

HOWARD COUNTY

Capital Project #D-1158

Whiterock Court

Stream Rehabilitation Project

Storm Water Management Division
Bureau Of Environmental Services

GENERAL NOTES

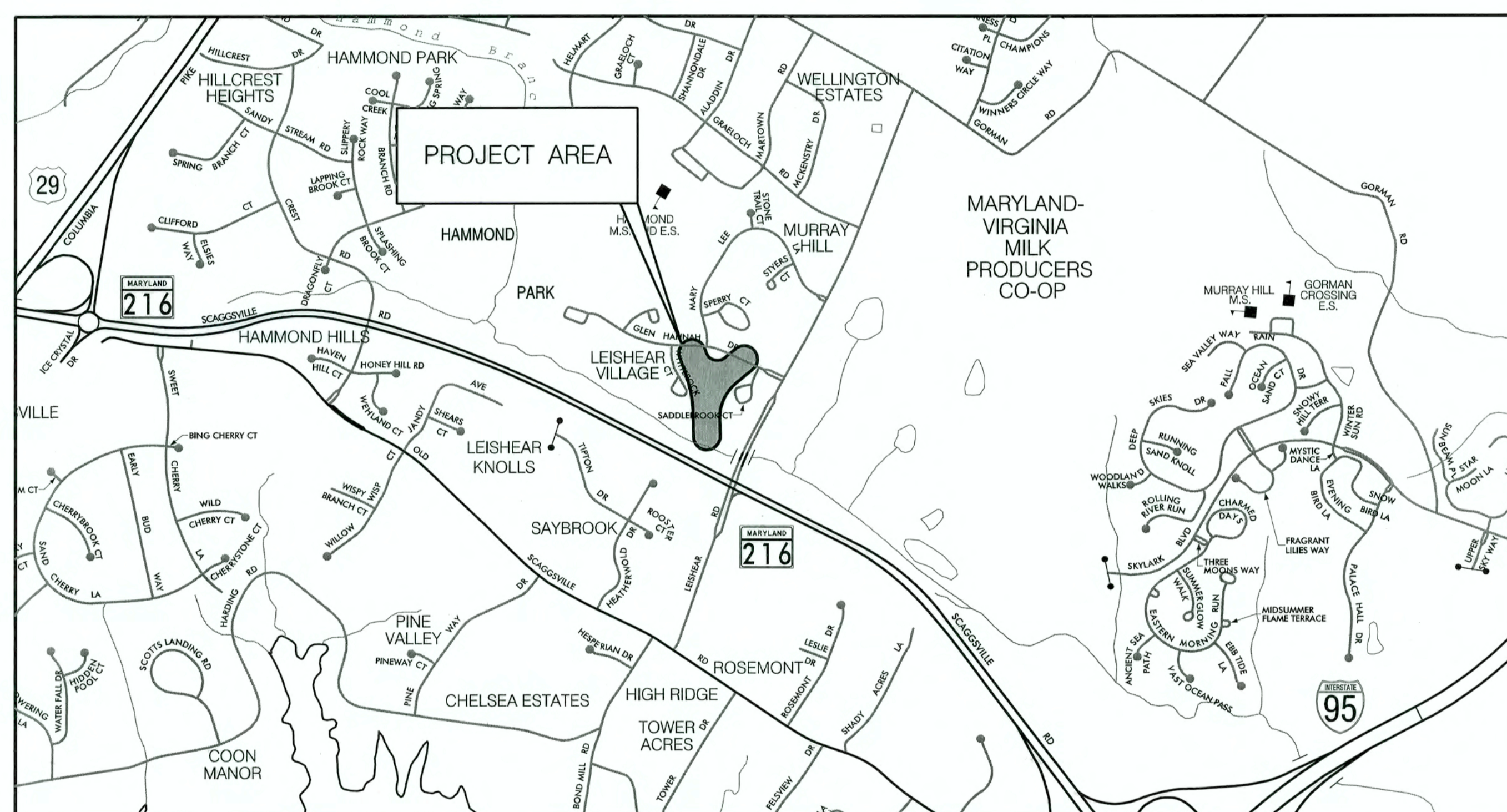
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY WORK BEING DONE.
- THIS PLAN IS PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS /BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- SURVEY OF THIS SITE WAS PERFORMED BY AB CONSULTANTS, INC-SEPTEMBER/OCTOBER 2012.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. BENCHMARKS SHOWN HEREON WERE PROVIDED BY AB CONSULTANTS INC.
- WATERS OF THE US WERE DELINEATED BY McCORMICK TAYLOR SEPTEMBER 2012.
- OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND McCORMICK TAYLOR DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION.
- THE EXISTING INFORMATION SHOWN ON THESE PLANS WAS TAKEN FROM THE BEST AVAILABLE SOURCES AND SHALL BE VERIFIED BEFORE STARTING CONSTRUCTION. HOWARD COUNTY DOES NOT GUARANTEE THE COMPLETENESS OR THE CORRECTNESS OF THE SHOWN INFORMATION.
- THE CONTRACTORS SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY. ALL UTILITIES SHALL HAVE A CLEARANCE BY A MINIMUM OF 6 INCHES VERTICALLY AND A MINIMUM OF 5 FEET HORIZONTALLY.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY McCORMICK TAYLOR IMMEDIATELY TO RESOLVE THE SITUATION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- SITE DEVELOPMENT DETAILS ARE REFERENCED FROM THE AS-BUILT PLANS FOR THE MURRAY HILL SECTION 2 (F-81-143), SECTION 3, AREA 1 (F-82-72), SECTION 4, AREA 1 (F-83-64).
- A JOINT PERMIT APPLICATION WILL BE SUBMITTED TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT. (TRACKING NUMBER 20130105013-NI-3190)
- STORMWATER MANAGEMENT IS NOT REQUIRED FOR THIS PROJECT SINCE THE PROJECT WILL NOT ADD IMPERVIOUS AREA.
- THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) HAS SATISFIED THE FOREST CONSERVATION OBLIGATION OF 0.23 ACRES OF REFORESTATION FOR THIS PLAN WITH A FEE-IN-LIEU PAYMENT OF \$7,514.10 MADE TO THE HOWARD COUNTY FOREST CONSERVATION FUND.
- AS OF JULY 31, 2013, THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING APPROVED THE REQUEST TO WAIVE SECTION 16.155(a)(1)(i) AND SECTION 16.1201(n) FOR THIS PROJECT WAIVER PETITION WP-13-193 WAS APPROVED JULY 31, 2013 BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING FOR THIS PROJECT, SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE PETITIONER SHALL OBTAIN AUTHORIZATION FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE U.S. ARMY CORPS OF ENGINEERS FOR ACTIVITIES IN REGULATED AREAS ASSOCIATED WITH THE WHITEROCK COURT STREAM RESTORATION PROJECT. A COPY OF THAT AUTHORIZATION WILL BE PROVIDED TO THE DEPARTMENT OF PLANNING AND ZONING FOR THE WAIVER FILE.
 - THE APPLICANT SHALL PROVIDE WRITTEN PROOF THAT \$7,514.10 HAS BEEN TRANSFERRED FROM CAPITAL PROJECT D-1158 TO THE FOREST CONSERVATION FUND (SAP ACCT 2060000000-3000-3000000000-PWP0000000000-432521) AS FEE-IN-LIEU PAYMENT FOR A TOTAL OF 0.23 ACRES OF REQUIRED REFORESTATION IN ASSOCIATION WITH THE WHITE ROCK COURT STREAM RESTORATION PROJECT.
 - DISTURBANCE IS LIMITED TO 700± LINEAR FEET OF STREAM BANK AND ADJACENT STORM DRAIN OUTFALLS WITHIN THE LOD AS DEPICTED ON THE WAIVER EXHIBIT AND AS DESCRIBED IN THE JUSTIFICATION PREPARED BY CHRISTINE S. SMITH, DATED JUNE 25, 2013.
 - PROVIDE WRITTEN VERIFICATION OF PERMITTED RIGHT-OF-ENTRY FROM THE MURRAY HILL ASSOCIATION, INC. FOR SECTION 1, LOT 80, SECTION 1, LOT 31 AND SECTION 4, AREA 1, LOT 159.
 - SUBMIT 2 FOLDED, PAPER COPIES (ONE TO DLD AND ONE TO OED) OF REVISED SHEET 1 OF "HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION" TO REFLECT THE FOLLOWING:
 - UPDATE/CORRECT GENERAL NOTE #17 ON SHEET 1 OF 17 OF THE "HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION" TO ADDRESS WP-13-193. INCLUDE APPLICABLE SECTION NUMBERS, DATE OF APPROVAL AND LIST OUT ALL CONDITIONS.
 - ADD A GENERAL NOTE TO SHEET 1 OF 17 OF THE HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION" TO READ AS FOLLOWS: "THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) HAS SATISFIED THE FOREST CONSERVATION OBLIGATION OF 0.23 ACRES OF REFORESTATION FOR THIS PLAN WITH A FEE-IN-LIEU PAYMENT OF \$7,514.10 MADE TO THE HOWARD COUNTY FOREST CONSERVATION FUND".

INDEX OF SHEETS

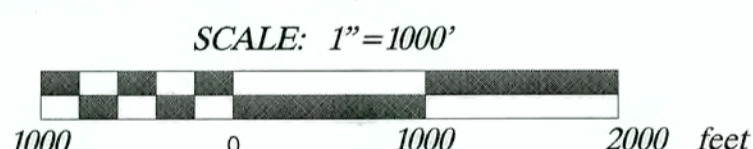
SHEET NO.	TITLE
1	TITLE SHEET
2	GEOMETRY SHEET
3-5	SITE PLANS
6-7	STREAM STABILIZATION DETAILS
8-10	EROSION AND SEDIMENT CONTROL PLANS
11	EROSION AND SEDIMENT CONTROL NOTES
12	EROSION AND SEDIMENT CONTROL DETAILS
13-15	LANDSCAPE PLANS
16	LANDSCAPE NOTES AND DETAILS
17	PROFILE SHEET

LEGEND

PROPOSED MEDIAN BARRIER	
ELECTRICAL HAND BOX - SIGNALS	
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	
BASE OR SURVEY LINE	
TRAVERSE POINT	
APPROXIMATE LIMITS OF CUT AND/OR FILL	
PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
LIMIT OF DISTURBANCE	
EXISTING MAJOR CONTOURS	
EXISTING MINOR CONTOURS	
EXISTING PIPE/CULVERT	
EXISTING DROP INLET	
WATERS OF THE US	
HEDGE /TREE LINE	
BUSH /TREE	
CONIFEROUS TREE	
LIGHT POLE	



HORIZONTAL DATUM NAD 83 /91
VERTICAL DATUM NAVD 88



DEPARTMENT OF RECREATION AND PARKS, HOWARD COUNTY, MD

John R. Boyd
DIRECTOR OF RECREATION AND PARKS
DATE 9/3/13

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts
HOWARD SOIL CONSERVATION DISTRICT
DATE 9/5/13

DESIGN CERTIFICATION

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

8/26/13
DATE

Chris Brooks
DESIGNER'S SIGNATURE

MARYLAND REGISTRATION NUMBER 25819

CHRIS BROOKS P.E.
PRINTED NAME

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

8/29/13
DATE

Mark S. Richmond
OWNER /DEVELOPER SIGNATURE

Mark S. Richmond Acting Division Chief
PRINTED NAME AND TITLE

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. 25819, EXPIRATION DATE: 2/5/2015

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Mark S. Richmond
DATE 8/29/13
CHIEF, STORMWATER MANAGEMENT DIVISION

McCormick
Engineers & Planners
Since 1946
Taylor

509 South Exeter Street
4th Floor
Baltimore, Maryland 21202
(410) 662-7400

Howard County
MARYLAND

Storm Water Management Division
Bureau of Environmental Services
6751 Columbia Gateway Drive, Suite 514
Columbia, Maryland 21046-3143
(410) 313-6444



DES: LN

DRN: MR

CHK: CB

DATE: 8/27/13

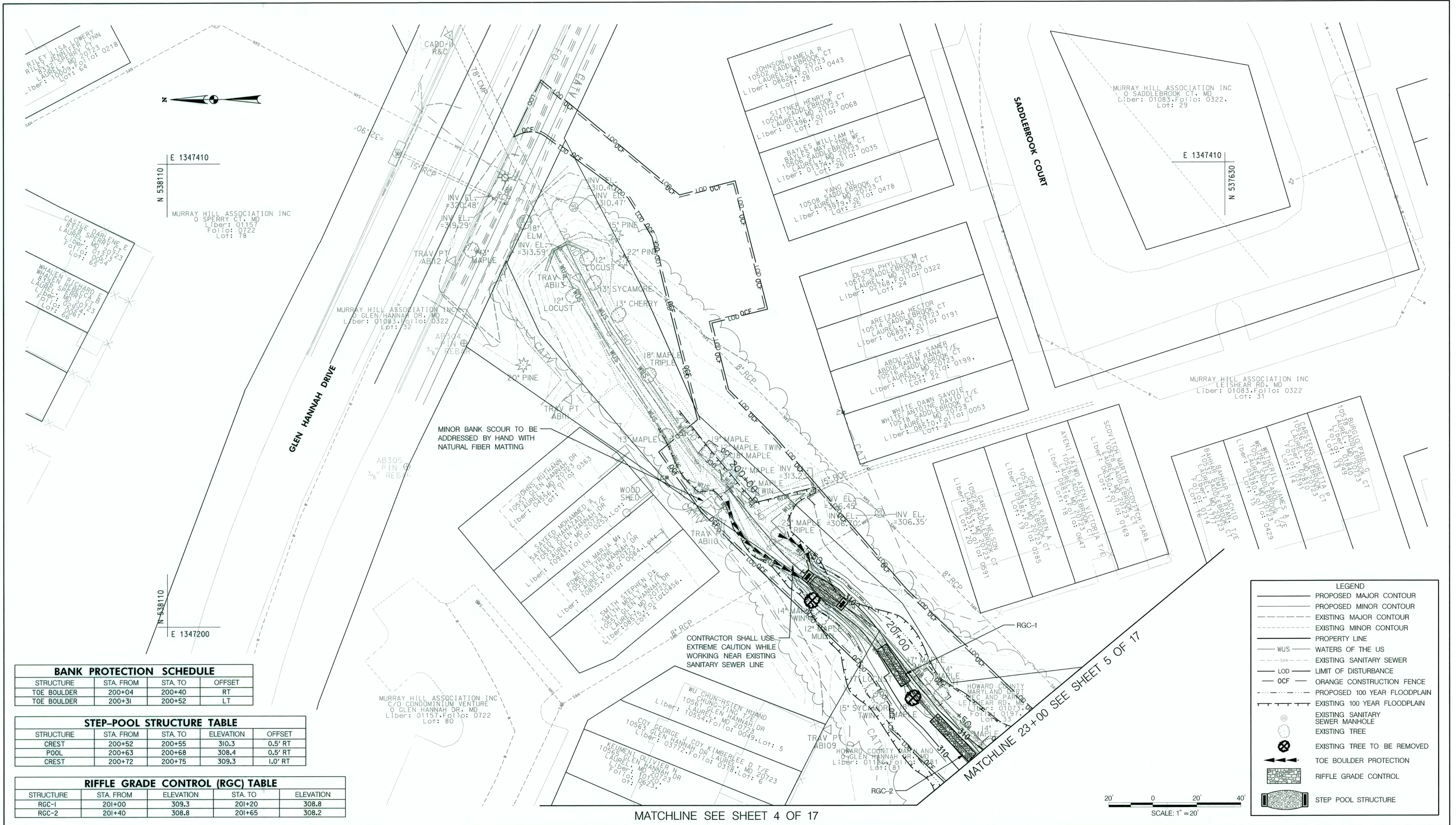
BY	NO.	REVISION	DATE

HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
WHITEROCK COURT STREAM REHABILITATION PROJECT
CAPITAL PROJECT #D-1158
ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND
TAX MAP 46, GRID/BLOCK NO. 6
WAIVER PETITION #WP-13-193

TITLE SHEET

SCALE
AS SHOWN

SHEET
1 OF 17



BANK PROTECTION SCHEDULE

STRUCTURE	STA. FROM	STA. TO	OFFSET
TOE BOULDER	200+04	200+40	RT
TOE BOULDER	200+31	200+52	LT

STEP-POOL STRUCTURE TABLE

STRUCTURE	STA. FROM	STA. TO	ELEVATION	OFFSET
CREST	200+52	200+55	310.3	0.5' RT
POOL	200+63	200+68	308.4	0.5' RT
CREST	200+72	200+75	309.3	1.0' RT

RIFFLE GRADE CONTROL (RGC) TABLE

STRUCTURE	STA. FROM	ELEVATION	STA. TO	ELEVATION
RGC-1	201+00	309.3	201+20	308.8
RGC-2	201+40	308.8	201+65	308.2

LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- PROPERTY LINE
- WUS — WATERS OF THE US
- - - SAH — EXISTING SANITARY SEWER
- LOD — LIMIT OF DISTURBANCE
- OCF — ORANGE CONSTRUCTION FENCE
- - - PROPOSED 100 YEAR FLOODPLAIN
- EXISTING 100 YEAR FLOODPLAIN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- TOE BOULDER PROTECTION
- RIFFLE GRADE CONTROL
- STEP POOL STRUCTURE

MATCHLINE SEE SHEET 4 OF 17

SCALE: 1" = 20'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Michael D. ...
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

8/29/13
DATE

McCormick Taylor
Engineers & Planners
Since 1946

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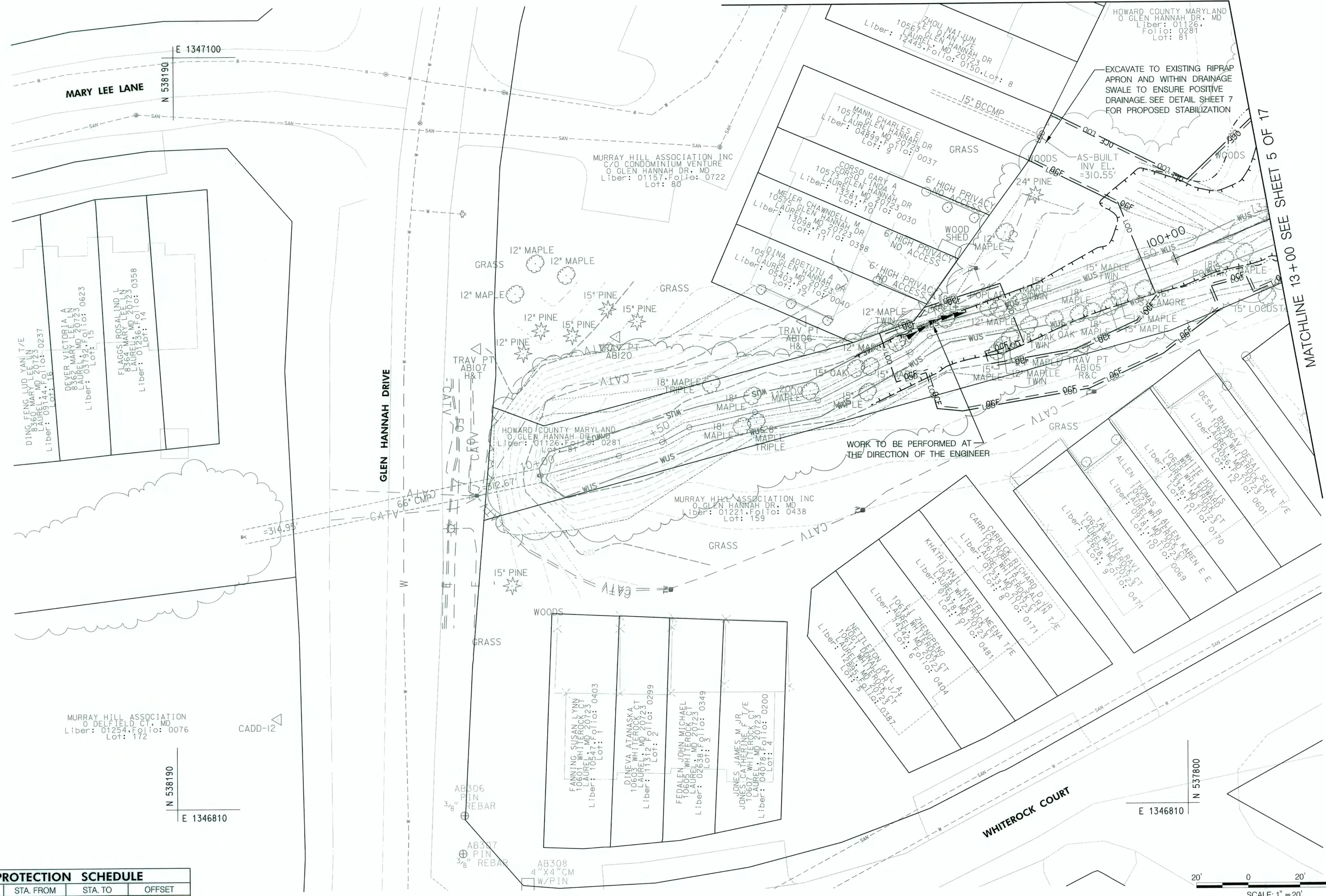
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WHITEROCK COURT STREAM REHABILITATION PROJECT
CAPITAL PROJECT #D-1158
ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND
TAX MAP 46, GRID/BLOCK NO. 6
WAIVER PETITION #WP-13-193

SITE PLAN

SCALE
1" = 20'
SHEET
3 OF 17



MATCHLINE SEE SHEET 3 OF 17



MATCHLINE 13+00 SEE SHEET 5 OF 17

LEGEND	
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPERTY LINE
	WUS - WATERS OF THE US
	EXISTING SANITARY SEWER
	LIMIT OF DISTURBANCE
	ORANGE CONSTRUCTION FENCE
	PROPOSED 100 YEAR FLOODPLAIN
	EXISTING 100 YEAR FLOODPLAIN
	EXISTING SANITARY SEWER MANHOLE
	EXISTING TREE
	EXISTING TREE TO BE REMOVED
	TOE BOULDER PROTECTION
	RIFFLE GRADE CONTROL
	STEP POOL STRUCTURE

BANK PROTECTION SCHEDULE			
STRUCTURE	STA. FROM	STA. TO	OFFSET
TOE BOULDER	11+52	11+67	LT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Mark D. ...
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

slz/1/3
DATE

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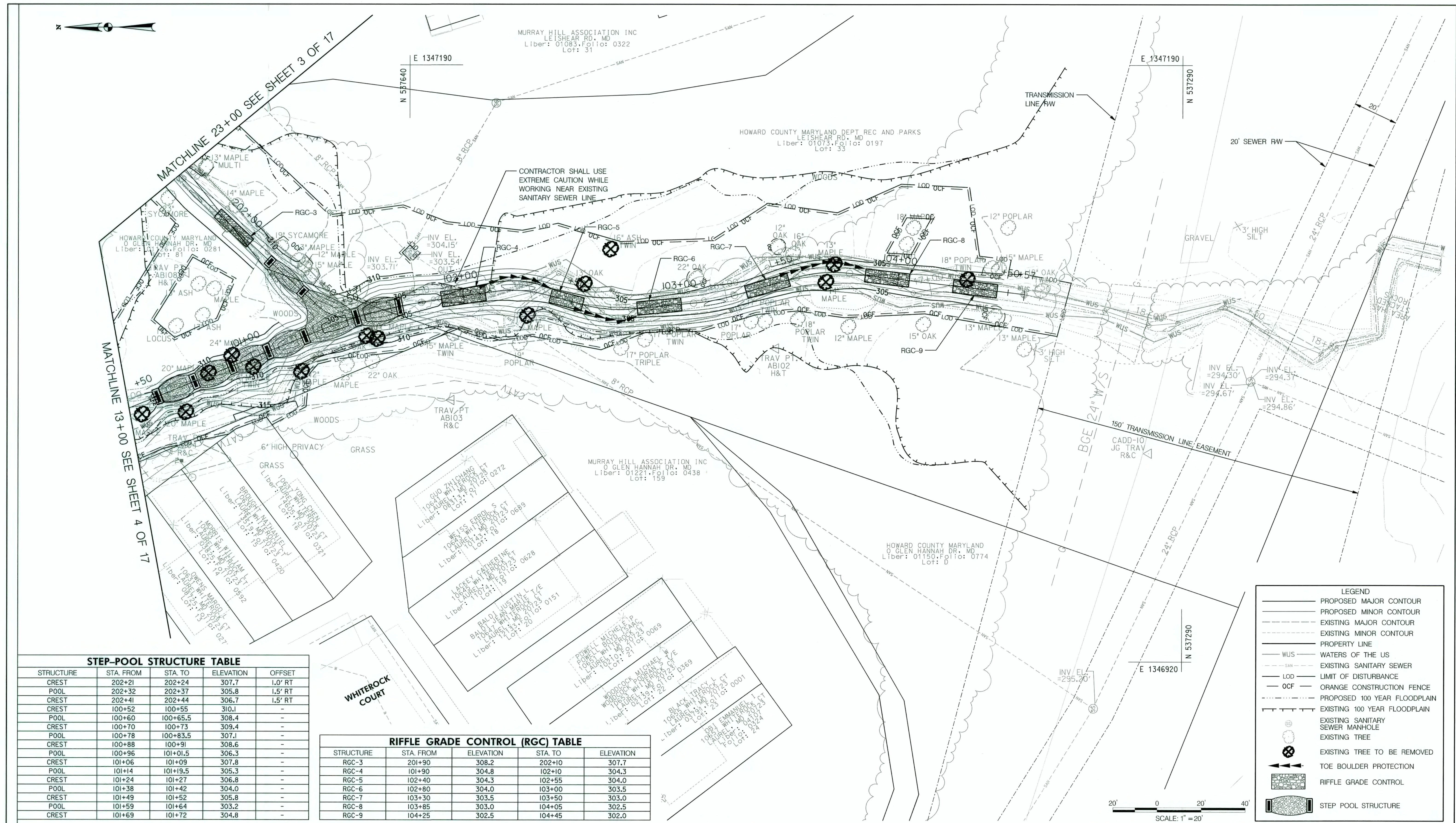


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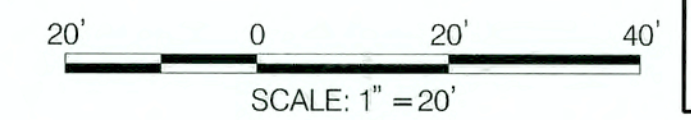
SITE PLAN

SCALE	1" = 20'
SHEET	4 OF 17



LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- PROPERTY LINE
- WUS — WATERS OF THE US
- - - SAN — EXISTING SANITARY SEWER
- - - LOD — LIMIT OF DISTURBANCE
- - - OCF — ORANGE CONSTRUCTION FENCE
- - - PROPOSED 100 YEAR FLOODPLAIN
- - - EXISTING 100 YEAR FLOODPLAIN
- ⊗ EXISTING SANITARY SEWER MANHOLE
- ⊗ EXISTING TREE
- ⊗ EXISTING TREE TO BE REMOVED
- ⬆ TOE BOULDER PROTECTION
- ▒ RIFFLE GRADE CONTROL
- ▒ STEP POOL STRUCTURE



STEP-POOL STRUCTURE TABLE

STRUCTURE	STA. FROM	STA. TO	ELEVATION	OFFSET
CREST	202+21	202+24	307.7	1.0' RT
POOL	202+32	202+37	305.8	1.5' RT
CREST	202+41	202+44	306.7	1.5' RT
CREST	100+52	100+55	310.1	-
POOL	100+60	100+65.5	308.4	-
CREST	100+70	100+73	309.4	-
POOL	100+78	100+83.5	307.1	-
CREST	100+88	100+91	308.6	-
POOL	100+96	101+01.5	306.3	-
CREST	101+06	101+09	307.8	-
POOL	101+14	101+19.5	305.3	-
CREST	101+24	101+27	306.8	-
POOL	101+38	101+42	304.0	-
CREST	101+49	101+52	305.8	-
POOL	101+59	101+64	303.2	-
CREST	101+69	101+72	304.8	-

RIFFLE GRADE CONTROL (RGC) TABLE

STRUCTURE	STA. FROM	ELEVATION	STA. TO	ELEVATION
RGC-3	201+90	308.2	202+10	307.7
RGC-4	101+90	304.8	102+10	304.3
RGC-5	102+40	304.3	102+55	304.0
RGC-6	102+80	304.0	103+00	303.5
RGC-7	103+30	303.5	103+50	303.0
RGC-8	103+85	303.0	104+05	302.5
RGC-9	104+25	302.5	104+45	302.0

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

McCormick Taylor
Engineers & Planners
Since 1946

Howard County
MARYLAND



DES: LN				
DRN: MR				
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BY	NO.	REVISION	DATE	

HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
WHITEROCK COURT STREAM REHABILITATION PROJECT
CAPITAL PROJECT #D-1158
ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND
TAX MAP 46, GRID/BLOCK NO. 6
WAIVER PETITION #WP-13-193

SITE PLAN

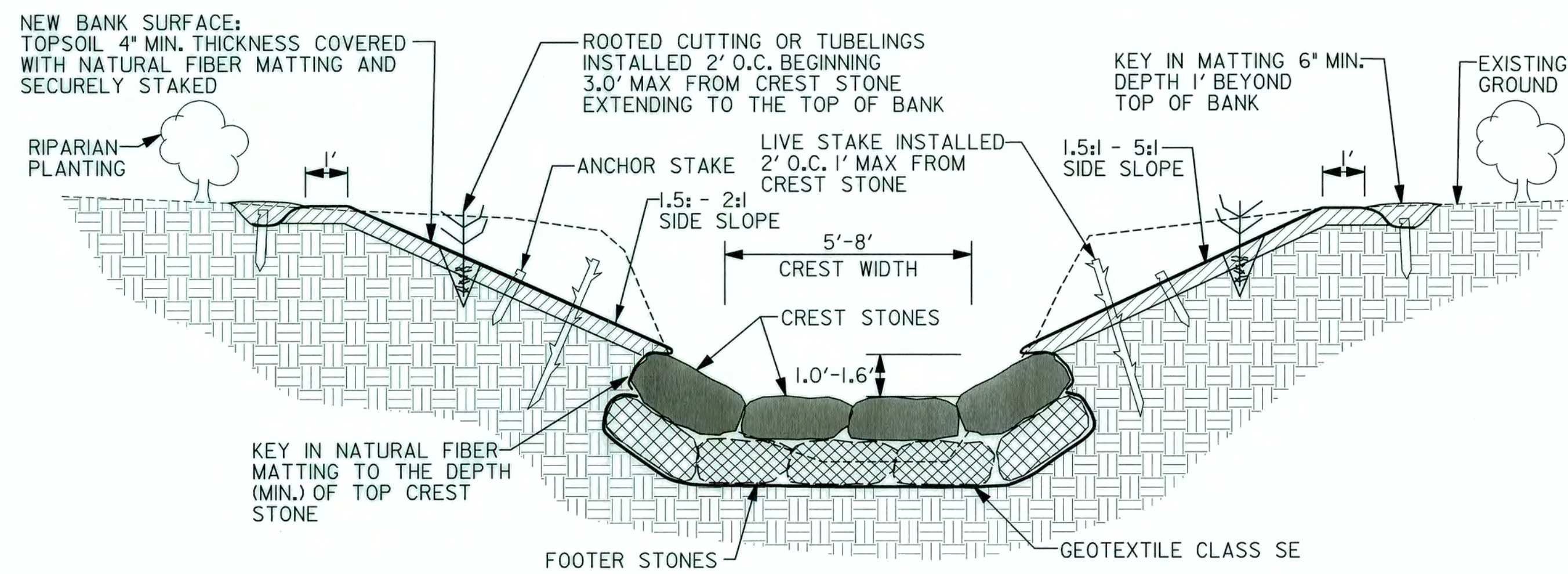
SCALE
1" = 20'
SHEET
5 OF 17

Michael P. ...
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

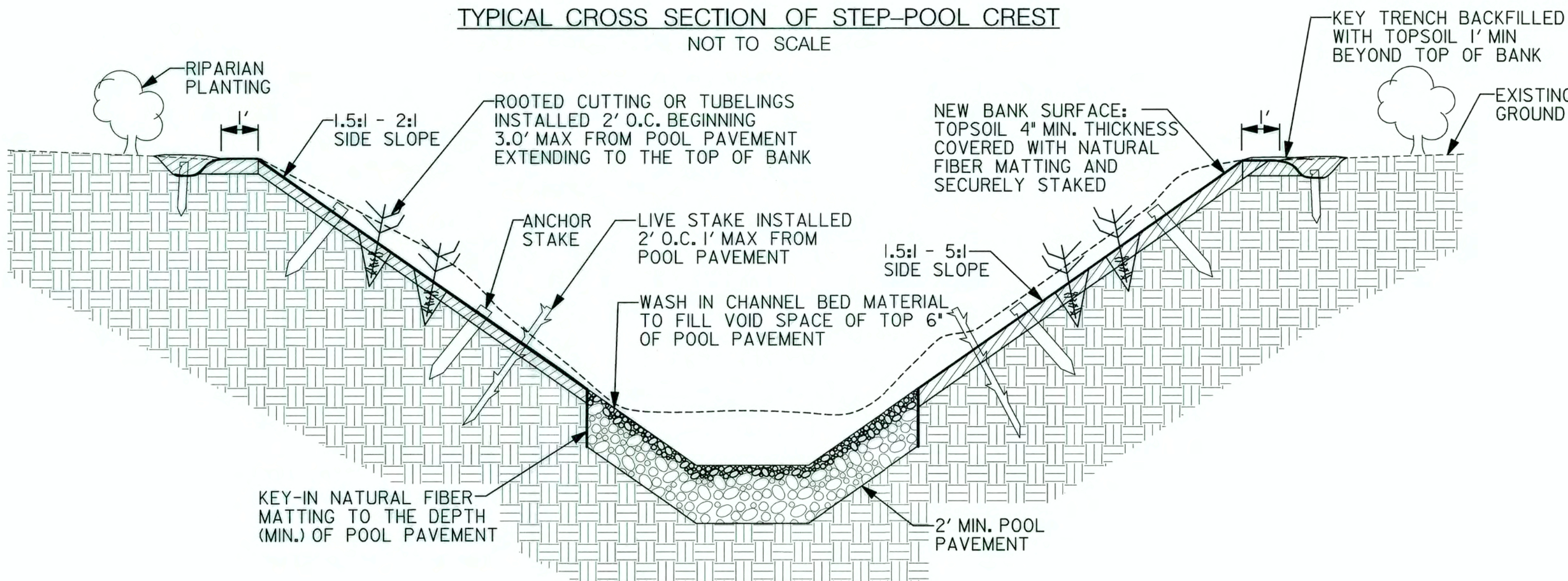
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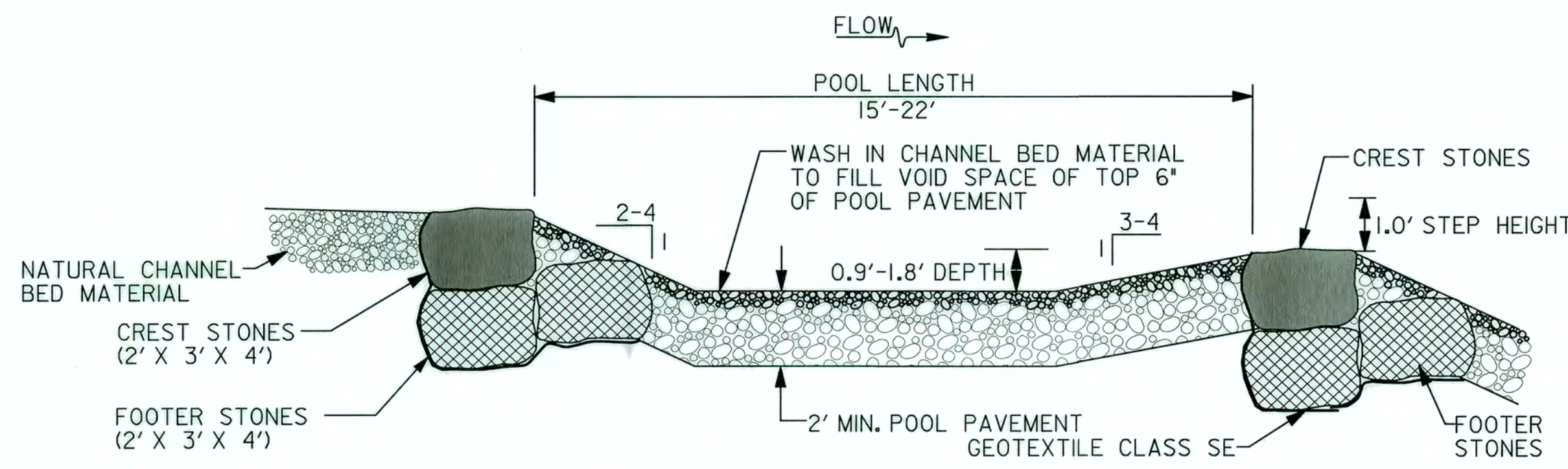
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TYPICAL CROSS SECTION OF STEP-POOL CREST
NOT TO SCALE



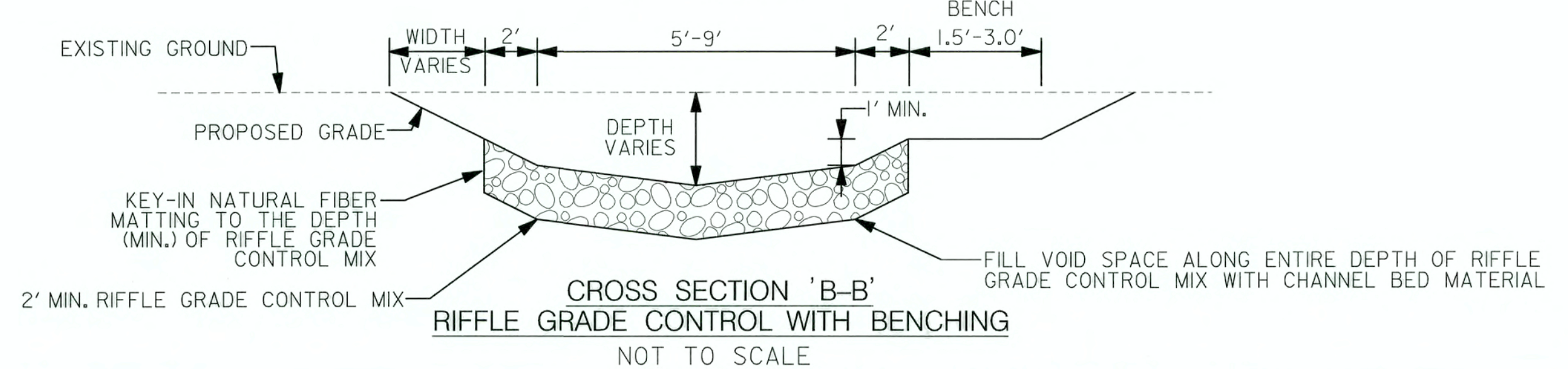
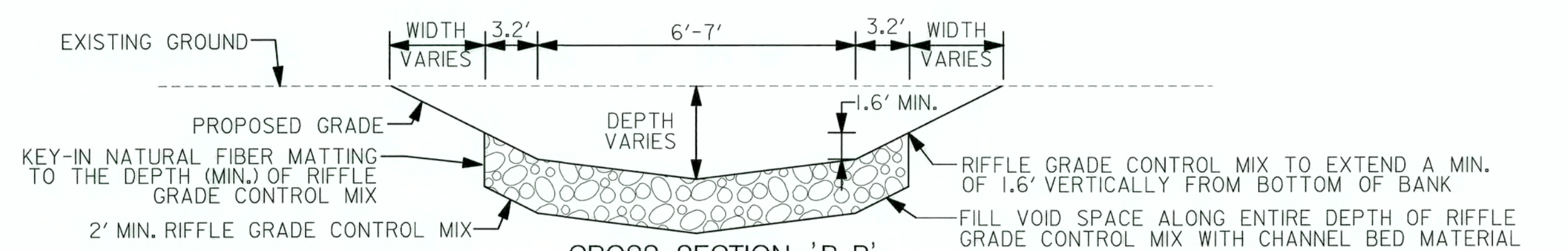
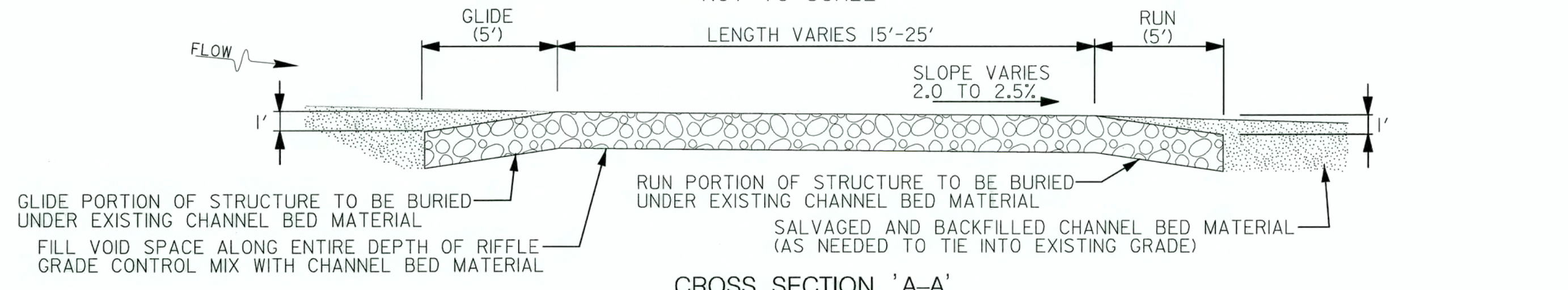
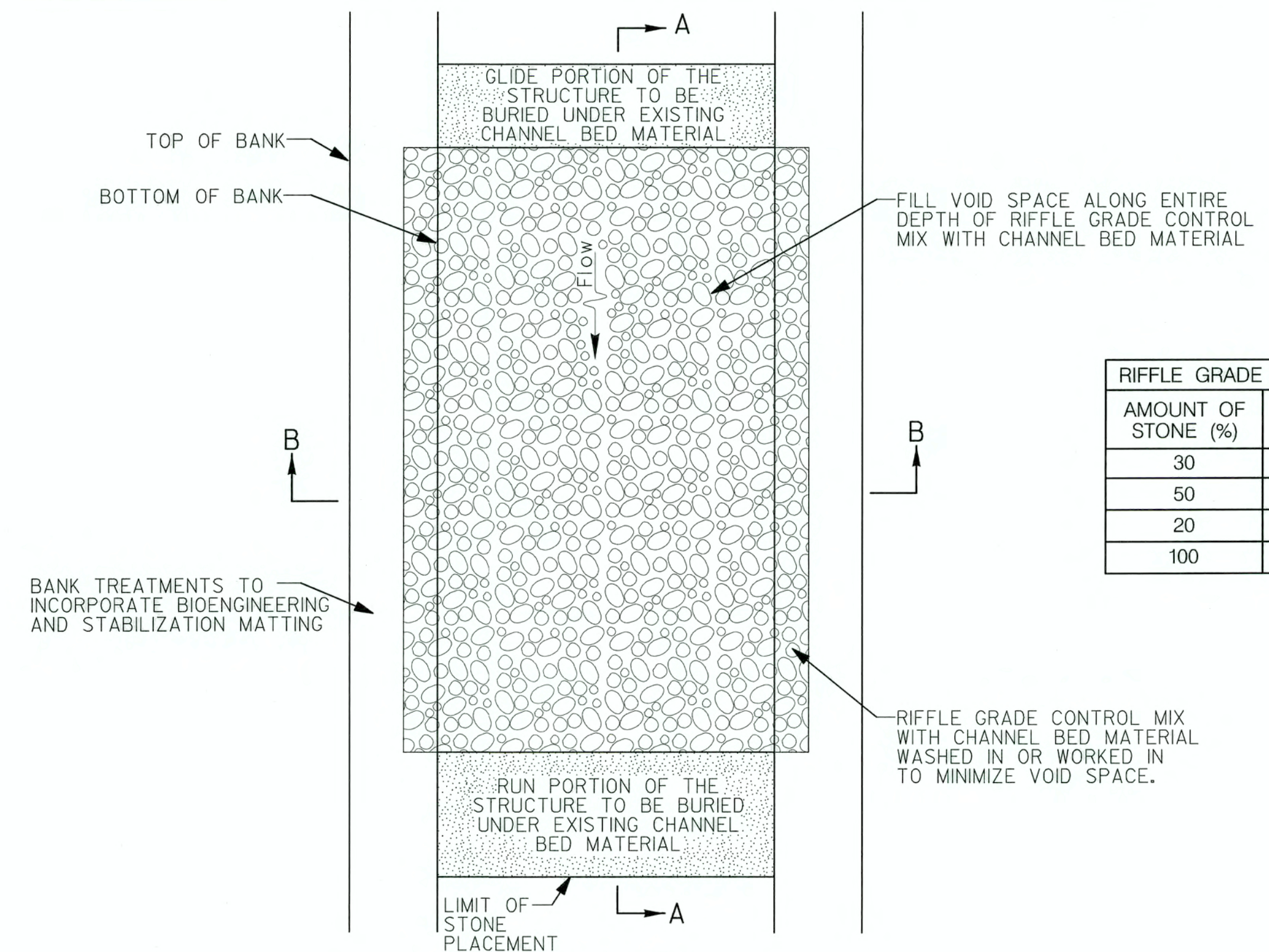
TYPICAL CROSS SECTION OF STEP-POOL POOL
NOT TO SCALE



TYPICAL PROFILE THROUGH STEP-POOL
NOT TO SCALE

POOL PAVEMENT MIX	
AMOUNT OF STONE (%)	TYPE
20	57 STONE
50	SHA CLASS 0
30	SHA CLASS 1
100	TOTAL

RIFFLE GRADE CONTROL MIX	
AMOUNT OF STONE (%)	TYPE
30	SHA CLASS 0
50	SHA CLASS 1
20	SHA CLASS 2
100	TOTAL



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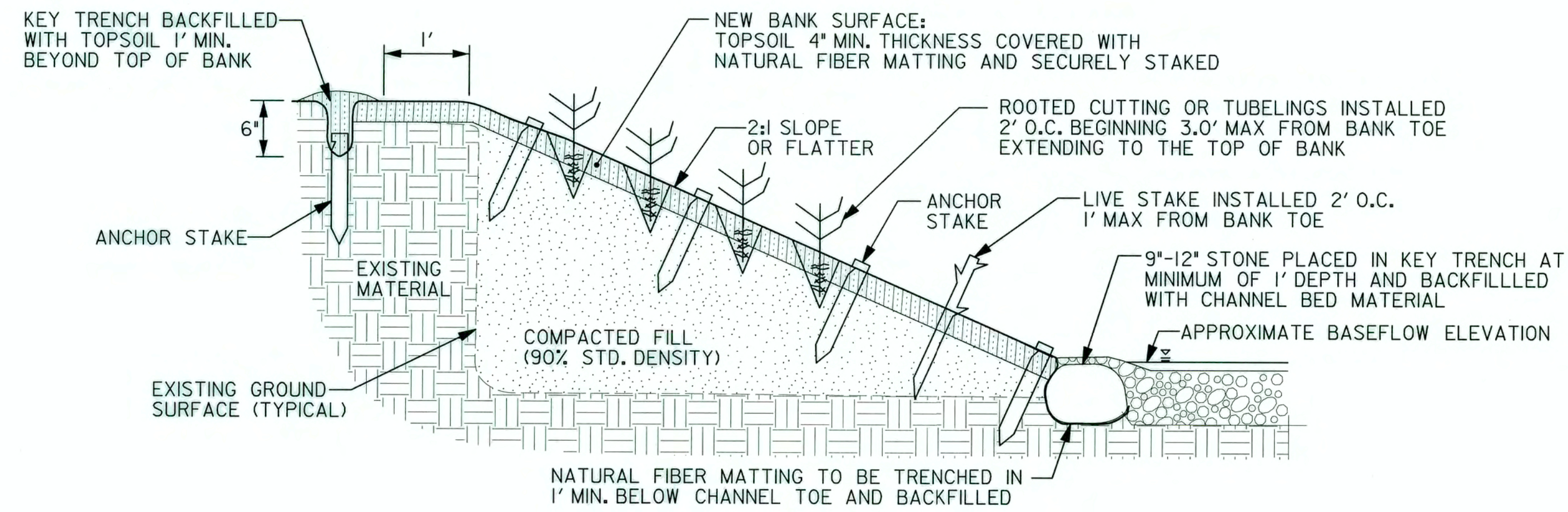
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STREAM STABILIZATION DETAILS

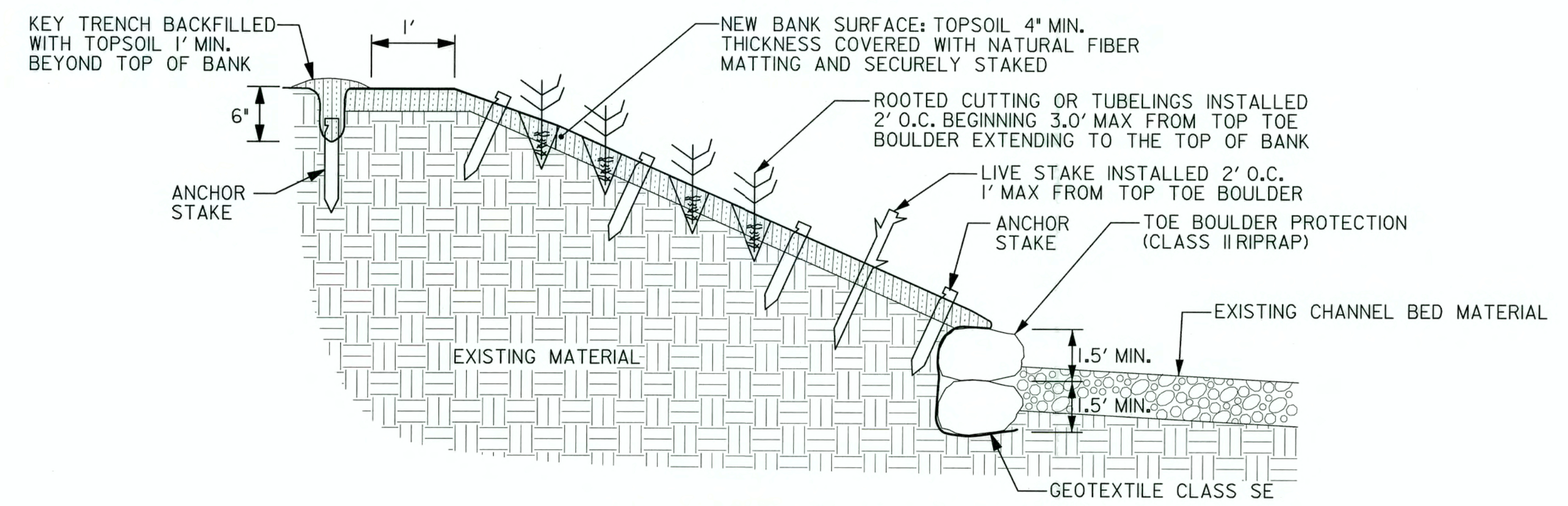
SCALE
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Michael D. ...
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

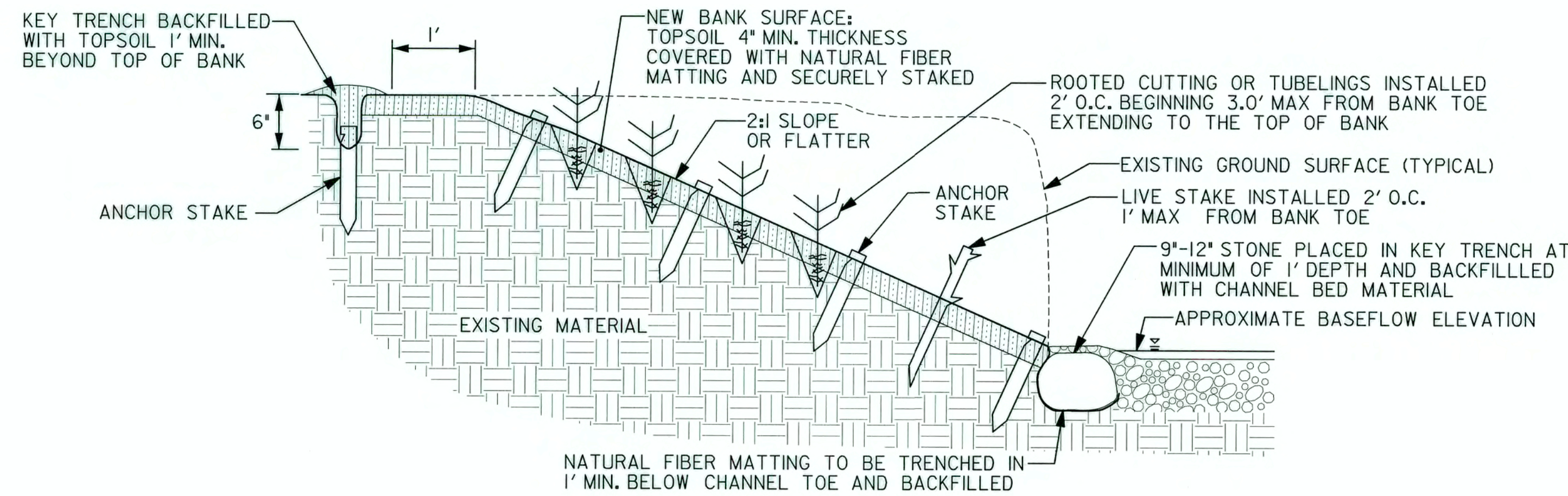
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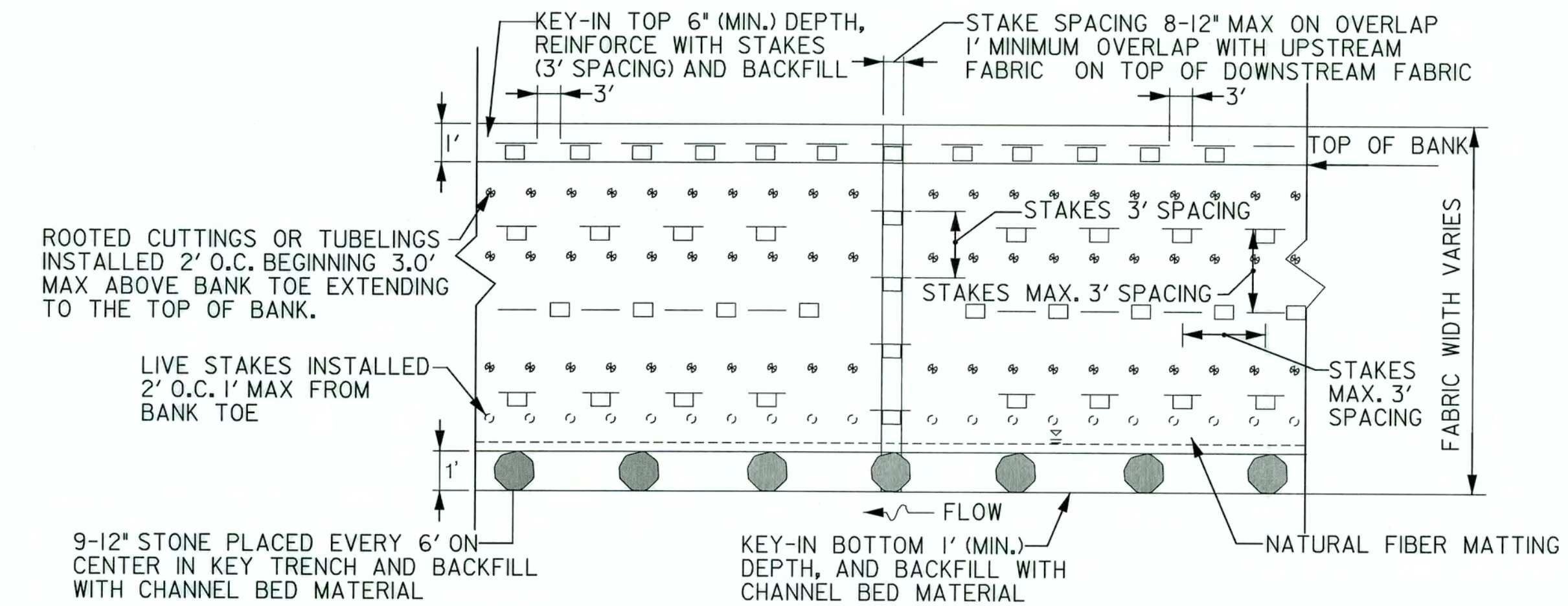
TYPICAL STREAMBANK STABILIZATION IN FILL WITH STONE KEY
NOT TO SCALE



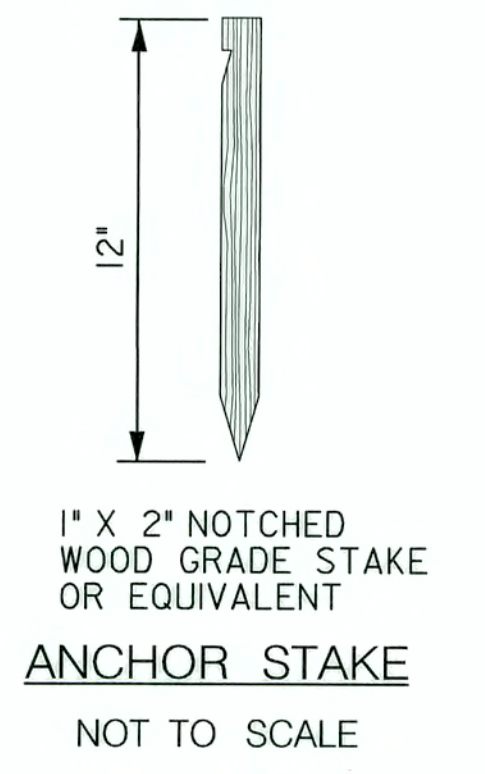
TOE BOULDER PROTECTION TYPICAL
NOT TO SCALE



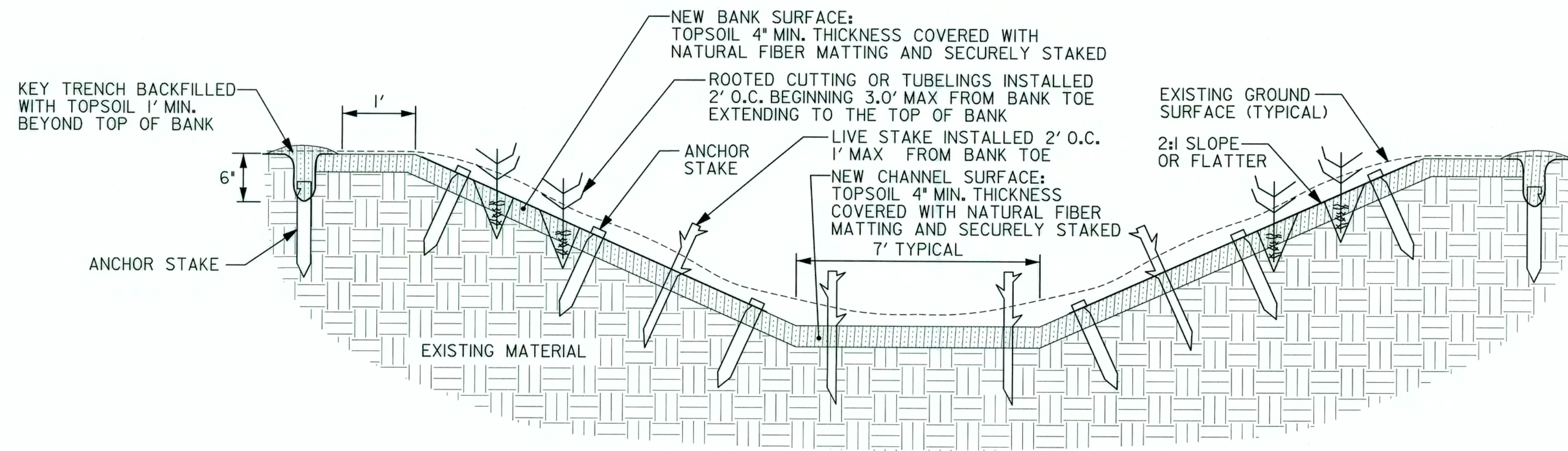
TYPICAL STREAMBANK STABILIZATION IN CUT WITH STONE KEY
NOT TO SCALE



NATURAL FIBER MATTING - PLAN VIEW
NOT TO SCALE



1" X 2" NOTCHED WOOD GRADE STAKE OR EQUIVALENT
ANCHOR STAKE
NOT TO SCALE



TYPICAL OUTFALL CHANNEL STABILIZATION
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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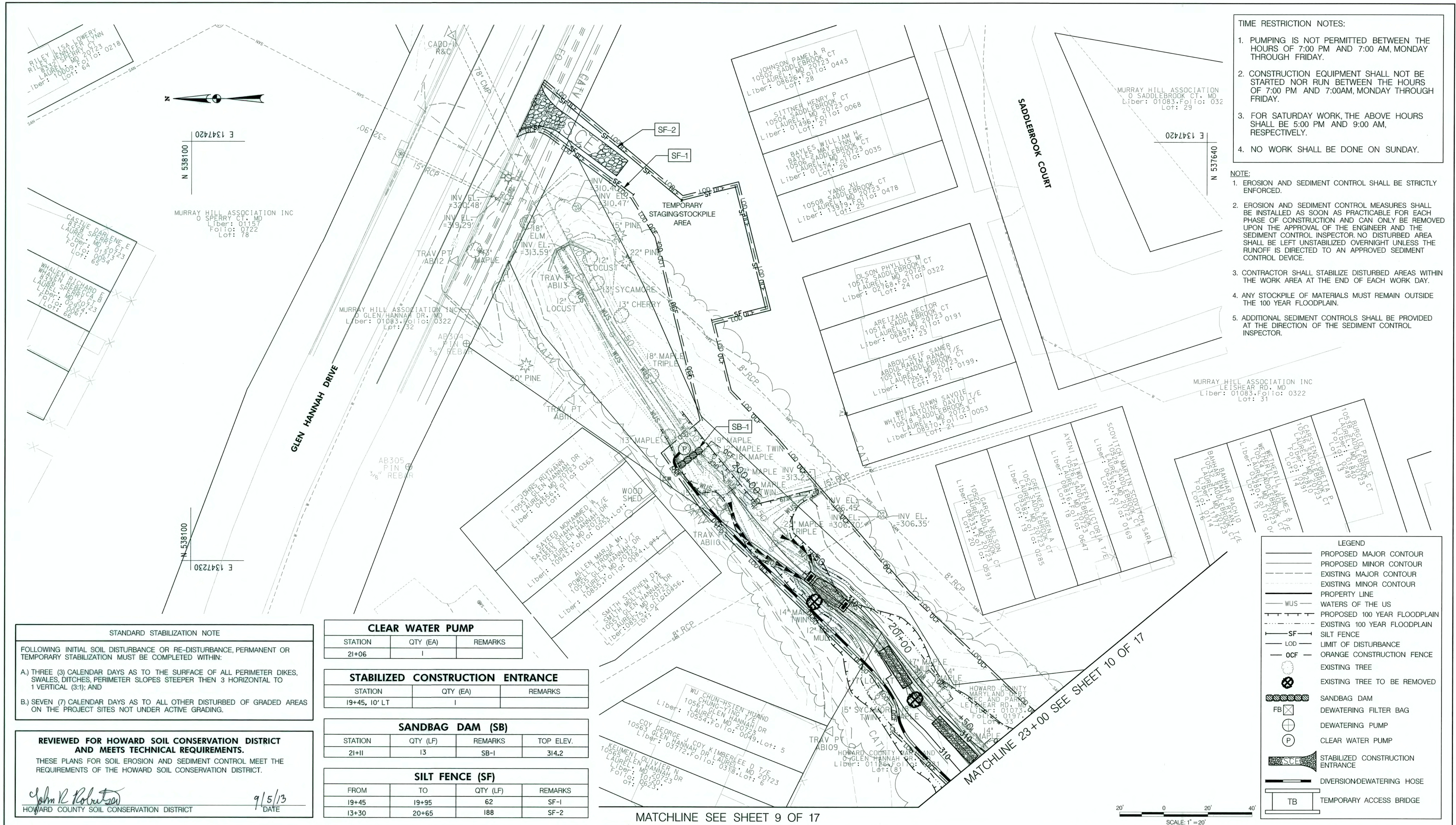


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TAX MAP 46, GRID/BLOCK NO. 6
WAIVER PETITION #WP-13-193

STREAM STABILIZATION DETAILS

SCALE	
AS NOTED	
SHEET	
Z OF 17	



- TIME RESTRICTION NOTES:**
1. PUMPING IS NOT PERMITTED BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM, MONDAY THROUGH FRIDAY.
 2. CONSTRUCTION EQUIPMENT SHALL NOT BE STARTED NOR RUN BETWEEN THE HOURS OF 7:00 PM AND 7:00AM, MONDAY THROUGH FRIDAY.
 3. FOR SATURDAY WORK, THE ABOVE HOURS SHALL BE 5:00 PM AND 9:00 AM, RESPECTIVELY.
 4. NO WORK SHALL BE DONE ON SUNDAY.

- NOTE:**
1. EROSION AND SEDIMENT CONTROL SHALL BE STRICTLY ENFORCED.
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- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPERTY LINE
- WUS — WATERS OF THE US
- - - PROPOSED 100 YEAR FLOODPLAIN
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- - - SF — SILT FENCE
- - - LOD — LIMIT OF DISTURBANCE
- - - OCF — ORANGE CONSTRUCTION FENCE
- ⊙ — EXISTING TREE
- ⊗ — EXISTING TREE TO BE REMOVED
- ▨ — SANDBAG DAM
- FB ⊗ — DEWATERING FILTER BAG
- ⊕ — DEWATERING PUMP
- ⊙ — CLEAR WATER PUMP
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- DIVERSION/DEWATERING HOSE
- TB — TEMPORARY ACCESS BRIDGE

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

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REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 9/5/13
 HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

CLEAR WATER PUMP			
STATION	QTY (EA)	REMARKS	
21+06	1		

STABILIZED CONSTRUCTION ENTRANCE			
STATION	QTY (EA)	REMARKS	
19+45, 10' LT	1		

SANDBAG DAM (SB)			
STATION	QTY (LF)	REMARKS	TOP ELEV.
21+11	13	SB-1	314.2

SILT FENCE (SF)			
FROM	TO	QTY (LF)	REMARKS
19+45	19+95	62	SF-1
13+30	20+65	188	SF-2

MATCHLINE SEE SHEET 9 OF 17



<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Michael D. ...</i> CHIEF, BUREAU OF ENVIRONMENTAL SERVICES</p>	<p>McCormick Taylor Engineers & Planners Since 1946</p> <p>509 South Exeter Street 4th Floor Baltimore, Maryland 21202 (410) 662-7400</p>	<p>Howard County MARYLAND</p> <p>Storm Water Management Division Bureau of Environmental Services 6751 Columbia Gateway Drive, Suite 514 Columbia, Maryland 21046-3143 (410) 313-6444</p>		<p>DES: LN</p> <p>DRN: MR</p> <p>CHK: CB</p> <p>DATE: 8/27/13</p>		<p>HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION WHITEROCK COURT STREAM REHABILITATION PROJECT CAPITAL PROJECT #D-1158 ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND TAX MAP 46, GRID/BLOCK NO. 6 WAIVER PETITION #WP-13-193</p> <p>EROSION AND SEDIMENT CONTROL PLAN</p>	<p>SCALE 1" = 20'</p> <p>SHEET 8 OF 12</p>								
<table border="1" style="width: 100%;"> <thead> <tr> <th>BY</th> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					BY	NO.	REVISION	DATE							
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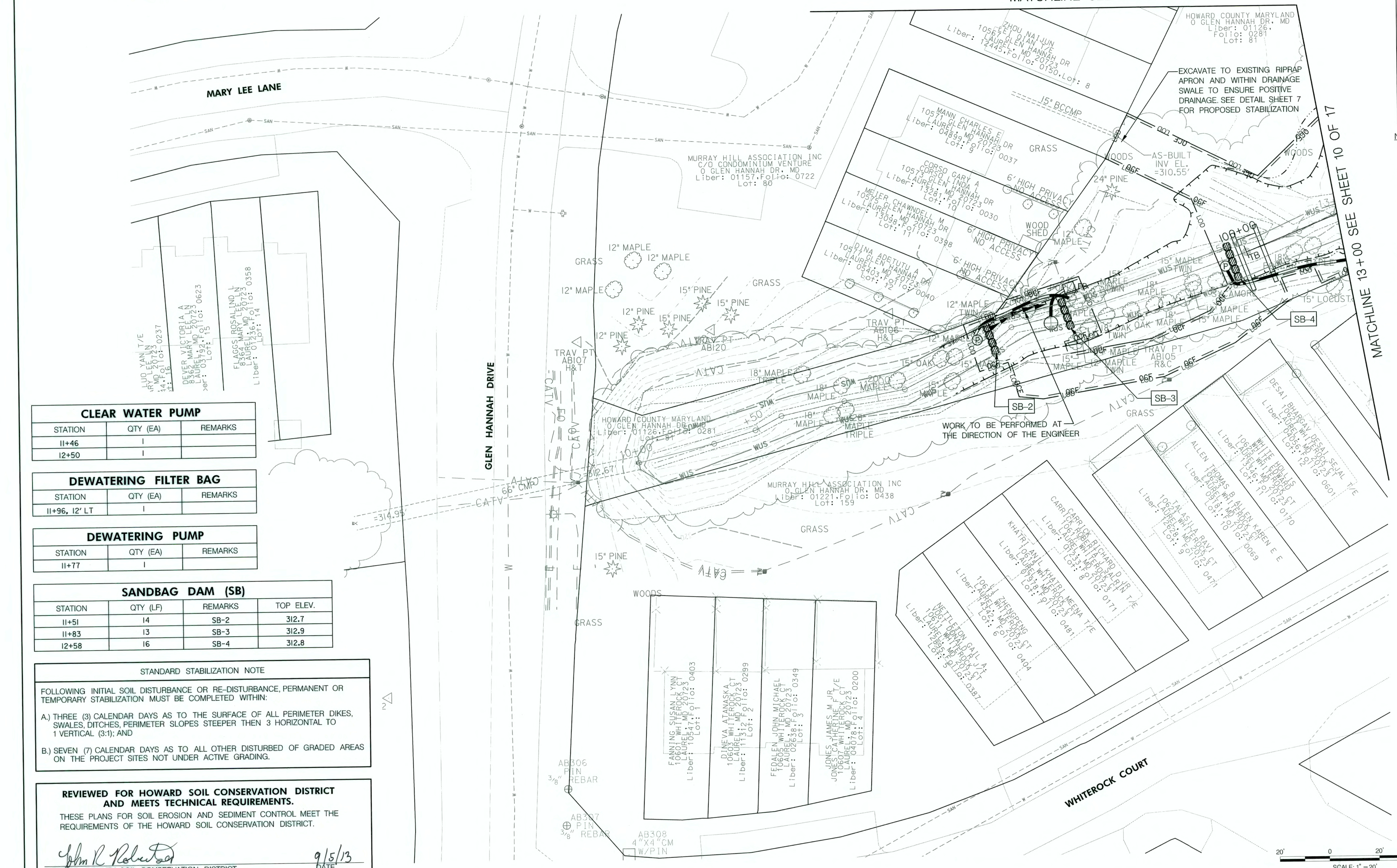
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- STABILIZED CONSTRUCTION ENTRANCE
- DIVERSION/DEWATERING HOSE
- TEMPORARY ACCESS BRIDGE

MATCHLINE SEE SHEET 8 OF 17

MATCHLINE 13+00 SEE SHEET 10 OF 17



CLEAR WATER PUMP

STATION	QTY (EA)	REMARKS
11+46	1	
12+50	1	

DEWATERING FILTER BAG

STATION	QTY (EA)	REMARKS
11+96, 12' LT	1	

DEWATERING PUMP

STATION	QTY (EA)	REMARKS
11+77	1	

SANDBAG DAM (SB)

STATION	QTY (LF)	REMARKS	TOP ELEV.
11+51	14	SB-2	312.7
11+83	13	SB-3	312.9
12+58	16	SB-4	312.8

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REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts 9/5/13
 HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Michael... 8/29/13
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE

McCormick Taylor
 Engineers & Planners
 Since 1946

509 South Exeter Street
 4th Floor
 Baltimore, Maryland 21202
 (410) 662-7400

Howard County
 MARYLAND

Storm Water Management Division
 Bureau of Environmental Services
 6751 Columbia Gateway Drive, Suite 514
 Columbia, Maryland 21046-3143
 (410) 313-6444

DES: LN					
DRN: MR					
CHK: CB					
DATE: 8/27/13	BY	NO.	REVISION	DATE	

HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
 WHITEROCK COURT STREAM REHABILITATION PROJECT
 CAPITAL PROJECT #D-1158
 ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND
 TAX MAP 46, GRID/BLOCK NO. 6
 WAIVER PETITION #WP-13-193

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

SHEET 9 OF 17



MURRAY HILL ASSOCIATION INC
LETSHEAR RD., MD
Liber: 01083, Folio: 0322
Lot: 31

HOWARD COUNTY MARYLAND DEPT REC AND PARKS
LETSHEAR RD., MD
Liber: 01013, Folio: 0197
Lot: 33

MURRAY HILL ASSOCIATION INC
9 GLEN HANNAH DR., MD
Liber: 01221, Folio: 0438
Lot: 159

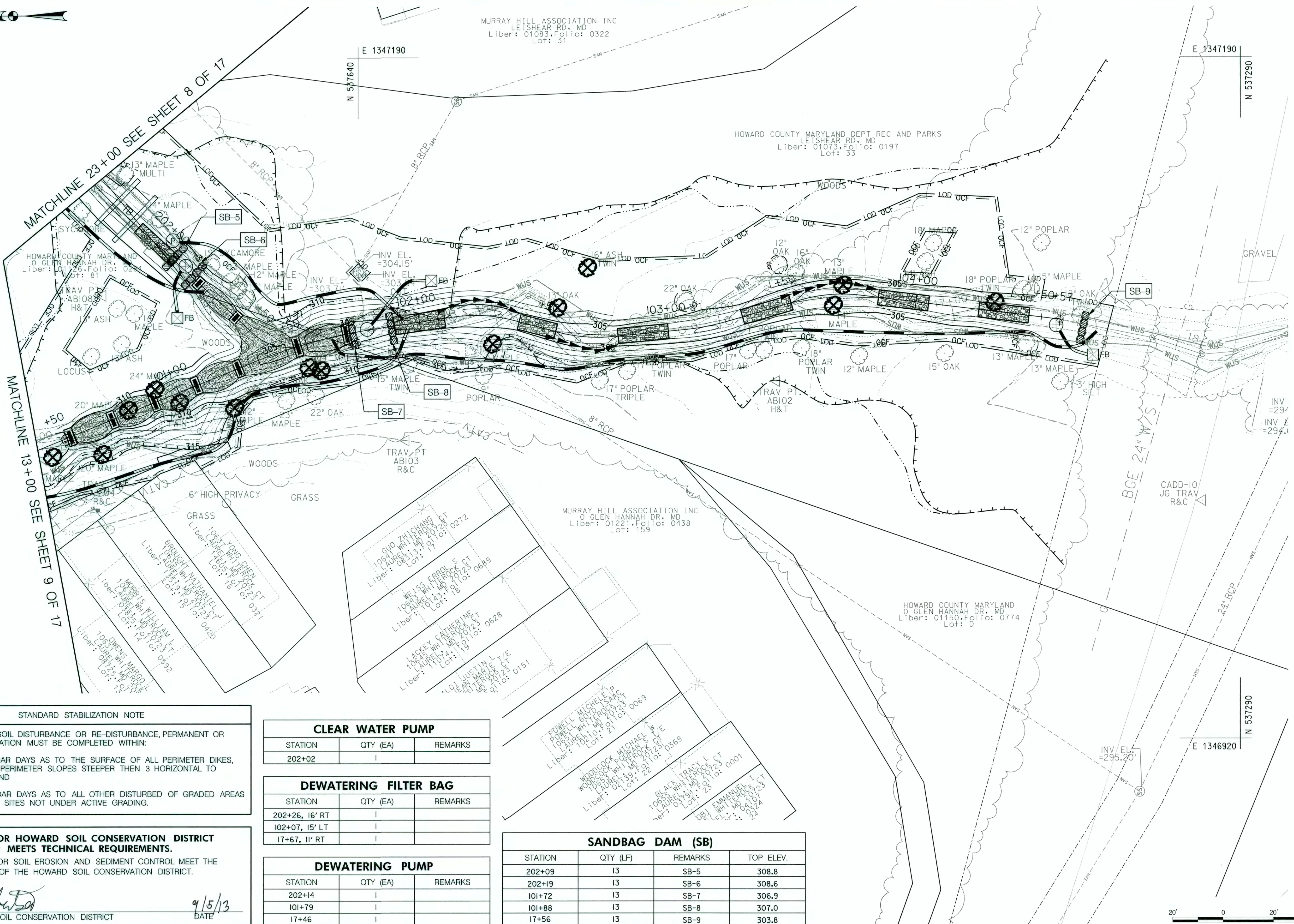
HOWARD COUNTY MARYLAND
9 GLEN HANNAH DR., MD
Liber: 01150, Folio: 0774
Lot: D

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MATCHLINE 23+00 SEE SHEET 8 OF 17

MATCHLINE 13+00 SEE SHEET 9 OF 17



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John R. Roberts
HOWARD COUNTY SOIL CONSERVATION DISTRICT

9/5/13
DATE

CLEAR WATER PUMP

STATION	QTY (EA)	REMARKS
202+02	1	

DEWATERING FILTER BAG

STATION	QTY (EA)	REMARKS
202+26, 16' RT	1	
102+07, 15' LT	1	
17+67, 11' RT	1	

DEWATERING PUMP

STATION	QTY (EA)	REMARKS
202+14	1	
101+79	1	
17+46	1	

SANDBAG DAM (SB)

STATION	QTY (LF)	REMARKS	TOP ELEV.
202+09	13	SB-5	308.8
202+19	13	SB-6	308.6
101+72	13	SB-7	306.9
101+88	13	SB-8	307.0
17+56	13	SB-9	303.8

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DES: LN

DRN: MR

CHK: CB

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BY	NO.	REVISION	DATE

HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
WHITEROCK COURT STREAM REHABILITATION PROJECT
CAPITAL PROJECT #D-1158
ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND
TAX MAP 46, GRID/BLOCK NO. 6
WAIVER PETITION #WP-13-193

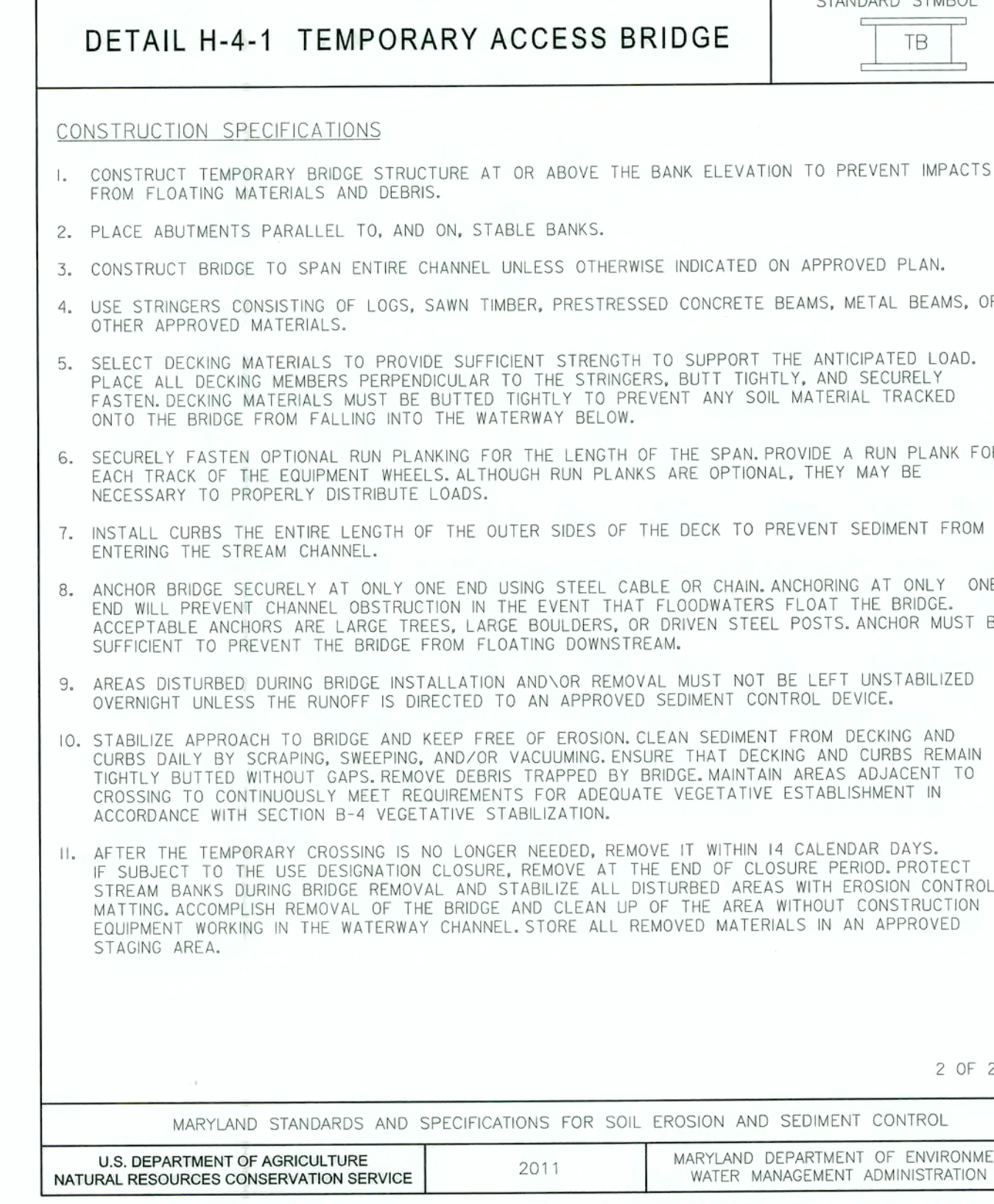
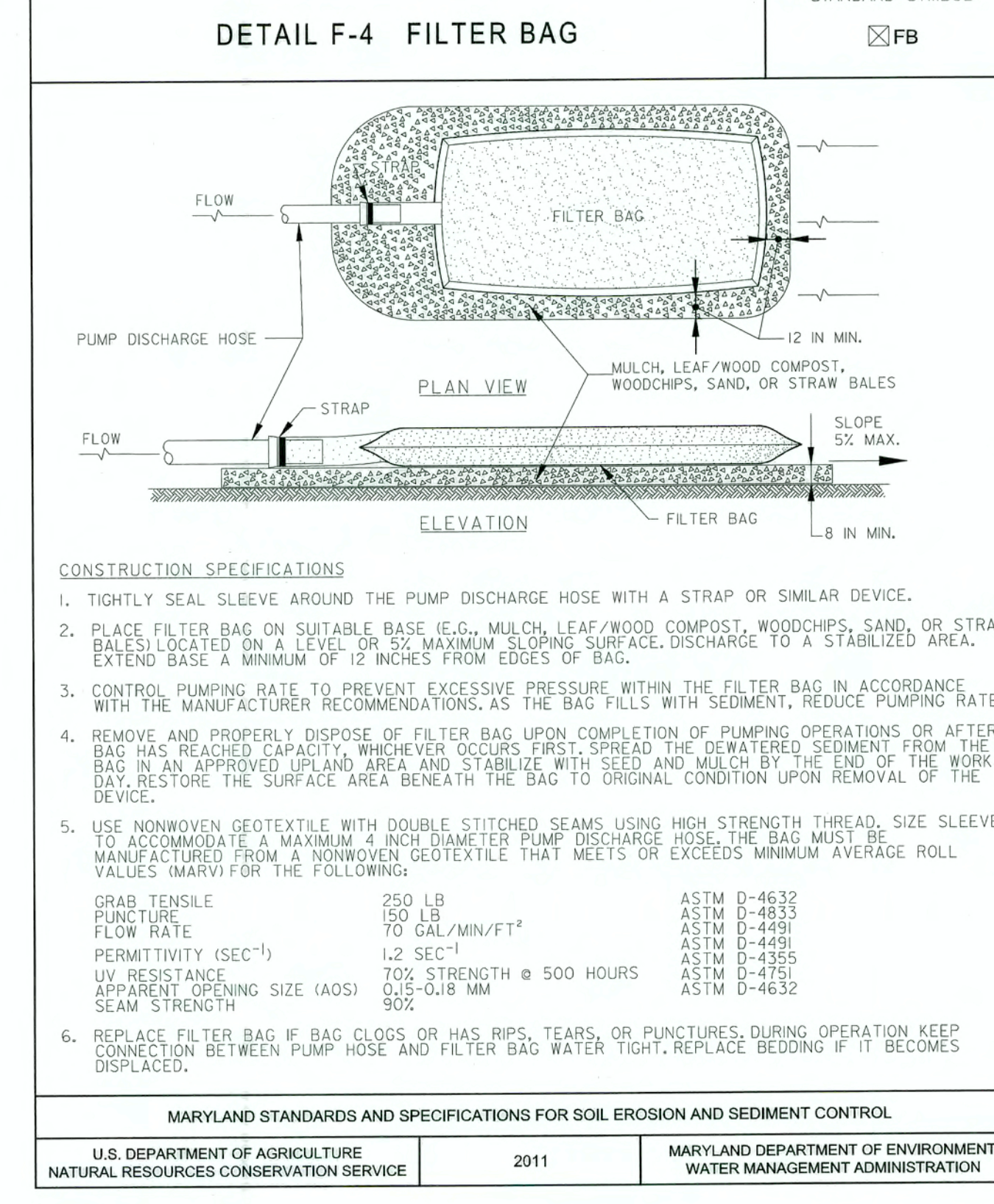
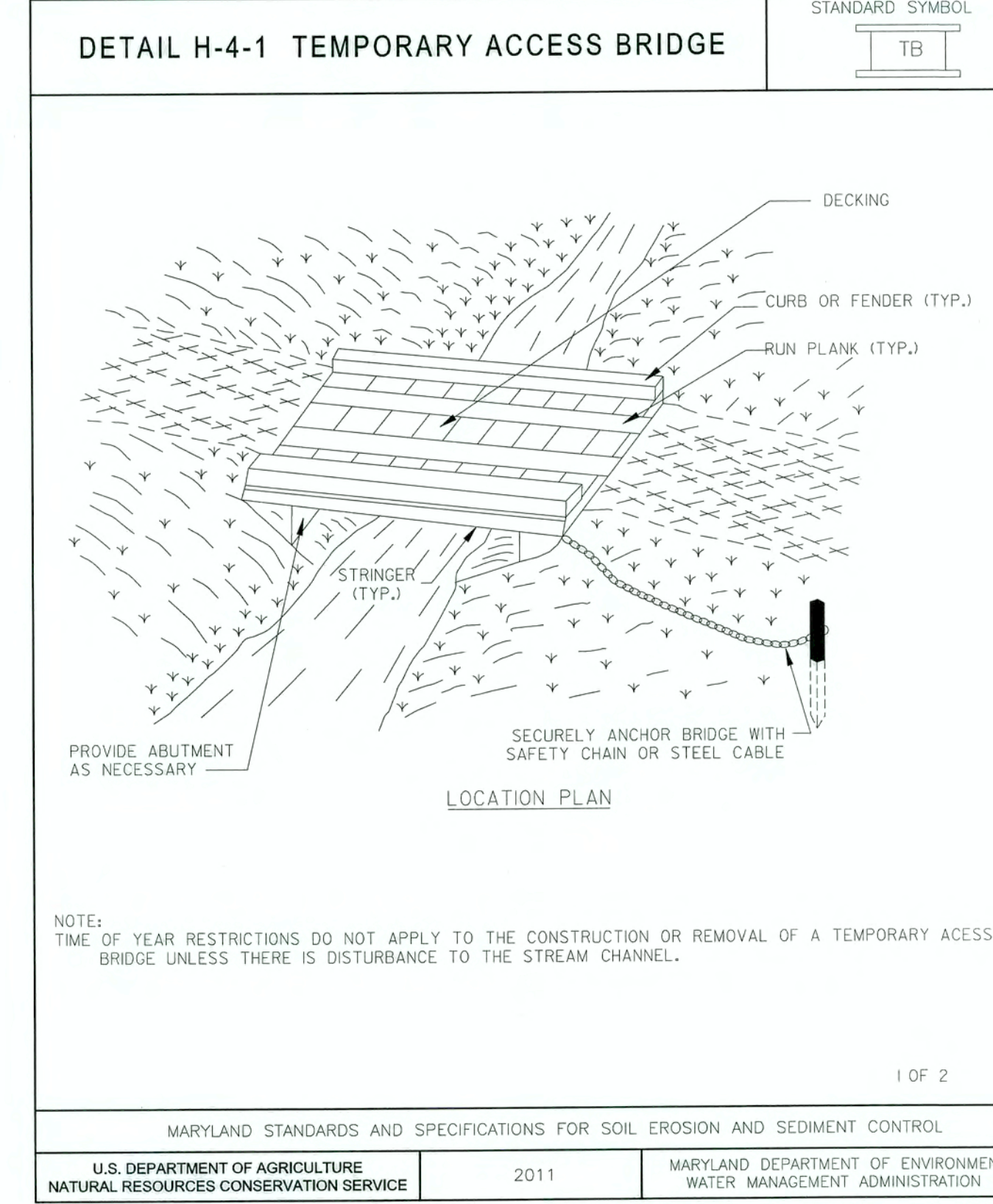
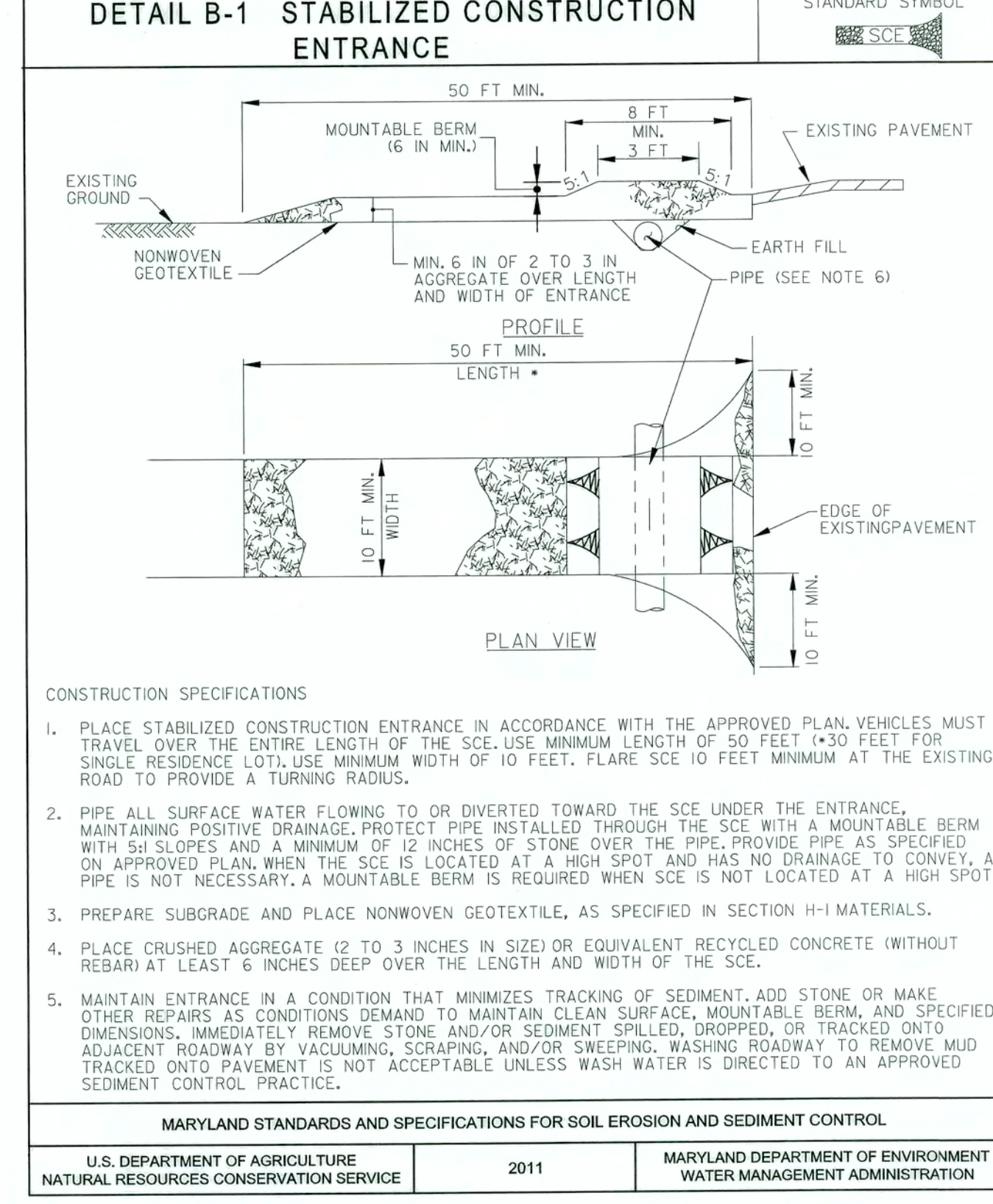
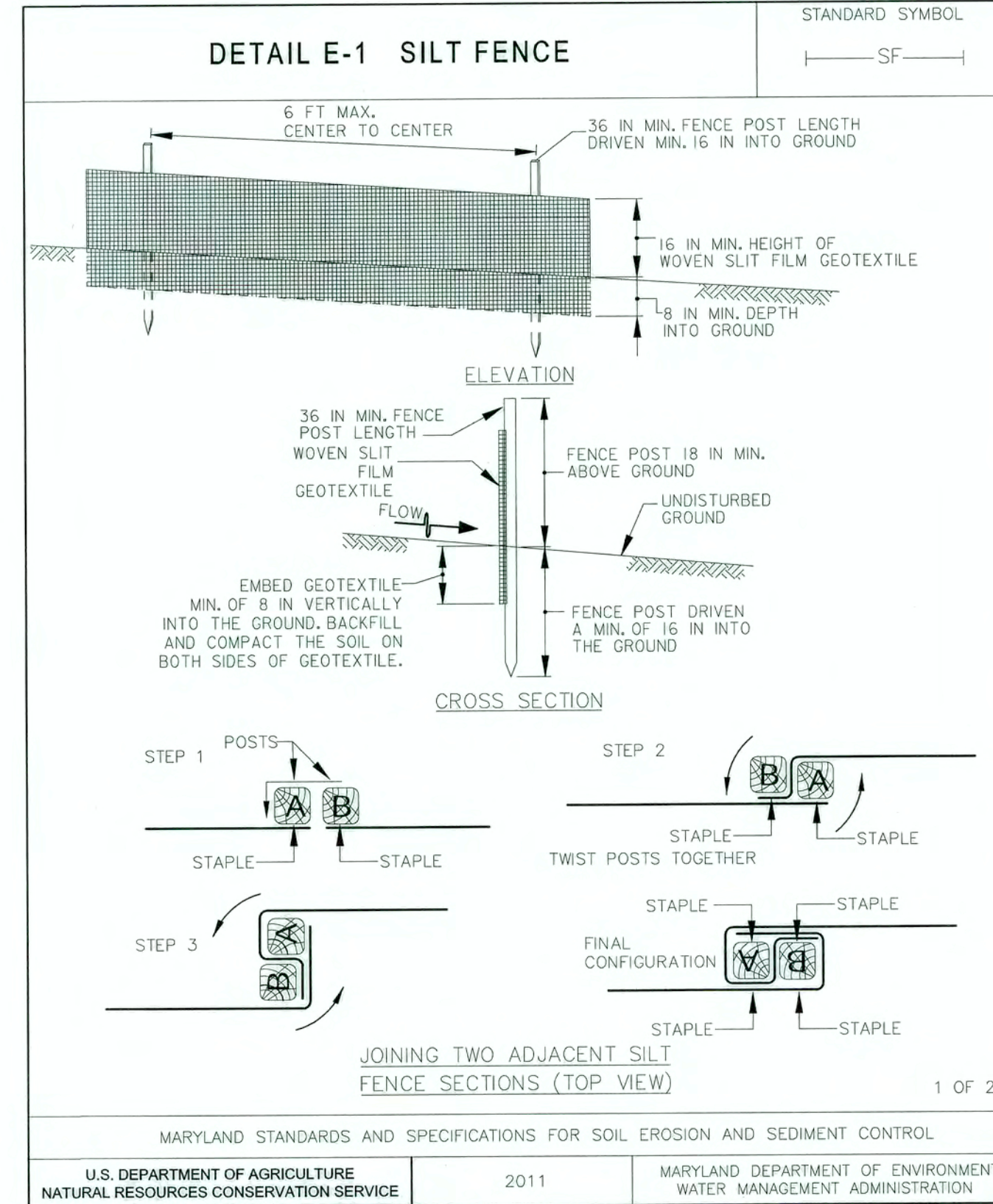
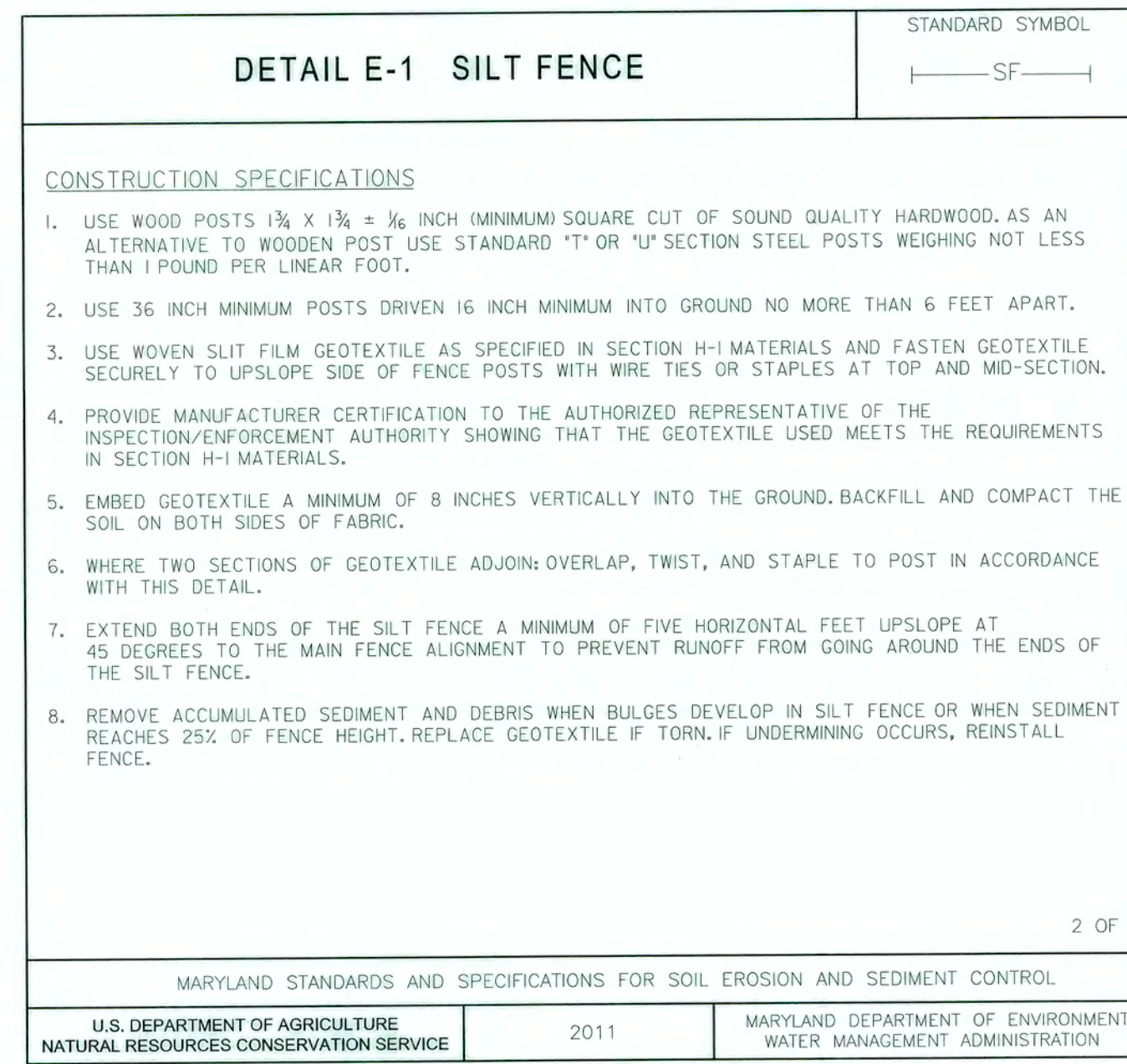
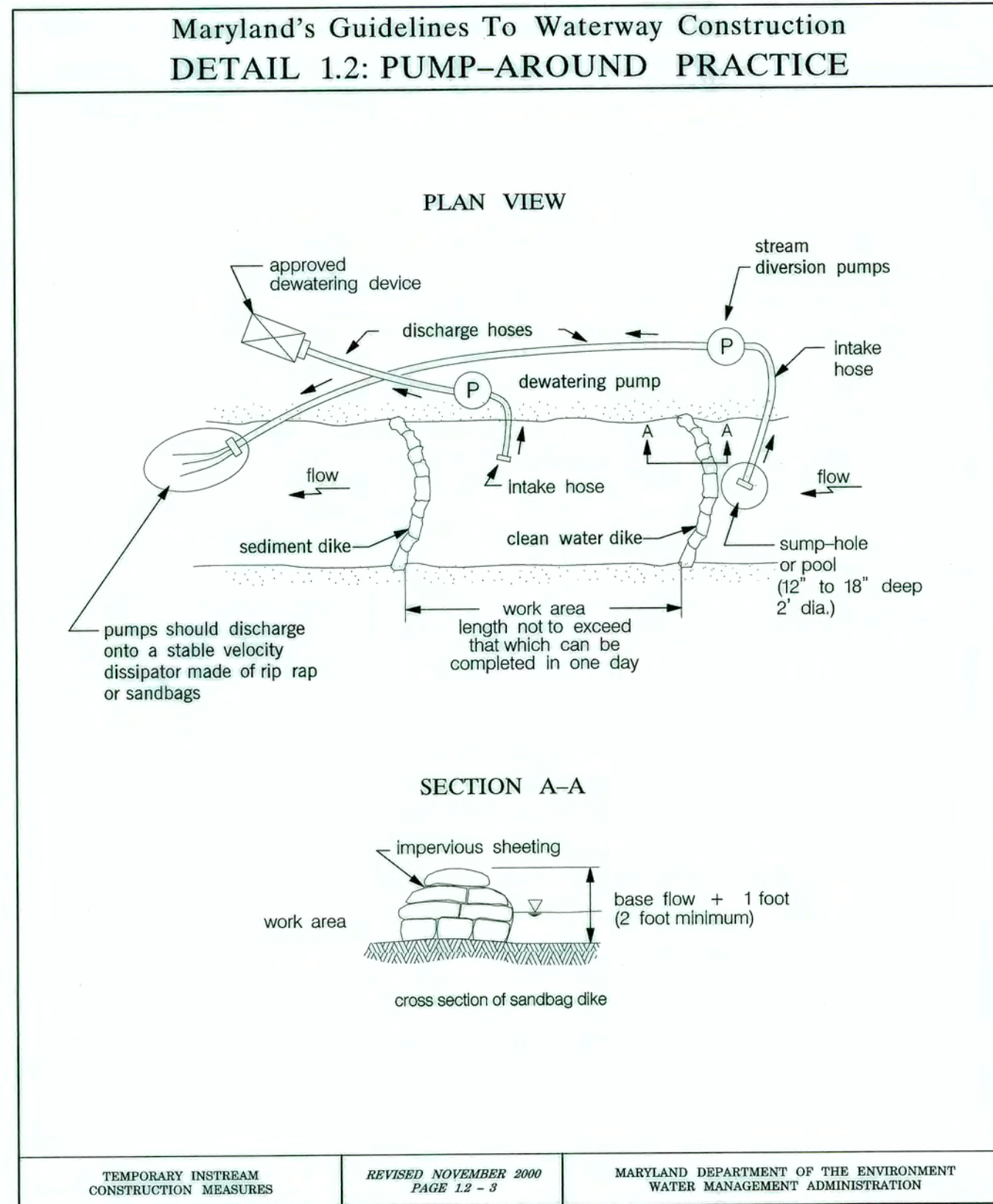
EROSION AND SEDIMENT CONTROL PLAN

SCALE

1" = 20'

SHEET

10 OF 17



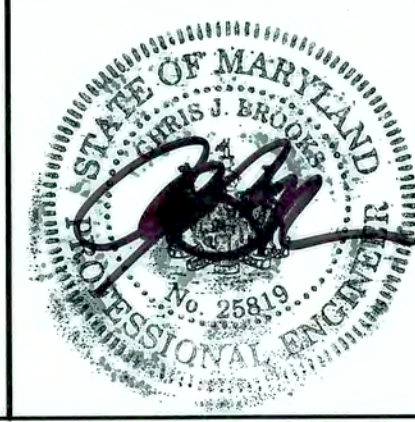
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John R. Robertson 9/15/13
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

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HOWARD COUNTY, MARYLAND

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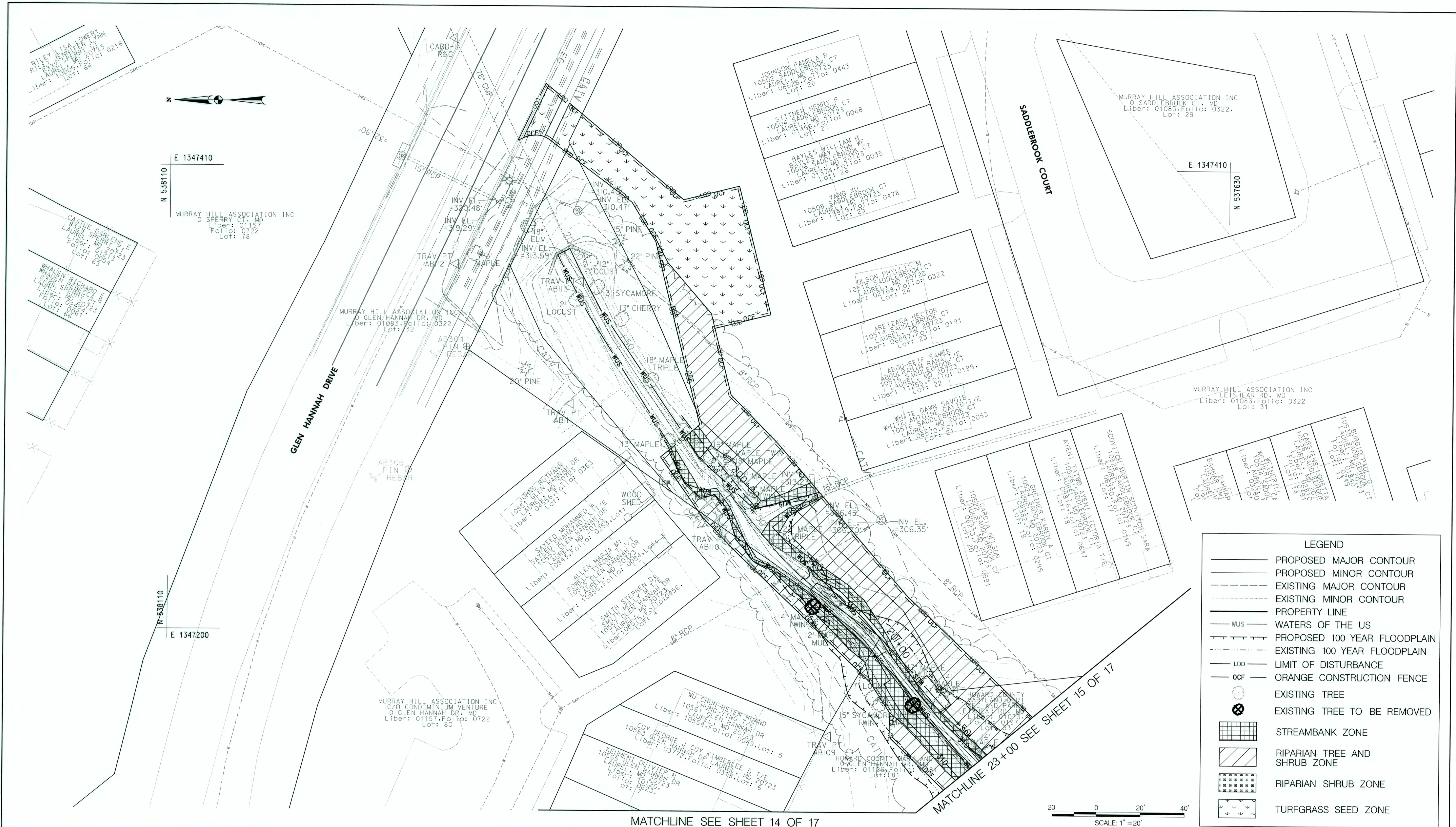


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**HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
WHITEROCK COURT STREAM REHABILITATION PROJECT
CAPITAL PROJECT #D-1158
ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND
TAX MAP 46, GRID/BLOCK NO. 6
WAIVER PETITION #WP-13-193**

EROSION AND SEDIMENT CONTROL DETAIL SHEET

SCALE: NOT TO SCALE
SHEET: 12 OF 17



LEGEND

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- [Diagonal Lines] RIPARIAN TREE AND SHRUB ZONE
- [Cross-hatched] RIPARIAN SHRUB ZONE
- [Dotted] TURFGRASS SEED ZONE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Michael D. ...
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8/27/13
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LANDSCAPING PLAN

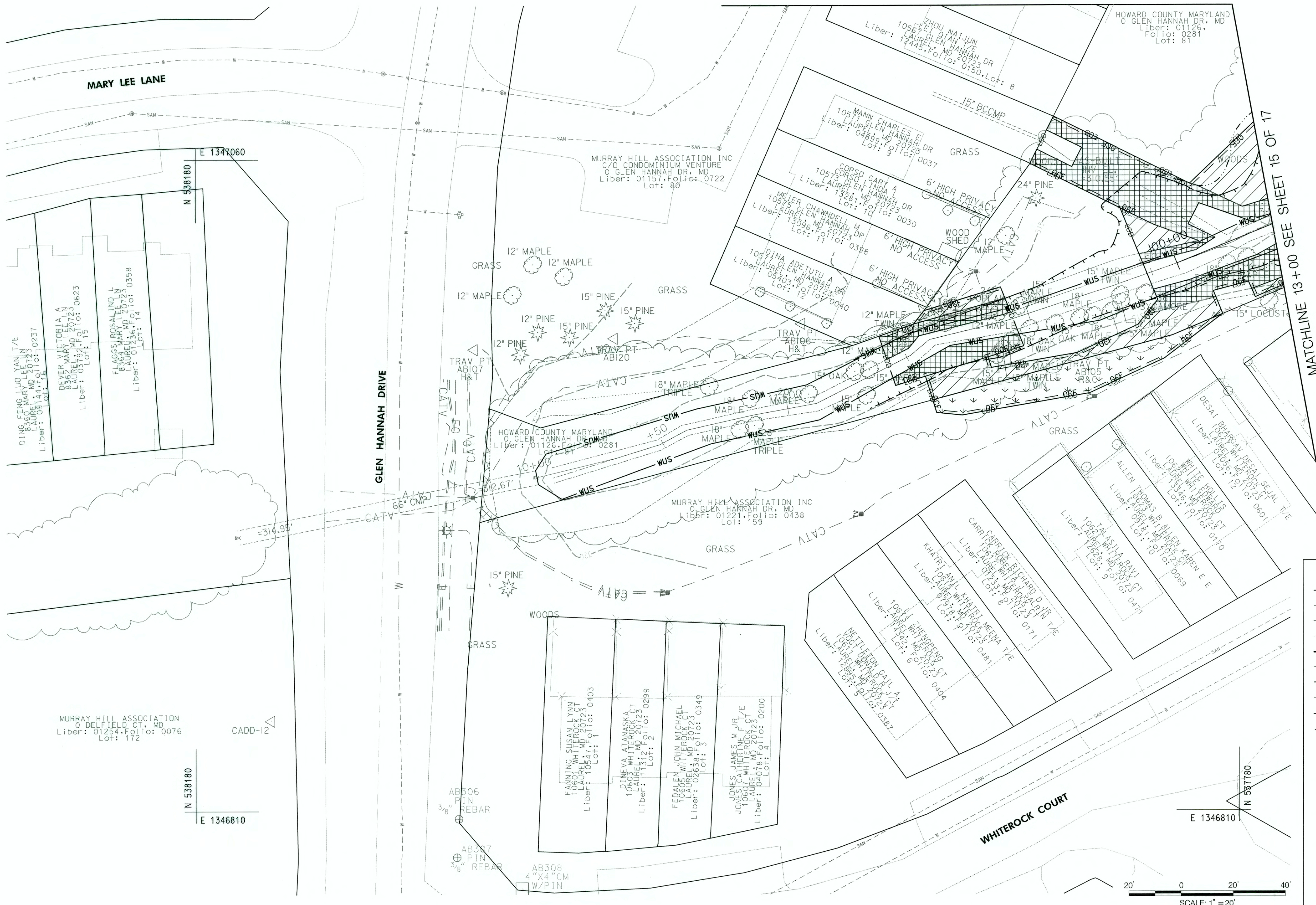
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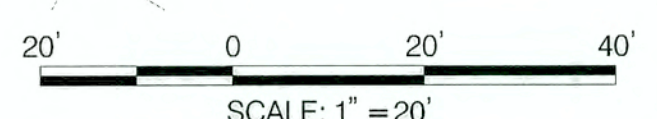
MATCHLINE SEE SHEET 13 OF 17

MATCHLINE 13+00 SEE SHEET 15 OF 17



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HOWARD COUNTY, MARYLAND

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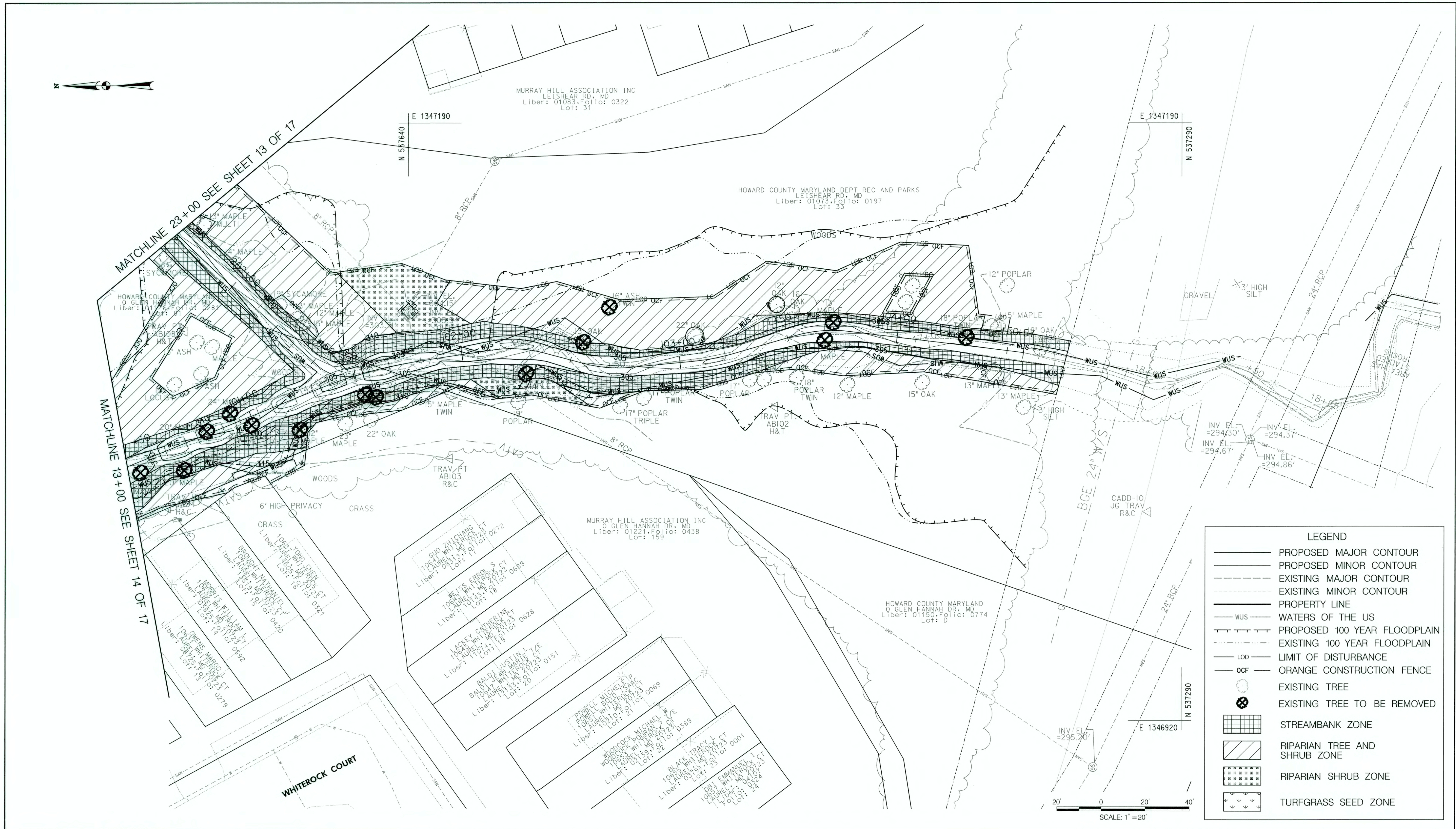
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LANDSCAPING PLAN

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14 OF 17



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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature]
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

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LANDSCAPING PLAN

SCALE
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SHEET
15 OF 17

Planting Schedule

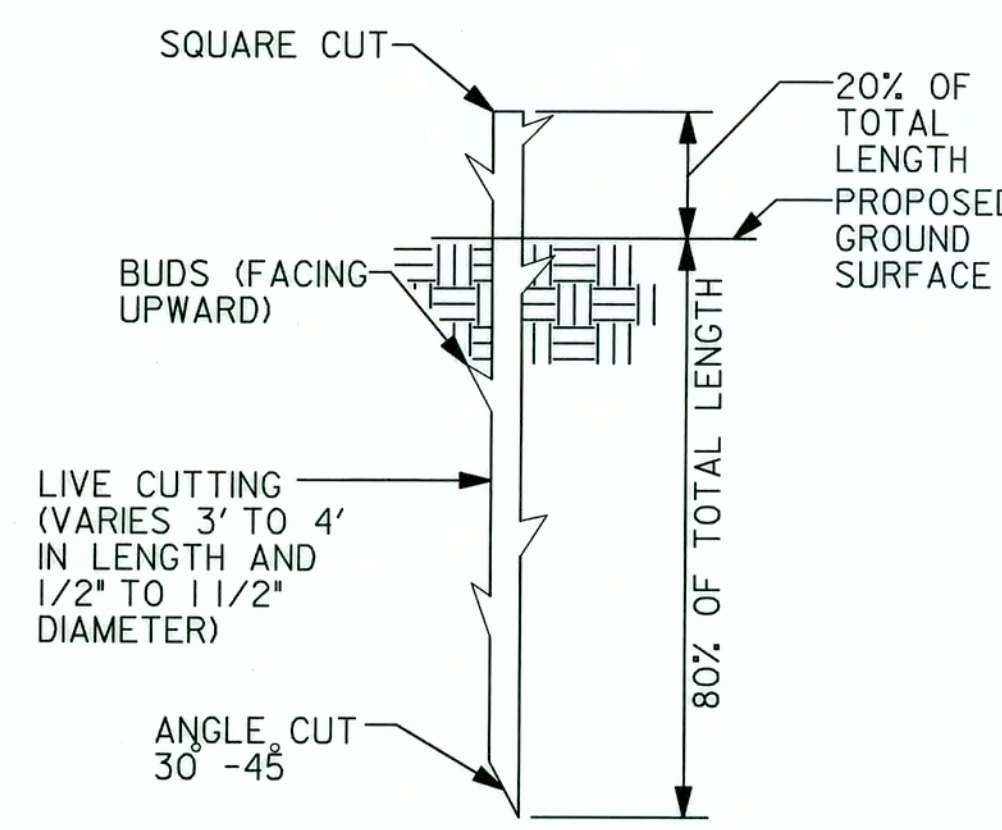
Zone	Botanical Name	Common Name	Size	Comment	Quantity
Streambank	Cornus sericea	Red Osler Dogwood	3'-4' Live Stake	Plant 2' O.C.	310
Streambank	Viburnum dentatum	Southern Arrowwood	3'-4' Live Stake	Plant 2' O.C.	310
Streambank	Salix sericea	Silky Willow	3'-4' Live Stake	Plant 2' O.C.	310
Streambank	Cornus sericea	Red Osler Dogwood	1" Dia. X 8-12" Deep Tubeling	Plant 3' O.C.	230
Streambank	Viburnum dentatum	Southern Arrowwood	1" Dia. X 8-12" Deep Tubeling	Plant 3' O.C.	230
Streambank	Salix sericea	Silky Willow	1" Dia. X 8-12" Deep Tubeling	Plant 3' O.C.	230
Riparian Tree & Shrub	Cercis canadensis	Eastern Redbud	5' HT, 3 GAL Cont.	Plant 12' O.C.	20
Riparian Tree & Shrub	Quercus alba	White Oak	5' HT, 3 GAL Cont.	Plant 12' O.C.	20
Riparian Tree & Shrub	Platanus occidentalis	American Sycamore	5' HT, 3 GAL Cont.	Plant 12' O.C.	20
Riparian Tree & Shrub	Acer saccharum	Sugar Maple	5' HT, 3 GAL Cont.	Plant 12' O.C.	20
Riparian Tree & Shrub	Amelanchier arborea	Serviceberry	2' HT, 3 GAL. Cont.	Plant 8' O.C.	58
Riparian Tree & Shrub	Cornus amomum	Silky Dogwood	2' HT, 3 GAL. Cont.	Plant 8' O.C.	58
Riparian Tree & Shrub	Lindera benzoin	Spice Bush	2' HT, 3 GAL. Cont.	Plant 8' O.C.	58
Riparian Shrub	Amelanchier arborea	Serviceberry	2' HT, 3 GAL. Cont.	Plant 8' O.C.	8
Riparian Shrub	Cornus amomum	Silky Dogwood	2' HT, 3 GAL. Cont.	Plant 8' O.C.	8
Riparian Shrub	Lindera benzoin	Spice Bush	2' HT, 3 GAL. Cont.	Plant 8' O.C.	8

Riparian Seed Mix

Zone	Botanical Name	Common Name	Percent Mix	Seeding Rate	Quantity (lbs.)
Streambank, Riparian	Elymus virginicus	Virginia Wildrye	5	30 lbs per acre	
Streambank, Riparian	Agrostis alba	Redtop	5	30 lbs per acre	
Streambank, Riparian	Poa compressa	Canada Bluegrass	5	30 lbs per acre	
Streambank, Riparian	Festuca arundinacea	Trident tall Fescue	10	30 lbs per acre	
Streambank, Riparian	Sorghastrum nutans	Indian Grass	5	30 lbs per acre	
Streambank, Riparian	Lolium multiflorum	Annual Ryegrass	25	30 lbs per acre	
Streambank, Riparian	Elymus sp.	Saint Perennial Ryegrass	20	30 lbs per acre	
Streambank, Riparian	Festuca rubra	Creeping Red Fescue	25	30 lbs per acre	
TOTAL MIX					76.2

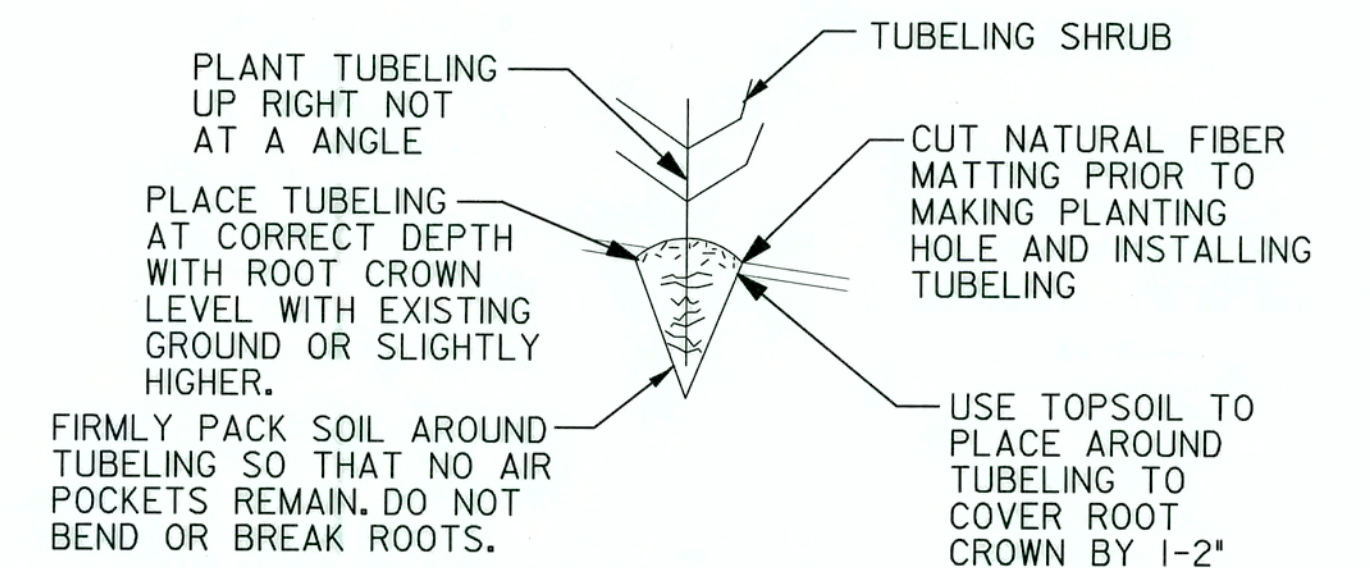
Turfgrass Seed Mix

Zone	Botanical Name	Common Name	Percent Mix	Seeding Rate	Quantity (lbs.)
Turfgrass	Poa pratensis	Kentucky Blue Grass	33	50 lbs per acre	
Turfgrass	Lolium perenne	Perennial Rye Grass	33	50 lbs per acre	
Turfgrass	Schedonorus phoenix	Tall Fescue	34	50 lbs per acre	
TOTAL MIX					3.5

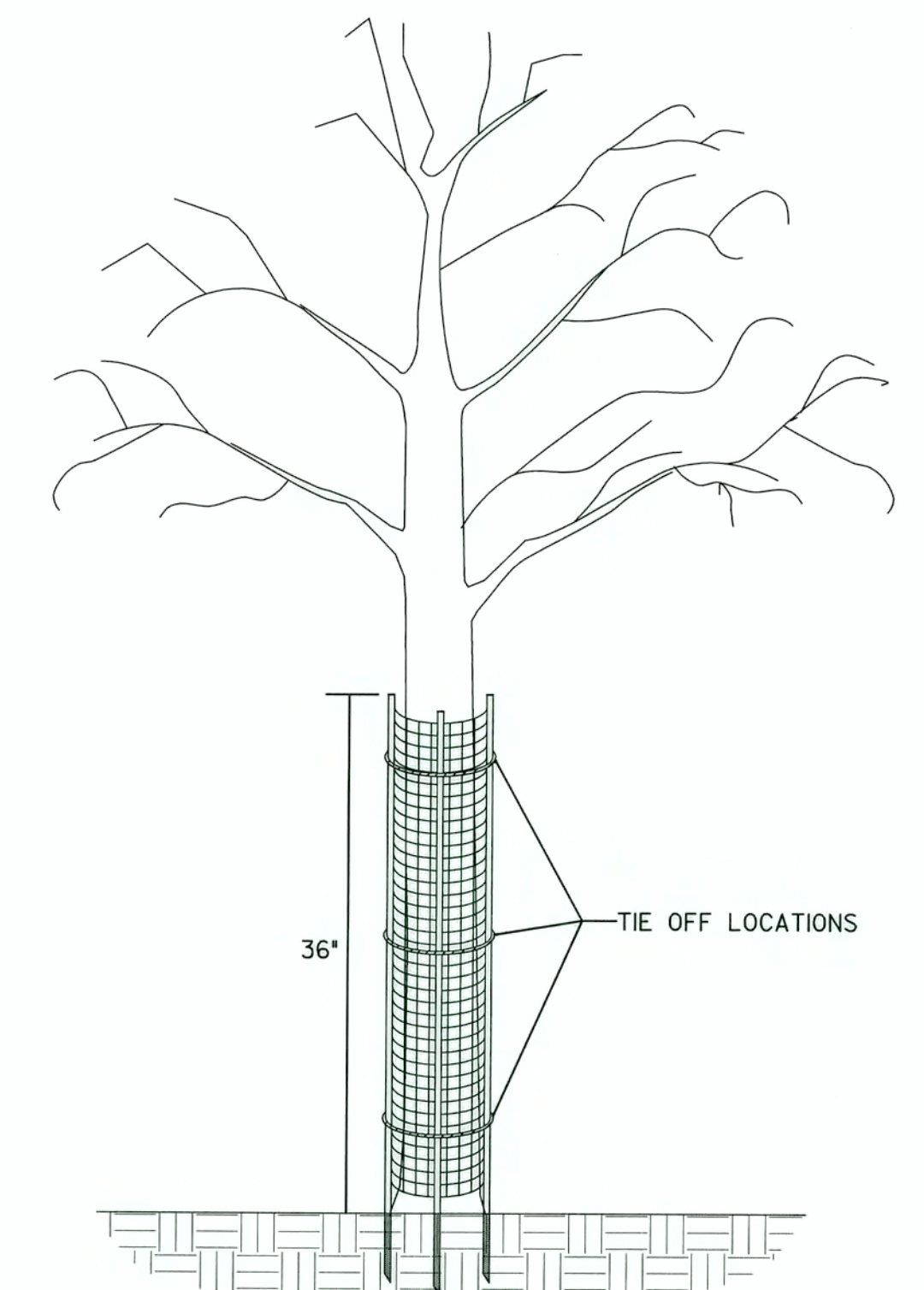


LIVE STAKE

NOTE:
1. LIVE STAKES MUST BE INSTALLED WHILE DORMANT (LATE FALL TO EARLY SPRING). DO NOT ALLOW THEM TO DRY OUT.



TUBELING DETAIL
NOT TO SCALE



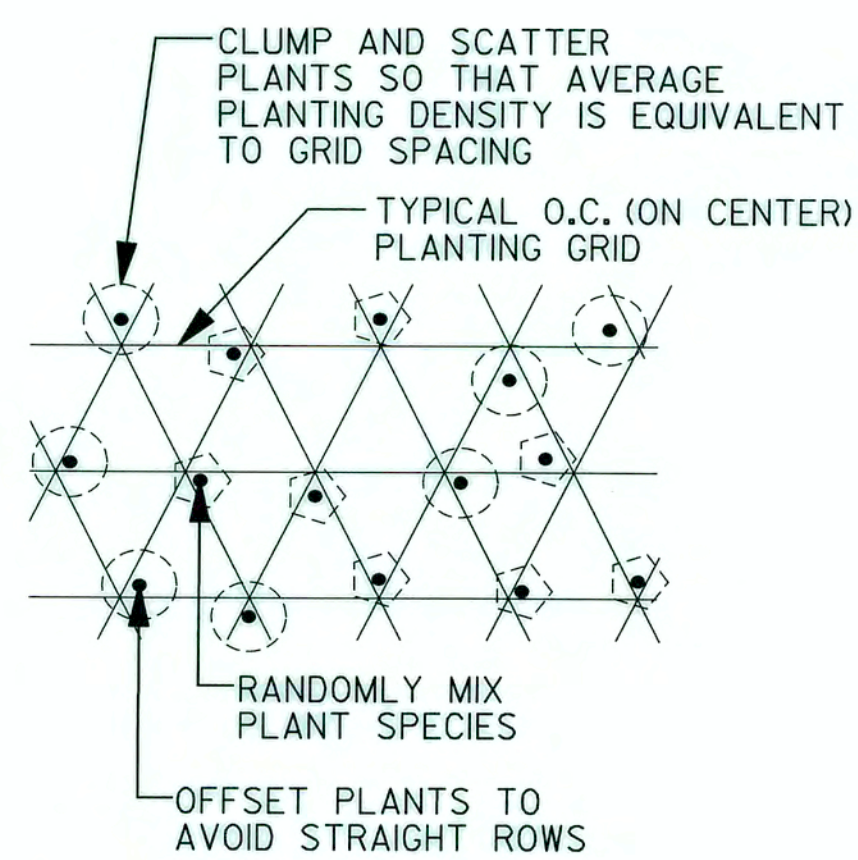
INSTALLATION INSTRUCTIONS:

1. PLANT TREE ACCORDING TO STANDARD SPECIFICATIONS.
2. PLACE THE SHELTER AROUND THE TREE.
3. DRIVE LONGER STAKES INTO THE GROUND.
4. TIE-OFF ROPE ENDS AROUND TREE.

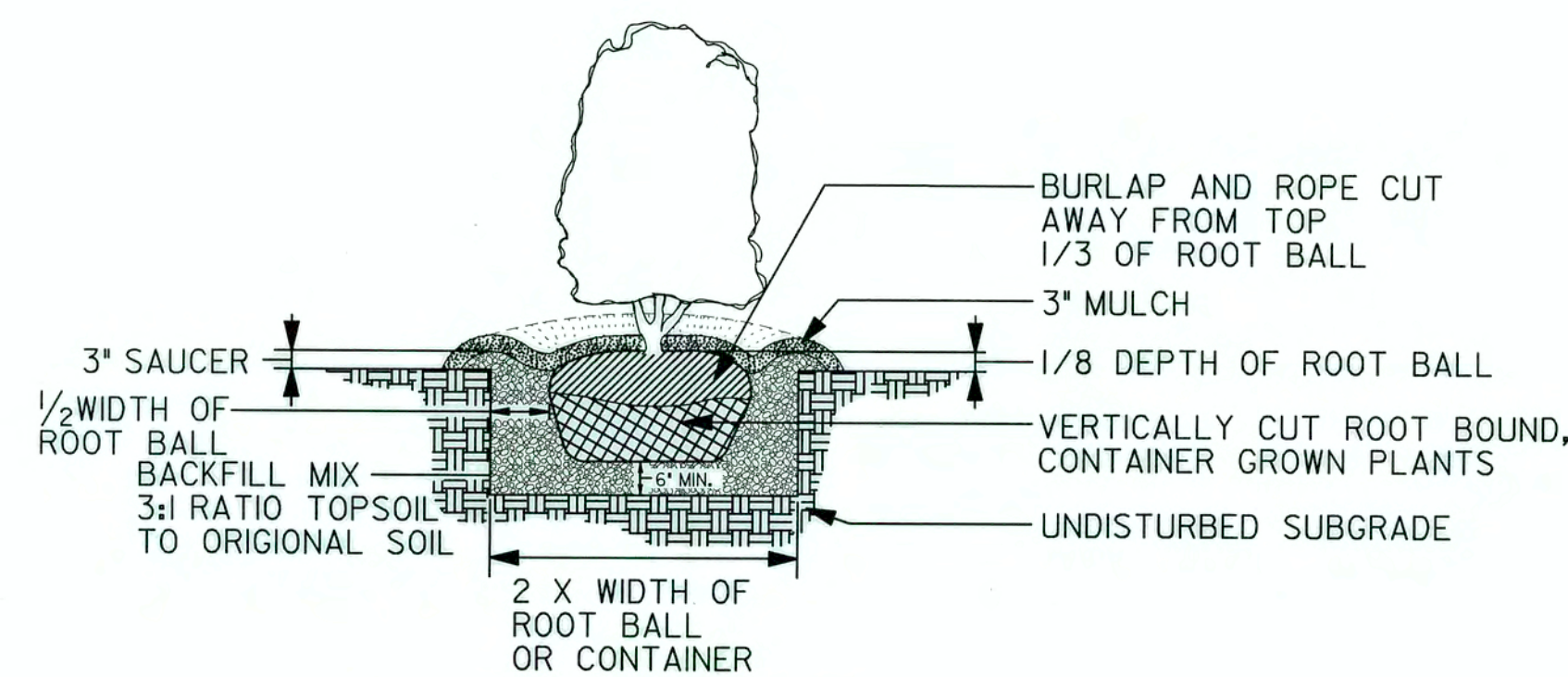
PRODUCT NOTES:

1. TREE SHELTER SHALL BE A.M. LEONARD TREE BARK PROTECTOR OR APPROVED EQUAL.
2. TREE SHELTER MUST HAVE LONGER, HARDY STAKES FOR INSERTION INTO GROUND TO PROVIDE SUPPORT.

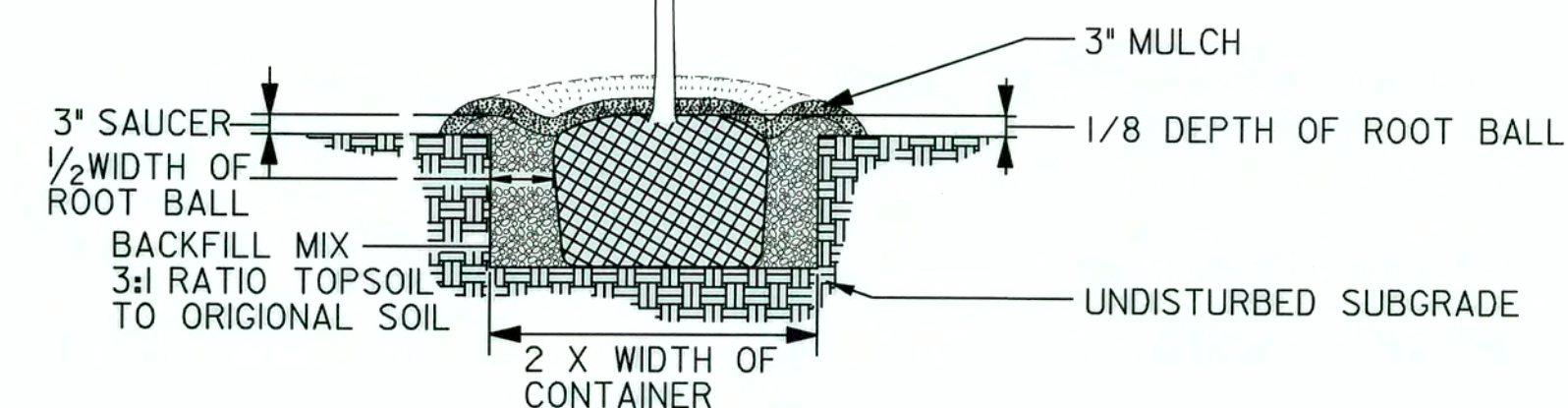
TREE SHELTER DETAIL
NOT TO SCALE



RANDOM PLANTING PATTERN
NOT TO SCALE




SHRUB PLANTING DETAIL
B & B AND CONTAINER GROWN
NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL
CONTAINER GROWN
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND



CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

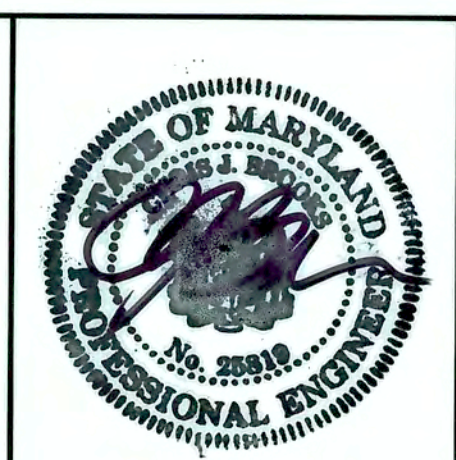
DATE: 8/27/13

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MARYLAND

Storm Water Management Division
Bureau of Environmental Services
6751 Columbia Gateway Drive, Suite 514
Columbia, Maryland 21046-3143
(410) 313-6444

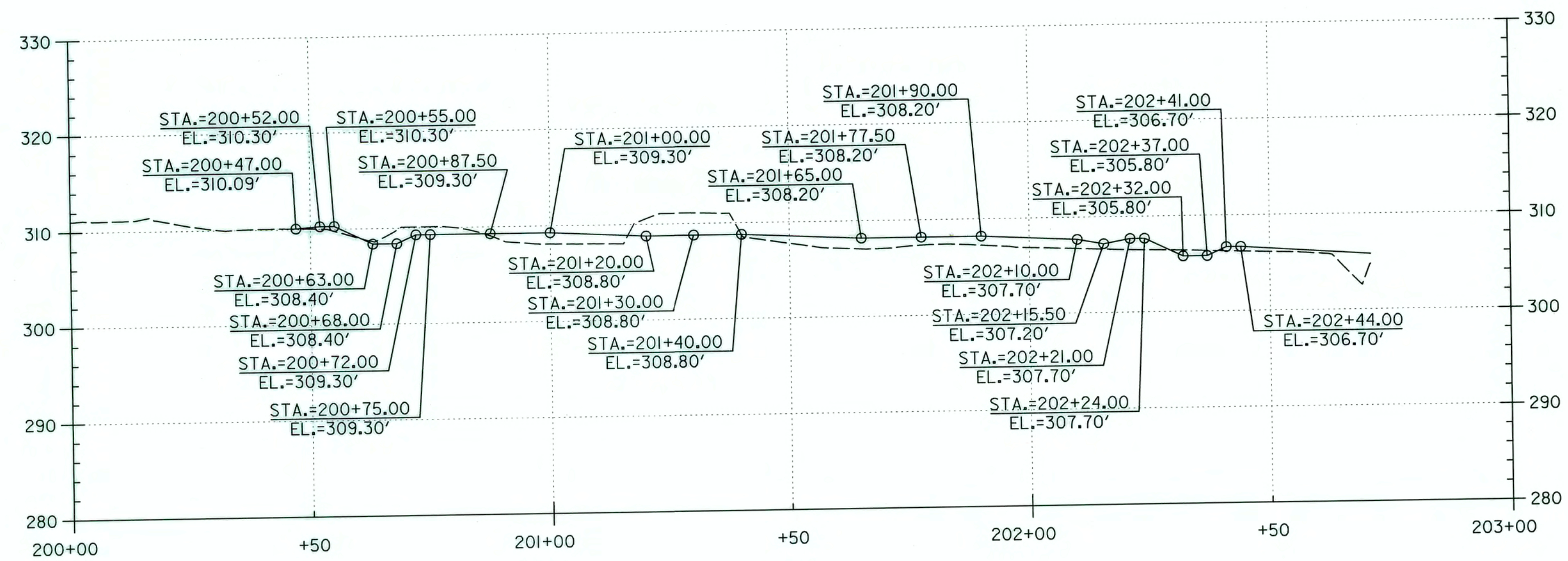


DES: LN					
DRN: MR					
CHK: CB					
DATE: 8/27/13	BY	NO.	REVISION	DATE	

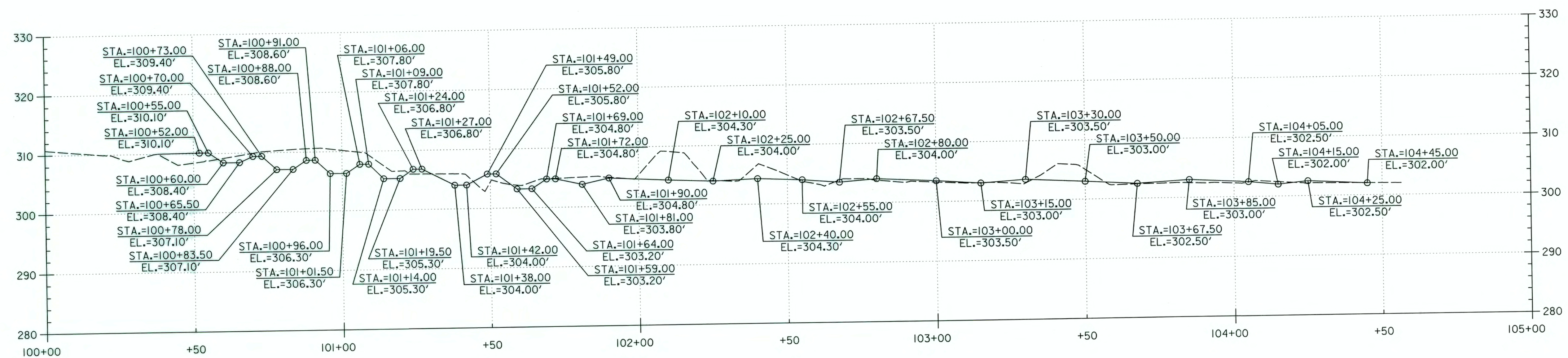
HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
WHITEROCK COURT STREAM REHABILITATION PROJECT
CAPITAL PROJECT #D-1158
ELECTION DISTRICT NO. 5, HOWARD COUNTY MARYLAND
TAX MAP 46, GRID/BLOCK NO. 6
WAIVER PETITION #WP-13-193

SCALE: AS NOTED
SHEET: 16 OF 17

STREAM STABILIZATION DETAILS



EAST BRANCH



WEST BRANCH MAINSTEM

SCALE
HORIZONTAL: 1" = 20' VERTICAL: 1" = 10'

LEGEND
--- EXISTING — PROPOSED

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature]
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

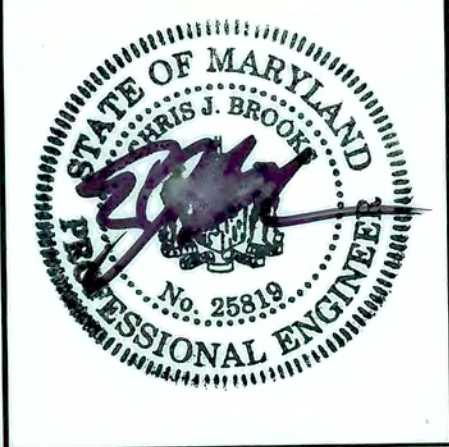
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PROFILE SHEET

SCALE
AS SHOWN
SHEET
17 OF 17