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3	SHEPPARD LANE CROSS-SECTIONS
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FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLAN

WALNUT CREEK

PHASE TWO

Lots 23 - 68, Non-Buildable Preservation Parcels

'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'

(Being A Resubdivision Of Buildable Bulk Parcels 'F' & 'E' And a Revision To Non-Buildable
Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No's. 20631 Thru 20647

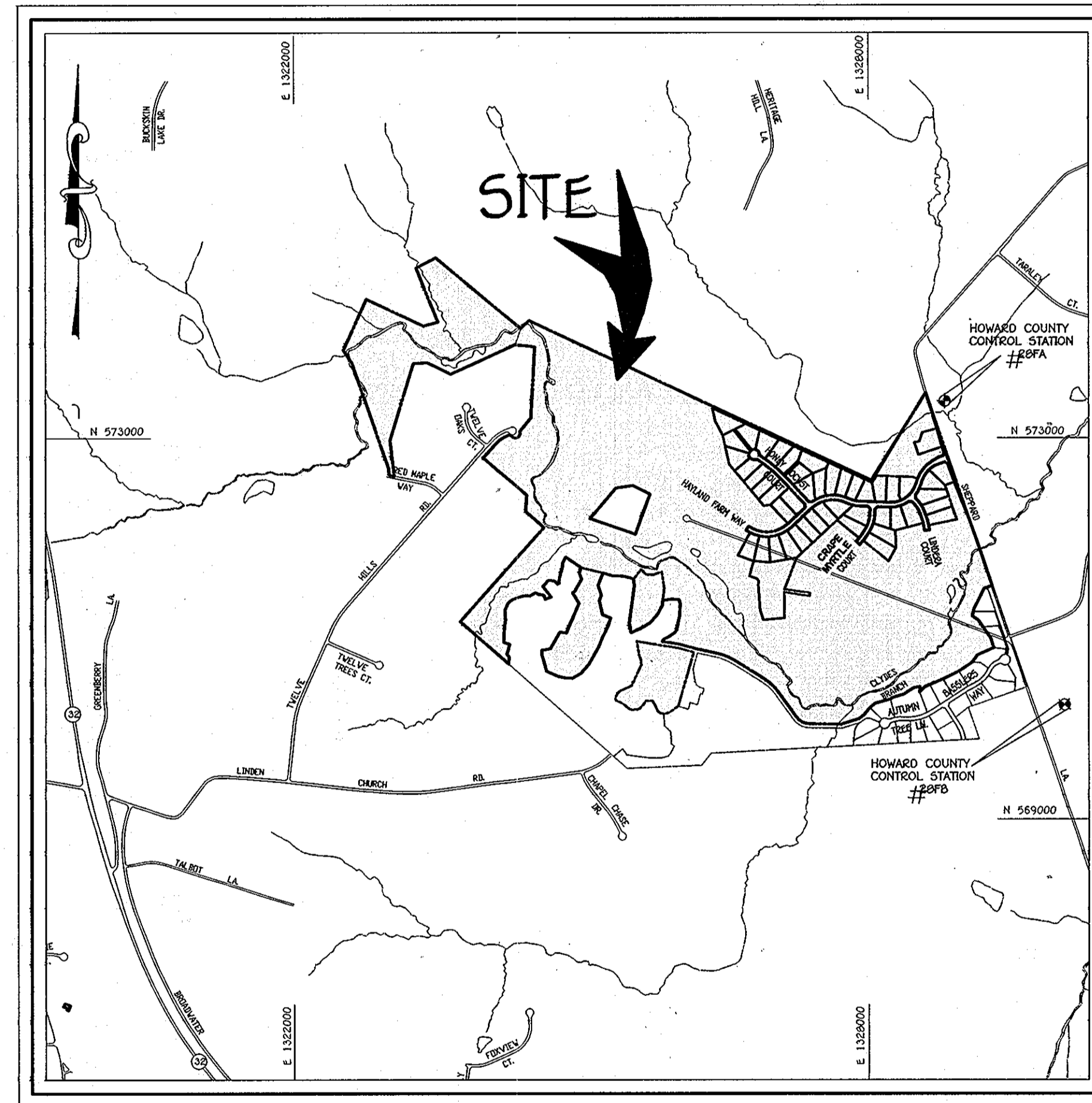
ZONING: RC-DEO & RR-DEO

TAX MAP NO. 28 GRID Nos. 4, 5, 10-12, 17 AND 18 PARCEL No. 49

TRAFFIC CONTROL SIGNS				
ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
HAYLAND FARM WAY	0+50	44L	STOP	R1-1
HAYLAND FARM WAY	2+00	18R	SPEED LIMIT 25	R2-1
HAYLAND FARM WAY	0+48	--	KEEP RIGHT	R4-7
HAYLAND FARM WAY	1+16	--	KEEP RIGHT	R4-7
HAYLAND FARM WAY	3+00	14L	STOP AHEAD	W3-1
HAYLAND FARM WAY	20+20	14R	ROAD ENDS 500 FT.	
HAYLAND FARM WAY	0+25	--	NO PARKING IN TEE TURNAROUND	
LINDERA COURT	0+25	16L	STOP	R1-1
LINDERA COURT	1+00	14R	SPEED LIMIT 25	R2-1
CRAPE MYRTLE CT.	0+25	--	NO PARKING IN TEE TURNAROUND	
CRAPE MYRTLE CT.	0+25	16L	STOP	R1-1
CRAPE MYRTLE CT.	1+00	14R	SPEED LIMIT 25	R2-1
HONEY LOCUST COURT	0+25	16L	STOP	R1-1
HONEY LOCUST COURT	1+50	11R	SPEED LIMIT 25	R2-1

ROADWAY INFORMATION CHART				
ROAD NAME	CLASSIFICATION	DESIGN SPEED	R/W WIDTH	
HAYLAND FARM WAY	PUBLIC ACCESS STREET	30 M.P.H.	50'	
LINDERA COURT	PUBLIC ACCESS STREET	30 M.P.H.	50'	
CRAPE MYRTLE COURT	PUBLIC ACCESS STREET	30 M.P.H.	50'	
HONEY LOCUST COURT	PUBLIC ACCESS PLACE	25 M.P.H.	50'	

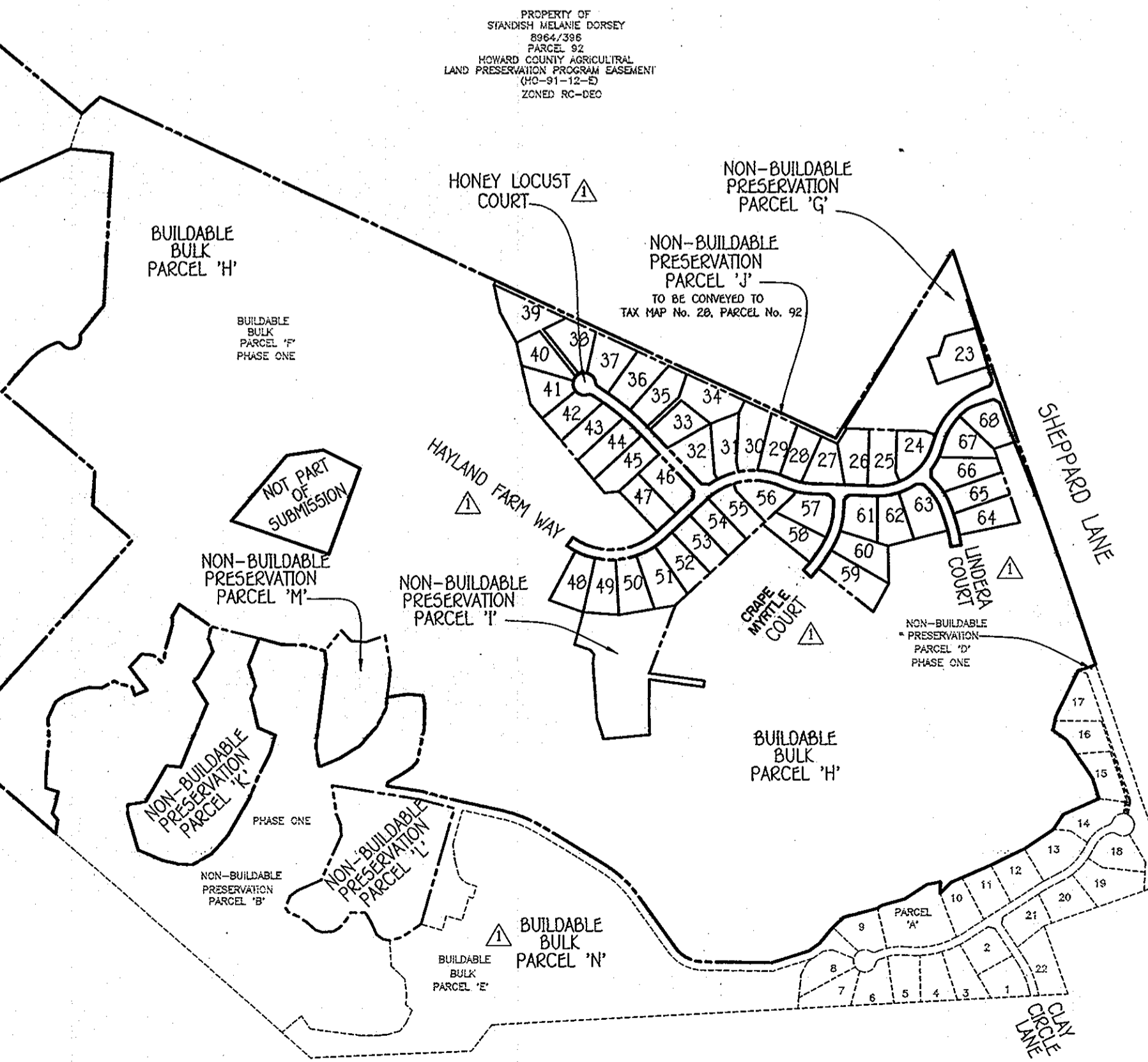
STREET LIGHT CHART				
STREET NAME	C.L. STATION	OFFSET	FIXTURE/POLE TYPE	
SHEPPARD LANE	5+48	50' L	150-WATT H.P.S. "PREMIER" PENDANT POST-TOP MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE	



VICINITY MAP

SCALE: 1" = 1200'

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

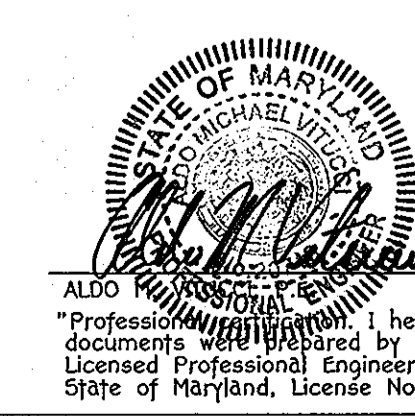


PLAN VIEW
NO SCALE

REVISED PARCELS 'E', 'I', 'H' & 'Q'. ROAD NAMES AND TITLE BLOCK.			9/25/12
NO.	DESCRIPTION	DATE.	
	REVISIONS		

OWNER
BASSLESS, INCORPORATED
C/O ALFRED S. BASSLER
4994 SHEPPARD LANE
ELICOTT CITY, MARYLAND 21042
(410) 531-2193

DEVELOPER
HERITAGE LAND DEVELOPMENT
1990 NORTH AVE.
USRBON, MARYLAND 21765
(410) 489-7900



10/3/12
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Dave Johnson, Acting 11/29/12
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Ved Steinhilber 12/05/12
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 12/3/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION

- GENERAL NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST (6) 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 HAD3'S MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 28 FA AND NO. 28 FB
HOWARD COUNTY MONUMENT NO. 28FA N 572,456.665 ELEV. = 348.296
E 1,329,957.66
HOWARD COUNTY MONUMENT NO. 28FB N 570,710.839 ELEV. = 365.804
E 1,329,524.63
 - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED SEPTEMBER, 2005 AND WAS APPROVED UNDER SP-06-007 ON MAY 31, 2006.
 - BACKGROUND INFORMATION:
A. SUBMISSION NAME: WALNUT CREEK
B. TAX MAP NO.: 28
C. PARCEL NO.: 49
D. ZONING: RC-DEO & RR-DEO
E. ELECTION DISTRICT: FIFTH
F. TOTAL TRACT AREA: 361,259 AC.
G. NO. OF BUILDABLE LOTS: 48 (PHASE TWO)
H. NO. OF OPEN SPACE LOTS: 0
I. NO. OF NON-BUILDABLE PRESERVATION PARCELS: 7
J. NO. OF BUILDABLE BULK PARCELS: 2
K. AREA OF BUILDABLE LOTS: 38,986 AC.
L. AREA OF OPEN SPACE LOTS: 0.00 AC.
M. AREA OF NON-BUILDABLE PRESERVATION PARCELS: 67,179 AC.
N. AREA OF BUILDABLE BULK PARCELS: 24,216 AC.
O. TOTAL AREA OF ROADWAY TO BE DEDICATED: 5,292 AC.
P. PREVIOUS FILE NOS.: SP-06-007 APPROVAL DATE: 5/31/06, BA-05-56E, BA-08-33E, BA-03-49E & WP-08-007 (SEE NOTE 10 BELOW).
Q. DATE: 9/25/12
 - ONE CERTIFICATE EXISTS WITHIN THIS SUBMISSION.
NO. 02-02802-2 THE PLANNING BOARD APPROVED THE CERTIFICATE ACCOMPANYING AND BOUNDARY DOCUMENTATION PLAN ON MARCH 30, 2006 SUBJECT TO THE FOLLOWING CONDITIONS:
1. THE DEVELOPER AND/OR THE WALNUT CREEK H.O.A. SHALL UPGRADE THE EXISTING SPLIT RAIL FENCE TO FIVEFEET PROTECT THE EXISTING CEMETERY.
2. THE DEVELOPER AND/OR THE WALNUT CREEK H.O.A. SHALL REGULARLY MAINTAIN THE CEMETERY AREA.
3. THE DEVELOPER AND/OR THE WALNUT CREEK H.O.A. MUST PLACE A CEMETERY MARKER AT THE ENTRANCE OF THE CEMETERY SITE.
 - ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-100.
 - THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1209 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THE ENTIRE SUBMISSION WILL BE FULFILLED BY PROVIDING 59.57 ACRES OF ON-SITE FOREST RETENTION AND 31.66 ACRES OF ON-SITE FOREST AFForestation FOR A TOTAL OF 91.23 ACRES.
A SURVEY FOR ON-SITE FOREST RETENTION @ \$0.50/SF FOR 2,994,069 SF = \$510,974.00 AND ON-SITE AFForestation @ \$0.50/SF FOR 1,373,110 SF = \$686,555.00 IS REQUIRED. TOTAL SURVEY AMOUNT FOR THE ENTIRE SUBMISSION = \$1,197,529.00.
THE FOREST CONSERVATION PROVIDED WITH PHASE TWO ARE AS FOLLOWS:
18.00 AC. OF FOREST CONSERVATION EASEMENT (CREATED AND NON-CREATED).
CREATED ON-SITE RETENTION OF 17.13 ACRES OF FOREST AND 9.10 ACRES OF ON-SITE AFForestation. CALCULATION USED FOR PHASE TWO FOREST REQUIREMENT:
59.57 TOTAL RETENTION ACRES / 160 TOTAL UNITS = 0.3723 (46 UNITS X 0.3723 = 17.13 AC.)
31.66 TOTAL PLANTING ACRES / 160 TOTAL UNITS = 0.1979 (148 UNITS X 0.1979 = 29.10 AC.)
A SURVEY FOR ON-SITE FOREST RETENTION @ \$0.50/SF FOR 396,396 SF = \$198,198.00 IS REQUIRED. TOTAL SURVEY AMOUNT FOR THIS SUBMISSION = \$347,433.00.
THE FOREST CONSERVATION SURETY IN THE AMOUNT OF \$347,433.00 IS BE PAID AS PART OF THE DPM DEVELOPER'S AGREEMENT.
THIS FOREST CONSERVATION PROPOSAL IS SUBJECT TO WP-08-007, APPROVED ON AUGUST 21, 2007 TO THE FOLLOWING CONDITIONS:
1. THE WAIVER PETITION APPROVAL APPLIES ONLY TO THE TEMPORARY DEFERRAL FOR ESTABLISHING THE FOREST CONSERVATION EASEMENTS FOR THIS PROJECT. THE FOREST CONSERVATION SURETY FOR THIS PROJECT, EACH SUBSEQUENT PHASE OF DEVELOPMENT MUST ESTABLISH A PROPORTIONATE AREA OF FOREST CONSERVATION EASEMENTS AND PROVIDE THE NECESSARY AREA OF FOREST RETENTION AND AFForestation AS REQUIRED BY THE FOREST CONSERVATION WAIVER FOR THIS PROJECT TO SATISFY ITS OBLIGATION. THE ENTIRE AREA OF FOREST CONSERVATION OBLIGATION MUST BE PROVIDED WITH THE PROCESSING AND RECORDING OF THE LAST PHASE OF DEVELOPMENT FOR THIS PROJECT.
2. THE APPLICANT/DEVELOPER MUST CONTINUE PROCESSING THE SUBMISSIONS PLANS FOR WALNUT CREEK AND MEET ALL APPLICABLE PROCESSING DEADLINE DATES IN ACCORDANCE WITH THE APPROVED APPROVAL SCHEDULE.
 - STORMWATER MANAGEMENT FACILITIES: D.H.P. NO. 3 & D.H.P. NO. 4
STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY AND MARYLAND 378 SPECIFICATIONS. RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF GRASS CHANNELS ALONG THE PROPOSED ROADWAYS. WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED AS A RECHARGE FACILITY (EXTENDED DETENTION) POND, ONE 80'-RETENTION FACILITY AND LEVEL SPREADSIZES. OVERSIZING FLOOD PROTECTION VOLUME AND EXTENSIVE FLOOD VOLUME ARE NOT REQUIRED FOR THIS SITE.
 - THE PROPOSED WATER AND SEWER SYSTEMS SHALL BE PERMITS. SEE CONTRACT NO. 50-4440-0 FOR LOW PRESSURE SYSTEM.
 - THE SUBJECT PROPERTY IS LOCATED OUTSIDE OF THE METROPOLITAN DISTRICT.
 - TOPOGRAPHIC CONTOURS BASED ON HARFORD AERIAL SURVEYS, INC. DATED FEBRUARY, 2004.
 - FOR FLAG OR PIPESTEIN LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEIN AND THE ROAD RIGHT-OF-WAY AND NOT ONTO THE FLAG OR PIPESTEIN DRIVE.
 - THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HERBST BENSON & ASSOCIATES, INC., DATED SEPTEMBER, 2005 AND APPROVED ON MAY 31, 2006.
 - THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED SEPTEMBER, 2005 AND APPROVED ON MAY 31, 2006.
 - THE MIN-CRITICAL FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY FRONCO, COLLINS & CARTER, INC. DATED JULY, 2005 AND SUPPLEMENTED WITH INFORMATION OBTAINED FROM HO. CO. CAPITAL PROJECT D-1028A. THE FLOODPLAIN STUDY WAS APPROVED UNDER SP-06-007 DATED 5/31/06.
 - SOILS INFORMATION TAKEN FROM 50L, MAP NO. 18, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY 1960 ISSUE.
 - THERE ARE STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY "SLOPES THAT AVERAGE 25% OR GREATER OVER 10 VERTICAL FEET". PER SECTION 16.1066(I)(2) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, TOTAL AREA OF 25% OR GREATER SLOPES = 43 AC.
 - AS PER SECTION 104.4.4.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 'C' OWNED PRIVATELY. EASEMENT HOLDERS: HOWARD COUNTY, MARYLAND USE: S.W.M.
B. NON-BUILDABLE PRESERVATION PARCEL 'I' OWNED PRIVATELY. EASEMENT HOLDERS: HOWARD COUNTY, MARYLAND USE: S.W.M.
 - NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAM OR THEIR REGULAR BUFFERS.
 - THE LANDSCAPE SURETY FOR THE 80 SHADE AND 100 EVERGREEN TREES IN THE AMOUNT OF \$42,600.00 FOR PERMITS LANDSCAPE REQUIREMENTS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEIN AND THE ROAD RIGHT-OF-WAY SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$69,000.00.
 - BUILDABLE BULK PARCEL 'H' RETAINS THE RIGHT TO BE FURTHER SUBDIVIDED IN ACCORDANCE WITH THE GEO CLUSTER REGULATIONS BY SECTION 106 OF THE HOWARD COUNTY ZONING REGULATIONS. THE RESUBDIVISION OF THIS BULK PARCEL INTO RESIDENTIAL LOTS WILL REQUIRE DEDICATE FROM AN OFF-SITE LOCATION WITHIN THE RC-DEO DISTRICT.
 - THIS SUBMISSION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2004 ZONING REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS PER COUNCIL BILL NO. 70-2003 AND THE COMP-LITE ZONING REGULATIONS AMENDMENTS EFFECTIVE 7/28/06. THE TYPE OF SUBDIVISION IS A BUILDING OR GRADING FRONT APPLICATION.
 - WELLS SHALL BE DRILLED ON LOTS PRIOR TO RECONSTRUCTION OF THE FINAL RECORD PLAN.
 - LOTS 23 THRU 68 ARE TO BE SERVED BY A PUBLIC SHARED SEPTIC FACILITY LOCATED ON NON-BUILDABLE PRESERVATION PARCEL 'Q' (P-07-076). WALNUT CREEK, PHASE ONE.
 - SEPTIC POTS: ALL SEPTIC POTS FOR TOILET, SINKS, SHOWER, INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE INSTALLED ON A "Z" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLAB (12 GAUGE) - 2" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
 - THIS PROJECT IS SUBJECT TO WASTEWATER DISCHARGE PERMIT NUMBER 06-09-3550 AND IS EFFECTIVE FROM AUGUST 1, 2006 UNTIL AUGUST 1, 2011 WHEN IT EXPIRES. THE SHARED SEPTIC SYSTEM CONTRACT NO. IS 50-4441-01 AND THE COLLECTION SYSTEM CONTRACT NO. IS 50-4441-02.
 - NON-BUILDABLE PRESERVATION PARCEL 'L' TO BE CONVEYED TO TAX MAP NO. 28, PARCEL NO. 92 SIMULTANEOUSLY WITH THE RECORDATION OF THIS PLAN.
 - A DESIGN MANUAL W/AVR FROM SECTION 5.2.7.4.A, WHICH REQUIRES THAT A WET POND SHALL HAVE A POND DRAIN CAPABLE OF DEWATERING. THE PERMANENT POND AREA WAS SUBMITTED WITH THIS PROJECT. THIS W/AVR HAS BEEN DENIED AND A POND DRAIN HAS BEEN ADDED TO D.H.P. NO. 3.

**REVISED
WALNUT CREEK
PHASE TWO**

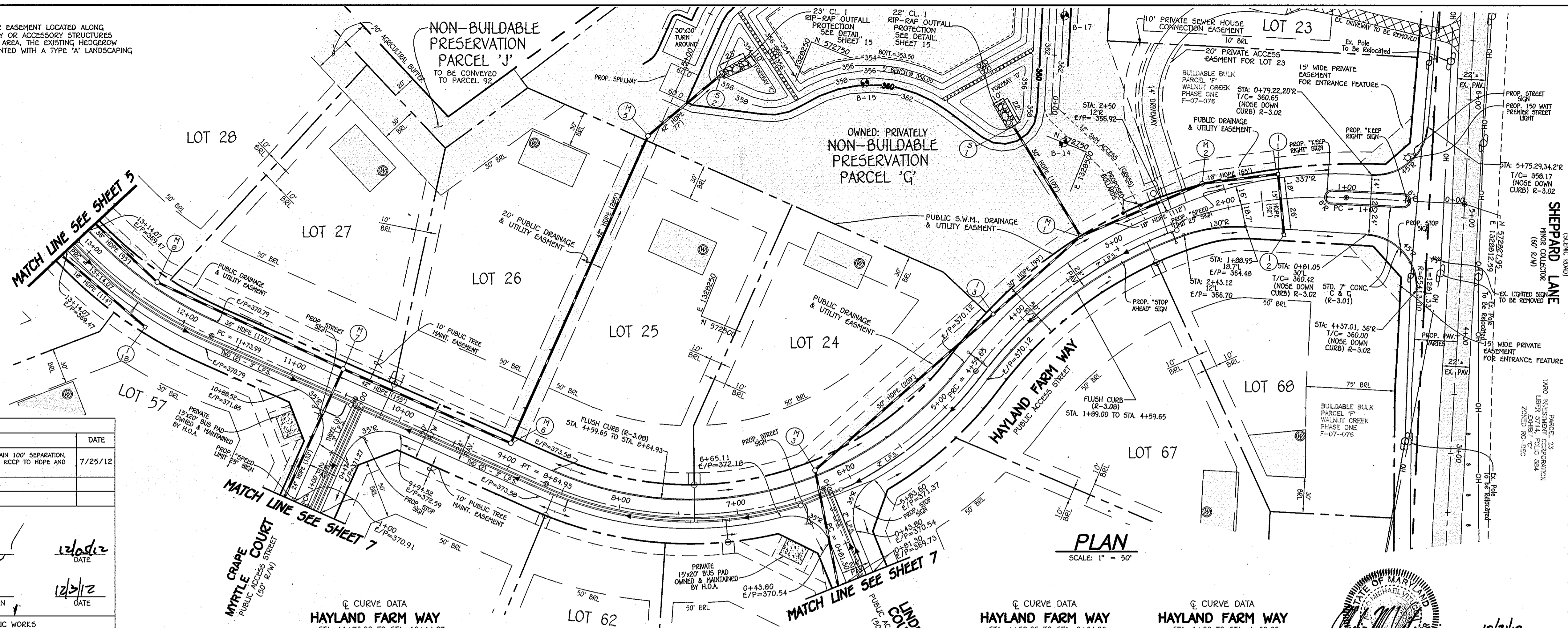
Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'

(Being A Resubdivision Of Buildable Bulk Parcels 'F' & 'E' And a Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No's. 20631 Thru 20647

ZONED: RC-DEO & RR-DEO
TAX MAP NO. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL NO. 49
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: SEPTEMBER, 2006
SHEET 1 OF 32

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE BUILDING - 10322 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2295

NOTE:
 WITHIN THE 50 FOOT WIDE AGRICULTURAL BUFFER EASEMENT LOCATED ALONG THE NORTHERN PROPERTY BOUNDARY, NO PRIMARY OR ACCESSORY STRUCTURES SHALL BE PERMITTED, AND WITHIN THE EASEMENT AREA THE EXISTING HEDGEROW VEGETATION SHALL BE PRESERVED AND SUPPLEMENTED WITH A TYPE 'A' LANDSCAPING BUFFER WHERE INSUFFICIENT VEGETATION EXISTS.



REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER WELLS TO MAINTAIN 10' SEPARATION PARCELS 'C', 'H' & 'J'. STORM DRAIN PIPE FROM RCP TO HOPE AND ROAD NAMES	7/25/12

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Veronica D... 12/2/12
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Dianna Schw... 11/29/12
 CHIEF, BUREAU OF HIGHWAYS

REVISED
WALNUT CREEK
PHASE TWO
 Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'T', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N' (Being A Re-division of Buildable Bulk Parcels 'F' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, File No. 20031 Thru 20647)

ZONED: RC-DEO & RE-DEO
 TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

HAYLAND FARM WAY
 PLAN AND PROFILE

OWNER
 BASSLESS, INCORPORATED
 c/o ALFRED S. BASLER
 4994 SHEPPARD LANE
 ELLICOTT CITY, MARYLAND 21042
 (410) 531-2193

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LEBANON, MARYLAND 21765
 (410) 489-7900

SCALE: AS SHOWN DATE: SEPT., 2008 DWG. NO. 4 OF 32
 DES. R.A.I. DRN. J.C.L. CHK. A.H.V.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALDROCK NATIONAL FILE
 ELLICOTT CITY, MARYLAND 21042
 (410) 851-2222

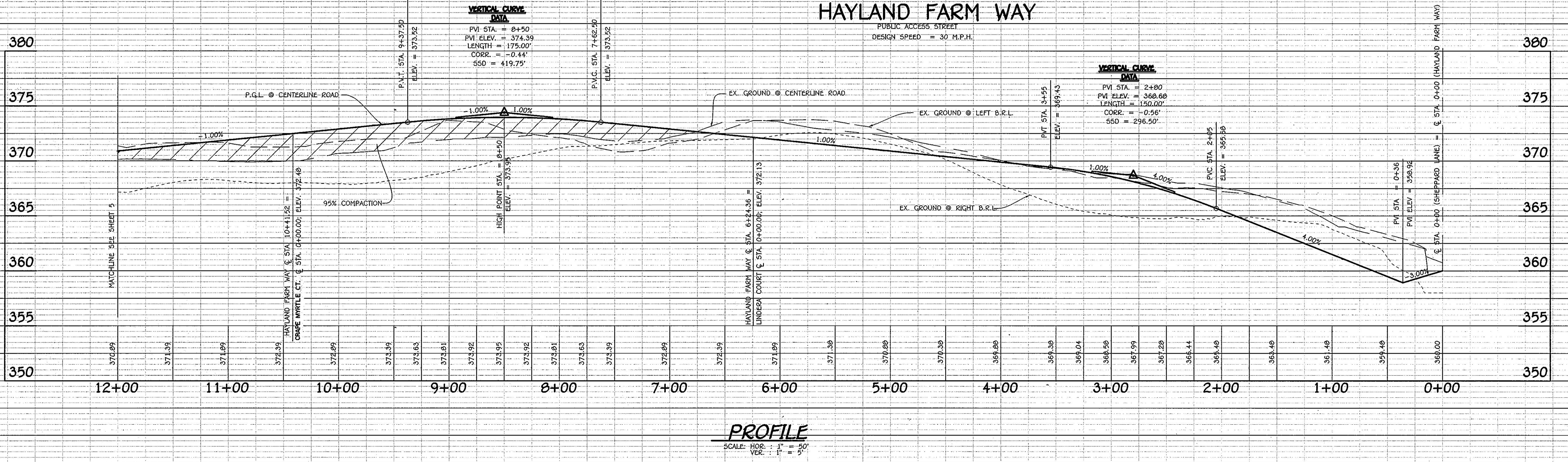
© CURVE DATA
HAYLAND FARM WAY
 STA. 11+73.99 TO STA. 13+14.07
 RADIUS = 350.00' R
 ARC LENGTH = 140.00'
 TAN. = 70.93'
 DELTA = 22°55'53"
 CHORD = N76°24'35"W, 139.15'

© CURVE DATA
HAYLAND FARM WAY
 STA. 4+59.65 TO STA. 6+64.93
 RADIUS = 300.00' R
 ARC LENGTH = 405.28'
 TAN. = 240.35'
 DELTA = 77°24'08"
 CHORD = S53°25'25"W, 375.15'

© CURVE DATA
HAYLAND FARM WAY
 STA. 1+00 TO STA. 4+59.65
 RADIUS = 365.00' R
 ARC LENGTH = 359.65'
 TAN. = 195.94'
 DELTA = 56°27'22"
 CHORD = S42°57'02"W, 345.28'

NOTE:
 SEE SHEET 29 FOR FILLET PROFILES.

STATE OF MARYLAND
PROFESSIONAL ENGINEER
Dianna Schw...
 License No. 20748, Expiration Date 2-22-13



Q CURVE DATA
HAYLAND FARM WAY
 STA. 20+21.37 TO STA. 25+91.72
 RADIUS = 350.00' R
 ARC LENGTH = 570.35'
 TAN. = 371.20
 DELTA = 93°22'05"
 CHORD = N86°20'45"W, 509.31'

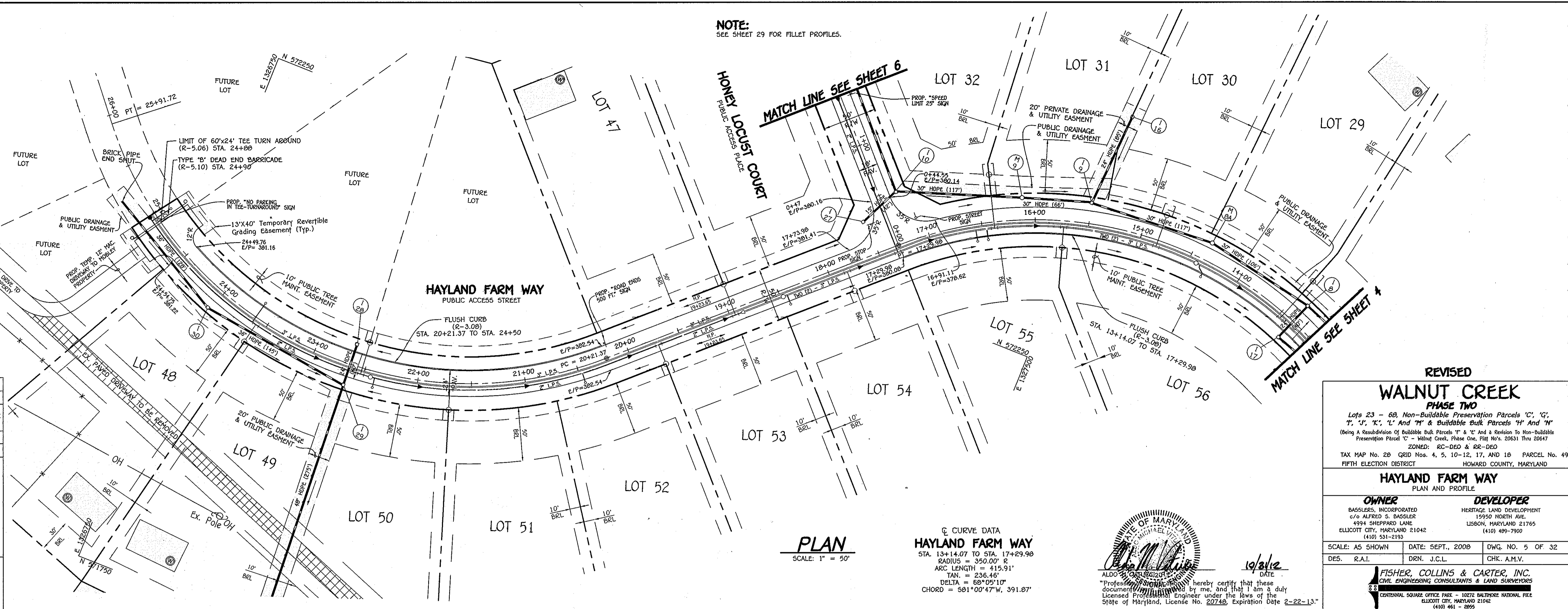
NOTE:
 SEE SHEET 29 FOR FILLET PROFILES.

NOTE:
 THE CONTRACTOR SHALL PROVIDE UNINTERRUPTED ACCESS TO MOBLEY PROPERTY, PARCEL No. 50 DURING CONSTRUCTION.

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER, WELLS TO MAINTAIN 100' SEPARATION. PARCELS 'G', 'H' & 'J'. STORM DRAIN PIPE FROM ROOP TO HOPE AND ROAD NAMES	7/25/12

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Karl Schlander 12/05/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Diane Schwary, Acting 11/21/12
 CHIEF, BUREAU OF HIGHWAYS DATE



REVISED
WALNUT CREEK
PHASE TWO
 Lots 23 - 68 Non-Buildable Preservation Parcels 'C', 'G', 'H', 'I', 'K', 'L' And 'M' & Buildable Bulk Parcels 'J' And 'M' (Being A Re-division Of Buildable Bulk Parcels 'I' & 'C' And A Re-division To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, P&H No. 20531 Thru 20647)
 ZONED: RC-DEO & RR-DEO
 TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

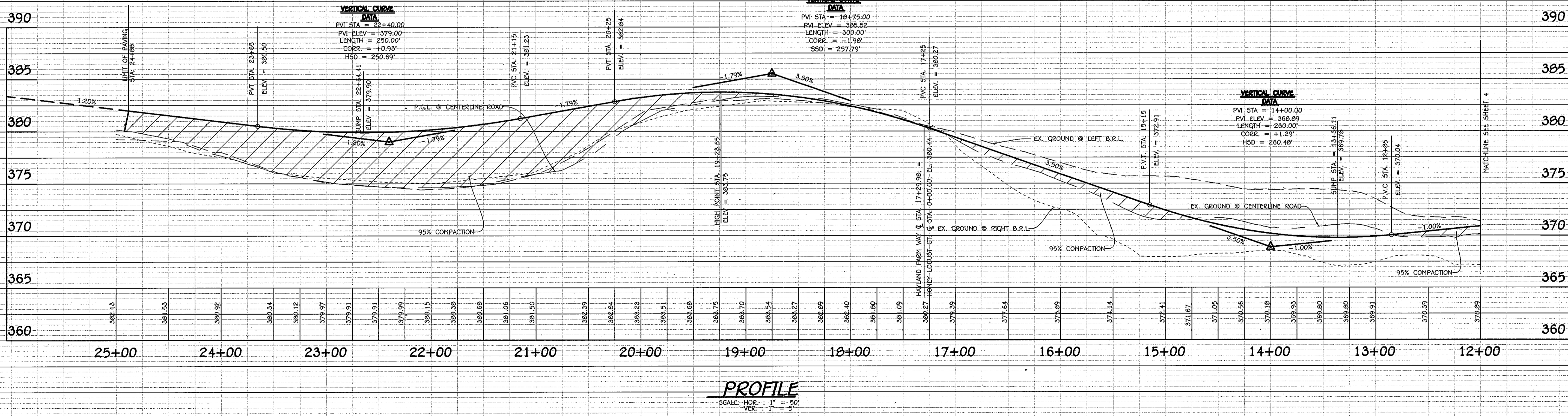
HAYLAND FARM WAY
 PLAN AND PROFILE

OWNER	DEVELOPER
BASSLER, INCORPORATED c/o ALFRED S. BASSLER 4934 SHEPARD LANE ELLCOTT CITY, MARYLAND 21042 (410) 531-2193	HERITAGE LAND DEVELOPMENT 15950 NORTH AVE. LISBON, MARYLAND 21765 (410) 489-7900

SCALE: AS SHOWN DATE: SEPT., 2008 DWG. NO. 5 OF 32
 DES. R.A.I. DRN. J.C.L. CHK. A.M.V.

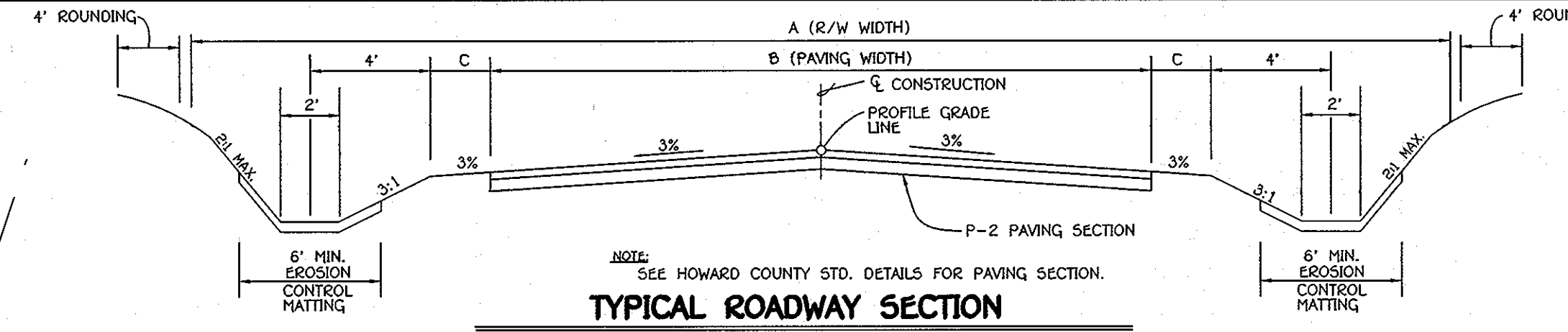
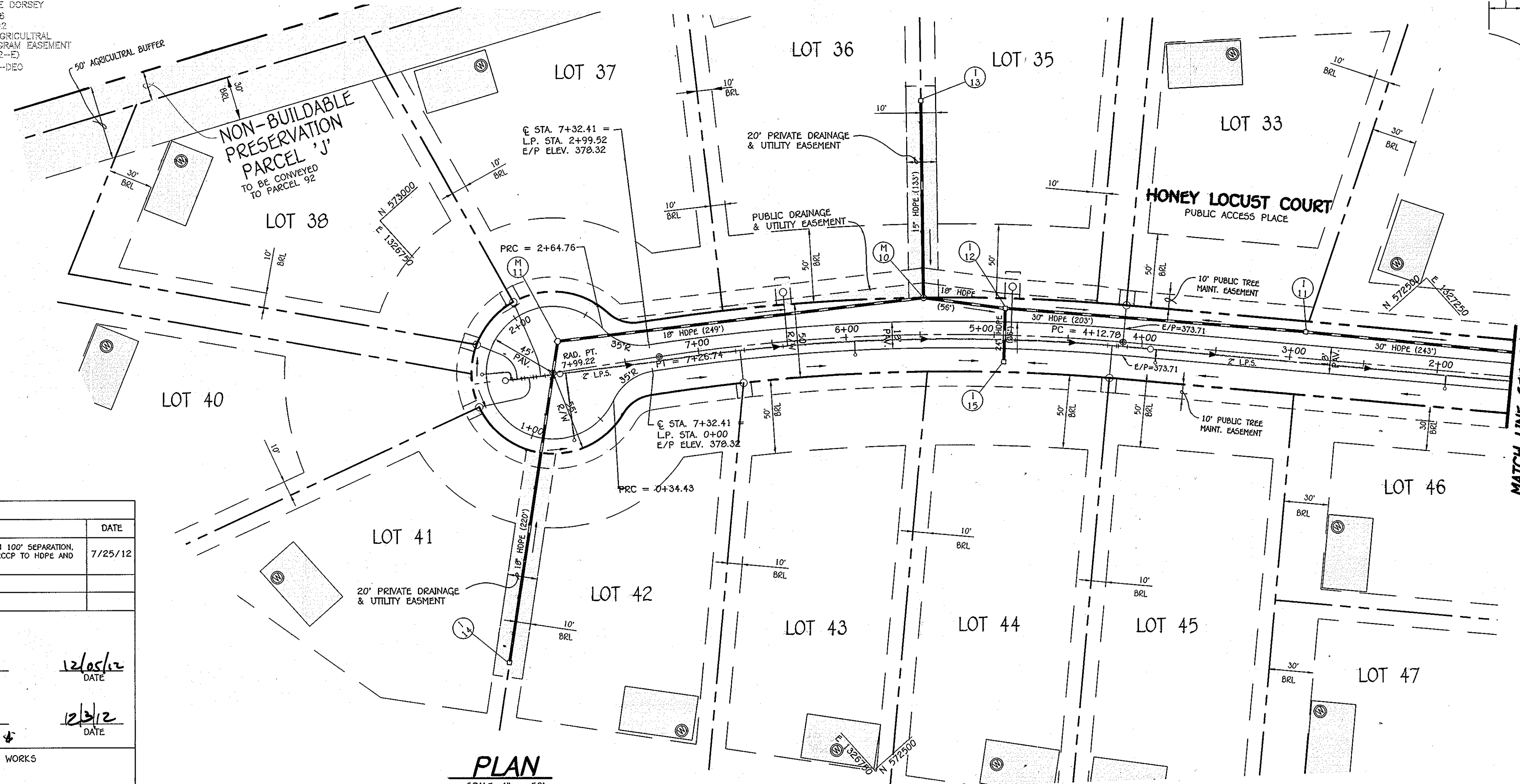
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10273 BALTIMORE NATIONAL PIKE
 ELLCOTT CITY, MARYLAND 21042
 (410) 461-2895

HAYLAND FARM WAY
 PUBLIC ACCESS STREET
 DESIGN SPEED = 30 M.P.H.



PROPERTY OF
STANDISH MELANIE DORSEY
8964/396
PARCEL 92
HOWARD COUNTY AGRICULTURAL
LAND PRESERVATION PROGRAM EASEMENT
(HO-01-12-E)
ZONED RC-DEO

NON-BUILDABLE
PRESERVATION
PARCEL 'J'
TO BE CONVEYED
TO PARCEL 92



ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	A	B	C	STATION LIMITS	PAVING SECTION
HAYLAND FARM WAY	PUBLIC ACCESS STREET	30 M.P.H.	RC-DEO	50'	24'	3'	0+00 TO 24+88	P-2
LINDSA COURT	PUBLIC ACCESS STREET	30 M.P.H.	RC-DEO	50'	24'	3'	0+00 TO 3+31	P-2
CLEVELAND COURT	PUBLIC ACCESS STREET	30 M.P.H.	RC-DEO	50'	24'	3'	0+00 TO 4+43	P-2
HONEY LOCUST COURT	PUBLIC ACCESS PLACE	25 M.P.H.	RC-DEO	50'	18'	4'	0+00 TO 7+99.22	P-2

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER WELLS TO MAINTAIN 100' SEPARATION PARCELS 'C', 'H' & 'J'. STORM DRAIN PIPE FROM ROCP TO HOPE AND ROAD NAMES	7/25/12

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Karl Stalman 12/2/12
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Williams 12/2/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Diane Ashby Acting 11/29/12
CHIEF, BUREAU OF HIGHWAYS DATE

Q CURVE DATA
HONEY LOCUST COURT
STA. 4+12.78 TO STA. 7+26.74
RADIUS = 1300.00'
ARC LENGTH = 313.96'
TAN. = 157.75'
DELTA = 131°50'15"
CHORD = N49°56'55"W, 313.20'

REVISED
WALNUT CREEK
PHASE TWO

Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'T', 'U', 'V', 'W', 'X', 'Y' and 'Z' and Buildable Bulk Parcels 'H' and 'M' (Being a Re-Subdivision of Buildable Bulk Parcels 'P' & 'Q' and a Revision to Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No. 20631 Thru 20647)

ZONED: RC-DEO & RC-DEO
TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 19 PARCEL No. 49
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

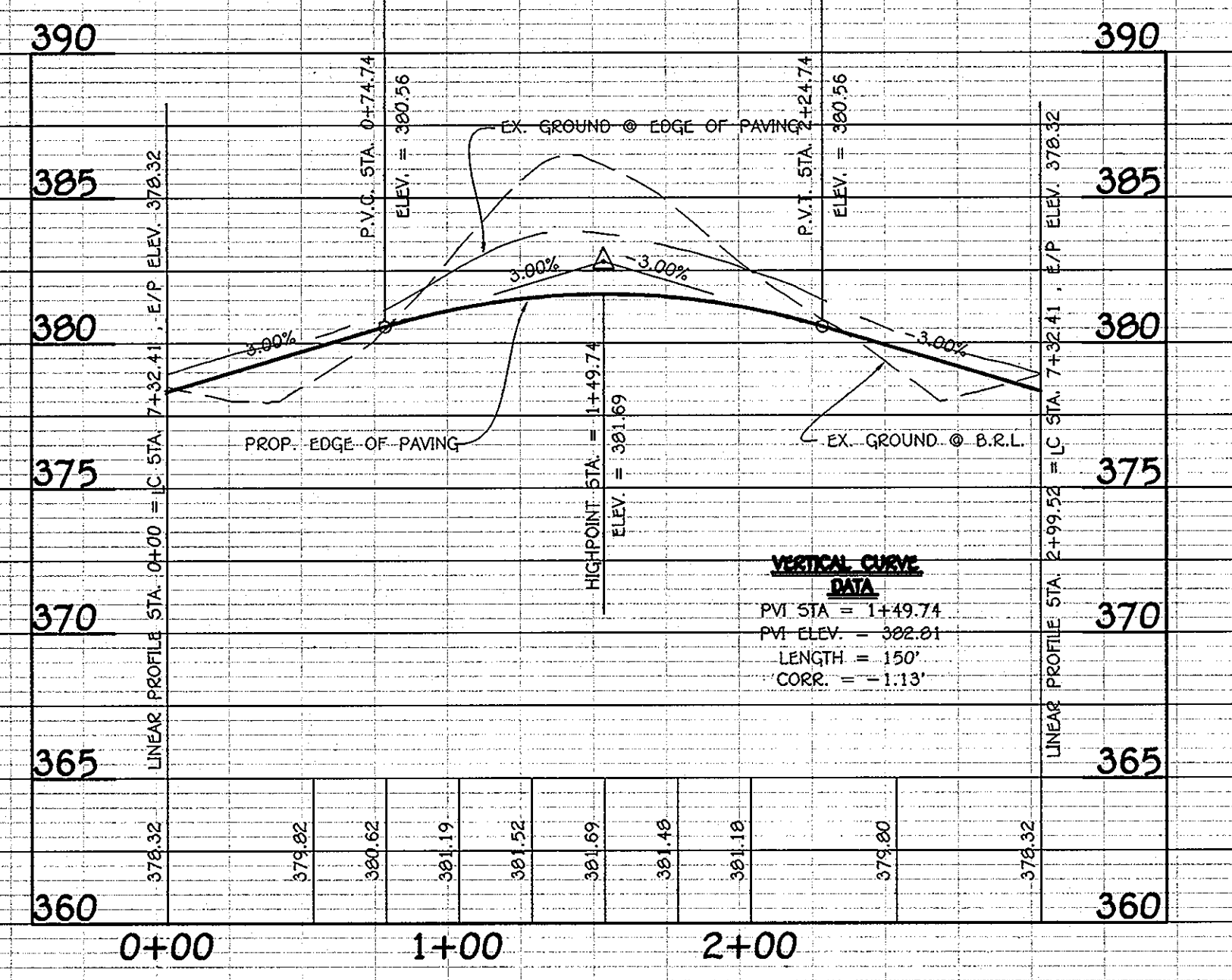
HONEY LOCUST COURT
PLAN AND PROFILE

OWNER **DEVELOPER**
BASSELLER, INCORPORATED HERITAGE LAND DEVELOPMENT
c/o ALFRED S. BASSELLER 15950 NORTH AVE.
4934 SHEPARD LANE LEBANON, MARYLAND 21765
ELLCOTT CITY, MARYLAND 21042 (410) 499-7900 (410) 331-2193

SCALE: AS SHOWN DATE: SEPT., 2008 DWG. NO. 6 OF 32
DES. R.A.I. DRN. J.C.L. CHK. A.M.V.

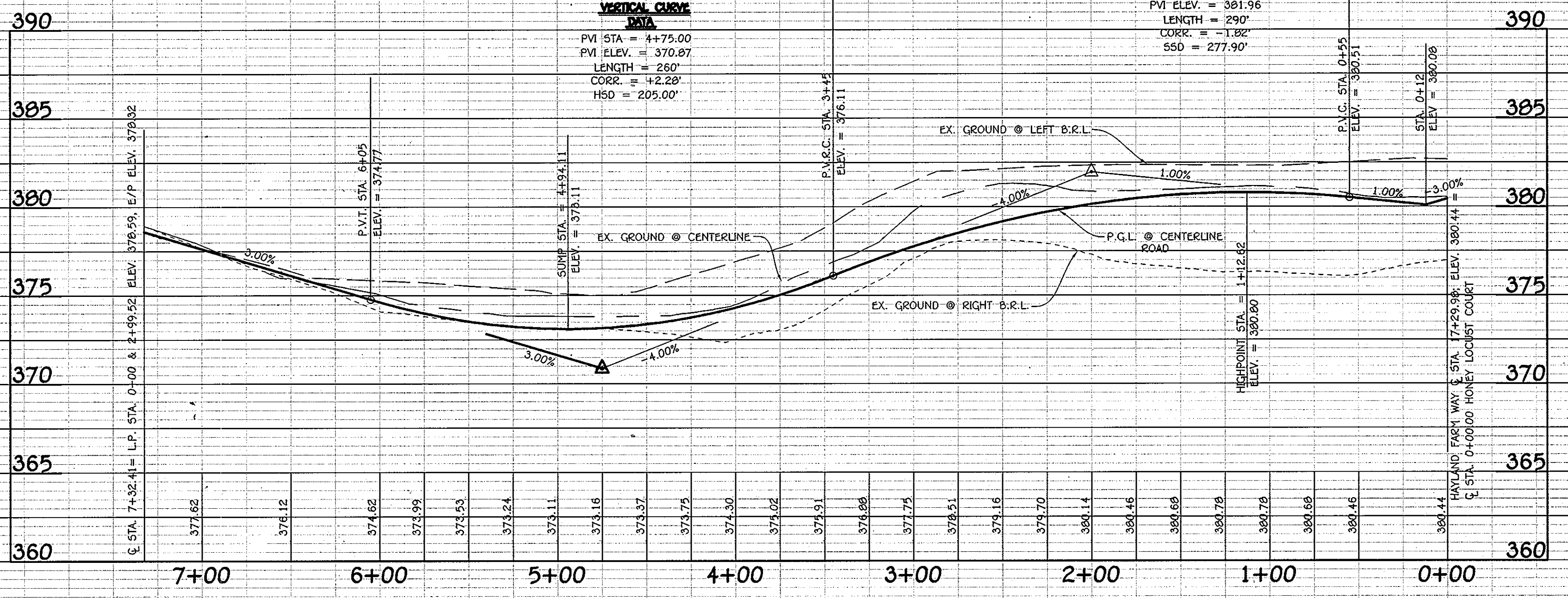
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10725 BALDREAN NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 481-2899

HONEY LOCUST COURT
PUBLIC ACCESS PLACE



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

HONEY LOCUST COURT
PUBLIC ACCESS PLACE
DESIGN SPEED = 25 M.P.H.



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

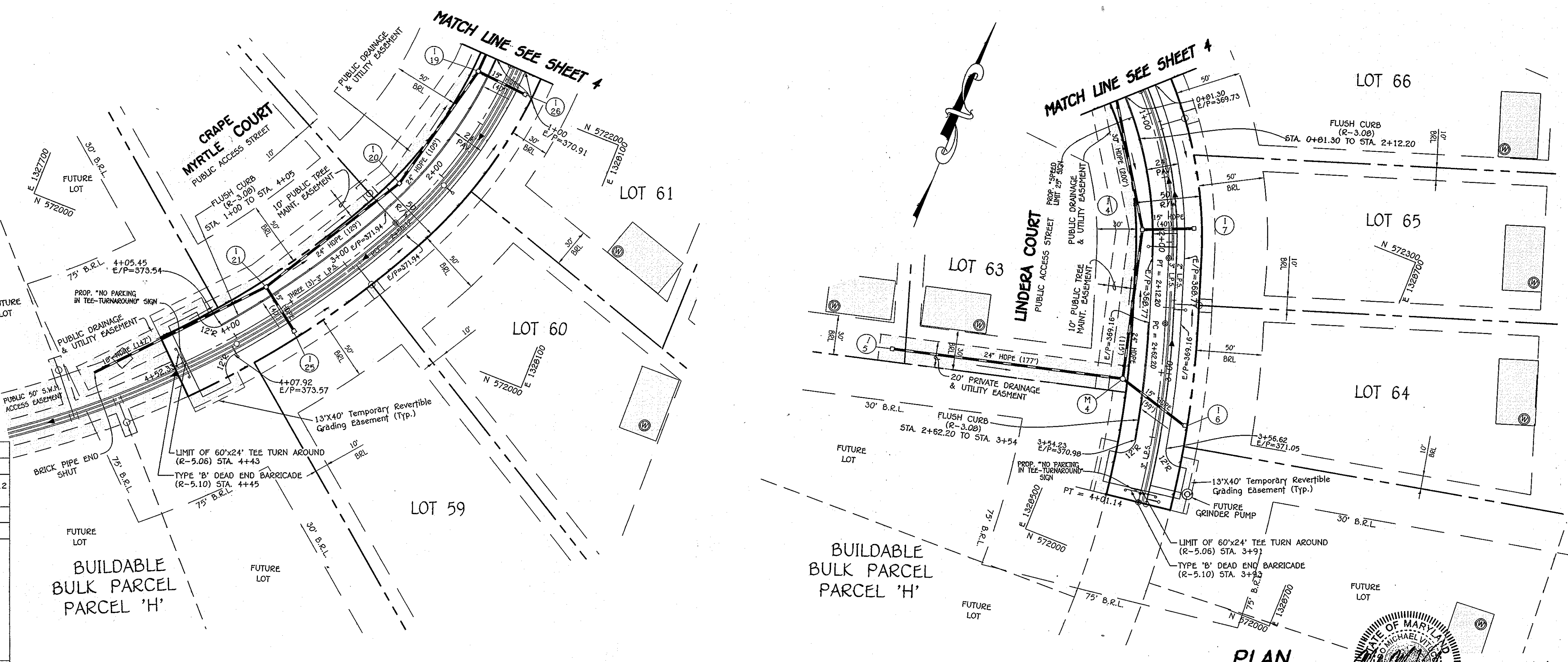
@ CURVE DATA
CRAPE MYRTLE COURT
 STA. 1+00.00 TO STA. 2+50.12
 RADIUS = 350.00' R
 ARC LENGTH = 150.12'
 TAN. = 76.23°
 DELTA = 24°34'32"
 CHORD = 514'24"44"W, 148.97'

@ CURVE DATA
CRAPE MYRTLE COURT
 STA. 2+50.12 TO STA. 5+77.71
 RADIUS = 700.00' R
 ARC LENGTH = 327.59'
 TAN. = 166.89°
 DELTA = 26°48'49"
 CHORD = 540'06"25"W, 324.61'

@ CURVE DATA
LINDERA COURT
 STA. 0+61.30 TO STA. 2+12.20
 RADIUS = 300.00' R
 ARC LENGTH = 130.90'
 TAN. = 66.51°
 DELTA = 25°00'01"
 CHORD = 531'19"17"E, 129.86'

@ CURVE DATA
LINDERA COURT
 STA. 2+12.20 TO STA. 13+53.38
 RADIUS = 725.00' R
 ARC LENGTH = 1091.18'
 TAN. = 678.84°
 DELTA = 28°14'05"
 CHORD = 524'17"46"W, 991.07'

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER, WELLS TO MAINTAIN 10' SEPARATION, PARCELS 'G', 'H' & 'J', STORM DRAIN PIPE FROM RCP TO HOPE AND ROAD NAMES	7/25/12
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
<i>Ket Shalman</i> CHIEF, DIVISION OF LAND DEVELOPMENT		12/08/12 DATE
<i>Mark D... ..</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION		12/12/12 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		
<i>Diane Schwab, Acting</i> CHIEF, BUREAU OF HIGHWAYS		11/29/12 DATE



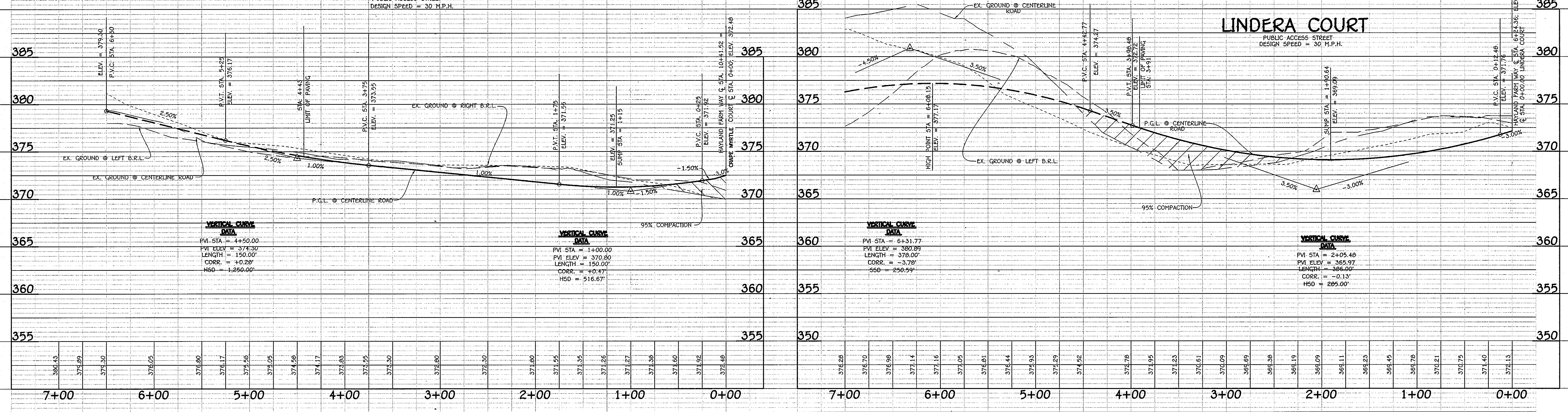
REVISED WALNUT CREEK PHASE TWO
 Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'H' (Being A Re-division Of Buildable Bulk Parcels 'F' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No. 20631 Thru 20647)
 ZONED: RC-DEO & RR-DEO
 TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

LINDERA COURT PLAN AND PROFILE	CRAPE MYRTLE COURT PLAN AND PROFILE
OWNER BASSLERS, INCORPORATED c/o ALFRED S. BASSLER 4994 SHEPPARD LANE ELIJAH CITY, MARYLAND 21042 (410) 531-2193	DEVELOPER HERITAGE LAND DEVELOPMENT 19950 NORTH AVE. LUSKON, MARYLAND 21765 (410) 489-7900
SCALE: AS SHOWN	DATE: SEPT., 2008
DES. R.A.I.	DN. J.C.L.
	CHK. A.M.V.

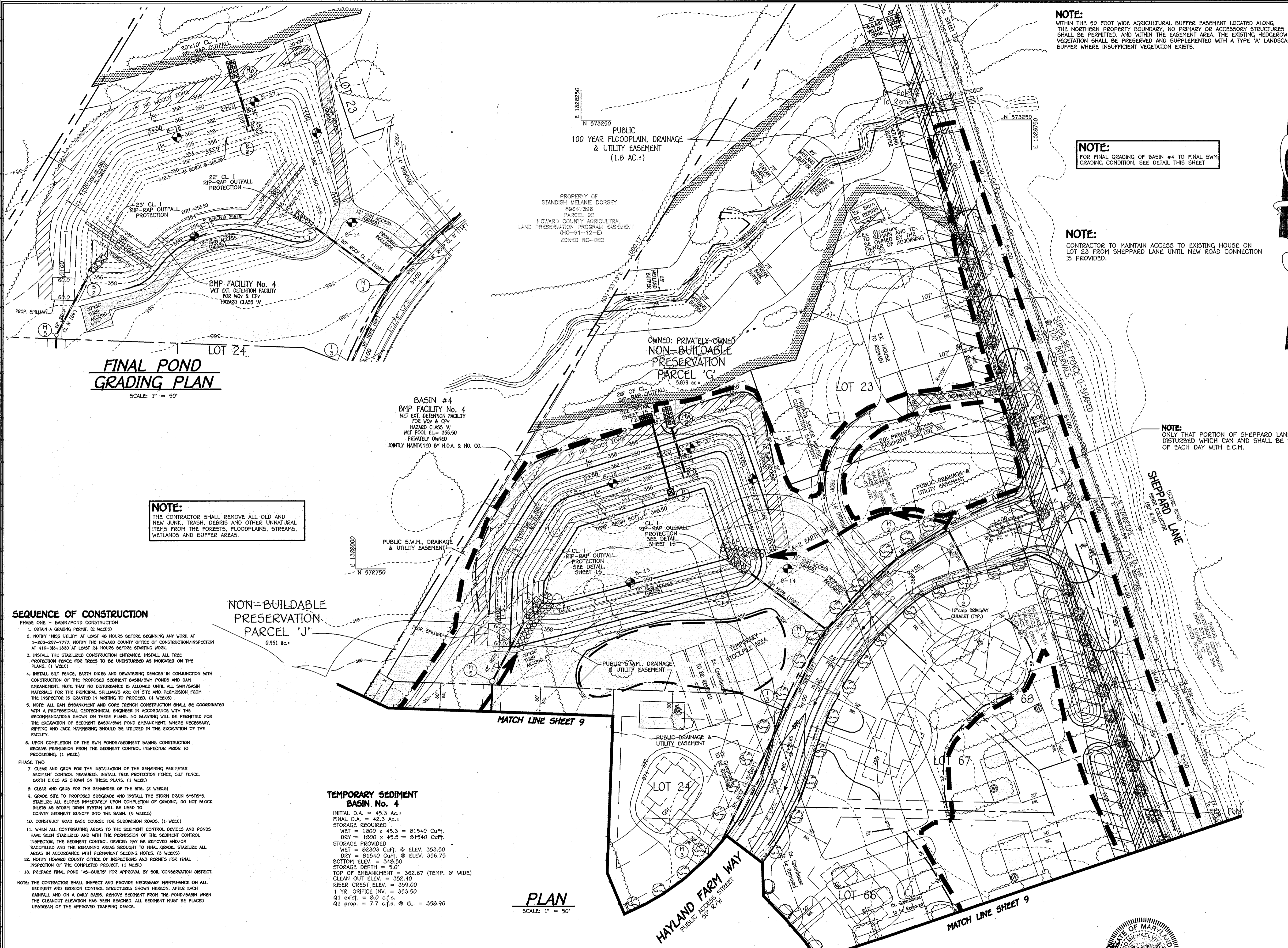
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELIJAH CITY, MARYLAND 21042
 (410) 881 - 2895

CRAPE MYRTLE COURT

LINDERA COURT



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



NOTE:
 WITHIN THE 50 FOOT WIDE AGRICULTURAL BUFFER EASEMENT LOCATED ALONG THE NORTHERN PROPERTY BOUNDARY, NO PRIMARY OR ACCESSORY STRUCTURES SHALL BE PERMITTED, AND WITHIN THE EASEMENT AREA, THE EXISTING HEDGEROW VEGETATION SHALL BE PRESERVED AND SUPPLEMENTED WITH A TYPE 'A' LANDSCAPE BUFFER WHERE INSUFFICIENT VEGETATION EXISTS.

NOTE:
 FOR FINAL GRADING OF BASIN #4 TO FINAL SWM GRADING CONDITION, SEE DETAIL THIS SHEET.

NOTE:
 CONTRACTOR TO MAINTAIN ACCESS TO EXISTING HOUSE ON LOT 23 FROM SHEPARD LANE UNTIL NEW ROAD CONNECTION IS PROVIDED.

NOTE:
 ONLY THAT PORTION OF SHEPARD LANE WILL BE DISTURBED WHICH CAN AND SHALL BE STABILIZED BY THE END OF EACH DAY WITH E.C.M.

NOTE:
 THE CONTRACTOR SHALL REMOVE ALL OLD AND NEW JUNK, TRASH, DEBRIS AND OTHER UNNATURAL ITEMS FROM THE FORESTS, FLOODPLAINS, STREAMS, WETLANDS AND BUFFER AREAS.

SEQUENCE OF CONSTRUCTION

- PHASE ONE - BASIN/POND CONSTRUCTION**
- OBTAIN A GRADING PERMIT. (2 WEEKS)
 - NOTIFY "HES UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-331-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
 - INSTALL THE STABILIZED CONSTRUCTION ENTRANCE. INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE PLANS. (1 WEEK)
 - INSTALL SILT FENCE, EARTH DIKES AND DESILTING DEVICES IN CONJUNCTION WITH CONSTRUCTION OF THE PROPOSED SEDIMENT BASIN/SWM PONDS AND DAM EMBANKMENT. NOTE THAT NO DISTURBANCE IS ALLOWED UNTIL ALL SWM/BASIN MATERIALS FOR THE PROPOSED SPILLWAYS ARE ON SITE AND PERMISSION FROM THE INSPECTOR IS GRANTED IN WRITING TO PROCEED. (4 WEEKS)
 - NOTE: ALL DAM EMBANKMENT AND CORE TRENCH CONSTRUCTION SHALL BE COORDINATED WITH A PROFESSIONAL GEOTECHNICAL ENGINEER IN ACCORDANCE WITH THE RECOMMENDATIONS SHOWN ON THESE PLANS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF SEDIMENT BASIN/SWM POND EMBANKMENT. WHERE NECESSARY, RIPPING AND JACK HAMMERING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITY.
 - UPON COMPLETION OF THE SWM POND/SEDIMENT BASIN CONSTRUCTION RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. (1 WEEK)
- PHASE TWO**
- CLEAR AND GRUB FOR THE INSTALLATION OF THE REMAINING PERIMETER SEDIMENT CONTROL MEASURES. INSTALL TREE PROTECTION FENCE, SILT FENCE, EARTH DIKES AS SHOWN ON THESE PLANS. (1 WEEK)
 - CLEAR AND GRUB FOR THE REMAINDER OF THE SITE. (2 WEEKS)
 - GRADE SITE TO PROPOSED SUBGRADE AND INSTALL THE STORM DRAIN SYSTEMS. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING. DO NOT BLOCK INLETS AS STORM DRAIN SYSTEM WILL BE USED TO CONVEY SEDIMENT RUNOFF INTO THE BASIN. (5 WEEKS)
 - CONSTRUCT ROAD BASE COURSE FOR SUBDIVISION ROADS. (1 WEEK)
 - WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND PONDS HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. STABILIZE ALL AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (3 WEEKS)
 - NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT. (1 WEEK)
 - PREPARE FINAL POND "AS-BUILT" FOR APPROVAL BY SOIL CONSERVATION DISTRICT.
- NOTE:** THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL, AND ON A DAILY BASIS, REMOVE SEDIMENT FROM THE POND/BASIN WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE APPROVED TRAPPING DEVICE.

NON-BUILDABLE PRESERVATION PARCEL 'J'
 0.951 ac.±

TEMPORARY SEDIMENT BASIN No. 4
 INITIAL D.A. = 45.3 Ac.±
 FINAL D.A. = 42.3 Ac.±
 STORAGE REQUIRED
 WET = 1800 x 45.3 = 81540 CUFT.
 DRY = 1800 x 45.3 = 81540 CUFT.
 STORAGE PROVIDED
 WET = 92303 CUFT. @ ELEV. 353.50
 DRY = 81540 CUFT. @ ELEV. 356.75
 BOTTOM ELEV. = 348.50
 STORAGE DEPTH = 5.0'
 TOP OF EMBANKMENT = 362.67 (TEMP. 6' WIDE)
 CLEAN OUT ELEV. = 352.40
 RISER CREST ELEV. = 359.00
 1 YR. ORIFICE INV. = 353.50
 Q1 exist. = 8.0 c.f.s.
 Q1 prop. = 7.7 c.f.s. @ EL = 358.90

PLAN
 SCALE: 1" = 50'

By The Developer:
 Signature of Developer: *Timothy W. Leaga* 10/21/12 Date
 Printed Name of Developer: Timothy W. Leaga

By The Engineer:
 Signature of Engineer: *John R. Roberts* 10/21/12 Date
 Printed Name of Engineer: John R. Roberts
 These Plans for Construction, Soil Erosion and Sediment Control Meet the Requirements of the Howard Soil Conservation District.
 Approved: Department of Public Works
 Signature: *Diane Johnson* Acting 11/28/12 Date
 Chief, Bureau of Highways
 Approved: Department of Planning and Zoning
 Signature: *Ket Slesinger* 12/05/12 Date
 Chief, Division of Land Development
 Signature: *John P. ...* 12/31/12 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.

LEGEND

- SSP-SSP-SSP SUPER-SILT FENCE
- SF-SF-SF SILT FENCE
- TP-TP-TP TREE PROTECTION FENCE
- S.C.E. STABILIZED CONSTRUCTION ENTRANCE
- EARTH DIKE
- L.O.D. LIMITS OF DISTURBANCE
- R.P.S. REMOVABLE PUMPING STATION
- F.B. FILTER BAG
- E.C.M. DENOTES EROSION CONTROL MATTING
- DENOTES 25% OR GREATER SLOPES
- DENOTES 15% - 24.99% SLOPES
- LOW PRESSURE SEWER BY OTHERS W/ GRINDER PUMPS
- G.I.P. GABION INFLOW PROTECTION
- OH OVERHEAD ELECTRIC
- UG UNDERGROUND ELECTRIC

CONTRACTOR NOTE:
 NO WORK MAY BEGIN UNTIL ALL BASIN STRUCTURES, PIPES, ETC. ARE ON-SITE AND PERMISSION IS GRANTED BY CID INSPECTOR TO PROCEED.

REVISED STREET TREE, GRADING & SEDIMENT CONTROL PLAN WALNUT CREEK PHASE TWO
 Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' and 'M' & Buildable Bulk Parcels 'H' and 'N' (Using a Resubdivision of Buildable Bulk Parcels 'I' & 'C' and a Reversion to Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, P.H. No. 20631, Thru 20647)
 ZONED: RC-DEO & RR-DEO
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET # OF 32

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10723 BALDORNE NATIONAL PARK
 ELICOTT CITY, MARYLAND 21042
 (410) 481-2895

NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER, WELLS TO MAINTAIN 100' SEPARATION, PARCELS 'G', 'H' & 'J', STORM DRAIN PIPE FROM RSCP TO HOPE AND ROAD INHSES	7/25/12

OWNER
 BASSLERS, INCORPORATED
 c/o ALFRED S. BASSLER
 4994 SHEPARD LANE
 ELICOTT CITY, MARYLAND 21042
 (410) 531-2193

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LUSKON, MARYLAND 21765
 (410) 469-7900

ALDO M. ...
 Professional Engineer
 License No. 20748, Expiration Date 2-22-13

STREET TREE SCHEDULE				
SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	2498' x 2 = 4976' 4976' / 40 = 124.4 124 TREES	ACER SUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2" - 3" CAL.	40' APART ON PUBLIC R/W (HAYLAND FARM WAY)
	391' x 2 = 782' 782' / 40 = 19.5 20 TREES	PLATANUS OCCIDENTALIS 'BLOODGOOD' LONDON PLANETREE	2 1/2" - 3" CAL.	40' APART ON PUBLIC R/W (LINDERA COURT)
	443' x 2 = 886' 886' / 40 = 22.2 22 TREES	PRUNUS SARGENTII SARGENT CHERRY	2 1/2" - 3" CAL.	40' APART ON PUBLIC R/W (ORAPE MYRTLE COURT)
	799' x 2 = 1598' 1598' / 40 = 39.9 40 TREES	CLADRASTIS LUTEA YELLOWWOOD	2 1/2" - 3" CAL.	40' APART ON PUBLIC R/W (HONEY LOCUST COURT)
	948' / 40 = 23.7 24 TREES	ACER GRISIMUM PAPERBARK MAPLE	2 1/2" - 3" CAL.	40' APART ON PUBLIC R/W (SHEPARD'S LANE)

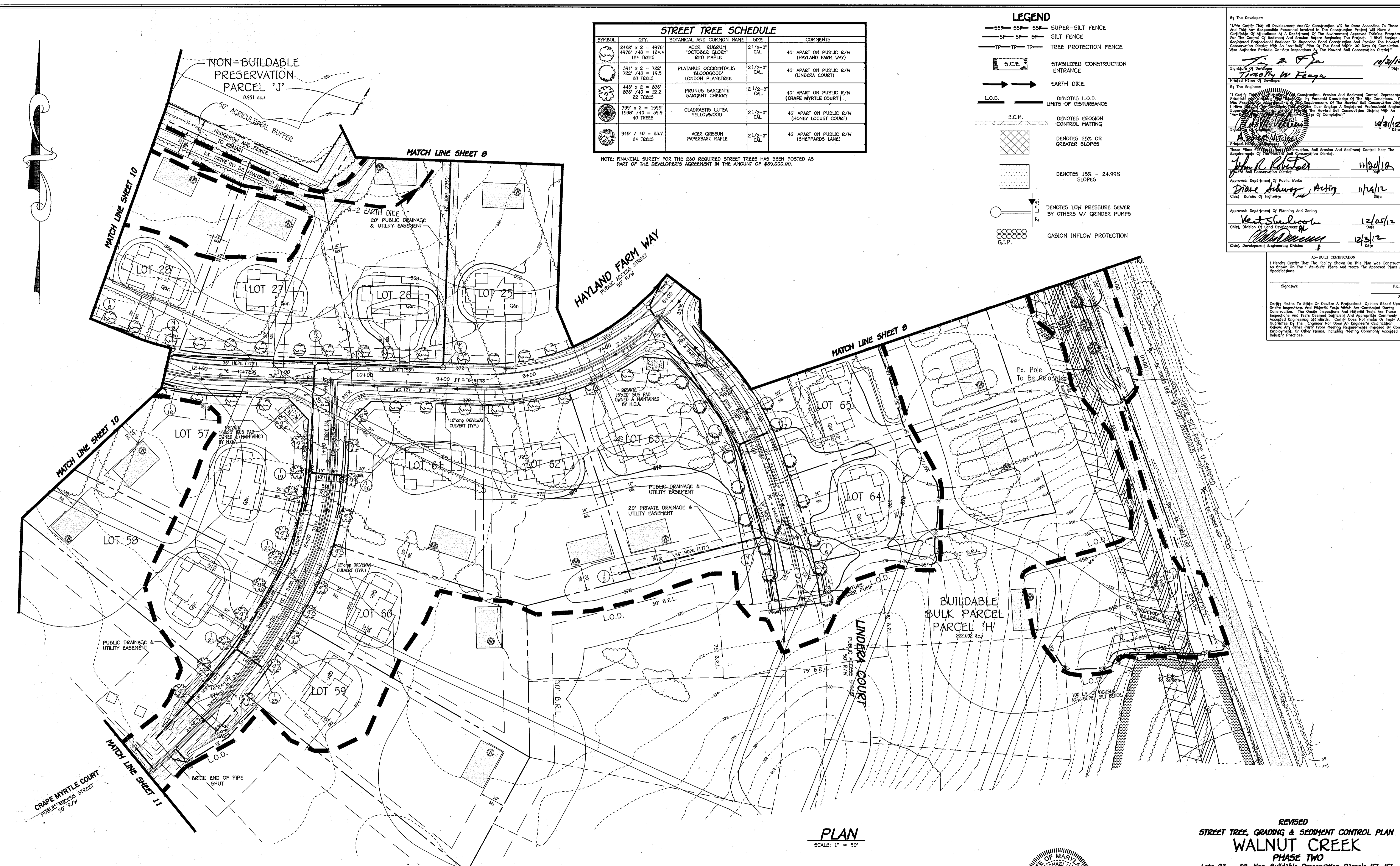
NOTE: FINANCIAL SURETY FOR THE 230 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$69,000.00.

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
- L.O.D.— LIMITS OF DISTURBANCE
- E.C.M. DENOTES EROSION CONTROL MATTING
- DENOTES 25% OR GREATER SLOPES
- DENOTES 15% - 24.99% SLOPES
- DENOTES LOW PRESSURE SEWER BY OTHERS W/ GRINDER PUMPS
- GABION INFLOW PROTECTION

By The Developer:
 I hereby certify that all Development And/Or Construction Will Be Done According To These Plans And That All 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 A "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: *Timothy W. Fagan* 10/25/12
 Printed Name Of Developer: **Timothy W. Fagan**
 By The Engineer:
 I Certify That The Construction, Erosion And Sediment Control Represents A Practical Application Of The Engineering Principles And 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 Plans And I Have Verified That The Plans Comply With The Requirements Of The Howard Soil Conservation District With An "As-Built" Plan Within 30 Days Of Completion.
 Signature Of Engineer: *[Signature]* 10/25/12
 Printed Name Of Engineer: **[Name]**
 These Plans Represent Construction, Soil Erosion And Sediment Control That Meet The Requirements Of The Howard Soil Conservation District.
 Approved: Department of Public Works
 Chief, Bureau of Highways: *[Signature]* 11/20/12
 Approved: Department of Planning And Zoning
 Chief, Division of Land Development: *[Signature]* 12/05/12
 Chief, Development Engineering Division: *[Signature]* 12/13/12

AS-BUILT CERTIFICATION
 I hereby certify that the Facility shown on this Plan was constructed as shown on the "As-Built" Plans and meets the approved Plans and Specifications.
 Signature: _____ P.E. No. _____
 Date: _____
 Certify Means To State Or Declare A Professional Opinion Based Upon On-site Inspections And Material Tests Which Are Conducted During Construction. The On-site Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Release Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



PLAN
 SCALE: 1" = 50'

REVISED
STREET TREE, GRADING & SEDIMENT CONTROL PLAN
WALNUT CREEK
PHASE TWO
 Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 (Being A Re-division Of Buildable Bulk Parcels 'I' & 'C' And A Re-division To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, FDI No. 20531, Tract 20547)
 ZONED: RC-DEO & RR-DEO
 TAX MAP No. 29 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 9 OF 32

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10272 BALDWIN NATIONAL PARK
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER, WELLS TO MAINTAIN 100' SEPARATION, PARCELS 'G', 'H' & 'J', STORM DRAIN PIPE FROM RCCP TO HOPE AND ROAD NAMES	7/25/12

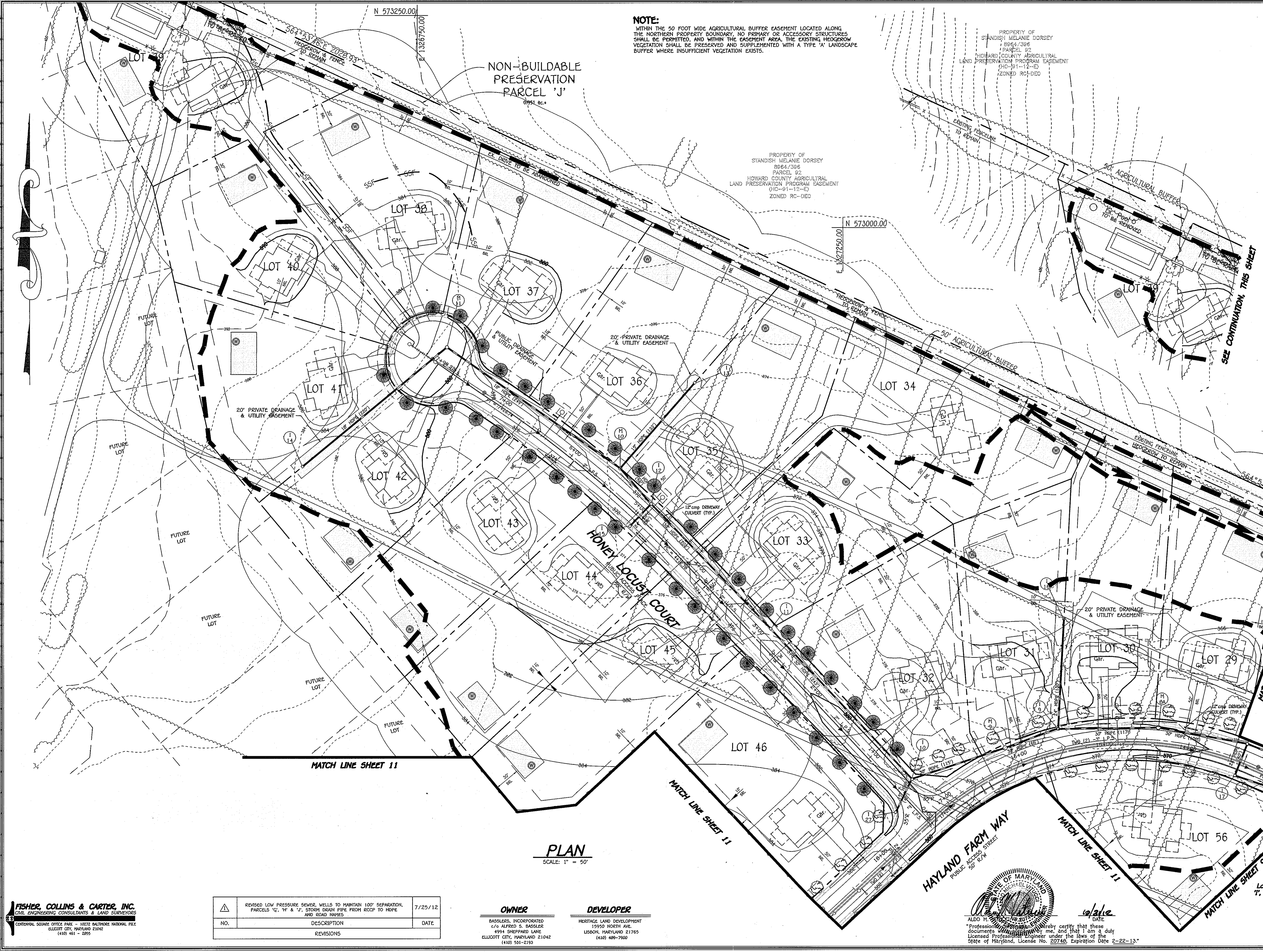
OWNER
 BASSLERS, INCORPORATED
 c/o ALFRED S. BASSLER
 4994 SHEPARD LANE
 ELICOTT CITY, MARYLAND 21042
 (410) 531-2193

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 19950 NORTH AVE.
 LISSON, MARYLAND 21765
 (410) 469-7900



10/25/12
 DATE

1:2024(04001)WALNUT CREEK PHASE TWO REVISIONS SHEET 9 OF 11 GRADING PLANS (DWG) SHEET 9, 10/20/2012 1:36:17 PM, 1:1



NOTE:
 WITHIN THE 50 FOOT WIDE AGRICULTURAL BUFFER EASEMENT LOCATED ALONG THE NORTHERN PROPERTY BOUNDARY, NO PRIMARY OR ACCESSORY STRUCTURES SHALL BE PERMITTED, AND WITHIN THE EASEMENT AREA, THE EXISTING HEDGEROW VEGETATION SHALL BE PRESERVED AND SUPPLEMENTED WITH A TYPE 'A' LANDSCAPE BUFFER WHERE INSUFFICIENT VEGETATION EXISTS.

NON-BUILDABLE PRESERVATION PARCEL 'J'
 0991 AC.

PROPERTY OF
 STANDISH MELANIE DORSEY
 PARCEL 92
 HOWARD COUNTY AGRICULTURAL
 LAND PRESERVATION PROGRAM EASEMENT
 (HC-91-12-E)
 ZONED RC-DEO

PROPERTY OF
 STANDISH MELANIE DORSEY
 PARCEL 92
 HOWARD COUNTY AGRICULTURAL
 LAND PRESERVATION PROGRAM EASEMENT
 (HC-91-12-E)
 ZONED RC-DEO

By the Developer:
 I, the undersigned, 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 Approval from a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall employ 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.

Tracy W. Feaga
 Signature of Developer
 Tracy W. Feaga
 Title of Developer

By the Engineer:
 I, the undersigned, certify that the construction, erosion and sediment control represents a practical and feasible plan based on my personal knowledge of the site conditions. This plan was prepared by me or under my direct supervision and I have personally supervised the construction of the project. I shall employ 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.

John E. Blanton
 Signature of Engineer
 John E. Blanton
 Title of Engineer

These Plans (Erosion, Sediment, Soil Erosion and Sediment Control) Meet the Requirements of the Howard Soil Conservation District.

Approved: Department of Public Works
 Chief, Bureau of Highways
Diane Adams
 Acting
 11/29/12

Approved: Department of Planning and Zoning
 Chief, Division of Land Management
Victor Steinhilber
 12/05/12

William D. ...
 Chief, Development Engineering Division
 12/13/12

AS-BUILT CERTIFICATION
 I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" Plans and meets the approved plans and specifications.

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

Certify Means to State or Declare a Professional Opinion Based Upon On-site Inspections and Material Tests Which are Conducted During Construction. The On-site Inspections and Material Tests are Those Inspections and Tests Deemed Sufficient and Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean or imply a Guarantee by the Engineer Nor does an Engineer's Certification Release Any Other Party from Meeting Requirements Imposed by Contract, Employment, or Other Means, Including Meeting Commonly Accepted Industry Practices.

- LEGEND**
- SSS-SSS-SSS SUPER-SILT FENCE
 - SS-SS-SS SILT FENCE
 - TF-TF-TF TREE PROTECTION FENCE
 - S.C.E. STABILIZED CONSTRUCTION ENTRANCE
 - Earth Die
 - L.O.D. DENOTES L.O.D. LIMITS OF DISTURBANCE
 - E.C.M. DENOTES EROSION CONTROL MATTING
 - Denotes 25% or Greater Slopes
 - Denotes 15% - 24.99% Slopes
 - Denotes Low Pressure Sewer by Others w/ Grinder Pumps
 - Denotes Gully Protection

PLAN
 SCALE: 1" = 50'

REVISED STREET TREE, GRADING & SEDIMENT CONTROL PLAN WALNUT CREEK PHASE TWO
 Lots 23 - 60, Non-Buildable Preservation Parcels 'C', 'G', 'H', 'J', 'K', 'L' and 'M' & Buildable Bulk Parcels 'N' and 'O' (Being a Subdivision of Buildable Bulk Parcels 'F' & 'E' and a Subdivision to Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plot No. 20631 from 2047)

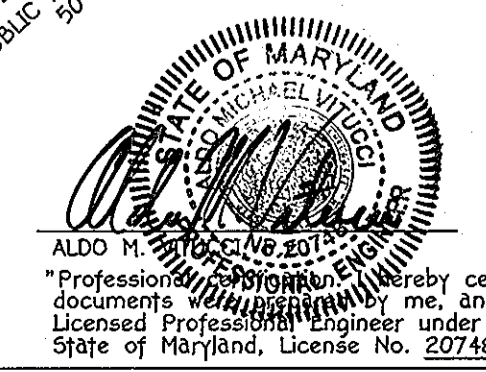
ZONED: RC-DEO & RR-DEO
 TAX MAP No. 2B GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 10 OF 32

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10222 BALDORNE NATIONAL PIKE
 ELIJAH CITY, MARYLAND 21042
 (410) 461-2895

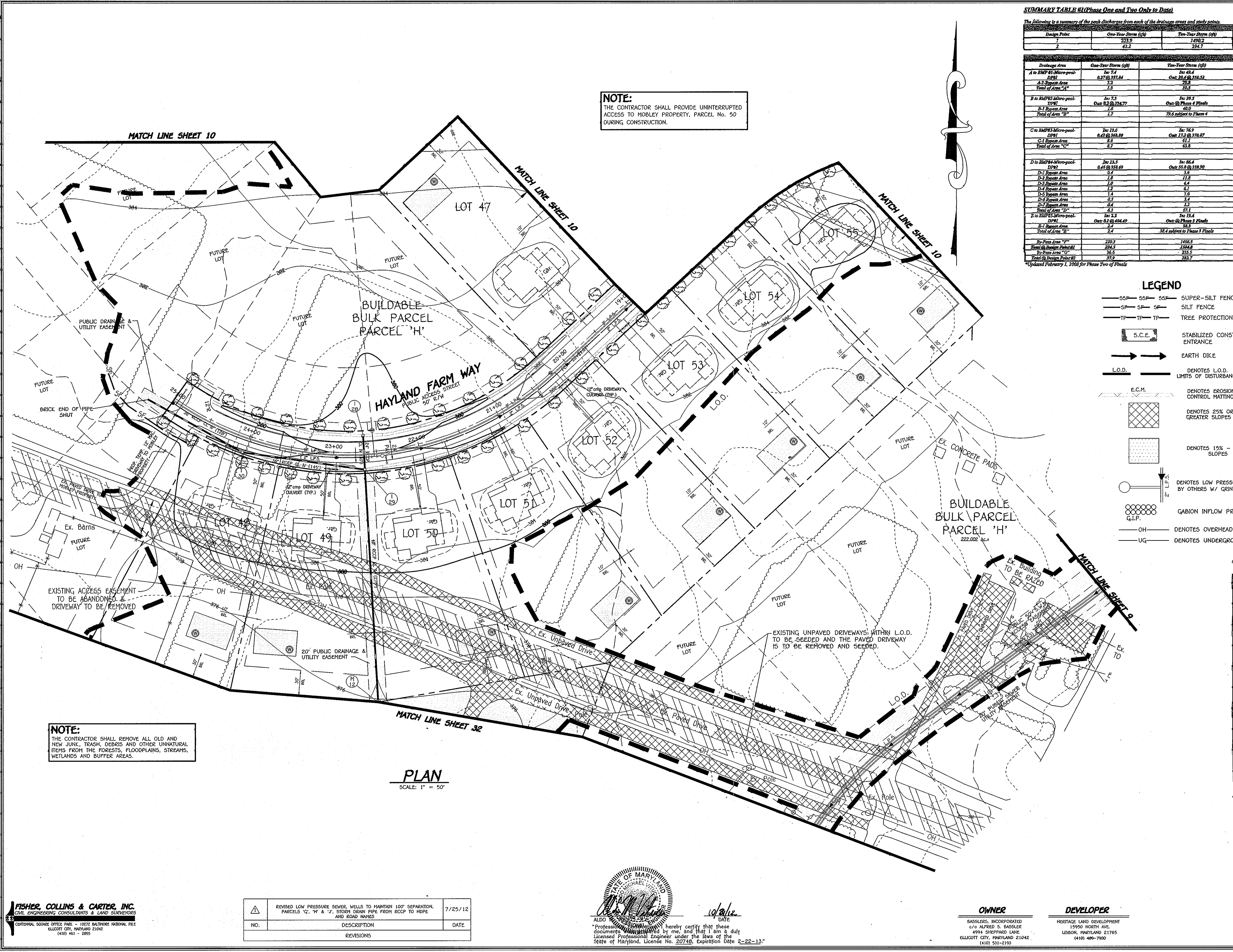
NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER, WELLS TO MAINTAIN 100' SEPARATION, PARCELS 'G', 'H' & 'J', STORM DRAIN PIPE FROM ROOF TO HOPE AND ROAD NAMES	7/25/12
	REVISIONS	

OWNER
 BASSLERS, INCORPORATED
 c/o ALFRED S. BASSLER
 4914 SHEPARD LANE
 ELIJAH CITY, MARYLAND 21042
 (410) 531-2193

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LUSKON, MARYLAND 21765
 (410) 469-7900



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NOTE:
THE CONTRACTOR SHALL PROVIDE UNINTERRUPTED ACCESS TO MOBLEY PROPERTY, PARCEL No. 50 DURING CONSTRUCTION.

SUMMARY TABLE #1 (Phase One and Two Only to Date)

The following is a summary of the peak discharges from each of the drainage areas and study points.

Design Point	One-Year Storm (cfs)	Two-Year Storm (cfs)
1	233.9	1490.2
2	42.2	294.7

Drainage Area	One-Year Storm (cfs)	Two-Year Storm (cfs)
A to BMP #1-Micro-pool	In: 7.4	In: 49.4
D-1 Bypass Area	0.27 @ 327.64	Out: 24.4 @ 328.52
Total of Area "A"	7.3	35.3
B to BMP #2-Micro-pool	In: 7.3	In: 39.3
D-2 Bypass Area	0.25 @ 324.77	Out: 20.9 @ Phase 4 Ponds
Total of Area "B"	7.2	79.6 subject to Phase 4
C to BMP #3-Micro-pool	In: 15.0	In: 76.9
D-3 Bypass Area	0.42 @ 344.89	Out: 17.2 @ 378.07
Total of Area "C"	8.7	63.8
D to BMP #4-Micro-pool	In: 13.5	In: 66.4
D-4 Bypass Area	0.45 @ 322.69	Out: 25.8 @ 329.90
Total of Area "D"	13.0	11.8
D-5 Bypass Area	1.0	4.4
D-6 Bypass Area	1.2	4.7
D-7 Bypass Area	1.4	7.0
D-8 Bypass Area	0.5	3.4
Total of Area "E"	4.3	2.3
S to BMP #5-Micro-pool	In: 2.3	In: 19.4
E-1 Bypass Area	0.21 @ 404.49	Out: 2.4 @ Phase 3 Ponds
Total of Area "E"	2.4	38.4 subject to Phase 3 Ponds
By-Pass Area "F"	230.3	1466.5
Total to Design Point #1	234.5	1599.8
Total to Design Point #2	292.9	252.7

Updated February 1, 2008 for Phase Two of Plans

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 Approval 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.

Timothy W. Feaga
Signature Of Developer
1/29/12 Date

By the Engineer:
I Certify That Construction, Erosion And Sediment Control Represents A Practical Application Of My Professional 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 And Must Engage A Registered Professional Engineer To Supervise The Construction Of The Project. I Shall Engage A Registered Professional Engineer To Provide The Howard Soil Conservation District With An "As-Built" Plan Within 30 Days Of Completion.

John R. Butler
Signature Of Engineer
11/20/12 Date

Approved: Department of Public Works
Diane Ahrens, Acting
Chief, Bureau of Highways
11/16/12 Date

Approved: Department of Planning And Zoning
West Shaddock
Chief, Division Of Land Development
12/05/12 Date

John J. ...
Chief, Development Engineering Division
12/13/12 Date

- LEGEND**
- SFF—SFF—SFF— SUPER-SILT FENCE
 - SF—SF—SF— SILT FENCE
 - TP—TP—TP— TREE PROTECTION FENCE
 - S.C.E.— STABILIZED CONSTRUCTION ENTRANCE
 - EARTH DIKE
 - L.O.D.— DENOTES L.O.D. LIMITS OF DISTURBANCE
 - E.C.M.— DENOTES EROSION CONTROL MATTING
 - ▨ DENOTES 25% OR GREATER SLOPES
 - ▤ DENOTES 15% - 24.99% SLOPES
 - DENOTES LOW PRESSURE SEWER BY OTHERS W/ GRINDER PUMPS
 - G.I.P. GABION INFLOW PROTECTION
 - OH— DENOTES OVERHEAD ELECTRIC
 - UG— DENOTES UNDERGROUND ELECTRIC

SUMMARY TABLE #2 (Phase One and Two)

The following is a summary of the Re₁₀, W₂ and C₂ Requirements:

Re ₁₀ (Recharge Vol. for Entire Site)	10.04 acres or 1.11 acre-feet	12.32 acres w/ 9% Area Method
W₂ for Phase One and Two Only		
Area A - BMP#1-DP#1	0.2871 acre-feet	0.2871 ac. Ft. @ BMP Facility #1
Bypass Area A-1	0.2329 acre-feet	0.2329 ac. Ft. Via Credits
Area B - BMP#2-DP#1	0.35 acre-feet	0.35 ac. Ft. @ BMP Facility #2
Bypass Area B-1	0.2653 acre-feet	0.2653 ac. Ft. via credits
Area C - BMP#3-DP#1	0.74 acre-feet	0.74 ac. Ft. @ BMP Facility #3
Bypass Area C-1	0.1878 acre-feet	0.1878 ac. Ft. via credits
Area D - BMP#4-DP#1	0.83 acre-feet	0.83 ac. Ft. @ BMP Facility #4
Bypass Area D-1	0.032 acre-feet	0.032 ac. Ft. @ Level Spreader
Bypass Area D-2	0.091 acre-feet	0.091 ac. Ft. @ Level Spreader
Bypass Area D-3	0.028 acre-feet	0.028 ac. Ft. @ Level Spreader
Bypass Area D-4	0.042 acre-feet	0.042 ac. Ft. @ Level Spreader
Bypass Area D-5	0.049 acre-feet	0.049 ac. Ft. @ Level Spreader
Bypass Area D-6	0.026 acre-feet	0.026 ac. Ft. @ Level Spreader
Bypass Area D-7	0.009 acre-feet	0.009 ac. Ft. @ Level Spreader
Area E - BMP#5-DP#1	0.089 acre-feet	0.089 ac. Ft. @ BMP Facility #5
Bypass Area E-1	0.2275 acre-feet	0.2275 ac. Ft. via credits
C₂		
Area A - BMP#1-DP#1	0.4778 acre-feet	0.4778 ac. Ft. @ BMP Facility #1
Area B - BMP#2-DP#1	0.4092 acre-feet	0.4092 ac. Ft. @ BMP Facility #2
Area C - BMP#3-DP#1	0.8013 acre-feet	0.8013 ac. Ft. @ BMP Facility #3
Area D - BMP#4-DP#1	1.0022 acre-feet	1.0022 ac. Ft. @ BMP Facility #4
Area E - BMP#5-DP#1	0.164 acre-feet	0.164 ac. Ft. @ BMP Facility #5

Notes: Both Q₁(Overbank Flood Protection or 10-year storm) and Q₂(Extreme Flood Volume or 100-year storm) are not required for this site since this watershed area is not classified as one of the sensitive watershed areas for Howard County.

Notes: All of the ponds for this subdivision will allow safe passage of the proposed condition 10-year and 100 year Q₂. The ponds are adequately sized to do so and no emergency spillways are proposed.

REVISED
STREET TREE, GRADING & SEDIMENT CONTROL PLAN
WALNUT CREEK
PHASE TWO
Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
(Being A Re-subdivision Of Buildable Bulk Parcels 'I' & 'C' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, FPI No. 20031 Thru 20047)
TAX MAP No. 28 ZONED: RC-DEO & RR-DEO
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: SEPTEMBER, 2008
SHEET 11 OF 32

NOTE:
THE CONTRACTOR SHALL REMOVE ALL OLD AND NEW JUNK, TRASH, DEBRIS AND OTHER UNNATURAL ITEMS FROM THE FORESTS, FLOODPLAINS, STREAMS, WETLANDS AND BUFFER AREAS.

PLAN
SCALE: 1" = 50'

NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER, WELLS TO MAINTAIN 100' SEPARATION, PARCELS 'G', 'H' & 'J', STORM DRAIN PIPE FROM RCCP TO HOPE AND ROAD NAMES	7/25/12
	REVISIONS	

John J. ...
ALDO ...
Professional Engineer hereby certifies that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.

OWNER
BASSLERS, INCORPORATED
c/o ALFRED S. BASSLER
4994 SHEPPARD LANE
ELLIOTT CITY, MARYLAND 21042
(410) 531-2193

DEVELOPER
HERITAGE LAND DEVELOPMENT
15950 NORTH AVE.
LEESON, MARYLAND 21795
(410) 469-7900

1:2004(0401)0401(PHASE TWO FINAL)PHASE TWO FINAL SHEET TWO REDEFINE 2012(0401)3001 SHEET 11, 10/20/2012 1:15:40 PM, 11

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)	NUMBER OF PLANTS REQUIRED & PROVIDED	
						SHADE TREES	EVERGREEN TREES
P-1	FRONT TO ROADWAY	N/A	177'	NO	NO	0	0
P-2	ADJACENT TO PERIMETER	A	291'	YES (35')	NO	4	-
P-3	ADJACENT TO ROADWAY	B	262'	YES (100')	NO	1	2
*P-4	ADJACENT TO PERIMETER	A	1095'	YES (1347')	NO	9	-
P-5	ADJACENT TO ROADWAY	C	690'	NO	NO	17	35
TOTAL						31	37

NOTE: THE EXISTING HEDGEROW LOCATED ALONG PERIMETER P-4 MUST BE PRESERVED AND SUPPLEMENTED WITH A TYPE 'A' LANDSCAPING BUFFER WHERE THE EXISTING HEDGEROW IS LESS THAN 20' WIDE OR WHERE THE EXISTING HEDGEROW PROVIDES INSUFFICIENT LANDSCAPE SCREENING.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Diane Schwab, Acting, 11/24/12
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Neil Slesinski, 12/05/12
 CHIEF, DIVISION OF LAND DEVELOPMENT
John Williams, 12/3/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING			
LINEAR FEET OF TYPE 'B' PERIMETER	D-1 : 125DD-2 : 1587		
NUMBER OF TREES REQUIRED & PROVIDED:	25	32	
SHADE TREES	31	40	
EVERGREEN TREES			
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)		NO	
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)		NO	

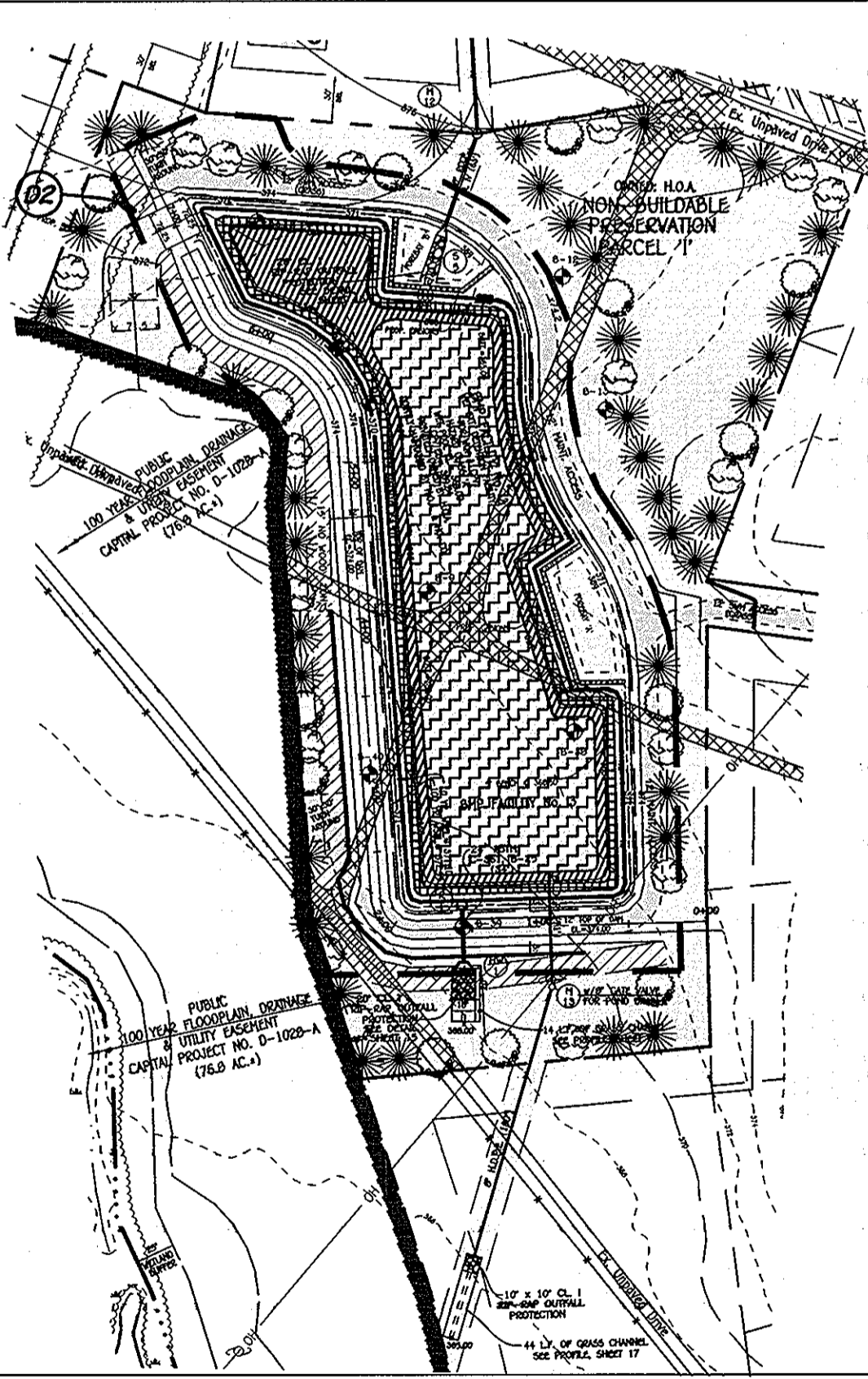
PLANT LIST			
SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE
	49	ACER RUBRUM "OCTOBER GLORY" RED MAPLE	2 1/2" - 3" CAL.
	39	QUERCUS ACUTISSIMA SAWTOOTH OAK	2 1/2" - 3" CAL.
	73	PINUS STROBUS EASTERN WHITE PINE	6" - 8" HT.
	35	CHINESE JUNIPER ROBUSTA	5" - 6" HT.

*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 REQUIRED 50% SHADE & 10% EVERGREEN TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$42,600.00

INTERNAL POND PLANT LIST

ZONE 1 FLOODPLAIN TERRACE	1' - 4' ELEVATION ABOVE NORMAL POOL ELEVATION - PLANT AREA w/ SWATCH GRASS	QUANTITY - N/A	SPACING - N/A
ZONE 3 SHORELINE FENCE	7' - 12' ELEVATION ABOVE NORMAL POOL ELEVATION - PLANT AREA w/ FOLLOWING: INBERGRIY, VITICORTEL & WATERBERRY	QUANTITY - 16 EACH	SPACING - 12' MAX.
ZONE 2 SHALLOW WATER BENCH	7' - 12' ELEVATION BELOW NORMAL POOL ELEVATION - PLANT AREA w/ BULRUSH, SPICE	QUANTITY - N/A	SPACING - N/A
ZONE 1 DEEPWATER POOL	1' - 3' ELEVATION BELOW NORMAL POOL ELEVATION - PLANT AREA w/ WICKIAGO-GRASS	QUANTITY - N/A	SPACING - N/A

LANDSCAPE DEVELOPER'S CERTIFICATE
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.
Fisher Collins & Carter
 Name: Date: 12/6/12



NOTES:

*At the time of plant installation, all trees listed and approved on the Landscape Plan shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviations from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are staged and/or revisions are made to the road drawing plan.

*The Owner, tenants and/or their agents shall be responsible for maintenance of the required perimeter landscaping. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

NO.	DESCRIPTION	DATE
	REVISED LOW PRESSURE SEWER, WELLS TO MAINTAIN 100' SEPARATION PARCELS 'G', 'H' & 'J' AND STORM DRAIN PIPE FROM RCP TO HOPE	9/25/12
	REVISIONS	

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10722 BALDORNE ROAD, SUITE 100
 ELKTON CITY, MARYLAND 21042
 (410) 461-2999

PLANTING SPECIFICATIONS

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

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

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

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

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

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

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

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

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

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of organic (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

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

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

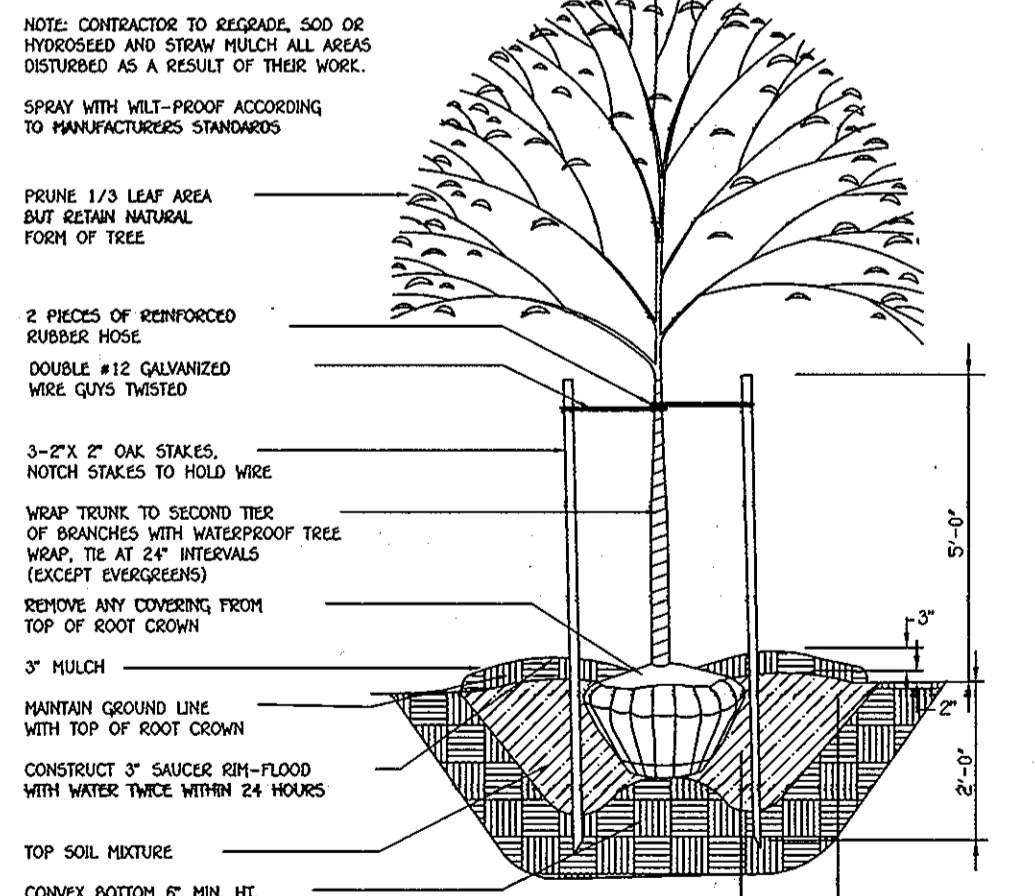
This plan is intended for landscape use only; see other plan sheets for more information on grading, sediment control, layout, etc.

OWNER
 BASSLERS, INCORPORATED
 c/o ALFRED S. BASSLER
 4994 SHEPPARD LANE
 ELKTON CITY, MARYLAND 21042
 (410) 531-2193

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LUSKON, MARYLAND 21765
 ELKTON CITY, MARYLAND 21042
 (410) 409-7900

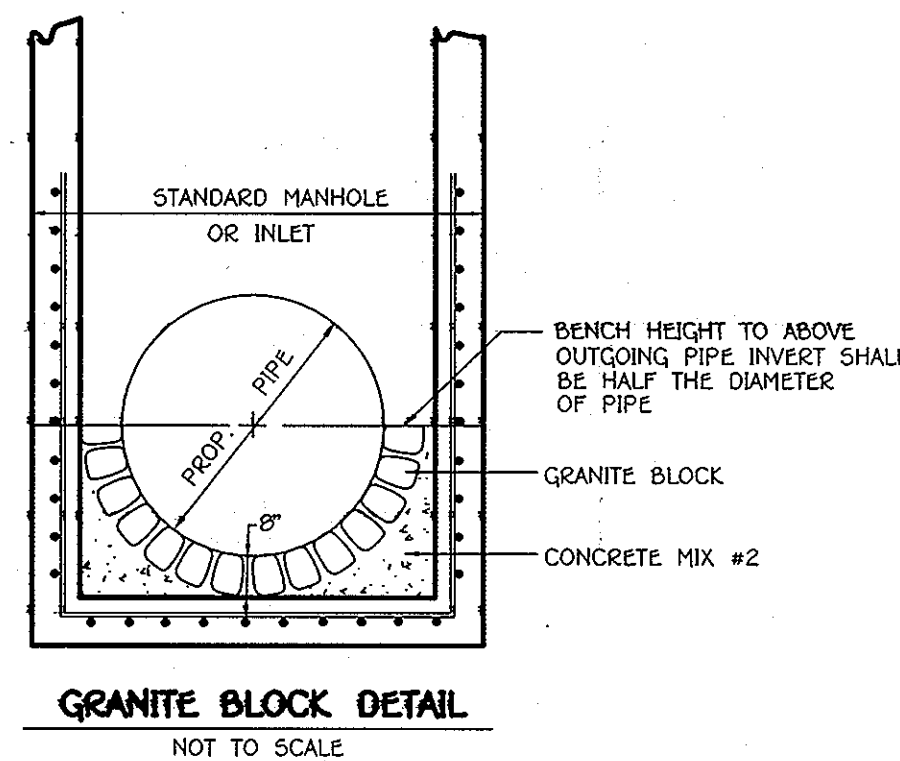
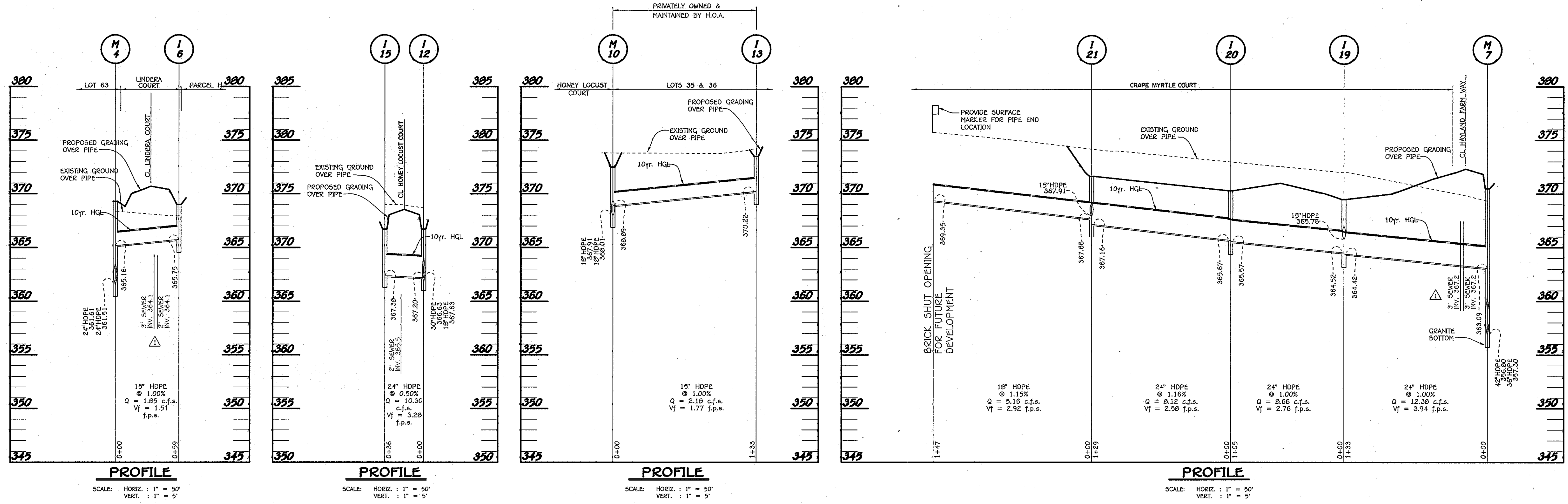
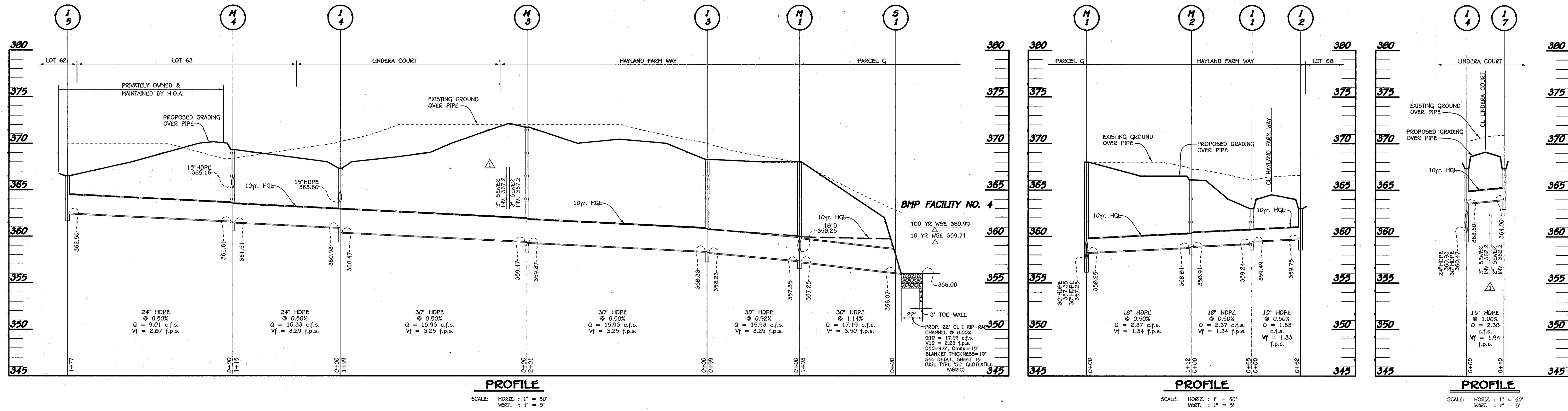


PLAN
 SCALE 1" = 100'



TREE PLANTING DETAIL

REVISED LANDSCAPE PLAN
 WALNUT CREEK
 PHASE TWO
 Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 Being A Resubdivision of Buildable Bulk Parcels 'M' & 'N' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No. 20931 Thru 22047
 ZONED: RC-DEO & RR-DEO
 TAX MAP NO. 28 GRID NOS. 4, 5, 10-12, 17, AND 18 PARCEL NO. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 12 OF 32



APPROVED: DEPARTMENT OF PUBLIC WORKS
Diane Schwan Acting Chief, Bureau of Highways 11/29/12
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
V. St. Joseph Chief, Division of Land Development 12/05/12
John P. ... Chief, Development Engineering Division 12/21/12

NO.	DESCRIPTION	DATE
1	REVISE LOW PRESSURE SEWER CROSSINGS & PIPE TYPE	9-25-12

OWNER
 BASALERS, INCORPORATED
 c/o ALFRED S. BASSLER
 4994 SHEPPARD LANE
 ELLICOTT CITY, MARYLAND 21042

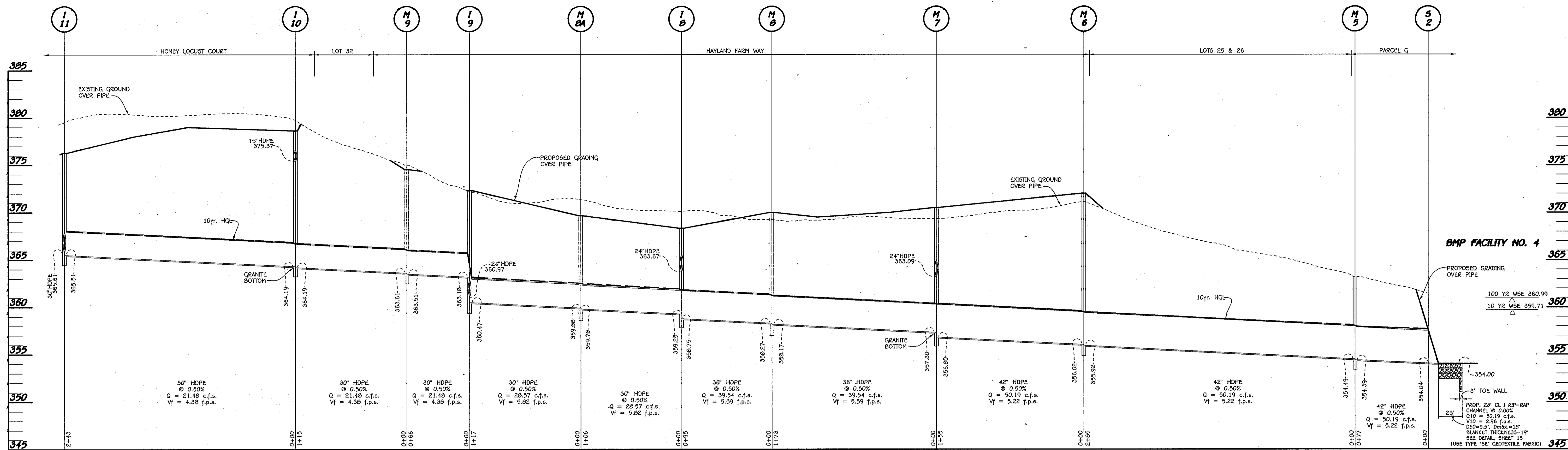
DEVELOPER
 HERITAGE LAND DEVELOPMENT
 19950 NORTH AVE.
 LUSKON, MARYLAND 21765



12/31/12
 DATE

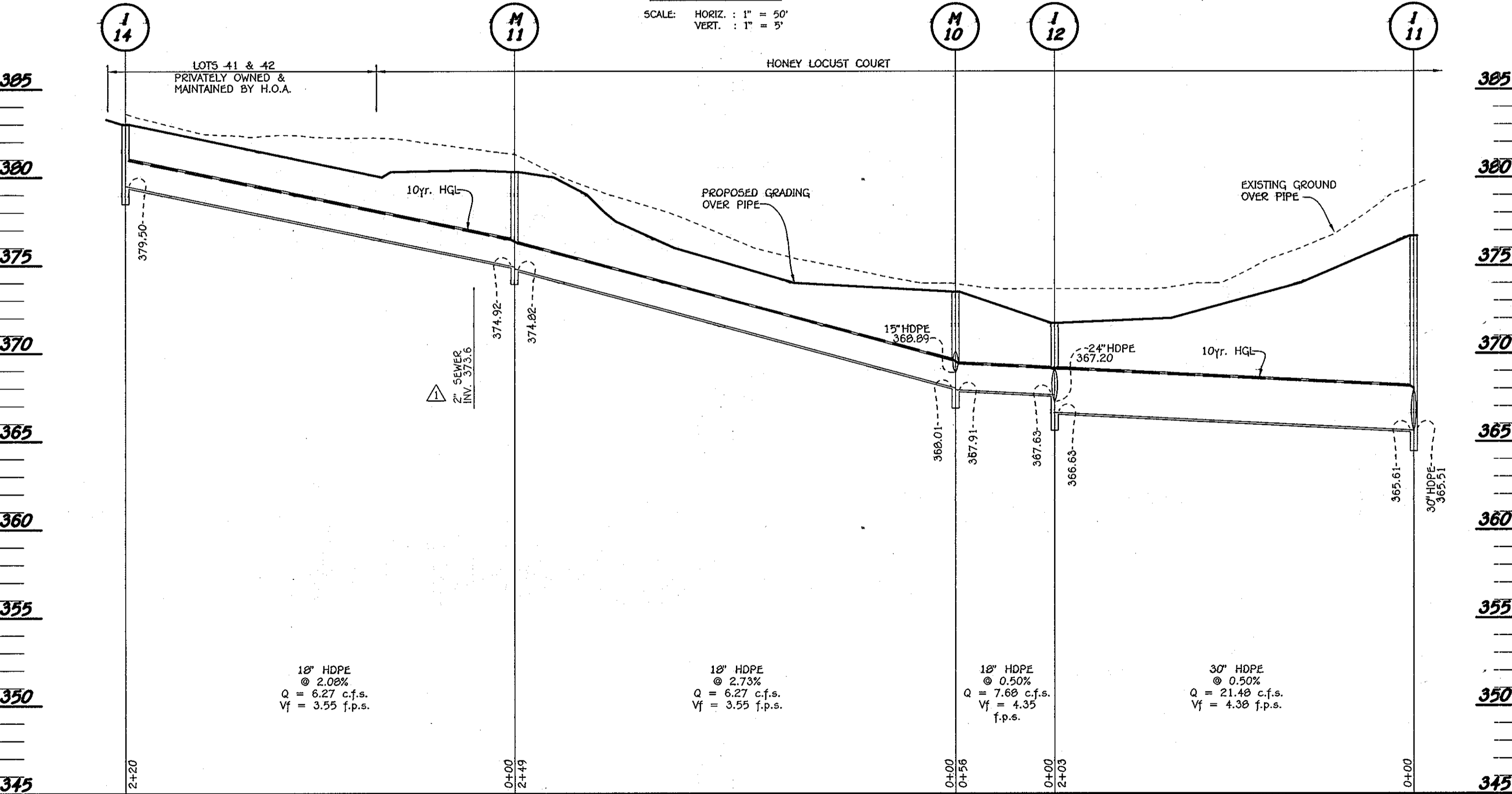
REVISED
STORM DRAIN PROFILES
WALNUT CREEK
PHASE TWO
 Lots 23 - 60, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 (Being A Re-division Of Buildable Bulk Parcels 'F' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat Nos. 20631 Thru 20647)
 ZONED: RC-DEO & RR-DEO
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 13 OF 32

I:\2008\09\01\13\PHASE TWO FINALS\PHASE TWO REDLINE 2012\09\01 2:01 SHEET 13-14 STORM DRAIN PROFILES.dwg, Model, 10/30/2012 2:02:52 PM, 1:50



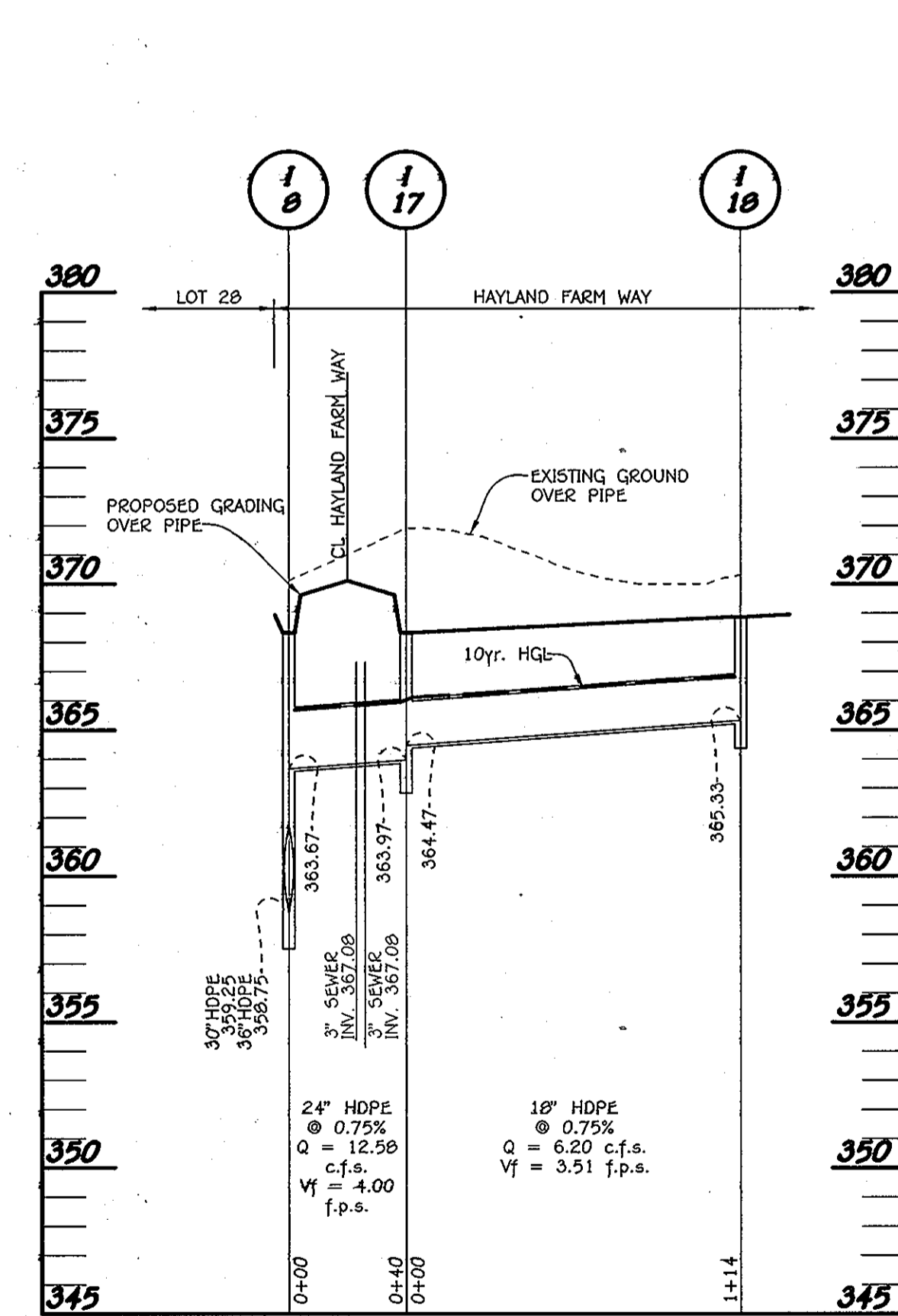
PROFILE

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



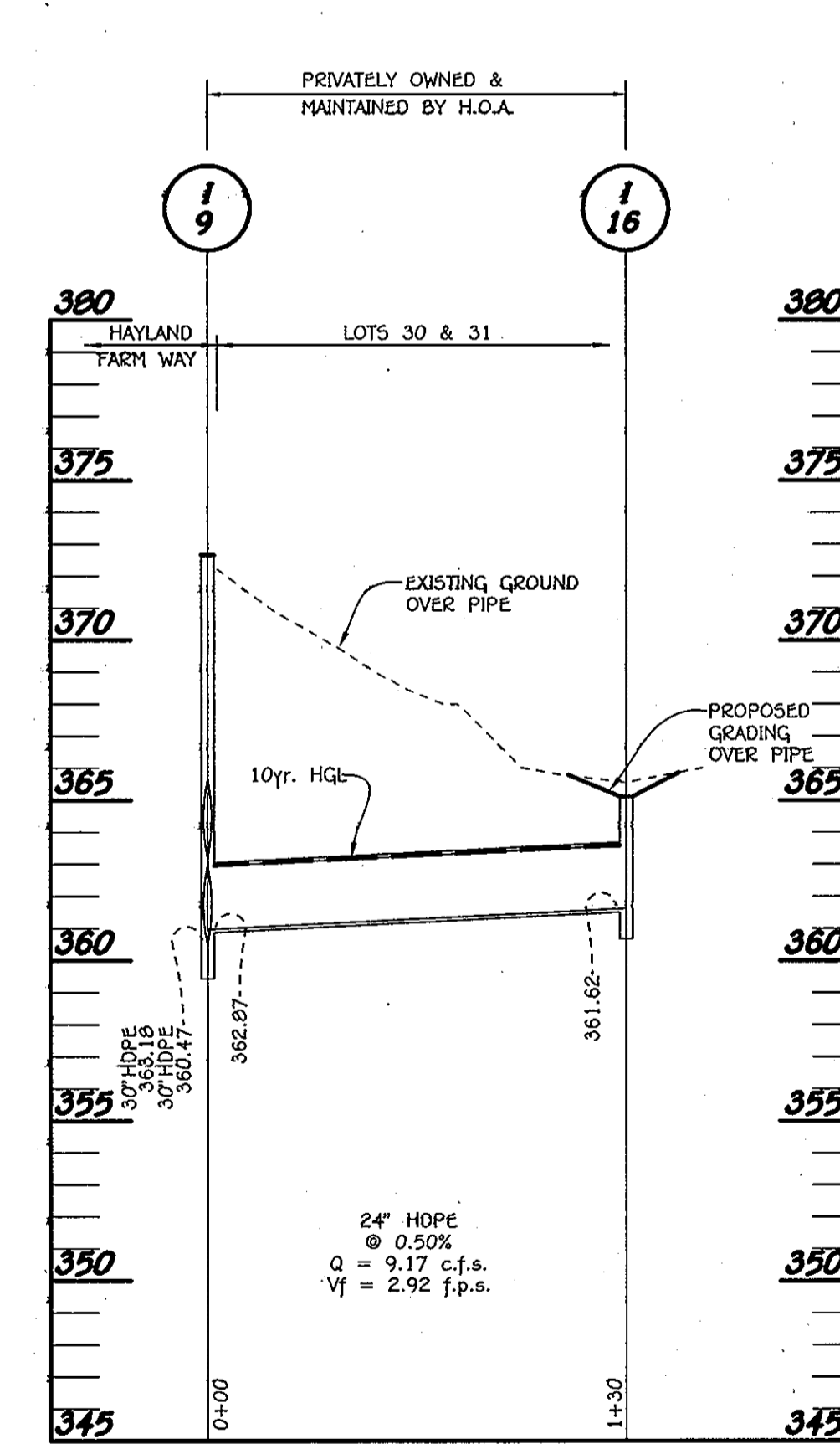
PROFILE

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



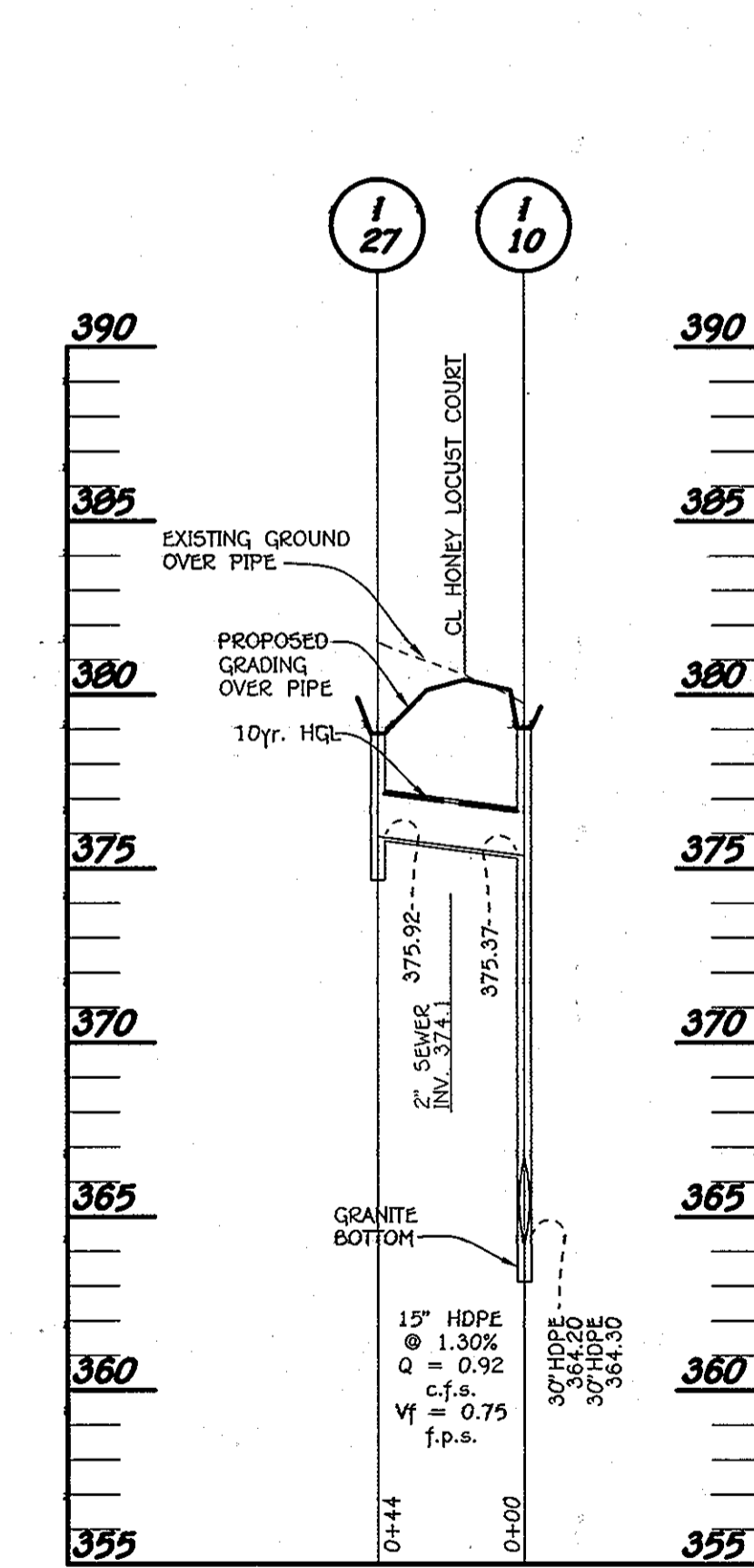
PROFILE

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



PROFILE

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



PROFILE

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

APPROVED: DEPARTMENT OF PUBLIC WORKS
Dr. Ashburn, Acting
CHIEF, BUREAU OF HIGHWAYS
DATE: 11/29/12

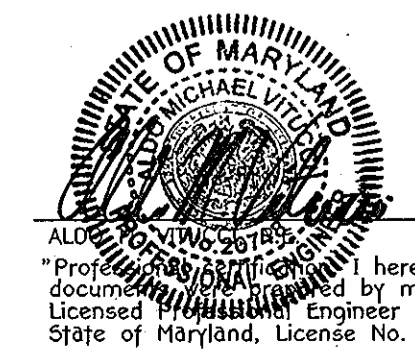
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Ket Steadman
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 12/05/12

Chris P... ..
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 12/3/12

NO.	DESCRIPTION	DATE
1	REVISE LOW PRESSURE SEWER CROSSINGS & PIPE TYPE	9-25-12

OWNER
BASLESS, INCORPORATED
C/O ALFRED S. BASSELER
4994 SHEPPARD LANE
ELICOTT CITY, MARYLAND 21042

DEVELOPER
HERITAGE LAND DEVELOPMENT
1950 NORTH AVE.
LUSKON, MARYLAND 21785



DATE: 1/3/12

REVISED
STORM DRAIN PROFILES
WALNUT CREEK
PHASE TWO

Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'T', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'

(Being A Resubdivision Of Buildable Bulk Parcels 'T' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, P141 No's. 2003) Thru 20647

ZONED: RC-DEO & RR-DEO
TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: SEPTEMBER, 2008
SHEET 14 OF 32

I:\2004\0401\14\14\PHASE TWO FINALS\PHASE TWO REDLINE 2012\0401-2001 SHEET 13-14 STORM DRAIN PROFILES.dwg, Model: 10/20/2012 2:09:28 PM, 150

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2295

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	LOCATION	ROAD STA./COORDINATE	OFFSET	TYPE AND WIDTH	REMARKS
I-1	* 362.03	359.49 (15')	359.24 (18')	HAYLAND FARM WAY	1+55.00	21.5' RT	'D' INLET - 2.5'	D - 4.10
I-2	* 361.90	-	359.75 (15')	HAYLAND FARM WAY	1+55.00	30.5' LT	'D' INLET - 2.5'	D - 4.10
I-3	* 368.58	358.33 (30')	358.23 (30')	HAYLAND FARM WAY	4+14.50	19' RT	'D' INLET - 3.5'	D - 4.10
I-4	* 367.22	363.60 (15')	360.93 (24')	LINDERA COURT	1+90.64	19' RT	'D' INLET - 3.5'	D - 4.10
I-5	* 366.50	-	362.50 (24')	LOT 62	N 572,290.42 E 1339,354.25	-	'D' INLET (PRIVATE)-2.5'	D - 4.10
I-6	* 369.00	-	365.75 (15')	LINDERA COURT	3+37.26	23' LT	'D' INLET - 2.5'	D - 4.10
I-7	* 367.32	-	364.00 (15')	LINDERA COURT	1+90.64	19' LT	'D' INLET - 2.5'	D - 4.10
I-8	* 368.33	363.67 (24')	359.15 (30')	HAYLAND FARM WAY	13+36.11	19' RT	'D' INLET - 4.0'	D - 4.10
I-9	* 372.66	360.97 (24')	363.18 (30')	HAYLAND FARM WAY	15+49.20	19' RT	'D' INLET - 3.5'	D - 4.10
I-10	* 379.04	375.37 (15')	364.29 (30')	HONEY LOCUST COURT	0+47.40	17' RT	'D' INLET - 3.5'	D - 4.10
I-11	* 376.69	365.61 (30)	365.51 (30')	HONEY LOCUST COURT	2+90.70	17' RT	'D' INLET - 3.5'	D - 4.10
I-12	* 371.72	367.20 (24')	367.63 (18')	HONEY LOCUST COURT	4+94.11	17' RT	'D' INLET - 3.5'	D - 4.10
I-13	* 373.50	-	370.22 (15')	LOTS 35 & 36	N 572,817.08 E 1339,075.91	-	'D' INLET (PRIVATE)-2.5'	D - 4.10
I-14	* 383.00	-	379.50 (18')	LOTS 41 & 42	N 572,718.64 E 1339,815.43	-	'D' INLET (PRIVATE)-2.5'	D - 4.10
I-15	* 371.72	-	367.38 (24')	HONEY LOCUST COURT	4+94.11	17' LT	'D' INLET - 2.5'	D - 4.10
I-16	* 365.12	-	361.62 (24')	LOTS 30 & 31	N 572,438.97 E 1327,909.39	-	'D' INLET (PRIVATE)-2.5'	D - 4.10
I-17	* 368.33	364.47 (18')	363.97 (24')	HAYLAND FARM WAY	13+36.11	19' LT	'D' INLET - 2.5'	D - 4.10
I-18	* 368.07	-	365.33 (18')	HAYLAND FARM WAY	12+25.50	19' LT	'D' INLET - 2.5'	D - 4.10
I-19	* 369.48	364.92 (24')	365.76 (15')	CAPE MYRTLE COURT	1+15.00	19' RT	'D' INLET - 2.5'	D - 4.10
I-20	* 370.30	365.67 (24')	365.57 (24')	CAPE MYRTLE COURT	2+26.60	19' RT	'D' INLET - 2.5'	D - 4.10
I-21	* 371.63	367.91 (15')	367.66 (18')	CAPE MYRTLE COURT	3+60.00	19' RT	'D' INLET - 2.5'	D - 4.10
I-25	* 371.63	-	368.31 (15')	CAPE MYRTLE COURT	3+60.00	19' LT	'D' INLET - 2.5'	D - 4.10
I-26	* 369.48	-	366.16 (15')	CAPE MYRTLE COURT	1+15.00	19' LT	'D' INLET - 2.5'	D - 4.10
I-27	* 378.89	-	375.92 (15')	HONEY LOCUST COURT	0+32.20	23' LT	'D' INLET - 2.5'	D - 4.10
I-28	* 378.45	-	371.83 (24')	HAYLAND FARM WAY	22+64.41	19' RT	'D' INLET - 2.5'	D - 4.10
I-29	* 378.45	372.00 (36')	371.43 (24')	HAYLAND FARM WAY	22+64.41	19LT	'D' INLET - 5.0'	D - 4.10
I-30	* 379.50	372.90 (36')	373.00 (36')	HAYLAND FARM WAY	24+02.69	19' LT	'D' INLET - 3.5'	D - 4.10
M-1	368.00	357.35 (30')	358.25 (18')	HAYLAND FARM WAY	3+21.13	25' RT	5' DIA. MANHOLE	G - 5.13
M-2	366.10	358.91 (18')	358.81 (18')	HAYLAND FARM WAY	2+16.13	25' RT	4' DIA. MANHOLE	G - 5.12
M-3	371.73	359.47 (30')	359.37 (30')	HAYLAND FARM WAY	6+25.60	15' RT	5' DIA. MANHOLE	G - 5.13
M-4	369.30	365.16 (15')	361.61 (24)	LINDERA COURT	3+08.17	28.7' RT	4' DIA. MANHOLE	G - 5.12
M-5	363.20	354.49 (42')	354.39 (42')	FACILITY NO. 4	N 572,817.08 E 1339,151.41	-	6' DIA. MANHOLE	G - 5.13
M-6	372.00	358.02 (42')	355.92 (42')	HAYLAND FARM WAY	9+06.30	19.3' RT	6' DIA. MANHOLE	G - 5.13
M-7	370.50	363.09 (24')	357.30 (36')	HAYLAND FARM WAY	10+61.20	19.3' RT	6' DIA. MANHOLE	G - 5.13
M-8	370.00	358.27 (36')	358.17 (36')	HAYLAND FARM WAY	12+37.82	17.2' RT	5' DIA. MANHOLE	G - 5.13
M-8A	370.00	359.88 (30')	359.78 (30')	HAYLAND FARM WAY	14+37.00	15.0' RT	5' DIA. MANHOLE	G - 5.13
M-9	374.53	363.61 (30')	363.51 (30')	HAYLAND FARM WAY	16+11.60	21.0 RT	5' DIA. MANHOLE	G - 5.13
M-10	373.50	368.01 (18')	368.89 (15')	HONEY LOCUST COURT	5+47.33	25' RT	4' DIA. MANHOLE	G - 5.12
M-11	380.30	374.92 (18')	374.82 (18')	HONEY LOCUST COURT	7+92.80	20.7' RT	4' DIA. MANHOLE	G - 5.12
M-12	376.00	369.46 (48')	369.36 (48')	FACILITY NO. 3	N 571,713.37 E 1326,934.53	-	6' DIA. MANHOLE	G - 5.13
M-13	369.50	366.00 (8')	365.50 (8')	FACILITY NO. 3	N 571,688.24 E 1326,982.00	-	SHALLOW MANHOLE	G - 5.12
S-1	-	-	356.00 (30')	FACILITY NO. 4	** N 572,743.42 E 1329,339.76	-	30' FLARED END SECTION	***
S-2	-	-	354.00 (42')	FACILITY NO. 4	** N 572,895.10 E 1329,631.64	-	42' FLARED END SECTION	***
S-5	-	-	369.00 (48')	FACILITY NO. 3	** N 571,697.20 E 1328,914.33	-	48' FLARED END SECTION	***
HW-1	370.50	-	368.00 (24')	FACILITY NO. 3	N 571,713.37 E 1326,934.53	-	24' TYPE 'A' HEADWALL	D - 5.11
HW-2	357.00	-	353.00 (30')	FACILITY NO. 4	N 572,895.10 E 1329,631.64	-	30' TYPE 'A' HEADWALL	D - 5.11
R-1	373.75	369.00 (3.5' ORIFICE)	368.50 (24')	FACILITY NO. 3	N 571,223.97 E 1338,924.44	-	CONC. RISER	SEE SHEET 23
R-2	361.00	353.50 (12')	353.50 (30')	FACILITY NO. 4	N 572,259.06 E 1328,865.90	-	CONC. RISER	SEE SHEET 25

* - DENOTES THROAT ELEVATION
 (PRIVATE) - DENOTES OWNED AND MAINTAINED BY H.O.A.
 ** - DENOTES LOCATION OF END OF PIPE/BEGINNING OF END SECTION

*** - ADS FLARED END SECTION OR EQUAL

PIPE SCHEDULE (PUBLIC)

SIZE	CLASS	LENGTH
15"	HDPE	275'
18"	HDPE	821'
24"	HDPE	598'
30"	HDPE	1453'
36"	HDPE	541'
42"	HDPE	517'
48"	HDPE	337'
8"	D.I.P. POND DRAIN	71'
8"	H.D.P.E. POND DRAIN	180'
12"	D.I.P. POND DRAIN	3'

NOTE: HDPE MAY BE SUBSTITUTED WITH RCCP PIPE MATERIAL.

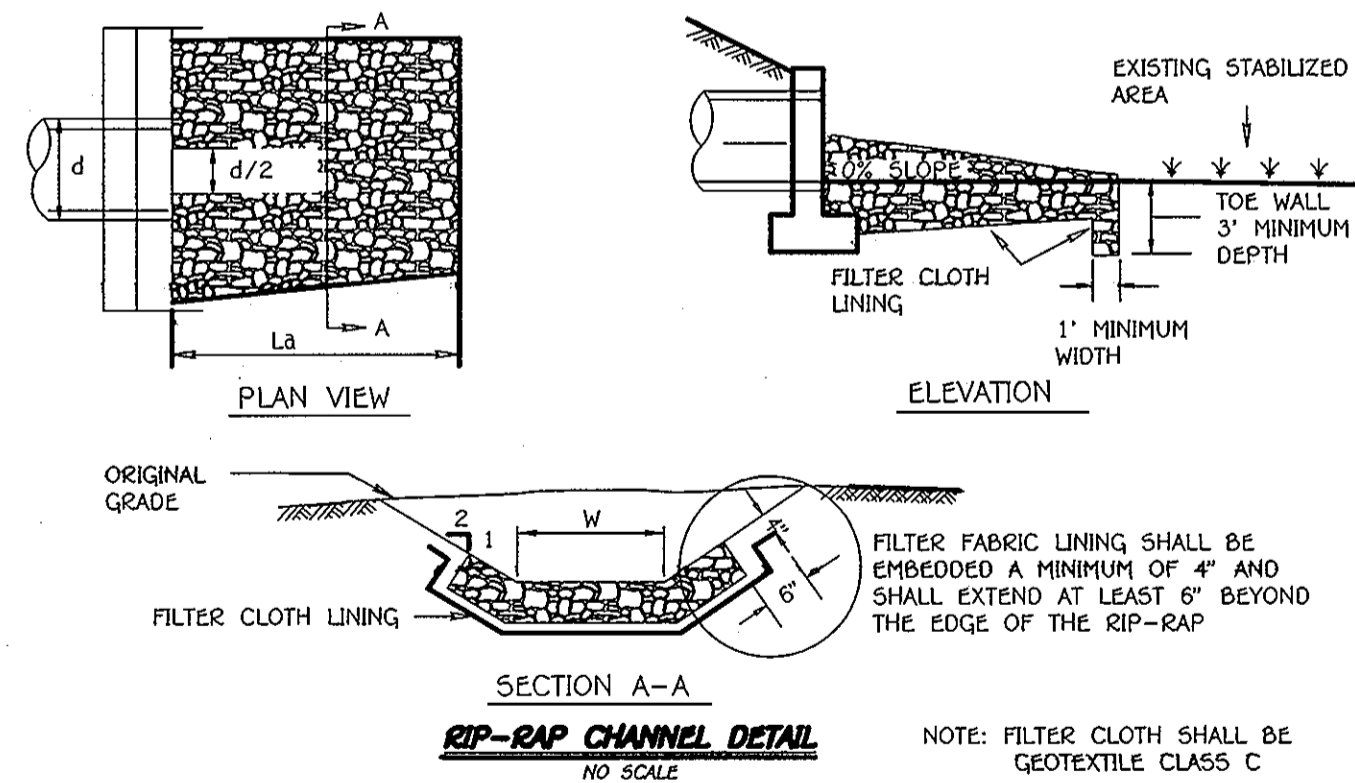
PIPE SCHEDULE (PRIVATE)

SIZE	CLASS	LENGTH
15"	HDPE	133'
18"	HDPE	142'
24"	HDPE	307'

NOTE: HDPE MAY BE SUBSTITUTED WITH RCCP PIPE MATERIAL.

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stone for the riprap or gabion outlets may be placed by equipment. Each shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

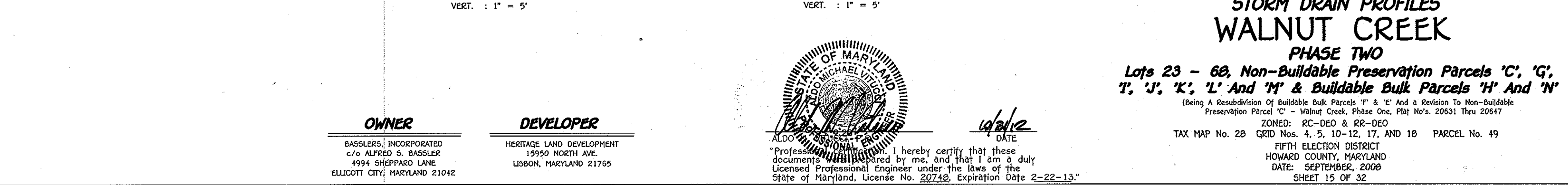
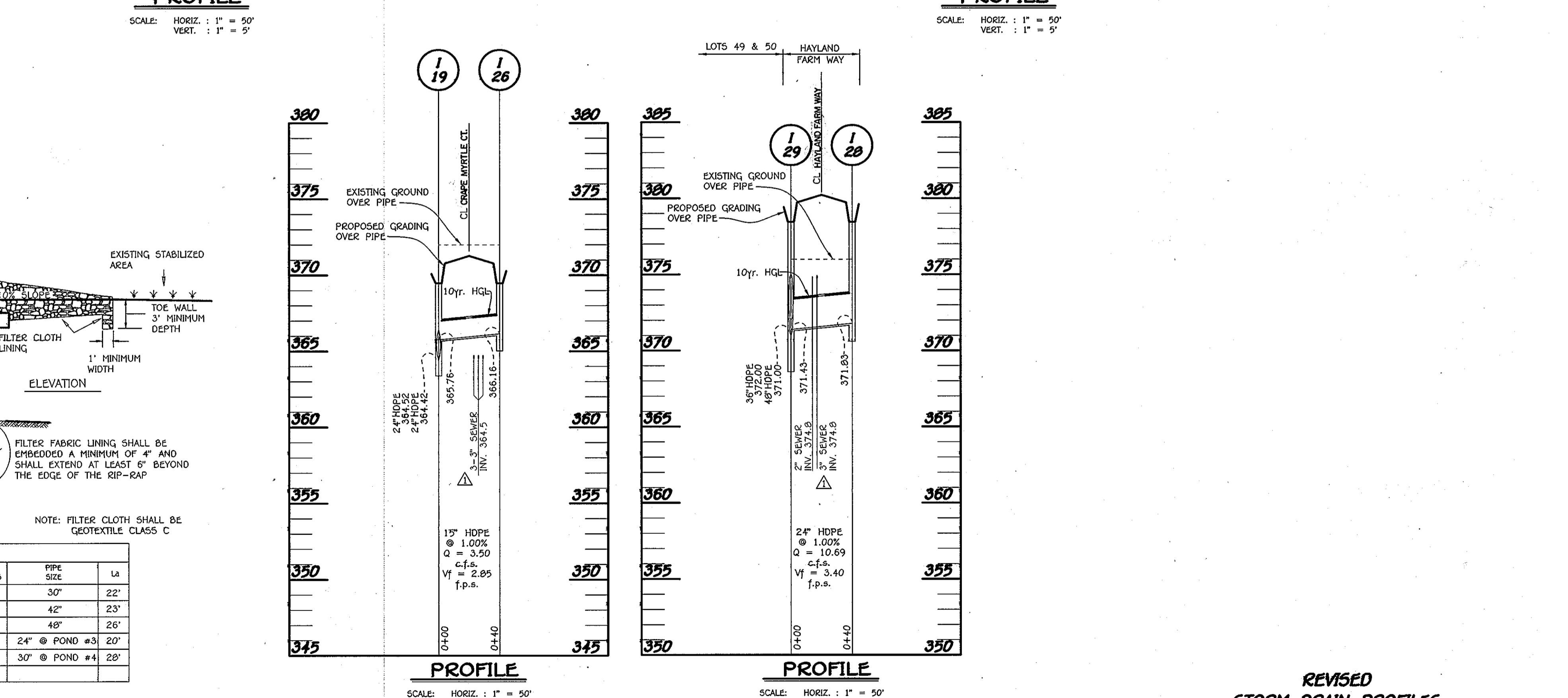
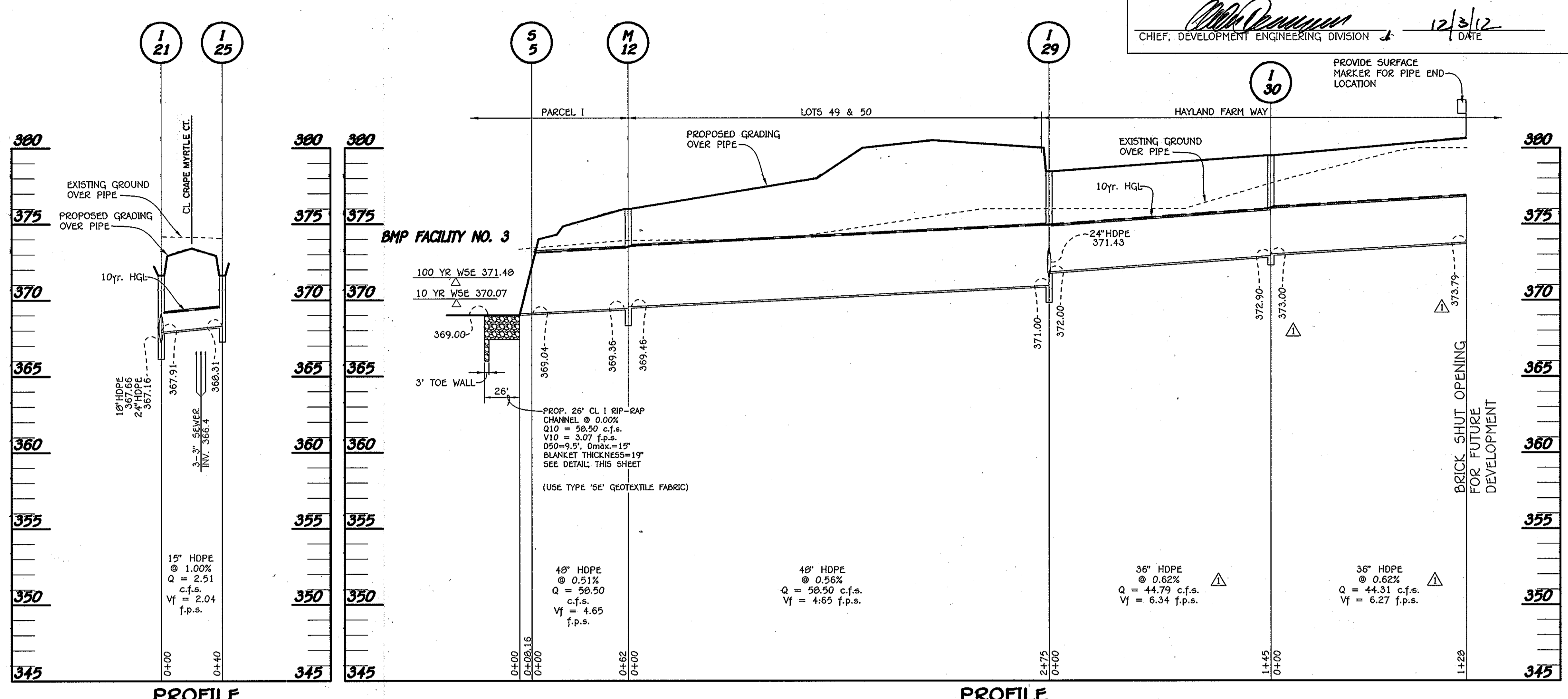


RIP-RAP CHANNEL DESIGN DATA

STRUCTURE	AREA (S.F.)	WETTED PERIMETER	R	R ^{2/3}	S	S ^{1/2}	W	d	n	V (f.p.s.)	Q 100 (c.f.s.)	BLANKET THICKNESS	PIPE SIZE	LA
S-1	7.69	9.81	0.7839	0.8502	0.005	0.0707	5.0'	1.08	0.04	2.23	17.19	9.5'	19"	22'
S-2	16.94	14.14	1.1980	1.1280	0.005	0.0707	6.5'	1.71	0.04	2.96	50.19	9.5'	19"	42'
S-5	19.03	15.03	1.2661	1.1704	0.005	0.0707	7.0'	1.80	0.04	3.07	58.50	9.5'	19"	48'
HW-1	11.98	13.19	0.9083	0.9378	0.005	0.0707	8.0'	1.16	0.04	2.46	29.50	9.5'	19"	24" @ POND #3, 20"
HW-2	21.73	16.54	1.3138	1.1996	0.005	0.0707	8.5'	1.80	0.04	3.15	68.50	9.5'	19"	30" @ POND #4, 28"

* DENOTES 100 YEAR Q USED FOR DESIGN

NO.	DESCRIPTION	DATE
1	Changed pipe slope from I-29 to stub, low pressure sewer crossings and pipe material & Road Names	9-25-12
	REVISIONS	

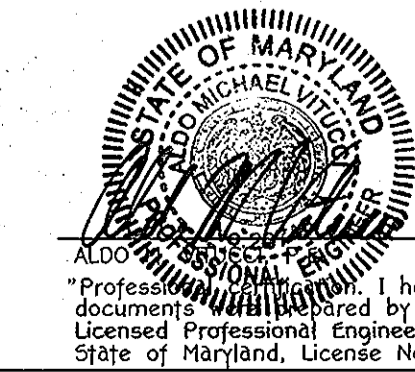


APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division

DATE: 11/2/12
 DATE: 12/05/12
 DATE: 12/3/12

REVISED STORM DRAIN PROFILES WALNUT CREEK PHASE TWO

Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 (Being A Re-subdivision of Bulbette Bulk Parcels 'F', 'A', 'C' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One Plat No. 20031 Rev. 2004)
 ZONED: RC-DEO & RR-DEO
 TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 15 OF 32



OWNER
 BASSLERS, INCORPORATED
 c/o ALFRED S. BASSLER
 4994 SHEPPARD LANE
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LISBON, MARYLAND 21765

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS
 CENTRAL SOURCE OFFICE PARK - SUITE 200 BALTIMORE NATIONAL FIRE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895

APPROVED: DEPARTMENT OF PUBLIC WORKS
Dave Schwarz, Acting 11/21/12
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
K. J. Stender 12/05/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

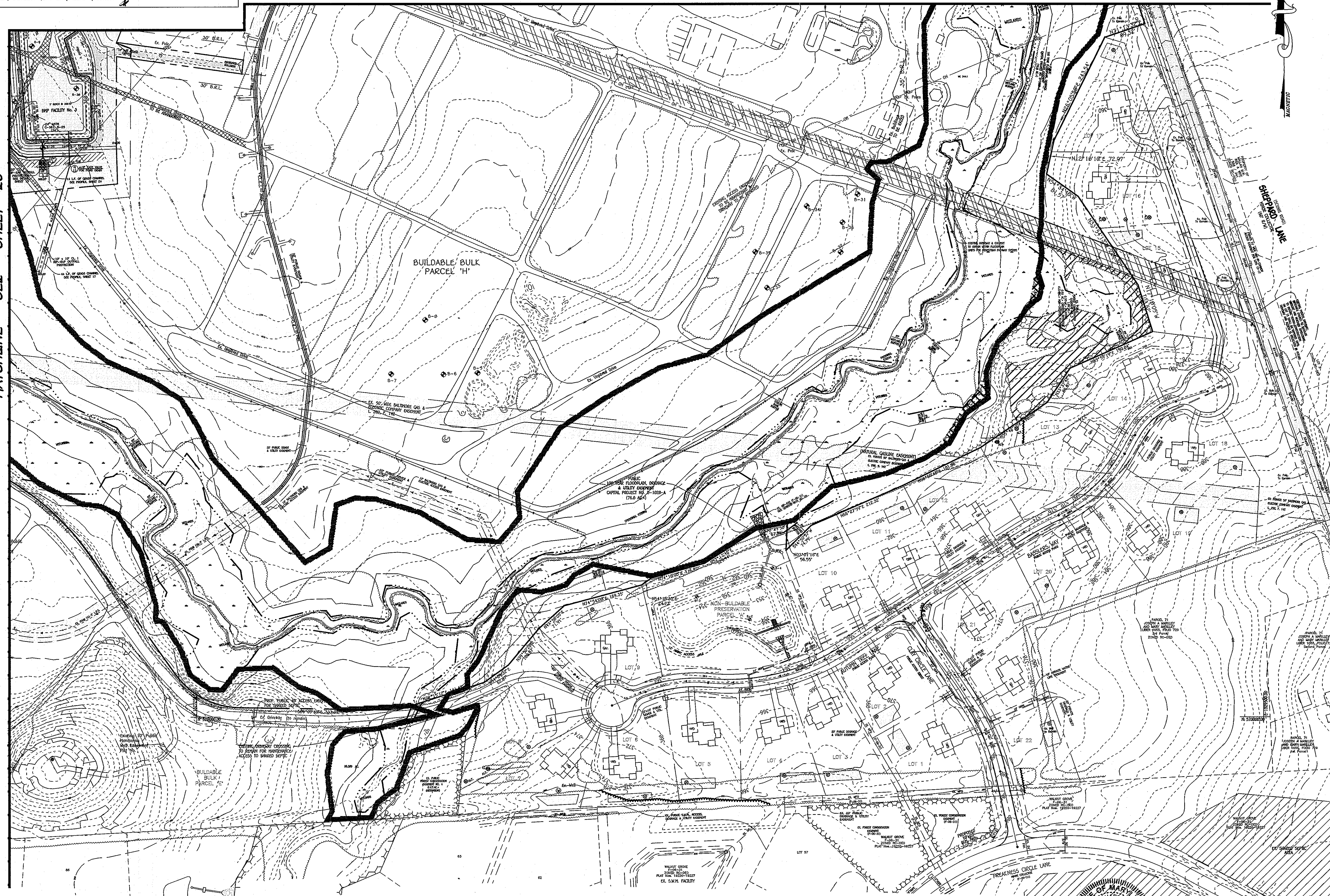
M. J. Pennington 12/18/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Note: THE FOREST CONSERVATION EASEMENT(S) WILL BE ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

Reforestation Note:
 The reforestation obligation will be met within priority planting areas on the site. This includes floodplain, wetland and buffers.

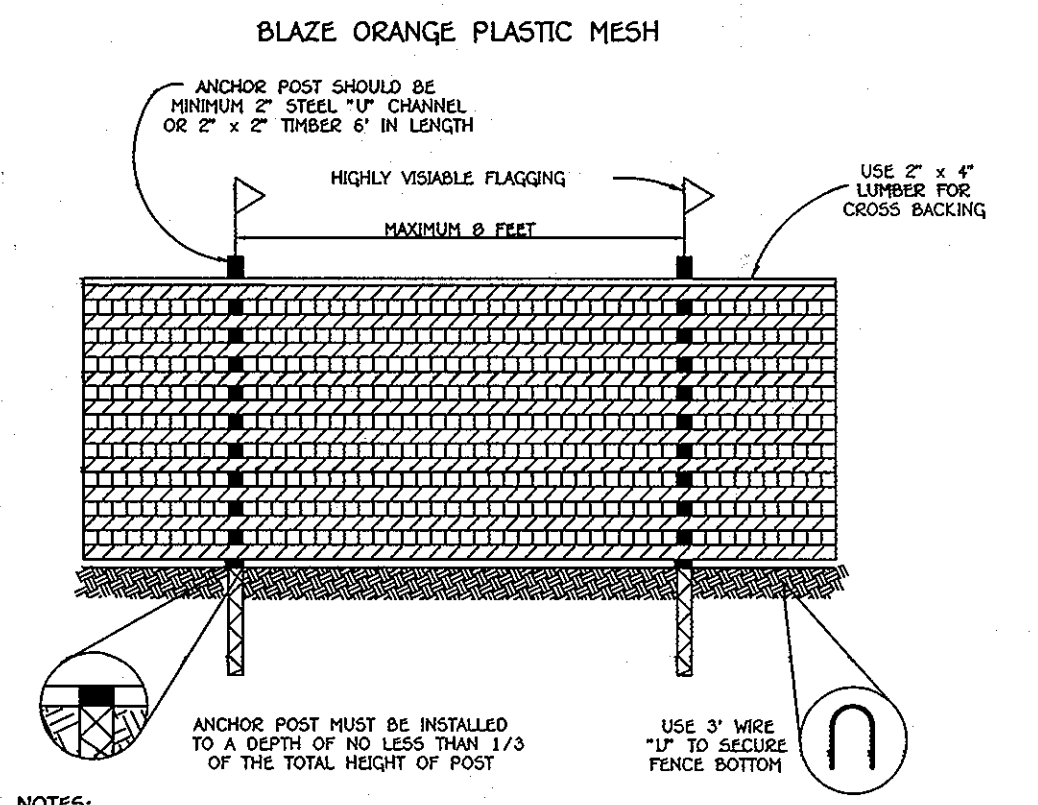
MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 20



Specimen Tree Chart

Key	Species/size	Comments
A	White oak, 44 inch dbh	fair condition, some dieback, poor crown spread
B	Tulip poplar, 30 inch dbh	good condition
C	Tulip poplar, 40 inch dbh	good condition
D	Tulip poplar, 74 inch dbh	poor condition, substantial dieback and poor canopy spread



NOTES:

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

TREE PROTECTION DETAIL
 NOT TO SCALE

FCP NOTES

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
- Permanent signage shall be placed 50'-100' apart along the boundaries of all areas included in Forest Conservation Easements.
- The Forest Conservation Act requirements for the entire site will be met through the onsite retention of 99.57 acres of forest and 31.66 acres of onsite reforestation. Total Forest Conservation Obligation = 91.23 ac.
- The forest conservation requirements per section 16.1200 of the howard county code And the forest conservation manual for the entire subdivision will be fulfilled by providing 99.57 acres of onsite forest retention and 31.66 acres of onsite forest reforestation for a total of 91.23 acres.
- A surety for onsite forest retention @ \$0.20/sf for 2,594,869 sf. = \$518,974.00 and On-site reforestation @ \$0.20/sf for 1,279,110 sf. = \$255,822.00 is required. Total surety amount for the entire subdivision = \$774,796.00

The Forest Conservation provided with Phase Two are as follows:
 35.67 AC. OF FOREST CONSERVATION EASEMENT (CREDITED AND NON-CREDITED).
 Credited onsite retention of 17.13 acres of forest and 9.10 acres of onsite reforestation.
 CALCULATION USED FOR PHASE TWO FOREST REQUIREMENT:
 99.57 TOTAL RETENTION ACRES/160 TOTAL UNITS = 0.3723 (46 UNITS x 0.3723 = 17.13 AC.)
 31.66 TOTAL PLANTING ACRES/160 TOTAL UNITS = 0.1979 (46 UNITS x 0.1979 = 9.10 AC.)
 A SURETY FOR ONSITE FOREST RETENTION @ \$0.20/SF FOR 746183 SF. = \$149,237.00 AND ON-SITE REFORESTATION @ \$0.20/SF FOR 393926 SF. = \$78,785.00 IS REQUIRED.
 TOTAL SURETY AMOUNT FOR THIS PHASE TWO SUBMISSION = \$347,435.00.

The forest conservation surety in the amount of \$347,435.00 is to be paid as part of the dpw developer's agreement.

LEGEND

- Existing Contours
- Wetland Limits
- Wetland/Stream Buffer
- Proposed Contours
- Forest Conservation Easement (Retention Area)
- Forest Conservation Easement To Be Planted
- NON-CREDITED RETENTION Forest Conservation Easement
- Forest Conservation Signs
- TP Tree Protection Fence
- Limits Of Floodplain
- Proposed Retireline

REVISED FOREST CONSERVATION PLAN WALNUT CREEK PHASE TWO

Lots 23 - 60, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 (Being A Resubdivision Of Buildable Bulk Parcels 'I' & 'L' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No's. 20631 Thru 20647)

ZONED: RC-DEO & RC-DEO
 GRID Nos. 4, 5, 10-12, 17, AND 18
 PARCEL No. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 18 OF 32

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALDOR NATIONAL FIC
 ELICOTT CITY, MARYLAND 21042
 (410) 461-1000

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACOE Wetland Designer
 Certification # WDCP93M006100448
J. H. Canoles 11/5/12
 JOHN P. CANOLES

NO.	DESCRIPTION	DATE
1	REVISED PARCELS 'E', 'J', 'H' & 'G'; ROAD NAMES, WELLS, PROPOSED FORCEMAN AND TITLE BLOCK	9/25/12
REVISIONS		

PLAN
 SCALE: 1" = 100'

OWNER
 BASSELLS, INCORPORATED
 19950 NORTH AVE.
 4204 SHEPPARD LANE
 ELICOTT CITY, MARYLAND 21042

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 19950 NORTH AVE.
 LEBANON, MARYLAND 21765



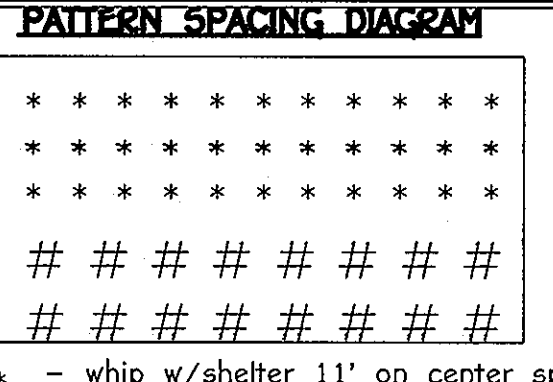
J. H. Canoles 11/5/12
 DATE

I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Riane Schwyz, Acting 11/29/12
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Karl Schaubert 12/05/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Williams 12/13/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



Planting/Soil Specifications

1. Inspection of bareroot plant stock shall take place between March 15 - April 20, b&b/container stock March 15 - May 30 or September 15 - November 15. Fall planting of b&b stock is not recommended.
2. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
3. Bareroot plants shall be installed so that the top of root mass is level with the top of existing grade. Roots shall be dipped in an anti-desiccant gel prior to planting. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.
4. Fertilizer shall consist of Aqflon 22-0-2, or equivalent, applied as per manufacturer's specifications, for woody plants. Herbaceous plants shall be fertilized with Osmocote 8-0-12.
5. Plant material shall be transported to the site in a tarp or covered truck. Plants shall be kept moist prior to planting.
6. All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

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

Maintenance of Plantings

1. Maintenance of plantings shall last for a period of 2 years.
2. Plantings must receive 2 gallons of water, either through precipitation or watering, weekly during the 1st growing season, as needed. During second growing season, once a month during May-September, if needed.
3. Invasive exotics and noxious weeds will be removed, as required, from planting areas mechanically and/or with limited herbicide application (see groundcover note where appropriate). Old field successional species will be retained.
4. Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.
5. Dead branches will be pruned from plantings.

Guarantee Requirements

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

Surety for Forestation

SEE GENERAL NOTE 10, SHEET 1.

Planting Notes

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

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

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

Planting Notes:

Planting units defined by the spacing requirements established in the FCA Manual. One planting unit is defined as 1 seeding or whip without shelter. The Manual states that 700 seedlings/whips without shelters are required per acre, or 350 whips w/shelters, or 200 1" caliper trees. By convention it has been determined that a seeding or whip without shelter = 1 unit, whip with shelter = 2 units, 1" caliper tree = 3.5 units and 2" caliper tree = 7 units. The use of plant units simplifies the plant density calculations when mixing stock size.

++ - These species should not be planted within the wetland limits.

1" caliper trees should be staggered along the outer perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 Foot Spacing. Whip spacing to be placed on 11 foot centers, shelters will be required per Howard County policy.

Planting shall be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance.

Multiple rows/heavy brush removal/control may be required prior to installation of planting.

All whips are required to be installed with tree shelters per Howard County FCA requirements.

FCE Planting Area # 9 - 2.72 acres

Planting units required: 1904 (952 whips)
 Planting units provided: 1904 (917 whips and 20 trees)

Qty	Species	Size	Spacing	Total FCA Units
0	Acer rubrum - Red maple	1" cal.	15' o.c.	
12	Quercus alba - White oak	1" cal.	15' o.c.	
20 Total 1" caliper trees (3.5 planting units per tree) 70 Total FCA unit credit				
150	Acer rubrum - Red maple	2-3" whip	11' o.c.	
150	Cornus canadensis - Red bud	2-3" whip	11' o.c.	
120	Cornus florida - Flowering dogwood	2-3" whip	11' o.c.	
100	Liriodendron tulipifera - Tulip poplar	2-3" whip	11' o.c.	
100	Prunus serotina - Black cherry	2-3" whip	11' o.c.	
100	Robinia pseudo-acacia - Black locust	2-3" whip	11' o.c.	
100	Quercus alba - White oak	2-3" whip	11' o.c.	
92	Viburnum prunifolium - Blackhaw	2-3" whip	11' o.c.	
917 Total whip plantings (2 planting units per tree) = 1834 Total FCA unit credit				
Total Unit Credit (70 + 1834) 1904				

1" CAL TREES = 200/ACRE (20 TREES/200 = 0.10 AC.) 3.5 Planting units = 1 - 1" Cal. Tree
 WHIPS w/shelters = 350/ACRE = 350 x 2.62 AC. = 917 WHIPS Planting units = 1 Whip

FCE Planting Area # 10 - 4.07 acres

Planting units required: 2950 (1425 whips)
 Planting units provided: 2950 (1359 whips and 40 trees)

Qty	Species	Size	Spacing	Total FCA Units
20	Acer rubrum - Red maple	1" cal.	15' o.c.	
20	Quercus alba - White oak	1" cal.	15' o.c.	
40 Total 1" caliper trees (3.5 planting units per tree) 140 Total FCA unit credit				
200	Acer rubrum - Red maple	2-3" whip	11' o.c.	
200	Cornus canadensis - Red bud	2-3" whip	11' o.c.	
170	Cornus florida - Flowering dogwood	2-3" whip	11' o.c.	
170	Liriodendron tulipifera - Tulip poplar	2-3" whip	11' o.c.	
150	Prunus serotina - Black cherry	2-3" whip	11' o.c.	
150	Robinia pseudo-acacia - Black locust	2-3" whip	11' o.c.	
150	Quercus alba - White oak	2-3" whip	11' o.c.	
150	Viburnum prunifolium - Blackhaw	2-3" whip	11' o.c.	
1920 Total whip plantings (2 planting units per tree) 3840 Total FCA unit credit				
Total Unit Credit (140 + 3840) 3980				

1" CAL TREES = 200/ACRE (40 TREES/200 = 0.20 AC.) 3.5 Planting units = 1 - 1" Cal. Tree
 WHIPS w/shelters = 350/ACRE = 350 x 3.87 AC. = 1355 WHIPS Planting units = 1 Whip

FOREST CONSERVATION DATA (Phase Two)

EASEMENT NO.	CREATED RETENTION AREA	PLANTING AREA	NON-CREATED RETENTION AREA	TOTAL EASEMENT AREA
7	1.99 AC.	0.00 AC.	0.00 AC.	1.99 AC.
8	14.51 AC.	0.00 AC.	9.44 AC.	23.95 AC.
9	0.39 AC.	2.72 AC.	0.00 AC.	3.11 AC.
10	0.24 AC.	4.07 AC.	0.00 AC.	4.31 AC.
11	0.00 AC.	2.31 AC.	0.00 AC.	2.31 AC.
TOTAL	17.13 AC.	9.10 AC.	9.44 AC.	35.67 AC.

FCE Planting Area # 11 - 2.31 acres

Planting units required: 1618 (809 whips)
 Planting units provided: 1618 (774 whips and 20 trees)

Qty	Species	Size	Spacing	Total FCA Units
0	Acer rubrum - Red maple	1" cal.	15' o.c.	
12	Quercus alba - White oak	1" cal.	15' o.c.	
20 Total 1" caliper trees (3.5 planting units per tree) 70 Total FCA unit credit				
120	Acer rubrum - Red maple	2-3" whip	11' o.c.	
120	Cornus canadensis - Red bud	2-3" whip	11' o.c.	
75	Cornus florida - Flowering dogwood	2-3" whip	11' o.c.	
75	Liriodendron tulipifera - Tulip poplar	2-3" whip	11' o.c.	
100	Prunus serotina - Black cherry	2-3" whip	11' o.c.	
100	Robinia pseudo-acacia - Black locust	2-3" whip	11' o.c.	
94	Quercus alba - White oak	2-3" whip	11' o.c.	
80	Viburnum prunifolium - Blackhaw	2-3" whip	11' o.c.	
774 Total whip plantings (2 planting units per tree) = 1548 Total FCA unit credit				
Total Unit Credit (70 + 1548) 1618				

1" CAL TREES = 200/ACRE (20 TREES/200 = 0.10 AC.) 3.5 Planting units = 1 - 1" Cal. Tree
 WHIPS w/shelters = 350/ACRE = 350 x 2.21 AC. = 774 WHIPS Planting units = 1 Whip

FOREST CONSERVATION WORKSHEET (For the entire Walnut Creek subdivision)

NET TRACT AREA	ACRES
A. TOTAL TRACT AREA	438.0
B. DEDUCTIONS (CRITICAL AREA RESTRICTED BY LOCAL OR PROGRAM) (78.6 AC. FLOODPLAIN & 15.1 AC. UTILITY TRANSMISSION LINE EASEMENTS)	93.7
C. NET TRACT AREA - NET TRACT AREA = TOTAL TRACT AREA (A) - DEDUCTIONS (B)	344.3
LAND USE CATEGORY: MEDIUM DENSITY RESIDENTIAL	
D. AFFORESTATION THRESHOLD (NET TRACT AREA (C) x 20%)	68.9
E. CONSERVATION THRESHOLD (NET TRACT AREA (C) x 25%)	86.1
EXISTING FOREST COVER	
F. EXISTING FOREST COVER WITHIN THE NET TRACT AREA	75.4
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	0
IF THE EXISTING FOREST COVER (F) IS GREATER THAN THE CONSERVATION THRESHOLD (E), THEN G = F - E; OTHERWISE G = 0.	
BREAK-EVEN POINT	
H. BREAK-EVEN POINT (AMOUNT OF FOREST THAT MUST BE RETAINED SO THAT NO MITIGATION IS REQUIRED)	n/a
(1) IF THE AREA OF FOREST ABOVE CONSERVATION THRESHOLD (G) IS GREATER THAN 0, THEN H = (0.2 x THE AREA OF FOREST ABOVE CONSERVATION THRESHOLD (G) + THE CONSERVATION THRESHOLD (E)).	
(2) IF THE AREA OF FOREST ABOVE CONSERVATION THRESHOLD (G) IS EQUAL TO 0, THEN H = EXISTING FOREST COVER (F)	
I. FOREST CLEARING PERMITTED WITHOUT MITIGATION	0
J. FOREST CLEARING PERMITTED WITHOUT MITIGATION	0
PROPOSED FOREST CLEARING	
J. TOTAL AREA OF FOREST TO BE CLEARED	15.03
K. TOTAL AREA OF FOREST TO BE CLEARED	59.57
K = EXISTING FOREST COVER (F) - FOREST TO BE CLEARED (J)	
PLANTING REQUIREMENTS	
IF THE TOTAL AREA OF FOREST TO BE RETAINED (K) IS AT OR ABOVE THE BREAK-EVEN POINT (H), NO PLANTING IS REQUIRED, AND NO FURTHER CALCULATIONS ARE NECESSARY (L=0, M=0, N=0, P=0, Q=0, R=0).	
OTHERWISE, CALCULATE THE PLANTING REQUIREMENTS AS FOLLOWS:	
L. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD	
(1) IF THE TOTAL AREA OF FOREST TO BE RETAINED (K) IS GREATER THAN THE CONSERVATION THRESHOLD (E), THEN L = THE AREA OF FOREST TO BE CLEARED (J) x 0.25;	
(2) IF THE FOREST TO BE RETAINED (K) IS LESS THAN OR EQUAL TO THE CONSERVATION THRESHOLD (E), THEN L = AREA OF FOREST ABOVE CONSERVATION THRESHOLD (G) x 0.25	
M. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD	31.66
(1) IF EXISTING FOREST COVER (F) IS GREATER THAN THE CONSERVATION THRESHOLD (E) AND THE FOREST TO BE RETAINED (K) IS LESS THAN OR EQUAL TO THE CONSERVATION THRESHOLD (E), THEN M = 2.0 x (CONSERVATION THRESHOLD (E) - FOREST TO BE RETAINED (K)).	
(2) IF EXISTING FOREST COVER (F) IS LESS THAN OR EQUAL TO THE CONSERVATION THRESHOLD (E), THEN M = 2.0 x FOREST TO BE CLEARED (J)	
N. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD	0
IF THE AREA OF FOREST TO BE RETAINED (K) IS GREATER THAN THE CONSERVATION THRESHOLD (E), THEN N = K - E; OTHERWISE N = 0	
P. TOTAL REFORESTATION REQUIRED P = L + M - N	31.66
Q. TOTAL AFFORESTATION REQUIRED	0
IF EXISTING FOREST COVER (F) IS LESS THAN THE AFFORESTATION THRESHOLD (D), THEN Q = AFFORESTATION THRESHOLD (D) - EXISTING FOREST COVER (F)	
R. TOTAL PLANTING REQUIREMENT R = P + Q	31.66

NOTE: THIS PROJECT IS USING "SUM CLUSTER OPTION" PER APPENDIX L OF THE FOREST CONSERVATION MANUAL FOR ITS FOREST REQUIREMENT CALCULATIONS WHICH INCLUDES THE AREA FOR ALL THE PRESERVATION PARCELS.

NOTE:

WITHIN THE 50 FOOT WIDE AGRICULTURAL BUFFER EASEMENT LOCATED ALONG THE NORTHERN PROPERTY BOUNDARY, NO PRIMARY OR ACCESSORY STRUCTURES SHALL BE PERMITTED, AND WITHIN THE EASEMENT AREA, THE EXISTING HEDGEROW VEGETATION SHALL BE PRESERVED AND SUPPLEMENTED WITH A TYPE 'X' LANDSCAPE BUFFER WHERE INSUFFICIENT VEGETATION EXISTS.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SOURCE OFFICE PARK - 10272 BATHORNE NATIONAL FEE
 ELICOTT CITY, MARYLAND 21102
 (410) 461-2000

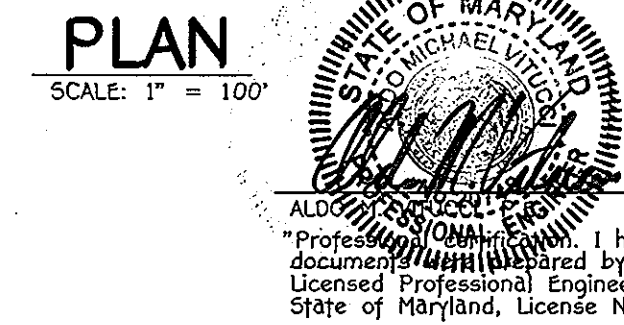
Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACE Wetland Delimitation
 Certification # WDCP34006100418
John P. Canoles 11/5/12
 JOHN P. CANOLES

NO.	DESCRIPTION	DATE
1	REVISED PARCELS 'C', 'J', 'H' & 'G'. ROAD NAMES, WELLS, PROPOSED FOREDRAIN AND TITLE BLOCK.	9/25/12

OWNER
 BASSLERS, INCORPORATED
 476 ALFRED S. BASSLER
 4994 SHEPPARD LANE
 ELICOTT CITY, MARYLAND 21142

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LISBON, MARYLAND 21165



REVISED FOREST CONSERVATION PLAN WALNUT CREEK PHASE TWO
 Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'J', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 (Being A Resubdivision Of Buildable Bulk Parcels 'F' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No's. 20631 Thru 20647)

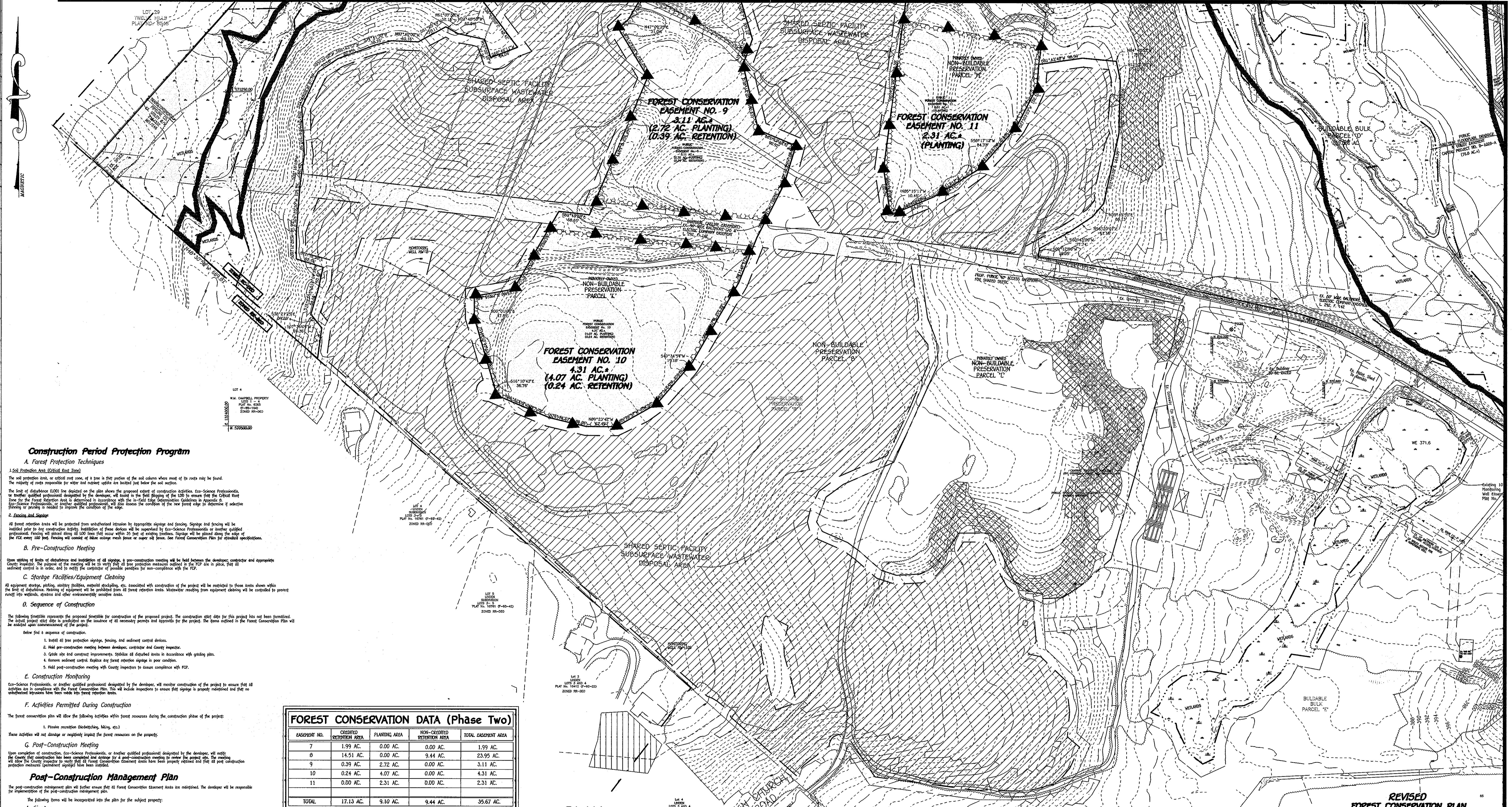
ZONED: RC-DED & RC-DEO
 TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2009
 SHEET 19 OF 32

APPROVED: DEPARTMENT OF PUBLIC WORKS
Diane Schwegel, Acting 11/29/12
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Val Siedel 12/05/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John P. Canoles 12/31/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MATCHLINE SEE SHEET 21



Construction Period Protection Program

- A. Forest Protection Techniques**
- 1. Soil Protection Area (Critical Root Zone)**
 The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface.
 The limit of disturbance (LOD) line depicted on the plan shows the proposed extent of construction activities. Eco-Science Professionals, or another qualified professional designated by the developer, will assist in the field mapping of the LOD to ensure that the Critical Root Zone for the Forest Retention Area is determined in accordance with the in-field edge determination guidelines in Appendix B. Eco-Science Professionals, or another qualified professional, will also assess the condition of the new forest edge to determine if selective thinning or pruning is needed to improve the condition of the edge.
- 2. Fencing and Signage**
 All forest retention areas will be protected from unauthorized intrusion by appropriate signage and fencing. Signage and fencing will be installed prior to any construction activity. Installation of these devices will be supervised by Eco-Science Professionals or another qualified professional. Fencing will be placed along all LOD lines that occur within 35 feet of existing structures. Signage will be placed along the edge of the FCR every 100 feet. Fencing will consist of 1/2 inch galvanized mesh fence or caper rail fence. See Forest Conservation Plan for standard specifications.
- B. Pre-Construction Meeting**
 Upon signing of deeds of disturbance and installation of all signage, a pre-construction meeting will be held between the developer, contractor and appropriate County inspectors. The purpose of the meeting will be to verify that all forest protection measures outlined in this FCP are in place, that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.
- C. Storage Facilities/Equipment Cleaning**
 All equipment storage, parking, storage facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas shown within the limit of disturbance. Washing of equipment will be prohibited from all forest retention areas. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into wetlands, streams and other environmentally sensitive areas.
- D. Sequence of Construction**
 The following timetable represents the proposed timetable for construction of the proposed project. The construction start date for this project has not been finalized. The actual project start date is contingent on the issuance of all necessary permits and approvals for the project. The items outlined in the Forest Conservation Plan will be enacted upon commencement of the project.
- Below find a sequence of construction:
1. Install all forest protection signage, fencing, and sediment control devices.
 2. Hold pre-construction meeting between developer, contractor and County inspectors.
 3. Grade site and construct improvements. Stabilize all disturbed areas in accordance with grading plan.
 4. Remove sediment control. Replace any forest retention signage in poor condition.
 5. Hold post-construction meeting with County inspectors to ensure compliance with FCP.
- E. Construction Monitoring**
 Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan. This will include inspections to ensure that signage is properly maintained and that no unauthorized intrusions have been made into forest retention areas.
- F. Activities Permitted During Construction**
 The forest conservation plan will allow the following activities within forest resources during the construction phase of the project:
 1. Passive recreation (hiking, etc.)
 These activities will not damage or negatively impact the forest resources on the property.
- G. Post-Construction Meeting**
 Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County inspectors and assist in the post-construction meeting to ensure that signage is properly maintained and that all forest retention areas have been properly returned and that all post-construction protection measures (permanent signage) have been installed.

FOREST CONSERVATION DATA (Phase Two)				
EASEMENT NO.	CRITICAL ROOT ZONE AREA	PLANTING AREA	NON-CRITICAL ROOT ZONE AREA	TOTAL EASEMENT AREA
7	1.99 AC.	0.00 AC.	0.00 AC.	1.99 AC.
8	14.51 AC.	0.00 AC.	9.44 AC.	23.95 AC.
9	0.39 AC.	2.72 AC.	0.00 AC.	3.11 AC.
10	0.24 AC.	4.07 AC.	0.00 AC.	4.31 AC.
11	0.00 AC.	2.31 AC.	0.00 AC.	2.31 AC.
TOTAL	17.13 AC.	9.10 AC.	9.44 AC.	35.67 AC.

PLAN
 SCALE: 1" = 100'

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERS, CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLETTTOWN, MARYLAND 21744
 (410) 461-2295

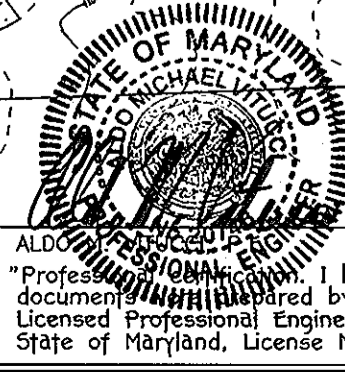
Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACOE Wetland Delineator
 Certification # WDCP93M008100448
John P. Canoles 11/15/12
 JOHN P. CANOLES

NO.	DESCRIPTION	DATE
1	REVISED PARCELS 'E', 'J', 'H' & 'G', ROAD NAMES, WELLS, PROPOSED FORCEMAIN AND TITLE BLOCK	9/25/12
REVISIONS		

OWNER
 BASGLER, INCORPORATED
 276 ALFRED S. BASGLER
 4994 SHEPPARD LANE
 ELLETTTOWN CITY, MARYLAND 21742

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LESGON, MARYLAND 21765



I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 22249, Expiration Date 2-22-13.

REVISED FOREST CONSERVATION PLAN WALNUT CREEK PHASE TWO
 Lots 23 - 60, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' and 'M' & Buildable Bulk Parcels 'H' and 'N' (Being A Resubdivision of Buildable Bulk Parcels 'F' & 'E' And a Revision to Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No's. 20631 Thru 20647)
 ZONED: RC-DEO & RC-DEO
 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 20 OF 32

MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 22

APPROVED: DEPARTMENT OF PUBLIC WORKS
Diane Johnson, Acting 11/29/12
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Victor Shelebin 12/05/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 12/31/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NOTE:
 WITHIN THE 50 FOOT WIDE AGRICULTURAL BUFFER EASEMENT LOCATED ALONG THE NORTHERN PROPERTY BOUNDARY, NO PRIMARY OR ACCESSORY STRUCTURES SHALL BE PERMITTED, AND WITHIN THE EASEMENT AREA, THE EXISTING HEDGEROW VEGETATION SHALL BE PRESERVED AND SUPPLEMENTED WITH A TYPE 'A' LANDSCAPE BUFFER WHERE INSUFFICIENT VEGETATION EXISTS.



MATCHLINE SEE SHEET 19



[Signature] 12/31/12
 DATE

"I, the undersigned, hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-15."

PLAN
 SCALE: 1" = 100'

**REVISED
 FOREST CONSERVATION PLAN
 WALNUT CREEK
 PHASE TWO**

Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'T', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'I'
 (Being A Subdivision Of Buildable Bulk Parcels 'A' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No's. 20631 Thru 20647)

ZONED: RC-DEO & RR-DEO
 TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 21 OF 32

MATCHLINE SEE SHEET 20

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CONFIDENTIAL SOURCE OFFICE PARK - 10272 BALDORNE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2995

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACE Wetland Designer
 Certification # WD0P33MD06100448
[Signature] 11/6/12
 JOHN P. CANOLIS

OWNER
 BASSLESS, INCORPORATED
 610 ALFRED S. BASSLEGE
 4994 SHEPHERD LANE
 ELICOTT CITY, MARYLAND 21042

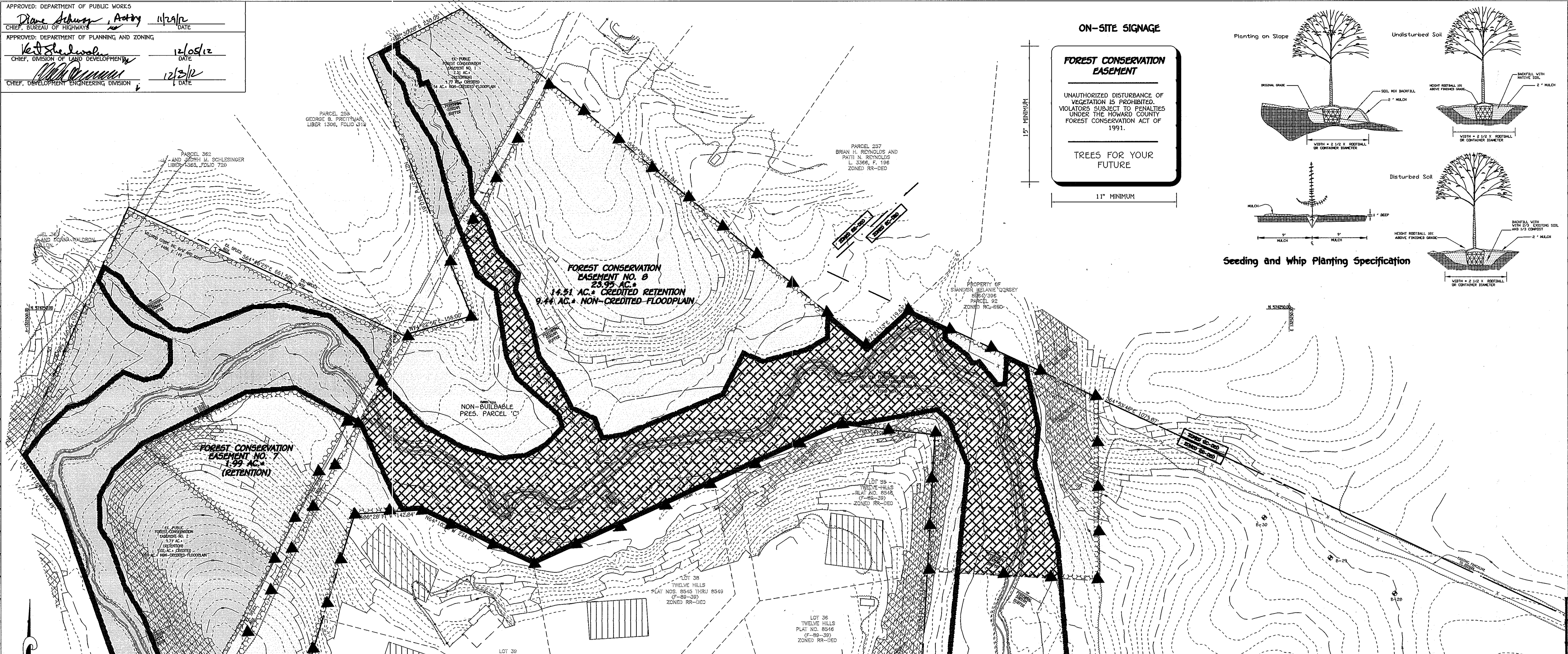
DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LISBON, MARYLAND 21765

NO.	DESCRIPTION	DATE
1	REVISED PARCELS 'E', 'J', 'H' & 'G', ROAD NAMES, WELLS, PROPOSED FORECMAN AND TITLE BLOCK	9/25/12
REVISIONS		

APPROVED: DEPARTMENT OF PUBLIC WORKS
Diane Schwegel, Acting 11/29/12
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Ket Stedman 12/05/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John P. Canoles 12/31/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



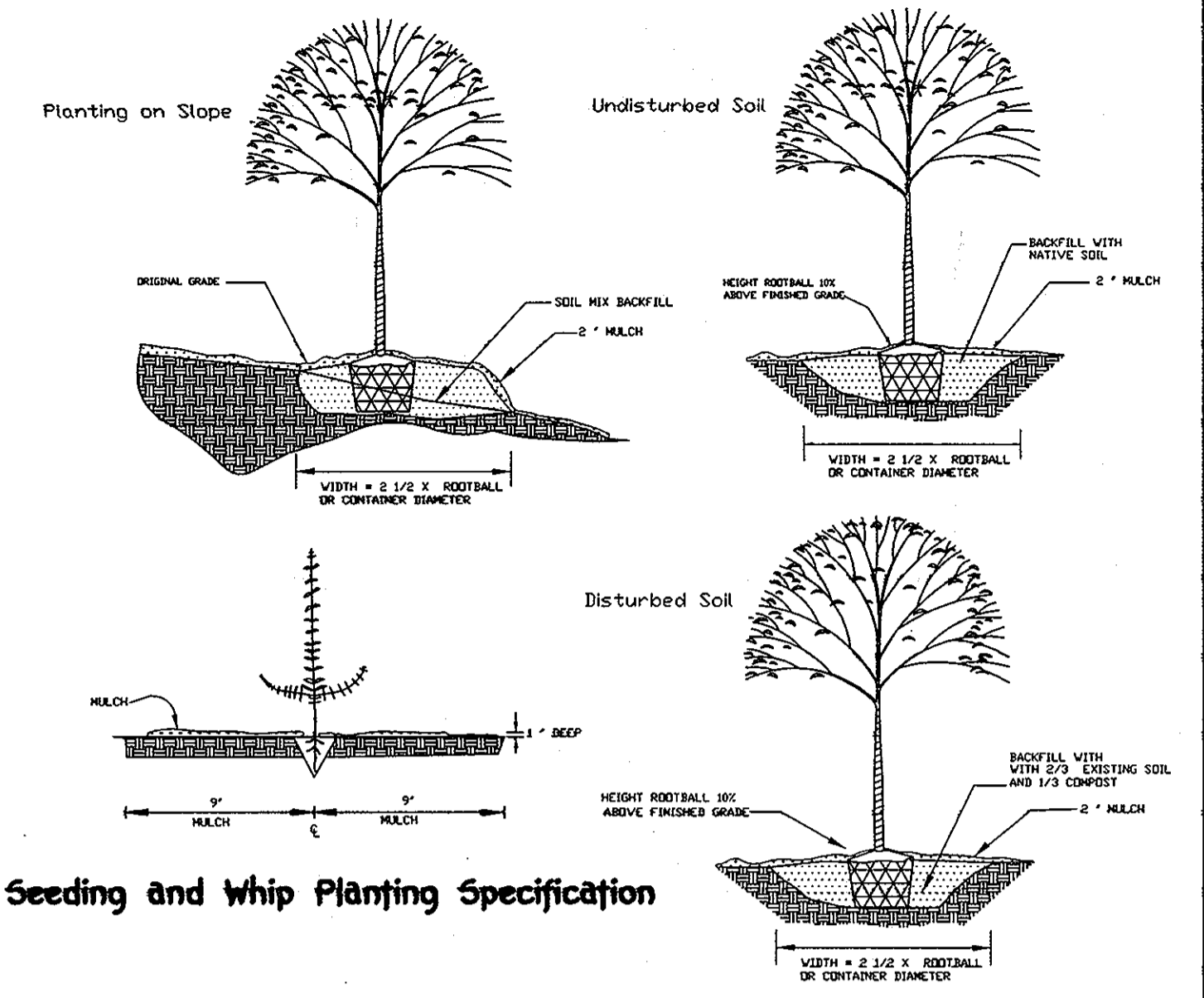
ON-SITE SIGNAGE

FOREST CONSERVATION EASEMENT

UNAUTHORIZED DISTURBANCE OF VEGETATION IS PROHIBITED. VIOLATORS SUBJECT TO PENALTIES UNDER THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1991.

TREES FOR YOUR FUTURE

15" MINIMUM
 11" MINIMUM



MATCHLINE SEE SHEET 21

PLAN
 SCALE: 1" = 100'

- LEGEND**
- Existing Contours
 - Wetland Limits
 - Wetland/Stream Buffer
 - Proposed Contours
 - Forest Conservation Easement (Retention Area)
 - Forest Conservation Easement To Be Planted
 - NON-CREDITED RETENTION Forest Conservation Easement
 - Forest Conservation Signs
 - Tree Protection Fence
 - Limits Of Floodplain

FOREST CONSERVATION DATA (Phase Two)

EASEMENT NO.	CREDITED RETENTION AREA	PLANTING AREA	NON-CREDITED RETENTION AREA	TOTAL EASEMENT AREA
7	1.99 AC.	0.00 AC.	0.00 AC.	1.99 AC.
8	14.51 AC.	0.00 AC.	9.44 AC.	23.95 AC.
9	0.39 AC.	2.72 AC.	0.00 AC.	3.11 AC.
10	0.24 AC.	4.07 AC.	0.00 AC.	4.31 AC.
11	0.00 AC.	2.31 AC.	0.00 AC.	2.31 AC.
TOTAL	17.13 AC.	9.10 AC.	9.44 AC.	35.67 AC.

NO.	DESCRIPTION	DATE
1	REVISED PARCELS 'E', 'J', 'H' & 'G', ROAD NAMES, WELLS, PROPOSED FORCEMAIN AND TITLE BLOCK.	9/25/12

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2000

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACE Wetland Delineator
 Certification # WDCP93MDD6100448
John P. Canoles

OWNER
 BASSLES, INCORPORATED
 c/o ALFRED S. BASSLER
 4994 SHEPHERD LANE
 ELICOTT CITY, MARYLAND 21042

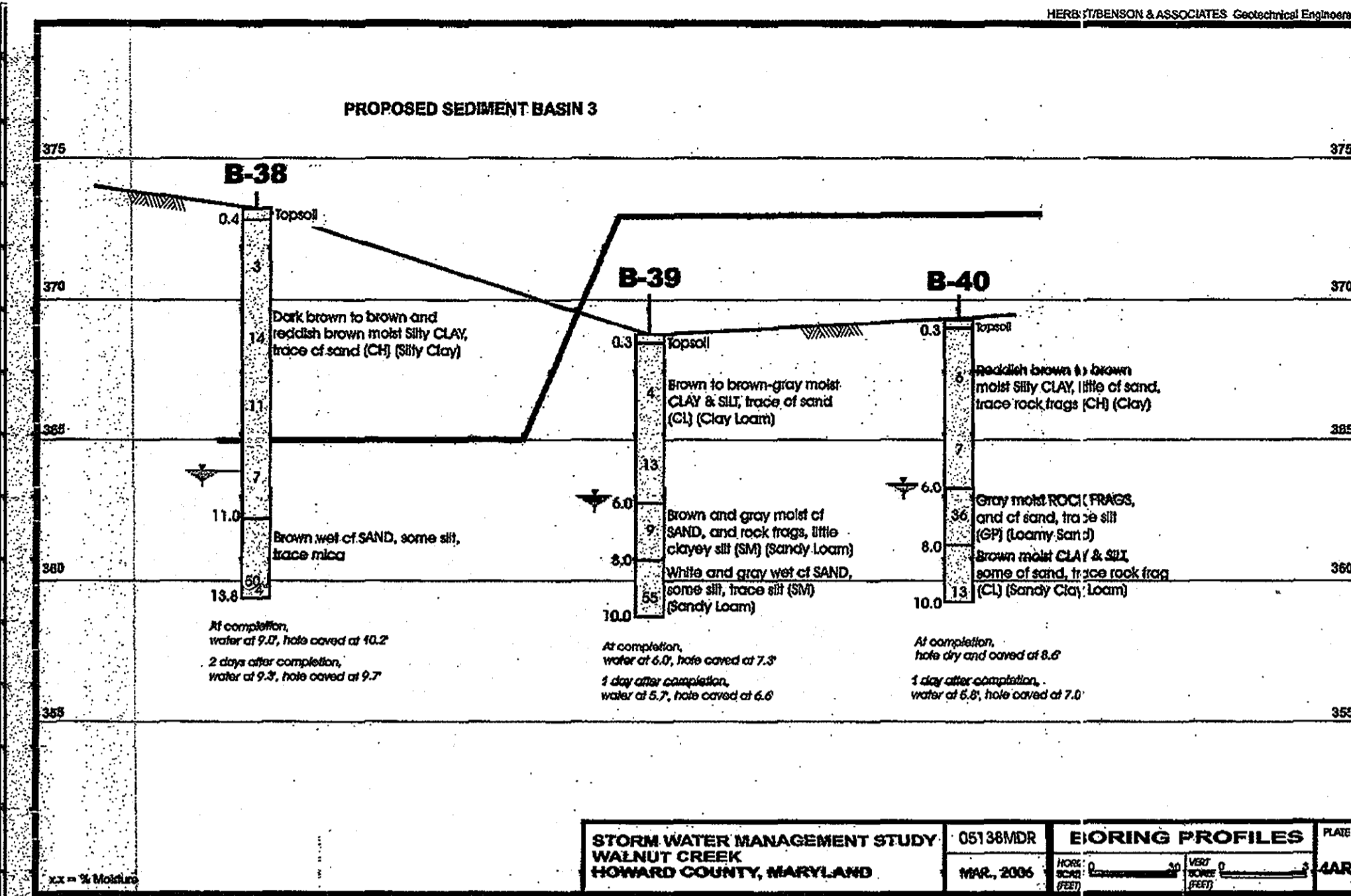
DEVELOPER
 HERITAGE LAND DEVELOPMENT
 19950 NORTH AVE.
 LEBOK, MARYLAND 21765

ALDO CARBONARA
 I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.

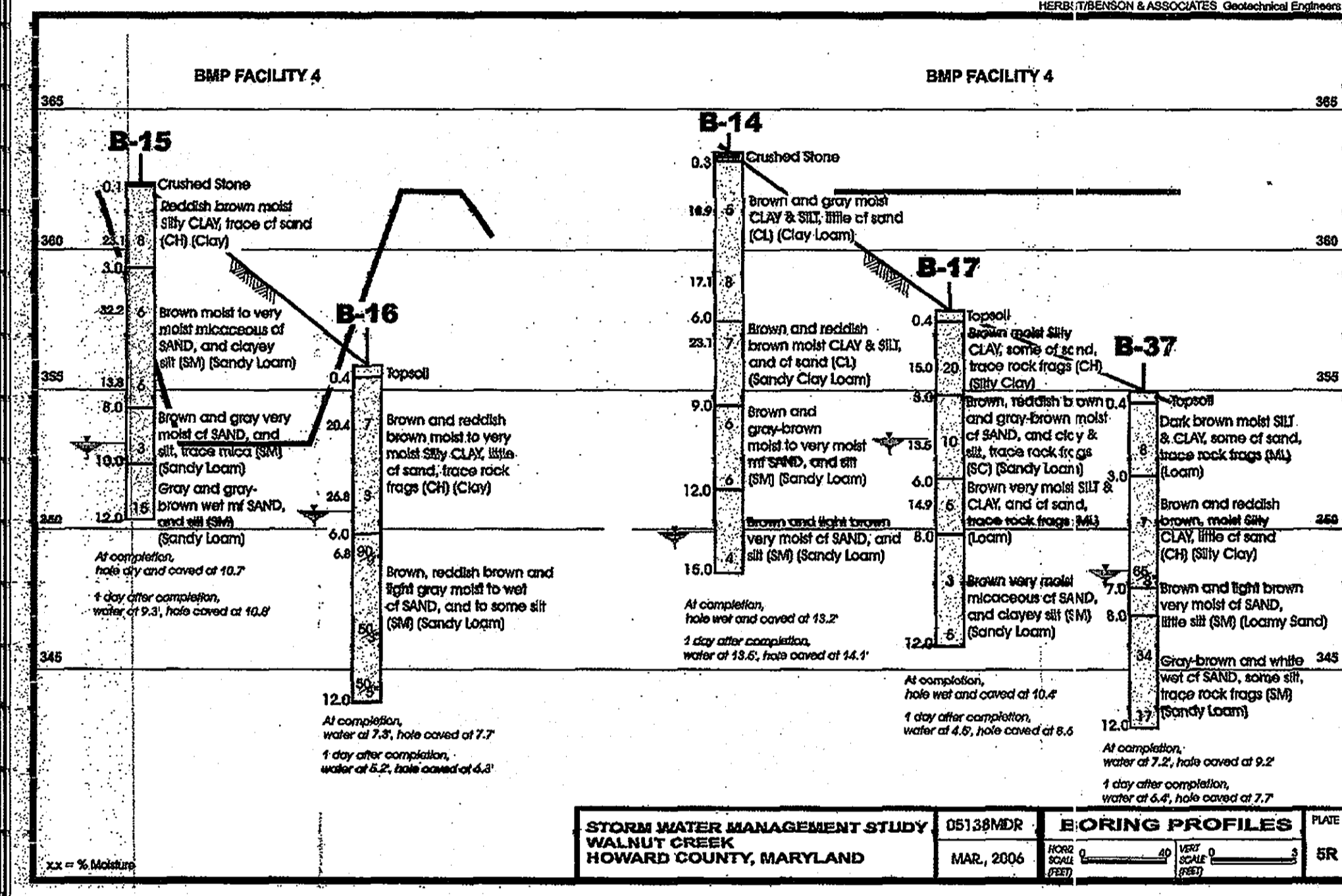
REVISED FOREST CONSERVATION PLAN WALNUT CREEK PHASE TWO

Lots 23 - 60, Non-Buildable Preservation Parcels 'C', 'G', 'T', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 (Being A Resubdivision Of Buildable Bulk Parcels 'F' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No's. 20631 Thru 20647)

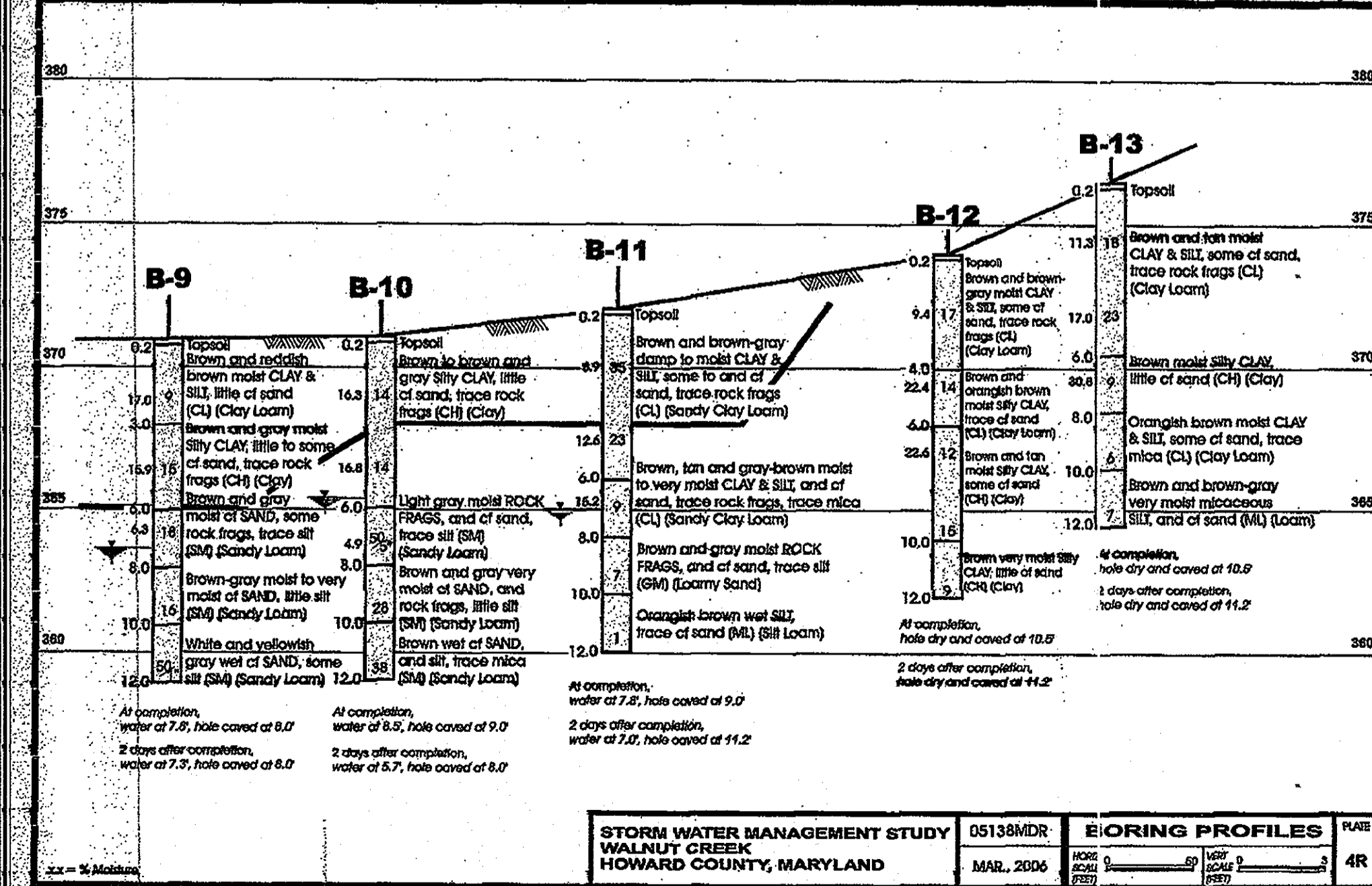
TAX MAP No. 2B GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 ZONED: RC-DEO & RR-DEO
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 22 OF 32



STORM WATER MANAGEMENT STUDY WALNUT CREEK HOWARD COUNTY, MARYLAND		05138MDR	BIORING PROFILES	DATE
MAR, 2006		NO. 05138MDR	DATE 03/23/06	4AR

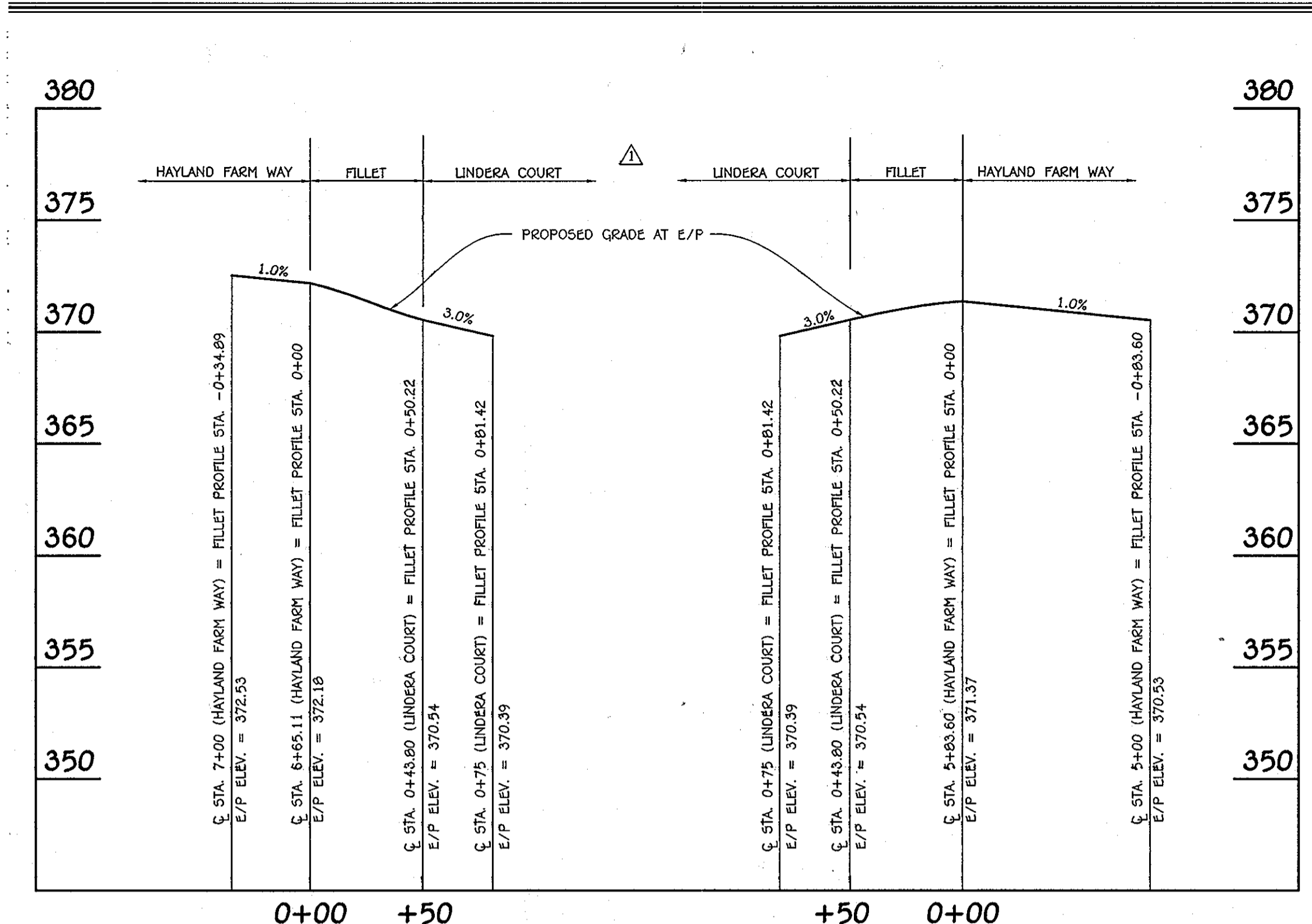


STORM WATER MANAGEMENT STUDY WALNUT CREEK HOWARD COUNTY, MARYLAND		05138MDR	BIORING PROFILES	DATE
MAR, 2006		NO. 05138MDR	DATE 03/23/06	8R

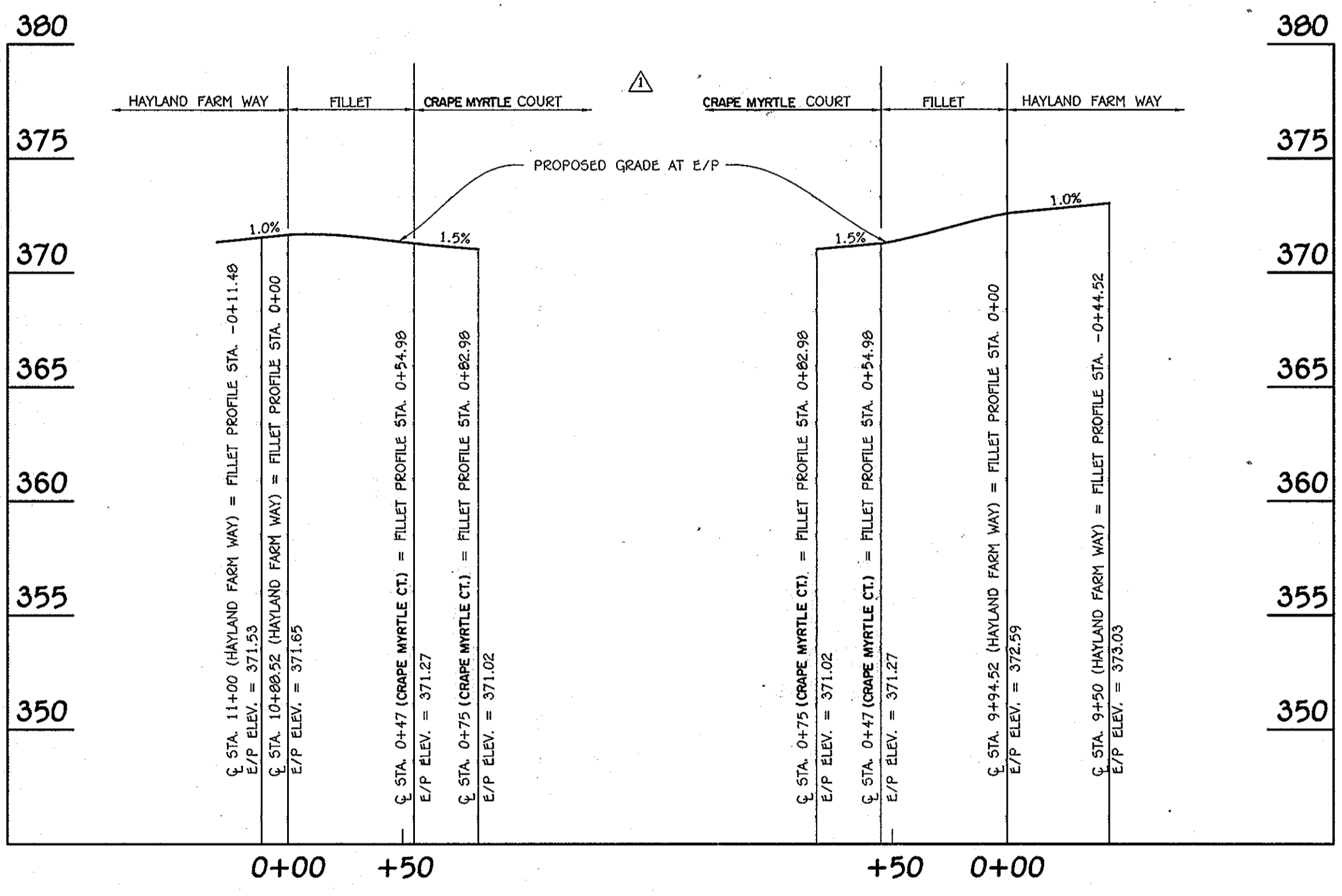


STORM WATER MANAGEMENT STUDY WALNUT CREEK HOWARD COUNTY, MARYLAND		05138MDR	BIORING PROFILES	DATE
MAR, 2006		NO. 05138MDR	DATE 03/23/06	4R

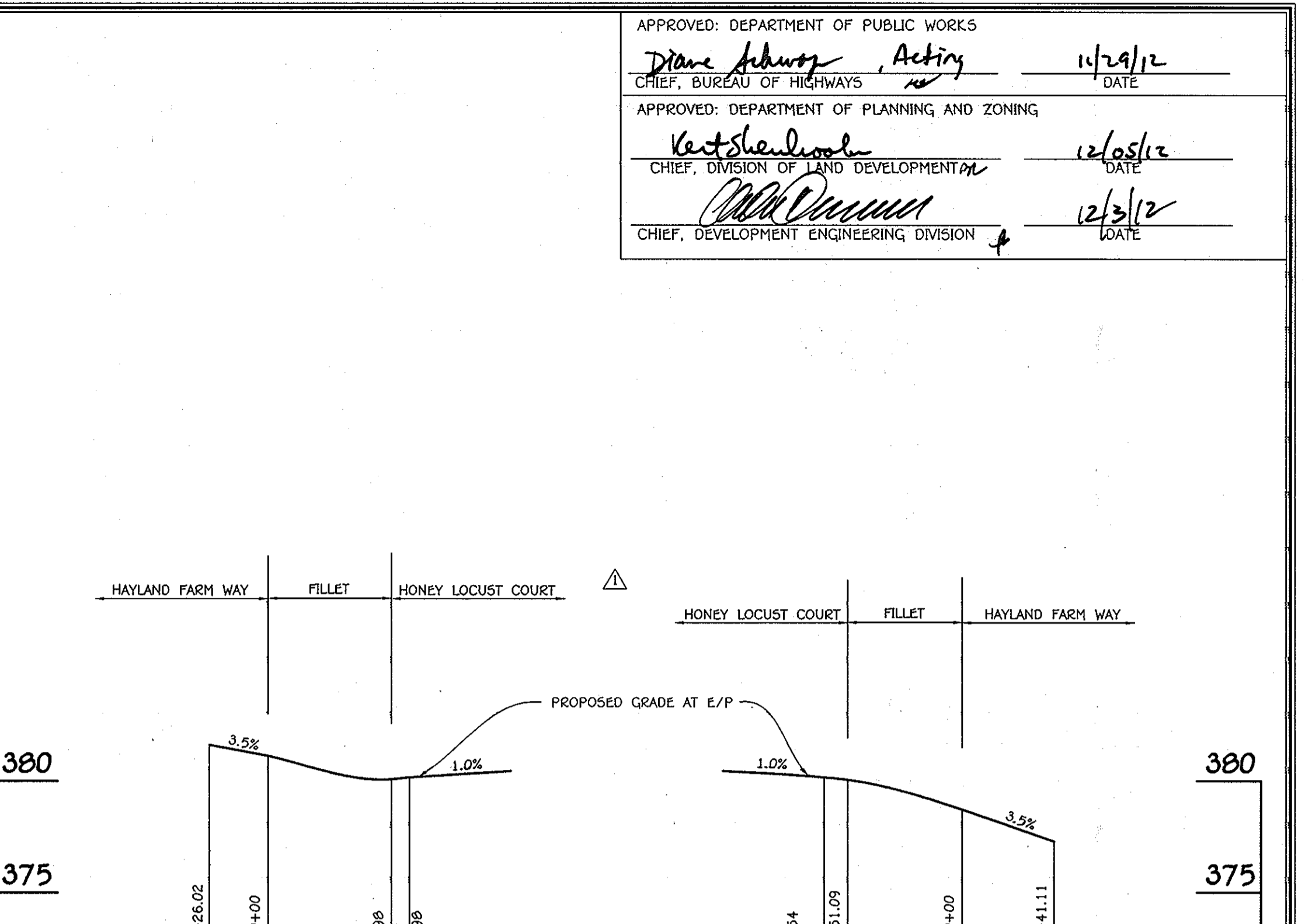
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CORPORATE OFFICE: 1022 BALDWIN NATIONAL PLACE
GAITHERSBURG, MARYLAND 20878
(410) 461-2999



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



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



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

APPROVED: DEPARTMENT OF PUBLIC WORKS
Diane Schwarz, Acting
CHIEF, BUREAU OF HIGHWAYS
12/29/12
DATE

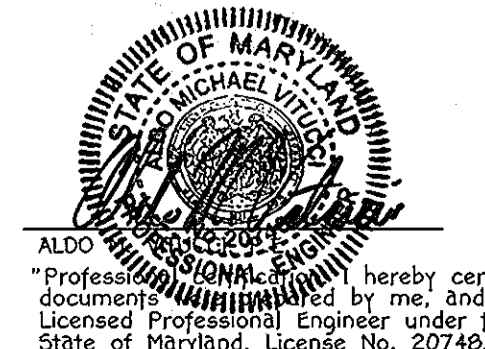
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Karl Schlemmer
CHIEF, DIVISION OF LAND DEVELOPMENT
12/05/12
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Aldo...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
12/31/12
DATE

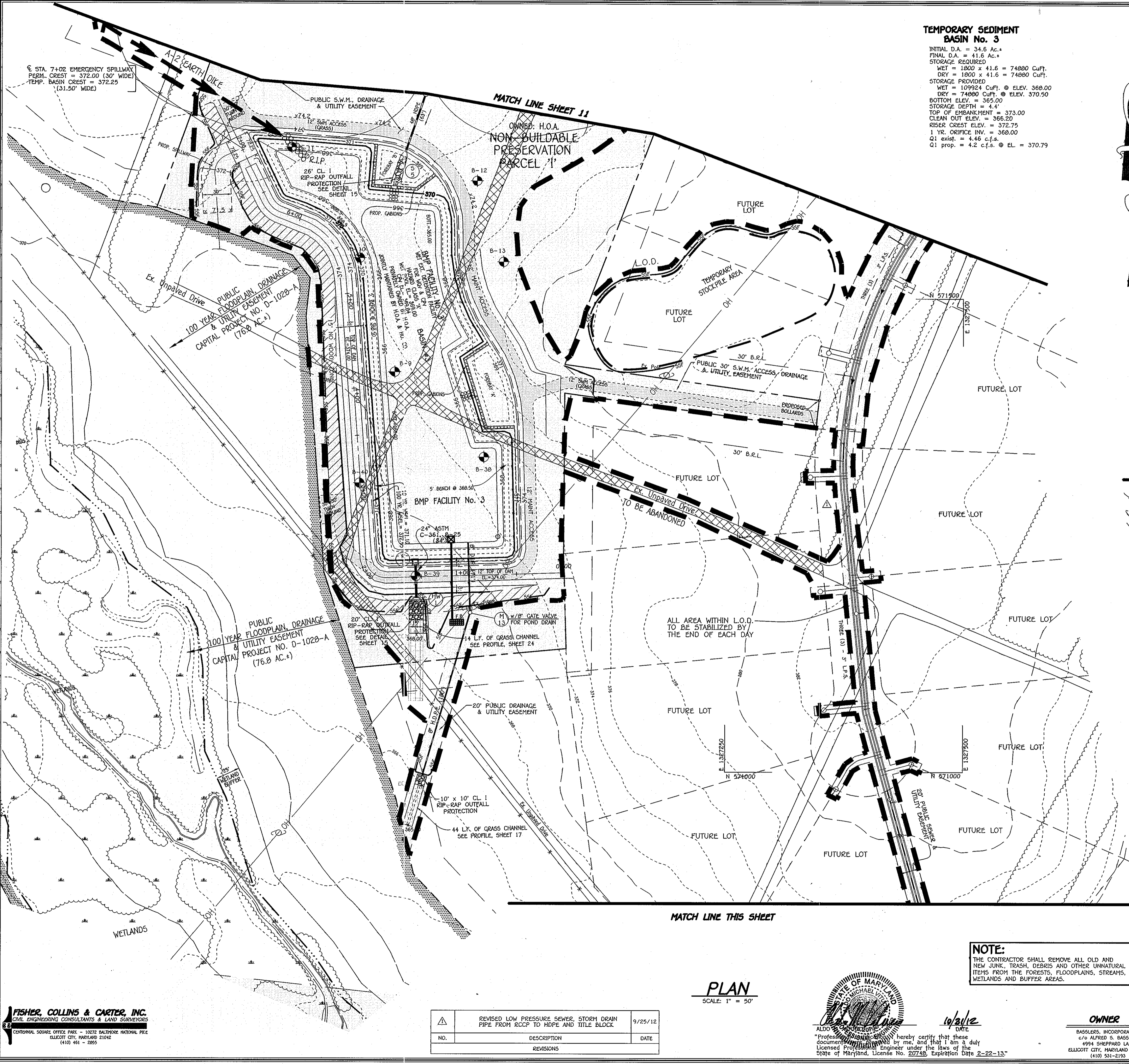
NO.	REVISIONS	DATE
1	REVISED ROAD NAMES & TITLE BLOCK	5/25/12

OWNER: BASSLERS, INCORPORATED
C/O ALFRED S. BASSLER
4994 SHEPPARD LANE
ELICOTT CITY, MD 21042
(410) 588-2289

DEVELOPER: HERITAGE LAND DEVELOPMENT
15950 NORTH AVE.
LEESON, MARYLAND 21765
(410) 860-7800



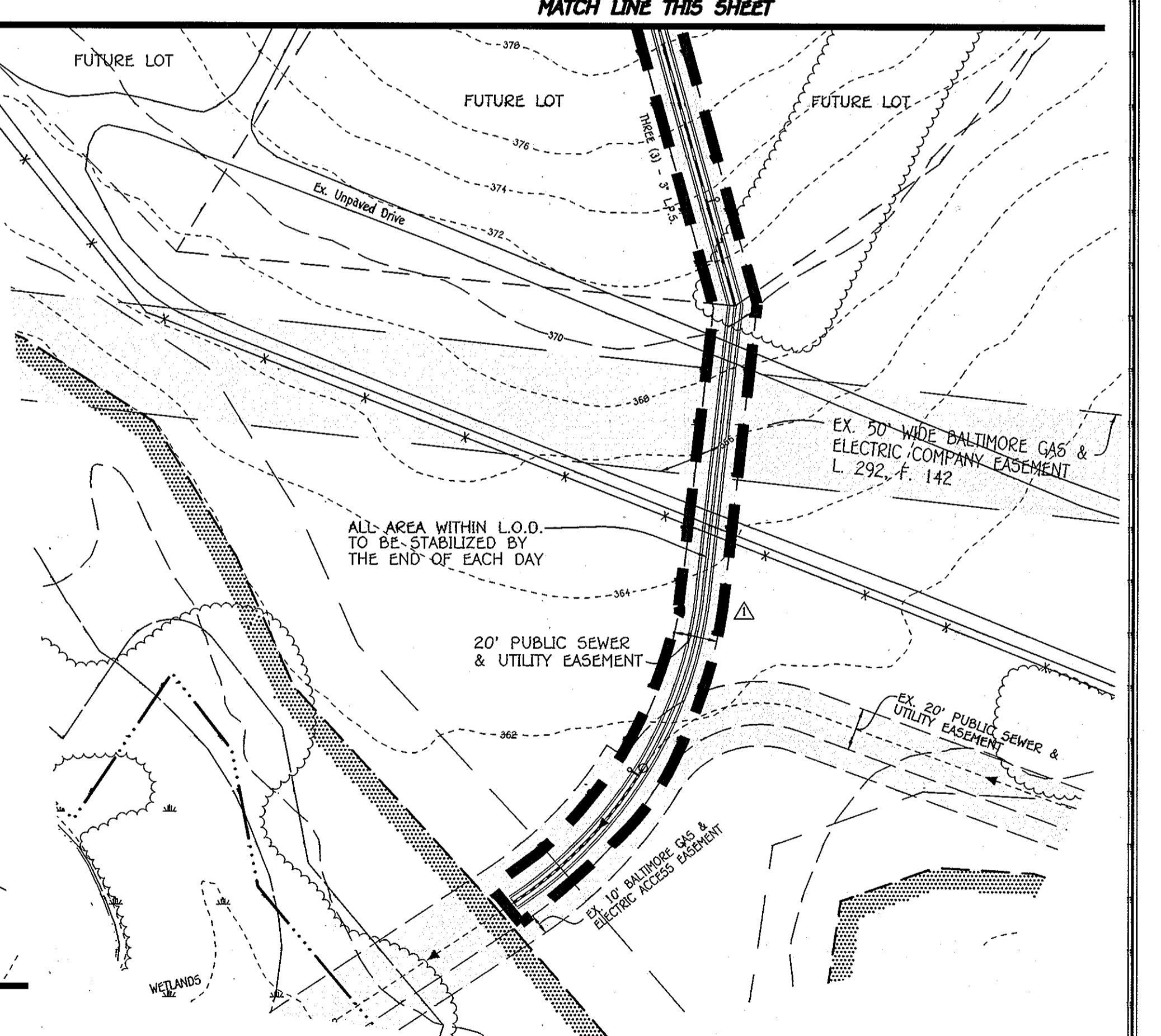
REVISED
SOIL BORINGS & FILLET PROFILES
WALNUT CREEK
PHASE TWO
Lots 23 - 68, Non-Buildable Preservation Parcels 'C', 'G', 'I', 'J', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
(Being A Re-subdivision of Baltimore Bulk Parcels 'M' & 'N' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, P&Z No. 20531 Thru 20647
ZONED: RC-DEO & RR-DEO
TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: SEPTEMBER, 2008
SHEET 29 OF 32



TEMPORARY SEDIMENT BASIN No. 3
 INITIAL D.A. = 34.6 Ac.
 FINAL D.A. = 41.6 Ac.
 STORAGE REQUIRED
 WET = 1800 x 41.6 = 74880 Cuft.
 DRY = 1800 x 41.6 = 74880 Cuft.
 STORAGE PROVIDED
 WET = 109924 Cuft. @ ELEV. 368.00
 DRY = 74880 Cuft. @ ELEV. 370.50
 BOTTOM ELEV. = 365.00
 STORAGE DEPTH = 4.4'
 TOP OF EMBANKMENT = 373.00
 CLEAN OUT ELEV. = 366.20
 RISER CREST ELEV. = 372.75
 1 YR. ORIFICE INV. = 368.00
 Q1 exst. = 4.46 C.F.S.
 Q1 prop. = 4.2 C.F.S. @ EL. = 370.79

- LEGEND**
- S—S—S— SUPER-SILT FENCE
 - S—S—S— SILT FENCE
 - T—T—T— TREE PROTECTION FENCE
 - S.C.E. STABILIZED CONSTRUCTION ENTRANCE
 - E—E—E— EARTH DIKE
 - L.O.D. DENOTES L.O.D. LIMITS OF DISTURBANCE
 - E.C.M. DENOTES EROSION CONTROL MATTING
 - [Cross-hatch pattern] DENOTES 25% OR GREATER SLOPES
 - [Dotted pattern] DENOTES 15% - 24.99% SLOPES
 - DENOTES LOW PRESSURE SEWER BY OTHERS W/ GRINDER PUMPS
 - G.I.P. GABION INFLOW PROTECTION
 - OH— DENOTES OVERHEAD ELECTRIC
 - UG— DENOTES UNDERGROUND ELECTRIC

By the Developer:
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans And That My 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 Final 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: *Timothy W. Feaga* 1/2/12
 Printed Name of Developer: Timothy W. Feaga
 By the Engineer:
 I Certify That The Plans, Specifications, Construction, Erosion And Sediment Control Represents A Professional Engineering Design And That I Am A Registered Professional Engineer In The State Of Maryland. I Must Engage A Registered Professional Engineer To Supervise Final Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.
 Signature: *John R. Roberts* 1/2/12
 Printed Name of Engineer: John R. Roberts
 Approved: Department of Public Works
 Signature: *Diane Schwegel, Acting* 1/29/12
 Chief, Bureau of Highways
 Approved: Department of Planning And Zoning
 Signature: *Wesley J. ...* 1/25/12
 Chief, Department of Planning And Zoning
 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 Release Any Other Party From Meeting Requirements Imposed By Contract, Ordinances, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



NOTE:
 THE CONTRACTOR SHALL REMOVE ALL OLD AND NEW JUNK, TRASH, DEBRIS AND OTHER UNNATURAL ITEMS FROM THE FORESTS, FLOODPLAINS, STREAMS, WETLANDS AND BUFFER AREAS.

PLAN
 SCALE: 1" = 50'

NO.	DESCRIPTION	DATE
1	REVISED LOW PRESSURE SEWER, STORM DRAIN PIPE FROM RCCP TO HDPE AND TITLE BLOCK	9/25/12
	REVISIONS	

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SERVICE OFFICE: PH: 410-272-7200 FAX: 410-272-7201
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2855

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 Signature: *John R. Roberts*
 DATE: 1/2/12
 "I, the undersigned, hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13."

OWNER
 BASALERS, INCORPORATED
 c/o ALFRED S. BASLER
 4994 SHEPPARD LANE
 ELICOTT CITY, MARYLAND 21042
 (410) 531-2193

DEVELOPER
 HERITAGE LAND DEVELOPMENT
 15950 NORTH AVE.
 LISBON, MARYLAND 21765
 (410) 489-7900

REVISED
STREET TREE, GRADING & SEDIMENT CONTROL PLAN
WALNUT CREEK
PHASE TWO
 Lots 23 - 60, Non-Buildable Preservation Parcels 'C', 'G', 'T', 'U', 'K', 'L' And 'M' & Buildable Bulk Parcels 'H' And 'N'
 (Being A Re subdivision Of Buildable Bulk Parcels 'F' & 'E' And A Revision To Non-Buildable Preservation Parcel 'C' - Walnut Creek, Phase One, Plat No. 20631 Thru 20647)
 ZONED: RC-DEO & RC-DEO
 TAX MAP No. 28 GRID Nos. 4, 5, 10-12, 17, AND 18 PARCEL No. 49
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: SEPTEMBER, 2008
 SHEET 32 OF 32

1:2004/01/01/1/1/PHASE TWO FINAL/PHASE TWO REDLINE 2012/04/01/3001 SHEET 32 GRADING PLAN.dwg SHEET 32 10/20/2012 3:55:17 PM 1:1