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FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLAN HOMWOOD CROSSING PHASE 2

LOTS 44 - 79, NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M', BUILDABLE PRESERVATION PARCEL 'N' & NON-BUILDABLE BULK PARCEL 'O'

(A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J', Benedict Farm, Phase One, Plat Nos.)

ZONING: RC-DEO

TAX MAP NO. 29 GRID No. 9 PARCEL No. 28

ROADWAY INFORMATION CHART			
ROAD NAME	CLASSIFICATION	DESIGN SPEED	R/W WIDTH
INDEPENDENCE WAY	PUBLIC ACCESS STREET	30 M.P.H.	50'
RIVERCROSSING COURT	PUBLIC ACCESS PLACE	25 M.P.H.	40'
ASHBY COURT	PUBLIC ACCESS PLACE	25 M.P.H.	40'

TRAFFIC CONTROL SIGNS				
ROAD NAME	C.L. STA.	OFFSET	POSTED SIGN	SIGN CODE
INDEPENDENCE WAY	0+56	31' L	STOP	R1-1
INDEPENDENCE WAY	2+33	14' R	SPEED LIMIT 25	R2-1
RIVERCROSSING COURT	0+36	16' L	STOP	R1-1
ASHBY COURT	0+36	16' L	STOP	R1-1
INDEPENDENCE WAY	3+50	14' L	STOP AHEAD	W3-1a
HOMWOOD ROAD	5+00	28' R	RIGHT LANE MUST TURN RIGHT	R3-7R
HOMWOOD ROAD	3+00	28' R	* W2-1 w/ (2) D-3(1)	
HOMWOOD ROAD	11+00	24' L	* W2-1 w/ (2) D-3(1)	
HOMWOOD ROAD	35+60	17' R	* W2-2 w/ (1) D-3(1)	
HOMWOOD ROAD	42+50	24' L	* W2-2 w/ (1) D-3(1)	

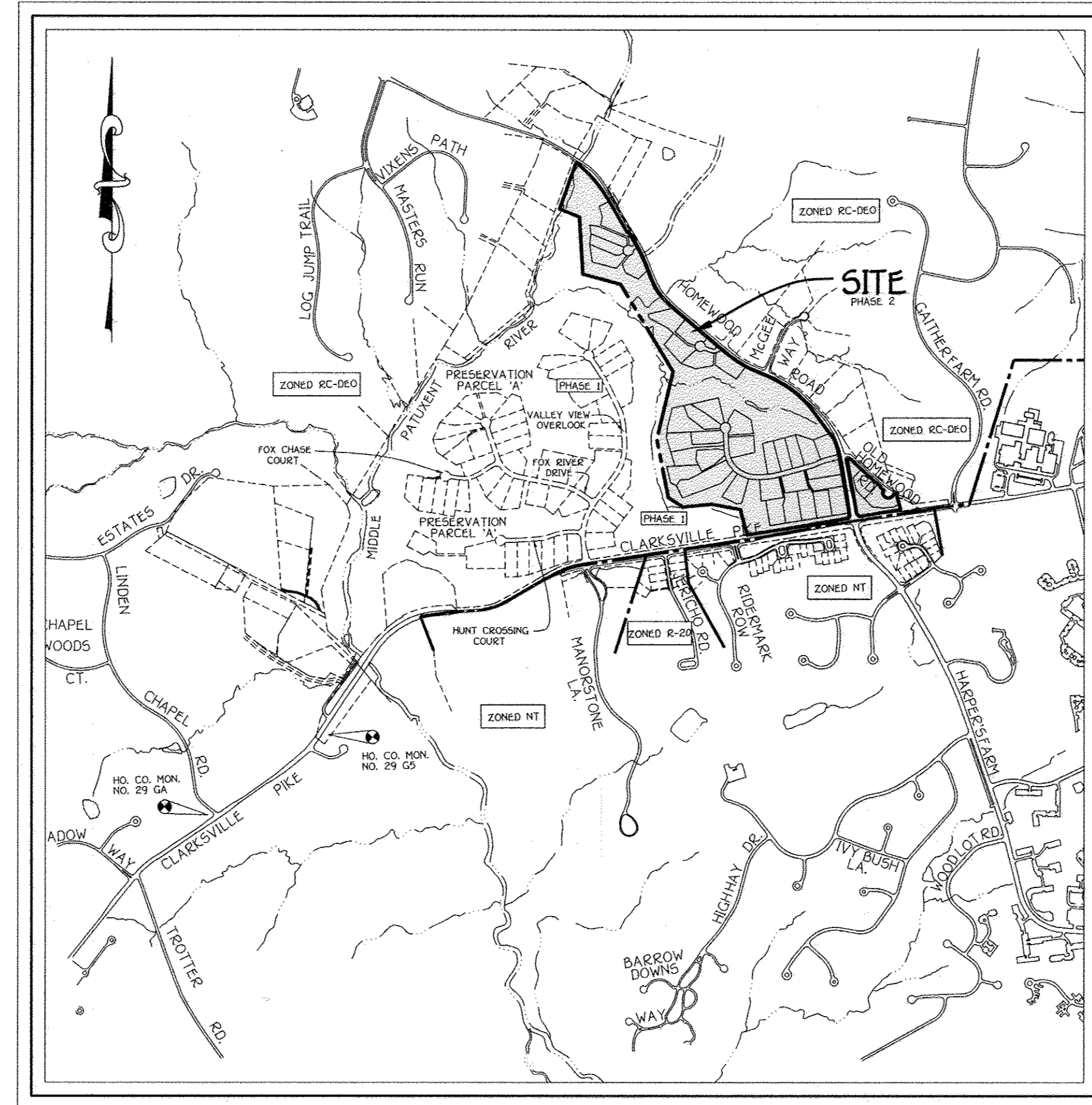
NOTE: ALL SIGN POSTS USED FOR TRAFFIC CONTROL, INSTALLED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED SQUARE TUBE (1/4 GAUGE) INSERTED INTO A 2 1/2" GALVANIZED STEEL PERFORATED SQUARE TUBE SLEEVE (1/2 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

STREET LIGHT CHART			
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
INDEPENDENCE WAY	* C.L. STA. 0+50	37' L	250-WATT H.P.S. VAPOR PENDANT (SAG) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12" ARM
RIVERCROSSING COURT	* C.L. STA. 0+57	55' R	250-WATT H.P.S. VAPOR PENDANT (SAG) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12" ARM
ASHBY COURT	* C.L. STA. 0+34	42' R	250-WATT H.P.S. VAPOR PENDANT (SAG) MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12" ARM

* - ANGLE ARM AS SHOWN ON PLAN

CONCRETE MONUMENTS SET		
POINT#	NORTHING	EASTING
923	572379.1596	1339653.0230
924	573447.0642	1338668.3677

RIGHT-OF-WAY PINS SET		
POINT#	NORTHING	EASTING
1179	571821.1896	1340456.4464
2243	572385.1672	1339964.1001
2245	572385.1168	1339864.1994
2244	572312.3586	1339645.9967
2245	572172.5194	1339900.4687
2246	572122.3080	1340032.0386
2287	571523.9301	1340675.8014
1057	570691.7893	1340809.9390
1058	571259.3469	1340859.4882
1059	571264.5373	1340888.7286
1060	571258.0188	1340894.2222
1066	570889.9671	1341346.0978
1067	570904.0928	1341352.2151
1110	573046.0581	1338842.2396
1183	570679.0517	1340885.0471
1183	570679.0742	1340885.0486
2234	573634.6910	1338858.6701
2235	573525.1630	1338624.8833
2236	573448.3234	1338670.6467
2237	573321.9772	1338730.8719
2238	573133.9994	1338805.8671
2239	573093.5546	1338823.5533
2240	573038.4603	1338854.8103
2241	572863.8095	1338995.2013
2250	571290.7632	1340777.7911
2251	571234.2037	1340736.7420
2252	570638.3254	1340985.4080
2253	570533.0608	1340240.2319
2289	573480.8739	1338916.4415
2290	573486.5363	1338609.4199
2292	573432.2556	1338618.1235
2293	573492.3589	1338630.1252
2294	573456.5734	1338637.1106
2295	572407.5621	1338461.8236
2296	572413.4370	1338429.5696
2297	572430.5319	1338387.2215



VICINITY MAP

SCALE: 1" = 1200'

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Owner

Developer

MARY CARTER CARROLL, ZIEGLER, ET AL.
C/O NATALIE ZIEGLER
11052 HOMWOOD ROAD
ELLCOTT CITY, MARYLAND 21042

TOLL BROTHERS, INC.
ATTN: MR. SCOTT HARE
7164 COLUMBIA GATEWAY DRIVE, SUITE 230
COLUMBIA, MARYLAND 21046

APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. ... 9-21-05
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamstra 9/20/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK 9/26/05
DATE

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 4100 313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- COORDINATES BASED ON NAD83(03) HORIZONAL AND VERTICAL DATUMS AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 29 GA AND NO. 29 G5
- HOWARD COUNTY MONUMENT NO. 29 GA N 566,857.478 ELEV. = 450.73
HOWARD COUNTY MONUMENT NO. 29 G5 E 1,333,325.606 ELEV. = 380.189
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES, LTD., DATED MARCH 4, 2002 AND WAS APPROVED ON JULY 31, 2002.
- BACKGROUND INFORMATION:
A. SUBDIVISION NAME: HOMWOOD CROSSING
B. TAX MAP NO.: 29
C. PARCEL NO.: 28
D. ZONING: RC-DEO
E. ELECTION DISTRICT: THIRD
F. TOTAL TRACT AREA: 87,369 AC.
G. NO. OF BUILDABLE LOTS: 36
H. NO. OF OPEN SPACE LOTS: 0
I. NO. OF NON-BUILDABLE PRESERVATION PARCELS: 3
J. NO. OF NON-BUILDABLE BULK PARCELS: 1
K. NO. OF BUILDABLE PRESERVATION PARCELS: 1
L. AREA OF BUILDABLE LOTS: 99,997 AC.
M. AREA OF OPEN SPACE LOTS: 0.00 AC.
N. AREA OF NON-BUILDABLE PRESERVATION PARCELS: 40,407 AC.
O. AREA OF NON-BUILDABLE BULK PARCELS: 2,328 AC.
P. AREA OF BUILDABLE PRESERVATION PARCELS: 1,580 AC.
Q. TOTAL AREA OF ROADWAY TO BE DEDICATED: 3,097 AC.
R. PREVIOUS FILE NOS.: SP 02-13 AS BENEDECT FARM, APPROVAL DATE: 1/28/03, F 05-31
- NO COMPETES EXIST ON THE PROPERTY.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-100.
- STREET LIGHTS WILL BE REQUIRED IN THE DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL, STREET LIGHT PLACEMENT AND POLE SELECTION SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993) THE JUNE 1993 POLICY INCIDENTS GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- STORMWATER MANAGEMENT FACILITY:
B.M.P. No. 8 - TYPE - MICRO-POOL DESIGN, (EXTENDED DETENTION)
OWNER - HOMEOWNERS ASSOCIATION
B.M.P. No. 9 - TYPE - SURFACE SAND FILTER DESIGN, (WQV MANAGEMENT)
OWNER - HOMEOWNERS ASSOCIATION
B.M.P. No. 10 - TYPE - MICRO-POOL DESIGN, (EXTENDED DETENTION)
OWNER - HOMEOWNERS ASSOCIATION
B.M.P. No. 11 - TYPE - BIO-RETENTION DESIGN, (WQV MANAGEMENT)
OWNER - HOMEOWNERS ASSOCIATION
B.M.P. No. 12 - TYPE - BIO-RETENTION DESIGN, (WQV MANAGEMENT)
OWNER - HOMEOWNERS ASSOCIATION

- STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY AND MARYLAND 37B SPECIFICATIONS. RECHARGE VOLUME WILL BE PROVIDED THROUGH COUNTY AND MARYLAND 37B SPECIFICATIONS. EXTENDED DETENTION POND, WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED BY TWO MICROPOOL, EXTENDED DETENTION POND AND ONE POCKET POND. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUME ARE NOT REQUIRED FOR THIS SITE. THE STORMWATER MANAGEMENT FACILITIES WILL BE OWNED AND MAINTAINED BY THE BENEDECT FARM HOMEOWNERS ASSOCIATION.
- THE PROPOSED WATER AND SEWER SYSTEMS SHALL BE PRIVATE.
 - THE SUBJECT PROPERTY IS LOCATED OUTSIDE OF THE METROPOLITAN DISTRICT.
 - TOPOGRAPHIC INFORMATION ESTABLISHED AT TWO FOOT INTERVALS BASED ON AERIAL TOPOGRAPHY PREPARED BY S.D. L.L. DATED APRIL 14, 2001 AND SUPPLEMENTED BY FIELD RUN TOPOGRAPHY PREPARED BY FISHER, COLLINS & CARTER, INC. DATED ...
 - FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY AND NOT INTO THE FLAG OR PIPESTEM DRIVEWAY.
 - WETLAND AND FOREST STAND DELINEATION INFORMATION SHOWN WAS TAKEN FROM REPORTS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JUNE 2002 AND APPROVED ON JULY 31, 2002 UNDER SP 02-13.
 - SOILS INFORMATION TAKEN FROM SOIL MAP NO. 8, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY 1968 ISSUE.
 - AS A CONSEQUENCE OF ITS SUBMISSION FOR COUNTY REVIEW PRIOR TO NOVEMBER 15, 2001, THIS PLAN IS SUBJECT TO THE 4TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. IN ADDITION, BECAUSE IT DID NOT HAVE PRELIMINARY PLAN APPROVAL PRIOR TO NOVEMBER 1, 2001, IT IS SUBJECT TO COMPLIANCE WITH COUNTY COUNCIL BILL 50-2001, WHICH AMENDS PORTIONS OF THE 1993 ZONING REGULATIONS.
 - AS PER SECTION 10A.4.B OF THE ZONING REGULATIONS, ONLY ONE EASEMENT HOLDER IS REQUIRED FOR PRESERVATION PARCELS DESIGNED SOLELY FOR SWM FACILITIES OR COMMUNITY SEWERAGE DISPOSAL SYSTEMS.
a. NON-BUILDABLE PRESERVATION PARCEL 'K' OWNED: HOMEOWNER'S ASSOCIATION EASEMENT HOLDER: HOWARD COUNTY
b. NON-BUILDABLE PRESERVATION PARCEL 'L' OWNED: HOMEOWNER'S ASSOCIATION EASEMENT HOLDER: HOWARD COUNTY
c. NON-BUILDABLE PRESERVATION PARCEL 'M' OWNED: HOMEOWNER'S ASSOCIATION EASEMENT HOLDER: HOWARD COUNTY
d. BUILDABLE PRESERVATION PARCEL 'N' OWNED: PRIVATELY OWNED EASEMENT HOLDER: HOWARD COUNTY
 - NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAM OR THEIR REQUIRED BUFFERS.
 - THE FOREST PRESERVATION REQUIREMENTS FOR THIS SUBDIVISION WERE PROVIDED AS PART OF PHASE I, F 05-31.
 - THE LANDSCAPE SURETY IN THE AMOUNT OF \$41,850.00 FOR PERMITTED LANDSCAPE REQUIREMENTS SECTION 16.24 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL IS POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION.
 - THE NOISE STUDY FOR THIS PROJECT WAS PREPARED BY WILSON T. BALLARD CO., DATED JUNE 2002 AND WAS APPROVED ON JULY 31, 2002.
 - THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED JUNE 8, 2002 AND WAS APPROVED ON JULY 31, 2002. TOTAL FLOODPLAIN FOR BENEDECT FARM, PHASE I AND PHASE 2 = 57,132 AC. AREA OF FLOODPLAIN WITHIN THIS SUBMISSION = 4,910 AC.
 - THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLS-CARNE ENGINEERING ASSOC., INC. DATED JUNE 20, 2002 AND WAS APPROVED ON JULY 31, 2002.
 - THE EXISTING FLOODPLAIN FOR MIDDLE PATUXENT RIVER WAS TAKEN FROM HOWARD COUNTY CAPITAL PROJECT NO. D-1028. THE AREA OF FLOODPLAIN WAS FULLY DEDICATED UNDER PHASE 1 IF 05-30.
 - WELLS SHALL BE DRILLED ON LOTS 46, 54, 56, 57, 64, 66, 72, 74 AND 77 PRIOR TO RECORDATION OF THE FINAL RECORD PLAN.



FOR ESE CONSULTANTS, INC.
AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
MP License No.: 21328



AS-BUILT
DATE: 9-2-05

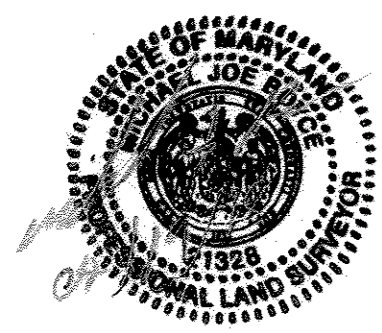
F 05-69

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTINENTAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
4100 488 - 2895

KEY MAP
NO SCALE

K:\SDS\PROJ\30754\QW\PHASE 2 - FINALS\SHEET 1 TITLE SHEET.dwg, 9/12/2005 1:35:18 PM

NOTE:
SEE SHEET 27 FOR PAVING STRIPING PLAN & TRAFFIC CONTROL PLAN.



FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
MD LICENSE No.: 21328

NO.	REVISIONS DESCRIPTION	DATE

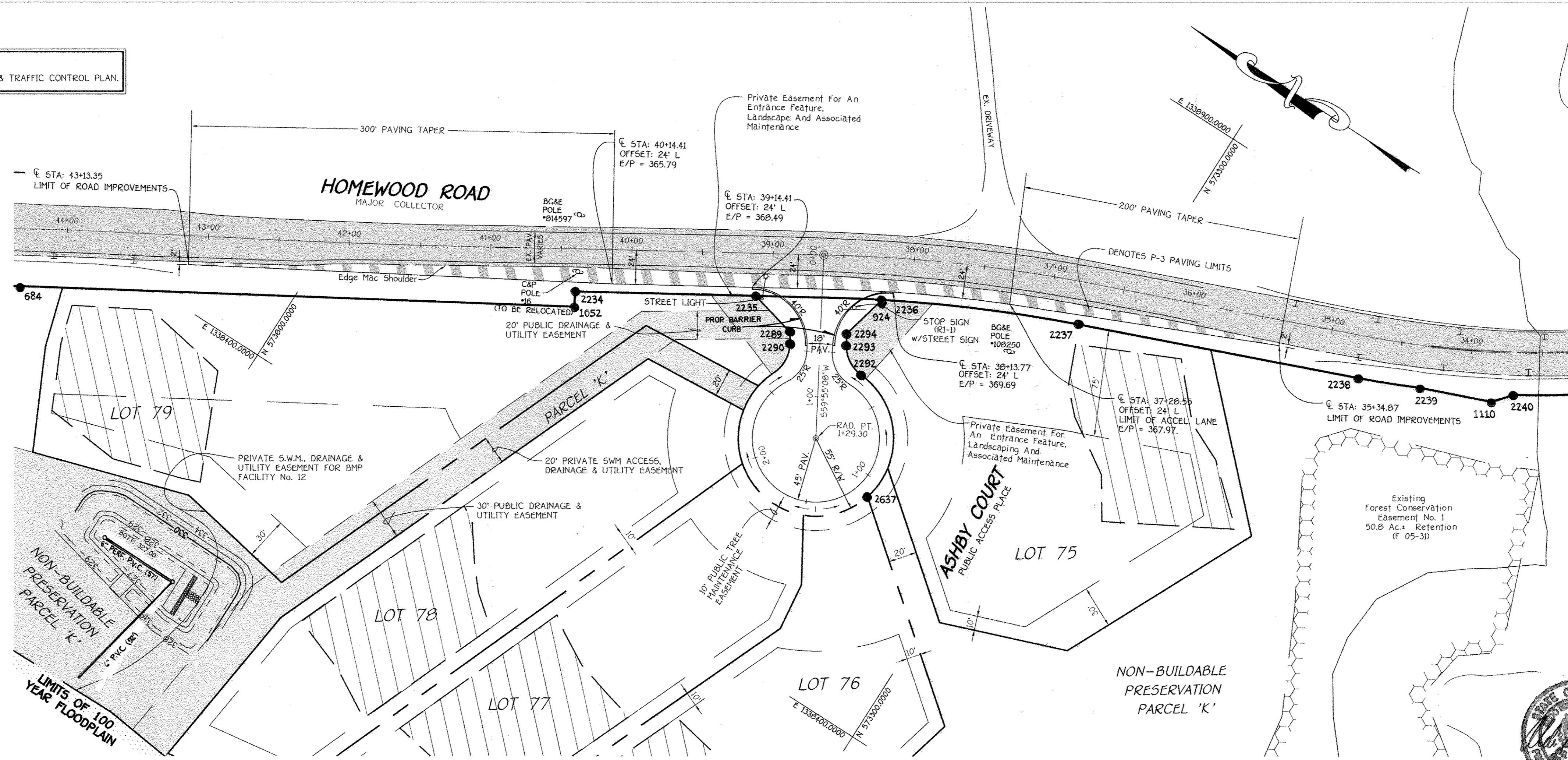
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton 9/30/05
CHIEF, DIVISION OF LAND DEVELOPMENT JVA DATE

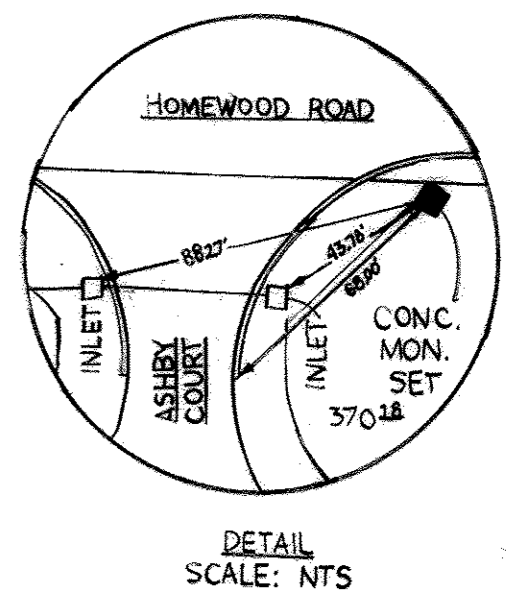
[Signature] 9/26/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William F. [Signature] 9-21-05
CHIEF, BUREAU OF HIGHWAYS DATE



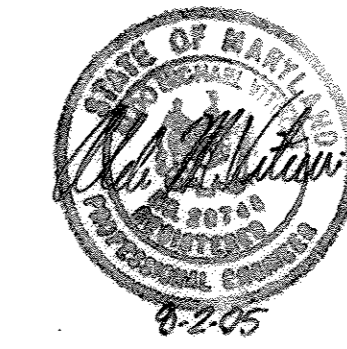
PLAN
SCALE: 1" = 50'



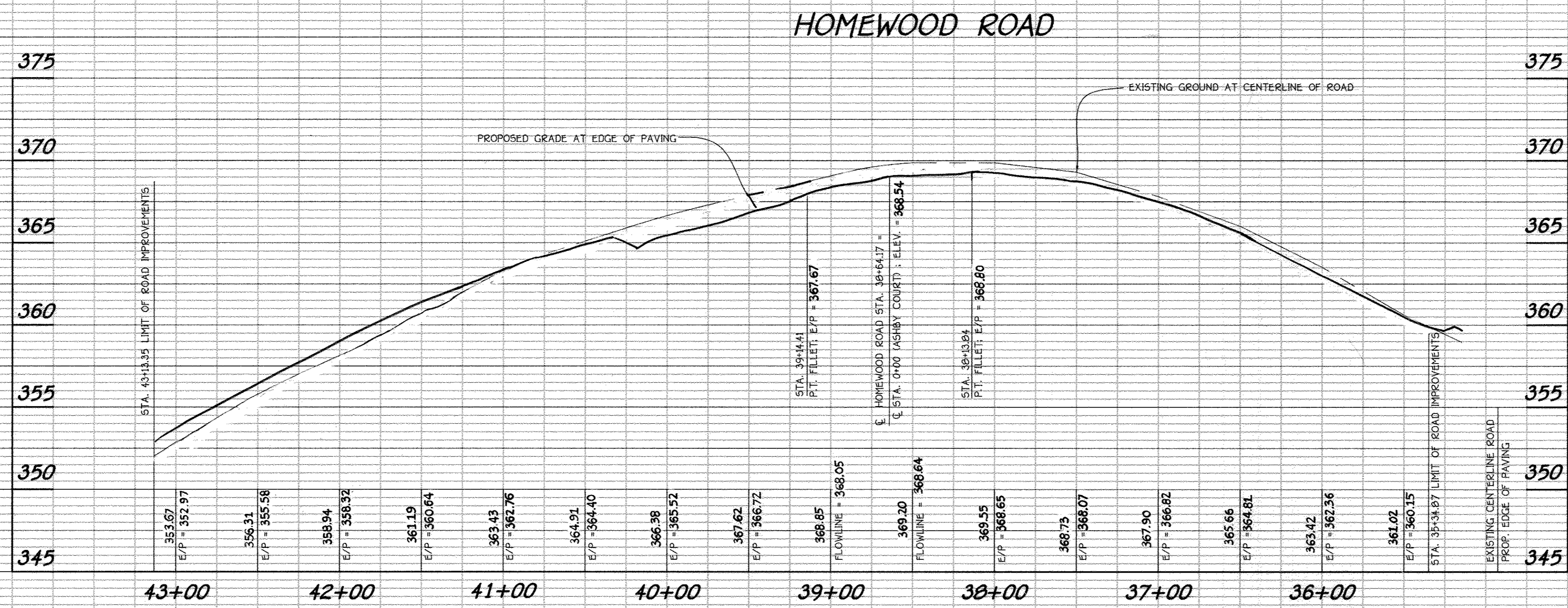
HOMEWOOD CROSSING PHASE 2
LOTS 44 - 79
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M', 'N' & 'O'
BUILDABLE PRESERVATION PARCEL 'N' & 'O'
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J', Benedict Farm, Phase One, Plat Nos.)

Tax Map: 29 Grid: 9 Parcel: 28
Third Election District
HOMEWOOD ROAD WIDENING @ ASHBY COURT
PLAN AND PROFILE

OWNER	DEVELOPER
MARY CARTER CARROLL ZIEGLER, ET AL. C/O NATALIE ZIEGLER 11332 HOMEWOOD ROAD ELLICOTT CITY, MARYLAND 21042	TOLL BROTHERS, INC. ATTN: MR. SCOTT HARE 7164 COLUMBIA GATEWAY DRIVE, SUITE 230 COLUMBIA, MARYLAND 21046
SCALE: AS SHOWN	DATE: AUGUST, 2005
DES. R.A.L.	CHK. J.C.L.
DRN. J.C.L.	CHK. A.M.V.

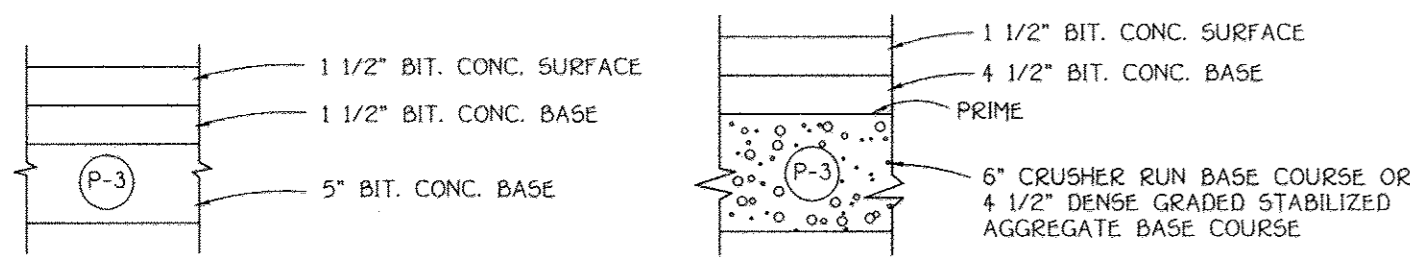


FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONFIDENTIAL. SEE SHEET 27 FOR PAVING STRIPING PLAN
1996-1997

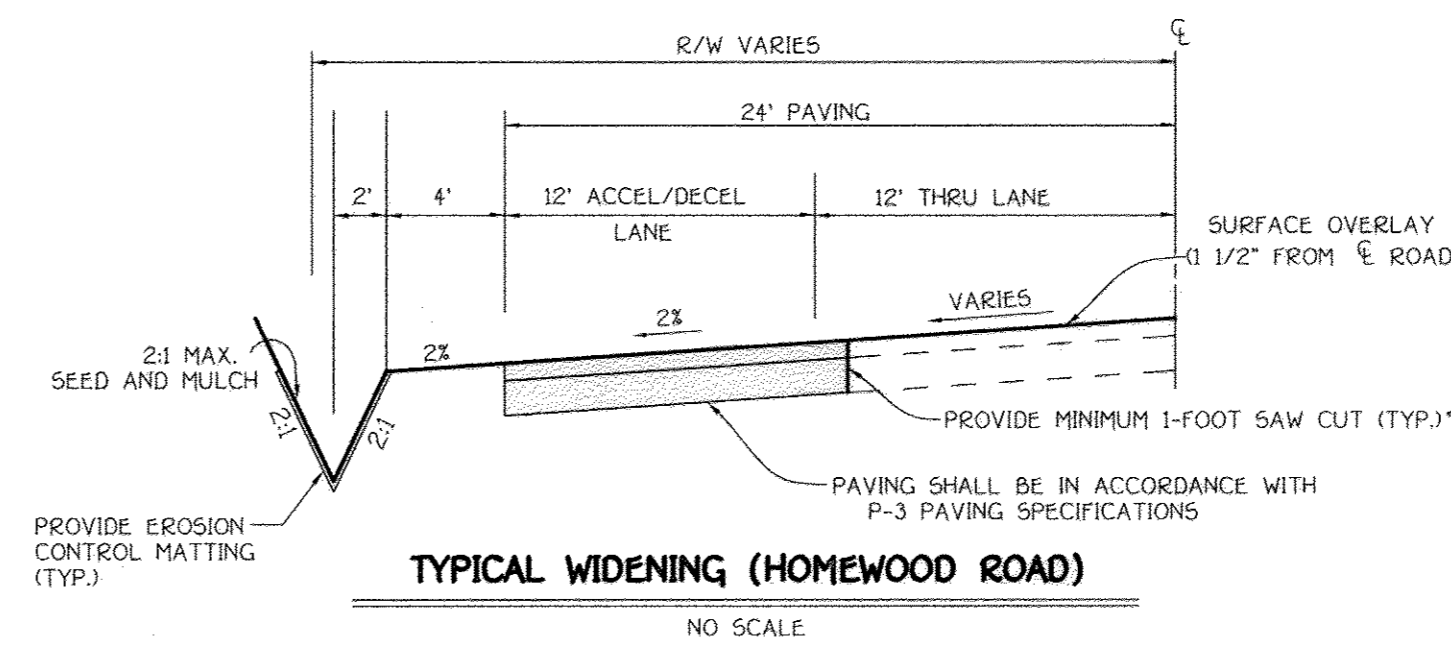


PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

K:\SDS\PROJ\03754_Benedict Farm\wg\PHASE 2 - FINAL\03754 SHEET 2-HOMEWOOD WIDENING.dwg 8/22/05 8:27:11 AM

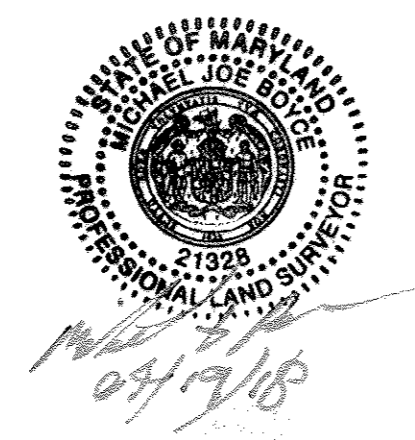
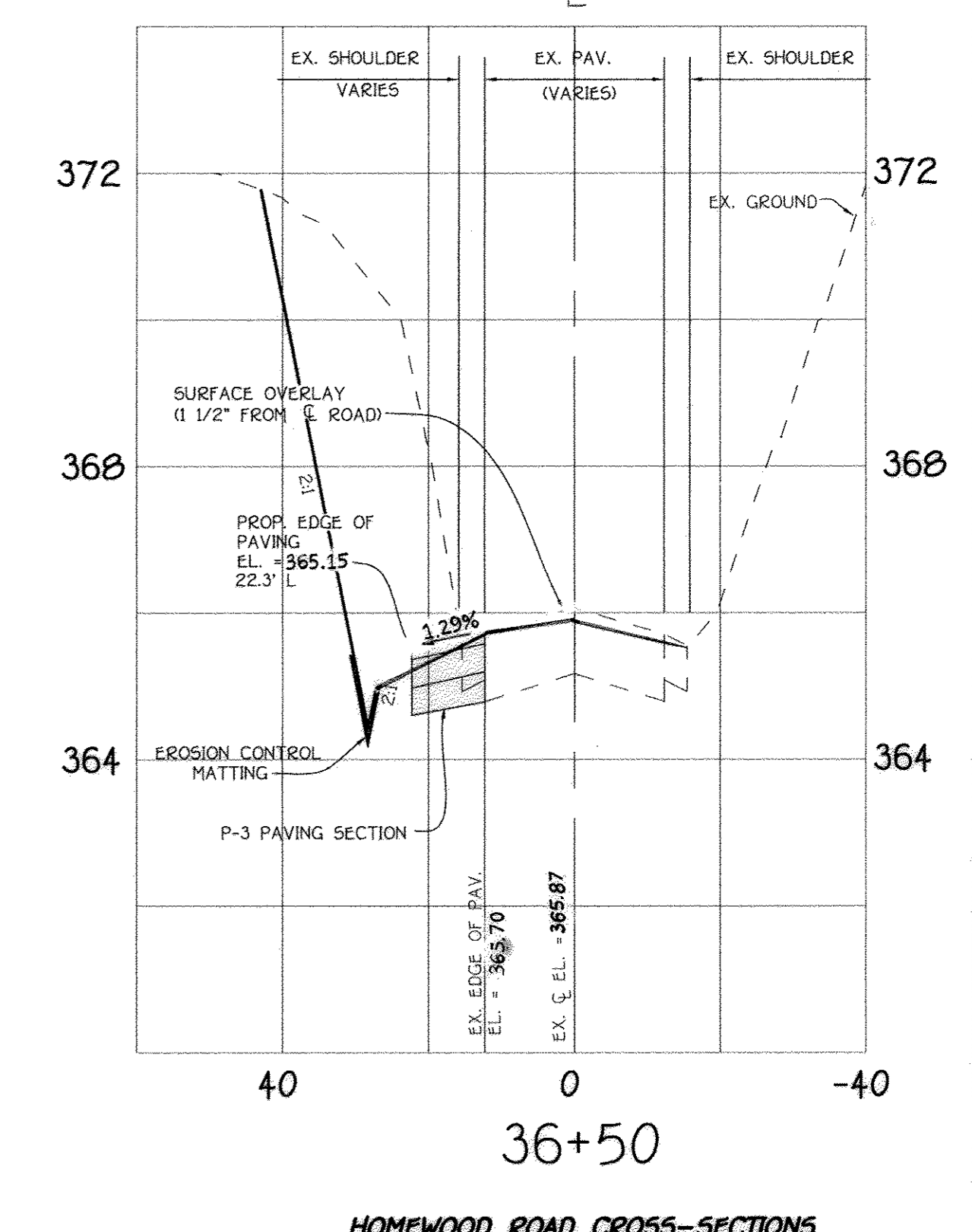
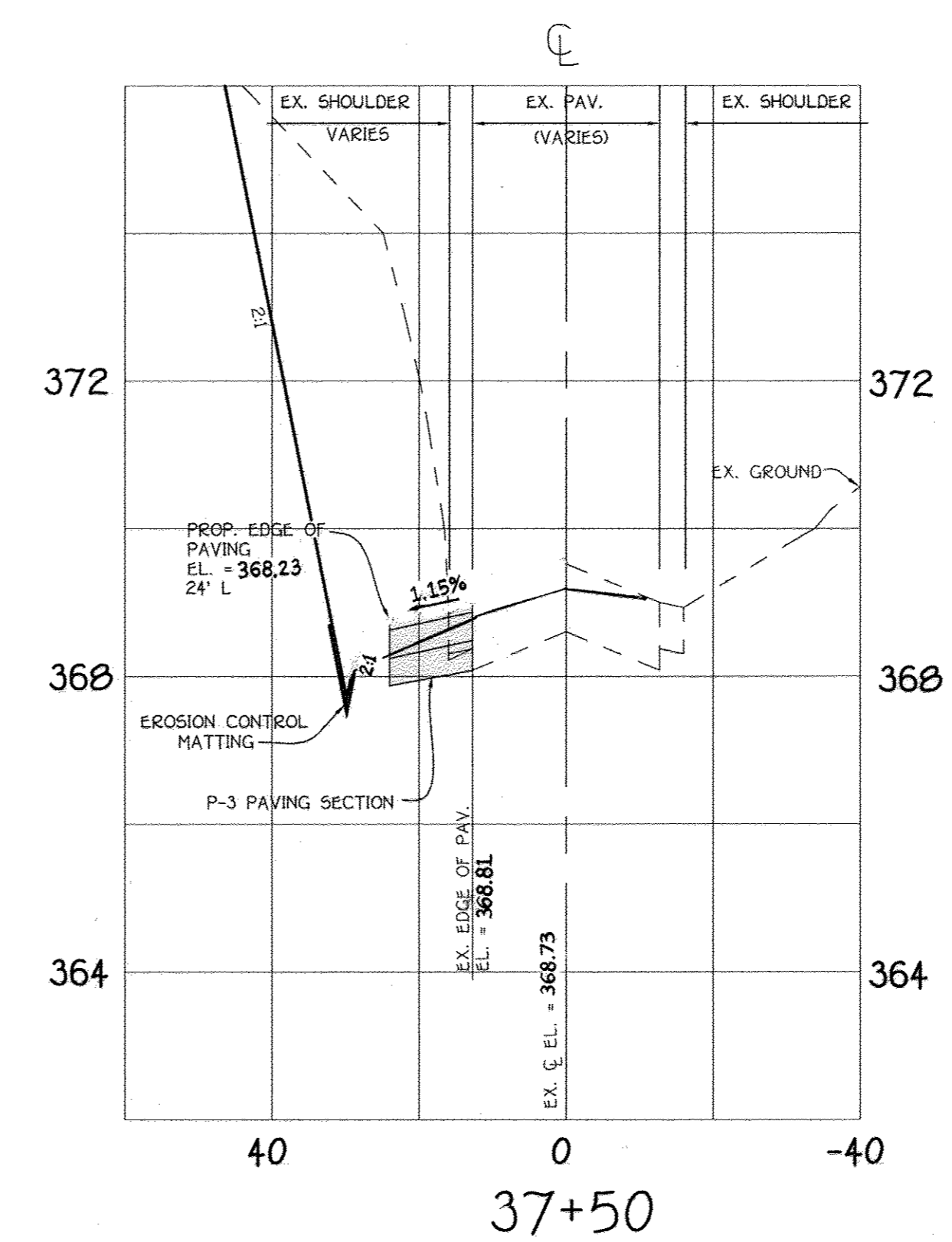
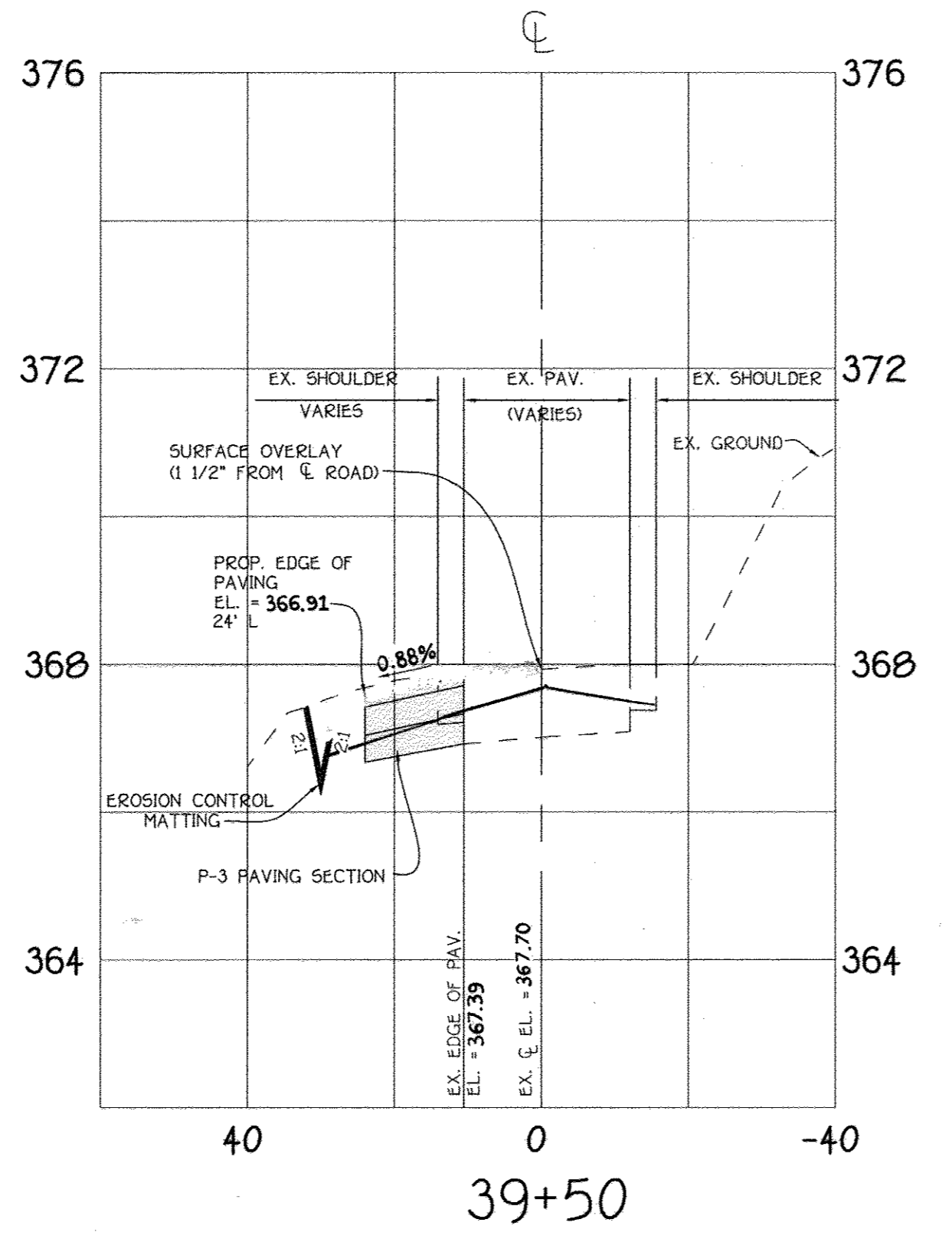
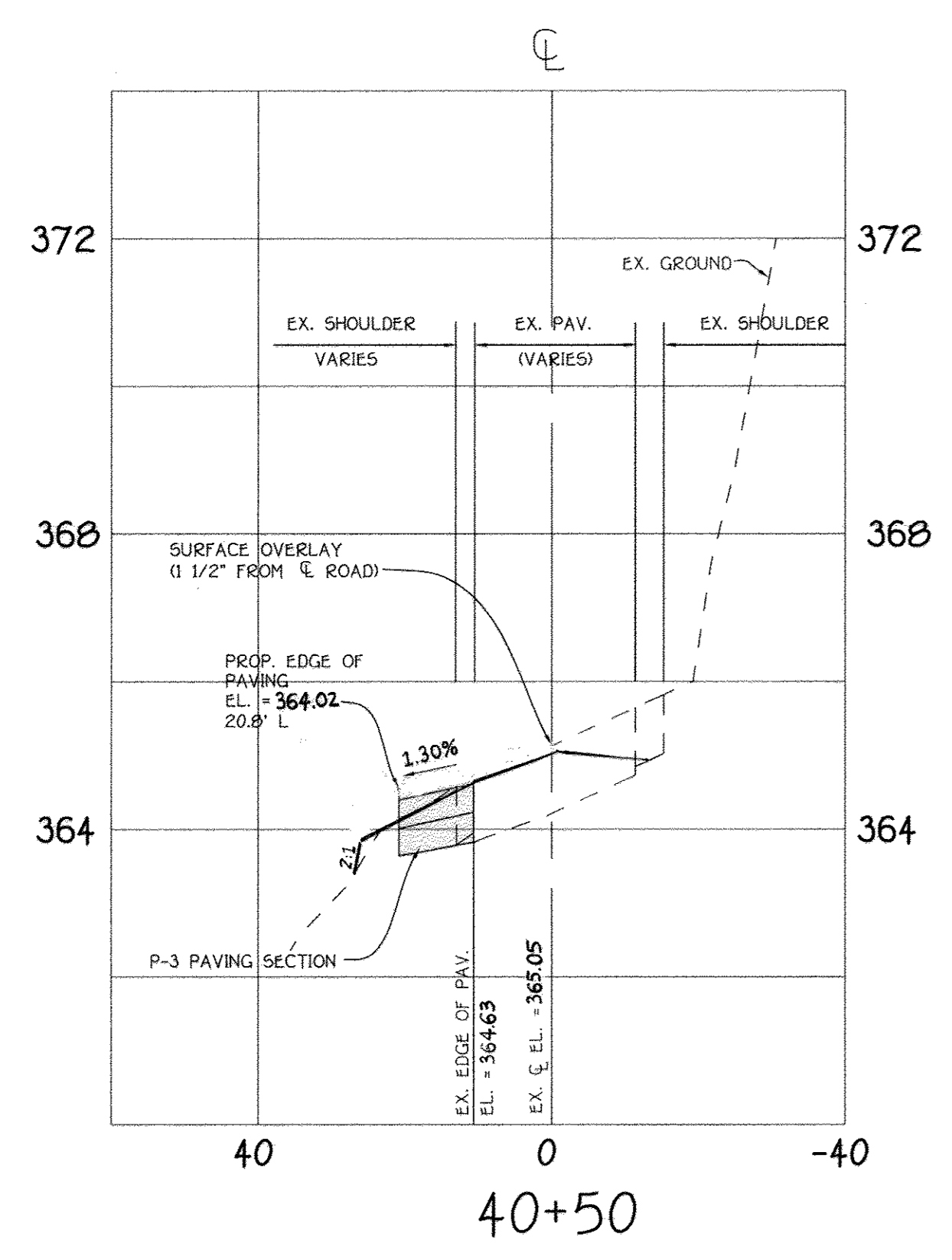
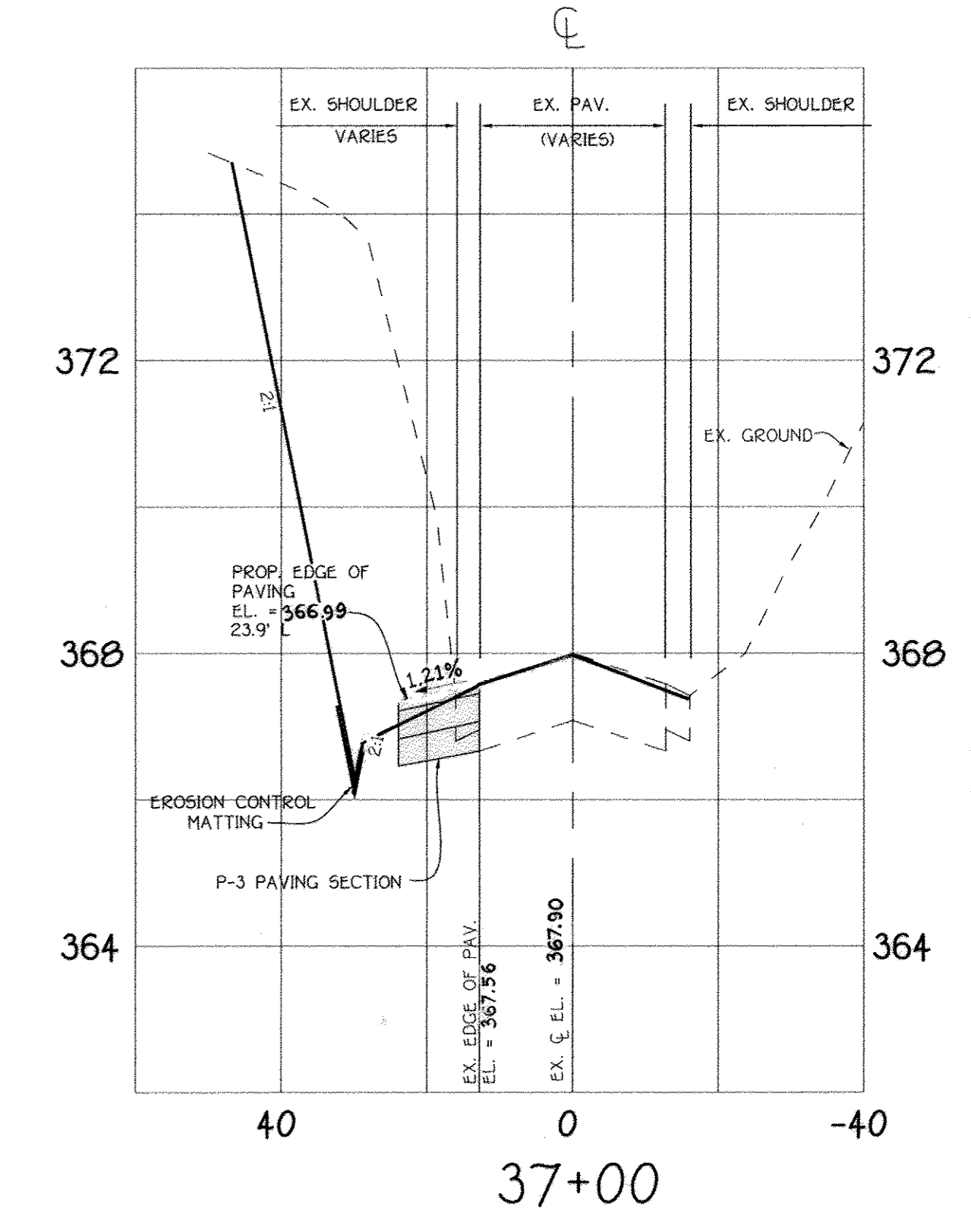
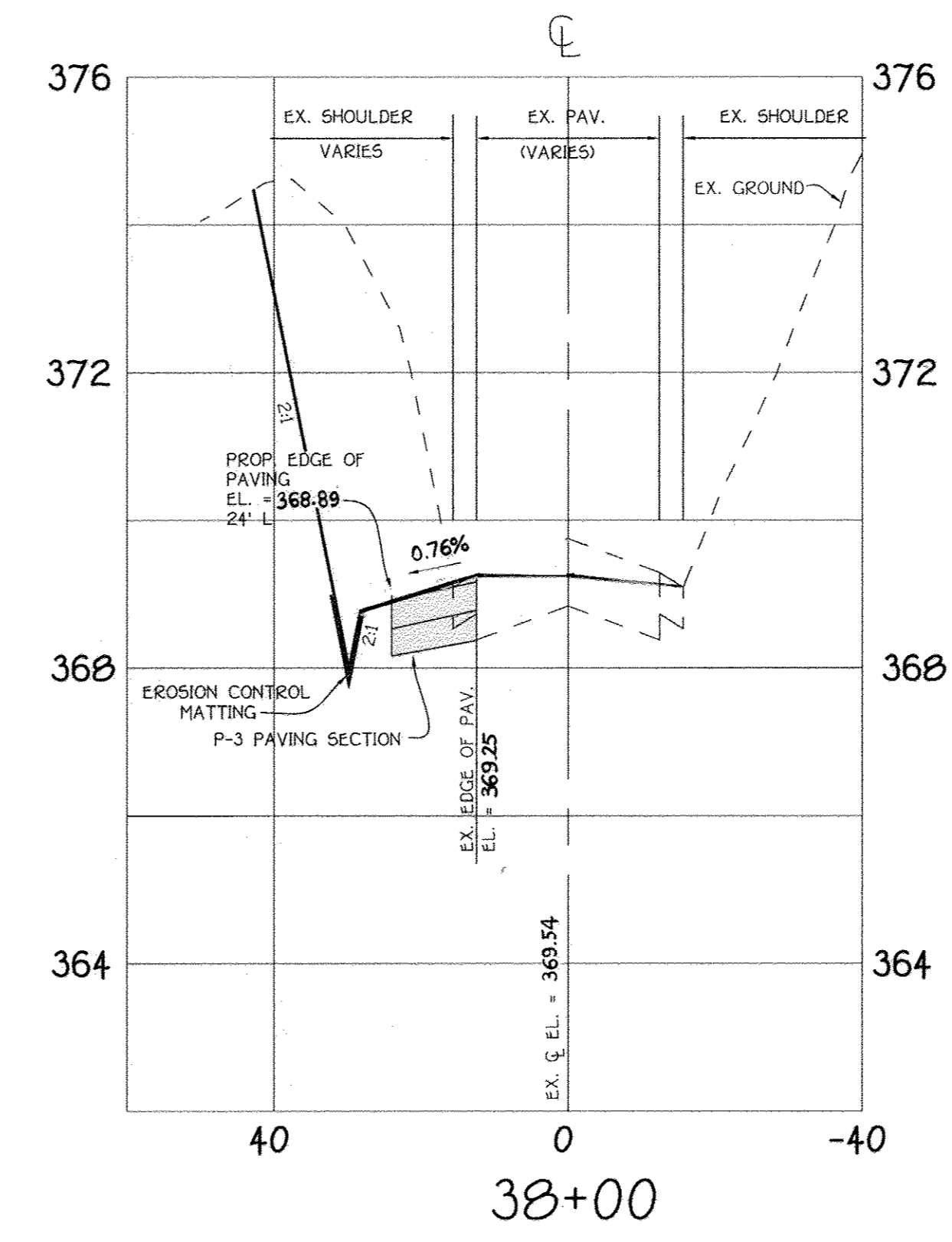
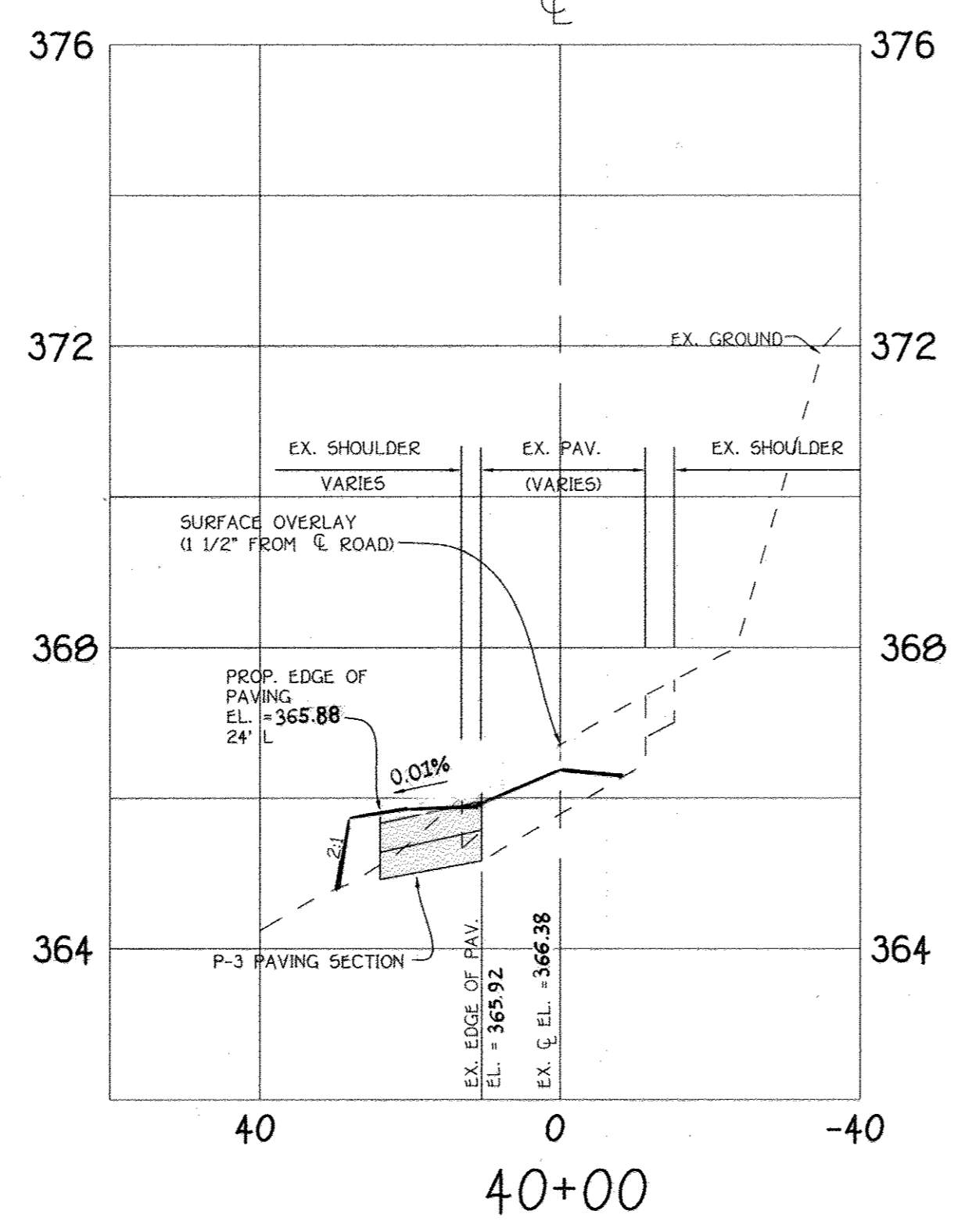
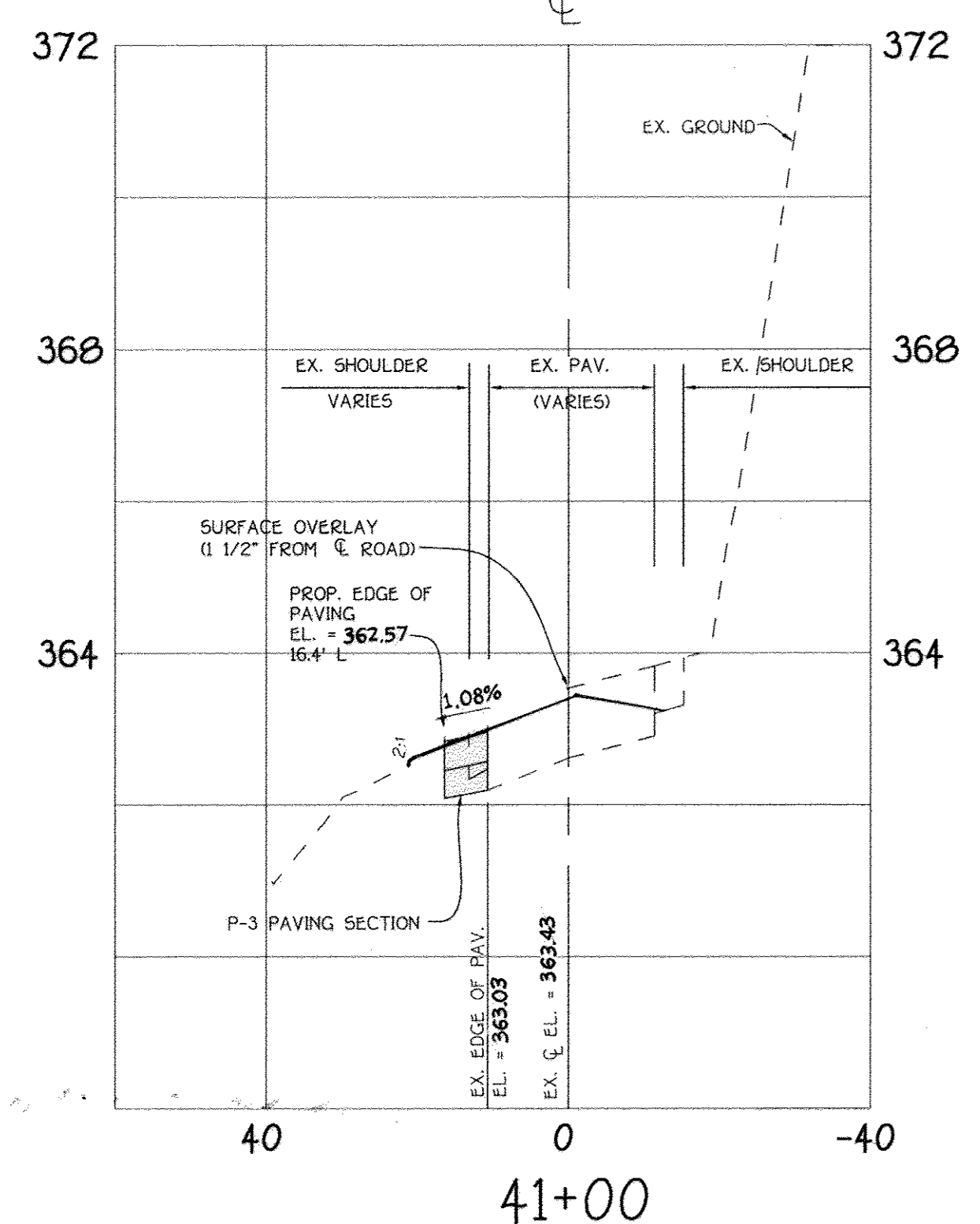


PAVING SECTION P-3
NO SCALE



TYPICAL WIDENING (HOMWOOD ROAD)
NO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. DeBate 9-21-05
 CHIEF, BUREAU OF HIGHWAYS DATE
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/20/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

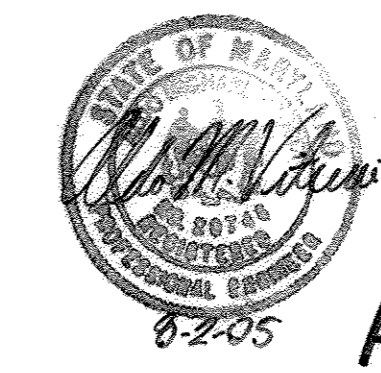


FOR ESE CONSULTANTS, INC.
 AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE No.: 21328

CROSS-SECTIONS

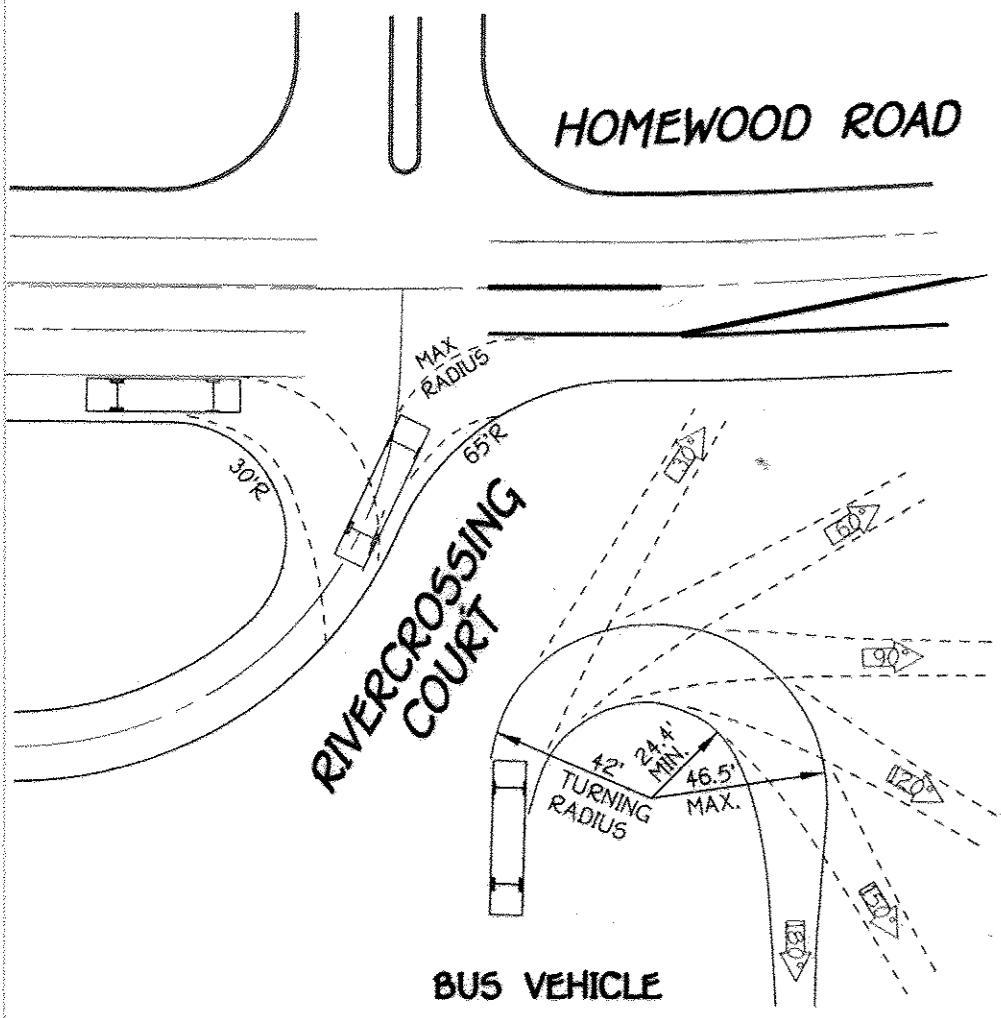
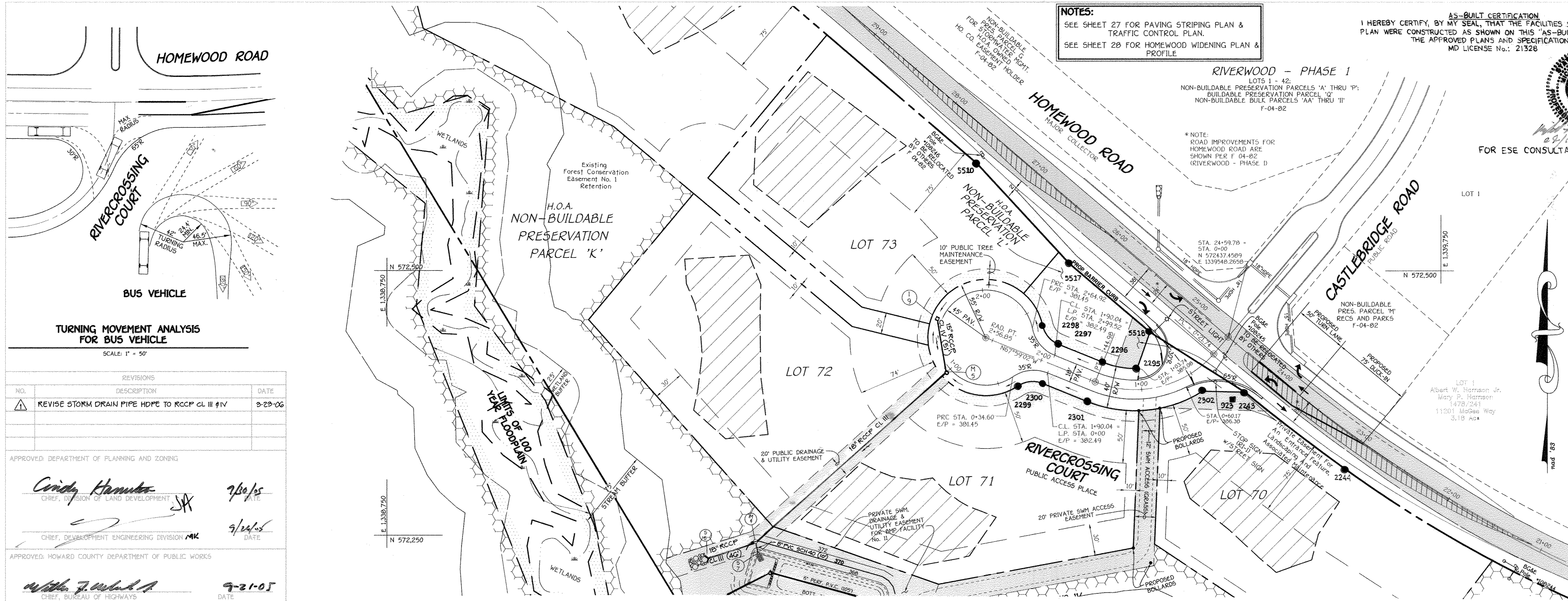
SCALE: HOR. : 1" = 20'
 VER. : 1" = 2'

HOMWOOD ROAD CROSS-SECTIONS
 @ ASHBY COURT
 HOMWOOD CROSSING
 PHASE 2
 LOTS 44 - 79
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'O' and 'J',
 Benedict Farm, Phase One, Plot Nos.)



AS-BUILT

Zoned: RC-DEO
 Tax Map: 29 Grid: 9 Parcel: 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 3 of 30



HOMEWOOD CROSSING PHASE 2
 LOTS 44 - 79,
 BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'

(A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat Nos.)

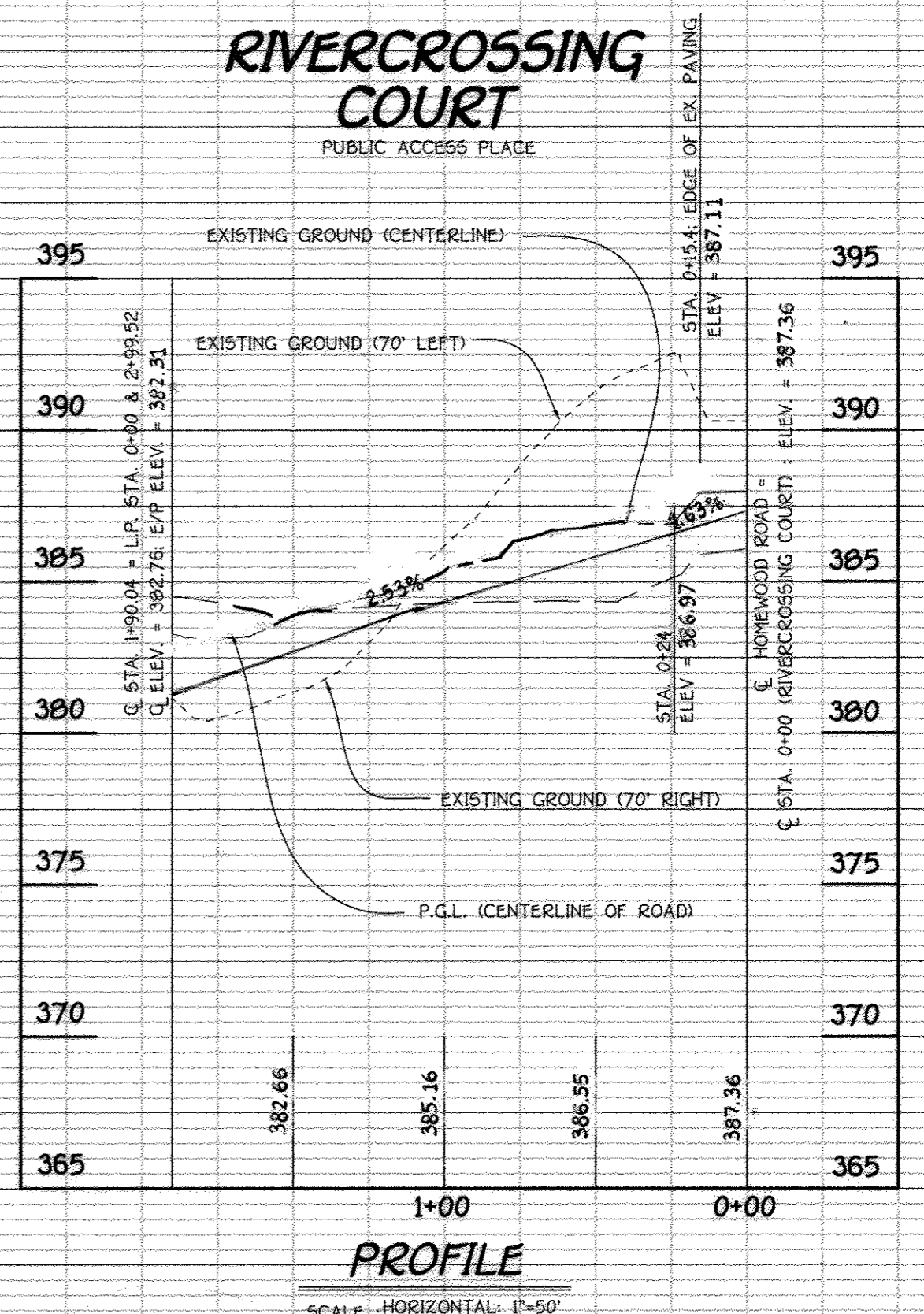
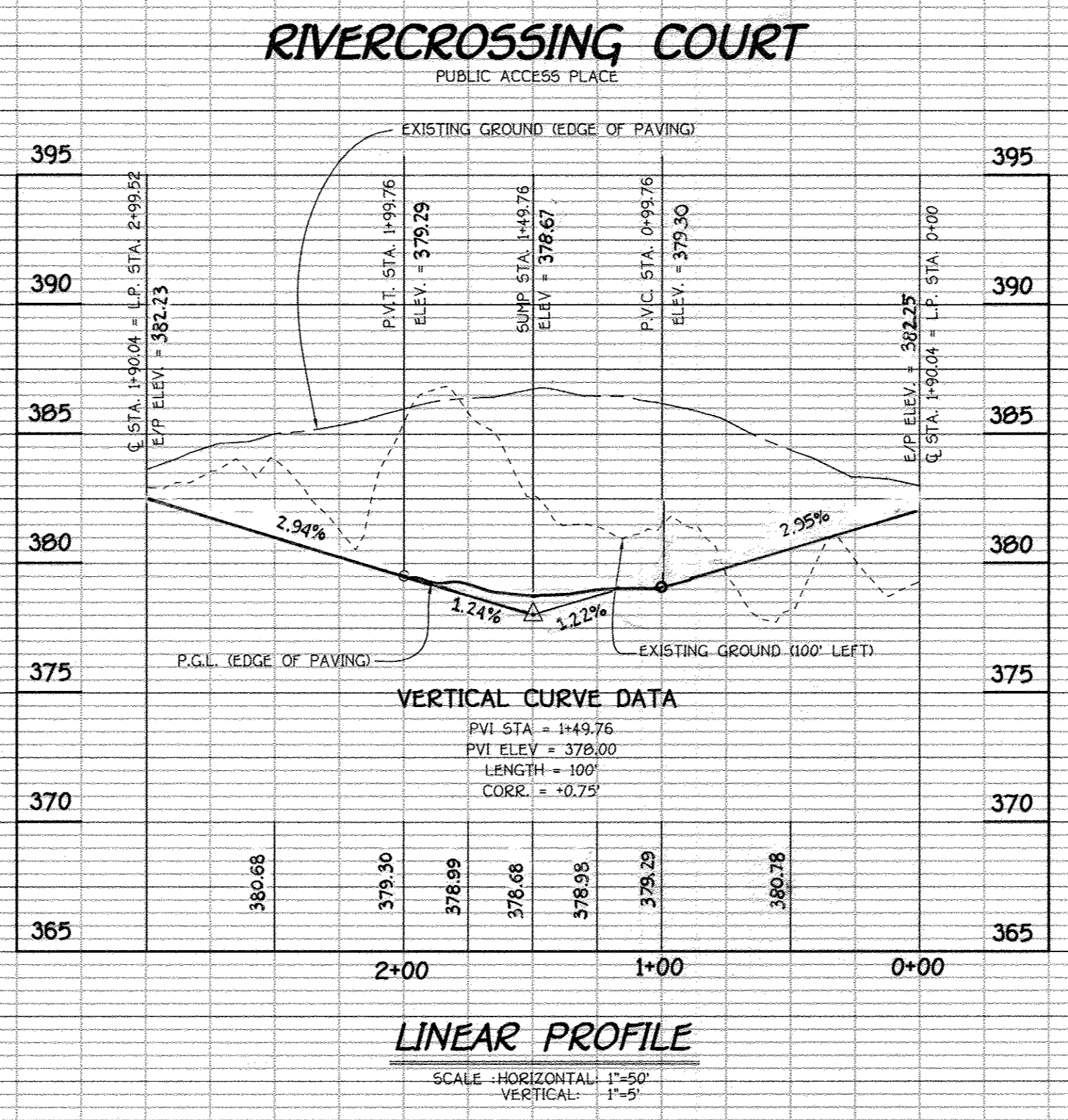
Zoned: RC-DEO
 Tax Map: 29 Grid: 9 Parcel: 2B
 Third Election District
 Howard County, Maryland

RIVERCROSSING COURT
 PLAN AND PROFILE

OWNER	DEVELOPER
MARY CARTER CARROLL ZIEGLER, ETAL. C/O NATALIE ZIEGLER 11352 HOMEWOOD ROAD ELLICOTT CITY, MARYLAND 21042	TOLL BROTHERS, INC. ATTN: MR. SCOTT HARE 7154 COLUMBIA GATEWAY DRIVE, SUITE 230 COLUMBIA, MARYLAND 21046

SCALE: AS SHOWN DATE: AUGUST, 2005 DWG. NO. 6 OF 30
 DES. R.A.I. DRN. J.C.L. CHK. A.M.V.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 3872 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (800) 463-2200





FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS
MD LICENSE No.: 21328

NO.	REVISIONS DESCRIPTION	DATE
1	REVISE STORM DRAIN PIPE HDPE TO RCCP CL III #IV	3-23-05

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT

9/29/05
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

9/16/05
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

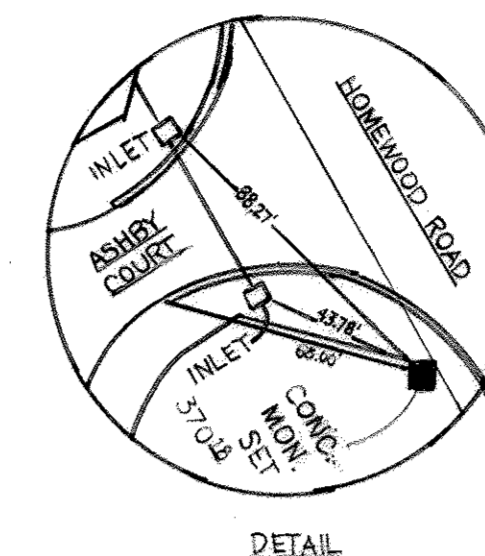
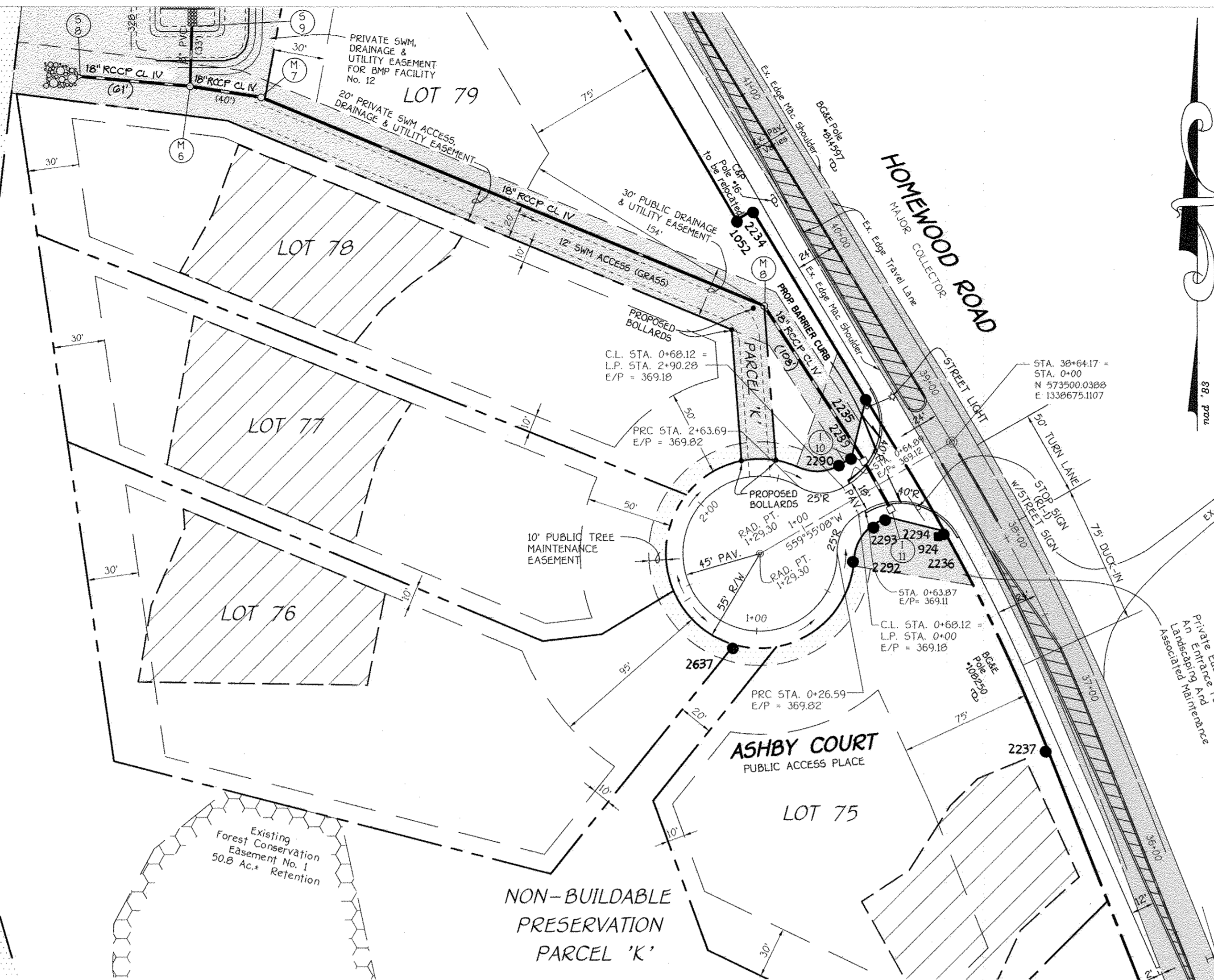
Walter Z. Walsh
CHIEF, BUREAU OF HIGHWAYS

9-21-05
DATE

LIMITS OF 100 YEAR FLOODPLAIN

E 1,338,000
N 573,500

E 1,338,000
N 573,250



DETAIL SCALE: NTS

TURNING MOVEMENT ANALYSIS FOR BUS VEHICLE

SCALE: 1" = 50'

- NOTES:
- SEE SHEET 27 FOR PAVING STRIPING PLAN & TRAFFIC CONTROL PLAN.
 - SEE SHEET 2 FOR HOMEWOOD WIDENING PLAN & PROFILE

HOMEWOOD CROSSING PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'

(A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
Benedict Farm, Phase One, Plat Nos.)

Tax Map: 29 Grid: 9 Parcel: 28
Third Election District: Howard County, Maryland

ASHBY COURT
PLAN AND PROFILE

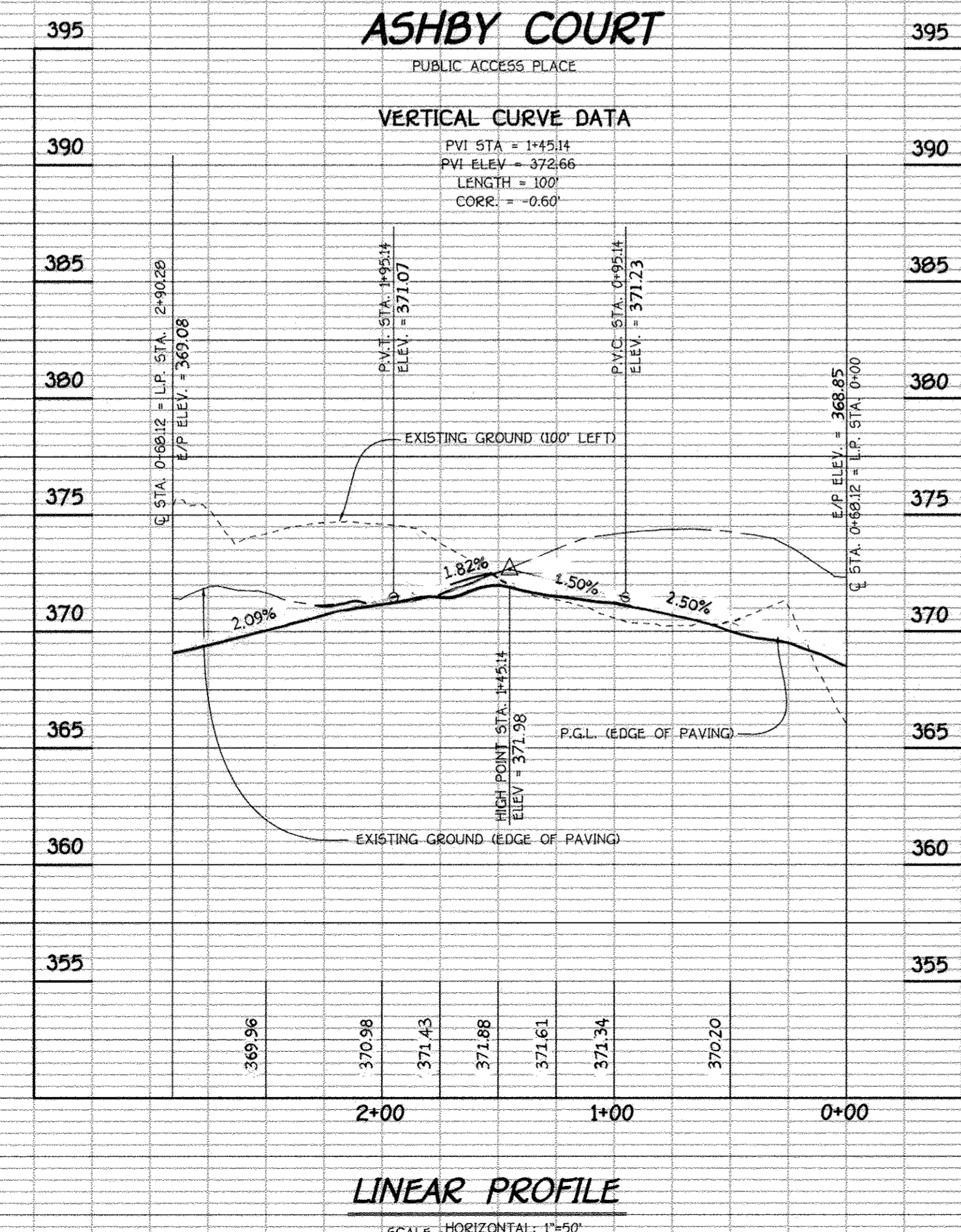
OWNER	DEVELOPER
MARY CARTER CARROLL ZIEGLER, ET AL. C/O NATALIE ZIEGLER 11552 HOMEWOOD ROAD ELLICOTT CITY, MARYLAND 21042	TOLL BROTHERS, INC. ATTN: MR. SCOTT HARE 7164 COLUMBIA GATEWAY DRIVE, SUITE 230 COLUMBIA, MARYLAND 21046

SCALE: AS SHOWN DATE: AUGUST, 2005 DWG. NO. 7 OF 30
D.P.S. R.A.I. DEN. J.C.L. CHK. A.M.V.

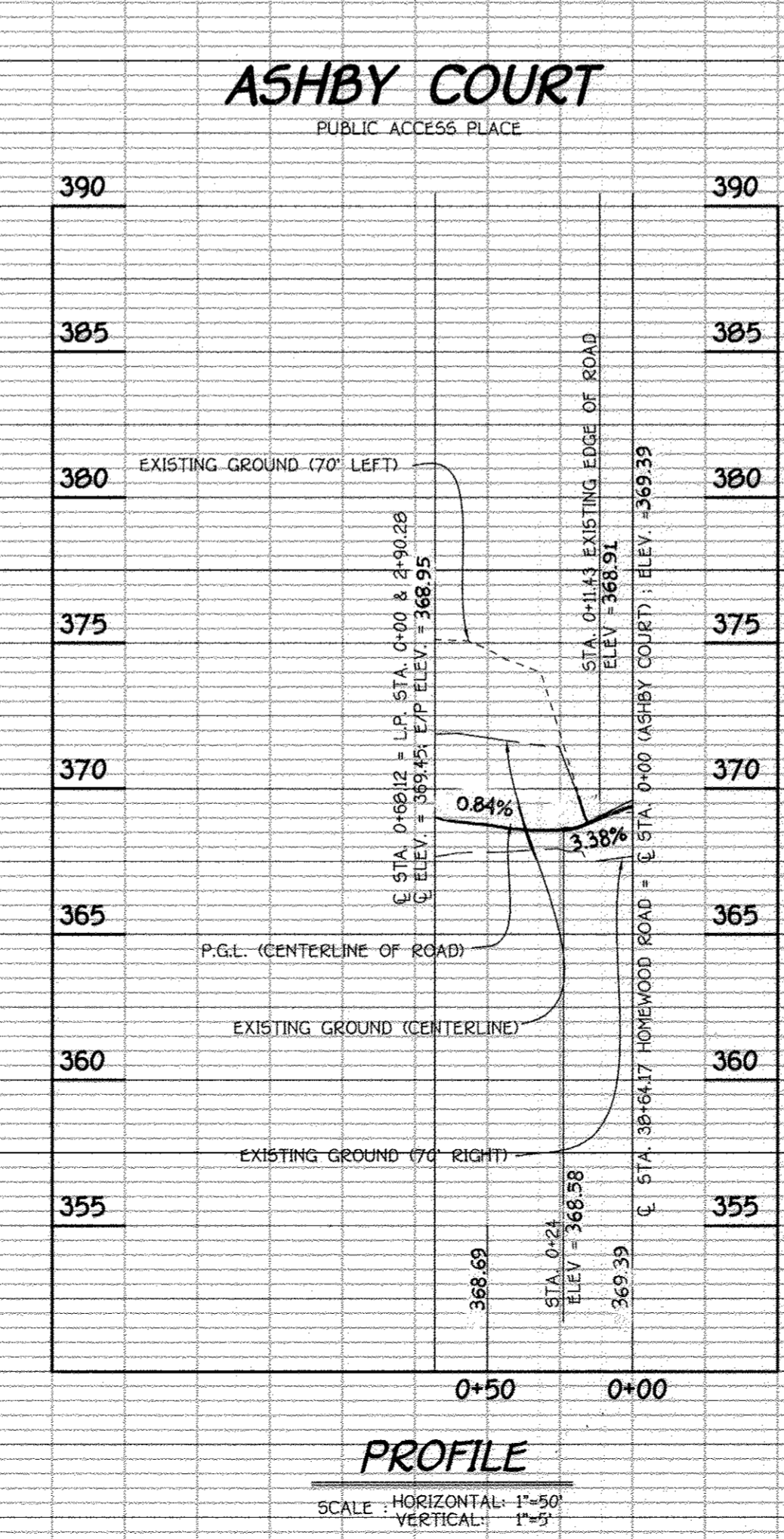
FISHER, COLLINS & CARTER, INC.
REGISTERED PROFESSIONAL ENGINEERS
CENTRAL OFFICE: 3877 SALT POND NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
410-461-2200



PLAN SCALE: 1" = 50'



LINEAR PROFILE SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'



PROFILE SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

AS-BUILT

APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. ... 9-21-05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/21/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/21/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-4 Job #: 02254A

Datum: 426.42 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-24-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-24-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
2.5	Brown, moist, soft sandy silt, trace gravel (ML)	2.5		I	1-2-3	1	12"	No groundwater encountered while drilling
5.0	Brown, moist, stiff sandy silt, trace clay trace gravel (ML)	5.0		I	5-7-8	2	15"	
8.0	Brown, moist to wet, medium dense fine to medium sand trace to little gravel (SP)	8.0		D	8-10-8	3	18"	Caved in at 7.5' at Completion
10.0	Bottom of Hole at 10.0'	10.0		D	4-5-6	4	10"	Caved in at 7.5' after 24 hours

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-2 Job #: 02254A

Datum: 428.24 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-30-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-30-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
2.5	Brown, moist, very soft, clayey silt trace fine sand (MH)	2.5		D	1-1-1	1	13"	No groundwater encountered while drilling
3.0	Brown, moist, loose to dense silty fine sand trace gravel (SM)	3.0		UD	3-20-9	2	11"	
3.5		3.5		D	3-5-7	3	14"	Caved in at 7.0' at Completion
9.5		9.5		D	9-6-4	4	10"	Caved in at 7.0' after 24 hours
10.0	Bottom of Hole at 10.0'	10.0						

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-3 Job #: 02254A

Datum: 424.57 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-29-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-29-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
1.0	Brown, moist, loose to medium dense silty medium sand trace gravel (SM)	1.0		UD	2-2-3	1	13"	No groundwater encountered while drilling
5.5		5.5		D	5-5-5	2	18"	
7.5		7.5		D	2-3-3	3	15"	Caved in at 6.5' after 24 hours
8.0		8.0		D	2-3-5	4	8"	Caved in at 7.5' at Completion
10.0	Bottom of Hole at 10.0'	10.0						

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-4 Job #: 02254A

Datum: 426.72 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-24-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-24-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
2.5	Brown, moist, loose to medium dense fine sand and gravel trace silt (SP-GP)	2.5		D	2-4-5	1	16"	No groundwater encountered while drilling
5.0		5.0		D	5-8-10	2	15"	
7.5		7.5		D	8-7-8	3	17"	Caved in at 6.5' at Completion
8.0	Brown, moist, medium stiff micaceous clayey silt, trace fine sand (MH)	8.0		D	2-3-3	4	14"	Caved in at 8.0' after 24 hours
10.0	Bottom of Hole at 10.0'	10.0						

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-5 Job #: 02254A

Datum: 426.47 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-24-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-24-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
2.5	Brown, moist, medium stiff clayey fine sand trace gravel (SC)	2.5		I	2-3-5	1	13"	No groundwater encountered while drilling
4.5	Brown to gray, moist, very loose to medium dense micaceous silty fine sand (SM)	4.5		D	4-4-6	2	15"	
7.0		7.0		I	3-4-7	3	14"	Caved in at 7.0' at Completion
10.0		10.0		UD	2-2-2	4	12"	Caved in at 7.0' after 24 hours
10.0	Bottom of Hole at 10.0'	10.0						

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-6 Job #: 02254A

Datum: 425.06 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-24-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-24-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
2.5	Brown, moist, medium stiff silty clay trace fine sand (CL)	2.5		I	2-2-4	1	10"	No groundwater encountered while drilling
4.5	Brown and gray, moist, medium stiff to very stiff micaceous silt trace fine sand trace gravel (ML)	4.5		D	4-4-7	2	18"	
6.5		6.5		D	6-12-4	3	18"	Caved in at 7.0' at Completion
10.0		10.0		D	2-3-3	4	11"	Caved in at 7.0' after 24 hours
10.0	Bottom of Hole at 10.0'	10.0						

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-7 Job #: 02254A

Datum: 425.29 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-29-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-29-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
2.5	Brown, moist, loose to medium dense silty fine sand (SM)	2.5		D	2-3-3	1	10"	
6.0		6.0		D	6-6-7	2	17"	
6.5	Brown to tan, moist, medium dense to dense fine sand and gravel (SP-GP)	6.5		D	6-12-13	3	18"	Caved in at 7.0' at Completion
10.0		10.0		D	6-12-12	4	15"	Caved in at 8.0' after 24 hours
10.0	Bottom of Hole at 10.0'	10.0						

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-8 Job #: 02254A

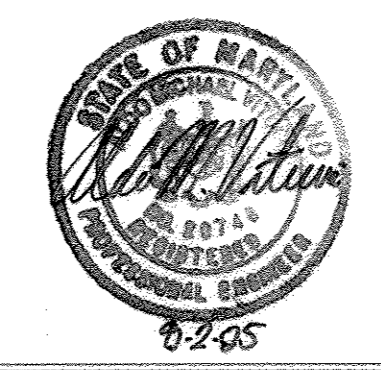
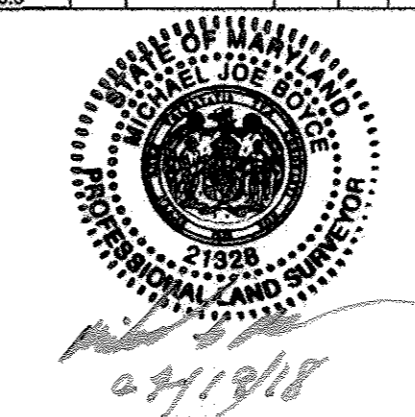
Datum: 420.83 Surf. Elev. Hammer Drop: 30 Hammer Wt.: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith Date Started: 05-29-02 Pipe Size: 2.0 inches OD Boring Method: HSA Inspector Completed: 05-29-02

ELEV.	SOIL DESCRIPTION	DEPTH	SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
0.0	SURFACE	0.0						3" Topsoil
2.5	Brown, moist, very loose to loose silty fine sand (SM)	2.5		DI	2-2-2	1	10"	
3.5		3.5		D	2-3-3	2	16"	
7.0		7.0		D	3-4-6	3	15"	Groundwater encountered at 8.0' while drilling
10.0		10.0		D	2-3-5	4	8"	Caved in at 7.5' after 24 hours
10.0	Bottom of Hole at 10.0'	10.0						Caved in at 8.0' at Completion

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

Owner
 MARY CARTER CARROLL ZIEGLER, ET AL.
 C/O NATALIE ZIEGLER
 11522 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

Developer
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HAZEL
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046



FOR ESE CONSULTANTS, INC.
 THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
 MD LICENSE No.: 21328

SOIL BORINGS
 HOMEWOOD CROSSING
 PHASE 2
 LOTS 44 - 79
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat Nos.)
 Zoned: RC-DEO
 Tax Map: 29 Grid: 9 Parcel: 2B
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 8 of 30

AS-BUILT

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 9-24-05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/24/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION *MC* 9/26/05 DATE

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-9 Job #: 02254A

Datum: 421.80 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-23-02
 Date Started: 05-23-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						0" Topsoil
	Brown, moist medium stiff silt (ML)	2.5		I	2-3-3	1	11"	
	Tan to brown, moist, medium dense micaceous silty fine sand (SM)	5.0		I	4-5-6	2	17"	
	Brown, moist, loose silty fine sand, trace mica (SM)			D	3-2-7	3	18"	Caved in at 7.5' at Completion
		10.0		D	2-3-3	4	12"	Groundwater encountered at 8.5' while drilling
	Bottom of Hole at 10.0'							

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-26 Job #: 02254A

Datum: 329.32 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Jerry Malecki
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-24-02
 Date Started: 05-24-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						0" Topsoil
	Brown, moist, loose to medium dense micaceous silty fine sand (SM)				3-3-3	1	0"	No groundwater encountered while drilling
					6-6-8	2	11"	Caved in at 3.5' at Completion
					5-5-6	3	12"	Caved in at 3.5' after 24 hours
		10.0			4-5-6	4	14"	
	Bottom of Hole at 10.0'							Backfilled after 24 hours

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-27 Job #: 02254A

Datum: 329.38 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Jerry Malecki
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-24-02
 Date Started: 05-24-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						0" Topsoil
	Brown, moist, loose to medium dense micaceous silty fine sand trace gravel (SM) (USDA: Loamy Sand)				2-3-4	1	14"	No groundwater encountered while drilling
					3-4-4	2	11"	Caved in at 3.5' at Completion
					8-9-9	3	10"	Caved in at 4.0' after 24 hours
		10.0			8-10-14	4	12"	
	Bottom of Hole at 10.0'							

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-28 Job #: 02254A

Datum: 329.25 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Jerry Malecki
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-24-02
 Date Started: 05-24-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						0" Topsoil
	Brown, moist, medium stiff clayey, silt, trace fine sand (MH)				3-3-3	1	14"	Caved in at 2.10' at Completion
	Brown, moist, loose micaceous silty fine sand (SM)	3.0			3-3-4	2	12"	Caved in at 3.0' after 24 hours
	Brown, moist, hard clayey silt trace fine sand (MH)	6.0			3-3-3	3	12"	
		10.0			3-3-30	4	15"	
	Bottom of Hole at 10.0'							Backfilled after 24 hours

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-29 Job #: 02254A

Datum: 330.08 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-28-02
 Date Started: 05-28-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						0" Topsoil
	Brown moist medium stiff clayey silt trace fine sand (MH)	2.5		I	2-2-5	1	13"	No groundwater encountered while drilling
	Brown moist medium dense silty fine sand (SM)	5.0		D	6-7-8	2	18"	
	Tan dry very dense fine sand trace rock fragments (SP) (Decomposed Rock)			D	51/8"	3	6"	Caved in at 7.0' at Completion
		8.5		D	32-51/8"	4	12"	Caved in at 6.5' after 24 hours
	Bottom of Hole at 8.5'							

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-30 Job #: 02254A

Datum: 331.57 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-28-02
 Date Started: 05-28-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						4" Topsoil
	Brown moist medium stiff clayey silt trace fine sand (MH)	2.5		UD	2-3-4	1	10"	No groundwater encountered while drilling
	Brown moist loose to medium dense micaceous silty fine sand (SM)			I	4-4-6	2	15"	
				UD	8-11-13	3	18"	Caved in at 7.0' at Completion
		10.0		D	12-17-21	4	14"	Caved in at 7.5' after 24 hours
	Bottom of Hole at 10.0'							

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-31 Job #: 02254A

Datum: 370.28 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-31-02
 Date Started: 05-31-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

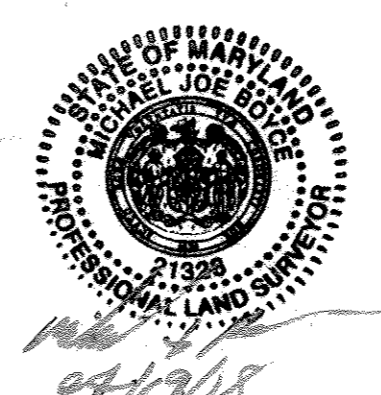
ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						0" Topsoil
	Brown moist very soft silty clay trace fine sand (CL)			UD	1-1-2	1	13"	No groundwater encountered while drilling
	Brown moist loose micaceous silty fine sand (SM)			D	3-3-4	2	15"	
	Tan moist medium dense fine sand trace to little gravel (SP)			D	7-12-12	3	18"	Caved in at 7.0' at Completion
		10.0		D	7-10-9	4	15"	Caved in at 6.0' after 24 hours
	Bottom of Hole at 10.0'							

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. Page 1 of 1
 RECORD OF SOIL EXPLORATION

Project Name: Benedict Farm SWM Location: Howard County, Maryland Boring Number: B-32 Job #: 02254A

Datum: 358.70 Hammer Wt: 140 Lbs. Hole Diameter: 6" Foreman: Lamont Smith
 Surf. Elev.: Hammer Drop: 30 Inches Rock Core Dia.: Inspector: Completed: 05-31-02
 Date Started: 05-31-02 Pipe Size: 2.0 Inches OD Boring Method: HSA

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Size, Proportion	DEPTH DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
	SURFACE	0.0						0" Topsoil
	Brown moist very loose to loose micaceous silty fine sand (SM)			D	2-2-2	1	12"	No groundwater encountered while drilling
				D	2-3-4	2	17"	
				D	2-3-3	3	14"	Caved in at 7.0' at Completion
		10.0		D	2-3-4	4	15"	Caved in at 7.0' after 24 hours
	Bottom of Hole at 10.0'							



SOIL BORINGS
 HOMEWOOD CROSSING
 PHASE 2
 LOTS 44 - 79,
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, P181 Nos.)
 Tax Map: 29 Grid 9 Parcel 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 9 of 30

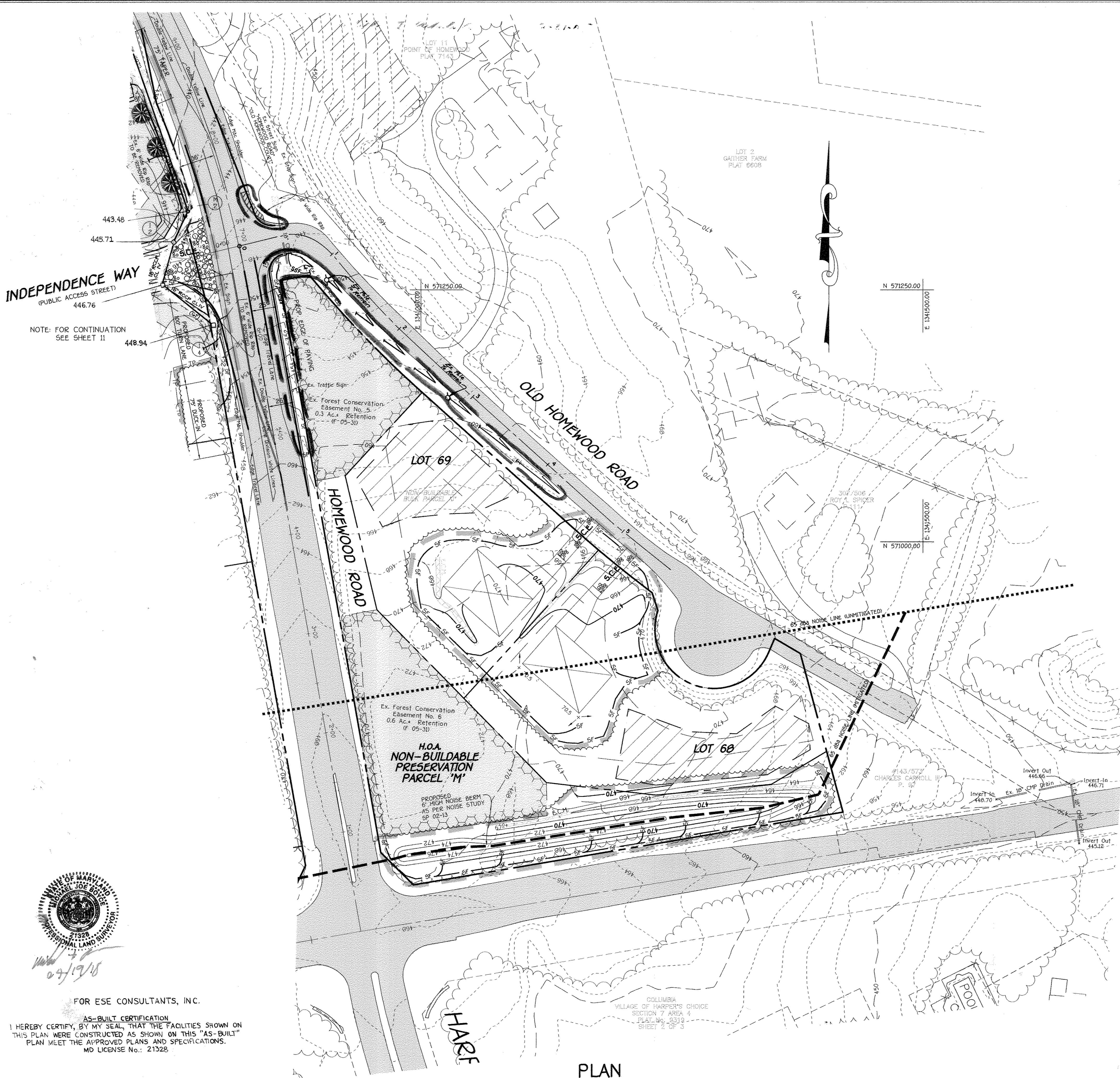
FOR ESE CONSULTANTS, INC.
 THERE IS NO "AS-BUILT" INFORMATION
 PROVIDED ON THIS SHEET
 MD LICENSE No.: 21328

AS-BUILT

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10770 SA THORPE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 410.461.2959

Owner
 MARY CARTER CARROLL ZIEGLER, ET AL.
 C/O NATALIE ZIEGLER
 11352 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

Developer
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARE
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046



LEGEND

- SSP—SSP—SSP— SUPER-SILT FENCE
- SF—SF—SF— SILT FENCE
- TP—TP—TP— TREE PROTECTION FENCE
- [S.C.E. BOX] STABILIZED CONSTRUCTION ENTRANCE
- EARTH DIKE
- DENOTES L.O.D. LIMITS OF DISTURBANCE
- [E.C.M. HATCH] DENOTES EROSION CONTROL MATTING
- [DIAGONAL HATCH] DENOTES 25% OR GREATER SLOPES
- [DOTTED HATCH] DENOTES 15% - 24.9% SLOPES

NOTE: FOR SEQUENCE OF CONSTRUCTION SEE SHEET 20

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.

Douglas C. Shippe V.P. 8-2-05
 Signature Of Developer Date
 Douglas C. Shippe
 Printed Name Of Developer

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Advised The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Asa M. Williams 8-2-05
 Signature Of Engineer Date
 Asa M. Williams
 Printed Name Of Engineer

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

USDA-Natural Resources Conservation Service 8/16/05
 Approved: *Jim Myers* 8/16/05
 Chief, Bureau Of Highways Date

Howard Soil Conservation District 8/16/05
 Approved: *Robert A. ...* 8/16/05
 Chief, Bureau Of Highways Date

Approved: Department Of Public Works 9-21-05
William J. ... 9-21-05
 Chief, Bureau Of Highways Date

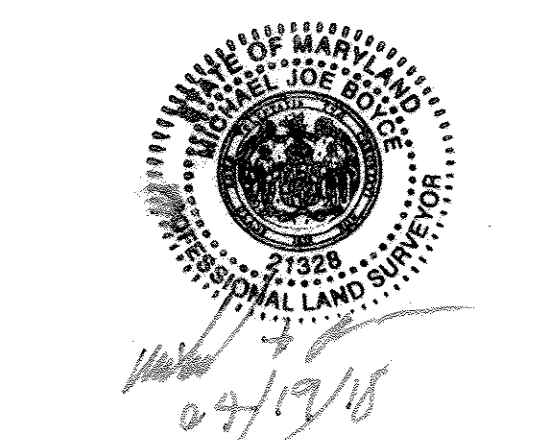
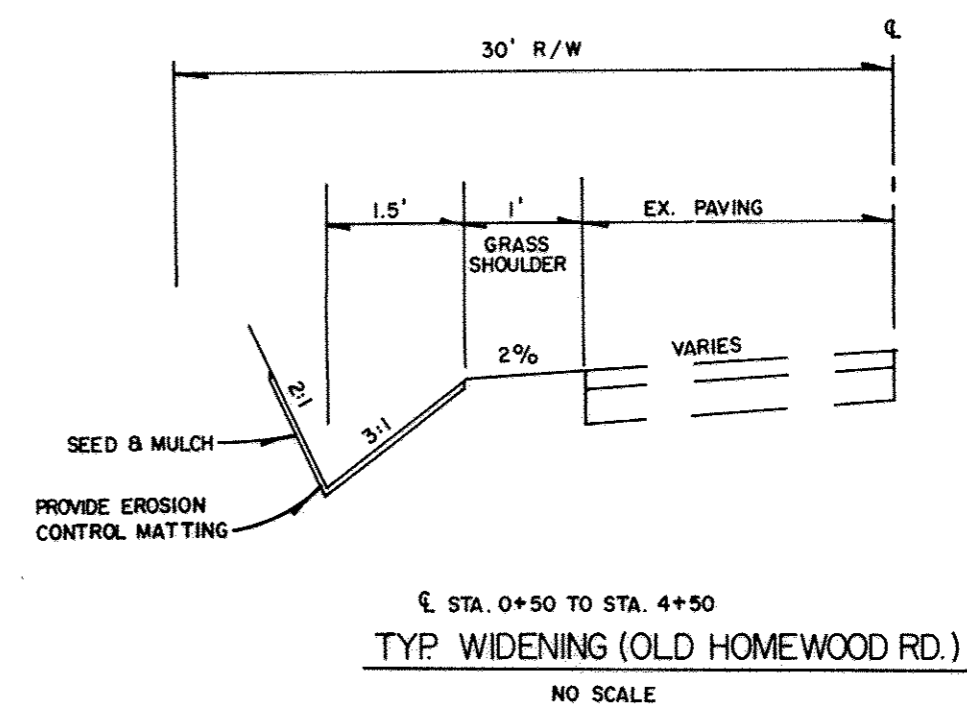
Approved: Department Of Planning And Zoning 9/26/05
Candice ... 9/26/05
 Chief, Division Of Land Development Date
 Chief, Development Engineering Division MK Date

AS-BUILT CERTIFICATION
 I Herby 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 State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISE STORM DRAIN PIPE HDPE TO RCCP CL III # IV	9-23-06



FOR ESE CONSULTANTS, INC.
 AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE No.: 21328

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL OFFICE: 1072 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 MD LICENSE NO. 2895

PLAN
 SCALE: 1" = 50'

OWNER
 MARY CARTER CARROLL ZIEGLER, ETAL.
 C/O NATALIE ZIEGLER
 11262 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARRIS
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046



STREET TREE, GRADING & SEDIMENT CONTROL PLAN
HOMWOOD CROSSING
PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J', Benedict Farm, Phase One, Plat Nos.)
 Zone: RC-DEO
 Tax Map: 29 Grid: 9 Parcel: 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 10 of 30

AS-BUILT

8-2-05

F 05-69

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: *Shane C. Shippe* V.P.
 Date: 8-3-05
 Printed Name Of Developer: *Shane C. Shippe*

By The Engineer:
 "I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible 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 Noted That The Developer (That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction) Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion."

Signature of Engineer: *David A. ...*
 Date: 8-2-05
 Printed Name Of Engineer: *David A. ...*

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: *Jim ...* Date: 8/10/05
 Title: *...*

USDA-Natural Resources Conservation Service
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

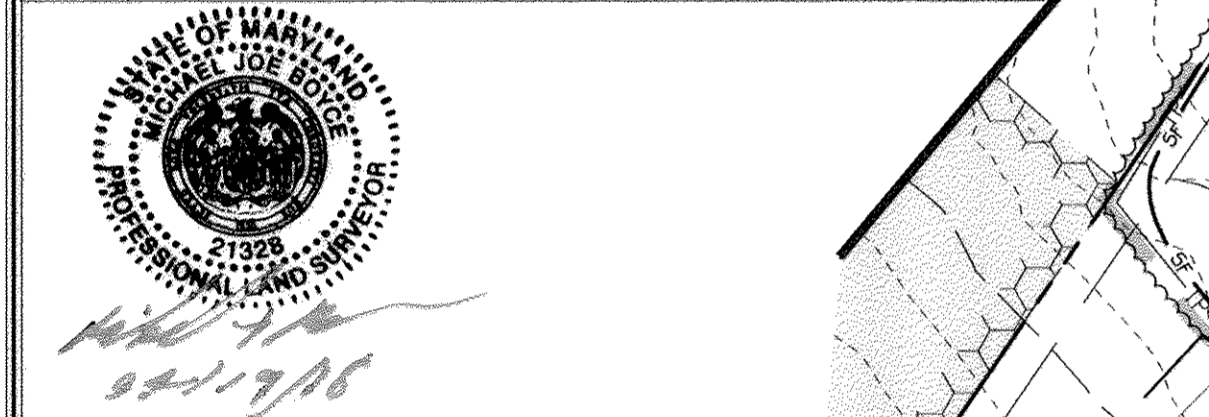
Signature: *...* Date: 8/10/05
 Title: *...*

AS-BUILT CERTIFICATION
 I Herby 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 State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

NO.	REVISIONS	DESCRIPTION	DATE



FOR ESE CONSULTANTS, INC.
 AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE No.: 21328

TEMPORARY SEDIMENT BASIN No. B
 INITIAL D.A. = 7.00 Ac.
 FINAL D.A. = 7.00 Ac.
 STORAGE REQUIRED
 WET = 1800 x 7.0 = 12,600 Cuft.
 DRY = 1800 x 7.0 = 12,600 Cuft.
 STORAGE PROVIDED
 WET = 12,600 Cuft. @ ELEV. 420.20
 DRY = 15,921 Cuft. @ ELEV. 422.75
 BOTTOM ELEV. = 416.50
 STORAGE DEPTH = 3.56'
 TOP OF EMBANKMENT = 424.25
 CLEAN OUT ELEV. = 419.25
 RISER CREST ELEV. = 422.75
 1 YR. ORIFICE INV. = 420.20
 Q1 exist. = 0.11 c.f.s.
 Q1 prop. = 0.09 c.f.s.

OWNER
 MARY CARTER CARROLL ZIEGLER, ETAL.
 C/O NATALIE ZIEGLER
 11352 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARRIS
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046

FISHER, COLLINS & CARTER, INC.
 ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK, 10719 BAL THORNE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 4103 401 - 2899

Approved: Department Of Public Works
 Signature: *Walter Z. ...* Date: 9-21-05
 Title: Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
 Signature: *Cindy ...* Date: 9/21/05
 Title: Chief, Division Of Land Development

Signature: *...* Date: 9/21/05
 Title: Chief, Development Engineering Division

LEGEND

- SSP - SUPER-SILT FENCE
- SF - SILT FENCE
- TP - TREE PROTECTION FENCE
- G.I.P. - GABION INFLOW PROTECTION
- S.C.E. - STABILIZED CONSTRUCTION ENTRANCE
- E.D. - EARTH DIKE
- L.O.D. - DENOTES LIMITS OF DISTURBANCE
- E.C.M. - DENOTES EROSION CONTROL MATTING
- 25% - DENOTES 25% OR GREATER SLOPES
- 15X - DENOTES 15X - 24.9X SLOPES
- R.P.S. - DENOTES REMOVABLE PUMPING STATION, HOSE & FILTER BAG



TEMPORARY SEDIMENT BASIN No. 9
 INITIAL D.A. = 7.02 Ac.
 FINAL D.A. = 7.02 Ac.
 STORAGE REQUIRED
 WET = 1800 x 7.02 = 12,636 Cuft.
 DRY = 1800 x 7.02 = 12,636 Cuft.
 STORAGE PROVIDED
 WET = 12,636 Cuft. @ ELEV. 422.25
 DRY = 12,600 Cuft. @ ELEV. 424.40
 BOTTOM ELEV. = 419.00
 STORAGE DEPTH = 6.23'
 TOP OF EMBANKMENT = 428.00
 CLEAN OUT ELEV. = 420.70
 RISER CREST ELEV. = 425.25
 1 YR. ORIFICE INV. = 423.95
 Q1 exist. = 1.18 c.f.s.
 Q1 prop. = 1.03 c.f.s. (NON-EROSIVE)

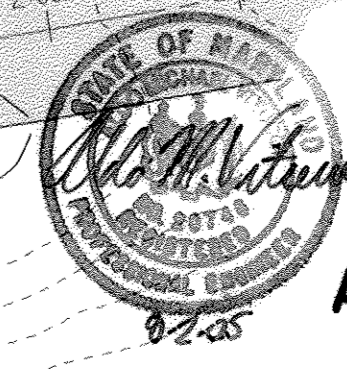
NOTE: SEE SHEET 23 FOR FINAL GRADING OF B.M.P. FACILITY NO. 9 AND NO WOODY VEGETATION ZONE

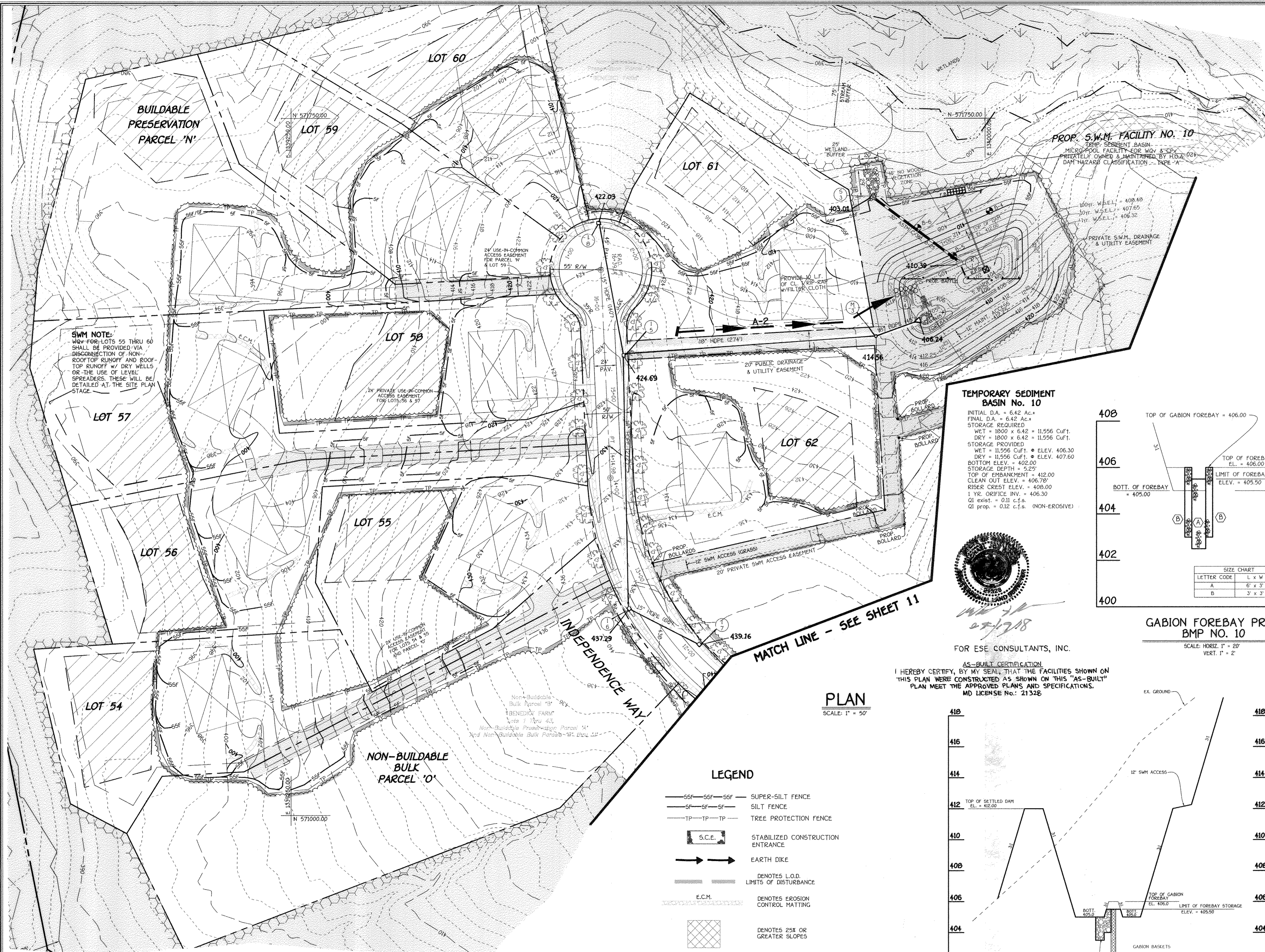
NOTE: SEE SHEET 23 FOR STORM DRAIN OUTFALL FROM M-1 TO S-2.

PLAN
 SCALE: 1" = 50'

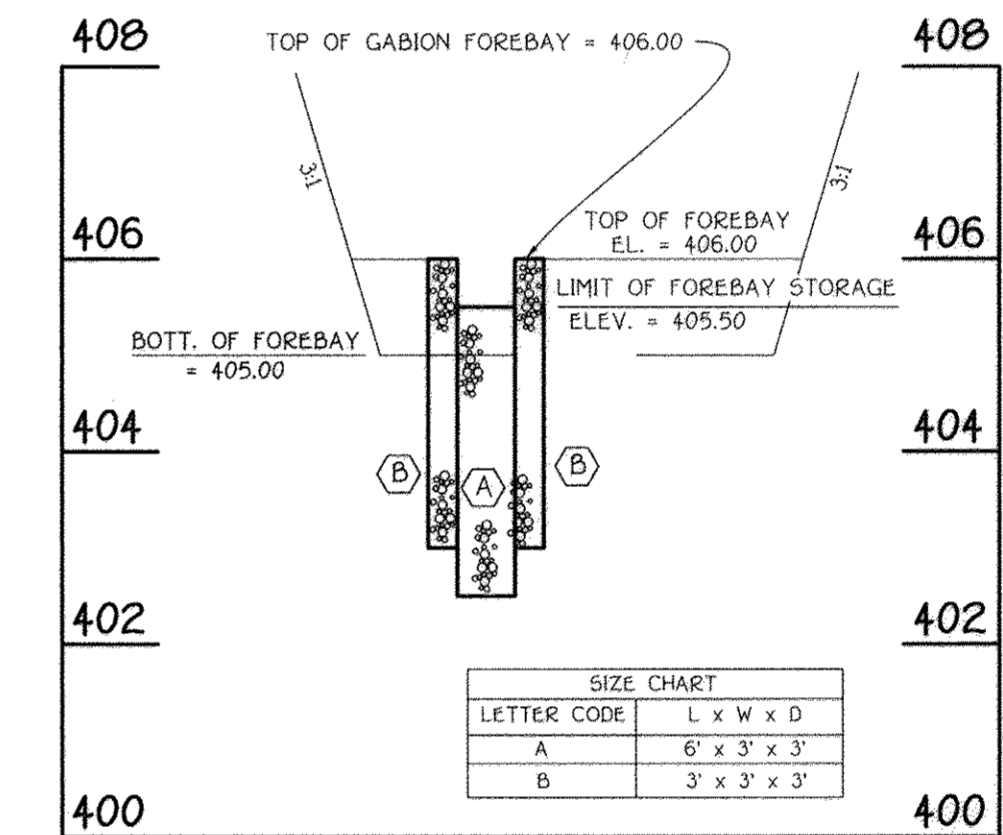
STREET TREE, GRADING & SEDIMENT CONTROL PLAN
HOMWOOD CROSSING
PHASE 2
 LOTS 44 - 79,
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'N' and 'J',
 Benedict Farm, Phase One, Plat Nos. 1)
 Zoned: RC-300
 Tax Map 29 Grid 9 Parcel 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 11 of 30

AS-BUILT





TEMPORARY SEDIMENT BASIN No. 10
 INITIAL D.A. = 6.42 Ac.
 FINAL D.A. = 6.42 Ac.
 STORAGE REQUIRED:
 WET = 1800 x 6.42 = 11,556 Cuf.
 DRY = 1800 x 6.42 = 11,556 Cuf.
 STORAGE PROVIDED:
 WET = 11,556 Cuf. @ ELEV. 406.30
 DRY = 11,556 Cuf. @ ELEV. 407.60
 BOTTOM ELEV. = 402.00
 STORAGE DEPTH = 5.25'
 TOP OF EMBANKMENT = 412.00
 CLEAN OUT ELEV. = 406.75'
 RISER CREST ELEV. = 409.00
 1 YR. ORIFICE INV. = 406.30
 Q1 exist. = 0.11 c.f.s.
 Q1 prop. = 0.12 c.f.s. (NON-EROSIVE)

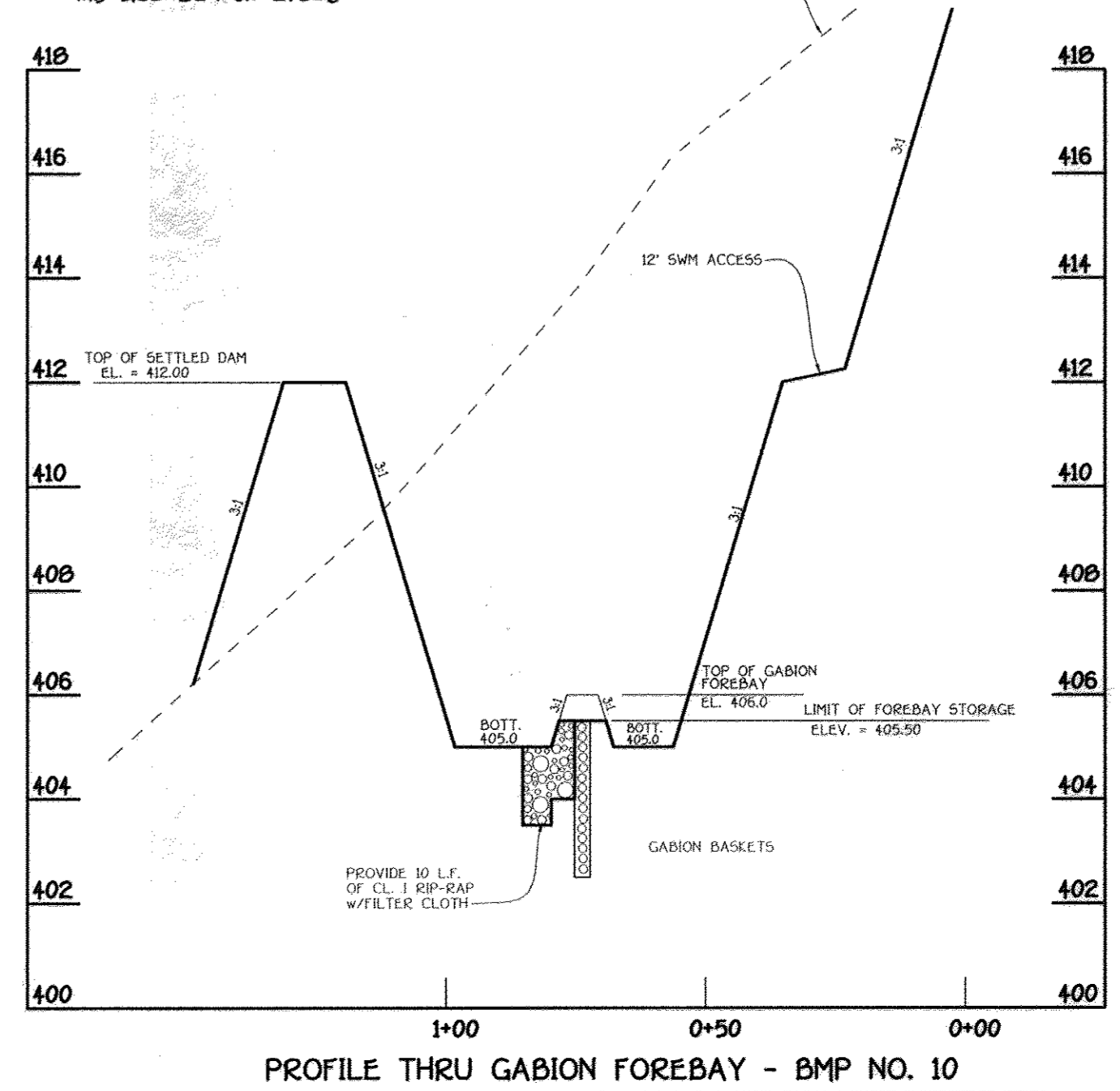


FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE NO.: 21328

PLAN
 SCALE: 1" = 50'

- LEGEND**
- SSF—SSF—SSF— SUPER-SILT FENCE
 - SF—SF—SF— SILT FENCE
 - TP—TP—TP— TREE PROTECTION FENCE
 - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
 - EARTH DIKE
 - DENOTES L.O.D. LIMITS OF DISTURBANCE
 - [E.C.M.] DENOTES EROSION CONTROL MATTING
 - [Cross-hatch] DENOTES 25% OR GREATER SLOPES
 - [Dotted] DENOTES 15% - 24.99% SLOPES
 - EXISTING TREELINE
 - PROPOSED TREELINE



PROFILE THRU GABION FOREBAY - BMP NO. 10
 SCALE: HORIZ. 1" = 30'
 VERT. 1" = 3'

STREET TREE SCHEDULE

SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
[Symbol]	3270 LF. / 40 = 82 TREES	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (INDEPENDENCE WAY)
[Symbol]	514 LF. / 40 = 13 TREES	PLATANUS OCCIDENTALIS 'BLOODGOOD' COLUMBIA LONDON PLANE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (RIVERCROSSING COURT)
[Symbol]	258 LF. / 40 = 6 TREES	ACER RUBRUM 'RED SUNSET' RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (ASHBY COURT)
[Symbol]	1055 LF. / 40 = 26 TREES	PLATANUS X ACERIFOLIA 'COLUMBIA' COLUMBIA LONDON PLANE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (HOMWOOD ROAD)

NOTE: STREET TREE TYPES ARE ONLY A RECOMMENDATION AND MAY BE SUBSTITUTED WITH A COUNTY ACCEPTED EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE 127 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$ 38,100.00.

STREET TREE, GRADING & SEDIMENT CONTROL PLAN
HOMWOOD CROSSING
PHASE 2
 LOTS 44 - 79,
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat Nos.)
 Zoned: RC-DCO
 Parcel: 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 12 of 30

By The Developer:
 "I We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any 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 Post 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: *Charles C. Slupe* V.P.
 Printed Name Of Developer: Charles C. Slupe
 Date: 8-7-05

By The Engineer:
 "I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Solution 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 Reviewed The Construction Plans That He/She Must Engage A Registered Professional Engineer To Supervise Post Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion."
 Signature Of Engineer: *John M. Sturges*
 Printed Name Of Engineer: John M. Sturges
 Date: 8-2-05

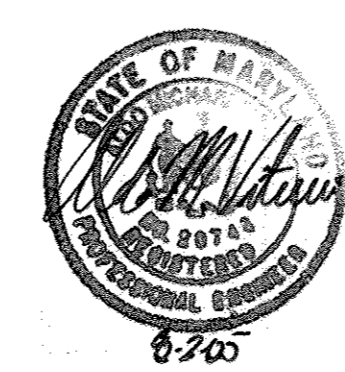
These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
 Signature: *Jim Meyer* JMS
 Title: District Engineer
 Date: 8/16/05

USDA-Natural Resources Conservation Service
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Signature: *Wanda Z. ...*
 Title: Chief, Bureau Of Highways
 Date: 9-21-05

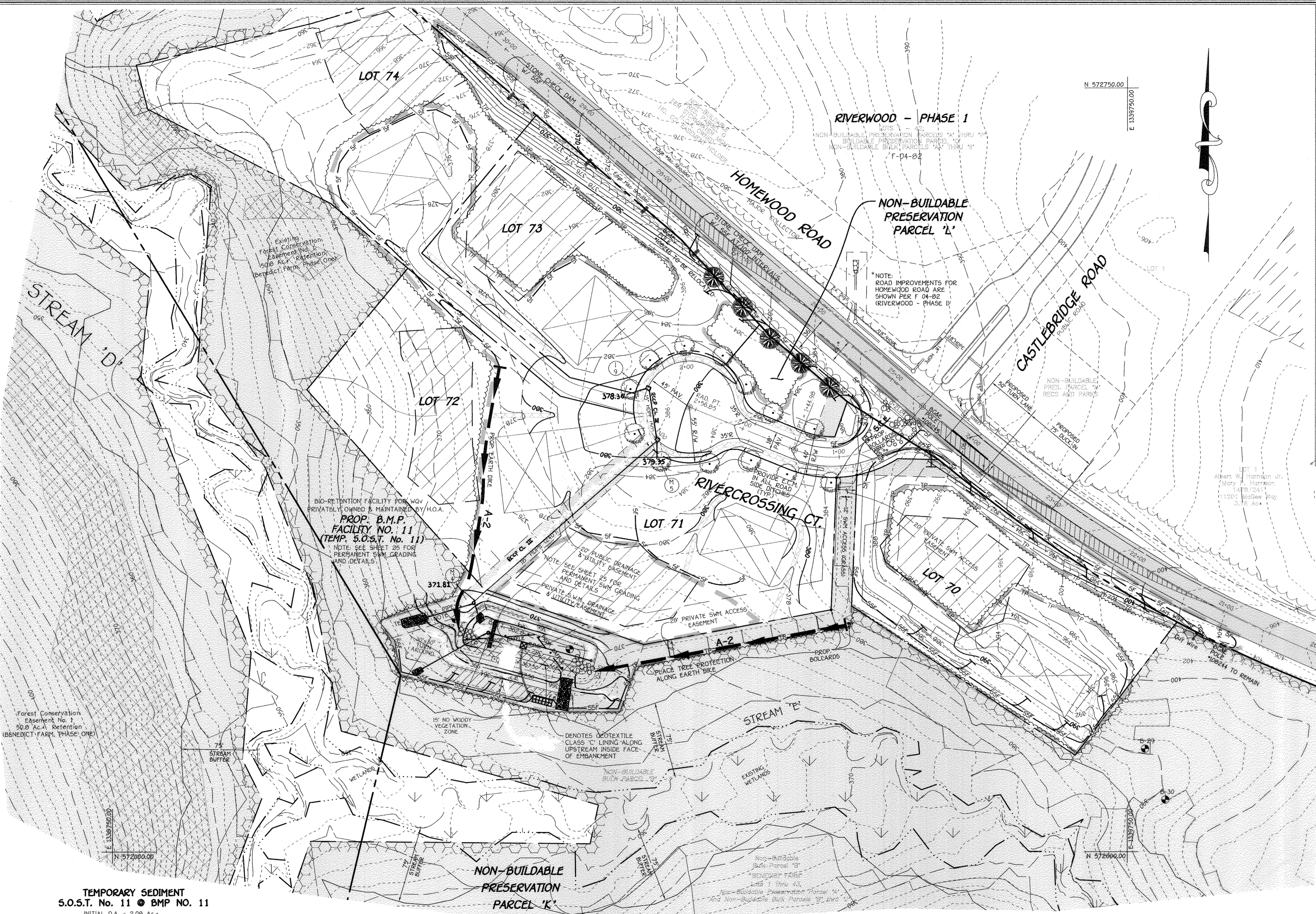
Approved: Department Of Public Works
 Signature: *...*
 Title: Chief, Division Of Land Development
 Date: 9/21/05

Approved: Department Of Planning And Zoning
 Signature: *...*
 Title: Chief, Development Engineering Division
 Date: 9/21/05

AS-BUILT



8-2-05



TEMPORARY SEDIMENT S.O.S.T. No. 11 @ BMP No. 11
 INITIAL D.A. = 2.08 Ac.
 FINAL D.A. = 2.08 Ac.
 STORAGE REQUIRED
 WET = 1800 x 2.08 = 3,744 Cuft.
 DRY = 1800 x 2.08 = 3,744 Cuft.
 STORAGE PROVIDED
 WET = 3,990 Cuft. @ ELEV. 364.00
 DRY = 5,615 Cuft. @ ELEV. 365.80
 BOTTOM ELEV. = 362.00
 STORAGE DEPTH = 3.78'
 TOP OF EMBANKMENT = 367.50
 CLEAN OUT ELEV. = 363.00
 WEIR CREST ELEV. = 365.80
 WEIR LENGTH = 10.0'
 FOR 1 YR. TEMP. SWM STORAGE REQ'D. & PROVID. = 5,615 CUFT. @ EL. 365.80
 NOTE: PROVIDE GEOTEXTILE CLASS 'C' LINING ALONG UPSTREAM INSIDE FACE OF EMBANKMENT.
 * NOTE: SEE SHEET 25 FOR FINAL GRADING OF B.M.P. FACILITY NO. 11 AND STORM DRAIN OUTFALL FROM M-4 TO 5-6.

PLAN
 SCALE: 1" = 50'



FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE No. 21328

OWNER
 MARY CARTER CARROLL ZIEGLER, ET AL.
 C/O NATALIE ZIEGLER
 11352 HORNWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARE
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046

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: *Douglas C. Shipe* V.P. Date: 8-3-05
 Printed Name Of Developer: Douglas C. Shipe

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 With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.
 Signature: *John M. Vitale* Date: 8-2-05
 Printed Name Of Engineer: John M. Vitale
 These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.
 USDA Natural Resource Conservation Service Date: 8/2/05
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Howard Soil Conservation District Date: 8/2/05
 Approved: Department Of Public Works Date: 8/2/05
 Chief, Bureau Of Highways
 Approved: Department Of Planning And Zoning Date: 9/21/05
 Chief, Division Of Land Development
 Chief, Development Engineering Division Date: 9/26/05

AS-BUILT CERTIFICATION
 I Herby 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 State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

REVISIONS

NO.	DESCRIPTION	DATE

- LEGEND**
- SSF—SSF—SSF— SUPER-SILT FENCE
 - SF—SF—SF— SILT FENCE
 - TP—TP—TP— TREE PROTECTION FENCE
 - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
 - EARTH DIKE
 - DENOTES L.O.D. LIMITS OF DISTURBANCE
 - E.C.M. DENOTES EROSION CONTROL MATTING
 - [Cross-hatch] DENOTES 25% OR GREATER SLOPES
 - [Dotted] DENOTES 15% - 24.99% SLOPES
 - ~~~~~ EXISTING TREELINE
 - ~~~~~ PROPOSED TREELINE

STREET TREE, GRADING & SEDIMENT CONTROL PLAN
HOMECROSSING PHASE 2
 LOTS 44 - 79,
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J', Benedict Farm, Phase One, Plat Nos.)
 Zoned: RC-DEO
 Tax Map: 29 Grid: 9 Parcel: 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 13 of 30

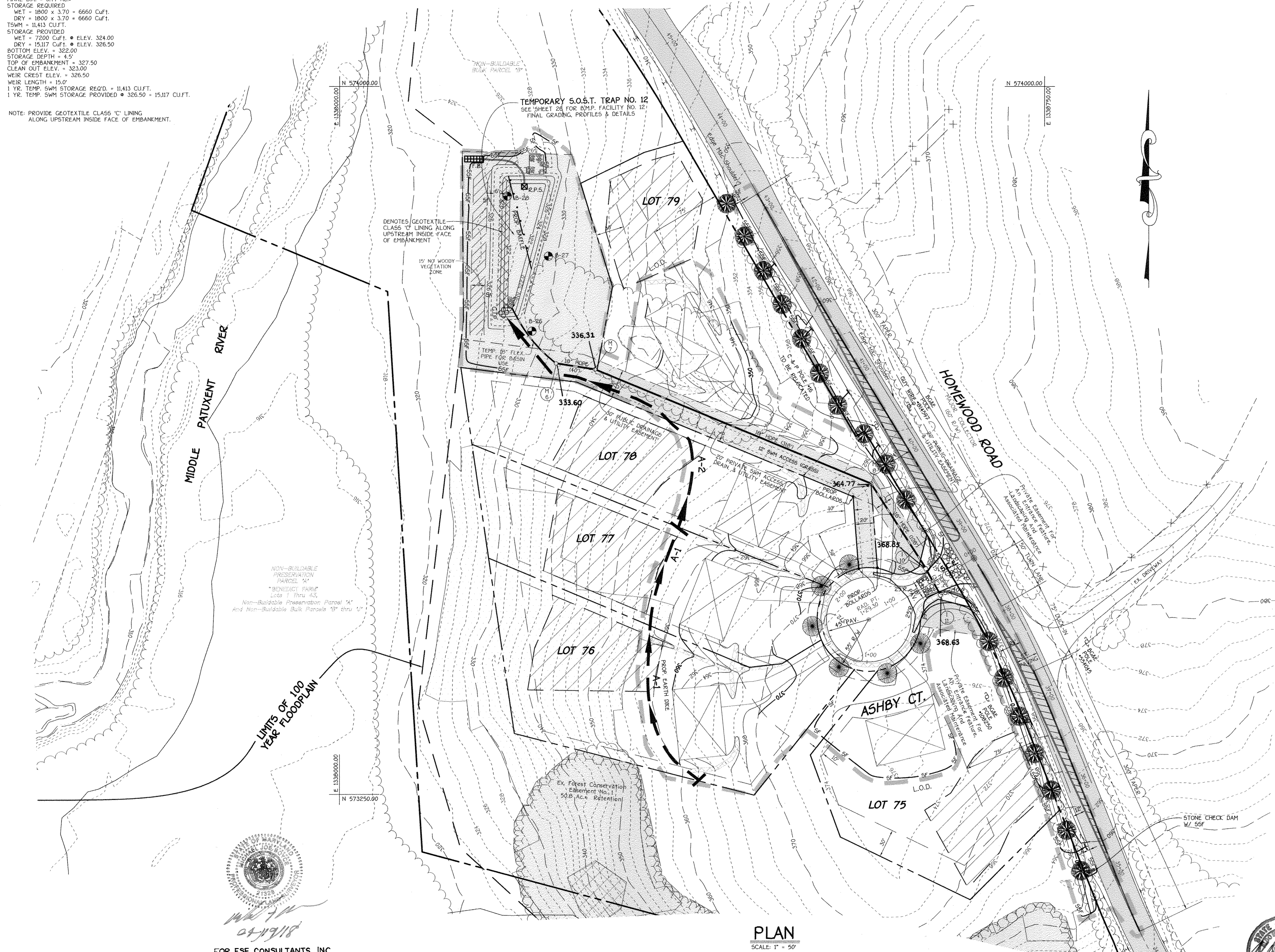
AS-BUILT
 Date: 8-2-05

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TEMPORARY SEDIMENT S.O.S.T. No. 12

INITIAL D.A. = 3.70 AC.
 FINAL D.A. = 3.44 AC.
 STORAGE REQUIRED
 WET = 1800 x 3.70 = 6660 CU.F.
 DRY = 1800 x 3.70 = 6660 CU.F.
 TSM = 11413 CU.F.
 STORAGE PROVIDED
 WET = 7200 CU.F. @ ELEV. 324.00
 DRY = 15117 CU.F. @ ELEV. 326.50
 BOTTOM ELEV. = 322.00
 STORAGE DEPTH = 4.5'
 TOP OF EMBANKMENT = 327.50
 CLEAN OUT ELEV. = 323.00
 WEIR CREST ELEV. = 326.50
 WEIR LENGTH = 15.0'
 1 YR. TEMP. SWM STORAGE REQ'D. = 11,413 CU.F.T.
 1 YR. TEMP. SWM STORAGE PROVIDED = 326.50 = 15,117 CU.F.T.

NOTE: PROVIDE GEOTEXTILE CLASS 'C' LINING ALONG UPSTREAM INSIDE FACE OF EMBANKMENT.



FOR ESE CONSULTANTS, INC.
 AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE No. 21328

OWNER
 MARY CARTER CARROLL ZIEGLER, ET AL.
 C/O NATALIE ZIEGLER
 11922 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARE
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046

PLAN
 SCALE: 1" = 50'

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/We 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: *Douglas C. Sligo* V.P. 8-3-05
 Date

Signature of Engineer: *Jim Magala* 8/16/05
 Date

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible 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 Engaged The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature of Engineer: *Jim Magala* 8/16/05
 Date

Printed Name of Engineer: *Jim Magala*
 Date

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

USDA-Natural Resources Conservation Service 8/16/05
 Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature of District: *John Adley* 8/16/05
 Date

Approved: Department Of Public Works
 Signature: *William J. Walsh* 9-2-05
 Date
 Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
 Signature: *Cindy Hammett* 9/16/05
 Date
 Chief, Division Of Land Development

Signature: *[Signature]* 9/26/05
 Date
 Chief, Development Engineering Division

AS-BUILT CERTIFICATION
 I Herby 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 State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

REVISIONS		
NO.	DESCRIPTION	DATE

LEGEND

- S—S—S— SUPER-SILT FENCE
- SF—SF—SF— SILT FENCE
- TP—TP—TP— TREE PROTECTION FENCE
- [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
- EARTH DIKE
- DENOTES L.O.D. LIMITS OF DISTURBANCE
- [E.C.M.] DENOTES EROSION CONTROL MATTING
- [Cross-hatch] DENOTES 25% OR GREATER SLOPES
- [Dotted] DENOTES 15% - 24.9% SLOPES

STREET TREE, GRADING & SEDIMENT CONTROL PLAN
HOMEWOOD CROSSING
PHASE 2
 LOTS 44 - 79
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat Nos.)
 Zoned: RC-DEC
 Tax Map: 29 Grid: 9 Parcel: 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 14 of 30

AS-BUILT

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 8-2-05

F 05-69

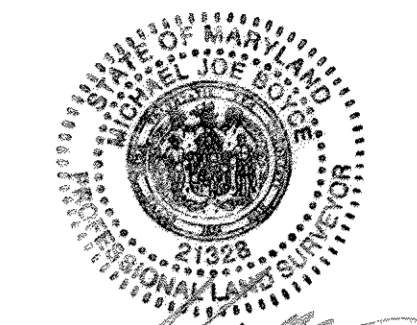
K:\SOS\PROJ\130754 Benedict Farm\PHASE 2 - FINAL\130754 base plan.dwg, 8/1/2005 9:41:29 AM

Approved: Department Of Public Works
 Chief: Bureau Of Highways
 Date: 7-21-05

Approved: Department Of Planning And Zoning
 Chief: Division Of Land Development
 Date: 9/20/05

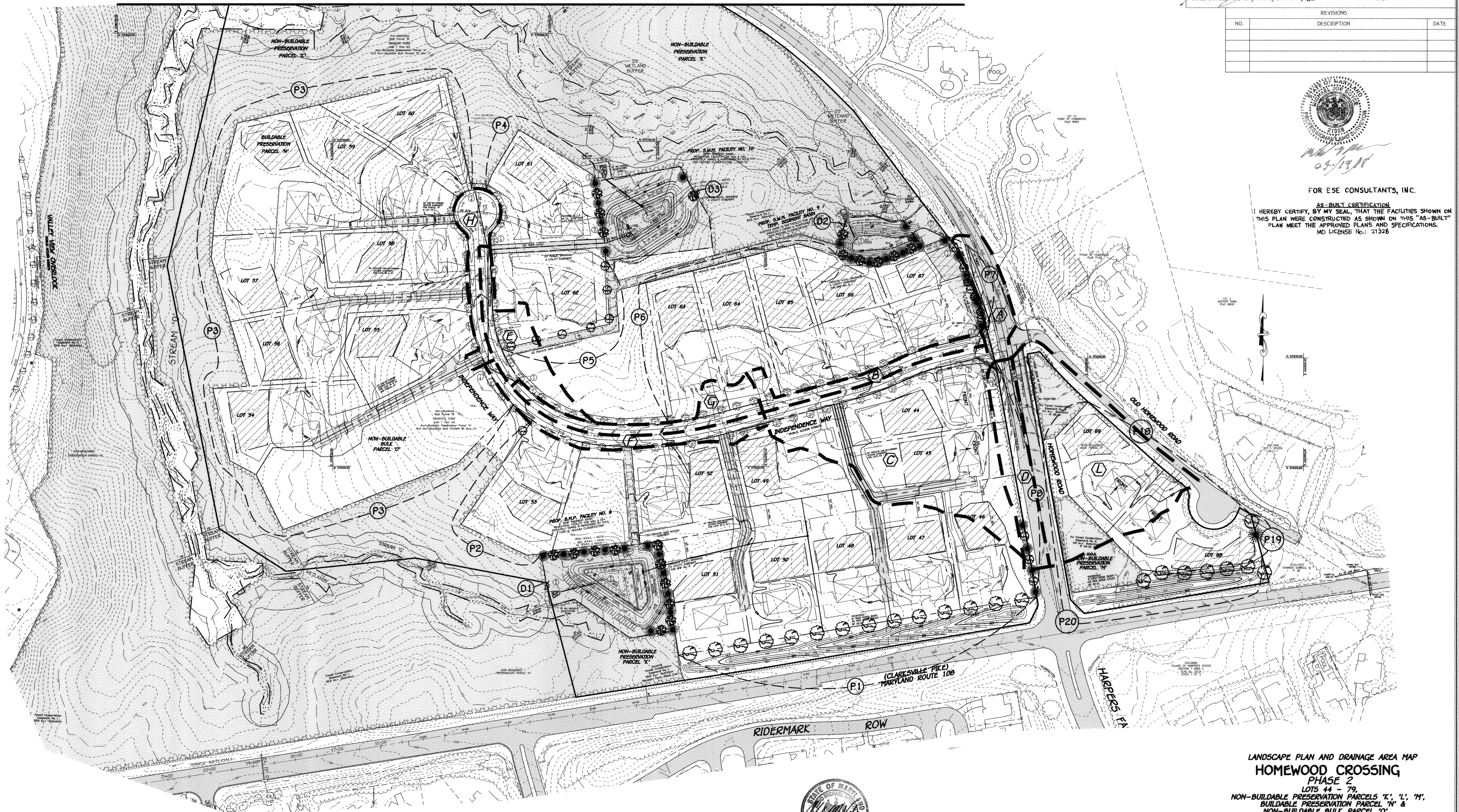
Chief: Development Engineering Division
 Date: 9/16/05

REVISIONS		
NO.	DESCRIPTION	DATE



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 MD LICENSE No.: 21328

MATCH LINE SEE SHEET 16



LANDSCAPE PLAN AND DRAINAGE AREA MAP
 HOMEWOOD CROSSING
 PHASE 2
 LOTS 44 - 79,
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat No. 1)

AS-BUILT
 Zoned: RC-DEO
 Tax Map: 29 Grid 9 Parcel 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 15 of 30

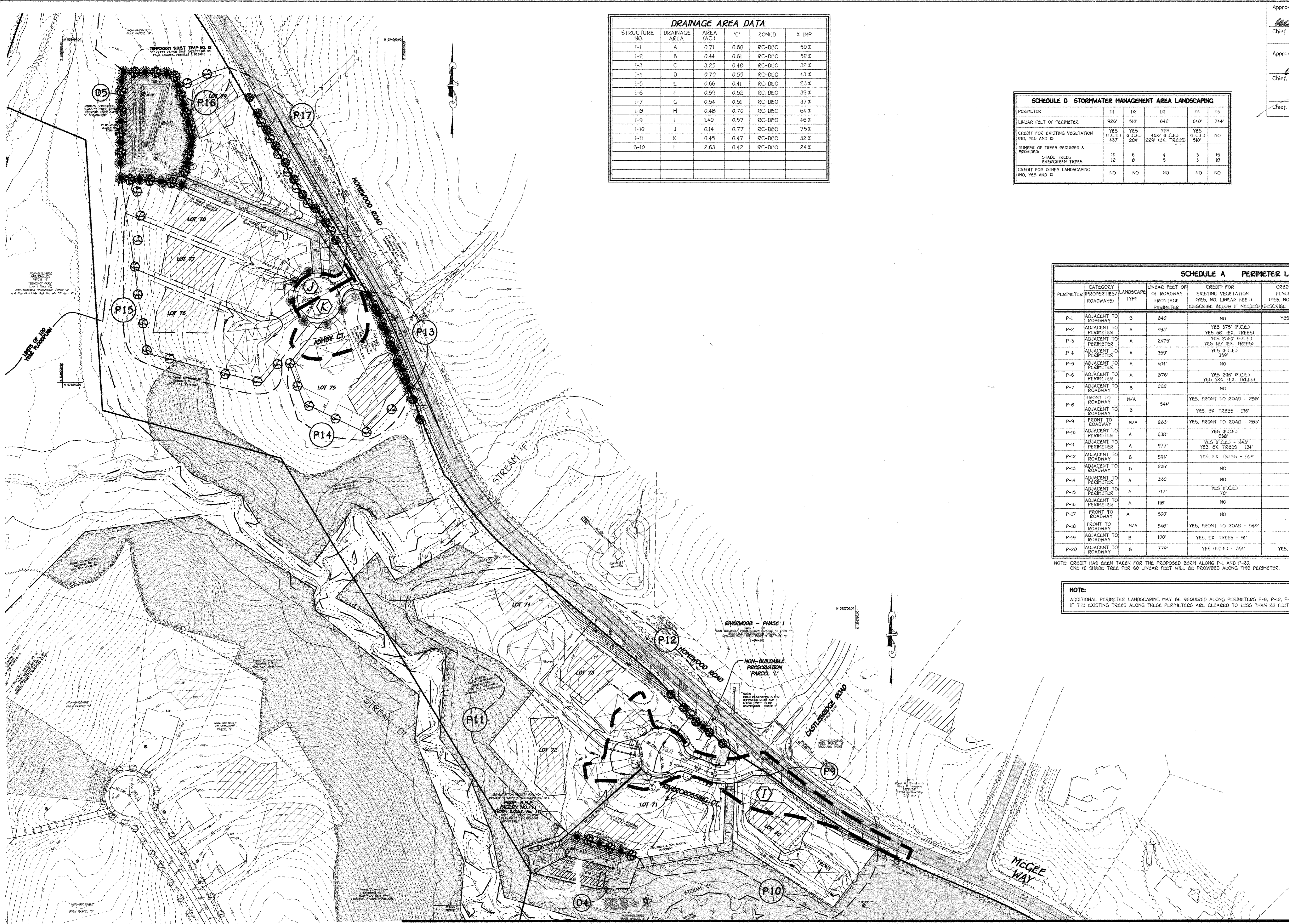
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 410.411.2955

PLAN
 SCALE: 1" = 100'



OWNER
 MARY CARTER CARROLL ZIEGLER, ET AL.
 C/O NATALIE ZIEGLER
 11232 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARR
 7154 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA (AC)	'C'	ZONED	% IMP.
I-1	A	0.71	0.60	RC-DEO	50%
I-2	B	0.44	0.61	RC-DEO	52%
I-3	C	3.25	0.48	RC-DEO	32%
I-4	D	0.70	0.55	RC-DEO	43%
I-5	E	0.66	0.41	RC-DEO	23%
I-6	F	0.59	0.52	RC-DEO	39%
I-7	G	0.54	0.51	RC-DEO	37%
I-8	H	0.48	0.70	RC-DEO	64%
I-9	I	1.40	0.57	RC-DEO	46%
I-10	J	0.14	0.77	RC-DEO	75%
I-11	K	0.45	0.47	RC-DEO	32%
I-10	L	2.63	0.42	RC-DEO	24%

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING					
PERIMETER	D1	D2	D3	D4	D5
LINEAR FEET OF PERIMETER	926'	510'	842'	640'	744'
CREDIT FOR EXISTING VEGETATION (NO, YES AND #)	YES (F.C.E.) 437	YES (F.C.E.) 204	YES (F.C.E.) 108' (EX. TREES) 229'	YES (F.C.E.) 510'	NO
NUMBER OF TREES REQUIRED & PROVIDED:					
SHADE TREES	10	6	4	3	15
EVERGREEN TREES	12	8	5	3	18
CREDIT FOR OTHER LANDSCAPING (NO, YES AND #)	NO	NO	NO	NO	NO

Approved: Department of Public Works
William J. ... 9-21-05
 Chief, Bureau of Highways Date

Approved: Department of Planning and Zoning
Cindy Hamilton 9/20/05
 Chief, Division of Land Development Date

Chief, Development Engineering Division MK 9/20/05
 Date

REVISIONS		
NO.	DESCRIPTION	DATE

SCHEDULE A PERIMETER LANDSCAPE EDGE												
PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF 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)	REMAINING PERIMETER/FRONTAGE	NUMBER OF PLANTS REQUIRED			NUMBER OF PLANTS PROVIDED		
							SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO ROADWAY	B	840'	NO	YES (840' BERM)	840'	14	0	-	14	0	-
P-2	ADJACENT TO PERIMETER	A	493'	YES 375' (F.C.E.) YES 68' (EX. TREES)	NO	50'	1	-	-	1	-	-
P-3	ADJACENT TO PERIMETER	A	2475'	YES 2360' (F.C.E.) YES 115' (EX. TREES)	NO	0	0	-	-	0	-	-
P-4	ADJACENT TO PERIMETER	A	359'	YES (F.C.E.) 359'	NO	0	0	-	-	0	-	-
P-5	ADJACENT TO PERIMETER	A	404'	NO	NO	404'	7	-	-	7	-	-
P-6	ADJACENT TO PERIMETER	A	876'	YES 296' (F.C.E.) YES 980' (EX. TREES)	NO	0	0	-	-	0	-	-
P-7	ADJACENT TO ROADWAY	B	220'	NO	NO	220'	4	5	-	4	5	-
P-8	FRONT TO ROADWAY	N/A	544'	YES, FRONT TO ROAD - 258'	NO	0	0	0	-	0	0	-
P-9	FRONT TO ROADWAY	N/A	283'	YES, EX. TREES - 136'	NO	150'	3	4	-	3	4	-
P-10	ADJACENT TO PERIMETER	A	638'	YES (F.C.E.) 638'	NO	0	0	-	-	0	-	-
P-11	ADJACENT TO PERIMETER	A	977'	YES (F.C.E.) 843' YES, EX. TREES - 134'	NO	0	0	-	-	0	-	-
P-12	ADJACENT TO ROADWAY	B	594'	YES, EX. TREES - 554'	NO	40'	1	1	-	1	1	-
P-13	ADJACENT TO ROADWAY	B	236'	NO	NO	236'	5	6	-	5	6	-
P-14	ADJACENT TO PERIMETER	A	380'	NO	NO	380'	6	-	-	6	-	-
P-15	ADJACENT TO PERIMETER	A	717'	YES (F.C.E.) 717'	NO	647'	11	-	-	11	-	-
P-16	ADJACENT TO PERIMETER	A	118'	NO	NO	118'	2	-	-	2	-	-
P-17	FRONT TO ROADWAY	A	500'	NO	NO	500'	8	-	-	8	-	-
P-18	FRONT TO ROADWAY	N/A	548'	YES, FRONT TO ROAD - 548'	NO	0	0	0	-	0	0	-
P-19	ADJACENT TO ROADWAY	B	100'	YES, EX. TREES - 51'	NO	49'	1	1	-	1	1	-
P-20	ADJACENT TO ROADWAY	B	779'	YES (F.C.E.) - 354'	YES, (425' BERM)	425'	7	0	-	7	0	-

NOTE: CREDIT HAS BEEN TAKEN FOR THE PROPOSED BERM ALONG P-1 AND P-20. ONE (1) SHADE TREE PER 60' LINEAR FEET WILL BE PROVIDED ALONG THIS PERIMETER.

NOTE: ADDITIONAL PERIMETER LANDSCAPING MAY BE REQUIRED ALONG PERIMETERS P-8, P-12, P-13, P-17 & P-19 AT SITE PLAN STAGE. IF THE EXISTING TREES ALONG THESE PERIMETERS ARE CLEARED TO LESS THAN 20 FEET IN WIDTH FOR SEPTIC SYSTEM INSTALLATION.

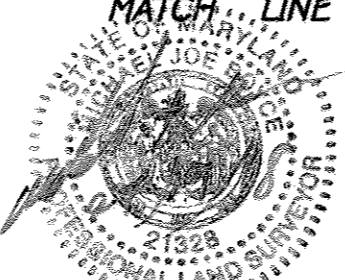
LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
70		ACER SACCHARUM GREEN MOUNTAIN (SUGAR MAPLE)	2 - 2 1/2" CALIPER FULL CROWN, B&B
38		QUERCUS COCCINEA SCARLET OAK	2 - 2 1/2" CALIPER FULL CROWN, B&B
63		PINUS STROBUS EASTERN WHITE PINE	6' - 8' HT.

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL". FINANCIAL SURETY FOR THE 171 REQUIRED LANDSCAPE TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$41,850.00.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 MD 481 - 2895

Owner
 MARY CARTER CARROLL ZIEGLER, ET AL.
 C/O NATALIE ZIEGLER
 11352 HOMEMOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

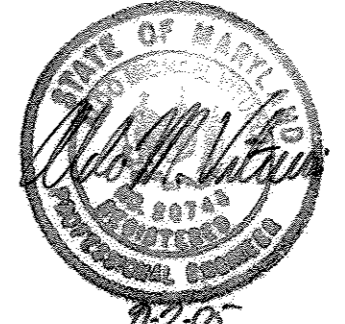
Developer
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARE
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046



AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE No.: 21328

PLAN
 SCALE: 1" = 100'

FOR ESE CONSULTANTS, INC.



LANDSCAPE PLAN AND DRAINAGE AREA MAP
 HOMEMOOD CROSSING
 PHASE 2
 LOTS 44 - 79,
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat Nos.)
 Zoned: RC-DEO
 Tax Map: 29 Grid 9 Parcel 28
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 16 of 30

AS-BUILT

F 05-69

INLET & MANHOLE STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	433.65	428.43	427.89	HOMEWOOD ROAD	C.L. STA. 9+41.77	39' L	'D' INLET	S.D. - 4.11
I-2	445.71	440.32	439.70	INDEPENDENCE WAY	C.L. STA. 0+61.91	20' R	'D' INLET	S.D. - 4.11
I-3	446.76	441.27	440.98	INDEPENDENCE WAY	C.L. STA. 0+83.91	18' L	'D' INLET	S.D. - 4.11
I-4	448.94	-----	445.26	HOMEWOOD ROAD	C.L. STA. 6+20.50	40' L	'D' INLET	S.D. - 4.11
I-5	424.69	419.34, 415.98	415.65	INDEPENDENCE WAY	C.L. STA. 15+47.08	20' R	'D' INLET	S.D. - 4.11
I-6	437.29	431.27	431.09	INDEPENDENCE WAY	C.L. STA. 12+81.94	20' L	'D' INLET	S.D. - 4.11
I-7	439.16	-----	433.82	INDEPENDENCE WAY	C.L. STA. 12+02.57	20' R	'D' INLET	S.D. - 4.11
I-8	422.03	-----	417.35	INDEPENDENCE WAY	L.P. STA. 1+46.11	6' L	'D' INLET	S.D. - 4.11
I-9	378.36	-----	373.42	RIVERCROSSING COURT	L.P. STA. 1+49.76	6' L	'D' INLET	S.D. - 4.11
I-10	368.70	363.01	362.82	ASHBY COURT	C.L. STA. 0+50.20	16' R	'D' INLET	S.D. - 4.11
I-11	368.63	-----	363.55	ASHBY COURT	C.L. STA. 0+50.20	16' L	'D' INLET	S.D. - 4.11
M-1	430.85	426.76	426.77, 425.67	N 571544.43 E 1340634.77	-----	-----	STD. MANHOLE	G - 5.11
M-2	443.48	437.53	437.15	HOMEWOOD ROAD	C.L. STA. 7+39.00	30' L	STD. MANHOLE	G - 5.11
M-3	414.46	408.53	405.05	N 571515.58 E 1339882.28	-----	-----	STD. MANHOLE	G - 5.11
M-4	371.80	366.52	366.22	N 572244.05 E 1339099.92	-----	-----	STD. MANHOLE	G - 5.11
M-5	379.35	372.87	372.69	RIVERCROSSING COURT	L.P. STA. 1+01.51	5' L	STD. MANHOLE	G - 5.11
M-6	333.56	328.00	327.92	N 573706.60 E 1338230.36	-----	-----	STD. MANHOLE	G - 5.11
M-7	336.16	330.25	329.75	N 573700.24 E 1338271.88	-----	-----	DROP MANHOLE	G -
M-8	364.50	357.73	357.34	N 573579.24 E 1338565.56	-----	-----	STD. MANHOLE	G - 5.11

A.D.S. - ADVANCED DRAINAGE SYSTEMS
LONDON, OHIO
1-800-733-9554

* DENOTES THROAT ELEVATION

SIZE	CLASS	LENGTH
8"	PVC, SCH. 40	99 L.F.
12"	HDPE	37 L.F.
15"	RCCP CLIV	376 L.F.
18"	RCCP CLIV	1014 L.F.
24"	RCCP CL IV	68 L.F.
18"	RCCP CL III	1329 L.F.
24"	RCCP CL III	27 L.F.

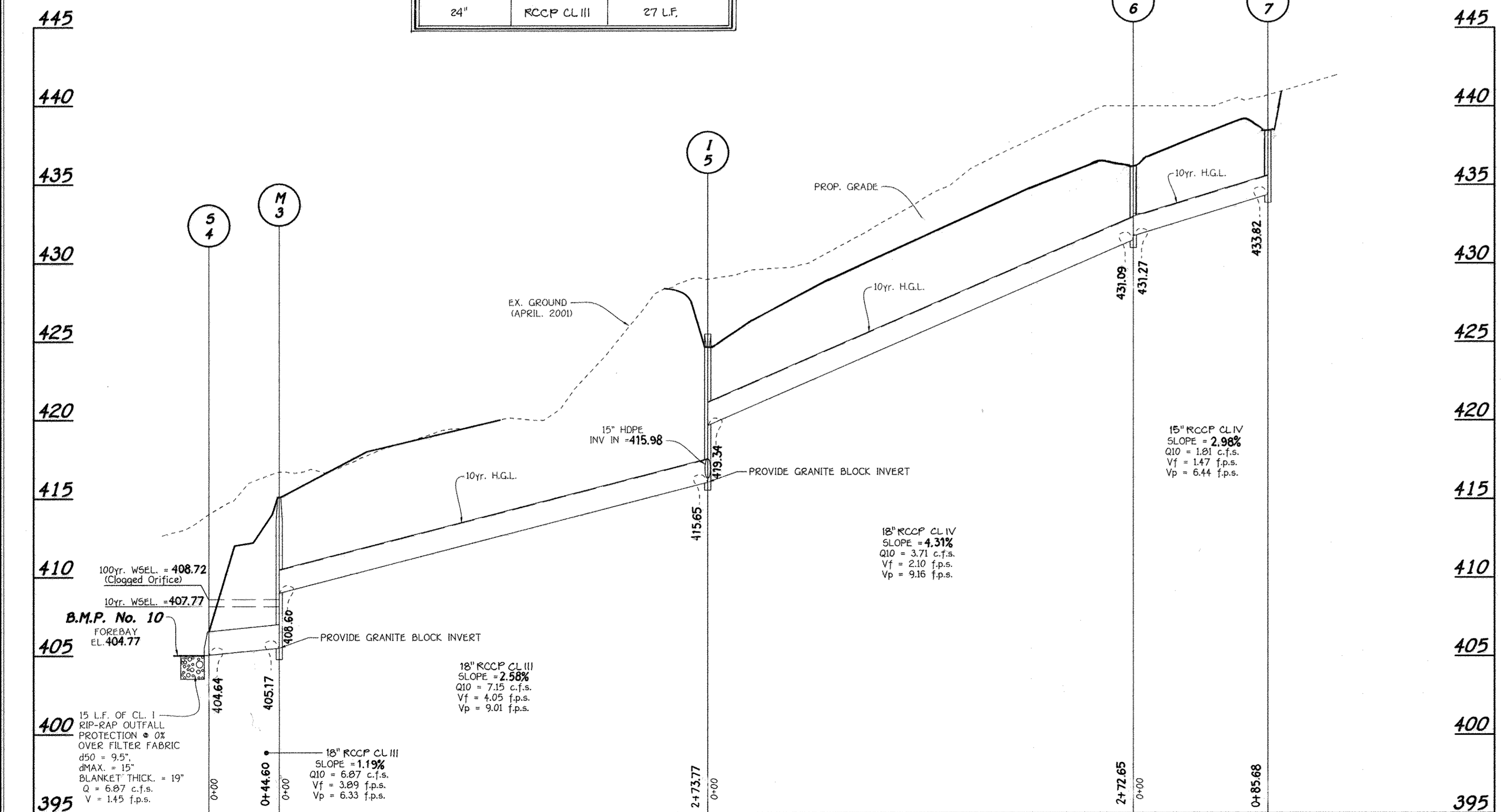
OUTFALL & RISER STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	LOCATION		TYPE	REMARKS
				NORTH	EAST		
S-1	426.28	425.23	-----	N 571530.49	E 1340596.87	12" HDPE END SECTION	A.D.S. FLARED END SECTION
S-2	427.86	425.64	-----	N 571563.43	E 1340611.74	24" CONC. END SECTION	S.D. - 5.52
S-3	403.01	399.68	-----	N 571662.87	E 1339882.14	30" CONC. END SECTION	S.D. - 5.52
S-4	406.24	404.64	-----	N 571531.23	E 1339929.72	18" CONC. END SECTION	S.D. - 5.52
S-5	418.61	415.71	-----	N 570710.17	E 1339779.77	30" CONC. END SECTION	S.D. - 5.52
S-6	365.50	363.77	-----	N 572230.29	E 1339054.20	18" CONC. END SECTION	S.D. - 5.82
S-7	366.17	365.29	-----	N 572232.31	E 1339102.53	MITER PIPE END	-----
S-8	325.67	365.25	-----	N 573712.31	E 1338165.85	18" CONC. END SECTION	S.D. - 5.52
S-9	327.67	327.08	-----	N 573741.38	E 1338231.41	MODIFIED TYPE 'C' HEADWALL	SEE DETAIL, SHT. 18
S-10	424.00	416.62	-----	N 571559.50	E 1340445.88	30" CMP END SECTION	-----
R-1	410.34	401.80	400.70	N 571593.79	E 1339972.51	CONCRETE RISER	-----
R-2	426.57	418.30	418.18	N 570732.67	E 1339860.83	CONCRETE RISER	-----
R-3	434.90	422.25	422.00	N 571525.64	E 1340460.62	42" CMP RISER	-----

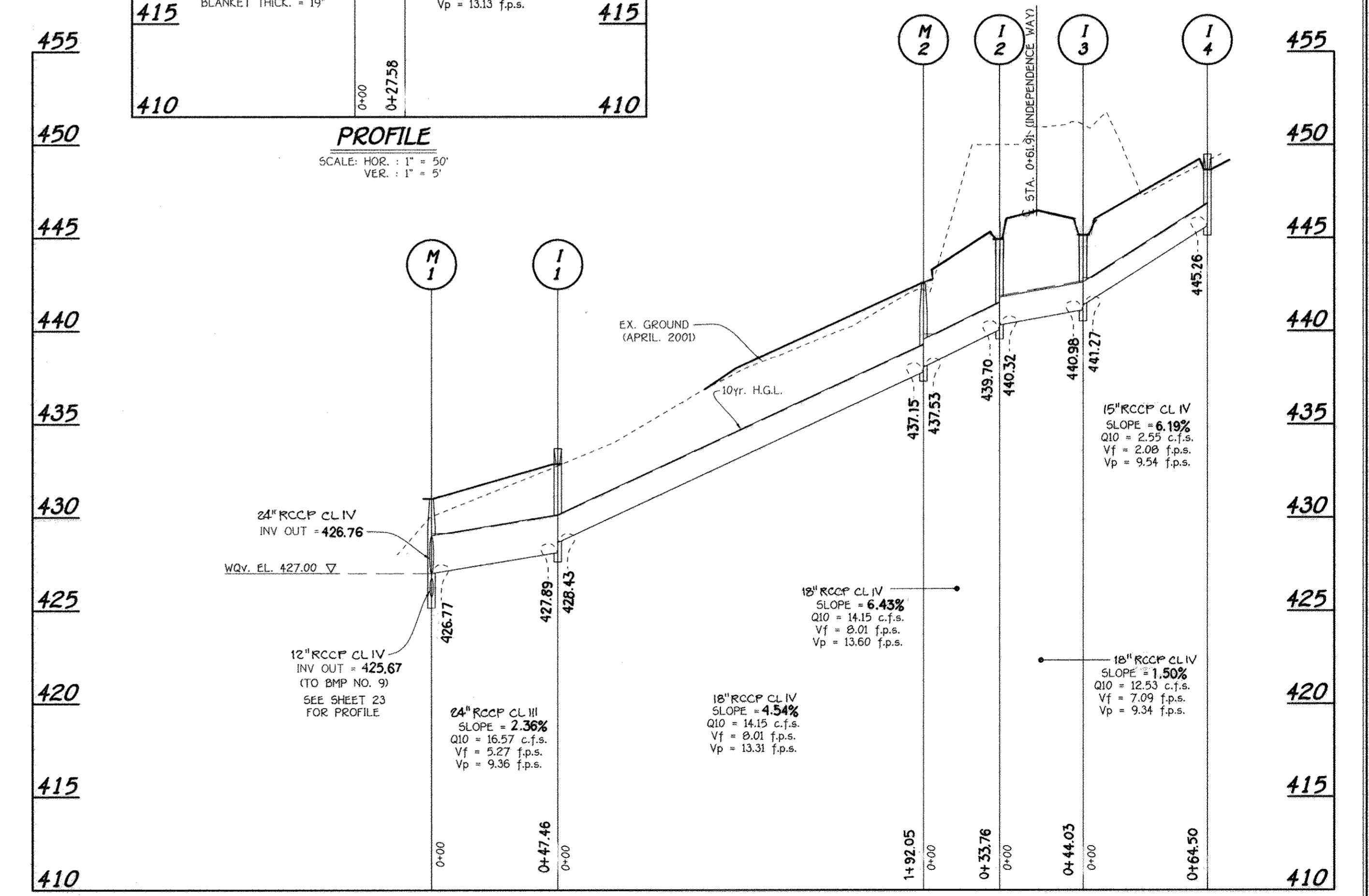


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MD LICENSE No.: 21328

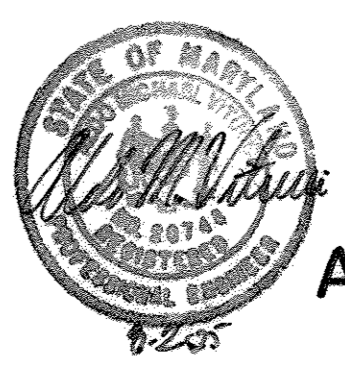


PROFILE
SCALE: HOR. : 1" = 50'
VER. : 1" = 5'



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

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. Walsh 9-21-05
CHIEF, BUREAU OF HIGHWAYS DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hammett 9/26/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION, MK DATE



STORM DRAIN PROFILES
HOMWOOD CROSSING
PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision of Non-Buildable Bulk Parcel 'B' and 'J',
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Tax Map: 29 Grid: 9 Parcel: 28
Third Election District
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Date: August, 2005
Sheet 17 of 30

AS-BUILT

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
10000 SQUAIRE OFFICE PARK - 10775 BALTIMORE NATIONAL Fwy.
ELLICOTT CITY, MARYLAND 21042
(410) 461-2855

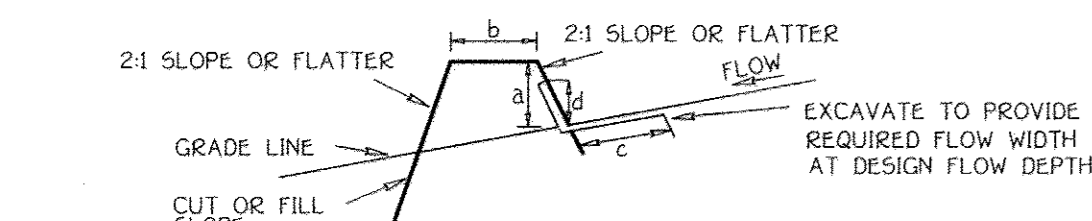
Owner
MARY CARTER CARROLL ZIEGLER, ET AL.
C/O NATALIE ZIEGLER
11352 HOMEWOOD ROAD
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Developer
TOLL BROTHERS, INC.
ATTN: MR. SCOTT HARE
7164 COLUMBIA GATEWAY DRIVE, SUITE 230
COLUMBIA, MARYLAND 21046

REVISION: STORM DRAIN PIPE HDPE TO RCCP CL III 4" 3-25-06

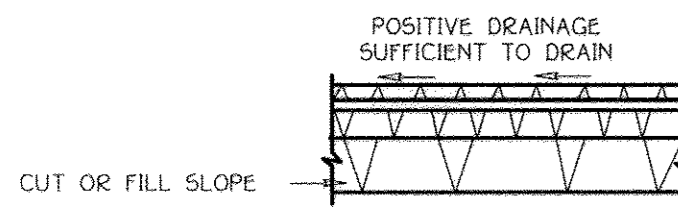
EARTH DIKE

NOT TO SCALE



CROSS SECTION

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



PLAN VIEW

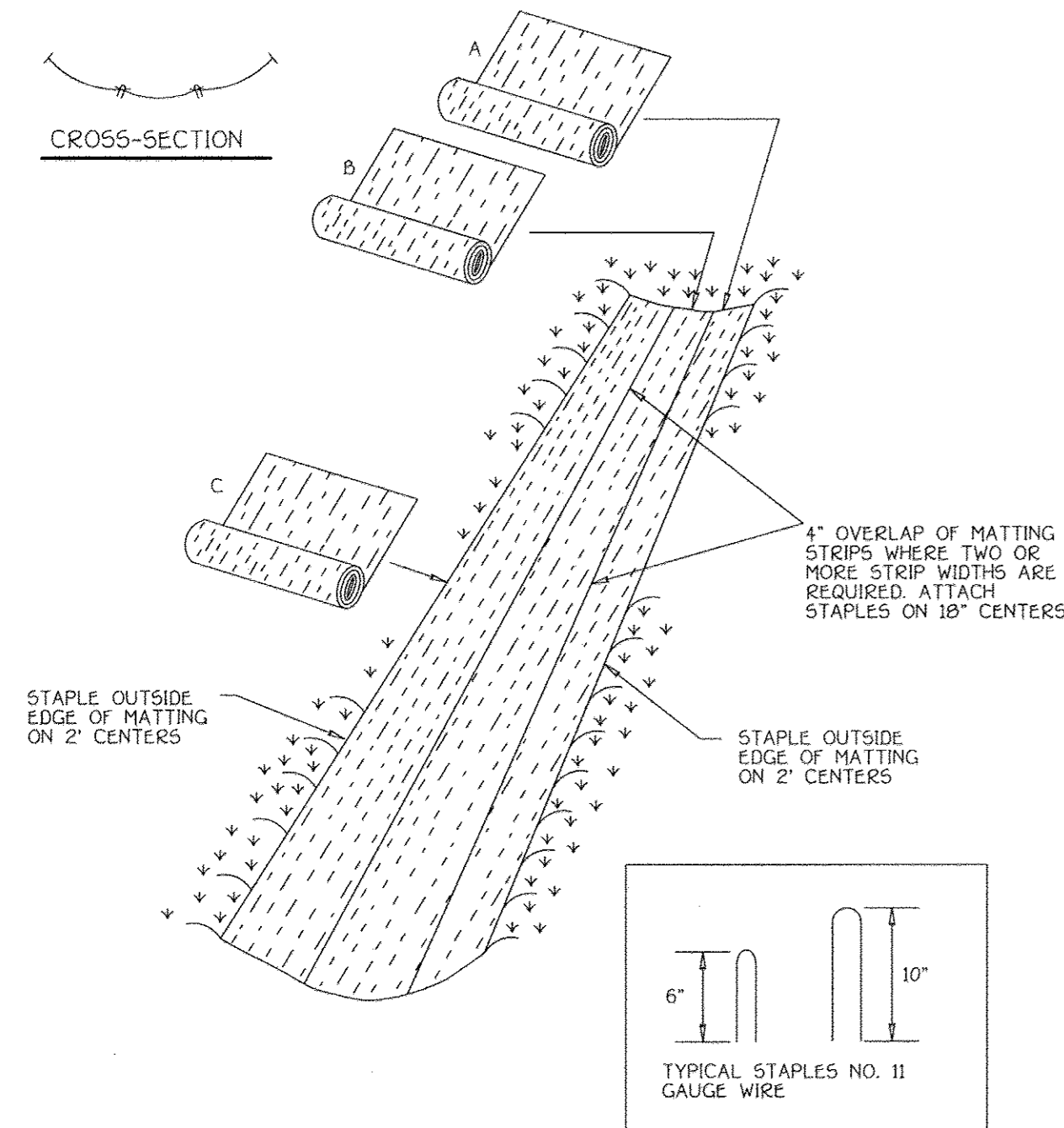
- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or line with sod.
- 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.

Construction Specifications

- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
- Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
- Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
- All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
- 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.
- Fill shall be compacted by earth moving equipment.
- All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
- Inspection and maintenance must be provided periodically and after each rain event.

EROSION CONTROL MATTING

NOT TO SCALE



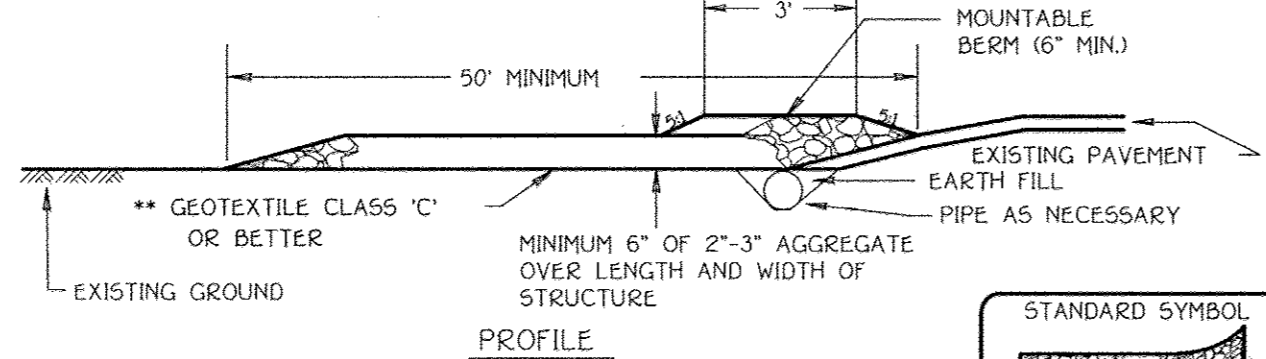
EROSION CONTROL MATTING

Construction Specifications

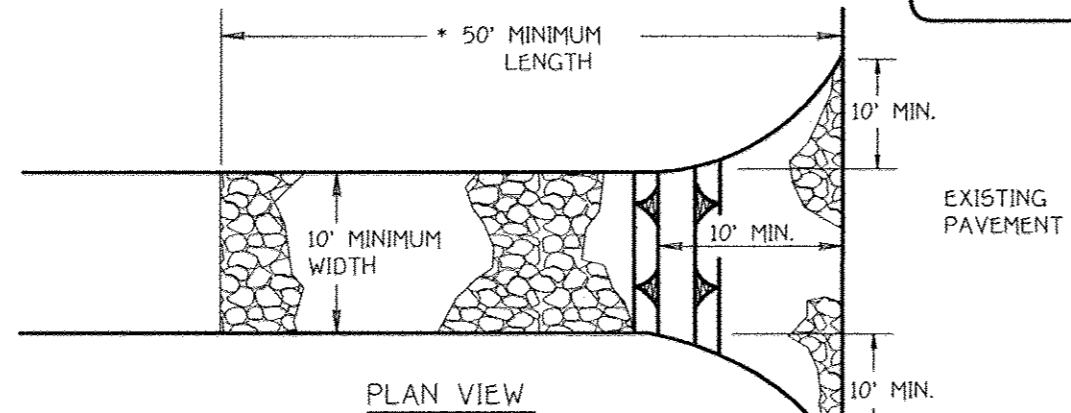
- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
- Staple the 4" overlap in the channel center using an 18" spacing between staples.
- Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
- Staples shall be placed 2" apart with 4 rows for each strip. 2 outer rows, and 2 alternating rows down the center.
- 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.
- 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 affected by the flow must be key-in.

STABILIZED CONSTRUCTION ENTRANCE



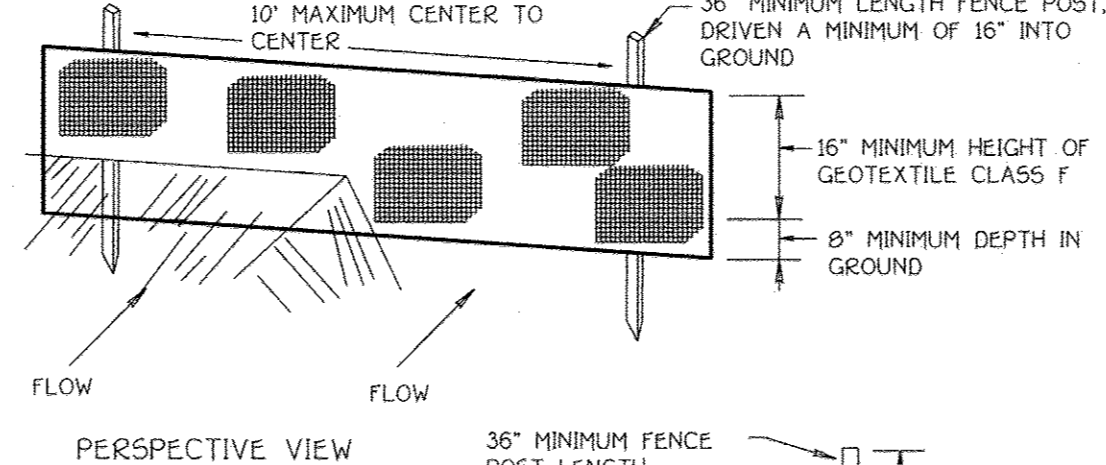
PROFILE



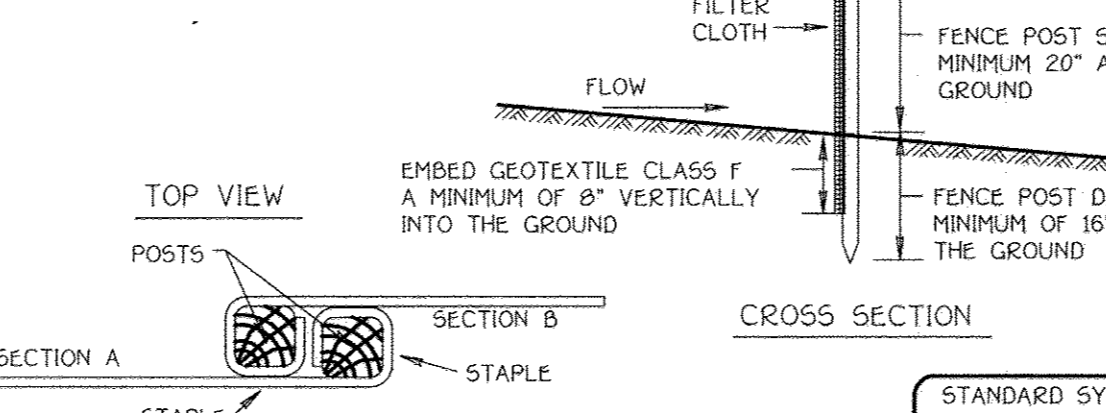
PLAN VIEW

Construction Specification

- Length - minimum of 50' (*30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- 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.
- 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.
- 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.
- 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.

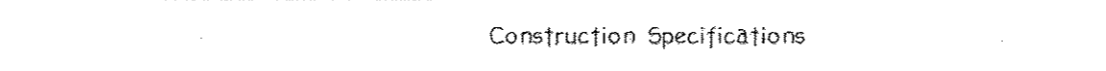


PERSPECTIVE VIEW



CROSS SECTION

JOINING TWO ADJACENT SILT FENCE SECTIONS



STANDARD SYMBOL

Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T and U section weighting not less than 1.00 pound per linear foot.
- 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/ft / minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

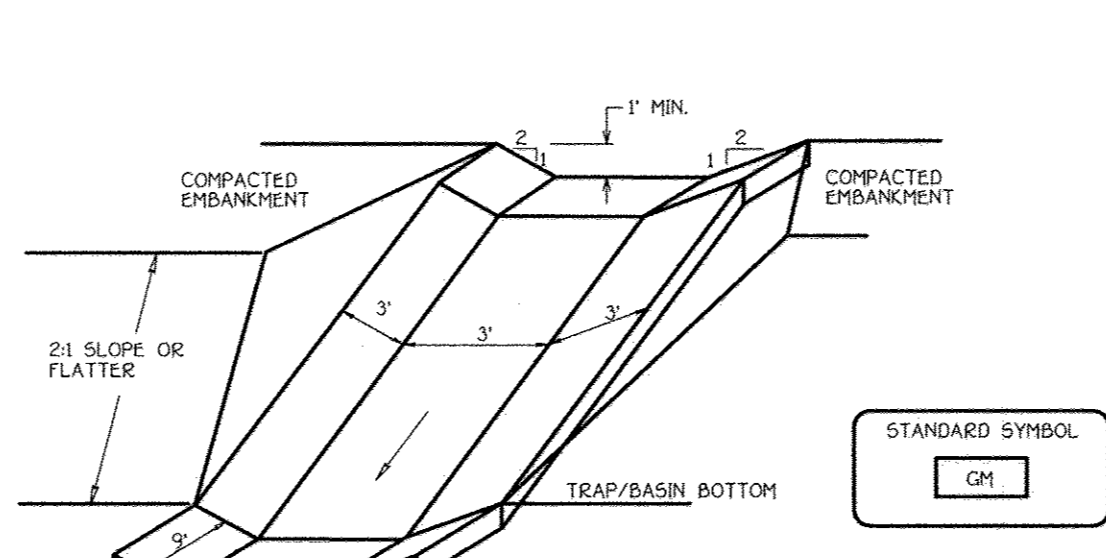
Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
flatter than 5:1	unlimited	unlimited
5:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

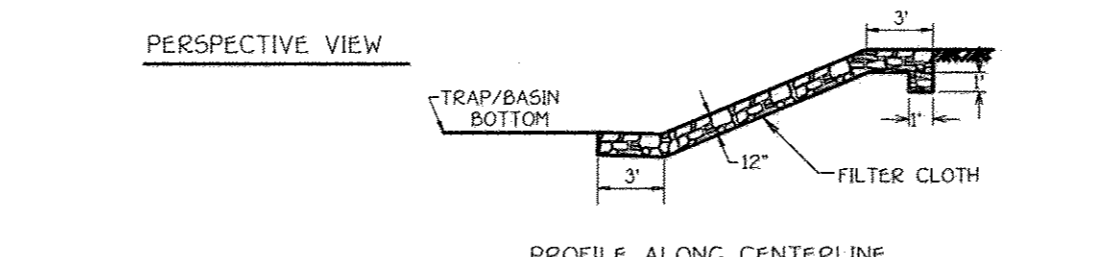
Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

SILT FENCE

NOT TO SCALE



PERSPECTIVE VIEW



PROFILE ALONG CENTERLINE

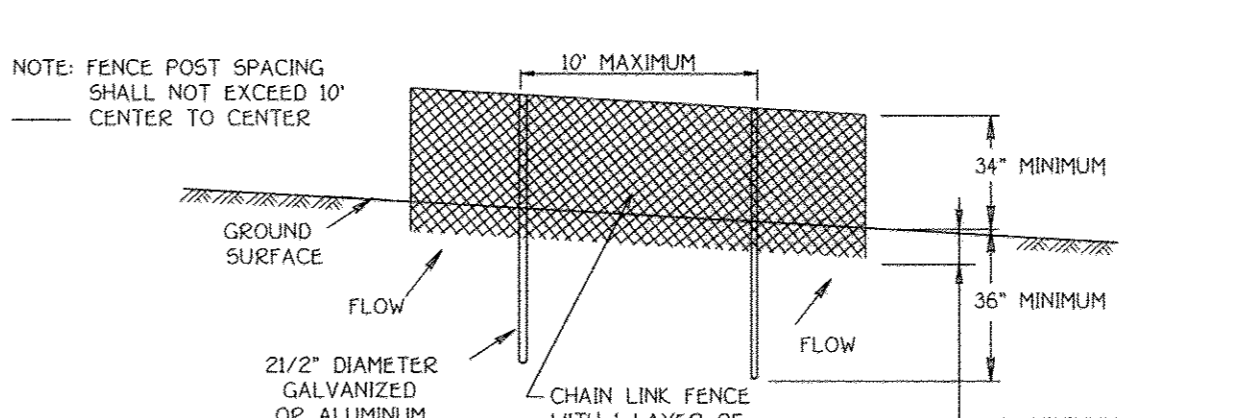
Construction Specifications

- 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.
- Geotextile Class C shall be installed under all gabion baskets.
- The stone used to fill the gabion baskets shall be 4" - 7".
- Gabions shall be installed in accordance with manufacturers recommendations.
- Gabion inflow protection shall be used where concentrated flow is present on slopes steeper than 4:1.

GABION INFLOW PROTECTION

NOT TO SCALE

SUPER SILT FENCE



STANDARD SYMBOL

Construction Specifications

- 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.
- 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.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- 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/ft / minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

ENGINEER'S CERTIFICATE
I, Howard County, certify that this Plan for Erosion and Sediment Control is a practical and workable plan based on my personal knowledge of the condition and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
Signature: *[Signature]* Date: 02-05

DEVELOPER'S CERTIFICATE
I/We Certify That All Development and Construction Will Be Done According To This Plan of Development and Plan for Erosion and Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Deemed Necessary.
Signature: *[Signature]* Date: 8-7-05

Reviewed for Howard County Soil Conservation District and Meets Technical Requirements.
U.S.D.A. - National Resources Conservation Service

Approved: This Development Is Approved For Erosion and Sediment Control By The Howard Soil Conservation District.
District: Howard Soil Conservation Dist.

Approved: Department Of Planning And Zoning
Signature: *[Signature]* Date: 8/16/05

Chief, Division Of Land Development
Signature: *[Signature]* Date: 9/16/05

Approved: Howard County Department Of Public Works
Signature: *[Signature]* Date: 9-21-05

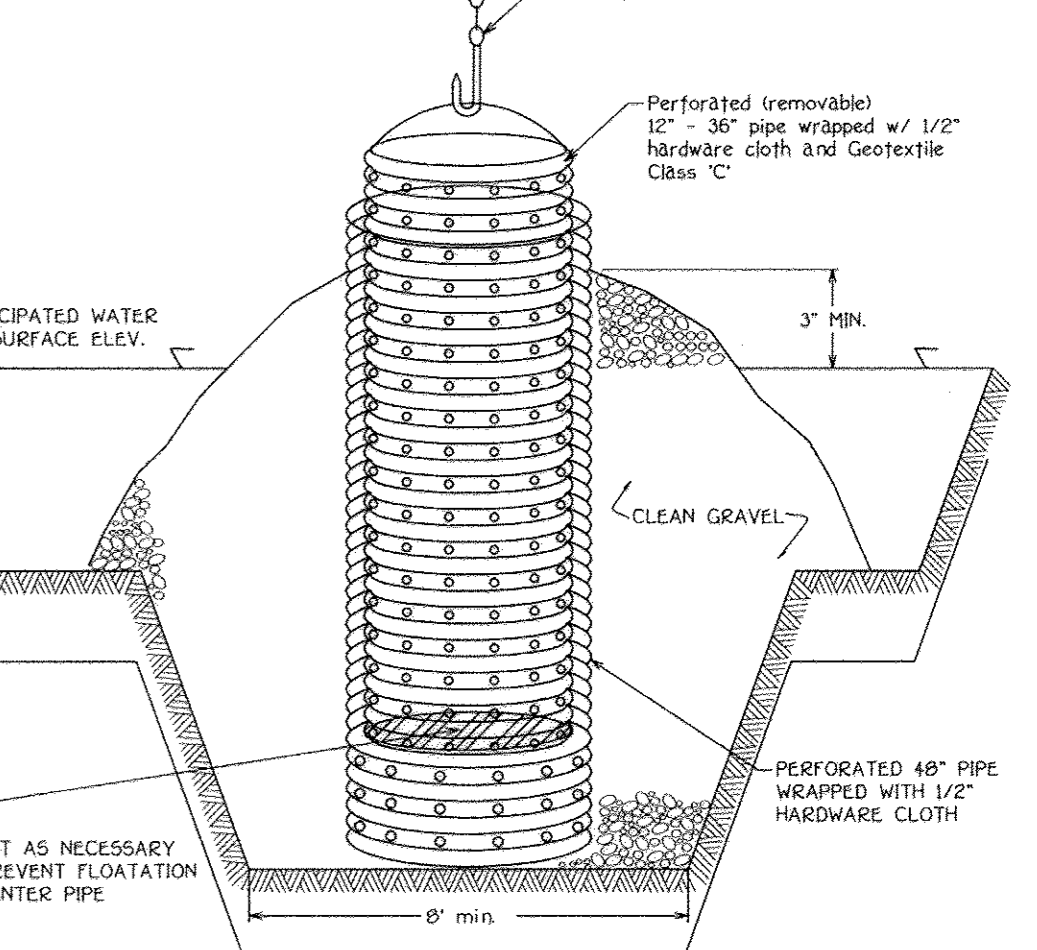
Chief, Bureau Of Highways

REVISIONS

NO.	DESCRIPTION	DATE

REMOVABLE PUMPING STATION

NOT TO SCALE



Construction Specifications

- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
- After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
- 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" slots 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.
- The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

SEDIMENT CONTROL NOTES AND DETAILS
HOMEWOOD CROSSING
PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
Benedict Farm, Phase One, Plat Nos.)
Zoned: RC-DEO
Tax Map: 29 Grid: 9 Parcel: 28
Third Election District
Howard County, Maryland
Date: August, 2005
Sheet 19 of 30

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALFOUR NATIONAL FIC
ELLICOTT CITY, MARYLAND 21042
4100 461 - 2095

FOR ESE CONSULTANTS, INC.
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.
MD LICENSE No.: 21528

Owner
MARY CARTER CARROLL ZIEGLER, ET AL.
C/O NATALIE ZIEGLER
11352 HOMEWOOD ROAD
ELLICOTT CITY, MARYLAND 21042

Developer
TOLL BROTHERS, INC.
ATTN: MR. SCOTT HARE
7164 COLUMBIA GATEWAY DRIVE, SUITE 230
COLUMBIA, MARYLAND 21046

STONE OUTLET SEDIMENT TRAP - ST II
NOT TO SCALE

AS-BUILT

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover for barren soil to protect it from 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 at final grade, former stockpile and staging areas, etc.

EFFECTS

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation and groundwater recharge. Vegetation over time will increase organic matter content and improve the water holding capacity of the soil and stabilize it. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, 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

- Site Preparation
 - Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
- Soil Amendments (Fertilizer and Lime Specifications)
 - Soil tests must be performed to determine the exact rates and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
 - 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 80% will pass through a #20 mesh sieve and 98-100% will pass through a #20 mesh sieve. Incomplete lime and fertilizer into the top 3-5" of soil by disk or other suitable means.
- Seeded Preparation
 - Temporary Seeding
 - Seeded 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.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3-5" of soil by disk or other suitable means.
 - Permanent Seeding
 - Minimum conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay, but enough fine grained material (No. 200 sieve plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if low organic or organic impurities is to be planted, then a sandy soil (No. 200 sieve plus clay) should be acceptable.
 - Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soils on site, additional topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
 - Areas to be seeded in accordance 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 from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Mix soil amendments into the top 3-5" of topsoil by disk or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application, where site conditions will permit normal seeded preparation loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes steeper than 3:1 should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.
- Seed Specifications
 - All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized testing agency and shall be tested within the 18 months immediately preceding the date of sowing such material on the job.
 - Seed tags shall be made available to the inspector to verify type and rate of seed used.
 - Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of the appropriate bacteria prepared in accordance with the instructions on the package and used within the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate to very infertile soil. Inoculant should be applied to seed as soon as possible until used. Temperatures above 75-80° F. can weaken bacteria and make the inoculant less effective.

- Methods of Seeding
 - Hydroseeding - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seed or mulch spreader. 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) 500 lbs/acre K2O (potassium) 200 lbs/acre.
 - Lime - use only ground agricultural limestone, up to 3 tons per acre may be applied by hydroseeding. Normally 2 tons per acre may be applied by hydroseeder at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
- Dry Seeding - This includes use of conventional drop or broadcast spreaders.
 - Seed spreader 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 weighted roller to provide good seed to soil contact.
 - Where practical seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- Drill or Cultivator Seeding - Mechanized seeders that apply and cover seed with soil. Cultivators are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

- Mulch Specifications (in order of preference)
 - Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed or excessively dusty and shall be free of noxious weed seeds specified in the Maryland Seed Law.
 - Wood Cellulose Fiber Mulch (WCFM)
 - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous material.
 - 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 uniform spread.
 - WCFM, including dye, shall contain no germination or growth inhibiting factors.
 - WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a batter-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 seedlings.
 - WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length to 300 microns; 10 mesh (No. 20) maximum; 1 mm. pH range of 4.0 to 8.5, ash content of 10% maximum and water holding capacity of 90% minimum.

- Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.
 - If grading is completed outside of the seeding season, mulch alone 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.
 - 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.
 - Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1500 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.

- Securing Straw 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:
 - A mulch anchoring tool is a tractor draw 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 less effective on steep slopes where equipment is difficult to operate.
 - Wood cellulose fiber - The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Application of liquid binders should be heavier at the edges where wind catches much, such as in valleys and crests of banks. The remainder of area should be applied uniform after binder application. Binders - such as Acrylic Dux (Ligno-Tack) or other approved equal may be used at rates recommended by the manufacturer.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300' to 3,000' feet long.

Incremental Stabilization - Cut Slopes

- All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 10'.
 - Construction sequence (Refer to Figure 3 below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff from the excavation.
 - Perform Phase 1 excavation, dress, and stabilize.
 - Perform Phase 2 excavation, dress and stabilize. Overseed previously seeded areas as necessary.
 - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.

CONDITIONS WHERE PRACTICE APPLIES

- Incremental Stabilization of Embankments - Fill Slopes
 - Embankments shall be constructed in lifts as prescribed on the plans.
 - 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.
 - At the end of each lift, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.

- CONSTRUCTION SEQUENCE - Refer to Figure 4 (below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff from the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans indicate this area.
 - Place Phase 1 embankment, dress and stabilize.
 - Place Phase 2 embankment, dress and stabilize.
 - Place final phase embankment, dress and stabilize. Overseed previously seeded 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 of completing the operation out of the seeding season will necessitate the application of temporary stabilization.

SECTION 2 - TEMPORARY SEEDING

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

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

Seed Mixture (Hardness Zone ----- 6B)	From Table 26	Fertilizer Rate (lb/acre)	Lime Rate (lb/acre)
No.	Species	Application Rate (lb/acre)	Seeding Dates
1	BARLEY	122	3/1 - 5/15
	OATS	96	6/15 - 10/15
	RYE	140	1" - 2"

No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depth	Fertilizer Rate (lb/acre)	Lime Rate (lb/acre)
1	BARLEY	122	3/1 - 5/15	1" - 2"	600 lb/acre	2 tons/acre
	OATS	96	6/15 - 10/15	1" - 2"	95 lb/1000sq ft	100 lb/1000sq ft
	RYE	140	1" - 2"	1" - 2"		

SECTION 3 - PERMANENT SEEDING

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

- Seed mixtures - Permanent Seeding
 - Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding depths. Seeding rates shall be estimated using Table 25. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV D and V Turfgrass.
 - For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
 - For areas receiving low maintenance, apply ureiform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (50 lbs/acre) and legumes to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardness Zone ----- 6B)	From Table 25	Fertilizer Rate (lb/acre)	Lime Rate (lb/acre)
No.	Species	Application Rate (lb/acre)	Seeding Dates
1	TALL FESCUE (95%)	125	3/1 - 5/15
2	PERENNIAL RYE GRASS (85%)	15	8/15 - 10/15
3	PERENNIAL RYE GRASS (85%)	15	8/15 - 10/15
4	TALL FESCUE (85%)	120	3/1 - 5/15
5	HARD FESCUE (20%)	30	8/15 - 10/15

No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depth	Fertilizer Rate (lb/acre)	Lime Rate (lb/acre)
1	TALL FESCUE (95%)	125	3/1 - 5/15	1" - 2"	90 lb/acre	175 lb/acre
2	PERENNIAL RYE GRASS (85%)	15	8/15 - 10/15	1" - 2"	14 lb/1000sq ft	14 lb/1000sq ft
3	TALL FESCUE (85%)	120	3/1 - 5/15	1" - 2"	100 lb/acre	100 lb/acre
4	HARD FESCUE (20%)	30	8/15 - 10/15	1" - 2"		

DUST CONTROL

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

- PURPOSE - TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

CONDITIONS WHERE PRACTICE APPLIES

PERMANENT METHODS

- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
- VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
- TILLAGE - TO ROUGHEN SURFACE AND BRING CLOYS TO THE SURFACE, THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART. SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST, REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
- BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES, AND SIMILAR MATERIALS CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

SPECIFICATIONS

TEMPORARY METHODS

- PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOIL. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
- TOPSOLLING - COVERING WITH LESS ERODIBLE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
- STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

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
This practice is limited to areas having 21 or flatter slopes where:

- The texture of the exposed subsoil material is not adequate to produce vegetative growth.
- 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.
- The original soil to be vegetated contains materials toxic to plant growth.
- The soil is so acidic that treatment with limestone is not feasible.

For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

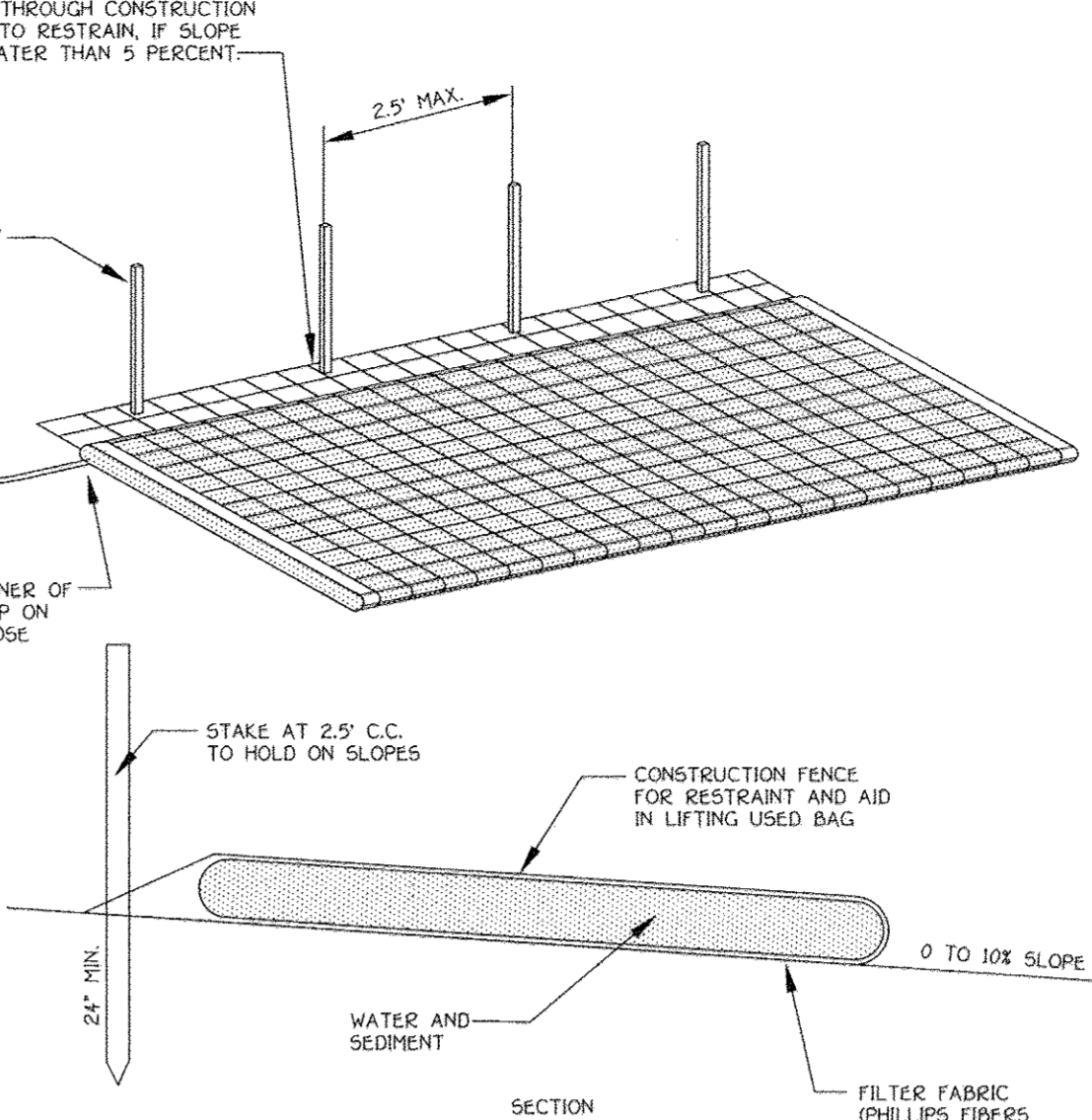
Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Topsoil of depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, silt loam, clay loam, silty clay loam, sandy clay loam, silty clay, or silty loam. 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 1% by volume of cinders, stones, iron coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
 - 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 1000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following paragraphs.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 15 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No soil 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 (4 days min) to permit dissipation of phytotoxic materials.
 - Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- Topsoil Application
 - When topsoil, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
 - 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 seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoil or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are fully licensed and bonded and subject to the control of the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 15 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.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet around the normal application rate.

References: Guidelines Specifications, Soil Preparation and Sodding, MD-VIA, Pub. 1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.



NOTES

- FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
- WIDTH AND LENGTH SHALL BE AS SHOWN IN THE TABLE.
- THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
- FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300 GPM.
- DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.

AVAILABILITY FROM:

INDIAN VALLEY INDUSTRIES, INC. P.O. BOX 810 JOHNSON CITY, NEW YORK 13790 (800) 659-5111	A.C.F. ENVIRONMENTAL 1800-A WILLIS ROAD RICHMOND, VIRGINIA 23237 TOLL FREE 1-800-448-3636	PRICE AND COMPANY, INC. 425 36TH STREET WYOMING, MI 49408 (616) 530-8230
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FILTER BAG DETAIL

NOT TO SCALE

ENGINEER'S CERTIFICATE

I hereby certify that this Plan for Erosion and Sediment Control is a true and correct copy of the original and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature: *[Signature]* Date: 8-2-05

DEVELOPER'S CERTIFICATE

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

Signature of Developer: *[Signature]* Date: 8-3-05

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

Signature: *[Signature]* Date: 8/16/05

U.S.D.A. - Natural Resource Conservation Service

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

Signature: *[Signature]* Date: 8/16/05

Approved: Department Of Planning And Zoning

Signature: *[Signature]* Date: 9/2/05

Chief, Development Engineering Division

Approved: Howard County Department Of Public Works

Signature: *[Signature]* Date: 9-21-05

Chief, Bureau Of Highways

REVISIONS		
NO.	DESCRIPTION	DATE

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (318-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 TO 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - 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.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	87.37	ACRES
AREA DISTURBED	33.03	ACRES
AREA TO BE VEGETATED OR PAVED	3.01	

STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-37B. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and shrub 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 material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot round surface the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

Material - The fill material shall be taken from approved designated borrow areas. It shall be 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 #20 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

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

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

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

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

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

Structure Backfill

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

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

Pipe Conduits

All pipes shall be circular in cross section.

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

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

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

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

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

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

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

Helically corrugated pipe shall have either continuously welded seams or lock seams with intercal caulking or a neoprene bead.

4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill".

6. Other details (Anti-seep collars, valves, etc.) shall be as shown on the drawings. Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

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

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

4. Backfilling shall conform to "Structure Backfill".

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

The following criteria shall apply for plastic pipe:

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

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide 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 Specifications for Construction and Materials, Section 415, 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 stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundations and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization

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

Erosion and Sediment Control

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

OPERATION AND MAINTENANCE

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

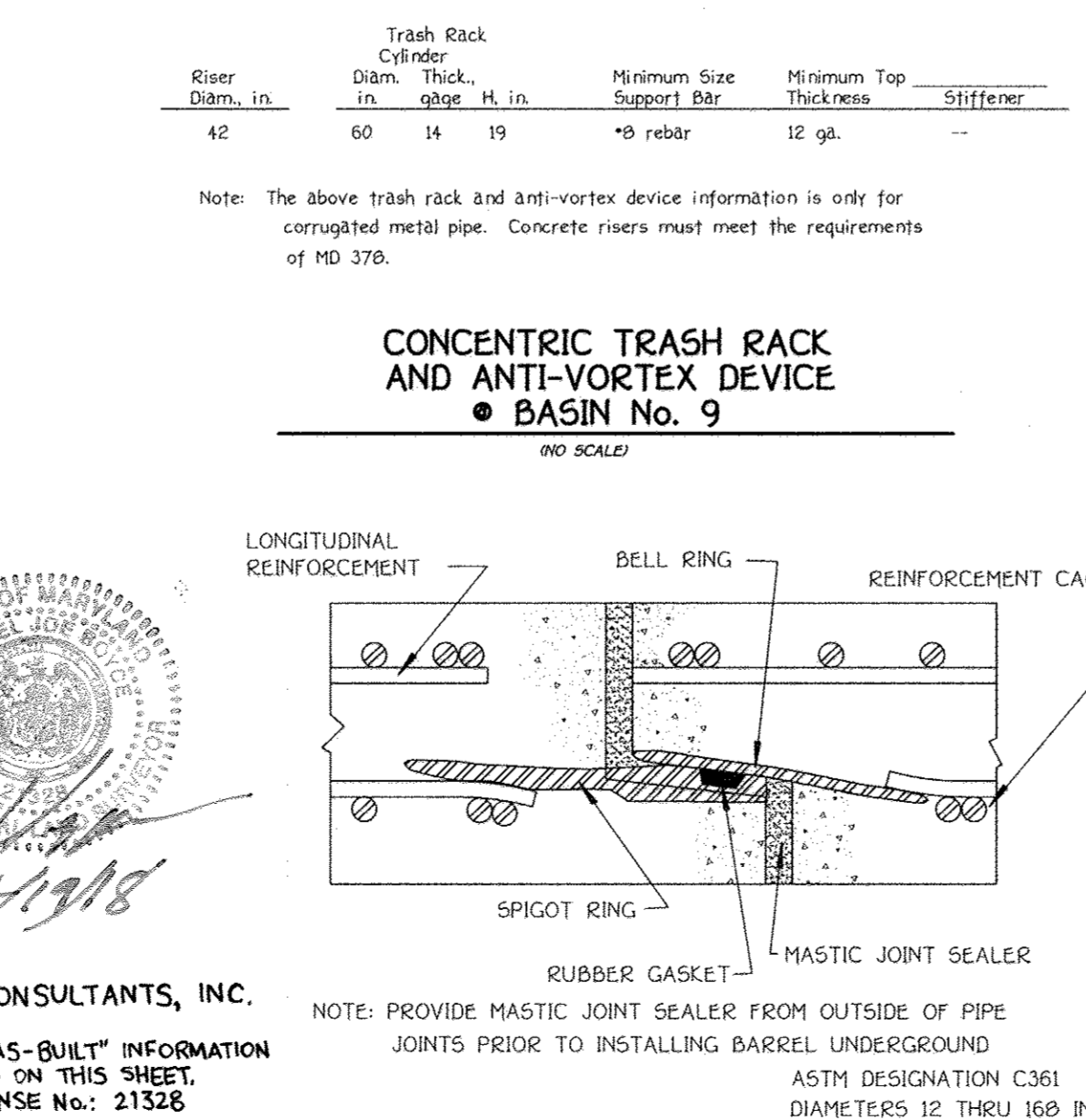
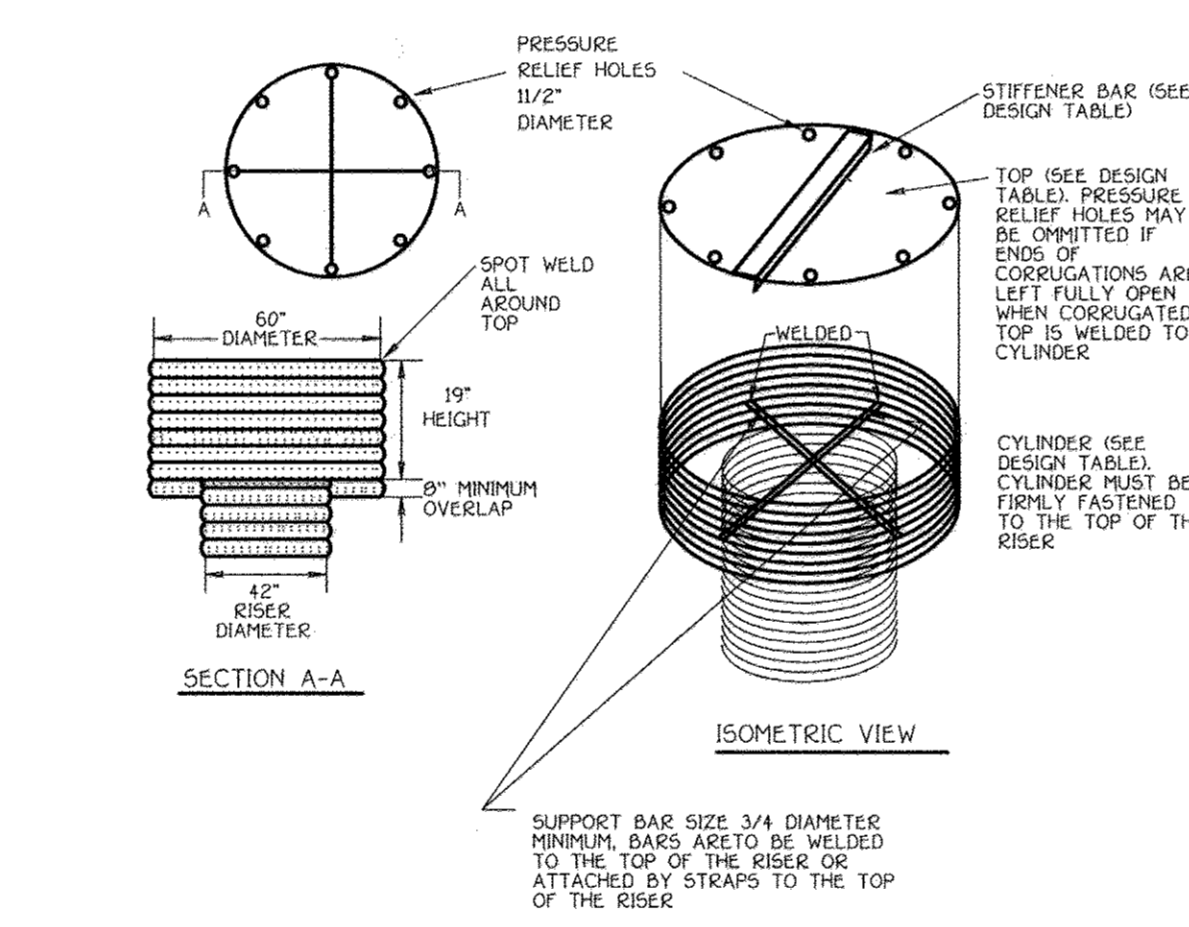
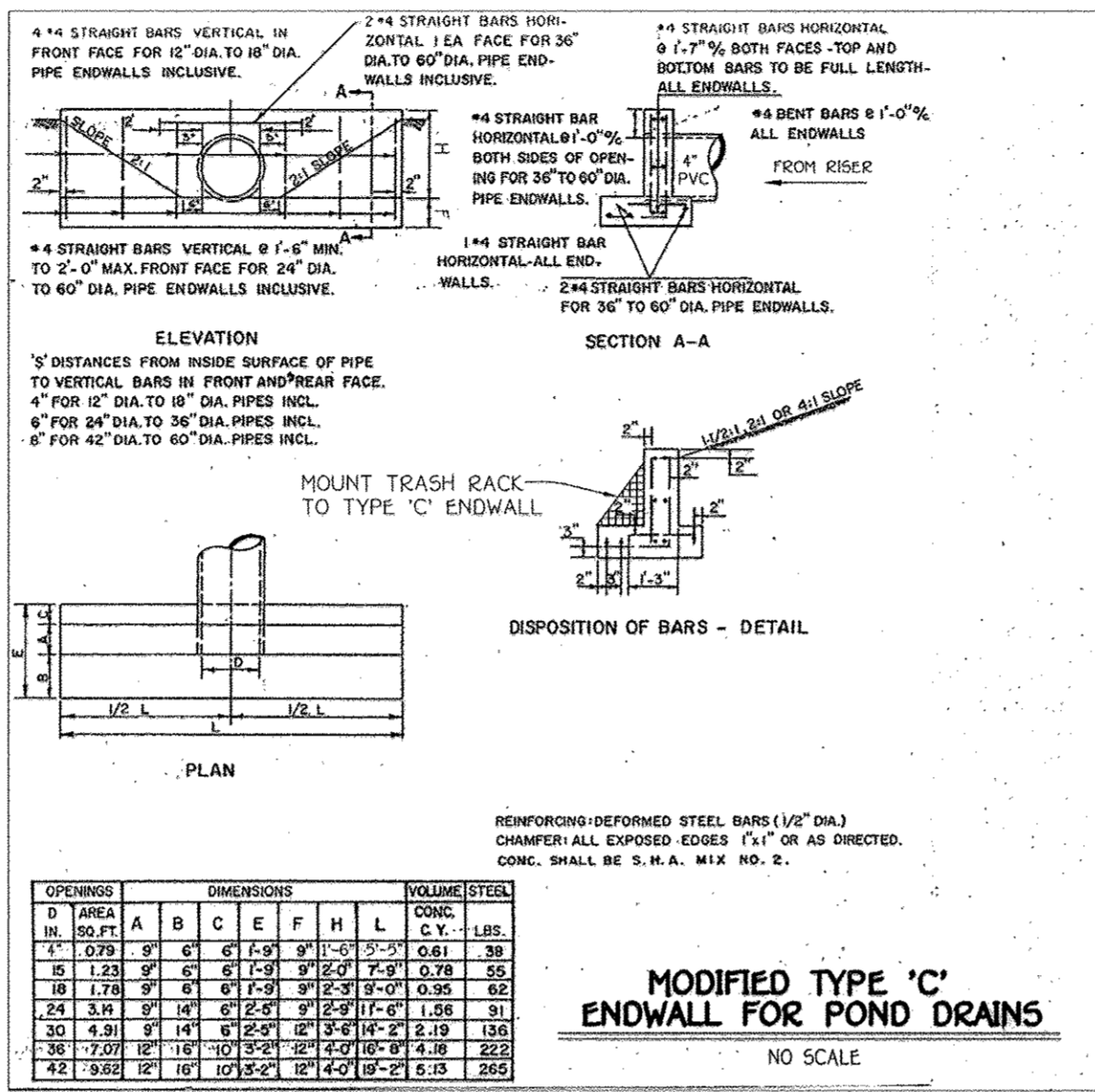
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITIES

ROUTINE MAINTENANCE

1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
2. 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 areas should be mowed as needed.
3. Debris and litter shall be removed during regular mowing operations and as needed.
4. Visible signs of erosion in the pond as well as the rip-rap or gabion outlet area shall be repaired as soon as it is noticed.

NON-ROUTINE MAINTENANCE

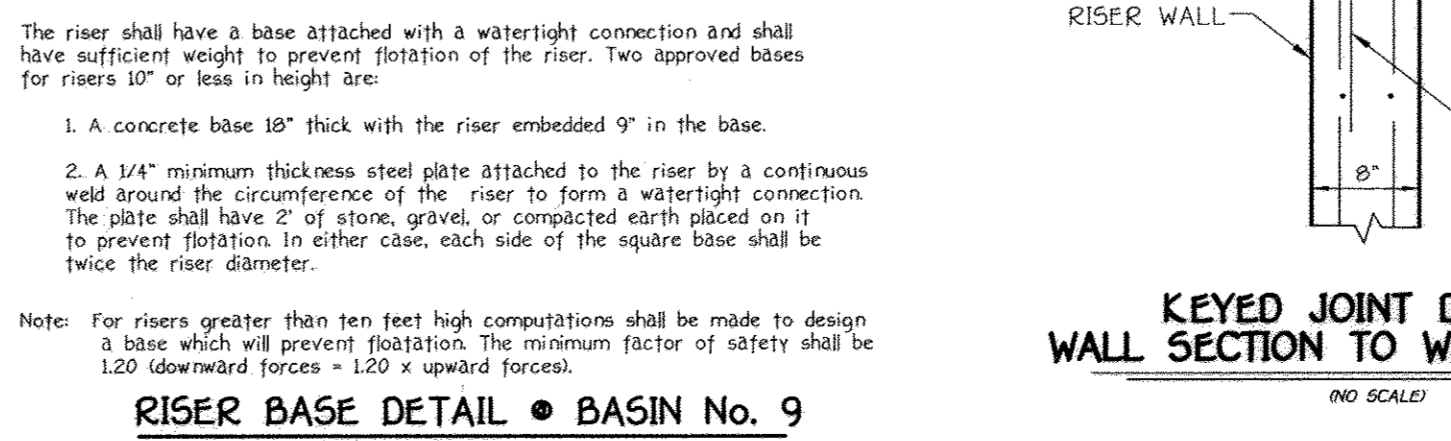
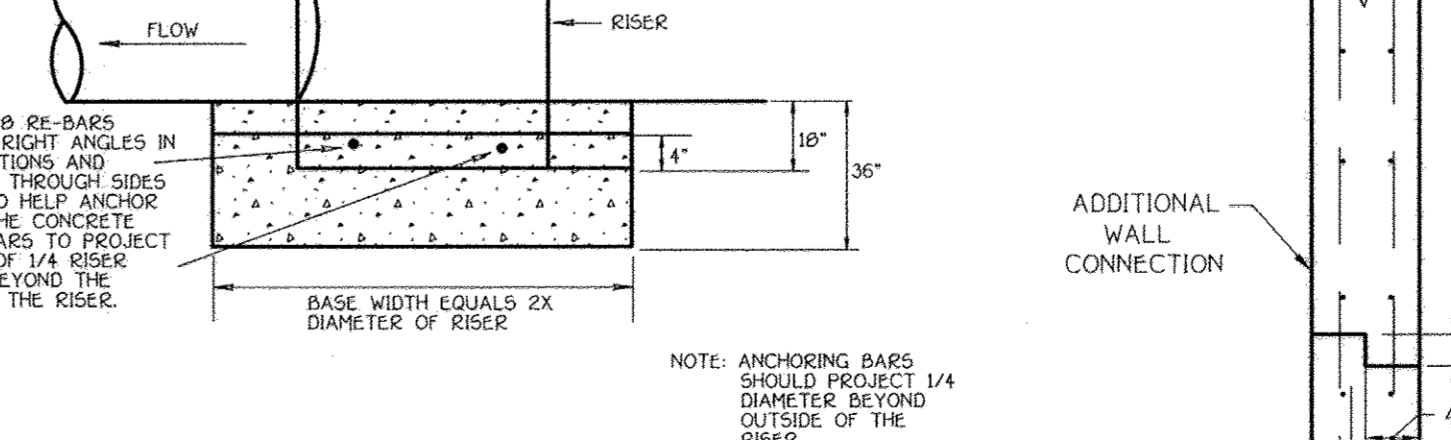
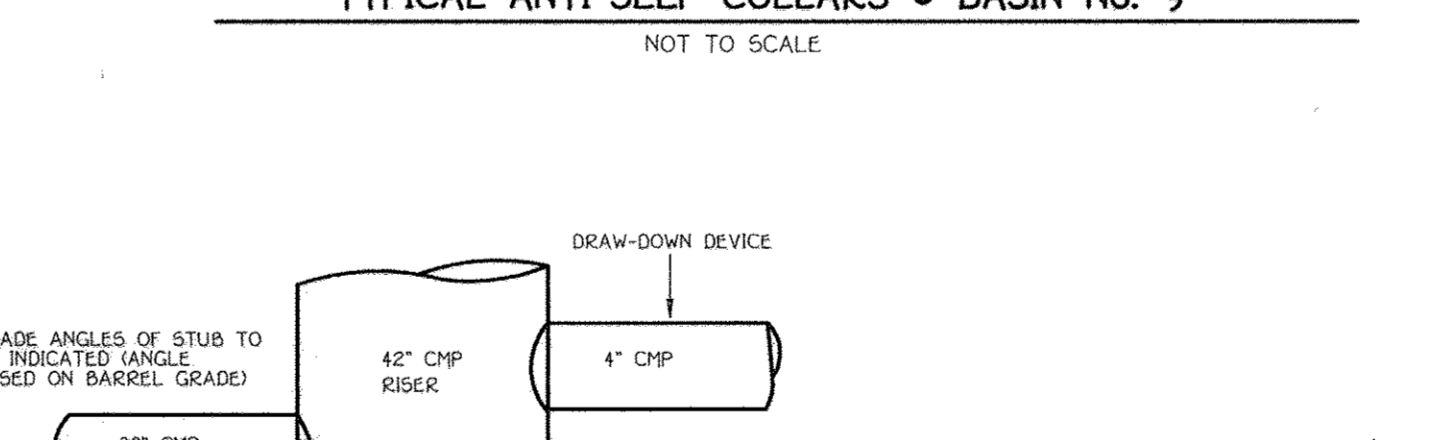
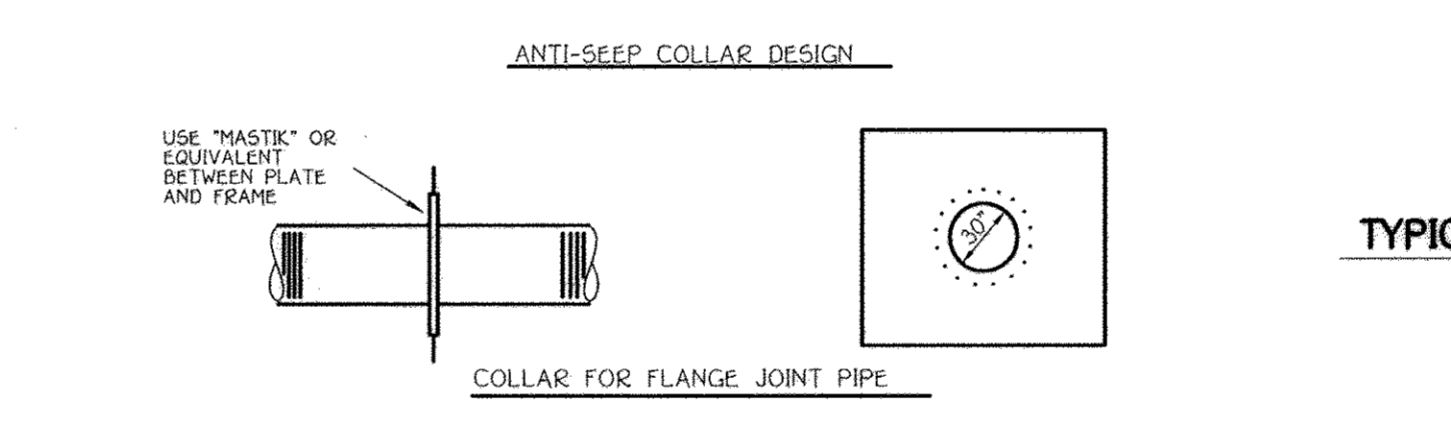
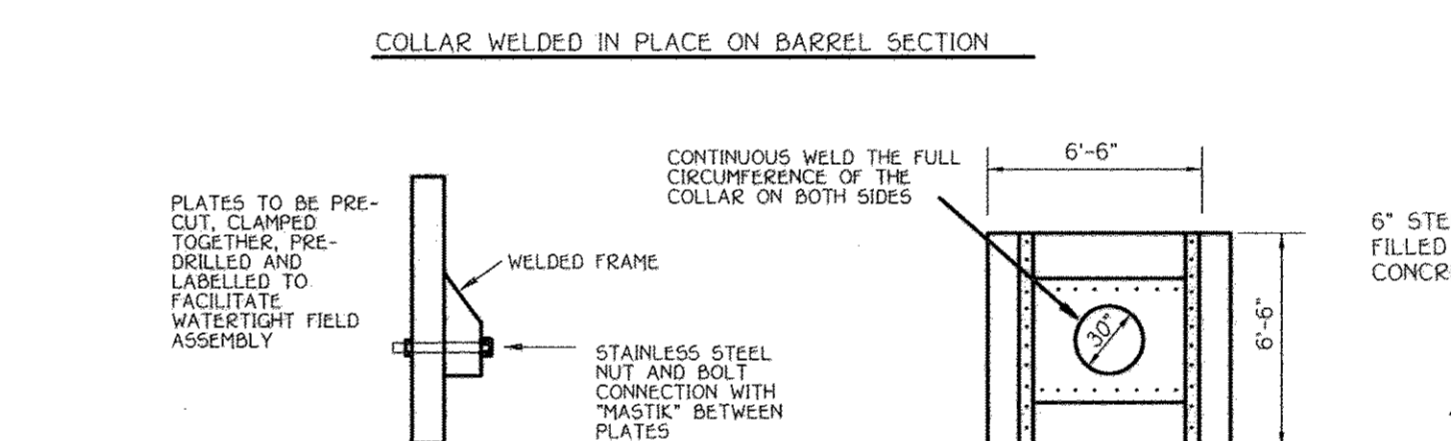
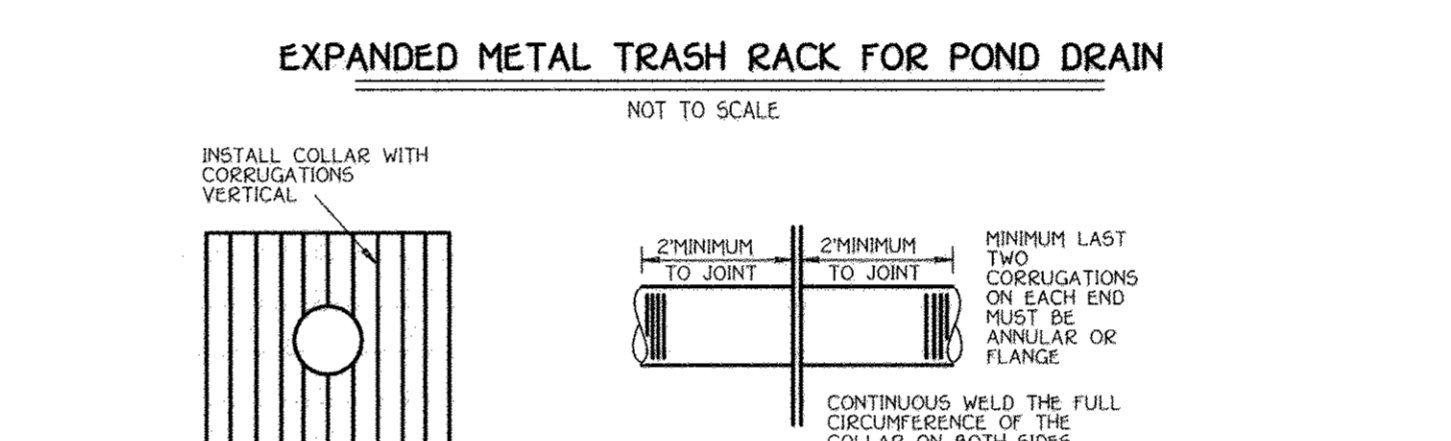
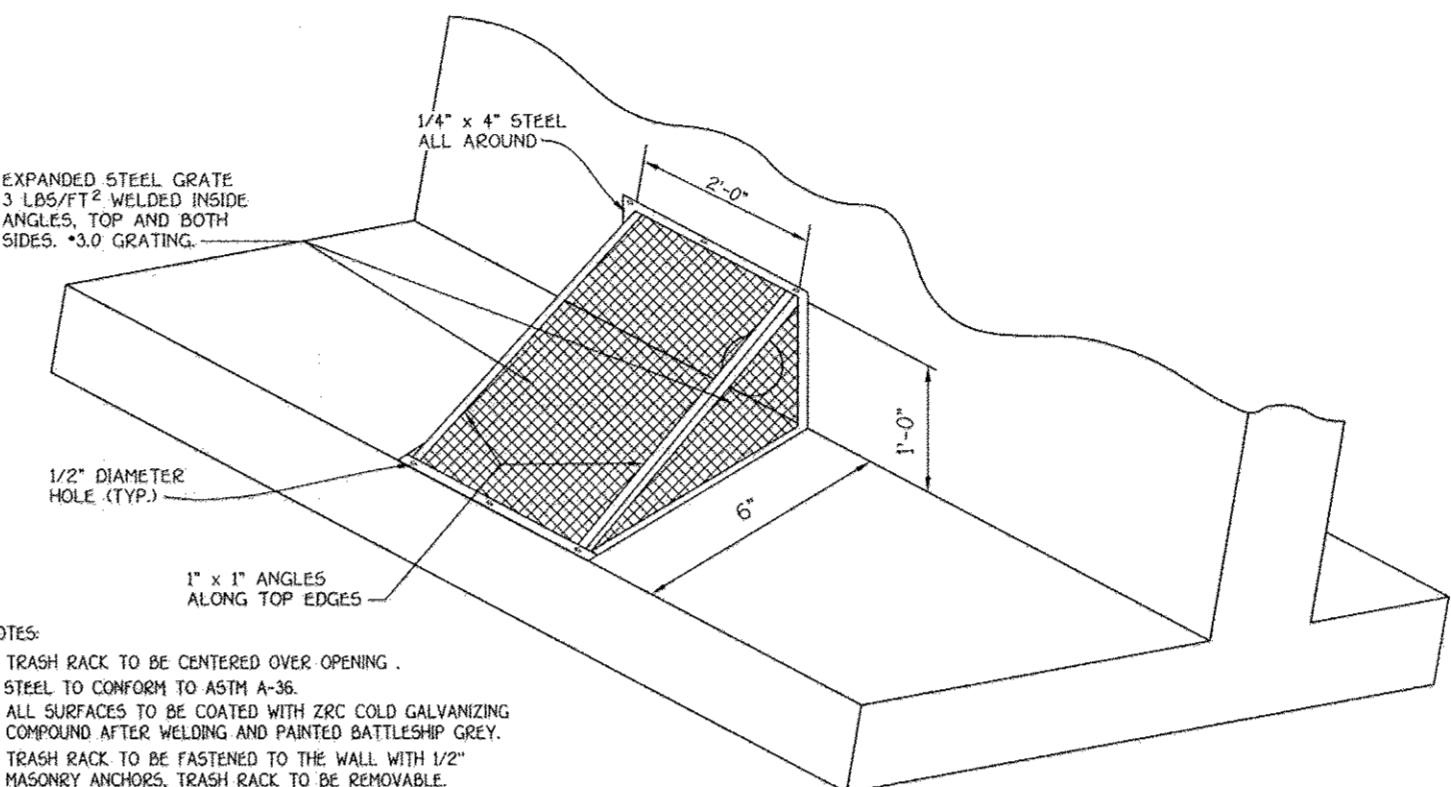
1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
2. Sediment shall be removed from the pond and forebay, no later than when the capacity of the pond or forebay, is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.



Embankment and Cut-off Trench Construction

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

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATION 37B SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL. IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. BASED ON OUR VISUAL CLASSIFICATIONS IT APPEARS THAT SOME OF THE ON-SITE SOILS, ESPECIALLY THE NEAR SURFACE SOILS, WILL BE SUITABLE FOR USE AS CORE TRENCH MATERIAL. IT IS RECOMMENDED THAT ADDITIONAL EXPLORATION AND LABORATORY TESTING BE PERFORMED PRIOR TO POND CONSTRUCTION TO IDENTIFY AND QUANTIFY POTENTIAL BORROW AREAS FOR CORE TRENCH MATERIAL. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED WITH MD SCS 37B SPECIFICATIONS.



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: *David C. Stipe* V.P. P-7-05
Date

Printed Name of Developer: *David C. Stipe*
By The Engineer:
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature of Engineer: *Robert J. Stipe* R-2-05
Date

Printed Name of Engineer: *Robert J. Stipe*
These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature of Engineer: *John M. Lee* JML
Date: *8/16/05*

Signature of Engineer: *William Z. ...* WZ
Date: *9-21-05*

Signature of Engineer: *Cindy Hamilton* CH
Date: *9/28/05*

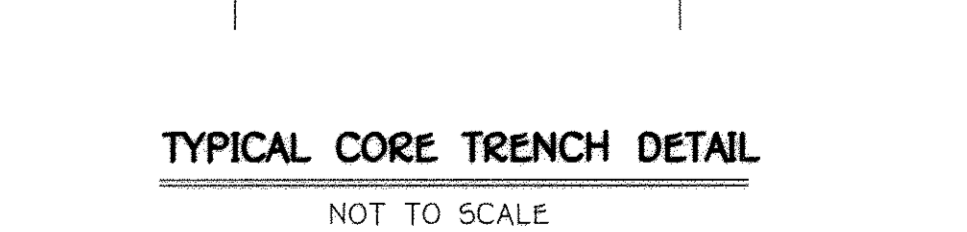
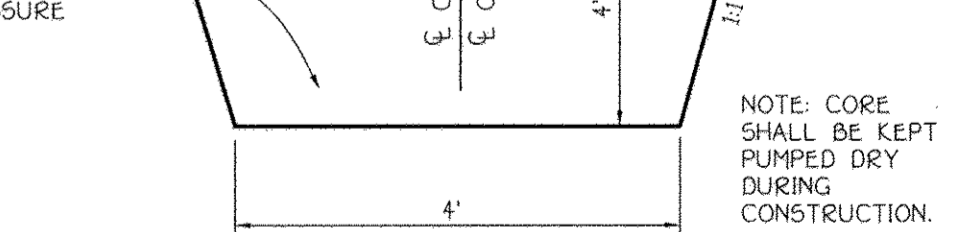
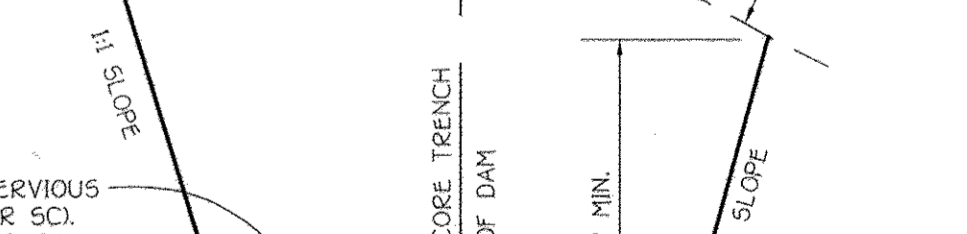
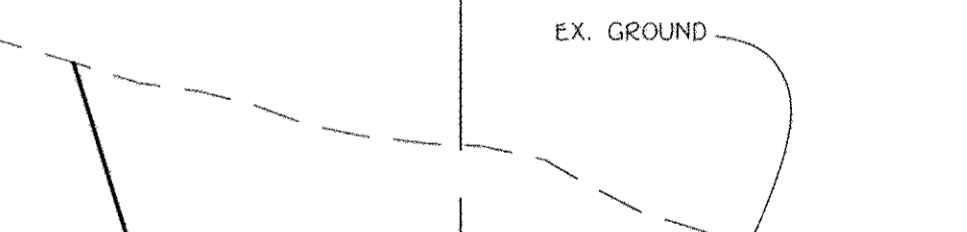
Signature of Engineer: *...*
Date: *9/28/05*

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 That To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



STORMWATER MANAGEMENT NOTES AND DETAILS
HOMEWOOD CROSSING
PHASE 2
LOTS 44 - 79
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision Of Non-Buildable Bulk Parcel 'B' And 'J',
Benedict Farm, Phase One, P141 Nos. 1)
Zoned: RC-DEO
Tax Map: 29 Grid: 9 Parcel: 28
Third Election District
Howard County, Maryland
Date: August, 2005
Sheet 21 of 30

AS-BUILT
F 05-69

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
NATIONAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2955

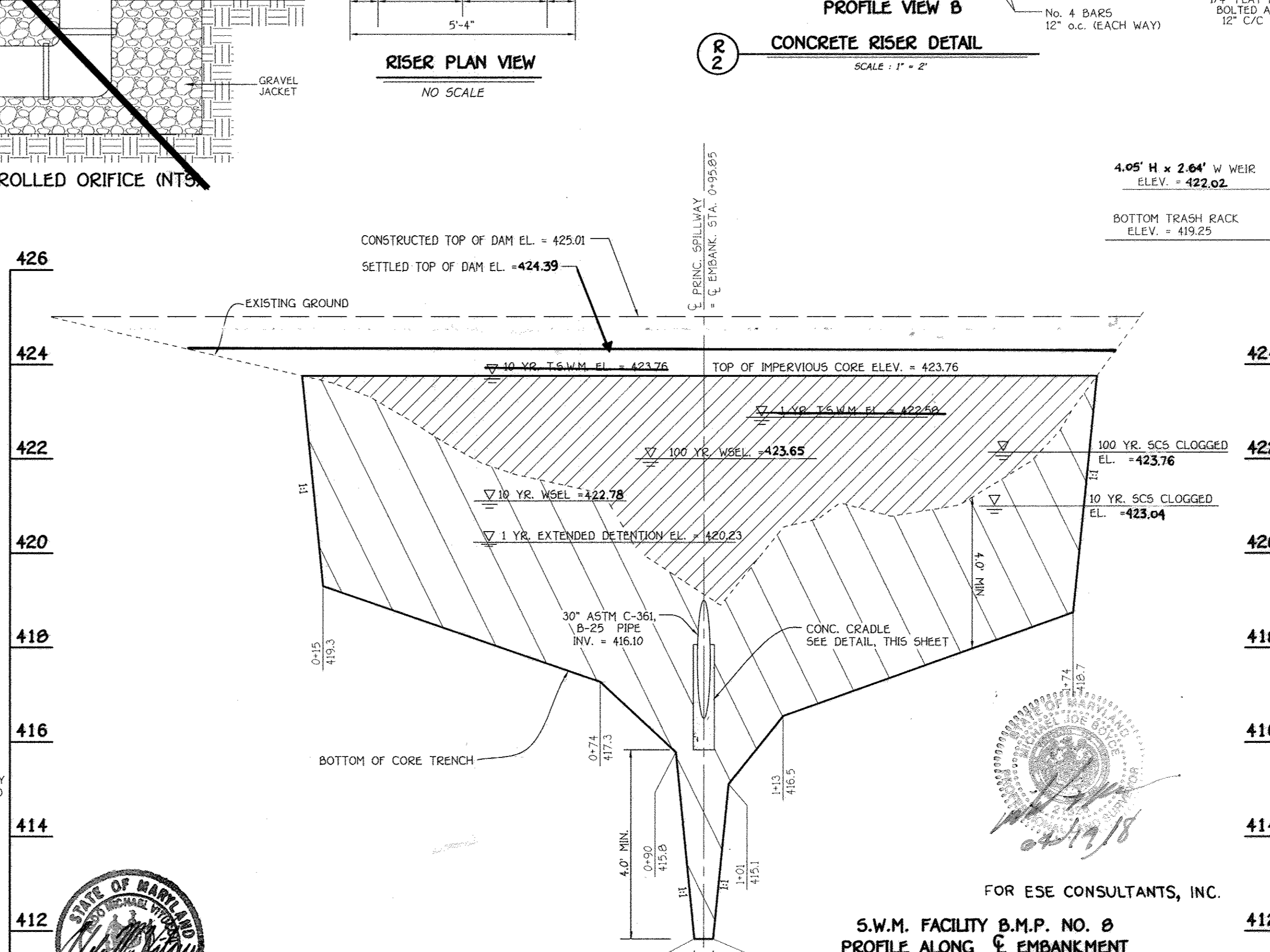
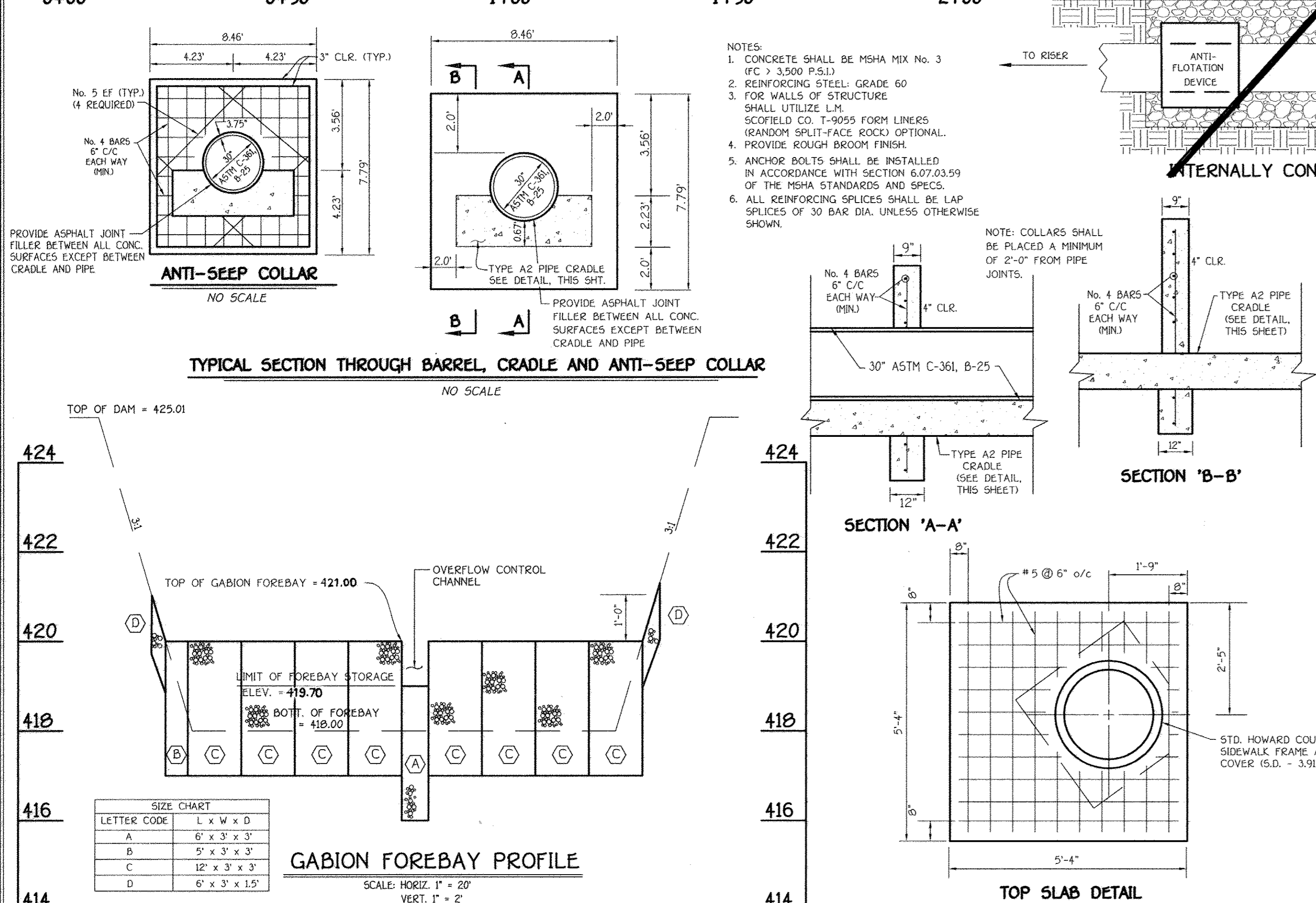
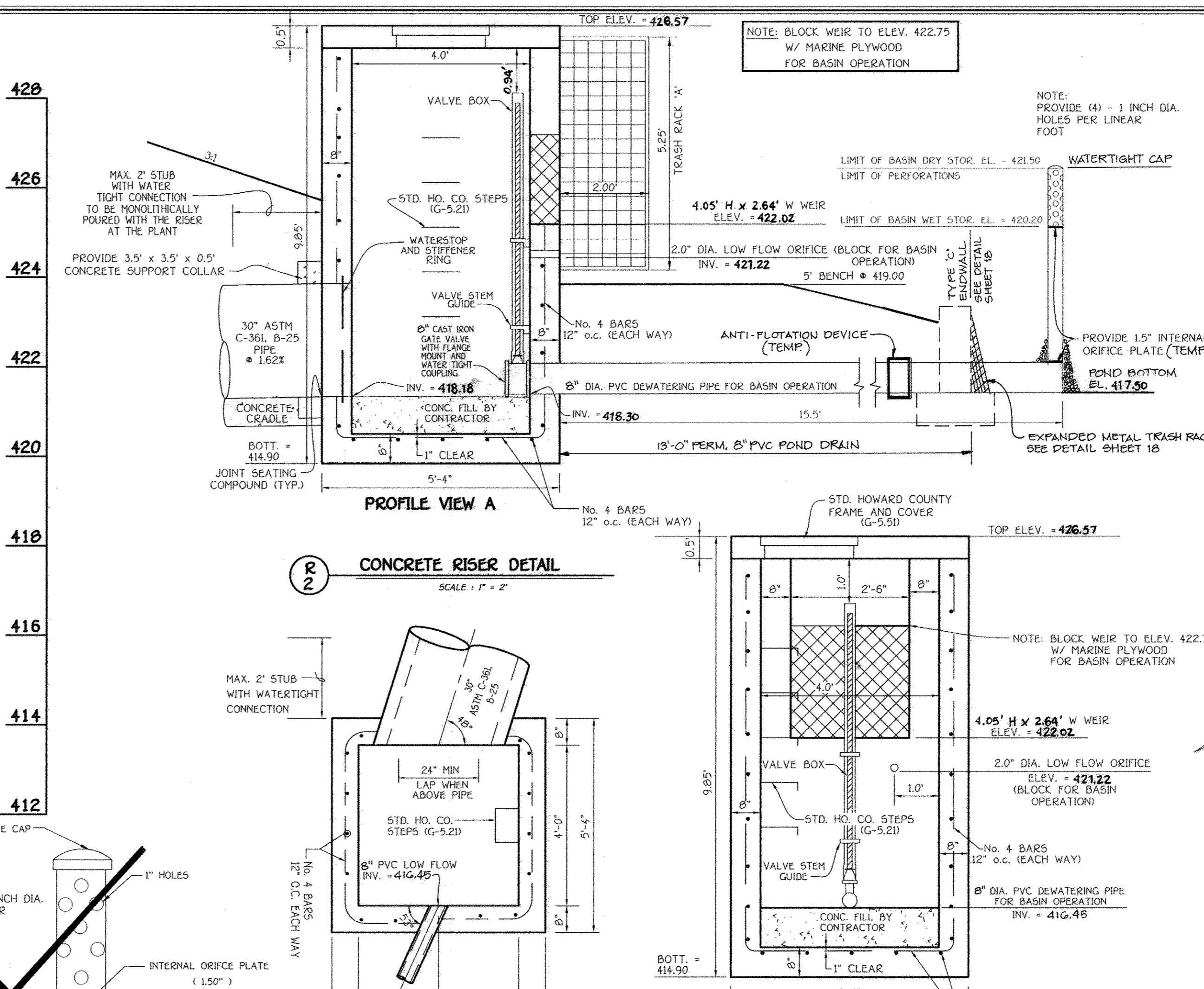
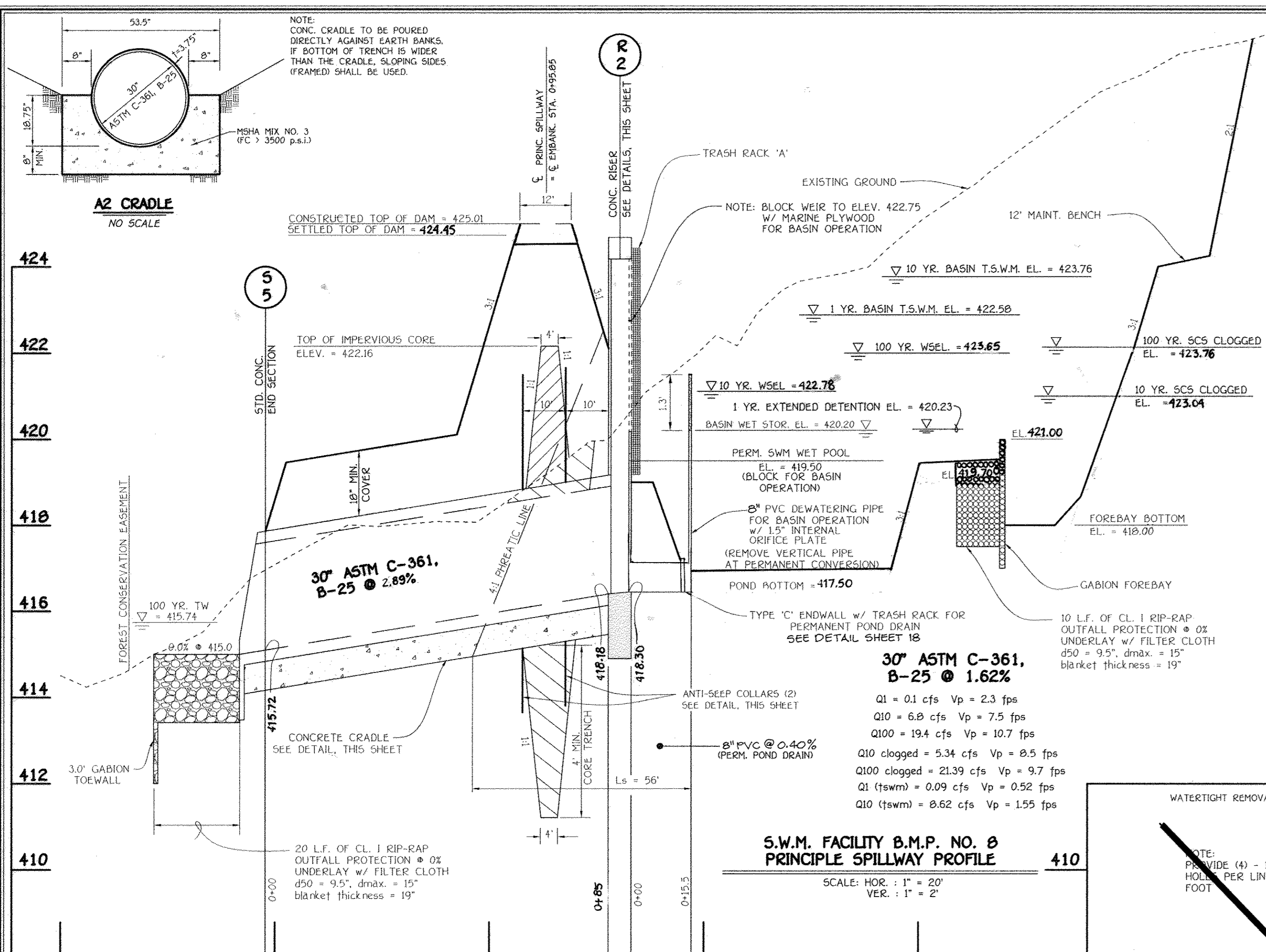
Owner: MARY CARTER CARROLL ZIEGLER, ET AL.
11352 HOMEWOOD ROAD
ELLICOTT CITY, MARYLAND 21042

Developer: TOLL BROTHERS, INC.
ATTN: NATALIE ZIEGLER
7164 COLUMBIA GATEWAY DRIVE, SUITE 230
COLUMBIA, MARYLAND 21046

CONCRETE PIPE JOINT DETAIL
NO SCALE

RISER BASE DETAIL • BASIN No. 9
NO SCALE

KEYED JOINT DETAIL WALL SECTION TO WALL SECTION
NO SCALE



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: *Richard C. Shipe V.P.* Date: 8-2-05
 Signature of Developer: *Richard C. Shipe*
 Printed Name of Developer: Richard C. Shipe

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible 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 Noted The District's Policy That Home/Use Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Within 30 Days Of Completion.

Signature: *Richard C. Shipe* Date: 8-2-05
 Signature of Engineer: *Richard C. Shipe*
 Printed Name of Engineer: Richard C. Shipe

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: *Jim Mays* Date: 8/16/05
 Signature of District: *Jim Mays*
 Printed Name of District: Jim Mays
 Title: USA-Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: *William R. Mink* Date: 9-21-05
 Signature of Department: *William R. Mink*
 Printed Name of Department: William R. Mink
 Title: Chief, Bureau Of Highways

Signature: *Cindy Hunter* Date: 9/2/05
 Signature of Department: *Cindy Hunter*
 Printed Name of Department: Cindy Hunter
 Title: Chief, Development Engineering Division

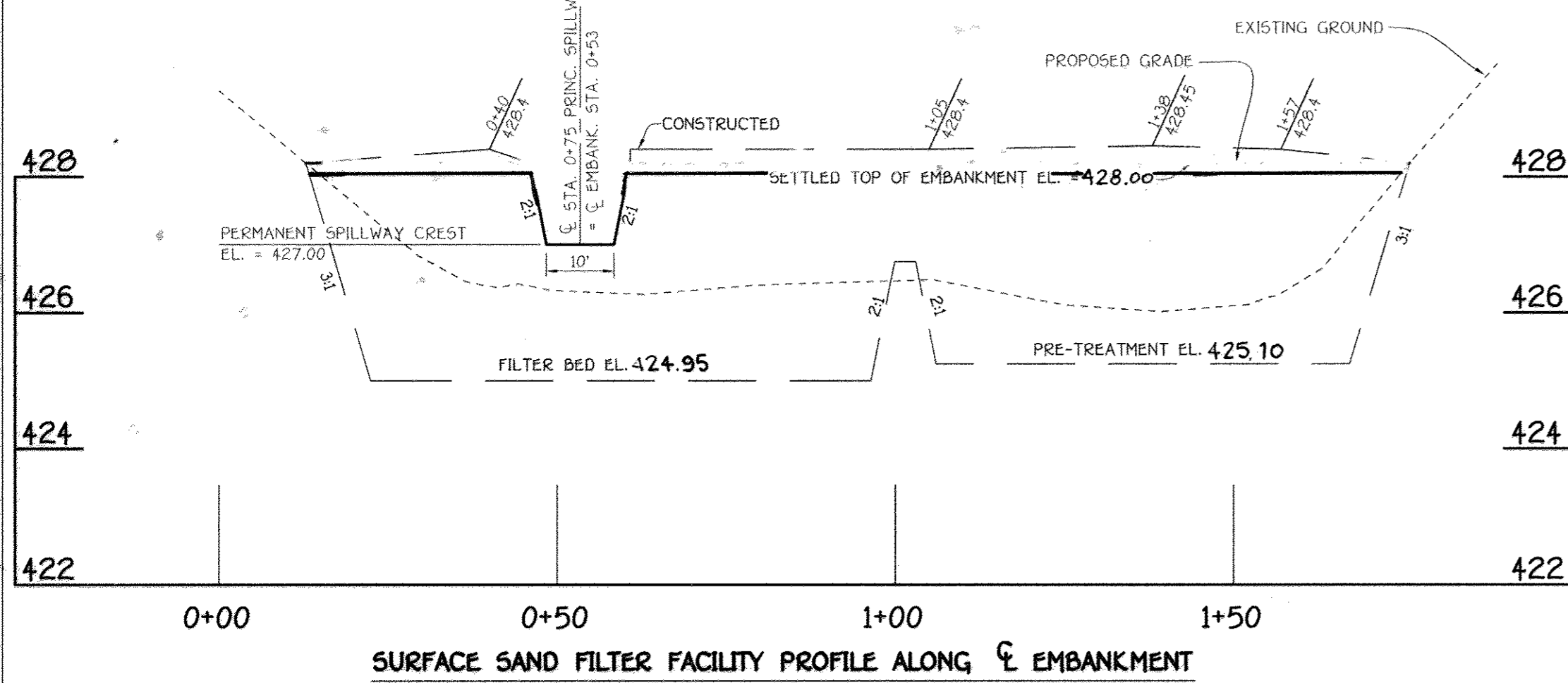
AS-BUILT CERTIFICATION
 I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature: _____ P.E. No. _____
 Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

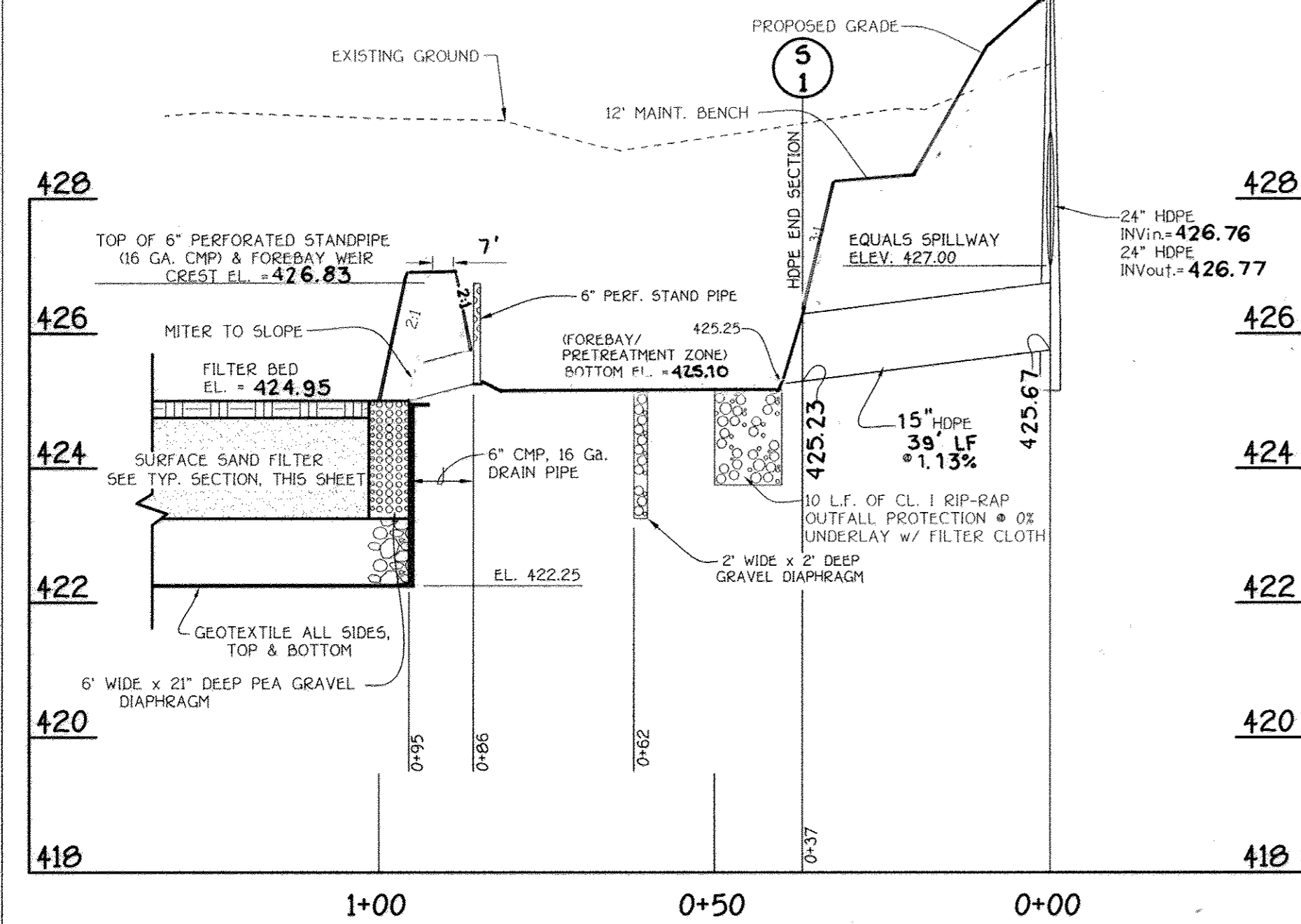
FOR ESE CONSULTANTS, INC.
 S.W.M. FACILITY B.M.P. NO. 8
 PROFILE ALONG EMBANKMENT
 SCALE: HORIZ. 1" = 20'
 VERT. 1" = 2'

REVISE STORM DRAIN PIPE HDPE TO RCP CL III @ IV 8-29-05



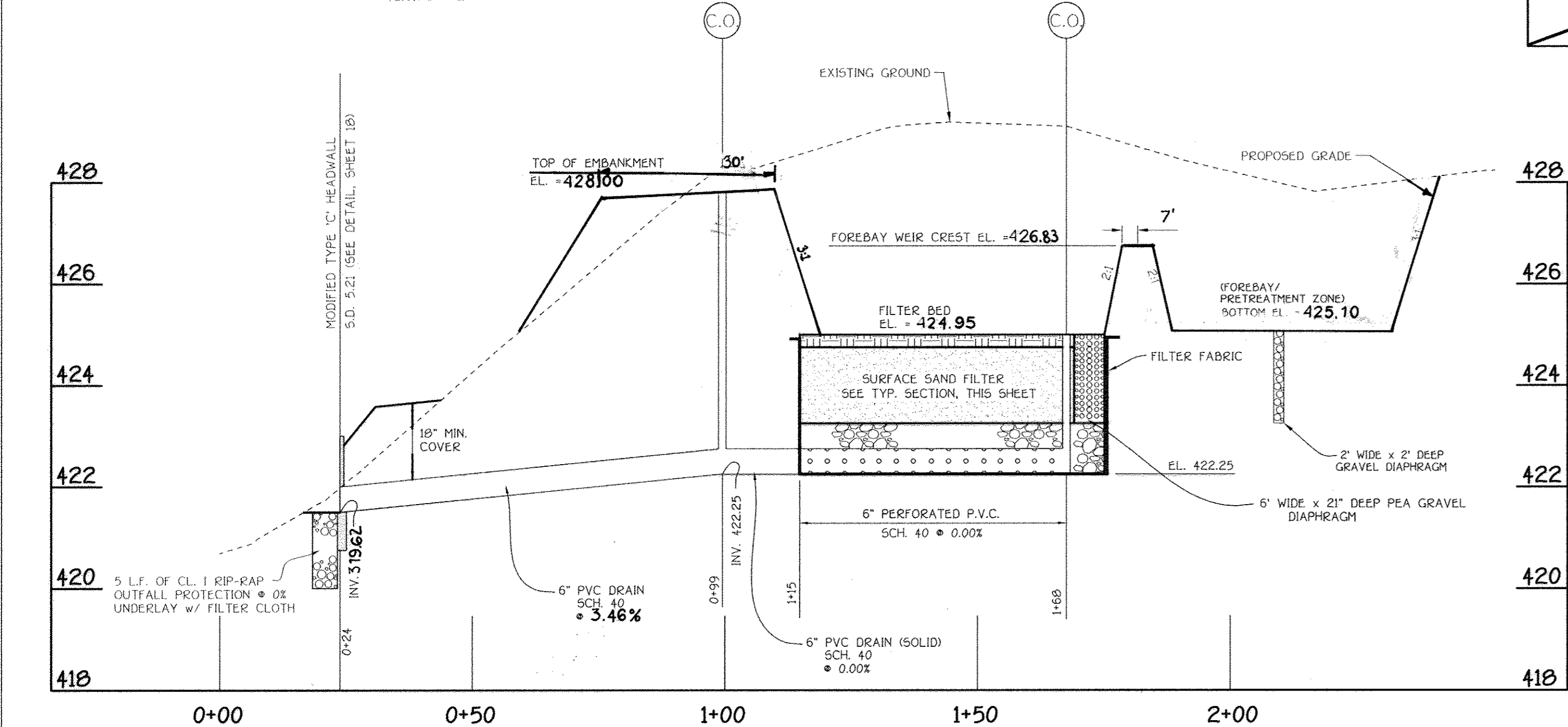
SURFACE SAND FILTER FACILITY PROFILE ALONG EMBANKMENT

SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



SECTION 'B-B' THRU SURFACE SAND FILTER FACILITY

SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



SECTION 'A-A' THRU SURFACE SAND FILTER FACILITY

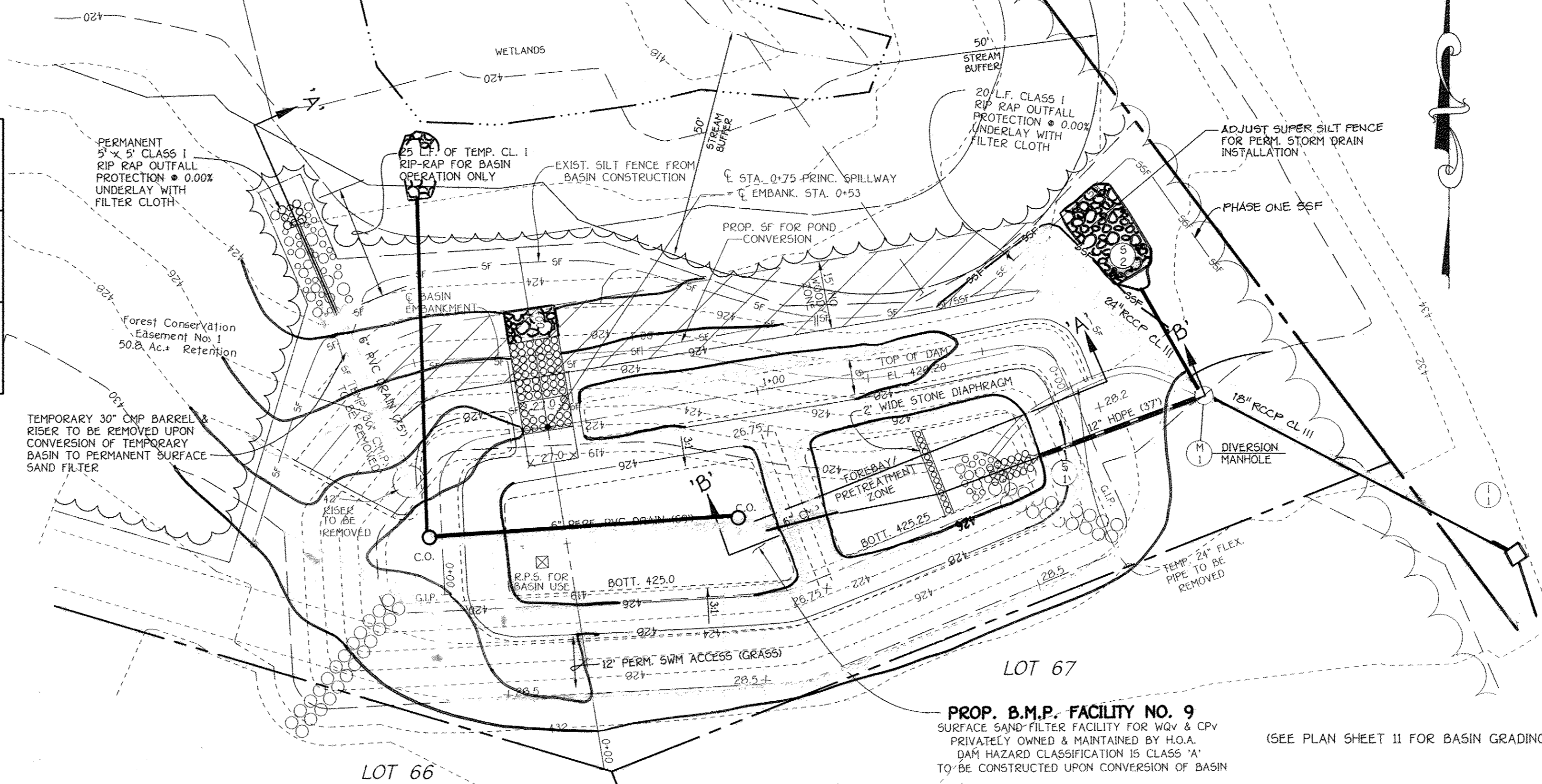
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'

OWNER

MARY CARTER CARROLL ZIEGLER ET AL.
C/O NATALIE ZIEGLER
11352 HOMEWOOD ROAD
ELLICOTT CITY, MARYLAND 21042

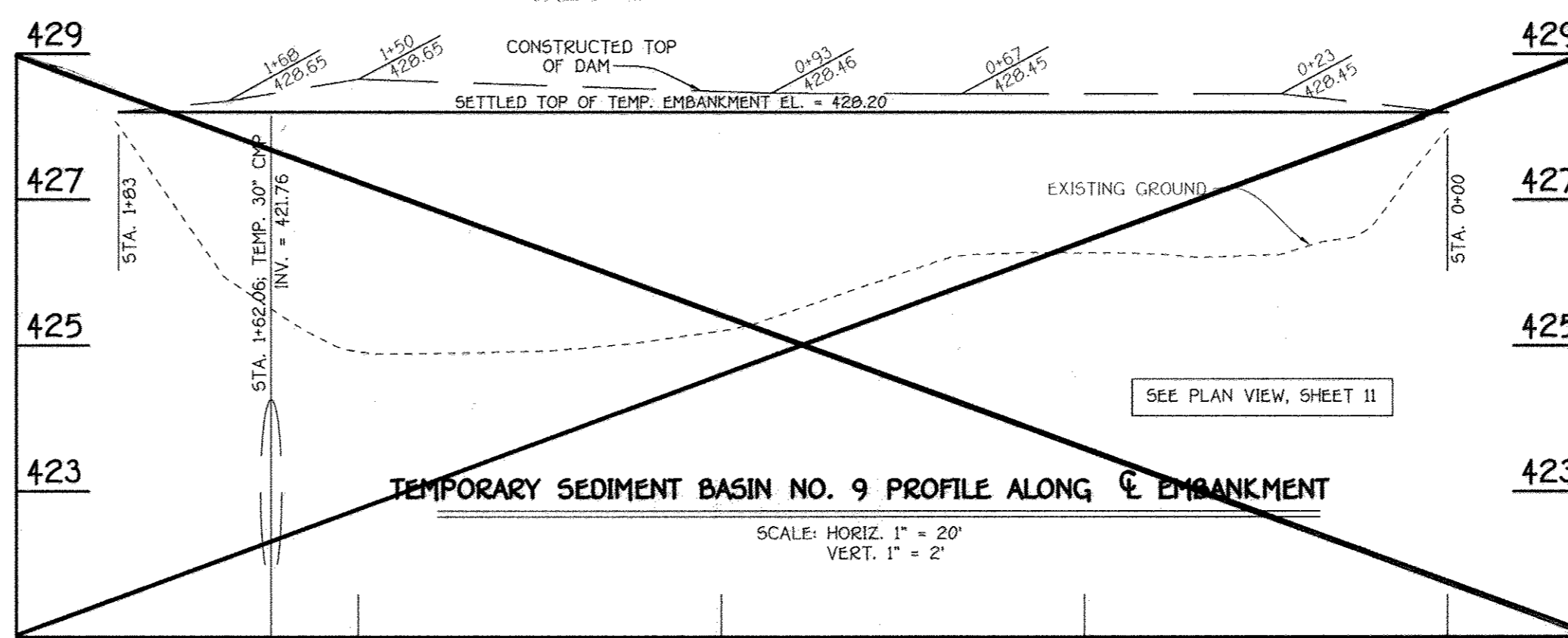
DEVELOPER

TOLL BROTHERS, INC.
ATTN: MR. SCOTT HARE
7164 COLUMBIA GATEWAY DR., SUITE 230
COLUMBIA, MARYLAND 21046



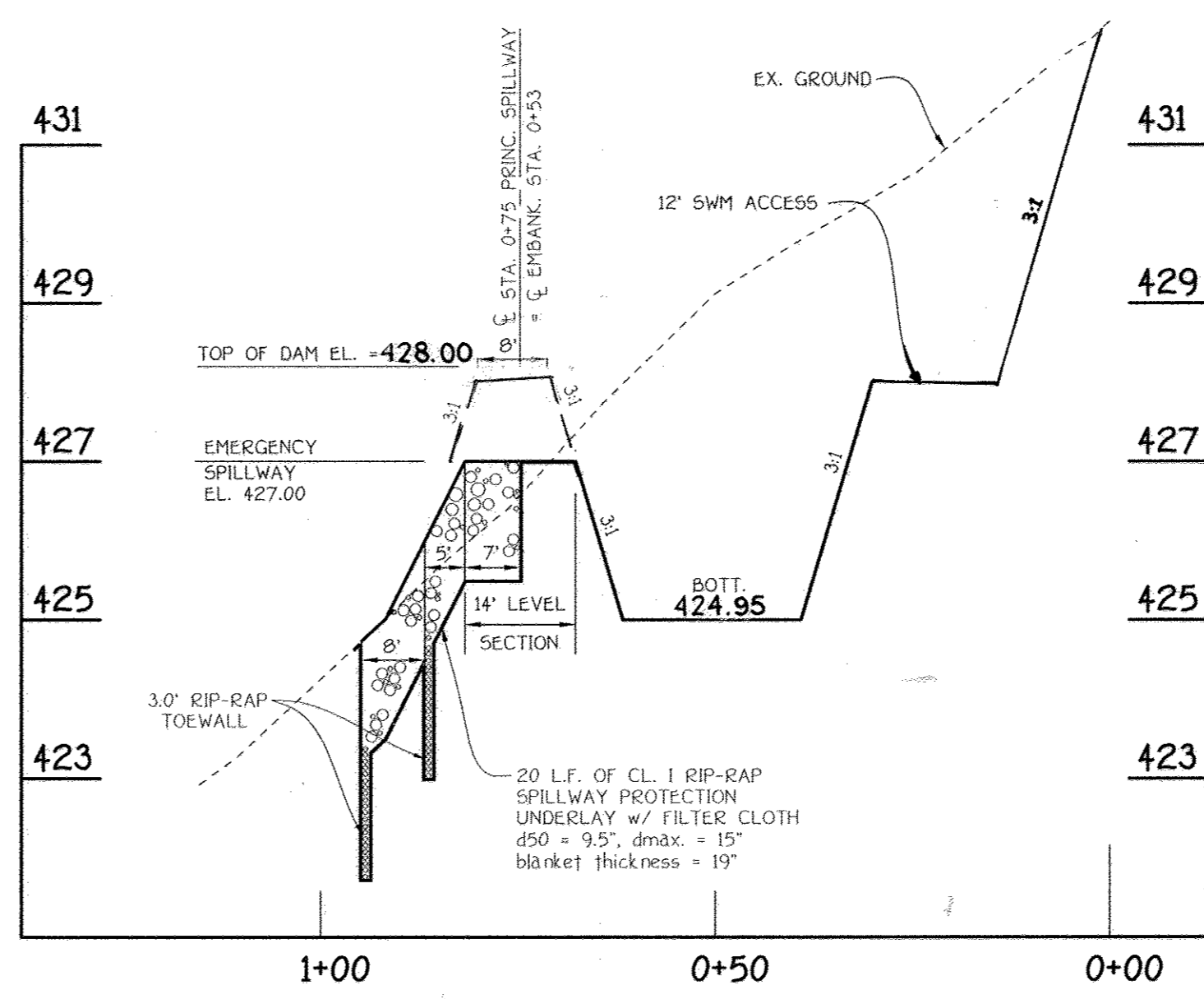
B.M.P. No. 9
PLAN - SURFACE SAND FILTER

SCALE: 1" = 20'



TEMPORARY SEDIMENT BASIN NO. 9 PROFILE ALONG EMBANKMENT

SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



EMERGENCY SPILLWAY PROFILE - SURFACE SAND FILTER

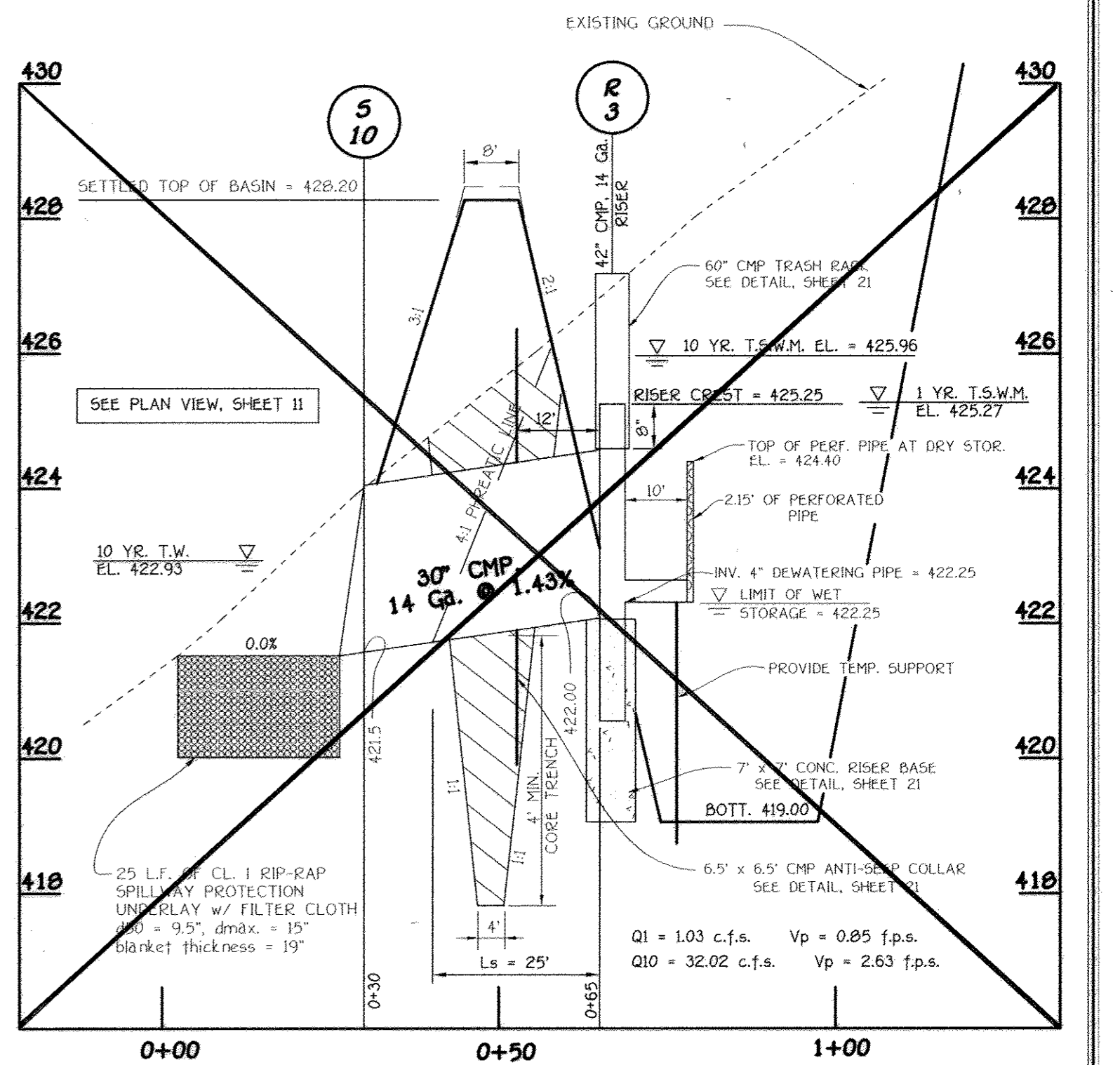
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'

ENGINEER'S CERTIFICATE
I, the undersigned, a duly Licensed Professional Engineer in the State of Maryland, certify that this Plan for Erosion and Sediment Control is a true and correct copy of the original as shown to me by the Developer and that it was prepared in accordance with the requirements of the Howard County Soil Conservation District.

DEVELOPER'S CERTIFICATE
I, the undersigned, certify that all development and construction will be done according to this Plan for Erosion and Sediment Control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the purpose of Sedimentation and Erosion Control. I also authorize periodic inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Developer: *James L. Sharp* Date: 8-2-05
 Signature of Engineer: *John A. Los* Date: 8/16/05
 Signature of U.S.D.A.: *John A. Los* Date: 8/16/05
 Signature of District: *John A. Los* Date: 8/16/05
 Signature of Chief, Division of Land Development: *John A. Los* Date: 9/2/05
 Signature of Chief, Development Engineering Division: *John A. Los* Date: 9/2/05
 Signature of Chief, Bureau of Highways: *John A. Los* Date: 9-21-05

- OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS**
1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
 2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
 3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
 4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
 6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
 7. WHEN WATER POUNDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. THE OWNER MUST FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID.
 8. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
 9. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
 10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



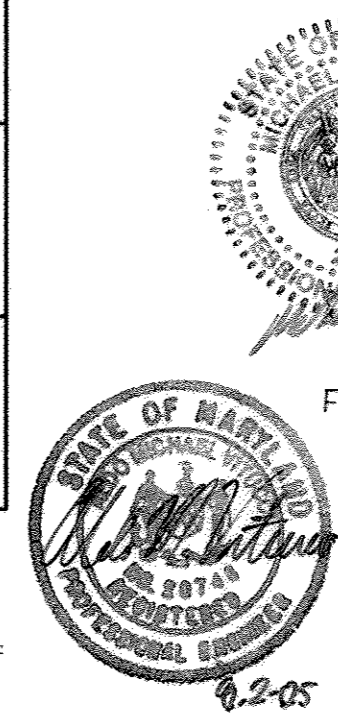
TEMPORARY BASIN No. 9
PRINCIPLE SPILLWAY PROFILE

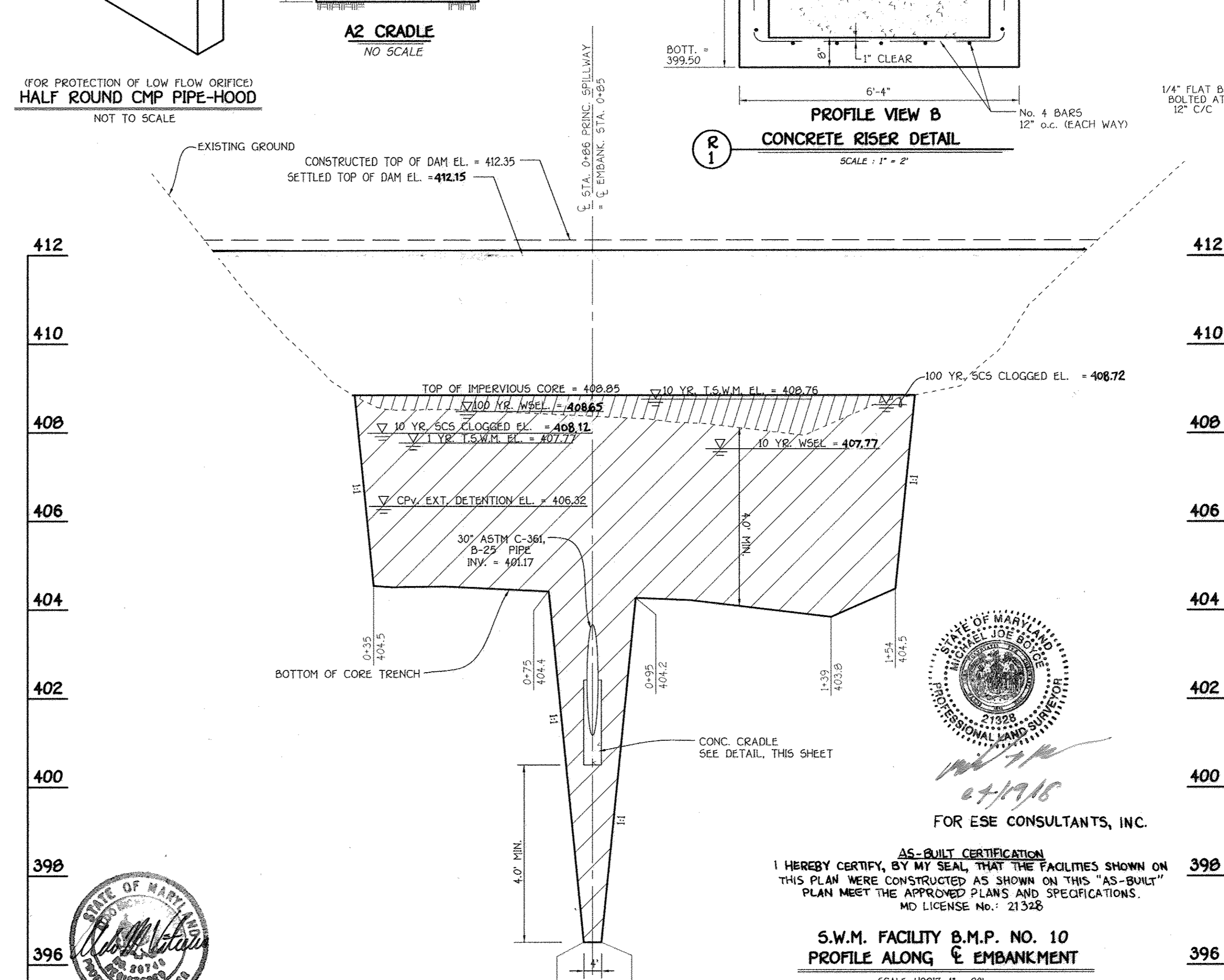
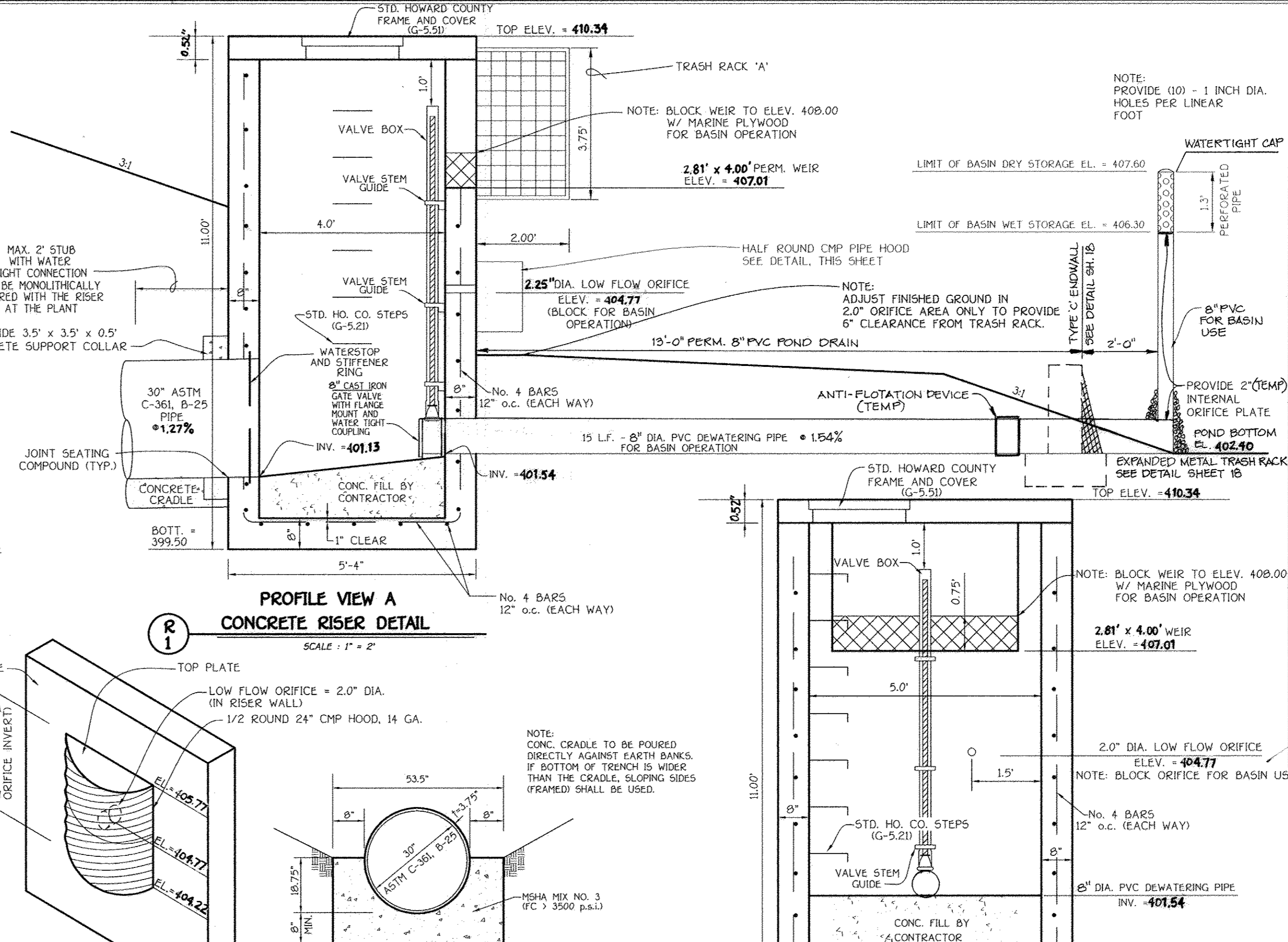
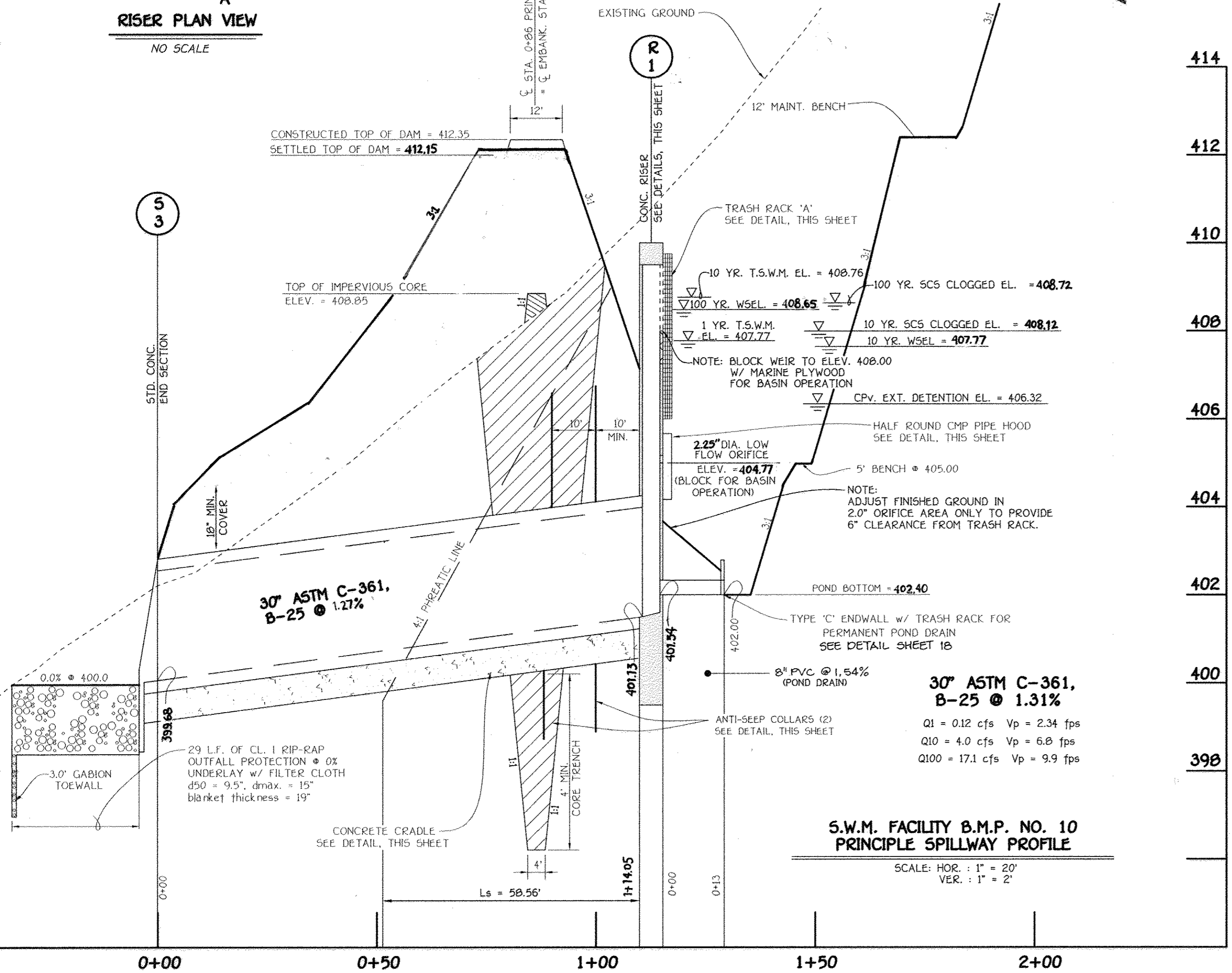
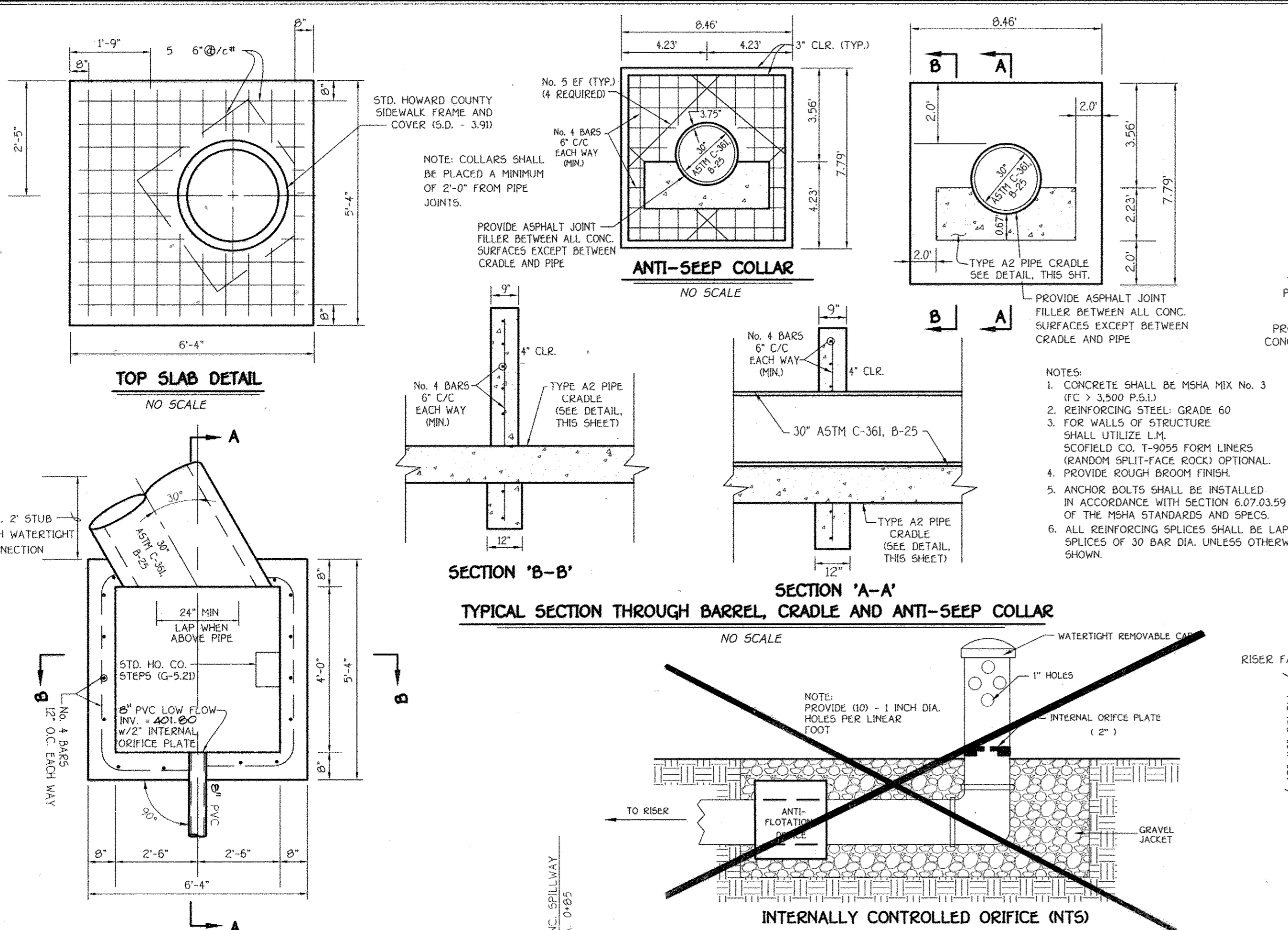
SCALE: HOR. 1" = 20'
VERT. 1" = 2'

**B.M.P. FACILITY NO. 9
STORMWATER MANAGEMENT NOTES AND DETAILS
HOMEWOOD CROSSING
PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'**

(A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
Benedict Farm, Phase One, Plat Nos.)
Zoned: R2C-060
Tax Map: 29 Grid 9 Parcel 2B
Third Election District
Howard County, Maryland
Date: August, 2005
Sheet 23 of 30

AS-BUILT





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.

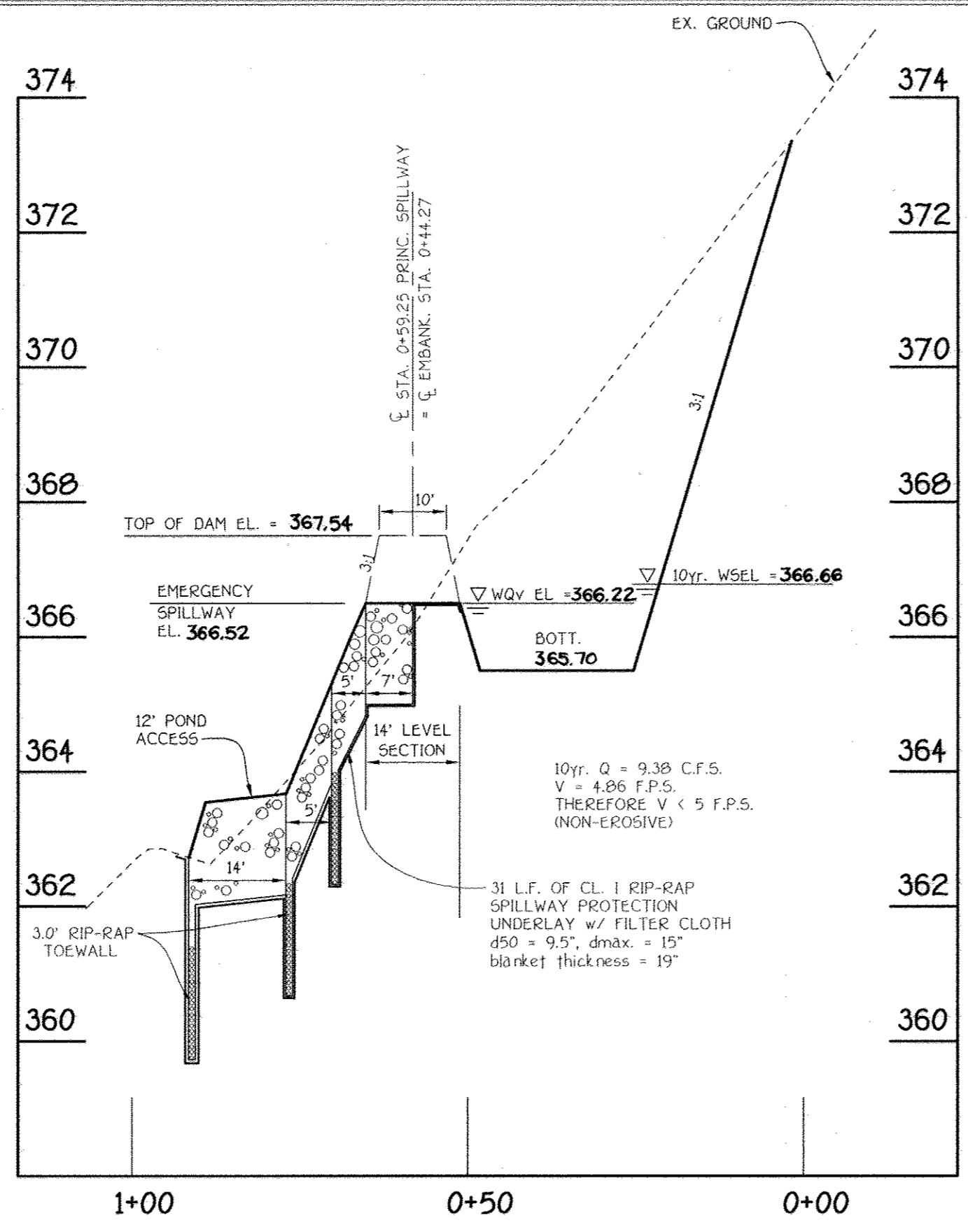
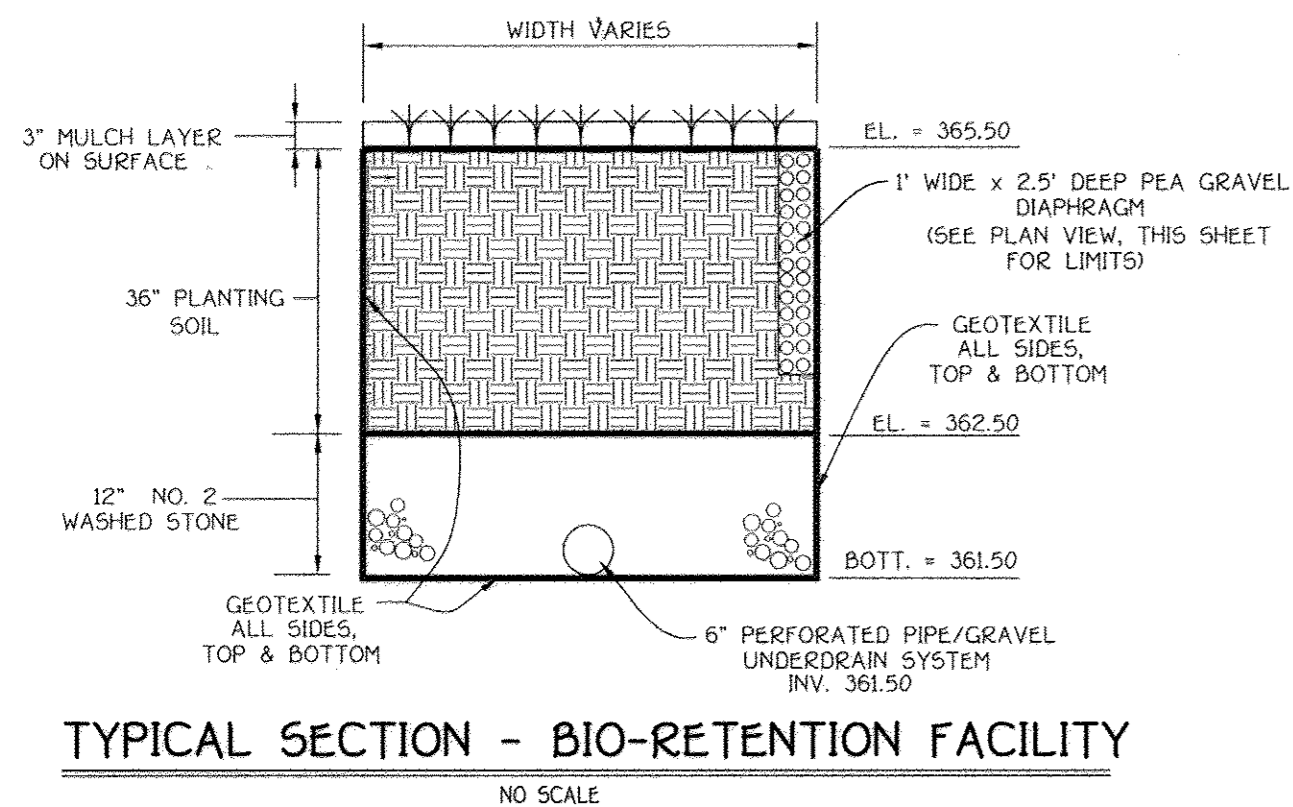
By The Engineer:
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Informed The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

AS-BUILT CERTIFICATION
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

S.W.M. FACILITY NO. 10
STORMWATER MANAGEMENT NOTES AND DETAILS
HOMEWOD CROSSING
PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision Of Non-Buildable Bulk Parcel 'B' And 'J',
Benedict Farm, Phase One, P&T Nos.)
Zoned RC-DEO
Tax Map: 29 Grid: 9 Parcel: 20
Third Election District
Howard County, Maryland
Date: August, 2005
Sheet 24 of 30

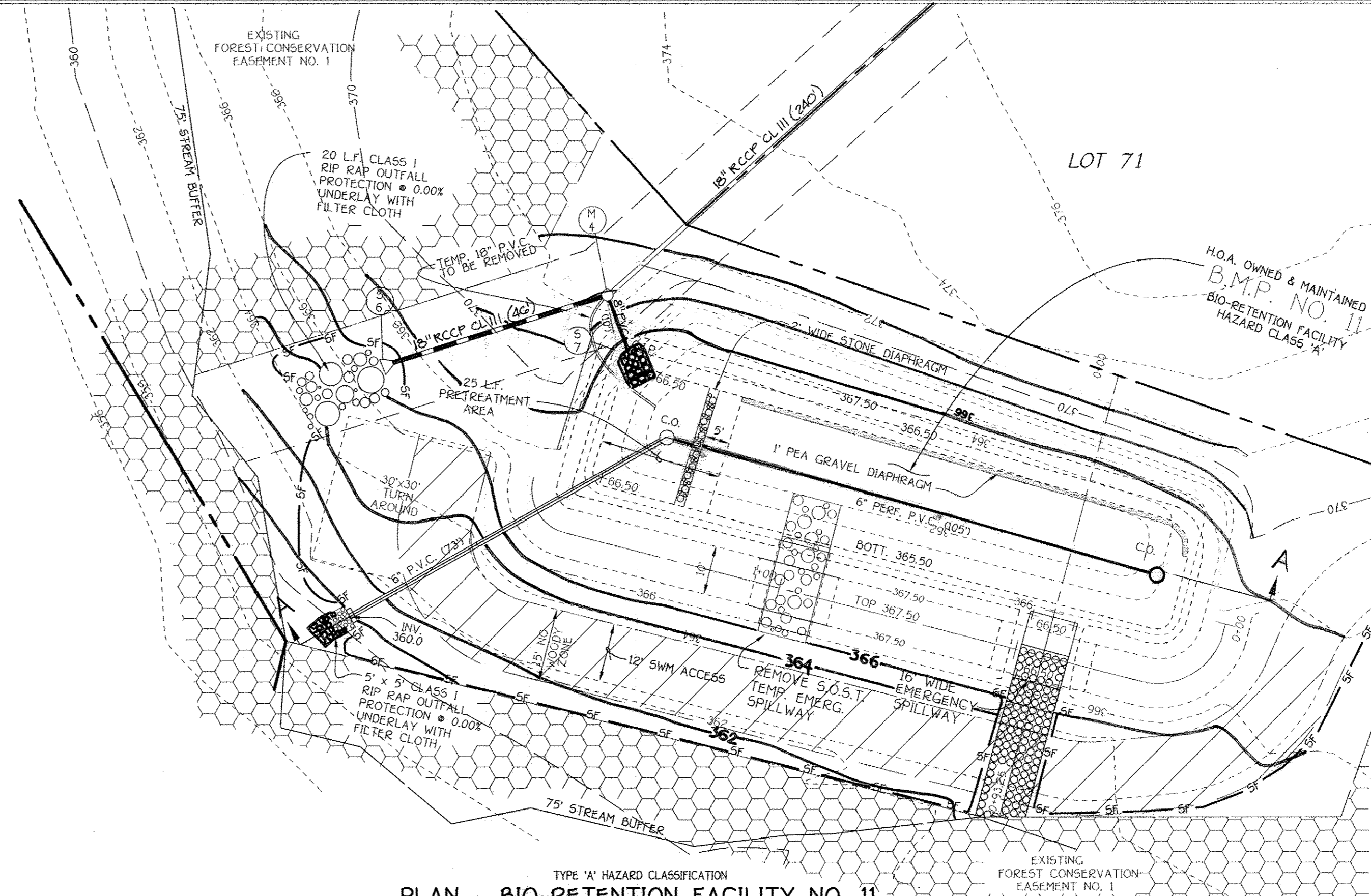
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIO-RETENTION FACILITIES

1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
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8. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



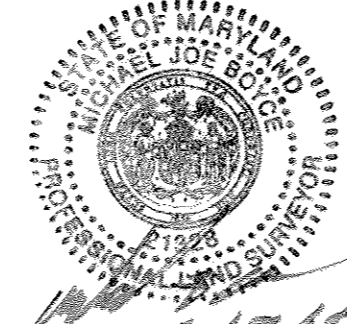
EMERGENCY SPILLWAY PROFILE

SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



PLAN - BIO-RETENTION FACILITY NO. 11

SCALE: 1" = 20'

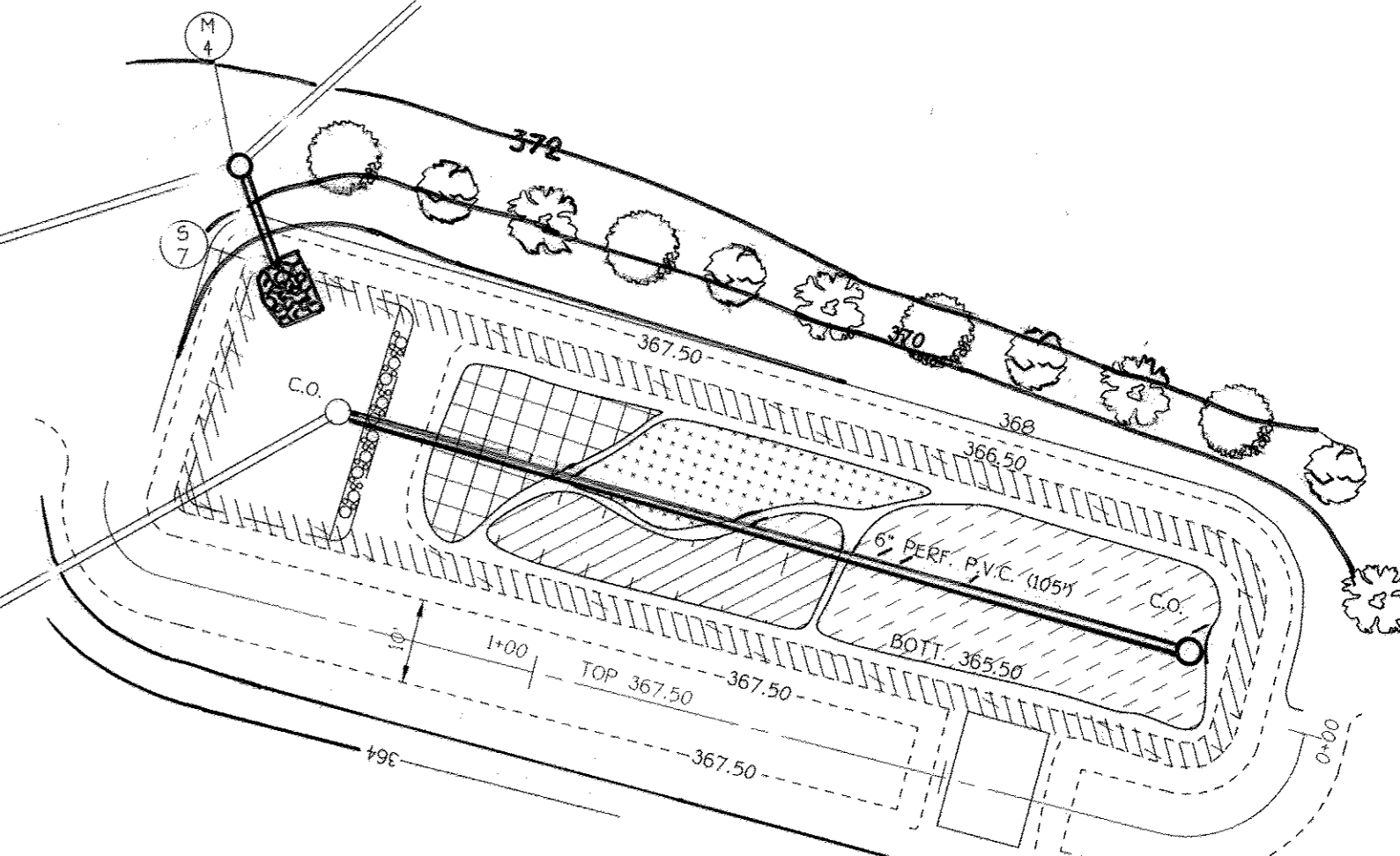


FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
MD LICENSE No.: 21328

BIO-RETENTION PLANT MATERIAL CELL No. 11		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
4	RED MAPLE	12
4	BLOODGOOD LONDON PLANE	12
4	SYCAMORE	12
SHRUB SPECIES		
25	WITCH HAZEL	12
25	RED OSLER DOGWOOD	12
25	WINTER BERRY	12
MIXED PERENNIALS AND GRASSES		
N/A	BLUEJOINT	N/A

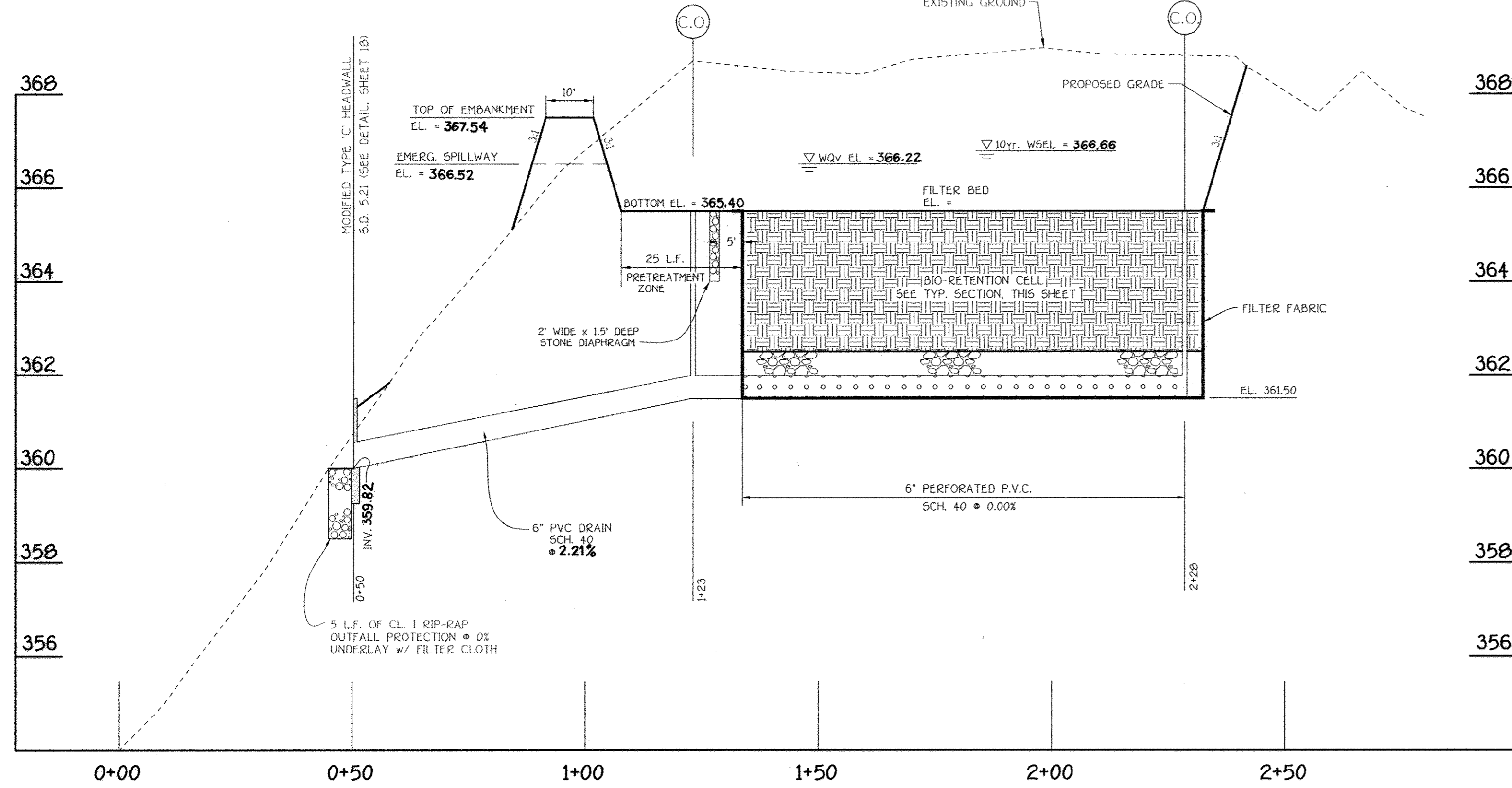
NOTE: THE PLANTING SCHEDULE AND SPECIES FOR CELL 1 IS FOR DESIGN PURPOSES. PLANT DISTRIBUTION AND TYPES MAY BE SUBSTITUTED WITH SPECIES LISTED IN THE "DESIGN MANUAL FOR BIO-RETENTION IN STORM WATER MANAGEMENT" PRINCE GEORGE'S COUNTY GOVERNMENT.



Storm Water Management Facility No. 11 Bio-Retention Facility

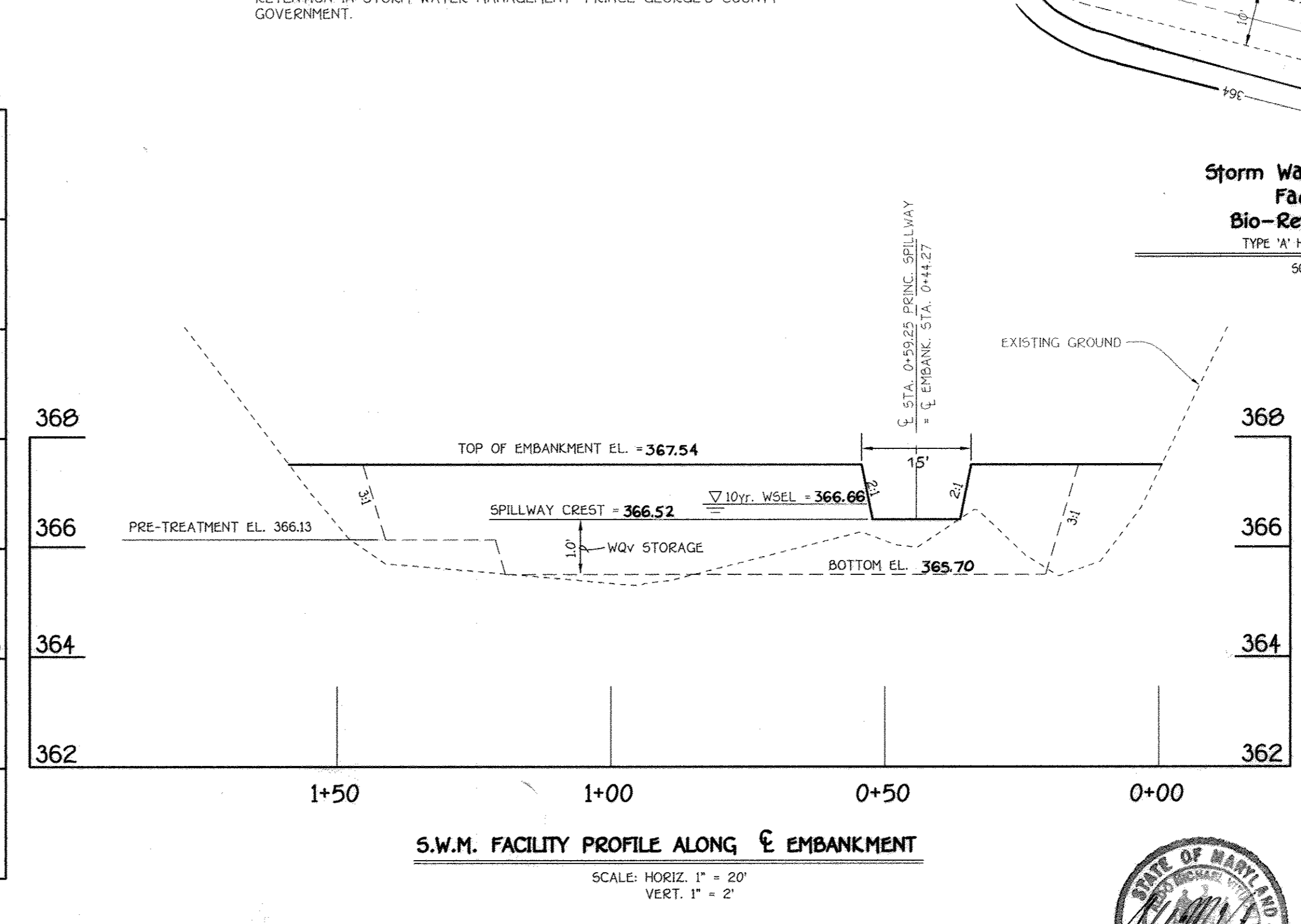
SCALE: 1" = 20'

- SYCAMORE
- MAPLE
- LONDON PLANE
- RED OSLER DOGWOOD
WINTER BERRY
- WITCH HAZEL
- MIXED PERENNIALS
(E.G., CARDINAL FLOWER,
TALL CONE FLOWER)
- MIXED GRASSES
(E.G., BROOMSEDGE SWITCH
GRASS)



SECTION 'A-A' THRU S.W.M. FACILITY

SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



S.W.M. FACILITY PROFILE ALONG EMBANKMENT

SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'

OWNER
MARY CARTER CARROLL ZIEGLER ET AL.
C/O NATALIE ZIEGLER
11352 HOMEWOOD ROAD
ELLICOTT CITY, MARYLAND 21042

DEVELOPER
TOLL BROTHERS, INC.
ATTN: MR. SCOTT HARE
7164 COLUMBIA GATEWAY DR., SUITE 230
COLUMBIA, MARYLAND 21046

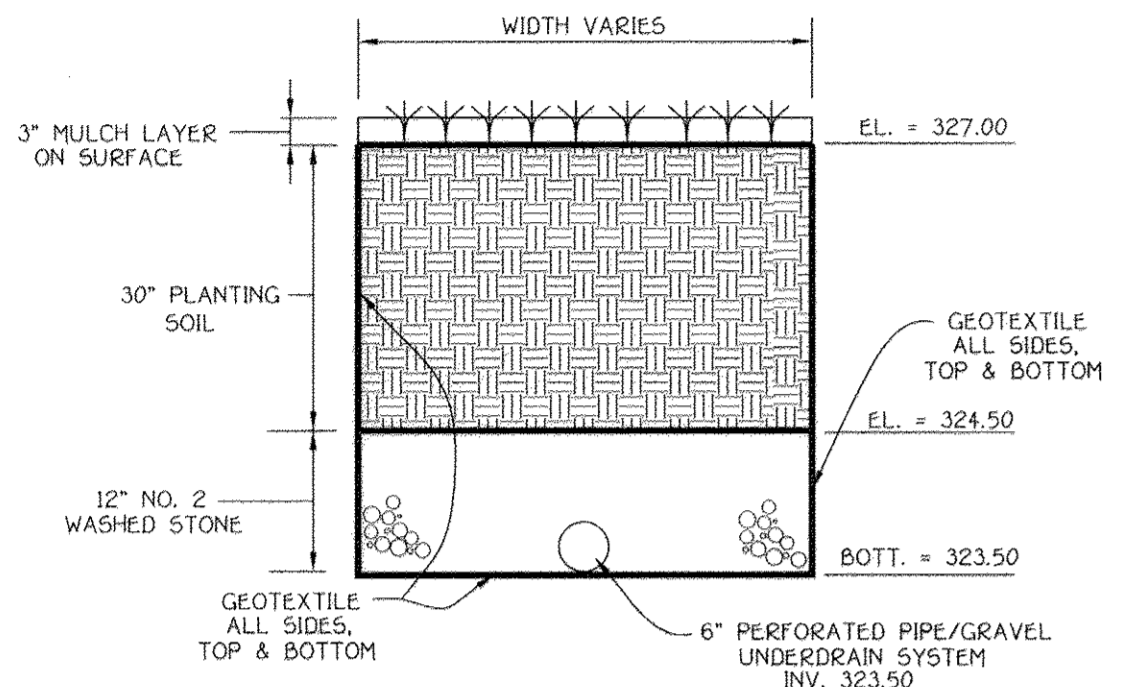
B.M.P. FACILITY NO. 11 STORMWATER MANAGEMENT NOTES AND DETAILS
HOMEWOOD CROSSING PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision of Non-Buildable Bulk Parcel 'B' and 'J',
Benedict Farm, Phase One, Plat Nos.)
Zoned: RC-DEO
Tax Map: 29 Grid: 9 Parcel: 2B
Third Election District
Howard County, Maryland
Date: August, 2005
Sheet 25 of 30



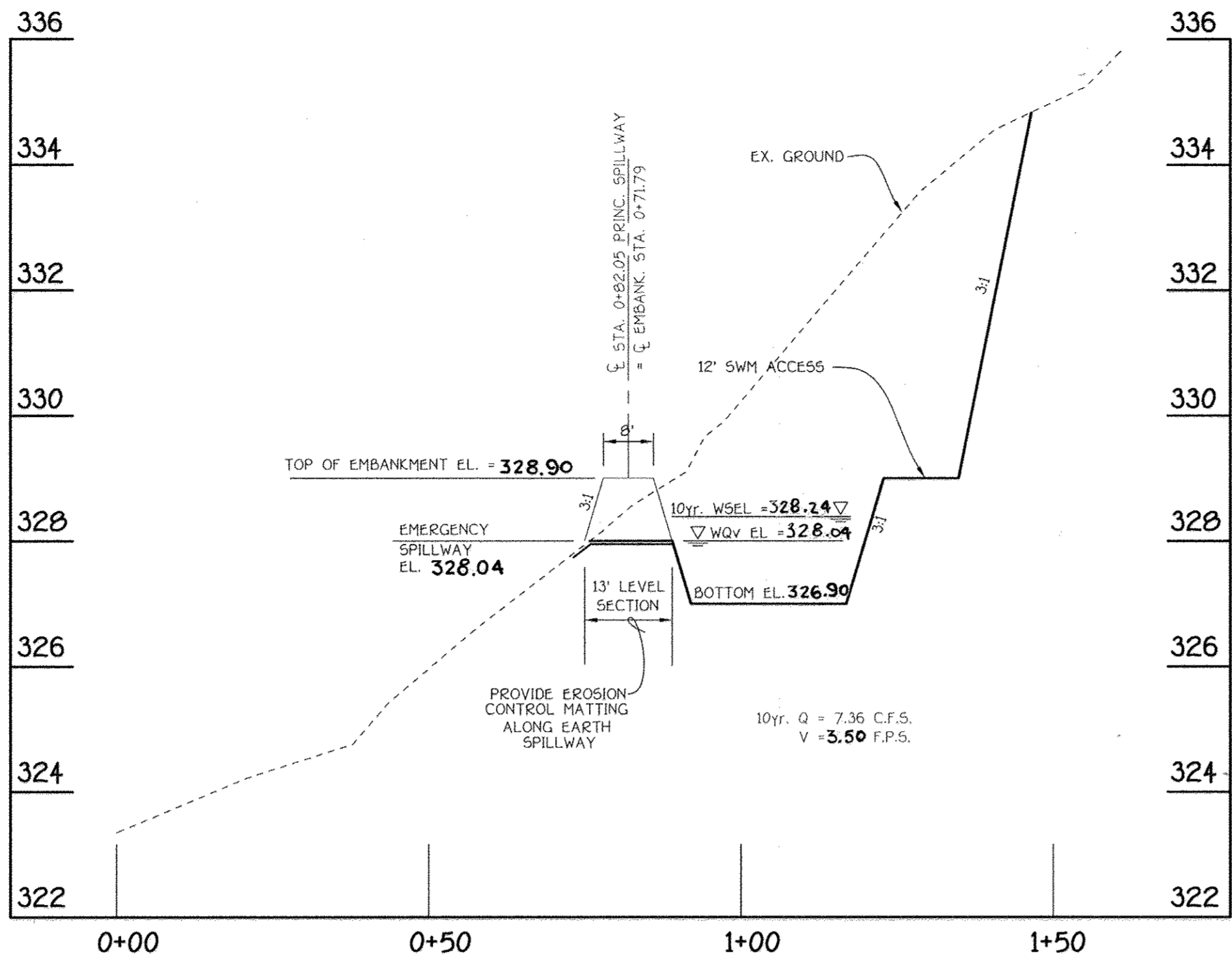
AS-BUILT

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIO-RETENTION FACILITIES

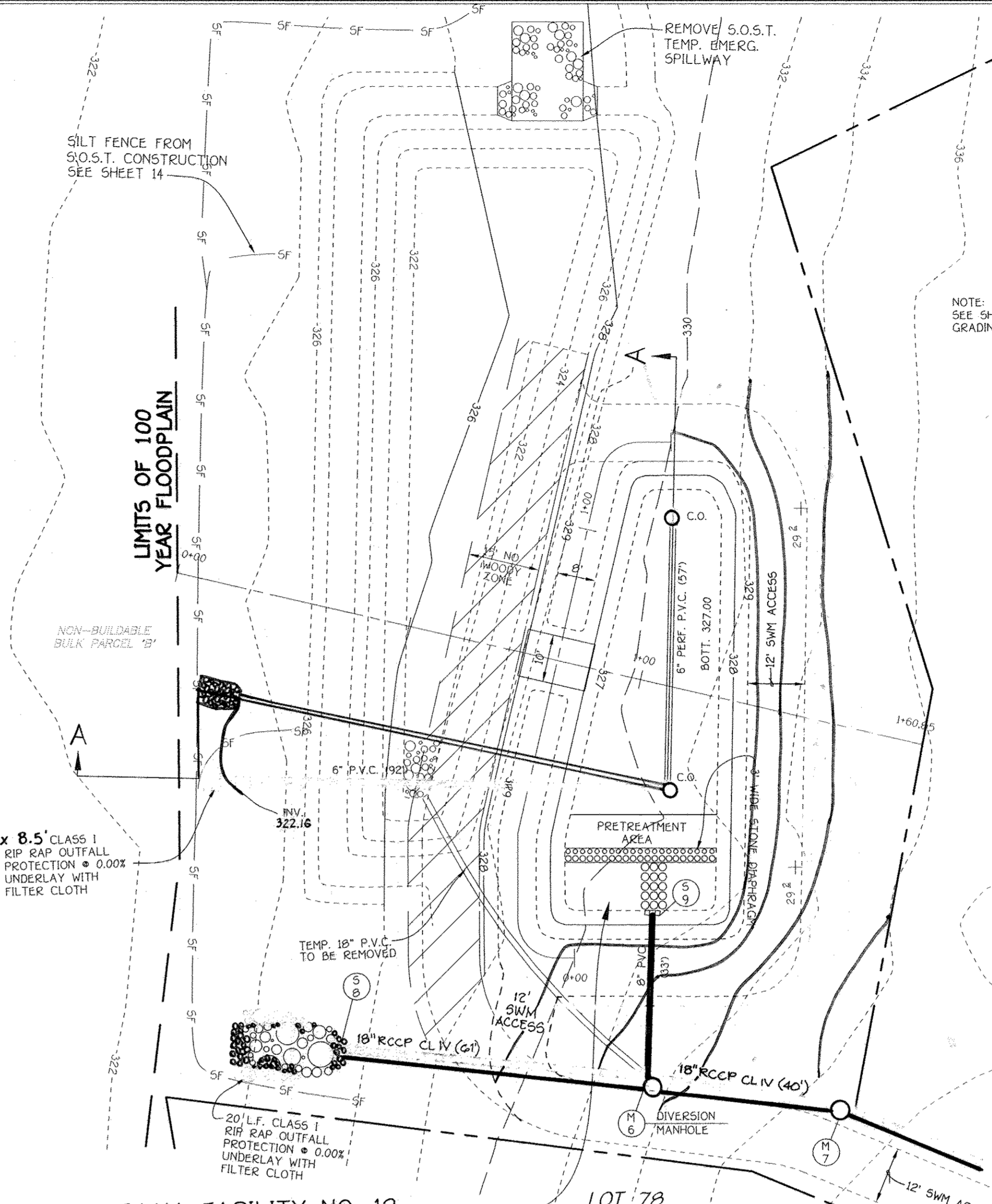
1. THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
7. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. THE OWNER MUST FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID.
8. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



TYPICAL SECTION - BIO-RETENTION FACILITY
NO SCALE



EMERGENCY SPILLWAY PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



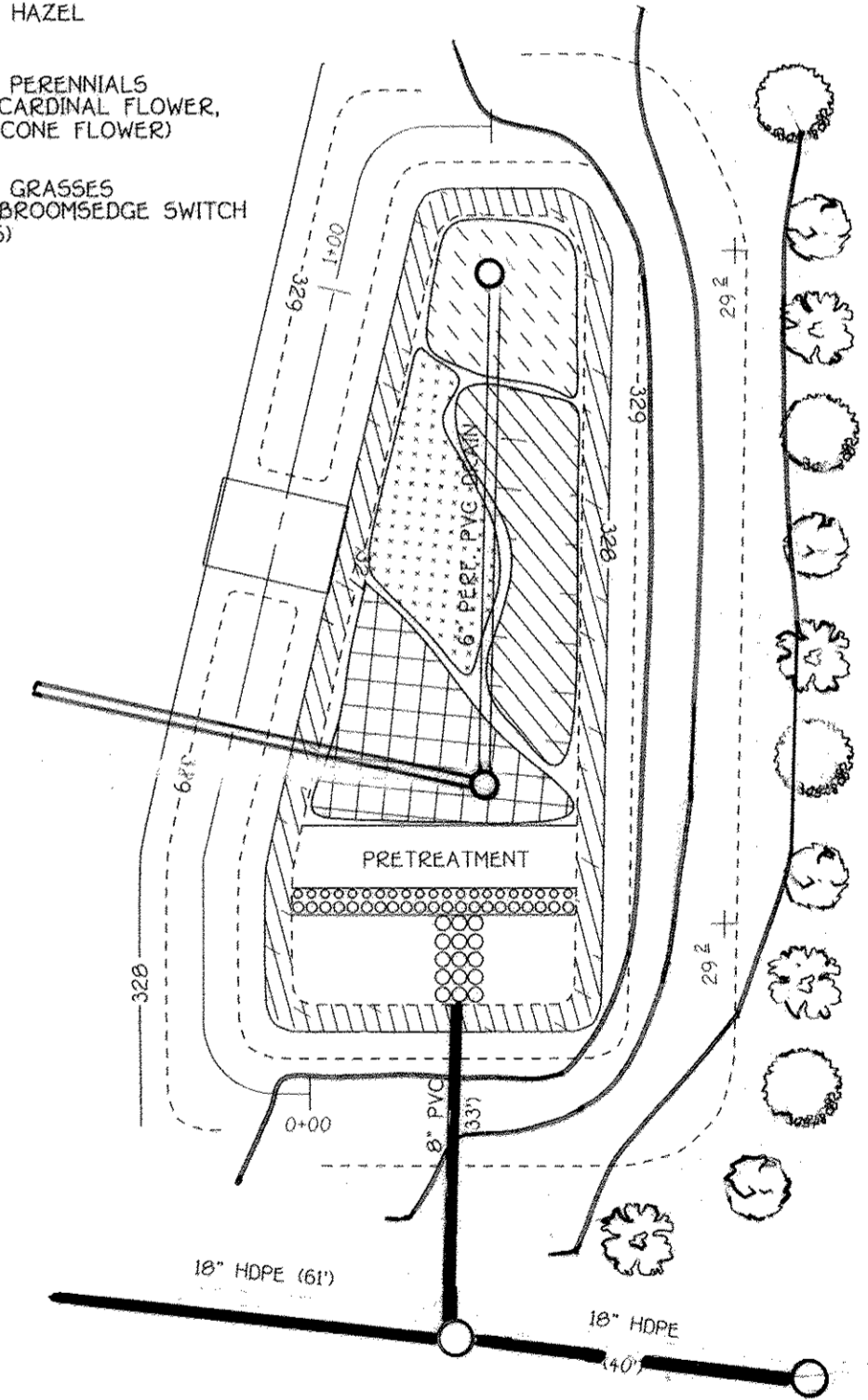
PLAN - BIO-RETENTION FACILITY NO. 12
SCALE: 1" = 20'

BIO-RETENTION PLANT MATERIAL CELL No. 12

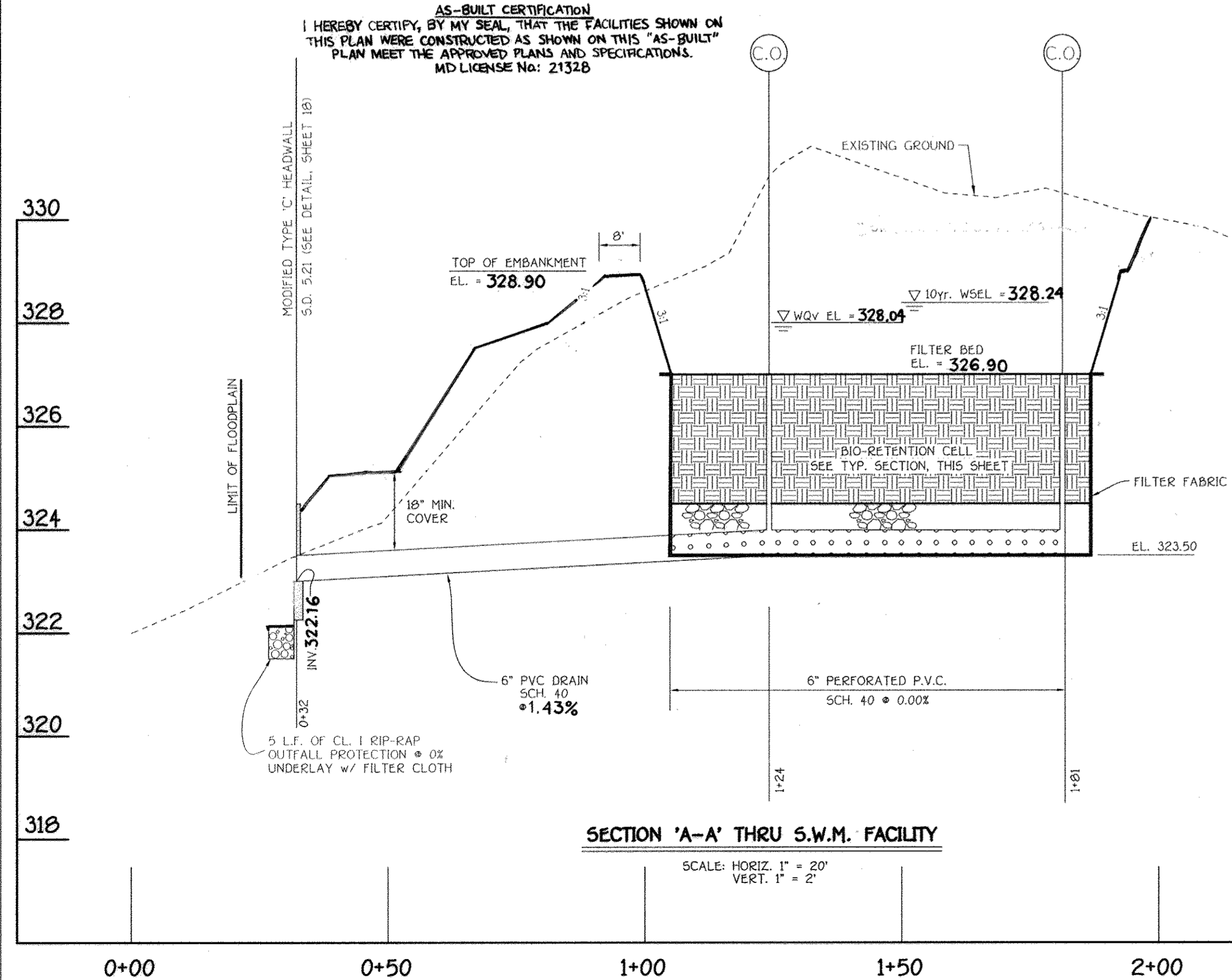
QUANTITY	NAME	MAXIMUM SPACING (FT.)
TREE SPECIES		
4	RED MAPLE	12
4	BLOODGOOD LONDON PLANE	12
4	SYCAMORE	12
SHRUB SPECIES		
25	WITCH HAZEL	12
25	RED OSLER DOGWOOD	12
30	WINTER BERRY	12
MIXED PERENNIALS AND GRASSES		
N/A	BLUEJOINT	N/A

NOTE: THE PLANTING SCHEDULE AND SPECIES FOR CELL 12 IS FOR DESIGN PURPOSES. PLANT DISTRIBUTION AND TYPES MAY BE SUBSTITUTED WITH SPECIES LISTED IN THE "DESIGN MANUAL FOR BIO-RETENTION IN STORM WATER MANAGEMENT" PRINCE GEORGE'S COUNTY GOVERNMENT.

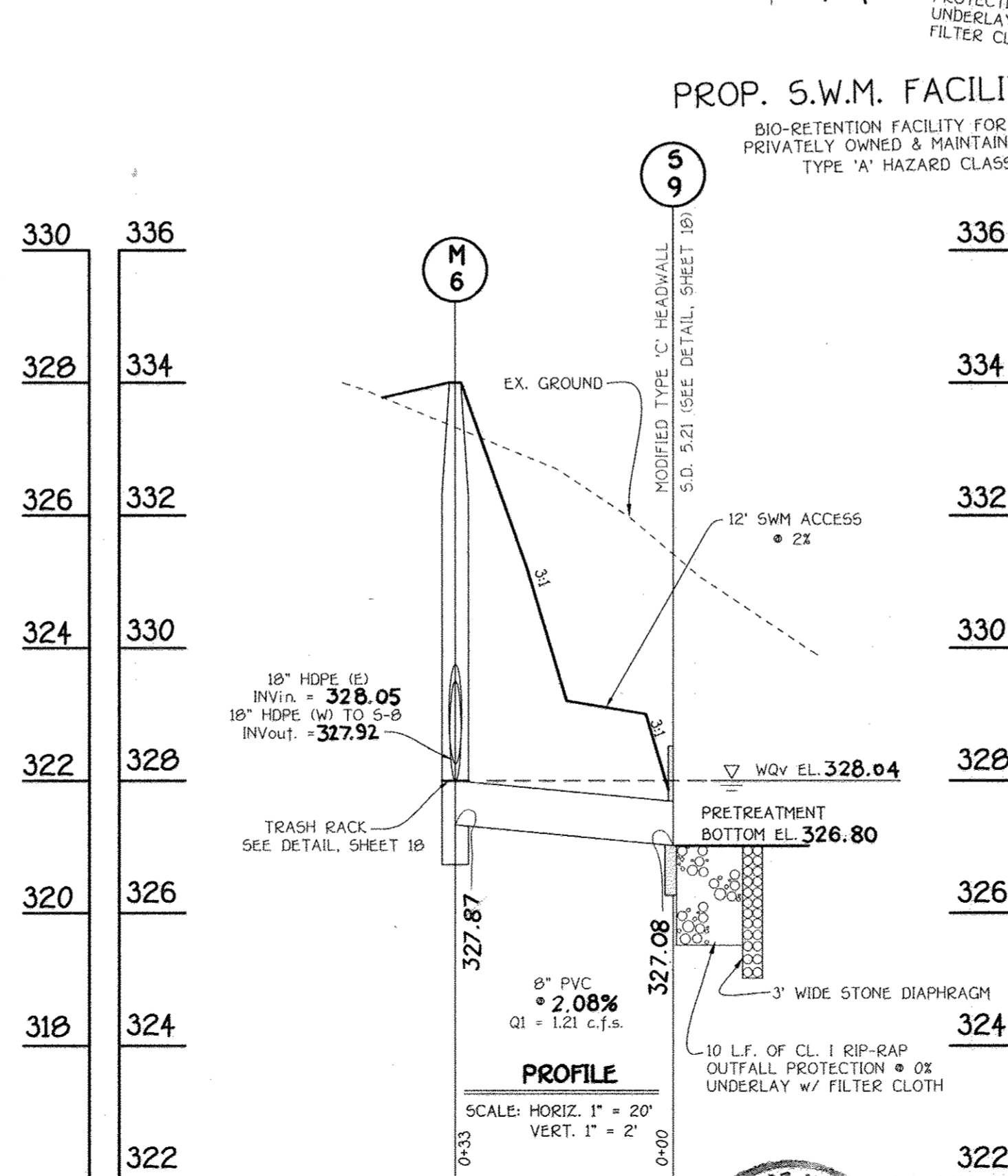
- SYCAMORE
- MAPLE
- LONDON PLANE
- RED OSLER DOGWOOD
- WINTER BERRY
- WITCH HAZEL
- MIXED PERENNIALS (E.G., CARDINAL FLOWER, TALL CONE FLOWER)
- MIXED GRASSES (E.G., BROOMEDGE SWITCH GRASS)



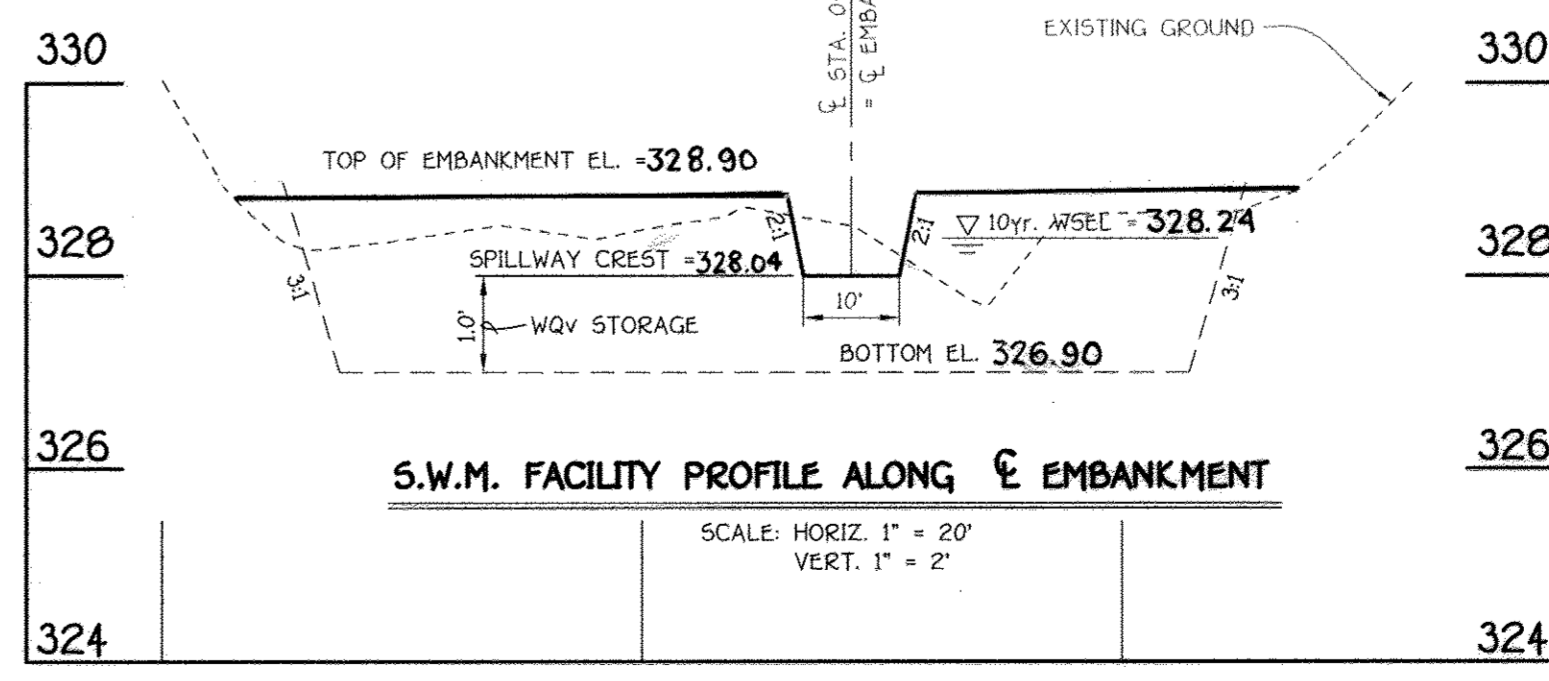
Storm Water Management Facility No. 12 Bio-Retention Facility
SCALE: 1" = 20'



SECTION 'A-A' THRU S.W.M. FACILITY
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



S.W.M. FACILITY PROFILE ALONG E EMBANKMENT
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'

B.M.P. FACILITY NO. 12 STORMWATER MANAGEMENT NOTES AND DETAILS
HOMEWOOD CROSSING PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'

AS-BUILT

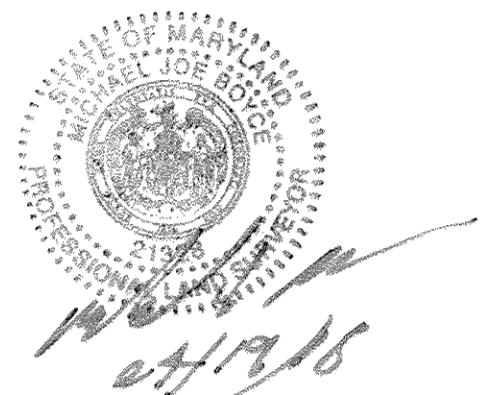
Reviewed For Howard County Soil Conservation District and Meets Technical Requirements.
U.S.D.A. - Natural Resources Conservation Service
Approved: This Development Is Approved For Erosion And Sediment Control By The Howard County Soil Conservation District.
District: Howard County Soil Conservation District
Approved: Department Of Planning And Zoning
Chief, Division Of Land Development
Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways

Zoned: RC-DEO
Tax Map: 29, Grid: 9, Parcel: 29
Third Election District
Howard County, Maryland
Date: August, 2005
Sheet 26 of 30

F 05-69

ENGINEER'S CERTIFICATE
I Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.
Signature: [Signature] Date: 8-20-05

DEVELOPER'S CERTIFICATE
I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Certify That I Am A Licensed Professional Engineer In The State Of Maryland.
Signature: [Signature] Date: 8-20-05



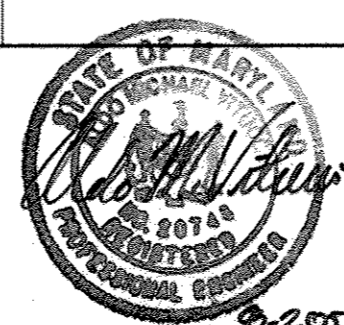
FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
MD LICENSE No: 21328

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 1072 BALFOUR NATIONAL PKWY.
ELLICOTT CITY, MARYLAND 21042
4100 161 - 2955

OWNER
MARY CARTER CARROLL ZIEGLER ET AL.
C/O NATALIE ZIEGLER
11352 HOMWOOD ROAD
ELLICOTT CITY, MARYLAND 21042

DEVELOPER
TOLL BROTHERS, INC.
ATTN: MR. SCOTT HARE
7164 COLUMBIA GATEWAY DR., SUITE 230
COLUMBIA, MARYLAND 21046

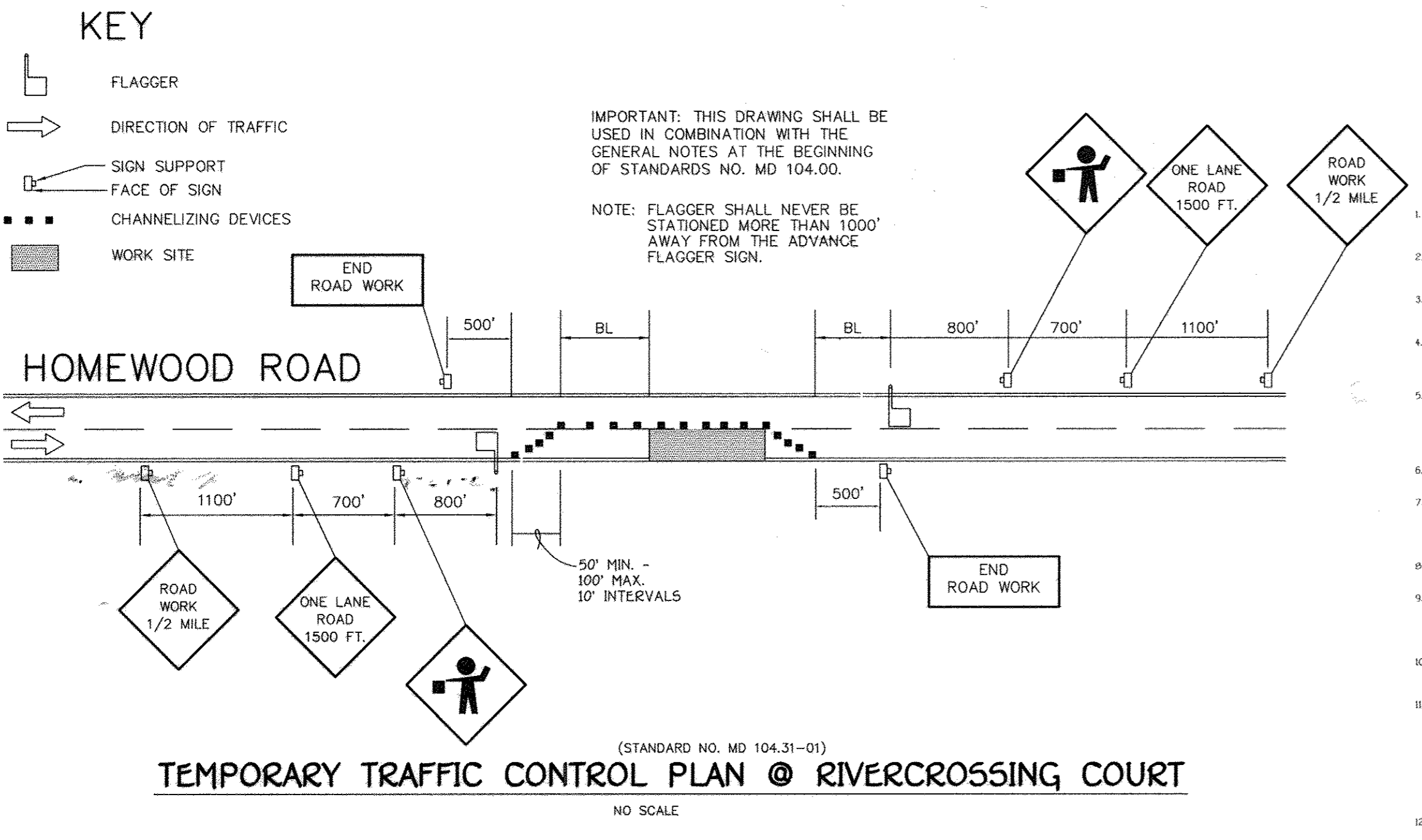
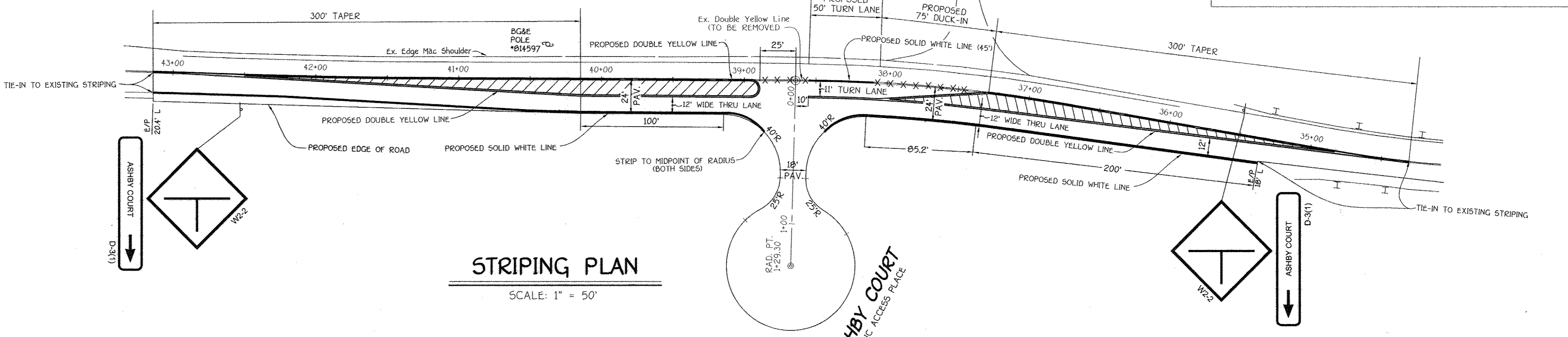
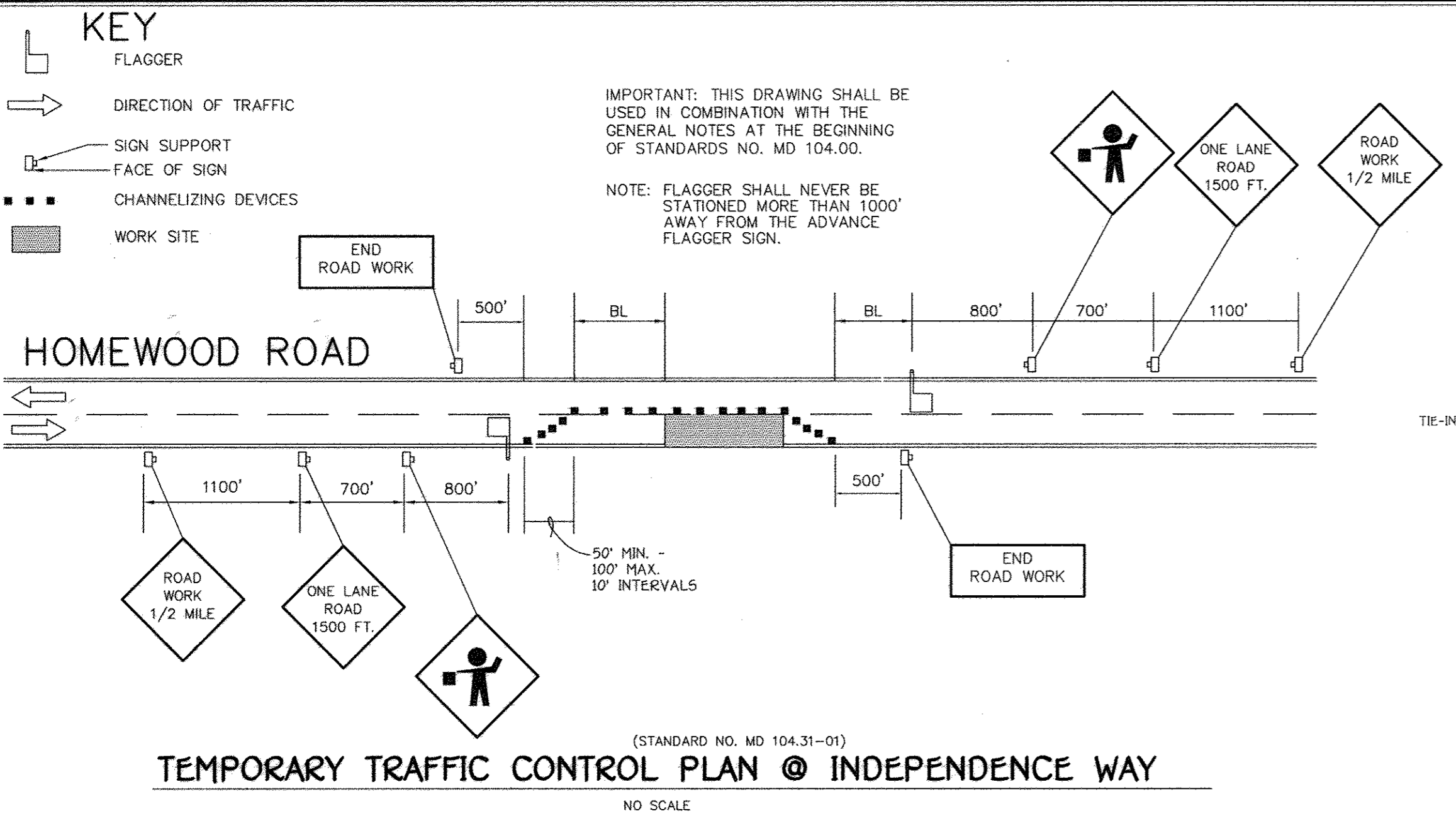


REVISION: REVISE STORM PIPE HDPE TO RCCP CL III #IV 8-29-05

K:\S\PROJ\030754_Benedict Family\PHASE 2 - FINAL\030754 SHEET 22-26 SWM DETAILS.dwg, 8/19/2005 11:54:22 AM

Approved: Department Of Planning And Zoning
Cindy Harter 9/28/15
 Chief, Division Of Land Development
 Approved: Chief, Development Engineering Division *MK* 9/28/15
 Approved: Howard County Department Of Public Works
William Z. ... 9-28-15
 Chief, Bureau Of Highways

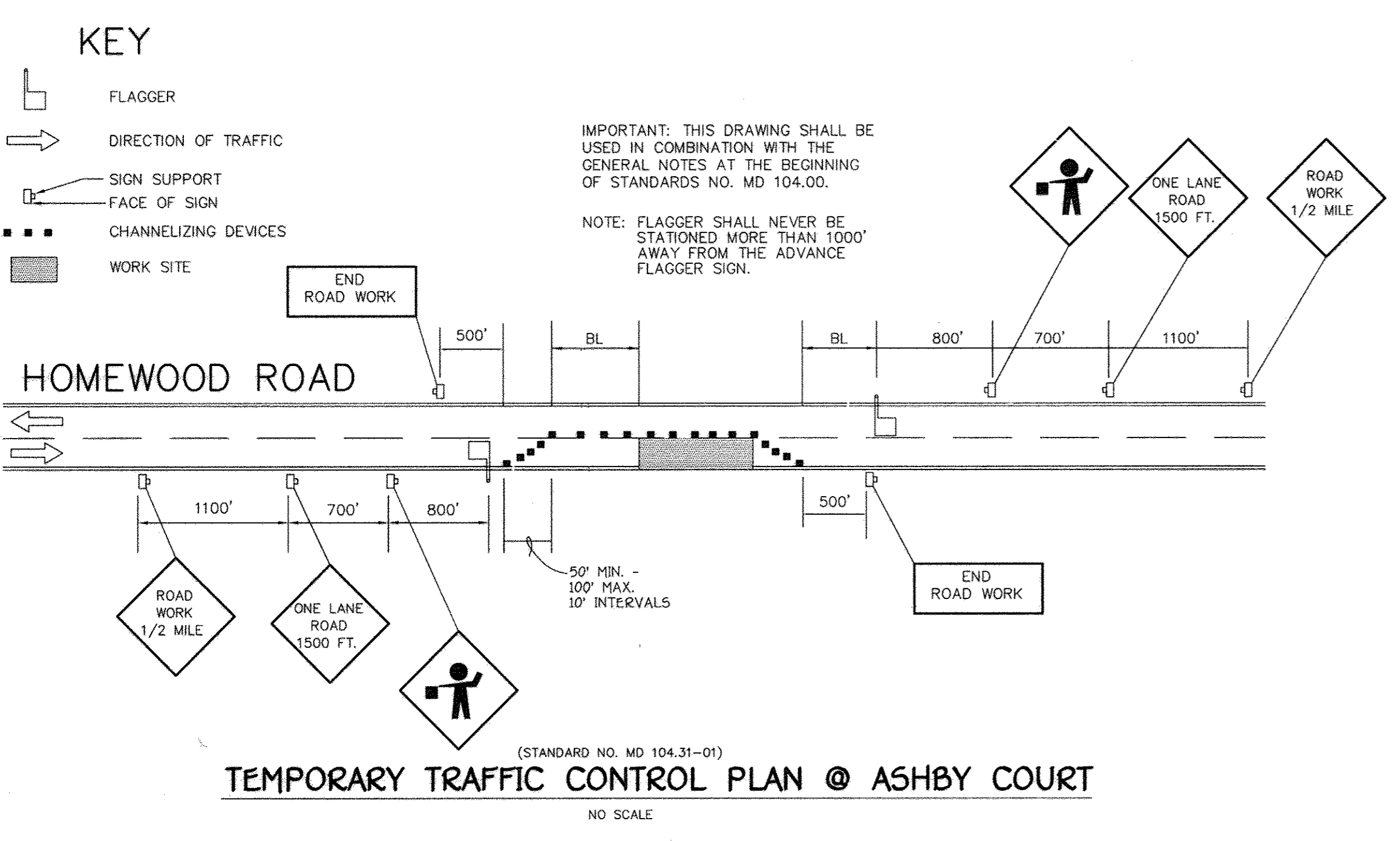
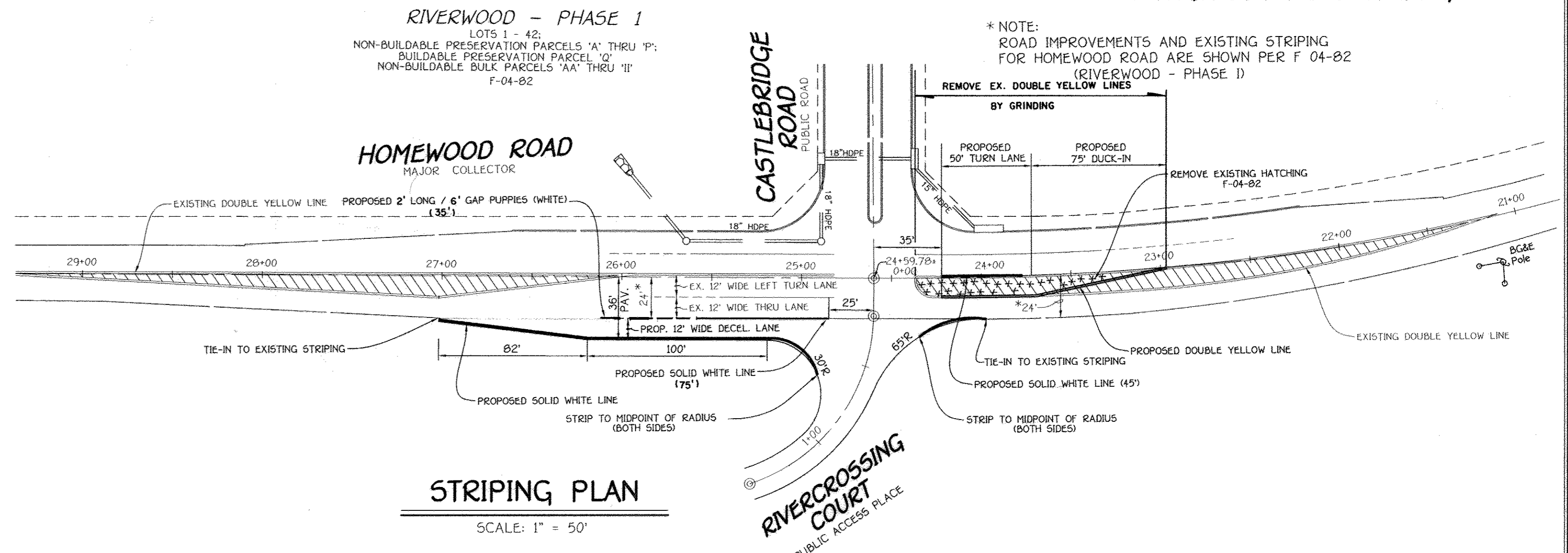
NOTE: ALL LANE DESIGNATION TO BE THERMOPLASTIC LINE STRIPING.



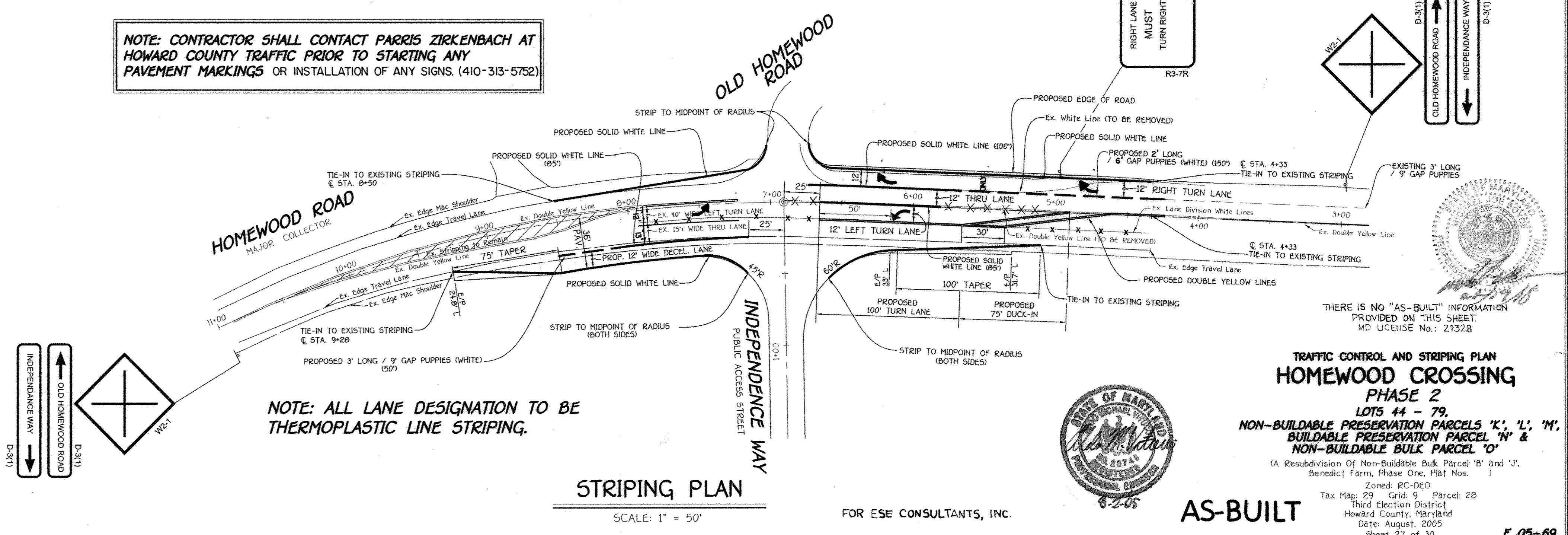
MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS

GENERAL

1. THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE TO TRAFFIC WITHIN WORK AREAS, AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
2. PROPER TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPER APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN SHALL PROVIDE THE DESIRED LEVEL OF SAFETY.
3. THROUGHOUT THESE SPECIAL PROVISIONS, ANY REFERENCE TO THE TOP SHALL BE IMPLIED TO INCLUDE ANY COMBINATION OF TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TOP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
4. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 8TH EDITION, ESPECIALLY PART VI, AND TO SECTION 04 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE WORK, INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
5. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FORTH IN THE TOP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUEST TO MAKE CHANGES TO THE TOP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER. A PROGRAM OF WORK ACTIVITIES (PWA) SHALL BE MAINTAINED THROUGHOUT THE PROJECT. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
6. NO WORK SHALL BEGIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TOP FOR THAT ACTIVITY OR PHASE ARE COMPLETED AND CORRECTED IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.
7. GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY BEING PERFORMED OR ABOUT TO BE PERFORMED. HAZARDOUS TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER. NOTE: THE PRACTICE OF PLACING SIGNS AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TOP IS NOT PERMITTED.
8. THE CONTRACTOR AND/OR PERMITTEE SHALL MAINTAIN IN NEW CONDITION, AND MOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
9. ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TOP SHALL BE KEPT IN GOOD CONDITION, FULLY PERFORMING AS SET FORTH IN THE TOP. THE MUTCD AND/OR SECTION 04 OF THE SPECIFICATIONS, FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSIGNED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTANCE CAPABILITY OF AT LEAST 80% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST ONE OF THE VISIBLE REFLECTIVE SURFACES.
10. ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROPERLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE KEPT OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICES TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
11. THROUGHOUT THE PERIOD OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TOP. IN THE EVENT OF THE TOP BEING MAINTAINED BY THE CONTRACTOR AND/OR PERMITTEE, THE CONTRACTOR AND/OR PERMITTEE SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF HIS OWN DESIGN FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND OBSERVED BY THE ADMINISTRATION. A TOP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TOPS MAY BE IMPLEMENTED WITH A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TOPS JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
12. THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
13. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANE OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TOP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.



NOTE: CONTRACTOR SHALL CONTACT PARRIS ZIRKENBACH AT HOWARD COUNTY TRAFFIC PRIOR TO STARTING ANY PAVEMENT MARKINGS OR INSTALLATION OF ANY SIGNS. (410-313-5752)



TRAFFIC CONTROL AND STRIPING PLAN
HOMEWOOD CROSSING
 PHASE 2
 LOTS 44 - 79,
 NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
 BUILDABLE PRESERVATION PARCEL 'N' &
 NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat Nos.)
 Zoned: RC-DEO
 Tax Map: 29 Grid 9 Parcel 20
 Third Election District
 Howard County, Maryland
 Date: August, 2005
 Sheet 27 of 30

AS-BUILT

K:\SDS\PROJ\30754\FINALS\30754 SHEET 27 TRAFFIC CONTROL PLAN.dwg, 8/11/2005 12:06:13 PM

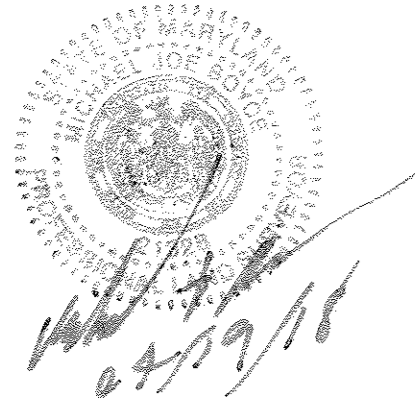
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

OWNER
 MARY CARTER CARROLL ZIEGLER ET AL.
 C/O NATALIE ZIEGLER
 1352 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HARE
 7164 COLUMBIA GATEWAY DR., SUITE 230
 COLUMBIA, MARYLAND 21046

FOR ESE CONSULTANTS, INC.

NOTE:
SEE SHEET 27 FOR PAVING STRIPING PLAN & TRAFFIC CONTROL PLAN.



FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
MD LICENSE No.: 21328

NO.	REVISIONS DESCRIPTION	DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

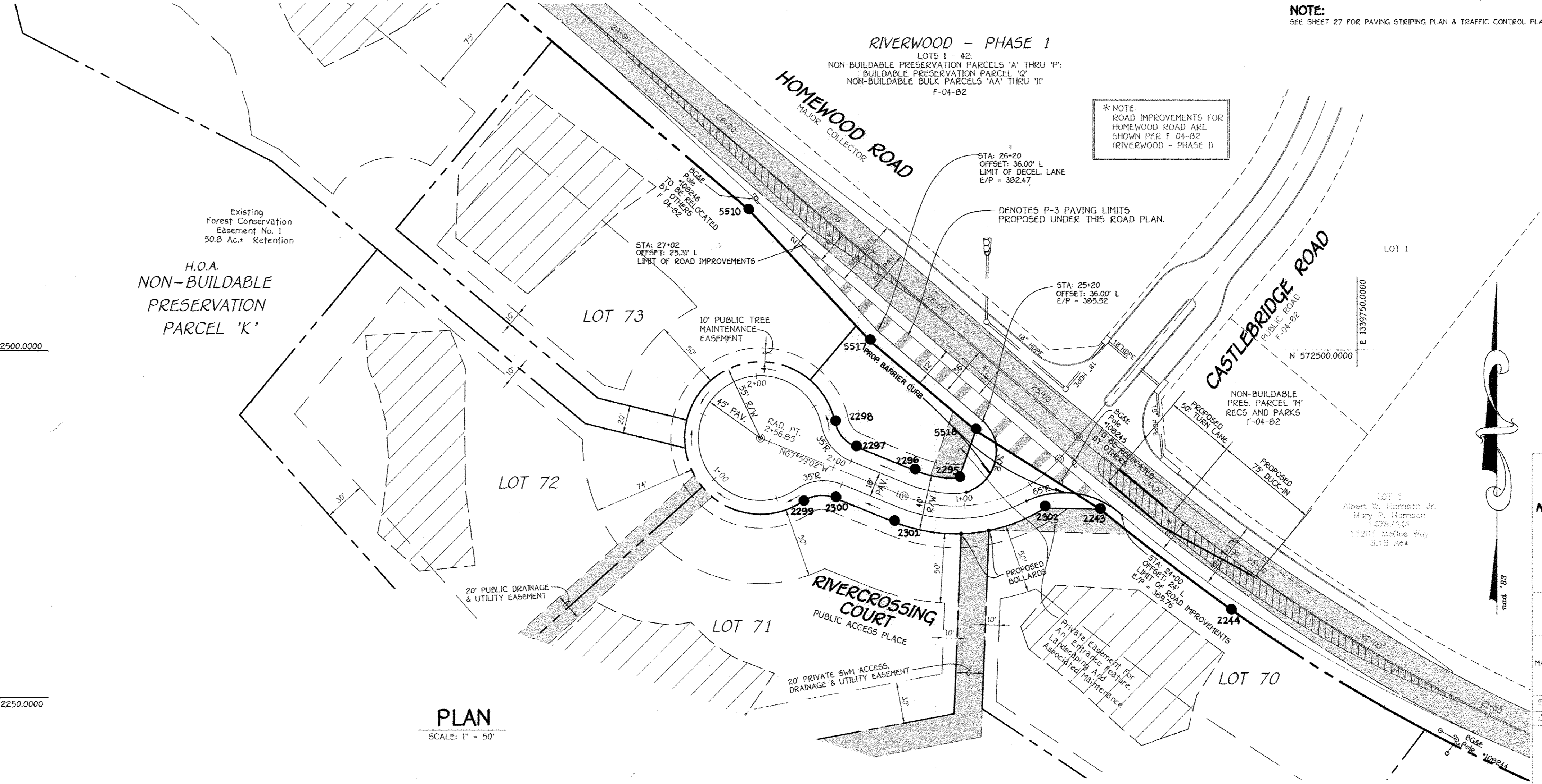
Cindy Hammit 9/30/16
CHIEF, DIVISION LAND DEVELOPMENT VA DATE

[Signature] 1/14/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 9-21-15
CHIEF, BUREAU OF HIGHWAYS DATE

N 572500.0000
E 1339750.0000
N 572250.0000
E 1339750.0000



HOMECROSSING PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
Benedict Farm, Phase One, PB1 Nos.)
Zoned: RC-DEO
Tax Map: 29 Grid: 9 Parcel: 28
Third Election District Howard County, Maryland

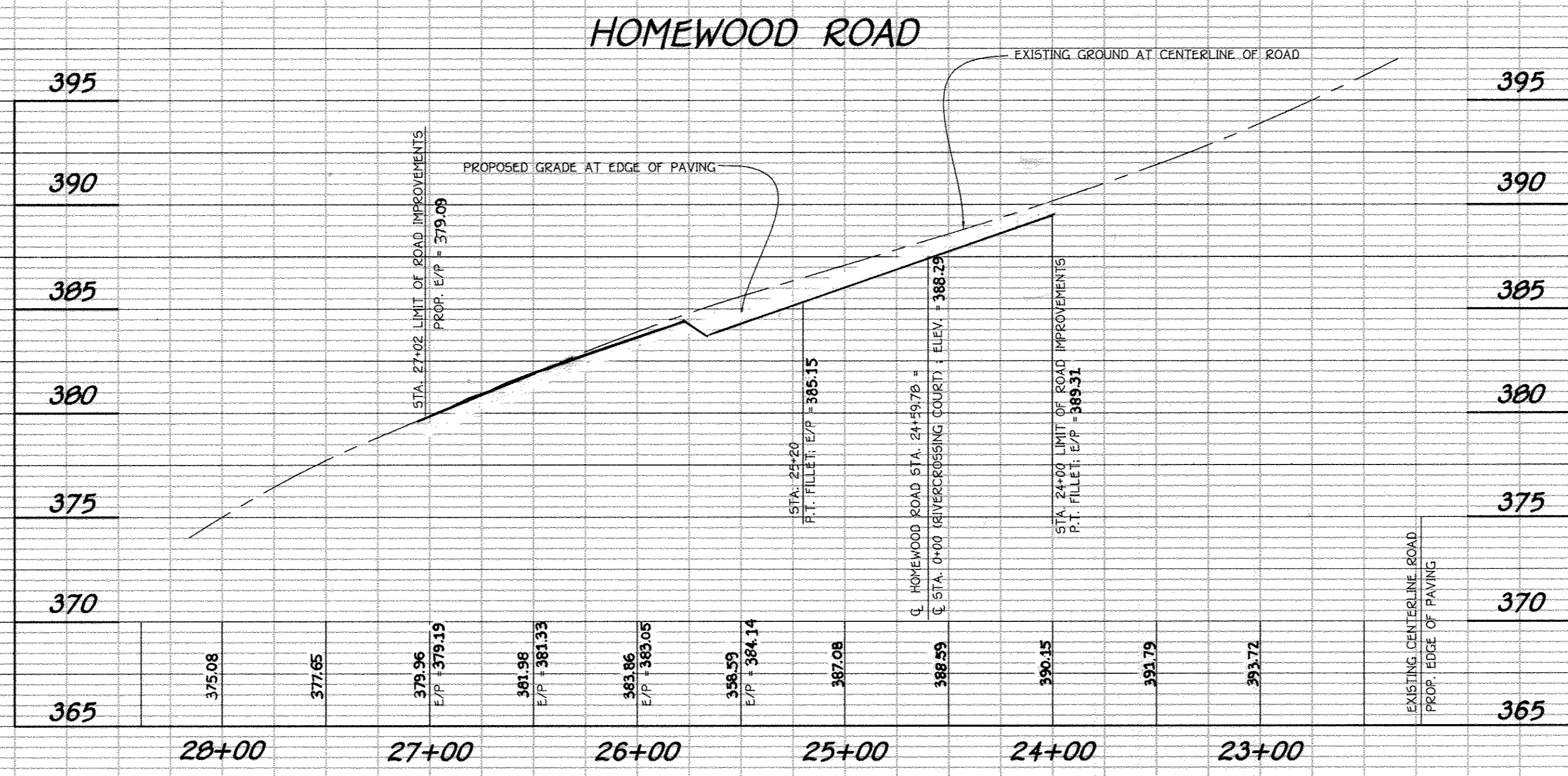
HOMECROSSING ROAD WIDENING @ RIVERCROSSING COURT
PLAN AND PROFILE

OWNER: MARY CARTER CARROLL ZIEGLER, ET AL.
C/O NATALIE ZIEGLER
11352 HOMEWOOD ROAD
ELLICOTT CITY, MARYLAND 21042

DEVELOPER: TOLL BROTHERS, INC.
ATTN: MS. SCOTT HARE
7164 COLUMBIA GATEWAY DRIVE, SUITE 230
COLUMBIA, MARYLAND 21046

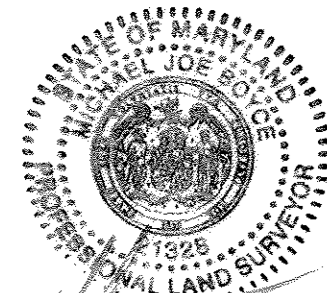
SCALE: AS SHOWN DATE: AUGUST, 2005 DWG. NO. 28 OF 30
DES. R.A.L. DRN. J.C.L. CHK. A.M.V.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10775 BALTIC NATIONAL FREE
CLARKEVILLE, MARYLAND 21729
1925 955 - 2005



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

AS-BUILT



FOR ESE CONSULTANTS, INC.

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
 MD LICENSE NO.: 21328

NO.	REVISIONS DESCRIPTION	DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamstra
 CHIEF, DIVISION OF LAND DEVELOPMENT

9/30/05
 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

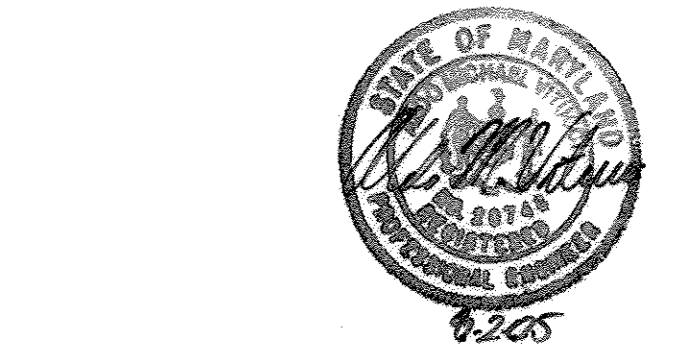
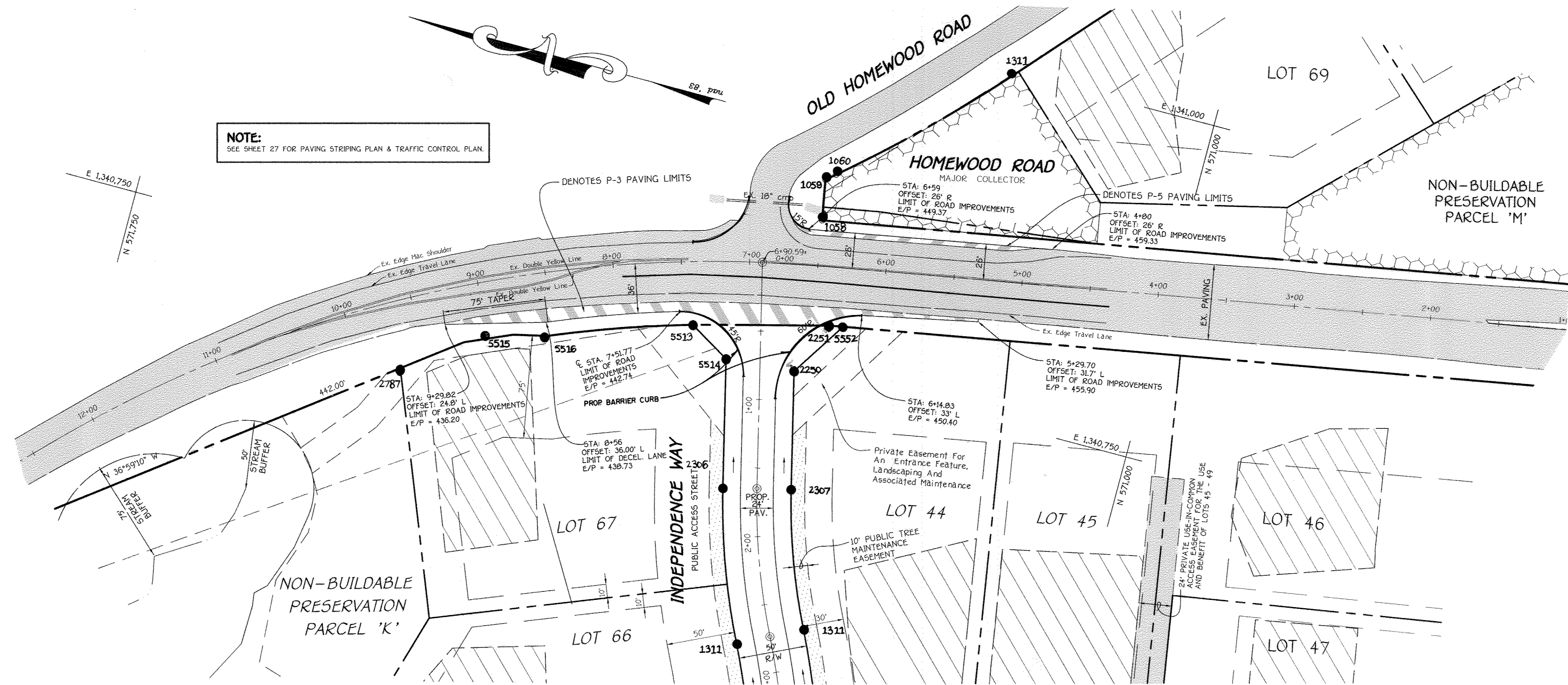
9/21/05
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William J. Walsh
 CHIEF, BUREAU OF HIGHWAYS

9-21-05
 DATE

NOTE:
 SEE SHEET 27 FOR PAVING STRIPING PLAN & TRAFFIC CONTROL PLAN



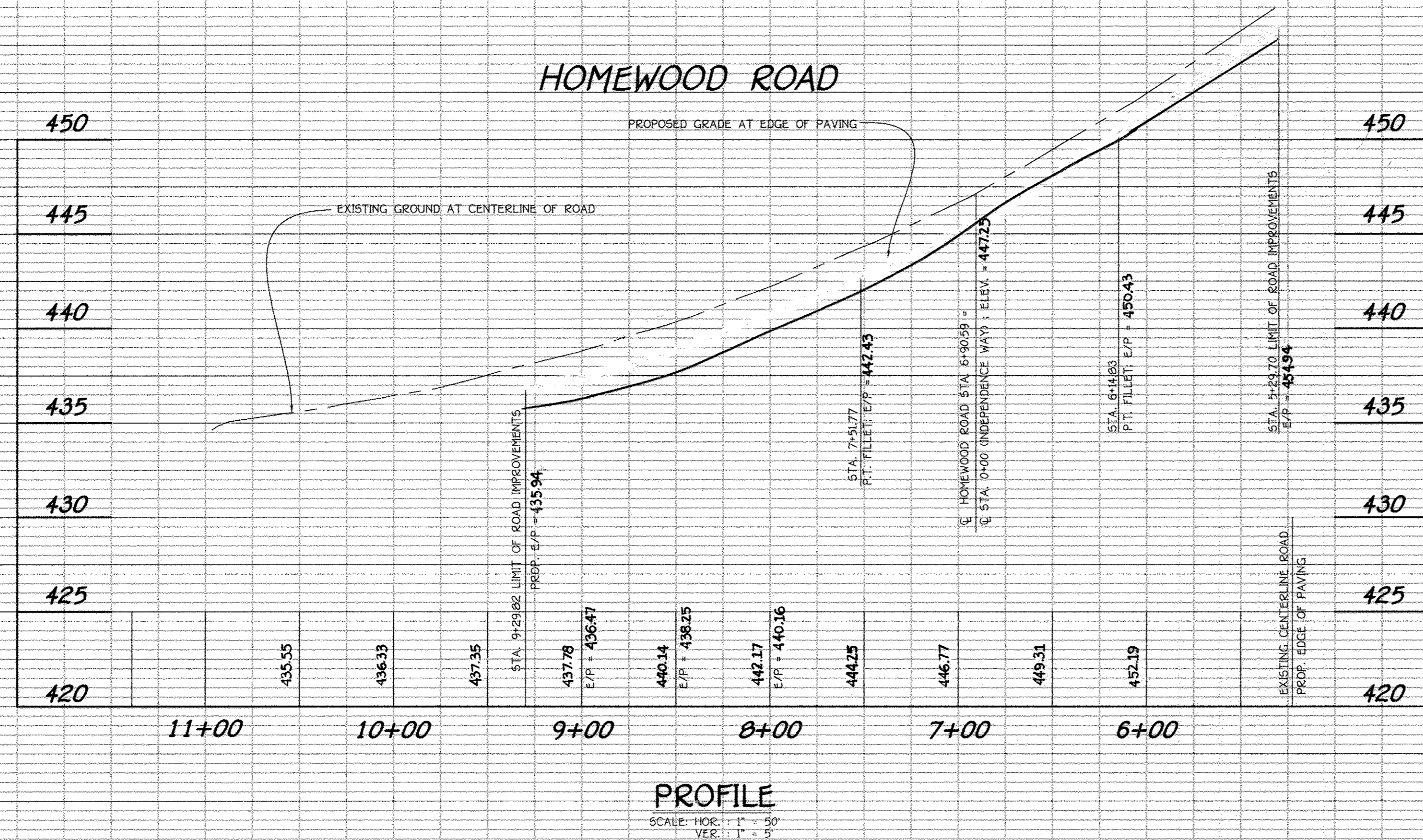
HOMEWOOD CROSSING
PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
 (A Resubdivision Of Non-Buildable Bulk Parcel 'B' and 'J',
 Benedict Farm, Phase One, Plat Nos.)

Tax Map: 29 Grid: 9 Parcel: 2B
 Third Election District: Howard County, Maryland
HOMEWOOD ROAD WIDENING @
INDEPENDENCE WAY
 PLAN AND PROFILE

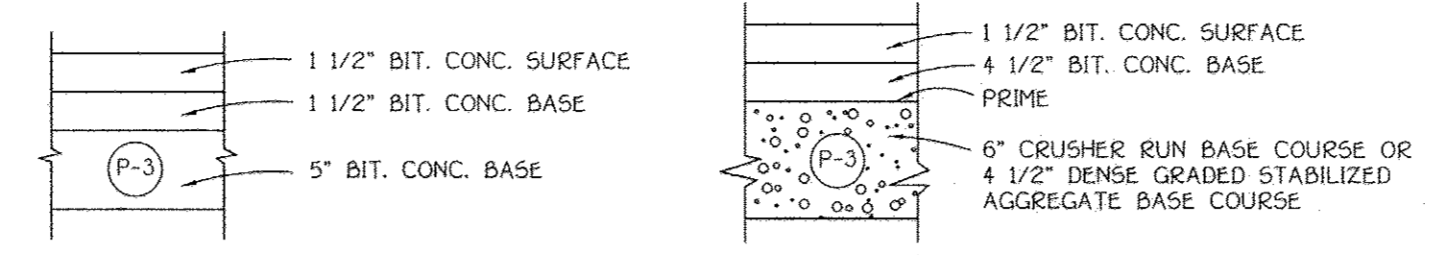
OWNER MARY CARTER CARROLL ZIEGLER, ET AL.
 C/O NATALIE ZIEGLER
 13322 HOMEWOOD ROAD
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER TOLL BROTHERS, INC.
 ATTN: MR. SCOTT HASE
 7164 COLUMBIA GATEWAY DRIVE, SUITE 230
 COLUMBIA, MARYLAND 21046

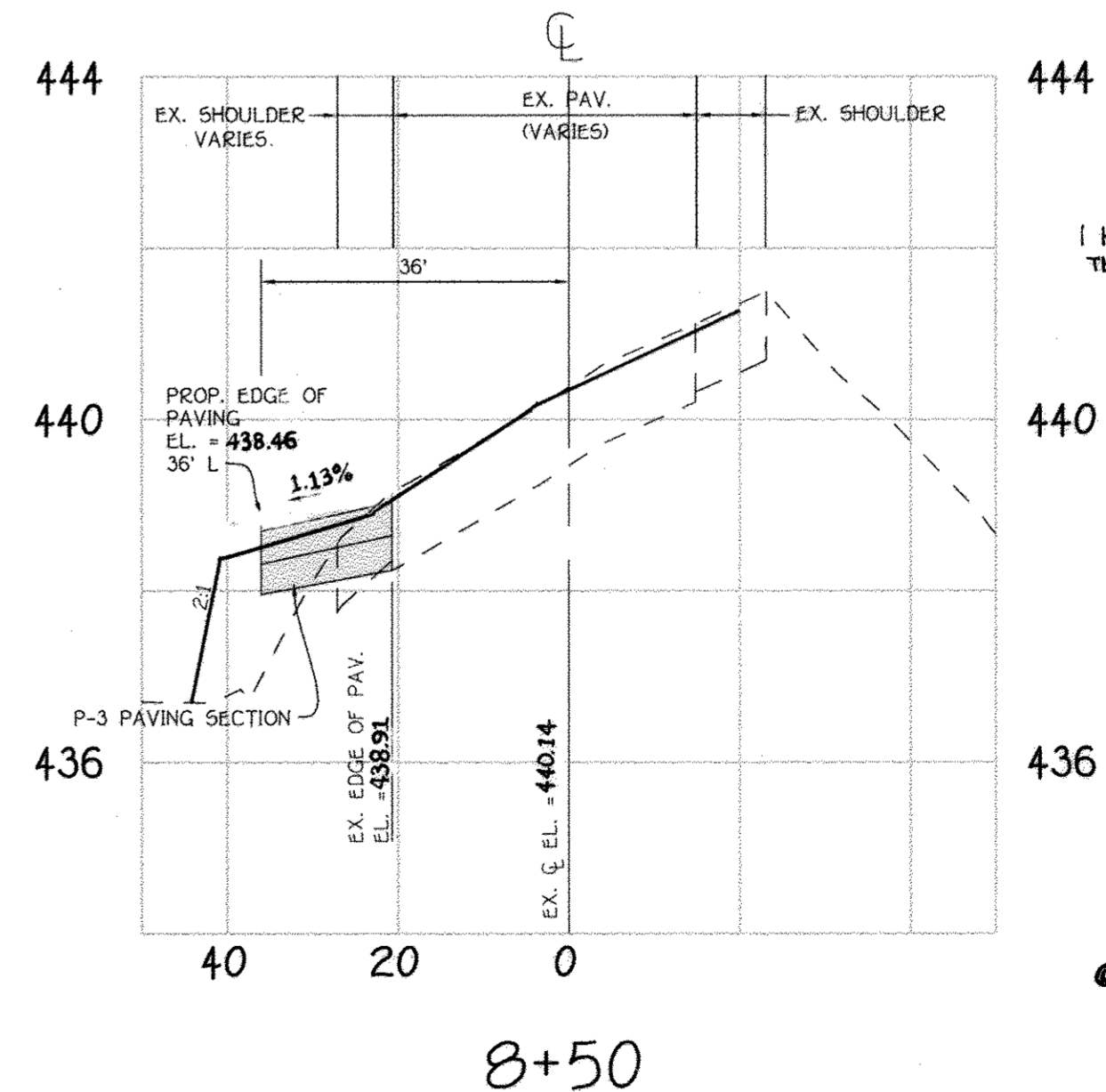
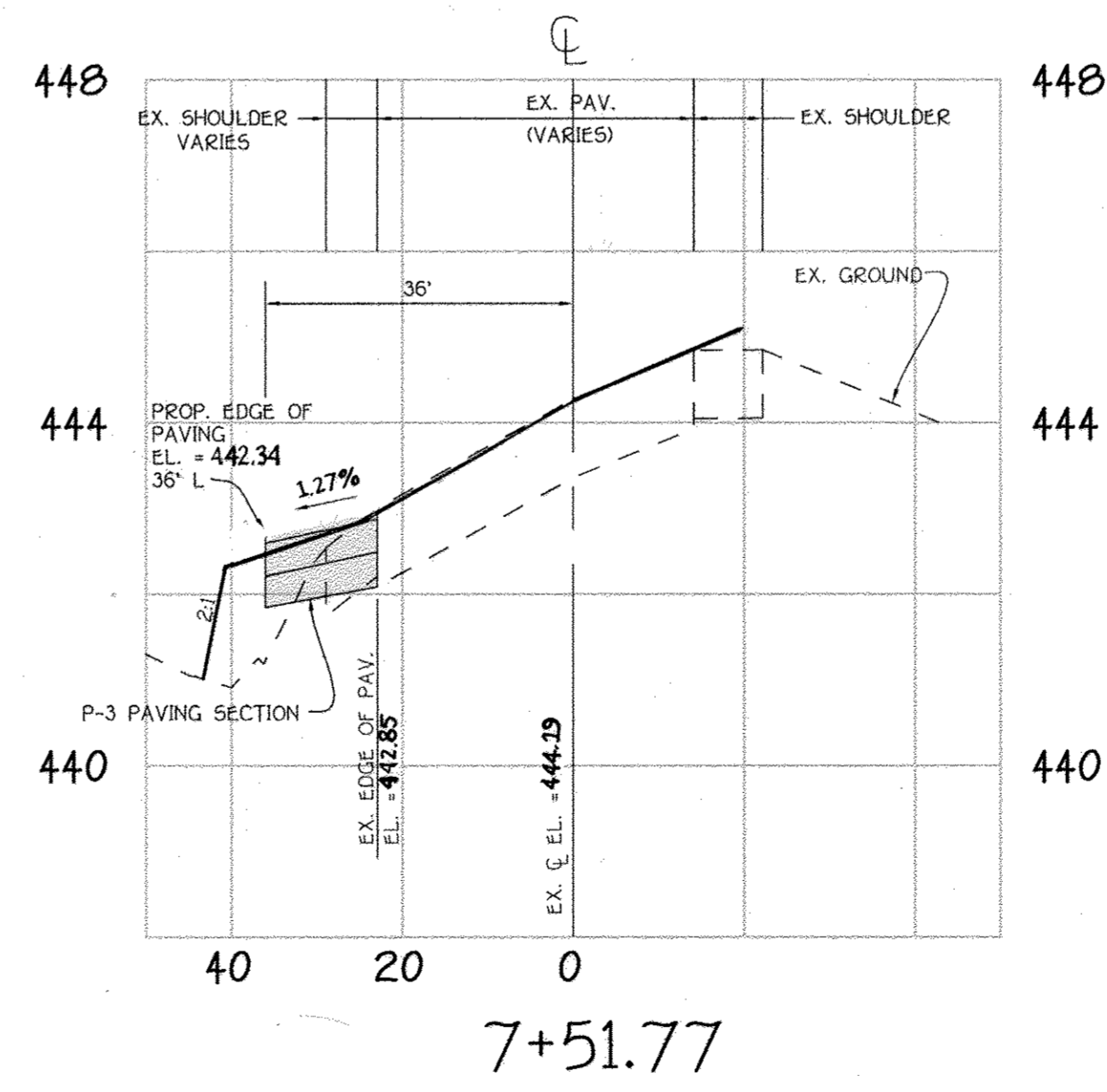
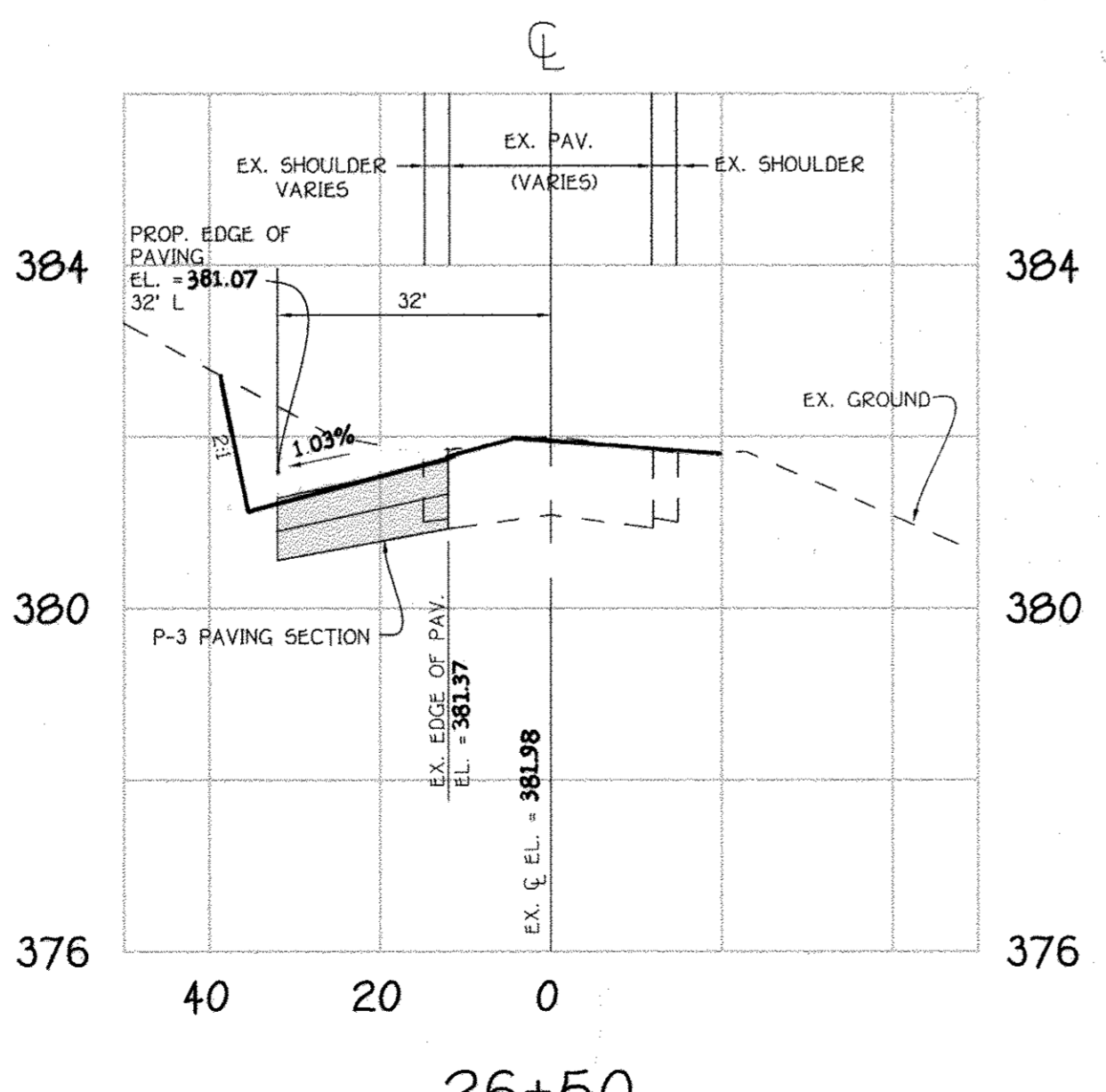
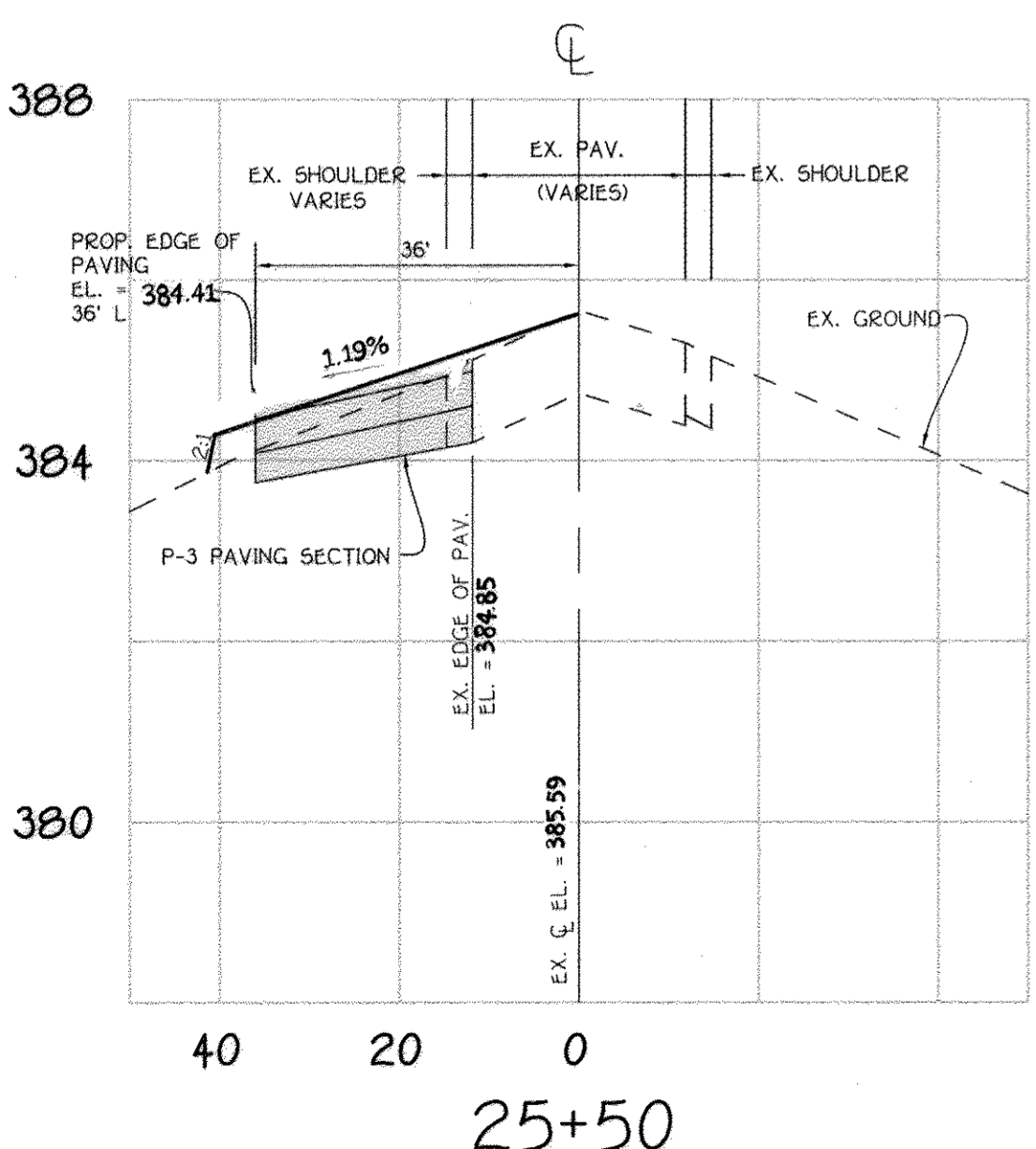
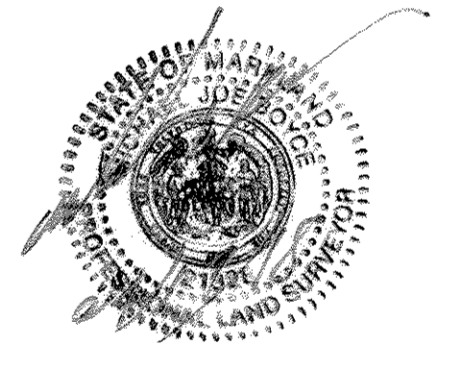
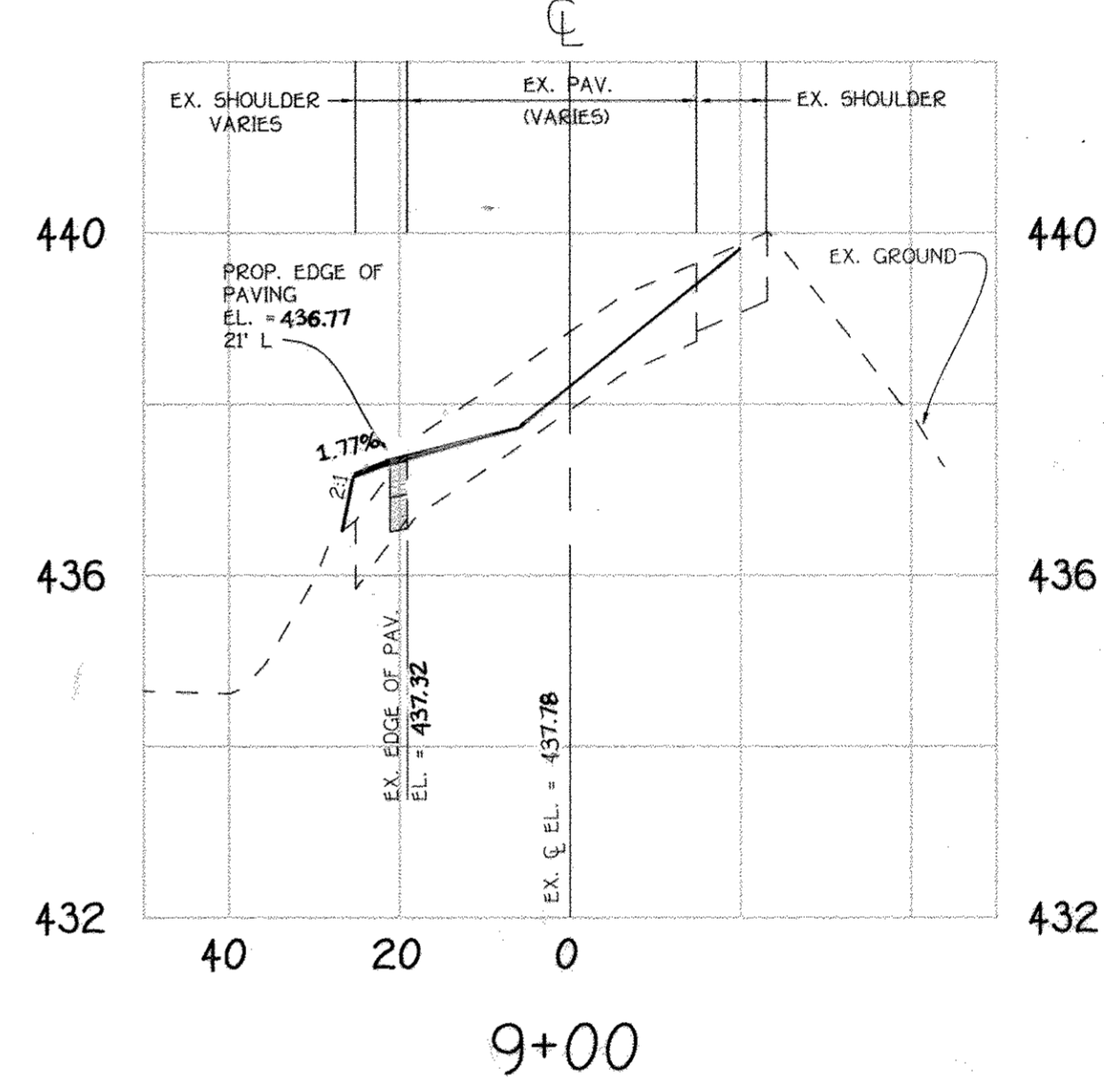
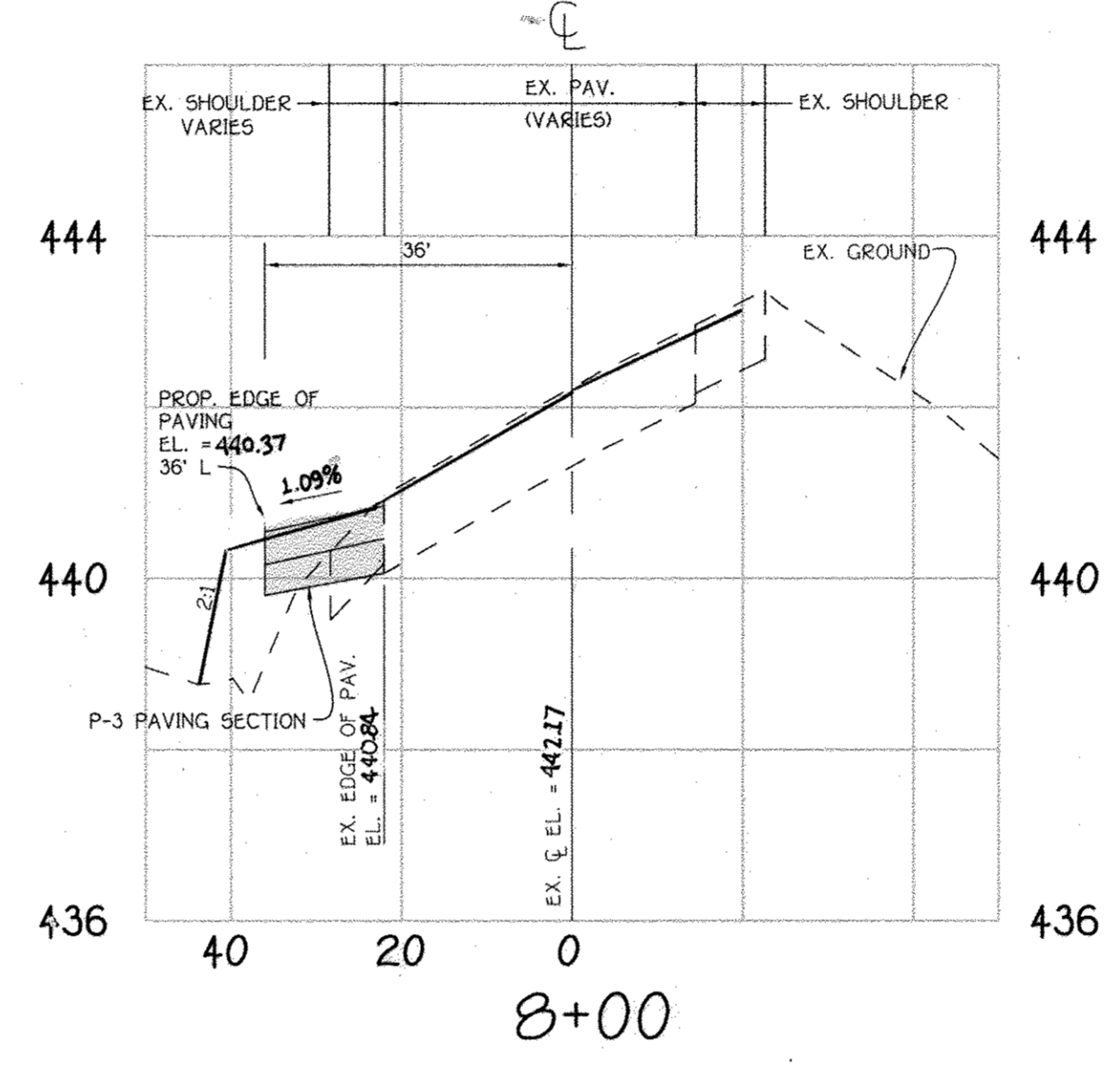
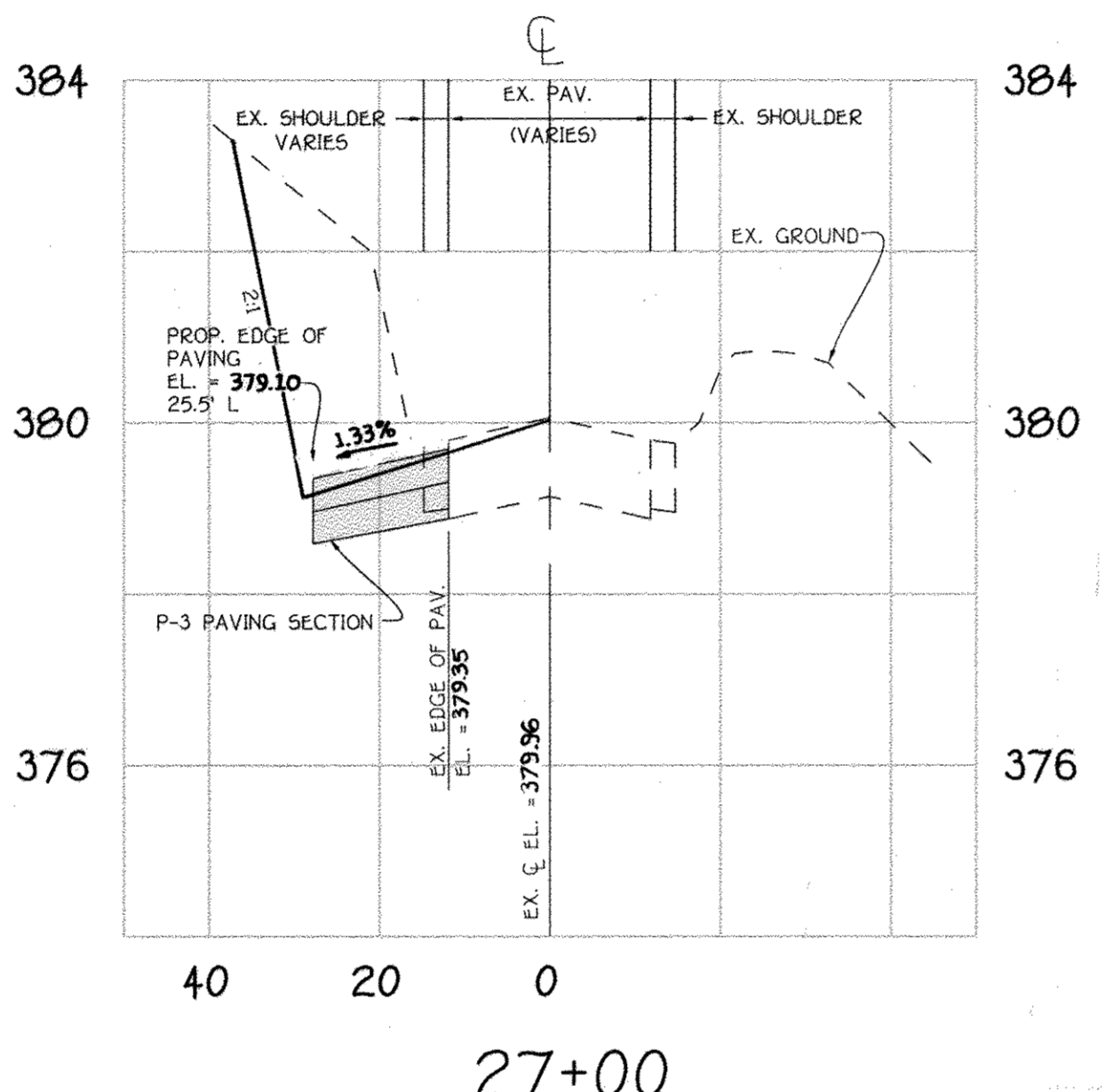
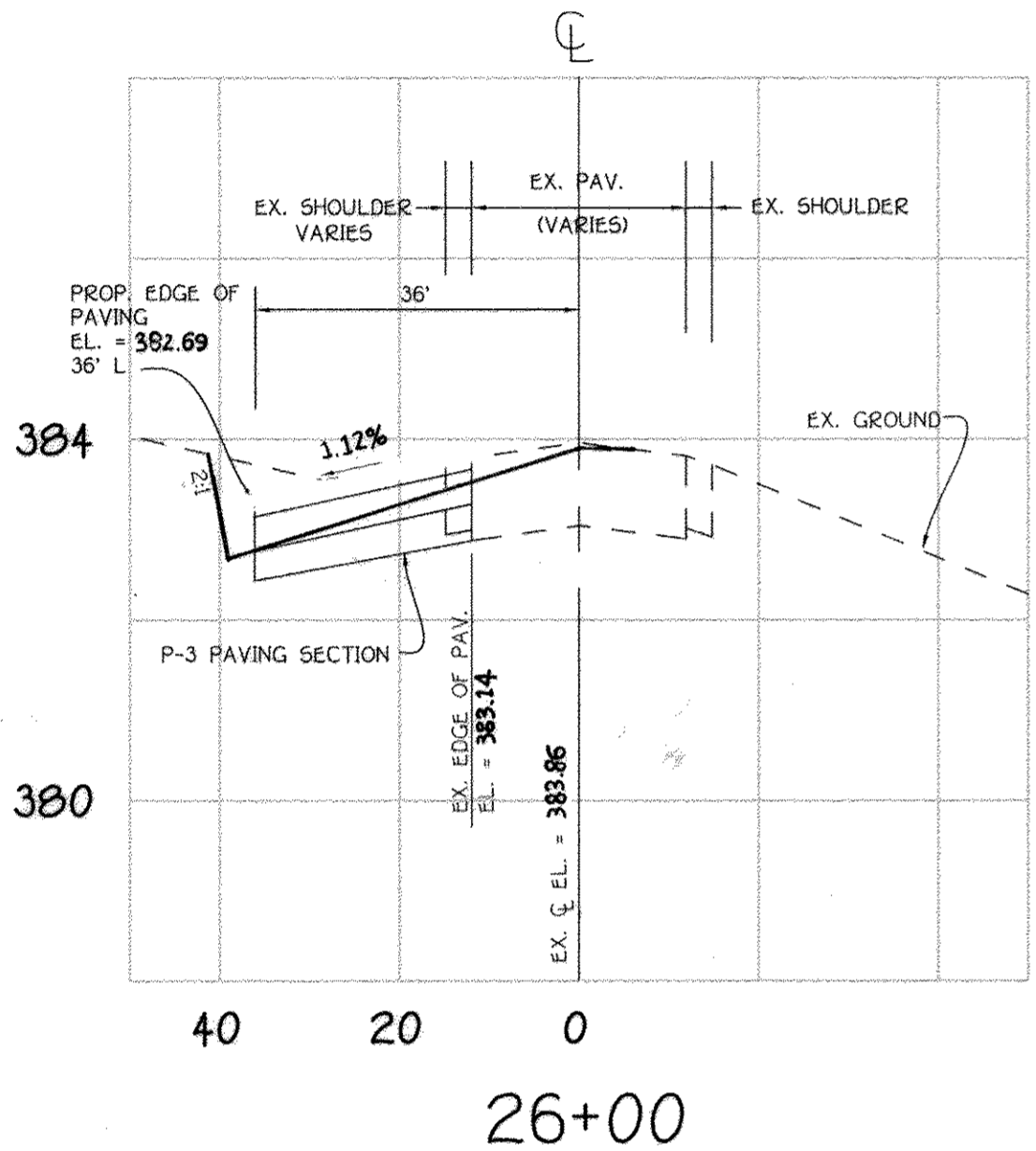
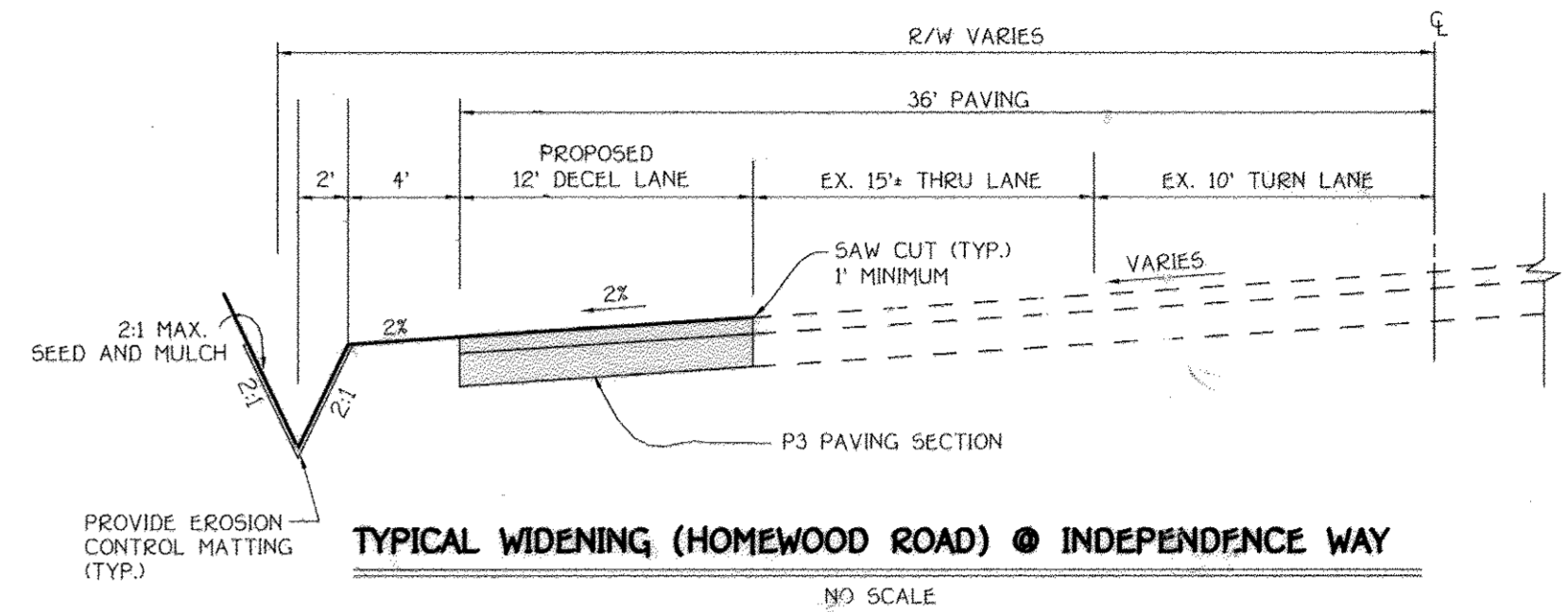
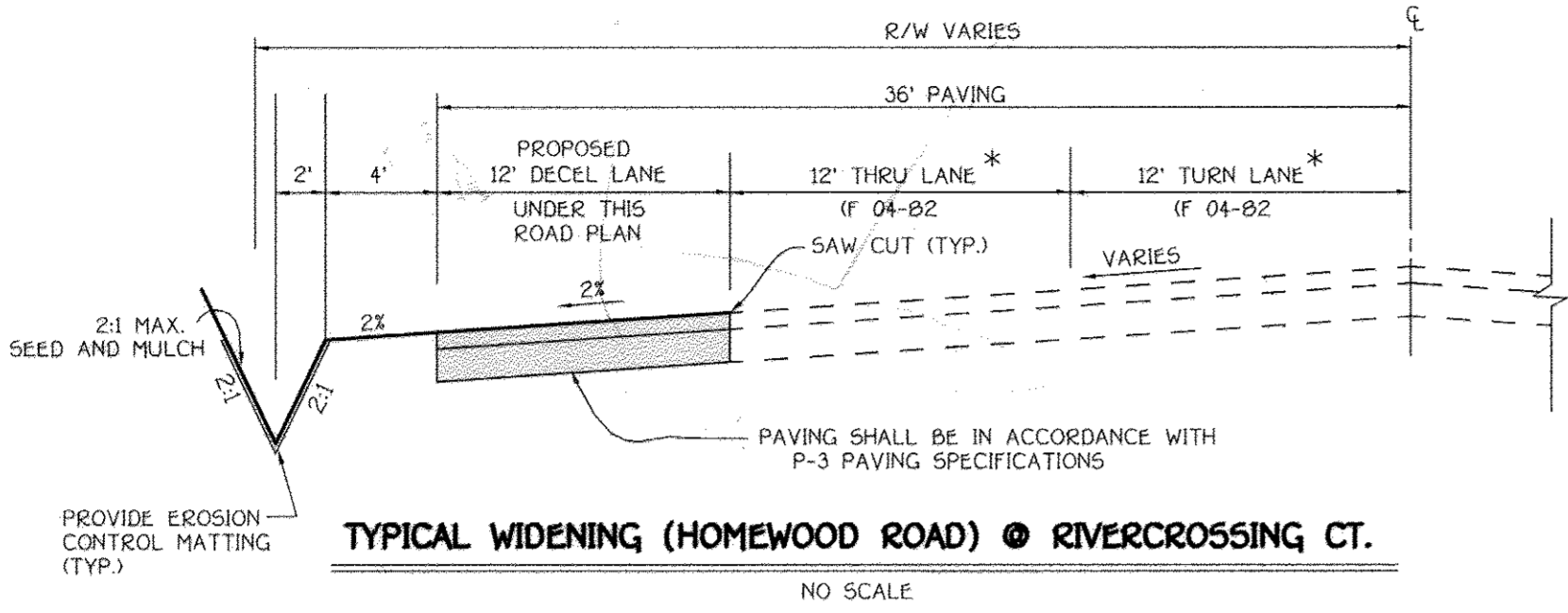
SCALE: AS SHOWN DATE: AUGUST, 2005 DWG. NO. 29 OF 30
 DES. R.A.L. DRN. J.C.L. CHK. A.M.V.
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL OFFICE PARK - 10770 BALTIMORE NATIONAL PIKE
 TELESUITE CITY, MARYLAND 21046
 4103 881 - 8200



* NOTE:
ROAD IMPROVEMENTS FOR
HOMEWOOD ROAD ARE
SHOWN PER F 04-82
(RIVERWOOD - PHASE 1)



APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. ... 9-21-05
CHIEF, BUREAU OF HIGHWAYS DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy ... 9/26/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE



FOR ESE CONSULTANTS, INC.
AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS.
MD LICENSE NO.: 21328



HOMEWOOD ROAD CROSS-SECTIONS @ RIVERCROSSING COURT

HOMEWOOD ROAD CROSS-SECTIONS @ INDEPENDENCE WAY

HOMEWOOD ROAD CROSS-SECTIONS @ RIVERCROSSING COURT & INDEPENDENCE WAY
HOMEWOOD CROSSING PHASE 2
LOTS 44 - 79,
NON-BUILDABLE PRESERVATION PARCELS 'K', 'L', 'M',
BUILDABLE PRESERVATION PARCEL 'N' &
NON-BUILDABLE BULK PARCEL 'O'
(A Resubdivision of Non-Buildable Bulk Parcel 'B' and 'J',
Benedict Farm, Phase One, Plat Nos.)
Zoned RC-DEO
Tax Map 29 Grid 9 Parcel 28
Third Election District
Howard County, Maryland
Date: August, 2005
Sheet 30 of 30

AS-BUILT

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
PENTAGON SQUARE OFFICE PARK - 2672 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
410-461-2555

SCALE: HOR. : 1" = 20'
VER. : 1" = 2'

SCALE: HOR. : 1" = 20'
VER. : 1" = 2'

Owner
MARY CARTER CARROLL ZIEGLER, ET AL.
C/O NATALIE ZIEGLER
11352 HOMEWOOD ROAD
ELLICOTT CITY, MARYLAND 21042

Developer
TOLL BROTHERS, INC.
ATTN: MR. SCOTT HARE
7164 COLUMBIA GATEWAY DRIVE, SUITE 230
COLUMBIA, MARYLAND 21046