

STANDARD RESPONSIBILITY NOTES:

- I (WE) CERTIFY THAT:
 - ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT (ASCD) BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS.
 - ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. RESPONSIBLE PERSONNEL ON SITE: _____
 - IF APPLICABLE, THE APPROPRIATE ENCLOSURE WILL BE CONSTRUCTED AND MAINTAINED ON SEDIMENT BASIN(S) INCLUDED IN THIS PLAN. SUCH STRUCTURE(S) WILL BE IN COMPLIANCE WITH THE ANNE ARUNDEL COUNTY CODE.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHT, AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THE PLAN.
- FOR INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT AND/OR TEMPORARY STABILIZATION PER THE ASCD VEGETATIVE ESTABLISHMENT SHALL BE COMPLETED WITHIN THREE CALENDAR DAYS FOR THE SURFACE OF ALL CONTROLS DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- THE GRADING AND SEDIMENT CONTROL APPROVAL ON THIS PLAN EXTENDS ONLY TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE.
- THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH FEDERAL, STATE OR COUNTY REQUIREMENTS PERTAINING TO ENVIRONMENTAL ISSUES.
- THE DEVELOPER MUST REQUEST THAT THE SEDIMENT AND EROSION CONTROL INSPECTOR APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THE ORDINANCE.
- ALL MATERIAL SHALL BE TAKEN TO A SITE WITH AN APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- FIRST PHASE INSPECTION AND APPROVAL OF THE SEDIMENT AND EROSION CONTROL INSPECTOR SHALL BE REQUIRED UPON COMPLETION OF THE INSTALLATION OF EROSION AND SEDIMENT CONTROLS PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE INITIAL APPROVAL BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IS GIVEN. INSPECTION AND PERMITS MAY ALSO REQUIRE THAT AN INSPECTION AND CERTIFICATION OF THE INSTALLATION OF SEDIMENT CONTROL ALSO BE PERFORMED BY A DESIGN PROFESSIONAL PRIOR TO CONSTRUCTION COMMENCING.
- APPROVAL FROM THE INSPECTOR MUST BE REQUESTED ON FINAL STABILIZATION OF ALL SITES PRIOR TO REMOVAL OF SEDIMENT AND EROSION CONTROLS.
- EXISTING TOPOGRAPHY MUST BE FIELD VERIFIED BY RESPONSIBLE PERSONNEL TO THE SATISFACTION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING WORK.

ANNE ARUNDEL COUNTY MARYLAND

DEPARTMENT OF PUBLIC WORKS

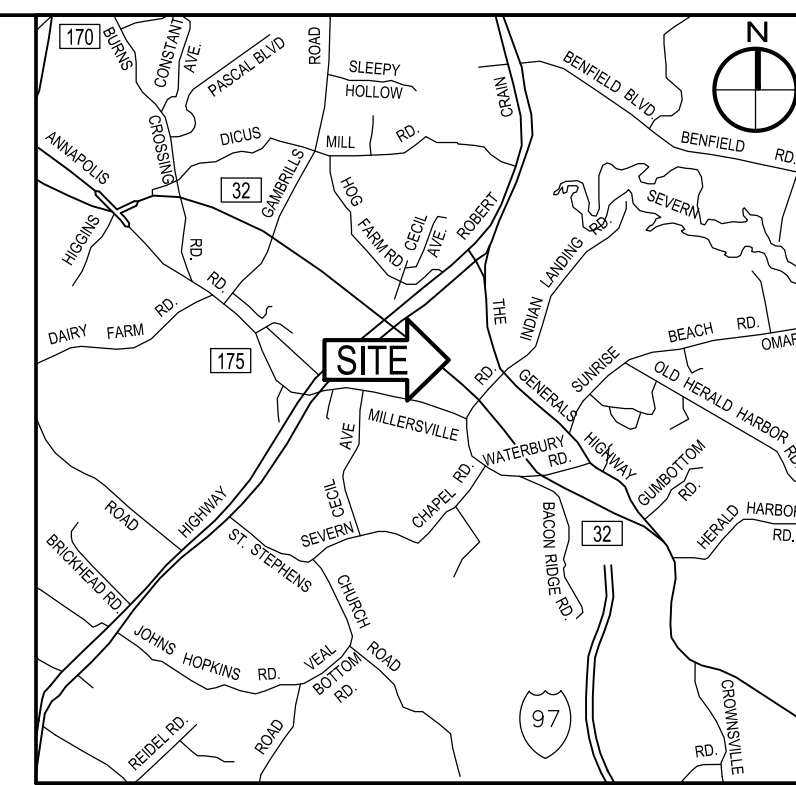
MILLERSVILLE PARK

SITE DEVELOPMENT

DESIGN DEVELOPMENT SUBMISSION - MARCH 6th 2024

1580 MILLERSVILLE ROAD, MILLERSVILLE, MARYLAND 21108

PROJECT NO.: P567102, CONTRACT NO. P56702



VICINITY MAP
SCALE: 1" = 2,000'

SIGNATURE OF DEVELOPER/OWNER _____ DATE _____
 PRINT NAME: David Braun
 TITLE: Engineer Administrator
 ADDRESS: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS
 2662 RIVA ROAD
 ANNAPOLIS, MARYLAND 21401
 TELEPHONE NUMBER: (410) 222 - 7500
 EMAIL ADDRESS: pwbrown78@aaacounty.org

CONSULTANT'S CERTIFICATION

THE DEVELOPER'S PLAN TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION ON THE PROPERTY COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ASCD PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

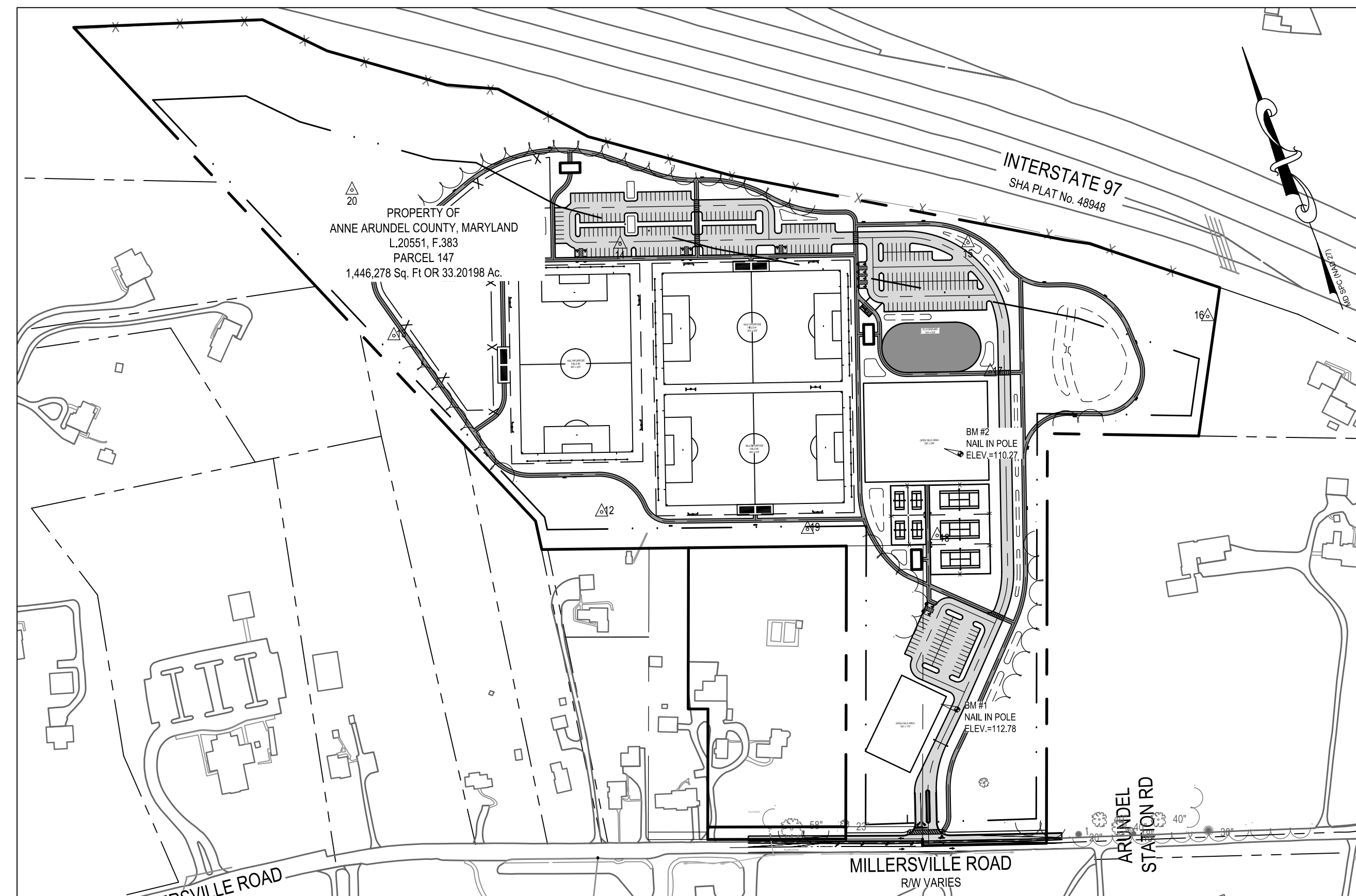
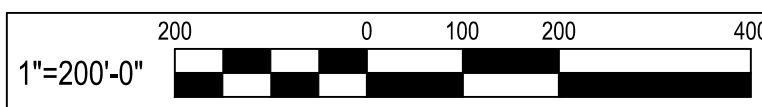
MD P.E. LICENSE # 27734
 MD LAND SURVEYOR LICENSE # _____
 MD LANDSCAPE ARCHITECT # _____
 NAME: JESSE LINDSAY, P.E.
 FIRM NAME: TRANSYSTEMS
 ADDRESS: 300 E. JOPPA ROAD, SUITE 200
 CITY: _____ TOWNSHIP: _____ STATE: MD ZIP CODE: 21286 DATE: _____

NOTE: THE CONSULTANT'S CERTIFICATION MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IF THE SITE LIES WITHIN THE SEVERN RIVER WATERSHED.

GENERAL NOTES:

- THE PROPERTY DELINEATED HEREON IS SHOWN ON TAX MAP 30, GRID 23, PARCEL 147 AND IS LISTED IN THE NAME OF ANNE ARUNDEL COUNTY, MARYLAND AS RECORDED IN LIBER 20551 AT FOLIO 383 AMONG THE LAND RECORDS OF ANNE ARUNDEL COUNTY, MARYLAND.
- THE PROPERTY LIES WITHIN ZONE 'X' (AREA OF 0.2% ANNUAL CHANCE OF FLOOD) AS PLOTTED ON NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP NO. 24003C0145E DATED OCTOBER 16, 2012 FOR ANNE ARUNDEL COUNTY, MARYLAND.
- NO TITLE REPORT FURNISHED. THIS SURVEY IS NOT A COMPREHENSIVE RECORD OF APPURTENANCES OR ENCUMBRANCES OF RECORD OR IN USE.
- THE BEARINGS SHOWN ON THIS SURVEY ARE IN THE MARYLAND COORDINATE SYSTEM NAD 83/91. THE VERTICAL DATUM IS NAVD 88.
- THIS FIELD RUN BOUNDARY AND TOPOGRAPHIC SURVEY WAS PERFORMED BY PENNONI ASSOCIATES, INC. ON OR ABOUT JULY 17, 2017.
- NO EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITION WAS OBSERVED AT THE TIME OF THE SURVEY.
- THE EXISTENCE OF VEGETATED OR TIDAL WETLANDS, WATERS OF THE U.S., AND/OR HAZARDOUS WASTES HAS BEEN NEITHER INVESTIGATED NOR CONFIRMED DURING THE PERFORMANCE OF THIS SURVEY.
- ADDITIONAL SPOT ELEVATIONS RESIDE IN THE ELECTRONIC VERSION OF THIS DRAWING BUT ARE NOT PLOTTED HEREON.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE DESCRIPTION OF THE UNDERGROUND UTILITIES AS SHOWN HEREON WERE BASED SOLELY UPON FIELD OBSERVATIONS AND HAVE NOT BEEN COMPARED TO OR VERIFIED WITH RECORD UTILITY DRAWINGS OR FIELD TEST PITS. THE SIZE, TYPE AND LOCATION OF THE UTILITY LINES SHOULD BE VERIFIED BY THE USER OF THIS DRAWING.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITION INFORMATION. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO THE START OF ANY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" AT 1-800-257-7777 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION WORK.
- THE WORDS "CERTIFY" OR "CERTIFICATION" AS USED HEREON ARE UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE UNDERSIGNED SURVEYOR, BASED UPON HIS BEST KNOWLEDGE, INFORMATION, AND BELIEF, AS SUCH, IT DOES NOT CONSTITUTE A GUARANTEE NOR A WARRANTY, EXPRESSED OR IMPLIED.
- THE WORDS "CERTIFY" OR "CERTIFICATION" AS USED HEREON ARE UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE UNDERSIGNED SURVEYOR, BASED UPON HIS BEST KNOWLEDGE, INFORMATION, AND BELIEF, AS SUCH, IT DOES NOT CONSTITUTE A GUARANTEE NOR A WARRANTY, EXPRESSED OR IMPLIED.
- TRACK-TYPE VEHICLES ARE PROHIBITED FROM TRAVELING ON OR ACROSS PAVED SIDE ROADWAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY REMOVAL OF ALL DUST AND MUD ON ALL THE ROADS DUE TO CONTRACTOR ARRIVING AND LEAVING THE JOB SITE AND AS DIRECTED BY THE ENGINEER OR ANNE ARUNDEL COUNTY INSPECTOR.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR APPLYING AND OBTAINING ALL TRADE (ELECTRICAL, BUILDING AND PLUMBING) PERMITS.

CAUTION:
IF THIS DRAWING IS A REDUCTION,
USE THE GRAPHIC SCALES.



LOCATION MAP
SCALE: 1" = 200'

SURVEY TRAVERSE CONTROL LISTING

PT#	NORTHING	EASTING	ELEV.	DESCRIPTION
12	506766.4929	1415114.9708	106.09	REBAR & CAP
13	507249.0065	1414850.7958	110.50	REBAR & CAP
14	507258.4102	1415343.3482	108.45	REBAR & CAP
15	507009.6916	1416000.4328	107.73	REBAR & CAP
16	506697.4365	1416398.6339	102.48	REBAR & CAP
17	506750.1887	1415948.7274	110.52	REBAR & CAP
18	506479.8047	1415730.6068	110.56	TRV GPS
19	506585.1880	1415490.6821	109.09	TRV GPS
20	507553.8405	1414876.9288	137.18	REBAR & CAP

BENCHMARK CONTROL LISTING

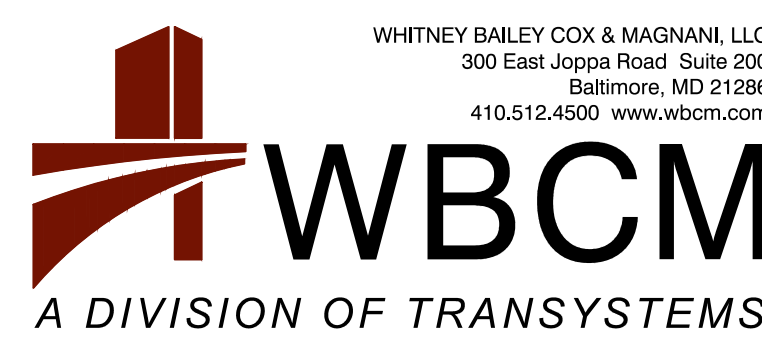
PT#	NORTHING	EASTING	ELEV.	DESCRIPTION
1	506638.2926	1415806.9341	110.27	NAIL IN POLE
2	506159.0594	1415615.8779	112.78	NAIL IN POLE

INDEX OF DRAWINGS

SHEET NO.	SHEET TITLE
CIVIL	
1.	COVER SHEET
2.	OVERALL EXISTING CONDITIONS PLAN
3.	EXISTING CONDITIONS AND DEMOLITION PLAN
4.	EXISTING CONDITIONS AND DEMOLITION PLAN
5.	EXISTING CONDITIONS AND DEMOLITION PLAN
6.	SOIL BORING LOG
7.	SOIL BORING LOG
8.	SOIL BORING LOG
9.	OVERALL SITE LAYOUT PLAN
10.	SITE LAYOUT PLAN
11.	SITE LAYOUT PLAN
12.	SITE LAYOUT PLAN
13.	MILLERSVILLE ROAD ENTRANCE PLAN
14.	SITE DETAILS
15.	SITE DETAILS
16.	SITE DETAILS
17.	OVERALL GRADING AND STORM DRAIN PLAN
18.	GRADING AND STORM DRAIN PLAN
19.	GRADING AND STORM DRAIN PLAN
20.	STORM DRAIN PROFILES
21.	OVERALL STORM WATER MANAGEMENT PLAN
22.	STORM WATER MANAGEMENT DETAILS - MICRO-BIORETENTION
23.	STORM WATER MANAGEMENT DETAILS - BIORETENTION
24.	STORM WATER MANAGEMENT DETAILS - BIOSWALE
25.	IRRIGATION PLAN
26.	IRRIGATION DETAILS
27.	OVERALL EROSION AND SEDIMENT CONTROL
28.	EROSION AND SEDIMENT CONTROL PLAN
29.	EROSION AND SEDIMENT CONTROL PLAN
30.	EROSION AND SEDIMENT CONTROL NOTES
31.	EROSION AND SEDIMENT CONTROL DETAILS
32.	EROSION AND SEDIMENT CONTROL DETAILS
33.	LANDSCAPE PLAN
34.	LANDSCAPE NOTES AND DETAILS
35.	FOREST STAND DELINEATION PLAN
36.	FOREST CONSERVATION PLAN
37.	FOREST CONSERVATION NOTES AND DETAILS

LEGEND

DESCRIPTION	EXISTING	REMOVE	NEW
BUILDING	EX. BLDG	EX. BLDG	
BITUMINOUS CONCRETE PAVING	EX. MACADAM		
CONCRETE WALK	EX. CONC. WALK		
GRAVEL PAVING	EX. GRAVEL		
MILL AND OVERLAY	EX. MACADAM		
ATHLETIC COURT SURFACE			
CONC. CURB WALL			
METAL FENCE	X		X
SIGN (ONE-POST)	+ 316.5		+ 441.5
SPOT ELEVATION	- 315		440
MAJOR CONTOUR	- 316		441
MINOR CONTOUR			
O/H ELECTRIC	OHE	OHE	
U/G ELECTRIC	E		
U/G STORM	D		
U/G WATER	W		
PROPERTY LINE			
BLDG SETBACK LINE			
SOIL BORING	B#		
SURVEY LIMITS			
TREES	10'	10'	10'
TREE LINE			
DRAIN INLET			
POWER POLE			
STORM DRAIN MH			
STREET LIGHT			
TRAVERSE STATION	800		
WELL			
WATER VALVE			
SOIL LINE			
STEEP SLOPES (15% OR GREATER)			
LIMIT OF DISTURBANCE			LOD
FLOW ARROW			



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.
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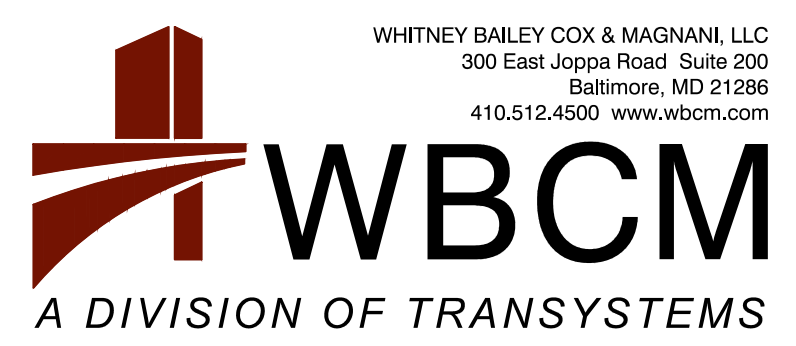
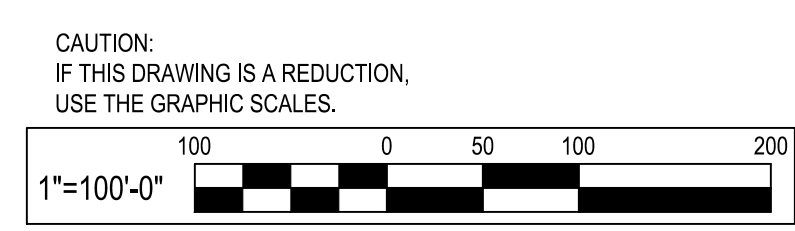
REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY			
DEPARTMENT OF PUBLIC WORKS			
APPROVED _____ DATE _____	APPROVED _____ DATE _____	SCALE: AS SHOWN	MILLERSVILLE PARK
CHIEF ENGINEER _____	PROJECT MANAGER _____	DRAWN BY: R.S.S.	
APPROVED _____ DATE _____	APPROVED _____ DATE _____	CHECKED BY: R.W.H.	COVER SHEET
ASSISTANT CHIEF ENGINEER _____	CHIEF, RIGHT-OF-WAY _____	SHEET NO. 01 OF 37	
		PROJECT NO.: P567102	
		CONTRACT NO.: P56702	



LEGEND

DESCRIPTION	EXISTING
BUILDING	EX. BLDG
BITUMINOUS CONCRETE PAVING	EX. MACADAM
CONCRETE WALK	EX. CONC. WALK
GRAVEL PAVING	EX. GRAVEL
MILL AND OVERLAY	EX. MACADAM
ATHLETIC COURT SURFACE	
CONC. CURB	
WALL	
METAL FENCE	X
SIGN (ONE-POST)	× 316.5
SPOT ELEVATION	316
MAJOR CONTOUR	316
MINOR CONTOUR	
O/H ELECTRIC	OHE
U/G ELECTRIC	E
U/G STORM	D
U/G WATER	W
PROPERTY LINE	
BLDG SETBACK LINE	
SOIL BORING	B#
SURVEY LIMITS	
TREES	10' 6'
TREE LINE	
DRAIN INLET	
POWER POLE	
STORM DRAIN MH	
STREET LIGHT	
TRAVERSE STATION	900
WELL	
WATER VALVE	
SOIL LINE	Bldg (C) Eur (B)
STEEP SLOPES (15% OR GREATER)	



WHITNEY BAILEY COX & MAGNANI, LLC
300 East Joppa Road, Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

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NO.	DESCRIPTION	BY	DATE

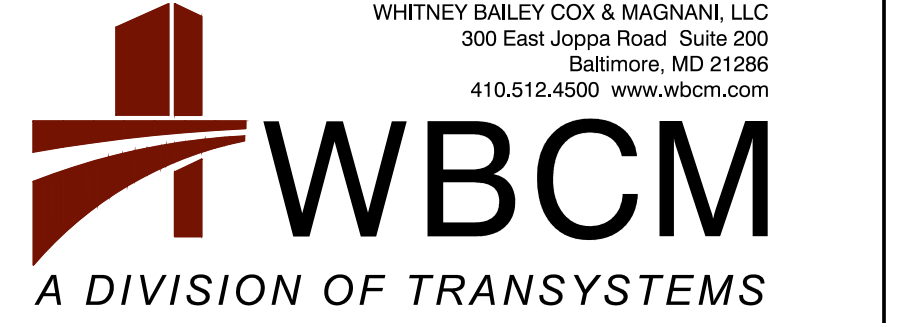
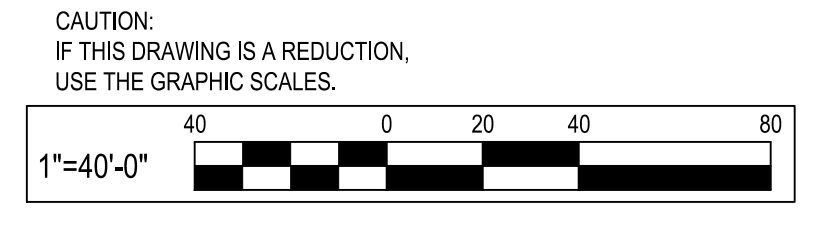
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 100'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		OVERALL EXISTING CONDITIONS PLAN	
CHECKED BY: R.W.H.		SHEET NO. 02 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	

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- DEMOLITION**
- D-1 SAW CUT BITUMINOUS CONCRETE PAVING.
 - D-2 REMOVE AND DISPOSE OF BITUMINOUS CONCRETE PAVING.
 - D-3 REMOVE AND DISPOSE OF EXISTING DWELLING, BARN'S AND SHED.
 - D-4 REMOVE AND DISPOSE OF GRAVEL PAVING.
 - D-5 REMOVE AND DISPOSE OF CONCRETE WALK.
 - D-7 REMOVE AND DISPOSE OF EXISTING HVAC EQUIPMENT, OIL TANK AND ASSOCIATED PIPING.
 - D-8 REMOVE EXISTING WOODED AREA TO THE EXTENT SHOWN.
 - D-9 REMOVE AND ABANDON EXISTING WELL PER COMAR REGULATIONS, WITH A LICENSED WELL DRILLER.
 - D-10 REMOVE AND DISPOSE OF EXISTING UTILITY POLES AND OVERHEAD POWER LINES.
 - D-11 MILL 1 1/2" OF EXISTING BITUMINOUS PAVING.
 - D-12 REMOVE EXISTING TREE.

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 MATCH LINE SEE SHEET 06 EXISTING CONDITIONS AND DEMOLITION PLAN



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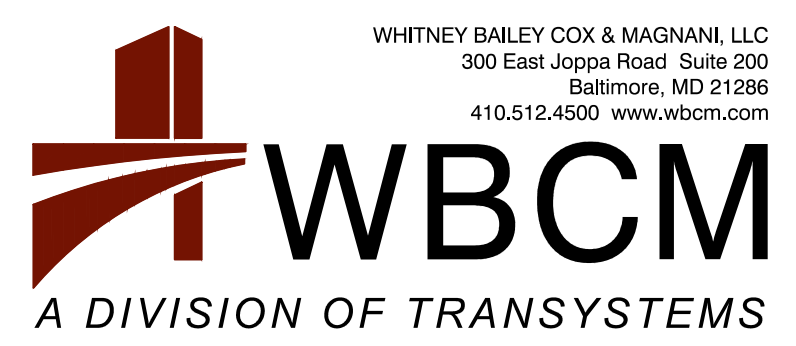
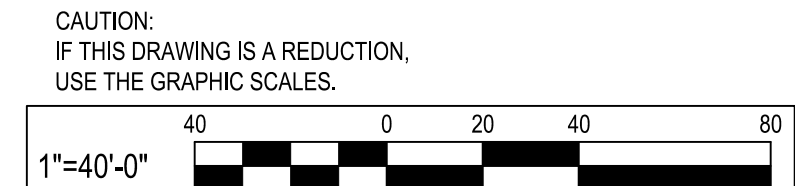
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 40'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		CHECKED BY: R.W.H.	
SHEET NO. 03 OF 37		PROJECT NO.: P567102	
CONTRACT NO.: P56702		EXISTING CONDITIONS AND DEMOLITION PLAN	

MATCH LINE SEE SHEET NO. 03 EXISTING CONDITIONS AND DEMOLITION PLAN



DESCRIPTION	EXISTING	REMOVE
BUILDING	EX. BLDG	EX. BLDG
BITUMINOUS CONCRETE PAVING	EX. MACADAM	
CONCRETE WALK	EX. CONC. WALK	
GRAVEL PAVING	EX. GRAVEL	
MILL AND OVERLAY	EX. MACADAM	
ATHLETIC COURT SURFACE		
CONC. CURB		
WALL		
METAL FENCE	X	
SIGN (ONE-POST)		
SPOT ELEVATION	× 316.5	
MAJOR CONTOUR	315	
MINOR CONTOUR	316	
O/H ELECTRIC	OHE	OHE
UG ELECTRIC	E	
UG STORM	D	
UG WATER	W	
PROPERTY LINE		
BLDG SETBACK LINE		
SOIL BORING	B#	
SURVEY LIMITS		
TREES	10' 5'	10' 5'
TREE LINE		
DRAIN INLET		
POWER POLE		
STORM DRAIN MH		
STREET LIGHT		
TRAVERSE STATION	900	
WELL		
WATER VALVE		
SOIL LINE	B#(C) E#(B)	
STEEP SLOPES (15% OR GREATER)		

DEMOLITION
D-1 SAW CUT BITUMINOUS CONCRETE PAVING.
D-2 REMOVE AND DISPOSE OF BITUMINOUS CONCRETE PAVING.
D-3 REMOVE AND DISPOSE OF EXISTING DWELLING, BARN'S AND SHED.
D-4 REMOVE AND DISPOSE OF GRAVEL PAVING.
D-5 REMOVE AND DISPOSE OF CONCRETE WALK.
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D-9 REMOVE AND ABANDON EXISTING WELL PER COMAR REGULATIONS, WITH A LICENSED WELL DRILLER.
D-10 REMOVE AND DISPOSE OF EXISTING UTILITY POLES AND OVERHEAD POWER LINES.
D-11 MILL 1 1/2" OF EXISTING BITUMINOUS PAVING.
D-12 REMOVE EXISTING TREE.



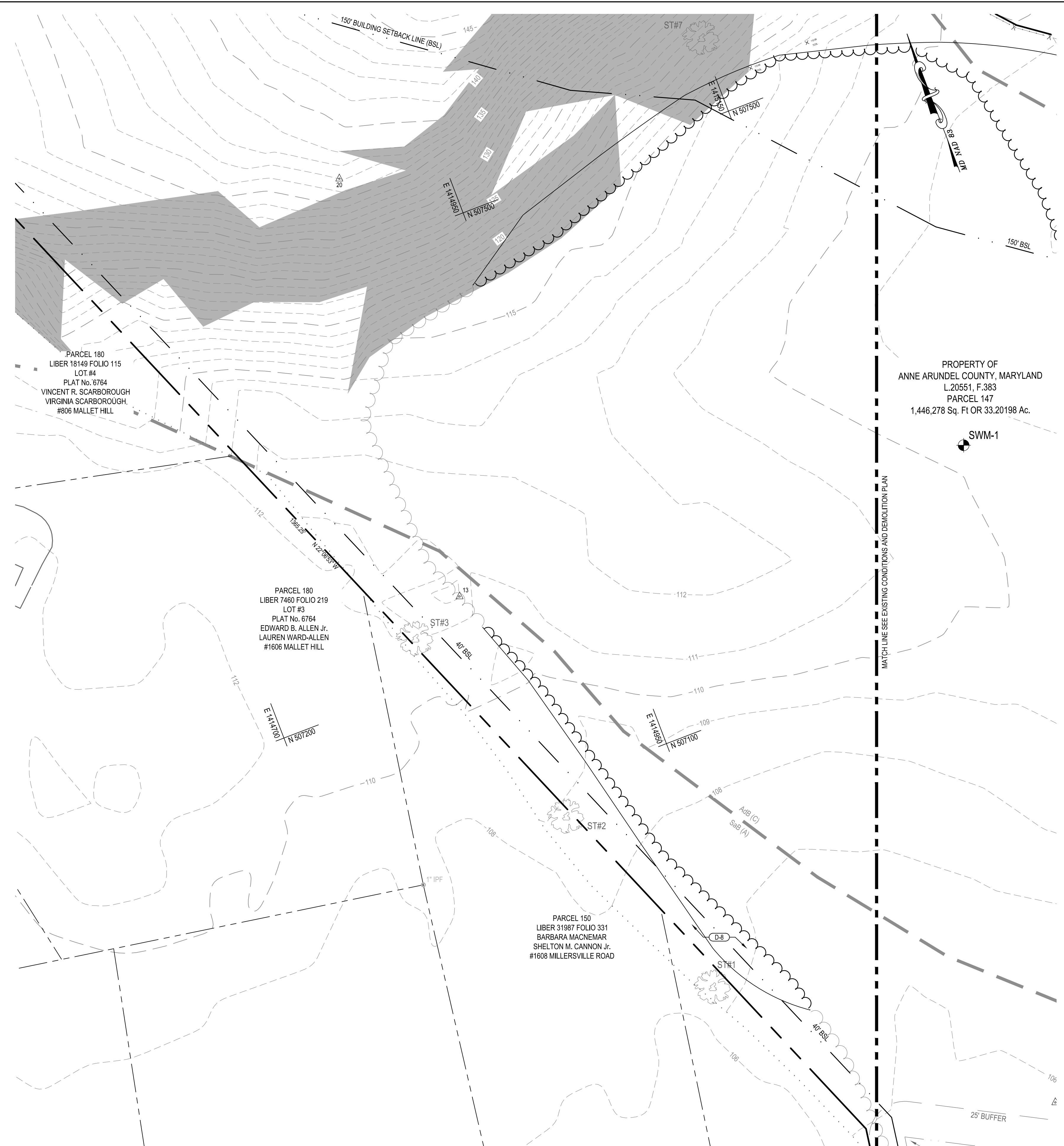
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REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 40'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		EXISTING CONDITIONS AND DEMOLITION PLAN	
CHECKED BY: R.W.H.		SHEET NO. 04 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	

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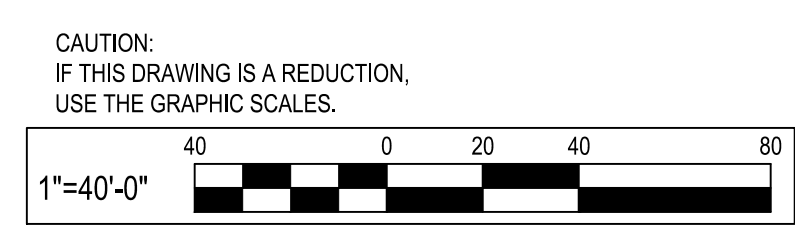
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SPECIMEN TREE TABLE						
Point No.	Species	Common Name	Size	DBH (in.)	Condition	Condition Comments
ST-1	<i>Liriodendron tulipifera</i>	Tulip poplar	38	57	Fair	Approx. DBH, Heavily covered in greenbrier, limb damage
ST-2	<i>Liriodendron tulipifera</i>	Tulip poplar	33	49.5	Good	Approx. DBH, Heavily covered in greenbrier
ST-3	<i>Liriodendron tulipifera</i>	Tulip poplar	31.5	47.25	Good	
ST-4	<i>Quercus alba</i>	White oak	53	79.5	Good	
ST-5	<i>Liriodendron tulipifera</i>	Tulip poplar	35.5	53.25	Good	Splits just above BH
ST-6	<i>Liriodendron tulipifera</i>	Tulip poplar	31	46.5	Good	Lower trunk angled off slope
ST-7	<i>Acer rubrum</i>	Red maple	30.5	45.75	Good	Splits just above BH
ST-8	<i>Liriodendron tulipifera</i>	Tulip poplar	40	60	Good	
ST-9	<i>Liriodendron tulipifera</i>	Tulip poplar	31.5	47.25	Good	
ST-10	<i>Liriodendron tulipifera</i>	Tulip poplar	34.5	51.75	Good	
ST-11	<i>Liriodendron tulipifera</i>	Tulip poplar	31.5	47.25	Poor	Trunk rot
ST-12	<i>Acer rubrum</i>	Red maple	33	49.5	Good	
ST-13	<i>Quercus palustris</i>	Pin oak	31.5	47.25	Good	
ST-14	<i>Acer rubrum</i>	Red maple	34.5	51.75	Fair	Limb dieback noted
ST-15	<i>Liriodendron tulipifera</i>	Tulip poplar	73.5	110.25	Good	Splits just above BH
ST-16	<i>Quercus velutina</i>	Black oak	48	72	Good	
ST-17	<i>Acer saccharinum</i>	Silver maple	41.5	62.25	Fair	Some dieback noted
ST-18	<i>Liriodendron tulipifera</i>	Tulip poplar	36	54	Poor	Major trunk rot

DESCRIPTION	EXISTING	REMOVE
	EX. BLDG	EX. BLDG
BITUMINOUS CONCRETE PAVING	EX. MACADAM	
CONCRETE WALK	EX. CONC. WALK	
GRAVEL PAVING	EX. GRAVEL	
MILL AND OVERLAY	EX. MACADAM	
ATHLETIC COURT SURFACE		
CONC. CURB		
WALL		
METAL FENCE	X	
SIGN (ONE-POST)		
SPOT ELEVATION	× 316.5	
MAJOR CONTOUR	- 315	
MINOR CONTOUR	- 316	
O/H ELECTRIC	OHE	OHE
U/G ELECTRIC	E	
U/G STORM	D	
U/G WATER	W	
PROPERTY LINE		
BLDG SETBACK LINE		
SOIL BORING	SB#	
SURVEY LIMITS		
TREES	10' FT	10' FT
TREE LINE		
DRAIN INLET		
POWER POLE		
STORM DRAIN MH		
STREET LIGHT		
TRAVERSE STATION	900	
WELL		
WATER VALVE		
SOIL LINE	Bu/C (C) Eu/B (B)	
STEEP SLOPES (15% OR GREATER)		

- DEMOLITION**
- D-1 SAW CUT BITUMINOUS CONCRETE PAVING.
 - D-2 REMOVE AND DISPOSE OF BITUMINOUS CONCRETE PAVING.
 - D-3 REMOVE AND DISPOSE OF EXISTING DWELLING, BARN'S AND SHED.
 - D-4 REMOVE AND DISPOSE OF GRAVEL PAVING.
 - D-5 REMOVE AND DISPOSE OF CONCRETE WALK.
 - D-7 REMOVE AND DISPOSE OF EXISTING HVAC EQUIPMENT, OIL TANK AND ASSOCIATED PIPING.
 - D-8 REMOVE EXISTING WOODED AREA TO THE EXTENT SHOWN.
 - D-9 REMOVE AND ABANDON EXISTING WELL PER COMAR REGULATIONS, WITH A LICENSED WELL DRILLER.
 - D-10 REMOVE AND DISPOSE OF EXISTING UTILITY POLES AND OVERHEAD POWER LINES.
 - D-11 MILL 1 1/2" OF EXISTING BITUMINOUS PAVING.
 - D-12 REMOVE EXISTING TREE.



WHITNEY BAILEY COX & MAGNANI, LLC
300 East Joppa Road, Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

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A DIVISION OF TRANSYSTEMS

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 # 27234 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

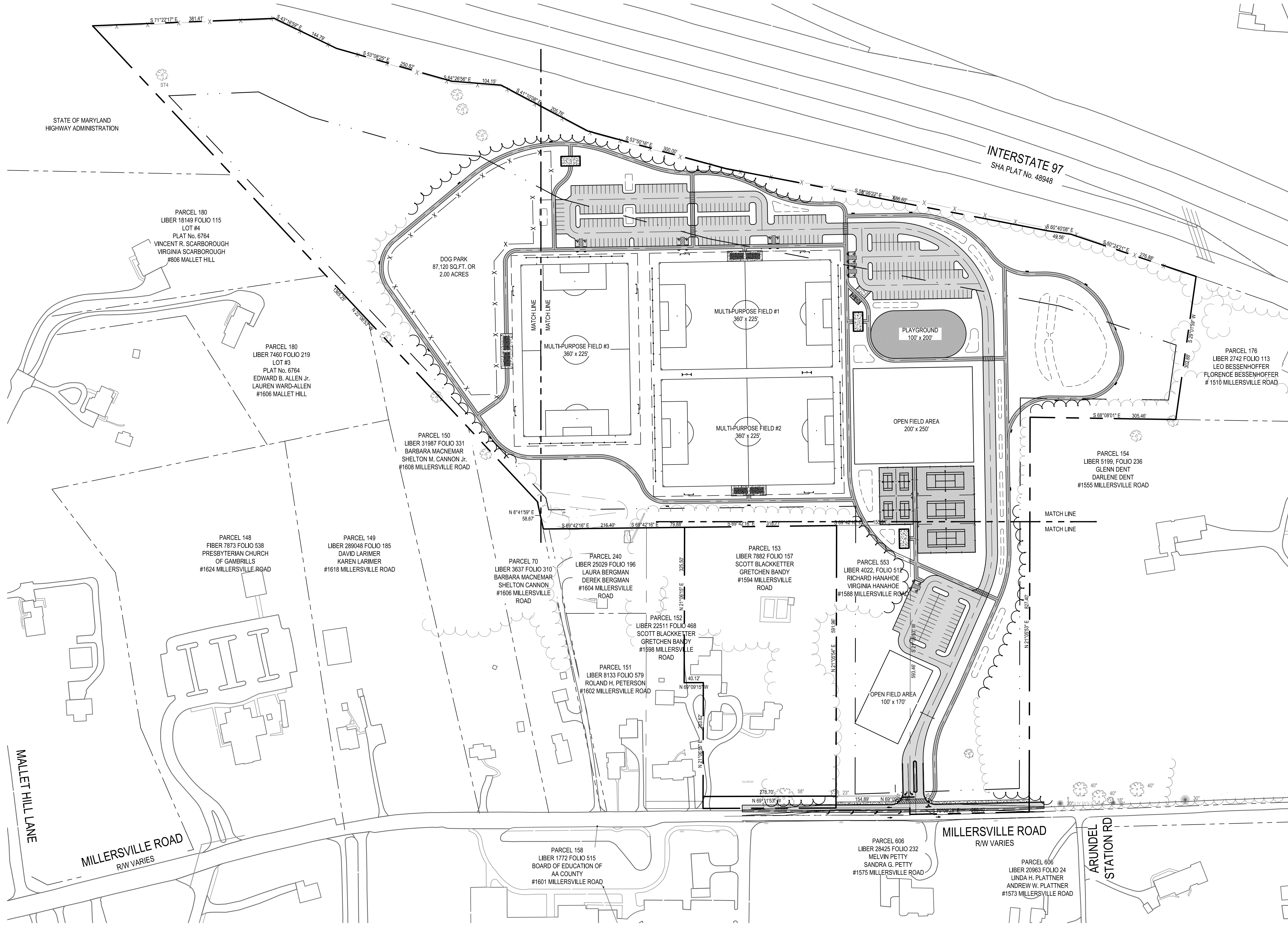
MILLERSVILLE PARK

APPROVED _____ DATE _____	APPROVED _____ DATE _____	SCALE: 1" = 40'
CHIEF ENGINEER	PROJECT MANAGER	DRAWN BY: R.S.S.
APPROVED _____ DATE _____	APPROVED _____ DATE _____	CHECKED BY: R.W.H.
ASSISTANT CHIEF ENGINEER	CHIEF, RIGHT-OF-WAY	SHEET NO. 05 OF 37
		PROJECT NO.: P567102
		CONTRACT NO.: P56702

EXISTING CONDITIONS AND DEMOLITION PLAN

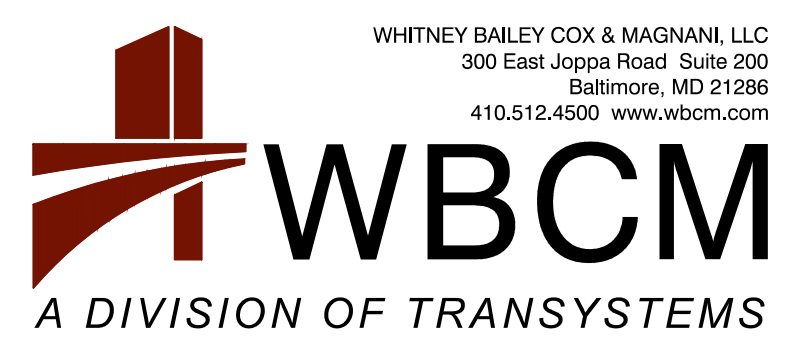
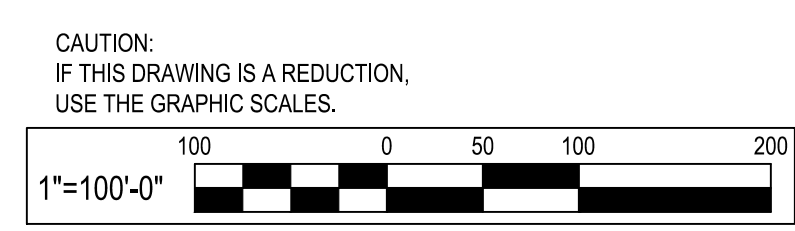
BORING LOG		BORING B-1							
The Robert B. Balter Company Geotechnical and Environmental Engineers Materials and Construction Inspection and Testing Telephone No. (410) 363-1555 www.balterco.com									
CLIENT: Gaudreau, Inc.		PROJECT NAME: Millersville Tennis Center							
PROJECT LOCATION: Anne Arundel County, MD		PROJECT NUMBER: 16875-0							
DATE TESTED: 4/4/2018		DATE TESTED: 4/4/2018							
RIG: Tracked Mobile B45		METHOD: Hollow Stem Auger							
SAMPLER: 2-in OD SS		HAMMER: 140#							
FALL: 30"		AUTO? Yes							
DATE STARTED: 3/16/18		COMPLETED: 3/16/18							
DRILLER: Dennis Strademan		HELPER: Kenny Putman							
REVIEWED BY: Matt Leone		SITE DELAYS:							
LOCATION: As Shown		BULK SAMPLES:							
DEPTH (ft)	SAMPLE TYPE AND NUMBER	N VALUE OR SPT BLOWN* OR REC. NIN %	WATER LEVEL	MATERIAL DESCRIPTION	PP (lb)	NMC %	FOOD	ATTERBERG	REMARKS
0	S1 2-2-3	4	1.6	Topsoil approximately 12 inches					
1	S2 3-5-4	6		Moist, Soft to Stiff, Grayish Brown Sandy SILT	1.80	22	56	29	31 2
2	S3 2-3-4	4			1.50				
3	S4 3-4-3	7			0.60	25			
4	S5 5-6-8	15			0.70				
5	S6 2-3-4	7		Moist, Loose to Very Dense, Light Brown Silty SAND, siltstone concretions					7
6	S7 3-3-20	23							
7	S8 11-34	84							
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160									

BORING LOG		BORING SWM-2								
The Robert B. Bajer Company Geotechnical and Environmental Engineers Materials and Construction Inspection and Testing Telephone No. (410) 363-1555 www.ballico.com		PAGE 1 OF 1								
CLIENT: Gaudreau, Inc.		PROJECT NAME: Millersville Tennis Center								
PROJECT LOCATION: Anne Arundel County, MD		PROJECT NUMBER: 16875-0								
RIG: Tracked Mobile B45		METHOD: Hollow Stem Auger								
SAMPLER: 2-in OD SS		HAMMER: 140#								
DATE TESTED: 4/6/2018		DATE TESTED: 4/6/2018								
DATE STARTED: 3/16/18		COMPLETED: 3/16/18								
DRILLER: Dennis Strawdsman		HELPER: Kenny Putman								
REVIEWED BY: Matt Leone		SITE DELAYS:								
LOCATION: As Shown		BULK SAMPLES:								
DEPTH (ft)	SAMPLE TYPE AND NUMBER	N VALUE OR SPT BLOWN* OR REC NIN %	WATER LEVEL	WATER DEPTH (ft)	WATER ELEV (ft)	PP (ft)	NMC %	POD	ATTERBERG	REMARKS
1-2-3	4	5	1.0							
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LEGEND

NEW BUILDING	[Symbol]
NEW FULL DEPTH BITUMINOUS PAVING	[Symbol]
NEW OVERLAY BITUMINOUS PAVING	[Symbol]
NEW TENNIS COURT SURFACE	[Symbol]
NEW BITUMINOUS CONCRETE PEDESTRIAN TRAIL	[Symbol]
NEW CONCRETE WALK / PAD	[Symbol]
NEW CONCRETE CURB AND GUTTER	[Symbol]
NEW FENCE	[Symbol]



WHITNEY BAILEY COX & MAGNANI, LLC
300 East Joppa Road, Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

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 # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

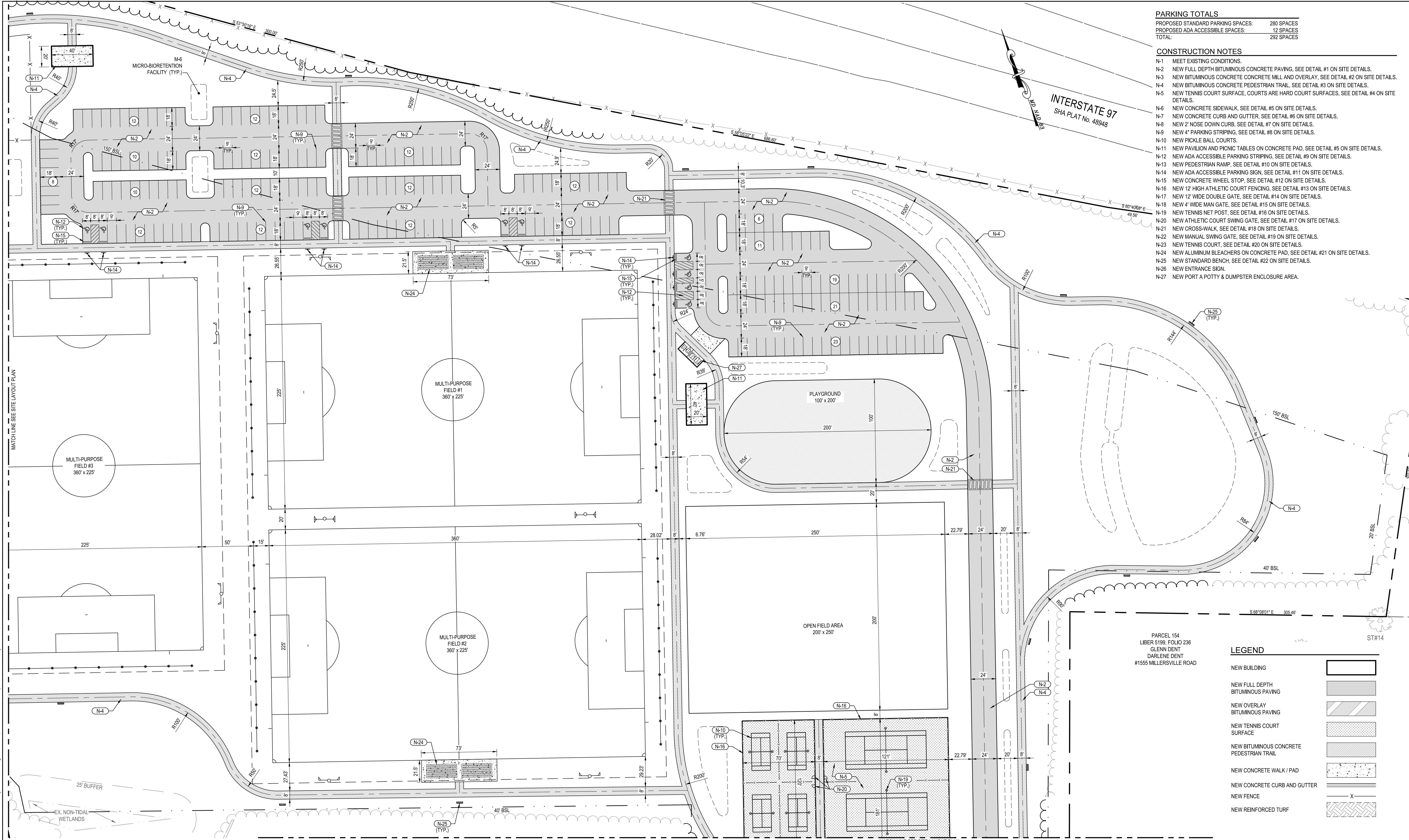
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 100'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		OVERALL SITE LAYOUT PLAN	
CHECKED BY: R.W.H.			
SHEET NO. 09 OF 37			
PROJECT NO.: P567102			
CONTRACT NO.: P56702			

P:\2017\17141801\Drawings\07-Site\17141801-C201-Site Layout_Plan.dwg Mar 06, 2024 12:20pm Plot By: remith

PARKING TOTALS	
PROPOSED STANDARD PARKING SPACES:	280 SPACES
PROPOSED ADA ACCESSIBLE SPACES:	12 SPACES
TOTAL:	292 SPACES

- CONSTRUCTION NOTES**
- N-1 MEET EXISTING CONDITIONS.
 - N-2 NEW FULL DEPTH BITUMINOUS CONCRETE PAVING, SEE DETAIL #1 ON SITE DETAILS.
 - N-3 NEW BITUMINOUS CONCRETE MILL AND OVERLAY, SEE DETAIL #2 ON SITE DETAILS.
 - N-4 NEW BITUMINOUS CONCRETE PEDESTRIAN TRAIL, SEE DETAIL #3 ON SITE DETAILS.
 - N-5 NEW TENNIS COURT SURFACE, COURTS ARE HARD COURT SURFACES, SEE DETAIL #4 ON SITE DETAILS.
 - N-6 NEW CONCRETE SIDEWALK, SEE DETAIL #5 ON SITE DETAILS.
 - N-7 NEW CONCRETE CURB AND GUTTER, SEE DETAIL #6 ON SITE DETAILS.
 - N-8 NEW 2" NOSE DOWN CURB, SEE DETAIL #7 ON SITE DETAILS.
 - N-9 NEW 4" PARKING STRIPING, SEE DETAIL #8 ON SITE DETAILS.
 - N-10 NEW PICKLE BALL COURTS.
 - N-11 NEW PAVILION AND PICNIC TABLES ON CONCRETE PAD, SEE DETAIL #5 ON SITE DETAILS.
 - N-12 NEW ADA ACCESSIBLE PARKING STRIPING, SEE DETAIL #9 ON SITE DETAILS.
 - N-13 NEW PEDESTRIAN RAMP, SEE DETAIL #10 ON SITE DETAILS.
 - N-14 NEW ADA ACCESSIBLE PARKING SIGN, SEE DETAIL #11 ON SITE DETAILS.
 - N-15 NEW CONCRETE WHEEL STOP, SEE DETAIL #12 ON SITE DETAILS.
 - N-16 NEW 12' HIGH ATHLETIC COURT FENCING, SEE DETAIL #13 ON SITE DETAILS.
 - N-17 NEW 12' WIDE DOUBLE GATE, SEE DETAIL #14 ON SITE DETAILS.
 - N-18 NEW 4' WIDE MAN GATE, SEE DETAIL #15 ON SITE DETAILS.
 - N-19 NEW TENNIS NET POST, SEE DETAIL #16 ON SITE DETAILS.
 - N-20 NEW ATHLETIC COURT SWING GATE, SEE DETAIL #17 ON SITE DETAILS.
 - N-21 NEW CROSS-WALK, SEE DETAIL #18 ON SITE DETAILS.
 - N-22 NEW MANUAL SWING GATE, SEE DETAIL #19 ON SITE DETAILS.
 - N-23 NEW TENNIS COURT, SEE DETAIL #20 ON SITE DETAILS.
 - N-24 NEW ALUMINUM BLEACHERS ON CONCRETE PAD, SEE DETAIL #21 ON SITE DETAILS.
 - N-25 NEW STANDARD BENCH, SEE DETAIL #22 ON SITE DETAILS.
 - N-26 NEW ENTRANCE SIGN.
 - N-27 NEW PORT A POTTYS & DUMPSTER ENCLOSURE AREA.

INTERSTATE 97
SHA PLAT No. 48948

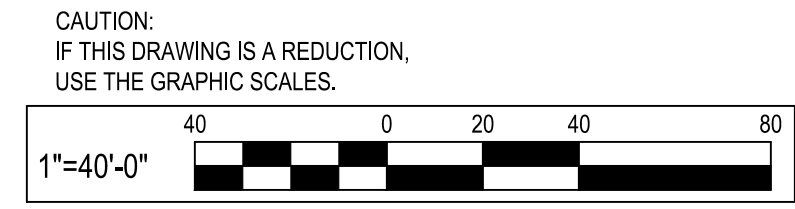


PARCEL 154
LIBER 5199, FOLIO 236
GLENN DENT
DARLENE DENT
#1555 MILLERSVILLE ROAD

LEGEND

NEW BUILDING	[Symbol]
NEW FULL DEPTH BITUMINOUS PAVING	[Symbol]
NEW OVERLAY BITUMINOUS PAVING	[Symbol]
NEW TENNIS COURT SURFACE	[Symbol]
NEW BITUMINOUS CONCRETE PEDESTRIAN TRAIL	[Symbol]
NEW CONCRETE WALK / PAD	[Symbol]
NEW CONCRETE CURB AND GUTTER	[Symbol]
NEW FENCE	[Symbol]
NEW REINFORCED TURF	[Symbol]

NOTE:
PROPOSED INDOOR TENNIS AND CLUBHOUSE BUILDINGS TO BE CONSTRUCTED BY OTHERS UNDER SEPARATE CONTRACT. SITE CONTRACTOR SHALL PROVIDE PAD PREPARATION AS INDICATED.



WHITNEY BAILEY COX & MAGNANI, LLC
300 East Joppa Road, Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

WBCM
A DIVISION OF TRANSYSTEMS

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 # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

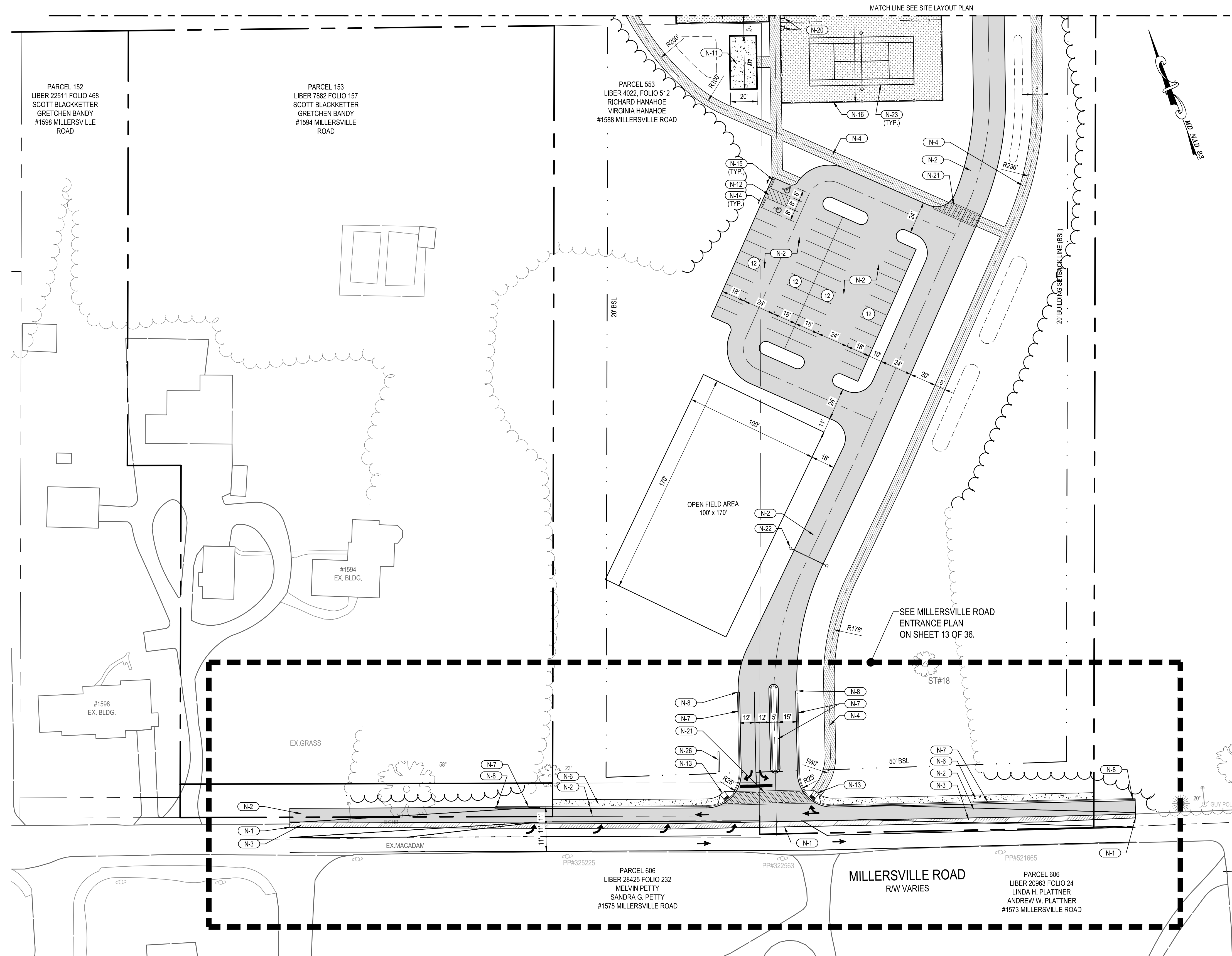
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED	DATE	APPROVED	DATE	SCALE: 1" = 40'
CHIEF ENGINEER		PROJECT MANAGER		DRAWN BY: R.S.S.
APPROVED	DATE	APPROVED	DATE	CHECKED BY: R.W.H.
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY		SHEET NO. 10 OF 37
				PROJECT NO.: P567102
				CONTRACT NO.: P56702

MILLERSVILLE PARK
SITE LAYOUT PLAN

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PARKING TOTALS

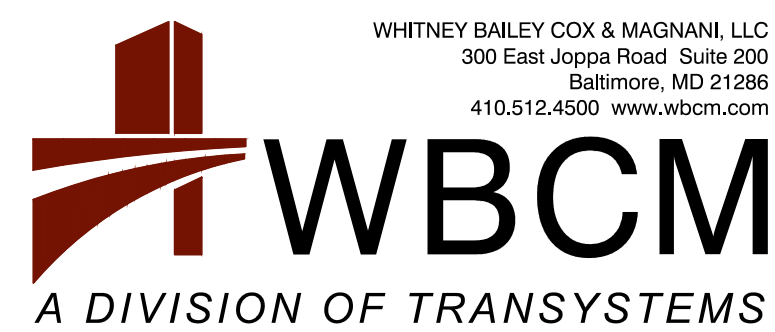
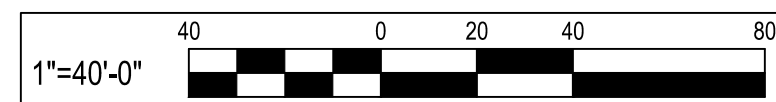
PROPOSED STANDARD PARKING SPACES:	280 SPACES
PROPOSED ADA ACCESSIBLE SPACES:	12 SPACES
TOTAL:	292 SPACES

- CONSTRUCTION NOTES**
- N-1 MEET EXISTING CONDITIONS.
 - N-2 NEW FULL DEPTH BITUMINOUS CONCRETE PAVING, SEE DETAIL #1 ON SITE DETAILS.
 - N-3 NEW BITUMINOUS CONCRETE MILL AND OVERLAY, SEE DETAIL #2 ON SITE DETAILS.
 - N-4 NEW BITUMINOUS CONCRETE PEDESTRIAN TRAIL, SEE DETAIL #3 ON SITE DETAILS.
 - N-5 NEW TENNIS COURT SURFACE, COURTS ARE HARD COURT SURFACES, SEE DETAIL #4 ON SITE DETAILS.
 - N-6 NEW CONCRETE SIDEWALK, SEE DETAIL #5 ON SITE DETAILS.
 - N-7 NEW CONCRETE CURB AND GUTTER, SEE DETAIL #6 ON SITE DETAILS.
 - N-8 NEW 2" NOSE DOWN CURB, SEE DETAIL #7 ON SITE DETAILS.
 - N-9 NEW 4" PARKING STRIPING, SEE DETAIL #8 ON SITE DETAILS.
 - N-10 NEW PICKLE BALL COURTS.
 - N-11 NEW PAVILION AND PICNIC TABLES ON CONCRETE PAD, SEE DETAIL #5 ON SITE DETAILS.
 - N-12 NEW ADA ACCESSIBLE PARKING STRIPING, SEE DETAIL #9 ON SITE DETAILS.
 - N-13 NEW PEDESTRIAN RAMP, SEE DETAIL #10 ON SITE DETAILS.
 - N-14 NEW ADA ACCESSIBLE PARKING SIGN, SEE DETAIL #11 ON SITE DETAILS.
 - N-15 NEW CONCRETE WHEEL STOP, SEE DETAIL #12 ON SITE DETAILS.
 - N-16 NEW 12' HIGH ATHLETIC COURT FENCING, SEE DETAIL #13 ON SITE DETAILS.
 - N-17 NEW 12' WIDE DOUBLE GATE, SEE DETAIL #14 ON SITE DETAILS.
 - N-18 NEW 4' WIDE MAN GATE, SEE DETAIL #15 ON SITE DETAILS.
 - N-19 NEW TENNIS NET POST, SEE DETAIL #16 ON SITE DETAILS.
 - N-20 NEW ATHLETIC COURT SWING GATE, SEE DETAIL #17 ON SITE DETAILS.
 - N-21 NEW CROSS-WALK, SEE DETAIL #18 ON SITE DETAILS.
 - N-22 NEW MANUAL SWING GATE, SEE DETAIL #19 ON SITE DETAILS.
 - N-23 NEW TENNIS COURT, SEE DETAIL #20 ON SITE DETAILS.
 - N-24 NEW ALUMINUM BLEACHERS ON CONCRETE PAD, SEE DETAIL #21 ON SITE DETAILS.
 - N-25 NEW STANDARD BENCH, SEE DETAIL #22 ON SITE DETAILS.
 - N-26 NEW ENTRANCE SIGN.
 - N-27 NEW PORT A POTTYS & DUMPSTER ENCLOSURE AREA.

LEGEND

NEW BUILDING	
NEW FULL DEPTH BITUMINOUS PAVING	
NEW OVERLAY BITUMINOUS PAVING	
NEW TENNIS COURT SURFACE	
NEW BITUMINOUS CONCRETE PEDESTRIAN TRAIL	
NEW CONCRETE WALK / PAD	
NEW CONCRETE CURB AND GUTTER	
NEW FENCE	
NEW REINFORCED TURF	

CAUTION:
IF THIS DRAWING IS A REDUCTION,
USE THE GRAPHIC SCALES.



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Baltimore, MD 21286
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License # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 40'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		CHECKED BY: R.W.H.	
SHEET NO. 11 OF 37		PROJECT NO.: P567102	
CONTRACT NO.: P56702			

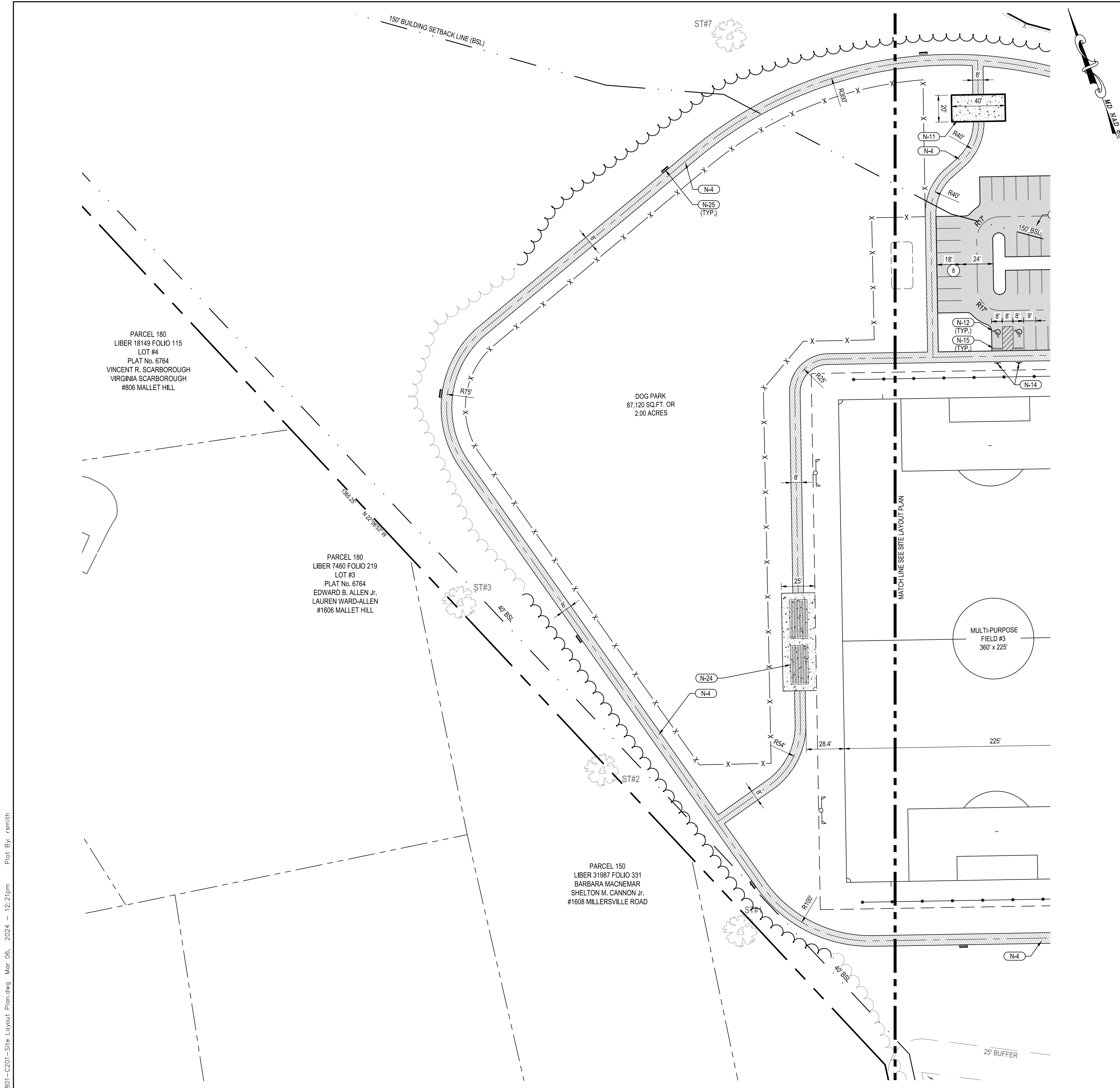
SITE LAYOUT PLAN

PARKING TOTALS	
PROPOSED STANDARD PARKING SPACES:	280 SPACES
PROPOSED ADA ACCESSIBLE SPACES:	12 SPACES
TOTAL:	292 SPACES

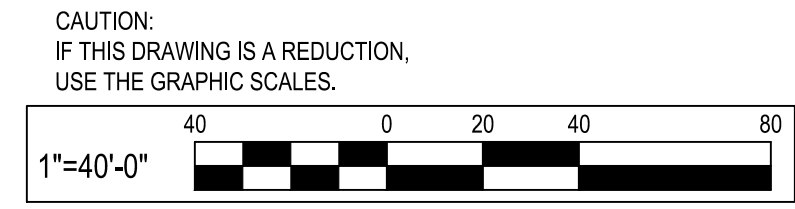
- CONSTRUCTION NOTES**
- N-1 MEET EXISTING CONDITIONS.
 - N-2 NEW FULL DEPTH BITUMINOUS CONCRETE PAVING, SEE DETAIL #1 ON SITE DETAILS.
 - N-3 NEW BITUMINOUS CONCRETE CONCRETE MILL AND OVERLAY, SEE DETAIL #2 ON SITE DETAILS.
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 - N-26 NEW ENTRANCE SIGN.
 - N-27 NEW PORT A POTTYS & DUMPSTER ENCLOSURE AREA.

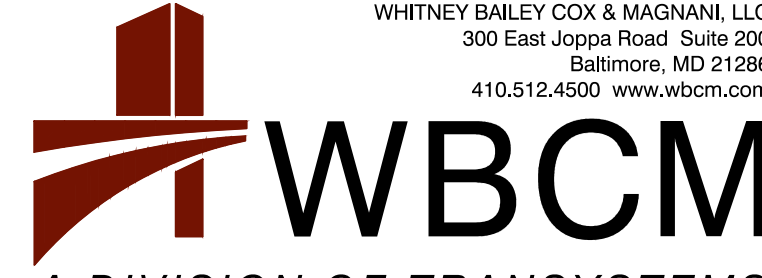
LEGEND

NEW BUILDING	
NEW FULL DEPTH BITUMINOUS PAVING	
NEW OVERLAY BITUMINOUS PAVING	
NEW TENNIS COURT SURFACE	
NEW BITUMINOUS CONCRETE PEDESTRIAN TRAIL	
NEW CONCRETE WALK / PAD	
NEW CONCRETE CURB AND GUTTER	
NEW FENCE	
NEW REINFORCED TURF	



P:\2017\17141801\Drawings\07-Site\17141801-C201-Site-Layout-Plan.dwg Mar 06, 2024 12:21pm Plot By: rsmith



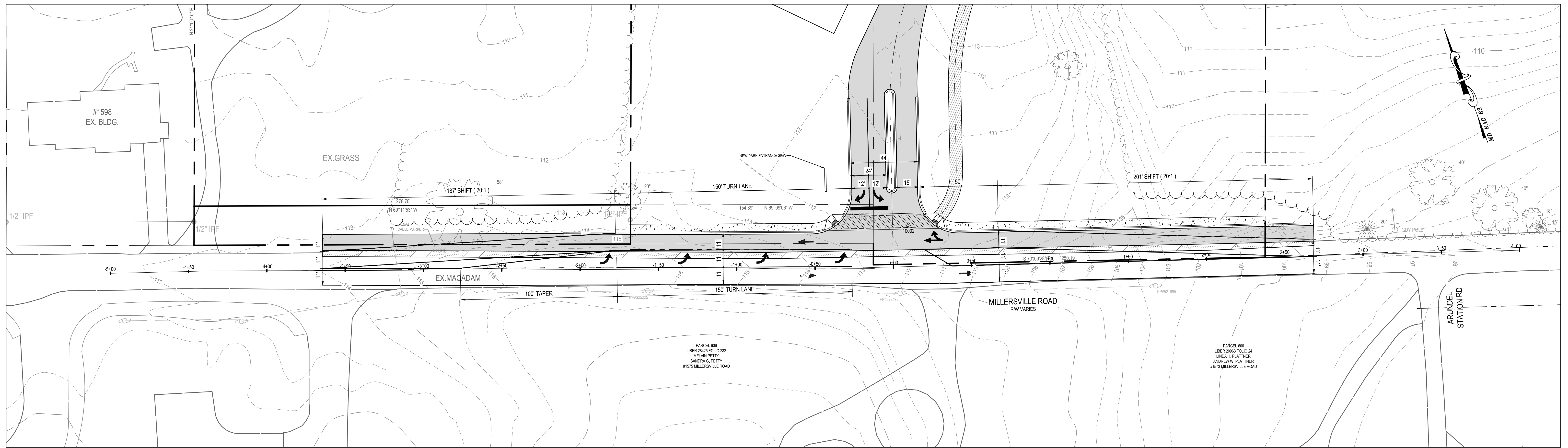

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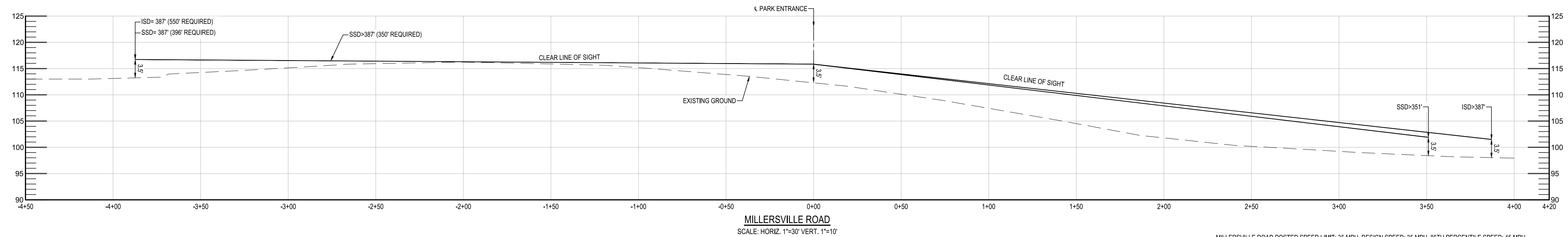
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY			
DEPARTMENT OF PUBLIC WORKS			
APPROVED _____	DATE _____	APPROVED _____	DATE _____
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED _____	DATE _____	APPROVED _____	DATE _____
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 40'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		CHECKED BY: R.W.H.	
SHEET NO. 12 OF 37		PROJECT NO.: P567102	
CONTRACT NO.: P56702		SITE LAYOUT PLAN	

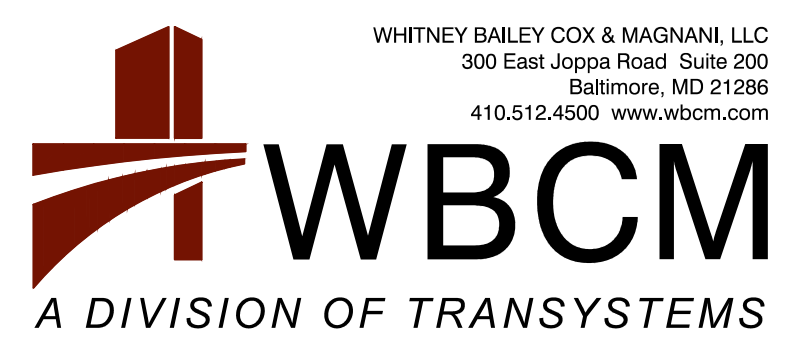
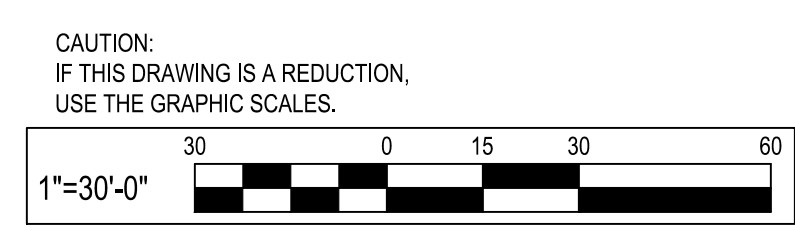


PLAN
SCALE: 1" = 30'



MILLERSVILLE ROAD
SCALE: HORIZ. 1"=30' VERT. 1"=10'

MILLERSVILLE ROAD POSTED SPEED LIMIT: 35 MPH, DESIGN SPEED: 35 MPH, 85TH PERCENTILE SPEED: 45 MPH
 THE HEIGHT OF EYE AND OBJECTS ARE 3.5 FT.
 STOPPING SIGHT DISTANCE SPEED (MPH): 45, COMPUTED DISTANCE 360 (FT.), ADJUSTED FOR GRADES > 3%
 +4% GRADE ADJUSTMENT: 0.9 (351 FT.), -4% GRADE ADJUSTMENT: 1.1 (396 FT.)
 [RIGHT TURN] INTERSECTION SIGHT DISTANCE SPEED (MPH): 45, COMPUTED DISTANCE 430.0 (FT.),
 ROUNDED 430 (FT.), +4% GRADE ADJUSTMENT: 0.9 (387 FT.)
 [LEFT TURN] INTERSECTION SIGHT DISTANCE SPEED (MPH): 45, COMPUTED DISTANCE 496.1 (FT.),
 ROUNDED 500 (FT.), -4% GRADE ADJUSTMENT: 1.1 (550 FT.)



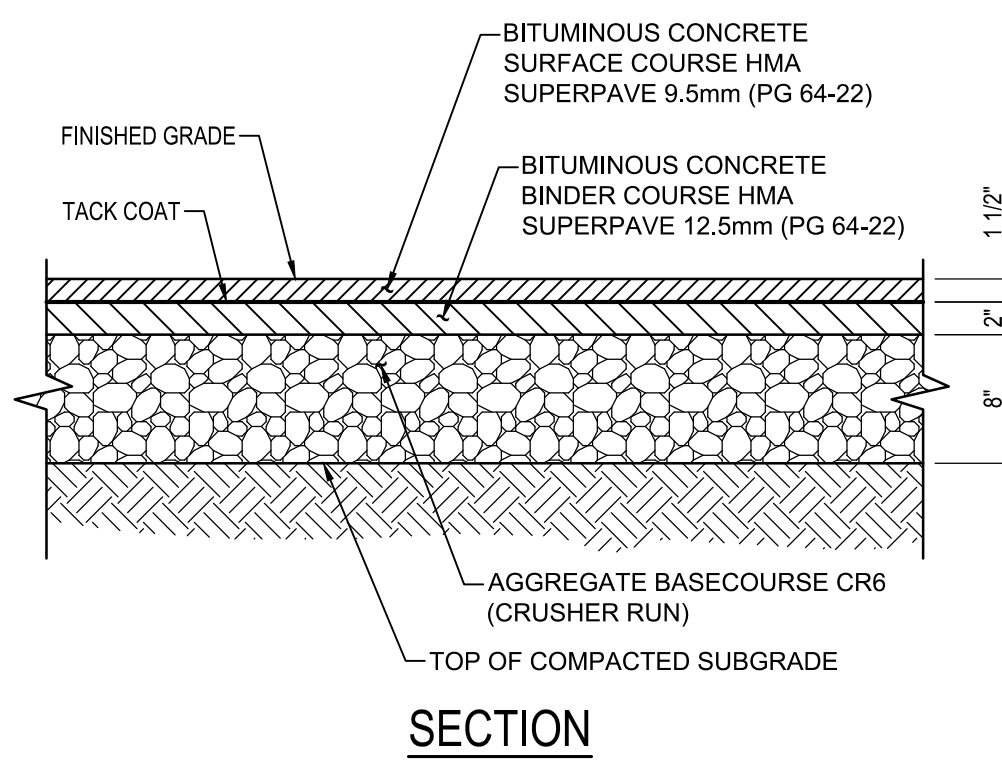
WHITNEY BAILEY COX & MAGNANI, LLC
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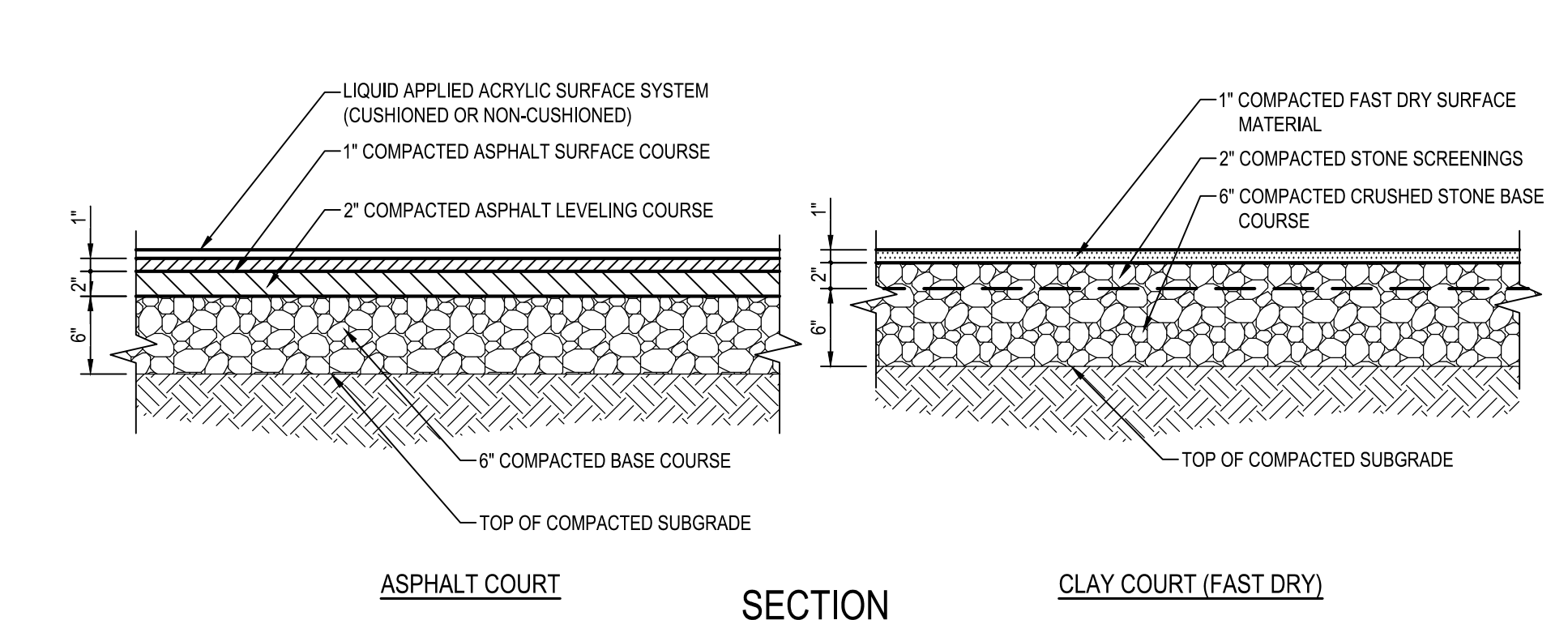
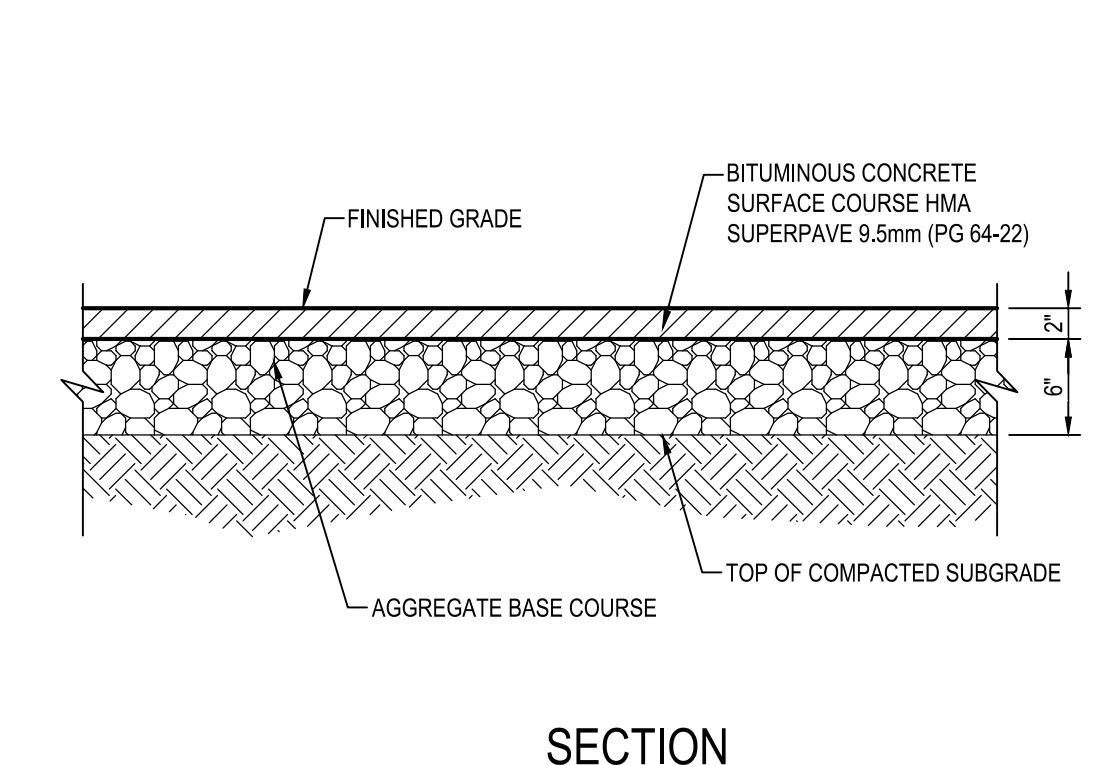
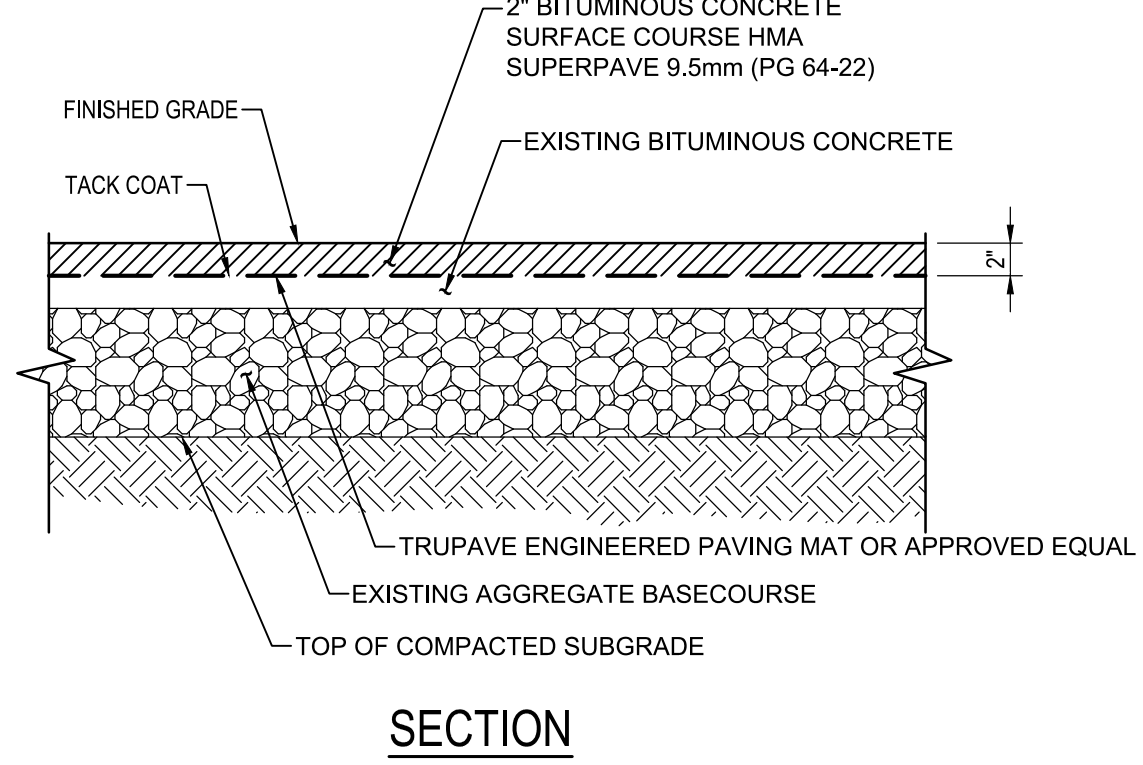
REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 30'		DRAWN BY: R.S.S.	
CHECKED BY: R.W.H.		SHEET NO. 13 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	
MILLERSVILLE PARK MILLERSVILLE ROAD ENTRANCE PLAN			

P:_2017\17141801\Drawings\07-Site\17141801-C202-Millersville Road Entrance Plan.dwg, Mar 06, 2024, 10:25am, Plot By: rsmith



- NOTES:
1. MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.
 2. AT PERIMETERS OF OVERLAY PAVING AREAS: MEET NEW ROAD PAVING SECTION FINISHED GRADE FLUSH.
 3. MILL THE TOP ZINCHES OF THE PARKING LOT AND ROADWAY SURFACE.
 4. EXAMINE THE MILLED SURFACE. CUT OUT ANY FAILED BASE COURSE AREA EXHIBITING ALLIGTOR OR PATCHWORK CRACKING, WHICH MAY HAVE BEEN HIDDEN BELOW THE SURFACE COURSE, TO EXPOSE THE UNDERLYING SOIL OR CRUSHED STONE BASE.
 5. CLEAN EXPOSED LINEAR CRACKS IN THE EXPOSED SURFACE. FILLING CRACKS THINNER THAN 1/4-INCH WIDTH WITH LIQUID ASPHALT AND FILLING CRACKS LARGER THAN 1/4-INCH WITH SAND/ASPHALT MIX.
 6. PLACE THE LIQUID ASPHALT TACK COAT AND APPROPRIATE PAVEMENT GRADE GEOTEXTILE FABRIC ACROSS THE ENTIRE OVERLAY AREA TO MEET MANUFACTURER'S REQUIREMENTS. PAVING FABRIC SHOULD BE INSTALLED BY AN APPROVED SPECIALTY CONTRACTOR.
 7. PLACE A 2-INCH THICK OVERLAY SECTION OF HOT-MIX ASPHALT (9.5MM SUPERPAVE, LEVEL 10) OVER THE ENTIRE OVERLAY AREA.

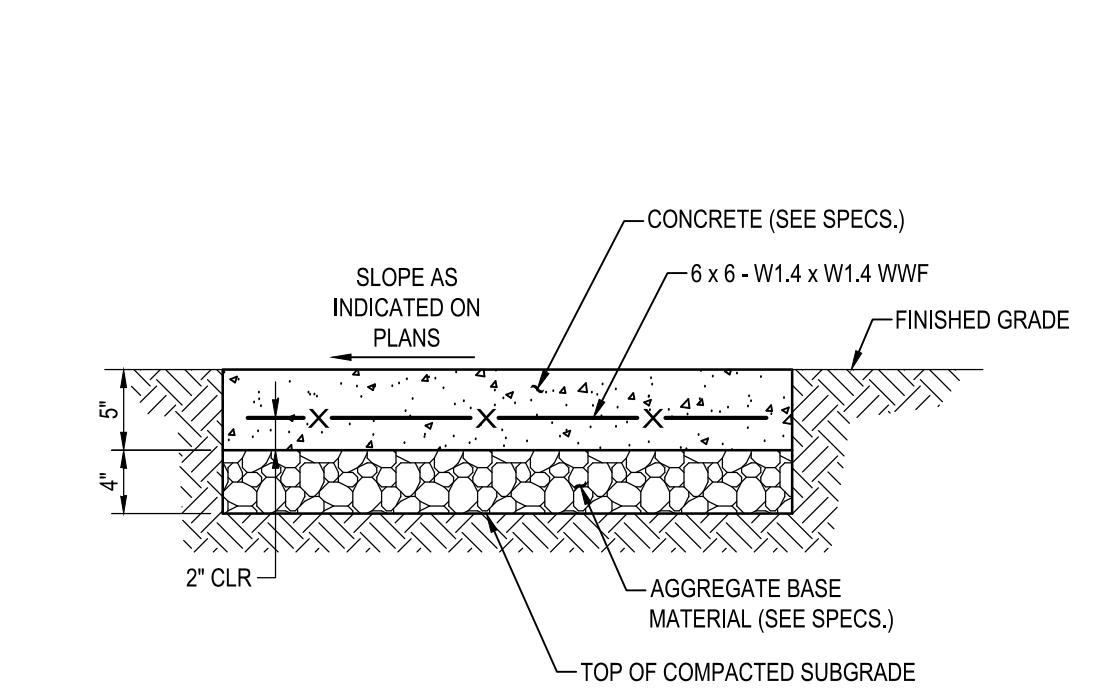


1 BITUMINOUS CONCRETE PAVING
SCALE: 1" = 1'-0"

2 MILL AND OVERLAY PAVEMENT SECTION
SCALE: 1" = 1'-0"

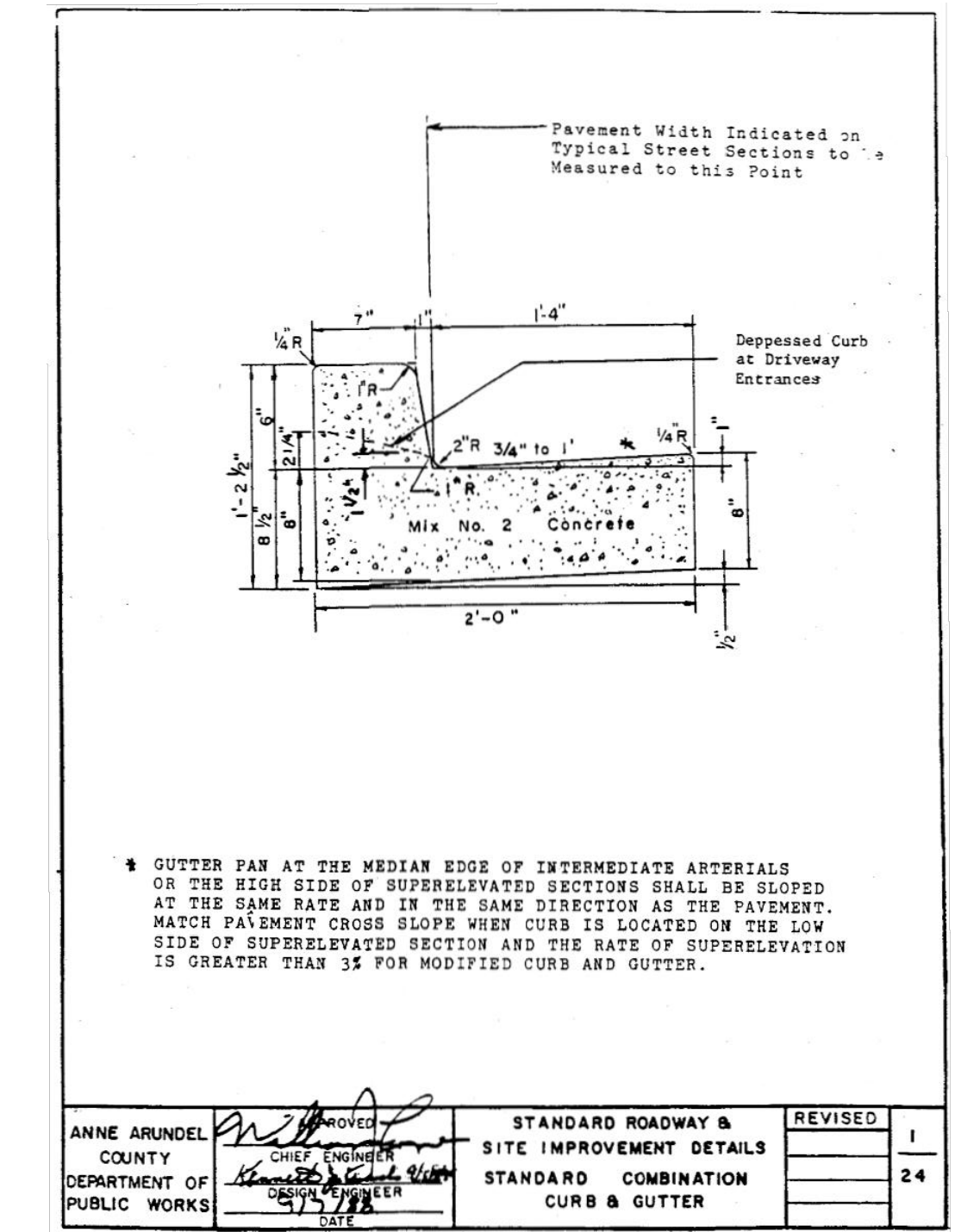
3 BITUMINOUS CONCRETE WALK
SCALE: 1" = 1'-0"

4 TENNIS COURT SURFACE
SCALE: 1" = 1'-0"

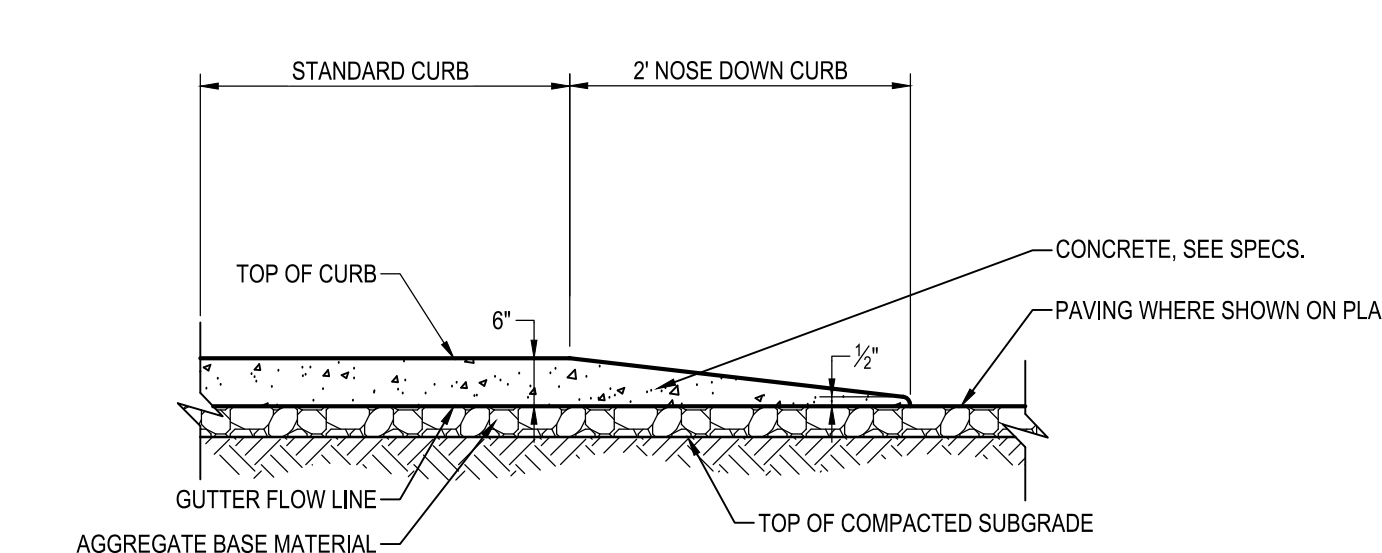


- NOTES:
1. 1/2\"/>

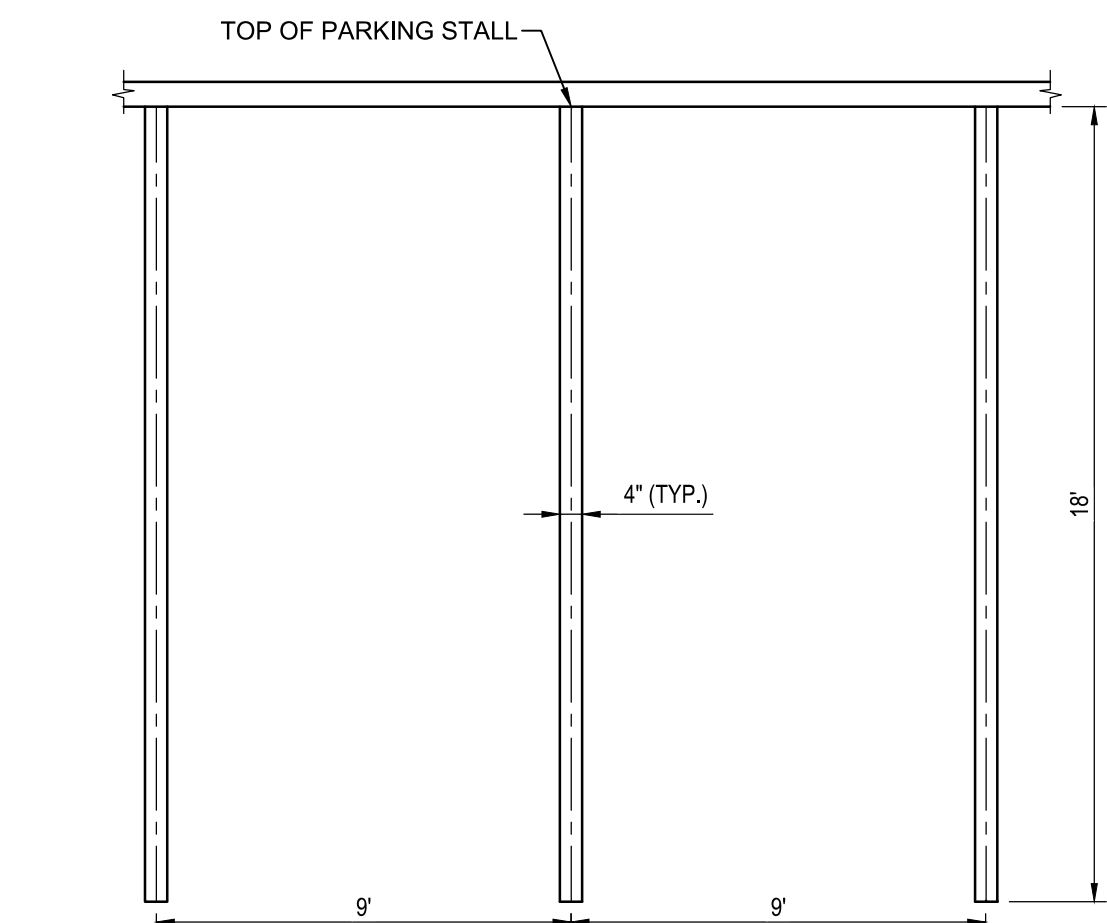
5 CONCRETE WALK
SCALE: 1" = 1'-0"



6 6\"/>

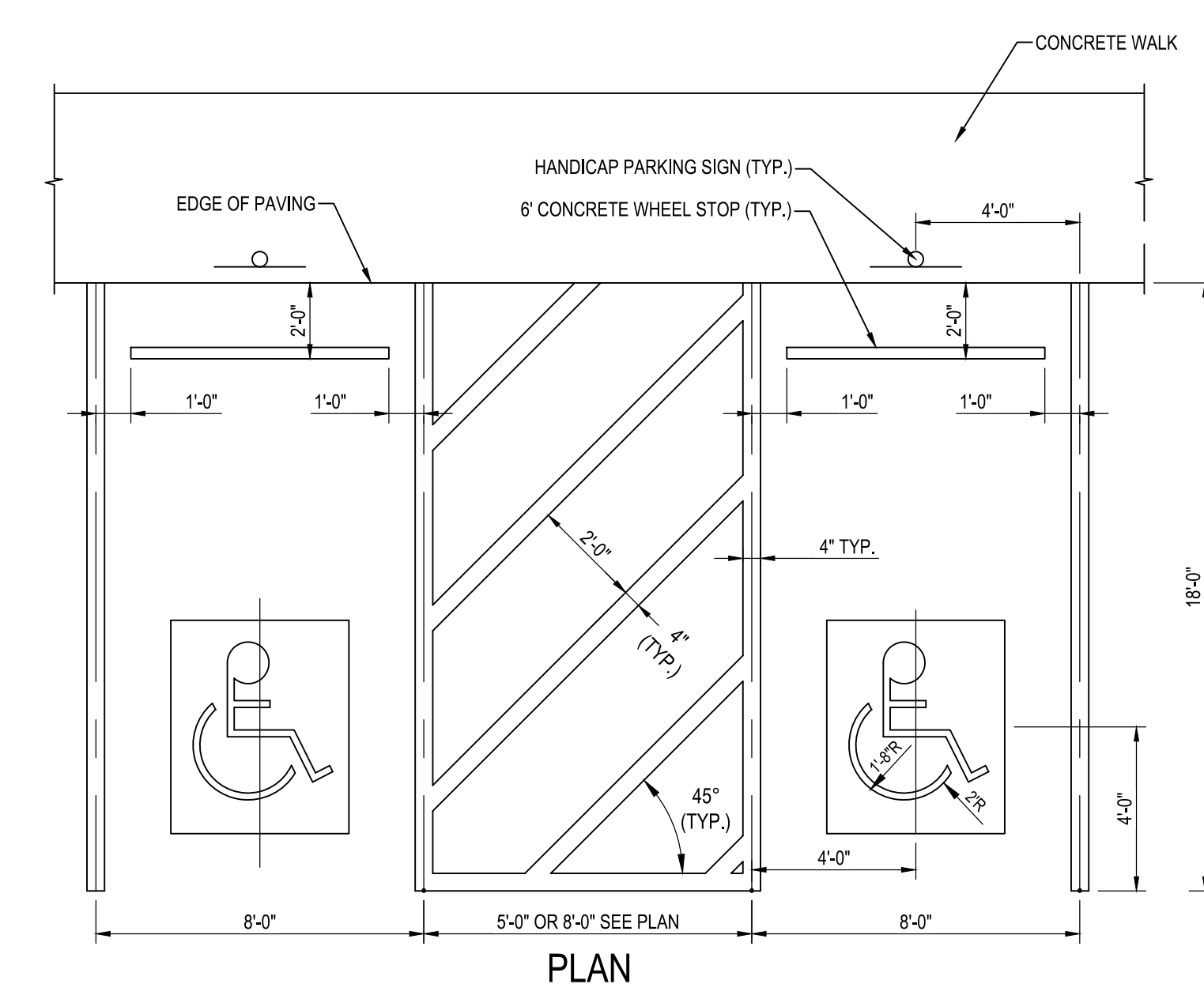


7 2'-0\"/>



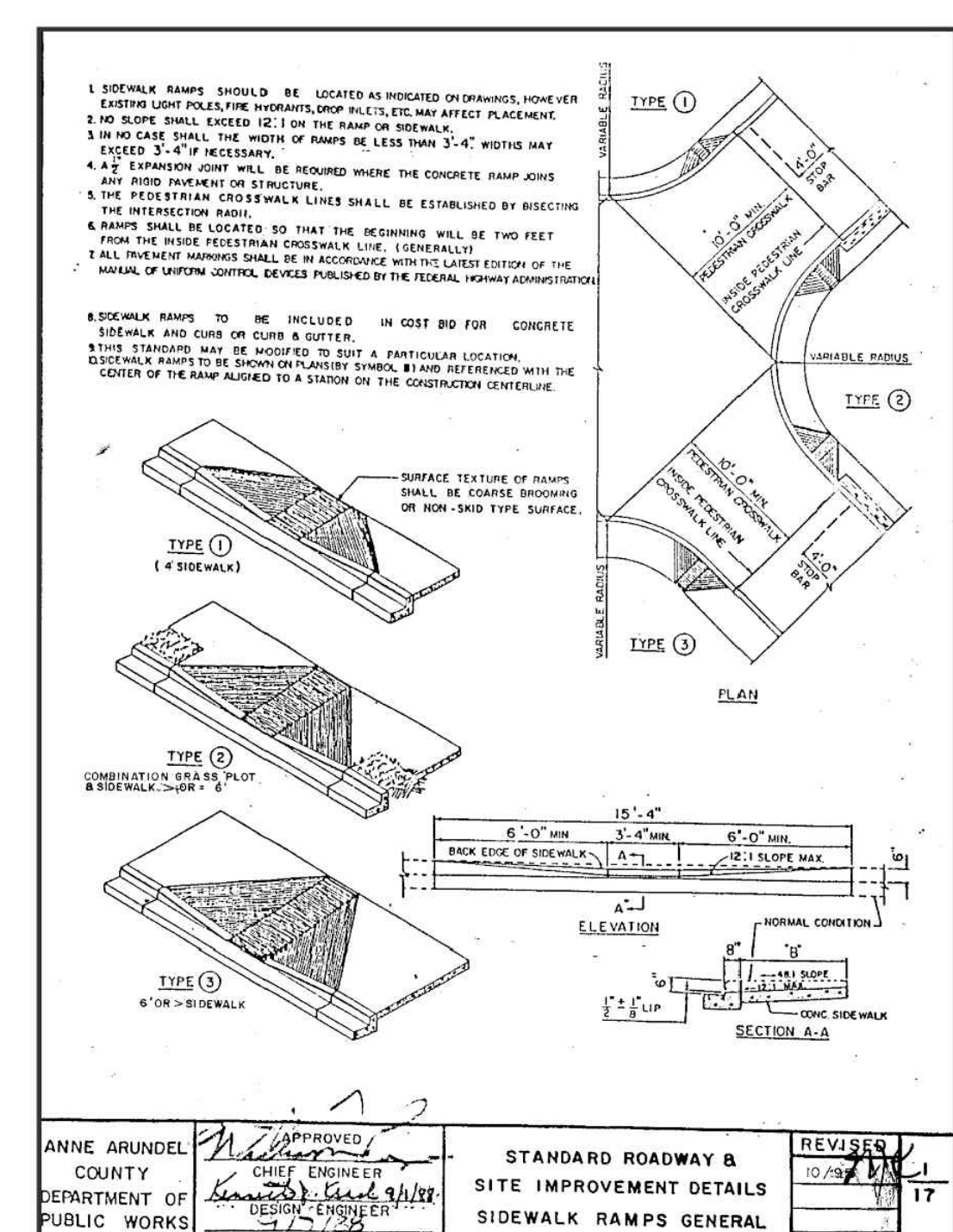
- NOTES:
1. PAINT IS TO BE WHITE TRAFFIC PAINT APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS (TWO (2) COATS REQUIRED).
 2. DETAIL SHOWS TYPICAL SPACE DIMENSIONS. SEE PLAN FOR SPACE LOCATIONS.

8 4\"/>



- NOTES:
1. PAINT TO BE WHITE TRAFFIC PAINT APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. TWO (2) COATS REQUIRED.
 2. SEE PLAN TO DETERMINE IF MULTIPLE HANDICAP SPACES ARE REQUIRED.
 3. HANDICAPPED SYMBOL TO BE WHITE TRAFFIC PAINT ON BLUE TRAFFIC PAINT BACKGROUND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. TWO (2) COATS REQUIRED.

9 ADA ACCESSIBLE PARKING STRIPING
NOT TO SCALE



10 PEDESTRIAN RAMP
NOT TO SCALE

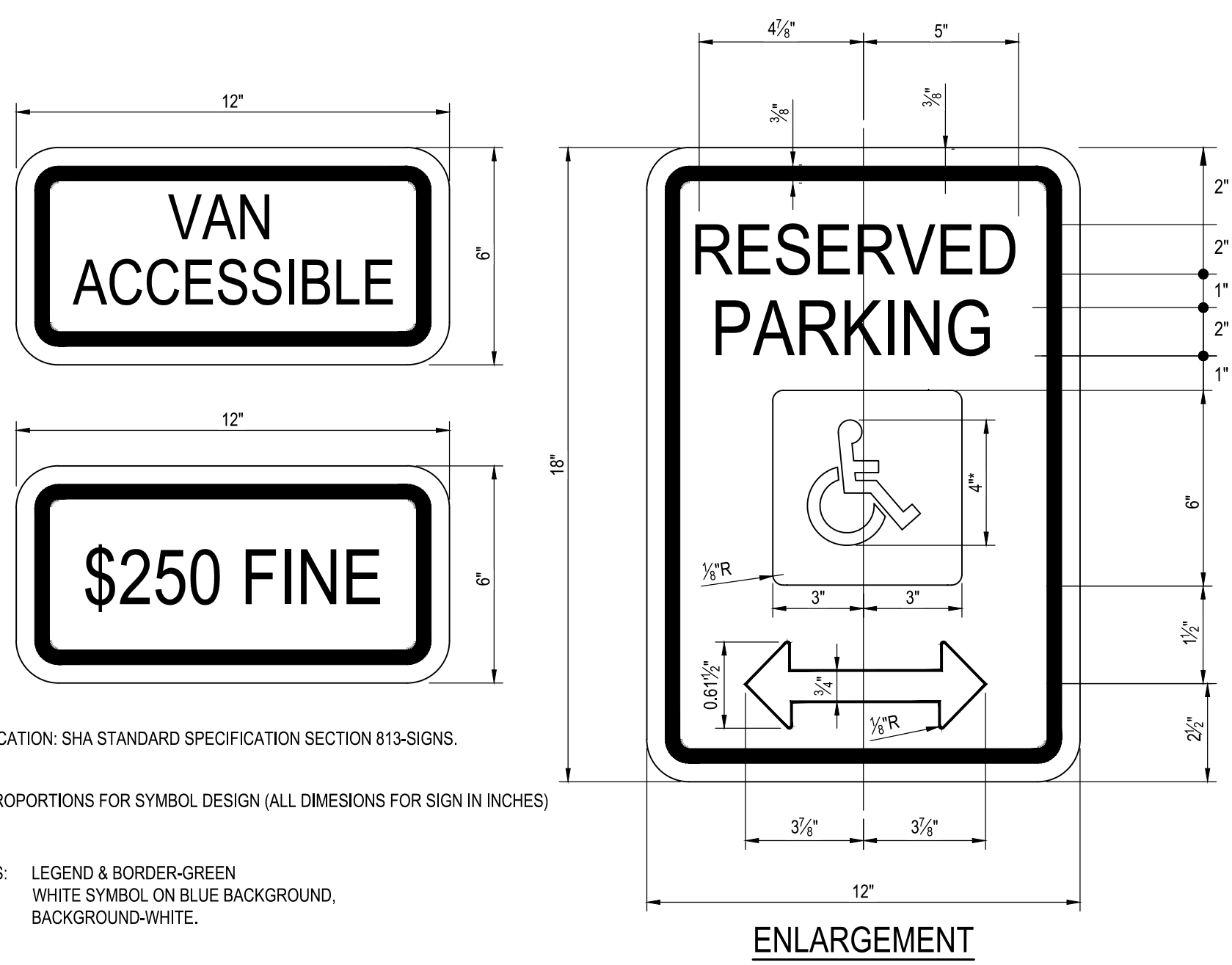
WHITNEY BAILEY COX & MAGNANI, LLC
300 East Joppa Road, Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

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License # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

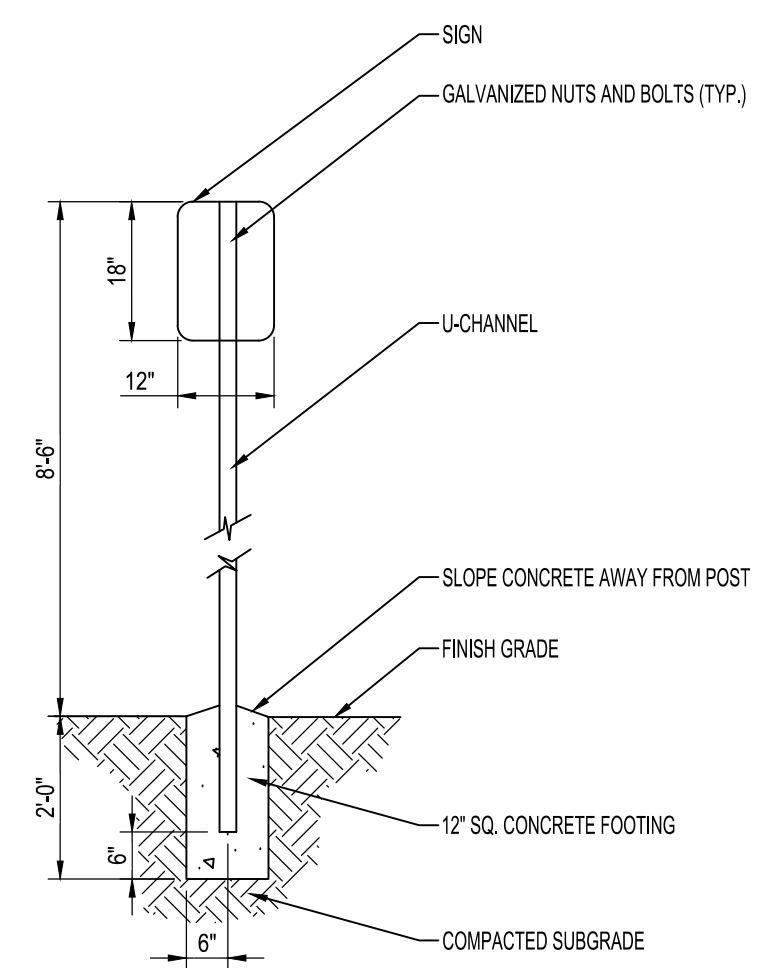
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED	DATE	APPROVED	DATE	SCALE: AS SHOWN	MILLERSVILLE PARK SITE DETAILS
CHIEF ENGINEER		PROJECT MANAGER		DRAWN BY: R.S.S.	
APPROVED	DATE	APPROVED	DATE	CHECKED BY: R.W.H.	
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY		SHEET NO. 14 OF 37	
				PROJECT NO.: P567102	
				CONTRACT NO.: P56702	

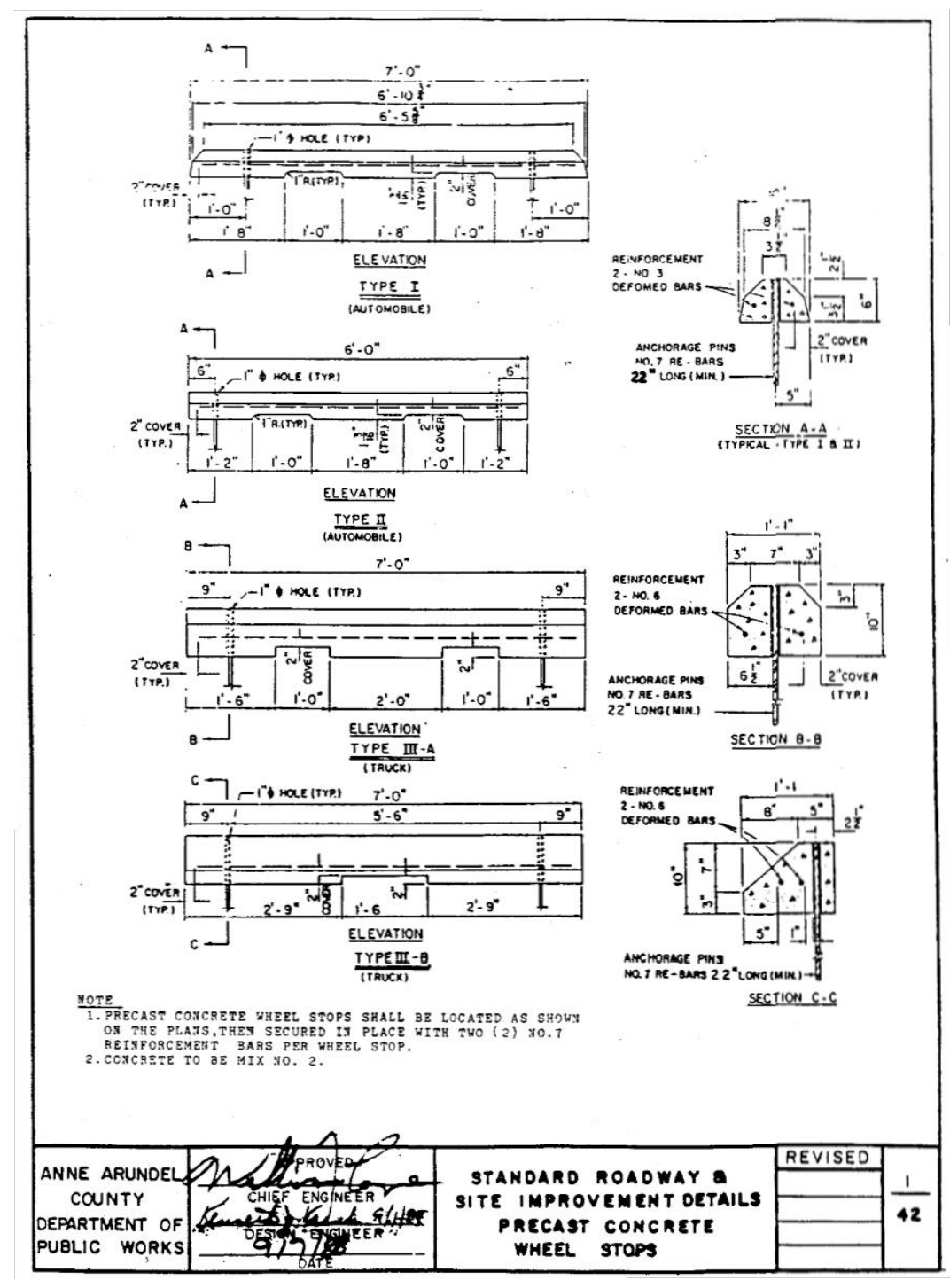


SPECIFICATION: SHA STANDARD SPECIFICATION SECTION 813-SIGNS.
 *SEE PROPORTIONS FOR SYMBOL DESIGN (ALL DIMENSIONS FOR SIGN IN INCHES)
 COLORS: LEGEND & BORDER-GREEN
 WHITE SYMBOL ON BLUE BACKGROUND,
 BACKGROUND-WHITE.

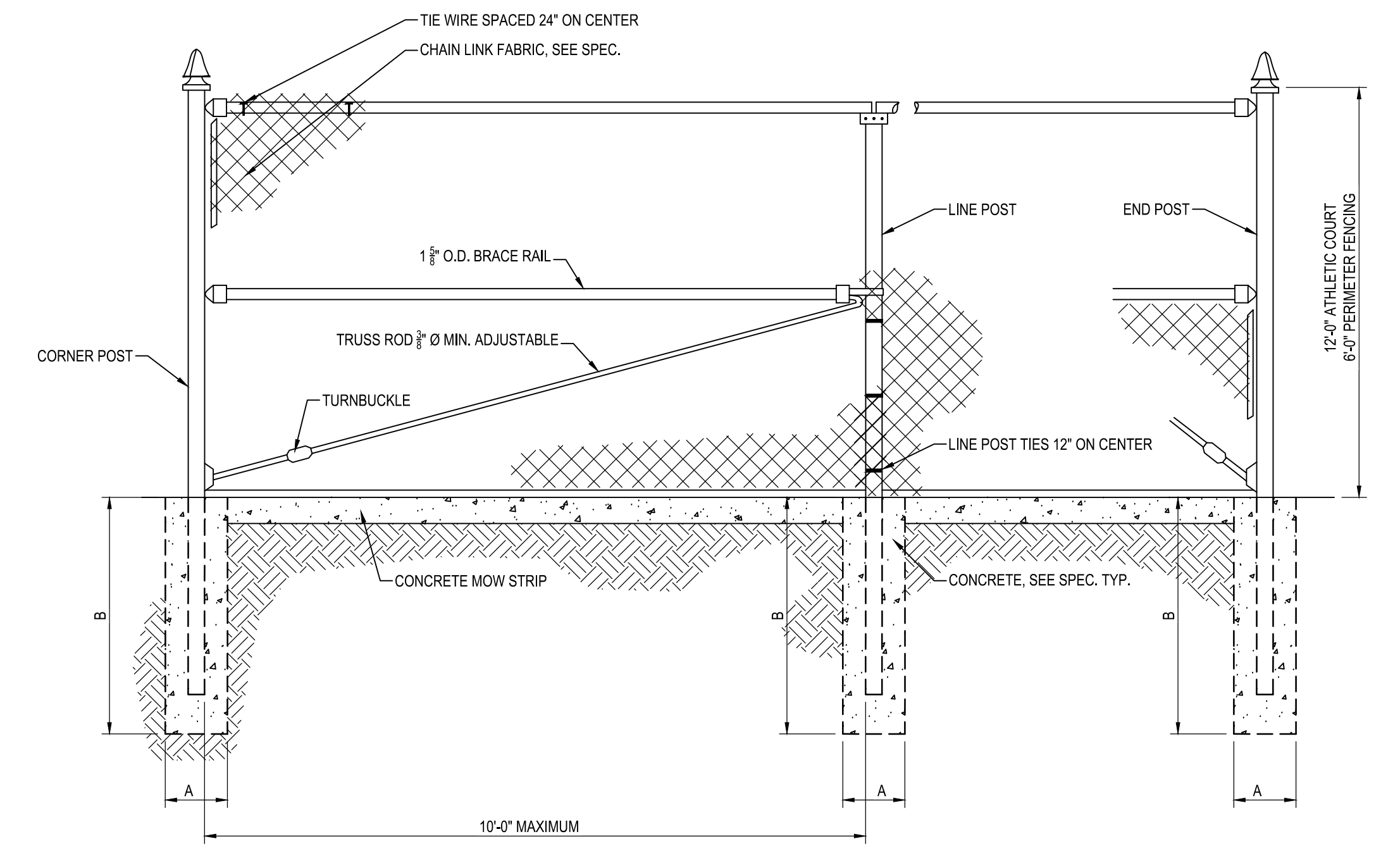
11 HANDICAP PARKING SIGN
 NOT TO SCALE



SECTION



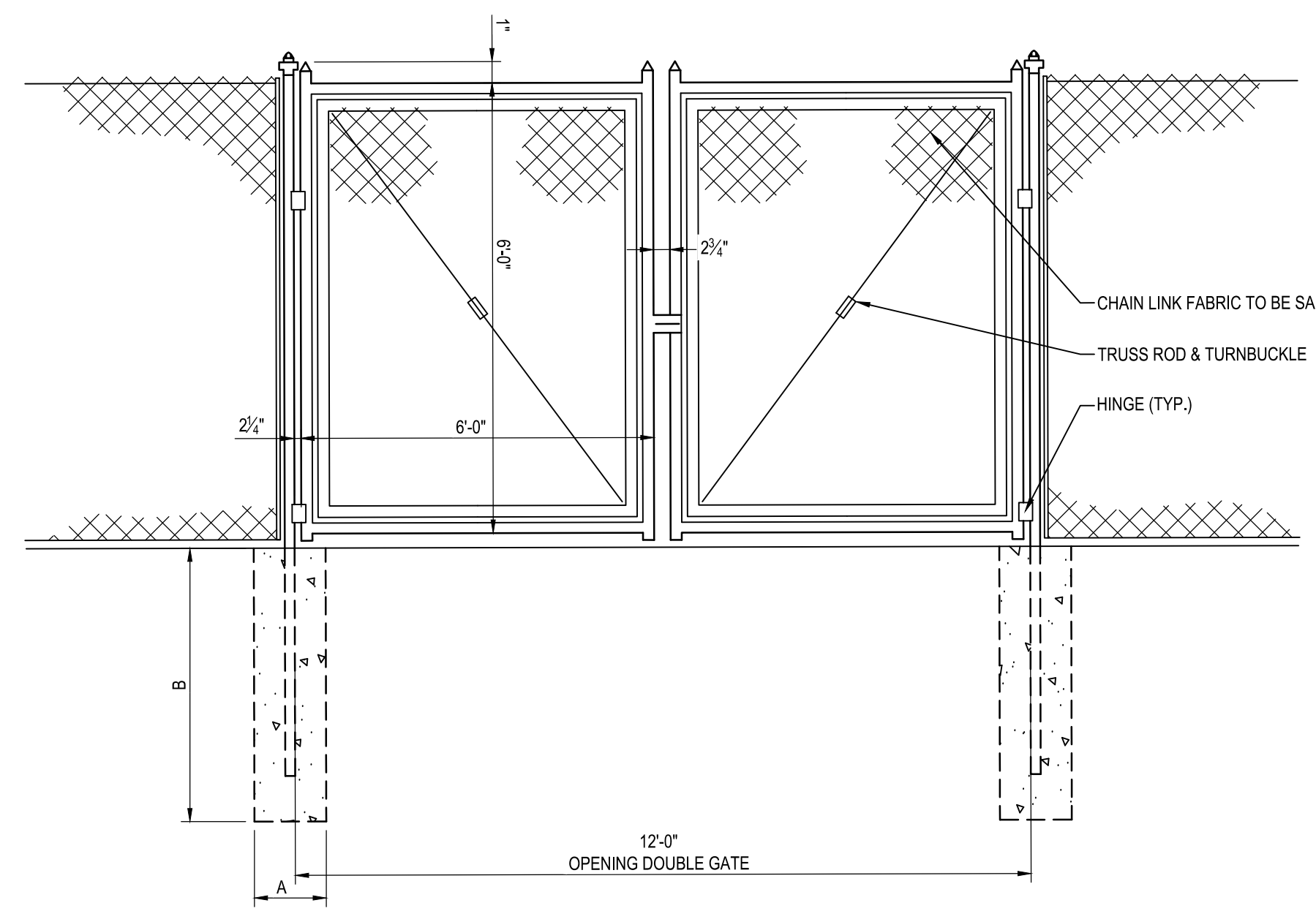
12 CONCRETE WHEELSTOP
 SCALE: 1" = 1'-0"



SECTION

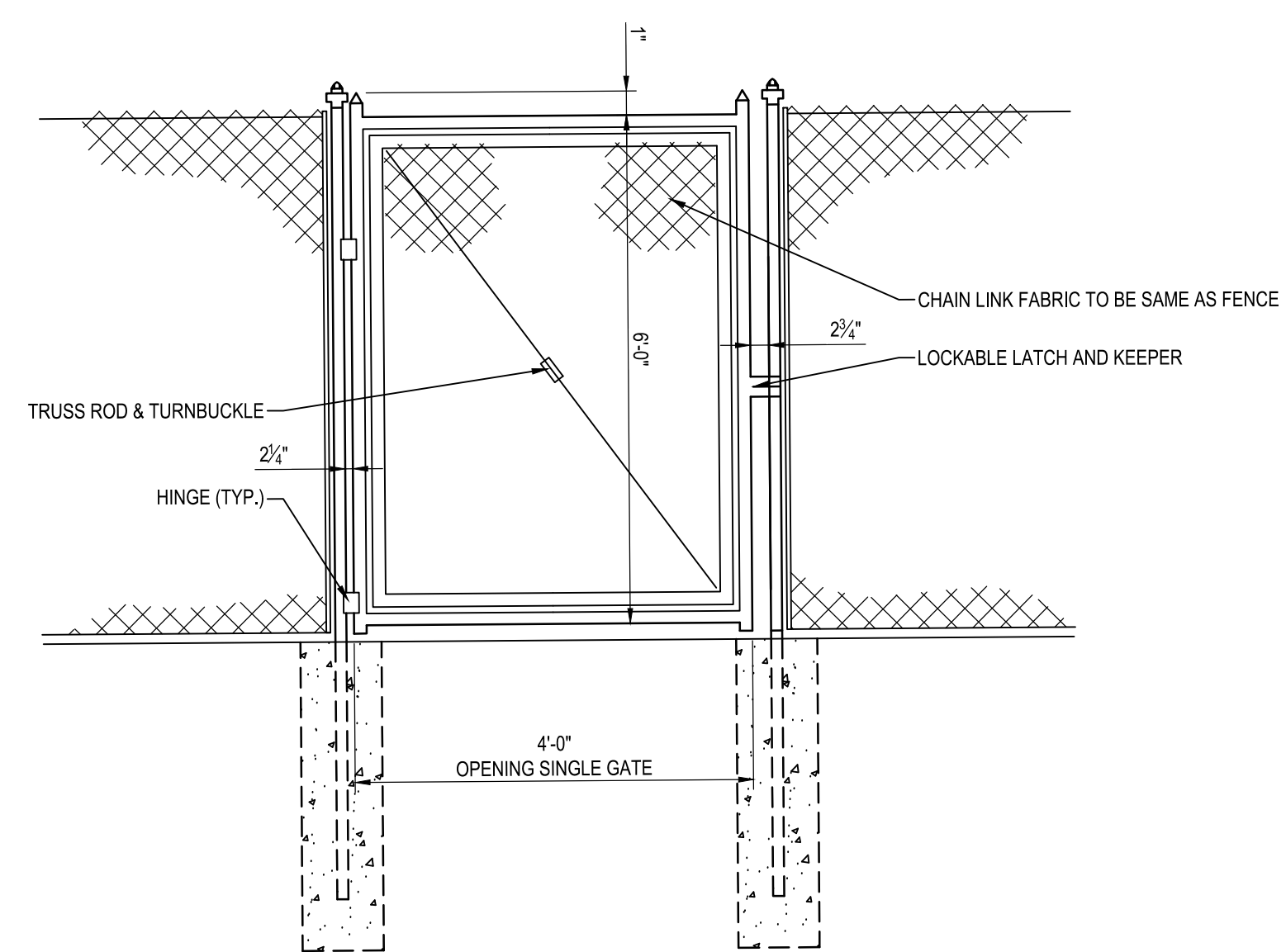
13 TENNIS COURT FENCE
 NOT TO SCALE

POST TYPE	POST DIA. O. D.	FOOTING	
		A	B
CORNER	4"	2'-0"	3'-6"
LINE	3"	1'-0"	3'-0"
END & GATE	4"	2'-0"	3'-6"



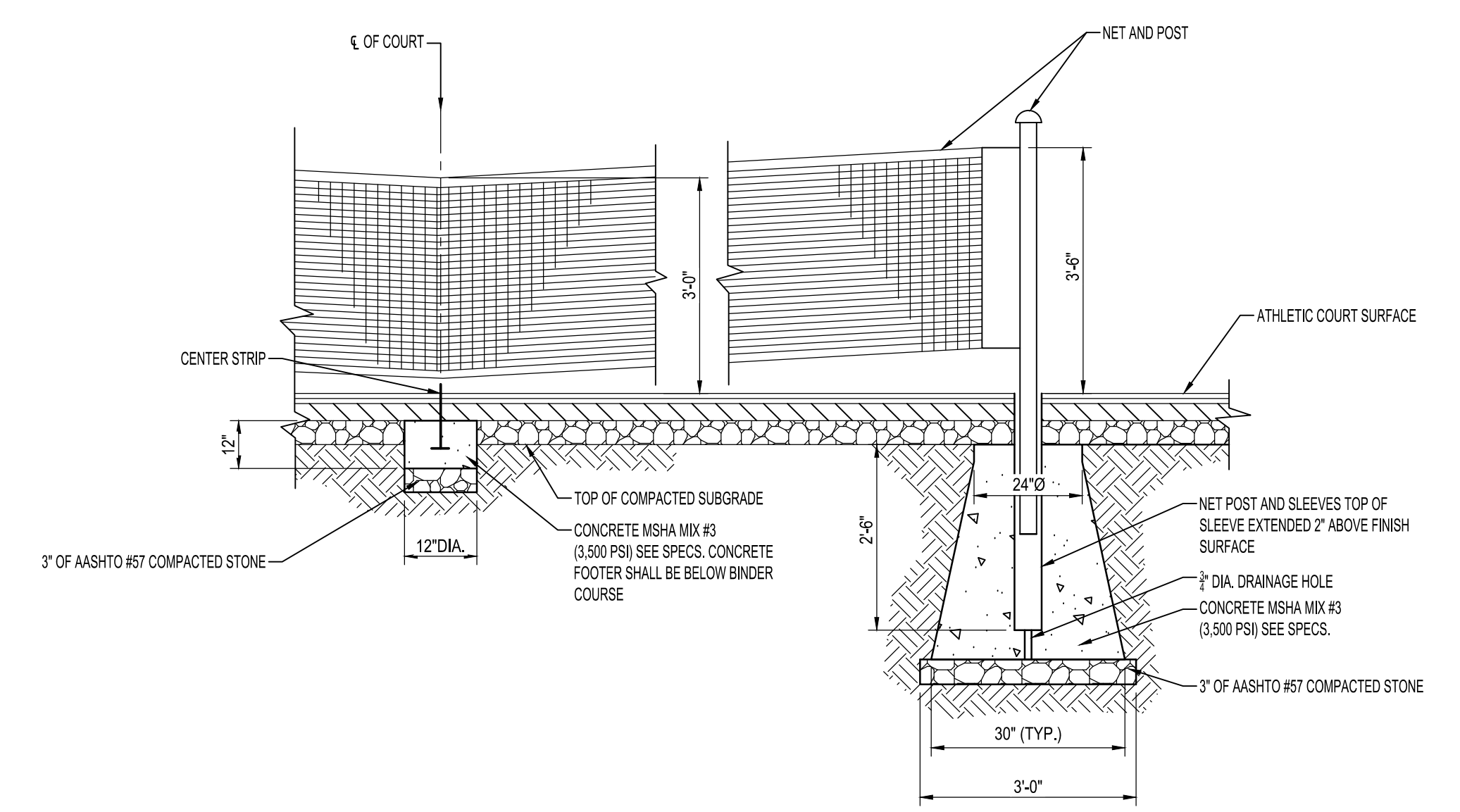
ELEVATION

14 12' WIDE DOUBLE GATE
 NOT TO SCALE



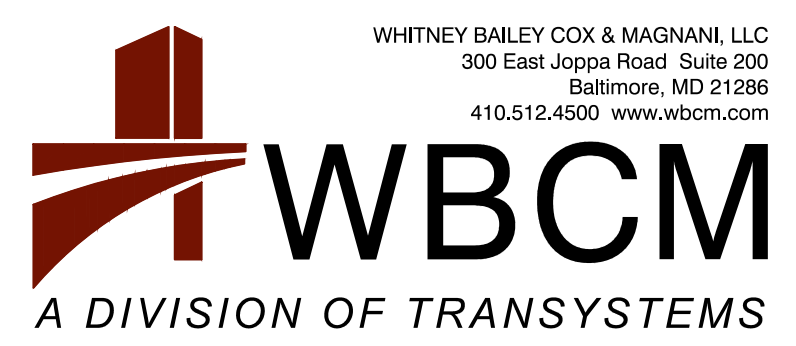
ELEVATION

15 4' WIDE MAN GATE
 NOT TO SCALE



SECTION

19 TENNIS NET POST DETAIL
 NOT TO SCALE



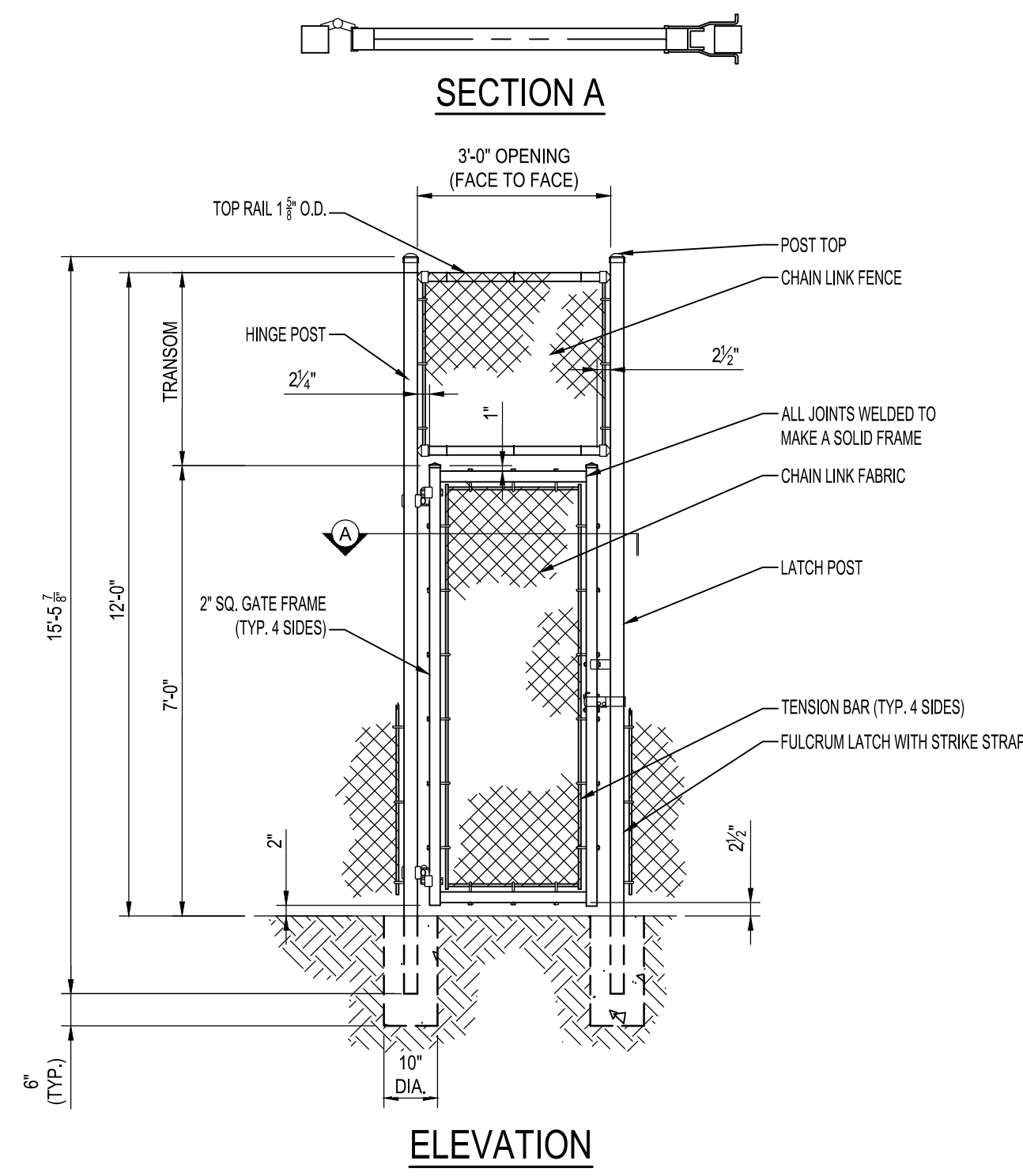
WHITNEY BAILEY COX & MAGNANI LLC
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 Baltimore, MD 21286
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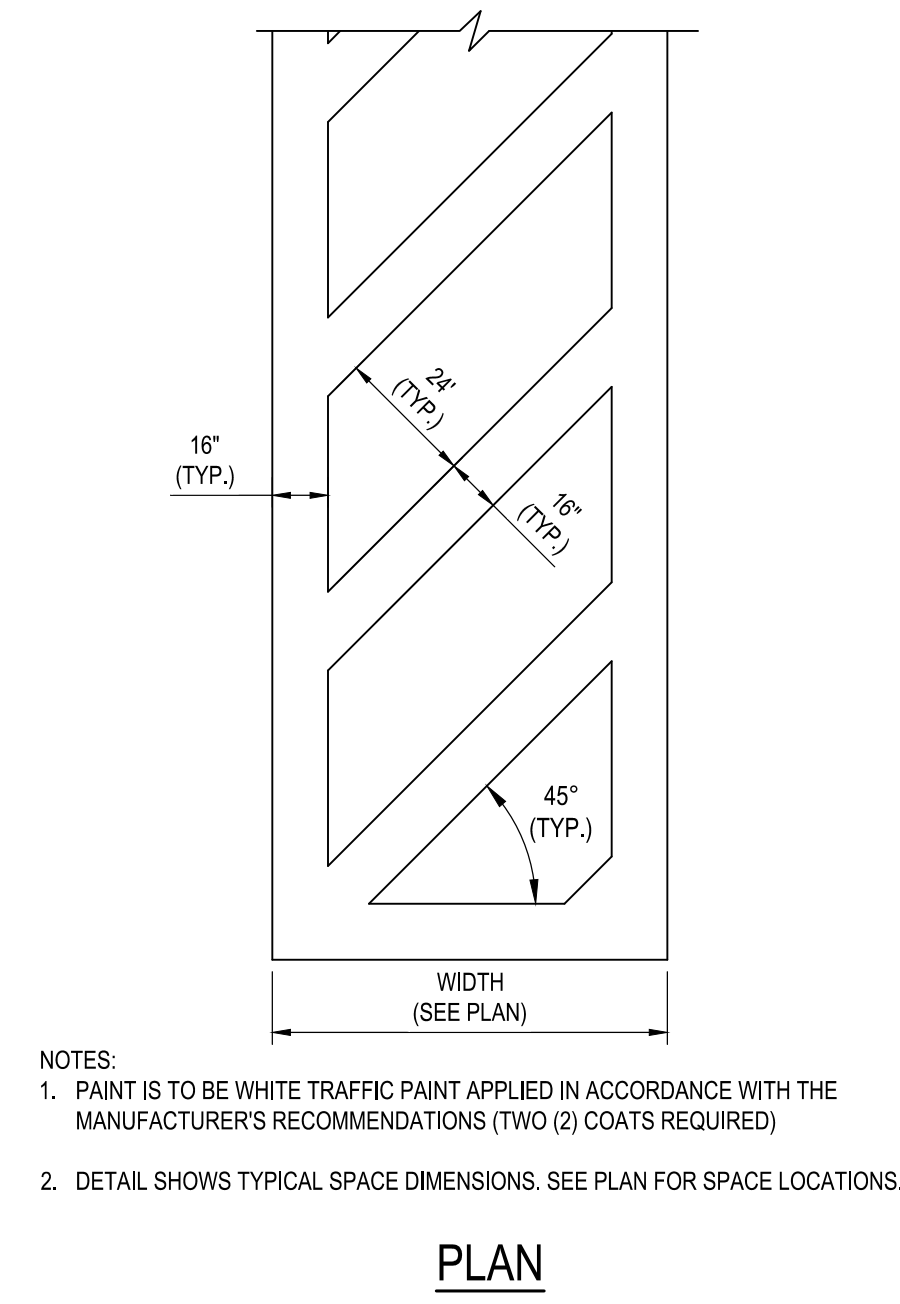
REVISIONS			
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ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: AS SHOWN		DRAWN BY: R.S.S.	
CHECKED BY: R.W.H.		PROJECT NO.: P567102	
SHEET NO. 15 OF 37		CONTRACT NO.: P56702	
MILLERSVILLE PARK			
SITE DETAILS			

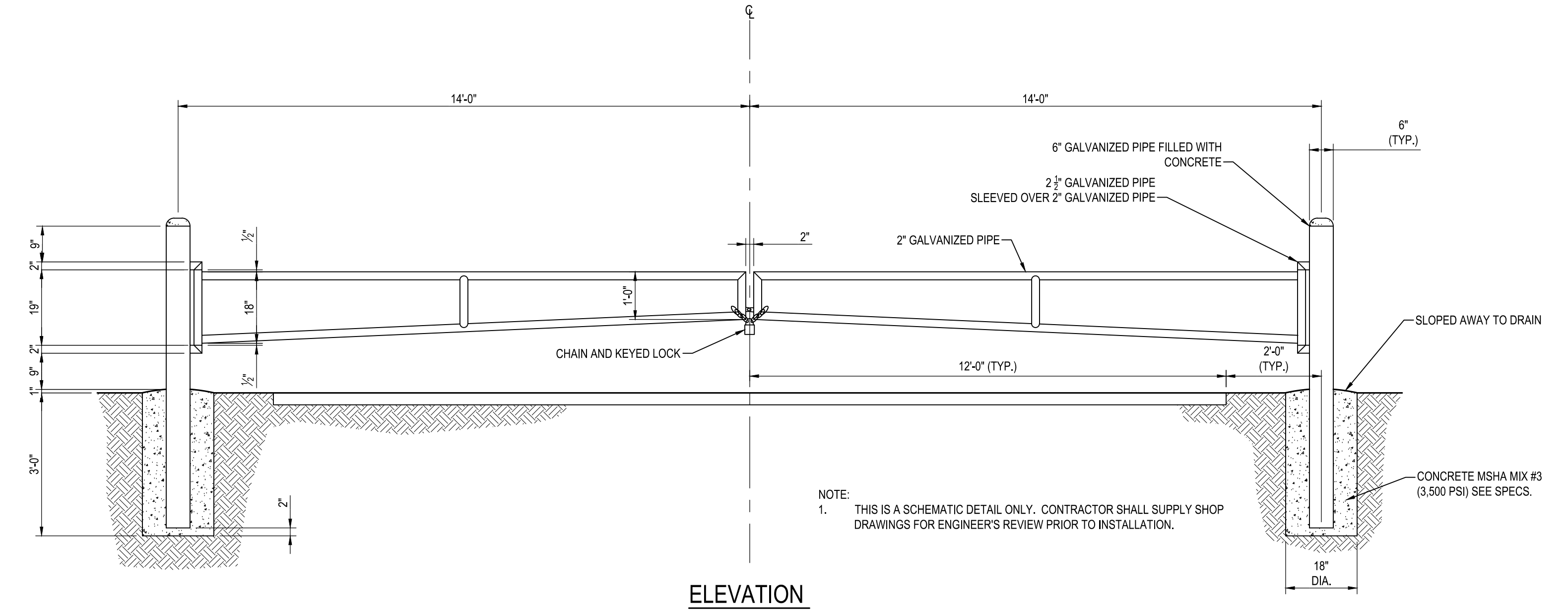
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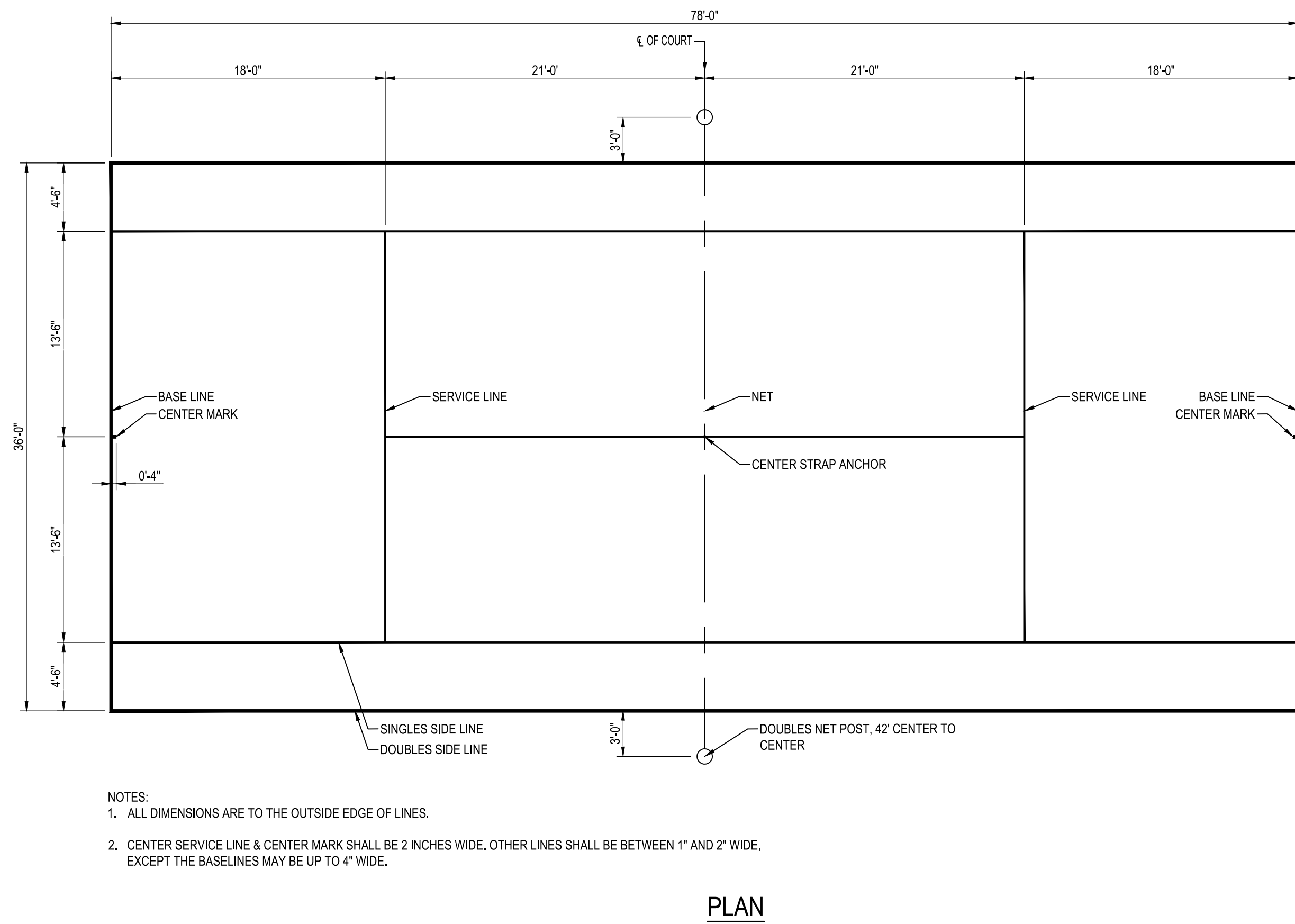
17 TENNIS COURT SWING GATE
NOT TO SCALE



18 PEDESTRIAN CROSSWALK
NOT TO SCALE

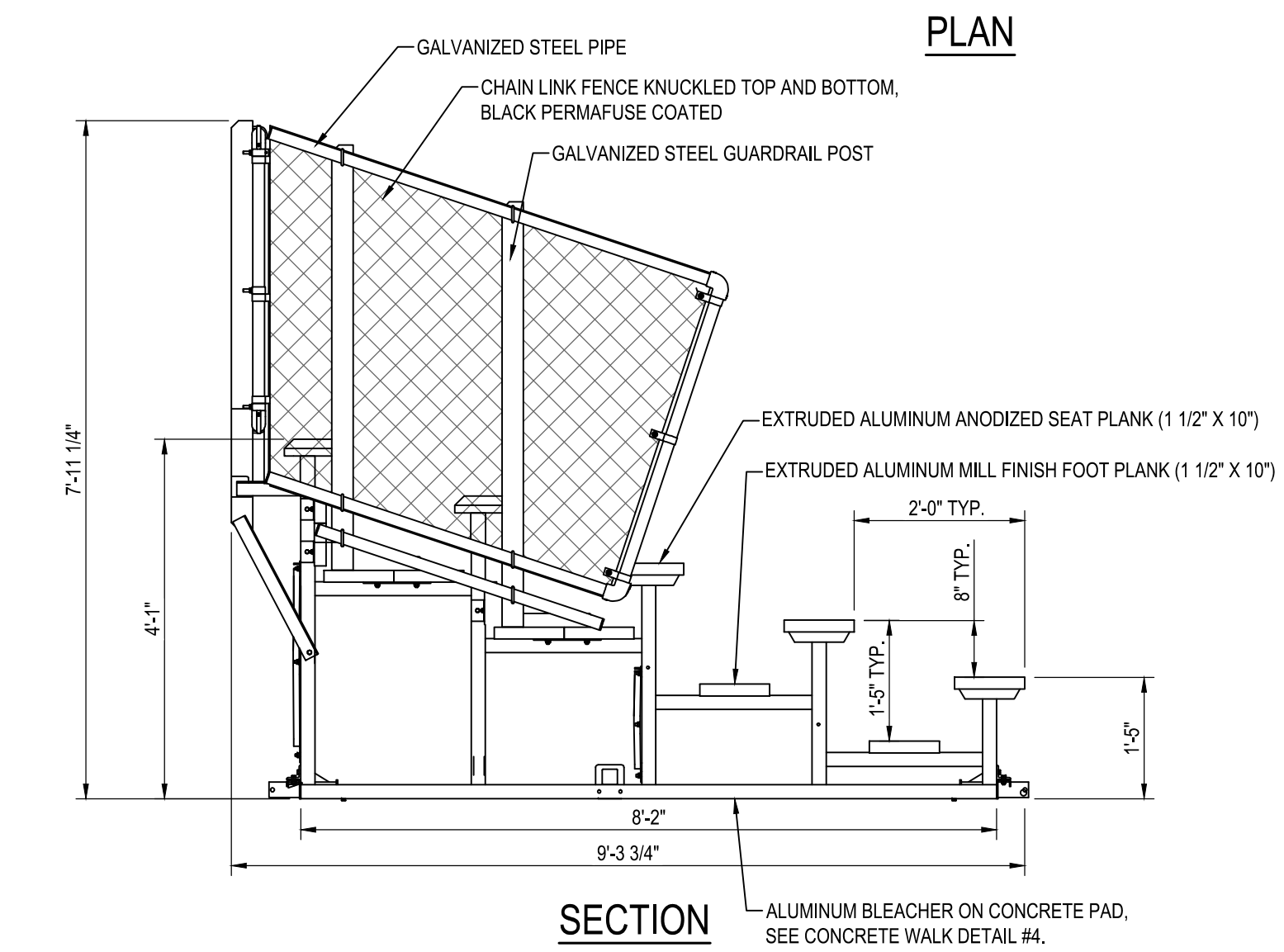


19 SWING GATE
NOT TO SCALE

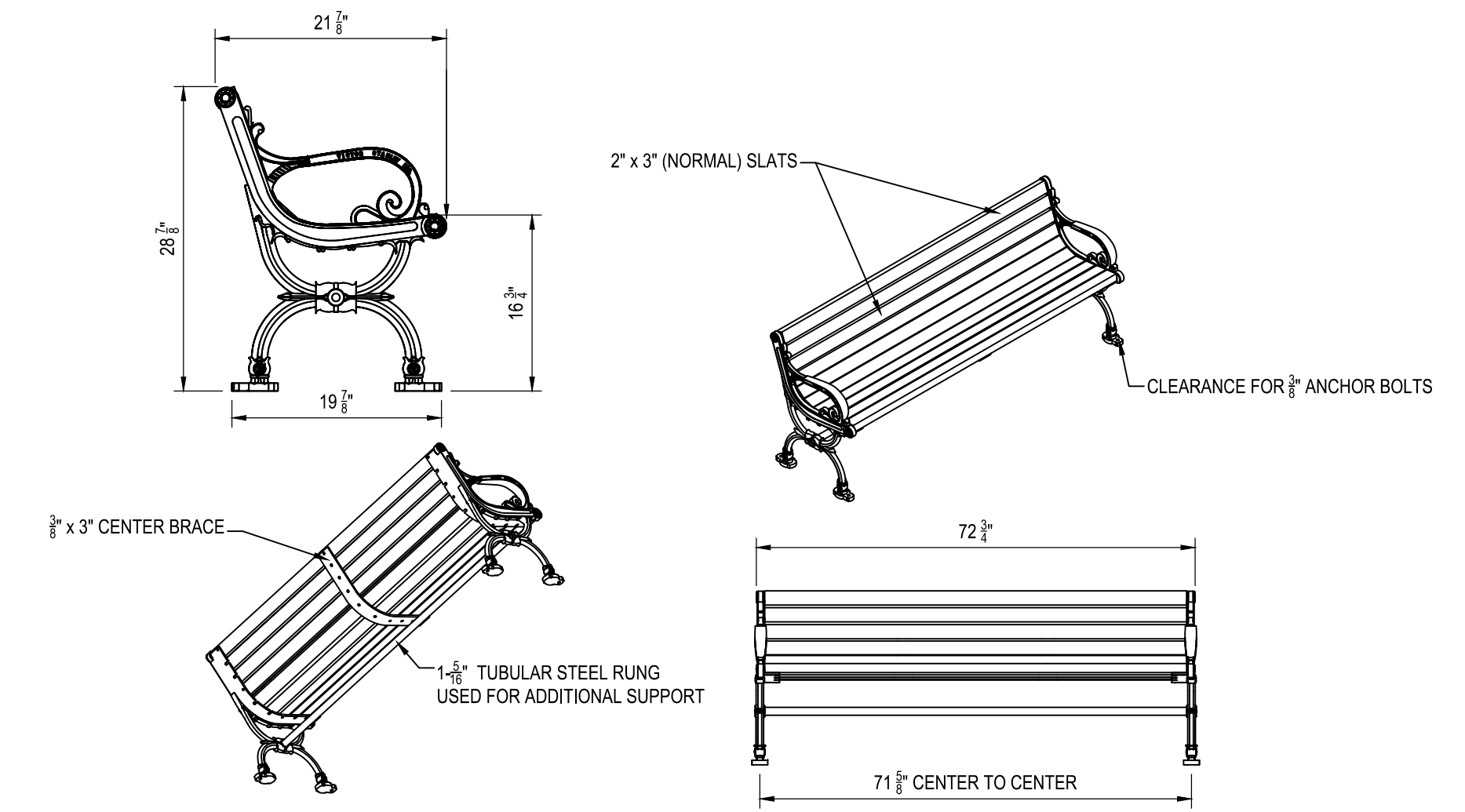


20 78' COURT - PLAYING LINE LAYOUT
NOT TO SCALE

GENERAL SPECIFICATIONS		
BLEACHER LENGTH	SEATING CAPACITY	WEIGHT (LBS)
27'-0"	90	1311 LBS

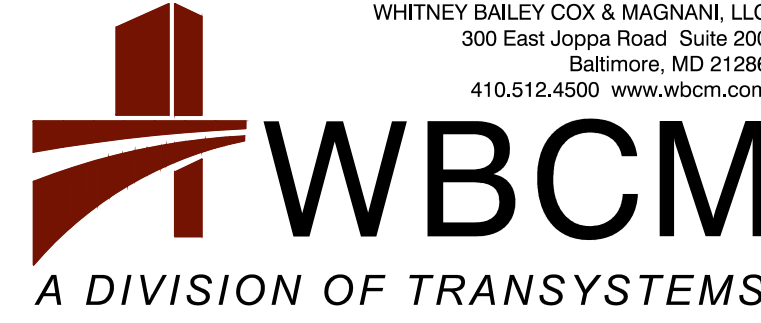


21 ALUMINUM BLEACHERS
NOT TO SCALE



22 STANDARD BENCH WITH DUCTILE IRON END FRAMES
NOT TO SCALE

P:_2017\17141801\Drawings\07-Site\17141801-C203-Site_Details.dwg Mar 06, 2024 - 10:30am Plot By: remith

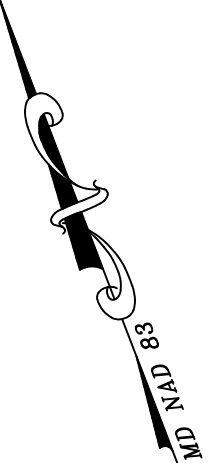
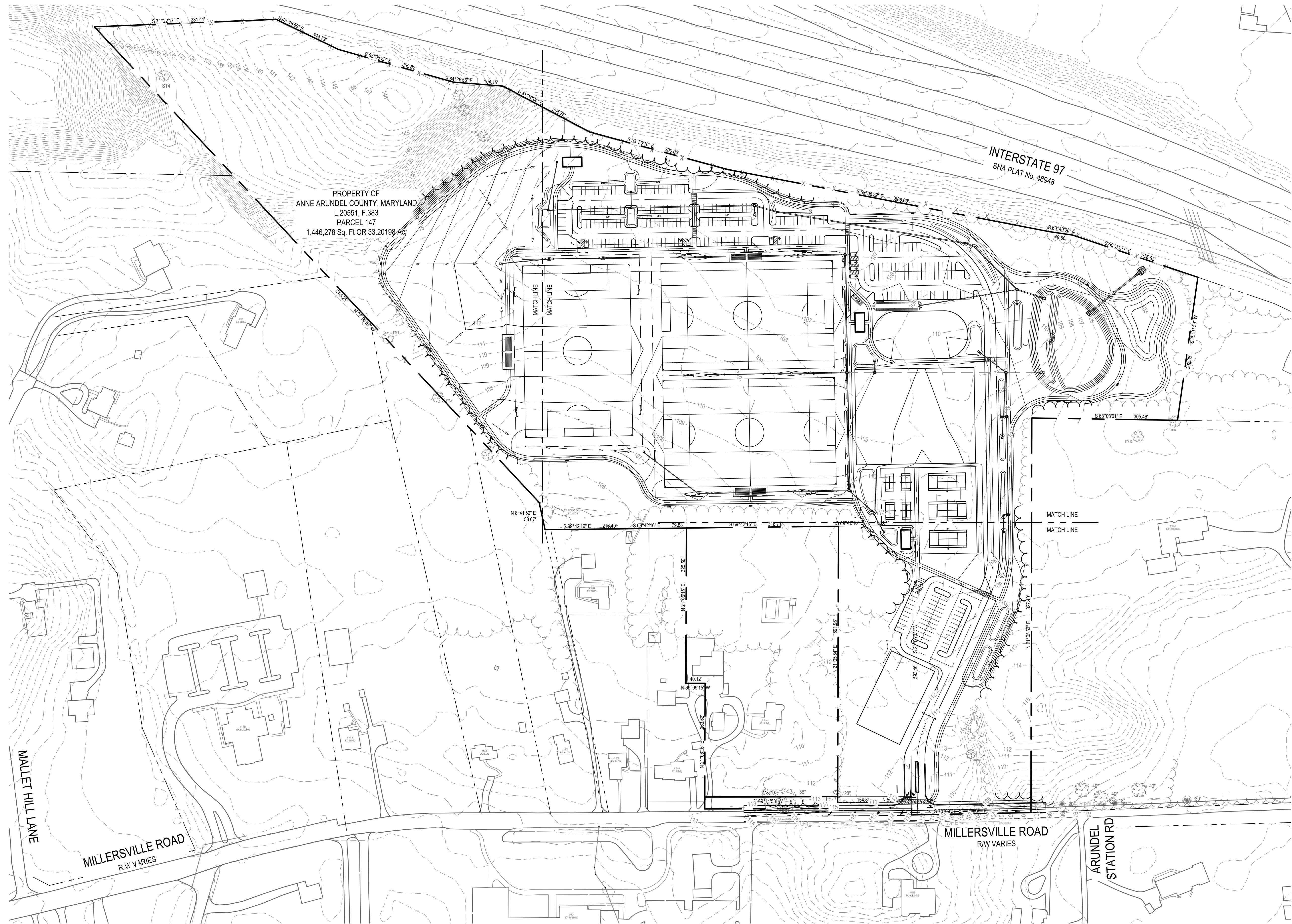

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ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS
MILLERSVILLE PARK
SITE DETAILS


APPROVED	DATE	APPROVED	DATE	SCALE: AS SHOWN
CHIEF ENGINEER		PROJECT MANAGER		DRAWN BY: R.S.S.
APPROVED	DATE	APPROVED	DATE	CHECKED BY: R.W.H.
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY		SHEET NO. 16 OF 37
				PROJECT NO.: P567102
				CONTRACT NO.: P56702



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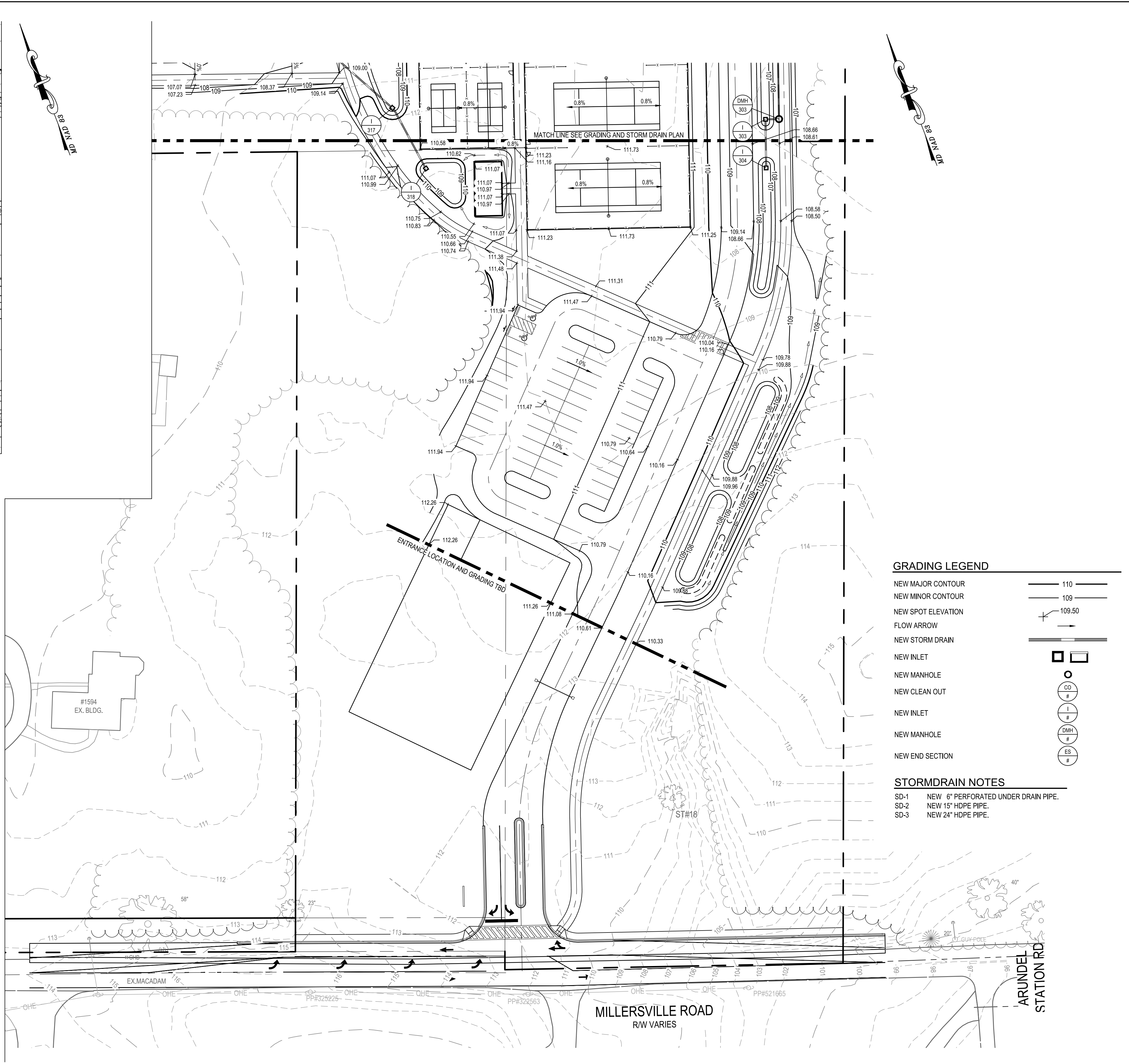
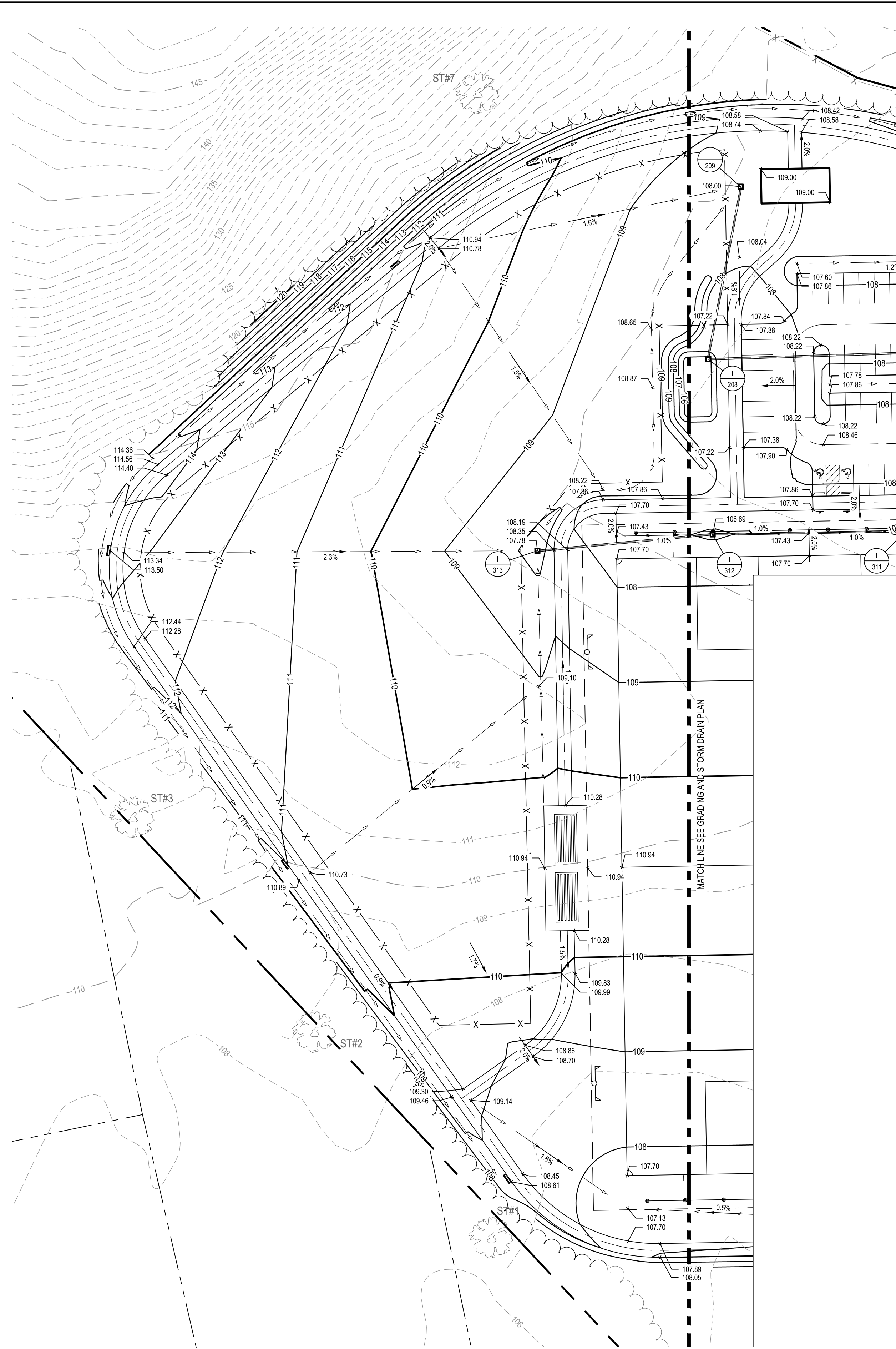
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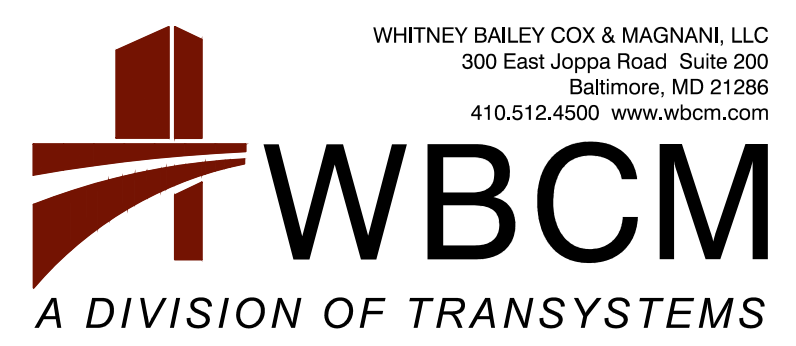
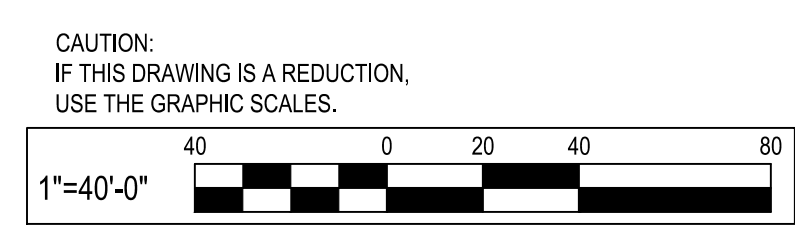
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 100'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		OVERALL GRADING AND STORM DRAIN PLAN	
CHECKED BY: R.W.H.		SHEET NO. 17 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	

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- GRADING LEGEND**
- NEW MAJOR CONTOUR
 - NEW MINOR CONTOUR
 - NEW SPOT ELEVATION
 - FLOW ARROW
 - NEW STORM DRAIN
 - NEW INLET
 - NEW MANHOLE
 - NEW CLEAN OUT
 - NEW INLET
 - NEW MANHOLE
 - NEW END SECTION

- STORMDRAIN NOTES**
- SD-1 NEW 6" PERFORATED UNDER DRAIN PIPE.
 - SD-2 NEW 15" HDPE PIPE.
 - SD-3 NEW 24" HDPE PIPE.

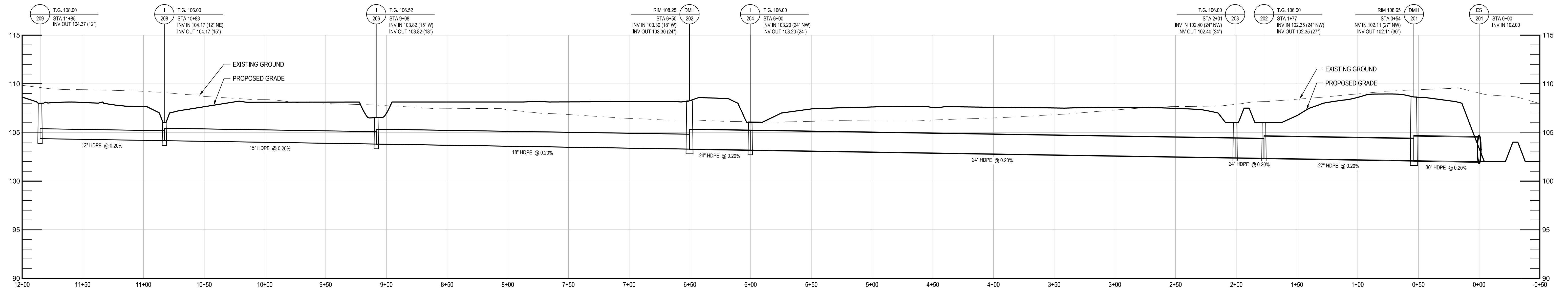


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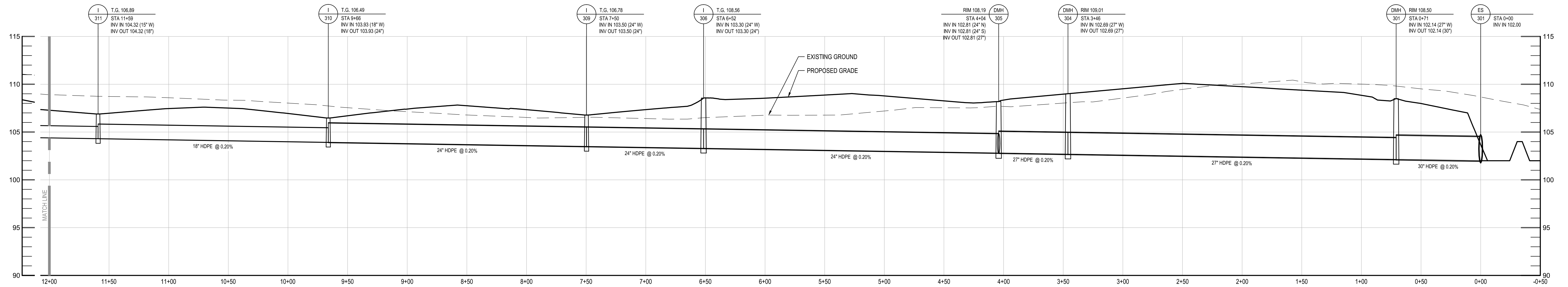
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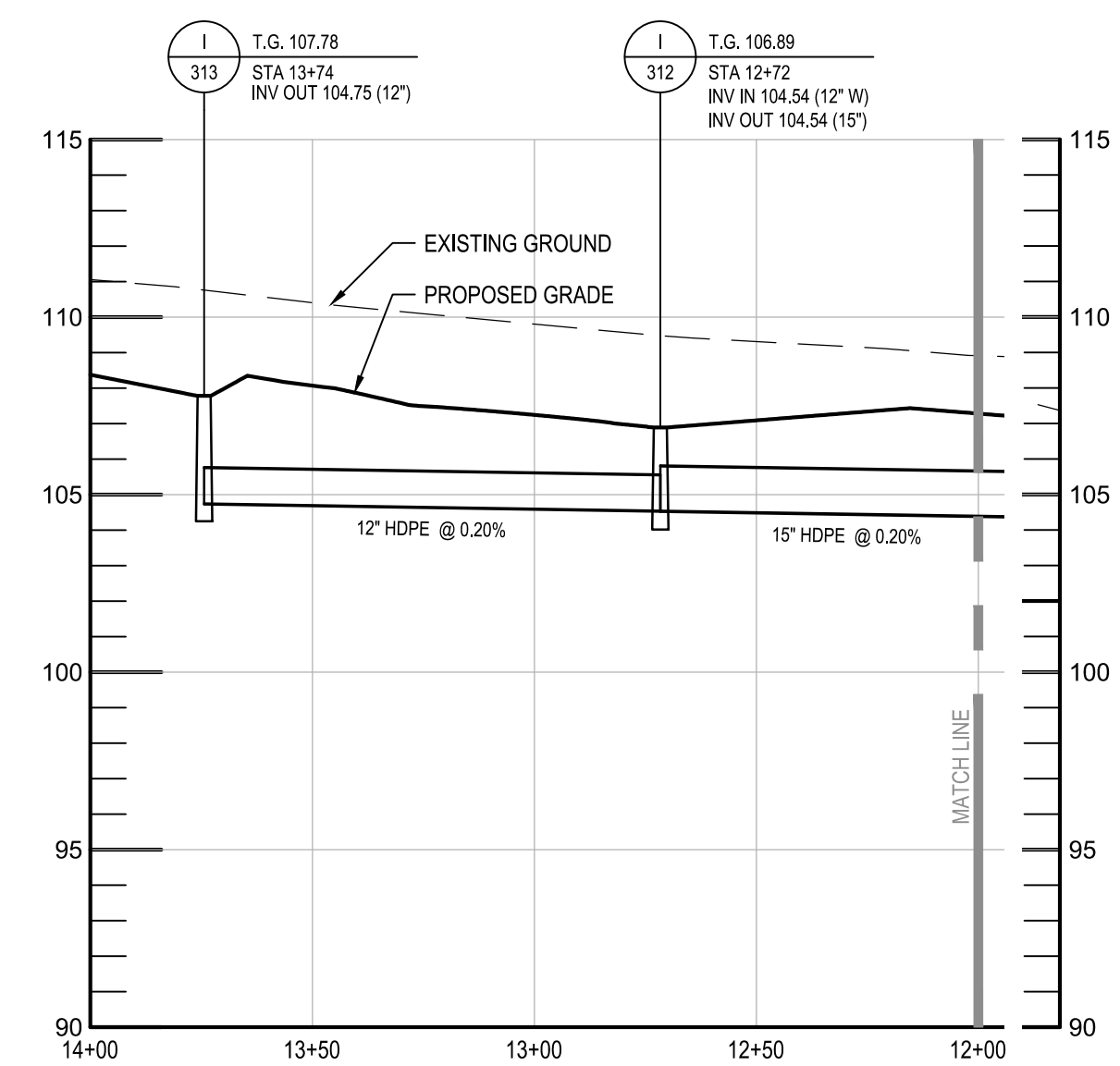
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APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 40'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		CHECKED BY: R.W.H.	
SHEET NO. 19 OF 37		PROJECT NO.: P567102	
CONTRACT NO.: P56702		GRADING AND STORM DRAIN PLAN	



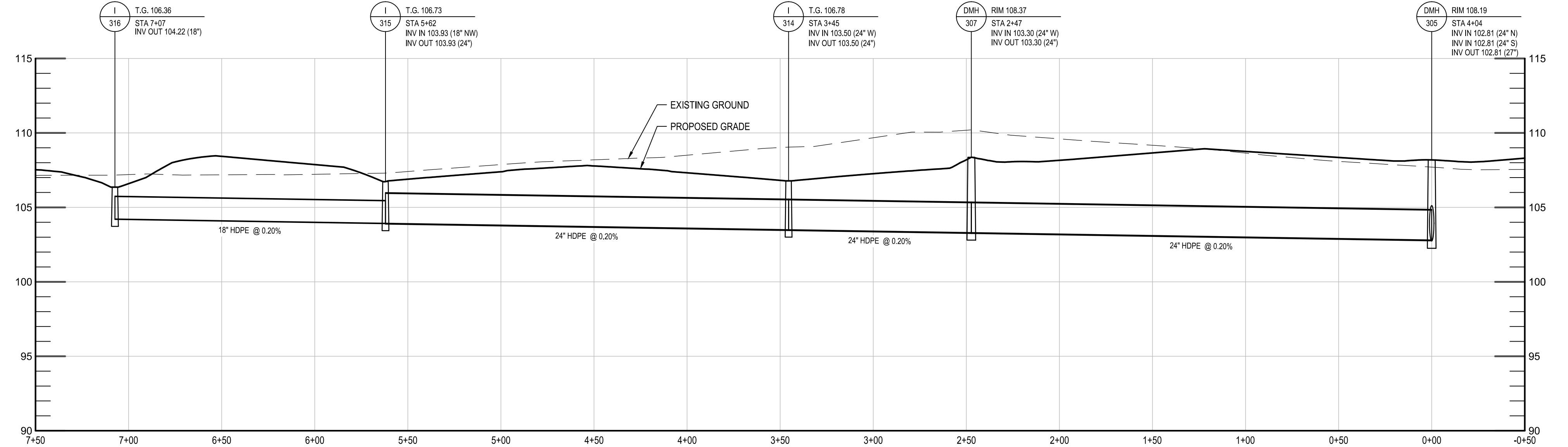
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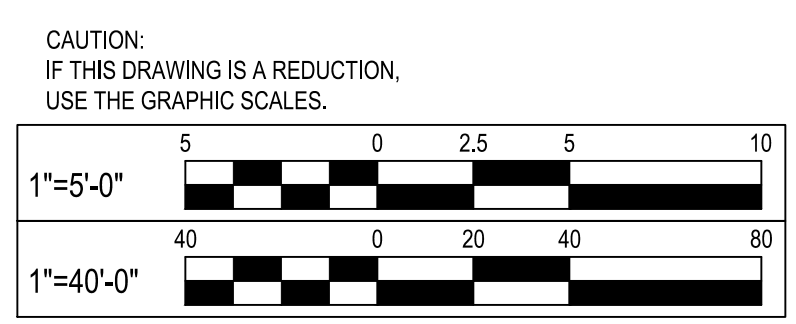
ES-301 TO I-313
SCALE: HORIZ. 1"=40' VERT. 1"=5'



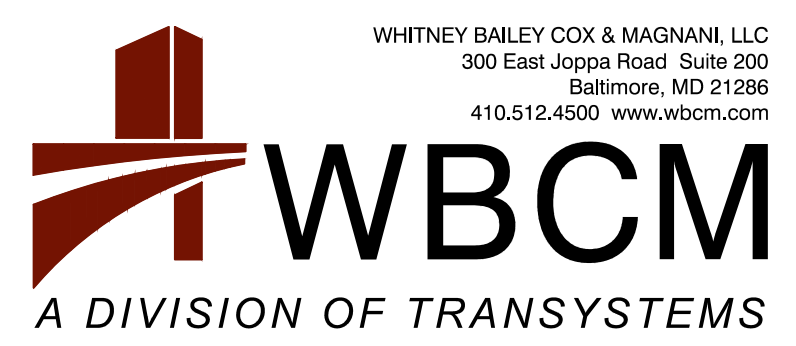
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SCALE: HORIZ. 1"=40' VERT. 1"=5'



DMH-305 TO I-316
SCALE: HORIZ. 1"=40' VERT. 1"=5'



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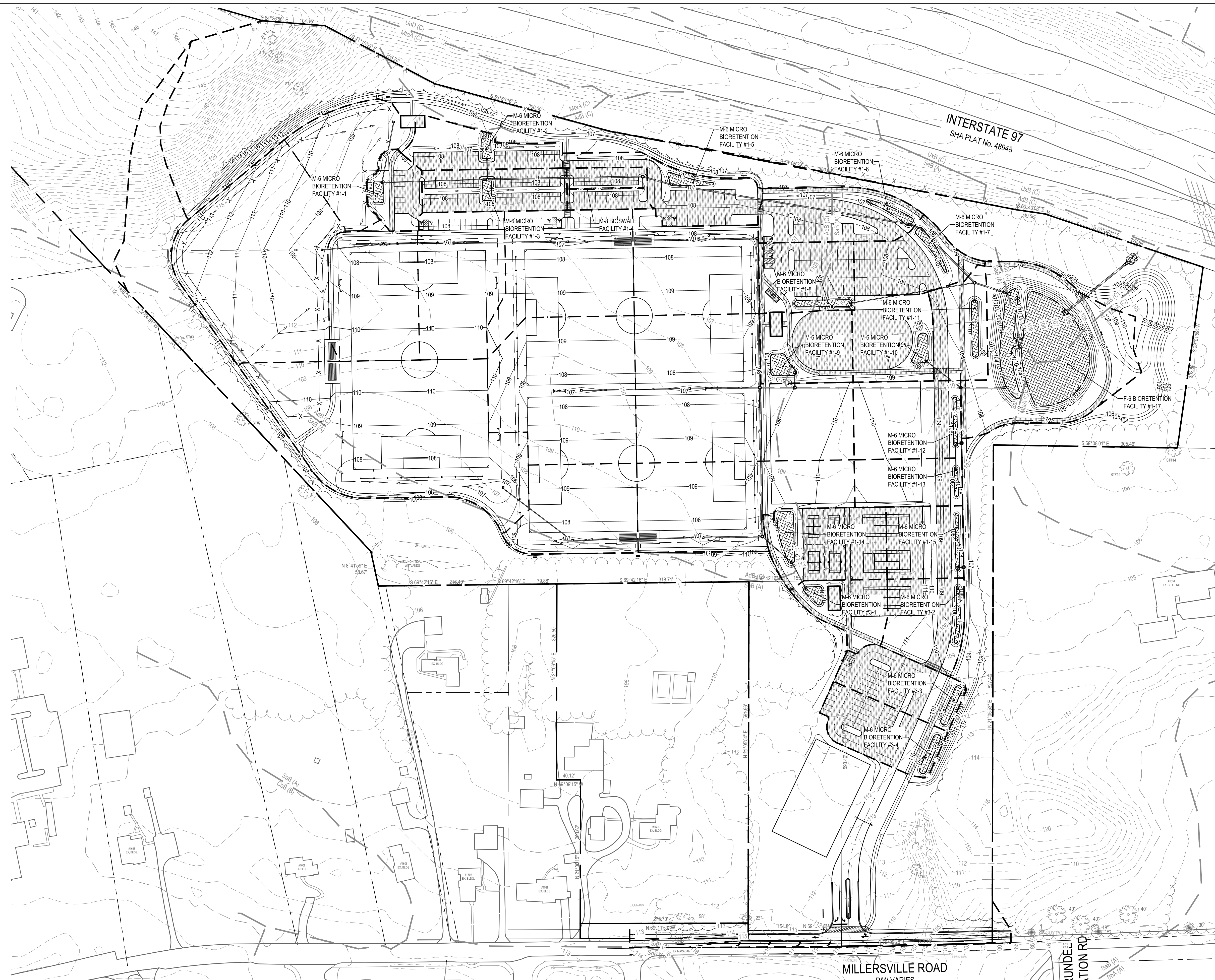
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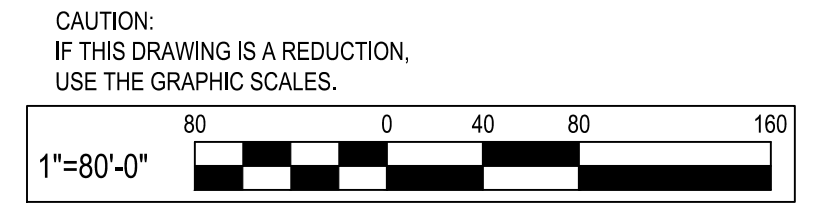
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: AS SHOWN		DRAWN BY: R.S.S.	
CHECKED BY: R.W.H.		SHEET NO. 20 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	
MILLERSVILLE PARK			
STORM DRAIN PROFILES			


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SWM LEGEND

ESD SWM FACILITY	
DRAINAGE AREA BOUNDARY	
IMPERVIOUS AREA TREATED BY SWM FACILITY	




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REVISIONS			
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ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 80'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		OVERALL STORM WATER MANAGEMENT PLAN	
CHECKED BY: R.W.H.		SHEET NO. 21 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	

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SPECIFICATIONS:

1. SEE CHART RIGHT.
2. THE CONTRACTOR SHALL SUBMIT SOIL TEST RESULTS (1 PER 30 CY BSM) TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. PERFORM SOIL TESTS REQUIRED FOR BOTH IMPORTED SOIL AND RE-USED / AMENDED TOP SOIL. SOIL TEST RESULTS SHALL INCLUDE AT A MINIMUM: PHOSPHORUS, ORGANIC MATTER, SOLUBLE SALTS, AND TEXTURAL ANALYSIS.
3. MINIMIZE COMPACTION OF SUBGRADE SOILS IN SWALES. CONTRACTOR SHALL TILL THE SUBGRADE SOILS TO A DEPTH OF 6" BELOW THE BOTTOM OF EACH FACILITY. WHEN BACKFILLING THE SWALE, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE SWALE. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE SWALE TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.
4. PLANT MATERIAL SHALL BE REPRESENTATIVE OF SPECIES AND CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1-2004.

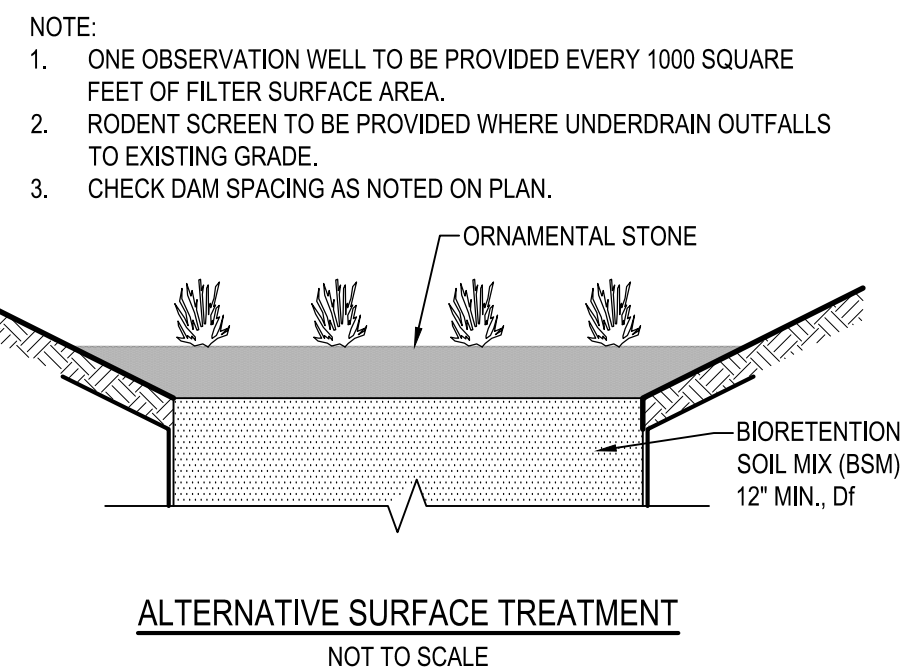
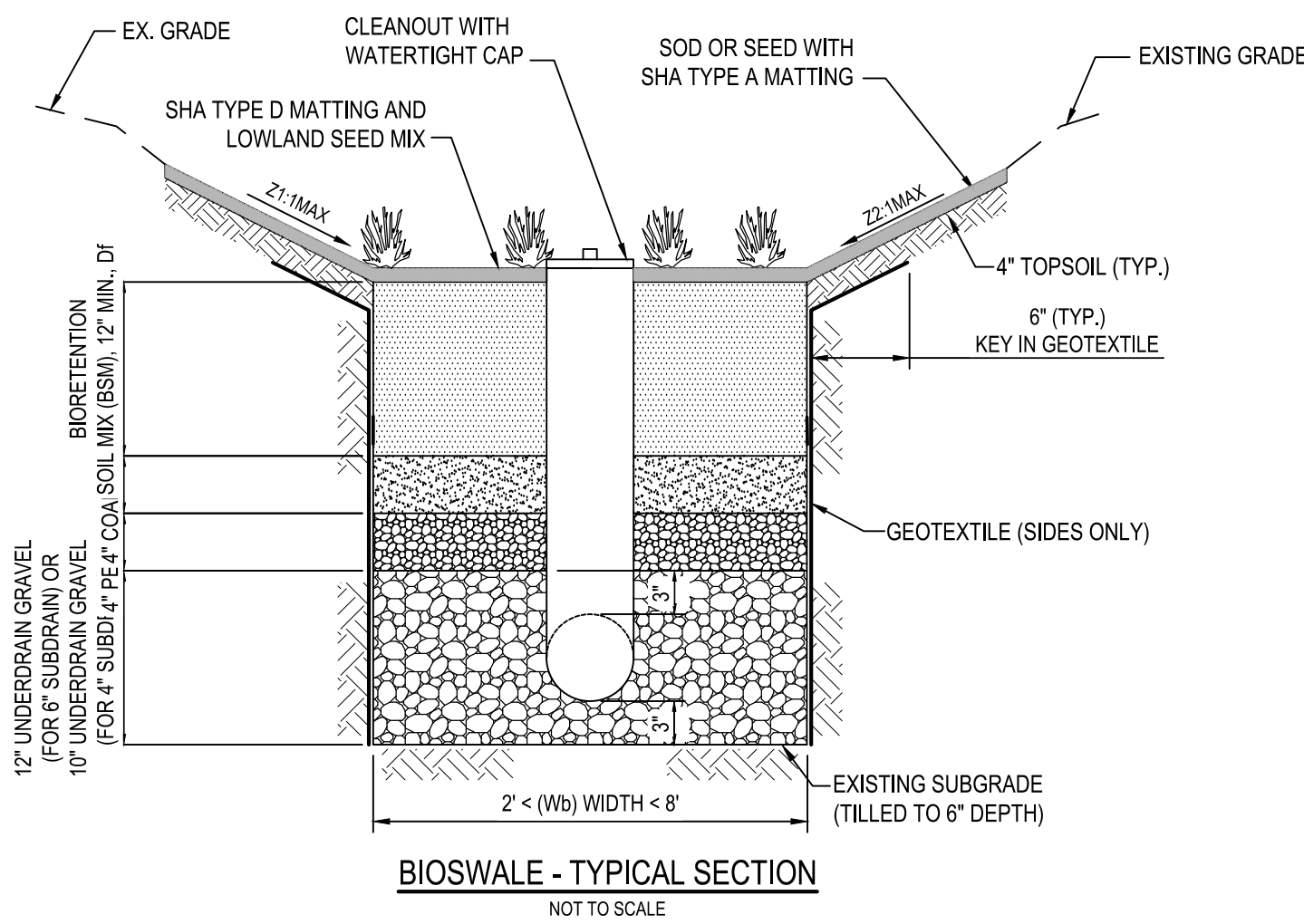
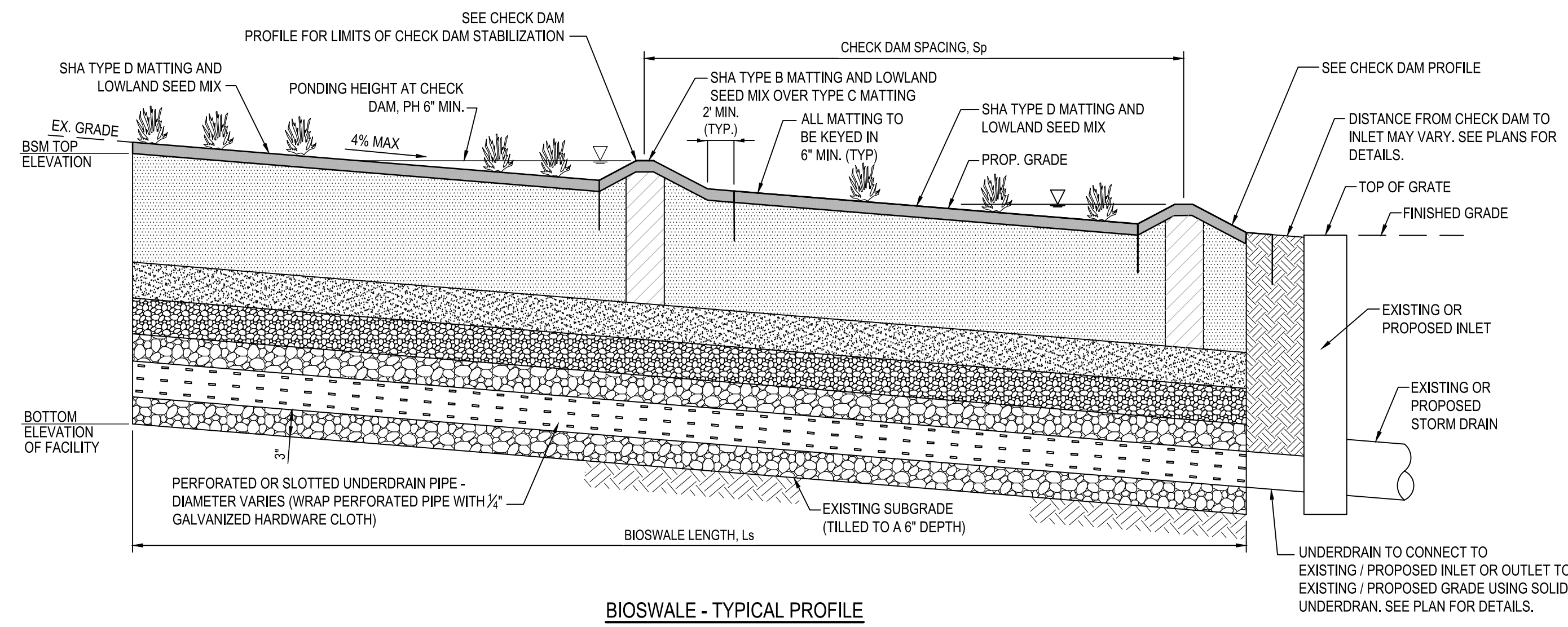
MAINTENANCE SCHEDULE:

AFTER CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE WORK, INSPECTION AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE UNITED STATES NAVY.

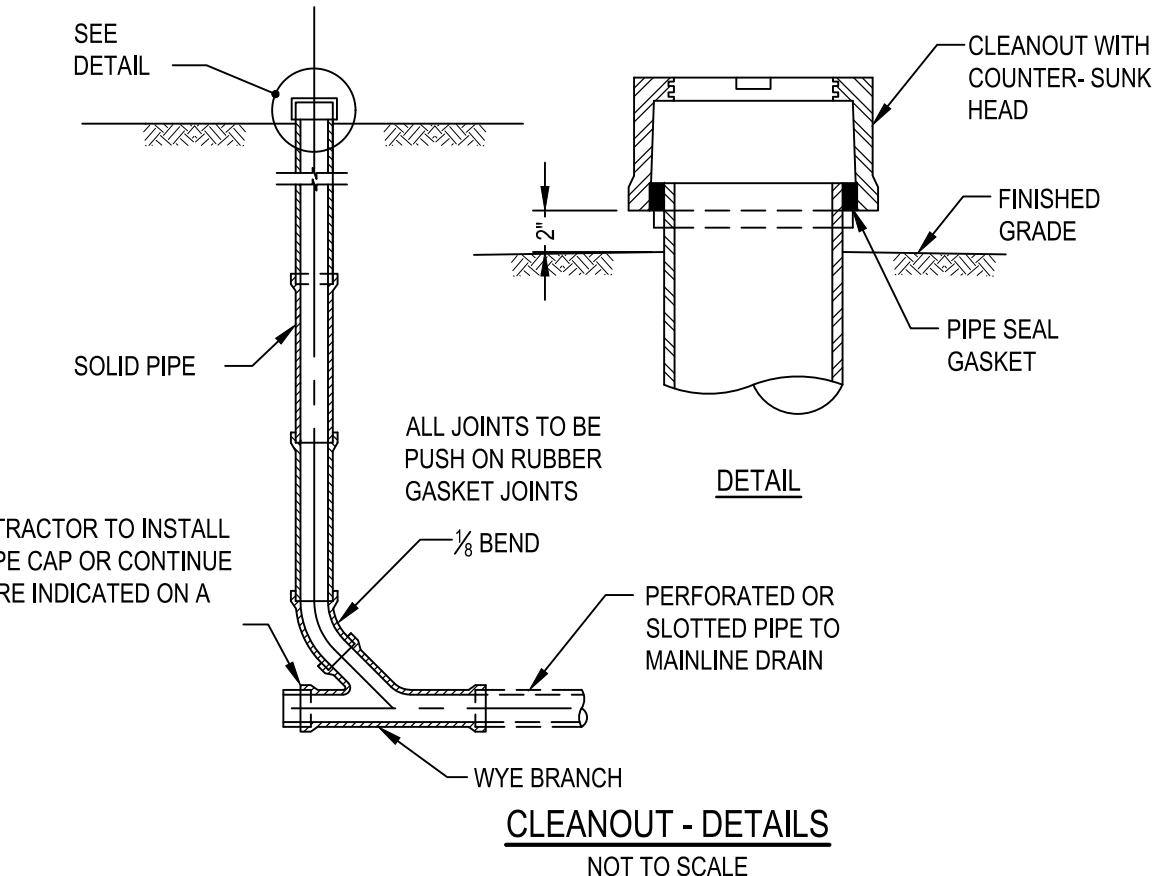
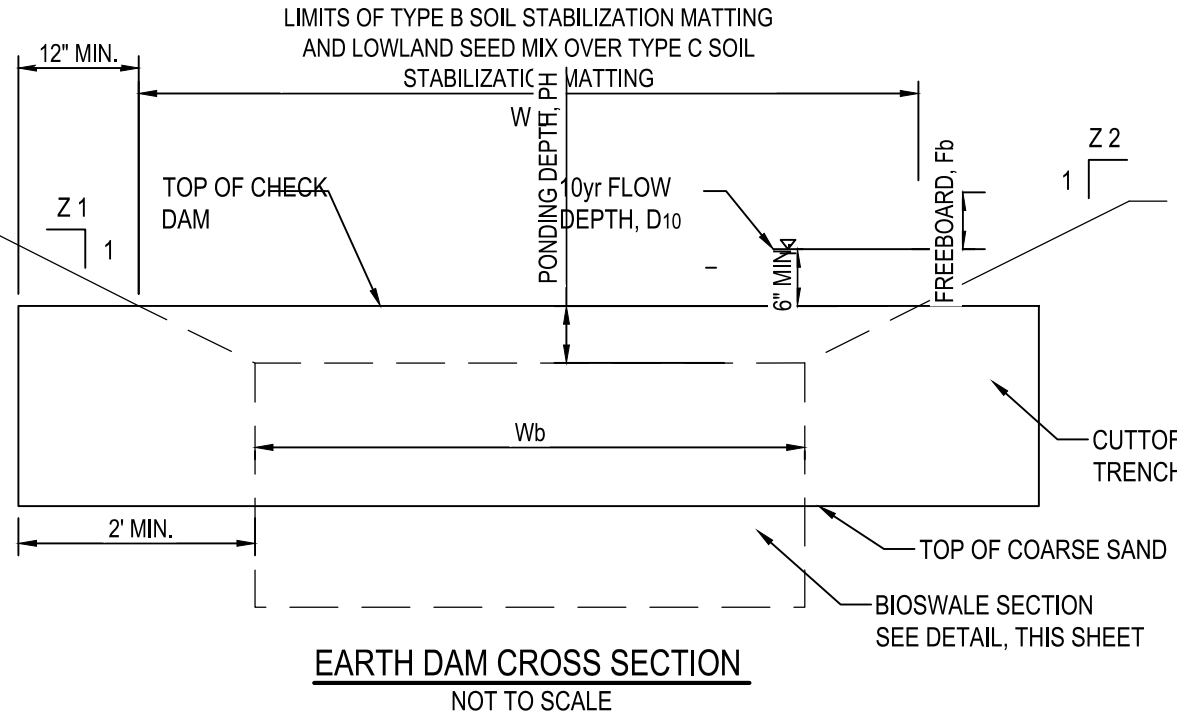
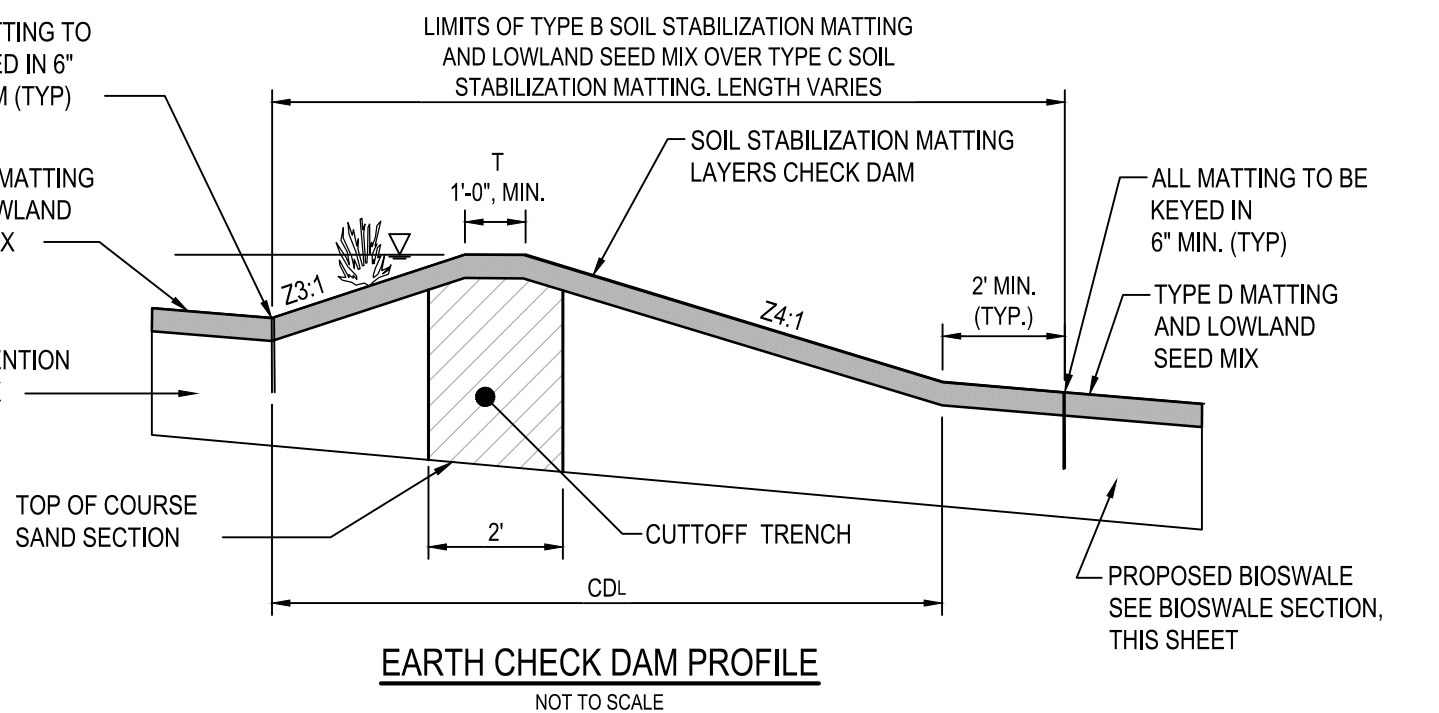
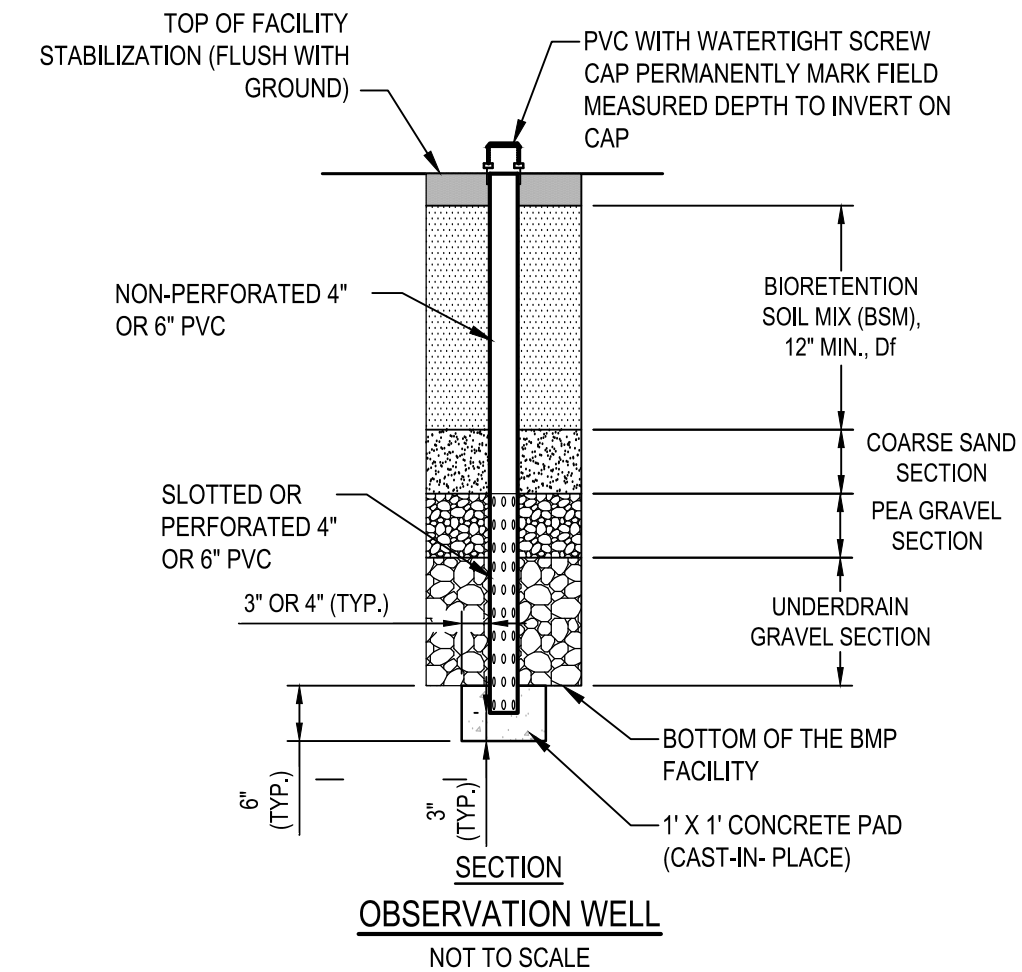
STORMWATER MAINTENANCE SCHEDULE BIOSWALES

INSPECTION ITEM	FREQUENCY OF INSPECTION	INSPECTION REQUIREMENTS	REMEDIAL ACTION
SWALE SURFACE	SEASONALLY AND AFTER A MAJOR STORM	CHECK FOR EROSION, FLOW BLOCKAGES, AND STABLE CONVEYANCE.	STABILIZE AND GRADE ACCORDING TO APPROVED PLAN.
DEWATERING	SEASONALLY AND AFTER A MAJOR STORM	FACILITY MUST DEWATER WITHIN 48 HOURS OF RAINFALL. NOTICEABLE DOORS, STAINED WATER ON THE FILTER SURFACE OR AT THE OUTLET, OR THE PRESENCE OF ALGAE OR AQUATIC VEGETATION ARE INDICATORS OF ANAEROBIC CONDITIONS, AND INADEQUATE DEWATERING OF THE FACILITY.	THE TOP THREE INCHES OF SOIL SHOULD BE REMOVED AND REPLACED WITH SOIL MATERIAL AS PER PLAN SPECIFICATIONS. FOLLOW UP INSPECTIONS MUST CONFIRM ADEQUATE DEWATERING. IF THE FACILITY DOES NOT FUNCTION AS INTENDED AFTER THE ABOVE ACTION, OR DRAWDOWN EXCEEDS 72 HOURS, ALL THE MEDIA AND UNDERDRAIN SYSTEM NEED TO BE REMOVED AND REPLACED.
VEGETATION	SEASONALLY AND AFTER A MAJOR STORM	CHECK FOR HEALTHY VEGETATION AND GOOD COVER. CHECK FOR EVIDENCE OF EROSION, BARE SPOTS OR DEAD OR DYING VEGETATION.	REMOVE UNWANTED VEGETATION AND RE-SEED OR RE-PLANT ACCORDING TO APPROVED PLAN.
SEDIMENT ACCUMULATION	SEASONALLY AND AFTER A MAJOR STORM	CHECK FOR EXCESSIVE SEDIMENT IN THE SWALE CAUSING DISRUPTION TO FLOW.	CLEAN OUT SEDIMENTS AND RESTORE ELEVATIONS TO APPROVED PLAN DESIGN.
PONDING AREA	SEASONALLY AND AFTER A MAJOR STORM	CHECK THAT WATER PONDING DEPTH IS IN ACCORDANCE WITH THE APPROVED DESIGN.	SEDIMENTS MAY NEED TO BE CLEANED OUT TO RESTORE WET POOL VOLUME. IF THE FACILITY IS NOT FUNCTIONING AS DESIGNED, CONTACT MDE FOR REVIEW AND APPROVAL OF FIELD MODIFICATIONS.
CHECK DAMS OR ENERGY DISSIPATORS	SEASONALLY AND AFTER A MAJOR STORM	CHECK FOR EVIDENCE OF FLOW CUTTING AROUND THE STRUCTURE, AND EVIDENCE OF EROSION AT THE DOWNSTREAM TOE.	REPAIR AND RE-GRADE AS REQUIRED TO COMPLY WITH APPROVED PLANS.
DEBRIS AND TRASH CLEANOUT	MONTHLY	CHECK THAT THE FACILITY IS CLEAN OF TRASH AND DEBRIS. INLETS, OUTLETS, AND CONTRIBUTING AREAS AROUND THE FACILITY MUST BE CHECKED.	TRASH AND DEBRIS MUST BE DISPOSED OF IN AN ACCEPTABLE MANNER ACCORDING TO CURRENT REGULATIONS.
STRUCTURAL COMPONENTS	ANNUALLY	CHECK FOR EVIDENCE OF STRUCTURAL DETERIORATION, SPALLING OR CRACKING. OUTLET STRUCTURE IN GOOD CONDITION.	REPAIR TO GOOD CONDITION ACCORDING TO SPECIFICATIONS ON THE APPROVED PLANS.
OUTLETS	SEASONALLY AND AFTER A MAJOR STORM	CHECK FOR EVIDENCE OF EROSION, RILLS, OR GULLIES. CHECK THAT RIPRAP OUTLET IS MAINTAINED IN GOOD FUNCTIONAL CONDITION.	STABILIZE ALL ERODED AREAS AND GRADE TO PROVIDE STABLE CONVEYANCE. REPAIR IN ACCORDANCE WITH APPROVED PLAN.
OVERALL FUNCTION OF THE FACILITY	ANNUALLY	CHECK THAT FLOW CONVEYANCE IS OPERATING AS DESIGNED.	REPAIRS MUST BE IN ACCORDANCE WITH APPROVED PLANS.

* IF FIELD CONDITIONS REQUIRE A MODIFICATION TO THE ORIGINAL APPROVAL IN ORDER TO ACHIEVE THE INTENDED DESIGN FUNCTION, CONTACT MDE'S SEDIMENT AND STORMWATER MANAGEMENT PLAN REVIEW DIVISION AT 410-537-3563 FOR REVIEW AND APPROVAL OF PROPOSED MODIFICATIONS



- NOTE:**
1. ONE OBSERVATION WELL TO BE PROVIDED EVERY 1000 SQUARE FEET OF FILTER SURFACE AREA.
 2. RODENT SCREEN TO BE PROVIDED WHERE UNDERDRAIN OUTFALLS TO EXISTING GRADE.
 3. CHECK DAM SPACING AS NOTED ON PLAN.



MATERIALS SPECIFICATIONS FOR BIOSWALES

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLAN SHEETS	N/A	PLANTINGS ARE SITE SPECIFIC
BSM	SHA BIOWSALE SOIL MIX (BSM) SECTION 920.01.05	N/A	MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2008 INCLUDING AND ADDENDA THERETO. COPY TO BE KEPT ON-SITE
PEA GRAVEL	ASTM-D-448	NO.8 OR NO.9 (1/8" TO 3/8")	
ORNAMENTAL STONE	WASHED COBBLES	STONE: 1" TO 3"	
GEOTEXTILE		N/A	NONWOVEN GEOTEXTILE TABLE H.1 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
UNDERDRAIN GRAVEL	AASHTO M-43	NO.57, 6, OR 67 (3/8" TO 3/4")	
IMPERMEABLE LINER (IF REQUIRED)	ASTM-D-7176	30-ML THICKNESS	LAYER TO BE ULTRA-VIOLET RESISTANT. A GEOTEXTILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
UNDERDRAIN PIPING	F 756, TYPE PS 28 AASHTO M-279 AASHTO M-252	4" TO 6"	SLOTTED OR PERFORATED PIPE: SLOTTED PIPE SHALL HAVE A MINIMUM OPEN AREA OF 1.5 SQ. IN. LINEAR FOOT WITH A MAXIMUM SLOT LENGTH OF 2" AND MAXIMUM SLOT WIDTH OF 1/8 INCH. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4 INCH GALVANIZED HARDWARE CLOTH.
CAST-IN-PLACE CONCRETE (IF REQUIRED)	MSHA MK. NO.3; Fc=3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR-ENTRAINED, REINFORCING TO MEET ASTM-A615-60	N/A	ON-SITE TESTING OF CAST-IN-PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST-IN-PLACE OR PRE-CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND - DESIGN TO INCLUDE MEETING ACI CODE 301-R99; VERTICAL LOADING (H-FI OR H-H-03); ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING
COARSE SAND	AASHTO-M6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRANITONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND
CUTTUFF TRENCH	UNIFIED SOIL CLASSIFICATION (ASTM D 2487)	GC SC CH CL	COMPACT TO 95% STANDARD PROCTOR
STABILIZATION MATTING	SHA SECTION 920.05		TYPE A, B, C OR D AS NOTED ON PLAN / SECTION / DETAILS MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2008 INCLUDING AND ADDENDA THERETO. COPY TO BE KEPT ON-SITE. SEE SHEET C-500 FOR DESCRIPTIONS.

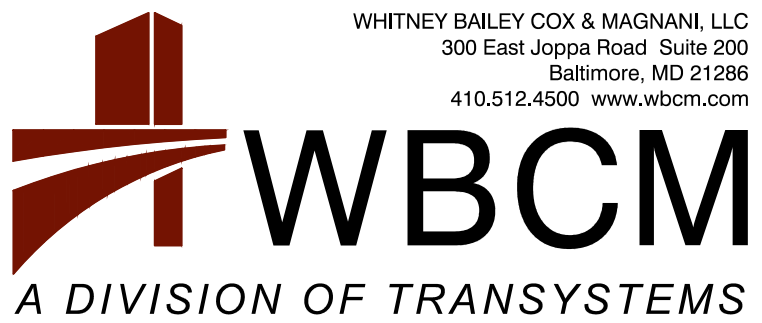
- INSPECTION:**
- REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER 48 HOURS PRIOR TO REQUIRED INSPECTION.
- DURING EXCAVATION TO SUBGRADE.
 - DURING PLACEMENT AND BACKFILL OF UNDERDRAINS.
 - DURING PLACEMENT OF CHECK DAMS OR WEIRS.
 - DURING PLACEMENT OF BACKFILL AND BSM SOIL.

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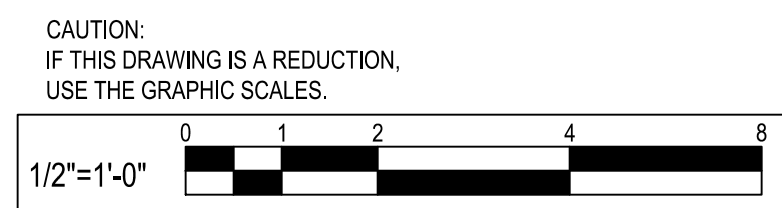
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_____ CHIEF ENGINEER	_____ DATE	_____ PROJECT MANAGER	_____ DATE		
_____ ASSISTANT CHIEF ENGINEER	_____ DATE	_____ CHIEF, RIGHT-OF-WAY	_____ DATE		

DRAWN BY: R.S.S.
CHECKED BY: R.W.H.
SHEET NO. 24 OF 37
PROJECT NO.: P567102
CONTRACT NO.: P56702

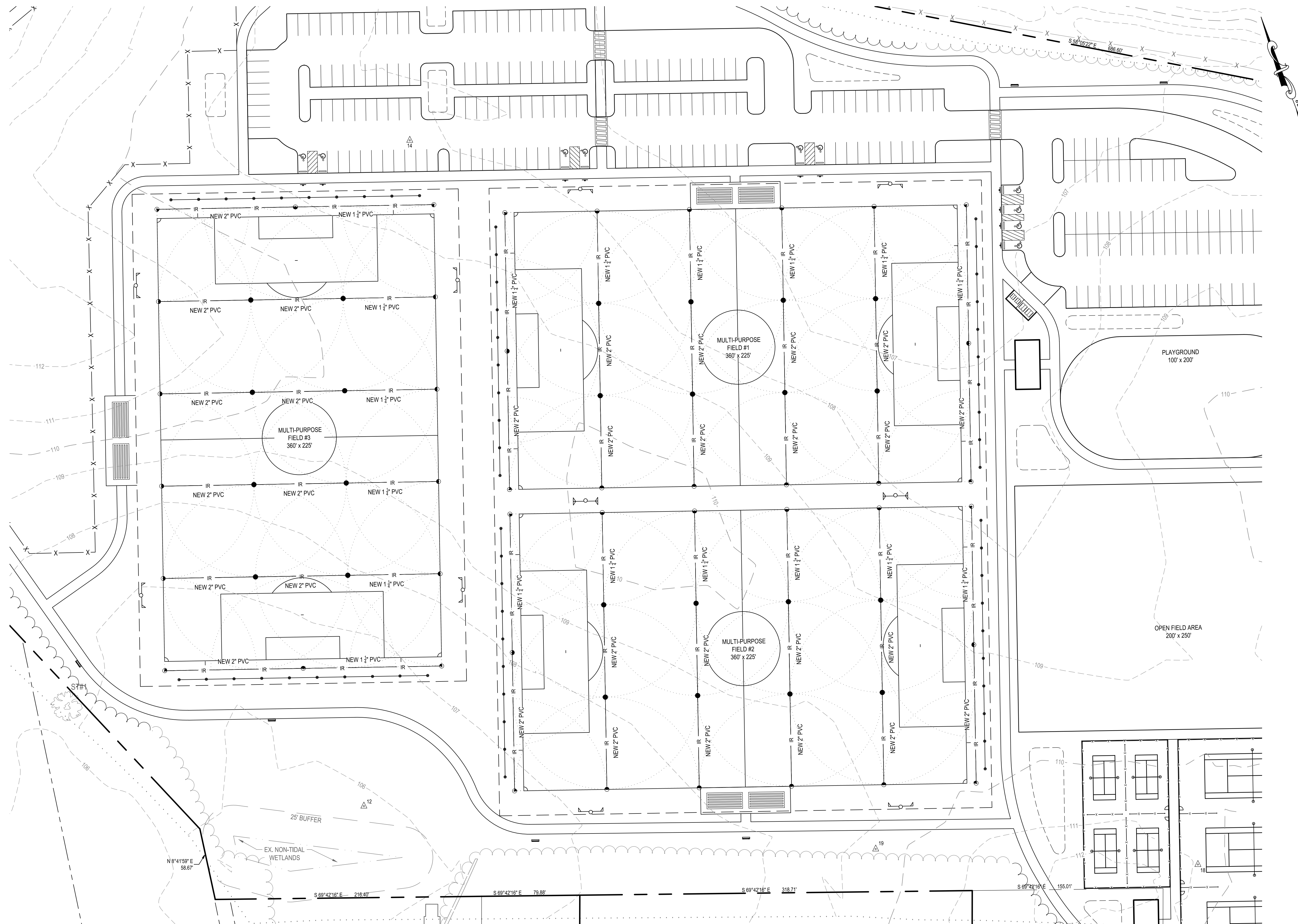
MILLERSVILLE PARK
STORM WATER MANAGEMENT DETAILS
BIOWSALE



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IRRIGATION NOTES:

- SEE IRRIGATION DETAILS.
- TRENCHES FOR IRRIGATION INSTALLATION SHALL BE HAND DUG ADJACENT TO STORMWATER STRUCTURES AND OTHER UTILITIES. CONFLICTS AND DISCREPANCIES SHALL BE REPORTED TO THE PROJECT ENGINEER IMMEDIATELY.
- IRRIGATION MAIN LINES TO HAVE A MINIMUM OF 36" OF COVER, SECONDARY LINE TO HAVE 18" OF COVER FROM FINISH GRADE, ARE FROM TOP OF PIPE TO ASSIST CONTRACTOR IN PLACEMENT.
- CLOCK TO BE A TWO WIRE DECODER CAPABLE OF HANDLING UP TO 50 STATIONS AND HARD WIRED TO SITE CONTROLLER IN BUILDING.
- ALL IRRIGATION PIPE PLACED IN ROAD TO BE SLEEVED WITH SCH. 80 PVC PIPE FOUR INCHES IN DIAMETER GREATER THAN PIPE TO BE SLEEVED.
- HIGH VOLTAGE AND LOW VOLTAGE NOT TO BE LOCATED IN THE SAME SLEEVE. ALL WIRING FOR IRRIGATION SYSTEM TO BE SLEEVED.

WATER LINE TO SPIGOT NOTES:

- WATER LINE TO BE PLACED A MINIMUM OF 48 INCHES BELOW FINISHED GRADE.
- USED 3" CLASS 200 PVC PIPING IN A SIMILAR MANNER TO THE IRRIGATION SYSTEM FOR ALL WATER LINES FEEDING THE WATERING STATIONS.
- ALL WATERING SPIGOTS ARE TO BE FROST FREE PROVIDING A MANUFACTURER APPROPRIATE DRAIN WINDOW BELOW THE FROST LINE.
- DROP 2" CLASS 200 PVC PIPE AT A MAXIMUM RADIUS OF 8' TO AVOID OBSTRUCTIONS.

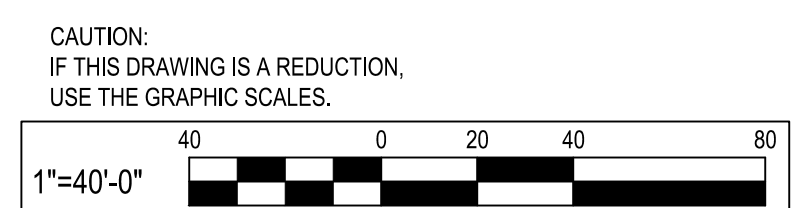
GENERAL NOTES:

- DESIGN IS BASED UPON A MINIMUM FLOW OF 81 GPM AND A MINIMUM PRESSURE OF 85 PSI DOWNSTREAM OF BACKFLOW PREVENTION DEVICE. IF SUFFICIENT PRESSURE IS NOT AVAILABLE AT POINT-OF-CONNECTION INSTALL A BOOSTER PUMP. CONTACT A RAIN BIRD REPRESENTATIVE FOR THE APPROPRIATE PUMP FOR THE SITE.
- ADDITIONAL LATERALS OUTSIDE PLAY FIELD AREA MAY BE INSTALLED PROVIDED HYDRAULIC CAPABILITY OF SUPPLY IS NOT EXCEEDED.
- SPRINKLER LOCATIONS ARE TO SCALE. PIPE LOCATIONS ARE DIAGRAMMATIC.
- PROVIDE #55K-1 KEY (1" MALE OUTLET) AND SH-2 SWIVEL HOSE ELL FOR EACH QUICK COUPLING VALVE.

IRRIGATION LEGEND:

SYMBOL	DESCRIPTION	QUANTITY
	BACKFLOW PREVENTION DEVICE	1
	MAIN SHUT-OFF VALVE	1
	RAIN BIRD PGA OR PEB REMOTE CONTROL VALVE (SIZED AS SHOWN)	5
	RAIN BIRD 5LRC QUICK COUPLING VALVE	2
	RAIN BIRD 8005 W/24 NOZZLE PRESSURE = 70 PSI RADIUS = 75 FEET FLOW = 27 GPM	22
	RAIN BIRD ESP-LX MODULAR OR ESP-INC IRRIGATION CONTROLLER W/8 STATIONS	1
— IR —	MAINLINE PIPE: CLASS 200 PVC (3")	
— IR —	LATERAL PIPE: CLASS 200 PVC (AS SHOWN)	

A1	INDICATES CONTROLLER AND CONTROLLER STATION NUMBER
81	INDICATES LATERAL DISCHARGE IN GPM
2"	INDICATES REMOTE CONTROL VALVE SIZE
-	



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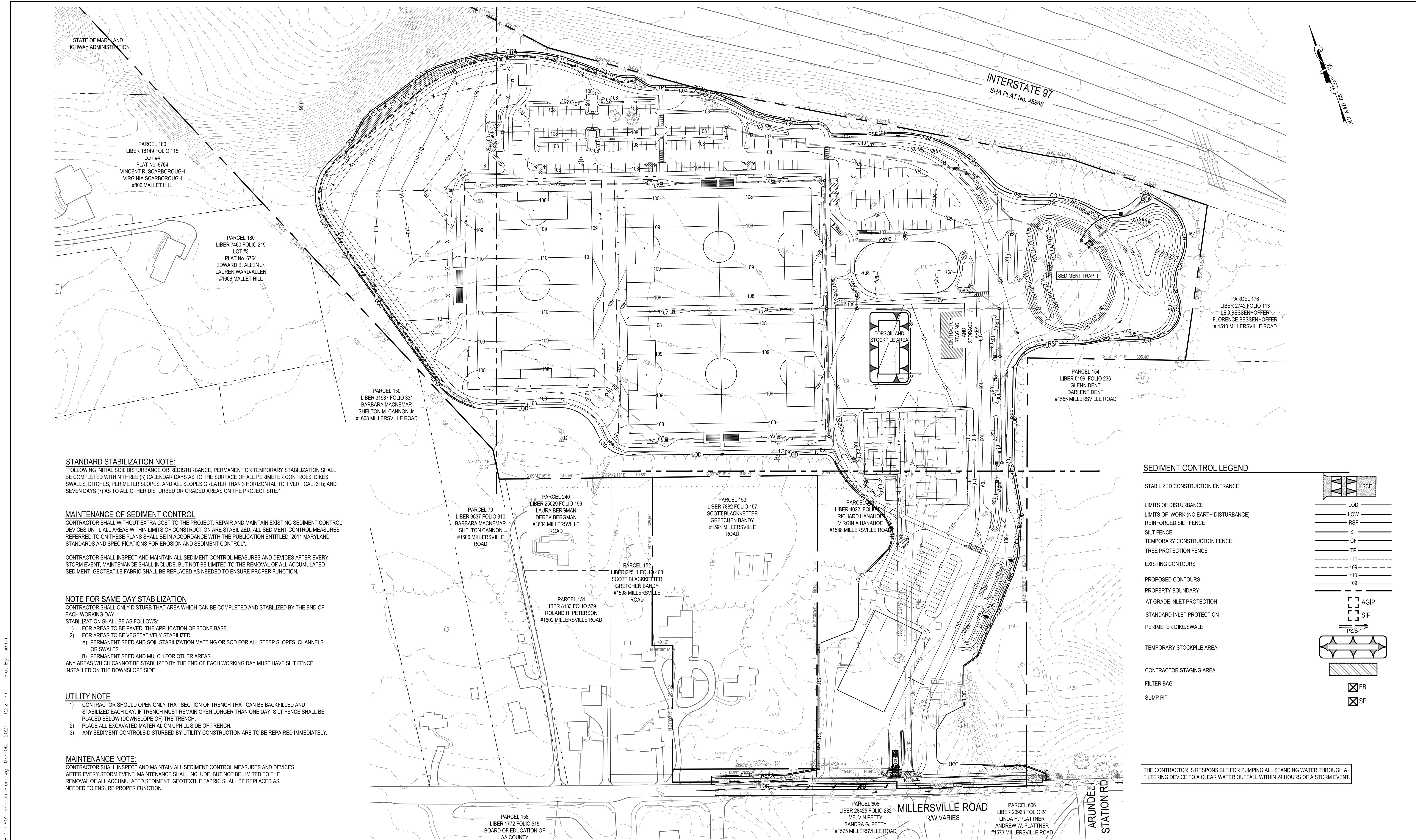
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REVISIONS			
NO.	DESCRIPTION	BY	DATE

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DEPARTMENT OF PUBLIC WORKS

APPROVED _____ DATE _____	APPROVED _____ DATE _____	SCALE: 1" = 40'	MILLERSVILLE PARK
CHIEF ENGINEER _____	PROJECT MANAGER _____	DRAWN BY: R.S.S.	
APPROVED _____ DATE _____	APPROVED _____ DATE _____	CHECKED BY: R.W.H.	IRRIGATION PLAN
ASSISTANT CHIEF ENGINEER _____	CHIEF, RIGHT-OF-WAY _____	SHEET NO. 25 OF 37	
		PROJECT NO.: P567102	
		CONTRACT NO.: P56702	



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 DAYS (7) AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE."

MAINTENANCE OF SEDIMENT CONTROL

CONTRACTOR SHALL WITHOUT EXTRA COST TO THE PROJECT, REPAIR AND MAINTAIN EXISTING SEDIMENT CONTROL DEVICES UNTIL ALL AREAS WITHIN LIMITS OF CONSTRUCTION ARE STABILIZED. ALL SEDIMENT CONTROL MEASURES REFERRED TO ON THESE PLANS SHALL BE IN ACCORDANCE WITH THE PUBLICATION ENTITLED "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL".

CONTRACTOR SHALL INSPECT AND MAINTAIN ALL SEDIMENT CONTROL MEASURES AND DEVICES AFTER EVERY STORM EVENT. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO THE REMOVAL OF ALL ACCUMULATED SEDIMENT. GEOTEXTILE FABRIC SHALL BE REPLACED AS NEEDED TO ENSURE PROPER FUNCTION.

NOTE FOR SAME DAY STABILIZATION

CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY.

STABILIZATION SHALL BE AS FOLLOWS:

- 1) FOR AREAS TO BE PAVED, THE APPLICATION OF STONE BASE.
- 2) FOR AREAS TO BE VEGETATIVELY STABILIZED:
 - A) PERMANENT SEED AND SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES.
 - B) PERMANENT SEED AND MULCH FOR OTHER AREAS.

ANY AREAS WHICH CANNOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE.

UTILITY NOTE

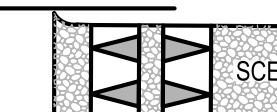
- 1) CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWNSLOPE OF) THE TRENCH.
- 2) PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- 3) ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

MAINTENANCE NOTE:

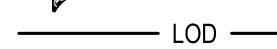
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SEDIMENT CONTROL LEGEND

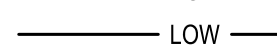
STABILIZED CONSTRUCTION ENTRANCE



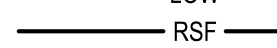
LIMITS OF DISTURBANCE



LIMITS OF WORK (NO EARTH DISTURBANCE)



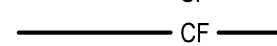
REINFORCED SILT FENCE



SILT FENCE



TEMPORARY CONSTRUCTION FENCE



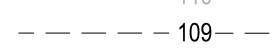
TREE PROTECTION FENCE



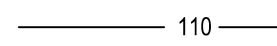
EXISTING CONTOURS



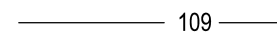
PROPOSED CONTOURS



PROPERTY BOUNDARY



AT GRADE INLET PROTECTION



STANDARD INLET PROTECTION



PERIMETER DIKE/SWALE



TEMPORARY STOCKPILE AREA



CONTRACTOR STAGING AREA



FILTER BAG

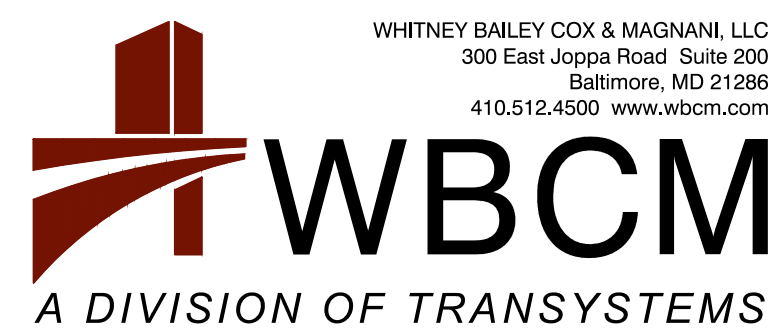
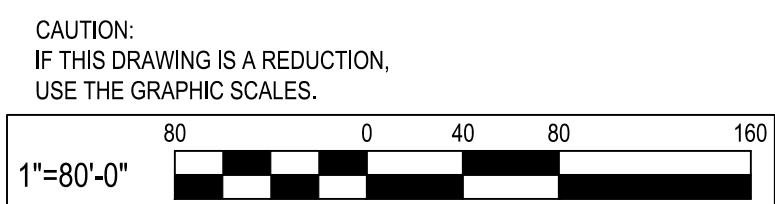


SUMP PIT



THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL STANDING WATER THROUGH A FILTERING DEVICE TO A CLEAR WATER OUTFALL WITHIN 24 HOURS OF A STORM EVENT.

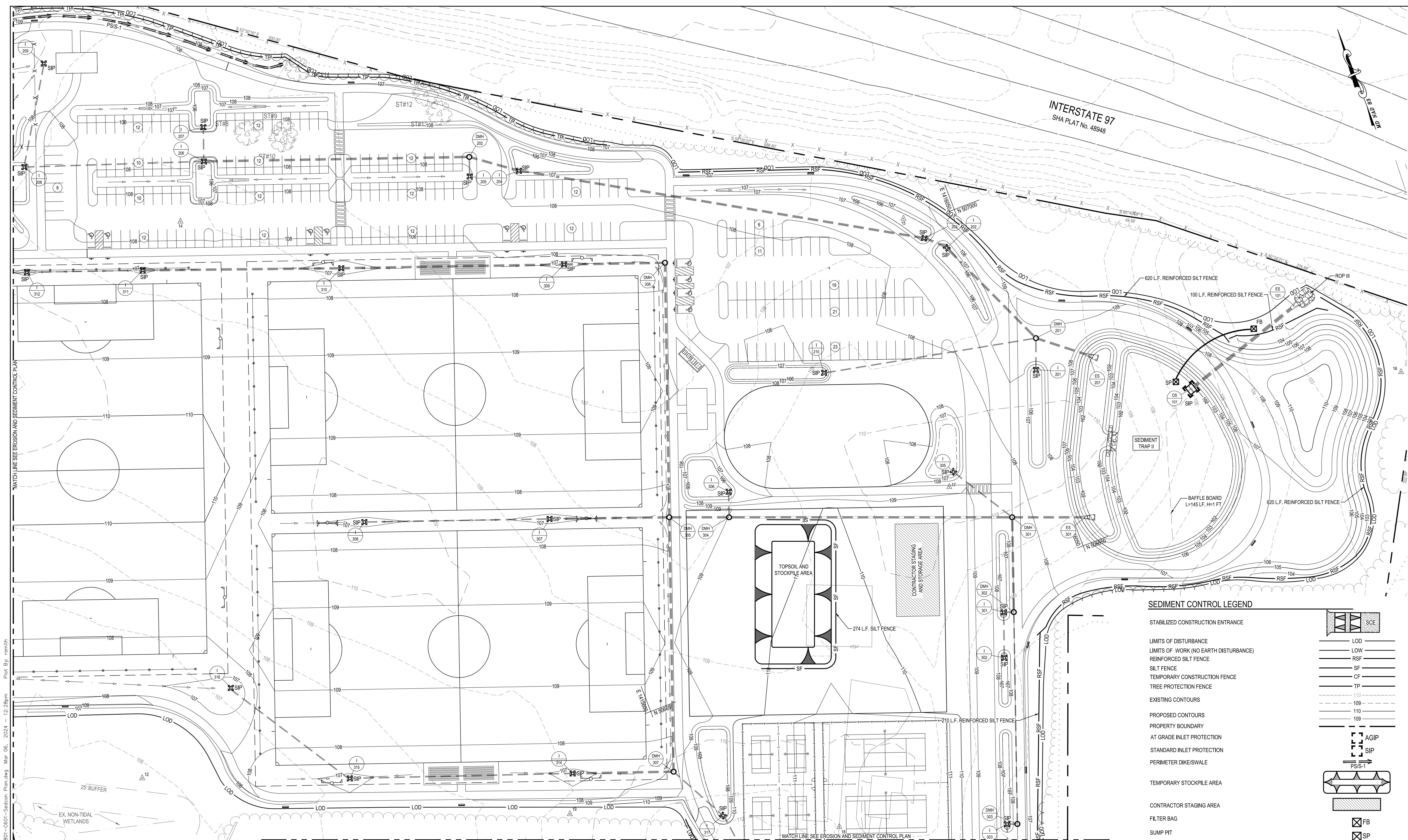
P:_2017\17141801\Drawings\07-Station Plan.dwg Mar 06, 2024 12:29pm Plot By: rsm11h



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 # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY			
DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 80'		MILLERSVILLE PARK	
DRAWN BY: R.S.S.		OVERALL EROSION AND SEDIMENT CONTROL PLAN	
CHECKED BY: R.W.H.		SHEET NO. 27 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	

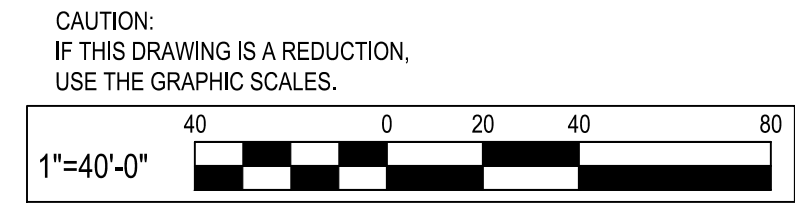


INTERSTATE 97
SHA PLAT No. 48948

SEDIMENT CONTROL LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- LIMITS OF DISTURBANCE
- LIMITS OF WORK (NO EARTH DISTURBANCE)
- REINFORCED SILT FENCE
- SILT FENCE
- TEMPORARY CONSTRUCTION FENCE
- TREE PROTECTION FENCE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPERTY BOUNDARY
- AT GRADE INLET PROTECTION
- STANDARD INLET PROTECTION
- PERIMETER DIKE/SWALE
- TEMPORARY STOCKPILE AREA
- CONTRACTOR STAGING AREA
- FILTER BAG
- SUMP PIT

THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL STANDING WATER THROUGH A FILTERING DEVICE TO A CLEAR WATER OUTFALL WITHIN 24 HOURS OF A STORM EVENT.



WHITNEY BAILEY COX & MAGNANI, LLC
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WBCM
A DIVISION OF TRANSYSTEMS

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License # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

APPROVED _____ DATE _____

CHIEF ENGINEER _____ PROJECT MANAGER _____

APPROVED _____ DATE _____

ASSISTANT CHIEF ENGINEER _____ CHIEF, RIGHT-OF-WAY _____

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

SCALE: 1" = 40'

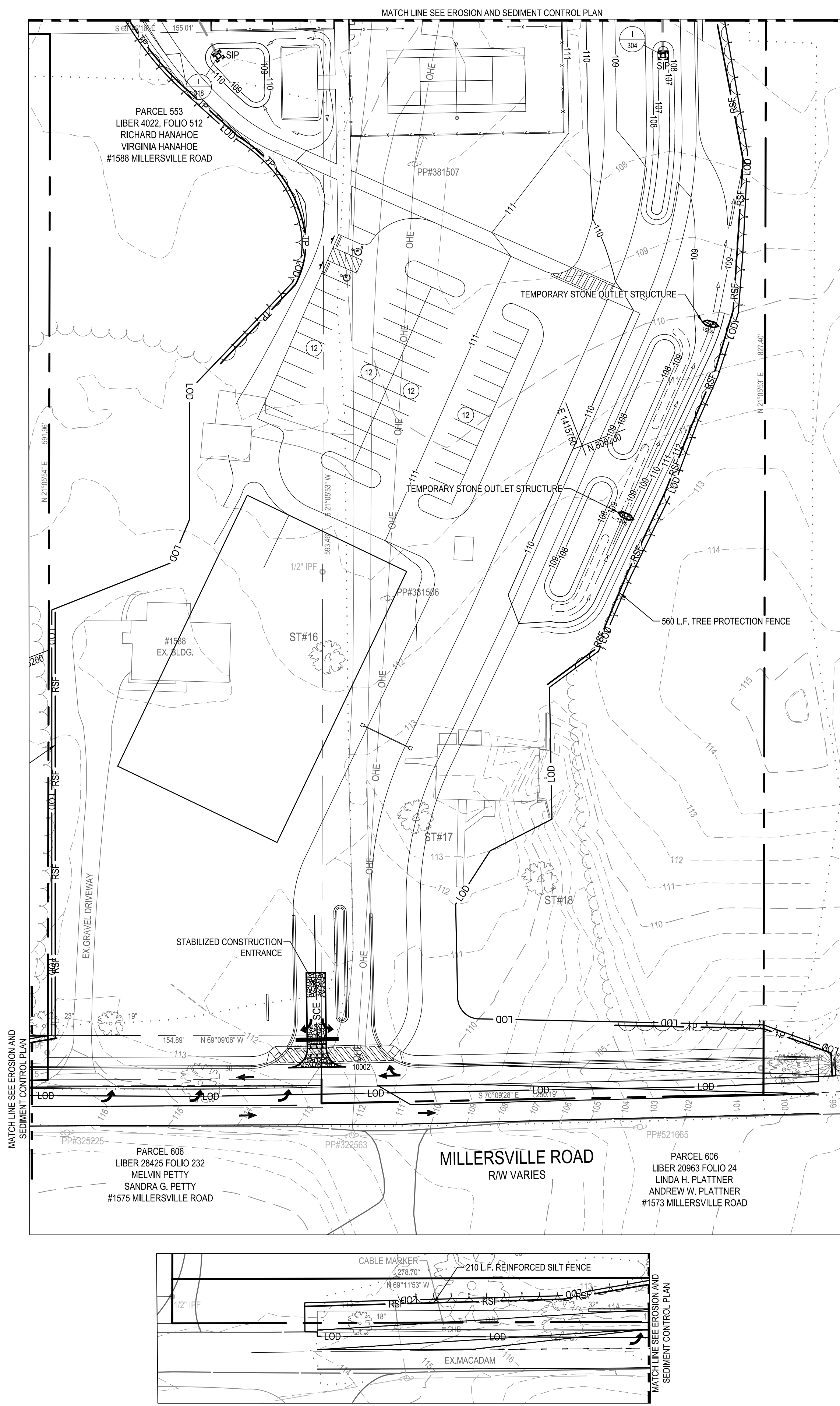
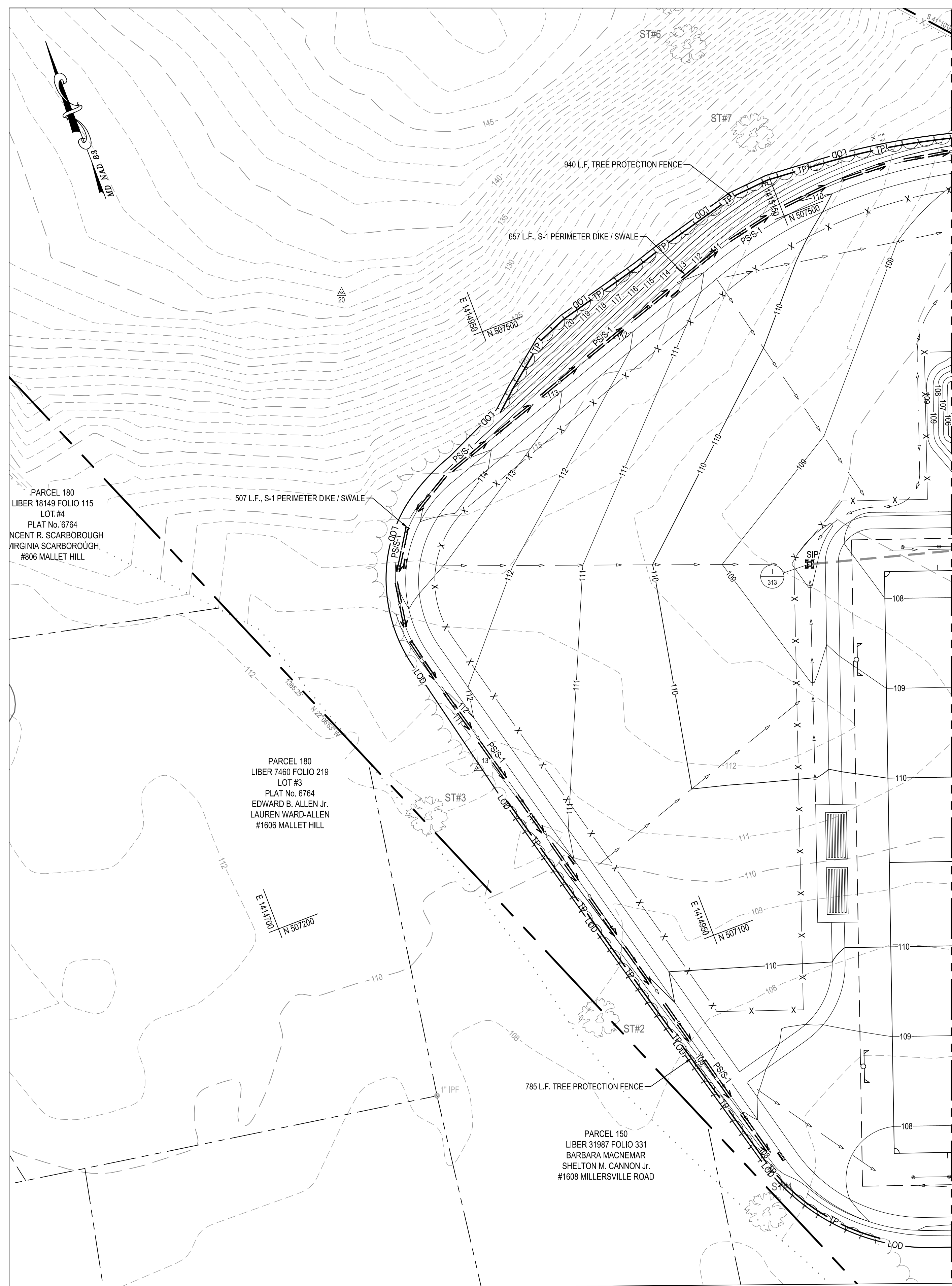
DRAWN BY: R.S.S.
CHECKED BY: R.W.H.

SHEET NO. 28 OF 37
PROJECT NO.: P567102
CONTRACT NO.: P56702

MILLERSVILLE PARK
EROSION AND SEDIMENT CONTROL PLAN

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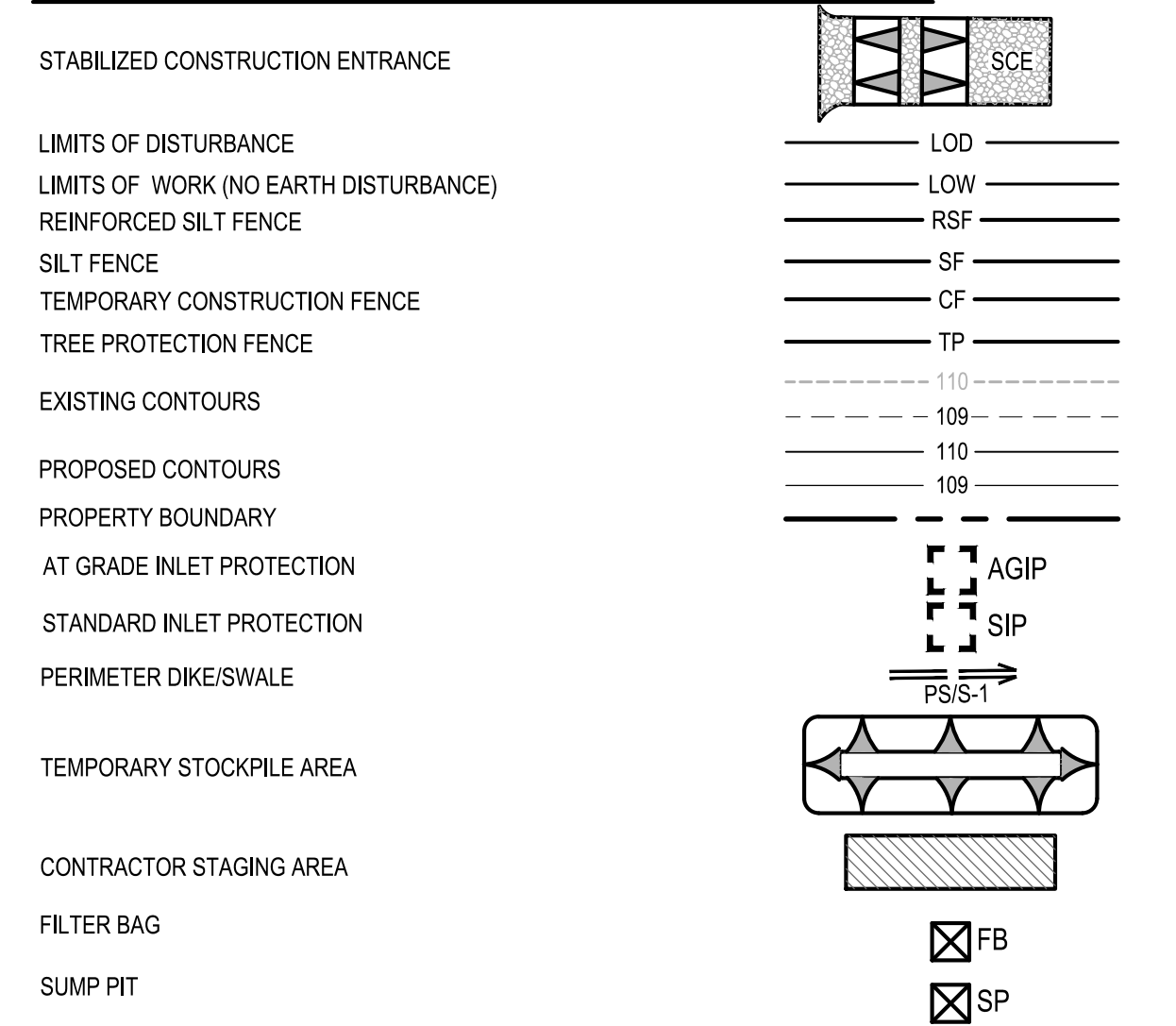
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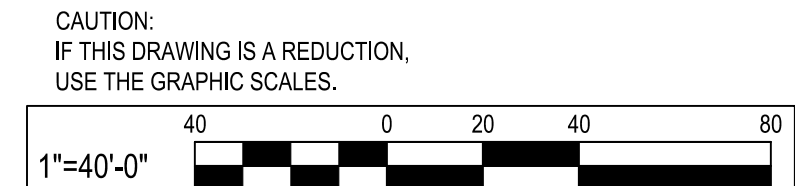
SEQUENCE OF CONSTRUCTION:

- INITIAL PHASE**
- PRE-CONSTRUCTION MEETING: NOTIFY THE DEPARTMENT OF INSPECTIONS AND PERMITS. (410-222-7780), RECREATION AND PARKS CONTACT ERICA JACKSON (410-222-2866) AT LEAST 48 HOURS BEFORE COMMENCING WORK. WORK MAY NOT COMMENCE UNTIL THE PERMITTEE OR THE RESPONSIBLE PERSONNEL HAVE MET ON SITE WITH THE SEDIMENT AND EROSION CONTROL INSPECTOR TO REVIEW THE APPROVED PLANS.
THE PERMITTEE OR CONTRACTOR SHALL NOT COMMENCE WITH CLEARING OR ANY EARTH DISTURBANCE ACTIVITIES ON THE SITE DURING OR BEFORE PREDICTED WET WEATHER EVENTS. ONCE SITE WORK BEGINS, CLEARING AND GRUBBING ACTIVITIES SHALL BE FOR THE INSTALLATION AND STABILIZATION OF THE PERIMETER EROSION CONTROL MEASURES ONLY.
 - CONTRACTOR SHALL LOCATE AND PROCURE ALL STAGING AND STOCKPILING AREAS WHICH SHALL BE APPROVED BY THE PROJECT INSPECTOR.
 - PRESENT FINISHED SCHEDULE OF WORK AND MAINTENANCE OF TRAFFIC OPERATIONS TO THE ENGINEER AND ANNE ARUNDEL COUNTY INSPECTIONS AND PERMITS DIVISION.
 - CLEAR AND GRUB THOSE AREAS FOR INSTALLATION OF SEDIMENT AND EROSION PERIMETER CONTROLS, INCLUDING STABILIZED CONSTRUCTION ENTRANCE, REINFORCED SILT FENCE, TREE PROTECTION FENCE, SEDIMENT TRAP, SUMP PITS, FILTER LOGS AND FILTER BAGS.
 - INSTALL REMAINING SEDIMENT CONTROL DEVICES AS REQUIRED PER THE PLANS. CONTACT THE INSPECTOR FOR APPROVAL OF THE SEDIMENT CONTROL INSTALLATION. INSPECTION AND PERMITS WILL BE REQUIRED THAT AN INSPECTION AND CERTIFICATION OF THE INSTALLATION OF THE SEDIMENT CONTROLS BE PERFORMED BY A DESIGN PROFESSIONAL PRIOR TO CONSTRUCTION COMMENCING.
 - BUILD STAGING AND STOCKPILE AREAS. OBTAIN APPROVAL FROM THE COUNTY SEDIMENT AND EROSION CONTROL INSPECTOR.
 - BEGIN PAVEMENT REMOVAL, AND MASS GRADING OF PROPOSED GRASS PLAYING FIELD.
 - PERFORM THE FOLLOWING SEQUENCE FOR EACH DAY OF UTILITY CONSTRUCTION OPERATIONS:
 - CONTRACTOR TO ONLY DISTURB THE AREA THAT WILL BE STABILIZED THE SAME DAY.
 - INSTALL REINFORCED SILT FENCE DOWNGRADE OF AREA TO BE WORKED ON A DAILY BASIS.
 - CLEAR AND GRUB AREA WHERE UTILITIES WILL BE INSTALLED. REMOVE AND SALVAGE TOPSOIL.
 - EXCAVATE AND INSTALL UTILITIES AND APPURTENANCES. PLACE BACKFILL AND COMPACT.
 - INSTALL TEMPORARY PAVING OR, PLACE TOPSOIL, FINE GRADE, SEED AND APPLY MULCH IN UNPAVED DISTURBED AREAS.
 - STREETS ARE TO BE SWEEPED FREE OF DIRT AND DEBRIS.
 - DIRECT ALL WATER PUMPED DURING TRENCH DEWATERING OPERATIONS TO AN APPROVED PORTABLE SEDIMENT TANK. CLEAN OUT TANK WHEN ONE-THIRD (1/3) FILLED WITH SILT. HAUL SEDIMENT TO AN APPROVED SITE.
 - COMPLETE SEDIMENT TRAP GRADING AS SHOWN ON PLAN.
 - FINALIZE INSTALLATION OF UTILITIES.
 - COMPLETE MASS GRADING AND BEGIN PARKING LOT, ROAD AND SIDEWALK PAVING.
 - ONCE UPSTREAM AREAS ARE 95% STABILIZED, INSTALL SWM SYSTEMS AND DEVICES AND/OR PLANTINGS. (SEDIMENT IS TO BE PREVENTED FROM ENTERING SWM SYSTEMS DURING CONSTRUCTION. INFLOW PIPES TO BE CONNECTED AFTER CONTRIBUTING AREAS ARE ALSO STABILIZED). THE ENGINEER MUST CERTIFY SWM INSTALLATION. UPON COMPLETION OF PAVING AND CURB AND GUTTER INSTALLATION AND DURING A NOAA 3-DAY DRY FORECASTED PERIOD, INSTALL EACH OF THE PROPOSED MICRO-BIORETENTIONS AND BIOSWALES.
 - DEWATER SEDIMENT TRAP USING AASCD APPROVED DEVICE. CONVERT TRAP INTO BIORETENTION AND REMAINING STORM DRAIN.
 - STABILIZE ANY REMAINING DISTURBED AREAS AS REQUIRED.
 - REMOVE ANY REMAINING SEDIMENT CONTROLS AFTER PRIOR APPROVAL FROM ANNE ARUNDEL COUNTY INSPECTIONS AND PERMITS DIVISION. FINE GRADE AND STABILIZE AREA FORMERLY OCCUPIED BY PERIMETER CONTROLS.

SEDIMENT CONTROL LEGEND



THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL STANDING WATER THROUGH A FILTERING DEVICE TO A CLEAR WATER OUTFALL WITHIN 24 HOURS OF A STORM EVENT.



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License # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED	DATE	APPROVED	DATE	SCALE: 1" = 40'
CHIEF ENGINEER		PROJECT MANAGER		DRAWN BY: R.S.S.
APPROVED	DATE	APPROVED	DATE	CHECKED BY: R.W.H.
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY		SHEET NO. 29 OF 37
				PROJECT NO.: P567102
				CONTRACT NO.: P56702

MILLERSVILLE PARK
EROSION AND SEDIMENT CONTROL PLAN

VEGETATIVE ESTABLISHMENT

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE CALENDAR DAYS FOR 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 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

1. PERMANENT SEEDING

A. SOIL TESTS: LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF ROUGH GRADING. RATES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE CONTRACTOR.

1. OCCURRENCE OF ACID SULFATE SOILS (GRAYISH BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPRINS OF TOP SOIL. NO STOCKPILES OF MATERIAL IS ALLOWED IF NEEDED. SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 6 WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF SULFATES.

THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGATATIVE ESTABLISHMENT ARE:

- a. SOIL pH SHALL BE BETWEEN 6.0 AND 7.0.
- b. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (ppm)
- c. THE SOIL SHALL CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL (>30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOVEGRASS OR SERICIA LESPEDEZA IS TO BE PLANTED, THEN A SANDY SOIL (<30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
- d. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
- e. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
- f. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOILING AND SOIL AMENDMENTS FORM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR AMENDMENTS MADE AS RECOMMENDED BY A CERTIFIED AGRONOMIST.

B. SEEDBED PREPARATION: AREA TO BE SEEDED SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 3-5 INCHES. THE TOP LAYER SHALL BE LOOSENEED BY RAVING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS OF DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR DISK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3-5 INCHES ON SLOPES FLATTER THAN 3:1.

C. SEEDING: APPLY 5-6 POUNDS PER 1,000 SQUARE FEET OF TALL FESCUE BETWEEN FEBRUARY 1 AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31, APPLY SEED UNIFORMLY ON A MOIST FIRM SEEDBED WITH A CYCLONE SEEDER, CULTPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER, RECOMMENDED ON STEEP SLOPES ONLY), MAXIMUM SEED DEPTH SHOULD BE 1/2 INCH IN CLAYEY SOILS AND 1/4 INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE WHERE NECESSARY TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. IF OTHER SEED MIXES ARE TO BE USED, SELECT FROM TABLE B3 AND B5 OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOILS EROSION AND SEDIMENT CONTROL.

D. MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED, MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING. MULCH SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 POUNDS PER 1,000 SQUARE FEET (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF SEEDS AND SHALL BE FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR UNIFORMLY BY HAND, TO A DEPTH OF 1-2 INCHES.

E. SECURING STRAW MULCH: STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE MOVEMENT BY WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED.

- 1. USE A MULCH ANCHORING TOOL WHICH IS DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH; HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREAS WHERE EQUIPMENT CAN OPERATE SAFELY.
- 2. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
- 3. LIQUID BINDERS MAY BE USED AND APPLIED HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND OR CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. BINDERS LISTED IN THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUAL SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURERS.
- 4. LIGHTWEIGHT PLASTIC NETTING MAY BE USED TO SECURE MULCH. THE NETTING WILL BE STAPLED TO THE GROUND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

F. TEMPORARY SEEDING

LIME: 100 LBS. DOLOMITIC LIMESTONE PER 1,000 SQUARE FEET
 FERTILIZER: 15 LBS. OF 10-10-10 PER 1,000 SQUARE FEET
 LIME: PERENNIAL RYE - 0.92 POUNDS PER 1,000 SQUARE FEET
 (FEBRUARY 1 THROUGH APRIL 30 OR AUGUST 15 THROUGH NOVEMBER 1)
 MILLET - 0.92 LBS. PER 1,000 SQUARE FEET (MAY 1 - AUGUST 15)
 LIME: SAME AS PARAGRAPHS 1D AND 1E ABOVE.

NO FILLS MAY BE PLACED ON FROZEN GROUND. ALL FILL TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES. ALL FILL IN ROADWAYS AND PARKING AREAS IS TO BE CLASSIFIED TYPE 2 AS PER ANNE ARUNDEL COUNTY CODE - ARTICLE 21, SECTION 2-308, AND COMPACTED TO 90% DENSITY. COMPACTION TO BE DETERMINED BY ASTM D-1557-66T (MODIFIED PROCTOR). ANY FILL WITHIN BUILDING AREA TO BE COMPACTED TO A MINIMUM OF 95% DENSITY PER ASTM D-1557-66T (MODIFIED PROCTOR). FILLS FOR POND EMBANKMENTS SHALL BE COMPACTED AS PER MD-378 CONSTRUCTION SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED TO 90% DENSITY PER ASTM D-1557-66T (MODIFIED PROCTOR) SO AS TO BE STABLE AND PREVENT EROSION AND SLIPPAGE.

PERMANENT SOD:

INSTALLATION OF SOD SHOULD FOLLOW PERMANENT SEEDING DATES. PERMANENT SOD IS

TO BE TALL FESCUE, MARYLAND APPROVED SOD; LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY IRRIGATE SOIL PRIOR TO LAYING SOD. SOD IS TO BE LAID ON THE CONTOUR WITH ALL ENDS TIGHTLY ABUTTING. JOINTS ARE TO BE STAGGERED BETWEEN ROWS. WATER AND ROLL OR TAMP SOD TO INSURE POSITIVE FOOT CONTACT WITH THE SOIL. ALL SLOPES STEEPER THAN 3:1 ARE TO BE PERMANENTLY SODDED OR PROTECTED WITH AN APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOD IS NOT TO BE APPLIED ON FROZEN GROUND. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (DRY OR WET) AND/OR EXTREME TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULD BE PERFORMED TO INSURE ESTABLISHED SOD.

MINING OPERATIONS:

SEDIMENT CONTROL PLANS FOR MINING OPERATIONS MUST INCLUDE THE FOLLOWING SEEDING DATES AND MIXTURES:

FOR SEEDING DATES OF FEBRUARY 1 THROUGH APRIL 30 AND AUGUST 15 THROUGH OCTOBER 31 USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND SERICIA LESPEDEZA AT THE RATE OF 0.5 POUNDS PER 1,000 SQUARE FEET.

FOR SEEDING DATES OF MAY 1 THROUGH AUGUST 14 USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND WEEPING LOVEGRASS AT THE RATE OF 0.1 POUND PER 1,000 SQUARE FEET.

TOPSOIL SHALL BE APPLIED AS PER THE STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS FROM THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

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 LOOSENEED, 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 IS 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 LOOSENEED 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 1 1/2 INCHES IN DIAMETER.
 - B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUUDA 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 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.

SITE ANALYSIS

1. TOTAL AREA OF PARCEL:	33.20 ACRES
2. TOTAL DISTURBED AREA:	24.85 ACRES
3. TOTAL AREA TO BE STABILIZED:	24.85 ACRES
a. TOTAL IMPERVIOUS AREA:	5.72 ACRES
b. TOTAL TO BE VEGETATIVELY STABILIZED:	19.13 ACRES
4. PROPOSED NEW IMPERVIOUS AREA:	5.32 ACRES
5. ESTIMATED CUT:	25,319 CU.YD.S.
6. ESTIMATED FILL:	23,955 CU.YD.S.

NOTE: THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. WBCM MAKES NO GUARANTEES OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.

NOTES:
 1. EROSION CONTROL MATTING SHALL BE INSTALLED ON ALL SLOPE AREAS 3:1 OR GREATER.
 2. FILL SOILS MAY BE AVAILABLE FROM ON-SITE SOIL BORROW AREA (CELL 9) PROVIDED THE SOILS MEET THE PROJECT SPECIFICATIONS.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SOILS (TOP SOIL AND FILL SOIL) MEETING THE PROJECT SPECIFICATIONS FROM ON-SITE AND OFF-SITE SOURCES.

STANDARD STABILIZATION NOTE
 FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
 a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1), AND
 b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO A MDE APPROVED SEDIMENT CONTROL DEVICE

NOTE TO CONTRACTOR: SEDIMENT AND EROSION CONTROL SHALL BE STRICTLY ENFORCED.

WHITNEY BAILEY COX & MAGNANI, LLC
 300 East Joppa Road, Suite 200
 Baltimore, MD 21286
 410.512.4500 www.wbcm.com

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 # 27734 Expiration Date: 07/12/24

REVISIONS				ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
NO.	DESCRIPTION	BY	DATE	APPROVED	DATE	APPROVED	DATE

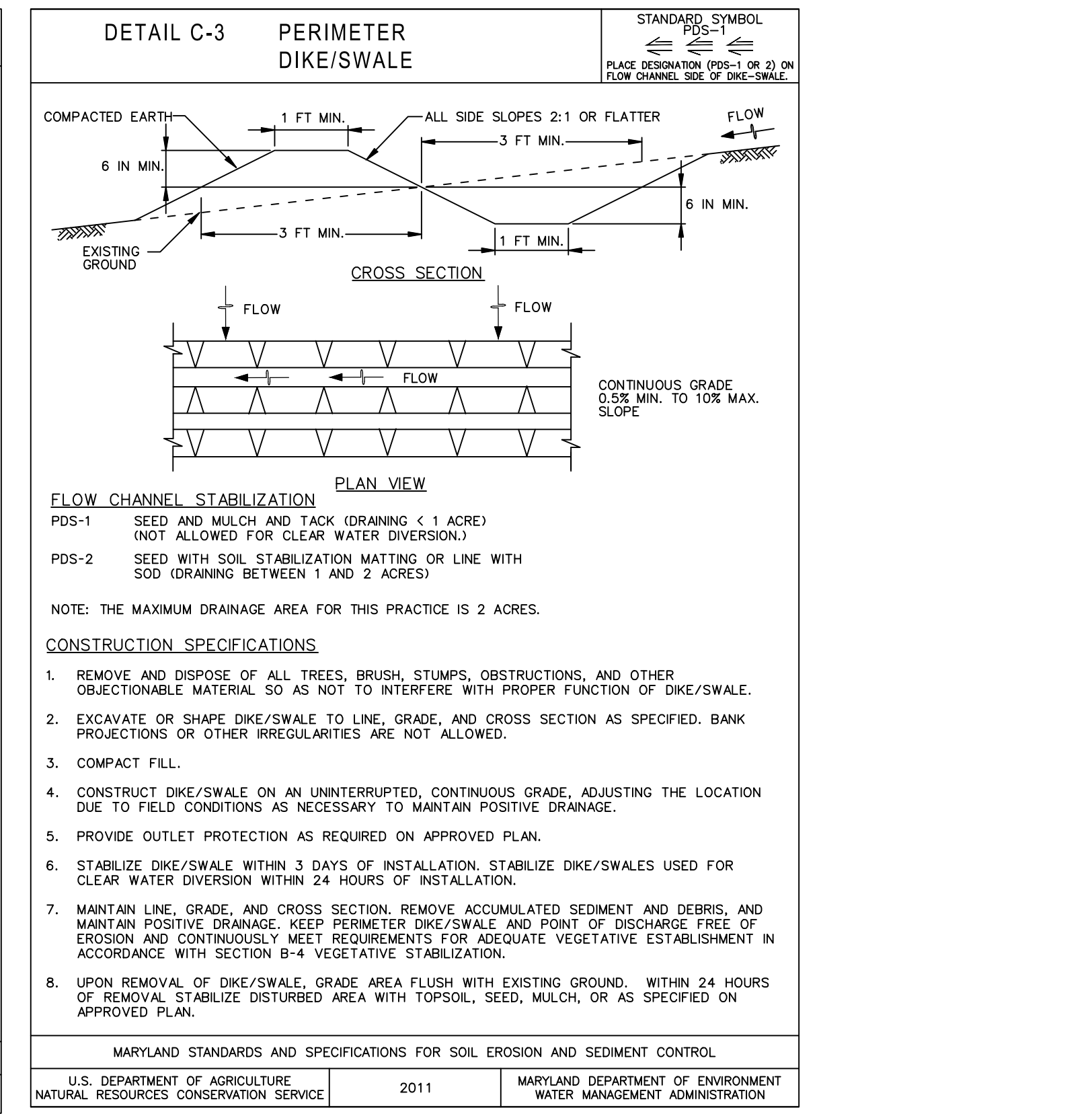
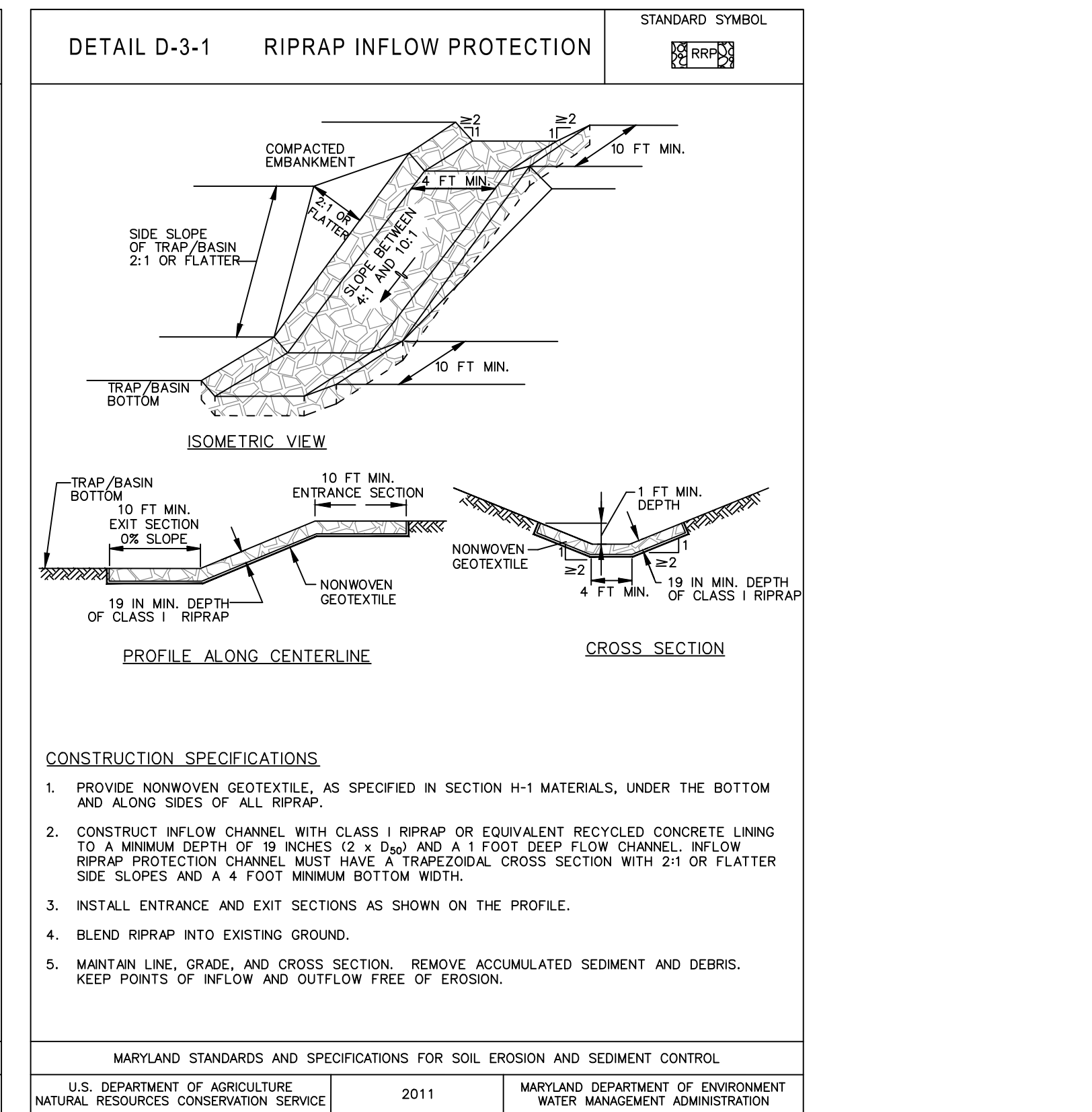
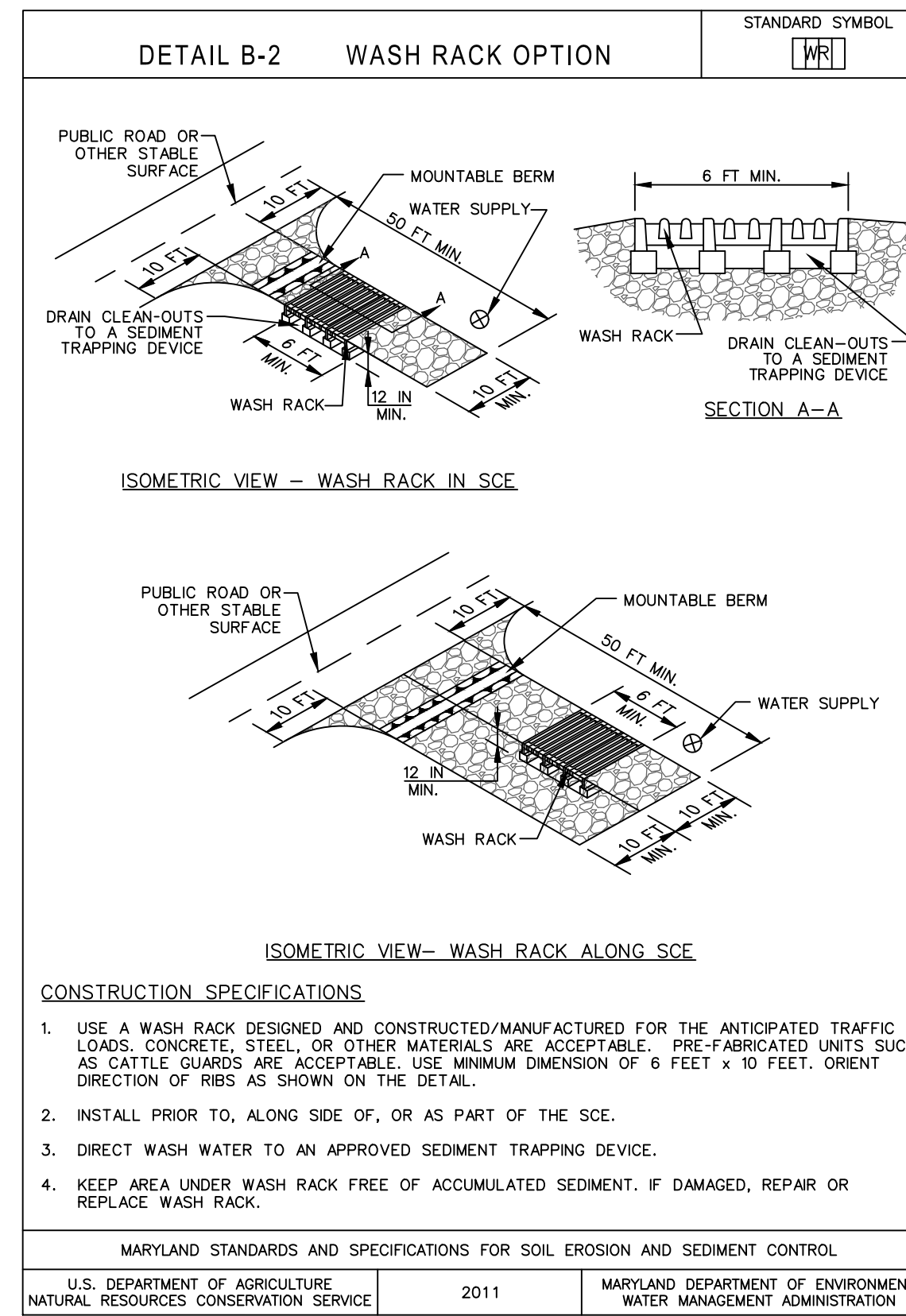
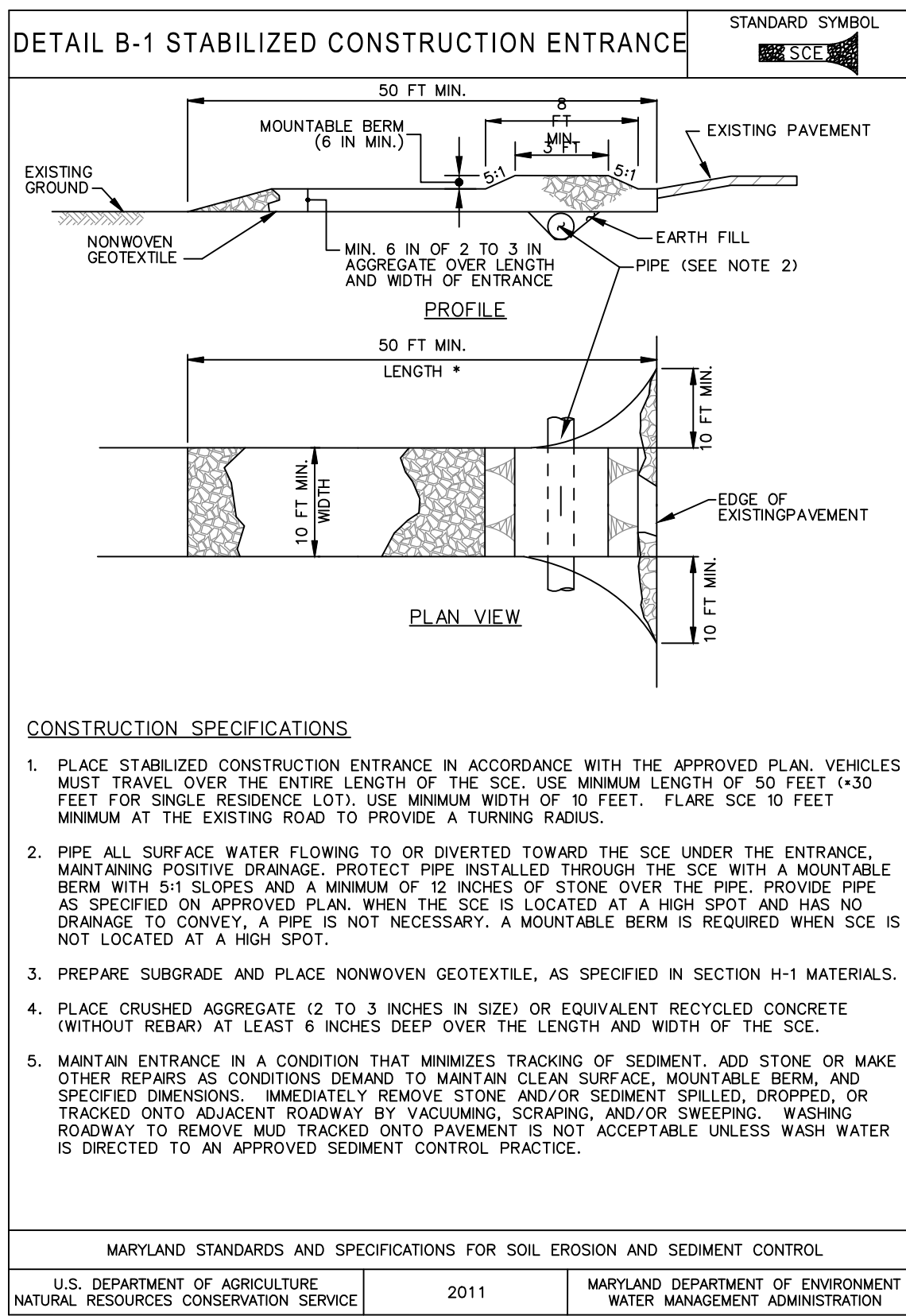
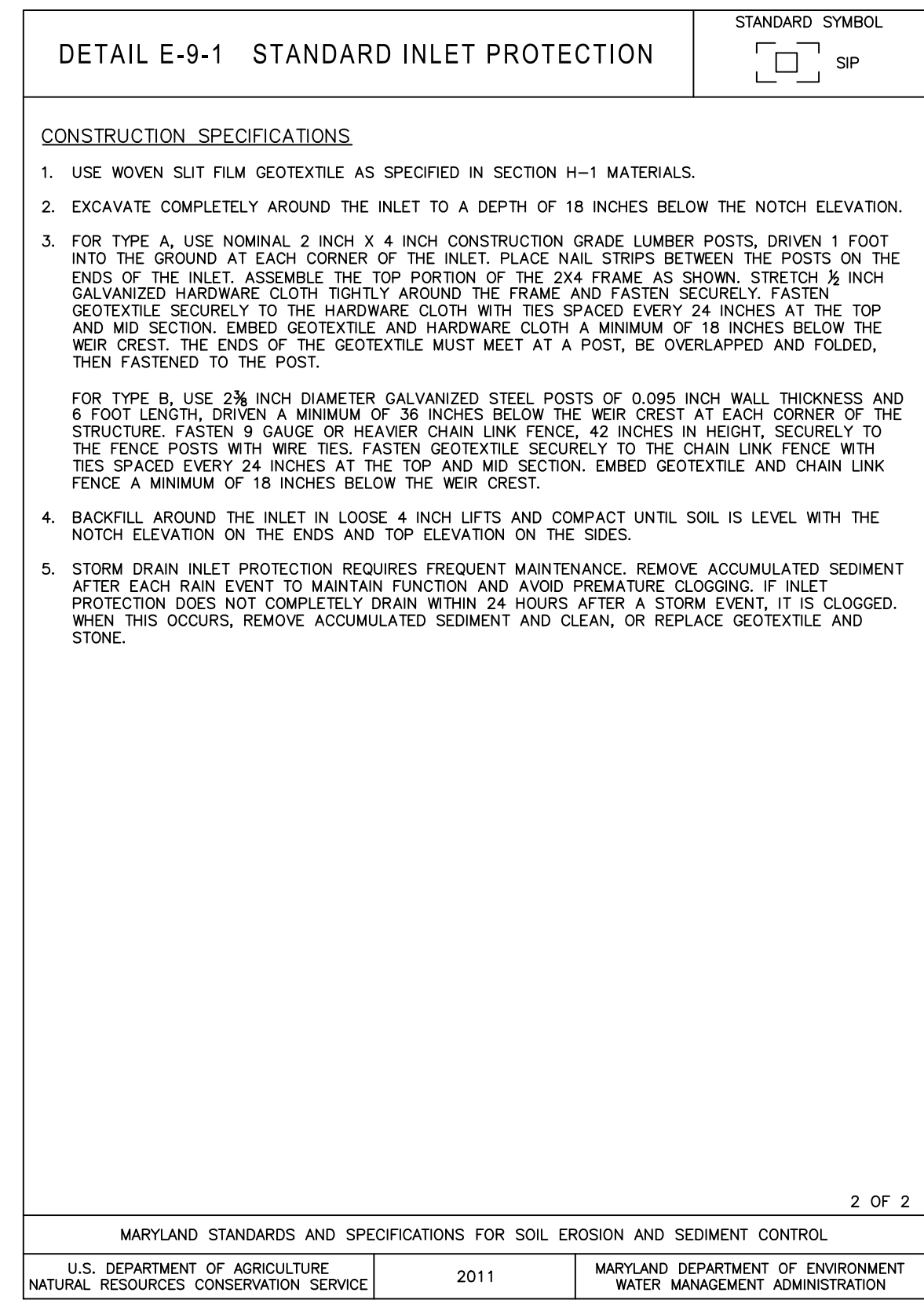
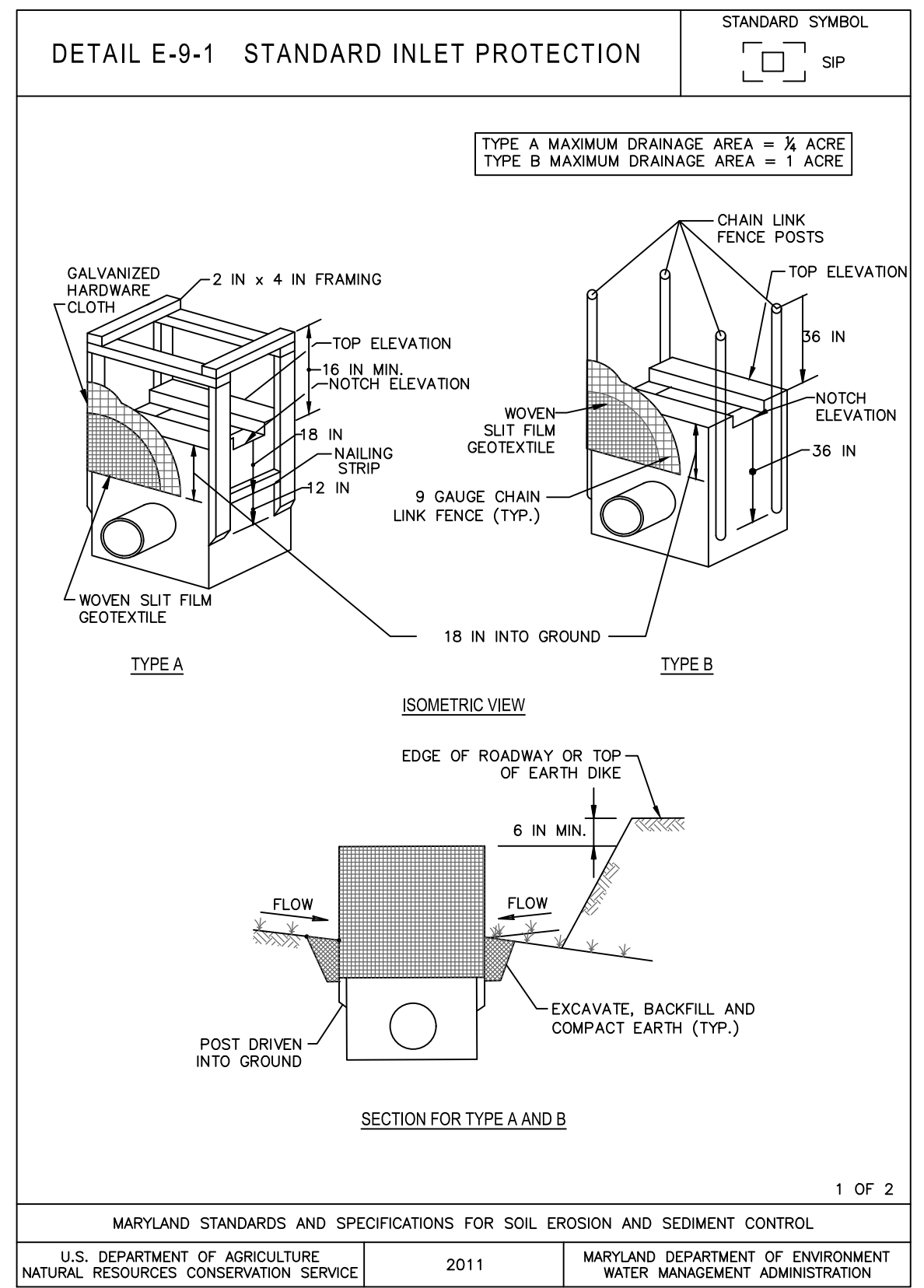
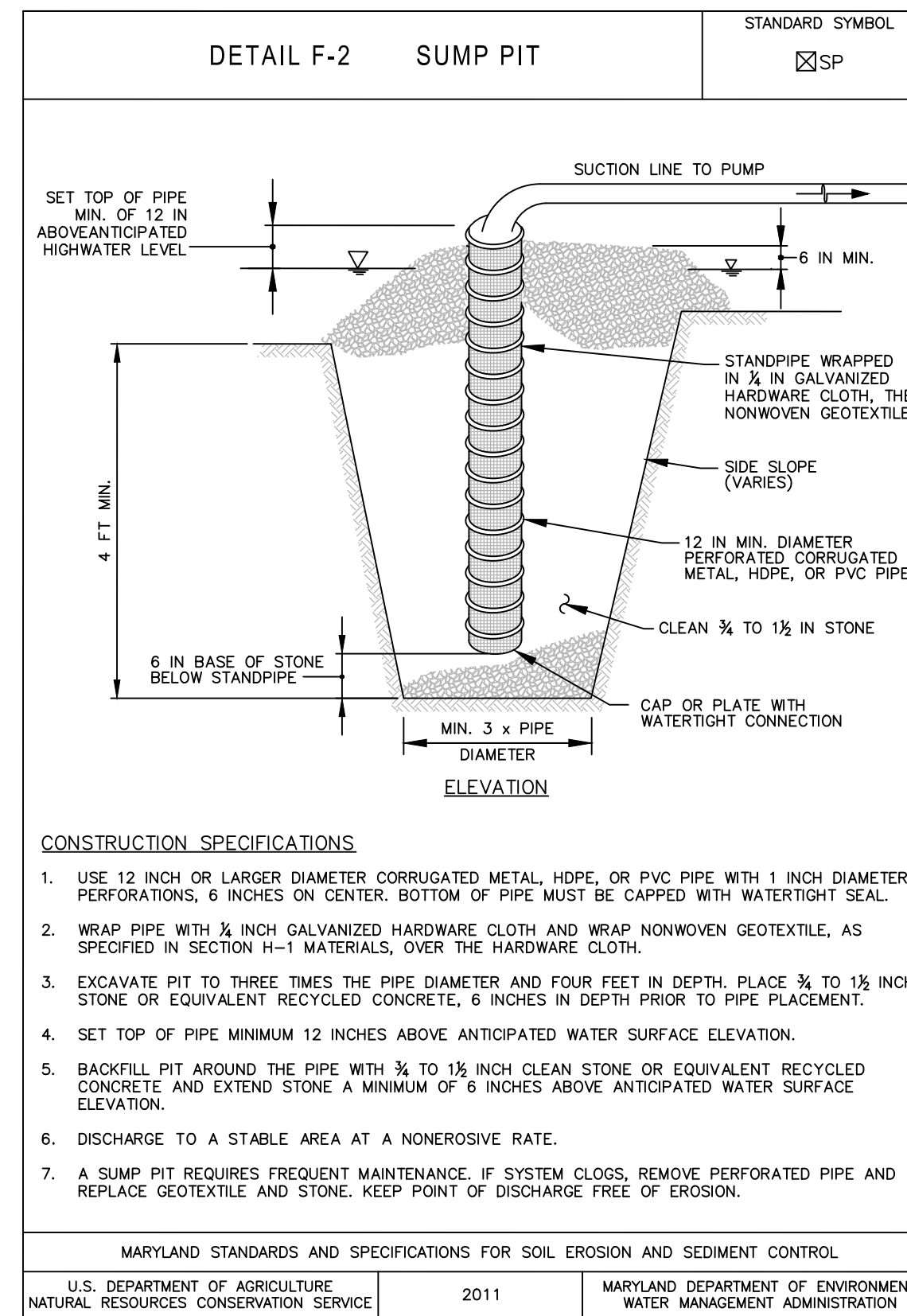
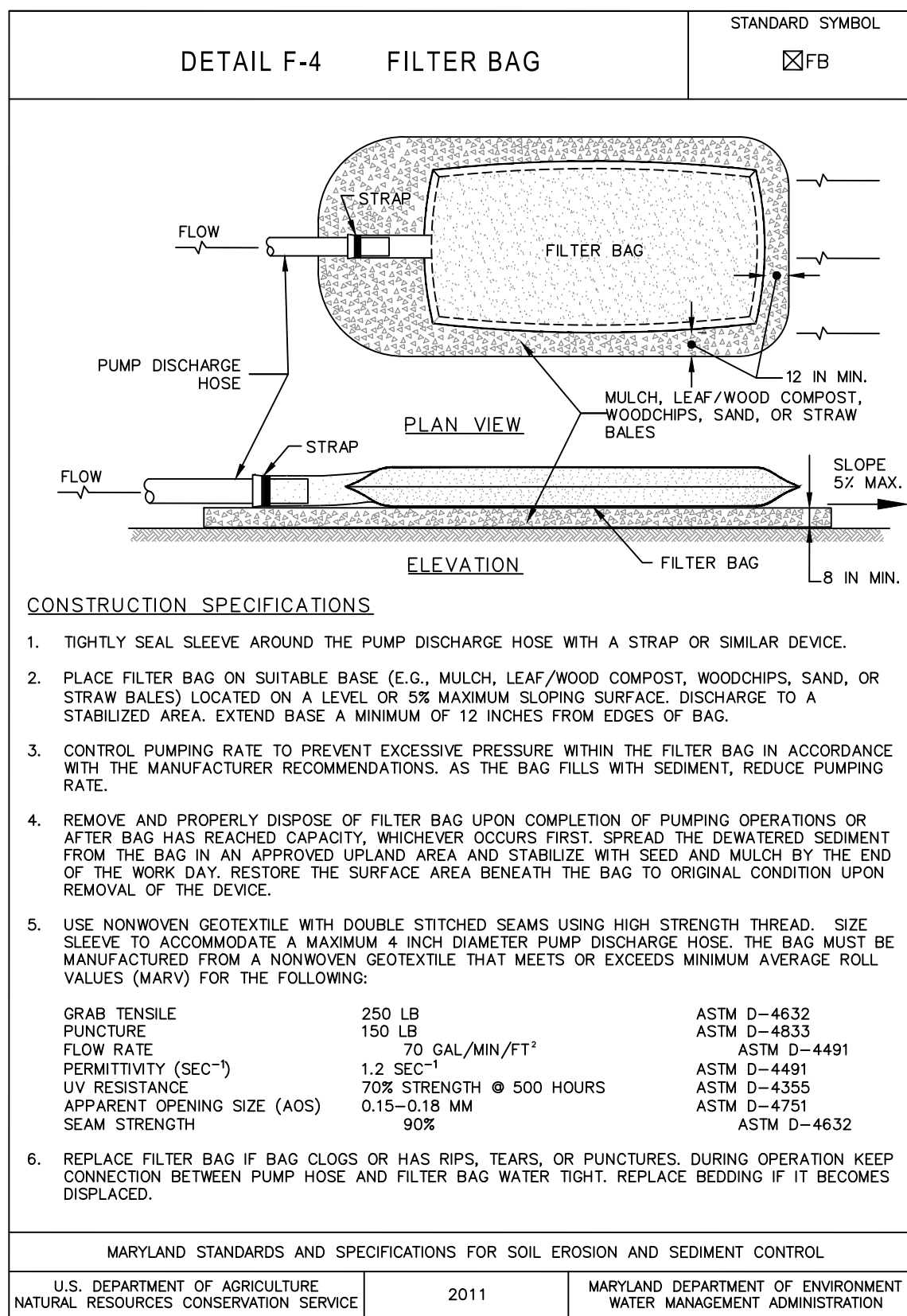
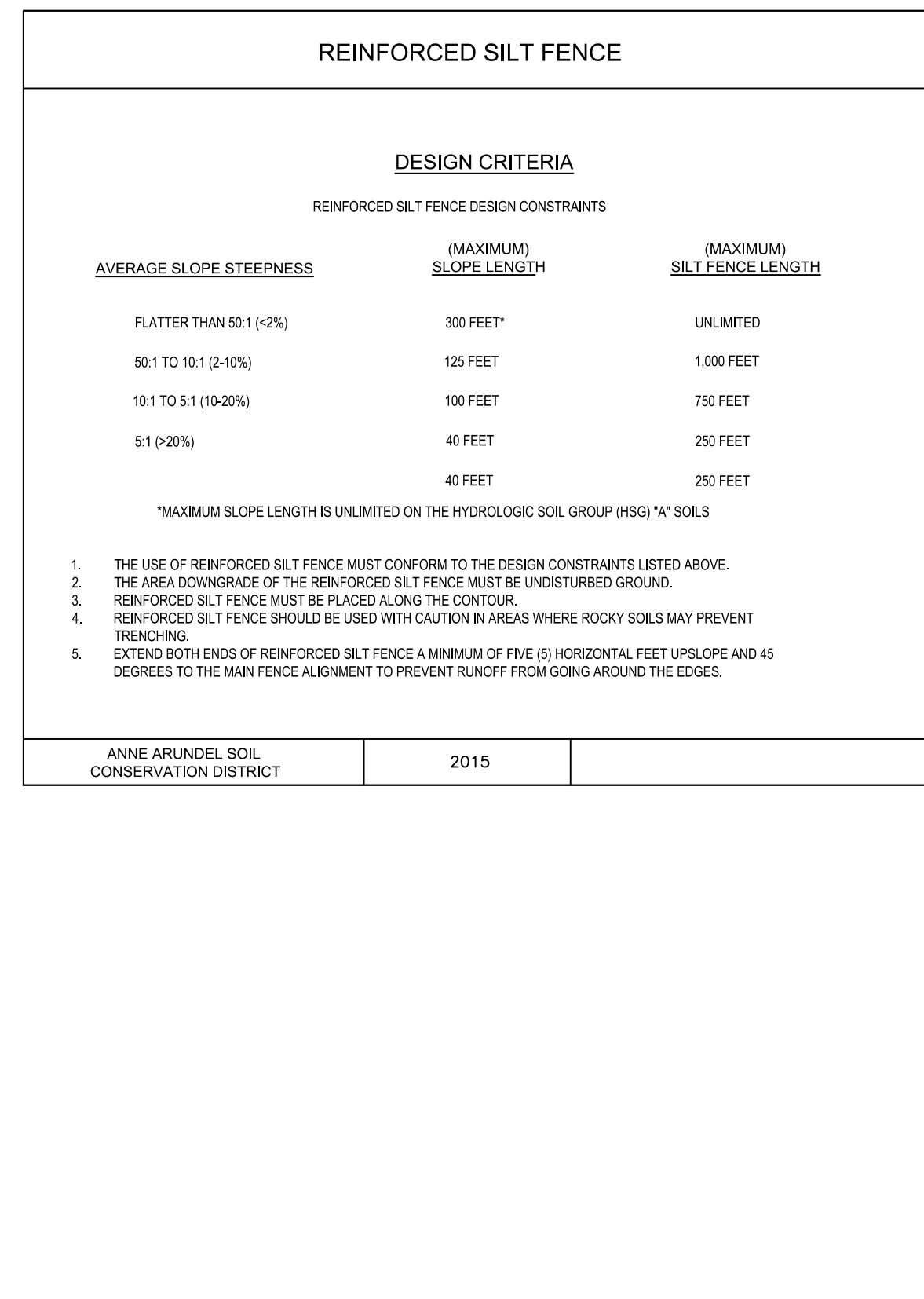
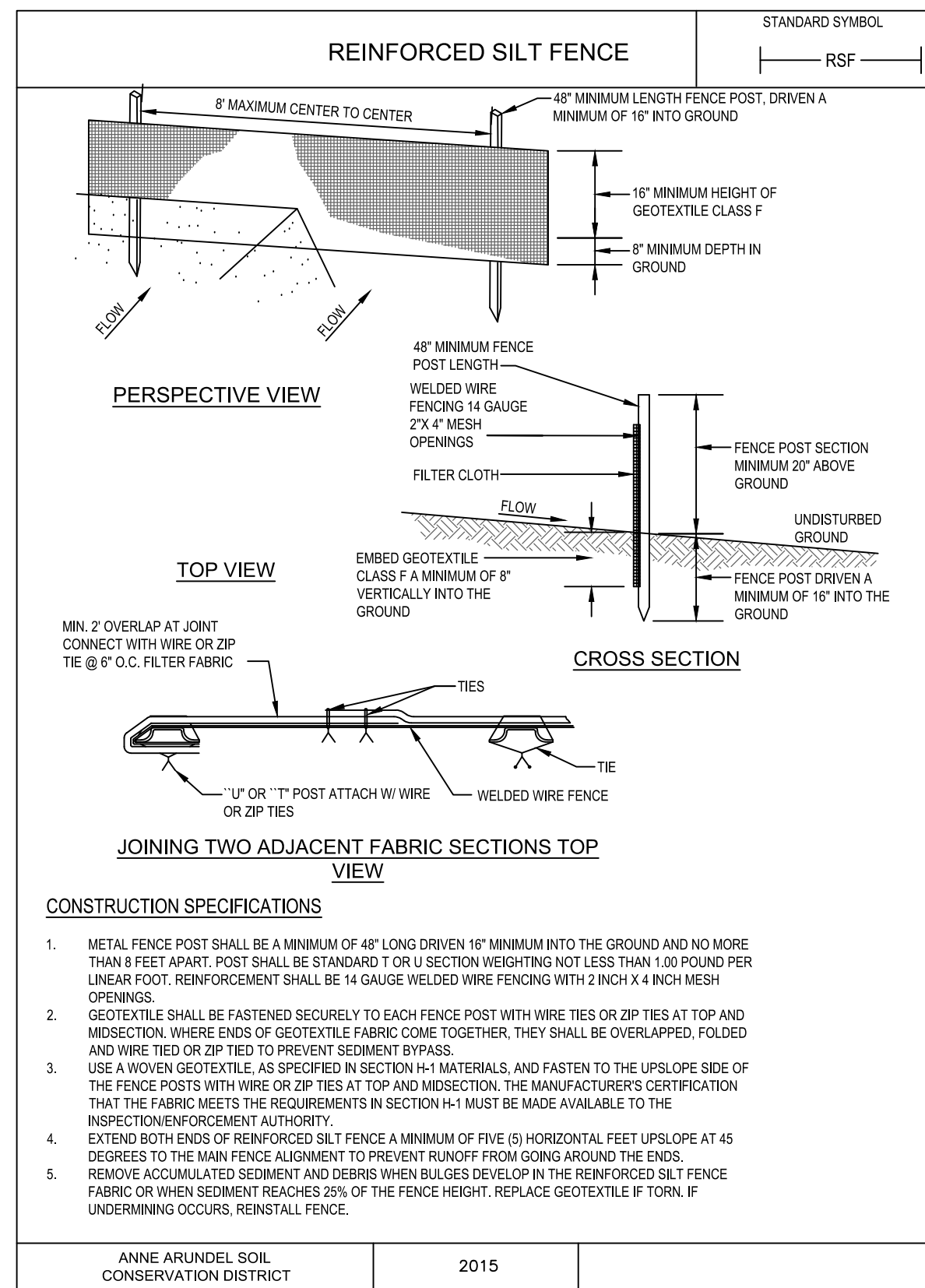
CHIEF ENGINEER

ASSISTANT CHIEF ENGINEER

PROJECT MANAGER

CHIEF, RIGHT-OF-WAY

SCALE:	AS SHOWN	MILLERSVILLE PARK EROSION AND SEDIMENT CONTROL NOTES
DRAWN BY:	R.S.S.	
CHECKED BY:	R.W.H.	
SHEET NO.	30 OF 37	
PROJECT NO.:	P567102	
CONTRACT NO.:	P56702	



NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO A MDE APPROVED SEDIMENT CONTROL DEVICE

NOTE TO CONTRACTOR: SEDIMENT AND EROSION CONTROL SHALL BE STRICTLY ENFORCED.

WHITNEY BAILEY COX & MAGNANI, LLC
 300 East Joppa Road, Suite 200
 Baltimore, MD 21286
 410.512.4500 www.wbcm.com

WBCM
 A DIVISION OF TRANSYSTEMS

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 # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY
 DEPARTMENT OF PUBLIC WORKS

SCALE: AS SHOWN

DRAWN BY: R.S.S.
 CHECKED BY: R.W.H.

SHEET NO. 31 OF 37
 PROJECT NO.: P567102
 CONTRACT NO.: P56702

MILLERSVILLE PARK
 EROSION AND SEDIMENT CONTROL
 DETAILS

APPROVED: DATE: PROJECT MANAGER
 APPROVED: DATE: ASSISTANT CHIEF ENGINEER
 APPROVED: DATE: CHIEF, RIGHT-OF-WAY

H-1 STANDARDS AND SPECIFICATIONS FOR MATERIALS							
TABLE H-1: GEOTEXTILE FABRICS							
PROPERTY	TEST METHOD	WOVEN SILT FILM GEOTEXTILE		WOVEN MONOFILAMENT GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MD	CD	MD	CD	MD	CD
MINIMUM AVERAGE ROLL VALUE							
GRAB TENSILE STRENGTH	ASTM D-4532	200 LB	200 LB	370 LB	250 LB	200 LB	200 LB
GRAB TENSILE ELONGATION	ASTM D-4532	15%	10%	15%	15%	50%	50%
TRAPEZOIDAL TEAR STRENGTH	ASTM D-4533	75 LB	75 LB	100 LB	80 LB	80 LB	80 LB
PUNCTURE STRENGTH	ASTM D-6241	450 LB		900 LB		450 LB	
APPARENT OPENING SIZE ¹	ASTM D-4751	U.S. SIEVE 30 (0.59 MM)		U.S. SIEVE 30 (0.59 MM)		U.S. SIEVE 30 (0.59 MM)	
PERMITTIVITY	ASTM D-4491	0.05 SEC		0.25 SEC		1.1 SEC	
ULTRAVIOLET RESISTANCE RETAINED AT 500 HOURS	ASTM D-4365	70% STRENGTH		70% STRENGTH		70% STRENGTH	

¹ ALL NUMERIC VALUES EXCEPT APPARENT SIZE (AOS) REPRESENT MINIMUM AVERAGE ROLL VALUES (MARV). MARV IS CALCULATED AS THE TYPICAL MINUS TWO STANDARD DEVIATIONS. MD IS MACHINE DIRECTION. CD IS CROSS DIRECTION.

² VALUES FOR AOS REPRESENT THE AVERAGE MAXIMUM OPENING.

GEOTEXTILES MUST BE EVALUATED BY THE NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM (NTPPE) AND CONFORM TO THE VALUES IN TABLE H-1.

THE GEOTEXTILE MUST BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS AND MUST BE ROT AND MILDEW RESISTANT. THE GEOTEXTILE MUST BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS AND COMPOSED OF A MINIMUM OF 95 PERCENT BY WEIGHT OF POLYOLEFINS OR POLYESTERS, AND FORMED INTO A STABLE NETWORK SO THE FILAMENTS OR YARNS RETAIN THEIR DIMENSIONAL STABILITY RELATIVE TO EACH OTHER, INCLUDING SELVAGES.

WHEN MORE THAN ONE SECTION OF GEOTEXTILE IS NECESSARY, OVERLAP THE SECTIONS BY AT LEAST ONE FOOT. THE GEOTEXTILE MUST BE PULLED TIGHT OVER THE APPLIED SURFACE. EQUIPMENT MUST NOT RUN OVER EXPOSED FABRIC. WHEN PLACING RIPRAP ON GEOTEXTILE, DO NOT EXCEED A ONE FOOT DROP HEIGHT.

DETAIL B-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: PSSMS - * (lb/ft²) (* INCLUDE SHEAR STRESS)

CONSTRUCTION SPECIFICATIONS:

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- 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-IRRITIOUS 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.
- 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 1/2 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.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING 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.
- UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDING SURFACE. AVOID STRETCHING THE MATTING.
- 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 DOWNSLOPE MAT.
- 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.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYPED 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.
- 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

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

STANDARD SYMBOL: PSSMS - * (lb/ft²) (* INCLUDE SHEAR STRESS)

CONSTRUCTION SPECIFICATIONS:

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- 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-IRRITIOUS 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.
- 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 1/2 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.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING 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.
- 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 SEEDING SURFACE. AVOID STRETCHING THE MATTING.
- 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 DOWNSLOPE MAT.
- 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.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYPED 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.
- 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

DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE

STANDARD SYMBOL: TSOS

CONSTRUCTION SPECIFICATIONS:

- PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
- USE NONWOVEN GEOTEXTILE ON INTERFACE BETWEEN GROUND AND STONE.
- PERFORATE Baffle BOARD WITH 3 ROWS OF 1 INCH DIAMETER HOLES 6 INCHES ON CENTER. EMBED A MINIMUM OF 4 INCHES INTO GROUND, AND EXTEND Baffle BOARD MINIMUM OF 12 INCHES INTO EARTH DIKE.
- USE CLEAN 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. PLACE WOVEN MONOFILAMENT GEOTEXTILE ON UPSTREAM FACE AND COVER WITH A MINIMUM OF 6 INCHES OF ADDITIONAL STONE.
- USE NONWOVEN AND WOVEN MONOFILAMENT GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
- SET WEIR CREST OF STONE 6 INCHES LOWER THAN THE TOP OF EARTH DIKE. USE MINIMUM LENGTH OF 6 FEET FOR WEIR CREST.
- REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO DRAIN. MAINTAIN LINE, GRADE, AND CROSS SECTION.
- UPON REMOVAL OF STONE OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, 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

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- SET WEIR CREST OF STONE 6 INCHES LOWER THAN THE TOP OF EARTH DIKE. USE MINIMUM LENGTH OF 6 FEET FOR WEIR CREST.
- REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO DRAIN. MAINTAIN LINE, GRADE, AND CROSS SECTION.
- UPON REMOVAL OF STONE OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, 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 G-2-4 BAFFLE BOARDS

STANDARD SYMBOL: BB

CONSTRUCTION SPECIFICATIONS:

- BAFFLES ARE REQUIRED TO PROVIDE A FLOW LENGTH BETWEEN INFLOW POINT AND OUTLET EQUAL TO TWICE THE EFFECTIVE TRAP/BASIN WIDTH.

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DETAIL G-1-2 STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II

STANDARD SYMBOL: ST-II

CONSTRUCTION SPECIFICATIONS:

- CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
- CLEAR GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
- USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
- CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE WEIR CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
- PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE BOTTOM AND SIDES OF OUTLET AND APRON PRIOR TO PLACEMENT OF RIPRAP. OVERLAP SECTIONS OF GEOTEXTILE AT LEAST 1 FOOT WITH THE SECTION NEARER TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
- USE CLEAN 4 TO 7 INCH RIPRAP TO CONSTRUCT THE WEIR. USE CLASS 1 RIPRAP FOR THE APRON. USE OF RECYCLED CONCRETE EQUIVALENT IS ACCEPTABLE.
- PLACE 1 FOOT OF CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE ON THE UPSTREAM FACE OF THE WEIR.
- CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO APPROVED PLAN, AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
- STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
- REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (50% OF WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES, BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINE, GRADE, AND CROSS SECTION.
- WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
- UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

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 G-1-2 STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II

STANDARD SYMBOL: ST-II

CONSTRUCTION SPECIFICATIONS:

- CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
- CLEAR GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
- USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
- CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE WEIR CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
- PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE BOTTOM AND SIDES OF OUTLET AND APRON PRIOR TO PLACEMENT OF RIPRAP. OVERLAP SECTIONS OF GEOTEXTILE AT LEAST 1 FOOT WITH THE SECTION NEARER TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
- USE CLEAN 4 TO 7 INCH RIPRAP TO CONSTRUCT THE WEIR. USE CLASS 1 RIPRAP FOR THE APRON. USE OF RECYCLED CONCRETE EQUIVALENT IS ACCEPTABLE.
- PLACE 1 FOOT OF CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE ON THE UPSTREAM FACE OF THE WEIR.
- CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO APPROVED PLAN, AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
- STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
- REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (50% OF WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES, BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINE, GRADE, AND CROSS SECTION.
- WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
- UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

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 G-1-2 STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II

STANDARD SYMBOL: ST-II

STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. _____	
DRAINAGE AREA - INITIAL	ACRES
DRAINAGE AREA - INTERIM	ACRES
DRAINAGE AREA - FINAL	ACRES
TOTAL STORAGE REQUIRED	CF
TOTAL STORAGE PROVIDED	CF
WET STORAGE REQUIRED	CF
WET STORAGE PROVIDED	CF
DRY STORAGE REQUIRED	CF
DRY STORAGE PROVIDED	CF
EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION)	FT
TRAP BOTTOM ELEVATION	FT
TRAP BOTTOM DIMENSIONS	FT x FT
WEIR LENGTH	FT
WEIR CREST (DRY STORAGE) ELEVATION	FT
CLEANOUT ELEVATION	FT
TOP OF EMBANKMENT ELEVATION	FT
SIDE SLOPE	H:V RATIO
EMBANKMENT TOP WIDTH	FT
OUTLET PROTECTION - LENGTH	FT
OUTLET PROTECTION - DEPTH	IN

CONSTRUCTION SPECIFICATIONS:

- CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
- CLEAR GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
- USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
- CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE WEIR CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
- PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE BOTTOM AND SIDES OF OUTLET AND APRON PRIOR TO PLACEMENT OF RIPRAP. OVERLAP SECTIONS OF GEOTEXTILE AT LEAST 1 FOOT WITH THE SECTION NEARER TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
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- WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
- UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

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 D-4-1-C ROCK OUTLET PROTECTION III

STANDARD SYMBOL: ROP III

CONSTRUCTION SPECIFICATIONS:

- RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
- USE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
- PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (3/4 TO 1 1/2 INCH MINIMUM STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
- CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
- WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
- CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS, INSPECT FOR SCOUR AND RIPRAP DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

NO UNSTABILIZED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO A MDE APPROVED SEDIMENT CONTROL DEVICE

NOTE TO CONTRACTOR: SEDIMENT AND EROSION CONTROL SHALL BE STRICTLY ENFORCED.

WHITNEY BAILEY COX & MAGNANI, LLC
300 East Joppa Road Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

A DIVISION OF TRANSYSTEMS

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 # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

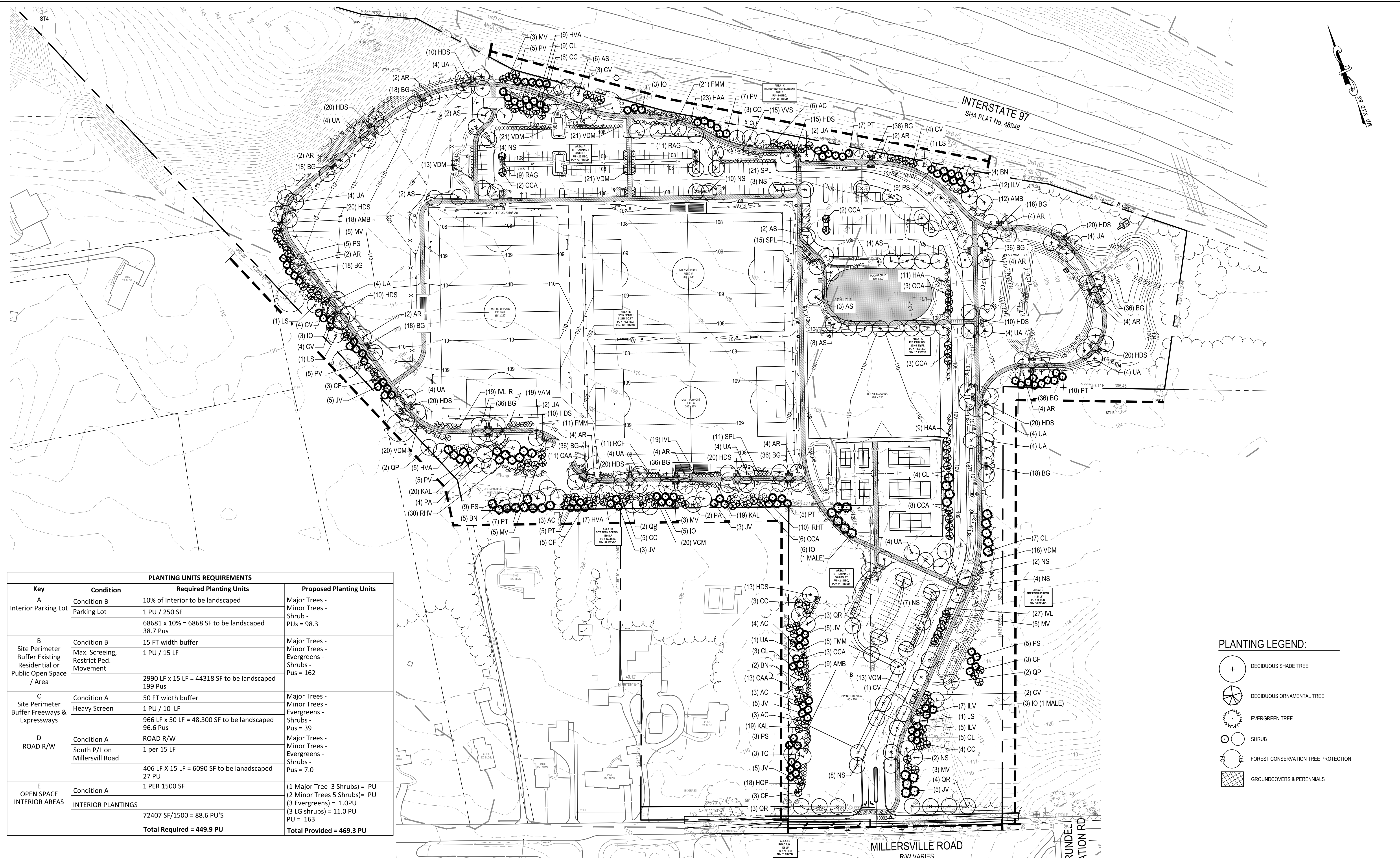
ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	

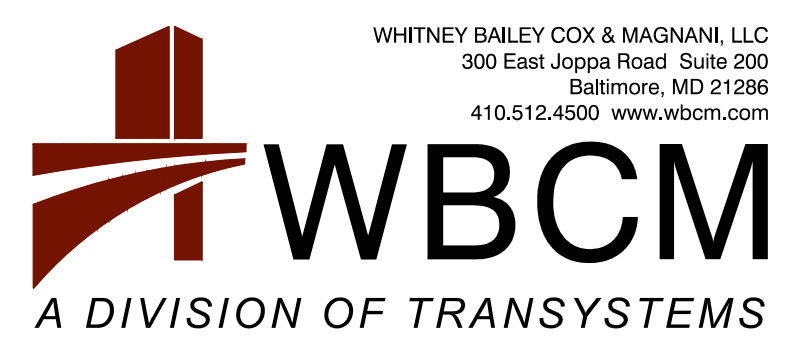
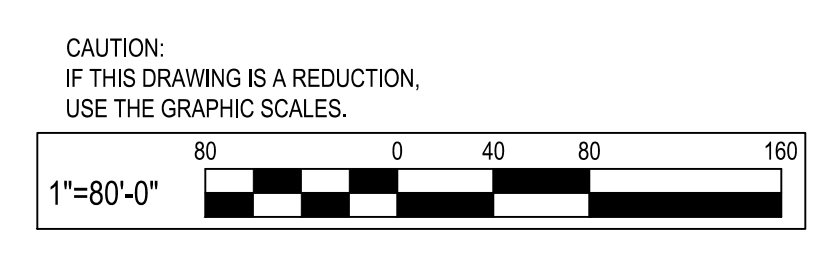
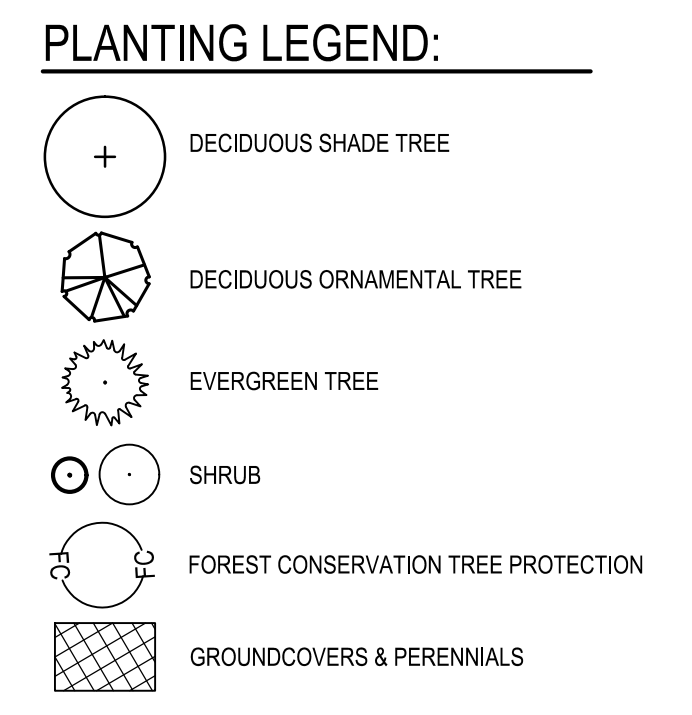
SCALE: AS SHOWN
DRAWN BY: R.S.S.
CHECKED BY: R.W.H.
SHEET NO. 32 OF 37
PROJECT NO.: P567102
CONTRACT NO.: P56702

MILLERSVILLE PARK
EROSION AND SEDIMENT CONTROL
DETAILS

P:\2017\17141801\Drawings\07-Site\17141801-C70-Landscape Plan.dwg Mar 06, 2024 12:30pm Plot By: rsmith



PLANTING UNITS REQUIREMENTS			
Key	Condition	Required Planting Units	Proposed Planting Units
A Interior Parking Lot	Condition B Parking Lot	10% of Interior to be landscaped 1 PU / 250 SF 68681 x 10% = 6868 SF to be landscaped 38.7 Pus	Major Trees - Minor Trees - Shrub - PUs = 98.3
	Condition B Max. Screening, Restrict Ped. Movement	15 FT width buffer 1 PU / 15 LF 2990 LF x 15 LF = 44318 SF to be landscaped 199 Pus	Major Trees - Minor Trees - Evergreens - Shrubs - Pus = 162
B Site Perimeter Buffer Existing Residential or Public Open Space / Area	Condition A Heavy Screen	50 FT width buffer 1 PU / 10 LF 966 LF x 50 LF = 48,300 SF to be landscaped 96.6 Pus	Major Trees - Minor Trees - Evergreens - Shrubs - Pus = 39
	Condition A ROAD R/W South P/L on Millersville Road	ROAD R/W 1 per 15 LF 406 LF x 15 LF = 6090 SF to be landscaped 27 PU	Major Trees - Minor Trees - Evergreens - Shrubs - Pus = 7.0
C Site Perimeter Buffer Freeways & Expressways	Condition A	1 PER 1500 SF	(1 Major Tree 3 Shrubs) = PU (2 Minor Trees 5 Shrubs) = PU (3 Evergreens) = 1.0PU (3 LG shrubs) = 11.0 PU PU = 163
	INTERIOR PLANTINGS	72407 SF/1500 = 88.6 PU'S	
		Total Required = 449.9 PU	Total Provided = 469.3 PU



WHITNEY BAILEY COX & MAGNANI, LLC
300 East Joppa Road, Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

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 # 27734 Expiration Date: 07/12/24

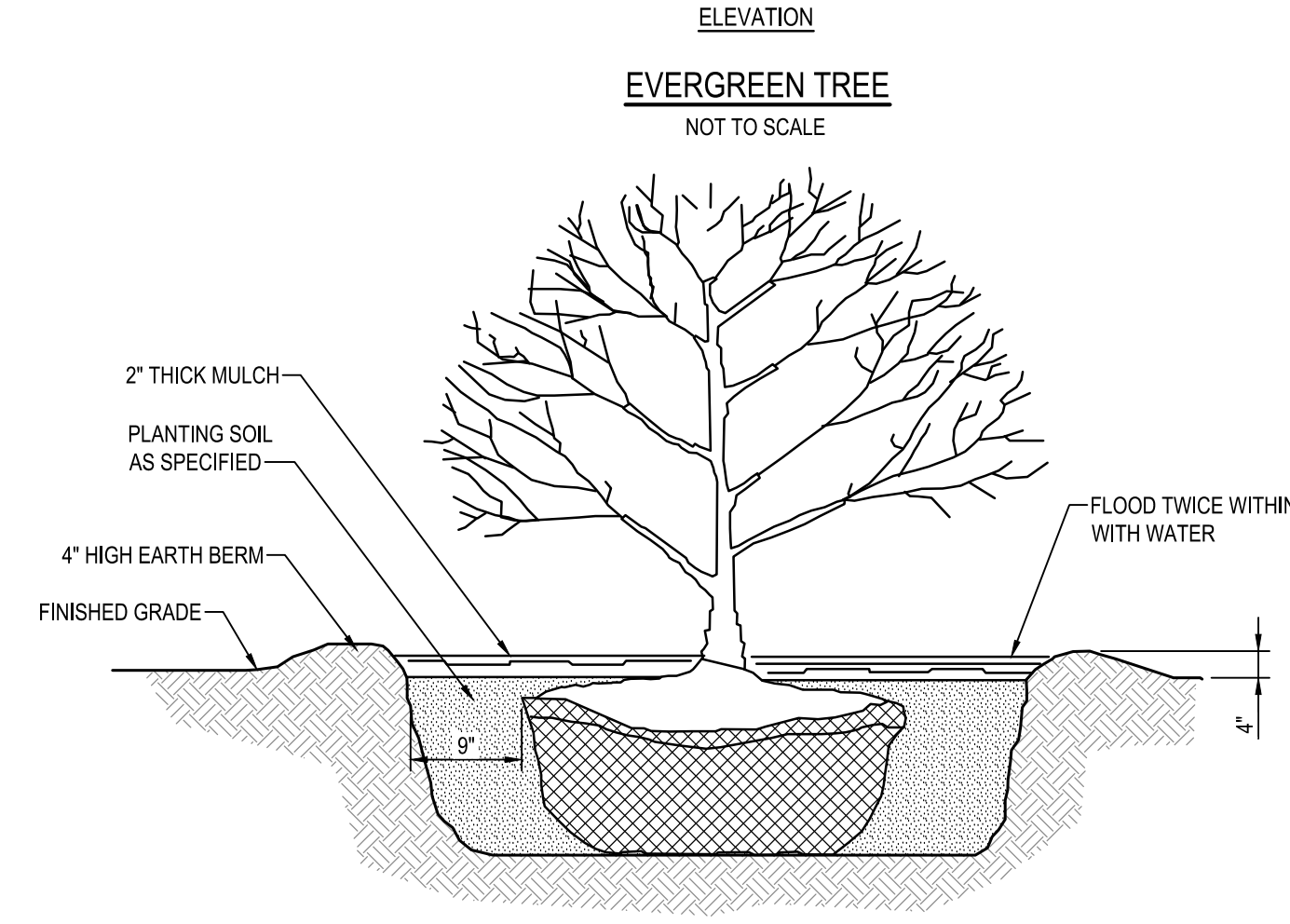
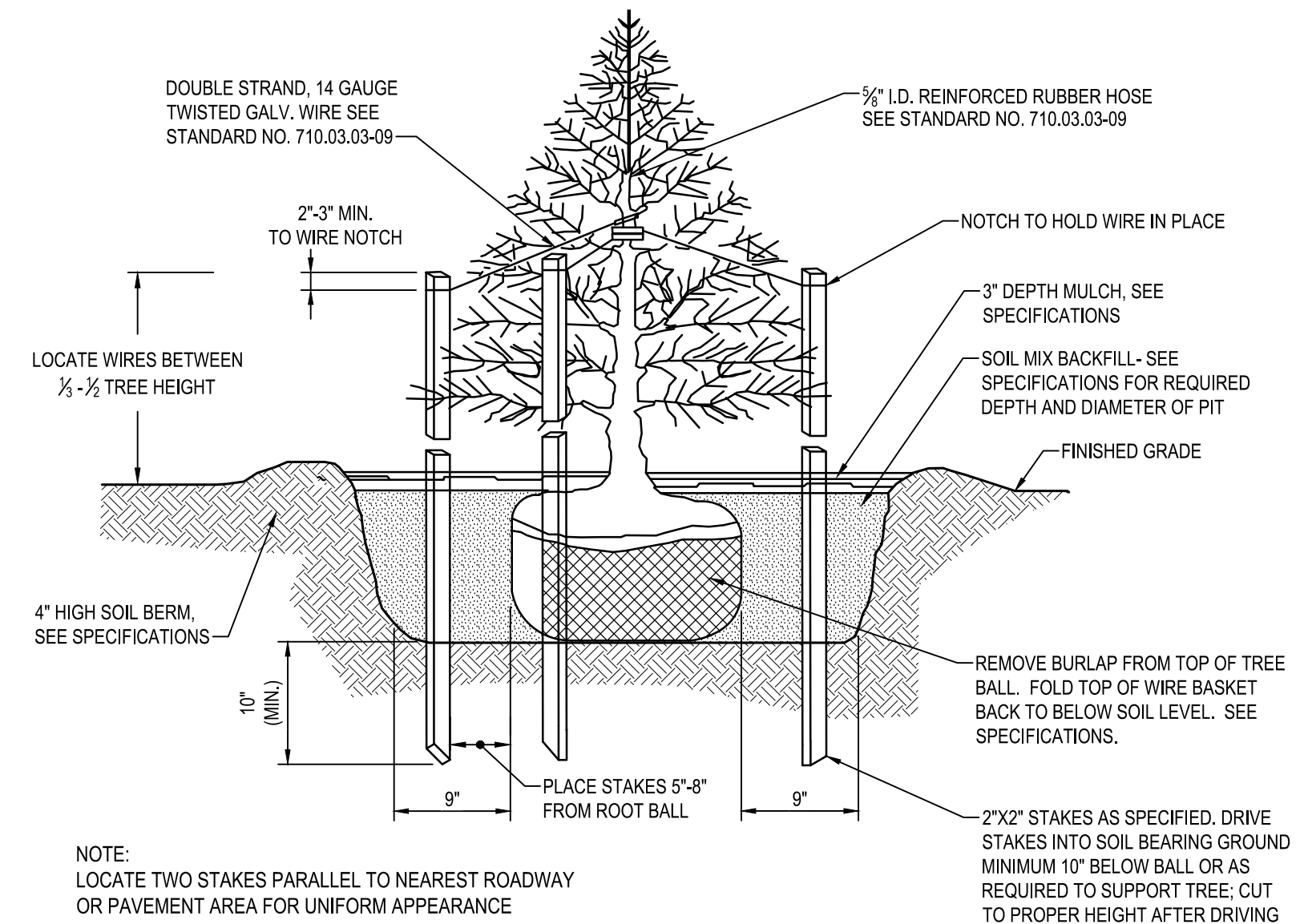
REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE

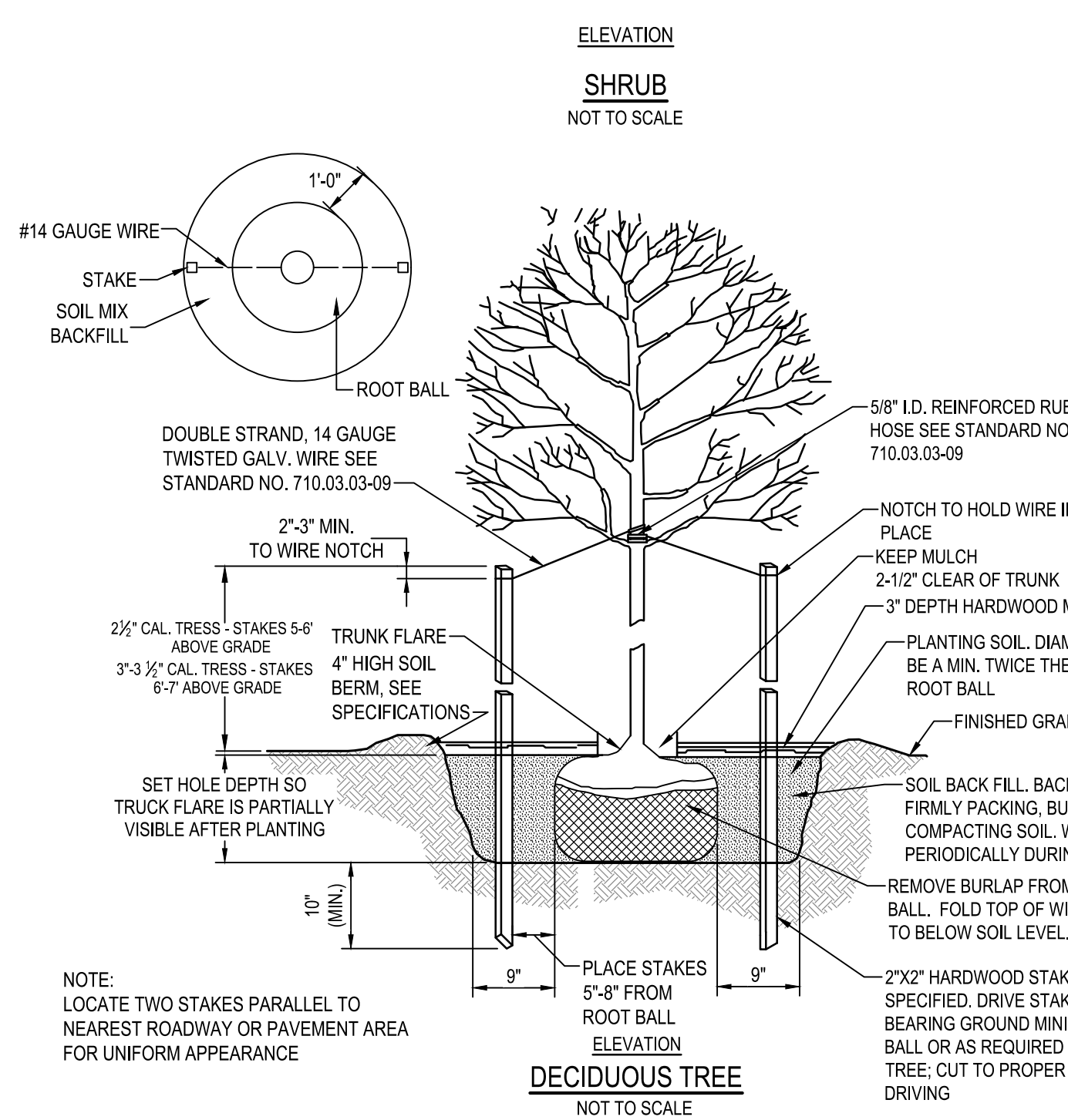
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DRAWN BY: R.S.S.	LANDSCAPE PLAN
CHECKED BY: R.W.H.	
SHEET NO. 33 OF 37	
PROJECT NO.: P567102	
CONTRACT NO.: P56702	

PROPOSED PLANT SCHEDULE

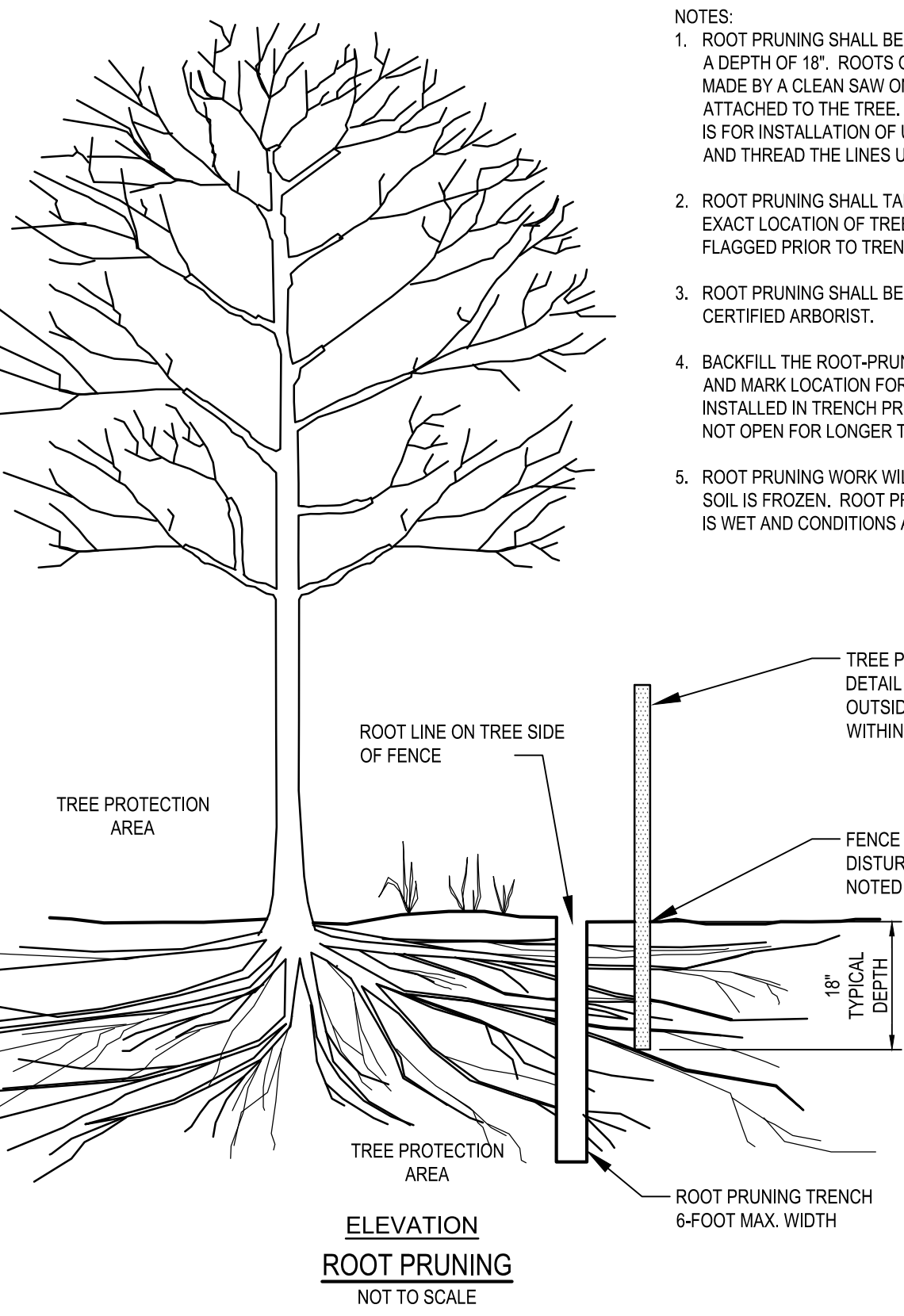
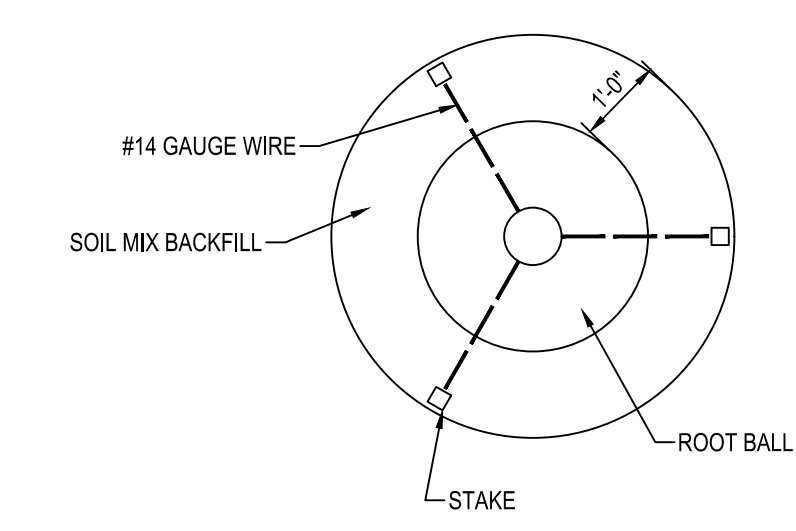
PLANT SCHEDULE						
Key	Botanical Name	Common Name	Size (Min.)	Root	Remarks	Quantity
Major Deciduous Trees						
AR	Acer Rubrum 'Red Sunset'	Red Maple	2.5" Cal.	B&B	As Shown	42
AS	Acer saccharum 'Legacy'	Sugar Maple	2.5" Cal.	B&B	As Shown	24
BN	Betula nigra	River Birch	2.5" Cal.	B&B	As Shown	11
CO	Celtis occidentalis	Hackberry	2.5" Cal.	B&B	As Shown	3
LS	Liquidambar styraciflua	Sweet Gum	2.5" Cal.	B&B	As Shown	4
NS	Nyssa sylvatica	Black Gum	2.5" Cal.	B&B	As Shown	36
PA	Platanus acerifolia 'Exclamation'	London Plantree	2.5" Cal.	B&B	As Shown	7
TC	Tilia cordata 'Greenspire'	Littleleaf Linden	2.5" Cal.	B&B	As Shown	3
QR	Quercus rubra	Northern Red Oak	2.5" Cal.	B&B	As Shown	10
QP	Quercus palustris	Pin Oak	2.5" Cal.	B&B	As Shown	4
QPw	Quercus phellos	Willow Oak	2.5" Cal.	B&B	As Shown	3
UA	Ulmus americana 'Valley Forge'	American Elm	2.5" Cal.	B&B	As Shown	55
Total						202
Minor Deciduous Trees						
AC	Amelanchier canadensis	Serviceberry	2" Cal.	B&B	As Shown	19
CCA	Carpinus caroliniana	American Hornbeam	2" Cal.	B&B	As Shown	29
CC	Cercis canadensis	Eastern Redbud	2" Cal.	B&B	As Shown	18
CV	Chionanthus virginicus	White Fringetree	2" Cal.	B&B	As Shown	11
CF	Cornus florida 'Cherokee Princess'	Dogwood	2" Cal.	B&B	As Shown	14
MV	Magnolia virginia 'Green Shadow'	Sweetbay Magnolia	2" Cal.	B&B	As Shown	21
Total						112
Evergreen Trees						
CL	Cupressocyparis x leylandii	Leyland Cypress	8-10' HT., 1.5" Cal.	B&B	As Shown	24
IO	Ilex opaca 'Jersy Princess'	American Holly	8-10' HT., 1.5" Cal.	B&B	As Shown	17
IOM	Ilex opaca - male	Male American Holly	8-10' HT., 1.5" Cal.	B&B	A.S. 1 per 7	3
JV	Juniperus virginiana	Eastern Red Cedar	8-10' HT., 1.5" Cal.	B&B	As Shown	26
PS	Pinus strobus	Eastern White Pine	8-10' HT., 1.5" Cal.	B&B	As Shown	31
PT	Pinus taeda	Loblolly Pine	8-10' HT., 1.5" Cal.	B&B	As Shown	27
PV	Pinus virginiana	Virginia Pine	8-10' HT., 1.5" Cal.	B&B	As Shown	25
Total						153
Shrubs						
AMB	Aronia melanocarpa	Black Chokeberry	24 - 36" Hgt. & Sprd., #5	Cont.	60" O.C.	39
CAA	Clethra alnifolia	Sweet pepperbush	24 - 36" Hgt. & Sprd., #5	Cont.	36"-48" O.C.	47
FMM	Fothergilla major 'Mt Airy'	Dwarf Fothergilla	24 - 36" Hgt. & Sprd., #7	Cont.	36"-48" O.C.	37
HVA	Hammamelis virginiana 'Jelena'	Witch hazel	24 - 36" Hgt. & Sprd., #7	Cont.	48"-60" O.C.	14
HAA	Hydrangea arborescens 'Annabelle'	Hydrangea	24 - 36" Hgt. & Sprd., #5	Cont.	48"-60" O.C.	43
HQP	Hydrangea quercifolia 'Pee Wee'	Oakleaf Hydrangea	24 - 36" Hgt. & Sprd., #5	Cont.	48"-60" O.C.	24
HDS	Hypericum densiflorum	St. Johns wort	24 - 36" Hgt. & Sprd., #5	Cont.	36" O.C.	230
IGA	Ilex glabra 'Shamrock'	Inkberry	26 - 36" Hgt. & Sprd., #7	Cont.	48" O.C.	34
ILV	Ilex verticillata 'Winter Red'	Winterberry	26 - 36" Hgt. & Sprd., #7	Cont.	60" O.C.	22
IVS	Ilex verticillata 'Southern Gentleman'	Winterberry (1 MALE PER 7 FEMALE)	26 - 36" Hgt. & Sprd., #7	Cont.	60" O.C.	3
IVL	Itea virginica 'Little Henry'	Dwarf Virginia Sweetpire	24 - 36" Hgt. & Sprd., #5	Cont.	36" O.C.	46
KAL	Kalmia angustifolia	Lambkill Kalmia	24 - 36" Hgt. & Sprd., #5	Cont.	36"-48" O.C.	58
MP	Myrica pensylvanica	Bayberry	24 - 36" Hgt. & Sprd., #5	Cont.	60" O.C.	18
RHN	Rhododendron atlanticum	Coast Azalea	28 - 36" Hgt. & Sprd., #5	Cont.	36"-60" O.C.	15
RCF	Rhododendron calendulaceum	Flame Azalea	28 - 36" Hgt. & Sprd., #5	Cont.	36"-60" O.C.	26
RHV	Rhododendron viscosum	Swamp Azalea	28 - 36" Hgt. & Sprd., #5	Cont.	36"-60" O.C.	30
RAG	Rhus aromatica 'Gro-Low'	Fragrant Sumac	24 - 36" Hgt. & Sprd., #5	Cont.	48"-60" O.C.	37
RHT	Rhus typhina	Staghorn Sumac	30 - 36" Hgt. & Sprd., #5	Cont.	72" O.C.	10
SPL	Spirea latifolia	American Meadow-sweet	30 - 36" Hgt. & Sprd., #3	Cont.	36" O.C.	68
VCM	Vaccinium corymbosum	Highbush Blueberry	30 - 36" Hgt. & Sprd., #5	Cont.	36"-60" O.C.	33
VVS	Vaccinium vacillans	Low Blueberry	30 - 36" Hgt. & Sprd., #5	Cont.	36"-60" O.C.	22
VAM	Viburnum acerifolium	Maple-leaved Viburnum	30 - 36" Hgt. & Sprd., #7	Cont.	36"-60" O.C.	74
VDM	Viburnum dentatum	Southern Arrowwood	30 - 36" Hgt. & Sprd., #7	Cont.	36"-60" O.C.	51
VRM	Viburnum recognitum	Smooth Arrowwood	30 - 36" Hgt. & Sprd., #7	Cont.	36"-60" O.C.	14
Total						995
Perennials / Grasses						
BA	Baptisia australis	False indigo	12"-18" Hgt. & Sprd., #1	Cont.	24" O.C.	230
BG	Bouteloua gracilis 'Blonde Ambition'	Blue Grama	12"-18" Hgt. & Sprd., #1	Cont.	18" O.C.	230
Total						460



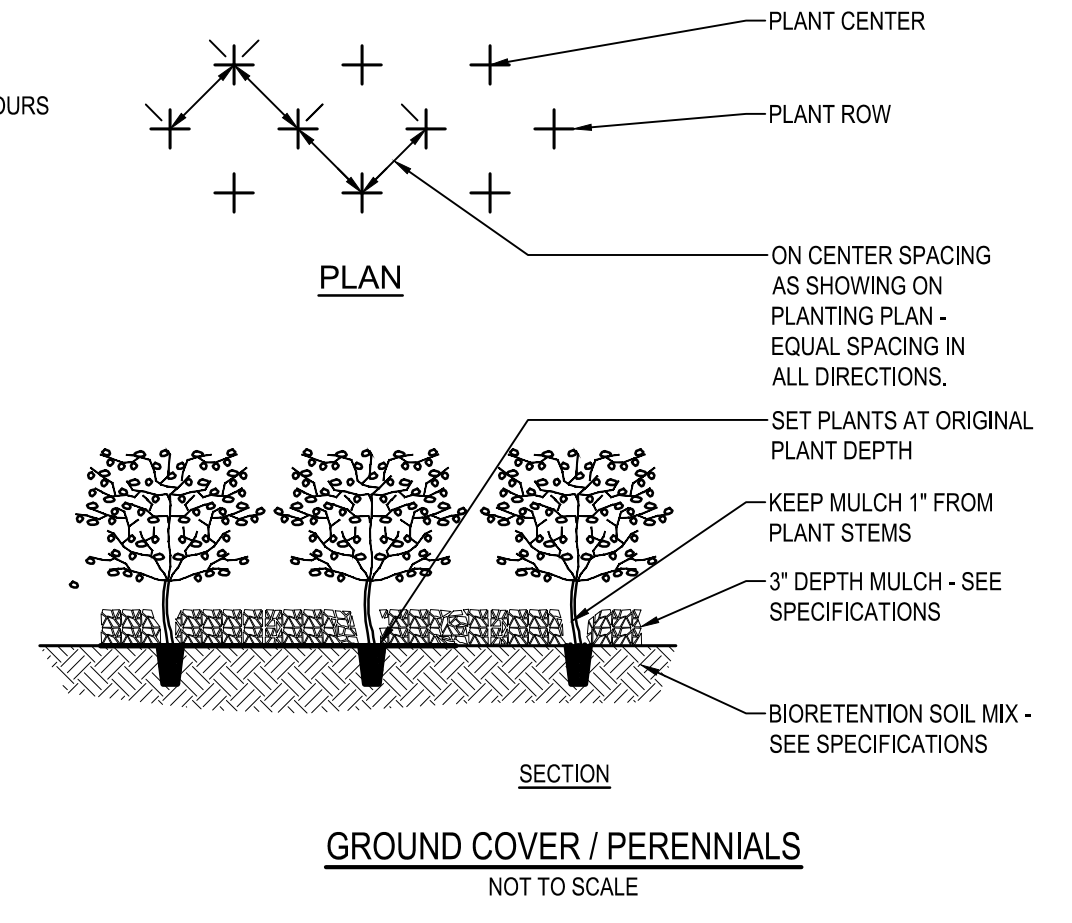
NOTES:
 1. SHRUBS SHALL BE PLANTED IN TILLED, MULCHED BEDS WHICH HAVE BEEN AMENDED WITH EITHER PEAT MOSS OR COMPOSTED LEAF MOLD.
 2. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND ALL MATERIALS.



NOTE:
 LOCATE TWO STAKES PARALLEL TO NEAREST ROADWAY OR PAVEMENT AREA FOR UNIFORM APPEARANCE



- NOTES:
- ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 18". ROOTS OVER 1 1/2" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.
 - ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING.
 - ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF A CERTIFIED ARBORIST.
 - BACKFILL THE ROOT-PRUNING TRENCH WITH EXCAVATED SOIL AND MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.
 - ROOT PRUNING WORK WILL NOT BE DONE WHEN MORE THAN TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING WILL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.



MINIMUM LANDSCAPE MAINTENANCE REQUIREMENTS:

- LAWN AREAS SHALL BE MOVED TO A HEIGHT OF 2 TO 3 INCHES AND NOT ALLOWED TO REACH A HEIGHT OF 4 INCHES BEFORE MOWING.
- ALL CURBS AND WALKS SHALL BE EDGED AS NEEDED.
- ALL LAWN AREAS ADJACENT TO BUILDING FACES OR STRUCTURES SHALL BE TRIMMED.
- A SLOW RELEASE NITROGEN BALANCED FERTILIZER WITH A 2-1-1 RATIO SHALL BE APPLIED AT A RATE OF 2 POUNDS OF NITROGEN PER 1000 SQUARE FEET IN SEPTEMBER, OCTOBER, AND FEBRUARY.
- LIME SHALL BE APPLIED AT THE RATE DETERMINED BY A SOILS REPORT.
- IT IS RECOMMENDED THAT LAWN AREAS BE TREATED IN MID-MARCH TO EARLY APRIL WITH PER-EMERGENT HERBICIDE (BETASAM) OR EQUAL APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE.
- A POST-EMERGENT HERBICIDE (TRIMEC) OR EQUAL IS RECOMMENDED TO BE SPRAYED ON LAWN AREAS IN THE LATE SPRING OR THE EARLY FALL. FOLLOW MANUFACTURER'S RATES AND RECOMMENDATIONS.
- INSECTICIDES AND FUNGICIDES ARE RECOMMENDED FOR INSECT AND DISEASE CONTROL.
- RESEED BARE AREAS OF LAWN AS NECESSARY. YEARLY AERATION IS RECOMMENDED.
- ALL TRASH, LITTER, AND DEBRIS SHALL BE REMOVED FROM LAWN AREAS, PARKING LOTS, AND SHRUB BEDS AS NEEDED.
- MULCH ALL SHRUB AND GROUND COVER BEDS YEARLY WITH 3 INCHES OF HARD WOOD BARK.
- PERMIT SHRUBS AND TREES TO GROW AND ENLARGE TO THEIR DESIGN SIZE. CONSULT PROJECT LANDSCAPE ARCHITECT FOR DETAILS.
- PRUNE TREES IN ACCORDANCE WITH LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METRO-POLITAN AREAS.

GENERAL NOTES:

- ALL PLANT MATERIAL SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK, ANSI Z60.1-2004, LATEST EDITION PREPARED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, 230 SOUTHERN BUILDING, WASHINGTON, DC, 20005.
- CONTRACTOR MUST VERIFY THE CORRECT LOCATION OF ANY EXISTING UTILITIES WHICH ARE UNDERGROUND PRIOR TO PLANT INSTALLATION. THE CONTRACTOR SHALL CALL MISS UTILITY (1-800-257-7777) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND REQUIREMENTS FOR CONSTRUCTION.
- ALL PLANT BEDS SHALL BE MULCHED WITH A MINIMUM OF 2" AND A MAXIMUM OF 3" LAYER OF MULCH WITHIN TWO DAYS AFTER PLANTING. THIS SHALL BE SHREDDED HARDWOOD BARK, AND SHALL COVER ENTIRELY THE PLANTING BED.
- ALL PLANTS SHALL BE GUARANTEED TO REMAIN ALIVE AND HEALTHY FOR A PERIOD OF TWO FULL YEARS AFTER INITIAL ACCEPTANCE. ANY REPLACEMENT PLANTS, REQUIREMENTS, ETC. AND METHOD OF PLACING SHALL COMPLY WITH THE REQUIREMENTS SPECIFIED HEREIN AND ON THE DRAWINGS.
- EXISTING SOIL IN BED AREAS SHALL BE AMENDED TO A DEPTH OF 12". SOIL MIX IN ALL BEDS SHALL BE 2/3 EXISTING SOIL, AND 1/3 ORGANIC MATERIAL SUCH AS LEAFGRO.
- PLANT MATERIAL AVAILABILITY MAY VARY AT THE TIME OF CONSTRUCTION. ANY SUBSTITUTIONS ARE TO BE OF EQUIVALENT TYPE AND SIZE (OR LARGER), AND MUST BE APPROVED BY LANDSCAPE ARCHITECT BEFORE INSTALLATION.
- WHERE THE CONDITION EXISTS THAT BALLED AND BURLAPPED TREES ARE DELIVERED IN WIRE BASKETS, THE WIRE BASKETS SHALL BE CUT DOWN THE SIDE OF EACH MESH AND PEEL AWAY FROM THE ROOTBALL OR REMOVED IN ENTIRETY. NO PORTION OF THE WIRE BASKET SHALL REMAIN INTACT AROUND THE SIDES OF THE ROOTBALL OR EXTEND ABOVE FINISHED GRADE.
- ANY DAMAGE TO THE EXISTING UTILITIES, BUILDINGS, PAVING, CURB, WALLS, AND VEGETATION (NOT SO DESIGNATED FOR REMOVAL ON THESE PLANS) SHALL BE REPAIRED TO PREVIOUS CONDITION OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL AREAS DISTURBED DURING CONSTRUCTION ARE TO BE SEEDDED UNLESS NOTED OTHERWISE.
- ADJUST TREE LOCATIONS IN THE FIELD IF LOCATIONS SHOWN CONFLICT WITH EXISTING VEGETATION NOT PICKED UP IN SURVEY.
- SEED DISTURBED AREAS.

WHITNEY BAILEY COX & MAGNANI, LLC
 300 East Joppa Road, Suite 200
 Baltimore, MD 21286
 410.512.4500 www.wbcm.com

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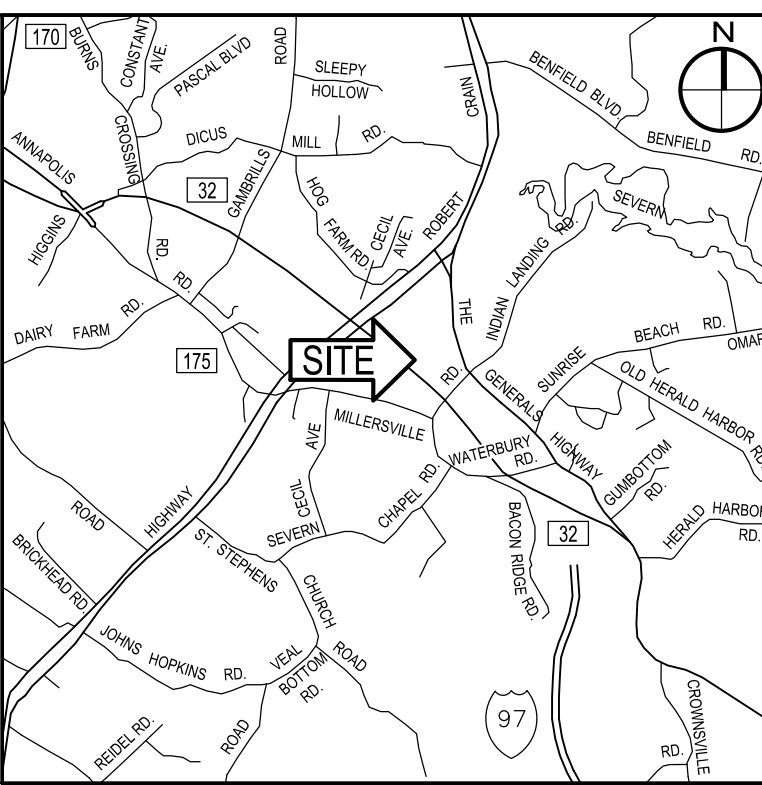
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NO.	DESCRIPTION	BY	DATE

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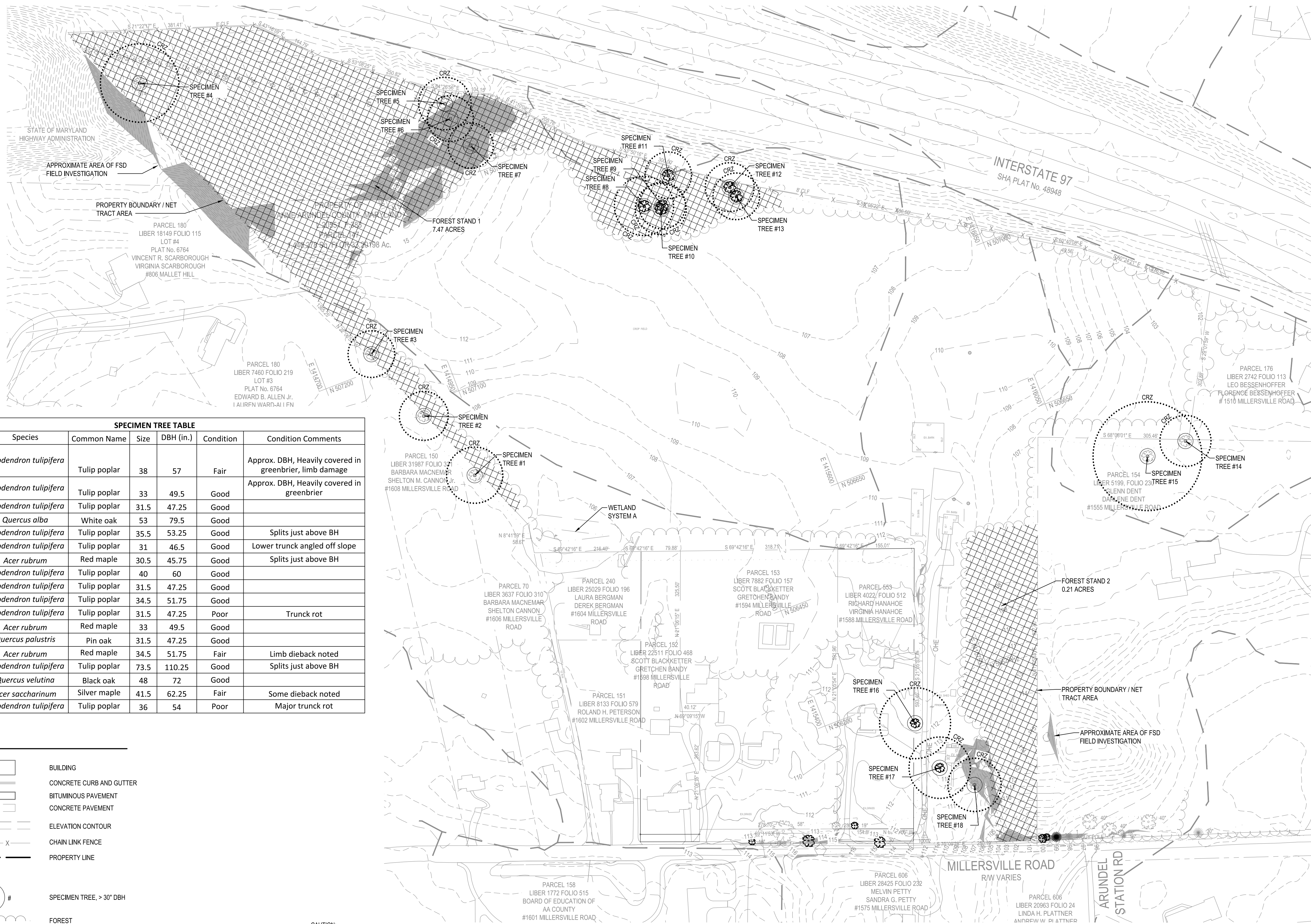
APPROVED	DATE	APPROVED	DATE

SCALE: AS SHOWN
 DRAWN BY: R.S.S.
 CHECKED BY: R.W.H.
 SHEET NO. 34 OF 37
 PROJECT NO.: P567102
 CONTRACT NO.: P56702

MILLERSVILLE PARK
 LANDSCAPE NOTES AND DETAILS



VICINITY MAP
SCALE: 1" = 2,000'



SPECIMEN TREE TABLE

Point No.	Species	Common Name	Size	DBH (in.)	Condition	Condition Comments
ST-1	<i>Liriodendron tulipifera</i>	Tulip poplar	38	57	Fair	Approx. DBH, Heavily covered in greenbrier, limb damage
ST-2	<i>Liriodendron tulipifera</i>	Tulip poplar	33	49.5	Good	Approx. DBH, Heavily covered in greenbrier
ST-3	<i>Liriodendron tulipifera</i>	Tulip poplar	31.5	47.25	Good	
ST-4	<i>Quercus alba</i>	White oak	53	79.5	Good	
ST-5	<i>Liriodendron tulipifera</i>	Tulip poplar	35.5	53.25	Good	Splits just above BH
ST-6	<i>Liriodendron tulipifera</i>	Tulip poplar	31	46.5	Good	Lower trunk angled off slope
ST-7	<i>Acer rubrum</i>	Red maple	30.5	45.75	Good	Splits just above BH
ST-8	<i>Liriodendron tulipifera</i>	Tulip poplar	40	60	Good	
ST-9	<i>Liriodendron tulipifera</i>	Tulip poplar	31.5	47.25	Good	
ST-10	<i>Liriodendron tulipifera</i>	Tulip poplar	34.5	51.75	Good	
ST-11	<i>Liriodendron tulipifera</i>	Tulip poplar	31.5	47.25	Poor	Trunk rot
ST-12	<i>Acer rubrum</i>	Red maple	33	49.5	Good	
ST-13	<i>Quercus palustris</i>	Pin oak	31.5	47.25	Good	
ST-14	<i>Acer rubrum</i>	Red maple	34.5	51.75	Fair	Limb dieback noted
ST-15	<i>Liriodendron tulipifera</i>	Tulip poplar	73.5	110.25	Good	Splits just above BH
ST-16	<i>Quercus velutina</i>	Black oak	48	72	Good	
ST-17	<i>Acer saccharinum</i>	Silver maple	41.5	62.25	Fair	Some dieback noted
ST-18	<i>Liriodendron tulipifera</i>	Tulip poplar	36	54	Poor	Major trunk rot

FOREST STAND DATA

Key	Community Type	Acreage	Dominant Vegetation	General Condition	Priority Acreage
F1	Oak/Poplar	8.1	<i>Liriodendron tulipifera</i> , <i>Quercus alba</i> , <i>Quercus rubra</i> , <i>Carya glabra</i> , <i>Fagus grandiflora</i> , <i>Prunus serotina</i>	Good	1.7 +/- slopes
F2	White Pine	1.4	<i>Pinus strobus</i> , <i>Prunus serotina</i> , <i>Acer rubrum</i> , <i>Morus rubra</i>	Fair	0

- SFSD NOTES:**
- No rare, threatened or endangered species, or their habitats, were observed on the property.
 - Surrounding land use is primarily low density residential development and Interstate 97.
 - No historic elements or cemeteries are known to occur on the property.
 - No 100 year floodplain is present within the proposed lot areas or access roads.
 - Steep slopes (15% and greater) are present on the property.
 - An isolated nontidal wetland is present on the site. No streams have been identified on the property.
 - Eighteen specimen trees have been identified on the property.

PRELIMINARY FOREST CONSERVATION WORKSHEET
Project: Millersville Park Tennis Center April 2, 2018

I. BASIC SITE DATA		ACRES
1. Gross Site Acreage		33.2
2. Area within 100 Year Floodplain		0.0
3. Area in within overhead utility easement		
4. Net Tract Area		33.2
5. Land Use Category		RLD
II. INFORMATION FOR CALCULATIONS		
A. Net Tract Area		33.2
B. Forest Conservation Threshold (percentage)	50	16.6
C. Afforestation Threshold (percentage)	20	6.6
D. Existing Forest on NTA		9.5
E. Existing Forest above Forest Conservation Threshold		0.0
F. Break-Even Point		N/A

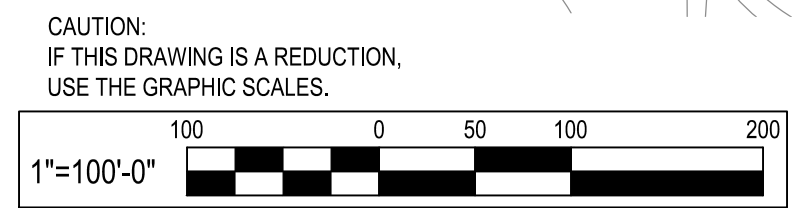
- FOREST CONSERVATION NOTES:**
- ADDRESS: MILLERSVILLE PARK 1580 MILLERSVILLE ROAD, MILLERSVILLE, MARYLAND, 21108.
 - OWNER: ANNE ARUNDEL COUNTY, 2660 RIVA RD, FL 3 ANNAPOLIS, MARYLAND, 21401
 - AREA: 33.20 AC
 - ZONING: R-L-D RESIDENTIAL LOW DENSITY
MAP 30, GRID 23, PARCEL 00147; DEED REFERENCE: 20551 / 00383

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.

SIGNATURE: _____
DATE: _____

LEGEND

- BUILDING
- CONCRETE CURB AND GUTTER
- BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- ELEVATION CONTOUR (40, 42)
- CHAIN LINK FENCE
- PROPERTY LINE
- SPECIMEN TREE, > 30" DBH
- FOREST
- MAPPED SOIL UNIT / HYDROLOGIC SOIL GROUP RATING (M/A, C, LgA, D)
- STEEP SLOPES (15% OR GREATER)
- EXISTING FOREST WITHIN THE PROPERTY BOUNDARY
- EXISTING FOREST EXTENDING OUTSIDE THE PROPERTY BOUNDARY
- FOREST SAMPLING DATA PLOT LOCATION
- CRITICAL ROOT ZONE FOR SPECIMEN TREE
- FSD FIELD INVESTIGATION BOUNDARY



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300 East Joppa Road, Suite 200
Baltimore, MD 21286
410.512.4500 www.wbcm.com

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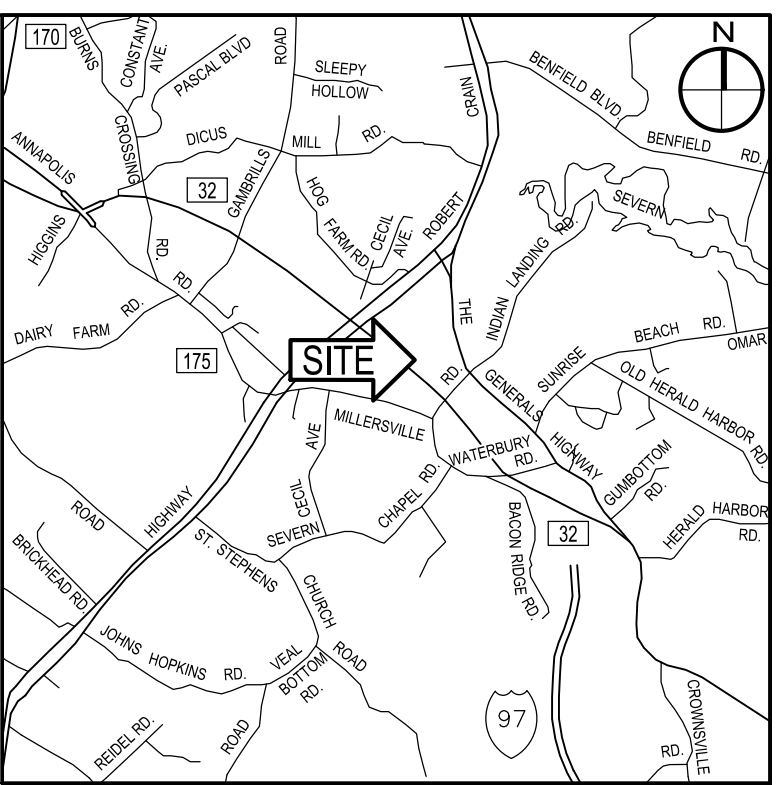
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License # 27734 Expiration Date: 07/12/24

REVISIONS			
NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED	DATE	APPROVED	DATE	SCALE: 1" = 100'
CHIEF ENGINEER		PROJECT MANAGER		DRAWN BY: R.S.S.
APPROVED	DATE	APPROVED	DATE	CHECKED BY: R.W.H.
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY		SHEET NO. 35 OF 37
				PROJECT NO.: P567102
				CONTRACT NO.: P56702

MILLERSVILLE PARK
FOREST STAND DELINEATION PLAN



VICINITY MAP
SCALE: 1" = 2,000'

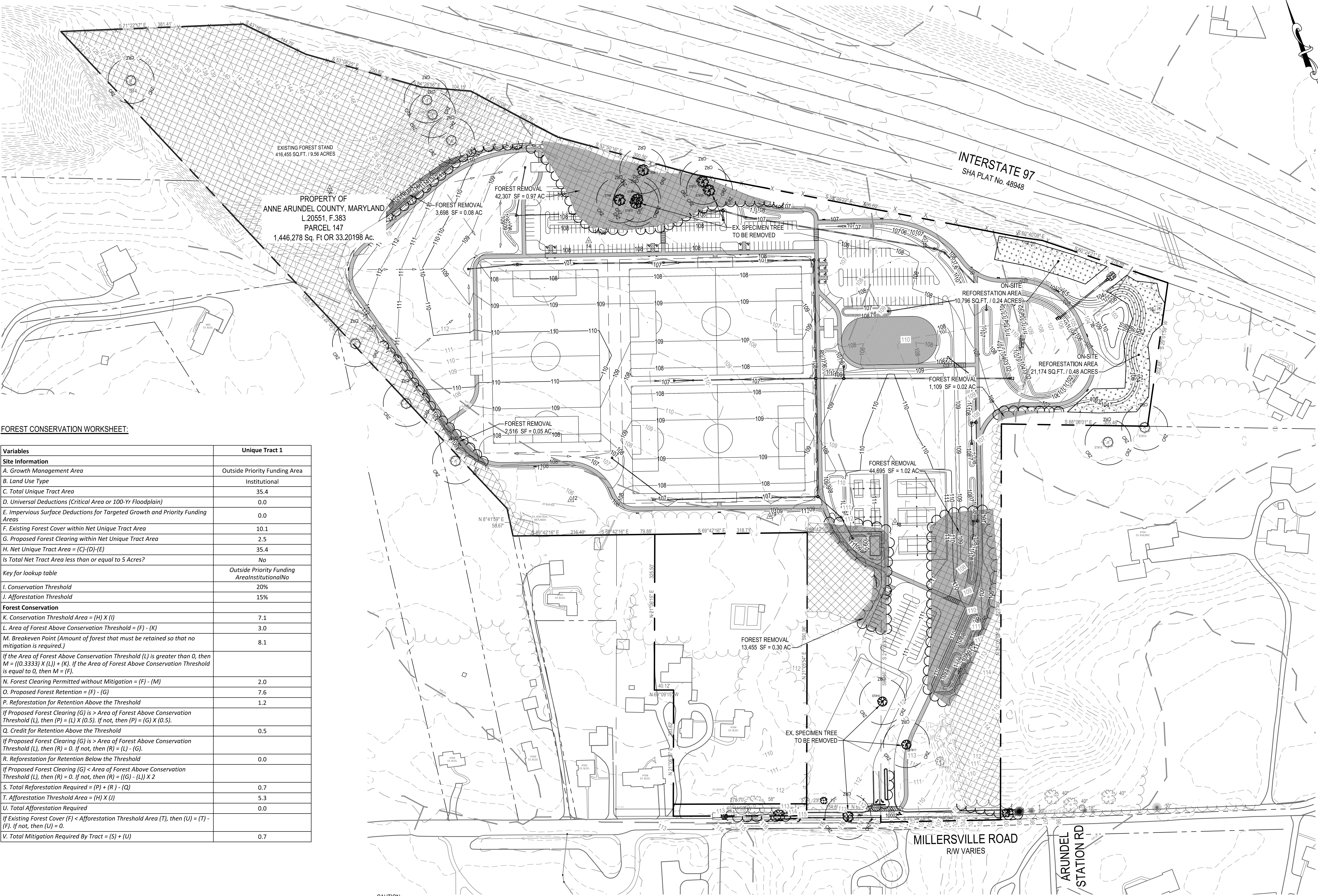
LEGEND

- EXISTING FOREST ON PROJECT PROPERTY
- FOREST TO BE REMOVED
- REFORESTATION PLANTING AREA
- SPECIMEN TREES
- CRITICAL ROOT ZONE (CRZ)
- SPECIMEN TREE TO BE REMOVED

- FOREST CONSERVATION NOTES:**
- PROPERTY ADDRESS: 1580 MILLERSVILLE ROAD MILLERSVILLE, MARYLAND
21108 PROPERTY AREA IS COMPRISED OF THE FOLLOWING PARCEL:
a. MAP 0030, GRID 0023, PARCEL 0553, DEED REF: LIBER 4003, FOLIO 0667
b. MAP 0030, GRID 0023, PARCEL 0147, DEED REF: LIBER 20551, FOLIO 0383
 - OWNER: ANNE ARUNDEL COUNTY
MAILING ADDRESS:
2660 RIVA ROAD, 3RD FLOOR
ANNAPOLIS, MARYLAND 21401
 - AREA: 35.29 ACRES
 - ZONING: R-LD RESIDENTIAL LOW DENSITY
 - THIS PROJECT WILL REMOVE 125673 SF OR 2.88 ACRES OF EXISTING FOREST FROM WITHIN THE NET TRACT AREA. REFORESTATION PLANTING REQUIREMENTS PER THE FOREST CONSERVATION WORKSHEET ARE 58563 SF OR 1.30 ACRES. 1.0 ACRES ARE PLANTED ON-SITE, 0.30 ACRES TO BE PLANTED OFF-SITE AT A LOCATION TO BE DETERMINED.
 - PLANTING REQUIREMENTS ARE PROPOSED TO BE MET THROUGH ON-SITE AND OFF-SITE PLANTING OF 1.3 ACRES. TOTAL TREES TO BE PLANTED BASED ON 350 TREES PER ACRE FOR 1 GALLON CONTAINER STOCK.
 - DNR FOREST SERVICE MUST BE CONTACTED AT 410-836-4568 FOR A PRE-CONSTRUCTION MEETING AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED.

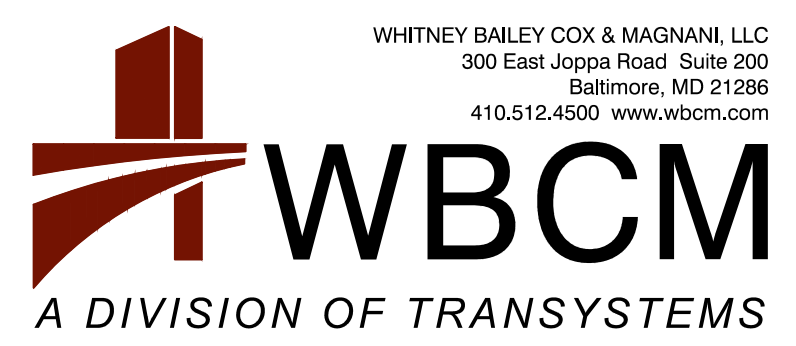
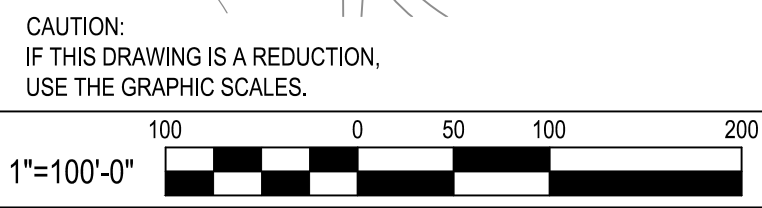
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FOREST CONSERVATION WORKSHEET:

Variables	Unique Tract 1
Site Information	
A. Growth Management Area	Outside Priority Funding Area
B. Land Use Type	Institutional
C. Total Unique Tract Area	35.4
D. Universal Deductions (Critical Area or 100-Yr Floodplain)	0.0
E. Impervious Surface Deductions for Targeted Growth and Priority Funding Areas	0.0
F. Existing Forest Cover within Net Unique Tract Area	10.1
G. Proposed Forest Clearing within Net Unique Tract Area	2.5
H. Net Unique Tract Area = (C)-(D)-(E)	35.4
I. Is Total Net Tract Area less than or equal to 5 Acres?	No
Key for lookup table	
I. Conservation Threshold	20%
J. Afforestation Threshold	15%
Forest Conservation	
K. Conservation Threshold Area = (H) X (I)	7.1
L. Area of Forest Above Conservation Threshold = (F) - (K)	3.0
M. Breakeven Point (Amount of forest that must be retained so that no mitigation is required.)	8.1
If the Area of Forest Above Conservation Threshold (L) is greater than 0, then M = ((0.3333) X (L)) + (K). If the Area of Forest Above Conservation Threshold is equal to 0, then M = (F).	
N. Forest Clearing Permitted without Mitigation = (F) - (M)	2.0
O. Proposed Forest Retention = (F) - (G)	7.6
P. Reforestation for Retention Above the Threshold	1.2
If Proposed Forest Clearing (G) is > Area of Forest Above Conservation Threshold (L), then (P) = (L) X (0.5). If not, then (P) = (G) X (0.5).	
Q. Credit for Retention Above the Threshold	0.5
If Proposed Forest Clearing (G) is > Area of Forest Above Conservation Threshold (L), then (R) = 0. If not, then (R) = (L) - (G).	
R. Reforestation for Retention Below the Threshold	0.0
If Proposed Forest Clearing (G) < Area of Forest Above Conservation Threshold (L), then (R) = 0. If not, then (R) = ((G) - (L)) X 2	
S. Total Reforestation Required = (P) + (R) - (Q)	0.7
T. Afforestation Threshold Area = (H) X (J)	5.3
U. Total Afforestation Required	0.0
If Existing Forest Cover (F) < Afforestation Threshold Area (T), then (U) = (T) - (F). If not, then (U) = 0.	
V. Total Mitigation Required By Tract = (S) + (U)	0.7



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NO.	DESCRIPTION	BY	DATE

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
APPROVED	DATE	APPROVED	DATE
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED	DATE	APPROVED	DATE
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT-OF-WAY	
SCALE: 1" = 100'		DRAWN BY: R.S.S.	
CHECKED BY: R.W.H.		SHEET NO. 36 OF 37	
PROJECT NO.: P567102		CONTRACT NO.: P56702	
MILLERSVILLE PARK			
FOREST CONSERVATION PLAN			

