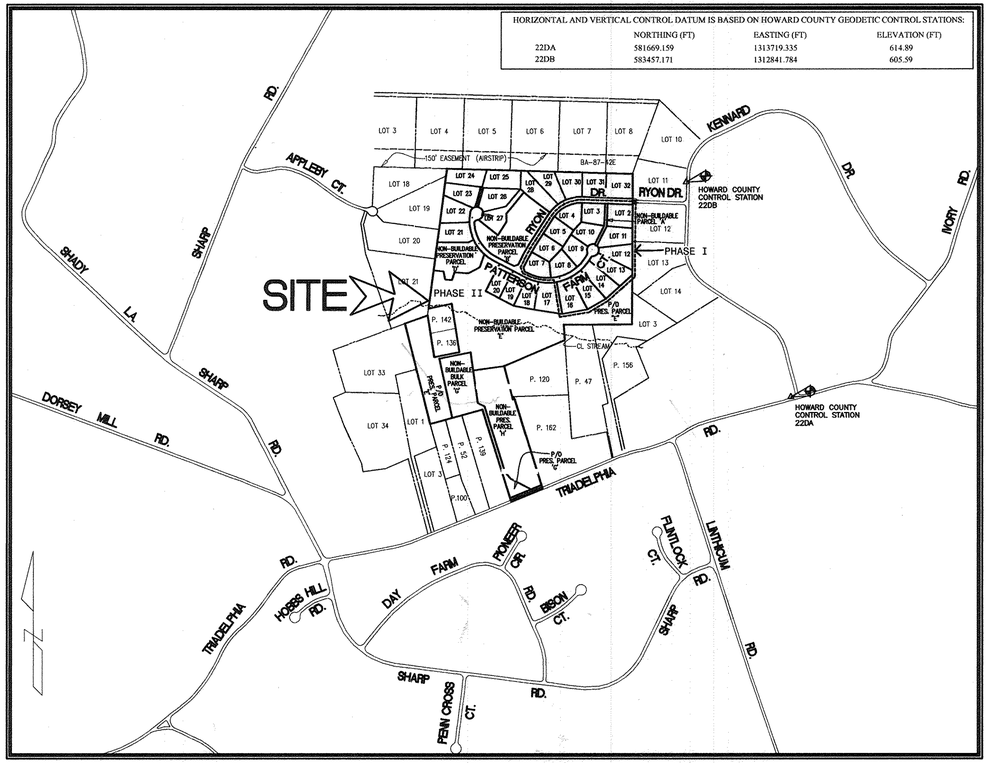
SHEET INDEX

COORDINATE TABLE

POINT	NORTHING	EASTING
1	583524.3887	1312390.9241
2	583525.1845	1312375.4545
3	583568.2310	1310835.6461
4	582405.5061	1310682.3900
5	582447.0549	1310875.7634
6	582243.0097	1310908.4709
7	582042.8261	1310940.5594
8	582002.1159	1310729.3571
9	582202.2624	1310697.9784
10	582348.2925	1310674.8488
11	582281.2453	1310483.6998
12	581445.3322	1310695.5675
13	581565.1613	1311133.5153
14	580814.5169	1311370.1897
15	580820.2820	1311383.8208
16	580834.1733	1311416.2204
17	580925.7237	1311632.2706
18	581652.4075	1311402.9741
19	581647.9466	1311388.7787
20	581927.6833	1311315.4735
21	582142.6794	1311823.6589
22	582272.0203	1311814.6183
23	582273.6816	1312386.7218

PARCEL	OWNER	EASEMENT HOLDERS	PURPOSE
PARCEL A	HOA	None	Pedestrian Parkway
Non-Buildable Preservation Parcel B	HOA	Howard County	Shared Septic System
Non-Buildable Bulk Parcel C	Prescription Acres LLC	None	Non-buildable bulk parcel, to be subdivided when allocations are awarded and density is transferred
Non-Buildable Preservation Parcel D	HOA	Howard County	Stormwater Management
Non-Buildable Preservation Parcel E	Prescription Acres LLC	Howard County & Howard County Conservancy	Conservation and Environment Management Area
Non-Buildable Bulk Parcel F	Prescription Acres LLC	None	Non-buildable bulk parcel, to be subdivided when allocations are awarded and density is transferred
Non-Buildable Bulk Parcel G	Prescription Acres LLC	None	Non-buildable bulk parcel, to be converted to a Buildable Preservation Parcel 'G' when allocations are awarded and density is transferred
Non-Buildable Preservation Parcel H	HOA	Howard County	Shared Septic System



LOCATION MAP
SCALE : 1" = 600'

FINAL ROAD CONSTRUCTION PLAN
HOPKINS CHOICE
PHASE I & II

ROAD CLASSIFICATION

ROAD NAME	CLASSIFICATION	RIGHT-OF-WAY	DESIGN SPEED
RYON DR.	ACCESS STREET	50 FEET	30 M.P.H.
RYON DR.	ACCESS STREET	50 FEET	30 M.P.H.
PATTERSON FARM CT.	ACCESS STREET	40 FEET	30 M.P.H.

TRAFFIC CONTROL SIGNS*

ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
RYON DR.	4+65	15' R	SPEED LIMIT 25 MPH	R2-1
RYON DR.	16+98	25' R	STOP SIGN	R1-1
RYON DR.	14+00	15' R	STOP AHEAD	W3-1A

*ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

RIGHT-OF-WAY PINS SET

POINT#	NORTHING	EASTING
1	583319.6024	1312390.2674
2	583334.3338	1311967.4778
5	583187.2206	1311684.0986
6	583958.9710	1311535.1222
9	582868.9891	1311482.6985
10	582770.3809	1311431.7511
11	582759.5849	1311398.0505
12	582840.0106	1311242.3890
15	583114.4041	1311064.3328
18	583140.7479	1311087.6517
22	583269.6615	1312389.9871
23	583284.4347	1311965.9339
24	583217.8113	1311033.6118
25	582931.6418	1311577.0569
27	582804.4762	1311223.9533
29	582664.7783	1311493.5285
38	582805.4253	1312025.3207
39	582830.8484	1312041.9040
41	582846.0415	1311527.1170
42	582747.3925	1311476.1508
43	582713.7266	1311486.9350
44	582700.6623	1311512.7213
62	582827.1664	1311991.7430
63	582852.4193	1312008.2165
66	582874.6571	1312010.7606
72	582841.9169	1312061.1017

CONCRETE MONUMENTS SET

POINT#	NORTHING	EASTING
2000	582771.0782	1311413.5917
2001	583326.9167	1312358.6260

FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

DAWN JORGENSON, PE# 37668 (EXPIRES 7/13/17)

SIGNATURE — DATE 4/25/16

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

STATE OF MARYLAND — DAWN MARIE JORGENSON — No. 37668 — PROFESSIONAL ENGINEER

AS-BUILT

HORIZONTAL DATUM FOR THIS AS-BUILT SURVEY IS BASED ON THE MARYLAND STATE REFERENCE SYSTEM NAD 83 (ADJUSTED JANUARY OF 2012) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 22DA AND 22DB. VERTICAL DATUM FOR THIS AS-BUILT SURVEY IS NORTH AMERICAN VERTICAL DATUM (NAVD) 1988 AS PROJECTED BY THE ABOVE MENTIONED HOWARD GEODETIC CONTROL STATIONS OR HOWARD COUNTY VERTICAL CONTROL BENCHMARKS:
22DA = 614.067
22DB = 604.850

THIS AS-BUILT WAS PERFORMED BY:
ESE CONSULTANTS, INC.
7164 COLUMBIA GATEWAY DRIVE, SUITE 230
COLUMBIA, MD 21046

THE INSTRUMENTS USED IN PERFORMING THIS AS-BUILT WERE THE 3 SECOND ROBOTIC TOTAL STATION & PRISM AND THE RTK GPS.

DENSITY TABULATION

BY RIGHT YIELD	= (66.83 Ac./4.25 Ac.) 15 LOTS
MAXIMUM ALLOWABLE YIELD	= 64.20 Ac. / 2 = 32 LOTS
TOTAL UNITS PROPOSED	= 32 LOTS ★
DEO UNITS REQUIRED BY SECT. 106 (FOR PHASE II)	= 17 (32-15)

★31 BUILDING LOTS PLUS BUILDABLE PRES. PARCEL 'G'

NO.	DATE	DESCRIPTION

REVISIONS

GENERAL NOTES

1. THE SUBJECT PROPERTY IS ZONED RR-DEO PER THE FEBRUARY 2, 2004 ZONING REGULATIONS.
2. AS A CONSEQUENCE OF THIS PLAN'S SUBMISSION AFTER NOVEMBER 15, 2001, THE SUBDIVISION PLAN WILL BE SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND 1993 AMENDED BY CB50-2001 ZONING REGULATIONS EFFECTIVE 1-8-02.
3. SITE ANALYSIS DATA :
   GROSS AREA OF TRACT = 66.83 Ac.
   AREA OF FLOODPLAIN = 2.49 Ac.
   AREA OF 25 % OR GREATER SLOPES = 0.14 Ac.
   NET AREA OF TRACT = 64.20 Ac.
4. AREA OF PROPOSED ROAD RIGHT-OF-WAY = 3.26 Ac.
5. AREA OF PROPOSED BUILDABLE LOTS = 28.26 Ac. (PHASE I = 11.81 Ac. & PHASE II = 16.45 Ac.)
   AREA OF PROPOSED BUILDABLE PRESERVATION PARCEL = 3.67 Ac.
   AREA OF NON-BUILDABLE PRESERVATION PARCELS = 25.13 Ac.
   AREA OF NON-BUILDABLE PARCEL 'A' = 0.17 Ac.
6. NUMBER OF LOTS PROPOSED :
   a. BUILDABLE LOTS = 31 (14 PHASE I & 17 PHASE II)
   b. BUILDABLE PRESERVATION PARCEL = 1 (PARCEL 'G' PHASE II)
   c. NON-BUILDABLE PRESERVATION PARCELS = 4 (PRESERVATION PARCELS B, D, E AND H)
   d. NON-BUILDABLE BULK PARCEL = 3 (PARCELS C, F AND G) (TO BE FURTHER SUBDIVIDED IN PHASE II)
   e. NON-BUILDABLE PARCEL = 1 (PARCEL 'A')
7. DRIVEWAY SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER FOLLOWING MINIMUM REQUIREMENTS:
   1) WIDTH -- 12' (14' SERVING MORE THAN ONE RESIDENCE);
   2) SURFACE -- 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2"MIN.);
   3) GEOMETRY -- MAX. 15 %GRADE, MAX, 10 % GRADE CHANGE AND MIN. 45' TURNING RADUIS;
   4) STRUCTURES (CULVERTS/BRIDGES) -- CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING);
   5) DRAINAGE ELEMENTS -- CAPABLE OF SAFE PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
   6) MAINTENANCE -- SUFFICIENT TO INSURE ALL WEATHER USE.
8. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TRESS, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
9. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND MAINTENANCE ARE PROVIDED ONTO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
10. PRIVATE WATER AND SEWER SHALL BE UTILIZED WITHIN THIS DEVELOPMENT FOR LOTS 2,13-16, 23-26 AND 28-32. THE PUBLIC SHARED SEPTIC SYSTEM WILL SERVE LOTS 3-12, 17-22, AND 27.
11. SOILS INFORMATION TAKEN FROM SOIL MAP No. 13, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY, 1968 ISSUE.
12. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED TO THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
13. BOUNDARY OUTLINE AND TOPOGRAPHIC CONTOURS BASED ON FIELD RUN SURVEY PERFORMED BY JACK C. MELLEMA INC. IN OCTOBER OF 2002.
14. THERE ARE AREAS OF STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116 b.
15. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY AND MARYLAND 378 SPECIFICATIONS. RECHARGE VOLUME WILL BE PROVIDED WITH THE WATER QUALITY VOLUME IN THE WET POND. THE FACILITY WILL BE OWNED AND SHALL BE MAINTAINED BY THE HOA. WATER QUALITY CONTROLS FOR THIS DEVELOPMENT ARE PROVIDED ON THE WET POND PORTION OF THE POND AND CREDITS UNDER SECT. 5.4,5.5 & 5.6 OF THE 2000 MD. SWM DESIGN MANUALS VOL. I & II. QUALITY CONTROL WILL BE PROVIDED IN THE PORTION OF THE POND USED FOR RETENTION STORAGE
16. FOREST STAND DELINEATION AND WETLAND DELINEATION WAS PREPARED BY WILLIAM BRIDGELAND ON JULY 29, 2002.
17. STORMWATER MANAGEMENT FACILITY IS HAZARD CLASS "A". FAILURE WILL NOT CAUSE DAMAGE TO INHABITED BUILDING BUT ONLY TO FLOODPLAIN AND FLOOD TOLERANT AREAS.
18. THIS PROPERTY IS LOCATED OUTSIDE OF THE METROPOLITAN DISTRICT.
19. THE TRAFFIC STUDY WAS PREPARED BY THE LEE CUNNINGHAM AND ASSOCIATES ON NOV. 2002 AND APPROVED WITH THE PRELIMINARY EQUIVALENT SKETCH PLAN SP 03-09 ON 06/20/03.
20. NON-BUILDABLE PARCEL 'A', NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E' AND 'H' WILL BE PRIVATELY OWNED AND MAINTAINED. THE PURPOSE, EASEMENT HOLDERS, AND OWNERSHIP, ARE STATED IN A TABLE. SEE THIS SHEET.
21. NO CEMETERIES EXIST WITHIN THIS SUBDIVISION.
22. THERE ARE NO EXISTING DWELLING/STRUCTURE(S) TO REMAIN.
23. THE GEOTECHNICAL REPORT WAS PREPARED BY HILLIS CARNES AND ASSOCIATES DATED NOV. 2002.
24. THE FLOODPLAIN STUDY WAS PREPARED BY ALDE INC. AND APPROVED UNDER THE PRELIMINARY EQUIVALENT SKETCH PLAN SP 03-09 ON 06/20/03.
25. PER SEC.16.121 OF THE SUBDIVISION REGULATION OPEN SPACE IS NOT REQUIRED.
26. THE SHARED SEPTIC SYSTEMS WERE DESIGNED BY KCI TECHNOLOGIES. EACH SYSTEM IS EQUAL TO OR LESS THAN THE MAXIMUM DAILY FLOW REQUIRING A DISCHARGE PERMIT. THE SHARED SEPTIC SYSTEM, CONT.# 50-4254-D WAS APPROVED BY DPW (D.E.D) ON 5-20-05.
27. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
28. 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.
29. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
30. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNINGS 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.
31. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
32. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY RETENTION OF EXISTING FOREST IN THE AMOUNT OF 4.25 ACRES AND 11.85 ACRES OF REFORESTATION FOR A TOTAL FOREST CONSERVATION EASEMENT AREA OF 15.90 ACRES. A CREDIT OF 1.15 ACRES WAS TAKEN FOR TREES THAT QUALIFY AS "FOREST" ONCE ADDITION REFORESTATION PLANTING ARE ADDED TO CREATE AREAS GREATER THAN 10,000 SQUARE FEET (SEE SHEET 20 OF 22). THE TOTAL SURETY AMOUNT FOR RETENTION IS $ 37,026.00 AND ON SITE REFORESTATION IS $ 253,737.00 FOR A TOTAL SURETY AMOUNT OF $ 290,763.00 WHICH WILL BE PART OF THE DEVELOPER'S AGREEMENT FOR PHASE I.
33. MDE HAS ISSUED A NONTIDAL WETLANDS AND WATERWAYS LETTER OF AUTHORIZATION AND WATER QUALITY CERTIFICATION, FILE #03NT 0468/2004 60 265.
34. THE SURETY FOR STREET TREES EQUALS $ 41,400.00. THE SURETY FOR LANDSCAPE TREES EQUALS $ 25,950.00. THE DETAILED BREAKDOWN IS FOUND ON SHEET 19 OF 22.
35. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
36. RESERVATION OF PUBLIC UTILITY AND FOREST CONSERVATION EASEMENTS
    DEVELOPER RESERVES UNTO ITSELF, ITS SUCCESSORS AND ASSIGNS, ALL EASEMENTS SHOWN ON THIS PLAN FOR WATER, SEWER, STORM DRAINAGE, OTHER PUBLIC UTILITIES AND FOREST CONSERVATION (DESIGNATED A "FOREST CONSERVATION AREA"), LOCATED IN, ON, OVER AND THROUGH LOTS/PARCELS, ANY CONVEYANCES OF THE AFORESAID LOTS/PARCELS SHALL BE SUBJECT TO THE EASEMENTS HEREIN RESERVED, WHETHER OR NOT EXPRESSLY STATED IN THE DEED(S) CONVEYING SAID LOTS/PARCELS. DEVELOPER SHALL EXECUTE AND DELIVER DEEDS FOR THE EASEMENTS HEREIN RESERVED TO HOWARD COUNTY WITH A METES AND BOUNDS DESCRIPTION OF THE FOREST CONSERVATION AREA. UPON COMPLETION OF THE PUBLIC UTILITIES AND THEIR ACCEPTANCE BY HOWARD COUNTY, AND IN THE CASE OF THE FOREST CONSERVATION INSTALLATION AND MAINTENANCE AGREEMENT EXECUTED BY THE DEVELOPER AND THE COUNTY, AND THE RELEASE OF DEVELOPER'S SURETY POSTED WITH SAID AGREEMENT. THE COUNTY SHALL ACCEPT THE EASEMENTS AND RECORD THE DEED(S) OF EASEMENT IN THE LAND RECORDS OF HOWARD COUNTY.
37. LANDSCAPING FOR PHASE I AND PHASE II IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN INCLUDED WITH THE ROAD CONSTRUCTION PLAN SET IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL, AND THE SURETY FOR ALL LANDSCAPING WILL BE COVERED BY THE DEVELOPER'S AGREEMENT FOR PHASE I. THE LANDSCAPE SURETY AMOUNT IS $ 25,950.00.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

STATE OF MARYLAND — DAWN MARIE JORGENSON — No. 37668 — PROFESSIONAL ENGINEER

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
FINAL PLAN - COVER SHEET
SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : TRIADELPHIA FARM, LLC.
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737
DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : AS SHOWN	SHEET 1 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

F-05-29

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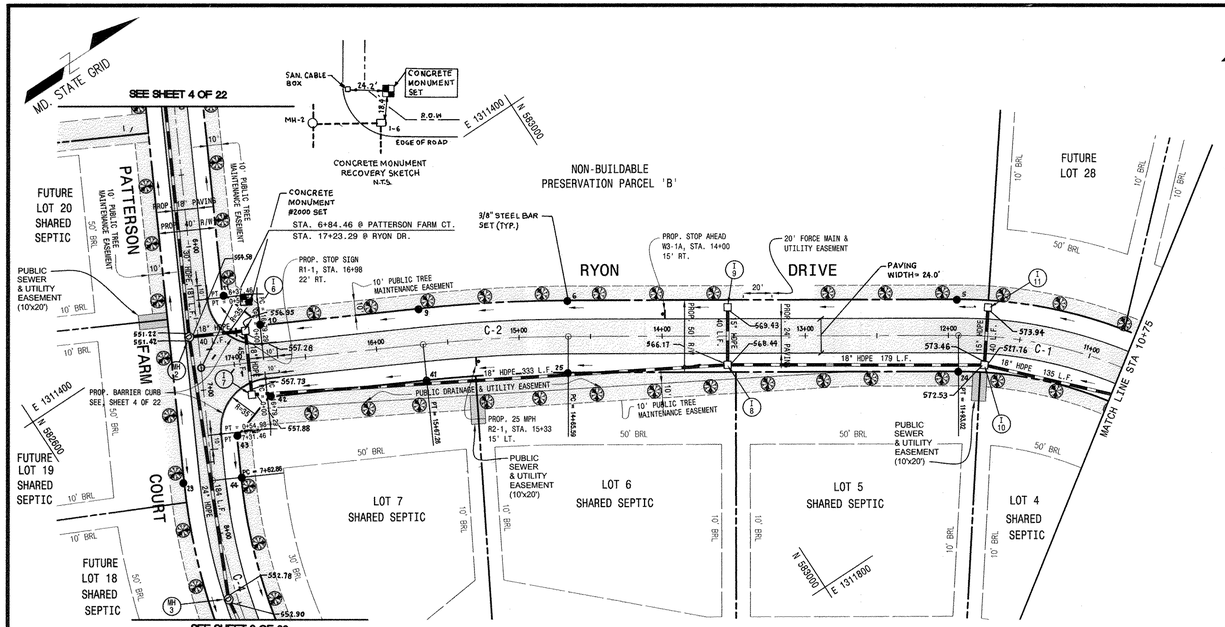
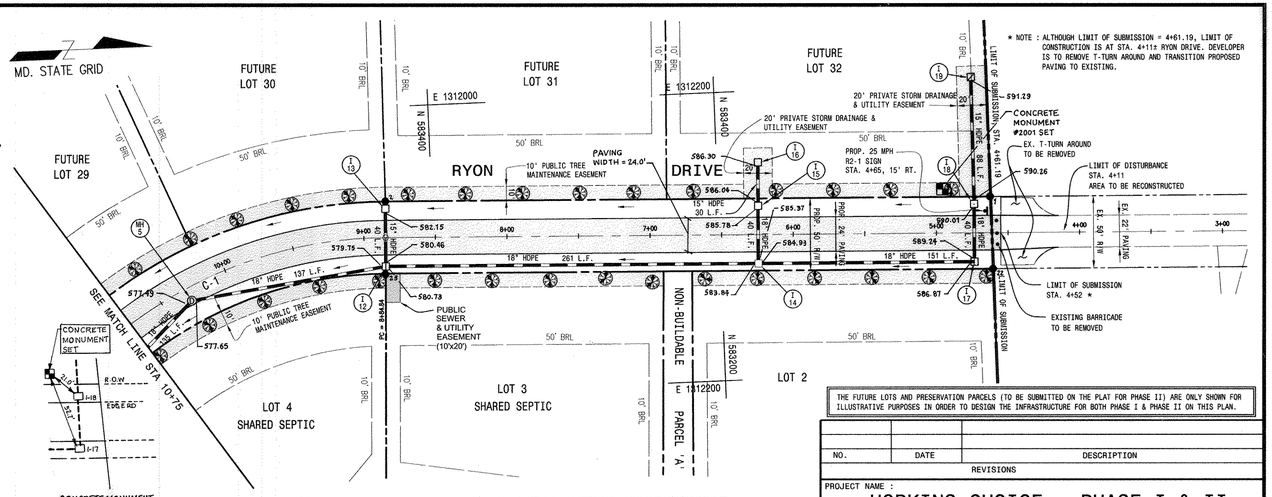


PLAN
SCALE : 1" = 50'

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C-1	308.18	300.01	58°51'26"	169.24	294.81	S 62°34'15" W
C-2	101.67	1000.09	5°49'29"	50.88	101.63	S 30°13'46" W



PLAN
SCALE : 1" = 50'

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

NO.	DATE	DESCRIPTION
		REVISIONS

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'

4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT # 1 , NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

RYON DRIVE - PLAN AND PROFILE

SP-03-09 F-03-159 F-05-29

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

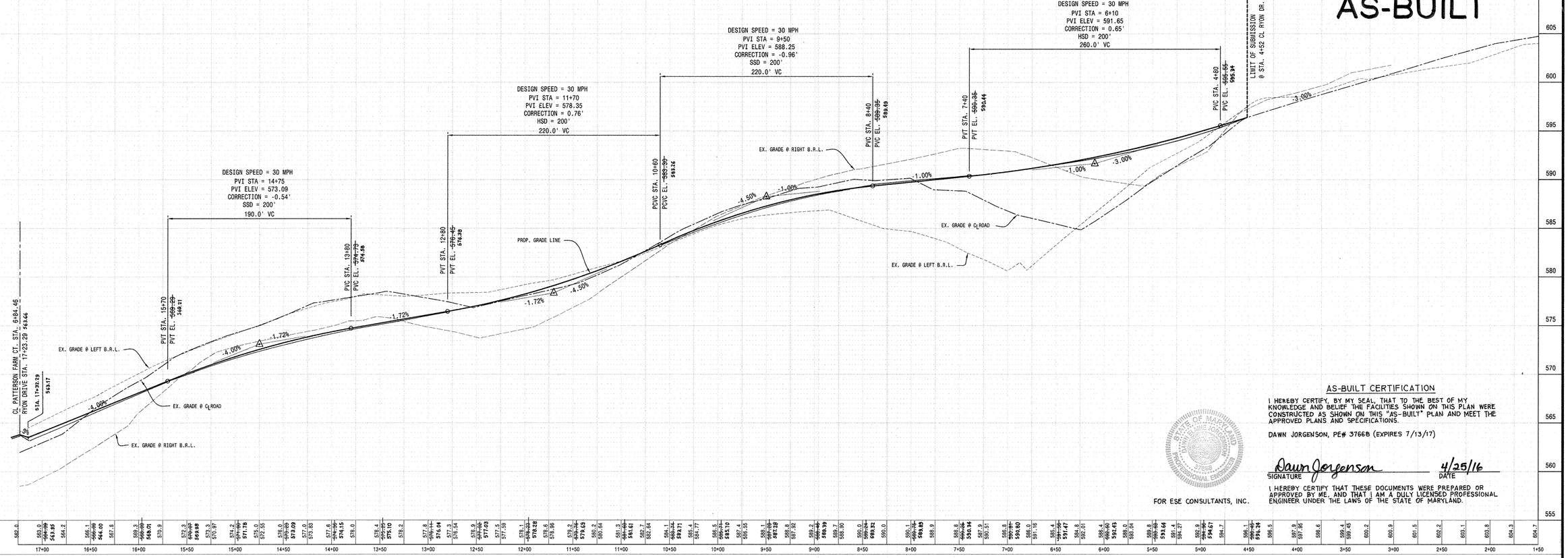
PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : 1" = 50'	SHEET 2 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

AS-BUILT



DESIGN SPEED = 25 MPH
RYON DRIVE - PROFILE
SCALE : 1" = 50' HOR.
1" = 5' VER

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

DAWN JORGENSON, PE# 37668 (EXPIRES 7/13/17)

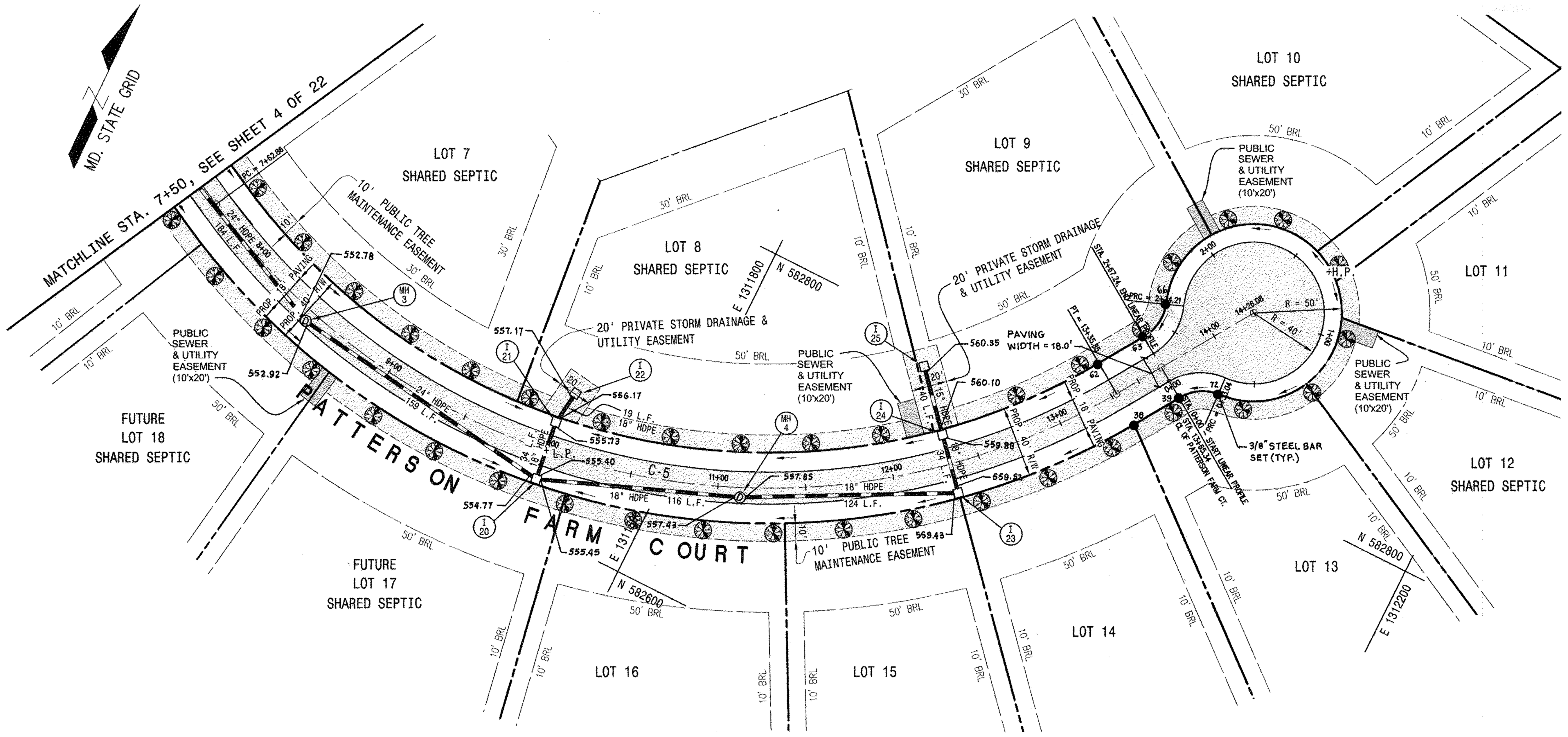
Dawn Jorgenson — SIGNATURE — 4/25/16 DATE

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

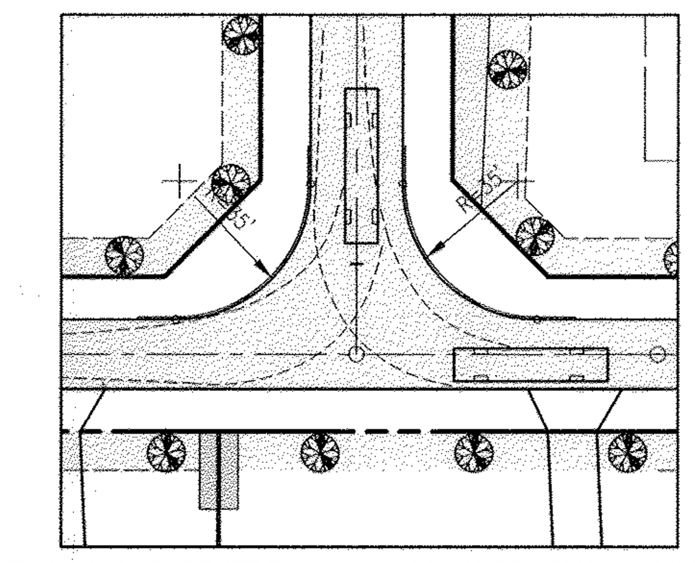
FOR ESE CONSULTANTS, INC.

I:\SUBDIVISION\PROJECTS\HOPKINS CHOICE-FINAL\FINAL PLAN\2-3-shpkinsPROFILES.dwg, RYON DRIVE, 5/20/2005 2:07:21 PM, guz

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C-5	572.99	389.91	84°12'00"	352.31	522.81	N 75°13'45" E



PLAN
SCALE : 1" = 50'



TURNING MOVEMENT ANALYSIS FOR BUS VEHICLE
AT PATTERSON FARM CT.
SCALE : 1" = 50'

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
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THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

DAWN JORGENSON, PE# 37668 (EXPIRES 7/13/17)

Dawn Jorgenson — SIGNATURE 4/25/16 — DATE

STATE OF MARYLAND · DAWN ELAINE JORGENSON · 37668 · PROFESSIONAL ENGINEER

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

FOR ESE CONSULTANTS, INC.

STATE OF MARYLAND · CHRISTOPHER WOE... · PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PUBLIC WORKS	
William L. Malick HS — CHIEF, BUREAU OF HIGHWAYS	6-13-05 DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
Cindy Hamilton JA — CHIEF, DIVISION OF LAND DEVELOPMENT	8/22/05 DATE
Mark Koval — CHIEF, DEVELOPMENT ENGINEERING DIVISION	6/16/05 DATE

NO.	DATE	DESCRIPTION

REVISIONS

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
PATTERSON FARM COURT PLAN PROFILE AND LINEAR PROFILE
SP-03-09 F-03-159 F-05-29

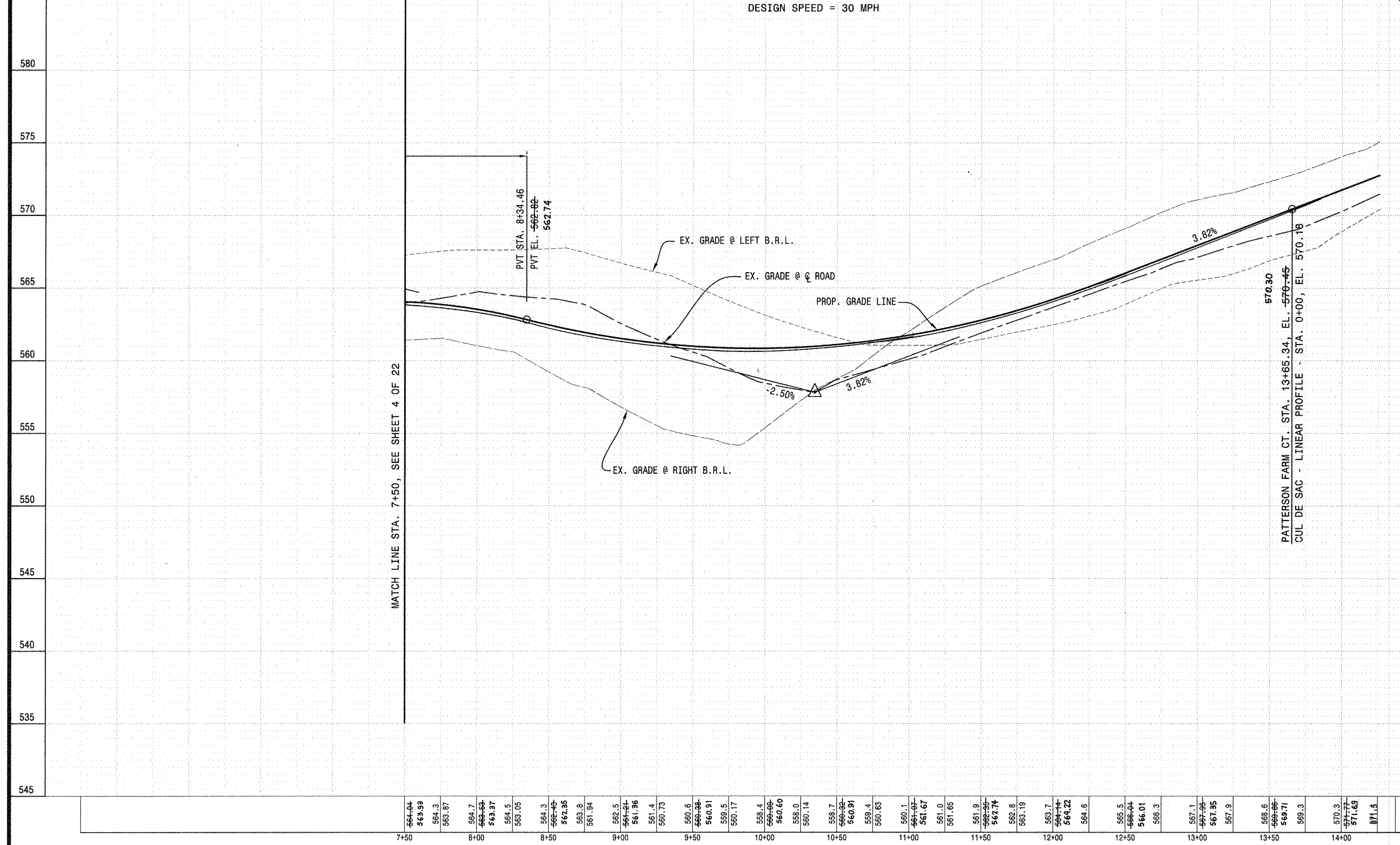
PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

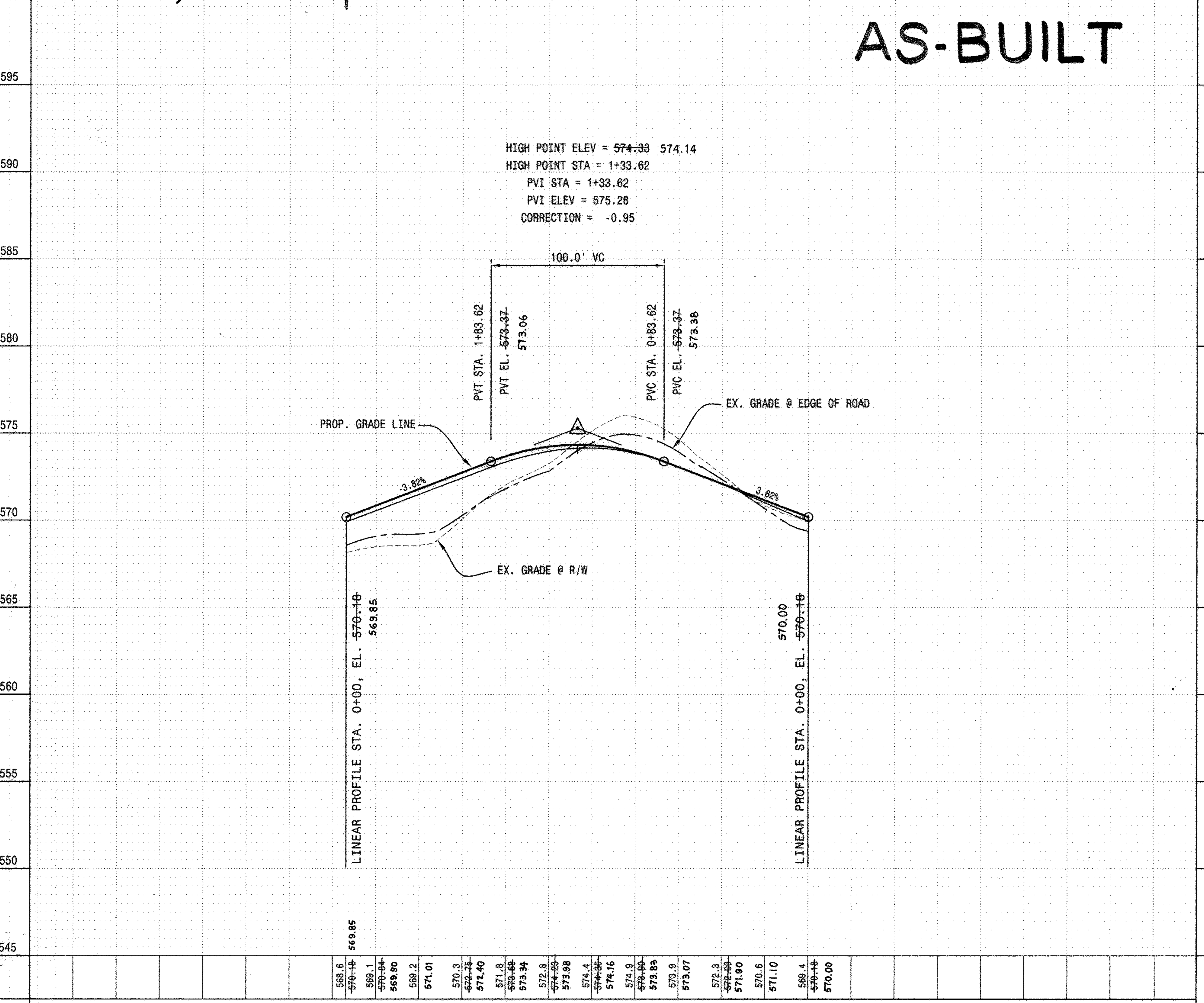
DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : 1" = 50'	SHEET 3 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

AS-BUILT

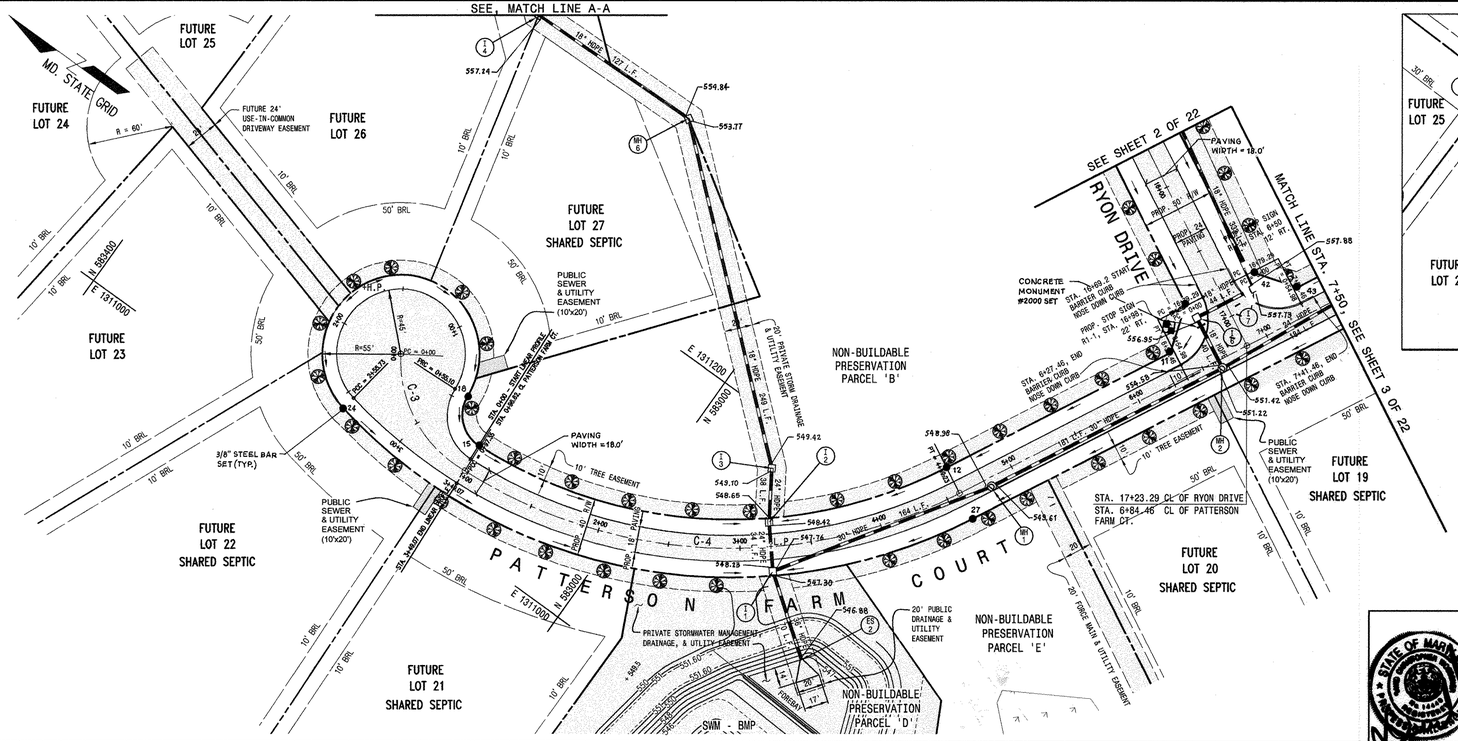


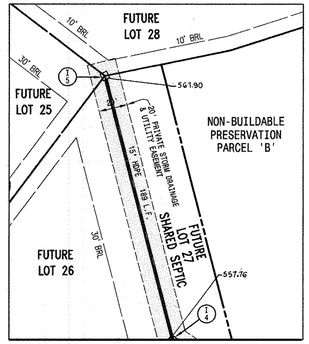
DESIGN SPEED = 25 MPH
PATTERSON FARM COURT - PROFILE
SCALE : 1" = 50' HOR.
1" = 5' VER.

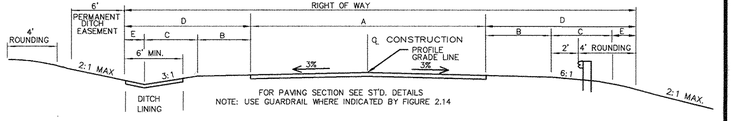


CUL DE SAC - LINEAR PROFILE
SCALE : 1" = 50' HOR.
1" = 5' VER.

I:\SUBDIVISION-PROJECTS\HOPKINS CHOICE-FINAL\FINAL-PLAN\2-3-4hpknsPROFILES.dwg, PATTERSON 1, 5/20/2005 2:07:47 PM, guz







CLASSIFICATION		A	B	C	D	E	R/W	
ACCESS PLACE	PUBLIC-200 ADT	18'	4'	4'	11'	3'	40'	(1)
ACCESS STREET	500-ADT	24'	4'	4'	13'	5'	50'	(2)

RYON DRIVE : 25 MPH DESIGN SPEED
STA. 4+61.19 TO STA. 17+00 (2)

PATTERSON FARM CT. : 25 MPH DESIGN SPEED
STA. 0+00 TO STA. 17+59.63 (1)

AS-BUILT

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD BEARING
C-3	97.35	87.85	63°29'39"	54.35	92.44	S 25°22'15" W
C-4	361.89	350.00	59°14'30"	199.00	345.98	S 33°03'46" E

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

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NO.	DATE	DESCRIPTION
		REVISIONS

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
PATTERSON FARM COURT PLAN PROFILE AND LINEAR PROFILE
SP-03-09 F-03-159 F-05-29

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

PREPARED BY :
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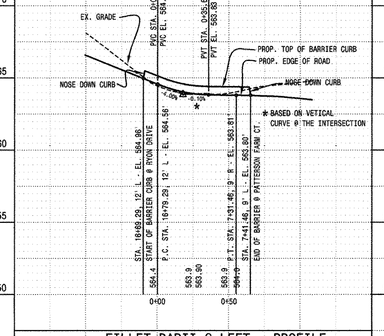
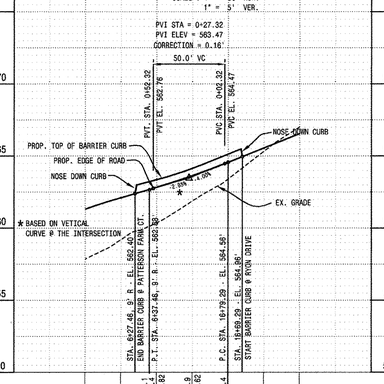
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :
DRW. : AVG	PROJ. :
CHK. : DCW	DATE : MAY 17, 2005

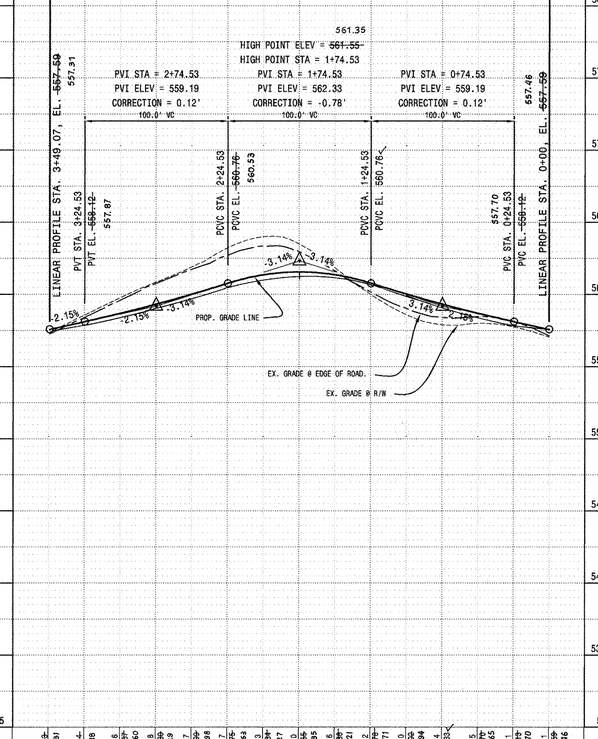
SCALE : 1" = 50'
SHEET 4 OF 22



FILLET RADII @ LEFT - PROFILE
SCALE : 1" = 50' HOR.
1" = 5' VER.



FILLET RADII @ RIGHT - PROFILE
SCALE : 1" = 50' HOR.
1" = 5' VER.



CUL DE SAC - LINEAR PROFILE
SCALE : 1" = 50' HOR.
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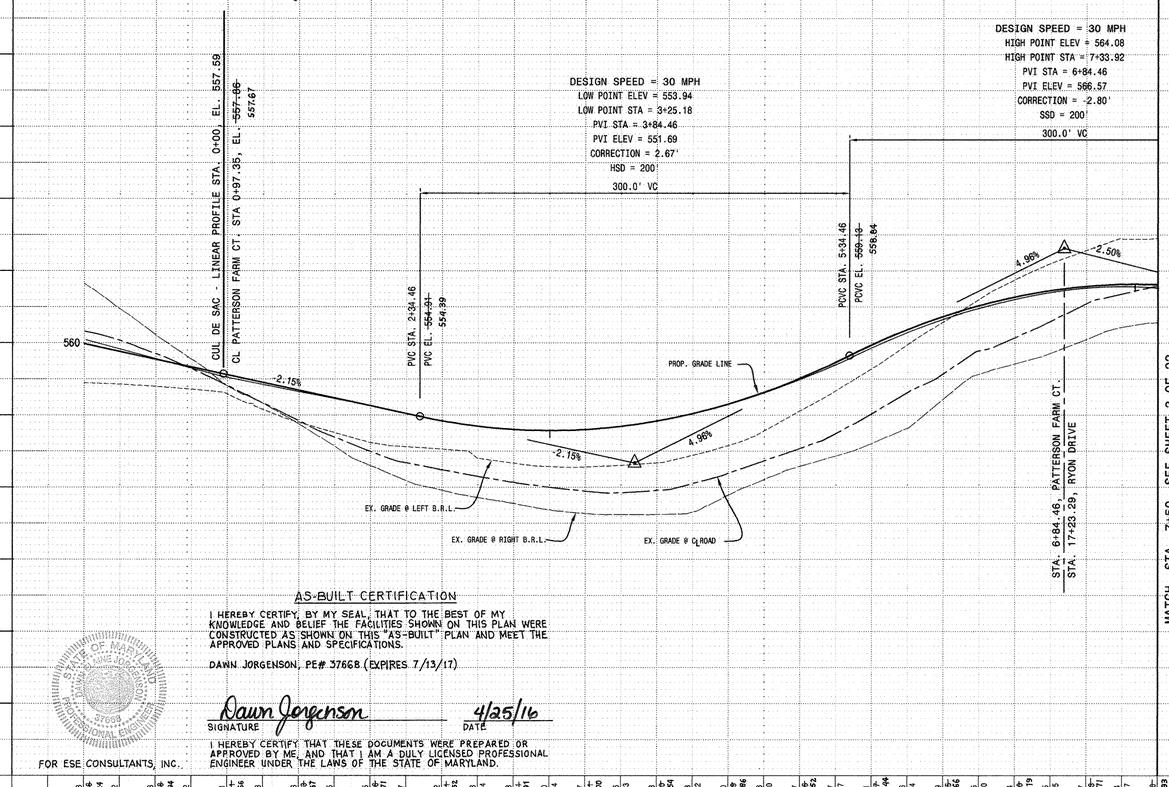

DESIGN SPEED = 25 MPH
PATTERSON FARM COURT - PROFILE
SCALE : 1" = 50' HOR.
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AS-BUILT CERTIFICATION

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DAWN JORGENSON, PE# 37668 (EXPIRES 7/13/17)

Dawn Jorgenson — SIGNATURE — DATE 4/25/16

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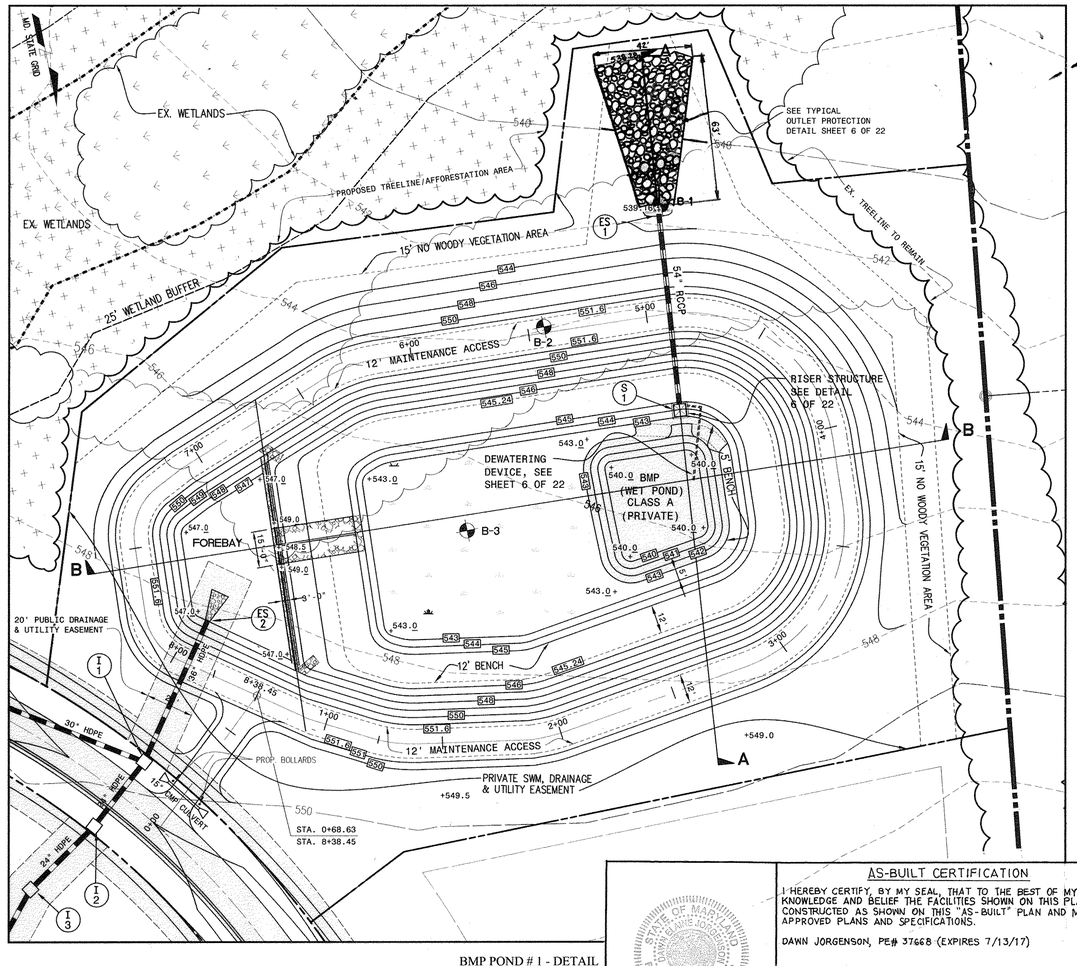
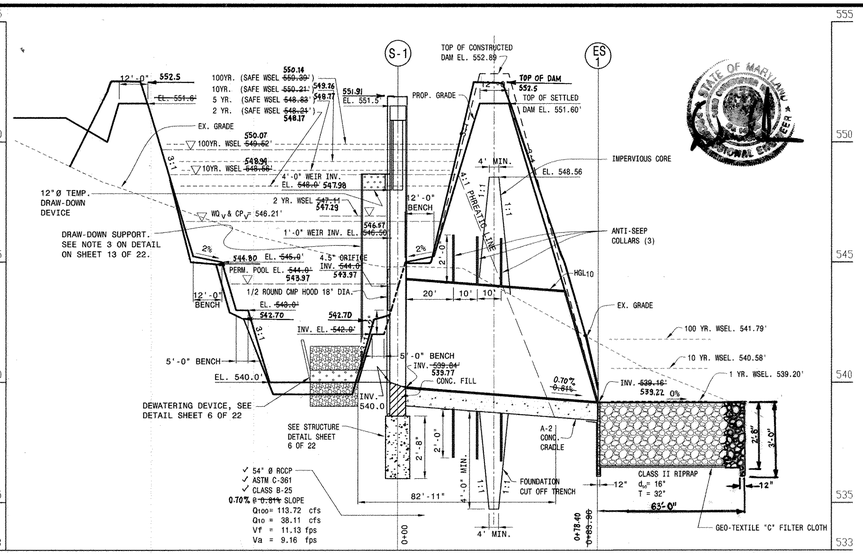
FOR ESE CONSULTANTS, INC.

I:\SUBDIVISION PROJECTS\HOPKINS CHOICE FINAL\FINAL PLANS\2-3 4hpkns&PROFILES.dwg, PATTERSON 2, 5/20/2005 2:17:10 PM, guz



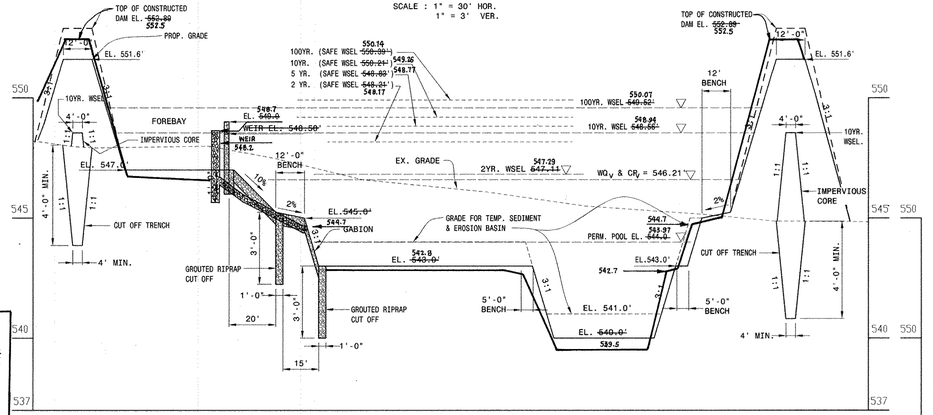
BMP POND # 1 - DETAIL

SCALE : 1" = 30'



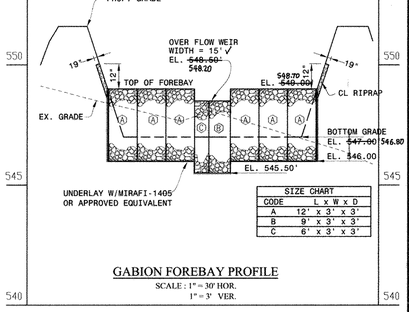
SECTION A-A

SCALE : 1" = 30' HOR.
1" = 3' VER.



SECTION B-B

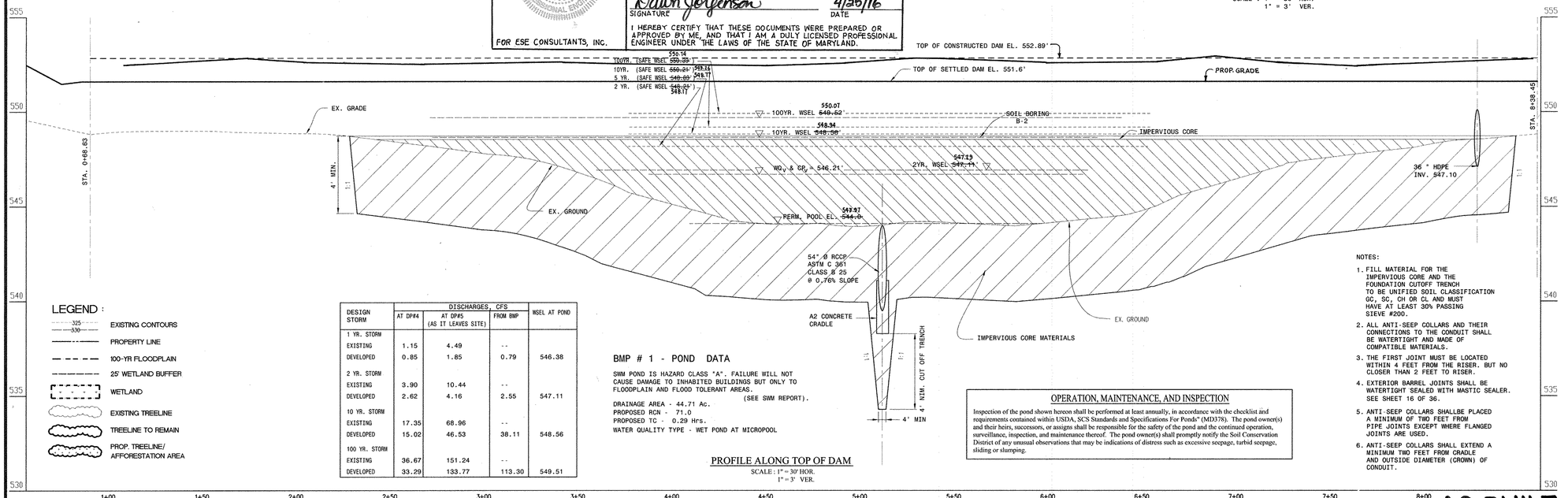
SCALE : 1" = 30' HOR.
1" = 3' VER.



SIZE CHART	
CODE	L x W x D
A	12' x 3' x 3'
B	9' x 3' x 3'
C	6' x 3' x 3'

GABION FOREBAY PROFILE

SCALE : 1" = 30' HOR.
1" = 3' VER.



LEGEND :

- EXISTING CONTOURS (325 / 330)
- PROPERTY LINE
- 100-YR FLOODPLAIN
- 25' WETLAND BUFFER
- WETLAND
- EXISTING TREELINE
- TREELINE TO REMAIN
- PROP. TREELINE/ AFFORESTATION AREA

DESIGN STORM	DISCHARGES, CFS AT DP#4	AT DP#5 (AS IT LEAVES SITE)	FROM BMP	WSEL AT POND
1 YR. STORM				
EXISTING	1.15	4.49	--	
DEVELOPED	0.85	1.85	0.79	546.38
2 YR. STORM				
EXISTING	3.90	10.44	--	
DEVELOPED	2.62	4.16	2.55	547.11
10 YR. STORM				
EXISTING	17.35	68.96	--	
DEVELOPED	15.02	46.53	38.11	548.56
100 YR. STORM				
EXISTING	36.67	151.24	--	
DEVELOPED	33.29	133.77	113.30	549.51

BMP # 1 - POND DATA

SWM POND IS HAZARD CLASS "A". FAILURE WILL NOT CAUSE DAMAGE TO INHABITED BUILDINGS BUT ONLY TO FLOODPLAIN AND FLOOD TOLERANT AREAS. (SEE SWM REPORT).

DRAINAGE AREA - 44.71 Ac.
PROPOSED RCN - 71.0
PROPOSED Tc - 0.29 Hrs.
WATER QUALITY TYPE - WET POND AT MICROPOOL

PROFILE ALONG TOP OF DAM

SCALE : 1" = 30' HOR.
1" = 3' VER.

NOTES:

1. FILL MATERIAL FOR THE IMPERVIOUS CORE AND THE FOUNDATION CUTOFF TRENCH TO BE UNIFIED SOIL CLASSIFICATION GC, SC, CH OR CL AND MUST HAVE AT LEAST 30% PASSING SIEVE #200.
2. ALL ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE CONDUIT SHALL BE WATERTIGHT AND MADE OF COMPATIBLE MATERIALS.
3. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER. BUT NO CLOSER THAN 2 FEET TO RISER.
4. EXTERIOR BARREL JOINTS SHALL BE WATERTIGHT SEALED WITH MASTIC SEALER. SEE SHEET 16 OF 36.
5. ANTI-SEEP COLLARS SHALLBE PLACED A MINIMUM OF TWO FEET FROM PIPE JOINTS EXCEPT WHERE FLANGED JOINTS ARE USED.
6. ANTI-SEEP COLLARS SHALL EXTEND A MINIMUM TWO FEET FROM CRADLE AND OUTSIDE DIAMETER (CROWN) OF CONDUIT.

OPERATION, MAINTENANCE, AND INSPECTION

Inspection of the pond shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS Standards and Specifications For Ponds" (MD378). The pond owner(s) and their heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

AS-BUILT CERTIFICATION

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DAWN JORGENSON, PE# 37668 (EXPIRES 7/13/17)

Dawn Jorgenson — SIGNATURE — 4/25/16 DATE

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FOR ESE CONSULTANTS, INC.

AS-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 SPECIFICATIONS.

SIGNATURE — P.E.NO. — DATE

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEERS NOR DOES AND ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS INCURRED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — 1-21-05 DATE
DAVID WOESSNER
ENGINEER'S NAME

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH 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."

SIGNATURE OF DEVELOPER — 1-21-05 DATE
DALE THOMPSON
NAME OF DEVELOPER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — 5/26/05 DATE

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

DISTRICT HOWARD SOIL CONSERVATION DIST. — 5/26/05 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — 6-13-05 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 6/22/05 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 6/16/05 DATE

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NO.	DATE	DESCRIPTION
		REVISIONS

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'

4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

STORMWATER MANAGEMENT - BMP 1 PLAN AND SECTIONS

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
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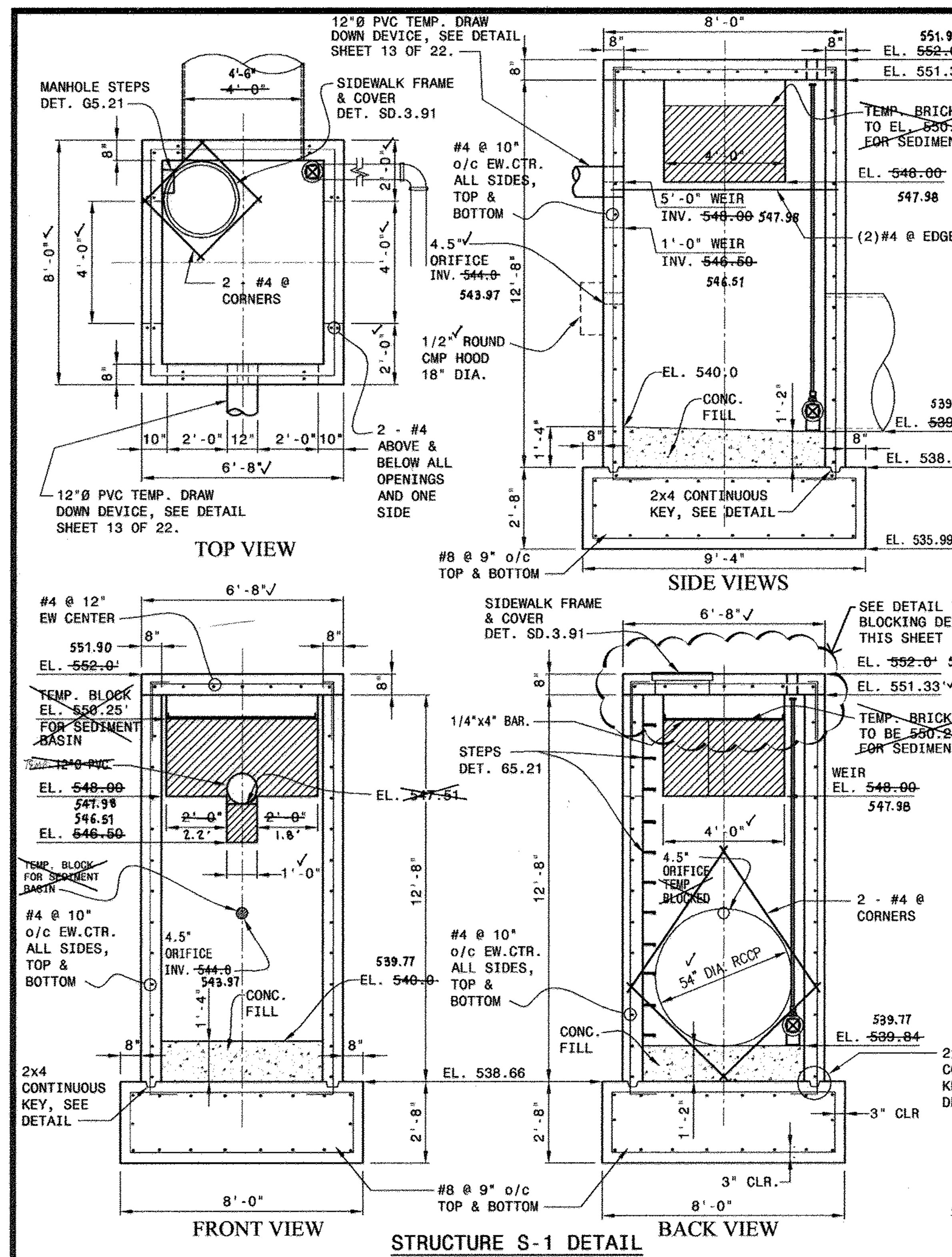
DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : AS SHOWN	SHEET 5 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

AS-BUILT

F-05-29

I:\SUBDIVISION PROJECTS\HOPKINS CHOICE-FINAL\FINAL PLANS-SWM\SWM-DTLS.dwg, SWM-DETAILS, 5/17/2005 4:01:04 PM, guz



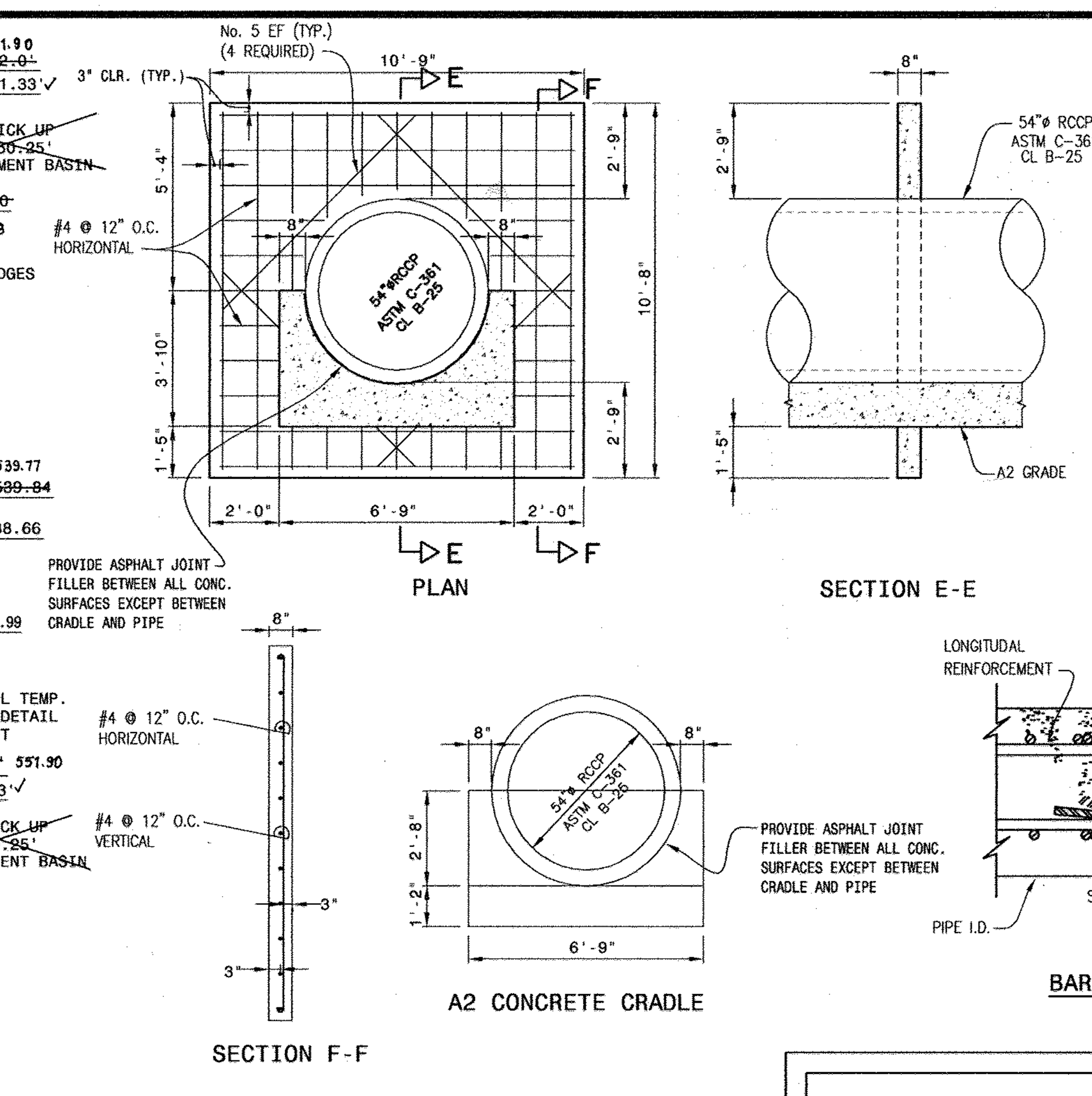
TOP VIEW

SIDE VIEWS

FRONT VIEW

BACK VIEW

STRUCTURE S-1 DETAIL
SCALE : 1" = 4'



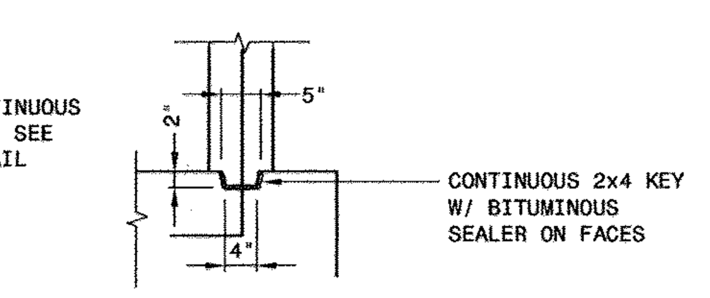
PLAN

SECTION E-E

SECTION F-F

A2 CONCRETE CRADLE

ANTI-SEEP COLLAR DETAIL
SCALE : 1" = 4'



2x4 CONTINUOUS KEY - DETAIL
SCALE : 1" = 2'

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DAWN JORGENSON, PE # 37668 (EXPIRES 7/13/17)

SIGNATURE Dawn Jorgenson   DATE 4/25/16

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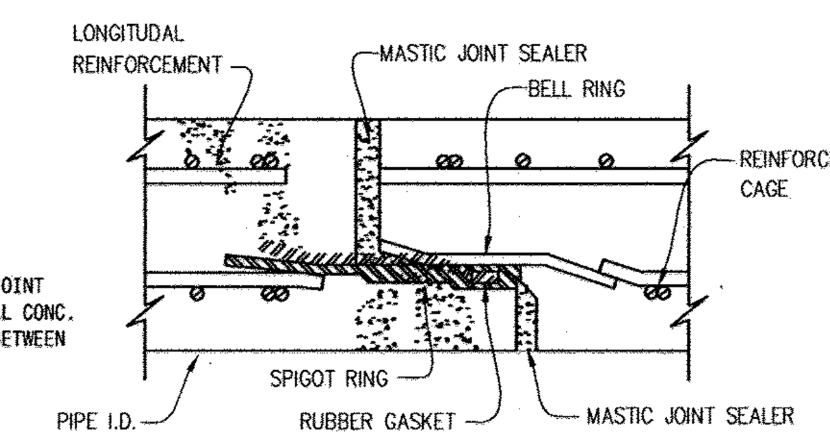
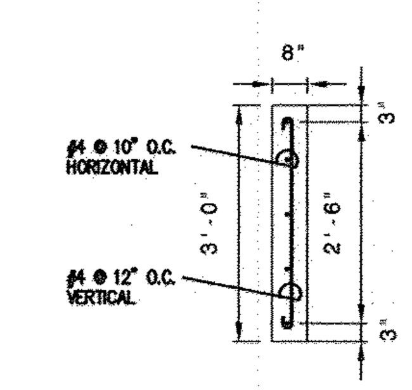
1. CONCRETE SHALL BE MSHS MIX NO.3 (FC) 3,500 P.S.I.
2. REINFORCING STEEL : GRADE 60
3. FOR WALLS OF STRUCTURE SHALL UTILIZE L.M. SCOFIELD CO. T-9055 FORM LINERS (RANDOM SPLIT-FACE ROCK) OPTIONAL.
4. PROVIDED ROUGH BROOM FINISH.
5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPEC.
6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.

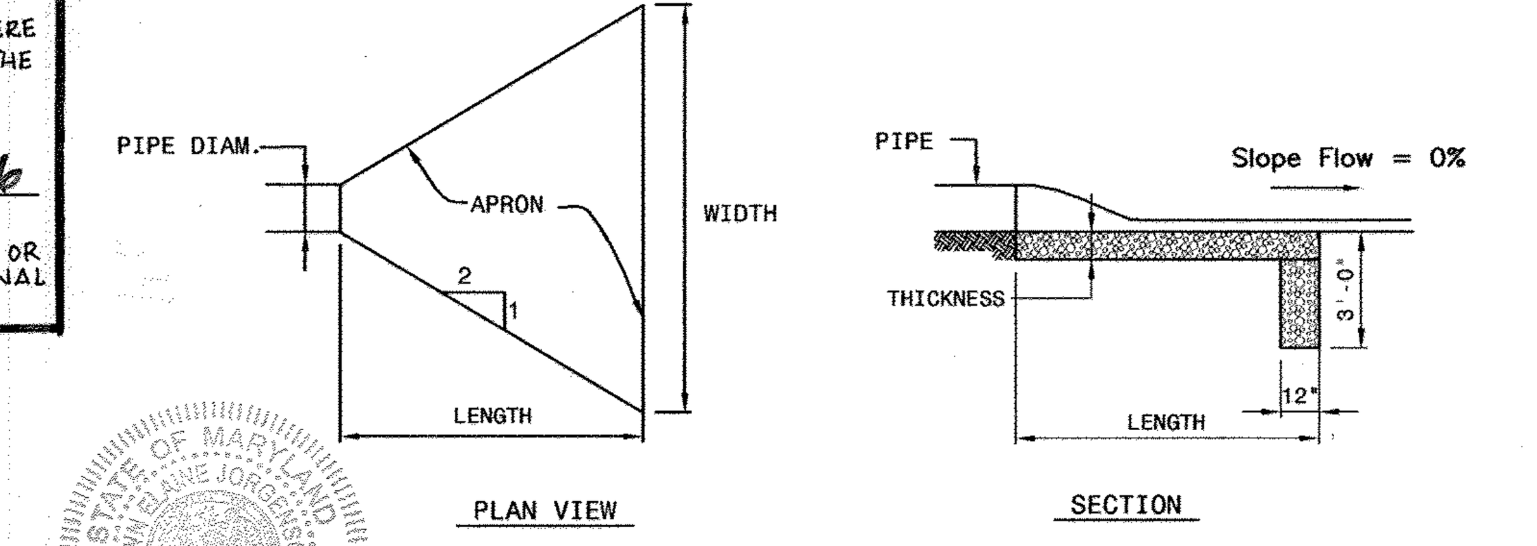
FOR ESE CONSULTANTS, INC.



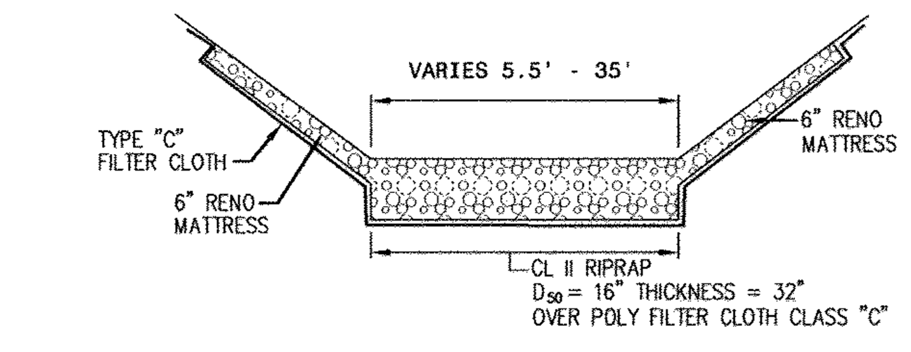
BARREL JOINT SEAL DETAIL
NOT TO SCALE



REINF. CONC. CUT-OFF COLLAR DETAIL
NOT TO SCALE



TYP. OUTLET PROTECTION
NOT TO SCALE



SECTION THROUGH OUTLET CHANNEL
SCALE: 1" = 5'

AS-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 SPECIFICATIONS.

SIGNATURE   P.E.NO.   DATE

CERTIFY MEANS TO START OR DECLARE A PROFESSIONAL OPINION BASED UPON ON SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEERS NOR DOES AND ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT. EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER   1-21-05 DATE

DAVID C. WOESSNER
ENGINEER'S NAME

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH 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."

SIGNATURE OF DEVELOPER   1-21-05 DATE

DALE THOMPSON
NAME OF DEVELOPER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE   5/31/05 DATE

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

DISTRICT HOWARD SOIL CONSERVATION DIST.   6/31/05

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS   6-13-05 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT   6/22/05 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION   6/16/05 DATE

OUTFALL STABILIZATION DATA

STRUCTURE NO.	d50 (in.)	THICKNESS (in.)	LENGTH (FT.)	WIDTH (FT.)
ES-1	16"	32"	56.0'	35.0'
ES-2	9.5"	19"	14'	17.0'

SUMMARY TABLE

DESCRIPTION	SUBAREAS				AT DISCHARGE POINT
	No.1.0	No.2.0	No. 3 (2)	No. 4	DP #5(3)
HYDROLOGIC DATA					
Area Ac.	2.68	10.32	33.91	11.32	
CN	58.0	65.0	72.0	60.0	-
tC, Hr.	0.15	0.22	0.29	0.24	-
DISCHARGES, CFS (1)					
1 YEAR	0.12	1.99	15.19/0.79	0.85	1.85
2 YEAR	0.68	5.05	27.18/2.55	2.62	4.16
10 YEAR	4.12	18.50	73.77/38.11	15.02	46.53
100 YEAR	9.10	36.82	132.83/113.30	33.29	133.77
SWM CATEGORIES					
WATER QUALITY, WQv	-	-	-	-	
Required	566 CF	6,011 CF	32,017 CF	5,358 CF	
Provided	CREDIT USED	CREDIT USED	@ BMP	CREDIT USED	
RECHARGE VOLUME, Rev					
Required	174 CF	1,220 CF	7,057 CF	N/A	
Provided	(5) CREDIT USED	(5) CREDIT USED	(5) CREDIT USED	(5) CREDIT USED	
CHANNEL PROTECTION, Cpv					
Required	EXEMPT (4)	EXEMPT (4)	0.983 Ac.Ft.	EXEMPT (4)	
Provided	Q1<2.0 CFS	Q1<2.0 CFS	@ BMP	Q1<2.0 CFS	
OVERBANK FLOOD PRTECTION, Qp					
Required	NONE	NONE	NONE	NONE	
Provided	Q10<Q10x	Q10<Q10x	@ BMP	Q10<Q10x	
EXTREME FLOOD, Qf					
Required	N/A (+)	N/A	N/A	N/A	
Provided	N/A	N/A	N/A	N/A	

NOTE :
(1) PEAK DISCHARGES AT SUBAREAS' DISCHARGE POINTS (DPs)
(2) PEAK DISCHARGE AT SUBAREA/BMP (POND)
(3) PEAK DISCHARGE LEAVING SITE AT DISCHARGE POINT.
(4) NOT REQUIRED AS Q1, IS LESS THAN 2.0 CFS, i.e. 0.12, 1.99 AND 0.85 CFS FOR SUBAREAS 1, 2, AND 4 RESPECTIVELY.
(5) FOR SUBAREAS 1, 2 AND 4 ROOFTOPS WERE DISCONNECTED AND CONVEYED OVERLAND TO NATURAL AREAS OF CONSERVATION. FOR SUBAREA 3 GRASS OPEN CHANNEL IN LIEU OF CURB AND GUTTER IS USED.

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE POND NO. 1
(OWNED AND MAINTAINED BY H.O.A.)

ROUTINE MAINTENANCE (BY H.O.A.)

FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.

TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES, THE BOTTOM OF THE POND, AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.

DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.

VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIP-RAP OUTLET AREA SHALL BE REPAIRS AS SOON AS IT IS NOTICED.

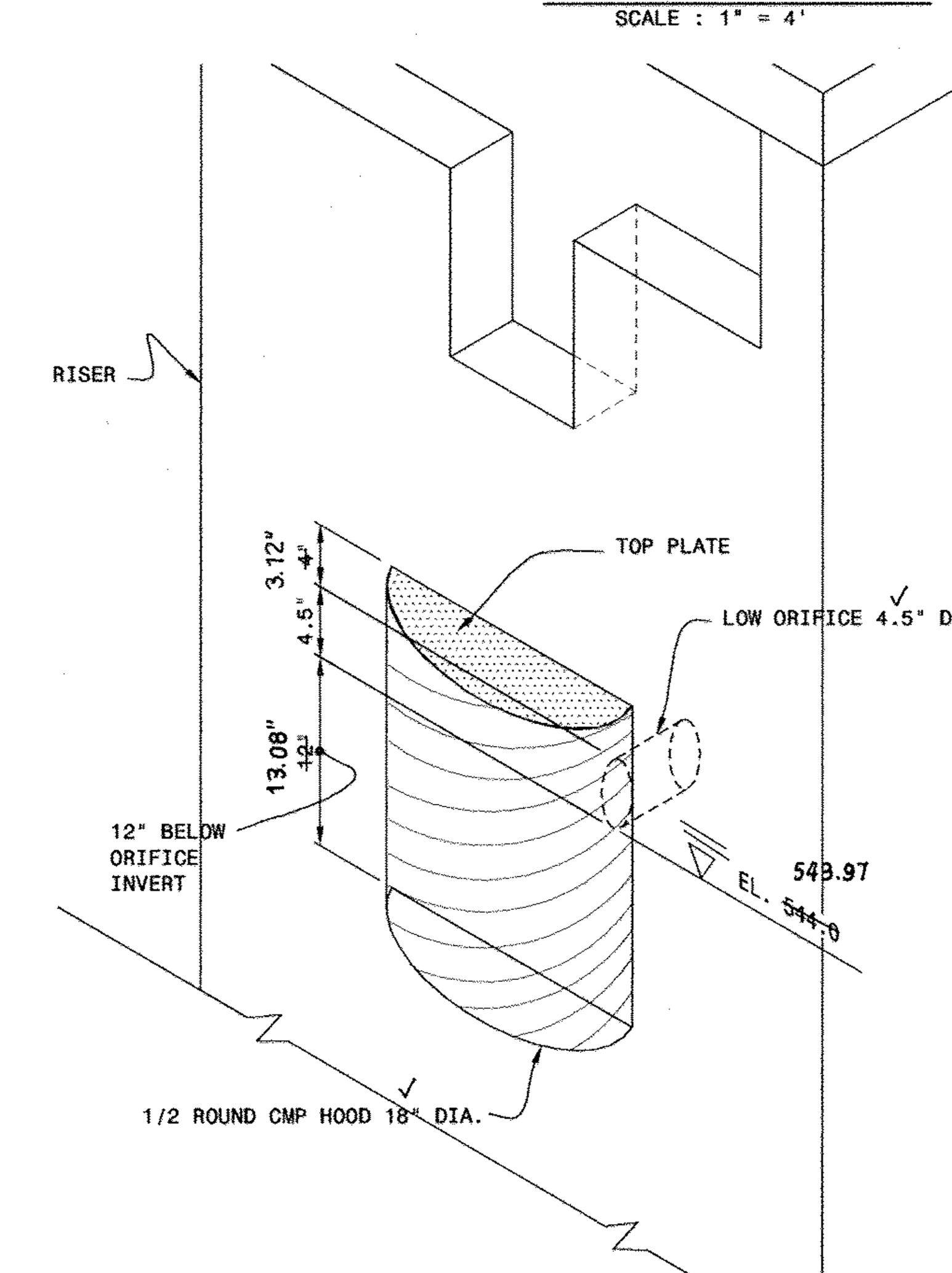
NON-ROUTINE MAINTENANCE (BY H.O.A.)

STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, RISER STRUCTURE AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.

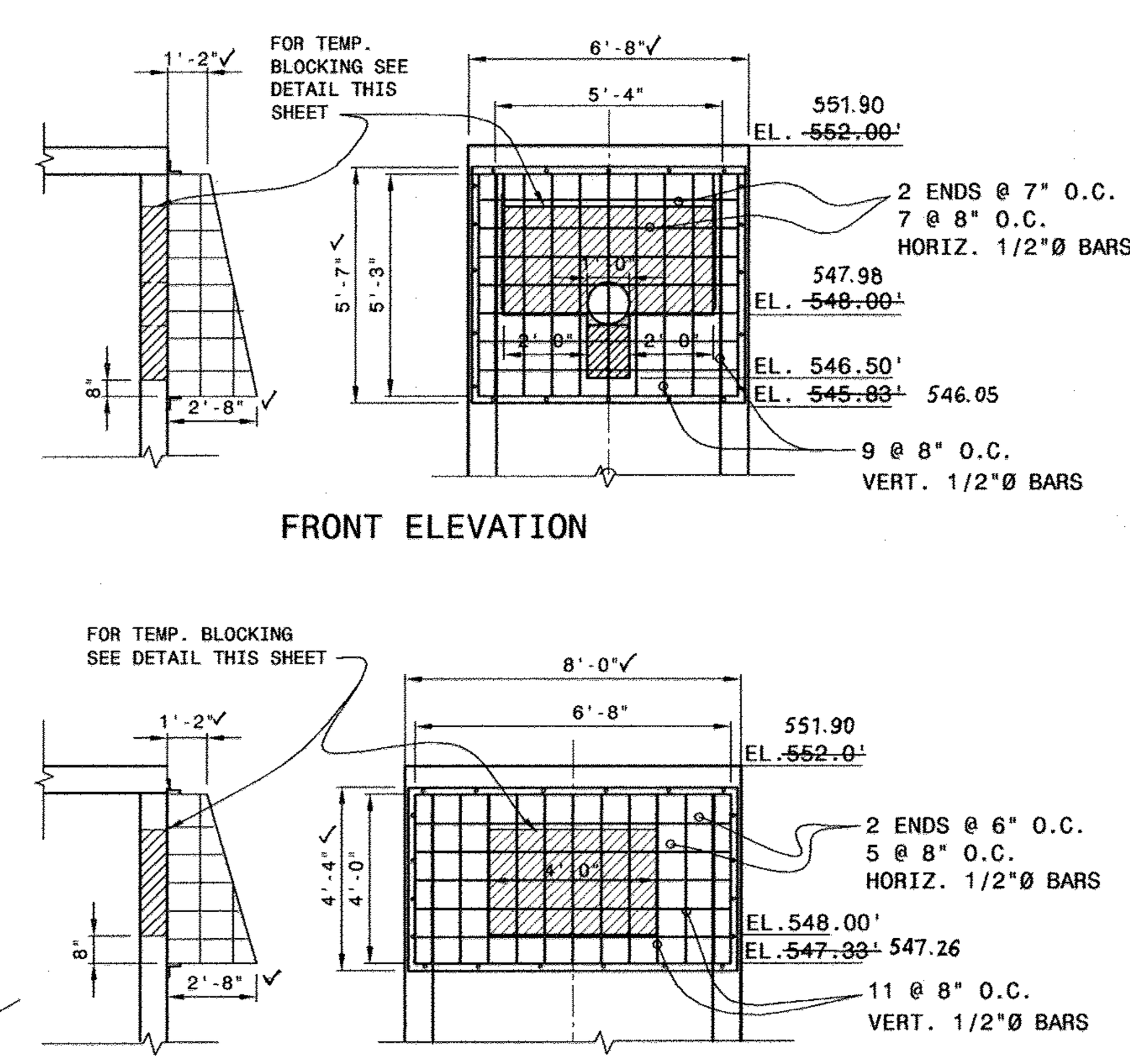
SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERES WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATIONS. SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.



1/2 ROUND CMP PIPE HOOD - DETAIL
SCALE : 1" = 1'



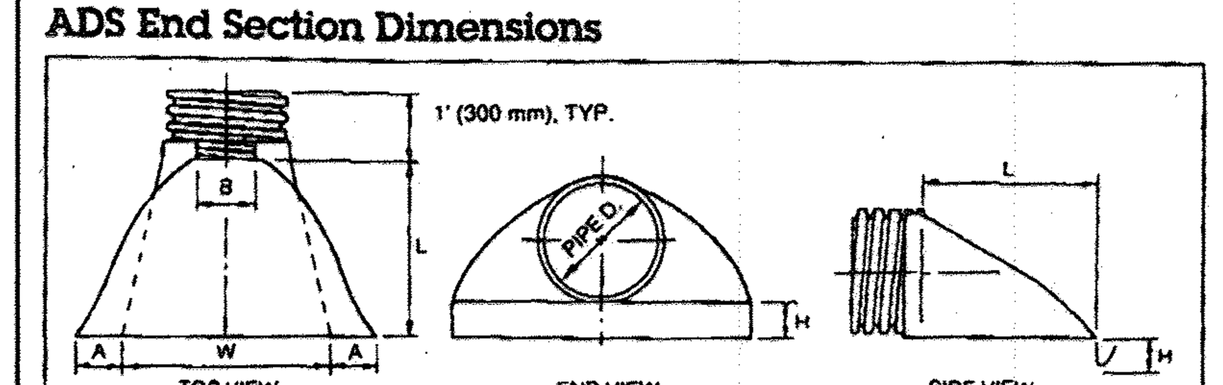
FRONT ELEVATION

SIDES & REAR ELEVATION

BMP TRASH RACK DETAIL
SCALE : 1" = 4'

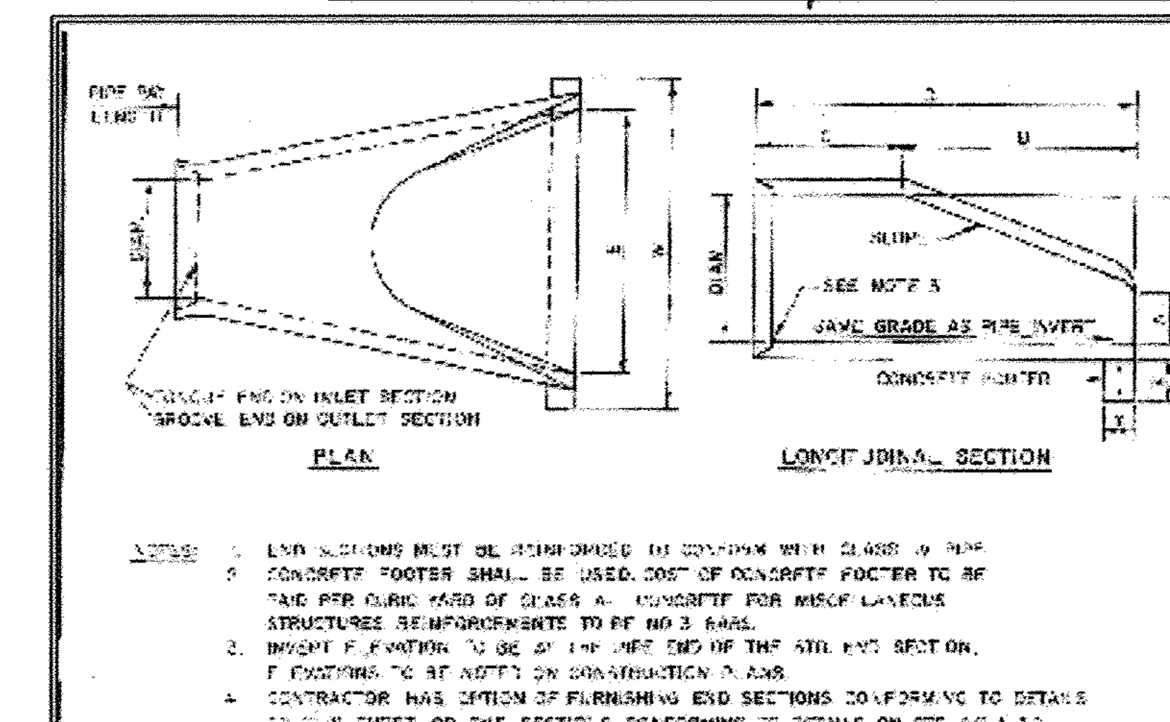
NOTE :
1. FIELD MEASURE THE STRUCTURE DIMENSIONS TO INSURE EXACT FIT OF TRASH RACK
2. GALVANIZE ENTIRE TRASH RACK AFTER FABRICATION.
3. PAINT 2 COATS OF BATTLESHIP GRAY PAINT.

ADS End Section Dimensions



PIPE DIAMETER	PART No.	DIMENSIONS, INCHES (mm)					
		A, ± 1(25)	B MAX	H, ± 1(25)	L, ± 1/2(13)	W, ± 2(50)
36(900)	3610NP	10.5(266)	NA	7.0(178)	53(1346)	68(1725)

AS-BUILT



CONCRETE END SECTION							CONCRETE FOOTER		
DIAM.	SLOPE	A	B	C	D	E	W	X	Y
54"	2.4:1	2'-5"	5'-2"	2'-10"	8'-0"	7'-6"	9'-0"	18"	12"

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS
Approved
Chief - Bureau of Engineering

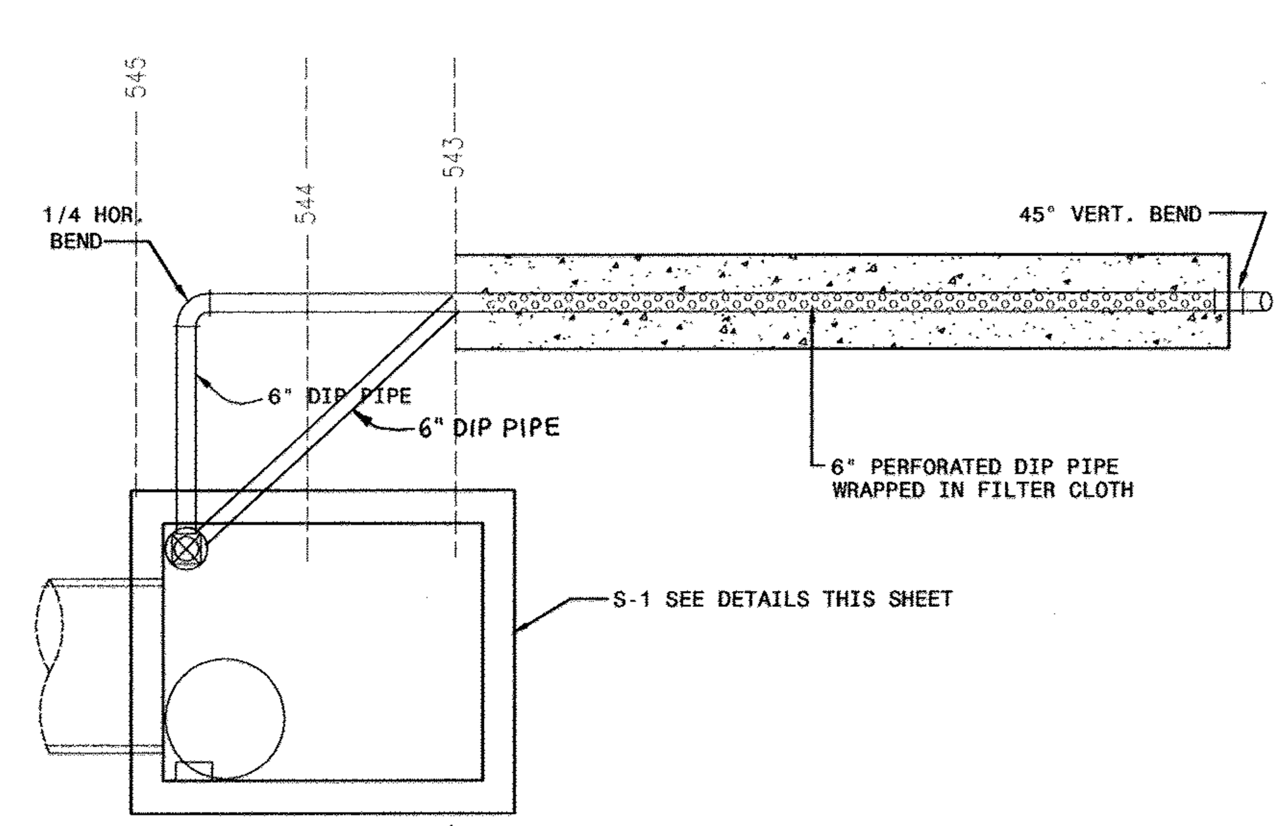
CONCRETE END SECTION
CIRCULAR CONCRETE PIPE

SD 5.51

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

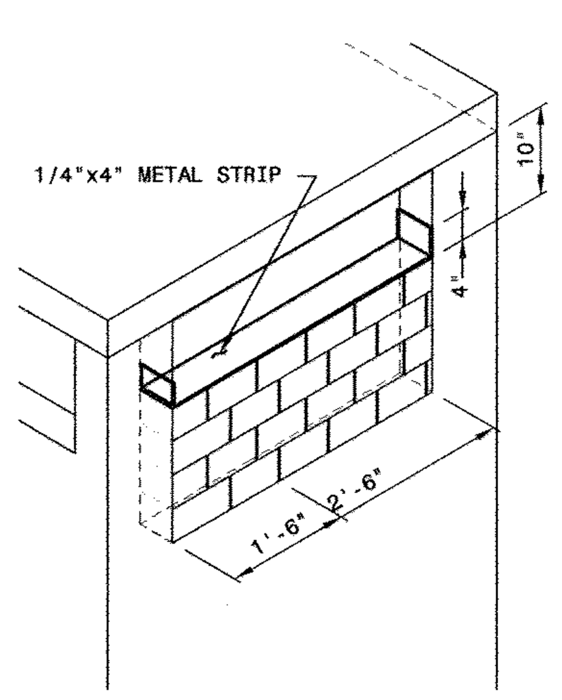
NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

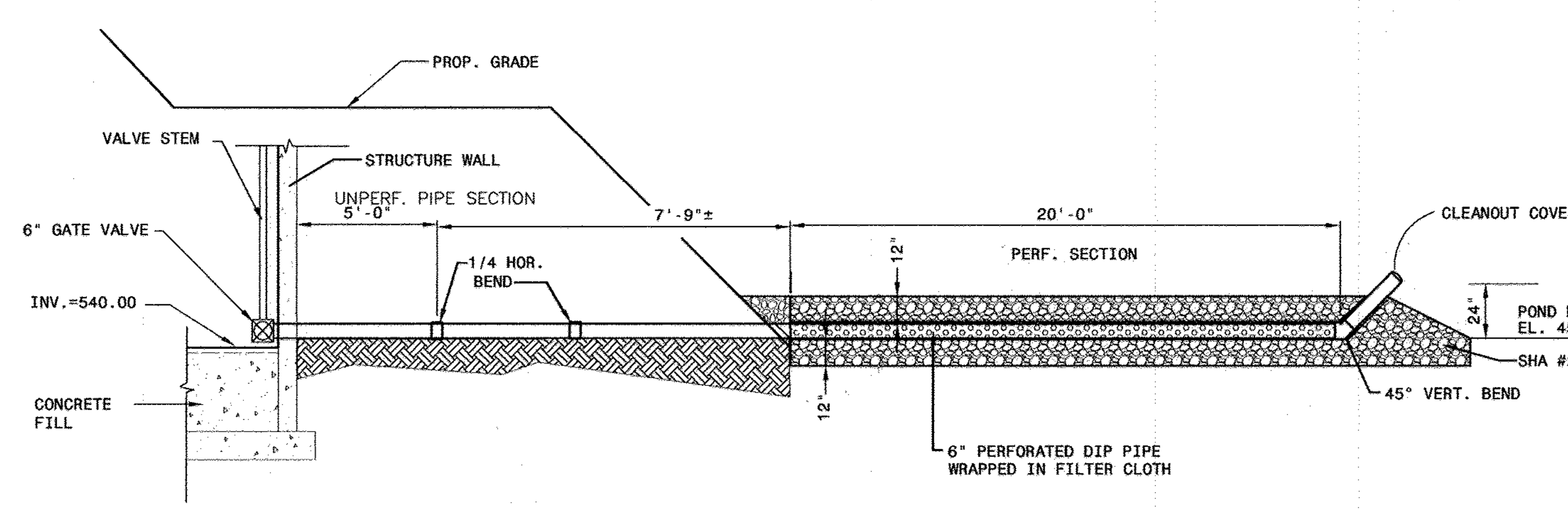


PLAN VIEW

DEWATERING DEVICE FOR POND
NOT TO SCALE

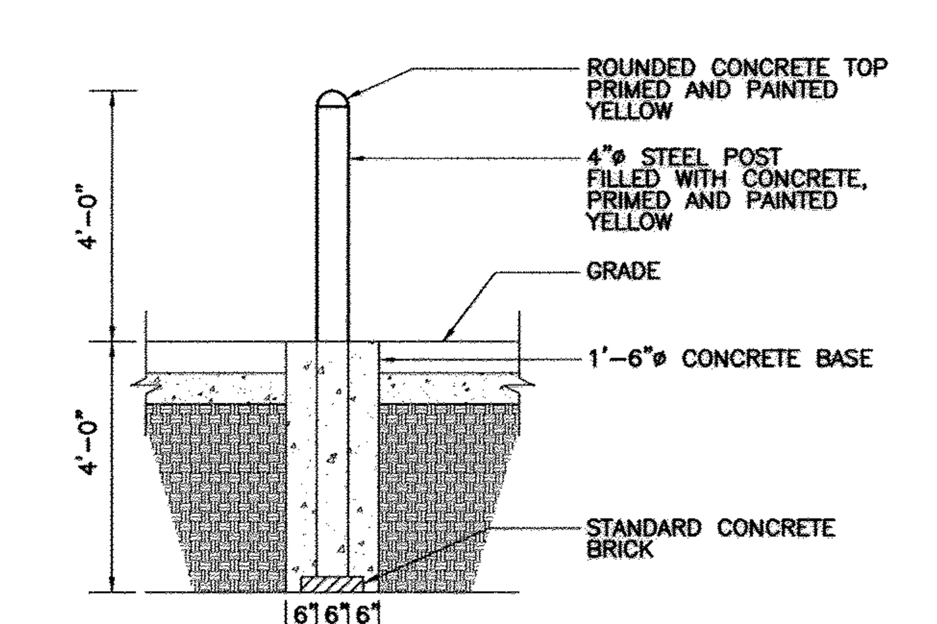


TEMPORARY BLOCKING - DETAIL
NOT TO SCALE



SECTION
NOT TO SCALE

DEWATERING DEVICE FOR POND



DETAIL - BOLLARD
NO SCALE

NO.	DATE	DESCRIPTIONS

REVISIONS

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
STORMWATER MANAGEMENT DETAILS
SP-03-09   F-03-159   F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : AS SHOWN
DRW. : AVG	PROJ. :	
CHK. : DCW	DATE : MAY 17, 2005	SHEET 6 OF 22

F-05-29

HYDROLOGIC TABLE

INLET MUNBER	AREA (Ac.)	IMP.%	C FACTOR	C x AREA	Tc (min)	I_{10}	DISCHARGE Q_{10} (CFS)	ZONE
I-1	0.32	46.9	0.49	0.157	5.0	8.5	1.33	RR-DEO
I-2	0.36	47.2	0.50	0.180	5.0	8.5	1.53	RR-DEO
I-3	5.17	3.3	0.19	0.982	10.0	6.6	6.48	RR-DEO
I-4	3.37	8.3	0.22	1.741	10.4	6.54	4.85	RR-DEO
I-5	7.94	1.9	0.18	1.429	13.6	5.68	8.12	RR-DEO
I-6	0.20	45.0	0.47	0.094	5.0	8.5	0.80	RR-DEO
I-7	0.20	50.0	0.51	0.102	5.0	8.5	0.87	RR-DEO
I-8	0.10	58.0	0.53	0.053	5.0	8.5	0.45	RR-DEO
I-9	0.10	50.0	0.51	0.051	5.0	8.5	0.43	RR-DEO
I-10	0.16	50.0	0.53	0.085	5.0	8.5	0.72	RR-DEO
I-11	0.16	56.3	0.56	0.090	5.0	8.5	0.76	RR-DEO
I-12	0.14	50.0	0.52	0.073	5.0	8.5	0.62	RR-DEO
I-13	0.14	50.0	0.52	0.073	5.0	8.5	0.62	RR-DEO

HYDROLOGIC TABLE

INLET MUNBER	AREA (Ac.)	IMP.%	C FACTOR	C x AREA	Tc (min)	I_{10}	DISCHARGE Q_{10} (CFS)	ZONE
I-14	0.11	54.6	0.55	0.060	5.0	8.5	0.51	RR-DEO
I-15	0.11	54.6	0.55	0.060	5.0	8.5	0.51	RR-DEO
I-16	0.81	9.9	0.24	0.194	12.2	6.0	1.17	RR-DEO
I-17	0.47	21.3	0.31	0.146	9.4	6.78	0.99	RR-DEO
I-18	0.47	21.3	0.31	0.146	9.4	6.78	0.99	RR-DEO
I-19	3.14	5.7	0.20	0.628	11.4	6.2	3.89	RR-DEO
I-20	0.29	41.4	0.46	0.133	5.0	8.5	1.13	RR-DEO
I-21	0.29	41.4	0.46	0.133	5.0	8.5	1.13	RR-DEO
I-22	4.66	10.0	0.24	1.135	12.2	6.0	6.71	RR-DEO
I-23	0.12	41.7	0.45	0.054	5.0	8.5	0.46	RR-DEO
I-24	0.12	41.7	0.45	0.054	5.0	8.5	0.46	RR-DEO
I-25	4.41	9.1	0.22	0.970	13.1	5.78	5.61	RR-DEO

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
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APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

NO.	DATE	DESCRIPTION

REVISIONS

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

DRAINAGE AREA MAP STORM DRAINS

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

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PO BOX 1
GLENELG, MD. 21737

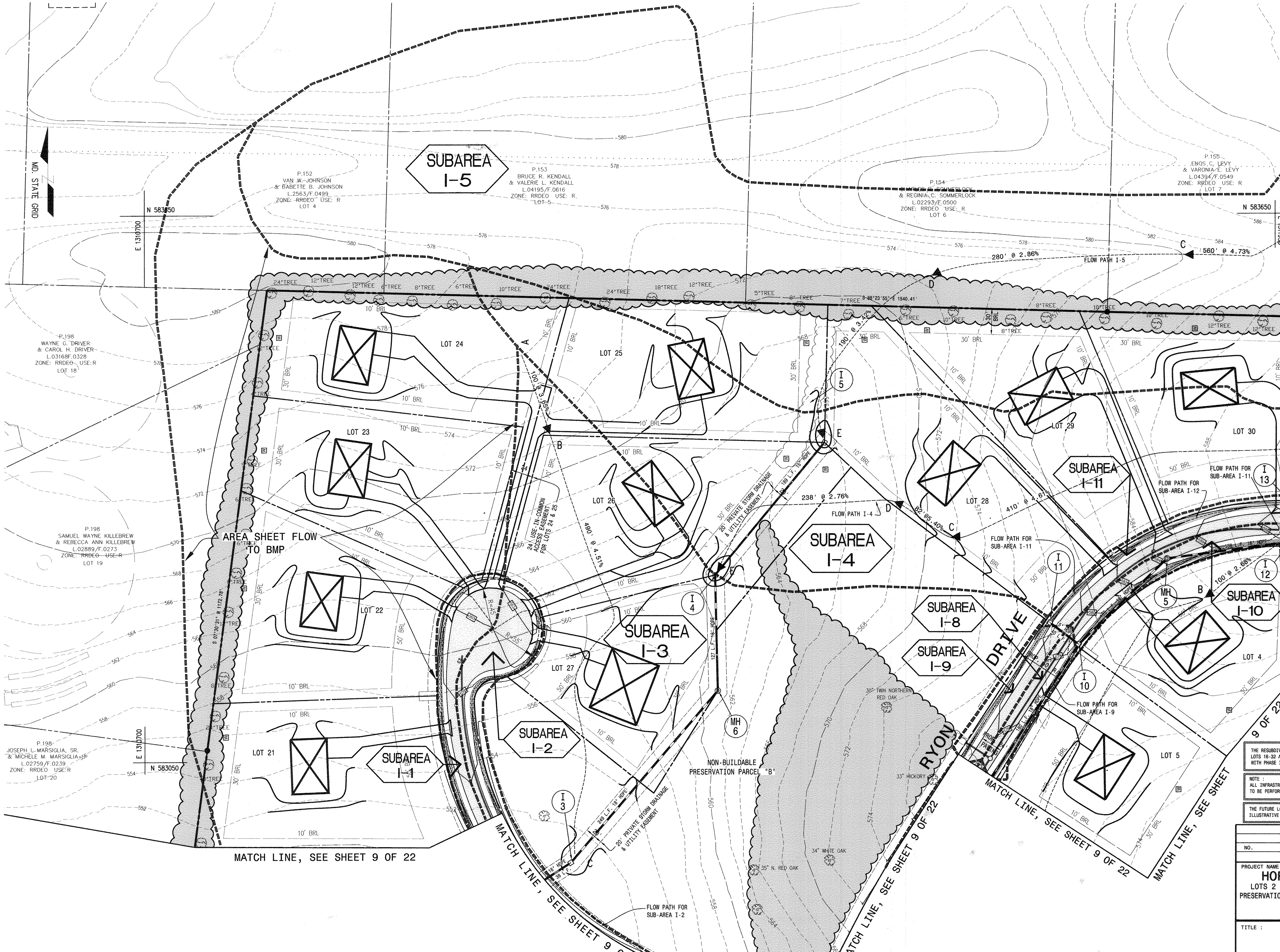
DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG | JOB :
DRW. : AVG | PROJ. :
CHK. : DCW | DATE : MAY 17, 2005

SCALE : 1" = 50'

DRAINAGE AREA MAP- STORM DRAINS

I:\SUBDIVISION-PROJECTS\HOPKINS CHOICE-FINAL\FINAL-PLAN\7-8-9HPKNS-STRMDRN-DAM.dwg, 7STRMDRNDAM1, 5/17/2005 3:57:42 PM, gsz


SUBAREA I-1
SUBAREA I-2
SUBAREA I-3
SUBAREA I-4
SUBAREA I-5
SUBAREA I-8
SUBAREA I-9
SUBAREA I-10
SUBAREA I-11
LOT 21
LOT 22
LOT 23
LOT 24
LOT 25
LOT 26
LOT 27
LOT 28
LOT 29
LOT 30
LOT 4
LOT 5
MD. STATE GRID
N 583050
E 1310700
N 583650
P.152 VAN W. JOHNSON & BABETTE B. JOHNSON L.2563/F.0499 ZONE: RRDEO USE: R LOT 4
P.153 BRUCE R. KENDALL & VALERIE L. KENDALL L.04195/F.0616 ZONE: RRDEO USE: R. LOT 5
P.155 ENOS C. LEVY & VARONIA E. LEVY L.04394/F.0549 ZONE: RRDEO USE: R LOT 7
P.198 WAYNE G. DRIVER & CAROL H. DRIVER L.03168/F.0328 ZONE: RRDEO USE:R LOT 18
P.198 SAMUEL WAYNE KILLEBREW & REBECCA ANN KILLEBREW L.02889/F.0273 ZONE: RRDEO USE:R LOT 19
P.198 JOSEPH L. MARSIGLIA, SR. & MICHELE M. MARSIGLIA L.02759/F.0239 ZONE: RRDEO USE:R LOT 20
AREA SHEET FLOW TO BMP
FLOW PATH I-5
FLOW PATH I-4
FLOW PATH FOR SUB-AREA I-2
FLOW PATH FOR SUB-AREA I-9
FLOW PATH FOR SUB-AREA I-11
FLOW PATH FOR SUB-AREA I-12
NON-BUILDABLE PRESERVATION PARCEL "B"
RYON DRIVE
MH 5
MH 6
24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 24 & 25
20' PRIVATE STORM DRAINAGE & UTILITY EASEMENT
MATCH LINE, SEE SHEET 9 OF 22
MATCH LINE, SEE SHEET 7 OF 22

NOTE : TOPOGRAPHY OBTAINED FROM JACK C. MELLLEMA SR. INC. SURVEYS. OCT. 2002.

LEGEND :

- EXISTING CONTOURS
- PROPERTY LINE
- SETBACK LINE
- EXISTING TREELINE
- TREELINE TO REMAIN
- EX. SPECIMEN TREES
- EX.TREES
- 100-YR FLOODPLAIN
- 100' STREAM BUFFER
- 25' WETLAND BUFFER
- WETLAND
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE
- LIMIT OF DISTURBANCE
- DRAINAGE DIVIDE
- SOIL STABILIZATION MATTING OVER SEED & MULCH
- SEED & MULCH
- SOLID SODDING
- COURSE GRAVEL

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

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NO.	DATE	DESCRIPTION

REVISIONS

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

DRAINAGE AREA MAP
STORM DRAINS

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
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GLENELG, MD. 21737

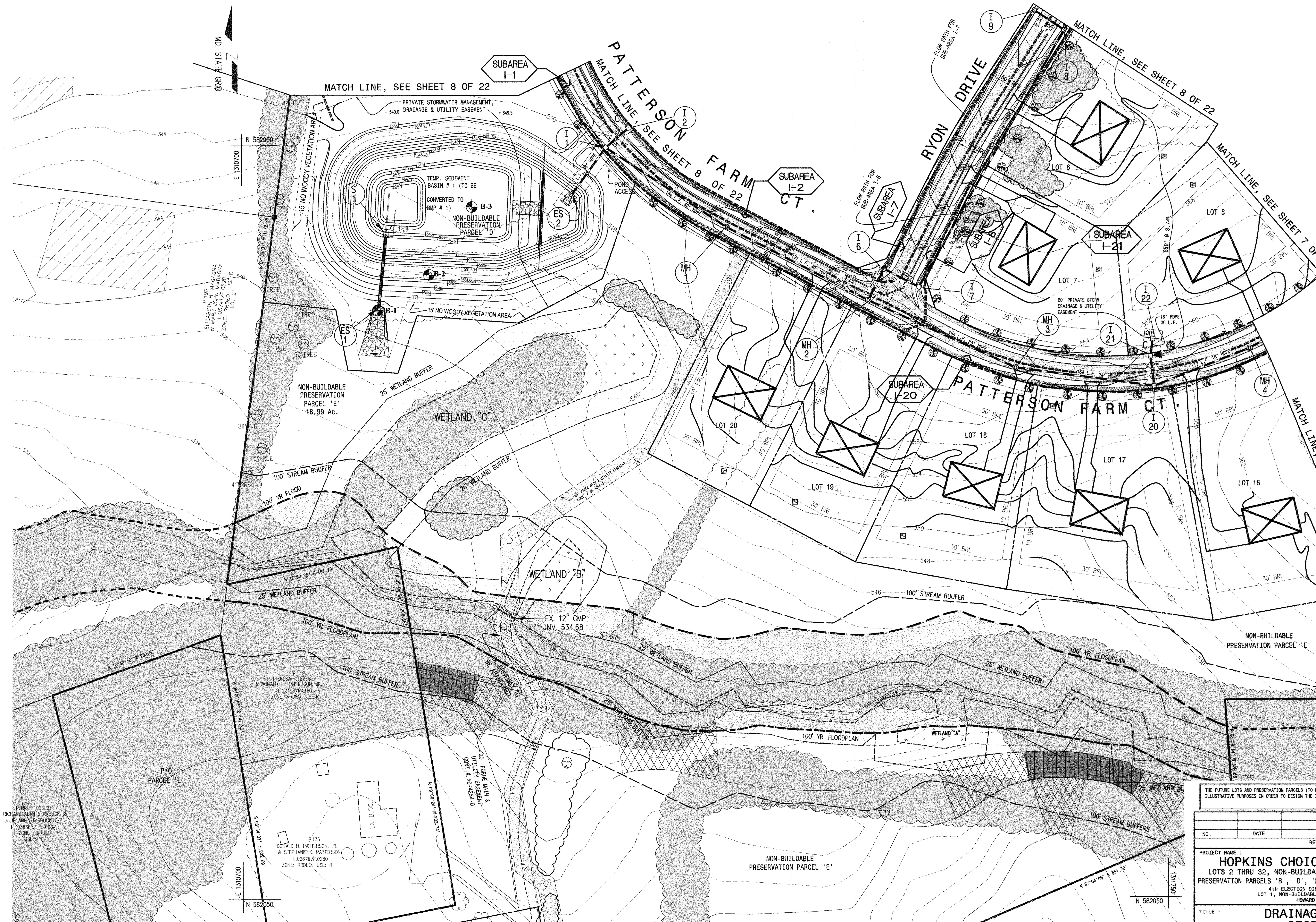
DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : 1" = 50'	SHEET 8 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

I:\SUBDIVISION-PROJECTS\HOPKINS CHOICE-FINAL\FINAL-PLAN\7-8-9HPKNS-STMDRN-DAM.dwg, 8STMDRNDAM2, 5/17/2005 3:53:19 PM, guz



MD. STATE GRID
MATCH LINE, SEE SHEET 8 OF 22
SUBAREA I-1
PRIVATE STORMWATER MANAGEMENT, DRAINAGE & UTILITY EASEMENT
15' NO WOODY VEGETATION AREA
TEMP. SEDIMENT BASIN # 1 (TO BE CONVERTED TO BMP # 1)
NON-BUILDABLE PRESERVATION PARCEL 'D'
B-1
B-2
B-3
ES 1
ES 2
POND ACCESS
N 582900
E 1310700
PATTERSON FARM CT.
MATCH LINE, SEE SHEET 8 OF 22
SUBAREA I-2
RYON DRIVE
FLOW PATH FOR SUB-AREA I-7
FLOW PATH FOR SUB-AREA I-6
SUBAREA I-7
SUBAREA I-8
SUBAREA I-21
SUBAREA I-20
MATCH LINE, SEE SHEET 8 OF 22
MATCH LINE, SEE SHEET 7 OF 22
MH 1
MH 2
MH 3
MH 4
LOT 6
LOT 7
LOT 8
LOT 16
LOT 17
LOT 18
LOT 19
LOT 20
20' PRIVATE STORM DRAINAGE & UTILITY EASEMENT
NON-BUILDABLE PRESERVATION PARCEL 'E' 18.99 Ac.
WETLAND "C"
WETLAND "B"
WETLAND "A"
25' WETLAND BUFFER
100' STREAM BUFFER
100' YR. FLOODPLAIN
EX. 12" CMP INV. 534.68
EX. DRIVEWAY TO BE ABANDONED
NON-BUILDABLE PRESERVATION PARCEL 'E'
P/O PARCEL 'E'
P.142 THERESA P. BASS & DONALD H. PATTERSON, JR. L.02498/F.0160 ZONE: RRDEO USE: R
P.136 DONALD H. PATTERSON, JR. & STEPHANIE K. PATTERSON L.02678/F.0280 ZONE: RRDEO USE: R
P.198 - LOT 21 RICHARD ALAN STARBUCK & JULIE ANN STARBUCK T/E L.03836 / F.0332 ZONE: RRDEO USE: R
EX. BLDG.
20' FORCE MAIN & UTILITY EASEMENT CONT.#.50-4254-D
N 582050
E 1310700
E 1311750
N 67°04'06" E 551.79'
N 89°50'01" E 572.11'
100' STREAM BUFFERS

NOTE : TOPOGRAPHY OBTAINED FROM JACK C. MELLLEMA SR. INC. SURVEYS. OCT. 2002.

LEGEND :

- EXISTING CONTOURS
- PROPERTY LINE
- SETBACK LINE
- EXISTING TREELINE
- TREELINE TO REMAIN
- EX. SPECIMEN TREES
- EX.TREES
- 100-YR FLOODPLAIN
- 100' STREAM BUFFER
- 25' WETLAND BUFFER
- WETLAND
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE
- LIMIT OF DISTURBANCE
- DRAINAGE DIVIDE
- SOIL STABILIZATION MATTING OVER SEED & MULCH
- SEED & MULCH
- SOLID SODDING
- COURSE GRAVEL

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

NO.	DATE	DESCRIPTION

REVISIONS

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'

4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

DRAINAGE AREA MAP STORM DRAINS

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :
DRW. : AVG	PROJ. :
CHK. : DCW	DATE : MAY 17, 2005

SCALE : 1" = 50'

SHEET 9 OF 22

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

F-05-29

Operation and Maintenance Schedule of Home Owners Association Owned and Maintained Stormwater Management Facility Wet Pond

Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be mowed as needed.

Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.

When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.

OPERATION, MAINTENANCE, AND INSPECTION

Inspection of the pond shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS Standards and Specifications For Ponds" (MD378). The pond owner(s) and their heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

HYDROLOGIC TABLE

INLET MUNBER	AREA (Ac.)	IMP.%	C FACTOR	C x AREA	Tc (min)	I_{10}	DISCHARGE Q_{10} (CFS)	ZONE
I-1	0.32	46.9	0.49	0.157	5.0	8.5	1.33	RR-DEO
I-2	0.36	47.2	0.50	0.180	5.0	8.5	1.53	RR-DEO
I-3	5.17	3.3	0.19	0.982	10.0	6.6	6.48	RR-DEO
I-4	3.37	8.3	0.22	1.741	10.4	6.54	4.85	RR-DEO
I-5	7.94	1.9	0.18	1.429	13.6	5.68	8.12	RR-DEO
I-6	0.20	45.0	0.47	0.094	5.0	8.5	0.80	RR-DEO
I-7	0.20	50.0	0.51	0.102	5.0	8.5	0.87	RR-DEO
I-8	0.10	58.0	0.53	0.053	5.0	8.5	0.45	RR-DEO
I-9	0.10	50.0	0.51	0.051	5.0	8.5	0.43	RR-DEO
I-10	0.16	50.0	0.53	0.085	5.0	8.5	0.72	RR-DEO
I-11	0.16	56.3	0.56	0.090	5.0	8.5	0.76	RR-DEO
I-12	0.14	50.0	0.52	0.073	5.0	8.5	0.62	RR-DEO
I-13	0.14	50.0	0.52	0.073	5.0	8.5	0.62	RR-DEO
I-14	0.11	54.6	0.55	0.060	5.0	8.5	0.51	RR-DEO
I-15	0.11	54.6	0.55	0.060	5.0	8.5	0.51	RR-DEO
I-16	0.81	9.9	0.24	0.194	12.2	6.0	1.17	RR-DEO
I-17	0.47	21.3	0.31	0.146	9.4	6.78	0.99	RR-DEO
I-18	0.47	21.3	0.31	0.146	9.4	6.78	0.99	RR-DEO
I-19	3.14	5.7	0.20	0.628	11.4	6.2	3.89	RR-DEO
I-20	0.29	41.4	0.46	0.133	5.0	8.5	1.13	RR-DEO
I-21	0.29	41.4	0.46	0.133	5.0	8.5	1.13	RR-DEO
I-22	4.66	10.0	0.24	1.135	12.2	6.0	6.71	RR-DEO
I-23	0.12	41.7	0.45	0.054	5.0	8.5	0.46	RR-DEO
I-24	0.12	41.7	0.45	0.054	5.0	8.5	0.46	RR-DEO
I-25	4.41	9.1	0.22	0.970	13.1	5.78	5.61	RR-DEO

NOTE : TOPOGRAPHY OBTAINED FROM JACK C. MELLLEMA SR. INC. SURVEYS. OCT. 2002.

LEGEND :

- EXISTING CONTOURS
- PROPERTY LINE
- SETBACK LINE
- EXISTING TREELINE
- TREELINE TO REMAIN
- 100-YR FLOODPLAIN
- 100' STREAM BUFFER
- 25' WETLAND BUFFER
- WETLAND
- 1500 S.F. WELL RESERVE AREA
- AFFORESTATION AREA
- 10,000 S.F. SEPTIC RESERVE AREA
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/24/05

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

NO.	DATE	DESCRIPTIONS

REVISIONS

PROJECT NAME : HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE : DRAINAGE AREA MAP
STORM DRAINS

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :
DRW. : AVG	PROJ. :
CHK. : DCW	DATE : MAY 17, 2005

SCALE : 1" = 100'

SHEET 10 OF 22

F-05-29

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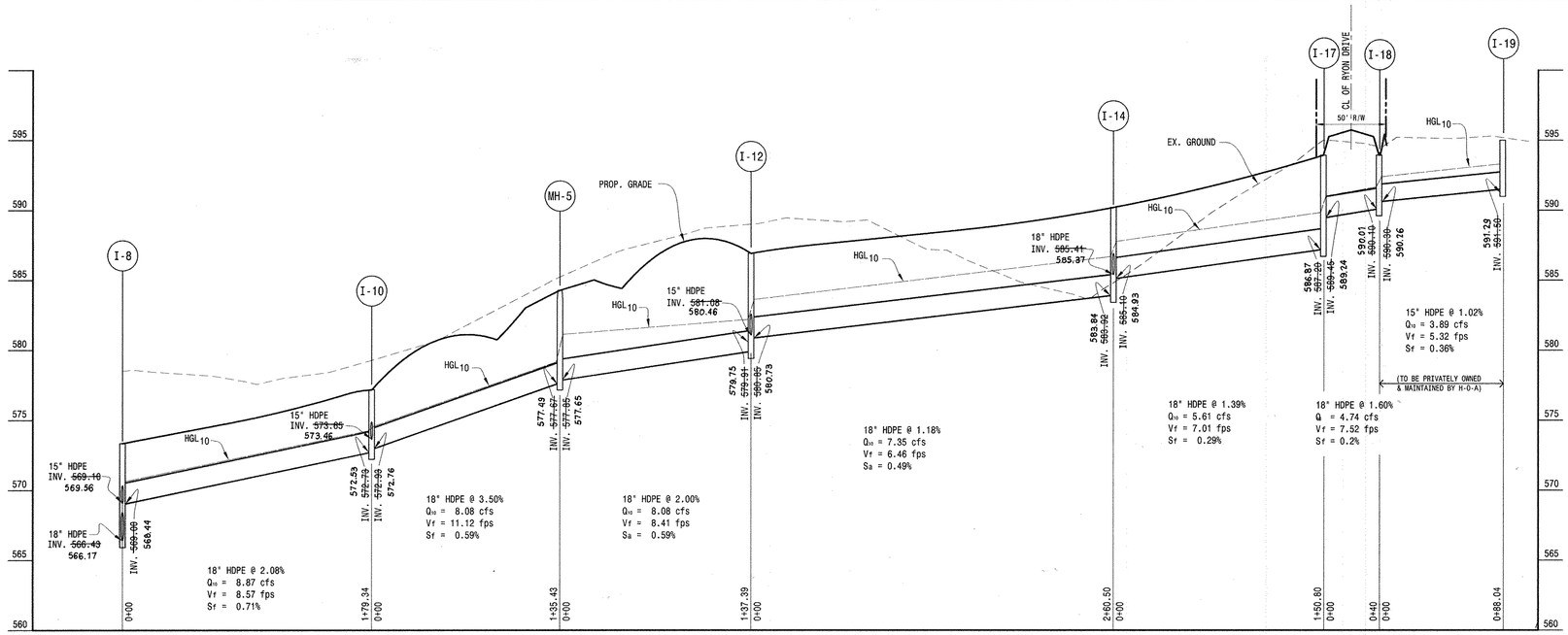
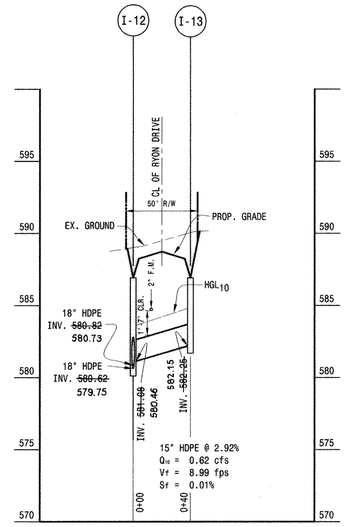


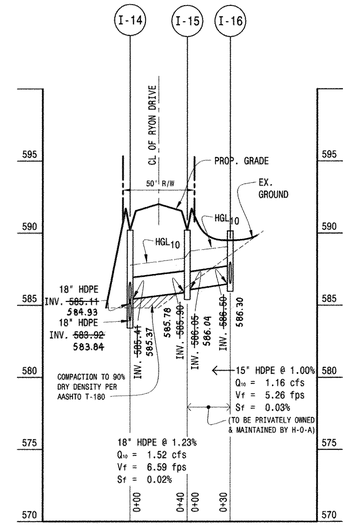
PROFILE

SCALE : 1" = 50' HOR.
1" = 5' VER.



PROFILE

SCALE : 1" = 50' HOR.
1" = 5' VER.



PROFILE

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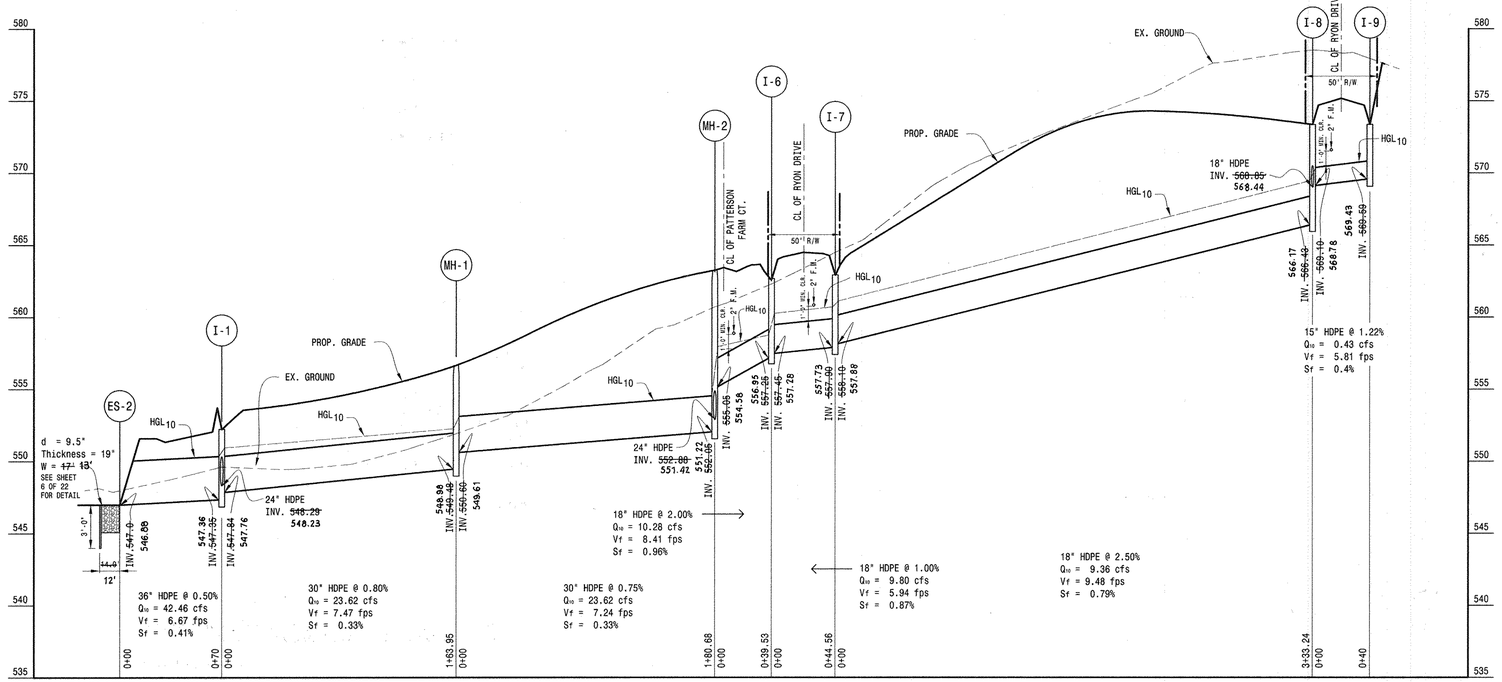

PROFILE

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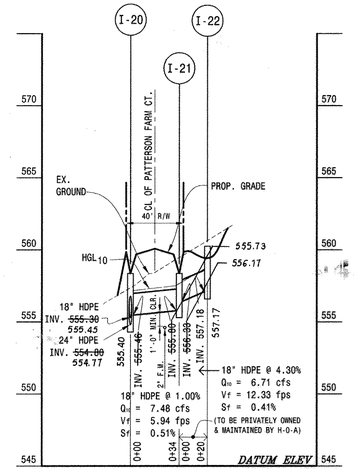

PROFILE

SCALE : 1" = 50' HOR.
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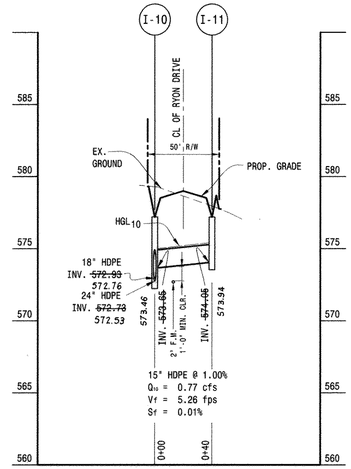


PROFILE

SCALE : 1" = 50' HOR.
1" = 5' VER.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

AS-BUILT

NOTE: UNLESS OTHERWISE NOTED STORM DRAINS ARE PUBLIC STORM DRAINS.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

NO.	DATE	DESCRIPTION

REVISIONS

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'

4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

STORM DRAIN PROFILES

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :
DRW. : AVG	PROJ. :
CHK. : DCW	DATE : MAY 17, 2004

SCALE : 1" = 50'

SHEET 11 OF 22

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

DAWN JORGENSON, PE# 37668 (EXPIRES 7/13/17)

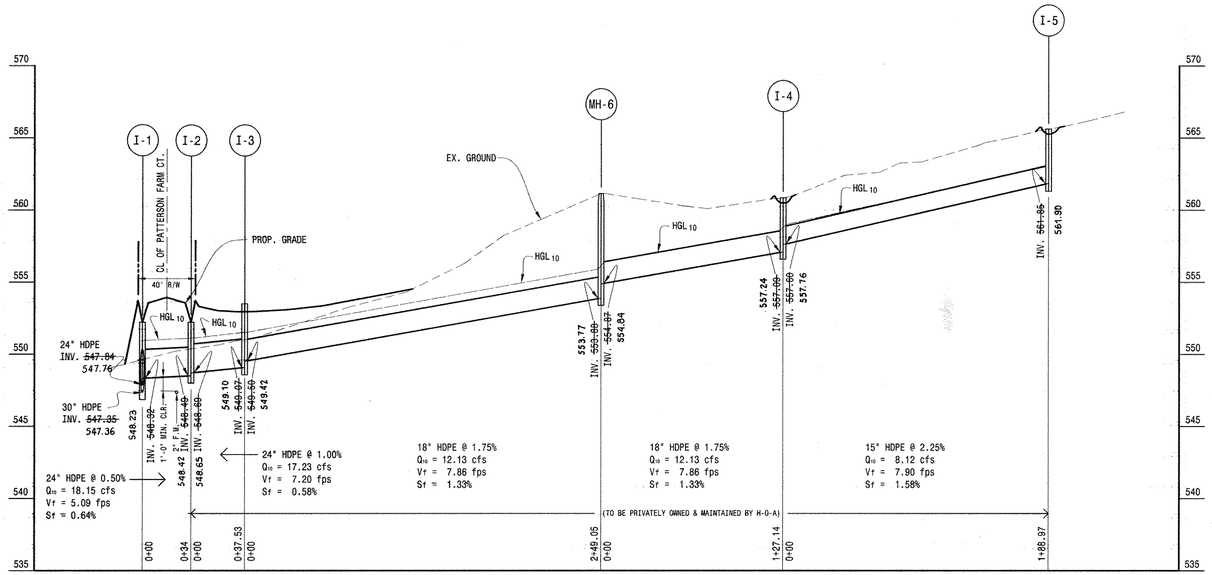
SIGNATURE — DATE 4/25/16

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

FOR ESE CONSULTANTS, INC.

I:\SUBDIVISION-PROJECTS\HOPKINS CHOICE-FINAL\FINAL-PLAN\11-12HPKNS-DRN-PROFILE.dwg, DRAIN-PROFILE1, 5/17/2005 3:46:50 PM, guz

F-05-29



PROFILE

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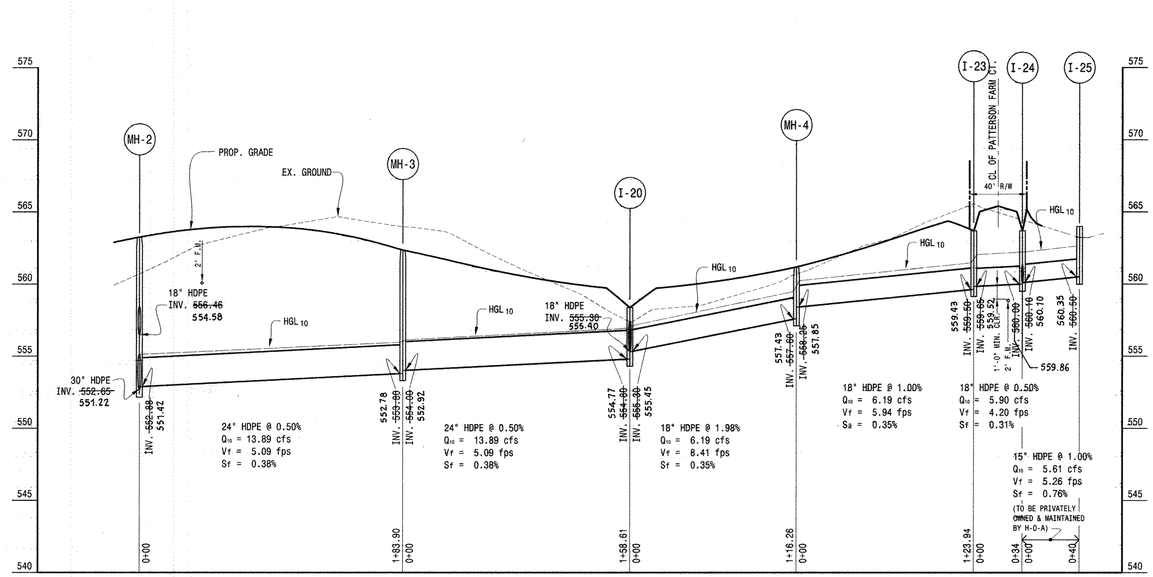


PROFILE

SCALE : 1" = 50' HOR.
1" = 5' VER.

STRUCTURE SCHEDULE

STUCTURE NO.	TYPE	TOP / GRATE ELEVATION	THROAT ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	HO. CO. STD.
I - 1	TYPE'K' INLET	553.05	552.22	547.76 , 548.23	547.36	PATTERSON FARM CT.	3+21.6	17' R	S.D. 4.36
I - 2	TYPE'K' INLET	553.05	552.22	548.65	548.42	PATTERSON FARM CT.	3+21.6	17' L	S.D. 4.36
I - 3 ★	TYPE'D' INLET	553.50	552.67	549.42	549.10	PATTERSON FARM CT.	3+27.22	54.18' L	S.D. 4.39
I - 4 ★	TYPE'D' INLET	560.85	560.02	557.76	557.24	--	N 583254.53, E 1311330.68	--	S.D. 4.39
I - 5 ★	TYPE'D' INLET	565.62	564.79		561.90	--	N 583399.74, E 1311451.59	--	S.D. 4.39
I - 6	TYPE'K' INLET	563.51	562.68	557.28	556.35	PATTERSON FARM CT.	16+89.95	22.37' R	S.D. 4.36
I - 7	TYPE'K' INLET	563.75	562.92	557.88	557.73	RYON DRIVE	16+89.95	22.37' L	S.D. 4.36
I - 8	TYPE'K' INLET	574.19	573.36	568.44 , 568.78	566.17	RYON DRIVE	13+54.23	20' L	S.D. 4.36
I - 9	TYPE'K' INLET	574.19	573.36		569.43	RYON DRIVE	13+54.23	20' R	S.D. 4.36
I - 10	TYPE'K' INLET	578.03	577.20	573.45 , 572.76	572.53	RYON DRIVE	11+73.58	20' L	S.D. 4.36
I - 11	TYPE'K' INLET	578.03	577.20		573.94	RYON DRIVE	11+73.58	20' R	S.D. 4.36
I - 12	TYPE'K' INLET	587.75	586.92	580.73 , 580.46	579.75	RYON DRIVE	8+84.84	20' L	S.D. 4.36
I - 13	TYPE'K' INLET	587.75	586.92		582.15	RYON DRIVE	8+84.84	20' R	S.D. 4.36
I - 14	TYPE'D' INLET	591.04	590.21	585.37 , 584.93	583.84	RYON DRIVE	6+24.33	20' L	S.D. 4.36
I - 15	TYPE'K' INLET	591.04	590.21	586.05	585.78	RYON DRIVE	6+24.33	20' R	S.D. 4.36
I - 16 ★	TYPE'K' INLET	590.16	589.50		586.30	RYON DRIVE	6+24.33	50.11' R	S.D. 4.36
I - 17	TYPE'D' INLET	594.76	593.93	589.24	586.87	RYON DRIVE	4+73.53	20' L	S.D. 4.39
I - 18	TYPE'K' INLET	594.76	593.93	590.26	590.01	RYON DRIVE	4+73.53	20' R	S.D. 4.12
I - 19 ★	TYPE'K' INLET	595.83	595.0		591.29	RYON DRIVE	N 583403.03, E 1312379.84		S.D. 4.12
I - 20	TYPE'K' INLET	559.20	558.36	555.45 , 555.40	554.77	PATTERSON FARM CT.	10+00.0	17' R	S.D. 4.36
I - 21	TYPE'K' INLET	559.20	558.36	556.17	555.73	PATTERSON FARM CT.	10+00.0	17' L	S.D. 4.36
I - 22 ★	TYPE'D' INLET	560.25	559.42	--	557.17	PATTERSON FARM CT.	10+05.8	35.91' L	S.D. 4.39
I - 23	TYPE'K' INLET	564.50	563.69	559.52	559.43	PATTERSON FARM CT.	12+33.28	17' R	S.D. 4.36
I - 24	TYPE'K' INLET	564.50	563.69	560.10	559.86	PATTERSON FARM CT.	12+33.28	17' L	S.D. 4.36
I - 25 ★	TYPE'D' INLET	564.0	563.17	--	560.35	PATTERSON FARM CT.	12+33.28	57' L	S.D. 4.39
MH 1	STD. MANHOLE	556.66		549.61	549.98	PATTERSON FARM CT.	4+81.65	6.0' R	G-5.01
MH 2	STD. MANHOLE	563.25		554.58 , 551.42	551.12	PATTERSON FARM CT.	6+62.33	6.0' L	
MH 3	STD. MANHOLE	562.36		552.92	552.78	PATTERSON FARM CT.	8+45.31	6.0' R	G.-5.11
MH 4	STD. MANHOLE	558.39		557.85	557.43	PATTERSON FARM CT.	11+12.85	6.0' R	
MH 5	STD. MANHOLE	584.29		577.65	577.49	RYON DRIVE	10+30.27	9.0' L	G.-5.11
MH 6 ★	STD. MANHOLE	561.14		554.84	553.77		N 583127.42, E 1311333.51		G.-5.11
						--			
ES 2	END SECTION	--			546.88	--	N 582716.69, E 1310855.62		S.D. 5.52
ES 1	END SECTION	--		-	539.22	--	N 582844.44, E 1311075.31	-	S.D. 5.52
								-	
S-1	STRUCTURE	551.0		-	539.80	--	N 582799.25, E 1310863.59	-	SPECIAL

★ THESE STRUCTURE ARE TO BE PRIVATELY OWNED AND MAINTAINED BY THE H-O-A.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

DAWN JORGENSON, PE# 37668 (EXPIRES 7/13/17)

Dawn Jorgenson — SIGNATURE — 4/25/16 DATE

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

FOR ESE CONSULTANTS, INC.

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05

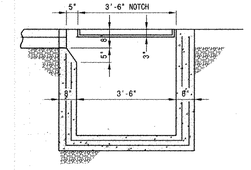
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

PIPE SCHEDULE

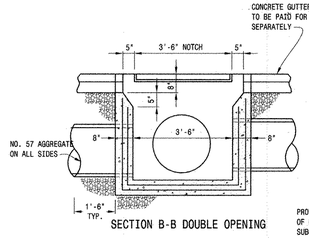
TYPE/CLASS OF PIPE	PIPE SIZE (IN.)	TOTAL LENGTH (FT.)	REMARKS
HDPE, SMOOTH INTERIOR	15	347	PRIVATE
	15	576	PUBLIC
	18	396	PRIVATE
	18	1671	PUBLIC
	24	414	PUBLIC
	30	345	PUBLIC
	36	70	PUBLIC

GENERALS NOTES

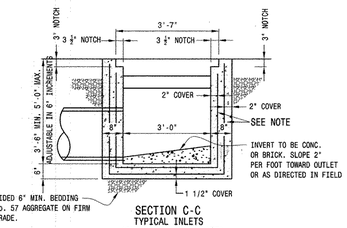
1. CONCRETE TO BE MIX. No.6 14500 P.S.I.
2. REINFORCING-2 LAYERS OF 4X4-W4DXW4D WELDED WIRE FABRIC
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. PIPE OPENING TO BE PROVIDED AS REQUIRED, FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
5. FOR GRATE DETAILS SEE STANDARD NO. 378.05. GRATE TO BE AS SHOWN OR FINISH APPROVED EQUIVALENT.
6. "MINIMUM DEPTH" PAVMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER "LINEAR FOOT" INCLUDES DEPTH IN EXCESS OF 3'-6".
7. A 6" PERFORATED CIRCULARS PIPE, FOR EROSION AND SEDIMENT CONTROL SHALL BE PLACED IN THE INLET WALL AT ALL INLET SEDIMENT TRAPS AS SHOWN ON THE PLANS.



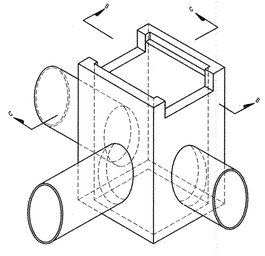
SECTION B-B SINGLE OPENING



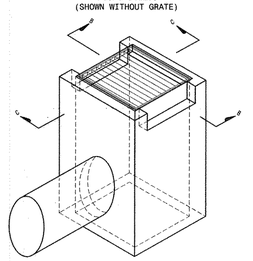
SECTION B-B DOUBLE OPENING



SECTION C-C
TYPICAL INLETS
(SHOWN WITHOUT GRATE)



DOUBLE OPENING
(SHOWN WITHOUT GRATE)



SINGLE OPENING
(SHOWN WITH GRATE)

MODIFIED K-INLET
PRE-CAST OPEN END GRATE
NOT TO SCALE

DRIVEWAY CULVERT DATA

LOT NUMBERS	STREET GRADE %	DISCHARGE Q_{10} (CPS)	PIPE TYPE/ DIAMETER	PIPE CAPACITY (CFS)	VELOCITY (1)CULVERT/DITCH(2) (FPS)	OUTFALL PREOTECTION FOR CULVERT AND ROAD SIDE DITCH	REMARKS
2	3.00	0.15	12" CMP	3.34	4.26 / 2.70	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-14
3	1.00	0.62	12" CMP	1.93	2.46 / 1.56	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-12
4	4.50	0.72	12" CMP	4.09	5.21 / 2.90	COURSE GRAVEL (3)	Q TO I-10
5	1.72	0.45	12" CMP	2.53	3.22 / 2.05	SOLID SODDING	Q TO I-8
6	1.72	0.87	12" CMP	2.53	3.22 / 2.05	SOLID SODDING	Q TO I 7
7	4.00	1.13	12" CMP	3.86	4.91 / 3.12	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-21
8	3.82	1.13	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-21
9	3.82	0.46	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-24
10	3.82	0.46	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-24
11	-	-	-	-	-	-	-
12	3.82	0.46	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-23
13	3.82	0.46	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-23
14	3.82	0.46	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-23
15	3.82	1.13	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-20
16	3.82	1.13	12" CMP	3.77	4.80 / 3.05	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-20
17	2.50	1.13	12" CMP	3.05	3.89 / 2.47	SOLID SODDING	Q TO I-20
18	2.50	1.13	12" CMP	3.05	3.89 / 2.47	SOLID SODDING	Q TO I-20
19	4.96	1.33	12" CMP	4.30	5.47 / 3.04	COURSE GRAVEL	Q TO I-1
20	4.96	1.33	12" CMP	4.30	5.47 / 3.04	COURSE GRAVEL	Q TO I-1
21	2.15	1.33	12" CMP	2.83	3.60 / 2.29	SOLID SODDING	Q TO I-1
22	2.15	1.33	12" CMP	2.83	3.60 / 2.29	SOLID SODDING	Q TO I-1
23	2.15	1.33	12" CMP	2.83	3.60 / 2.29	SOLID SODDING	Q TO I-11
24	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-
27	2.15	1.53	12" CMP	2.83	3.60 / 2.29	SOLID SODDING	Q TO I-2
28	4.50	0.76	12" CMP	4.09	5.21 / 2.90	COURSE GRAVEL	Q TO I-11
29	4.50	0.76	12" CMP	4.09	5.21 / 2.90	COURSE GRAVEL	Q TO I-11
30	3.00	0.76	12" CMP	3.34	4.26 / 2.70	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-11
31	1.00	0.51	12" CMP	1.93	2.46 / 1.56	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-13
32	3.00	0.51	12" CMP	3.34	4.26 / 2.70	SOIL STABILIZATION MATTING OVER SEED & MULCH	Q TO I-15

NOTE :

1. VELOCITIES ARE DRIVEWAY CULVERTS FULL FLOW VELOCITIES BASED ON :
   a. STREET GRADE,
   b. ASSUMED n = 0.024, and
   c. MANNINGS EQUATION
   $V = 24.57 \times D^{2/3} S^{1/2}$
2. DITCH VELOCITIES BASED ON :
   a. DEPTH OF FLOW = 0.50'
   b. AREA OF FLOW = 0.50 S.F.
   c. FLOW WETTED PERIMETER = 2.24'
   d. HYDRAULIC RADIUS = 0.223'
   e. MANNINGS EQUATION,
   $V = 15.61 \times D^{2/3} S^{1/2}$ FOR n = 0.035 (SOD, SBM, SOIL LINING)
   $V = 13.66 \times D^{2/3} S^{1/2}$ FOR n = 0.04 (COURSE GRAVEL)
3. FOR COURSE GRAVEL, d50 = 3"Ø STONE

AS-BUILT

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE: UNLESS OTHERWISE NOTED STORM DRAINS ARE PUBLIC STORM DRAINS.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

NO.	DATE	DESCRIPTION
		REVISIONS

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

STORM DRAIN PROFILES AND STRUCTURE SCHEDULE

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :
DRW. : AVG	PROJ. :
CHK. : DCW	DATE : MAY 17, 2005

SCALE : 1" = 50'

SHEET 12 OF 22

F-05-29

I:\SUBDIVISION-PROJECTS\HOPKINS CHOICE-FINAL\FINAL-PLAN\11-13HPKNS-DRN-PROFILE.dwg, DRAIN-PROFILE2, 5/17/2005 3:46:02 PM, guz

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 5/20/05

DAVID WOESSNER
ENGINEER'S NAME

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ONSITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER — DATE 5/20/05

DALE THOMPSON
NAME OF DEVELOPER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — DATE 5/31/05

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

DISTRICT HOWARD SOIL CONSERVATION DIST. — DATE 5/31/05

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05

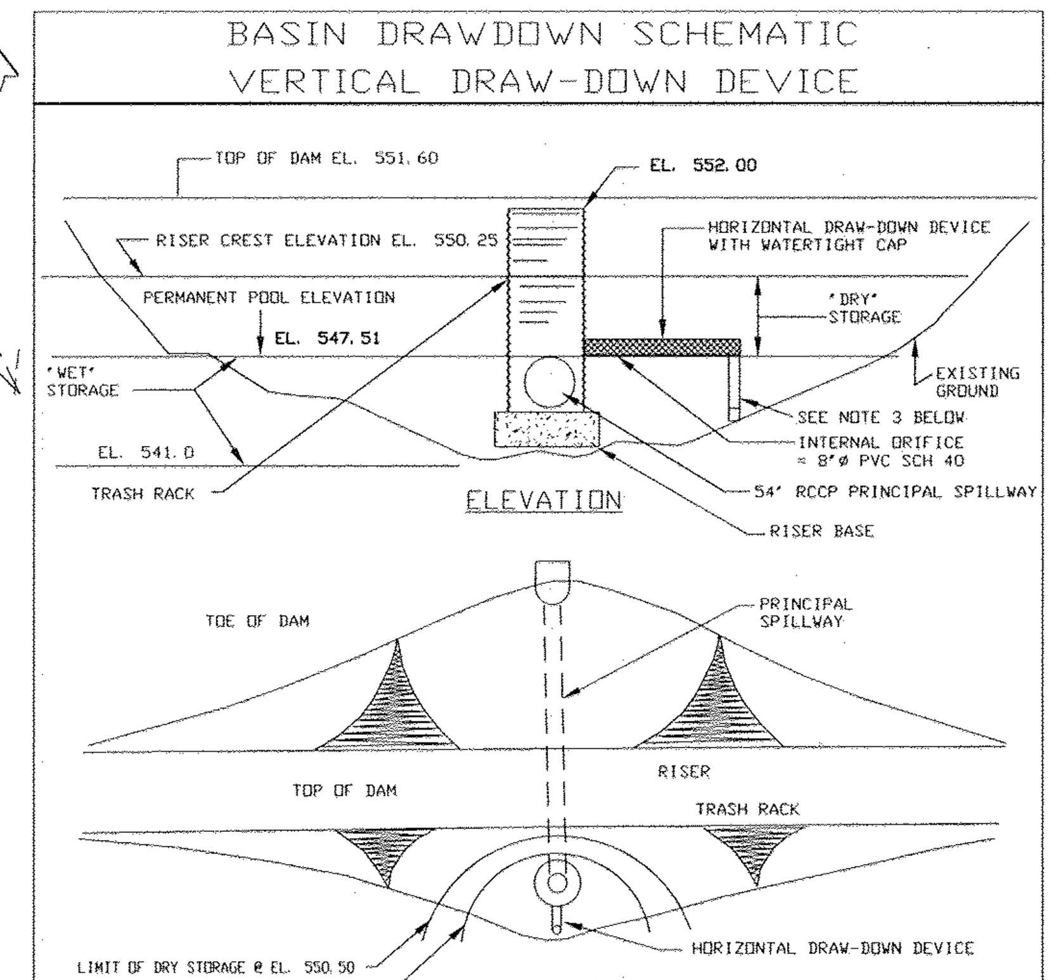
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

NOTE : TOPOGRAPHY OBTAINED FROM JACK C. MELLLEMA SR. INC. SURVEYS. OCT. 2002.

LEGEND :

- 325 / 330 — EXISTING CONTOURS
- PROPERTY LINE
- 10' BRL — SETBACK LINE
- EXISTING TREELINE
- EX. SPECIMEN TREES
- EX.TREES
- 100-YR FLOODPLAIN
- 100' STREAM BUFFER
- 25' WETLAND BUFFER
- WETLAND
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- IP — INLET PROTECTION
- SOIL STABILIZATION MATTING OVER SEED & MULCH
- SEED & MULCH
- SOLID SODDING
- COURSE GRAVEL

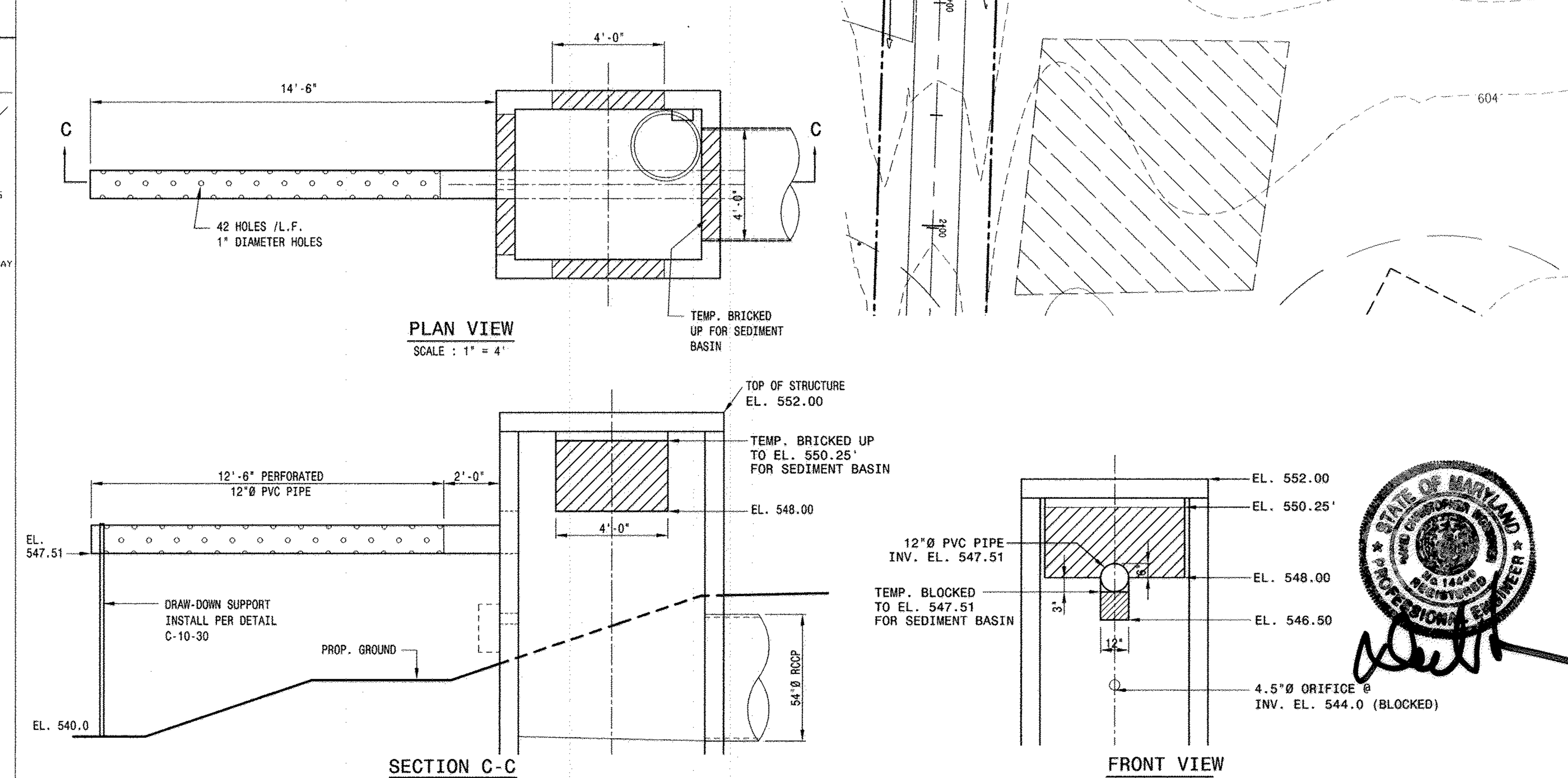
BASIN DRAWDOWN SCHEMATIC
VERTICAL DRAW-DOWN DEVICE



Construction Specifications

1. The total area of the perforations must be greater than 2 times the area of the internal orifice.
2. The perforated portion of the draw-down device shall be wrapped with 2 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for goetextile Class E.
3. 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 post set 3' minimum into the ground then joining them to the device by wrapping with 12 guage minimum wire.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 10 - 30	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



TEMPORARY DRAW-DOWN DEVICE DETAIL

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

NO.	DATE	DESCRIPTION

REVISION

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

GRADING AND SEDIMENT CONTROL PLAN

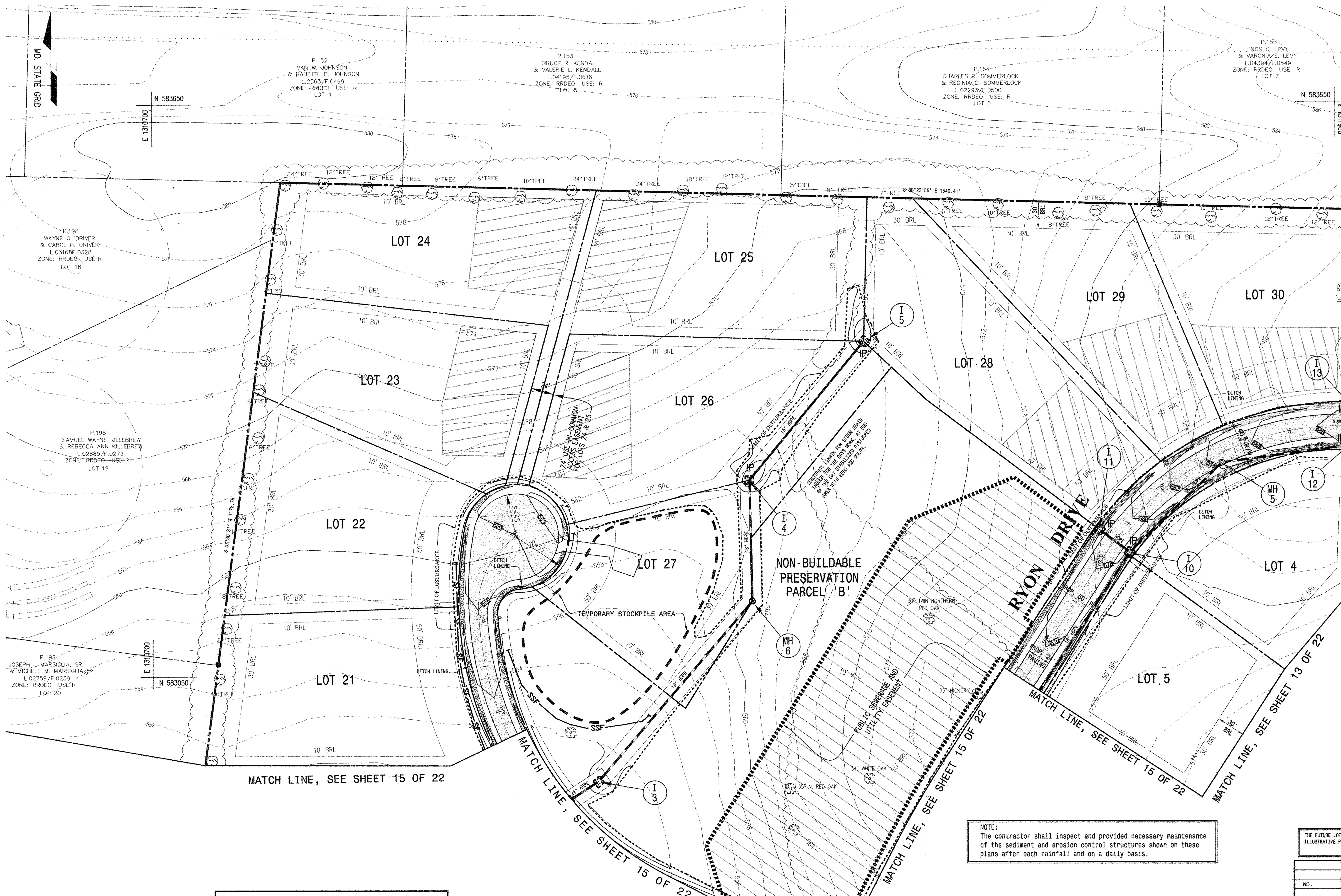
SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : 1" = 50'	SHEET 13 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		


MD. STATE GRID
N 583650
E 1310700
P.152 VAN W. JOHNSON & BABETTE B. JOHNSON L.2563/F.0499 ZONE: RRDEO USE: R LOT 4
P.153 BRUCE R. KENDALL & VALERIE L. KENDALL L.04195/F.0616 ZONE: RRDEO USE: R LOT 5
P.154 CHARLES R. SOMMERLOCK & REGINIA C. SOMMERLOCK L.02293/F.0500 ZONE: RRDEO USE: R LOT 6
P.155 ENOS C. LEVY & VARONIA E. LEVY L.04394/F.0549 ZONE: RRDEO USE: R LOT 7
N 583650
E 1311950
P.198 WAYNE G. DRIVER & CAROL H. DRIVER L.03168F.0328 ZONE: RRDEO USE:R LOT 18
P.198 SAMUEL WAYNE KILLEBREW & REBECCA ANN KILLEBREW L.02889/F.0273 ZONE: RRDEO USE:R LOT 19
P.198 JOSEPH L. MARSIGLIA, SR. & MICHELE M. MARSIGLIA L.02759/F.0239 ZONE: RRDEO USE:R LOT 20
E 1310700
N 583050
LOT 24
LOT 25
LOT 23
LOT 26
LOT 22
LOT 27
LOT 21
LOT 28
LOT 29
LOT 30
LOT 4
LOT 5
NON-BUILDABLE PRESERVATION PARCEL 'B'
RYON DRIVE
24' USE-IN-COMMON ACCESS EASEMENT FOR LOTS 24 & 25
TEMPORARY STOCKPILE AREA
PUBLIC SEWERAGE AND UTILITY EASEMENT
LIMIT OF DISTURBANCE
DITCH LINING
MATCH LINE, SEE SHEET 15 OF 22
MATCH LINE, SEE SHEET 15 OF 22
MATCH LINE, SEE SHEET 15 OF 22
MATCH LINE, SEE SHEET 15 OF 22
MATCH LINE, SEE SHEET 13 OF 22
MATCH LINE, SEE SHEET 13 OF 22
S 88°23'55" E 1540.41'
MH 5
MH 6
I 3
I 4
I 5
I 10
I 11
I 12
I 13

NOTE : TOPOGRAPHY OBTAINED FROM JACK C. MELLLEMA SR. INC. SURVEYS. OCT. 2002.

LEGEND :

- EXISTING CONTOURS
- PROPERTY LINE
- SETBACK LINE
- EXISTING TREELINE
- TREELINE TO REMAIN
- EX. SPECIMEN TREES
- EX.TREES
- 100-YR FLOODPLAIN
- 100' STREAM BUFFER
- 25' WETLAND BUFFER
- WETLAND
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- INLET PROTECTION
- SOIL STABILIZATION MATTING OVER SEED & MULCH
- SOLID SODDING
- COURSE GRAVEL

SEQUENCE OF CONSTRUCTION

1. Obtain Grading Permit and MDE Permit. .... 1 day
2. Notify Howard County Construction Inspection Division (410-313-1880). .... 1 day
3. Install Stabilized Construction Entrance. .... 1 week
4. Construct clear water diversion dikes as shown on the plans. .... 1 week
5. Install Sediment & Erosion measures downstream of proposed SWM / Sediment Basin. .... 1 week
6. Clear, Grub, and Construct SWM / Sediment Basin .... 5 weeks
7. Clear and Grub and Install Storm Drain System from I-21 to ES-2, and from Inlet I-5 to Inlet I-2. .... 4 weeks
8. After obtaining permission from Sediment Control Inspector, clear and grub, within limit of disturbance shown for the construction of the roadways. .... 2 weeks
9. Install the rest of Erosion and Sediment Control measures at the Site. .... 2 weeks
10. Install Force Main under cont.# 50-4250- & GP-05-50 and rest of the Storm Drain Systems. .... 5 weeks
11. Construct all roads including side ditches. .... 6 weeks
12. Sediment shall be removed from the sediment traps when the cleanout elevations have been reached. .... 2 days
13. Pave roads to base course. .... 3 weeks
14. Seed and mulch and stabilize all disturbed areas. clean and flush the storm drain systems. .... 1 week
15. Upon approval of the Sediment Control Inspector, remove all sediment and erosion control devices except Temporary SWM Basin. .... 3 days
16. Upon approval of the Sediment Control Inspector and after all construction on site is complete and all disturbed areas are stabilized with permanent seeding and mulching, convert pond as a permanent SWM Pond. .... 1 week

NOTE:
The contractor shall inspect and provided necessary maintenance of the sediment and erosion control structures shown on these plans after each rainfall and on a daily basis.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — DATE 5/31/05

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
DISTRICT HOWARD SOIL CONSERVATION DIST. — DATE 5/31/05

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/6/05

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 5/17/05
DAVID WOESSNER
ENGINEER'S NAME

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ONSITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER — DATE 5/17/05
DALE THOMPSON
NAME OF DEVELOPER

NO.	DATE	DESCRIPTIONS

REVISIONS

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
GRADING AND SEDIMENT CONTROL PLAN
SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : 1" = 50'	SHEET 14 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — 5/15/05 DATE

DAVID WOESSNER
ENGINEER'S NAME

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ONSITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER — 5/15/05 DATE

DALE THOMPSON
NAME OF DEVELOPER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — 5/31/05 DATE

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

DISTRICT HOWARD SOIL CONSERVATION DIST. — 5/31/05 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — 6-13-05 DATE

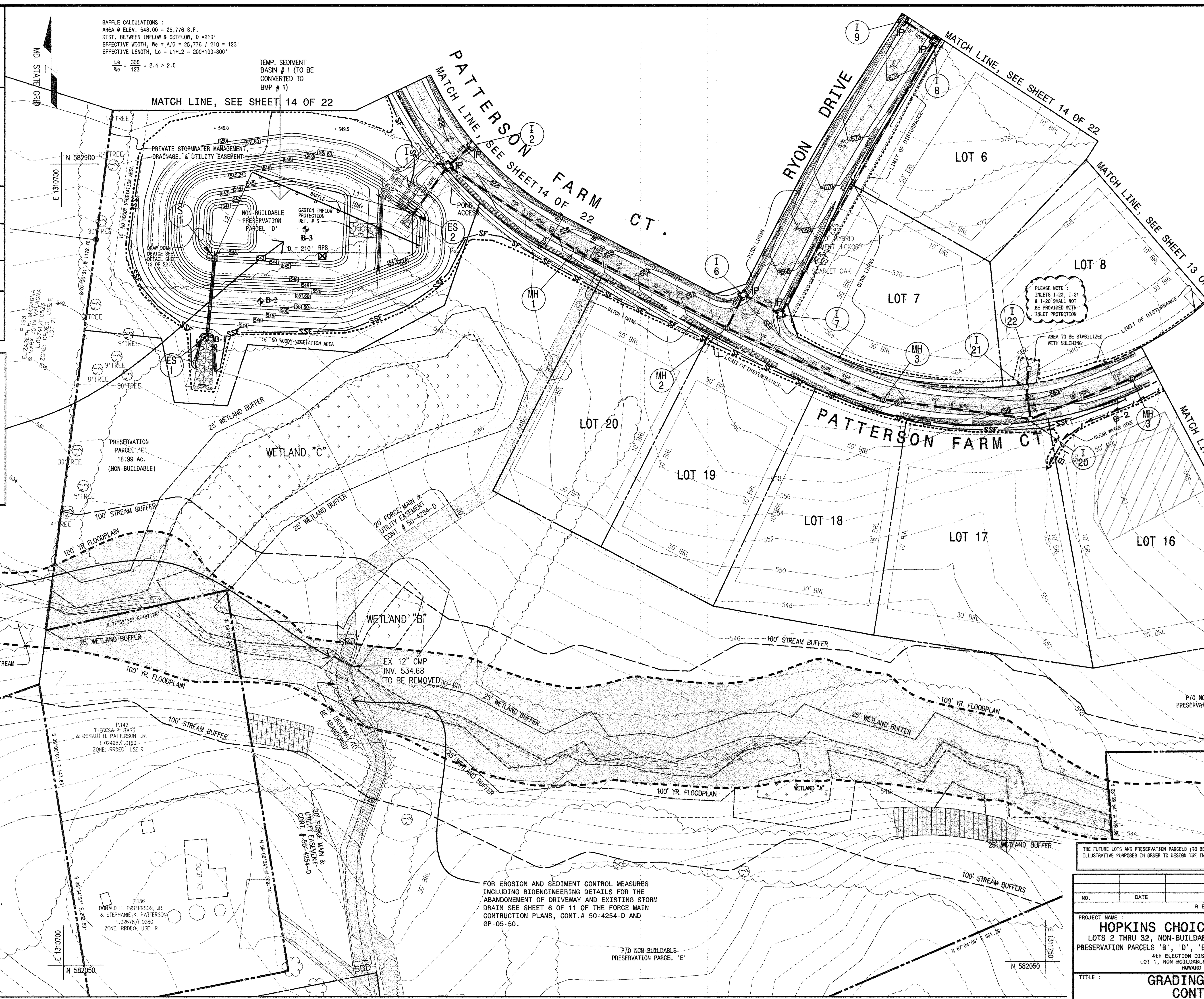
APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 6/22/05 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 6/16/05 DATE

SEDIMENT BASIN # 1

DRAINAGE AREA = 44.71 Ac.
VOLUME REQUIRED = 44.71 x 3600 = 160,956 C.F.
ACTUAL VOLUME OF BASIN = 207,709 C.F. @ ELEV. 551.60'
WET VOL. REQUIRED (DEWATERING) = 1800 x 44.71 = 80,478 C.F.
WET VOL. PROVIDED = 86,615 C.F. @ ELEV. 547.75'
DRY VOL. REQUIRED = 1800 x 44.71 = 80,478 C.F.
DRY VOL. PROVIDED = 169,339 - 86,615 = 82,724 C.F. @ ELEV. 550.50'
CLEANOUT = 44.71 x 900 = 40,234 C.F.
RISER CREST ELEV. = 550.50'
PERMANENT POOL ELEV. = 547.75'
DIST. FROM RISER CREST TO PERM. POOL ELEV. = 2.75'
BASIN CLEAN OUT ELEV. = 545.54'
DIST. FROM RISER CREST TO CLEAN OUT ELEV. = 4.96'
Q_2 = 11.72 CFS* , Ex. Q_2 = 12.49 CFS* , Q_{10} = 54.25 CFS*,
Ex. Q_{10} = 91.69 CFS* — * @ Design Point 5



BAFFLE CALCULATIONS :
AREA @ ELEV. 548.00 = 25,776 S.F.
DIST. BETWEEN INFLOW & OUTFLOW, D =210'
EFFECTIVE WIDTH, We = A/D = 25,776 / 210 = 123'
EFFECTIVE LENGTH, Le = L1+L2 = 200+100=300'
Le / We = 300 / 123 = 2.4 > 2.0
TEMP. SEDIMENT BASIN # 1 (TO BE CONVERTED TO BMP # 1)
MATCH LINE, SEE SHEET 14 OF 22
MD. STATE GRID
PRIVATE STORMWATER MANAGEMENT, DRAINAGE, & UTILITY EASEMENT
NON-BUILDABLE PRESERVATION PARCEL 'D'
GABION INFLOW PROTECTION DET. # 5
POND ACCESS
PATTERSON FARM CT.
RYON DRIVE
MATCH LINE, SEE SHEET 13 OF 22
LOT 6
LOT 7
LOT 8
LOT 16
LOT 17
LOT 18
LOT 19
LOT 20
PLEASE NOTE : INLETS I-22, I-21 & I-20 SHALL NOT BE PROVIDED WITH INLET PROTECTION
AREA TO BE STABILIZED WITH MULCHING
LIMIT OF DISTURBANCE
PRESERVATION PARCEL 'E' 18.99 Ac. (NON-BUILDABLE)
WETLAND "C"
WETLAND "B"
WETLAND "A"
25' WETLAND BUFFER
100' STREAM BUFFER
100' YR. FLOODPLAIN
20' FORCE MAIN & UTILITY EASEMENT CONT. # 50-4254-D
MDE AHS ISSUED A NON-TIDAL WETLANDS AND WATER WAYS LETTER OF AUTHORIZATION AND WATER QUALITY CERTIFICATION FILE # 03NT0468/2004_60_265 SEE # F-05-029
USE III STREAM
EX. 12" CMP INV. 534.68 TO BE REMOVED
DRIVEWAY TO BE ABANDONED
P/O NON-BUILDABLE PRESERVATION PARCEL 'E'
FOR EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BIOENGINEERING DETAILS FOR THE ABANDONEMENT OF DRIVEWAY AND EXISTING STORM DRAIN SEE SHEET 6 OF 11 OF THE FORCE MAIN CONTRUCTION PLANS, CONT.# 50-4254-D AND GP-05-50.
P.142 THERESA F. BASS & DONALD H. PATTERSON, JR. L.02498/F.0160 ZONE: RRDEO USE: R
P.136 DONALD H. PATTERSON, JR. & STEPHANIE K. PATTERSON L.02678/F.0280 ZONE: RRDEO USE: R
P.198 - LOT 21 RICHARD ALAN STARBUCK & JULIE ANN STARBUCK T/E
P/O PARCEL 'E'
N 582900
E 1310700
N 582050
E 1311750
MATCH LINE, SEE SHEET 16 OF 22

NOTE : TOPOGRAPHY OBTAINED FROM JACK C. MELLLEMA SR. INC. SURVEYS. OCT. 2002.

LEGEND :

- EXISTING CONTOURS
- PROPERTY LINE
- SETBACK LINE
- EXISTING TREELINE
- EX. SPECIMEN TREES
- EX.TREES
- 100-YR FLOODPLAIN
- 100' STREAM BUFFER
- 25' WETLAND BUFFER
- WETLAND
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- INLET PROTECTION
- STRAW BALE DIKE
- SOIL STABILIZATION MATTING OVER SEED & MULCH
- SOLID SODDING
- COURSE GRAVEL
- REMOVABLE PUMPING STATION

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

NO.	DATE	DESCRIPTIONS

R E V I S I O N S

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

GRADING AND SEDIMENT CONTROL PLAN

SP-03-09 F-03-159 F-05-29

PREPARED BY :
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10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
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PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :
DRW. : AVG	PROJ. :
CHK. : DCW	DATE : MAY 17, 2005

SCALE : 1" = 50'

F-05-29

I:\SUBDIVISION-PROJECTS\HOPKINS CHOICE-FINAL\FINAL-PLAN\13-14-15-16HPKNS-GRDNG1.dwg, 15GRDNG-SDMNT, 5/17/2005 3:34:24 PM, guz

NOTE : TOPOGRAPHY OBTAINED
FROM JACK C. MELLLEMA SR.
INC. SURVEYS. OCT. 2002.

LEGEND :

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- PROPERTY LINE
- SETBACK LINE
- EXISTING TREELINE
- EX. SPECIMEN TREES
- EX.TREES
- 100-YR FLOODPLAIN
- 100' STREAM BUFFER
- 25' WETLAND BUFFER
- WETLAND
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- INLET PROTECTION
- STRAW BALE DIKE

MD. STATE GRID
P. 45
FRANCIS E. GALLAGHER &
BARBARA L. GALLAGHER
L. 04144 / F. 0311
ZONE : RRDEO
USE : R
P. 124
MICHAEL G. HEINMULLER &
CHARLENE P. HEINMULLER WF
L. 01102 / F. 0468
ZONE : RRDEO
USE : R
P. 139
BRIAN LEE TAYLOR & WF
L. 00636 / F. 0708
ZONE : RRDEO
USE : R
EX. BLDG.
EX. SHED
EX. POLE #111910
EX. UNDERGROUND ELEC.
P/O PARCEL 'E'
FUTURE BUILDABLE PRESERVATION PARCEL 'G' 3.67 Ac.
PRIVATE 24' INGRESS/EGRESS EASEMENT TO SERVE PARCEL 136, PARCEL 142 & FUTURE BUILDABLE PRESERVATION PARCEL "G"
LAND TO BE DEDICATED TO HOWARD COUNTY, MD. FOR THE PURPOSE OF A PUBLIC ROAD. AREA = 0.20 Ac.
EXISTING DRIVEWAY TO REMAIN.
30' BRL
10' BRL
N 17°29'59" W 801.92'
S 14°13'21" E 862.34'
P/O PARCEL 'G'
EX. BGE POLE #87647 CP 105
FUTURE DRIVEWAY TO BE CONSTRUCTED BY OTHERS
P/O PARCEL 'H'
PUBLIC 20' FORCE MAIN & UTILITY EASEMENT CONT. # 50-4254-D
NON-BUILDABLE PRESERVATION PARCEL 'H'
SYSTEM "B"
SHARED SEPTIC RESERVE AREA (90,000 S.F.)
SEE SHARED SEPTIC PLAN
P/O NON-BUILDABLE PRESERVATION PARCEL 'E'
MATCH LINE, SEE SHEET 15 OF 22
TRIADELPHIA ROAD
(PUBLIC MINOR COLLECTOR)
EX. R/W
PROP. 30' HALF R/W
EX. 20' PAVING
EX. 15' HALF R/W
EX. BGE POLE #87646 CP 104
LIMIT OF DISTURBANCE
PUBLIC 24 FT. SHARED SEPTIC FACILITY ACCESS, MAINTENANCE & UTILITY EASEMENT
PROP. 12' MAINTENANCE ACCESS DRIVE
SEE SHARED SEPTIC PLAN
S 17°30'45" E 780.17'
N 72°33'17" E 14.88'
N 14°41'03" W 289.18'
E 1310700
N 581900
N 581250
E 1311600
P. 162
JAMES J. PATTERSON &
MARY AGNES J/T
L. 00698 / F. 0044
ZONE : RRDEO
USE : A
P.120
JOHN EASTER
& DOROTHY P. EASTER
L.00907/F.0543
ZONE: RRDEO USE: A

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

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SIGNATURE OF ENGINEER — DATE: 5/15/05

DAVID WOESSNER
ENGINEER'S NAME

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SIGNATURE OF DEVELOPER — DATE: 5/15/05

DALE THOMPSON
NAME OF DEVELOPER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — DATE: 5/31/05

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DISTRICT HOWARD SOIL CONSERVATION DIST. — DATE: 5/31/05

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE: 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE: 6/20/05

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE: 6/16/05

NO.	DATE	DESCRIPTION

REVISION

PROJECT NAME :

HOPKINS CHOICE - PHASE I & II

LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'

4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :

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DES. : JHE/AVG	JOB :	SCALE : 1" = 50'	SHEET 16 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

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 most recent version.

Site Preparation:

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. After stripping operations have been completed, the exposed subgrade materials should be proof rolled with a loaded dump truck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proof rolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil. All trees, vegetation, roots and other objectional material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet 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 materials unless otherwise designated on the plans. Trees, brush, and stump shall be cut approximately level with the ground surface. For dry storm-water management ponds, a minimum of a 25 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reservoir as directed by the owner or his authorized representative. When specified, a sufficient quality of top soil 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 area or areas. It shall be free 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. In addition to the soils materials described above a fine grained soil including Silt (ML) with plasticity index of 10 or more can be utilized for the center of the embankment and core trench. Consideration may be given to the use of the other materials in the embankment if design and construction are supervised 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 erosion of the embankment.

Placement – Substantial effort shall be made to reduce soil moisture prior to placement and compaction. Consideration shall be given to lime treatment of soils to facilitate placement and compaction. Fills for cut-off trench and embankment construction shall be constructed in 8-inch loose lifts and compacted to within 95% of the dry density in accordance with the Standard Proctor, ASTM D-698 and monitored with in-place density testing performed by a qualified engineering technician under the direction of the P.E.
Area on which fill is to be placed shall be scarified prior to placement of the fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable material borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with 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 thread track of the equipment or compaction shall be achieve 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 can be obtain 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. Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within -+2% of the optimum. Each layer of fill shall 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.

Cut-off Trench – Where specified, a cut-off trench shall be excavated 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 a minimum permeability. A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankment and cut-off trench.

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 the 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.

A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankment and cut-off trench.

Pipe Conduits

All pipe shall be circular in cross section.

Reinforced Concrete Pipe – All of the following criteria shall apply for reinforced concrete pipe.

1. Materials – Reinforced concrete pipe shall have bell and spigot joints with rubber gasket and shall equal or exceed ASTM Designation C-361.
2. Bedding – All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding 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 structurum thickal reasons, flowable fill may be used as described in the "Structural 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 collar, valves, etc.) shall be as shown on the drawings.

Plastic Pipe – 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 an fittings shall conform to the following: 4-10 inch pipe shall meet the requirements of AASHTO M252 Type S, and 12 through 24 inch shall meet the requirements 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 through out 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 adequate support.
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 Specification 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 Materials, Section 311. 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 streams 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 the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required 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 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 of 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 location being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to 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 Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

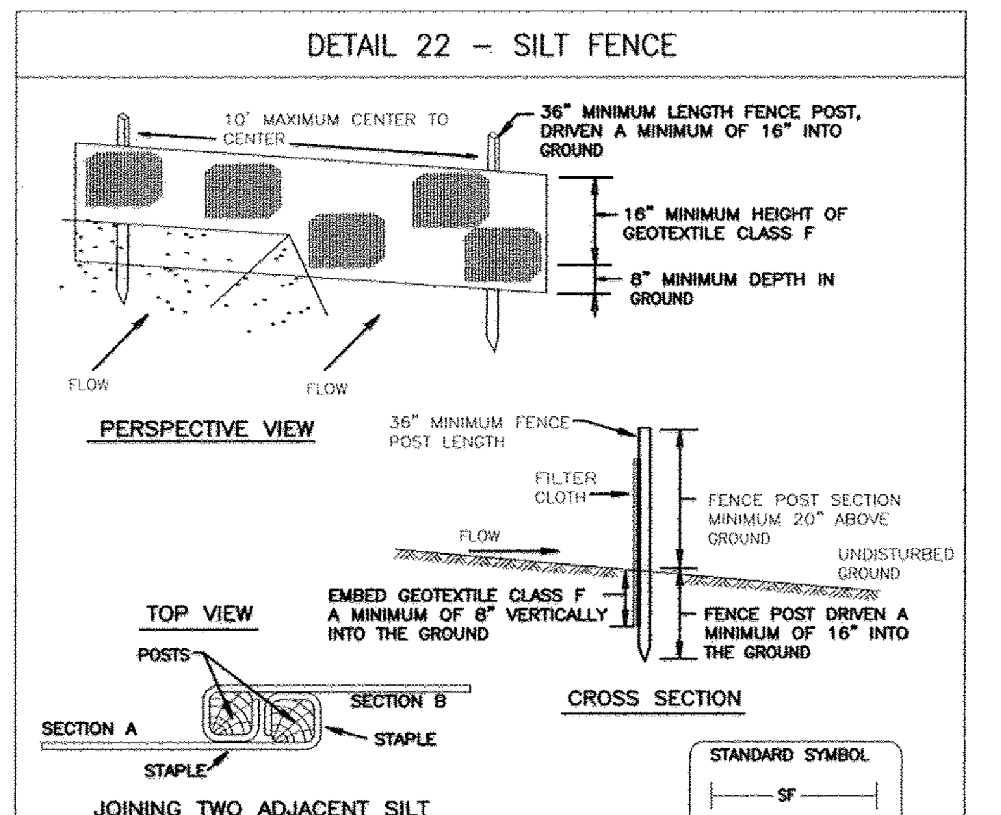
Erosion and Sediment Control:

Construction operation 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 to be employed during the construction process.

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 MD Code 378 shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs need 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.

DETAIL 22 – SILT FENCE



Construction Specifications

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 quality 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:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft² / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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.

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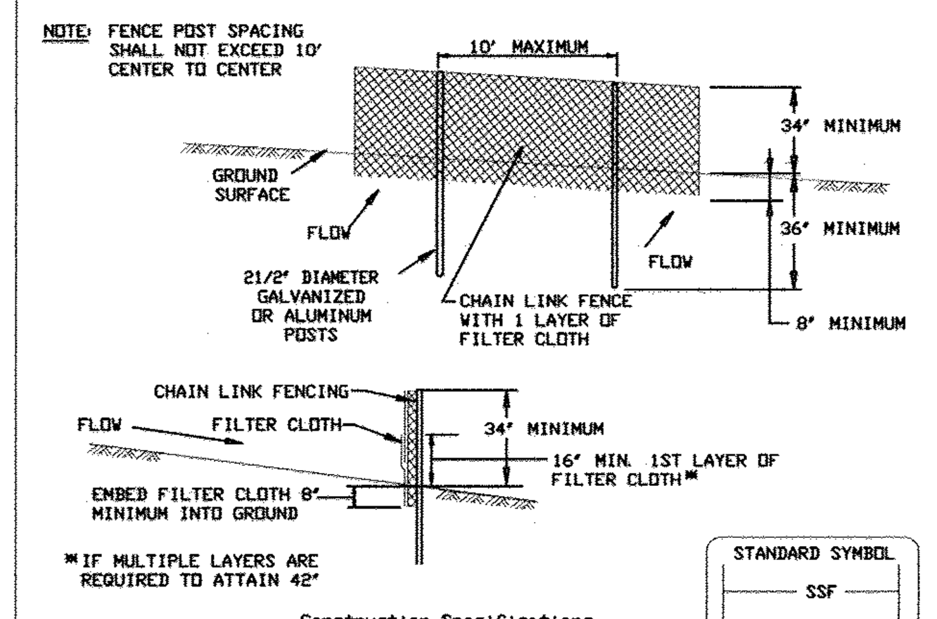
DETAIL 33 – SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER



Construction Specifications

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 posts.
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 by 6" and folded.
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:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
RECORD OF SOIL EXPLORATION

Page 1 of 1

Project Name: Hopkins Choice SWM — Location: Howard County, Maryland — Boring Number: B-1 — Job #: 02595A

Datum — Surf. Elev.: 541.0 — Date Started: 11-26-02 — Hammer Wt.: 140 Lbs. — Hammer Drop: 30 Inches — Pipe Size: 2.0 Inches OD — Hole Diameter: 5" — Rock Core Dia.: – — Boring Method: HSA — Foreman: Steven McManus — Inspector — Completed: 11-26-02

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Size Proportion)	STRAT. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS/6"	NO.	REC	BORING & SAMPLING NOTES
	SURFACE	0.0	0.0					
	Brown, moist, medium stiff clayey silt little roots (ML)			D	3-3-3	1	4"	3" Topsoil
	Brown and gray moist, loose to very dense silty fine sand trace to little gravel, trace mica (SM)	2.0		D	3-7-21	2	12"	
			5.0	D	23-50-50/5"	3	12"	Groundwater encountered at 5.0' while drilling
				D	3-3-5	4	12"	Caved in at 4.2' at Completion; Caved in at 4' after 24 hrs
			10.0					
				I	5-4-3	5	10"	
			15.0					
				D	6-9-12	6	9"	
	Bottom of Hole at 20.0'	20.0	20.0					

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. T-PRESSED SHELBY TUBE, CA-CONTINUOUS FLIGHT AUGER, RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED, I-INTACT, U-UNDISTURBED, L-LOST
GROUND WATER DEPTH: AT COMPLETION Dry FT.; AFTER 24 hrs 3.0 FT.; AFTER FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, DC-DRIVING CASING, MD-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
RECORD OF SOIL EXPLORATION

Page 1 of 1

Project Name: Hopkins Choice SWM — Location: Howard County, Maryland — Boring Number: B-2 — Job #: 02595A

Datum — Surf. Elev.: 543.0 — Date Started: 11-26-02 — Hammer Wt.: 140 Lbs. — Hammer Drop: 30 Inches — Pipe Size: 2.0 Inches OD — Hole Diameter: 5" — Rock Core Dia.: – — Boring Method: HSA — Foreman: Steven McManus — Inspector — Completed: 11-26-02

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Size Proportion)	STRAT. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS/6"	NO.	REC	BORING & SAMPLING NOTES
	SURFACE	0.0	0.0					
	Brown, moist, soft to medium stiff clayey silt trace fine sand trace mica (ML)			D	2-2-3	1	4"	4" Topsoil
				I	3-4-6	2	12"	
	Brown and gray to brown, moist, medium dense to dense silty fine sand little gravel (SM)	5.0	5.0	D	6-9-20	3	10"	Caved in at 7.0' at Completion
				D	4-7-9	4	6"	Groundwater encountered at 7.5' while drilling
	Brown, moist, soft silt, trace fine sand (ML)	10.0	10.0					Caved in at 6.4' after 24 hrs
			15.0	I	2-2-3	5	10"	
				I	2-2-3	6	12"	
	Bottom of Hole at 20.0'	20.0	20.0					

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. T-PRESSED SHELBY TUBE, CA-CONTINUOUS FLIGHT AUGER, RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED, I-INTACT, U-UNDISTURBED, L-LOST
GROUND WATER DEPTH: AT COMPLETION Dry FT.; AFTER 24 hrs 6.0 FT.; AFTER FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, DC-DRIVING CASING, MD-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
RECORD OF SOIL EXPLORATION

Page 1 of 1

Project Name: Hopkins Choice SWM — Location: Howard County, Maryland — Boring Number: B-3 — Job #: 02595A

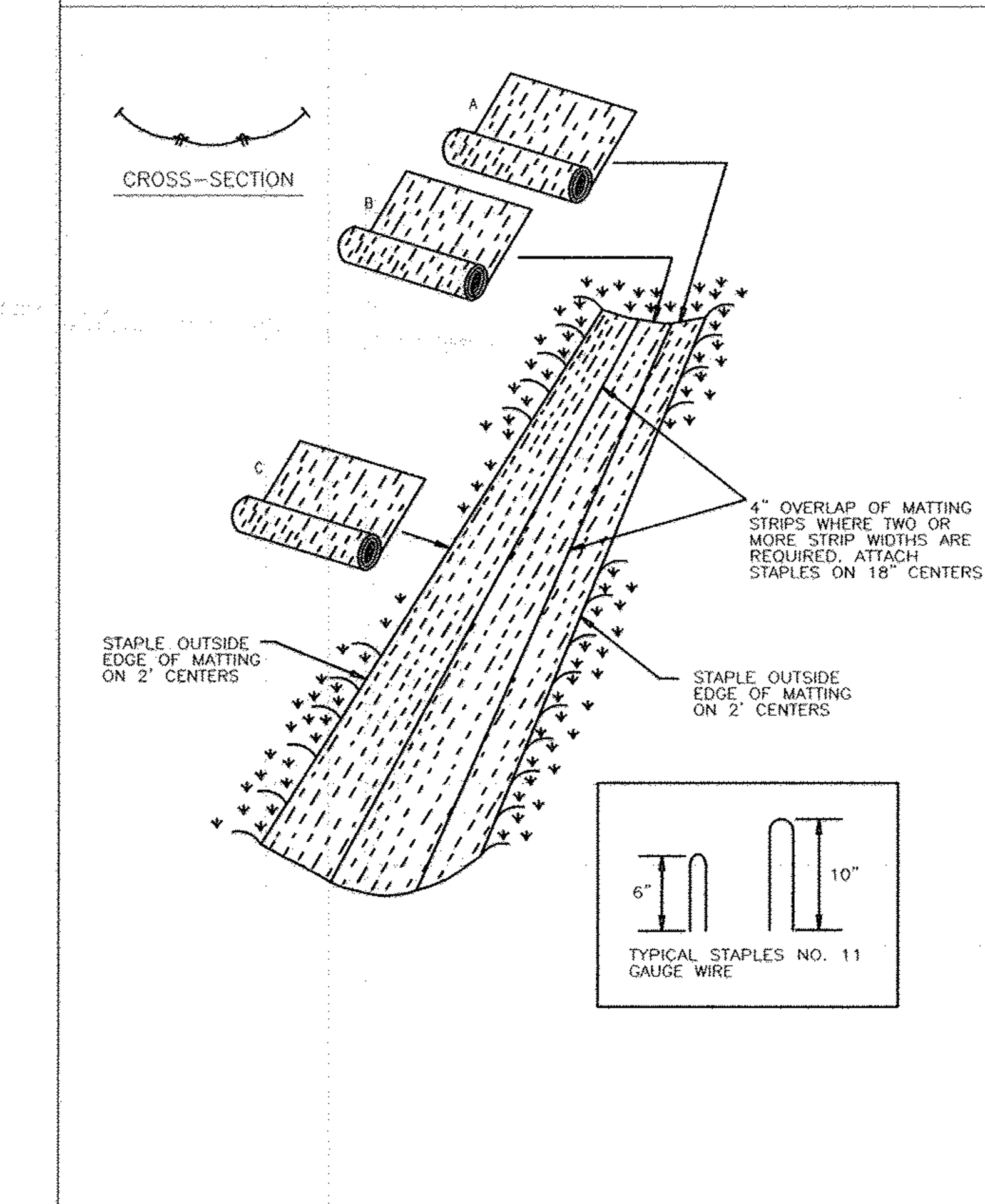
Datum — Surf. Elev.: 546.5 — Date Started: 11-26-02 — Hammer Wt.: 140 Lbs. — Hammer Drop: 30 Inches — Pipe Size: 2.0 Inches OD — Hole Diameter: 5" — Rock Core Dia.: – — Boring Method: HSA — Foreman: Steven McManus — Inspector — Completed: 11-26-02

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Size Proportion)	STRAT. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS/6"	NO.	REC	BORING & SAMPLING NOTES
	SURFACE	0.0	0.0					
	Brown, moist, medium stiff clayey silt, trace gravel trace fine sand (ML)			D	2-3-3	1	10"	4" Topsoil
	Brown and gray moist clayey fine sand trace gravel trace mica (SC)	2.0	5.0	D	3-20-16	2	12"	No groundwater encountered while drilling
				D	3-5-5	3	12"	
	Brown and gray moist, dense silty fine sand trace gravel (SM)	7.5		D	6-16-18	4	10"	Caved in at 8.2' at Completion
			10.0					Caved in at 5' after 24 hrs
	Brown, wet, loose silty fine sand and gravel (SM)	12.0						
	Brown, moist, stiff silt, trace fine sand trace mica (ML)	15.0	15.0	D	3-4-3	5	2"	
				D	5-6-7	6	12"	
	Bottom of Hole at 20.0'	20.0	20.0					

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. T-PRESSED SHELBY TUBE, CA-CONTINUOUS FLIGHT AUGER, RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED, I-INTACT, U-UNDISTURBED, L-LOST
GROUND WATER DEPTH: AT COMPLETION Dry FT.; AFTER 24 hrs 3.5 FT.; AFTER FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, DC-DRIVING CASING, MD-MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

DETAIL 30 – EROSION CONTROL MATTING



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EROSION CONTROL MATTING

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.

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

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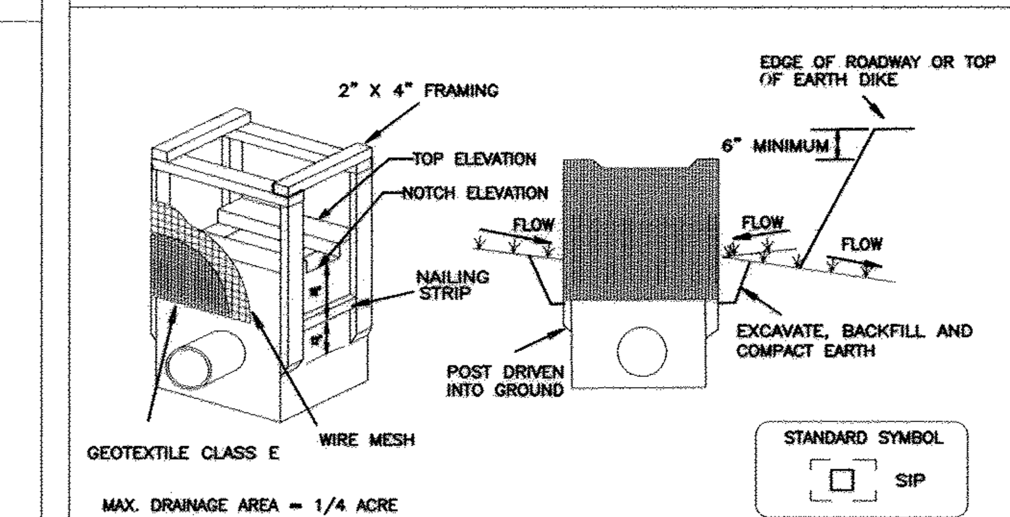
DETAIL 23A – STANDARD INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

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 rain and the geotextile replaced when it becomes clogged.

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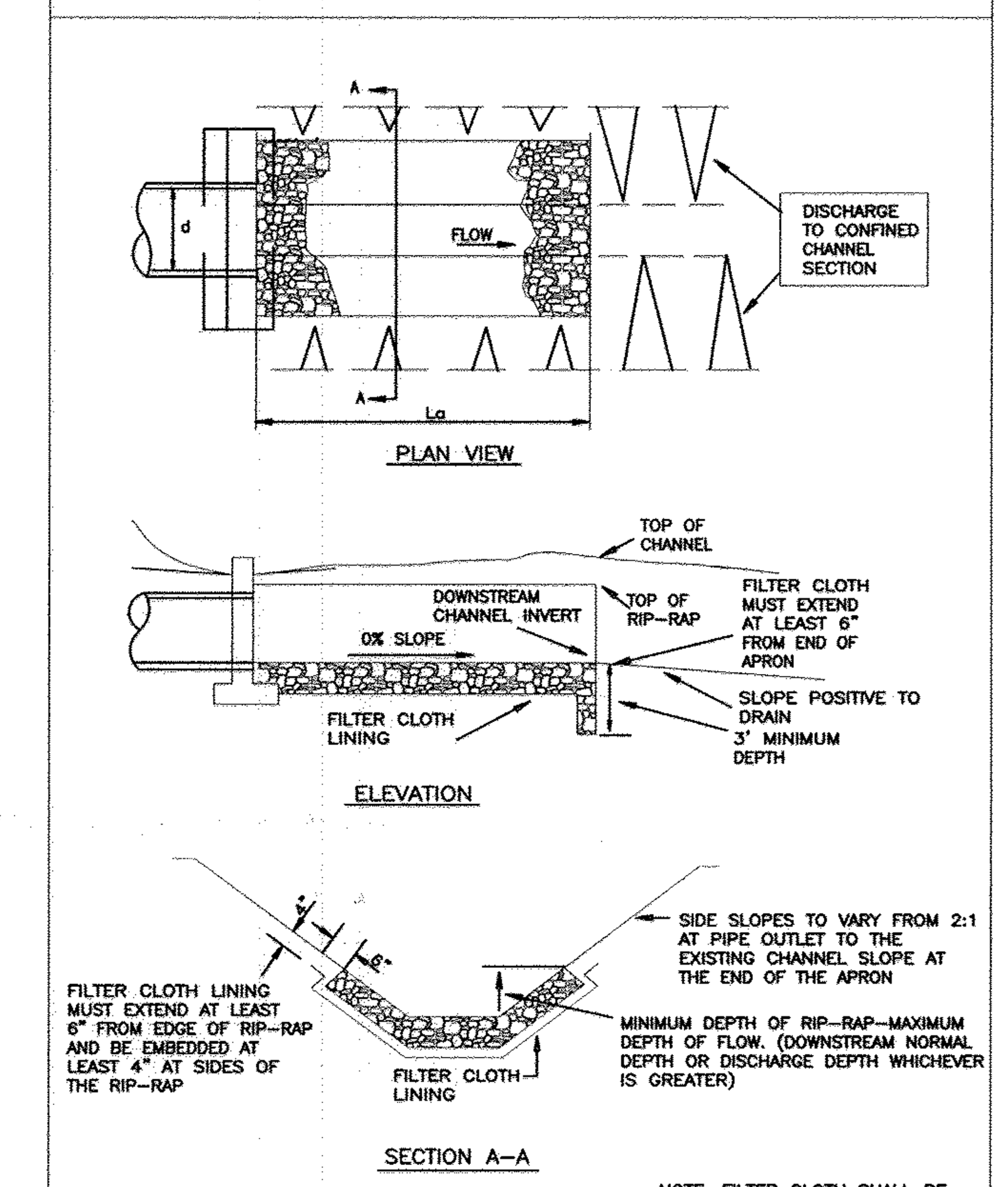
DETAIL 26 – ROCK OUTLET PROTECTION II



NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

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ROCK OUTLET PROTECTION II

Construction Specifications

1. The subgrade for the filter, rip-rap, 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.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall 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 rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

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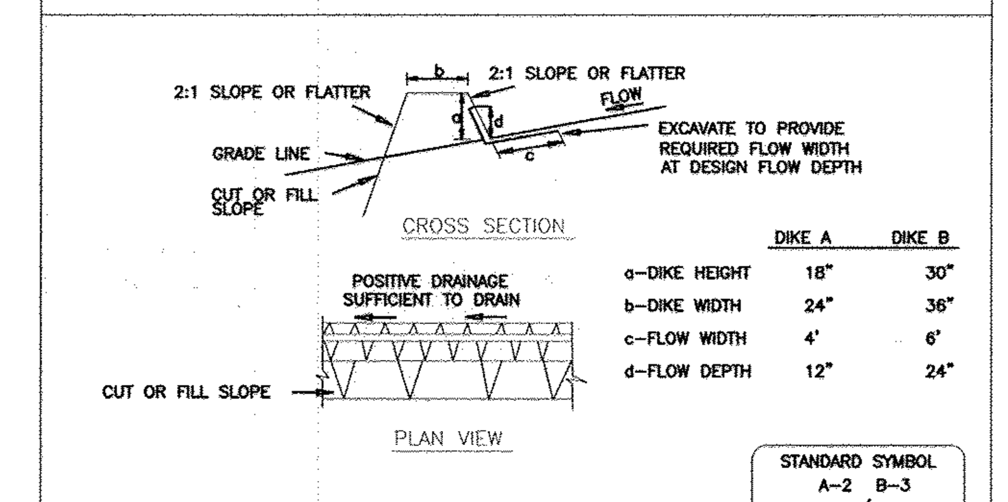
DETAIL 1 – EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

STANDARD SYMBOL A-2 B-3

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

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 objectional 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 normal flow.
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.

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THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE:
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 5/15/05
DAVID WOESSNER
ENGINEER'S NAME

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ONSITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER — DATE 5/15/05
DAVE THOMPSON
NAME OF DEVELOPER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — DATE 5/20/05

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
DISTRICT HOWARD SOIL CONSERVATION DIST. — DATE 5/31/05

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

NO.	DATE	DESCRIPTION

REVISIONS

PROJECT NAME:
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE:
STORMWATER MANAGEMENT NOTES, BORING LOGS AND DETAILS
SP-03-09 F-03-159 F-05-29

PREPARED BY:
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS: DONALD H. PATTERSON, TRIADELPHIA FARM, LLC., PRESCRIPTION ACRES, LLC., c/o DONALD H. PATTERSON, PO BOX 1, GLENELG, MD. 21737
DEVELOPER: TRIADELPHIA FARM, LLC., 6258 CARDINAL LANE, COLUMBIA, MD. 21044

DES.: JHE/AVG — JOB:
DRW.: AVG — PROJ.:
CHK.: DCW — DATE: MAY 17, 2005
SCALE: AS SHOWN

STANDARD SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permit, Sediment Control Division prior to the start of any construction (313-1855).

2. All vegetative and structural practice are to be installed according to the provisions of this plan and are to be 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 greater 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. 1, Chapter 12 of the Howard County Design Manual, Storm Drainage.

5. All disturbed areas must be fenced within the time period specified above in accordance with 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 be done only when recommended seeding dates do not allow for proper germination and establishment of grasses.

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	66.84 ...... Acres
Area Disturbed	4.83 ...... Acres
Area to be roofed or paved	3.10 ...... Acres
Area to be vegetatively stabilized	1.73 ...... Acres
Total Cut	6,500 ...... Cu. Yds.
Total Fill	6,500 ...... Cu. Yds.
Offsite waste/borrow area location :	....

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 control 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 length or that which should be back-filled and stabilized by the end of each work day, whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived wegetative cover is needed.

Seedbed Preparation : Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments : In lieu of soil test rescommendations, use one of the following schedules :

1. Preferred -- Apply 2 tons/acre dolomitic limestone (92 bls/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)

2. Acceptable -- Apply 2 tons/acre dolomitic limestone (92 bls/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding -- For the periods March 1 -- April 30, and August 1 -- October 15, seed with 60 lbs/acre (1.4 lbs/sq. ft.) of Kentuky 31 Tall Fescue. For the perion May 1 -- July 31, seed with 60lbs Kentucky 31 tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 -- February 28, protect site by :

Option 1 -- Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring.
Option 2 -- Use sod. Option 3 -- Seer : with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of rooted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance -- Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation:-- Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, unless previously loosened.

Soil Amendments:-- Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 lbs/1000 sq ft).

Seeding:-- For periods March 1 -- April 30 and from August 15 -- October 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.) for the period May 1 -- August 14, seed with 3 lbs/acre of weeping lovegrass (.07lbs/1000 sq. ft.). For the period November 16 -- February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching:-- Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed free, small grain straw immediately after seeding. anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/ 1000 sq. ft.) of emulsified asphalt on flat areas. on slopes, 8 ft. or higher, use 348 gal per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rate and methods not covered.

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

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 (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 of final grade, former stockpile and staging areas, etc.

EFFECTS OF WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of run-off, 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 run-off to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must retain in place during grading, seeded 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

i. Install erosion and sediment control structures (either temporary or permanent) such as diversion, 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)

i. 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 maybe performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposed may also be used for chemical analyses.

ii. 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 mesh sieve. iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

C. Seedbed Preparation

i. Temporary Seeding 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. b. Apply fertilizer and lime as prescribed on the plane. c. In corporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

ii. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0.
2. Soluble salts shall be less than 500 parts per million (ppm).
3. 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.
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by soils on site, adding topsoil is required in 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.

c. Apply soil amendments as per soil test or as included on the plans.

d. Mix soil amendments into the top 3-5" ot topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, abd 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 slopoe. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

i. 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.

ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specially for the species. Inoculants shall not be used later than the date indicated in 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. Temperature above 75 °-80°F. can weaken bacteria amd make the inoculant less effective.

E. Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or dropo seeded, or a cultipacker seeder.

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 (phosphorus); 200 lbs/ac; K20 (potassium); 200 lbs/ac.

b. 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.

c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

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. b. 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 seed rate in each direction.

F. Mulch Specifications (In order of preference)

i. 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.

ii. Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

b. 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.

c. WCFM, including dye, shall contain no germination or growth inhibiting factors. d. 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 in contact with the soil without inhibiting the growth of the grass seedings.

E. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.

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.

i. 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 accordance with these specifications.

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. If 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 lbs./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 of water.

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 appear uniform after binder application. Synthetic binders- such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' wide and 300 to 3,000 feet long.

I. Incremental Stabilization - Cut Slopes

i. 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'.

ii. 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.

c. Perform Phase 2 excavation, dress, and stabilize. Overseed Phase 1 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 out of the seeding season will necessitate the application of temporary stabilization.

J. Incremental Stabilization of Embankments - Fill Slopes

i. 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. a sediment trapping device.

iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to inrercept surface runoff and convey it down the slope in a non-erosive manner to

iv. Construction sequence: Refer to Figure 4 (below).

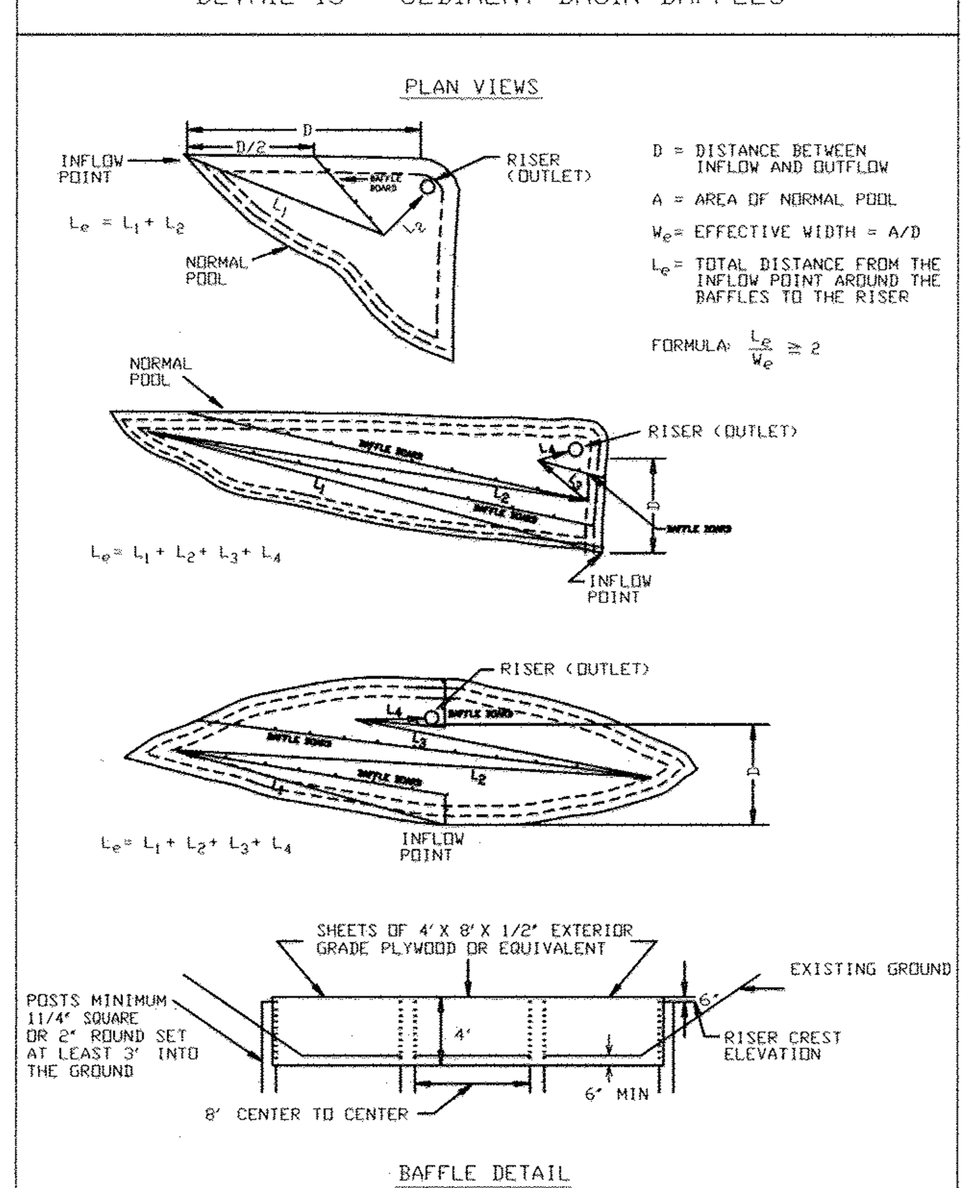
a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slopr silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.

b. Place Phase 1 embankment, dress, and stabilize.

c. Place Phase 2 embankment, dress, and stabilize.

d. Place final phase embankment, dress, and stabilize. Overseed previously seeded areas as necessary. Note: 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 ot the seeding season will necessitate the application of temporary stabilization.

DETAIL 18 - SEDIMENT BASIN BAFFLES



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STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

PURPOSE
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

I. 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. II. 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

I. 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-SCA in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. 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, slags, coarse fragments, gravel, sticks, roots, trash, or other materials larger the 11/12" in diameter.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, 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.

III. For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acres. i. 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 authority, may be used in lieu of natural topsoil. ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoilling, 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 sodding or seed line 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

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen of muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. 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:

i. 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 permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

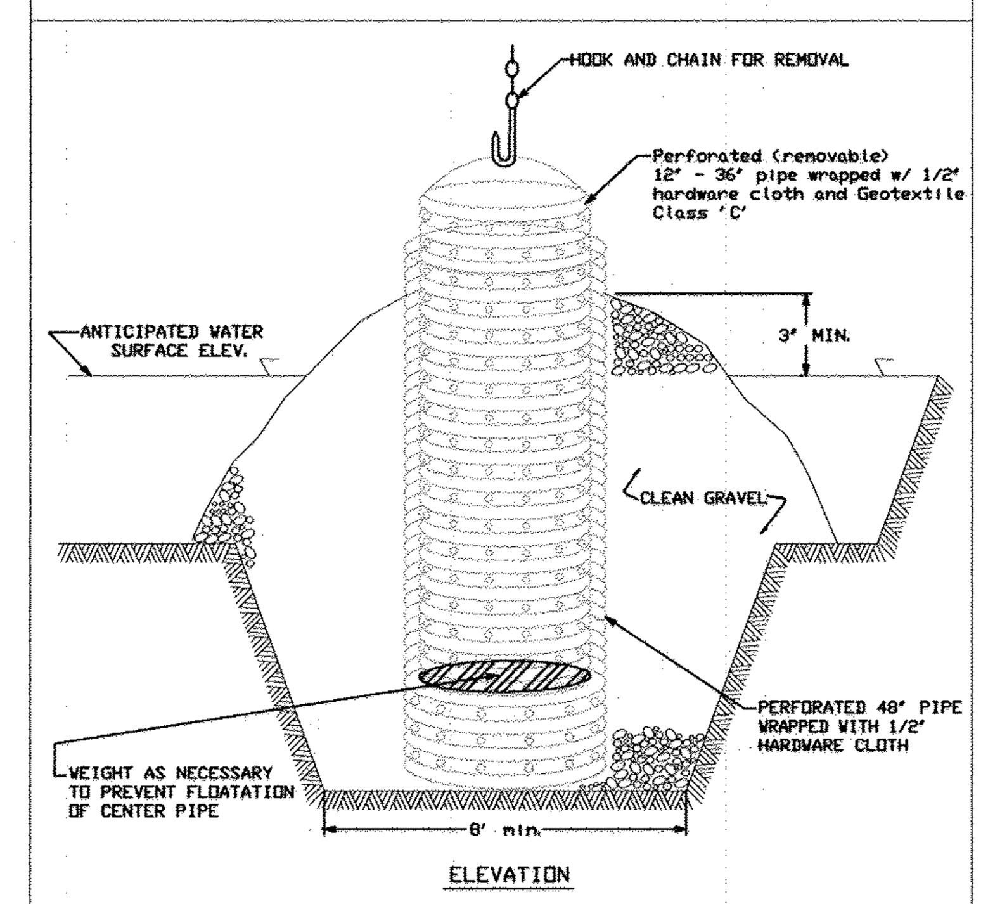
b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 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. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

DETAIL 20A - REMOVABLE PUMPING STATION



Construction Specifications

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.

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.

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12.0 DEWATERING SPECIFICATIONS FOR REMOVABLE PUMPING STATION

Definition

A temporary structure which is used to remove water from excavated areas, sediment traps and basins.

Purpose

The Removable Pumping Station is an easily maintained device that filters sediment laden water at a pump intake, prior to discharging to a suitable area .

Conditions Where Practice Applies

Removable Pumping Stations are constructed when water collects and must be pumped away during excavation, cofferdam dewatering, maintenance or removal of sediment traps and basins or for other uses as applicable . These are preferred over Sump Pits on projects where a long duration of pumping is expected .

Design Criteria

The number of Removable Pumping Stations and their locations shall be determined by the designer and included on the plans . Contractors may relocate sump pits to optimize use but discharge location changes must be coordinated with inspectors . A design is not required but construction must conform to the general criteria outlined on Detail 20A .

A perforated, vertical standpipe wrapped with wire mesh and geotextile is placed inside a larger pipe. The outside pipe is then enveloped by a cone of washed stone. Water is then pumped from the center of the inside pipe to a suitable discharge area .

Water pumped from the standpipe should discharge into a sediment trap, sediment basin or stabilized area .

Construction Specifications

1 . The inner pipe shall be constructed by perforating a 12" to 36" diameter pipe with a watertight cap on the bottom end and wrapping it with 1/2" hardware cloth and Geotextile Class E 19 . The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center .

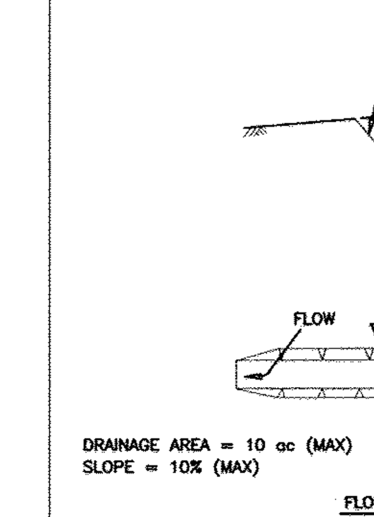
2. The outer pipe shall be at least 4" larger in diameter than the inside pipe . Both the inner and outer pipes should extend 12" to 18" above the riser crest elevation, or anticipated high water elevation .

3 . Filter material ranging from clean gravel (minimal fines) to #57 stone 20 (1 1/2" maximum diameter) should be backfilled around the outer pipe .

4. The suction hose from the pump shall be placed inside the inner pipe to begin dewatering . The discharge hose shall be placed in a stabilized area downslope of unstabilized areas to prevent erosion. Meadow or wooded areas are preferred discharge locations but storm drains and paved areas are acceptable .

5. Maintenance - The inner pipe can easily be removed to facilitate changing the geotextile when it clogs. Maintenance must be performed when the pump runs dry and backed up water remains.

DETAIL 2 - TEMPORARY SWALE



DRAINAGE AREA = 10 ac (MAX)
SLOPE = 10% (MAX)

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

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 soil in a minimum 7" layer.

Construction Specifications

1. All temporary swales 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 objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.

5. The swale 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 normal flow.

6. Fill, if necessary, 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 swale.

8. Inspection and maintenance must be provided periodically and after each rain event.

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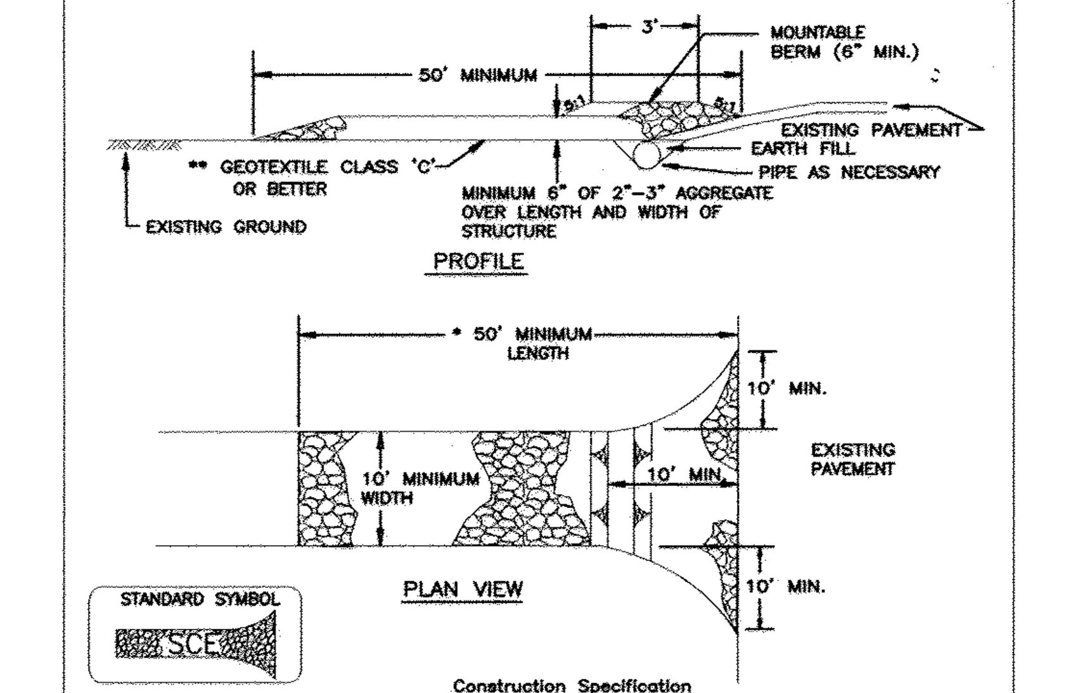
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length — minimum of 50' (*30' for single residence lot).

2. Width — 10' minimum, should be flared at the existing road to provide a turning radius.

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 entrance.

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.

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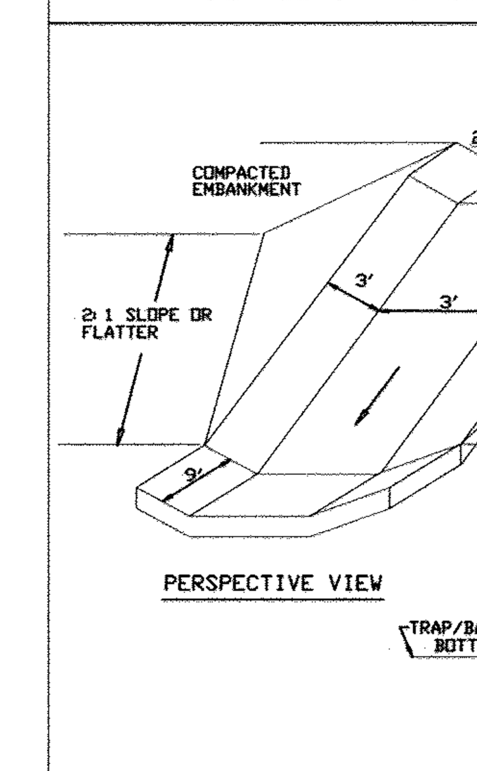
DETAIL 6 - GABION INFLOW PROTECTION



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.

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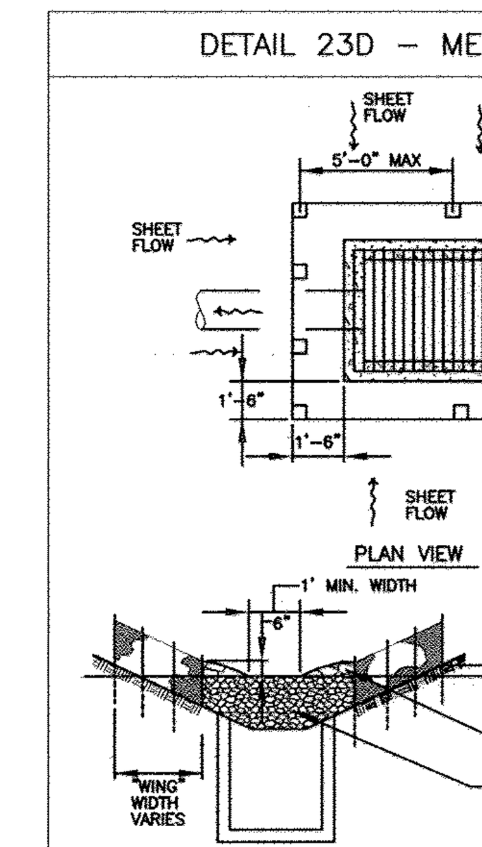
DETAIL 23D - MEDIAN INLET PROTECTION



Construction Specifications

1. Fence posts shall be 36" (min.) long, driven 16" into the ground and spaced 5' (max.) apart. Wood posts shall be 1 1/2 " x 1 1/2 " (min.) square cut or 1 3/4 " (min.) diameter round and shall be of sound quality hardwood. Steel posts shall be standard T or U section weighing not less than 1.0 #/linear foot.

2. Geotextile Class F shall be fastened securely to each post with wire ties or staples at top and mid-section.

3. Where ends of geotextile fabric come together they shall be overlapped, folded and stapled.

4. Median Inlet Protection shall be inspected after each rain and maintained when bulges occur in the fabric or when the stone gets clogged.

5. Stone used to construct the weir shall be 4" - 7" with a 1' thick layer of 3/4 " - 1 1/2 " stone on the upstream face.

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THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER — DATE 5/15/05
DAVID WOESSNER
ENGINEER'S NAME

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ONSITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER — DATE
DAVE THOMPSON
NAME OF DEVELOPER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE — DATE 5/31/05

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
DISTRICT HOWARD SOIL CONSERVATION DIST. — DATE 5/31/05

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

NO.	DATE	DESCRIPTION
REVISIONS		

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
SEDIMENT CONTROL NOTES AND DETAILS
SP-03-09 F-03-159 F-05-29

PREPARED BY :
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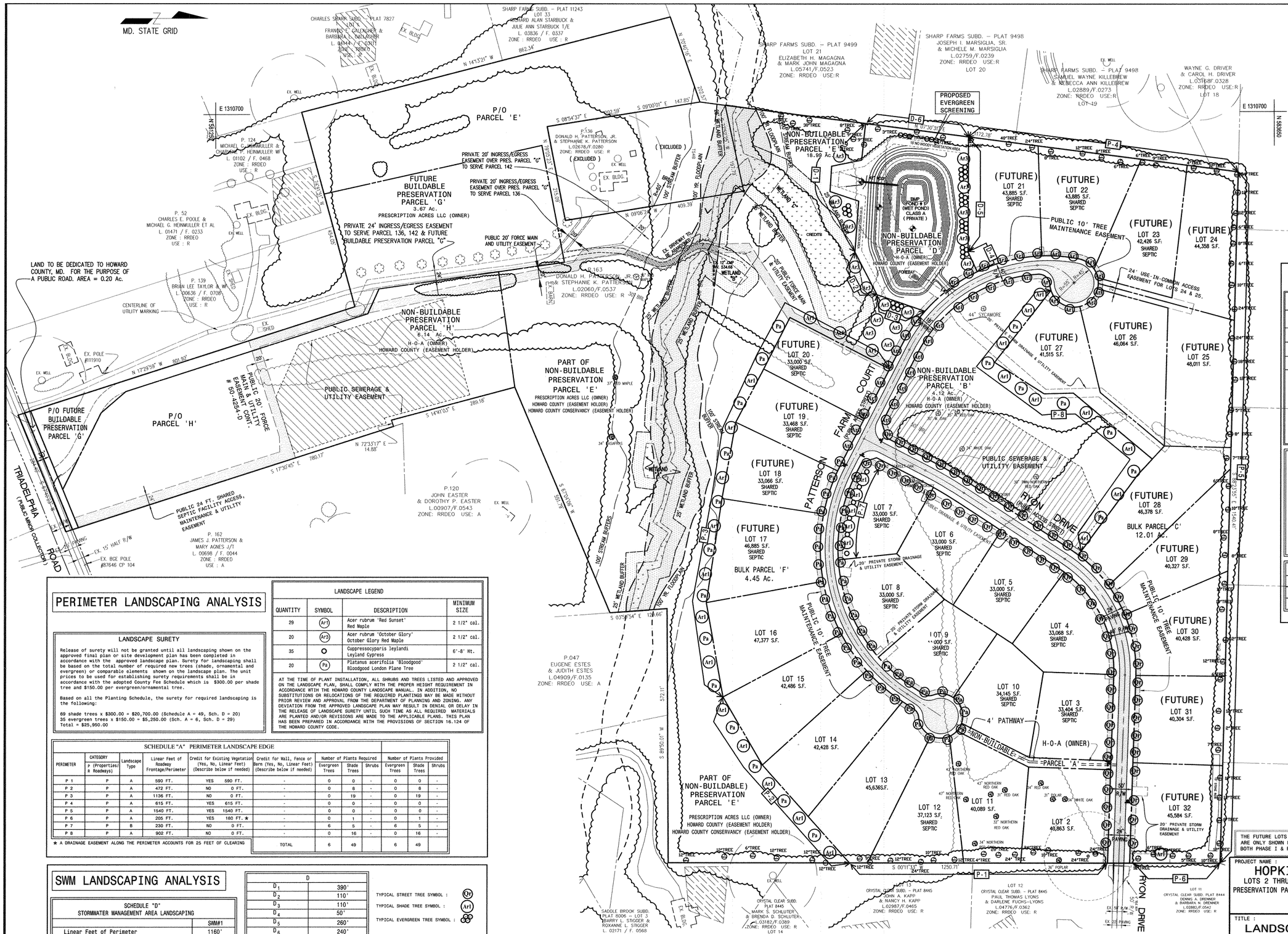
OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : AS SHOWN	SHEET 18 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

F-05-29



STREET TREE ANALYSIS

STREET TREE LEGEND

QUANTITY	SYMBOL	DESCRIPTION	MINIMUM SIZE
39	Pa	Platanus acerifolia 'Bloodgood' Bloodgood London Plane Tree	2 1/2" cal.
63	Qr	Quercus phellos Northern Red Oak	2 1/2" cal.
36	Ar1	Ace rubrum 'Red Sunset' Red Maple	2 1/2" cal.

AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE.

STREET TREE SURETY

Release of surety will not be granted until all landscaping shown on the approved final plan or site development plan has been completed in accordance with the approved landscape plan. Surety for landscaping shall be based on the total number of required new trees (shade, ornamental and evergreen) or comparable elements shown on the landscape plan. The unit prices to be used for establishing surety requirements shall be in accordance with the adopted County Fee Schedule which is $300.00 per shade tree and $150.00 per evergreen/ornamental tree.

Based on all the Planting Schedule, the surety for required landscaping is the following:

138 street trees x $300 = $41,400.00

STREET TREES (1:40 Ft.)	REQUIRED	PROVIDED
★ PATTERSON FARM CT. 1500 FT.	75	75 SHADE TREES
★ RYON DRIVE 1250 FT.	63	63 SHADE TREES
TOTAL TREES	138	138

★ BOTH SIDES

PERIMETER LANDSCAPING ANALYSIS

LANDSCAPE SURETY

Release of surety will not be granted until all landscaping shown on the approved final plan or site development plan has been completed in accordance with the approved landscape plan. Surety for landscaping shall be based on the total number of required new trees (shade, ornamental and evergreen) or comparable elements shown on the landscape plan. The unit prices to be used for establishing surety requirements shall be in accordance with the adopted County Fee Schedule which is $300.00 per shade tree and $150.00 per evergreen/ornamental tree.

Based on all the Planting Schedule, the surety for required landscaping is the following:

69 shade trees x $300.00 = $20,700.00 (Schedule A = 49, Sch. D = 20)
35 evergreen trees x $150.00 = $5,250.00 (Sch. A = 6, Sch. D = 29)
Total = $25,950.00

LANDSCAPE LEGEND

QUANTITY	SYMBOL	DESCRIPTION	MINIMUM SIZE
29	Ar1	Acer rubrum 'Red Sunset' Red Maple	2 1/2" cal.
20	Ar3	Acer rubrum 'October Glory' October Glory Red Maple	2 1/2" cal.
35	O	Cuppressocyparis leylandi Leyland Cypress	6'-8' Ht.
20	Pa	Platanus acerifolia 'Bloodgood' Bloodgood London Plane Tree	2 1/2" cal.

AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE.

SCHEDULE "A" PERIMETER LANDSCAPE EDGE

PERIMETER	CATEGORY (P (Properties) & R (Roadways))	Landscape Type	Linear Feet of Roadway Frontage/Perimeter	Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	Number of Plants Required: Evergreen Trees	Shade Trees	Shrubs	Number of Plants Provided: Evergreen Trees	Shade Trees	Shrubs
P 1	P	A	590 FT.	YES 590 FT.	-	0	0	-	0	0	-
P 2	P	A	472 FT.	NO 0 FT.	-	0	8	-	0	8	-
P 3	P	A	1136 FT.	NO 0 FT.	-	0	19	-	0	19	-
P 4	P	A	615 FT.	YES 615 FT.	-	0	0	-	0	0	-
P 5	P	A	1540 FT.	YES 1540 FT.	-	0	0	-	0	0	-
P 6	P	A	205 FT.	YES 180 FT. ★	-	0	1	-	0	1	-
P 7	P	B	230 FT.	NO 0 FT.	-	6	5	-	6	5	-
P 8	P	A	902 FT.	NO 0 FT.	-	0	16	-	0	16	-
					TOTAL	6	49		6	49	

★ A DRAINAGE EASEMENT ALONG THE PERIMETER ACCOUNTS FOR 25 FEET OF CLEARING

SWM LANDSCAPING ANALYSIS

SCHEDULE "D" STORMWATER MANAGEMENT AREA LANDSCAPING

		SWM#1
Linear Feet of Perimeter		1160'
Number of Trees Required: Shade Trees 1:50		24
Evergreen Trees 1:40		29
Credit for Existing Vegetation (Yes, D_6)	CREDIT 4 SHADE 0 EVERGREEN	4 / 0
Credit for Other Landscaping (No, Yes and %)		0

D	
D_1	390'
D_2	110'
D_3	110'
D_4	50'
D_5	260'
D_6	240'
TOTAL =	1160'

NUMBER OF TREES PROVIDED	
SHADE TREES	20
EVERGREEN TREES	29
OTHER TREES (2:1 SUBSTITUTION)	0

TYPICAL STREET TREE SYMBOL : Qr
TYPICAL SHADE TREE SYMBOL : Ar1
TYPICAL EVERGREEN TREE SYMBOL :

LEGEND :
EXISTING TREELINE
TREELINE TO REMAIN

DEVELOPER'S / OWNER'S LANDSCAPE CERTIFICATE

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

DEVELOPER'S / OWNER'S NAME DALE THOMPSON — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-17-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'

TITLE :
LANDSCAPE AND STREET TREE PLAN

SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON TRIADELPHIA FARM, LLC. PRESCRIPTION ACRES, LLC. c/o DONALD H. PATTERSON PO BOX 1 GLENELG, MD. 21737
DEVELOPER : TRIADELPHIA FARM, LLC. 6258 CARDINAL LANE COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : 1" = 100'	SHEET 19 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

F-05-29

I:\SUBDIVISION.PROJECTS\HOPKINS CHOICE-FINAL\FINAL-PLAN\19\HPKNS-LNDSCPNG.dwg, LNDSCP-PLAN, 5/18/2005 2:49:13 PM, guz

FCE # 1 DESCRIPTION		
LINE	BEARING	LENGTH
L1	N 00°11'33" E	368.20
L2	N 66°50'18" W	35.00
L3	S 48°18'20" W	97.07
L4	S 48°18'20" W	155.69
L5	S 59°49'48" W	177.40
L6	S 80°01'32" W	215.59
L7	N 81°15'39" W	237.07
L8	N 79°37'33" W	174.35
L9	N 62°01'44" W	135.54
L10	N 62°41'01" W	123.63
L11	S 56°48'02" W	183.21
L12	S 01°28'24" E	64.25
L13	S 18°24'15" W	26.38
L14	S 25°31'38" E	105.51
L15	S 20°23'26" W	103.80
L16	S 08°08'38" E	80.02
L17	N 87°03'17" E	253.07
L18	S 59°55'35" E	220.46
L19	N 67°04'06" E	382.57
L20	N 03°59'54" W	129.66
L21	N 89°50'01" E	572.11
TOTAL AREA = 9.35 Ac.		

FCE # 2 DESCRIPTION		
LINE	BEARING	LENGTH
L22	S 74°42'43" W	92.21
L23	S 08°03'35" E	532.37
L24	S 08°56'54" E	350.44
L25	N 70°40'16" E	202.57
L26	N 14°13'21" W	862.34
TOTAL AREA = 3.16 Ac.		

FCE # 3 DESCRIPTION		
LINE	BEARING	LENGTH
L27	N 07°30'31" E	320.90
L28	S 83°49'14" E	82.77
L29	S 11°15'44" E	69.41
L30	S 86°13'55" E	57.11
L31	N 18°29'35" E	68.31
L32	S 85°37'44" E	114.82
L33	N 62°36'21" E	108.15
L34	N 19°07'49" E	30.80
L35	S 60°40'54" E	125.99
L36	S 27°19'17" W	173.23
L37	S 56°47'11" W	187.98
L38	S 01°28'24" E	72.01
L39	S 18°54'55" W	10.31
L40	N 70°16'29" W	117.51
L41	N 09°06'24" W	30.29
L42	S 77°52'25" W	197.79
TOTAL AREA = 2.83 Ac.		

FCE # 4 DESCRIPTION		
CURVE	LENGTH	RADIUS
C2	114.07	319.99
LINE	BEARING	LENGTH
L43	N 62°41'01" W	22.68
L44	N 57°07'56" E	24.36
L45	N 40°47'30" E	118.73
L46	S 51°35'55" E	9.63
L47	N 32°17'47" E	65.12
L48	N 40°47'30" E	70.80
L49	N 01°16'25" W	81.56
L50	N 39°46'53" E	217.44
L51	S 47°02'24" E	49.46
L52	S 53°08'46" E	129.37
L53	S 68°00'22" W	130.60
L54	S 32°17'48" W	440.38
TOTAL AREA = 1.50 Ac.		

FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY RETENTION OF EXISTING FOREST IN THE AMOUNT OF 4.25 ACRES AND 11.65 ACRES FOR REFORESTATION FOR A TOTAL FOREST CONSERVATION EASEMENT AREA OF 15.90 ACRES. A CREDIT OF 1.15 ACRES WAS TAKEN FOR TREES THAT QUALIFY AS "FOREST" ONCE ADDITION REFORESTATION PLANTING ARE ADDED TO CREATE AREAS GREATER THAN 10,000 SQUARE FEET. THE TOTAL SURETY AMOUNT FOR RETENTION IS $ 37,026.00 AND ON SITE REFORESTATION IS $ 253,737.00 FOR A TOTAL SURETY AMOUNT OF $ 290,763.00 WHICH WILL BE PART OF THE DEVELOPER'S AGREEMENT FOR PHASE I.

FOREST CONSERVATION AREA TABULATION

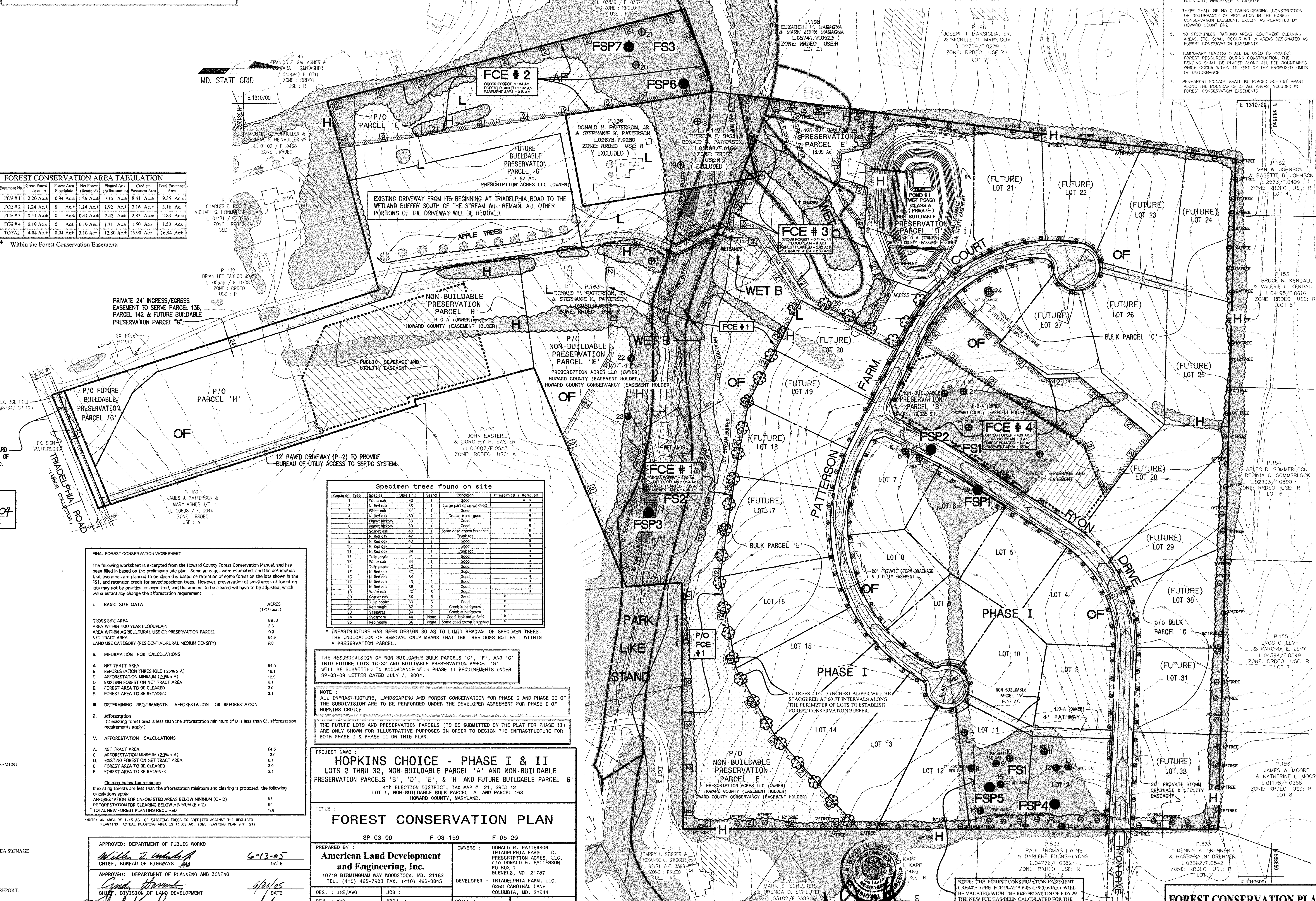
Easement No.	Gross Forest Area *	Forest Area Floodplain	Net Forest (Retained)	Planted Area (Afforestation)	Credited Easement Area	Total Easement Area
FCE # 1	2.20 Ac.±	0.94 Ac.±	1.26 Ac.±	7.15 Ac.±	8.41 Ac.±	9.35 Ac.±
FCE # 2	1.24 Ac.±	0 Ac.±	1.24 Ac.±	1.92 Ac.±	3.16 Ac.±	3.16 Ac.±
FCE # 3	0.41 Ac.±	0 Ac.±	0.41 Ac.±	2.42 Ac±	2.83 Ac.±	2.83 Ac.±
FCE # 4	0.19 Ac±	0 Ac±	0.19 Ac±	1.31 Ac±	1.50 Ac±	1.50 Ac±
TOTAL	4.04 Ac.±	0.94 Ac±	3.10 Ac±	12.80 Ac.±	15.90 Ac±	16.84 Ac±

* Within the Forest Conservation Easements

NOTE TO CONTRACTOR : THIS PLAN IS FOR FOREST CONSERVATION ANALYSIS ONLY. TREE SAVE AREAS ARE ANTICIPATED BASED UPON FUTURE LOT GRADING. ALL GRADING, CLEARING, SEDIMENT CONTROL AND TREE PROTECTION IS SHOWN ON THE THE GRADING/SEDIMENT CONTROL SHEETS.

FCE 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. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
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 COUNT 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 DISTURBANCE.
7. PERMANENT SIGNAGE SHALL BE PLACED 50–100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.



LAND TO BE DEDICATED TO HOWARD COUNTY, MD. FOR THE PURPOSE OF A PUBLIC ROAD. AREA = 0.20 Ac.

MD. DNR QUALIFIED PROFESSIONAL
WILLIAM BRIDGELAND 8/18/04
DATE

NOTE : TOPOGRAPHY OBTAINED FROM JOHN C. MELLLEMA SR. INC. SURVEYS. OCT. 2002.

LEGEND :

- EXISTING CONTOURS (325, 330)
- PROPERTY LINE
- SETBACK LINE (10' BRL)
- TREELINE TO REMAIN
- 100-YR. FLOODPLAN
- 100' STREAM BUFFER (FROM EDGE OF BANK)
- 25' WETLAND BUFFER
- WETLAND
- LIMIT OF F.C.E.
- AFFORESTATION AREA
- WELL LOCATION
- SEPTIC RESERVE AREA
- FCE # 1 — FOREST CONSERVATION EASEMENT
- SHARED SEPTIC EASEMENT
- 25% SLOPE OR GREATER
- 15% - 25% SLOPE
- TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE
- HYDRIC SOIL
- 2 — FOREST CONSERVATION AREA SIGNAGE @ 100' SPACING
- • FSP — FOREST SAMPLE POINT
- ⊕2 — SPECIMEN TREES. NUMBERS CORRESPOND TO TABLE IN REPORT.

FINAL FOREST CONSERVATION WORKSHEET

The following worksheet is excerpted from the Howard County Forest Conservation Manual, and has been filled in based on the preliminary site plan. Some acreages were estimated, and the assumption that two acres are planned to be cleared is based on retention of some forest on the lots shown in the FS1, and retention credit for saved specimen trees. However, preservation of small areas of forest on lots may not be practical or permitted, and the amount to be cleared will have to be adjusted, which will substantially change the afforestation requirement.

		ACRES (1/10 acre)
I.	BASIC SITE DATA	
	GROSS SITE AREA	66.8
	AREA WITHIN 100 YEAR FLOODPLAIN	2.3
	AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	0.0
	NET TRACT AREA	64.5
	LAND USE CATEGORY (RESIDENTIAL-RURAL MEDIUM DENSITY)	RC
II.	INFORMATION FOR CALCULATIONS	
A.	NET TRACT AREA	64.5
B.	REFORESTATION THRESHOLD (25% x A)	16.1
C.	AFFORESTATION MINIMUM (20% x A)	12.9
D.	EXISTING FOREST ON NET TRACT AREA	6.1
E.	FOREST AREA TO BE CLEARED	3.0
F.	FOREST AREA TO BE RETAINED	3.1
III.	DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION	

2. Afforestation
(If existing forest area is less than the afforestation minimum (if D is less than C), afforestation requirements apply.)

V.	AFFORESTATION CALCULATIONS	
A.	NET TRACT AREA	64.5
C.	AFFORESTATION MINIMUM (20% x A)	12.9
D.	EXISTING FOREST ON NET TRACT AREA	6.1
E.	FOREST AREA TO BE CLEARED	3.0
F.	FOREST AREA TO BE RETAINED	3.1

Clearing below the minimum
If existing forests are less than the afforestation minimum and clearing is proposed, the following calculations apply:

AFFORESTATION FOR UNFORESTED AREAS BELOW MINIMUM (C - D)	6.8
REFORESTATION FOR CLEARING BELOW MINIMUM (E x 2)	6.0
* TOTAL NEW FOREST PLANTING REQUIRED	12.8

*NOTE: AN AREA OF 1.15 AC. OF EXISTING TREES IS CREDITED AGAINST THE REQUIRED PLANTING. ACTUAL PLANTING AREA IS 11.65 AC. (SEE PLANTING PLAN SHT. 21)

Specimen trees found on site

Specimen Tree	Species	DBH (in.)	Stand	Condition	Preserved / Removed
1	White oak	30	1	Good	* R
2	N. Red oak	35	1	Large part of crown dead	R
3	White oak	34	1	Good	R
4	N. Red oak	30	1	Double trunk; good	R
5	Pignut hickory	33	1	Good	R
6	Pignut hickory	30	1	Good	R
7	Scarlet oak	40	1	Some dead crown branches	R
8	N. Red oak	47	1	Trunk rot	R
9	N. Red oak	43	1	Good	R
10	N. Red oak	31	1	Good	R
11	N. Red oak	34	1	Trunk rot	R
12	Tulip poplar	31	1	Good	R
13	White oak	34	1	Good	R
14	Tulip poplar	36	1	Good	R
15	N. Red oak	32	1	Good	R
16	N. Red oak	34	1	Good	R
17	N. Red oak	43	1	Good	R
18	N. Red oak	38	3	Good	R
19	White oak	40	3	Good	R
20	Scarlet oak	36	3	Good	P
21	Tulip poplar	33	3	Good	P
22	Red maple	37	2	Good; in hedgerow	P
23	Sassafras	34	2	Good; in hedgerow	P
24	Sycamore	44	None	Good; isolated in field	P
25	Red maple	36	None	Some dead crown branches	P

* INFASTRUCTURE HAS BEEN DESIGN SO AS TO LIMIT REMOVAL OF SPECIMEN TREES. THE INDICATION OF REMOVAL ONLY MEANS THAT THE TREE DOES NOT FALL WITHIN A PRESERVATION PARCEL.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

NOTE: THE FOREST CONSERVATION EASEMENT CREATED PER FCE PLAT # F-03-159 (0.60Ac.) WILL BE VACATED WITH THE RECORDATION OF F-05-29. THE NEW FCE HAS BEEN CALCULATED FOR THE ENTIRE PROPERTY.

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
FOREST CONSERVATION PLAN
SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON, TRIADELPHIA FARM, LLC., PRESCRIPTION ACRES, LLC., c/o DONALD H. PATTERSON, PO BOX 1, GLENELG, MD. 21737
DEVELOPER : TRIADELPHIA FARM, LLC., 6258 CARDINAL LANE, COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : 1" = 100'	SHEET 20 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

FOREST CONSERVATION PLAN

F-05-29

PLANTING PLAN

PLANTING PLAN

The tree species selected are consistent with the mixed upland oak association native to the upland soils, and the river birch association in the riparian areas (i.e. hydric soils). The County Manual recommends a planting density of 350 per acre with tree shelters, and the schedule below meets the recommendation. Species will be randomly mixed and planted approximately 11' apart from other plantings. Straight rows should be avoided to simulate a more natural arrangement. The total number of plants will be 4078 trees based on 12.8 ac at 350 whips/ac. Actual required plantings equal 11.65 Ac. @ 350 whips per Ac.*

** A credit of 1.15 Ac. is taken for existing trees that didn't qualify as forest unitl addition reforestation was performed*

UPLAND SPECIES		SIZE	QUANTITY/ACRE
Pioneer species			
Tulip poplar	*Liriodendron tulipifera*	whip	175
Black cherry	*Prunus serotina*	whip	175
Sassafras	*Sassafras albidum*	whip	94
Climax species			
White oak	*Quercus alba*	whip	100
N. red oak	*Q. rubra*	whip	100
Scarlet oak	*Q. coccinea*	whip	76
Pignut hickory	*Carya glabra*	whip	90
Flowering dogwood	*Cornus florida*	whip	76
RIPARIAN SPECIES (Hydric soils only)		SIZE	QUANTITY/ACRE
Red maple	*Acer rubrum*	whip	900
River birch	*Betula nigra*	whip	900
Pin oak	*Quercus palustris*	whip	464
Black willow	*Salix nigra*	whip	464
Sycamore	*Platanus Occidentalis*	whip	464
		Total Provided =	4078

OTHER PLANTING INSTRUCTIONS

Plant material should be obtained from a reputable nursery and ordered 3 to 6 months before desired delivery. Delivery should be arranged to occur as close to planting time possible, and stock should be protected from direct sun and drying until planting. Planting dates are October through May, with spring months preferred. (Suggested supplier: Silva Native Nursery & Seed Co., New Freedom, PA, (717) 227–0486.

Stock should be inspected before planting for signs of damage, disease, or insect infestation, vigor, and size. Damaged or inferior plants should be replaced.

Upon planting container grown stock, plants should be removed from the container and the soil gently loosened from the roots. If roots encircle the root ball, or are J-shaped or kinked, consider replacement. Do not trim roots on-site.

The planting field should be dug and backfilled with the native soil. Rake the surface and cover the disturbed area with approximately 4 inches of mulch, but avoid burying the base of the stem to prevent fungal rot. Water immediately to settle the soil around the roots.

MAINTENANCE AND PROTECTION OF PLANTED AREA

Soils should be tested to determine the need for fertilizer. If fertilizer is needed, it should be applied at the testing lab's recommended rates after the first growing season (late fall or early spring). Organic or slow-release fertilizers are preferred.

Watering should be planned to compensate for deficient rainfall. New plantings need water once a week for the first growing season. The second year, watering may only be necessary in July and August, and in subsequent years only water during drought periods. Watering should be done slowly enough to permit deep soaking of the root zone.

Monitor the young trees for several years for health, insect damage, and invasive vines. Replace dead manually, or by careful and selective use of appropriate herbicide.

Post protective signage that states that this area is a Forest Conservation Area and trees have been planted for reforestation. An effort should be made to inform and gain the cooperation of the adjacent residents to monitor and protect the plantings.

FOREST PROTECTION PLAN

The forest conservation and reforestation areas will need to be protected from injury during the land clearing and construction process, and from any future land use changes. Long-term protection will require placing the forest in a permanent, recorded, non-developable open space or conservation easement. The legal document establishing this protection will be required for final FCP approval.

CONSTRUCTION PHASE

Protective measures during the construction stage will focus on protecting the critical root zone of the retained trees along the new forest edge. The final LOD line will be staked in the field by a qualified professional who will determine which individual trees will be saved, and the extent of the critical root zone based on trees species and size. The resulting boundary will be fenced with approved fencing and posted as a tree preservation area, and no disturbance to the vegetation within the retention area will be allowed, except that which may be necessary to manage the health of the trees, such as thinning, pruning, or vine control. Any grading and construction that will occur uphill from the forest will require sediment control measures such as a silt fence or other device that will prevent siltation in the critical root zone of retained trees.

TWO-YEAR POST-CONSTRUCTION MANAGEMENT PROGRAM

Howard County requires the developer to commit to a minimum of two years of responsibility for the management of the Forest Conservation Area. The program must be supervised by a qualified professional. The obligations include: periodic (beginning and end of growing season) inspection of the condition of the forest; necessary management such as maintenance of fencing and signage, treatment or removal of damaged or dying trees, or invasive plant control; education of new land owners or occupants about allowable activities and future responsibilities for the forest; and a final inspection and certification that the forest is intact and the conditions of FCP have been met submitted to the County. Upon review of the final certification, the County will notify the developer of release from all future obligations, and their transferral to the owner.

Prepared by: William Bridgeland
MD DNR Qualified Professional

FOREST PROTECTION PROCEDURES - Construction Phase

Forest and tree conditions should be monitored during construction and corrective measures taken when appropriate.

The following shall be monitored:

a.) Soil compaction
b.) Root injury - prune and monitor; consider crown reduction
c.) Limb injury - prune and monitor
d.) Flooded conditions - drain and monitor; correct problem
e.) Drought conditions - water and monitor; correct problem
f.) Other stress signs - determine reason, correct and monitor

FOREST PROTECTION PROCEDURES - Post-Construction Phase

The following measures shall be taken:

1.) Corrective measures if damages were incurred due to negligence:

a.) Stress reduction
b.) Removal of dead or dying tress. This may be done only if trees pose an immediate safety hazard.

2.) Removal of temporary structures:

a.) No burial of discarded materials will occur on-site within the conservation area.
b.) No open burning within 100 feet of a wooded area.
c.) All temporary forest protections structures will be removed after construction.
d.) Remove temporary roads by removing stone or broadcasting mulch; pre-construction elevation should be maintained.
e.) Aerate compacted soil.
f.) Replant disturbed sites with trees, shrubs and/or herbaceous plants.
g.) Retain signs for retention areas or specimen trees.
h.) A county official shall inspect the entire site.

The area of stream buffer/reforestation planting shall be protected during construction per the following:

FOREST PROTECTION PROCEDURES - Preconstruction Phase

Stress Reduction and Protection of Specimen Trees Isolated from Forest Retention Areas and General Forest Retention Areas (As They May Apply)

1.) The edge of the woods to be protected will be marked (staked or flagged) in the field per the limits of disturbance shown in the approved final construction plan prior to the start of construction activity. All areas within protective fences are to be considered "off limits" to any construction activities. The protective fencing shall be installed at the outside edge of forested areas and speciment trees to be retained and should be combined with sediment control devices when possible. The limit of the critical root zone and therefore the location of the protective devices is to be determined as follows:

Isolated Specimen Trees - 1.5 feet of protective radius per inch of DBH

Edge of Forested Area - 1 foot of protective radius/inch of DBH or an eight foot protective radius, whichever is greater.

2.) Construction activities expressly prohibited within the preservation areas are:

Placing or stockpiling backfill or top soil in protected areas
Felling trees into protected areas
Driving construction equipment into or through protected areas
Burning in or in close proximity to protected areas
Stacking or storing supplies of any kind
Concrete wash-off areas
Conducting trenching operations
Grading beyond the limits of disturbance
Parking vehicles or construction equipment
Removal of root mat or topsoil
Siting and construction of: Utility lines
Access roads
Impervious surfaces
Storm water management
Devices
Staging Areas

3.) Protective fencing (see Figure "Protective Fencing") shall be the responsibility of the general contractor. The general contractor shall affix signs to the fencing at 25' minimum intervals indicating that these areas are "Forest Retention Area" or Specimen Tree" (see Figure "Signage"). The general contractor shall take great care to assure the restricted areas are not violated and that root systems are protected from smothering, flooding, excessive wetting from de-watering operations, off-site run-off, spillage and drainage or solutions containing materials hazardous to tree roots.

4.) The general contractor shall be responsible for any tree damaged or destroyed within the preservation areas whether caused by the contractor, his agents, employees, sub-contractors, or licensees.

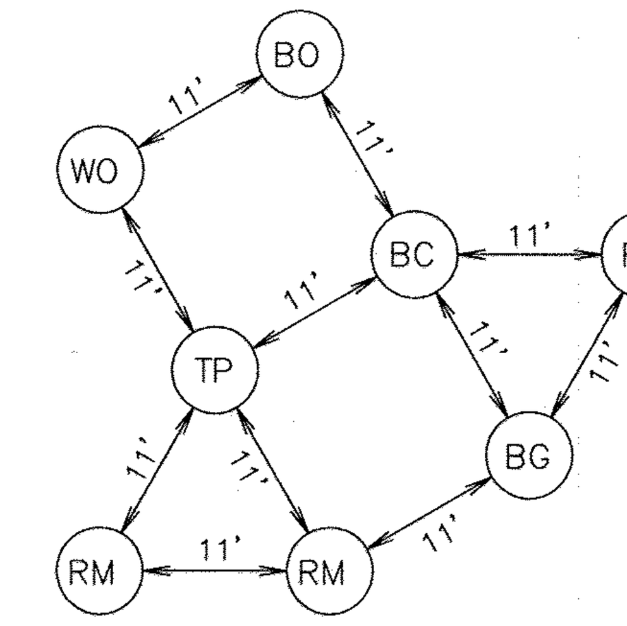
5). Foot traffic shall be kept to a minimum in the protective areas.

6). All trees which are not to be preserved within fifty feet of any tree preservation areas are to be removed in a manner that will not damage those trees that are designated for preservation. It is highly recommended that tree stumps within this fifty foot area be ground out with a stump grinding machine to minimize damage.

7.) The general contractor shall designate a "wash out" area on-site for concrete trucks which will not drain toward a protected area.

8.) A pre-construction meeting shall be held with local authorities before any disturbance has taken place on site.

TYPICAL PLANTING DIAGRAM



WO = WHITE OAK
BO = BLACK OAK
TP = TULIP POPLAR
BC = BLACK CHERRY
RM = RED MAPLE
BG = BLACK GUM
FD = FLOWERING DOGWOOD
RO = RED OAK

NOTE TO CONTRACTOR:

1. FOR DEAD OR DISEASED TREES, THE CONTRACTOR MAY REMOVE THE SAME.
2. TREES ARE TO BE PLACED IN A RANDOM PATTERN TO CREATE A NATURAL EFFECT. THEY ARE TO BE MIXED IN THE RATIOS DESCRIBED ABOVE AND THEY ARE TO BE SPACED APPROXIMATELY 20 FEET APART.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Water Management Administration
Nontidal Wetlands and Waterways Division
Telephone: 410-537-3768, Fax: 410-537-3751

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

July 21, 2004

Paul M. Revelle
Triadelphia Farm LLC
6258 Cardinal Lane
Columbia, Maryland 21044

Application Tracking Number 03-NT-0468/200460265
Project: TRIADELPHIA FARM LLC/UTILITY LINE - Howard County

Dear Mr. Revelle:

The Nontidal Wetlands and Waterways Division of the Water Management Administration (WMA) has completed its review of the application for the project listed above and intends to issue a Nontidal Wetlands and Waterways Letter of Authorization (LOA) for the proposed activity.

In order to issue the LOA two sets of final signed construction drawings for the project are needed. The plans must include limits of nontidal wetlands, the nontidal wetland buffer, and waters of the State (including the 100-year floodplain), limits of disturbance, "Best Management Practices for Working in Nontidal Wetlands" (attached), a sequence of construction, and approved erosion and sediment control plans.

The LOA will be issued following receipt, review, and approval of the information requested. Approved plans will be distributed to the Authorized Person and to the Compliance Program of the WMA.

If you have any questions I may be reached at 410-537-3768 or at dboellner@mde.state.md.us.

Sincerely,

David B. Boellner, Project Manager
WMA, Nontidal Wetlands and Waterways Division

Attachment

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350

Marsha S. McLaughlin, Director

www.co.ho.md.us
FAX 410-313-3467
TDD 410-313-2323

July 7, 2004

Paul Revelle
Triadelphia Farm LLC
6258 Cardinal Lane
Columbia, MD 21044

RE: SP-03-09, Hopkins Choice

Dear Mr. Revelle:

On July 6, 2004, the County Council approved Resolutions 70-2004 and 71-2004 which adopted a new Housing Unit Allocation Chart, and Elementary and Middle School Open/Closed Charts, respectively. As a consequence of the Council's action, the status of the above referenced plan has been altered.

The Department of Planning and Zoning hereby grants tentative allocations for this subdivision in the Rural West Planning Area in accordance with the following allocation schedule and milestones:

Phase	No. Tentative Allocations	Allocation Year	Plan Submission
1	13	2007	Final due by 11/7/04
2	19	2008	Final due between 7/1/05 and 11/1/05

This project, located in the Western School Region, the Triadelphia Ridge Elementary School District and the Folly Quarter Middle School District has passed a preliminary assessment of the Adequate Public Facilities Ordinance test for roads, open school region, open elementary school district, and open middle school district.

A final plan must be submitted for Phase 1 approved on the preliminary equivalent sketch plan within **4** months from the date of this letter (**on or before November 7, 2004**).

If the final plan is not received by the milestone date, your plan approval will become null and void and your project will lose its tentative housing unit allocations in accordance with Section 16.144.q(1) of the Howard County Subdivision and Land Development Regulations.

If you miss the milestone date, any plans resubmitted must be processed as a new preliminary equivalent sketch plan. You will be required to comply with all plan submission requirements and regulations in effect at the time of re-submission. This Department cannot consider requests for extensions of time for your project beyond the deadlines and milestones established by the Adequate Public Facilities Ordinance.

Copies of the plan may now be ordered at the Department of Planning and Zoning's front counter, Monday thru Friday from 8:00 a.m. to 5:00 p.m.

If you have any questions, please contact Jeanette Anders at (410) 313-2350.

Sincerely,

Cindy Hamilton, Chief
Division of Land Development

CH/cs/sp0309allocs
Cc: Research DED American Engineering & Land Development

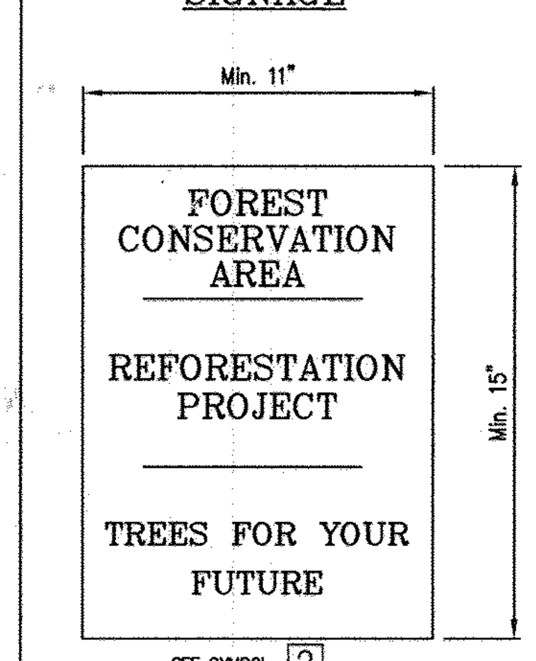
BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1) No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
2) Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
3) Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
4) Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
5) Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
6) Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (Lolium multiflorum), Millet (Setaria italica), Barley (Hordeum sp.), Oats (Uniola sp.), and/or Rye (Secale cereale). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. **Kentucky 31 fescue shall not be utilized in wetland or buffer areas.** The area should be seeded and mulched to reduce erosion after construction activities have been completed.
8) After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
9) To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream:

Use I waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.

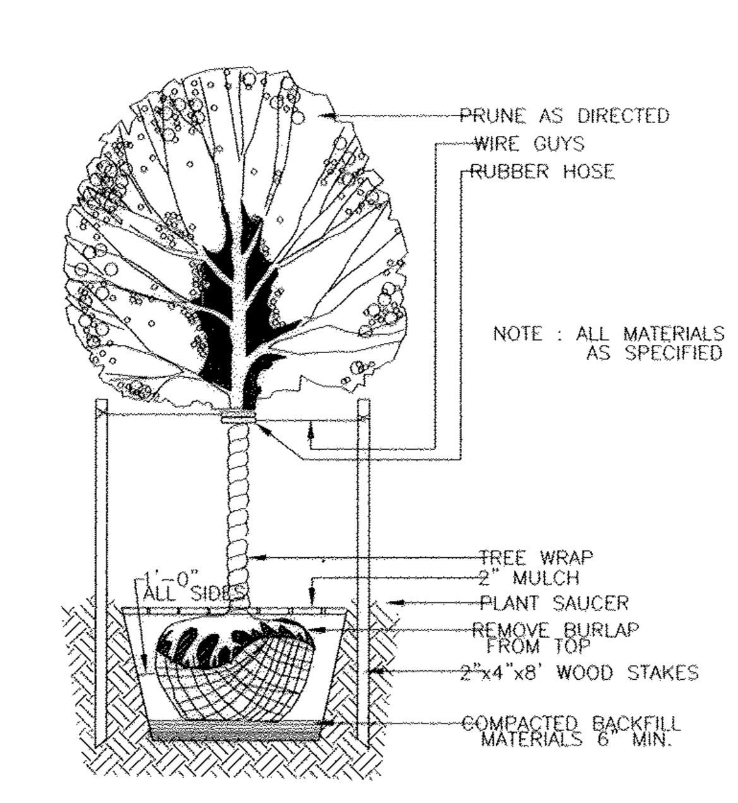
10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
11) Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

SIGNAGE



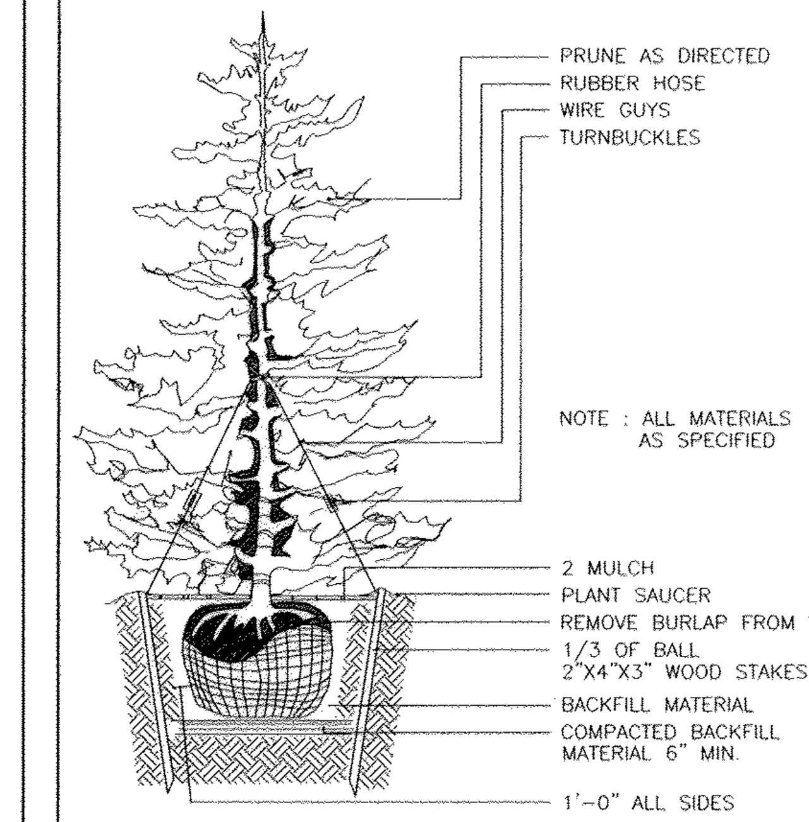
FOREST CONSERVATION EASEMENT STANDARD NOTES:

The forest Conservation Easement has 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 Easement; however forest management practices as defined in the Deed of Forest Conservation Easement are allowed.



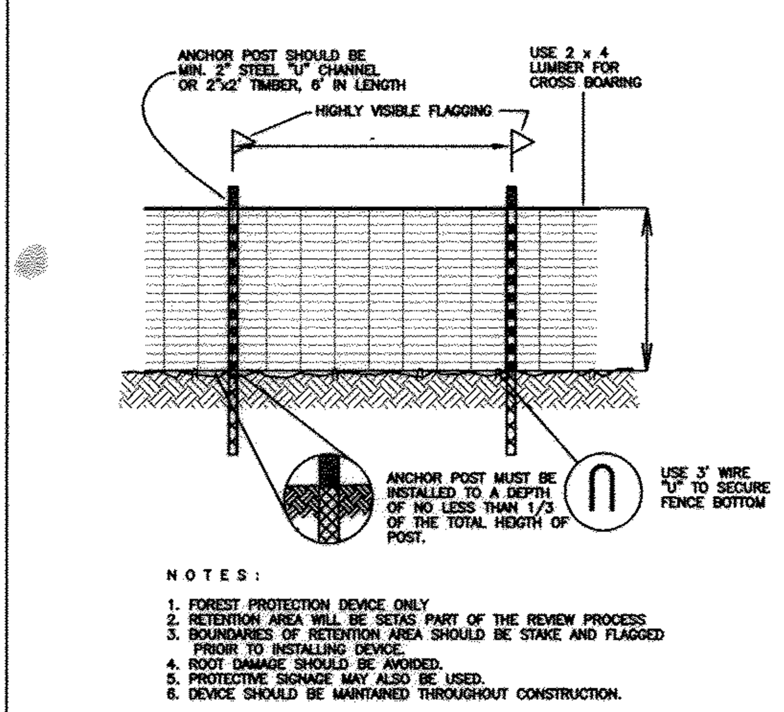
TYPICAL DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE



NOTES:

1. FOREST PROTECTION DEVICE ONLY
2. RETENTION AREA WILL BE SETAS PART OF THE REVIEW PROCESS
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKE AND FLAGGED PRIOIR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

BLAZE ORANGE PLASTIC MESH TREE PROTECTION DEVICE

NOT TO SCALE

THE TREE PROTECTION FENCING SHOWN ON THIS PLAN IS TEMPORARY AND SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITY , BUT THE FOREST CONSERVATION SIGNAGE IS PERMANENT AND SHALL REMAIN IN PLACE AROUND THE FCE AFTER THE REMOVAL OF THE TREE PROTECTION FENCING

FCE 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. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
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 COUNT 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 DISTURBANCE.
7. PERMANENT SIGNAGE SHALL BE PLACED 50–100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

NOTE :
ALL INFRASTRUCTURE, LANDSCAPING AND FOREST CONSERVATION FOR PHASE I AND PHASE II OF THE SUBDIVISION ARE TO BE PERFORMED UNDER THE DEVELOPER AGREEMENT FOR PHASE I OF HOPKINS CHOICE.

THE FUTURE LOTS AND PRESERVATION PARCELS (TO BE SUBMITTED ON THE PLAT FOR PHASE II) ARE ONLY SHOWN FOR ILLUSTRATIVE PURPOSES IN ORDER TO DESIGN THE INFRASTRUCTURE FOR BOTH PHASE I & PHASE II ON THIS PLAN.

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — 6-13-05 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — 6/23/05 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION — 6/16/05 DATE

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
PLANTING PLAN AND DETAILS
SP-03-09 F-03-159 F-05-29

PREPARED BY :
American Land Development and Engineering, Inc.
10749 BIRMINGHAM WAY WOODSTOCK, MD. 21163
TEL. (410) 465-7903 FAX. (410) 465-3845

OWNERS : DONALD H. PATTERSON
TRIADELPHIA FARM, LLC.
PRESCRIPTION ACRES, LLC.
c/o DONALD H. PATTERSON
PO BOX 1
GLENELG, MD. 21737

DEVELOPER : TRIADELPHIA FARM, LLC.
6258 CARDINAL LANE
COLUMBIA, MD. 21044

DES. : JHE/AVG	JOB :	SCALE : AS SHOWN	SHEET 21 OF 22
DRW. : AVG	PROJ. :		
CHK. : DCW	DATE : MAY 17, 2005		

F-05-29

I:\SUBDIVISION-PROJECTS\HOPKINS CHOICE-FINAL\FINAL PLAN\20-21HPKNS-FSD-FCE2.dwg, PLANT&DETAILS, 5/17/2005 3:08:19 PM, guz

FROM : REVELLOPMENT INC FAX NO. : 4109923802 Aug. 22 2004 12:32PM P1

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350

Marsha S. McLaughlin, Director

www.co.ho.md.us
FAX 410-313-3467
TDD 410-313-2323

July 7, 2004

Paul Revelle
Triadelphia Farm LLC
6258 Cardinal Lane
Columbia, MD 21044

RE: SP-03-09, Hopkins Choice

Dear Mr. Revelle:

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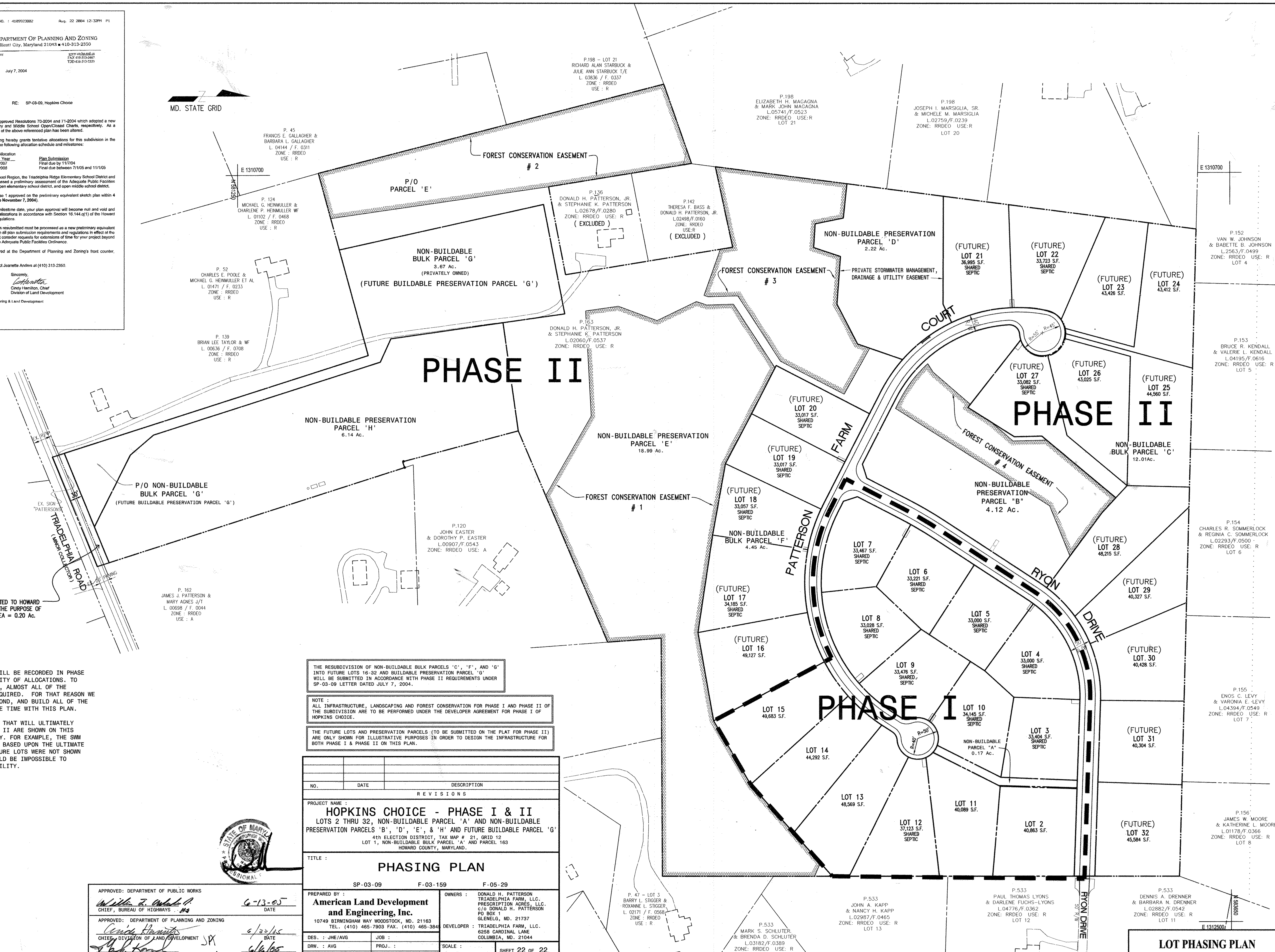
Sincerely,

Cindy Hamilton, Chief
Division of Land Development

CH/cs/sp0309allocs
Cc: Research DED American Engineering & Land Development



NOTE :

1. FOURTEEN (14) LOTS WILL BE RECORDED IN PHASE ONE DUE TO AVAILABILITY OF ALLOCATIONS. TO CREATE THESE 14 LOTS, ALMOST ALL OF THE INFRASTRUCTURE IS REQUIRED. FOR THAT REASON WE PROPOSE TO DESIGN, BOND, AND BUILD ALL OF THE INFRASTRUCTURE AT ONE TIME WITH THIS PLAN.
2. THE LOTS AND PARCELS THAT WILL ULTIMATELY BE RECORDED IN PHASE II ARE SHOWN ON THIS PLAN OUT OF NECESSITY. FOR EXAMPLE, THE SWM FACILITY IS DESIGNED BASED UPON THE ULTIMATE CONSTRUCTION. IF FUTURE LOTS WERE NOT SHOWN ON THIS PLAN, IT WOULD BE IMPOSSIBLE TO EVALUATE THE SWM FACILITY.

THE RESUBDIVISION OF NON-BUILDABLE BULK PARCELS 'C', 'F', AND 'G' INTO FUTURE LOTS 16-32 AND BUILDABLE PRESERVATION PARCEL 'G' WILL BE SUBMITTED IN ACCORDANCE WITH PHASE II REQUIREMENTS UNDER SP-03-09 LETTER DATED JULY 7, 2004.

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NO.	DATE	DESCRIPTION

REVISIONS

PROJECT NAME :
HOPKINS CHOICE - PHASE I & II
LOTS 2 THRU 32, NON-BUILDABLE PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B', 'D', 'E', & 'H' AND FUTURE BUILDABLE PARCEL 'G'
4th ELECTION DISTRICT, TAX MAP # 21, GRID 12
LOT 1, NON-BUILDABLE BULK PARCEL 'A' AND PARCEL 163
HOWARD COUNTY, MARYLAND.

TITLE :
PHASING PLAN
SP-03-09 F-03-159 F-05-29

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 6-13-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 6/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/05

PREPARED BY :
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DES. : JHE/AVG	JOB :
DRW. : AVG	PROJ. :
CHK. : DCW	DATE : MAY 17, 2005

SCALE : 1" = 100'

SHEET 22 OF 22

F-05-29