SHEET INDEX SHEET No. FOLLY QUARTER ROAD - ROAD WIDENING PLAN AND PROFILE BUCKS RIDGE COURT - ROAD PLAN AND PROFILE STREET TREE, GRADING, AND SEDIMENT CONTROL PLAN FOLLY QUARTER ROAD - CROSS-SECTIONS LANDSCAPE PLAN AND STORM DRAIN DRAINAGE AREA MAP SEDIMENT AND EROSION CONTROL NOTES AND DETAILS SEDIMENT AND EROSION CONTROL NOTES AND DETAILS STORMWATER MANAGEMENT NOTES AND DETAILS STORMWATER MANAGEMENT NOTES AND DETAILS FOREST CONSERVATION PLAN FOREST CONSERVATION PLAN NOTES AND DETAILS

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLAN

BUCKSKIN OAKS

LOTS 1 THRU 4, OPEN SPACE LOT 5, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' (A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 144449)

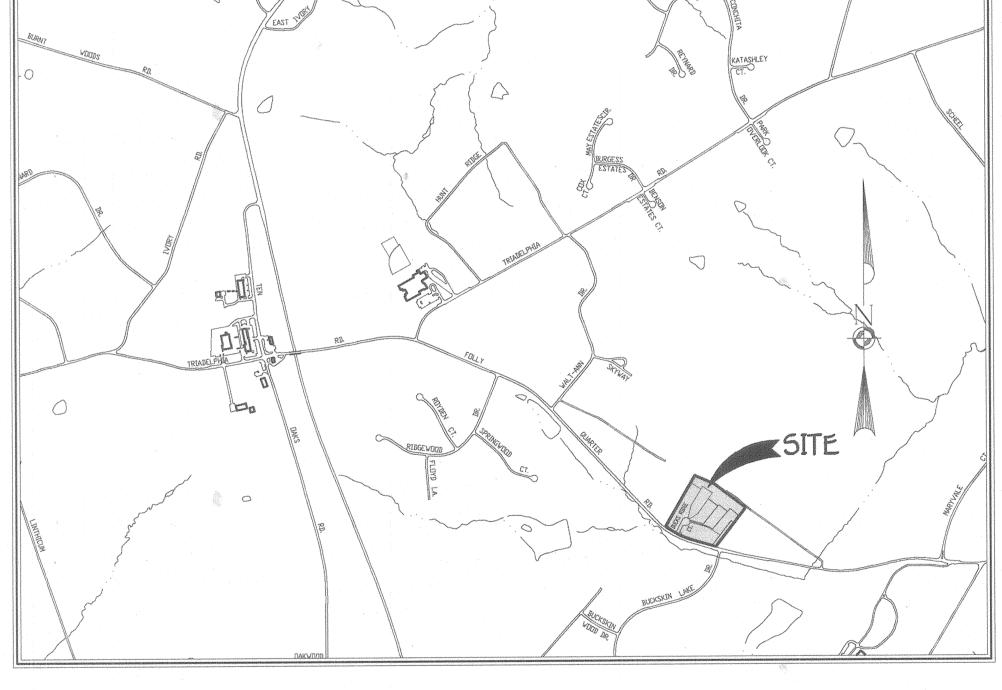
ZONED: RR-DEO

TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73

-						
Commission		ROAD	CLASSIFICATION CLASSI) NC	CHART	
None and Associated the Control of t	ROAD NAME	CL	ASSIFICATION	1	DESIGN SPEED	R/W WIDTH
	BUCKS RIDGE COURT	PUBLIC	ACCESS PLACE		25 M.P.H.	40'

TR	AFFIC	CONTR	ROL SIGNS	
STREET NAME	C.L. STATION	OFFSET	POSTED SIGN	SIGN CODE
BUCKS RIDGE COURT	0+39	15'L	STOP	R1-1

NOTE: PLACE STREET SIGN ON TOP OF STOP SIGN POLE



THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION 12-1-05 CHIEF, BUREAU OF HIGHWAYS

ELEV. = 501.265

APPROVED: DEPARTMENT OF PLANNING AND ZONING

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.

2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-

1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK. 3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN

PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT. 5. COORDINATES BASED ON NAD'27 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3035003 AND

E 808,854.115

E 809,377.965 ELEV. = 493.080

N 518 771 894

6. THE TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP DATED JULY 27, 2000 AND APPROVED UNDER SP 01-05.

7. BACKGROUND INFORMATION: A. SUBDIVISION NAME: BUCKSKIN OAKS B. TAX MAP NO.: 22 C. PARCEL NO.: PART OF PARCEL NO. 73 D. ZONING: RR-DEO E. ELECTION DISTRICT: THIRD F. TOTAL TRACT AREA: 11.487 AC.+ G. NO. OF BUILDABLE LOTS: 4 H. NO. OF OPEN SPACE LOTS: I. NO. OF NON-BUILDABLE PARCELS: 2 J. NO. OF BUILDABLE PARCELS: K. AREA OF BUILDABLE LOTS: 4.236 AC.± L AREA OF OPEN SPACE LOTS: 0.346 AC.+ M. AREA OF NON-BUILDABLE PARCELS: 4.351 AC.+

N. AREA OF BUILDABLE PARCELS: 2.215 AC.+ O. TOTAL AREA OF ROADWAY TO BE DEDICATED: 0.339 AC.+ P. PREVIOUS FILE NOS.: SP 01-05, APPROVAL DATE: 11/02/01 & WP 05-82 WAS APPROVED ON MARCH 28, 2005 TO ALLOW CLEARING OR GRADING WITHIN THE FLOODPLAIN (SEC. 16.115.C) AND TO ALLOW GRADING WITHIN 50' OF AN INTERMITTENT STREAM

OR 75' OF A PERENNIAL STREAM (SEC. 16.116 (a)). THE WAIVER WAS APPROVED SUBJECT TO THE FOLLOWING CONDITIONS: 1. COORDINATE THE LOCATION OF THE OUTFALL WITH THE DEVELOPMENT ENGINEERING DIVISION AND THE 50

2. PROVIDE A DESIGN WHICH MINIMIZES DISTURBANCE, AND SHOW A CLEAR LIMIT OF DISTURBANCE 3. GRADING, REMOVAL OF VEGETATIVE COVER AND CONSTRUCTION SHALL ONLY BE TO THE EXTENT REQUIRED TO ACCOMMODATE THE NECESSARY IMPROVEMENTS. REPLANT ANY AREA DISTURBED OUTSIDE OF THE RIP-RAP OUTFALL.

(THE EASEMENT IN CONJUNCTION WITH THE STORM DRAIN WAS REDESIGNED SO AS NOT TO REQUIRE THE APPROVED WAIVER.)

CONSERVATION DISTRICT

8. NO CEMETERIES EXIST ON THE PROPERTY. 9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE

COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180. 10. THE FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

11. STORMWATER MANAGEMENT FACILITY: TYPE - MICRO-POOL DESIGN. (EXTENDED DETENTION) OWNER - PRIVATELY OWNED AND MAINTAINED BY H.O.A. CREDITS AREAS FOR S.W.M. COMPUTATIONS: NATURAL AREA FOUNTION COEDIT FOR DOAINAGE AREA 'A' THERE WAS NO CHANGE IN RCN OR Q VALUES, THE ONLY BENEFIT GAINED BY THIS CREDIT WAS A REDUCTION IN WQV. IN ADDITION, A GRASS CHANNEL CREDIT IS UTILIZED THAT PROVIDES THE REQUIRED RECHARGE VOLUME FOR THIS SITE.

12. THE PROPOSED WATER AND SEWER SYSTEMS SHALL BE PRIVATE. 13. THE SUBJECT PROPERTY IS LOCATED OUTSIDE OF THE METROPOLITAN DISTRICT.

14. TOPOGRAPHIC INFORMATION PROVIDED BY FISHER, COLLINS & CARTER, INC. FIELD RUN SURVEY DATED JUNE, 2000 AND SUPPLEMENTED BY HOWARD COUNTY AERIAL SURVEY DATED APRIL, 1973,

15. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY AND NOT ONTO THE FLAG OR PIPESTEM

16. THERE ARE NO WETLANDS PRESENT ON-SITE AS BASED ON THE REPORT BY PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED NOVEMBER 21, 2000. 17. SOILS INFORMATION TAKEN FROM SOIL MAP NO. 18, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY 1968 155UE.

18. AS A CONSEQUENCE OF ITS SUBMISSION FOR COUNTY REVIEW PRIOR TO NOVEMBER 15, 2001, THIS PLAN IS SUBJECT TO THE 4th EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. IN ADDITION, BECAUSE IT DID NOT HAVE PRELIMINARY PLAN APPROVAL PRIOR TO NOVEMBER 1, 2001, IT IS SUBJECT TO COMPLIANCE WITH COUNTY COUNCIL BILL 50-2001, WHICH AMENDS PORTIONS OF THE ZONING REGULATIONS. THIS PLAN IS ALSO SUBJECT TO THE 1993 ZONING REGULATIONS.

19. SUBJECT PROPERTY ZONED RR-DEO PER 04/13/04 COMPREHENSIVE ZONING PLAN.

20. THERE ARE NO STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY "SLOPES THAT AVERAGE 25% OR GREATER OVER 10 VERTICAL FEET", PER SECTION 16.108(b)(55) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

21. AS PER SECTION 104.F.4.b OF THE ZONING REGULATIONS, ONLY ONE EASEMENT HOLDER IS REQUIRED FOR PRESERVATION PARCELS DESIGNED SOLELY FOR SWM FACILITIES OR COMMUNITY SEWERAGE DISPOSAL SYSTEMS.

A. BUILDABLE PRESERVATION PARCEL 'A' OWNED: PRIVATE OWNER

EASEMENT HOLDERS: HOWARD COUNTY, MARYLAND AND BUCKSKIN OAKS HOMEOWNERS ASSOCIATION B. NON-BUILDABLE PRESERVATION PARCEL 'B'

EASEMENT HOLDER: HOWARD COUNTY, MARYLAND & BUCKSKIN OAKS HOMEOWNERS ASSOCIATION

OWNED: BUCKSKIN WOODS HOMEOWNERS ASSOCIATION EASEMENT HOLDERS: HOWARD COUNTY, MARYLAND

C NON-BUILDABLE PRESERVATION PARCEL 'C' OWNED: PRIVATE OWNER OF EITHER PARCEL "A", LOTS 1,2,3 OR 4 OF THE BUCKSKIN OAKS SUBDIVISION.

22. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY PROVIDING 0.7 ACRES +/- OF ONSITE AFFORESTATION @ \$0.50/5F FOR 30,492 5.F. = \$ 15,246.00 AND 1.6 ACRES OF ONSITE FOREST RETENTION # \$0.20/5F FOR 69,696 SF. = \$ 13,939.20. TOTAL FOREST CONSERVATION EASEMENT AREA = 2.3 ACRES FOR A TOTAL FOREST SURETY OF \$29,185.20.

23. THE LANDSCAPE SURETY IN THE AMOUNT OF \$ 16,750.00 FOR PERIMETER LANDSCAPE REQUIREMENTS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL IS POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION.

24. A NOISE STUDY IS NOT REQUIRED AS THIS PLAN OF SUBDIVISION DOES NOT MEET ANY OF THE CRITERIA UNDER VOLUME III, SECTION

25. ALL SIGN POSTS USED FOR TRAFFIC CONTROL INSTALLED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE (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.

TITLE SHEET BUCKSKIN OAKS

LOTS 1 THRU 4, OPEN SPACE LOT 5, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C' (A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

> ZONED: RR-DEO TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: JUNE 20, 2005

FISHER. COLLINS & CARTER, INC ELLICOTT CITY, MARYLAND 21042

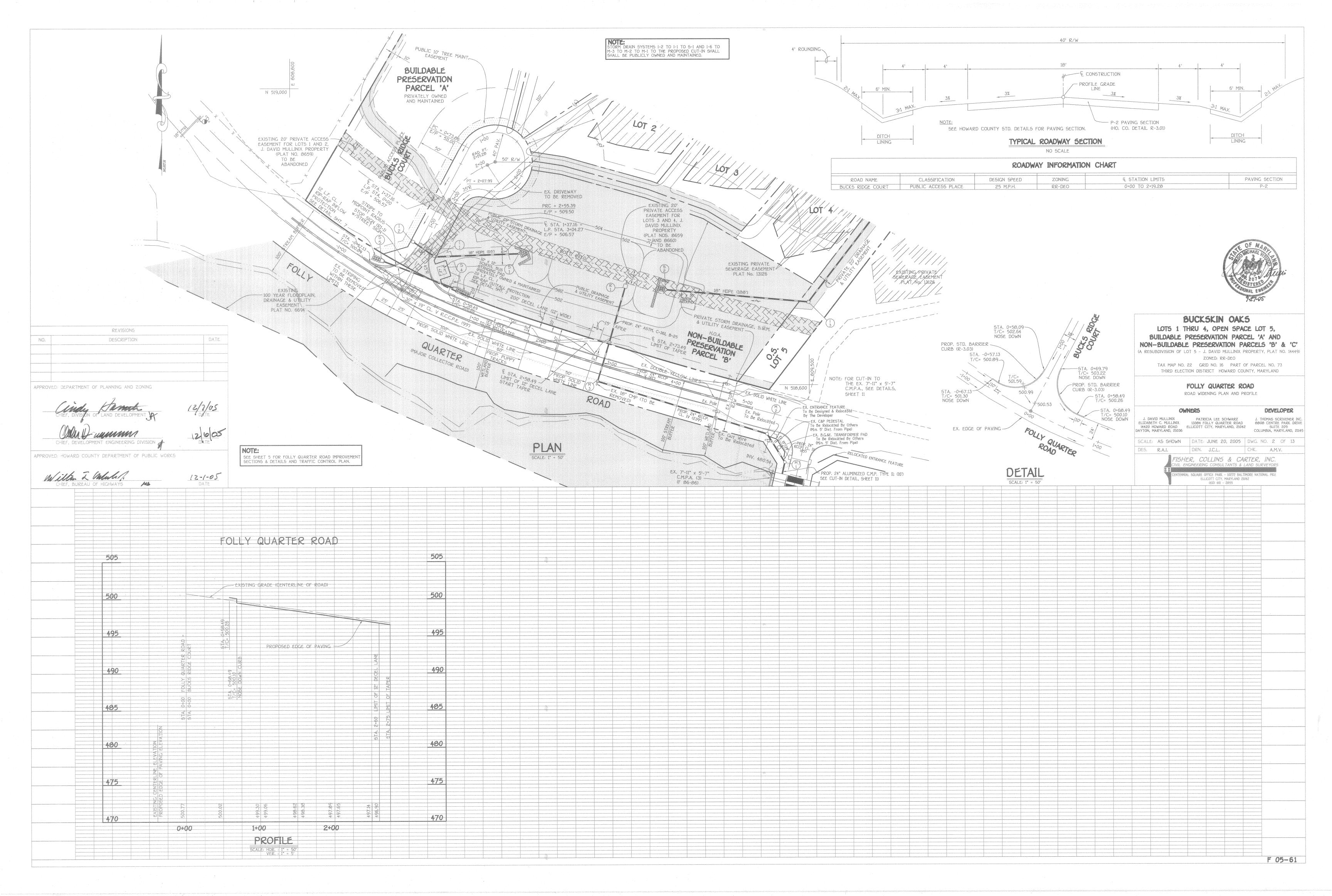
K:/DRAWINGS 3/30716/FINALS/30716 SHEET 1 TITLE SHEET.DWG

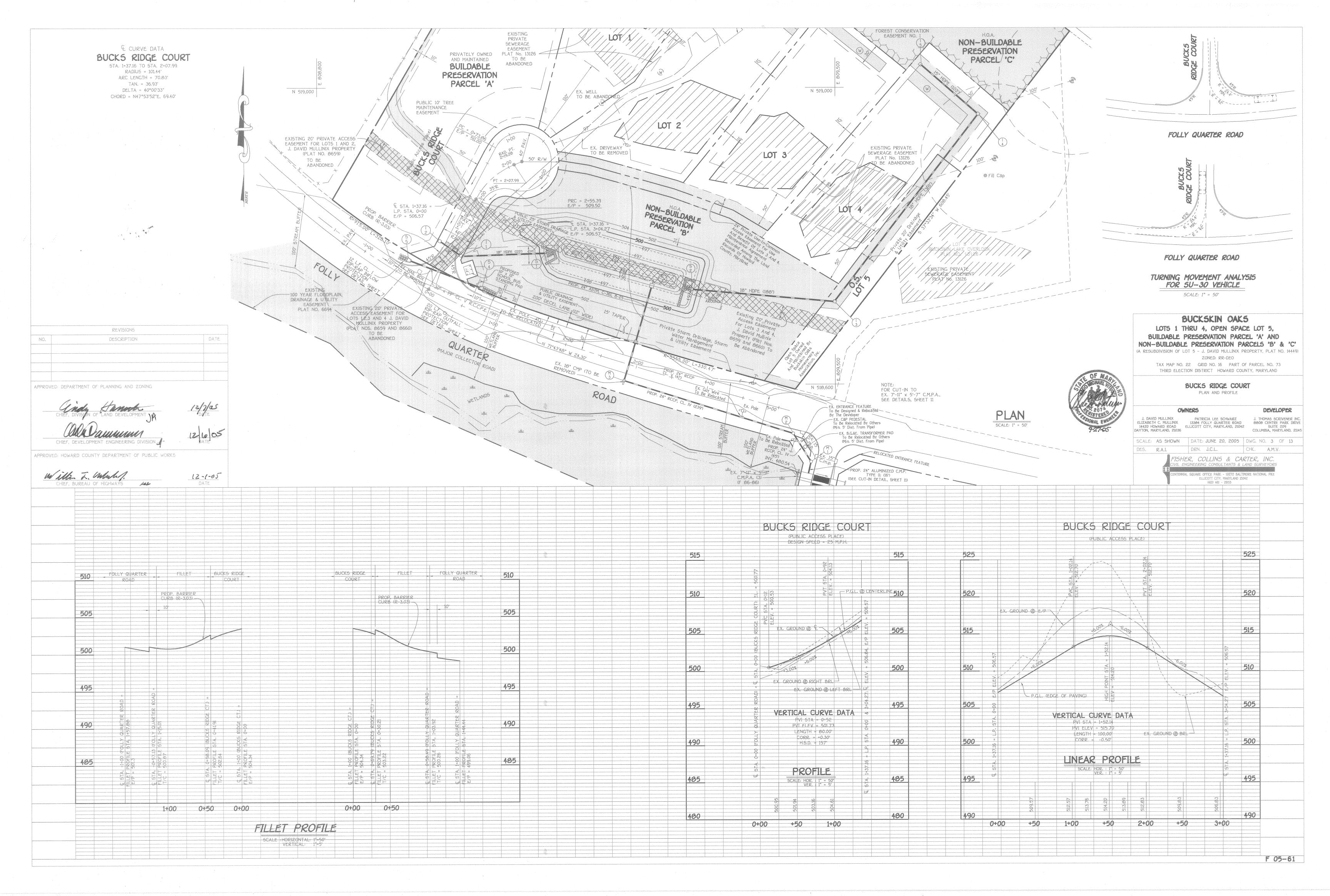
OWNERS J. DAVID MULLINIX PATRICIA LEE SCHWARZ ELIZABETH C. MULLINIX 13384 FOLLY QUARTER ROAD 14420 HOWARD ROAD ELLICOTT CITY, MARYLAND, 21042-1247

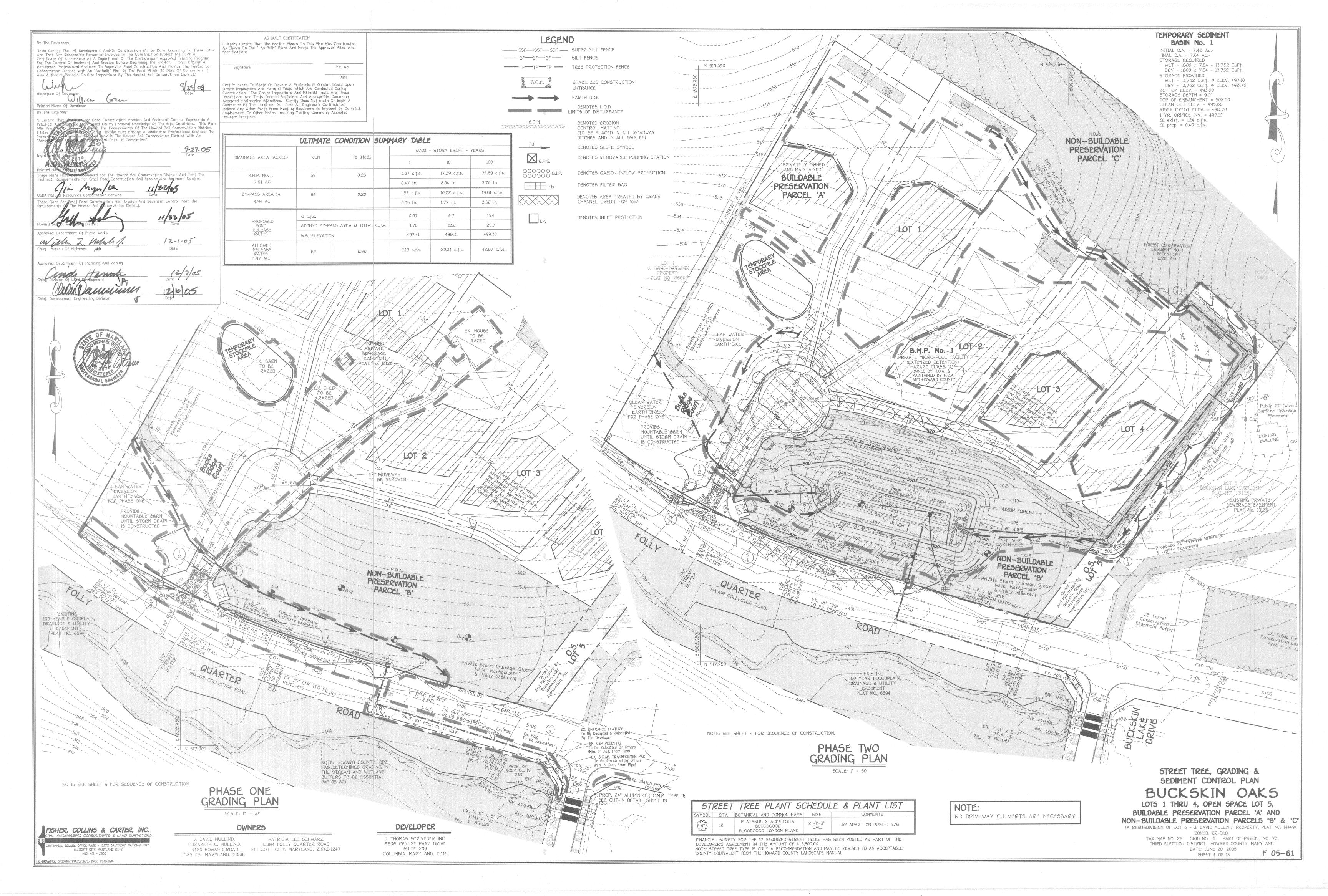
DAYTON, MARYLAND, 21036

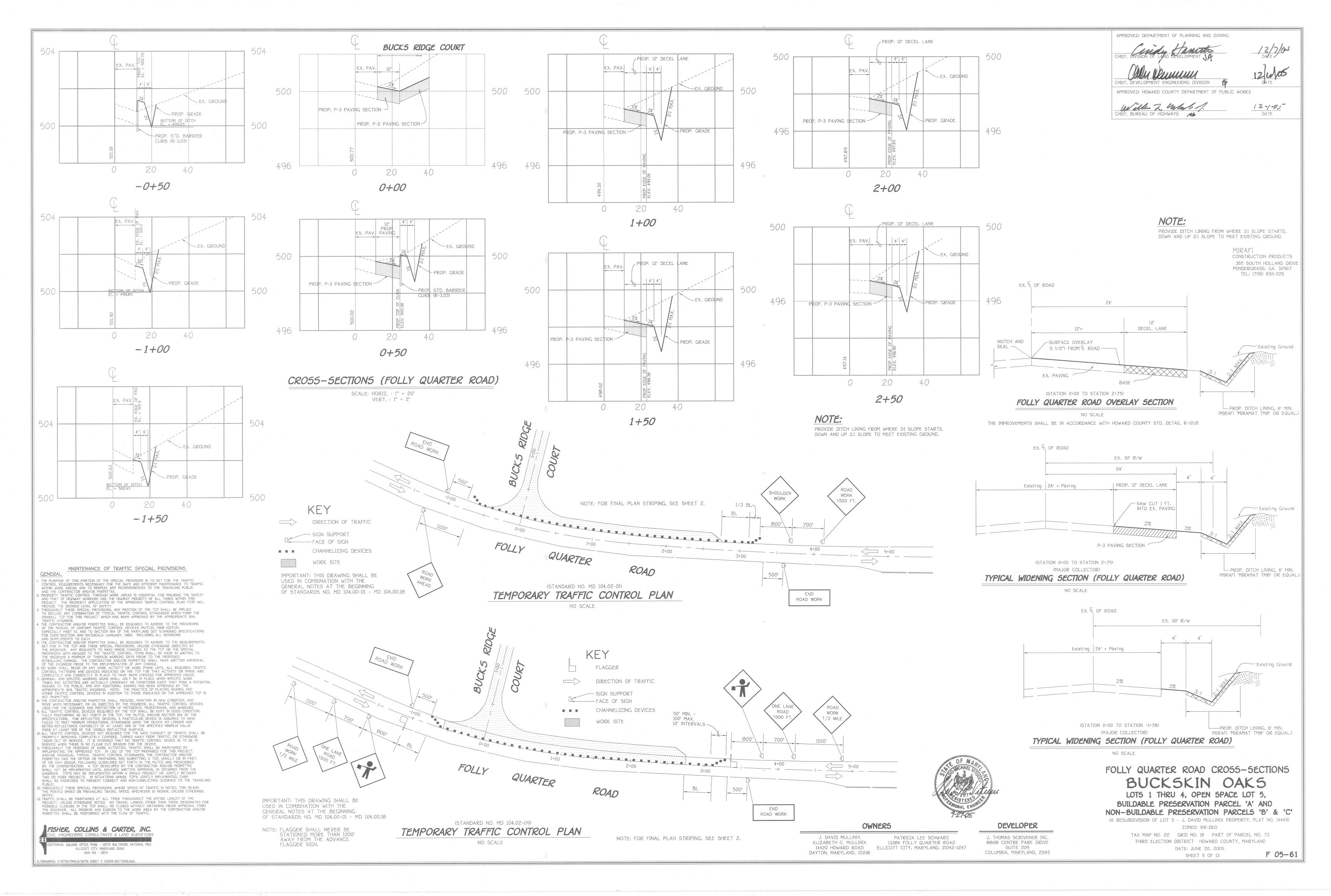
DEVELOPER J. THOMAS SCRIVENER INC. 8808 CENTRE PARK DRIVE SUITE 209 COLUMBIA, MARYLAND, 21145

F 05-61 SHEET 1 OF 13











Approved: Department Of Public Works

William T. Mahal. 12-1-05

Chief Bureau Of Highways Date

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development Date

Chief, Development Engineering Division Date

			5	CHEDULE A	- PERIMETER LANDS	CAPE EDGE						
	PERIMETER (PROPERTIES/ ROADWAYS) TYPE CATEGORY LINEAR FEET OF CREDIT FOR CREDIT FOR WALL, NUMBER OF PLANTS REQUIRED & PROVIDED											
	P-1	ADJACENT TO PERIMETER	Α	324'	NO	NO	5					
	P-2	ADJACENT TO PERIMETER	Α	808'	YES - 146'	NO	11		-			
Caracteristics	P-3	ADJACENT TO PERIMETER	A	237'	NO	NO .	4	vales	~-			
	P-4	ADJACENT TO PERIMETER	A	1611	NO	NO	3		And			

SCHEDULE D - STORMWATER MANAGEMENT AREA LANDSCAPING									
LINEAR FEET OF PERIMETER	D1: 420'	D2: 165'	D3: 413'	D4: 264					
NUMBER OF TREES REQUIRED: SHADE TREES EVERGREEN TREES	8 10	3 4	8 10	5 7					
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	NO	NO	NO					
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO	NO	NO					
NUMBER OF TREES PROVIDED: SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION)	8	3 4	8	5 7					

rugsuu-apak pak panaga sara ya jajajajajaja sanguur esasal kapit es voo inol kon ilikuwala mininta elektropi	wy managan a y y y y y y y y y y y y y y y y y y	geldiging (fr. 6), exemples over all and de finite member from 6 februari (des and újernet)		DRAIN	VAGE	AF	REA	D	ATA			
STRUCTURE NO.	5TRU	RUCTURE NO.		DRAINAGE AREA	ARE	ΞA	,C	,	ZON	VED .	% 1	MP.
I1	***************************************	I-1		A	0.88	AC.	0.6	3	RR-	DEO	5	4%
I-2		I-2	**************************************	В	1.52	AC.	0.3	5	RR-	DEO	14	1%
1-3		I-3	artiminen municipay debt.	C	1.88	AC.	0.4	1	RR-	DEO	2	3%
I 4		I-4	waterowa	D	0.34	AC.	0.4	2	RR-	DEO	2	5%
I5	una madeina a un una escrivir	I-5		See A. Se	0.77	AC.	0.4	0	RR-	DEO	2	2%
I6		I-6	erentetetakken	. Yes	3.98	AC.	0.3	0	RR-	DEO	7	%
I-4 I-5 I-6		I-4 I-5 I-6		D E F	0.77	AC.	0.4	0	RR-	DEO		

	LAND	SCAPING PLANT	LIST
QTY.	SIZE		
24	6	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2 - 2 1/2" CALIPER FULL CROWN, B&B
23	A STATE OF THE STA	ACER RUBRUM 'OCTOBER GLORY' (OCTOBER RED MAPLE)	2 – 2 1/2" CALIPER FULL CROWN, B&B
31	*	PINUS STROBUS EASTERN WHITE PINE	6' - 8' HT.

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL". FINANCIAL SURETY FOR THE 78 REQUIRED LANDSCAPE TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$18,750.00.

LANDSCAPE PLAN AND STORM DRAIN DRAINAGE AREA MAP

BUCKSKIN OAKS

LOTS 1 THRU 4, OPEN SPACE LOT 5,
BUILDABLE PRESERVATION PARCEL 'A' AND
NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C'
(A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

ZONED: RR-DEO

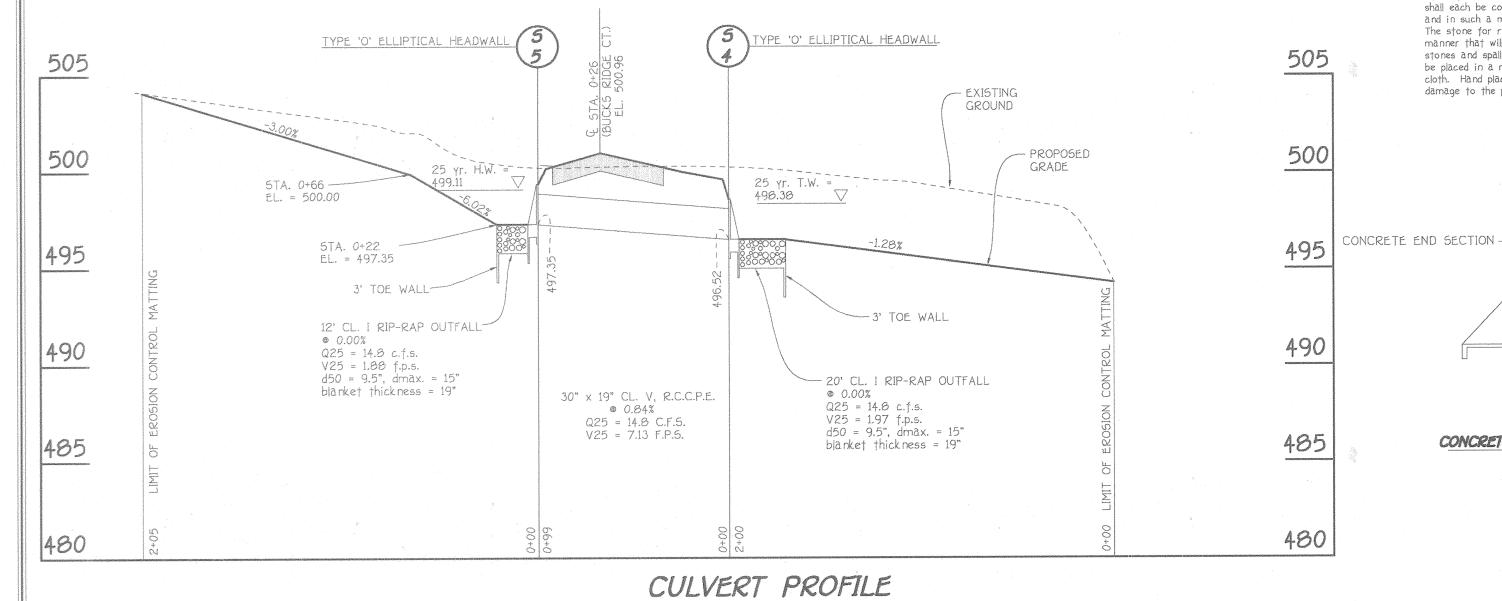
TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 20, 2005

SHEET 6 OF 13 F 05-61

			5TR	UCTURE SCHEDULE				
STRUCTURE NO.	TOP ELEVATION	NI.VNI	INV.OUT	ROAD NAME	C.L. ROAD STA.	OFFSET	TYPE	REMARK5
I-1	* 500.64	498.04	497.79	BUCKS RIDGE COURT	0+59	17' R	SEE DETAIL,	THIS SHEET
I-2	* 500.96		498.21	BUCKS RIDGE COURT	0+64	17' L	'D' INLET	5.D 4.11
1-3	* 503.17	499.67	499.42	N 518711.5925 E 809499.2073			SEE DETAIL,	THIS SHEET
1-4	* 505.10	502.35	502.10	N 518964.3156 E 809693.0721	Annual years of many transmission or control specified by a principle of the princip	Appr visit due	SEE DETAIL,	THIS SHEET
I-5	* 514.27	Adequipment and a second interface complete manifest or manifest and m	510.06	N 519031.2976 E 809615.3843	general control contro	Man- work ever	'D' INLET	S.D 4.11
1-6	* 495.50	492.06	490.06	N 518644.9811 E 809226.6482	Section seeds and seeds are seeds as the section of	Angle, Visual Aspet	SEE DETAIL,	THIS SHEET
M-1	490.00	482.48	482.23	FOLLY QUARTER ROAD	5+60	59.4° R	STD. MANHOLE	G - 5.11
M-2	492.28	483.85	483.60	FOLLY QUARTER ROAD	5+28	28.5' R	STD. MANHOLE	G - 5.11
M-3	496.50	489.29	489.04	FOLLY QUARTER ROAD	2+90	22.5' R	STD. MANHOLE	G - 5.11
R-1	501.04	494.00	493.75	N 518733.5188 E 809252.3257	made wide), delity close	Auto-monta della	CONCRETE RISER	
5-1	498.51	497.01		N 518777.7756 E 809108.4739	and and are	dem value basis	CONC. END SECTION	5.D 5.52
5-2	498.60	497.10		N 518728.6821 E 809307.1098	man while some while		CONC. END SECTION	5.D 5.52
5-4	498.19	496.52		BUCKS RIDGE COURT	0+35	63' R	TYPE 'O' HEADWALL	5.D 5.42 & 5.D 5.42 A
5-5	499.02		497.35	BUCKS RIDGE COURT	0+22	43' L	TYPE 'O' HEADWALL	5.D 5.42 & 5.D 5.42 A



SCALE: HORIZ. : 1" = 50"

VERT. : 1" = 5'

500

490

485

PIPE SCHEDULE SIZE MATERIAL LENGTH 137' 15" HDPE 18" HOPE 621' 30" x 19" 99' CL. V, R.C.C.P.E. 24" ASTM, C-361 B-25 90' 24" CL. V, R.C.C.P. CL. IV, R.C.C.P. 24" 284'

ALUMINIZED C.M.P., TYPE II

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

- 1. The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- installed respectively in the riprap or filter. 3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional shall hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.

2. The rock or gravel shall conform to the specified grading limits when

4. Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

CONCRETE - HOPE CONNECTION DETAIL

NOT TO SCALE

- CONCRETE COLLAR

CONCRETE COLLAR

/- H.D.P.E. PIPE

* - DENOTES 25-YEAR Q

NOTE: CONTRACTOR SHALL MAKE

SURE THAT JOINT IS

- NEOPRIN GASKET OR EQUIVALENT

PRIVATE STORM DRAIN SYSTEM - MAINTAINED BY H.O.A.

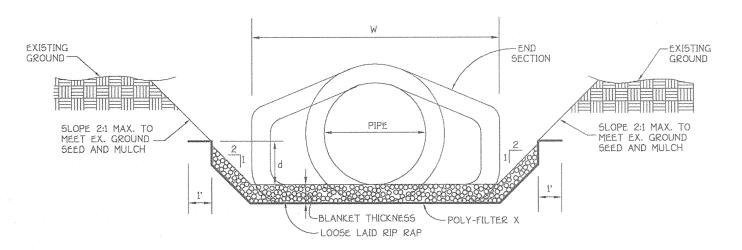
PROFILE

SCALE: HORIZ. : 1" = 50"

VERT. : 1" = 5'

WATERTIGHT.

JOINT SEALER.



RIP RAP CHANNEL DETAIL

	RIP-RAP CHANNEL DESIGN DATA														
STRUCTURE	TRUCTURE AREA WETTED R R 2/3 5 5 1/2 W d N (f.p.s.) (c.f.s.) D D DMAX THICKNESS SIZE														
5-1	4.92*	9.00'	0.5467	0.6673	0.0050	0.0707	6.0'	0.67	0.04	1.76	8.65	9.5"	15"	19"	18"
5-2	5.18'	9.13'	0.5674	0.6841	0.0050	0.0707	6.0'	0.70	0.04	1.80	9.32	9.5"	15"	19"	18"
5-4	7.98'	13.13'	0.6078	0.7163	0.0050	0.0707	10.0	0.70	0.04	1.88	14.8 *	9.5"	15"	19"	30" x 19"
5-5	7.98'	13.13'	0.6078	0.7163	0.0050	0.0707	10.0'	0.70'	0.04	1.88	14.8 *	9.5"	15"	19"	30" x 19"

3'-6" NOTCH 5" 5'-0" CONC. GUTTER TO BE PAID FOR SEPARATELY 3 1/2" NOTCH ---3" NOTCH 1 1/2" COVER (TYP.) RUNGS (IF USED) SEE NOTE NO. 7 SEE NOTE *2 -- RISER UNIT (VERTICAL WALLS) -KEYED JOINT (WALLS MAY TAPER 1/2" PER FOOT) - INVERT TO BE CONCRETE OR BRICK. SLOPE 2" PER FOOT TOWARD OUTLET - PROVIDE 6" MIN. BEDDING OF OR AS DIRECTED. NO. 57 AGGREGATE ON FIRM (TO BE PROVIDED IN FIELD) *SUBGRADE* 1'-0" LAP SPLICE MAKE REINFORCING CONTINUOUS SECTION 'C-C' AROUND OUTSIDE CORNER SECTION 'B-B' (DOUBLE OPENING)

Approved: Department Of Public Works

Chief Bureau Of Highways

Wille I. While J.

Approved: Department Of Planning And Zoning

DOUBLE OPENING IN SUMPS (SHOWN WITHOUT GRATE)

515

510

505

500

495

490

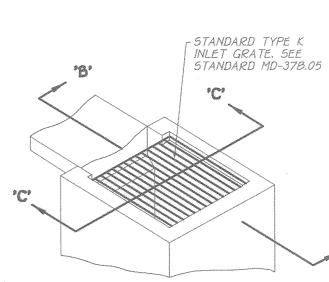
485

15" HDPE @ 7.49%

Q10 = 2.32 c.f.s.

Vf = 1.89 f.p.s.

Vp = 9.67 f.p.s.



12-1-05

SINGLE OPENING

GENERAL NOTES:

- 1. CONCRETE TO BE MIX NO. 6 (4500 PSI). 2. REINFORCING - 2 LAYERS OF 4 x 4 - W 4.0 x W 4.0 WELDED WIRE FABRIC.
- 3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING. 4. FOR GRATE DETAILS SEE STANDARD MD. - 378.05.
- GRATE TO BE AS SHOWN OR FURNISH APPROVED EQUIVALENT. 5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED, FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION
- 6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS. 7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD
- MD. 383.91, A5 SHOWN OR A5 DIRECTED BY THE ENGINEER. 8. MINIMUM DEPTH PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT
- INCLUDES DEPTHS IN EXCESS OF 3'-6". 9. A 6" PERFORATED CIRCULAR PIPE, FOR EROSION AND SEDIMENT CONTROL, SHALL BE PLACED IN THE INLET WALL AT ALL
- INLET SEDIMENT TRAPS AS SHOWN ON THE PLANS. 10. FOR USE IN NON-TRAFFIC LOCATIONS ONLY.

MODIFIED OPEN END GRATE NOT TO SCALE

STORMDRAIN PROFILES BUCKSKIN OAKS

LOTS 1 THRU 4, OPEN SPACE LOT 5, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C' (A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

ZONED: RR-DEO TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 20, 2005 F 05-61 SHEET 7 OF 13

520 - EXISTING GROUND - PROPOSED GRADE 515 30' x 30' TURN AROUND - 10 YR. H.G.L. AREA FOREBAY EL. 497.00 PROPOSED 3' H x 3' W ∇10 Yr. W.5.E.L. = 498.47 GABION FOREBAY TOP EL. 498.00 -BOTTOM OF POND 18" HDPE ● 0.76% EL. 494.00 Q10 = 3.62 c.f.s.18" HDPE ● 1.23% Vf = 2.05 f.p.s.Q10 = 9.32 c.f.s.Vp = 4.83 f.p.s.Vf = 5.27 f.p.s.12' CL. I RIP-RAP OUTFALL Vp = 7.28 f.p.s.∅ 0.00% Q10 = 8.65 c.f.s.V10 = 1.76 f.p.s. d50 = 9.5", dmax. = 15" blanket thickness = 19"

PROFILE SCALE: HORIZ. : 1" = 50"

18" HDPE ● 0.68%

Q10 = 8.65 c.f.s.

Vf = 4.90 f.p.s.

VERT. : 1" = 5"

- PROPOSED

GRADE

- 10 YR. H.G.L.

FISHER, COLLINS & CARTER, INC. NNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

C/DRAWINGS 3/30716/Finals/Sheet 7 STORM DRAIN PROFILES.dwg

15" HDPE ● 0.50%

Q10 = 3.97 c.f.s.

Vf = 3.24 f.p.s.

Vp = 4.14 f.p.s.

- EXISTING

GROUND

510

500

495

490



FOREBAY EL. 497.00

10 yr. W.S.E.L. = 498.47 & TOP OF GABIONS

BOTTOM OF POND

Q10 = 8.65 c.f.s.

V10 = 1.76 f.p.s.

© 0.00%

_____PROPOSED 3' H x 3' W

GABION FOREBAY

PERM. POOL EL. = 496.00

12' CL. I RIP-RAP OUTFALL

d50 = 9.5", dmax. = 15"

blanket thickness = 19"

OWNERS J. DAVID MULLINIX PATRICIA LEE SCHWARZ ELIZABETH C. MULLINIX 13384 FOLLY QUARTER ROAD 14420 HOWARD ROAD ELLICOTT CITY, MARYLAND, 21042-1247

DAYTON, MARYLAND, 21036

DEVELOPER J. THOMAS SCRIVENER INC. 8808 CENTRE PARK DRIVE SUITE 209 COLUMBIA, MARYLAND, 21145

(5)

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

This practice is limited to areas having 2:1 or flatter slopes where: a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

- b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
- c. The original soil to be vegetated contains material toxic to plant growth.
- d. The soil is so acidic that treatment with limestone is not feasible. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require

special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material 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 representative 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 an 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 cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 11/2" in diameter.
- ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.
- iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 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 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials. For sites having disturbed areas over 5 acres:
- On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime
- amendments required to bring the soil into compliance with the following: a. 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
- b. Organic content of topsoil shall be not less than 1.5 percent by weight.
- c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
- d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
- Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

Topsoil Application

- . When top soiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- ii. Grades on the areas to be top soiled, which have been previously established, shall be maintained albeit 4" - 8" higher in elevation.
- iii. Topsoil shall be uniformly distributed in a 4" 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that spdding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from top soiling or other operations shall be corrected in order to prevent the
- formation of depressions or water pockets. the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
- . Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
- a. Composted sludge shall be supplied by, or originate from, a person or persons that are ermitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
- b. Composted sludge shall contain at least I percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
- c. Composted sludge shall be applied at a rate of I ton/1,000 square feet. iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.
- References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub. . I, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY
- DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855). 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS
- FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO. 3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1. b) 14 DAYS
- AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING
- SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE. 5) 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 SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN

ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER

- 6) 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.
- 7) SITE ANALYSIS: TOTAL AREA OF SITE ARFA DISTURBED AREA TO BE ROOFED OR PAVED

GERMINATION AND ESTABLISHMENT OF GRASSES.

- 3.39 ACRES ACRES 3.02 ACRES 8,500 CU. YDS. AREA TO BE VEGETATIVELY STABILIZED 8,500 CU. YD5.
- OFFSITE WASTE/BORROW AREA LOCATION N/A 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE
- SAME DAY OF DISTURBANCE 9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 10) 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 CONTROLS, BUT 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.
- 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration O(up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- A. Site Preparation Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins. ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually
- necessary for temporary seeding. iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
- B. Soil Amendments (Fertilizer and Lime Specifications) Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering
- purposes may also be used for chemical analyses. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee
- of the producer. iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a *100 mesh sieve and 98-100% will pass through a *20
- iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means. C Seedbed Preparation
 - a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
- c. In corporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means. ii. Permanent Seeding
- Minimum soil conditions required for permanent vegetative establishment:

 1. Soil pH shall be between 6.0 and 7.0. Soluble salts shall be less than 500 parts per million (ppm). The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a
- moderate amount of moisture. An exception is if lovegrass or serecia lespedezas is to be planted, then a sandy soil (30% silt plus clay) would be acceptable. Soil shall contain 1.5% minimum organic matter by weight. Soil must contain sufficient pore space to permit adequate root penetration.
- If these conditions cannot be met by soils on site, adding topsoil is required n accordance with Section 21 Standard and Specification for Topsoil. b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil
- to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope. Apply soil amendments as per soil test or as included on the plans.

 Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The
- top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on
- All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job. Note: Seed tags shall be made available to the inspector to verify type and rate of seed used. . Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than
- the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast
- a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs/ac; K20 (potassium): 200 lbs/ac. Lime - use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one
- time. Do not use burnt or hydrated lime when hydroseeding Seed and fertilizer shall be mixed on site and seeding shall be done immediately and ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
- a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting. b. Where practical, seed should be applied in two directions perpendicular to each other.
 Apply half the seeding rate in each direction.
- F. Mulch Specifications (In order of preference) Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 - a. WCFM shall consist of specially prepared wood cellulose processed into a uniform
 - fibrous physical state. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - wcfm, including dye, shall contain no germination or growth inhibiting factors. Wcfm materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed
 - contact with the soil without inhibiting the growth of the grass seedlings. M material shall contain no elements or compounds at concentration levels that
- f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

 Note: Only sterile straw mulch should be used in areas where one species of grass is desired. G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately, after seeding.
- If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is
- to be used, the rate should be increased to 2.5 tons/acre. iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water. H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch

application to minimize loss by wind or water. This may be done by one of the following methods (listed by

- preference), depending upon size of area and erosion hazard: i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. It used on sloping land, this practice should be used on the contour if possible.

 ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and
- the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons
- iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Ta . Terra Tack AR or other approved equal may be used at rates recommended by the
- iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.



OWNERS

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PATRICIA LEE SCHWARZ 13384 FOLLY QUARTER ROAD 14420 HOWARD ROAD ELLICOTT CITY, MARYLAND, 21042-1247 Incremental Stabilization - Cut Slopes All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes

shall be excavated and stabilized in equal increments not to exceed 15' i. Construction sequence (Refer to Figure 3 below):

- a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 b. Perform Phase 1 excavation, dress, and stabilize.
- Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as
- necessary.

 d. Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary
- Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization. Incremental Stabilization of Embankments - Fill Slopes
 - Embankments shall be constructed in lifts as prescribed on the plans.
- ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches

 15", or when the grading operation ceases as prescribed in the plans.

 iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge

 of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to
- a sediment trapping device. Construction sequence: Refer to Figure 4 (below).
- a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
- Place Phase 1 embankment, dress and stabilize. Place Phase 2 embankment, dress and stabilize
- Place final phase embankment, dress and stabilize. Overseed previously seeded Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

SECTION 2 - TEMPORARY SEEDING

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

- A. Seed mixtures Temporary Seeding
- i. Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 26 must be put on the plans.
- ii. For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in Soil tests are not required for Temporary Seeding.

5e	ed Mixture (Hardi From	ness Zone <u>6b</u> Table 26)		Fertilizer Rate	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	BARLEY OATS RYE	122 96 140	3/1 - 5/15, 8/15 - 10/15	1" - 2" 1" - 2" 1" - 2"	600 lb/ac (15 lb/1000sf)	2 tons/ac (100 lb/1000sf

SECTION 3 - PERMANENT SEEDING

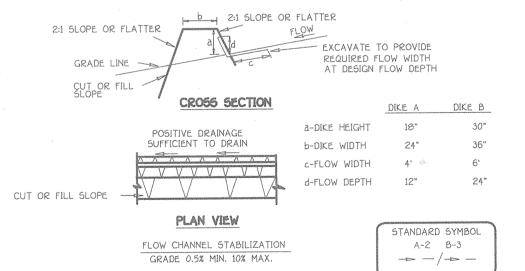
Seeding grass and legumes to establish groung cover for a minimum of one year on disturbed areas generally receiving low maintenance.

A. Seed mixtures - Permanent Seeding

- i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Techinical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.
- ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in
- iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at

	Seed Mixture (Hardiness Z From Table	American de la companya de la compan	Lime Rate					
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
3	TALL FESCUE (05%) PERENNIAL RYE GRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	3/1 - 5/15, 8/15 - 10/15	1" - 2"	90 lb/ac (2.0 lb/	(4 Jb/	175 lb/ac (4 lb/	2 tons/ac (100 lb/
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3/1 - 5/15, 8/15 - 10/15	1" - 2"	1000sf)	1000sf)	1000sf)	(1000sf)

EARTH DIKE NOT TO SCALE



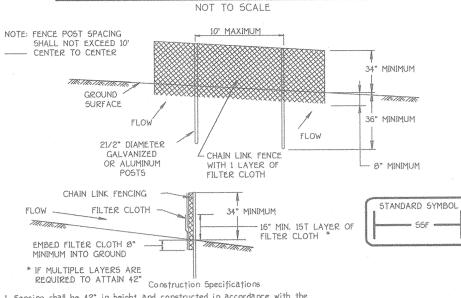
1. Seed and cover with straw mulch. 2. Seed and cover with Erosion Control Matting or line with sod. 3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum Construction Specifications

- 1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
- 2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
- 3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity. 4. All trees, brush, stumps, obstructions, and other objectionable
- material shall be removed and disposed of so as not to interfere with the proper functioning of the dike. 5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede
- 6. Fill shall be compacted by earth moving equipment.
- 7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
- 8. Inspection and maintenance must be provided periodically and after each rain event.

DEVELOPER

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SUPER SILT FENCE



1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length 2. Chain link fence shall be fastened securely to the fence posts with wire ties.

The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. 3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section. 4. Filter cloth shall be embedded a minimum of 8" into the ground. 5. When two sections of filter cloth adjoin each other, they shall be overlapped

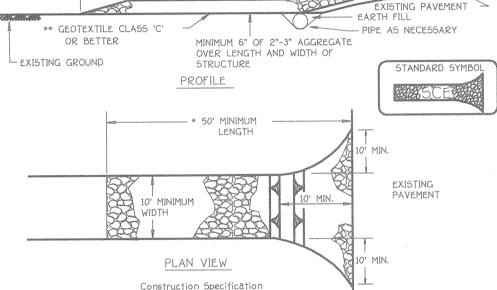
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F: 50 lbs/in (min.) Test: MSMT 509 Tensile Strength Test: MSMT 509 Tensile Modulus 20 lbs/in (min.)

Flow Rate

Filtering Efficiency 75% (min.) Test: MSMT 322 Silt Fence Length Slope Length Unlimited 200 feet 100 feet Unlimited 1,500 feet 1,000 feet 500 feet 100 feet

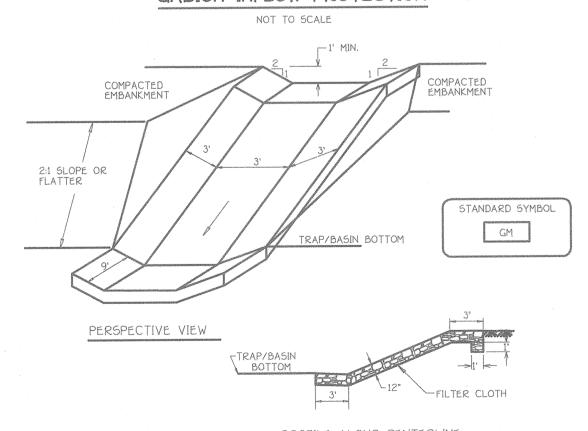
0.3 gal/ft /minuté (max.) Test: MSMT 322

STABILIZED CONSTRUCTION ENTRANCE - MOUNTABLE BERM (6" MIN.) - 50° MINIMUM



- Length minimum of 50' (*30' for single residence lat) 2. Width - 10' minimum, should be flared at the existing road to provide a turning 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior
- to placing stone. **The plan approval authority may not require single family residences to use geotextile. 4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the
- 5. Surface Water all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized
- according to the amount of runoff to be conveyed. A 6" minimum will be required. 6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

GABION INFLOW PROTECTION



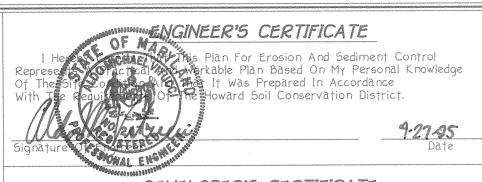
PROFILE ALONG CENTERLINE

Construction Specifications

- 1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
- 2. Geotextile Class C shall be installed under all gabion baskets.
- 3. The stone used to fill the gabion baskets shall be 4" 7".

4. Gabions shall be installed in accordance with manufacturers recommendations.

- 5. Gabion Inflow Protection shall be used where concentrated flow is present
- on slopes steeper than 4:1.



DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.

of Developer Signature Reviewed For Howard County Soil Conservation District And Meets

relopment Is Approved For Erosion And Sediment Control By

Approved: Howard County Department Of Public Works

12-1-05

managaman SF ensemblement

Test: M5MT 322

Test: MSMT 322

SILT FENCE 36" MINIMUM LENGTH FENCE POST 10' MAXIMUM CENTER TO DRIVEN A MINIMUM OF 16" INTO - 8" MINIMUM DEPTH IN 36" MINIMUM FENCE PERSPECTIVE VIEW POST LENGTH CLOTH -FENCE POST SECTION MINIMUM 20" ABOVE FLOW A MINIMUM OF 8" VERTICALLY V _ THE GROUND POSTS T STANDARD SYMBO

FENCE SECTIONS

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound guality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F Test: MSMT 509 Tensile Strenath 50 lbs/in (min.) 20 lbs/in (min.) Tensile Modulus

STAPLE

Flow Rate

JOINING TWO ADJACENT SILT

3. Where ends of geotextile fabric come together, they shall be overlapped folded and stapled to prevent sediment bypass. 4. Silt Fence shall be inspected after each rainfall event and maintained when

bulges occur or when sediment accumulation reached 50% of the fabric height.

6" STEEL PIPE FILLED WITH CONCRETE PROPOSED GRADE

SEDIMENT CONTROL NOTES AND DETAILS BUCKSKIN OAKS

TYPICAL BOLLARD DETAIL

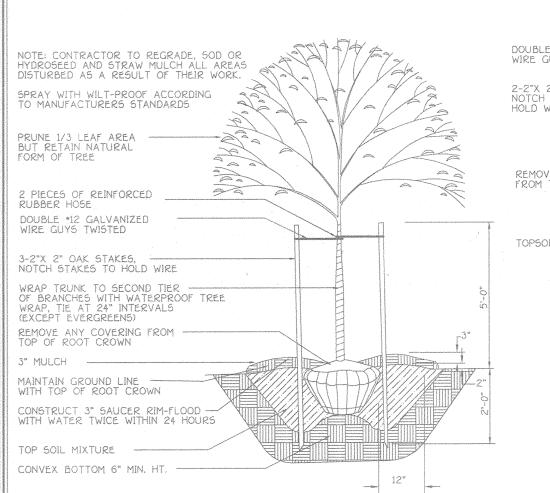
NOT TO SCALE

LOTS 1 THRU 4, OPEN SPACE LOT 5. BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C'

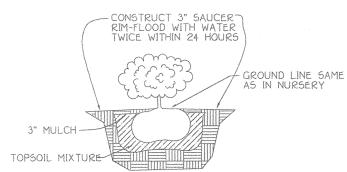
(A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449) ZONED: RR-DEO TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 20, 2005 F 05-61 SHEET 8 OF 13

/DRAWINGS 3/30716/FINALS/30716 SHEET & SED CON DETAILS.DWG



NOTCH STAKES TO HOLD WIRE - GROUND LINE SAME AS IN NURSERY TOPSOIL MIXTURE -



SHRUB PLANTING DETAIL

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

TREE PLANTING DETAIL

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 40 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line. Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of

completion of site construction. Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where

Positive drainage shall be maintained in planting beds 2 percent slope).

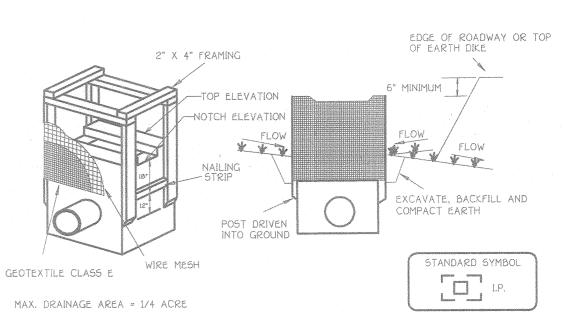
Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded. This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

NOT TO SCALE

TREE PLANTING DETAIL



Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.

2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.

3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post. 4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the

inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and

folded, then fastened down. 5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and

top elevation on the sides. 6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike

should be at least 6" higher than the top of the frame. 7. The structure must be inspected periodically and after each

STANDARD INLET PROTECTION

rain and the geotextile replaced when it becomes clogged.

NOT TO SCALE



:/DRAWINGS 3/30716/FINALS/30716 SHEET 9 SED CON DETAILS.DWC



We = A/D = 2/150 = 42

CHECK Le/We > 2 = 150/42= 3.57 : OK

Le = 42x2 = 84' Req'd.

CONSTRUCT 3" SAUCER RIM-FLOOD WITH WATER TWICE WITHIN 24 HOURS EVERGREEN PLANTING DETAIL

NOTES:

FOREST PROTECTION DEVICE ONLY. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE. ROOT DAMAGE SHOULD BE AVOIDED. PROTECTIVE SIGNAGE MAY ALSO BE USED. 5. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

USE 3' WIRE

"U" TO SECURE

FENCE BOTTOM

TREE PROTECTION DETAIL

ANCHOR POST MUST BE INSTALLED

TO A DEPTH OF NO LESS THAN 1/3

OF THE TOTAL HEIGHT OF POST

BLAZE ORANGE PLASTIC MESH

MAXIMUM & FEET

HIGHLY VISIABLE FLAGGING

USE 2" x 4"

LUMBER FOR CROSS BACKING

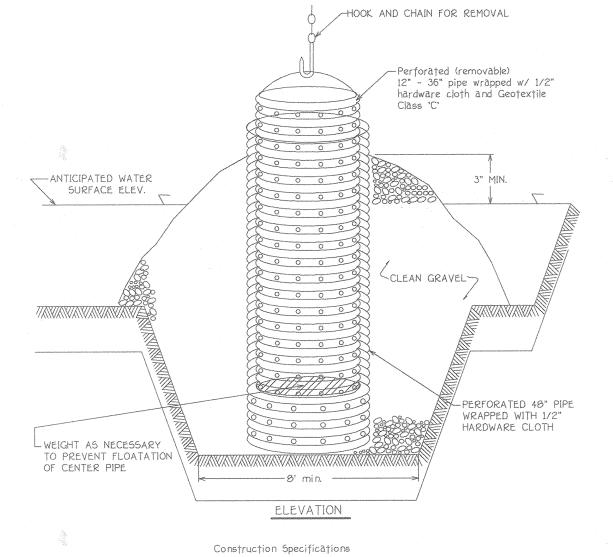
- ANCHOR POST SHOULD BE

MINIMUM 2" STEEL "U" CHANNEL

OR 2" x 2" TIMBER 6' IN LENGTH

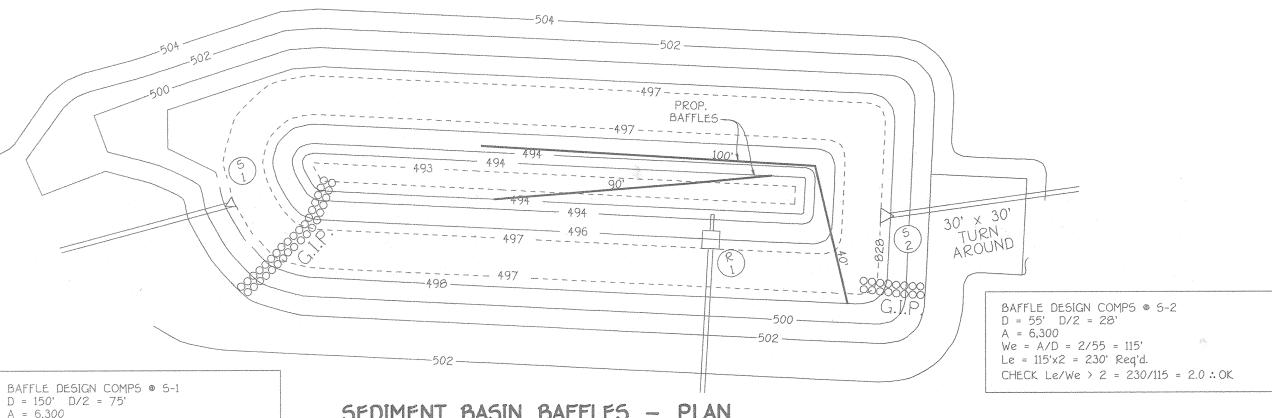
NOT TO SCALE

REMOVABLE PUMPING STATION



1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C. 4. The center pipe should extend 12" to 10" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.



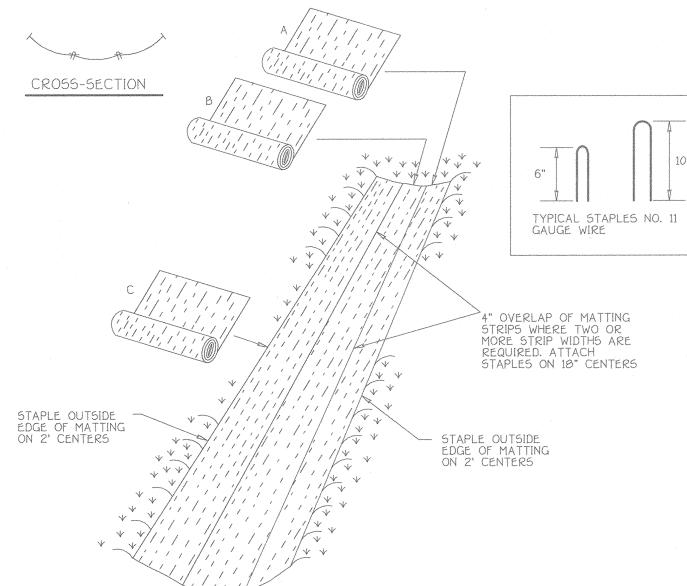
SEDIMENT BASIN BAFFLES - PLAN 5CALE: 1" = 30'

OWNERS

J. DAVID MULLINIX PATRICIA LEE SCHWARZ ELIZABETH C. MULLINIX 13384 FOLLY QUARTER ROAD 14420 HOWARD ROAD ELLICOTT CITY, MARYLAND, 21042-1247 DAYTON, MARYLAND, 21036

DEVELOPER

J. THOMAS SCRIVENER INC 8808 CENTRE PARK DRIVE SUITE 209 COLUMBIA, MARYLAND, 21145



Construction Specifications

- 1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
- 2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - 3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - 4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - 5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - 6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Le= L1+ L2+ L3+ L4

 $L_e = L_1 + L_2 + L_3 + L_4$

8' CENTER TO CENTER

POSTS MINIMUM

OR 2" ROUND SET

AT LEAST 3' INTO

11/4" SQUARE

THE GROUND

Note: If flow will enter from the edge of the matting then the area. effected by the flow must be keyed-in.

EROSION CONTROL MATTING NOT TO SCALE

SEDIMENT BASIN BAFFLES

NOT TO SCALE

PLAN VIEWS

SHEETS OF 4'X 8'X 1/2" EXTERIOR

BAFFLE DETAIL

GRADE PLYWOOD OR EQUIVALENT

DITCH COMPUTATIONS ABOVE 5-5 ARE AS FOLLOWS: 25 YR. Q = 14.8 c.f.s. SIDE SLOPES: 7:1 OPPOSITE ROAD 3:1 CLOSEST TO ROAD 'V' DITCH COMPUTATION: $AREA = Zd^2$ WHERE: Z = 5:1 AVERAGE

- d = 0.38AREA = 0.72 SQ.FT. WETTED PERIMETER = 3.89' R = A/WP = 0.72/3.89 = 0.1851
- $\frac{V = 1.486 \times 0.1851^{0.67} \times 0.029^{0.5}}{0.04} =$ V = 2.04 f.p.s. .. NON-EROSVE

C1028REVISED.DWG

D = DISTANCE BETWEEN

FORMULA: Le > 2

- RISER (OUTLET)

INFLOW

6" MIN

- RISER (OUTLET)

INFLOW AND OUTFLOW

A = AREA OF NORMAL POOL

We = EFFECTIVE WIDTH = A/D

Le TOTAL DISTANCE FROM THE INFLOW POINT AROUND THE

BAFFLES TO THE RISER

EXISTING GROUND

- RISER CREST

ELEVATION

Technical Req

Approved: Howard County Department Of Public Works

ENGINEER'S CERTIFICATE

And Taat It Was Prepared In Accordance

DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion

And Sediment Control And That All Responsible Personnel Involved

I Also Authorize Periodic On-Site Inspection By The Howard Soil

Reviewed For Howard County Soil Conservation District And Meets

In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program

For The Control Of Sediment And Erosion Before Beginning The Project.

Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Howard Soil Conservation District.

his Plan For Erosion And Sediment Control

And Workable Plan Based On My Personal Knowledge

12-1-05

SEQUENCE OF CONSTRUCTION

PHASE ONE

1. OBTAIN A GRADING PERMIT.

- 2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24 HOURS BEFORE STARTING WORK.
- 3. INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE PLANS (1 DAY). INSTALL STABILIZED CONSTRUCTION ENTRANCE. (3 DAYS)
- NOTE: THE FOLLOWING S.O.C. 4 -5 SHALL OCCUR WITHIN A 5-DAY CLEAR WEATHER FORCAST WITH THE PERMISSION FROM INSPECTOR BEFORE PROCEEDING.
- 4. INSTALL SILT FENCE, EARTH DIKES & MOUNTABLE BERM. INSTALL CULVERTS FROM 5-4 TO 5-5 AND GRADE IN DITCHES ALONG FOLLY QUARTER ROAD. GRADE ALONG FOLLY QUARTER ROAD FOR APPROPRIATE ROAD SAW CUT FOLLY QUARTER ROAD AND INSTALL PAVING SECTION PER APPROPRIATE IMPROVEMENTS. (2 WEEKS)
- NOTE: CONTRACTOR TO STABILIZE ANY DISTURBED AREA BY THE END OF EACH DAY WITH TOPSOIL, E.C.M. AND PERMANENT SEED MIX.
- 5. WORKING DOWNSTREAM TO UPSTREAM BEGIN STORM DRAIN CONSTRUCTION FROM CONNECTION TO EXISTING TRIPLE CELL CULVERT UP TO I-6. REMOVED THE EXISTING 18" CULVERT UNDER FOLLY QUARTER ROAD WHEN WORK REACHES VICINITY OF M-3. INSTALL
- 6. RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING.

PHASE TWO

- 7. CLEAR & GRUB FOR SEDIMENT BASIN/S.W.M. POND. INSTALL SEDIMENT BASIN/SWM POND WITH OUTFALL TO 1-6 AND SILT FENCE AS INDICATED ON THE PLANS NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF SEDIMENT BASIN/SWM POND EMBANKMENT. WHERE NECESSARY, RIPPING AND JACK HAMMERING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITY. (2 WEEKS)
- 8. CLEAR AND GRUB THE REMAINDER OF THE SITE. (3 DAYS) 9. GRADE SITE TO THE PROPOSED SUB-GRADE AND INSTALL THE STORM DRAIN SYSTEMS. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING. INSTALL 5-1 THRU I-2 & 5-2 THRU I-5. GRADE DITCH AT REAR OF LOT 4 & ON THE EAST SIDE OF LOT 4 AS SHOWN ON THE PLANS. DO NOT BLOCK INLETS AS STORM DRAIN SYSTEM WILL BE USE TO CONVEY SEDIMENT TO BASIN. (2 WEEKS)
- 10. CONSTRUCT ROAD BASE COURSE FOR INTERNAL SUBDIVISION ROAD. (1 WEEK) 11. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND THE POND HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL DESIGN GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 WEEKS)
- 12. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE POND WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE APPROVED TRAPPING DEVICE.

SEDIMENT CONTROL NOTES AND DETAILS

BUCKSKIN OAKS

LOTS 1 THRU 4, OPEN SPACE LOT 5, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C' (A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

ZONED: RR-DEO TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 20, 2005 SHEET 9 OF 13

F 05-61

STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be

around the inlet structure shall be cleared.

erosion of the embankment.

of the toe of the embankment. Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius

sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When

specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas. EARTH FILL

Material - The fill material shall be taken from approved designated borrow areas. It shall be tree of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the *200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embarkment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within +2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line oid conduits. Averãoe slump of the fill shall be 7° to assure flowability o the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to the specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated

1. Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Stel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability. shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling banks or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip calvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in

3. Connections- All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be

NOTES:

1. CONCRETE SHALL BE MSHA MIX No. 3

(FC > 3,500 P.S.L) 2. REINFORCING STEEL: GRADE 60

3. FOR WALLS OF STRUCTURE SHALL UTILIZE L.M.

SCOFIELD CO. T-9055 FORM LINERS (RANDOM SPLIT-FACE ROCK) OPTIONAL. 4. PROVIDE ROUGH BROOM FINISH.

5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECS.

6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.

FISHER, COLLINS & CARTER, INC.

ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24-inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene aasket, prepunched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2-inch greater than the corrugation depth. Pipes 24-inches in diameter and larger shall be connected by a 24-inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12-inches on the end of each pipe. Flanged joints with 3/8-inch closed cell gaskets the full width of the

> Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead. 4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide

5. Backfilling shall conform to "Structure Backfill". 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings. Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber

aaskets and shall equal or exceed ASTM C-361.

2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Stucture Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser. 4. Backfilling shall conform to "Structure Backfill".

5. Other details (Anti-seep collars, valves, etc.) shall be as shown on the drawings.

Plastic Pipe

flange is also acceptable.

The following criteria shall apply for plastic pipe: 1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirement of AASHTO M252 Type 5, and 12" through 24" inch shall meet the requirement of AASHTO M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight. 3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings. Drainage Diaphragms - When a drainage diaphragm is used, a registered

professional engineer will supervise the design and construction inspection. Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall

be pumped. Stabilization

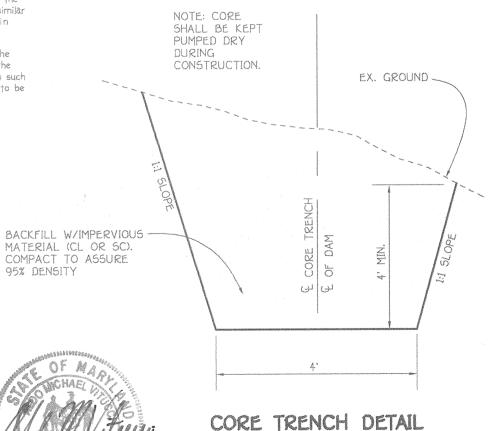
All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

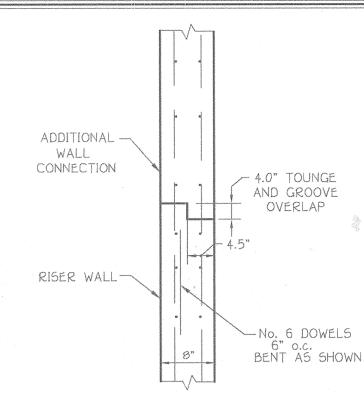
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.



NOT TO SCALE



KEYED JOINT DETAIL WALL SECTION TO WALL SECTION NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITIES FOR BMP POND #1

ROUTINE MAINTENANCE

- 1 Facility shall be inspected annually and after major storms. Inspections shall be preformed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be moved a minimum of two (2) times a year, once in June and once in September.
- Other side slopes and maintenance access should be moved as
- 3. Debris and litter shall be removed during regular mowing operations and as needed.
- 4. Visible signs of erosion in the pond as well as the rip-rap or gabion outlet area shall be repairer as soon as it is noticed.

NON-ROUTINE MAINTENANCE

VERTICAL DRAW-DOWN DEVICE-

10" P.V.C.

1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.

2. Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond or forebay, is half full of sediment, or, when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

VERTICAL DRAW-DOWN DEVICE

NOT TO SCALE TOP OF DAM = 502.00 RISER TOP EL. = 501.00 -VERTICAL DRAW-DOWN DEVICE RISER CREST EL. = 499.50 RISER CREST EL. = 498.70 (N. SIDE ONLY) EL. = 498.70 = DRY STOR. EL. WET BASIN STORAGE EL = 497.10 -"DRY" STORAGE PERMANENT POOL EL. = 496.00 EL. = 497.10 BEGIN DRY STORAGE - EXISTING GROUND -"WET" STORAGE INTERNAL ORIFICE - 1.5" ORIFICE PLAT - SEE NOTE 3 ELEVATION - PRINCIPAL SPILLWAY - 24" ASTM C-361, 8-25 - RISER BASE - EL.= 490.00 PRINCIPAL SPILLWAY - 24" ASTM C-361, B-25 EL = 499# -TOP OF DAM = 502.00 -LIMIT OF WET STORAGE

> CONSTRUCTION SPECIFICATIONS 1. PERFORATIONS IN THE DRAW-DOWN DEVICE MAY NOT EXTEND INTO THE WET STORAGE. 2. THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 2 TIMES THE AREA OF THE INTERNAL ORIFICE.

PLAN VIEW

EL. = 497.10

3. THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS FOR GEOTEXTILE CLASS E.

4. PROVIDE SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATATION. AN ACCEPTABLE PREVENTATIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1" STEEL ANGLE, OR 1' BY 4" SQUARE OR 2" ROUND WOODEN POSTS SET 3' MINIMUM INTO THE GROUND THEN JOINING THEM TO THE DEVICE BY WRAPPING WITH 12 GAUGE

MINIMUM WIRE. -MSHA MIX NO. 3 (FC > 3500 p.s.i.) CONC. CRADLE TO BE POURED DIRECTLY AGAINST EARTH BANKS. IF BOTTOM OF TRENCH IS WIDER THAN THE CRADLE, SLOPING SIDES A2 CRADLE (FRAMED) SHALL BE USED. NO SCALE

OWNERS

J. DAVID MULLINIX ELIZABETH C. MULLINIX 14420 HOWARD ROAD DAYTON, MARYLAND, 21036

PATRICIA LEE SCHWARZ 13384 FOLLY QUARTER ROAD ELLICOTT CITY, MARYLAND, 21042-1247

DEVELOPER

TOP SLAB DETAIL

NO SCALE

J. THOMAS SCRIVENER INC. 8808 CENTRE PARK DRIVE SUITE 209 COLUMBIA, MARYLAND, 21145

Embankment and Cut-off Trench Construction

THE AREA OF THE PROPOSED SWM POND SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROOFOLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATION 378 SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE. UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. BASED ON OUR VISUAL CLASSIFICATIONS IT APPEARS THAT SOME OF THE ON-SITE SOILS, ESPECIALLY THE NEAR SURFACE SOILS, WILL BE SUITABLE FOR USE AS CORE TRENCH MATERIAL. IT IS RECOMMENDED THAT ADDITIONAL EXPLORATION AND LABORATORY TESTING BE PERFORMED PRIOR TO POND CONSTRUCTION TO IDENTIFY AND QUANTIFY POTENTIAL BORROW AREAS FOR CORE TRENCH MATERIAL ALL FILL MATERIALS MUST BE PLACED AND COMPACTED WITH MD 5C5 378

BORINGLOG

CONCRETE PIPE JOINT DETAIL

SPIGOT RING -

PENNIMAN & BROWNE, INC

ung no: B-3 Total depte: 15 feet | ELEVATION: 501

REDDISH BROWN, MOIST, MEDIUM DENSE TO DENSE, SELTY SAND, WYROCK FRAGMENTS, SANUY LOAM

BOTTOM OF HOLE - 13 FEET WATER UPON COMPLETION - 9 FEET WATER AT 2 DAYS - 6 FEET

TOPSOIL 6-INCHES

STEM AUGER STARTED: 11:2-00 COMPLETED: 11-2-00 DRILLER: EBA

DESCRIPTION OF MATERIAL BAMPLE SAMPLE MOISTURE REMARKS

CLIENT: BUCKSKIN RIDGE

RUBBER GASKET-

NOTE: PROVIDE MASTIC JOINT SEALER FROM OUTSIDE OF PIPE

JOINTS PRIOR TO INSTALLING BARREL UNDERGROUND

REINFORCEMENT CAGE

MASTIC JOINT SEALER

ASTM DESIGNATION C361

DIAMETERS 12 THRU 168 INCH

PRESSURES TO 125 FEET OF HEAD

BORING LOG

MAX. 2' STUB -

WITH WATERTIGHT

SOUTH 24" MIN LAP WHEN ABOVE PIPE

5TD. HO. CO. -

NORTH

RISER PLAN VIEW

NO SCALE

STEPS (G-5.21)

CONNECTION

10" D.I.P. LOW FLOW -

STD. HOWARD COUNTY

SIDEWALK FRAME AND

COVER (5.D. - 3.91)

DATE: 11-13-00

LONGITUDINAL

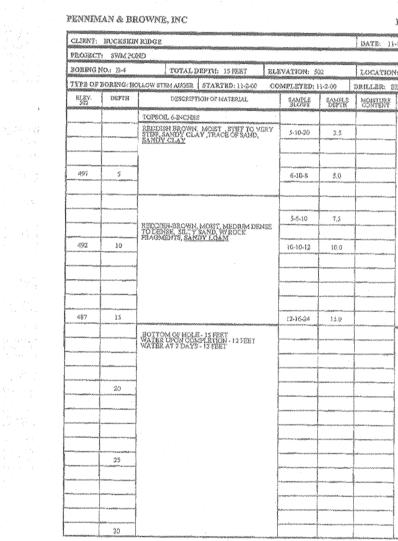
REINFORCEMENT

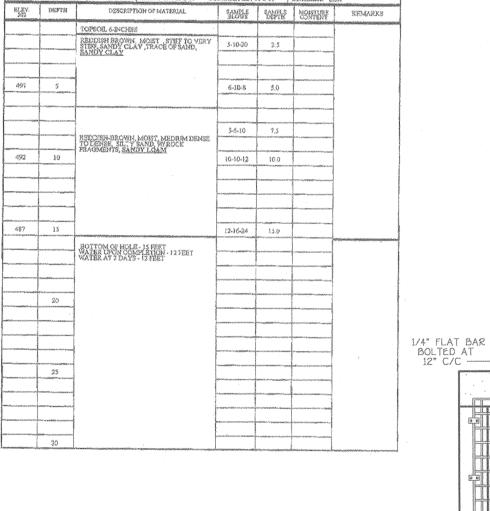
PENNIMAN & BROWNE, INC BORING LOG TOTAL DEPTH: 15 FRET | ELEVATION: 500 | LOCATION SEE SKETCH TYPE OF BORING: HOLLOW STEM ADDER STARTED: 11-2-00 COMPLETED: 11-2-00 DRILLER: SEA ELEV. DEPTH DESCRIPTION OF MATERIAL SANSE SANSE MONTENS REMARKS SILT TRACE OF SAND, SILTY GLAY LOAM DDESH-BROWN, MOIST, MEDIUM DENSE rown and oray, moist, silty sand, quartz rock fraoments.

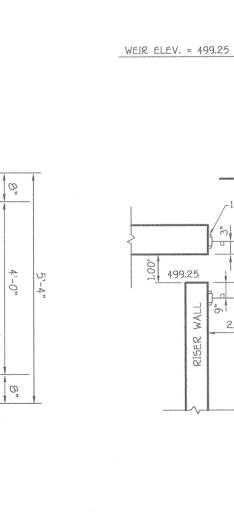
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	Teachers a	STATES IT A NOT	& BROWNE, INC				BORING

PENNIMAN & BROWNE, INC

CLIENT: BUCKSKIN RIDG







WELDED AT ALL
JOINING SIDES
(OR OPTIONAL
No. 5 GALVANIZED REBAR)

TRASH RACK 'A' DETAIL

BUCKSKIN OAKS

LOTS 1 THRU 4, OPEN SPACE LOT 5, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C' (A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

ZONED: RR-DEO

SHEET 10 OF 13

F 05-61

Signature Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those NSTEMANOSE STARTED: 11-2-00 COMPLETED: 11-2-00 DRILLER: EHA Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Pelieve Any Other Party From Meeting Requirements Imposed By Co Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices. TOP FIFY = 501.00 4' WEIR ELEV. = 499.25 2' WEIR ELEV. = 497.50

By The Developer:

Signature Of Developer

By The Engineer:

"I/We Certify That All Development And/Or Construction Will Be Done According To These Plans,

Certificate Of Attendance At A Department Of The Environment Approved Training Program

Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil

Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The

A5-BUILT CERTIFICATION

I Hereby Certify That The Facility Shown On This Plan Was Constructed

As Shown On The " As-Built" Plans And Meets The Approved Plans And

Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Pran Of The eard Within 30 Days Of Completion."

Willin 7. Mala ...

Approved: Department Of Planning And Zoning

Chief, Development Engineering Division

Specifications.

Chief Bureau Of Highways

Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Prepared in Accordance With The Requirements Of The Howard Soil Conservation District.

Ve Notified The Developer That He/She Must Engage A Registered Professional Engineer To ervise Point Conservation And Provide The Howard Soil Conservation District With An

9-27-95

12-1-05

P.E. No.

Date:

For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A

Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

And That Any Responsible Personnel Involved In The Construction Project Will Have A

2'-0" OPENING (NORTH SIDE ONLY) -2" x 2" x 3/16" TUBING AT 4" C/C EACH_WAY WELDED AT AL JOINING SIDES (OR OPTIONAL No. 5 REBAR) TT. TRASH RACK 4'-0" OPENING (EAST SIDE ONLY) No. 5 GALVANIZED REBAR)

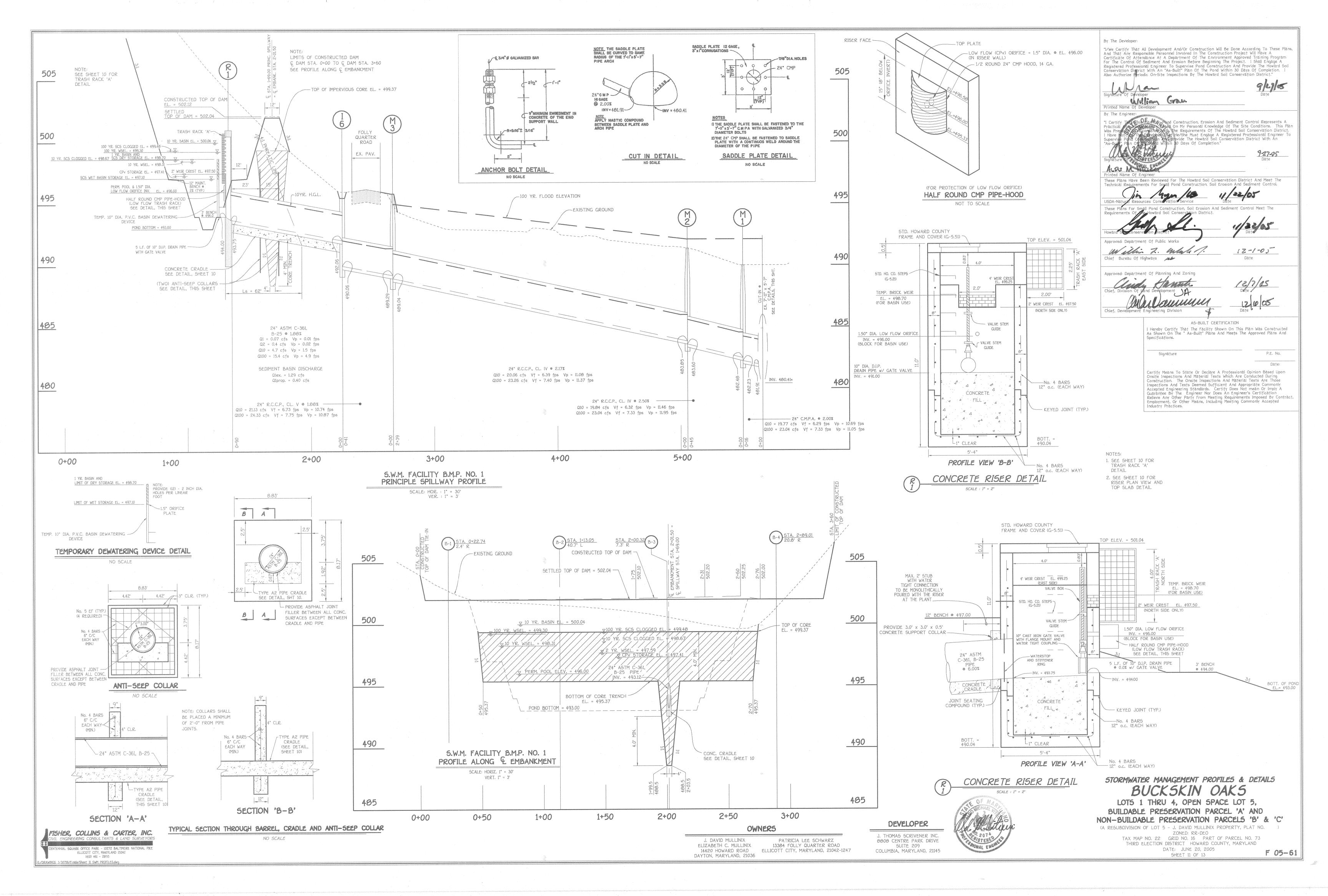
1. FIELD MEASURE THE STRUCTURE DIMENSIONS TO INSURE EXACT FIT OF TRASH RACK. 2. GALVANIZE ENTIRE TRASH RACK

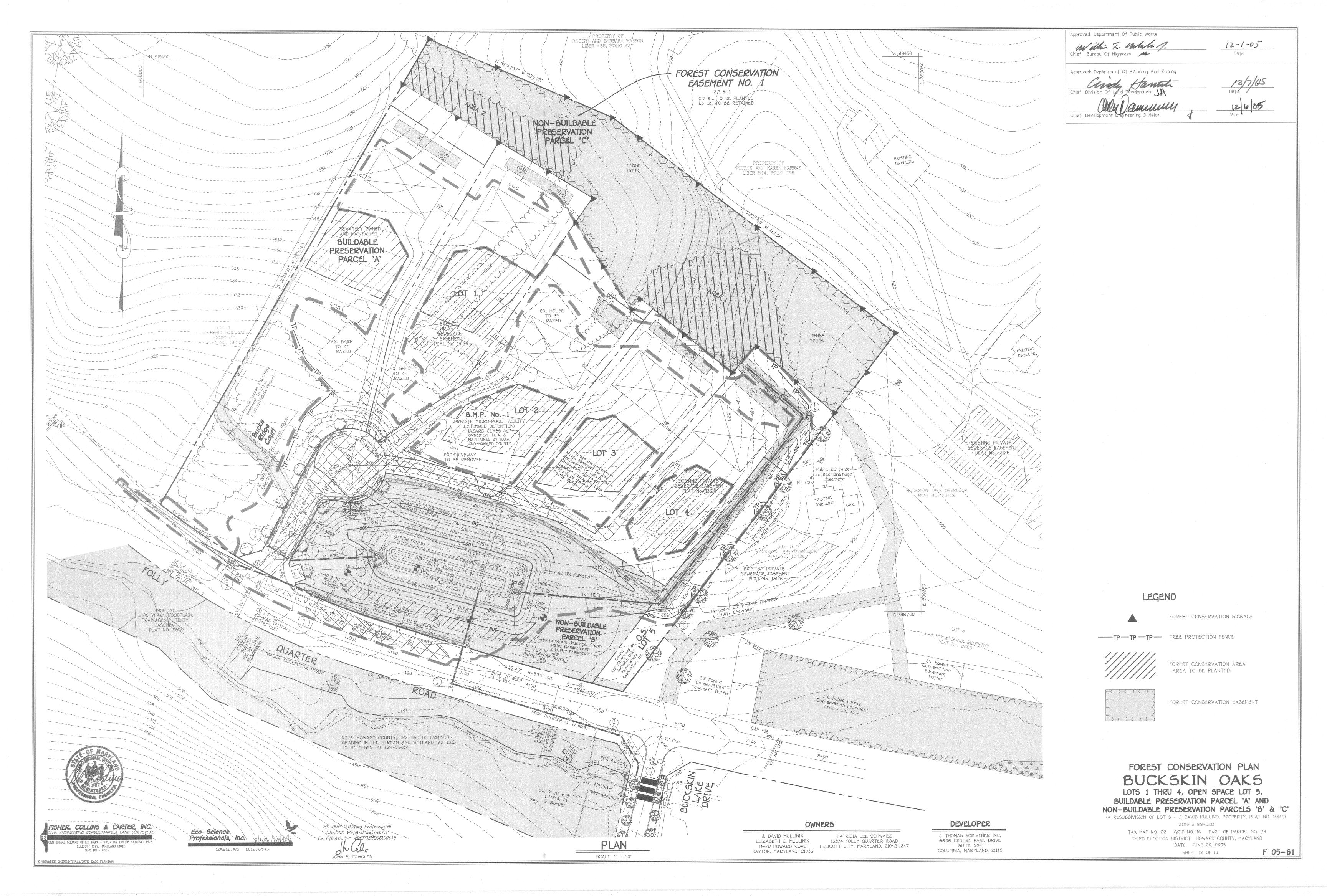
AFTER FABRICATION. 3. PAINT BATTLESHIP GRAY.

STORMWATER MANAGEMENT NOTES AND DETAILS

TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: JUNE 20, 2005

/DRAWINGS 3/30716/Finals/Sheet 10 SWM Notes.dwo





FCE Planting Area # 1 - 0.5 acres

Planting units proposed: 350.5

	7			
Qty	Species	5ize	Spacing	Total Units
1	Acer rubrum - Red maple	1" cal.	15' o.c.	
2	Quercus alba - White oak	1" cal.	15' o.c.	
3	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		10.5
25	Acer rubrum - Red maple	2-3' whip	11' o.c.	
5	Cercis canadensis - Red bud	2-3' whip	11' o.c.	
5	Cornus florida - Flowering dogwood	2-3' whip	11' o.c.	
35	Liriodendron tulipitera - Tulip poplar	2-3' whip	11' o.c.	
30	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
25	Robinia pseudo-acacia - Black locust	2-3' whip	11' o.c.	
20	Quercus alba - White oak	2-3' whip	11' o.c.	
25	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
170	Total whip plantings (2 planting units per tree)	FCA unit credit		340
		Total Unit	Credit	350.5

FCE Planting Area # 2 - 0.2 acres

Planting units required: 140 Planting units proposed: 142.5

Qty	Species	Size	Spacing	Total Units
1	Acer rubrum - Red maple	i" cal.	15' o.c.	
2	Quercus alba - White oak	1" cal.	15' o.c.	
3	Total 1" caliper trees (3.5 planting units per tree)	FCA unit credit		10.5
10	Acer rubrum - Red maple	2-3' whip	11' o.c.	
3	Cercis canadensis - Red bud	2-3' whip	11' o.c.	
3	Cornus florida - Flowering dogwood	'2-3' whip	11' o.c.	
10	Liriodendron tulipitera - Tulip poplar	2-3' whip	11' o.c.	
10	Prunus serotina - Black cherry	2-3' whip	11' o.c.	
10	Robinia pseudo-acacia - Black locust	2-3" whip	11' o.c.	
10	Quercus alba - White oak	2-3' whip	11' o.c.	
10	Viburnum prunifolium - Blackhaw	2-3' whip	11' o.c.	
66	Total whip plantings (2 planting units per tree)	FCA unit credit		132
		Total Unit	Credit	142.5

Whip plantings to be spaced on 11 foot centers, shelters will be required as per Howard County policy. Plantings should be installed in rows to facilitate future maintenance. The planting rows should be created in a curvilinear fashion to avoid a grid appearance.

One inch caliper plants should be installed along edge of planting area to serve as demarcation of boundary. Spacing should be approximately 15 feet.

Planting/Soil Specifications

1. Installation of bareroot plant stock shall take place between March 15 - April 20; b&b/container stock March 15 -May 30 or September 15 - November 15. Fall planting of B&B stock is not recommended.

2. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.

3. Bareroot plants shall be installed so that the top of root mass is level with the top of existing grade. Roots shall be dipped in an anti-desiccant gel prior to planting. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.

4. Fertilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications, for woody plants. Herbaceous plants shall be fertilized with Osmocote 8-6-12.

5. Plant material shall be transported to the site in a tarped or covered truck. Plants shall be kept moist prior to

6. All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

- 1. Sediment control shall be installed in accordance with general construction plan for site.
- 2. Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
- 3. Upon completion of the planting, signage shall be installed as shown.
- 4. Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

- 1. Maintenance of plantings shall last for a period of 2 years.
- 2. Plantings must receive 2 gallons of water, either through precipitation or watering, weekly during the 1st growing season, as needed. During second growing season, once a month during May-September, if needed.

3. Invasive exotics and noxious weeds will be removed, as required, from planting areas mechanically and/or with limited herbicide application (see groundcover note where appropriate). Old field successional species will be retained.

4. Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.

5. Dead branches will be pruned from plantings.

Guarantee Requirements

1. A 75 percent survival rate of forestation plantings will be required at the end of 2 growing seasons. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season. Wild trees arising from natural regeneration may be counted up to 50 percent towards the total survival number if they are healthy, native species at least 12 inches tall.

Surety for Forestation

1. The developer shall post a surety (bond, letter of credit) to ensure that forestation plantings are completed.

Planting Notes

When possible, plants shall be installed within 24 hours of delivery. If installation cannot be performed within this time frame, plant stock shall be watered and protected from dessication

Application of herbicide, Round-up or equivalent, may be used to reduce plant competition from old field successional growth at the time of installation. Mowing, re-application of herbicide, or a combination thereof, may be used to control unwanted, competing vegetation.

Planting shall be installed within one year or two growing seasons of subdivision approval. Plantings shall be installed in accordance with the time schedule included in Note 1 of the planting /Seeding Specifications.

BLAZE ORANGE PLASTIC MESH

MAXIMUM 8 FEET

HIGHLY VISIABLE FLAGGING

BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.

TREE PROTECTION DETAIL

NOT TO SCALE

ANCHOR POST SHOULD BE

MINIMUM 2" STEEL "U" CHANNEL OR 2" x 2" TIMBER 6' IN LENGTH

> ANCHOR POST MUST BE INSTALLED TO A DEPTH OF NO LESS THAN 1/3

OF THE TOTAL HEIGHT OF POST

RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.

DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

FOREST PROTECTION DEVICE ONLY.

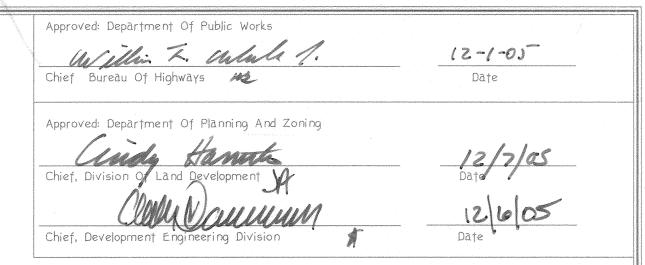
ROOT DAMAGE SHOULD BE AVOIDED. PROTECTIVE SIGNAGE MAY ALSO BE USED.

HEIGHT ROOTBALL 10% - SDIL MIX BACKFILL VIDTH = 2 1/2 X ROOTBALL OR CONTAINER DIAMETER WIDTH = 2 1/2 X ROOTBALL OR CONTAINER DIAMETER Disturbed Soil BACKFILL WITH WITH 2/3 EXISTING SOIL AND 1/3 COMPOST HEIGHT ROOTBALL 10% ABOVE FINISHED GRADE Seeding and Whip Planting Specification WIDTH = 2 1/2 X ROOTBALL

Planting on Slope

Undisturbed Soil

CONTAINER GROWN AND B & B PLANTING TECHNIQUES



FCP NOTES

- 1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- 2. THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE
- 3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- 4. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- 5. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- 6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF
- 7. PERMANENT SIGNAGE SHALL BE PLACED 50' 100' APART ALONG BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
- 8. THE FOREST CONSERVATION OBLIGATIONS INCURRED BY THIS SITE DEVELOPMENT PLAN HAVE BEEN MET THROUGH THE RETENTION, IN AN EASEMENT, OF 1.6 ACRES OF EXISTING FOREST AND THE FORESTATION OF 0.7 ACRES OF FOREST. A TOTAL OF 2.3 ACRES OF FOREST CONSERVATION EASEMENTS WILL BE CREATED FOR THIS PROJECT. TOTAL FOREST CONSERVATION EASEMENT AREA = 2.3 ACRES FOR A TOTAL FOREST SURETY OF \$29,185.20.

FOREST CONSERVATION WORKSHEET VERSION 1.0

BASIC SITE DATA:		
A. TOTAL TRACT AREA		11.5
B. AREA WITHIN 100 YEAR FLOODPLAIN		0.0
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION		
D. NET TRACT AREA	*******	11.5
LAND USE CATEGORY: RC-DEO		
INFORMATION FOR CALCULATIONS:		
E. AFFORESTATION THRESHOLD	20% x D =	2.3
F. FOREST CONSERVATION THRESHOLD	25% x D =	2.9
EXISTING FOREST COVER:		
G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	· · · · · · · · · · · · · · · · · · ·	1.6
H. AREA OF FOREST ABOVE CONSERVATION THRESHO	LD:	0.0
I. BREAK EVEN POINT:		manga selambi mangali selama penjenti prish selama saspe pender selambi penjen, mbana manbas
J. TOTAL AREA OF FOREST TO BE CLEARED	**************************************	0.0
K. TOTAL AREA OF FOREST TO BE RETAINED	***************************************	1.6
AFFORESTATION CALCULATIONS:		
L. NO FOREST CLEARING (afforestation threshold - e)	kisting forest)=	0.7

FOREST CONSERVATION NOTES AND DETAILS BUCKSKIN OAKS

LOTS 1 THRU 4. OPEN SPACE LOT 5. BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C' (A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

> ZONED: RR-DEO TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 20, 2005

F 05-61

ON-SITE SIGNAGE

FOREST CONSERVATION EASEMENT UNAUTHORIZED DISTURBANCE OF VEGETATION IS PROHIBITED. VIOLATORS SUBJECT TO PENALTIES UNDER THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1991. TREES FOR YOUR FUTURE

11" MINIMUM

C/DRAWINGS 3/30716/FINALS/30716 BASE PLAN.DWG

FISHER, COLLINS & CARTER, INC.

FILICOTT CITY, MARYLAND 21042 (410) 461 - 2855

Eco-Science CONSULTING ECOLOGISTS USACOE Wetland Delineator JOHN P. CANOLES

NOTES:

OWNERS J. DAVID MULLINIX

USE 2" x 4"

LUMBER FOR CROSS BACKING

USE 3' WIRE

"U" TO SECURE \

FENCE BOTTOM

ELIZABETH C. MULLINIX

DAYTON, MARYLAND, 21036

PATRICIA LEE SCHWARZ 13384 FOLLY QUARTER ROAD

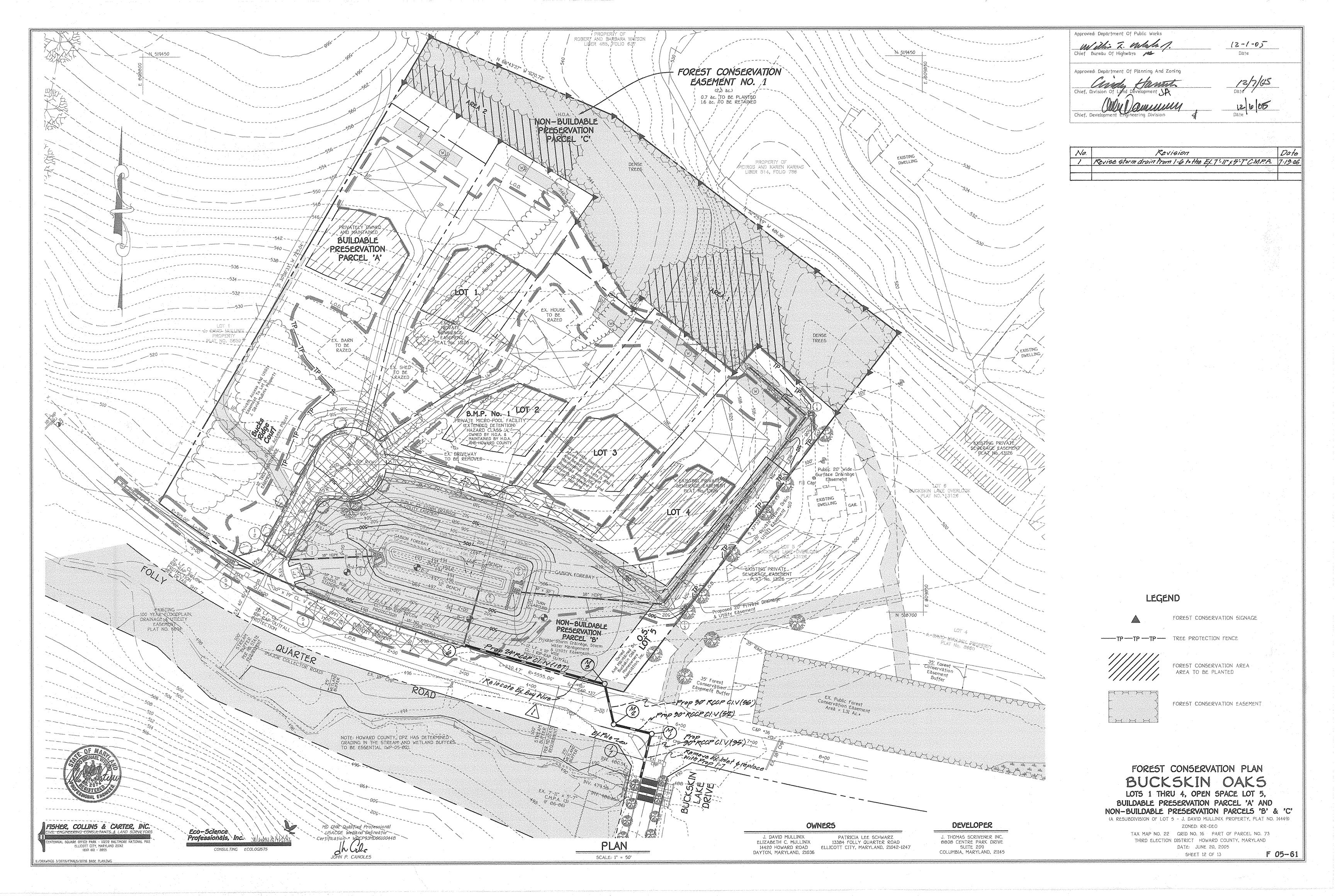
DEVELOPER J. THOMAS SCRIVENER INC. 8808 CENTRE PARK DRIVE SUITE 209

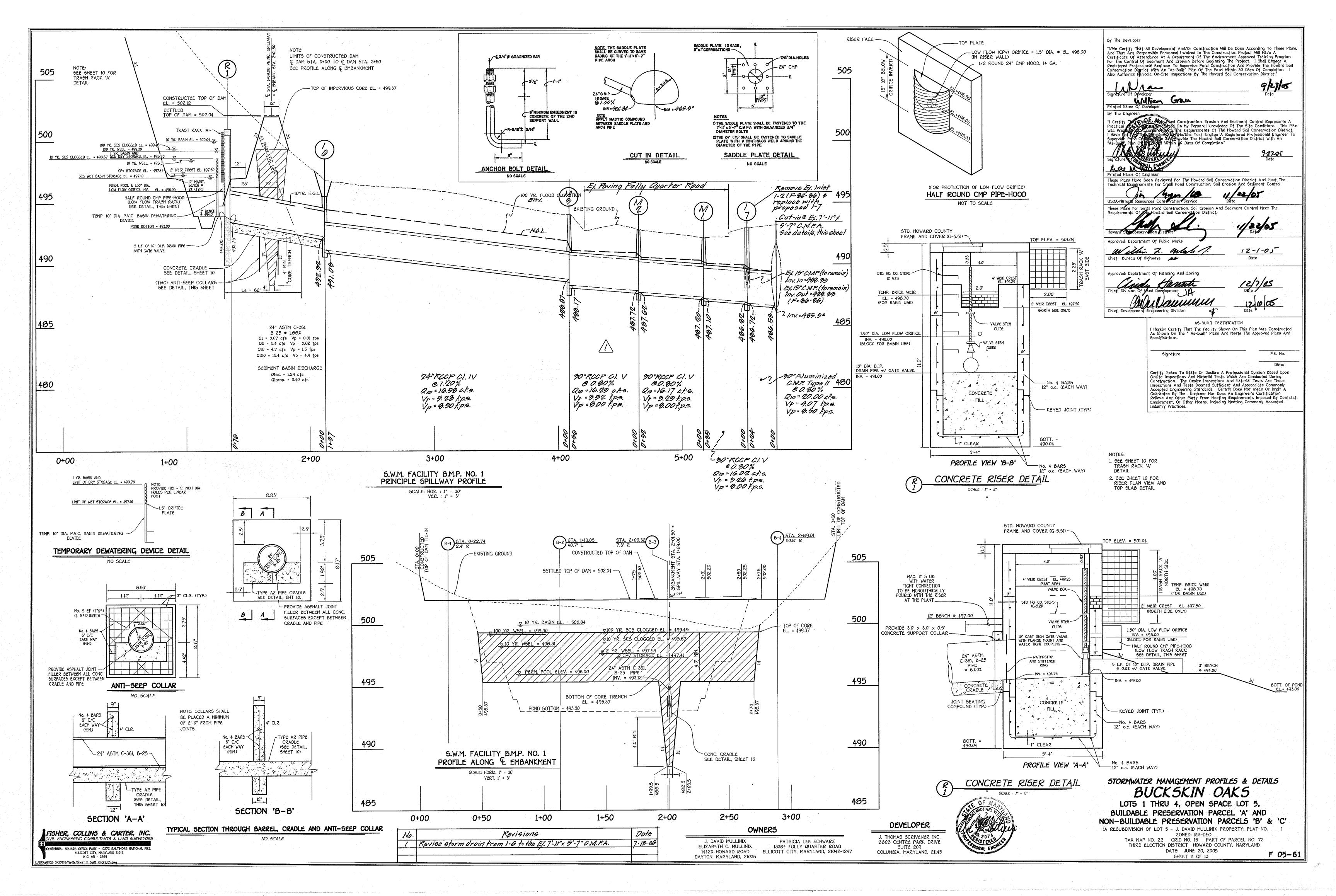
Professionals, Inc. X WALLY IN

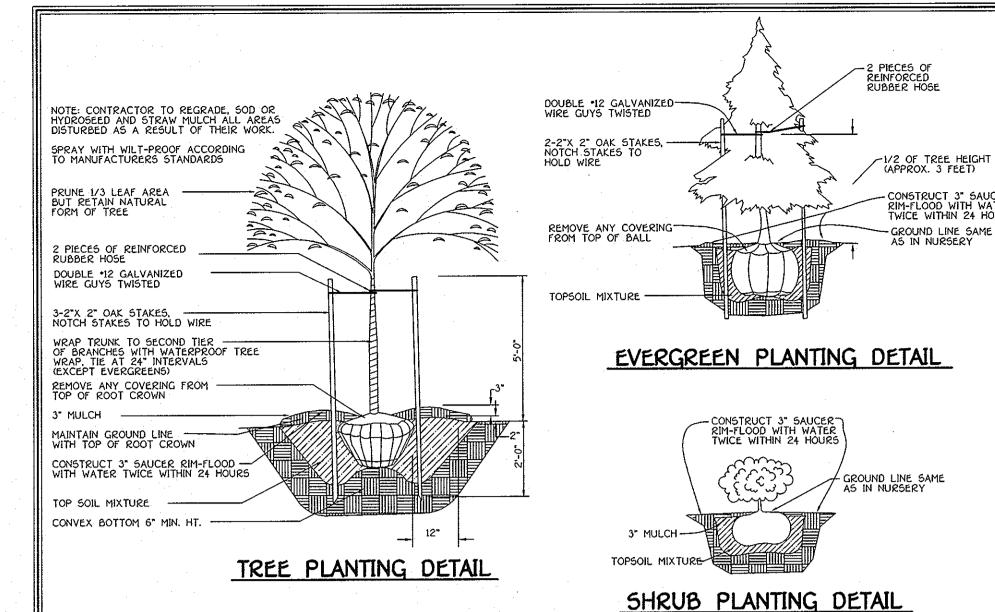
MD DNR Qualified Professional Certification * WDCP93MD0610044B

14420 HOWARD ROAD ELLICOTT CITY, MARYLAND, 21042-1247 COLUMBIA, MARYLAND, 21145

SHEET 13 OF 13







PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 40 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction. Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where

Positive drainage shall be maintained in planting beds 2 percent slope).

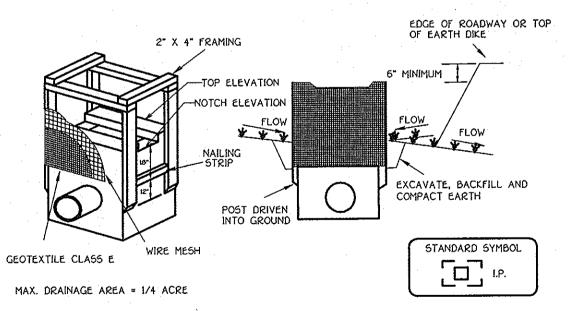
Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

TREE PLANTING DETAIL



Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the

notch elevation 2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where

flooding and safety issues may arise. 3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post. 4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and

folded, then fastened down 5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and

6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike

should be at least 6" higher than the top of the frame. 7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

STANDARD INLET PROTECTION

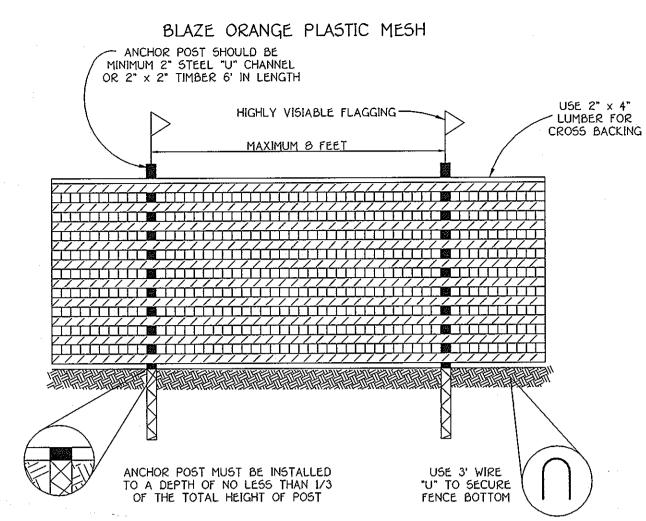
NOT TO SCALE





Le = 42x2 = 84' Rea'd.

CHECK Le/We > 2 = 150/42= 3.57 ÷ OK



NOTES:

FOREST PROTECTION DEVICE ONLY. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE. ROOT DAMAGE SHOULD BE AVOIDED.

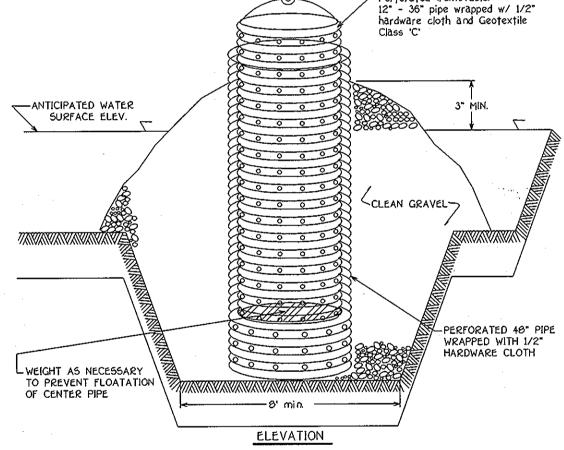
DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

PROTECTIVE SIGNAGE MAY ALSO BE USED.

TREE PROTECTION DETAIL

REMOVABLE PUMPING STATION

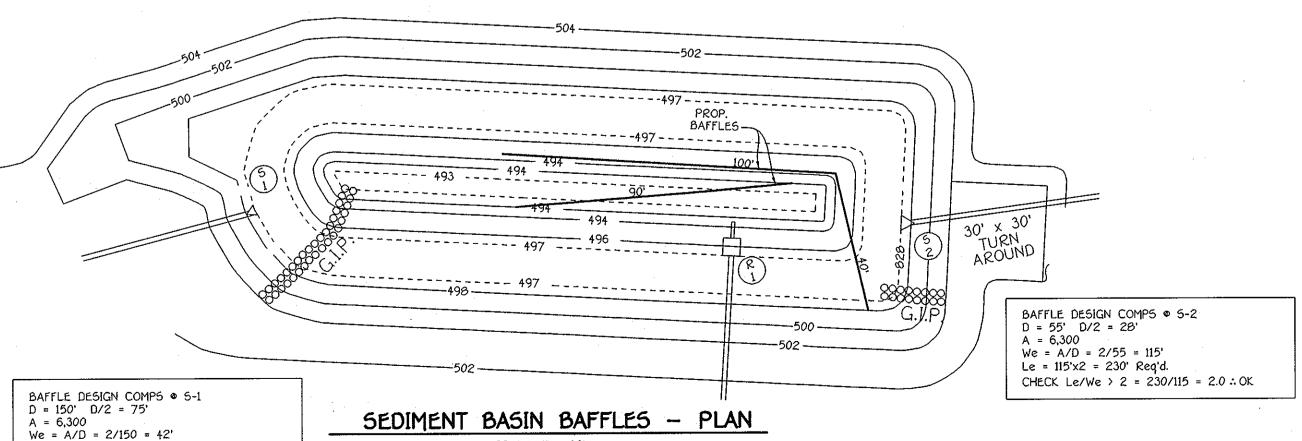
-HOOK AND CHAIN FOR REMOVAL Perforated (removable) SURFACE ELEV. 0000



Construction Specifications

1. The outer pipe should be 40° dia. or shall, in any case, be at least 4° greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2° hardware cloth to prevent backfill material from entering the perforations. 2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel. 3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C 4. The center pipe should extend 12" to 18" above the anticipated water surface

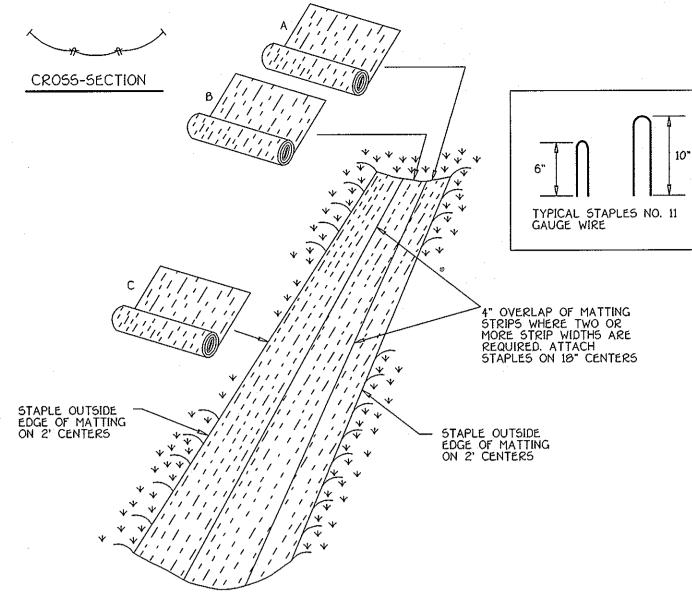
elevation or riser crest elevation when dewatering a basin



OWNERS

J. DAVID MULLINIX PATRICIA LEE SCHWARZ ELIZABETH C. MULLINIX 13384 FOLLY QUARTER ROAD 14420 HOWARD ROAD ELLICOTT CITY, MARYLAND, 21042-1247

DEVELOPER J. THOMAS SCRIVENER INC. 8808 CENTRE PARK DRIVE SUITE 209



Construction Specifications

Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

EROSION CONTROL MATTING

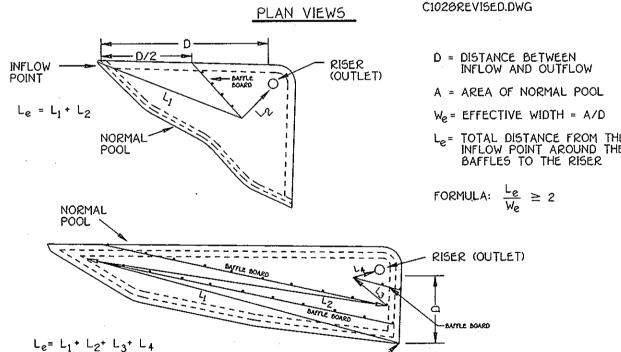
DITCH COMPUTATIONS ABOVE 5-5 ARE AS FOLLOWS: 25 YR. Q = 14.8 c.f.s. SIDE SLOPES: 7:1 OPPOSITE ROAD 3:1 CLOSEST TO ROAD 'V' DITCH COMPUTATION: AREA = Zd2

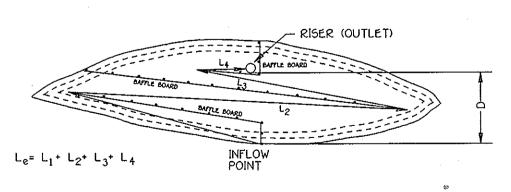
WHERE: Z = 5:1 AVERAGE d = 0.38' AREA = 0.72 SQ.FT. WETTED PERIMETER = 3.89' R = A/WP = 0.72/3.89 = 0.1851

V = 1.486 R^{2/3} 5^{1/2}

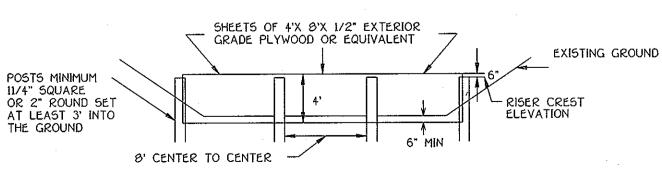
 $V = 1.486 \times 0.1051^{0.67} \times 0.029^{0.5}$ V = 2.04 f.p.s. .. NON-EROSVE

SEDIMENT BASIN BAFFLES NOT TO SCALE





INFLOW



BAFFLE DETAIL

The Howard Soil Conservation District. DEVELOPER'S CERTIFICATE "I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary." Signature Of C Reviewed For Howard County Soil Conservation District And Meets Technical Requirement U.S.D.A. - Nat Approved: Howard County Department Of Public Works 12-1-05

ENGINEER'S CERTIFICATE

Ofif The This Plan For Erosion And Sediment Control

Mode Workable Plan Based On My Personal Knowledge

SEQUENCE OF CONSTRUCTION

PHASE ONE

1. OBTAIN A GRADING PERMIT.

BEFORE PROCEEDING.

2. NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24 HOURS BEFORE STARTING WORK.

3. INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE PLANS (I DAY). INSTALL STABILIZED CONSTRUCTION ENTRANCE. (3 DAYS) NOTE: THE FOLLOWING S.O.C. 4 -5 SHALL OCCUR WITHIN A 5-DAY CLEAR WEATHER FORCAST WITH THE PERMISSION FROM INSPECTOR

4. INSTALL SILT FENCE, EARTH DIKES & MOUNTABLE BERM. INSTALL CULVERTS FROM 5-4 TO 5-5 AND GRADE IN DITCHES ALONG FOLLY QUARTER ROAD. GRADE ALONG FOLLY QUARTER ROAD FOR APPROPRIATE ROAD IMPROVEMENTS. RELOCATE ANY UTILITY POLES IF NECESSARY. SAW CUT FOLLY QUARTER ROAD AND INSTALL PAVING SECTION PER APPROPRIATE

IMPROVEMENTS. (2 WEEKS) NOTE: CONTRACTOR TO STABILIZE ANY DISTURBED AREA BY THE END OF EACH DAY

WITH TOPSOIL, E.C.M. AND PERMANENT SEED MIX.

5. WORKING DOWNSTREAM TO UPSTREAM BEGIN STORM DRAIN CONSTRUCTION FROM CONNECTION TO EXISTING TRIPLE CELL CULVERT UP TO I-6. REMOVED THE EXISTING 18* CULVERT UNDER FOLLY QUARTER ROAD WHEN WORK REACHES VICINITY OF M-3. INSTALL INLET. * SEE BELOW.

6. RECEIVE RERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO

PHASE TWO

7. CLEAR & GRUB FOR SEDIMENT BASIN/S.W.M. POND. INSTALL SEDIMENT BASIN/SWM POND WITH OUTFALL TO I-6 AND SILT FENCE AS INDICATED ON THE PLANS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF SEDIMENT BASIN/SWM POND EMBANKMENT. WHERE NECESSARY, RIPPING AND JACK HAMMERING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITY. (2 WEEKS)

8. CLEAR AND GRUB THE REMAINDER OF THE SITE. (3 DAYS)

9. GRADE SITE TO THE PROPOSED SUB-GRADE AND INSTALL THE STORM DRAIN SYSTEMS. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING. INSTALL 5-1 THRU 1-2 & 5-2 THRU 1-5. GRADE DITCH AT REAR OF LOT 4 & ON THE EAST SIDE OF LOT 4 AS SHOWN ON THE PLANS. DO NOT BLOCK INLETS AS STORM DRAIN SYSTEM WILL BE USE TO CONVEY SEDIMENT TO BASIN. (2 WEEKS)

10. CONSTRUCT ROAD BASE COURSE FOR INTERNAL SUBDIVISION ROAD. (1 WEEK)

11. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND THE POND HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL DESIGN GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 WEEKS)

12. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE POND WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE APPROVED TRAPPING DEVICE.

5 Cont. WORK WITHIN FOLLY QUARTER ROAD SHALL FOLLOW THE TRAFFIC MAINTENANCE PLANS AND BE SCHEDULED BETWEEN Jam. to 3 p.m. FOR LANE CLOSURES.

	revisions		
No	10 DESCRIPTION		
1	REVISE STORM DRAIN FROM 1-6 TO THE EX. 7'-11" X5'-7" C.M.P.A.	7-19-06	

SEDIMENT CONTROL NOTES AND DETAILS BUCKSKIN OAKS

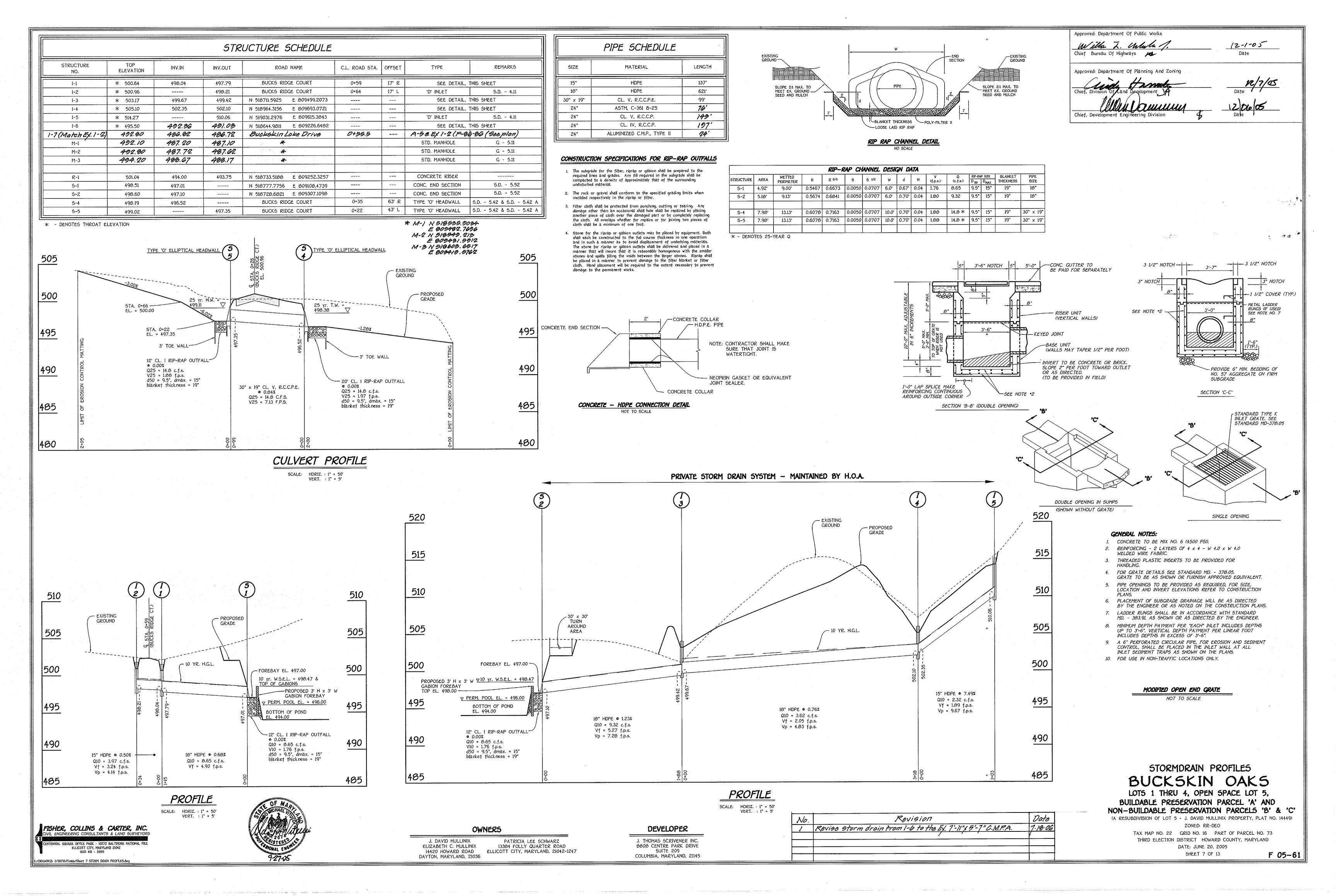
LOTS 1 THRU 4, OPEN SPACE LOT 5, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C' (A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

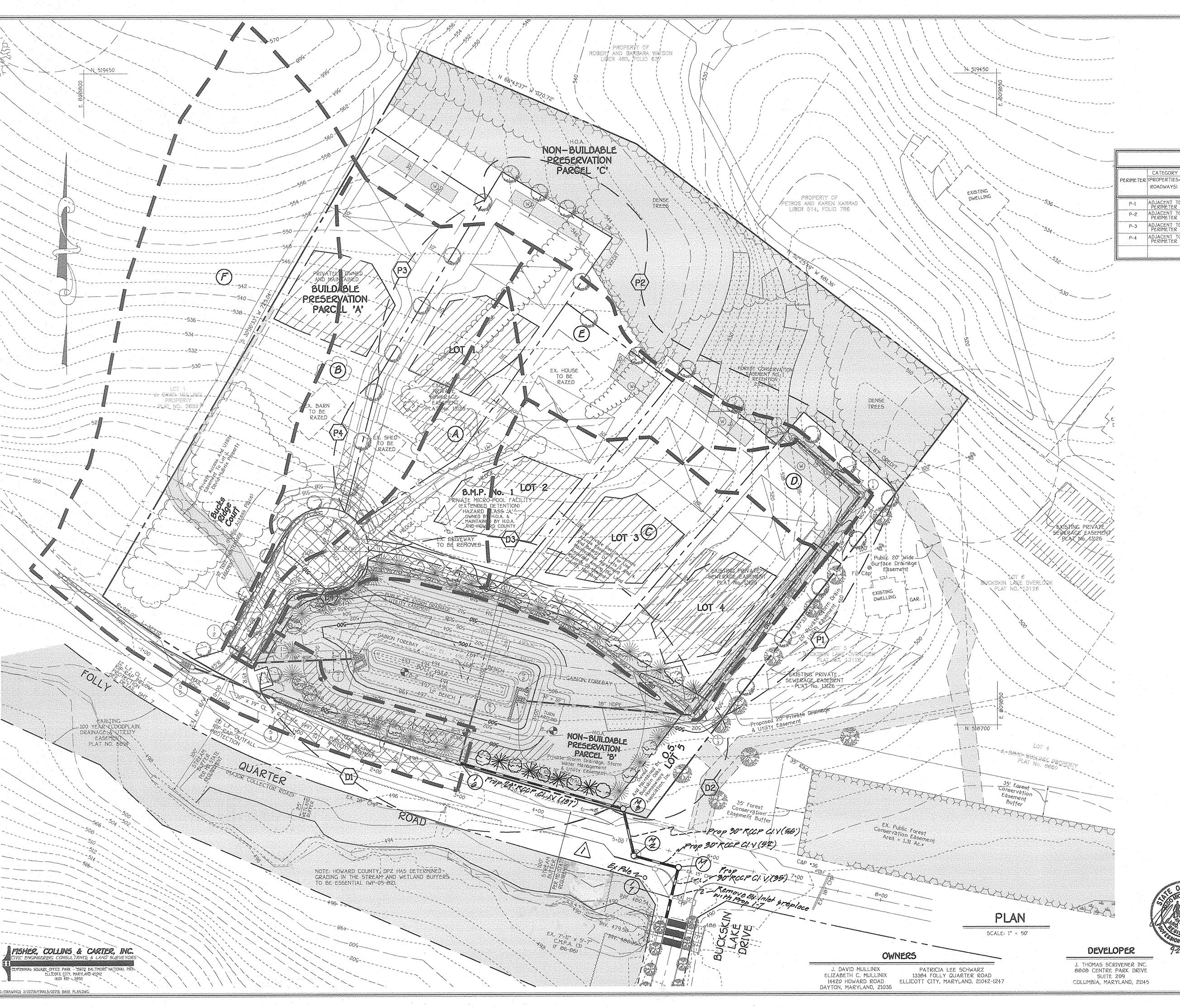
> ZONED: RR-DEO TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 20, 2005 **SHEET 9 OF 13**

F 05-61

COLUMBIA, MARYLAND, 21145 DAYTON, MARYLAND, 21036 /DRAWINGS 3/30716/FINALS/30716 SHEET 9 SED CON DETAILS.DWG





Approved: Department Of Public Works

Chief Bureau Of Highways

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development JA

Date

Chief, Division Of Land Development JA

Chief Division Of Land Development D

		. 6	CHEDULE A	- PERIMETER LANDS	SCAPE EDGE			
PERIMETER	CATEGORY (PROPERTIES/ ROADWAYS)		FRONTAGE	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		REQI 5HADE	MBER OF PLAN JIRED & PROV EVERGREEN TREES	
P-1	ADJACENT TO PERIMETER	A	324'	NO	NO	5		To get
P-2	ADJACENT TO PERIMETER	europe bereigen er gebeneigen bereigen bereigen bereigen bereigen beseigen beseigen beseigen beseigen beseigen.	808,	YES - 146'	NO	12	~	-
P-3	ADJACENT TO PERIMETER	A	237'	NO	NO.	4	. ~	>***
. P-4	ADJACENT TO PERIMETER		161	NO .	NO	3	t-	

LINEAR FEET OF PERIMETER	D1: 420'	D2: 165'	D3: 413'	D4: 264'
NUMBER OF TREES REQUIRED: SHADE TREES EVERGREEN TREES	8	3 4	8	5 7
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	NO	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO	NO	NO
NUMBER OF TREES PROVIDED: SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION)	8 10	3 ' 4	& 10	The state of the s

No.	Revision	Dote
7	Revise storm drain from 1-6 to the ex 7'-11'x 5'-7" C.M.P.A	7-19-06
Acc. 10		

STRUCTURE NO.	DRAINAGE AREA	AREA	,C,	ZONED	% IMP.
I-1	A	0.88 AC.	0.63	RR-DEO	54%
1-2	В	1.52 AC.	0.35	RR-DEO	14%
1-3	C	1.88 AC.	0.41	RR-DEO	234
<u>[-4</u>	0	0.34 AC.	0.42	RR-DEO	25%
1-5	E	0.77 AC.	0.40	RR-DEO	22%
i-6	F	3.98 AC.	0.30	RR-DEO	7%

LANDSCAPING PLANT LIST							
QTY.	KEY	NAME	SIZE				
24	6	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2 - 2 1/2" CALIPER FULL CROWN, B&B				
23		ACER RUBRUM 'OCTOBER GLORY' (OCTOBER RED MAPLE)	2 - 2 1/2" CALIPER FULL CROWN, B&B				
31	*	PINUS STROBUS EASTERN WHITE PINE	6' - 8' HT.				

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL". FINANCIAL SURETY FOR THE 76 REQUIRED LANDSCAPE TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$10,750.00.

LANDSCAPE PLAN AND STORM DRAIN DRAINAGE AREA MAP

BUCKSKIN OAKS

LOTS 1 THRU 4, OPEN SPACE LOT 5,
BUILDABLE PRESERVATION PARCEL 'A' AND
NON-BUILDABLE PRESERVATION PARCELS 'B' & 'C'
(A RESUBDIVISION OF LOT 5 - J. DAVID MULLINIX PROPERTY, PLAT NO. 14449)

ZONED: RR-DEO

TAX MAP NO. 22 GRID NO. 16 PART OF PARCEL NO. 73

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 20, 2005

SHEET 6 OF 13

F 05-61

