	X	*Acer rubrum*	Red Maple	Good	10"		
T-20		*Juniperus virginiana*	Cedar	Fair	12"	TREE PROTECTION FENCE AND ROOT PRUNING	
T-21	X	*Juniperus virginiana*	Cedar	Fair	12"		
T-22	X	*Pyrus calleriana*	Bradford Pear	Fair	12"		
T-23		*Juniperus virginiana*	Cedar	Fair	12"	TREE PROTECTION FENCE AND ROOT PRUNING	
T-24	X	*Juniperus virginiana*	Cedar	Fair	12"		
T-25		*Juniperus virginiana*	Cedar	Fair	12"	TREE PROTECTION FENCE AND ROOT PRUNING	
T-26	X	*Juniperus virginiana*	Cedar	Fair	12"		
T-27		*Juniperus virginiana*	Cedar	Fair	12"	TREE PROTECTION FENCE AND ROOT PRUNING	
T-28	X	*Pyrus calleriana*	Bradford Pear	Fair	18"		

TREE IMPACT SCHEDULE

TREE	REMOVAL	BOTANICAL NAME	COMMON NAME	CONDITION	DBH	TREATMENT	COMMENTS
T-29		*Pinus strobus*	White Pine	Good	8"	TREE PROTECTION FENCE	
T-30		*Fraxinus pennsylvanica*	Ash	Good	8"	TREE PROTECTION FENCE	
T-31		*Acer rubrum*	Red Maple	Poor	6"	TREE PROTECTION FENCE	
T-32		*Acer rubrum*	Red Maple	Poor	6"	TREE PROTECTION FENCE	
T-33		*Fraxinus pennsylvanica*	Ash	Good	8"	TREE PROTECTION FENCE	
T-34		*Picea spp.*	Spruce	Good	8"	TREE PROTECTION FENCE	

TREE IMPACT LEGEND

- EXISTING TREE TO BE REMOVED
- CRITICAL ROOT ZONE (CRZ)
- EXISTING VEGETATION
- LOD — LIMIT OF DISTURBANCE
- TPF — TEMPORARY ORANGE CONSTRUCTION FENCE (TPF)

20' 0 20' 40'
SCALE: 1" = 20'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

DIRECTOR OF PUBLIC WORKS — DATE

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE

9250 BENDIX ROAD
COLUMBIA, MD 21045

CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17

CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

FLOURA TEETER
landscape architects
800 North Charles St. Ste. 300
Baltimore, Maryland 21201
Phone: 410.528.8395
Fax: 410.528.8425

LANDSCAPE ARCHITECT — JOHN CHARLES FOSTER — No. 1053 — STATE OF MARYLAND

DATE	REVISION	BY	APP'R.

TREE IMPACT PLAN

MAP 31 GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B

ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817

ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE: APRIL 2017	DRAWING NUMBER: TP-01
CHECKED BY: JF	WM&A FILE #: 215023.0002
DRAFTED BY: JD	SCALE: 1" = 20'
DESIGNED BY: SA	SHEET NUMBER: 11 OF 12

$FILE$
Wednesday, April 26, 2017 AT 10:02 AM

GRADING TABLE

ROADWAY	STATIONS FROM	STATIONS TO	EXCAVATION CLASS 2 CUT FROM XSECTS	TOPSOIL CUT	TOPSOIL FILL	ROOTMAT CUT	ROOTMAT FILL	TOTAL	SUITABLE FOR EMBANK.	LOSS DUE TO HANDLING	AVAIL. FOR EMBANK.	EROSION & SEDIMENT ORIGINAL EXCAVATION	EROSION & SEDIMENT CLEAN-OUT EXCAVATION	EMBANKMENT FILL FROM XSECT	EMBANKMENT FILL TOT. REQ. BEFORE DENSIFICATION	EMBANKMENT CAPPING BORROW CAPPING	EMBANKMENT CAPPING BORROW TOT. REQ. AFTER DENSIFICATION	EMBANKMENT SELECT BORROW FROM XSECT	EMBANKMENT SELECT BORROW TOT. REQ. AFTER DENSIFICATION
MD 103	PS-01																		
	201+00	206+75	11	22	104	0	0	115	0	0	0	0	0	219	323	0	0	0	0
	TOTAL		11	22	104	0	0	115	0	0	0	0	0	219	323	0	0	0	0

SUMMARY OF EARTHWORK

EXCAVATION

TOTAL CLASS 1 EXCAVATION	0	C.Y.
TOTAL CLASS 2 EXCAVATION	115	C.Y.
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	0	C.Y.
TOTAL EROSION & SEDIMENT CONTROL EXCAVATION	0	C.Y.

EMBANKMENT

TOTAL COMMON BORROW REQUIRED	323	C.Y.
TOTAL CAPPING BORROW REQUIRED	0	C.Y.
TOTAL SELECT BORROW REQUIRED	0	C.Y.
WASTE	0	C.Y.
COMMON BORROW REQUIRED	323	C.Y.
BORROW DENSIFIED (20%)	65	C.Y.
TOTAL COMMON BORROW REQUIRED	388	C.Y.

PROPOSAL QUANTITIES

CLASS 1 EXCAVATION	0	C.Y.
CLASS 1-A EXCAVATION	0	C.Y.
CLASS 2 EXCAVATION	120	C.Y.
COMMON BORROW	400	C.Y.
CAPPING BORROW	0	C.Y.
SELECT BORROW	0	C.Y.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
(410)-313-6143

DIRECTOR OF PUBLIC WORKS — DATE 8/11/17

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 8/9/17

9250 BENDIX ROAD
COLUMBIA, MD 21045

CHIEF, BUREAU OF ENGINEERING — DATE 8/10/17

CHIEF, BUREAU OF HIGHWAYS — DATE 8/10/2017

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

STATE OF MARYLAND — MICHAEL J. BOSLEY — No. 31481 — PROFESSIONAL ENGINEER
6/12/17

DATE	REVISION	BY	APP'R.

GRADING TABLE AND EARTHWORK SUMMARY

MAP 31 | GRID 14, 20

MONTGOMERY ROAD (MD 103) SIDEWALK (PHASE 1)
CAPITAL PROJECT NO. K-5036

PARCEL: 0205
ELECTION DISTRICT NO. 9B

ADDRESS: 5333 MONTGOMERY ROAD
ELLICOTT CITY, MD 21043
Contract # 4400002817

ZONE: R-20
HOWARD COUNTY, MARYLAND

DATE: JUNE 2017	DRAWING NUMBER: GR-01
CHECKED BY: M.J.B.	WM&A FILE #: 215023.0002
DRAFTED BY: J.W.L. & J.D.W.	SCALE: NONE
DESIGNED BY: N.D.K.	SHEET NUMBER: 12 OF 12

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