

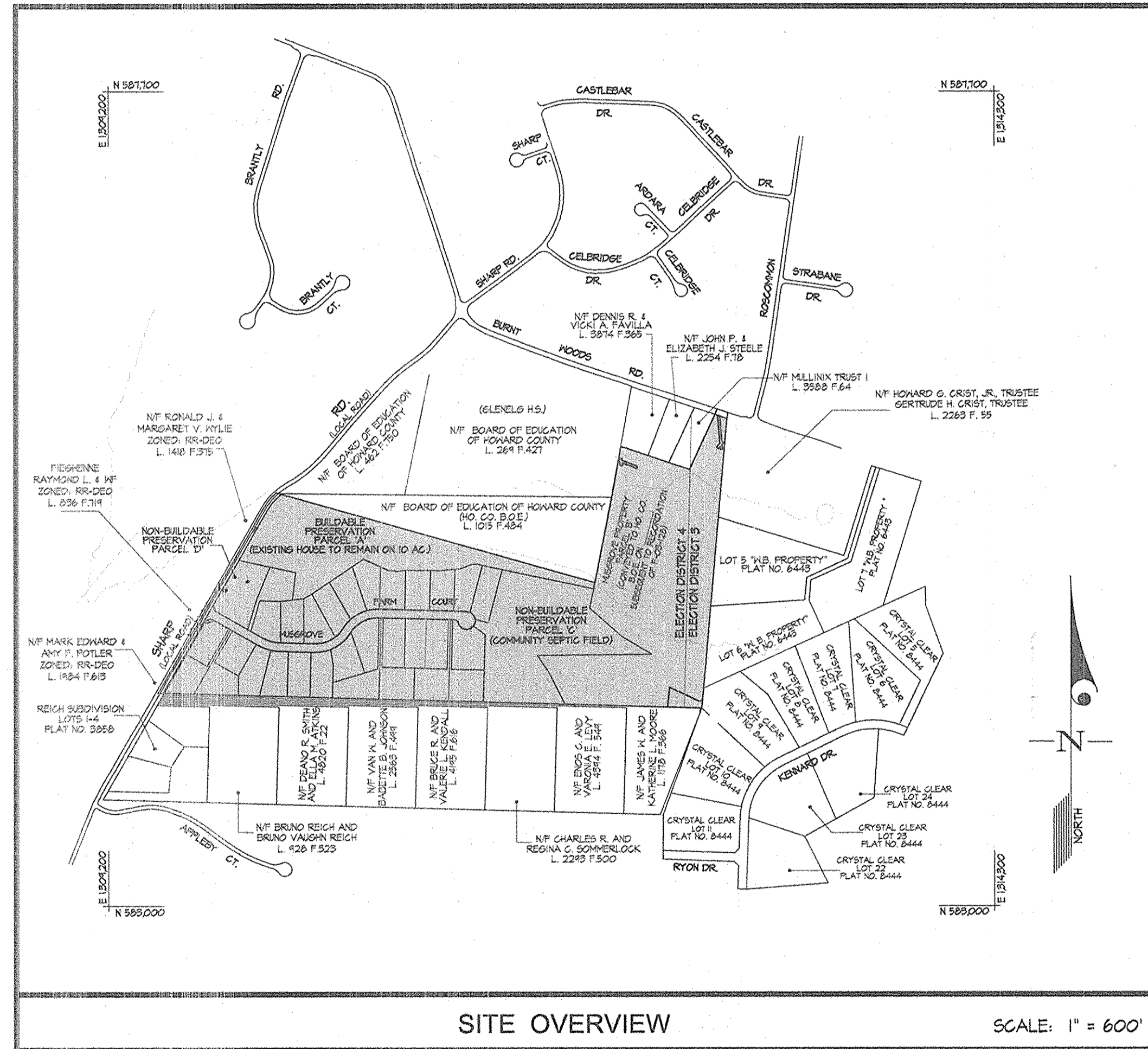
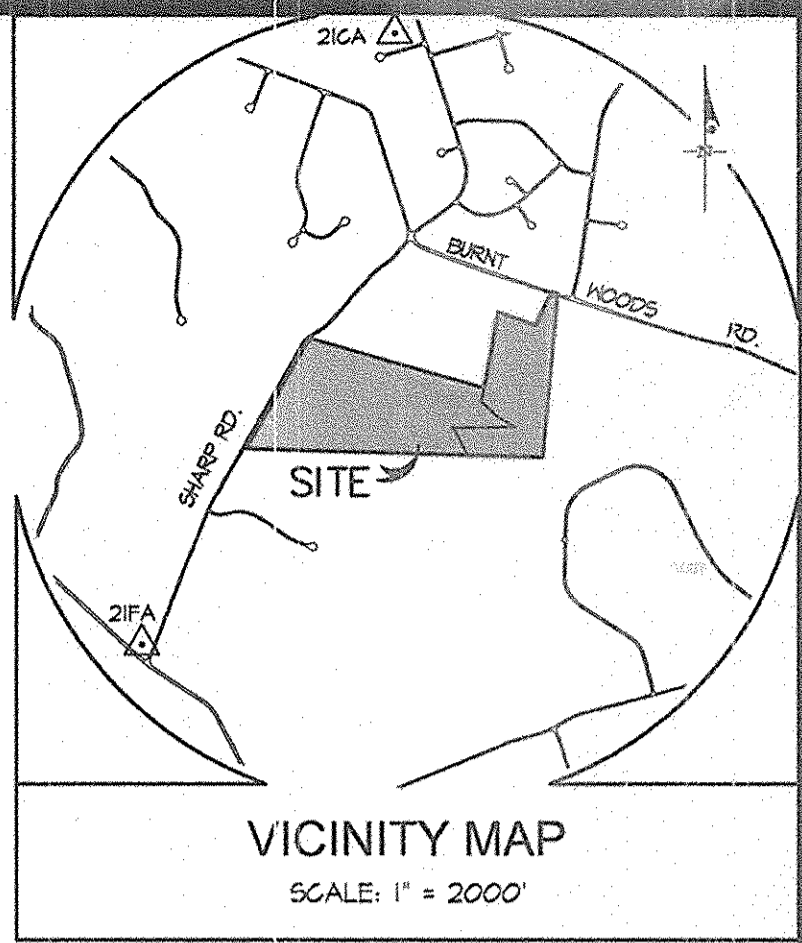
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 315-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-251-TITI AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION WORK.
- SITE ANALYSIS & PROJECT BACKGROUND**
 GROSS SITE/PROJECT AREA (BULK PARCELS 'A' & 'B' PER F-03-128) 71.11 ACRES±
 AREA OF THIS SUBMISSION (BULK PARCEL 'A' PER F-03-128) 41.51 ACRES±
 AREA OF ROADWAY (PUBLIC) 3.06 ACRES±
 AREA OF BUILDABLE LOTS (1-30) 24.48 ACRES±
 AREA OF BUILDABLE PRESERVATION PARCEL 'A' 10.00 ACRES±
 AREA OF NON-BUILDABLE PRESERVATION PARCELS 'C' AND 'D' 11.08 ACRES±
 AREA OF 100-YEAR FLOODPLAIN (ON BULK PARCEL 'A') 4.01 ACRES±
 NUMBER OF LOTS: 30 (50 LOTS, 1 BUILDABLE PRESERVATION PARCEL AND 2 NON-BUILDABLE PRESERVATION PARCELS)
 PREVIOUS DPZ FILE REF.: F-03-128, SP-03-11, AND RE-04-04.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL TOPOGRAPHY PREPARED DURING NOVEMBER 2001 BY MCKENZIE-SNYDER, INC.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 21CA AND 21FA WERE USED FOR THIS PROJECT.
- LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROADS AND BRIDGES.
- THE BUILDABLE LOTS WILL BE SERVED BY PRIVATE WELLS AND SEPTIC SYSTEMS. SEE DRAWINGS BY WHITMAN RIGGARDT AND ASSOCIATES, LLP (SDP-04-136) FOR THE SEPTIC SYSTEM DESIGN.
- STORMWATER MANAGEMENT IS BEING PROVIDED BY TWO FACILITIES. FACILITY A IS A WATER QUALITY & EXTENDED DETENTION PERMANENT POOL FACILITY. FACILITY IS LOCATED WITHIN PRESERVATION PARCEL D. THE FUND WILL BE PRIVATELY OWNED AND MAINTAINED JOINTLY WITH THE HOME OWNER'S ASSOCIATION BEING RESPONSIBLE FOR THE ROUTINE ITEMS AND THE COUNTY BEING RESPONSIBLE FOR THE NON-ROUTINE ITEMS. THE FACILITY HAS AN 'A' HAZARD CLASSIFICATION.
 FACILITY B IS A WATER QUALITY BIO-RETENTION DRY POND. FACILITY B IS LOCATED WITHIN PRESERVATION PARCEL 'A' & WITHIN AN EASEMENT DICTATING ITS MAINTENANCE TO BE PRIVATELY MAINTAINED BY THE HOMEOWNER'S ASSOCIATION. FACILITY B IS A NON-MD-37B POND. RECHARGE WILL NOT BE PROVIDED BECAUSE THE LATEST GEOTECHNICAL INDICATES THAT RECHARGE IS NOT FEASIBLE.
 THE ENTIRE AOV IS PROVIDED FOR WITHIN FACILITIES A & B. NATURAL AREA CONSERVATION CREDIT OF 5 ACRES HAS TAKEN TOWARD THE VOLUME REQUIREMENTS IN THE FACILITY AT FACILITY A.
- THE 100-YEAR FLOOD PLAIN EASEMENT IS PER F-03-128 AS RECORDED ON PLATS 16005-08. THE WETLAND, STREAMS AND THEIR BUFFERS ARE ALSO PER F-03-128 AND THE SAME RECORDED PLATS.
- TRAFFIC STUDY WAS PREPARED BY TRAFFIC CONCEPTS, INC. (APRIL 2003) AND APPROVED UNDER SP-03-11 (LINE 03).
- NO NOISE STUDY IS REQUIRED FOR THIS PROJECT (BASED ON THE CLASSIFICATION OF SHARP ROAD).
- THE GEOTECHNICAL REPORT WAS PREPARED BY HILLIS-GARNES (JANUARY 2003) AS PART OF SP-03-11.
- EXISTING UTILITIES WERE TAKEN FROM AVAILABLE HOWARD COUNTY RECORDS.
- THE PROJECT BOUNDARY INFORMATION SHOWN IS PER PLAT 16003-09 (F-03-128).
- SOILS DATA WAS TAKEN FROM THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND ISSUED JULY 1988 (MAP 15).
- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- ANY DAMAGE TO HOWARD COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- RESIDENTIAL LOT DRIVEWAY ENTRANCES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-2.09 AND TO THE 1995 REGULATIONS AS AMENDED BY CB-50-2001.
- THIS PLAN IS SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND TO THE 1995 ZONING REGULATIONS AS AMENDED BY CB 50-2001.
- THE CEMETERY INVENTORY MAPS DO NOT SHOW ANY CEMETERIES WITHIN THE PROJECT LIMITS. THE SCENIC ROADS MAP DOES NOT INDICATE ANY SCENIC ROADS WITHIN OR ADJACENT TO THE LIMITS OF SUBMISSION FOR THIS PROJECT.
- BUILDABLE PRESERVATION PARCEL 'A' IS OWNED BY MAPLE SPRINGS FARM LIMITED PARTNERSHIP AND THE PURPOSE IS FOR AN EXISTING RESIDENTIAL HOUSE. THE EASEMENT HOLDER IS HOWARD COUNTY. NON-BUILDABLE PRESERVATION PARCEL 'B' IS OWNED BY THE BOARD OF EDUCATION OF HOWARD COUNTY AND THE PURPOSE FOR PRIVATE SEWAGE SYSTEMS. THE EASEMENT HOLDER IS HOWARD COUNTY. NON-BUILDABLE PRESERVATION PARCEL 'C' WILL BE CONVEYED TO THE HOMEOWNER'S ASSOCIATION FOR THE PURPOSE OF PRIVATE SHARED SEWAGE SYSTEMS. THE EASEMENT HOLDER IS HOWARD COUNTY. NON-BUILDABLE 'D' WILL BE CONVEYED TO THE HOMEOWNER'S ASSOCIATION FOR THE PURPOSE OF STORMWATER MANAGEMENT. THE EASEMENT HOLDER IS HOWARD COUNTY.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY F-03-128 WHICH CREATES THE FOREST CONSERVATION EASEMENTS SHOWN ON PLATS 16005 THRU 16006. NO FURTHER REQUIREMENTS WILL BE MADE DURING THE RESUBDIVISION OF BUILDABLE BULK PARCEL 'A' (PLATS 16003-08).
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL 95% COMPACTION IN FILL AREA SHALL BE IN ACCORDANCE WITH AASHTO T-180 STANDARDS.
- THE LANDSCAPE SURETY WITH THE DEVELOPER'S AGREEMENT FOR THIS PROJECT IS \$44,000.00.

MUSGROVE FARM CONSTRUCTION PLAN

LOTS 1 THRU 30, PRESERVATION PARCEL 'A' and NON-BUILDABLE PRESERVATION PARCELS 'C' & 'D'

THIRD & FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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DENSITY CALCULATIONS

** GROSS AREA:	71.11 ACRES±
BASE DENSITY:	16 UNITS (GROSS AREA/4.25)
FLOODPLAIN AREA:	8.2 ACRES± (ON BULK PARCELS 'A' AND 'B', F-03-128)
** NET AREA:	62.91 ACRES±
MAX. DENSITY:	31 UNITS (MAXIMUM ALLOWABLE WITH D.E.O. NET AREA/2)
D.E.O. UNITS REQUIRED:	15 UNITS (SEE RE-04-04 FOR INFORMATION ON THE TRANSFER OF D.E.O. UNITS TO THIS DEVELOPMENT)
UNITS PROPOSED:	30 LOTS + 1 BUILDABLE PRESERVATION PARCEL (WITH EXISTING HOUSE TO REMAIN)

** FOR THE PURPOSE OF CALCULATING THE DENSITY, THE ACREAGE OF NON-BUILDABLE PRESERVATION PARCEL B FROM F-03-128 TO BE TRANSFERRED TO THE BOARD OF EDUCATION IS INCLUDED IN BOTH THE GROSS AND NET AREAS OF THE SITE. AS A CONSEQUENCE OF BEING INCLUDED IN DETERMINING THE DENSITY, ALL DEVELOPMENT POTENTIAL IS EXHAUSTED FROM THIS PARCEL WHEN IT IS ESTABLISHED AS A PRESERVATION PARCEL AND IT IS TRANSFERRED TO THE BOARD OF EDUCATION. PARCEL 'B' MAY NOT BE SOLD OR DEVELOPED FOR THE PURPOSE OF CREATING LOTS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. ... 2-12-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Conrad ... 2/21/07
 Chief, Division of Land Development

... 2/21/07
 Chief, Development Engineering Division

GLW Gutschick Little & Weber, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-421-4024
 TEL: 410-880-1820 FAX: 410-880-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN.: BILL GRAU
 410-964-5522

COVER SHEET
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	1 OF 22

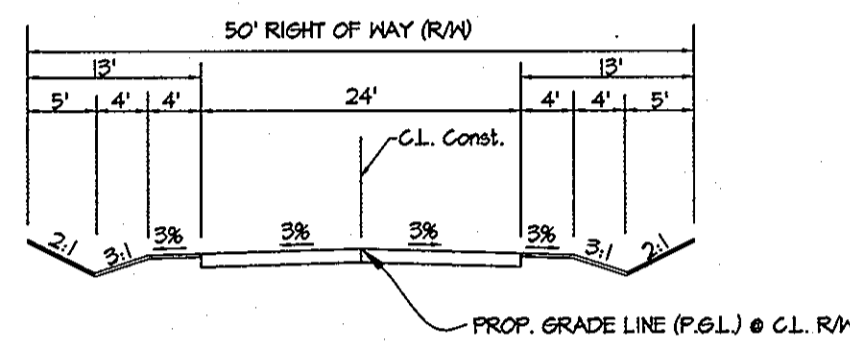
STREET LIGHT SCHEDULE			
LOCATION	LAMP TYPE	MOUNTING	POLE TYPE
C.L. STA. 0+17 - 32' LL.	150-WATT HPS VAPOR	PREMIER POST TOP	12" BLACK ALUMINUM

CURVE TABLE						
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA	
(A)	122.32'	250.00'	62.41'	121.10'	S 74°23'10" E	28°01'59"
(B)	219.91'	210.00'	121.24'	210.00'	N 61°35'51" E	60°00'00"
(C)	219.91'	210.00'	121.24'	210.00'	S 61°35'51" N	60°00'00"

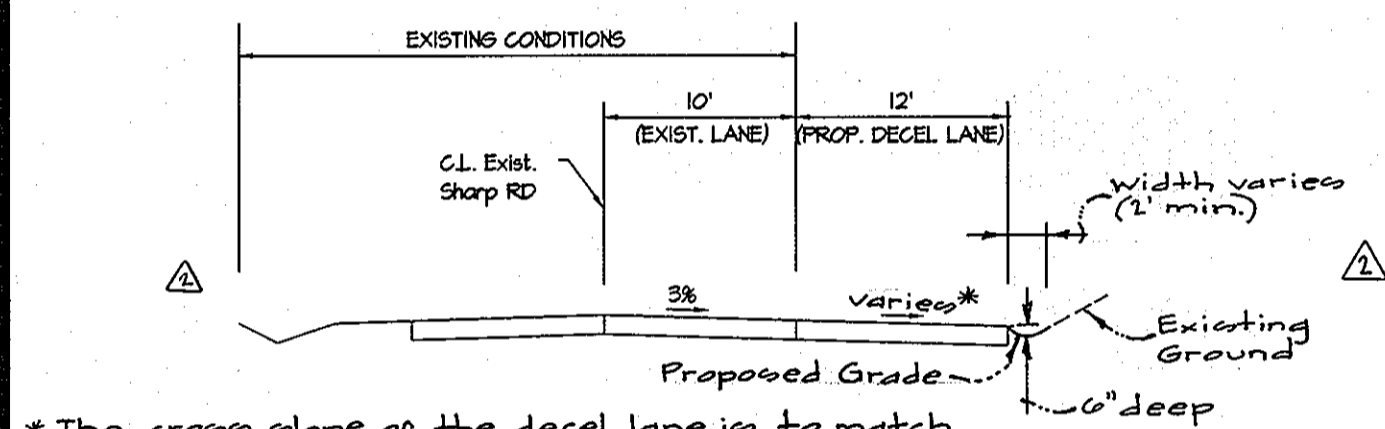
SPEED CONTROL DEVICE					
CURVE	PC STA.	PRG STA.	PT STA.	DEFLECTION	RADIUS
(A)	6+83.03	4+02.94	---	60°	210.0'
(B)	---	4+02.94	1+22.85	60°	210.0'

NOTE: ALL PROPOSED PAVING IS P-3 SEE DETAIL THIS SHEET

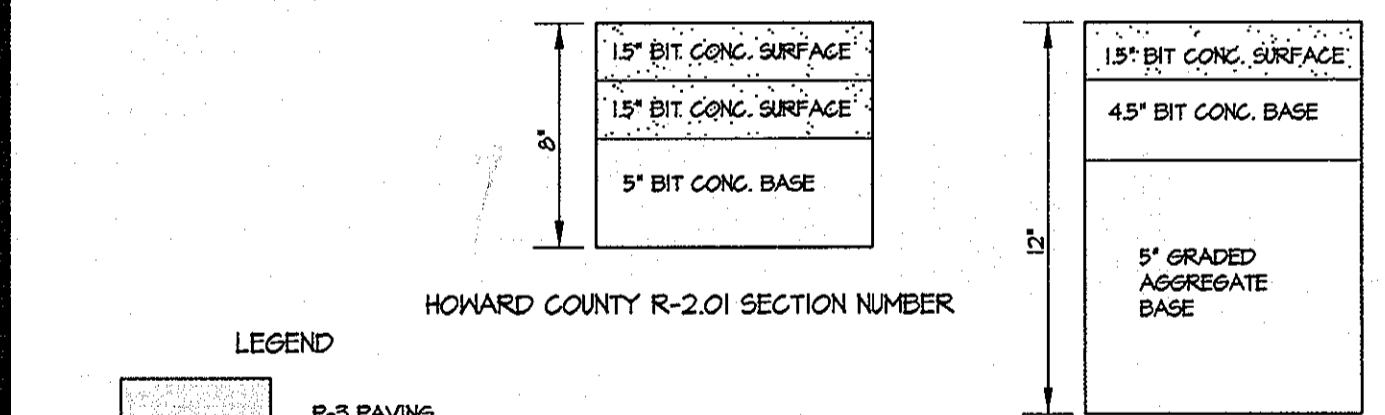
TYPICAL ROAD SECTION AND ROAD INFORMATION					
ROAD NAME	STATION	ROAD CLASSIFICATION	DESIGN SPEED	R/W	PAVING SECTION
MUSGROVE FARM CT.	0+00 TO 16+36.41	ACCESS STREET	25 MPH	60'	P-3



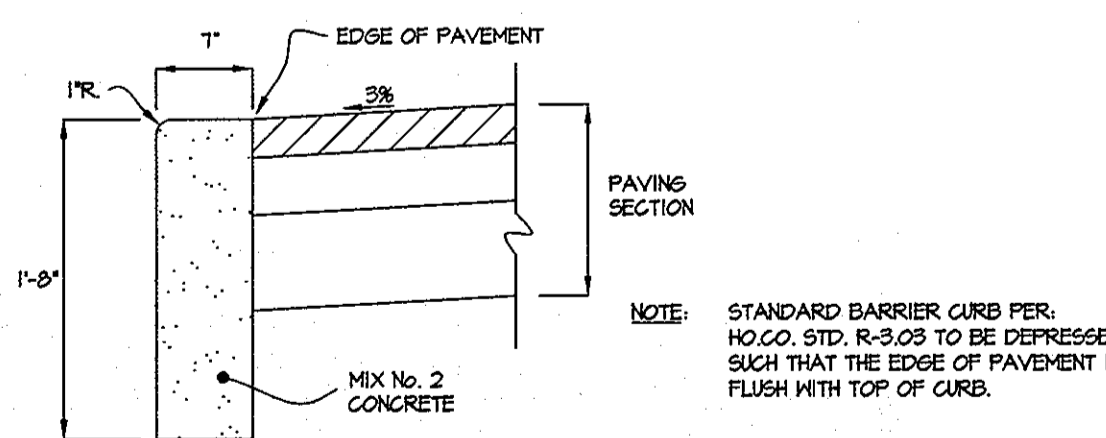
TYPICAL ROAD SECTION FOR MUSGROVE FARM COURT NOT TO SCALE



TYPICAL ROAD SECTION FOR SHARP ROAD (STA: 6+10 - 8+00) SCALE: 1"=10'



P-3 BITUMINOUS PAVING SECTIONS NOT TO SCALE



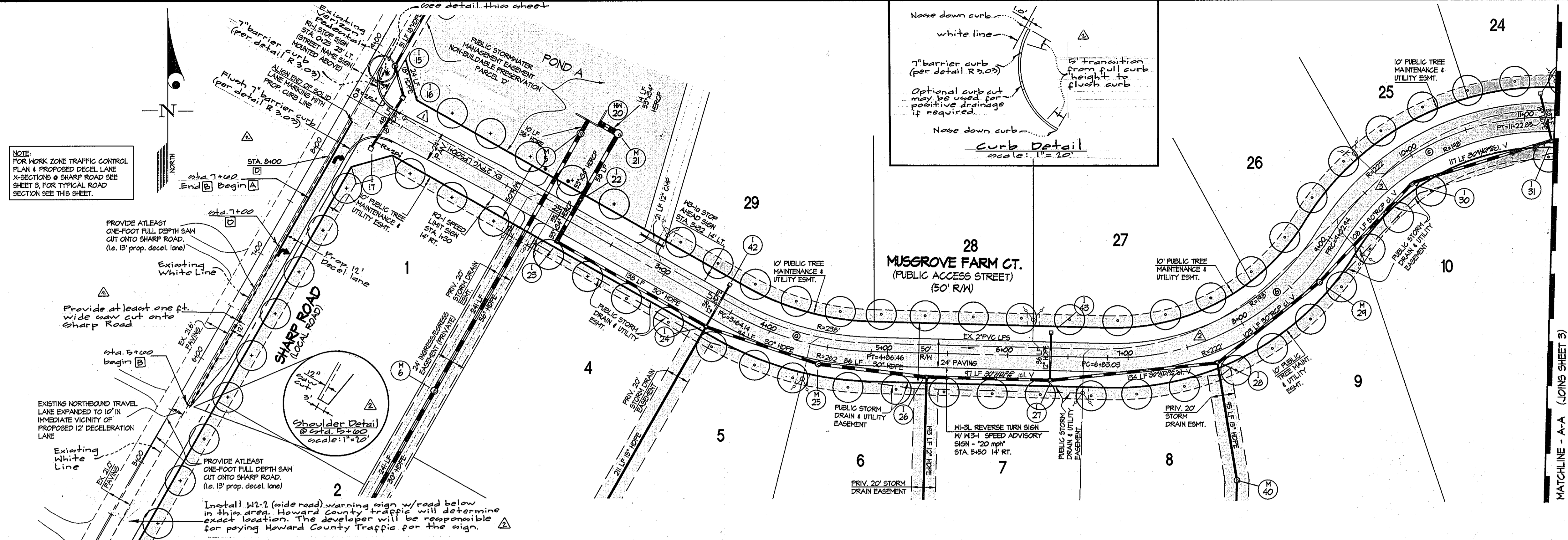
DEPRESSED BARRIER CURB NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways *W. J. Mohr* 2-12-07 Date

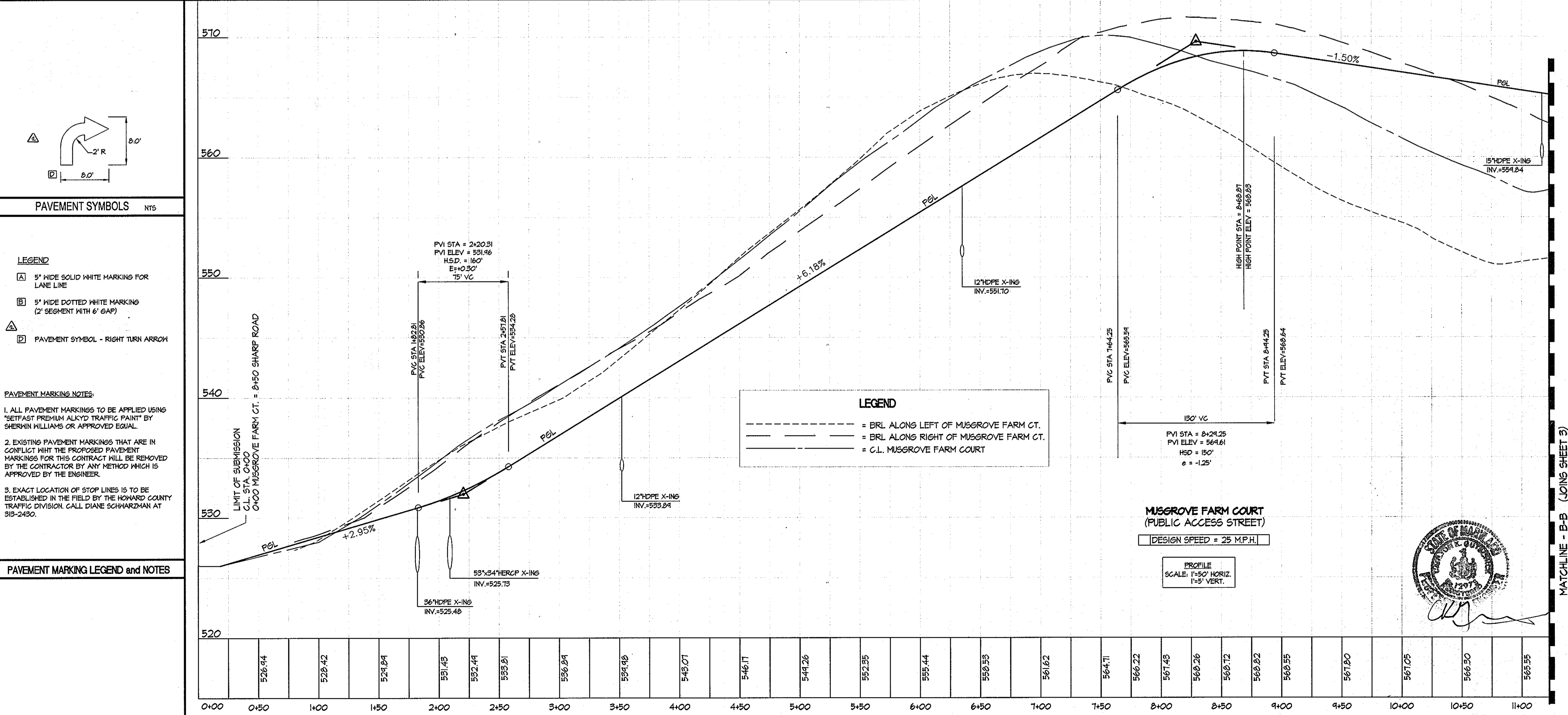
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development *David R. Smith* 2/25/07 Date

Chief, Development Engineering Division *Y. G.* 2/22/07 Date

NOTE:
 FOR STREET TREE SCHEDULE
 SEE LANDSCAPE NOTES &
 DETAIL SHEET 22



PLAN VIEW and SHARP ROAD STRIPING PLAN SCALE: 1" = 50'



MUSGROVE FARM COURT (PUBLIC ACCESS STREET)

DESIGN SPEED = 25 M.P.H.

PROFILE SCALE: 1"=50' HORIZ. 1"=5' VERT.

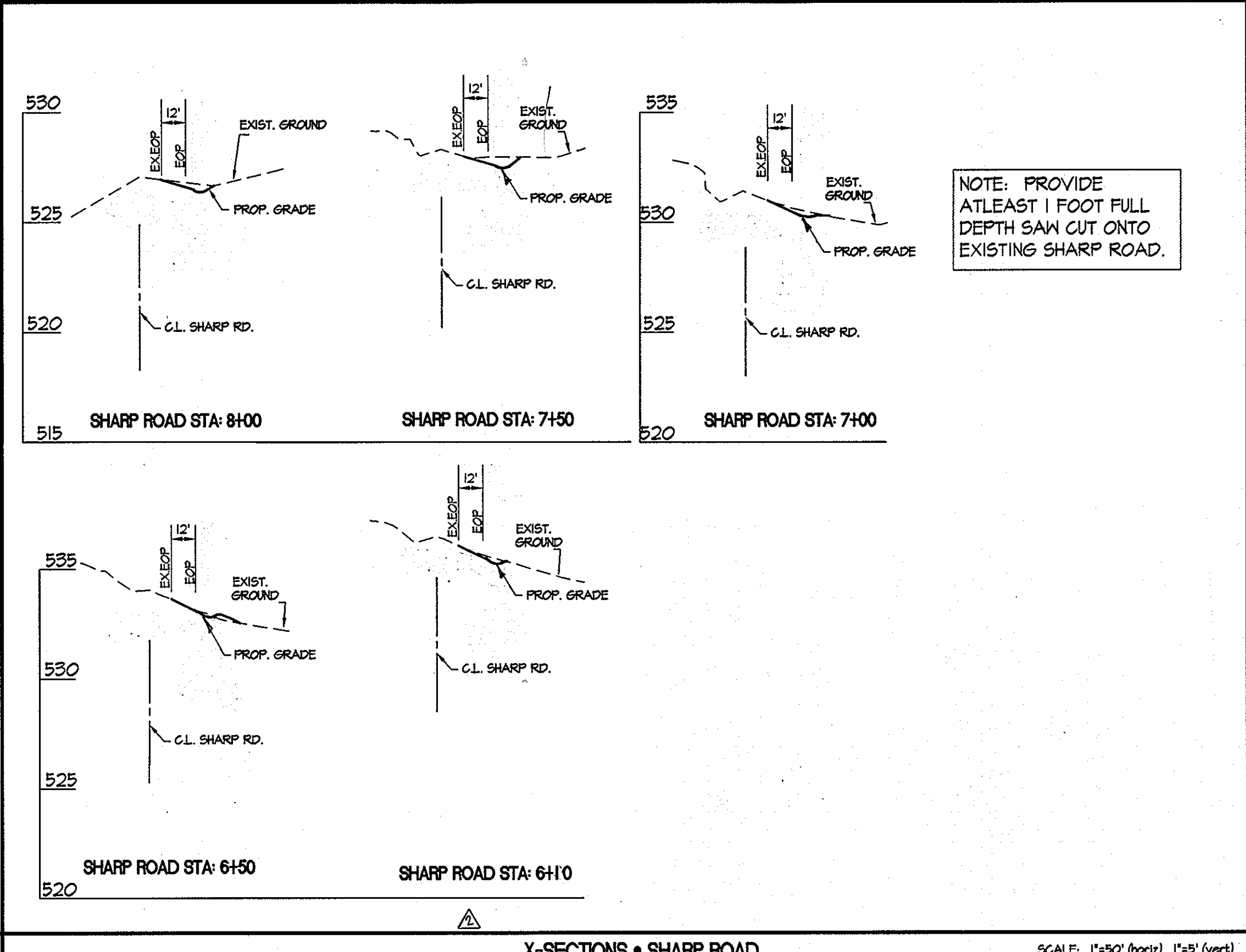
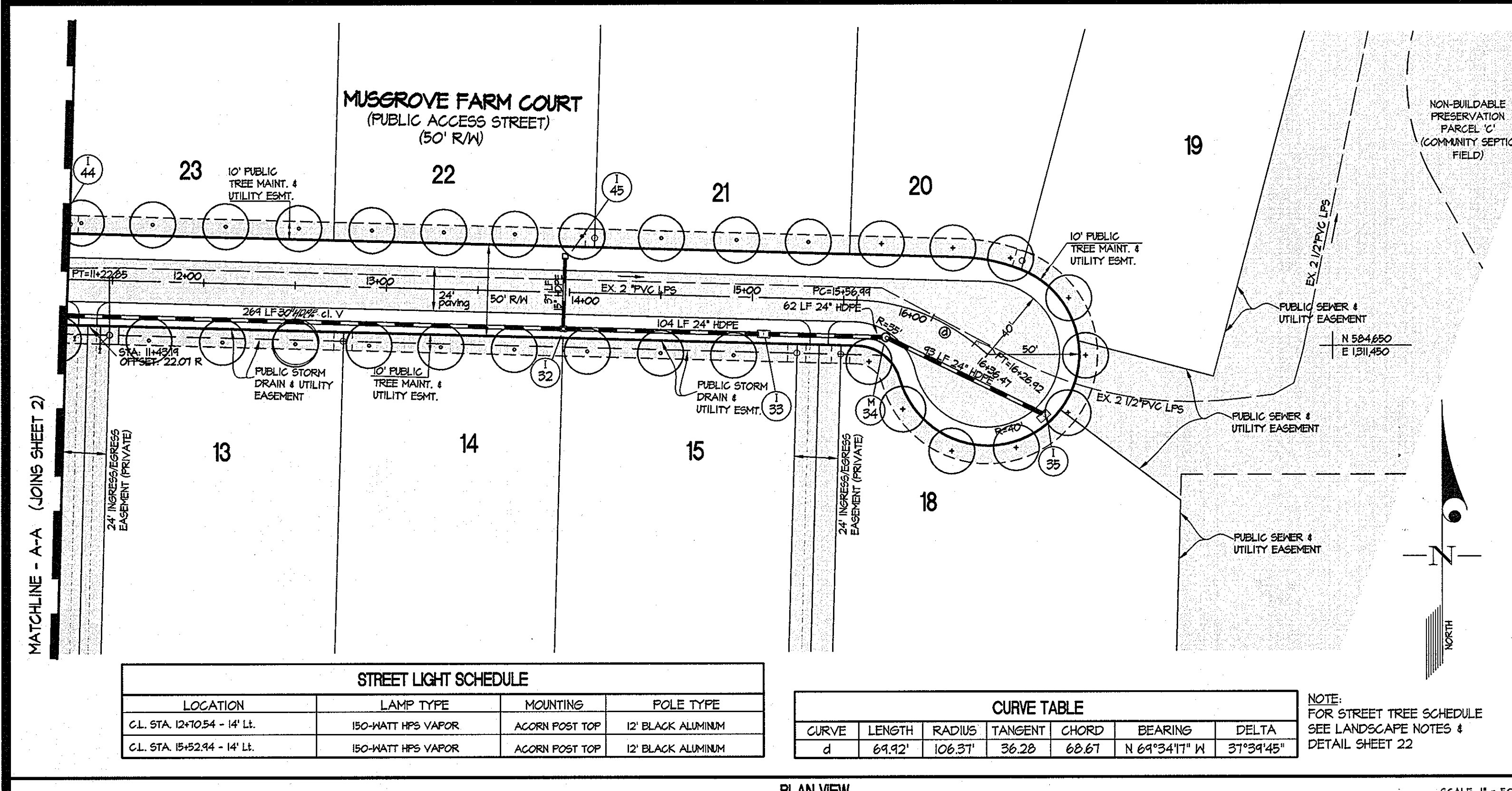
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
03/20/07	rev. length of decel lane to section to modify swale, pavement markings & signage	KLP	
03/10/07	Edge of pavement and curb req. to avoid conflict with vertical etc.	Wes J	

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN: BILL GRAU
 410-964-5522

ROAD CONSTRUCTION PLAN
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
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STREET LIGHT SCHEDULE

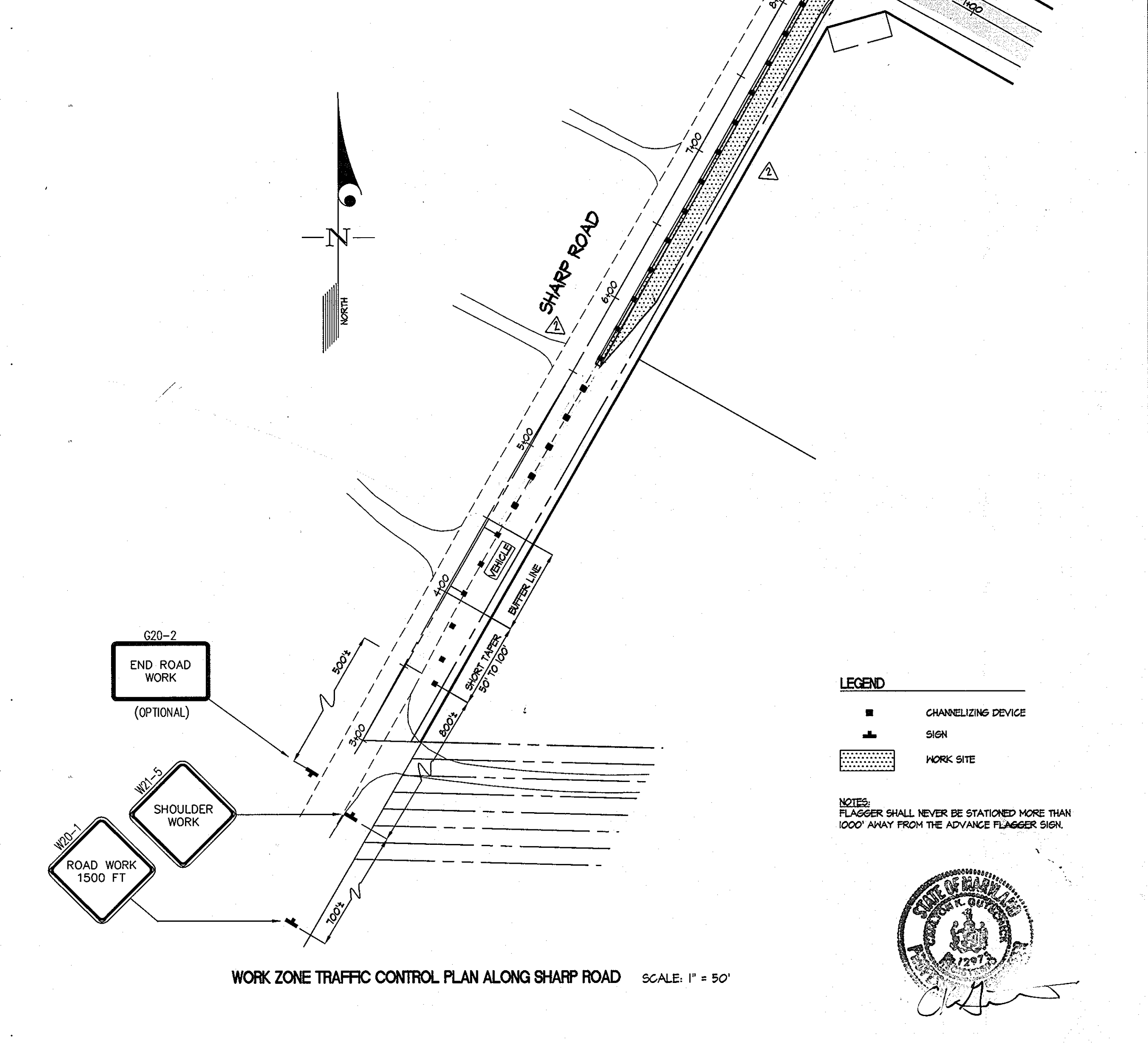
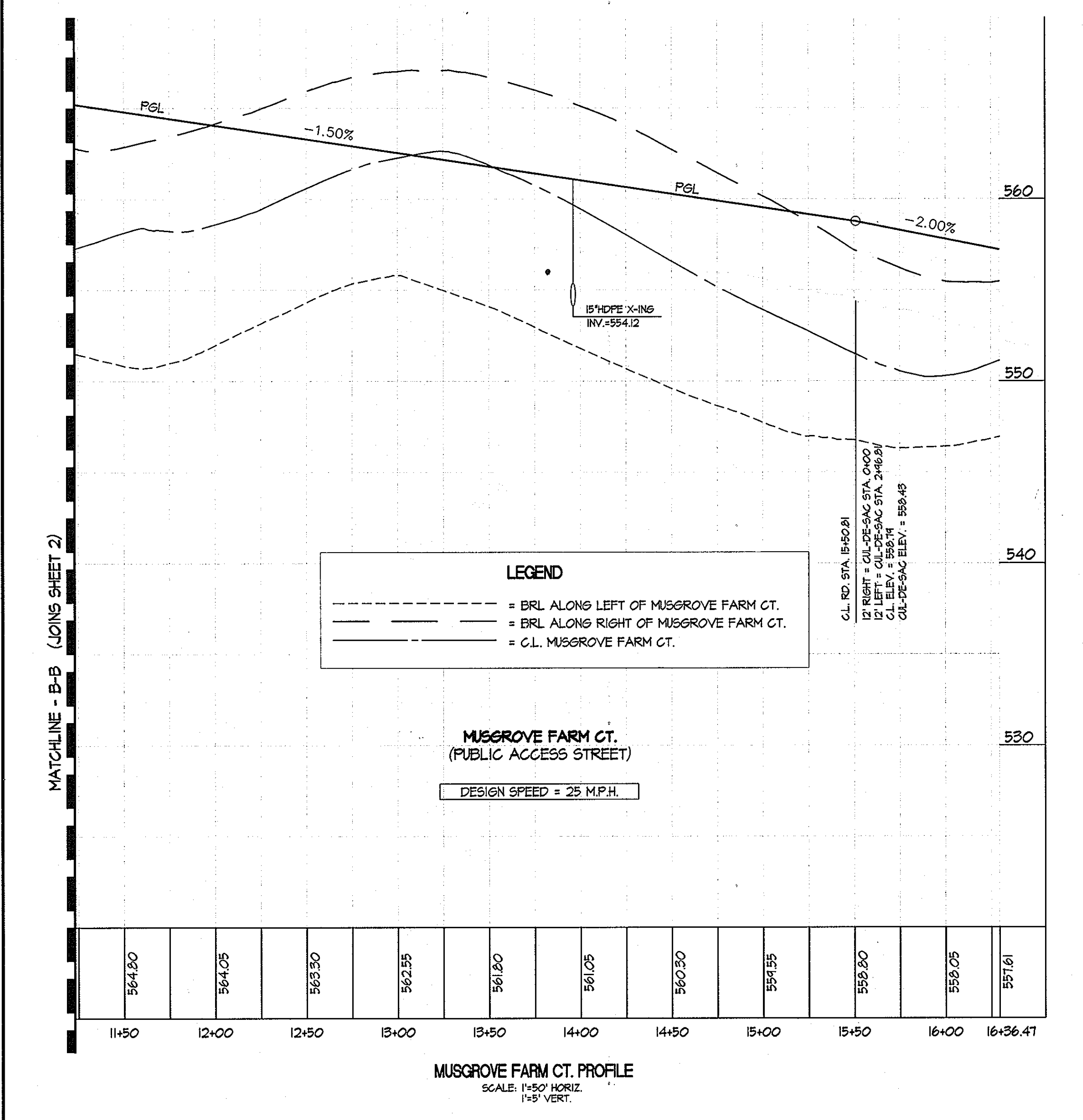
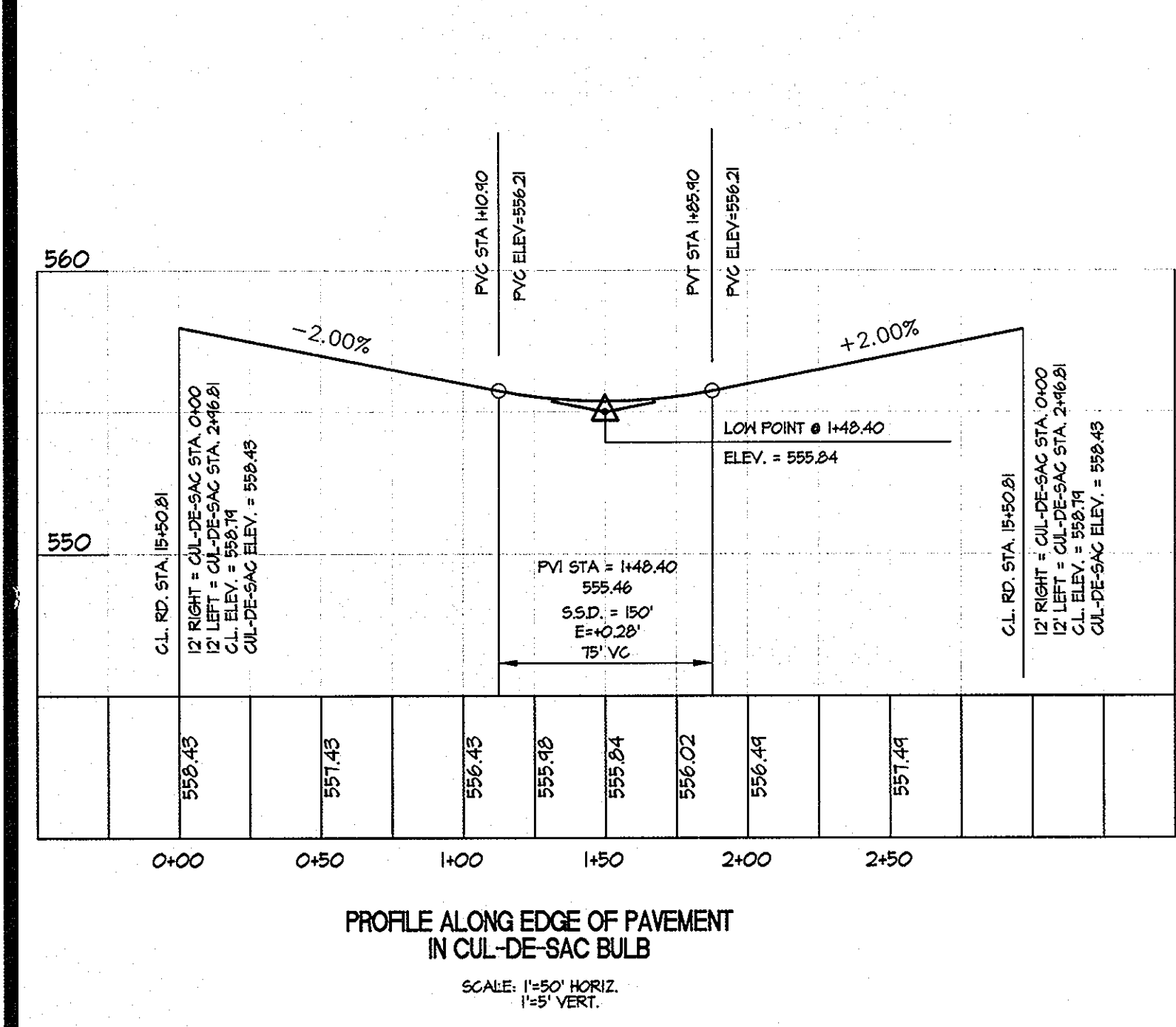
LOCATION	LAMP TYPE	MOUNTING	POLE TYPE
C.L. STA. 12+10.54 - 14' LL	150-WATT HPS VAPOR	ACORN POST TOP	12" BLACK ALUMINUM
C.L. STA. 15+52.44 - 14' LL	150-WATT HPS VAPOR	ACORN POST TOP	12" BLACK ALUMINUM

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
d	64.92'	106.37'	36.28	68.67	N 64°34'11" W	37°34'45"

NOTE: FOR STREET TREE SCHEDULE SEE LANDSCAPE NOTES & DETAIL SHEET 22

PLAN VIEW SCALE: 1" = 50' X-SECTIONS • SHARP ROAD SCALE: 1" = 50' (HORIZ) 1" = 5' (VERT)



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. ... 2-12-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Condy ... 2/28/07
 Chief, Division of Land Development

... 2/22/07
 Chief, Development Engineering Division

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
02/12/07	rev & remove cross sections along Sharp Rd.; rev limits of work area	KIP	
02/12/07	edge of pavement and curb rev. to avoid conflict with Verizon cat.	WSJ	

MUSGROVE FARM LLC
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 410-964-5522

ROAD CONSTRUCTION PLAN/SHARP ROAD IMPROVEMENTS
MUSGROVE FARM
LOTS 1 THRU 30, BUIDABLE PRESERVATION PARCEL A,
AND NON-BUIDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUIDABLE BULK PARCEL 'A' FROM F-03-128)
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 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
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JUNE, 2005	21-12, 22-1&7	3 OF 22



FLOODPLAIN INFORMATION

STA.	Q TOTAL (cfs)	W.S. ELEV. (ft.)
210	298.0	572.79
200	298.0	568.39
190	298.0	563.86
180	298.0	562.60
170	298.0	560.11
160	298.0	556.33
150	298.0	554.51
140	298.0	546.78
130	298.0	545.27
120	298.0	543.49
110	298.0	542.50
100	298.0	541.13
90	998.40	539.18
80	998.40	537.30
70	998.40	534.99
60	998.40	531.46
50	998.40	529.16
40	998.40	527.89
30	998.40	527.06
20	998.40	522.49
10	998.40	519.82

FLOOD PLAIN INFORMATION TAKEN FROM THE APPROVED STUDY PERFORMED BY GUTSCHICK LITTLE & WEBER PA. UNDER HOWARD COUNTY COUNTY FILE # SP-03-11.

GRADING PLAN LEGEND

- 600 --- EXISTING CONTOUR
- 600 PROPOSED CONTOUR
- + 388.88' EXISTING SPOT ELEV.
- + 388.88' PROPOSED SPOT ELEV. (HP-HIGH PT.)
- LOD • LIMIT OF GRADING DISTURBANCE
- 9H --- 9H
- 25' --- 25' WETLAND BUFFER (WB)
- 100' --- 100' STREAM BUFFER (SB)
- 100-YR FLOODPLAIN (FP)
- ★ PROPOSED LIGHT
- EXISTING UTILITY/LIGHT POLE
- TRANSFORMER PAD
- FENCE LINE
- PROP. STORM DRAIN
- EXISTING STORM DRAIN
- EXISTING SEWER MAIN (DASHED LINE)
- 4" SEWER HOUSE CONNECTION TYP. (SOLID LINE)
- PUBLIC SEWER & UTILITY EASEMENT
- FOREST CONSERVATION ESMT. (FCE)
- EASEMENTS
- HELL BOX
- 100 YEAR FLOODPLAIN CROSS SECTION
- (120) CROSS SECTION IDENTIFIER
- DEPRESSED BARRIER CURB



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter Z. ... 2-12-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy ... 2/28/07
 Chief, Division of Land Development Date
... 2/22/07
 Chief, Development Engineering Division Date

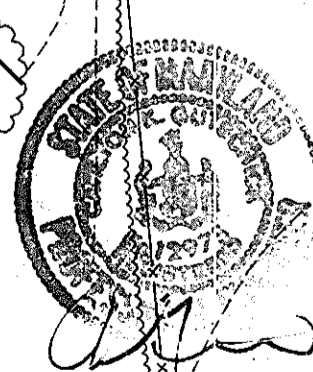
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 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-421-4186
 BAL: 410-880-1820 DC/VA: 301-989-2524

DATE	REVISION	BY	APPR.
2/21/07	Revised Grading Notation to Clarify Access Path	WJG	APR

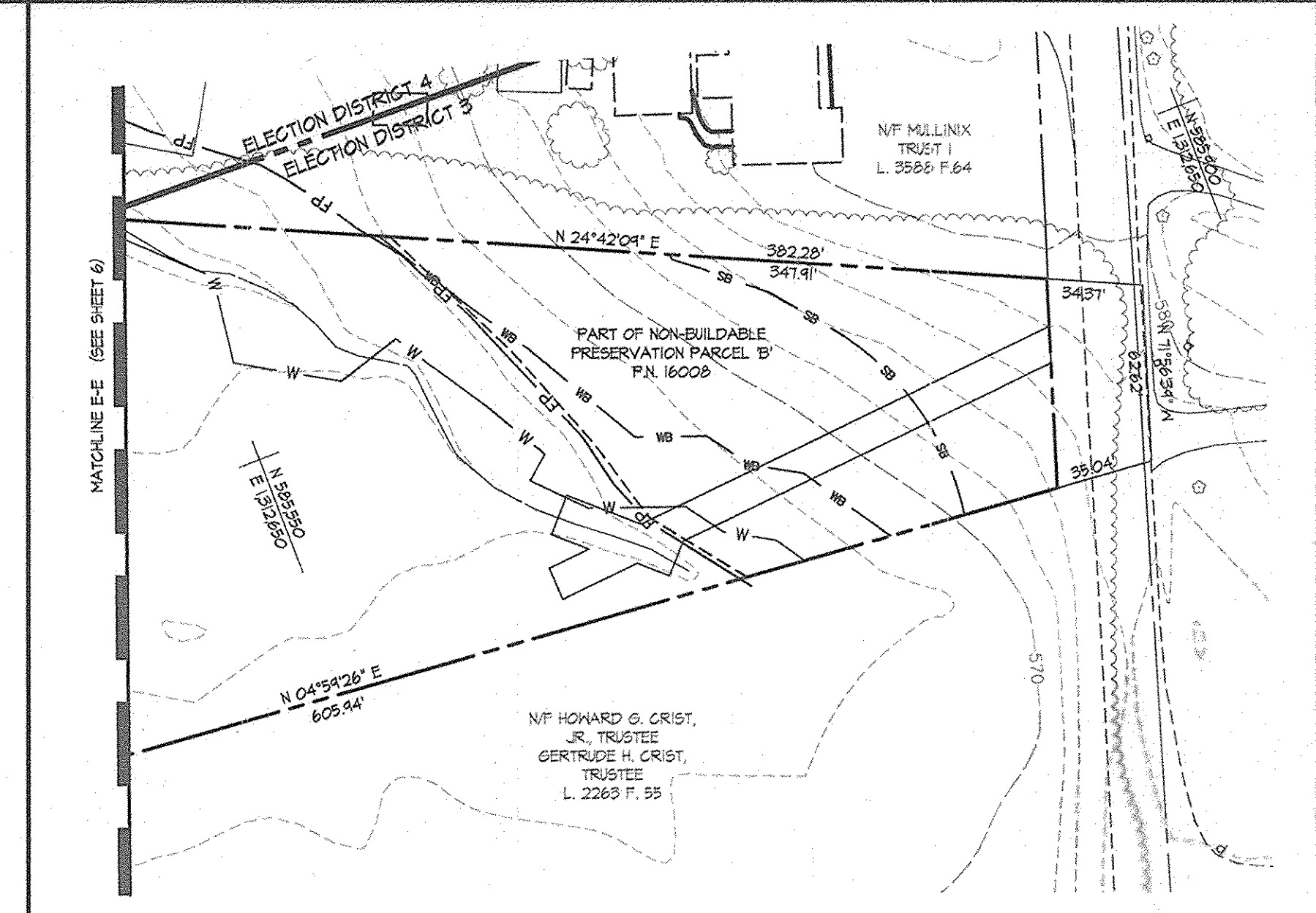
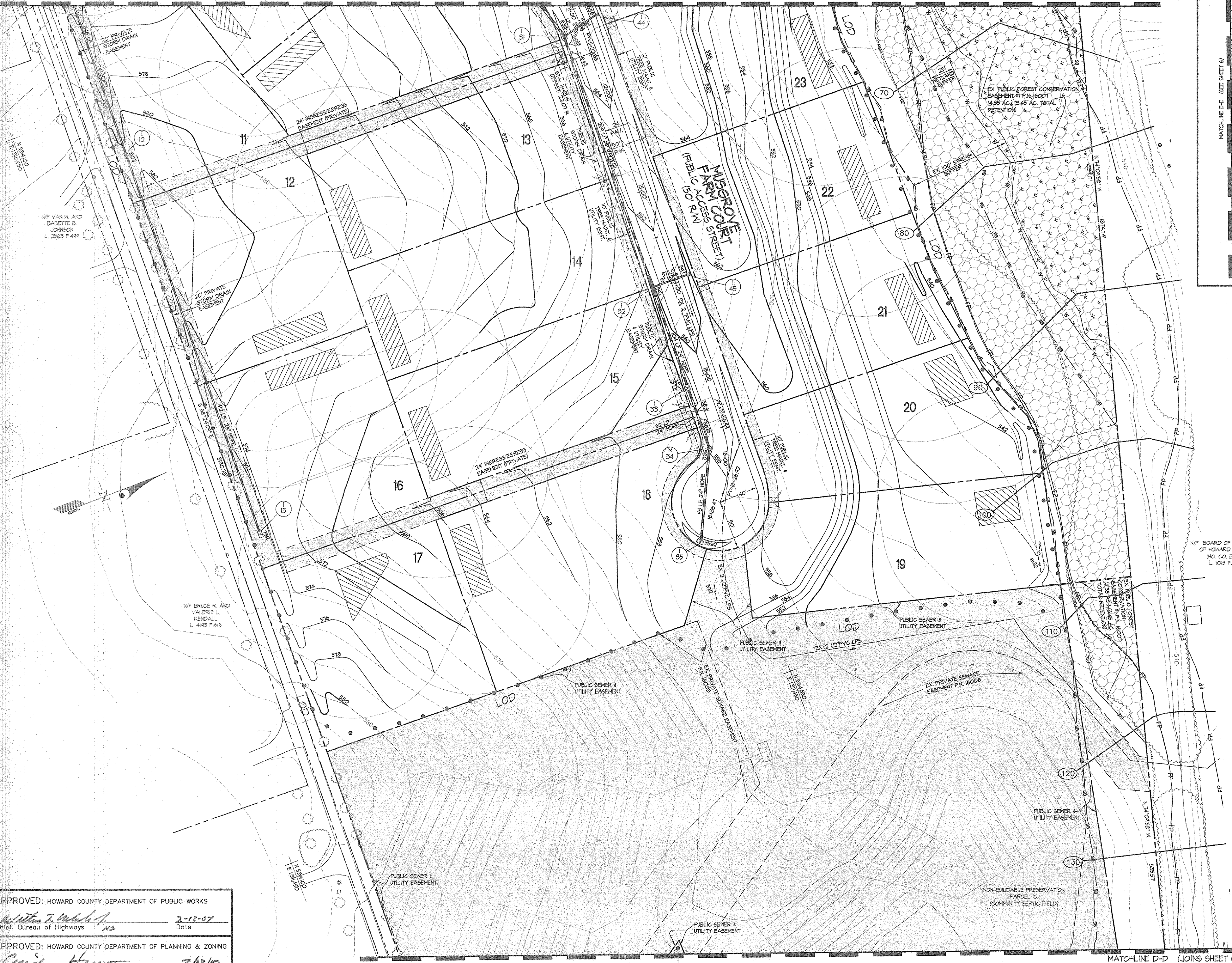
MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN: BILL GRAU
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GRADING PLAN
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
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 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
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 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

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1"=50'	RR-DEO	01171
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JUNE, 2005	21-12, 22-1&7	4 OF 22



MATCHLINE C-C (JOINS SHEET 4)



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. [Signature] 2-12-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Craig [Signature] 2/12/07
 Chief, Division of Land Development Date

[Signature] 2/22/07
 Chief, Development Engineering Division Date

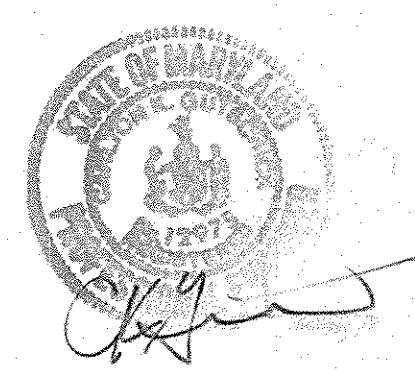
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BAL: 410-290-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

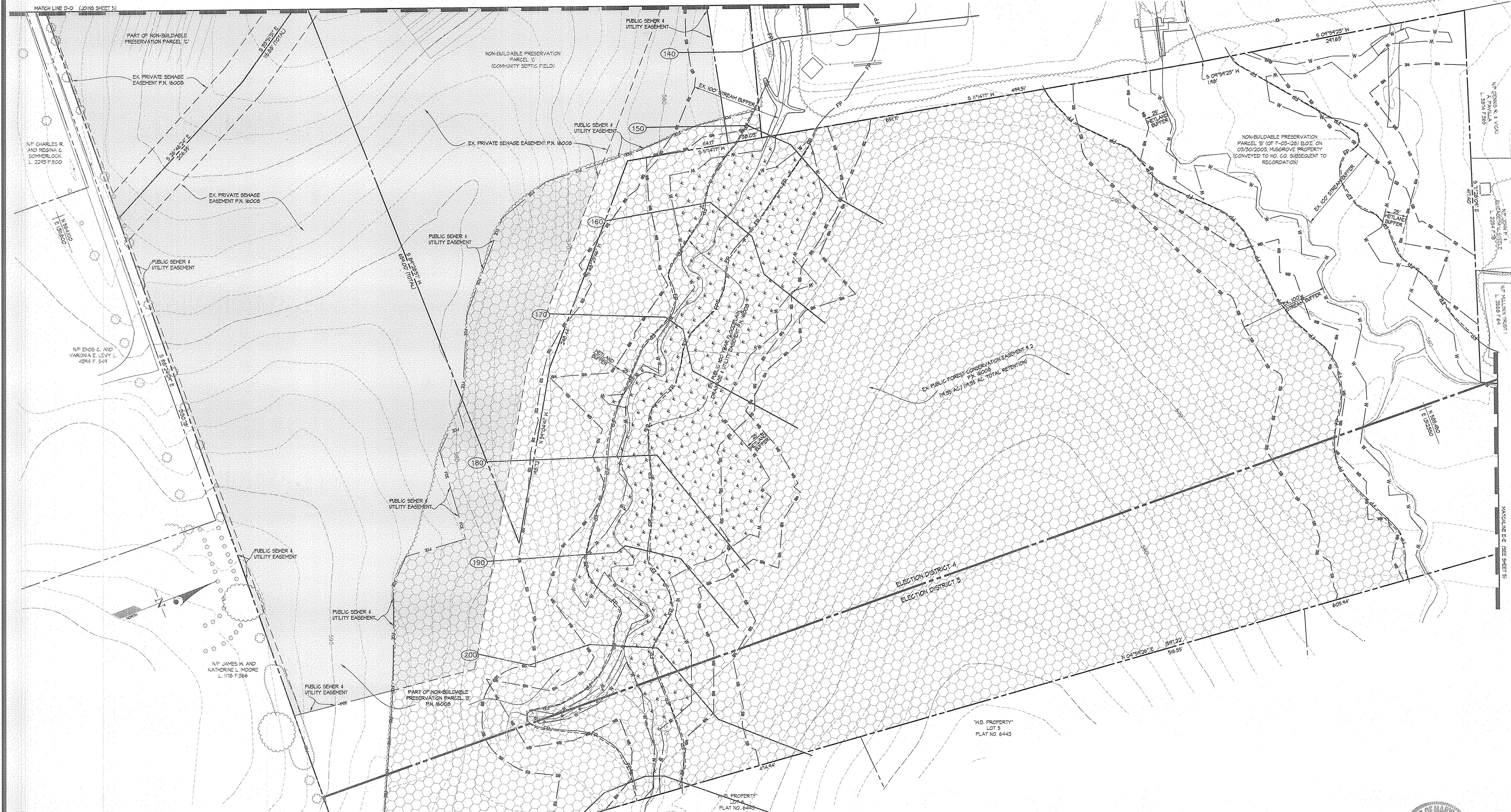
DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN.: BILL GRAU
 410-964-5522

GRADING PLAN
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	5 OF 22

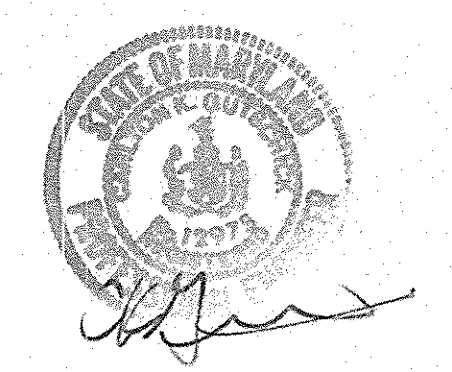




APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. Melick Jr. 2-12-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Stamat 2/28/07
 Chief, Division of Land Development Date

William J. Melick Jr. 2/22/07
 Chief, Development Engineering Division Date



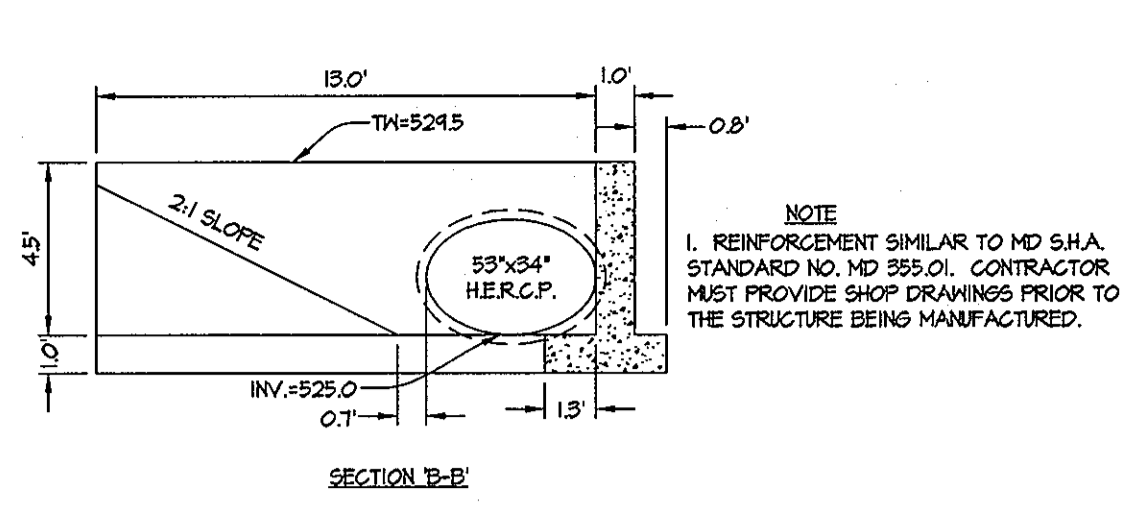
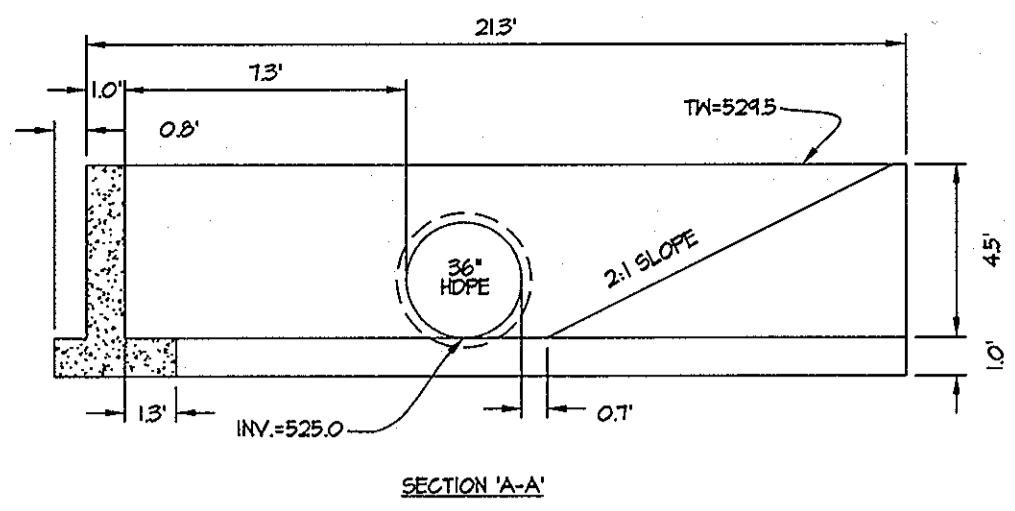
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-980-1820 DC/VA: 301-989-2524 FAX 301-421-4186

DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN.: BILL GRAU
 410-964-5522

GRADING PLAN
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 ELECTION DISTRICT No. 3 & 4

SCALE	ZONING	G. L. W. FILE No.
1"=50'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	6 OF 22



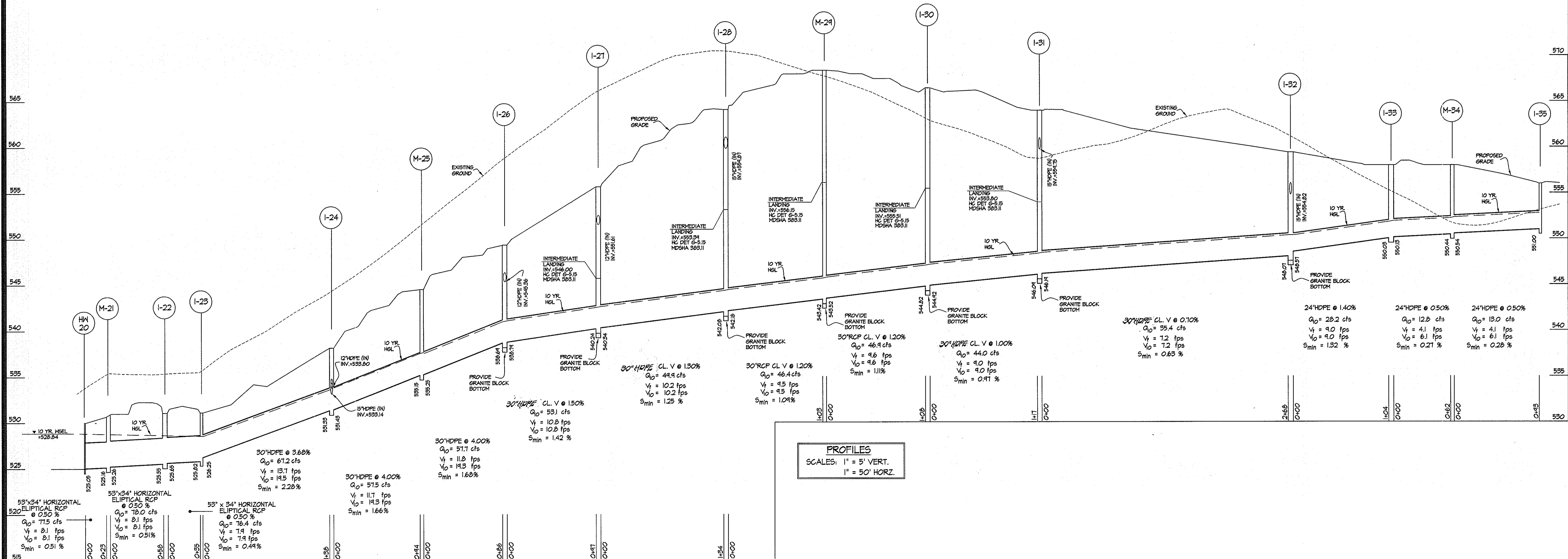
STRUCTURE HM-20 HEADWALL DETAIL SCALE: 1" = 5'

S.D. Pipe Summary Table

Size (in)	Type	Quantity (LF)	Remarks
24	HDPE	251	ADS N12 or equiv.
30	HDPE	934	ADS N12 or equiv.
53'x34'	HORIZONTAL ELLIPTICAL RCP	101	
30	RCP	211	

S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	NOTES
			UPPER	LOWER	UPPER	LOWER		
M-21	T' MANHOLE	7'-0"	---	530.90	525.26	525.16	MD SHA 384.07	
I-22	MODIFIED 'K' INLET	7'-0"	---	530.50	525.65	525.55	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
I-23	MODIFIED 'K' INLET	7'-0"	---	530.50	526.25	525.82	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
I-24	MODIFIED 'K' INLET	5'-0"	---	534.00	533.80	531.33	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
M-25	5' MANHOLE	5'-0"	---	545.50	535.25	535.15	HO. CO. SD 5.13	
I-26	MODIFIED 'K' INLET	5'-0"	---	550.00	545.36	538.61	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
I-27	MODIFIED 'K' INLET	5'-0"	---	556.00	551.61	540.24	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
I-28	MODIFIED 'K' INLET	5'-0"	---	564.30	554.87	542.08	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
M-29	5' MANHOLE	5'-0"	---	568.38	543.52	543.42	HO. CO. SD 5.13	
I-30	MODIFIED 'K' INLET	5'-0"	---	565.70	544.42	544.82	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
I-31	MODIFIED 'K' INLET	5'-0"	---	563.80	554.75	546.01	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
I-32	MODIFIED 'K' INLET	5'-0"	---	554.70	554.82	548.07	SEE DETAIL SHEET Ø	SINGLE OPENING/SUMP
I-33	DOUBLE 'S' INLET	2'-1 1/2"	---	551.71	550.13	550.03	HO. CO. SD. 4.23	
M-34	4' MANHOLE	4'-0"	---	558.00	550.54	550.44	HO. CO. G. 5.12	
I-35	DOUBLE 'S' INLET	2'-1 1/2"	---	555.50	551.00	terminal	HO. CO. SD. 4.23	



PROFILES
 SCALES: 1" = 5' VERT.
 1" = 50' HORIZ.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 2-12-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 2/25/07
 Chief, Division of Land Development

[Signature] 2/22/07
 Chief, Development Engineering Division



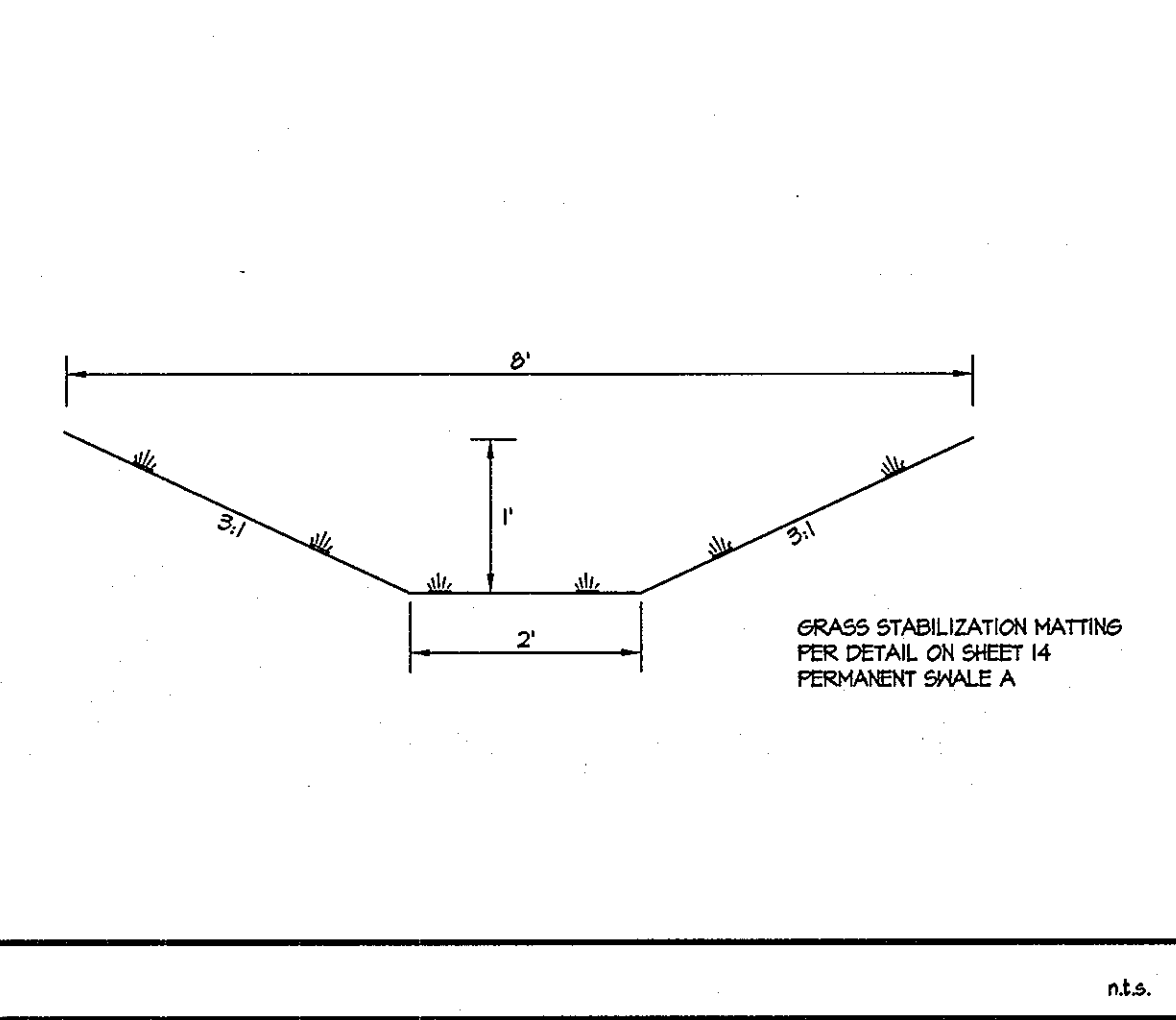
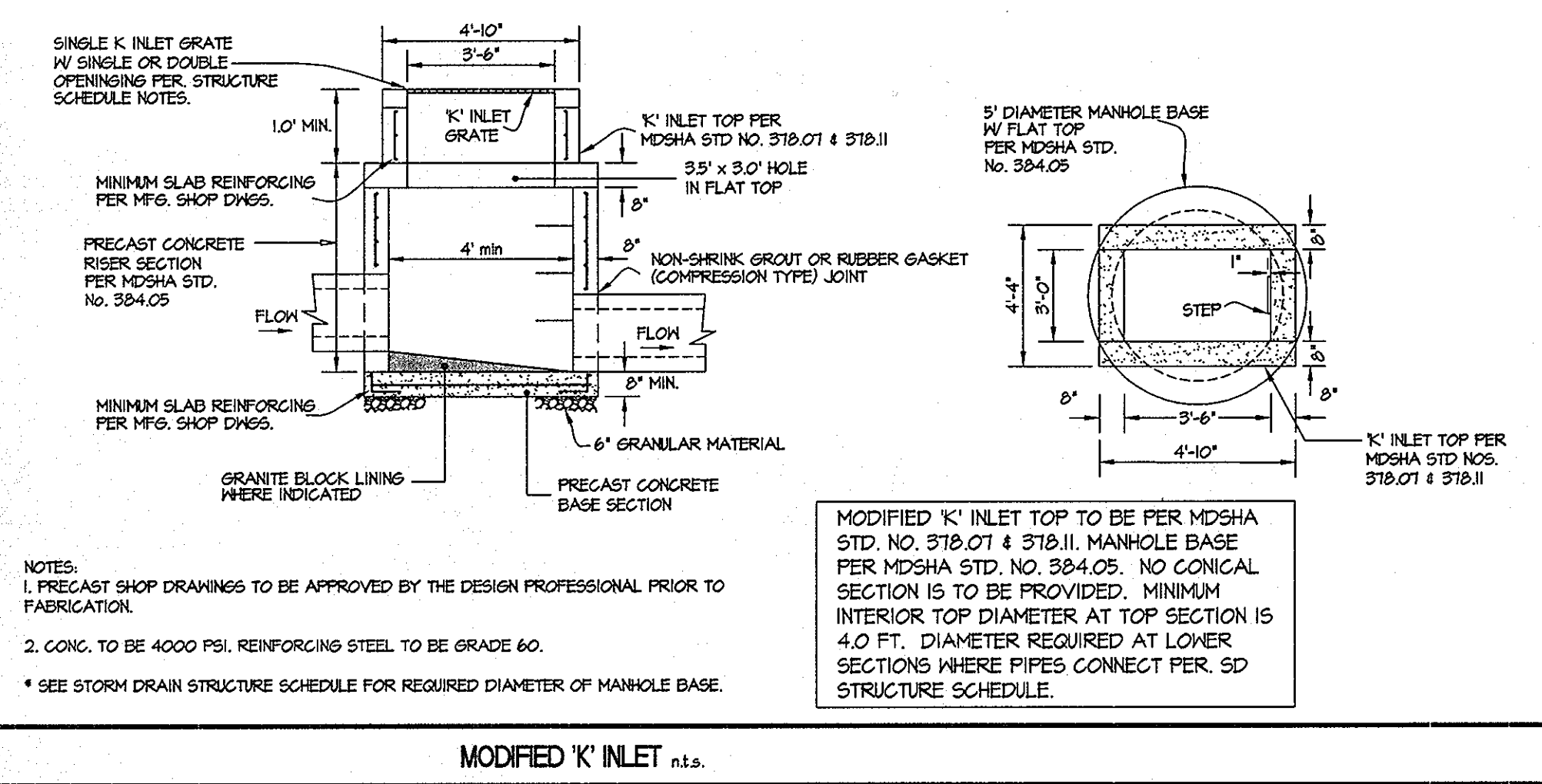
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-389-2324 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN: BILL GRAU
 410-964-5522

STORM DRAIN PROFILES
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	7 OF 22

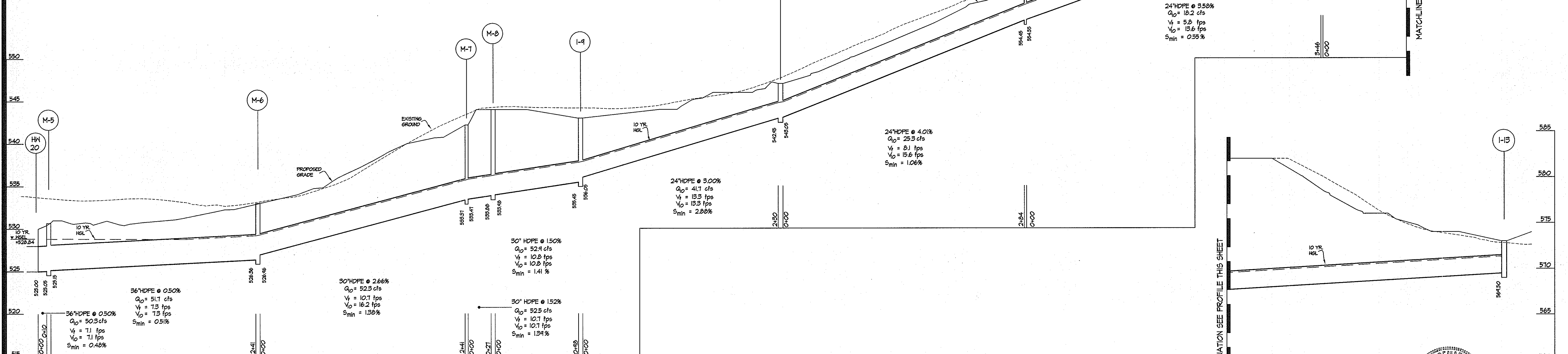
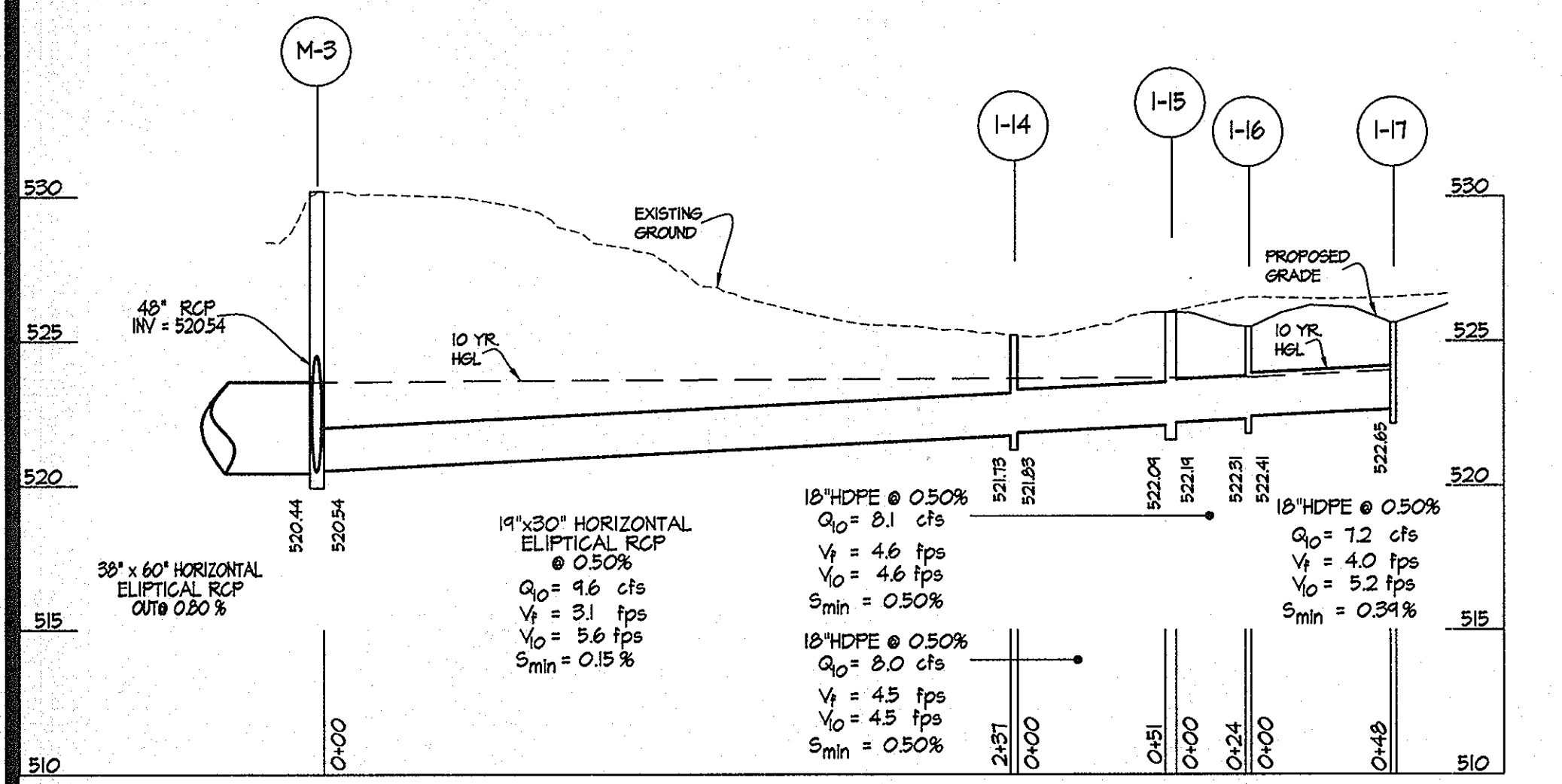


S.D. Pipe Summary Table

Size (in)	Type	Quantity (LF)	Remarks
18	HDPE	123	ADS N12 or equiv.
24	HDPE	1272	ADS N12 or equiv.
30	HDPE	366	ADS N12 or equiv.
36	HDPE	251	ADS N12 or equiv.
18"x30"	HORIZONTAL ELLIPTICAL RCP	237	

S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	NOTES
			UPPER	LOWER	UPPER	LOWER		
M-5	5' DIAMETER MH	5'-0"	---	530.90	525.15	525.05	HO. CO. G. 5.13	
M-6	5' DIAMETER MH	5'-0"	---	533.00	526.96	526.86	HO. CO. G. 5.13	
M-7	5' DIAMETER MH	5'-0"	---	542.00	533.47	533.37	HO. CO. G. 5.13	
M-8	5' DIAMETER MH	5'-0"	---	544.10	533.48	533.38	HO. CO. G. 5.13	
I-4	MODIFIED 'K' INLET	5'-0"	---	542.00	536.05	535.45	SEE DET. THIS SHEET	DOUBLE OPENING/SUMP
I-10	DOUBLE 'S' INLET	2'-7 1/2"	---	541.50	543.05	542.95	HO. CO. SD. 4.23	
I-11	SINGLE 'S' INLET	2'-7 1/2"	---	554.00	554.55	554.45	HO. CO. SD. 4.22	
I-12	SINGLE 'S' INLET	2'-7 1/2"	---	580.50	567.03	566.93	HO. CO. SD. 4.22	
I-13	DOUBLE 'S' INLET	2'-7 1/2"	---	573.00	564.50	terminal	HO. CO. SD. 4.23	
I-14	4' MANHOLE *	4'-0"	---	525.00	521.83	521.73	HO. CO. G. 5.12	* 24" MANHOLE COVER TO BE A GRATED INLET TOP
I-15	4' MANHOLE *	4'-0"	---	525.00	522.04	522.04	HO. CO. G. 5.12	* 24" MANHOLE COVER TO BE A GRATED INLET TOP
I-16	SINGLE 'S' INLET	2'-7 1/2"	---	525.50	522.41	522.31	HO. CO. SD. 4.22	
I-17	SINGLE 'S' INLET	2'-7 1/2"	---	525.50	522.65	terminal	HO. CO. SD. 4.22	
M-3	7' MANHOLE	7'-0"	---	530.00	520.54	520.44	MD SHA 384.01	

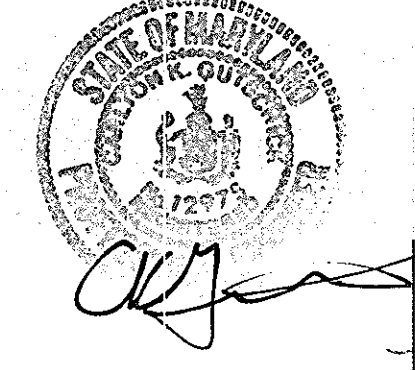


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter Z. ... 2-12-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Conrad ... 2/20/07
 Chief, Division of Land Development

... 2/22/07
 Chief, Development Engineering Division

PROFILES
 SCALES: 1" = 5' VERT.
 1" = 50' HORIZ.



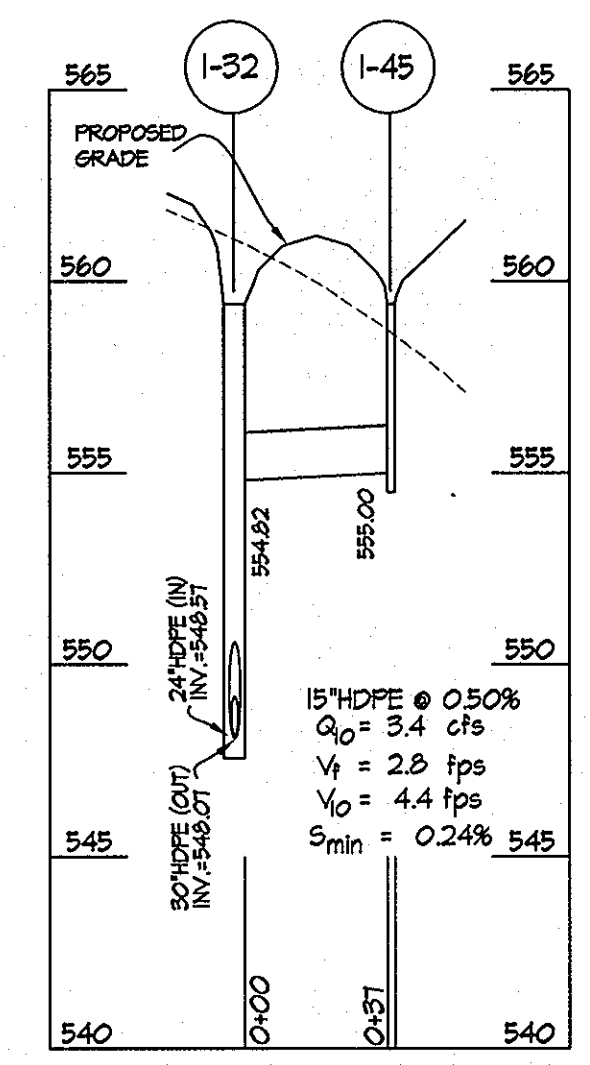
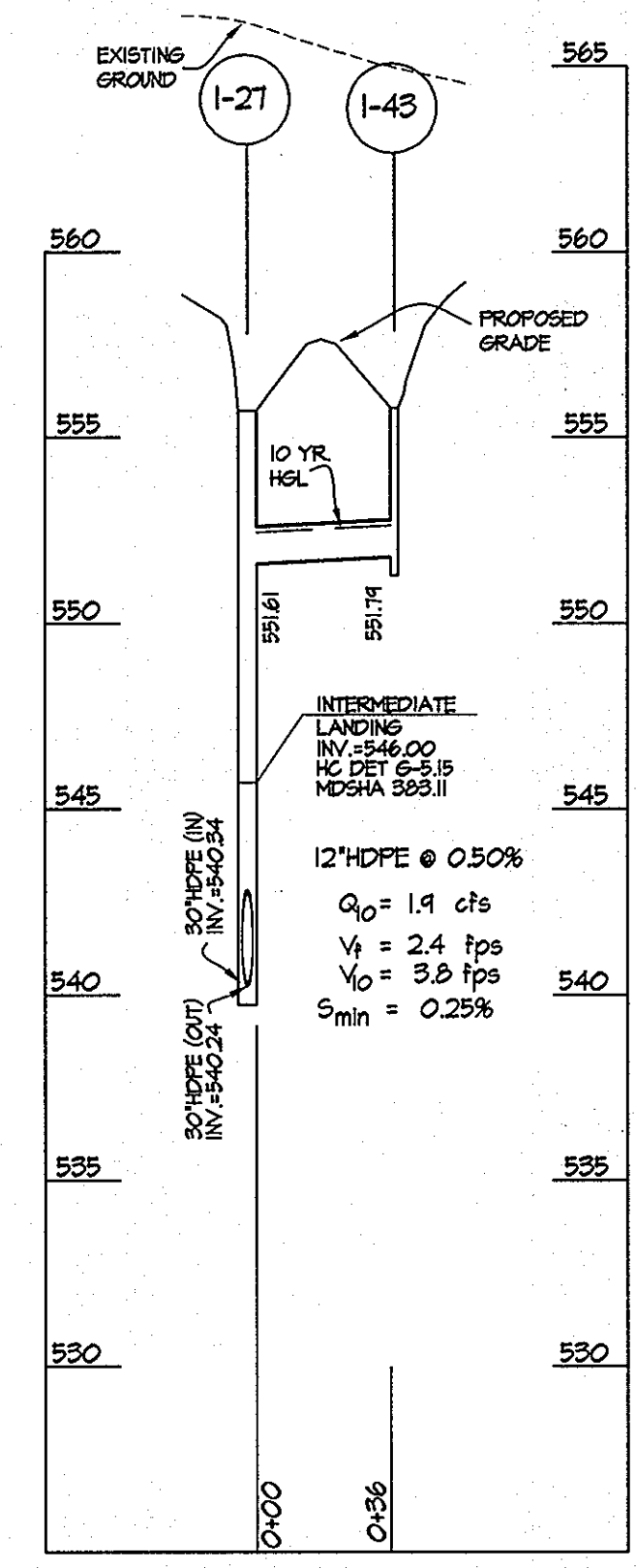
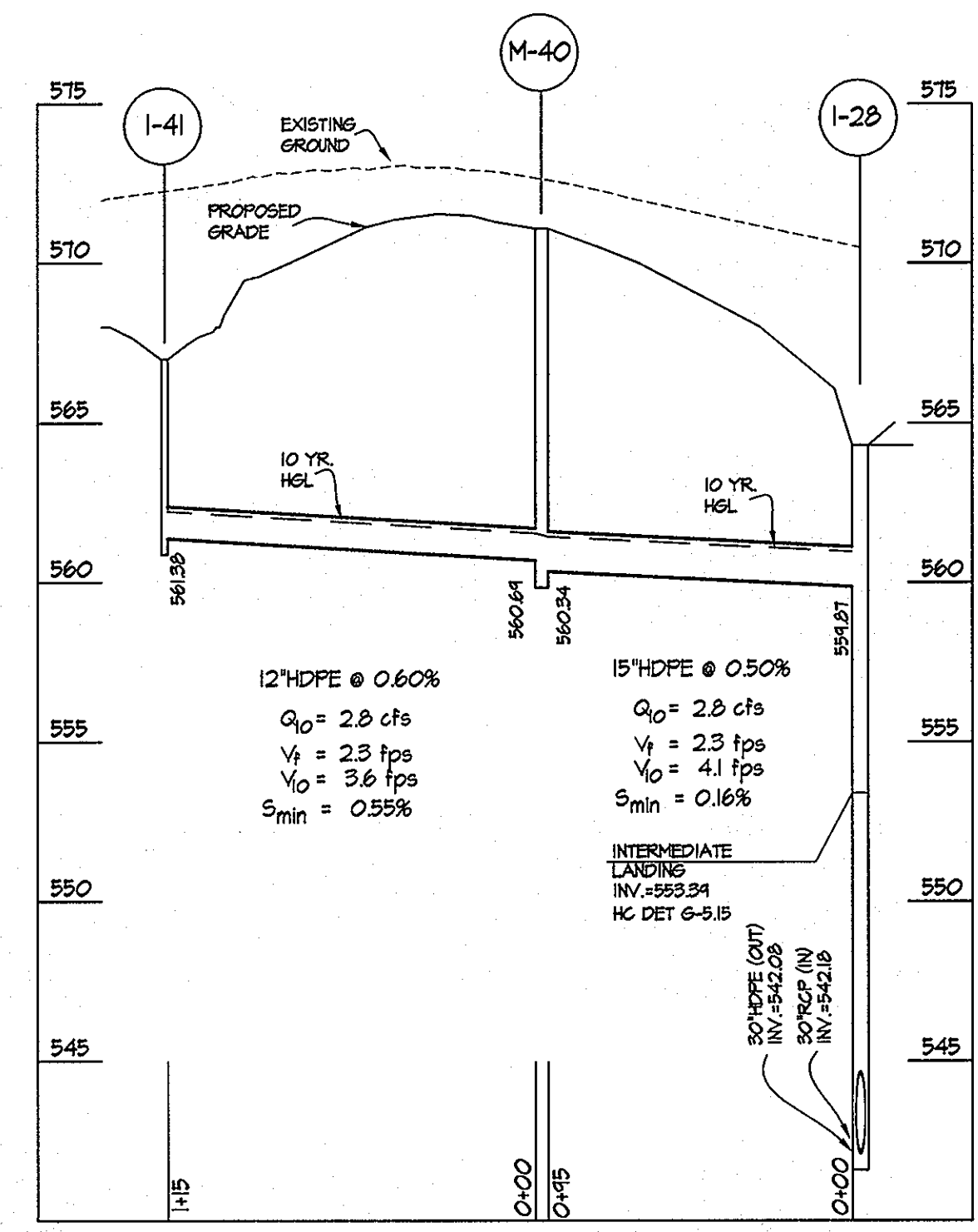
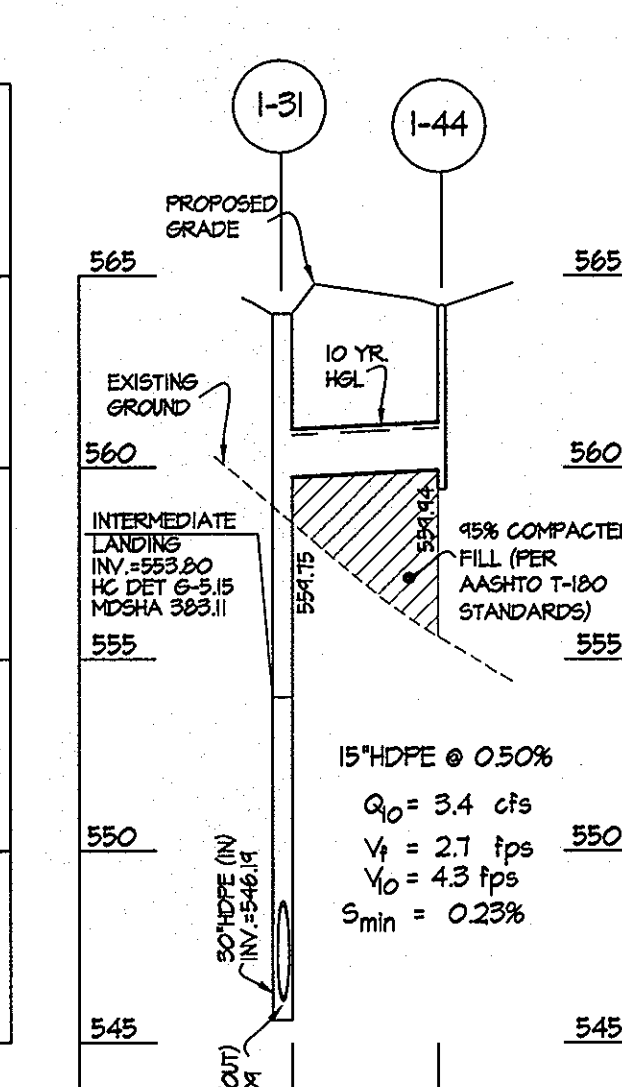
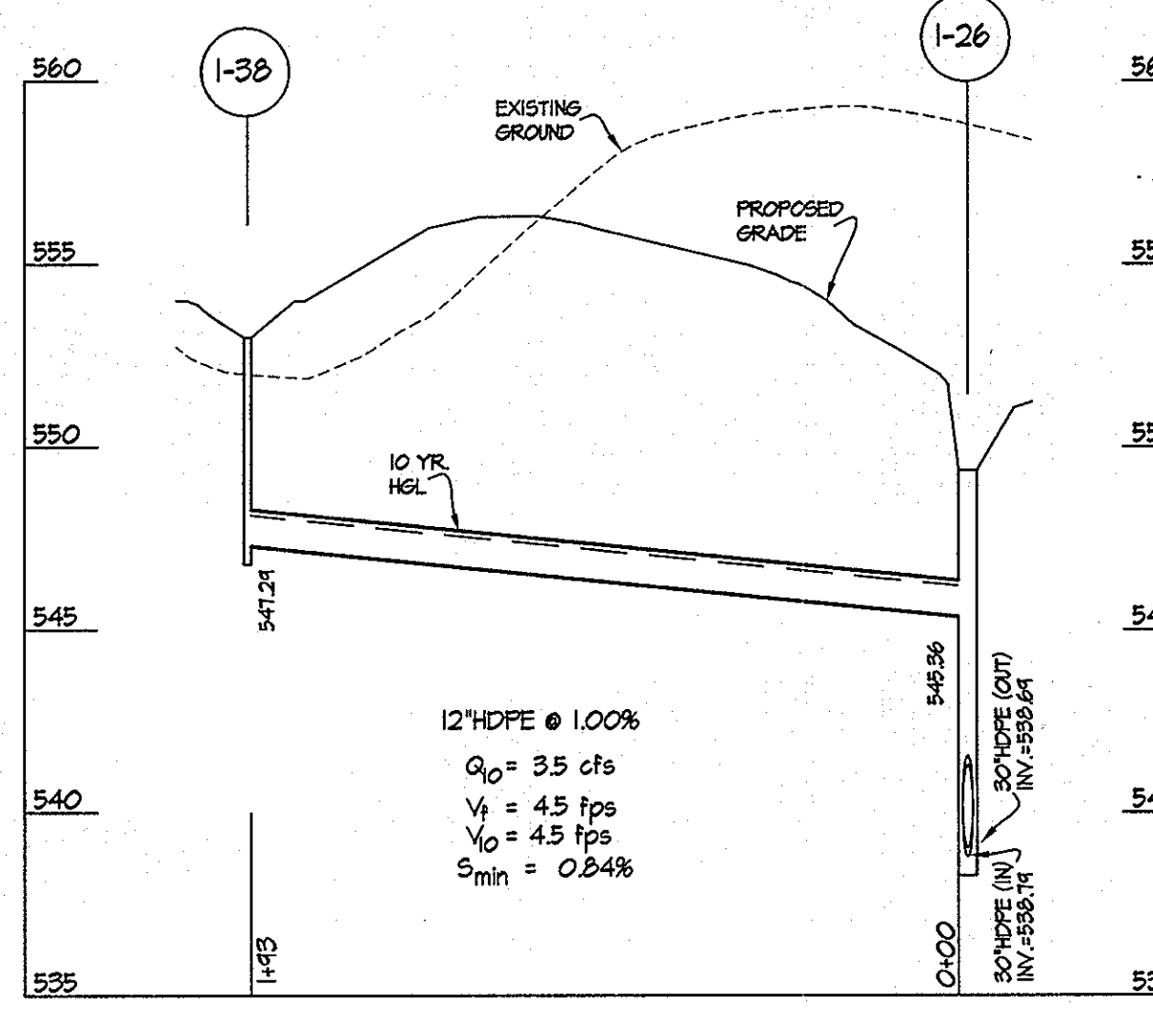
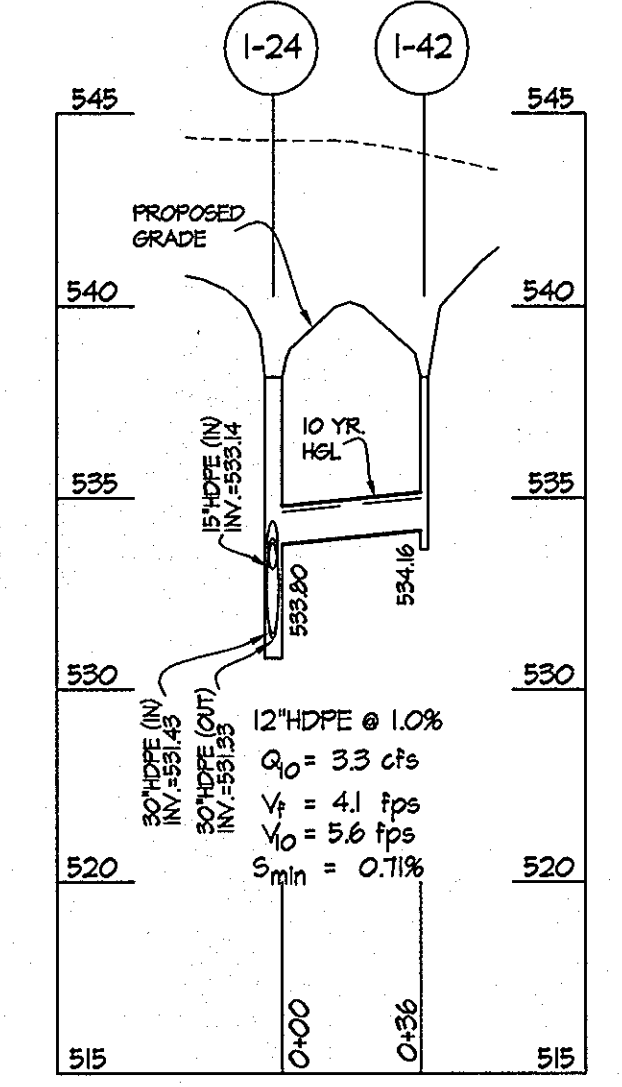
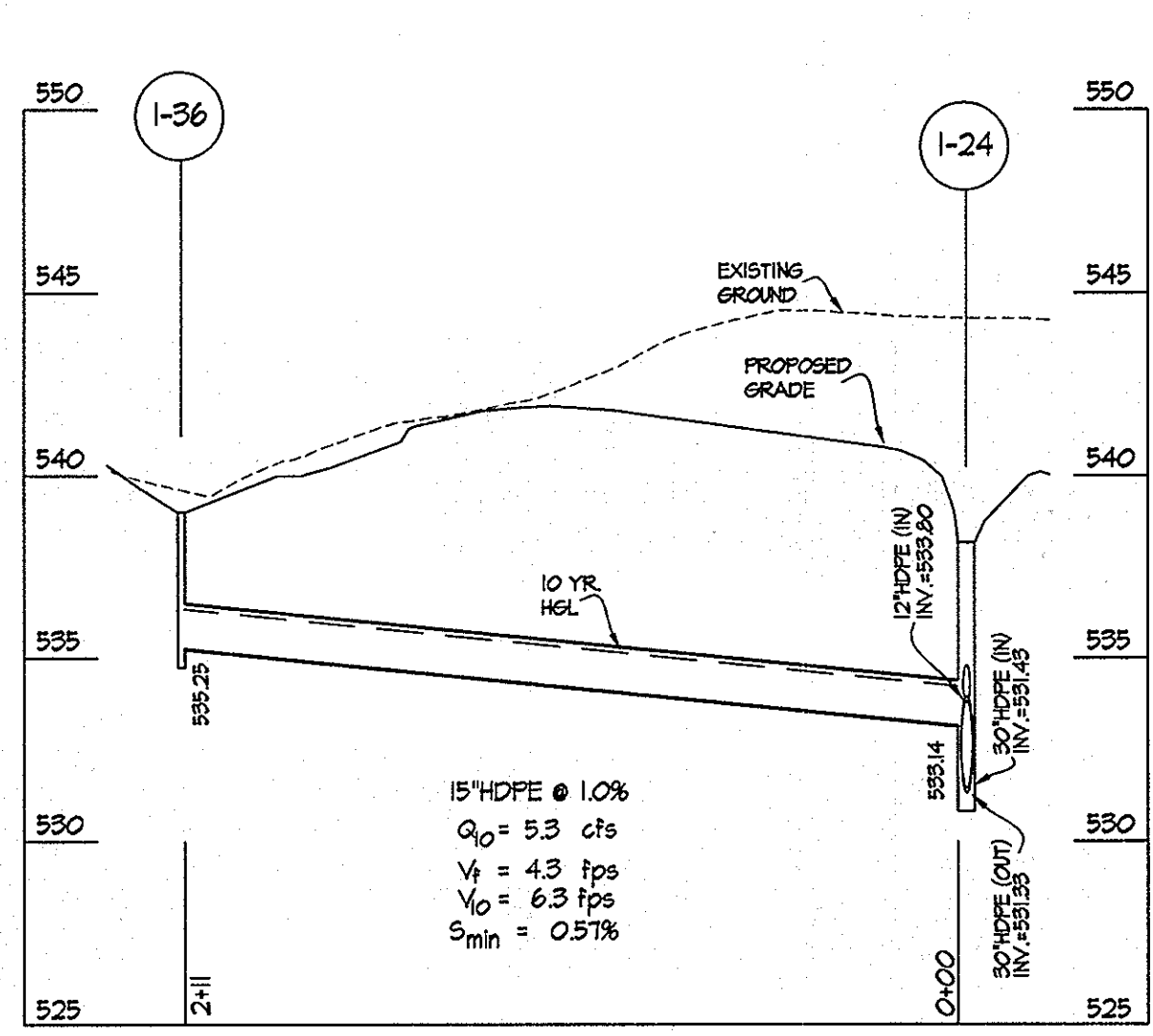
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-993-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN.: BILL GRAU
 410-964-5522

STORM DRAIN PROFILES
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	8 OF 22

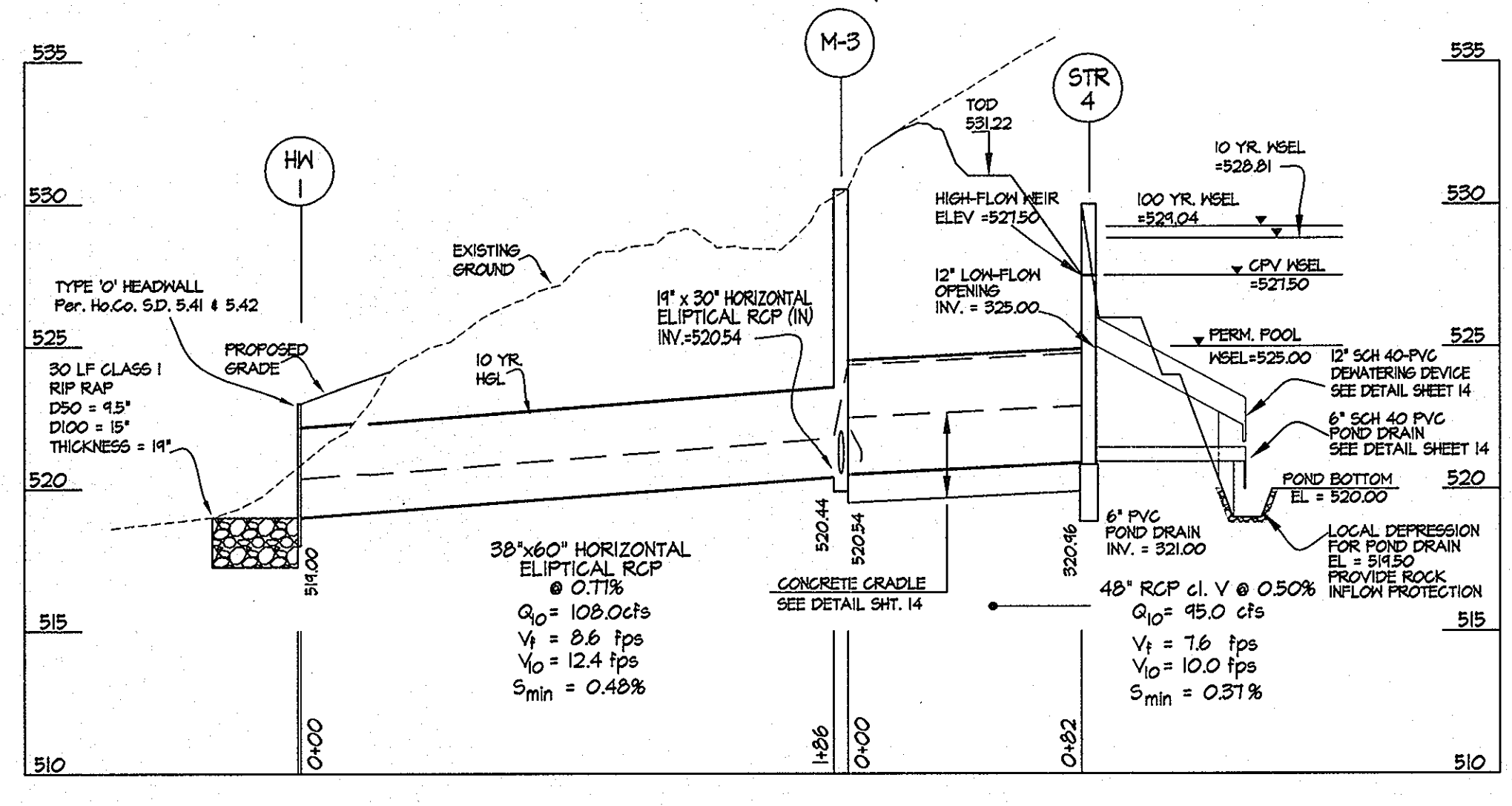
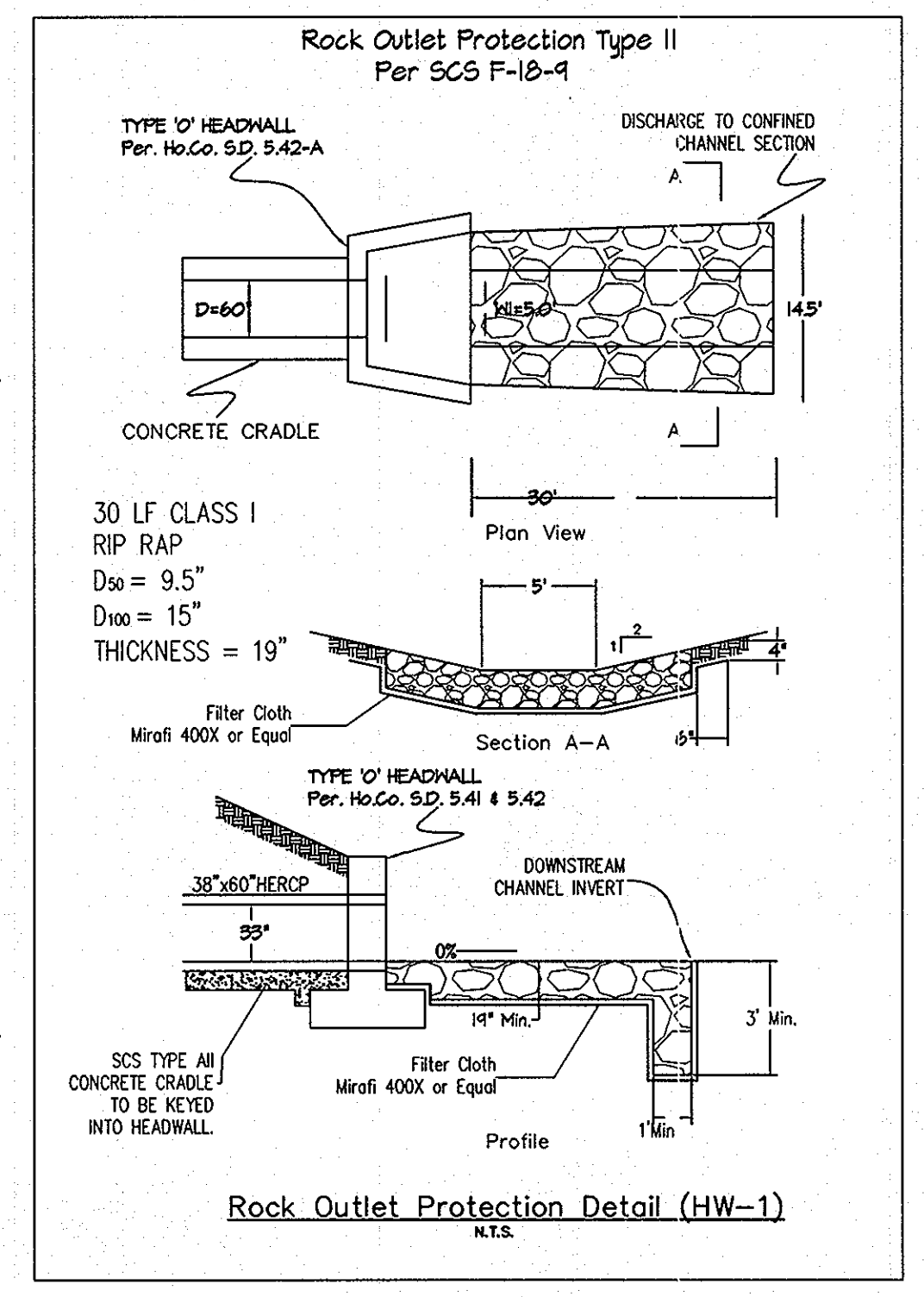


S.D. Pipe Summary Table

Size (in)	Type	Quantity (LF)	Remarks
12	HDPE	380	ADS N12 or equiv.
15	HDPE	381	ADS N12 or equiv.
38x60	HORIZONTAL ELLIPTICAL RCP	186	ADS N12 or equiv.
48	RCP class V	70	ASTM C-361

S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	NOTES
			UPPER	LOWER	UPPER	LOWER		
1-36	YARD INLET	2'-0"	---	534.00	535.25	terminal	HO. CO. SD. 4.14	
1-42	YARD INLET	2'-0"	---	534.00	534.16	terminal	HO. CO. SD. 4.14	
1-38	YARD INLET	2'-0"	---	553.00	541.21	terminal	HO. CO. SD. 4.14	
1-44	YARD INLET	2'-0"	---	563.80	559.44	terminal	HO. CO. SD. 4.14	
M-40	4' DIAMETER MH	4'-0"	---	571.00	560.64	560.34	HO. CO. G. 5.12	
1-41	YARD INLET	2'-0"	---	561.00	561.38	terminal	HO. CO. SD. 4.14	
1-43	YARD INLET	2'-0"	---	556.00	551.74	terminal	HO. CO. SD. 4.14	
1-45	YARD INLET	2'-0"	---	554.10	555.00	terminal	HO. CO. SD. 4.14	
M-3	T' MANHOLE	7'-0"	---	530.00	520.54	520.44	MD SHA 384.07	
STR-4	SEE STORMWATER MANAGEMENT DETAIL SHEET							



PROFILES
 SCALES: 1" = 5' VERT.
 1" = 50' HORIZ.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 2-12-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 2/18/07
 Chief, Division of Land Development

[Signature] 2/21/07
 Chief, Development Engineering Division



GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4188
 \Drawings\01171\ROAD PLAN\SD-PROF.dwg DES. BJM DRN. KLP CHK. XXX

DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN: BILL GRAU
 410-964-5522

STORM DRAIN PROFILES
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
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 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	9 OF 22

STRUCTURE NUMBER	AREA (acres)	C (-)	IMP. (%)
I-4	0.36	0.55	30%
I-8	0.18	0.55	30%
I-4	2.94	0.52	25%
I-10	4.14	0.52	25%
I-11	1.85	0.52	25%
I-12	0.25	0.52	25%
I-13	4.14	0.52	25%
I-16	0.21	0.55	30%
I-17	1.93	0.55	30%
I-22	0.49	0.61	40%
I-23	2.21	0.59	35%
I-24	0.36	0.61	40%
I-26	0.41	0.61	40%
I-27	0.47	0.61	40%
I-28	0.24	0.61	40%
I-30	0.75	0.61	40%
I-31	1.41	0.61	40%
I-32	0.84	0.61	40%
I-33	3.21	0.61	40%
I-35	2.64	0.61	40%
I-36	1.07	0.61	40%
I-39	0.72	0.61	40%
I-41	0.58	0.61	40%
I-42	0.65	0.61	40%
I-43	0.34	0.61	40%
I-44	0.68	0.61	40%
I-45	0.64	0.61	40%

NOTES:
 1. HOUSES SHOWN ARE FOR DRAINAGE STUDY INFORMATION PURPOSES. LOCATIONS MAY OR MAY NOT REFLECT THE FINAL PLACEMENT OF THE UNIT.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. Melchior 2-12-07
 Chief, Bureau of Highways Date

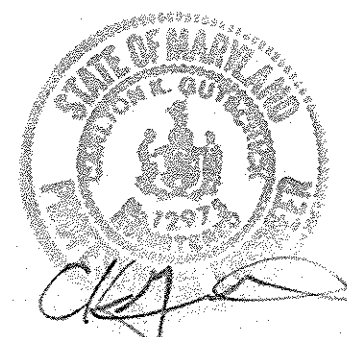
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamstra 2/21/07
 Chief, Division of Land Development Date

Michael J. ... 2/22/07
 Chief, Development Engineering Division Date

THIS PLAN IS FOR STORM DRAIN DRAINAGE AREA PURPOSES ONLY!

LEGEND

---> To PATH
 ⊙ To SEGMENT
 --- Storm Drain Drainage Divide



GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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DATE	REVISION	BY	APPR.

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN: BILL GRAU
 410-964-5522

STORM DRAIN DRAINAGE AREA MAP
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	10 OF 22



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Walter F. ... 2-12-07
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chris Hanna 2/25/07
 Chief, Division of Land Development

... 2/22/07
 Chief, Development Engineering Division

LEGEND

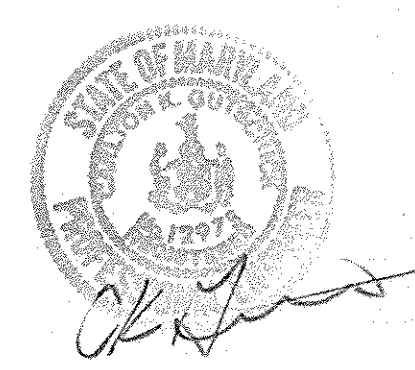
- - - - - TO PATH
- - - - - TO SEGMENT
- - - - - PREDEVELOPMENT SWM DRAINAGE DIVIDE

- 'B' SOIL
- 'C' SOIL
- 'D' SOIL

Stormwater Management
 Study Point Summary Table

Study Point (No.)	Qex-1YR (cfs)	Qex-10YR (cfs)	Qex-100YR (cfs)
1	1.06	67.28	130.31

THIS PLAN IS FOR STORMWATER MANAGEMENT DRAINAGE AREA PURPOSES ONLY!



GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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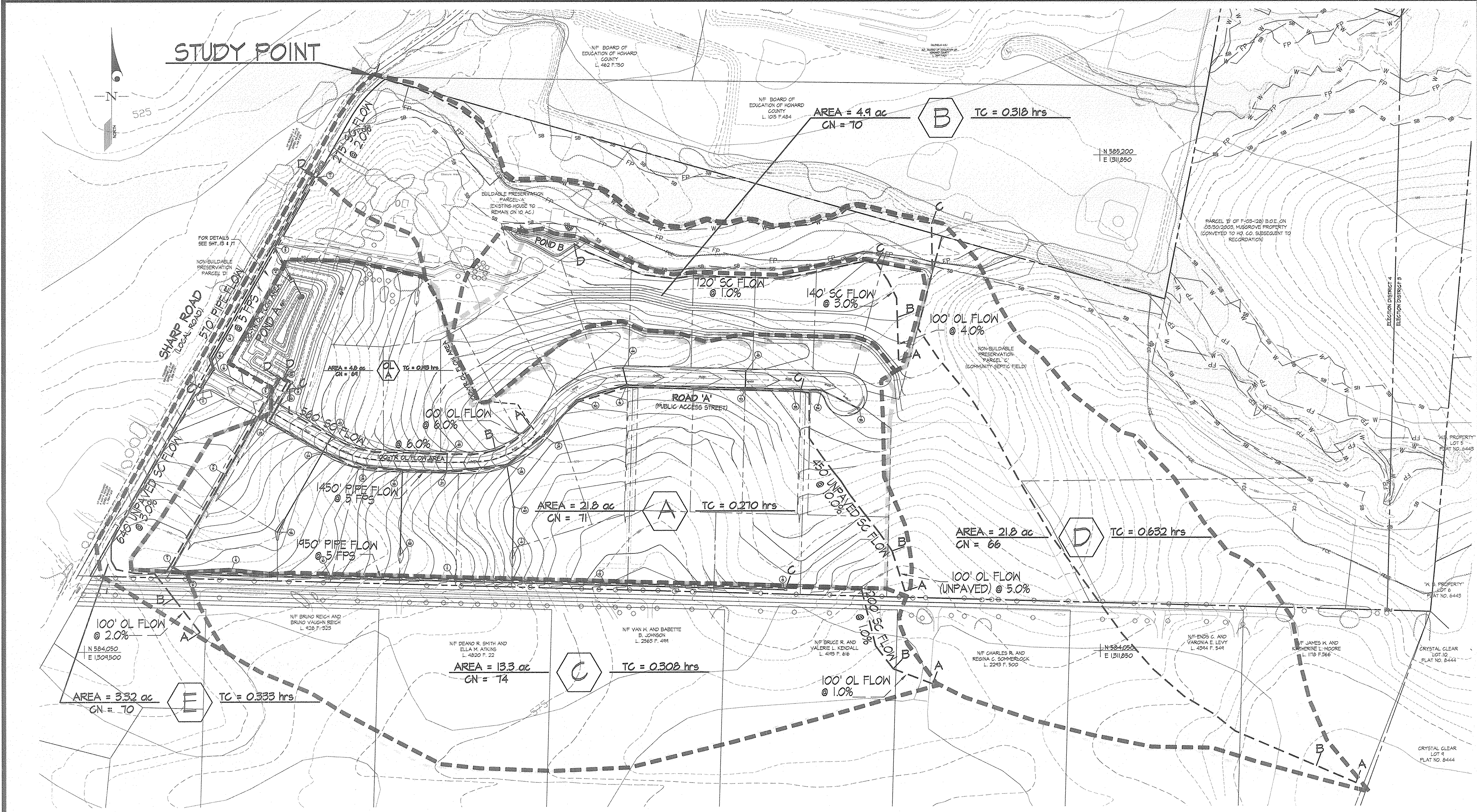
DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN: BILL GRAU
 410-964-5522

STORMWATER MANAGEMENT PRE-DEVELOPMENT DRAINAGE AREA MAP
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	11 OF 22

STUDY POINT



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Walter J. Weber, Jr. 2-12-07
 Chief, Bureau of Highways HS Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Amelia Hamer 2/28/07
 Chief, Division of Land Development JR Date
Michael J. ... 2/22/07
 Chief, Development Engineering Division YR Date

LEGEND

- TC PATH
- TC SEGMENT
- PREDEVELOPMENT SWM DRAINAGE DIVIDE

- 'B' SOIL
- 'C' SOIL
- 'D' SOIL

STUDY POINT SUMMARY TABLE

Study Point (No.)	Q _{ex-1YR} (cfs)	Q _{prop-1YR} (cfs)	Q _{ex-10YR} (cfs)	Q _{prop-10YR} (cfs)	Q _{ex-100YR} (cfs)	Q _{prop-100YR} (cfs)
1	7.06	6.58	61.28	112.75	138.31	207.44

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-980-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

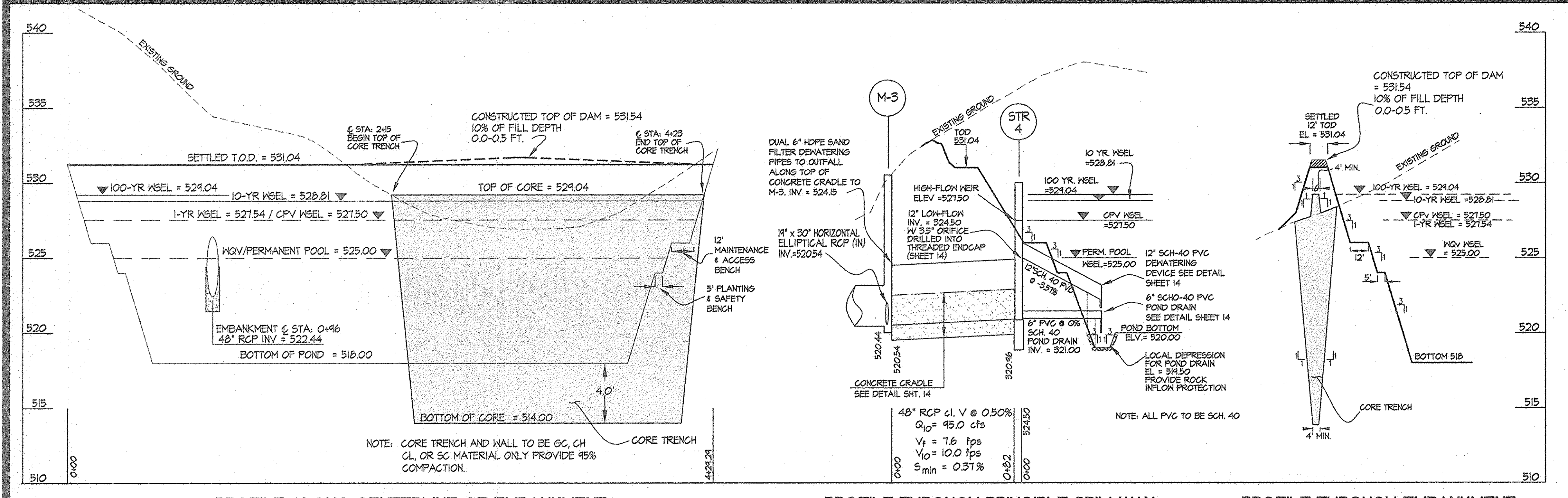
MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN.: BILL GRAU
 410-964-5522

THIS PLAN IS FOR STORMWATER MANAGEMENT DRAINAGE AREA PURPOSES ONLY!

STORMWATER MANAGEMENT POST-DEVELOPMENT DRAINAGE AREA MAP
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
 (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	12 OF 22





PROFILE ALONG CENTERLINE OF EMBANKMENT

PROFILE THROUGH PRINCIPLE SPILLWAY

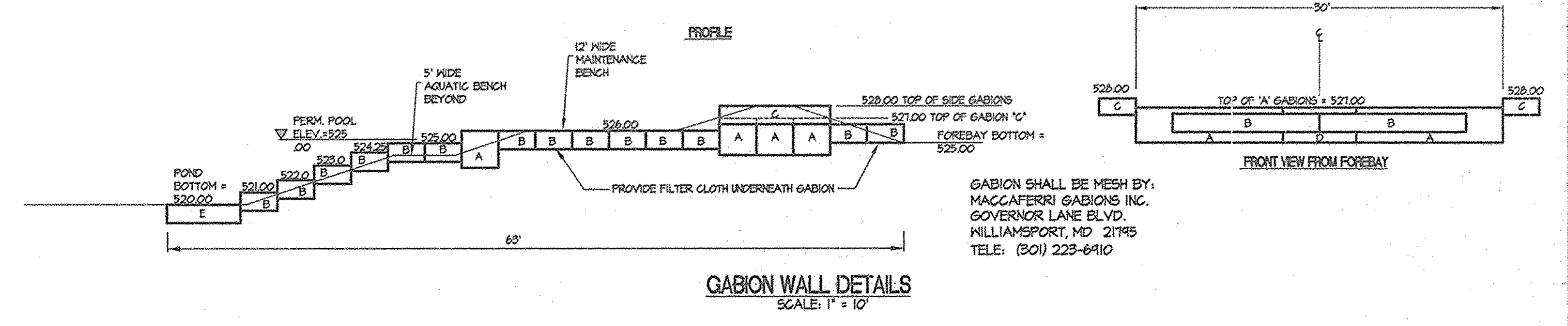
PROFILE THROUGH EMBANKMENT

SWM POND A SUMMARY TABLE

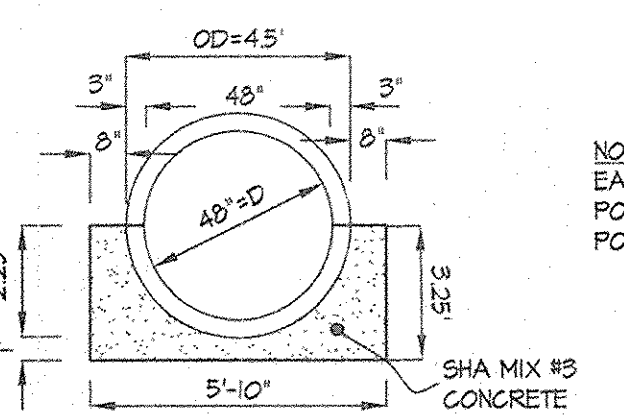
TYPE:	24-HR E.D. WET POND (P3)
TOTAL D.A. TO FACILITY:	35.1 acres
PROPOSED ON-SITE D.A. TO FACILITY:	21.8 acres
OFF-SITE D.A. TO FACILITY:	13.3 acres
NATURAL AREA CONSERVATION CREDIT:	5.0 acres
AREA PROVIDED FOR REQUIREMENT:	16.8 acres
AREA PROVIDED FOR REQUIREMENT:	21.8 acres
WAV REQUIRED:	0.94 acre-ft.
WAV PROVIDED:	0.48 acre-ft.
WAV WSEL:	525.00 ft.
CPV REQUIRED:	0.64 acre-ft.
CPV PROVIDED:	0.74 acre-ft.
CPV WSEL:	521.50 ft.
EX 1-YR DISCHARGE TO STUDY POINT:	7.06 cfs
PROP. 1-YR DISCHARGE TO STUDY POINT:	6.58 cfs
PROP. 10-YR WSEL:	521.54 ft.
PROP. 100-YR WSEL:	524.04 ft.
OUTFALL 48" RISER BARREL TO PROP. STORM DRAIN	
TOP OF DAM:	531.04 ft.
POND BOTTOM:	518.00 ft.

GABION SIZES

LETTER CODE	LENGTH	WIDTH	HEIGHT
A	12'	3'	3'
B	12'	3'	16"
C	6'	3'	16"
D	6'	3'	3'
E	6'	3'	16"



GABION WALL DETAILS



CONCRETE CRADLE DETAIL (NTS)

NOTE: FOUR CONCRETE TO UNDISTURBED BARTH. REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION IN SHEETING IN PLACE.

DEVELOPERS/BUILDERS CERTIFICATE

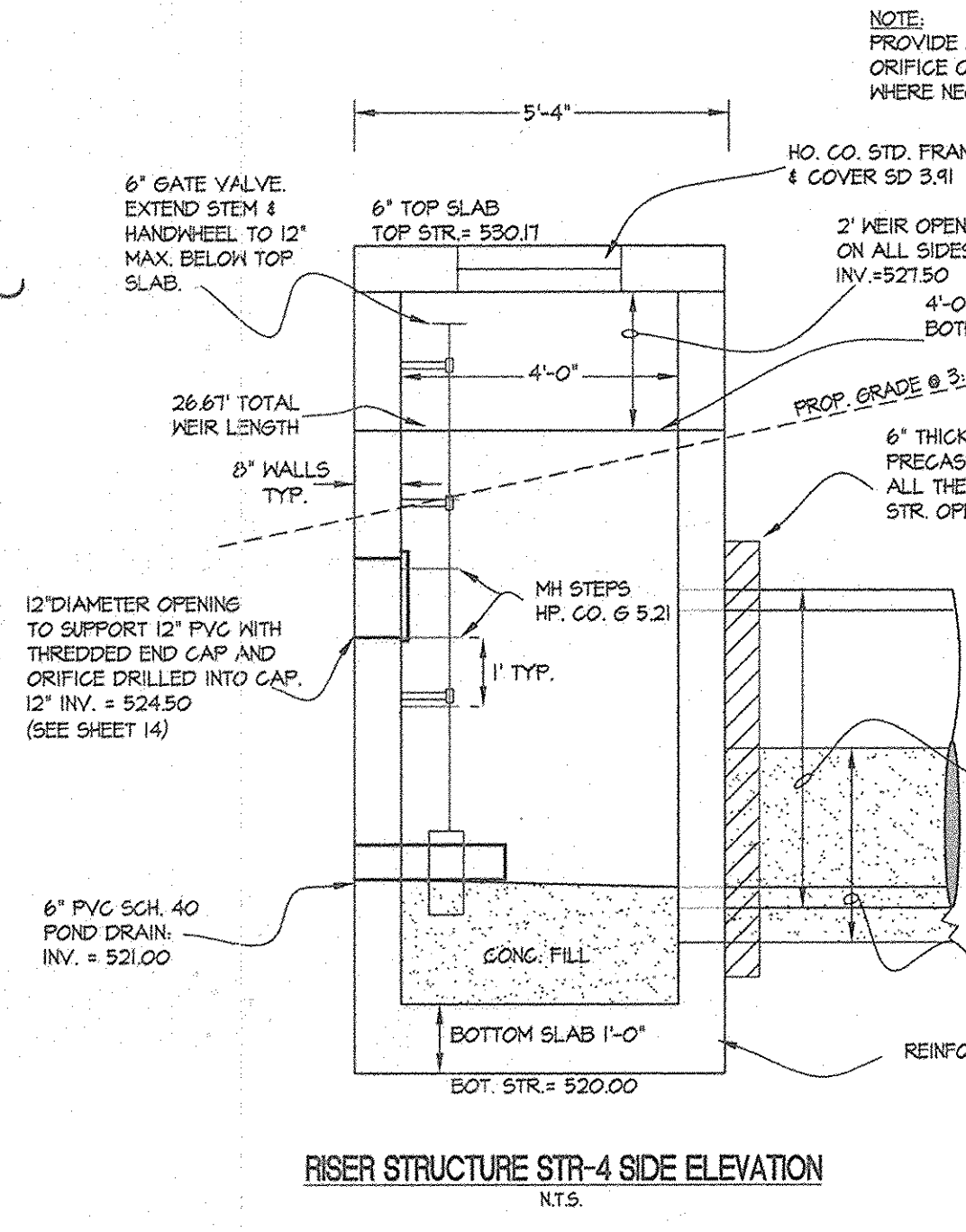
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY SOIL CONSERVATION DISTRICT WITH A SIGNED SHEET PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER/BUILDER: *[Signature]* DATE: 6/22/05

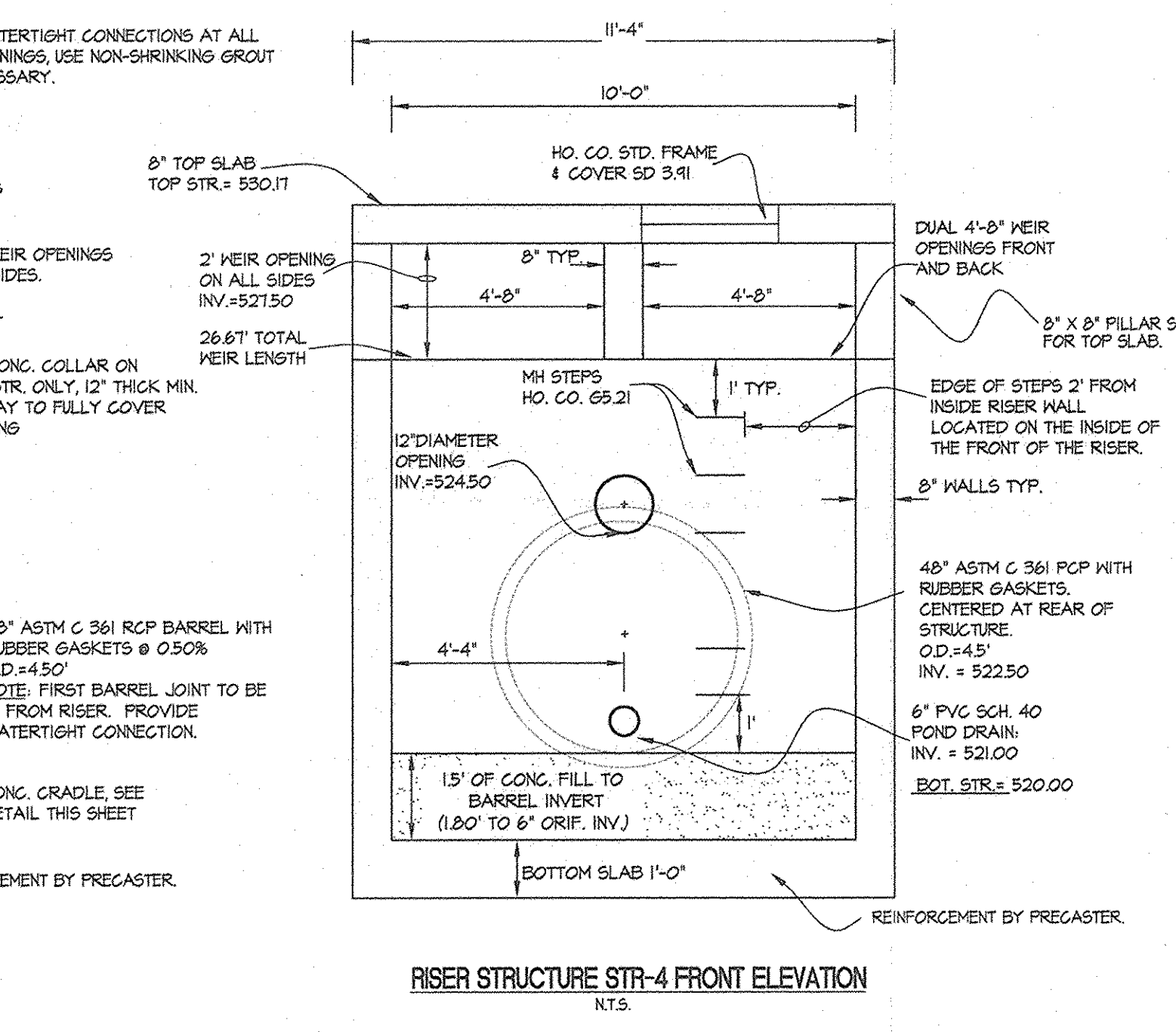
ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A SIGNED SHEET PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

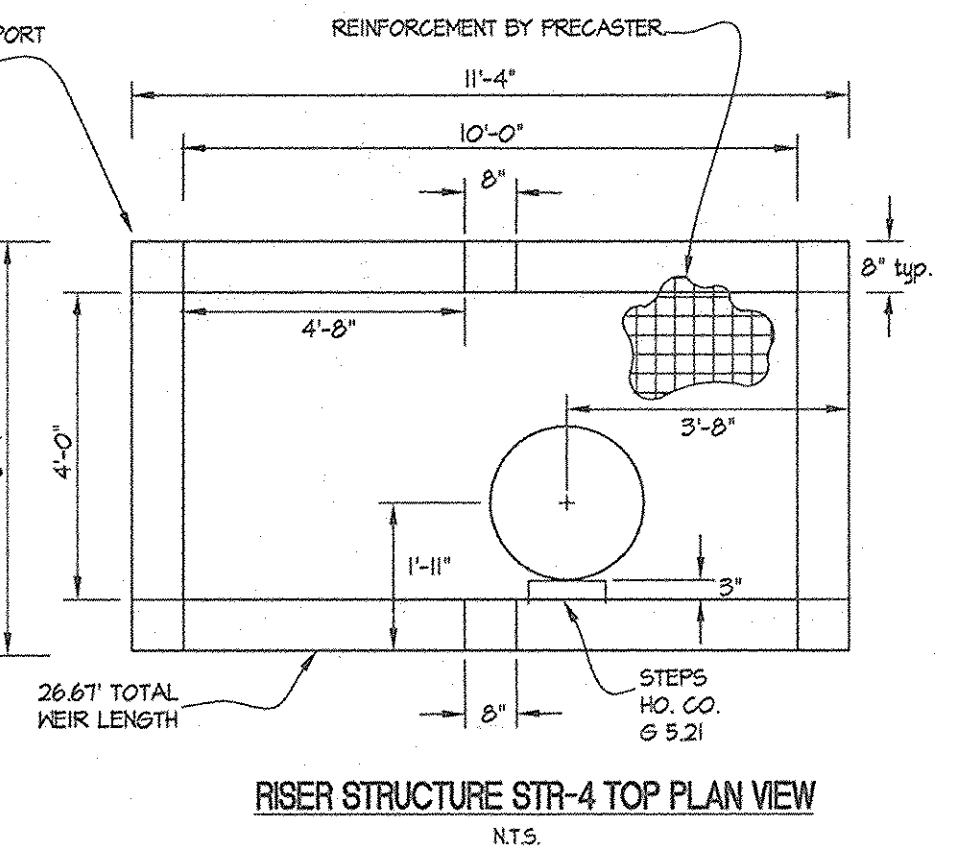
ENGINEER'S SIGNATURE: *[Signature]* DATE: 6/22/05



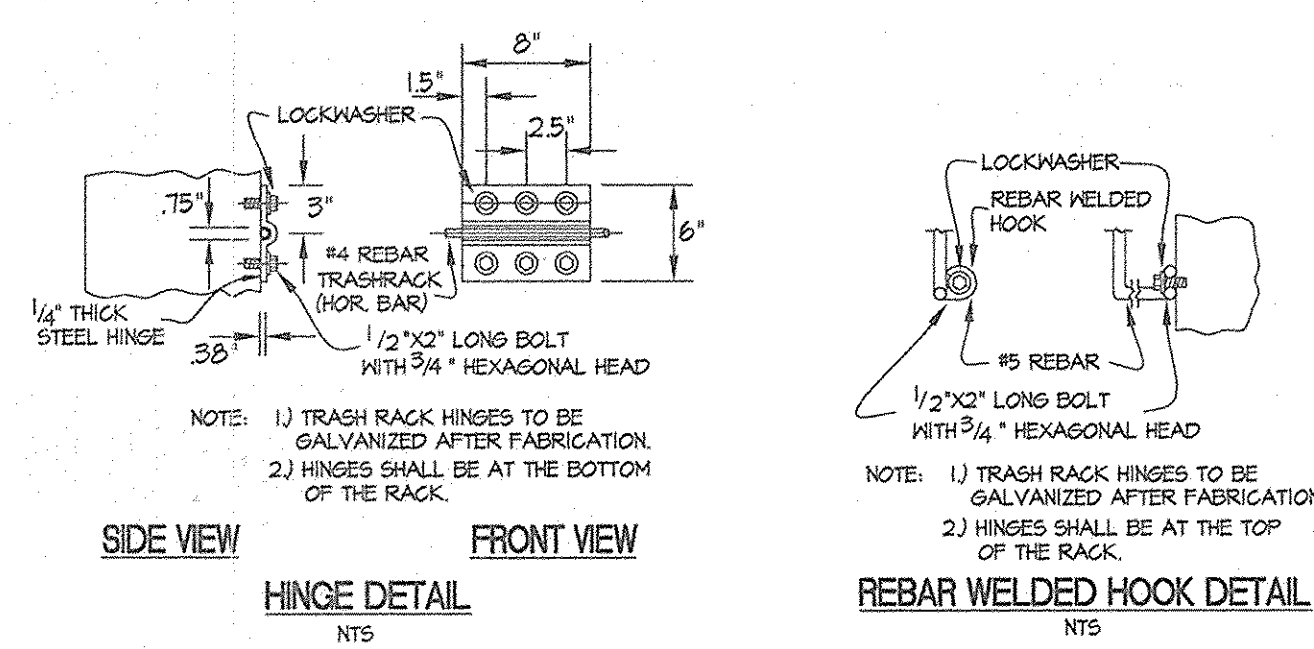
RISER STRUCTURE STR-4 SIDE ELEVATION



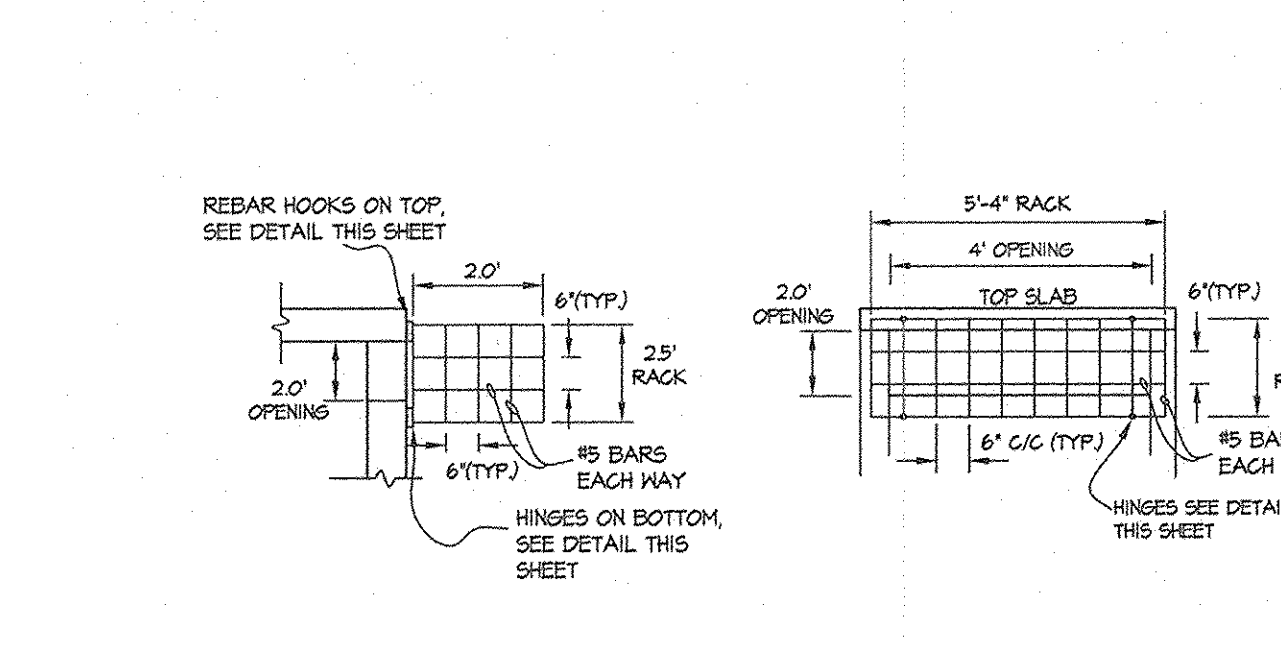
RISER STRUCTURE STR-4 FRONT ELEVATION



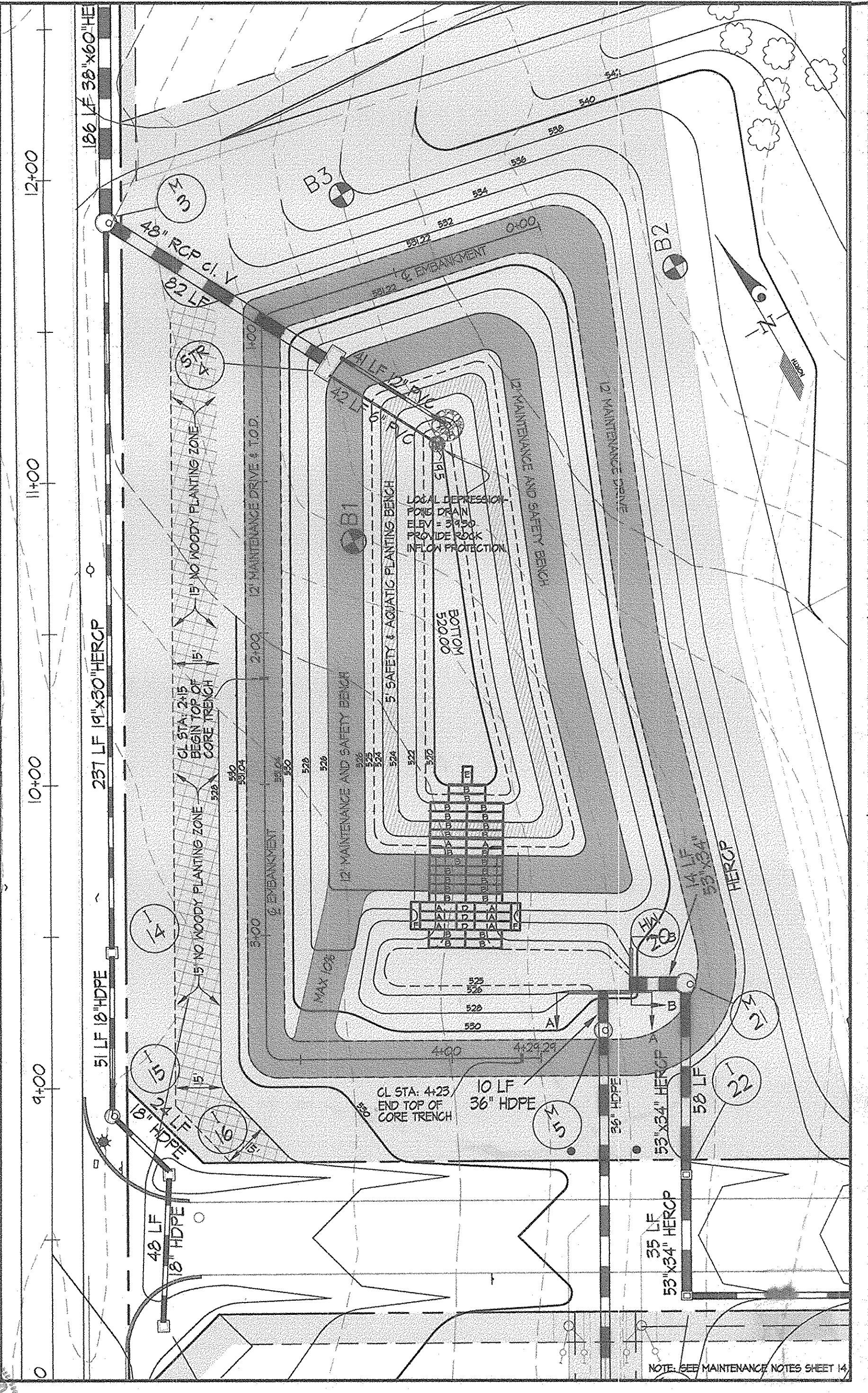
RISER STRUCTURE STR-4 TOP PLAN VIEW



HINGE DETAIL



REBAR WELDED HOOK DETAIL



STORMWATER MANAGEMENT POND 'A' ENLARGEMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 2-12-07
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 2/27/07
Chief, Division of Land Development

[Signature] 2/22/07
Chief, Development Engineering Division

GLWGUTSCHICK LITTLE & WEBBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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DATE	REVISION	BY	APP'R.

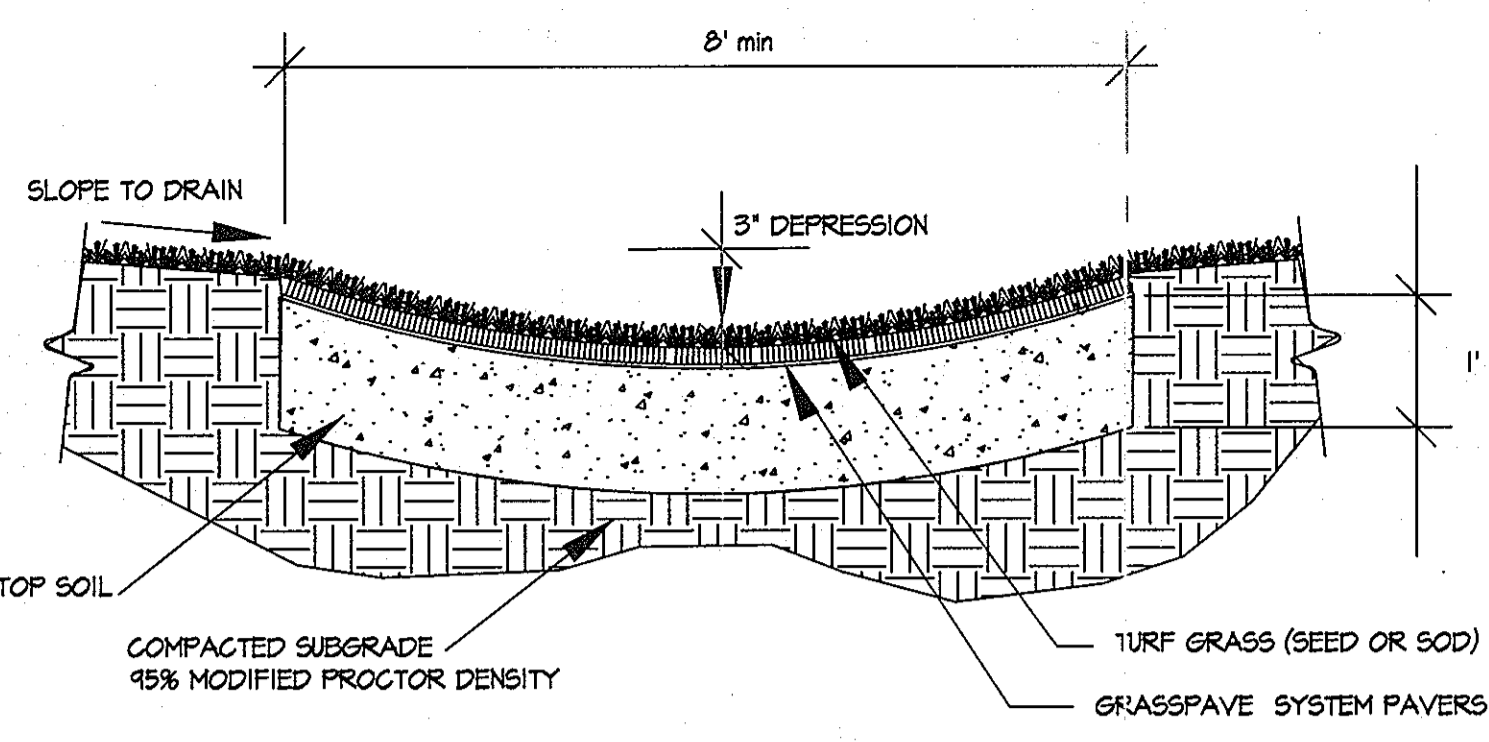
MUSGROVE FARM LLC
8808 CENTRE PARK DRIVE
SUITE 209
COLUMBIA, MARYLAND 21045
ATTN.: BILL GRAU
410-964-5522

STORMWATER MANAGEMENT POND 'A' DETAILS

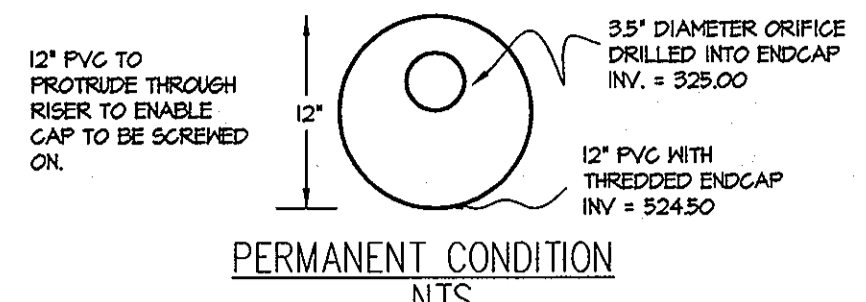
MUSGROVE FARM
LOTS 1 THRU 30, BUIDABLE PRESERVATION PARCEL A,
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(NON-BUIDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)

ELECTION DISTRICT No. 3 & 4

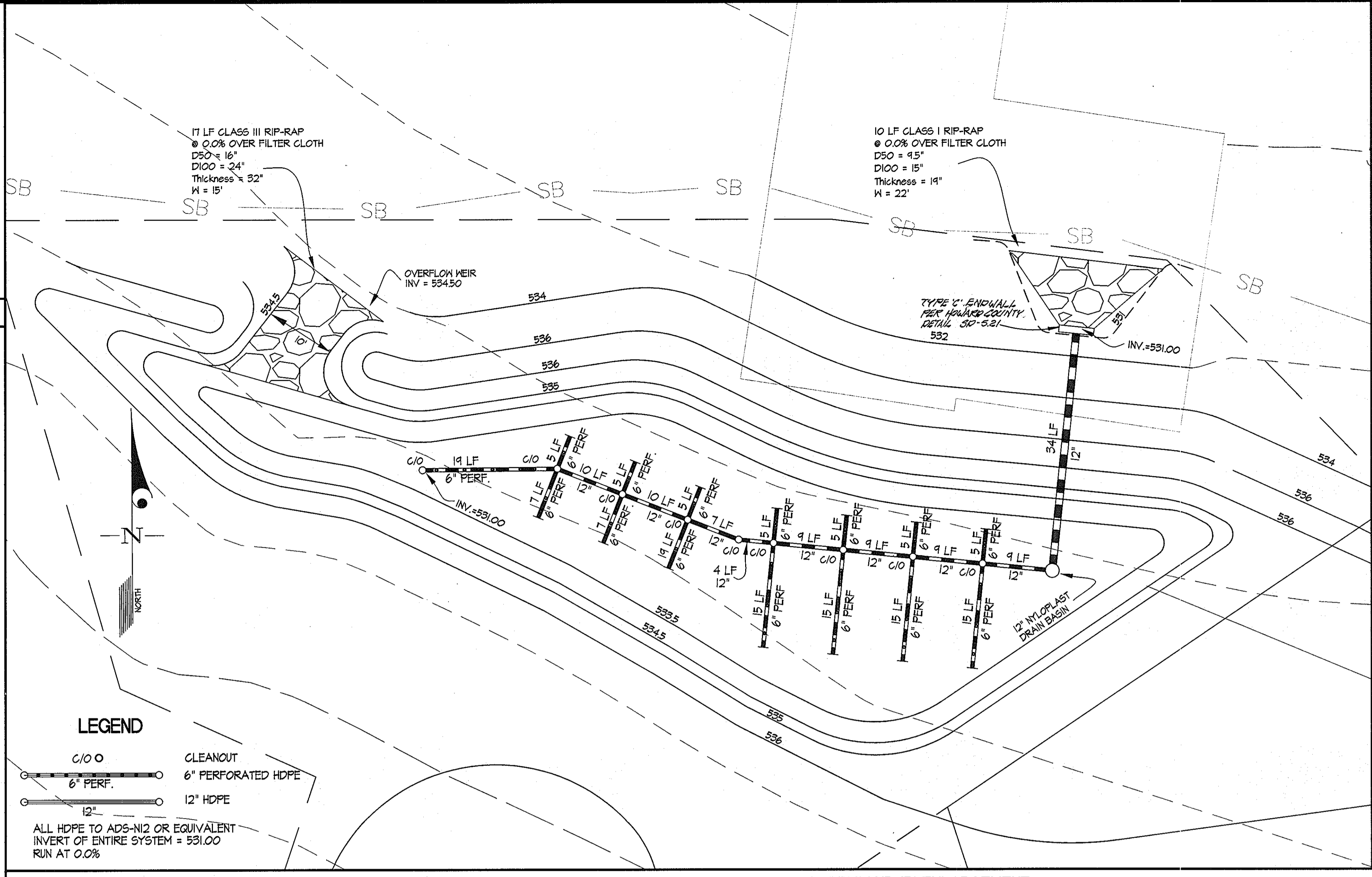
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	13 OF 22



GRASS STABILIZATION MATTING NTS



POND 'A' LOW FLOW ORIFICE DETAIL NTS

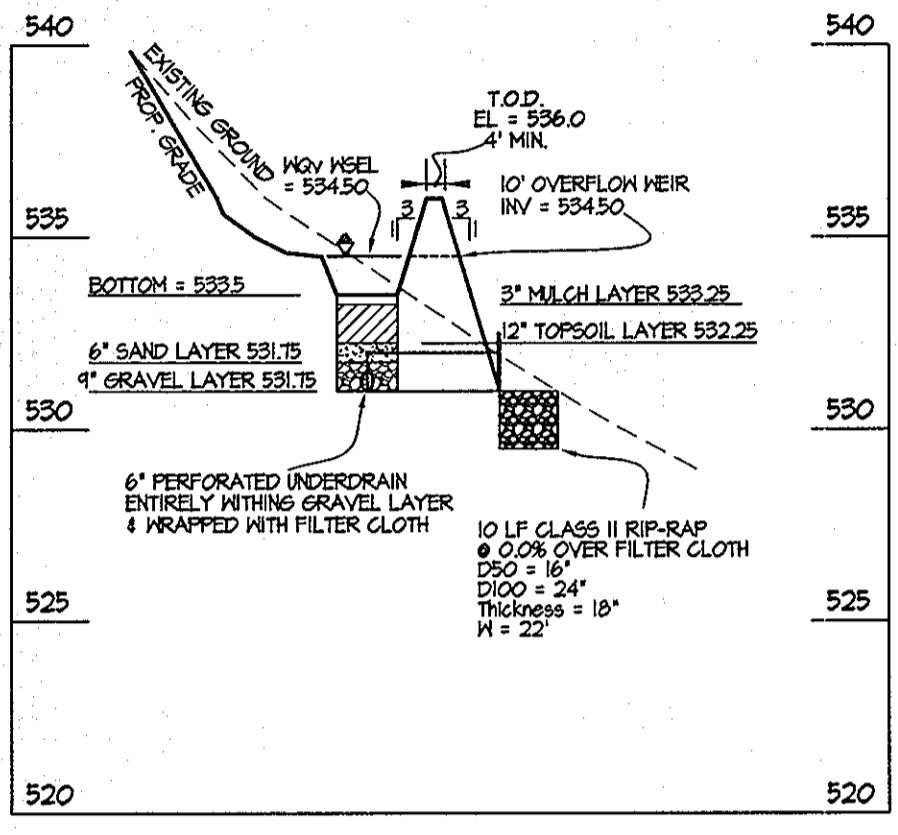


STORMWATER MANAGEMENT POND 'B' ENLARGEMENT

SCALE: 1" = 10'

SWM POND B SUMMARY TABLE

TYPE: BIORETENTION - DRY POND (F-6)
TOTAL D.A. TO FACILITY: 4.90 acres
INV. REQUIRED: 0.063 acre-ft.
INV. PROVIDED: 0.064 acre-ft.
INV. SEEL: 534.50 ft.
PROP. 1-YR DISCHARGE: 182 cfs
1.20 cfs --- C/Pv not required
OUTFALL 1: 12" OVER FLOW ROCK WEIR INV. = 534.50
OUTFALL 2: 12" HDPE @ 0.0% INV. = 531.00
TOP OF DAM: 536.00 ft.
POND BOTTOM: 533.50 ft.



PROFILE THROUGH POND 'B' 1" = 50' (HORZ.) 1" = 5' (VERT.)

DEVELOPERS/BUILDERS CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY DEPARTMENT OF THE ENVIRONMENT WITH AN INSPECTION REPORT OF THE POND WITHIN 30 DAYS OF COMPLETION. I/WE ALLOW ACCESS TO THE POND FOR INSPECTIONS BY THE HOWARD COUNTY DEPARTMENT OF THE ENVIRONMENT.

SIGNATURE OF DEVELOPER/BUILDER

DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY DEPARTMENT OF THE ENVIRONMENT. I/WE ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY DEPARTMENT OF THE ENVIRONMENT WITH AN INSPECTION REPORT OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER'S SIGNATURE

6/22/05
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways

2-12-07
Date

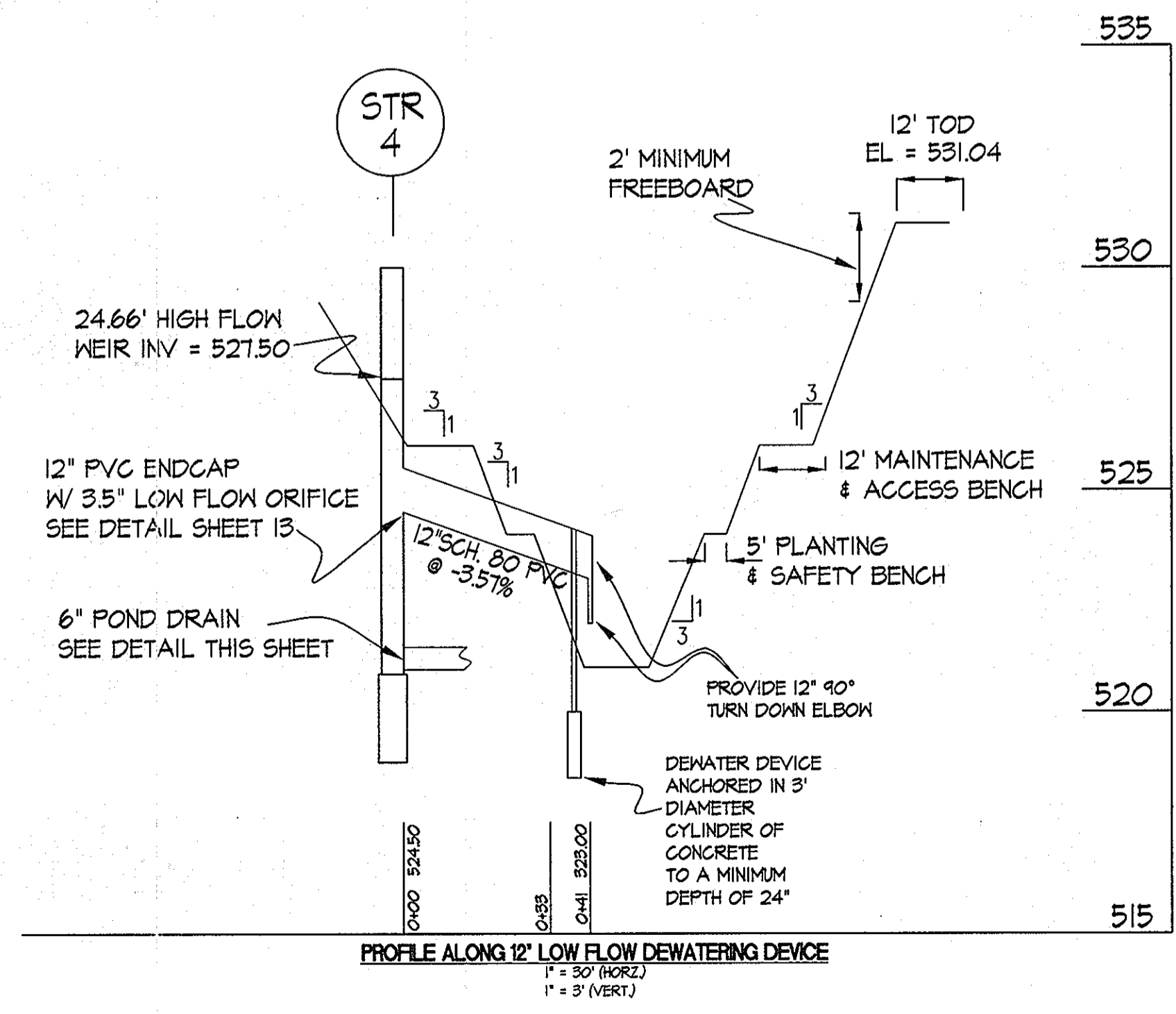
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development

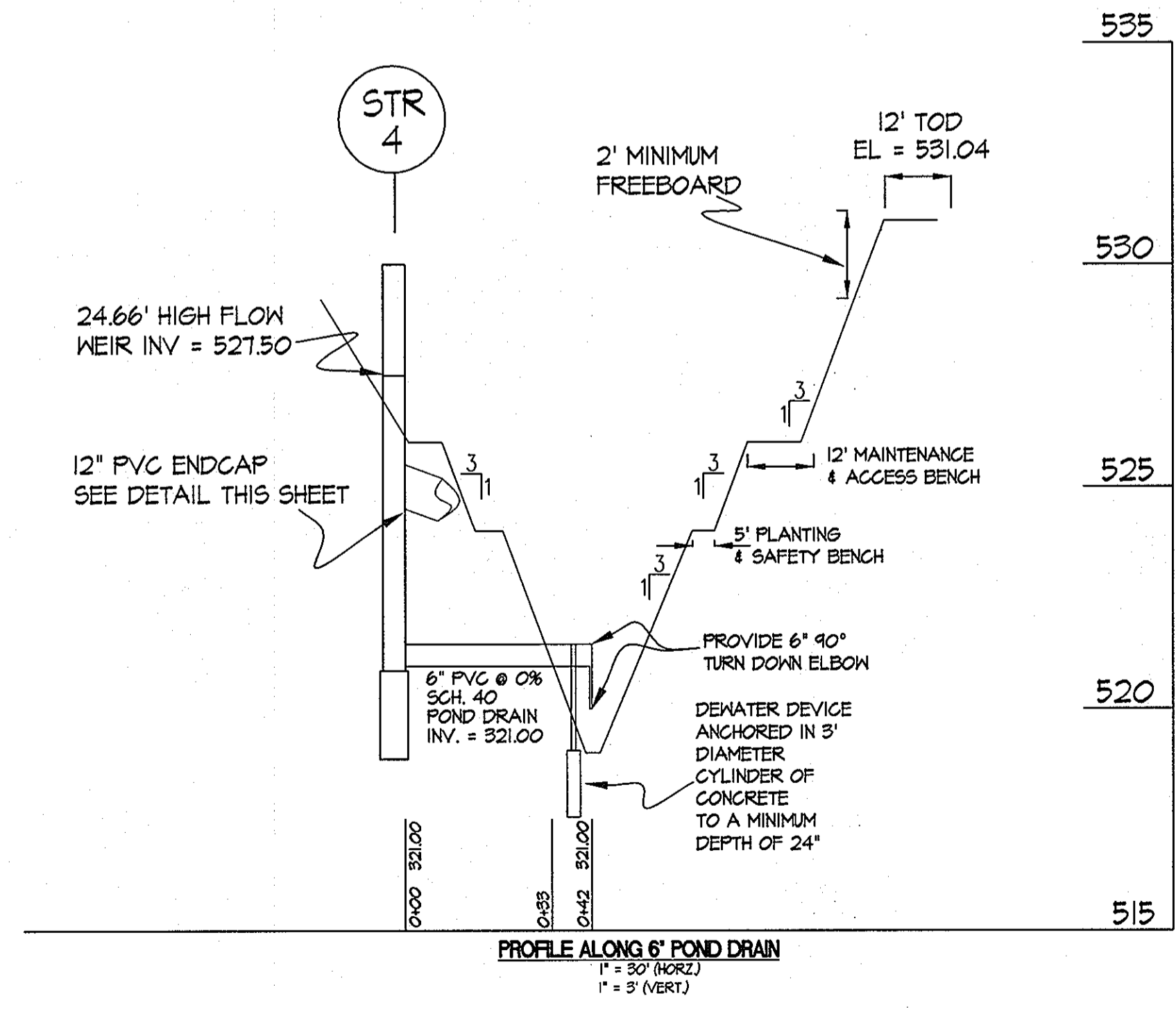
2/28/07
Date

Chief, Development Engineering Division

2/22/07
Date



PROFILE ALONG 12" LOW FLOW DEWATERING DEVICE 1" = 50' (HORZ.) 1" = 5' (VERT.)



PROFILE ALONG 6" POND DRAIN 1" = 50' (HORZ.) 1" = 5' (VERT.)

OPERATION AND MAINTENANCE SCHEDULE OF JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITY

POND A

Routine Maintenance (by HOA)

- The facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.

Non-Routine Maintenance (by Howard County)

- Structural Components of the pond such as the dam, the riser, and the pipes shall be repaired upon detection of any damage. The components should be inspected during routine maintenance operations.
- Sediment should be when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by Howard County's Department of Public Works.

OPERATION AND MAINTENANCE SCHEDULE OF JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITY

POND B

Routine Maintenance (by HOA)

- The facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.

Non-Routine Maintenance (by HOA)

- Structural Components of the pond such as the dam, the riser, and the pipes shall be repaired upon detection of any damage. The components should be inspected during routine maintenance operations.
- Sediment should be when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary.

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
8808 CENTRE PARK DRIVE
SUITE 209
COLUMBIA, MARYLAND 21045
ATTN.: BILL GRAU
410-964-5522

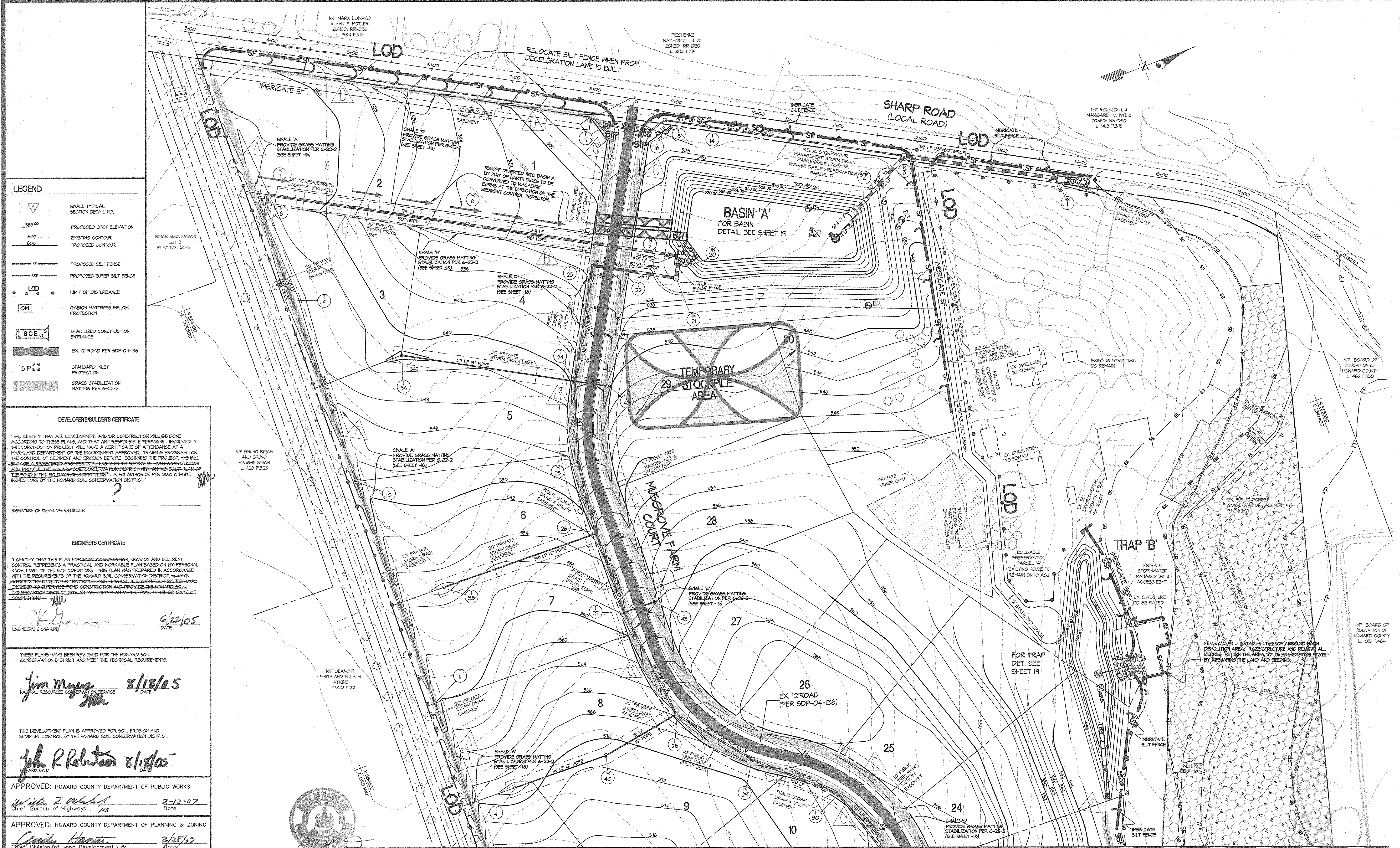
STORMWATER MANAGEMENT DETAILS

MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
(A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
(NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)

ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	14 OF 22





LEGEND

	SWALE TYPICAL SECTION DETAIL NO.
	PROPOSED SPOT ELEVATION
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SILT FENCE
	PROPOSED SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	GABION MATTRESS INFLOW PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
	EX. 12' ROAD PER SDP-04-136
	STANDARD INLET PROTECTION
	GRASS STABILIZATION MATTING PER G-22-2

DEVELOPERS/BUILDERS CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE WILL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 90 DAYS OF COMPLETION. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER/BUILDER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR ROAD CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE ADVISED THE DEVELOPER THAT HE/MAY ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 90 DAYS OF COMPLETION.

ENGINEER'S SIGNATURE

6/22/05
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

Jim Mays 8/18/05
NATURAL RESOURCES COMMISSIONER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 8/18/05
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. Mchale 2-13-07
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cynthia Harris 2/25/07
Chief, Division of Land Development Date
Chad DeWitt 2/22/07
Chief, Development Engineering Division Date



MATCHLINE F-F (JOINS SHEET 16)

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY!

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 FAX: 301-421-4188

DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
8808 CENTRE PARK DRIVE
SUITE 209
COLUMBIA, MARYLAND 21045
ATTN: BILL GRAU
410-964-5522

SEDIMENT & EROSION CONTROL PLAN
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
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ELECTION DISTRICT No. 3 & 4
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=50'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	15 OF 22

MATCHLINE F-F (JOINS SHEET 15)



DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH "PROBLET" FORMS. THE BOND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER/BUILDER: _____ DATE: _____

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE ADVISED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER'S SIGNATURE: *CKG* DATE: *6/22/05*

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

Jim Meyer *8/18/05*
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts *8/18/05*
AND S.C.D. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William E. Walsh *2-12-07*
Chief, Bureau of Highways DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Janice Harmon *2/25/07*
Chief, Division of Land Development DATE
Bill Deussen *2/22/07*
Chief, Development Engineering Division DATE

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY!

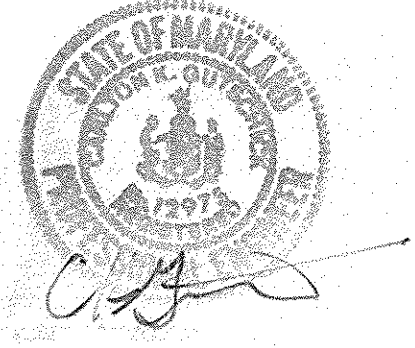
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ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

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1"=50'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	16 OF 22



Temporary Stormwater Management
Study Point Summary Table

Study Point (No.)	Q _{ex} -1YR (cfs)	Q _{prop} -1YR (cfs)	Q _{ex} -10YR (cfs)	Q _{prop} -10YR (cfs)	Q _{ex} -100YR (cfs)	Q _{prop} -100YR (cfs)
1	0.33	0.16	5.97	15.98	13.24	31.54
2	9.71	9.65	65.11	127.99	124.46	140.00
3	9.99	9.78	70.56	134.42	136.91	171.54

LEGEND

	PROPOSED SPOT ELEVATION
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SILT FENCE
	PROPOSED SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	GABION MATTRESS INFLOW PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
	EX 12' ROAD
	B' SOIL
	C' SOIL
	D' SOIL
	Tc PATH
	Tc SEGMENT
	EXISTING & INTERIM DRAINAGE DIVIDE

DEVELOPERS/BUILDERS CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A WORKSHOP AND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE ROAD CONSTRUCTION AND SUPERVISE THE HOWARD SOIL CONSERVATION DISTRICT'S SUPERVISOR'S BUILT PLAN OF THE ROAD WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER/BUILDER _____ DATE _____

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR ROAD CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE ROAD CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE ROAD WITHIN 30 DAYS OF COMPLETION.

ENGINEER'S SIGNATURE *CKJ* DATE *6/22/05*

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

John R. Pitzer *3/18/05*
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Jim Nguyen *8/18/05*
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

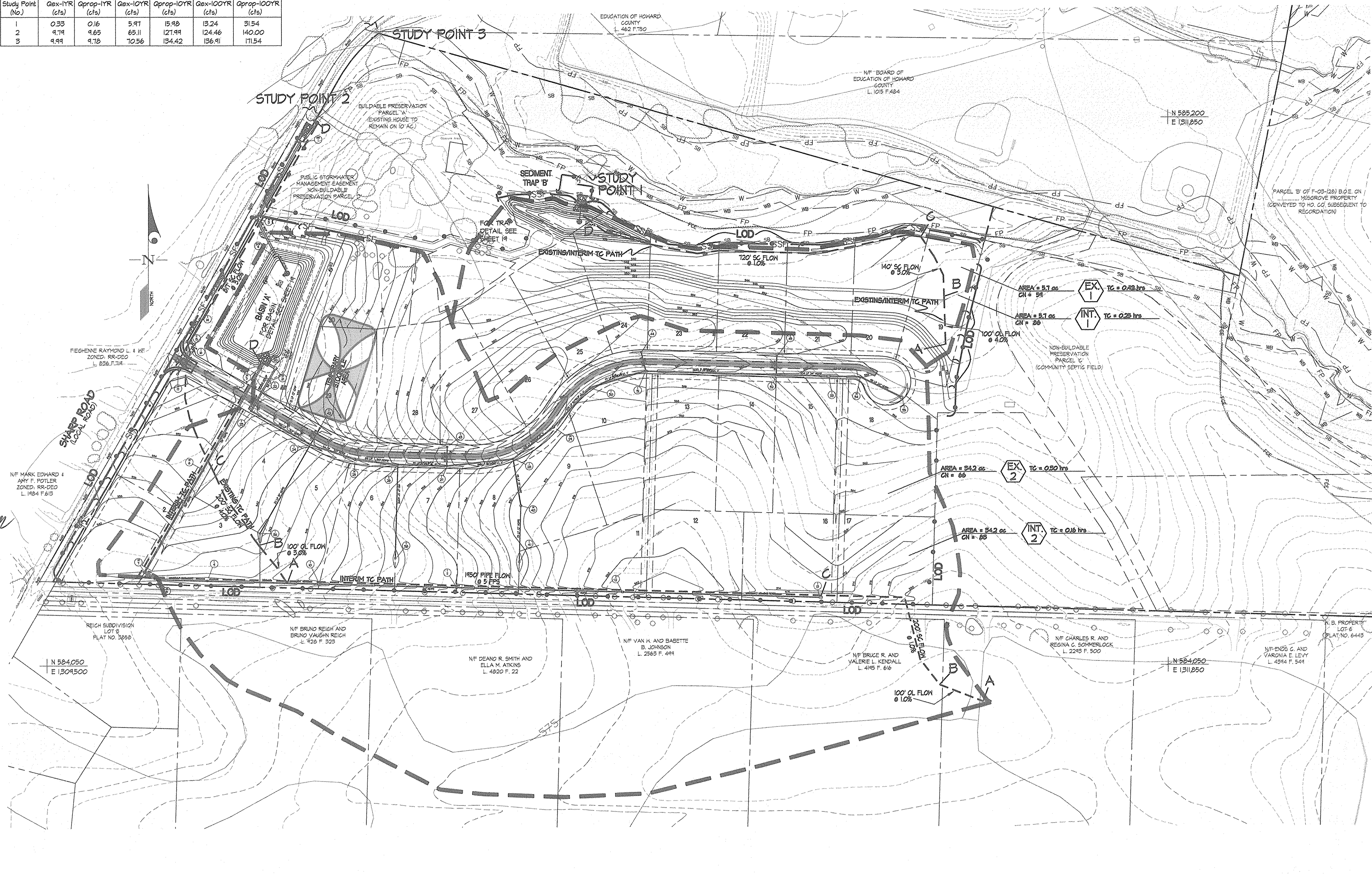
Walter Z. ... *2-12-07*
Chief, Bureau of Highways DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Conny Hamilton *2/25/07*
Chief, Division of Land Development DATE

... *2/22/07*
Chief, Development Engineering Division DATE

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-421-4186



- SEDIMENT AND EROSION CONTROL SEQUENCE OF CONSTRUCTION**
- OBTAIN GRADING PERMIT AND ARRANGE PRE-CONSTRUCTION MEETING WITH SEDIMENT CONTROL INSPECTOR (1 DAY)
 - INSTALL THE STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE/SUPER SILT FENCE (TWO DAYS)
 - INSTALL SILT FENCE AROUND BARN DEMOLITION AREA. RAZE STRUCTURE AND REMOVE ALL DEBRIS. RETURN THE AREA TO ITS PRE-EXISTING STATE BY RESHAPING THE LAND AND SEEDING.
 - CONSTRUCT SEDIMENT BASIN 'A' AND SEDIMENT TRAP 'B'. INSTALL ASSOCIATED PERMANENT DIVERSION 'B' (SEE DETAIL ON SHEET 18). STABILIZE DIVERSION 'B' WITH TEMPORARY GRASS SEED AND MULCH (1 MONTH).
 - INSTALL STORM DRAIN AND PERMANENT DIVERSION 'A' AT THE SOUTH SITE OF THE SITE TO BASIN 'A'. BEGIN GRADING SITE (5 MONTHS).
 - INSTALL THE REMAINDER OF THE STORM DRAIN AND OTHER UTILITIES. COMPLETE GRADING (1 MONTH).
 - INSTALL BASE PAVING (2 WEEKS)
 - STABILIZE ALL DISTURBED AREAS OF THE SITE WITH GRASS SEED AND MULCH. INSTALL LANDSCAPING (2 WEEKS).
 - WHEN AREAS DRAINING TO THE SEDIMENT CONTROLS ARE STABILIZED AND PERMISSION HAS BEEN OBTAINED FROM THE SEDIMENT CONTROL INSPECTOR, MODIFY THE SEDIMENT BASIN 'A' TO CONFORM WITH THE FINAL GRADING FOR THE PERMANENT STORMWATER MANAGEMENT FACILITY AND STABILIZE DISTURBED AREAS. MODIFY THE SEDIMENT TRAP 'B' TO CONFORM WITH THE FINAL GRADING FOR THE PERMANENT STORMWATER MANAGEMENT FACILITY AND STABILIZE DISTURBED AREAS. STABILIZE PERMANENT DIVERSION 'B' WITH PERMANENT SEED AND MULCH. REMOVE ALL REMAINING SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS (2 WEEKS).
 - INSTALL SURFACE PAVING (1 WEEK).

THIS PLAN IS FOR SEDIMENT CONTROL & DRAINAGE AREA INFORMATION ONLY!

SEDIMENT & EROSION CONTROL DRAINAGE AREA MAP

MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
(A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
(NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)

HOWARD COUNTY, MARYLAND

DATE	REVISION	BY	APP'R.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENED).

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (42 LBS/1000 SQUARE FEET) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (4 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC TO UNIFORM THREE INCHES OF SOIL. AT THE TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UNIFORM FERTILIZER (4 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (42 LBS/1000 SQUARE FEET) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (25 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC TO UNIFORM THREE INCHES OF SOIL.

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (OS LBS/1000 SQ FT) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY OPTION (I) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE.

IN THE SPRING, OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1/2 TO 2 TONS PER ACRE (TO 40 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 210 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 340 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENED).

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (4 LBS/1000 SQ FT).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LOVEGRASS (OT LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1/2 TO 2 TONS PER ACRE (TO 40 LBS/1000 SQ FT) OF UNROTTED, NEED-FREE, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 210 GAL PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT OR HIGHER, USE 340 GAL PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

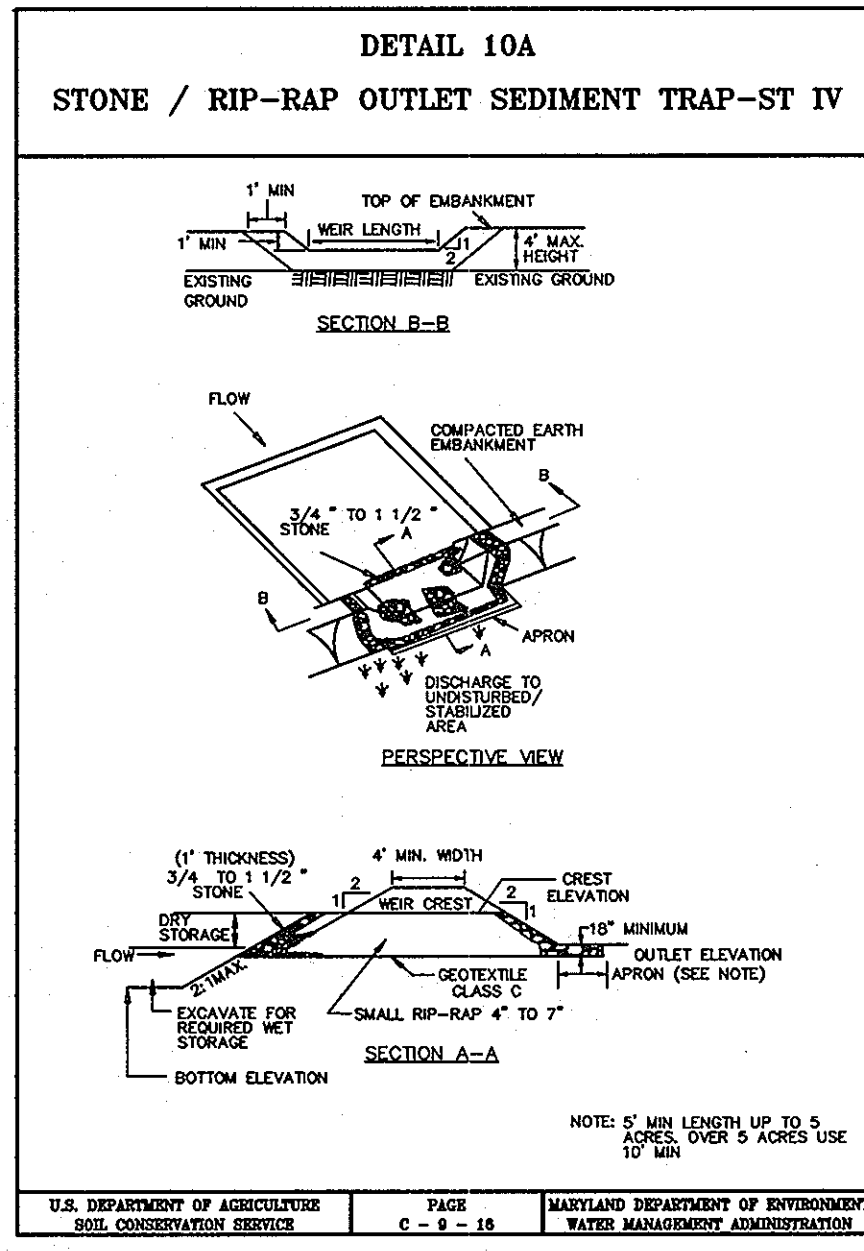
SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (410) 318-1855.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES AND PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAP/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING AND MULCHING (SEC. 6).
- TEMPORARY STABILIZATION WITH MULCH ALONE, CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

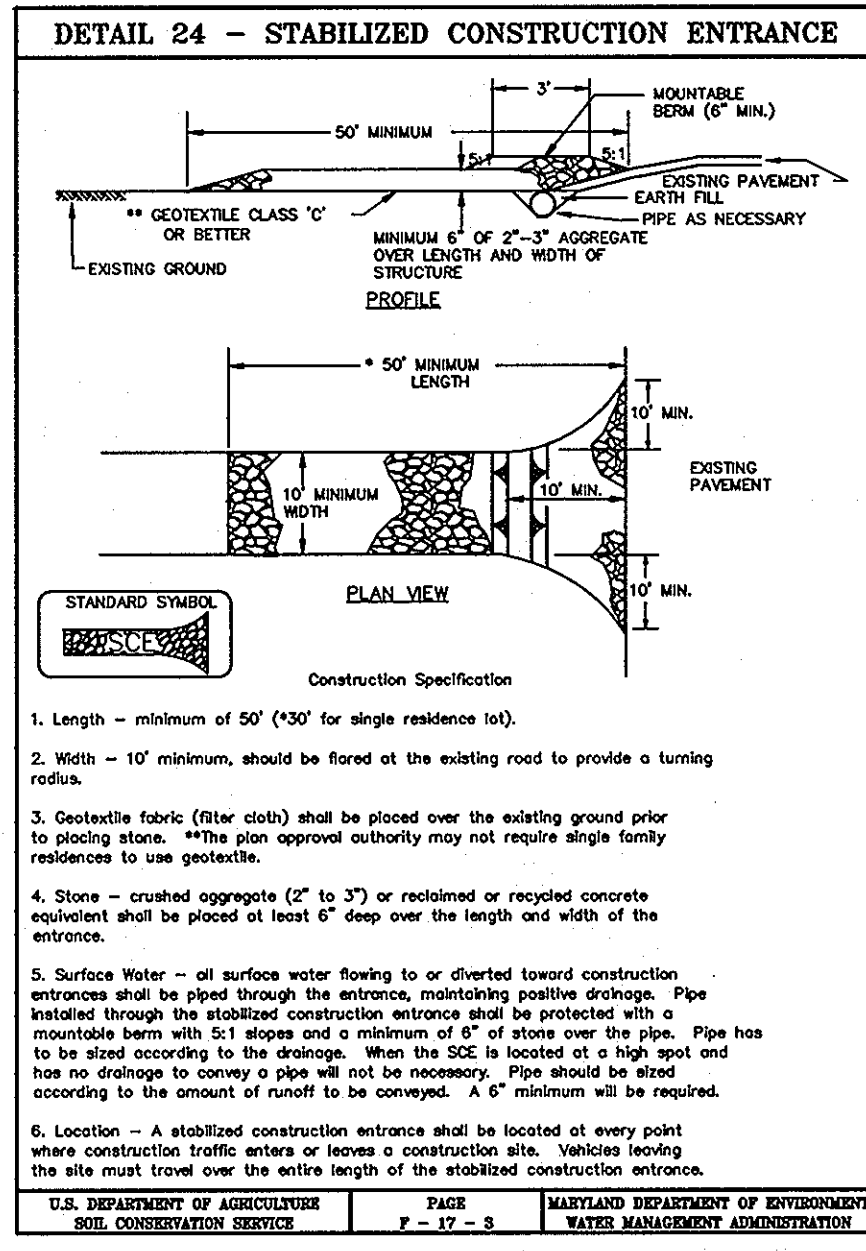
TOTAL AREA OF SITE	10.28 ACRES
AREA DISTURBED	28.89 ACRES
AREA TO BE ROOFED OR PAVED	5.75 ACRES
AREA TO BE VEGETATIVELY STABILIZED	231 ACRES
TOTAL CUIT	30000 Gal. Yds.
TOTAL FILL	30000 Gal. Yds.
HASTE BORROW AREA	N/A
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPM SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL STRUCTURES BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO PIPE LENGTH OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

CONSTRUCTION AND MATERIAL + TOPSOIL SPECIFICATIONS

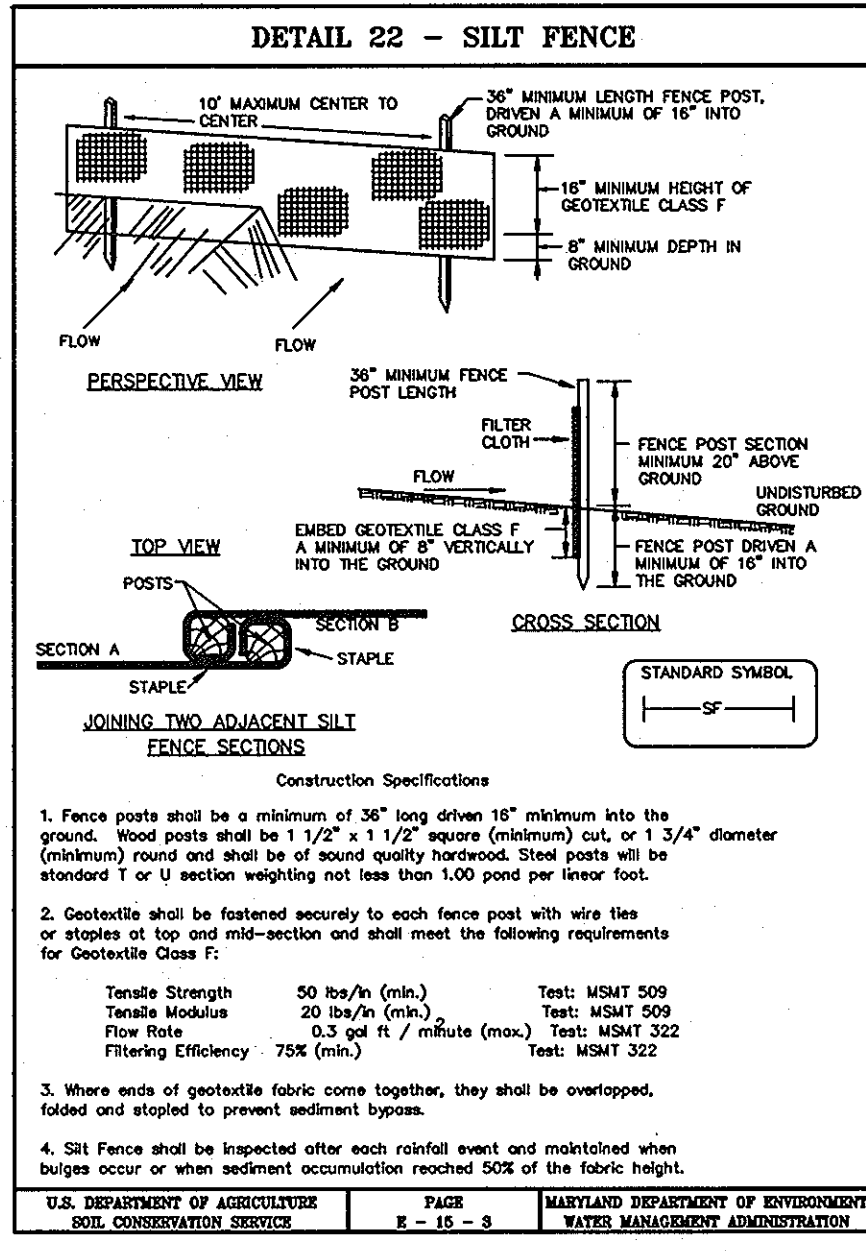
- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE RESPECTIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY A AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF COARSE STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NETTLE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIME SHALL BE SPREAD AT THE RATE IF 4-8 TONS/ACRE (200-400 POUNDS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 2.00 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS (OR SEE SEEDING NOTES).
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETINGS TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DIGESTING FERTILIZER & LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 15 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT GREATER THAN 500 PARTS PER MILL SHALL NOT BE USED.
 - NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN WITH SOIL STERILANTS OR CHEMICALS USED FOR PEST CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHOTO-TOXIC MATERIALS.



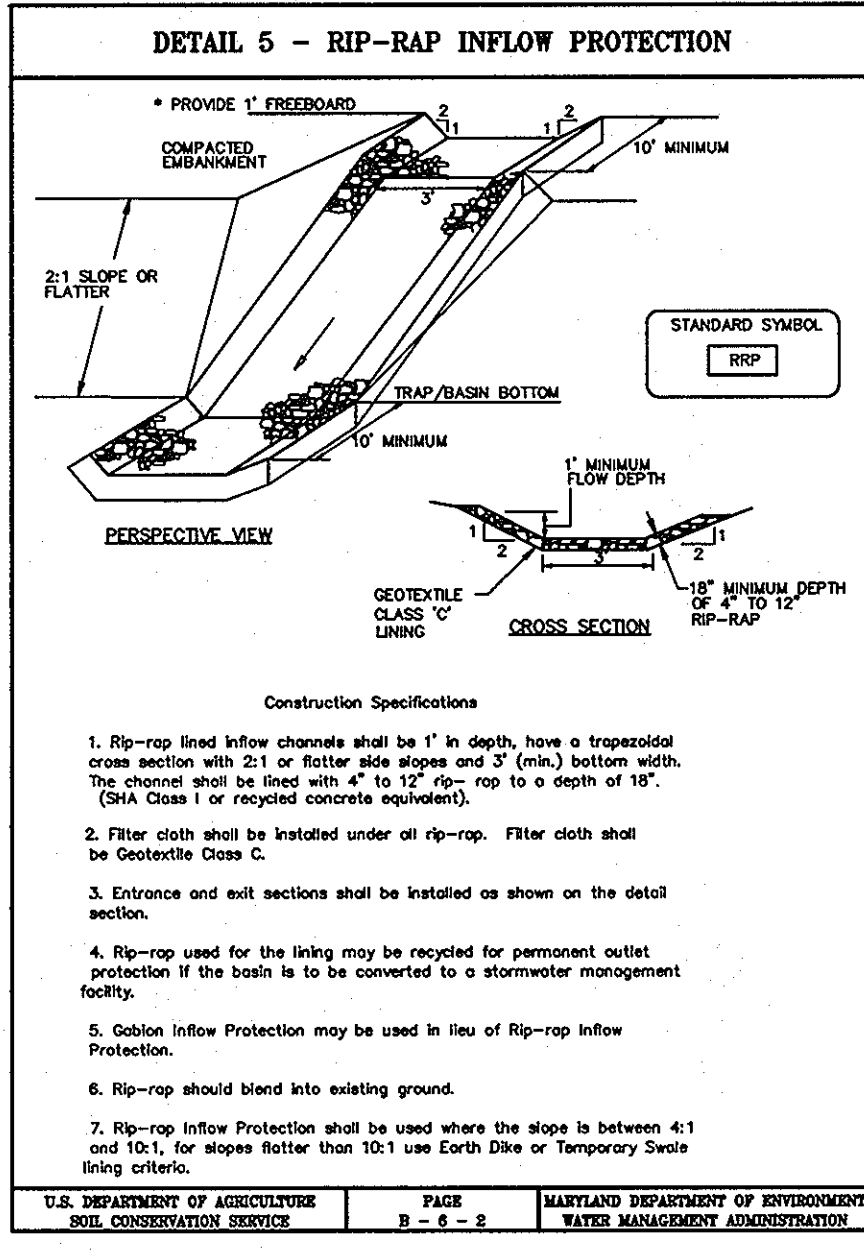
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-8-18 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



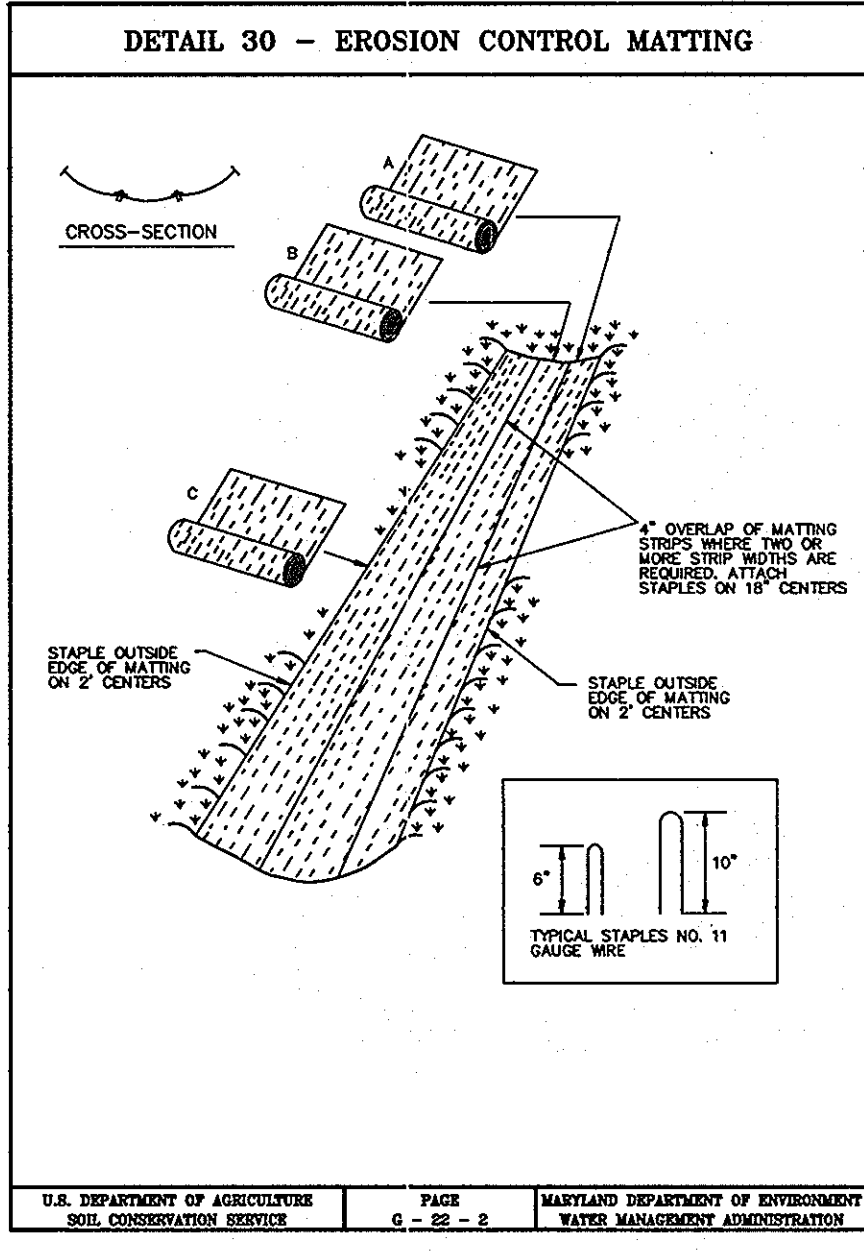
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



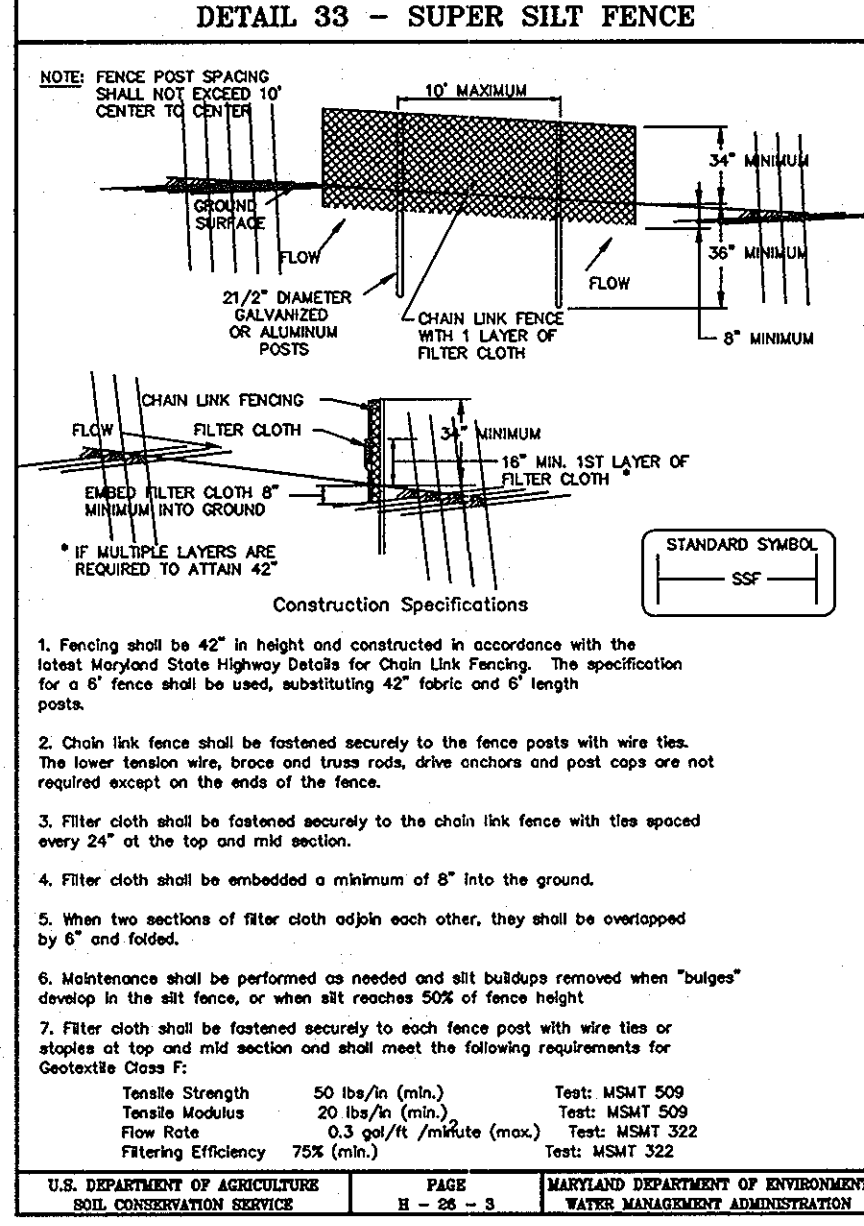
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



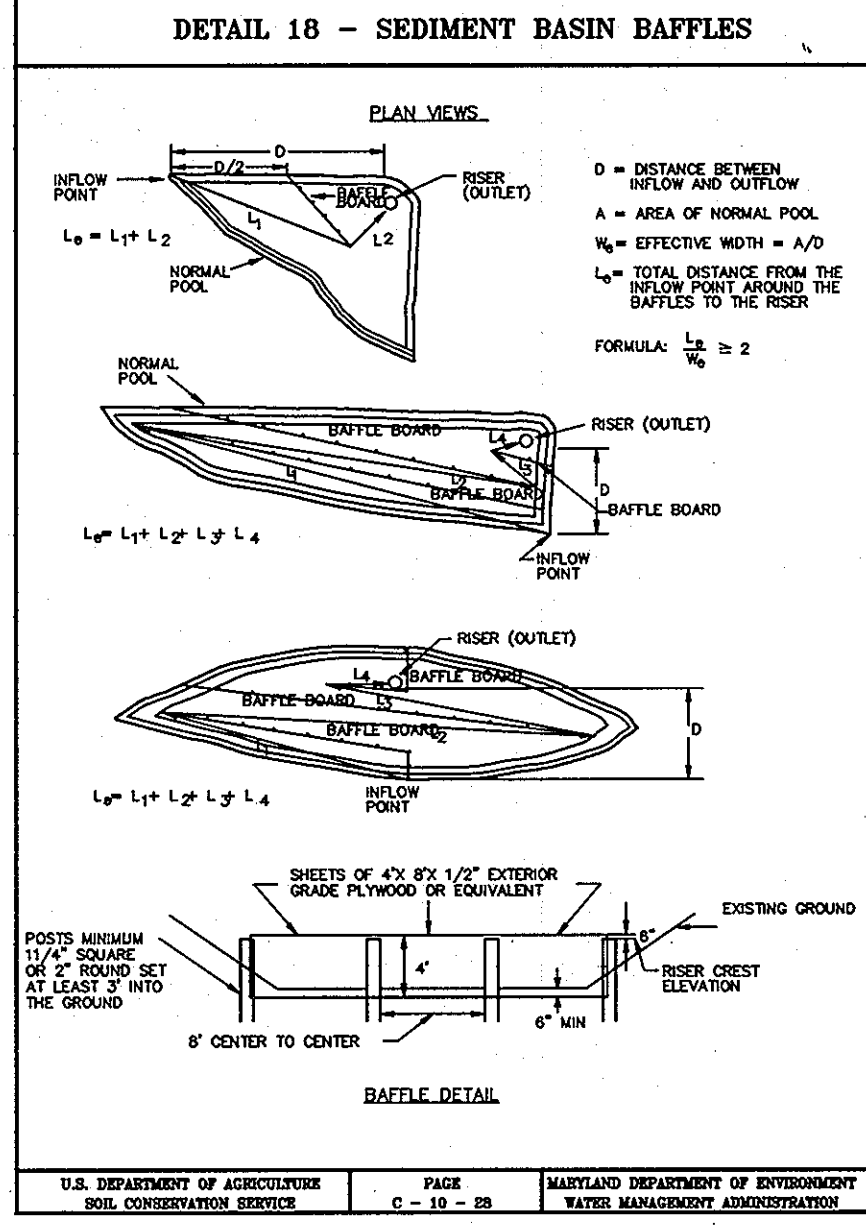
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-4-2 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



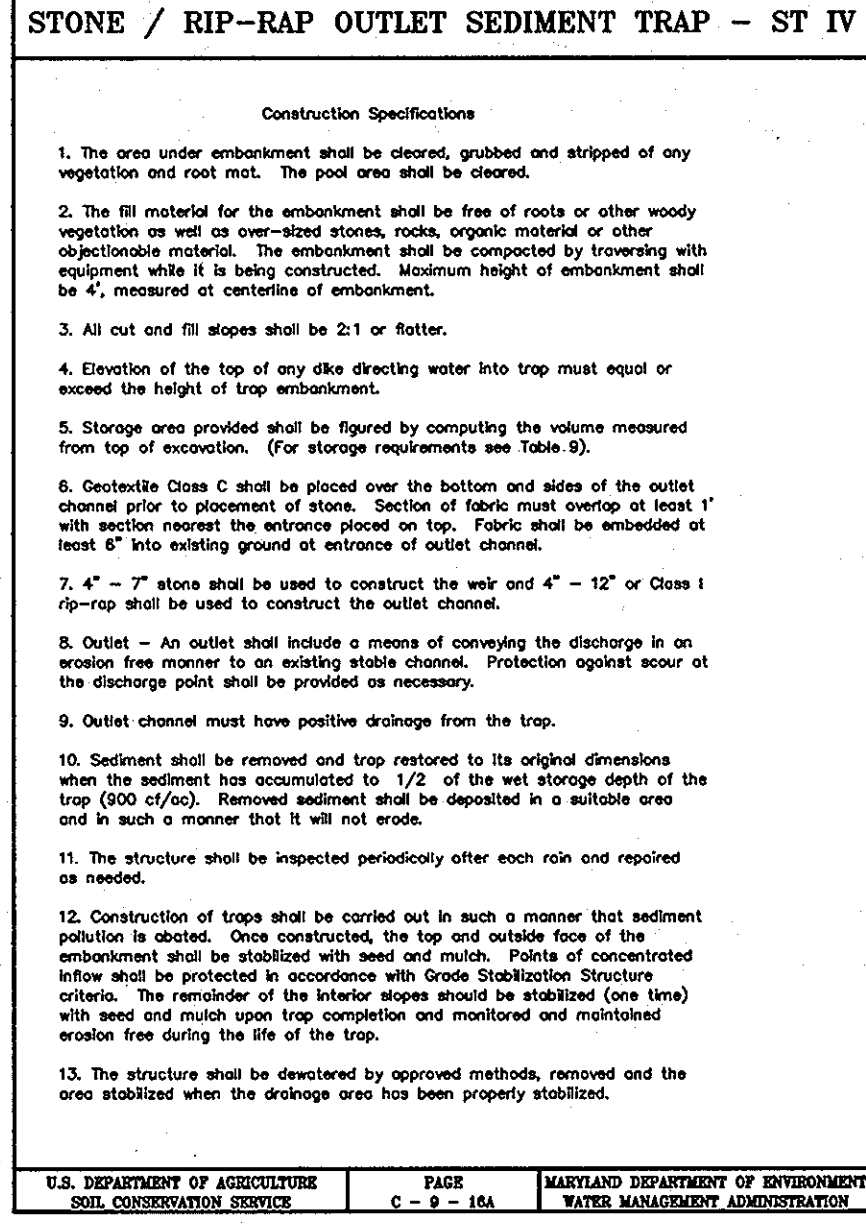
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE G-25-2 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



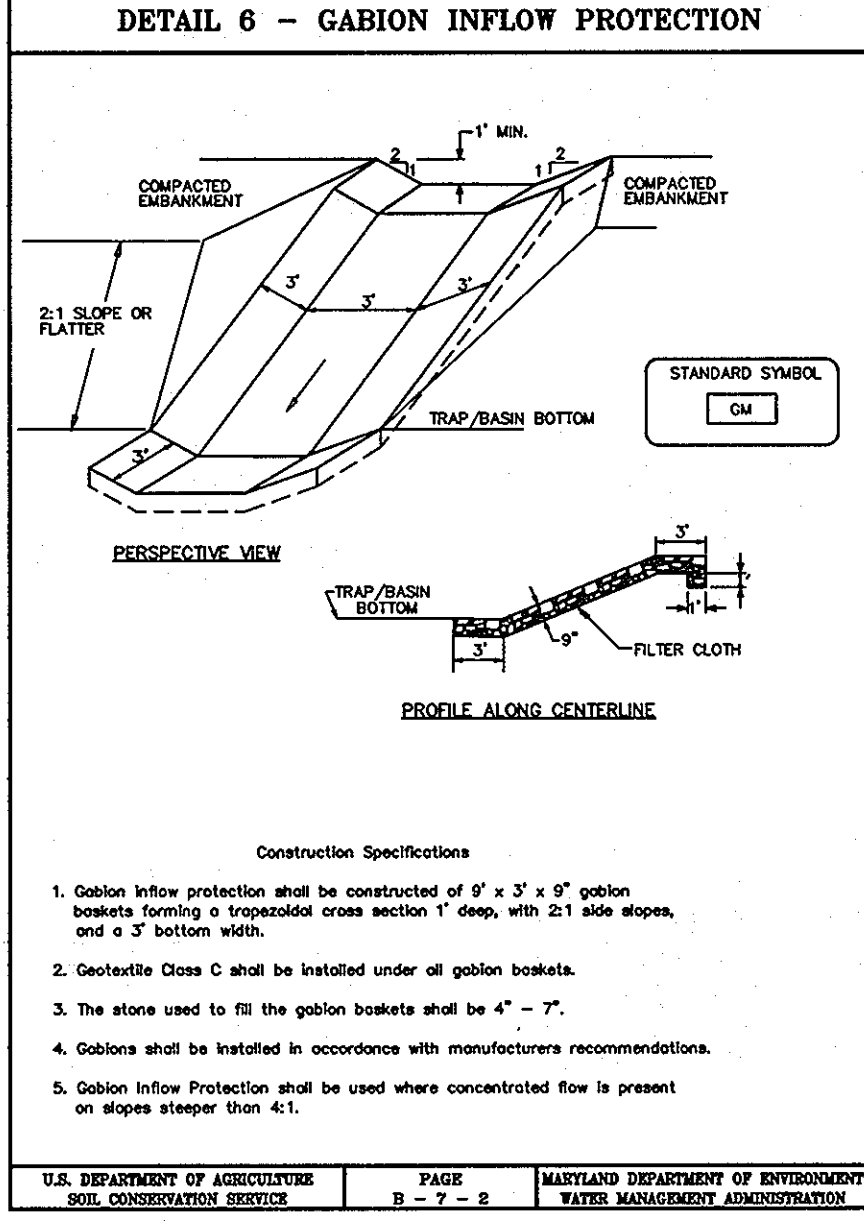
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



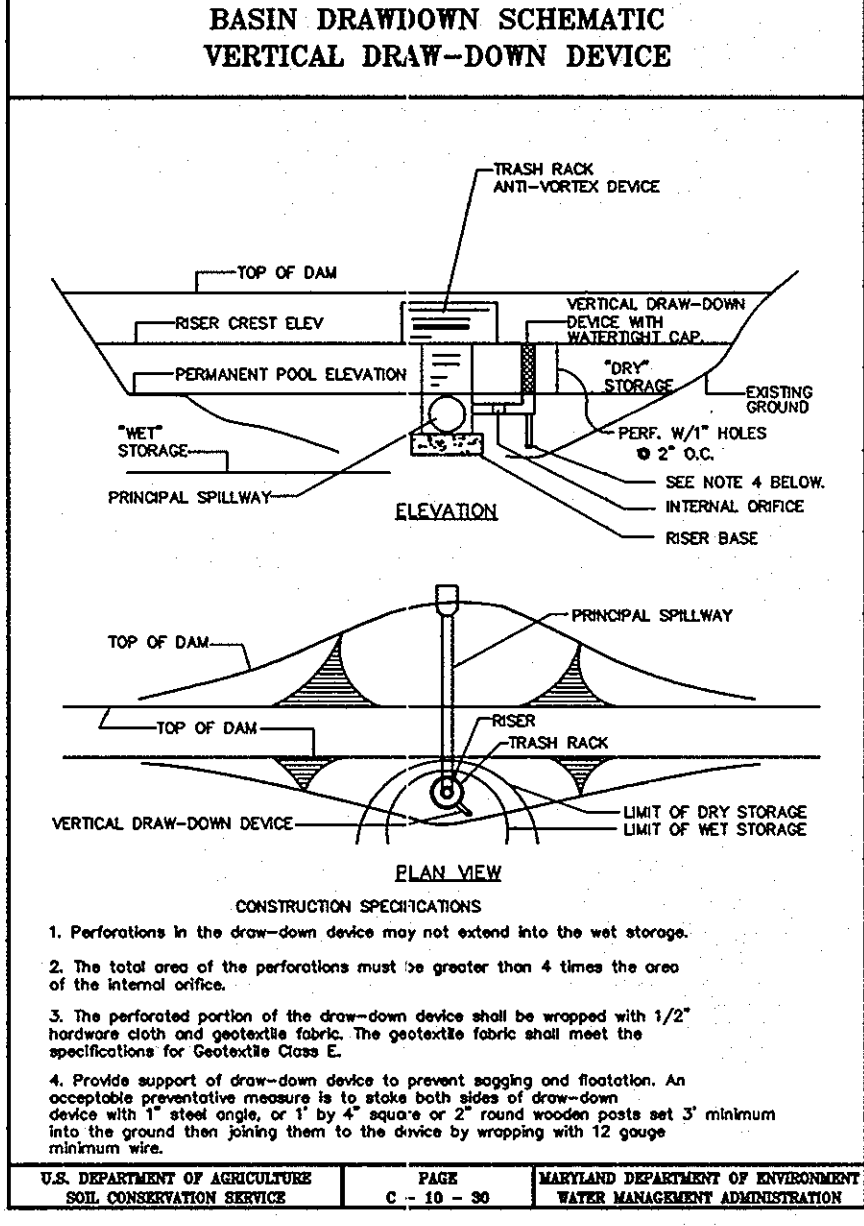
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-8-18A MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-7-2 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE G-19-30 MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES WATER MANAGEMENT ADMINISTRATION

DEVELOPERS/BUILDERS CERTIFICATE

I, THE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I, THE DEVELOPER, ENGINEER, ARCHITECT, REGISTERED PROFESSIONAL ENGINEER, REGISTERED PROFESSIONAL ENGINEER-TO-SUPERVISE ROAD CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE PROJECT WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER/BUILDER: *CKJ* DATE: 6/22/05

ENGINEERS CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE ADVISED THE DEVELOPER OF ALL REQUIREMENTS AND I HAVE ADVISED THE DEVELOPER OF ALL REQUIREMENTS TO SUPERVISE ROAD CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE ROAD WITHIN 30 DAYS OF COMPLETION.

ENGINEERS SIGNATURE: *CKJ* DATE: 6/22/05

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William F. ... Chief, Bureau of Highways DATE: 2-12-07

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Conrad ... Chief, Division of Land Development DATE: 2/22/07

... Chief, Development Engineering Division DATE: 2/22/07

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robinson 8/18/05 DATE

Jim Myler 8/18/05 DATE

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY!

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 410-880-1820 D07/MS: 301-959-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

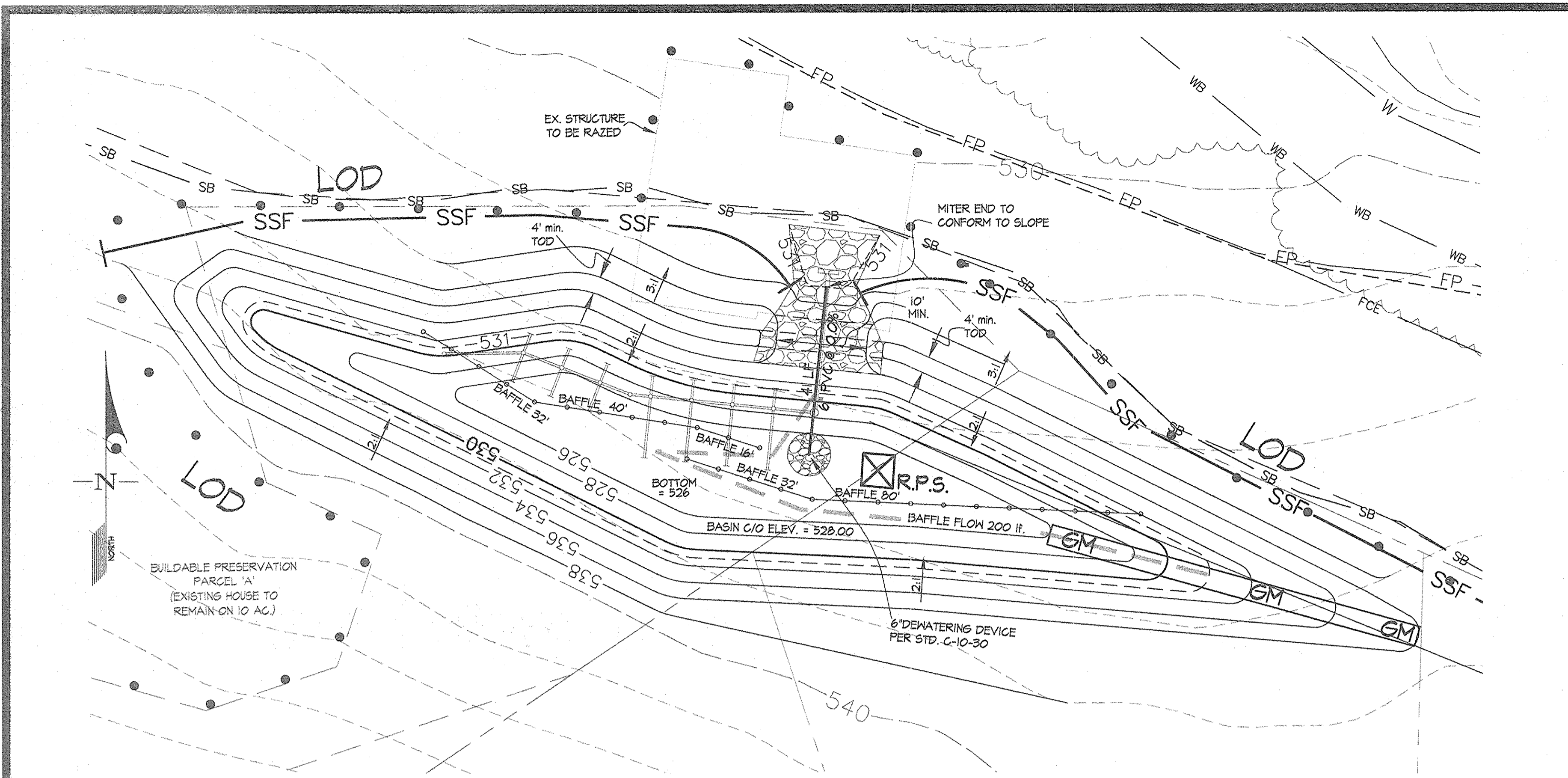
MUSGROVE FARM LLC
8808 CENTRE PARK DRIVE
SUITE 209
COLUMBIA, MARYLAND 21045
ATTN: BILL GRAU
410-964-5522

SEDIMENT CONTROL NOTES & DETAILS

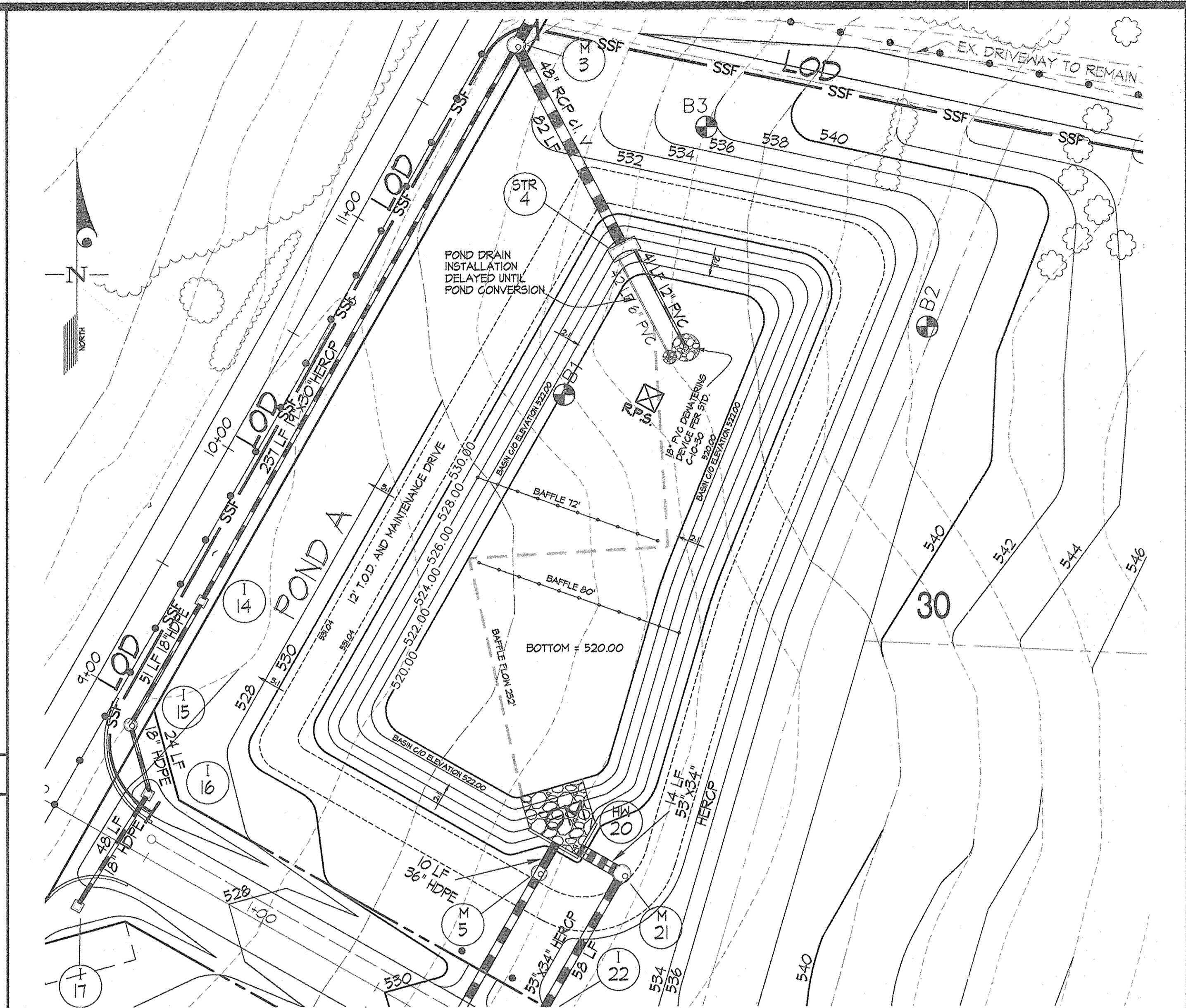
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(NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA P-03-128)

ELECTION DISTRICT No. 3 & 4

SCALE	ZONING	G. L. W. FILE NO.
NO SCALE	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	18 OF 22



SEDIMENT TRAP B SCALE: 1"=20'



Basin A SCALE: 1"=30'

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

Jim Meyer 8/18/05
 NATIONAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Ranta 8/18/05
 HOWARD S.C.D. DATE

DEVELOPERS/BUILDERS CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE HAVE ENGAGED A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE PERIODIC INSPECTIONS THROUGHOUT CONSTRUCTION AND TO PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN INSPECTION REPORT WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT THESE PLANS MUST BE ENGAGED BY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN INSPECTION REPORT WITHIN 30 DAYS OF COMPLETION."

CK 6/22/05
 ENGINEERS SIGNATURE DATE

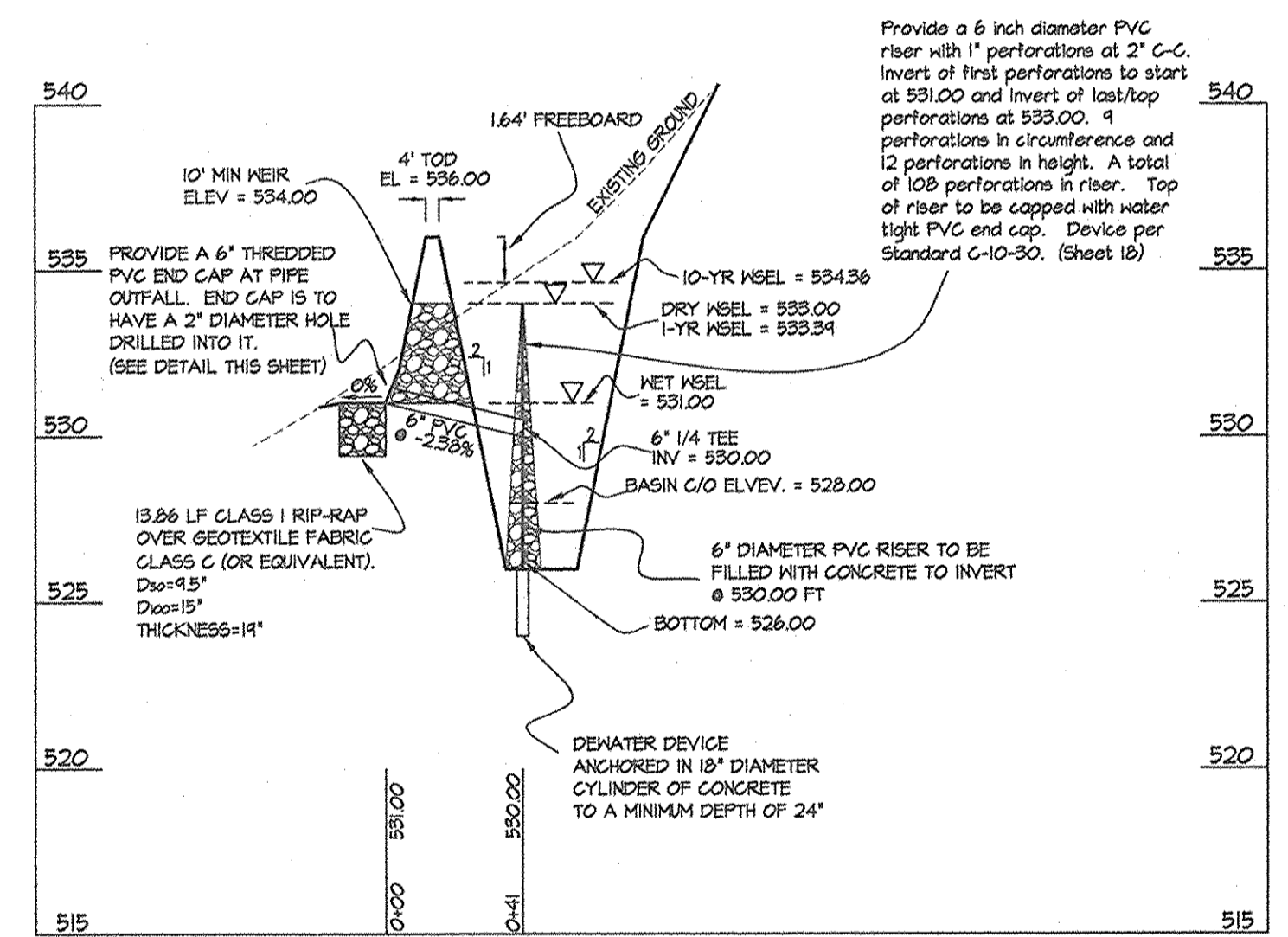
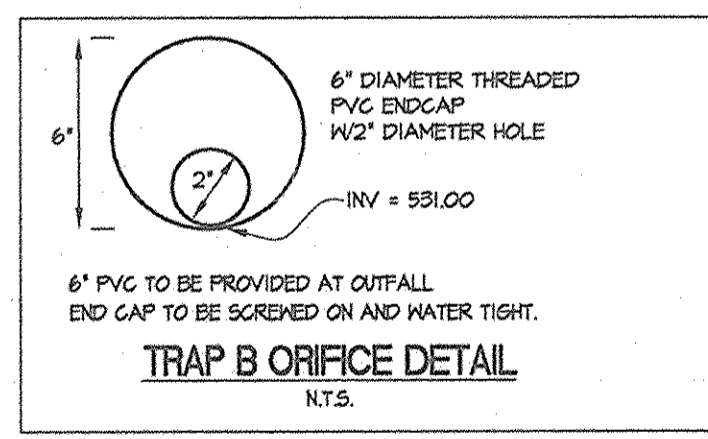
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Wish Z... 2-12-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
... 2/15/07
 Chief, Division of Land Development Date

... 2/2/07
 Chief, Development Engineering Division Date

SEDIMENT TRAP B DATA TABLE

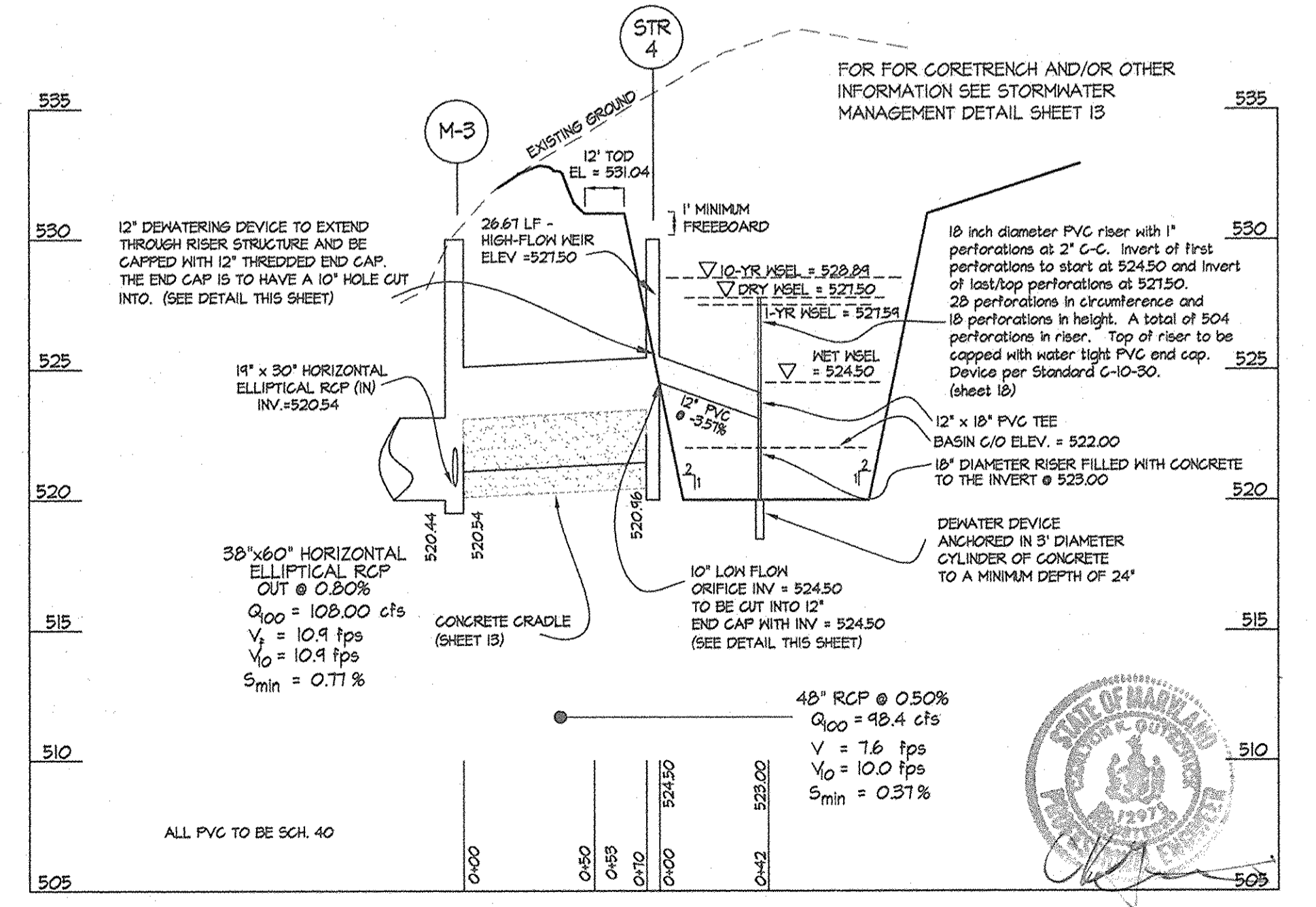
ROCK OUTLET SEDIMENT TRAP TYPE ST-IV
 EX. DRAINAGE AREA: 5.1 AC (EX-1)
 INTERIM DRAINAGE AREA: 5.1 AC (INT-1)
 NET STORAGE VOL. REQUIRED: 0.24 AC-FT
 NET STORAGE VOL. PROVIDED: 0.52 AC-FT
 NET STORAGE ELEV.: 531
 DRY STORAGE PROVIDED: 0.24 AC-FT
 DRY STORAGE WEIR: 533.00
 EXISTING Q-YR = 0.35 cfs (STUDY POINT 1)
 INTERIM Q-YR = 0.18 cfs (STUDY POINT 1)
 SAFE PASS OF 10-YR STORM PROVIDED
 Q10 = 18.48 cfs
 10-YR WEIR = 534.36 ft.
 BOTTOM ELEVATION: 526.00
 TOP OF EMBANKMENT: 536.00
 OUTFALL: 41 LF 6" PVC @ -2.38%
 4" 10' WIDE ROCK WEIR @ 534.00 TO
 RIPRAP OUTFALL AT 521.00
 6" INVERT AT DEWATERING DEVICE + 530.00
 6" INVERT AT RIPRAP = 531.00
 EMERGENCY SPILLWAY ELEV. NONE
 CLEANOUT ELEVATION: 528.00
 EMBANKMENT TOP WIDTH: 4' MIN
 SIDE SLOPES: 2:1 INTERIOR, 3:1 EXTERIOR



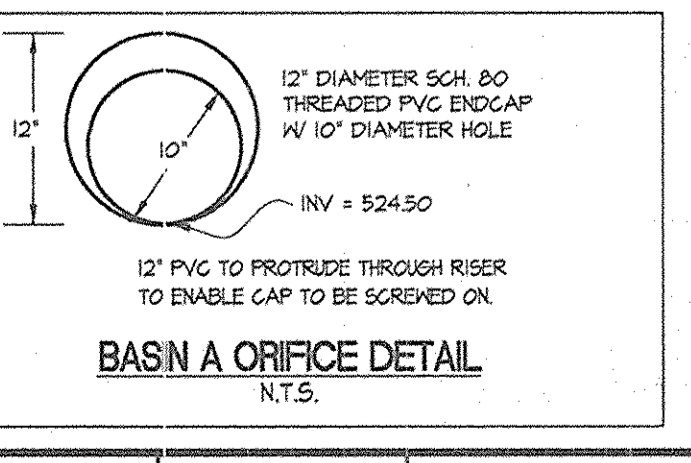
SEDIMENT BASIN B - PROFILE THROUGH PRINCIPLE SPILLWAY SCALE: (H) 1" = 5' (V) 1" = 5'

SEDIMENT BASIN A DATA TABLE

EXISTING DRAINAGE AREA: 34.2 AC (EX-2)
 INTERIM DRAINAGE AREA: 34.2 AC (INT-2)
 NET STORAGE VOL. REQUIRED: 1.41 AC-FT
 NET STORAGE VOL. PROVIDED: 1.64 AC-FT
 NET STORAGE ELEV.: 524.50
 DRY STORAGE PROVIDED: 1.41 AC-FT
 DRY STORAGE WEIR: 521.50
 EXISTING Q-YR = 4.74 cfs (STUDY POINT 2)
 INTERIM Q-YR = 4.78 cfs (STUDY POINT 2)
 SAFE PASS OF 10-YR STORM PROVIDED
 Q10 = 21.61 cfs
 10-YR WEIR = 528.24 ft.
 BOTTOM ELEVATION: 520.00
 TOP OF EMBANKMENT: 531.04
 OUTFALL: 10 LF 48" RCP @ 0.58%
 OUTFALL TO PROPOSED STORM DRAIN (M-3)
 OUTFALL INVERT AT RISER = 520.16
 OUTFALL INVERT AT M-3 = 520.44
 RISER/WEIR DIAMETER = 10' x 4' PRECAST STR.
 RISER WEIR CREST ELEVATION: 521.50
 RISER WEIR LENGTH: 26.61
 RISER TRASH RACK/ANTIVORTEX: N/A
 DEWATERING DEVICE = 18" PERFORATED PVC WITH 12" PVC BARREL AT -5.78
 DEWATERING INVERT AT STR-4 = 524.50
 DEWATERING INVERT AT 18" RISER = 523.00
 INVERT FIRST PERFORATION = 524.50
 DEWATERING PERFORMANCE CONFIGURATION:
 WITH 1" HOLES @ 2' C-C
 20 HOLES PER CIRCUMFERENTIAL ROW
 18 HOLES RANNING VERTICALLY.
 504 HOLES TOTAL
 EMERGENCY SPILLWAY ELEV. NONE
 CLEANOUT ELEVATION: 522.00
 EMBANKMENT TOP WIDTH: 3'
 SIDE SLOPES: 2:1 INTERIOR - 3:1 EXTERIOR



SEDIMENT BASIN A - PROFILE THROUGH PRINCIPLE SPILLWAY SCALE: (H) 1" = 5' (V) 1" = 5'



THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY!

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

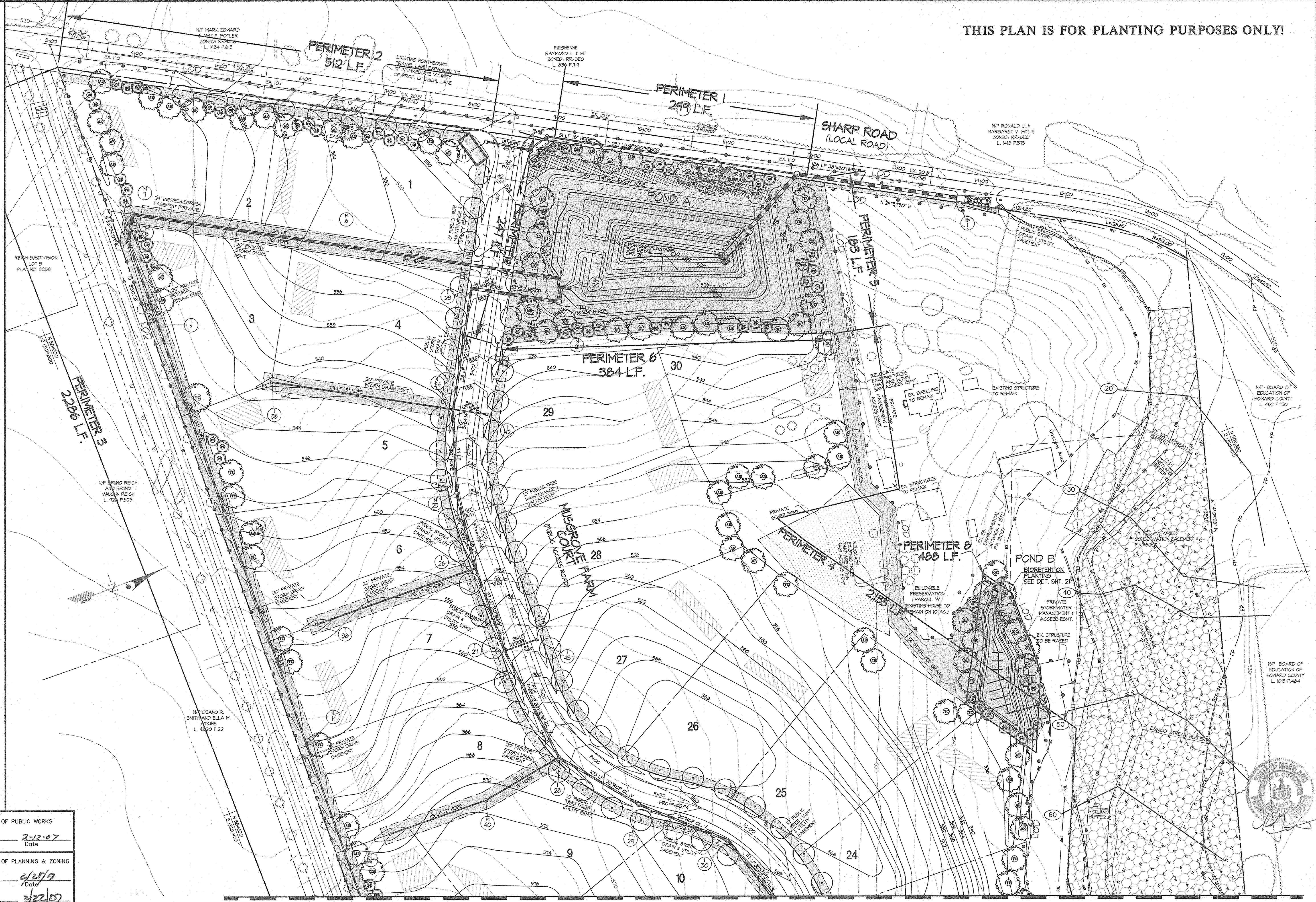
MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN.: BILL GRAU
 410-964-5522

SEDIMENT CONTROL NOTES & DETAILS
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A, AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128) (NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	19 OF 22

THIS PLAN IS FOR PLANTING PURPOSES ONLY!

- LEGEND**
- EXISTING TOPOGRAPHY
 - PROPOSED CONTOURS
 - EXISTING TREE LINE
 - EXISTING STRUCTURES
 - STREAM VALLEY BUFFER
 - WETLANDS
 - WETLAND BUFFER
 - FLOODPLAIN
 - LIMIT OF DISTURBANCE
 - FOREST CONSERVATION EASEMENT
 - TREE PROTECTION FENCE
 - FOREST CONSERVATION EASEMENT AREA
 - NO-WOODY ZONE
 - SHADE TREE
 - STREET TREE
 - EVERGREEN TREE



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. Whelan 2-12-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Judy Hammit 2/27/07
 Chief, Division of Land Development Date

Michael J. ... 2/27/07
 Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-850-1820 DC/VA: 301-959-2324 FAX: 301-421-4186

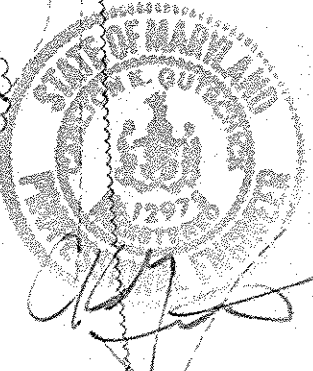
DATE	REVISION	BY	APP'R.

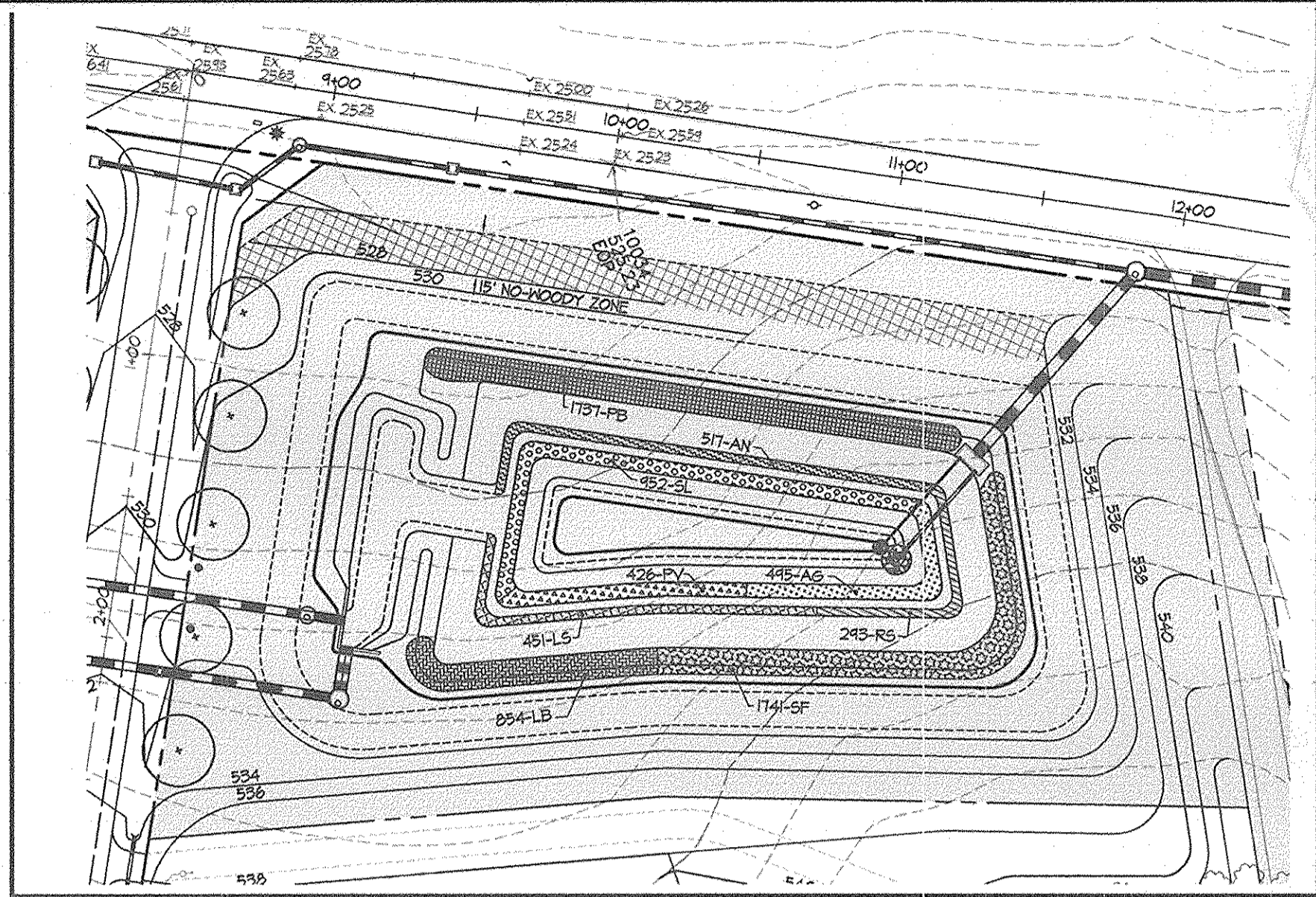
MUSGROVE FARM LLC
 8808 CENTRE PARK DRIVE
 SUITE 209
 COLUMBIA, MARYLAND 21045
 ATTN: BILL GRAU
 410-964-5522

LANDSCAPE PLAN
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
 (A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
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 HOWARD COUNTY, MARYLAND

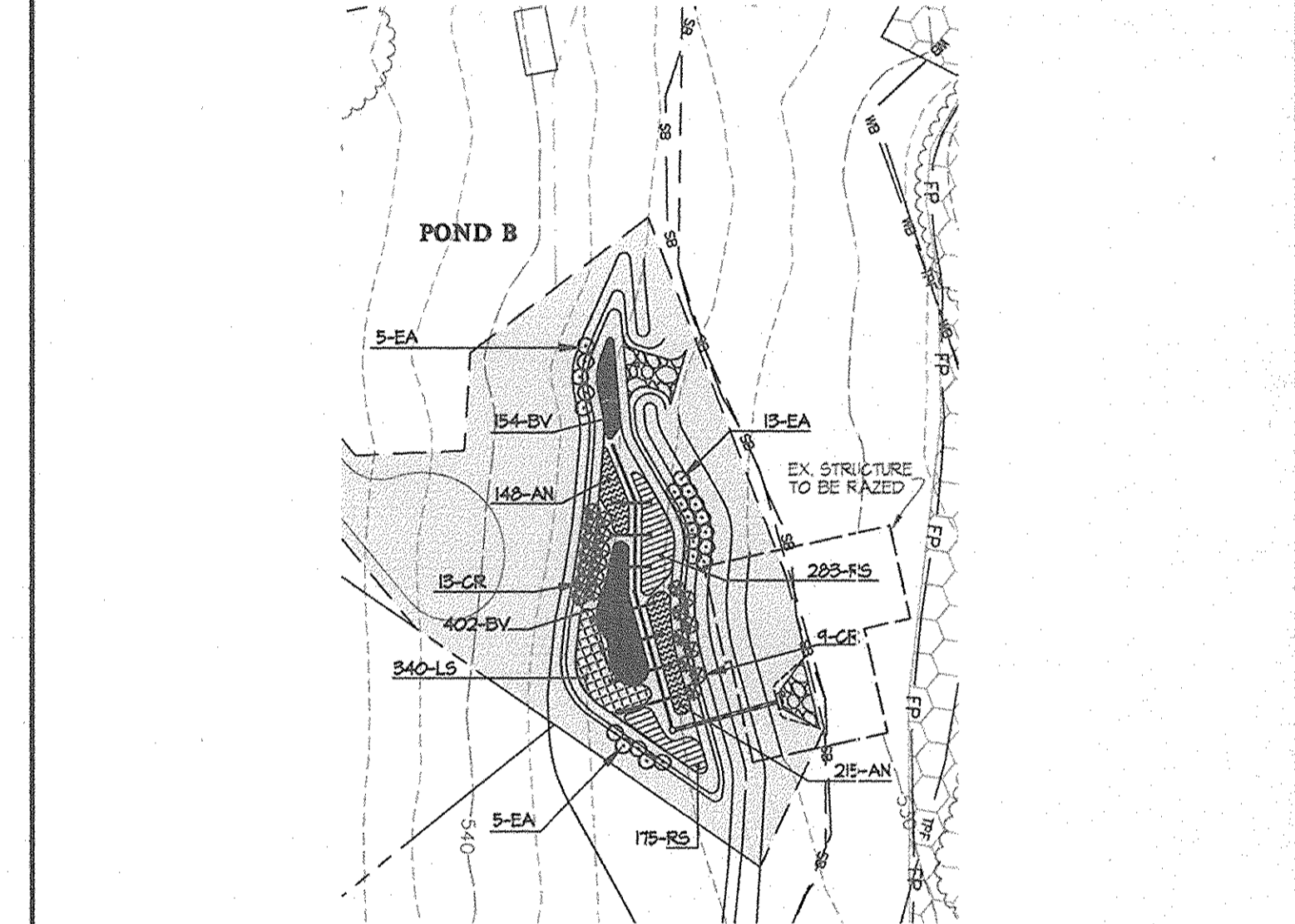
SCALE	ZONING	G. L. W. FILE NO.
1"=50'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	20 OF 22

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SWM POND A PLANTING PLAN SCALE: 1" = 50'



SWM POND B BIORETENTION PLANTING PLAN SCALE: 1" = 50'

PLANT LIST FOR STORMWATER MANAGEMENT PONDS				
SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	NOTES
SHRUBS				
EA	23	<i>Euronymus atropurpureus</i> Eastern Burning Bush	24"-36" spread	containerized
CR	22	<i>Cornus racemosa</i> Gray Dogwood	24"-36" spread	containerized
PERENNIALS/GROUNDCOVER				
AN	880	<i>Aster novi-belgii</i> New York Aster	1 gal. cont.	18" o.c.
LS	791	<i>Lobelia siphilitica</i> Great Blue Lobelia	1 gal. cont.	18" o.c.
RS	751	<i>Rudbeckia subtomentosa</i> Cut-leaf Coneflower	1 gal. cont.	18" o.c.
AG	495	<i>Andropogon glomeratus</i> Bushy Beardgrass	1 gal. cont.	18" o.c.
PV	426	<i>Peltandra virginica</i> Arrow Arum	1 gal. cont.	18" o.c.
SL	952	<i>Sagittaria latifolia</i> Duck Potato	1 gal. cont.	18" o.c.
BV	556	<i>Verbena hastata</i> Blue Vervain	1 gal. cont.	18" o.c.
PB	1737	<i>Agrostis perennans</i> Perennial Bentgrass	1 gal. cont.	18" o.c.
SF	1741	<i>Cyperus fillicinus</i> Slender Flatsedge	1 gal. cont.	18" o.c.
LB	854	<i>Poa alpigena</i> Low Bluegrass	1 gal. cont.	18" o.c.

NOTE: STORMWATER MANAGEMENT POND PLANTINGS ARE PER MDE 2000 REQUIREMENTS

THIS PLAN IS FOR PLANTING PURPOSES ONLY!

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William Z. ... 2-22-07
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Condy ... 2/22/07
 Chief, Division of Land Development Date

... 2/22/07
 Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
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DATE	REVISION	BY	APP'R.

MUSGROVE FARM LLC
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 COLUMBIA, MARYLAND 21045
 ATTN.: BILL GRAU
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LANDSCAPE PLAN
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
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 ELECTION DISTRICT No. 3 & 4 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	21 OF 22

PLANT LIST				
SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	NOTES
SHADE TREES				
AR	67	Acer rubrum 'October Glory' October Glory Red Maple	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht	
SB	4	Salix babylonica Weeping Willow	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht	
TC	25	Tilia cordata 'Greenspire' Greenspire Littleleaf Linden	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht	
QC	13	Quercus coccinea Scarlet Oak	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht	
TA	3	Taxodium distichum Bald Cypress	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht	
LS	7	Liquidambar styraciflua Sweet Gum	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht	
EVERGREEN TREES				
CD	10	Cedrus deodara Deodar Cedar	8'-10' height	
IO	53	Ilex opaca American Holly	7'-8' height 16 male and 31 female plants (1 male to 3 females)	
FS	34	Pinus strobus White Pine	8'-10' height	

STREET TREE SCHEDULE			
SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE
QP	62	Quercus phellos Willow Oak	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht
QR	29	Quercus rubra Northern Red Oak	2 1/2"-3" Cal. B&B 12' - 14' height 6' min. branching ht

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William F. ... 2-12-07
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Christy ... 2/21/07
Chief, Division of Land Development

... 2/22/07
Chief, Development Engineering

PLANT MATERIALS AND PLANTING METHODS

A. PLANT MATERIALS

THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG BALL, BURLAP AND TRANSLANT ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.

1. PLANT NAMES

PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM WITH STANDARDIZED PLANT NAMES, LATEST EDITION.

2. PLANT STANDARDS

ALL PLANT MATERIAL SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE 195A STANDARD FOR NURSERY STOCK, LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (HEREAFTER REFERRED TO AS AAN STANDARDS). ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL-BRANCHED AND WITH HEALTHY, WELL-FURNISHED ROOT SYSTEMS. THEY SHALL BE FREE OF DISEASE, INSECT PESTS AND MECHANICAL INJURIES.

ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATE CONDITIONS AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER HEEL-IN PLANTS NOR PLANTS FROM GOLD STORAGE WILL BE ACCEPTED.

3. PLANT MEASUREMENTS

ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE AS APPROVED BY THE ARG.

A. CALIPER MEASUREMENTS SHALL BE TAKEN SIX INCHES (6") ABOVE GRADE FOR TREES UNDER FOUR-INCH (4") CALIPER AND TWELVE (12") ABOVE GRADE FOR TREES FOUR INCHES (4") IN CALIPER AND OVER.

B. MINIMUM BRANCHING HEIGHT FOR ALL TREES SHALL BE SIX FEET (6'), MAXIMUM EIGHT FEET (8').

C. MINIMUM SIZE FOR PLANTING SHADE TREES SHALL BE 3"-3 1/2" CALIPER, 14'-16' IN HEIGHT.

D. MINIMUM SIZE FOR PLANTING MINOR OR INTERMEDIATE FOCUS TREES (PINES, CRABAPPLES, ETC.) SHALL BE 3"-3 1/2" CALIPER, 10'-12' IN HEIGHT.

E. MINIMUM SIZE FOR PLANTING SHRUBS SHALL BE 18" - 24" SPREAD UNLESS NOTED OTHERWISE.

F. CALIPER, HEIGHT, SPREAD AND SIZE OF BALL SHALL BE GENERALLY AS FOLLOWS:

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3 1/2"	14'-16'	6'-8'	32" DIAMETER
3 1/2" - 4"	14'-16'	8'-10'	36" DIAMETER
4" - 4 1/2"	16'-18'	8'-10'	40" DIAMETER
4 1/2" - 5"	16'-17'	10'-12'	44" DIAMETER
5" - 5 1/2"	18'-20'	10'-12'	48" DIAMETER
5 1/2" - 6"	18'-20'	12'-14'	52" DIAMETER

ALL PLANT MATERIAL SHALL GENERALLY AVERAGE THE MEDIAN FOR THE SIZE RANGES INDICATED ABOVE AS INDICATED IN THE 'AAN STANDARDS'.

4. PLANT IDENTIFICATION

LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOXES OF OTHER PLANT MATERIAL, GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.

5. PLANT INSPECTION

THE ARG MAY, UPON REQUEST BY THE BUILDER OR DEVELOPER, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, INSPECT ALL PROPOSED PLANT MATERIAL AT THE SOURCE OF ORIGIN.

B. PLANTING METHODS

ALL PROPOSED PLANT MATERIALS THAT MEET THE SPECIFICATIONS IN SECTION A ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:

1. PLANTING SEASONS

THE PLANTING OF DECIDUOUS TREES, SHRUBS AND VINES SHALL BE FROM MARCH 1ST TO JUNE 15TH AND FROM SEPTEMBER 15TH TO DECEMBER 15TH. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL PLANTING MIXTURES ARE USED.

THE PLANTING OF EVERGREEN MATERIAL SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM AUGUST 1ST TO DECEMBER 15TH. NO PLANTING SHALL BE DONE WHEN GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN OR NET TOPSOIL SHALL BE USED AT ANY TIME.

2. DIGGING

ALL PLANT MATERIAL SHALL BE DUG, BALLED AND BURLAPPED (B&B) IN ACCORDANCE WITH THE 'AAN STANDARDS'.

3. EXCAVATION OF PLANT FITS

THE LANDSCAPING CONTRACTOR SHALL EXCAVATE ALL PLANT FITS, VINE FITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

A. LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.

B. ALL FITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, VERTICAL SIDES, DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL. DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL AS SET FORTH IN THE FOLLOWING SCHEDULE.

C. IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE EXCAVATED TO AT LEAST 18" DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE EXCAVATED TO AT LEAST 12" IN DEPTH MINIMUM.

D. DIAMETER AND DEPTH OF TREE FITS SHALL GENERALLY BE AS FOLLOWS:

PLANT SIZE	ROOT BALL	DIAMETER	DEPTH
3" - 3 1/2" CAL.	32"	64"	28"
3 1/2" - 4" CAL.	36"	72"	32"
4" - 4 1/2" CAL.	40"	80"	36"
4 1/2" - 5" CAL.	44"	88"	40"
5" - 5 1/2" CAL.	48"	96"	44"
5 1/2" - 6" CAL.	52"	104"	48"

A 20% COMPACTION FIGURE OF THE SOIL TO BE REMOVED IS ASSIGNED AND WILL BE ALLOWED IN CALCULATION OF EXTRA TOPSOIL. THE TABULATED FIT SIZES ARE FOR PURPOSES OF UNIFORM CALCULATION AND SHALL NOT OVERRIDE THE SPECIFIED DEPTHS BELOW THE BOTTOMS OF THE ROOT BALLS.

4. STAKING, GUYING AND WRAPPING

ALL PLANT MATERIAL SHALL BE STAKED OR GUYED, AND WRAPPED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

A. STAKES SHALL BE SOUND WOOD 2" X 2" ROUGH SHAWN OAK OR SIMILAR DURABLE WOODS, OR LENGTHS, MINIMUM 1'-0" FOR MAJOR TREES AND 5'-0" MINIMUM FOR MINOR TREES.

B. WIRE AND CABLE WIRE SHALL BE #10 GA. GALVANIZED OR BETHANIZED ANNEALED STEEL WIRE. FOR TREES OVER 3" CALIPER, PROVIDE 5/8" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 5" CALIPER, PROVIDE 3/8", 1 STRAND CABLE CADMIUM PLATED STEEL, WITH GALVANIZED 1/2" THICKNESS OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.

C. HOSE SHALL BE NEW 2 PLY REINFORCED RUBBER HOSE, MINIMUM 1/2" I.D. "PLASTIC LOCK TIES" OR "PALLS TREES BRACES" MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.

D. ALL TREES UNDER 3" IN CALIPER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE ATTACHED "TYPICAL TREE STAKING DETAIL". ALL TREES OVER 3" IN CALIPER ARE TO BE PLANTED AND GUYED IN ACCORDANCE WITH THE ATTACHED "TYPICAL TREE GUYING DETAIL".

5. PLANT PRUNING, EDGING AND MULCHING

A. EACH TREE, SHRUB OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE. BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS FLUSH WITH THE ADJACENT TRUNK OR BRANCHES. ALL CUTS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED ANTISEPTIC TREE WOUND DRESSING.

B. ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE FIT. SOD WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT FIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.

C. AFTER CULTIVATION ALL PLANT MATERIALS SHALL BE MULCHED WITH A 2" LAYER OF FINE SHREDED PINE BARK, FEAT MOSS, OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR SAUCER.

6. PLANT INSPECTION AND ACCEPTANCE

THE ARG SHALL BE RESPONSIBLE FOR INSPECTING ALL PLANTING PROJECTS ON A PERIODIC BASIS TO ASSURE THAT ALL WORK IS PROCEEDING IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

7. PLANT GUARANTEE

ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION OF ONE FULL GROWING SEASON, AFTER FINAL INSPECTION AND ACCEPTANCE OF THE WORK IN THE PLANTING PROJECT. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD.

A. FOR THIS PURPOSE THE "GROWING SEASON" SHALL BE THAT PERIOD BETWEEN THE END OF THE "SPRING" PLANTING SEASON, AND THE COMMENCEMENT OF THE "FALL" PLANTING SEASON.

B. GUARANTEE FOR PLANTING PERFORMED AFTER THE SPECIFIED END OF THE "SPRING" PLANTING SEASON SHALL BE EXTENDED THROUGH THE END OF THE NEXT FOLLOWING "SPRING" PLANTING SEASON.

SODDING

ALL SODDING SHALL BE IN ACCORDANCE TO THE 'LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS' LATEST EDITION, APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.

ALL SOD SHALL BE STRONGLY ROOTED SOD, NOT LESS THAN TWO YEARS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES. PROVIDE ONLY SOD CAPABLE OF GROWTH DEVELOPMENT WHEN PLANTED AND IN STRIPS NOT MORE THAN 18" WIDE X 4' LONG. PROVIDE SOD COMPOSED PRINCIPALLY OF IMPROVED STRAIN KENTUCKY BLUEGRASS, SUCH AS COLUMBIA, VICTA, OR ESCORT.

SCHEDULE A PERIMETER LANDSCAPE PERIMETER CATEGORY	PERIMETER 2	PERIMETER 3	PERIMETER 4
LANDSCAPE BUFFER TYPE	B	A	A
LINEAR FEET OF ROADWAY/ PERIMETER FRONTAGE	512'	2,286'	2,195'
CREDIT FOR EX. VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO
CREDIT FOR HALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	11 15 0	54 0 0	36 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (21 SUBST.) SHRUBS (101 SUBST.) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	11 14 0 0	54 40 0 0	36 0 0 0
Schedule 'A' Number of Shade Trees for Bonding: 56 x \$500 = \$28,000 Schedule 'A' Number of Evergreen Trees for Bonding: 15 x \$150 = \$2,250 Schedule 'A' Number of Shrubs for Bonding: 0 x \$50 = \$0 TOTAL ESTIMATE FOR BONDING: \$30,250			
COMMENTS:			

MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:
MUSGROVE FARM COURT - 1631 L.F. (20' FOR BOTH SIDES) WITH 1 TREE PER 40' LINEAR FEET, BOTH SIDES
SHARP ROAD IMPROVEMENTS - 360 L.F. WITH 1 TREE PER 40' LINEAR FEET
TOTAL REQUIRED FOR MUSGROVE FARM COURT: 62
TOTAL REQUIRED FOR SHARP ROAD: 9

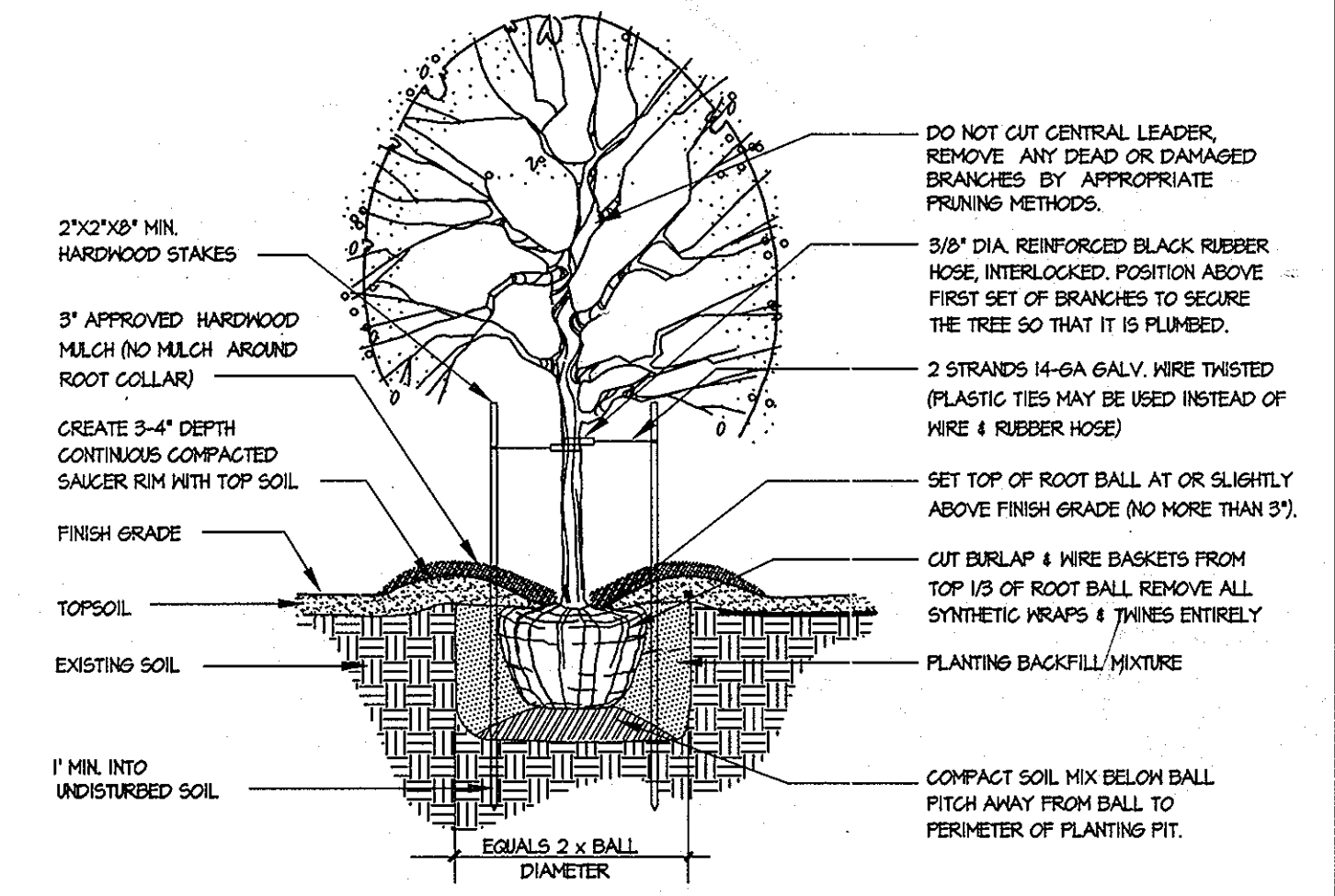
STREET TREE SCHEDULE				
SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQ'D	NUMBER OF TREES PROVIDED
QP	QUERCUS PHELLOS / WILLOW OAK	2 1/2"-3" cal.	SEE NOTE ABOVE	62
QR	QUERCUS RUBRA / NORTHERN RED OAK	2 1/2"-3" cal.	SEE NOTE ABOVE	29
STREET TREE SCHEDULE NUMBER OF TREES FOR BONDING: 91 x \$500 = \$45,500.00				

STORM WATER MANAGEMENT AREA LANDSCAPING - SCHEDULE D									
PERIMETER	PROPOSED LAND USE	ADJACENT LAND USE	LINEAR FEET OF PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	# OF PLANTS REQUIRED (SHADE TREES, EVERGREEN TREES, ORN. TREES)	# OF PLANTS PROVIDED (SHADE TREES, EVERGREEN TREES, ORN. TREES)	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)		
TP-1	POND	ROADWAY	299' (8)	NO	6 8	6 8	NO		
TP-5	POND	RESIDENTIAL	183' (8)	NO	4 5	4 5	NO		
TP-6	POND	RESIDENTIAL	384' (8)	NO	8 10	8 10	NO		
TP-7	POND	ROADWAY	247' (8)	NO	5 7	5 7	NO		
TP-8	POND	RESIDENTIAL	488' (8)	NO	10 13	10 13	NO		
SCHEDULE D REQUIRED SURETY: 55 SHADE TREES @ \$500/TREE = \$27,500.00 43 EVG. TREES @ \$150.00 = \$6,450.00 TOTAL = \$33,950.00									

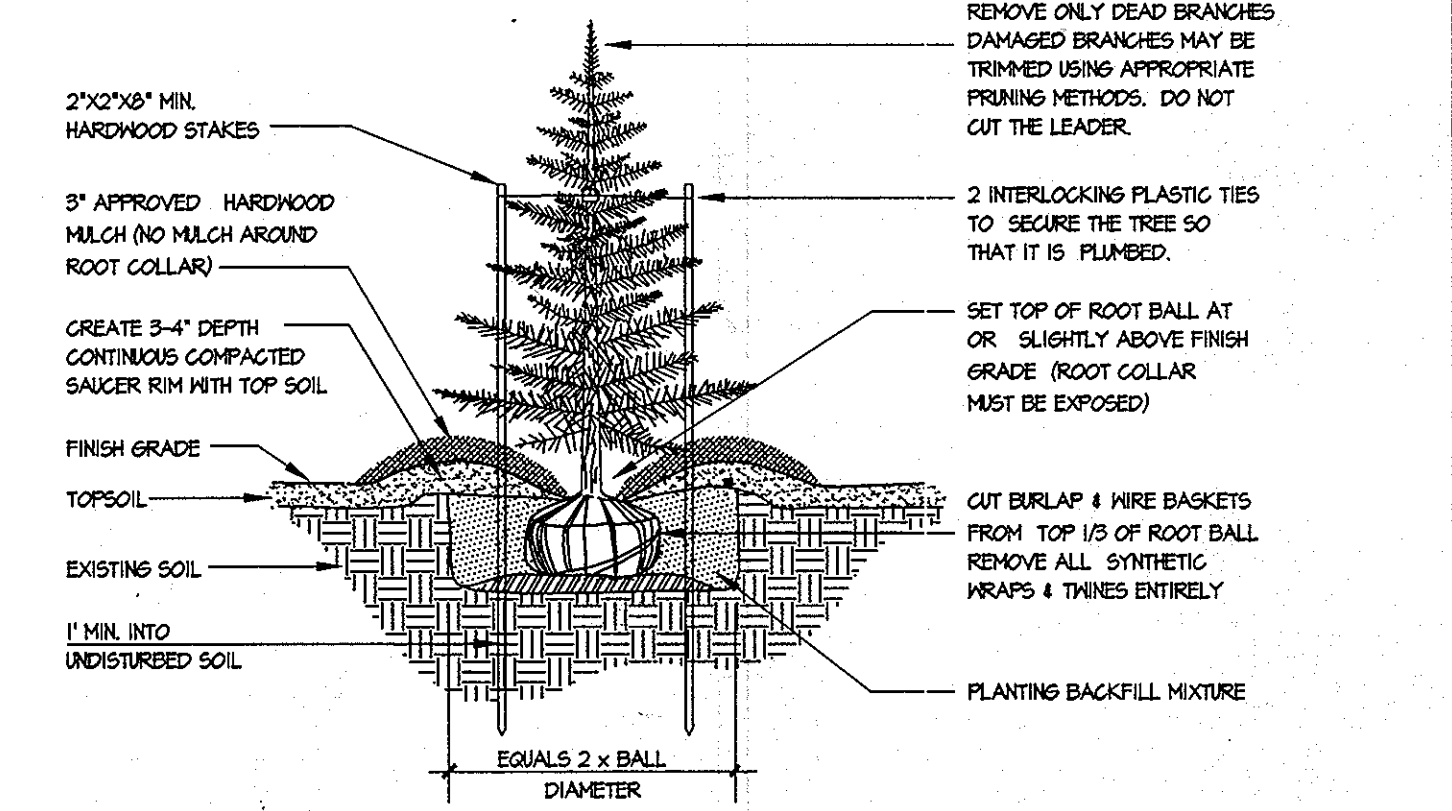
THE LANDSCAPE SURETY WILL BE INCLUDED IN THE DEVELOPER'S AGREEMENT

LANDSCAPING NOTES:

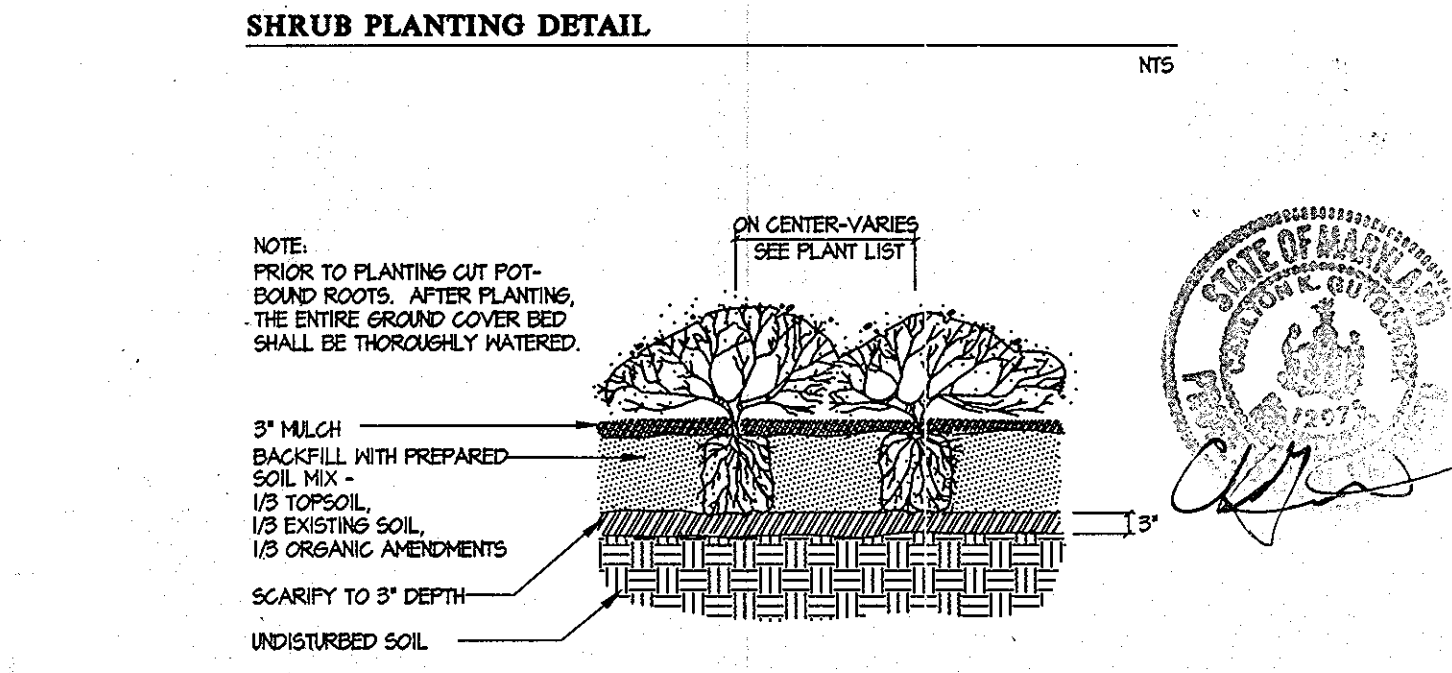
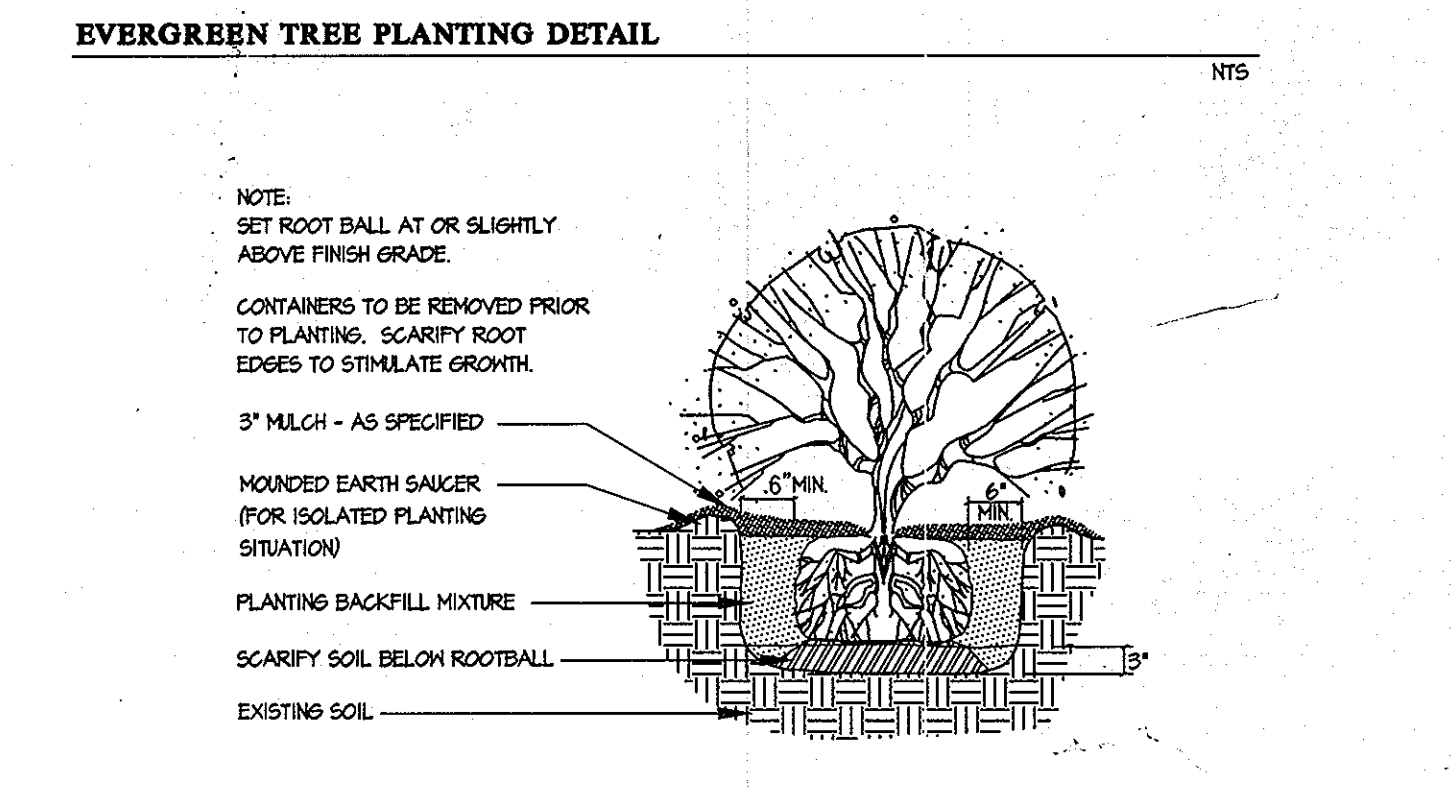
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE OF THE HOWARD COUNTY LANDSCAPE MANUAL.
- CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST (5) FIVE DAYS BEFORE STARTING WORK. ALL GENERAL NOTES, ESPECIALLY THOSE REGARDING UTILITIES, ON SHEET 1 SHALL APPLY.
- FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK. CONTACT ENGINEER / LANDSCAPE ARCHITECT IF ANY RELOCATIONS ARE REQUIRED.
- PLANT QUANTITIES SHOWN ON PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON THE PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL TAKE PRECEDENCE.
- ALL PLANT MATERIAL SHALL BE FULL, HEAVY, WELL FORMED, AND SYMMETRICAL, AND CONFORM TO THE 'AAN' SPECIFICATIONS, AND BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- NO SUBSTITUTION SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR HIS REPRESENTATIVE.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED, OR MULCHED SHALL BE SEEDED OR SODDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF HE/SHE ENCOUNTERS SOIL DRAINAGE CONDITIONS WHICH MAY BE DETRIMENTAL TO THE GROWTH OF THE PLANTS.
- ALL EXPOSED EARTH WITHIN LIMITS OF PLANTING BEDS SHALL BE MULCHED WITH SHREDED HARDWOOD MULCH PER PLANTING DETAILS.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND, WHEN NECESSARY, REPAIRED AND REPLACED.
- SCHEDULE A - PERIMETER LANDSCAPE EDGE, AND SCHEDULE D - STORMWATER MANAGEMENT AREA LANDSCAPING ARE PROVIDED FOR LANDSCAPE SURETY CALCULATION PURPOSES ONLY. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED WITH THE DPM DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$44,000.00 FOR:
111 SHADE TREES @ \$500/TREE = \$55,500.00
36 EVG. TREES @ \$150/TREE = \$5,400.00
- 'STREET TREE SCHEDULE' IS PROVIDED FOR LANDSCAPE SURETY CALCULATION PURPOSES ONLY. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED WITH THE DPM DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$21,500.00 FOR THE VALUE OF 41 REQUIRED SHADE TREES (AT \$500.00/TREE).
- NO LANDSCAPING WILL BE ALLOWED WITHIN STORMWATER EASMENTS.



NOTE: ALL SUPPORTING DEVICES (STAKES, WIRES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.



NOTE: ALL SUPPORTING DEVICES (STAKES, TIES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.



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GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

MUSGROVE FARM LLC
8808 CENTRE PARK DRIVE
SUITE 209
COLUMBIA, MARYLAND 21045
ATTN.: BILL GRAU
410-964-5522

LANDSCAPE NOTES & DETAILS
MUSGROVE FARM
LOTS 1 THRU 30, BUILDABLE PRESERVATION PARCEL A,
AND NON-BUILDABLE PRESERVATION PARCELS C & D
(A RE-SUBDIVISION OF BUILDABLE BULK PARCEL 'A' FROM F-03-128)
(NON-BUILDABLE PRESERVATION PARCEL 'B' CREATED VIA F-03-128)
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	RR-DEO	01171
DATE	TAX MAP - GRID	SHEET
JUNE, 2005	21-12, 22-1&7	22 OF 22

DES. JRS DRN. JRS CHK. MT